FINAL

SWMU 49 MONITORED NATURAL ATTENUATION SAMPLING YEAR SIX REPORT

RADFORD ARMY AMMUNITION PLANT
RADFORD, VIRGINIA

Contract No. W912DR-15-D-0022
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Prepared For:

U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT
Baltimore, MD

and

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LIST OF ACRONYMS AND ABBREVIATIONS

>	greater than
≥	greater than or equal to
°C	degrees Celsius
µg/L	micrograms per liter
µS/cm	microsiemens per centimeter
1,1,1-TCA	1,1,1-trichloroethane
1,1-DCA	1,1-dichloroethane
amsl	above mean sea level
bgs	below ground surface
BTOC	below top of casing
CB&I	CB&I Federal Services LLC
CCV	continuing calibration verification
cis-1,2-DCE	cis-1,2-dichloroethene
CMO	corrective measures objective
CoC	chain-of-custody
COC	contaminant of concern
COD	chemical oxygen demand
CT	carbon tetrachloride
DO	dissolved oxygen
DoD	U.S. Department of Defense
DTW	depth to water
ELAP	Environmental Laboratory Accreditation Program
ERA	ecological risk assessment
Esri	Environmental Systems Research Institute
FD	field duplicate
Fe	iron
Fe^{2+}	ferrous iron
ft	feet/foot
HHRA	human health risk assessment
IM	Interim Measures
ICV	initial calibration verification
IDW	investigation-derived waste
IS	internal standard
IT	IT Corporation
ITRC	Interstate Technology and Regulatory Council
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LOQ	limit of quantitation
LTM	long-term monitoring
MCL	maximum contaminant level
MDL	Method Detection Limit
mg/L	milligrams per liter

LIST OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

mL	milliliters
mL/min	milliliters per minute
MNA	monitored natural attenuation
MRL	method reporting limit
MS	matrix spike
MSD	matrix spike duplicate
mV	millivolts
MWP	Master Work Plan
NA	not applicable
ND	not detected/non-detect
No.	Number
NT	not tested
NTU	Nephelometric turbidity unit
ORP	oxidation-reduction potential
Parsons	Parsons Engineering Science, Inc.
PCE	tetrachloroethene
PDS	post digestion spike
pH	corrosivity/hydrogen ion concentration
PID	photoionization detector
POC	point of compliance
ppm	parts per million
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RCRA	Resource Conservation and Recovery Act
RFAAP	Radford Army Ammunition Plant
RFI	RCRA Facility Investigation
RG	remedial goal
RPD	relative percent difference
RSL	regional screening level
SU	standard unit
SWMU	Solid Waste Management Unit
TCE	trichloroethene
TCL	target compound list
TOC	total organic carbon
U.S.	United States
URS	URS Corporation
USACE	U.S. Army Corps of Engineers
USATHAMA	U.S. Army Toxic and Hazardous Materials Agency
USEPA	U.S. Environmental Protection Agency
Validata	Validata Chemical Services, Inc.

LIST OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

VDEQ	Virginia Department of Environmental Quality
VI	verification investigation
VOC	volatile organic compound
WESTON®	Weston Solutions, Inc.
YSI	Yellow Springs Instrument

1. INTRODUCTION

Weston Solutions, Inc. (WESTON®) has been contracted by the United States (U.S.) Army Corps of Engineers (USACE), Baltimore District, to perform long-term monitoring (LTM) and monitored natural attenuation (MNA) at Solid Waste Management Unit (SWMU) 49 (RAAP-013), Propellant Burning Ash Disposal Area, at Radford Army Ammunition Plant (RFAAP), Radford, VA. This report provides a description of the groundwater sampling activities completed and an analysis of results from the twenty-first through twenty-fourth quarterly rounds conducted in 2020 (October) through 2021 (January, April, and July). Further, this report provides a summary of the Year Six sampling, consisting of those four sampling events.

This work was performed under Contract Number (No.) W912DR-15-D-0022, Delivery Order No. W912DR18F0492 in accordance with the *Final Master Work Plan, Quality Assurance Plan, Health and Safety Plan* (RFAAP Final MWP) (URS Corporation [URS], 2003) and with Part II (D)(11-21) Interim Measures (IM) of the RFAAP Resource Conservation and Recovery Act (RCRA) Corrective Action Permit (U.S. Environmental Protection Agency [USEPA], 2000).

Groundwater at the SWMU 49 study area has been investigated from the mid-1990s through 2020 and has been fully characterized and delineated. Based on the contamination assessment and human health risk assessment (HHRA) performed and presented in the Draft *SWMU 48/49 RCRA Facility Investigation Report* (Draft SWMU 48/49 RFI Report) (CB&I Federal Services LLC [CB&I], 2014a), carbon tetrachloride (CT) and trichloroethene (TCE) were identified as the primary contaminants of concern (COCs). (Note: SWMU 49 used to be a combined study area with SWMU 48; however, previous investigations and sample data have determined that suspected contaminants reportedly disposed of at SWMU 48 were, in fact, likely disposed at SWMU 49. Therefore, this LTM report concerns only contamination associated with SWMU 49.) CT and TCE were identified as the COCs that are contributing to potential future industrial and residential risk at the study area. Based on the MNA results presented in the SWMU 49 MNA Sampling Baseline Report (CB&I, 2015), MNA processes, including biodegradation, sorption, dilution, dispersion, and chemical stabilization, are occurring in groundwater at the SWMU 49 study area.

The Year Six MNA sampling program was developed and conducted in accordance with the USEPA- and Virginia Department of Environmental Quality (VDEQ)-approved Draft

SWMU 48/49 RFI Report (CB&I, 2014a) and the Draft Final SWMU 49 MNA Groundwater Monitoring Work Plan (CB&I, 2014b). The corrective measures objectives (CMOs) and remedial goals (RGs) were developed and presented in the Draft SWMU 48/49 RFI Report (CB&I, 2014a). The site-specific CMO for SWMU 49 is to reduce COC (i.e., CT and TCE) concentrations to below the RGs/maximum contaminant levels (MCLs) to avoid adversely impacting future beneficial use of groundwater and, to the extent practicable, to achieve the goal of restoring site groundwater to the most beneficial use.

The objectives of the MNA program are as follows:

- To measure and track the reduction of CT and TCE to levels below the RGs as defined in **Table 1-1**.
- To monitor and evaluate the daughter products of the COCs to determine the progress (effectiveness and timeliness) of the degradation process.

1.1 SITE DESCRIPTION AND BACKGROUND

SWMU 49 is located in the southeastern portion of the RFAAP Horseshoe Area, east of the main bridge over the New River. As shown on **Figure 1-1**, the study area is situated on a bluff approximately 120 feet (ft) above and overlooking SWMU 13 and the New River. The SWMU 49 study area is approximately 75 ft long by 83 ft wide and is situated adjacent to SWMUs 48, 50, and 59. Previously, SWMU 49 was combined with these three adjacent areas.

As presented in previous reports (CB&I, 2014a and 2014b), SWMU 49 reportedly received 10 tons of red water ash during its active period. However, the results of environmental sampling to date indicate that the red water ash was likely disposed of in the disposal trenches associated with neighboring SWMU 48. Conversely, sampling indicates that the only wastewater associated with SWMU 48 was disposed of in the SWMU 49 area.

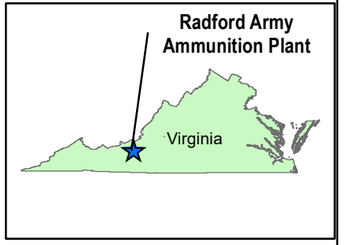
Table 1-1 SWMU 48 & 49 Groundwater Remedial Goals

Chemical of Interest	Groundwater RG (µg/L)	Groundwater RG Source*[1]
Carbon Tetrachloride	5.0	MCL
Trichloroethene	5.0	MCL

Notes:
* RGs are also the MCLs listed in the USEPA 2018 Edition of the Drinking Water Standards and Health Advisories (USEPA, 2018).
[1] RGs developed and presented in Draft SWMU 48/49 RFI Report (CB&I, 2014a).
µg/L = micrograms per liter
CB&I = CB&I Federal Services LLC
MCL = maximum contaminant level
SWMU = Solid Waste Management Unit
RCRA = Resource Conservation and Recovery Act
RFI = RCRA Facility Investigation
RG = remedial goal
USEPA = U.S. Environmental Protection Agency

Legend

- SWMU 49 Boundary
- Other SWMU Boundary



Aerial Source:
ESRI Imagery Mapping Service, 2019

N

0 150 300 600 Feet

Prepared By:

Baltimore District

FIGURE 1-1
SWMU 49 SITE LOCATION MAP
RADFORD, VIRGINIA

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2. PHYSICAL CHARACTERISTICS

2.1 TOPOGRAPHY

The land surface at SWMU 49 slopes gently from 1,830 ft above mean sea level (amsl) on the north side of the site to approximately 1,816 ft amsl on the southeast side of the site. The southeast side ends abruptly at a bluff that rises approximately 120 ft above the Burning Grounds (SWMU 13) and the New River. In general, the topography is uneven and hummocky with several small draws and topographic highs.

2.2 SURFACE WATER

SWMU 49 is located on a bluff approximately 120 ft above the New River. Based on topography, surface water runoff is expected to flow approximately 700 ft south to the New River.

2.3 GEOLOGY

2.3.1 Regional Geology

SWMU 49 is located in the New River Valley, which crosses the Valley and Ridge Province approximately perpendicular to the regional strike of bedrock, and cross cuts Cambrian and Ordovician limestone or dolostone. Deep clay-rich residuum is prevalent in areas underlain by carbonate rocks. The valley is covered by river floodplain and terrace deposits; karst topography is dominant throughout the area. A more detailed description of the regional geology is presented in the RFAAP Final MWP (URS, 2003).

2.3.2 Site-Specific Geology

The lithology of the SWMU 49 subsurface was characterized during the advancement of soil borings and monitoring well borings at the site. One soil boring (48SB05) was advanced within SWMU 49 to 37 ft in depth. In addition to 48SB05, two monitoring wells were installed directly north and south of the target study area: 48MW1 and 48MW2, respectively. Plan views of lines A-A' and B-B' that run through the adjacent sites of SWMU 48, SWMU 50, and SWMU 59 are presented on **Figure 2-1**, with geologic cross sections of A-A' and B-B' presented on **Figures 2-2** and **2-3**, respectively. Based on the borings, the subsurface geology consists of alluvium and residual deposits comprised of clay and silt with some sand and gravel overlying

bedrock. Well 48MW1 was advanced to 154 ft below ground surface (bgs), with the bedrock elevation encountered at 72 ft bgs. Well 48MW2 was advanced to 133.7 ft bgs, with the bedrock elevation encountered at approximately 41 ft bgs. Depths to bedrock were directly measured at the monitoring well borings. Bedrock elevations ranged from approximately 1,745 to 1,776 ft amsl, with the bedrock surface sloping to the north.

Depth to competent bedrock at the site ranges from approximately 41 to 72 ft bgs. A saprolitic layer, formed from in situ weathering of the carbonate bedrock, immediately overlies the competent bedrock. The saprolite is up to 10 ft in thickness.

Bedrock consists of highly fractured interbedded siltstone, limestone, and dolostone of the Elbrook Formation. The Max Meadows Breccia is evident in outcrops along the slope leading to the river. In the outcrop along the slope, the tectonic breccias and the limestone and dolostone are highly weathered with many solution cavities. The unconsolidated sediment immediately overlying the saprolite consists of alluvial deposits.

Alluvial deposits, consisting primarily of silty sand, overlie channel deposits of fine- to coarse-grained sand and gravel (river jack). These Paleo-channel deposits rest directly on the saprolite. Portions of the disposal areas contain fill material to depths of 9 to 10 ft bgs. A more detailed discussion of the geology and soil at RFAAP is presented in Sections 3.4 through 3.7 of the RFAAP Final MWP (URS, 2003) and in the *Facility-Wide Background Study* (IT Corporation [IT], 2001).

2.4 HYDROGEOLOGY

2.4.1 Regional Hydrogeology

Geologically, the Appalachian Plateaus and Valley and Ridge Province encompass two major tectonic domains: the southern Appalachian Basin and the southeastern part of the Eastern Interior Basin. The hydrogeologic framework is based on generalized stratigraphic succession, with indurated sedimentary rocks of the Paleozoic age forming predominant units.

Groundwater flow paths are typically short, commonly extending no more than several miles in their longest dimension. The largest groundwater supplies are produced from the carbonate rocks, especially where they are associated with thick regolith, an important storage reservoir throughout

the entire area. The regolith serves as a store of recharge that would otherwise be rapidly diverted to overland flow. It also slowly releases water to underlying carbonate aquifers. Because of the widespread distribution of carbonate rocks and associated regolith, abundant precipitation in a humid climate, and relatively steep hydraulic gradients, this region (and locality) is one of the major karstlands in the eastern United States.

Groundwater supplies in the Valley and Ridge Province are generally good quality compared to surface water supplies (Parsons Engineering Science, Inc. [Parsons], 1996). Because of extended contact with minerals, however, many groundwater supplies contain higher levels of dissolved solids than the streams into which they discharge. Because of sinkholes and underground caverns in karst aquifers, there is a high potential for groundwater to be impacted by direct infiltration of contaminated surface water.

2.4.2 Site-Specific Hydrogeology

Monitoring wells installed at SWMU 49 were screened in both the surficial unconsolidated deposits and the underlying bedrock. Boring logs and well construction diagrams for the SWMU 49 study area wells are presented in the SWMU 49 MNA Sampling Baseline Report (CB&I, 2015). Water levels were measured in the wells to determine the groundwater flow direction at the site. A groundwater contour map prepared from the baseline MNA monitoring completed in January 2015 is provided in **Figure 2-4**. A steep bluff separates SWMU 49 and SWMU 13; therefore, no monitoring wells are positioned between these sites. Contour lines shown on the figure represent lines of equal elevation of the water table; consequently, groundwater flow direction is always perpendicular to the contour lines and feeds into the New River, which generally runs a south-to-north course, but west-to-east at this location. Groundwater at the site tends to flow south towards SWMU 13 and appears to discharge to the New River, south of the study area. Groundwater elevations at SWMU 49 vary minimally from each of the four sampling quarters, suggesting little seasonal impact on groundwater elevations. Based on the Year Six groundwater elevations recorded, the flow direction did not change appreciably from quarter to quarter (see discussion in Sections 4.1.1, 4.2.1, 4.3.1, and 4.4.1).

Legend

- Well
- Cross Section
- SWMU 49 Boundary

Aerial Source:
Near Map Imagery, February 2020

N

0 55 110 220 Feet

Prepared By:

Baltimore District

FIGURE 2-1
SWMU 49
CROSS SECTION
RADFORD, VIRGINIA

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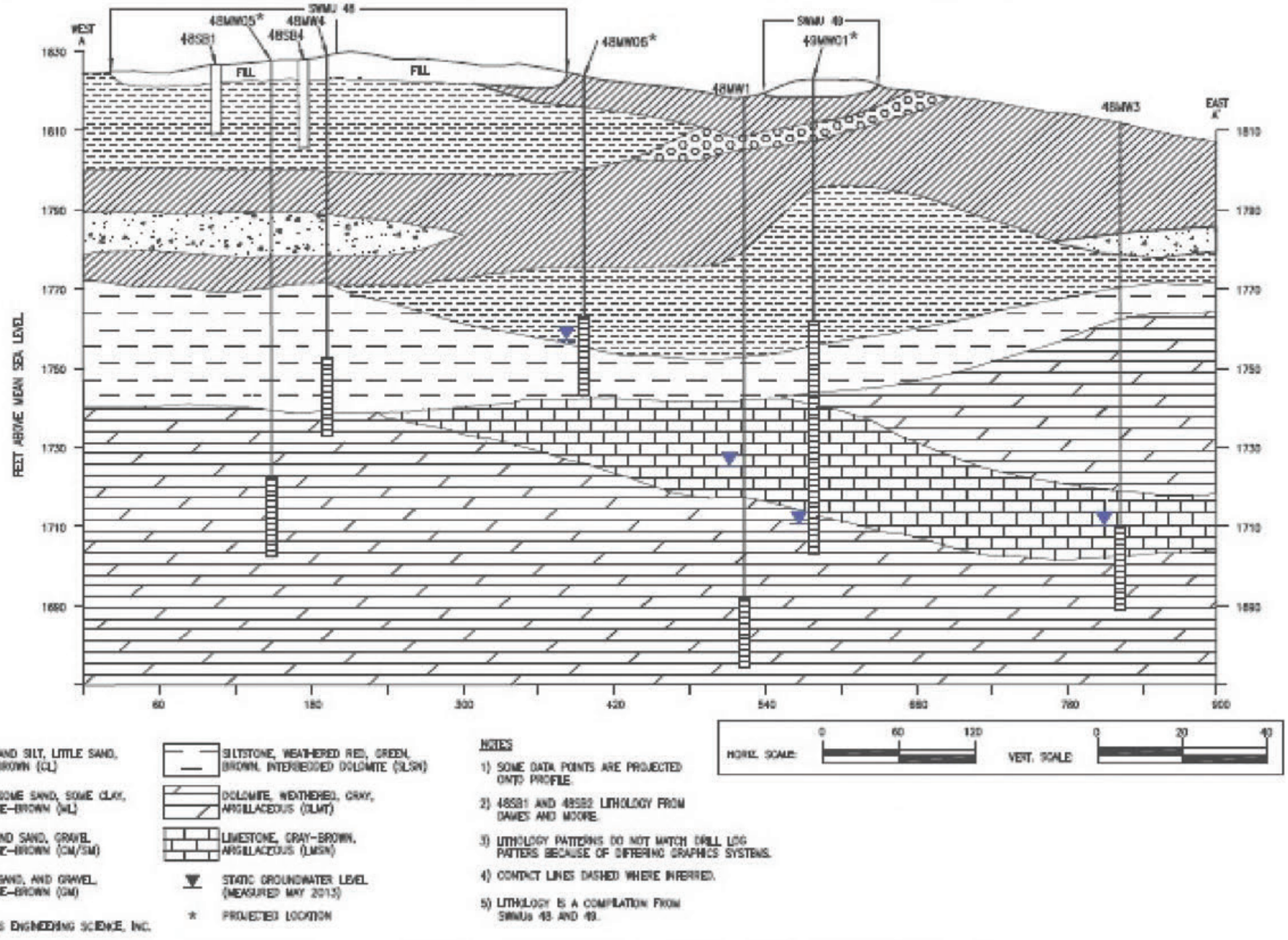

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Aerial Source:
Near Map Imagery, February 2020

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Prepared By:

Baltimore District

FIGURE 2-2
SWMU 49
CROSS SECTION A-A' SWMU 49
RADFORD, VIRGINIA

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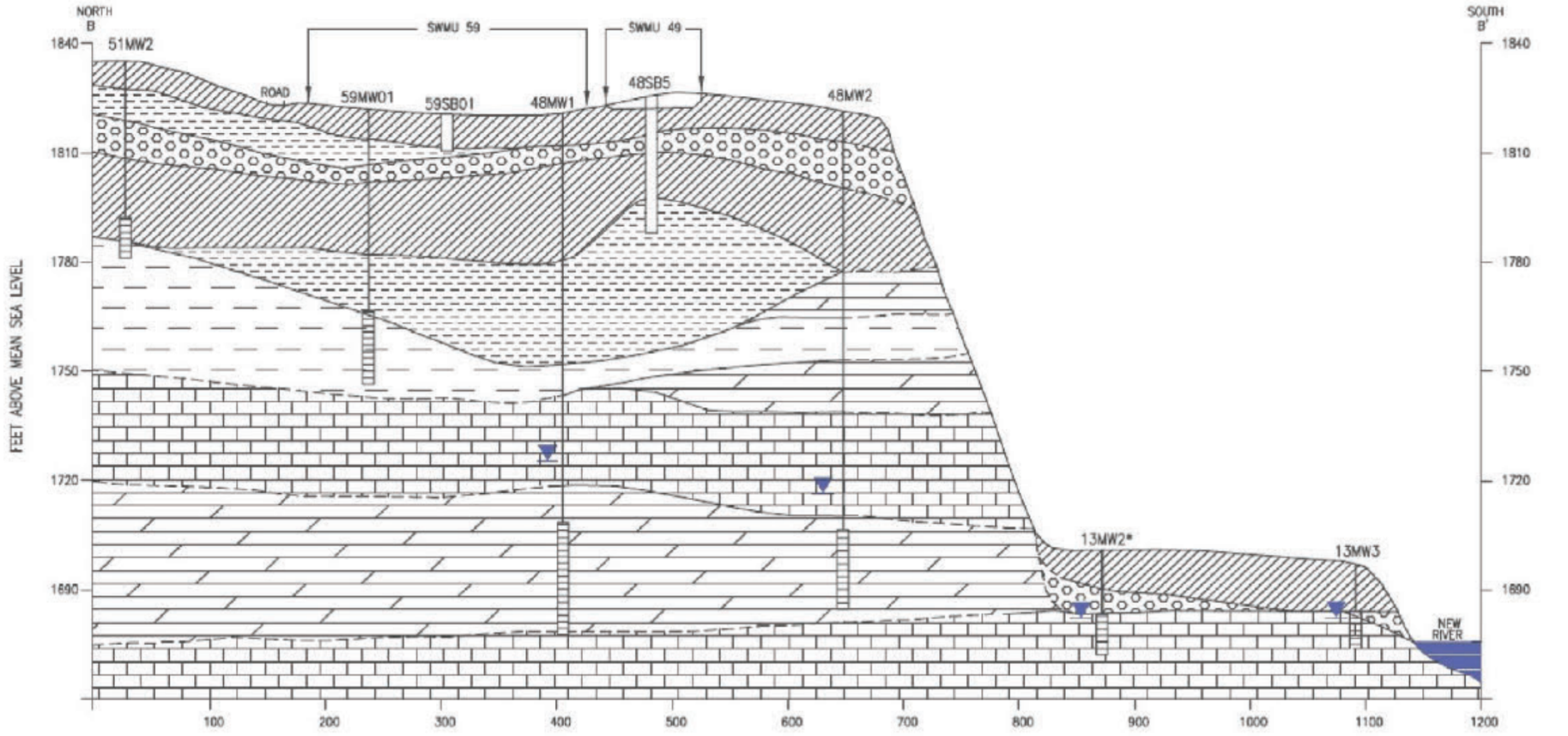
20P-0251



Legend

Aerial Source:
Near Map Imagery, February 2020

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FIGURE 2-3
SWMU 49
CROSS SECTION B-B SWMU 49
RADFORD, VIRGINIA

WESTON SOLUTIONS

BSEn
BERING SEA ENVIRONMENTAL LLC

51MW1
51MW2
48MW7
1780
48MW4
1770
1760
59MW1
48MW5
1750
48MW6
1720
1730
48MW1
49MW3
1740
49MW1
SWMU 49
1710
50MW1
48MW3
49MW2
48MW2
1700
50MW2
1690
49MW5
49MW4
13MW2
13MW5
1680
13MW4
13MW3
NEW RIVER

Legend

- Well
- Groundwater Contour
- SWMU 49 Boundary
- Groundwater Flow Direction

Aerial Source:
Near Map Imagery, February 2020

N

0 55 110 220
Feet

Prepared By:

Baltimore District

FIGURE 2-4
SWMU 49 JANUARY 2015
POTENTIOMETRIC SURFACE MAP
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49_Potentiometric_Surface_Map_Jan2015.mxd, 11/22/2020 3:47:42 PM, johna

3. PREVIOUS INVESTIGATIONS

Seven prior investigations have been conducted at the previously combined study area including SWMUs 48 and 49. In 1987, a RCRA Facility Assessment was conducted to evaluate potentially hazardous waste or hazardous constituent releases and to implement corrective actions, as necessary (U.S. Army Toxic and Hazardous Materials Agency [USATHAMA], 1987). In 1992, Dames and Moore performed a verification investigation (VI), which included surface and subsurface soil sampling and a soil gas survey to characterize the nature and extent of contamination (Dames and Moore, 1992). In 1996, Parsons conducted an RFI to further delineate the extent of contamination identified during the 1992 VI sampling (Parsons, 1996). ICF Kaiser Engineers also performed an RFI in 1998 to further refine the understanding of the nature and extent of contamination identified during the previous investigations. Additional RFI sampling was conducted by IT/Shaw Environmental, Inc. in 2002, 2006, 2007, and 2013 to collect sufficient data to complete HHRAs and ecological risk assessments (ERAs) (CB&I, 2014a).

In 2014, USEPA and VDEQ approved the Draft SWMU 48/49 RFI Report (CB&I, 2014a), which developed the CMOs and RGs for the MNA program. Direct-push soil borings and the installation and sampling of new and existing monitoring wells were used: to characterize the nature and extent of constituents in soil and groundwater at the SWMU 48/49 combined study area, to identify the lateral and vertical extent of impacted soil and chlorinated solvents in groundwater, and to characterize soil lithology and depth to groundwater and bedrock. Details of these investigations are described in Section 3.0 (Field Investigation Program) of the approved Draft SWMU 48/49 RFI Report (CB&I, 2014a). Historical data presenting the SWMU 49 COC concentrations for CT and TCE in the study area wells can be found in **Tables 3-1** through **3-5**.

WESTON has performed the LTM and MNA at SWMU 49 since October 2019 through the present, including the seventeenth through twentieth quarterly sampling rounds for Year Five of sampling at RFAAP and twenty-first through twenty-fourth quarterly sampling rounds for Year Six of sampling at RFAAP. The nature and extent assessment identified several volatile organic compounds (VOCs) and metals in groundwater as elevated and contributing to potential future risks. Two of the VOCs associated with potential future industrial and residential risk in the HHRA (CT and TCE) were present above USEPA's maximum contaminant levels (MCLs)

(USEPA, 2018) during the multiple groundwater sampling events at the study area. A comparison of concentrations from the mid-1990s to 2019 indicates that the majority of the VOCs are no longer present in these sampled areas and have broken down through natural processes. Analysis of the groundwater data during this roughly 20-year period shows that concentrations of CT and TCE plume have changed as follows: (1) decreased overall, (2) decreased to 1 microgram per liter (µg/L) surrounding the center of the plume, and (3) decreased at least by one half in the center of the plume. The presence of daughter products (i.e., chloroform and cis-1,2-dichloroethene [cis-1,2-DCE]) in groundwater at the study area indicates that limited biological degradation of the chlorinated solvents is occurring.

The HHRA determined that CT and TCE are the primary COCs in groundwater that are contributing potential future industrial and residential risk at the SWMU 49 study area. Because the RFI demonstrated that groundwater contamination is present at concentrations associated with unacceptable human health concerns, CMOs and RGs were developed to address the concerns.

The site-specific CMOs for SWMU 49 are: to reduce COC concentrations to below RGs/MCLs to avoid adversely impacting future beneficial use of groundwater, and, to the extent practicable, to achieve a goal of restoring site groundwater to the most beneficial use. The SWMU 49 groundwater COCs have been identified as CT and TCE. The groundwater RGs (presented in **Table 1-1** of this report) will be used to compare results from groundwater monitoring wells to assess the progress of the MNA.

Table 3-6 provides the analytical results presented in the SWMU 49 MNA Sampling Baseline Report (CB&I, 2015). In the initial 2012 sampling, the highest concentrations of CT and TCE were observed in wells 48MW2 and 48MW3. The plumes are small, appear to be isolated, and have not changed in dimension since 2013. Recommendations provided in the SWMU 49 MNA Sampling Baseline Report called for further monitoring of CT, TCE, and daughter products of these VOCs within the SWMU. The rationale of continued monitoring is to evaluate the effectiveness of the MNA processes.

Table 3-1 COCs Detected in SWMU 48 & 49 Groundwater Samples – 1996 RFI

Analyte	Sample ID Sample Date	48MW1 1/20/95		48MW1 7/20/95		48MW2 1/19/95		48MW2 7/19/95		48MW3 1/20/95		48MW3 7/21/95		48MW4 7/27/95	
	RG	Result	Lab Q	Result	Lab Q	Result	Lab Q	Result	Lab Q	Result	Lab Q	Result	Lab Q	Result	Lab Q
VOCs (µg/L)															
Carbon Tetrachloride	5	NT		1	U	NT		92		NT		100		1	U
Trichloroethene	5	NT		17		NT		11		NT		37		1	U

Notes:

Bold outline indicates an RG exceedance.

µg/L = micrograms per liter (parts per billion)
ID = identification
NT = analyte not tested
RG = remedial goal
VOC = volatile organic compound

Lab Q = Lab Data Qualifiers.
U = Analyte not detected at the method reporting limit.

Table 3-2 COCs Detected in SWMU 49 Groundwater Samples – 1998 RFI

Analyte	Sample ID Sample Date	48MW1-2 4/8/98					48MW2-2 4/2/98					48MW3-2 4/2/98					48MW4-2 4/8/98				
	RG	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL
VOCs (µg/L)																					
Carbon Tetrachloride	5	5	U	U	5	5	140			5	5	180			5	5	5	U	U	5	5
Trichloroethene	5	8 J			5	5	18 J			5	5	33 J			5	5	5	U	U	5	5

Notes:

Bold outline indicates an RG exceedance.

Shading in the MDL/MRL columns indicates the MDL/MRL is equal to or exceeds a criterion.

µg/L = micrograms per liter (parts per billion)
ID = identification
MDL = method detection limit
MRL = method reporting limit
RCRA = Resource Conservation and Recovery Act
RFI = RCRA Facility Investigation
RG = remedial goal
VOC = volatile organic compound

Lab Q = Lab Data Qualifiers.
D = Sample was run at a dilution.
J = Value < MRL and > MDL and is considered estimated.
N = Matrix Spike/Matrix Spike Duplicate accuracy and/or precision were outside criteria.
U = Analyte not detected at the method reporting limit.
X = The associated ICV/CCV exceeded the upper control limit.

Val Q = Validation Data Qualifiers.
B = Blank contamination. Value detected in sample and associated blank.
J = Estimated concentration.
K = Estimated concentration bias high.
L = Estimated concentration bias low.
U = Analyte not detected.
UL = Estimated concentration non-detect bias low.
-2 = Sample code signifies the second round of sampling conducted at these four wells. Original samples were collected during the 1998 RFI performed by ICF Kaiser.

Table 3-3 COCs Detected in SWMU 49 Groundwater Samples – 2006 Groundwater Data Report

Analyte	Sample ID Sample Date	48MW1 4/13/06					48MW2 4/13/06					48MW3 4/13/06					48MW4 4/11/06				
	RG	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL
VOCs (µg/L)																					
Carbon tetrachloride	5	1	U		0.5	1	29.2			0.5	1	51.2			0.5	1	1	U		0.5	1
Trichloroethene	5	5.5			0.5	1	3			0.5	1	7.4			0.5	1	1	U		0.5	1

Notes:

Bold outline indicates an RG exceedance.

µg/L = micrograms per liter (parts per billion)
ID = identification
MDL = method detection limit
MRL = method reporting limit
RCRA = Resource Conservation and Recovery Act
RFI = RCRA Facility Investigation
RG = remedial goal
VOC = volatile organic compound

Lab Q = Lab Data Qualifiers
D = Sample was run at a dilution.
J = Value < MRL and > MDL and is considered estimated.
N = Matrix Spike/Matrix Spike Duplicate accuracy and/or precision were outside criteria.
U = Analyte not detected at the method reporting limit.
X = The associated ICV/CCV exceeded the upper control limit.

Val Q = Validation Data Qualifiers.
B = Blank contamination. Value detected in sample and associated blank.
J = Estimated concentration.
K = Estimated concentration bias high.
L = Estimated concentration bias low.
U = Analyte not detected.
UL = Estimated concentration non-detect bias low.
-2 = Sample code signifies the second round of sampling conducted at these four wells. Original samples were collected during the 1998 RFI performed by ICF Kaiser.

Table 3-4 COCs Detected in SWMU 49 Study Area Groundwater Samples – 2007 RFI

Analyte	Sample ID Sample	48MW1 8/29/07					48MW2 8/29/07					48MW3 8/29/07					48MW4 8/29/07					48MW05 8/30/07					48MW06 8/30/07				
	RG	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL
VOCs (µg/L)																															
Carbon Tetrachloride	5	1	U		0.29	1	94.6			0.29	1	60.3			0.29	1	1	U		0.29	1	1	U		0.29	1	1	U		0.29	1
Trichloroethene	5	1.6			0.38	1	11.2			0.38	1	10.1			0.38	1	1	U		0.38	1	1	U		0.38	1	3.7			0.38	1

Analyte	Sample ID Sample	48MW07 8/30/07					49MW01 8/29/07					50MW01 8/30/07					50MW02 8/30/07					59MW01 8/29/07				
	RG	Result	Lab	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL
VOCs (µg/L)																										
Carbon tetrachloride	5	1	U		0.29	1	3.8			0.29	1	1	U		0.29	1	2.7			0.29	1	1	U		0.29	1
Trichloroethene	5	1	U		0.38	1	1	U		0.38	1	1	U		0.38	1	3.4			0.38	1	1	U		0.38	1

Notes:

Bold outline indicates an RG exceedance.

µg/L = micrograms per liter (parts per billion)
ID = identification
MDL = method detection limit
MRL = method reporting limit
RCRA = Resource Conservation and Recovery Act
RFI = RCRA Facility Investigation
RG = remedial goal
VOC = volatile organic compound

Lab Q = Lab Data Qualifiers.
D = Sample was run at a dilution.
J = Value < MRL and > MDL and is considered estimated.
N = Matrix Spike/Matrix Spike Duplicate accuracy and/or precision were outside criteria.
U = Analyte not detected at the method reporting limit.
X = The associated ICV/CCV exceeded the upper control limit.

Val Q = Validation Data Qualifiers.
B = Blank contamination. Value detected in sample and associated blank.
J = Estimated concentration.
K = Estimated concentration bias high.
L = Estimated concentration bias low.
U = Analyte not detected.
UL = Estimated concentration non-detect bias low.
-2 = Sample code signifies the second round of sampling conducted at these four wells. Original samples were collected during the 1998 RFI performed by ICF Kaiser.

Table 3-5 VOCs Detected in SWMU 49 Study Area Groundwater Samples – 2013 Supplemental RFI

Analyte	Sample ID / Sample Date	13MW2 5/6/13					13MW3 5/6/13					13MW4 5/6/13					13MW5 5/6/13					48MW1 5/8/13					48MW2 5/9/13					48MW3 5/9/13				
	RG	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL
VOCs (µg/L)																																			
1,1,1-Trichloroethane	NA	0.2	U		0.123	0.2	0.2	U		0.123	0.2	0.2	U		0.123	0.2	0.2	U		0.123	0.2	0.432	J	J	0.123	0.2	0.2	U		0.123	0.2	0.2	U		0.123	0.2
1,1-Dichloroethane	NA	0.2	U		0.171	0.2	0.2	U		0.171	0.2	0.2	U		0.171	0.2	0.2	U		0.171	0.2	1.03			0.171	0.2	0.2	U		0.171	0.2	0.2	U		0.171	0.2
1,1-Dichloroethene	NA	0.5	U		0.2	0.5	0.5	U		0.2	0.5	0.5	U		0.2	0.5	0.5	U		0.2	0.5	0.5	U		0.2	0.5	0.5	U		0.2	0.5	0.5	U		0.2	0.5
Acetone	NA	1	U		0.193	1	1	U		0.193	1	1	U		0.193	1	1	U		0.193	1	1	U		0.193	1	1	U		0.193	1	1	U		0.193	1
Carbon Tetrachloride	5	0.5	U		0.248	0.5	5.63			0.248	0.5	0.5	U		0.248	0.5	0.5	U		0.248	0.5	0.5	U		0.248	0.5	82.7			0.248	0.5	73.1			0.248	0.5
Chloroform	NA	0.2	U		0.155	0.2	0.453	J	J	0.155	0.2	0.2	U		0.155	0.2	0.2	U		0.155	0.2	0.2	U		0.155	0.2	5.97			0.155	0.2	7.89			0.155	0.2
cis-1,2-Dichloroethene	NA	0.2	U		0.103	0.2	0.2	U		0.103	0.2	0.2	U		0.103	0.2	0.2	U		0.103	0.2	0.817	J	J	0.103	0.2	0.2	U		0.103	0.2	0.2	U		0.103	0.2
Methylene Chloride	NA	0.5	U		0.149	0.5	0.5	U		0.149	0.5	0.5	U		0.149	0.5	0.5	U		0.149	0.5	0.5	U		0.149	0.5	0.5	U		0.149	0.5	0.5	U		0.149	0.5
Tetrachloroethene	NA	0.5	U		0.193	0.5	0.5	U		0.193	0.5	0.5	U		0.193	0.5	0.5	U		0.193	0.5	0.5	U		0.193	0.5	0.5	U		0.193	0.5	0.5	U		0.193	0.5
Toluene	NA	0.2	U		0.122	0.2	0.2	U		0.122	0.2	0.2	U		0.122	0.2	0.2	U		0.122	0.2	2.1			0.122	0.2	1.18			0.122	0.2	0.291	J	J	0.122	0.2
Trichloroethene	5	0.2	U		0.161	0.2	1.08			0.161	0.2	1.08			0.161	0.2	0.2	U		0.161	0.2	1.9			0.161	0.2	9.75			0.161	0.2	10.7			0.161	0.2

Analyte	Sample ID / Sample Date	48MW06 5/7/13					49MW01 5/8/13					49MW02 5/9/13					49MW03 5/7/13					49MW04 5/6/13					49MW05 5/6/13					50MW02 5/8/13				
	RG	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL
VOCs (µg/L)																																			
1,1,1-Trichloroethane	NA	1.66			0.123	0.2	0.2	U		0.123	0.2	0.2	U		0.123	0.2	0.2	U	UL	0.123	0.2	0.2	U		0.123	0.2	0.2	U		0.123	0.2	0.251	J	J	0.123	0.2
1,1-Dichloroethane	NA	5.86			0.171	0.2	0.2	U		0.171	0.2	0.2	U		0.171	0.2	0.2	U	UL	0.171	0.2	0.2	U		0.171	0.2	0.2	U		0.171	0.2	0.344	J	J	0.171	0.2
1,1-Dichloroethene	NA	0.301	J	J	0.2	0.5	0.5	U		0.2	0.5	0.5	U		0.2	0.5	0.5	U	UL	0.2	0.5	0.5	U		0.2	0.5	0.5	U		0.2	0.5	0.5	U		0.2	0.5
Acetone	NA	1	U		0.193	1	1	U		0.193	1	2.41	J	B	0.193	1	1	U	UL	0.193	1	1	U		0.193	1	1	U		0.193	1	1	U		0.193	1
Carbon Tetrachloride	5	0.5	U		0.248	0.5	4.61			0.248	0.5	5.36			0.248	0.5	0.5	U	UL	0.248	0.5	0.664	J	J	0.248	0.5	0.5	U		0.248	0.5	0.919	J	J	0.248	0.5
Chloroform	NA	0.2	U		0.155	0.2	0.193	J	J	0.155	0.2	7.79			0.155	0.2	0.2	U	UL	0.155	0.2	1.25			0.155	0.2	0.2	U		0.155	0.2	0.2	U		0.155	0.2
cis-1,2-Dichloroethene	NA	9.21			0.103	0.2	0.2	U		0.103	0.2	0.2	U		0.103	0.2	0.2	U	UL	0.103	0.2	0.2	U		0.103	0.2	0.2	U		0.103	0.2	0.373	J	J	0.103	0.2
Methylene Chloride	NA	0.5	U		0.149	0.5	0.5	U		0.149	0.5	0.5	U		0.149	0.5	2.3	J	L	0.149	0.5	0.5	U		0.149	0.5	0.5	U		0.149	0.5	0.5	U		0.149	0.5
Tetrachloroethene	NA	0.801	J	J	0.193	0.5	0.5	U		0.193	0.5	0.5	U		0.193	0.5	0.5	U	UL	0.193	0.5	0.5	U		0.193	0.5	0.5	U		0.193	0.5	0.255	J	J	0.193	0.5
Toluene	NA	0.2	U		0.122	0.2	0.765	J	J	0.122	0.2	1.52			0.122	0.2	0.2	U	UL	0.122	0.2	0.2	U		0.122	0.2	0.2	U		0.122	0.2	0.726	J	J	0.122	0.2
Trichloroethene	5	6.25			0.161	0.2	0.2	U		0.161	0.2	0.934	J	J	0.161	0.2	0.2	U	UL	0.161	0.2	0.2	U		0.161	0.2	0.2	U		0.161	0.2	2.31			0.161	0.2

Notes:

Bold outline indicates an RG exceedance.

µg/L = micrograms per liter (parts per billion)
ID = identification
MDL = method detection limit
MRL = method reporting limit
RCRA = Resource Conservation and Recovery Act
RFI = RCRA Facility Investigation
RG = remedial goal
VOC = volatile organic compound

Lab Q = Lab Data Qualifiers.
D = Sample was run at a dilution.
J = Value < MRL and > MDL and is considered estimated.
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Val Q = Validation Data Qualifiers.
B = Blank contamination. Value detected in sample and associated blank.
J = Estimated concentration.
K = Estimated concentration bias high.
L = Estimated concentration bias low.
U = Analyte not detected.
UL = Estimated concentration non-detect bias low.
-2 = Sample code signifies the second round of sampling conducted at these four wells. Original samples were collected during the 1998 RFI performed by ICF Kaiser.

Table 3-6 Analytes Detected in Baseline Monitoring

Analyte	Sample ID / Sample Date	13MW2 1/26/15					13MW3 1/26/15					13MW4 1/26/15					13MW5 1/26/15					48MW1 1/28/15					48MW2 1/28/15					48MW3 1/27/15					48MW06 1/29/15				
	RG	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL
VOCs (µg/L)																																								
1,1,1-Trichloroethane	NA	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.454	J	J	0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.691	DJ	J	0.5	1
1,1-Dichloroethane	NA	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.908	J	J	0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	4.28	D		0.5	1
Acetone	NA	5	U		2.5	5	5	U		2.5	5	5	U		2.5	5	5	U		2.5	5	5	U		2.5	5	5	U		2.5	5	5	XU		2.5	5	27.8	D	B	5	10
Bromoform	NA	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	XU		0.5	1
Bromomethane	NA	1	U		0.5	1	1	U		0.5	1	1	U		0.5	1	1	U		0.5	1	1	U		0.5	1	1	U		0.5	1	1	NU		0.5	1	2	U		1	2
Carbon Tetrachloride	5	0.5	U		0.25	0.5	4.62			0.25	0.5	0.592	J	J	0.25	0.5	0.5	U		0.25	0.5	0.5	XU		0.25	0.5	118	X	J	0.25	0.5	77.4			0.25	0.5	1	XU		0.5	1
Chloroform	NA	0.5	U		0.25	0.5	0.47	J	J	0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	7.46			0.25	0.5	8.37			0.25	0.5	1	U		0.5	1
cis-1,2-Dichloroethene	NA	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.914	J	J	0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	4.86	D		0.5	1
Dibromochloromethane	NA	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	XU		0.25	0.5	1	U		0.5	1
Ethylbenzene	NA	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.469	J	J	0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1
m- & p-Xylene	NA	1	U		0.5	1	1	U		0.5	1	1	U		0.5	1	1	U		0.5	1	0.535	J	J	0.5	1	1.32	J	J	0.5	1	0.736	J	J	0.5	1	2	U		1	2
o-Xylene	NA	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.285	J	J	0.25	0.5	0.919	J	J	0.25	0.5	0.495	J	J	0.25	0.5	1	U		0.5	1
Tetrachloroethene	NA	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	0.709	DJ	J	0.5	1
Trichloroethene	5	0.5	U		0.25	0.5	0.883	J	J	0.25	0.5	0.5	U		0.25	0.5	1.42			0.25	0.5	1.91			0.25	0.5	10.5			0.25	0.5	12.4			0.25	0.5	3.29	D		0.5	1
Miscellaneous (µg/L)																																								
Total Organic Carbon	NA	2500	U		1250	2500	2500	U		1250	2500	2500	U		1250	2500	NT					2500	U		1250	2500	2500	U		1250	2500	2500	U		1250	2500	1640	J	J	1250	2500
Chloride	NA	2750			170	330	3880			170	330	11500			170	330	NT					3100			170	330	2650			170	330	2220			170	330	9360	D		340	660
Nitrate (as N)	NA	71.5	J	J	33	100	1660			33	100	100	U		33	100	NT					1350			33	100	754			33	100	6400			33	100	5880			33	100
Sulfate	NA	45900			330	1000	126000			330	1000	23800			330	1000	NT					58000			330	1000	16800			330	1000	29800			330	1000	275000	D		660	2000
Methane	NA	2	U		1	2	2	U		1	2	2	U		1	2	NT					2	U		1	2	2	U		1	2	2	U		1	2	2	U		1	2
Ethene	NA	2	U		1	2	2	U		1	2	2	U		1	2	NT					2	U		1	2	2	U		1	2	2	U		1	2	2	U		1	2

Table 3-6 Analytes Detected in Baseline Monitoring (Continued)

Analyte	Sample ID Sample Date	48MW07 1/29/15					49MW01 1/28/15					49MW02 1/27/15					49MW03 1/28/15					49MW04 1/26/15					49MW05 1/26/15					50MW02 1/27/15				
	RG	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	MRL
VOCs (µg/L)																																			
1,1,1-Trichloroethane	NA	0.5	U		0.25	0.5	0.262	J	J	0.25	0.5	1	U		0.5	1	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	0.5	U		0.25	0.5
1,1-Dichloroethane	NA	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	0.313	J	J	0.25	0.5
Acetone	NA	5	U		2.5	5	5	U		2.5	5	14	XDJ	B	5	10	5	U		2.5	5	5	U		2.5	5	18.6	DJ	B	5	10	5	XU		2.5	5
Bromoform	NA	0.5	XU		0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	0.5	U		0.25	0.5
Bromomethane	NA	1	U		0.5	1	1	U		0.5	1	2	U		1	2	1	U		0.5	1	1	U		0.5	1	2	U		1	2	1	U		0.5	1
Carbon Tetrachloride	5	0.5	XU		0.25	0.5	4.97	X	J	0.25	0.5	5.05	D		0.5	1	0.5	XU		0.25	0.5	0.662	J	J	0.25	0.5	1	U		0.5	1	1.62			0.25	0.5
Chloroform	NA	0.5	U		0.25	0.5	0.404	J	J	0.25	0.5	1.55	DJ	J	0.5	1	0.5	U		0.25	0.5	1.46			0.25	0.5	1	U		0.5	1	0.5	U		0.25	0.5
cis-1,2-Dichloroethene	NA	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	0.384	J	J	0.25	0.5
Dibromochloromethane	NA	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	XU		0.5	1	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	0.5	XU		0.25	0.5
Ethylbenzene	NA	0.5	U		0.25	0.5	0.262	J	J	0.25	0.5	1.13	DJ	J	0.5	1	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	0.5	U		0.25	0.5
m- & p-Xylene	NA	1	U		0.5	1	0.69	J	J	0.5	1	4.06	D		1	2	1	U		0.5	1	1	U		0.5	1	2	U		1	2	0.804	J	J	0.5	1
o-Xylene	NA	0.5	U		0.25	0.5	0.544	J	J	0.25	0.5	2.91	D		0.5	1	0.296	J	J	0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	0.542	J	J	0.25	0.5
Tetrachloroethene	NA	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	0.311	J	J	0.25	0.5
Trichloroethene	5	0.5	U		0.25	0.5	0.5	U		0.25	0.5	.0501	DJ	J	0.5	1	0.5	U		0.25	0.5	0.5	U		0.25	0.5	1	U		0.5	1	2.08			0.25	0.5
Miscellaneous (µg/L)																																			
Total Organic Carbon	NA	NT					2500	U		1250	2500	2500	U		1250	2500	NT					2500	U		1250	2500	NT					2500	U		1250	2500
Chloride	NA	NT					6030			170	330	3450			170	330	NT					5160			170	330	NT					7270			170	330
Nitrate (as N)	NA	NT					303			33	100	47.6	J	J	33	100	NT					249	J	J	33	100	NT					2060			33	100
Sulfate	NA	NT					1000	U		330	1000	26600			330	1000	NT					53600			330	1000	NT					73200			330	1000
Methane	NA	NT					2	U		1	2	1.54	J	J	1	2	NT					2	U		1	2	NT					2	U		1	2
Ethene	NA	NT					2	U		1	2	1.4	J	J	1	2	NT					2	U		1	2	NT					2	U		1	2

Notes:

Bold outline indicates an RG exceedance.
µg/L = micrograms per liter (parts per billion)
CCV = Continuing Calibration Verification
ICV = Initial Calibration Verification
ID = identification
MDL = method detection limit
MRL = method reporting limit
NA = not applicable
NT = Analyte not tested
RCRA = Resource Conservation and Recovery Act
RFI = RCRA Facility Investigation
RG = remedial goal
VOC = volatile organic compound

Lab Q = Lab Data Qualifiers.
D = Sample was run at a dilution.
J = Value < MRL and > MDL and is considered estimated.
N = Matrix Spike/Matrix Spike Duplicate accuracy and/or precision were outside criteria.
U = Analyte not detected at the method reporting limit.
X = The associated ICV/CCV exceeded the upper control limit.

Val Q = Validation Data Qualifiers.
B = Blank contamination. Value detected in sample and associated blank.
J = Estimated concentration.
K = Estimated concentration bias high.
L = Estimated concentration bias low.
U = Analyte not detected.
UL = Estimated concentration non-detect bias low.
-2 = Sample code signifies the second round of sampling conducted at these four wells. Original samples were collected during the 1998 RFI performed by ICF Kaiser.

4. FIELD ACTIVITIES

The following sections provide a discussion of field activities conducted by WESTON in the Year Six MNA monitoring at SWMU 49.

The Year Six groundwater monitoring consisted of four sampling events conducted in October 2020 (twenty-first quarter), January 2021 (twenty-second quarter), April 2021 (twenty-third quarter), and July 2021 (twenty-fourth quarter). Fifteen monitoring wells were included in the monitoring well network, 11 of which were sampled on a quarterly basis and 4 on an annual basis. The Year Six MNA groundwater monitoring consisted of a synoptic water level measurement and sampling of the 15 point of compliance (POC) monitoring wells for target compound list (TCL) VOCs and dissolved gases (methane, ethane, ethene). In addition, the following indicator parameters were collected: total organic carbon (TOC), dissolved ferrous iron (Fe^{2+}), and the anions chloride, nitrate, and sulfate. Water quality parameters collected during low-flow sampling included corrosivity/hydrogen ion concentration (pH), temperature, specific conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity utilizing a daily calibrated Yellow Springs Instrument (YSI) water quality meter. The list of monitoring wells and sample frequency is provided in **Table 4-1**. Groundwater samples were submitted to a U.S. Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP) accredited laboratory (CT Laboratories, LLC). Field activities were conducted in accordance with the Draft Final SWMU 49 MNA Groundwater Monitoring Work Plan (CB&I, 2014b). Copies of the groundwater sample forms, meter calibration records, and field notes are presented in **Appendices A-1, A-2,** and **A-3**, respectively.

4.1 TWENTY-FIRST QUARTER GROUNDWATER SAMPLING

Groundwater elevation measurements and samples were collected from 11 POC monitoring wells. The twenty-first quarter of groundwater sampling was conducted 25 through 28 October 2020. Groundwater elevation measurements were collected prior to sampling activities. The locations of monitoring wells sampled during this quarterly event are provided in **Figure 4-1**.

4.1.1 Groundwater Elevation Measurements

Water level elevations were collected during each Year Six quarterly event from the 15 monitoring wells at SWMU 49 prior to the collection of groundwater samples. **Table 4-2** provides the measured depth-to-water (DTW) levels (from the top of the casing) and groundwater elevations amsl collected on 25 October 2020. **Figure 4-2** presents a groundwater elevation contour map developed from the elevation data collected during this quarterly monitoring event. Groundwater contours were derived using the Environmental System Research Institute (Esri) ArcGIS Desktop Spatial Analyst 10.7.1 software and creating a spline interpolated continuous surface based on limited groundwater data collected in the field. The surface model was executed using default values in most cases and was forced to cover an area inclusive of all wells using the extent polygon to define the area of interest. Contour lines were then constructed from the output splined surface at 10-ft and 2-ft intervals, depending on the site, with zero base contour. The results of the automated processing were then reviewed by subject knowledge experts and manually adjusted to accurately represent ground conditions.

4.1.2 Groundwater Sampling

Groundwater samples were collected from 11 of the 15 POC monitoring wells from 25 through 28 October 2020 and analyzed for the analytical suites covering TCL VOCs and the dissolved gases (methane, ethane, and ethene). In addition, the following indicator parameters were collected: TOC, dissolved Fe^{2+}, chloride, nitrate, and sulfate. Water quality parameters collected during low-flow sampling included pH, temperature, specific conductivity, DO, ORP, and turbidity. These parameters are discussed in Section 6.2 regarding the potential for biodegradation in the groundwater at SWMU 49. **Table 4-1** presents the suite of analytes collected for analysis during the twenty-first quarterly monitoring event.

Groundwater samples were collected by low-flow peristaltic pumps to obtain representative groundwater samples and to minimize investigation-derived waste (IDW) purge water. The following procedures were followed during all quarterly groundwater monitoring events:

1. A photoionization detector (PID) reading was taken upon removing the well cap to determine the presence of potentially hazardous levels of volatile gases. The PID readings were collected during the water elevation sweeps and again during sample collection. All PID readings were within acceptable levels.

2. During the water level sweep, DTW and total depth measurements were recorded to determine the amount of water in the well casing and sand pack. Only approximate total well depths were measured during the quarterly events to confirm that the total depths were consistent with the data from the previous reports.

3. Groundwater samples were collected after all water level elevations had been recorded. The general practice was to lower the peristaltic pump tubing to a depth where the pump tubing inlet was within the screened interval. Ample hydraulic head was maintained above the tubing depth to ensure a sufficient water supply. The pump was connected to a Geocontrol PRO control unit, whereas the discharge tubing was connected to a YSI 556 water quality flow cell.

4. Monitoring wells were pumped at a rate of approximately 200 milliliters per minute (mL/min). Flow rate was determined by gauging the time it took to fill a 200-milliliter (mL) vial. Water quality parameters were recorded continuously including temperature, pH, DO, ORP, turbidity, and specific conductivity. Turbidity was measured using a Hach 2100Q turbidity meter, whereas concentrations of dissolved Fe^{2+} were measured in the field using a Hach DR900 test kit by Method 8146.

5. The groundwater flow rate was maintained during sample collection. Samples were collected, labeled, and packed in ice until shipment to the laboratory. Chain-of-custody (CoC) forms were filled out and shipped with the samples. Copies of the CoC forms are provided in **Appendix B-1**, along with the raw analytical data packages.

Table 4-3 presents a summary of the final (stabilized) water quality readings for each well from the twenty-first quarter. Based on the twenty-first quarter DO data, slightly aerobic groundwater conditions are prominent in all 11 monitoring wells at SWMU 49 (i.e., DO >1 parts per million [ppm]). The DO levels ranged from a low of 1.78 milligrams per liter (mg/L) at monitoring well 49MW06 to a high of 7.96 mg/L at monitoring well 48MW2. ORP measurements ranged from a low of 123.7 millivolts (mV) at monitoring well 48MW06 to a high of 165.3 mV at monitoring well 48MW2. Measurements of pH ranged from a low of 6.92 standard units (SU) at monitoring well 13MW2 to a high of 7.68 SU at monitoring well 49MW01. As evidenced in **Table 4-3**, all pH measurements were below 8.0. Measuring the suitability of the groundwater to support microbial species is accomplished through pH readings. Microbial activity tends to be reduced outside of pH range of 5 to 9, and anaerobic microorganisms are typically sensitive to pH extremes (Interstate Technology and Regulatory Council [ITRC], 1999). Measurements of specific conductivity ranged from a low of 430 microsiemens per centimeter (µS/cm) at monitoring well 13MW4 to a high of 769 µS/cm at monitoring well 13MW2.

4.1.3 Quality Control Samples

Quality control (QC) samples, including two duplicate samples, three trip blanks, one equipment rinsate, and one matrix spike/matrix spike duplicate (MS/MSD), were collected during the twenty-first quarterly monitoring event.

Two duplicate samples were collected during the twenty-first quarterly monitoring event at 49MW02 (duplicate as 49TW02) and 13MW3 (duplicate as 13TW3), and were analyzed for the same full suite of compounds as the parent sample. Further, one MS/MSD was collected and analyzed for the same full suite of compounds as the parent sample.

One equipment rinse blank was collected.

One IDW purge water sample (49IDW) was collected and analyzed for pH, chemical oxygen demand (COD), and total metals. All collected purge water for all events was taken to the ACD area for storage and deposited in a 55-gallon drum labeled 48/49 with RFAAP providing subsequent disposal.

Results of the quality assurance (QA)/QC samples are presented in the raw analytical data package provided in **Appendix B-1**.

4.2 TWENTY-SECOND QUARTER GROUNDWATER SAMPLING

Groundwater elevation measurements and samples were collected from all 15 POC monitoring wells. The twenty-second quarter of groundwater sampling was conducted from 25 through 28 January 2021. Groundwater elevation measurements were collected prior to sampling activities. The locations of monitoring wells sampled during this quarterly event are provided in **Figure 4-1**.

4.2.1 Groundwater Elevation Measurements

Water level elevations were collected during each Year Six quarterly event from the 15 monitoring wells at SWMU 49 prior to the collection of groundwater samples. **Table 4-4** provides the measured DTW levels (from the top of the casing) and groundwater elevations amsl collected on 25 January 2020. **Figure 4-3** presents a groundwater elevation contour map developed from the elevation data collected during this quarterly monitoring event.

4.2.2 Groundwater Sampling

Groundwater samples were collected from all 15 POC monitoring wells from 25 through 28 January 2021. The twenty-second quarter monitoring samples were tested for the same analytes as the twenty-first quarter, which are presented in **Table 4-1**. In addition, the same MNA indicator parameters were collected in the twenty-second quarter as were collected in the twenty-first quarter: TOC, dissolved Fe^{2+}, chloride, nitrate, and sulfate. Water quality parameters collected during low-flow sampling included pH, temperature, specific conductivity, DO, ORP, and turbidity. These parameters are discussed in Section 6.2 regarding the potential for biodegradation in the groundwater at SWMU 49.

Groundwater samples were collected applying the same method and approach used during the twenty-first quarterly monitoring event: specifically, by low-flow peristaltic pumps.

Table 4-5 presents a summary of the final (stabilized) water quality readings for each well from the twenty-second quarter. Based on the twenty-second quarter DO data, aerobic groundwater conditions exist at SWMU 49 (i.e., DO >1 ppm). The DO levels ranged from a low of 1.27 mg/L at monitoring well 48MW3 to a high of 19.81 mg/L at monitoring well 48MW07. ORP measurements ranged from a low of 5.08 mV at monitoring well 13MW4 to a high of 151.1 mV at monitoring well 49MW03. Measurements of pH ranged from a low of 6.88 SU at monitoring well 48MW06 to a high of 7.97 SU at monitoring well 48MW07. Measurements of specific conductivity ranged from a low of 218 µS/cm at monitoring well 48MW07 to a high of 994 µS/cm at monitoring well 49MW05. Copies of the CoC forms are provided in **Appendix B-1**, along with the raw analytical data packages.

4.2.3 Quality Control Samples

QC samples, including two duplicate samples, three trip blanks, one equipment rinsate, and one MS/MSD, were collected during the twenty-second quarterly monitoring event.

Two duplicate samples were collected during the twenty-second quarterly monitoring event at 48MW3 (duplicate as 48TW3) and 13MW3 (duplicate as 13TW3), and were analyzed for the full suite of compounds as the parent sample. Further, one MS/MSD was collected and analyzed for the same full suite of compounds as the parent sample.

One equipment rinsate was collected.

One IDW purge water sample (49IDW) was collected and analyzed for pH, COD, and total metals.

4.3 TWENTY-THIRD QUARTER GROUNDWATER SAMPLING

Groundwater elevation measurements were collected from all 15 POC monitoring wells, whereas samples were collected from 11 of the 15 wells. The twenty-third quarter of groundwater sampling was conducted 14 through 18 April 2021. Groundwater elevation measurements were collected prior to sampling activities. The locations of monitoring wells sampled during this quarterly event are provided in **Figure 4-1**.

4.3.1 Groundwater Elevation Measurements

Water level elevations were collected during each Year Six quarterly event from the 15 monitoring wells at SWMU 49 prior to the collection of groundwater samples. **Table 4-6** provides the measured DTW levels (from the top of the casing) and groundwater elevations amsl collected on 14 April 2021. **Figure 4-4** presents a groundwater elevation contour map developed from the elevation data collected during this quarterly monitoring event.

4.3.2 Groundwater Sampling

Groundwater samples were collected from 11 of the 15 POC monitoring wells from 14 through 18 April 2021. The twenty-third quarterly monitoring samples were tested for the same analytes as the twenty-first and twenty-second quarters, which are presented in **Table 4-1**. In addition, the following MNA indicator parameters were collected: TOC, dissolved Fe^{2+}, chloride, nitrate, and sulfate. Water quality parameters collected during low-flow sampling included pH, temperature, specific conductivity, DO, ORP, and turbidity. These parameters are discussed in Section 6.2 regarding the potential for biodegradation in the groundwater at SWMU 49.

Groundwater samples were collected applying the same method and approach used during the twenty-first and twenty-second quarterly monitoring events: specifically, by low-flow peristaltic pumps.

Table 4-7 presents a summary of the final (stabilized) water quality readings for each well from the twenty-third quarter. Based on the twenty-third quarter DO data, aerobic groundwater

conditions exist at SWMU 49 (i.e., DO >1 ppm). The DO levels ranged from a low of 1.27 mg/L at monitoring well 48MW3 to a high of 7.81 mg/L at monitoring well 48MW2. ORP measurements ranged from a low of 88.7 mV at monitoring well 49MW02 to a high of 220.6 mV at monitoring well 13MW4. Measurements of pH ranged from a low of 6.57 SU at monitoring well 13MW4 to a high of 7.64 SU at monitoring well 48MW1. Measurements of specific conductivity ranged from a low of 375 µS/cm at monitoring well 13MW4 to a high of 866 µS/cm at monitoring well 48MW06. Copies of the CoC forms are provided in **Appendix B-1**, along with the raw analytical data packages.

4.3.3 Quality Control Samples

QC samples, including two duplicate samples, three trip blanks, one equipment rinsate, and one MS/MSD, were collected during the twenty-third monitoring event.

Two duplicate samples were collected during the twenty-third monitoring event at 48MW3 (duplicate as 48TW3) and 13MW3 (duplicate as 13TW3), and were analyzed for the same full suite of compounds as the parent sample. Further, one MS/MSD was collected and analyzed for the same full suite of compounds as the parent sample.

One equipment rinse blank was collected.

One IDW purge water sample (49IDW) was collected and analyzed for pH, COD, and total metals.

Results of the QA/QC samples are presented in the raw analytical data package provided in **Appendix B-1**.

4.4 TWENTY-FOURTH QUARTER GROUNDWATER SAMPLING

Groundwater elevation measurements and samples were collected from 11 of 15 POC monitoring wells. The twenty-fourth quarter of groundwater sampling was conducted from 26 through 29 July 2021. Groundwater elevation measurements were collected prior to sampling activities. The locations of monitoring wells sampled during this quarterly event are provided in **Figure 4-1**.

4.4.1 Groundwater Elevation Measurements

Water level elevations were collected during each Year Six quarterly event from 11 monitoring wells at SWMU 49 prior to the collection of groundwater samples. **Table 4-8** provides the measured DTW levels (from the top of the casing) and groundwater elevations amsl collected on 26 July 2021. **Figure 4-5** presents a groundwater elevation contour map developed from the elevation data collected during this quarterly monitoring event.

4.4.2 Groundwater Sampling

Groundwater samples were collected from 11 of the 15 POC monitoring wells from 26 through 28 July 2021. The twenty-fourth quarterly monitoring samples were tested for the same analytes as all previous quarters, which are presented in **Table 4-1**. In addition, the following MNA indicator parameters were collected: TOC, dissolved Fe^{2+}, chloride, nitrate, and sulfate. Water quality parameters collected during low-flow sampling included pH, temperature, specific conductivity, DO, ORP, and turbidity. These parameters are discussed in Section 6.2 regarding the potential for biodegradation in the groundwater at SWMU 49.

Groundwater samples were collected applying the same method and approach used during the twenty first through twenty-third quarterly monitoring event: specifically, by low-flow peristaltic pumps.

Table 4-9 presents a summary of the final (stabilized) water quality readings for each well from the twenty-fourth quarter. Based on the twenty-fourth quarter DO data, aerobic groundwater conditions exist at SWMU 49 (i.e., DO >1 ppm) at all monitoring wells. The DO levels ranged from a low of 3.44 mg/L at monitoring well 13MW4 to a high of 8.56 mg/L at monitoring well 48MW2. ORP measurements ranged from a low of 187.3 mV at monitoring well 13MW3 to a high of 314.1 mV at monitoring well 50MW02. Measurements of pH ranged from a low of 6.29 SU at monitoring well 13MW4 to a high of 7.7 SU at monitoring well 48MW1. Measurements were recorded continuously for temperature, pH, DO, ORP, turbidity, and specific conductivity. Turbidity was measured using a Hach 2100Q turbidity meter, whereas concentrations of dissolved Fe^{2+} and manganese were tested in the field using a Hach DR900 test kit by Method 8146.

4.4.3 Quality Control Sampling

QC samples, including two duplicate samples, three trip blanks, one equipment rinsate, and one MS/MSD, were collected during the twenty-fourth quarterly monitoring event.

Two duplicate samples were collected during the twenty-fourth quarterly monitoring event at 48MW3 (duplicate as 48TW3) and 13MW3 (duplicate as 13TW3), and were analyzed for the full suite of compounds as the parent sample. Further, one MS/MSD was collected and analyzed for the full suite of compounds as the parent sample.

One equipment rinse blank was collected during this quarter.

One IDW purge water sample (49IDW) was collected and analyzed for pH, COD, and total metals.

Results of the QA/QC samples are presented in the raw analytical data package provided in **Appendix B-1**.

Table 4-1 SWMU 49 Year Six Quarterly Monitoring Analytical Suite

Well ID	Frequency	TCL VOCs	Dissolved Gases (Methane, Ethane, Ethene)	MNA Indicator Parameters	Water Quality Parameters
13MW2	Quarterly	X	X	X	X
13MW3	Quarterly	X	X	X	X
13MW4	Quarterly	X	X	X	X
13MW5	Annual	X	X	X	X
48MW1	Quarterly	X	X	X	X
48MW2	Quarterly	X	X	X	X
48MW3	Quarterly	X	X	X	X
48MW06	Quarterly	X	X	X	X
48MW07	Annual	X	X	X	X
49MW01	Quarterly	X	X	X	X
49MW02	Quarterly	X	X	X	X
49MW03	Annual	X	X	X	X
49MW04	Quarterly	X	X	X	X
49MW05	Annual	X	X	X	X
50MW02	Quarterly	X	X	X	X

Notes:
ID = identification
MNA = monitored natural attenuation
TCL = target compound list
VOC = volatile organic compound

Table 4-2 SWMU 49 Twenty-First Quarter Groundwater Elevations

Well ID	Screen Interval (ft bgs)	Screen Length (ft)	Total Depth (ft)	Water Level* (ft BTOC)	Elevation (top of casing) (ft amsl)	Water Level (ft amsl)	PID Readings (ppm)
48MW06	58 - 78	20	78	66.28	1822.85	1756.57	PID = 0.0
48MW1	110 - 140	30	140	106.27	1816.42	1710.15	PID = 0.0
48MW2	113 - 134	20	133.7	123.07	1816.27	1693.20	PID = 0.0
48MW3	100 - 120	20	120	95.96	1808.56	1712.60	PID = 0.0
49MW01	90 - 121	31	121	115.25	1826.42	1711.17	PID = 0.0
49MW02	103 - 133	30	133	91.21	1806.29	1715.08	PID = 0.0
50MW02	89 - 119	30	119	114.21	1809.63	1695.42	PID = 0.0
13MW2	19 - 29	10	29	21.18	1702.62	1681.44	PID = 0.0
13MW3	9 - 19	10	19	14.82	1694.47	1679.95	PID = 0.0
13MW4	14 - 24	10	24	15.91	1696.40	1680.49	PID = 0.0
49MW04	50 - 70	20	72	20.86	1703.00	1682.14	PID = 0.0

Notes:
* Groundwater levels measured on 25 October 2020.
amsl = above mean sea level
bgs = below ground surface
BTOC = below top of casing
DTW = depth to water
ft = feet
ID = identification
PID = photoionization detector
ppm = parts per million

Table 4-3 SWMU 49 Twenty-First Quarter Water Quality Parameters

Well ID	Temperature (°C)	Specific Conductivity (µS/cm)	pH	Dissolved Oxygen (mg/L)[1]	ORP (mV)	Turbidity (NTU)
48MW06	13.48	767	7.36	1.78	123.7	139.7
48MW1	13.83	633	7.63	3.9	145.9	45.8
48MW2	14.05	528	7.61	7.96	165.3	140.3
48MW3	14.05	746	7.40	3.17	144.1	41.2
49MW01	13.52	483	7.68	5.76	150.3	306.6
49MW02	14.43	582	7.54	2.34	128.1	710.3
50MW02	13.62	689	7.29	4.36	161.2	172.2
13MW2	17.32	769	7.19	5.97	158.7	15.3
13MW3	16.67	671	7.18	3.49	141.3	11.6
13MW4	16.20	430	6.92	3.28	140.8	19.2
49MW04	16.03	675	7.65	2.63	132.1	9.7

Notes:
[1]Despite appropriate calibration, DO levels were significantly above the saturation value for unknown reasons and consequently are questionable.

°C = degrees Celsius
µS/cm = microsiemens per centimeter
DO = dissolved oxygen
ID = identification
mg/L = milligrams per liter
mV = millivolts
NTU = Nephelometric turbidity unit
ORP = oxidation-reduction potential
pH = corrosivity/hydrogen ion concentration

Table 4-4 SWMU 49 Twenty-Second Quarter Groundwater Elevations

Well ID	Screen Interval (ft bgs)	Screen Length (ft)	Total Depth (ft)	Water Level (ft BTOC)	Elevation (top of casing) (ft amsl)	Water Level (ft amsl)	PID Readings (ppm)
48MW07	62 - 82	20	82	46.45	1833.69	1787.24	PID = 0.0
13MW5	14 - 25	19	25	16.45	1696.40	1679.95	PID = 0.0
49MW03	77 - 117	40	117	99.40	1811.82	1712.42	PID = 0.0
49MW05	16 - 37	19	36.8	19.80	1699.74	1676.94	PID = 0.0
48MW06	58 - 78	20	78	65.27	1822.85	1757.58	PID = 0.0
48MW1	110 - 140	30	140	102.58	1816.42	1713.84	PID = 0.0
48MW2	113 - 134	20	133.7	122.48	1816.27	1693.79	PID = 0.0
48MW3	100 - 120	20	120	96.05	1808.56	1712.51	PID = 0.0
49MW01	90 - 121	31	121	115.03	1826.42	1711.39	PID = 0.0
49MW02	103 - 133	30	133	91.07	1806.29	1715.22	PID = 0.0
50MW02	89 - 119	30	119	113.52	1809.63	1696.11	PID = 0.0
13MW2	19 - 29	10	29	20.47	1702.62	1682.15	PID = 0.0
13MW3	9 - 19	10	19	15.03	1694.47	1679.86	PID = 0.0
13MW4	14 - 24	10	24	16.47	1696.40	1680.94	PID = 0.0
49MW04	50 - 70	20	72	20.25	1703.00	1683.28	PID = 0.0

Notes:
amsl = above mean sea level
bgs = below ground surface
BTOC = below top of casing
ft = feet
ID = identification
PID = photoionization detector
ppm = parts per million

Table 4-5 SWMU 49 Twenty-Second Quarter Water Quality Parameters

Well ID	Temperature (°C)	Specific Conductivity (µS/cm)	pH	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)
48MW07	12.8	218	7.97	19.81	94.2	876
13MW5	13.5	869	7.32	2.44	21.9	6.38
49MW03	11.8	413	7.14	10.68	151.1	26.8
49MW05	13.4	994	6.97	650	103.9	3.91
48MW06	6.88	921	6.88	3.21	138.6	39.22
48MW1	9.0	574	7.34	6.63	135.8	17.19
48MW2	9.6	523	7.78	12.2	126.6	443
48MW3	13.9	665	6.99	1.27	139.1	9.81
49MW01	8.7	485	7.39	7.96	144.6	222
49MW02	12.3	568	7.57	16.35	143.1	510
50MW02	11.9	640	7.04	7.59	131.3	80.31
13MW2	13.5	830	7.05	6.98	98.8	3.79
13MW3	13.0	663	6.99	4.96	80.5	2.77
13MW4	14.2	542	7.06	3.03	5.08	9.77
49MW04	13.1	695	7.27	2.46	82.3	1.39

Notes:
°C = degrees Celsius
µS/cm = microsiemens per centimeter
ID = identification
mg/L = milligrams per liter
mV = millivolts
NTU = Nephelometric turbidity unit
ORP = oxidation-reduction potential
pH = corrosivity/hydrogen ion concentration

Table 4-6 SWMU 49 Twenty-Third Quarter Groundwater Elevations

Well ID	Screen Interval (ft bgs)	Screen Length (ft)	Total Depth (ft)	Water Level (ft BTOC)	Elevation (top of casing) (ft amsl)	Water Level (ft amsl)	PID Readings (ppm)
48MW07	62 - 82	20	82	45.28	1833.69	1788.41	PID = 0.0
13MW5	14 - 25	19	25	14.37	1696.40	1682.03	PID = 0.0
49MW03	77 - 117	40	117	91.28	1811.82	1720.54	PID = 0.0
49MW05	16 - 37	19	36.8	17.46	1699.74	1682.28	PID = 0.0
48MW06	58 - 78	20	78	62.51	1822.85	1760.34	PID = 0.0
48MW1	110 - 140	30	140	98.62	1816.42	1717.80	PID = 0.0
48MW2	113 - 134	20	133.7	120.4	1816.27	1695.87	PID = 0.0
48MW3	100 - 120	20	120	93.66	1808.56	1714.90	PID = 0.0
49MW01	90 - 121	31	121	110.41	1826.42	1716.01	PID = 0.0
49MW02	103 - 133	30	133	97.67	1806.29	1708.62	PID = 0.0
50MW02	89 - 119	30	119	111.06	1809.63	1698.57	PID = 0.0
13MW2	19 - 29	10	29	19.71	1702.62	1682.91	PID = 0.0
13MW3	9 - 19	10	19	14.00	1694.47	1680.47	PID = 0.0
13MW4	14 - 24	10	24	13.83	1696.40	1682.57	PID = 0.0
49MW04	50 - 70	20	72	18.82	1703.00	1684.18	PID = 0.0

Notes:
amsl = above mean sea level
bgs = below ground surface
BTOC = below top of casing
ft = feet/foot
ID = identification
PID = photoionization detector
ppm = parts per million

Table 4-7 SWMU 49 Twenty-Third Quarter Water Quality Parameters

Well ID	Temperature (°C)	Specific Conductivity (µS/cm)	pH	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)
48MW06	13.3	866	6.88	3.59	176.4	31.6
48MW1	12.4	431	7.64	5.17	190.8	10.35
48MW2	15.0	499	7.23	7.81	148.5	184.3
48MW3	13.9	665	6.99	1.27	139.1	9.81
49MW01	12.4	436	7.30	5.43	217.6	172.8
49MW02	14.4	519	7.25	4.6	88.7	302.8
50MW02	13.1	647	7.09	7.39	201.3	95.7
13MW2	14.5	686	7.0	7.72	165.9	6.03
13MW3	12.6	563	6.85	4.79	200.3	9.67
13MW4	13.5	375	6.57	5.31	220.6	7.63
49MW04	14.1	596	7.21	1.79	160.1	17.82

Notes:
°C = degrees Celsius
µS/cm = microsiemens per centimeter
ID = identification
mg/L = milligrams per liter
mV = millivolts
NTU = Nephelometric turbidity unit
ORP = oxidation-reduction potential
pH = corrosivity/hydrogen ion concentration

Table 4-8 SWMU 49 Twenty-Fourth Quarter Groundwater Elevations

Well ID	Screen Interval (ft bgs)	Screen Length (ft)	Total Depth (ft)	Water Level (ft BTOC)	Elevation (top of casing) (ft amsl)	Water Level (ft amsl)	PID Readings (ppm)
48MW06	58 - 78	20	78	66.13	1822.85	1756.72	PID = 0.0
48MW1	110 - 140	30	140	105.27	1816.42	1711.15	PID = 0.0
48MW2	113 - 134	20	133.7	122.54	1816.27	1693.73	PID = 0.0
48MW3	100 - 120	20	120	94.98	1808.56	1713.58	PID = 0.0
49MW01	90 - 121	31	121	115.13	1826.42	1711.29	PID = 0.0
49MW02	103 - 133	30	133	87.23	1806.29	1719.06	PID = 0.0
50MW02	89 - 119	30	119	113.75	1809.63	1695.88	PID = 0.0
13MW2	19 - 29	10	29	20.8	1702.62	1681.82	PID = 0.0
13MW3	9 - 19	10	19	15.51	1694.47	1678.96	PID = 0.0
13MW4	14 - 24	10	24	17.09	1696.40	1679.31	PID = 0.0
49MW04	50 - 70	20	72	20.74	1703.00	1682.26	PID = 0.0

Notes:
amsl = above mean sea level
bgs = below ground surface
BTOC = below top of casing
ft = feet/foot
ID = identification
PID = photoionization detector
ppm = parts per million

Table 4-9 SWMU 49 Twenty-Fourth Quarter Water Quality Parameters

Well ID	Temperature (°C)	Specific Conductivity (µS/cm)	pH	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)
48MW06	17.1	791	7.28	3.86	207.9	393.26
48MW1	18.5	518	7.7	5.3	207.4	3.87
48MW2	15.6	607	7.29	8.56	249.3	97.22
48MW3	15.6	788	7.21	3.86	233.8	-1.26
49MW01	18.4	521	7.58	5.93	229.3	190.44
49MW02	16.7	644	7.31	3.59	245.6	6.0
50MW02	17.5	711	7.15	5.9	314.1	21.21
13MW2	21.1	834	7.32	7.21	214.5	2.37
13MW3	28.7	651	7.02	4.74	187.3	5.82
13MW4	15.6	502	6.29	3.44	224.8	18.0
49MW04	15.3	743	7.28	5.87	235.0	0.76

Notes:
°C = degrees Celsius
µS/cm = microsiemens per centimeter
ID = identification
mg/L = milligrams per liter
mV = millivolts
NTU = Nephelometric turbidity unit
ORP = oxidation-reduction potential
pH = corrosivity/hydrogen ion concentration

Legend

- Well
- SWMU 49 Boundary

Aerial Source:
Near Map Imagery, February 2020

N

0 55 110 220 Feet

Prepared By:

Baltimore District

FIGURE 4-1
SWMU 49 MONITORING
WELL SAMPLE LOCATIONS
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49_Monitoring_Well_Sample_Locations.mxd, 10/21/2020 1:12:15 PM, johna

Legend

- Monitoring Well Sampled Annually
- Monitoring Well Sampled Quarterly
- Well not included in MNA Program
- Groundwater Contour
- SWMU 49 Boundary

Note:
Contours are in feet above mean sea level (amsl).

Aerial Source:
Near Map Imagery, February 2020

N

0 45 90 180 Feet

Prepared By:

Baltimore District

FIGURE 4-2
SWMU 49 OCTOBER 2020
GROUNDWATER CONTOUR MAP
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49\SWMU49_October2020_Groundwate_ Contour_Map.mxd, 12/22/2021 3:35:42 PM, johna

Legend

- Monitoring Well Sampled Annually
- Monitoring Well Sampled Quarterly
- Well not included in MNA Program
- Groundwater Contour
- SWMU 49 Boundary

Note:
It is the only quarter in which all wells in the program are sampled. (Annual wells)

Aerial Source:
Near Map Imagery, February 2020

N

0 45 90 180 Feet

Prepared By:

Baltimore District

FIGURE 4-3
SWMU 49 JANUARY 2021
GROUNDWATER CONTOUR MAP
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49\SWMU49_January2021_Groundwate_ Contour_Map.mxd, 12/22/2021 3:35:27 PM, johna

Legend

- Monitoring Well Sampled Annually
- Monitoring Well Sampled Quarterly
- Well not included in MNA Program
- Groundwater Contour
- SWMU 49 Boundary

Note:
Contours are in feet above mean sea level (amsl).

Aerial Source:
Near Map Imagery, February 2020

N

0 45 90 180 Feet

Prepared By:

Baltimore District

FIGURE 4-4
SWMU 49 APRIL 2021
GROUNDWATER CONTOUR MAP
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49\SWMU49_April2021_Groundwate_ Contour_Map.mxd, 12/22/2021 3:16:15 PM, johna

Legend

- Monitoring Well Sampled Annually
- Monitoring Well Sampled Quarterly
- Well not included in MNA Program
- Groundwater Contour
- SWMU 49 Boundary

Note:
Contours are in feet above mean sea level (amsl).

Aerial Source:
Near Map Imagery, February 2020

N

0 45 90 180 Feet

Prepared By:

Baltimore District

FIGURE 4-5
SWMU 49 JULY 2021
GROUNDWATER CONTOUR MAP
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49\SWMU49_July2021_Groundwate_ Contour_Map.mxd, 12/22/2021 3:35:06 PM, johna

5. CHEMICAL ANALYTICAL RESULTS

5.1 SELECTION OF COMPARISON CRITERIA

The chemical data collected during the Year Six MNA groundwater monitoring investigation were compared to RGs selected in the approved Draft SWMU 48/49 RFI Report (CB&I, 2014a). **Tables 5-1** through **5-8** present the analytical results and summaries of the twenty-first through twenty-fourth quarterly monitoring data, including number of results that exceeded the RGs, frequency of detection, the minimum and maximum detected concentrations, and the location of the maximum concentration.

5.2 TWENTY-FIRST QUARTER GROUNDWATER RESULTS

Eleven groundwater monitoring wells were sampled during this quarterly monitoring event: 13MW2, 13MW3, 13MW4, 48MW1, 48MW2, 48MW3, 48MW06, 49MW01, 49MW02, 49MW04, and 50MW02, whereas two duplicate samples were collected from monitoring wells 48MW3 (duplicate as 48TW3) and 13TW3 (duplicate as 13TW3). Sample locations are provided in **Figure 4-1**.

Samples were submitted for TCL VOCs and MNA indicator parameter analyses, including dissolved gases (methane, ethane, and ethene) and dissolved iron (Fe). A summary of detected constituents is summarized in **Table 5-1**, and a subset of the results, consistent with the reporting in previous SWMU 49 LTM reports, is presented in **Table 5-2**. The CT plume is shown in **Figure 5-1**, and the TCE plume is shown in **Figure 5-2**. The potential for biodegradation in the groundwater at SWMU 49 is discussed in Section 6.2.

TCL VOCs

Six VOCs were detected in groundwater samples: 1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethane (1,1-DCA), CT, chloroform, cis-1,2-DCE, and TCE. Seven of the 11 monitoring wells had one or more detections of the VOCs listed above; monitoring wells 49MW02 and 13MW2 did not have any detections of VOCs.

The VOC 1,1,1-TCA was detected at monitoring well 48MW06 at an estimated concentration of 0.42 µg/L. An RG for 1,1,1-TCA has not been established for SWMU 49. However, the USEPA MCL for 1,1,1-TCA is 200 µg/L (USEPA, 2018).

The VOC 1,1-DCA was detected in two monitoring wells, 48MW06 and 48MW1, at a concentration of 2.9 µg/L (48MW06) and an estimated concentration of 0.87 µg/L (48MW1). An RG for 1,1-DCA has not been established for SWMU 49. There is no USEPA MCL for 1,1-DCA (USEPA, 2018); however, the tapwater regional screening level (RSL) is 2.8 µg/L (USEPA, 2021).

The VOC CT was detected at six monitoring wells: 48MW2, 48MW3, 49MW01, 13MW3 (and field duplicate 13TW3), 49MW04, and 50MW02. Three wells contained CT concentrations that exceeded the RG of 5 µg/L: monitoring wells 48MW2 (35 µg/L), 48MW3 (79 µg/L), and 13MW3 (7.5 µg/L) (and field duplicate 13TW3 at 7.6 µg/L). The range of concentrations detected during this quarter went from a low of an estimated value of 0.56 µg/L (49MW04) to a high of 79 µg/L (48MW3). The CT plume is shown on **Figure 5-1**; the size of the area still exceeding the RG of 5 µg/L is estimated at 4 acres. The RG exceedance area presented on **Figure 5-1** was estimated based on triangulation of CT concentrations in the wells to establish the area above the RG of 5 µg/L. This methodology was used to estimate the RG exceedance area for all COCs for each quarterly event.

The VOC chloroform was detected in three monitoring wells: 48MW2, 48MW3, and 13MW3 (and field duplicate 13TW3). Concentrations ranged from an estimated low of 0.71 µg/L (13TW3) to a high of 15.0 µg/L (48MW3). An RG for chloroform has not been established for SWMU 49. However, the USEPA MCL for chloroform is 80 µg/L (USEPA, 2018).

The VOC cis-1,2-DCE was detected in three monitoring wells, 48MW06, 48MW1, and 50MW02, at an estimated concentration of 3.8 µg/L at 48MW06, an estimated concentration of 0.96 µg/L at 48MW1, and an estimated concentration of 0.42 µg/L at 50MW02. An RG for cis-1,2-DCE has not been established for SWMU 49. However, the USEPA MCL for cis-1,2-DCE is 70 µg/L (USEPA, 2018).

The VOC TCE was detected at seven monitoring wells: 48MW06, 48MW1, 48MW2, 48MW3, 50MW02, 13MW3 (and field duplicate 13TW3), and 13MW4. Monitoring well 48MW3 contained a concentration of TCE that exceeded the RG of 5 µg/L. The range of concentrations detected during this quarter went from an estimated low of 0.98 µg/L (13MW4) to a high of 16.0 µg/L

(48MW3). The TCE plume is shown on **Figure 5-2**; the size of the area still exceeding the RG of 5 µg/L is estimated at 1 acre.

Miscellaneous Analytes

Groundwater samples were also analyzed for MNA indicators (TOC, dissolved Fe^{2+} and manganese, dissolved gases, chloride, nitrate, and sulfate) for the purposes of evaluating the effectiveness of the MNA process.

TOC was only detected in one monitoring well at an estimated value of 1.5 µg/L (48MW06). Concentrations of dissolved Fe^{2+} ranged from a low of 0.0 mg/L (non-detect) (eight wells) to a high of 0.03 mg/L (13MW2), whereas dissolved manganese levels ranged from a low of 0.0 mg/L (non-detect) (seven wells) to a high of 0.30 mg/L (49MW04 and 13MW4). Chloride concentrations ranged from a low estimated value of 1.9 mg/L (49MW02) to an estimated high of 9.7 mg/L (48MW1). Detected concentrations of nitrate ranged from an estimated low of 0.17 mg/L (13MW2) to a high of 5.9 mg/L (48MW3). Sulfate concentrations ranged from an estimated low of 1.5 mg/L (49MW01) to a high of 130.0 mg/L (48MW06). Methane was detected in one monitoring well (49MW02 and its duplicate 49TW02) at concentrations of 3.9 and 1.1 µg/L, respectively. Ethane and ethene went undetected during this quarterly monitoring event. **Table 5-2** presents the MNA indicator parameters sample results.

5.3 TWENTY-SECOND QUARTER GROUNDWATER RESULTS

The twenty-second quarter monitoring event served as the annual event for the Year Six MNA sampling. As such, all 15 POC monitoring wells were sampled: 13MW2, 13MW3, 13MW4, 13MW5, 48MW1, 48MW2, 48MW3, 48MW06, 48MW07, 49MW01, 49MW02, 49MW3, 49MW04, 49MW5, and 50MW02. Two duplicate samples were collected from monitoring wells 48MW3 (duplicate as 48TW3) and 13MW3 (duplicate as 13TW3). Sample locations are provided in **Figure 4-1**. (Note: Both annual and quarterly wells were sampled during this monitoring event.)

Samples were submitted for TCL VOCs, dissolved gases (methane, ethane, and ethene), and MNA indicator parameter analyses. A summary of detected constituents is summarized in **Table 5-3**, and a subset of the results, consistent with the reporting in previous SWMU 49 LTM reports, is presented in **Table 5-4**. The CT plume is shown in **Figure 5-3**, and the TCE plume is shown in

Figure 5-4. The potential for biodegradation in the groundwater at SWMU 49 is discussed in Section 6.2.

TCL VOCs

Seven VOCs were detected in groundwater samples: 1,1,1-TCA, 1,1-DCA, CT, chloroform, cis-1,2-DCE, tetrachloroethene, and TCE. Seven monitoring wells had one or more detected concentrations of the VOCs listed above. Monitoring wells 48MW07 (upgradient well), 13MW5, 49MW03, 49MW05, 49MW02, and 13MW2 did not have detected concentrations of VOCs.

The VOC 1,1,1-TCA was detected in two monitoring wells (48MW06 and 48MW1) at estimated concentrations of 0.76 and 0.35 µg/L, respectively. An RG for 1,1,1-TCA has not been established for SWMU 49. However, the USEPA MCL for 1,1,1-TCA is 200 µg/L (USEPA, 2018).

The VOC 1,1-DCA was detected at three monitoring wells, 48MW06, 48MW1, and 50MW02, at a concentration of 4.2 µg/L (48MW06), an estimated concentration of 0.79 µg/L (48MW1), and an estimated concentration of 0.33 µg/L (50MW02). An RG for 1,1-DCA has not been established for SWMU 49. There is no USEPA MCL for 1,1-DCA (USEPA, 2018); however, the tapwater RSL is 2.8 µg/L (USEPA, 2021).

The VOC CT was detected at six monitoring wells: 48MW2, 48MW3 (and associated field duplicate 48TW3), 49MW01, 50MW02, 13MW3 (and associated field duplicate 13TW3), and 49MW04. Three wells contained CT concentrations that exceeded the RG of 5 µg/L: 48MW2 (14 µg/L), 48MW3 (94 µg/L) (95 µg/L in field duplicate 48TW3), and 13MW3 (6.8 µg/L) (6.8 µg/L in field duplicate 13TW3; this represents an increase at 48MW3 and a decrease in concentrations at 48MW2 and 13MW3 in comparison to the twenty-first quarter monitoring event. The size of the area still exceeding the RG of 5 µg/L reduced slightly from the twenty-first quarter and is estimated at 3.5 acres. The range of concentrations detected during this quarter went from a low of an estimated value of 0.61 µg/L (49MW04) to a high of 95 µg/L (13TW3, duplicate of 13MW3) (**Figure 5-3**).

Chloroform was detected in four monitoring wells, 48MW2, 48MW3 (and field duplicate 48TW3), 49MW01, and 13MW3 (and field duplicate 13TW3), at concentrations ranging from a low of 0.34 µg/L (49MW01) to a high of 16.0 µg/L (48MW3 and field duplicate 48TW3). Compared to

the twenty-first quarter monitoring results, the detected concentration of chloroform in 49MW01 increased and was similar in 48MW3 and 13MW3. An RG for chloroform has not been established for SWMU 49. However, the USEPA MCL for chloroform is 80 µg/L (USEPA, 2018).

The VOC cis-1,2-DCE was detected in three monitoring wells, 48MW06, 48MW1, and 50MW02, at a concentration of 8.2 µg/L, an estimated concentration of 0.89 µg/L, and an estimated concentration of 0.37 µg/L, respectively. When compared to the twenty-first quarter monitoring results, concentrations in 48MW06 increased, while 48MW1 was similar. Cis-1,2-DCE was not detected in 50MW02 in the twenty-first quarter. An RG for cis-1,2-DCE has not been established for SWMU 49. However, the USEPA MCL for cis-1,2-DCE is 70 µg/L (USEPA, 2018).

The VOC TCE was detected at seven monitoring wells: 48MW06, 48MW1, 48MW2, 48MW3 (and field duplicate 48TW3), 50MW02, 13MW3 (and field duplicate 13TW3), and 13MW4. Monitoring wells 48MW06 and 48MW3 contained concentrations of TCE that exceeded the RG of 5 µg/L (6.1 µg/L in 48MW06 and 22.0 µg/L in field duplicate 48TW3 for well 48MW3). The size of the area still exceeding the RG of 5 µg/L is estimated at 2 acres which is an increase from the twenty first quarter. The range of concentrations detected during this quarter went from an estimated value of 0.80 µg/L (13TW4) to a high of 22.0 µg/L (48MW3 duplicate 48TW3) (**Figure 5-4**). When compared to the previous quarter sampling results, concentrations in most wells increased slightly.

Miscellaneous Analytes

Groundwater samples were also analyzed for MNA indicators (TOC, dissolved Fe^{2+} and manganese, dissolved gases, chloride, nitrate, and sulfate) for the purposes of evaluating the effectiveness of the MNA process.

TOC was only detected in two of the 15 monitoring wells at an estimated value of 1.8 mg/L (48MW06) and 2.7 mg/L (49MW02). Concentrations of dissolved Fe^{2+} ranged from a low of 0.0 mg/L (non-detect) (seven wells) to a high of 0.03 mg/L (13MW4 and 50MW02). Dissolved manganese levels ranged from a low of 0.0 mg/L (non-detect) (11 wells) to a high of 0.08 mg/L (49MW05). Chloride concentrations ranged from an estimated low of 1.5 mg/L (48TW3) to a high of 11 mg/L (48MW06). Detected concentrations of nitrate ranged from an estimated low of

0.27 mg/L (13MW4) to a high of 7.1 mg/L (50MW02). Sulfate concentrations ranged from an estimated low of 0.85 mg/L (49MW01) to a high of 220 mg/L (13MW5). Methane was detected in four monitoring wells, 48MW2, 49MW01, 49MW02, and 50MW02, at a concentration range of 0.54 µg/L to 2.3 µg/L. Ethane and ethene went undetected during this quarterly monitoring event. **Table 5-4** presents the MNA indicator parameters sample results.

5.4 TWENTY-THIRD QUARTER GROUNDWATER RESULTS

Eleven monitoring wells were sampled during the twenty-third quarter monitoring event: 13MW2, 13MW3, 13MW4, 48MW1, 48MW2, 48MW3, 48MW06, 49MW01, 49MW02, 49MW04, and 50MW02. Two duplicate samples were collected from monitoring wells 48MW3 (duplicate as 48TM3) and 13MW3 (duplicate as 13TM3). Sample locations are provided in **Figure 4-1**.

Samples were submitted for TCL VOCs, dissolved gases (methane, ethane, and ethene), and MNA indicator parameter analyses. A summary of the detected constituents is summarized in **Table 5-5**, and a subset of the results, consistent with the reporting in previous SWMU 49 LTM reports, is presented in **Table 5-6**. The CT plume is shown in **Figure 5-5**, and the TCE plume is shown in **Figure 5-6**. The potential for biodegradation in the groundwater at SWMU 49 is discussed in Section 6.2.

TCL VOCs

Seven VOCs were detected in groundwater samples: 1,1,1-TCA, 1,1-DCA, CT, chloroform, cis-1,2-DCE, tetrachloroethene (PCE), and TCE. Eight monitoring wells had one or more detected concentrations of the VOCs listed above. Monitoring well 49MW02 did not have detected concentrations of VOCs.

The VOC 1,1,1-TCA was detected at monitoring well 48MW06 at an estimated concentration of 0.83 µg/L. The concentration of 1,1,1-TCA in this quarter is similar to the concentration of 1,1,1-TCA detected at 48MW06 in the twenty-second quarter. An RG for 1,1,1-TCA has not been established for SWMU 49. However, the USEPA MCL for 1,1,1-TCA is 200 µg/L (USEPA, 2018).

The VOC 1,1-DCA was detected at monitoring wells 48MW06, 48MW1, and 50MW02 at concentrations ranging from an estimated low value of 0.33 µg/L (50MW02) to a high of 3.8 µg/L

(48MW06). These concentrations are similar to concentrations observed during the twenty-first and twenty-second quarterly monitoring events. An RG for 1,1-DCA has not been established for SWMU 49. There is no USEPA MCL for 1,1-DCA (USEPA, 2018); however, the tapwater RSL is 2.8 µg/L (USEPA, 2021).

The VOC CT was detected at seven monitoring wells: 48MW2, 48MW3 (and field duplicate 48TW3), 49MW01, 50MW02, 13MW2, 13MW3 (and field duplicate 13TW3), and 49MW04. Three wells contained CT concentrations that exceeded the RG of 5 µg/L: 48MW2 (22 µg/L), 48MW3 (84 µg/L) (80 µg/L in field duplicate 48TW3), and 13MW3 (5.3 µg/L). These wells had elevated concentrations that exceeded the RG during the twenty-first and twenty-second quarterly monitoring events as well. The size of the area still exceeding the RG of 5 µg/L is estimated at 3.5 acres. The range of concentrations detected during this quarter was from a low of 0.33 µg/L (13MW2) to a high of 84 µg/L (48MW3) (**Figure 5-5**). Compared to the twenty-first and twenty-second quarterly monitoring results, the detected concentrations of CT in monitoring well 48MW3 have fluctuated each quarter as much as 15 µg/L, whereas monitoring wells 48MW2, 49MW01, 50MW02, and 13MW3 saw slight fluctuations.

Chloroform was detected in four monitoring wells: 48MW2, 48MW3 (and field duplicate 48TW3), 49MW01, and 13MW3 (and field duplicate 13TW3). Concentrations ranged from an estimated value of 0.43 µg/L (13MW3) to a high of 19.0 µg/L (48MW3 and field duplicate 48TW3). For the last three quarterly events, the detected concentrations of chloroform have been stable at 48MW3, ranging between 15.0 µg/L and 19.0 µg/L. An RG for chloroform has not been established for SWMU 49. However, the USEPA MCL for chloroform is 80 µg/L (USEPA, 2018).

The VOC cis-1,2-DCE was detected in three monitoring wells: 48MW06, 48MW1, and 50MW02. Concentrations ranged from an estimated low of 0.39 µg/L (50MW02 and 48MW1) to a high of 8.2 µg/L (48MW06). There were modest fluctuations in the concentrations in monitoring wells 48MW06 and 48MW1 during all three quarterly monitoring events. An RG for cis-1,2-DCE has not been established for SWMU 49. However, the USEPA MCL for cis-1, 2-DCE is 70 µg/L (USEPA, 2018).

The VOC PCE was detected in monitoring well 48MW06 at an estimated concentration of 0.81 µg/L. PCE was also detected at 48MW06 during the twenty-second sampling quarter at a concentration of 0.98 µg/L. An RG for PCE has not been established for SWMU 49. However, the USEPA MCL for PCE is 5 µg/L (USEPA, 2018).

The VOC TCE was detected at seven monitoring wells: 48MW06, 48MW1, 48MW2, 48MW3 (and field duplicate 48TW3), 50MW02, 13MW3 (and field duplicate 13TW3), and 13MW4. Monitoring well 48MW3 (and field duplicate 48TW3) (16.0 µg/L in both samples) contained concentrations of TCE that exceeded the RG of 5 µg/L. The size of the area still exceeding the RG of 5 µg/L is estimated at 2 acres. The range of concentrations detected during this quarter went from an estimated low of 0.45 µg/L (13MW4) to a high of 16.0 µg/L (48MW3 and duplicate 48TW3) (**Figure 5-6**). In general, the wells with detections of TCE and the concentrations are consistent with previous quarters.

Miscellaneous Analytes

Groundwater samples were also analyzed for MNA indicators (TOC, dissolved Fe^{2+}, dissolved manganese, dissolved gases, chloride, nitrate, and sulfate) for the purposes of evaluating the effectiveness of the MNA process.

Observed levels of TOC in the 11 monitoring wells ranged from an estimated low of 1.8 mg/L (48MW06) to a high of 2.7 mg/L (49MW02). The twenty-first and twenty-second quarterly monitoring events had TOC detections ranging from 1.5 to 2.7 mg/L. Concentrations of dissolved Fe^{2+} ranged from a low of 0.0 mg/L (non-detect) (four wells) to a high of 0.72 mg/L (48MW02). Dissolved manganese concentrations ranged from a low of 0.0 mg/L (non-detect) (five wells) to a high of 8.5 mg/L (48MW02). Chloride concentrations ranged from an estimated low of 1.7 mg/L (49MW02) to a high of 8.8 mg/L (48MW06). Detected concentrations of nitrate ranged from an estimated low of 0.22 mg/L (49MW04) to a high of 4.7 mg/L (48MW3 and field duplicate 48TW3). Sulfate concentrations ranged from an estimated low of 0.87 mg/L (49MW01) to a high of 140 mg/L (48MW06). Methane was only detected in one monitoring at 1.6 mg/L (49MW02). Ethene and ethane went undetected during this quarterly monitoring event. The MNA indicator parameters are presented in **Table 5-6**.

5.5 TWENTY-FOURTH QUARTER GROUNDWATER RESULTS

Eleven monitoring wells were sampled during the twenty-fourth quarterly monitoring event: 13MW2, 13MW3, 13MW4, 48MW1, 48MW2, 48MW3, 48MW06, 49MW01, 49MW02, 49MW04, and 50MW02. Two duplicate samples were collected from monitoring wells 48MW3 (duplicate as 48TW3) and 13MW3 (duplicate as 13TW3). Sample locations are provided in **Figure 4-1**.

Samples were submitted for TCL VOCs, dissolved gases (methane, ethane, and ethene), and MNA indicator parameter analyses. A summary of detected constituents is summarized in **Table 5-7**, and a subset of the results, consistent with the reporting in previous SWMU 49 LTM reports, is presented in **Table 5-8**. The CT plume is shown in **Figure 5-7**, and the TCE plume is shown in **Figure 5-8**. The potential for biodegradation in the groundwater at SWMU 49 is discussed in Section 6.2.

TCL VOCs

Seven VOCs were detected in groundwater samples: 1,1,1-TCA, 1,1-DCA, CT, chloroform, cis-1,2-DCE, PCE, and TCE. Nine monitoring wells had one or more detected concentrations of the VOCs listed above. Monitoring wells 49MW04 and 13MW2 did not have detected concentrations of VOCs.

The VOC 1,1,1-TCA was detected at monitoring well 48MW06 at an estimated concentration of 0.43 µg/L. The fluctuations that have taken place during the Year Six MNA sampling events have been minimal and limited to monitoring wells 48MW06 and 48MW1. An RG for 1,1,1-TCA has not been established for SWMU 49. However, the USEPA MCL for 1,1,1-TCA is 200 µg/L (USEPA, 2018).

The VOC 1,1-DCA was detected at three monitoring wells: 48MW06, 48MW1, and 48MW3. Concentrations ranged from an estimated low value of 0.46 µg/L (48MW1) to a high of 2.9 µg/L (48MW06). The concentrations of 1,1-DCA in these wells fluctuated only slightly during the four quarterly monitoring events. An RG for 1,1-DCA has not been established for SWMU 49. There is no USEPA MCL for 1,1-DCA (USEPA, 2018); however, the tapwater RSL is 2.8 µg/L (USEPA, 2021).

The VOC CT was detected at seven monitoring wells: 48MW2, 48MW3 (and associated field duplicate 48TM3), 49MW01, 50MW02, 13MW2, 13MW3 (and associated field duplicate 13TW3), and 13MW4. Three wells contained CT concentrations that exceeded the RG of 5 µg/L: 48MW2 (25 µg/L), 48MW3 (100 µg/L) and field duplicate 48TW3 (99 µg/L), and 13MW3 (7 µg/L) and field duplicate 13TW3 (6.8 µg/L). Monitoring wells 48MW2, 48MW3, and 13MW3 had elevated concentrations that exceeded the RG during all four quarterly monitoring events. The size of the area still exceeding the RG of 5 µg/L is estimated at 4 acres. The range of concentrations detected during this quarter was from a low estimated value of 0.59 µg/L (13MW4) to a high of 100 µg/L (48MW3) (**Figure 5-7**). All four quarterly monitoring results were relatively stable in monitoring wells 48MW2, 13MW3, 49MW04, 49MW01, and 50MW02, whereas well 48MW3 had fluctuations ranging from 79 µg/L to 100 µg/L.

Chloroform was detected in four monitoring wells: 48MW2, 48MW3 (and field duplicate 48TW3), 49MW01, and 13MW3 (and field duplicate 13TW3). Concentrations ranged from an estimated value of 0.46 µg/L (49MW01) to a high of 20.0 µg/L (48MW3 and field duplicate 48TW3). All four quarterly monitoring results were relatively stable in monitoring well 48MW3. An RG for chloroform has not been established for SWMU 49. However, the USEPA MCL for chloroform is 80 µg/L (USEPA, 2018).

The VOC cis-1,2-DCE was detected in three monitoring wells: 48MW06, 48MW1, and 50MW02. Concentrations ranged from an estimated low of 0.33 µg/L (48MW1) and to a high of 5 µg/L (48MW06). The concentrations in monitoring well 48MW06 fluctuated slightly in Year Six (3 µg/L to 6.1 µg/L), with a high of 6.1 µg/L in the twenty-third quarter. Concentrations in wells 48MW1 and 50MW02 fluctuated minimally. An RG for cis-1,2-DCE has not been established for SWMU 49. However, the USEPA MCL for cis-1, 2-DCE is 70 µg/L (USEPA, 2018).

The VOC PCE was detected in monitoring well 48MW06 at an estimated concentration of 0.45 µg/L. An RG for PCE has not been established for SWMU 49. However, the USEPA MCL for PCE is 5 µg/L (USEPA, 2018).

The VOC TCE was detected at seven monitoring wells: 48MW06, 48MW1, 48MW2, 48MW3 (and field duplicate 48TW3), 50MW02, 13MW3 (and field duplicate 13TW3), and 13MW4.

Monitoring well 48MW3 (and field duplicate 48TW3) contained a concentrations of TCE at 20 µg/L and 23 µg/L, respectively, which exceeded the RG of 5 µg/L. The size of the area still exceeding the RG of 5 µg/L is estimated at 1.5 acres. The range of concentrations detected during this quarter went from an estimated low of 0.96 µg/L (13MW4) to a high of 23 µg/L (48MW3 field duplicate 48TW3) (**Figure 5-8**). TCE was detected all four quarters in monitoring wells 48MW06, 48MW1, 48MW2, 48MW3, 50MW02, 13MW3, and 13MW4, all with relatively stable concentrations and only minor fluctuations.

Miscellaneous Analytes

Groundwater samples were analyzed for MNA indicators (TOC, dissolved Fe^{2+}, dissolved manganese, dissolved gases, chloride, nitrate, and sulfate) for the purposes of evaluating the effectiveness of the MNA process.

TOC was detected in 2 of the 11 monitoring wells (48MW06 and 49MW04) at 2.7 mg/L and an estimated value of 0.61 mg/L, respectively. Concentrations of dissolved Fe^{2+} ranged from a low of 0.0 mg/L (non-detect) (three wells) to a high of 0.26 mg/L (48MW06). Concentrations of dissolved Fe^{2+} ranged from a low of 0.0 mg/L (non-detect) (three wells) to a high of 0.26 mg/L (48MW06). Dissolved manganese levels ranged from a low of 0.0 mg/L (non-detect) (two wells) to a high of 0.60 mg/L (48MW06). Chloride concentrations ranged from an estimated low of 1.8 mg/L (48MW2) to a high of 8.8 mg/L (48MW06). Detected concentrations of nitrate ranged from an estimated low of 0.24 mg/L (49MW04) to a high of 4.1 mg/L (48MW3 and duplicate 48TW3). Sulfate concentrations ranged from an estimated low of 0.88 mg/L (non-detect) (49MW01) to a high of 120 mg/L (48MW06). Methane, ethene, and ethane went undetected during this quarterly monitoring event. The MNA indicator parameter sample results are provided in **Table 5-8**.

5.6 YEAR SIX SAMPLE RESULTS

This section discusses the results from the Year Six MNA sampling. Samples collected were analyzed for the full suite of analytical parameters described in **Table 4-1** (TCL VOCs and MNA indicator parameters including dissolved gases [methane, ethane, and ethene] and dissolved Fe^{2+}).

5.6.1 Carbon Tetrachloride

The VOC CT was detected in six monitoring wells during the twenty-first and twenty-second quarterly monitoring events and seven wells during the twenty-third and twenty-fourth events. CT was detected in wells 48MW2, 48MW3, 49MW01, 50MW02, and 13MW3 in all four quarters. Monitoring well 49MW04 was non-detect for concentrations of CT in the twenty-fourth quarter. The highest concentrations were consistently detected at monitoring wells 48MW2, 48MW3, and 13MW3, with the highest levels observed at 48MW3. Concentrations detected in these three wells exceeded the RG of 5 µg/L in each quarter. In general, the concentrations detected at these three wells were variable from quarter to quarter with no clear increasing or decreasing trend, consistent with Years Two through Six MNA sampling results. The remaining wells with observed detections were well below the RG and, in general, had concentrations that were relatively steady, with minor fluctuations, throughout the Year Six MNA sampling. **Figures 5-9** through **5-12** depict the concentrations at these sampling locations throughout Year Six quarterly sampling. **Figure 5-13** provides a time series plot of CT concentrations dating back to samples collected in 1996.

5.6.2 Trichloroethene

The VOC TCE was detected in seven monitoring wells during all four quarterly monitoring events: 48MW06, 48MW1, 48MW2, 48MW3, 50MW02, 13MW3, and 13MW4. The highest concentrations were consistently detected at monitoring well 48MW3. Concentrations detected in 48MW3 exceeded the RG of 5 µg/L in all four quarters (ranging from 16.0 µg/L to 23.0 µg/L) with no other sample concentrations at other wells exceeding the RG. In general, the concentrations detected in all seven monitoring wells were variable from quarter to quarter with no clear increasing or decreasing trend. **Figures 5-9** through **5-12** depict the concentrations at these sampling locations throughout Year Six of quarterly sampling. **Figure 5-14** provides a time series plot of TCE concentrations dating back to samples collected in 1996.

5.7 LABORATORY ANALYSIS, DATA VALIDATION, AND REPORTING

The Year Six MNA sampling for SWMU 49 was collected quarterly in October 2020, January 2021, April 2021, and July 2021. Groundwater samples were collected in accordance with the Quality Assurance Project Plan (QAPP), revised August 2015. Documentation pertaining to

CoC and sample condition was filed in field and laboratory records. A summary of samples and analyses is included in **Table 5-9**. Analytical methods are provided in **Table 5-10**.

The samples were placed into coolers with ice at the time of collection. The CoC forms were completed as the samples were packaged into coolers for transport. Trip blanks, temperature blanks, and ice were added as required. All coolers were shipped to the main laboratory, CT Laboratories in Baraboo, WI. The trip blanks were packed in the coolers with the VOC and methane/ethane/ethene samples.

The analytical data were reviewed for consistency with the test methods as noted in **Table 5-10** and the Project QAPP (Radford Army Ammunitions Plant, Virginia – LTM) to ensure that the data set met project data quality objectives and was usable for the purposes of the project. Validation was performed following the National Functional Guidelines for Inorganic Superfund Data Review (USEPA, 2014a), National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, 2014b), and professional judgment. Any anomalies to the requirements for precision, accuracy, representativeness, completeness, comparability, and sensitivity are discussed below, and the data were flagged where appropriate.

Application of Data Flags

General data quality flagging conventions in **Table 5-11** were used to indicate QC anomalies. Data were flagged, where appropriate, in accordance with the National Functional Guidelines and the Project QAPP. A data quality summary is provided below.

Preservation, Temperature, and Hold Time

All sample preservation requirements were met. Most sample analyses were within holding time. Refer to **Table 5-12** for holding time exceedances.

5.7.1 Precision

Precision was measured from the relative percent difference (RPD) between the parent sample/field duplicate (FD), laboratory duplicates, laboratory control sample (LCS), and the MS/MSD pairs. MS/MSD sample collection and analysis were performed at a frequency of 5% of field samples.

Field Duplicates

FDs were collected at a frequency of 10% of field samples. Most RPDs were within control limits. **Table 5-13** lists FD exceedances.

Laboratory Duplicates

Laboratory duplicate analysis was performed at a frequency of 10% of laboratory samples for inorganic analyses. Most RPDs were within control limits. There were no laboratory duplicate exceedances.

Matrix Spike/Matrix Spike Duplicate Relative Percent Difference

In instances where MS/MSD RPDs were above the laboratory acceptance criteria and the associated results were not detected, no data were qualified. **Table 5-14** lists MS/MSD RPD exceedances.

5.7.2 Accuracy

Accuracy was measured from laboratory QC sample percent recoveries, including LCS, MS, MSD, and surrogates. Accuracy was also evaluated by determining whether any deviations to method or laboratory requirements for internal standards (ISs), initial calibration verification (ICV), and continuing calibration verification (CCV) recoveries were noted in the case narrative(s).

Laboratory Control Sample/Matrix Spike/Matrix Spike Duplicate Recovery

One LCS was analyzed for each batch of 20 samples or fewer. Most LCS recoveries were within control limits. **Table 5-15** lists LCS exceedances.

MS/MSD analysis was performed at a frequency of 5% of field samples. Most recoveries were within control limits. **Table 5-16** presents MS/MSD recoveries outside control limits. The data for the parent sample were flagged as indicated on the table. If no flag was indicated, the data were not flagged. Data were not flagged in cases where the parent sample concentration was greater than four times the spike concentration.

Parent samples only were qualified.

Post Digestion Spike Recovery Exceedances

Most recoveries were within control limits. There were no post digestion spike (PDS) recovery exceedances.

Serial Dilution Percent Difference

Most recoveries were within control limits. **Table 5-17** lists the serial dilution difference exceedances.

Surrogates

All surrogate recoveries were within control limits. There were no surrogates that exceeded acceptance criteria.

Internal Standards

There were no ISs outside control limits.

Calibration Verification

Some calibration results were outside control limits. **Table 5-18** summarizes calibration exceedances.

5.7.3 Representativeness

The samples were collected from locations specified in the approved Work Plan. Representativeness of the data is considered acceptable.

5.7.4 Comparability

Comparability was acceptable. Standard analytical methods were used. Standard preparatory and analytical methods were applied to the samples across sampling events. In all cases, the detection limits and limits of detection attained were below the specified limits of quantitation (LOQs). All target compounds detected below the LOQs flagged (J) by the laboratory are considered estimated concentrations.

5.7.5 Completeness

Completeness was measured as the number of usable results versus the total number of results. The data set was 100% complete with no omissions or rejections with respect to analysis. The information fulfilled the data quality objectives of this investigation.

5.7.6 Sensitivity

Sensitivity was measured by evaluating whether the LOQ was less than RGs for constituents with RGs and less than the regulatory criteria for those constituents without RGs. All nominal LOQs were below the regulatory criteria.

Additionally, sensitivity was evaluated by determining whether method blank, trip blank, and rinsate blank results were less than the LOQs. Some analytes were detected in some blanks, leading to qualification of sample results.

Blanks (Calibration [Instrument], Method, Trip, and Rinsate)

Calibration blanks were analyzed throughout analytical runs.

One method blank was analyzed with every batch of 20 samples or fewer for each matrix.

One trip blank was included with each cooler for samples to be analyzed for VOCs and dissolved gases (methane, ethane and ethene).

One rinsate blank was analyzed for each sample date.

Table 5-19 presents samples flagged for blank results. Sample results greater than two times the blank concentration were not qualified. Data quality and usability were not affected.

Reporting Limits

Nominal reporting limits, before adjustments for dilutions, were below the regulatory criteria noted in the Project QAPP.

5.7.7 Data Usability Summary

In summary, all data were considered usable with the qualifications discussed above. The completeness goals for the project were met. The data were considered of good quality for the

project goals, and no J-flagged results affected the overall conclusions as to whether MNA is occurring.

Low MS/MSD (**Table 5-16**) and PDS percent recoveries indicate that the associated results may be biased low for the associated samples.

The RPDs for laboratory duplicate and FD exceedance indicate that the associated results were estimated or non-detected estimated for the associated samples.

This Data Quality Assessment was prepared by Validata Chemical Services, Inc. (Validata). Validata has provided data validation services since 1990 with completion of over 350 environmental chemistry data validation contracts for all business sectors, including 35 USACE and 252 additional DoD contracts. Validata has been audited by the USEPA Quality Assurance Section and the U.S. Navy Environmental Project Management Group, and was approved as a data validation service by both agencies. Data validation reports are presented in **Appendix B-2**.

Table 5-1 SWMU 49 Summary of Detected Constituents in Twenty-First Quarter Groundwater Samples

Analyte	Units	RG	# of RG Exceedances	# of Detections	# of Samples[1]	Minimum Concentration	Maximum Concentration	Location of Maximum
VOCs								
1,1,1-Trichloroethane	µg/L	NA	NA	1	13	ND	0.42	48MW06
1,1-Dichloroethane	µg/L	NA	NA	2	13	ND	2.9	48MW06
Carbon tetrachloride	µg/L	5	4	6	13	ND	79.0	48MW3
Chloroform	µg/L	NA	NA	4	13	ND	15	48MW3
Cis-1,2-Dichloroethene	µg/L	NA	NA	3	13	ND	3.8	48MW06
Tetrachloroethene	µg/L	NA	NA	0	13	ND	ND	NA
Trichloroethene	µg/L	5	2	8	13	ND	16	48MW3
Miscellaneous								
Chloride	mg/L	NA	NA	13	13	1.9	9.7	48MW1
Ethane	µg/L	NA	NA	0	13	ND	ND	NA
Ethene	µg/L	NA	NA	0	13	ND	ND	NA
Methane	µg/L	NA	NA	2	13	ND	3.8	49MW02
Nitrate (as N)	mg/L	NA	NA	13	13	0.17	5.9	48MW3
Sulfate	mg/L	NA	NA	13	13	1.5	130	48MW06
Total Organic Carbon	mg/L	NA	NA	1	13	ND	1.5	48MW06

Notes:
[1]Includes two duplicate samples
µg/L = micrograms per liter
mg/L = milligrams per liter
NA = not applicable
ND = non-detect
RG = remedial goal
VOC = volatile organic compound

Table 5-2 SWMU 49 Detected Analytes In Twenty-First Quarter Groundwater Samples

Sample ID			48MW06					48MW1					48MW2					48MW3					49MW01					49MW02				
Date Collected			10/28/2020					10/28/2020					10/29/2029					10/29/2020					10/28/2020					10/28/2020				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
VOCs																																
1,1,1-Trichloroethane	µg/L	NA	0.42	J		0.2	0.1	0.6	U	J	0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U	UJ	0.2	0.1
1,1-Dichloroethane	µg/L	NA	2.9			0.2	0.1	0.87	J	J	0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U	UJ	0.2	0.1
Carbon tetrachloride	µg/L	5	0.6	U		0.2	0.1	0.6	U	UJ	0.2	0.1	**35**			0.2	0.1	**79**			0.2	0.1	2.8			0.2	0.1	0.6	U	J	0.2	0.1
Chloroform	µg/L	NA	0.6	U		0.2	0.1	0.6	U	UJ	0.2	0.1	3.7			0.2	0.1	15			0.2	0.1	0.6	U		0.2	0.1	0.6	U	UJ	0.2	0.1
cis-1,2-Dichloroethene	µg/L	NA	3.8			0.2	0.1	0.96	J	J	0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U	UJ	0.2	0.1
Tetrachloroethene	µg/L	NA	0.6	U		0.2	0.1	0.6	U	J	0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U	UJ	0.2	0.1
Trichloroethene	µg/L	5	3			0.2	0.1	2.2		J	0.2	0.1	3.2			0.2	0.1	**16**			0.2	0.1	0.6	U		0.2	0.1	0.6	U	UJ	0.2	0.1
Miscellaneous																																
Ethane	µg/L	NA	0.7	U		0.2	0.1	0.7	U		0.2	0.1	0.7	U		0.2	0.1	0.7	U		0.2	0.1	0.7	U		0.2	0.1	0.7	U		0.2	0.1
Ethene	µg/L	NA	1	U		0.2	0.1	1	U		0.2	0.1	1	U		0.2	0.1	1	U		0.2	0.1	1	U		0.2	0.1	1	U		0.2	0.1
Methane	µg/L	NA	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	3.9			0.2	0.1
Chloride	mg/L	NA	9.3			0.2	0.1	9.7			0.2	0.1	2.6	J		0.2	0.1	2.8	J		0.2	0.1	6			0.2	0.1	1.9	J	J	0.2	0.1
Nitrate (as N)	mg/L	NA	2.7			0.2	0.1	2.1			0.2	0.1	0.82			0.2	0.1	5.9			0.2	0.1	0.3	J		0.2	0.1	0.24	J	J	0.2	0.1
Sulfate	mg/L	NA	130			0.2	0.1	61			0.2	0.1	6.1			0.2	0.1	28			0.2	0.1	1.5	J	J	0.2	0.1	16		UJ	0.2	0.1
Total Organic Carbon	mg/L	NA	1.5	J		0.2	0.1	1.5	U		0.2	0.1	1.5	U		0.2	0.1	1.5	U	U	0.2	0.1	1.5	U	U	0.2	0.1	1.5	J		0.2	0.1
MNA																																
Dissolved Mn	mg/L	NA	0					0.2					0					0					0					0				
Dissolved Fe^{2+}	mg/L	NA	0					0.0					0					0					0.02					0				

Table 5-2 SWMU 49 Detected Analytes In Twenty-First Quarter Groundwater Samples (Continued)

Sample ID			49TW02 (dup of 49MW02)					50MW02					13MW2					13MW3					13TW3 (Field Duplicate of 13MW3)					13MW4					49MW04				
Date Collected			10/28/2020					10/28/2020					10/27/2020					10/27/2020					10/27/2020					10/27/2020					10/1272020				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
VOCs																																					
1,1,1-Trichloroethane	µg/L	NA	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1
1,1-Dichloroethane	µg/L	NA	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1
Carbon tetrachloride	µg/L	5	0.6	U		0.2	0.1	1.2			0.2	0.1	0.6	U		0.2	0.1	**7.5**			0.2	0.1	**7.6**			0.2	0.1	0.6	U		0.2	0.1	0.56	J		0.2	0.1
Chloroform	µg/L	NA	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.75	J		0.2	0.1	0.71	J		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1
cis-1,2-Dichloroethene	µg/L	NA	0.6	U		0.2	0.1	0.42	J		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1
Tetrachloroethene	µg/L	NA	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1
Trichloroethene	µg/L	5	0.6	U		0.2	0.1	1.5			0.2	0.1	0.6	U		0.2	0.1	1.4			0.2	0.1	1.4			0.2	0.1	0.98	J		0.2	0.1	0.6	U		0.2	0.1
Miscellaneous																																					
Ethane	µg/L	NA	0.7	U		0.2	0.1	0.7	U		0.2	0.1	0.7	U		0.2	0.1	0.7	U	0.7	0.2	0.1	0.7	U		0.2	0.1	0.7	U		0.2	0.1	0.7	U		0.2	0.1
Ethene	µg/L	NA	1	U		0.2	0.1	1	U		0.2	0.1	1	U		0.2	0.1	1	U	1	0.2	0.1	1	U		0.2	0.1	1	U		0.2	0.1	1	U		0.2	0.1
Methane	µg/L	NA	1.1			0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U	0.6	0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1
Chloride	mg/L	NA	2.1	J		0.2	0.1	8			0.2	0.1	4.7			0.2	0.1	4.7		3.6	0.2	0.1	4.7			0.2	0.1	3.5			0.2	0.1	6.4			0.2	0.1
Nitrate (as N)	mg/L	NA	0.24	J		0.2	0.1	2.1			0.2	0.1	0.17	J		0.2	0.1	1.7		1.6	0.2	0.1	1.7			0.2	0.1	0.72			0.2	0.1	0.21	J		0.2	0.1
Sulfate	mg/L	NA	16			0.2	0.1	68			0.2	0.1	48	M		0.2	0.1	110		99	0.2	0.1	100			0.2	0.1	28			0.2	0.1	61			0.2	0.1
Total Organic Carbon	mg/L	NA	1.5	U		0.2	0.1	1.5	U		0.2	0.1	1.5	U		0.2	0.1	1.5	U	1.5	0.2	0.1	1.5	U		0.2	0.1	1.5	U		0.2	0.1	1.5	U		0.2	0.1
MNA																																					
Dissolved Mn	mg/L	NA	0					0					0.20					0					0					0.30					0.30				
Dissolved Fe^{2+}	mg/L	NA	0					0					0.03					0					0					0.01					0.00				

Notes:

[1]Remedial Goals developed in Draft SWMU 48/49 RFI Report (CB&I, 2014a).
Exceedances denoted by **bold font.**
µg/L = micrograms per liter (parts per billion)
Fe^{2+} = ferrous iron
ID = identification
LOD = limit of detection
LOQ = limit of quantitation
MDL = Method Detection Limit
mg/L = milligrams per liter (parts per million)
Mn = manganese
MNA = monitored natural attenuation
NA = not applicable; remedial goal not established for analyte at SWMU 49
RL = Reporting Limit
VOC = volatile organic compound

Lab Q = Lab Data Qualifiers
Val Q = Validation Data Qualifiers
H = The sample or analyte was analyzed and reported past the hold time.
J = Estimated value.
M = Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recovery outside acceptance limits.
Q = Laboratory Control Sample (LCS) outside acceptable limits.
U = Analyte concentration was not above the detection level.
Y = A Relative Percent Difference (RPD) exceedance between an LCS and a Laboratory Control Sample Duplicate (LCSD), between an MS and an MSD, or between a parent sample and a duplicate sample.
Z = Continuing calibration verification (CCV) or initial calibration verification (ICV) failure for the associated analyte.

Table 5-3 SWMU 49 Summary of Detected Constituents in Twenty-Second Quarter Groundwater Samples

Analyte	Units	RG	# of RG Exceedances	# of Detections	# of Samples[1]	Minimum Concentration	Maximum Concentration	Location of Maximum
VOCs								
1,1,1-Trichloroethane	µg/L	NA	NA	2	17	ND	0.76	48MW06
1,1-Dichloroethane	µg/L	NA	NA	3	17	ND	4.2	48MW06
Carbon tetrachloride	µg/L	5	5	8	17	ND	95	48MW3
Chloroform	µg/L	NA	NA	6	17	ND	16	48MW3 and 48TW3 (duplicate of 48MW3)
cis-1,2-Dichloroethene	µg/L	NA	NA	3	17	ND	8.2	48MW06
Tetrachloroethene	µg/L	NA	NA	1	17	ND	0.98 J	48MW06
Trichloroethene	µg/L	5	2	8	17	ND	22	48TW3 (duplicate of 48MW3)
Miscellaneous								
Chloride	mg/L	NA	NA	17	17	1.7	11	48MW06
Ethane	µg/L	NA	NA	0	17	ND	ND	NA
Ethene	µg/L	NA	NA	0	17	ND	ND	NA
Methane	µg/L	NA	NA	4	17	ND	2.3	48MW2
Nitrate (as N)	mg/L	NA	NA	17	17	0.19	5.3	48TW3 (field duplicate of 48MW3)
Sulfate	mg/L	NA	NA	17	17	0.85	220	13MW5
Total Organic Carbon	mg/L	NA	NA	2	17	ND	2.7	49MW02

Notes:
[1]Includes one duplicate sample
µg/L = micrograms per liter
mg/L = milligrams per liter
NA = not applicable
ND = non-detect
RG = Remedial Goal
VOC = volatile organic compound

Table 5-4 SWMU 49 Detected Analytes in Twenty-Second Quarter Groundwater Samples

Sample ID			48MW07[2]					13MW5[2]					49MW03[2]					49MW05[2]					48MW06					48MW1				
Date Collected			1/27/21					1/25/21					1/27/21					1/25/21					1/27/21					1/28/21				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
VOCs																																
1,1,1-Trichloroethane	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.76			0.19	0.096	0.35	J		0.19	0.096
1,1-Dichloroethane	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	4.2			0.19	0.096	0.79	J		0.19	0.096
Carbon tetrachloride	µg/L	5	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
Chloroform	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
cis-1,2-Dichloroethene	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	8.2			0.19	0.096	0.89	J		0.19	0.096
Tetrachloroethene	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.98	J		0.19	0.096	0.6	U	J	0.19	0.096
Trichloroethene	µg/L	5	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	**6.1**			0.19	0.096	2.2			0.19	0.096
Miscellaneous																																
Ethane	µg/L	NA	0.8	U		0.19	0.096	0.8	U		0.19	0.096	0.8	U		0.19	0.096	0.8	U		0.19	0.096	0.8	U		0.19	0.096	0.8	U		0.19	0.096
Ethene	µg/L	NA	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		0.19	0.096
Methane	µg/L	NA	0.9	U		0.19	0.096	0.9	U		0.19	0.096	0.9	U		0.19	0.096	0.9	U		0.19	0.096	0.9	U		0.19	0.096	0.9	U		0.19	0.096
Chloride	mg/L	NA	1.5	J		0.19	0.096	3			0.19	0.096	6.2			0.19	0.096	5.6			0.19	0.096	11			0.19	0.096	6.2			0.19	0.096
Nitrate (as N)	mg/L	NA	0.82			0.19	0.096	0.29	J		0.19	0.096	1.3			0.19	0.096	0.19	J		0.19	0.096	2.7			0.19	0.096	1.6			0.19	0.096
Sulfate	mg/L	NA	4.1			0.19	0.096	220			0.19	0.096	2.8	J		0.19	0.096	91			0.19	0.096	120			0.19	0.096	52			0.19	0.096
Total Organic Carbon	mg/L	NA	1.5	U		0.19	0.096	1.5	U		0.19	0.096	1.5	U		0.19	0.096	1.5	U		0.19	0.096	1.8	J		0.19	0.096	1.5	U		0.19	0.096
MNA																																
Dissolved Mn	mg/L	NA	0					0.00					0					0.08					0					0				
Dissolved Fe^{2+}	mg/L	NA	0					0.02					0.01					0.02					0					0.01				

Table 5-4 SWMU 49 Detected Analytes in Twenty-Second Quarter Groundwater Samples (Continued)

Sample ID			48MW2					48MW3					48TW3 (Field Duplicate of 48MW3)					49MW01					49MW02					50MW02				
Date Collected			1/28/21					1/27/21					1/27/21					1/28/21					1/27/21					1/27/21				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
VOCs																															
1,1,1-Trichloroethane	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
1,1-Dichloroethane	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.33	J		0.19	0.096
Carbon tetrachloride	µg/L	5	**14**			0.19	0.096	**94**			0.19	0.096	**95**			0.19	0.096	1.4			0.19	0.096	0.6	U		0.19	0.096	0.89	J		0.19	0.096
Chloroform	µg/L	NA	2.5			0.19	0.096	16		U	0.19	0.096	16			0.19	0.096	0.34	J	U	0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
cis-1,2-Dichloroethene	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.37	J		0.19	0.096
Tetrachloroethene	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
Trichloroethene	µg/L	5	2.1			0.19	0.096	**21**			0.19	0.096	**22**			0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	1.4			0.19	0.096
Miscellaneous																															
Ethane	µg/L	NA	0.8	U		0.19	0.096	0.78	U		0.19	0.096	0.8	U		0.19	0.096	0.8	U		0.19	0.096	0.8	U		0.19	0.096	0.8	U		0.19	0.096
Ethene	µg/L	NA	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		0.19	0.096
Methane	µg/L	NA	2.3			0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.54	J		0.19	0.096	2			0.19	0.096	0.71	U		0.19	0.096
Chloride	mg/L	NA	1.9	J		0.19	0.096	2.4	J		0.19	0.096	2.4	J		0.19	0.096	5			0.19	0.096	1.7	J		0.19	0.096	7.1			0.19	0.096
Nitrate (as N)	mg/L	NA	0.85			0.19	0.096	5.2			0.19	0.096	5.3			0.19	0.096	0.38	J		0.19	0.096	0.32	J		0.19	0.096	2.1			0.19	0.096
Sulfate	mg/L	NA	3.9			0.19	0.096	24			0.19	0.096	25		J	0.19	0.096	0.85	J		0.19	0.096	14			0.19	0.096	63			0.19	0.096
Total Organic Carbon	mg/L	NA	1.5	U		0.19	0.096	1.5	U		0.19	0.096	1.5	U		0.19	0.096	1.5	U		0.19	0.096	2.7	J		0.19	0.096	1.5	U		0.19	0.096
MNA																															
Dissolved Mn	mg/L	NA	0					0					0					0.01					0					0				
Dissolved Fe^{2+}	mg/L	NA	0					0.01					0.01					0					0					0.03				

Table 5-4 SWMU 49 Detected Analytes in Twenty-Second Quarter Groundwater Samples (Continued)

Sample ID			13MW2					13MW3					13TW3 (Field Duplicate of 13MW3)					13MW4					49MW04				
Date Collected			1/25/21					1/25/21					1/25/21					1/25/21					1/25/21				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
VOCs																											
1,1,1-Trichloroethane	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.6	U	0.6	U		1	0.29	0.6	U		1	0.29	0.6	U		1	0.29
1,1-Dichloroethane	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.6	U	0.6	U		1	0.3	0.6	U		1	0.3	0.6	U		1	0.3
Carbon tetrachloride	µg/L	5	0.6	U		0.19	0.096	6.8			4.6		6.8			1	0.3	0.6	U		1	0.3	0.61	J		1	0.3
Chloroform	µg/L	NA	0.6	U		0.19	0.096	0.6	J		0.41	J	0.65	J		1	0.3	0.6	U		1	0.3	0.6	U		1	0.3
cis-1,2-Dichloroethene	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.6	U	0.6	U		1	0.3	0.6	U		1	0.3	0.6	U		1	0.3
Tetrachloroethene	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.6	U	0.6	U		1	0.27	0.6	U		1	0.27	0.6	U		1	0.27
Trichloroethene	µg/L	5	0.6	U		0.19	0.096	1.1	J		0.79	J	1.2	J		1	0.3	0.8	J		1	0.3	0.6	U		1	0.3
Miscellaneous																											
Ethane	µg/L	NA	0.8	U		0.19	0.096	0.8	U		0.8	0.4	0.8	U		0.8	0.4	0.8	U		0.8	0.4	0.8	U		0.8	0.4
Ethene	µg/L	NA	1.2	U		0.19	0.096	1.2	U		1.1	0.5	1.2	U		1.1	0.5	1.2	U		1.1	0.5	1.1	U		1.1	0.5
Methane	µg/L	NA	0.9	U		0.19	0.096	0.9	U		0.7	0.3	0.9	U		0.7	0.3	0.9	U		0.7	0.3	0.9	U		0.7	0.3
Chloride	mg/L	NA	4			0.19	0.096	4.1			3	1	4.1			3	1	3.1			3	1	5.8			3	1
Nitrate (as N)	mg/L	NA	0.36	J		0.19	0.096	1.8			0.4	0.12	1.8			0.4	0.12	0.27	J		0.4	0.12	0.29	J		0.4	0.12
Sulfate	mg/L	NA	38			0.19	0.096	95			15	4	95			15	4	57			3	0.8	57			3	0.8
Total Organic Carbon	mg/L	NA	1.5	U		0.19	0.096	1.5	U		3	0.5	1.5	U		3	0.5	1.5	U		3	0.5	1.5	U		3	0.5
MNA																											
Dissolved Mn	mg/L	NA	0.043					0					0					0					0.03				
Dissolved Fe^{2+}	mg/L	NA	0.00					0					0					0.03					0.02				

Notes:

[1]Remedial Goals developed in Draft SWMU 48/49 RFI Report (CB&I, 2014a).

[2]Groundwater well sampled annually in January.

Exceedances denoted by **bold font.**

µg/L = micrograms per liter (parts per billion)
Fe^{2+} = ferrous iron
ID = identification
LOD = limit of detection
LOQ = limit of quantitation
MDL = Method Detection Limit
mg/L = milligrams per liter (parts per million)
Mn = manganese
MNA = monitored natural attenuation
NA = not applicable; remedial goal not established for analyte at SWMU 49
RL = Reporting Limit
VOC = volatile organic compound

Lab Q = Lab Data Qualifiers
Val Q = Validation Data Qualifiers
H = The sample or analyte was analyzed and reported past the hold time.
J = Estimated value.
M = Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recovery outside acceptance limits.
Q = Laboratory Control Sample (LCS) outside acceptable limits.
U = Analyte concentration was not above the detection level.
Y = A Relative Percent Difference (RPD) exceedance between an LCS and a Laboratory Control Sample Duplicate (LCSD), between an MS and an MSD, or between a parent sample and a duplicate sample.
Z = Continuing calibration verification (CCV) or initial calibration verification (ICV) failure for the associated analyte.

Table 5-5 SWMU 49 Summary of Detected Constituents in Twenty-Third Quarter Groundwater Samples

Analyte	Units	RG	# of RG Exceedances	# of Detections	# of Samples[1]	Minimum Concentration	Maximum Concentration	Location of Maximum
VOCs								
1,1,1-Trichloroethane	µg/L	NA	NA	1	13	ND	0.83	48MW06
1,1-Dichloroethane	µg/L	NA	NA	3	13	ND	3.8	48MW06
Carbon tetrachloride	µg/L	5	4	9	13	ND	84	48MW3
Chloroform	µg/L	NA	NA	6	13	ND	19	48MW3 (and field duplicate 48TW3)
cis-1,2-Dichloroethene	µg/L	NA	NA	3	13	ND	8.2	48MW06
Tetrachloroethene	µg/L	NA	NA	1	13	ND	0.81	48MW06
Trichloroethene	µg/L	5	3	9	13	ND	16	48MW3 (and field duplicate 48TM3)
Miscellaneous								
Chloride	mg/L	NA	NA	13	13	1.7	8.4	48MW06
Ethane	µg/L	NA	NA	0	13	ND	ND	NA
Ethene	µg/L	NA	NA	0	13	ND	ND	NA
Methane	µg/L	NA	NA	1	13	ND	1.6	49MW02
Nitrate (as N)	mg/L	NA	NA	13	13	0.22	4.7	48MW06
Sulfate	mg/L	NA	NA	13	13	0.87	140.0	48MW06
Total Organic Carbon	mg/L	NA	NA	2	13	1.8	2.7	49MW02

Notes:
[1]Includes one duplicate sample
µg/L = micrograms per liter
mg/L = milligrams per liter
NA = not applicable
ND = non-detect
RG = Remedial Goal
VOC = volatile organic compound

Table 5-6 SWMU 49 Detected Analytes in Twenty-Third Quarter Groundwater Samples

Sample ID			48MW06					48MW1					48MW2					48MW3					48TW3 (Field Duplicate of 48MW3)					49MW01				
Date Collected			4/15/2021					4/15/2021					4/13/2021					4/13/2021					4/13/2021					4/15/2021				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
VOCs																															
1,1,1-Trichloroethane	µg/L	NA	0.83	J		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
1,1-Dichloroethane	µg/L	NA	3.8			0.19	0.096	0.58	J		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
Carbon tetrachloride	µg/L	5	0.6	U		0.19	0.096	0.6	U		0.19	0.096	**22**			0.19	0.096	**84**			0.19	0.096	**80**			0.19	0.096	2.8			0.19	0.096
Chloroform	µg/L	NA	0.6	U		0.19	0.096	0.6	U	U	0.19	0.096	3			0.19	0.096	19			0.19	0.096	19			0.19	0.096	0.46	J		0.19	0.096
cis-1,2-Dichloroethene	µg/L	NA	8.2			0.19	0.096	0.39	J		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
Tetrachloroethene	µg/L	NA	0.81	J		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
Trichloroethene	µg/L	5	4.9			0.19	0.096	1			0.19	0.096	1			0.19	0.096	**16**			0.19	0.096	**16**			0.19	0.096	0.6	U		0.19	0.096
Miscellaneous																															
Ethane	µg/L	NA	0.8	U		0.19	0.096	0.8	U		0.19	0.096	0.8	U		0.8	0.4	0.8	U		0.8	0.4	0.8	U		0.8	0.4	0.8	U		0.8	0.4
Ethene	µg/L	NA	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		1.1	0.5	1.2	U		1.1	0.5	1.2	U		1.1	0.5	1.2	U		1.1	0.5
Methane	µg/L	NA	0.9	U		0.19	0.096	0.9	U		0.19	0.096	0.9	U		0.7	0.3	0.9	U		0.7	0.3	0.9	U		0.7	0.3	0.9	U		0.7	0.3
Chloride	mg/L	NA	8.8			0.19	0.096	3.6			0.19	0.096	1.9	J		3	1	2.5	J		3	1	2.4	J		3	1	3.6			3	1
Nitrate (as N)	mg/L	NA	3.8			0.19	0.096	1.2			0.19	0.096	0.83			0.4	0.12	4.7			0.4	0.12	4.7			0.4	0.12	0.39	J		0.4	0.12
Sulfate	mg/L	NA	140			0.19	0.096	43			0.19	0.096	3.3			3	0.8	22			3	0.8	22			3	0.8	0.87	J		3	0.8
Total Organic Carbon	mg/L	NA	1.8	J	U	0.19	0.096	1.5	U	U	0.19	0.096	1.5	U		3	0.5	1.5	U		3	0.5	1.5	U		3	0.5	1.5	U		3	0.5
MNA																															
Dissolved Mn	mg/L	NA	8.4					0					0					8.5					8.5					0				
Dissolved Fe^{2+}	mg/L	NA	0					0					0.37					0.05					0.05					0.04				

Table 5-6 SWMU 49 Detected Analytes in Twenty-Third Quarter Groundwater Samples (Continued)

Sample ID			49MW02					50MW02					13MW2					13MW3					13TW3 (Field Duplicate of 13MW3)					13MW4					49MW04				
Date Collected			4/13/2021					4/13/2021					4/14/2021					4/14/2021					4/14/2021					4/14/2021					4/14/2021				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
VOCs																																				
1,1,1-Trichloroethane	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
1,1-Dichloroethane	µg/L	NA	0.6	U		0.19	0.096	0.3	J		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
Carbon tetrachloride	µg/L	5	0.6	U		0.19	0.096	0.83	J		0.19	0.096	0.33	J		0.19	0.096	**5.3**			0.19	0.096	5			0.19	0.096	0.6	U		0.19	0.096	0.56	J		0.19	0.096
Chloroform	µg/L	NA	0.6	U		0.19	0.096	0.6	U	U	0.19	0.096	0.6	U		0.19	0.096	0.43	J	U	0.19	0.096	0.45	J		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
cis-1,2-Dichloroethene	µg/L	NA	0.6	U		0.19	0.096	0.39	J		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
Tetrachloroethene	µg/L	NA	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096	0.6	U		0.19	0.096
Trichloroethene	µg/L	5	0.6	U		0.19	0.096	1.3			0.19	0.096	0.6	U		0.19	0.096	0.97	J		0.19	0.096	0.89	J		0.19	0.096	0.45	J		0.19	0.096	0.6	U		0.19	0.096
Miscellaneous																																				
Ethane	µg/L	NA	0.8	U		0.19	0.096	0.8	U		0.19	0.096	0.8	U		0.19	0.096	0.8	U		0.19	0.096	0.8	U		0.19	0.096	0.8	U		0.19	0.096	0.7	U		0.19	0.096
Ethene	µg/L	NA	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1.2	U		0.19	0.096	1	U		0.19	0.096
Methane	µg/L	NA	1.6			0.19	0.096	0.9	U		0.19	0.096	0.9	U		0.19	0.096	0.9	U		0.19	0.096	0.9	U		0.19	0.096	0.9	U		0.19	0.096	0.6	U		0.19	0.096
Chloride	mg/L	NA	1.7	J		0.19	0.096	7.1			0.19	0.096	3.9			0.19	0.096	4.3			0.19	0.096	4.2			0.19	0.096	3.8			0.19	0.096	6.2			0.19	0.096
Nitrate (as N)	mg/L	NA	0.38	J		0.19	0.096	2.4			0.19	0.096	0.3	J		0.19	0.096	1.8			0.19	0.096	1.8			0.19	0.096	0.74	J		0.19	0.096	0.22	J		0.19	0.096
Sulfate	mg/L	NA	13			0.19	0.096	62			0.19	0.096	33			0.19	0.096	15			0.19	0.096	87			0.19	0.096	25			0.19	0.096	58			0.19	0.096
Total Organic Carbon	mg/L	NA	2.7	J		0.19	0.096	1.5	U		0.19	0.096	1.5	U		0.19	0.096	1.5	U		0.19	0.096	1.5	U		0.19	0.096	1.5	U		0.19	0.096	1.5	U		0.19	0.096
MNA																																				
Dissolved Mn	mg/L	NA	0.6					0.10					0.4					0					0					0.4					0				
Dissolved Fe^{2+}	mg/L	NA	0.72					0.30					0.01					0					0					0.04					0				

Notes:
[1]Remedial Goals developed in Draft SWMU 48/49 RFI Report (CB&I, 2014a).
Exceedances denoted by **bold font.**
µg/L = micrograms per liter (parts per billion)
Fe^{2+} = ferrous iron
ID = identification
LOD = limit of detection
LOQ = limit of quantitation
MDL = Method Detection Limit
mg/L = milligrams per liter (parts per million)
Mn = manganese
Lab Q = Lab Data Qualifiers
Val Q = Validation Data Qualifiers
H = The sample or analyte was analyzed and reported past the hold time.
J = Estimated value.
M = Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recovery outside acceptance limits.
Q = Laboratory Control Sample (LCS) outside acceptable limits.
U = Analyte concentration was not above the detection level.
Y = A Relative Percent Difference (RPD) exceedance between an LCS and a Laboratory Control Sample Duplicate (LCSD), between an MS and an MSD, or between a parent sample and a duplicate sample.
Z = Continuing calibration verification (CCV) or initial calibration verification (ICV) failure for the associated analyte.

Table 5-7 SWMU 49 Summary of Detected Constituents in Twenty-Fourth Quarter Groundwater Samples

Analyte	Units	RG	# of RG Exceedances	# of Detections	# of Samples[1]	Minimum Concentration	Maximum Concentration	Location of Maximum
VOCs								
1,1,1-Trichloroethane	µg/L	NA	NA	1	13	ND	0.43	48MW06
1,1-Dichloroethane	µg/L	NA	NA	3	13	ND	2.9	48MW06
Carbon tetrachloride	µg/L	5	5	9	13	ND	100	48MW3
Chloroform	µg/L	NA	NA	6	13	ND	20	48MW3
cis-1,2-Dichloroethene	µg/L	NA	NA	3	13	ND	5	48MW06
Tetrachloroethene	µg/L	NA	NA	1	13	ND	0.45	48MW06
Trichloroethene	µg/L	5	2	9	13	ND	23	48TW3 (field duplicate of 48MW3)
Miscellaneous								
Chloride	mg/L	NA	NA	13	13	1.8	8.8	48MW06
Ethane	µg/L	NA	NA	0	13	ND	ND	NA
Ethene	µg/L	NA	NA	0	13	ND	ND	NA
Methane	µg/L	NA	NA	0	13	ND	ND	NA
Nitrate (as N)	mg/L	NA	NA	13	13	0.24	4.1	48MW3
Sulfate	mg/L	NA	NA	13	13	0.88	120	48MW06
Total Organic Carbon	mg/L	NA	NA	2	13	ND	2.7	48MW06

Notes:
[1]Includes one duplicate sample
µg/L = micrograms per liter
mg/L = milligrams per liter
NA = not applicable
ND = non-detect
RG = Remedial Goal
VOC = volatile organic compound

Table 5-8 SWMU 49 Detected Analytes in Twenty-Fourth Quarter Groundwater Samples

Sample ID			48MW06					48MW1					48MW2					48MW3					48TW3 (Field Duplicate of 48MW3)					49MW01				
Date Collected			7/26/2021					7/29/2021					7/30/2021					7/30/2021					7/22/2020					7/23/2020				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
VOCs																																
1,1,1-Trichloroethane	µg/L	NA	0.43	J		0.2	0.1	0.6	J		0.2	0.1	0.6	U		0.2	0.1	3	U		0.2	0.1	3	U		0.2	0.98	0.6	U		0.2	0.1
1,1-Dichloroethane	µg/L	NA	2.9			0.2	0.78	0.46	J		0.2	0.78	0.6	U		0.2	0.78	1.7	J		0.2	0.78	3	U		0.2	0.98	0.6	U		0.2	0.78
Carbon tetrachloride	µg/L	5	0.6	U		0.2	0.98	0.6	U		0.2	0.98	**25**			0.2	0.98	**100**			0.2	0.98	**99**			0.2	0.98	2.7			0.2	0.98
Chloroform	µg/L	NA	0.6	U		0.2	0.98	0.6	U		0.2	0.98	2.9			0.2	0.98	20			0.2	0.98	20			0.2	0.98	0.46	J		0.2	0.98
cis-1,2-Dichloroethene	µg/L	NA	5			0.2	0.98	0.33	J		0.2	0.98	0.6	U		0.2	0.98	3	U		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98
Tetrachloroethene	µg/L	NA	0.45	J		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98	3	U		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98
Trichloroethene	µg/L	5	3.1			0.2	0.98	0.96	**J**		0.2	0.98	1.4			0.2	0.98	**20**			0.2	0.98	**23**			0.2	0.98	0.6	U		0.2	0.98
Miscellaneous																																
Ethane	µg/L	NA	0.8	U		0.2	0.98	0.8	U		0.2	0.98	0.8	U		0.2	0.98	0.8	U		0.2	0.98	0.8	U		0.2	0.98	0.8	U		0.2	0.98
Ethene	µg/L	NA	1.2	U		0.2	0.98	1.2	U		0.2	0.98	1.2	U		0.2	0.98	1.2	U		0.2	0.98	1.2	U		0.2	0.98	1.2	U		0.2	0.98
Methane	µg/L	NA	0.9	U		0.2	0.98	0.9	U		0.2	0.98	0.9	U		0.2	0.98	0.9	U		0.2	0.98	0.9	U		0.2	0.98	0.9	U		0.2	0.98
Chloride	mg/L	NA	8.8			0.2	0.98	3.4			0.2	0.98	1.8	J		0.2	0.98	2.2	J		0.2	0.98	2.3		J	0.2	0.98	4.9			0.2	0.98
Nitrate (as N)	mg/L	NA	2			0.2	0.98	1.1			0.2	0.98	0.82			0.2	0.98	4.1			0.2	0.98	4.1			0.2	0.98	0.38	J		0.2	0.98
Sulfate	mg/L	NA	120			0.2	0.98	44			0.2	0.98	2.9			0.2	0.98	19			0.2	0.98	20		J	0.2	0.98	0.88	J		0.2	0.98
Total Organic Carbon	mg/L	NA	2.7	J		0.2	0.98	1.5	U		0.2	0.98	1.5	U		0.2	0.98	1.5	U		0.2	0.98	1.5	U		0.2	0.98	1.5	U		0.2	0.98
MNA																																
Dissolved Mn	mg/L	NA	0.6					0.4					0					0.1					0.1					0.3				
Dissolved Fe^{2+}	mg/L	NA	0.26					0.05					0.1					0.01					0.01					0.03				

Table 5-8 SWMU 49 Detected Analytes in Twenty-Fourth Quarter Groundwater Samples (Continued)

Sample ID			49MW02					50MW02					13MW2					13MW3					13TW3 (Field Duplicate of 13MW3)					13MW4					49MW04				
Date Collected			7/30/2021					7/29/2021					7/28/2021					7/26/2021					7/26/2021					7/21/2021					7/21/2021				
Analyte	Units	Remedial Goals[1]	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD	Result	Lab Q	Val Q	LOQ	LOD
VOCs																																				
1,1,1-Trichloroethane	µg/L	NA	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1	0.6	U		0.2	0.1
1,1-Dichloroethane	µg/L	NA	0.6	U		0.2	0.78	0.6	U		0.2	0.78	0.6	U		0.2	0.78	0.6	U		0.2	0.78	0.6	U		0.2	0.78	0.6	U		0.2	0.78	0.6	U		0.2	0.78
Carbon tetrachloride	µg/L	5	0.79	J		0.2	0.98	1.1	J		0.2	0.98	0.6	U		0.2	0.98	**7**			0.2	0.98	**6.8**			0.2	0.98	0.59	J		0.2	0.98	0.6	U		0.2	0.98
Chloroform	µg/L	NA	0.6	U		0.2	0.98	0.6	U	U	0.2	0.98	0.6	U		0.2	0.98	0.62	J	U	0.2	0.98	0.67	J		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98
cis-1,2-Dichloroethene	µg/L	NA	0.6	U		0.2	0.98	0.34	J		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98
Tetrachloroethene	µg/L	NA	0.6	U		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98	0.6	U		0.2	0.98
Trichloroethene	µg/L	5	0.6	U		0.2	0.98	1.4			0.2	0.98	0.6	U		0.2	0.98	1.1			0.2	0.98	1.2	J		0.2	0.98	1.7			0.2	0.98	0.6	U		0.2	0.98
Miscellaneous																																				
Ethane	µg/L	NA	0.8	U		0.2	0.98	0.8	U		0.2	0.98	0.8	U		0.2	0.98	0.8	U		0.8	0.4	0.8	U		0.2	0.98	0.8	U		0.2	0.98	0.8	U		0.2	0.98
Ethene	µg/L	NA	1.2	U		0.2	0.98	1.2	U		0.2	0.98	1.2	U		0.2	0.98	1.2	U		1.1	0.5	1.2	U		0.2	0.98	1.2	U		0.2	0.98	1.2	U		0.2	0.98
Methane	µg/L	NA	0.9	U		0.2	0.98	0.9	U		0.2	0.98	0.9	U		0.2	0.98	0.9	U		0.7	0.3	0.9	U		0.2	0.98	0.9	U		0.2	0.98	0.9	U		0.2	0.98
Chloride	mg/L	NA	1.6	J		0.2	0.98	6.8			0.2	0.98	4.7			0.2	0.98	3.7			3	1	3.7			0.2	0.98	3.7			0.2	0.98	6.2			0.2	0.98
Nitrate (as N)	mg/L	NA	0.34	J		0.2	0.98	2.1			0.2	0.98	0.25	J		0.2	0.98	1.5			0.4	0.12	1.5			0.2	0.98	0.73			0.2	0.98	0.24	J		0.2	0.98
Sulfate	mg/L	NA	12			0.2	0.98	59			0.2	0.98	34			0.2	0.98	96			15	4	99			0.2	0.98	42			0.2	0.98	58			0.2	0.98
Total Organic Carbon	mg/L	NA	1.5	U		0.2	0.98	1.5	U		0.2	0.98	1.5	U		0.2	0.98	1.5	U		3	0.5	1.5	U		0.2	0.98	1.5	U		0.2	0.98	0.61	J		0.2	0.98
MNA																																				
Dissolved Mn	mg/L	NA	0.4					0.6					0.2					0.6					0.6					0.2					0				
Dissolved Fe^{2+}	mg/L	NA	0.02					0					0.01					0					0					0					0.01				

Notes:
[1]Remedial Goals developed in Draft SWMU 48/49 RFI Report (CB&I, 2014a).
Exceedances denoted by **bold font.**
µg/L = micrograms per liter (parts per billion)
Fe^{2+} = ferrous iron
ID = identification
LOD = limit of detection
LOQ = limit of quantitation
MDL = Method Detection Limit
mg/L = milligrams per liter (parts per million)
Mn = manganese
MNA = monitored natural attenuation
NA = not applicable; remedial goal not established for analyte at SWMU 49
Val Q = Validation Data Qualifiers
H = The sample or analyte was analyzed and reported past the hold time.
J = Estimated value.
M = Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recovery outside acceptance limits.
Q = Laboratory Control Sample (LCS) outside acceptable limits.
U = Analyte concentration was not above the detection level.
Y = A Relative Percent Difference (RPD) exceedance between an LCS and a Laboratory Control Sample Duplicate (LCSD), between an MS and an MSD, or between a parent sample and a duplicate sample.
Z = Continuing calibration verification (CCV) or initial calibration verification (ICV) failure for the associated analyte.

Table 5-9 Summary of Sample and Analyses

Sampling Event ID	Data Packages	Matrix	TCL VOCs	Methane Ethane Ethene	Chloride Nitrate Sulfate	Metals [1]	TOC	COD pH
October 2020	157538	GW	X	X	X	X	X	X
January 2020	159400	GW	X	X	X	X	X	X
April 2020	161060	GW	X	X	X	X	X	X
July 2020	163390	GW	X	X	X	X	X	X

Notes:
[1]Ferrous iron and manganese were analyzed for groundwater samples, whereas total metals were only analyzed for IDW samples.
COD = chemical oxygen demand
GW = groundwater
ID = identification
IDW = investigation-derived waste
pH = corrosivity/hydrogen ion concentration
TCL = target compound list
TOC = total organic carbon
VOC = volatile organic compound

Table 5-10 Analytical Methods

Analysis	Analytes	Method
VOCs	Numerous	USEPA SW-846 Method 8260C
Dissolved Gases	Methane Ethane Ethene	USEPA SW-846 Method 8015/RSK-175
Anions	Chloride Nitrate Sulfate	USEPA SW-846 Method 9056A
TOC	TOC	USEPA SW-846 Method 9060A

Notes:
TOC = total organic carbon
USEPA = U.S. Environmental Protection Agency
VOC = volatile organic compound

Table 5-11 Data Qualifiers

Qualifier	Description
R	Rejected: The result is rejected due to deficiencies in the analytical system or the inability to meet QC criteria.
M	Matrix effect: The concentration is estimated due to a matrix effect.
J	Estimated: The analyte was positively identified, but the quantitation is an estimate due to discrepancies in meeting certain analyte-specific QC criteria.
J+	Estimated: The analyte was positively identified, but the quantitation is an estimate, possibly biased high, due to discrepancies in meeting certain analyte-specific QC criteria.
J-	Estimated: The analyte was positively identified, but the quantitation is an estimate, possibly biased low, due to discrepancies in meeting certain analyte-specific QC criteria.
B	Blank. The analyte was detected in an associated blank.
U	Undetected: The analyte was analyzed for but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific QC criteria.

Table 5-12 Holding Time Exceedances

Sampling Event	Analysis [1]	Analytes	Result	Samples	Qualifiers
October 2020	Anions	Nitrate	Technical holding time	48MW06 and 48MW07	J
January 2021	pH Dissolved Gases Nitrates	All compounds	Technical holding time	49MW01, 49MW02, 48MW06, 48MW07, 49MW03	UJ UJ/J J
April 2021	Anions	Nitrate	Technical holding time	49MW01, 48MW1, 48MW06	J
July 2021	No exceedances				

Notes:

[1]The holding time for pH analysis is only minutes; therefore, this is expected. The data are still usable for their intended purpose.
J = estimated
UJ = non-detected estimated

Table 5-13 Field Duplicate Precision Exceedances

Sample	Analyte	Flag	RPD
October 2020	Methane	J	≥35
January 2021	No exceedances		
April 2021	No exceedances		
July 2021	No exceedances		

Notes:
≥ = greater than or equal to
J = estimated
RPD = relative percent difference

Table 5-14 MS/MSD RPD Exceedances

Sample	Location/Analyte	Flag	RPD
October 2020	48MW06 (Various VOCs)	J	≥10
January 2021	48MW06 (1,4-dioxane, TOC) 48/49-IDW (Metals) 13MW2 (TOC)	UJ/J	≥10
April 2021	No exceedances		
July 2021	48/49-IDW (Aluminum)	J	≥10

Notes:
≥ = greater than or equal to
J = estimated
RPD = relative percent difference
UJ = non-detected estimated
VOC = volatile organic compound

Table 5-15 LCS Recovery Exceedances

Sample/Method	Analyte	Flag	Recovery
October 2020	1,2,4-Trichlorobenzene 1,4-Dioxane	UJ	≥20
January 2021	1,4-Dioxane	UJ	≥20
April 2021	1,4-Dioxane	UJ	≥50
July 2021	1,4-Dioxane	UJ	>20

Notes:
> = greater than
≥ = greater than or equal to
UJ = non-detected estimated

Table 5-16 MS/MSD Recovery Exceedances

Sample ID	Analyte	Recovery	Parent Flag
October 2020 (48MW06)	VOCs	High	No flag
January 2021 (13MW2, 48MW06) (48/49-IDW)	1,4-Dioxane, Sulfate Metals	High Low	J
April 2021 (49MW01)	Nitrate	Low	J
July 2021 (IDW-48/49)	Metals	Low	J

Notes:
ID = identification
J = estimated
VOC = volatile organic compound

Table 5-17 Serial Dilution

Sample ID	Analyte	Recovery	Parent Flag
October 2020	No exceedances		
January 2021 48/49IDW	Aluminum, Cadmium, Iron	Low	J
April 2021 48/49IDW	Iron	High	J
July 2021 IDW-48/49	Metals	High	J

Notes:
ID = identification
J = estimated

Table 5-18 Calibration Exceedances

Sampling Event	Analysis	Analytes	Result	Samples	Qualifiers
October 2020	VOCs	1,4-Dioxane Bromomethane	CCV low	Numerous	UJ
January 2021	VOCs	1,4-Dioxane	ICV low, CCV low	All	UJ
April 2021	VOCs	1,4-Dioxane Numerous VOCs	ICV low CCV low	49MW01, 48MW06, 48MW06	UJ
July 2020	VOCs	1,4-Dioxane Dichlorodifluoromethane	ICV High, CCV high	13MW4, 13MW3, 13TW3	UJ

Notes:
CCV = continuing calibration verification
ICV = initial calibration verification
UJ = non-detected estimated
VOC = volatile organic compound

Table 5-19 Blank Flags

Sample Event	Type of Blank	Method	Analyte	Samples Qualified	Flag
October 2020	No exceedances				
January 2021	No exceedances				
April 2021	No exceedances				
July 2020	No exceedances				

Legend

- Well
- SWMU 49 Boundary

Carbon Tetrachloride Isopleths (ug/L)

- 1
- 5
- 50

Aerial Source:
Near Map Imagery, February 2020

N

0 45 90 180 Feet

Prepared By:

Baltimore District

FIGURE 5-1
SWMU 49 OCTOBER 2020
CARBON TETRACHLORIDE ISOPLETHS
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49\SWMU49_Carbon_Tetrachloride_Oct2020.mxd, 12/22/2021 9:52:48 PM, johna

Legend

- Well
- SWMU 49 Boundary

Trichloroethene Isopleths (ug/L)

- 1
- 5

Aerial Source:
Near Map Imagery, February 2020

N

0 45 90 180 Feet

Prepared By:
Baltimore District

FIGURE 5-2
SWMU 49 OCTOBER 2020
TRICHLOROETHENE ISOPLETHS
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49\SWMU49_Carbon_Trichloroethene_Oct2020.mxd, 12/22/2021 7:43:03 PM, johna

Legend

- Well
- SWMU 49 Boundary

Carbon Tetrachloride Isopleths (ug/L)

- 1
- 5
- 20
- 50

Aerial Source:
Near Map Imagery, February 2020

N

0 45 90 180 Feet

Prepared By:

Baltimore District

FIGURE 5-3
SWMU 49 JANUARY 2021
CARBON TETRACHLORIDE ISOPLETHS
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49\SWMU49_Carbon_Tetrachloride_Jan2021.mxd, 12/22/2021 8:30:33 PM, johna

Legend

- Well
- SWMU 49 Boundary

Trichloroethene Isopleths (ug/L)

- 1
- 5
- 20

Aerial Source:
Near Map Imagery, February 2020

N

0 45 90 180 Feet

Prepared By:

Baltimore District

FIGURE 5-4
SWMU 49 JANUARY 2021
TRICHLOROETHENE ISOPLETHS
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49\SWMU49_Carbon_Trichloroethene_Jan2021.mxd, 12/22/2021 8:20:31 PM, johna

Legend

- Well
- SWMU 49 Boundary

Carbon Tetrachloride Isopleths (ug/L)

- 1
- 20
- 100

Aerial Source:
Near Map Imagery, February 2020

N

0 45 90 180 Feet

Prepared By:

Baltimore District

FIGURE 5-5
SWMU 49 APRIL 2021
CARBON TETRACHLORIDE ISOPLETHS
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49_Carbon_Tetrachloride_Apr2021.mxd, 12/22/2021 9:43:17 PM, johna

Legend

- Well
- SWMU 49 Boundary

Trichloroethene Isopleths (ug/L)

- 1
- 5
- 20

Aerial Source:
Near Map Imagery, February 2020

N

0 45 90 180 Feet

Prepared By:

Baltimore District

FIGURE 5-6
SWMU 49 APRIL 2021
TRICHLOROETHENE ISOPLETHS
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49_Carbon_Trichloroethene_Apr2021.mxd, 12/22/2021 9:07:03 PM, johna

Legend

- Well
- SWMU 49 Boundary

Carbon Tetrachloride Isopleths (ug/L)

- 1
- 20
- 100

Aerial Source:
Near Map Imagery, February 2020

N

0 45 90 180 Feet

Prepared By:

Baltimore District

FIGURE 5-7
SWMU 49 JULY 2021
CARBON TETRACHLORIDE ISOPLETHS
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49_Carbon_Tetrachloride_July2021.mxd, 12/22/2021 9:22:22 PM, johna

Legend

- Well
- SWMU 49 Boundary

Trichloroethene Isopleths (ug/L)

- 1
- 5
- 20

Aerial Source:
Near Map Imagery, February 2020

N

0 45 90 180 Feet

Prepared By:

Baltimore District

FIGURE 5-8
SWMU 49 JULY 2021
TRICHLOROETHENE ISOPLETHS
RADFORD, VIRGINIA

File: Y:\Radford\MXD\SWMU\SWMU49_Carbon_Trichloroethene_July2021.mxd, 12/22/2021 9:36:00 PM, johna

Figure 5-9 SWMU 49 Twenty-First Quarter CT and TCE Concentrations

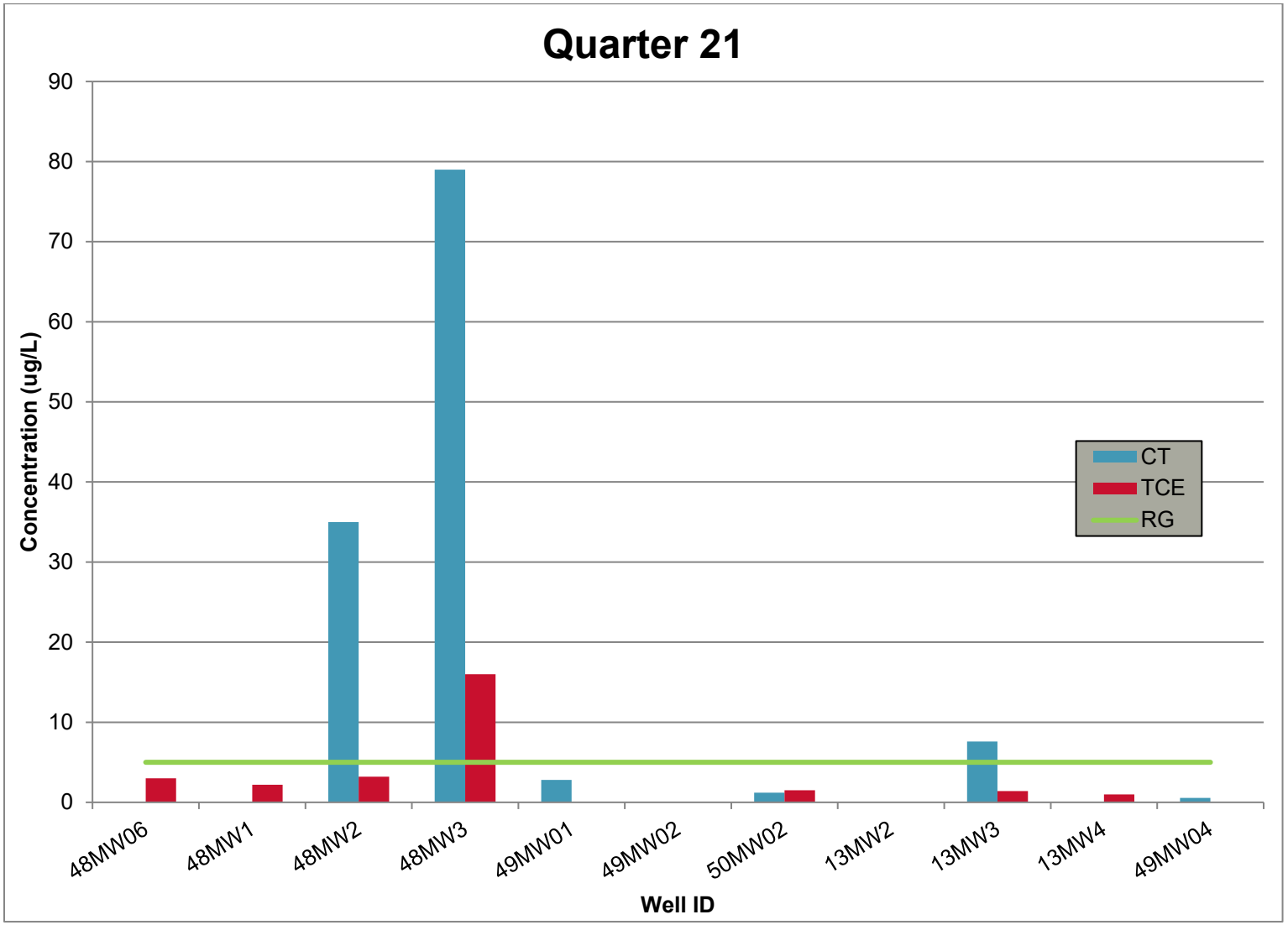


Figure 5-10 SWMU 49 Twenty-Second Quarter CT and TCE Concentrations

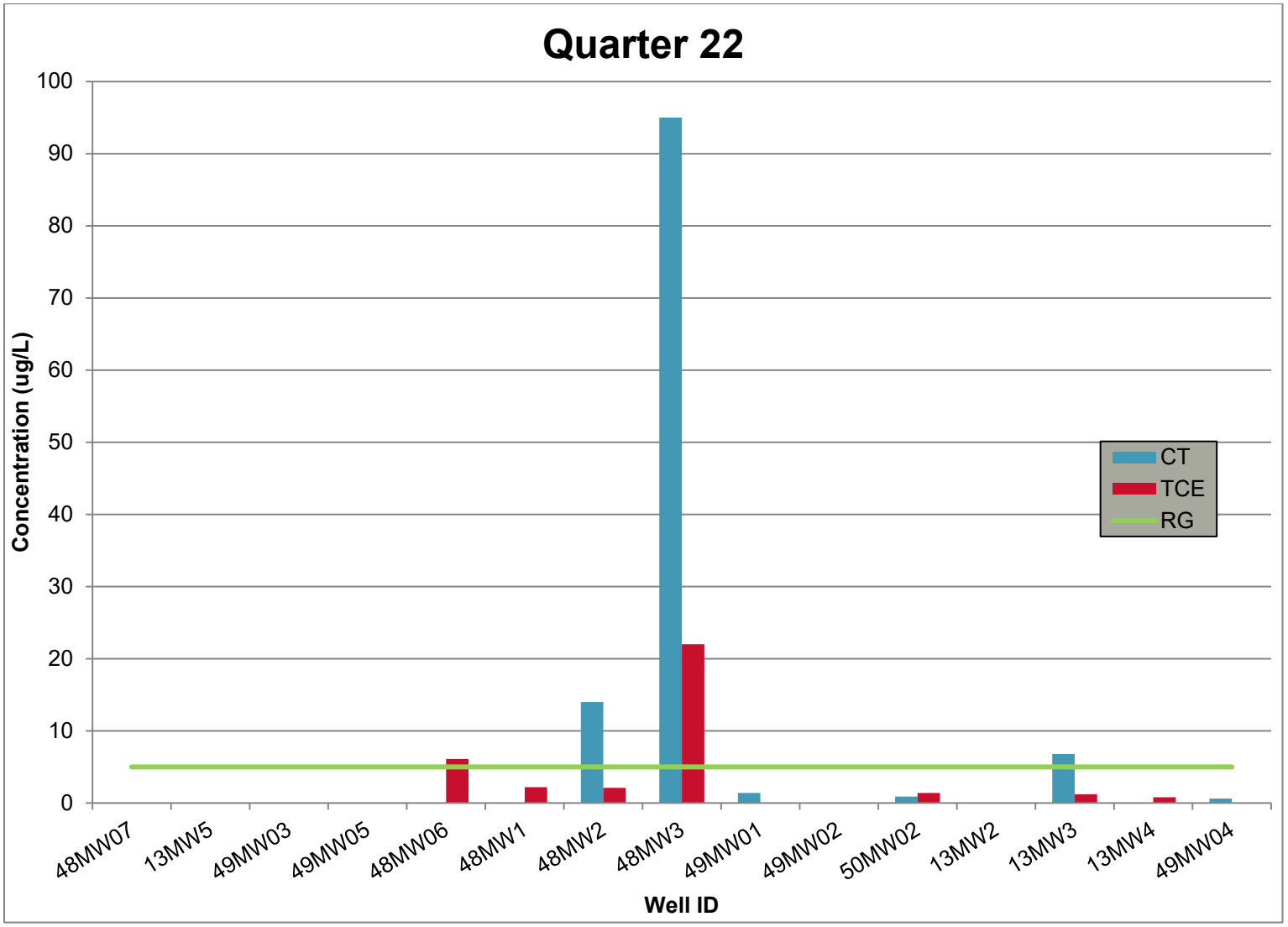


Figure 5-11 SWMU 49 Twenty-Third Quarter CT and TCE Concentrations

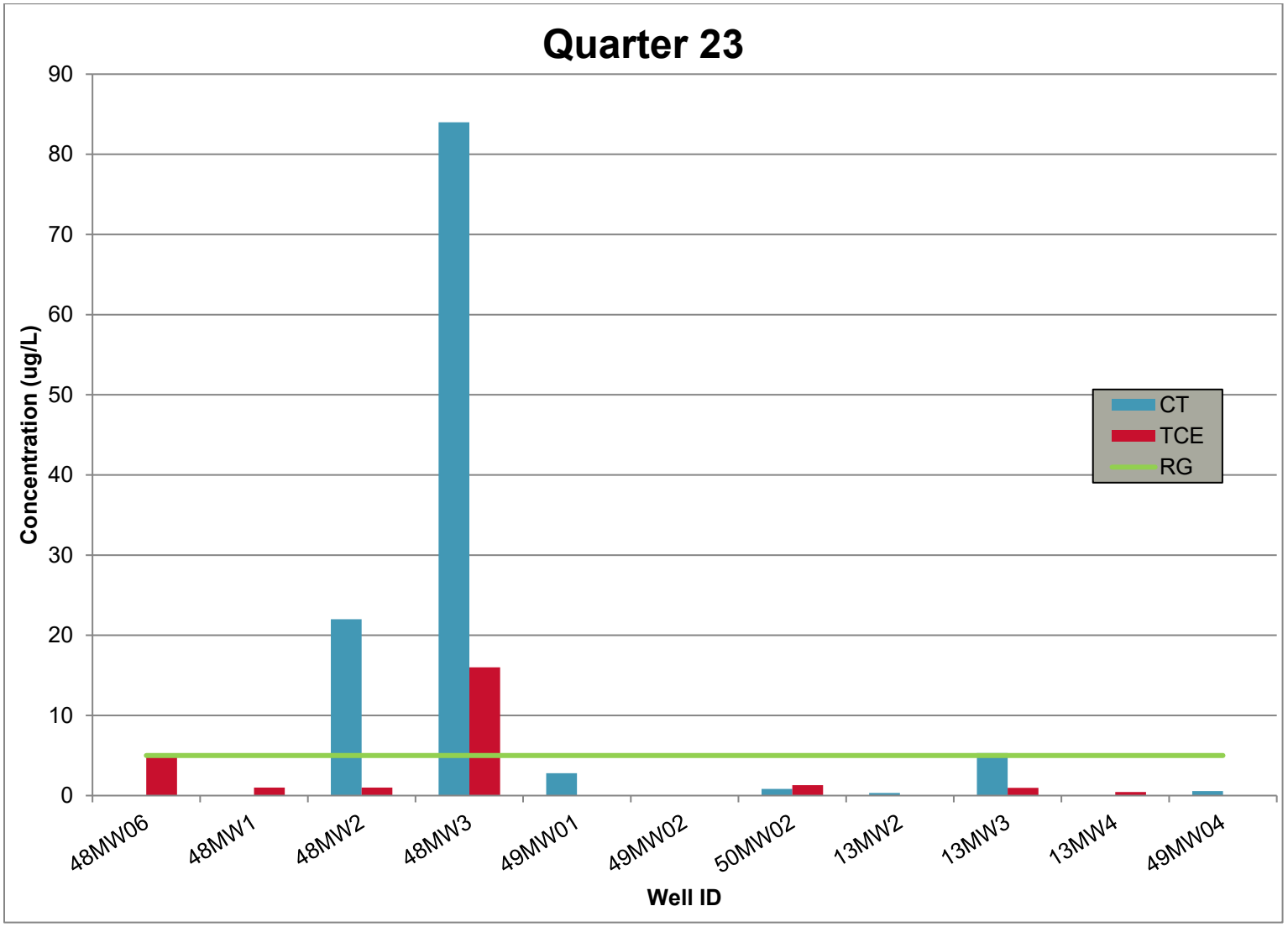


Figure 5-12 SWMU 49 Twenty-Fourth Quarter CT and TCE Concentrations

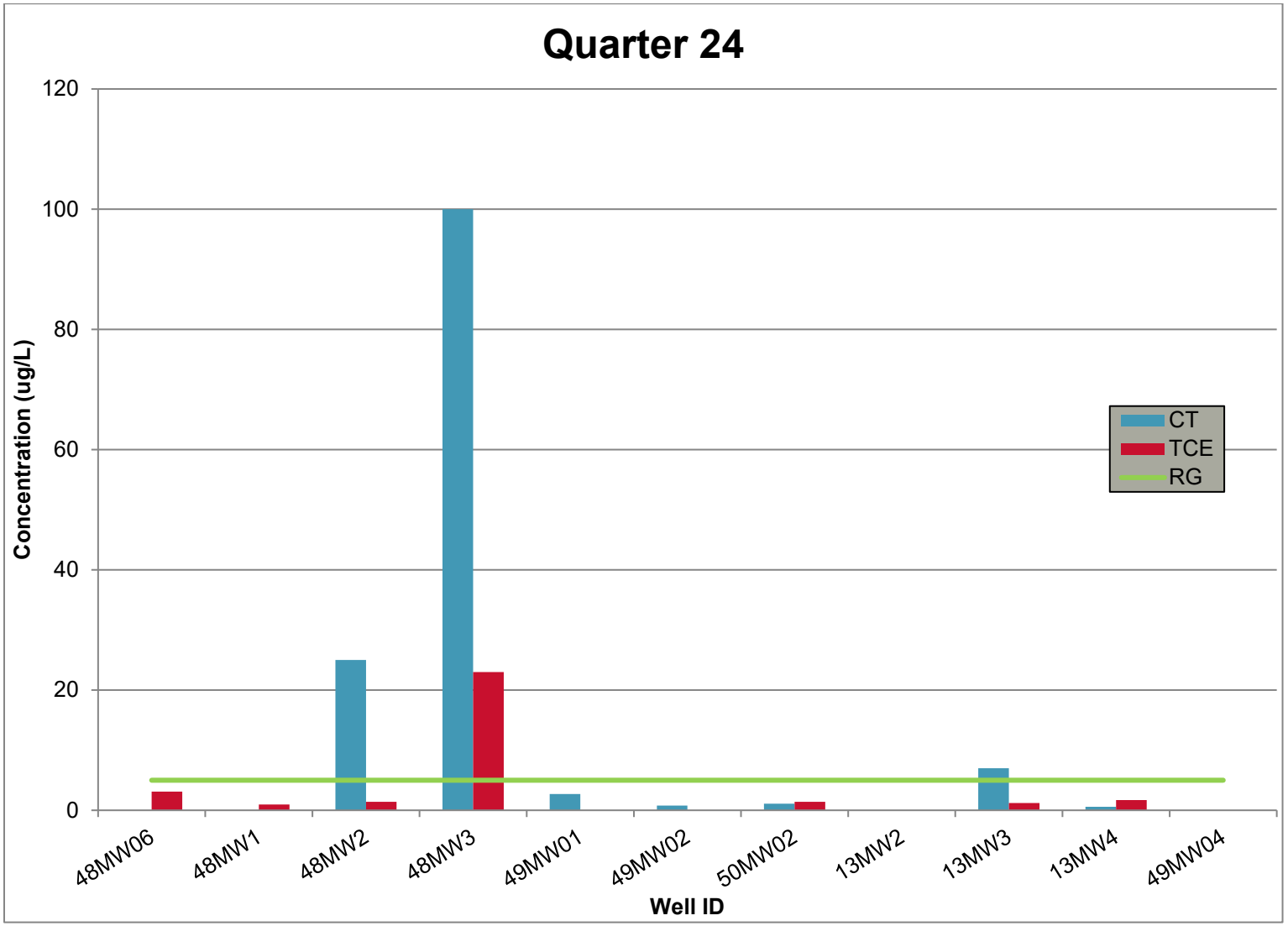
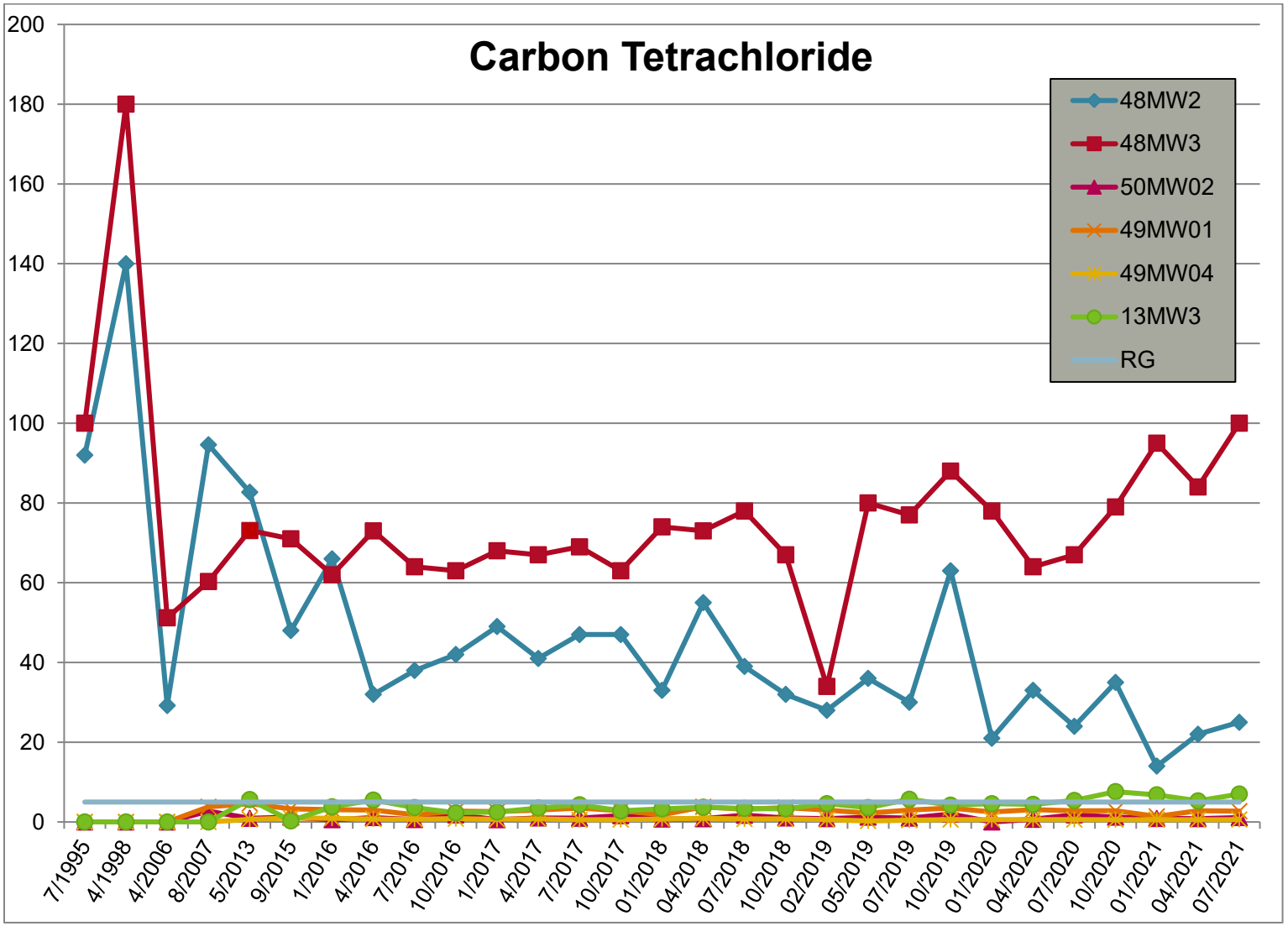
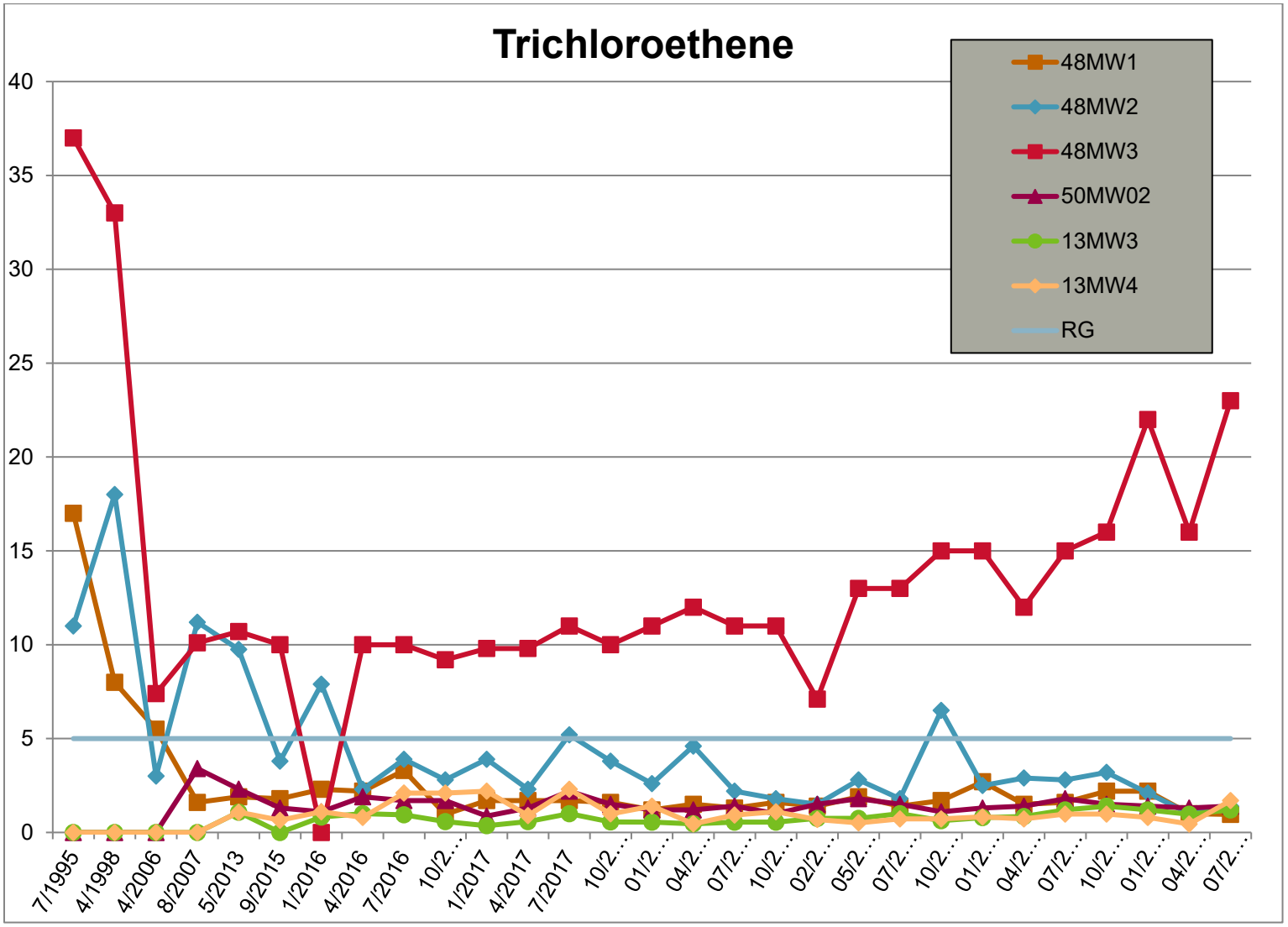


Figure 5-13 SWMU 49 CT Concentration Trends



Note: In order to fit all data on one page, x-axis time intervals do not reflect actual period of time between events.

Figure 5-14 SWMU 49 TCE Concentration Trends



Note: In order to fit all data on one page, x-axis time intervals do not reflect actual period of time between events.

6. MNA EVALUATION OF SWMU 49

This section presents and summarizes the results for the Year Six MNA sampling. Eleven monitoring wells were sampled in the SWMU 49 study area for four quarters, whereas four wells were sampled on an annual basis during the Year Six MNA monitoring. Sample results were evaluated to determine whether MNA is continuing to occur at the site.

Consistent with the TCL VOC results from the sampling event in May 2013 and the baseline sampling conducted in January 2015, the highest concentrations of CT were observed in wells 48MW2 and 48MW3, where the center of the plume is located. Exceedances of the RG for CT were also noted at 13MW3 in three of four quarters during Year Six. CT concentrations have hovered around the RG since 2013.

TCE concentrations detected at 48MW2, where historically high concentrations had been detected, were below the RG of 5 µg/L in all four quarters. During the Year Six sampling year, all concentrations of TCE at 48MW2 were below the RG of 5 µg/L. Conversely, TCE concentrations in 48MW3 were above the RG in all four quarters of Year Six. Further, well 48MW06 contained a TCE concentration during the twenty-second quarter of MNA sampling slightly above the RG, and the remaining quarters were well below the RG. This detection pattern was also noted in Years Four and Five. Monitoring well 48MW06 is located upgradient from 48MW2 and 48MW3.

Based on the Year Six MNA results, the CT and TCE plumes changed only slightly from quarter to quarter (seasonally) (**Figures 5-1** through **5-8**). There were modest changes in all four quarters with a moderate increase of TCE at 48MW3 in Year Six. In general, the CT and TCE plumes were centered on monitoring wells 48MW3/48MW2 and 48MW06/48MW3, respectively. These trends continued throughout the year. TCE continued the trend since Year Two and generally remained undetected at monitoring well 13MW2, except for nineteenth quarter (0.33 µg/L). In all quarterly events during the Year Six MNA monitoring, detections of CT were found downgradient at well 13MW3 (ranging from 5.3 µg/L to 7.6 µg/L), which is next to the New River. This concentration range is slightly higher than the Year Five data. As has been the recent trend, TCE was detected in downgradient at monitoring wells 13MW3 and 13MW4 (well below the RG).

6.1 FIRST LINE OF EVIDENCE: OCCURRENCE OF CONTAMINANTS

The first line of evidence consists of evaluating contaminant and daughter product concentrations in monitoring wells over time. The VOC CT reduces to form chloroform, and TCE will be reduced to form cis-1,2-DCE, among other by-products. Both CT and TCE attenuate more favorably under anaerobic conditions. Fifteen monitoring wells were included in the MNA monitoring at SWMU 49, which targeted areas with CT and TCE contamination. Historical trends and the results of the Year Six MNA quarterly groundwater sampling are discussed below, and the CT and TCE data are provided in **Table 6-1**.

Carbon Tetrachloride

There is good correlation of chloroform to CT concentrations for Year Six monitoring periods. Based on the data, wells with detected concentrations of CT also contained measurable levels of chloroform except for 49MW04 and 50MW02. There were scattered quarters at monitoring wells 49MW01, 49MW02, 13MW4, and 13MW2 where chloroform went undetected, although there were detections of CT. Based on available data, the presence of chloroform suggests the degradation of CT is occurring at SWMU 49. **Figures 6-1** through **6-8** provide correlation data from the Year Six MNA sampling.

Trichloroethene

The correlation of cis-1,2-DCE to TCE appears to have improved some over the four quarters of Year Five from that of the Years Three and Four MNA results. There is evidence that some correlation exists; however, in wells that contained the highest observed concentrations of TCE (48MW2 and 48MW3), cis-1,2-DCE went undetected during all four quarters. For all four quarters of Year Six, MNA cis-1,2-DCE concentrations were above TCE concentrations in well 48MW06. Based on the available data, a strong correlation of TCE degradation to cis-1,2-DCE cannot yet be determined. **Figures 6-1** through **6-8** provide correlation data from the Year Six MNA sampling.

Statistical Trends

Mann-Kendall tests were run using the USEPA software package ProUCL (USEPA, 2020). The Mann-Kendall graphs are included as **Appendix C**. Monitoring wells 48MW2 and 48MW3 both displayed high and low outliers for the CT and TCE concentration trends over the past 5 years.

Time series plots were created with and without those initial and/or final sampling data point to compare how the concentration trends would be affect by the varying results.

At 48MW2, both CT and TCE experienced decreasing trends, regardless of outlying results or concentration variability. This trend is comparable to all other wells sampling during Year Six, which also display decreasing trends for CT and TCE concentrations. At 48MW3, CT has a slight decreasing trend with the initial outlier removed and a steeply decreasing trend with the outlier data from the initial sampling included. At 48MW3, TCE has a decreasing trend with all data included and a steeply increasing trend with the initial data removed.

6.2 SECOND LINE OF EVIDENCE: GEOCHEMICAL CONDITIONS

Geochemical data are available for all four quarterly groundwater monitoring events at SWMU 49. Field parameters (DO, ORP, pH, temperature, and specific conductivity) were collected for all four quarters as part of the low-flow sampling procedures. Laboratory analysis for nitrate, sulfate, and TOC were conducted for all four quarterly groundwater monitoring events at SWMU 49. These geochemical data are discussed regarding the potential for biodegradation in the groundwater at SWMU 49.

The degradation of CT primarily occurs under anaerobic conditions, either through denitrification, iron reduction, sulfate reduction, or methanogenesis. The environmental degradation of TCE primarily occurs under anaerobic conditions that facilitate reductive chlorination, whereas natural degradation under aerobic oxidizing conditions has been documented but is much less likely to occur. Historical trends and the results of the Year Six MNA quarterly groundwater sampling are discussed below, and the data are provided in Section 4 tables.

Much of the discussion that follows uses the comparison values provided by USEPA in its *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water* (USEPA, 1998).

Dissolved Oxygen

The preferred terminal electron acceptor during aerobic microbial respiration is oxygen, and DO is measured to determine whether the groundwater is under aerobic or anaerobic conditions. Average DO values less than 1 mg/L are tolerable of anaerobic microbial activities. Further, DO

values higher than 8 mg/L were considered biased high given their relative magnitude to oxygen solubility at field temperatures, which primarily included DO measurements from the January 2021 event.

DO levels during the four quarterly monitoring events (October 2020 to July 2021) of Year Six ranged between 1.27 mg/L and 19.81 mg/L, indicating aerobic conditions were present at the site.

Oxidation-Reduction Potential

ORP values indicate the groundwater's reductive potential and are used to confirm the DO measurements in groundwater. ORP values less than +50 mV typically correspond to mildly reducing, anaerobic conditions, whereas ORP values less than -200 mV correspond to highly reducing, anaerobic conditions.

ORP levels recorded during the Year Six MNA sampling ranged from 5.08 mV to 314.1.0 mV, indicating aerobic conditions were present at the site. Twenty-first quarter values ranged from 123.7 mV to 165.3 mV; twenty-second quarter values ranged down slightly lower from 5.08 mV to 151.1 mV; twenty-third quarter values ranged higher from 88.7 mV to 220.6 mV; and the twenty-fourth quarter values ranged from 187.3 mV to 314.1 mV. Aerobic conditions remain most prevalent. Further, with a few minor exceptions, the ORP values and DO readings for all quarters showed a clear correlation whereby ORP values demonstrating aerobic conditions were confirmed with DO readings.

pH

The pH for optimum microbial activity ranges from 5 SU to 9 SU. Microbial activity may decrease at lower pH values. All pH measurements during Year Six ranged between 6.29 SU and 7.97 SU, within this optimal pH range. In general, the pH environment at SWMU 49 is suitable for microbial activity.

Nitrate

Following oxygen, microorganisms preferentially use nitrate as a terminal electron acceptor. Depressed nitrate concentrations may indicate nitrate-reducing conditions that promote the degradation of CT forming breakdown by-products. Nitrate levels during Year Six of MNA sampling were generally low (a calculated average of all measurements are <1 mg/L) with

concentrations ranging from 0.17 mg/L to 5.9 mg/L, very similar to the Years One through Five of MNA sampling. The highest levels of nitrate were observed at 48MW3 during all four quarters ranging from 4.1 mg/L to 5.9 mg/L.

Ferrous Iron

Ferric iron is reduced to soluble ferrous iron in the groundwater where iron-reducing bacteria facilitate activity. An increase in ferrous iron concentrations is indicative of iron-reducing conditions and can be used to determine the potential for contaminant precipitation or coprecipitation and for geochemical modeling. Biological reduction of CT is favored in iron-reducing conditions; therefore, elevated levels of ferrous iron are an indicator of favorable groundwater conditions. Ferrous iron concentrations for all wells during Year Six of MNA monitoring ranged between 0.0 mg/L (non-detect) and 0.72 mg/L, indicating that iron-reducing conditions remain low but slightly higher than Year Five. Year Five iron levels ranged from 0.00 mg/L (non-detect) to 0.34 mg/L.

Sulfate

After DO and nitrate have been depleted in the microbiological treatment zone, sulfate may be used as an electron acceptor for anaerobic biodegradation. This process is termed "sulfate reduction" and results in the production of sulfide. At higher concentrations, sulfate (and nitrate) may compete with the reductive pathway. Relative amounts of sulfate provide additional lines of evidence of reducing conditions in the aquifer and provide data on changing aquifer conditions. However, reductive dechlorination still occurs in plumes with high concentrations of sulfate (USEPA, 1998). Sulfate concentrations were measured in the groundwater during each of the Year Six MNA sampling events and were found to range between 0.85 mg/L and 220 mg/L, very similar to the MNA sampling results from Years Two through Five.

Total Organic Carbon

TOC concentrations greater than 20 mg/L are considered adequate to support microbial activity. For the Year Six MNA monitoring, TOC concentrations ranged from 0.00 mg/L (non-detect) to 2.7 mg/L, suggesting a still unfavorable environment. TOC concentrations during the Year One MNA sampling ranged from 0.0 mg/L (non-detect) to 34 mg/L. TOC concentrations during the Year Two MNA sampling ranged from 0.0 mg/L (non-detect) to 6.0 mg/L, a notable decrease in

TOC concentrations from Year One. TOC concentrations recorded during Year Three monitoring, however, increased from the Year Two high of 6.0 mg/L to 13 mg/L. TOC concentrations during Year Four ranged from non-detect (0.00) mg/L (non-detect) to 3.7 mg/L. TOC concentrations in Year Five ranged from non-detect (0.00) to 5.2 mg/L.

Specific Conductivity

Specific conductivity is the indirect measure of the presence of dissolved solids such as chloride, nitrate, sulfate, and Fe, all degradation by-products. **Figure 6-9** provides a time series plot of CT and chloroform concentrations relative to specific conductivity readings for 48MW2 and 48MW3 for monitoring Years One through Six. **Figure 6-10** provides a time series plot of TCE and cis-1,2-DCE concentrations relative to specific conductivity readings for 48MW2 and 48MW3 for monitoring Years One through Six. As with MNA Years Two, Three, Four, and Five results, data suggest that TCE and CT contaminants are biodegrading and more dissolved inorganic ions (such as chlorides, nitrates, sulfates, and Fe) are creating the electrical current witnessed in the specific conductivity readings. Data also suggest that organic compounds do not carry current and, therefore, have almost no conductivity (USACE, 1999). No direct trend in specific conductivity from Years One through Six are evident.

Figures 6-11 and **6-12** provide time series plots of MNA indicators sulfate, nitrate, chloride, TOC, ethene, and methane in source wells 48MW2 and 48MW3 for monitoring Years One through Six. Sulfate concentrations are trending slightly lower in monitoring wells 48MW2 and 48MW3. Nitrate concentrations remain relatively stable in both monitoring wells 48MW2 and 48MW3. Chloride concentrations in both monitoring wells are trending slightly lower and appear to be leveling off, whereas TOC concentrations continue to fluctuate. Methane concentrations have shown wide fluctuations in 48MW2 in Year 6.

Figure 6-13 provides a time series plot of water quality parameters (DO, Fe, and ORP) in 48MW2 and 48MW3 for monitoring Years One through Six. The time series plot shows that the individual trends for DO, Fe, and ORP are relatively consistent in monitoring wells 48MW2 and 48MW3.

Monitoring wells 13MW2, 48MW06, and 48MW3 appear to carry more of the dissolved solids with high conductivity readings ranging from 686 µS/cm to 834 µS/cm, 767 µS/cm to 921 µS/cm, and 665 µS/cm to 788 µS/cm, respectively. Biodegradation consumes sulfate and nitrate, and

produces alkalinity. Chloride is the ion that is formed during dechlorination that takes place in an anaerobic reduction zone. Chloride concentrations are fluctuating among all wells; however, there appears to be a slight decreasing trend at 48MW2 and 48MW3.

Monitoring well 48MW2 maintained aerobic conditions during all four quarters of Year Six monitoring. Chloride concentrations are impacted by more aerobic conditions and would be increasing; however, chloride concentrations are generally stable. Nitrate concentrations appear to be stable at 48MW2. Ethane and ethene went undetected in all four quarters at 48MW2.

Table 6-1 SWMU 49 Carbon Tetrachloride and TCE Quarterly Concentrations

Parameter	Units	RG	October 2020 (Q21)	January 2021 (Q22)	April 2021 (Q23)	July 2021 (Q24)
13MW2						
Carbon tetrachloride	µg/L	5	ND	ND	0.33	ND
Trichloroethene	µg/L	5	ND	ND	ND	ND
13MW3						
Carbon tetrachloride	µg/L	5	7.6	6.8	**5.3**	**7.0**
Trichloroethene	µg/L	5	1.4	1.2	0.97	1.2
13MW4						
Carbon tetrachloride	µg/L	5	ND	ND	ND	0.59
Trichloroethene	µg/L	5	0.98	0.8	0.45	1.7
13MW5						
Carbon tetrachloride	µg/L	5	A	ND	A	A
Trichloroethene	µg/L	5	A	ND	A	A
48MW06						
Carbon tetrachloride	µg/L	5	ND	ND	ND	ND
Trichloroethene	µg/L	5	3	**6.1**	4.9	3.1
48MW07						
Carbon tetrachloride	µg/L	5	A	ND	A	A
Trichloroethene	µg/L	5	A	ND	A	A
48MW1						
Carbon tetrachloride	µg/L	5	0.87	ND	ND	ND
Trichloroethene	µg/L	5	2.2	2.2	1	0.96
48MW2						
Carbon tetrachloride	µg/L	5	**35**	**14**	**22**	**25**
Trichloroethene	µg/L	5	3.2	2.1	1.0	1.4
48MW3						
Carbon tetrachloride	µg/L	5	**79**	**95**	**84**	**100**
Trichloroethene	µg/L	5	**16**	**22**	**16**	**23**
49MW01						
Carbon tetrachloride	µg/L	5	2.8	1.4	2.8	2.7
Trichloroethene	µg/L	5	ND	ND	ND	ND
49MW02						
Carbon tetrachloride	µg/L	5	ND	ND	ND	0.79
Trichloroethene	µg/L	5	ND	ND	ND	ND
49MW03						
Carbon tetrachloride	µg/L	5	A	ND	A	A
Trichloroethene	µg/L	5	A	ND	A	A
49MW04						
Carbon tetrachloride	µg/L	5	0.56 J	0.61 J	0.56	ND
Trichloroethene	µg/L	5	ND	ND	ND	ND
49MW05						
Carbon tetrachloride	µg/L	5	A	ND	A	A
Trichloroethene	µg/L	5	A	ND	A	A
50MW02						
Carbon tetrachloride	µg/L	5	1.2	0.89	0.83	1.1
Trichloroethene	µg/L	5	1.5	1.4	1.3	1.4

Notes:
µg/L = micrograms per liter A = sampled annually ND = non-detect RG = remedial goal

Figure 6-1 SWMU 49 Twenty-First Quarter CT to Chloroform Correlation

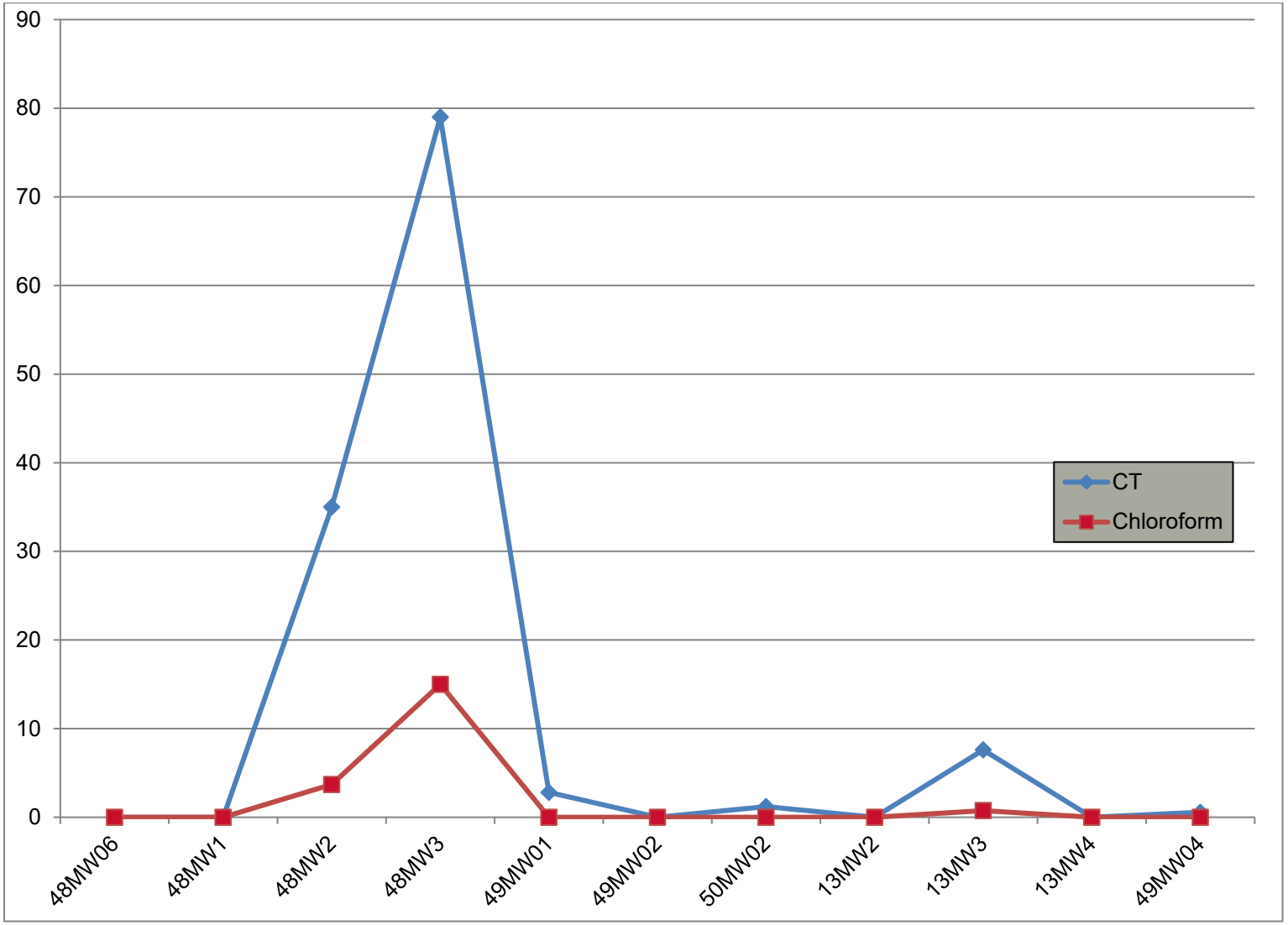


Figure 6-2 SWMU 49 Twenty-First Quarter TCE to cis-1,2-DCE Correlation

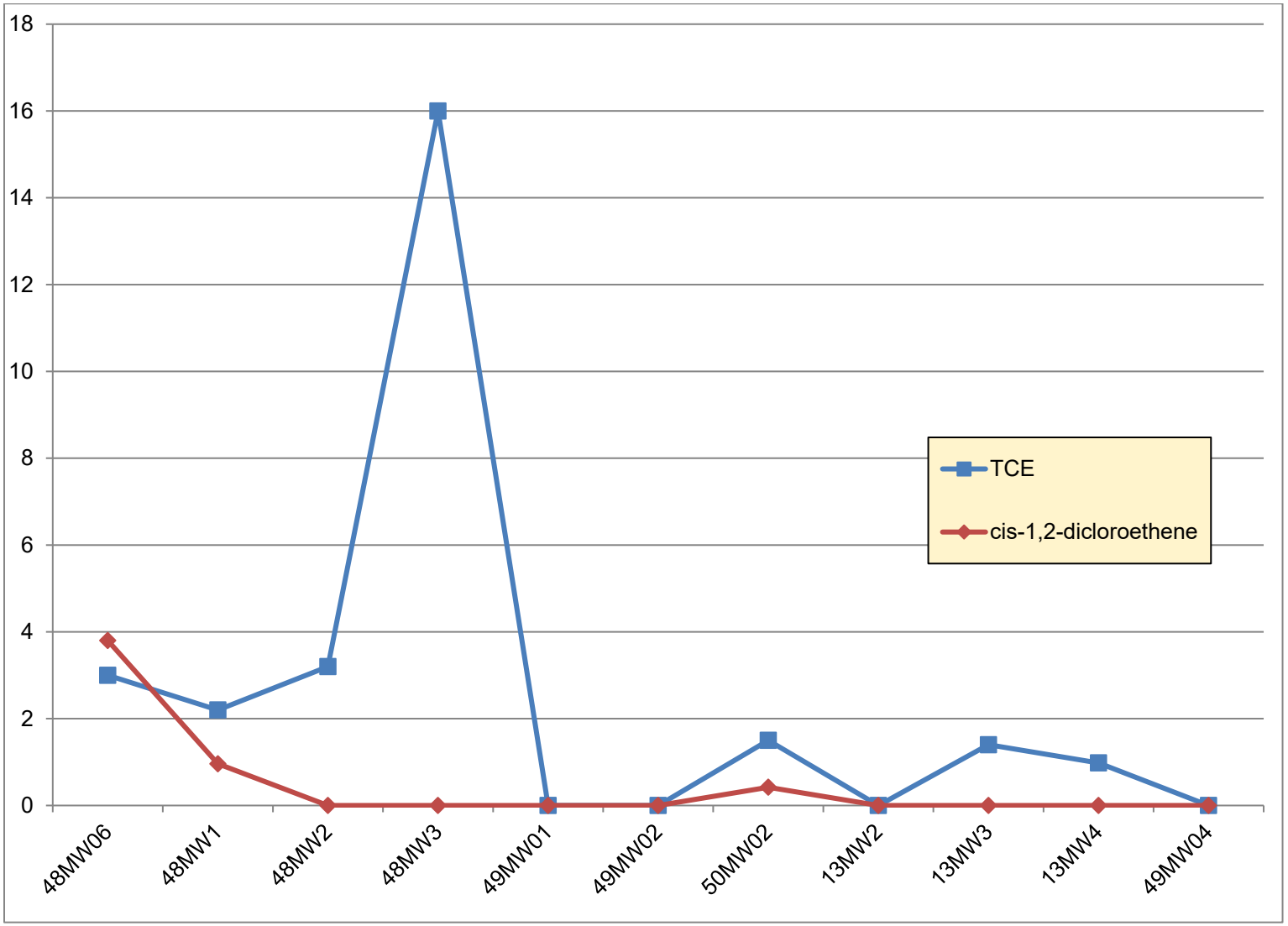


Figure 6-3 SWMU 49 Twenty-Second Quarter CT to Chloroform Correlation

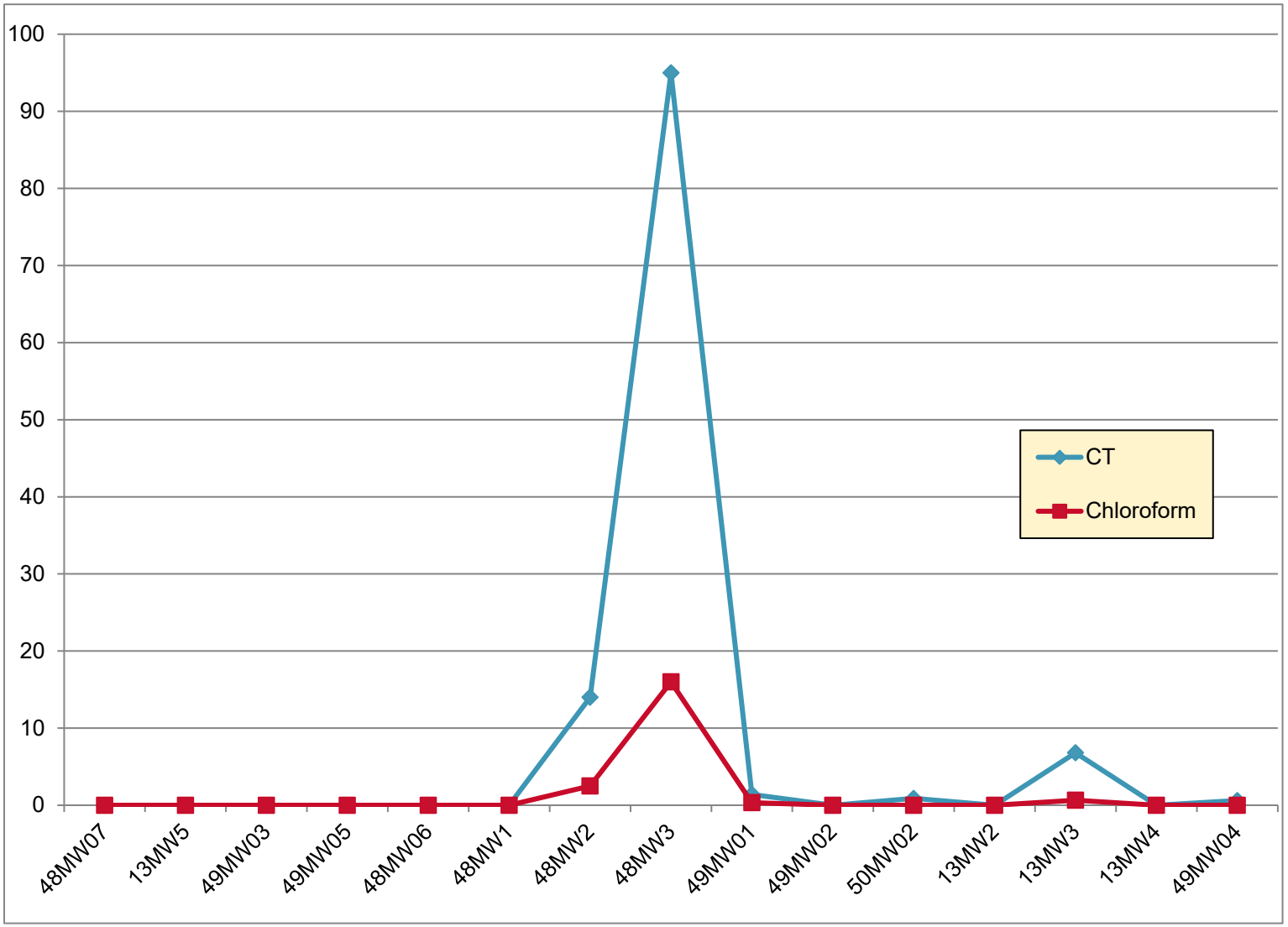


Figure 6-4 SWMU 49 Twenty-Second Quarter TCE to cis-1,2-DCE Correlation

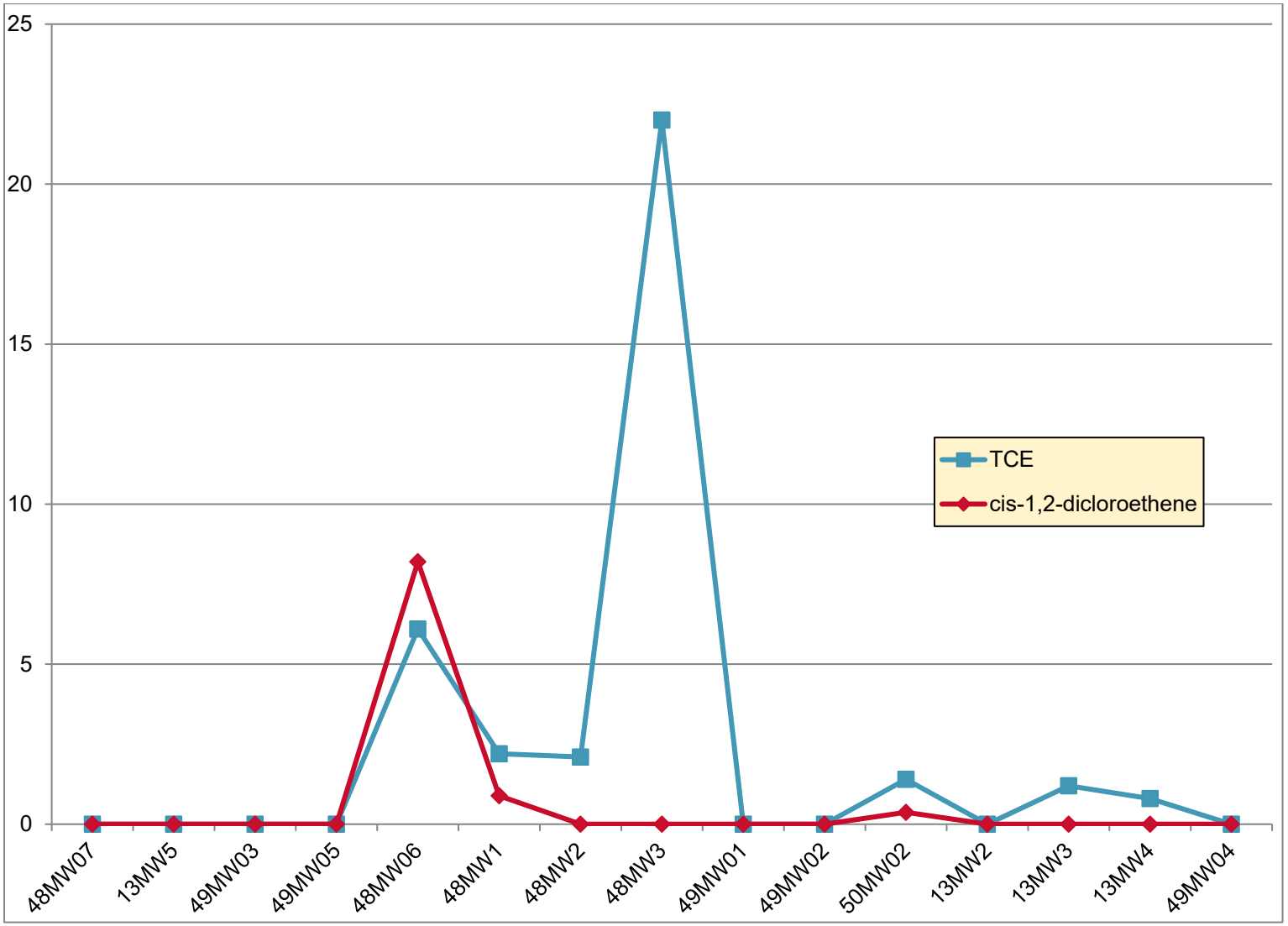


Figure 6-5 SWMU 49 Twenty-Third Quarter CT to Chloroform Correlation

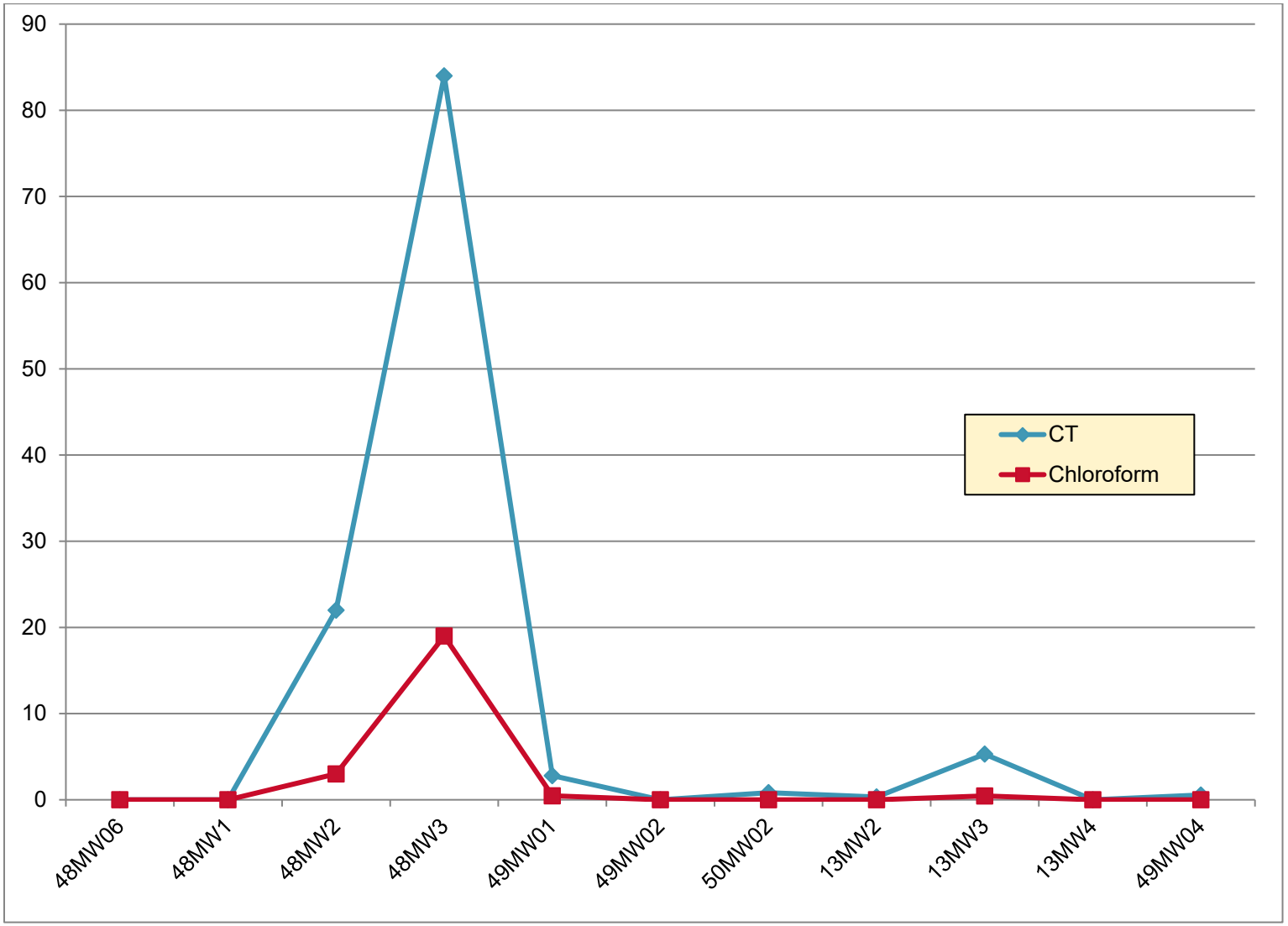


Figure 6-6 SWMU 49 Twenty-Third Quarter TCE to cis-1,2-DCE Correlation

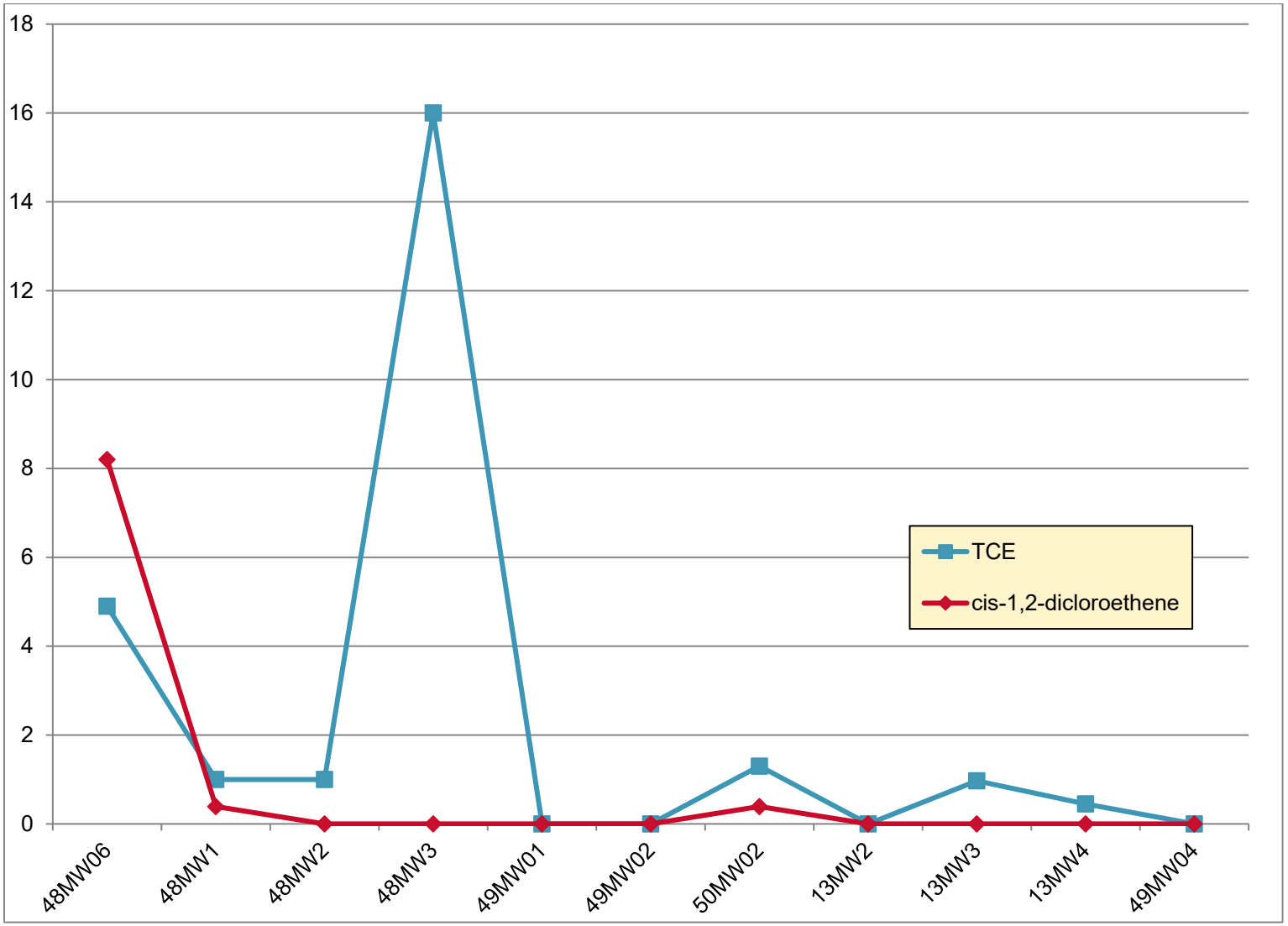


Figure 6-7 SWMU 49 Twenty-Fourth Quarter CT to Chloroform Correlation

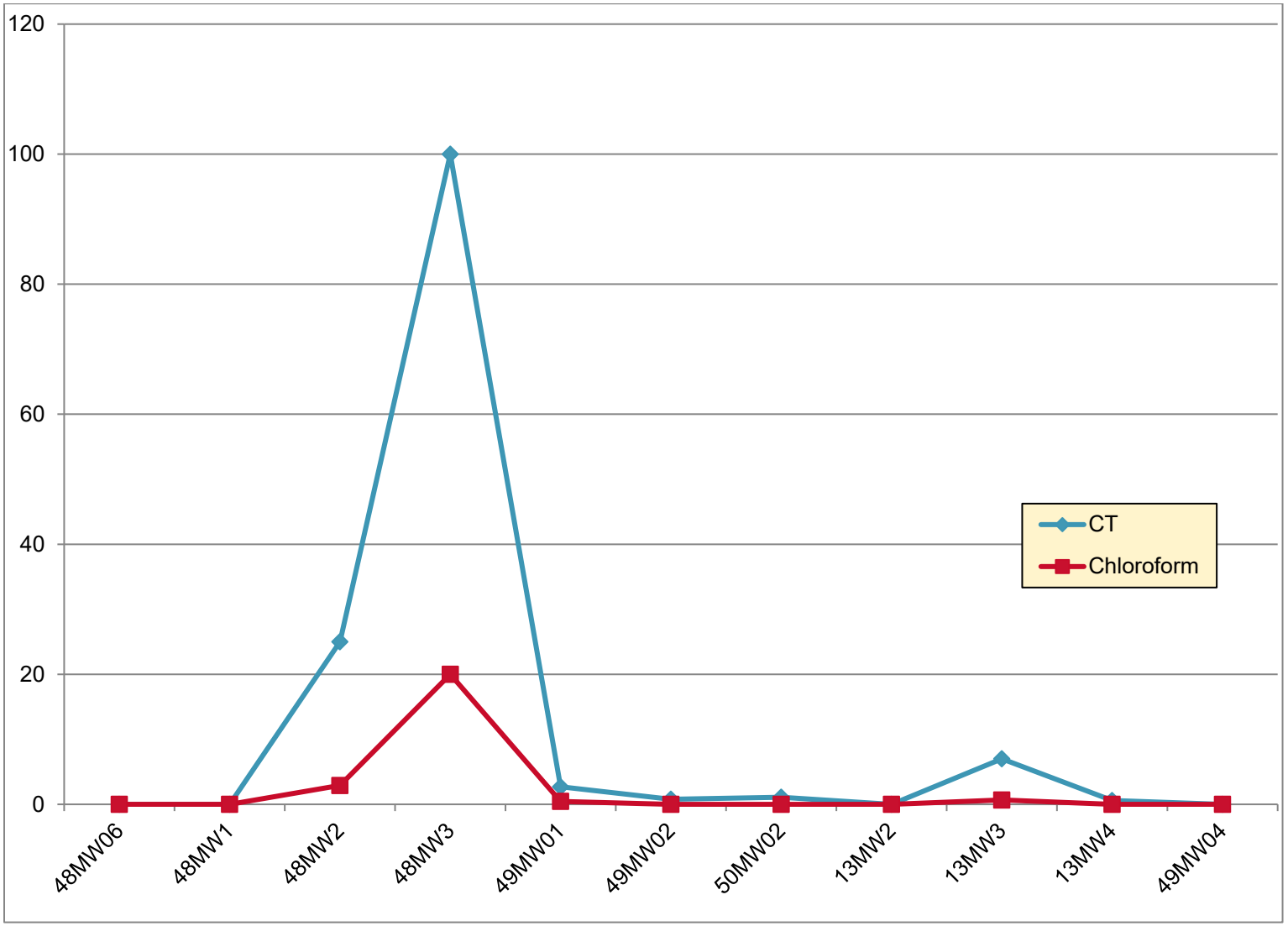


Figure 6-8 SWMU 49 Twenty-Fourth Quarter TCE to cis-1,2-DCE Correlation

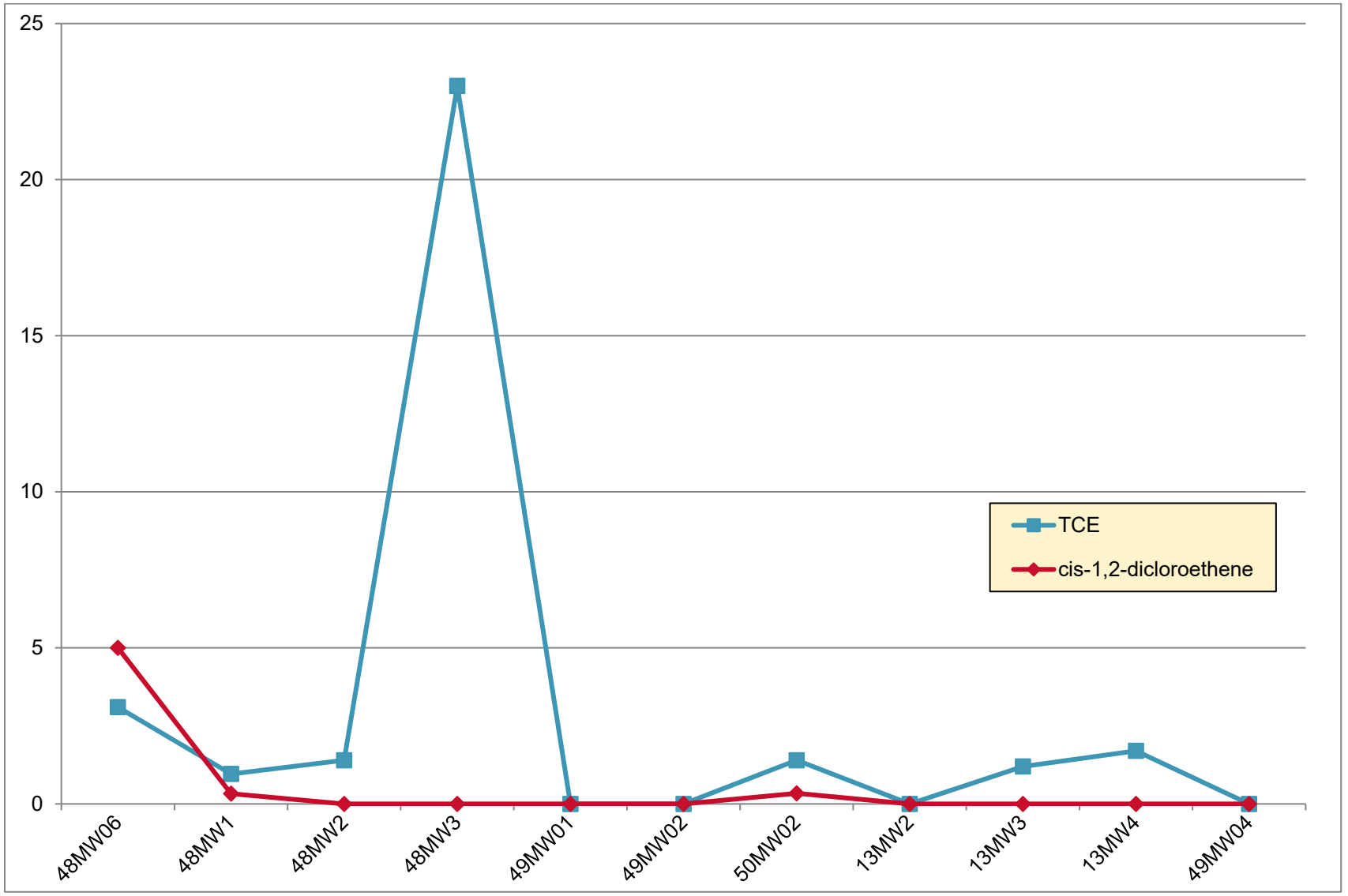


Figure 6-9 CT and Chloroform Concentration Trends Relative to Specific Conductivity 48MW2 and 48MW3

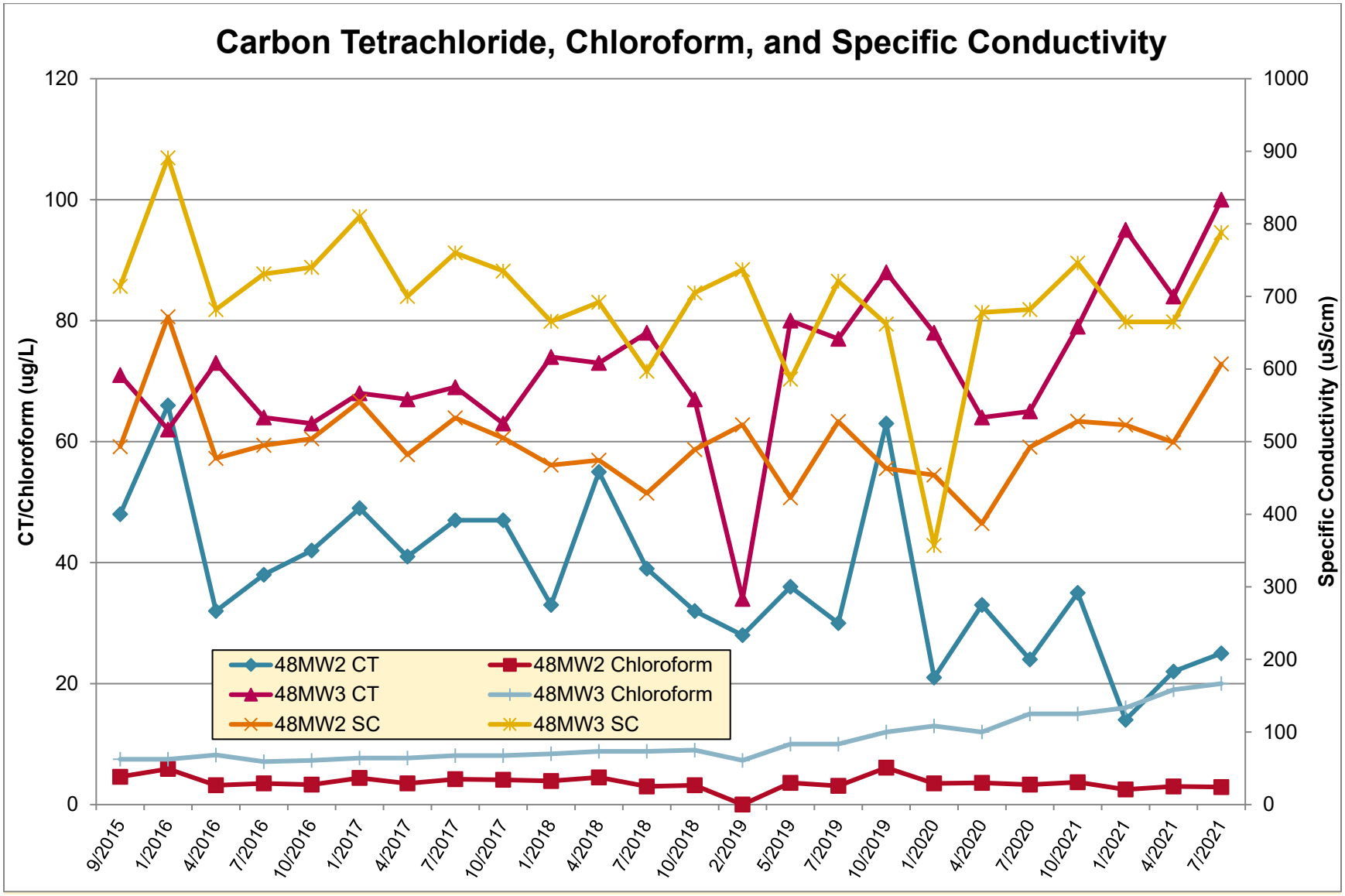


Figure 6-10 TCE and cis-1,2-DCE Concentration Trends Relative to Specific Conductivity 48MW2 and 48MW3

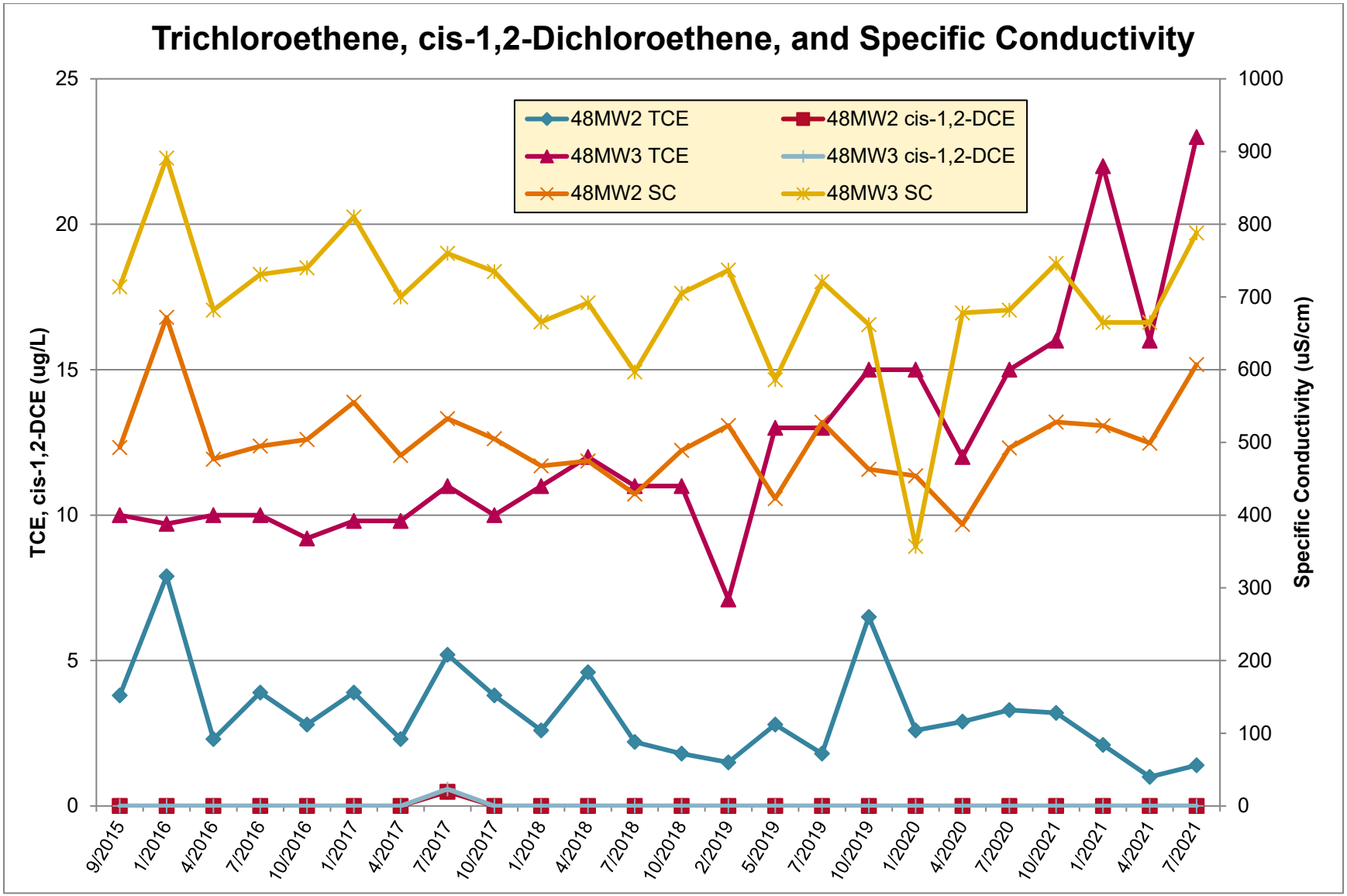


Figure 6-11 48MW2 MNA Indicators Years One, Two, Three, Four, Five, and Six

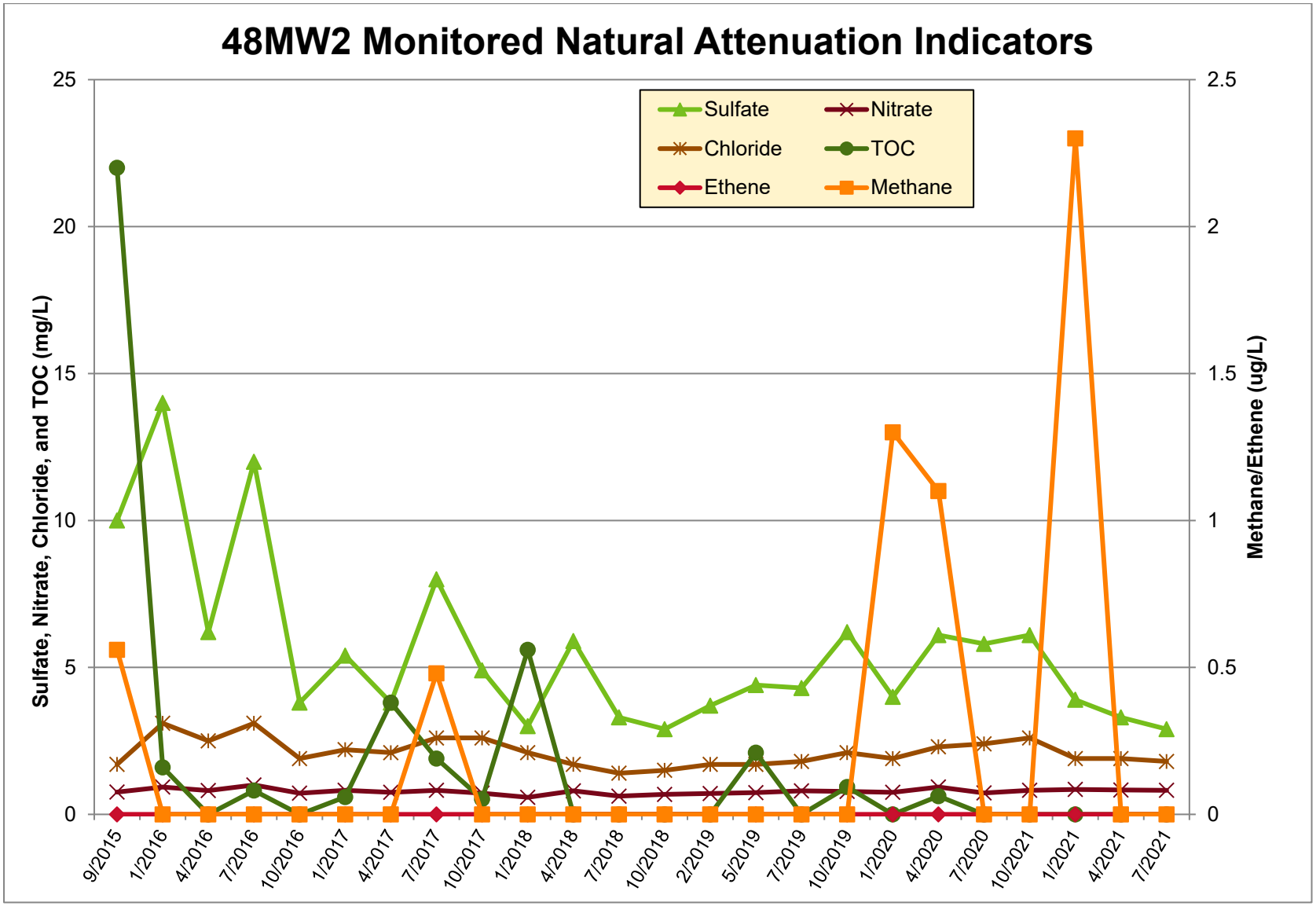


Figure 6-12 48MW3 MNA Indicators Years One, Two, Three, Four, Five, and Six

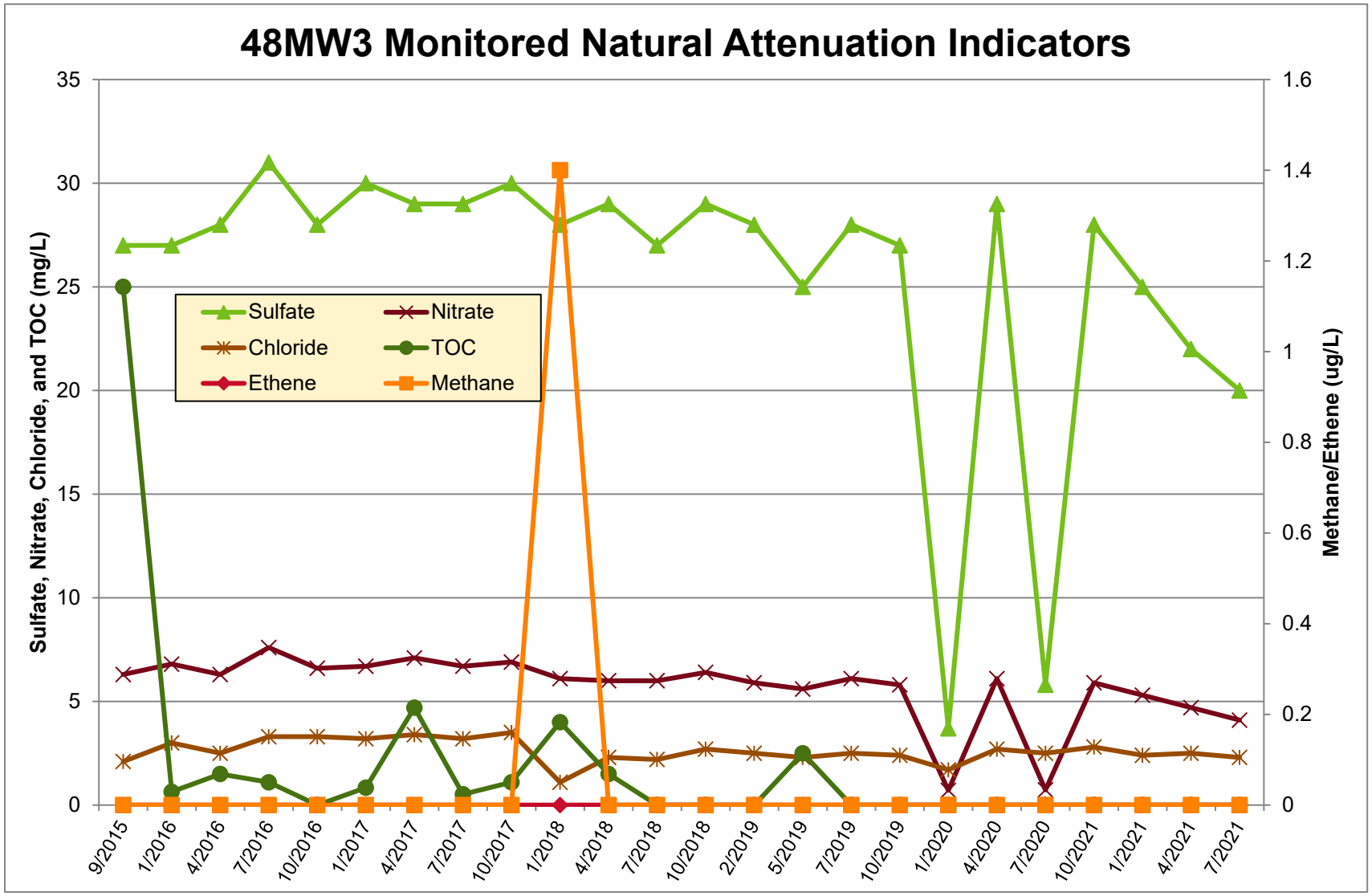
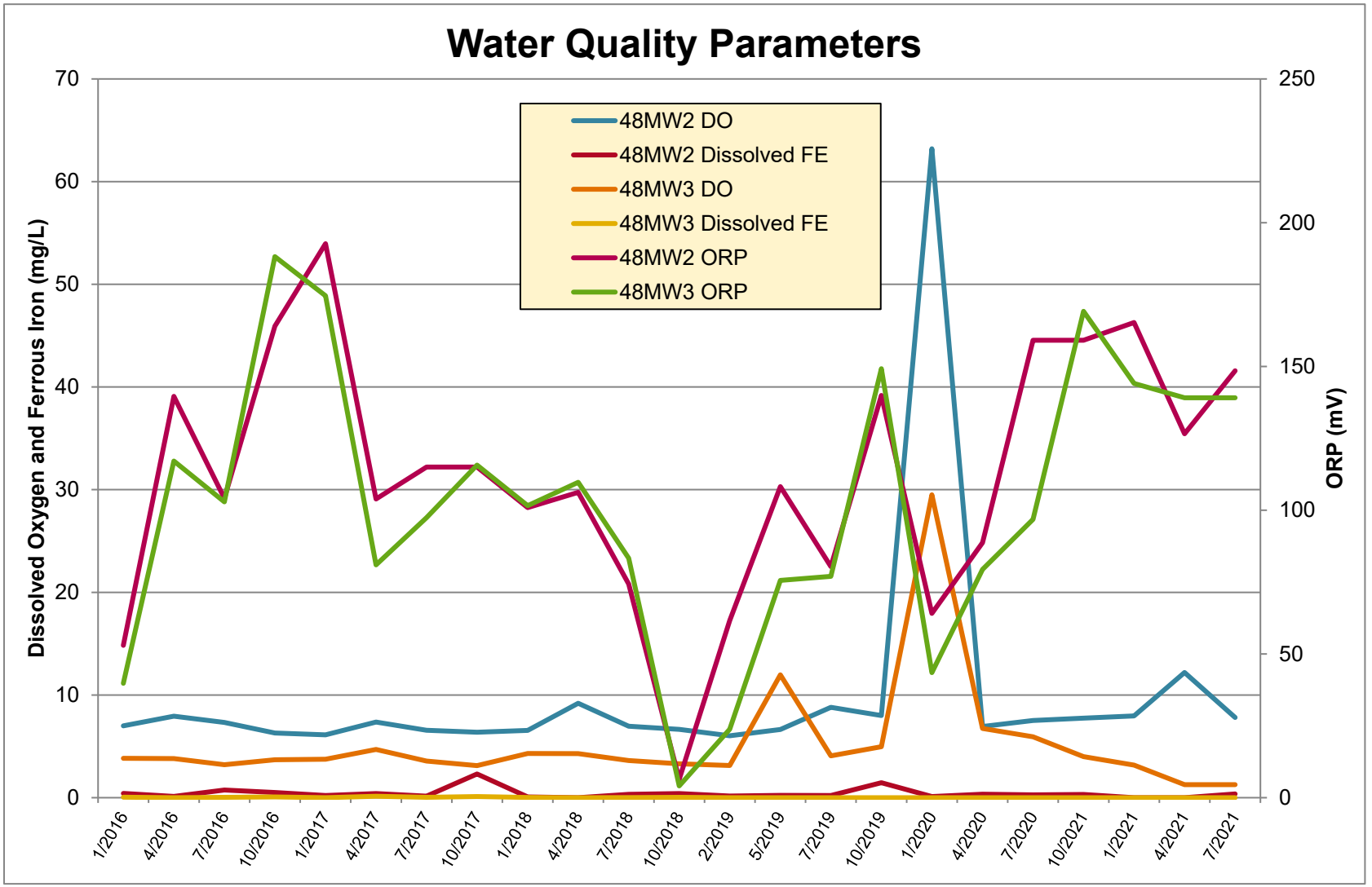


Figure 6-13 Water Quality Parameters 48MW2 and 48MW3 Years One, Two, Three, Four, Five, and Six



7. SUMMARY AND CONCLUSIONS

Eleven groundwater monitoring wells were sampled on a quarterly basis during the Year Six MNA monitoring at SWMU 49, and four more were sampled on an annual basis at the beginning of the year. The four quarters of sample data suggest that CT and TCE concentrations are increasing in some wells and decreasing in others. CT and TCE remain in exceedance of the RGs. The CT contaminant plume remains centered around monitoring wells 48MW2 and 48MW3, although detections were observed downgradient along the New River at 13MW3 during all four quarters with a slightly increasing concentration observed. TCE was detected in all four quarters at monitoring wells 48MW06, 48MW1 (located adjacent to 48MW06), and 50MW02, with no detections above the RG. Further, TCE was detected in all four quarters at monitoring wells 13MW3 and 13MW4, which are located downgradient and adjacent to the New River.

Based on the presence of chloroform in wells where CT was observed, it appears that VOC is continuing to degrade. The data suggest that MNA processes may still be decreasing mass; however, concentration increases are noted in 48MW3. The data suggest that the correlation of cis-1,2-DCE to TCE is not as prevalent as an indicator of degradation. A slight increase in TCE concentrations in 48MW3 is observed. A notable trend at monitoring wells 48MW2 where the TCE and CT concentrations mirror each other and are trending in consistent patterns at each well (refer to **Figures 6-9** and **6-10**). TCE concentrations are increased at 48MW3 but decreasing at 48MW2.

In summary, the following conclusions and recommendations are made regarding the potential for MNA in contaminated groundwater at SWMU 49:

- Presence of chloroform suggests that degradation is occurring, which may be aiding in removing CT mass in the groundwater.
- The breakdown product, cis-1,2-DCE, is present at the site, although no substantive correlation continues to exist with TCE. TCE concentrations have increased at 48MW3 but decreased at 48MW2.
- Geochemical parameters also indicate that groundwater conditions are currently aerobic (based on DO and ORP levels) and that pH and TOC levels are adequate to promote microbial degradation. Overall ferrous iron, nitrate, and sulfate concentrations do not appear to favor conditions to support degradation. However, conditions still appear to be trending toward a favorable environment for microbial degradation.

- Based on the MNA results presented in the SWMU 49 MNA Sampling Baseline Report (CB&I, 2015), other MNA processes including sorption, dilution, dispersion, and chemical stabilization are occurring in groundwater at the SWMU 49 study area. Conditions appear favorable that these processes will not significantly change or diminish and will continue to contribute to attenuation of the contaminants at SWMU 49.

- Because the groundwater flow pattern is consistent with the historical pattern, the monitoring well network appears adequate to monitor MNA at SWMU 49.

- Based on the consistency of the data and the fact that quarterly monitoring has been conducted for a full 6 years, groundwater monitoring starting with Year Seven will be reduced to a semiannual basis (October and April) at the 15 monitoring well locations. VDEQ approved this recommendation, which was presented in the Year Five report.

8. REFERENCES

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APPENDIX A-1
FIELD SAMPLING LOGS

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 13MW2
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 14-Apr-21 | SAMPLE TIME: 1150

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: Peristaltic Pump

INITIAL DEPTH TO WATER: 19.71 (FT) | WELL DEPTH: 30.05 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1115	19.77	200	0	14.4	0.681	7.08	161.1	7.31	7.82	
1125	19.77	200	2	14.2	0.683	6.99	170.4	7.37	6.24	
1135	19.77	200	4	14.6	0.68	7	167.4	7.4	6.01	
1145	19.77	200	6	14.5	0.686	7	165.9	7.72	6.03	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 14.5 (°C) | ORP: 165.9 (MV) | COMMENTS: 0.0 PID reading
SPECIFIC CONDUCTANCE: 0.686 (uS/cm) | DO: 7.72 (mg/L) | MS/MSD
pH: 7 (S.U.) | TURBIDITIY: 6.03 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s P. Cloudy calm

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 13MW2
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 25-Jan-21 | SAMPLE TIME: 1425

PURGING DATA

REFERENCE POINT (CIRCLE): PVC / Steel Casing / TIC / TOC
WELL COMPLETION (CIRCLE): Flush / Stick-up
PURGING DEVICE: Peristaltic Pump

INITIAL DEPTH TO WATER: 20.47 (FT) | WELL DEPTH: 30.05 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1355	20.74	100	0	13	632	7.01	97.01	8.93	3.81	
1405	20.83	100	1	12.9	861	7.09	97.03	9.54	3.31	
1415	20.96	100	2	12.7	830	7.06	97.4	6.95	4.32	
1425	21.02	100	3	13.5	830	7.05	98.8	6.98	3.79	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13.5 (°C) | ORP: 98.8 (MV) | COMMENTS: 0.0 PID reading
SPECIFIC CONDUCTANCE: 830 (uS/cm) | DO: 6.98 (mg/L) | MS/MSD
pH: 7.05 (S.U.) | TURBIDITIY: 3.79 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 40s Overcast Rain E-10mph

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 13MW2
LOCATION: Radford VA
SAMPLING CREW: Kormos/Bebee | DATE: 28-Jul-21 | SAMPLE TIME: 1626

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing / TIC TOC
PURGING DEVICE: Peristaltic Pump
WELL COMPLETION (CIRCLE): Flush Stick-up
INITIAL DEPTH TO WATER: 20.8 (FT) | WELL DEPTH: 30.54 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1540	21.70	300	0	23.3	830	9.80	158.2	6.97	10.85	
1544	21.82	100	1.2	21.8	816	7.96	163.0	6.84	6.35	
1548	21.90	100	1.6	21.5	811	7.51	185.0	6.82	4.36	
1552	22.03	100	2	21.7	805	7.42	192.6	6.88	4.31	
1556	22.09	100	2.4	21.7	803	7.42	199.7	7.05	4.02	
1600	22.26	100	2.8	21.7	803	7.46	212.0	6.96	4.12	*Flow rate decreased, adjusted tubing depth
1613	22.53	400	2.8	17.3	813	7.36	204.9	7.04	3.73	
1617	22.69	400	4.4	16.3	803	7.23	206.3	7..44	3.23	
1621	22.78	300	6	16.3	799	7.25	212.4	7.41	2.38	
1624	22.90	200	6.9	17.3	799	7.22	219.7	7.46	2.10	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 21.1 (°C) | ORP: 214.5 (MV) | COMMENTS: 0.0 PID reading
SPECIFIC CONDUCTANCE: 834 (uS/cm) | DO: 7.21 (mg/L) | peripump was overheating
pH: 7.32 (S.U.) | TURBIDITIY: 2.37 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL: 30.5

WEATHER CONDITIONS: Sunny, low 90s

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 13MW2
LOCATION: Radford VA
SAMPLING CREW: Bounds/Kormos | DATE: 27-Oct-20 | SAMPLE TIME: 1230

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: Peristaltic Pump

INITIAL DEPTH TO WATER: 21.19 (FT) | WELL DEPTH: 30.05 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1150	21.19	150	0	16.33	772	7.34	141.3	6.2	14	
1200	21.2	150	2	16	769	7.21	151.3	6.1	14.2	
1210	21.2	150	4	16.02	767	7.17	155.1	6.12	15	
1220	21.2	150	6	17.27	769	7.15	158.1	6	15.8	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 17.32 (°C) | ORP: 158.7 (MV) | COMMENTS: 0.0 PID reading
SPECIFIC CONDUCTANCE: 769 (uS/cm) | DO: 5.97 (mg/L) | MS/MSD
pH: 719 (S.U.) | TURBIDITIY: 15.3 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 70s, M. Sunny

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 13MW3
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 14-Apr-21 | SAMPLE TIME: 955

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: GeoTech Peristaltic Pump

INITIAL DEPTH TO WATER: 14 (FT) | WELL DEPTH: 22.5 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
930	14.03	250	0	12.6	0.56	6.88	206.4	4.67	11.8	
940	14.03	250	2	12.6	0.563	6.83	201.7	4.99	10.82	
950	14.03	250	5	12.6	0.563	6.85	200.3	4.79	9.67	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 12.6 (°C) | ORP: 200.3 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 0.563 (uS/cm) | DO: 4.79 (mg/L) | Duplicate (13TW3)
pH: 6.85 (S.U.) | TURBIDITIY: 9.67 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s P. Cloudy clam

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 13MW3
LOCATION: Radford VA

SAMPLING CREW: Bounds/Taylor | DATE: 25-Jan-21 | SAMPLE TIME: 1240

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

PURGING DEVICE: GeoTech Peristaltic Pump

INITIAL DEPTH TO WATER: 15.03 (FT) | WELL DEPTH: 22.5 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1215	15.07	150	0	11.1	654	7.37	54.9	5.74	14.95	
1225	15.01	150	1	12.7	601	7	75	4.93	7.25	
1235	15.01	150	3	13	663	6.99	80.5	4.96	2.77	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13 (°C) | ORP: 80.5 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 663 (uS/cm) | DO: 4.96 (mg/L) | Duplicate (13TW3)
pH: 6.99 (S.U.) | TURBIDITIY: 2.77 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 40s Overcast rain E-13mph

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 13MW3
LOCATION: Radford VA
SAMPLING CREW: Kormos/Bebee | DATE: 26-Jul-21 | SAMPLE TIME: 1520

PURGING DATA

REFERENCE POINT (CIRCLE): PVC / Steel Casing / TIC / TOC
WELL COMPLETION (CIRCLE): Flush / Stick-up
PURGING DEVICE: GeoTech Peristaltic Pump

INITIAL DEPTH TO WATER: 15.51 (FT) | WELL DEPTH: 17.64 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1430	15.51	400	0	16.8	610	6.83	194.6	3.03	76	
1434	15.51	400	1.6	17.4	611	6.65	193.8	3.29	-	Switch from flow-thru cell to grab sampler
1440	15.51	400	4	18.3	628	7.09	197.1	5.62	2.02	
1444	15.51	400	5.6	20.2	629	6.79	202.5	4.92	1	
1448	15.51	400	8.8	21.4	636	6.82	201.7	4.83	1.82	
1452	15.51	400	10.4	22.9	640	6.84	199.4	4.73	2.26	
1456	15.51	400	12	24.3	639	6.88	196.3	4.70	3.01	
1500	15.51	400	13.6	25.4	648	6.92	194.7	4.70	3.65	
1504	15.51	400	15.2	26.4	648	6.95	192.7	4.71	4.34	
1508	15.51	400	16.8	27.4	649	6.99	190.5	4.73	4.84	
1512	15.51	400	18.4	28.1	650	7.01	188.9	4.76	5.43	
1516	15.51	400	20	28.7	651	7.02	187.3	4.74	5.82	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 28.7 (°C) | ORP: 187.3 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 651 (uS/cm) | DO: 4.74 (mg/L)
pH: 7.02 (S.U.) | TURBIDITIY: 5.82 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL: 17.64

WEATHER CONDITIONS: Sunny, low 90s

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 13MW3
LOCATION: Radford VA
SAMPLING CREW: Bounds/Kormos | DATE: 27-Oct-20 | SAMPLE TIME: 1010

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: GeoTech Peristaltic Pump

INITIAL DEPTH TO WATER: 14.82 (FT) | WELL DEPTH: 22.5 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
940	14.82	150	0	16.57	670	7.17	154.6	4.12	21.2	
950	14.82	150	2	16.57	670	7.19	146.6	3.54	12.4	
1000	14.82	150	4	16.57	668	7.18	142.9	3.51	11.7	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 16.67 (°C) | ORP: 141.3 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 671 (uS/cm) | DO: 3.49 (mg/L) | Duplicate (13TW3)
pH: 7.18 (S.U.) | TURBIDITIY: 11.6 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 70s, M. Sunny

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 13MW4
LOCATION: Radford VA

SAMPLING CREW: Bounds/Taylor | DATE: 14-Apr-21 | SAMPLE TIME: 915

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

PURGING DEVICE: GeoTech Peristaltic Pump

INITIAL DEPTH TO WATER: 13.83 (FT) | WELL DEPTH: 25.35 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
840	13.83	250	0	13.5	0.384	6.81	238.9	5.46	211.7	
850	13.83	250	2	13.4	0.379	6.53	235.6	5.24	9.66	
900	13.83	250	5	13.5	0.377	6.56	227.6	5.28	7.25	
910	13.83	250	7	13.5	0.375	6.57	220.6	5.31	7.63	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13.5 (°C) | ORP: 220.6 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 0.375 (uS/cm) | DO: 5.31 (mg/L)
pH: 6.57 (S.U.) | TURBIDITIY: 7.63 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s P Cloudy calm

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 13MW4
LOCATION: Radford VA

SAMPLING CREW: Bounds/Taylor | DATE: 25-Jan-21 | SAMPLE TIME: 1150

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

PURGING DEVICE: GeoTech Peristaltic Pump

INITIAL DEPTH TO WATER: 16.47 (FT) | WELL DEPTH: 25.35 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1115	16.47	150	0	13.98	543	7.21	36.2	2.73	12.73	
1125	16.41	150	1	14.2	567	7.16	48.8	2.54	10.55	
1135	16.39	150	3	14.3	553	7.11	50.9	2.76	9.92	
1145	16.35	150	4	14.2	542	7.06	50.8	3.03	9.77	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 14.2 (°C) | ORP: 5.08 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 542 (uS/cm) | DO: 3.03 (mg/L)
pH: 7.06 (S.U.) | TURBIDITIY: 9.77 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 40s Overcast rain E-13mph

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 13MW4
LOCATION: Radford VA

SAMPLING CREW: Kormos/Bebee | DATE: 26-Jul-21 | SAMPLE TIME: 1300

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing / TIC TOC
PURGING DEVICE: GeoTech Peristaltic Pump

WELL COMPLETION (CIRCLE): Flush Stick-up

INITIAL DEPTH TO WATER: 17.09 (FT) | WELL DEPTH: 25.35 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1229	17.15	200	0.0	16	577	6.76	202.7	1.72	11.5	
1233	17.15	200	0.8	15.7	588	6.5	203.4	1.33	9.07	
1237	17.15	300	1.6	15.7	568	6.48	205.2	1.67	13.32	
1241	17.15	300	2.8	15.6	539	6.39	210.4	2.44	21.32	
1245	17.13	300	4.0	15.7	533	6.37	215.3	2.62	6.72	
1249	17.13	300	5.2	15.6	5220	6.35	219.1	2.89	10.1	
1253	17.14	300	6.4	15.7	510	6.35	222.1	3.20	18.92	
1257	17.14	300	7.6	15.6	502	6.29	224.8	3.44	18	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 15.6 (°C) | ORP: 224.8 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 502 (uS/cm) | DO: 3.44 (mg/L) | *incoming thunderstorm,
pH: 6.29 (S.U.) | TURBIDITIY: 18 (NTU) | collect sample for lightening hold.

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL: 25.35

WEATHER CONDITIONS: Thunderstorm incoming, 85 F, humidity 66%

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 13MW4
LOCATION: Radford VA
SAMPLING CREW: Bounds/Kormos | DATE: 27-Oct-20 | SAMPLE TIME: 920

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: GeoTech Peristaltic Pump

INITIAL DEPTH TO WATER: 15.91 (FT) | WELL DEPTH: 25.35 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
840	15.9	150	0	16	483	7.67	91.2	3.16	20.2	
850	15.9	150	2	16.1	460	7.28	111.3	2.83	20.2	
900	15.9	150	4	16.15	443	7.09	127	3.05	19.8	
910	15.9	150	6	16.2	431	6.97	139.2	3.24	19.4	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 16.2 (°C) | ORP: 140.8 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 430 (uS/cm) | DO: 3.28 (mg/L)
pH: 6.92 (S.U.) | TURBIDITIY: 19.2 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 70s, M Sunny

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500.2110 | WELL ID: 13MW5
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 25-Jan-21 | SAMPLE TIME: 1050

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: GeoTech Peristaltic Pump
INITIAL DEPTH TO WATER: 16.45 (FT) | WELL DEPTH: 25.4 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1015	16.45	200	0	13.6	886	7.14	-14.2	3.06	7.19	
1025	16.34	200	2	13.8	862	7.32	9.2	2.5	3.96	
1035	16.35	200	4	13.5	861	7.33	17.5	2.42	5.3	
1045	16.34	200	6	13.5	869	7.32	21.9	2.44	6.38	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13.5 (°C) | ORP: 21.9 (MV) | COMMENTS: 0.0 PID
SPECIFIC CONDUCTANCE: 869 (uS/cm) | DO: 2.44 (mg/L)
pH: 7.32 (S.U.) | TURBIDITIY: 6.38 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 40s Overcast rain E-13mph

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW1
LOCATION: Radford VA

SAMPLING CREW: Bounds/Taylor | DATE: 15-Apr-21 | SAMPLE TIME: 1125

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 96.82 (FT) | WELL DEPTH: 147.3 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1100	96.7	100	0	12.5	0.429	7.8	194	6.64	219.8	
1110	96.7	100	1	12.5	0.434	7.63	193.3	4.84	12.25	
1120	96.7	100	2	12.4	0.431	7.64	190.8	5.17	10.35	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 12.4 (°C) | ORP: 190.8 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 0.431 (uS/cm) | DO: 5.17 (mg/L)
pH: 7.64 (S.U.) | TURBIDITIY: 10.35 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 60s cloudy NW@10 Rain Late

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Rardford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW1
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 28-Jan-21 | SAMPLE TIME: 1405

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 102.57 (FT) | WELL DEPTH: 147.3 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1345	102.6	100	0	8.7	604	7.44	125	6.02	41.67	
1355	103.04	100	1	9.9	606	7.31	135.7	6.5	22.62	
1405	103.24	100	2	9	574	7.37	135.8	6.63	17.19	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 9 (°C) | ORP: 135.8 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 574 (uS/cm) | DO: 6.63 (mg/L)
pH: 7.34 (S.U.) | TURBIDITIY: 17.19 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 30s Cloudy Flurries 20NW

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW1
LOCATION: Radford VA
SAMPLING CREW: Kormos/Bebee | DATE: 29-Jul-21 | SAMPLE TIME: 1342

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing / TIC TOC
PURGING DEVICE: QED Bladder pump
WELL COMPLETION (CIRCLE): Flush Stick-up
INITIAL DEPTH TO WATER: 105.27 (FT) | WELL DEPTH: 149.5 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1309	105.40	150	0	19.3	563	8.64	182.4	6.23	4.12	
1313	105.66	150	0.6	18.6	526	8.05	211.4	6.47	5.86	
1317	105.78	150	1.2	17.1	520	7.82	210.3	5.94	5.63	
1321	105.87	150	1.8	17.2	518	7.65	206.2	6	4.31	
1325	105.96	150	2.4	17.6	519	7.77	211.6	5.78	4.39	
1329	106.09	150	3	17.7	520	7.77	209	5.82	4.47	
1333	106.16	150	3.6	17.6	515	7.71	206.9	5.88	4.24	
1337	106.24	150	4.2	18.0	519	7.77	211.7	5.62	4.46	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 18.5 (°C) | ORP: 207.4 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 518 (uS/cm) | DO: 5.3 (mg/L)
pH: 7.7 (S.U.) | TURBIDITIY: 3.87 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL: 149.5 ft

WEATHER CONDITIONS: Sunny, 90s

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW1
LOCATION: Radford VA
SAMPLING CREW: Bounds/Kormos | DATE: 28-Oct-20 | SAMPLE TIME: 1025

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 106.29 (FT) | WELL DEPTH: 147.3 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
945	106.3	100	0	13.97	576	7.77	147.2	5.84	45.4	
955	106.3	100	2	13.8	632	7.67	147	4.02	46.2	
1005	106.3	100	4	13.87	632	7.61	146.3	3.91	46.9	
1015	106.3	100	6	13.84	633	7.63	146.3	3.89	46.1	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13.83 (°C) | ORP: 145.9 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 633 (uS/cm) | DO: 3.9 (mg/L)
pH: 7.63 (S.U.) | TURBIDITIY: 45.8 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 60s Cloudy

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW2
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 15-Apr-21 | SAMPLE TIME: 1030

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump
INITIAL DEPTH TO WATER: 120.45 (FT) | WELL DEPTH: 138.3 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
955	120.41	150	0	14.7	0.504	7.24	188.6	8.13	1204	
1005	120.41	150	1	14.3	0.503	7.21	189.2	7.91	245.5	
1015	120.41	150	3	14.3	0.503	7.21	160.7	7.88	197.2	
1025	120.41	150	4	15	0.499	7.23	148.5	7.81	184.3	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 15 (°C) | ORP: 148.5 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 0.499 (uS/cm) | DO: 7.81 (mg/L)
pH: 7.23 (S.U.) | TURBIDITIY: 184.3 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: minor cloudy, No odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s Sunny SW@10

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW2
LOCATION: Radford VA

SAMPLING CREW: Bounds/Taylor | DATE: 28-Jan-21 | SAMPLE TIME: 1115

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 122.48 (FT) | WELL DEPTH: 138.3 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1045	122.06	100	0	8.9	544	7.66	110.9	13.67	947	
1055	122.97	100	1	5.8	554	7.64	131.2	13.41	801	
1105	122.85	100	2	10.3	525	7.68	128.7	12.66	584	
1115	122.8	100	3	9.6	523	7.78	126.6	13.2	443	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 9.6 (°C) | ORP: 126.6 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 523 (uS/cm) | DO: 13.2 (mg/L)
pH: 7.78 (S.U.) | TURBIDITIY: 443 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: minor cloudy, No odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 30s, Cloudy flurries 20NW

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW2
LOCATION: Radford VA
SAMPLING CREW: Kormos/Bebee | DATE: 30-Jul-21 | SAMPLE TIME: 0927

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing / TIC TOC
PURGING DEVICE: QED Bladder pump
WELL COMPLETION (CIRCLE): Flush Stick-up
INITIAL DEPTH TO WATER: 122.54 (FT) | WELL DEPTH: 138.46 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
0856	122.42	150	0.0	16.7	6.8	7.36	204.7	8.62	137.26	
0859	122.77	150	0.5	15.5	616	7.25	216.2	8.53	121.72	
0902	122.93	150	0.9	15.2	615	7.25	222.3	8.43	110.94	
0905	122.96	100	1.4	15.3	611	7.25	226.5	8.36	112.23	
0908	122.99	100	1.7	15.2	617	7.23	227.9	8.36	122.35	
0911	123.03	100	2.0	15.1	621	7.25	241.1	8.43	123.02	
0914	123.03	100	2.3	15.2	618	7.25	242.4	8.51	120.02	
0917	123.10	100	2.6	15.1	620	7.19	251.2	8.41	106393	
0920	123.06	100	2.9	15.0	617	7.09	251.9	8.40	109.65	
0923	123.13	100	3.2	15.0	614	7.11	252.2	8.46	110.63	
0926	123.12	100	3.5	15.3	609	7.10	260.4	8.44	102.78	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 15.6 (°C) | ORP: 249.3 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 607 (uS/cm) | DO: 8.56 (mg/L)
pH: 7.29 (S.U.) | TURBIDITIY: 97.22 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: partly cloudy, no odor | TOTAL DEPTH OF WELL: 138.46 ft

WEATHER CONDITIONS: Sunny, windy, 90s

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW2
LOCATION: Radford VA
SAMPLING CREW: Bounds/Kormos | DATE: 29-Oct-20 | SAMPLE TIME: 1015

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 123.6 (FT) | WELL DEPTH: 138.3 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
935	123.06	100	0	14.26	560	7.78	144.1	7.98	303.6	
945	123.06	100	2	14.02	538	7.67	158.1	8.01	188.6	
955	123.06	100	4	14.08	532	7.61	162.1	7.96	155	
1005	123.06	100	6	14.06	529	7.59	165.1	7.96	146.1	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 14.05 (°C) | ORP: 165.3 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 528 (uS/cm) | DO: 7.96 (mg/L)
pH: 7.61 (S.U.) | TURBIDITIY: 140.3 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 60s Heavy rain

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500.2110 | WELL ID: 48MW3
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 15-Apr-21 | SAMPLE TIME: 1235

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 93.73 (FT) | WELL DEPTH: 126.5 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1210	93.91	100	0	14.3	0.696	7.03	131.8	2.68	74.81	
1220	93.91	100	1	13.8	0.664	7	140	1.39	11.56	
1230	93.91	100	2	13.9	0.665	6.99	139.1	1.27	9.81	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13.9 (°C) | ORP: 139.1 (MV) | COMMENTS: Duplicate
SPECIFIC CONDUCTANCE: 0.665 (uS/cm) | DO: 1.27 (mg/L)
pH: 6.99 (S.U.) | TURBIDITIY: 9.81 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s Sunny SW@10

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW3
LOCATION: Radford VA
SAMPLING CREW: Kormos/Bebee | DATE: 30-Jul-21 | SAMPLE TIME: 1111

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 94.98 (FT) | WELL DEPTH: 128.34 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1049	94.82	100	0	16.9	763	7.36	221.7	3.93	-0.52	
1052	95.19	100	0.3	15.6	791	7.12	227.4	3.94	-1.35	Turbidity reading negative, water extremely clear.
1055	95.31	100	0.6	14.9	785	7.05	228.4	4.09	-1.47	
1058	95.38	100	0.9	14.8	782	7.00	235	3.97	-0.5	
1101	95.50	100	1.2	14.7	781	7.06	237.8	4.09	-1.43	
1104	95.55	100	1.5	14.8	783	7.09	243.9	3.87	-1.25	
1107	95.61	100	1.8	14.7	781	7.07	239.8	3.94	-1.34	
1110	95.67	100	2.1	14.8	780	7.01	247.5	4.06	-1.33	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 15.6 (°C) | ORP: 233.8 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 788 (uS/cm) | DO: 3.86 (mg/L)
pH: 7.21 (S.U.) | TURBIDITIY: -1.26 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL: 128.34

WEATHER CONDITIONS: partly cloudy, light wind, shaded area, hot, 90s

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW3
LOCATION: Radford VA
SAMPLING CREW: Bounds/Kormos | DATE: 29-Oct-20 | SAMPLE TIME: 845

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 95.95 (FT) | WELL DEPTH: 126.5 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
805	95.96	100	0	14.69	749	7.65	122.8	3.86	38.1	
815	95.96	100	2	13.98	748	7.52	123.7	3.4	33.7	
825	95.96	100	4	14.09	746	7.45	140.6	3.29	36.2	
835	95.96	100	6	14.05	745	7.42	144.3	3.17	41.8	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 14.05 (°C) | ORP: 144.1 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 746 (uS/cm) | DO: 3.17 (mg/L) | Duplicate 48TW3
pH: 7.4 (S.U.) | TURBIDITIY: 41.2 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 60s, overcast rain

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW06
LOCATION: Radford VA

SAMPLING CREW: Bounds/Taylor | DATE: 15-Apr-21 | SAMPLE TIME: 1225

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

PURGING DEVICE: GeoTech Bladder Pump

INITIAL DEPTH TO WATER: 62.51 (FT) | WELL DEPTH: 80 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1150	62.57	200	0	13.2	0.737	7.05	133.4	1.66	615.7	
1200	62.57	200	2	13.2	0.826	6.85	169	2.92	125.3	
1210	62.57	200	4	13.2	0.859	6.89	174.3	3.91	53.6	
1220	62.57	200	6	13.3	0.866	6.88	176.4	3.59	31.6	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13.3 (°C) | ORP: 176.4 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 0.866 (uS/cm) | DO: 3.59 (mg/L)
pH: 6.88 (S.U.) | TURBIDITIY: 31.6 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 60s Cloudy NW@10 rain late

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW06
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 27-Jan-21 | SAMPLE TIME: 1035

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: GeoTech Bladder Pump

INITIAL DEPTH TO WATER: 65.27 (FT) | WELL DEPTH: 80 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1010	66.27	200	0	12.6	724	6.99	137.6	4.49	345.6	
1020	67.36	200	2	12.7	911	6.89	140.2	3.37	51.55	
1030	67.28	200	4	12.6	921	6.88	138.6	3.21	39.22	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 12.6 (°C) | ORP: 138.6 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 921 (uS/cm) | DO: 3.21 (mg/L)
pH: 6.88 (S.U.) | TURBIDITIY: 39.22 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s Cloudy 15NE

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW06
LOCATION: Radford VA
SAMPLING CREW: Kormos/Bebee | DATE: 28-Jul-21 | SAMPLE TIME: 1130

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing / TIC TOC
PURGING DEVICE: GeoTech Bladder Pump
WELL COMPLETION (CIRCLE): Flush Stick-up
INITIAL DEPTH TO WATER: 66.13 (FT) | WELL DEPTH: 80.44 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
0939	65.8	300	0	18	884	8.18	232.7	5.26	858.72	
0943	67.79	300	1.2	16.7	707	7.8	234.7	6.54	505.29	
0947	67.89	300	2.4	16.3	704	7.61	246.1	5.89	350.66	
0951	67.82	300	3.6	16.4	745	7.48	247.5	5.66	280.84	
0955	67.65	300	4.8	16.5	758	7.39	250.9	5.22	305.24	
0959	67.51	300	6	16.7	787	7.34	247.6	5.28	173.44	
1003	67.36	300	7.2	17	779	7.25	241.3	4.7	222.65	
1007	67.18	300	8.4	17.6	804	7.39	239.8	4.72	110.15	
1011	66.9	300	9.3	18.3	789	7.31	243.4	4.56	166.44	
1015	66.73	300	10.2	18.7	799	7.37	239.9	4.94	90.36	
-	-	-	-	-	-	-	-	-	-	Battery/Pump issues
1058	66.76	100	10.2	21.3	822	7.25	197.5	3.93	63.54	
1105	66.4	100	10.9	20.7	815	7.54	195.9	5.33	58.81	
1114	66.87	250	11.8	17.9	728	7.67	188.9	3.79	872.42	
1118	67.31	250	12.8	17.2	729	7.35	198.3	3.79	947.01	
1122	67.56	250	13.8	17.5	767	7.32	204.6	3.82	647.19	
1126	67.58	250	14.8	17.1	791	7.28	207.9	3.86	393.26	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 17.1 (°C) | ORP: 207.9 (MV) | COMMENTS: 0.1 ppm PID Reading
SPECIFIC CONDUCTANCE: 791 (uS/cm) | DO: 3.86 (mg/L) | 18.9% Oxygen
pH: 7.28 (S.U.) | TURBIDITIY: 393.26 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL: 79.8

WEATHER CONDITIONS: Sunny, 90s

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 48MW06
LOCATION: Radford VA

SAMPLING CREW: Bounds/Kormos | DATE: 28-Oct-20 | SAMPLE TIME: 855

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

PURGING DEVICE: GeoTech Bladder Pump

INITIAL DEPTH TO WATER: 66.28 (FT) | WELL DEPTH: 80 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
805	66.28	100	0	13.61	567	8.01	89.9	2.62	633.5	
815	66.28	100	2	13.54	638	7.7	99.8	1.85	219.4	
825	66.28	100	4	13.5	707	7.53	110.8	1.77	169	
835	66.28	100	6	13.5	761	7.44	118.1	1.78	137.5	
845	66.28	100	8	13.49	767	7.39	123.6	1.79	140.8	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13.48 (°C) | ORP: 123.7 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 767 (uS/cm) | DO: 1.78 (mg/L)
pH: 7.36 (S.U.) | TURBIDITIY: 139.7 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 60s Cloudy

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500.2110 | WELL ID: 48MW07
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 27-Jan-21 | SAMPLE TIME: 940

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: GeoTech Bladder Pump

INITIAL DEPTH TO WATER: 46.46 (FT) | WELL DEPTH: 84.5 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
920	45.35	200	0	12.7	220.7	7.98	70.7	12.19	1699	
930	45.35	200	2	12.7	220.7	7.97	81.7	19.8	1286	
940	45.365	200	4	12.8	218.3	7.97	94.2	19.81	876	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 12.8 (°C) | ORP: 94.2 (MV) | COMMENTS:
SPECIFIC CONDUCTANCE: 218.3 (uS/cm) | DO: 19.81 (mg/L)
pH: 7.97 (S.U.) | TURBIDITIY: 876 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s Cloudy 15NE

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 49MW01
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 15-Apr-21 | SAMPLE TIME: 1020

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump
INITIAL DEPTH TO WATER: 110.41 (FT) | WELL DEPTH: 132 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
925	110.5	150	0	12.2	0.449	7.42	246.9	6.79	4512	
935	110.5	150	2	12.3	0.437	7.23	239.3	5.68	3918	
945	110.5	150	3	12.4	0.435	7.26	234.9	5.65	2412	
955	110.5	150	5	12.4	0.435	7.27	230.3	5.48	642.3	
1005	110.5	150	6	12.4	0.436	7.29	224.7	5.45	258.7	
1015	110.5	150	8	12.4	0.436	7.3	217.6	5.43	172.8	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 12.4 (°C) | ORP: 217.6 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 0.436 (uS/cm) | DO: 5.43 (mg/L)
pH: 7.3 (S.U.) | TURBIDITIY: 172.8 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 60s cloudy NW@10 Rain late

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 49MW01
LOCATION: Radford VA

SAMPLING CREW: Bounds/Taylor | DATE: 28-Jan-21 | SAMPLE TIME: 1250

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 115.03 (FT) | WELL DEPTH: 132 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1210	115.26	100	0	8.44	484.3	7.47	145.6	8.39	804	
1220	115.13	100	1	10	484.2	7.39	143.6	7.93	431	
1230	113.95	100	2	9.1	484.3	7.39	143.8	7.9	338	
1240	114.59	100	3	8.1	485.3	7.39	144.2	7.96	236	
1250	114.6	100	4	8.7	485.3	7.39	144.6	7.96	222	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 8.7 (°C) | ORP: 144.6 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 485.3 (uS/cm) | DO: 7.96 (mg/L)
pH: 7.39 (S.U.) | TURBIDITIY: 222 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 30s Cloudy flurries 20NW

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 49MW01
LOCATION: Radford VA
SAMPLING CREW: Kormos/Bebee | DATE: 29-Jul-21 | SAMPLE TIME: 1523

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 115.13 (FT) | WELL DEPTH: 126.17 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1454	115.9	150	0	19.2	527	9.14	169.7	6.87	1045.61	
1458	115.39	150	0.6	17.7	524	7.82	184.3	6.61	635.61	
1502	115.45	150	1.2	16.6	522	7.62	201.3	6.62	500.42	
1506	115.45	150	1.8	16.6	517	7.54	206.1	6.48	432.68	
1510	115.47	150	2.4	16.7	517	7.53	211.3	6.02	383.46	
1514	115.43	150	3	16.5	516	7.49	211.7	6.19	332.38	
1508	115.45	150	3.6	16.6	519	7.51	214.7	6.02	307.3	
1522	115.47	150	4.2	16.7	519	7.51	224.7	5.96	295.21	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 18.4 (°C) | ORP: 229.3 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 521 (uS/cm) | DO: 5.93 (mg/L)
pH: 7.58 (S.U.) | TURBIDITIY: 190.44 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: nimor cloudy, no odor | TOTAL DEPTH OF WELL: 126.17

WEATHER CONDITIONS: under trees, sunny, hot, 90s

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 49MW01
LOCATION: Radford VA
SAMPLING CREW: Bounds/Kormos | DATE: 28-Oct-20 | SAMPLE TIME: 1210

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 115.25 (FT) | WELL DEPTH: 132 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1130	115.25	100	0	13.9	487	7.86	143.1	6.32	1419	
1140	115.25	100	2	13.69	483	7.74	147.6	5.81	602.1	
1150	115.25	100	4	13.66	483	7.71	149.5	5.75	398.2	
1200	115.25	100	6	13.59	484	7.69	150.1	5.74	308.2	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13.52 (°C) | ORP: 150.3 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 483 (uS/cm) | DO: 5.76 (mg/L)
pH: 7.68 (S.U.) | TURBIDITIY: 306.6 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 60s, Cloudy

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 49MW02
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 13-Apr-21 | SAMPLE TIME: 1355

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump
INITIAL DEPTH TO WATER: 87.77 (FT) | WELL DEPTH: 131.1 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1320	87.62	100	0	17.2	0.54	7.39	139.1	5.01	573.4	
1330	87.62	100	1	15.6	0.524	7.26	71.7	3.46	495.6	
1340	87.62	100	2	14.4	0.52	7.26	84.5	4.1	345.6	
1350	87.62	100	3	14.4	0.519	7.25	88.7	4.6	302.8	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 14.4 (°C) | ORP: 88.7 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 0.519 (uS/cm) | DO: 4.6 (mg/L)
pH: 7.25 (S.U.) | TURBIDITIY: 302.8 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s Sunny SW@10

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 49MW02
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 27-Jan-21 | SAMPLE TIME: 1240

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 91.07 (FT) | WELL DEPTH: 131.1 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1220	91.56	200	0	12.9	575	7.6	134.7	11.85	1819	
1230	92.81	200	2	12.4	587	7.57	149.3	16.33	662	
1240	94	200	4	12.3	568	7.57	143.1	16.35	510	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 12.3 (°C) | ORP: 143.1 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 568 (uS/cm) | DO: 16.35 (mg/L)
pH: 7.57 (S.U.) | TURBIDITIY: 510 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s Cloudy 15NE

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 49MW02
LOCATION: Radford VA

SAMPLING CREW: Kormos/Bebee | DATE: 30-Jul-21 | SAMPLE TIME:

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 87.23 (FT) | WELL DEPTH: 134.98 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1217	86.38	250	0	18.9	6.37	7.69	224.1	5.15	187.31	
1220	88.96	250	0.8	15.8	647	7.61	222.1	4.94	140.41	
1223	89.87	250	1.5	15.7	642	7.29	227.4	3.81	82.31	
1226	90.77	250	2.3	15.2	639	7.27	226.4	4.13	80.20	
1229	90.87	250	3.0	15.2	637	7.21	227.2	4.08	50.65	
1232	91.36	250	3.8	15.6	640	7.27	222.8	3.89	33.44	
1235	92.2	250	4.5	15.3	637	7.52	226.5	3.86	26.72	
1238	92.76	250	5.3	15.1	639	7.45	232.2	4.31	21.40	
1241	93.18	225	6.0	15.5	637	7.40	233.6	4.18	18.06	
1244	93.73	225	6.7	15.5	641	7.50	235.5	4.13	18.41	
1247	94.26	225	7.4	15.6	638	7.48	237.7	4.20	14.71	
1250	94.76	225	8.0	15.4	640	7.50	239.3	4.16	14.63	
1253	95.14	200	8.7	15.1	635	7.47	242.6	4.24	11.93	
1256	95.71	200	9.3	15.4	636	7.41	242.7	4.12	10.46	
1259	96.08	200	9.9	15.4	640	7.37	247.7	4.24	10.52	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 16.7 (°C) | ORP: 245.6 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 644 (uS/cm) | DO: 3.59 (mg/L)
pH: 7.31 (S.U.) | TURBIDITIY: 6.00 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear no odor | TOTAL DEPTH OF WELL: 134.98

WEATHER CONDITIONS: Sunny, 90s

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 49MW02
LOCATION: Radford VA

SAMPLING CREW: Bounds/Kormos | DATE: 28-Oct-20 | SAMPLE TIME: 1500

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 19.21 (FT) | WELL DEPTH: 131.1 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1420	91.22	100	0	14.59	592	7.63	133.9	3.9	687.4	
1430	91.22	100	2	14.41	590	7.59	123.4	2.54	770.8	
1440	91.22	100	4	14.16	588	7.56	122.8	2.34	724.6	
1450	91.22	100	6	14.47	589	7.54	127.6	2.38	718.2	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 14.43 (°C) | ORP: 128.1 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 582 (uS/cm) | DO: 2.34 (mg/L)
pH: 7.54 (S.U.) | TURBIDITIY: 710.3 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Whitish, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 60s, Cloudy

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500.2110 | WELL ID: 49MW03
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 27-Jan-21 | SAMPLE TIME: 1130

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 99.39 (FT) | WELL DEPTH: 122.83 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1110	99.36	200	0	11.6	419.1	7.56	152.4	11	244	
1120	99.36	200	2	11.7	414.3	7.2	151.1	10.56	52.36	
1130	99.36	200	4	11.8	413.7	7.14	151.1	10.68	26.8	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 11.8 (°C) | ORP: 151.1 (MV) | COMMENTS:
SPECIFIC CONDUCTANCE: 413.1 (uS/cm) | DO: 10.68 (mg/L)
pH: 7.14 (S.U.) | TURBIDITIY: 26.8 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s Cloudy 15NE

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 49MW04
LOCATION: Radford VA

SAMPLING CREW: Bounds/taylor | DATE: 14-Apr-21 | SAMPLE TIME: 1055

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing | PURGING DEVICE: GeoTech Peristaltic Pump
TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

INITIAL DEPTH TO WATER: 18.82 (FT) | WELL DEPTH: 73.65 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1020	18.81	200	0	13.7	0.593	7.19	185.3	2.71	4.95	
1030	18.81	200	2	13.7	0.595	7.28	170	3	4.49	
1040	18.81	200	4	13.7	0.595	7.25	162.8	2.55	16.49	
1050	18.81	200	6	14.1	0.596	7.21	160.1	1.79	17.82	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 14.1 (°C) | ORP: 160.1 (MV) | COMMENTS: 0.0. PID Reading
SPECIFIC CONDUCTANCE: 0.596 (uS/cm) | DO: 1.79 (mg/L)
pH: 7.21 (S.U.) | TURBIDITIY: 17.82 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s P. Cloudy calm

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 49MW04
LOCATION: Radford VA
SAMPLING CREW: Bounds/taylor | DATE: 25-Jan-21 | SAMPLE TIME: 1330

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
PURGING DEVICE: GeoTech Peristaltic Pump
WELL COMPLETION (CIRCLE): Flush Stick-up
INITIAL DEPTH TO WATER: 20.25 (FT) | WELL DEPTH: 73.65 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1300	21.14	125	0	12.2	688	7.38	81.4	5.11	2.49	
1310	22.56	125	1	13.1	697	7.26	82.3	2.66	1.52	
1320	23.79	125	2	13.1	695	7.27	82.7	2.52	1.45	
1330	24.47	125	4	13.1	695	7.27	82.3	2.46	1.39	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13.1 (°C) | ORP: 82.3 (MV) | COMMENTS: 0.0. PID Reading
SPECIFIC CONDUCTANCE: 695 (uS/cm) | DO: 2.46 (mg/L)
pH: 7.27 (S.U.) | TURBIDITIY: 1.39 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 40s Overcast rain E-13mph

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 49MW04
LOCATION: Radford VA
SAMPLING CREW: Kormos/Bebee | DATE: 30-Jul-21 | SAMPLE TIME: 800

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing | PURGING DEVICE: GeoTech Peristaltic Pump
TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

INITIAL DEPTH TO WATER: 20.74 (FT) | WELL DEPTH: 72.91 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
7:40	20.59	400	0	15.7	808	7.2	224.4	7.83	0.56	
7:43	23.2	400	1.2	15.1	743	7.49	225.2	8.09	-0.46	
7:46	25.39	400	2.4	14.8	737	7.34	227.2	8	-0.94	
7:49	25.76	400	3.6	151.2	731	7.35	228.6	7.85	0.72	
7:53	26.99	400	4.8	14.9	731	7.39	229.9	7.88	-0.36	
7:56	28.22	400	6	14.8	729	7.27	231.5	7.94	-0.43	
7:59	29.07	400	7.2	14.8	730	7.32	234.9	7.38	-0.38	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 15.3 (°C) | ORP: 235 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 743 (uS/cm) | DO: 5.87 (mg/L)
pH: 7.28 (S.U.) | TURBIDITIY: 0.76 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: very clear, no odor | TOTAL DEPTH OF WELL: 72.91

WEATHER CONDITIONS: partly cloudy

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 49MW04
LOCATION: Radford VA
SAMPLING CREW: Bounds/Kormos | DATE: 27-Oct-20 | SAMPLE TIME: 1120

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: GeoTech Peristaltic Pump

INITIAL DEPTH TO WATER: 20.86 (FT) | WELL DEPTH: 73.65 (FT) | Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1040	20.88	150	0	15.4	677	7.54	137.4	3.46	13.5	
1050	20.88	150	2	15.56	675	7.58	134	3.13	13.5	
1100	20.88	150	4	15.84	674	7.61	130.6	2.9	12.3	
1110	20.88	150	6	16.05	676	7.61	131	2.64	10.1	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 16.03 (°C) | ORP: 132.1 (MV) | COMMENTS: 0.0. PID Reading
SPECIFIC CONDUCTANCE: 675 (uS/cm) | DO: 2.63 (mg/L)
pH: 7.61 (S.U.) | TURBIDITIY: 9.7 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 70s, M Sunny

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500.2110 | WELL ID: 49MW05
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 25-Jan-21 | SAMPLE TIME: 1530

PURGING DATA

REFERENCE POINT (CIRCLE): PVC / Steel Casing — PURGING DEVICE: Peristaltic Pump
TIC / TOC
WELL COMPLETION (CIRCLE): Flush / Stick-up

INITIAL DEPTH TO WATER: 19.8 (FT) — WELL DEPTH: 38.8 (FT) — Well Diameter: 4"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1510	20.07	225	0	13.2	999	6.97	91.6	674	3.6	
1520	20.85	225	2	13.2	1000	6.97	101.6	651	3.48	
1530	21.45	225	5	13.4	994	6.97	103.9	650	3.91	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13.4 (°C) — ORP: 103.9 (MV) — COMMENTS: 0.0 PID
SPECIFIC CONDUCTANCE: 994 (uS/cm) — DO: 650 (mg/L)
pH: 6.97 (S.U.) — TURBIDITIY: 3.91 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor — TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 40s Overcast rain E-13mph

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 50MW02
LOCATION: Radford VA

SAMPLING CREW: Bounds/Taylor | DATE: 13-Apr-21 | SAMPLE TIME: 1010

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up

PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 111.08 (FT) | WELL DEPTH: 122.8 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
935	111.11	150	0	12.9	0.672	7.28	218.7	8.82	1081	
345	111.11	150	2	12.9	0.651	7.13	216.4	8.12	371.3	
355	111.11	150	4	13.1	0.649	7.11	209.5	7.7	157.3	
1005	111.11	150	6	13.1	0.647	7.09	201.3	7.39	95.7	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13.1 (°C) | ORP: 201.3 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 0.647 (uS/cm) | DO: 7.39 (mg/L)
pH: 7.09 (S.U.) | TURBIDITIY: 95.7 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s Sunny SW@5

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Rardford AAP | PROJECT #: 03886.552.500 | WELL ID: 50MW02
LOCATION: Radford VA
SAMPLING CREW: Bounds/Taylor | DATE: 27-Jan-21 | SAMPLE TIME: 1455

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 113.5 (FT) | WELL DEPTH: 122.8 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1435	113.52	100	0	12	653	7.14	142.3	7.91	767	
1445	113.5	100	1	11.9	644	7.05	128.4	7.58	171.3	
1455	113.5	100	2	11.9	640	7.04	131.3	7.59	80.31	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 11.9 (°C) | ORP: 131.3 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 640 (uS/cm) | DO: 7.59 (mg/L)
pH: 7.04 (S.U.) | TURBIDITIY: 80.31 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 50s Cloudy 15NE

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Radford AAP | PROJECT #: 03886.552.500 | WELL ID: 50MW02
LOCATION: Radford VA
SAMPLING CREW: Kormos/Bebee | DATE: 29-Jul-21 | SAMPLE TIME: 1745

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing / TIC TOC
PURGING DEVICE: QED Bladder pump
WELL COMPLETION (CIRCLE): Flush Stick-up
INITIAL DEPTH TO WATER: 113.75 (FT) | WELL DEPTH: 120.71 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1647	113.76	150	0	20.1	726	7.95	188.5	6.22	441.48	
1651	113.79	175	0.6	17.7	732	7.49	194.1	5.72	310.37	
1655	113.80	175	1.3	17.1	724	7.46	201.7	5.87	226.31	
1659	113.79	175	2	17.3	715	7.26	206.7	5.73	197.21	
1703	113.79	175	2.7	17.2	714	7.25	214.0	5.80	152.91	
1707	113.79	175	3.4	17.3	714	7.26	214.4	6.01	116.49	
1711	113.79	175	4.1	17.4	710	7.20	236.1	6.02	81.85	
1715	113.79	175	4.8	17.4	709	7.24	236.6	5.98	79.66	
1719	113.79	175	5.5	17.6	710	7.24	264.1	5.96	70.76	
1723	113.79	175	6.2	17.6	711	7.12	274.2	5.90	52.37	
1727	113.79	175	6.9	17.6	711	7.18	290.7	6.15	50.74	
1731	113.79	175	7.6	17.6	712	7.22	292.6	6.03	41.73	
1735	113.79	175	8.3	17.6	705	7.29	301.4	6.03	38.91	
1739	113.79	175	9	17.6	710	7.26	303.6	6.01	30.70	
1743	113.79	150	9.7	18.6	703	7.17	314.3	6.26	39.44	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 17.5 (°C) | ORP: 314.1 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 711 (uS/cm) | DO: 5.90 (mg/L)
pH: 7.15 (S.U.) | TURBIDITIY: 21.21 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: clear, no odor | TOTAL DEPTH OF WELL: 120.71

WEATHER CONDITIONS: in shade under trees, sunny, hot, 90s

WESTON LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Rardford AAP | PROJECT #: 03886.552.500 | WELL ID: 50MW02
LOCATION: Radford VA
SAMPLING CREW: Bounds/Kormos | DATE: 28-Oct-20 | SAMPLE TIME: 1330

PURGING DATA

REFERENCE POINT (CIRCLE): PVC Steel Casing TIC TOC
WELL COMPLETION (CIRCLE): Flush Stick-up
PURGING DEVICE: QED Bladder pump

INITIAL DEPTH TO WATER: 114.21 (FT) | WELL DEPTH: 122.8 (FT) | Well Diameter: 2"

CLOCK TIME (24 HR)	Water Depth Below MP (ft)	PURGE RATE (mL/min)	CUM. VOLUME PURGED (L)	TEMP (°C) **(3%)**	SP COND (uS/cm[c])[1] **(3%)**	pH (s.u) **(+/-0.1)**	ORP/Eh[2] (MV) **(+/-10)**	DO (mg/L) **(10%)**	Turb (NTU) **(10%)**	COMMENTS
1250	114.21	100	0	13.94	678	7.5	159.3	5.28	787.8	
1300	114.21	100	2	13.64	680	7.38	159.9	4.59	335	
1310	114.21	100	4	13.65	683	7.31	160.1	4.43	188.1	
1320	114.21	100	6	13.63	689	7.3	160.8	4.37	177.2	

1. uSiemens per cm (same as umhos/cm) at 25C
2. Oxidation reduction potential (stand in for Eh)

FINAL FIELD DATA

TEMPERATURE: 13.62 (°C) | ORP: 161.2 (MV) | COMMENTS: 0.0 PID Reading
SPECIFIC CONDUCTANCE: 689 (uS/cm) | DO: 4.36 (mg/L)
pH: 7.29 (S.U.) | TURBIDITIY: 172.2 (NTU)

ODOR AND PHYSICAL APPEARANCE OF SAMPLE: Clear, no odor | TOTAL DEPTH OF WELL:

WEATHER CONDITIONS: 60s overcast

APPENDIX A-2
CALIBRATION FORMS

Equipment Calibration Log					Project: Radford GW Sampling: SWMU 49 & 54		
			Calibration				
Date/ Time	Equipment Description	Equip ID	Calibr standard/ value	Pre Cal readings	Post Cal Readings	Performed by:	Lot#/Exp/Comments
October 2020 Sampling Event							
10-26-20 / 10:12	MultiRAE	22414	CO / 50 ppm	38 ppm	47 ppm	DK	
			H_2S / 10 ppm	14.4 ppm	10.0 ppm	DK	Lot# 304-401842189-1 Exp. 07/09/22
			LEL / 50%	50.0%	48%	DK	
			O_2 / 18.0%	18.2%	17.8%	DK	
			VOC / 100 ppm	85.2 ppm	100.1 ppm	DK	Lot# 304-40180617-1 Exp: 07/09/24
	YSI - DDS	22549	Turbidity / 123 NTU	150.13 NTU	124.07 NTU	DK	
January 2021 Sampling Event							
01-26-21 / 9:23	MultiRAE	Unknown	CO / 50 ppm	41 ppm	49 ppm	DK	
			H_2S / 10 ppm	14.0 ppm	10.1 ppm	DK	
			LEL / 50%	50.0%	49%	DK	
			O_2 / 18.0%	18.1%	17.8%	DK	
			VOC / 100 ppm	95.2 ppm	100.6 ppm	DK	
	YSI - DDS	Unknown	Turbidity / 123 NTU	148.23' NTU	123.21 NTU	DK	
April 2021 Sampling Event							
04-12-21 / 11:11	MultiRAE	22414	CO / 50 ppm	38 ppm	48 ppm	DK	
			H_2S / 10 ppm	15.4 ppm	10.2 ppm	DK	
			LEL / 50%	50.0%	48%	DK	
			O_2 / 18.0%	18.1%	18.3%	DK	
			VOC / 100 ppm	89.7 ppm	102.1 ppm	DK	
	YSI - DDS	27333	Turbidity / 123 NTU	140.44 NTU	122.01 NTU	DK	
July 2021 Sampling Event							
07-26-21 / 11:13	MultiRAE	43444	CO / 50 ppm	45 ppm	48 ppm	DK	
			H_2S / 10 ppm	12.4 ppm	10.2 ppm	DK	
			LEL / 50%	50.1%	48%	DK	
			O_2 / 18.0%	18.0%	17.8%	DK	
			VOC / 100 ppm	91.8 ppm	99.5 ppm	DK	
	YSI - DDS	22549	Turbidity / 123 NTU	130.23 NTU	123.90 NTU	DK	

APPENDIX A-3
FIELD NOTES

Radford Army Ammuntion Mon. Oct. 14, 2019

- B. Bounds and P. Taylor check in at facility RAAP Visitors center.
P. Taylor acquires a visitor pass.
B. Bounds acquires a vehicle pass.
- Meet up with Jody Hawks and Melissa Lincoln with BAE to receive permits and coordinate efforts. Area Access and Hot Work Permits received.

0920 Arrive at Area 54.

0942 P. Taylor calibrates the Hanna HI 98703 Turbidimeter (REW22192).

Standard (NTU)	Reading (NTU)
0.1	0.15
15	15.0
100	100
750	752

0955 Begin purge of 54MW13.

1025 Collect groundwater sample 54MW13 and duplicate sample 54TW13.

1155 Begin purge of 54MW10.

Contacted Security to access 54MW10 through Perimeter Gate 19E. Security Dispatch 540-639-7289. Gate Key #11.

1215 Collect groundwater sample 54MW10.

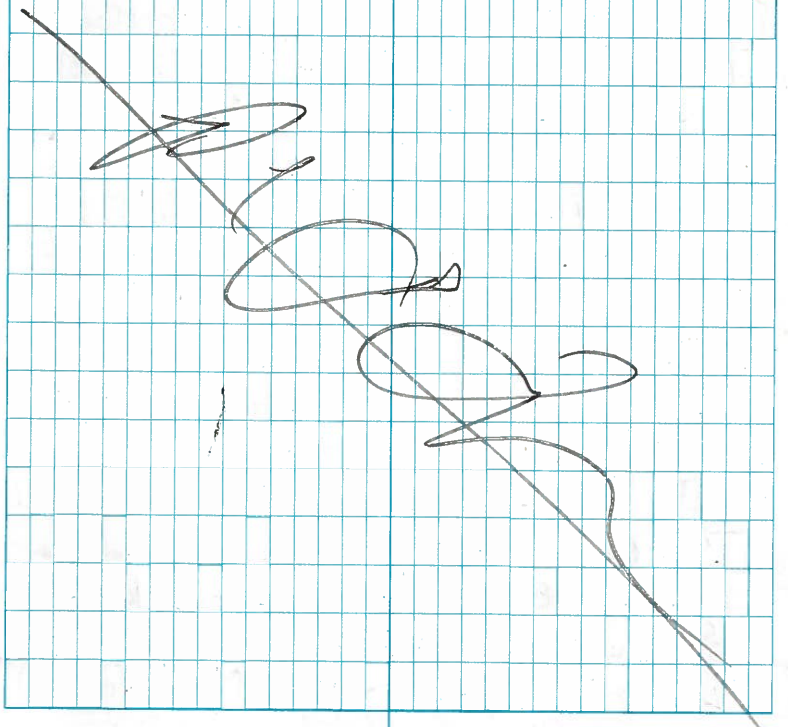
1255 Begin purge of 54MW12.

1325 Collect groundwater sample 54MW12 with MS/MSD.

1440 Begin purge of 54MW1.

1510 Collect groundwater sample 54MW1.

1600 Collect IDW water sample from purge water (consolidated). Sample ID: 54 IDW.



Rite in the Rain

Radford AAP Tues. Oct. 15, 2019

0739 B. Bounds and P. Taylor arrive at Radford AAP Burning Grounds. — Meet with Calvin regarding burn schedule and access to lower wells for Area 49. Burn scheduled for 0900, should be complete around 1100, will check back with burn at 1100.

0800 Begin gauging water levels for Area 49 wells.

0909 P. Taylor calibrates the Hanna HI 98703 Turbidimeter (RFW 22192).

Standard (NTU)	Reading (NTU)
0.1	0.20
15	15.1
100	99.8
750	751

0945 Begin purge of 48MW06 using a QED Micropurge Bladder Pump.

1025 Collect groundwater sample 48MW06.

1115 Begin water level gauging on lower side of site but break key in lock at first well (13MW5).

1155 Acquired spare key from M. Lincoln.

Radford AAP Tues. Oct. 15, 2019

Water Level Gauging

Well ID	Depth to Water (ft TOC)
48 MW06	66.09
48 MW1	108.52
48 MW2	124.04
48 MW3	96.50
49 MW01	115.39
49 MW02	92.95
50 MW02	115.27
13 MW2	22.06
13 MW3	15.58
13 MW4	17.67
49 MW04	21.29
48 MW07	Dry TD = 86.80
13 MW5	17.99
49 MW03	104.24
49 MW05	~~Dry 104.24~~ 20.42

1232 Complete water level gauging for SWMU 49.

1245 Start purge of 13MW2.

1305 Collect groundwater sample 13MW2 with MS/MSD.

1330 Start purge of 49MW04.

1350 Collect groundwater sample 49MW04.

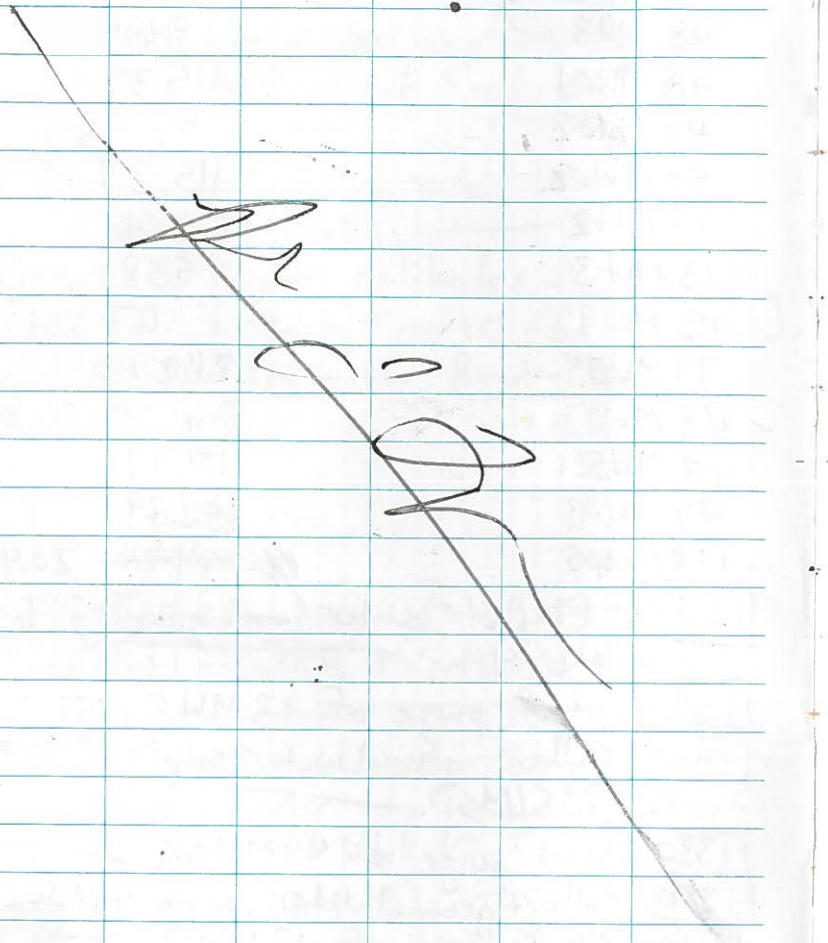
1410 Start purge of 13MW3.

Radford AAP Tues. Oct. 15, 2019

1440 Collect groundwater sample 13MW3 and duplicate groundwater sample 13TW3.

1500 Start purge of 13MW4.

1520 Collect groundwater sample 13MW4.



0753 P. Taylor calibrates the Hanna HI 98703 Turbidimeter (RFW22192).

Standard (NTU)	Reading (NTU)
0.1	0.18
15	14.7
100	98.3
750	747

0805 Attempted purge of 48MW2. No flow achieved with QED Bladder Pump. Troubleshooting. Swapped tubing. Managed to get water to the YSI flow cell but no further progress.

0950 ordered bailers (6) and twine to complete sampling of 48MW2.

1020 Collect equipment rinsate blank 149EQB-48MW2 from the freshly decontaminated QED bladder pump following decontamination. Sampled with distilled water decanted from bladder housing.

1150 Begin purge (after several adjustments) of 48MW3.

Radford AAP Wed. Oct. 16, 2019

1220 Collect groundwater sample 48MW3 and duplicate groundwater sample 48TW3.

1320 Begin purge of 49MW02.

1350 Collect ground water sample 49MW02.

- Attempted to purge 50MW02 without success 2-inch well with approx. 6 ft. water column. 115.27 DTW; ~121 ft. DTB.

1555 Begin purge of 48MW1.

Out of tubing.

1625 Collect groundwater sample 48MW1.

~~0943~~ ~~0830~~ DTC

0830 B. Bounds and P. Taylor depart hotel for Walmart. Purchase ice and pack samples from SWMU 59 for shipment.

0943 Return ship the PID to Western's Westchester, PA RES. Fedex Tracking #: 802793713710 Standard Overnight.

0947 shipped SWMU 59 samples via Fedex Priority Overnight under chain-of-custody to CT Laboratories in Baraboo, WI in three coolers.

Tracking #s:

- 7803 1914 1885
- 7803 1914 1896
- 7803 1914 1900.

1000 Pickup bladder pump tubing (500 ft.) and 4 poly bailers delivered by Fedex to Hampton Inn.

1017 Arrive at Radford AAP visitor's center and Contacted Lee Roope (540) 818-0808 for access to the ACD area for IDW water disposal.

1045 Emptied SWMU 49 purge water

Rite in the Rain

into a SWMU 48+49 designated poly drum at the ACD staging area.

1102 D. Taylor calibrates the Hanna HI 98703 Turbidimeter (RFW22192).

Standard (NTU)	Reading (NTU)
0.1	0.17
15	15.1
100	98.1
750	751

1120 Begin purge of 49MW01.

1200 Collect ground sample 49MW01.

1235 Begin purge of 50MW02.

1315 Collect groundwater sample 50MW02.

1400 Begin purge of 48MW2 using bladder pump at a rate of one cycle per minute (40:20).

1450 Collect groundwater sample 48MW2.

1527 Deposit remaining purge water and decon water from SWMU 49 in the SWMU 48/49 designated drum at the ACD Staging Area.

1530 Collect IDW water sample 49IDW from the SWMU 48/49 IDW drum.

1552 Depart Radford AAP dropping off

P. Taylor's badge at the Visitor's Center.

1726 Shipped SWMU 49 samples to CT Laboratories in Beaver, WI via Priority Overnight shipment on fedex under chain-of-custody. Also return shipped an empty cooler (Standard overnight).

- Return shipped the QED Bladder Pump to Pine Environmental Services in King of Prussia, PA. (Standard Overnight).

1728 Return shipped the turbidimeter, YSI water quality meter, and water level gauge to Weston's Exton, PA RES standard Overnight. Fedex Tracking #s:

- Samples to CT Lab: 780334830946
- Empty Cooler to CT Lab: 780334830957
- Bladder Pump to Pine: 780349757127
- Water Level Meter to RES: 802793714500
- Peristaltic Pump, YSI, Turbidimeter to RES: 802793714511

Rite in the Rain

RADFORD AAP 1/27/2020

0715 arrived onsite Got security Badge / Car pass

0800 Mtg w/ Jessica Lindsey at Burning Ground for PERMITS

0845 Got PERMITS discussed with Collin time to sample Burning Ground

0900 Proceed to Area 54

0930 Security let us into Area 19E to sample 54mw13

0945 Cal check of Equipment

0950 Began to purge of 54mw10

1035 sample 54mw10

1135 Collin starting purge of 54mw13 & 54Tmw13 (Duplicate)

1205 Sample of 54mw13 & 54Tmw13

1250 moved to 54mw12

1300 started purge of 54mw12

1350 sample 54mw12 ms/msd

1410 moved to 54mw1

1430 started purge of 54mw1

1505 sample of 54mw1

1520 sample of IDW 54

1606 Done sampling 15 Gal DCE used

1550 SAMPLE Processing

1700 Sample Drop off

MB

Radford AAP 1/28/2020

0700 Arrived onsite started Brief

0730 IDW disposal MT and PPE

0800 at 49mw07 set up of Bladder Pump

0830 Purge of 49mw07

0918 Sample of 49mw07

0930 Decon of Bladder pump

0945 at 49mw03 setup of Pump MAP says 49mw03 well has 49mw05 water on it.

1200 Issues with pump Collin said we could come to Burn area

1245 started Purge of 13mw8

1310 sample 13mw8

1330 moved to 13mw4 & started Purge

1355 sample 13mw4

1410 moved to 13mw3 & started Purge

1435 sample 13mw3 & 13Tmw3

1440 moved to 49mw04

1500 started Purge of 49mw04

1530 sample 49mw04

1600 Drop Purge water at ACE 10 Gal

1700 shipped samples to EDB

MB

Rite in the Rain.

1/29/20

0700 onsite safety Brief
0730 Cal check of equipment
0800 started at 48mw06
0830 purge started at 48mw06
0905 sample of 48mw06
0930 moved to 46mw01
Sue with pump water and tube
1030 moved to Burning Ground
1045 started Purge of 49mw05
1126 collect sample from 49mw05
1135 starting Purge of 48mw02
1210 Sampled 8mw2
1215 Headed to Hotel to get new Bladder Pump
1320 at 48mw03
1345 Purge started 48mw03
1420 Sample 48mw03 equipment Rinsate Blank 49EQ-48mw03
1500 moved to 49mw02
1515 started Purge of 49mw02
1540 Sample 49mw02
1545 ACN Area to Dump Purge water 10 Gal
1700 Samples Processed and to Fedex

1/30/20

0700 Period onsite safety Brief
0730 at 48mw1 Cal check
0830 started Purge of 48mw1
0915 Sample of 48mw1
0930 started at 49mw01
1000 Purge of 49mw01
1045 Sample 49mw01
1145 went to Hotel to pickup additional Hose and Lunch to Get oil in mckenna parked for all locks to be oiled
1230 at 50mw02
1320 started Purge 50mw02
1355 Sample 50mw02
430 Purge 48mw2
1505 Sample 48mw2
1555 Sample 48mw3 Dup
1615 ACN area to Gal

Rite in the Rain

Radford AAP Mon. 4/27/2020

0725 B. Bounds and P. Taylor depart hotel. Purchase ice.

0740 Arrive at Radford AAP Visitor's Center and acquire vehicle pass and temporary badge.

0820 Meet Andy at the burning grounds. Speak with Calvin about burn schedule. Will conduct sampling in burn area (SWMU 49) today. Meet with H&S to receive permits.

0917 P. Taylor calibrates the YSI Pro DSS Water Quality meter (RFW22561).

Parameter	Standard	Readings
DO	97.5%	97.6%
Sp. Cond.	1,000 uS/cm	1,000
pH 4	4.00	4.05 → 4.00
pH 7	7.00	7.10 → 7.06
pH 10	10.00	10.24 → 10.02
ORP	203 ~~246~~ mV	201.4 → 203.4

0939 Begin purge of well 13MW4.

1015 Collect groundwater sample 13MW4.

1053 Begin purge of well 13MW3.

1125 Collect groundwater sample 13MW3 and duplicate groundwater sample 13TW3.

Radford AAP Mon. April 27, 2020 17

1149 Begin purge of well 49MW04.

1230 Collect groundwater sample 49MW04.

1253 Begin purge of well 13MW2.

1325 Collect groundwater sample 13MW2 with triple volume for MS/MSD analysis.

~~1450~~

- Setup at well 48MW1. Found that we did not have any O-rings for the bladder pump. Ordered O-Rings and tubing from Pine Environmental for overnight delivery to the hotel in Blacksburg, VA.

1430 Deposited IDW purge water at the ACD Area after contacting Lee for access.

Water Level Gauging:

Well ID	Depth to Water (ft. TOC)
48MW1	98.71
13MW4	15.09
13MW3	13.42
49MW04	19.37
13MW2	20.14
48MW06	62.31
48MW2	~~96.9~~ 121.85
48MW3	96.96

Rite in the Rain.

Radford AAP — Tues. April 28, 2020

1340 Begin purge of well 54MW1.
1420 Collect groundwater sample 54MW1.
1438 Collect IDW purge water from all 4 SWMU 54 wells combined in one composite sample: 54 IDW.
1502 Delivered SWMU 54 purge water to the ACD staging area. Decant the water into designated 55-gallon drum.
1636 Deliver samples to Fedex in Christiansburg, VA for overnight shipment under chain-of-custody to CT Laboratories (1 cooler) in Berlin, WI and SGS North America (2 coolers) in Orlando, FL for analyses (SWMU-54 samples). Also deliver the peristaltic pump for overnight return shipment to Weston's RES in West Chester, PA.

Radford AAP — Wed. April 29, 2020

0810 W. Bounds and P. Taylor arrive at Radford AAP.
0831 P. Taylor calibrates the YSI ProDSS Water Quality Meter (RFW22561).

Parameter	Standard	Readings
DO	96.8%	98.8 → 96.8%
Sp. Cond.	1,000 µs/cm	1,001 → 1,000
pH 4	4.00	3.98 → 4.00
pH 7	7.00	7.01 → 7.05
pH 10	10.00	10.06 → 10.00
ORP	202.0 mV	208.1 → 202.3

0908 Begin purge of well 48MW06.
0940 Collect groundwater sample 48MW06.
0952 Following decontamination of the bladder pump, collect equipment rinsate blank ~~EQ01~~ 49EQ05-48MW06 by decanting distilled water from the pump into sample bottles.
1037 Begin purge of well 48MW1.
1110 Collect groundwater sample 48MW1.
1156 Begin purge of well 49MW01.
1245 Collect groundwater sample 49MW01.
1326 Begin purge of well 48MW2.
1410 Collect groundwater sample 48MW2.
1541 Deliver samples to Fedex.

Rite in the Rain

Radford AAP — Mon. April 27, 2020

Well ID	Depth to Water (ft. TOC)
49MW01	113.56
49MW02	92.35
50MW02	112.63
48MW07	42.07
13MW5	14.78
49MW03	95.73
49MW05	18.35

1530 Depart site.

1610 Purchase ice and supplies at Walmart. Pack samples for shipment to CT Laboratories in Baraboo, WI.

1700 Deliver samples to Fedex in Christiansburg for overnight delivery to CT Laboratory in Baraboo, WI.

Radford AAP — Tues. April 28, 2020

0800 D. Bounds and P. Taylor arrive at Radford AAP.

0847 P. Taylor calibrates the YSI Pro DSS Water Quality Meter (RFW22561).

Parameter	Standard	Reading
DO	97.9%	108.9 → 97.9 %
Sp. Cond.	1,000 uS/cm	998 → 1,000
pH 4	4.0	3.96 → 4.00
pH 7	7.0	6.96 → 7.00
pH 10	10.0	10.08 → 10.00
ORP	205.5 ~~240 mV~~	206.7 → 205.8

Note: No calibration fluids were provided. Fluids from a previous event were used. No turbidity calibration fluids were on hand. The conductance fluid was labeled with an expiration date of January 2020.

0920 Begin purge of well 54MW13.

1000 Collect groundwater sample 54MW13 and duplicate groundwater sample 54TW13.

1101 Begin purge of 54MW10.

1130 Collect groundwater sample 54MW10.

1153 Begin purge of well 54MW12

1245 Collect groundwater sample 54MW12 in triple volume for MS/MSD designation.

0835 P. Taylor calibrates the YSI ProDSS water Quality Meter (RFW 22561).

Parameters	Standard	Readings
~~DO%~~ DO%	96.0%	95.7 → 96.0
Sp. Cond.	1,000 uS/cm	998 → 1,000
pH 4	4.00	4.03 → 4.00
pH 7	7.00	6.99 → 7.00
pH 10	10.00	9.96 → 10.00
ORP	202.0	202.6 → 202.2

0914 Begin purge of well 50MW02.
0955 Collect groundwater sample 50MW02.
1033 Begin purge of well 48MW3.
- Todd with facility grounds maintenance cleared downed trees from the access road allowing access to well 49MW02.
1100 Collect groundwater sample 48MW3 and duplicate groundwater sample 48TW3.
1149 Begin purge of well 49MW02.
1250 Collect groundwater sample 49MW02.
1310 Arrive at SWMU 54 Gate 19E.
W. Bounds contacts site security for access to well 54MW10 through Gate 19E.
1350 Security arrives to open gate 19E.
1400 Collect chlorate/chlorite aliquot for groundwater sample 54MW10.

1420 Collect chlorate/chlorite aliquot ~~for~~ for groundwater sample 54MW12 including MS/MSD.
1440 Collect chlorate/chlorite aliquot for groundwater sample 54MW11.
1510 Dispose of SWMU 49 purge water at ACD Area in consolidated drum.
1515 Collect IDW purge water sample (Composite) from SWMU 49 purge water drum.
49IDW.
1646 Delivered samples to Fedex in Christiansburg, VA for overnight delivery to CT Laboratory in Baraboo, WI under chain-of-custody.
Also delivered rental equipment for overnight return shipment to Wesson's RES in Exton, PA.

Rite in the Rain

7/20/20 Radford AAP

0700 Left Hotel for site

0713 at Pass office

0830 Obtained permits

0900 Had to go to Lowes to Get Buckets

1030 back on site

1045 Cal of equipment

PID

CO 4 ppm

LEL 50%

O_2 14%

VOC 98.7

YSI Cal Good

1100 started Purge of 13MW4

1140 Sample 13MW4

1200 Purge of 13MW3

1230 ~~Sample of~~ 13MW3 13MW3

1250 Purge of 49MW04

1323 Sample of 49MW04

1350 Purge of 13MW02

1413 Sample 13MW02 MS/MSD

10/20/20

0730 arrived on site Got Keys Passes

0800 met Safety AT OBG TO GET PERMITS.

0830 Setup at 54MW13

0850 started Purge

940 Sample 54MW13 moved to 54MW10

1110 setup at 54 MW 10

1120 Purge started at 54MW10

1150 Sample 54MW10 moved TO 54MW12

1230 setup at 54 MW12

1255 Purge started 54MW12

1325 Sample 54MW12 moved to 54MW1

1400 Setup at 54MW1

1410 Purge started 54MW1

1440 Sample 54MW1 moved TO 48MW06

1500 Setup at ~~48MW06 couldn't~~

~~Get flow will Get water started -~~

~~pump on HOG~~ Dedicated Pump.

Purge water

1600 Process Samples

1700 Shipped Samples one for DAY

S

Rite in the Rain

10/27/20

0730 arrived onsite at 036
830 setup at 13mw4
840 start purge 13mw4
920 sample 13mw4 move to 49mw01
1025 setup at 49mw01
1040 start purge 49mw01
1120 sample 49mw01 move to 13mw3
930 setup 13mw3
940 Purge 13mw3
1010 Sample 13mw3 move to 49mw04
1025 setup 49mw04
1040 Purge 49mw04
1120 sample 49mw04 move to 13mw2
1130 setup 13mw2
1150 purge 13mw2
1230 sample 13mw2 moved to 46mw06 to sample couldn't Get purge started with Peri Pump will have to use Bladder to be sampled 10/28 full Gauging
1330 Pumped purge water
1430 processed Samples
1600 shipped samples

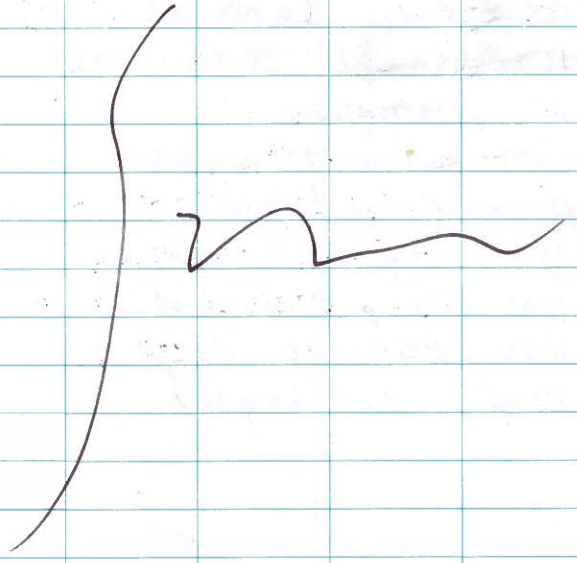
10/28/20

0730 arrived Onsite
0950 setup at 46mw06
805 Purge 46mw06
855 sample 46mw06 move to 46mw1
920 setup 46mw1
945 purge 46mw1
1025 sample 46mw1 move to 49mw01
1115 setup at 49mw01
1130 purge 49mw01
1210 sample 49mw01 move to 50mw02
1230 setup at 50mw02
1250 Purge 50mw02
1320 sample 50mw02 move to 49mw02
1400 setup 49mw02
1420 Purge 49mw02
1500 sample 49mw02
1600 Pump Purge water
1630 Process Samples
1700 Ship samples

Rite in the Rain

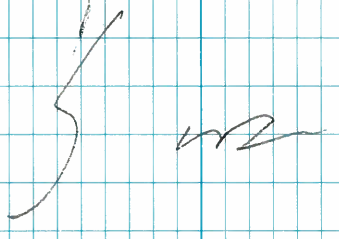
10/29/20

0730 arrived onsite
745 set-up 46 mw3
805 Purge 46 mw3
845 sample 46 mw3 now to 46mw2
910 setup 46 mw2
933 Purge 46 mw2
1015 Sample 46 mw2
1045 Dump Purge water
1200 process sample
1400 ship samples



11/25/21

0800 arrived possible
0835 at OBG for Permit (cell checks)
1000 Permit issued
1015 started sampling at OBG
1020 started 13mw5
1050 sample 13mw5
1100 started 13 mw4 Sin onsite
1150 sample 13 mw4
1200 started 13 mw3
1240 sample 13 mw3 Drip
1345 started 49mw02
* 1425 sample 49mw02 MSD/MS
1445 started 49mw05
1530 sample 49mw05
trip Blank full Bottle at Cooler
1600 Disposal of Purge water
1630 process samples
1730 ship samples Done fieldwork
1900 Fe/Mn Realized

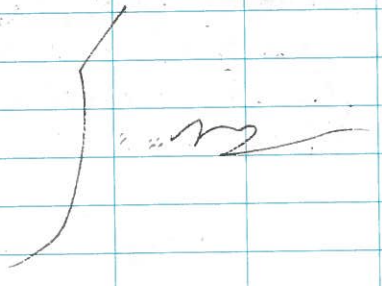


* 13mw2

Rite in the Rain.

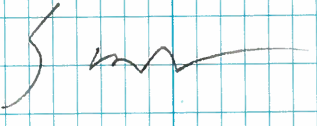
1/26/24

0800 arrive onsite prep 54
col check
0900 start sampling 54 mw13
1005 sample 54 mw13 DUP
collect secondary to get
to 54 mw10
1100 start sampling 54 mw10
1150 sample 54 mw10
1200 start 54 mw12
1300 sample 54 mw12 ms/msd
1445 start 54 mw1
1525 sample 54 mw1
1600 Disposal of purge water
1630 sample processing
1730 ship samples DOT field work
1900 FE/mn analysis



1/27/24

0745 arrive onsite
col check
0800 start sampling 48 mw07
0840 sample 49 mw07
0850 start sampling 48 mw06 S. in onsite
1035 sample 48 mw06
1045 start sampling 49 mw03
1130 sample 49 mw03
1140 start sampling 49 mw02 ? check first DUP
1240 sample 49 mw02
1255 start sampling 48 mw3
1345 sample 48 mw3 DUP
1400 start sampling mw02
1455 sample 48 mw02
1600 Rinsate Blank
Trip Blank
1630 took purge water for disposal
1900 Process samples
1800 ship samples DOT field work
1930 Fe/mn analysis



Rite in the Rain

1/24/24

1000 Arrival onsite Gate start
one to show
Cal check

1030 start 46 mw2 5:N onsite

1115 sampled 46 mw2

1430 start 49 mw01

1250 sampled 49 mw01

1330 start 46 mw1

1405 sampled 46 mw1

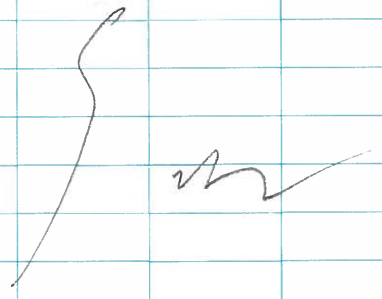
1500 Trip Blank

1530 Disposal of Purge water
sample Purge water

1600 Process samples

1700 Stopped samples
Done field work

1906 Fe Mn analysis



Rite in the Rain

APPENDIX B-1
LABORATORY ANALYTICAL REPORTS

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ANALYTICAL RESULTS FOR:

ANTHONY PACE
WESTON SOLUTIONS, INC.
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

PROJECT SITE:	RFAAP SWMU-49; RADFORD, VA
DOD CONTRACT #:	
PROJECT #:	
SDG:	***157538***
FOLDERS:	157538, 157621, 157624
PREPARED:	December 2, 2020
TOTAL # OF PAGES:	1444

The data contained in the following report have been reviewed by the appropriate CT Laboratories' LLC staff members. In addition, CT Laboratories LLC certifies that to the best of our knowledge that the analyses reported herein are true, complete and correct within the limits of the methods employed and that they follow the applicable requirements as specified by the project plan, state-specific, NELAC or DOD QSM requirements. The estimated uncertainty of measurement is only available upon request. The reported results relate only to the tested samples. This report shall not be reproduced, except in full, without written approval of CT Laboratories LLC.

APPROVED BY: Brett Szymanski
PROJECT MANAGER

Certifications: IL (NELAP 200073), KS (NELAP E-10368), WI (157066030), DOD ELAP (A2LA 3806.01), VA (NELAP 4602038), MD (WI 00061), LA (NELAP ACC20160002), ISO17025 (A2LA 3806.01), GA EDP Stipulation (Accreditor: LA NELAP, ACC#: ACC20160002, Scope: Non-potable water solid and chemical materials, biological tissue, Effective: 12/10/2014, Expires: annually)

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Case Narrative

Client: Weston Solutions
Project: RFAAP SWMU-49, Radford, VA
Sample Receipt Dates: 10/28/2020 & 10/30/2020
SDG #: *157538* (Folder #'s 157538, 157621, & 157624)

Fifteen water samples were received and analyzed for a variety of parameters, including: VOCs, Dissolved Gases, Metals, pH, COD, Anions, and TOC. Three Trip Blanks were included with the VOCs. The assigned sample ID number, date sampled, and date received are indicated in the attached Project Summary. The samples were received intact and at a temperature within method specified acceptance limits. A breakdown of sample receipt information can be found on the Sample Condition Report located in the last section of the data package and any exceptions are noted below. The analyses were performed following DOD QSM 5.3 requirements.

Manual integrations may have been performed on the data provided with this package. If manual integrations were performed, a Reason #(s) was included on the raw data that corresponds to the "Index Key for Manual Integration Rationale." The raw data includes a "Before" and "After" manual integration illustration. The manual integrations were initialed and dated by the analyst, as well as, by the person reviewing the data.

Sample Analysis and Quality Control

Volatile Analysis:

The samples were analyzed using US EPA Methods 8260C (VOC) and RSK-175 (Dissolved Gases). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Surrogate Recovery Data
Matrix Spike/Matrix Spike Duplicate Recovery Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log
Chromatograms

All analysis results met the method specified quality control criteria with the following exceptions:

Detailed reports were provided for the 8260 data for all detected compounds, as well as, for those compounds manually integrated (if applicable). Compounds not reported on the form 1's were either not detected or did not meet identification criteria so they were reported as non-detects.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

VOC (8260C) Water Analysis

Analytical Run # 176563

CCV1 (analyzed 11/06/2020 @ 22:41 on VMS4) had a low recovery outside of specified criteria for 1,4-dioxane. This compound was qualified with a "Z" flag in the associated samples.

The Relative Percent Difference (RPD) limits between the Laboratory Control Sample (LCS) and the Laboratory Control Sample Duplicate (LCSD) were exceeded for 1,2,4-trichlorobenzene and 1,4-dioxane. These compounds were qualified with a "Y" flag in the associated samples.

Analytical Run # 176659

CCV1 (analyzed 11/09/2020 @ 07:48 on VMS4) had a high recovery outside of specified criteria for bromomethane. This compound was qualified with a "Z" flag in the associated samples.

CCVF1 (analyzed 11/09/2020 @ 14:46 on VMS4) had a low recovery outside of specified criteria for bromomethane. This compound was qualified with a "Z" flag in the associated samples.

CCV2 (analyzed 11/09/2020 @ 15:27 on VMS4) had a low recovery outside of specified criteria for bromomethane. This compound was qualified with a "Z" flag in the associated sample.

The Matrix Spike (MS) and/or the Matrix Spike Duplicate (MSD) for sample # 496500 had high recoveries for 1,1-dichloroethane, 1,1-dichloroethene, 1,1,2-trichloro-1,2,2-trifluoroethane, 1,2-dichloropropane, benzene, carbon disulfide, chloromethane, cyclohexane, methylcyclohexane, trans-1,2-dichloroethene, vinyl chloride. The parent sample results for these compounds were qualified with an "M" flag.

Dissolved Gases (RSK-175) Analysis

Analytical Run # 176737

All analytical results for this run met the method/project specified quality control criteria.

Metals Analysis:

The samples were analyzed using US EPA Methods 6010C (ICP) and 7470A (Hg). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Initial and Continuing Calibration Verification
Blanks Summary
ICP Interference Check Data
Spike Sample Recovery
Duplicates Data
Laboratory Control Sample Data
Analysis Run Log

All analysis results met the method specified quality control criteria with the following exceptions:

ICP Metals (6010C) Water Analysis

Continuing Calibration Verification (CCV) standards were analyzed at two levels (CCV1 & CCV2) with potentially differing wavelengths. Data associated with CCV's were evaluated based on the concentration of the element in the samples and compared to the appropriate CCV level/wavelength.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Analytical Run # 176769

The MS and MSD for sample # 496544 had recoveries outside of acceptable limits for aluminum and iron. A Serial Dilution (L) was analyzed and was not applicable for aluminum and iron because the parent sample raw results were less than 50 times the Limit of Quantitation (LOQ). A Post Digestion Spike (PDS) was analyzed and was acceptable. The parent sample was reported and not qualified.

The Duplicate (DUP) for sample # 496544 was not applicable for antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc because the parent sample results were less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

ICP Sodium & Potassium (6010C) Water Analysis

Analytical Run # 176770

All analytical results for this run met the method/project specified quality control criteria.

CVAA Mercury (7470A) Water Analysis

Analytical Run # 176863

The sample QC was performed on a sample from SDG # 157537.

All analytical results for this run met the method/project specified quality control criteria.

Inorganic Analysis:

The samples were analyzed using US EPA Methods 9060A (TOC), 9040C (pH), 410.4 (COD) and 9056A (Anions). All samples were analyzed within the holding time unless noted below. The following summaries of quality control procedures are included:

Duplicate Analysis Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Anions (9056A) Water Analysis

Analytical Run # 176516

The MS and/or the MSD for sample # 495142 had a low recovery for chloride and sulfate. The parent sample results for these analytes were qualified with an “M” flag.

Analytical Run # 176633

Sample #'s 496500 and 496501 were analyzed past the 48-hour hold time for nitrate due to a FedEx shipping delay. The nitrate results for these samples were qualified with an "H" flag.

The MS and the MSD for sample # 496500 had a low recovery for sulfate. The parent sample result for this analyte was qualified with an "M" flag.

Analytical Run # 176644

The MS for sample # 496543 had a low recovery for chloride. The parent sample result for this analyte was qualified with an "M" flag.

COD (410.4) Water Analysis

Analytical Run # 176665

The MS and the MSD for sample # 496544 had a low recovery. The parent sample result for this analyte was qualified with an "M" flag.

pH (9040C) Water Analysis

Analytical Run # 176643

All analytical results for this run met the method/project specified quality control criteria.

TOC (9060A) Water Analysis

Analytical Run # 176903

The MS/MSD analysis for this run was performed on a sample from a different SDG (SDG # 157537).

Analytical Run # 176996

All analytical results for this run met the method/project specified quality control criteria.

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Data Qualifiers

Code	Description
A	Analyte averaged calibration criteria within acceptable limits.
B	Analyte detected in associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was not above the detection level.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Calibration criteria exceeded.

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MANUAL INTEGRATION REASON CODES

CTLaboratories has identified four general cases with valid reasons supporting the use of manual integration techniques. These codes are used on chromatograms in this data package to document the reasons for manual integrations per CTLaboratories' SOP SS-10 current revision.

#1: **Data system failed to select the correct peak or missed the peak entirely.**
In some cases the chromatography system selects and integrates the "wrong peak". In this case the analyst must correct the selection and force the system to integrate the proper peak. In other instances the system may miss the peak completely. In this case the analyst manually integrated the peak

#2: **Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.**
This phenomenon is common at low concentrations where the signal to noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low or high area counts for the target compound.

#3: Improperly Integrated Isomers and/or coeluting compounds.
For when the system fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations may be inaccurate, and they must be corrected by manual integration. Prime examples are compounds that are unresolved and integrated improperly when present at low concentrations in standards or samples.

#4: System Established Incorrect Baseline.
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and may be corrected via manual procedures.

#5: Miscellaneous.
Some situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the group supervisor. If the form of manual integration is not clearly covered by these four cases, then review and approval by the group supervisor or the *QA/QC* Supervisor will be required.

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1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

Sample Delivery Group

157538

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMU-49
Project #:

	CT Sample #	Folder #	Client Sample #	Sample Description	Matrix	Date Sampled	Date Received
1	495136	157538		TRIP BLANK	TRIP BLANK	10/27/2020	10/28/2020
2	495137	157538		13MW4	GROUND WATER	10/27/2020	10/28/2020
3	495139	157538		13MW3	GROUND WATER	10/27/2020	10/28/2020
4	495140	157538		13TW3	GROUND WATER	10/27/2020	10/28/2020
5	495141	157538		49MW04	GROUND WATER	10/27/2020	10/28/2020
6	495142	157538		13MW2	GROUND WATER	10/27/2020	10/28/2020
7	496500	157621		48MW06	GROUND WATER	10/28/2020	10/30/2020
8	496501	157621		48MW1	GROUND WATER	10/28/2020	10/30/2020
9	496502	157621		49MW01	GROUND WATER	10/28/2020	10/30/2020
10	496503	157621		50MW02	GROUND WATER	10/28/2020	10/30/2020
11	496504	157621		49TW02	GROUND WATER	10/28/2020	10/30/2020
12	496505	157621		TB-2	TRIP BLANK	10/28/2020	10/30/2020
13	496507	157621		49MW02	GROUND WATER	10/28/2020	10/30/2020
14	496508	157621		RNS-1	GROUND WATER	10/28/2020	10/30/2020
15	496542	157624		48MW2	GROUND WATER	10/29/2020	10/30/2020
16	496543	157624		48MW3	GROUND WATER	10/29/2020	10/30/2020
17	496544	157624		48/49-IDW	GROUND WATER	10/29/2020	10/30/2020
18	496545	157624		TB-3	TRIP BLANK	10/29/2020	10/30/2020

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www.ctlaboratories.com

QC Batch Cross Reference Summary

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

Project Name:	RADFORD AAP SWMU-49
Project #:	
Report Date:	12/02/2020
Date Received:	10/30/2020
SDG #:	157538

Inorganic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
496544	pH	EPA 9040C	GROUND WATER		176643

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
496544	COD QSM	EPA 410.4	GROUND WATER	78785	176665

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
495137	Anions QSM 5.0	EPA 9056A	GROUND WATER		176516
495139	Anions QSM 5.0	EPA 9056A	GROUND WATER		176516
495140	Anions QSM 5.0	EPA 9056A	GROUND WATER		176516
495141	Anions QSM 5.0	EPA 9056A	GROUND WATER		176516
495142	Anions QSM 5.0	EPA 9056A	GROUND WATER		176516
496500	Anions QSM 5.0	EPA 9056A	GROUND WATER		176633
496501	Anions QSM 5.0	EPA 9056A	GROUND WATER		176633
496502	Anions QSM 5.0	EPA 9056A	GROUND WATER		176633
496503	Anions QSM 5.0	EPA 9056A	GROUND WATER		176633
496504	Anions QSM 5.0	EPA 9056A	GROUND WATER		176633
496507	Anions QSM 5.0	EPA 9056A	GROUND WATER		176633
496508	Anions QSM 5.0	EPA 9056A	GROUND WATER		176633
496542	Anions QSM 5.0	EPA 9056A	GROUND WATER		176644
496543	Anions QSM 5.0	EPA 9056A	GROUND WATER		176644
495139	Anions QSM 5.0	EPA 9056A	GROUND WATER		176516
495140	Anions QSM 5.0	EPA 9056A	GROUND WATER		176516
496500	Anions QSM 5.0	EPA 9056A	GROUND WATER		176633
496501	Anions QSM 5.0	EPA 9056A	GROUND WATER		176633

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
495137	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176903
495139	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176903
495140	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176903

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Project Name: RADFORD AAP SWMU-49
Project #:
SDG #: 157538

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
495141	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176903
495142	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176903
496500	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176996
496501	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176996
496502	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176996
496503	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176996
496504	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176996
496507	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176996
496508	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176996
496542	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176996
496543	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		176996

Metal Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
496544	Potassium, Total QSM 5.0	EPA 6010C	GROUND WATER	78777	176770

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
496544	Sodium, Total QSM 5.0	EPA 6010C	GROUND WATER	78777	176770

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
496544	ICP Metals, Total QSM 5.0	EPA 6010C	GROUND WATER	78777	176769

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
496544	Mercury, Total QSM	EPA 7470A	GROUND WATER	78793	176863

Organic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
495136	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		176563
495137	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176563
495139	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176563
495140	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176563
495141	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176563
495142	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176563
496500	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176659
496501	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176659
496502	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176659
496503	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176659

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Project Name: RADFORD AAP SWMU-49
Project #:
SDG #: 157538

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
496504	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176659
496505	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		176659
496507	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176659
496508	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176659
496542	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176659
496543	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176659
496545	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		176659
496543	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		176659

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
495137	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
495139	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
495140	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
495141	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
495142	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
496500	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
496501	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
496502	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
496503	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
496504	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
496507	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
496508	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
496542	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737
496543	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	78814	176737

VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL SUMMARY
DOCUMENTS

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495142
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 04:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U Y	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Y,Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495142
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 04:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495142
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 04:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	495142
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:11	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495139
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U Y	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Y,Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495139
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	7.5		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.75	J	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495139
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.4		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	495139
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495137
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 02:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U Y	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Y,Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495137
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 02:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495137
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 02:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.0		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	495137
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 19:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495140
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U Y	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Y,Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495140
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	7.6		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.71	J	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495140
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.4		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	495140
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:04	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496500
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 10:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.42	J	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	2.9	M	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U M	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U M	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U M	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U M	0.60	2.0	4.0	4.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496500
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 10:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U M	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	3.8		0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U M	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U M	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U M	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U M	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496500
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 10:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	3.0		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U M	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496500
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496501
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 11:19	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.87	J	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496501
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 11:19	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.96	J	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496501
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 11:19	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	2.2		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496501
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:24	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496542
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 14:16	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496542
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 14:16	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	35		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	3.7		0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496542
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 14:16	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	3.2		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496542
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 21:06	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496543
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	5.00
Date & Time Analyzed:	11/10/2020 / 11:39	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	79		1.5	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496543
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 17:26	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	1.0		0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496543
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 17:26	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	15		0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0
79-01-6	Trichloroethene	16		0.30	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496543
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 17:26	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496543
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 21:09	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496502
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 11:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496502
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 11:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	2.8		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496502
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 11:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496502
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496507
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 13:17	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496507
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 13:17	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496507
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 13:17	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496507
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	3.9		0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495141
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U Y	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Y,Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495141
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.56	J	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495141
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	495141
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:07	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

49TW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496504
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 12:48	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49TW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496504
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 12:48	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49TW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496504
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 12:48	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49TW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496504
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:36	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	1.1		0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496503
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 12:18	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496503
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 12:18	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.2		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.42	J	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496503
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 12:18	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.5		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496503
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:33	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

RNS-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496508
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 13:47	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

RNS-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496508
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 13:47	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.95	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

RNS-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496508
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 13:47	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

RNS-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496508
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 21:02	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496505
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 09:21	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496505
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 09:21	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496505
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 09:21	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496545
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 09:50	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496545
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 09:50	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496545
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 09:50	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TRIP BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495136
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 00:08	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U Y	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Y	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TRIP BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495136
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 00:08	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TRIP BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495136
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 00:08	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	498361
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
74-84-0	Ethane	11/03/2020	19:51	0.4	U	0.4	0.8	***0.4***
74-85-1	Ethene	11/03/2020	19:51	0.5	U	0.5	1.1	***0.6***
74-82-8	Methane	11/03/2020	19:51	0.3	U	0.3	0.7	***0.4***

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1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	500932
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	176563	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	11/06/2020	23:39	0.38	U	0.38	1.0	***0.50***
79-34-5	1,1,2,2-Tetrachloroethane	11/06/2020	23:39	0.36	U	0.36	1.0	***0.5***
79-00-5	1,1,2-Trichloroethane	11/06/2020	23:39	0.27	U	0.27	1.0	***0.50***
75-34-3	1,1-Dichloroethane	11/06/2020	23:39	0.28	U	0.28	1.0	***0.50***
75-35-4	1,1-Dichloroethene	11/06/2020	23:39	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	11/06/2020	23:39	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	11/06/2020	23:39	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	11/06/2020	23:39	0.50	U	0.50	2.0	***1.0***
106-93-4	1,2-Dibromoethane	11/06/2020	23:39	0.33	U	0.33	1.0	***0.50***
95-50-1	1,2-Dichlorobenzene	11/06/2020	23:39	0.35	U	0.35	1.0	***0.50***
107-06-2	1,2-Dichloroethane	11/06/2020	23:39	0.69	U	0.69	2.0	***1.0***
78-87-5	1,2-Dichloropropane	11/06/2020	23:39	0.37	U	0.37	1.0	***0.50***
541-73-1	1,3-Dichlorobenzene	11/06/2020	23:39	0.30	U	0.30	1.0	***0.50***
123-91-1	1,4-Dioxane	11/06/2020	23:39	34	U	34	100	***50***
78-93-3	2-Butanone	11/06/2020	23:39	2.9	U	2.9	10	***5.0***
591-78-6	2-Hexanone	11/06/2020	23:39	3.3	U	3.3	10	***5.0***
108-10-1	4-Methyl-2-pentanone	11/06/2020	23:39	3.7	U	3.7	10	***5.0***
67-64-1	Acetone	11/06/2020	23:39	4.1	U	4.1	20	***10***
71-43-2	Benzene	11/06/2020	23:39	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	11/06/2020	23:39	0.26	U	0.26	1.0	***0.50***
75-27-4	Bromodichloromethane	11/06/2020	23:39	0.29	U	0.29	1.0	***0.50***
75-25-2	Bromoform	11/06/2020	23:39	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	11/06/2020	23:39	0.49	U	0.49	2.0	***1.0***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	500932
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	176563	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
75-15-0	Carbon disulfide	11/06/2020	23:39	0.83	U	0.83	4.0	***2.0***
56-23-5	Carbon tetrachloride	11/06/2020	23:39	0.37	U	0.37	1.0	***0.50***
108-90-7	Chlorobenzene	11/06/2020	23:39	0.37	U	0.37	1.0	***0.50***
75-00-3	Chloroethane	11/06/2020	23:39	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	11/06/2020	23:39	0.46	U	0.46	1.0	***0.50***
74-87-3	Chloromethane	11/06/2020	23:39	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	11/06/2020	23:39	0.41	U	0.41	1.0	***0.50***
10061-01-5	cis-1,3-Dichloropropene	11/06/2020	23:39	0.34	U	0.34	1.0	***0.50***
110-82-7	Cyclohexane	11/06/2020	23:39	0.71	U	0.71	2.0	***1.0***
124-48-1	Dibromochloromethane	11/06/2020	23:39	0.35	U	0.35	1.0	***0.50***
75-71-8	Dichlorodifluoromethane	11/06/2020	23:39	0.63	U	0.63	2.0	***1.0***
100-41-4	Ethylbenzene	11/06/2020	23:39	0.42	U	0.42	1.0	***0.50***
76-13-1	Freon 113	11/06/2020	23:39	1.5	U	1.5	4.0	***2.0***
98-82-8	Isopropylbenzene	11/06/2020	23:39	0.39	U	0.39	1.0	***0.50***
179601-23-1	m & p-Xylene	11/06/2020	23:39	0.74	U	0.74	2.0	***1.0***
79-20-9	Methyl Acetate	11/06/2020	23:39	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	11/06/2020	23:39	0.28	U	0.28	1.0	***0.50***
108-87-2	Methylcyclohexane	11/06/2020	23:39	0.78	U	0.78	2.0	***1.0***
75-09-2	Methylene chloride	11/06/2020	23:39	1.2	U	1.2	4.0	***2.0***
95-47-6	o-Xylene	11/06/2020	23:39	0.72	U	0.72	2.0	***1.0***
100-42-5	Styrene	11/06/2020	23:39	0.33	U	0.33	1.0	***0.50***
127-18-4	Tetrachloroethene	11/06/2020	23:39	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	11/06/2020	23:39	0.27	U	0.27	1.0	***0.50***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	500932
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	176563	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
156-60-5	trans-1,2-Dichloroethene	11/06/2020	23:39	0.35	U	0.35	1.0	***0.50***
10061-02-6	trans-1,3-Dichloropropene	11/06/2020	23:39	0.56	U	0.56	2.0	***1.0***
79-01-6	Trichloroethene	11/06/2020	23:39	0.39	U	0.39	1.0	***0.50***
75-69-4	Trichlorofluoromethane	11/06/2020	23:39	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	11/06/2020	23:39	0.14	U	0.14	0.60	***0.30***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	501830
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	176659	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	11/09/2020	16:26	0.38	U	0.38	1.0	***0.50***
79-34-5	1,1,2,2-Tetrachloroethane	11/09/2020	16:26	0.36	U	0.36	1.0	***0.50***
79-00-5	1,1,2-Trichloroethane	11/09/2020	16:26	0.27	U	0.27	1.0	***0.50***
75-34-3	1,1-Dichloroethane	11/09/2020	16:26	0.28	U	0.28	1.0	***0.50***
75-35-4	1,1-Dichloroethene	11/09/2020	16:26	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	11/09/2020	16:26	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	11/09/2020	16:26	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	11/09/2020	16:26	0.50	U	0.50	2.0	***1.0***
106-93-4	1,2-Dibromoethane	11/09/2020	16:26	0.33	U	0.33	1.0	***0.5***
95-50-1	1,2-Dichlorobenzene	11/09/2020	16:26	0.35	U	0.35	1.0	***0.50***
107-06-2	1,2-Dichloroethane	11/09/2020	16:26	0.69	U	0.69	2.0	***1.0***
78-87-5	1,2-Dichloropropane	11/09/2020	16:26	0.37	U	0.37	1.0	***0.50***
541-73-1	1,3-Dichlorobenzene	11/09/2020	16:26	0.30	U	0.30	1.0	***0.50***
78-93-3	2-Butanone	11/09/2020	16:26	2.9	U	2.9	10	***5.0***
591-78-6	2-Hexanone	11/09/2020	16:26	3.3	U	3.3	10	***5.0***
108-10-1	4-Methyl-2-pentanone	11/09/2020	16:26	3.7	U	3.7	10	***5.0***
67-64-1	Acetone	11/09/2020	16:26	4.1	U	4.1	20	***10***
71-43-2	Benzene	11/09/2020	16:26	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	11/09/2020	16:26	0.26	U	0.26	1.0	***0.50***
75-27-4	Bromodichloromethane	11/09/2020	16:26	0.29	U	0.29	1.0	***0.50***
75-25-2	Bromoform	11/09/2020	16:26	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	11/09/2020	16:26	0.49	U	0.49	2.0	***1.0***
75-15-0	Carbon disulfide	11/09/2020	16:26	0.83	U	0.83	4.0	***2.0***

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	501830
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	176659	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
56-23-5	Carbon tetrachloride	11/09/2020	16:26	0.37	U	0.37	1.0	***0.50***
108-90-7	Chlorobenzene	11/09/2020	16:26	0.37	U	0.37	1.0	***0.50***
75-00-3	Chloroethane	11/09/2020	16:26	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	11/09/2020	16:26	0.46	U	0.46	1.0	***0.50***
74-87-3	Chloromethane	11/09/2020	16:26	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	11/09/2020	16:26	0.41	U	0.41	1.0	***0.50***
10061-01-5	cis-1,3-Dichloropropene	11/09/2020	16:26	0.34	U	0.34	1.0	***0.50***
110-82-7	Cyclohexane	11/09/2020	16:26	0.71	U	0.71	2.0	***1.0***
124-48-1	Dibromochloromethane	11/09/2020	16:26	0.35	U	0.35	1.0	***0.50***
75-71-8	Dichlorodifluoromethane	11/09/2020	16:26	0.63	U	0.63	2.0	***1.0***
100-41-4	Ethylbenzene	11/09/2020	16:26	0.42	U	0.42	1.0	***0.50***
76-13-1	Freon 113	11/09/2020	16:26	1.5	U	1.5	4.0	***2.0***
98-82-8	Isopropylbenzene	11/09/2020	16:26	0.39	U	0.39	1.0	***0.50***
179601-23-1	m & p-Xylene	11/09/2020	16:26	0.74	U	0.74	2.0	***1.0***
79-20-9	Methyl Acetate	11/09/2020	16:26	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	11/09/2020	16:26	0.28	U	0.28	1.0	***0.50***
75-09-2	Methylene chloride	11/09/2020	16:26	1.2	U	1.2	4.0	***2.0***
95-47-6	o-Xylene	11/09/2020	16:26	0.72	U	0.72	2.0	***1.0***
100-42-5	Styrene	11/09/2020	16:26	0.33	U	0.33	1.0	***0.50***
127-18-4	Tetrachloroethene	11/09/2020	16:26	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	11/09/2020	16:26	0.27	U	0.27	1.0	***0.50***
156-60-5	trans-1,2-Dichloroethene	11/09/2020	16:26	0.35	U	0.35	1.0	***0.50***
10061-02-6	trans-1,3-Dichloropropene	11/09/2020	16:26	0.56	U	0.56	2.0	***1.0***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	501830
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	176659	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
79-01-6	Trichloroethene	11/09/2020	16:26	0.39	U	0.39	1.0	***0.50***
75-69-4	Trichlorofluoromethane	11/09/2020	16:26	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	11/09/2020	16:26	0.14	U	0.14	0.60	***0.30***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	502132
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	176659	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	11/10/2020	09:10	0.38	U	0.38	1.0	***0.50***
79-34-5	1,1,2,2-Tetrachloroethane	11/10/2020	09:10	0.36	U	0.36	1.0	***0.50***
79-00-5	1,1,2-Trichloroethane	11/10/2020	09:10	0.27	U	0.27	1.0	***0.50***
75-34-3	1,1-Dichloroethane	11/10/2020	09:10	0.28	U	0.28	1.0	***0.50***
75-35-4	1,1-Dichloroethene	11/10/2020	09:10	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	11/10/2020	09:10	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	11/10/2020	09:10	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	11/10/2020	09:10	0.50	U	0.50	2.0	***1.0***
106-93-4	1,2-Dibromoethane	11/10/2020	09:10	0.33	U	0.33	1.0	***0.5***
95-50-1	1,2-Dichlorobenzene	11/10/2020	09:10	0.35	U	0.35	1.0	***0.50***
107-06-2	1,2-Dichloroethane	11/10/2020	09:10	0.69	U	0.69	2.0	***1.0***
78-87-5	1,2-Dichloropropane	11/10/2020	09:10	0.37	U	0.37	1.0	***0.50***
541-73-1	1,3-Dichlorobenzene	11/10/2020	09:10	0.30	U	0.30	1.0	***0.50***
78-93-3	2-Butanone	11/10/2020	09:10	2.9	U	2.9	10	***5.0***
591-78-6	2-Hexanone	11/10/2020	09:10	3.3	U	3.3	10	***5.0***
108-10-1	4-Methyl-2-pentanone	11/10/2020	09:10	3.7	U	3.7	10	***5.0***
67-64-1	Acetone	11/10/2020	09:10	4.1	U	4.1	20	***10***
71-43-2	Benzene	11/10/2020	09:10	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	11/10/2020	09:10	0.26	U	0.26	1.0	***0.50***
75-27-4	Bromodichloromethane	11/10/2020	09:10	0.29	U	0.29	1.0	***0.50***
75-25-2	Bromoform	11/10/2020	09:10	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	11/10/2020	09:10	0.49	U	0.49	2.0	***1.0***
75-15-0	Carbon disulfide	11/10/2020	09:10	0.83	U	0.83	4.0	***2.0***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	502132
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	176659	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
56-23-5	Carbon tetrachloride	11/10/2020	09:10	0.37	U	0.37	1.0	***0.50***
108-90-7	Chlorobenzene	11/10/2020	09:10	0.37	U	0.37	1.0	***0.50***
75-00-3	Chloroethane	11/10/2020	09:10	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	11/10/2020	09:10	0.46	U	0.46	1.0	***0.50***
74-87-3	Chloromethane	11/10/2020	09:10	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	11/10/2020	09:10	0.41	U	0.41	1.0	***0.50***
10061-01-5	cis-1,3-Dichloropropene	11/10/2020	09:10	0.34	U	0.34	1.0	***0.50***
110-82-7	Cyclohexane	11/10/2020	09:10	0.71	U	0.71	2.0	***1.0***
124-48-1	Dibromochloromethane	11/10/2020	09:10	0.35	U	0.35	1.0	***0.50***
75-71-8	Dichlorodifluoromethane	11/10/2020	09:10	0.63	U	0.63	2.0	***1.0***
100-41-4	Ethylbenzene	11/10/2020	09:10	0.42	U	0.42	1.0	***0.50***
76-13-1	Freon 113	11/10/2020	09:10	1.5	U	1.5	4.0	***2.0***
98-82-8	Isopropylbenzene	11/10/2020	09:10	0.39	U	0.39	1.0	***0.50***
179601-23-1	m & p-Xylene	11/10/2020	09:10	0.74	U	0.74	2.0	***1.0***
79-20-9	Methyl Acetate	11/10/2020	09:10	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	11/10/2020	09:10	0.28	U	0.28	1.0	***0.50***
75-09-2	Methylene chloride	11/10/2020	09:10	1.2	U	1.2	4.0	***2.0***
95-47-6	o-Xylene	11/10/2020	09:10	0.72	U	0.72	2.0	***1.0***
100-42-5	Styrene	11/10/2020	09:10	0.33	U	0.33	1.0	***0.50***
127-18-4	Tetrachloroethene	11/10/2020	09:10	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	11/10/2020	09:10	0.27	U	0.27	1.0	***0.50***
156-60-5	trans-1,2-Dichloroethene	11/10/2020	09:10	0.35	U	0.35	1.0	***0.50***
10061-02-6	trans-1,3-Dichloropropene	11/10/2020	09:10	0.56	U	0.56	2.0	***1.0***

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	502132
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	176659	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
79-01-6	Trichloroethene	11/10/2020	09:10	0.39	U	0.39	1.0	***0.50***
75-69-4	Trichlorofluoromethane	11/10/2020	09:10	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	11/10/2020	09:10	0.14	U	0.14	0.60	***0.30***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	502225
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	176659	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	11/09/2020	08:17	0.38	U	0.38	1.0	***0.50***
79-34-5	1,1,2,2-Tetrachloroethane	11/09/2020	08:17	0.36	U	0.36	1.0	***0.5***
79-00-5	1,1,2-Trichloroethane	11/09/2020	08:17	0.27	U	0.27	1.0	***0.50***
75-34-3	1,1-Dichloroethane	11/09/2020	08:17	0.28	U	0.28	1.0	***0.50***
75-35-4	1,1-Dichloroethene	11/09/2020	08:17	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	11/09/2020	08:17	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	11/09/2020	08:17	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	11/09/2020	08:17	0.50	U	0.50	2.0	***1.0***
106-93-4	1,2-Dibromoethane	11/09/2020	08:17	0.33	U	0.33	1.0	***0.50***
95-50-1	1,2-Dichlorobenzene	11/09/2020	08:17	0.35	U	0.35	1.0	***0.50***
107-06-2	1,2-Dichloroethane	11/09/2020	08:17	0.69	U	0.69	2.0	***1.0***
78-87-5	1,2-Dichloropropane	11/09/2020	08:17	0.37	U	0.37	1.0	***0.50***
541-73-1	1,3-Dichlorobenzene	11/09/2020	08:17	0.30	U	0.30	1.0	***0.50***
123-91-1	1,4-Dioxane	11/09/2020	08:17	34	U	34	100	***50***
78-93-3	2-Butanone	11/09/2020	08:17	2.9	U	2.9	10	***5.0***
591-78-6	2-Hexanone	11/09/2020	08:17	3.3	U	3.3	10	***5.0***
108-10-1	4-Methyl-2-pentanone	11/09/2020	08:17	3.7	U	3.7	10	***5.0***
67-64-1	Acetone	11/09/2020	08:17	4.1	U	4.1	20	***10***
71-43-2	Benzene	11/09/2020	08:17	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	11/09/2020	08:17	0.26	U	0.26	1.0	***0.50***
75-27-4	Bromodichloromethane	11/09/2020	08:17	0.29	U	0.29	1.0	***0.50***
75-25-2	Bromoform	11/09/2020	08:17	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	11/09/2020	08:17	0.49	U	0.49	2.0	***1.0***

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	502225
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	176659	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
75-15-0	Carbon disulfide	11/09/2020	08:17	0.83	U	0.83	4.0	***2.0***
56-23-5	Carbon tetrachloride	11/09/2020	08:17	0.37	U	0.37	1.0	***0.50***
108-90-7	Chlorobenzene	11/09/2020	08:17	0.37	U	0.37	1.0	***0.50***
75-00-3	Chloroethane	11/09/2020	08:17	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	11/09/2020	08:17	0.46	U	0.46	1.0	***0.50***
74-87-3	Chloromethane	11/09/2020	08:17	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	11/09/2020	08:17	0.41	U	0.41	1.0	***0.50***
10061-01-5	cis-1,3-Dichloropropene	11/09/2020	08:17	0.34	U	0.34	1.0	***0.50***
110-82-7	Cyclohexane	11/09/2020	08:17	0.71	U	0.71	2.0	***1.0***
124-48-1	Dibromochloromethane	11/09/2020	08:17	0.35	U	0.35	1.0	***0.50***
75-71-8	Dichlorodifluoromethane	11/09/2020	08:17	0.63	U	0.63	2.0	***1.0***
100-41-4	Ethylbenzene	11/09/2020	08:17	0.42	U	0.42	1.0	***0.50***
76-13-1	Freon 113	11/09/2020	08:17	1.5	U	1.5	4.0	***2.0***
98-82-8	Isopropylbenzene	11/09/2020	08:17	0.39	U	0.39	1.0	***0.50***
179601-23-1	m & p-Xylene	11/09/2020	08:17	0.74	U	0.74	2.0	***1.0***
79-20-9	Methyl Acetate	11/09/2020	08:17	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	11/09/2020	08:17	0.28	U	0.28	1.0	***0.50***
108-87-2	Methylcyclohexane	11/09/2020	08:17	0.78	U	0.78	2.0	***1.0***
75-09-2	Methylene chloride	11/09/2020	08:17	1.2	U	1.2	4.0	***2.0***
95-47-6	o-Xylene	11/09/2020	08:17	0.72	U	0.72	2.0	***1.0***
100-42-5	Styrene	11/09/2020	08:17	0.33	U	0.33	1.0	***0.50***
127-18-4	Tetrachloroethene	11/09/2020	08:17	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	11/09/2020	08:17	0.27	U	0.27	1.0	***0.50***

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	502225
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	176659	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
156-60-5	trans-1,2-Dichloroethene	11/09/2020	08:17	0.35	U	0.35	1.0	***0.50***
10061-02-6	trans-1,3-Dichloropropene	11/09/2020	08:17	0.56	U	0.56	2.0	***1.0***
79-01-6	Trichloroethene	11/09/2020	08:17	0.39	U	0.39	1.0	***0.50***
75-69-4	Trichlorofluoromethane	11/09/2020	08:17	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	11/09/2020	08:17	0.14	U	0.14	0.60	***0.30***

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Analytical Method: EPA 8260C | SDG: 157538

Analytical Run #: 176563 | ICAL Calibration #: W110320.

CTLab #	495136				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	81	118	
Bromofluorobenzene	100	101	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	99	80	119	
CTLab #	**495137**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	105	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	102	80	119	
CTLab #	**495139**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	104	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	100	80	119	
CTLab #	**495140**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	102	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	101	80	119	
CTLab #	**495141**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	106	81	118	
Bromofluorobenzene	100	105	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	102	80	119	
CTLab #	**495142**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	96	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	102	80	119	

CT LABORATORIES
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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	157538
Analytical Run #:	176563	ICAL Calibration #:	W110320.

CTLab #	500932	Sample Type:	Method Blank		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	70	120	
Bromofluorobenzene	100	102	75	120	
d8-Toluene	100	101	85	120	
Dibromofluoromethane	100	100	85	115	

CTLab #	500938	Sample Type:	Lab Control Spike		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	105	85	114	
d8-Toluene	100	107	89	112	
Dibromofluoromethane	100	108	80	119	

CTLab #	500939	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	70	120	
Bromofluorobenzene	100	105	70	120	
d8-Toluene	100	107	85	120	
Dibromofluoromethane	100	108	85	115	

CTLab #	500943	Sample Type:	Lab Control Spike Duplicate		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	103	89	112	
Dibromofluoromethane	100	103	80	119	

CTLab #	500944	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	50	150	
Bromofluorobenzene	100	99.0	50	150	
d8-Toluene	100	103	50	150	
Dibromofluoromethane	100	103	50	150	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	157538
Analytical Run #:	176659	ICAL Calibration #:	W110320.

CTLab #	496500				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	98	80	119	

CTLab #	496501				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	105	89	112	
Dibromofluoromethane	100	99	80	119	

CTLab #	496502				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	106	85	114	
d8-Toluene	100	105	89	112	
Dibromofluoromethane	100	97	80	119	

CTLab #	496503				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	81	118	
Bromofluorobenzene	100	106	85	114	
d8-Toluene	100	99	89	112	
Dibromofluoromethane	100	95	80	119	

CTLab #	496504				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98	81	118	
Bromofluorobenzene	100	105	85	114	
d8-Toluene	100	99	89	112	
Dibromofluoromethane	100	94	80	119	

CTLab #	496505				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	103	81	118	
Bromofluorobenzene	100	108	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	97	80	119	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	157538
Analytical Run #:	176659	ICAL Calibration #:	W110320.

CTLab #	496507				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	105	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	99	80	119	
CTLab #	**496508**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	105	81	118	
Bromofluorobenzene	100	104	85	114	
d8-Toluene	100	106	89	112	
Dibromofluoromethane	100	102	80	119	
CTLab #	**496542**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	98	80	119	
CTLab #	**496543**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	104	81	118	
Bromofluorobenzene	100	111	85	114	
d8-Toluene	100	103	89	112	
Dibromofluoromethane	100	101	80	119	
CTLab #	**496545**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99	81	118	
Bromofluorobenzene	100	104	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	94	80	119	
CTLab #	**501415**	Sample Type:	Lab Control Spike		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	93.0	81	118	
Bromofluorobenzene	100	107	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	102	80	119	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	157538
Analytical Run #:	176659	ICAL Calibration #:	W110320.

CTLab #	501422	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	93.0	70	120	
Bromofluorobenzene	100	107	70	120	
d8-Toluene	100	102	85	120	
Dibromofluoromethane	100	102	85	115	

CTLab #	501793	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	103	50	150	
Bromofluorobenzene	100	105	50	150	
d8-Toluene	100	102	50	150	
Dibromofluoromethane	100	97.0	50	150	

CTLab #	501816	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	70	120	
Bromofluorobenzene	100	105	70	120	
d8-Toluene	100	101	85	120	
Dibromofluoromethane	100	97.0	85	115	

CTLab #	501825	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	96.0	50	150	
Bromofluorobenzene	100	105	50	150	
d8-Toluene	100	105	50	150	
Dibromofluoromethane	100	96.0	50	150	

CTLab #	501830	Sample Type:		Normal Field Sample	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	70	120	
Bromofluorobenzene	100	103	75	120	
d8-Toluene	100	103	85	120	
Dibromofluoromethane	100	100	85	115	

CTLab #	501854	Sample Type:		Matrix Spike	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	103	81	118	
Bromofluorobenzene	100	107	85	114	
d8-Toluene	100	104	89	112	
Dibromofluoromethane	100	97.0	80	119	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	157538
Analytical Run #:	176659	ICAL Calibration #:	W110320.

CTLab #	501859	Sample Type:	Matrix Spike Duplicate		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	105	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	98.0	80	119	

CTLab #	501864	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	70	120	
Bromofluorobenzene	100	106	70	120	
d8-Toluene	100	103	85	120	
Dibromofluoromethane	100	97.0	85	115	

CTLab #	502132	Sample Type:	Normal Field Sample		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	70	120	
Bromofluorobenzene	100	107	75	120	
d8-Toluene	100	102	85	120	
Dibromofluoromethane	100	100	85	115	

CTLab #	502225	Sample Type:	Method Blank		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	95.0	70	120	
Bromofluorobenzene	100	106	75	120	
d8-Toluene	100	98.0	85	120	
Dibromofluoromethane	100	102	85	115	

CTLab #	502334	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	50	150	
Bromofluorobenzene	100	107	50	150	
d8-Toluene	100	105	50	150	
Dibromofluoromethane	100	97.0	50	150	

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3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **48MW06**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: GROUND WATER
SDG No.: 157538
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 176659
Sample No.: 501854
Parent Sample No.: 496500
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W110320.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R	
1,1,1-Trichloroethane	11/10/2020	00:20	74-131	12.7	0.42	10.0	123	
1,1,2,2-Tetrachloroethane	11/10/2020	00:20	71-121	10.7	BDL	10.0	107	
1,1,2-Trichloroethane	11/10/2020	00:20	80-119	11.1	BDL	10.0	111	
1,1-Dichloroethane	11/10/2020	00:20	77-125	16.1	2.9	10.0	132	*FAIL*
1,1-Dichloroethene	11/10/2020	00:20	71-131	13.2	BDL	10.0	132	*FAIL*
1,2,3-Trichlorobenzene	11/10/2020	00:20	69-129	10.7	BDL	10.0	107	
1,2,4-Trichlorobenzene	11/10/2020	00:20	69-130	10.6	BDL	10.0	106	
1,2-Dibromo-3-chloropropane	11/10/2020	00:20	62-128	9.33	BDL	10.0	93	
1,2-Dibromoethane	11/10/2020	00:20	77-121	10.1	BDL	10.0	101	
1,2-Dichlorobenzene	11/10/2020	00:20	80-119	10.2	BDL	10.0	102	
1,2-Dichloroethane	11/10/2020	00:20	73-128	12.0	BDL	10.0	120	
1,2-Dichloropropane	11/10/2020	00:20	78-122	12.8	BDL	10.0	128	*FAIL*
1,3-Dichlorobenzene	11/10/2020	00:20	80-119	10.5	BDL	10.0	105	
1,4-Dioxane	11/10/2020	00:20	59-139	531	BDL	500	106	
2-Butanone	11/10/2020	00:20	56-143	114	BDL	100	114	
2-Hexanone	11/10/2020	00:20	57-139	114	BDL	100	114	
4-Methyl-2-pentanone	11/10/2020	00:20	67-130	124	BDL	100	124	
Acetone	11/10/2020	00:20	39-160	111	BDL	100	111	
Benzene	11/10/2020	00:20	79-120	12.7	BDL	10.0	127	*FAIL*
Bromochloromethane	11/10/2020	00:20	78-123	11.4	BDL	10.0	114	
Bromodichloromethane	11/10/2020	00:20	79-125	10.7	BDL	10.0	107	
Bromoform	11/10/2020	00:20	66-130	8.88	BDL	10.0	89	
Bromomethane	11/10/2020	00:20	53-141	5.51	BDL	10.0	55	
Carbon disulfide	11/10/2020	00:20	64-133	28.0	BDL	20.0	140	*FAIL*
Carbon tetrachloride	11/10/2020	00:20	72-136	12.0	BDL	10.0	120	
Chlorobenzene	11/10/2020	00:20	82-118	11.0	BDL	10.0	110	
Chloroethane	11/10/2020	00:20	60-138	12.4	BDL	10.0	124	
Chloroform	11/10/2020	00:20	79-124	11.9	BDL	10.0	119	
Chloromethane	11/10/2020	00:20	50-139	15.1	BDL	10.0	151	*FAIL*
cis-1,2-Dichloroethene	11/10/2020	00:20	78-123	15.1	3.8	10.0	113	
cis-1,3-Dichloropropene	11/10/2020	00:20	75-124	11.4	BDL	10.0	114	

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **48MW06**

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER | SDG No.: 157538

Analytical Method: EPA 8260C | Concentration Units: ug/L

Analytical Run #: 176659 | Sample No.: 501854 | Parent Sample No.: 496500

Analytical Prep Batch #: 0 | Analytical Preparation Date/Time:

ICAL Calibration #: W110320.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R	
Cyclohexane	11/10/2020	00:20	71-130	14.5	BDL	10.0	145	*FAIL*
Dibromochloromethane	11/10/2020	00:20	74-126	9.26	BDL	10.0	93	
Dichlorodifluoromethane	11/10/2020	00:20	32-152	14.7	BDL	10.0	147	
Ethylbenzene	11/10/2020	00:20	79-121	11.9	BDL	10.0	119	
Freon 113	11/10/2020	00:20	70-136	27.4	BDL	20.0	137	*FAIL*
Isopropylbenzene	11/10/2020	00:20	72-131	11.8	BDL	10.0	118	
m & p-Xylene	11/10/2020	00:20	80-121	22.9	BDL	20.0	114	
Methyl Acetate	11/10/2020	00:20	56-136	9.78	BDL	10.0	98	
Methyl tert-butyl ether	11/10/2020	00:20	71-124	11.8	BDL	10.0	118	
Methylcyclohexane	11/10/2020	00:20	72-132	14.1	BDL	10.0	141	*FAIL*
Methylene chloride	11/10/2020	00:20	74-124	10.1	BDL	10.0	101	
o-Xylene	11/10/2020	00:20	78-122	10.9	BDL	10.0	109	
Styrene	11/10/2020	00:20	78-123	10.7	BDL	10.0	107	
Tetrachloroethene	11/10/2020	00:20	74-129	12.4	BDL	10.0	124	
Toluene	11/10/2020	00:20	80-121	12.1	BDL	10.0	121	
trans-1,2-Dichloroethene	11/10/2020	00:20	75-124	12.6	BDL	10.0	126	*FAIL*
trans-1,3-Dichloropropene	11/10/2020	00:20	73-127	10.9	BDL	10.0	109	
Trichloroethene	11/10/2020	00:20	79-123	15.0	3.0	10.0	120	
Trichlorofluoromethane	11/10/2020	00:20	65-141	11.5	BDL	10.0	115	
Vinyl chloride	11/10/2020	00:20	58-137	15.5	BDL	10.0	155	*FAIL*

Spike Recovery: 11 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description

48MW06

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 157538

Analytical Method: Mod RSK 175 Concentration Units: ug/L

Analytical Run #: 176737 Sample No.: 498357 Parent Sample No.: 496500

Analytical Prep Batch #: 78814 Analytical Preparation Date/Time: 11/03/2020 18:40

ICAL Calibration #: P4DG121319

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Ethane	11/03/2020 20:17	74-131	4.06	BDL	4.54	89
Ethene	11/03/2020 20:17	72-133	5.87	BDL	6.36	92
Methane	11/03/2020 20:17	73-125	2.12	BDL	2.22	95

Spike Recovery: 0 out of 3 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

Sample Description: **48MW06**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: GROUND WATER
SDG No.: 157538
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 176659
Sample No.: 501859
Parent Sample No.: 501854
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W110320.

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)	
1,1,1-Trichloroethane	11/10/2020	00:50	12.5	10.0	121	2	74-131	20	
1,1,2,2-Tetrachloroethane	11/10/2020	00:50	10.7	10.0	107	0	71-121	20	
1,1,2-Trichloroethane	11/10/2020	00:50	10.7	10.0	107	4	80-119	20	
1,1-Dichloroethane	11/10/2020	00:50	16.1	10.0	132	0	77-125	20	*FAIL*
1,1-Dichloroethene	11/10/2020	00:50	12.6	10.0	126	5	71-131	20	
1,2,3-Trichlorobenzene	11/10/2020	00:50	10.5	10.0	105	2	69-129	20	
1,2,4-Trichlorobenzene	11/10/2020	00:50	10.7	10.0	107	1	69-130	20	
1,2-Dibromo-3-chloropropane	11/10/2020	00:50	9.76	10.0	98	5	62-128	20	
1,2-Dibromoethane	11/10/2020	00:50	9.76	10.0	98	3	77-121	20	
1,2-Dichlorobenzene	11/10/2020	00:50	10.1	10.0	101	1	80-119	20	
1,2-Dichloroethane	11/10/2020	00:50	11.7	10.0	117	3	73-128	20	
1,2-Dichloropropane	11/10/2020	00:50	12.3	10.0	123	4	78-122	20	*FAIL*
1,3-Dichlorobenzene	11/10/2020	00:50	10.0	10.0	100	5	80-119	20	
1,4-Dioxane	11/10/2020	00:50	540	500	108	2	59-139	20	
2-Butanone	11/10/2020	00:50	113	100	113	1	56-143	20	
2-Hexanone	11/10/2020	00:50	119	100	119	4	57-139	20	
4-Methyl-2-pentanone	11/10/2020	00:50	123	100	123	1	67-130	20	
Acetone	11/10/2020	00:50	111	100	111	0	39-160	20	
Benzene	11/10/2020	00:50	12.6	10.0	126	1	79-120	20	*FAIL*
Bromochloromethane	11/10/2020	00:50	10.9	10.0	109	4	78-123	20	
Bromodichloromethane	11/10/2020	00:50	10.6	10.0	106	1	79-125	20	
Bromoform	11/10/2020	00:50	8.67	10.0	87	2	66-130	20	
Bromomethane	11/10/2020	00:50	6.20	10.0	62	12	53-141	20	
Carbon disulfide	11/10/2020	00:50	27.5	20.0	138	2	64-133	20	*FAIL*
Carbon tetrachloride	11/10/2020	00:50	11.8	10.0	118	2	72-136	20	
Chlorobenzene	11/10/2020	00:50	10.8	10.0	108	1	82-118	20	
Chloroethane	11/10/2020	00:50	12.3	10.0	123	0	60-138	20	
Chloroform	11/10/2020	00:50	11.7	10.0	117	1	79-124	20	
Chloromethane	11/10/2020	00:50	13.6	10.0	136	10	50-139	20	
cis-1,2-Dichloroethene	11/10/2020	00:50	14.5	10.0	107	4	78-123	20	
cis-1,3-Dichloropropene	11/10/2020	00:50	11.2	10.0	112	2	75-124	20	

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

48MW06

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 157538

Analytical Method: EPA 8260C Concentration Units: ug/L

Analytical Run #: 176659 Sample No.: 501859 Parent Sample No.: 501854

Analytical Prep Batch #: 0 Analytical Preparation Date/Time:

ICAL Calibration #: W110320.

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)	
Cyclohexane	11/10/2020	00:50	14.5	10.0	145	0	71-130	20	*FAIL*
Dibromochloromethane	11/10/2020	00:50	9.17	10.0	92	1	74-126	20	
Dichlorodifluoromethane	11/10/2020	00:50	14.0	10.0	140	5	32-152	20	
Ethylbenzene	11/10/2020	00:50	11.8	10.0	118	1	79-121	20	
Freon 113	11/10/2020	00:50	26.4	20.0	132	4	70-136	20	
Isopropylbenzene	11/10/2020	00:50	11.5	10.0	115	3	72-131	20	
m & p-Xylene	11/10/2020	00:50	22.9	20.0	114	0	80-121	20	
Methyl Acetate	11/10/2020	00:50	10.3	10.0	103	5	56-136	20	
Methyl tert-butyl ether	11/10/2020	00:50	11.6	10.0	116	2	71-124	20	
Methylcyclohexane	11/10/2020	00:50	14.0	10.0	140	1	72-132	20	*FAIL*
Methylene chloride	11/10/2020	00:50	9.62	10.0	96	5	74-124	20	
o-Xylene	11/10/2020	00:50	10.9	10.0	109	1	78-122	20	
Styrene	11/10/2020	00:50	10.4	10.0	104	3	78-123	20	
Tetrachloroethene	11/10/2020	00:50	12.1	10.0	121	3	74-129	20	
Toluene	11/10/2020	00:50	11.5	10.0	115	5	80-121	20	
trans-1,2-Dichloroethene	11/10/2020	00:50	12.0	10.0	120	5	75-124	20	
trans-1,3-Dichloropropene	11/10/2020	00:50	10.7	10.0	107	2	73-127	20	
Trichloroethene	11/10/2020	00:50	14.4	10.0	114	4	79-123	20	
Trichlorofluoromethane	11/10/2020	00:50	11.4	10.0	114	1	65-141	20	
Vinyl chloride	11/10/2020	00:50	15.3	10.0	153	1	58-137	20	*FAIL*

RPD or Spike Recovery: 7 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

48MW06

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 157538

Analytical Method: Mod RSK 175 Concentration Units: ug/L

Analytical Run #: 176737 Sample No.: 498358 Parent Sample No.: 498357

Analytical Prep Batch #: 78814 Analytical Preparation Date/Time: 11/03/2020 18:40

ICAL Calibration #: P4DG121319

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)
Ethane	11/03/2020	20:21	4.24	4.54	93	4	74-131	30
Ethene	11/03/2020	20:21	6.27	6.36	99	7	72-133	30
Methane	11/03/2020	20:21	2.19	2.22	99	3	73-125	30

RPD or Spike Recovery: 0 out of 3 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Sample No.: 498362 SDG No.: 157538

Analytical Method: Mod RSK 175 Concentration Units: ug/L

Sample No.: 498362 Parent Sample No.: 0

Analytical Prep Batch #: 78814 Analytical Preparation Date/Time: 11/03/2020 18:40

Analytical Run #: 176737 ICAL Calibration #: P4DG121319

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Ethane	11/03/2020	19:15	74-131	4.80		4.54	106
Ethene	11/03/2020	19:15	72-133	6.85		6.36	108
Methane	11/03/2020	19:15	73-125	2.38		2.22	107

Spike Recovery: 0 out of 3 outside limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 500938
SDG No.: 157538
Analytical Method: EPA 8260C
Concentration Units: ug/L

Sample No.: 500938
Parent Sample No.: 0
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 176563
ICAL Calibration #: W110320.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1,1-Trichloroethane	11/06/2020	22:41	74-131	10.7		10.0	107
1,1,2,2-Tetrachloroethane	11/06/2020	22:41	71-121	10.7		10.0	107
1,1,2-Trichloroethane	11/06/2020	22:41	80-119	10.9		10.0	109
1,1-Dichloroethane	11/06/2020	22:41	77-125	10.3		10.0	103
1,1-Dichloroethene	11/06/2020	22:41	71-131	10.5		10.0	105
1,2,3-Trichlorobenzene	11/06/2020	22:41	69-129	11.1		10.0	111
1,2,4-Trichlorobenzene	11/06/2020	22:41	69-130	11.2		10.0	112
1,2-Dibromo-3-chloropropane	11/06/2020	22:41	62-128	9.62		10.0	96
1,2-Dibromoethane	11/06/2020	22:41	77-121	10.0		10.0	100
1,2-Dichlorobenzene	11/06/2020	22:41	80-119	10.4		10.0	104
1,2-Dichloroethane	11/06/2020	22:41	73-128	10.0		10.0	100
1,2-Dichloropropane	11/06/2020	22:41	78-122	10.8		10.0	108
1,3-Dichlorobenzene	11/06/2020	22:41	80-119	10.6		10.0	106
1,4-Dioxane	11/06/2020	22:41	59-139	318		500	64
2-Butanone	11/06/2020	22:41	56-143	101		100	101
2-Hexanone	11/06/2020	22:41	57-139	98.7		100	99
4-Methyl-2-pentanone	11/06/2020	22:41	67-130	111		100	111
Acetone	11/06/2020	22:41	39-160	88.9		100	89
Benzene	11/06/2020	22:41	79-120	10.9		10.0	109
Bromochloromethane	11/06/2020	22:41	78-123	10.8		10.0	108
Bromodichloromethane	11/06/2020	22:41	79-125	10.4		10.0	104
Bromoform	11/06/2020	22:41	66-130	8.37		10.0	84
Bromomethane	11/06/2020	22:41	53-141	11.6		10.0	116
Carbon disulfide	11/06/2020	22:41	64-133	21.4		20.0	107
Carbon tetrachloride	11/06/2020	22:41	72-136	11.1		10.0	111
Chlorobenzene	11/06/2020	22:41	82-118	10.1		10.0	101
Chloroethane	11/06/2020	22:41	60-138	9.72		10.0	97
Chloroform	11/06/2020	22:41	79-124	11.1		10.0	111

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

LCS

WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 500938
SDG No.: 157538
Analytical Method: EPA 8260C
Concentration Units: ug/L

Sample No.: 500938
Parent Sample No.: 0
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 176563
ICAL Calibration #: W110320.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Chloromethane	11/06/2020	22:41	50-139	8.90		10.0	89
cis-1,2-Dichloroethene	11/06/2020	22:41	78-123	10.1		10.0	101
cis-1,3-Dichloropropene	11/06/2020	22:41	75-124	10.7		10.0	107
Cyclohexane	11/06/2020	22:41	71-130	11.1		10.0	111
Dibromochloromethane	11/06/2020	22:41	74-126	8.95		10.0	90
Dichlorodifluoromethane	11/06/2020	22:41	32-152	8.11		10.0	81
Ethylbenzene	11/06/2020	22:41	79-121	10.6		10.0	106
Freon 113	11/06/2020	22:41	70-136	22.5		20.0	112
Isopropylbenzene	11/06/2020	22:41	72-131	10.6		10.0	106
m & p-Xylene	11/06/2020	22:41	80-121	20.9		20.0	104
Methyl Acetate	11/06/2020	22:41	56-136	9.52		10.0	95
Methyl tert-butyl ether	11/06/2020	22:41	71-124	10.1		10.0	101
Methylcyclohexane	11/06/2020	22:41	72-132	10.9		10.0	109
Methylene chloride	11/06/2020	22:41	74-124	9.93		10.0	99
o-Xylene	11/06/2020	22:41	78-122	10.3		10.0	103
Styrene	11/06/2020	22:41	78-123	10.1		10.0	101
Tetrachloroethene	11/06/2020	22:41	74-129	11.3		10.0	113
Toluene	11/06/2020	22:41	80-121	10.9		10.0	109
trans-1,2-Dichloroethene	11/06/2020	22:41	75-124	10.4		10.0	104
trans-1,3-Dichloropropene	11/06/2020	22:41	73-127	11.0		10.0	110
Trichloroethene	11/06/2020	22:41	79-123	10.6		10.0	106
Trichlorofluoromethane	11/06/2020	22:41	65-141	10.3		10.0	103
Vinyl chloride	11/06/2020	22:41	58-137	9.59		10.0	96

Spike Recovery: 0 out of 51 outside limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Sample No.: 501415 | SDG No.: 157538

Analytical Method: EPA 8260C | Concentration Units: ug/L

Sample No.: 501415 | Parent Sample No.: 0

Analytical Prep Batch #: 0 | Analytical Preparation Date/Time:

Analytical Run #: 176659 | ICAL Calibration #: W110320.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1,1-Trichloroethane	11/09/2020	07:48	74-131	10.6		10.0	106
1,1,2,2-Tetrachloroethane	11/09/2020	07:48	71-121	11.9		10.0	119
1,1,2-Trichloroethane	11/09/2020	07:48	80-119	10.5		10.0	105
1,1-Dichloroethane	11/09/2020	07:48	77-125	10.5		10.0	105
1,1-Dichloroethene	11/09/2020	07:48	71-131	9.76		10.0	98
1,2,3-Trichlorobenzene	11/09/2020	07:48	69-129	9.26		10.0	93
1,2,4-Trichlorobenzene	11/09/2020	07:48	69-130	9.13		10.0	91
1,2-Dibromo-3-chloropropane	11/09/2020	07:48	62-128	9.01		10.0	90
1,2-Dibromoethane	11/09/2020	07:48	77-121	9.76		10.0	98
1,2-Dichlorobenzene	11/09/2020	07:48	80-119	10.5		10.0	105
1,2-Dichloroethane	11/09/2020	07:48	73-128	10.7		10.0	107
1,2-Dichloropropane	11/09/2020	07:48	78-122	10.0		10.0	100
1,3-Dichlorobenzene	11/09/2020	07:48	80-119	10.3		10.0	103
1,4-Dioxane	11/09/2020	07:48	59-139	514		500	103
2-Butanone	11/09/2020	07:48	56-143	101		100	101
2-Hexanone	11/09/2020	07:48	57-139	105		100	105
4-Methyl-2-pentanone	11/09/2020	07:48	67-130	103		100	103
Acetone	11/09/2020	07:48	39-160	104		100	104
Benzene	11/09/2020	07:48	79-120	10.4		10.0	104
Bromochloromethane	11/09/2020	07:48	78-123	9.50		10.0	95
Bromodichloromethane	11/09/2020	07:48	79-125	11.3		10.0	113
Bromoform	11/09/2020	07:48	66-130	8.71		10.0	87
Bromomethane	11/09/2020	07:48	53-141	12.8		10.0	128
Carbon disulfide	11/09/2020	07:48	64-133	21.4		20.0	107
Carbon tetrachloride	11/09/2020	07:48	72-136	10.3		10.0	103
Chlorobenzene	11/09/2020	07:48	82-118	10.1		10.0	101
Chloroethane	11/09/2020	07:48	60-138	10.1		10.0	101
Chloroform	11/09/2020	07:48	79-124	10.8		10.0	108

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

LCS

WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 501415
SDG No.: 157538
Analytical Method: EPA 8260C
Concentration Units: ug/L

Sample No.: 501415
Parent Sample No.: 0
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 176659
ICAL Calibration #: W110320.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Chloromethane	11/09/2020	07:48	50-139	8.52		10.0	85
cis-1,2-Dichloroethene	11/09/2020	07:48	78-123	9.59		10.0	96
cis-1,3-Dichloropropene	11/09/2020	07:48	75-124	10.6		10.0	106
Cyclohexane	11/09/2020	07:48	71-130	10.6		10.0	106
Dibromochloromethane	11/09/2020	07:48	74-126	9.59		10.0	96
Dichlorodifluoromethane	11/09/2020	07:48	32-152	8.94		10.0	89
Ethylbenzene	11/09/2020	07:48	79-121	10.9		10.0	109
Freon 113	11/09/2020	07:48	70-136	22.0		20.0	110
Isopropylbenzene	11/09/2020	07:48	72-131	10.7		10.0	107
m & p-Xylene	11/09/2020	07:48	80-121	20.7		20.0	104
Methyl Acetate	11/09/2020	07:48	56-136	8.89		10.0	89
Methyl tert-butyl ether	11/09/2020	07:48	71-124	10.2		10.0	102
Methylcyclohexane	11/09/2020	07:48	72-132	10.3		10.0	103
Methylene chloride	11/09/2020	07:48	74-124	9.87		10.0	99
o-Xylene	11/09/2020	07:48	78-122	10.1		10.0	101
Styrene	11/09/2020	07:48	78-123	10.4		10.0	104
Tetrachloroethene	11/09/2020	07:48	74-129	9.30		10.0	93
Toluene	11/09/2020	07:48	80-121	9.88		10.0	99
trans-1,2-Dichloroethene	11/09/2020	07:48	75-124	9.74		10.0	97
trans-1,3-Dichloropropene	11/09/2020	07:48	73-127	10.8		10.0	108
Trichloroethene	11/09/2020	07:48	79-123	10.1		10.0	101
Trichlorofluoromethane	11/09/2020	07:48	65-141	11.2		10.0	112
Vinyl chloride	11/09/2020	07:48	58-137	9.57		10.0	96

Spike Recovery: 0 out of 51 outside limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE LAB CONTROL SAMPLE

Sample Description: **LCSD**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 500943
SDG No.: 157538
Analytical Method: EPA 8260C
Concentration Units: ug/L

Analytical Run #: 176563 Sample No.: 500943 Parent Sample No.: 500938
Analytical Prep Batch #: 0 Analytical Preparation Date/Time:
ICAL Calibration #: W110320.

Analyte	Analysis Date/Time		Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)	
1,1,1-Trichloroethane	11/07/2020	09:39	10.9	10.7	10.0	109	2	74-131	20	
1,1,2,2-Tetrachloroethane	11/07/2020	09:39	9.81	10.7	10.0	98	9	71-121	20	
1,1,2-Trichloroethane	11/07/2020	09:39	11.0	10.9	10.0	110	1	80-119	20	
1,1-Dichloroethane	11/07/2020	09:39	10.3	10.3	10.0	103	0	77-125	20	
1,1-Dichloroethene	11/07/2020	09:39	9.54	10.5	10.0	95	10	71-131	20	
1,2,3-Trichlorobenzene	11/07/2020	09:39	9.23	11.1	10.0	92	18	69-129	20	
1,2,4-Trichlorobenzene	11/07/2020	09:39	8.64	11.2	10.0	86	26	69-130	20	*FAIL*
1,2-Dibromo-3-chloropropane	11/07/2020	09:39	8.33	9.62	10.0	83	14	62-128	20	
1,2-Dibromoethane	11/07/2020	09:39	10.0	10.0	10.0	100	0	77-121	20	
1,2-Dichlorobenzene	11/07/2020	09:39	9.84	10.4	10.0	98	6	80-119	20	
1,2-Dichloroethane	11/07/2020	09:39	10.6	10.0	10.0	106	6	73-128	20	
1,2-Dichloropropane	11/07/2020	09:39	11.2	10.8	10.0	112	4	78-122	20	
1,3-Dichlorobenzene	11/07/2020	09:39	10.0	10.6	10.0	100	6	80-119	20	
1,4-Dioxane	11/07/2020	09:39	511	318	500	102	47	59-139	20	*FAIL*
2-Butanone	11/07/2020	09:39	99.9	101	100	100	1	56-143	20	
2-Hexanone	11/07/2020	09:39	106	98.7	100	106	7	57-139	20	
4-Methyl-2-pentanone	11/07/2020	09:39	109	111	100	109	2	67-130	20	
Acetone	11/07/2020	09:39	92.0	88.9	100	92	3	39-160	20	
Benzene	11/07/2020	09:39	10.5	10.9	10.0	105	4	79-120	20	
Bromochloromethane	11/07/2020	09:39	10.5	10.8	10.0	105	3	78-123	20	
Bromodichloromethane	11/07/2020	09:39	10.5	10.4	10.0	105	1	79-125	20	
Bromoform	11/07/2020	09:39	8.45	8.37	10.0	84	1	66-130	20	
Bromomethane	11/07/2020	09:39	11.9	11.6	10.0	119	3	53-141	20	
Carbon disulfide	11/07/2020	09:39	20.2	21.4	20.0	101	6	64-133	20	
Carbon tetrachloride	11/07/2020	09:39	10.6	11.1	10.0	106	5	72-136	20	
Chlorobenzene	11/07/2020	09:39	10.3	10.1	10.0	103	2	82-118	20	
Chloroethane	11/07/2020	09:39	9.65	9.72	10.0	96	1	60-138	20	
Chloroform	11/07/2020	09:39	10.6	11.1	10.0	106	5	79-124	20	

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE LAB CONTROL SAMPLE

Sample Description: **LCSD**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 500943
SDG No.: 157538
Analytical Method: EPA 8260C
Concentration Units: ug/L

Analytical Run #: 176563 Sample No.: 500943 Parent Sample No.: 500938
Analytical Prep Batch #: 0 Analytical Preparation Date/Time:
ICAL Calibration #: W110320.

Analyte	Analysis Date/Time		Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)
Chloromethane	11/07/2020	09:39	7.58	8.90	10.0	76	16	50-139	20
cis-1,2-Dichloroethene	11/07/2020	09:39	9.87	10.1	10.0	99	2	78-123	20
cis-1,3-Dichloropropene	11/07/2020	09:39	9.92	10.7	10.0	99	8	75-124	20
Cyclohexane	11/07/2020	09:39	10.7	11.1	10.0	107	4	71-130	20
Dibromochloromethane	11/07/2020	09:39	9.22	8.95	10.0	92	3	74-126	20
Dichlorodifluoromethane	11/07/2020	09:39	8.02	8.11	10.0	80	1	32-152	20
Ethylbenzene	11/07/2020	09:39	10.7	10.6	10.0	107	1	79-121	20
Freon 113	11/07/2020	09:39	20.3	22.5	20.0	102	10	70-136	20
Isopropylbenzene	11/07/2020	09:39	10.6	10.6	10.0	106	0	72-131	20
m & p-Xylene	11/07/2020	09:39	20.4	20.9	20.0	102	2	80-121	20
Methyl Acetate	11/07/2020	09:39	9.26	9.52	10.0	93	3	56-136	20
Methyl tert-butyl ether	11/07/2020	09:39	9.96	10.1	10.0	100	1	71-124	20
Methylcyclohexane	11/07/2020	09:39	11.1	10.9	10.0	111	2	72-132	20
Methylene chloride	11/07/2020	09:39	9.65	9.93	10.0	96	3	74-124	20
o-Xylene	11/07/2020	09:39	9.80	10.3	10.0	98	5	78-122	20
Styrene	11/07/2020	09:39	9.97	10.1	10.0	100	1	78-123	20
Tetrachloroethene	11/07/2020	09:39	10.1	11.3	10.0	101	11	74-129	20
Toluene	11/07/2020	09:39	10.8	10.9	10.0	108	1	80-121	20
trans-1,2-Dichloroethene	11/07/2020	09:39	10.0	10.4	10.0	100	4	75-124	20
trans-1,3-Dichloropropene	11/07/2020	09:39	10.0	11.0	10.0	100	10	73-127	20
Trichloroethene	11/07/2020	09:39	11.2	10.6	10.0	112	6	79-123	20
Trichlorofluoromethane	11/07/2020	09:39	9.94	10.3	10.0	99	4	65-141	20
Vinyl chloride	11/07/2020	09:39	8.70	9.59	10.0	87	10	58-137	20

RPD or Spike Recovery: 2 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	498361	SDG No.:	157538
Matrix:	LIQUID	Date Extracted:	11/03/2020
Date Analyzed:	11/03/2020	Time Analyzed:	19:51
Analytical Method:	Mod RSK 175	Extraction Method:	METHOD
Analytical Run #:	176737	Extraction Batch #:	78814
		ICAL Calibration #:	P4DG121319

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	CCV	498366	11/03/2020 19:11	P4DG121319
2	LCSW	498362	11/03/2020 19:15	P4DG121319
3	MBW	498361	11/03/2020 19:51	P4DG121319
4	13MW4	495137	11/03/2020 19:57	P4DG121319
5	13MW3	495139	11/03/2020 20:00	P4DG121319
6	13TW3	495140	11/03/2020 20:04	P4DG121319
7	49MW04	495141	11/03/2020 20:07	P4DG121319
8	13MW2	495142	11/03/2020 20:11	P4DG121319
9	48MW06	496500	11/03/2020 20:14	P4DG121319
10	48MW3MSW	498357	11/03/2020 20:17	P4DG121319
11	48MW3MSDW	498358	11/03/2020 20:21	P4DG121319
12	48MW1	496501	11/03/2020 20:24	P4DG121319
13	49MW01	496502	11/03/2020 20:29	P4DG121319
14	50MW02	496503	11/03/2020 20:33	P4DG121319
15	49TW02	496504	11/03/2020 20:36	P4DG121319
16	CCV	498367	11/03/2020 20:46	P4DG121319
17	49MW02	496507	11/03/2020 20:58	P4DG121319
18	RNS-1	496508	11/03/2020 21:02	P4DG121319
19	48MW2	496542	11/03/2020 21:06	P4DG121319
20	48MW3	496543	11/03/2020 21:09	P4DG121319
21	CCV	498368	11/03/2020 21:12	P4DG121319

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	500932	SDG No.:	157538
Matrix:	LIQUID	Date Extracted:	
Date Analyzed:	11/06/2020	Time Analyzed:	23:39
Analytical Method:	EPA 8260C	Extraction Method:	NONE
Analytical Run #:	176563	Extraction Batch #:	0
		ICAL Calibration #:	W110320.

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	BFB	500935	11/06/2020 22:28	
2	LCSW	500938	11/06/2020 22:41	W110320.
3	CCV	500939	11/06/2020 22:41	W110320.
4	MBW	500932	11/06/2020 23:39	W110320.
5	TRIP BLANK	495136	11/07/2020 00:08	W110320.
6	13MW4	495137	11/07/2020 02:31	W110320.
7	13MW3	495139	11/07/2020 03:00	W110320.
8	13TW3	495140	11/07/2020 03:28	W110320.
9	49MW04	495141	11/07/2020 03:57	W110320.
10	13MW2	495142	11/07/2020 04:25	W110320.
11	LCSDW	500943	11/07/2020 09:39	W110320.
12	CCVF	500944	11/07/2020 09:39	W110320.

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	502225	SDG No.:	157538
Matrix:	LIQUID	Date Extracted:	
Date Analyzed:	11/09/2020	Time Analyzed:	08:17
Analytical Method:	EPA 8260C	Extraction Method:	NONE
Analytical Run #:	176659	Extraction Batch #:	0
		ICAL Calibration #:	W110320.

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	BFB	501413	11/09/2020 07:32	
2	LCSW	501415	11/09/2020 07:48	W110320.
3	CCV	501422	11/09/2020 07:48	W110320.
4	MBW	502225	11/09/2020 08:17	W110320.
5	TB-2	496505	11/09/2020 09:21	W110320.
6	TB-3	496545	11/09/2020 09:50	W110320.
7	48MW06	496500	11/09/2020 10:49	W110320.
8	48MW1	496501	11/09/2020 11:19	W110320.
9	49MW01	496502	11/09/2020 11:49	W110320.
10	50MW02	496503	11/09/2020 12:18	W110320.
11	49TW02	496504	11/09/2020 12:48	W110320.
12	49MW02	496507	11/09/2020 13:17	W110320.
13	RNS-1	496508	11/09/2020 13:47	W110320.
14	48MW2	496542	11/09/2020 14:16	W110320.
15	CCVF	501793	11/09/2020 14:46	W110320.
16	BFB	501818	11/09/2020 15:12	
17	CCV	501816	11/09/2020 15:27	W110320.
18	CCB	501830	11/09/2020 16:26	W110320.
19	48MW3	496543	11/09/2020 17:26	W110320.
20	48MW06MSW	501854	11/10/2020 00:20	W110320.
21	48MW06MSDW	501859	11/10/2020 00:50	W110320.
22	CCVF	501825	11/10/2020 03:17	W110320.
23	BFB	501867	11/10/2020 07:50	
24	CCV	501864	11/10/2020 08:11	W110320.
25	CCB	502132	11/10/2020 09:10	W110320.
26	48MW3	496543	11/10/2020 11:39	W110320.
27	CCVF	502334	11/10/2020 13:08	W110320.

BFB

Data File : C:\Instarch\Data\NOV0320\BFB1.D Vial: 1
Acq On : 3 Nov 2020 8:34 Operator: RLD-DGS
Sample : 176686,BFB, Inst : VMS4
Misc : 50 ng Injection Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110320.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.586 to 4.650 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.8	6901	PASS
75	95	30	60	44.5	19473	PASS
95	95	100	100	100.0	43806	PASS
96	95	5	9	6.1	2674	PASS
173	174	0.00	2	0.2	105	PASS
174	95	50	100	97.7	42777	PASS
175	174	5	9	7.5	3210	PASS
176	174	95	101	95.1	40675	PASS
177	176	5	9	6.7	2716	PASS

W110320.M Thu Nov 19 08:51:42 2020

pl_ilog
Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W110320.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\NOV0320\BFB1.D
Injection Date : 3 Nov 2020 Log Time Period (hrs) : ALL
Injection Time : 08:34 Total files within period : 24
Sample Directory : C:\INSTARCH\DATA\NOV0320\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT. 1 0.50/5.00 ug/L, 5.0	3 Nov 2020	10:18
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT. 2 1.00/10.00 ug/L, 5.0	3 Nov 2020	10:48
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT. 3 2.00/20.00 ug/L, 5.0	3 Nov 2020	11:18
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT. 4 5.00/50.00 ug/L, 5.0	3 Nov 2020	11:48
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT. 5 10.00/100 ug/L, 5.0	3 Nov 2020	12:18
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT. 6 20.00/200 ug/L, 5.0	3 Nov 2020	12:48
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT. 7 30.00/300 ug/L, 5.0	3 Nov 2020	13:19
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT. 8 40.00/400 ug/L, 5.0	3 Nov 2020	13:49
WCAL9	1.00	1.00	1.00	INITIAL CALIB. PT. 9 80.00/800 ug/L, 5.0	3 Nov 2020	14:19
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.00/100 ug/L, 5.0	3 Nov 2020	15:19
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF 30.00/300 ug/L, 5.0	3 Nov 2020	15:49

Data File : C:\Instarch\Data\NOV0620B\BFB1.D Vial: 1
Acq On : 6 Nov 2020 22:28 Operator: RLD-DGS
Sample : 176555,BFB, Inst : VMS4
Misc : 50 ng Injection Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110320.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.592 to 4.605 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.3	6943	PASS
75	95	30	60	49.7	18848	PASS
95	95	100	100	100.0	37956	PASS
96	95	5	9	7.2	2717	PASS
173	174	0.00	2	0.4	131	PASS
174	95	50	100	94.2	35769	PASS
175	174	5	9	7.4	2658	PASS
176	174	95	101	97.1	34715	PASS
177	176	5	9	5.3	1855	PASS

W110320.M Tue Nov 10 09:20:20 2020

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\NOV0620B\BFB1.D
Injection Date : 6 Nov 2020 Log Time Period (hrs) : ALL
Injection Time : 22:28 Total files within period : 48
Sample Directory : C:\INSTARCH\DATA\NOV0620B\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	176654,LCSW, 10.00/100 ug/L, 5.0 ml Pu	6 Nov 2020	22:41
IB1	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 ml DI H2O Purged + IS	6 Nov 2020	23:10
MB-CCB1	1.00	1.00	1.00	176555,MBW, pH<2, 5.0 ml DI H2O Purge	6 Nov 2020	23:39
495136	1.00	1.00	1.00	176563,495136, pH<2, 5.0 ml Purged + IS/	7 Nov 2020	00:08
495137	1.00	1.00	1.00	176563,495137, pH<2, 5.0 ml Purged + IS/	7 Nov 2020	02:31
495139	1.00	1.00	1.00	176563,495139, pH<2, 5.0 ml Purged + IS/	7 Nov 2020	03:00
495140	1.00	1.00	1.00	176563,495140, pH<2, 5.0 ml Purged + IS/	7 Nov 2020	03:28
495141	1.00	1.00	1.00	176563,495141, pH<2, 5.0 ml Purged + IS/	7 Nov 2020	03:57
495142	1.00	1.00	1.00	176563,495142, pH<2, 5.0 ml Purged + IS/	7 Nov 2020	04:25
CCVF-LCSD1	1.00	1.00	1.00	176555,LCSDW, 10.00/100 ug/L, 5.0 ml Pu	7 Nov 2020	09:39

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : CT Laboratories, LLC Contract :
Project : Site : Location : Group :
Lab File ID (Standard): WCAL5.D Date Analyzed : 3 Nov 2020
Instrument ID : VMS4 Time Analyzed : 12:18
GC Column : DB-624 UI ID : VMS4(mm) Heated Purge (Y:N) : N

	IS1		IS2		IS3	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	1335480	7.64	1160069	11.56	664584	14.86
UPPER LIMIT	2670960	8.14	2320138	12.06	1329168	15.36
LOWER LIMIT	667740	7.14	580035	11.06	332292	14.36
File ID Sample						
495136 176563,49	1387794	7.64	1235952	11.56	670834	14.86
495137 176563,49	1392907	7.64	1248164	11.56	668627	14.86
495139 176563,49	1357333	7.64	1198069	11.56	638278	14.86
495140 176563,49	1342441	7.64	1190363	11.56	645819	14.86
495141 176563,49	1340999	7.64	1207123	11.56	645117	14.86
495142 176563,49	1297222	7.64	1179562	11.56	637445	14.86
CCV-LCS1 176654,LC	1371231	7.64	1311053	11.56	719376	14.86
CCVF-LCSD176555,LC	1355391	7.64	1239348	11.56	697357	14.86
MB-CCB1 176555,MB	1407908	7.64	1248822	11.56	685021	14.86

IS1 = FLUOROBENZENE**ISTD**
IS2 = d5-CHLOROBENZENE**ISTD**
IS3 = d4-1,4-DICHLOROBENZENE**IS

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

Data File : C:\Instarch\Data\NOV0920\BFB1.D Vial: 1
Acq On : 9 Nov 2020 7:32 Operator: RLD-DGS
Sample : 176659,BFB, Inst : VMS4
Misc : 50 ng Injection Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110320.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.605 to 4.621 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.7	7610	PASS
75	95	30	60	49.7	22608	PASS
95	95	100	100	100.0	45446	PASS
96	95	5	9	6.2	2817	PASS
173	174	0.00	2	0.9	396	PASS
174	95	50	100	97.2	44184	PASS
175	174	5	9	8.3	3682	PASS
176	174	95	101	96.1	42453	PASS
177	176	5	9	7.2	3072	PASS

W110320.M Thu Nov 12 07:40:44 2020

Data File : C:\Instarch\Data\NOV0920\BFB2.D Vial: 17
Acq On : 9 Nov 2020 15:12 Operator: RLD-DGS
Sample : 176786,BFB, Inst : VMS4
Misc : 50 ng Injection Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110320.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.579 to 4.656 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.5	18470	PASS
75	95	30	60	49.6	49609	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.6	6591	PASS
173	174	0.00	2	0.4	363	PASS
174	95	50	100	96.0	96007	PASS
175	174	5	9	8.1	7751	PASS
176	174	95	101	95.2	91387	PASS
177	176	5	9	6.5	5924	PASS

W110320.M Thu Nov 12 07:41:17 2020

Data File : C:\Instarch\Data\NOV0920\BFB3.D Vial: 43
Acq On : 10 Nov 2020 7:50 Operator: RLD-DGS
Sample : 176913,BFB, Inst : VMS4
Misc : 50 ng Injection Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110320.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.596 to 4.608 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.9	18937	PASS
75	95	30	60	54.3	54325	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	5.5	5541	PASS
173	174	0.00	2	0.9	774	PASS
174	95	50	100	85.1	85137	PASS
175	174	5	9	6.0	5121	PASS
176	174	95	101	96.8	82446	PASS
177	176	5	9	7.2	5917	PASS

W110320.M Thu Nov 12 07:41:35 2020

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\NOV0920\BFB1.D
Injection Date : 9 Nov 2020 Log Time Period (hrs) : ALL
Injection Time : 07:32 Total files within period : 52
Sample Directory : C:\INSTARCH\DATA\NOV0920\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	176659,LCSW, 10.00/100 ug/L, 5.0 ml Pu	9 Nov 2020	07:48
MB1	1.00	1.00	1.00	176659,MBW, pH<2, 5.0 ml DI H2O Purge	9 Nov 2020	08:17
496505	1.00	1.00	1.00	176659,496505, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	09:21
496545	1.00	1.00	1.00	176659,496545, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	09:50
496500	1.00	1.00	1.00	176659,496500, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	10:49
496501	1.00	1.00	1.00	176659,496501, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	11:19
496502	1.00	1.00	1.00	176659,496502, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	11:49
496503	1.00	1.00	1.00	176659,496503, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	12:18
496504	1.00	1.00	1.00	176659,496504, pH7, 5.0 ml Purged + IS/S	9 Nov 2020	12:48
496507	1.00	1.00	1.00	176659,496507, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	13:17
496508	1.00	1.00	1.00	176659,496508, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	13:47
496542	1.00	1.00	1.00	176659,496542, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	14:16
CCVF1	1.00	1.00	1.00	176659,CCVF, 10.00/100 ug/L, 5.0 ml Pu	9 Nov 2020	14:46
BFB2	1.00	1.00	1.00	176786,BFB, 50 ng Injection	9 Nov 2020	15:12
CCV-LCS2	1.00	1.00	1.00	176786,LCSW, 10.00/100 ug/L, 5.0 ml Pu	9 Nov 2020	15:27
IB1	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 ml DI H2O Purged + IS	9 Nov 2020	15:57
MB2-CCB1	1.00	1.00	1.00	176786,MBW, pH<2, 5.0 ml DI H2O Purge	9 Nov 2020	16:26
496543	1.00	1.00	1.00	176659,496543, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	17:26

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\NOV0920\BFB1.D
Injection Date : 9 Nov 2020 Log Time Period (hrs) : ALL
Injection Time : 07:32 Total files within period : 52
Sample Directory : C:\INSTARCH\DATA\NOV0920\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
496500MS	1.00	1.00	1.00	176659,MSW496500, pH<2, 10.00/100 ug/L, 5.0	10 Nov 2020	00:20
496500SD	1.00	1.00	1.00	176659,MSDW496500, pH<2, 10.00/100 ug/L, 5.0	10 Nov 2020	00:50
CCVF2	1.00	1.00	1.00	176659,CCVF, 10.00/100 ug/L, 5.0 ml Pu	10 Nov 2020	03:17
BFB3	1.00	1.00	1.00	176913,BFB, 50 ng Injection	10 Nov 2020	07:50
CCV-LCS3	1.00	1.00	1.00	176913,LCSW, 10.00/100 ug/L, 5.0 ml Pu	10 Nov 2020	08:11
IB2	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 ml DI H2O Purged + IS	10 Nov 2020	08:40
MB3-CCB2	1.00	1.00	1.00	176913,MBW, pH<2, 5.0 ml DI H2O Purge	10 Nov 2020	09:10
496543R	1.00	1.00	1.00	176659,496543,5 pH<2, 5.0 ml Purged + IS/	10 Nov 2020	11:39
CCVF3	1.00	1.00	1.00	176913,CCVF, 10.00/100 ug/L, 5.0 ml Pu	10 Nov 2020	13:08

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : CT Laboratories, LLC Contract :
Project : Site : Location : Group :
Lab File ID (Standard): WCAL5.D Date Analyzed : 3 Nov 2020
Instrument ID : VMS4 Time Analyzed : 12:18
GC Column : DB-624 UI ID : VMS4(mm) Heated Purge (Y:N) : N

	IS1		IS2		IS3	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	1335480	7.64	1160069	11.56	664584	14.86
UPPER LIMIT	2670960	8.14	2320138	12.06	1329168	15.36
LOWER LIMIT	667740	7.14	580035	11.06	332292	14.36
File ID Sample						
496500 176659,49	1319936	7.64	1193167	11.56	679339	14.86
496500MS 176659,MS	1286685	7.64	1175049	11.56	674755	14.86
496500SD 176659,MS	1307406	7.64	1169390	11.56	679195	14.86
496501 176659,49	1310723	7.64	1194824	11.56	679255	14.87
496502 176659,49	1285594	7.64	1171774	11.56	657905	14.86
496503 176659,49	1350439	7.64	1182514	11.56	662639	14.86
496504 176659,49	1360644	7.65	1157632	11.56	669999	14.86
496505 176659,49	1369199	7.64	1175394	11.56	669464	14.86
496507 176659,49	1282133	7.65	1157501	11.56	660232	14.86
496508 176659,49	1262423	7.64	1148211	11.56	654685	14.86
496542 176659,49	1279694	7.64	1181019	11.56	659668	14.86
496543 176659,49	1284272	7.64	1161513	11.56	652416	14.86
496543R 176659,49	1362610	7.64	1144185	11.56	673138	14.86
496545 176659,49	1378528	7.64	1214690	11.56	674161	14.86

IS1 = FLUOROBENZENE**ISTD**
IS2 = d5-CHLOROBENZENE**ISTD**
IS3 = d4-1,4-DICHLOROBENZENE**IS

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : CT Laboratories, LLC Contract :
Project : Site : Location : Group :
Lab File ID (Standard): WCAL5.D Date Analyzed : 3 Nov 2020
Instrument ID : VMS4 Time Analyzed : 12:18
GC Column : DB-624 UI ID : VMS4(mm) Heated Purge (Y:N) : N

	IS1		IS2		IS3	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	1335480	7.64	1160069	11.56	664584	14.86
UPPER LIMIT	2670960	8.14	2320138	12.06	1329168	15.36
LOWER LIMIT	667740	7.14	580035	11.06	332292	14.36
File ID Sample						
CCV-LCS1 176659,LC	765664	7.64	670483	11.56	353415	14.86
CCV-LCS2 176786,LC	1291370	7.65	1151752	11.56	666780	14.86
CCV-LCS3 176913,LC	1326746	7.64	1199750	11.56	678814	14.86
CCVF1 176659,CC	1324639	7.64	1197312	11.56	692726	14.86
CCVF2 176659,CC	1329715	7.64	1194461	11.56	708316	14.86
CCVF3 176913,CC	1361123	7.64	1231353	11.56	706949	14.86
MB1 176659,MB	783720	7.64	656346	11.56	333275	14.86
MB2-CCB1 176786,MB	1286416	7.64	1139836	11.56	665782	14.86
MB3-CCB2 176913,MB	1333143	7.64	1228443	11.56	695831	14.86

IS1 = FLUOROBENZENE**ISTD**
IS2 = d5-CHLOROBENZENE**ISTD**
IS3 = d4-1,4-DICHLOROBENZENE**IS

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

VOLATILE ORGANIC ANALYSIS
SAMPLE DATA
DOCUMENTS

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495136.D Vial: 5
Acq On : 7 Nov 2020 00:08 Operator: RLD-DGS
Sample : 176563,495136, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 00:28:56 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1387794	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1235952	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	670834	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	417240	19.837	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 99 %			
45) SURR12DCAd4	7.21	102	96023	20.078	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
61) SURRd8Tolule	9.64	98	1433111	20.034	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 100 %			
83) SURR4BrFBenz	13.19	95	575278	20.223	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	2.66	94	5261	Below Cal		95
6) Chloroethane	2.86	64	2687	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.02	43	8527	Below Cal	#	44
16) Iodomethane	0.00	127	0	N.D.		
17) Carbon Dislf	0.00	76	0	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.58	84	22361	N.D.		
21) tbutylalcohol	4.79	59	17854	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	6.17	59	3589	N.D.		
31) 22dichloropr	6.17	77	7907	0.3581	ug/L #	47
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.61	42	3619	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495136.D Vial: 5
Acq On : 7 Nov 2020 00:08 Operator: RLD-DGS
Sample : 176563,495136, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 00:28:56 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.56	91	3131	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.41	91	3383	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495136.D Vial: 5
Acq On : 7 Nov 2020 00:08 Operator: RLD-DGS
Sample : 176563,495136, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 00:28:56 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

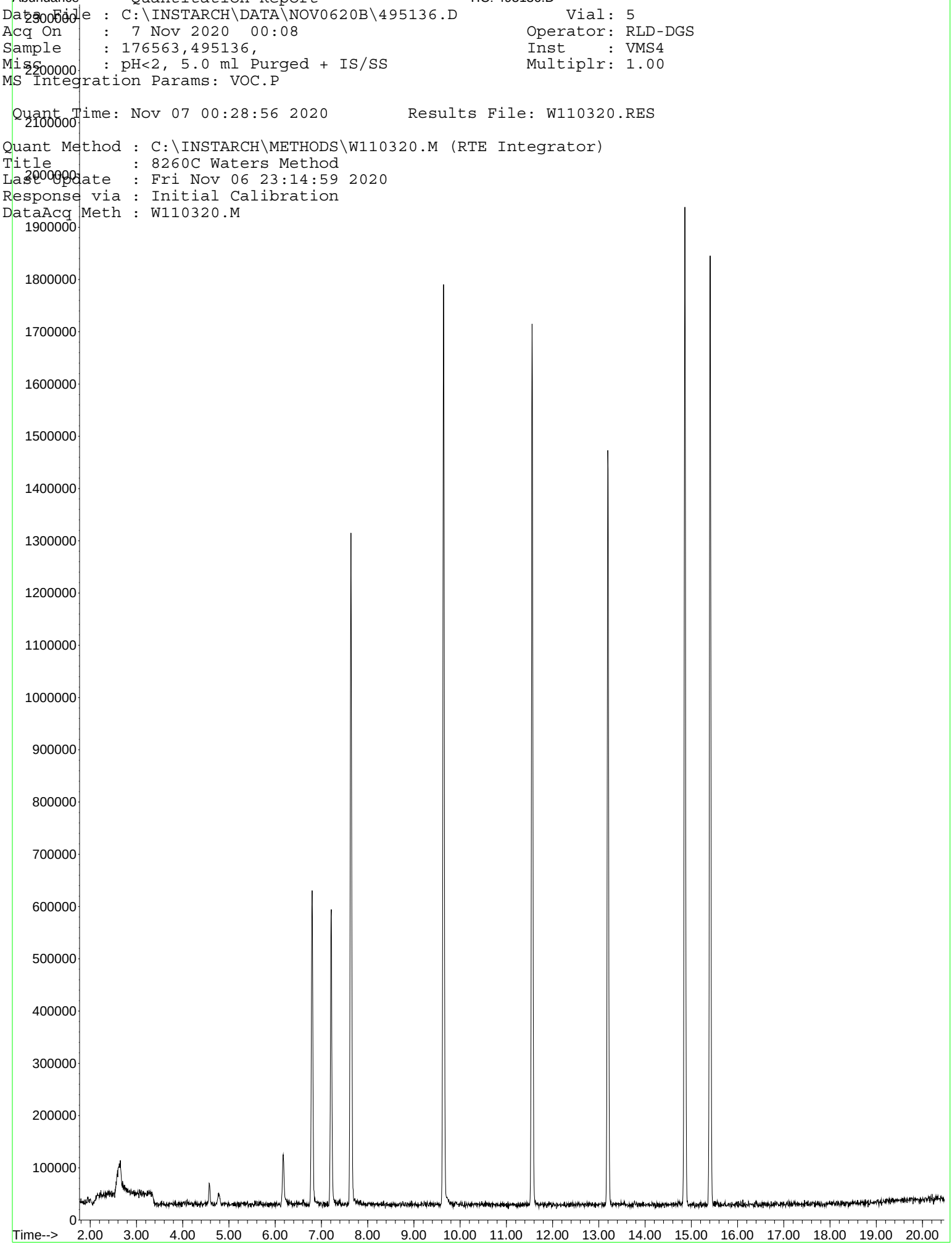
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0620B\495136.D Vial: 5
Acq On : 7 Nov 2020 00:08 Operator: RLD-DGS
Sample : 176563,495136, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 00:28:56 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495137.D Vial: 10
Acq On : 7 Nov 2020 2:31 Operator: RLD-DGS
Sample : 176563,495137, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 02:52:03 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1392907	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1248164	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	668627	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	428676	20.306	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 102 %			
45) SURR12DCAd4	7.21	102	97221	20.254	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
61) SURRd8Tolule	9.64	98	1433912	19.972	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 100 %			
83) SURR4BrFBenz	13.20	95	593542	20.933	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 105 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	2.66	94	6735	Below Cal #		47
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.03	43	4516	Below Cal #		44
16) Iodomethane	0.00	127	0	N.D.		
17) Carbon Dislf	0.00	76	0	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.79	59	6820	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	6.17	77	4420	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495137.D Vial: 10
Acq On : 7 Nov 2020 2:31 Operator: RLD-DGS
Sample : 176563,495137, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 02:52:03 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	2883	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.04	119	5067	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.10	95	18704	1.0309 ug/L	98
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.73	92	5388	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.54	91	2750	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	11.92	106	3088	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	13.21	55	2716	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.36	105	2582	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.41	91	2806	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495137.D Vial: 10
Acq On : 7 Nov 2020 2:31 Operator: RLD-DGS
Sample : 176563,495137, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 02:52:03 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

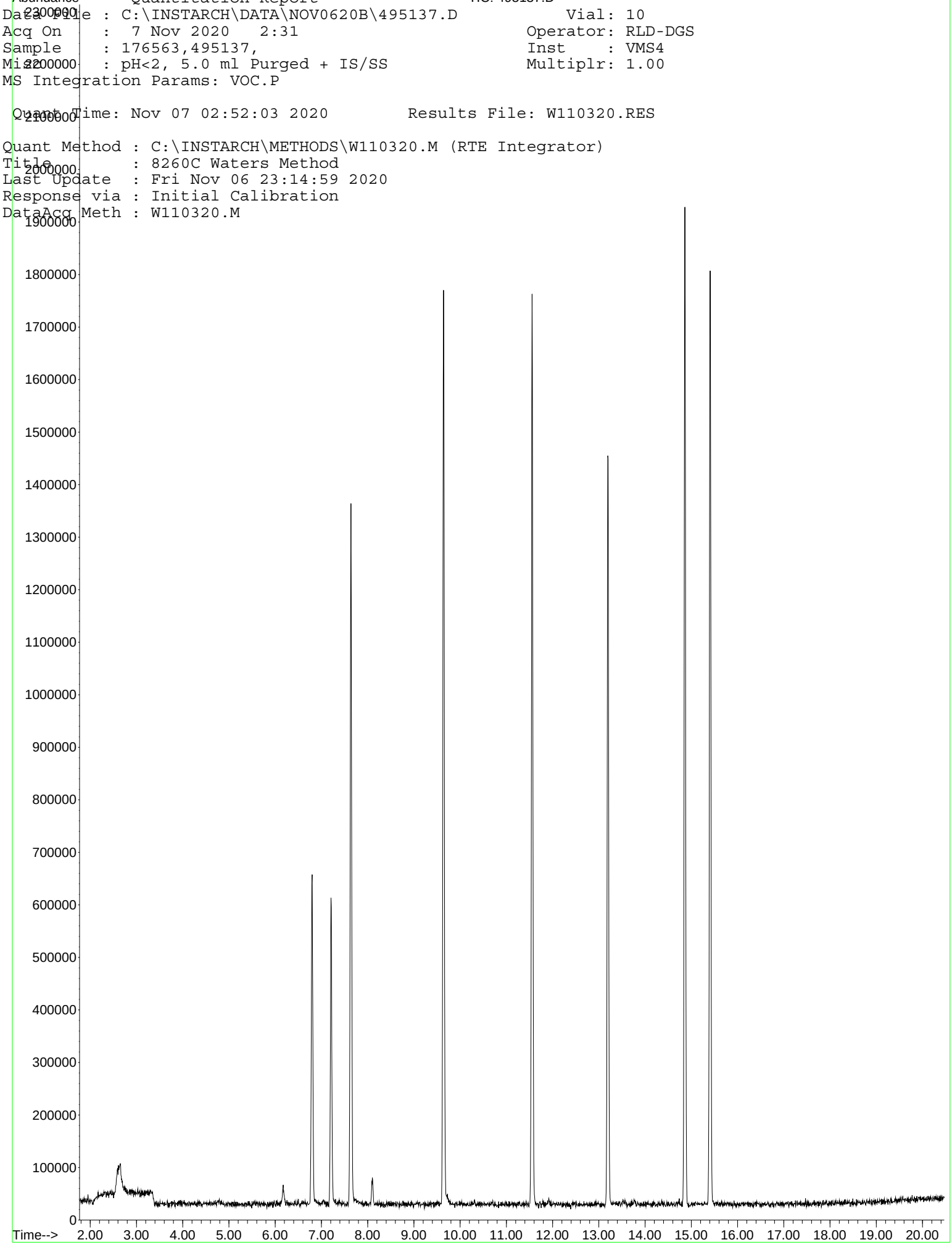
(#) = qualifier out of range (m) = manual integration

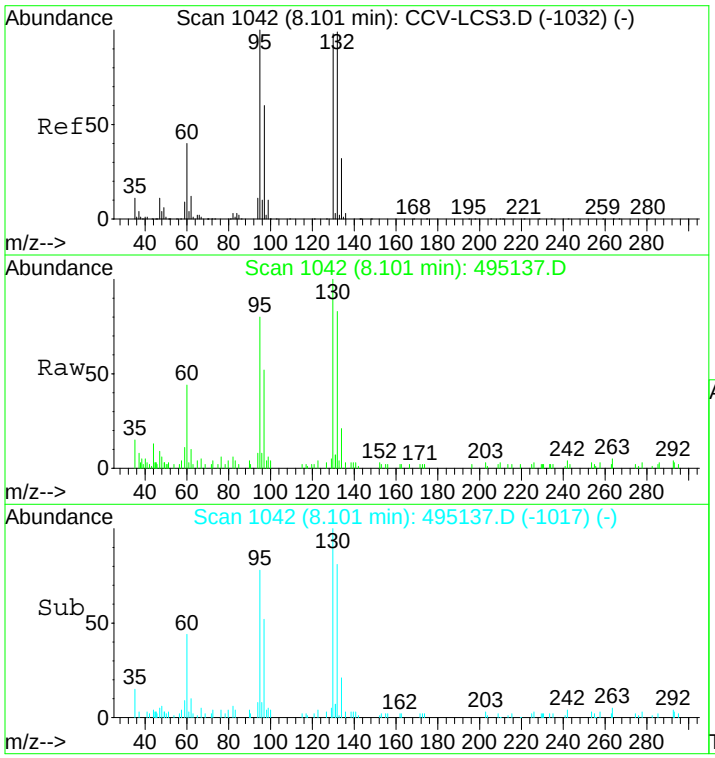
Quantitation Report (TIC: 495137.D)

Data File : C:\INSTARCH\DATA\NOV0620B\495137.D Vial: 10
Acq On : 7 Nov 2020 2:31 Operator: RLD-DGS
Sample : 176563,495137, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 02:52:03 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

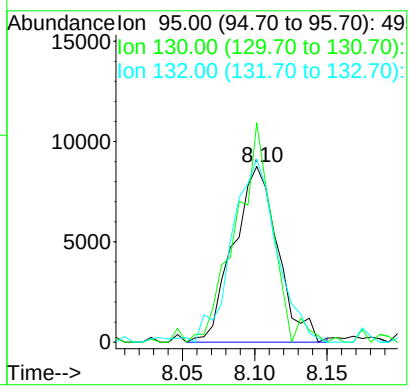




#49
trichloroete
Concen: 1.03 ug/L
RT: 8.10 min Scan# 1042
Delta R.T. 0.00 min
Lab File: 495137.D
Acq: 7 Nov 2020 2:31

Tgt Ion: 95 Resp: 18704

Ion	Ratio	Lower	Upper
95	100		
130	104.3	85.9	125.9
132	105.3	83.1	123.1



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495139.D Vial: 11
Acq On : 7 Nov 2020 3:00 Operator: RLD-DGS
Sample : 176563,495139, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 03:20:36 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1357333	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1198069	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	638278	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.80	113	411794	20.017 ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 100 %		
45) SURR12DCAd4	7.21	102	94767	20.261 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %		
61) SURRd8Tolule	9.64	98	1401958	20.039 ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 100 %		
83) SURR4BrFBenz	13.19	95	564137	20.842 ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 104 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	2.05	50	2852	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	2.67	94	4685	Below Cal	86
6) Chloroethane	2.81	64	2703	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	3.20	101	9294	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.02	43	6962	Below Cal #	44
16) Iodomethane	0.00	127	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	5.49	63	3792	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495139.D Vial: 11
Acq On : 7 Nov 2020 3:00 Operator: RLD-DGS
Sample : 176563,495139, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 03:20:36 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	21994	0.7464 ug/L	97
40)	111trichlota	6.83	97	2759	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.04	119	167581	7.5364 ug/L	96
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.10	95	24654	1.3945 ug/L	94
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.71	92	3218	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.57	91	3120	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495139.D Vial: 11
Acq On : 7 Nov 2020 3:00 Operator: RLD-DGS
Sample : 176563,495139, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 03:20:36 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

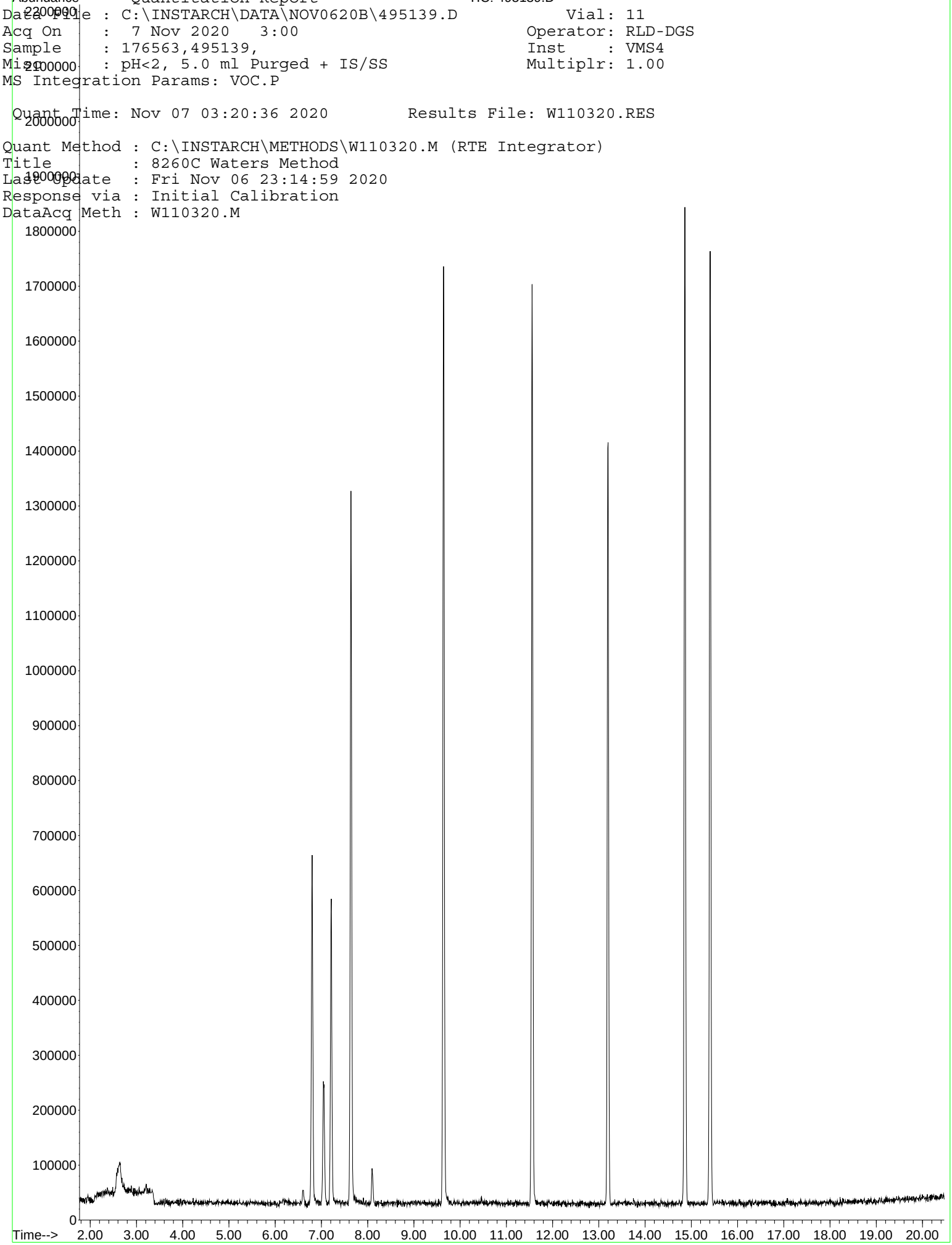
(#) = qualifier out of range (m) = manual integration

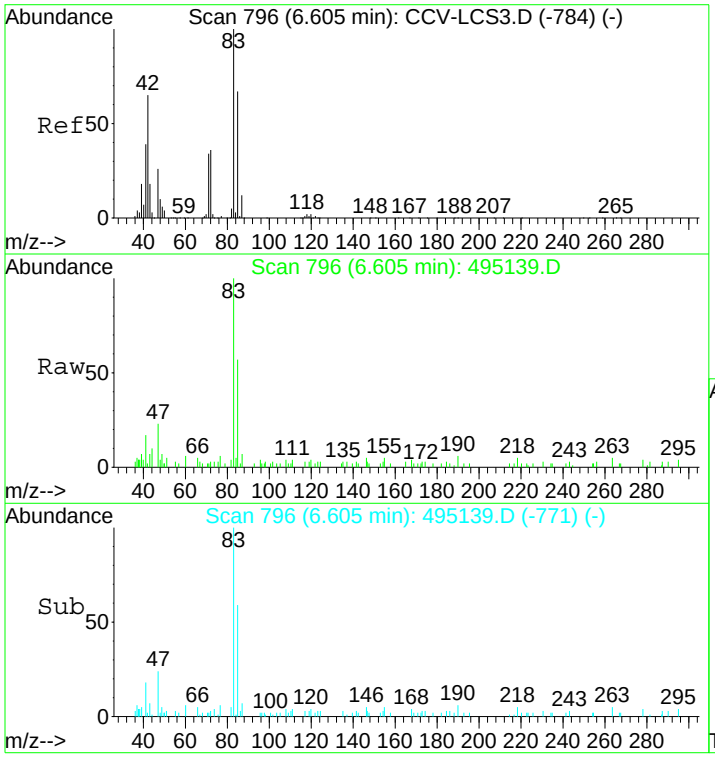
Quantitation Report (TIC: 495139.D)

Data File : C:\INSTARCH\DATA\NOV0620B\495139.D Vial: 11
Acq On : 7 Nov 2020 3:00 Operator: RLD-DGS
Sample : 176563,495139, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 03:20:36 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

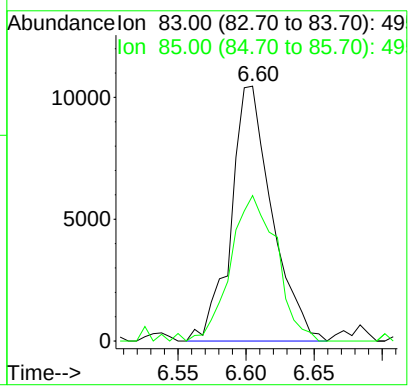


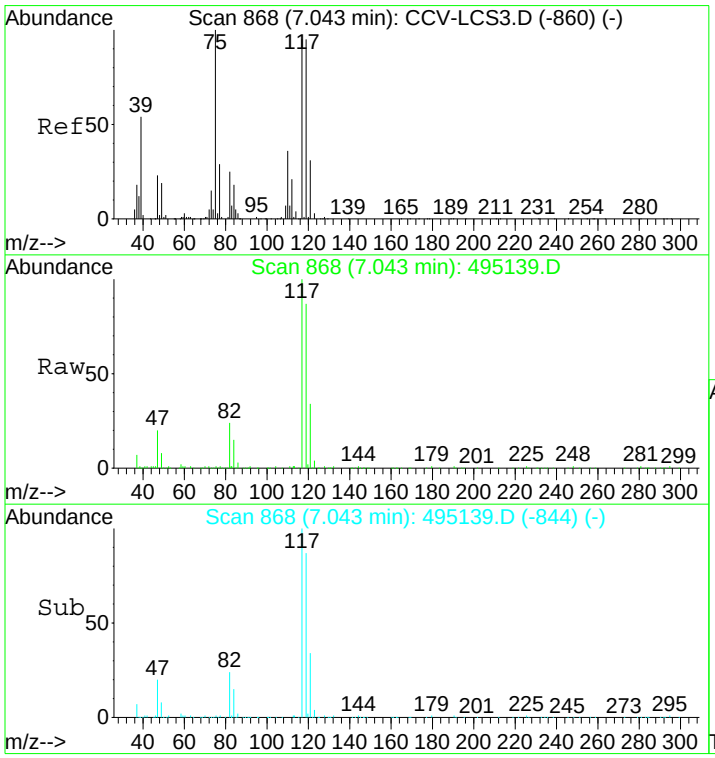


#39
Chloroform
Concen: 0.75 ug/L
RT: 6.60 min Scan# 796
Delta R.T. -0.00 min
Lab File: 495139.D
Acq: 7 Nov 2020 3:00

Tgt Ion: 83 Resp: 21994

Ion	Ratio	Lower	Upper
83	100		
85	64.1	46.5	86.5

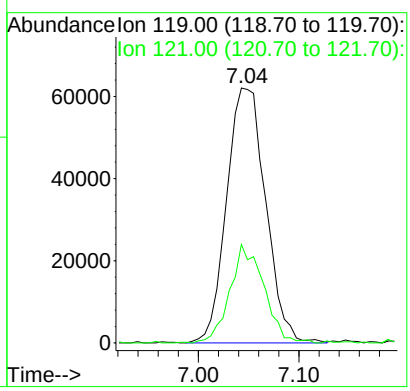


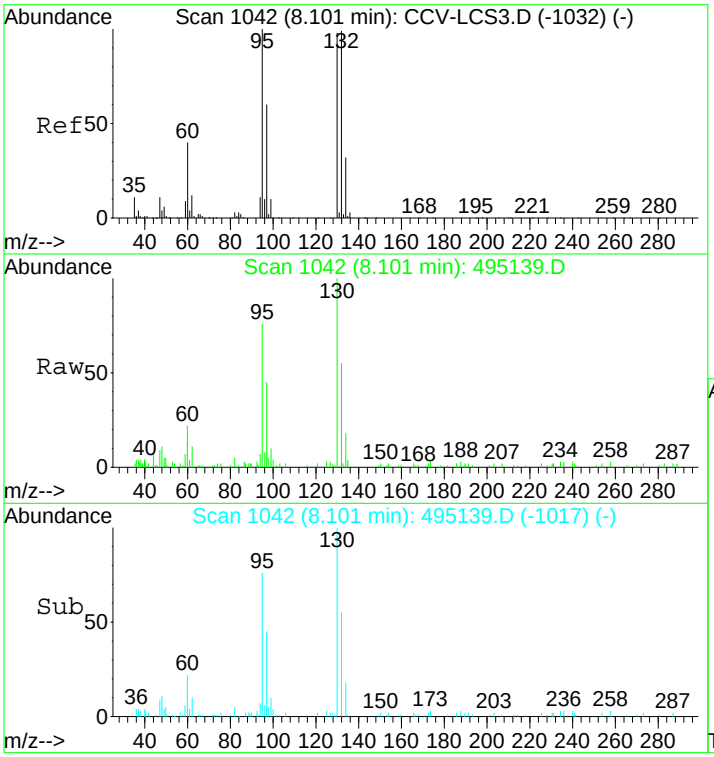


#43
Carbtetraclo
Concen: 7.54 ug/L
RT: 7.04 min Scan# 868
Delta R.T. -0.01 min
Lab File: 495139.D
Acq: 7 Nov 2020 3:00

Tgt Ion:119 Resp: 167581

Ion	Ratio	Lower	Upper
119	100		
121	33.5	11.3	51.3

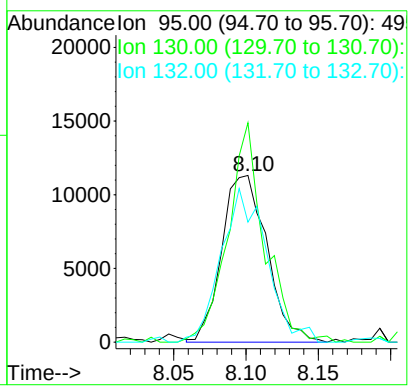




#49
trichloroete
Concen: 1.39 ug/L
RT: 8.10 min Scan# 1042
Delta R.T. -0.00 min
Lab File: 495139.D
Acq: 7 Nov 2020 3:00

Tgt Ion: 95 Resp: 24654

Ion	Ratio	Lower	Upper
95	100		
130	106.7	85.9	125.9
132	92.3	83.1	123.1



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495140.D Vial: 12
Acq On : 7 Nov 2020 3:28 Operator: RLD-DGS
Sample : 176563,495140, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 03:49:07 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1342441	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1190363	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	645819	20.00 ug/L	0.00 NA%

System Monitoring Compounds							
41) SURRDibrflma	6.80	113	410366	20.169 ug/L	0.00		
Spiked Amount 20.000	Range 88 - 112		Recovery = 101 %				
45) SURR12DCAd4	7.21	102	94777	20.487 ug/L	0.00		
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %				
61) SURRd8Tolule	9.64	98	1383586	19.996 ug/L	0.00		
Spiked Amount 20.000	Range 88 - 116		Recovery = 100 %				
83) SURR4BrFBenz	13.19	95	558670	20.399 ug/L	0.00		
Spiked Amount 20.000	Range 86 - 111		Recovery = 102 %				

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	3.20	101	10388	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.02	43	4242	Below Cal # 44	
16) Iodomethane	0.00	127	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.79	59	3529	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	5.46	63	3451	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495140.D Vial: 12
Acq On : 7 Nov 2020 3:28 Operator: RLD-DGS
Sample : 176563,495140, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 03:49:07 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	20614	0.7073 ug/L	92
40)	111trichlota	6.85	97	3813	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.05	119	166541	7.5727 ug/L	97
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.10	95	24484	1.4002 ug/L	91
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.73	92	3367	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.56	91	3884	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	11.92	106	2752	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	15.43	146	3246	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495140.D Vial: 12
Acq On : 7 Nov 2020 3:28 Operator: RLD-DGS
Sample : 176563,495140, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 03:49:07 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

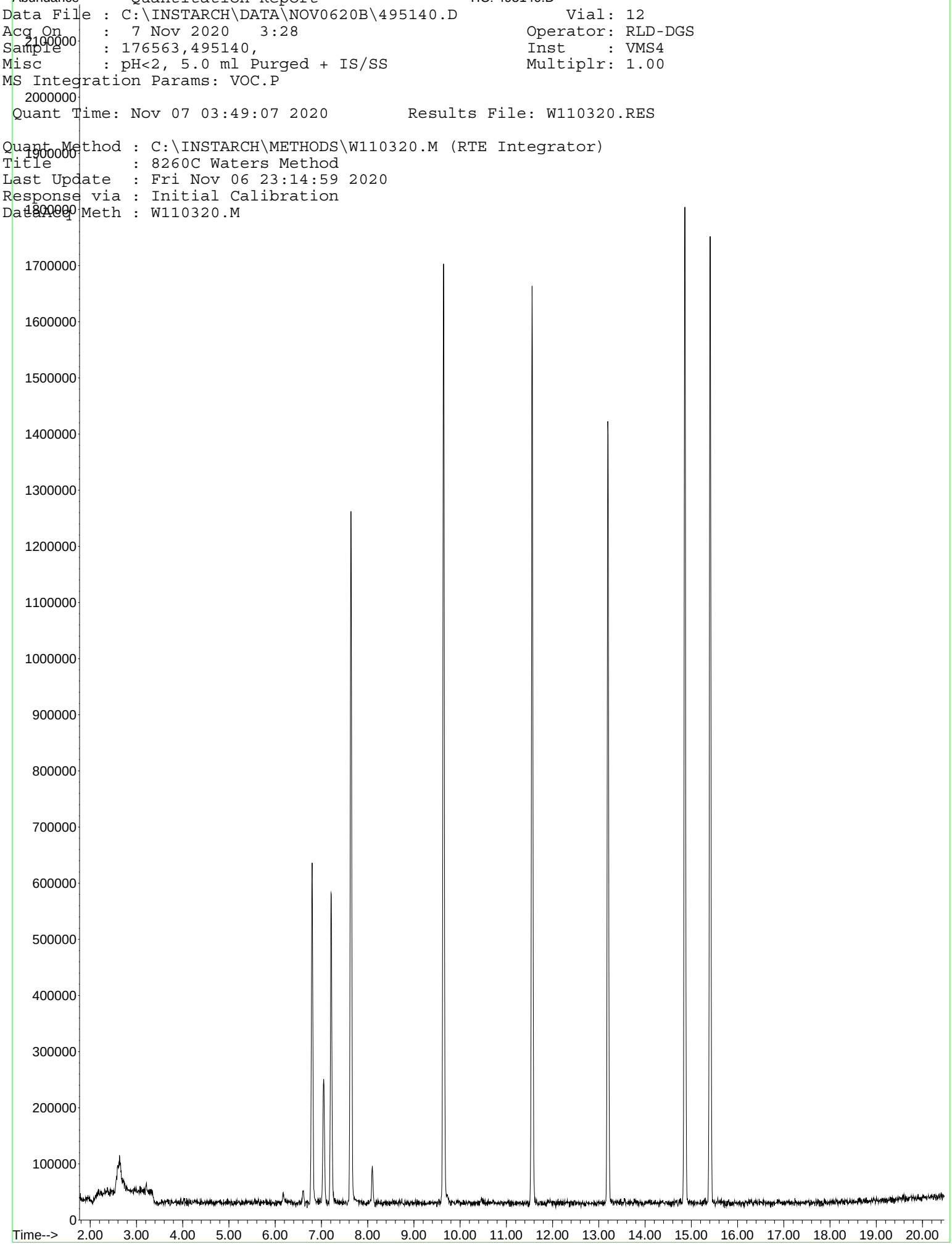
(#) = qualifier out of range (m) = manual integration

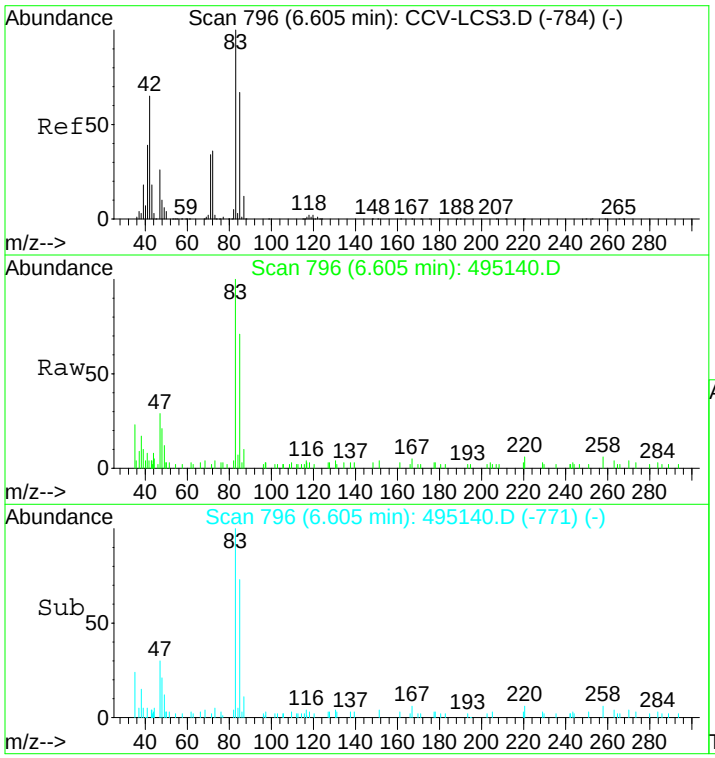
Abundance Quantitation Report TIC: 495140.D

Data File : C:\INSTARCH\DATA\NOV0620B\495140.D Vial: 12
Acq On : 7 Nov 2020 3:28 Operator: RLD-DGS
Sample : 176563,495140, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 03:49:07 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

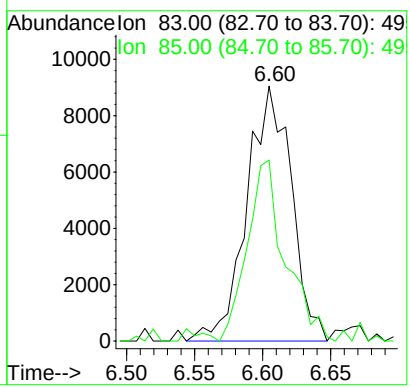


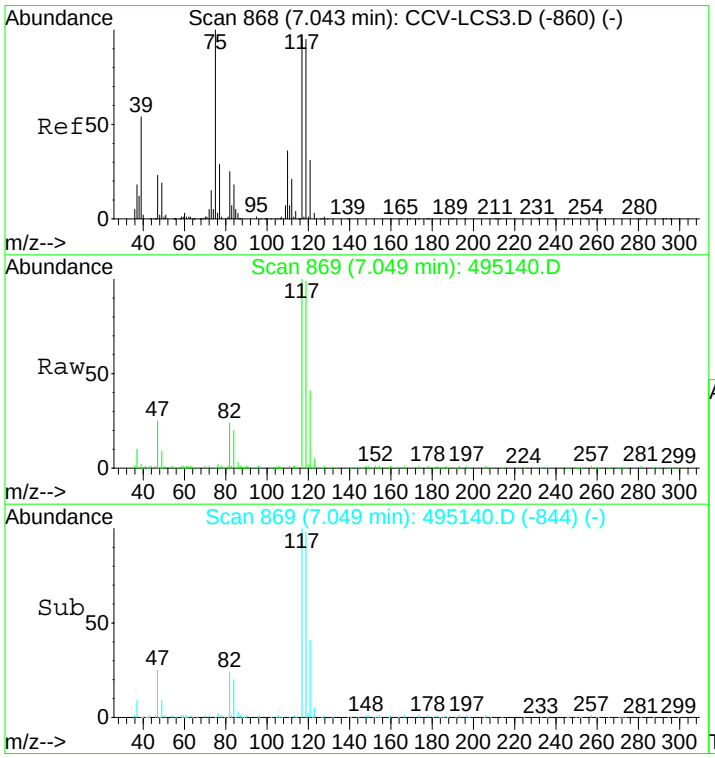


#39
Chloroform
Concen: 0.71 ug/L
RT: 6.60 min Scan# 796
Delta R.T. -0.00 min
Lab File: 495140.D
Acq: 7 Nov 2020 3:28

Tgt Ion: 83 Resp: 20614

Ion	Ratio	Lower	Upper
83	100		
85	60.3	46.5	86.5

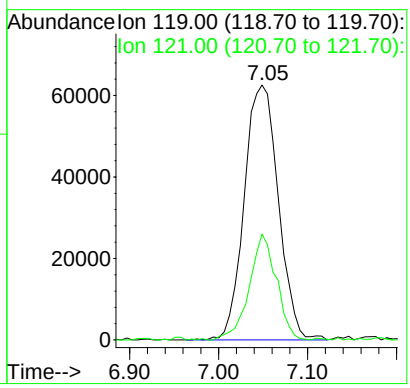


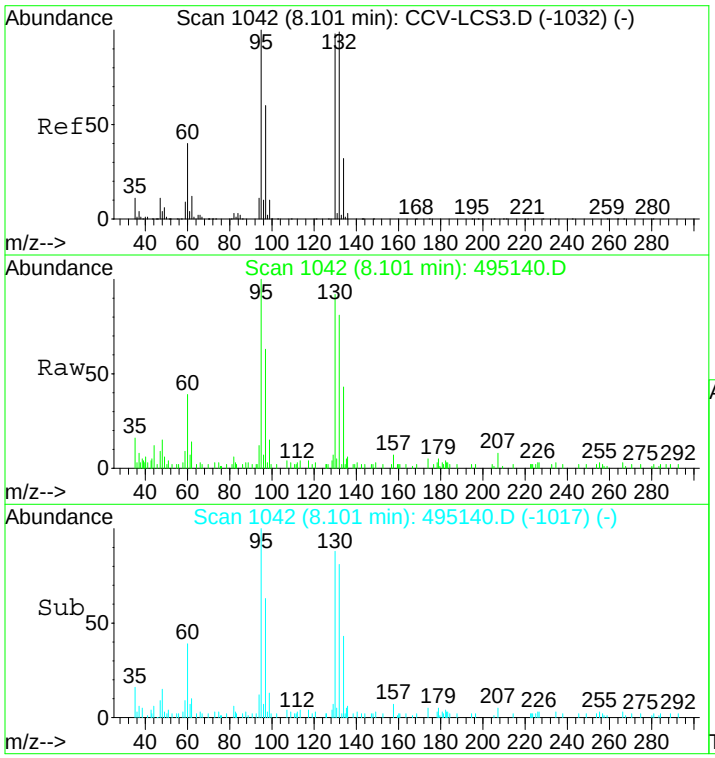


#43
Carbtetraclo
Concen: 7.57 ug/L
RT: 7.05 min Scan# 869
Delta R.T. -0.00 min
Lab File: 495140.D
Acq: 7 Nov 2020 3:28

Tgt Ion:119 Resp: 166541

Ion	Ratio	Lower	Upper
119	100		
121	33.1	11.3	51.3

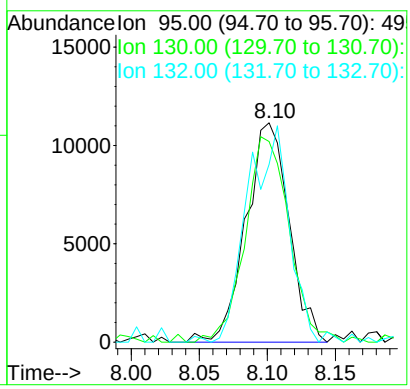




#49
trichloroete
Concen: 1.40 ug/L
RT: 8.10 min Scan# 1042
Delta R.T. -0.00 min
Lab File: 495140.D
Acq: 7 Nov 2020 3:28

Tgt Ion: 95 Resp: 24484

Ion	Ratio	Lower	Upper
95	100		
130	95.8	85.9	125.9
132	95.0	83.1	123.1



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495141.D Vial: 13
Acq On : 7 Nov 2020 3:57 Operator: RLD-DGS
Sample : 176563,495141, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 04:17:39 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1340999	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1207123	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	645117	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	416363	20.486	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 102 %			
45) SURR12DCAd4	7.21	102	97688	21.139	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 106 %			
61) SURRd8Tolule	9.64	98	1375997	19.907	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 100 %			
83) SURR4BrFBenz	13.20	95	573577	20.967	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 105 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	2.66	94	4935	Below Cal	88
6) Chloroethane	2.74	64	2663	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.03	43	5107	Below Cal #	44
16) Iodomethane	0.00	127	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.77	59	4616	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495141.D Vial: 13
Acq On : 7 Nov 2020 3:57 Operator: RLD-DGS
Sample : 176563,495141, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 04:17:39 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.05	119	12285	0.5592	ug/L	97
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.72	92	4254	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.54	91	3300	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	11.76	91	2650	N.D.		
76)	m p-Xylene	11.92	106	3022	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	13.21	55	2581	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	14.37	105	3397	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.43	91	3453	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495141.D Vial: 13
Acq On : 7 Nov 2020 3:57 Operator: RLD-DGS
Sample : 176563,495141, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 04:17:39 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

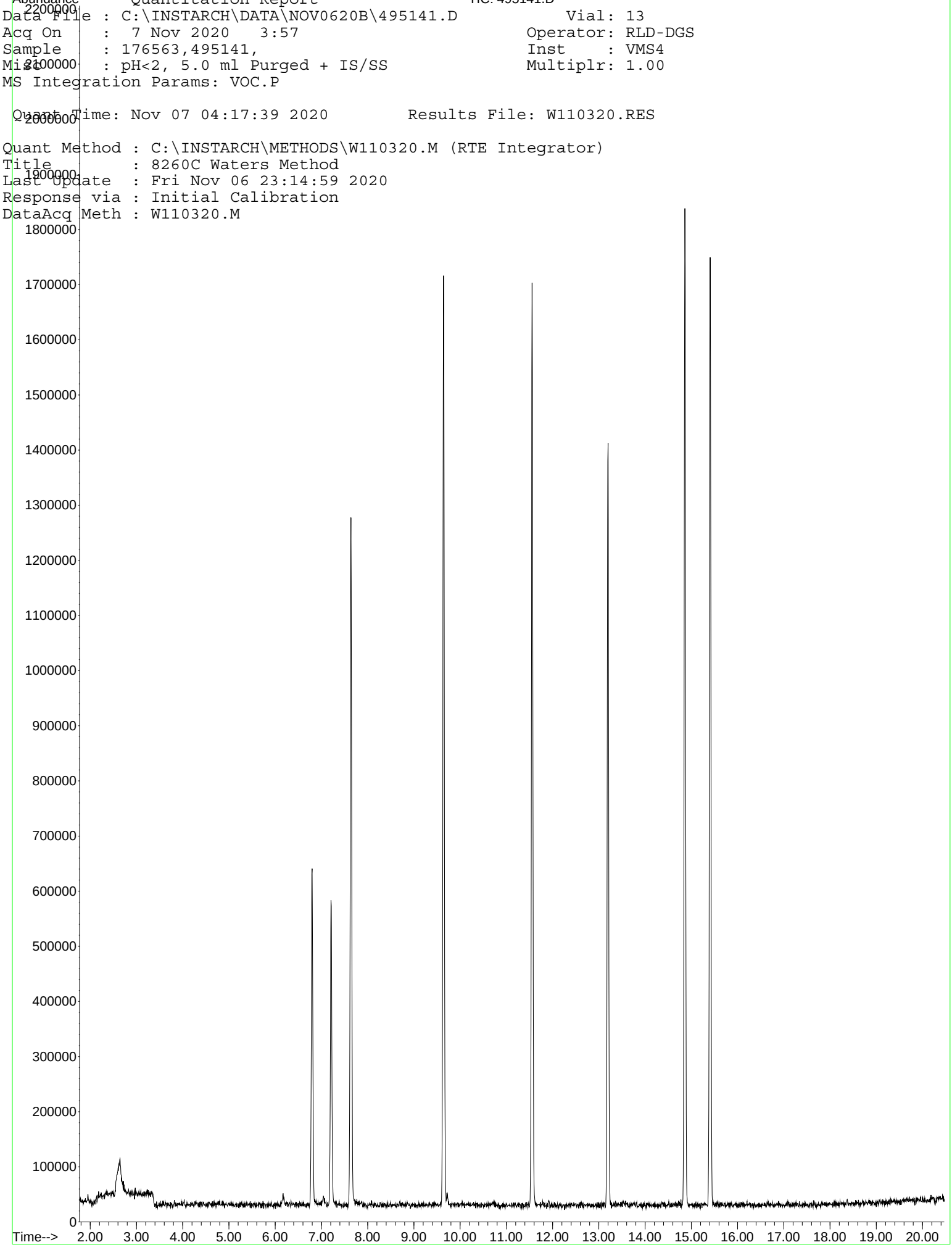
(#) = qualifier out of range (m) = manual integration

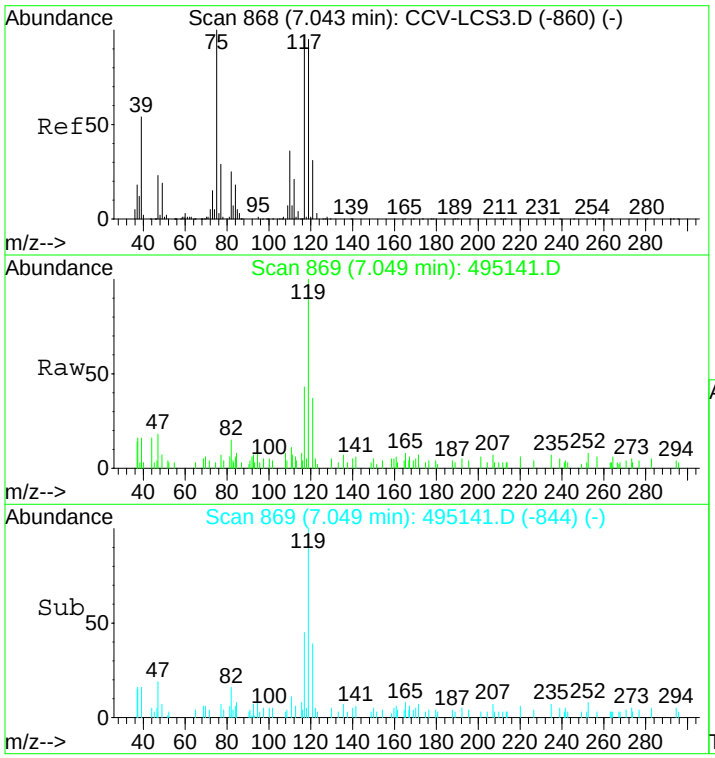
Abundance Quantitation Report TIC: 495141.D

Data File : C:\INSTARCH\DATA\NOV0620B\495141.D Vial: 13
Acq On : 7 Nov 2020 3:57 Operator: RLD-DGS
Sample : 176563,495141, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 04:17:39 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

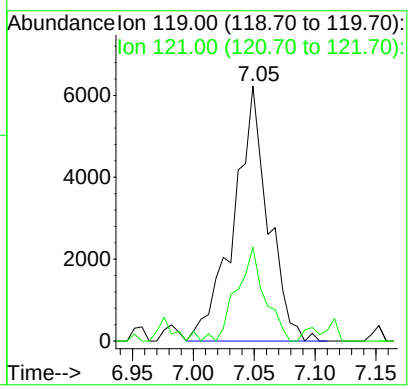




#43
Carbtetraclo
Concen: 0.56 ug/L
RT: 7.05 min Scan# 869
Delta R.T. 0.00 min
Lab File: 495141.D
Acq: 7 Nov 2020 3:57

Tgt Ion:119 Resp: 12285

Ion	Ratio	Lower	Upper
119	100		
121	29.8	11.3	51.3



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495142.D Vial: 14
Acq On : 7 Nov 2020 4:25 Operator: RLD-DGS
Sample : 176563,495142, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 04:46:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1297222	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1179562	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	637445	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	400276	20.359	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 102 %			
45) SURR12DCAd4	7.21	102	85888	19.213	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 96 %			
61) SURRd8Tolule	9.64	98	1365607	20.424	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 102 %			
83) SURR4BrFBenz	13.19	95	557082	20.609	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 103 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	2.67	94	5061	Below	Cal	99
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.02	43	3794	Below	Cal #	44
16) Iodomethane	0.00	127	0	N.D.		
17) Carbon Dislf	0.00	76	0	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.82	59	3443	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495142.D Vial: 14
Acq On : 7 Nov 2020 4:25 Operator: RLD-DGS
Sample : 176563,495142, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 04:46:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.74	92	3942	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.55	91	3699	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	11.90	106	4397	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.36	105	3153	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\495142.D Vial: 14
Acq On : 7 Nov 2020 4:25 Operator: RLD-DGS
Sample : 176563,495142, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 04:46:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	17.98	128	2590	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

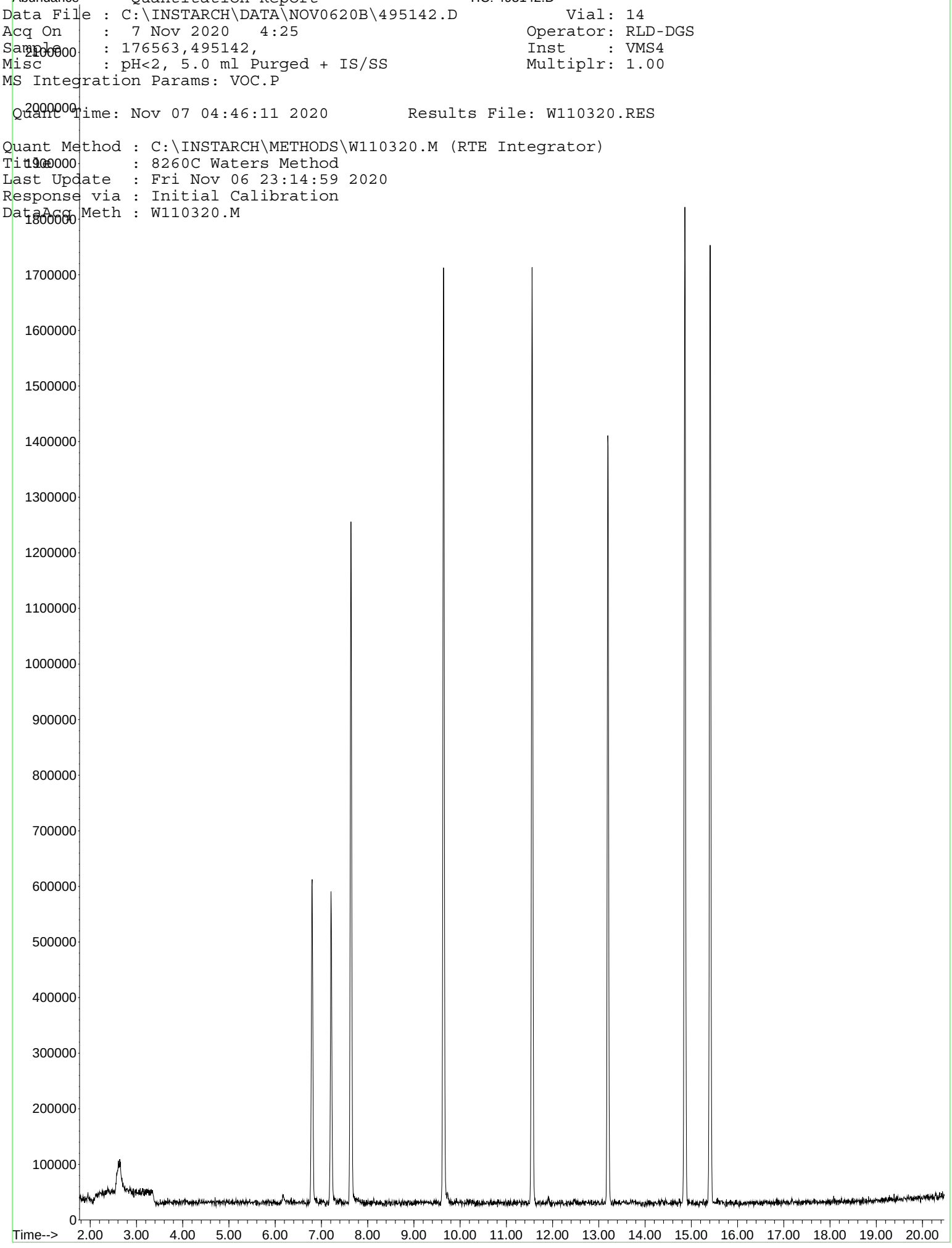
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 495142.D

Data File : C:\INSTARCH\DATA\NOV0620B\495142.D Vial: 14
Acq On : 7 Nov 2020 4:25 Operator: RLD-DGS
Sample : 176563,495142, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 04:46:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496505.D Vial: 5
Acq On : 9 Nov 2020 9:21 Operator: RLD-DGS
Sample : 176659,496505, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 09:41:49 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1369199	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1175394	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	669464	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	404086	19.472	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 97 %			
45) SURR12DCAd4	7.21	102	97386	20.640	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103 %			
61) SURRd8Tolule	9.64	98	1424109	20.179	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 101 %			
83) SURR4BrFBenz	13.20	95	614987	21.663	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 108 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	2.05	50	2792	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.02	43	6574	Below Cal		78
16) Iodomethane	0.00	127	0	N.D.		
17) Carbon Dislf	0.00	76	0	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.59	84	20215	N.D.		
21) tbutylalcohol	4.79	59	11040	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	6.17	59	3845	N.D.		
31) 22dichloropr	6.16	77	8476	0.3891	ug/L #	47
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.60	42	3281	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496505.D Vial: 5
Acq On : 9 Nov 2020 9:21 Operator: RLD-DGS
Sample : 176659,496505, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 09:41:49 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496505.D Vial: 5
Acq On : 9 Nov 2020 9:21 Operator: RLD-DGS
Sample : 176659,496505, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 09:41:49 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

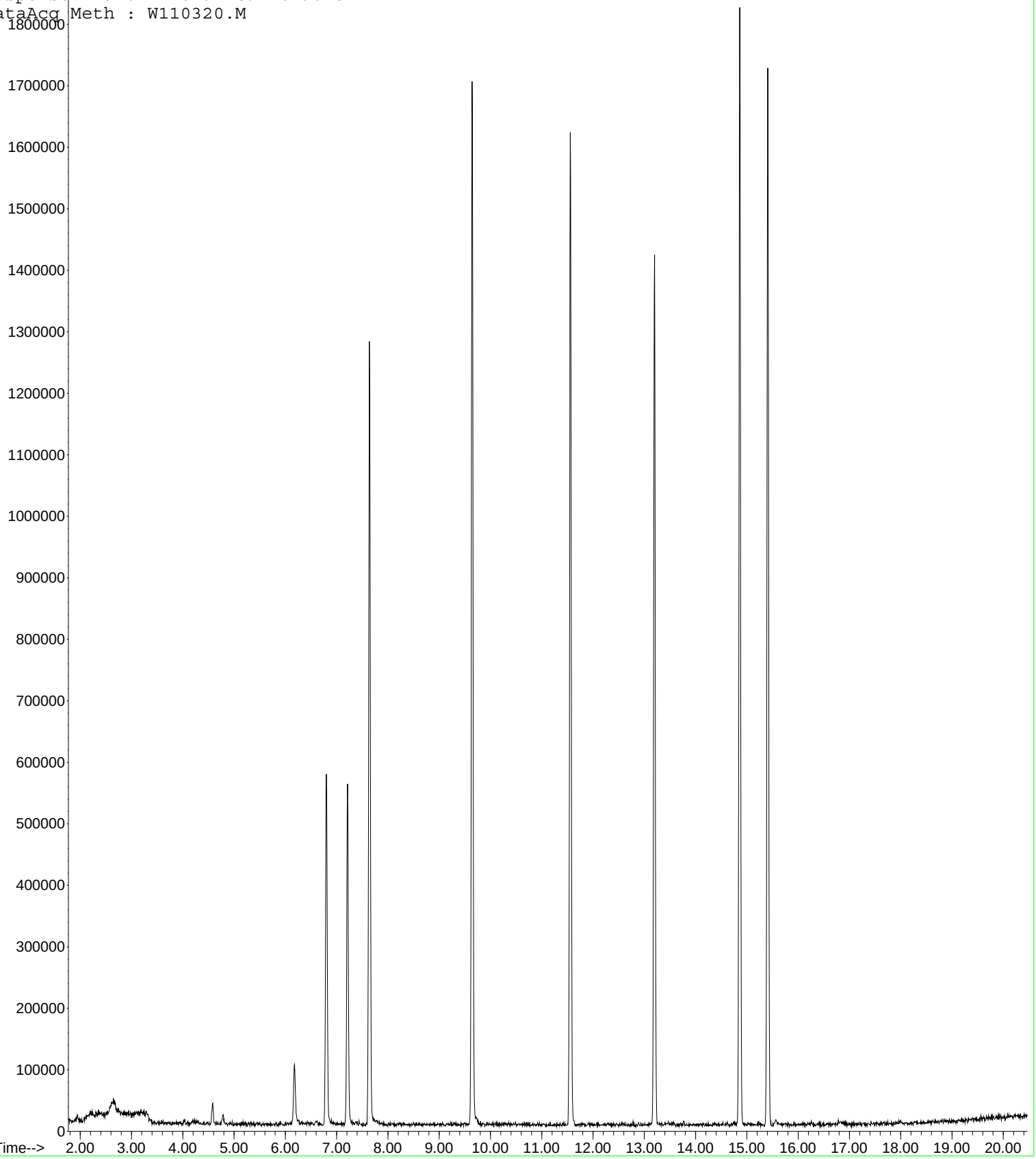
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0920\496505.D Vial: 5
Acq On : 9 Nov 2020 9:21 Operator: RLD-DGS
Sample : 176659,496505, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 09:41:49 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496545.D Vial: 6
Acq On : 9 Nov 2020 9:50 Operator: RLD-DGS
Sample : 176659,496545, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 10:11:07 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1378528	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1214690	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	674161	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	391462	18.736	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 94 %			
45) SURR12DCAd4	7.21	102	93786	19.743	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
61) SURRd8Tolule	9.65	98	1440517	20.273	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 101 %			
83) SURR4BrFBenz	13.20	95	595492	20.830	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 104 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.03	43	4375	Below Cal # 44	
16) Iodomethane	0.00	127	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.57	84	13325	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.59	42	3457	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496545.D Vial: 6
Acq On : 9 Nov 2020 9:50 Operator: RLD-DGS
Sample : 176659,496545, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 10:11:07 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.56	91	2763	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.41	91	2898	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496545.D Vial: 6
Acq On : 9 Nov 2020 9:50 Operator: RLD-DGS
Sample : 176659,496545, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 10:11:07 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

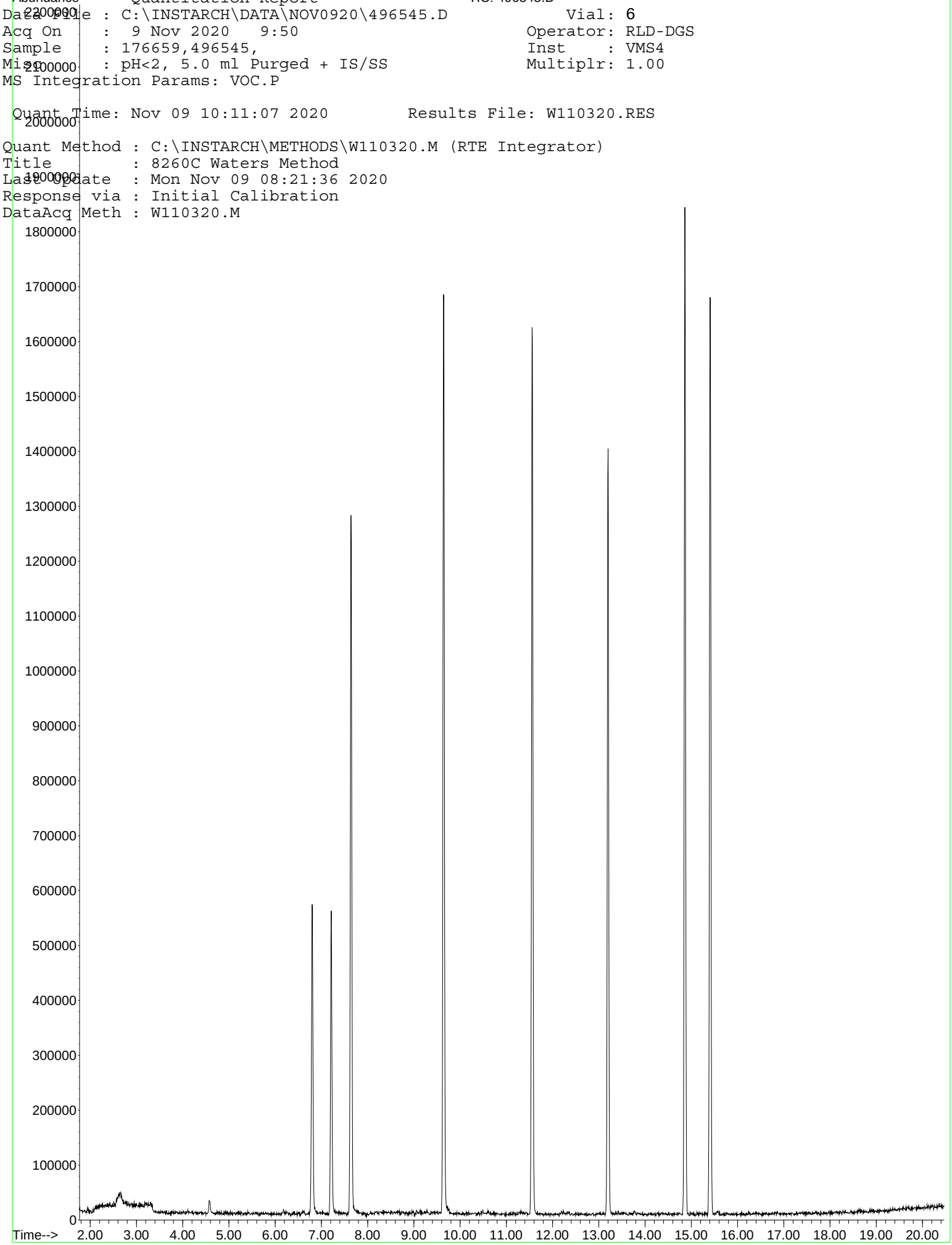
(#) = qualifier out of range (m) = manual integration

Quantitation Report (TIC: 496545.D)

Data File : C:\INSTARCH\DATA\NOV0920\496545.D Vial: 6
Acq On : 9 Nov 2020 9:50 Operator: RLD-DGS
Sample : 176659,496545, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 10:11:07 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496500.D Vial: 8
Acq On : 9 Nov 2020 10:49 Operator: RLD-DGS
Sample : 176659,496500, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 11:10:25 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1319936	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1193167	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	679339	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	390102	19.500	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 98 %			
45) SURR12DCAd4	7.21	102	92476	20.331	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
61) SURRd8Tolule	9.64	98	1384306	20.347	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 102 %			
83) SURR4BrFBenz	13.20	95	596050	20.690	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 103 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	3.67	67	6302	0.4190	ug/L #	41
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.04	43	6802	Below Cal	#	44
16) Iodomethane	0.00	127	0	N.D.		
17) Carbon Dislf	0.00	76	0	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.81	59	3724	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.47	63	68816	2.8865	ug/L	93
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	6.20	96	69891	3.8059	ug/L	94
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496500.D Vial: 8
Acq On : 9 Nov 2020 10:49 Operator: RLD-DGS
Sample : 176659,496500, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 11:10:25 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39) Chloroform	0.00	83	0	N.D.	
40) 111trichlota	6.84	97	10258	0.4158 ug/L #	64
42) Cyclohexane	0.00	56	0	N.D.	
43) Carbtetraclo	0.00	119	0	N.D.	
44) 11dicloprope	0.00	110	0	N.D.	
46) Benzene	7.29	78	4333	N.D.	
47) 12dichlorota	0.00	62	0	N.D.	
48) TAME	0.00	73	0	N.D.	
49) trichloroete	8.10	95	51255	2.9812 ug/L	93
50) methylcyclohexane	0.00	83	0	N.D.	
51) 12dicloropra	0.00	63	0	N.D.	
52) 23Dicl1propene	0.00	75	0	N.D.	
53) Dibromometha	0.00	93	0	N.D.	
54) methylmethacrylate	0.00	69	0	N.D.	
55) 14dioxane	0.00	88	0	N.D.	
56) Bromodiclrma	0.00	83	0	N.D.	
57) 2Nitropropane	0.00	43	0	N.D.	
58) 2CLEVE	0.00	63	0	N.D.	
59) c13dicloproe	0.00	75	0	N.D.	
60) 4Meth2Pentan	0.00	43	0	N.D.	
62) Toluene	0.00	92	0	N.D.	
63) t13Dicloprop	0.00	75	0	N.D.	
64) ethylmethacrylate	0.00	69	0	N.D.	
65) 112Triclotha	0.00	83	0	N.D.	
66) Tetrachlorte	10.46	166	10554	N.D.	
67) 13Diclorpropa	0.00	76	0	N.D.	
69) 2Hexanone	0.00	43	0	N.D.	
70) Clorodibrmta	0.00	129	0	N.D.	
71) 12Dibrometha	0.00	107	0	N.D.	
72) Chlorobenzen	0.00	112	0	N.D.	
73) 1Clhexane	11.55	91	2698	N.D.	
74) 1112Tetclota	0.00	131	0	N.D.	
75) Ethylbenzene	0.00	91	0	N.D.	
76) m p-Xylene	0.00	106	0	N.D.	
77) o-Xylene	0.00	106	0	N.D.	
78) Styrene	0.00	104	0	N.D.	
79) Bromoform	0.00	173	0	N.D.	
80) Isopropylben	0.00	105	0	N.D.	
81) cyclohexanone	0.00	55	0	N.D.	
84) Bromobenzene	0.00	156	0	N.D.	
85) 1122Tetrclta	0.00	83	0	N.D.	
86) 123Triclproa	0.00	75	0	N.D.	
87) 14dichloro2butene	0.00	53	0	N.D.	
88) n-Propylbenz	0.00	91	0	N.D.	
89) 2chlorotolue	0.00	91	0	N.D.	
90) 4chlorotolue	0.00	91	0	N.D.	
91) 135Trimebenz	0.00	105	0	N.D.	
92) tbutylbenzen	0.00	119	0	N.D.	
93) 124Trimetben	0.00	105	0	N.D.	
94) sbutylbenzen	0.00	105	0	N.D.	
95) 13Diclorbenz	0.00	146	0	N.D.	
96) pIsopropylto	0.00	119	0	N.D.	
97) 14dichlorobe	0.00	146	0	N.D.	
98) 12dichlorobe	0.00	146	0	N.D.	
99) nButylbenzen	0.00	91	0	N.D.	
100) 12dibromo3cl	0.00	157	0	N.D.	
101) 135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496500.D Vial: 8
Acq On : 9 Nov 2020 10:49 Operator: RLD-DGS
Sample : 176659,496500, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 11:10:25 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

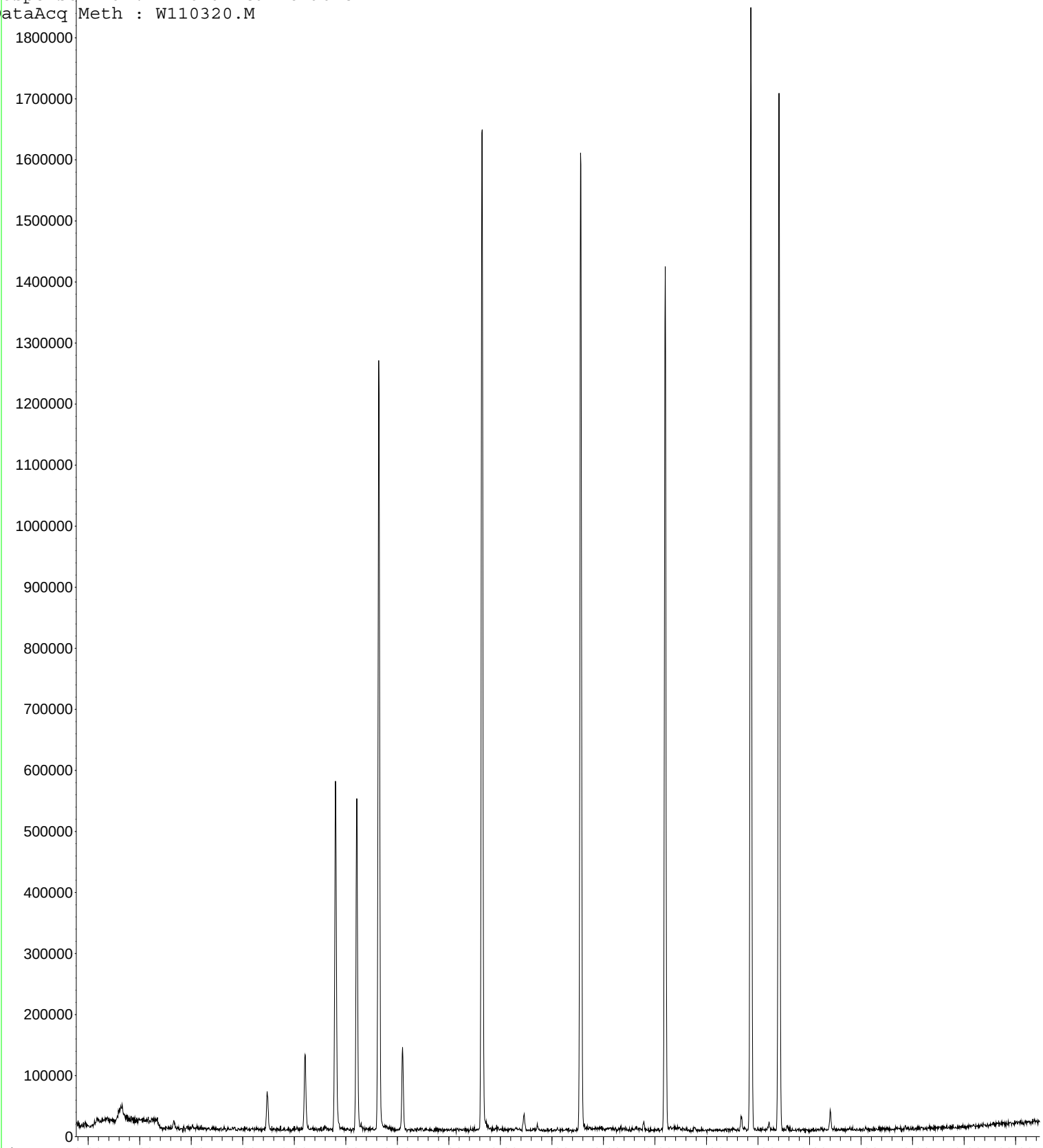
(#) = qualifier out of range (m) = manual integration

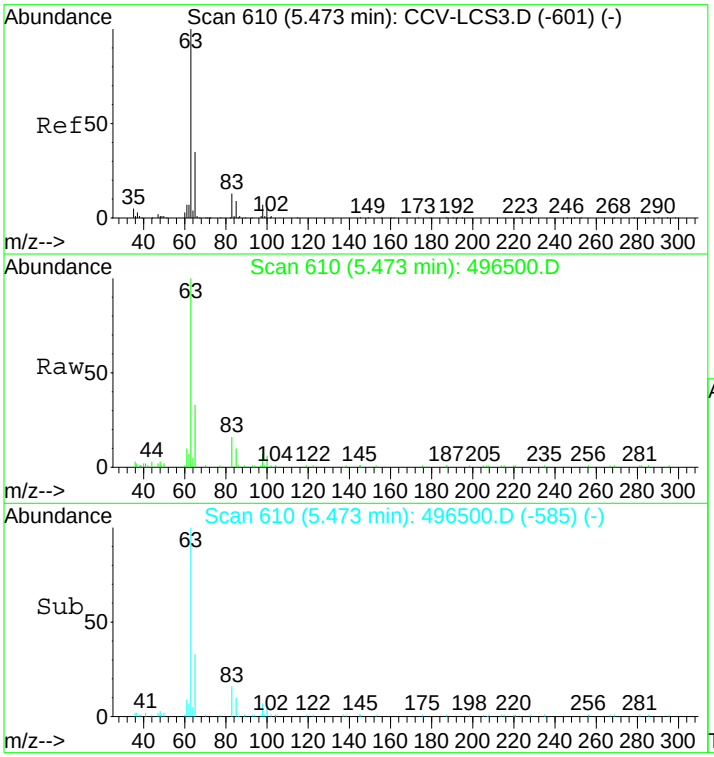
Abundance Quantitation Report TIC: 496500.D

Data File : C:\INSTARCH\DATA\NOV0920\496500.D Vial: 8
Acq On : 9 Nov 2020 10:49 Operator: RLD-DGS
Sample : 176659,496500, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 11:10:25 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

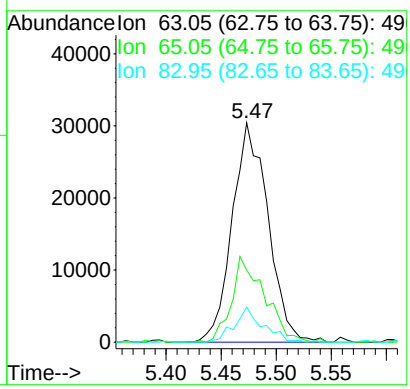


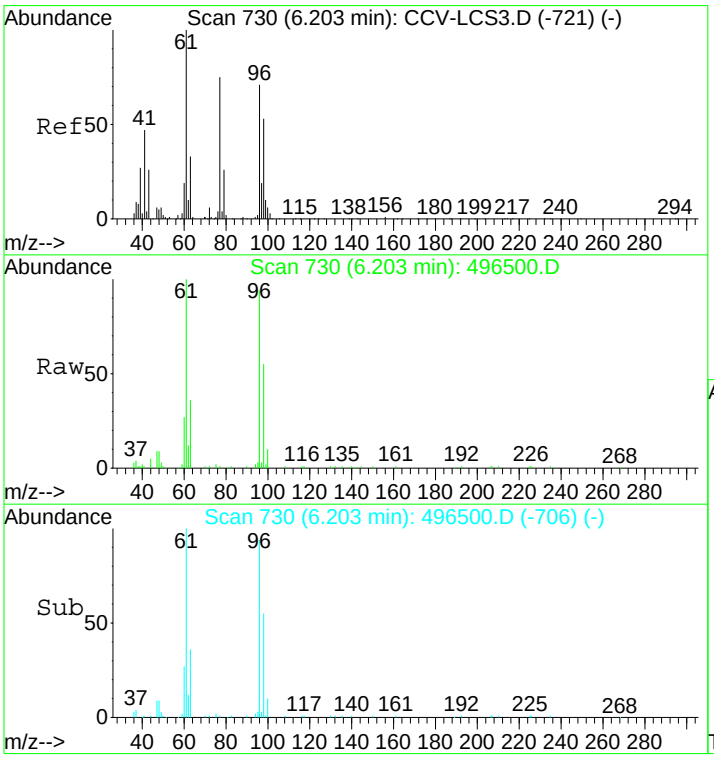


#26
11dichlorota
Concen: 2.89 ug/L
RT: 5.47 min Scan# 610
Delta R.T. -0.00 min
Lab File: 496500.D
Acq: 9 Nov 2020 10:49

Tgt Ion: 63 Resp: 68816

Ion	Ratio	Lower	Upper
63	100		
65	35.8	12.5	52.5
83	12.7	0.0	36.9

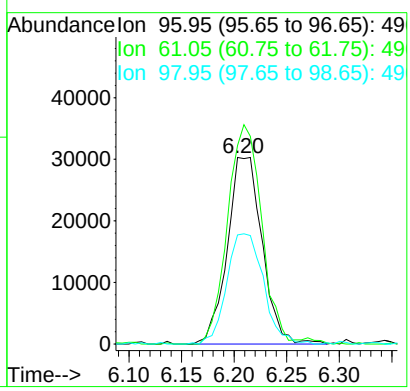


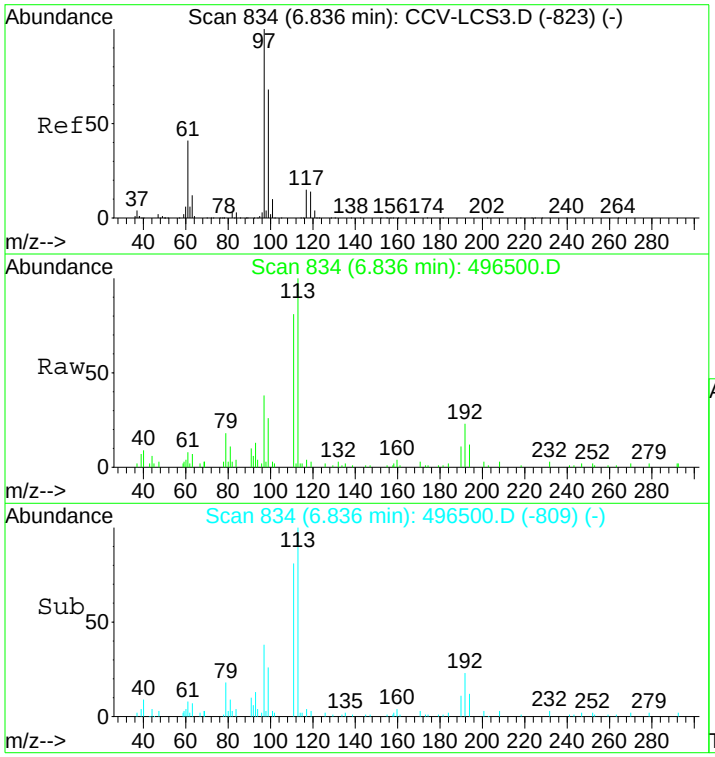


#32
c12dichlorte
Concen: 3.81 ug/L
RT: 6.20 min Scan# 730
Delta R.T. -0.01 min
Lab File: 496500.D
Acq: 9 Nov 2020 10:49

Tgt Ion: 96 Resp: 69891

Ion	Ratio	Lower	Upper
96	100		
61	116.6	105.1	145.1
98	62.1	43.9	83.9

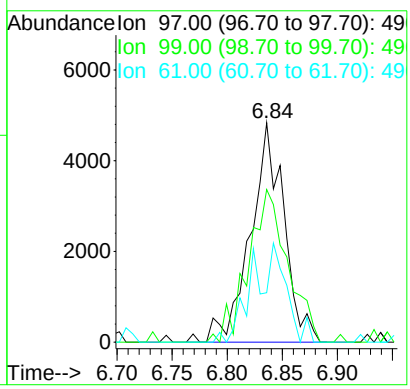


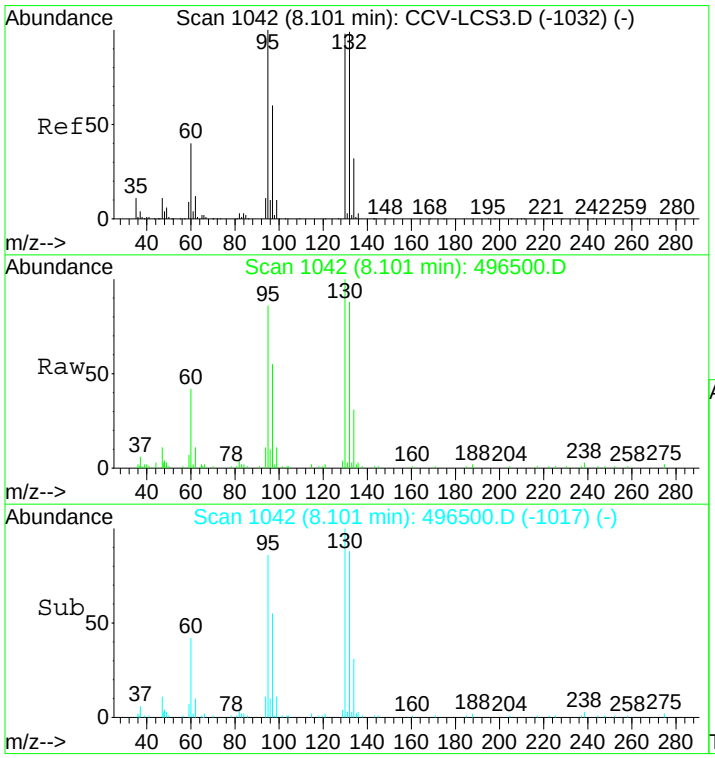


#40
111trichlota
Concen: 0.42 ug/L
RT: 6.84 min Scan# 834
Delta R.T. -0.00 min
Lab File: 496500.D
Acq: 9 Nov 2020 10:49

Tgt Ion: 97 Resp: 10258

Ion	Ratio	Lower	Upper
97	100		
99	81.0	46.5	86.5
61	0.0	21.0	61.0#

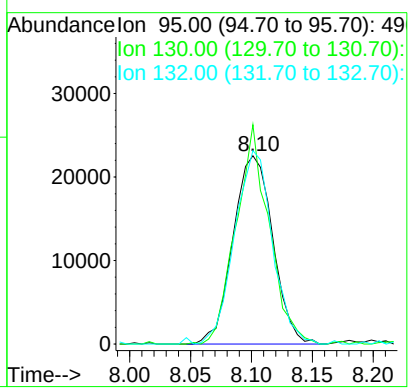




#49
trichloroete
Concen: 2.98 ug/L
RT: 8.10 min Scan# 1042
Delta R.T. -0.00 min
Lab File: 496500.D
Acq: 9 Nov 2020 10:49

Tgt Ion: 95 Resp: 51255

Ion	Ratio	Lower	Upper
95	100		
130	97.2	85.9	125.9
132	97.5	83.1	123.1



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496501.D Vial: 9
Acq On : 9 Nov 2020 11:19 Operator: RLD-DGS
Sample : 176659,496501, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 11:40:01 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1310723	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1194824	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.87	152	679255	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	393074	19.787	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 99 %			
45) SURR12DCAd4	7.21	102	92313	20.438	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
61) SURRd8Tolule	9.64	98	1425094	21.094	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 105 %			
83) SURR4BrFBenz	13.19	95	593830	20.616	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 103 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	3.67	67	3130	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.03	43	7455	Below Cal #		44
16) Iodomethane	0.00	127	0	N.D.		
17) Carbon Dislf	0.00	76	0	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.80	59	3097	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.48	63	20654	0.8724	ug/L	95
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	6.21	96	17455	0.9572	ug/L	89
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496501.D Vial: 9
Acq On : 9 Nov 2020 11:19 Operator: RLD-DGS
Sample : 176659,496501, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 11:40:01 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	6.84	97	8491	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.10	95	38360	2.2469	ug/L	93
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	10.46	166	3523	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.56	91	3176	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496501.D Vial: 9
Acq On : 9 Nov 2020 11:19 Operator: RLD-DGS
Sample : 176659,496501, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 11:40:01 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

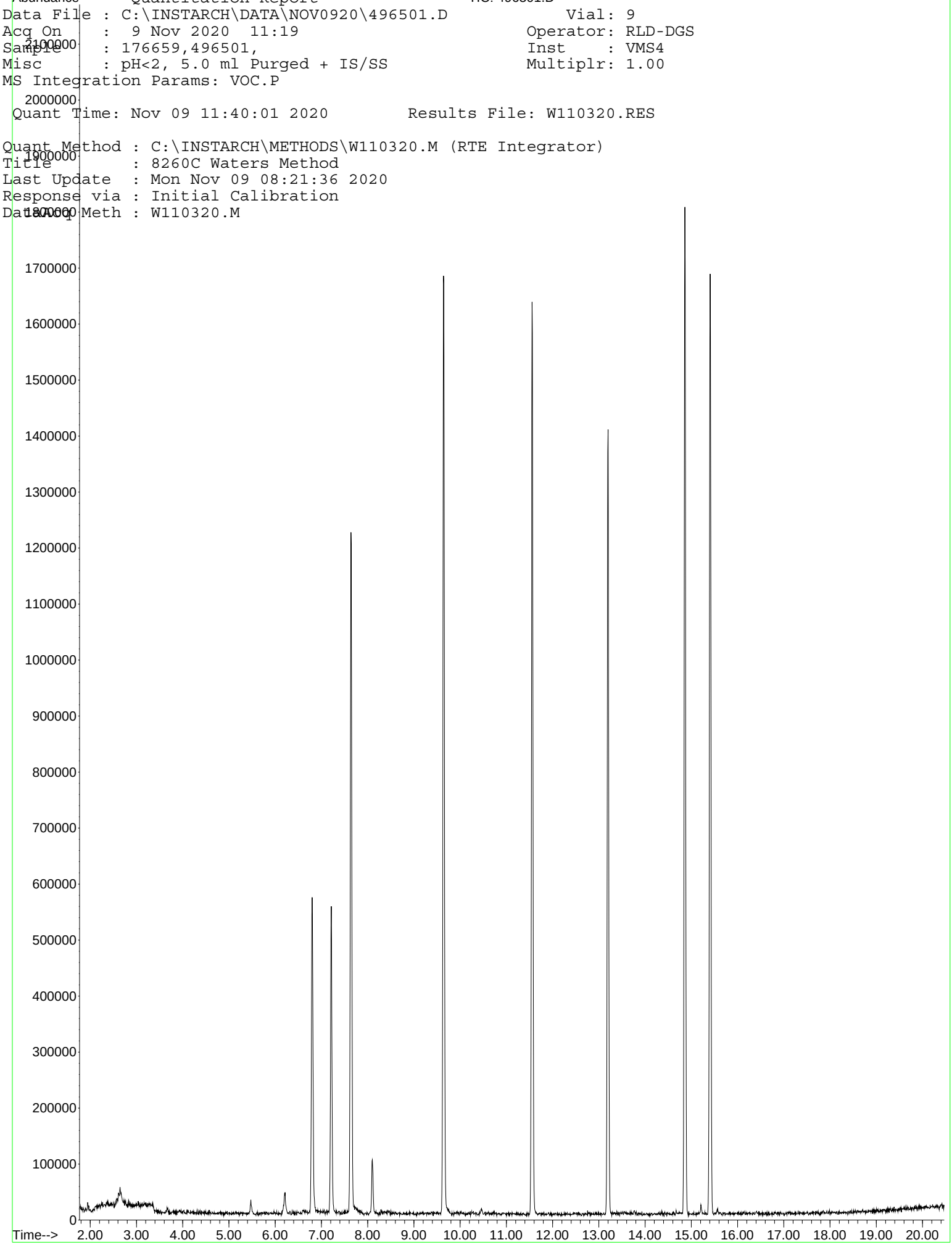
(#) = qualifier out of range (m) = manual integration

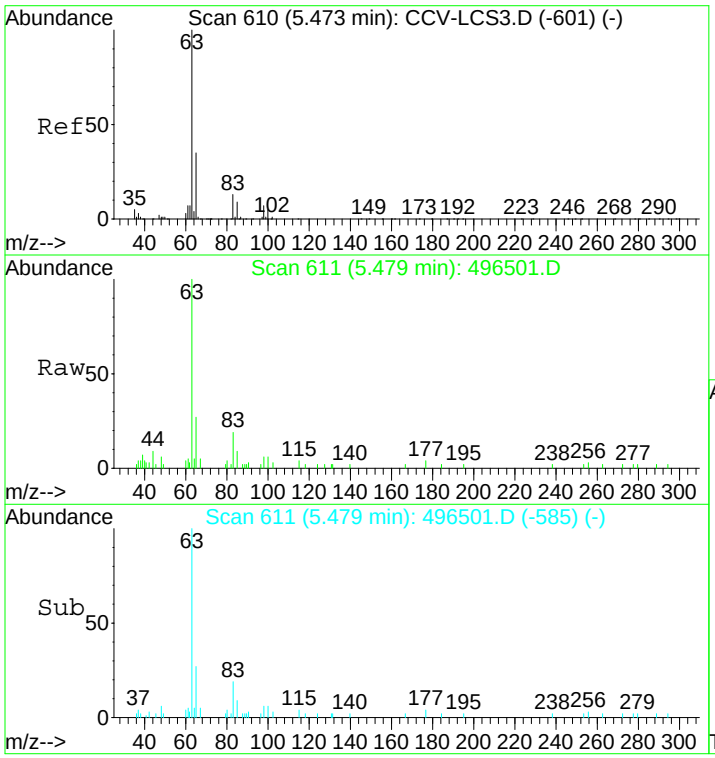
Abundance Quantitation Report TIC: 496501.D

Data File : C:\INSTARCH\DATA\NOV0920\496501.D Vial: 9
Acq On : 9 Nov 2020 11:19 Operator: RLD-DGS
Sample : 176659,496501, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 11:40:01 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
Data Acq Meth : W110320.M

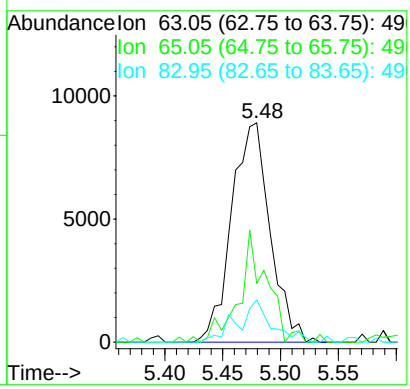


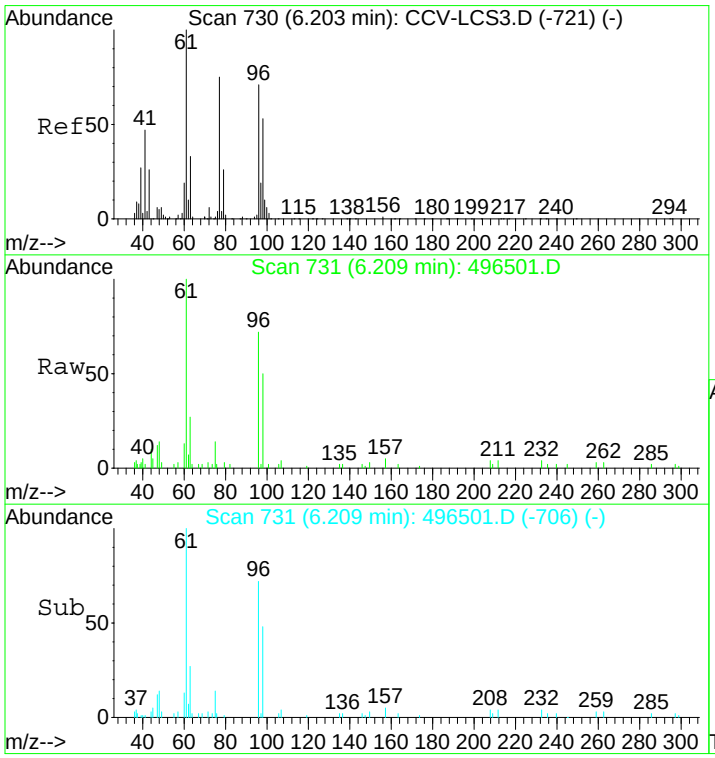


#26
11dichlorota
Concen: 0.87 ug/L
RT: 5.48 min Scan# 611
Delta R.T. 0.01 min
Lab File: 496501.D
Acq: 9 Nov 2020 11:19

Tgt Ion: 63 Resp: 20654

Ion	Ratio	Lower	Upper
63	100		
65	36.7	12.5	52.5
83	16.9	0.0	36.9

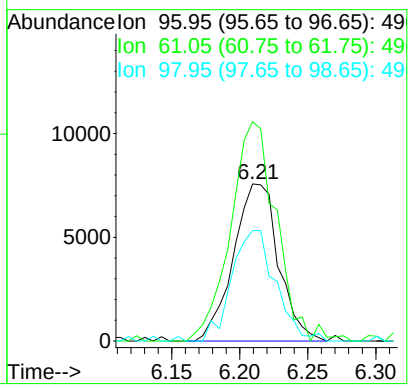


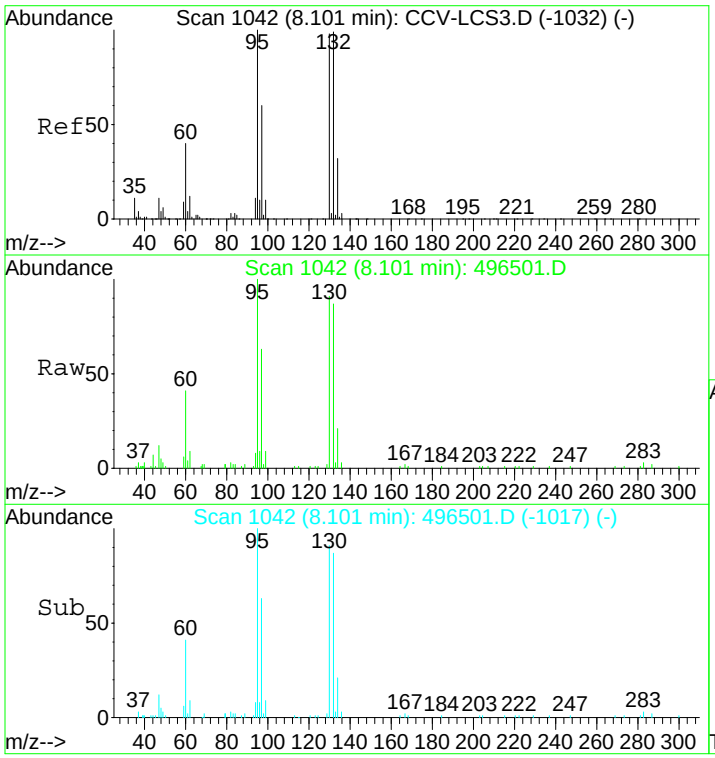


#32
c12dichlorte
Concen: 0.96 ug/L
RT: 6.21 min Scan# 731
Delta R.T. 0.00 min
Lab File: 496501.D
Acq: 9 Nov 2020 11:19

Tgt Ion: 96 Resp: 17455

Ion	Ratio	Lower	Upper
96	100		
61	141.6	105.1	145.1
98	68.2	43.9	83.9

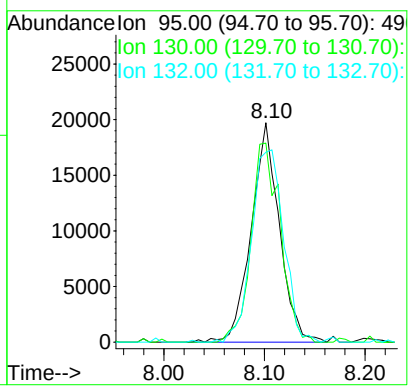




#49
trichloroete
Concen: 2.25 ug/L
RT: 8.10 min Scan# 1042
Delta R.T. 0.00 min
Lab File: 496501.D
Acq: 9 Nov 2020 11:19

Tgt Ion: 95 Resp: 38360

Ion	Ratio	Lower	Upper
95	100		
130	94.6	85.9	125.9
132	99.6	83.1	123.1



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496502.D Vial: 10
Acq On : 9 Nov 2020 11:49 Operator: RLD-DGS
Sample : 176659,496502, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 12:09:34 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1285594	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1171774	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	657905	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	376620	19.329	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 97 %			
45) SURR12DCAd4	7.21	102	89912	20.295	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
61) SURRd8Tolule	9.64	98	1394536	21.045	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 105 %			
83) SURR4BrFBenz	13.20	95	589284	21.122	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 106 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.79	64	2628	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	3.65	67	14888	1.0164	ug/L	97
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	3.95	101	9794	N.D.		
15) Acetone	4.03	43	5938	Below Cal #		44
16) Iodomethane	0.00	127	0	N.D.		
17) Carbon Dislf	0.00	76	0	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496502.D Vial: 10
Acq On : 9 Nov 2020 11:49 Operator: RLD-DGS
Sample : 176659,496502, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 12:09:34 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.60	83	12817	N.D.		
40)	111trichlota	6.82	97	3274	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.05	119	58265	2.7665	ug/L	95
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	0.00	91	0	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496502.D Vial: 10
Acq On : 9 Nov 2020 11:49 Operator: RLD-DGS
Sample : 176659,496502, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 12:09:34 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

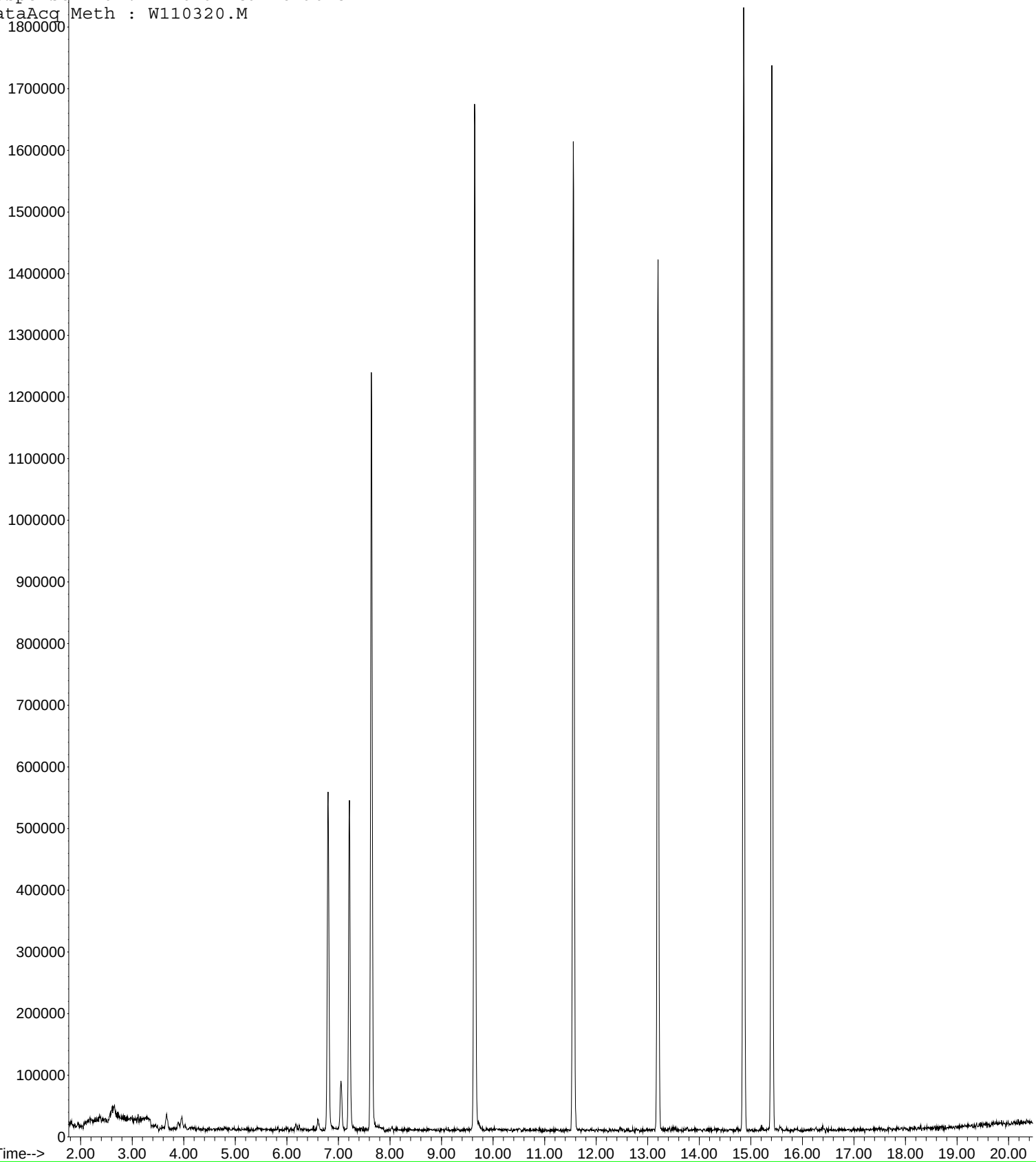
(#) = qualifier out of range (m) = manual integration

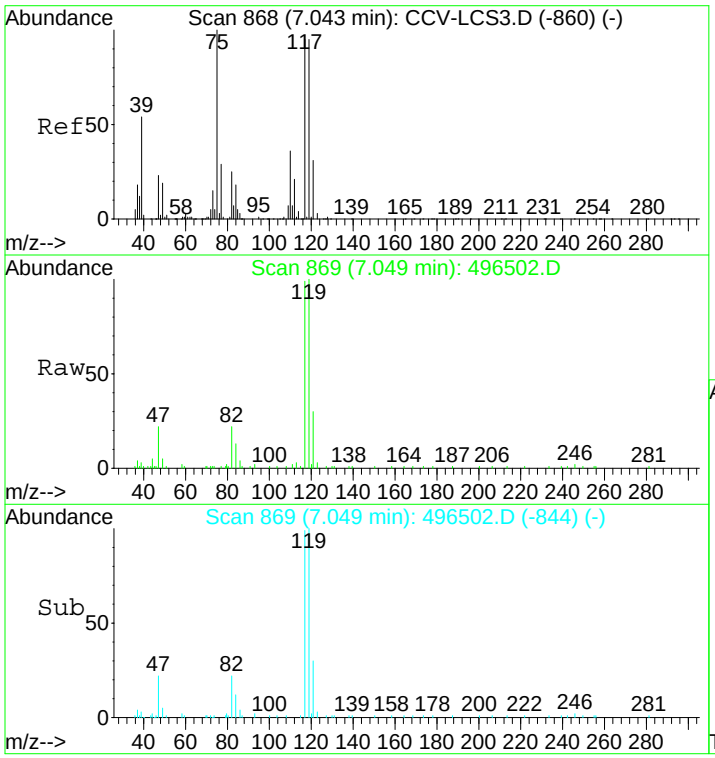
Abundance Quantitation Report TIC: 496502.D

Data File : C:\INSTARCH\DATA\NOV0920\496502.D Vial: 10
Acq On : 9 Nov 2020 11:49 Operator: RLD-DGS
Sample : 176659,496502, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 12:09:34 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

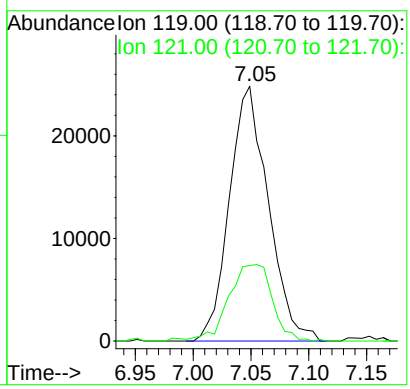




#43
Carbtetraclo
Concen: 2.77 ug/L
RT: 7.05 min Scan# 869
Delta R.T. -0.00 min
Lab File: 496502.D
Acq: 9 Nov 2020 11:49

Tgt Ion:119 Resp: 58265

Ion	Ratio	Lower	Upper
119	100		
121	33.8	11.3	51.3



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496503.D Vial: 11
Acq On : 9 Nov 2020 12:18 Operator: RLD-DGS
Sample : 176659,496503, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 12:39:10 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1350439	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1182514	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	662639	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	389759	19.043	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 95 %			
45) SURR12DCAd4	7.21	102	93144	20.015	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
61) SURRd8Tolule	9.64	98	1381686	19.850	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 99 %			
83) SURR4BrFBenz	13.20	95	596313	21.221	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 106 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	3.22	101	2677	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.03	43	4721	Below Cal #		44
16) Iodomethane	0.00	127	0	N.D.		
17) Carbon Dislf	0.00	76	0	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.80	59	2958	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.49	63	6694	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	6.21	96	7797	0.4150	ug/L	87
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496503.D Vial: 11
Acq On : 9 Nov 2020 12:18 Operator: RLD-DGS
Sample : 176659,496503, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 12:39:10 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.60	83	6395	N.D.		
40)	111trichlota	6.84	97	4716	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.04	119	26864	1.2143	ug/L	95
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.10	95	26126	1.4853	ug/L	89
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.73	92	6520	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	10.46	166	4460	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.58	91	3381	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	11.73	91	3102	N.D.		
76)	m p-Xylene	11.91	106	4372	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	14.37	105	5188	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496503.D Vial: 11
Acq On : 9 Nov 2020 12:18 Operator: RLD-DGS
Sample : 176659,496503, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 12:39:10 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

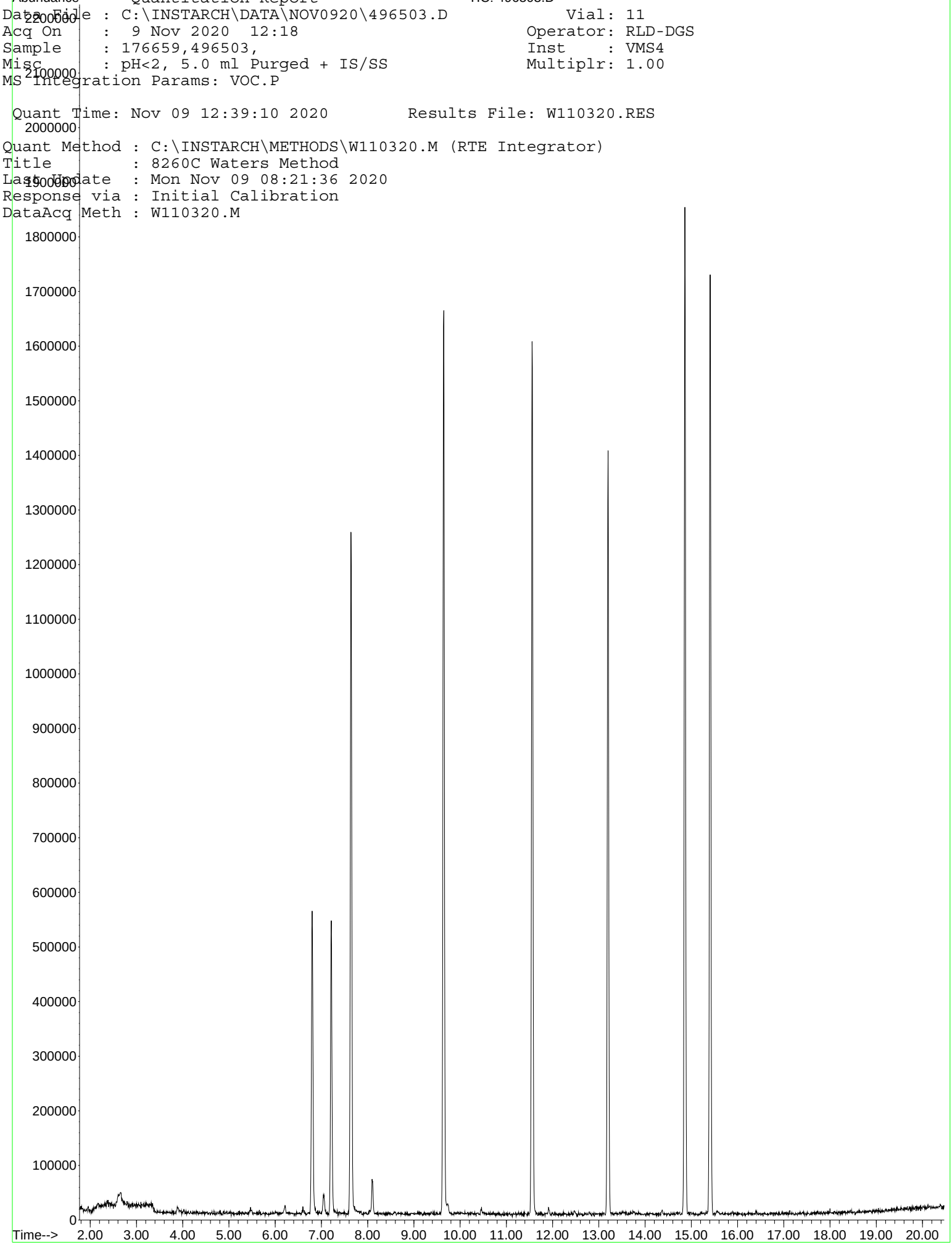
(#) = qualifier out of range (m) = manual integration

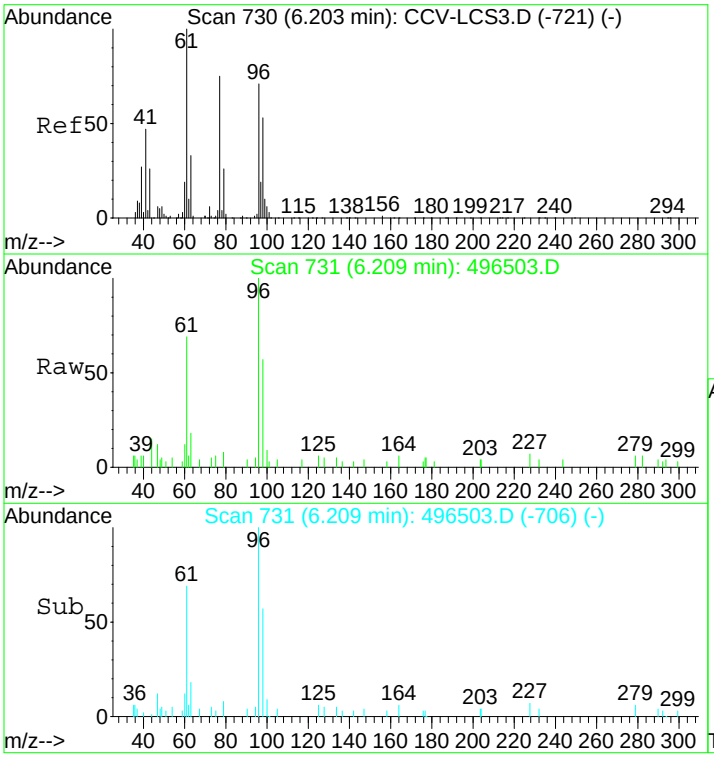
Abundance Quantitation Report TIC: 496503.D

Data File : C:\INSTARCH\DATA\NOV0920\496503.D Vial: 11
Acq On : 9 Nov 2020 12:18 Operator: RLD-DGS
Sample : 176659,496503, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 12:39:10 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

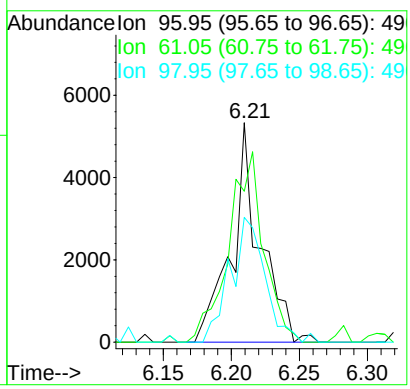


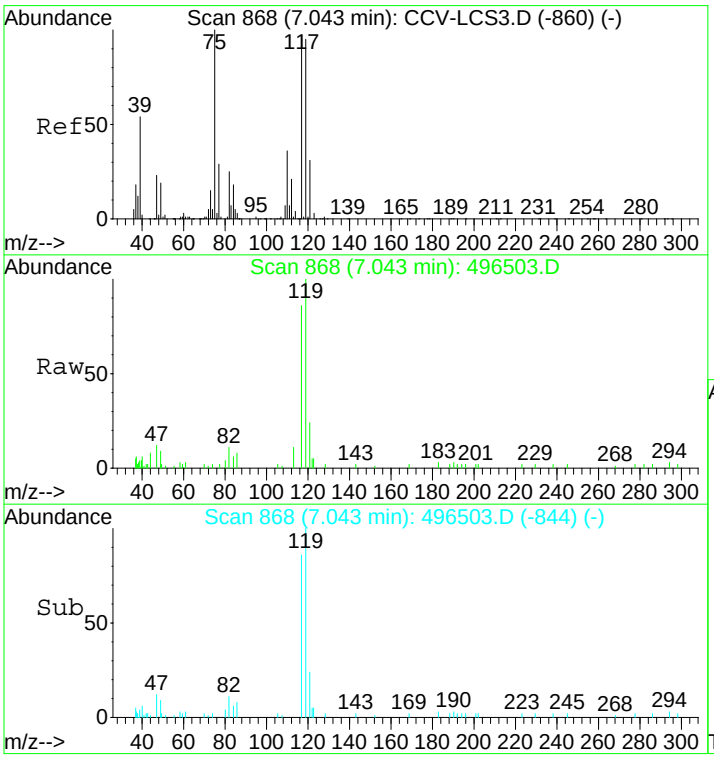


#32
c12dichlorte
Concen: 0.41 ug/L
RT: 6.21 min Scan# 731
Delta R.T. 0.00 min
Lab File: 496503.D
Acq: 9 Nov 2020 12:18

Tgt Ion: 96 Resp: 7797

Ion	Ratio	Lower	Upper
96	100		
61	106.7	105.1	145.1
98	69.4	43.9	83.9

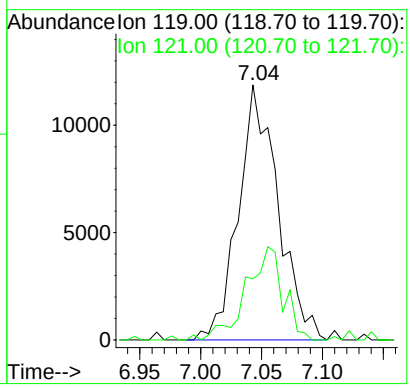


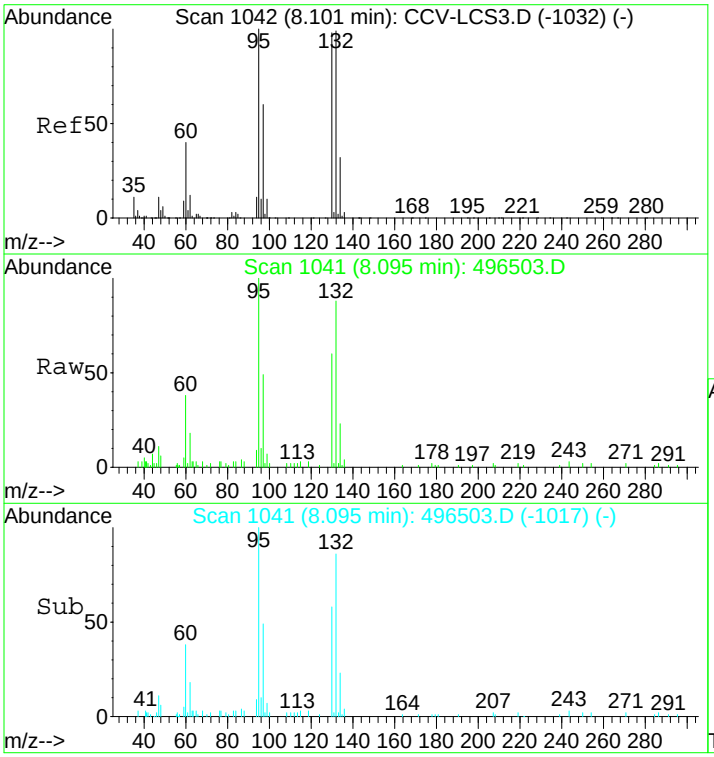


#43
Carbtetraclo
Concen: 1.21 ug/L
RT: 7.04 min Scan# 868
Delta R.T. -0.01 min
Lab File: 496503.D
Acq: 9 Nov 2020 12:18

Tgt Ion:119 Resp: 26864

Ion	Ratio	Lower	Upper
119	100		
121	34.1	11.3	51.3

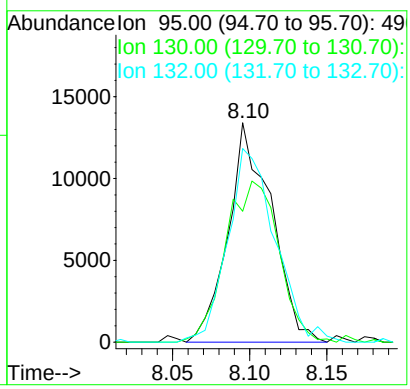




#49
trichloroete
Concen: 1.49 ug/L
RT: 8.10 min Scan# 1041
Delta R.T. -0.01 min
Lab File: 496503.D
Acq: 9 Nov 2020 12:18

Tgt Ion: 95 Resp: 26126

Ion	Ratio	Lower	Upper
95	100		
130	90.4	85.9	125.9
132	97.0	83.1	123.1



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496504.D Vial: 12
Acq On : 9 Nov 2020 12:48 Operator: RLD-DGS
Sample : 176659,496504, Inst : VMS4
Misc : pH7, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 13:08:48 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.65	96	1360644	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1157632	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	669999	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	388480	18.838	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 94 %			
45) SURR12DCAd4	7.21	102	92105	19.643	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
61) SURRd8Tolule	9.64	98	1384012	19.734	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 99 %			
83) SURR4BrFBenz	13.20	95	594699	20.931	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 105 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.03	43	4848	Below Cal # 44	
16) Iodomethane	0.00	127	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496504.D Vial: 12
Acq On : 9 Nov 2020 12:48 Operator: RLD-DGS
Sample : 176659,496504, Inst : VMS4
Misc : pH7, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 13:08:48 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.74	92	5171	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	11.75	91	2728	N.D.	
76)	m p-Xylene	11.92	106	4256	N.D.	
77)	o-Xylene	12.45	106	2608	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.37	105	3982	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496504.D Vial: 12
Acq On : 9 Nov 2020 12:48 Operator: RLD-DGS
Sample : 176659,496504, Inst : VMS4
Misc : pH7, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 13:08:48 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	17.98	128	2566	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

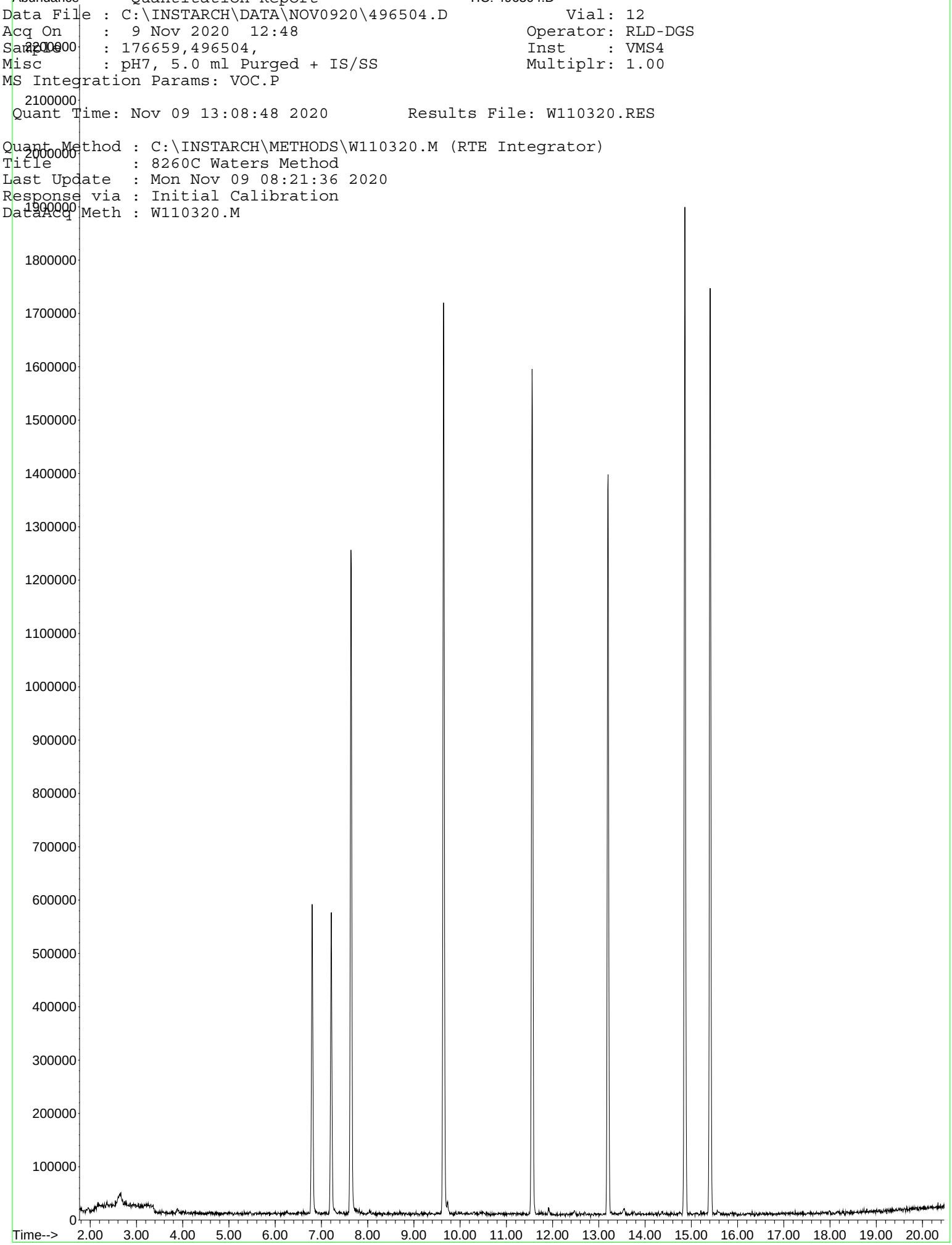
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 496504.D

Data File : C:\INSTARCH\DATA\NOV0920\496504.D Vial: 12
Acq On : 9 Nov 2020 12:48 Operator: RLD-DGS
Sample : 176659,496504, Inst : VMS4
Misc : pH7, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 13:08:48 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496507.D Vial: 13
Acq On : 9 Nov 2020 13:17 Operator: RLD-DGS
Sample : 176659,496507, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 13:38:13 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.65	96	1282133	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1157501	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	660232	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	385143	19.820	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 99 %			
45) SURR12DCAd4	7.21	102	90544	20.493	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
61) SURRd8Tolule	9.65	98	1317453	19.935	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 100 %			
83) SURR4BrFBenz	13.20	95	587955	21.000	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 105 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.03	43	5442	Below Cal # 44	
16) Iodomethane	0.00	127	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496507.D Vial: 13
Acq On : 9 Nov 2020 13:17 Operator: RLD-DGS
Sample : 176659,496507, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 13:38:13 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.73	92	9090	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.56	91	3025	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	11.75	91	4246	N.D.	
76)	m p-Xylene	11.92	106	6585	N.D.	
77)	o-Xylene	12.48	106	3349	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.36	105	4500	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496507.D Vial: 13
Acq On : 9 Nov 2020 13:17 Operator: RLD-DGS
Sample : 176659,496507, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 13:38:13 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	17.98	128	3655	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

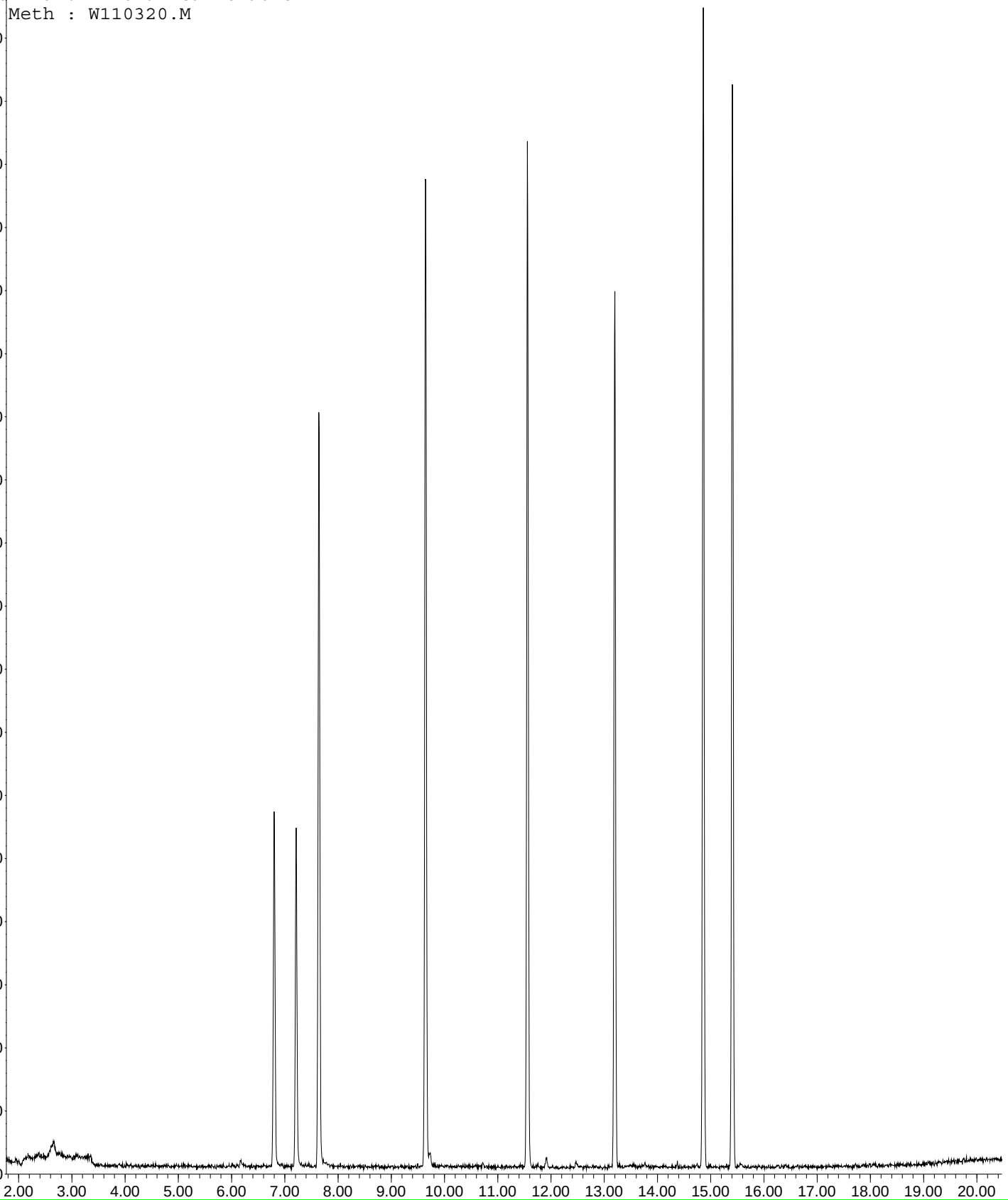
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 496507.D

Data File : C:\INSTARCH\DATA\NOV0920\496507.D Vial: 13
Acq On : 9 Nov 2020 13:17 Operator: RLD-DGS
Sample : 176659,496507, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 13:38:13 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496508.D Vial: 14
Acq On : 9 Nov 2020 13:47 Operator: RLD-DGS
Sample : 176659,496508, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 14:07:52 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1262423	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1148211	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	654685	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.79	113	389797	20.373 ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 102 %		
45) SURR12DCAd4	7.21	102	91490	21.030 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 105 %		
61) SURRd8Tolule	9.64	98	1379773	21.204 ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 106 %		
83) SURR4BrFBenz	13.20	95	577552	20.803 ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 104 %		
Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.02	43	21926	Below Cal	96
16) Iodomethane	0.00	127	0	N.D.	
17) Carbon Dislf	4.19	76	2697	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.81	59	3050	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	6.25	72	3466	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496508.D Vial: 14
Acq On : 9 Nov 2020 13:47 Operator: RLD-DGS
Sample : 176659,496508, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 14:07:52 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.72	92	37086	0.9538	ug/L	94
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	10.59	43	3071	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	0.00	91	0	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	11.75	91	5382	N.D.		
76)	m p-Xylene	11.92	106	4322	N.D.		
77)	o-Xylene	12.46	106	3377	N.D.		
78)	Styrene	12.49	104	4322	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	14.36	105	3782	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	14.85	119	2528	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496508.D Vial: 14
Acq On : 9 Nov 2020 13:47 Operator: RLD-DGS
Sample : 176659,496508, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 14:07:52 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102)	124Trichlobe	0.00	180	0	N.D.	
103)	Hexachlorobu	0.00	225	0	N.D.	
104)	Naphthalene	0.00	128	0	N.D.	
105)	123Trichlben	0.00	180	0	N.D.	

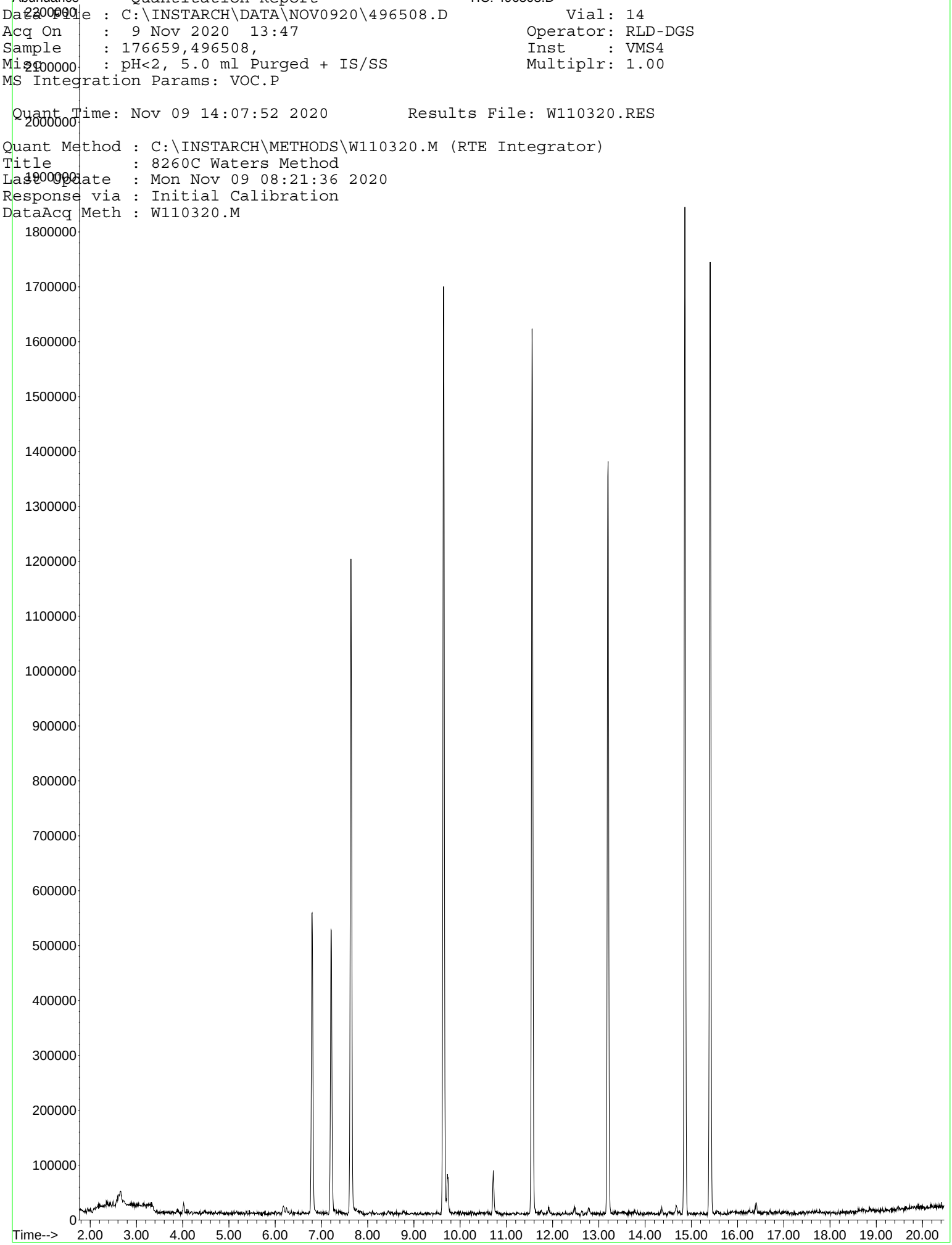
(#) = qualifier out of range (m) = manual integration

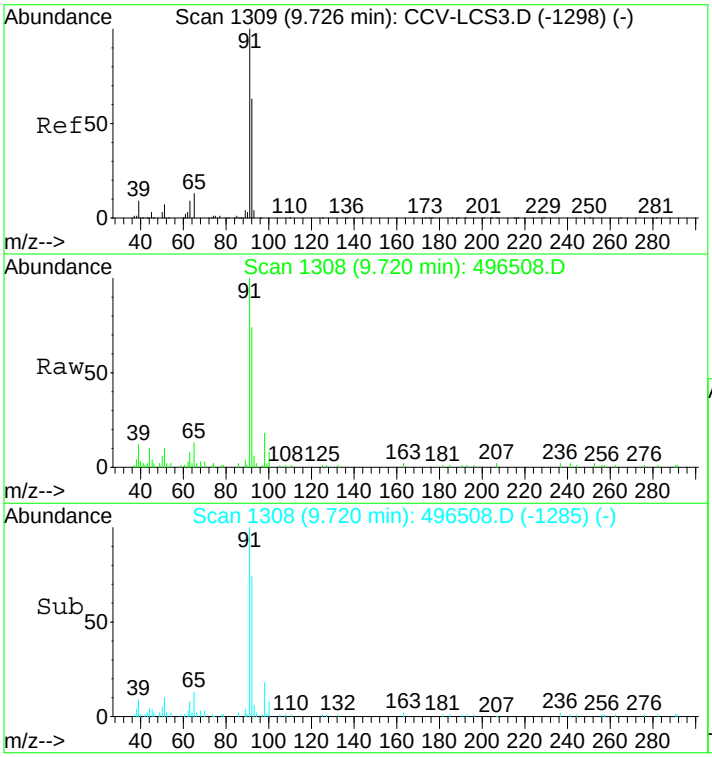
Abundance Quantitation Report TIC: 496508.D

Data File : C:\INSTARCH\DATA\NOV0920\496508.D Vial: 14
Acq On : 9 Nov 2020 13:47 Operator: RLD-DGS
Sample : 176659,496508, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 14:07:52 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

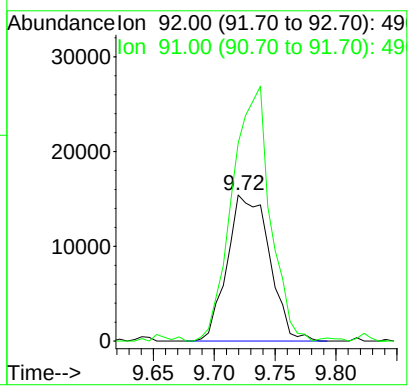




#62
Toluene
Concen: 0.95 ug/L
RT: 9.72 min Scan# 1308
Delta R.T. -0.01 min
Lab File: 496508.D
Acq: 9 Nov 2020 13:47

Tgt Ion: 92 Resp: 37086

Ion	Ratio	Lower	Upper
92	100		
91	157.7	146.5	186.5



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496542.D Vial: 15
Acq On : 9 Nov 2020 14:16 Operator: RLD-DGS
Sample : 176659,496542, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 14:37:23 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1279694	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1181019	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	659668	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.80	113	381340	19.662 ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 98 %		
45) SURR12DCAd4	7.21	102	88681	20.110 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %		
61) SURRd8Tolule	9.65	98	1336505	20.262 ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 101 %		
83) SURR4BrFBenz	13.20	95	561735	20.081 ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 100 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.02	43	4229	Below Cal # 44	
16) Iodomethane	0.00	127	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496542.D Vial: 15
Acq On : 9 Nov 2020 14:16 Operator: RLD-DGS
Sample : 176659,496542, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 14:37:23 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.60	83	103587	3.7284	ug/L	95
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.05	119	734706	35.0455	ug/L	98
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.10	95	54066	3.2436	ug/L	93
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.73	92	5640	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.56	91	2654	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	11.92	106	3577	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	14.37	105	5749	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496542.D Vial: 15
Acq On : 9 Nov 2020 14:16 Operator: RLD-DGS
Sample : 176659,496542, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 14:37:23 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	17.99	128	3005	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

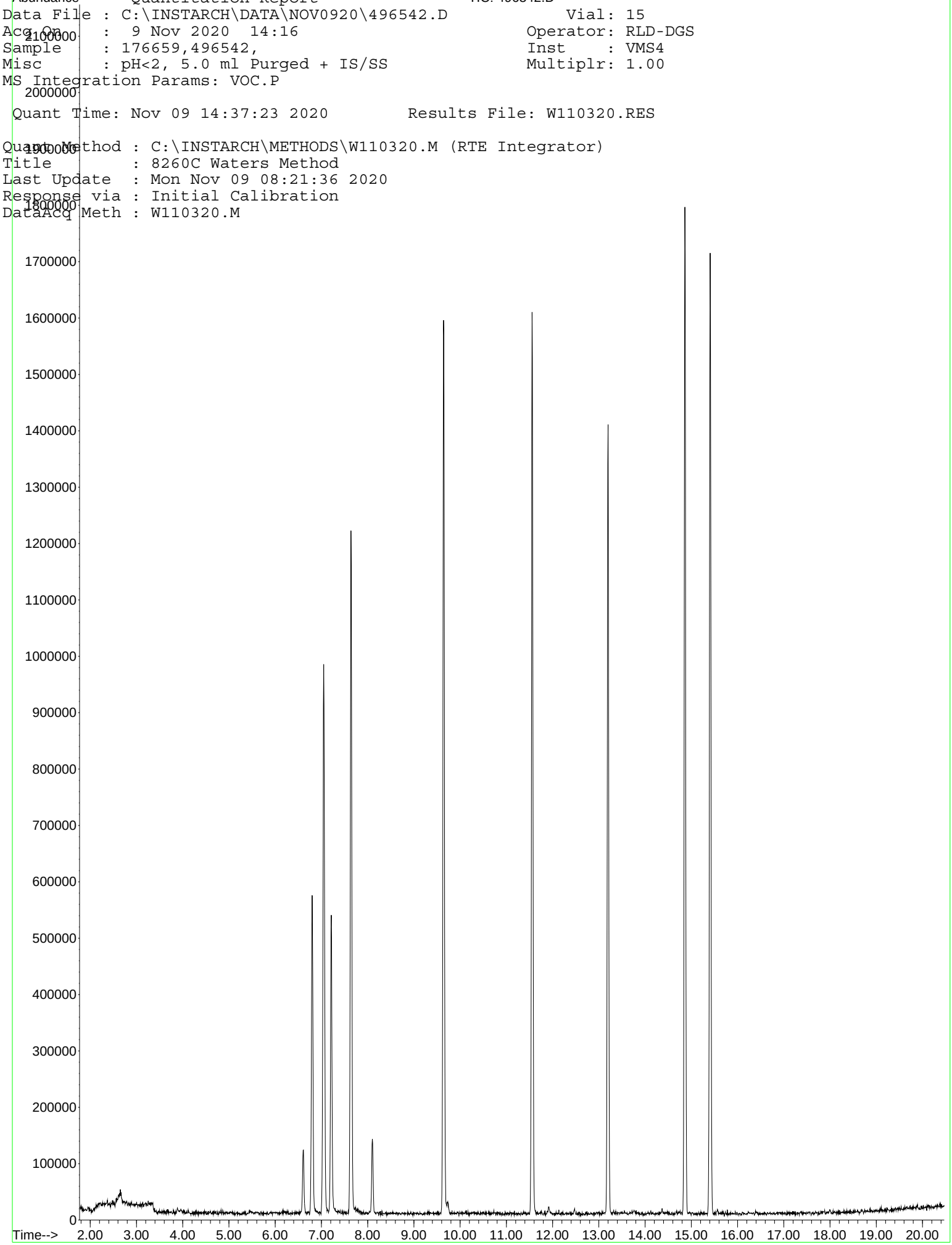
(#) = qualifier out of range (m) = manual integration

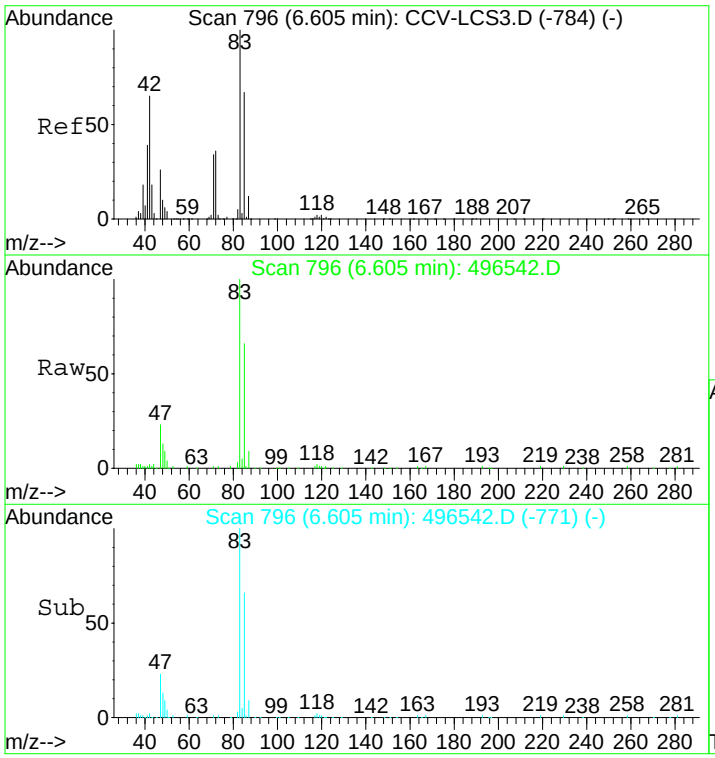
Abundance Quantitation Report TIC: 496542.D

Data File : C:\INSTARCH\DATA\NOV0920\496542.D Vial: 15
Acq On : 9 Nov 2020 14:16 Operator: RLD-DGS
Sample : 176659,496542, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 14:37:23 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

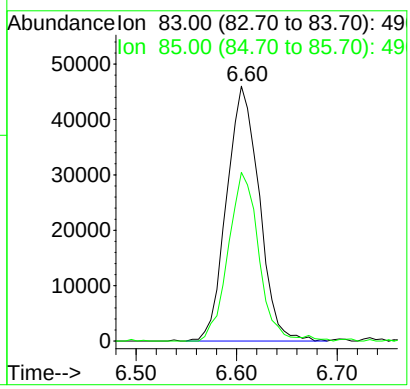


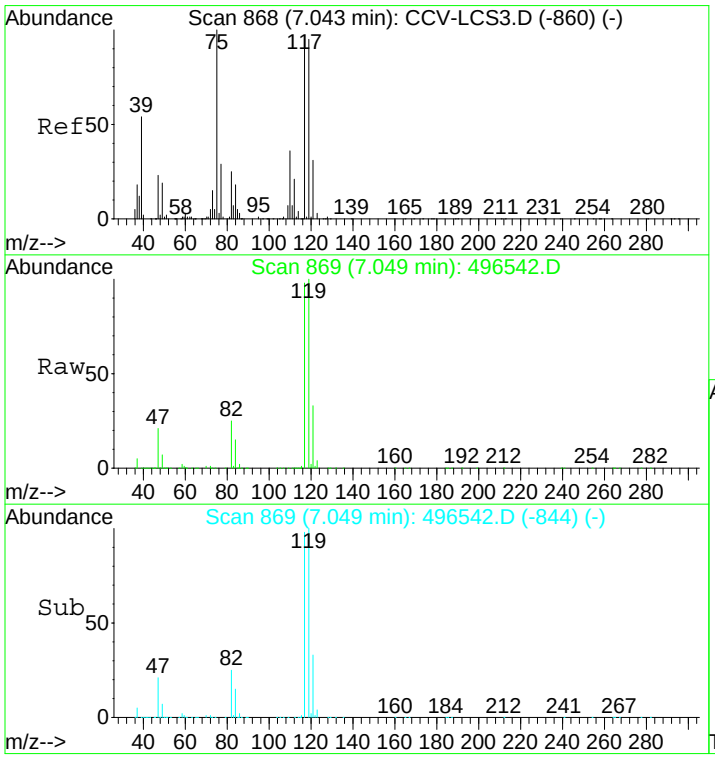


#39
Chloroform
Concen: 3.73 ug/L
RT: 6.60 min Scan# 796
Delta R.T. -0.00 min
Lab File: 496542.D
Acq: 9 Nov 2020 14:16

Tgt Ion: 83 Resp: 103587

Ion	Ratio	Lower	Upper
83	100		
85	62.4	46.5	86.5

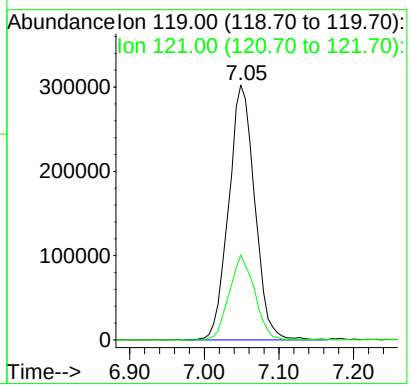


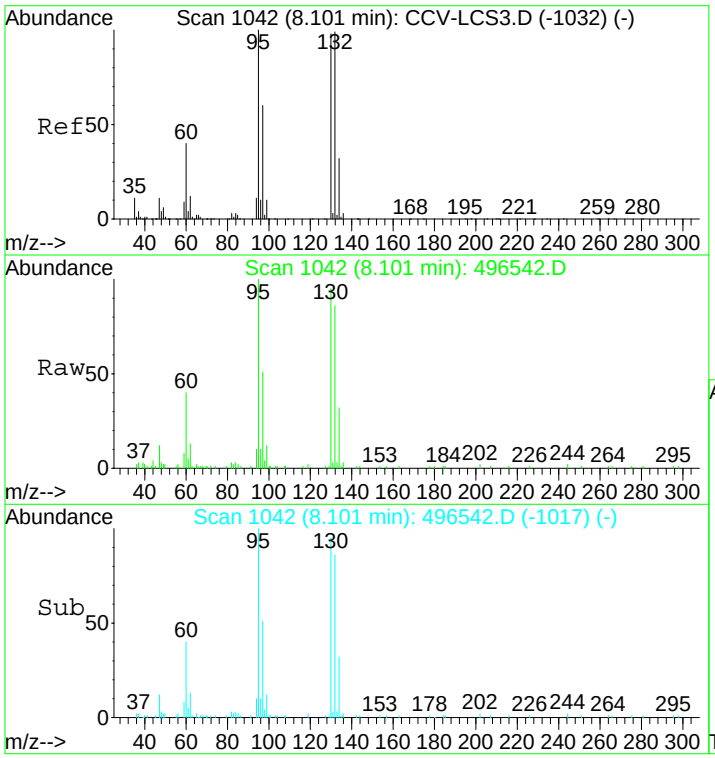


#43
Carbtetraclo
Concen: 35.05 ug/L
RT: 7.05 min Scan# 869
Delta R.T. -0.00 min
Lab File: 496542.D
Acq: 9 Nov 2020 14:16

Tgt Ion:119 Resp: 734706

Ion	Ratio	Lower	Upper
119	100		
121	32.6	11.3	51.3

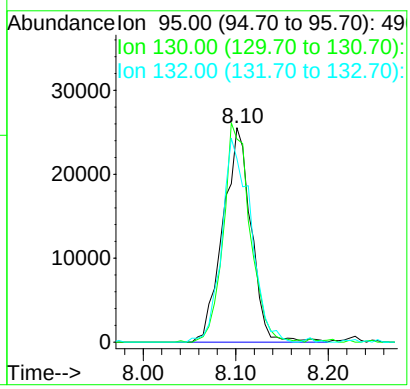




#49
trichloroete
Concen: 3.24 ug/L
RT: 8.10 min Scan# 1042
Delta R.T. -0.00 min
Lab File: 496542.D
Acq: 9 Nov 2020 14:16

Tgt Ion: 95 Resp: 54066

Ion	Ratio	Lower	Upper
95	100		
130	96.6	85.9	125.9
132	97.4	83.1	123.1



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496543.D Vial: 22
Acq On : 9 Nov 2020 17:26 Operator: RLD-DGS
Sample : 176659,496543, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 17:46:35 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1284272	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1161513	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	652416	20.00	ug/L	0.00 NA%

System Monitoring Compounds						
41) SURRDibrflma	6.80	113	393257	20.204	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 101 %			
45) SURR12DCAd4	7.21	102	92018	20.792	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 104 %			
61) SURRd8Tolule	9.64	98	1369469	20.688	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 103 %			
83) SURR4BrFBenz	13.20	95	612335	22.133	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 111 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	2.66	94	4731	Below Cal #	1
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.02	43	5269	Below Cal #	61
16) Iodomethane	0.00	127	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.81	59	3628	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496543.D Vial: 22
Acq On : 9 Nov 2020 17:26 Operator: RLD-DGS
Sample : 176659,496543, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 17:46:35 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	424414	15.2216 ug/L	99
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.05	119	1775552	84.3919 ug/L	94
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	7.30	62	21766	1.0363 ug/L	93
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.10	95	273176	16.3304 ug/L	98
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.73	92	7752	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	11.76	91	4268	N.D.	
76)	m p-Xylene	11.93	106	6345	N.D.	
77)	o-Xylene	12.46	106	2861	N.D.	
78)	Styrene	12.48	104	3001	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.37	105	3618	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.41	91	3034	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496543.D Vial: 22
Acq On : 9 Nov 2020 17:26 Operator: RLD-DGS
Sample : 176659,496543, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 17:46:35 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

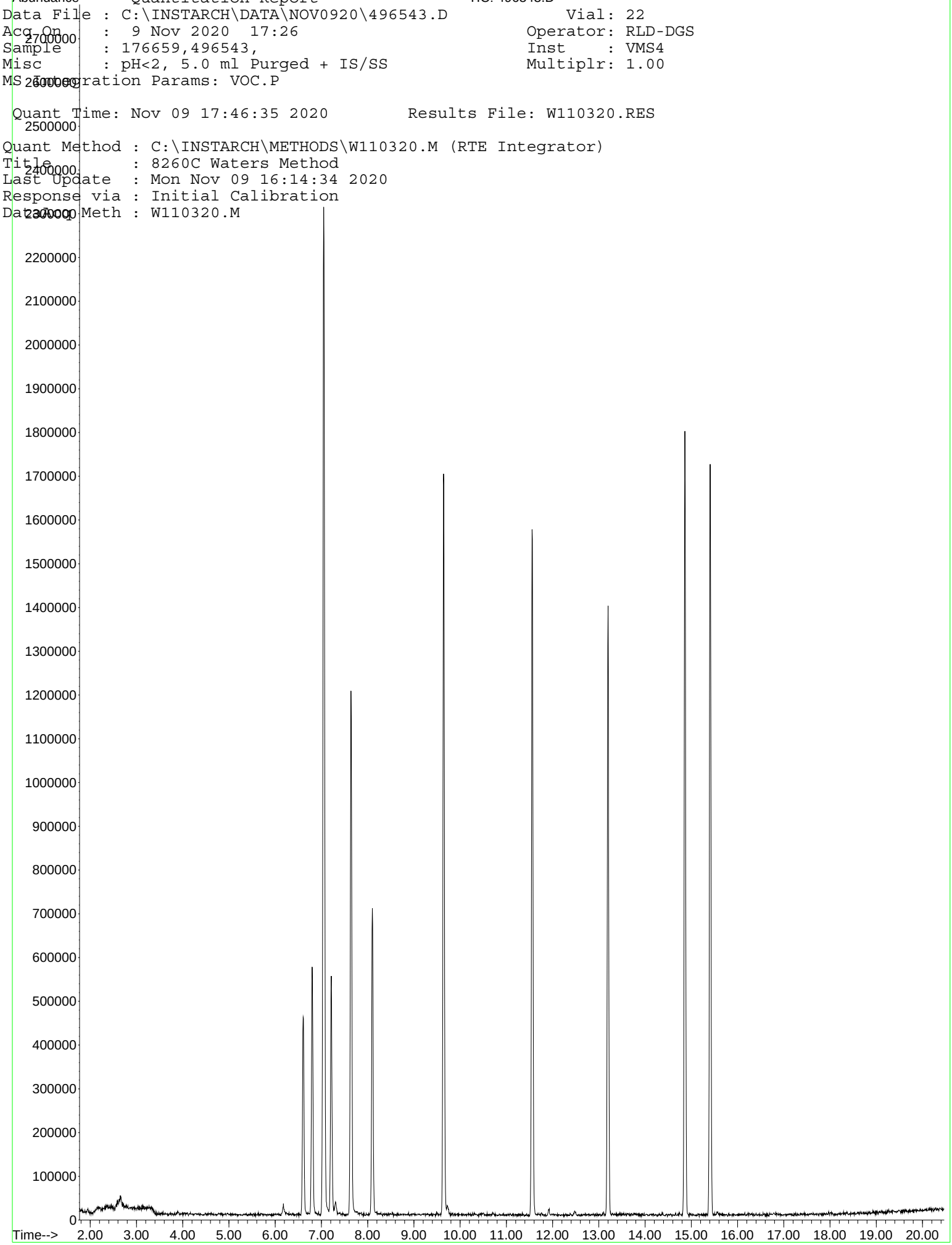
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

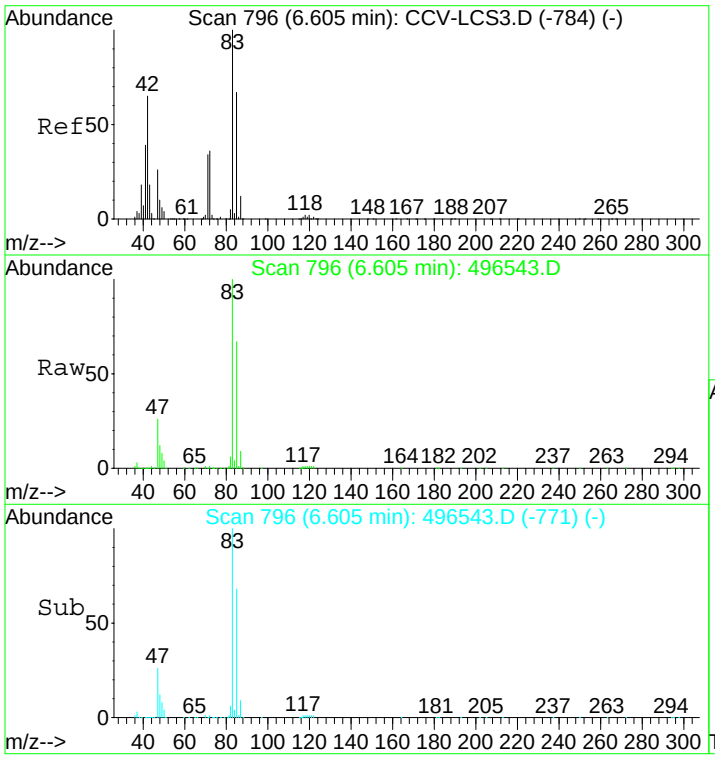
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0920\496543.D Vial: 22
Acq On : 9 Nov 2020 17:26 Operator: RLD-DGS
Sample : 176659,496543, Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 17:46:35 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
Data Meth : W110320.M

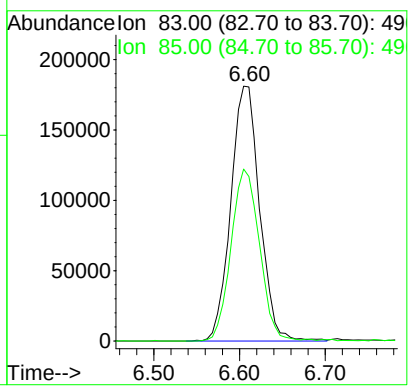


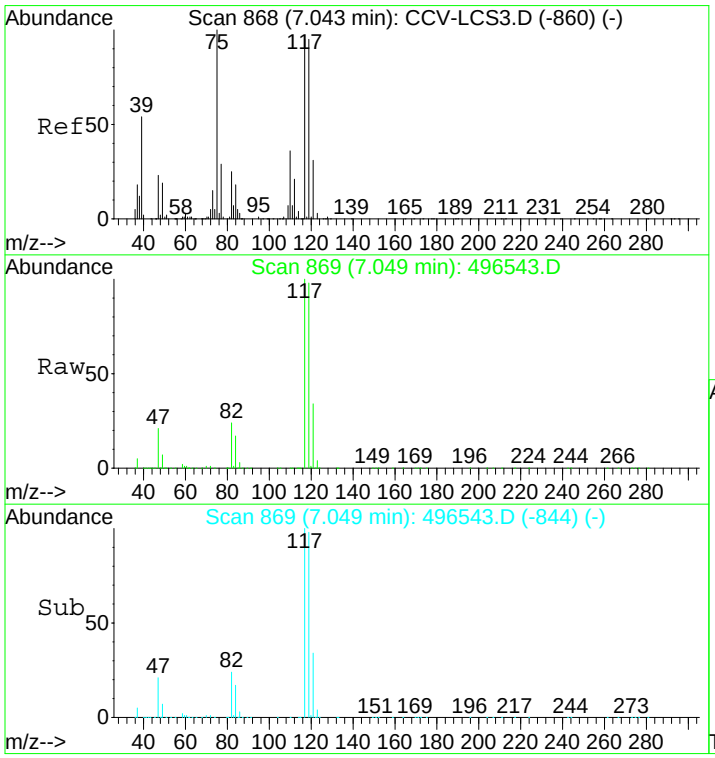


#39
Chloroform
Concen: 15.22 ug/L
RT: 6.60 min Scan# 796
Delta R.T. 0.00 min
Lab File: 496543.D
Acq: 9 Nov 2020 17:26

Tgt Ion: 83 Resp: 424414

Ion	Ratio	Lower	Upper
83	100		
85	67.0	46.5	86.5

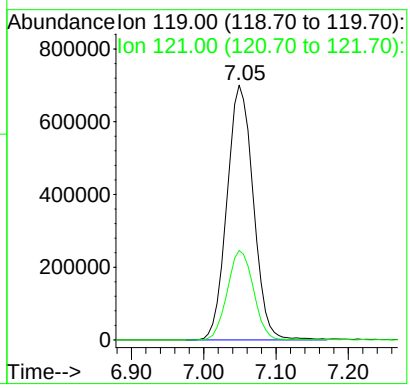


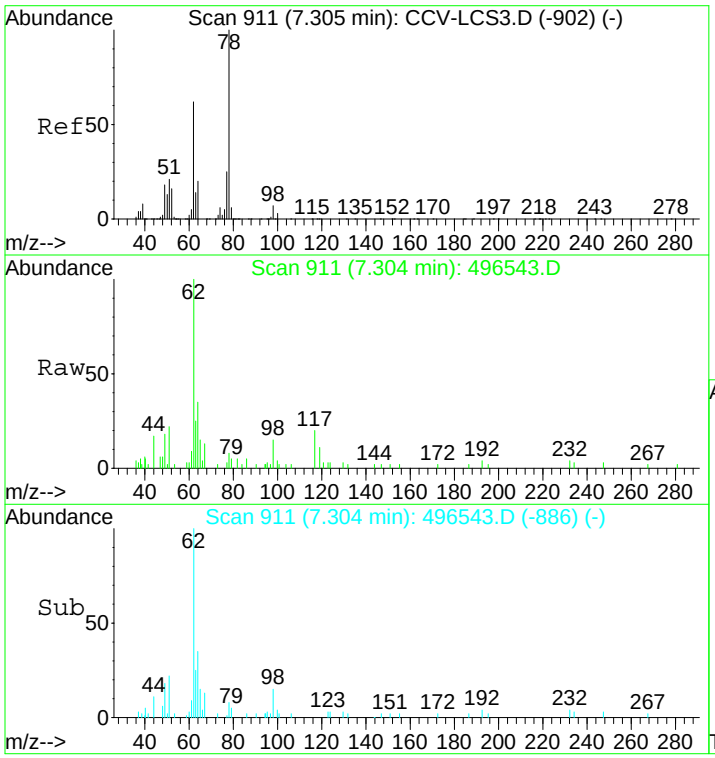


#43
Carbtetraclo
Concen: 84.39 ug/L
RT: 7.05 min Scan# 869
Delta R.T. 0.00 min
Lab File: 496543.D
Acq: 9 Nov 2020 17:26

Tgt Ion:119 Resp: 1775552

Ion	Ratio	Lower	Upper
119	100		
121	34.8	11.3	51.3

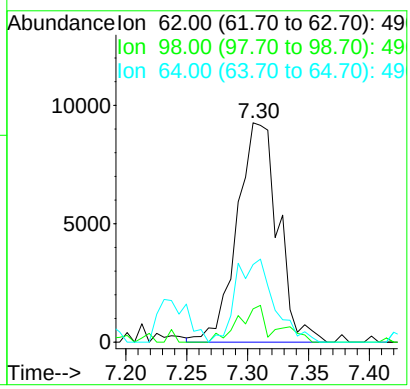


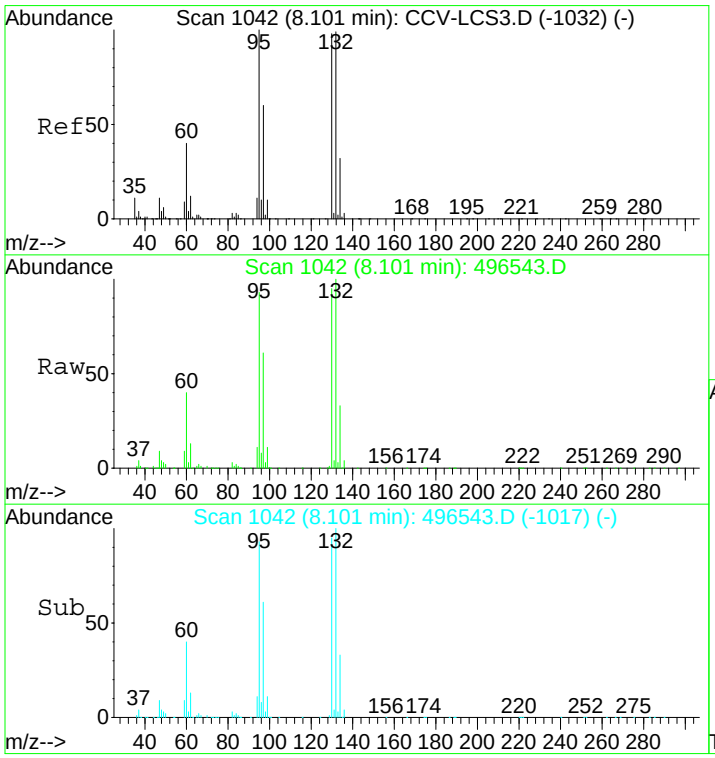


#47
12dichlorota
Concen: 1.04 ug/L
RT: 7.30 min Scan# 911
Delta R.T. 0.00 min
Lab File: 496543.D
Acq: 9 Nov 2020 17:26

Tgt Ion: 62 Resp: 21766

Ion	Ratio	Lower	Upper
62	100		
98	14.3	0.0	29.5
64	35.2	12.1	52.1

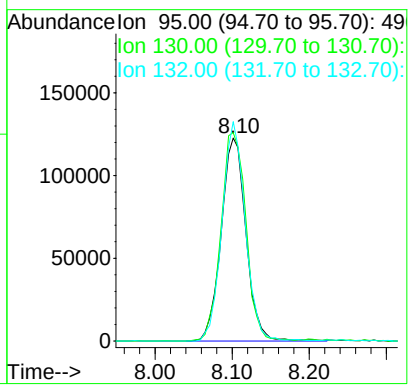




#49
trichloroete
Concen: 16.33 ug/L
RT: 8.10 min Scan# 1042
Delta R.T. 0.00 min
Lab File: 496543.D
Acq: 9 Nov 2020 17:26

Tgt Ion: 95 Resp: 273176

Ion	Ratio	Lower	Upper
95	100		
130	103.8	85.9	125.9
132	101.1	83.1	123.1



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496543R.D Vial: 51
Acq On : 10 Nov 2020 11:39 Operator: RLD-DGS
Sample : 176659,496543,5 Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 11:59:40 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1362610	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1144185	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	673138	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	398287	19.286	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 96 %			
45) SURR12DCAd4	7.21	102	91700	19.529	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
61) SURRd8Tolule	9.64	98	1441368	20.522	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 103 %			
83) SURR4BrFBenz	13.20	95	617172	21.621	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 108 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	2.67	94	3836	Below	Cal	87
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.03	43	9600	Below	Cal	89
16) Iodomethane	0.00	127	0	N.D.		
17) Carbon Dislf	0.00	76	0	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.82	59	3180	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.59	42	4254	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496543R.D Vial: 51
Acq On : 10 Nov 2020 11:39 Operator: RLD-DGS
Sample : 176659,496543,5 Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 11:59:40 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.61	83	88127	2.9790 ug/L	98
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.05	119	354792	15.8938 ug/L	99
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	7.30	62	4793	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.10	95	54946	3.0958 ug/L	94
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.56	91	3188	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496543R.D Vial: 51
Acq On : 10 Nov 2020 11:39 Operator: RLD-DGS
Sample : 176659,496543,5 Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 11:59:40 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

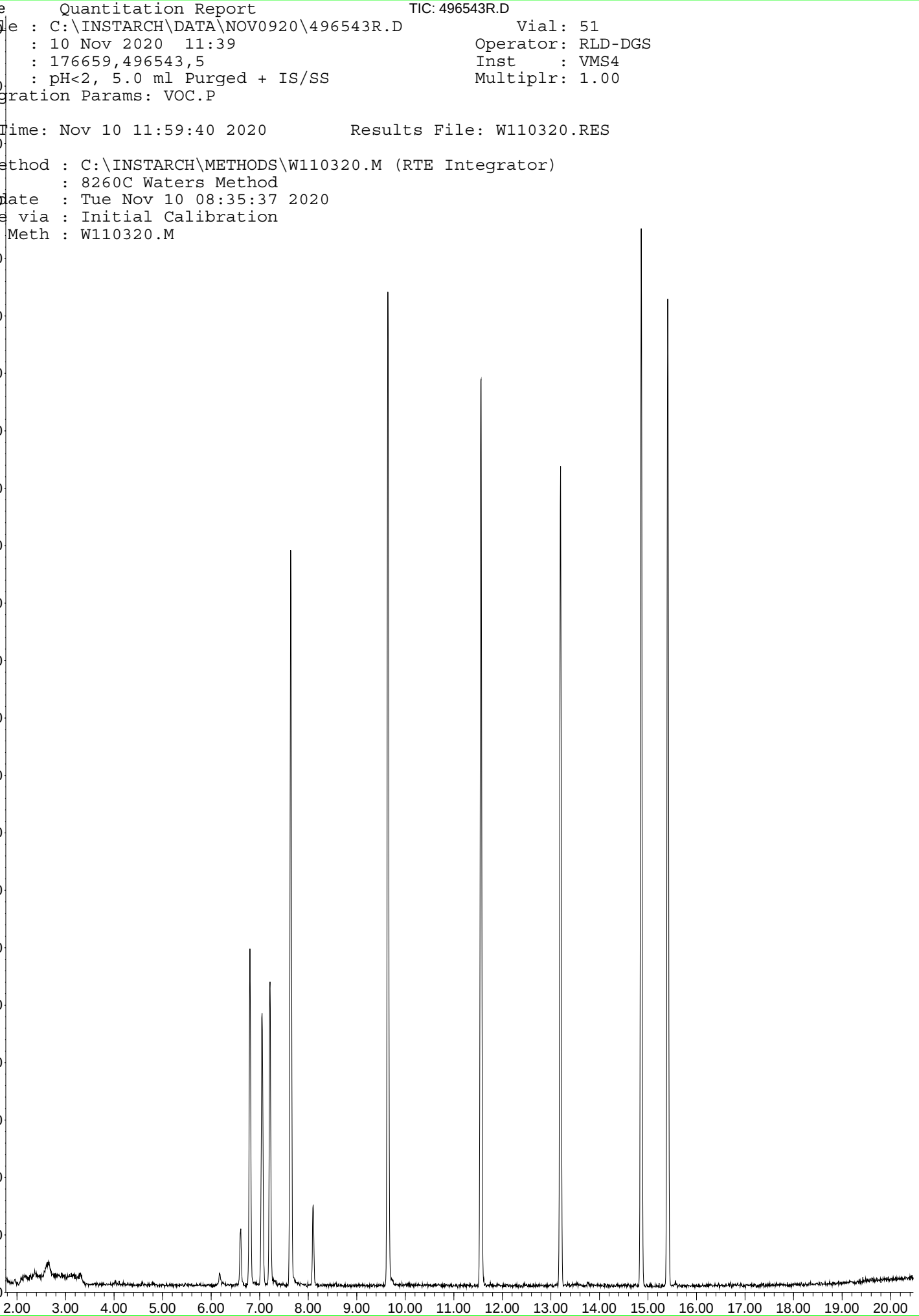
(#) = qualifier out of range (m) = manual integration

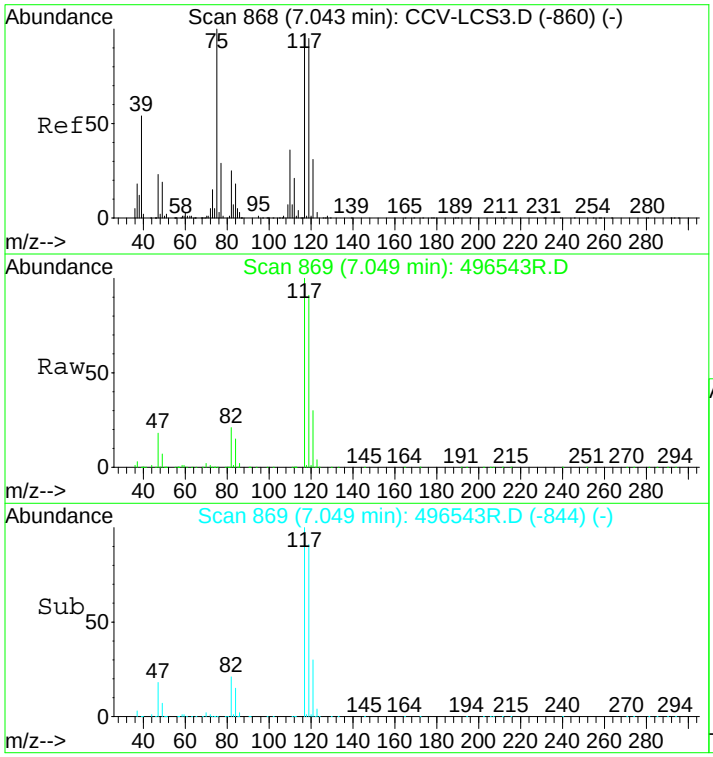
Abundance Quantitation Report TIC: 496543R.D

Data File : C:\INSTARCH\DATA\NOV0920\496543R.D Vial: 51
Acq On : 10 Nov 2020 11:39 Operator: RLD-DGS
Sample : 176659,496543,5 Inst : VMS4
Misc : pH<2, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 11:59:40 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

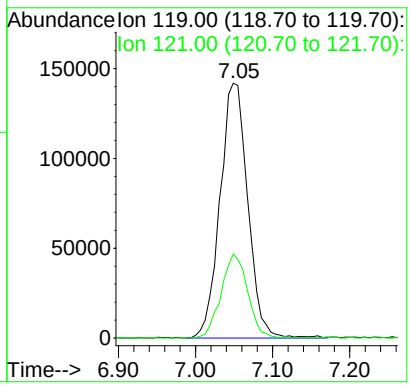




#43
Carbtetraclo
Concen: 15.89 ug/L
RT: 7.05 min Scan# 869
Delta R.T. -0.00 min
Lab File: 496543R.D
Acq: 10 Nov 2020 11:39

Tgt Ion:119 Resp: 354792

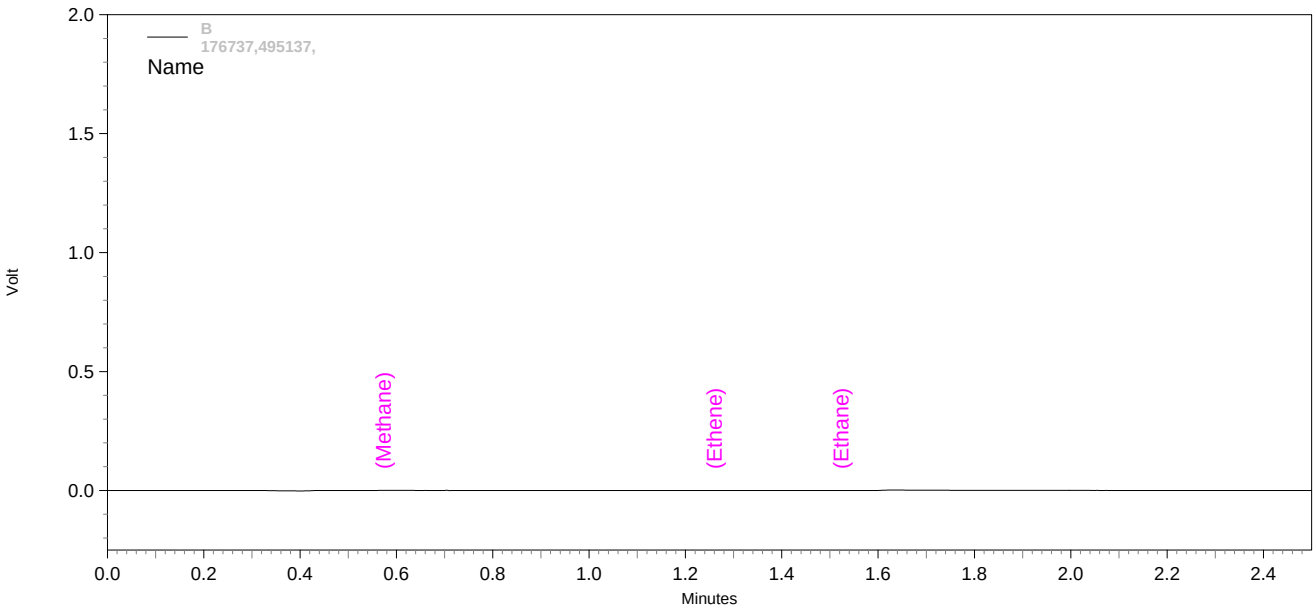
Ion	Ratio	Lower	Upper
119	100		
121	31.6	11.3	51.3



Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\005.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,495137,
Acquired: Nov 03, 2020 19:57:30
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



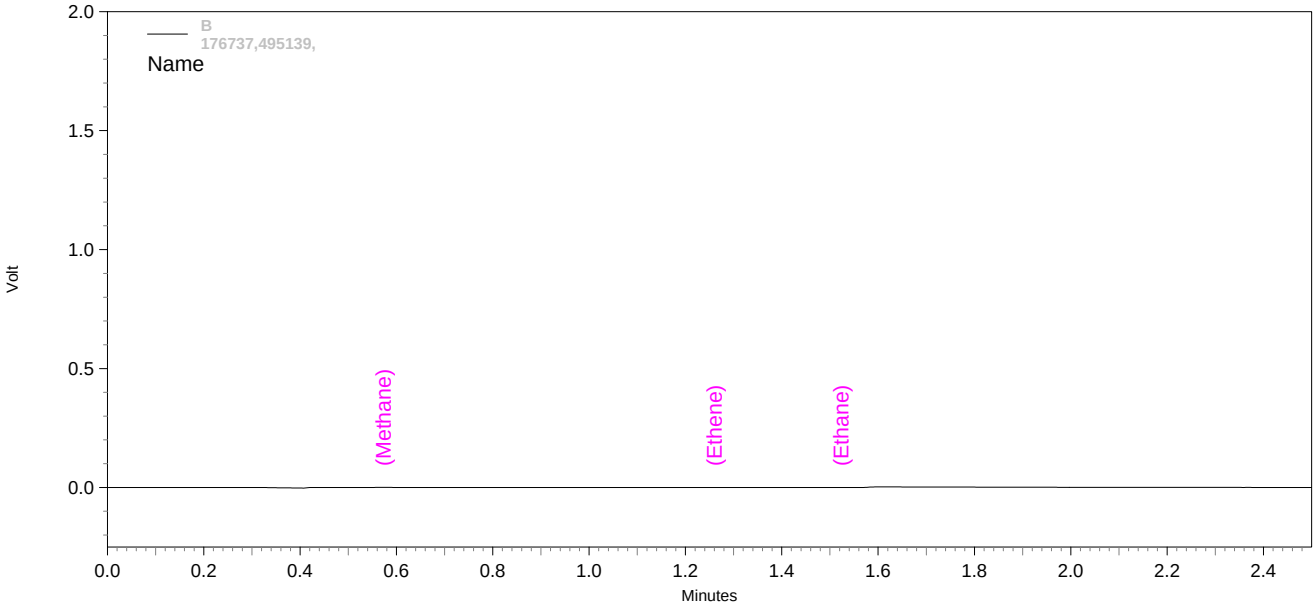
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\006.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,495139,
Acquired: Nov 03, 2020 20:00:56
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



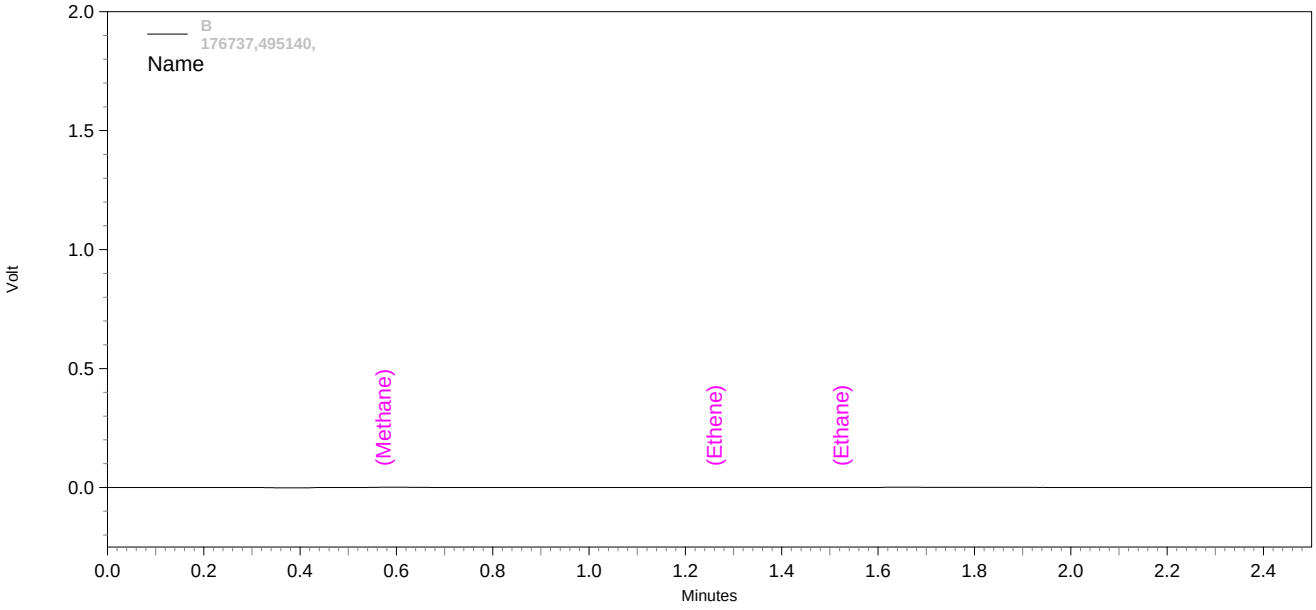
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\007.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,495140,
Acquired: Nov 03, 2020 20:04:39
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



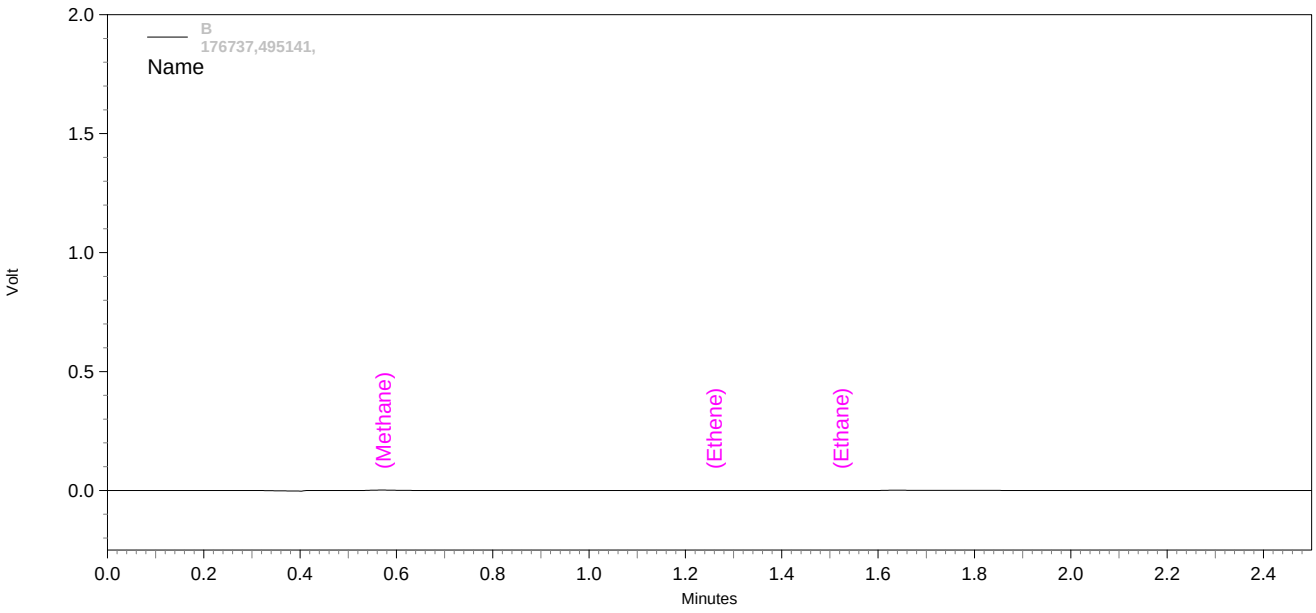
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\008.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,495141,
Acquired: Nov 03, 2020 20:07:56
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



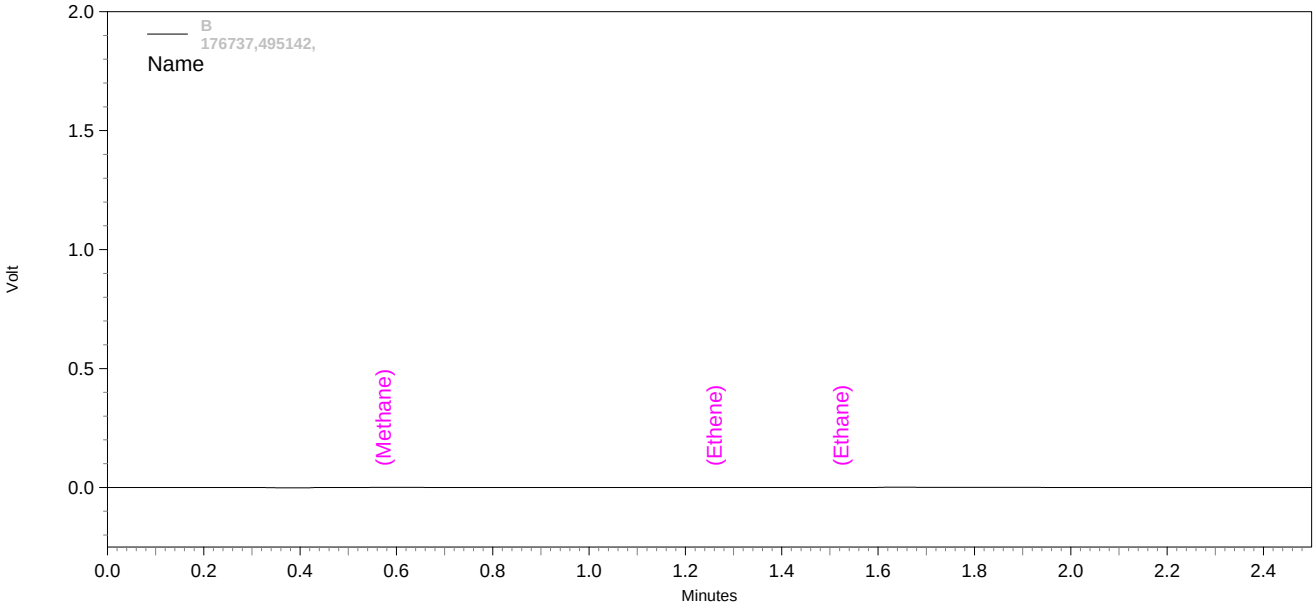
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\009.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,495142,
Acquired: Nov 03, 2020 20:11:10
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



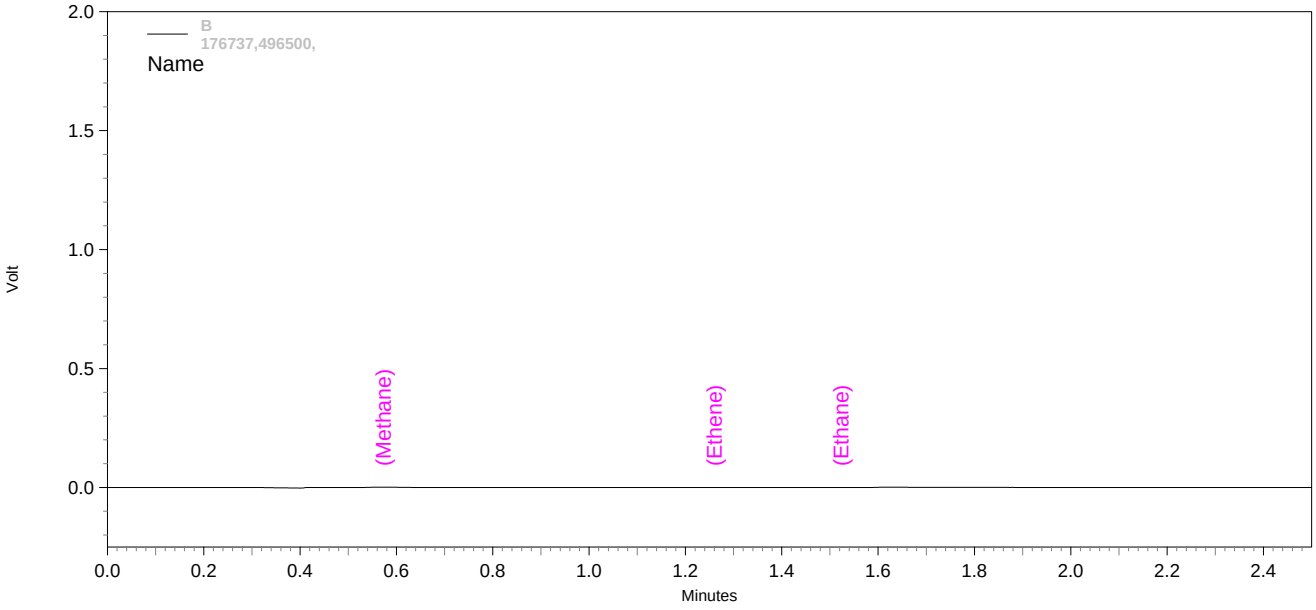
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\010.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,496500,
Acquired: Nov 03, 2020 20:14:35
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



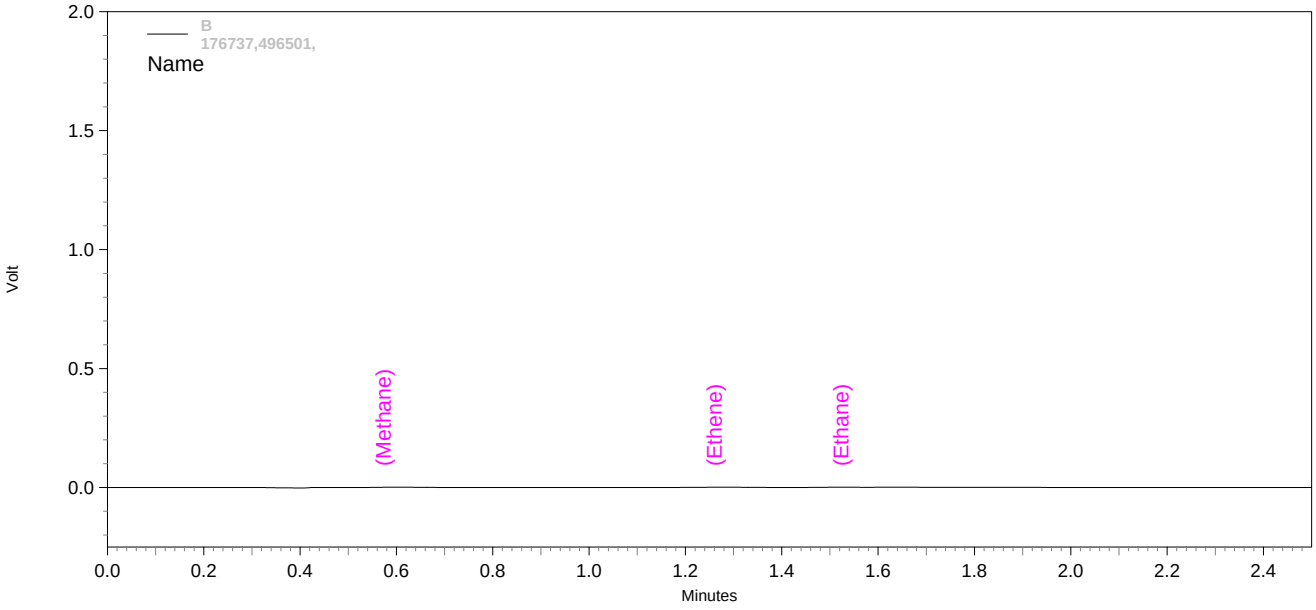
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\013.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,496501,
Acquired: Nov 03, 2020 20:24:38
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



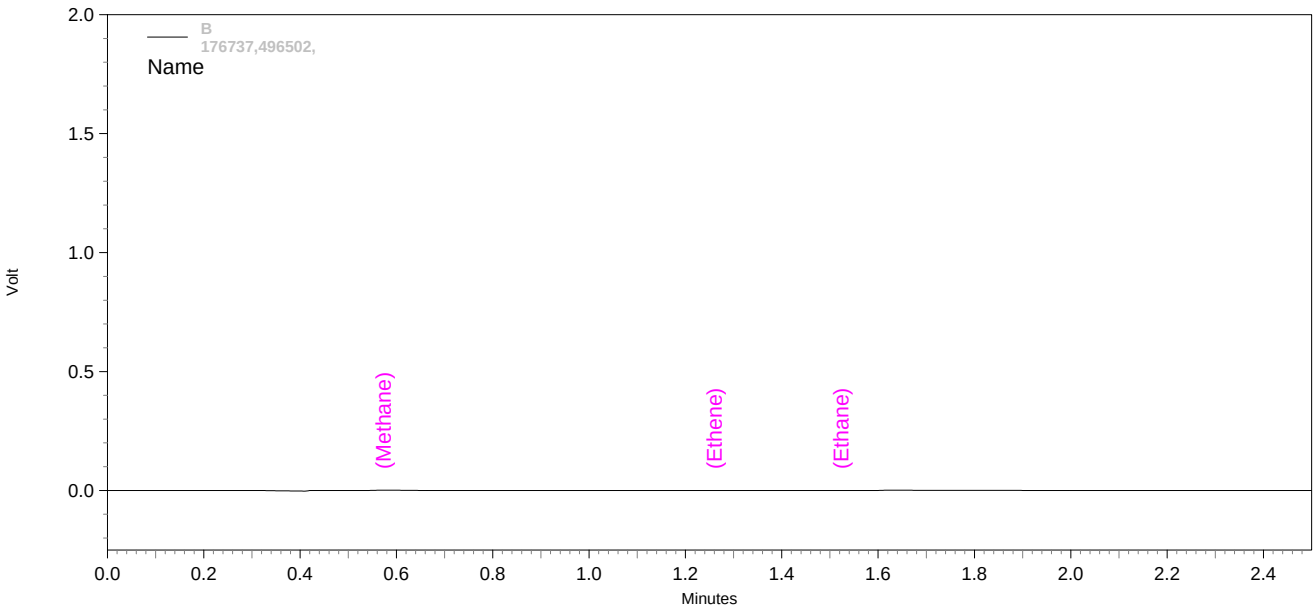
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\014.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,496502,
Acquired: Nov 03, 2020 20:29:45
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



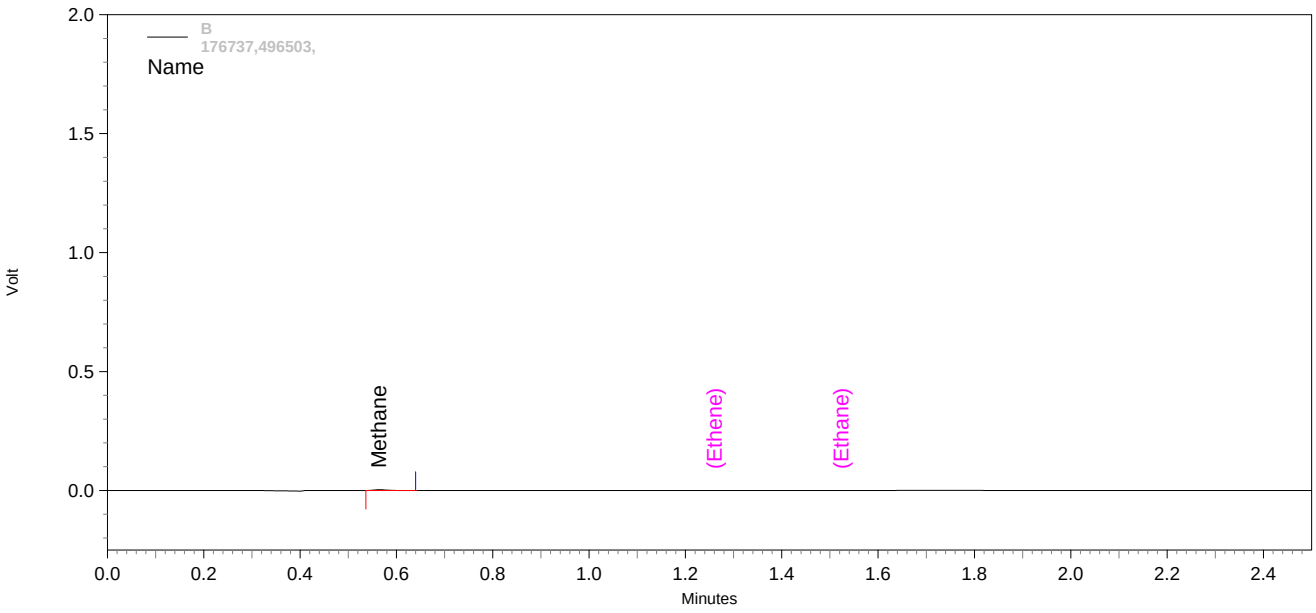
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\015.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,496503,
Acquired: Nov 03, 2020 20:33:18
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



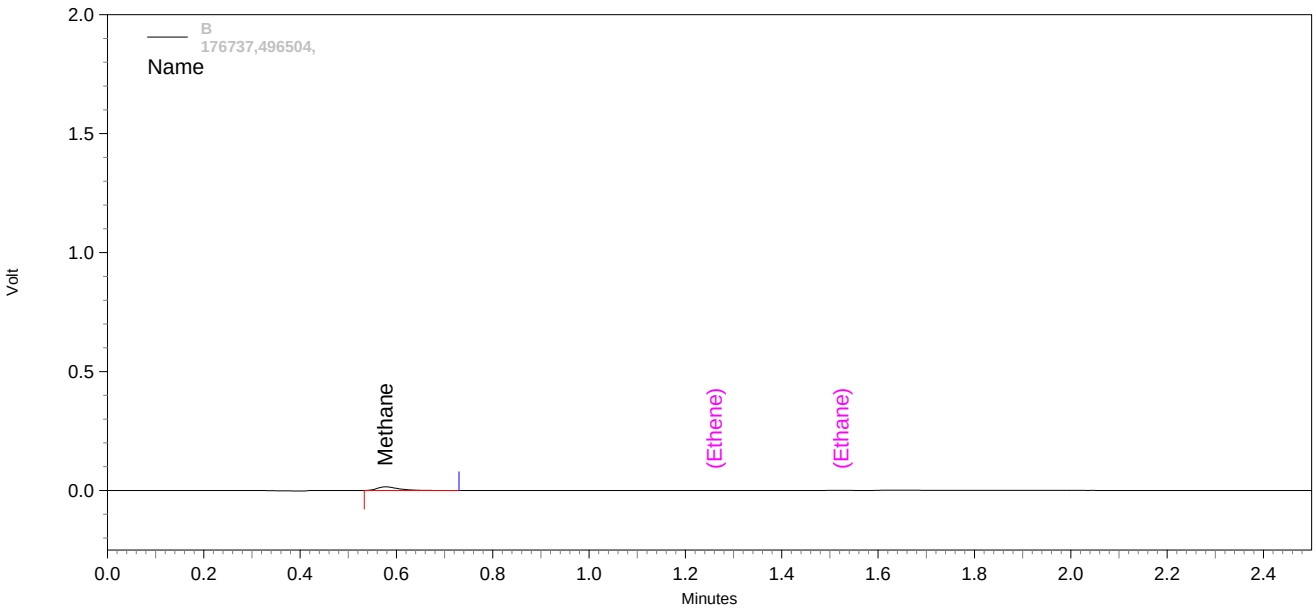
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.563**	**0.573**	**5982**	**0.879**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\016.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,496504,
Acquired: Nov 03, 2020 20:36:38
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



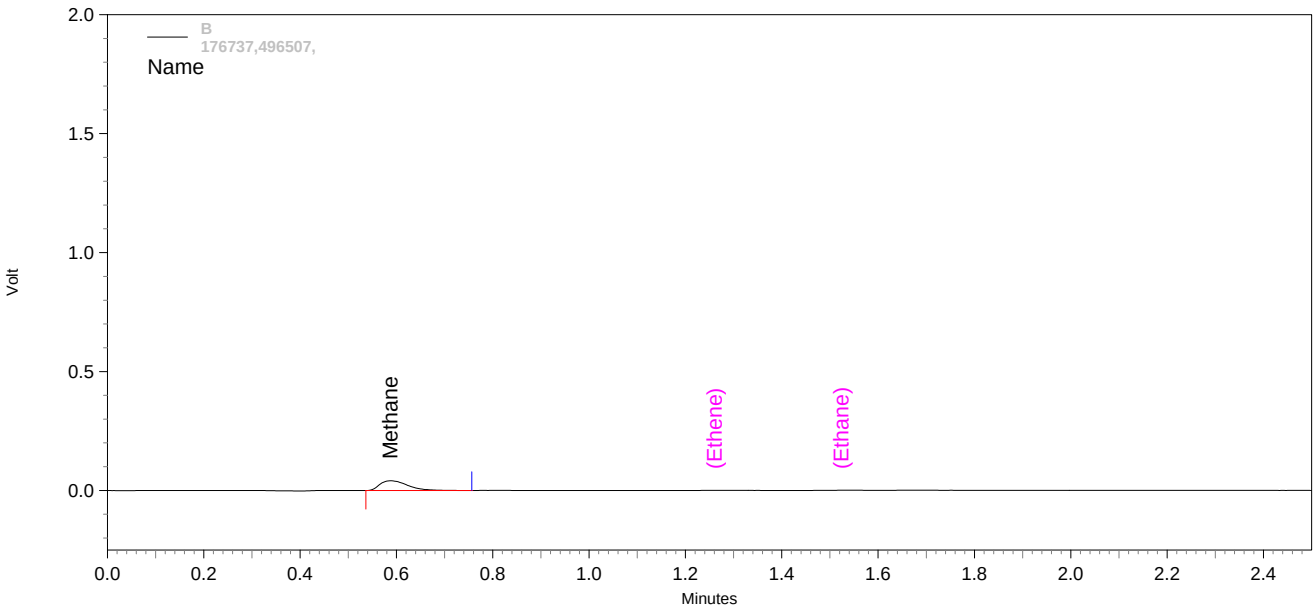
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.577**	**0.573**	**46240**	**11.984**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\019.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,496507,
Acquired: Nov 03, 2020 20:58:04
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



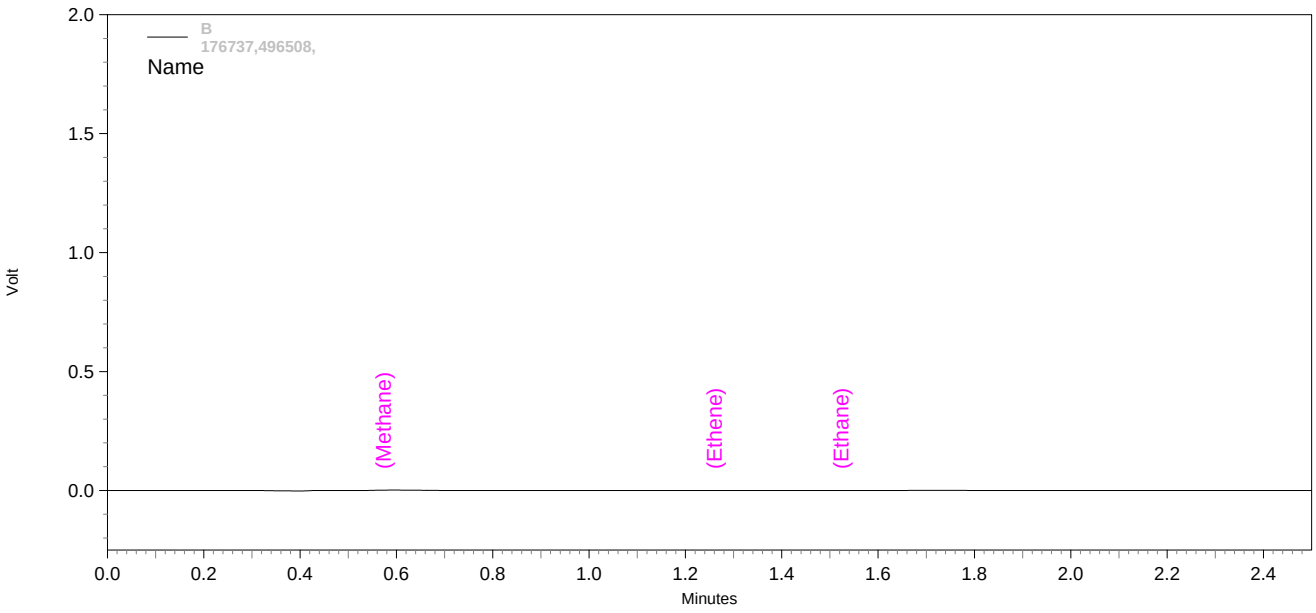
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.587**	**0.573**	**162575**	**44.076**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\020.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,496508,
Acquired: Nov 03, 2020 21:02:01
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



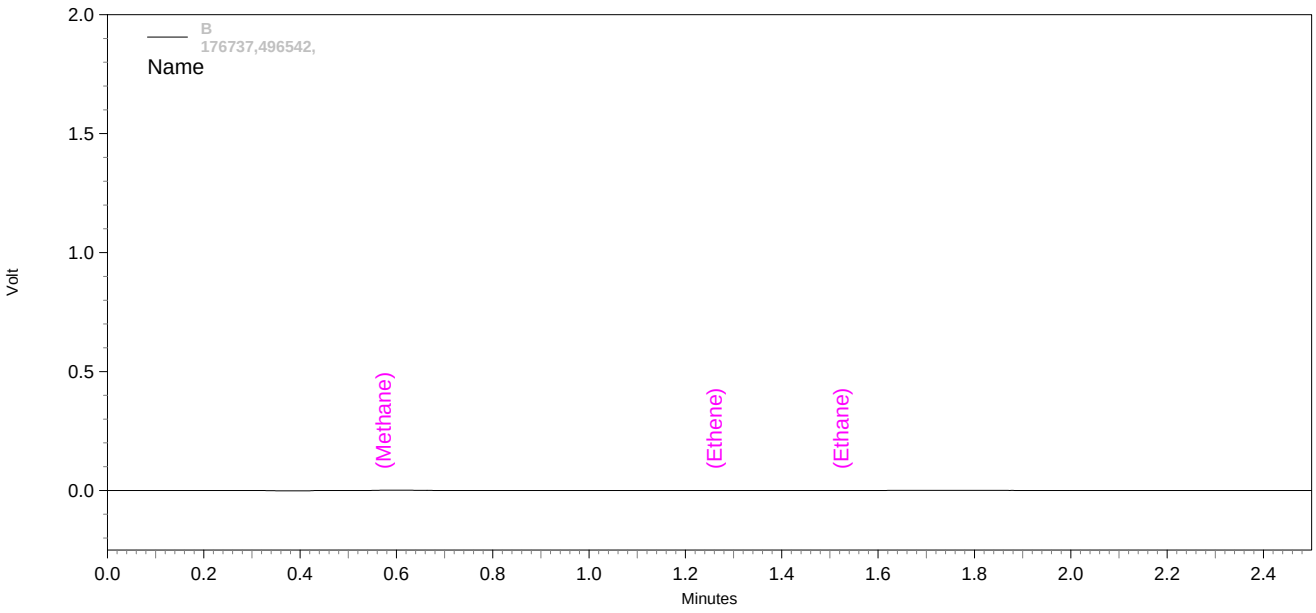
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\021.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,496542,
Acquired: Nov 03, 2020 21:06:07
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



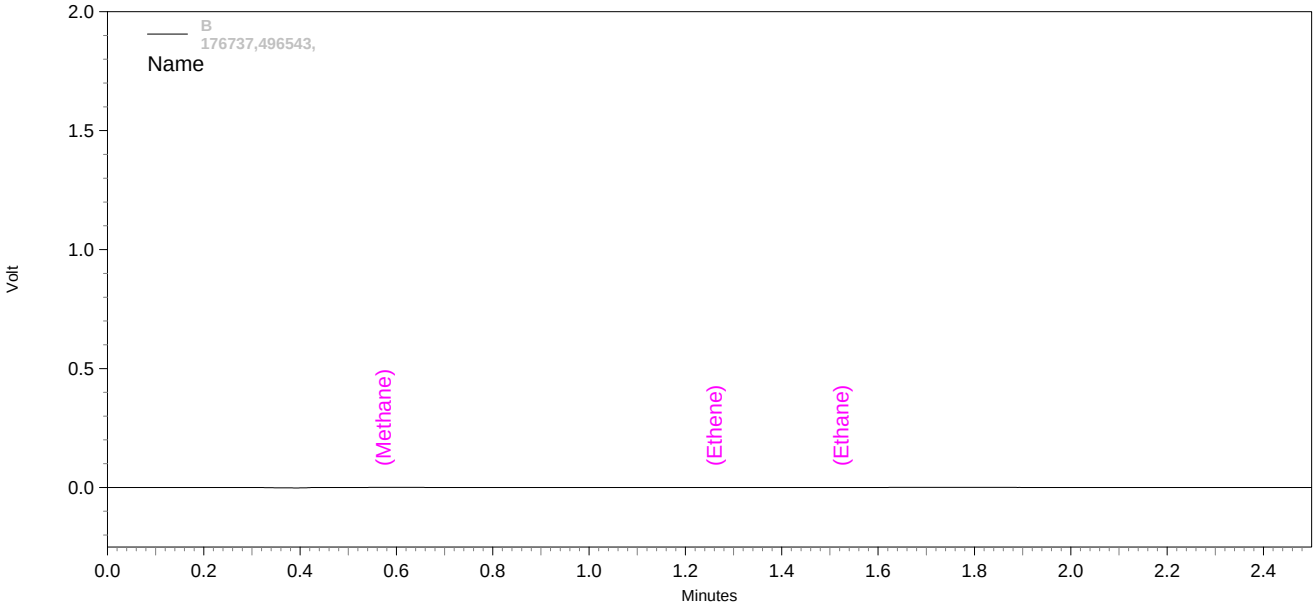
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\022.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,496543,
Acquired: Nov 03, 2020 21:09:32
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

VOLATILE ORGANIC ANALYSIS
INITIAL CALIBRATION
DOCUMENTS

Method Path : C:\INSTARCH\METHODS\
Method File : W110320.M
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response Via : Initial Calibration

RJ 11/19/2020

Calibration Files ug/L
1 0.500/5.00 =WCAL1.D 2 1.00/10.00 =WCAL2.D 3 2.00/20.00 =WCAL3.D
4 5.00/50.00 =WCAL4.D 5 10.00/100 =WCAL5.D 6 20.00/200 =WCAL6.D
7 30.00/300 =WCAL7.D 8 40.00/400 =WCAL8.D 9 80.00/800 =WCAL9.D

		Compound	1	2	3	4	5	6	7	Avg	%RSD
			8	9							
1)	I	FLUOROBENZENE**ISTD**	----------ISTD----------								
2)	PT	Dichlorodi	0.282	0.265	0.251	0.269	0.270	0.260	0.256	0.259	5.62
			0.241	0.236							
3)	PT	Chloromethan	0.285	0.264	0.254	0.235	0.225	0.205	0.210	0.232	13.06
			0.198	0.208							
4)	PT	VinylChlorid	0.258	0.230	0.259	0.259	0.253	0.244	0.243	0.245	5.48
			0.233	0.224							
5)	PT	Bromomethane		0.297	0.185	0.204	0.142	0.110	0.107	-----	
			0.109	0.101							
								Q	A= -0.001 R=0.998		
									B= 0.103		
									C= 0.014		
6)	PT	Chloroethane		0.226	0.176	0.184	0.178	0.159	0.166	0.176	12.82
			0.160	0.157							
7)	T	Dichloroflmetha	0.506	0.476	0.443	0.455	0.441	0.411	0.411	0.434	9.68
			0.388	0.375							
8)	PT	Trichlorofma	0.447	0.437	0.459	0.474	0.491	0.458	0.457	0.451	5.25
			0.427	0.413							
9)	T	Ethylether	0.165	0.160	0.166	0.152	0.150	0.142	0.148	0.153	5.51
			0.147	0.149							
10)	T	dichlorotfluoro	0.227	0.212	0.249	0.232	0.242	0.226	0.228	0.228	5.26
			0.219	0.217							
11)	T	propyleneoxide		0.027	0.024	0.029	0.024	0.025	0.029	0.027#	9.05
			0.028	0.030							
12)	T	Acrolein		0.070	0.064	0.061	0.057	0.057	0.059	0.060	7.78
			0.057	0.056							
13)	PT	11dichlorthe	0.196	0.232	0.193	0.213	0.217	0.203	0.206	0.207	6.07
			0.196	0.210							
14)	PT	Trichlorotfluor	0.222	0.213	0.215	0.225	0.233	0.219	0.223	0.218	4.56
			0.213	0.197							
15)	PT	Acetone	0.142	0.136	0.120	0.111	0.096	0.092	0.089	-----	
			0.085	0.079							
								Q	A= -0.000 R=1.000		
									B= 0.092		
									C= 0.029		
16)	T	Iodomethane		0.041	0.035	0.033	0.052	0.078	0.097	-----	
			0.101								
								Q	A= 0.011 R=0.996		
									B= 0.063		
									C= -0.010		
17)	PT	Carbon Dislf	0.520	0.543	0.534	0.533	0.515	0.487	0.491	0.503	7.36
			0.476	0.426							
18)	T	allylchloride	0.280	0.271	0.280	0.263	0.256	0.248	0.260	0.260	6.24
			0.248	0.231							
19)	PT	methylacetate		0.072	0.064	0.061	0.055	0.053	0.061	0.060#	9.81
			0.056	0.060							
20)	PT	Methylchlorid	0.433	0.413	0.384	0.354	0.332	0.319	0.324	0.353	13.14
			0.312	0.306							
21)	T	tbutylalcohol	0.043	0.042	0.039	0.040	0.037	0.036	0.035	0.037	13.53
			0.032	0.027							
22)	T	Acrylonitrile		0.089	0.099	0.098	0.091	0.088	0.089	0.091	5.74
			0.086	0.085							

23)	PT	t12dichlorte	0.279	0.259	0.226	0.242	0.220	0.219	0.228	0.234	9.34
			0.220	0.214							
24)	PT	MtBE	0.686	0.656	0.626	0.615	0.588	0.565	0.582	0.604	7.44
			0.563	0.557							
25)	T	Hexane	0.300	0.237	0.267	0.302	0.322	0.325	0.309	0.294	9.46
			0.303	0.284							
26)	PT	11dichlorota	0.391	0.409	0.362	0.364	0.355	0.337	0.355	0.361	6.73
			0.341	0.338							
27)	T	Vinylacetate	0.418	0.402	0.378	0.375	0.373	0.340	0.297	0.357	14.32
			0.270								
28)	T	chloroprene	0.271	0.273	0.290	0.290	0.297	0.286	0.289	0.282	4.31
			0.279	0.258							
29)	T	Diisopether	0.662	0.656	0.598	0.568	0.567	0.545	0.558	0.578	8.92
			0.543	0.509							
30)	T	ETBE	0.559	0.576	0.555	0.542	0.536	0.531	0.540	0.545	3.02
			0.546	0.521							
31)	T	22dichloropr	0.351	0.326	0.319	0.321	0.321	0.317	0.311	0.318	4.93
			0.302	0.296							
32)	PT	c12dichlorte	0.352	0.289	0.301	0.272	0.264	0.253	0.265	0.278	11.65
			0.259	0.250							
33)	PT	2Butanone		0.044	0.042	0.042	0.038	0.038	0.038	0.039#	7.19
			0.037	0.035							
34)	T	propionitrile		0.044	0.045	0.043	0.041	0.040	0.041	0.041	5.90
			0.041	0.038							
35)	T	Ethylacetate		0.013	0.014	0.014	0.013	0.012	0.012	0.013#	4.95
			0.013	0.013							
36)	T	methacrylonitri		0.118	0.115	0.111	0.109	0.110	0.116	0.113	2.58
			0.113	0.112							
37)	T	Bromochlorma	0.162	0.136	0.144	0.133	0.135	0.120	0.120	0.131	11.79
			0.114	0.117							
38)	T	Tetrahydofur	0.100	0.091	0.089	0.091	0.082	0.079	0.079	0.084	11.89
			0.073	0.068							
39)	PT	Chloroform	0.503	0.439	0.460	0.441	0.427	0.427	0.420	0.434	7.67
			0.404	0.387							
40)	PT	111trichlota	0.361	0.405	0.353	0.379	0.377	0.376	0.385	0.374	4.11
			0.367	0.362							
41)	S	SURRDibrflma	0.296	0.311	0.307	0.301	0.302	0.304	0.299	0.303	2.30
			0.292	0.315							
42)	PT	Cyclohexane	0.332	0.295	0.298	0.315	0.335	0.324	0.328	0.319	4.51
			0.317	0.323							
43)	PT	Carbtetraclo	0.294	0.313	0.324	0.329	0.340	0.338	0.348	0.328	5.06
			0.338	0.325							
44)	T	11dicloprope		0.135	0.119	0.118	0.126	0.119	0.128	0.124	4.88
			0.122	0.122							
45)	S	SURR12DCAd4	0.069	0.070	0.070	0.070	0.068	0.066	0.071	0.069	2.24
			0.069	0.069							
46)	PT	Benzene	0.918	0.970	0.932	0.919	0.864	0.832	0.837	0.864	9.12
			0.770	0.733							
47)	PT	12dichlorota	0.374	0.373	0.352	0.323	0.314	0.311	0.307	0.327	9.58
			0.302	0.288							
48)	T	TAME	0.660	0.553	0.599	0.564	0.574	0.560	0.574	0.579	5.68
			0.564	0.562							
49)	PT	trichloroete	0.273	0.261	0.267	0.263	0.268	0.252	0.260	0.261	3.14
			0.250	0.250							
50)	PT	methylcyclohexa	0.369	0.340	0.352	0.386	0.402	0.408	0.407	0.382	6.26
			0.386	0.390							
51)	PT	12dicloropra	0.243	0.230	0.232	0.230	0.223	0.215	0.222	0.226	3.99
			0.218	0.216							
52)	T	23Dicl1propene		0.344	0.348	0.367	0.345	0.344	0.347	0.347	2.41
			0.339	0.342							
53)	T	Dibromometha		0.181	0.170	0.175	0.170	0.163	0.170	0.171	3.17
			0.167	0.168							
54)	T	methylmethacryl		0.192	0.173	0.182	0.177	0.179	0.187	0.182	3.19
			0.183	0.180							
55)	T	14dioxane		0.005	0.005	0.005	0.005	0.005	0.005	0.005#	7.16
			0.004	0.004							
56)	PT	Bromodiclrma	0.341	0.349	0.332	0.344	0.317	0.332	0.337	0.334	2.98
			0.327	0.327							
57)	T	2Nitropropane	0.065	0.062	0.060	0.072	0.076	0.081	0.085	0.074	12.40
			0.083	0.078							

```
58) T   2CLEVE               0.011 0.014 0.015 0.016 0.020 0.023 ----- #
                      0.025 0.032
                                                    Q  A=  0.001 R=1.000
                                                       B=  0.018
                                                       C= -0.004
59) PT  c13dicloproe    0.366 0.383 0.369 0.372 0.363 0.373 0.373 0.371   1.57
                      0.376 0.369
60) PT  4Meth2Pentan    0.271 0.268 0.273 0.267 0.245 0.225 0.212 0.244  13.33
                      0.187
61) S   SURRd8Tolule    1.016 1.033 1.043 1.032 1.031 1.040 1.041 1.031   1.40
                      1.000 1.041
62) PT  Toluene         0.702 0.696 0.627 0.619 0.607 0.602 0.588 0.616   8.81
                      0.567 0.537
63) PT  t13Dicloprop    0.324 0.314 0.306 0.325 0.326 0.329 0.346 0.327   3.70
                      0.334 0.337
64) T   ethylmethacryla       0.305 0.314 0.312 0.312 0.308 0.312 0.307   2.57
                      0.299 0.291
65) PT  112Triclotha          0.215 0.214 0.205 0.195 0.196 0.197 0.200   4.98
                      0.189 0.192
66) PT  Tetrachlorte    0.311 0.318 0.296 0.310 0.311 0.317 0.316 0.309   2.60
                      0.299 0.302
67) T   13Diclorpropa   0.423 0.401 0.409 0.381 0.381 0.365 0.359 0.380   7.12
                      0.353 0.344

68) I   d5-CHLOROBENZENE**IST ----------------ISTD---------------------
69) PT  2Hexanone       0.260 0.241 0.239 0.250 0.227 0.213 0.203 0.227  11.18
                      0.185
70) PT  Clorodibrmta    0.346 0.341 0.332 0.317 0.322 0.331 0.341 0.335   3.41
                      0.338 0.352
71) PT  12Dibrometha    0.412 0.323 0.310 0.320 0.321 0.311 0.315 0.327   9.97
                      0.316 0.310
72) PT  Chlorobenzen    1.024 0.904 0.908 0.906 0.874 0.847 0.836 0.875   8.65
                      0.829 0.747
73) T   1Clhexane       0.388 0.388 0.355 0.370 0.391 0.403 0.401 0.385   3.98
                      0.390 0.378
74) T   1112Tetclota           0.317 0.293 0.299 0.294 0.313 0.316 0.306   3.59
                      0.298 0.318
75) PT  Ethylbenzene    1.344 1.412 1.241 1.366 1.327 1.264 1.237 1.262   9.79
                      1.160 1.004
76) PT  m p-Xylene      0.522 0.561 0.530 0.555 0.537 0.523 0.526 0.523   6.11
                      0.507 0.450
77) PT  o-Xylene        0.544 0.500 0.497 0.570 0.548 0.530 0.550 0.532   4.92
                      0.541 0.501
78) PT  Styrene         0.930 0.818 0.862 0.886 0.872 0.846 0.870 0.853   5.65
                      0.832 0.757
79) PT  Bromoform             0.222 0.213 0.215 0.220 0.231 0.251 0.235   9.39
                      0.257 0.271
80) PT  Isopropylben    1.330 1.335 1.314 1.391 1.389 1.355 1.324 1.308   7.19
                      1.248 1.084
81) T   cyclohexanone         0.016 0.015 0.016 0.016 0.015 0.016 0.016#  2.74
                      0.016 0.015

82) I   d4-1,4-DICHLOROBENZEN ----------------ISTD---------------------
83) S   SURR4BrFBenz    0.867 0.863 0.843 0.849 0.850 0.840 0.841 0.848   1.81
                      0.817 0.863
84) T   Bromobenzene    0.872 0.720 0.765 0.733 0.700 0.670 0.662 0.713  10.19
                      0.653 0.639
85) PT  1122Tetrclta    0.930 0.749 0.727 0.739 0.761 0.735 0.710 0.747   9.88
                      0.698 0.673
86) T   123Triclproa          0.765 0.893 0.888 0.855 0.829 0.835 0.845   4.70
                      0.854 0.842
87) T   14dichloro2bute       0.133 0.145 0.155 0.155 0.160 0.164 0.158   9.42
                      0.175 0.178
88) T   n-Propylbenz    2.617 2.634 2.706 2.755 2.746 2.602 2.478 2.536  10.29
                      2.355 1.930
89) T   2chlorotolue    1.748 1.676 1.731 1.660 1.638 1.555 1.529 1.589   8.84
                      1.442 1.322
90) T   4chlorotolue    2.065 2.029 1.993 1.970 1.881 1.772 1.712 1.837  11.02
                      1.644 1.465
91) T   135Trimebenz    1.957 1.979 1.985 2.014 2.011 1.925 1.882 1.893   8.20
```

			1.743	1.545						
92)	T	tbutylbenzen	1.862	1.729	1.746	1.829	1.833	1.782	1.725	1.739	6.52
			1.652	1.491						
93)	T	124Trimetben	2.022	1.983	1.908	2.031	1.991	1.922	1.869	1.894	8.01
			1.767	1.557						
94)	T	sbutylbenzen	2.243	2.423	2.298	2.522	2.595	2.475	2.328	2.341	8.53
			2.263	1.918						
95)	PT	13Diclorbenz	1.415	1.250	1.267	1.290	1.266	1.242	1.192	1.242	7.21
			1.165	1.093						
96)	T	pIsopropylto	1.915	2.063	2.073	2.172	2.210	2.145	2.053	2.032	7.68
			1.959	1.702						
97)	PT	14dichlorobe	1.439	1.323	1.311	1.289	1.279	1.222	1.190	1.257	8.12
			1.170	1.089						
98)	PT	12dichlorobe	1.446	1.230	1.236	1.200	1.187	1.137	1.100	1.181	10.43
			1.067	1.026						
99)	T	nButylbenzen	1.566	1.705	1.679	1.776	1.828	1.784	1.704	1.679	7.12
			1.621	1.446						
100)	PT	12dibromo3cl		0.177	0.211	0.200	0.187	0.205	0.209	0.202	6.73
			0.210	0.218						
101)	T	135Trichloroben	0.940	0.781	0.874	0.874	0.897	0.870	0.865	0.853	6.44
			0.791	0.787						
102)	PT	124Trichlobe	0.785	0.673	0.714	0.777	0.737	0.730	0.713	0.727	5.39
			0.738	0.674						
103)	T	Hexachlorobu	0.384	0.354	0.356	0.354	0.351	0.360	0.366	0.364	3.59
			0.387	0.366						
104)	T	Naphthalene	2.029	1.719	1.856	1.914	1.923	1.901	1.953	1.849	7.55
			1.772	1.571						
105)	T	123Trichlben	0.719	0.672	0.681	0.666	0.681	0.672	0.675	0.679	2.53
			0.686	0.658						

Total Average %RSD 6.87

L = Linear LO = Linear+Origin Q = Quad QO = Quad+Origin R = Corr. Coef
(#) = Out of Range

W110320.M Thu Nov 19 08:55:13 2020

Data File : C:\Instarch\Data\NOV0320\BFB1.D Vial: 1
Acq On : 3 Nov 2020 8:34 Operator: RLD-DGS
Sample : 176686,BFB, Inst : VMS4
Misc : 50 ng Injection Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110320.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.586 to 4.650 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.8	6901	PASS
75	95	30	60	44.5	19473	PASS
95	95	100	100	100.0	43806	PASS
96	95	5	9	6.1	2674	PASS
173	174	0.00	2	0.2	105	PASS
174	95	50	100	97.7	42777	PASS
175	174	5	9	7.5	3210	PASS
176	174	95	101	95.1	40675	PASS
177	176	5	9	6.7	2716	PASS

W110320.M Thu Nov 19 08:51:42 2020

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\WCAL1.D Vial: 5
Acq On : 3 Nov 2020 10:18 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 1 Inst : VMS4
Misc : 0.50/5.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:09:06 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:08:30 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1301914	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1114652	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	629286	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.79	113	385105	19.517 ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 98 %		
45) SURR12DCAd4	7.21	102	89324	19.910 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %		
61) SURRd8Tolule	9.64	98	1322103	19.702 ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 99 %		
83) SURR4BrFBenz	13.20	95	545586	20.445 ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 102 %		
Target Compounds					Qvalue
2) Dichlorodi	1.80	85	9169	0.5439 ug/L	95
3) Chloromethan	2.07	50	9272m	0.6222 ug/L	98
4) VinylChlorid	2.21	62	8391	0.5266 ug/L	81
5) Bromomethane	2.67	94	11673	Below Cal	92
6) Chloroethane	2.83	64	11755	1.0284 ug/L	71
7) Dichloroflmethane	3.14	67	16458	0.5825 ug/L	94
8) Trichlorofma	3.21	101	14535	0.4946 ug/L	95
9) Ethylether	3.65	59	5376	0.5387 ug/L #	69
10) dichlorotfluoroethan	3.67	67	7381	0.4976 ug/L #	86
11) propyleneoxide	3.72	58	9170	5.2440 ug/L	94
12) Acrolein	3.80	56	11006	2.8121 ug/L	100
13) 11dichlorthe	3.93	96	6379	0.4723 ug/L #	82
14) Trichlorotfluoroeth	3.95	101	14419	1.0178 ug/L	88
15) Acetone	4.03	43	46164	2.1030 ug/L	96
16) Iodomethane	4.12	127	4202	0.9536 ug/L #	78
17) Carbon Dislf	4.19	76	33877	1.0353 ug/L	95
18) allylchloride	4.41	41	18207	1.0778 ug/L	96
19) methylacetate	4.49	74	3777	0.9656 ug/L #	41
20) Methylchlorid	4.59	84	14092	0.6128 ug/L	98
21) tbutylalcohol	4.80	59	69983	29.2508 ug/L	89
22) Acrylonitrile	4.90	53	17436	2.9531 ug/L	98
23) t12dichlorte	4.94	96	9091	0.5963 ug/L	89
24) MtBE	4.97	73	22318	0.5675 ug/L	93
25) Hexane	5.32	57	19517	1.0188 ug/L #	87
26) 11dichlorota	5.48	63	12722	0.5410 ug/L	88
27) Vinylacetate	5.58	43	136115	6.1938 ug/L	98
28) chloroprene	5.60	53	17657	0.9634 ug/L	99
29) Diisopether	5.61	45	21558	0.5725 ug/L	98
30) ETBE	6.08	59	18208	0.5131 ug/L	94
31) 22dichloropr	6.21	77	11431	0.5519 ug/L	91
32) c12dichlorte	6.21	96	11473	0.6334 ug/L	89
33) 2Butanone	6.24	72	14165	5.5284 ug/L	96
34) propionitrile	6.29	54	12940	4.7912 ug/L	80
35) Ethylacetate	6.34	88	1420	1.6778 ug/L #	1
36) methacrylonitrile	6.48	67	7140	0.9704 ug/L	87
37) Bromochlorma	6.50	128	5266	0.6167 ug/L	92
38) Tetrahydofur	6.59	42	32441	5.9673 ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\WCAL1.D Vial: 5
Acq On : 3 Nov 2020 10:18 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 1 Inst : VMS4
Misc : 0.50/5.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:09:06 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:08:30 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.60	83	16369	0.5791 ug/L		85
40)	111trichlota	6.84	97	11759	0.4832 ug/L		90
42)	Cyclohexane	6.91	56	10814	0.5215 ug/L		86
43)	Carbtetraclo	7.04	119	9556	0.4480 ug/L		100
44)	11dicloprope	7.04	110	3905	0.4849 ug/L	#	86
46)	Benzene	7.30	78	29893	0.5314 ug/L		87
47)	12dichlorota	7.30	62	12171	0.5716 ug/L		92
48)	TAME	7.46	73	21466	0.5695 ug/L		98
49)	trichloroete	8.10	95	8883	0.5238 ug/L		96
50)	methylcyclohexane	8.36	83	12013	0.4829 ug/L		92
51)	12dicloropra	8.36	63	7898	0.5376 ug/L	#	57
52)	23Dicl1propene	8.42	75	12348	0.5467 ug/L		87
53)	Dibromometha	8.51	93	6178	0.5565 ug/L	#	82
54)	methylmethacrylate	8.53	69	7531	0.6374 ug/L		96
55)	14dioxane	8.58	88	9548	30.8609 ug/L		88
56)	Bromodiclrma	8.72	83	11108	0.5106 ug/L		92
57)	2Nitropropane	8.99	43	21304	4.4507 ug/L		92
58)	2CLEVE	9.10	63	2865	2.2620 ug/L	#	43
59)	c13dicloproe	9.29	75	11915	0.4928 ug/L		98
60)	4Meth2Pentan	9.49	43	88353	5.8399 ug/L		99
62)	Toluene	9.73	92	22844	0.5697 ug/L		91
63)	t13Dicloprop	10.01	75	10558	0.4962 ug/L		84
64)	ethylmethacrylate	10.14	69	19575	0.9803 ug/L		95
65)	112Triclotha	10.25	83	7428	0.5695 ug/L		97
66)	Tetrachlorte	10.45	166	10108	0.5027 ug/L		92
67)	13Diclorpropa	10.46	76	13776	0.5574 ug/L		97
69)	2Hexanone	10.58	43	72515	5.9762 ug/L		97
70)	Clorodibrmta	10.76	129	9648	0.5161 ug/L		87
71)	12Dibrometha	10.92	107	11492	0.6314 ug/L	#	79
72)	Chlorobenzen	11.59	112	28532	0.5851 ug/L	#	69
73)	1Clhexane	11.56	91	10825	0.5047 ug/L	#	36
74)	1112Tetclota	11.71	131	7375	0.4327 ug/L	#	76
75)	Ethylbenzene	11.75	91	37464	0.5328 ug/L		98
76)	m p-Xylene	11.92	106	29112	0.9981 ug/L		88
77)	o-Xylene	12.47	106	15170	0.5121 ug/L		88
78)	Styrene	12.48	104	25907	0.5452 ug/L		98
79)	Bromoform	12.72	173	6500	0.4967 ug/L		91
80)	Isopropylben	12.99	105	37072	0.5086 ug/L		96
81)	cyclohexanone	13.10	55	9734	11.1832 ug/L	#	85
84)	Bromobenzene	13.40	156	13725	0.6119 ug/L		86
85)	1122Tetrclta	13.39	83	14633	0.6226 ug/L		98
86)	123Triclproa	13.45	75	13761	0.5175 ug/L		92
87)	14dichloro2butene	13.47	53	2932	0.5894 ug/L	#	82
88)	n-Propylbenz	13.58	91	41171	0.5160 ug/L		100
89)	2chlorotolue	13.69	91	27497	0.5500 ug/L		93
90)	4chlorotolue	13.85	91	32489	0.5622 ug/L		94
91)	135Trimebenz	13.83	105	30784	0.5167 ug/L		100
92)	tbutylbenzen	14.30	119	29288	0.5354 ug/L		93
93)	124Trimetben	14.37	105	31811	0.5337 ug/L		96
94)	sbutylbenzen	14.61	105	35288	0.4792 ug/L		98
95)	13Diclorbenz	14.78	146	22263	0.5696 ug/L		95
96)	pIsopropylto	14.84	119	30121	0.4710 ug/L	#	98
97)	14dichlorobe	14.89	146	22634	0.5724 ug/L		88
98)	12dichlorobe	15.44	146	22741	0.6120 ug/L	#	75
99)	nButylbenzen	15.43	91	24632	0.4664 ug/L		90
100)	12dibromo3cl	16.54	157	2879	0.4531 ug/L		96
101)	135Trichlorobenzene	16.86	180	14793	0.5510 ug/L		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\WCAL1.D Vial: 5
Acq On : 3 Nov 2020 10:18 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 1 Inst : VMS4
Misc : 0.50/5.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:09:06 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:08:30 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

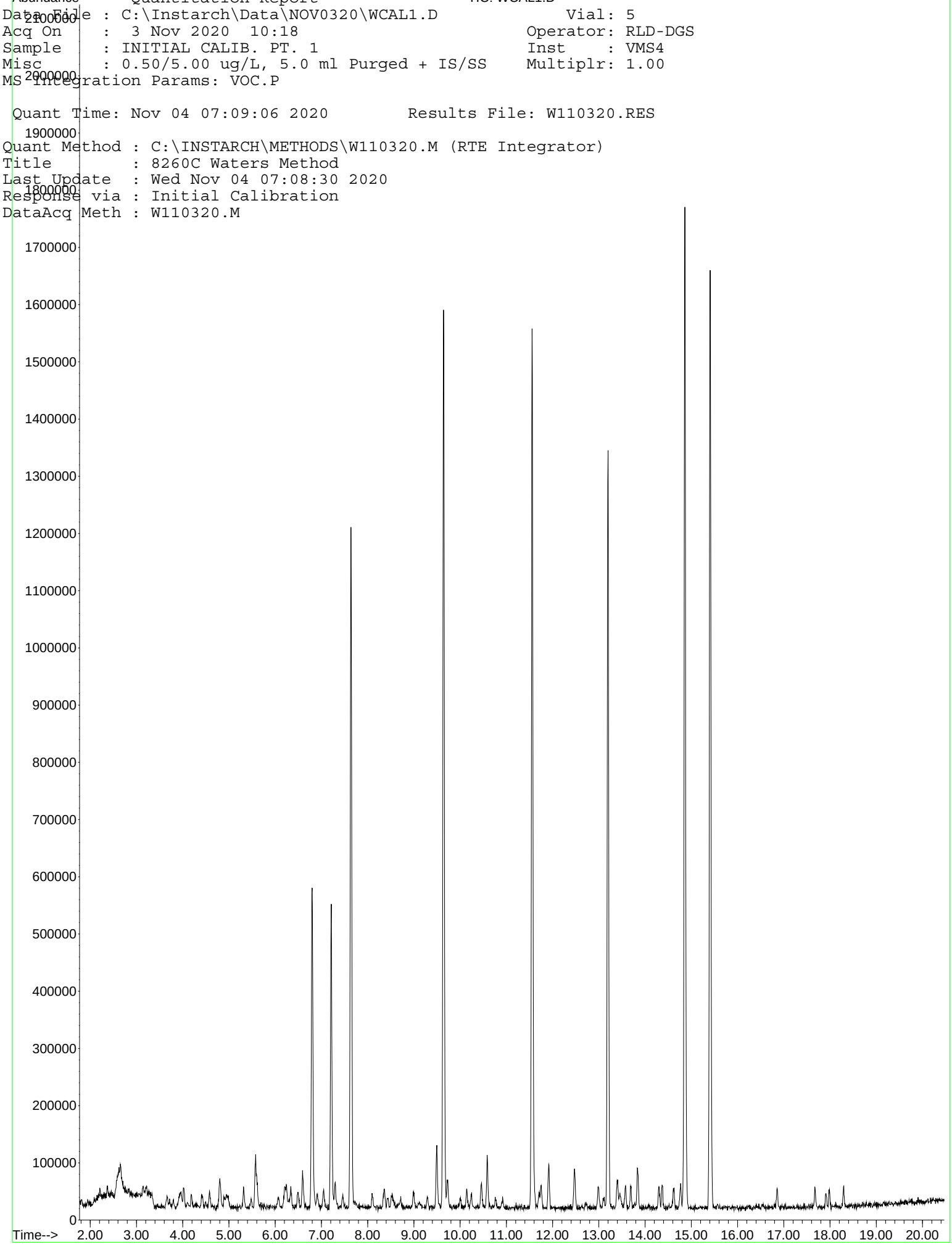
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	17.67	180	12357	0.5403 ug/L	97
103) Hexachlorobu	17.91	225	6045	0.5275 ug/L	90
104) Naphthalene	17.99	128	31928	0.5489 ug/L	100
105) 123Trichlben	18.30	180	11307	0.5293 ug/L	96

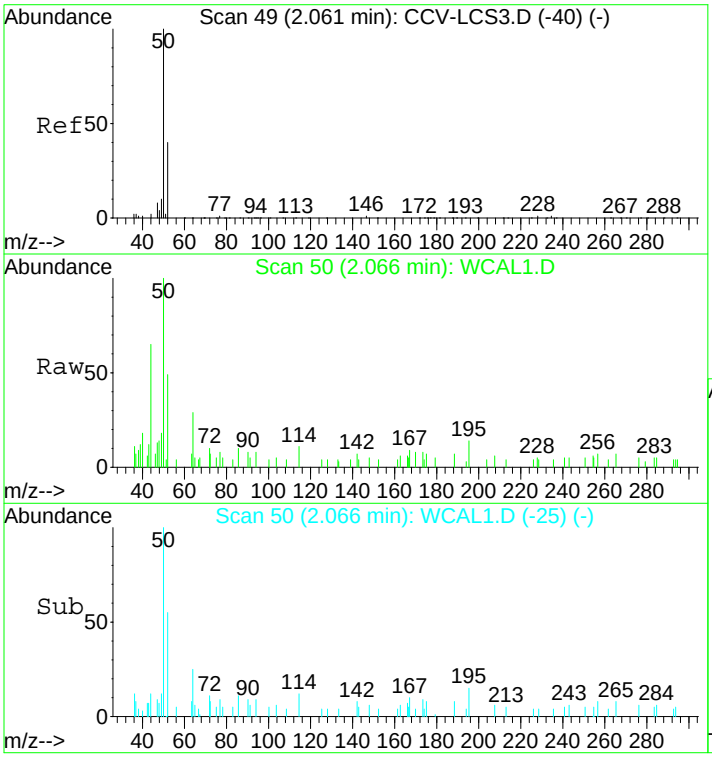
(#) = qualifier out of range (m) = manual integration

Data File : C:\Instarch\Data\NOV0320\WCAL1.D Vial: 5
Acq On : 3 Nov 2020 10:18 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 1 Inst : VMS4
Misc : 0.50/5.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:09:06 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:08:30 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

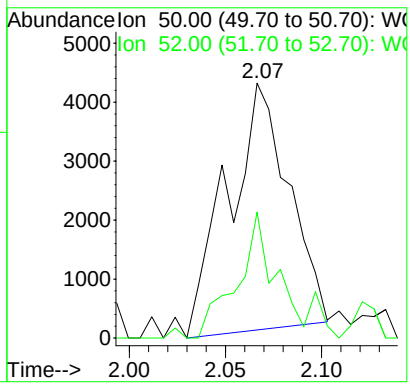




#3
Chloromethan
Concen: 0.62 ug/L m
RT: 2.07 min Scan# 50
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 3 Nov 2020 10:18

Tgt Ion: 50 Resp: 9272

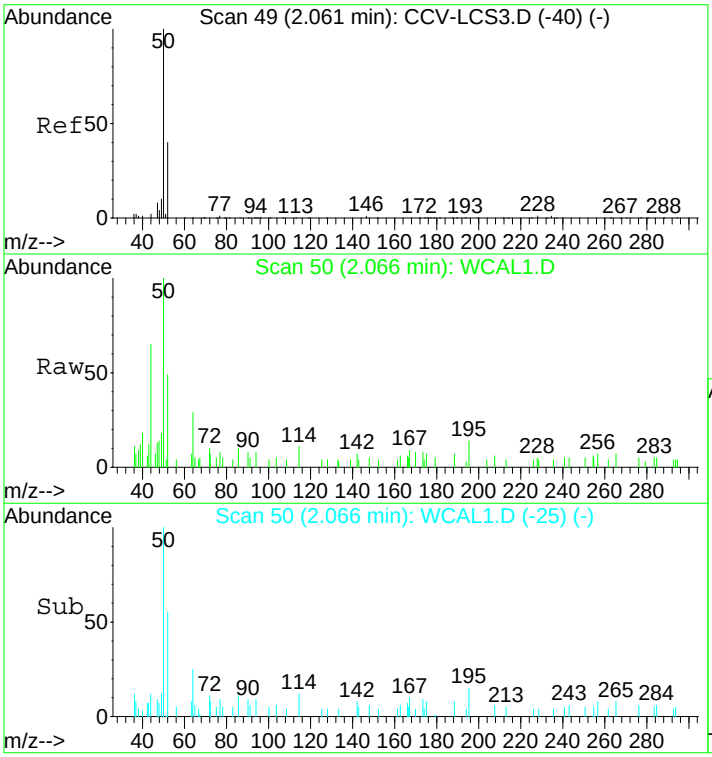
Ion	Ratio	Lower	Upper
50	100		
52	36.6	12.6	52.6



After Manual Integration

RJ 11/19/2020

DGS 11/19/2020



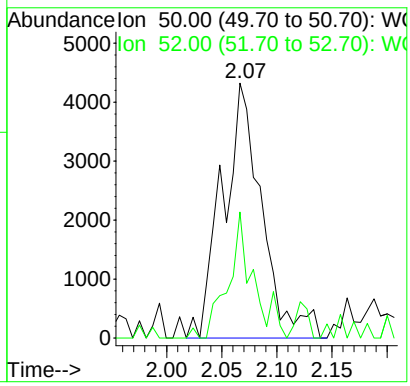
#3
Chloromethan
Concen: 0.71 ug/L
RT: 2.07 min Scan# 50
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 3 Nov 2020 10:18

Tgt Ion: 50 Resp: 10703

Ion	Ratio	Lower	Upper
50	100		
52	31.7	12.6	52.6

Before Manual Integration

RJ 11/19/2020



REASON # 2

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\WCAL2.D Vial: 6
Acq On : 3 Nov 2020 10:48 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 2 Inst : VMS4
Misc : 1.00/10.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:09:37 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:09:26 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1268362	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1099552	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	633215	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.80	113	393872	20.489 ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 102 %		
45) SURR12DCAd4	7.21	102	89190	20.406 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %		
61) SURRd8Tolule	9.64	98	1309672	20.033 ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 100 %		
83) SURR4BrFBenz	13.19	95	546367	20.347 ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 102 %		
Target Compounds					Qvalue
2) Dichlorodi	1.81	85	16822	1.0243 ug/L	93
3) Chloromethan	2.07	50	16727	1.1517 ug/L	100
4) VinylChlorid	2.21	62	14601	0.9406 ug/L	80
5) Bromomethane	2.66	94	18821	0.3107 ug/L	83
6) Chloroethane	2.82	64	14307	1.2848 ug/L	96
7) Dichloroflmethane	3.14	67	30202	1.0973 ug/L	90
8) Trichlorofma	3.20	101	27713	0.9680 ug/L	95
9) Ethylether	3.65	59	10165	1.0455 ug/L	88
10) dichlorotfluoroethan	3.67	67	13427	0.9291 ug/L	81
11) propyleneoxide	3.72	58	16943	9.9454 ug/L	88
12) Acrolein	3.79	56	22056	5.7846 ug/L	94
13) 11dichlorthe	3.93	96	14732	1.1197 ug/L	93
14) Trichlorotfluoroeth	3.96	101	27050	1.9599 ug/L	96
15) Acetone	4.02	43	86108	8.9822 ug/L	99
16) Iodomethane	4.10	127	5218	1.2154 ug/L #	83
17) Carbon Dislf	4.19	76	68844	2.1595 ug/L	100
18) allylchloride	4.41	41	34357	2.0876 ug/L	99
19) methylacetate	4.49	74	4551	1.1942 ug/L	90
20) Methylchlorid	4.58	84	26213	1.1700 ug/L	97
21) tbutylalcohol	4.80	59	131664	56.4873 ug/L	95
22) Acrylonitrile	4.90	53	28214	4.9050 ug/L #	80
23) t12dichlorte	4.94	96	16419	1.1055 ug/L	95
24) MtBE	4.97	73	41593	1.0856 ug/L	97
25) Hexane	5.33	57	30087	1.6122 ug/L	97
26) 11dichlorota	5.47	63	25909	1.1310 ug/L	97
27) Vinylacetate	5.57	43	255121	11.9162 ug/L	97
28) chloroprene	5.60	53	34685	1.9425 ug/L	99
29) Diisopether	5.61	45	41604	1.1342 ug/L	97
30) ETBE	6.06	59	36508	1.0560 ug/L	98
31) 22dichloropr	6.22	77	20659	1.0239 ug/L	93
32) c12dichlorte	6.21	96	18334	1.0390 ug/L	95
33) 2Butanone	6.24	72	27699	11.0965 ug/L	94
34) propionitrile	6.28	54	28094	10.6773 ug/L	97
35) Ethylacetate	6.34	88	4220	5.1179 ug/L #	69
36) methacrylonitrile	6.49	67	14947	2.0851 ug/L	99
37) Bromochlorma	6.50	128	8607	1.0346 ug/L #	87
38) Tetrahydofur	6.59	42	57607	10.8767 ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\WCAL2.D Vial: 6
Acq On : 3 Nov 2020 10:48 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 2 Inst : VMS4
Misc : 1.00/10.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:09:37 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:09:26 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.60	83	27826	1.0105 ug/L		96
40)	111trichlota	6.84	97	25659	1.0822 ug/L		94
42)	Cyclohexane	6.92	56	18689	0.9251 ug/L		96
43)	Carbtetraclo	7.05	119	19835	0.9546 ug/L		89
44)	11dicloprope	7.04	110	8593	1.0953 ug/L	#	91
46)	Benzene	7.29	78	61537	1.1230 ug/L		94
47)	12dichlorota	7.30	62	23629	1.1392 ug/L		93
48)	TAME	7.47	73	35099	0.9558 ug/L		91
49)	trichloroete	8.10	95	16554	1.0020 ug/L		98
50)	methylcyclohexane	8.34	83	21556	0.8895 ug/L		91
51)	12dicloropra	8.37	63	14606	1.0206 ug/L		85
52)	23Dicl1propene	8.43	75	21811	0.9913 ug/L		94
53)	Dibromometha	8.51	93	11481	1.0615 ug/L		99
54)	methylmethacrylate	8.54	69	12151	1.0556 ug/L		97
55)	14dioxane	8.57	88	16254	53.9257 ug/L		89
56)	Bromodiclrma	8.72	83	22164	1.0457 ug/L		93
57)	2Nitropropane	8.99	43	39564	8.4841 ug/L		92
58)	2CLEVE	9.10	63	3404	2.7586 ug/L	#	69
59)	c13dicloproe	9.29	75	24262	1.0299 ug/L		95
60)	4Meth2Pentan	9.49	43	170081	11.5392 ug/L		93
62)	Toluene	9.73	92	44109	1.1291 ug/L		92
63)	t13Dicloprop	10.00	75	19904	0.9602 ug/L		90
64)	ethylmethacrylate	10.15	69	38660	1.9873 ug/L		98
65)	112Triclotha	10.24	83	13637	1.0733 ug/L		95
66)	Tetrachlorte	10.46	166	20195	1.0309 ug/L		99
67)	13Diclorpropa	10.47	76	25429	1.0561 ug/L		91
69)	2Hexanone	10.59	43	132281	11.0514 ug/L		98
70)	Clorodibrmta	10.77	129	18729	1.0157 ug/L		98
71)	12Dibrometha	10.91	107	17767	0.9896 ug/L		99
72)	Chlorobenzen	11.60	112	49712	1.0334 ug/L		95
73)	1Clhexane	11.57	91	21316	1.0074 ug/L	#	66
74)	1112Tetclota	11.71	131	17434	1.0369 ug/L		93
75)	Ethylbenzene	11.75	91	77608	1.1189 ug/L		95
76)	m p-Xylene	11.92	106	61633	2.1420 ug/L		94
77)	o-Xylene	12.46	106	27504	0.9412 ug/L	#	83
78)	Styrene	12.48	104	44964	0.9593 ug/L		97
79)	Bromoform	12.72	173	12181	0.9435 ug/L		100
80)	Isopropylben	12.99	105	73381	1.0205 ug/L		98
81)	cyclohexanone	13.09	55	17842	20.7798 ug/L		97
84)	Bromobenzene	13.40	156	22798	1.0101 ug/L		98
85)	1122Tetrclta	13.39	83	23706	1.0025 ug/L		94
86)	123Triclproa	13.45	75	24222	0.9052 ug/L		89
87)	14dichloro2butene	13.48	53	4215	0.8421 ug/L		99
88)	n-Propylbenz	13.57	91	83409	1.0388 ug/L		96
89)	2chlorotolue	13.69	91	53056	1.0546 ug/L		90
90)	4chlorotolue	13.84	91	64237	1.1046 ug/L		100
91)	135Trimebenz	13.83	105	62641	1.0450 ug/L		96
92)	tbutylbenzen	14.29	119	54727	0.9942 ug/L		96
93)	124Trimetben	14.37	105	62769	1.0466 ug/L		95
94)	sbutylbenzen	14.62	105	76705	1.0351 ug/L		99
95)	13Diclorbenz	14.76	146	39590	1.0066 ug/L		96
96)	pIsopropylto	14.84	119	65304	1.0149 ug/L		94
97)	14dichlorobe	14.90	146	41882	1.0525 ug/L	#	82
98)	12dichlorobe	15.44	146	38940	1.0415 ug/L		81
99)	nButylbenzen	15.43	91	53995	1.0160 ug/L		98
100)	12dibromo3cl	16.55	157	5613	0.8779 ug/L	#	70
101)	135Trichlorobenzene	16.85	180	24736	0.9156 ug/L		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\WCAL2.D Vial: 6
Acq On : 3 Nov 2020 10:48 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 2 Inst : VMS4
Misc : 1.00/10.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:09:37 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:09:26 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	17.67	180	21314	0.9261 ug/L	99
103) Hexachlorobu	17.91	225	11215	0.9726 ug/L	99
104) Naphthalene	17.99	128	54419	0.9297 ug/L	97
105) 123Trichlben	18.30	180	21268	0.9895 ug/L	93

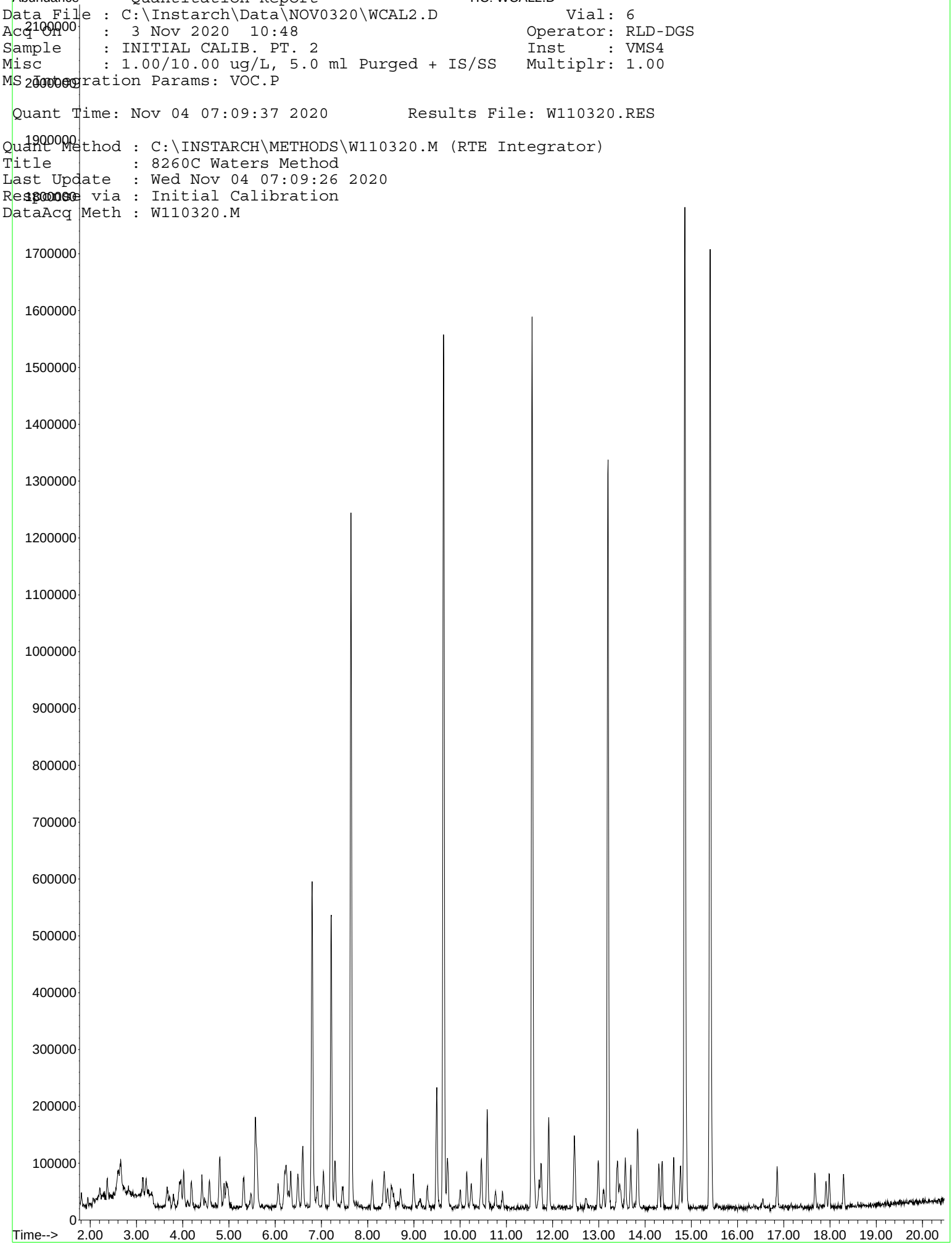
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL2.D

Data File : C:\Instarch\Data\NOV0320\WCAL2.D Vial: 6
Acq On : 3 Nov 2020 10:48 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 2 Inst : VMS4
Misc : 1.00/10.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:09:37 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:09:26 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL3.D Vial: 7
Acq On : 3 Nov 2020 11:18 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 3 Inst : VMS4
Misc : 2.00/20.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:07:54 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:01:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1271080	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1113812	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	631148	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	390497	20.960	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 105 %			
45) SURR12DCAd4	7.21	102	89419	20.970	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 105 %			
61) SURRd8Tolule	9.64	98	1326294	21.096	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 105 %			
83) SURR4BrFBenz	13.19	95	532260	17.542	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 88 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	31876	1.6956	ug/L	100
3) Chloromethan	2.07	50	32289	1.9265	ug/L	92
4) VinylChlorid	2.21	62	32975	2.0396	ug/L	99
5) Bromomethane	2.66	94	23560	2.9309	ug/L	80
6) Chloroethane	2.83	64	22331	2.1337	ug/L	85
7) Dichloroflmethane	3.14	67	56318	2.1733	ug/L	96
8) Trichlorofma	3.21	101	58358	2.2666	ug/L	97
9) Ethylether	3.65	59	21078	1.9985	ug/L	91
10) dichlorotfluoroethan	3.66	67	31643	2.2074	ug/L	96
11) propyleneoxide	3.71	58	29994	17.5375	ug/L	97
12) Acrolein	3.79	56	40960	10.0418	ug/L	99
13) 11dichlorthe	3.93	96	24476	1.8113	ug/L	90
14) Trichlorotfluoroeth	3.96	101	54627	3.9999	ug/L	96
15) Acetone	4.02	43	152707	24.0411	ug/L	93
16) Iodomethane	4.10	127	8849	1.7756	ug/L #	83
17) Carbon Dislf	4.19	76	135726	3.9441	ug/L	97
18) allylchloride	4.41	41	71254	4.0339	ug/L	95
19) methylacetate	4.48	74	8075	1.9455	ug/L	98
20) Methylchlorid	4.58	84	48861	2.3030	ug/L	97
21) tbutylalcohol	4.80	59	250376	98.5285	ug/L	98
22) Acrylonitrile	4.90	53	62831	10.4999	ug/L	96
23) t12dichlorte	4.94	96	28738	1.9403	ug/L	98
24) MtBE	4.98	73	79615	2.0146	ug/L	98
25) Hexane	5.31	57	67783	3.5811	ug/L	97
26) 11dichlorota	5.47	63	46013	1.9583	ug/L	96
27) Vinylacetate	5.57	43	480097	20.2809	ug/L	96
28) chloroprene	5.59	53	73631	4.2260	ug/L	98
29) Diisopether	5.61	45	75981	2.0859	ug/L	98
30) ETBE	6.07	59	70600	1.9473	ug/L	96
31) 22dichloropr	6.20	77	40548	1.9479	ug/L	98
32) c12dichlorte	6.21	96	38245	2.2232	ug/L	99
33) 2Butanone	6.24	72	53563	21.0481	ug/L	96
34) propionitrile	6.29	54	57306	21.0421	ug/L	98
35) Ethylacetate	6.34	88	8918	11.0164	ug/L #	91
36) methacrylonitrile	6.48	67	29151	3.7899	ug/L	96
37) Bromochlorma	6.50	128	18324	2.3577	ug/L	92
38) Tetrahydofur	6.59	42	112700	20.8979	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL3.D Vial: 7
Acq On : 3 Nov 2020 11:18 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 3 Inst : VMS4
Misc : 2.00/20.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:07:54 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:01:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.60	83	58459	2.1712 ug/L		98
40)	111trichlota	6.84	97	44890	1.8880 ug/L		96
42)	Cyclohexane	6.90	56	37817	1.8506 ug/L		99
43)	Carbtetraclo	7.05	119	41135	2.0537 ug/L		98
44)	11dicloprope	7.04	110	15075	1.9600 ug/L		98
46)	Benzene	7.30	78	118504	2.1351 ug/L		99
47)	12dichlorota	7.30	62	44735	2.2543 ug/L		100
48)	TAME	7.46	73	76195	1.9870 ug/L		94
49)	trichloroete	8.10	95	33888	2.0627 ug/L		99
50)	methylcyclohexane	8.34	83	44761	1.7830 ug/L		95
51)	12dicloropra	8.37	63	29532	2.0650 ug/L		99
52)	23Dicl1propene	8.44	75	44178	1.9549 ug/L		93
53)	Dibromometha	8.51	93	21646	2.0143 ug/L		88
54)	methylmethacrylate	8.53	69	21957	1.8101 ug/L		95
55)	14dioxane	8.56	88	33899	111.4944 ug/L		99
56)	Bromodiclrma	8.72	83	42248	1.9925 ug/L		95
57)	2Nitropropane	9.00	43	76158	14.8427 ug/L		90
58)	2CLEVE	9.10	63	9130	10.1459 ug/L		97
59)	c13dicloproe	9.29	75	46861	1.9461 ug/L		92
60)	4Meth2Pentan	9.49	43	347564	22.8185 ug/L		94
62)	Toluene	9.73	92	79688	2.1017 ug/L		99
63)	t13Dicloprop	10.01	75	38834	1.8360 ug/L		92
64)	ethylmethacrylate	10.15	69	79864	3.9220 ug/L		97
65)	112Triclotha	10.24	83	27215	2.2230 ug/L		94
66)	Tetrachlorte	10.46	166	37655	2.0851 ug/L		98
67)	13Diclorpropa	10.47	76	52031	2.2360 ug/L		100
69)	2Hexanone	10.58	43	265746	20.3453 ug/L		99
70)	Clorodibrmta	10.77	129	36945	1.9785 ug/L		98
71)	12Dibrometha	10.92	107	34497	1.8549 ug/L		91
72)	Chlorobenzen	11.59	112	101101	2.1040 ug/L		91
73)	1Clhexane	11.57	91	39487	1.7547 ug/L		81
74)	1112Tetclota	11.70	131	32658	1.9305 ug/L		96
75)	Ethylbenzene	11.75	91	138194	1.8993 ug/L		99
76)	m p-Xylene	11.92	106	117965	4.0942 ug/L		97
77)	o-Xylene	12.47	106	55406	1.8486 ug/L	#	78
78)	Styrene	12.48	104	96043	2.0031 ug/L		98
79)	Bromoform	12.72	173	23691	1.6939 ug/L		97
80)	Isopropylben	12.99	105	146399	1.9808 ug/L		97
81)	cyclohexanone	13.10	55	33339	34.5753 ug/L		87
84)	Bromobenzene	13.41	156	48300	2.0860 ug/L		98
85)	1122Tetrclta	13.39	83	45883	1.7148 ug/L		95
86)	123Triclproa	13.45	75	56368	1.8107 ug/L		96
87)	14dichloro2butene	13.49	53	9144	1.5289 ug/L		94
88)	n-Propylbenz	13.58	91	170820	1.9663 ug/L		98
89)	2chlorotolue	13.69	91	109226	1.9763 ug/L		95
90)	4chlorotolue	13.84	91	125767	1.9975 ug/L		92
91)	135Trimebenz	13.83	105	125287	1.9698 ug/L		98
92)	tbutylbenzen	14.29	119	110206	1.9244 ug/L		98
93)	124Trimetben	14.37	105	120396	1.8784 ug/L		99
94)	sbutylbenzen	14.62	105	145056	1.8173 ug/L		98
95)	13Diclorbenz	14.77	146	79942	2.0070 ug/L		97
96)	pIsopropylto	14.84	119	130820	1.9950 ug/L		95
97)	14dichlorobe	14.90	146	82753	2.1040 ug/L		94
98)	12dichlorobe	15.43	146	78029	2.1106 ug/L		92
99)	nButylbenzen	15.43	91	105946	1.8505 ug/L		94
100)	12dibromo3cl	16.54	157	13295	1.7593 ug/L		88
101)	135Trichlorobenzene	16.86	180	55160	1.8774 ug/L		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL3.D Vial: 7
Acq On : 3 Nov 2020 11:18 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 3 Inst : VMS4
Misc : 2.00/20.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:07:54 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:01:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	17.68	180	45055	1.8099 ug/L	97
103) Hexachlorobu	17.91	225	22498	1.7701 ug/L	87
104) Naphthalene	17.98	128	117112	1.8559 ug/L	98
105) 123Trichlben	18.29	180	42994	1.8485 ug/L	96

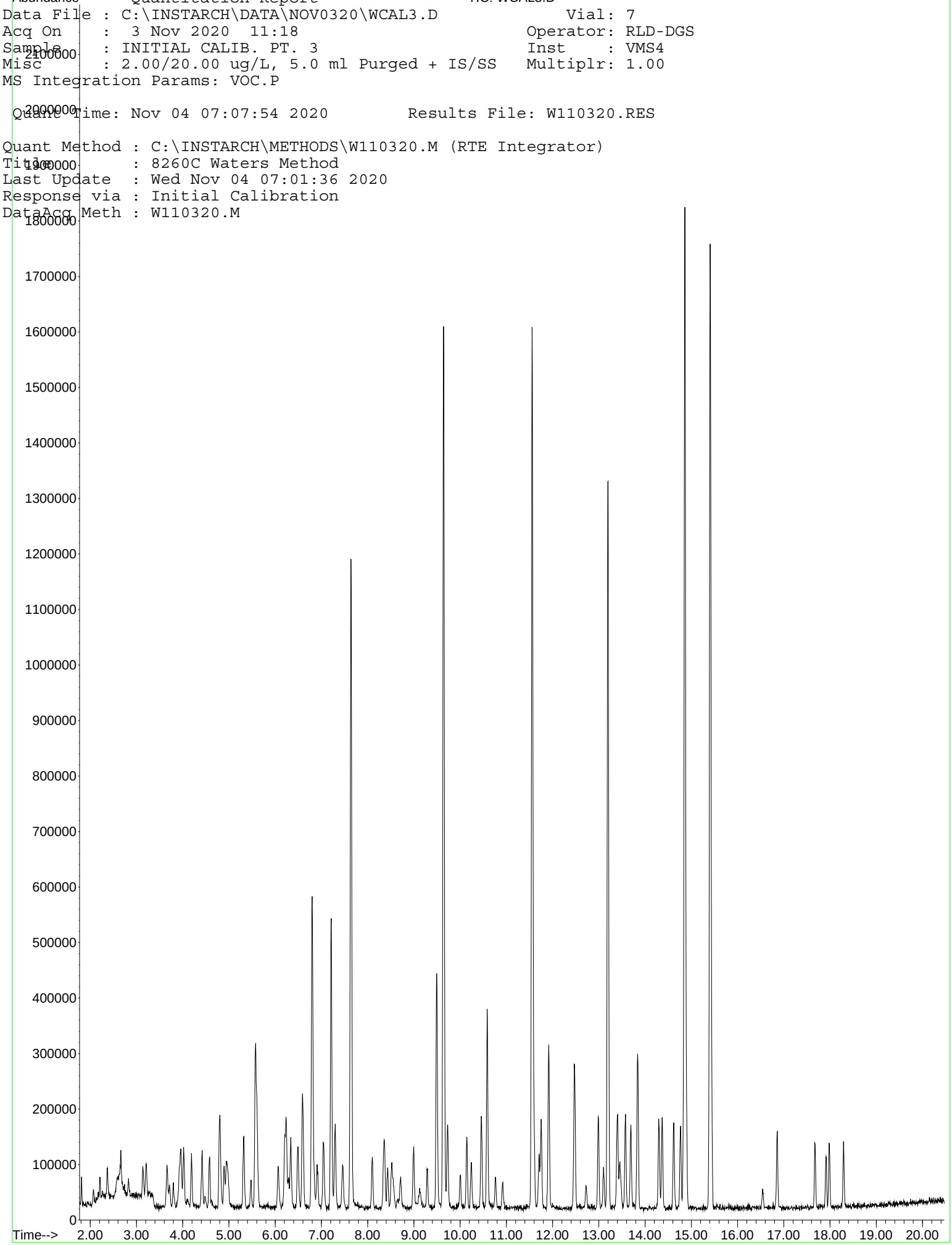
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL3.D

Data File : C:\INSTARCH\DATA\NOV0320\WCAL3.D Vial: 7
Acq On : 3 Nov 2020 11:18 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 3 Inst : VMS4
Misc : 2.00/20.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:07:54 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:01:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\Instarch\Data\NOV0320\WCAL4.D Vial: 8
Acq On : 3 Nov 2020 11:48 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 4 Inst : VMS4
Misc : 5.00/50.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:01:57 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:01:51 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1300012	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1126820	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	646773	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	391908	20.431	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 102	%		
45) SURR12DCAd4	7.21	102	90531	20.623	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103	%		
61) SURRd8Tolule	9.64	98	1341703	20.737	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 104	%		
83) SURR4BrFBenz	13.20	95	548857	17.970	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 90	%		
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	87559	4.6764	ug/L	98
3) Chloromethan	2.07	50	76447	4.5295	ug/L	98
4) VinylChlorid	2.21	62	84249	5.1494	ug/L	94
5) Bromomethane	2.66	94	66439	7.3346	ug/L	87
6) Chloroethane	2.82	64	59718	5.5613	ug/L	99
7) Dichloroflmethane	3.13	67	148015	5.5508	ug/L	98
8) Trichlorofma	3.21	101	154108	5.7266	ug/L	95
9) Ethylether	3.65	59	49433	4.6265	ug/L	97
10) dichlorotfluoroethan	3.67	67	75409	5.0748	ug/L	91
11) propyleneoxide	3.72	58	92691	53.0855	ug/L	92
12) Acrolein	3.79	56	98629	23.8952	ug/L	93
13) 11dichlorthe	3.92	96	69331	5.1026	ug/L	98
14) Trichlorotfluoroeth	3.95	101	146103	10.4746	ug/L	97
15) Acetone	4.02	43	360385	54.5465	ug/L	97
16) Iodomethane	4.10	127	21413	4.4220	ug/L	97
17) Carbon Dislf	4.19	76	346179	10.0196	ug/L	99
18) allylchloride	4.42	41	170821	9.6131	ug/L	99
19) methylacetate	4.48	74	19685	4.7513	ug/L	97
20) Methylchlorid	4.58	84	115110	5.2809	ug/L	98
21) tbutylalcohol	4.80	59	648002	254.3617	ug/L	98
22) Acrylonitrile	4.90	53	159615	26.3684	ug/L	96
23) t12dichlorte	4.94	96	78628	5.2342	ug/L	90
24) MtBE	4.98	73	199758	4.9932	ug/L	98
25) Hexane	5.32	57	196280	10.3235	ug/L	97
26) 11dichlorota	5.47	63	118247	4.9683	ug/L	99
27) Vinylacetate	5.57	43	1217649	51.6698	ug/L	97
28) chloroprene	5.59	53	188493	10.6317	ug/L	98
29) Diisopether	5.61	45	184541	5.0043	ug/L	99
30) ETBE	6.06	59	176238	4.8285	ug/L	99
31) 22dichloropr	6.21	77	104413	5.0140	ug/L	97
32) c12dichlorte	6.21	96	88275	4.9518	ug/L	99
33) 2Butanone	6.24	72	135531	52.7299	ug/L	100
34) propionitrile	6.29	54	138682	50.1927	ug/L	98
35) Ethylacetate	6.34	88	22341	26.7513	ug/L	95
36) methacrylonitrile	6.49	67	72456	9.4558	ug/L	96
37) Bromochlorma	6.50	128	43287	5.3956	ug/L	93
38) Tetrahydofur	6.59	42	296198	53.8935	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\WCAL4.D Vial: 8
Acq On : 3 Nov 2020 11:48 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 4 Inst : VMS4
Misc : 5.00/50.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:01:57 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:01:51 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	143453	5.2458 ug/L	100
40)	111trichlota	6.84	97	123283	5.1295 ug/L	97
42)	Cyclohexane	6.91	56	102311	4.9430 ug/L	98
43)	Carbtetraclo	7.05	119	107011	5.2286 ug/L	100
44)	11dicloprope	7.04	110	38409	4.9272 ug/L	95
46)	Benzene	7.29	78	298602	5.2996 ug/L	98
47)	12dichlorota	7.31	62	104839	5.1347 ug/L	98
48)	TAME	7.46	73	183340	4.7158 ug/L	99
49)	trichloroete	8.10	95	85418	5.1153 ug/L	99
50)	methylcyclohexane	8.34	83	125613	4.9760 ug/L	98
51)	12dicloropra	8.37	63	74882	5.1374 ug/L	93
52)	23Dicl1propene	8.43	75	119165	5.2617 ug/L	99
53)	Dibromometha	8.51	93	56801	5.2469 ug/L	97
54)	methylmethacrylate	8.53	69	59021	4.8688 ug/L	96
55)	14dioxane	8.56	88	80368	258.5464 ug/L	98
56)	Bromodiclrma	8.71	83	111963	5.2239 ug/L	94
57)	2Nitropropane	8.99	43	233590	47.0698 ug/L	95
58)	2CLEVE	9.11	63	24283	24.9749 ug/L	95
59)	c13dicloproe	9.29	75	120975	5.0061 ug/L	100
60)	4Meth2Pentan	9.49	43	866578	55.9184 ug/L	97
62)	Toluene	9.73	92	201272	5.1991 ug/L	98
63)	t13Dicloprop	10.00	75	105658	4.9707 ug/L	96
64)	ethylmethacrylate	10.15	69	202960	9.9905 ug/L	98
65)	112Triclotha	10.25	83	66661	5.2609 ug/L	97
66)	Tetrachlorte	10.46	166	100682	5.4060 ug/L	96
67)	13Diclorpropa	10.47	76	123731	5.1681 ug/L	98
69)	2Hexanone	10.58	43	704173	54.3415 ug/L	98
70)	Clorodibrmta	10.77	129	89175	4.7641 ug/L	94
71)	12Dibrometha	10.91	107	90281	4.8458 ug/L	96
72)	Chlorobenzen	11.59	112	255160	5.2586 ug/L	96
73)	1Clhexane	11.57	91	104208	4.6864 ug/L	93
74)	1112Tetclota	11.71	131	84103	4.9904 ug/L	99
75)	Ethylbenzene	11.75	91	384803	5.3455 ug/L	99
76)	m p-Xylene	11.92	106	312491	10.8227 ug/L	99
77)	o-Xylene	12.47	106	160644	5.4060 ug/L	99
78)	Styrene	12.48	104	249525	5.1918 ug/L	98
79)	Bromoform	12.72	173	60444	4.3468 ug/L	93
80)	Isopropylben	12.99	105	391749	5.3283 ug/L	97
81)	cyclohexanone	13.10	55	89193	95.5155 ug/L	98
84)	Bromobenzene	13.41	156	118535	4.9813 ug/L	99
85)	1122Tetrclta	13.39	83	119559	4.4806 ug/L	97
86)	123Triclproa	13.45	75	143508	4.6331 ug/L	98
87)	14dichloro2butene	13.48	53	25016	4.2181 ug/L	92
88)	n-Propylbenz	13.57	91	445417	5.1125 ug/L	97
89)	2chlorotolue	13.69	91	268473	4.8266 ug/L	97
90)	4chlorotolue	13.84	91	318455	5.0339 ug/L	95
91)	135Trimebenz	13.83	105	325642	5.0608 ug/L	99
92)	tbutylbenzen	14.30	119	295657	5.1148 ug/L	99
93)	124Trimetben	14.37	105	328410	5.1044 ug/L	98
94)	sbutylbenzen	14.62	105	407753	5.1067 ug/L	99
95)	13Diclorbenz	14.77	146	208553	5.1428 ug/L	98
96)	pIsopropylto	14.84	119	351148	5.2610 ug/L	98
97)	14dichlorobe	14.90	146	208358	5.1511 ug/L	97
98)	12dichlorobe	15.43	146	193966	5.0796 ug/L	96
99)	nButylbenzen	15.43	91	287108	4.9713 ug/L	99
100)	12dibromo3cl	16.55	157	32288	4.2786 ug/L	86
101)	135Trichlorobenzene	16.86	180	141240	4.7691 ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\WCAL4.D Vial: 8
Acq On : 3 Nov 2020 11:48 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 4 Inst : VMS4
Misc : 5.00/50.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:01:57 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:01:51 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	17.68	180	125637	4.9891 ug/L	96
103) Hexachlorobu	17.92	225	57193	4.4557 ug/L	95
104) Naphthalene	17.99	128	309435	4.8792 ug/L	100
105) 123Trichlben	18.29	180	107757	4.5835 ug/L	97

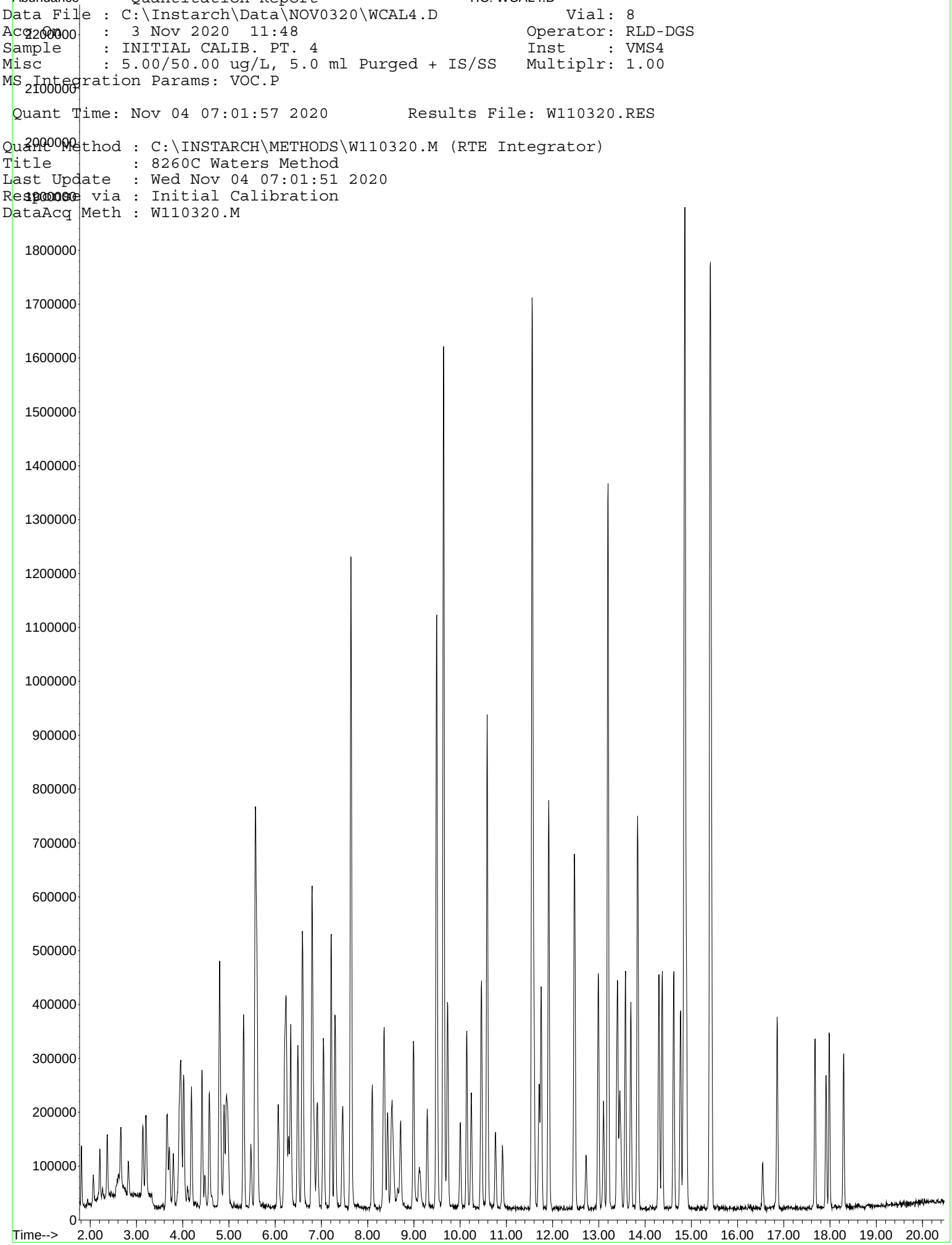
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL4.D

Data File : C:\Instarch\Data\NOV0320\WCAL4.D Vial: 8
Acq On : 3 Nov 2020 11:48 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 4 Inst : VMS4
Misc : 5.00/50.00 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:01:57 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:01:51 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL5.D Vial: 9
Acq On : 3 Nov 2020 12:18 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 5 Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:05 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1335480	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1160069	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	664584	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	403541	20.370	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 102 %			
45) SURR12DCAd4	7.21	102	90709	19.958	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
61) SURRd8Tolule	9.64	98	1377077	20.589	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 103 %			
83) SURR4BrFBenz	13.19	95	565049	18.348	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 92 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	180186	9.5015	ug/L	100
3) Chloromethan	2.07	50	150277	8.8444	ug/L	100
4) VinylChlorid	2.21	62	168748	10.0709	ug/L	100
5) Bromomethane	2.66	94	94909	9.3490	ug/L	100
6) Chloroethane	2.83	64	119070	10.6536	ug/L	100
7) Dichloroflmethane	3.14	67	294323	10.5869	ug/L	100
8) Trichlorofma	3.21	101	327759	11.5173	ug/L	100
9) Ethylether	3.66	59	100352	9.3662	ug/L	100
10) dichlorotfluoroethan	3.67	67	161858	10.6263	ug/L	100
11) propyleneoxide	3.71	58	161609	89.0530	ug/L	100
12) Acrolein	3.80	56	191787	46.0425	ug/L	100
13) 11dichlorthe	3.92	96	145176	10.4436	ug/L	100
14) Trichlorotfluoroeth	3.96	101	310903	21.5251	ug/L	100
15) Acetone	4.02	43	643185	93.4546	ug/L	100
16) Iodomethane	4.10	127	69434	15.1809	ug/L	100
17) Carbon Dislf	4.19	76	687531	19.6711	ug/L	100
18) allylchloride	4.42	41	341952	19.0931	ug/L	100
19) methylacetate	4.48	74	36598	8.8516	ug/L	100
20) Methylchlorid	4.58	84	222008	9.8506	ug/L	100
21) tbutylalcohol	4.80	59	1236798	480.7726	ug/L	100
22) Acrylonitrile	4.90	53	303892	49.1470	ug/L	100
23) t12dichlorte	4.94	96	147172	9.5043	ug/L	100
24) MtBE	4.98	73	392534	9.6769	ug/L	100
25) Hexane	5.32	57	429743	21.9709	ug/L	100
26) 11dichlorota	5.47	63	236826	9.7525	ug/L	100
27) Vinylacetate	5.57	43	2491016	105.6056	ug/L	100
28) chloroprene	5.60	53	396331	21.8217	ug/L	100
29) Diisopether	5.61	45	378528	10.0542	ug/L	100
30) ETBE	6.06	59	358064	9.6754	ug/L	100
31) 22dichloropr	6.20	77	214049	10.1082	ug/L	100
32) c12dichlorte	6.21	96	176159	9.6174	ug/L	100
33) 2Butanone	6.24	72	256681	97.9203	ug/L	100
34) propionitrile	6.29	54	271382	96.7745	ug/L	100
35) Ethylacetate	6.34	88	43102	50.4252	ug/L	100
36) methacrylonitrile	6.49	67	145527	18.8251	ug/L	100
37) Bromochlorma	6.50	128	90437	10.8541	ug/L	100
38) Tetrahydofur	6.59	42	548381	97.0570	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL5.D Vial: 9
Acq On : 3 Nov 2020 12:18 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 5 Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:05 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.60	83	285034	10.1495	ug/L	100
40)	111trichlota	6.84	97	251439	10.1744	ug/L	100
42)	Cyclohexane	6.92	56	224014	10.5228	ug/L	100
43)	Carbtetraclo	7.05	119	227149	10.7632	ug/L	100
44)	11dicloprope	7.04	110	84371	10.5146	ug/L	100
46)	Benzene	7.29	78	577161	9.9915	ug/L	100
47)	12dichlorota	7.30	62	209353	9.9323	ug/L	100
48)	TAME	7.46	73	383096	9.7640	ug/L	100
49)	trichloroete	8.10	95	179039	10.4210	ug/L	100
50)	methylcyclohexane	8.34	83	268107	10.3835	ug/L	100
51)	12dicloropra	8.37	63	149150	10.0087	ug/L	100
52)	23Dicl1propene	8.44	75	230575	9.9730	ug/L	100
53)	Dibromometha	8.51	93	113360	10.2298	ug/L	100
54)	methylmethacrylate	8.53	69	118325	9.6418	ug/L	100
55)	14dioxane	8.56	88	153200	483.1234	ug/L	100
56)	Bromodiclrma	8.72	83	211743	9.6076	ug/L	100
57)	2Nitropropane	9.00	43	505357	103.1068	ug/L	100
58)	2CLEVE	9.11	63	52436	49.9170	ug/L	100
59)	c13dicloproe	9.29	75	242129	9.8936	ug/L	100
60)	4Meth2Pentan	9.49	43	1633603	102.6834	ug/L	100
62)	Toluene	9.73	92	405256	10.1423	ug/L	100
63)	t13Dicloprop	10.00	75	217861	10.0944	ug/L	100
64)	ethylmethacrylate	10.15	69	416597	20.2248	ug/L	100
65)	112Triclotha	10.24	83	130028	9.9969	ug/L	100
66)	Tetrachlorte	10.46	166	207991	10.7433	ug/L	100
67)	13Diclorpropa	10.46	76	254559	10.3288	ug/L	100
69)	2Hexanone	10.58	43	1317593	99.7186	ug/L	100
70)	Clorodibrmta	10.77	129	186538	9.7730	ug/L	100
71)	12Dibrometha	10.92	107	186112	9.8175	ug/L	100
72)	Chlorobenzen	11.60	112	507170	10.1877	ug/L	100
73)	1Clhexane	11.57	91	226932	9.9967	ug/L	100
74)	1112Tetclota	11.71	131	170287	9.8554	ug/L	100
75)	Ethylbenzene	11.75	91	769636	10.4672	ug/L	100
76)	m p-Xylene	11.92	106	622872	20.9567	ug/L	100
77)	o-Xylene	12.46	106	318110	10.4416	ug/L	100
78)	Styrene	12.48	104	505691	10.3078	ug/L	100
79)	Bromoform	12.72	173	127576	9.1781	ug/L	100
80)	Isopropylben	12.99	105	805910	10.7122	ug/L	100
81)	cyclohexanone	13.10	55	181277	192.8885	ug/L	100
84)	Bromobenzene	13.41	156	232629	9.5814	ug/L	100
85)	1122Tetrclta	13.39	83	252924	9.4611	ug/L	100
86)	123Triclproa	13.45	75	284216	9.1904	ug/L	100
87)	14dichloro2butene	13.48	53	51485	8.7969	ug/L	100
88)	n-Propylbenz	13.58	91	912342	10.3246	ug/L	100
89)	2chlorotolue	13.69	91	544163	9.7174	ug/L	100
90)	4chlorotolue	13.84	91	625193	9.7552	ug/L	100
91)	135Trimebenz	13.83	105	668090	10.2705	ug/L	100
92)	tbutylbenzen	14.30	119	608959	10.3231	ug/L	100
93)	124Trimetben	14.37	105	661628	10.1669	ug/L	100
94)	sbutylbenzen	14.62	105	862313	10.6549	ug/L	100
95)	13Diclorbenz	14.77	146	420766	10.1103	ug/L	100
96)	pIsopropylto	14.84	119	734361	10.7650	ug/L	100
97)	14dichlorobe	14.90	146	424855	10.2635	ug/L	100
98)	12dichlorobe	15.44	146	394361	10.0490	ug/L	100
99)	nButylbenzen	15.43	91	607298	10.3732	ug/L	100
100)	12dibromo3cl	16.55	157	62005	8.2737	ug/L	100
101)	135Trichlorobenzene	16.86	180	298133	9.9664	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL5.D Vial: 9
Acq On : 3 Nov 2020 12:18 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 5 Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:05 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

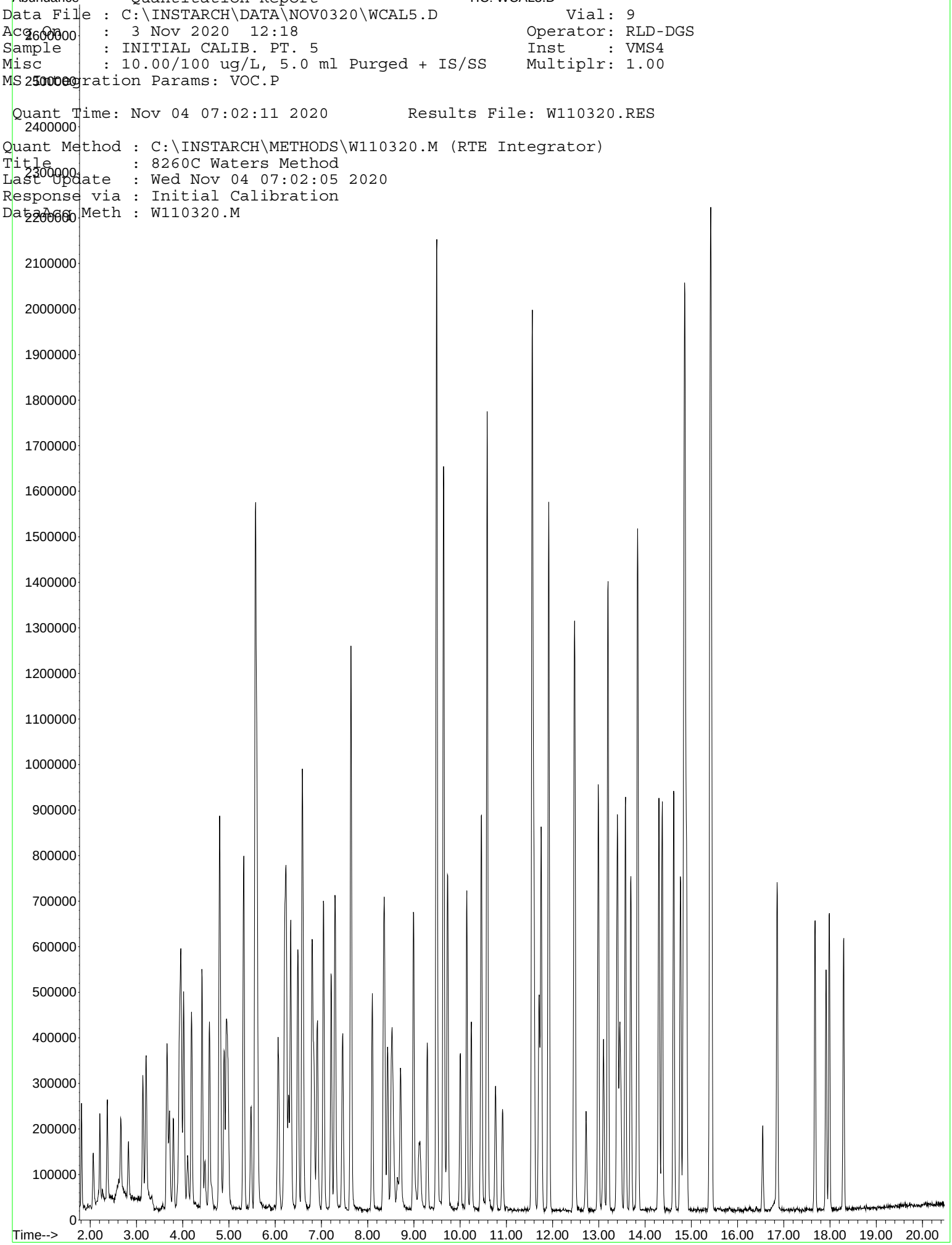
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	17.68	180	245027	9.5387 ug/L	100
103) Hexachlorobu	17.91	225	116712	8.9672 ug/L	100
104) Naphthalene	17.99	128	639073	10.0151 ug/L	100
105) 123Trichlben	18.30	180	226359	9.5574 ug/L	100

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0320\WCAL5.D Vial: 9
Acq On : 3 Nov 2020 12:18 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 5 Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:05 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL6.D Vial: 10
Acq On : 3 Nov 2020 12:48 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 6 Inst : VMS4
Misc : 20.00/200 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:26 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:18 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1363414	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1208126	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	701311	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.80	113	415050	20.521 ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 103 %		
45) SURR12DCAd4	7.21	102	89594	19.308 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 97 %		
61) SURRd8Tolule	9.64	98	1418470	20.774 ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 104 %		
83) SURR4BrFBenz	13.19	95	588890	18.120 ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 91 %		
Target Compounds					Qvalue
2) Dichlorodi	1.81	85	354449	18.3077 ug/L	97
3) Chloromethan	2.07	50	280071	16.1456 ug/L	99
4) VinylChlorid	2.21	62	332209	19.4200 ug/L	95
5) Bromomethane	2.66	94	149934	14.4667 ug/L	94
6) Chloroethane	2.83	64	217378	19.0511 ug/L	98
7) Dichloroflmethane	3.14	67	560124	19.7351 ug/L	98
8) Trichlorofma	3.21	101	624253	21.4865 ug/L	96
9) Ethylether	3.65	59	193779	17.7154 ug/L	99
10) dichlorotfluoroethan	3.67	67	307952	19.8034 ug/L	97
11) propyleneoxide	3.72	58	340029	183.5314 ug/L	98
12) Acrolein	3.80	56	391673	92.0863 ug/L	99
13) 11dichlorthe	3.92	96	276428	19.4781 ug/L	97
14) Trichlorotfluoroeth	3.96	101	597091	40.4921 ug/L	98
15) Acetone	4.02	43	1258547	179.1198 ug/L	98
16) Iodomethane	4.11	127	212553	45.5742 ug/L	93
17) Carbon Dislf	4.19	76	1327595	37.2059 ug/L	100
18) allylchloride	4.42	41	675493	36.9439 ug/L	99
19) methylacetate	4.48	74	72593	17.1976 ug/L	99
20) Methylchlorid	4.58	84	435600	18.9318 ug/L	96
21) tbutylalcohol	4.80	59	2433935	926.7436 ug/L	100
22) Acrylonitrile	4.90	53	603039	95.5285 ug/L	97
23) t12dichlorte	4.94	96	298774	18.8994 ug/L	97
24) MtBE	4.97	73	770280	18.5988 ug/L	99
25) Hexane	5.32	57	885734	44.3560 ug/L	99
26) 11dichlorota	5.48	63	459818	18.5474 ug/L	99
27) Vinylacetate	5.57	43	4641658	192.7494 ug/L	96
28) chloroprene	5.60	53	780981	42.1164 ug/L	99
29) Diisopether	5.61	45	742608	19.3168 ug/L	100
30) ETBE	6.06	59	723307	19.1443 ug/L	99
31) 22dichloropr	6.21	77	431599	19.9641 ug/L	96
32) c12dichlorte	6.21	96	344698	18.4332 ug/L	97
33) 2Butanone	6.24	72	520946	194.6620 ug/L	100
34) propionitrile	6.29	54	543911	189.9841 ug/L	98
35) Ethylacetate	6.34	88	83578	95.7749 ug/L	96
36) methacrylonitrile	6.48	67	300647	38.0942 ug/L	94
37) Bromochlorma	6.50	128	164043	19.2848 ug/L	98
38) Tetrahydofur	6.58	42	1081596	187.5078 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL6.D Vial: 10
Acq On : 3 Nov 2020 12:48 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 6 Inst : VMS4
Misc : 20.00/200 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:26 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:18 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	581672	20.2878 ug/L	96
40)	111trichlota	6.84	97	512037	20.2949 ug/L	98
42)	Cyclohexane	6.91	56	441553	20.3164 ug/L	99
43)	Carbtetraclo	7.05	119	460829	21.3885 ug/L	98
44)	11dicloprope	7.04	110	162231	19.8035 ug/L	94
46)	Benzene	7.29	78	1134174	19.2319 ug/L	97
47)	12dichlorota	7.30	62	424542	19.7288 ug/L	99
48)	TAME	7.46	73	764082	19.0753 ug/L	98
49)	trichloroete	8.10	95	343987	19.6116 ug/L	95
50)	methylcyclohexane	8.35	83	555783	21.0838 ug/L	98
51)	12dicloropra	8.37	63	293153	19.2690 ug/L	95
52)	23Dicl1propene	8.43	75	469141	19.8760 ug/L	97
53)	Dibromometha	8.52	93	222068	19.6292 ug/L	96
54)	methylmethacrylate	8.53	69	244029	19.4774 ug/L	95
55)	14dioxane	8.56	88	310913	960.3904 ug/L	99
56)	Bromodiclrma	8.72	83	452061	20.0915 ug/L	93
57)	2Nitropropane	8.99	43	1101732	220.1783 ug/L	100
58)	2CLEVE	9.11	63	133190	124.1939 ug/L	99
59)	c13dicloproe	9.29	75	508750	20.3622 ug/L	99
60)	4Meth2Pentan	9.49	43	3070710	189.0612 ug/L	96
62)	Toluene	9.73	92	820519	20.1143 ug/L	97
63)	t13Dicloprop	10.01	75	449195	20.3867 ug/L	97
64)	ethylmethacrylate	10.15	69	839211	39.9070 ug/L	97
65)	112Triclotha	10.24	83	267817	20.1687 ug/L	98
66)	Tetrachlorte	10.46	166	431750	21.8442 ug/L	99
67)	13Diclorpropa	10.46	76	498260	19.8028 ug/L	97
69)	2Hexanone	10.58	43	2568271	186.6411 ug/L	98
70)	Clorodibrmta	10.77	129	399389	20.0923 ug/L	99
71)	12Dibrometha	10.92	107	376266	19.0588 ug/L	98
72)	Chlorobenzen	11.60	112	1023289	19.7374 ug/L	98
73)	1Clhexane	11.57	91	486523	20.5795 ug/L	98
74)	1112Tetclota	11.71	131	377682	20.9890 ug/L	96
75)	Ethylbenzene	11.75	91	1526897	19.9400 ug/L	99
76)	m p-Xylene	11.92	106	1263323	40.8141 ug/L	94
77)	o-Xylene	12.46	106	640692	20.1935 ug/L	100
78)	Styrene	12.48	104	1022038	20.0042 ug/L	99
79)	Bromoform	12.72	173	278533	19.2413 ug/L	99
80)	Isopropylben	12.99	105	1636865	20.8918 ug/L	97
81)	cyclohexanone	13.10	55	366763	374.7319 ug/L	97
84)	Bromobenzene	13.41	156	469872	18.3393 ug/L	98
85)	1122Tetrclta	13.39	83	515410	18.2703 ug/L	100
86)	123Triclproa	13.45	75	581357	17.8142 ug/L	99
87)	14dichloro2butene	13.48	53	111877	18.1147 ug/L	96
88)	n-Propylbenz	13.57	91	1824796	19.5691 ug/L	99
89)	2chlorotolue	13.69	91	1090755	18.4581 ug/L	98
90)	4chlorotolue	13.84	91	1242441	18.3712 ug/L	96
91)	135Trimebenz	13.83	105	1350014	19.6668 ug/L	96
92)	tbutylbenzen	14.30	119	1249825	20.0775 ug/L	99
93)	124Trimetben	14.37	105	1347986	19.6290 ug/L	99
94)	sbutylbenzen	14.62	105	1735858	20.3253 ug/L	98
95)	13Diclorbenz	14.77	146	871123	19.8354 ug/L	99
96)	pIsopropylto	14.84	119	1504490	20.8994 ug/L	100
97)	14dichlorobe	14.90	146	857324	19.6263 ug/L	100
98)	12dichlorobe	15.44	146	797503	19.2574 ug/L	98
99)	nButylbenzen	15.43	91	1251072	20.2503 ug/L	98
100)	12dibromo3cl	16.55	157	143533	18.1496 ug/L	95
101)	135Trichlorobenzene	16.86	180	610113	19.3277 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL6.D Vial: 10
Acq On : 3 Nov 2020 12:48 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 6 Inst : VMS4
Misc : 20.00/200 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:26 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:18 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.68	180	512301	18.8991	ug/L	96
103) Hexachlorobu	17.91	225	252318	18.3709	ug/L	96
104) Naphthalene	17.98	128	1333252	19.7996	ug/L	99
105) 123Trichlben	18.30	180	470974	18.8442	ug/L	99

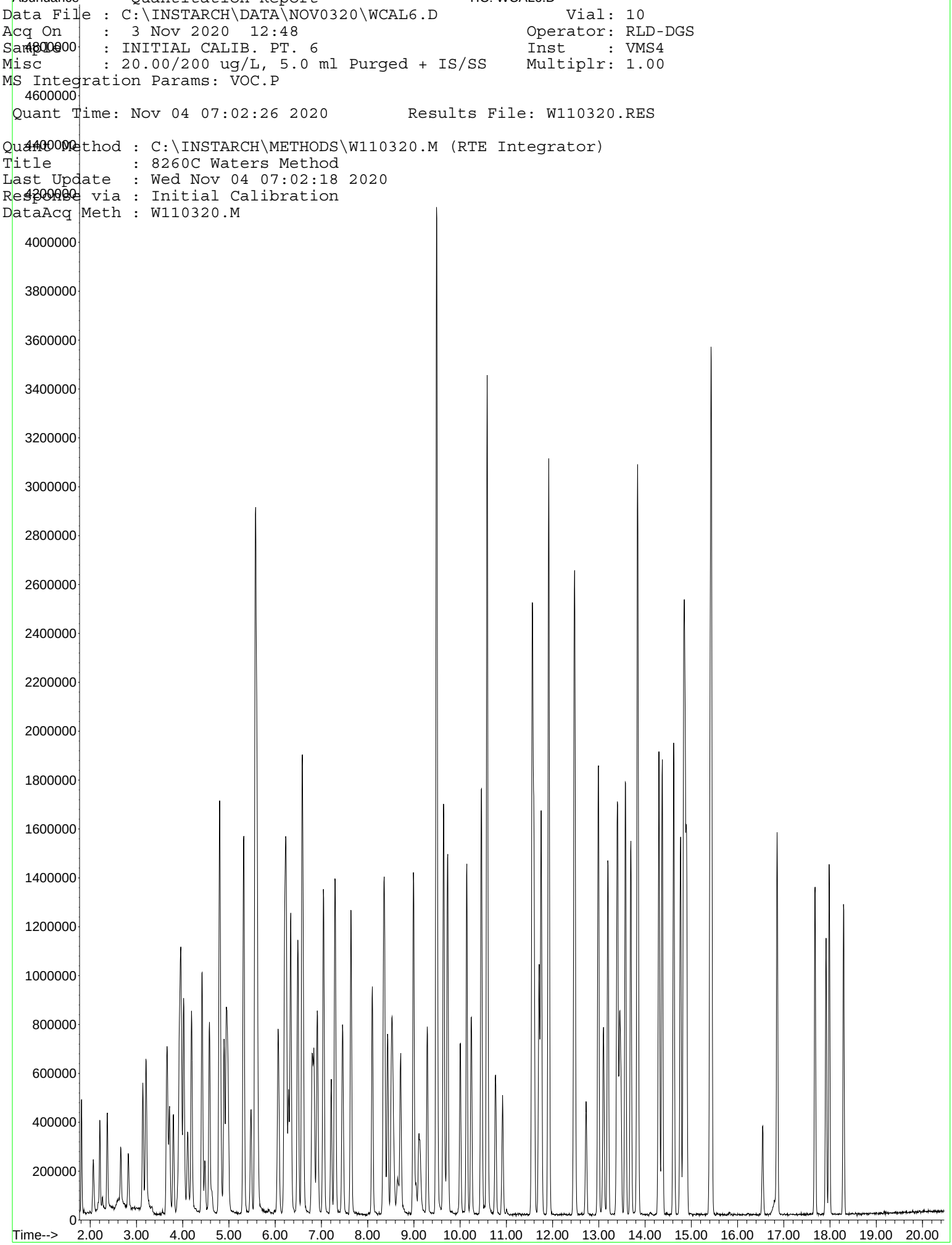
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL6.D

Data File : C:\INSTARCH\DATA\NOV0320\WCAL6.D Vial: 10
Acq On : 3 Nov 2020 12:48 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 6 Inst : VMS4
Misc : 20.00/200 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:26 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:18 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL7.D Vial: 11
Acq On : 3 Nov 2020 13:19 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 7 Inst : VMS4
Misc : 30.00/300 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:45 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1404309	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1222277	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	731626	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	420514	20.101	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 101 %			
45) SURR12DCAd4	7.21	102	99172	20.747	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 104 %			
61) SURRd8Tolule	9.64	98	1462246	20.638	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 103 %			
83) SURR4BrFBenz	13.20	95	615427	18.585	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 93 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	539781	27.6870	ug/L	99
3) Chloromethan	2.07	50	442454	25.2439	ug/L	98
4) VinylChlorid	2.21	62	511634	29.2424	ug/L	98
5) Bromomethane	2.66	94	225504	20.4456	ug/L	97
6) Chloroethane	2.82	64	348776	29.3898	ug/L	96
7) Dichloroflmethane	3.14	67	865154	29.2517	ug/L	99
8) Trichlorofma	3.20	101	963177	31.6470	ug/L	97
9) Ethylether	3.65	59	311798	28.0420	ug/L	99
10) dichlorotfluoroethan	3.67	67	480019	30.0007	ug/L	97
11) propyleneoxide	3.72	58	605385	319.4252	ug/L	98
12) Acrolein	3.79	56	618283	142.7654	ug/L	98
13) 11dichlorthe	3.93	96	434872	29.7952	ug/L	98
14) Trichlorotfluoroeth	3.96	101	937439	61.7796	ug/L	98
15) Acetone	4.02	43	1875852	258.2234	ug/L	100
16) Iodomethane	4.10	127	407634	89.7873	ug/L	91
17) Carbon Dislf	4.19	76	2068740	57.1413	ug/L	99
18) allylchloride	4.42	41	1093817	58.9016	ug/L	98
19) methylacetate	4.48	74	129059	30.1214	ug/L	100
20) Methylchlorid	4.58	84	683326	28.5552	ug/L	97
21) tbutylalcohol	4.80	59	3672559	1366.5244	ug/L	99
22) Acrylonitrile	4.90	53	940281	145.7371	ug/L	96
23) t12dichlorte	4.94	96	479817	29.4783	ug/L	96
24) MtBE	4.97	73	1225272	28.9578	ug/L	99
25) Hexane	5.32	57	1301512	63.2373	ug/L	97
26) 11dichlorota	5.47	63	747303	29.4318	ug/L	98
27) Vinylacetate	5.57	43	6259321	251.6030	ug/L	93
28) chloroprene	5.60	53	1219263	63.5864	ug/L	97
29) Diisopether	5.61	45	1176039	29.6666	ug/L	98
30) ETBE	6.06	59	1136999	29.4642	ug/L	98
31) 22dichloropr	6.21	77	655463	29.4694	ug/L	97
32) c12dichlorte	6.21	96	558641	29.0595	ug/L	98
33) 2Butanone	6.23	72	806492	293.2703	ug/L	99
34) propionitrile	6.29	54	866417	296.4169	ug/L	100
35) Ethylacetate	6.33	88	129729	144.7309	ug/L	97
36) methacrylonitrile	6.48	67	486640	60.6780	ug/L	93
37) Bromochlorma	6.50	128	252086	28.4647	ug/L	99
38) Tetrahydofur	6.58	42	1656453	277.6669	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL7.D Vial: 11
Acq On : 3 Nov 2020 13:19 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 7 Inst : VMS4
Misc : 30.00/300 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:45 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	884728	29.7518 ug/L	100
40)	111trichlota	6.84	97	811659	31.1705 ug/L	99
42)	Cyclohexane	6.91	56	691969	31.0149 ug/L	99
43)	Carbtetraclo	7.05	119	732803	32.7646 ug/L	97
44)	11dicloprope	7.04	110	270653	32.1416 ug/L	95
46)	Benzene	7.29	78	1764149	29.1256 ug/L	98
47)	12dichlorota	7.30	62	646870	28.9124 ug/L	99
48)	TAME	7.46	73	1209689	29.5936 ug/L	99
49)	trichloroete	8.10	95	548617	30.3751 ug/L	96
50)	methylcyclohexane	8.34	83	856486	31.5832 ug/L	98
51)	12dicloropra	8.36	63	468333	30.0006 ug/L	95
52)	23Dicl1propene	8.43	75	730174	30.1468 ug/L	97
53)	Dibromometha	8.51	93	358731	30.7235 ug/L	99
54)	methylmethacrylate	8.53	69	393052	30.7447 ug/L	98
55)	14dioxane	8.56	88	485269	1455.7154 ug/L	99
56)	Bromodiclrma	8.72	83	709623	30.5574 ug/L	92
57)	2Nitropropane	9.00	43	1784054	349.3132 ug/L	97
58)	2CLEVE	9.11	63	240222	205.2449 ug/L	94
59)	c13dicloproe	9.29	75	786414	30.5395 ug/L	98
60)	4Meth2Pentan	9.49	43	4455942	264.3483 ug/L	93
62)	Toluene	9.73	92	1238611	29.2511 ug/L	96
63)	t13Dicloprop	10.01	75	728764	32.2124 ug/L	96
64)	ethylmethacrylate	10.15	69	1315195	61.2348 ug/L	97
65)	112Triclotha	10.24	83	414734	30.2113 ug/L	98
66)	Tetrachlorte	10.46	166	665416	32.1546 ug/L	99
67)	13Diclorpropa	10.47	76	756249	29.0141 ug/L	96
69)	2Hexanone	10.58	43	3718137	267.2301 ug/L	95
70)	Clorodibrmta	10.77	129	625637	31.0796 ug/L	98
71)	12Dibrometha	10.92	107	576963	29.0220 ug/L	99
72)	Chlorobenzen	11.60	112	1532430	29.0957 ug/L	97
73)	1Clhexane	11.57	91	735910	30.7901 ug/L	97
74)	1112Tetclota	11.71	131	579020	31.5824 ug/L	99
75)	Ethylbenzene	11.75	91	2267816	29.3114 ug/L	96
76)	m p-Xylene	11.92	106	1929434	61.4094 ug/L	89
77)	o-Xylene	12.47	106	1009045	31.4457 ug/L	92
78)	Styrene	12.48	104	1595550	30.9302 ug/L	98
79)	Bromoform	12.73	173	459771	31.7999 ug/L	99
80)	Isopropylben	12.99	105	2427493	30.5329 ug/L	93
81)	cyclohexanone	13.10	55	581547	596.2349 ug/L	96
84)	Bromobenzene	13.41	156	726891	27.4019 ug/L	98
85)	1122Tetrclta	13.39	83	779330	26.9261 ug/L	95
86)	123Triclproa	13.46	75	916661	27.6488 ug/L	100
87)	14dichloro2butene	13.48	53	180253	28.7566 ug/L	97
88)	n-Propylbenz	13.58	91	2719737	28.2691 ug/L	94
89)	2chlorotolue	13.69	91	1677462	27.6120 ug/L	98
90)	4chlorotolue	13.84	91	1879269	26.9888 ug/L	95
91)	135Trimebenz	13.83	105	2065211	29.0781 ug/L	98
92)	tbutylbenzen	14.30	119	1893434	29.2197 ug/L	99
93)	124Trimetben	14.37	105	2050883	28.8347 ug/L	97
94)	sbutylbenzen	14.62	105	2555008	28.9050 ug/L	96
95)	13Diclorbenz	14.77	146	1308516	28.5642 ug/L	98
96)	pIsopropylto	14.84	119	2253193	29.9989 ug/L	97
97)	14dichlorobe	14.90	146	1306322	28.5552 ug/L	98
98)	12dichlorobe	15.43	146	1207214	27.8668 ug/L	97
99)	nButylbenzen	15.43	91	1870047	29.2985 ug/L	97
100)	12dibromo3cl	16.55	157	229727	28.6077 ug/L	96
101)	135Trichlorobenzene	16.86	180	949226	29.1223 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL7.D Vial: 11
Acq On : 3 Nov 2020 13:19 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 7 Inst : VMS4
Misc : 30.00/300 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:45 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

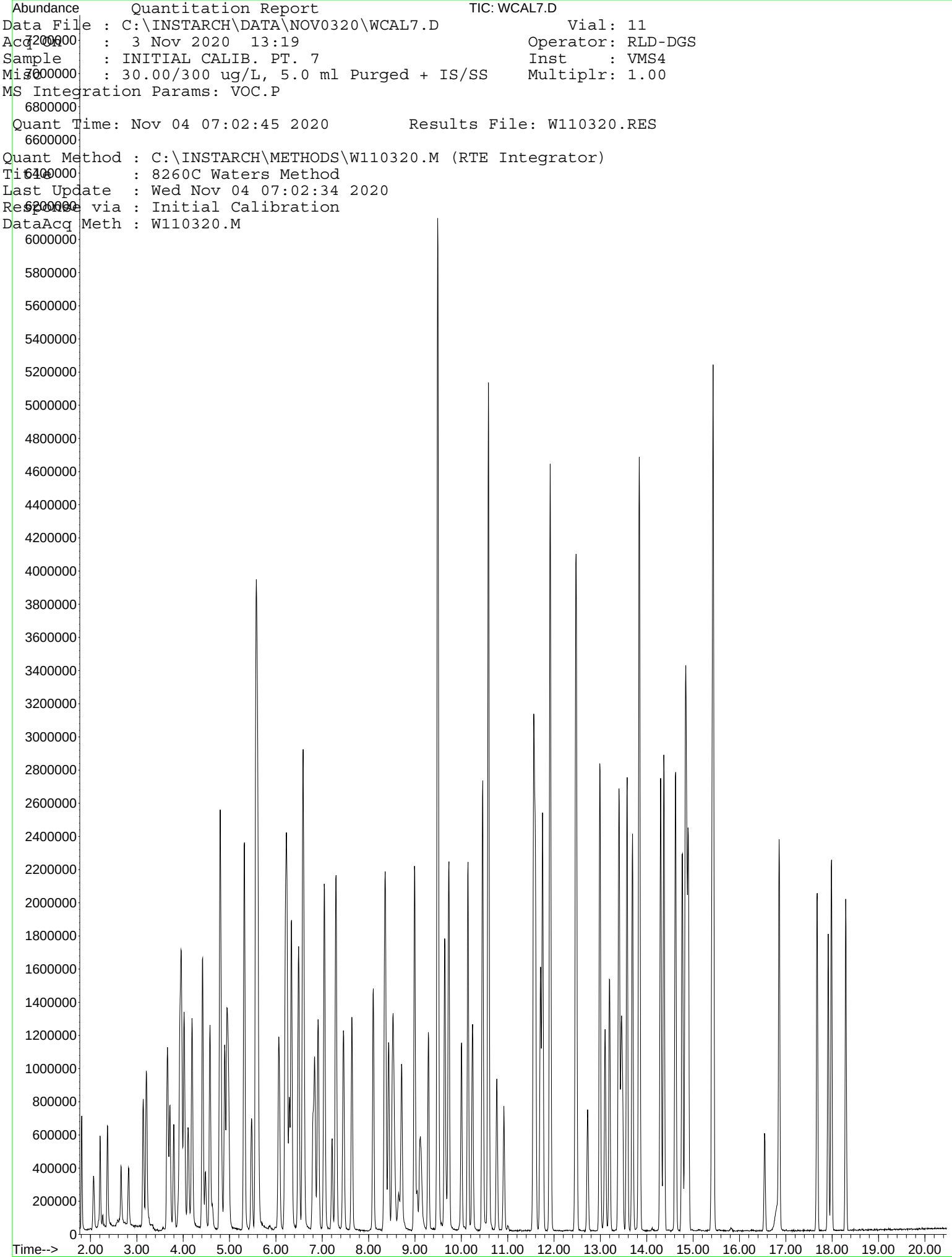
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.68	180	782705	28.0440	ug/L	99
103)	Hexachlorobu	17.91	225	401152	28.5199	ug/L	95
104)	Naphthalene	17.99	128	2143832	30.8380	ug/L	98
105)	123Trichlben	18.29	180	741129	28.7335	ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0320\WCAL7.D Vial: 11
Acq On : 3 Nov 2020 13:19 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 7 Inst : VMS4
Misc : 30.00/300 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:45 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL8.D Vial: 12
Acq On : 3 Nov 2020 13:49 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 8 Inst : VMS4
Misc : 40.00/400 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:59 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:52 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1451196	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1247627	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	747800	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	424442	19.519	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 98 %			
45) SURR12DCAd4	7.21	102	99499	19.985	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
61) SURRd8Tolule	9.65	98	1451294	19.644	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 98 %			
83) SURR4BrFBenz	13.20	95	611139	18.389	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 92 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	699985	35.6944	ug/L	98
3) Chloromethan	2.07	50	573241	32.3287	ug/L	96
4) VinylChlorid	2.21	62	676000	37.6576	ug/L	99
5) Bromomethane	2.66	94	317485	27.2465	ug/L	96
6) Chloroethane	2.82	64	463658	37.2418	ug/L	97
7) Dichloroflmethane	3.14	67	1126185	36.4577	ug/L	100
8) Trichlorofma	3.21	101	1238380	38.7651	ug/L	95
9) Ethylether	3.65	59	425426	37.5432	ug/L	99
10) dichlorotfluoroethan	3.67	67	634490	38.4376	ug/L	96
11) propyleneoxide	3.72	58	805270	413.5074	ug/L	98
12) Acrolein	3.80	56	821268	186.0495	ug/L	100
13) 11dichlorthe	3.93	96	568820	37.8818	ug/L	95
14) Trichlorotfluoroeth	3.96	101	1234169	78.5220	ug/L	97
15) Acetone	4.02	43	2480766	330.0912	ug/L	96
16) Iodomethane	4.11	127	584999	128.1914	ug/L	92
17) Carbon Dislf	4.19	76	2763508	74.8060	ug/L	99
18) allylchloride	4.41	41	1439202	75.7340	ug/L	97
19) methylacetate	4.49	74	161819	36.8047	ug/L	98
20) Methylchlorid	4.58	84	906805	36.2425	ug/L	96
21) tbutylalcohol	4.80	59	4701560	1703.8404	ug/L	99
22) Acrylonitrile	4.90	53	1245210	188.7209	ug/L	98
23) t12dichlorte	4.94	96	638000	37.8673	ug/L	97
24) MtBE	4.97	73	1635224	37.4865	ug/L	98
25) Hexane	5.32	57	1760504	83.0085	ug/L	98
26) 11dichlorota	5.48	63	988979	37.7475	ug/L	99
27) Vinylacetate	5.57	43	7831314	304.1063	ug/L	88
28) chloroprene	5.59	53	1619193	81.1937	ug/L	97
29) Diisopether	5.61	45	1576534	38.3430	ug/L	97
30) ETBE	6.06	59	1585841	40.1039	ug/L	98
31) 22dichloropr	6.21	77	875804	38.2088	ug/L	97
32) c12dichlorte	6.21	96	750854	37.6811	ug/L	97
33) 2Butanone	6.24	72	1072174	379.0404	ug/L	100
34) propionitrile	6.29	54	1180313	394.2719	ug/L	98
35) Ethylacetate	6.33	88	184275	199.5970	ug/L	98
36) methacrylonitrile	6.49	67	658054	80.1838	ug/L	94
37) Bromochlorma	6.50	128	329649	35.5977	ug/L	98
38) Tetrahydofur	6.58	42	2124118	343.9377	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL8.D Vial: 12
Acq On : 3 Nov 2020 13:49 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 8 Inst : VMS4
Misc : 40.00/400 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:59 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:52 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.60	83	1172414	37.8802 ug/L		100
40)	111trichlota	6.84	97	1064700	39.5114 ug/L		100
42)	Cyclohexane	6.92	56	918991	39.9519 ug/L		100
43)	Carbtetraclo	7.05	119	982290	42.2086 ug/L		96
44)	11dicloprope	7.04	110	353789	40.2446 ug/L		99
46)	Benzene	7.29	78	2235609	35.7334 ug/L		96
47)	12dichlorota	7.30	62	877826	37.6400 ug/L		98
48)	TAME	7.46	73	1637971	39.0450 ug/L		98
49)	trichloroete	8.10	95	726734	38.8861 ug/L		95
50)	methylcyclohexane	8.34	83	1120922	40.3026 ug/L		98
51)	12dicloropra	8.36	63	632953	39.1241 ug/L		94
52)	23Dicl1propene	8.43	75	985067	39.4629 ug/L		97
53)	Dibromometha	8.52	93	484703	40.0392 ug/L		97
54)	methylmethacrylate	8.54	69	532125	40.4883 ug/L		98
55)	14dioxane	8.56	88	647847	1892.7817 ug/L		99
56)	Bromodiclrma	8.71	83	950289	39.5281 ug/L		94
57)	2Nitropropane	8.99	43	2396920	456.5426 ug/L		98
58)	2CLEVE	9.11	63	364773	287.5327 ug/L		95
59)	c13dicloproe	9.29	75	1090744	41.0308 ug/L		99
60)	4Meth2Pentan	9.49	43	5425355	309.2772 ug/L		88
62)	Toluene	9.73	92	1645987	37.4208 ug/L		95
63)	t13Dicloprop	10.01	75	969084	41.3390 ug/L		98
64)	ethylmethacrylate	10.15	69	1738339	78.6600 ug/L		96
65)	112Triclotha	10.24	83	547390	38.2677 ug/L		98
66)	Tetrachlorte	10.46	166	867513	39.9822 ug/L		99
67)	13Diclorpropa	10.46	76	1025350	37.9450 ug/L		97
69)	2Hexanone	10.59	43	4614836	326.0019 ug/L		91
70)	Clorodibrmta	10.77	129	843244	40.9502 ug/L		96
71)	12Dibrometha	10.92	107	789232	39.0034 ug/L		98
72)	Chlorobenzen	11.60	112	2069699	38.4465 ug/L		96
73)	1Clhexane	11.57	91	973360	40.2411 ug/L		97
74)	1112Tetclota	11.71	131	743282	39.5627 ug/L		97
75)	Ethylbenzene	11.75	91	2894150	36.7877 ug/L		93
76)	m p-Xylene	11.92	106	2528747	78.6302 ug/L	#	86
77)	o-Xylene	12.47	106	1350498	41.1855 ug/L		91
78)	Styrene	12.48	104	2075648	39.3922 ug/L		98
79)	Bromoform	12.72	173	641777	43.9659 ug/L		100
80)	Isopropylben	12.99	105	3115208	38.4178 ug/L		92
81)	cyclohexanone	13.10	55	795345	813.1759 ug/L		95
84)	Bromobenzene	13.41	156	976506	36.3368 ug/L		99
85)	1122Tetrclta	13.39	83	1043491	36.0926 ug/L		96
86)	123Triclproa	13.45	75	1277002	38.8092 ug/L		96
87)	14dichloro2butene	13.48	53	262185	42.4629 ug/L		99
88)	n-Propylbenz	13.57	91	3522819	36.3663 ug/L		92
89)	2chlorotolue	13.69	91	2157160	35.3181 ug/L		94
90)	4chlorotolue	13.84	91	2459318	35.1050 ug/L		94
91)	135Trimebenz	13.83	105	2607323	36.2487 ug/L		93
92)	tbutylbenzen	14.30	119	2470960	37.6193 ug/L		98
93)	124Trimetben	14.37	105	2642366	36.7411 ug/L		95
94)	sbutylbenzen	14.62	105	3385018	38.0409 ug/L		93
95)	13Diclorbenz	14.77	146	1741956	37.3858 ug/L		98
96)	pIsopropylto	14.84	119	2930536	38.3832 ug/L		96
97)	14dichlorobe	14.90	146	1749817	37.4080 ug/L		98
98)	12dichlorobe	15.43	146	1595549	36.1524 ug/L		97
99)	nButylbenzen	15.43	91	2423948	37.7107 ug/L		93
100)	12dibromo3cl	16.55	157	313765	39.4973 ug/L		97
101)	135Trichlorobenzene	16.86	180	1183093	35.9857 ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL8.D Vial: 12
Acq On : 3 Nov 2020 13:49 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 8 Inst : VMS4
Misc : 40.00/400 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:59 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:52 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.67	180	1104056	39.3932	ug/L	99
103)	Hexachlorobu	17.91	225	578208	40.9791	ug/L	93
104)	Naphthalene	17.99	128	2650857	37.6562	ug/L	96
105)	123Trichlben	18.29	180	1026153	39.5526	ug/L	99

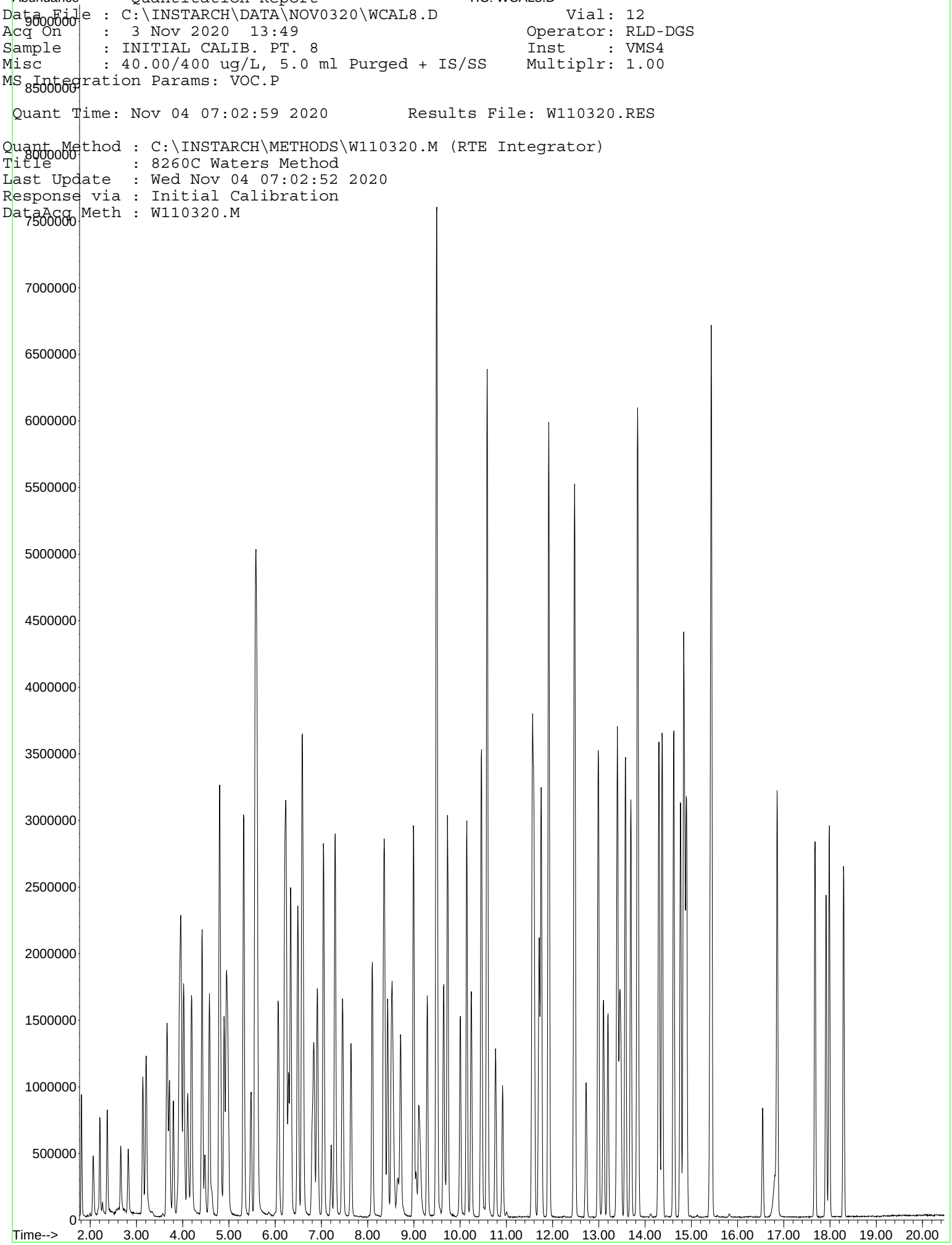
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL8.D

Data File : C:\INSTARCH\DATA\NOV0320\WCAL8.D Vial: 12
Acq On : 3 Nov 2020 13:49 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 8 Inst : VMS4
Misc : 40.00/400 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:02:59 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:02:52 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL9.D Vial: 13
Acq On : 3 Nov 2020 14:19 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 9 Inst : VMS4
Misc : 80.00/800 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:03:16 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:03:08 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1458369	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1267122	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.87	152	761962	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	458759	20.973	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 105 %			
45) SURR12DCAd4	7.21	102	99974	19.930	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
61) SURRd8Tolule	9.65	98	1518829	20.357	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 102 %			
83) SURR4BrFBenz	13.20	95	657541	19.920	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 100 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	1377982	71.6591	ug/L	96
3) Chloromethan	2.07	50	1212069	69.2907	ug/L	99
4) VinylChlorid	2.21	62	1307749	72.9126	ug/L	99
5) Bromomethane	2.66	94	586909	48.9839	ug/L	96
6) Chloroethane	2.81	64	913455	72.1986	ug/L	97
7) Dichloroflmethane	3.14	67	2189834	69.9045	ug/L	97
8) Trichlorofma	3.21	101	2411842	74.2189	ug/L	94
9) Ethylether	3.65	59	871515	77.5215	ug/L	99
10) dichlorotfluoroethan	3.67	67	1264340	76.2343	ug/L	95
11) propyleneoxide	3.72	58	1775894	912.4440	ug/L	97
12) Acrolein	3.80	56	1635944	373.0042	ug/L	99
13) 11dichlorthe	3.93	96	1227831	81.6805	ug/L	94
14) Trichlorotfluoroeth	3.96	101	2302049	145.3840	ug/L	96
15) Acetone	4.02	43	4592561	603.4390	ug/L	94
16) Iodomethane	4.10	127	1227256	269.9866	ug/L	95
17) Carbon Dislf	4.19	76	4966577	135.0018	ug/L	94
18) allylchloride	4.41	41	2690717	141.9504	ug/L	96
19) methylacetate	4.48	74	348847	79.8916	ug/L	95
20) Methylchlorid	4.58	84	1784492	70.2429	ug/L	95
21) tbutylalcohol	4.80	59	7866918	2840.8643	ug/L	90
22) Acrylonitrile	4.90	53	2478547	376.7527	ug/L	97
23) t12dichlorte	4.94	96	1250256	73.5475	ug/L	99
24) MtBE	4.97	73	3246890	74.2752	ug/L	99
25) Hexane	5.32	57	3313367	155.2542	ug/L	94
26) 11dichlorota	5.48	63	1974201	75.0601	ug/L	98
27) Vinylacetate	5.57	43	10793998	415.0353	ug/L	76
28) chloroprene	5.59	53	3012125	148.5734	ug/L	96
29) Diisopether	5.61	45	2968206	71.1975	ug/L	94
30) ETBE	6.06	59	3038138	76.6207	ug/L	95
31) 22dichloropr	6.21	77	1728005	74.8981	ug/L	97
32) c12dichlorte	6.21	96	1456400	72.3006	ug/L	99
33) 2Butanone	6.23	72	2070360	727.6406	ug/L	99
34) propionitrile	6.29	54	2189224	726.5299	ug/L	99
35) Ethylacetate	6.34	88	371598	397.4501	ug/L	100
36) methacrylonitrile	6.48	67	1308915	159.5724	ug/L	91
37) Bromochlorma	6.50	128	681373	72.5724	ug/L	98
38) Tetrahydofur	6.57	42	3969548	637.0886	ug/L	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL9.D Vial: 13
Acq On : 3 Nov 2020 14:19 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 9 Inst : VMS4
Misc : 80.00/800 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:03:16 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:03:08 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.60	83	2260253	72.1016 ug/L		96
40)	111trichlota	6.84	97	2112066	77.8232 ug/L		98
42)	Cyclohexane	6.91	56	1885860	81.6679 ug/L		99
43)	Carbtetraclo	7.05	119	1896303	80.1933 ug/L		93
44)	11dicloprope	7.04	110	709512	79.5540 ug/L		97
46)	Benzene	7.29	78	4275554	68.1785 ug/L		92
47)	12dichlorota	7.30	62	1681109	71.1971 ug/L		95
48)	TAME	7.46	73	3279852	78.1293 ug/L		97
49)	trichloroete	8.10	95	1457861	77.3212 ug/L		96
50)	methylcyclohexane	8.34	83	2273573	81.7236 ug/L		97
51)	12dicloropra	8.36	63	1262944	77.3520 ug/L		94
52)	23Dicl1propene	8.43	75	1995221	79.4912 ug/L		96
53)	Dibromometha	8.52	93	981917	80.0762 ug/L		96
54)	methylmethacrylate	8.53	69	1049945	79.7231 ug/L		95
55)	14dioxane	8.56	88	1282180	3723.7091 ug/L		97
56)	Bromodiclrma	8.72	83	1909937	78.9697 ug/L		96
57)	2Nitropropane	9.00	43	4573542	863.8387 ug/L		98
58)	2CLEVE	9.11	63	945822	709.2611 ug/L		95
59)	c13dicloproe	9.29	75	2150800	80.1581 ug/L		97
60)	4Meth2Pentan	9.49	43	8381807	472.0511 ug/L		76
62)	Toluene	9.73	92	3131239	70.3406 ug/L		88
63)	t13Dicloprop	10.00	75	1968441	83.2908 ug/L		95
64)	ethylmethacrylate	10.15	69	3400067	153.5191 ug/L		94
65)	112Triclotha	10.24	83	1119601	77.5113 ug/L		98
66)	Tetrachlorte	10.46	166	1761985	79.6485 ug/L		98
67)	13Diclorpropa	10.46	76	2006157	73.3337 ug/L		94
69)	2Hexanone	10.58	43	7226735	502.2479 ug/L		80
70)	Clorodibrmta	10.77	129	1784401	85.0248 ug/L		97
71)	12Dibrometha	10.92	107	1570631	76.3555 ug/L		99
72)	Chlorobenzen	11.60	112	3785340	68.7802 ug/L		94
73)	1Clhexane	11.57	91	1914187	78.2882 ug/L		97
74)	1112Tetclota	11.71	131	1610870	84.3455 ug/L		98
75)	Ethylbenzene	11.75	91	5089903	63.8047 ug/L		85
76)	m p-Xylene	11.92	106	4566390	138.8251 ug/L	#	73
77)	o-Xylene	12.46	106	2540218	75.8293 ug/L	#	86
78)	Styrene	12.48	104	3838608	71.5317 ug/L		93
79)	Bromoform	12.72	173	1375103	93.1127 ug/L		99
80)	Isopropylben	12.99	105	5496109	66.6174 ug/L		84
81)	cyclohexanone	13.10	55	1552503	1571.5880 ug/L		94
84)	Bromobenzene	13.41	156	1948782	71.6821 ug/L		98
85)	1122Tetrclta	13.39	83	2051377	71.0604 ug/L		95
86)	123Triclproa	13.45	75	2566522	78.4176 ug/L		98
87)	14dichloro2butene	13.48	53	542691	88.4307 ug/L		91
88)	n-Propylbenz	13.58	91	5881605	60.3399 ug/L		84
89)	2chlorotolue	13.69	91	4029810	65.8543 ug/L		92
90)	4chlorotolue	13.84	91	4465661	63.3434 ug/L		88
91)	135Trimebenz	13.83	105	4708957	64.9618 ug/L		88
92)	tbutylbenzen	14.30	119	4545445	68.3645 ug/L		94
93)	124Trimetben	14.37	105	4744471	65.4169 ug/L		89
94)	sbutylbenzen	14.62	105	5844513	65.1551 ug/L		86
95)	13Diclorbenz	14.77	146	3330975	70.4363 ug/L		94
96)	pIsopropylto	14.84	119	5187551	66.9642 ug/L		90
97)	14dichlorobe	14.90	146	3318187	69.5897 ug/L		95
98)	12dichlorobe	15.43	146	3126785	69.7234 ug/L		96
99)	nButylbenzen	15.43	91	4407574	68.3351 ug/L		88
100)	12dibromo3cl	16.55	157	663167	84.5255 ug/L		98
101)	135Trichlorobenzene	16.86	180	2399928	73.0502 ug/L		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL9.D Vial: 13
Acq On : 3 Nov 2020 14:19 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 9 Inst : VMS4
Misc : 80.00/800 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:03:16 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:03:08 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.68	180	2053015	73.0375	ug/L	96
103)	Hexachlorobu	17.91	225	1115574	78.9521	ug/L	98
104)	Naphthalene	17.98	128	4789265	67.7003	ug/L	92
105)	123Trichlben	18.29	180	2005044	76.8902	ug/L	99

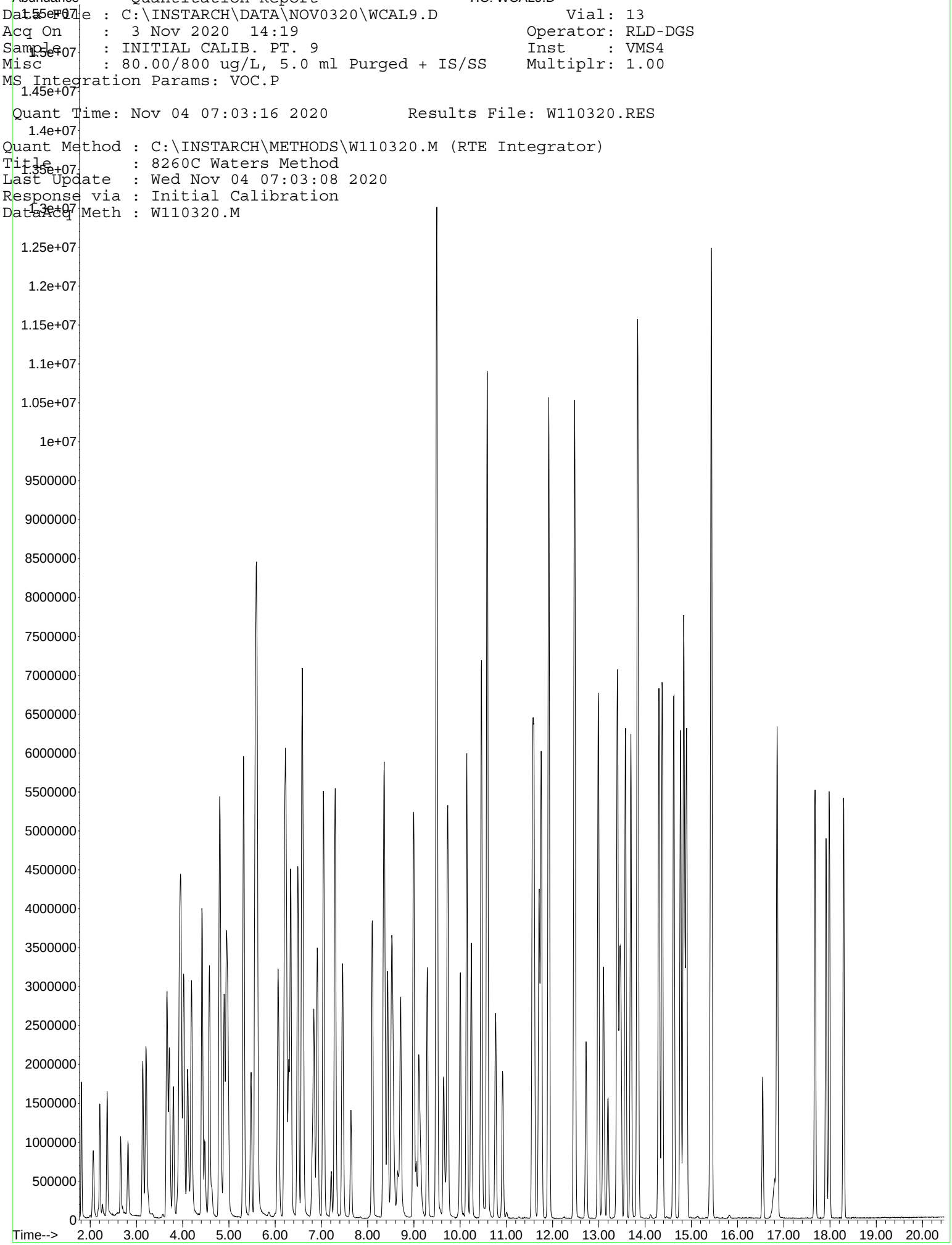
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0320\WCAL9.D Vial: 13
Acq On : 3 Nov 2020 14:19 Operator: RLD-DGS
Sample : INITIAL CALIB. PT. 9 Inst : VMS4
Misc : 80.00/800 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:03:16 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:03:08 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\NOV0320\ICV1.D Vial: 15
Acq On : 3 Nov 2020 15:19 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 04 07:14:30 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	104	0.00
2	PT	Dichlorodi	0.2590	0.3006	-16.06	116	0.00
3	PT	Chloromethan	0.2315	0.2547	-10.02	117	0.00
4	PT	VinylChlorid	0.2448	0.2802	-14.46	115	0.00
5	PT	Bromomethane	0.1570	0.1434	8.66	105	0.00
6	PT	Chloroethane	0.1756	0.1789	-1.88	104	0.00
7	T	Dichloroflmethane	0.4340	0.4484	-3.32	105	0.00
8	PT	Trichlorofma	0.4514	0.4932	-9.26	104	0.00
9	T	Ethylether	0.1533	0.1692	-10.37	117	-0.01
10	T	dichlorotfluoroethan	0.2279	0.2472	-8.47	106	0.00
11	T	propyleneoxide	0.0269	0.0285#	-5.95	122	0.00
12	T	Acrolein	0.0601	0.0613	-2.00	111	0.00
13	PT	11dichlorthe	0.2075	0.2334	-12.48	111	0.00
14	PT	Trichlorotfluoroeth	0.2176	0.2478	-13.88	110	0.00
15	PT	Acetone	0.1056	0.1091	-3.31	117	0.00
16	T	Iodomethane	0.0623	0.0561	9.95	112	0.00
17	PT	Carbon Dislf	0.5027	0.5815	-15.68	117	0.00
18	T	allylchloride	0.2595	0.2916	-12.37	118	0.00
19	PT	methylacetate	0.0601	0.0629#	-4.66	119	0.00
20	PT	Methylchlorid	0.3533	0.3053	13.59	95	0.00
21	T	tbutylalcohol	0.0368	0.0372	-1.09	104	0.00
22	T	Acrylonitrile	0.0907	0.0945	-4.19	108	0.00
23	PT	t12dichlorte	0.2342	0.2513	-7.30	118	0.00
24	PT	MtBE	0.6041	0.6429	-6.42	113	0.00
25	T	Hexane	0.2943	0.3313	-12.57	107	0.00
26	PT	11dichlorota	0.3612	0.3729	-3.24	109	0.00
27	T	Vinylacetate	0.3567	0.3795	-6.39	105	0.00
28	T	chloroprene	0.2816	0.3103	-10.19	108	0.00
29	T	Diisopether	0.5784	0.6001	-3.75	110	0.00
30	T	ETBE	0.5452	0.5766	-5.76	111	0.00
31	T	22dichloropr	0.3182	0.3253	-2.23	105	0.00
32	PT	c12dichlorte	0.2783	0.2868	-3.05	113	0.00
33	PT	2Butanone	0.0394	0.0395#	-0.25	107	0.00
34	T	propionitrile	0.0415	0.0428	-3.13	109	0.00
35	T	Ethylacetate	0.0130	0.0134#	-3.08	108	0.00
36	T	methacrylonitrile	0.1130	0.1208	-6.90	115	0.00
37	T	Bromochlorma	0.1312	0.1457	-11.05	112	0.00
38	T	Tetrahydofur	0.0835	0.0854	-2.28	108	0.00
39	PT	Chloroform	0.4342	0.4373	-0.71	106	0.00
40	PT	111trichlota	0.3739	0.4083	-9.20	112	0.00
41	S	SURRDibrflma	0.3031	0.3013	0.59	103	0.00
42	PT	Cyclohexane	0.3186	0.3512	-10.23	109	0.00
43	PT	Carbtetraclo	0.3276	0.3624	-10.62	110	0.00
44	T	11dicloprope	0.1237	0.1359	-9.86	111	0.00
45	S	SURR12DCAd4	0.0689	0.0652	5.37	100	0.00
46	PT	Benzene	0.8641	0.9016	-4.34	108	0.00
47	PT	12dichlorota	0.3271	0.3362	-2.78	111	0.00
48	T	TAME	0.5791	0.6156	-6.30	111	0.00

49	PT	trichloroete	0.2605	0.2691	-3.30	104	0.00
50	PT	methylcyclohexane	0.3821	0.4300	-12.54	111	0.00
51	PT	12dicloropra	0.2257	0.2424	-7.40	113	0.00
52	T	23Dicl1propene	0.3470	0.3478	-0.23	104	0.00
53	T	Dibromometha	0.1705	0.1735	-1.76	106	0.00
54	T	methylmethacrylate	0.1815	0.1794	1.16	105	0.00
55	T	14dioxane	0.0048	0.0049#	-2.08	110	0.00
56	PT	Bromodiclrma	0.3342	0.3437	-2.84	112	0.00
57	T	2Nitropropane	0.0735	0.0781	-6.26	107	0.00
58	T	2CLEVE	0.0195	0.0255#	-30.77#	169	0.00
59	PT	c13dicloproe	0.3715	0.3842	-3.42	110	0.00
60	PT	4Meth2Pentan	0.2435	0.2479	-1.81	105	0.00
61	S	SURRd8Tolule	1.0309	1.0238	0.69	103	0.00
62	PT	Toluene	0.6160	0.6241	-1.31	107	0.00
63	PT	t13Dicloprop	0.3269	0.3278	-0.28	104	0.00
64	T	ethylmethacrylate	0.3067	0.3259	-6.26	108	0.00
65	PT	112Triclotha	0.2004	0.2034	-1.50	108	0.00
66	PT	Tetrachlorte	0.3089	0.3152	-2.04	105	0.00
67	T	13Diclorpropa	0.3797	0.3793	0.11	103	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	105	0.00
69	PT	2Hexanone	0.2271	0.2250	0.92	104	0.00
70	PT	Clorodibrmta	0.3354	0.3270	2.50	107	0.00
71	PT	12Dibrometha	0.3265	0.3234	0.95	106	0.00
72	PT	Chlorobenzen	0.8750	0.8844	-1.07	106	0.00
73	T	1Clhexane	0.3849	0.3765	2.18	101	0.00
74	T	1112Tetclota	0.3058	0.3171	-3.70	113	0.00
75	PT	Ethylbenzene	1.2616	1.3133	-4.10	104	0.00
76	PT	m p-Xylene	0.5234	0.5435	-3.84	106	0.00
77	PT	o-Xylene	0.5315	0.5335	-0.38	102	0.00
78	PT	Styrene	0.8525	0.8672	-1.72	104	0.00
79	PT	Bromoform	0.2348	0.2312	1.53	110	0.00
80	PT	Isopropylben	1.3079	1.3898	-6.26	105	0.00
81	T	cyclohexanone	0.0156	0.0143#	8.33	96	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	104	0.00
83	S	SURR4BrFBenz	0.8481	0.8576	-1.12	105	0.00
84	T	Bromobenzene	0.7128	0.7046	1.15	105	0.00
85	PT	1122Tetrclta	0.7469	0.7222	3.31	99	0.00
86	T	123Triclproa	0.8451	0.8650	-2.35	105	0.00
87	T	14dichloro2butene	0.1581	0.1607	-1.64	108	0.00
88	T	n-Propylbenz	2.5360	2.7519	-8.51	104	0.00
89	T	2chlorotolue	1.5889	1.6275	-2.43	103	0.00
90	T	4chlorotolue	1.8368	1.9022	-3.56	105	0.00
91	T	135Trimebenz	1.8933	2.0058	-5.94	104	0.00
92	T	tbutylbenzen	1.7387	1.8490	-6.34	105	0.00
93	T	124Trimetben	1.8943	1.9944	-5.28	104	0.00
94	T	sbutylbenzen	2.3406	2.6069	-11.38	105	0.00
95	PT	13Diclorbenz	1.2423	1.2980	-4.48	107	0.00
96	T	pIsopropylto	2.0324	2.2389	-10.16	105	0.00
97	PT	14dichlorobe	1.2568	1.2483	0.68	102	0.00
98	PT	12dichlorobe	1.1809	1.1858	-0.41	104	0.00
99	T	nButylbenzen	1.6786	1.8218	-8.53	104	0.00
100	PT	12dibromo3cl	0.2019	0.1907	5.55	106	0.00
101	T	135Trichlorobenzene	0.8533	0.9008	-5.57	105	0.00
102	PT	124Trichlobe	0.7269	0.7556	-3.95	107	0.00
103	T	Hexachlorobu	0.3642	0.3875	-6.40	115	0.00
104	T	Naphthalene	1.8488	1.9925	-7.77	108	0.00
105	T	123Trichlben	0.6789	0.7155	-5.39	109	0.00

(#) = Out of Range SPCC's out = 2 CCC's out = 0

W110320.M Thu Nov 19 08:53:02 2020

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\NOV0320\ICV1.D Vial: 15
Acq On : 3 Nov 2020 15:19 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 04 07:14:30 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	104	0.00
2	PT	Dichlorodi	10.0000	11.6097	-16.10	116	0.00
3	PT	Chloromethan	10.0000	11.0016	-10.02	117	0.00
4	PT	VinylChlorid	10.0000	11.4454	-14.45	115	0.00
5	PT	Bromomethane	10.0000	11.2452	-12.45	105	0.00
6	PT	Chloroethane	10.0000	10.1861	-1.86	104	0.00
7	T	Dichloroflmethane	10.0000	10.3308	-3.31	105	0.00
8	PT	Trichlorofma	10.0000	10.9244	-9.24	104	0.00
9	T	Ethylether	10.0000	11.0380	-10.38	117	-0.01
10	T	dichlorotfluoroethan	10.0000	10.8483	-8.48	106	0.00
11	T	propyleneoxide	100.0000	106.2490	-6.25	122	0.00
12	T	Acrolein	50.0000	50.9959	-1.99	111	0.00
13	PT	11dichlorthe	10.0000	11.2499	-12.50	111	0.00
14	PT	Trichlorotfluoroeth	20.0000	22.7720	-13.86	110	0.00
15	PT	Acetone	100.0000	114.9361	-14.94	117	0.00
16	T	Iodomethane	20.0000	18.2763	8.62	112	0.00
17	PT	Carbon Dislf	20.0000	23.1373	-15.69	117	0.00
18	T	allylchloride	20.0000	22.4693	-12.35	118	0.00
19	PT	methylacetate	10.0000	10.4756	-4.76	119	0.00
20	PT	Methylchlorid	10.0000	8.6427	13.57	95	0.00
21	T	tbutylalcohol	500.0000	505.7026	-1.14	104	0.00
22	T	Acrylonitrile	50.0000	52.1110	-4.22	108	0.00
23	PT	t12dichlorte	10.0000	10.7308	-7.31	118	0.00
24	PT	MtBE	10.0000	10.6414	-6.41	113	0.00
25	T	Hexane	20.0000	22.5143	-12.57	107	0.00
26	PT	11dichlorota	10.0000	10.3228	-3.23	109	0.00
27	T	Vinylacetate	100.0000	106.3927	-6.39	105	0.00
28	T	chloroprene	20.0000	22.0437	-10.22	108	0.00
29	T	Diisopether	10.0000	10.3749	-3.75	110	0.00
30	T	ETBE	10.0000	10.5774	-5.77	111	0.00
31	T	22dichloropr	10.0000	10.2233	-2.23	105	0.00
32	PT	c12dichlorte	10.0000	10.3082	-3.08	113	0.00
33	PT	2Butanone	100.0000	100.4464	-0.45	107	0.00
34	T	propionitrile	100.0000	103.1441	-3.14	109	0.00
35	T	Ethylacetate	50.0000	51.6514	-3.30	108	0.00
36	T	methacrylonitrile	20.0000	21.3826	-6.91	115	0.00
37	T	Bromochlorma	10.0000	11.1093	-11.09	112	0.00
38	T	Tetrahydofur	100.0000	102.2872	-2.29	108	0.00
39	PT	Chloroform	10.0000	10.0715	-0.72	106	0.00
40	PT	111trichlota	10.0000	10.9225	-9.22	112	0.00
41	S	SURRDibrflma	20.0000	19.8804	0.60	103	0.00
42	PT	Cyclohexane	10.0000	11.0245	-10.24	109	0.00
43	PT	Carbtetraclo	10.0000	11.0604	-10.60	110	0.00
44	T	11dicloprope	10.0000	10.9826	-9.83	111	0.00
45	S	SURR12DCAd4	20.0000	18.9180	5.41	100	0.00
46	PT	Benzene	10.0000	10.4338	-4.34	108	0.00
47	PT	12dichlorota	10.0000	10.2789	-2.79	111	0.00
48	T	TAME	10.0000	10.6312	-6.31	111	0.00

49	PT	trichloroete	10.0000	10.3284	-3.28	104	0.00
50	PT	methylcyclohexane	10.0000	11.2526	-12.53	111	0.00
51	PT	12dicloropra	10.0000	10.7418	-7.42	113	0.00
52	T	23Dicl1propene	10.0000	10.0255	-0.25	104	0.00
53	T	Dibromometha	10.0000	10.1738	-1.74	106	0.00
54	T	methylmethacrylate	10.0000	9.8832	1.17	105	0.00
55	T	14dioxane	500.0000	513.1230	-2.62	110	0.00
56	PT	Bromodiclrma	10.0000	10.2844	-2.84	112	0.00
57	T	2Nitropropane	100.0000	106.2775	-6.28	107	0.00
58	T	2CLEVE	50.0000	67.7457	-35.49#	169	0.00
59	PT	c13dicloproe	10.0000	10.3441	-3.44	110	0.00
60	PT	4Meth2Pentan	100.0000	101.8009	-1.80	105	0.00
61	S	SURRd8Tolule	20.0000	19.8628	0.69	103	0.00
62	PT	Toluene	10.0000	10.1303	-1.30	107	0.00
63	PT	t13Dicloprop	10.0000	10.0277	-0.28	104	0.00
64	T	ethylmethacrylate	20.0000	21.2458	-6.23	108	0.00
65	PT	112Triclotha	10.0000	10.1536	-1.54	108	0.00
66	PT	Tetrachlorte	10.0000	10.2030	-2.03	105	0.00
67	T	13Diclorpropa	10.0000	9.9891	0.11	103	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	105	0.00
69	PT	2Hexanone	100.0000	99.0776	0.92	104	0.00
70	PT	Clorodibrmta	10.0000	9.7492	2.51	107	0.00
71	PT	12Dibrometha	10.0000	9.9045	0.95	106	0.00
72	PT	Chlorobenzen	10.0000	10.1075	-1.07	106	0.00
73	T	1Clhexane	10.0000	9.7821	2.18	101	0.00
74	T	1112Tetclota	10.0000	10.3685	-3.68	113	0.00
75	PT	Ethylbenzene	10.0000	10.4095	-4.09	104	0.00
76	PT	m p-Xylene	20.0000	20.7706	-3.85	106	0.00
77	PT	o-Xylene	10.0000	10.0377	-0.38	102	0.00
78	PT	Styrene	10.0000	10.1723	-1.72	104	0.00
79	PT	Bromoform	10.0000	9.8438	1.56	110	0.00
80	PT	Isopropylben	10.0000	10.6262	-6.26	105	0.00
81	T	cyclohexanone	200.0000	183.3034	8.35	96	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	104	0.00
83	S	SURR4BrFBenz	20.0000	20.2241	-1.12	105	0.00
84	T	Bromobenzene	10.0000	9.8846	1.15	105	0.00
85	PT	1122Tetrclta	10.0000	9.6697	3.30	99	0.00
86	T	123Triclproa	10.0000	10.2348	-2.35	105	0.00
87	T	14dichloro2butene	10.0000	10.1643	-1.64	108	0.00
88	T	n-Propylbenz	10.0000	10.8514	-8.51	104	0.00
89	T	2chlorotolue	10.0000	10.2429	-2.43	103	0.00
90	T	4chlorotolue	10.0000	10.3562	-3.56	105	0.00
91	T	135Trimebenz	10.0000	10.5941	-5.94	104	0.00
92	T	tbutylbenzen	10.0000	10.6345	-6.34	105	0.00
93	T	124Trimetben	10.0000	10.5283	-5.28	104	0.00
94	T	sbutylbenzen	10.0000	11.1378	-11.38	105	0.00
95	PT	13Diclorbenz	10.0000	10.4486	-4.49	107	0.00
96	T	pIsopropylto	10.0000	11.0162	-10.16	105	0.00
97	PT	14dichlorobe	10.0000	9.9319	0.68	102	0.00
98	PT	12dichlorobe	10.0000	10.0415	-0.41	104	0.00
99	T	nButylbenzen	10.0000	10.8528	-8.53	104	0.00
100	PT	12dibromo3cl	10.0000	9.4444	5.56	106	0.00
101	T	135Trichlorobenzene	10.0000	10.5573	-5.57	105	0.00
102	PT	124Trichlobe	10.0000	10.3941	-3.94	107	0.00
103	T	Hexachlorobu	10.0000	10.6383	-6.38	115	0.00
104	T	Naphthalene	10.0000	10.7772	-7.77	108	0.00
105	T	123Trichlben	10.0000	10.5392	-5.39	109	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W110320.M Thu Nov 19 08:53:21 2020

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\ICV1.D Vial: 15
Acq On : 3 Nov 2020 15:19 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:14:30 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:14:25 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1384536	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1218576	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	691748	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	417173	19.880	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 99 %			
45) SURR12DCAd4	7.21	102	90261	18.918	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 95 %			
61) SURRd8Tolule	9.64	98	1417492	19.863	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 99 %			
83) SURR4BrFBenz	13.20	95	593259	20.224	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	208125	11.6097	ug/L	97
3) Chloromethan	2.07	50	176327	11.0016	ug/L	98
4) VinylChlorid	2.21	62	193949	11.4454	ug/L	94
5) Bromomethane	2.66	94	99246	11.2452	ug/L	97
6) Chloroethane	2.83	64	123815	10.1861	ug/L	95
7) Dichloroflmethane	3.14	67	310391	10.3308	ug/L	98
8) Trichlorofma	3.21	101	341405	10.9244	ug/L	96
9) Ethylether	3.65	59	117148	11.0380	ug/L	99
10) dichlorotfluoroethan	3.67	67	171139	10.8483	ug/L	97
11) propyleneoxide	3.72	58	197584	106.2490	ug/L	97
12) Acrolein	3.80	56	212251	50.9959	ug/L	100
13) 11dichlorthe	3.93	96	161577	11.2499	ug/L	98
14) Trichlorotfluoroeth	3.96	101	343074	22.7720	ug/L	99
15) Acetone	4.02	43	755533	114.9361	ug/L	98
16) Iodomethane	4.11	127	77687	18.2763	ug/L	97
17) Carbon Dislf	4.19	76	805162	23.1373	ug/L	99
18) allylchloride	4.41	41	403668	22.4693	ug/L	95
19) methylacetate	4.48	74	43578	10.4756	ug/L	99
20) Methylchlorid	4.58	84	211374	8.6427	ug/L	97
21) tbutylalcohol	4.80	59	1286686	505.7026	ug/L	99
22) Acrylonitrile	4.90	53	327200	52.1110	ug/L	96
23) t12dichlorte	4.94	96	173970	10.7308	ug/L	94
24) MtBE	4.97	73	445032	10.6414	ug/L	98
25) Hexane	5.32	57	458653	22.5143	ug/L	99
26) 11dichlorota	5.47	63	258144	10.3228	ug/L	99
27) Vinylacetate	5.57	43	2626916	106.3927	ug/L	100
28) chloroprene	5.60	53	429664	22.0437	ug/L	100
29) Diisopether	5.61	45	415436	10.3749	ug/L	98
30) ETBE	6.06	59	399194	10.5774	ug/L	100
31) 22dichloropr	6.20	77	225175	10.2233	ug/L	98
32) c12dichlorte	6.21	96	198563	10.3082	ug/L	97
33) 2Butanone	6.24	72	273698	100.4464	ug/L	100
34) propionitrile	6.29	54	296250	103.1441	ug/L	98
35) Ethylacetate	6.33	88	46490	51.6514	ug/L	96
36) methacrylonitrile	6.48	67	167319	21.3826	ug/L	94
37) Bromochlorma	6.50	128	100890	11.1093	ug/L	99
38) Tetrahydofur	6.58	42	591371	102.2872	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\ICV1.D Vial: 15
Acq On : 3 Nov 2020 15:19 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:14:30 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:14:25 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	302741	10.0715 ug/L	100
40)	111trichlota	6.84	97	282682	10.9225 ug/L	98
42)	Cyclohexane	6.92	56	243120	11.0245 ug/L	98
43)	Carbtetraclo	7.06	119	250871	11.0604 ug/L	98
44)	11dicloprope	7.04	110	94051	10.9826 ug/L	94
46)	Benzene	7.29	78	624129	10.4338 ug/L	98
47)	12dichlorota	7.30	62	232740	10.2789 ug/L	98
48)	TAME	7.46	73	426169	10.6312 ug/L	99
49)	trichloroete	8.10	95	186262	10.3284 ug/L	95
50)	methylcyclohexane	8.34	83	297687	11.2526 ug/L	99
51)	12dicloropra	8.36	63	167811	10.7418 ug/L	98
52)	23Dicl1propene	8.44	75	240795	10.0255 ug/L	98
53)	Dibromometha	8.52	93	120116	10.1738 ug/L	94
54)	methylmethacrylate	8.53	69	124183	9.8832 ug/L	99
55)	14dioxane	8.56	88	168829	513.1230 ug/L	98
56)	Bromodiclrma	8.71	83	237953	10.2844 ug/L	93
57)	2Nitropropane	8.99	43	541002	106.2775 ug/L	98
58)	2CLEVE	9.10	63	88382	67.7457 ug/L	97
59)	c13dicloproe	9.29	75	265999	10.3441 ug/L	99
60)	4Meth2Pentan	9.49	43	1716078	101.8009 ug/L	99
62)	Toluene	9.73	92	432010	10.1303 ug/L	99
63)	t13Dicloprop	10.00	75	226912	10.0277 ug/L	96
64)	ethylmethacrylate	10.14	69	451159	21.2458 ug/L	100
65)	112Triclotha	10.24	83	140829	10.1536 ug/L	98
66)	Tetrachlorte	10.46	166	218177	10.2030 ug/L	99
67)	13Diclorpropa	10.46	76	262556	9.9891 ug/L	98
69)	2Hexanone	10.58	43	1370988	99.0776 ug/L	99
70)	Clorodibrmta	10.77	129	199227	9.7492 ug/L	99
71)	12Dibrometha	10.92	107	197062	9.9045 ug/L	100
72)	Chlorobenzen	11.60	112	538867	10.1075 ug/L	100
73)	1Clhexane	11.57	91	229378	9.7821 ug/L	98
74)	1112Tetclota	11.71	131	193200	10.3685 ug/L	100
75)	Ethylbenzene	11.75	91	800160	10.4095 ug/L	99
76)	m p-Xylene	11.92	106	662322	20.7706 ug/L	98
77)	o-Xylene	12.46	106	325083	10.0377 ug/L	96
78)	Styrene	12.48	104	528394	10.1723 ug/L	100
79)	Bromoform	12.72	173	140841	9.8438 ug/L	98
80)	Isopropylben	12.99	105	846805	10.6262 ug/L	99
81)	cyclohexanone	13.10	55	174425	183.3034 ug/L	97
84)	Bromobenzene	13.41	156	243709	9.8846 ug/L	98
85)	1122Tetrclta	13.39	83	249805	9.6697 ug/L	97
86)	123Triclproa	13.45	75	299177	10.2348 ug/L	99
87)	14dichloro2butene	13.48	53	55581	10.1643 ug/L	95
88)	n-Propylbenz	13.58	91	951807	10.8514 ug/L	97
89)	2chlorotolue	13.69	91	562922	10.2429 ug/L	100
90)	4chlorotolue	13.84	91	657930	10.3562 ug/L	100
91)	135Trimebenz	13.83	105	693762	10.5941 ug/L	98
92)	tbutylbenzen	14.30	119	639531	10.6345 ug/L	99
93)	124Trimetben	14.37	105	689801	10.5283 ug/L	100
94)	sbutylbenzen	14.62	105	901653	11.1378 ug/L	100
95)	13Diclorbenz	14.77	146	448941	10.4486 ug/L	98
96)	pIsopropylto	14.84	119	774388	11.0162 ug/L	97
97)	14dichlorobe	14.90	146	431738	9.9319 ug/L	97
98)	12dichlorobe	15.44	146	410135	10.0415 ug/L	99
99)	nButylbenzen	15.43	91	630111	10.8528 ug/L	98
100)	12dibromo3cl	16.55	157	65968	9.4444 ug/L	97
101)	135Trichlorobenzene	16.86	180	311578	10.5573 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\ICV1.D Vial: 15
Acq On : 3 Nov 2020 15:19 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:14:30 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:14:25 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

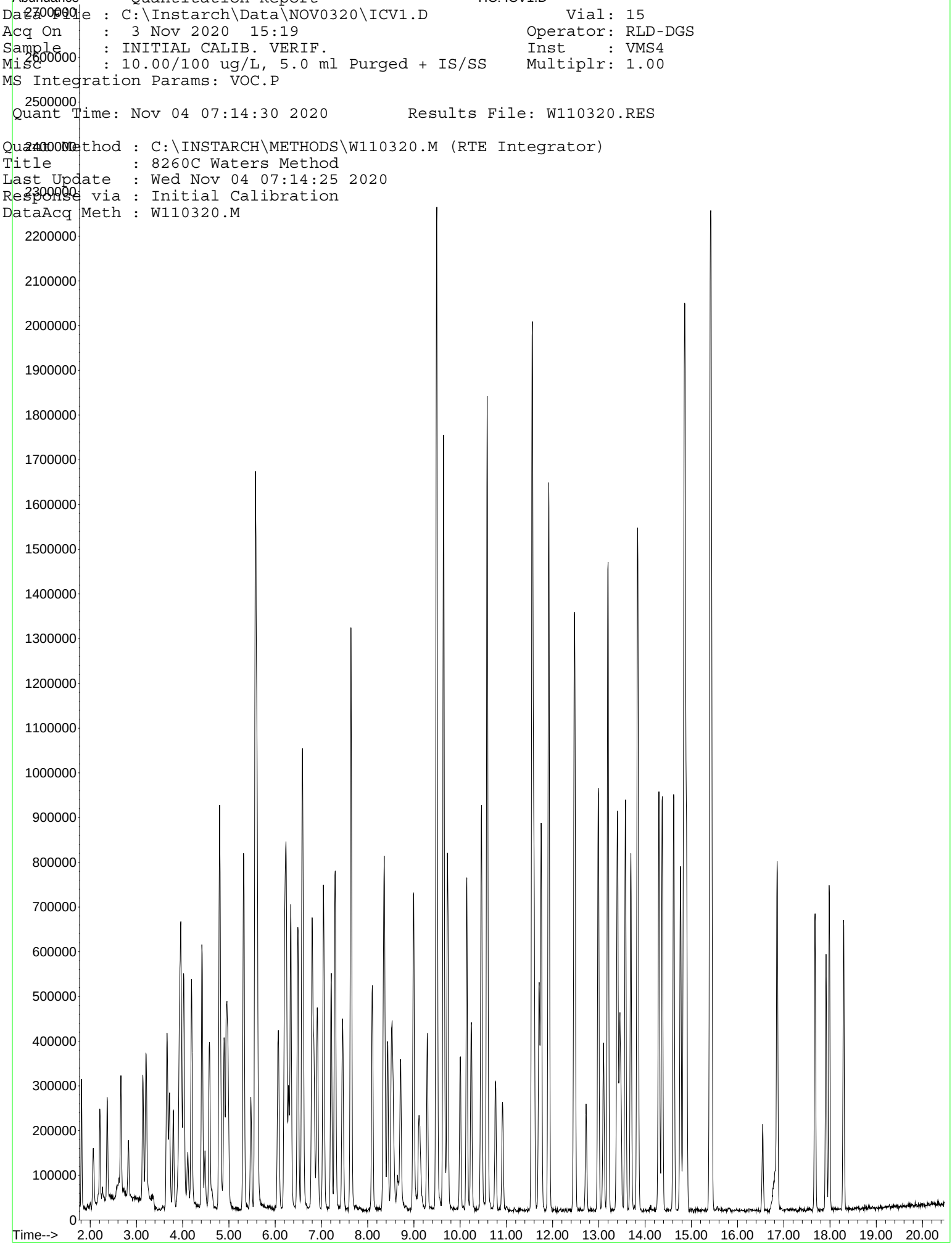
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102)	124Trichlobe	17.68	180	261336	10.3941 ug/L	99
103)	Hexachlorobu	17.92	225	134009	10.6383 ug/L	95
104)	Naphthalene	17.98	128	689147	10.7772 ug/L	99
105)	123Trichlben	18.29	180	247478	10.5392 ug/L	97

(#) = qualifier out of range (m) = manual integration

Data File : C:\Instarch\Data\NOV0320\ICV1.D Vial: 15
Acq On : 3 Nov 2020 15:19 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:14:30 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:14:25 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\NOV0320\ICV2.D Vial: 16
Acq On : 3 Nov 2020 15:49 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS4
Misc : 30.00/300 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 04 07:15:34 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	104	0.00
2	PT	Dichlorodi	30.0000	35.4199	-18.07	124	0.00
3	PT	Chloromethan	30.0000	30.4354	-1.45	116	0.00
4	PT	VinylChlorid	30.0000	32.3223	-7.74	113	0.00
5	PT	Bromomethane	30.0000	28.3975	5.34	102	0.00
6	PT	Chloroethane	30.0000	29.2954	2.35	108	0.00
7	T	Dichloroflmethane	30.0000	29.0566	3.14	106	0.00
8	PT	Trichlorofma	30.0000	31.6300	-5.43	108	0.00
9	T	Ethylether	30.0000	31.7012	-5.67	114	-0.01
10	T	dichlorotfluoroethan	30.0000	30.3596	-1.20	105	0.00
11	T	propyleneoxide	300.0000	339.3618	-13.12	110	0.00
12	T	Acrolein	150.0000	149.4960	0.34	106	0.00
13	PT	11dichlorthe	30.0000	31.6879	-5.63	110	0.00
14	PT	Trichlorotfluoroeth	60.0000	63.9033	-6.51	108	0.00
15	PT	Acetone	300.0000	323.6029	-7.87	111	0.00
16	T	Iodomethane	60.0000	62.6522	-4.42	104	0.00
17	PT	Carbon Dislf	60.0000	63.3866	-5.64	112	0.00
18	T	allylchloride	60.0000	63.2667	-5.44	110	0.00
19	PT	methylacetate	30.0000	30.4834	-1.61	104	0.00
20	PT	Methylchlorid	30.0000	24.1628	19.46	91	0.00
21	T	tbutylalcohol	1500.0000	1391.0509	7.26	102	0.00
22	T	Acrylonitrile	150.0000	151.0371	-0.69	106	0.00
23	PT	t12dichlorte	30.0000	29.8432	0.52	106	0.00
24	PT	MtBE	30.0000	30.3731	-1.24	109	0.00
25	T	Hexane	60.0000	62.7153	-4.53	103	0.00
26	PT	11dichlorota	30.0000	30.2092	-0.70	107	0.00
27	T	Vinylacetate	300.0000	254.1277	15.29	106	0.00
28	T	chloroprene	60.0000	63.3273	-5.55	107	0.00
29	T	Diisopether	30.0000	29.7911	0.70	107	0.00
30	T	ETBE	30.0000	31.2154	-4.05	109	0.00
31	T	22dichloropr	30.0000	28.8926	3.69	102	0.00
32	PT	c12dichlorte	30.0000	28.6283	4.57	104	0.00
33	PT	2Butanone	300.0000	292.7516	2.42	104	0.00
34	T	propionitrile	300.0000	300.6765	-0.23	105	0.00
35	T	Ethylacetate	150.0000	151.6945	-1.13	111	0.00
36	T	methacrylonitrile	60.0000	63.2193	-5.37	107	0.00
37	T	Bromochlorma	30.0000	28.0385	6.54	106	0.00
38	T	Tetrahydofur	300.0000	285.2084	4.93	105	0.00
39	PT	Chloroform	30.0000	29.0055	3.31	104	0.00
40	PT	111trichlota	30.0000	31.6538	-5.51	106	0.00
41	S	SURRDibrflma	20.0000	19.4225	2.89	102	0.00
42	PT	Cyclohexane	30.0000	31.3894	-4.63	105	0.00
43	PT	Carbtetraclo	30.0000	32.6657	-8.89	107	0.00
44	T	11dicloprope	30.0000	31.2956	-4.32	104	0.00
45	S	SURR12DCAd4	20.0000	20.0523	-0.26	102	0.00
46	PT	Benzene	30.0000	29.6944	1.02	106	0.00
47	PT	12dichlorota	30.0000	28.8365	3.88	106	0.00
48	T	TAME	30.0000	30.8280	-2.76	108	0.00

49	PT	trichloroete	30.0000	30.0629	-0.21	104	0.00
50	PT	methylcyclohexane	30.0000	33.5996	-12.00	109	0.00
51	PT	12dicloropra	30.0000	29.7114	0.96	104	0.00
52	T	23Dicl1propene	30.0000	29.3046	2.32	102	0.00
53	T	Dibromometha	30.0000	31.2355	-4.12	108	0.00
54	T	methylmethacrylate	30.0000	29.7973	0.68	100	0.00
55	T	14dioxane	1500.0000	1490.1721	0.66	106	0.00
56	PT	Bromodiclrma	30.0000	29.5084	1.64	101	0.00
57	T	2Nitropropane	300.0000	337.5376	-12.51	101	0.00
58	T	2CLEVE	150.0000	188.3930	-25.60#	139	0.00
59	PT	c13dicloproe	30.0000	30.2439	-0.81	104	0.00
60	PT	4Meth2Pentan	300.0000	256.0694	14.64	102	0.00
61	S	SURRd8Tolule	20.0000	19.4908	2.55	100	0.00
62	PT	Toluene	30.0000	28.7676	4.11	104	0.00
63	PT	t13Dicloprop	30.0000	31.0372	-3.46	102	0.00
64	T	ethylmethacrylate	60.0000	60.5704	-0.95	103	0.00
65	PT	112Triclotha	30.0000	29.7781	0.74	105	0.00
66	PT	Tetrachlorte	30.0000	30.8265	-2.75	104	0.00
67	T	13Diclorpropa	30.0000	28.5263	4.91	104	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	103	0.00
69	PT	2Hexanone	300.0000	258.5566	13.81	100	0.00
70	PT	Clorodibrmta	30.0000	30.8297	-2.77	104	0.00
71	PT	12Dibrometha	30.0000	30.1731	-0.58	108	0.00
72	PT	Chlorobenzen	30.0000	29.0292	3.24	105	0.00
73	T	1Clhexane	30.0000	30.7376	-2.46	102	0.00
74	T	1112Tetclota	30.0000	30.6701	-2.23	102	0.00
75	PT	Ethylbenzene	30.0000	29.2679	2.44	103	0.00
76	PT	m p-Xylene	60.0000	58.9327	1.78	101	0.00
77	PT	o-Xylene	30.0000	31.0081	-3.36	103	0.00
78	PT	Styrene	30.0000	29.7513	0.83	100	0.00
79	PT	Bromoform	30.0000	31.7084	-5.69	102	0.00
80	PT	Isopropylben	30.0000	30.2502	-0.83	103	0.00
81	T	cyclohexanone	600.0000	586.6630	2.22	100	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	100	0.00
83	S	SURR4BrFBenz	20.0000	20.9515	-4.76	106	0.00
84	T	Bromobenzene	30.0000	29.2075	2.64	105	0.00
85	PT	1122Tetrclta	30.0000	28.3295	5.57	100	0.00
86	T	123Triclproa	30.0000	31.1129	-3.71	105	0.00
87	T	14dichloro2butene	30.0000	32.1104	-7.03	103	0.00
88	T	n-Propylbenz	30.0000	29.4941	1.69	101	0.00
89	T	2chlorotolue	30.0000	29.2814	2.40	102	0.00
90	T	4chlorotolue	30.0000	28.1144	6.29	101	0.00
91	T	135Trimebenz	30.0000	29.4052	1.98	99	0.00
92	T	tbutylbenzen	30.0000	30.1088	-0.36	101	0.00
93	T	124Trimetben	30.0000	29.8408	0.53	101	0.00
94	T	sbutylbenzen	30.0000	30.4498	-1.50	102	0.00
95	PT	13Diclorbenz	30.0000	29.4765	1.74	103	0.00
96	T	pIsopropylto	30.0000	30.6409	-2.14	101	0.00
97	PT	14dichlorobe	30.0000	29.1005	3.00	103	0.00
98	PT	12dichlorobe	30.0000	28.5214	4.93	102	0.00
99	T	nButylbenzen	30.0000	30.1240	-0.41	99	0.00
100	PT	12dibromo3cl	30.0000	32.4658	-8.22	105	0.00
101	T	135Trichlorobenzene	30.0000	30.5986	-2.00	101	0.00
102	PT	124Trichlobe	30.0000	30.9111	-3.04	105	0.00
103	T	Hexachlorobu	30.0000	30.6859	-2.29	102	0.00
104	T	Naphthalene	30.0000	30.6958	-2.32	97	0.00
105	T	123Trichlben	30.0000	30.8753	-2.92	104	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W110320.M Thu Nov 19 08:53:56 2020

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\ICV2.D Vial: 16
Acq On : 3 Nov 2020 15:49 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS4
Misc : 30.00/300 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:15:34 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:15:21 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1459108	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1264109	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	733757	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	429516	19.422	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 97 %			
45) SURR12DCAd4	7.21	102	100826	20.052	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
61) SURRd8Tolule	9.64	98	1465865	19.491	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 97 %			
83) SURR4BrFBenz	13.20	95	651919	20.951	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 105 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	669164	35.4199	ug/L	99
3) Chloromethan	2.07	50	514073	30.4354	ug/L	97
4) VinylChlorid	2.21	62	577219	32.3223	ug/L	100
5) Bromomethane	2.66	94	229747	28.3975	ug/L	97
6) Chloroethane	2.83	64	375275	29.2954	ug/L	96
7) Dichloroflmethane	3.14	67	920036	29.0566	ug/L	99
8) Trichlorofma	3.20	101	1041727	31.6300	ug/L	96
9) Ethylether	3.65	59	354573	31.7012	ug/L	98
10) dichlorotfluoroethan	3.67	67	504741	30.3596	ug/L	96
11) propyleneoxide	3.72	58	665079	339.3618	ug/L	97
12) Acrolein	3.79	56	655733	149.4960	ug/L	98
13) 11dichlorthe	3.92	96	479633	31.6879	ug/L	96
14) Trichlorotfluoroeth	3.96	101	1014595	63.9033	ug/L	97
15) Acetone	4.02	43	2079106	323.6029	ug/L	98
16) Iodomethane	4.11	127	424449	62.6522	ug/L	95
17) Carbon Dislf	4.19	76	2324620	63.3866	ug/L	99
18) allylchloride	4.41	41	1197826	63.2667	ug/L	97
19) methylacetate	4.48	74	133640	30.4834	ug/L	97
20) Methylchlorid	4.58	84	622779	24.1628	ug/L	97
21) tbutylalcohol	4.80	59	3729955	1391.0509	ug/L	99
22) Acrylonitrile	4.90	53	999425	151.0371	ug/L	96
23) t12dichlorte	4.94	96	509881	29.8432	ug/L	97
24) MtBE	4.98	73	1338648	30.3731	ug/L	98
25) Hexane	5.32	57	1346423	62.7153	ug/L	97
26) 11dichlorota	5.47	63	796132	30.2092	ug/L	99
27) Vinylacetate	5.57	43	6612556	254.1277	ug/L	91
28) chloroprene	5.59	53	1300826	63.3273	ug/L	97
29) Diisopether	5.61	45	1257158	29.7911	ug/L	98
30) ETBE	6.06	59	1241527	31.2154	ug/L	99
31) 22dichloropr	6.21	77	670653	28.8926	ug/L	96
32) c12dichlorte	6.21	96	581159	28.6283	ug/L	98
33) 2Butanone	6.24	72	840659	292.7516	ug/L	100
34) propionitrile	6.29	54	910116	300.6765	ug/L	99
35) Ethylacetate	6.34	88	143890	151.6945	ug/L	96
36) methacrylonitrile	6.48	67	521336	63.2193	ug/L	95
37) Bromochlorma	6.50	128	268348	28.0385	ug/L	97
38) Tetrahydofur	6.59	42	1737737	285.2084	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\ICV2.D Vial: 16
Acq On : 3 Nov 2020 15:49 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS4
Misc : 30.00/300 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:15:34 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:15:21 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	918839	29.0055 ug/L	99
40)	111trichlota	6.84	97	863350	31.6538 ug/L	98
42)	Cyclohexane	6.91	56	729504	31.3894 ug/L	100
43)	Carbtetraclo	7.05	119	780828	32.6657 ug/L	97
44)	11dicloprope	7.04	110	282438	31.2956 ug/L	97
46)	Benzene	7.29	78	1871924	29.6944 ug/L	97
47)	12dichlorota	7.30	62	688095	28.8365 ug/L	98
48)	TAME	7.46	73	1302349	30.8280 ug/L	99
49)	trichloroete	8.10	95	571355	30.0629 ug/L	94
50)	methylcyclohexane	8.34	83	936751	33.5996 ug/L	99
51)	12dicloropra	8.37	63	489158	29.7114 ug/L	98
52)	23Dicl1propene	8.43	75	741756	29.3046 ug/L	96
53)	Dibromometha	8.51	93	388641	31.2355 ug/L	98
54)	methylmethacrylate	8.53	69	394572	29.7973 ug/L	97
55)	14dioxane	8.56	88	516708	1490.1721 ug/L	100
56)	Bromodiclrma	8.71	83	719519	29.5084 ug/L	96
57)	2Nitropropane	9.00	43	1810768	337.5376 ug/L	100
58)	2CLEVE	9.11	63	333079	188.3930 ug/L	98
59)	c13dicloproe	9.29	75	819611	30.2439 ug/L	100
60)	4Meth2Pentan	9.49	43	4549109	256.0694 ug/L	93
62)	Toluene	9.73	92	1292881	28.7676 ug/L	96
63)	t13Dicloprop	10.00	75	740155	31.0372 ug/L	97
64)	ethylmethacrylate	10.15	69	1355501	60.5704 ug/L	96
65)	112Triclotha	10.24	83	435261	29.7781 ug/L	97
66)	Tetrachlorte	10.46	166	694683	30.8265 ug/L	100
67)	13Diclorpropa	10.46	76	790178	28.5263 ug/L	96
69)	2Hexanone	10.59	43	3711467	258.5566 ug/L	93
70)	Clorodibrmta	10.77	129	653554	30.8297 ug/L	99
71)	12Dibrometha	10.92	107	622764	30.1731 ug/L	98
72)	Chlorobenzen	11.60	112	1605474	29.0292 ug/L	97
73)	1Clhexane	11.57	91	747693	30.7376 ug/L	96
74)	1112Tetclota	11.70	131	592842	30.6701 ug/L	100
75)	Ethylbenzene	11.75	91	2333844	29.2679 ug/L	96
76)	m p-Xylene	11.92	106	1949435	58.9327 ug/L	93
77)	o-Xylene	12.46	106	1041759	31.0081 ug/L	95
78)	Styrene	12.48	104	1603151	29.7513 ug/L	98
79)	Bromoform	12.72	173	470624	31.7084 ug/L	100
80)	Isopropylben	12.99	105	2500711	30.2502 ug/L	95
81)	cyclohexanone	13.10	55	579107	586.6630 ug/L	99
84)	Bromobenzene	13.41	156	763854	29.2075 ug/L	98
85)	1122Tetrclta	13.39	83	776308	28.3295 ug/L	98
86)	123Triclproa	13.45	75	964703	31.1129 ug/L	98
87)	14dichloro2butene	13.48	53	186251	32.1104 ug/L	98
88)	n-Propylbenz	13.58	91	2744112	29.4941 ug/L	95
89)	2chlorotolue	13.69	91	1706959	29.2814 ug/L	98
90)	4chlorotolue	13.84	91	1894585	28.1144 ug/L	95
91)	135Trimebenz	13.83	105	2042551	29.4052 ug/L	95
92)	tbutylbenzen	14.30	119	1920627	30.1088 ug/L	99
93)	124Trimetben	14.37	105	2073860	29.8408 ug/L	98
94)	sbutylbenzen	14.62	105	2614738	30.4498 ug/L	95
95)	13Diclorbenz	14.76	146	1343417	29.4765 ug/L	98
96)	pIsopropylto	14.84	119	2284712	30.6409 ug/L	98
97)	14dichlorobe	14.90	146	1341817	29.1005 ug/L	99
98)	12dichlorobe	15.43	146	1235673	28.5214 ug/L	98
99)	nButylbenzen	15.43	91	1855204	30.1240 ug/L	95
100)	12dibromo3cl	16.55	157	240541	32.4658 ug/L	99
101)	135Trichlorobenzene	16.86	180	957903	30.5986 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0320\ICV2.D Vial: 16
Acq On : 3 Nov 2020 15:49 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS4
Misc : 30.00/300 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:15:34 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:15:21 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	17.68	180	824388	30.9111 ug/L	98
103) Hexachlorobu	17.91	225	410018	30.6859 ug/L	96
104) Naphthalene	17.99	128	2082045	30.6958 ug/L	97
105) 123Trichlben	18.30	180	769030	30.8753 ug/L	99

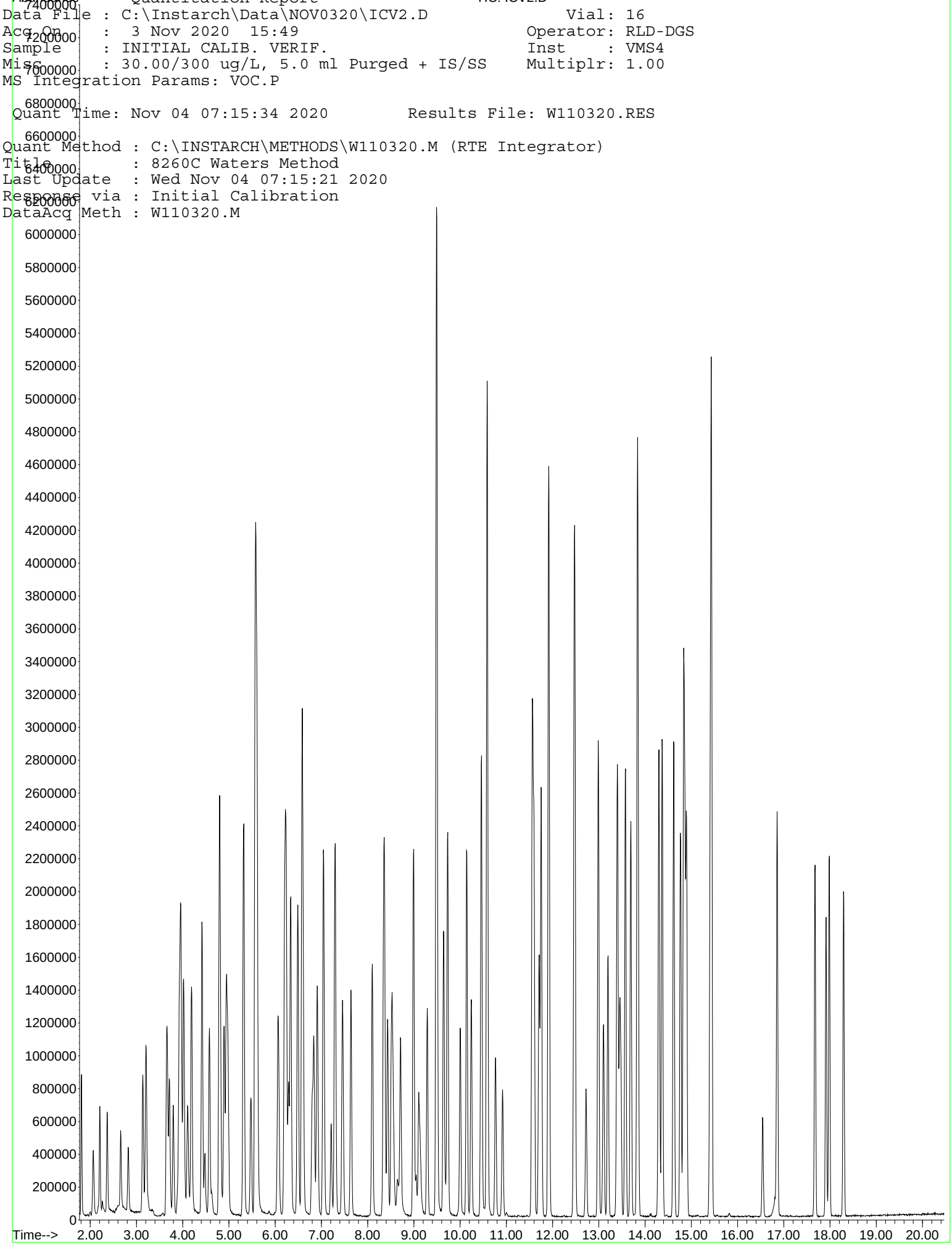
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: ICV2.D

Data File : C:\Instarch\Data\NOV0320\ICV2.D Vial: 16
Acq On : 3 Nov 2020 15:49 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS4
Misc : 30.00/300 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 04 07:15:34 2020 Results File: W110320.RES

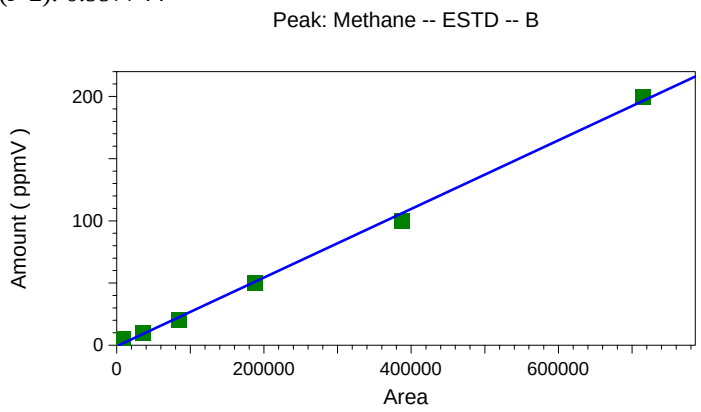
Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 04 07:15:21 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121319.met
Print Time: Dec 19, 2019 14:06:30
User: AGK
Instrument: PVOC4

Methane (B)
Average RF: 0.000329987 RF StDev: 0.000126154 RF %RSD: 38.2302
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 0.000275856x - 0.771544
Goodness of fit (r^2): 0.997744



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	5030	8460	35927	84034	187484
RF	0.000397614	0.00059101654	0.000278342193	0.000237998905	0.0002666894
	314115308	8463357	893172	205036	24164195
Last Area					
Residual	1.38399	3.4378	0.860857	-2.40976	-0.947087
Rep StDev					
Rep %RSD					
Rep 1 Area	5030	8460	35927	84034	187484
Rep 1 User	AGK	AGK	AGK	AGK	AGK
Rep 1 Data File	C:\Instarch\PVOC4\Data\121319icdg\001.dat	C:\Instarch\PVOC4\Data\121319icdg\002.dat	C:\Instarch\PVOC4\Data\121319icdg\003.dat	C:\Instarch\PVOC4\Data\121319icdg\017.dat	C:\Instarch\PVOC4\Data\121319icdg\018.dat
Rep 1 Sample ID	MEE PT1 - 2 ppmV	MEE PT2 - 5 ppmV	MEE PT3 - 10 ppmV	MEE PT4 - 20 ppmV	MEE PT5 - 50 ppmV
Rep 1 Calib. Time	Dec 13, 2019 11:03:20	Dec 13, 2019 11:08:54	Dec 13, 2019 11:12:33	Dec 13, 2019 12:20:46	Dec 13, 2019 12:24:12

	Level 6	Level 7
Amount	100	200
Area	387182	714366

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121319.met
Print Time: Dec 19, 2019 14:06:30
User: AGK
Instrument: PVOC4

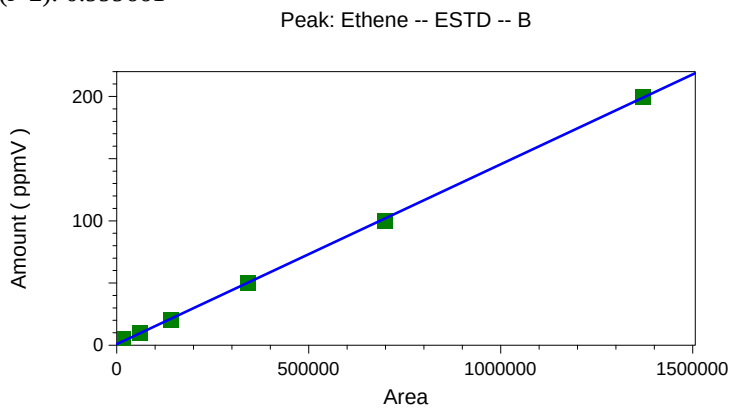
RF	0.000258276469463973	0.00027996853 1537055
Last Area Residual	-6.03503	3.70923
Rep StDev		
Rep %RSD		
Rep 1 Area	387182	714366
Rep 1 User	AGK	AGK
Rep 1 Data File	C:\Instarch\PVOC4\Data\121319icdg\019.dat	C:\Instarch\PVOC4\Data\121319icdg\024.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Dec 13, 2019 12:27:59	Dec 13, 2019 13:49:34

RJ 01/03/2020

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121319.met
Print Time: Dec 19, 2019 14:06:47
User: AGK
Instrument: PVOC4

Ethene (B)
Average RF: 0.000194500 RF StDev: 7.92626e-005 RF %RSD: 40.7519
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 0.000144547x + 0.886235
Goodness of fit (r^2): 0.999661



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	6741	15526	60017	142264	341448
RF	0.000296691	0.00032204044	0.000166619457	0.000140583703	0.0001464351
	885476932	8280304	820284	537086	8193107
Last Area					
Residual	0.139376	1.86953	0.438507	-1.45002	-0.241407
Rep StDev					
Rep %RSD					
Rep 1 Area	6741	15526	60017	142264	341448
Rep 1 User	AGK	AGK	AGK	AGK	AGK
Rep 1 Data File	C:\Instarch\P	C:\Instarch\PV	C:\Instarch\PVO	C:\Instarch\PVO	C:\Instarch\PV
	VOC4\Data\1	OC4\Data\1213	C4\Data\121319	C4\Data\121319	OC4\Data\121
	21319icdg\00	19icdg\002.dat	icdg\003.dat	icdg\017.dat	319icdg\018.d
	1.dat				at
Rep 1 Sample ID	MEE PT1 - 2	MEE PT2 - 5	MEE PT3 - 10	MEE PT4 - 20	MEE PT5 - 50
	ppmV	ppmV	ppmV	ppmV	ppmV
Rep 1 Calib. Time	Dec 13, 2019	Dec 13, 2019	Dec 13, 2019	Dec 13, 2019	Dec 13, 2019
	11:03:20	11:08:54	11:12:33	12:20:46	12:24:12

	Level 6	Level 7
Amount	100	200
Area	698761	1369661

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121319.met
Print Time: Dec 19, 2019 14:06:47
User: AGK
Instrument: PVOC4

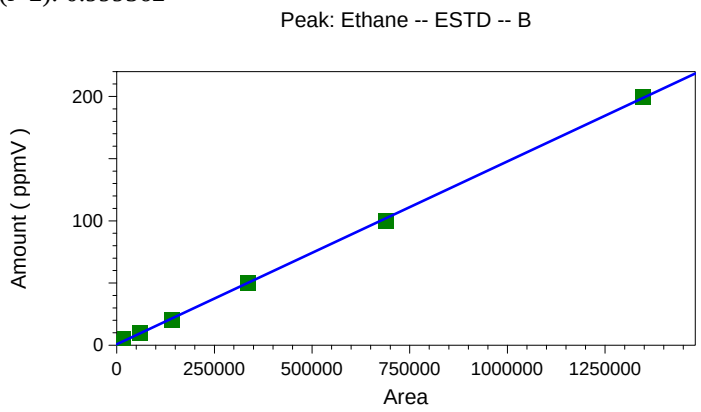
RF	0.000143110448350724	0.000146021533795589
Last Area Residual	-1.88981	1.13383
Rep StDev		
Rep %RSD		
Rep 1 Area	698761	1369661
Rep 1 User	AGK	AGK
Rep 1 Data File	C:\Instarch\PVOC4\Data\121319icdg\019.dat	C:\Instarch\PVOC4\Data\121319icdg\024.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Dec 13, 2019 12:27:59	Dec 13, 2019 13:49:34

RJ 01/03/2020

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121319.met
Print Time: Dec 19, 2019 14:07:05
User: AGK
Instrument: PVOC4

Ethane (B)
Average RF: 0.000201411 RF StDev: 8.94581e-005 RF %RSD: 44.4156
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 0.000147091x + 0.704169
Goodness of fit (r^2): 0.999562



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	6087	14916	60913	142761	337378
RF	0.000328569 081649417	0.00033521051 2201663	0.000164168568 285916	0.000140094283 452764	0.0001482017 2032557
Last Area Residual	0.400487	2.10182	0.336069	-1.70305	-0.329479
Rep StDev					
Rep %RSD					
Rep 1 Area	6087	14916	60913	142761	337378
Rep 1 User	AGK	AGK	AGK	AGK	AGK
Rep 1 Data File	C:\Instarch\PVOC4\Data\121319icdg\001.dat	C:\Instarch\PVOC4\Data\121319icdg\002.dat	C:\Instarch\PVOC4\Data\121319icdg\003.dat	C:\Instarch\PVOC4\Data\121319icdg\017.dat	C:\Instarch\PVOC4\Data\121319icdg\018.dat
Rep 1 Sample ID	MEE PT1 - 2 ppmV	MEE PT2 - 5 ppmV	MEE PT3 - 10 ppmV	MEE PT4 - 20 ppmV	MEE PT5 - 50 ppmV
Rep 1 Calib. Time	Dec 13, 2019 11:03:20	Dec 13, 2019 11:08:54	Dec 13, 2019 11:12:33	Dec 13, 2019 12:20:46	Dec 13, 2019 12:24:12

	Level 6	Level 7
Amount	100	200
Area	689400	1346056

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121319.met
Print Time: Dec 19, 2019 14:07:05
User: AGK
Instrument: PVOC4

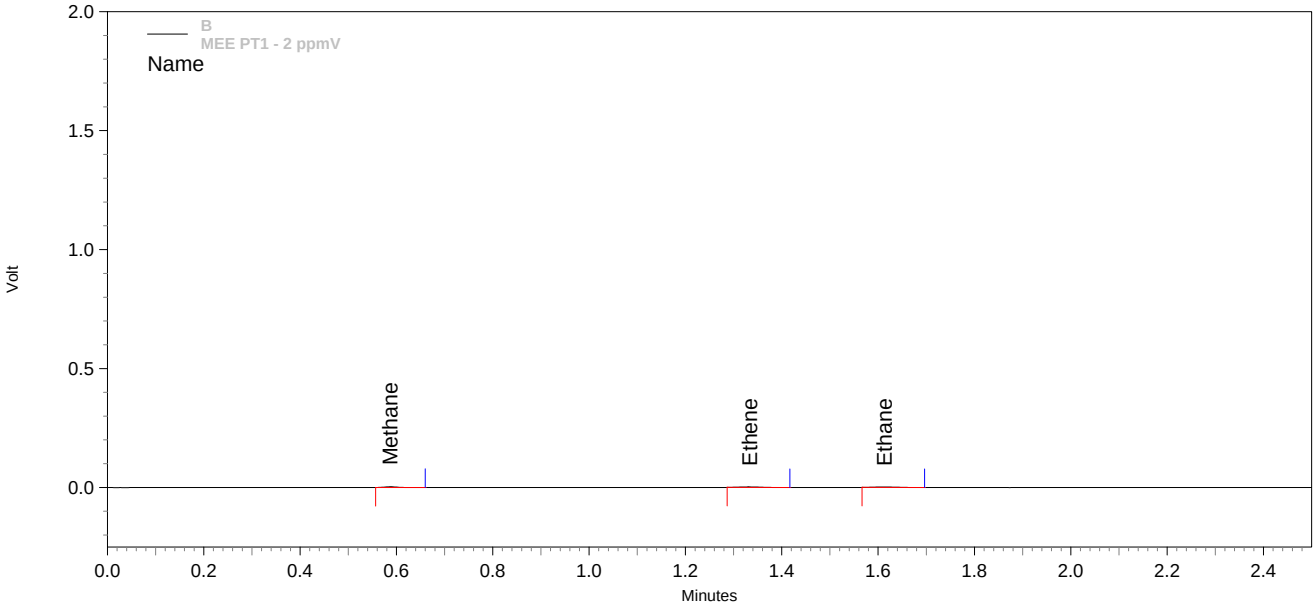
RF	0.000145053669857847	0.000148582228376828
Last Area Residual	-2.10879	1.30294
Rep StDev		
Rep %RSD		
Rep 1 Area	689400	1346056
Rep 1 User	AGK	AGK
Rep 1 Data File	C:\Instarch\PVOC4\Data\121319icdg\019.dat	C:\Instarch\PVOC4\Data\121319icdg\024.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Dec 13, 2019 12:27:59	Dec 13, 2019 13:49:34

RJ 01/03/2020

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121319icdg\001.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: MEE PT1 - 2 ppmV
Acquired: Dec 13, 2019 10:58:16
File Desc. 0.01 mL injection (Methane, Ethene, Ethane)



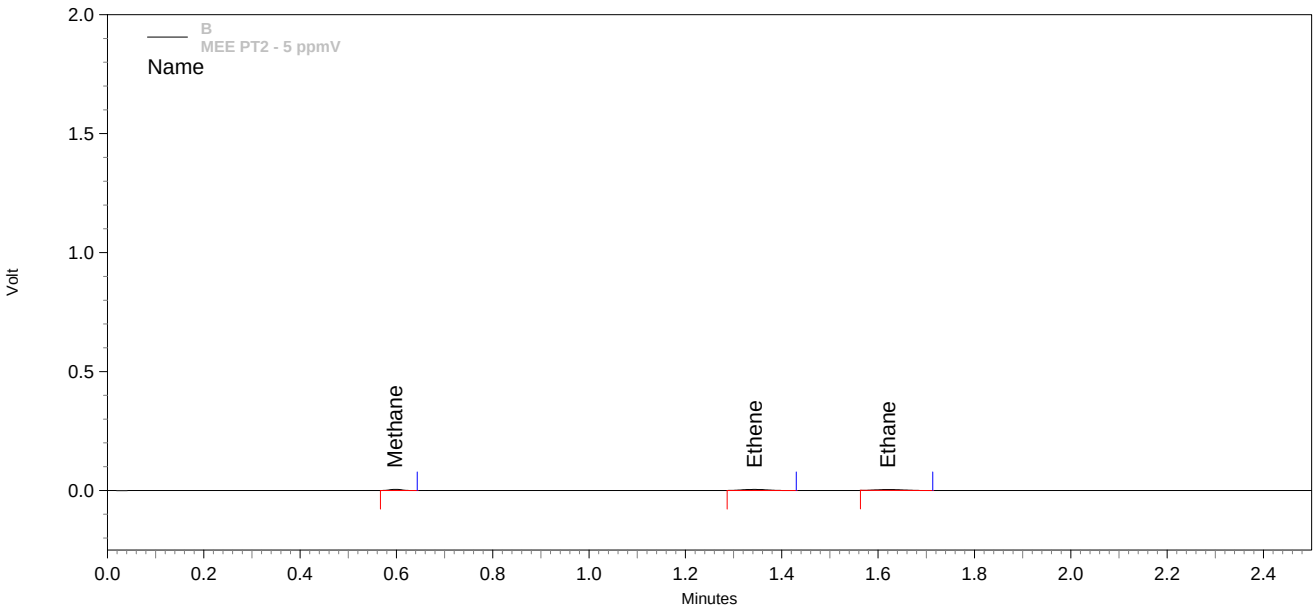
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.587**	**0.577**	**5030**	**2.000 CAL**	**ppmV**
2	**Ethene**	**1.333**	**1.310**	**6741**	**2.000 CAL**	**ppmV**
3	**Ethane**	**1.613**	**1.593**	**6087**	**2.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121319icdg\002.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: MEE PT2 - 5 ppmV
Acquired: Dec 13, 2019 11:06:00
File Desc. 0.025 mL injection (Methane, Ethene, Ethane)



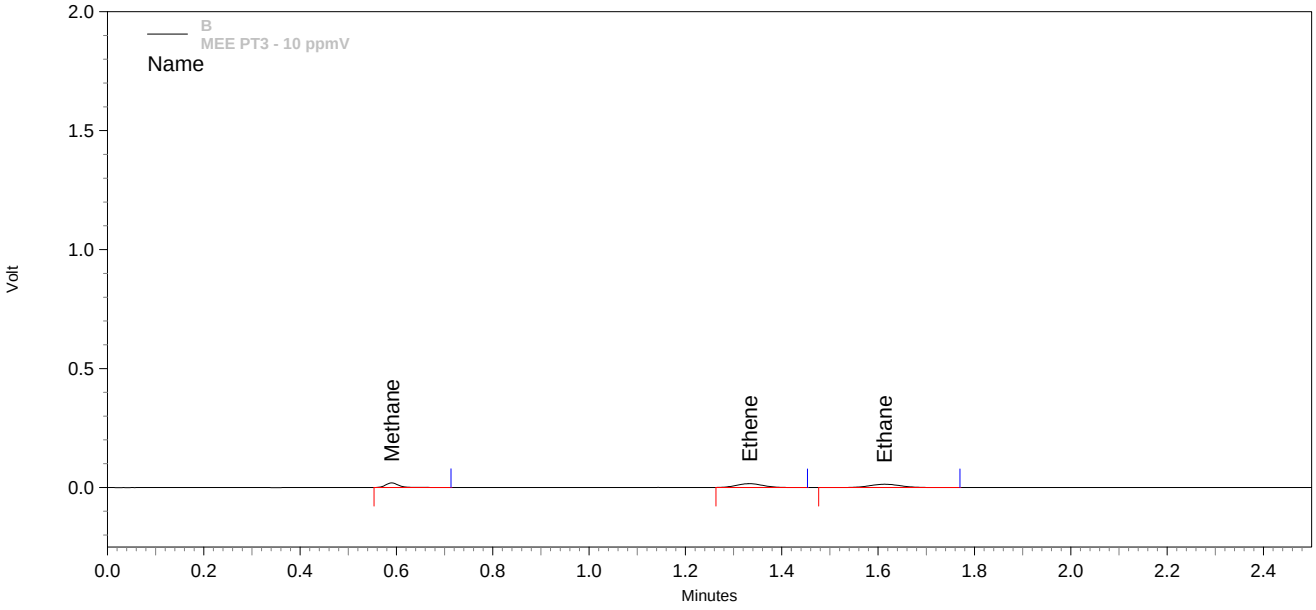
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.597**	**0.587**	**8460**	**5.000 CAL**	**ppmV**
2	**Ethene**	**1.343**	**1.333**	**15526**	**5.000 CAL**	**ppmV**
3	**Ethane**	**1.620**	**1.613**	**14916**	**5.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121319icdg\003.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: MEE PT3 - 10 ppmV
Acquired: Dec 13, 2019 11:09:45
File Desc. 0.05 mL injection (Methane, Ethene, Ethane)



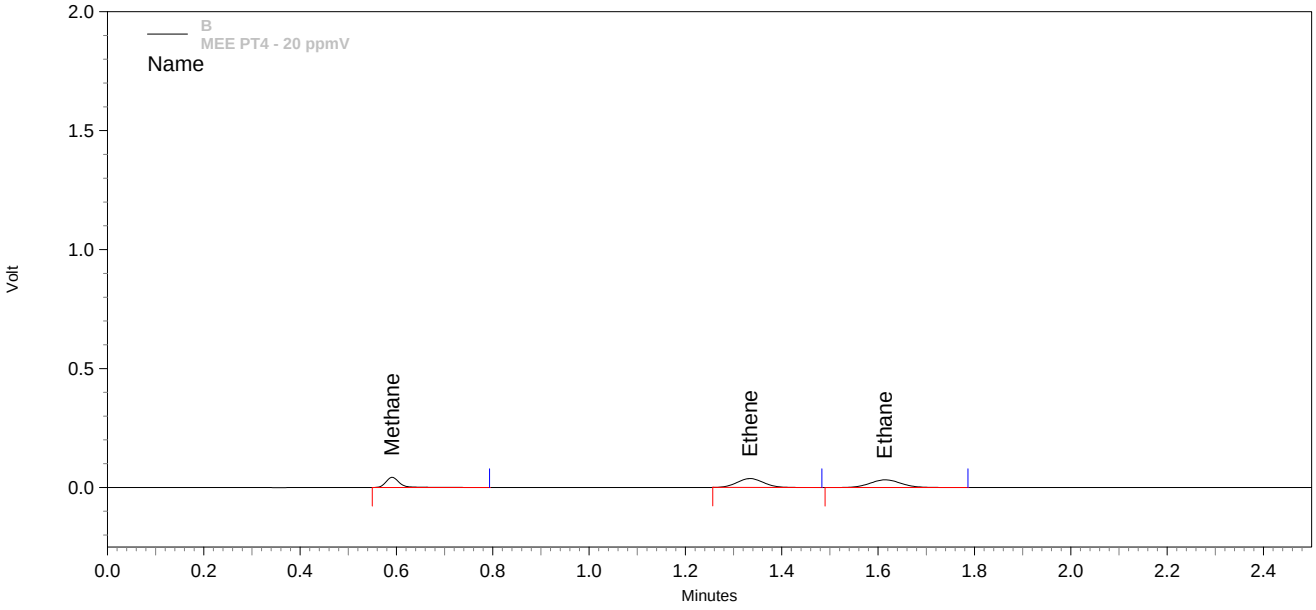
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.590**	**0.597**	**35927**	**10.000 CAL**	**ppmV**
2	**Ethene**	**1.333**	**1.343**	**60017**	**10.000 CAL**	**ppmV**
3	**Ethane**	**1.613**	**1.620**	**60913**	**10.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121319icdg\017.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: MEE PT4 - 20 ppmV
Acquired: Dec 13, 2019 12:18:01
File Desc. 0.1 mL injection (Methane, Ethene, Ethane)



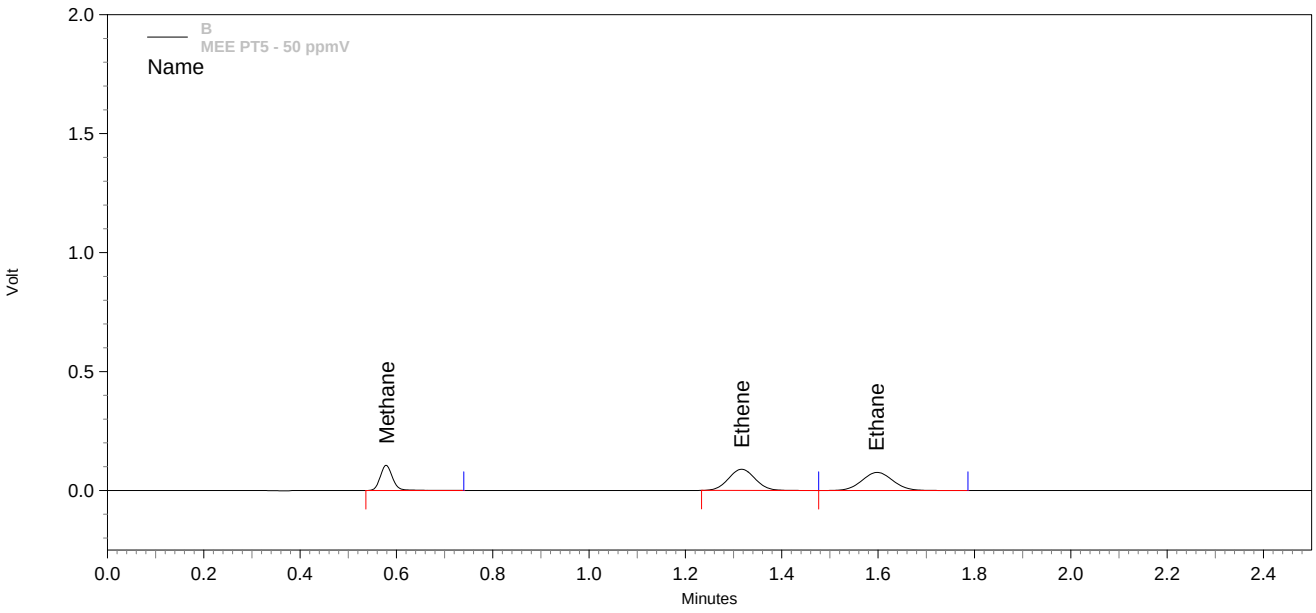
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.590**	**0.580**	**84034**	**20.000 CAL**	**ppmV**
2	**Ethene**	**1.333**	**1.320**	**142264**	**20.000 CAL**	**ppmV**
3	**Ethane**	**1.613**	**1.600**	**142761**	**20.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121319icdg\018.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: MEE PT5 - 50 ppmV
Acquired: Dec 13, 2019 12:21:29
File Desc. 0.25 mL injection (Methane, Ethene, Ethane)



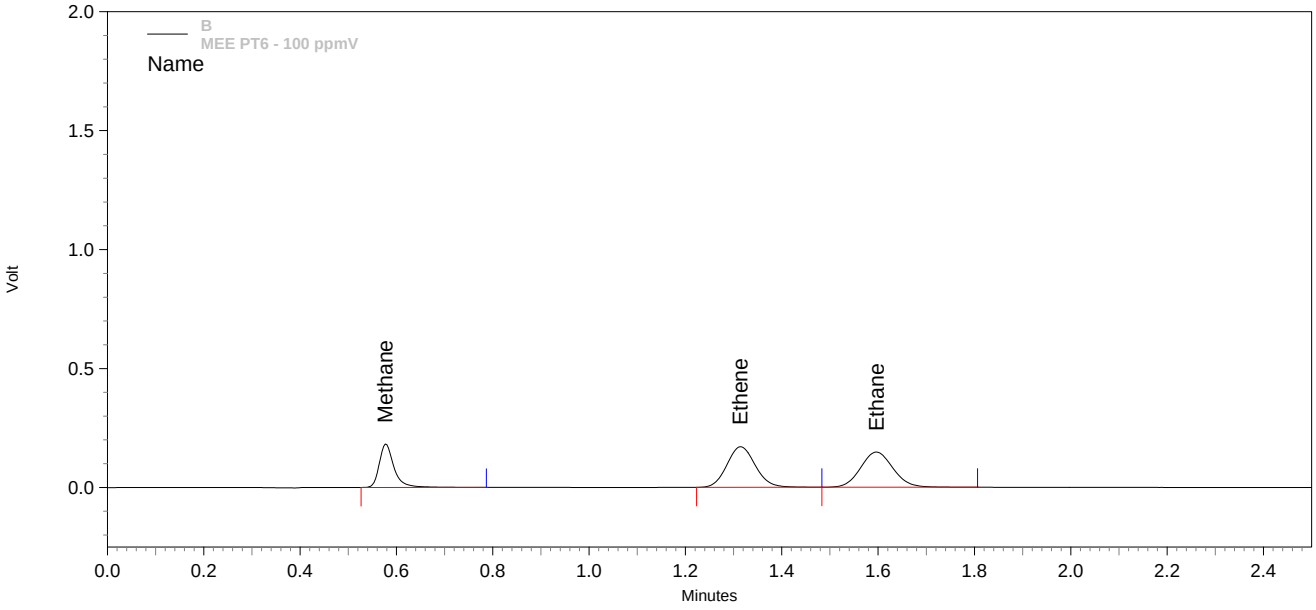
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.580**	**0.590**	**187484**	**50.000 CAL**	**ppmV**
2	**Ethene**	**1.317**	**1.333**	**341448**	**50.000 CAL**	**ppmV**
3	**Ethane**	**1.597**	**1.613**	**337378**	**50.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121319icdg\019.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: MEE PT6 - 100 ppmV
Acquired: Dec 13, 2019 12:24:55
File Desc. 0.5 mL injection (Methane, Ethene, Ethane)



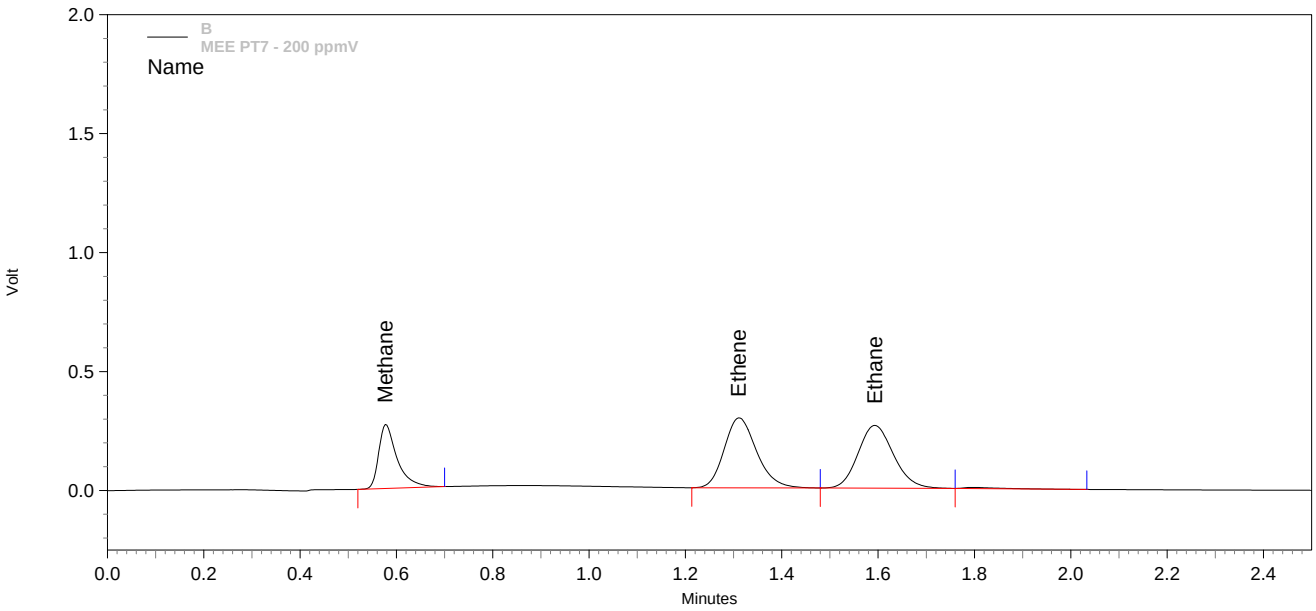
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.577**	**0.580**	**387182**	**100.000 CAL**	**ppmV**
2	**Ethene**	**1.313**	**1.317**	**698761**	**100.000 CAL**	**ppmV**
3	**Ethane**	**1.597**	**1.597**	**689400**	**100.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121319icdg\024.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: MEE PT7 - 200 ppmV
Acquired: Dec 13, 2019 13:46:48
File Desc. 1.0 mL injection (Methane, Ethene, Ethane)



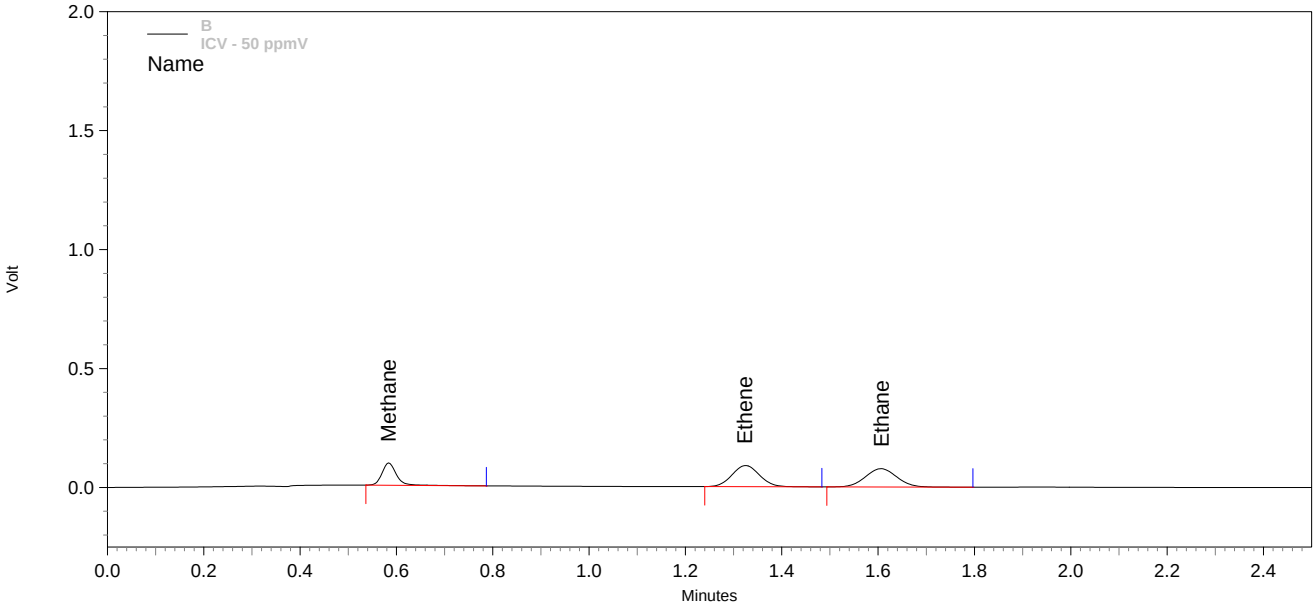
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.577**	**0.580**	**714366**	**200.000 CAL**	**ppmV**
2	**Ethene**	**1.310**	**1.317**	**1369661**	**200.000 CAL**	**ppmV**
3	**Ethane**	**1.593**	**1.600**	**1346056**	**200.000 CAL**	**ppmV**
4		**1.797**	**0.000**	**24582**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121319icdg\025.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: ICV - 50 ppmV
Acquired: Dec 13, 2019 13:51:32
File Desc. INITIAL CALIB. VERIF. - 0.25 mL injection (Methane, Ethene, Ethane)



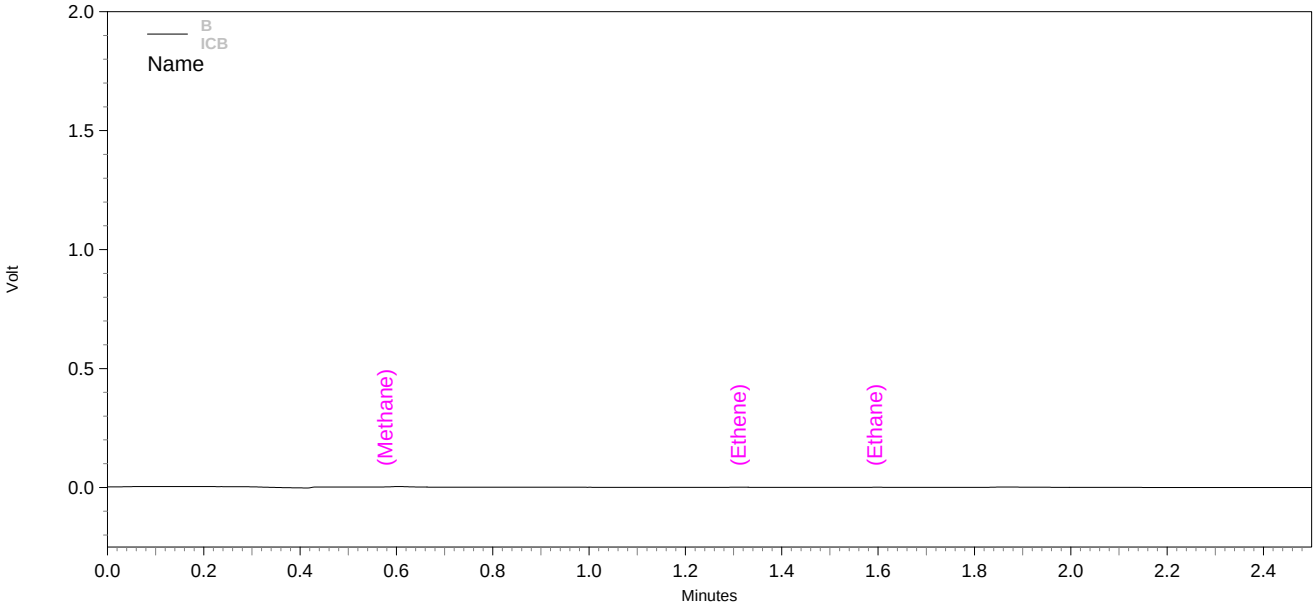
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.583**	**0.577**	**193552**	**52.621**	**ppmV**
2	**Ethene**	**1.323**	**1.310**	**352785**	**51.880**	**ppmV**
3	**Ethane**	**1.607**	**1.593**	**348500**	**51.965**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121319icdg\026.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: ICB
Acquired: Dec 13, 2019 14:03:04
File Desc. INITIAL CALIB. BLANK



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.577**		**0.000 BDL**	**ppmV**
	Ethene		**1.310**		**0.000 BDL**	**ppmV**
	Ethane		**1.593**		**0.000 BDL**	**ppmV**

VOLATILE ORGANIC ANALYSIS
CONTINUING CALIBRATION
DOCUMENTS

BFB

Data File : C:\Instarch\Data\NOV0620B\BFB1.D Vial: 1
Acq On : 6 Nov 2020 22:28 Operator: RLD-DGS
Sample : 176555,BFB, Inst : VMS4
Misc : 50 ng Injection Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110320.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.592 to 4.605 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.3	6943	PASS
75	95	30	60	49.7	18848	PASS
95	95	100	100	100.0	37956	PASS
96	95	5	9	7.2	2717	PASS
173	174	0.00	2	0.4	131	PASS
174	95	50	100	94.2	35769	PASS
175	174	5	9	7.4	2658	PASS
176	174	95	101	97.1	34715	PASS
177	176	5	9	5.3	1855	PASS

W110320.M Tue Nov 10 09:20:20 2020

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\NOV0620B\CCV-LCS1.D Vial: 2
Acq On : 6 Nov 2020 22:41 Operator: RLD-DGS
Sample : 176654,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 06 23:13:11 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	103	0.00
2	PT	Dichlorodi	0.2590	0.2099	18.96	80	0.00
3	PT	Chloromethan	0.2315	0.2061	10.97	94	0.00
4	PT	VinylChlorid	0.2448	0.2348	4.08	95	0.00
5	PT	Bromomethane	0.1570	0.1472	6.24	106	0.01
6	PT	Chloroethane	0.1756	0.1707	2.79	98	0.00
7	T	Dichloroflmethane	0.4340	0.4454	-2.63	104	0.00
8	PT	Trichlorofma	0.4514	0.4636	-2.70	97	0.00
9	T	Ethylether	0.1533	0.1603	-4.57	109	-0.01
10	T	dichlorotfluoroethan	0.2279	0.2517	-10.44	107	0.00
11	T	propyleneoxide	0.0269	0.0306	-13.75	130	0.00
12	T	Acrolein	0.0601	0.0549	8.65	98	0.00
13	PT	11dichlorthe	0.2075	0.2168	-4.48	102	0.00
14	PT	Trichlorotfluoroeth	0.2176	0.2447	-12.45	108	0.00
15	PT	Acetone	0.1056	0.0861#	18.47	92	0.00
16	T	Iodomethane	0.0623	0.0767	-23.11#	151	0.00
17	PT	Carbon Dislf	0.5027	0.5372	-6.86	107	0.00
18	T	allylchloride	0.2595	0.2763	-6.47	111	0.00
19	PT	methylacetate	0.0601	0.0572#	4.83	107	0.00
20	PT	Methylchlorid	0.3533	0.3508	0.71	108	0.00
21	T	tbutylalcohol	0.0368	0.0351	4.62	97	0.00
22	T	Acrylonitrile	0.0907	0.0980	-8.05	111	0.00
23	PT	t12dichlorte	0.2342	0.2446	-4.44	114	0.00
24	PT	MtBE	0.6041	0.6086	-0.74	106	0.00
25	T	Hexane	0.2943	0.3631	-23.38#	116	0.00
26	PT	11dichlorota	0.3612	0.3712	-2.77	107	0.00
27	T	Vinylacetate	0.3567	0.4214	-18.14	116	0.00
28	T	chloroprene	0.2816	0.3070	-9.02	106	0.00
29	T	Diisopether	0.5784	0.6015	-3.99	109	0.00
30	T	ETBE	0.5452	0.5573	-2.22	107	0.00
31	T	22dichloropr	0.3182	0.3605	-13.29	115	0.00
32	PT	c12dichlorte	0.2783	0.2812	-1.04	109	0.00
33	PT	2Butanone	0.0394	0.0398#	-1.02	106	0.00
34	T	propionitrile	0.0415	0.0436	-5.06	110	0.00
35	T	Ethylacetate	0.0130	0.0131#	-0.77	104	0.00
36	T	methacrylonitrile	0.1130	0.1191	-5.40	112	0.00
37	T	Bromochlorma	0.1312	0.1417	-8.00	107	0.00
38	T	Tetrahydofur	0.0835	0.0864	-3.47	108	0.00
39	PT	Chloroform	0.4342	0.4821	-11.03	116	0.00
40	PT	111trichlota	0.3739	0.3995	-6.85	109	0.00
41	S	SURRDibrflma	0.3031	0.3259	-7.52	111	0.00
42	PT	Cyclohexane	0.3186	0.3521	-10.51	108	0.00
43	PT	Carbtetraclo	0.3276	0.3634	-10.93	110	0.00
44	T	11dicloprope	0.1237	0.1393	-12.61	113	0.00
45	S	SURR12DCAd4	0.0689	0.0696	-1.02	105	0.00
46	PT	Benzene	0.8641	0.9413	-8.93	112	0.00
47	PT	12dichlorota	0.3271	0.3283	-0.37	108	0.00
48	T	TAME	0.5791	0.5781	0.17	103	0.00

49	PT	trichloroete	0.2605	0.2760	-5.95	106	0.00
50	PT	methylcyclohexane	0.3821	0.4177	-9.32	107	0.00
51	PT	12dicloropra	0.2257	0.2429	-7.62	112	0.00
52	T	23Dicl1propene	0.3470	0.3592	-3.52	107	0.00
53	T	Dibromometha	0.1705	0.1917	-12.43	116	0.00
54	T	methylmethacrylate	0.1815	0.1962	-8.10	114	0.00
55	T	14dioxane	0.0048	0.0030#	37.50#	68	0.00
56	PT	Bromodiclrma	0.3342	0.3475	-3.98	113	0.00
57	T	2Nitropropane	0.0735	0.0790	-7.48	107	0.00
58	T	2CLEVE	0.0195	0.0105#	46.15#	69	0.00
59	PT	c13dicloproe	0.3715	0.3988	-7.35	113	0.00
60	PT	4Meth2Pentan	0.2435	0.2697	-10.76	113	0.00
61	S	SURRd8Tolule	1.0309	1.1051	-7.20	110	0.00
62	PT	Toluene	0.6160	0.6691	-8.62	113	0.00
63	PT	t13Dicloprop	0.3269	0.3599	-10.09	113	0.00
64	T	ethylmethacrylate	0.3067	0.3328	-8.51	110	0.00
65	PT	112Triclotha	0.2004	0.2185	-9.03	115	0.00
66	PT	Tetrachlorte	0.3089	0.3484	-12.79	115	0.00
67	T	13Diclorpropa	0.3797	0.4055	-6.79	109	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	113	0.00
69	PT	2Hexanone	0.2271	0.2242	1.28	112	0.00
70	PT	Clorodibrmta	0.3354	0.3002	10.49	105	0.00
71	PT	12Dibrometha	0.3265	0.3265	0.00	115	0.00
72	PT	Chlorobenzen	0.8750	0.8840	-1.03	114	0.00
73	T	1Clhexane	0.3849	0.4212	-9.43	122	0.00
74	T	1112Tetclota	0.3058	0.2991	2.19	115	0.00
75	PT	Ethylbenzene	1.2616	1.3432	-6.47	114	0.00
76	PT	m p-Xylene	0.5234	0.5479	-4.68	115	0.00
77	PT	o-Xylene	0.5315	0.5487	-3.24	113	0.00
78	PT	Styrene	0.8525	0.8632	-1.26	112	0.00
79	PT	Bromoform	0.2348	0.1966	16.27	101	0.00
80	PT	Isopropylben	1.3079	1.3814	-5.62	112	0.00
81	T	cyclohexanone	0.0156	0.0108#	30.77#	78	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	108	0.00
83	S	SURR4BrFBenz	0.8481	0.8868	-4.56	113	0.00
84	T	Bromobenzene	0.7128	0.7018	1.54	109	0.00
85	PT	1122Tetrclta	0.7469	0.8024	-7.43	114	0.00
86	T	123Triclproa	0.8451	0.8616	-1.95	109	0.00
87	T	14dichloro2butene	0.1581	0.1384	12.46	97	0.00
88	T	n-Propylbenz	2.5360	2.9498	-16.32	116	0.00
89	T	2chlorotolue	1.5889	1.7552	-10.47	116	0.00
90	T	4chlorotolue	1.8368	1.9958	-8.66	115	0.00
91	T	135Trimebenz	1.8933	2.0822	-9.98	112	0.00
92	T	tbutylbenzen	1.7387	1.9546	-12.42	115	0.00
93	T	124Trimetben	1.8943	2.0837	-10.00	113	0.00
94	T	sbutylbenzen	2.3406	2.7740	-18.52	116	0.00
95	PT	13Diclorbenz	1.2423	1.3168	-6.00	113	0.00
96	T	pIsopropylto	2.0324	2.3585	-16.05	116	0.00
97	PT	14dichlorobe	1.2568	1.3244	-5.38	112	0.00
98	PT	12dichlorobe	1.1809	1.2244	-3.68	112	0.00
99	T	nButylbenzen	1.6786	1.9923	-18.69	118	0.00
100	PT	12dibromo3cl	0.2019	0.1944	3.71	113	0.00
101	T	135Trichlorobenzene	0.8533	0.8984	-5.29	108	0.00
102	PT	124Trichlobe	0.7269	0.8119	-11.69	119	0.00
103	T	Hexachlorobu	0.3642	0.3977	-9.20	123	0.00
104	T	Naphthalene	1.8488	2.1389	-15.69	120	0.00
105	T	123Trichlben	0.6789	0.7514	-10.68	119	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W110320.M Tue Nov 10 09:22:17 2020

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\NOV0620B\CCV-LCS1.D Vial: 2
Acq On : 6 Nov 2020 22:41 Operator: RLD-DGS
Sample : 176654,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 06 23:13:11 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	103	0.00
2	PT	Dichlorodi	10.0000	8.1051	18.95	80	0.00
3	PT	Chloromethan	10.0000	8.9016	10.98	94	0.00
4	PT	VinylChlorid	10.0000	9.5923	4.08	95	0.00
5	PT	Bromomethane	10.0000	11.6250	-16.25	106	0.01
6	PT	Chloroethane	10.0000	9.7236	2.76	98	0.00
7	T	Dichloroflmethane	10.0000	10.2634	-2.63	104	0.00
8	PT	Trichlorofma	10.0000	10.2704	-2.70	97	0.00
9	T	Ethylether	10.0000	10.4529	-4.53	109	-0.01
10	T	dichlorotfluoroethan	10.0000	11.0443	-10.44	107	0.00
11	T	propyleneoxide	100.0000	113.9952	-14.00	130	0.00
12	T	Acrolein	50.0000	45.6168	8.77	98	0.00
13	PT	11dichlorthe	10.0000	10.4518	-4.52	102	0.00
14	PT	Trichlorotfluoroeth	20.0000	22.4844	-12.42	108	0.00
15	PT	Acetone	100.0000	88.8696	11.13	92	0.00
16	T	Iodomethane	20.0000	23.1173	-15.59	151	0.00
17	PT	Carbon Dislf	20.0000	21.3721	-6.86	107	0.00
18	T	allylchloride	20.0000	21.2913	-6.46	111	0.00
19	PT	methylacetate	10.0000	9.5156	4.84	107	0.00
20	PT	Methylchlorid	10.0000	9.9284	0.72	108	0.00
21	T	tbutylalcohol	500.0000	477.9824	4.40	97	0.00
22	T	Acrylonitrile	50.0000	54.0464	-8.09	111	0.00
23	PT	t12dichlorte	10.0000	10.4447	-4.45	114	0.00
24	PT	MtBE	10.0000	10.0746	-0.75	106	0.00
25	T	Hexane	20.0000	24.6757	-23.38#	116	0.00
26	PT	11dichlorota	10.0000	10.2772	-2.77	107	0.00
27	T	Vinylacetate	100.0000	118.1442	-18.14	116	0.00
28	T	chloroprene	20.0000	21.8047	-9.02	106	0.00
29	T	Diisopether	10.0000	10.3989	-3.99	109	0.00
30	T	ETBE	10.0000	10.2232	-2.23	107	0.00
31	T	22dichloropr	10.0000	11.3300	-13.30	115	0.00
32	PT	c12dichlorte	10.0000	10.1066	-1.07	109	0.00
33	PT	2Butanone	100.0000	101.2038	-1.20	106	0.00
34	T	propionitrile	100.0000	105.0104	-5.01	110	0.00
35	T	Ethylacetate	50.0000	50.2051	-0.41	104	0.00
36	T	methacrylonitrile	20.0000	21.0688	-5.34	112	0.00
37	T	Bromochlorma	10.0000	10.8011	-8.01	107	0.00
38	T	Tetrahydofur	100.0000	103.4537	-3.45	108	0.00
39	PT	Chloroform	10.0000	11.1023	-11.02	116	0.00
40	PT	111trichlota	10.0000	10.6857	-6.86	109	0.00
41	S	SURRDibrflma	20.0000	21.5004	-7.50	111	0.00
42	PT	Cyclohexane	10.0000	11.0522	-10.52	108	0.00
43	PT	Carbtetraclo	10.0000	11.0908	-10.91	110	0.00
44	T	11dicloprope	10.0000	11.2580	-12.58	113	0.00
45	S	SURR12DCAd4	20.0000	20.2088	-1.04	105	0.00
46	PT	Benzene	10.0000	10.8941	-8.94	112	0.00
47	PT	12dichlorota	10.0000	10.0385	-0.39	108	0.00
48	T	TAME	10.0000	9.9839	0.16	103	0.00

49	PT	trichloroete	10.0000	10.5964	-5.96	106	0.00
50	PT	methylcyclohexane	10.0000	10.9308	-9.31	107	0.00
51	PT	12dicloropra	10.0000	10.7631	-7.63	112	0.00
52	T	23Dicl1propene	10.0000	10.3520	-3.52	107	0.00
53	T	Dibromometha	10.0000	11.2391	-12.39	116	0.00
54	T	methylmethacrylate	10.0000	10.8078	-8.08	114	0.00
55	T	14dioxane	500.0000	318.2495	36.35#	68	0.00
56	PT	Bromodiclrma	10.0000	10.3960	-3.96	113	0.00
57	T	2Nitropropane	100.0000	107.4410	-7.44	107	0.00
58	T	2CLEVE	50.0000	32.5817	34.84#	69	0.00
59	PT	c13dicloproe	10.0000	10.7370	-7.37	113	0.00
60	PT	4Meth2Pentan	100.0000	110.7394	-10.74	113	0.00
61	S	SURRd8Tolule	20.0000	21.4408	-7.20	110	0.00
62	PT	Toluene	10.0000	10.8611	-8.61	113	0.00
63	PT	t13Dicloprop	10.0000	11.0098	-10.10	113	0.00
64	T	ethylmethacrylate	20.0000	21.6956	-8.48	110	0.00
65	PT	112Triclotha	10.0000	10.9063	-9.06	115	0.00
66	PT	Tetrachlorte	10.0000	11.2805	-12.81	115	0.00
67	T	13Diclorpropa	10.0000	10.6797	-6.80	109	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	113	0.00
69	PT	2Hexanone	100.0000	98.7138	1.29	112	0.00
70	PT	Clorodibrmta	10.0000	8.9497	10.50	105	0.00
71	PT	12Dibrometha	10.0000	9.9995	0.01	115	0.00
72	PT	Chlorobenzen	10.0000	10.1026	-1.03	114	0.00
73	T	1Clhexane	10.0000	10.9443	-9.44	122	0.00
74	T	1112Tetclota	10.0000	9.7808	2.19	115	0.00
75	PT	Ethylbenzene	10.0000	10.6463	-6.46	114	0.00
76	PT	m p-Xylene	20.0000	20.9380	-4.69	115	0.00
77	PT	o-Xylene	10.0000	10.3235	-3.23	113	0.00
78	PT	Styrene	10.0000	10.1252	-1.25	112	0.00
79	PT	Bromoform	10.0000	8.3713	16.29	101	0.00
80	PT	Isopropylben	10.0000	10.5622	-5.62	112	0.00
81	T	cyclohexanone	200.0000	138.6043	30.70#	78	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	108	0.00
83	S	SURR4BrFBenz	20.0000	20.9118	-4.56	113	0.00
84	T	Bromobenzene	10.0000	9.8454	1.55	109	0.00
85	PT	1122Tetrclta	10.0000	10.7430	-7.43	114	0.00
86	T	123Triclproa	10.0000	10.1949	-1.95	109	0.00
87	T	14dichloro2butene	10.0000	8.7554	12.45	97	0.00
88	T	n-Propylbenz	10.0000	11.6317	-16.32	116	0.00
89	T	2chlorotolue	10.0000	11.0465	-10.47	116	0.00
90	T	4chlorotolue	10.0000	10.8655	-8.66	115	0.00
91	T	135Trimebenz	10.0000	10.9976	-9.98	112	0.00
92	T	tbutylbenzen	10.0000	11.2417	-12.42	115	0.00
93	T	124Trimetben	10.0000	10.9997	-10.00	113	0.00
94	T	sbutylbenzen	10.0000	11.8517	-18.52	116	0.00
95	PT	13Diclorbenz	10.0000	10.5998	-6.00	113	0.00
96	T	pIsopropylto	10.0000	11.6044	-16.04	116	0.00
97	PT	14dichlorobe	10.0000	10.5381	-5.38	112	0.00
98	PT	12dichlorobe	10.0000	10.3683	-3.68	112	0.00
99	T	nButylbenzen	10.0000	11.8686	-18.69	118	0.00
100	PT	12dibromo3cl	10.0000	9.6246	3.75	113	0.00
101	T	135Trichlorobenzene	10.0000	10.5283	-5.28	108	0.00
102	PT	124Trichlobe	10.0000	11.1684	-11.68	119	0.00
103	T	Hexachlorobu	10.0000	10.9206	-9.21	123	0.00
104	T	Naphthalene	10.0000	11.5690	-15.69	120	0.00
105	T	123Trichlben	10.0000	11.0673	-10.67	119	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W110320.M Tue Nov 10 09:22:56 2020

Quantitation Report

Data File : C:\Instarch\Data\NOV0620B\CCV-LCS1.D Vial: 2
Acq On : 6 Nov 2020 22:41 Operator: RLD-DGS
Sample : 176654,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 06 23:13:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:12:23 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1371231	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1311053	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	719376	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.79	113	446832	21.500	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 108 %			
45) SURR12DCAd4	7.21	102	95493	20.209	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
61) SURRd8Tolule	9.64	98	1515407	21.441	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 107 %			
83) SURR4BrFBenz	13.19	95	637932	20.912	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 105 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	143902	8.1051	ug/L	99
3) Chloromethan	2.06	50	141299	8.9016	ug/L	100
4) VinylChlorid	2.21	62	160985	9.5923	ug/L	99
5) Bromomethane	2.67	94	100928	11.6250	ug/L	98
6) Chloroethane	2.83	64	117058	9.7236	ug/L	100
7) Dichloroflmethane	3.14	67	305404	10.2634	ug/L	100
8) Trichlorofma	3.20	101	317883	10.2704	ug/L	94
9) Ethylether	3.65	59	109873	10.4529	ug/L	96
10) dichlorotfluoroethan	3.67	67	172558	11.0443	ug/L	98
11) propyleneoxide	3.72	58	209952	113.9952	ug/L	99
12) Acrolein	3.79	56	188038	45.6168	ug/L	99
13) 11dichlorthe	3.92	96	148672	10.4518	ug/L	92
14) Trichlorotfluoroeth	3.95	101	335486	22.4844	ug/L	99
15) Acetone	4.02	43	590314	88.8696	ug/L	100
16) Iodomethane	4.10	127	105131	23.1173	ug/L	92
17) Carbon Dislf	4.19	76	736589	21.3721	ug/L	99
18) allylchloride	4.41	41	378830	21.2913	ug/L	96
19) methylacetate	4.48	74	39204	9.5156	ug/L	91
20) Methylchlorid	4.57	84	240484	9.9284	ug/L	97
21) tbutylalcohol	4.79	59	1204469	477.9824	ug/L	99
22) Acrylonitrile	4.90	53	336091	54.0464	ug/L	99
23) t12dichlorte	4.94	96	167703	10.4447	ug/L	98
24) MtBE	4.97	73	417282	10.0746	ug/L	99
25) Hexane	5.32	57	497852	24.6757	ug/L	100
26) 11dichlorota	5.47	63	254532	10.2772	ug/L	96
27) Vinylacetate	5.56	43	2889036	118.1442	ug/L	99
28) chloroprene	5.60	53	420922	21.8047	ug/L	98
29) Diisopether	5.61	45	412395	10.3989	ug/L	100
30) ETBE	6.06	59	382118	10.2232	ug/L	99
31) 22dichloropr	6.21	77	247152	11.3300	ug/L	96
32) c12dichlorte	6.21	96	192810	10.1066	ug/L	98
33) 2Butanone	6.24	72	273112	101.2038	ug/L	98
34) propionitrile	6.29	54	298712	105.0104	ug/L	98
35) Ethylacetate	6.33	88	44754	50.2051	ug/L #	88
36) methacrylonitrile	6.48	67	163279	21.0688	ug/L	99
37) Bromochlorma	6.50	128	97148	10.8011	ug/L	96
38) Tetrahydofur	6.58	42	592367	103.4537	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0620B\CCV-LCS1.D Vial: 2
Acq On : 6 Nov 2020 22:41 Operator: RLD-DGS
Sample : 176654,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 06 23:13:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:12:23 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.60	83	330517	11.1023	ug/L	98
40)	111trichlota	6.84	97	273897	10.6857	ug/L	99
42)	Cyclohexane	6.91	56	241389	11.0522	ug/L	99
43)	Carbtetraclo	7.05	119	249143	11.0908	ug/L	99
44)	11dicloprope	7.04	110	95483	11.2580	ug/L	97
46)	Benzene	7.29	78	645399	10.8941	ug/L	98
47)	12dichlorota	7.30	62	225111	10.0385	ug/L	97
48)	TAME	7.46	73	396376	9.9839	ug/L	97
49)	trichloroete	8.10	95	189259	10.5964	ug/L	98
50)	methylcyclohexane	8.35	83	286394	10.9308	ug/L	95
51)	12dicloropra	8.36	63	166527	10.7631	ug/L	89
52)	23Dicl1propene	8.43	75	246249	10.3520	ug/L	95
53)	Dibromometha	8.51	93	131418	11.2391	ug/L	98
54)	methylmethacrylate	8.53	69	134496	10.8078	ug/L	96
55)	14dioxane	8.56	88	103705	318.2495	ug/L	97
56)	Bromodiclrma	8.72	83	238223	10.3960	ug/L	97
57)	2Nitropropane	9.00	43	541669	107.4410	ug/L	98
58)	2CLEVE	9.10	63	35995	32.5817	ug/L	97
59)	c13dicloproe	9.29	75	273449	10.7370	ug/L	99
60)	4Meth2Pentan	9.49	43	1848817	110.7394	ug/L	99
62)	Toluene	9.73	92	458725	10.8611	ug/L	98
63)	t13Dicloprop	10.01	75	246742	11.0098	ug/L	95
64)	ethylmethacrylate	10.14	69	456282	21.6956	ug/L	97
65)	112Triclotha	10.24	83	149815	10.9063	ug/L	98
66)	Tetrachlorte	10.46	166	238899	11.2805	ug/L	99
67)	13Diclorpropa	10.46	76	278011	10.6797	ug/L	96
69)	2Hexanone	10.58	43	1469615	98.7138	ug/L	99
70)	Clorodibrmta	10.77	129	196769	8.9497	ug/L	98
71)	12Dibrometha	10.92	107	214051	9.9995	ug/L	97
72)	Chlorobenzen	11.60	112	579476	10.1026	ug/L	99
73)	1Clhexane	11.57	91	276107	10.9443	ug/L	99
74)	1112Tetclota	11.71	131	196080	9.7808	ug/L	99
75)	Ethylbenzene	11.75	91	880475	10.6463	ug/L	100
76)	m p-Xylene	11.92	106	718328	20.9380	ug/L	98
77)	o-Xylene	12.47	106	359711	10.3235	ug/L	99
78)	Styrene	12.48	104	565861	10.1252	ug/L	99
79)	Bromoform	12.73	173	128863	8.3713	ug/L	99
80)	Isopropylben	12.99	105	905577	10.5622	ug/L	99
81)	cyclohexanone	13.10	55	141900	138.6043	ug/L	99
84)	Bromobenzene	13.41	156	252436	9.8454	ug/L	95
85)	1122Tetrclta	13.39	83	288618	10.7430	ug/L	97
86)	123Triclproa	13.45	75	309914	10.1949	ug/L	97
87)	14dichloro2butene	13.48	53	49789	8.7554	ug/L	96
88)	n-Propylbenz	13.58	91	1060995	11.6317	ug/L	99
89)	2chlorotolue	13.69	91	631334	11.0465	ug/L	99
90)	4chlorotolue	13.84	91	717859	10.8655	ug/L	100
91)	135Trimebenz	13.83	105	748945	10.9976	ug/L	97
92)	tbutylbenzen	14.30	119	703048	11.2417	ug/L	99
93)	124Trimetben	14.37	105	749467	10.9997	ug/L	99
94)	sbutylbenzen	14.62	105	997761	11.8517	ug/L	99
95)	13Diclorbenz	14.77	146	473624	10.5998	ug/L	100
96)	pIsopropylto	14.84	119	848311	11.6044	ug/L	98
97)	14dichlorobe	14.90	146	476385	10.5381	ug/L	99
98)	12dichlorobe	15.44	146	440397	10.3683	ug/L	98
99)	nButylbenzen	15.43	91	716610	11.8686	ug/L	98
100)	12dibromo3cl	16.55	157	69912	9.6246	ug/L	94
101)	135Trichlorobenzene	16.86	180	323135	10.5283	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0620B\CCV-LCS1.D Vial: 2
Acq On : 6 Nov 2020 22:41 Operator: RLD-DGS
Sample : 176654,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 06 23:13:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:12:23 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.67	180	292021	11.1684	ug/L	98
103) Hexachlorobu	17.91	225	143059	10.9206	ug/L	95
104) Naphthalene	17.98	128	769323	11.5690	ug/L	99
105) 123Trichlben	18.29	180	270258	11.0673	ug/L	99

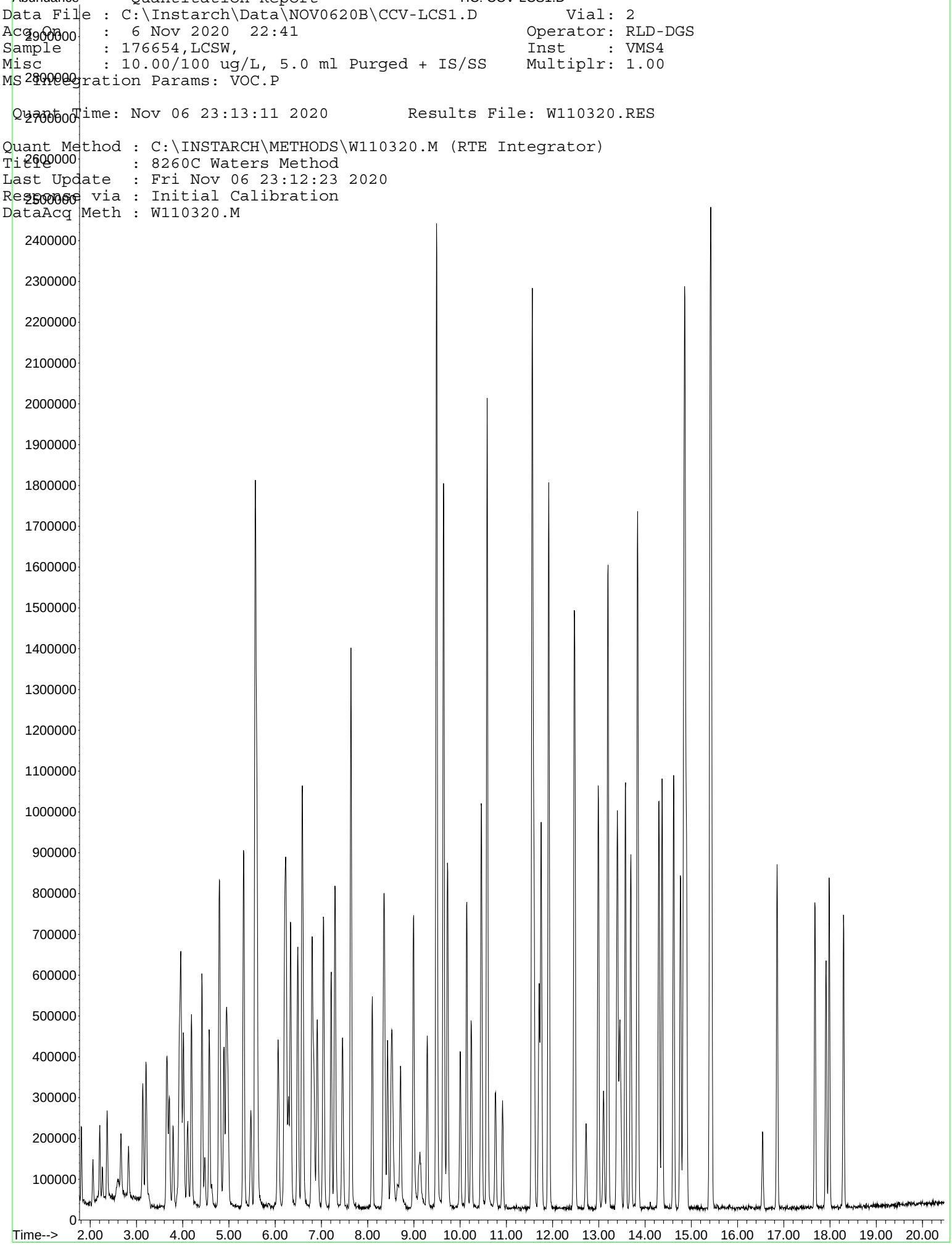
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCV-LCS1.D

Data File : C:\Instarch\Data\NOV0620B\CCV-LCS1.D Vial: 2
Acq On : 6 Nov 2020 22:41 Operator: RLD-DGS
Sample : 176654,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 06 23:13:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:12:23 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0620B\CCVF-LCSD1.D Vial: 25
Acq On : 7 Nov 2020 9:39 Operator: RLD-DGS
Sample : 176555,LCSDW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 07 09:59:46 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	101	0.00
2	PT	Dichlorodi	0.2590	0.2077	19.81	78	0.00
3	PT	Chloromethan	0.2315	0.1754	24.23	79	0.00
4	PT	VinylChlorid	0.2448	0.2129	13.03	85	0.00
5	PT	Bromomethane	0.1570	0.1505	4.14	107	0.00
6	PT	Chloroethane	0.1756	0.1694	3.53	96	0.00
7	T	Dichloroflmethane	0.4340	0.4082	5.94	94	0.00
8	PT	Trichlorofma	0.4514	0.4487	0.60	93	0.00
9	T	Ethylether	0.1533	0.1239	19.18	84	0.00
10	T	dichlorotfluoroethan	0.2279	0.2183	4.21	91	0.00
11	T	propyleneoxide	0.0269	0.0183#	31.97	77	0.00
12	T	Acrolein	0.0601	0.0493	17.97	87	0.00
13	PT	11dichlorthe	0.2075	0.1979	4.63	92	0.00
14	PT	Trichlorotfluoroeth	0.2176	0.2208	-1.47	96	0.00
15	PT	Acetone	0.1056	0.0889#	15.81	94	0.00
16	T	Iodomethane	0.0623	0.0816	-30.98	159	0.00
17	PT	Carbon Dislf	0.5027	0.5087	-1.19	100	0.00
18	T	allylchloride	0.2595	0.2531	2.47	100	0.00
19	PT	methylacetate	0.0601	0.0556#	7.49	103	0.00
20	PT	Methylchlorid	0.3533	0.3410	3.48	104	0.00
21	T	tbutylalcohol	0.0368	0.0376	-2.17	103	0.00
22	T	Acrylonitrile	0.0907	0.0960	-5.84	107	0.00
23	PT	t12dichlorte	0.2342	0.2343	-0.04	108	0.00
24	PT	MtBE	0.6041	0.6014	0.45	104	0.00
25	T	Hexane	0.2943	0.2978	-1.19	94	0.00
26	PT	11dichlorota	0.3612	0.3710	-2.71	106	0.00
27	T	Vinylacetate	0.3567	0.2181	38.86	59	0.00
28	T	chloroprene	0.2816	0.3143	-11.61	107	0.00
29	T	Diisopether	0.5784	0.5937	-2.65	106	0.00
30	T	ETBE	0.5452	0.5339	2.07	101	0.00
31	T	22dichloropr	0.3182	0.2821	11.35	89	0.00
32	PT	c12dichlorte	0.2783	0.2747	1.29	106	0.00
33	PT	2Butanone	0.0394	0.0393#	0.25	104	0.00
34	T	propionitrile	0.0415	0.0439	-5.78	110	0.00
35	T	Ethylacetate	0.0130	0.0130#	0.00	102	0.00
36	T	methacrylonitrile	0.1130	0.1168	-3.36	109	0.00
37	T	Bromochlorma	0.1312	0.1384	-5.49	104	0.00
38	T	Tetrahydofur	0.0835	0.0872	-4.43	108	0.00
39	PT	Chloroform	0.4342	0.4591	-5.73	109	0.00
40	PT	111trichlota	0.3739	0.4087	-9.31	110	0.00
41	S	SURRDibrflma	0.3031	0.3125	-3.10	105	0.00
42	PT	Cyclohexane	0.3186	0.3411	-7.06	103	0.00
43	PT	Carbtetraclo	0.3276	0.3479	-6.20	104	0.00
44	T	11dicloprope	0.1237	0.1271	-2.75	102	0.00
45	S	SURR12DCAd4	0.0689	0.0697	-1.16	104	0.00
46	PT	Benzene	0.8641	0.9112	-5.45	107	0.00
47	PT	12dichlorota	0.3271	0.3476	-6.27	113	0.00
48	T	TAME	0.5791	0.5738	0.92	102	0.00

49	PT	trichloroete	0.2605	0.2914	-11.86	110	0.00
50	PT	methylcyclohexane	0.3821	0.4244	-11.07	107	0.00
51	PT	12dicloropra	0.2257	0.2519	-11.61	114	0.00
52	T	23Dicl1propene	0.3470	0.3481	-0.32	102	0.00
53	T	Dibromometha	0.1705	0.1818	-6.63	109	0.00
54	T	methylmethacrylate	0.1815	0.1909	-5.18	109	0.00
55	T	14dioxane	0.0048	0.0049#	-2.08	107	0.00
56	PT	Bromodiclrma	0.3342	0.3510	-5.03	112	0.00
57	T	2Nitropropane	0.0735	0.0722	1.77	97	0.00
58	T	2CLEVE	0.0195	0.0031#	84.10#	20#	0.00
59	PT	c13dicloproe	0.3715	0.3686	0.78	103	0.00
60	PT	4Meth2Pentan	0.2435	0.2654	-8.99	110	0.00
61	S	SURRd8Tolule	1.0309	1.0636	-3.17	105	0.00
62	PT	Toluene	0.6160	0.6641	-7.81	111	0.00
63	PT	t13Dicloprop	0.3269	0.3280	-0.34	102	0.00
64	T	ethylmethacrylate	0.3067	0.3294	-7.40	107	0.00
65	PT	112Triclotha	0.2004	0.2197	-9.63	115	0.00
66	PT	Tetrachlorte	0.3089	0.3114	-0.81	101	0.00
67	T	13Diclorpropa	0.3797	0.3951	-4.06	105	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	107	0.00
69	PT	2Hexanone	0.2271	0.2399	-5.64	113	0.00
70	PT	Clorodibrmta	0.3354	0.3092	7.81	103	0.00
71	PT	12Dibrometha	0.3265	0.3272	-0.21	109	0.00
72	PT	Chlorobenzen	0.8750	0.8976	-2.58	110	0.00
73	T	1Clhexane	0.3849	0.3771	2.03	103	0.00
74	T	1112Tetclota	0.3058	0.3017	1.34	110	0.00
75	PT	Ethylbenzene	1.2616	1.3490	-6.93	109	0.00
76	PT	m p-Xylene	0.5234	0.5336	-1.95	106	0.00
77	PT	o-Xylene	0.5315	0.5211	1.96	102	0.00
78	PT	Styrene	0.8525	0.8503	0.26	104	0.00
79	PT	Bromoform	0.2348	0.1984	15.50	96	0.00
80	PT	Isopropylben	1.3079	1.3813	-5.61	106	0.00
81	T	cyclohexanone	0.0156	0.0148#	5.13	101	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	105	0.00
83	S	SURR4BrFBenz	0.8481	0.8397	0.99	104	0.00
84	T	Bromobenzene	0.7128	0.6892	3.31	103	0.00
85	PT	1122Tetrclta	0.7469	0.7329	1.87	101	0.00
86	T	123Triclproa	0.8451	0.8797	-4.09	108	0.00
87	T	14dichloro2butene	0.1581	0.1345	14.93	91	0.00
88	T	n-Propylbenz	2.5360	2.7473	-8.33	105	0.00
89	T	2chlorotolue	1.5889	1.7030	-7.18	109	0.00
90	T	4chlorotolue	1.8368	1.9209	-4.58	107	0.00
91	T	135Trimebenz	1.8933	1.9855	-4.87	104	0.00
92	T	tbutylbenzen	1.7387	1.8239	-4.90	104	0.00
93	T	124Trimetben	1.8943	1.9724	-4.12	104	0.00
94	T	sbutylbenzen	2.3406	2.6151	-11.73	106	0.00
95	PT	13Diclorbenz	1.2423	1.2466	-0.35	103	0.00
96	T	pIsopropylto	2.0324	2.2089	-8.68	105	0.00
97	PT	14dichlorobe	1.2568	1.2239	2.62	100	0.00
98	PT	12dichlorobe	1.1809	1.1615	1.64	103	0.00
99	T	nButylbenzen	1.6786	1.8303	-9.04	105	0.00
100	PT	12dibromo3cl	0.2019	0.1682	16.69	95	0.00
101	T	135Trichlorobenzene	0.8533	0.7700	9.76	90	0.00
102	PT	124Trichlobe	0.7269	0.6284	13.55	89	0.00
103	T	Hexachlorobu	0.3642	0.2882	20.87	86	0.00
104	T	Naphthalene	1.8488	1.9069	-3.14	104	0.00
105	T	123Trichlben	0.6789	0.6264	7.73	96	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W110320.M Tue Nov 10 09:26:55 2020

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0620B\CCVF-LCSD1.D Vial: 25
Acq On : 7 Nov 2020 9:39 Operator: RLD-DGS
Sample : 176555,LCSDW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 07 09:59:46 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	101	0.00
2	PT	Dichlorodi	10.0000	8.0196	19.80	78	0.00
3	PT	Chloromethan	10.0000	7.5765	24.23	79	0.00
4	PT	VinylChlorid	10.0000	8.6963	13.04	85	0.00
5	PT	Bromomethane	10.0000	11.9497	-19.50	107	0.00
6	PT	Chloroethane	10.0000	9.6498	3.50	96	0.00
7	T	Dichloroflmethane	10.0000	9.4054	5.95	94	0.00
8	PT	Trichlorofma	10.0000	9.9394	0.61	93	0.00
9	T	Ethylether	10.0000	8.0806	19.19	84	0.00
10	T	dichlorotfluoroethan	10.0000	9.5796	4.20	91	0.00
11	T	propyleneoxide	100.0000	68.0082	31.99	77	0.00
12	T	Acrolein	50.0000	40.9869	18.03	87	0.00
13	PT	11dichlorthe	10.0000	9.5380	4.62	92	0.00
14	PT	Trichlorotfluoroeth	20.0000	20.2905	-1.45	96	0.00
15	PT	Acetone	100.0000	91.9715	8.03	94	0.00
16	T	Iodomethane	20.0000	24.2310	-21.16	159	0.00
17	PT	Carbon Dislf	20.0000	20.2412	-1.21	100	0.00
18	T	allylchloride	20.0000	19.5026	2.49	100	0.00
19	PT	methylacetate	10.0000	9.2552	7.45	103	0.00
20	PT	Methylchlorid	10.0000	9.6531	3.47	104	0.00
21	T	tbutylalcohol	500.0000	511.3045	-2.26	103	0.00
22	T	Acrylonitrile	50.0000	52.9461	-5.89	107	0.00
23	PT	t12dichlorte	10.0000	10.0052	-0.05	108	0.00
24	PT	MtBE	10.0000	9.9550	0.45	104	0.00
25	T	Hexane	20.0000	20.2365	-1.18	94	0.00
26	PT	11dichlorota	10.0000	10.2712	-2.71	106	0.00
27	T	Vinylacetate	100.0000	61.1399	38.86	59	0.00
28	T	chloroprene	20.0000	22.3233	-11.62	107	0.00
29	T	Diisopether	10.0000	10.2642	-2.64	106	0.00
30	T	ETBE	10.0000	9.7940	2.06	101	0.00
31	T	22dichloropr	10.0000	8.8675	11.33	89	0.00
32	PT	c12dichlorte	10.0000	9.8719	1.28	106	0.00
33	PT	2Butanone	100.0000	99.9491	0.05	104	0.00
34	T	propionitrile	100.0000	105.7870	-5.79	110	0.00
35	T	Ethylacetate	50.0000	49.8260	0.35	102	0.00
36	T	methacrylonitrile	20.0000	20.6727	-3.36	109	0.00
37	T	Bromochlorma	10.0000	10.5483	-5.48	104	0.00
38	T	Tetrahydofur	100.0000	104.4397	-4.44	108	0.00
39	PT	Chloroform	10.0000	10.5732	-5.73	109	0.00
40	PT	111trichlota	10.0000	10.9312	-9.31	110	0.00
41	S	SURRDibrflma	20.0000	20.6195	-3.10	105	0.00
42	PT	Cyclohexane	10.0000	10.7083	-7.08	103	0.00
43	PT	Carbtetraclo	10.0000	10.6187	-6.19	104	0.00
44	T	11dicloprope	10.0000	10.2733	-2.73	102	0.00
45	S	SURR12DCAd4	20.0000	20.2253	-1.13	104	0.00
46	PT	Benzene	10.0000	10.5456	-5.46	107	0.00
47	PT	12dichlorota	10.0000	10.6280	-6.28	113	0.00
48	T	TAME	10.0000	9.9097	0.90	102	0.00

49	PT	trichloroete	10.0000	11.1852	-11.85	110	0.00
50	PT	methylcyclohexane	10.0000	11.1045	-11.04	107	0.00
51	PT	12dicloropra	10.0000	11.1626	-11.63	114	0.00
52	T	23Dicl1propene	10.0000	10.0324	-0.32	102	0.00
53	T	Dibromometha	10.0000	10.6624	-6.62	109	0.00
54	T	methylmethacrylate	10.0000	10.5168	-5.17	109	0.00
55	T	14dioxane	500.0000	510.5241	-2.10	107	0.00
56	PT	Bromodiclrma	10.0000	10.5022	-5.02	112	0.00
57	T	2Nitropropane	100.0000	98.1537	1.85	97	0.00
58	T	2CLEVE	50.0000	13.4493	73.10#	20	0.00
59	PT	c13dicloproe	10.0000	9.9219	0.78	103	0.00
60	PT	4Meth2Pentan	100.0000	109.0026	-9.00	110	0.00
61	S	SURRd8Tolule	20.0000	20.6341	-3.17	105	0.00
62	PT	Toluene	10.0000	10.7808	-7.81	111	0.00
63	PT	t13Dicloprop	10.0000	10.0330	-0.33	102	0.00
64	T	ethylmethacrylate	20.0000	21.4768	-7.38	107	0.00
65	PT	112Triclotha	10.0000	10.9666	-9.67	115	0.00
66	PT	Tetrachlorte	10.0000	10.0816	-0.82	101	0.00
67	T	13Diclorpropa	10.0000	10.4048	-4.05	105	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	107	0.00
69	PT	2Hexanone	100.0000	105.6306	-5.63	113	0.00
70	PT	Clorodibrmta	10.0000	9.2204	7.80	103	0.00
71	PT	12Dibrometha	10.0000	10.0196	-0.20	109	0.00
72	PT	Chlorobenzen	10.0000	10.2581	-2.58	110	0.00
73	T	1Clhexane	10.0000	9.7975	2.03	103	0.00
74	T	1112Tetclota	10.0000	9.8636	1.36	110	0.00
75	PT	Ethylbenzene	10.0000	10.6926	-6.93	109	0.00
76	PT	m p-Xylene	20.0000	20.3897	-1.95	106	0.00
77	PT	o-Xylene	10.0000	9.8037	1.96	102	0.00
78	PT	Styrene	10.0000	9.9740	0.26	104	0.00
79	PT	Bromoform	10.0000	8.4477	15.52	96	0.00
80	PT	Isopropylben	10.0000	10.5611	-5.61	106	0.00
81	T	cyclohexanone	200.0000	189.1774	5.41	101	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	105	0.00
83	S	SURR4BrFBenz	20.0000	19.8012	0.99	104	0.00
84	T	Bromobenzene	10.0000	9.6684	3.32	103	0.00
85	PT	1122Tetrclta	10.0000	9.8123	1.88	101	0.00
86	T	123Triclproa	10.0000	10.4086	-4.09	108	0.00
87	T	14dichloro2butene	10.0000	8.5065	14.93	91	0.00
88	T	n-Propylbenz	10.0000	10.8332	-8.33	105	0.00
89	T	2chlorotolue	10.0000	10.7176	-7.18	109	0.00
90	T	4chlorotolue	10.0000	10.4578	-4.58	107	0.00
91	T	135Trimebenz	10.0000	10.4870	-4.87	104	0.00
92	T	tbutylbenzen	10.0000	10.4898	-4.90	104	0.00
93	T	124Trimetben	10.0000	10.4121	-4.12	104	0.00
94	T	sbutylbenzen	10.0000	11.1731	-11.73	106	0.00
95	PT	13Diclorbenz	10.0000	10.0353	-0.35	103	0.00
96	T	pIsopropylto	10.0000	10.8684	-8.68	105	0.00
97	PT	14dichlorobe	10.0000	9.7379	2.62	100	0.00
98	PT	12dichlorobe	10.0000	9.8357	1.64	103	0.00
99	T	nButylbenzen	10.0000	10.9034	-9.03	105	0.00
100	PT	12dibromo3cl	10.0000	8.3299	16.70	95	0.00
101	T	135Trichlorobenzene	10.0000	9.0244	9.76	90	0.00
102	PT	124Trichlobe	10.0000	8.6448	13.55	89	0.00
103	T	Hexachlorobu	10.0000	7.9137	20.86	86	0.00
104	T	Naphthalene	10.0000	10.3141	-3.14	104	0.00
105	T	123Trichlben	10.0000	9.2262	7.74	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W110320.M Tue Nov 10 09:27:36 2020

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\CCVF-LCSD1.D Vial: 25
Acq On : 7 Nov 2020 9:39 Operator: RLD-DGS
Sample : 176555,LCSDW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 09:59:46 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1355391	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1239348	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	697357	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.79	113	423574	20.619 ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 103 %		
45) SURR12DCAd4	7.21	102	94467	20.225 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %		
61) SURRd8Tolule	9.64	98	1441538	20.634 ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 103 %		
83) SURR4BrFBenz	13.20	95	585564	19.801 ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 99 %		
Target Compounds					Qvalue
2) Dichlorodi	1.81	85	140739	8.0196 ug/L	98
3) Chloromethan	2.07	50	118876	7.5765 ug/L	99
4) VinylChlorid	2.21	62	144261	8.6963 ug/L	98
5) Bromomethane	2.66	94	101989	11.9497 ug/L	97
6) Chloroethane	2.82	64	114827	9.6498 ug/L	98
7) Dichloroflmethane	3.14	67	276640	9.4054 ug/L	96
8) Trichlorofma	3.21	101	304084	9.9394 ug/L	98
9) Ethylether	3.65	59	83956	8.0806 ug/L	91
10) dichlorotfluoroethan	3.67	67	147943	9.5796 ug/L	95
11) propyleneoxide	3.71	58	123808	68.0082 ug/L	94
12) Acrolein	3.79	56	167001	40.9869 ug/L	92
13) 11dichlorthe	3.92	96	134106	9.5380 ug/L	90
14) Trichlorotfluoroeth	3.96	101	299254	20.2905 ug/L	96
15) Acetone	4.02	43	602159	91.9715 ug/L	99
16) Iodomethane	4.10	127	110564	24.2310 ug/L #	89
17) Carbon Dislf	4.19	76	689552	20.2412 ug/L	98
18) allylchloride	4.42	41	342995	19.5026 ug/L	97
19) methylacetate	4.48	74	37691	9.2552 ug/L	95
20) Methylchlorid	4.57	84	231115	9.6531 ug/L	98
21) tbutylalcohol	4.80	59	1273554	511.3045 ug/L	99
22) Acrylonitrile	4.90	53	325445	52.9461 ug/L	94
23) t12dichlorte	4.94	96	158791	10.0052 ug/L	99
24) MtBE	4.97	73	407562	9.9550 ug/L	99
25) Hexane	5.32	57	403572	20.2365 ug/L	99
26) 11dichlorota	5.47	63	251445	10.2712 ug/L	99
27) Vinylacetate	5.57	43	1477811	61.1399 ug/L	95
28) chloroprene	5.59	53	425956	22.3233 ug/L	96
29) Diisopether	5.61	45	402353	10.2642 ug/L	96
30) ETBE	6.06	59	361846	9.7940 ug/L	99
31) 22dichloropr	6.20	77	191201	8.8675 ug/L	98
32) c12dichlorte	6.21	96	186156	9.8719 ug/L	97
33) 2Butanone	6.23	72	266610	99.9491 ug/L	98
34) propionitrile	6.29	54	297445	105.7870 ug/L	97
35) Ethylacetate	6.34	88	43903	49.8260 ug/L	92
36) methacrylonitrile	6.49	67	158359	20.6727 ug/L	95
37) Bromochlorma	6.50	128	93779	10.5483 ug/L	94
38) Tetrahydofur	6.59	42	591105	104.4397 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\CCVF-LCSD1.D Vial: 25
Acq On : 7 Nov 2020 9:39 Operator: RLD-DGS
Sample : 176555,LCSDW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 09:59:46 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	311132	10.5732 ug/L	98
40)	111trichlota	6.84	97	276954	10.9312 ug/L	96
42)	Cyclohexane	6.91	56	231176	10.7083 ug/L	99
43)	Carbtetraclo	7.05	119	235783	10.6187 ug/L	99
44)	11dicloprope	7.04	110	86125	10.2733 ug/L	96
46)	Benzene	7.29	78	617534	10.5456 ug/L	96
47)	12dichlorota	7.30	62	235578	10.6280 ug/L	99
48)	TAME	7.46	73	388885	9.9097 ug/L	96
49)	trichloroete	8.10	95	197467	11.1852 ug/L	98
50)	methylcyclohexane	8.35	83	287585	11.1045 ug/L	97
51)	12dicloropra	8.37	63	170713	11.1626 ug/L	91
52)	23Dicl1propene	8.43	75	235889	10.0324 ug/L	98
53)	Dibromometha	8.52	93	123234	10.6624 ug/L	95
54)	methylmethacrylate	8.53	69	129363	10.5168 ug/L	94
55)	14dioxane	8.56	88	164438	510.5241 ug/L	96
56)	Bromodiclrma	8.71	83	237878	10.5022 ug/L	93
57)	2Nitropropane	9.00	43	489130	98.1537 ug/L	98
58)	2CLEVE	9.11	63	10520	13.4493 ug/L	91
59)	c13dicloproe	9.29	75	249770	9.9219 ug/L	100
60)	4Meth2Pentan	9.49	43	1798799	109.0026 ug/L	99
62)	Toluene	9.73	92	450075	10.7808 ug/L	99
63)	t13Dicloprop	10.01	75	222254	10.0330 ug/L	95
64)	ethylmethacrylate	10.15	69	446464	21.4768 ug/L	98
65)	112Triclotha	10.24	83	148902	10.9666 ug/L	94
66)	Tetrachlorte	10.46	166	211043	10.0816 ug/L	98
67)	13Diclorpropa	10.46	76	267725	10.4048 ug/L	96
69)	2Hexanone	10.58	43	1486581	105.6306 ug/L	99
70)	Clorodibrmta	10.77	129	191633	9.2204 ug/L	100
71)	12Dibrometha	10.92	107	202751	10.0196 ug/L	100
72)	Chlorobenzen	11.60	112	556215	10.2581 ug/L	99
73)	1Clhexane	11.57	91	233657	9.7975 ug/L	96
74)	1112Tetclota	11.70	131	186925	9.8636 ug/L	96
75)	Ethylbenzene	11.75	91	835935	10.6926 ug/L	97
76)	m p-Xylene	11.92	106	661260	20.3897 ug/L	100
77)	o-Xylene	12.47	106	322916	9.8037 ug/L	91
78)	Styrene	12.48	104	526923	9.9740 ug/L	96
79)	Bromoform	12.72	173	122927	8.4477 ug/L	96
80)	Isopropylben	12.99	105	855962	10.5611 ug/L	100
81)	cyclohexanone	13.10	55	183083	189.1774 ug/L	94
84)	Bromobenzene	13.41	156	240311	9.6684 ug/L	94
85)	1122Tetrclta	13.39	83	255545	9.8123 ug/L	99
86)	123Triclproa	13.45	75	306724	10.4086 ug/L	99
87)	14dichloro2butene	13.47	53	46893	8.5065 ug/L	100
88)	n-Propylbenz	13.58	91	957913	10.8332 ug/L	99
89)	2chlorotolue	13.69	91	593790	10.7176 ug/L	96
90)	4chlorotolue	13.84	91	669772	10.4578 ug/L	100
91)	135Trimebenz	13.83	105	692312	10.4870 ug/L	100
92)	tbutylbenzen	14.30	119	635945	10.4898 ug/L	98
93)	124Trimetben	14.37	105	687718	10.4121 ug/L	99
94)	sbutylbenzen	14.62	105	911839	11.1731 ug/L	98
95)	13Diclorbenz	14.77	146	434678	10.0353 ug/L	100
96)	pIsopropylto	14.84	119	770188	10.8684 ug/L	99
97)	14dichlorobe	14.90	146	426738	9.7379 ug/L	98
98)	12dichlorobe	15.43	146	404985	9.8357 ug/L	97
99)	nButylbenzen	15.43	91	638180	10.9034 ug/L	98
100)	12dibromo3cl	16.55	157	58655	8.3299 ug/L	94
101)	135Trichlorobenzene	16.86	180	268498	9.0244 ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV0620B\CCVF-LCSD1.D Vial: 25
Acq On : 7 Nov 2020 9:39 Operator: RLD-DGS
Sample : 176555,LCSDW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 09:59:46 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

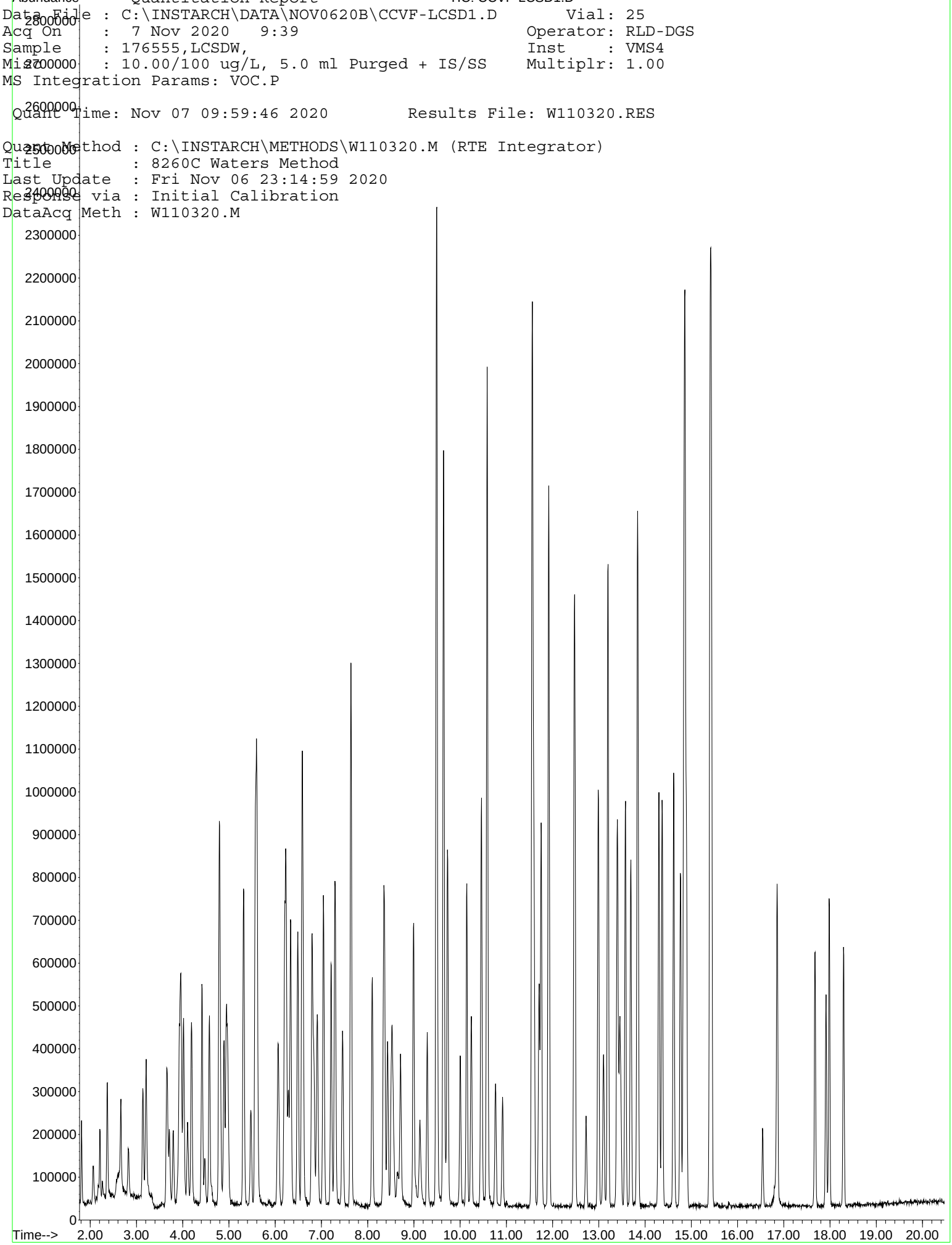
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.68	180	219116	8.6448	ug/L	99
103)	Hexachlorobu	17.91	225	100495	7.9137	ug/L	96
104)	Naphthalene	17.98	128	664881	10.3141	ug/L	99
105)	123Trichlben	18.30	180	218402	9.2262	ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0620B\CCVF-LCSD1.D Vial: 25
Acq On : 7 Nov 2020 9:39 Operator: RLD-DGS
Sample : 176555,LCSDW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 09:59:46 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



BFB

Data File : C:\Instarch\Data\NOV0920\BFB1.D Vial: 1
Acq On : 9 Nov 2020 7:32 Operator: RLD-DGS
Sample : 176659,BFB, Inst : VMS4
Misc : 50 ng Injection Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110320.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.605 to 4.621 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.7	7610	PASS
75	95	30	60	49.7	22608	PASS
95	95	100	100	100.0	45446	PASS
96	95	5	9	6.2	2817	PASS
173	174	0.00	2	0.9	396	PASS
174	95	50	100	97.2	44184	PASS
175	174	5	9	8.3	3682	PASS
176	174	95	101	96.1	42453	PASS
177	176	5	9	7.2	3072	PASS

W110320.M Thu Nov 12 07:40:44 2020

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS1.D Vial: 2
Acq On : 9 Nov 2020 7:48 Operator: RLD-DGS
Sample : 176659,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 09 08:20:26 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	57	0.00
2	PT	Dichlorodi	0.2590	0.2314	10.66	49#	0.00
3	PT	Chloromethan	0.2315	0.1973	14.77	50	0.00
4	PT	VinylChlorid	0.2448	0.2344	4.25	53	0.00
5	PT	Bromomethane	0.1570	0.1589	-1.21	64	0.00
6	PT	Chloroethane	0.1756	0.1766	-0.57	57	0.00
7	T	Dichloroflmethane	0.4340	0.4519	-4.12	59	0.00
8	PT	Trichlorofma	0.4514	0.5035	-11.54	59	0.00
9	T	Ethylether	0.1533	0.1446	5.68	55	0.00
10	T	dichlorotfluoroethan	0.2279	0.2556	-12.15	60	0.00
11	T	propyleneoxide	0.0269	0.0226#	15.99	53	0.00
12	T	Acrolein	0.0601	0.0621	-3.33	62	0.00
13	PT	11dichlorthe	0.2075	0.2025	2.41	53	0.00
14	PT	Trichlorotfluoroeth	0.2176	0.2390	-9.83	59	0.00
15	PT	Acetone	0.1056	0.0992#	6.06	59	0.00
16	T	Iodomethane	0.0623	0.0796	-27.77#	88	0.00
17	PT	Carbon Dislf	0.5027	0.5371	-6.84	60	0.00
18	T	allylchloride	0.2595	0.2694	-3.82	60	0.00
19	PT	methylacetate	0.0601	0.0534#	11.15	56	0.00
20	PT	Methylchlorid	0.3533	0.3487	1.30	60	0.00
21	T	tbutylalcohol	0.0368	0.0427	-16.03	66	0.00
22	T	Acrylonitrile	0.0907	0.0987	-8.82	62	0.00
23	PT	t12dichlorte	0.2342	0.2280	2.65	59	0.00
24	PT	MtBE	0.6041	0.6189	-2.45	60	0.00
25	T	Hexane	0.2943	0.3073	-4.42	55	0.00
26	PT	11dichlorota	0.3612	0.3802	-5.26	61	0.00
27	T	Vinylacetate	0.3567	0.3801	-6.56	58	0.00
28	T	chloroprene	0.2816	0.3187	-13.17	62	0.00
29	T	Diisopether	0.5784	0.5923	-2.40	60	0.00
30	T	ETBE	0.5452	0.5663	-3.87	61	0.00
31	T	22dichloropr	0.3182	0.3373	-6.00	60	0.01
32	PT	c12dichlorte	0.2783	0.2669	4.10	58	0.00
33	PT	2Butanone	0.0394	0.0398#	-1.02	59	0.00
34	T	propionitrile	0.0415	0.0446	-7.47	63	0.00
35	T	Ethylacetate	0.0130	0.0118#	9.23	52	0.00
36	T	methacrylonitrile	0.1130	0.1129	0.09	59	0.00
37	T	Bromochlorma	0.1312	0.1246	5.03	53	0.00
38	T	Tetrahydofur	0.0835	0.0895	-7.19	62	0.00
39	PT	Chloroform	0.4342	0.4683	-7.85	63	0.00
40	PT	111trichlota	0.3739	0.3973	-6.26	60	0.00
41	S	SURRDibrflma	0.3031	0.3087	-1.85	59	0.00
42	PT	Cyclohexane	0.3186	0.3369	-5.74	58	0.00
43	PT	Carbtetraclo	0.3276	0.3370	-2.87	57	0.00
44	T	11dicloprope	0.1237	0.1145	7.44	52	0.00
45	S	SURR12DCAd4	0.0689	0.0642	6.82	54	0.00
46	PT	Benzene	0.8641	0.8965	-3.75	59	0.00
47	PT	12dichlorota	0.3271	0.3510	-7.31	64	0.00
48	T	TAME	0.5791	0.5656	2.33	57	0.00

49	PT	trichloroete	0.2605	0.2639	-1.31	56	0.00
50	PT	methylcyclohexane	0.3821	0.3946	-3.27	56	0.00
51	PT	12dicloropra	0.2257	0.2261	-0.18	58	0.00
52	T	23Dicl1propene	0.3470	0.3614	-4.15	60	0.00
53	T	Dibromometha	0.1705	0.1817	-6.57	61	0.00
54	T	methylmethacrylate	0.1815	0.1880	-3.58	61	0.00
55	T	14dioxane	0.0048	0.0049#	-2.08	61	0.00
56	PT	Bromodiclrma	0.3342	0.3776	-12.99	68	0.00
57	T	2Nitropropane	0.0735	0.0772	-5.03	58	0.00
58	T	2CLEVE	0.0195	0.0045#	76.92#	16#	0.00
59	PT	c13dicloproe	0.3715	0.3947	-6.24	62	0.00
60	PT	4Meth2Pentan	0.2435	0.2511	-3.12	59	0.00
61	S	SURRd8Tolule	1.0309	1.0552	-2.36	59	0.00
62	PT	Toluene	0.6160	0.6087	1.19	57	0.00
63	PT	t13Dicloprop	0.3269	0.3544	-8.41	62	0.00
64	T	ethylmethacrylate	0.3067	0.3288	-7.21	60	0.00
65	PT	112Triclotha	0.2004	0.2097	-4.64	62	0.00
66	PT	Tetrachlorte	0.3089	0.2874	6.96	53	0.00
67	T	13Diclorpropa	0.3797	0.3941	-3.79	59	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	58	0.00
69	PT	2Hexanone	0.2271	0.2393	-5.37	61	0.00
70	PT	Clorodibrmta	0.3354	0.3215	4.14	58	0.00
71	PT	12Dibrometha	0.3265	0.3186	2.42	57	0.00
72	PT	Chlorobenzen	0.8750	0.8840	-1.03	58	0.00
73	T	1Clhexane	0.3849	0.3888	-1.01	57	0.00
74	T	1112Tetclota	0.3058	0.2865	6.31	56	0.00
75	PT	Ethylbenzene	1.2616	1.3772	-9.16	60	0.00
76	PT	m p-Xylene	0.5234	0.5423	-3.61	58	0.00
77	PT	o-Xylene	0.5315	0.5368	-1.00	57	0.00
78	PT	Styrene	0.8525	0.8829	-3.57	59	0.00
79	PT	Bromoform	0.2348	0.2046	12.86	54	0.00
80	PT	Isopropylben	1.3079	1.3947	-6.64	58	0.00
81	T	cyclohexanone	0.0156	0.0162#	-3.85	60	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	53	0.00
83	S	SURR4BrFBenz	0.8481	0.9077	-7.03	57	0.00
84	T	Bromobenzene	0.7128	0.6739	5.46	51	0.00
85	PT	1122Tetrclta	0.7469	0.8897	-19.12	62	0.00
86	T	123Triclproa	0.8451	0.9970	-17.97	62	0.00
87	T	14dichloro2butene	0.1581	0.1855	-17.33	64	0.00
88	T	n-Propylbenz	2.5360	2.8715	-13.23	56	0.00
89	T	2chlorotolue	1.5889	1.8145	-14.20	59	0.00
90	T	4chlorotolue	1.8368	2.1079	-14.76	60	0.00
91	T	135Trimebenz	1.8933	2.1336	-12.69	56	0.00
92	T	tbutylbenzen	1.7387	1.9067	-9.66	55	0.00
93	T	124Trimetben	1.8943	2.1661	-14.35	58	0.00
94	T	sbutylbenzen	2.3406	2.6220	-12.02	54	0.00
95	PT	13Diclorbenz	1.2423	1.2785	-2.91	54	0.00
96	T	pIsopropylto	2.0324	2.2837	-12.36	55	0.00
97	PT	14dichlorobe	1.2568	1.2777	-1.66	53	0.00
98	PT	12dichlorobe	1.1809	1.2418	-5.16	56	0.00
99	T	nButylbenzen	1.6786	1.8911	-12.66	55	0.00
100	PT	12dibromo3cl	0.2019	0.1820	9.86	52	0.00
101	T	135Trichlorobenzene	0.8533	0.7831	8.23	46#	0.00
102	PT	124Trichlobe	0.7269	0.6639	8.67	48#	0.00
103	T	Hexachlorobu	0.3642	0.3138	13.84	48#	0.00
104	T	Naphthalene	1.8488	1.9847	-7.35	55	0.00
105	T	123Trichlben	0.6789	0.6286	7.41	49#	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W110320.M Thu Nov 12 07:49:10 2020

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS1.D Vial: 2
Acq On : 9 Nov 2020 7:48 Operator: RLD-DGS
Sample : 176659,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 09 08:20:26 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	57	0.00
2	PT	Dichlorodi	10.0000	8.9375	10.63	49	0.00
3	PT	Chloromethan	10.0000	8.5211	14.79	50	0.00
4	PT	VinylChlorid	10.0000	9.5740	4.26	53	0.00
5	PT	Bromomethane	10.0000	12.7789	-27.79#	64	0.00
6	PT	Chloroethane	10.0000	10.0572	-0.57	57	0.00
7	T	Dichloroflmethane	10.0000	10.4123	-4.12	59	0.00
8	PT	Trichlorofma	10.0000	11.1526	-11.53	59	0.00
9	T	Ethylether	10.0000	9.4343	5.66	55	0.00
10	T	dichlorotfluoroethan	10.0000	11.2141	-12.14	60	0.00
11	T	propyleneoxide	100.0000	83.9753	16.02	53	0.00
12	T	Acrolein	50.0000	51.6180	-3.24	62	0.00
13	PT	11dichlorthe	10.0000	9.7622	2.38	53	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.9661	-9.83	59	0.00
15	PT	Acetone	100.0000	103.6489	-3.65	59	0.00
16	T	Iodomethane	20.0000	23.7879	-18.94	88	0.00
17	PT	Carbon Dislf	20.0000	21.3690	-6.84	60	0.00
18	T	allylchloride	20.0000	20.7634	-3.82	60	0.00
19	PT	methylacetate	10.0000	8.8880	11.12	56	0.00
20	PT	Methylchlorid	10.0000	9.8708	1.29	60	0.00
21	T	tbutylalcohol	500.0000	581.5298	-16.31	66	0.00
22	T	Acrylonitrile	50.0000	54.4224	-8.84	62	0.00
23	PT	t12dichlorte	10.0000	9.7361	2.64	59	0.00
24	PT	MtBE	10.0000	10.2439	-2.44	60	0.00
25	T	Hexane	20.0000	20.8870	-4.44	55	0.00
26	PT	11dichlorota	10.0000	10.5253	-5.25	61	0.00
27	T	Vinylacetate	100.0000	106.5799	-6.58	58	0.00
28	T	chloroprene	20.0000	22.6375	-13.19	62	0.00
29	T	Diisopether	10.0000	10.2407	-2.41	60	0.00
30	T	ETBE	10.0000	10.3885	-3.89	61	0.00
31	T	22dichloropr	10.0000	10.6024	-6.02	60	0.01
32	PT	c12dichlorte	10.0000	9.5903	4.10	58	0.00
33	PT	2Butanone	100.0000	101.1630	-1.16	59	0.00
34	T	propionitrile	100.0000	107.4331	-7.43	63	0.00
35	T	Ethylacetate	50.0000	45.3822	9.24	52	0.00
36	T	methacrylonitrile	20.0000	19.9828	0.09	59	0.00
37	T	Bromochlorma	10.0000	9.4996	5.00	53	0.00
38	T	Tetrahydofur	100.0000	107.1453	-7.15	62	0.00
39	PT	Chloroform	10.0000	10.7853	-7.85	63	0.00
40	PT	111trichlota	10.0000	10.6270	-6.27	60	0.00
41	S	SURRDibrflma	20.0000	20.3687	-1.84	59	0.00
42	PT	Cyclohexane	10.0000	10.5770	-5.77	58	0.00
43	PT	Carbtetraclo	10.0000	10.2843	-2.84	57	0.00
44	T	11dicloprope	10.0000	9.2595	7.41	52	0.00
45	S	SURR12DCAd4	20.0000	18.6295	6.85	54	0.00
46	PT	Benzene	10.0000	10.3752	-3.75	59	0.00
47	PT	12dichlorota	10.0000	10.7308	-7.31	64	0.00
48	T	TAME	10.0000	9.7668	2.33	57	0.00

49	PT	trichloroete	10.0000	10.1291	-1.29	56	0.00
50	PT	methylcyclohexane	10.0000	10.3252	-3.25	56	0.00
51	PT	12dicloropra	10.0000	10.0211	-0.21	58	0.00
52	T	23Dicl1propene	10.0000	10.4160	-4.16	60	0.00
53	T	Dibromometha	10.0000	10.6554	-6.55	61	0.00
54	T	methylmethacrylate	10.0000	10.3561	-3.56	61	0.00
55	T	14dioxane	500.0000	514.4951	-2.90	61	0.00
56	PT	Bromodiclrma	10.0000	11.2963	-12.96	68	0.00
57	T	2Nitropropane	100.0000	104.9478	-4.95	58	0.00
58	T	2CLEVE	50.0000	17.0444	65.91#	16	0.00
59	PT	c13dicloproe	10.0000	10.6264	-6.26	62	0.00
60	PT	4Meth2Pentan	100.0000	103.1256	-3.13	59	0.00
61	S	SURRd8Tolule	20.0000	20.4719	-2.36	59	0.00
62	PT	Toluene	10.0000	9.8803	1.20	57	0.00
63	PT	t13Dicloprop	10.0000	10.8433	-8.43	62	0.00
64	T	ethylmethacrylate	20.0000	21.4356	-7.18	60	0.00
65	PT	112Triclotha	10.0000	10.4680	-4.68	62	0.00
66	PT	Tetrachlorte	10.0000	9.3040	6.96	53	0.00
67	T	13Diclorpropa	10.0000	10.3807	-3.81	59	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	58	0.00
69	PT	2Hexanone	100.0000	105.3641	-5.36	61	0.00
70	PT	Clorodibrmta	10.0000	9.5854	4.15	58	0.00
71	PT	12Dibrometha	10.0000	9.7578	2.42	57	0.00
72	PT	Chlorobenzen	10.0000	10.1030	-1.03	58	0.00
73	T	1Clhexane	10.0000	10.1032	-1.03	57	0.00
74	T	1112Tetclota	10.0000	9.3689	6.31	56	0.00
75	PT	Ethylbenzene	10.0000	10.9162	-9.16	60	0.00
76	PT	m p-Xylene	20.0000	20.7232	-3.62	58	0.00
77	PT	o-Xylene	10.0000	10.0982	-0.98	57	0.00
78	PT	Styrene	10.0000	10.3556	-3.56	59	0.00
79	PT	Bromoform	10.0000	8.7140	12.86	54	0.00
80	PT	Isopropylben	10.0000	10.6631	-6.63	58	0.00
81	T	cyclohexanone	200.0000	207.3177	-3.66	60	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	53	0.00
83	S	SURR4BrFBenz	20.0000	21.4039	-7.02	57	0.00
84	T	Bromobenzene	10.0000	9.4538	5.46	51	0.00
85	PT	1122Tetrclta	10.0000	11.9120	-19.12	62	0.00
86	T	123Triclproa	10.0000	11.7970	-17.97	62	0.00
87	T	14dichloro2butene	10.0000	11.7309	-17.31	64	0.00
88	T	n-Propylbenz	10.0000	11.3232	-13.23	56	0.00
89	T	2chlorotolue	10.0000	11.4197	-14.20	59	0.00
90	T	4chlorotolue	10.0000	11.4760	-14.76	60	0.00
91	T	135Trimebenz	10.0000	11.2689	-12.69	56	0.00
92	T	tbutylbenzen	10.0000	10.9663	-9.66	55	0.00
93	T	124Trimetben	10.0000	11.4351	-14.35	58	0.00
94	T	sbutylbenzen	10.0000	11.2023	-12.02	54	0.00
95	PT	13Diclorbenz	10.0000	10.2914	-2.91	54	0.00
96	T	pIsopropylto	10.0000	11.2365	-12.36	55	0.00
97	PT	14dichlorobe	10.0000	10.1666	-1.67	53	0.00
98	PT	12dichlorobe	10.0000	10.5155	-5.15	56	0.00
99	T	nButylbenzen	10.0000	11.2654	-12.65	55	0.00
100	PT	12dibromo3cl	10.0000	9.0106	9.89	52	0.00
101	T	135Trichlorobenzene	10.0000	9.1772	8.23	46	0.00
102	PT	124Trichlobe	10.0000	9.1334	8.67	48	0.00
103	T	Hexachlorobu	10.0000	8.6157	13.84	48	0.00
104	T	Naphthalene	10.0000	10.7349	-7.35	55	0.00
105	T	123Trichlben	10.0000	9.2595	7.41	49	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W110320.M Thu Nov 12 07:49:38 2020

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS1.D Vial: 2
Acq On : 9 Nov 2020 7:48 Operator: RLD-DGS
Sample : 176659,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:20:26 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:20:20 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	765664	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	670483	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	353415	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.80	113	236368	20.369 ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 102 %		
45) SURR12DCAd4	7.21	102	49154	18.629 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 93 %		
61) SURRd8Tolule	9.64	98	807929	20.472 ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 102 %		
83) SURR4BrFBenz	13.19	95	320778	21.404 ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 107 %		
Target Compounds					Qvalue
2) Dichlorodi	1.81	85	88604	8.9375 ug/L	98
3) Chloromethan	2.06	50	75525	8.5211 ug/L	96
4) VinylChlorid	2.21	62	89719	9.5740 ug/L	97
5) Bromomethane	2.66	94	60823	12.7789 ug/L	98
6) Chloroethane	2.83	64	67605	10.0572 ug/L	96
7) Dichloroflmethane	3.14	67	173005	10.4123 ug/L	97
8) Trichlorofma	3.21	101	192744	11.1526 ug/L	96
9) Ethylether	3.65	59	55372	9.4343 ug/L	100
10) dichlorotfluoroethan	3.67	67	97833	11.2141 ug/L	99
11) propyleneoxide	3.71	58	86360	83.9753 ug/L	94
12) Acrolein	3.80	56	118809	51.6180 ug/L	99
13) 11dichlorthe	3.92	96	77538	9.7622 ug/L #	83
14) Trichlorotfluoroeth	3.96	101	183009	21.9661 ug/L	92
15) Acetone	4.01	43	379738	103.6489 ug/L	97
16) Iodomethane	4.10	127	60958	23.7879 ug/L #	83
17) Carbon Dislf	4.19	76	411235	21.3690 ug/L	99
18) allylchloride	4.41	41	206285	20.7634 ug/L	93
19) methylacetate	4.48	74	20447	8.8880 ug/L	90
20) Methylchlorid	4.58	84	133502	9.8708 ug/L	98
21) tbutylalcohol	4.80	59	818245	581.5298 ug/L	99
22) Acrylonitrile	4.90	53	188971	54.4224 ug/L	94
23) t12dichlorte	4.94	96	87289	9.7361 ug/L	99
24) MtBE	4.98	73	236916	10.2439 ug/L	98
25) Hexane	5.32	57	235307	20.8870 ug/L	100
26) 11dichlorota	5.47	63	145556	10.5253 ug/L	99
27) Vinylacetate	5.57	43	1455270	106.5799 ug/L	96
28) chloroprene	5.60	53	244010	22.6375 ug/L	92
29) Diisopether	5.61	45	226770	10.2407 ug/L	94
30) ETBE	6.06	59	216816	10.3885 ug/L	97
31) 22dichloropr	6.22	77	129142	10.6024 ug/L	97
32) c12dichlorte	6.22	96	102160	9.5903 ug/L	91
33) 2Butanone	6.23	72	152438	101.1630 ug/L	96
34) propionitrile	6.29	54	170642	107.4331 ug/L	99
35) Ethylacetate	6.34	88	22589	45.3822 ug/L #	70
36) methacrylonitrile	6.48	67	86472	19.9828 ug/L	93
37) Bromochlorma	6.50	128	47709	9.4996 ug/L #	85
38) Tetrahydofur	6.59	42	342567	107.1453 ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS1.D Vial: 2
Acq On : 9 Nov 2020 7:48 Operator: RLD-DGS
Sample : 176659,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:20:26 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:20:20 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.60	83	179285	10.7853 ug/L		99
40)	111trichlota	6.84	97	152097	10.6270 ug/L		97
42)	Cyclohexane	6.91	56	128991	10.5770 ug/L		96
43)	Carbtetraclo	7.05	119	129000	10.2843 ug/L		95
44)	11dicloprope	7.04	110	43851	9.2595 ug/L	#	80
46)	Benzene	7.29	78	343212	10.3752 ug/L		96
47)	12dichlorota	7.30	62	134366	10.7308 ug/L		99
48)	TAME	7.46	73	216514	9.7668 ug/L		97
49)	trichloroete	8.10	95	101018	10.1291 ug/L		96
50)	methylcyclohexane	8.34	83	151056	10.3252 ug/L		98
51)	12dicloropra	8.37	63	86575	10.0211 ug/L		100
52)	23Dicl1propene	8.44	75	138350	10.4160 ug/L		98
53)	Dibromometha	8.51	93	69570	10.6554 ug/L		88
54)	methylmethacrylate	8.53	69	71961	10.3561 ug/L		96
55)	14dioxane	8.56	88	93614	514.4951 ug/L		98
56)	Bromodiclrma	8.72	83	144539	11.2963 ug/L		92
57)	2Nitropropane	8.99	43	295437	104.9478 ug/L		97
58)	2CLEVE	9.11	63	8522	17.0444 ug/L		94
59)	c13dicloproe	9.29	75	151115	10.6264 ug/L		96
60)	4Meth2Pentan	9.49	43	961360	103.1256 ug/L		94
62)	Toluene	9.73	92	233012	9.8803 ug/L		96
63)	t13Dicloprop	10.01	75	135691	10.8433 ug/L		93
64)	ethylmethacrylate	10.15	69	251725	21.4356 ug/L		92
65)	112Triclotha	10.24	83	80291	10.4680 ug/L		95
66)	Tetrachlorte	10.46	166	110023	9.3040 ug/L		97
67)	13Diclorpropa	10.46	76	150888	10.3807 ug/L		99
69)	2Hexanone	10.58	43	802206	105.3641 ug/L		94
70)	Clorodibrmta	10.77	129	107777	9.5854 ug/L		96
71)	12Dibrometha	10.92	107	106822	9.7578 ug/L		96
72)	Chlorobenzen	11.60	112	296362	10.1030 ug/L		97
73)	1Clhexane	11.57	91	130351	10.1032 ug/L		92
74)	1112Tetclota	11.71	131	96054	9.3689 ug/L		99
75)	Ethylbenzene	11.75	91	461697	10.9162 ug/L		96
76)	m p-Xylene	11.92	106	363591	20.7232 ug/L		97
77)	o-Xylene	12.47	106	179945	10.0982 ug/L		90
78)	Styrene	12.48	104	295969	10.3556 ug/L		98
79)	Bromoform	12.72	173	68599	8.7140 ug/L		98
80)	Isopropylben	12.99	105	467545	10.6631 ug/L		99
81)	cyclohexanone	13.10	55	108545	207.3177 ug/L		100
84)	Bromobenzene	13.41	156	119084	9.4538 ug/L	#	87
85)	1122Tetrclta	13.39	83	157222	11.9120 ug/L		100
86)	123Triclproa	13.45	75	176180	11.7970 ug/L		95
87)	14dichloro2butene	13.49	53	32773	11.7309 ug/L		90
88)	n-Propylbenz	13.58	91	507422	11.3232 ug/L		92
89)	2chlorotolue	13.69	91	320642	11.4197 ug/L		96
90)	4chlorotolue	13.84	91	372485	11.4760 ug/L		98
91)	135Trimebenz	13.83	105	377018	11.2689 ug/L		98
92)	tbutylbenzen	14.30	119	336931	10.9663 ug/L		96
93)	124Trimetben	14.37	105	382773	11.4351 ug/L		93
94)	sbutylbenzen	14.62	105	463324	11.2023 ug/L		95
95)	13Diclorbenz	14.77	146	225913	10.2914 ug/L		99
96)	pIsopropylto	14.84	119	403547	11.2365 ug/L		99
97)	14dichlorobe	14.90	146	225788	10.1666 ug/L		98
98)	12dichlorobe	15.44	146	219430	10.5155 ug/L		98
99)	nButylbenzen	15.44	91	334163	11.2654 ug/L		96
100)	12dibromo3cl	16.55	157	32155	9.0106 ug/L		90
101)	135Trichlorobenzene	16.86	180	138377	9.1772 ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS1.D Vial: 2
Acq On : 9 Nov 2020 7:48 Operator: RLD-DGS
Sample : 176659,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:20:26 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:20:20 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

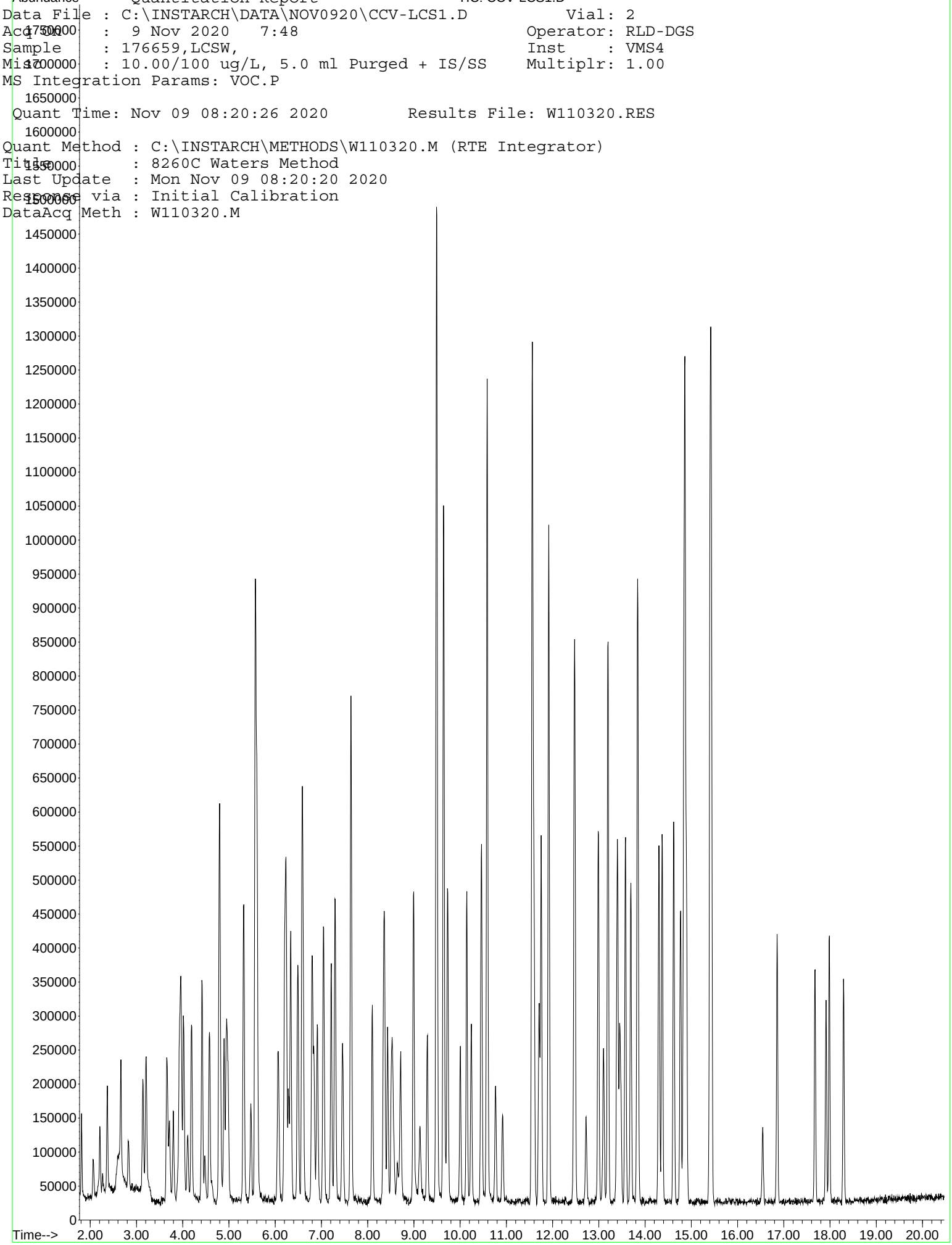
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.68	180	117323	9.1334	ug/L	98
103)	Hexachlorobu	17.91	225	55448	8.6157	ug/L	99
104)	Naphthalene	17.99	128	350703	10.7349	ug/L	98
105)	123Trichlben	18.29	180	111084	9.2595	ug/L	95

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS1.D Vial: 2
Acq On : 9 Nov 2020 7:48 Operator: RLD-DGS
Sample : 176659,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:20:26 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:20:20 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF1.D Vial: 16
Acq On : 9 Nov 2020 14:46 Operator: RLD-DGS
Sample : 176659,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 09 15:07:19 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	99	0.00
2	PT	Dichlorodi	0.2590	0.2254	12.97	83	0.00
3	PT	Chloromethan	0.2315	0.2160	6.70	95	0.00
4	PT	VinylChlorid	0.2448	0.2520	-2.94	99	0.00
5	PT	Bromomethane	0.1570	0.0697#	55.61#	49#	0.00
6	PT	Chloroethane	0.1756	0.1608	8.43	89	0.00
7	T	Dichloroflmethane	0.4340	0.3988	8.11	90	0.00
8	PT	Trichlorofma	0.4514	0.3719	17.61	75	0.00
9	T	Ethylether	0.1533	0.1577	-2.87	104	0.00
10	T	dichlorotfluoroethan	0.2279	0.2485	-9.04	102	0.00
11	T	propyleneoxide	0.0269	0.0228#	15.24	93	0.00
12	T	Acrolein	0.0601	0.0606	-0.83	105	0.00
13	PT	11dichlorthe	0.2075	0.1982	4.48	90	0.00
14	PT	Trichlorotfluoroeth	0.2176	0.2218	-1.93	95	0.00
15	PT	Acetone	0.1056	0.0971#	8.05	100	0.00
16	T	Iodomethane	0.0623	0.0546	12.36	104	0.00
17	PT	Carbon Dislf	0.5027	0.5020	0.14	97	0.00
18	T	allylchloride	0.2595	0.2877	-10.87	111	0.00
19	PT	methylacetate	0.0601	0.0551#	8.32	100	0.00
20	PT	Methylchlorid	0.3533	0.3482	1.44	104	0.00
21	T	tbutylalcohol	0.0368	0.0419	-13.86	112	0.00
22	T	Acrylonitrile	0.0907	0.1058	-16.65	115	0.00
23	PT	t12dichlorte	0.2342	0.2258	3.59	102	0.00
24	PT	MtBE	0.6041	0.6041	0.00	102	0.00
25	T	Hexane	0.2943	0.3368	-14.44	104	0.00
26	PT	11dichlorota	0.3612	0.3853	-6.67	108	0.00
27	T	Vinylacetate	0.3567	0.2743	23.10	73	0.00
28	T	chloroprene	0.2816	0.3236	-14.91	108	0.00
29	T	Diisopether	0.5784	0.6309	-9.08	110	0.00
30	T	ETBE	0.5452	0.5922	-8.62	110	0.00
31	T	22dichloropr	0.3182	0.2712	14.77	84	0.00
32	PT	c12dichlorte	0.2783	0.2606	6.36	98	0.00
33	PT	2Butanone	0.0394	0.0405#	-2.79	104	0.00
34	T	propionitrile	0.0415	0.0494	-19.04	120	0.00
35	T	Ethylacetate	0.0130	0.0123#	5.38	95	0.00
36	T	methacrylonitrile	0.1130	0.1205	-6.64	110	0.00
37	T	Bromochlorma	0.1312	0.1285	2.06	94	0.00
38	T	Tetrahydofur	0.0835	0.0939	-12.46	113	0.00
39	PT	Chloroform	0.4342	0.4298	1.01	100	0.00
40	PT	111trichlota	0.3739	0.3616	3.29	95	0.00
41	S	SURRDibrflma	0.3031	0.2937	3.10	96	0.00
42	PT	Cyclohexane	0.3186	0.3645	-14.41	108	0.00
43	PT	Carbtetraclo	0.3276	0.3183	2.84	93	0.00
44	T	11dicloprope	0.1237	0.1180	4.61	93	0.00
45	S	SURR12DCAd4	0.0689	0.0708	-2.76	103	0.00
46	PT	Benzene	0.8641	0.8975	-3.87	103	0.00
47	PT	12dichlorota	0.3271	0.3317	-1.41	105	0.00
48	T	TAME	0.5791	0.5777	0.24	100	0.00

49	PT	trichloroete	0.2605	0.2709	-3.99	100	0.00
50	PT	methylcyclohexane	0.3821	0.3812	0.24	94	0.00
51	PT	12dicloropra	0.2257	0.2572	-13.96	114	0.00
52	T	23Dicl1propene	0.3470	0.3585	-3.31	103	0.00
53	T	Dibromometha	0.1705	0.1773	-3.99	104	0.00
54	T	methylmethacrylate	0.1815	0.1900	-4.68	106	0.00
55	T	14dioxane	0.0048	0.0048#	0.00	104	0.00
56	PT	Bromodiclrma	0.3342	0.3357	-0.45	105	0.00
57	T	2Nitropropane	0.0735	0.0747	-1.63	98	0.00
58	T	2CLEVE	0.0195	0.0039#	80.00#	25#	0.00
59	PT	c13dicloproe	0.3715	0.3772	-1.53	103	0.00
60	PT	4Meth2Pentan	0.2435	0.2862	-17.54	116	0.00
61	S	SURRd8Tolule	1.0309	1.0534	-2.18	101	0.00
62	PT	Toluene	0.6160	0.6217	-0.93	102	0.00
63	PT	t13Dicloprop	0.3269	0.3292	-0.70	100	0.00
64	T	ethylmethacrylate	0.3067	0.3402	-10.92	108	0.00
65	PT	112Triclotha	0.2004	0.2139	-6.74	109	0.00
66	PT	Tetrachlorte	0.3089	0.3130	-1.33	100	0.00
67	T	13Diclorpropa	0.3797	0.3912	-3.03	102	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	103	0.00
69	PT	2Hexanone	0.2271	0.2567	-13.03	117	0.00
70	PT	Clorodibrmta	0.3354	0.2890	13.83	93	0.00
71	PT	12Dibrometha	0.3265	0.3046	6.71	98	0.00
72	PT	Chlorobenzen	0.8750	0.8599	1.73	102	0.00
73	T	1Clhexane	0.3849	0.3859	-0.26	102	0.00
74	T	1112Tetclota	0.3058	0.2892	5.43	102	0.00
75	PT	Ethylbenzene	1.2616	1.3499	-7.00	105	0.00
76	PT	m p-Xylene	0.5234	0.5338	-1.99	103	0.00
77	PT	o-Xylene	0.5315	0.5380	-1.22	101	0.00
78	PT	Styrene	0.8525	0.9007	-5.65	107	0.00
79	PT	Bromoform	0.2348	0.1935	17.59	91	0.00
80	PT	Isopropylben	1.3079	1.3871	-6.06	103	0.00
81	T	cyclohexanone	0.0156	0.0164#	-5.13	108	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	104	0.00
83	S	SURR4BrFBenz	0.8481	0.8920	-5.18	109	0.00
84	T	Bromobenzene	0.7128	0.6593	7.51	98	0.00
85	PT	1122Tetrclta	0.7469	0.7356	1.51	101	0.00
86	T	123Triclproa	0.8451	0.8388	0.75	102	0.00
87	T	14dichloro2butene	0.1581	0.1428	9.68	96	0.00
88	T	n-Propylbenz	2.5360	2.7575	-8.73	105	0.00
89	T	2chlorotolue	1.5889	1.7097	-7.60	109	0.00
90	T	4chlorotolue	1.8368	1.9566	-6.52	108	0.00
91	T	135Trimebenz	1.8933	2.0176	-6.57	105	0.00
92	T	tbutylbenzen	1.7387	1.7785	-2.29	101	0.00
93	T	124Trimetben	1.8943	2.0103	-6.12	105	0.00
94	T	sbutylbenzen	2.3406	2.5258	-7.91	101	0.00
95	PT	13Diclorbenz	1.2423	1.2063	2.90	99	0.00
96	T	pIsopropylto	2.0324	2.1345	-5.02	101	0.00
97	PT	14dichlorobe	1.2568	1.2139	3.41	99	0.00
98	PT	12dichlorobe	1.1809	1.1264	4.62	99	0.00
99	T	nButylbenzen	1.6786	1.8024	-7.38	103	0.00
100	PT	12dibromo3cl	0.2019	0.1817	10.00	101	0.00
101	T	135Trichlorobenzene	0.8533	0.8646	-1.32	100	0.00
102	PT	124Trichlobe	0.7269	0.7244	0.34	102	0.00
103	T	Hexachlorobu	0.3642	0.3692	-1.37	110	0.00
104	T	Naphthalene	1.8488	1.8041	2.42	98	0.00
105	T	123Trichlben	0.6789	0.6768	0.31	104	0.00

(#) = Out of Range SPCC's out = 4 CCC's out = 0

W110320.M Thu Nov 12 07:51:55 2020

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF1.D Vial: 16
Acq On : 9 Nov 2020 14:46 Operator: RLD-DGS
Sample : 176659,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 09 15:07:19 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	99	0.00
2	PT	Dichlorodi	10.0000	8.7031	12.97	83	0.00
3	PT	Chloromethan	10.0000	9.3282	6.72	95	0.00
4	PT	VinylChlorid	10.0000	10.2964	-2.96	99	0.00
5	PT	Bromomethane	10.0000	4.0051	59.95#	49	0.00
6	PT	Chloroethane	10.0000	9.1566	8.43	89	0.00
7	T	Dichloroflmethane	10.0000	9.1896	8.10	90	0.00
8	PT	Trichlorofma	10.0000	8.2389	17.61	75	0.00
9	T	Ethylether	10.0000	10.2831	-2.83	104	0.00
10	T	dichlorotfluoroethan	10.0000	10.9067	-9.07	102	0.00
11	T	propyleneoxide	100.0000	84.8783	15.12	93	0.00
12	T	Acrolein	50.0000	50.3571	-0.71	105	0.00
13	PT	11dichlorthe	10.0000	9.5524	4.48	90	0.00
14	PT	Trichlorotfluoroeth	20.0000	20.3849	-1.92	95	0.00
15	PT	Acetone	100.0000	101.3272	-1.33	100	0.00
16	T	Iodomethane	20.0000	17.9105	10.45	104	0.00
17	PT	Carbon Dislf	20.0000	19.9717	0.14	97	0.00
18	T	allylchloride	20.0000	22.1733	-10.87	111	0.00
19	PT	methylacetate	10.0000	9.1699	8.30	100	0.00
20	PT	Methylchlorid	10.0000	9.8566	1.43	104	0.00
21	T	tbutylalcohol	500.0000	570.3816	-14.08	112	0.00
22	T	Acrylonitrile	50.0000	58.3242	-16.65	115	0.00
23	PT	t12dichlorte	10.0000	9.6414	3.59	102	0.00
24	PT	MtBE	10.0000	9.9997	0.00	102	0.00
25	T	Hexane	20.0000	22.8905	-14.45	104	0.00
26	PT	11dichlorota	10.0000	10.6672	-6.67	108	0.00
27	T	Vinylacetate	100.0000	76.8953	23.10	73	0.00
28	T	chloroprene	20.0000	22.9876	-14.94	108	0.00
29	T	Diisopether	10.0000	10.9065	-9.06	110	0.00
30	T	ETBE	10.0000	10.8624	-8.62	110	0.00
31	T	22dichloropr	10.0000	8.5226	14.77	84	0.00
32	PT	c12dichlorte	10.0000	9.3658	6.34	98	0.00
33	PT	2Butanone	100.0000	102.8878	-2.89	104	0.00
34	T	propionitrile	100.0000	118.9636	-18.96	120	0.00
35	T	Ethylacetate	50.0000	47.4212	5.16	95	0.00
36	T	methacrylonitrile	20.0000	21.3152	-6.58	110	0.00
37	T	Bromochlorma	10.0000	9.7917	2.08	94	0.00
38	T	Tetrahydofur	100.0000	112.4913	-12.49	113	0.00
39	PT	Chloroform	10.0000	9.8980	1.02	100	0.00
40	PT	111trichlota	10.0000	9.6709	3.29	95	0.00
41	S	SURRDibrflma	20.0000	19.3804	3.10	96	0.00
42	PT	Cyclohexane	10.0000	11.4419	-14.42	108	0.00
43	PT	Carbtetraclo	10.0000	9.7154	2.85	93	0.00
44	T	11dicloprope	10.0000	9.5424	4.58	93	0.00
45	S	SURR12DCAd4	20.0000	20.5395	-2.70	103	0.00
46	PT	Benzene	10.0000	10.3864	-3.86	103	0.00
47	PT	12dichlorota	10.0000	10.1409	-1.41	105	0.00
48	T	TAME	10.0000	9.9772	0.23	100	0.00

49	PT	trichloroete	10.0000	10.4002	-4.00	100	0.00
50	PT	methylcyclohexane	10.0000	9.9759	0.24	94	0.00
51	PT	12dicloropra	10.0000	11.3964	-13.96	114	0.00
52	T	23Dicl1propene	10.0000	10.3326	-3.33	103	0.00
53	T	Dibromometha	10.0000	10.3947	-3.95	104	0.00
54	T	methylmethacrylate	10.0000	10.4691	-4.69	106	0.00
55	T	14dioxane	500.0000	504.9613	-0.99	104	0.00
56	PT	Bromodiclrma	10.0000	10.0428	-0.43	105	0.00
57	T	2Nitropropane	100.0000	101.6105	-1.61	98	0.00
58	T	2CLEVE	50.0000	15.6684	68.66#	25	0.00
59	PT	c13dicloproe	10.0000	10.1538	-1.54	103	0.00
60	PT	4Meth2Pentan	100.0000	117.5323	-17.53	116	0.00
61	S	SURRd8Tolule	20.0000	20.4364	-2.18	101	0.00
62	PT	Toluene	10.0000	10.0916	-0.92	102	0.00
63	PT	t13Dicloprop	10.0000	10.0699	-0.70	100	0.00
64	T	ethylmethacrylate	20.0000	22.1804	-10.90	108	0.00
65	PT	112Triclotha	10.0000	10.6761	-6.76	109	0.00
66	PT	Tetrachlorte	10.0000	10.1344	-1.34	100	0.00
67	T	13Diclorpropa	10.0000	10.3040	-3.04	102	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	103	0.00
69	PT	2Hexanone	100.0000	113.0421	-13.04	117	0.00
70	PT	Clorodibrmta	10.0000	8.6155	13.84	93	0.00
71	PT	12Dibrometha	10.0000	9.3293	6.71	98	0.00
72	PT	Chlorobenzen	10.0000	9.8273	1.73	102	0.00
73	T	1Clhexane	10.0000	10.0278	-0.28	102	0.00
74	T	1112Tetclota	10.0000	9.4580	5.42	102	0.00
75	PT	Ethylbenzene	10.0000	10.7001	-7.00	105	0.00
76	PT	m p-Xylene	20.0000	20.3999	-2.00	103	0.00
77	PT	o-Xylene	10.0000	10.1222	-1.22	101	0.00
78	PT	Styrene	10.0000	10.5648	-5.65	107	0.00
79	PT	Bromoform	10.0000	8.2406	17.59	91	0.00
80	PT	Isopropylben	10.0000	10.6056	-6.06	103	0.00
81	T	cyclohexanone	200.0000	209.6903	-4.85	108	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	104	0.00
83	S	SURR4BrFBenz	20.0000	21.0350	-5.18	109	0.00
84	T	Bromobenzene	10.0000	9.2484	7.52	98	0.00
85	PT	1122Tetrclta	10.0000	9.8487	1.51	101	0.00
86	T	123Triclproa	10.0000	9.9244	0.76	102	0.00
87	T	14dichloro2butene	10.0000	9.0322	9.68	96	0.00
88	T	n-Propylbenz	10.0000	10.8737	-8.74	105	0.00
89	T	2chlorotolue	10.0000	10.7603	-7.60	109	0.00
90	T	4chlorotolue	10.0000	10.6524	-6.52	108	0.00
91	T	135Trimebenz	10.0000	10.6566	-6.57	105	0.00
92	T	tbutylbenzen	10.0000	10.2287	-2.29	101	0.00
93	T	124Trimetben	10.0000	10.6123	-6.12	105	0.00
94	T	sbutylbenzen	10.0000	10.7915	-7.91	101	0.00
95	PT	13Diclorbenz	10.0000	9.7106	2.89	99	0.00
96	T	pIsopropylto	10.0000	10.5026	-5.03	101	0.00
97	PT	14dichlorobe	10.0000	9.6586	3.41	99	0.00
98	PT	12dichlorobe	10.0000	9.5382	4.62	99	0.00
99	T	nButylbenzen	10.0000	10.7373	-7.37	103	0.00
100	PT	12dibromo3cl	10.0000	8.9963	10.04	101	0.00
101	T	135Trichlorobenzene	10.0000	10.1324	-1.32	100	0.00
102	PT	124Trichlobe	10.0000	9.9648	0.35	102	0.00
103	T	Hexachlorobu	10.0000	10.1359	-1.36	110	0.00
104	T	Naphthalene	10.0000	9.7582	2.42	98	0.00
105	T	123Trichlben	10.0000	9.9691	0.31	104	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W110320.M Thu Nov 12 07:51:34 2020

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF1.D Vial: 16
Acq On : 9 Nov 2020 14:46 Operator: RLD-DGS
Sample : 176659,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 15:07:19 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 15:03:25 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1324639	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1197312	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	692726	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	389088	19.380	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 97 %			
45) SURR12DCAd4	7.21	102	93758	20.540	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103 %			
61) SURRd8Tolule	9.65	98	1395335	20.436	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 102 %			
83) SURR4BrFBenz	13.20	95	617918	21.035	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 105 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	149269	8.7031	ug/L	99
3) Chloromethan	2.07	50	143039	9.3282	ug/L	97
4) VinylChlorid	2.21	62	166930	10.2964	ug/L	97
5) Bromomethane	2.66	94	46145	4.0051	ug/L	99
6) Chloroethane	2.83	64	106487	9.1566	ug/L	94
7) Dichloroflmethane	3.14	67	264160	9.1896	ug/L	97
8) Trichlorofma	3.21	101	246339	8.2389	ug/L	97
9) Ethylether	3.65	59	104415	10.2831	ug/L	93
10) dichlorotfluoroethan	3.67	67	164617	10.9067	ug/L	96
11) propyleneoxide	3.72	58	151014	84.8783	ug/L	95
12) Acrolein	3.80	56	200525	50.3571	ug/L	99
13) 11dichlorthe	3.93	96	131262	9.5524	ug/L #	84
14) Trichlorotfluoroeth	3.96	101	293824	20.3849	ug/L	98
15) Acetone	4.02	43	643379	101.3272	ug/L	99
16) Iodomethane	4.11	127	72335	17.9105	ug/L	93
17) Carbon Dislf	4.19	76	664934	19.9717	ug/L	100
18) allylchloride	4.42	41	381118	22.1733	ug/L	91
19) methylacetate	4.48	74	36496	9.1699	ug/L	91
20) Methylchlorid	4.58	84	230635	9.8566	ug/L	98
21) tbutylalcohol	4.80	59	1388469	570.3816	ug/L	97
22) Acrylonitrile	4.90	53	350369	58.3242	ug/L	95
23) t12dichlorte	4.94	96	149545	9.6414	ug/L	96
24) MtBE	4.97	73	400106	9.9997	ug/L	98
25) Hexane	5.32	57	446142	22.8905	ug/L	96
26) 11dichlorota	5.48	63	255216	10.6672	ug/L	98
27) Vinylacetate	5.57	43	1816467	76.8953	ug/L	94
28) chloroprene	5.60	53	428679	22.9876	ug/L	93
29) Diisopether	5.61	45	417828	10.9065	ug/L	91
30) ETBE	6.06	59	392214	10.8624	ug/L	95
31) 22dichloropr	6.21	77	179595	8.5226	ug/L	96
32) c12dichlorte	6.21	96	172606	9.3658	ug/L	93
33) 2Butanone	6.24	72	268222	102.8878	ug/L	96
34) propionitrile	6.29	54	326905	118.9636	ug/L	99
35) Ethylacetate	6.34	88	40836	47.4212	ug/L #	81
36) methacrylonitrile	6.48	67	159576	21.3152	ug/L	96
37) Bromochlorma	6.50	128	85077	9.7917	ug/L #	89
38) Tetrahydofur	6.59	42	622230	112.4913	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF1.D Vial: 16
Acq On : 9 Nov 2020 14:46 Operator: RLD-DGS
Sample : 176659,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 15:07:19 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 15:03:25 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.60	83	284654	9.8980	ug/L	99
40)	111trichlota	6.84	97	239463	9.6709	ug/L	99
42)	Cyclohexane	6.92	56	241408	11.4419	ug/L	90
43)	Carbtetraclo	7.05	119	210831	9.7154	ug/L	100
44)	11dicloprope	7.04	110	78182	9.5424	ug/L	94
46)	Benzene	7.30	78	594411	10.3864	ug/L	100
47)	12dichlorota	7.30	62	219681	10.1409	ug/L	98
48)	TAME	7.46	73	382648	9.9772	ug/L	92
49)	trichloroete	8.10	95	179443	10.4002	ug/L	98
50)	methylcyclohexane	8.34	83	252494	9.9759	ug/L	87
51)	12dicloropra	8.37	63	170335	11.3964	ug/L	87
52)	23Dicl1propene	8.43	75	237436	10.3326	ug/L	98
53)	Dibromometha	8.51	93	117415	10.3947	ug/L	96
54)	methylmethacrylate	8.54	69	125855	10.4691	ug/L	96
55)	14dioxane	8.56	88	158956	504.9613	ug/L	87
56)	Bromodiclrma	8.72	83	222311	10.0428	ug/L	94
57)	2Nitropropane	9.00	43	494868	101.6105	ug/L	96
58)	2CLEVE	9.11	63	13028	15.6684	ug/L	85
59)	c13dicloproe	9.29	75	249810	10.1538	ug/L	97
60)	4Meth2Pentan	9.49	43	1895554	117.5323	ug/L	99
62)	Toluene	9.73	92	411741	10.0916	ug/L	99
63)	t13Dicloprop	10.00	75	218009	10.0699	ug/L	97
64)	ethylmethacrylate	10.15	69	450629	22.1804	ug/L	97
65)	112Triclotha	10.24	83	141669	10.6761	ug/L	94
66)	Tetrachlorte	10.46	166	207334	10.1344	ug/L	99
67)	13Diclorpropa	10.46	76	259117	10.3040	ug/L	97
69)	2Hexanone	10.58	43	1536926	113.0421	ug/L	98
70)	Clorodibrmta	10.77	129	172987	8.6155	ug/L	99
71)	12Dibrometha	10.92	107	182379	9.3293	ug/L	97
72)	Chlorobenzen	11.60	112	514785	9.8273	ug/L	95
73)	1Clhexane	11.57	91	231036	10.0278	ug/L	92
74)	1112Tetclota	11.71	131	173160	9.4580	ug/L	100
75)	Ethylbenzene	11.76	91	808148	10.7001	ug/L	99
76)	m p-Xylene	11.92	106	639150	20.3999	ug/L	95
77)	o-Xylene	12.46	106	322101	10.1222	ug/L	95
78)	Styrene	12.48	104	539204	10.5648	ug/L	99
79)	Bromoform	12.72	173	115846	8.2406	ug/L	98
80)	Isopropylben	12.99	105	830414	10.6056	ug/L	100
81)	cyclohexanone	13.10	55	196052	209.6903	ug/L	89
84)	Bromobenzene	13.41	156	228345	9.2484	ug/L	91
85)	1122Tetrclta	13.39	83	254791	9.8487	ug/L	98
86)	123Triclproa	13.45	75	290514	9.9244	ug/L	99
87)	14dichloro2butene	13.49	53	49460	9.0322	ug/L	91
88)	n-Propylbenz	13.58	91	955110	10.8737	ug/L	97
89)	2chlorotolue	13.69	91	592194	10.7603	ug/L	92
90)	4chlorotolue	13.84	91	677704	10.6524	ug/L	94
91)	135Trimebenz	13.83	105	698836	10.6566	ug/L	98
92)	tbutylbenzen	14.31	119	615997	10.2287	ug/L	99
93)	124Trimetben	14.37	105	696288	10.6123	ug/L	98
94)	sbutylbenzen	14.62	105	874848	10.7915	ug/L	100
95)	13Diclorbenz	14.76	146	417820	9.7106	ug/L	99
96)	pIsopropylto	14.84	119	739325	10.5026	ug/L	96
97)	14dichlorobe	14.90	146	420451	9.6586	ug/L	97
98)	12dichlorobe	15.44	146	390130	9.5382	ug/L	99
99)	nButylbenzen	15.43	91	624287	10.7373	ug/L	97
100)	12dibromo3cl	16.54	157	62927	8.9963	ug/L	93
101)	135Trichlorobenzene	16.86	180	299461	10.1324	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

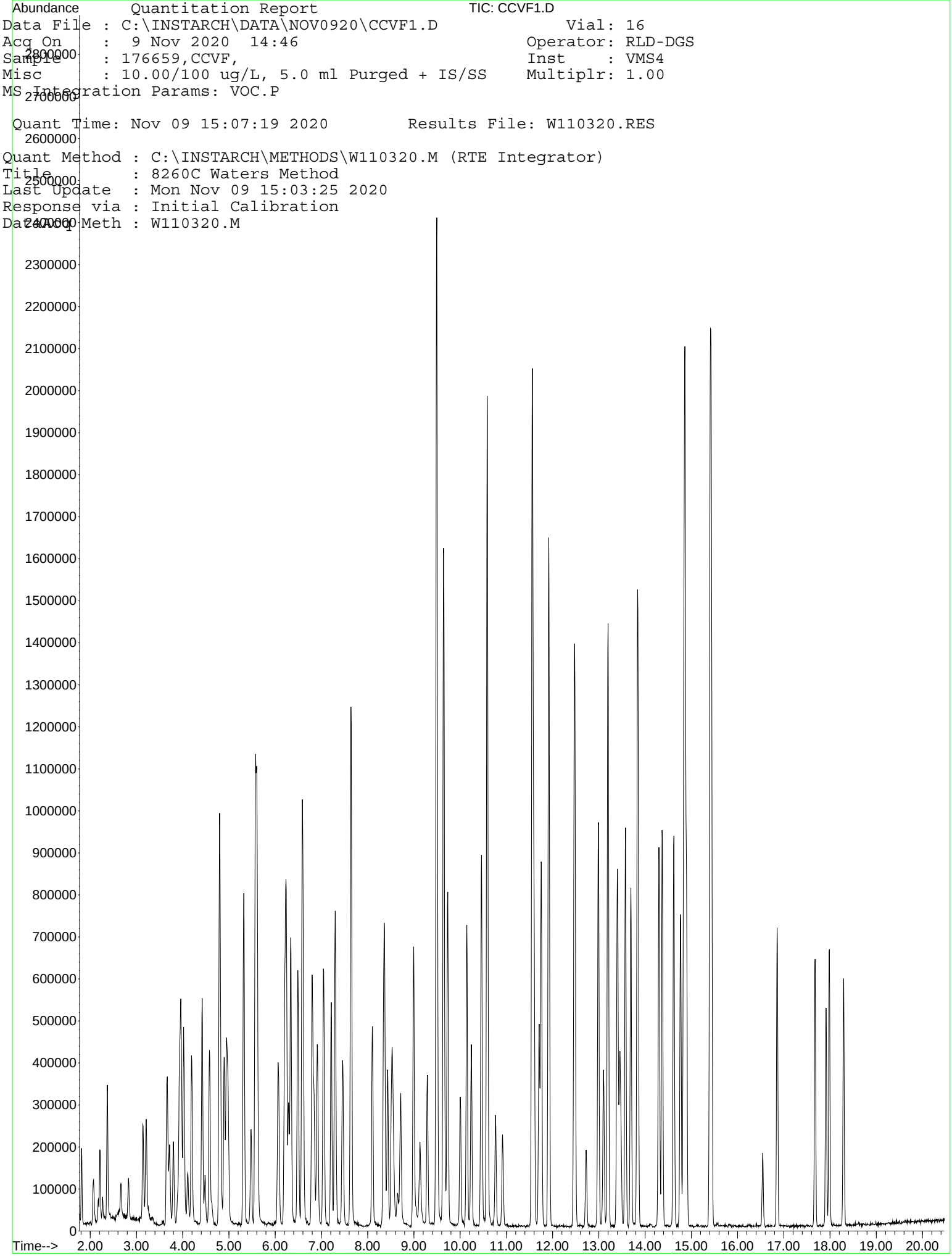
Data File : C:\INSTARCH\DATA\NOV0920\CCVF1.D Vial: 16
Acq On : 9 Nov 2020 14:46 Operator: RLD-DGS
Sample : 176659,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 15:07:19 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 15:03:25 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.68	180	250898	9.9648	ug/L	98
103) Hexachlorobu	17.91	225	127860	10.1359	ug/L	98
104) Naphthalene	17.99	128	624870	9.7582	ug/L	99
105) 123Trichlben	18.29	180	234421	9.9691	ug/L	98

(#) = qualifier out of range (m) = manual integration



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF1.D Vial: 16
Acq On : 9 Nov 2020 14:46 Operator: RLD-DGS
Sample : 176659,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 15:07:19 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 15:03:25 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Data File : C:\Instarch\Data\NOV0920\BFB2.D Vial: 17
Acq On : 9 Nov 2020 15:12 Operator: RLD-DGS
Sample : 176786,BFB, Inst : VMS4
Misc : 50 ng Injection Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110320.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.579 to 4.656 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.5	18470	PASS
75	95	30	60	49.6	49609	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.6	6591	PASS
173	174	0.00	2	0.4	363	PASS
174	95	50	100	96.0	96007	PASS
175	174	5	9	8.1	7751	PASS
176	174	95	101	95.2	91387	PASS
177	176	5	9	6.5	5924	PASS

W110320.M Thu Nov 12 07:41:17 2020

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS2.D Vial: 18
Acq On : 9 Nov 2020 15:27 Operator: RLD-DGS
Sample : 176786,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 09 16:14:22 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	97	0.00
2	PT	Dichlorodi	0.2590	0.2199	15.10	79	0.00
3	PT	Chloromethan	0.2315	0.2003	13.48	86	0.00
4	PT	VinylChlorid	0.2448	0.2325	5.02	89	0.00
5	PT	Bromomethane	0.1570	0.0630#	59.87#	43#	0.01
6	PT	Chloroethane	0.1756	0.1573	10.42	85	0.00
7	T	Dichloroflmethane	0.4340	0.3835	11.64	84	0.00
8	PT	Trichlorofma	0.4514	0.3638	19.41	72	0.00
9	T	Ethylether	0.1533	0.1561	-1.83	100	0.00
10	T	dichlorotfluoroethan	0.2279	0.2545	-11.67	102	0.00
11	T	propyleneoxide	0.0269	0.0207#	23.05#	83	0.00
12	T	Acrolein	0.0601	0.0675	-12.31	114	0.00
13	PT	11dichlorthe	0.2075	0.1884	9.20	84	0.00
14	PT	Trichlorotfluoroeth	0.2176	0.2162	0.64	90	0.00
15	PT	Acetone	0.1056	0.1010	4.36	101	0.00
16	T	Iodomethane	0.0623	0.0642	-3.05	119	0.00
17	PT	Carbon Dislf	0.5027	0.4900	2.53	92	0.00
18	T	allylchloride	0.2595	0.2913	-12.25	110	0.00
19	PT	methylacetate	0.0601	0.0529#	11.98	93	0.00
20	PT	Methylchlorid	0.3533	0.3305	6.45	96	0.00
21	T	tbutylalcohol	0.0368	0.0441	-19.84	115	0.00
22	T	Acrylonitrile	0.0907	0.1074	-18.41	114	0.00
23	PT	t12dichlorte	0.2342	0.2297	1.92	101	0.00
24	PT	MtBE	0.6041	0.6067	-0.43	100	0.00
25	T	Hexane	0.2943	0.3455	-17.40	104	0.00
26	PT	11dichlorota	0.3612	0.3791	-4.96	103	0.00
27	T	Vinylacetate	0.3567	0.4192	-17.52	109	0.00
28	T	chloroprene	0.2816	0.3170	-12.57	103	0.00
29	T	Diisopether	0.5784	0.6418	-10.96	109	0.00
30	T	ETBE	0.5452	0.6022	-10.45	109	0.00
31	T	22dichloropr	0.3182	0.2865	9.96	86	0.00
32	PT	c12dichlorte	0.2783	0.2671	4.02	98	0.00
33	PT	2Butanone	0.0394	0.0411#	-4.31	103	0.00
34	T	propionitrile	0.0415	0.0507	-22.17#	121	0.00
35	T	Ethylacetate	0.0130	0.0131#	-0.77	98	0.00
36	T	methacrylonitrile	0.1130	0.1264	-11.86	112	0.00
37	T	Bromochlorma	0.1312	0.1273	2.97	91	0.00
38	T	Tetrahydofur	0.0835	0.0944	-13.05	111	0.00
39	PT	Chloroform	0.4342	0.4365	-0.53	99	0.00
40	PT	111trichlota	0.3739	0.3571	4.49	92	0.00
41	S	SURRDibrflma	0.3031	0.2931	3.30	94	0.00
42	PT	Cyclohexane	0.3186	0.3548	-11.36	102	0.00
43	PT	Carbtetraclo	0.3276	0.3061	6.56	87	0.00
44	T	11dicloprope	0.1237	0.1188	3.96	91	0.00
45	S	SURR12DCAd4	0.0689	0.0666	3.34	95	0.00
46	PT	Benzene	0.8641	0.8701	-0.69	97	0.00
47	PT	12dichlorota	0.3271	0.3464	-5.90	107	0.00
48	T	TAME	0.5791	0.5953	-2.80	100	0.00

49	PT	trichloroete	0.2605	0.2617	-0.46	94	0.00
50	PT	methylcyclohexane	0.3821	0.3944	-3.22	95	0.00
51	PT	12dicloropra	0.2257	0.2566	-13.69	111	0.00
52	T	23Dicl1propene	0.3470	0.3641	-4.93	102	0.00
53	T	Dibromometha	0.1705	0.1732	-1.58	99	0.00
54	T	methylmethacrylate	0.1815	0.1991	-9.70	109	0.00
55	T	14dioxane	0.0048	0.0049#	-2.08	103	0.00
56	PT	Bromodiclrma	0.3342	0.3461	-3.56	106	0.00
57	T	2Nitropropane	0.0735	0.0800	-8.84	102	0.00
58	T	2CLEVE	0.0195	0.0045#	76.92#	28#	0.00
59	PT	c13dicloproe	0.3715	0.3848	-3.58	103	0.00
60	PT	4Meth2Pentan	0.2435	0.2826	-16.06	112	0.00
61	S	SURRd8Tolule	1.0309	1.0462	-1.48	98	0.00
62	PT	Toluene	0.6160	0.6297	-2.22	100	0.00
63	PT	t13Dicloprop	0.3269	0.3455	-5.69	102	0.00
64	T	ethylmethacrylate	0.3067	0.3598	-17.31	112	0.00
65	PT	112Triclotha	0.2004	0.2137	-6.64	106	0.00
66	PT	Tetrachlorte	0.3089	0.3141	-1.68	98	0.00
67	T	13Diclorpropa	0.3797	0.4224	-11.25	107	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	99	0.00
69	PT	2Hexanone	0.2271	0.2642	-16.34	115	0.00
70	PT	Clorodibrmta	0.3354	0.3006	10.38	93	0.00
71	PT	12Dibrometha	0.3265	0.3372	-3.28	104	0.00
72	PT	Chlorobenzen	0.8750	0.9180	-4.91	104	0.00
73	T	1Clhexane	0.3849	0.4017	-4.36	102	0.00
74	T	1112Tetclota	0.3058	0.2958	3.27	100	0.00
75	PT	Ethylbenzene	1.2616	1.3735	-8.87	103	0.00
76	PT	m p-Xylene	0.5234	0.5575	-6.52	103	0.00
77	PT	o-Xylene	0.5315	0.5571	-4.82	101	0.01
78	PT	Styrene	0.8525	0.9175	-7.62	104	0.00
79	PT	Bromoform	0.2348	0.2137	8.99	96	0.00
80	PT	Isopropylben	1.3079	1.4496	-10.83	104	0.00
81	T	cyclohexanone	0.0156	0.0173#	-10.90	110	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	100	0.00
83	S	SURR4BrFBenz	0.8481	0.8898	-4.92	105	0.00
84	T	Bromobenzene	0.7128	0.6865	3.69	98	0.00
85	PT	1122Tetrclta	0.7469	0.8305	-11.19	109	0.00
86	T	123Triclproa	0.8451	0.9085	-7.50	107	0.00
87	T	14dichloro2butene	0.1581	0.1465	7.34	95	0.00
88	T	n-Propylbenz	2.5360	2.8375	-11.89	104	0.00
89	T	2chlorotolue	1.5889	1.7403	-9.53	107	0.00
90	T	4chlorotolue	1.8368	1.9889	-8.28	106	0.00
91	T	135Trimebenz	1.8933	2.0366	-7.57	102	0.00
92	T	tbutylbenzen	1.7387	1.8480	-6.29	101	0.00
93	T	124Trimetben	1.8943	2.1072	-11.24	106	0.00
94	T	sbutylbenzen	2.3406	2.6093	-11.48	101	0.00
95	PT	13Diclorbenz	1.2423	1.2284	1.12	97	0.00
96	T	pIsopropylto	2.0324	2.2432	-10.37	102	0.00
97	PT	14dichlorobe	1.2568	1.2480	0.70	98	0.00
98	PT	12dichlorobe	1.1809	1.1800	0.08	100	0.00
99	T	nButylbenzen	1.6786	1.8681	-11.29	103	0.00
100	PT	12dibromo3cl	0.2019	0.1992	1.34	107	0.00
101	T	135Trichlorobenzene	0.8533	0.8963	-5.04	100	0.00
102	PT	124Trichlobe	0.7269	0.7528	-3.56	102	0.00
103	T	Hexachlorobu	0.3642	0.4004	-9.94	114	0.00
104	T	Naphthalene	1.8488	1.9580	-5.91	102	0.00
105	T	123Trichlben	0.6789	0.7085	-4.36	104	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W110320.M Thu Nov 12 07:50:19 2020

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS2.D Vial: 18
Acq On : 9 Nov 2020 15:27 Operator: RLD-DGS
Sample : 176786,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 09 16:14:22 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	97	0.00
2	PT	Dichlorodi	10.0000	8.4901	15.10	79	0.00
3	PT	Chloromethan	10.0000	8.6511	13.49	86	0.00
4	PT	VinylChlorid	10.0000	9.5001	5.00	89	0.00
5	PT	Bromomethane	10.0000	3.3543	66.46#	43	0.01
6	PT	Chloroethane	10.0000	8.9580	10.42	85	0.00
7	T	Dichloroflmethane	10.0000	8.8360	11.64	84	0.00
8	PT	Trichlorofma	10.0000	8.0585	19.41	72	0.00
9	T	Ethylether	10.0000	10.1811	-1.81	100	0.00
10	T	dichlorotfluoroethan	10.0000	11.1692	-11.69	102	0.00
11	T	propyleneoxide	100.0000	77.0068	22.99#	83	0.00
12	T	Acrolein	50.0000	56.1140	-12.23	114	0.00
13	PT	11dichlorthe	10.0000	9.0798	9.20	84	0.00
14	PT	Trichlorotfluoroeth	20.0000	19.8732	0.63	90	0.00
15	PT	Acetone	100.0000	105.7535	-5.75	101	0.00
16	T	Iodomethane	20.0000	20.2158	-1.08	119	0.00
17	PT	Carbon Dislf	20.0000	19.4971	2.51	92	0.00
18	T	allylchloride	20.0000	22.4469	-12.23	110	0.00
19	PT	methylacetate	10.0000	8.7961	12.04	93	0.00
20	PT	Methylchlorid	10.0000	9.3554	6.45	96	0.00
21	T	tbutylalcohol	500.0000	599.6151	-19.92	115	0.00
22	T	Acrylonitrile	50.0000	59.1878	-18.38	114	0.00
23	PT	t12dichlorte	10.0000	9.8093	1.91	101	0.00
24	PT	MtBE	10.0000	10.0429	-0.43	100	0.00
25	T	Hexane	20.0000	23.4836	-17.42	104	0.00
26	PT	11dichlorota	10.0000	10.4935	-4.93	103	0.00
27	T	Vinylacetate	100.0000	117.5451	-17.55	109	0.00
28	T	chloroprene	20.0000	22.5170	-12.58	103	0.00
29	T	Diisopether	10.0000	11.0949	-10.95	109	0.00
30	T	ETBE	10.0000	11.0459	-10.46	109	0.00
31	T	22dichloropr	10.0000	9.0053	9.95	86	0.00
32	PT	c12dichlorte	10.0000	9.5988	4.01	98	0.00
33	PT	2Butanone	100.0000	104.3367	-4.34	103	0.00
34	T	propionitrile	100.0000	122.0859	-22.09#	121	0.00
35	T	Ethylacetate	50.0000	50.5071	-1.01	98	0.00
36	T	methacrylonitrile	20.0000	22.3584	-11.79	112	0.00
37	T	Bromochlorma	10.0000	9.7016	2.98	91	0.00
38	T	Tetrahydofur	100.0000	113.0565	-13.06	111	0.00
39	PT	Chloroform	10.0000	10.0517	-0.52	99	0.00
40	PT	111trichlota	10.0000	9.5522	4.48	92	0.00
41	S	SURRDibrflma	20.0000	19.3388	3.31	94	0.00
42	PT	Cyclohexane	10.0000	11.1370	-11.37	102	0.00
43	PT	Carbtetraclo	10.0000	9.3419	6.58	87	0.00
44	T	11dicloprope	10.0000	9.6069	3.93	91	0.00
45	S	SURR12DCAd4	20.0000	19.3249	3.38	95	0.00
46	PT	Benzene	10.0000	10.0692	-0.69	97	0.00
47	PT	12dichlorota	10.0000	10.5894	-5.89	107	0.00
48	T	TAME	10.0000	10.2804	-2.80	100	0.00

49	PT	trichloroete	10.0000	10.0475	-0.47	94	0.00
50	PT	methylcyclohexane	10.0000	10.3204	-3.20	95	0.00
51	PT	12dicloropra	10.0000	11.3716	-13.72	111	0.00
52	T	23Dicl1propene	10.0000	10.4938	-4.94	102	0.00
53	T	Dibromometha	10.0000	10.1584	-1.58	99	0.00
54	T	methylmethacrylate	10.0000	10.9697	-9.70	109	0.00
55	T	14dioxane	500.0000	514.9725	-2.99	103	0.00
56	PT	Bromodiclrma	10.0000	10.3548	-3.55	106	0.00
57	T	2Nitropropane	100.0000	108.7850	-8.78	102	0.00
58	T	2CLEVE	50.0000	17.1836	65.63#	28	0.00
59	PT	c13dicloproe	10.0000	10.3598	-3.60	103	0.00
60	PT	4Meth2Pentan	100.0000	116.0549	-16.05	112	0.00
61	S	SURRd8Tolule	20.0000	20.2975	-1.49	98	0.00
62	PT	Toluene	10.0000	10.2222	-2.22	100	0.00
63	PT	t13Dicloprop	10.0000	10.5707	-5.71	102	0.00
64	T	ethylmethacrylate	20.0000	23.4605	-17.30	112	0.00
65	PT	112Triclotha	10.0000	10.6645	-6.65	106	0.00
66	PT	Tetrachlorte	10.0000	10.1678	-1.68	98	0.00
67	T	13Diclorpropa	10.0000	11.1248	-11.25	107	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	99	0.00
69	PT	2Hexanone	100.0000	116.3302	-16.33	115	0.00
70	PT	Clorodibrmta	10.0000	8.9616	10.38	93	0.00
71	PT	12Dibrometha	10.0000	10.3247	-3.25	104	0.00
72	PT	Chlorobenzen	10.0000	10.4912	-4.91	104	0.00
73	T	1Clhexane	10.0000	10.4375	-4.38	102	0.00
74	T	1112Tetclota	10.0000	9.6712	3.29	100	0.00
75	PT	Ethylbenzene	10.0000	10.8867	-8.87	103	0.00
76	PT	m p-Xylene	20.0000	21.3039	-6.52	103	0.00
77	PT	o-Xylene	10.0000	10.4812	-4.81	101	0.01
78	PT	Styrene	10.0000	10.7623	-7.62	104	0.00
79	PT	Bromoform	10.0000	9.1011	8.99	96	0.00
80	PT	Isopropylben	10.0000	11.0835	-10.84	104	0.00
81	T	cyclohexanone	200.0000	221.1873	-10.59	110	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	100	0.00
83	S	SURR4BrFBenz	20.0000	20.9834	-4.92	105	0.00
84	T	Bromobenzene	10.0000	9.6302	3.70	98	0.00
85	PT	1122Tetrclta	10.0000	11.1185	-11.18	109	0.00
86	T	123Triclproa	10.0000	10.7491	-7.49	107	0.00
87	T	14dichloro2butene	10.0000	9.2670	7.33	95	0.00
88	T	n-Propylbenz	10.0000	11.1890	-11.89	104	0.00
89	T	2chlorotolue	10.0000	10.9527	-9.53	107	0.00
90	T	4chlorotolue	10.0000	10.8283	-8.28	106	0.00
91	T	135Trimebenz	10.0000	10.7569	-7.57	102	0.00
92	T	tbutylbenzen	10.0000	10.6284	-6.28	101	0.00
93	T	124Trimetben	10.0000	11.1239	-11.24	106	0.00
94	T	sbutylbenzen	10.0000	11.1479	-11.48	101	0.00
95	PT	13Diclorbenz	10.0000	9.8886	1.11	97	0.00
96	T	pIsopropylto	10.0000	11.0374	-10.37	102	0.00
97	PT	14dichlorobe	10.0000	9.9301	0.70	98	0.00
98	PT	12dichlorobe	10.0000	9.9928	0.07	100	0.00
99	T	nButylbenzen	10.0000	11.1287	-11.29	103	0.00
100	PT	12dibromo3cl	10.0000	9.8634	1.37	107	0.00
101	T	135Trichlorobenzene	10.0000	10.5043	-5.04	100	0.00
102	PT	124Trichlobe	10.0000	10.3564	-3.56	102	0.00
103	T	Hexachlorobu	10.0000	10.9937	-9.94	114	0.00
104	T	Naphthalene	10.0000	10.5906	-5.91	102	0.00
105	T	123Trichlben	10.0000	10.4361	-4.36	104	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W110320.M Thu Nov 12 07:49:57 2020

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS2.D Vial: 18
Acq On : 9 Nov 2020 15:27 Operator: RLD-DGS
Sample : 176786,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 16:14:22 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:13:44 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.65	96	1291370	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1151752	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	666780	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	378502	19.339	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 97 %			
45) SURR12DCAd4	7.21	102	85998	19.325	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 97 %			
61) SURRd8Tolule	9.64	98	1351044	20.297	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 101 %			
83) SURR4BrFBenz	13.20	95	593316	20.983	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 105 %			
Target Compounds						Qvalue
2) Dichlorodi	1.82	85	141959m	8.4901	ug/L	97
3) Chloromethan	2.07	50	129325	8.6511	ug/L	99
4) VinylChlorid	2.21	62	150152	9.5001	ug/L	97
5) Bromomethane	2.67	94	40685	3.3543	ug/L	95
6) Chloroethane	2.83	64	101560	8.9580	ug/L	100
7) Dichloroflmethane	3.14	67	247617	8.8360	ug/L	98
8) Trichlorofma	3.21	101	234893	8.0585	ug/L	97
9) Ethylether	3.65	59	100783	10.1811	ug/L	96
10) dichlorotfluoroethan	3.67	67	164346	11.1692	ug/L	96
11) propyleneoxide	3.72	58	133568	77.0068	ug/L	94
12) Acrolein	3.80	56	217837	56.1140	ug/L	99
13) 11dichlorthe	3.93	96	121634	9.0798	ug/L #	83
14) Trichlorotfluoroeth	3.96	101	279255	19.8732	ug/L	98
15) Acetone	4.02	43	652464	105.7535	ug/L	98
16) Iodomethane	4.11	127	82904	20.2158	ug/L	97
17) Carbon Dislf	4.20	76	632831	19.4971	ug/L	99
18) allylchloride	4.42	41	376130	22.4469	ug/L	89
19) methylacetate	4.49	74	34129	8.7961	ug/L	90
20) Methylchlorid	4.58	84	213409	9.3554	ug/L	95
21) tbutylalcohol	4.80	59	1422972	599.6151	ug/L	98
22) Acrylonitrile	4.90	53	346627	59.1878	ug/L	97
23) t12dichlorte	4.94	96	148329	9.8093	ug/L	95
24) MtBE	4.97	73	391743	10.0429	ug/L	96
25) Hexane	5.32	57	446207	23.4836	ug/L	98
26) 11dichlorota	5.47	63	244754	10.4935	ug/L	96
27) Vinylacetate	5.57	43	2706981	117.5451	ug/L	96
28) chloroprene	5.59	53	409356	22.5170	ug/L	91
29) Diisopether	5.61	45	414371	11.0949	ug/L	92
30) ETBE	6.07	59	388822	11.0459	ug/L	94
31) 22dichloropr	6.20	77	185001	9.0053	ug/L	97
32) c12dichlorte	6.21	96	172456	9.5988	ug/L	96
33) 2Butanone	6.24	72	265168	104.3367	ug/L	99
34) propionitrile	6.29	54	327059	122.0859	ug/L	98
35) Ethylacetate	6.34	88	42401	50.5071	ug/L #	82
36) methacrylonitrile	6.48	67	163182	22.3584	ug/L	98
37) Bromochlorma	6.50	128	82177	9.7016	ug/L	91
38) Tetrahydofur	6.59	42	609650	113.0565	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS2.D Vial: 18
Acq On : 9 Nov 2020 15:27 Operator: RLD-DGS
Sample : 176786,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 16:14:22 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:13:44 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	281813	10.0517 ug/L	100
40)	111trichlota	6.84	97	230583	9.5522 ug/L	98
42)	Cyclohexane	6.91	56	229075	11.1370 ug/L	94
43)	Carbtetraclo	7.05	119	197634	9.3419 ug/L	98
44)	11dicloprope	7.05	110	76734	9.6069 ug/L	95
46)	Benzene	7.29	78	561786	10.0692 ug/L	96
47)	12dichlorota	7.31	62	223636	10.5894 ug/L	99
48)	TAME	7.46	73	384377	10.2804 ug/L	94
49)	trichloroete	8.10	95	169004	10.0475 ug/L	99
50)	methylcyclohexane	8.35	83	254653	10.3204 ug/L	92
51)	12dicloropra	8.37	63	165695	11.3716 ug/L	93
52)	23Dicl1propene	8.43	75	235084	10.4938 ug/L	99
53)	Dibromometha	8.51	93	111864	10.1584 ug/L	97
54)	methylmethacrylate	8.54	69	128560	10.9697 ug/L	93
55)	14dioxane	8.56	88	158036	514.9725 ug/L	92
56)	Bromodiclrma	8.72	83	223461	10.3548 ug/L	92
57)	2Nitropropane	9.00	43	516503	108.7850 ug/L	96
58)	2CLEVE	9.11	63	14543	17.1836 ug/L	97
59)	c13dicloproe	9.29	75	248477	10.3598 ug/L	99
60)	4Meth2Pentan	9.49	43	1824717	116.0549 ug/L	99
62)	Toluene	9.73	92	406596	10.2222 ug/L	99
63)	t13Dicloprop	10.01	75	223104	10.5707 ug/L	93
64)	ethylmethacrylate	10.15	69	464664	23.4605 ug/L	96
65)	112Triclotha	10.24	83	137961	10.6645 ug/L	97
66)	Tetrachlorte	10.46	166	202793	10.1678 ug/L	99
67)	13Diclorpropa	10.46	76	272731	11.1248 ug/L	97
69)	2Hexanone	10.59	43	1521447	116.3302 ug/L	97
70)	Clorodibrmta	10.77	129	173090	8.9616 ug/L	99
71)	12Dibrometha	10.92	107	194158	10.3247 ug/L	94
72)	Chlorobenzen	11.60	112	528651	10.4912 ug/L	98
73)	1Clhexane	11.57	91	231326	10.4375 ug/L	92
74)	1112Tetclota	11.71	131	170326	9.6712 ug/L	99
75)	Ethylbenzene	11.76	91	790953	10.8867 ug/L	98
76)	m p-Xylene	11.92	106	642076	21.3039 ug/L	99
77)	o-Xylene	12.48	106	320832	10.4812 ug/L	92
78)	Styrene	12.48	104	528383	10.7623 ug/L	97
79)	Bromoform	12.72	173	123074	9.1011 ug/L	97
80)	Isopropylben	12.99	105	834812	11.0835 ug/L	99
81)	cyclohexanone	13.10	55	198932	221.1873 ug/L	94
84)	Bromobenzene	13.41	156	228867	9.6302 ug/L	91
85)	1122Tetrclta	13.39	83	276866	11.1185 ug/L	99
86)	123Triclproa	13.45	75	302870	10.7491 ug/L	99
87)	14dichloro2butene	13.48	53	48845	9.2670 ug/L	93
88)	n-Propylbenz	13.58	91	945993	11.1890 ug/L	99
89)	2chlorotolue	13.69	91	580209	10.9527 ug/L	93
90)	4chlorotolue	13.85	91	663094	10.8283 ug/L	96
91)	135Trimebenz	13.83	105	678994	10.7569 ug/L	99
92)	tbutylbenzen	14.30	119	616095	10.6284 ug/L	99
93)	124Trimetben	14.37	105	702518	11.1239 ug/L	97
94)	sbutylbenzen	14.62	105	869898	11.1479 ug/L	98
95)	13Diclorbenz	14.77	146	409544	9.8886 ug/L	99
96)	pIsopropylto	14.84	119	747869	11.0374 ug/L	97
97)	14dichlorobe	14.90	146	416081	9.9301 ug/L	98
98)	12dichlorobe	15.44	146	393413	9.9928 ug/L	100
99)	nButylbenzen	15.43	91	622807	11.1287 ug/L	97
100)	12dibromo3cl	16.55	157	66408	9.8634 ug/L	94
101)	135Trichlorobenzene	16.86	180	298825	10.5043 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS2.D Vial: 18
Acq On : 9 Nov 2020 15:27 Operator: RLD-DGS
Sample : 176786,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 16:14:22 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:13:44 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

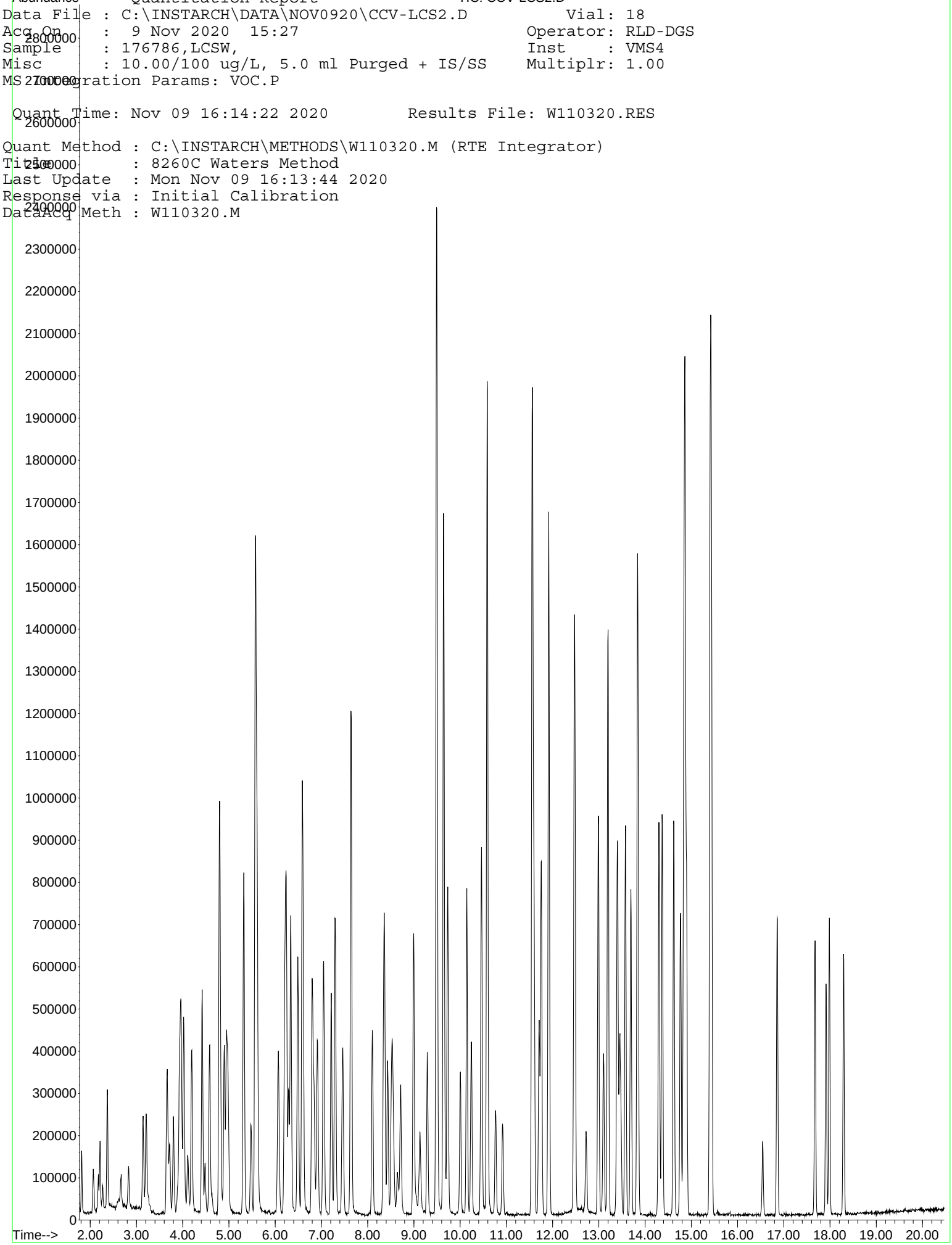
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.68	180	250990	10.3564	ug/L	98
103)	Hexachlorobu	17.91	225	133487	10.9937	ug/L	98
104)	Naphthalene	17.99	128	652771	10.5906	ug/L	99
105)	123Trichlben	18.30	180	236212	10.4361	ug/L	99

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS2.D Vial: 18
Acq On : 9 Nov 2020 15:27 Operator: RLD-DGS
Sample : 176786,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 16:14:22 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:13:44 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\MB2-CCB1.D Vial: 20
Acq On : 9 Nov 2020 16:26 Operator: RLD-DGS
Sample : 176786,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 16:47:21 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1286416	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1139836	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	665782	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	388908	19.947	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 100 %			
45) SURR12DCAd4	7.21	102	90809	20.485	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
61) SURRd8Tolule	9.64	98	1359611	20.505	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 103 %			
83) SURR4BrFBenz	13.20	95	582611	20.636	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 103 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.02	43	11526	Below Cal	97
16) Iodomethane	0.00	127	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.59	84	3076	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.60	42	3722	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\MB2-CCB1.D Vial: 20
Acq On : 9 Nov 2020 16:26 Operator: RLD-DGS
Sample : 176786,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 16:47:21 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.50	43	2736	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.58	43	3278	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.57	91	3559	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.42	91	3653	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\MB2-CCB1.D Vial: 20
Acq On : 9 Nov 2020 16:26 Operator: RLD-DGS
Sample : 176786,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 16:47:21 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

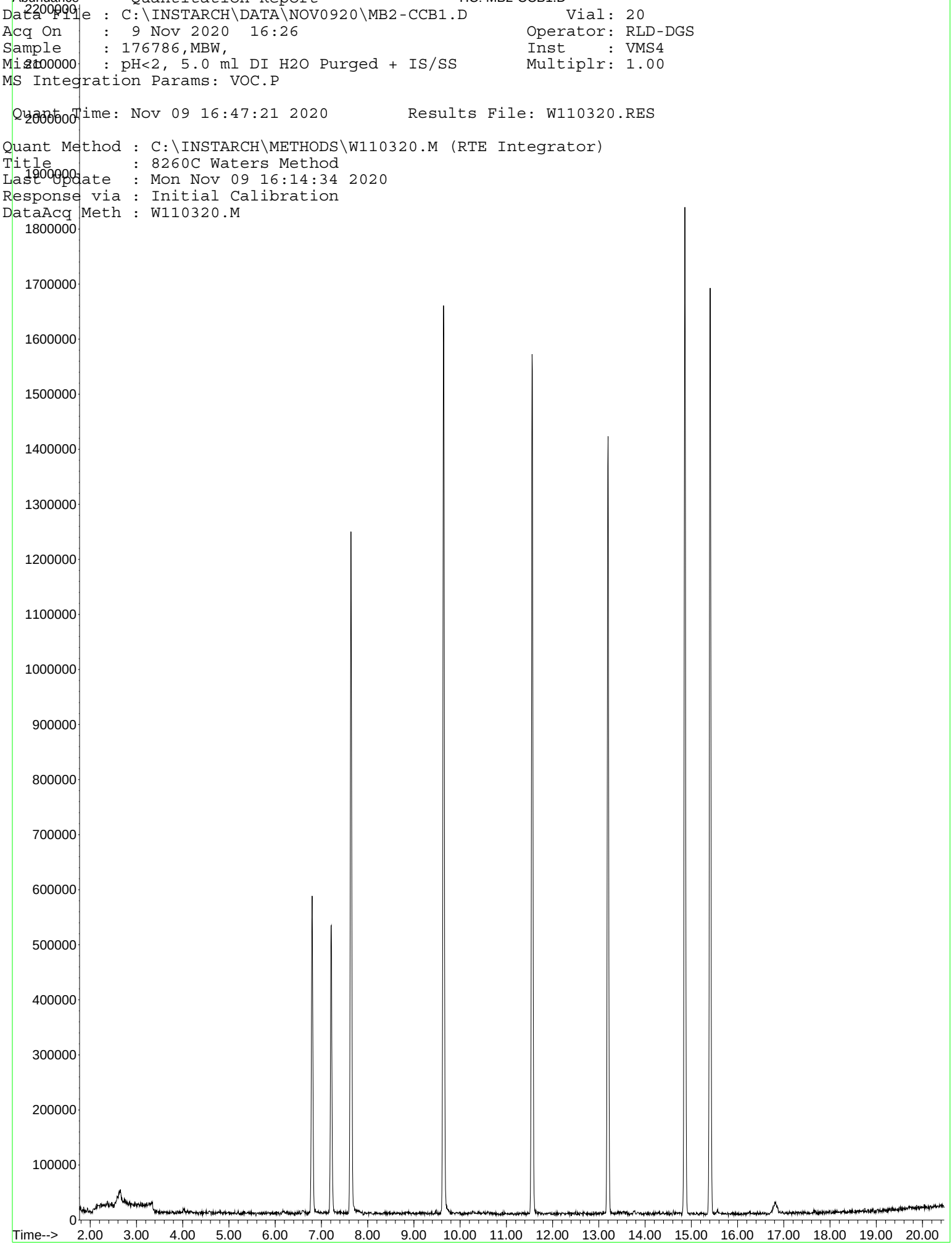
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	17.99	128	2673	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0920\MB2-CCB1.D Vial: 20
Acq On : 9 Nov 2020 16:26 Operator: RLD-DGS
Sample : 176786,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 16:47:21 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF2.D Vial: 42
Acq On : 10 Nov 2020 3:17 Operator: RLD-DGS
Sample : 176659,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 10 03:38:11 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	100	0.00
2	PT	Dichlorodi	0.2590	0.1946	24.86	72	0.00
3	PT	Chloromethan	0.2315	0.2041	11.84	90	0.00
4	PT	VinylChlorid	0.2448	0.2374	3.02	94	0.00
5	PT	Bromomethane	0.1570	0.0917#	41.59	64	0.00
6	PT	Chloroethane	0.1756	0.1567	10.76	87	0.00
7	T	Dichloroflmethane	0.4340	0.3928	9.49	89	0.00
8	PT	Trichlorofma	0.4514	0.3678	18.52	75	0.00
9	T	Ethylether	0.1533	0.1646	-7.37	109	0.00
10	T	dichlorotfluoroethan	0.2279	0.2587	-13.51	106	0.00
11	T	propyleneoxide	0.0269	0.0217#	19.33	89	0.00
12	T	Acrolein	0.0601	0.0636	-5.82	110	0.00
13	PT	11dichlorthe	0.2075	0.2073	0.10	95	0.00
14	PT	Trichlorotfluoroeth	0.2176	0.2252	-3.49	96	0.00
15	PT	Acetone	0.1056	0.0994#	5.87	103	0.00
16	T	Iodomethane	0.0623	0.0698	-12.04	134	0.00
17	PT	Carbon Dislf	0.5027	0.5104	-1.53	99	0.00
18	T	allylchloride	0.2595	0.3003	-15.72	117	0.00
19	PT	methylacetate	0.0601	0.0503#	16.31	91	0.00
20	PT	Methylchlorid	0.3533	0.3378	4.39	101	0.00
21	T	tbutylalcohol	0.0368	0.0446	-21.20	120	0.00
22	T	Acrylonitrile	0.0907	0.1066	-17.53	117	0.00
23	PT	t12dichlorte	0.2342	0.2324	0.77	105	0.00
24	PT	MtBE	0.6041	0.6222	-3.00	105	0.00
25	T	Hexane	0.2943	0.3587	-21.88	111	0.00
26	PT	11dichlorota	0.3612	0.3815	-5.62	107	0.00
27	T	Vinylacetate	0.3567	0.3407	4.49	91	0.00
28	T	chloroprene	0.2816	0.3425	-21.63	115	0.00
29	T	Diisopether	0.5784	0.6594	-14.00	116	0.00
30	T	ETBE	0.5452	0.6193	-13.59	115	0.00
31	T	22dichloropr	0.3182	0.2743	13.80	85	0.00
32	PT	c12dichlorte	0.2783	0.2719	2.30	103	0.00
33	PT	2Butanone	0.0394	0.0405#	-2.79	105	0.00
34	T	propionitrile	0.0415	0.0507	-22.17	124	0.00
35	T	Ethylacetate	0.0130	0.0118#	9.23	91	0.00
36	T	methacrylonitrile	0.1130	0.1298	-14.87	119	0.00
37	T	Bromochlorma	0.1312	0.1296	1.22	95	0.00
38	T	Tetrahydofur	0.0835	0.0954	-14.25	116	0.00
39	PT	Chloroform	0.4342	0.4531	-4.35	106	0.00
40	PT	111trichlota	0.3739	0.3898	-4.25	103	0.00
41	S	SURRDibrflma	0.3031	0.2924	3.53	96	0.00
42	PT	Cyclohexane	0.3186	0.3739	-17.36	111	0.00
43	PT	Carbtetraclo	0.3276	0.3270	0.18	96	0.00
44	T	11dicloprope	0.1237	0.1285	-3.88	101	0.00
45	S	SURR12DCAd4	0.0689	0.0660	4.21	97	0.00
46	PT	Benzene	0.8641	0.9237	-6.90	106	0.00
47	PT	12dichlorota	0.3271	0.3442	-5.23	109	0.00
48	T	TAME	0.5791	0.6102	-5.37	106	0.00

49	PT	trichloroete	0.2605	0.2767	-6.22	103	0.00
50	PT	methylcyclohexane	0.3821	0.4199	-9.89	104	0.00
51	PT	12dicloropra	0.2257	0.2575	-14.09	115	0.00
52	T	23Dicl1propene	0.3470	0.3801	-9.54	110	0.00
53	T	Dibromometha	0.1705	0.1752	-2.76	103	0.00
54	T	methylmethacrylate	0.1815	0.1902	-4.79	107	0.00
55	T	14dioxane	0.0048	0.0049#	-2.08	106	0.00
56	PT	Bromodiclrma	0.3342	0.3491	-4.46	110	0.00
57	T	2Nitropropane	0.0735	0.0809	-10.07	106	0.00
58	T	2CLEVE	0.0195	0.0051#	73.85#	32#	0.00
59	PT	c13dicloproe	0.3715	0.4008	-7.89	110	0.00
60	PT	4Meth2Pentan	0.2435	0.3027	-24.31	123	0.00
61	S	SURRd8Tolule	1.0309	1.0831	-5.06	105	0.00
62	PT	Toluene	0.6160	0.6567	-6.61	108	0.00
63	PT	t13Dicloprop	0.3269	0.3629	-11.01	111	0.00
64	T	ethylmethacrylate	0.3067	0.3721	-21.32	119	0.00
65	PT	112Triclotha	0.2004	0.2185	-9.03	112	0.00
66	PT	Tetrachlorte	0.3089	0.3279	-6.15	105	0.00
67	T	13Diclorpropa	0.3797	0.4288	-12.93	112	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	103	0.00
69	PT	2Hexanone	0.2271	0.2743	-20.78	124	0.00
70	PT	Clorodibrmta	0.3354	0.3094	7.75	99	0.00
71	PT	12Dibrometha	0.3265	0.3334	-2.11	107	0.00
72	PT	Chlorobenzen	0.8750	0.9418	-7.63	111	0.00
73	T	1Clhexane	0.3849	0.4235	-10.03	111	0.00
74	T	1112Tetclota	0.3058	0.3068	-0.33	108	0.00
75	PT	Ethylbenzene	1.2616	1.4590	-15.65	113	0.00
76	PT	m p-Xylene	0.5234	0.5778	-10.39	111	0.00
77	PT	o-Xylene	0.5315	0.5796	-9.05	109	0.00
78	PT	Styrene	0.8525	0.9369	-9.90	111	0.00
79	PT	Bromoform	0.2348	0.2127	9.41	100	0.00
80	PT	Isopropylben	1.3079	1.5204	-16.25	113	0.00
81	T	cyclohexanone	0.0156	0.0174#	-11.54	115	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	107	0.00
83	S	SURR4BrFBenz	0.8481	0.8885	-4.76	111	0.00
84	T	Bromobenzene	0.7128	0.6846	3.96	104	0.00
85	PT	1122Tetrclta	0.7469	0.7725	-3.43	108	0.00
86	T	123Triclproa	0.8451	0.9077	-7.41	113	0.00
87	T	14dichloro2butene	0.1581	0.1687	-6.70	116	0.00
88	T	n-Propylbenz	2.5360	2.8889	-13.92	112	0.00
89	T	2chlorotolue	1.5889	1.7641	-11.03	115	0.00
90	T	4chlorotolue	1.8368	1.9980	-8.78	113	0.00
91	T	135Trimebenz	1.8933	2.0915	-10.47	111	0.00
92	T	tbutylbenzen	1.7387	1.8720	-7.67	109	0.00
93	T	124Trimetben	1.8943	2.1347	-12.69	114	0.00
94	T	sbutylbenzen	2.3406	2.6659	-13.90	109	0.00
95	PT	13Diclorbenz	1.2423	1.2716	-2.36	107	0.00
96	T	pIsopropylto	2.0324	2.2667	-11.53	109	0.00
97	PT	14dichlorobe	1.2568	1.2380	1.50	103	0.00
98	PT	12dichlorobe	1.1809	1.1690	1.01	105	0.00
99	T	nButylbenzen	1.6786	1.9148	-14.07	112	0.00
100	PT	12dibromo3cl	0.2019	0.1941	3.86	111	0.00
101	T	135Trichlorobenzene	0.8533	0.9022	-5.73	107	0.00
102	PT	124Trichlobe	0.7269	0.7588	-4.39	110	0.00
103	T	Hexachlorobu	0.3642	0.4035	-10.79	122	0.00
104	T	Naphthalene	1.8488	1.9587	-5.94	109	0.00
105	T	123Trichlben	0.6789	0.6944	-2.28	109	0.00

(#) = Out of Range SPCC's out = 4 CCC's out = 0

W110320.M Thu Nov 12 07:52:19 2020

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF2.D Vial: 42
Acq On : 10 Nov 2020 3:17 Operator: RLD-DGS
Sample : 176659,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 10 03:38:11 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	100	0.00
2	PT	Dichlorodi	10.0000	7.5149	24.85	72	0.00
3	PT	Chloromethan	10.0000	8.8138	11.86	90	0.00
4	PT	VinylChlorid	10.0000	9.6986	3.01	94	0.00
5	PT	Bromomethane	10.0000	6.1656	38.34	64	0.00
6	PT	Chloroethane	10.0000	8.9230	10.77	87	0.00
7	T	Dichloroflmethane	10.0000	9.0496	9.50	89	0.00
8	PT	Trichlorofma	10.0000	8.1475	18.52	75	0.00
9	T	Ethylether	10.0000	10.7363	-7.36	109	0.00
10	T	dichlorotfluoroethan	10.0000	11.3510	-13.51	106	0.00
11	T	propyleneoxide	100.0000	80.9155	19.08	89	0.00
12	T	Acrolein	50.0000	52.9015	-5.80	110	0.00
13	PT	11dichlorthe	10.0000	9.9908	0.09	95	0.00
14	PT	Trichlorotfluoroeth	20.0000	20.6914	-3.46	96	0.00
15	PT	Acetone	100.0000	103.8294	-3.83	103	0.00
16	T	Iodomethane	20.0000	21.5365	-7.68	134	0.00
17	PT	Carbon Dislf	20.0000	20.3060	-1.53	99	0.00
18	T	allylchloride	20.0000	23.1435	-15.72	117	0.00
19	PT	methylacetate	10.0000	8.3649	16.35	91	0.00
20	PT	Methylchlorid	10.0000	9.5622	4.38	101	0.00
21	T	tbutylalcohol	500.0000	606.0692	-21.21	120	0.00
22	T	Acrylonitrile	50.0000	58.7783	-17.56	117	0.00
23	PT	t12dichlorte	10.0000	9.9225	0.78	105	0.00
24	PT	MtBE	10.0000	10.2998	-3.00	105	0.00
25	T	Hexane	20.0000	24.3787	-21.89	111	0.00
26	PT	11dichlorota	10.0000	10.5617	-5.62	107	0.00
27	T	Vinylacetate	100.0000	95.5340	4.47	91	0.00
28	T	chloroprene	20.0000	24.3294	-21.65	115	0.00
29	T	Diisopether	10.0000	11.4007	-14.01	116	0.00
30	T	ETBE	10.0000	11.3602	-13.60	115	0.00
31	T	22dichloropr	10.0000	8.6203	13.80	85	0.00
32	PT	c12dichlorte	10.0000	9.7710	2.29	103	0.00
33	PT	2Butanone	100.0000	102.8477	-2.85	105	0.00
34	T	propionitrile	100.0000	122.2163	-22.22	124	0.00
35	T	Ethylacetate	50.0000	45.2678	9.46	91	0.00
36	T	methacrylonitrile	20.0000	22.9703	-14.85	119	0.00
37	T	Bromochlorma	10.0000	9.8771	1.23	95	0.00
38	T	Tetrahydofur	100.0000	114.2832	-14.28	116	0.00
39	PT	Chloroform	10.0000	10.4343	-4.34	106	0.00
40	PT	111trichlota	10.0000	10.4276	-4.28	103	0.00
41	S	SURRDibrflma	20.0000	19.2951	3.52	96	0.00
42	PT	Cyclohexane	10.0000	11.7368	-17.37	111	0.00
43	PT	Carbtetraclo	10.0000	9.9816	0.18	96	0.00
44	T	11dicloprope	10.0000	10.3879	-3.88	101	0.00
45	S	SURR12DCAd4	20.0000	19.1659	4.17	97	0.00
46	PT	Benzene	10.0000	10.6901	-6.90	106	0.00
47	PT	12dichlorota	10.0000	10.5239	-5.24	109	0.00
48	T	TAME	10.0000	10.5384	-5.38	106	0.00

49	PT	trichloroete	10.0000	10.6198	-6.20	103	0.00
50	PT	methylcyclohexane	10.0000	10.9885	-9.89	104	0.00
51	PT	12dicloropra	10.0000	11.4123	-14.12	115	0.00
52	T	23Dicl1propene	10.0000	10.9559	-9.56	110	0.00
53	T	Dibromometha	10.0000	10.2708	-2.71	103	0.00
54	T	methylmethacrylate	10.0000	10.4772	-4.77	107	0.00
55	T	14dioxane	500.0000	512.9705	-2.59	106	0.00
56	PT	Bromodiclrma	10.0000	10.4444	-4.44	110	0.00
57	T	2Nitropropane	100.0000	110.0465	-10.05	106	0.00
58	T	2CLEVE	50.0000	18.6828	62.63#	32	0.00
59	PT	c13dicloproe	10.0000	10.7900	-7.90	110	0.00
60	PT	4Meth2Pentan	100.0000	124.3080	-24.31	123	0.00
61	S	SURRd8Tolule	20.0000	21.0125	-5.06	105	0.00
62	PT	Toluene	10.0000	10.6608	-6.61	108	0.00
63	PT	t13Dicloprop	10.0000	11.1008	-11.01	111	0.00
64	T	ethylmethacrylate	20.0000	24.2638	-21.32	119	0.00
65	PT	112Triclotha	10.0000	10.9080	-9.08	112	0.00
66	PT	Tetrachlorte	10.0000	10.6148	-6.15	105	0.00
67	T	13Diclorpropa	10.0000	11.2944	-12.94	112	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	103	0.00
69	PT	2Hexanone	100.0000	120.7901	-20.79	124	0.00
70	PT	Clorodibrmta	10.0000	9.2245	7.75	99	0.00
71	PT	12Dibrometha	10.0000	10.2104	-2.10	107	0.00
72	PT	Chlorobenzen	10.0000	10.7636	-7.64	111	0.00
73	T	1Clhexane	10.0000	11.0050	-10.05	111	0.00
74	T	1112Tetclota	10.0000	10.0336	-0.34	108	0.00
75	PT	Ethylbenzene	10.0000	11.5644	-15.64	113	0.00
76	PT	m p-Xylene	20.0000	22.0816	-10.41	111	0.00
77	PT	o-Xylene	10.0000	10.9047	-9.05	109	0.00
78	PT	Styrene	10.0000	10.9899	-9.90	111	0.00
79	PT	Bromoform	10.0000	9.0573	9.43	100	0.00
80	PT	Isopropylben	10.0000	11.6246	-16.25	113	0.00
81	T	cyclohexanone	200.0000	222.5384	-11.27	115	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	107	0.00
83	S	SURR4BrFBenz	20.0000	20.9522	-4.76	111	0.00
84	T	Bromobenzene	10.0000	9.6032	3.97	104	0.00
85	PT	1122Tetrclta	10.0000	10.3426	-3.43	108	0.00
86	T	123Triclproa	10.0000	10.7401	-7.40	113	0.00
87	T	14dichloro2butene	10.0000	10.6731	-6.73	116	0.00
88	T	n-Propylbenz	10.0000	11.3916	-13.92	112	0.00
89	T	2chlorotolue	10.0000	11.1024	-11.02	115	0.00
90	T	4chlorotolue	10.0000	10.8773	-8.77	113	0.00
91	T	135Trimebenz	10.0000	11.0464	-10.46	111	0.00
92	T	tbutylbenzen	10.0000	10.7666	-7.67	109	0.00
93	T	124Trimetben	10.0000	11.2690	-12.69	114	0.00
94	T	sbutylbenzen	10.0000	11.3902	-13.90	109	0.00
95	PT	13Diclorbenz	10.0000	10.2361	-2.36	107	0.00
96	T	pIsopropylto	10.0000	11.1531	-11.53	109	0.00
97	PT	14dichlorobe	10.0000	9.8503	1.50	103	0.00
98	PT	12dichlorobe	10.0000	9.8991	1.01	105	0.00
99	T	nButylbenzen	10.0000	11.4071	-14.07	112	0.00
100	PT	12dibromo3cl	10.0000	9.6104	3.90	111	0.00
101	T	135Trichlorobenzene	10.0000	10.5729	-5.73	107	0.00
102	PT	124Trichlobe	10.0000	10.4383	-4.38	110	0.00
103	T	Hexachlorobu	10.0000	11.0797	-10.80	122	0.00
104	T	Naphthalene	10.0000	10.5944	-5.94	109	0.00
105	T	123Trichlben	10.0000	10.2277	-2.28	109	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W110320.M Thu Nov 12 07:52:45 2020

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF2.D Vial: 42
Acq On : 10 Nov 2020 3:17 Operator: RLD-DGS
Sample : 176659,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 03:38:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1329715	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1194461	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	708316	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	388860	19.295	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 96 %			
45) SURR12DCAd4	7.21	102	87823	19.166	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 96 %			
61) SURRd8Tolule	9.64	98	1440166	21.012	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 105 %			
83) SURR4BrFBenz	13.19	95	629339	20.952	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 105 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	129383	7.5149	ug/L	99
3) Chloromethan	2.07	50	135669	8.8138	ug/L	97
4) VinylChlorid	2.21	62	157840	9.6986	ug/L	99
5) Bromomethane	2.66	94	60995	6.1656	ug/L	93
6) Chloroethane	2.83	64	104168	8.9230	ug/L	99
7) Dichloroflmethane	3.14	67	261133	9.0496	ug/L	97
8) Trichlorofma	3.21	101	244539	8.1475	ug/L	98
9) Ethylether	3.65	59	109435	10.7363	ug/L	95
10) dichlorotfluoroethan	3.67	67	171980	11.3510	ug/L	95
11) propyleneoxide	3.72	58	144515	80.9155	ug/L	92
12) Acrolein	3.79	56	211464	52.9015	ug/L	97
13) 11dichlorthe	3.92	96	137812	9.9908	ug/L	90
14) Trichlorotfluoroeth	3.96	101	299386	20.6914	ug/L	98
15) Acetone	4.02	43	660544	103.8294	ug/L	100
16) Iodomethane	4.10	127	92840	21.5365	ug/L	96
17) Carbon Dislf	4.19	76	678656	20.3060	ug/L	99
18) allylchloride	4.42	41	399318	23.1435	ug/L	89
19) methylacetate	4.48	74	33420	8.3649	ug/L	88
20) Methylchlorid	4.58	84	224602	9.5622	ug/L	97
21) tbutylalcohol	4.80	59	1480996	606.0692	ug/L	100
22) Acrylonitrile	4.90	53	354450	58.7783	ug/L	96
23) t12dichlorte	4.94	96	154496	9.9225	ug/L	96
24) MtBE	4.97	73	413692	10.2998	ug/L	96
25) Hexane	5.32	57	476968	24.3787	ug/L	96
26) 11dichlorota	5.47	63	253659	10.5617	ug/L	95
27) Vinylacetate	5.56	43	2265408	95.5340	ug/L	96
28) chloroprene	5.60	53	455440	24.3294	ug/L	92
29) Diisopether	5.61	45	438437	11.4007	ug/L	91
30) ETBE	6.06	59	411761	11.3602	ug/L	95
31) 22dichloropr	6.21	77	182350	8.6203	ug/L	97
32) c12dichlorte	6.21	96	180764	9.7710	ug/L	93
33) 2Butanone	6.23	72	269145	102.8477	ug/L	97
34) propionitrile	6.29	54	337130	122.2163	ug/L	97
35) Ethylacetate	6.34	88	39131	45.2678	ug/L #	60
36) methacrylonitrile	6.49	67	172626	22.9703	ug/L	99
37) Bromochlorma	6.50	128	86148	9.8771	ug/L #	88
38) Tetrahydofur	6.58	42	634564	114.2832	ug/L	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF2.D Vial: 42
Acq On : 10 Nov 2020 3:17 Operator: RLD-DGS
Sample : 176659,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 03:38:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.60	83	301228	10.4343	ug/L		98
40)	111trichlota	6.84	97	259189	10.4276	ug/L		96
42)	Cyclohexane	6.91	56	248580	11.7368	ug/L		91
43)	Carbtetraclo	7.05	119	217438	9.9816	ug/L		97
44)	11dicloprope	7.04	110	85436	10.3879	ug/L		98
46)	Benzene	7.29	78	614140	10.6901	ug/L		97
47)	12dichlorota	7.30	62	228851	10.5239	ug/L		98
48)	TAME	7.46	73	405723	10.5384	ug/L		95
49)	trichloroete	8.10	95	183934	10.6198	ug/L		99
50)	methylcyclohexane	8.34	83	279190	10.9885	ug/L		92
51)	12dicloropra	8.38	63	171226	11.4123	ug/L		87
52)	23Dicl1propene	8.43	75	252724	10.9559	ug/L		100
53)	Dibromometha	8.52	93	116460	10.2708	ug/L		98
54)	methylmethacrylate	8.54	69	126435	10.4772	ug/L		99
55)	14dioxane	8.56	88	162096	512.9705	ug/L		88
56)	Bromodiclrma	8.71	83	232088	10.4444	ug/L		94
57)	2Nitropropane	8.99	43	538007	110.0465	ug/L		96
58)	2CLEVE	9.11	63	16863	18.6828	ug/L		94
59)	c13dicloproe	9.29	75	266478	10.7900	ug/L		96
60)	4Meth2Pentan	9.49	43	2012514	124.3080	ug/L		99
62)	Toluene	9.73	92	436632	10.6608	ug/L		97
63)	t13Dicloprop	10.01	75	241250	11.1008	ug/L		94
64)	ethylmethacrylate	10.14	69	494846	24.2638	ug/L		96
65)	112Triclotha	10.24	83	145301	10.9080	ug/L		98
66)	Tetrachlorte	10.46	166	217995	10.6148	ug/L		97
67)	13Diclorpropa	10.46	76	285110	11.2944	ug/L		100
69)	2Hexanone	10.58	43	1638358	120.7901	ug/L		99
70)	Clorodibrmta	10.77	129	184774	9.2245	ug/L		95
71)	12Dibrometha	10.92	107	199128	10.2104	ug/L		99
72)	Chlorobenzen	11.60	112	562490	10.7636	ug/L		97
73)	1Clhexane	11.57	91	252948	11.0050	ug/L		92
74)	1112Tetclota	11.71	131	183260	10.0336	ug/L		98
75)	Ethylbenzene	11.75	91	871347	11.5644	ug/L		98
76)	m p-Xylene	11.92	106	690193	22.0816	ug/L		98
77)	o-Xylene	12.47	106	346174	10.9047	ug/L		93
78)	Styrene	12.48	104	559566	10.9899	ug/L		96
79)	Bromoform	12.72	173	127024	9.0573	ug/L		100
80)	Isopropylben	12.99	105	908032	11.6246	ug/L		99
81)	cyclohexanone	13.10	55	207569	222.5384	ug/L		93
84)	Bromobenzene	13.41	156	242441	9.6032	ug/L	#	88
85)	1122Tetrclta	13.39	83	273589	10.3426	ug/L		98
86)	123Triclproa	13.45	75	321466	10.7401	ug/L		98
87)	14dichloro2butene	13.47	53	59761	10.6731	ug/L		90
88)	n-Propylbenz	13.58	91	1023115	11.3916	ug/L		98
89)	2chlorotolue	13.69	91	624772	11.1024	ug/L		95
90)	4chlorotolue	13.84	91	707591	10.8773	ug/L		95
91)	135Trimebenz	13.83	105	740705	11.0464	ug/L		100
92)	tbutylbenzen	14.30	119	662981	10.7666	ug/L		97
93)	124Trimetben	14.37	105	756016	11.2690	ug/L		95
94)	sbutylbenzen	14.62	105	944164	11.3902	ug/L		98
95)	13Diclorbenz	14.77	146	450344	10.2361	ug/L		99
96)	pIsopropylto	14.84	119	802785	11.1531	ug/L		96
97)	14dichlorobe	14.89	146	438448	9.8503	ug/L		98
98)	12dichlorobe	15.44	146	414003	9.8991	ug/L		99
99)	nButylbenzen	15.43	91	678156	11.4071	ug/L		97
100)	12dibromo3cl	16.55	157	68735	9.6104	ug/L		92
101)	135Trichlorobenzene	16.86	180	319512	10.5729	ug/L		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF2.D Vial: 42
Acq On : 10 Nov 2020 3:17 Operator: RLD-DGS
Sample : 176659,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 03:38:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

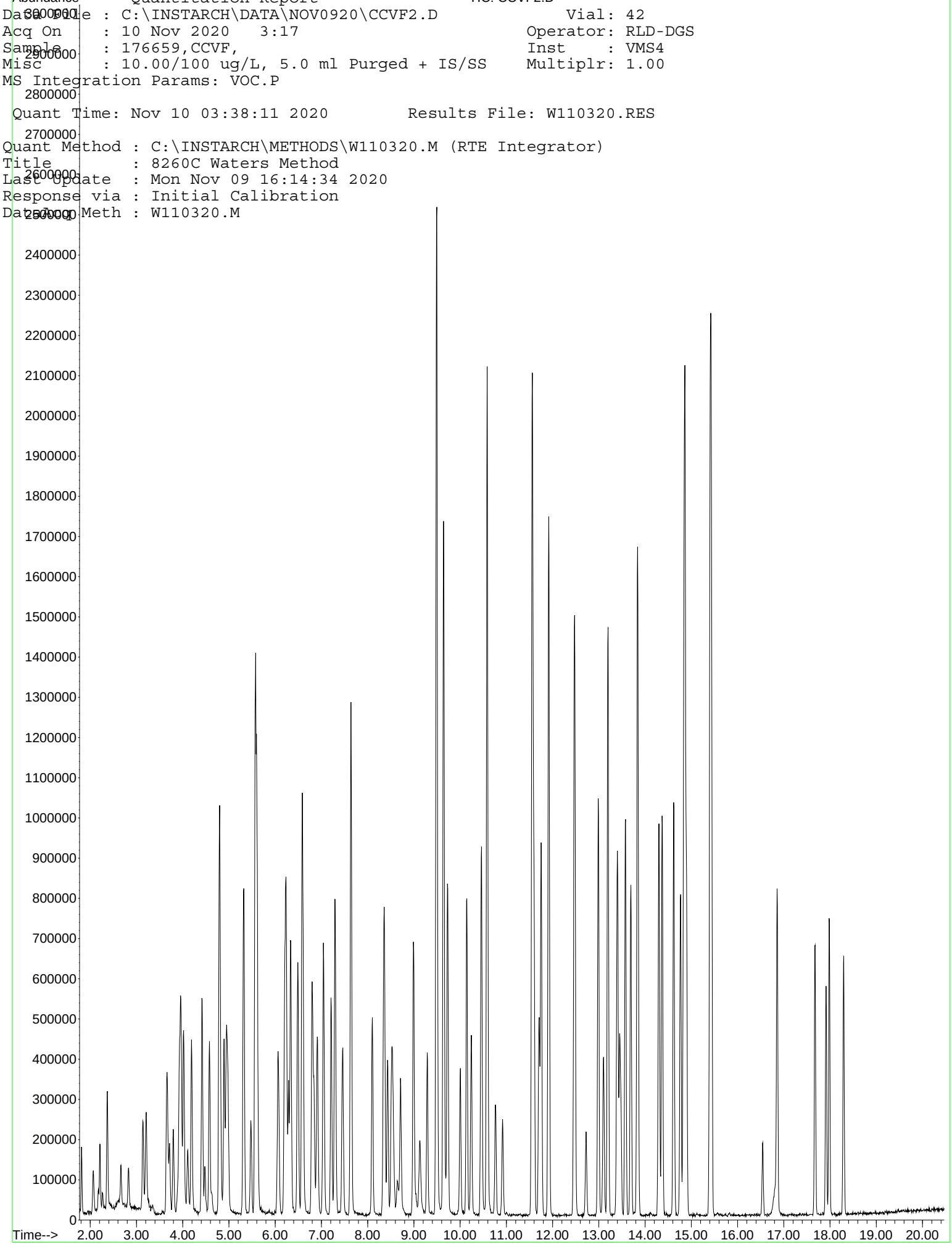
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.68	180	268734	10.4383	ug/L	97
103) Hexachlorobu	17.91	225	142911	11.0797	ug/L	96
104) Naphthalene	17.99	128	693681	10.5944	ug/L	99
105) 123Trichlben	18.30	180	245915	10.2277	ug/L	96

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0920\CCVF2.D Vial: 42
Acq On : 10 Nov 2020 3:17 Operator: RLD-DGS
Sample : 176659,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 03:38:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
Data Path Meth : W110320.M



Data File : C:\Instarch\Data\NOV0920\BFB3.D Vial: 43
Acq On : 10 Nov 2020 7:50 Operator: RLD-DGS
Sample : 176913,BFB, Inst : VMS4
Misc : 50 ng Injection Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110320.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.596 to 4.608 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.9	18937	PASS
75	95	30	60	54.3	54325	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	5.5	5541	PASS
173	174	0.00	2	0.9	774	PASS
174	95	50	100	85.1	85137	PASS
175	174	5	9	6.0	5121	PASS
176	174	95	101	96.8	82446	PASS
177	176	5	9	7.2	5917	PASS

W110320.M Thu Nov 12 07:41:35 2020

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS3.D Vial: 44
Acq On : 10 Nov 2020 8:11 Operator: RLD-DGS
Sample : 176913,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 10 08:35:16 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	99	0.00
2	PT	Dichlorodi	0.2590	0.2145	17.18	79	0.00
3	PT	Chloromethan	0.2315	0.2075	10.37	92	0.00
4	PT	VinylChlorid	0.2448	0.2511	-2.57	99	0.00
5	PT	Bromomethane	0.1570	0.1131	27.96#	79	0.00
6	PT	Chloroethane	0.1756	0.1583	9.85	88	0.00
7	T	Dichloroflmethane	0.4340	0.3926	9.54	88	0.00
8	PT	Trichlorofma	0.4514	0.3697	18.10	75	0.00
9	T	Ethylether	0.1533	0.1576	-2.80	104	-0.01
10	T	dichlorotfluoroethan	0.2279	0.2585	-13.43	106	0.00
11	T	propyleneoxide	0.0269	0.0222#	17.47	91	0.00
12	T	Acrolein	0.0601	0.0680	-13.14	118	0.00
13	PT	11dichlorthe	0.2075	0.2067	0.39	94	0.00
14	PT	Trichlorotfluoroeth	0.2176	0.2323	-6.76	99	0.00
15	PT	Acetone	0.1056	0.0993#	5.97	102	0.00
16	T	Iodomethane	0.0623	0.0641	-2.89	123	0.00
17	PT	Carbon Dislf	0.5027	0.5311	-5.65	102	0.00
18	T	allylchloride	0.2595	0.2980	-14.84	116	0.00
19	PT	methylacetate	0.0601	0.0622#	-3.49	113	0.00
20	PT	Methylchlorid	0.3533	0.3429	2.94	102	0.00
21	T	tbutylalcohol	0.0368	0.0443	-20.38#	119	0.00
22	T	Acrylonitrile	0.0907	0.1043	-14.99	114	0.00
23	PT	t12dichlorte	0.2342	0.2379	-1.58	107	0.00
24	PT	MtBE	0.6041	0.5914	2.10	100	0.00
25	T	Hexane	0.2943	0.3669	-24.67#	113	0.00
26	PT	11dichlorota	0.3612	0.3879	-7.39	109	0.00
27	T	Vinylacetate	0.3567	0.3679	-3.14	98	0.00
28	T	chloroprene	0.2816	0.3369	-19.64	113	0.00
29	T	Diisopether	0.5784	0.6498	-12.34	114	0.00
30	T	ETBE	0.5452	0.6065	-11.24	112	0.00
31	T	22dichloropr	0.3182	0.3427	-7.70	106	0.00
32	PT	c12dichlorte	0.2783	0.2686	3.49	101	0.00
33	PT	2Butanone	0.0394	0.0404#	-2.54	104	0.00
34	T	propionitrile	0.0415	0.0492	-18.55	120	0.00
35	T	Ethylacetate	0.0130	0.0133#	-2.31	102	0.00
36	T	methacrylonitrile	0.1130	0.1219	-7.88	111	0.00
37	T	Bromochlorma	0.1312	0.1273	2.97	93	0.00
38	T	Tetrahydofur	0.0835	0.0916	-9.70	111	0.00
39	PT	Chloroform	0.4342	0.4552	-4.84	106	0.00
40	PT	111trichlota	0.3739	0.3842	-2.75	101	0.00
41	S	SURRDibrflma	0.3031	0.2945	2.84	97	0.00
42	PT	Cyclohexane	0.3186	0.3638	-14.19	108	0.00
43	PT	Carbtetraclo	0.3276	0.3343	-2.05	98	0.00
44	T	11dicloprope	0.1237	0.1268	-2.51	100	0.00
45	S	SURR12DCAd4	0.0689	0.0675	2.03	99	0.00
46	PT	Benzene	0.8641	0.9153	-5.93	105	0.00
47	PT	12dichlorota	0.3271	0.3345	-2.26	106	0.00
48	T	TAME	0.5791	0.6131	-5.87	106	0.00

49	PT	trichloroete	0.2605	0.2716	-4.26	101	0.00
50	PT	methylcyclohexane	0.3821	0.4261	-11.52	105	0.00
51	PT	12dicloropra	0.2257	0.2644	-17.15	118	0.00
52	T	23Dicl1propene	0.3470	0.3770	-8.65	108	0.00
53	T	Dibromometha	0.1705	0.1710	-0.29	100	0.00
54	T	methylmethacrylate	0.1815	0.2007	-10.58	113	0.00
55	T	14dioxane	0.0048	0.0047#	2.08	101	0.00
56	PT	Bromodiclrma	0.3342	0.3542	-5.98	111	0.00
57	T	2Nitropropane	0.0735	0.0842	-14.56	111	0.00
58	T	2CLEVE	0.0195	0.0041#	78.97#	26#	0.00
59	PT	c13dicloproe	0.3715	0.4004	-7.78	110	0.00
60	PT	4Meth2Pentan	0.2435	0.2884	-18.44	117	0.00
61	S	SURRd8Tolule	1.0309	1.0647	-3.28	103	0.00
62	PT	Toluene	0.6160	0.6621	-7.48	108	0.00
63	PT	t13Dicloprop	0.3269	0.3506	-7.25	107	0.00
64	T	ethylmethacrylate	0.3067	0.3570	-16.40	114	0.00
65	PT	112Triclotha	0.2004	0.2144	-6.99	109	0.00
66	PT	Tetrachlorte	0.3089	0.3378	-9.36	108	0.00
67	T	13Diclorpropa	0.3797	0.4180	-10.09	109	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	103	0.00
69	PT	2Hexanone	0.2271	0.2656	-16.95	121	0.00
70	PT	Clorodibrmta	0.3354	0.3154	5.96	101	0.00
71	PT	12Dibrometha	0.3265	0.3122	4.38	101	0.00
72	PT	Chlorobenzen	0.8750	0.9159	-4.67	108	0.00
73	T	1Clhexane	0.3849	0.4264	-10.78	113	0.00
74	T	1112Tetclota	0.3058	0.3026	1.05	107	0.00
75	PT	Ethylbenzene	1.2616	1.4180	-12.40	111	0.00
76	PT	m p-Xylene	0.5234	0.5594	-6.88	108	0.00
77	PT	o-Xylene	0.5315	0.5614	-5.63	106	0.00
78	PT	Styrene	0.8525	0.9160	-7.45	109	0.00
79	PT	Bromoform	0.2348	0.2117	9.84	100	0.00
80	PT	Isopropylben	1.3079	1.4768	-12.91	110	0.00
81	T	cyclohexanone	0.0156	0.0165#	-5.77	109	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	102	0.00
83	S	SURR4BrFBenz	0.8481	0.9019	-6.34	108	0.00
84	T	Bromobenzene	0.7128	0.7030	1.37	103	0.00
85	PT	1122Tetrclta	0.7469	0.8034	-7.56	108	0.00
86	T	123Triclproa	0.8451	0.9416	-11.42	112	0.00
87	T	14dichloro2butene	0.1581	0.1750	-10.69	115	0.00
88	T	n-Propylbenz	2.5360	2.9675	-17.01	110	0.00
89	T	2chlorotolue	1.5889	1.7929	-12.84	112	0.00
90	T	4chlorotolue	1.8368	2.0433	-11.24	111	0.00
91	T	135Trimebenz	1.8933	2.1124	-11.57	107	0.00
92	T	tbutylbenzen	1.7387	1.9285	-10.92	107	0.00
93	T	124Trimetben	1.8943	2.1493	-13.46	110	0.00
94	T	sbutylbenzen	2.3406	2.7164	-16.06	107	0.00
95	PT	13Diclorbenz	1.2423	1.2597	-1.40	102	0.00
96	T	pIsopropylto	2.0324	2.3381	-15.04	108	0.00
97	PT	14dichlorobe	1.2568	1.2481	0.69	100	0.00
98	PT	12dichlorobe	1.1809	1.1583	1.91	100	0.00
99	T	nButylbenzen	1.6786	1.9304	-15.00	108	0.00
100	PT	12dibromo3cl	0.2019	0.1922	4.80	105	0.00
101	T	135Trichlorobenzene	0.8533	0.9029	-5.81	103	0.00
102	PT	124Trichlobe	0.7269	0.7682	-5.68	106	0.00
103	T	Hexachlorobu	0.3642	0.4150	-13.95	121	0.00
104	T	Naphthalene	1.8488	1.8731	-1.31	99	0.00
105	T	123Trichlben	0.6789	0.6891	-1.50	103	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W110320.M Thu Nov 12 07:50:40 2020

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS3.D Vial: 44
Acq On : 10 Nov 2020 8:11 Operator: RLD-DGS
Sample : 176913,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 10 08:35:16 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	99	0.00
2	PT	Dichlorodi	10.0000	8.2840	17.16	79	0.00
3	PT	Chloromethan	10.0000	8.9612	10.39	92	0.00
4	PT	VinylChlorid	10.0000	10.2590	-2.59	99	0.00
5	PT	Bromomethane	10.0000	8.2614	17.39	79	0.00
6	PT	Chloroethane	10.0000	9.0126	9.87	88	0.00
7	T	Dichloroflmethane	10.0000	9.0459	9.54	88	0.00
8	PT	Trichlorofma	10.0000	8.1885	18.12	75	0.00
9	T	Ethylether	10.0000	10.2826	-2.83	104	-0.01
10	T	dichlorotfluoroethan	10.0000	11.3416	-13.42	106	0.00
11	T	propyleneoxide	100.0000	82.6021	17.40	91	0.00
12	T	Acrolein	50.0000	56.5251	-13.05	118	0.00
13	PT	11dichlorthe	10.0000	9.9651	0.35	94	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.3458	-6.73	99	0.00
15	PT	Acetone	100.0000	103.7169	-3.72	102	0.00
16	T	Iodomethane	20.0000	20.1956	-0.98	123	0.00
17	PT	Carbon Dislf	20.0000	21.1315	-5.66	102	0.00
18	T	allylchloride	20.0000	22.9672	-14.84	116	0.00
19	PT	methylacetate	10.0000	10.3526	-3.53	113	0.00
20	PT	Methylchlorid	10.0000	9.7057	2.94	102	0.00
21	T	tbutylalcohol	500.0000	602.3741	-20.47#	119	0.00
22	T	Acrylonitrile	50.0000	57.4755	-14.95	114	0.00
23	PT	t12dichlorte	10.0000	10.1597	-1.60	107	0.00
24	PT	MtBE	10.0000	9.7887	2.11	100	0.00
25	T	Hexane	20.0000	24.9354	-24.68#	113	0.00
26	PT	11dichlorota	10.0000	10.7374	-7.37	109	0.00
27	T	Vinylacetate	100.0000	103.1377	-3.14	98	0.00
28	T	chloroprene	20.0000	23.9296	-19.65	113	0.00
29	T	Diisopether	10.0000	11.2337	-12.34	114	0.00
30	T	ETBE	10.0000	11.1243	-11.24	112	0.00
31	T	22dichloropr	10.0000	10.7706	-7.71	106	0.00
32	PT	c12dichlorte	10.0000	9.6532	3.47	101	0.00
33	PT	2Butanone	100.0000	102.6233	-2.62	104	0.00
34	T	propionitrile	100.0000	118.6574	-18.66	120	0.00
35	T	Ethylacetate	50.0000	51.0722	-2.14	102	0.00
36	T	methacrylonitrile	20.0000	21.5714	-7.86	111	0.00
37	T	Bromochlorma	10.0000	9.7026	2.97	93	0.00
38	T	Tetrahydofur	100.0000	109.6306	-9.63	111	0.00
39	PT	Chloroform	10.0000	10.4835	-4.83	106	0.00
40	PT	111trichlota	10.0000	10.2755	-2.75	101	0.00
41	S	SURRDibrflma	20.0000	19.4281	2.86	97	0.00
42	PT	Cyclohexane	10.0000	11.4210	-14.21	108	0.00
43	PT	Carbtetraclo	10.0000	10.2041	-2.04	98	0.00
44	T	11dicloprope	10.0000	10.2494	-2.49	100	0.00
45	S	SURR12DCAd4	20.0000	19.5914	2.04	99	0.00
46	PT	Benzene	10.0000	10.5928	-5.93	105	0.00
47	PT	12dichlorota	10.0000	10.2271	-2.27	106	0.00
48	T	TAME	10.0000	10.5883	-5.88	106	0.00

49	PT	trichloroete	10.0000	10.4270	-4.27	101	0.00
50	PT	methylcyclohexane	10.0000	11.1489	-11.49	105	0.00
51	PT	12dicloropra	10.0000	11.7181	-17.18	118	0.00
52	T	23Dicl1propene	10.0000	10.8665	-8.67	108	0.00
53	T	Dibromometha	10.0000	10.0277	-0.28	100	0.00
54	T	methylmethacrylate	10.0000	11.0587	-10.59	113	0.00
55	T	14dioxane	500.0000	489.2080	2.16	101	0.00
56	PT	Bromodiclrma	10.0000	10.5982	-5.98	111	0.00
57	T	2Nitropropane	100.0000	114.5123	-14.51	111	0.00
58	T	2CLEVE	50.0000	16.0826	67.83#	26	0.00
59	PT	c13dicloproe	10.0000	10.7800	-7.80	110	0.00
60	PT	4Meth2Pentan	100.0000	118.4552	-18.46	117	0.00
61	S	SURRd8Tolule	20.0000	20.6564	-3.28	103	0.00
62	PT	Toluene	10.0000	10.7479	-7.48	108	0.00
63	PT	t13Dicloprop	10.0000	10.7254	-7.25	107	0.00
64	T	ethylmethacrylate	20.0000	23.2751	-16.38	114	0.00
65	PT	112Triclotha	10.0000	10.7017	-7.02	109	0.00
66	PT	Tetrachlorte	10.0000	10.9358	-9.36	108	0.00
67	T	13Diclorpropa	10.0000	11.0104	-10.10	109	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	103	0.00
69	PT	2Hexanone	100.0000	116.9510	-16.95	121	0.00
70	PT	Clorodibrmta	10.0000	9.4044	5.96	101	0.00
71	PT	12Dibrometha	10.0000	9.5597	4.40	101	0.00
72	PT	Chlorobenzen	10.0000	10.4668	-4.67	108	0.00
73	T	1Clhexane	10.0000	11.0792	-10.79	113	0.00
74	T	1112Tetclota	10.0000	9.8935	1.07	107	0.00
75	PT	Ethylbenzene	10.0000	11.2399	-12.40	111	0.00
76	PT	m p-Xylene	20.0000	21.3766	-6.88	108	0.00
77	PT	o-Xylene	10.0000	10.5624	-5.62	106	0.00
78	PT	Styrene	10.0000	10.7446	-7.45	109	0.00
79	PT	Bromoform	10.0000	9.0158	9.84	100	0.00
80	PT	Isopropylben	10.0000	11.2910	-12.91	110	0.00
81	T	cyclohexanone	200.0000	210.8952	-5.45	109	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	102	0.00
83	S	SURR4BrFBenz	20.0000	21.2679	-6.34	108	0.00
84	T	Bromobenzene	10.0000	9.8626	1.37	103	0.00
85	PT	1122Tetrclta	10.0000	10.7559	-7.56	108	0.00
86	T	123Triclproa	10.0000	11.1416	-11.42	112	0.00
87	T	14dichloro2butene	10.0000	11.0712	-10.71	115	0.00
88	T	n-Propylbenz	10.0000	11.7017	-17.02	110	0.00
89	T	2chlorotolue	10.0000	11.2837	-12.84	112	0.00
90	T	4chlorotolue	10.0000	11.1240	-11.24	111	0.00
91	T	135Trimebenz	10.0000	11.1573	-11.57	107	0.00
92	T	tbutylbenzen	10.0000	11.0914	-10.91	107	0.00
93	T	124Trimetben	10.0000	11.3463	-13.46	110	0.00
94	T	sbutylbenzen	10.0000	11.6057	-16.06	107	0.00
95	PT	13Diclorbenz	10.0000	10.1403	-1.40	102	0.00
96	T	pIsopropylto	10.0000	11.5043	-15.04	108	0.00
97	PT	14dichlorobe	10.0000	9.9310	0.69	100	0.00
98	PT	12dichlorobe	10.0000	9.8091	1.91	100	0.00
99	T	nButylbenzen	10.0000	11.4999	-15.00	108	0.00
100	PT	12dibromo3cl	10.0000	9.5183	4.82	105	0.00
101	T	135Trichlorobenzene	10.0000	10.5812	-5.81	103	0.00
102	PT	124Trichlobe	10.0000	10.5672	-5.67	106	0.00
103	T	Hexachlorobu	10.0000	11.3943	-13.94	121	0.00
104	T	Naphthalene	10.0000	10.1316	-1.32	99	0.00
105	T	123Trichlben	10.0000	10.1503	-1.50	103	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W110320.M Thu Nov 12 07:51:02 2020

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS3.D Vial: 44
Acq On : 10 Nov 2020 8:11 Operator: RLD-DGS
Sample : 176913,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 08:35:16 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:22:15 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1326746	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1199750	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	678814	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	390666	19.428	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 97 %			
45) SURR12DCAd4	7.21	102	89572	19.591	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
61) SURRd8Tolule	9.64	98	1412598	20.656	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 103 %			
83) SURR4BrFBenz	13.19	95	612213	21.268	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 106 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	142306	8.2840	ug/L	100
3) Chloromethan	2.06	50	137630	8.9612	ug/L	99
4) VinylChlorid	2.21	62	166588	10.2590	ug/L	98
5) Bromomethane	2.66	94	75018	8.2614	ug/L	99
6) Chloroethane	2.83	64	104979	9.0126	ug/L	98
7) Dichloroflmethane	3.13	67	260444	9.0459	ug/L	99
8) Trichlorofma	3.20	101	245222	8.1885	ug/L	95
9) Ethylether	3.65	59	104576	10.2826	ug/L	90
10) dichlorotfluoroethan	3.67	67	171453	11.3416	ug/L	94
11) propyleneoxide	3.71	58	147198	82.6021	ug/L	96
12) Acrolein	3.79	56	225444	56.5251	ug/L	100
13) 11dichlorthe	3.92	96	137151	9.9651	ug/L #	85
14) Trichlorotfluoroeth	3.96	101	308165	21.3458	ug/L	97
15) Acetone	4.01	43	658410	103.7169	ug/L	98
16) Iodomethane	4.11	127	85062	20.1956	ug/L	99
17) Carbon Dislf	4.19	76	704670	21.1315	ug/L	99
18) allylchloride	4.41	41	395391	22.9672	ug/L	90
19) methylacetate	4.48	74	41269	10.3526	ug/L	99
20) Methylchlorid	4.58	84	227464	9.7057	ug/L	96
21) tbutylalcohol	4.79	59	1468680	602.3741	ug/L	98
22) Acrylonitrile	4.90	53	345820	57.4755	ug/L	98
23) t12dichlorte	4.94	96	157835	10.1597	ug/L	96
24) MtBE	4.97	73	392286	9.7887	ug/L	97
25) Hexane	5.32	57	486772	24.9354	ug/L	97
26) 11dichlorota	5.47	63	257303	10.7374	ug/L	97
27) Vinylacetate	5.56	43	2440255	103.1377	ug/L	96
28) chloroprene	5.60	53	446955	23.9296	ug/L	89
29) Diisopether	5.61	45	431047	11.2337	ug/L	90
30) ETBE	6.06	59	402310	11.1243	ug/L	93
31) 22dichloropr	6.21	77	227328	10.7706	ug/L	97
32) c12dichlorte	6.20	96	178186	9.6532	ug/L	89
33) 2Butanone	6.23	72	267958	102.6233	ug/L	96
34) propionitrile	6.29	54	326582	118.6574	ug/L	96
35) Ethylacetate	6.33	88	44050	51.0722	ug/L #	83
36) methacrylonitrile	6.48	67	161751	21.5714	ug/L	93
37) Bromochlorma	6.50	128	84437	9.7026	ug/L #	87
38) Tetrahydofur	6.58	42	607371	109.6306	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS3.D Vial: 44
Acq On : 10 Nov 2020 8:11 Operator: RLD-DGS
Sample : 176913,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 08:35:16 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:22:15 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.60	83	301971	10.4835	ug/L	97
40)	111trichlota	6.84	97	254838	10.2755	ug/L	98
42)	Cyclohexane	6.91	56	241352	11.4210	ug/L	95
43)	Carbtetraclo	7.04	119	221787	10.2041	ug/L	100
44)	11dicloprope	7.04	110	84108	10.2494	ug/L	98
46)	Benzene	7.29	78	607188	10.5928	ug/L	97
47)	12dichlorota	7.30	62	221900	10.2271	ug/L	97
48)	TAME	7.46	73	406734	10.5883	ug/L	94
49)	trichloroete	8.10	95	180191	10.4270	ug/L	99
50)	methylcyclohexane	8.35	83	282634	11.1489	ug/L	95
51)	12dicloropra	8.36	63	175421	11.7181	ug/L	94
52)	23Dicl1propene	8.43	75	250101	10.8665	ug/L	98
53)	Dibromometha	8.51	93	113449	10.0277	ug/L	94
54)	methylmethacrylate	8.53	69	133154	11.0587	ug/L	97
55)	14dioxane	8.56	88	154242	489.2080	ug/L	89
56)	Bromodiclrma	8.71	83	234979	10.5982	ug/L	93
57)	2Nitropropane	8.99	43	558590	114.5123	ug/L	98
58)	2CLEVE	9.11	63	13565	16.0826	ug/L	85
59)	c13dicloproe	9.29	75	265638	10.7800	ug/L	96
60)	4Meth2Pentan	9.49	43	1913476	118.4552	ug/L	98
62)	Toluene	9.73	92	439217	10.7479	ug/L	98
63)	t13Dicloprop	10.01	75	232571	10.7254	ug/L	95
64)	ethylmethacrylate	10.15	69	473622	23.2751	ug/L	96
65)	112Triclotha	10.24	83	142235	10.7017	ug/L	97
66)	Tetrachlorte	10.46	166	224086	10.9358	ug/L	96
67)	13Diclorpropa	10.47	76	277321	11.0104	ug/L	99
69)	2Hexanone	10.59	43	1593310	116.9510	ug/L	98
70)	Clorodibrmta	10.77	129	189213	9.4044	ug/L	99
71)	12Dibrometha	10.92	107	187264	9.5597	ug/L	100
72)	Chlorobenzen	11.59	112	549401	10.4668	ug/L	99
73)	1Clhexane	11.57	91	255780	11.0792	ug/L	93
74)	1112Tetclota	11.71	131	181502	9.8935	ug/L	100
75)	Ethylbenzene	11.75	91	850644	11.2399	ug/L	100
76)	m p-Xylene	11.92	106	671115	21.3766	ug/L	96
77)	o-Xylene	12.46	106	336793	10.5624	ug/L	92
78)	Styrene	12.48	104	549496	10.7446	ug/L	97
79)	Bromoform	12.73	173	127002	9.0158	ug/L	99
80)	Isopropylben	12.99	105	885877	11.2910	ug/L	99
81)	cyclohexanone	13.10	55	197580	210.8952	ug/L	95
84)	Bromobenzene	13.41	156	238620	9.8626	ug/L	92
85)	1122Tetrclta	13.39	83	272672	10.7559	ug/L	96
86)	123Triclproa	13.46	75	319593	11.1416	ug/L	92
87)	14dichloro2butene	13.48	53	59408	11.0712	ug/L	90
88)	n-Propylbenz	13.57	91	1007196	11.7017	ug/L	98
89)	2chlorotolue	13.69	91	608532	11.2837	ug/L	94
90)	4chlorotolue	13.84	91	693500	11.1240	ug/L	96
91)	135Trimebenz	13.84	105	716979	11.1573	ug/L	100
92)	tbutylbenzen	14.30	119	654540	11.0914	ug/L	99
93)	124Trimetben	14.37	105	729495	11.3463	ug/L	97
94)	sbutylbenzen	14.62	105	921960	11.6057	ug/L	98
95)	13Diclorbenz	14.76	146	427546	10.1403	ug/L	98
96)	pIsopropylto	14.83	119	793573	11.5043	ug/L	96
97)	14dichlorobe	14.90	146	423630	9.9310	ug/L	99
98)	12dichlorobe	15.44	146	393150	9.8091	ug/L	98
99)	nButylbenzen	15.44	91	655200	11.4999	ug/L	98
100)	12dibromo3cl	16.55	157	65241	9.5183	ug/L	96
101)	135Trichlorobenzene	16.86	180	306445	10.5812	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS3.D Vial: 44
Acq On : 10 Nov 2020 8:11 Operator: RLD-DGS
Sample : 176913,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 08:35:16 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:22:15 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

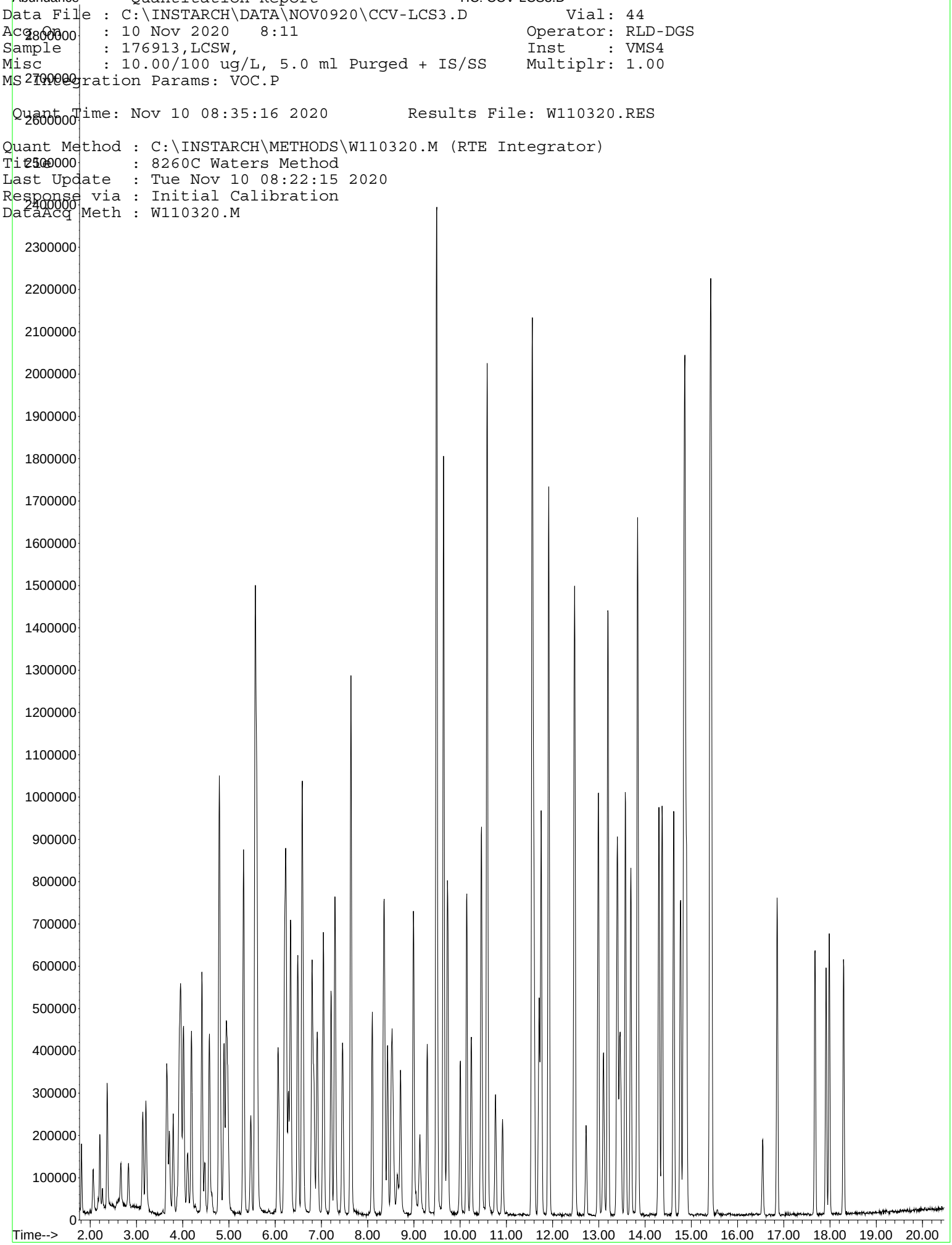
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.68	180	260720	10.5672	ug/L	96
103) Hexachlorobu	17.91	225	140848	11.3943	ug/L	98
104) Naphthalene	17.98	128	635754	10.1316	ug/L	99
105) 123Trichlben	18.30	180	233890	10.1503	ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS3.D Vial: 44
Acq On : 10 Nov 2020 8:11 Operator: RLD-DGS
Sample : 176913,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 08:35:16 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:22:15 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\MB3-CCB2.D Vial: 46
Acq On : 10 Nov 2020 9:10 Operator: RLD-DGS
Sample : 176913,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 09:31:07 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1333143	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1228443	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	695831	20.00	ug/L	0.00 NA%

System Monitoring Compounds							
41) SURRDibrflma	6.80	113	404396	20.014	ug/L	0.00	
Spiked Amount 20.000	Range 88 - 112		Recovery = 100 %				
45) SURR12DCAd4	7.21	102	92424	20.118	ug/L	0.00	
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %				
61) SURRd8Tolule	9.64	98	1395935	20.315	ug/L	0.00	
Spiked Amount 20.000	Range 88 - 116		Recovery = 102 %				
83) SURR4BrFBenz	13.20	95	629906	21.347	ug/L	0.00	
Spiked Amount 20.000	Range 86 - 111		Recovery = 107 %				

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	2.67	94	3054	Below Cal #	38
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.03	43	10847	Below Cal	90
16) Iodomethane	0.00	127	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.62	42	3994	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\MB3-CCB2.D Vial: 46
Acq On : 10 Nov 2020 9:10 Operator: RLD-DGS
Sample : 176913,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 09:31:07 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.50	43	2599	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.59	43	4042	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.56	91	2617	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.84	119	2879	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\MB3-CCB2.D Vial: 46
Acq On : 10 Nov 2020 9:10 Operator: RLD-DGS
Sample : 176913,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 09:31:07 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	17.98	128	4815	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

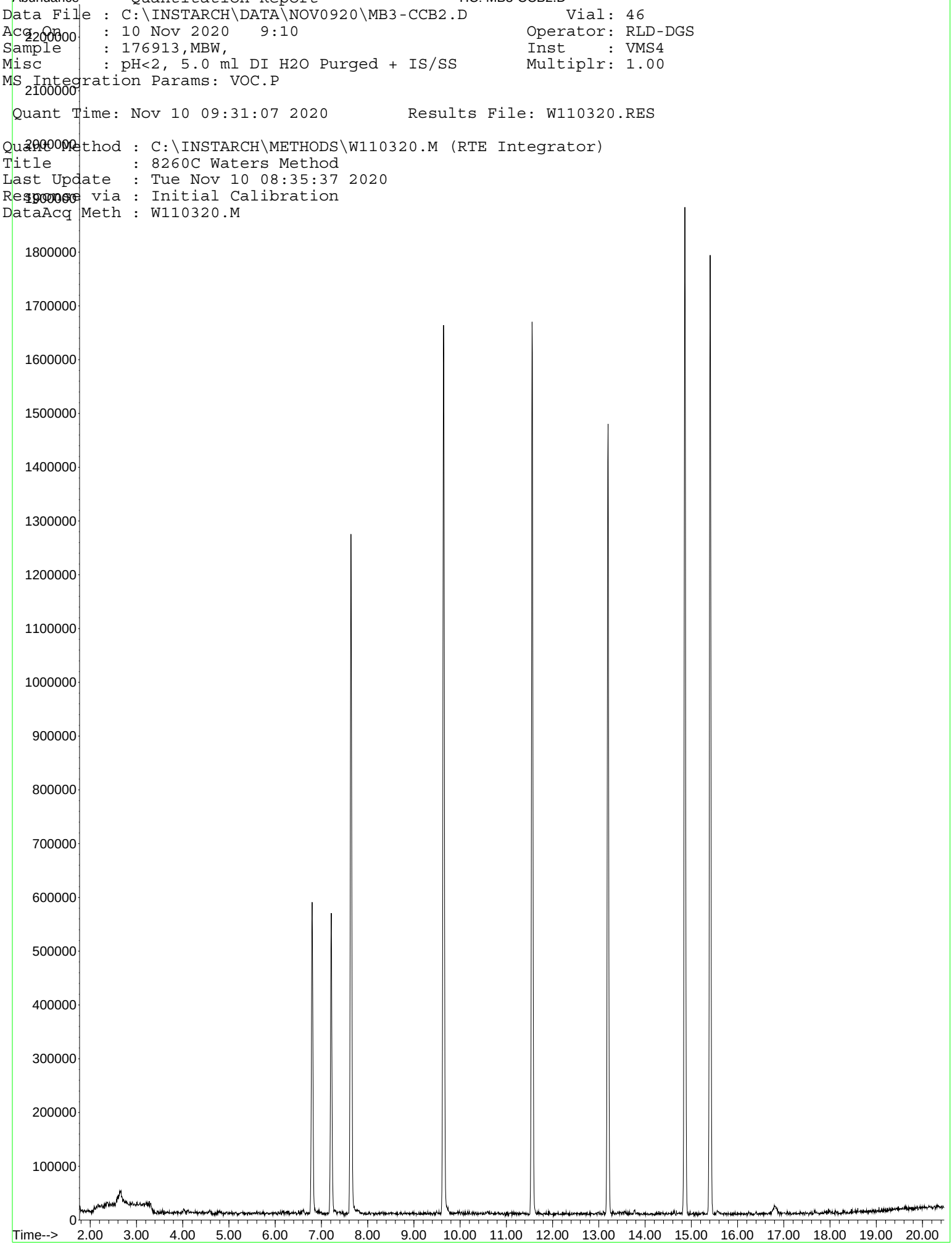
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: MB3-CCB2.D

Data File : C:\INSTARCH\DATA\NOV0920\MB3-CCB2.D Vial: 46
Acq On : 10 Nov 2020 9:10 Operator: RLD-DGS
Sample : 176913,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 09:31:07 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF3.D Vial: 54
Acq On : 10 Nov 2020 13:08 Operator: RLD-DGS
Sample : 176913,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 10 13:29:01 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	102	0.00
2	PT	Dichlorodi	0.2590	0.1770	31.66	67	0.00
3	PT	Chloromethan	0.2315	0.1902	17.84	86	0.00
4	PT	VinylChlorid	0.2448	0.2314	5.47	93	0.00
5	PT	Bromomethane	0.1570	0.0822#	47.64	59	0.01
6	PT	Chloroethane	0.1756	0.1451	17.37	83	0.00
7	T	Dichloroflmethane	0.4340	0.3753	13.53	87	0.00
8	PT	Trichlorofma	0.4514	0.3624	19.72	75	0.00
9	T	Ethylether	0.1533	0.1544	-0.72	105	0.00
10	T	dichlorotfluoroethan	0.2279	0.2502	-9.78	105	0.00
11	T	propyleneoxide	0.0269	0.0223#	17.10	94	0.00
12	T	Acrolein	0.0601	0.0604	-0.50	107	0.00
13	PT	11dichlorthe	0.2075	0.1983	4.43	93	0.00
14	PT	Trichlorotfluoroeth	0.2176	0.2126	2.30	93	0.00
15	PT	Acetone	0.1056	0.0930#	11.93	98	0.00
16	T	Iodomethane	0.0623	0.0669	-7.38	131	0.00
17	PT	Carbon Dislf	0.5027	0.4814	4.24	95	0.00
18	T	allylchloride	0.2595	0.2943	-13.41	117	0.00
19	PT	methylacetate	0.0601	0.0540#	10.15	100	0.00
20	PT	Methylchlorid	0.3533	0.3314	6.20	102	0.00
21	T	tbutylalcohol	0.0368	0.0456	-23.91	125	0.00
22	T	Acrylonitrile	0.0907	0.1076	-18.63	121	0.00
23	PT	t12dichlorte	0.2342	0.2195	6.28	102	0.00
24	PT	MtBE	0.6041	0.6052	-0.18	105	0.00
25	T	Hexane	0.2943	0.3495	-18.76	111	0.00
26	PT	11dichlorota	0.3612	0.3863	-6.95	111	0.00
27	T	Vinylacetate	0.3567	0.3924	-10.01	107	0.00
28	T	chloroprene	0.2816	0.3268	-16.05	112	0.00
29	T	Diisopether	0.5784	0.6483	-12.09	117	0.00
30	T	ETBE	0.5452	0.6351	-16.49	121	0.00
31	T	22dichloropr	0.3182	0.2944	7.48	94	0.00
32	PT	c12dichlorte	0.2783	0.2711	2.59	105	0.00
33	PT	2Butanone	0.0394	0.0398#	-1.02	106	0.00
34	T	propionitrile	0.0415	0.0485	-16.87	122	0.00
35	T	Ethylacetate	0.0130	0.0129#	0.77	102	0.00
36	T	methacrylonitrile	0.1130	0.1230	-8.85	115	0.00
37	T	Bromochlorma	0.1312	0.1233	6.02	93	0.00
38	T	Tetrahydofur	0.0835	0.0931	-11.50	116	0.00
39	PT	Chloroform	0.4342	0.4369	-0.62	104	0.00
40	PT	111trichlota	0.3739	0.3690	1.31	100	0.00
41	S	SURRDibrflma	0.3031	0.2949	2.71	99	0.00
42	PT	Cyclohexane	0.3186	0.3653	-14.66	111	0.00
43	PT	Carbtetraclo	0.3276	0.3149	3.88	94	0.00
44	T	11dicloprope	0.1237	0.1210	2.18	98	0.00
45	S	SURR12DCAd4	0.0689	0.0674	2.18	101	0.00
46	PT	Benzene	0.8641	0.9040	-4.62	107	0.00
47	PT	12dichlorota	0.3271	0.3236	1.07	105	0.00
48	T	TAME	0.5791	0.6152	-6.23	109	0.00

49	PT	trichloroete	0.2605	0.2713	-4.15	103	0.00	
50	PT	methylcyclohexane	0.3821	0.4116	-7.72	104	0.00	
51	PT	12dicloropra	0.2257	0.2557	-13.29	117	0.00	
52	T	23Dicl1propene	0.3470	0.3777	-8.85	111	0.00	
53	T	Dibromometha	0.1705	0.1725	-1.17	104	0.00	
54	T	methylmethacrylate	0.1815	0.1990	-9.64	114	0.00	
55	T	14dioxane	0.0048	0.0048#	0.00	107	0.00	
56	PT	Bromodiclrma	0.3342	0.3455	-3.38	111	0.00	
57	T	2Nitropropane	0.0735	0.0803	-9.25	108	0.00	
58	T	2CLEVE	0.0195	0.0042#	78.46#	27#	-0.01	
59	PT	c13dicloproe	0.3715	0.4048	-8.96	114	0.00	
60	PT	4Meth2Pentan	0.2435	0.2956	-21.40	123	0.00	
61	S	SURRd8Tolule	1.0309	1.0775	-4.52	107	0.00	
62	PT	Toluene	0.6160	0.6377	-3.52	107	0.00	
63	PT	t13Dicloprop	0.3269	0.3602	-10.19	113	0.00	
64	T	ethylmethacrylate	0.3067	0.3719	-21.26	122	0.00	
65	PT	112Triclotha	0.2004	0.2280	-13.77	119	0.00	
66	PT	Tetrachlorte	0.3089	0.3281	-6.22	107	0.00	
67	T	13Diclorpropa	0.3797	0.4225	-11.27	113	0.00	
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	106	0.00	
69	PT	2Hexanone	0.2271	0.2711	-19.37	127	0.00	
70	PT	Clorodibrmta	0.3354	0.3162	5.72	104	0.00	
71	PT	12Dibrometha	0.3265	0.3226	1.19	107	0.00	
72	PT	Chlorobenzen	0.8750	0.8963	-2.43	109	0.00	
73	T	1Clhexane	0.3849	0.4334	-12.60	118	0.00	
74	T	1112Tetclota	0.3058	0.3032	0.85	110	0.00	
75	PT	Ethylbenzene	1.2616	1.4140	-12.08	113	0.00	
76	PT	m p-Xylene	0.5234	0.5733	-9.53	113	0.00	
77	PT	o-Xylene	0.5315	0.5654	-6.38	109	0.00	
78	PT	Styrene	0.8525	0.9472	-11.11	115	0.00	
79	PT	Bromoform	0.2348	0.2064	12.10	100	0.00	
80	PT	Isopropylben	1.3079	1.4877	-13.75	114	0.00	
81	T	cyclohexanone	0.0156	0.0176#	-12.82	120	0.00	
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	106	0.00	
83	S	SURR4BrFBenz	0.8481	0.9072	-6.97	114	0.00	
84	T	Bromobenzene	0.7128	0.7105	0.32	108	0.00	
85	PT	1122Tetrclta	0.7469	0.8013	-7.28	112	0.00	
86	T	123Triclproa	0.8451	0.9253	-9.49	115	0.00	
87	T	14dichloro2butene	0.1581	0.1744	-10.31	120	0.00	
88	T	n-Propylbenz	2.5360	2.9627	-16.83	115	0.00	
89	T	2chlorotolue	1.5889	1.7955	-13.00	117	0.00	
90	T	4chlorotolue	1.8368	2.0669	-12.53	117	0.00	
91	T	135Trimebenz	1.8933	2.1554	-13.84	114	0.00	
92	T	tbutylbenzen	1.7387	1.9122	-9.98	111	0.00	
93	T	124Trimetben	1.8943	2.1536	-13.69	115	0.00	
94	T	sbutylbenzen	2.3406	2.8026	-19.74	115	0.00	
95	PT	13Diclorbenz	1.2423	1.2611	-1.51	106	0.00	
96	T	pIsopropylto	2.0324	2.3465	-15.45	113	0.00	
97	PT	14dichlorobe	1.2568	1.2467	0.80	104	0.00	
98	PT	12dichlorobe	1.1809	1.1695	0.97	105	0.00	
99	T	nButylbenzen	1.6786	1.9908	-18.60	116	0.00	
100	PT	12dibromo3cl	0.2019	0.1840	8.87	105	0.00	
101	T	135Trichlorobenzene	0.8533	0.9450	-10.75	112	0.00	
102	PT	124Trichlobe	0.7269	0.7973	-9.68	115	0.00	
103	T	Hexachlorobu	0.3642	0.4373	-20.07	132	0.00	
104	T	Naphthalene	1.8488	1.9986	-8.10	111	0.00	
105	T	123Trichlben	0.6789	0.7395	-8.93	115	0.00	

(#) = Out of Range SPCC's out = 4 CCC's out = 0

W110320.M Thu Nov 12 07:53:34 2020

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF3.D Vial: 54
Acq On : 10 Nov 2020 13:08 Operator: RLD-DGS
Sample : 176913,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 10 13:29:01 2020

Quant Method : C:\INSTARCH\METHODS\W110320.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110320.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	102	0.00
2	PT	Dichlorodi	10.0000	6.8344	31.66	67	0.00
3	PT	Chloromethan	10.0000	8.2156	17.84	86	0.00
4	PT	VinylChlorid	10.0000	9.4519	5.48	93	0.00
5	PT	Bromomethane	10.0000	5.2337	47.66	59	0.01
6	PT	Chloroethane	10.0000	8.2643	17.36	83	0.00
7	T	Dichloroflmethane	10.0000	8.6468	13.53	87	0.00
8	PT	Trichlorofma	10.0000	8.0279	19.72	75	0.00
9	T	Ethylether	10.0000	10.0687	-0.69	105	0.00
10	T	dichlorotfluoroethan	10.0000	10.9801	-9.80	105	0.00
11	T	propyleneoxide	100.0000	83.0649	16.94	94	0.00
12	T	Acrolein	50.0000	50.2552	-0.51	107	0.00
13	PT	11dichlorthe	10.0000	9.5587	4.41	93	0.00
14	PT	Trichlorotfluoroeth	20.0000	19.5364	2.32	93	0.00
15	PT	Acetone	100.0000	96.6300	3.37	98	0.00
16	T	Iodomethane	20.0000	20.8498	-4.25	131	0.00
17	PT	Carbon Dislf	20.0000	19.1542	4.23	95	0.00
18	T	allylchloride	20.0000	22.6779	-13.39	117	0.00
19	PT	methylacetate	10.0000	8.9832	10.17	100	0.00
20	PT	Methylchlorid	10.0000	9.3793	6.21	102	0.00
21	T	tbutylalcohol	500.0000	620.1856	-24.04	125	0.00
22	T	Acrylonitrile	50.0000	59.3364	-18.67	121	0.00
23	PT	t12dichlorte	10.0000	9.3743	6.26	102	0.00
24	PT	MtBE	10.0000	10.0182	-0.18	105	0.00
25	T	Hexane	20.0000	23.7538	-18.77	111	0.00
26	PT	11dichlorota	10.0000	10.6947	-6.95	111	0.00
27	T	Vinylacetate	100.0000	110.0088	-10.01	107	0.00
28	T	chloroprene	20.0000	23.2134	-16.07	112	0.00
29	T	Diisopether	10.0000	11.2088	-12.09	117	0.00
30	T	ETBE	10.0000	11.6503	-16.50	121	0.00
31	T	22dichloropr	10.0000	9.2515	7.49	94	0.00
32	PT	c12dichlorte	10.0000	9.7438	2.56	105	0.00
33	PT	2Butanone	100.0000	101.1050	-1.11	106	0.00
34	T	propionitrile	100.0000	116.9500	-16.95	122	0.00
35	T	Ethylacetate	50.0000	49.6411	0.72	102	0.00
36	T	methacrylonitrile	20.0000	21.7625	-8.81	115	0.00
37	T	Bromochlorma	10.0000	9.3970	6.03	93	0.00
38	T	Tetrahydofur	100.0000	111.5316	-11.53	116	0.00
39	PT	Chloroform	10.0000	10.0609	-0.61	104	0.00
40	PT	111trichlota	10.0000	9.8693	1.31	100	0.00
41	S	SURRDibrflma	20.0000	19.4554	2.72	99	0.00
42	PT	Cyclohexane	10.0000	11.4670	-14.67	111	0.00
43	PT	Carbtetraclo	10.0000	9.6108	3.89	94	0.00
44	T	11dicloprope	10.0000	9.7819	2.18	98	0.00
45	S	SURR12DCAd4	20.0000	19.5500	2.25	101	0.00
46	PT	Benzene	10.0000	10.4615	-4.61	107	0.00
47	PT	12dichlorota	10.0000	9.8925	1.07	105	0.00
48	T	TAME	10.0000	10.6235	-6.23	109	0.00

49	PT	trichloroete	10.0000	10.4158	-4.16	103	0.00
50	PT	methylcyclohexane	10.0000	10.7717	-7.72	104	0.00
51	PT	12dicloropra	10.0000	11.3325	-13.32	117	0.00
52	T	23Dicl1propene	10.0000	10.8851	-8.85	111	0.00
53	T	Dibromometha	10.0000	10.1124	-1.12	104	0.00
54	T	methylmethacrylate	10.0000	10.9654	-9.65	114	0.00
55	T	14dioxane	500.0000	505.0291	-1.01	107	0.00
56	PT	Bromodiclrma	10.0000	10.3388	-3.39	111	0.00
57	T	2Nitropropane	100.0000	109.1645	-9.16	108	0.00
58	T	2CLEVE	50.0000	16.3829	67.23#	27	-0.01
59	PT	c13dicloproe	10.0000	10.8980	-8.98	114	0.00
60	PT	4Meth2Pentan	100.0000	121.3762	-21.38	123	0.00
61	S	SURRd8Tolule	20.0000	20.9044	-4.52	107	0.00
62	PT	Toluene	10.0000	10.3516	-3.52	107	0.00
63	PT	t13Dicloprop	10.0000	11.0208	-10.21	113	0.00
64	T	ethylmethacrylate	20.0000	24.2510	-21.26	122	0.00
65	PT	112Triclotha	10.0000	11.3804	-13.80	119	0.00
66	PT	Tetrachlorte	10.0000	10.6224	-6.22	107	0.00
67	T	13Diclorpropa	10.0000	11.1275	-11.27	113	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	106	0.00
69	PT	2Hexanone	100.0000	119.3828	-19.38	127	0.00
70	PT	Clorodibrmta	10.0000	9.4286	5.71	104	0.00
71	PT	12Dibrometha	10.0000	9.8803	1.20	107	0.00
72	PT	Chlorobenzen	10.0000	10.2438	-2.44	109	0.00
73	T	1Clhexane	10.0000	11.2623	-12.62	118	0.00
74	T	1112Tetclota	10.0000	9.9145	0.85	110	0.00
75	PT	Ethylbenzene	10.0000	11.2079	-12.08	113	0.00
76	PT	m p-Xylene	20.0000	21.9098	-9.55	113	0.00
77	PT	o-Xylene	10.0000	10.6362	-6.36	109	0.00
78	PT	Styrene	10.0000	11.1105	-11.11	115	0.00
79	PT	Bromoform	10.0000	8.7901	12.10	100	0.00
80	PT	Isopropylben	10.0000	11.3749	-13.75	114	0.00
81	T	cyclohexanone	200.0000	225.8851	-12.94	120	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	106	0.00
83	S	SURR4BrFBenz	20.0000	21.3929	-6.96	114	0.00
84	T	Bromobenzene	10.0000	9.9674	0.33	108	0.00
85	PT	1122Tetrclta	10.0000	10.7286	-7.29	112	0.00
86	T	123Triclproa	10.0000	10.9483	-9.48	115	0.00
87	T	14dichloro2butene	10.0000	11.0319	-10.32	120	0.00
88	T	n-Propylbenz	10.0000	11.6828	-16.83	115	0.00
89	T	2chlorotolue	10.0000	11.2996	-13.00	117	0.00
90	T	4chlorotolue	10.0000	11.2529	-12.53	117	0.00
91	T	135Trimebenz	10.0000	11.3841	-13.84	114	0.00
92	T	tbutylbenzen	10.0000	10.9980	-9.98	111	0.00
93	T	124Trimetben	10.0000	11.3691	-13.69	115	0.00
94	T	sbutylbenzen	10.0000	11.9742	-19.74	115	0.00
95	PT	13Diclorbenz	10.0000	10.1514	-1.51	106	0.00
96	T	pIsopropylto	10.0000	11.5458	-15.46	113	0.00
97	PT	14dichlorobe	10.0000	9.9194	0.81	104	0.00
98	PT	12dichlorobe	10.0000	9.9038	0.96	105	0.00
99	T	nButylbenzen	10.0000	11.8597	-18.60	116	0.00
100	PT	12dibromo3cl	10.0000	9.1120	8.88	105	0.00
101	T	135Trichlorobenzene	10.0000	11.0752	-10.75	112	0.00
102	PT	124Trichlobe	10.0000	10.9680	-9.68	115	0.00
103	T	Hexachlorobu	10.0000	12.0066	-20.07	132	0.00
104	T	Naphthalene	10.0000	10.8102	-8.10	111	0.00
105	T	123Trichlben	10.0000	10.8930	-8.93	115	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W110320.M Thu Nov 12 07:53:06 2020

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF3.D Vial: 54
Acq On : 10 Nov 2020 13:08 Operator: RLD-DGS
Sample : 176913,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 13:29:01 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1361123	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1231353	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	706949	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	401351	19.455	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 97 %			
45) SURR12DCAd4	7.21	102	91699	19.550	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
61) SURRd8Tolule	9.64	98	1466601	20.904	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 105 %			
83) SURR4BrFBenz	13.20	95	641336	21.393	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 107 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	120447	6.8344	ug/L	96
3) Chloromethan	2.07	50	129448	8.2156	ug/L	100
4) VinylChlorid	2.21	62	157458	9.4519	ug/L	96
5) Bromomethane	2.67	94	55963	5.2337	ug/L	91
6) Chloroethane	2.83	64	98756	8.2643	ug/L	98
7) Dichloroflmethane	3.14	67	255404	8.6468	ug/L	97
8) Trichlorofma	3.21	101	246641	8.0279	ug/L	96
9) Ethylether	3.65	59	105054	10.0687	ug/L	95
10) dichlorotfluoroethan	3.67	67	170289	10.9801	ug/L	94
11) propyleneoxide	3.72	58	151858	83.0649	ug/L	92
12) Acrolein	3.80	56	205631	50.2552	ug/L	98
13) 11dichlorthe	3.93	96	134966	9.5587	ug/L	88
14) Trichlorotfluoroeth	3.95	101	289350	19.5364	ug/L	98
15) Acetone	4.02	43	632812	96.6300	ug/L	100
16) Iodomethane	4.10	127	91039	20.8498	ug/L	96
17) Carbon Dislf	4.19	76	655282	19.1542	ug/L	100
18) allylchloride	4.42	41	400527	22.6779	ug/L	88
19) methylacetate	4.48	74	36738	8.9832	ug/L	85
20) Methylchlorid	4.58	84	225509	9.3793	ug/L	98
21) tbutylalcohol	4.80	59	1551287	620.1856	ug/L	98
22) Acrylonitrile	4.90	53	366267	59.3364	ug/L	97
23) t12dichlorte	4.94	96	149407	9.3743	ug/L	94
24) MtBE	4.97	73	411885	10.0182	ug/L	97
25) Hexane	5.32	57	475720	23.7538	ug/L	97
26) 11dichlorota	5.48	63	262921	10.6947	ug/L	97
27) Vinylacetate	5.57	43	2670266	110.0088	ug/L	96
28) chloroprene	5.59	53	444813	23.2134	ug/L	91
29) Diisopether	5.61	45	441236	11.2088	ug/L	91
30) ETBE	6.06	59	432251	11.6503	ug/L	95
31) 22dichloropr	6.20	77	200324	9.2515	ug/L	99
32) c12dichlorte	6.21	96	184518	9.7438	ug/L	98
33) 2Butanone	6.24	72	270834	101.1050	ug/L	97
34) propionitrile	6.29	54	330223	116.9500	ug/L	97
35) Ethylacetate	6.34	88	43925	49.6411	ug/L #	80
36) methacrylonitrile	6.48	67	167412	21.7625	ug/L	97
37) Bromochlorma	6.50	128	83896	9.3970	ug/L #	87
38) Tetrahydofur	6.59	42	633913	111.5316	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF3.D Vial: 54
Acq On : 10 Nov 2020 13:08 Operator: RLD-DGS
Sample : 176913,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 13:29:01 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.61	83	297308	10.0609	ug/L	98
40)	111trichlota	6.84	97	251105	9.8693	ug/L	97
42)	Cyclohexane	6.92	56	248602	11.4670	ug/L	91
43)	Carbtetraclo	7.05	119	214305	9.6108	ug/L	97
44)	11dicloprope	7.05	110	82352	9.7819	ug/L	93
46)	Benzene	7.29	78	615203	10.4615	ug/L	98
47)	12dichlorota	7.30	62	220202	9.8925	ug/L	100
48)	TAME	7.46	73	418660	10.6235	ug/L	94
49)	trichloroete	8.10	95	184663	10.4158	ug/L	98
50)	methylcyclohexane	8.35	83	280147	10.7717	ug/L	93
51)	12dicloropra	8.37	63	174045	11.3325	ug/L	88
52)	23Dicl1propene	8.43	75	257021	10.8851	ug/L	95
53)	Dibromometha	8.51	93	117372	10.1124	ug/L	99
54)	methylmethacrylate	8.54	69	135451	10.9654	ug/L	97
55)	14dioxane	8.56	88	163356	505.0291	ug/L	91
56)	Bromodiclrma	8.71	83	235168	10.3388	ug/L	94
57)	2Nitropropane	8.99	43	546301	109.1645	ug/L	98
58)	2CLEVE	9.09	63	14301	16.3829	ug/L	89
59)	c13dicloproe	9.29	75	275503	10.8980	ug/L	97
60)	4Meth2Pentan	9.49	43	2011464	121.3762	ug/L	99
62)	Toluene	9.73	92	433984	10.3516	ug/L	97
63)	t13Dicloprop	10.00	75	245168	11.0208	ug/L	95
64)	ethylmethacrylate	10.15	69	506267	24.2510	ug/L	96
65)	112Triclotha	10.24	83	155175	11.3804	ug/L	95
66)	Tetrachlorte	10.46	166	223303	10.6224	ug/L	98
67)	13Diclorpropa	10.46	76	287531	11.1275	ug/L	97
69)	2Hexanone	10.58	43	1669282	119.3828	ug/L	98
70)	Clorodibrmta	10.77	129	194697	9.4286	ug/L	99
71)	12Dibrometha	10.91	107	198642	9.8803	ug/L	99
72)	Chlorobenzen	11.60	112	551859	10.2438	ug/L	97
73)	1Clhexane	11.57	91	266858	11.2623	ug/L	95
74)	1112Tetclota	11.70	131	186678	9.9145	ug/L	100
75)	Ethylbenzene	11.75	91	870568	11.2079	ug/L	100
76)	m p-Xylene	11.92	106	705976	21.9098	ug/L	99
77)	o-Xylene	12.46	106	348080	10.6362	ug/L	93
78)	Styrene	12.48	104	583177	11.1105	ug/L	100
79)	Bromoform	12.72	173	127084	8.7901	ug/L	100
80)	Isopropylben	12.99	105	915967	11.3749	ug/L	100
81)	cyclohexanone	13.10	55	217198	225.8851	ug/L	91
84)	Bromobenzene	13.41	156	251151	9.9674	ug/L	91
85)	1122Tetrclta	13.39	83	283252	10.7286	ug/L	98
86)	123Triclproa	13.45	75	327065	10.9483	ug/L	97
87)	14dichloro2butene	13.48	53	61651	11.0319	ug/L	95
88)	n-Propylbenz	13.58	91	1047243	11.6828	ug/L	99
89)	2chlorotolue	13.69	91	634646	11.2996	ug/L	93
90)	4chlorotolue	13.84	91	730608	11.2529	ug/L	97
91)	135Trimebenz	13.83	105	761875	11.3841	ug/L	97
92)	tbutylbenzen	14.30	119	675927	10.9980	ug/L	98
93)	124Trimetben	14.37	105	761259	11.3691	ug/L	97
94)	sbutylbenzen	14.62	105	990663	11.9742	ug/L	98
95)	13Diclorbenz	14.77	146	445754	10.1514	ug/L	98
96)	pIsopropylto	14.84	119	829445	11.5458	ug/L	96
97)	14dichlorobe	14.90	146	440670	9.9194	ug/L	97
98)	12dichlorobe	15.44	146	413399	9.9038	ug/L	98
99)	nButylbenzen	15.43	91	703705	11.8597	ug/L	98
100)	12dibromo3cl	16.55	157	65045	9.1120	ug/L	99
101)	135Trichlorobenzene	16.86	180	334048	11.0752	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCVF3.D Vial: 54
Acq On : 10 Nov 2020 13:08 Operator: RLD-DGS
Sample : 176913,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 13:29:01 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.68	180	281827	10.9680	ug/L	98
103)	Hexachlorobu	17.92	225	154568	12.0066	ug/L	96
104)	Naphthalene	17.98	128	706447	10.8102	ug/L	99
105)	123Trichlben	18.29	180	261406	10.8930	ug/L	96

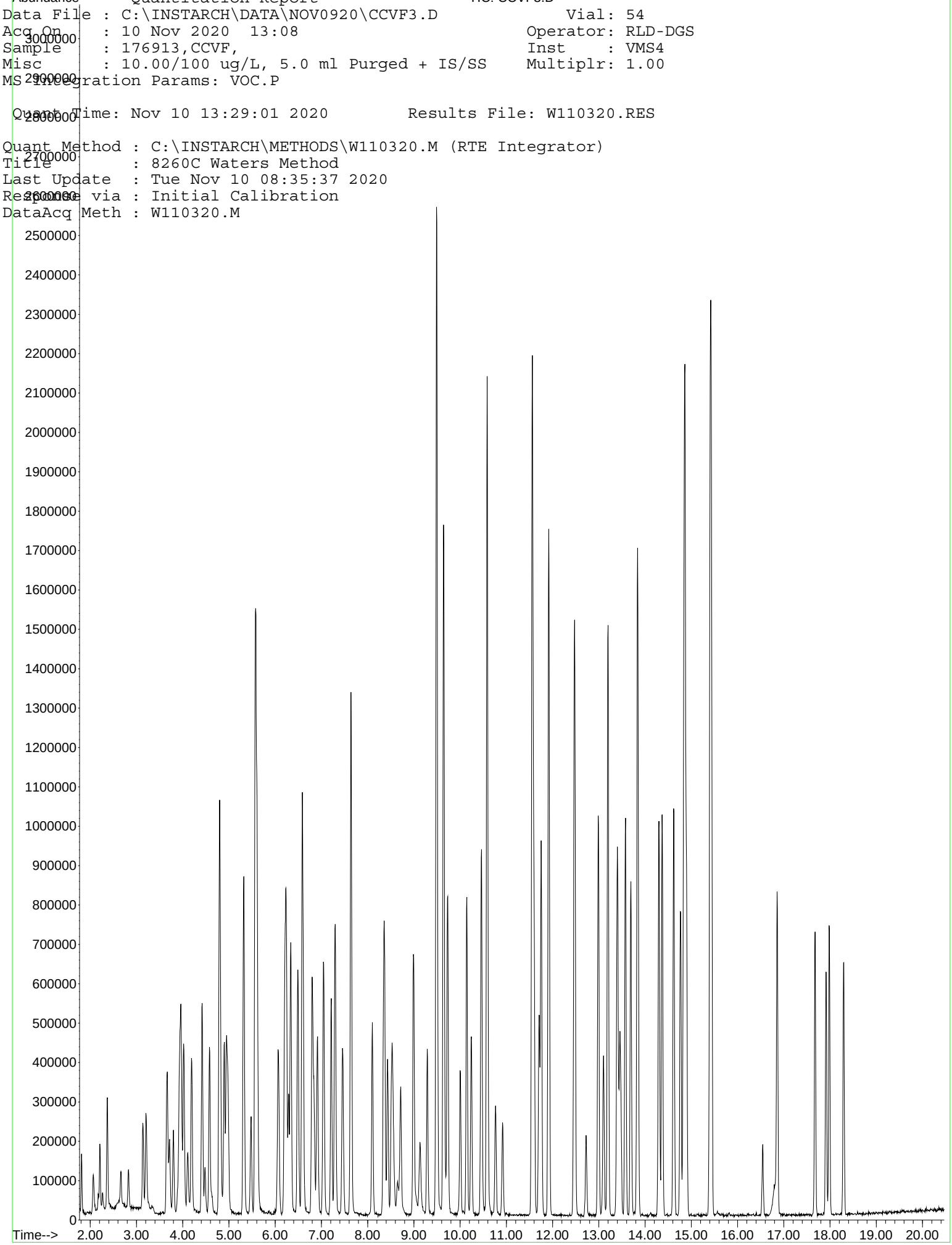
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCVF3.D

Data File : C:\INSTARCH\DATA\NOV0920\CCVF3.D Vial: 54
Acq On : 10 Nov 2020 13:08 Operator: RLD-DGS
Sample : 176913,CCVF, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 13:29:01 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Nov 10 08:35:37 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\110320 - 176737.seq
User : KMT
Printed : Nov 03, 2020 21:17:43

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\110320 -\002.dat	176737,CCV,	Nov 03, 2020 21:17:42

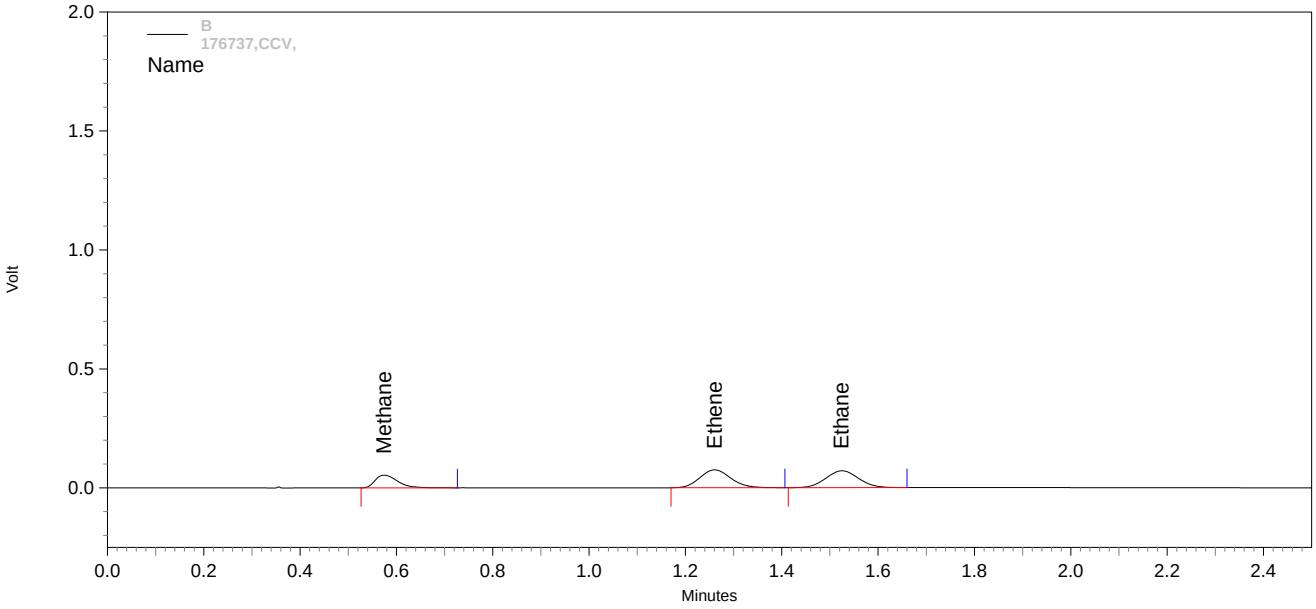
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	46.367	7.266	15.000	**Passed**
Ethene	50.000	49.252	1.497	15.000	**Passed**
Ethane	50.000	49.597	0.807	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\002.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,CCV,
Acquired: Nov 03, 2020 19:11:17
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.573**	**0.573**	**170881**	**46.367**	**ppmV**
2	**Ethene**	**1.260**	**1.260**	**334601**	**49.252**	**ppmV**
3	**Ethane**	**1.523**	**1.523**	**332395**	**49.597**	**ppmV**

QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\110320 - 176737.seq
User : KMT
Printed : Nov 03, 2020 21:19:06

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\110320 -\017.dat	176737,CCV,	Nov 03, 2020 21:19:06

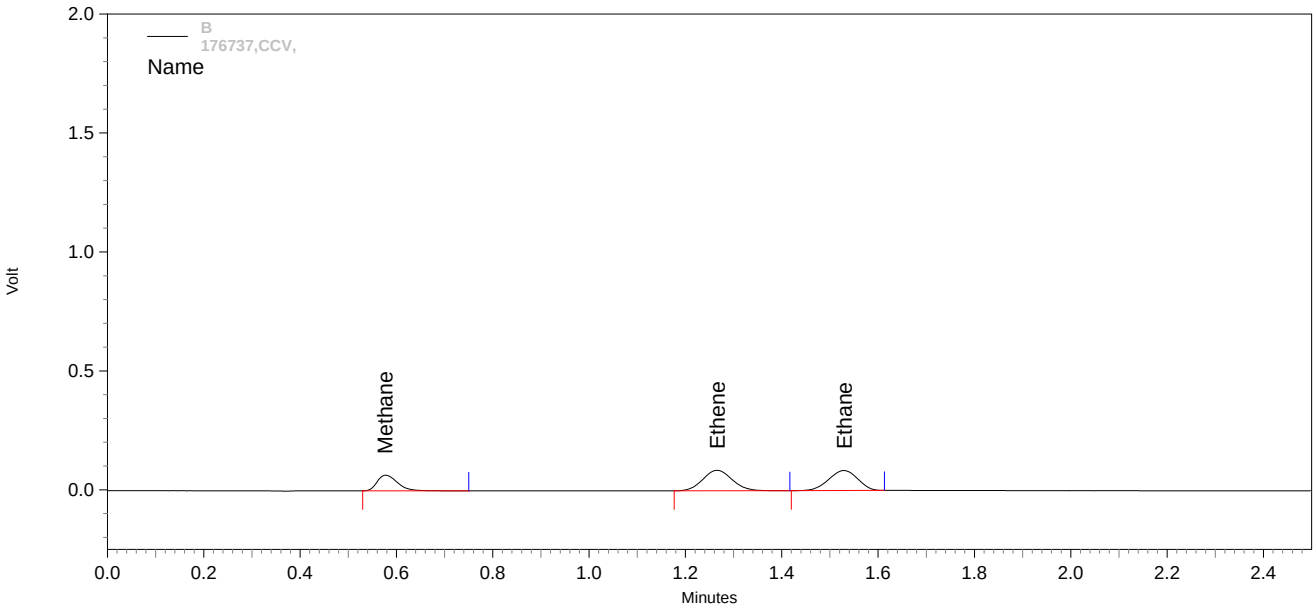
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	52.065	4.130	15.000	**Passed**
Ethene	50.000	53.381	6.762	15.000	**Passed**
Ethane	50.000	52.435	4.869	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\017.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,CCV,
Acquired: Nov 03, 2020 20:46:03
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



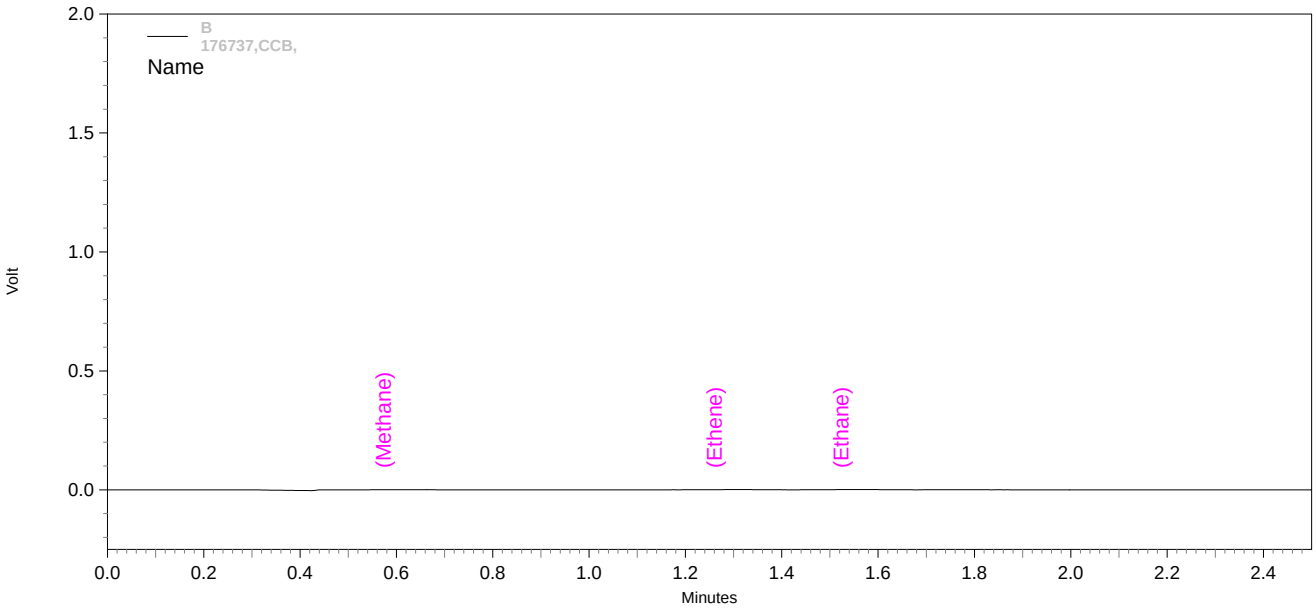
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	Methane	0.577	0.573	191537	52.065	ppmV
2	Ethene	1.267	1.260	363167	53.381	ppmV
3	Ethane	1.530	1.523	351689	52.435	ppmV

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\018.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,CCB,
Acquired: Nov 03, 2020 20:51:59
File Desc. MEE Continuing Calibration BLANK - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane
Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\110320 - 176737.seq
User : KMT
Printed : Nov 03, 2020 21:19:46

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\110320 -\023.dat	176737,CCV,	Nov 03, 2020 21:19:46

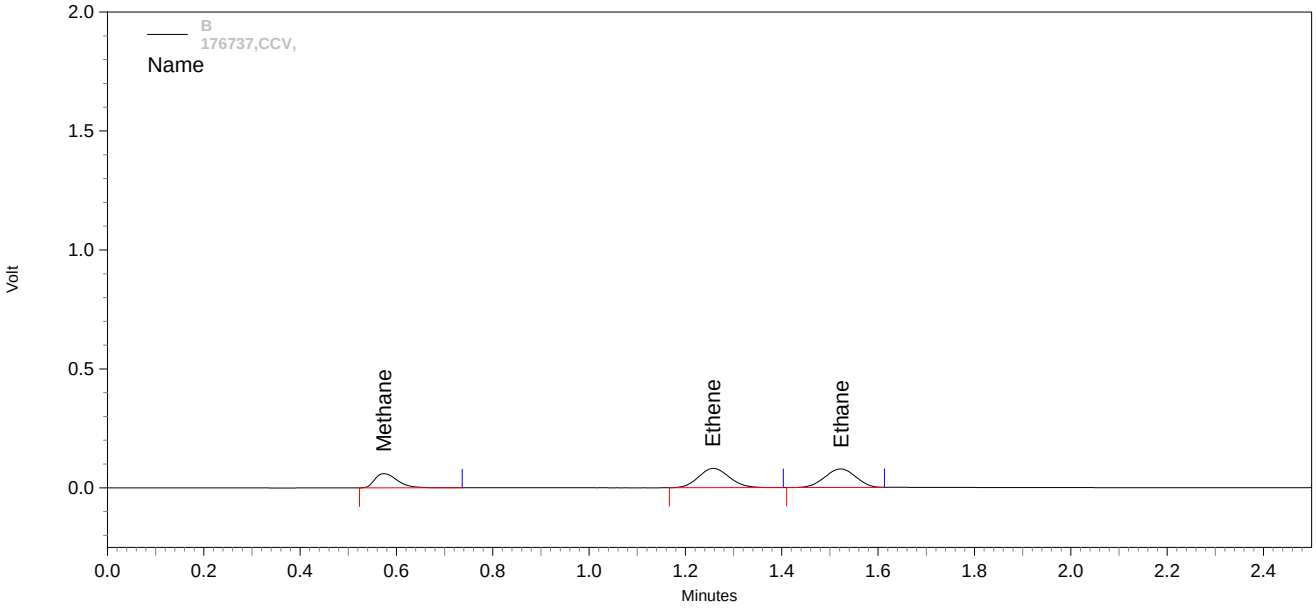
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	52.598	5.196	15.000	**Passed**
Ethene	50.000	52.826	5.653	15.000	**Passed**
Ethane	50.000	51.823	3.646	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\023.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,CCV,
Acquired: Nov 03, 2020 21:12:53
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.573**	**0.573**	**193469**	**52.598**	**ppmV**
2	**Ethene**	**1.257**	**1.260**	**359332**	**52.826**	**ppmV**
3	**Ethane**	**1.523**	**1.523**	**347533**	**51.823**	**ppmV**

VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL
DOCUMENTS

Quantitation Report

Data File : C:\Instarch\Data\NOV0620B\CCV-LCS1.D Vial: 2
Acq On : 6 Nov 2020 22:41 Operator: RLD-DGS
Sample : 176654,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 06 23:13:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:12:23 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1371231	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1311053	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	719376	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.79	113	446832	21.500	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 108 %			
45) SURR12DCAd4	7.21	102	95493	20.209	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
61) SURRd8Tolule	9.64	98	1515407	21.441	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 107 %			
83) SURR4BrFBenz	13.19	95	637932	20.912	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 105 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	143902	8.1051	ug/L	99
3) Chloromethan	2.06	50	141299	8.9016	ug/L	100
4) VinylChlorid	2.21	62	160985	9.5923	ug/L	99
5) Bromomethane	2.67	94	100928	11.6250	ug/L	98
6) Chloroethane	2.83	64	117058	9.7236	ug/L	100
7) Dichloroflmethane	3.14	67	305404	10.2634	ug/L	100
8) Trichlorofma	3.20	101	317883	10.2704	ug/L	94
9) Ethylether	3.65	59	109873	10.4529	ug/L	96
10) dichlorotfluoroethan	3.67	67	172558	11.0443	ug/L	98
11) propyleneoxide	3.72	58	209952	113.9952	ug/L	99
12) Acrolein	3.79	56	188038	45.6168	ug/L	99
13) 11dichlorthe	3.92	96	148672	10.4518	ug/L	92
14) Trichlorotfluoroeth	3.95	101	335486	22.4844	ug/L	99
15) Acetone	4.02	43	590314	88.8696	ug/L	100
16) Iodomethane	4.10	127	105131	23.1173	ug/L	92
17) Carbon Dislf	4.19	76	736589	21.3721	ug/L	99
18) allylchloride	4.41	41	378830	21.2913	ug/L	96
19) methylacetate	4.48	74	39204	9.5156	ug/L	91
20) Methylchlorid	4.57	84	240484	9.9284	ug/L	97
21) tbutylalcohol	4.79	59	1204469	477.9824	ug/L	99
22) Acrylonitrile	4.90	53	336091	54.0464	ug/L	99
23) t12dichlorte	4.94	96	167703	10.4447	ug/L	98
24) MtBE	4.97	73	417282	10.0746	ug/L	99
25) Hexane	5.32	57	497852	24.6757	ug/L	100
26) 11dichlorota	5.47	63	254532	10.2772	ug/L	96
27) Vinylacetate	5.56	43	2889036	118.1442	ug/L	99
28) chloroprene	5.60	53	420922	21.8047	ug/L	98
29) Diisopether	5.61	45	412395	10.3989	ug/L	100
30) ETBE	6.06	59	382118	10.2232	ug/L	99
31) 22dichloropr	6.21	77	247152	11.3300	ug/L	96
32) c12dichlorte	6.21	96	192810	10.1066	ug/L	98
33) 2Butanone	6.24	72	273112	101.2038	ug/L	98
34) propionitrile	6.29	54	298712	105.0104	ug/L	98
35) Ethylacetate	6.33	88	44754	50.2051	ug/L #	88
36) methacrylonitrile	6.48	67	163279	21.0688	ug/L	99
37) Bromochlorma	6.50	128	97148	10.8011	ug/L	96
38) Tetrahydofur	6.58	42	592367	103.4537	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0620B\CCV-LCS1.D Vial: 2
Acq On : 6 Nov 2020 22:41 Operator: RLD-DGS
Sample : 176654,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 06 23:13:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:12:23 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.60	83	330517	11.1023	ug/L	98
40)	111trichlota	6.84	97	273897	10.6857	ug/L	99
42)	Cyclohexane	6.91	56	241389	11.0522	ug/L	99
43)	Carbtetraclo	7.05	119	249143	11.0908	ug/L	99
44)	11dicloprope	7.04	110	95483	11.2580	ug/L	97
46)	Benzene	7.29	78	645399	10.8941	ug/L	98
47)	12dichlorota	7.30	62	225111	10.0385	ug/L	97
48)	TAME	7.46	73	396376	9.9839	ug/L	97
49)	trichloroete	8.10	95	189259	10.5964	ug/L	98
50)	methylcyclohexane	8.35	83	286394	10.9308	ug/L	95
51)	12dicloropra	8.36	63	166527	10.7631	ug/L	89
52)	23Dicl1propene	8.43	75	246249	10.3520	ug/L	95
53)	Dibromometha	8.51	93	131418	11.2391	ug/L	98
54)	methylmethacrylate	8.53	69	134496	10.8078	ug/L	96
55)	14dioxane	8.56	88	103705	318.2495	ug/L	97
56)	Bromodiclrma	8.72	83	238223	10.3960	ug/L	97
57)	2Nitropropane	9.00	43	541669	107.4410	ug/L	98
58)	2CLEVE	9.10	63	35995	32.5817	ug/L	97
59)	c13dicloproe	9.29	75	273449	10.7370	ug/L	99
60)	4Meth2Pentan	9.49	43	1848817	110.7394	ug/L	99
62)	Toluene	9.73	92	458725	10.8611	ug/L	98
63)	t13Dicloprop	10.01	75	246742	11.0098	ug/L	95
64)	ethylmethacrylate	10.14	69	456282	21.6956	ug/L	97
65)	112Triclotha	10.24	83	149815	10.9063	ug/L	98
66)	Tetrachlorte	10.46	166	238899	11.2805	ug/L	99
67)	13Diclorpropa	10.46	76	278011	10.6797	ug/L	96
69)	2Hexanone	10.58	43	1469615	98.7138	ug/L	99
70)	Clorodibrmta	10.77	129	196769	8.9497	ug/L	98
71)	12Dibrometha	10.92	107	214051	9.9995	ug/L	97
72)	Chlorobenzen	11.60	112	579476	10.1026	ug/L	99
73)	1Clhexane	11.57	91	276107	10.9443	ug/L	99
74)	1112Tetclota	11.71	131	196080	9.7808	ug/L	99
75)	Ethylbenzene	11.75	91	880475	10.6463	ug/L	100
76)	m p-Xylene	11.92	106	718328	20.9380	ug/L	98
77)	o-Xylene	12.47	106	359711	10.3235	ug/L	99
78)	Styrene	12.48	104	565861	10.1252	ug/L	99
79)	Bromoform	12.73	173	128863	8.3713	ug/L	99
80)	Isopropylben	12.99	105	905577	10.5622	ug/L	99
81)	cyclohexanone	13.10	55	141900	138.6043	ug/L	99
84)	Bromobenzene	13.41	156	252436	9.8454	ug/L	95
85)	1122Tetrclta	13.39	83	288618	10.7430	ug/L	97
86)	123Triclproa	13.45	75	309914	10.1949	ug/L	97
87)	14dichloro2butene	13.48	53	49789	8.7554	ug/L	96
88)	n-Propylbenz	13.58	91	1060995	11.6317	ug/L	99
89)	2chlorotolue	13.69	91	631334	11.0465	ug/L	99
90)	4chlorotolue	13.84	91	717859	10.8655	ug/L	100
91)	135Trimebenz	13.83	105	748945	10.9976	ug/L	97
92)	tbutylbenzen	14.30	119	703048	11.2417	ug/L	99
93)	124Trimetben	14.37	105	749467	10.9997	ug/L	99
94)	sbutylbenzen	14.62	105	997761	11.8517	ug/L	99
95)	13Diclorbenz	14.77	146	473624	10.5998	ug/L	100
96)	pIsopropylto	14.84	119	848311	11.6044	ug/L	98
97)	14dichlorobe	14.90	146	476385	10.5381	ug/L	99
98)	12dichlorobe	15.44	146	440397	10.3683	ug/L	98
99)	nButylbenzen	15.43	91	716610	11.8686	ug/L	98
100)	12dibromo3cl	16.55	157	69912	9.6246	ug/L	94
101)	135Trichlorobenzene	16.86	180	323135	10.5283	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\NOV0620B\CCV-LCS1.D Vial: 2
Acq On : 6 Nov 2020 22:41 Operator: RLD-DGS
Sample : 176654,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 06 23:13:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:12:23 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.67	180	292021	11.1684	ug/L	98
103) Hexachlorobu	17.91	225	143059	10.9206	ug/L	95
104) Naphthalene	17.98	128	769323	11.5690	ug/L	99
105) 123Trichlben	18.29	180	270258	11.0673	ug/L	99

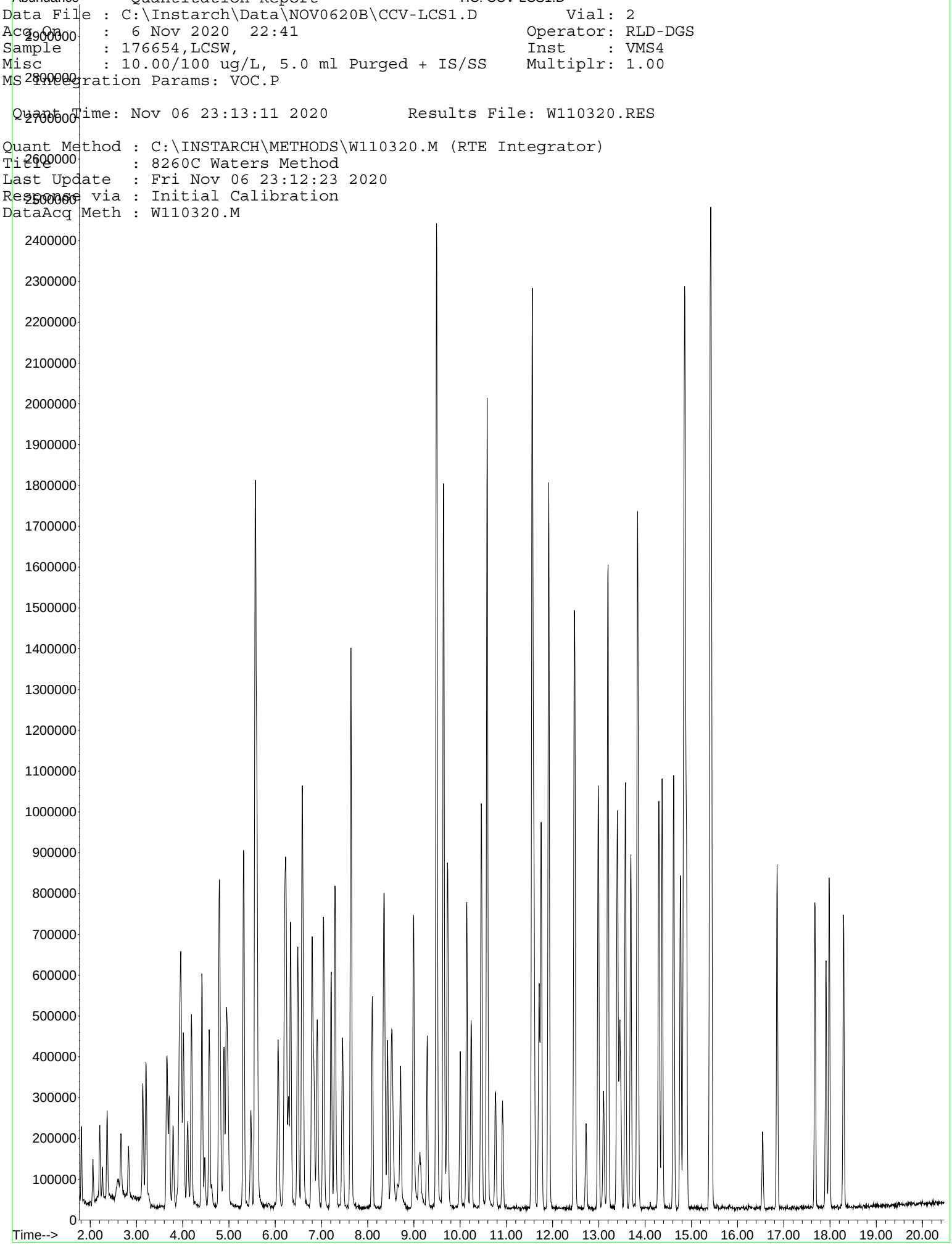
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCV-LCS1.D

Data File : C:\Instarch\Data\NOV0620B\CCV-LCS1.D Vial: 2
Acq On : 6 Nov 2020 22:41 Operator: RLD-DGS
Sample : 176654,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 06 23:13:11 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:12:23 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\MB-CCB1.D Vial: 4
Acq On : 6 Nov 2020 23:39 Operator: RLD-DGS
Sample : 176555,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 00:00:08 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1407908	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1248822	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	685021	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.79	113	427308	20.025 ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 100 %		
45) SURR12DCAd4	7.21	102	98024	20.204 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %		
61) SURRd8Tolule	9.64	98	1471138	20.272 ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 101 %		
83) SURR4BrFBenz	13.20	95	590312	20.321 ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 102 %		
Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	2.05	50	2844	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	2.66	94	7719	Below Cal # 60	
6) Chloroethane	2.80	64	2722	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.02	43	12049	Below Cal # 44	
16) Iodomethane	0.00	127	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.59	84	3405	N.D.	
21) tbutylalcohol	4.81	59	3293	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.59	42	4272	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\MB-CCB1.D Vial: 4
Acq On : 6 Nov 2020 23:39 Operator: RLD-DGS
Sample : 176555,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 00:00:08 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.56	91	3174	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.41	91	2689	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV0620B\MB-CCB1.D Vial: 4
Acq On : 6 Nov 2020 23:39 Operator: RLD-DGS
Sample : 176555,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 00:00:08 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

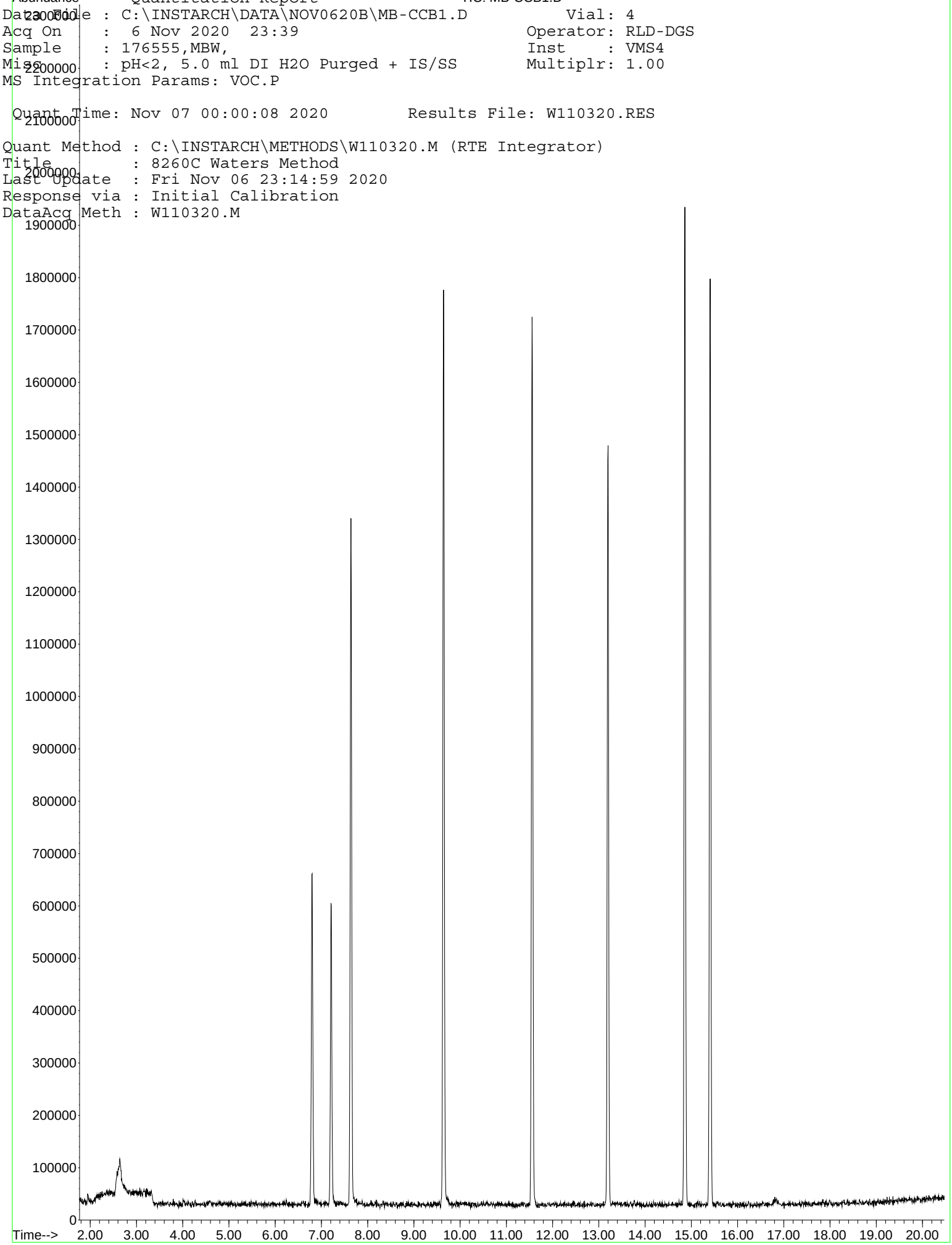
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	17.98	128	3872	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0620B\MB-CCB1.D Vial: 4
Acq On : 6 Nov 2020 23:39 Operator: RLD-DGS
Sample : 176555,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 00:00:08 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\CCVF-LCSD1.D Vial: 25
Acq On : 7 Nov 2020 9:39 Operator: RLD-DGS
Sample : 176555,LCSDW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 09:59:46 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1355391	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1239348	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	697357	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.79	113	423574	20.619 ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 103 %		
45) SURR12DCAd4	7.21	102	94467	20.225 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %		
61) SURRd8Tolule	9.64	98	1441538	20.634 ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 103 %		
83) SURR4BrFBenz	13.20	95	585564	19.801 ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 99 %		
Target Compounds					Qvalue
2) Dichlorodi	1.81	85	140739	8.0196 ug/L	98
3) Chloromethan	2.07	50	118876	7.5765 ug/L	99
4) VinylChlorid	2.21	62	144261	8.6963 ug/L	98
5) Bromomethane	2.66	94	101989	11.9497 ug/L	97
6) Chloroethane	2.82	64	114827	9.6498 ug/L	98
7) Dichloroflmethane	3.14	67	276640	9.4054 ug/L	96
8) Trichlorofma	3.21	101	304084	9.9394 ug/L	98
9) Ethylether	3.65	59	83956	8.0806 ug/L	91
10) dichlorotfluoroethan	3.67	67	147943	9.5796 ug/L	95
11) propyleneoxide	3.71	58	123808	68.0082 ug/L	94
12) Acrolein	3.79	56	167001	40.9869 ug/L	92
13) 11dichlorthe	3.92	96	134106	9.5380 ug/L	90
14) Trichlorotfluoroeth	3.96	101	299254	20.2905 ug/L	96
15) Acetone	4.02	43	602159	91.9715 ug/L	99
16) Iodomethane	4.10	127	110564	24.2310 ug/L #	89
17) Carbon Dislf	4.19	76	689552	20.2412 ug/L	98
18) allylchloride	4.42	41	342995	19.5026 ug/L	97
19) methylacetate	4.48	74	37691	9.2552 ug/L	95
20) Methylchlorid	4.57	84	231115	9.6531 ug/L	98
21) tbutylalcohol	4.80	59	1273554	511.3045 ug/L	99
22) Acrylonitrile	4.90	53	325445	52.9461 ug/L	94
23) t12dichlorte	4.94	96	158791	10.0052 ug/L	99
24) MtBE	4.97	73	407562	9.9550 ug/L	99
25) Hexane	5.32	57	403572	20.2365 ug/L	99
26) 11dichlorota	5.47	63	251445	10.2712 ug/L	99
27) Vinylacetate	5.57	43	1477811	61.1399 ug/L	95
28) chloroprene	5.59	53	425956	22.3233 ug/L	96
29) Diisopether	5.61	45	402353	10.2642 ug/L	96
30) ETBE	6.06	59	361846	9.7940 ug/L	99
31) 22dichloropr	6.20	77	191201	8.8675 ug/L	98
32) c12dichlorte	6.21	96	186156	9.8719 ug/L	97
33) 2Butanone	6.23	72	266610	99.9491 ug/L	98
34) propionitrile	6.29	54	297445	105.7870 ug/L	97
35) Ethylacetate	6.34	88	43903	49.8260 ug/L	92
36) methacrylonitrile	6.49	67	158359	20.6727 ug/L	95
37) Bromochlorma	6.50	128	93779	10.5483 ug/L	94
38) Tetrahydofur	6.59	42	591105	104.4397 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0620B\CCVF-LCSD1.D Vial: 25
Acq On : 7 Nov 2020 9:39 Operator: RLD-DGS
Sample : 176555,LCSDW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 09:59:46 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	311132	10.5732 ug/L	98
40)	111trichlota	6.84	97	276954	10.9312 ug/L	96
42)	Cyclohexane	6.91	56	231176	10.7083 ug/L	99
43)	Carbtetraclo	7.05	119	235783	10.6187 ug/L	99
44)	11dicloprope	7.04	110	86125	10.2733 ug/L	96
46)	Benzene	7.29	78	617534	10.5456 ug/L	96
47)	12dichlorota	7.30	62	235578	10.6280 ug/L	99
48)	TAME	7.46	73	388885	9.9097 ug/L	96
49)	trichloroete	8.10	95	197467	11.1852 ug/L	98
50)	methylcyclohexane	8.35	83	287585	11.1045 ug/L	97
51)	12dicloropra	8.37	63	170713	11.1626 ug/L	91
52)	23Dicl1propene	8.43	75	235889	10.0324 ug/L	98
53)	Dibromometha	8.52	93	123234	10.6624 ug/L	95
54)	methylmethacrylate	8.53	69	129363	10.5168 ug/L	94
55)	14dioxane	8.56	88	164438	510.5241 ug/L	96
56)	Bromodiclrma	8.71	83	237878	10.5022 ug/L	93
57)	2Nitropropane	9.00	43	489130	98.1537 ug/L	98
58)	2CLEVE	9.11	63	10520	13.4493 ug/L	91
59)	c13dicloproe	9.29	75	249770	9.9219 ug/L	100
60)	4Meth2Pentan	9.49	43	1798799	109.0026 ug/L	99
62)	Toluene	9.73	92	450075	10.7808 ug/L	99
63)	t13Dicloprop	10.01	75	222254	10.0330 ug/L	95
64)	ethylmethacrylate	10.15	69	446464	21.4768 ug/L	98
65)	112Triclotha	10.24	83	148902	10.9666 ug/L	94
66)	Tetrachlorte	10.46	166	211043	10.0816 ug/L	98
67)	13Diclorpropa	10.46	76	267725	10.4048 ug/L	96
69)	2Hexanone	10.58	43	1486581	105.6306 ug/L	99
70)	Clorodibrmta	10.77	129	191633	9.2204 ug/L	100
71)	12Dibrometha	10.92	107	202751	10.0196 ug/L	100
72)	Chlorobenzen	11.60	112	556215	10.2581 ug/L	99
73)	1Clhexane	11.57	91	233657	9.7975 ug/L	96
74)	1112Tetclota	11.70	131	186925	9.8636 ug/L	96
75)	Ethylbenzene	11.75	91	835935	10.6926 ug/L	97
76)	m p-Xylene	11.92	106	661260	20.3897 ug/L	100
77)	o-Xylene	12.47	106	322916	9.8037 ug/L	91
78)	Styrene	12.48	104	526923	9.9740 ug/L	96
79)	Bromoform	12.72	173	122927	8.4477 ug/L	96
80)	Isopropylben	12.99	105	855962	10.5611 ug/L	100
81)	cyclohexanone	13.10	55	183083	189.1774 ug/L	94
84)	Bromobenzene	13.41	156	240311	9.6684 ug/L	94
85)	1122Tetrclta	13.39	83	255545	9.8123 ug/L	99
86)	123Triclproa	13.45	75	306724	10.4086 ug/L	99
87)	14dichloro2butene	13.47	53	46893	8.5065 ug/L	100
88)	n-Propylbenz	13.58	91	957913	10.8332 ug/L	99
89)	2chlorotolue	13.69	91	593790	10.7176 ug/L	96
90)	4chlorotolue	13.84	91	669772	10.4578 ug/L	100
91)	135Trimebenz	13.83	105	692312	10.4870 ug/L	100
92)	tbutylbenzen	14.30	119	635945	10.4898 ug/L	98
93)	124Trimetben	14.37	105	687718	10.4121 ug/L	99
94)	sbutylbenzen	14.62	105	911839	11.1731 ug/L	98
95)	13Diclorbenz	14.77	146	434678	10.0353 ug/L	100
96)	pIsopropylto	14.84	119	770188	10.8684 ug/L	99
97)	14dichlorobe	14.90	146	426738	9.7379 ug/L	98
98)	12dichlorobe	15.43	146	404985	9.8357 ug/L	97
99)	nButylbenzen	15.43	91	638180	10.9034 ug/L	98
100)	12dibromo3cl	16.55	157	58655	8.3299 ug/L	94
101)	135Trichlorobenzene	16.86	180	268498	9.0244 ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV0620B\CCVF-LCSD1.D Vial: 25
Acq On : 7 Nov 2020 9:39 Operator: RLD-DGS
Sample : 176555,LCSDW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 09:59:46 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.68	180	219116	8.6448	ug/L	99
103)	Hexachlorobu	17.91	225	100495	7.9137	ug/L	96
104)	Naphthalene	17.98	128	664881	10.3141	ug/L	99
105)	123Trichlben	18.30	180	218402	9.2262	ug/L	98

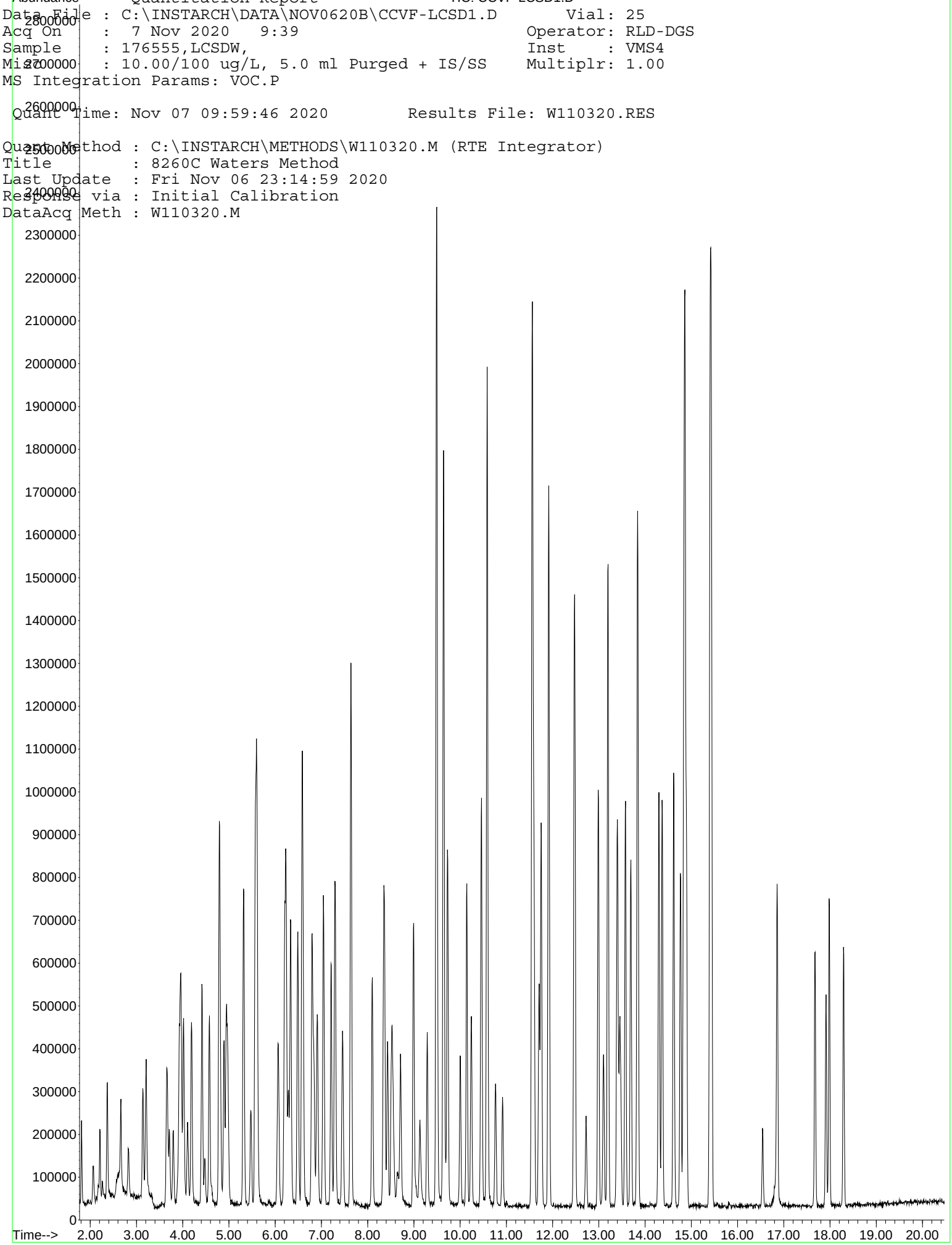
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCVF-LCSD1.D

Data File : C:\INSTARCH\DATA\NOV0620B\CCVF-LCSD1.D Vial: 25
Acq On : 7 Nov 2020 9:39 Operator: RLD-DGS
Sample : 176555,LCSDW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 07 09:59:46 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Fri Nov 06 23:14:59 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS1.D Vial: 2
Acq On : 9 Nov 2020 7:48 Operator: RLD-DGS
Sample : 176659,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:20:26 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:20:20 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	765664	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	670483	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	353415	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	236368	20.369	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 102 %			
45) SURR12DCAd4	7.21	102	49154	18.629	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 93 %			
61) SURRd8Tolule	9.64	98	807929	20.472	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 102 %			
83) SURR4BrFBenz	13.19	95	320778	21.404	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 107 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	88604	8.9375	ug/L	98
3) Chloromethan	2.06	50	75525	8.5211	ug/L	96
4) VinylChlorid	2.21	62	89719	9.5740	ug/L	97
5) Bromomethane	2.66	94	60823	12.7789	ug/L	98
6) Chloroethane	2.83	64	67605	10.0572	ug/L	96
7) Dichloroflmethane	3.14	67	173005	10.4123	ug/L	97
8) Trichlorofma	3.21	101	192744	11.1526	ug/L	96
9) Ethylether	3.65	59	55372	9.4343	ug/L	100
10) dichlorotfluoroethan	3.67	67	97833	11.2141	ug/L	99
11) propyleneoxide	3.71	58	86360	83.9753	ug/L	94
12) Acrolein	3.80	56	118809	51.6180	ug/L	99
13) 11dichlorthe	3.92	96	77538	9.7622	ug/L #	83
14) Trichlorotfluoroeth	3.96	101	183009	21.9661	ug/L	92
15) Acetone	4.01	43	379738	103.6489	ug/L	97
16) Iodomethane	4.10	127	60958	23.7879	ug/L #	83
17) Carbon Dislf	4.19	76	411235	21.3690	ug/L	99
18) allylchloride	4.41	41	206285	20.7634	ug/L	93
19) methylacetate	4.48	74	20447	8.8880	ug/L	90
20) Methylchlorid	4.58	84	133502	9.8708	ug/L	98
21) tbutylalcohol	4.80	59	818245	581.5298	ug/L	99
22) Acrylonitrile	4.90	53	188971	54.4224	ug/L	94
23) t12dichlorte	4.94	96	87289	9.7361	ug/L	99
24) MtBE	4.98	73	236916	10.2439	ug/L	98
25) Hexane	5.32	57	235307	20.8870	ug/L	100
26) 11dichlorota	5.47	63	145556	10.5253	ug/L	99
27) Vinylacetate	5.57	43	1455270	106.5799	ug/L	96
28) chloroprene	5.60	53	244010	22.6375	ug/L	92
29) Diisopether	5.61	45	226770	10.2407	ug/L	94
30) ETBE	6.06	59	216816	10.3885	ug/L	97
31) 22dichloropr	6.22	77	129142	10.6024	ug/L	97
32) c12dichlorte	6.22	96	102160	9.5903	ug/L	91
33) 2Butanone	6.23	72	152438	101.1630	ug/L	96
34) propionitrile	6.29	54	170642	107.4331	ug/L	99
35) Ethylacetate	6.34	88	22589	45.3822	ug/L #	70
36) methacrylonitrile	6.48	67	86472	19.9828	ug/L	93
37) Bromochlorma	6.50	128	47709	9.4996	ug/L #	85
38) Tetrahydofur	6.59	42	342567	107.1453	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS1.D Vial: 2
Acq On : 9 Nov 2020 7:48 Operator: RLD-DGS
Sample : 176659,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:20:26 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:20:20 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.60	83	179285	10.7853	ug/L		99
40)	111trichlota	6.84	97	152097	10.6270	ug/L		97
42)	Cyclohexane	6.91	56	128991	10.5770	ug/L		96
43)	Carbtetraclo	7.05	119	129000	10.2843	ug/L		95
44)	11dicloprope	7.04	110	43851	9.2595	ug/L	#	80
46)	Benzene	7.29	78	343212	10.3752	ug/L		96
47)	12dichlorota	7.30	62	134366	10.7308	ug/L		99
48)	TAME	7.46	73	216514	9.7668	ug/L		97
49)	trichloroete	8.10	95	101018	10.1291	ug/L		96
50)	methylcyclohexane	8.34	83	151056	10.3252	ug/L		98
51)	12dicloropra	8.37	63	86575	10.0211	ug/L		100
52)	23Dicl1propene	8.44	75	138350	10.4160	ug/L		98
53)	Dibromometha	8.51	93	69570	10.6554	ug/L		88
54)	methylmethacrylate	8.53	69	71961	10.3561	ug/L		96
55)	14dioxane	8.56	88	93614	514.4951	ug/L		98
56)	Bromodiclrma	8.72	83	144539	11.2963	ug/L		92
57)	2Nitropropane	8.99	43	295437	104.9478	ug/L		97
58)	2CLEVE	9.11	63	8522	17.0444	ug/L		94
59)	c13dicloproe	9.29	75	151115	10.6264	ug/L		96
60)	4Meth2Pentan	9.49	43	961360	103.1256	ug/L		94
62)	Toluene	9.73	92	233012	9.8803	ug/L		96
63)	t13Dicloprop	10.01	75	135691	10.8433	ug/L		93
64)	ethylmethacrylate	10.15	69	251725	21.4356	ug/L		92
65)	112Triclotha	10.24	83	80291	10.4680	ug/L		95
66)	Tetrachlorte	10.46	166	110023	9.3040	ug/L		97
67)	13Diclorpropa	10.46	76	150888	10.3807	ug/L		99
69)	2Hexanone	10.58	43	802206	105.3641	ug/L		94
70)	Clorodibrmta	10.77	129	107777	9.5854	ug/L		96
71)	12Dibrometha	10.92	107	106822	9.7578	ug/L		96
72)	Chlorobenzen	11.60	112	296362	10.1030	ug/L		97
73)	1Clhexane	11.57	91	130351	10.1032	ug/L		92
74)	1112Tetclota	11.71	131	96054	9.3689	ug/L		99
75)	Ethylbenzene	11.75	91	461697	10.9162	ug/L		96
76)	m p-Xylene	11.92	106	363591	20.7232	ug/L		97
77)	o-Xylene	12.47	106	179945	10.0982	ug/L		90
78)	Styrene	12.48	104	295969	10.3556	ug/L		98
79)	Bromoform	12.72	173	68599	8.7140	ug/L		98
80)	Isopropylben	12.99	105	467545	10.6631	ug/L		99
81)	cyclohexanone	13.10	55	108545	207.3177	ug/L		100
84)	Bromobenzene	13.41	156	119084	9.4538	ug/L	#	87
85)	1122Tetrclta	13.39	83	157222	11.9120	ug/L		100
86)	123Triclproa	13.45	75	176180	11.7970	ug/L		95
87)	14dichloro2butene	13.49	53	32773	11.7309	ug/L		90
88)	n-Propylbenz	13.58	91	507422	11.3232	ug/L		92
89)	2chlorotolue	13.69	91	320642	11.4197	ug/L		96
90)	4chlorotolue	13.84	91	372485	11.4760	ug/L		98
91)	135Trimebenz	13.83	105	377018	11.2689	ug/L		98
92)	tbutylbenzen	14.30	119	336931	10.9663	ug/L		96
93)	124Trimetben	14.37	105	382773	11.4351	ug/L		93
94)	sbutylbenzen	14.62	105	463324	11.2023	ug/L		95
95)	13Diclorbenz	14.77	146	225913	10.2914	ug/L		99
96)	pIsopropylto	14.84	119	403547	11.2365	ug/L		99
97)	14dichlorobe	14.90	146	225788	10.1666	ug/L		98
98)	12dichlorobe	15.44	146	219430	10.5155	ug/L		98
99)	nButylbenzen	15.44	91	334163	11.2654	ug/L		96
100)	12dibromo3cl	16.55	157	32155	9.0106	ug/L		90
101)	135Trichlorobenzene	16.86	180	138377	9.1772	ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS1.D Vial: 2
Acq On : 9 Nov 2020 7:48 Operator: RLD-DGS
Sample : 176659,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:20:26 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:20:20 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.68	180	117323	9.1334	ug/L	98
103)	Hexachlorobu	17.91	225	55448	8.6157	ug/L	99
104)	Naphthalene	17.99	128	350703	10.7349	ug/L	98
105)	123Trichlben	18.29	180	111084	9.2595	ug/L	95

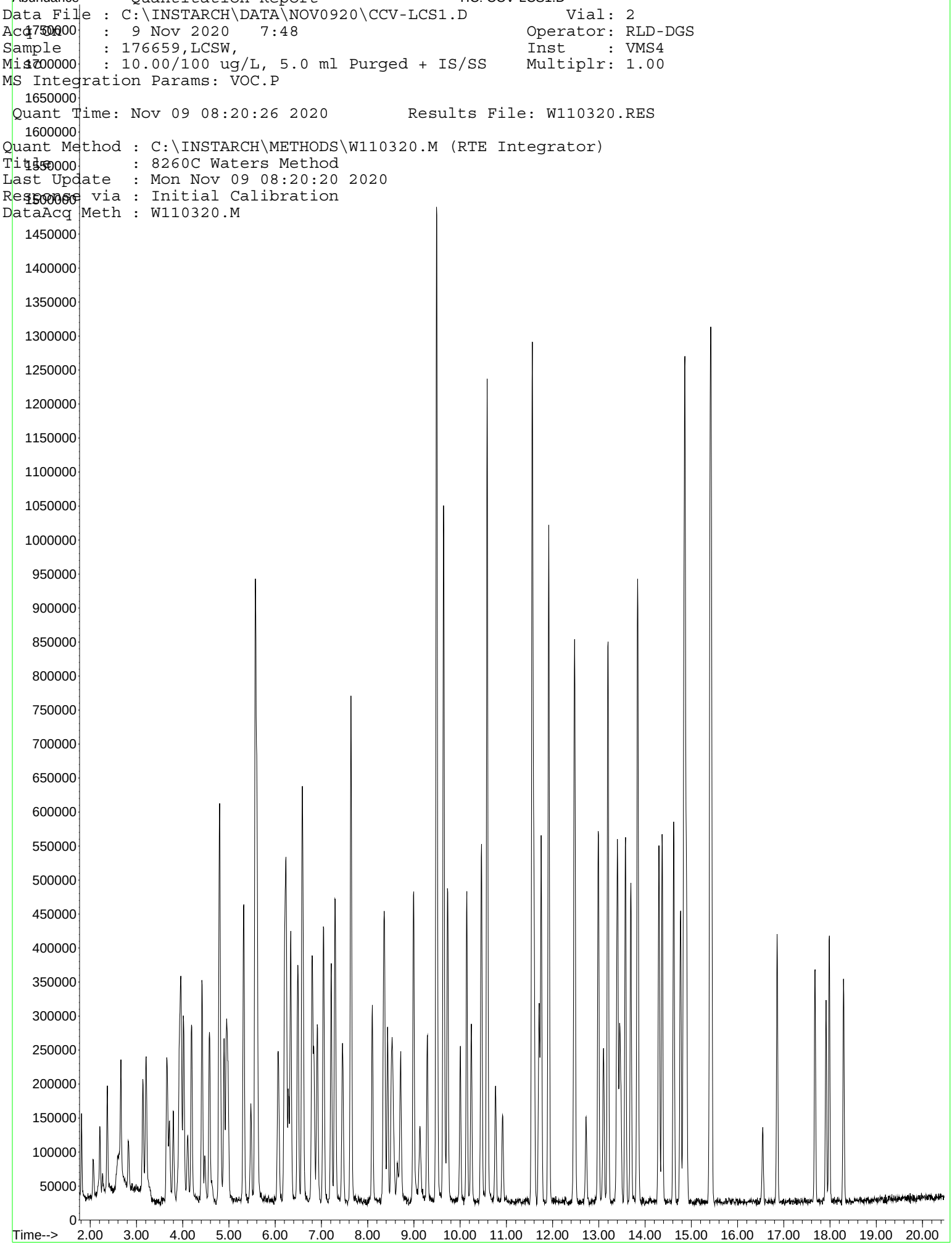
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCV-LCS1.D

Data File : C:\INSTARCH\DATA\NOV0920\CCV-LCS1.D Vial: 2
Acq On : 9 Nov 2020 7:48 Operator: RLD-DGS
Sample : 176659,LCSW, Inst : VMS4
Misc : 10.00/100 ug/L, 5.0 ml Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:20:26 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:20:20 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\MB1.D Vial: 3
Acq On : 9 Nov 2020 8:17 Operator: RLD-DGS
Sample : 176659,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:38:25 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	783720	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	656346	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	333275	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	242482	20.414	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 102 %			
45) SURR12DCAd4	7.21	102	51296	18.993	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 95 %			
61) SURRd8Tolule	9.65	98	792090	19.608	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 98 %			
83) SURR4BrFBenz	13.20	95	298366	21.112	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 106 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.03	43	11276	Below Cal	#	44
16) Iodomethane	4.12	127	3129	4.3859	ug/L #	47
17) Carbon Dislf	0.00	76	0	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.57	84	2871	N.D.		
21) tbutylalcohol	4.80	59	2888	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.59	42	2834	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\MB1.D Vial: 3
Acq On : 9 Nov 2020 8:17 Operator: RLD-DGS
Sample : 176659,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:38:25 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.49	43	8486	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.59	43	11097	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.55	91	2793	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	13.10	55	2592	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.36	105	2870	N.D.	
94)	sbutylbenzen	14.62	105	3574	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.84	119	3061	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.44	91	5851	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\MB1.D Vial: 3
Acq On : 9 Nov 2020 8:17 Operator: RLD-DGS
Sample : 176659,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:38:25 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.67	180	2787	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	17.98	128	10379	N.D.		
105) 123Trichlben	18.30	180	2886	N.D.		

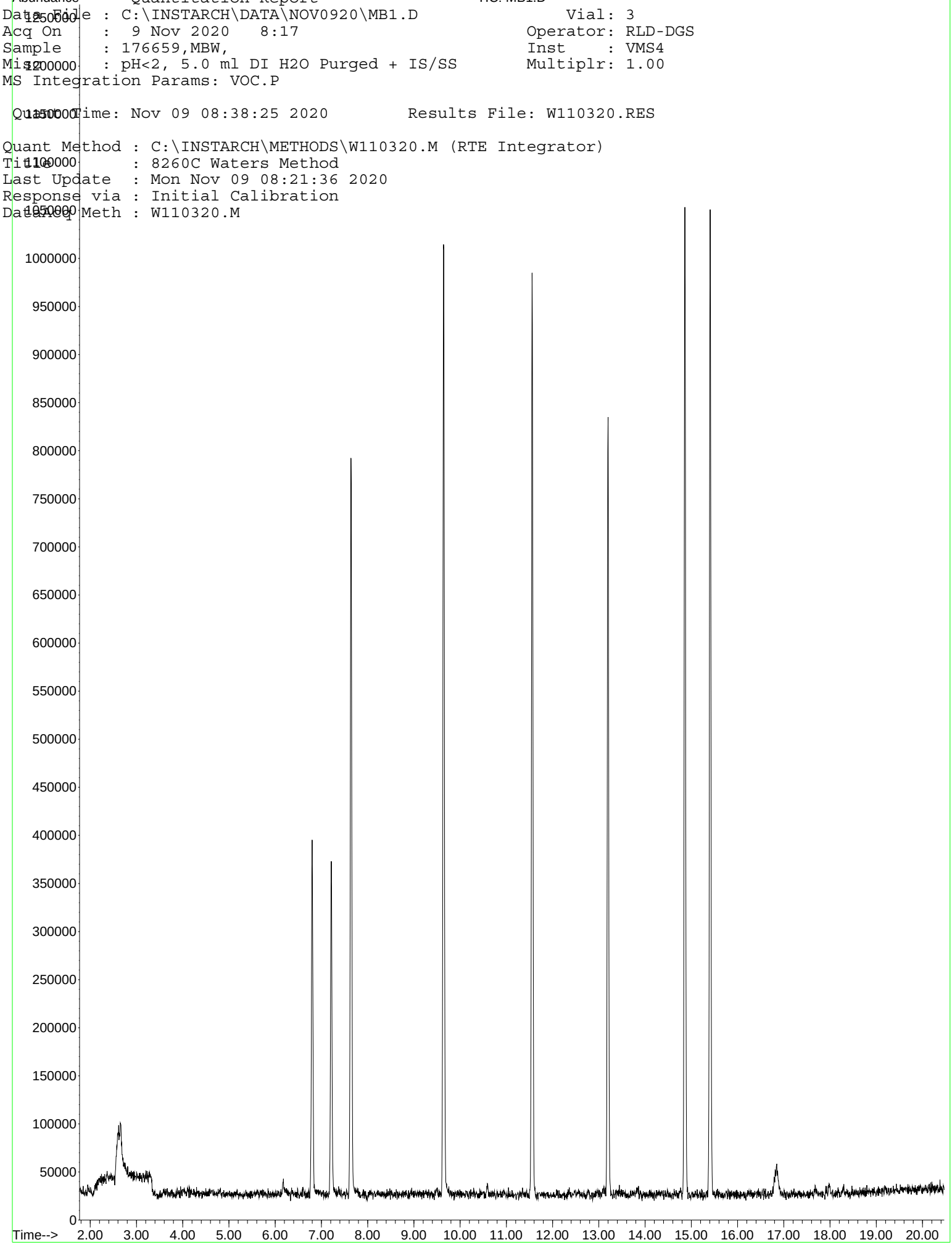
(#) = qualifier out of range (m) = manual integration

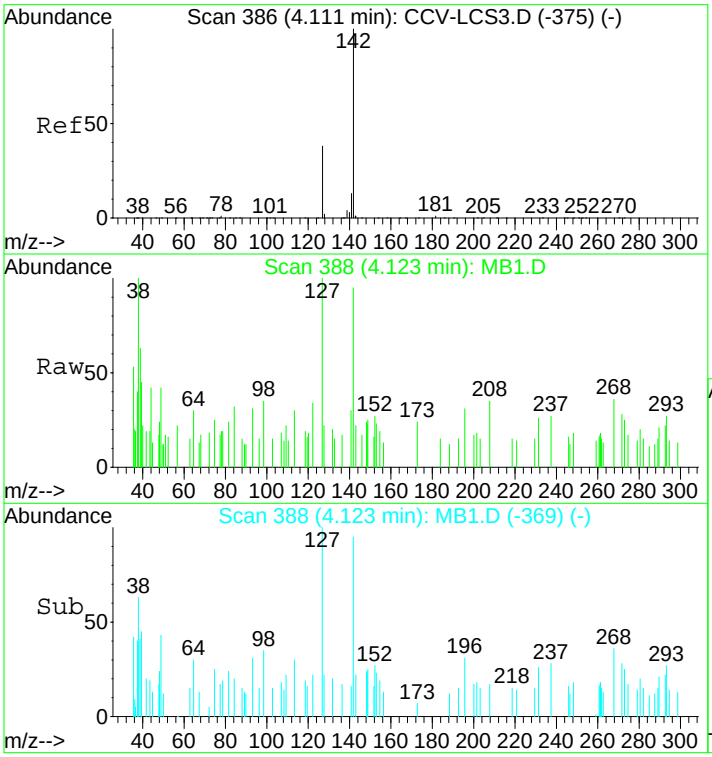
Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\MB1.D Vial: 3
Acq On : 9 Nov 2020 8:17 Operator: RLD-DGS
Sample : 176659,MBW, Inst : VMS4
Misc : pH<2, 5.0 ml DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:38:25 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 08:21:36 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

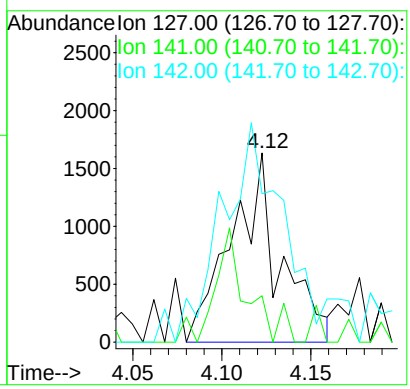




#16
Iodomethane
Concen: 4.39 ug/L
RT: 4.12 min Scan# 388
Delta R.T. 0.02 min
Lab File: MB1.D
Acq: 9 Nov 2020 8:17

Tgt Ion:127 Resp: 3129

Ion	Ratio	Lower	Upper
127	100		
141	0.0	13.9	53.9#
142	155.2	225.4	265.4#



Negative Library Identification

[redacted]

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496500MS.D Vial: 36
Acq On : 10 Nov 2020 00:20 Operator: RLD-DGS
Sample : 176659,MSW496500, Inst : VMS4
Misc : pH<2, 10.00/100 ug/L, 5.0 ml Purged + IS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 00:41:30 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1286685	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1175049	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	674755	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.80	113	379111	19.440 ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 97 %		
45) SURR12DCAd4	7.21	102	91609	20.661 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103 %		
61) SURRd8Tolule	9.64	98	1373707	20.713 ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 104 %		
83) SURR4BrFBenz	13.20	95	613078	21.426 ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 107 %		
Target Compounds					Qvalue
2) Dichlorodi	1.81	85	245443	14.7326 ug/L	98
3) Chloromethan	2.07	50	224257	15.0562 ug/L	97
4) VinylChlorid	2.21	62	243996	15.4939 ug/L	96
5) Bromomethane	2.66	94	54730	5.5119 ug/L	97
6) Chloroethane	2.83	64	139744	12.3708 ug/L	99
7) Dichloroflmethane	3.14	67	324090	11.6070 ug/L	98
8) Trichlorofma	3.21	101	333569	11.4854 ug/L	98
9) Ethylether	3.65	59	120822	12.2499 ug/L	92
10) dichlorotfluoroethan	3.67	67	219012	14.9386 ug/L	93
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	3.80	56	196063	50.6890 ug/L	98
13) 11dichlorthe	3.93	96	176729	13.2406 ug/L #	85
14) Trichlorotfluoroeth	3.96	101	383141	27.3656 ug/L	98
15) Acetone	4.02	43	677547	110.5930 ug/L	100
16) Iodomethane	4.11	127	110972	25.2784 ug/L	91
17) Carbon Dislf	4.20	76	904763	27.9766 ug/L	99
18) allylchloride	4.42	41	501638	30.0460 ug/L	89
19) methylacetate	4.48	74	37825	9.7841 ug/L	94
20) Methylchlorid	4.58	84	228854	10.0690 ug/L	98
21) tbutylalcohol	4.80	59	1360578	575.4109 ug/L	97
22) Acrylonitrile	4.90	53	386181	66.1819 ug/L	97
23) t12dichlorte	4.94	96	189933	12.6064 ug/L	95
24) MtBE	4.97	73	458639	11.8007 ug/L	97
25) Hexane	5.32	57	608718	32.1531 ug/L	97
26) 11dichlorota	5.48	63	374475	16.1136 ug/L	98
27) Vinylacetate	5.57	43	2995466	130.5456 ug/L	97
28) chloroprene	5.60	53	535379	29.5562 ug/L	92
29) Diisopether	5.61	45	496844	13.3516 ug/L	92
30) ETBE	6.06	59	429275	12.2395 ug/L	95
31) 22dichloropr	6.21	77	213310	10.4211 ug/L	98
32) c12dichlorte	6.21	96	269554	15.0578 ug/L	96
33) 2Butanone	6.24	72	288981	114.1206 ug/L	98
34) propionitrile	6.29	54	333212	124.8356 ug/L	99
35) Ethylacetate	6.34	88	41338	49.4201 ug/L #	78
36) methacrylonitrile	6.48	67	172424	23.7107 ug/L	96
37) Bromochlorma	6.50	128	96198	11.3982 ug/L #	86
38) Tetrahydofur	6.59	42	670130	124.7247 ug/L	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496500MS.D Vial: 36
Acq On : 10 Nov 2020 00:20 Operator: RLD-DGS
Sample : 176659,MSW496500, Inst : VMS4
Misc : pH<2, 10.00/100 ug/L, 5.0 ml Purged + IS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 00:41:30 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.60	83	331433	11.8646 ug/L		97
40)	111trichlota	6.84	97	306088	12.7263 ug/L		97
42)	Cyclohexane	6.91	56	296254	14.4555 ug/L		92
43)	Carbtetraclo	7.05	119	252787	11.9924 ug/L		98
44)	11dicloprope	7.04	110	95128	11.9532 ug/L	#	85
46)	Benzene	7.29	78	704729	12.6772 ug/L		97
47)	12dichlorota	7.30	62	252454	11.9975 ug/L		100
48)	TAME	7.46	73	425116	11.4114 ug/L		95
49)	trichloroete	8.10	95	251109	14.9831 ug/L		97
50)	methylcyclohexane	8.34	83	346511	14.0942 ug/L		94
51)	12dicloropra	8.37	63	186386	12.8382 ug/L		87
52)	23Dicl1propene	8.43	75	269187	12.0599 ug/L		98
53)	Dibromometha	8.51	93	120719	11.0025 ug/L		98
54)	methylmethacrylate	8.54	69	129790	11.1149 ug/L		97
55)	14dioxane	8.56	88	162280	530.7273 ug/L		88
56)	Bromodiclrma	8.72	83	229989	10.6961 ug/L		90
57)	2Nitropropane	9.00	43	497137	105.0874 ug/L		98
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.29	75	272401	11.3987 ug/L		96
60)	4Meth2Pentan	9.49	43	1940275	123.8539 ug/L		99
62)	Toluene	9.73	92	480264	12.1183 ug/L		98
63)	t13Dicloprop	10.01	75	229564	10.9164 ug/L		97
64)	ethylmethacrylate	10.15	69	463093	23.4663 ug/L		96
65)	112Triclotha	10.24	83	143168	11.1073 ug/L		97
66)	Tetrachlorte	10.46	166	247317	12.4453 ug/L		99
67)	13Diclorpropa	10.47	76	271843	11.1290 ug/L		97
69)	2Hexanone	10.58	43	1527361	114.4670 ug/L		97
70)	Clorodibrmta	10.77	129	182518	9.2624 ug/L		97
71)	12Dibrometha	10.92	107	193192	10.0696 ug/L		97
72)	Chlorobenzen	11.60	112	563488	10.9609 ug/L		97
73)	1Clhexane	11.57	91	259164	11.4617 ug/L		92
74)	1112Tetclota	11.71	131	176669	9.8325 ug/L		99
75)	Ethylbenzene	11.76	91	884954	11.9390 ug/L		99
76)	m p-Xylene	11.92	106	704000	22.8954 ug/L		97
77)	o-Xylene	12.46	106	338871	10.8510 ug/L		90
78)	Styrene	12.48	104	537709	10.7351 ug/L		95
79)	Bromoform	12.72	173	122495	8.8787 ug/L		98
80)	Isopropylben	12.99	105	907884	11.8147 ug/L		99
81)	cyclohexanone	13.10	55	187910	204.7898 ug/L		92
84)	Bromobenzene	13.41	156	239963	9.9778 ug/L		93
85)	1122Tetrclta	13.39	83	269402	10.6909 ug/L		96
86)	123Triclproa	13.45	75	305382	10.7102 ug/L		97
87)	14dichloro2butene	13.48	53	55080	10.3264 ug/L		90
88)	n-Propylbenz	13.58	91	1037504	12.1263 ug/L		97
89)	2chlorotolue	13.69	91	622947	11.6205 ug/L		94
90)	4chlorotolue	13.84	91	713719	11.5172 ug/L		95
91)	135Trimebenz	13.83	105	735714	11.5177 ug/L		100
92)	tbutylbenzen	14.30	119	653242	11.1360 ug/L		98
93)	124Trimetben	14.37	105	731553	11.4468 ug/L		97
94)	sbutylbenzen	14.62	105	964148	12.2098 ug/L		98
95)	13Diclorbenz	14.77	146	442110	10.5488 ug/L		98
96)	pIsopropylto	14.84	119	798885	11.6509 ug/L		97
97)	14dichlorobe	14.90	146	429816	10.1367 ug/L		98
98)	12dichlorobe	15.44	146	404694	10.1578 ug/L		98
99)	nButylbenzen	15.43	91	685102	12.0971 ug/L		98
100)	12dibromo3cl	16.55	157	63538	9.3256 ug/L		96
101)	135Trichlorobenzene	16.86	180	311476	10.8196 ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496500MS.D Vial: 36
Acq On : 10 Nov 2020 00:20 Operator: RLD-DGS
Sample : 176659,MSW496500, Inst : VMS4
Misc : pH<2, 10.00/100 ug/L, 5.0 ml Purged + IS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 00:41:30 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

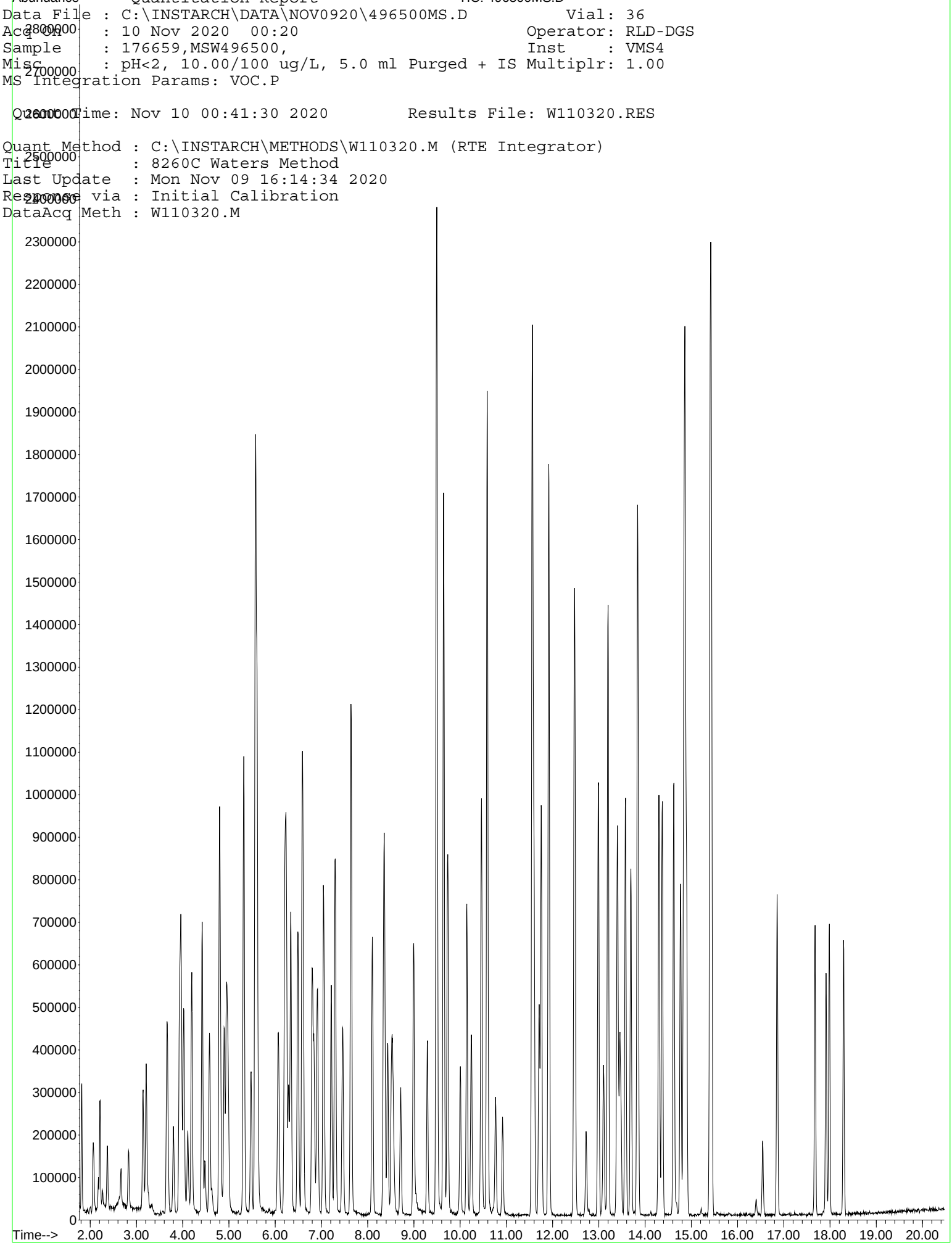
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.68	180	259644	10.5869	ug/L	98
103)	Hexachlorobu	17.91	225	144598	11.7680	ug/L	92
104)	Naphthalene	17.99	128	641355	10.2824	ug/L	99
105)	123Trichlben	18.30	180	245970	10.7388	ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0920\496500MS.D Vial: 36
Acq On : 10 Nov 2020 00:20 Operator: RLD-DGS
Sample : 176659,MSW496500, Inst : VMS4
Misc : pH<2, 10.00/100 ug/L, 5.0 ml Purged + IS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 00:41:30 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496500SD.D Vial: 37
Acq On : 10 Nov 2020 00:50 Operator: RLD-DGS
Sample : 176659,MSDW496500, Inst : VMS4
Misc : pH<2, 10.00/100 ug/L, 5.0 ml Purged + IS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 01:10:57 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.64	96	1307406	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.56	117	1169390	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.86	152	679195	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.80	113	387271	19.544	ug/L	0.00
Spiked Amount 20.000	Range 88 - 112		Recovery = 98 %			
45) SURR12DCAd4	7.21	102	91668	20.346	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
61) SURRd8Tolule	9.65	98	1359033	20.167	ug/L	0.00
Spiked Amount 20.000	Range 88 - 116		Recovery = 101 %			
83) SURR4BrFBenz	13.20	95	604363	20.983	ug/L	0.00
Spiked Amount 20.000	Range 86 - 111		Recovery = 105 %			
Target Compounds						Qvalue
2) Dichlorodi	1.81	85	236389	13.9643	ug/L	95
3) Chloromethan	2.07	50	206481	13.6430	ug/L	100
4) VinylChlorid	2.21	62	244307	15.2677	ug/L	95
5) Bromomethane	2.66	94	60172	6.1957	ug/L	90
6) Chloroethane	2.83	64	141379	12.3172	ug/L	99
7) Dichloroflmethane	3.14	67	332157	11.7074	ug/L	98
8) Trichlorofma	3.21	101	336962	11.4183	ug/L	95
9) Ethylether	3.65	59	125696	12.5421	ug/L	96
10) dichlorotfluoroethan	3.67	67	206387	13.8544	ug/L	99
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.80	56	203287	51.7237	ug/L	98
13) 11dichlorthe	3.93	96	171471	12.6430	ug/L #	83
14) Trichlorotfluoroeth	3.96	101	375671	26.4068	ug/L	98
15) Acetone	4.02	43	689572	110.7865	ug/L	100
16) Iodomethane	4.11	127	128411	27.9049	ug/L	95
17) Carbon Dislf	4.20	76	903536	27.4959	ug/L	99
18) allylchloride	4.42	41	500055	29.4765	ug/L	88
19) methylacetate	4.48	74	40454	10.2983	ug/L	90
20) Methylchlorid	4.59	84	222212	9.6219	ug/L	95
21) tbutylalcohol	4.80	59	1438858	598.8724	ug/L	98
22) Acrylonitrile	4.90	53	384171	64.7940	ug/L	94
23) t12dichlorte	4.94	96	184268	12.0366	ug/L	93
24) MtBE	4.97	73	457996	11.5974	ug/L	97
25) Hexane	5.32	57	601943	31.2913	ug/L	97
26) 11dichlorota	5.48	63	379023	16.0508	ug/L	96
27) Vinylacetate	5.57	43	2969776	127.3747	ug/L	96
28) chloroprene	5.60	53	540091	29.3437	ug/L	91
29) Diisopether	5.61	45	481804	12.7422	ug/L	92
30) ETBE	6.07	59	428172	12.0146	ug/L	97
31) 22dichloropr	6.20	77	212071	10.1964	ug/L	97
32) c12dichlorte	6.21	96	263214	14.4706	ug/L	93
33) 2Butanone	6.23	72	290941	113.0736	ug/L	97
34) propionitrile	6.29	54	344453	127.0017	ug/L	98
35) Ethylacetate	6.34	88	42773	50.3253	ug/L #	79
36) methacrylonitrile	6.49	67	180564	24.4366	ug/L	99
37) Bromochlorma	6.50	128	93687	10.9248	ug/L #	87
38) Tetrahydofur	6.59	42	688159	126.0503	ug/L	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0920\496500SD.D Vial: 37
Acq On : 10 Nov 2020 00:50 Operator: RLD-DGS
Sample : 176659,MSDW496500, Inst : VMS4
Misc : pH<2, 10.00/100 ug/L, 5.0 ml Purged + IS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 01:10:57 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.60	83	332041	11.6979 ug/L	99
40)	111trichlota	6.84	97	305944	12.5187 ug/L	96
42)	Cyclohexane	6.92	56	301392	14.4732 ug/L	91
43)	Carbtetraclo	7.06	119	252923	11.8087 ug/L	98
44)	11dicloprope	7.04	110	98961	12.2377 ug/L	97
46)	Benzene	7.29	78	712188	12.6084 ug/L	97
47)	12dichlorota	7.31	62	249274	11.6586 ug/L	100
48)	TAME	7.46	73	416220	10.9956 ug/L	95
49)	trichloroete	8.10	95	246042	14.4481 ug/L	99
50)	methylcyclohexane	8.34	83	348570	13.9533 ug/L	96
51)	12dicloropra	8.36	63	181541	12.3063 ug/L	89
52)	23Dicl1propene	8.43	75	259387	11.4367 ug/L	99
53)	Dibromometha	8.52	93	120208	10.7823 ug/L	99
54)	methylmethacrylate	8.53	69	126982	10.7021 ug/L	95
55)	14dioxane	8.56	88	167927	540.4913 ug/L	87
56)	Bromodiclrma	8.72	83	232351	10.6347 ug/L	93
57)	2Nitropropane	9.00	43	522549	108.7085 ug/L	98
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	9.29	75	272072	11.2045 ug/L	96
60)	4Meth2Pentan	9.49	43	1958029	123.0063 ug/L	98
62)	Toluene	9.73	92	464217	11.5277 ug/L	98
63)	t13Dicloprop	10.00	75	228093	10.6745 ug/L	97
64)	ethylmethacrylate	10.15	69	480215	23.9482 ug/L	98
65)	112Triclotha	10.24	83	139580	10.6573 ug/L	98
66)	Tetrachlorte	10.46	166	244455	12.1063 ug/L	98
67)	13Diclorpropa	10.46	76	274266	11.0502 ug/L	98
69)	2Hexanone	10.58	43	1578674	118.8851 ug/L	98
70)	Clorodibrmta	10.76	129	179765	9.1668 ug/L	99
71)	12Dibrometha	10.92	107	186386	9.7619 ug/L	98
72)	Chlorobenzen	11.60	112	554821	10.8445 ug/L	98
73)	1Clhexane	11.57	91	249241	11.0762 ug/L	91
74)	1112Tetclota	11.71	131	176560	9.8740 ug/L	99
75)	Ethylbenzene	11.75	91	867993	11.7669 ug/L	98
76)	m p-Xylene	11.92	106	699400	22.8559 ug/L	99
77)	o-Xylene	12.46	106	339156	10.9127 ug/L	95
78)	Styrene	12.49	104	518778	10.4073 ug/L	96
79)	Bromoform	12.72	173	119009	8.6677 ug/L	99
80)	Isopropylben	12.99	105	877977	11.4808 ug/L	100
81)	cyclohexanone	13.10	55	196776	215.4900 ug/L	92
84)	Bromobenzene	13.41	156	239625	9.8986 ug/L	95
85)	1122Tetrclta	13.39	83	271576	10.7067 ug/L	100
86)	123Triclproa	13.45	75	298371	10.3959 ug/L	98
87)	14dichloro2butene	13.48	53	57194	10.6526 ug/L	82
88)	n-Propylbenz	13.58	91	999813	11.6094 ug/L	98
89)	2chlorotolue	13.69	91	602110	11.1584 ug/L	95
90)	4chlorotolue	13.85	91	696369	11.1638 ug/L	95
91)	135Trimebenz	13.84	105	734740	11.4273 ug/L	97
92)	tbutylbenzen	14.30	119	664387	11.2520 ug/L	98
93)	124Trimetben	14.37	105	717428	11.1524 ug/L	96
94)	sbutylbenzen	14.62	105	945223	11.8918 ug/L	97
95)	13Diclorbenz	14.77	146	422770	10.0214 ug/L	100
96)	pIsopropylto	14.84	119	803779	11.6457 ug/L	96
97)	14dichlorobe	14.90	146	422375	9.8961 ug/L	97
98)	12dichlorobe	15.44	146	403373	10.0585 ug/L	99
99)	nButylbenzen	15.43	91	675246	11.8451 ug/L	97
100)	12dibromo3cl	16.55	157	66945	9.7614 ug/L	96
101)	135Trichlorobenzene	16.86	180	310107	10.7016 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV0920\496500SD.D Vial: 37
Acq On : 10 Nov 2020 00:50 Operator: RLD-DGS
Sample : 176659,MSDW496500, Inst : VMS4
Misc : pH<2, 10.00/100 ug/L, 5.0 ml Purged + IS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 01:10:57 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

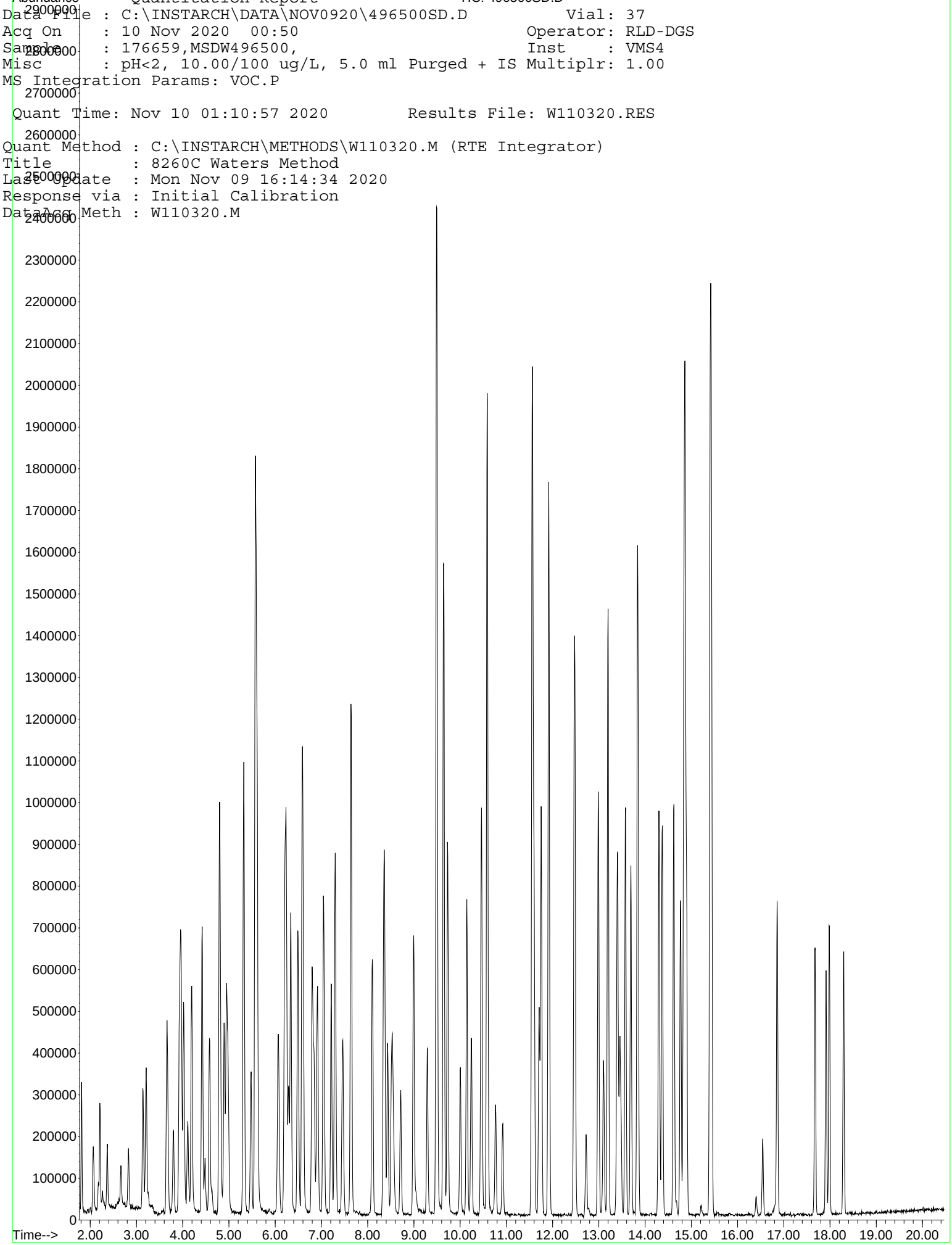
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.68	180	264472	10.7132	ug/L	98
103) Hexachlorobu	17.91	225	138589	11.2053	ug/L	95
104) Naphthalene	17.98	128	665774	10.6041	ug/L	99
105) 123Trichlben	18.30	180	242843	10.5330	ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\NOV0920\496500SD.D Vial: 37
Acq On : 10 Nov 2020 00:50 Operator: RLD-DGS
Sample : 176659,MSDW496500, Inst : VMS4
Misc : pH<2, 10.00/100 ug/L, 5.0 ml Purged + IS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 10 01:10:57 2020 Results File: W110320.RES

Quant Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Nov 09 16:14:34 2020
Response via : Initial Calibration
DataAcq Meth : W110320.M

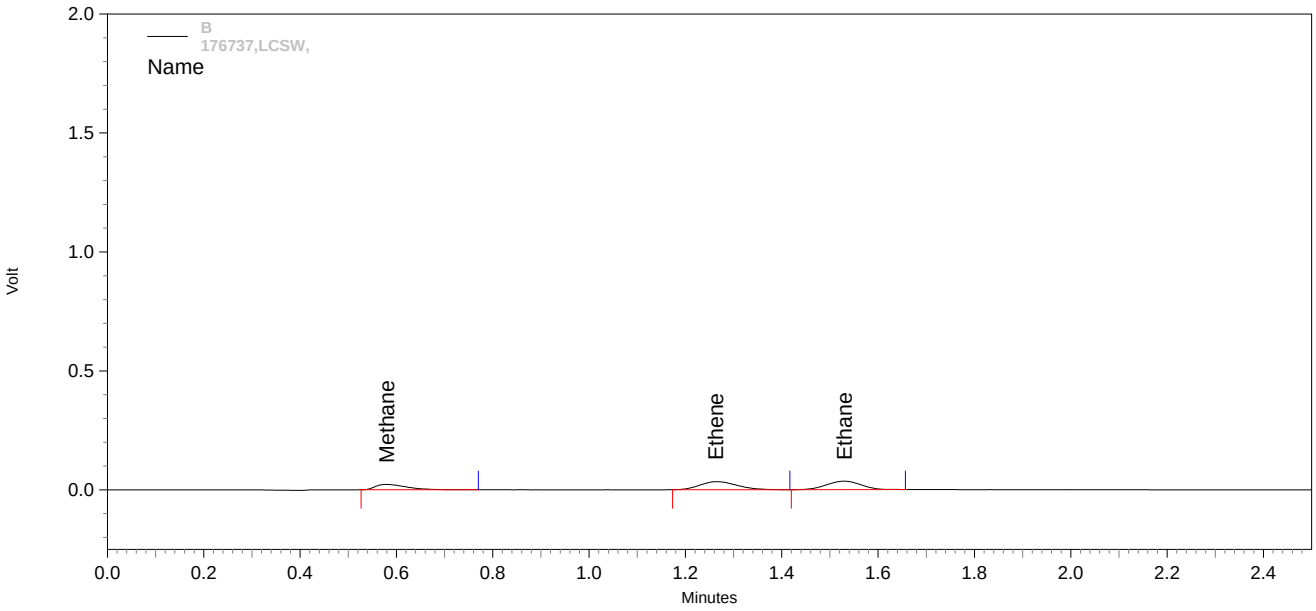


Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\003.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,LCSW,
Acquired: Nov 03, 2020 19:15:04
File Desc. Laboratory Control Sample - 25 ppmV -

500 uL of the 200 ppmV MEE Std. into 4 mL of headspace. 1.0 mL injection (Methane, Ethene, Ethane,)



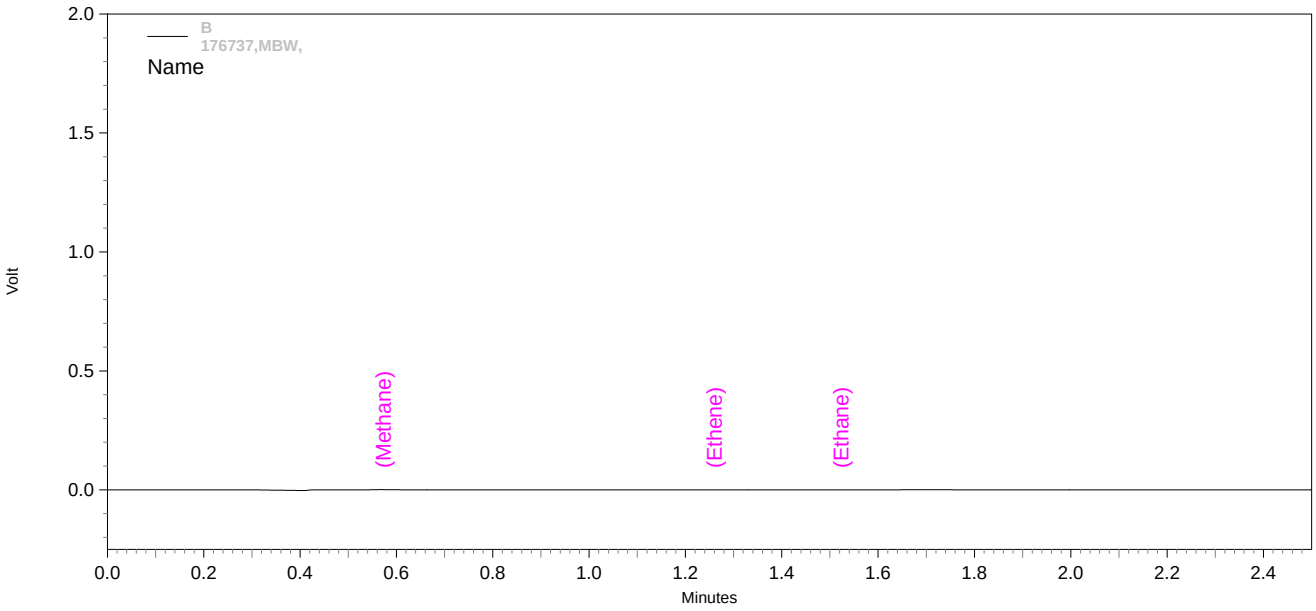
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.580**	**0.573**	**99808**	**26.761**	**ppmV**
2	**Ethene**	**1.263**	**1.260**	**180285**	**26.946**	**ppmV**
3	**Ethane**	**1.530**	**1.523**	**175144**	**26.466**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\004.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,MBW,
Acquired: Nov 03, 2020 19:51:19
File Desc. Method Blank
1.0 mL injection (Methane, Ethene, Ethane)



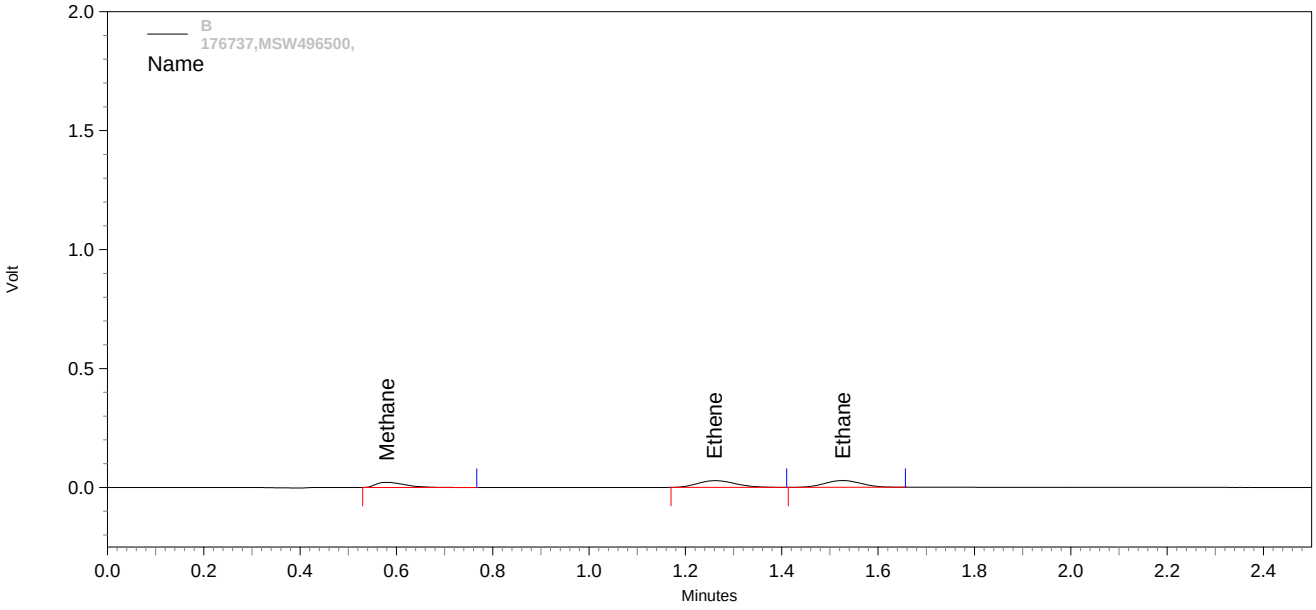
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.573**		**0.000 BDL**	**ppmV**
	Ethene		**1.260**		**0.000 BDL**	**ppmV**
	Ethane		**1.523**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\011.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,MSW496500,
Acquired: Nov 03, 2020 20:17:59
File Desc. MATRIX SPIKE 1mL injection (Methane, Ethene, Ethane)



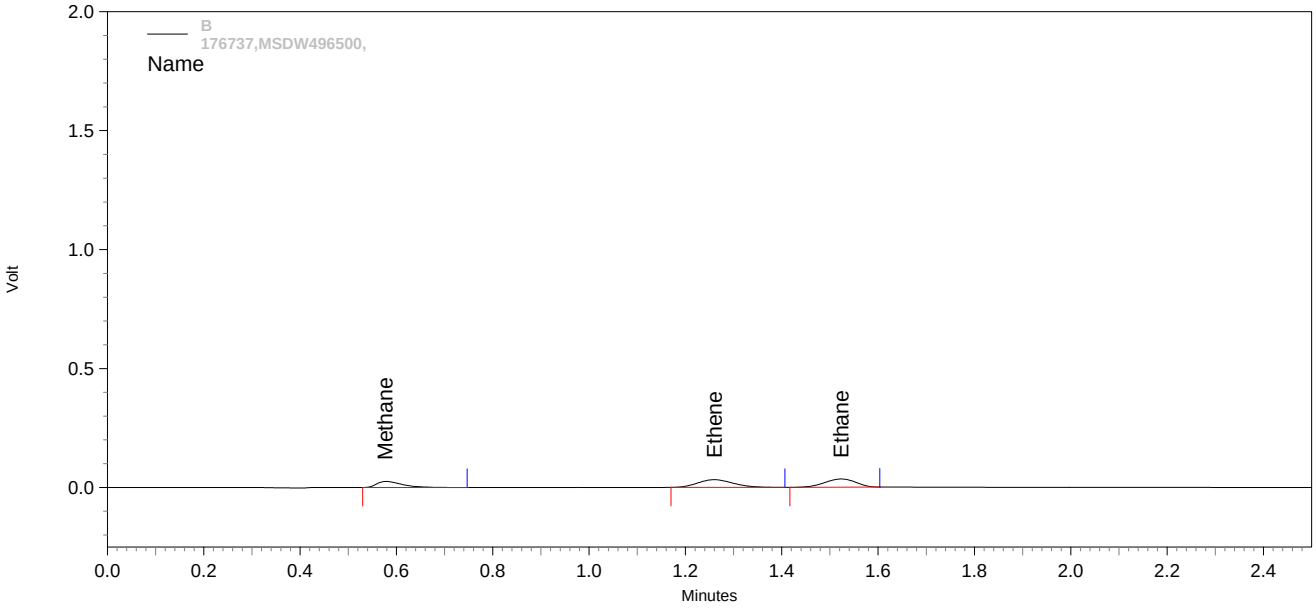
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.580**	**0.573**	**89174**	**23.828**	**ppmV**
2	**Ethene**	**1.260**	**1.260**	**153516**	**23.076**	**ppmV**
3	**Ethane**	**1.527**	**1.523**	**147441**	**22.391**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\110320 -\012.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121319.met
Sample ID: 176737,MSDW496500,
Acquired: Nov 03, 2020 20:21:20
File Desc. MATRIX SPIKE DUPLICATE 1mL injection (Methane, Ethene, Ethane)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.577**	**0.573**	**92060**	**24.624**	**ppmV**
2	**Ethene**	**1.260**	**1.260**	**164370**	**24.645**	**ppmV**
3	**Ethane**	**1.523**	**1.523**	**154061**	**23.365**	**ppmV**

VOLATILE ORGANIC ANALYSIS
LOGBOOK
DOCUMENTS

VOC 8260 QSM WATER 5.0 Analytical Run
176563 on 11/12/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	500935							VOC 8260 QSM WATER 5.0				
					BFB				0			
	500938							VOC 8260 QSM WATER 5.0				
					LCSW				0			
	500939							VOC 8260 QSM WATER 5.0				
					CCV				0			
	500932							VOC 8260 QSM WATER 5.0				
					MBW				0			
157538	495136		10/27/2020	1400		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	**4**	
		TRIP BLANK										
157538	495137		10/27/2020	0920		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		13MW4										
157538	495139		10/27/2020	1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		13MW3										
157538	495140		10/27/2020	1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		13TW3										
157538	495141		10/27/2020	1120		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		49MW04										
157538	495142		10/27/2020	1230		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		13MW2										
	500943							VOC 8260 QSM WATER 5.0				
					LCSDW 500938				0			
	500944							VOC 8260 QSM WATER 5.0				
					CCVF				0			

12 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\NOV0620B\BFB1.D
Injection Date : 6 Nov 2020 Log Time Period (hrs) : ALL
Injection Time : 22:28 Total files within period : 48
Sample Directory : C:\INSTARCH\DATA\NOV0620B\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	176654,LCSW, 10.00/100 ug/L, 5.0 ml Pu	6 Nov 2020	22:41
IB1	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 ml DI H2O Purged + IS	6 Nov 2020	23:10
MB-CCB1	1.00	1.00	1.00	176555,MBW, pH<2, 5.0 ml DI H2O Purge	6 Nov 2020	23:39
495136	1.00	1.00	1.00	176563,495136, pH<2, 5.0 ml Purged + IS/	7 Nov 2020	00:08
495137	1.00	1.00	1.00	176563,495137, pH<2, 5.0 ml Purged + IS/	7 Nov 2020	02:31
495139	1.00	1.00	1.00	176563,495139, pH<2, 5.0 ml Purged + IS/	7 Nov 2020	03:00
495140	1.00	1.00	1.00	176563,495140, pH<2, 5.0 ml Purged + IS/	7 Nov 2020	03:28
495141	1.00	1.00	1.00	176563,495141, pH<2, 5.0 ml Purged + IS/	7 Nov 2020	03:57
495142	1.00	1.00	1.00	176563,495142, pH<2, 5.0 ml Purged + IS/	7 Nov 2020	04:25
CCVF-LCSD1	1.00	1.00	1.00	176555,LCSDW, 10.00/100 ug/L, 5.0 ml Pu	7 Nov 2020	09:39

8260 ISTD/SSTD 20ug/ml VOC0761
8260 BFB STD. 50ug/ml VOC0760
8260 ICV STD. 100ug/ml VOC0771
8260 CCV/CALIB. 100ug/ml VOC0772

FVO4-01 Data Review Checklist

INDEPENDENT DATA REVIEW CHECKLIST			Method: GCMS (EPA SW-846 8260C)					
Analysis Date	**LIMS Run #(s):**	**Analyst/Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved?**			**Instrument**
					Yes	No		
11/06/2020	176552 176555 176563 176653 176654	TMG/RLD	RLD	11/13/2020	Yes			VMS4

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	
I. BFB Tune Check						
Was a BFB tune check analyzed with acceptable results?	Relative abundance criteria met?	Yes		Yes		
II. Initial Calibration Verification (ICV)						
Was initial calibration performed using a minimum of five standard concentration levels (minimum of 6 levels for quadratic curves)?	Lowest standard at or below RL?	Yes		Yes		
Were the Average Relative Response Factors (ARRF) acceptable?	ARRF<or= specified limits (<15%D.)see SOP)	Yes		Yes		
Was a second-source ICV(s) analyzed (for Quadratic Curve)?	Required before sample analyses.	Yes		Yes		
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		
Was Initial Calibration Blank (ICB) analyzed?	Required before sample analyses.	Yes		Yes		
Were the ICB results for all target analytes less than the limit of detection (LOD).	<LOD or < project/program specific limits		No		No	
III. Continuing Calibration Verification (CCV)						
Was an acceptable BFB tune check run at the beginning of every twelve hour shift?	Relative abundance criteria met?	Yes		Yes		
Was a CCV analyzed after every 12 hour tune check?	Required before sample analyses.	Yes		Yes		
Was a second CCV (CCV2) for compounds calibrated using quadratic curves analyzed after every 12 hour tune check?	Required before analyses of WI samples (above the inflection point of the curve).					
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific		No		No	
If necessary, were the results for outlying compounds qualified?		Yes		Yes		Affected sample results were "Z" flagged

IV. Blanks						
Was a Method Blank (MB) analyzed prior to analysis of samples?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MB results for all target analytes less than the limit of detection (LOD)?	*All target analytes <LOD or < project/program specific limits (<1/2 RL for DoD-QSM)	Yes		Yes		
If analytes were detected in the MB with no associated positives in the samples, no further action is needed. If the analyte detects in the MB were greater than the acceptance criteria and there were detects in the samples, was the data qualified.?						
V. Laboratory Control Spike (LCS)						
Was a LCS (and LCSD if needed) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the LCS (LCSD) recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.	Yes		Yes		
If applicable, were associated sample detects (and non-detects for low recoveries) qualified?						
Is the relative percent difference (RPD) for each analyte between the LCS and LSCD (if applicable) acceptable?	Default 20%, or see internally generated limits, or client specific limits.		No		No	Affected sample results were "Y' flagged
VI. Matrix Spike/Matrix Spike Duplicate (MS/MSD)						
Was a Martrix Spike (MS) and a Matrix Spike Duplicate (MSD) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MS/MSD recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.		No		No	Affected sample results were "M" flagged
Is the relative percent difference (RPD) for each analyte between the MS and MSD acceptable?	Default 20%, or see internally generated limits, or client specific limits.	Yes		Yes		
VII. Sample Analyses						
Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
Were surrogate recoveries for all samples and QC within acceptance criteria?	Default 70-130%, or see internally generated program limits, or client specified limits.	Yes		Yes		
If possible, were the affected samples reanalyzed?						
**Were reported sample results with failing surrogate recoveries qualified?						
Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed? If not qualify (X).	Target upper middle range of calibration curve.	Yes		Yes		
Did all samples meet hold time and preservation criteria as defined by method/program?	H2O sample: pH < 2 = 14 days, pH >2 = 7 days. Soil samples: 14 days (other criteria may apply)	Yes		Yes		
Were all samples and QC injected within 12 hours of BFB tune check?		Yes		Yes		
Were internal standard recoveries acceptable relevant to associated ICAL?	Response = -50 to +200%; Ret. time = +/- 30 sec.	Yes		Yes		

VIII. Records and Reporting						
Is sequence file / injection log present in the data package?		Yes		Yes		
Were all data, calculations, and values verified in LIMS (including removal of non-detections) upon completion of data capture?		Yes		Yes		
Were manual integrations performed correctly?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms.	Yes		Yes		
Was the rational for the manual integration verified?		Yes		Yes		
Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

ᵏNon-Applicable Yes/No Cells Are Left Blank*

Comments:

VOC 8260 QSM WATER 5.0 Analytical Run
176659 on 11/13/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	501413							VOC 8260 QSM WATER 5.0				
					BFB				0			
	501415							VOC 8260 QSM WATER 5.0				
					LCSW				0			
	501422							VOC 8260 QSM WATER 5.0				
					CCV				0			
	502225							VOC 8260 QSM WATER 5.0				
					MBW				0			
157621	496505		10/28/2020	1600		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	**4**	
		TB-2										
157624	496545		10/29/2020	1130		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	**4**	
		TB-3										
157621	496500		10/28/2020	0855		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		48MW06			Designated MS/MSD							
157621	496501		10/28/2020	1025		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		48MW1										
157621	496502		10/28/2020	1210		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		49MW01										
157621	496503		10/28/2020	1320		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		50MW02										
157621	496504		10/28/2020	1500		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		49TW02										
157621	496507		10/28/2020	1500		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		49MW02										
157621	496508		10/28/2020	1530		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		RNS-1										
157624	496542		10/29/2020	1015		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		48MW2										
	501793							VOC 8260 QSM WATER 5.0				
					CCVF				0			
	501818							VOC 8260 QSM WATER 5.0				
					BFB				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

VOC 8260 QSM WATER 5.0 Analytical Run
176659 on 11/13/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	501816								VOC 8260 QSM WATER 5.0				
					CCV					0			
	501830								VOC 8260 QSM WATER 5.0				
					CCB					0			
157624	496543		10/29/2020	0845			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		48MW3											
	501854		10/28/2020	0855					VOC 8260 QSM 5.0				
		48MW06			MSW	496500				0			
	501859		10/28/2020	0855					VOC 8260 QSM 5.0				
		48MW06			MSDW	501854				0			
	501825								VOC 8260 QSM WATER 5.0				
					CCVF					0			
	501867								VOC 8260 QSM WATER 5.0				
					BFB					0			
	501864								VOC 8260 QSM WATER 5.0				
					CCV					0			
	502132								VOC 8260 QSM WATER 5.0				
					CCB					0			
157624	496543		10/29/2020	0845			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
RERUN		48MW3											
	502334								VOC 8260 QSM WATER 5.0				
					CCVF					0			

27 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\NOV0920\BFB1.D
Injection Date : 9 Nov 2020 Log Time Period (hrs) : ALL
Injection Time : 07:32 Total files within period : 52
Sample Directory : C:\INSTARCH\DATA\NOV0920\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	176659,LCSW, 10.00/100 ug/L, 5.0 ml Pu	9 Nov 2020	07:48
MB1	1.00	1.00	1.00	176659,MBW, pH<2, 5.0 ml DI H2O Purge	9 Nov 2020	08:17
496505	1.00	1.00	1.00	176659,496505, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	09:21
496545	1.00	1.00	1.00	176659,496545, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	09:50
496500	1.00	1.00	1.00	176659,496500, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	10:49
496501	1.00	1.00	1.00	176659,496501, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	11:19
496502	1.00	1.00	1.00	176659,496502, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	11:49
496503	1.00	1.00	1.00	176659,496503, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	12:18
496504	1.00	1.00	1.00	176659,496504, pH7, 5.0 ml Purged + IS/S	9 Nov 2020	12:48
496507	1.00	1.00	1.00	176659,496507, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	13:17
496508	1.00	1.00	1.00	176659,496508, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	13:47
496542	1.00	1.00	1.00	176659,496542, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	14:16
CCVF1	1.00	1.00	1.00	176659,CCVF, 10.00/100 ug/L, 5.0 ml Pu	9 Nov 2020	14:46
BFB2	1.00	1.00	1.00	176786,BFB, 50 ng Injection	9 Nov 2020	15:12
CCV-LCS2	1.00	1.00	1.00	176786,LCSW, 10.00/100 ug/L, 5.0 ml Pu	9 Nov 2020	15:27
IB1	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 ml DI H2O Purged + IS	9 Nov 2020	15:57
MB2-CCB1	1.00	1.00	1.00	176786,MBW, pH<2, 5.0 ml DI H2O Purge	9 Nov 2020	16:26
496543	1.00	1.00	1.00	176659,496543, pH<2, 5.0 ml Purged + IS/	9 Nov 2020	17:26

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W110320.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\NOV0920\BFB1.D
Injection Date : 9 Nov 2020 Log Time Period (hrs) : ALL
Injection Time : 07:32 Total files within period : 52
Sample Directory : C:\INSTARCH\DATA\NOV0920\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
496500MS	1.00	1.00	1.00	176659,MSW496500, pH<2, 10.00/100 ug/L, 5.0	10 Nov 2020	00:20
496500SD	1.00	1.00	1.00	176659,MSDW496500, pH<2, 10.00/100 ug/L, 5.0	10 Nov 2020	00:50
CCVF2	1.00	1.00	1.00	176659,CCVF, 10.00/100 ug/L, 5.0 ml Pu	10 Nov 2020	03:17
BFB3	1.00	1.00	1.00	176913,BFB, 50 ng Injection	10 Nov 2020	07:50
CCV-LCS3	1.00	1.00	1.00	176913,LCSW, 10.00/100 ug/L, 5.0 ml Pu	10 Nov 2020	08:11
IB2	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 ml DI H2O Purged + IS	10 Nov 2020	08:40
MB3-CCB2	1.00	1.00	1.00	176913,MBW, pH<2, 5.0 ml DI H2O Purge	10 Nov 2020	09:10
496543R	1.00	1.00	1.00	176659,496543,5 pH<2, 5.0 ml Purged + IS/	10 Nov 2020	11:39
CCVF3	1.00	1.00	1.00	176913,CCVF, 10.00/100 ug/L, 5.0 ml Pu	10 Nov 2020	13:08

8260 ISTD/SSTD 20ug/ml VOC0761
8260 BFB STD. 50ug/ml VOC0760
8260 ICV STD. 100ug/ml VOC0771
8260 CCV/CALIB. 100ug/ml VOC0772

FVO4-01 Data Review Checklist

INDEPENDENT DATA REVIEW CHECKLIST			Method: GCMS (EPA SW-846 8260C)					
Analysis Date	**LIMS Run #(s):**	**Analyst/Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved?**			**Instrument**
					Yes	No		
11/09/2020	176657 176658 176659 176785 176786 176912 176913	TMG/RLD	RLD	11/13/2020	Yes			VMS4

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	
I. BFB Tune Check						
Was a BFB tune check analyzed with acceptable results?	Relative abundance criteria met?	Yes		Yes		
II. Initial Calibration Verification (ICV)						
Was initial calibration performed using a minimum of five standard concentration levels (minimum of 6 levels for quadratic curves)?	Lowest standard at or below RL?	Yes		Yes		
Were the Average Relative Response Factors (ARRF) acceptable?	ARRF<or= specified limits (<15%D.)see SOP)	Yes		Yes		
Was a second-source ICV(s) analyzed (for Quadratic Curve)?	Required before sample analyses.	Yes		Yes		
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		
Was Initial Calibration Blank (ICB) analyzed?	Required before sample analyses.	Yes		Yes		
Were the ICB results for all target analytes less than the limit of detection (LOD).	<LOD or < project/program specific limits	Yes		Yes		
III. Continuing Calibration Verification (CCV)						
Was an acceptable BFB tune check run at the beginning of every twelve hour shift?	Relative abundance criteria met?	Yes		Yes		
Was a CCV analyzed after every 12 hour tune check?	Required before sample analyses.	Yes		Yes		
Was a second CCV (CCV2) for compounds calibrated using quadratic curves analyzed after every 12 hour tune check?	Required before analyses of WI samples (above the inflection point of the curve).	Yes		Yes		
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific		No		No	
If necessary, were the results for outlying compounds qualified?		Yes		Yes		Affected sample results were "Z" flagged

IV. Blanks						
Was a Method Blank (MB) analyzed prior to analysis of samples?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MB results for all target analytes less than the limit of detection (LOD)?	*All target analytes <LOD or < project/program specific limits (<1/2 RL for DoD-QSM)	Yes		Yes		
If analytes were detected in the MB with no associated positives in the samples, no further action is needed. If the analyte detects in the MB were greater than the acceptance criteria and there were detects in the samples, was the data qualified.?						
V. Laboratory Control Spike (LCS)						
Was a LCS (and LCSD if needed) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the LCS (LCSD) recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.		No		No	
If applicable, were associated sample detects (and non-detects for low recoveries) qualified?		Yes		Yes		Affected sample results were "Q" flagged
Is the relative percent difference (RPD) for each analyte between the LCS and LSCD (if applicable) acceptable?	Default 20%, or see internally generated limits, or client specific limits.					
VI. Matrix Spike/Matrix Spike Duplicate (MS/MSD)						
Was a Martrix Spike (MS) and a Matrix Spike Duplicate (MSD) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MS/MSD recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.		No		No	Affected sample results were "M" flagged
Is the relative percent difference (RPD) for each analyte between the MS and MSD acceptable?	Default 20%, or see internally generated limits, or client specific limits.	Yes		Yes		
VII. Sample Analyses						
Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
Were surrogate recoveries for all samples and QC within acceptance criteria?	Default 70-130%, or see internally generated program limits, or client specified limits.	Yes		Yes		
If possible, were the affected samples reanalyzed?						
**Were reported sample results with failing surrogate recoveries qualified?						
Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed? If not qualify (X).	Target upper middle range of calibration curve.	Yes		Yes		
Did all samples meet hold time and preservation criteria as defined by method/program?	H2O sample: pH < 2 = 14 days, pH >2 = 7 days. Soil samples: 14 days (other criteria may apply)	Yes		Yes		
Were all samples and QC injected within 12 hours of BFB tune check?		Yes		Yes		
Were internal standard recoveries acceptable relevant to associated ICAL?	Response = -50 to +200%; Ret. time = +/- 30 sec.	Yes		Yes		

VIII. Records and Reporting						
Is sequence file / injection log present in the data package?		Yes		Yes		
Were all data, calculations, and values verified in LIMS (including removal of non-detections) upon completion of data capture?		Yes		Yes		
Were manual integrations performed correctly?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms.	Yes		Yes		
Was the rational for the manual integration verified?		Yes		Yes		
Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

ᵏNon-Applicable Yes/No Cells Are Left Blank*

Comments:

pl_ilog
Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W110320.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\NOV0320\BFB1.D
Injection Date : 3 Nov 2020 Log Time Period (hrs) : ALL
Injection Time : 08:34 Total files within period : 24
Sample Directory : C:\INSTARCH\DATA\NOV0320\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT. 1 0.50/5.00 ug/L, 5.0	3 Nov 2020	10:18
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT. 2 1.00/10.00 ug/L, 5.0	3 Nov 2020	10:48
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT. 3 2.00/20.00 ug/L, 5.0	3 Nov 2020	11:18
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT. 4 5.00/50.00 ug/L, 5.0	3 Nov 2020	11:48
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT. 5 10.00/100 ug/L, 5.0	3 Nov 2020	12:18
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT. 6 20.00/200 ug/L, 5.0	3 Nov 2020	12:48
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT. 7 30.00/300 ug/L, 5.0	3 Nov 2020	13:19
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT. 8 40.00/400 ug/L, 5.0	3 Nov 2020	13:49
WCAL9	1.00	1.00	1.00	INITIAL CALIB. PT. 9 80.00/800 ug/L, 5.0	3 Nov 2020	14:19
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.00/100 ug/L, 5.0	3 Nov 2020	15:19
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF 30.00/300 ug/L, 5.0	3 Nov 2020	15:49

8260 ISTD/SSTD 20ug/ml VOC0761
8260 BFB STD. 50ug/ml VOC0760
8260 ICV STD. 100ug/ml VOC0771
8260 CCV/CALIB. 100ug/ml VOC0772

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0771	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0949, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0966, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0968 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	10/29/2020	11/05/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0772	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0948, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0965, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0967 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	10/29/2020	11/05/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0766	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0949, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0966, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0968 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	10/20/2020	10/27/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0767	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0948, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0965, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0967 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	10/20/2020	10/27/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0760	8260 BFB Std.	75uL of 2,000 ug/mL 4-Bromofluorobenzene Std. V0929 into 2925uL of MeOH.	MeOH / B&J / DX932-U	50 ug/mL	10/12/2020	11/12/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0761	8260 ISTD/SSTD	200uL of 2,500 ug/mL 8260 Istd./Sstd. Mix V0944 and 250uL of 2000 ug/mL 1,2-Dichlorobenzene-$_{d4}$ Std. V0945 into 25mL of MeOH.	MeOH / B&J / DX932-U	20 ug/mL	10/12/2020	11/12/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0762	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0948, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0965, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0967 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	10/12/2020	10/19/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0763	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0949, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0966, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0968 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	10/12/2020	10/19/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0755	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0948, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0958, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0960 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	09/29/2020	10/06/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0756	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0949, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0959, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0961 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	09/29/2020	10/06/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0753	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0948, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0958, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0960 into 2250uL of MeOH.	MeOH / B&J / DX212-U	100 ug/mL	09/21/2020	09/28/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0754	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0949, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0959, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0961 into 2250uL of MeOH.	MeOH / B&J / DX212-U	100 ug/mL	09/21/2020	09/28/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0749	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0948, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0958, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0960 into 2250uL of MeOH.	MeOH / B&J / DX212-U	100 ug/mL	09/10/2020	09/17/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0750	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0949, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0959, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0961 into 2250uL of MeOH.	MeOH / B&J / DX212-U	100 ug/mL	09/10/2020	09/17/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0751	8260 BFB Std.	75uL of 2,000 ug/mL 4-Bromofluorobenzene Std. V0729 into 2925uL of MeOH.	MeOH / B&J / DX212-U	50 ug/mL	09/10/2020	10/10/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0752	8260 ISTD/SSTD	200uL of 2,500 ug/mL 8260 Istd./Sstd. Mix V0944 and 250uL of 2000 ug/mL 1,2-Dichlorobenzene-$_{d4}$ Std. V0945 into 25mL of MeOH.	MeOH / B&J / DX212-U	20 ug/mL	09/10/2020	10/10/2020	RLD

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0967	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	CP200917007
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	03/16/2020	10/09/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0968	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA201005013
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	04/03/2020	10/09/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0965	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	AA200925013
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	12/24/2020	10/01/2020	RLD
# of Ampules/Units:	2	Comments:	Used to prpare 8260 ICV/Spiking standard solution.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0966	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	CP200925014
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	12/24/2020	10/01/2020	RLD
# of Ampules/Units:	2	Comments:	Used to prpare 8260 CCV/Calib. standard solution.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0960	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA200613001
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	12/10/2020	06/22/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0961	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA200613005
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	12/10/2020	06/22/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0958	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	EN200604006
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	09/03/2020	06/16/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0959	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	AA200605006
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	09/03/2020	06/16/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib.Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0949	8260 VOC Mix	Agilent	DWM-588-1	0006518399
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,000 ug/mL	MeOH	04/30/2023	04/23/2020	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 CCV/Calib. Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0950	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	EN200424002
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	07/23/2020	04/27/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0951	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	AA200424003
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	07/23/2020	04/27/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0948	8260 VOC Mix	AccuStandard	M-502-10X-PAK	219111249
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	11/21/2022	04/01/2020	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 ICV/Spiking standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0946	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA200303013
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	08/30/2020	03/09/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0947	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA200303018
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	08/30/2020	03/09/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0944	8260 ISTD/SSTD Mix	Agilent	STM-540	CT-0055
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,500 ug/mL	MeOH	2/28/2022	01/31/2020	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 ISTD/SSTD preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0945	1,2-Dichlorobenzene-$_{d4}$	Agilent	STS-210-1	CM-4301A
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,000 ug/mL	MeOH	07/31/2021	01/31/2020	RLD
# of Ampules/Units:	4	Comments:	Used for 524.2 & 8021 IS/SS and SS preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0942	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	EN200120003
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	04/19/2020	01/24/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spikking Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0943	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	EN200120019
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	04/19/2020	01/24/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Standard preparation	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0939	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	EN191125015
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	05/23/2020	11/29/2019	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0940	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	EN191126007
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	05/24/2020	11/29/2019	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0941	8260 VOC Mix	Agilent	DWM-588-1	CT-0287
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,000 ug/mL	MeOH	02/28/2022	12/02/2019	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 CCV/Calib. Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0929	4-Bromofluorobenzene	Agilent	STS-110N	0006476760
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	7/31/2022	09/10/2019	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 BFB Std. and 8015 SSTD.	

V METH, ETH, ETHENE QSM 5.0 Analytical Run # 176737 on Nov 03, 2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	498366						V METH, ETH, ETHENE QSM 5.				
				CCV				0			
	498362						METH,ETH,ETHE QSM 5.0				
				LCSW				78814			
	498361						METH,ETH,ETHE QSM 5.0				
				MBW				78814			
157538	495137		Oct 27, 2020 0920		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13MW4						78814			
157538	495139		Oct 27, 2020 1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13MW3						78814			
157538	495140		Oct 27, 2020 1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13TW3						78814			
157538	495141		Oct 27, 2020 1120		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49MW04						78814			
157538	495142		Oct 27, 2020 1230		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13MW2						78814			
157621	496500		Oct 28, 2020 0855		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW06		Designated MS/MSD				78814			
	498357		Oct 29, 2020 0845				METH,ETH,ETHE QSM 5.0				
		48MW3		MSW 496500				78814			
	498358		Oct 29, 2020 0845				METH,ETH,ETHE QSM 5.0				
		48MW3		MSDW 498357				78814			
157621	496501		Oct 28, 2020 1025		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW1						78814			
157621	496502		Oct 28, 2020 1210		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49MW01						78814			
157621	496503		Oct 28, 2020 1320		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		50MW02						78814			
157621	496504		Oct 28, 2020 1500		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49TW02						78814			
	498367						V METH, ETH, ETHENE QSM 5.				
				CCV				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

V METH, ETH, ETHENE QSM 5.0 Analytical Run # 176737 on Nov 03, 2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
157621	496507		Oct 28, 2020 1500		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49MW02						78814			
157621	496508		Oct 28, 2020 1530		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		RNS-1						78814			
157624	496542		Oct 29, 2020 1015		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW2						78814			
157624	496543		Oct 29, 2020 0845		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW3						78814			
	498368						V METH, ETH, ETHENE QSM 5.				
				CCV				0			

21 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

PREP WORKSHEET
on Nov 03, 2020

Prep Batch **78,814** Date Prepped: Nov 03, 2020 Prepped By KMT

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	498361	MBW		METH,ETH,ETHE QSM	LIQUID	23.8				
	498362	LCSW		METH,ETH,ETHE QSM	LIQUID	23.8				
157538	495137			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
	495139			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
	495140			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
	495141			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
	495142			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
157621	496500	sample designated for QC		METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
	496501			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
	496502			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
	496503			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
	496504			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
	496507			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
	496508			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
157624	496542			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
	496543			METH,ETH,ETHE QSM	GROUND WATER	23.8			4	
	498357	MSW	496500	METH,ETH,ETHE QSM	GROUND WATER	23.8				

PREP WORKSHEET
on Nov 03, 2020

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	498358	MSDW	498357	METH,ETH,ETHE QSM	GROUND WATER	23.8				

Notes:_____

Sequence Summary Report

Sequence Filename: C:\InStarch\PVOC4\Sequence\110320 - 176737.seq
Instrument: PVOC4
Processing Date: Nov 03, 2020 21:12:53

'Run Number	Sample ID	Data Filename	Method Filename	Run Time
1	PS	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 19:05:31
2	176737,CCV,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 19:11:17
3	176737,LCSW,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 19:15:04
4	176737,MBW,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 19:51:19
5	176737,495137,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 19:57:30
6	176737,495139,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:00:56
7	176737,495140,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:04:39
8	176737,495141,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:07:56
9	176737,495142,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:11:10
10	176737,496500,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:14:35
11	176737,MSW496500,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:17:59
12	176737,MSDW496500,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:21:20
13	176737,496501,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:24:38
14	176737,496502,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:29:45
15	176737,496503,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:33:18
16	176737,496504,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:36:38
17	176737,CCV,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:46:03
18	176737,CCB,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:51:59
19	176737,496507,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 20:58:04
20	176737,496508,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 21:02:01
21	176737,496542,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 21:06:07
22	176737,496543,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 21:09:32
23	176737,CCV,	C:\InStarch\PVOC4\Data\110320 ...	C:\Instarch\PVOC4\Methods\P4...	Nov 03, 2020 21:12:53

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 11/3/2020 **Instrument:** PVOC4

Calibration Date: 12/13/2019 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
1	PS	0.25	43	①	
2	CCV	0.25	43		
3	LCSW	1	43	23.8	①
4	MBW	1	43	23.8	
5	495137	1	43	23.8	≤2
6	495139	1	43	23.8	≤2
7	495140	1	43	23.8	≤2
8	495141	1	43	23.8	≤2
9	495142	1	43	23.8	≤2
10	496500	1	43	23.8	≤2
11	MSW496500	1	43	23.8	≤2
12	MSDW496500	1	43	23.8	≤2
13	496501	1	43	23.8	≤2
14	496502	1	43	23.8	≤2
15	496503	1	43	23.8	≤2
16	496504	1	43	23.8	≤2
17	CCV	0.25	43	①	
18	CCB	1	43		
19	496507	1	43	23.8	≤2
20	496508	1	43	23.8	≤2
21	496542	1	43	23.8	≤2
22	496543	1	43	23.8	≤2
23	CCV	0.25	43		
24		①	43	①	
25			43		

Calibration Standard Ref. #: VO886

Second Source Ref. #: VOC0726

① N/A KMT 11/3/2020

Page 1

FVO1-01 Data Review Checklist

	FVO1-01 Method: Dissolved Gases (EPA SW-846 8015 / RSK 175 Modified)					
LIMS Run #(s)	**Analysis Date (s)**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**	**Instrument**
176737	11/03/2020	KMT	RLD	11/04/2020	Yes	PVOC4

Instructions: Complete one checklist per *analytical sequence*. Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments**
1. INITIAL CALIBRATION (ICAL)		**Yes**	**No**	**Yes**	**No**	(Indicate reference to an attachment if necessary)
a. Was the initial calibration performed using a minimum of five concentration levels?	Lowest standard at or below RL	Yes		Yes		
b. For each analyte/component is the variation between calibration response factors for all concentration levels <20% RSD or is $r^2 \geq .99$ or $r \geq .995$ for the regression line?	RSD <20% or $r^2 \geq .99$ or $r \geq .995$ or program/project specific	Yes		Yes		
c. Are the identification and date of the ICAL listed on the printout (or PDF) of the analytical run and in the method file?	ID# and date of ICAL listed	Yes		Yes		
d. Was an Initial Calibration Verification (ICV) analyzed after the ICAL?	Analyzed prior to sample analyses	Yes		Yes		
e. Were the recoveries for each analyte in the ICV within required limits?	Recoveries 85 - 115% or within program/project specific limits	Yes		Yes		
f. Was an Initial Calibration Blank (ICB) analyzed?		Yes		Yes		
g. Were the ICB results for all target analytes/components less than the reporting limit (RL)?	<RL or < program/project specific	Yes		Yes		
2. CONTINUING CALIBRATION VERIFICATION (CCV)						
a . Was a CCV analyzed at the beginning and end of a sequential analysis run, as well as after ever 10 samples?		Yes		Yes		
b. Were the recoveries for each analyte/component in the CCV within acceptance criteria?	Recoveries 85 - 115% or within program/project specific limits	Yes		Yes		
3. METHOD BLANKS (MB)						
a. Was a method blank (MB) analyzed?	1 / 20 or program/project specific	Yes		Yes		
b. Were the MB results for all analytes/components less than reporting limit?	All target analytes/components <RL or within program/project specific limits (DoD-QSM: <1/2 the RL)	Yes		Yes		
4. LABORATORY CONTROL SAMPLE (LCS)						
a. Was a LCS analyzed at the required frequency?	1 / 20 or program/project specific	Yes		Yes		
b. Were LCS recoveries for all analytes within the acceptance criteria?	Default = 70-130%, or within In-house generated or program/project specific limits	Yes		Yes		
c. If LCS recoveries exceed acceptance criteria, was the LCS reanalyzed in an effort to eliminate the possibility of a preparation error?		Yes		Yes		

5. MATRIX SPIKE (MS)/ MATRIX SPIKE DUPLICATES (MSD) and DUPLICATE						
a. Was a MS, MSD, and/or Duplicate (if valid) Vial analyzed with each batch of 20 samples (or program-specified frequency)?	1 / 20 or program/project specific frequency (QSM samples, duplicate only valid if sample result ≥ 5x the LOQ)	Yes		Yes		
b. Were MS/MSD recoveries for all analytes within acceptance criteria?	Default =70-130%, or within In-house generated or program/project specific limits	Yes		Yes		
6. PRECISION						
a. Is the relative percent difference (RPD) for each analyte between duplicate QC samples (i.e. parent sample / Duplicate vial), or for each MS/MSD within the acceptance criteria?	Default = 20 % RPD, or within In-house generated or program/project specific limits	Yes		Yes		
7. SAMPLES (INCLUDING BLANKS, STANDARDS, AND QC SAMPLES)						
a. Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
b. Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed or reanalyzed using a smaller sample aliquot? Affected analyte detects should remain above the limit of quantitation (LOQ) after reanalysis.		Yes		Yes		
c. Was the correct ambient temperature recorded on sample spreadsheets?		Yes		Yes		
d. Were all samples adequately preserved and analyzed within holding time?	CO_2 samples received unpreserved (analyze within 7 days or program/project specific) Methane, Ethene, Ethane samples received preserved to <2 (analyze within 14 days or program/project specific)	Yes		Yes		
8. RECORDS AND REPORTING						
a. Is a sequence run file present in the raw data file?		Yes		Yes		
b. Is the data initialed and dated by analyst?	Analysis Run sheet is initialed & dated by the analyst processing the raw data.	Yes		Yes		
c. Do all values, units, etc. listed match the raw data and associated calculations and records?		Yes		Yes		
e. Has the data been electronically transferred to the LIMS and were the applicable qualifiers assigned?		Yes		Yes		
f. Were manual integrations addressed properly and were the audit trails turned on (where applicable)?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms. Audit trail must be on (if available).	Yes		Yes		
g. Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier in LIMS and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

* Non-Applicable Yes/No Cells Are Left Blank*

Comments: _____

Sequence Summary Report

Sequence Filename: C:\InStarch\PVOC4\Sequence\121319 - MEE ICAL.seq
Instrument: PVOC4
Processing Date: Dec 13, 2019 14:03:04

'Run Number	Sample ID	Data Filename	Method Filename	Run Time
1	MEE PT1 - 2 ppmV	C:\Instarch\PVOC4\Data\121319i...	C:\Instarch\PVOC4\Methods\P4...	Dec 13, 2019 10:58:16
2	MEE PT2 - 5 ppmV	C:\Instarch\PVOC4\Data\121319i...	C:\Instarch\PVOC4\Methods\P4...	Dec 13, 2019 11:06:00
3	MEE PT3 - 10 ppmV	C:\Instarch\PVOC4\Data\121319i...	C:\Instarch\PVOC4\Methods\P4...	Dec 13, 2019 11:09:45
4	MEE PT4 - 20 ppmV	C:\Instarch\PVOC4\Data\121319i...	C:\Instarch\PVOC4\Methods\P4...	Dec 13, 2019 12:18:01
5	MEE PT5 - 50 ppmV	C:\Instarch\PVOC4\Data\121319i...	C:\Instarch\PVOC4\Methods\P4...	Dec 13, 2019 12:21:29
6	MEE PT6 - 100 ppmV	C:\Instarch\PVOC4\Data\121319i...	C:\Instarch\PVOC4\Methods\P4...	Dec 13, 2019 12:24:55
7	MEE PT7 - 200 ppmV	C:\Instarch\PVOC4\Data\121319i...	C:\Instarch\PVOC4\Methods\P4...	Dec 13, 2019 13:46:48
8	ICV - 50 ppmV	C:\Instarch\PVOC4\Data\121319i...	C:\Instarch\PVOC4\Methods\P4...	Dec 13, 2019 13:51:32
9	ICB	C:\Instarch\PVOC4\Data\121319i...	C:\Instarch\PVOC4\Methods\P4...	Dec 13, 2019 14:03:04

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 12/13/19 **Instrument:** PVOC4

Calibration Date: 12/13/19 **Analyst:** TMG

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)
1	PT 1	0.01	43	
2	PT 2	0.025	43	
3	PT3	0.05	43	
4	PT4	0.1	43	
5	PT5	0.25	43	
6	PT6	0.5	43	
7	PT7	1	43	
8	ICV	0.250	43	
9	ICB	1	43	
10			43	
11			43	
12			43	
13			43	
14			43	
15			43	
16			43	
17			43	
18			43	
19			43	
20			43	
21			43	
22			43	
23			43	
24			43	
25			43	

Calibration Standard Ref. #: V0886

Second Source Ref. #: V0C0299

Page 1

LSVO1-01
Volatiles Standards Logbook
Logbook Created: 12/08/2015

NOTEBOOK VIEW: LTN_LSVO1_01_VOC_Default, NOTEBOOK: LSVO1_01_VOC, PAGE: 64
Page is Locked
Author: rdigmann on: 5/25/2018 7:47:52 AM
Witness: akurth on: 7/31/2018 9:54:19 AM
Project: Unassigned
Page Title: 05/24/18

Standard Log #:	VO886	Standard/Reagent:	Methane Ethene Ethane STI
Analyst:	AGK	Final Concentration:	200.0 PPM
Prep Date:	05/24/18	Expiration Date:	05/17/21
Prep:	Airgas Methane, Ethene, Ethane Standard Received 05/24/18 LOT# 54-401204472-1 REF# 54-401204472-1 Cylinder # P180959		

Standard Log #:	VOC0726	Standard/Reagent:	MEE RECERTIFICATION O
Analyst:	KMT	Final Concentration:	N/A
Prep Date:	07/1/2020	Expiration Date:	7/1/2021
Prep:	Recertification of methane, ethane, ethane tank (V681). Ran 4 consecutive CCV's with acceptable recoveries.		

LPVO1-02 VOC
Volatiles Standards Prep Logbook
Logbook Created: 10/10/16
Balance used in reagent prep: VOB01
NOTEBOOK VIEW: LTN_LPVO1_02_VOC_Default, NOTEBOOK: LPVO1_02_VOC, PAGE: 27
Page is Locked
Author: AKURTH on: 22.03.2017 10:57:51
Page is not Witnessed
Project: Unassigned
Page Title: N/A

Standard Log #:	VOC0299	Standard/Reagent:	MEE RECERTIFICATION O
Analyst:	AGK	Final Concentration:	N/A
Prep Date:	03/17/17	Expiration Date:	03/17/20
Prep:	Recertification of methane, ethane, ethane tank (V681). Ran 4 consecutive CCV's with acceptable recoveries.		

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CT Laboratories, LLC

Airgas
an Air Liquide company

Expires 5/17/21 V0886 AGK 5/24/18

Airgas Specialty Gases
Airgas USA, LLC
12722 S. Wentworth Ave.
Chicago, IL 60628
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04HE99C353Q80	Reference Number:	54-401204472-1
Cylinder Number:	P180959	Cylinder Volume:	31.6 CF
Laboratory:	124 - Chicago (SAP) - IL	Cylinder Pressure:	2013 PSIG
Analysis Date:	May 17, 2018	Valve Outlet:	350
Lot Number:	54-401204472-1		

Expiration Date: May 17, 2021

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
ETHANE	200.0 PPM	198.9 PPM	+/- 2%
ETHYLENE	200.0 PPM	198.3 PPM	+/- 2%
METHANE	200.0 PPM	198.3 PPM	+/- 2%
HELIUM	Balance		

Approved for Release

Airgas

Recert VOC0726
~~6/30/2020~~ Ex: 7/1/2021
7/1/2020

Recert VOC0299
3/17/17 Ex: 3/17/20

Airgas Specialty Gases
12722 South Wentworth Avenue
Chicago, IL 60628
(773) 785-3000 Fax: (773) 785-1928
www.airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04HE99C353Q80	Reference Number:	54-124397530-1
Cylinder Number:	4774182	Cylinder Volume:	31.6 CF
Laboratory:	ASG - Chicago - IL	Cylinder Pressure:	2013 PSIG
Analysis Date:	Oct 07, 2013	Valve Outlet:	350
Lot Number:	54-124397530-1		

V681 Exp: 10/21/16
10/21/13
BMS

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration (Mole %)	Analytical Uncertainty
ETHANE	200.0 PPM	202.9 PPM	+/- 2%
ETHYLENE	200.0 PPM	200.3 PPM	+/- 2%
METHANE	200.0 PPM	204.3 PPM	+/- 2%
HELIUM	Balance		

Notes:

Approved for Release

METALS
CLP FORMS
DOCUMENTS

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496544
Analytical Method:	EPA 6010C	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176769	Analysis Date/Time	11/05/2020 06:41
Analytical Prep Batch #:	78777	Prep. Date/Time:	11/02/2020 11:52
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	1470		10	20	40	40
7440-36-0	Total Antimony	10	U	4.7	10	20	20
7440-38-2	Total Arsenic	25	U	12	25	50	50
7440-39-3	Total Barium	129		0.82	2.0	4.0	4.0
7440-41-7	Total Beryllium	0.30	U	0.10	0.30	0.60	0.60
7440-43-9	Total Cadmium	1.0	U	0.42	1.0	2.0	2.0
7440-70-2	Total Calcium	80400		19	50	100	100
7440-47-3	Total Chromium	5.3		1.6	3.5	5.0	5.0
7440-48-4	Total Cobalt	2.4	J	0.60	2.5	4.0	4.0
7440-50-8	Total Copper	25	U	11	25	50	50
7439-89-6	Total Iron	2300		33	70	100	100
7439-92-1	Total Lead	8.1		1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	40900		10	25	40	40
7439-96-5	Total Manganese	634		1.5	3.0	5.0	5.0
7440-02-0	Total Nickel	2.5	J	1.4	3.0	5.0	5.0
7782-49-2	Total Selenium	20	U	9.9	20	40	40
7440-22-4	Total Silver	2.0	U	0.70	2.0	4.0	4.0
7440-28-0	Total Thallium	12	U	5.9	12	20	20
7440-62-2	Total Vanadium	2.4	J	1.1	2.5	5.0	5.0
7440-66-6	Total Zinc	20.0		5.0	10	10	10

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496544
Analytical Method:	EPA 6010C	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176770	Analysis Date/Time	11/06/2020 11:12
Analytical Prep Batch #:	78777	Prep. Date/Time:	11/02/2020 11:52
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7440-09-7	Total Potassium	5430		120	250	500	500
7440-23-5	Total Sodium	18800		180	500	500	500

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1

INORGANIC ANALYSIS DATA SHEET

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496544
Analytical Method:	EPA 7470A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176863	Analysis Date/Time	11/05/2020 16:30
Analytical Prep Batch #:	78793	Prep. Date/Time:	11/05/2020 09:50
ICAL Calibration #:	11052020	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.060	U	0.030	0.060	0.12	0.12

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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176863

Lab Sample ID: 500290

ICAL Calibration #: 11052020

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/5/20 16:05	3.00	2.77	92	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176863 Lab Sample ID: 500409

ICAL Calibration #: 11052020 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/5/20 13:17	3.00	2.75	92	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176770

Lab Sample ID: 501270

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	11/6/20	09:43	100000	104000	104	90	110
Sodium	11/6/20	09:43	100000	104000	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

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Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176770 Lab Sample ID: 501271

ICAL Calibration #: Concentration Units:

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	11/6/20	09:45	3000	3070	102	80	120
Sodium	11/6/20	09:45	3000	3500	117	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 504013

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	11/4/20	14:00	12000	11500	96	90	110
Antimony	11/4/20	14:00	500.0	515.0	103	90	110
Arsenic	11/4/20	14:00	2000	2060	103	90	110
Barium	11/4/20	14:00	2000	1900	95	90	110
Beryllium	11/4/20	14:00	50.00	46.60	93	90	110
Cadmium	11/4/20	14:00	50.00	49.40	99	90	110
Calcium	11/4/20	14:00	10000	10200	102	90	110
Chromium	11/4/20	14:00	200.0	209.0	104	90	110
Cobalt	11/4/20	14:00	500.0	495.0	99	90	110
Copper	11/4/20	14:00	250.0	240.0	96	90	110
Iron	11/4/20	14:00	5000	5040	101	90	110
Lead	11/4/20	14:00	500.0	496.0	99	90	110
Magnesium	11/4/20	14:00	10000	10000	100	90	110
Manganese	11/4/20	14:00	500.0	530.0	106	90	110
Nickel	11/4/20	14:00	500.0	521.0	104	90	110
Selenium	11/4/20	14:00	2000	2090	104	90	110
Silver	11/4/20	14:00	50.00	47.50	95	90	110
Thallium	11/4/20	14:00	2000	2010	100	90	110
Vanadium	11/4/20	14:00	500.0	511.0	102	90	110
Zinc	11/4/20	14:00	500.0	518.0	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 504014

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	11/4/20	14:06	1200	1220	102	80	120
Antimony	11/4/20	14:06	60.00	65.30	109	80	120
Arsenic	11/4/20	14:06	60.00	55.40	92	80	120
Barium	11/4/20	14:06	30.00	31.30	104	80	120
Beryllium	11/4/20	14:06	12.00	11.90	99	80	120
Cadmium	11/4/20	14:06	15.00	15.90	106	80	120
Calcium	11/4/20	14:06	1500	1590	106	80	120
Chromium	11/4/20	14:06	30.00	32.80	109	80	120
Cobalt	11/4/20	14:06	30.00	31.30	104	80	120
Copper	11/4/20	14:06	30.00	32.60	109	80	120
Iron	11/4/20	14:06	900.0	967.0	107	80	120
Lead	11/4/20	14:06	30.00	32.60	109	80	120
Magnesium	11/4/20	14:06	1500	1560	104	80	120
Manganese	11/4/20	14:06	30.00	34.50	115	80	120
Nickel	11/4/20	14:06	30.00	33.40	111	80	120
Selenium	11/4/20	14:06	60.00	66.40	111	80	120
Thallium	11/4/20	14:06	60.00	61.60	103	80	120
Vanadium	11/4/20	14:06	30.00	31.70	106	80	120
Zinc	11/4/20	14:06	30.00	33.90	113	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769

Lab Sample ID: 504475

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Manganese	11/4/20	14:52	10.00	10.60	106	80	120
Silver	11/4/20	14:52	10.00	10.60	106	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176863

Lab Sample ID: 500395

ICAL Calibration #: 11052020

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/5/20	16:46	3.00	2.95	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176863 Lab Sample ID: 500411

ICAL Calibration #: 11052020 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/5/20 14:04	3.00	3.11	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176770

Lab Sample ID: 501276

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	11/6/20	10:28	100000	103000	103	90	110
Sodium	11/6/20	10:28	100000	96600	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176770

Lab Sample ID: 501278

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	11/6/20	11:01	100000	104000	104	90	110
Sodium	11/6/20	11:01	100000	100000	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176770

Lab Sample ID: 501282

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	11/6/20	11:34	100000	103000	103	90	110
Sodium	11/6/20	11:34	100000	98100	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 504019

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	11/5/20	05:38	5000	4860	97	90	110
Antimony	11/5/20	05:38	5000	5150	103	90	110
Arsenic	11/5/20	05:38	5000	4960	99	90	110
Barium	11/5/20	05:38	5000	4630	93	90	110
Beryllium	11/5/20	05:38	500.0	469.0	94	90	110
Cadmium	11/5/20	05:38	500.0	465.0	93	90	110
Calcium	11/5/20	05:38	5000	5000	100	90	110
Chromium	11/5/20	05:38	5000	4960	99	90	110
Cobalt	11/5/20	05:38	5000	4910	98	90	110
Copper	11/5/20	05:38	5000	4820	96	90	110
Iron	11/5/20	05:38	5000	4890	98	90	110
Lead	11/5/20	05:38	5000	5120	102	90	110
Magnesium	11/5/20	05:38	5000	5020	100	90	110
Manganese	11/5/20	05:38	5000	5070	101	90	110
Nickel	11/5/20	05:38	5000	5110	102	90	110
Selenium	11/5/20	05:38	5000	5420	108	90	110
Silver	11/5/20	05:38	500.0	461.0	92	90	110
Thallium	11/5/20	05:38	5000	4810	96	90	110
Vanadium	11/5/20	05:38	5000	4800	96	90	110
Zinc	11/5/20	05:38	5000	5090	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 504020

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	11/5/20	05:44	500.0	487.0	97	90	110
Antimony	11/5/20	05:44	500.0	524.0	105	90	110
Arsenic	11/5/20	05:44	500.0	515.0	103	90	110
Barium	11/5/20	05:44	500.0	509.0	102	90	110
Beryllium	11/5/20	05:44	50.00	47.20	94	90	110
Cadmium	11/5/20	05:44	50.00	52.10	104	90	110
Calcium	11/5/20	05:44	500.0	499.0	100	90	110
Chromium	11/5/20	05:44	500.0	529.0	106	90	110
Cobalt	11/5/20	05:44	500.0	488.0	98	90	110
Copper	11/5/20	05:44	500.0	502.0	100	90	110
Iron	11/5/20	05:44	500.0	502.0	100	90	110
Lead	11/5/20	05:44	500.0	508.0	102	90	110
Magnesium	11/5/20	05:44	500.0	520.0	104	90	110
Manganese	11/5/20	05:44	500.0	529.0	106	90	110
Nickel	11/5/20	05:44	500.0	530.0	106	90	110
Selenium	11/5/20	05:44	500.0	541.0	108	90	110
Silver	11/5/20	05:44	50.00	48.30	97	90	110
Thallium	11/5/20	05:44	500.0	517.0	103	90	110
Vanadium	11/5/20	05:44	500.0	485.0	97	90	110
Zinc	11/5/20	05:44	500.0	518.0	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 504023

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	11/5/20	07:01	5000	4930	99	90	110
Antimony	11/5/20	07:01	5000	5110	102	90	110
Arsenic	11/5/20	07:01	5000	5090	102	90	110
Barium	11/5/20	07:01	5000	4690	94	90	110
Beryllium	11/5/20	07:01	500.0	471.0	94	90	110
Cadmium	11/5/20	07:01	500.0	482.0	96	90	110
Calcium	11/5/20	07:01	5000	5050	101	90	110
Chromium	11/5/20	07:01	5000	5020	100	90	110
Cobalt	11/5/20	07:01	5000	5080	102	90	110
Copper	11/5/20	07:01	5000	4830	97	90	110
Iron	11/5/20	07:01	5000	4980	100	90	110
Lead	11/5/20	07:01	5000	5090	102	90	110
Magnesium	11/5/20	07:01	5000	5000	100	90	110
Manganese	11/5/20	07:01	5000	5040	101	90	110
Nickel	11/5/20	07:01	5000	5110	102	90	110
Selenium	11/5/20	07:01	5000	5280	106	90	110
Silver	11/5/20	07:01	500.0	475.0	95	90	110
Thallium	11/5/20	07:01	5000	4780	96	90	110
Vanadium	11/5/20	07:01	5000	4940	99	90	110
Zinc	11/5/20	07:01	5000	5090	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 504024

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	11/5/20	07:06	500.0	502.0	100	90	110
Antimony	11/5/20	07:06	500.0	524.0	105	90	110
Arsenic	11/5/20	07:06	500.0	516.0	103	90	110
Barium	11/5/20	07:06	500.0	500.0	100	90	110
Beryllium	11/5/20	07:06	50.00	47.40	95	90	110
Cadmium	11/5/20	07:06	50.00	51.30	103	90	110
Calcium	11/5/20	07:06	500.0	510.0	102	90	110
Chromium	11/5/20	07:06	500.0	524.0	105	90	110
Cobalt	11/5/20	07:06	500.0	499.0	100	90	110
Copper	11/5/20	07:06	500.0	497.0	99	90	110
Iron	11/5/20	07:06	500.0	511.0	102	90	110
Lead	11/5/20	07:06	500.0	506.0	101	90	110
Magnesium	11/5/20	07:06	500.0	508.0	102	90	110
Manganese	11/5/20	07:06	500.0	533.0	107	90	110
Nickel	11/5/20	07:06	500.0	530.0	106	90	110
Selenium	11/5/20	07:06	500.0	526.0	105	90	110
Silver	11/5/20	07:06	50.00	48.60	97	90	110
Thallium	11/5/20	07:06	500.0	514.0	103	90	110
Vanadium	11/5/20	07:06	500.0	496.0	99	90	110
Zinc	11/5/20	07:06	500.0	514.0	103	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 504027

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	11/5/20	08:21	5000	5080	102	90	110
Antimony	11/5/20	08:21	5000	5110	102	90	110
Arsenic	11/5/20	08:21	5000	5230	105	90	110
Barium	11/5/20	08:21	5000	4810	96	90	110
Beryllium	11/5/20	08:21	500.0	470.0	94	90	110
Cadmium	11/5/20	08:21	500.0	497.0	99	90	110
Calcium	11/5/20	08:21	5000	5120	102	90	110
Chromium	11/5/20	08:21	5000	5090	102	90	110
Cobalt	11/5/20	08:21	5000	5160	103	90	110
Copper	11/5/20	08:21	5000	4910	98	90	110
Iron	11/5/20	08:21	5000	5100	102	90	110
Lead	11/5/20	08:21	5000	5130	103	90	110
Magnesium	11/5/20	08:21	5000	5000	100	90	110
Manganese	11/5/20	08:21	5000	5040	101	90	110
Nickel	11/5/20	08:21	5000	5120	102	90	110
Selenium	11/5/20	08:21	5000	5120	102	90	110
Silver	11/5/20	08:21	500.0	481.0	96	90	110
Thallium	11/5/20	08:21	5000	4770	95	90	110
Vanadium	11/5/20	08:21	5000	5050	101	90	110
Zinc	11/5/20	08:21	5000	5090	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 504028

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	11/5/20	08:26	500.0	514.0	103	90	110
Antimony	11/5/20	08:26	500.0	529.0	106	90	110
Arsenic	11/5/20	08:26	500.0	519.0	104	90	110
Barium	11/5/20	08:26	500.0	500.0	100	90	110
Beryllium	11/5/20	08:26	50.00	47.80	96	90	110
Cadmium	11/5/20	08:26	50.00	51.50	103	90	110
Calcium	11/5/20	08:26	500.0	527.0	105	90	110
Chromium	11/5/20	08:26	500.0	526.0	105	90	110
Cobalt	11/5/20	08:26	500.0	514.0	103	90	110
Copper	11/5/20	08:26	500.0	502.0	100	90	110
Iron	11/5/20	08:26	500.0	518.0	104	90	110
Lead	11/5/20	08:26	500.0	510.0	102	90	110
Magnesium	11/5/20	08:26	500.0	506.0	101	90	110
Manganese	11/5/20	08:26	500.0	543.0	109	90	110
Nickel	11/5/20	08:26	500.0	536.0	107	90	110
Selenium	11/5/20	08:26	500.0	520.0	104	90	110
Silver	11/5/20	08:26	50.00	49.60	99	90	110
Thallium	11/5/20	08:26	500.0	519.0	104	90	110
Vanadium	11/5/20	08:26	500.0	514.0	103	90	110
Zinc	11/5/20	08:26	500.0	519.0	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

MRL

2B

MRL STANDARD CHECK

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176770 Lab Sample ID: 501273

ICAL Calibration #: Concentration Units:

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	11/6/20	09:51	1000	995.0	100	70	130
Sodium	11/6/20	09:51	1000	1050	105	70	130

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176863 Lab Sample ID: 500291

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 11052020 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/05/2020 16:11	0.00300	U	0.03	0.06

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176863

Lab Sample ID: 500410

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: 11052020

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/05/2020 13:29	0	U	0.03	0.06

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176770 Lab Sample ID: 501272

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	11/06/2020 09:48	115.0	U	120	250
Sodium	11/06/2020 09:48	63.00	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 504015

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	11/04/2020 14:20	1.31	U	10	20
Antimony	11/04/2020 14:20	2.56	U	4.7	10
Arsenic	11/04/2020 14:20	-7.45	U	12	25
Barium	11/04/2020 14:20	0.279	U	0.82	2.0
Beryllium	11/04/2020 14:20	-0.101	U	0.10	0.30
Cadmium	11/04/2020 14:20	0.113	U	0.42	1.0
Calcium	11/04/2020 14:20	0.352	U	19	50
Chromium	11/04/2020 14:20	-0.496	U	1.6	2.5
Cobalt	11/04/2020 14:20	0.248	U	0.6	2.0
Copper	11/04/2020 14:20	0.614	U	11	25
Iron	11/04/2020 14:20	0.490	U	33	50
Lead	11/04/2020 14:20	-0.470	U	1.4	2.0
Magnesium	11/04/2020 14:20	0.215	U	10	20
Manganese	11/04/2020 14:20	0.0580	U	1.5	2.5
Nickel	11/04/2020 14:20	0.227	U	1.4	2.5
Selenium	11/04/2020 14:20	-0.792	U	9.9	20
Silver	11/04/2020 14:20	-0.0140	U	0.7	2.0
Thallium	11/04/2020 14:20	-1.82	U	5.9	10
Vanadium	11/04/2020 14:20	-1.24	U	1.1	2.5
Zinc	11/04/2020 14:20	0.113	U	5.0	5.0

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176863 Lab Sample ID: 500396

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 11052020 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/05/2020 16:52	0.00500	U	0.03	0.06

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176863 Lab Sample ID: 500412

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 11052020 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/05/2020 14:10	0	U	0.03	0.06

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176770

Lab Sample ID: 501277

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	11/06/2020 10:30	115.0	U	120	250
Sodium	11/06/2020 10:30	115.0	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176770

Lab Sample ID: 501279

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	11/06/2020 11:04	126.0		120	250
Sodium	11/06/2020 11:04	107.0	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176770

Lab Sample ID: 501283

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	11/06/2020 11:37	167.0		120	250
Sodium	11/06/2020 11:37	124.0	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 504021

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	11/05/2020 05:49	4.58	U	10	20
Antimony	11/05/2020 05:49	5.50		4.7	10
Arsenic	11/05/2020 05:49	-7.54	U	12	25
Barium	11/05/2020 05:49	0.184	U	0.82	2.0
Beryllium	11/05/2020 05:49	-0.176	U	0.10	0.30
Cadmium	11/05/2020 05:49	-0.0280	U	0.42	1.0
Calcium	11/05/2020 05:49	1.19	U	19	50
Chromium	11/05/2020 05:49	-0.474	U	1.6	2.5
Cobalt	11/05/2020 05:49	0.818		0.6	2.0
Copper	11/05/2020 05:49	1.02	U	11	25
Iron	11/05/2020 05:49	1.44	U	33	50
Lead	11/05/2020 05:49	1.33	U	1.4	2.0
Magnesium	11/05/2020 05:49	0.478	U	10	20
Manganese	11/05/2020 05:49	0.229	U	1.5	2.5
Nickel	11/05/2020 05:49	0.183	U	1.4	2.5
Selenium	11/05/2020 05:49	3.68	U	9.9	20
Silver	11/05/2020 05:49	-1.13	U	0.7	2.0
Thallium	11/05/2020 05:49	-0.896	U	5.9	10
Vanadium	11/05/2020 05:49	-0.252	U	1.1	2.5
Zinc	11/05/2020 05:49	0.365	U	5.0	5.0

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 504025

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	11/05/2020 07:12	-8.56	U	10	20
Antimony	11/05/2020 07:12	2.98	U	4.7	10
Arsenic	11/05/2020 07:12	-5.10	U	12	25
Barium	11/05/2020 07:12	0.0230	U	0.82	2.0
Beryllium	11/05/2020 07:12	-0.133	U	0.10	0.30
Cadmium	11/05/2020 07:12	-0.0430	U	0.42	1.0
Calcium	11/05/2020 07:12	1.58	U	19	50
Chromium	11/05/2020 07:12	-0.131	U	1.6	2.5
Cobalt	11/05/2020 07:12	0.458	U	0.6	2.0
Copper	11/05/2020 07:12	0.290	U	11	25
Iron	11/05/2020 07:12	-0.573	U	33	50
Lead	11/05/2020 07:12	-0.791	U	1.4	2.0
Magnesium	11/05/2020 07:12	0.627	U	10	20
Manganese	11/05/2020 07:12	0.245	U	1.5	2.5
Nickel	11/05/2020 07:12	0.377	U	1.4	2.5
Selenium	11/05/2020 07:12	3.70	U	9.9	20
Silver	11/05/2020 07:12	-0.400	U	0.7	2.0
Thallium	11/05/2020 07:12	-1.30	U	5.9	10
Vanadium	11/05/2020 07:12	-0.518	U	1.1	2.5
Zinc	11/05/2020 07:12	0.399	U	5.0	5.0

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
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Sample No

3-2

CCB

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 504029

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	11/05/2020 08:32	-1.24	U	10	20
Antimony	11/05/2020 08:32	2.76	U	4.7	10
Arsenic	11/05/2020 08:32	-6.60	U	12	25
Barium	11/05/2020 08:32	-0.112	U	0.82	2.0
Beryllium	11/05/2020 08:32	-0.0940	U	0.10	0.30
Cadmium	11/05/2020 08:32	0.0700	U	0.42	1.0
Calcium	11/05/2020 08:32	2.12	U	19	50
Chromium	11/05/2020 08:32	-0.650	U	1.6	2.5
Cobalt	11/05/2020 08:32	0.358	U	0.6	2.0
Copper	11/05/2020 08:32	0.310	U	11	25
Iron	11/05/2020 08:32	-0.538	U	33	50
Lead	11/05/2020 08:32	0.501	U	1.4	2.0
Magnesium	11/05/2020 08:32	0.710	U	10	20
Manganese	11/05/2020 08:32	0.129	U	1.5	2.5
Nickel	11/05/2020 08:32	0.107	U	1.4	2.5
Selenium	11/05/2020 08:32	-0.0140	U	9.9	20
Silver	11/05/2020 08:32	-0.345	U	0.7	2.0
Thallium	11/05/2020 08:32	-1.98	U	5.9	10
Vanadium	11/05/2020 08:32	-1.16	U	1.1	2.5
Zinc	11/05/2020 08:32	0.409	U	5.0	5.0

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176863 Lab Sample ID: 497255

Analytical Prep Batch # 78793 Preparation Date/Time: 11/05/2020 09:50

ICAL Calibration #: 11052020 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Mercury	11/05/2020 13:38	-0.00100	U	0.03	0.06

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176769 Lab Sample ID: 497028

Analytical Prep Batch # 78777 Preparation Date/Time: 11/02/2020 11:52

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Aluminum	11/05/2020 06:28	1.64	U	10	20
Total Antimony	11/05/2020 06:28	2.32	U	4.7	10
Total Arsenic	11/05/2020 06:28	-4.62	U	12	25
Total Barium	11/05/2020 06:28	0.694	U	0.82	2.0
Total Beryllium	11/05/2020 06:28	-0.143	U	0.10	0.30
Total Cadmium	11/05/2020 06:28	-0.0400	U	0.42	1.0
Total Calcium	11/05/2020 06:28	11.10	U	19	50
Total Chromium	11/05/2020 06:28	-0.497	U	1.6	2.5
Total Cobalt	11/05/2020 06:28	0.00100	U	0.6	2.0
Total Copper	11/05/2020 06:28	0.805	U	11	25
Total Iron	11/05/2020 06:28	3.32	U	33	50
Total Lead	11/05/2020 06:28	0.988	U	1.4	2.0
Total Magnesium	11/05/2020 06:28	2.62	U	10	20
Total Manganese	11/05/2020 06:28	0.0760	U	1.5	2.5
Total Nickel	11/05/2020 06:28	0.198	U	1.4	2.5
Total Selenium	11/05/2020 06:28	2.28	U	9.9	20
Total Silver	11/05/2020 06:28	-0.311	U	0.7	2.0
Total Thallium	11/05/2020 06:28	-2.16	U	5.9	10
Total Vanadium	11/05/2020 06:28	-0.803	U	1.1	2.5
Total Zinc	11/05/2020 06:28	0.629	U	5.0	5.0

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176770 Lab Sample ID: 497028

Analytical Prep Batch # 78777 Preparation Date/Time: 11/02/2020 11:52

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Potassium	11/06/2020 11:06	-17.0	U	123	250
Total Sodium	11/06/2020 11:06	0	U	183	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176770 Lab Sample ID: 497028

Analytical Prep Batch # 78777 Preparation Date/Time: 11/02/2020 11:52

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Potassium	11/06/2020 11:06	-17.0	U	123	250
Total Sodium	11/06/2020 11:06	0	U	183	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 157538
ICS Source: SPEX

Analytical Run #: 176770
Lab Sample ID: 501274
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	11/06/2020 09:54	500000	485000	97	80	120
Calcium	11/06/2020 09:54	500000	474000	95	80	120
Iron	11/06/2020 09:54	500000	455000	91	80	120
Magnesium	11/06/2020 09:54	500000	496000	99	80	120
Potassium	11/06/2020 09:54	0	0		-170	170
Sodium	11/06/2020 09:54	0	0		-140	140

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 157538
ICS Source: SPEX

Analytical Run #: 176769
Lab Sample ID: 504016
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	11/04/2020 14:32	500000	578000	116	80	120
Antimony	11/04/2020 14:32	0	4.33		-10	10
Arsenic	11/04/2020 14:32	0	17.10		-20	20
Barium	11/04/2020 14:32	0	0		-1.7	1.7
Beryllium	11/04/2020 14:32	0	0		-.7	.7
Cadmium	11/04/2020 14:32	0	1.07		-1.3	1.3
Calcium	11/04/2020 14:32	500000	564000	113	80	120
Chromium	11/04/2020 14:32	0	-0.739		-13	13
Cobalt	11/04/2020 14:32	0	1.13		-2	2
Copper	11/04/2020 14:32	0	1.20		-7	7
Iron	11/04/2020 14:32	500000	547000	109	80	120
Lead	11/04/2020 14:32	0	0.434		-4.7	4.7
Magnesium	11/04/2020 14:32	500000	525000	105	80	120
Manganese	11/04/2020 14:32	0	-1.95		-7.3	7.3
Nickel	11/04/2020 14:32	0	-1.73		-7	7
Selenium	11/04/2020 14:32	0	0.0340		-13	13
Silver	11/04/2020 14:32	0	-0.373		-7.3	7.3
Thallium	11/04/2020 14:32	0	-4.30		-7.3	7.3
Vanadium	11/04/2020 14:32	20000	23800		16000	24000
Zinc	11/04/2020 14:32	0	-14.4		-20	20

CT LABORATORIES
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Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 157538
ICS Source: SPEX, Ultra

Analytical Run #: 176770
Lab Sample ID: 501275
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	11/06/2020 09:57	500000	503000	101	80	120
Calcium	11/06/2020 09:57	500000	489000	98	80	120
Iron	11/06/2020 09:57	500000	489000	98	80	120
Magnesium	11/06/2020 09:57	500000	502000	100	80	120
Potassium	11/06/2020 09:57	100000	115000	115	80	120
Sodium	11/06/2020 09:57	100000	119000	119	80	120

CT LABORATORIES
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Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 157538
ICS Source: SPEX, Ultra

Analytical Run #: 176769
Lab Sample ID: 504017
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	11/04/2020 14:39	500000	500000	100	80	120
Antimony	11/04/2020 14:39	500.0	516.0	103	80	120
Arsenic	11/04/2020 14:39	500.0	591.0	118	80	120
Barium	11/04/2020 14:39	500.0	498.0	100	80	120
Beryllium	11/04/2020 14:39	500.0	489.0	98	80	120
Cadmium	11/04/2020 14:39	500.0	530.0	106	80	120
Calcium	11/04/2020 14:39	500000	493000	99	80	120
Chromium	11/04/2020 14:39	500.0	537.0	107	80	120
Cobalt	11/04/2020 14:39	500.0	491.0	98	80	120
Copper	11/04/2020 14:39	500.0	502.0	100	80	120
Iron	11/04/2020 14:39	500000	478000	96	80	120
Lead	11/04/2020 14:39	500.0	456.0	91	80	120
Magnesium	11/04/2020 14:39	500000	475000	95	80	120
Manganese	11/04/2020 14:39	500.0	546.0	109	80	120
Nickel	11/04/2020 14:39	500.0	496.0	99	80	120
Selenium	11/04/2020 14:39	500.0	483.0	97	80	120
Silver	11/04/2020 14:39	500.0	405.0	81	80	120
Thallium	11/04/2020 14:39	500.0	578.0	116	80	120
Vanadium	11/04/2020 14:39	500.0	568.0	114	80	120
Zinc	11/04/2020 14:39	500.0	514.0	103	80	120

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5A

SPIKE SAMPLE RECOVERY

Sample Description: **48/49-IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 157538
% Solids for Sample:
Concentration Units: ug/L
Sample No: 497031
Parent Sample No.: 496544
Analytical Prep Batch #: 78777
Analytical Preparation Date/Time: 11/02/2020 11:52
Analytical Run #: 176769
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 11/05/2020 Analysis Time: -------- 07:18

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Aluminum	86-115	3180		1470		800	214		P	*FAIL*
Total Antimony	88-113	212		BDL	U	200	106		P	
Total Arsenic	87-113	867		BDL	U	800	108		P	
Total Barium	88-113	917		129		800	98		P	
Total Beryllium	89-112	19.2		BDL	U	20.0	96		P	
Total Cadmium	88-113	19.8		BDL	U	20.0	99		P	
Total Calcium	87-113	277000		80400		200000	98		P	
Total Chromium	90-113	91.5		5.3		80.0	108		P	
Total Cobalt	89-114	196		2.4	J	200	97		P	
Total Copper	86-114	108		BDL	U	100	108		P	
Total Iron	87-115	2990		2300		400	172		P	*FAIL*
Total Lead	86-113	200		8.1		200	96		P	
Total Magnesium	85-113	133000		40900		100000	92		P	
Total Manganese	90-114	826		634		200	96		P	
Total Nickel	88-113	208		2.5	J	200	103		P	
Total Selenium	83-114	838		BDL	U	800	105		P	
Total Silver	84-115	19.5		BDL	U	20.0	98		P	
Total Thallium	85-114	756		BDL	U	800	94		P	
Total Vanadium	90-111	209		2.4	J	200	103		P	
Total Zinc	87-115	241		20.0		200	110		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	ug/L
Sample No	497031	Parent Sample No.:	496544
Analytical Prep Batch #	78777	Analytical Preparation Date/Time:	11/02/2020 11:52
Analytical Run #:	176770	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 11/06/2020 Analysis Time: -------- 11:20

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Potassium	86-114	112000		5430		100000	107		P
Total Sodium	87-115	115000		18800		100000	96		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **48/49-IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 157538
% Solids for Sample:
Concentration Units: ug/L
Sample No: 501281
Parent Sample No.: 496544
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 176770
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 11/06/2020 Analysis Time: -------- 11:26

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Potassium	80-120.	111000		5430		100000	106		P
Sodium	80-120.	116000		18800		100000	97		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **48/49-IDW**

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID | SDG No.: 157538

% Solids for Sample: | Concentration Units: ug/L

Sample No: 504026 | Parent Sample No.: 496544

Analytical Prep Batch #: 0 | Analytical Preparation Date/Time:

Analytical Run #: 176769 | ICAL Calibration #:

Analysis Type: *Initial Analysis* | Analysis Date: ----- 11/05/2020 | Analysis Time: -------- 07:30

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Aluminum	80-120	5510		1470		4000	101		P
Iron	80-120	4220		2300		2000	96		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **48/49-IDW**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	ug/L
Sample No	497032	Parent Sample No.:	497031
Analytical Prep Batch #	78777	Analytical Preparation Date/Time:	11/02/2020 11:52
Analytical Run #:	176769	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 11/05/2020 Analysis Time: -------- 07:24

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Aluminum	86-115	3190		1470		800	215		P	*FAIL*
Total Antimony	88-113	216		BDL	U	200	108		P	
Total Arsenic	87-113	879		BDL	U	800	110		P	
Total Barium	88-113	927		129		800	100		P	
Total Beryllium	89-112	19.4		BDL	U	20.0	97		P	
Total Cadmium	88-113	20.4		BDL	U	20.0	102		P	
Total Calcium	87-113	279000		80400		200000	99		P	
Total Chromium	90-113	92.0		5.3		80.0	108		P	
Total Cobalt	89-114	199		2.4	J	200	98		P	
Total Copper	86-114	109		BDL	U	100	109		P	
Total Iron	87-115	3010		2300		400	178		P	*FAIL*
Total Lead	86-113	204		8.1		200	98		P	
Total Magnesium	85-113	135000		40900		100000	94		P	
Total Manganese	90-114	832		634		200	99		P	
Total Nickel	88-113	210		2.5	J	200	104		P	
Total Selenium	83-114	843		BDL	U	800	105		P	
Total Silver	84-115	18.9		BDL	U	20.0	94		P	
Total Thallium	85-114	759		BDL	U	800	95		P	
Total Vanadium	90-111	210		2.4	J	200	104		P	
Total Zinc	87-115	243		20.0		200	112		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	ug/L
Sample No	497032	Parent Sample No.:	497031
Analytical Prep Batch #	78777	Analytical Preparation Date/Time:	11/02/2020 11:52
Analytical Run #:	176770	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 11/06/2020 Analysis Time: -------- 11:23

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Potassium	86-114	113000		5430		100000	108		P
Total Sodium	87-115	116000		18800		100000	97		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

48/49-IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 157538

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 78777

Analytical Run #: 176769

ICAL Calibration #:

Sample #: 497030

Parent Sample #: 496544

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M	
Total Aluminum	11/05/2020	06:54	20	1470		1630		10		P	
Total Antimony	11/05/2020	06:54	20	4.7	U	4.7	U	0		P	
Total Arsenic	11/05/2020	06:54	20	12	U	12	U	0		P	
Total Barium	11/05/2020	06:54	20	129		131		2		P	
Total Beryllium	11/05/2020	06:54	20	0.10	U	0.10	U	0		P	
Total Cadmium	11/05/2020	06:54	20	0.42	U	0.42	U	0		P	
Total Calcium	11/05/2020	06:54	20	80400		80200		0		P	
Total Chromium	11/05/2020	06:54	20	5.3		5.8		9		P	
Total Cobalt	11/05/2020	06:54	20	2.4	J	2.4	J	0		P	
Total Copper	11/05/2020	06:54	20	11	U	11	U	0		P	
Total Iron	11/05/2020	06:54	20	2300		2460		7		P	
Total Lead	11/05/2020	06:54	20	8.1		6.9		16		P	
Total Magnesium	11/05/2020	06:54	20	40900		40900		0		P	
Total Manganese	11/05/2020	06:54	20	634		637		0		P	
Total Nickel	11/05/2020	06:54	20	2.5	J	3.0	J	18		P	
Total Selenium	11/05/2020	06:54	20	9.9	U	9.9	U	0		P	
Total Silver	11/05/2020	06:54	20	0.70	U	0.70	U	0		P	
Total Thallium	11/05/2020	06:54	20	5.9	U	5.9	U	0		P	
Total Vanadium	11/05/2020	06:54	20	2.4	J	3.3	J	32		P	*FAIL*
Total Zinc	11/05/2020	06:54	20	20.0		18.1		10		P	

CT LABORATORIES
delivering more than data from your environmental analyses

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DUPLICATES

Sample Description

48/49-IDW

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID
SDG No.: 157538

% Solid for Sample:
Concentration Units: ug/L

Analytical Prep Batch # 1
Analytical Preparation Date/Time 78777

Analytical Run #: 176770
ICAL Calibration #:

Sample #: 497030
Parent Sample #: 496544

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	11/06/2020	11:17	20	5430		5160		5		P
Total Sodium	11/06/2020	11:17	20	18800		18900		1		P

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **48/49-IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 157538
% Solid for Sample:
Concentration Units: ug/L
Analytical Prep Batch #: 78777
Analytical Preparation Date/Time: 11/02/2020 11:52
Analytical Run #: 176769
ICAL Calibration #:
Sample #: 497032
Parent Sample #: 497031

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Aluminum	11/05/2020	07:24	20	3180		3190		0		P
Total Antimony	11/05/2020	07:24	20	212		216		2		P
Total Arsenic	11/05/2020	07:24	20	867		879		1		P
Total Barium	11/05/2020	07:24	20	917		927		1		P
Total Beryllium	11/05/2020	07:24	20	19.2		19.4		1		P
Total Cadmium	11/05/2020	07:24	20	19.8		20.4		3		P
Total Calcium	11/05/2020	07:24	20	277000		279000		1		P
Total Chromium	11/05/2020	07:24	20	91.5		92.0		1		P
Total Cobalt	11/05/2020	07:24	20	196		199		2		P
Total Copper	11/05/2020	07:24	20	108		109		1		P
Total Iron	11/05/2020	07:24	20	2990		3010		1		P
Total Lead	11/05/2020	07:24	20	200		204		2		P
Total Magnesium	11/05/2020	07:24	20	133000		135000		1		P
Total Manganese	11/05/2020	07:24	20	826		832		1		P
Total Nickel	11/05/2020	07:24	20	208		210		1		P
Total Selenium	11/05/2020	07:24	20	838		843		1		P
Total Silver	11/05/2020	07:24	20	19.5		18.9		3		P
Total Thallium	11/05/2020	07:24	20	756		759		0		P
Total Vanadium	11/05/2020	07:24	20	209		210		0		P
Total Zinc	11/05/2020	07:24	20	241		243		1		P

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **48/49-IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 157538
% Solid for Sample:
Concentration Units: ug/L
Analytical Prep Batch #: 78777
Analytical Preparation Date/Time: 11/02/2020 11:52
Analytical Run #: 176770
ICAL Calibration #:
Sample #: 497032
Parent Sample #: 497031

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	11/06/2020	11:23	20	112000		113000		1		P
Total Sodium	11/06/2020	11:23	20	115000		116000		1		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 157538

Concentration Units: ug/L

Analytical Run #: 176863 Sample No.:#: 497256

Analytical Prep Batch #: 78793 Preparation Date/Time: 11/05/2020 09:50

ICAL Calibration #: 11052020

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Mercury	11/05/2020 13:32	82-119	1.82		2.00	91		CV

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 157538

Concentration Units: ug/L

Analytical Run #: 176769 Sample No.:#: 497029

Analytical Prep Batch #: 78777 Preparation Date/Time: 11/02/2020 11:52

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Aluminum	11/05/2020 06:22	86-115	854.0		800.0	107		P
Total Antimony	11/05/2020 06:22	88-113	216.0		200.0	108		P
Total Arsenic	11/05/2020 06:22	87-113	874.0		800.0	109		P
Total Barium	11/05/2020 06:22	88-113	805.0		800.0	101		P
Total Beryllium	11/05/2020 06:22	89-112	19.00		20.00	95		P
Total Cadmium	11/05/2020 06:22	88-113	20.10		20.00	100		P
Total Calcium	11/05/2020 06:22	87-113	201000		200000	100		P
Total Chromium	11/05/2020 06:22	90-113	86.60		80.00	108		P
Total Cobalt	11/05/2020 06:22	89-114	194.0		200.0	97		P
Total Copper	11/05/2020 06:22	86-114	104.0		100.0	104		P
Total Iron	11/05/2020 06:22	87-115	403.0		400.0	101		P
Total Lead	11/05/2020 06:22	86-113	203.0		200.0	102		P
Total Magnesium	11/05/2020 06:22	85-113	95300		100000	95		P
Total Manganese	11/05/2020 06:22	90-114	213.0		200.0	106		P
Total Nickel	11/05/2020 06:22	88-113	208.0		200.0	104		P
Total Selenium	11/05/2020 06:22	83-114	854.0		800.0	107		P
Total Silver	11/05/2020 06:22	84-115	19.60		20.00	98		P
Total Thallium	11/05/2020 06:22	85-114	765.0		800.0	96		P
Total Vanadium	11/05/2020 06:22	90-111	203.0		200.0	102		P
Total Zinc	11/05/2020 06:22	87-115	226.0		200.0	113		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 157538

Concentration Units: ug/L

Analytical Run #: 176770 Sample No.:#: 497029

Analytical Prep Batch #: 78777 Preparation Date/Time: 11/02/2020 11:52

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Potassium	11/06/2020 10:58	86-114	107000		100000	107		P
Total Sodium	11/06/2020 10:58	87-115	96900		100000	97		P

CT LABORATORIES
delivering more than data from your environmental analyses

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ICP SERIAL DILUTION

Sample Description

48/49-IDW

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID SDG No.: 157538

Concentration Units: ug/L

Sample No.: 504022 Parent Sample No.: 496544

LIMS Run #: 176769 ICAL Calibration #:.:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Aluminum	11/05/2020 06:47	1470.		1950		33		P	*INVALID*
Iron	11/05/2020 06:47	2300.		3100		35		P	*INVALID*

CT LABORATORIES
delivering more than data from your environmental analyses

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METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Matrix: LIQUID

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	MDL (ug/L)	M
Total Mercury	253.7			0.03	CV

CT LABORATORIES
delivering more than data from your environmental analyses

10

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

ICP ID Number: TJA SDG No.: 157538

Matrix: LIQUID

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	MDL (ug/L)	M
Total Aluminum	167.0			10	P
Total Antimony	217.5			4.7	P
Total Arsenic	193.7			12	P
Total Barium	455.4			0.82	P
Total Beryllium	313.041			0.10	P
Total Cadmium	226.502			0.42	P
Total Calcium	393.3			19	P
Total Chromium	267.716			1.6	P
Total Cobalt	228.616			0.6	P
Total Copper	327.3			11	P
Total Iron	259.9			33	P
Total Lead	220.35			1.4	P
Total Magnesium	279.5			10	P
Total Manganese	257.61			1.5	P
Total Nickel	231.604			1.4	P
Total Potassium	766.491			123	P
Total Selenium	196.02			9.9	P
Total Silver	328.068			0.7	P
Total Sodium	589.5			183	P
Total Thallium	190.864			5.9	P
Total Vanadium	292.402			1.1	P
Total Zinc	213.856			5.0	P

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	Fe	0.000006	0.000000	No
			Ce	0.000000	0.000000	No
Ag 338.289 {100}	☒	1	Fe	0.000906	0.000000	No
Al 167.079 {501}	☒	None				
Al 308.215 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	1	Al	0.001713	0.000000	No
As 197.262 {471}	☒	1	Al	-0.000113	0.000000	No
Ba 233.527 {445}	☒	3	Fe	-0.000038	0.000000	No
			V	0.000180	0.000000	No
			Al	0.000000	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000002	0.000000	No
Ba 493.409 { 68}	☒	1	Fe	0.000029	0.000000	No
Be 313.042 {108}	☒	1	Fe	0.000000	0.000000	No
Be 234.861 {144}	☒	1	Fe	-0.000016	0.000000	No
Ca 315.887 {107}	☒	None				
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	1	Cu	0.000000	0.000000	No
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	2	Fe	0.000090	0.000000	No
			Al	0.000000	0.000000	No
Cd 228.802 {147}	☒	None				
Co 228.616 {447}	☒	5	Fe	0.000009	0.000000	No
			Ti	0.003000	0.000000	No
			Ba	-0.001300	0.000000	No
			Ni	0.000040	0.000000	No
			Al	0.000001	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000188	0.000000	No
Cr 205.560 {464}	☒	1	Fe	-0.000004	0.000000	No
Cr 267.716 {126}	☒	1	Fe	-0.000014	0.000000	No
Cu 224.700 {450}	☒	5	Fe	0.000274	0.000000	No
			Mo	0.001320	0.000000	No
			Ni	-0.006000	0.000000	No
			Pb	0.003030	0.000000	No
			Al	0.000000	0.000000	No
Cu 324.754 {104}	☒	1	Fe	-0.000136	0.000000	No
Cu 327.396 {103}	☒	1	Fe	0.000069	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	-0.000086	0.000000	No

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mn 259.373 {130}	☒	1	Mg	0.001339	0.000000	No
Mo 202.030 {466}	☒	1	Fe	-0.000011	0.000000	No
Mo 203.844 {465}	☒	1	Fe	-0.000020	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000036	0.000000	No
Ni 221.647 {452}	☒	1	Ca	0.000021	0.000000	No
Ni 231.604 {445}	☒	3	Fe	0.000012	0.000000	No
			Co	0.000000	0.000000	No
			Mo	0.000000	0.000000	No
Pb 216.999 {455}	☒	2	Al	0.001241	0.000000	No
			Na	0.000000	0.000000	No
Pb 220.353 {453}	☒	3	Si	0.000000	0.000000	No
			Al	0.000001	0.000000	No
			Fe	0.000018	0.000000	No
Pb 220.353 {153}	☒	1	Al	-0.000040	0.000000	No
Sb 206.833 {463}	☒	1	Fe	0.000009	0.000000	No
Sb 217.581 {455}	☒	3	Fe	-0.000069	0.000000	No
			V	0.002070	0.000000	No
			Pb	-0.001040	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000360	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.001308	0.000000	No
Tl 190.856 {476}	☒	5	Fe	0.000024	0.000000	No
			Be	-0.000013	0.000000	No
			Ti	0.000050	0.000000	No
			Cr	0.000251	0.000000	No
			V	-0.003800	0.000000	No
Tl 190.856 {477}	☒	1	Fe	-0.000048	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000073	0.000000	No
V 292.402 {115}	☒	3	Fe	0.000020	0.000000	No
			Cr	-0.000400	0.000000	No
			Al	0.000000	0.000000	No
Zn 202.548 {466}	☒	1	Fe	-0.000239	0.000000	No
Zn 206.200 {463}	☒	1	Fe	-0.000003	0.000000	No
Zn 213.856 {457}	☒	2	Fe	0.000167	0.000000	No
			Cu	0.007413	0.000000	No
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Y 224.306 {451}*	☒	None				
Na 588.995 { 57}	☒	1	Fe	0.000106	0.000000	No
Si 251.611 {134}	☒	2	Fe	-0.000105	0.000000	No
			Mo	0.005400	0.000000	No
Ti 323.452 {104}	☒	1	Fe	0.000036	0.000000	No
Ti 334.941 {101}	☒	1	Fe	0.000052	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000014	0.000000	No
Sr 421.552 { 80}	☒	1	Fe	0.000014	0.000000	No

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Sn 189.989 {477}	☒	1	Fe	0.000013	0.000000	No
B 249.678 {135}	☒	2	Fe	0.000001	0.000000	No
			Co	0.003970	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000357	0.000000	No
Li 670.784 { 50}	☒	1	Fe	0.000011	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000216	0.000000	No
P 213.618 {457}	☒	1	Fe	-0.000079	0.000000	No
S 182.034 {485}	☒	1	Mg	0.000100	0.000000	No
Hg 184.950 {482}	☒	1	Fe	0.000001	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

ICP LINEAR RANGES (QUARTERLY)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

ICP ID Number: TA SDG No.: 157538

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	15.00	1000000	P
Antimony	15.00	10000	P
Arsenic	15.00	10000	P
Barium	15.00	10000	P
Beryllium	15.00	1000	P
Boron	15.00	1000	P
Cadmium	15.00	1000	P
Calcium	15.00	1000000	P
Chromium	15.00	100000	P
Cobalt	15.00	10000	P
Copper	15.00	100000	P
Iron	15.00	1000000	P
Lead	15.00	100000	P
Lithium	15.00	10000	P
Magnesium	15.00	1000000	P
Manganese	15.00	100000	P
Molybdenum	15.00	10000	P
Nickel	15.00	10000	P
Potassium	15.00	200000	P
Selenium	15.00	10000	P
Silicon	15.00	1000	P
Silver	15.00	100	P
Sodium	15.00	200000	P
Strontium	15.00	10000	P
Thallium	15.00	10000	P
Tin	15.00	10000	P
Titanium	15.00	1000	P
Tungsten	15.00	10000	P
Vanadium	15.00	10000	P
Zinc	15.00	100000	P

CT LABORATORIES
delivering more than data from your environmental analyses

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PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Method: EPA 3010A

SDG No.: 157538

Preparation Batch #: 78777

Preparation Date/Time: 11/02/2020 / 11:52

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
495127	Normal Sample	54IDW	GROUND WATER	50.0
496544	Normal Sample	48/49-IDW	GROUND WATER	50.0
497028	Method Blank		LIQUID	50.0
497029	Lab Control Spike		LIQUID	50.0
497030	Lab Duplicate	48/49-IDW	GROUND WATER	50.0
497031	Matrix Spike	48/49-IDW	GROUND WATER	50.0
497032	Matrix Spike Duplicate	48/49-IDW	GROUND WATER	50.0

CT LABORATORIES
delivering more than data from your environmental analyses

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PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Method: EPA 7470A

SDG No.: 157538

Preparation Batch #: 78793

Preparation Date/Time: 11/05/2020 / 09:50

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
495127	Normal Sample	54IDW	GROUND WATER	25.0
496544	Normal Sample	48/49-IDW	GROUND WATER	25.0
497255	Method Blank		LIQUID	25.0
497256	Lab Control Spike		LIQUID	25.0
497257	Lab Duplicate	54IDW	GROUND WATER	25.0
497258	Matrix Spike	54IDW	GROUND WATER	25.0
497259	Matrix Spike Duplicate	54IDW	GROUND WATER	25.0

CT LABORATORIES
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ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Lab Code: CTL

SDG No.: 157538

Instrument ID Number: CETAC

Method Number: CV

Start & End Date: 11/05/2020 to 11/05/2020

Analytical Run #: 176863

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
500409	ICV	1.00	11/05 13:17																X													
500410	ICB	1.00	11/05 13:29																X													
497256	LCSW	1.00	11/05 13:32																X													
497255	MBW	1.00	11/05 13:38																X													
500411	CCV	1.00	11/05 14:04																X													
500412	CCB	1.00	11/05 14:10																X													
500290	ICV	1.00	11/05 16:05																X													
500291	ICB	1.00	11/05 16:11																X													
495127	Initial	1.00	11/05 16:24																X													
497257	DUP	1.00	11/05 16:27																X													
496544	Initial	1.00	11/05 16:30																X													
497258	MSW	1.00	11/05 16:34																X													
497259	MSDW	1.00	11/05 16:37																X													
500395	CCV	1.00	11/05 16:46																X													
500396	CCB	1.00	11/05 16:52																X													

CT LABORATORIES
delivering more than data from your environmental analyses

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ANALYSIS RUN LOG

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Lab Code: CTL
SDG No.: 157538

Instrument ID Number: TJA
Method Number: P

Start & End Date: 11/04/2020 to 11/05/2020
Analytical Run #: 176769

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
504013	ICV	1.00	11/04 14:00	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504014	ICVLL	1.00	11/04 14:06	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X			X	X
504015	ICB	1.00	11/04 14:20	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504016	ICSA	1.00	11/04 14:32	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504017	ICSAB	1.00	11/04 14:39	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504475	ICVLL	1.00	11/04 14:52															X								X							
504019	CCV1	1.00	11/05 05:38	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504020	CCV2	1.00	11/05 05:44	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504021	CCB	1.00	11/05 05:49	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
497029	LCSW	1.00	11/05 06:22	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
497028	MBW	1.00	11/05 06:28	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
495127	Initial	1.00	11/05 06:34	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
496544	Initial	1.00	11/05 06:41	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504022	L	5	11/05 06:47	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
497030	DUP	1.00	11/05 06:54	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504023	CCV1	1.00	11/05 07:01	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504024	CCV2	1.00	11/05 07:06	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504025	CCB	1.00	11/05 07:12	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
497031	MSW	1.00	11/05 07:18	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
497032	MSDW	1.00	11/05 07:24	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504026	PDSW	1.00	11/05 07:30	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504027	CCV1	1.00	11/05 08:21	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504028	CCV2	1.00	11/05 08:26	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
504029	CCB	1.00	11/05 08:32	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X

CT LABORATORIES
delivering more than data from your environmental analyses

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ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Lab Code: CTL

SDG No.: 157538

Instrument ID Number: TJA

Method Number: P

Start & End Date: 11/06/2020 to 11/06/2020

Analytical Run #: 176770

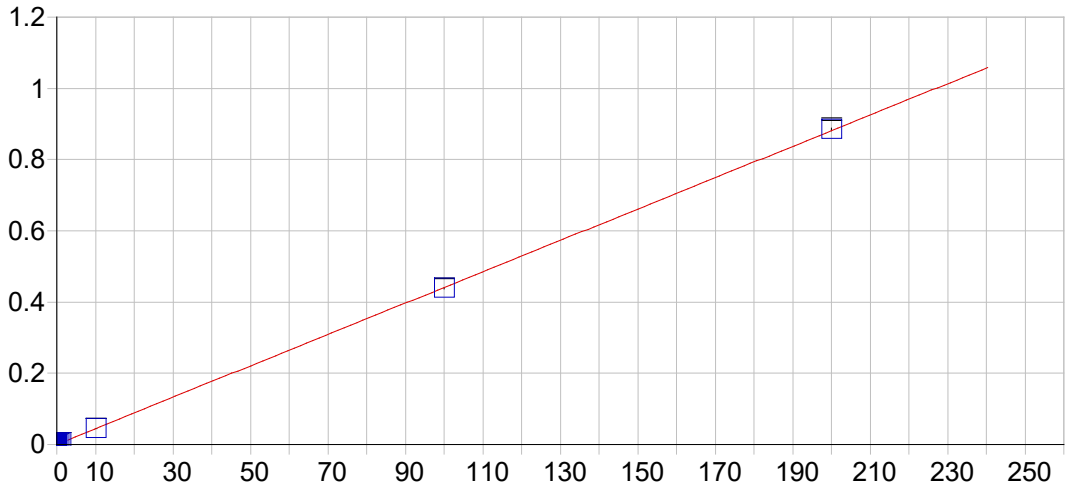
Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
501270	ICV	1.00	11/06 09:43																				X				X					
501271	ICVLL	1.00	11/06 09:45																				X				X					
501272	ICB	1.00	11/06 09:48																				X				X					
501273	MRL	1.00	11/06 09:51																				X				X					
501274	ICSA	1.00	11/06 09:54	X							X				X		X						X				X					
501275	ICSAB	1.00	11/06 09:57	X							X				X		X						X				X					
501276	CCV	1.00	11/06 10:28																				X				X					
501277	CCB	1.00	11/06 10:30																				X				X					
497029	LCSW	1.00	11/06 10:58																				X				X					
501278	CCV	1.00	11/06 11:01																				X				X					
501279	CCB	1.00	11/06 11:04																				X				X					
497028	MBW	1.00	11/06 11:06																				X				X					
495127	Initial	1.00	11/06 11:09																				X				X					
496544	Initial	1.00	11/06 11:12																				X				X					
501280	L	5	11/06 11:15																				X				X					
497030	DUP	1.00	11/06 11:17																				X				X					
497031	MSW	1.00	11/06 11:20																				X				X					
497032	MSDW	1.00	11/06 11:23																				X				X					
501281	PDSW	1.00	11/06 11:26																				X				X					
501282	CCV	1.00	11/06 11:34																				X				X					
501283	CCB	1.00	11/06 11:37																				X				X					

METALS
RAW DATA
DOCUMENTS

	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
	K 766.490 { 44}	11/13/2020 12:24:27	11/13/2020 12:24:27	Linear	1/Conc	0.000946	0.004401	0.000000	1.000000	0.999981	0.000013	0.053031	0.176770
	K 769.896 { 44}	11/13/2020 12:24:27	11/13/2020 12:24:27	Linear	1/Var	-0.000401	0.004680	0.000000	1.000000	0.999942	0.000877	0.064923	0.216411
	Na 330.237 {102}	11/13/2020 12:24:27	11/13/2020 12:24:27	Linear	1/Var	0.000059	0.000067	0.000000	1.000000	0.999986	0.000038	1.881994	6.273315
	Na 589.592 { 57}	11/13/2020 12:24:27	11/13/2020 12:24:27	Linear	1/Var	0.001504	0.049275	0.000000	1.000000	0.999966	0.000738	0.008355	0.027848
	Y 320.332 {105}*	11/13/2020 12:04:48	11/13/2020 12:04:48	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 360.073 { 94}	11/13/2020 12:04:48	11/13/2020 12:04:48	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Al 308.215 {109}	11/13/2020 12:27:31	11/13/2020 12:27:31	Linear	1/Conc	0.002765	0.000013	0.000000	1.000000	1.000000	0.000000	-1.000000	-1.000000
	Al 396.152 { 85}	11/13/2020 12:27:31	11/13/2020 12:27:31	Linear	1/Conc	-0.000237	0.007354	0.000000	1.000000	1.000000	0.000000	0.018896	0.062986
	Mg 285.213 {118}	11/13/2020 12:27:31	11/13/2020 12:27:31	Linear	None	-0.000018	0.036035	0.000000	1.000000	1.000000	0.000000	0.001957	0.006524
	Ca 317.933 {106}	11/13/2020 12:27:31	11/13/2020 12:27:31	Linear	None	0.034046	0.008267	0.000000	1.000000	1.000000	0.000000	0.007883	0.026275
	Fe 234.349 {144}	11/13/2020 12:27:31	11/13/2020 12:27:31	Linear	None	0.000078	0.001833	0.000000	1.000000	1.000000	0.000000	0.012682	0.042273

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	K 766.490 { 44}	OK.	1.000000	0.000000	1	0
	K 769.896 { 44}	OK.	1.000000	0.000000	1	0
	Na 330.237 {102}	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	OK.	1.000000	0.000000	1	0
	Y 320.332 {105}*	Warnin	1.000000	0.000000	1	0
	Y 360.073 { 94}	Warnin	1.000000	0.000000	1	0
	Al 308.215 {109}	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	OK.	1.000000	0.000000	1	0
	Mg 285.213 {118}	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	OK.	1.000000	0.000000	1	0
	Fe 234.349 {144}	OK.	1.000000	0.000000	1	0

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
K 766.490 { 44}	☒	1	Fe	-0.000330	0.000000	No
K 769.896 { 44}	☒	1	Fe	0.000322	0.000000	No
Na 330.237 {102}	☒	1	Fe	-0.004784	0.000000	No
Na 589.592 { 57}	☒	1	Fe	0.000238	0.000000	No
Y 320.332 {105}*	☒	None				
Y 360.073 { 94}	☒	None				
Al 308.215 {109}	☒	1	Fe	0.000000	0.000000	No
Al 396.152 { 85}	☒	None				
Mg 285.213 {118}	☒	None				
Ca 317.933 {106}	☒	None				
Fe 234.349 {144}	☒	None				

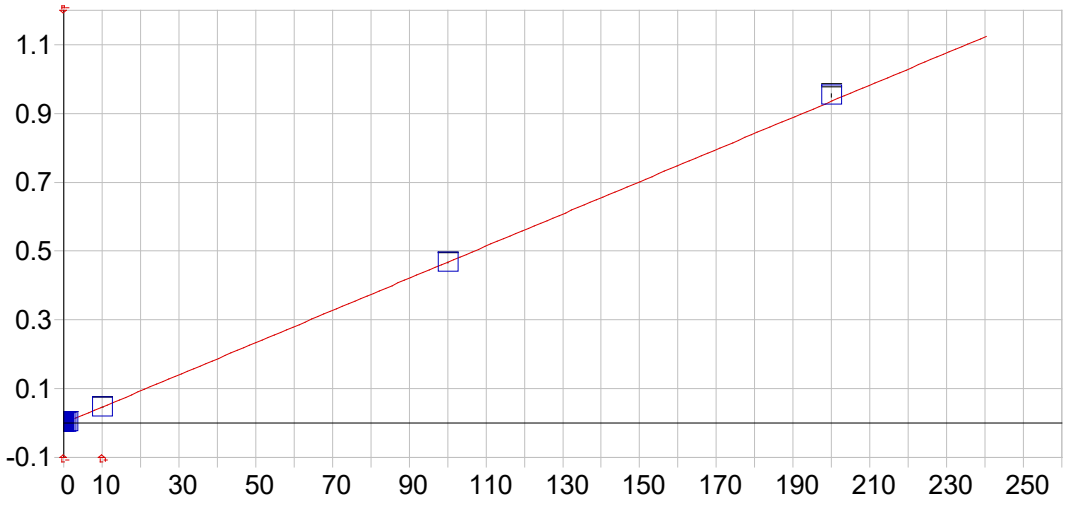


K 766.490 { 44}

Date of Fit:	11/13/2020 12:24:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000946	Re-Slope:	1.000000
A1 (Gain):	0.004401	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	0.053031		
Predicted MQL:	0.176770		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00002	.000	.000	.00095	.000	1
CalibStd-1.0	1.0000	.94367	-.056	-5.63	.00510	.000	1
CalibStd-10.0	10.000	9.8862	-.114	-1.14	.04445	.000	1
CalibStd-0.5	.50000	.51128	.011	2.26	.00320	.000	1
CalibStd-200	200.00	200.80	.803	.401	.88464	.004	1
CalibStd-100	100.00	99.356	-.644	-.644	.43819	.001	1

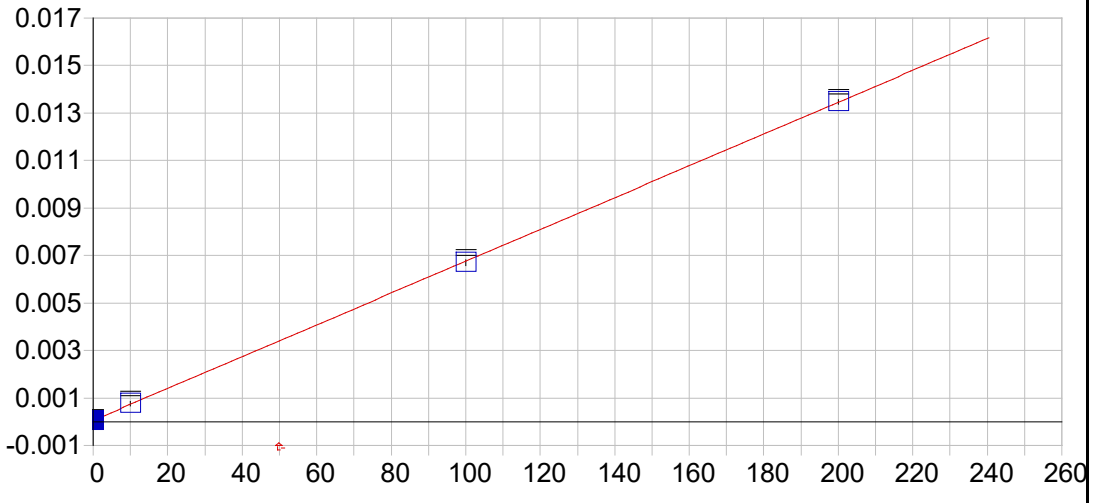


K 769.896 { 44}

Date of Fit:	11/13/2020 12:24:27	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000401	Re-Slope:	1.000000
A1 (Gain):	0.004680	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999942	Status:	OK.
Std Error of Est:	0.000877		
Predicted MDL:	0.064923		
Predicted MQL:	0.216411		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.35501	.355	.000	.00126	.000	1
CalibStd-1.0	1.0000	.93578	-.064	-6.42	.00398	.000	1
CalibStd-10.0	10.000	9.9549	-.045	-.451	.04619	.000	1
CalibStd-0.5	.50000	.60638	.106	21.3	.00244	.000	1
CalibStd-200	200.00	203.64	3.64	1.82	.95262	.004	1
CalibStd-100	100.00	99.838	-.162	-.162	.46682	.001	1

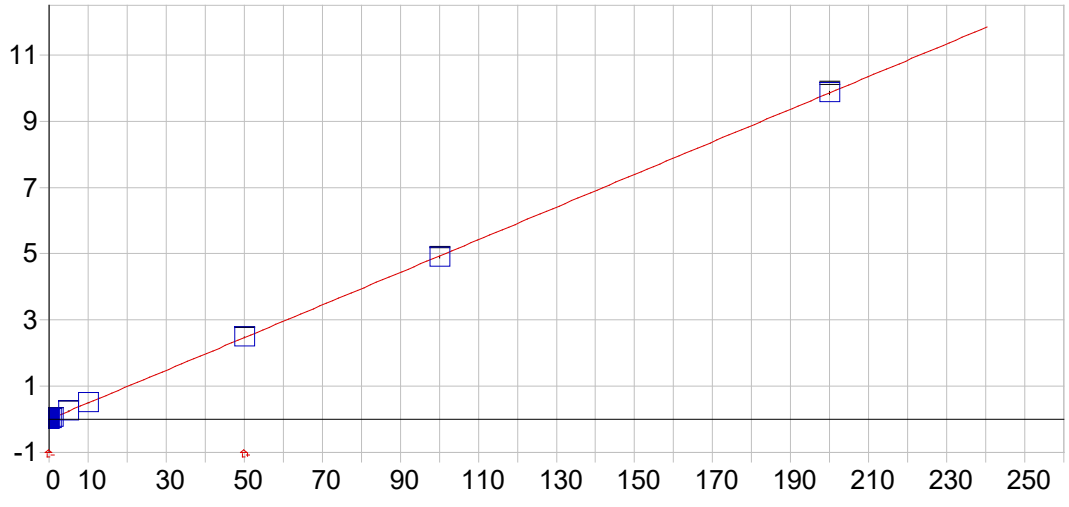


Na 330.237 {102}

Date of Fit:	11/13/2020 12:24:27	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000059	Re-Slope:	1.000000
A1 (Gain):	0.000067	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	1.881994		
Predicted MQL:	6.273315		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.13547	-.135	.000	.00005	.000	1
CalibStd-200	200.00	200.24	.236	.118	.01347	.000	1
CalibStd-10.0	10.000	10.525	.525	5.25	.00076	.000	1
CalibStd-100	100.00	99.186	-.814	-.814	.00670	.000	1

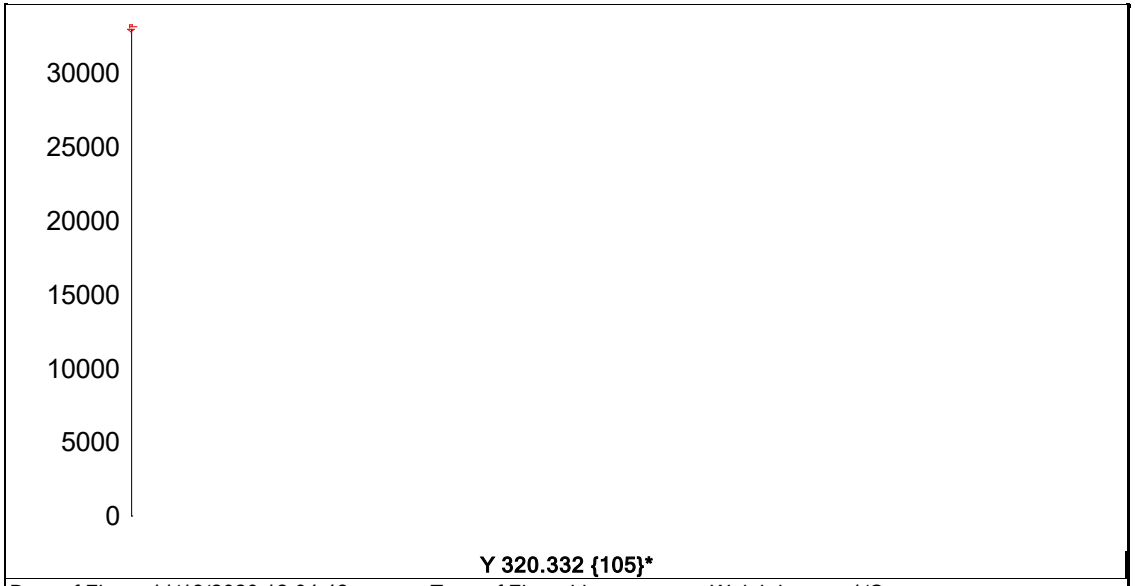


Na 589.592 { 57}

Date of Fit:	11/13/2020 12:24:27	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.001504	Re-Slope:	1.000000
A1 (Gain):	0.049275	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999966	Status:	OK.
Std Error of Est:	0.000738		
Predicted MDL:	0.008355		
Predicted MQL:	0.027848		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00322	-.003	.000	.00135	.002	1
CalibStd-0.5	.50000	.50367	.004	.735	.02632	.000	1
CalibStd-1.0	1.0000	.97975	-.020	-2.03	.04978	.000	1
CalibStd-5.0	5.0000	4.9746	-.025	-.508	.24663	.001	1
CalibStd-10.0	10.000	10.063	.063	.631	.49737	.004	1
CalibStd-50	50.000	50.275	.275	.549	2.4788	.005	1
CalibStd-100	100.00	99.180	-.820	-.820	4.8886	.014	1
CalibStd-200	200.00	200.03	.027	.013	9.8579	.052	1

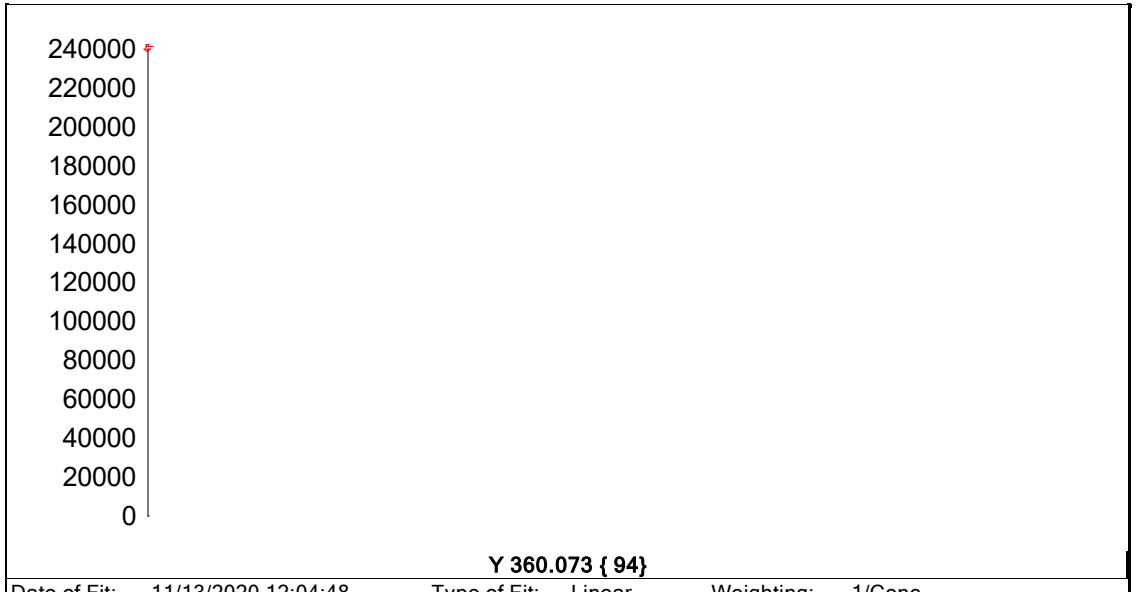


Y 320.332 {105}*

Date of Fit:	11/13/2020 12:04:48	Type of Fit:	Linear	Weighting:	1/Conc

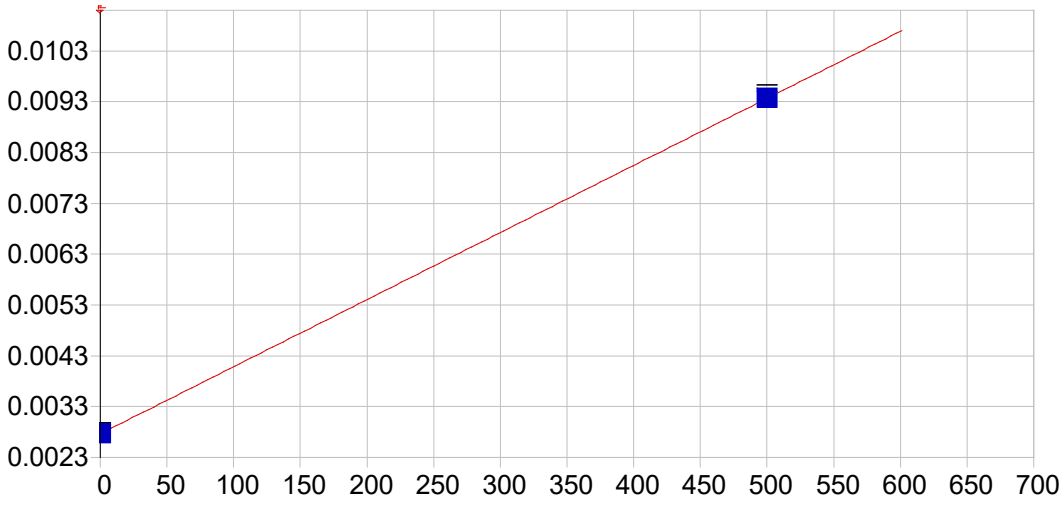
A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	31366.	63.0	1



Date of Fit:	11/13/2020 12:04:48	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000000		Re-Slope:	1.000000		
A1 (Gain):	0.000000		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	219400.	674.	1

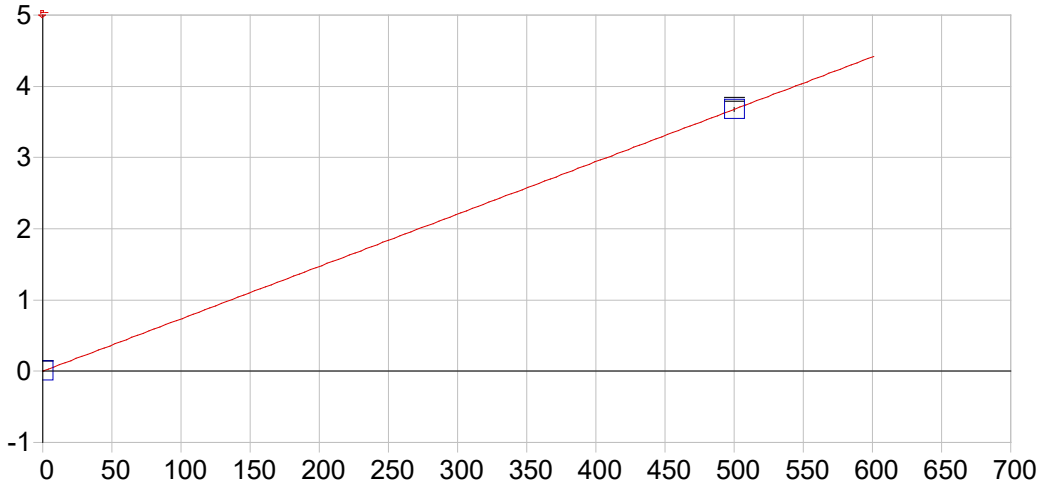


Al 308.215 {109}

Date of Fit:	11/13/2020 12:27:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002765	Re-Slope:	1.000000
A1 (Gain):	0.000013	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00277	.000	1
CalibStd-500	500.00	500.00	.000	.000	.00937	.000	1

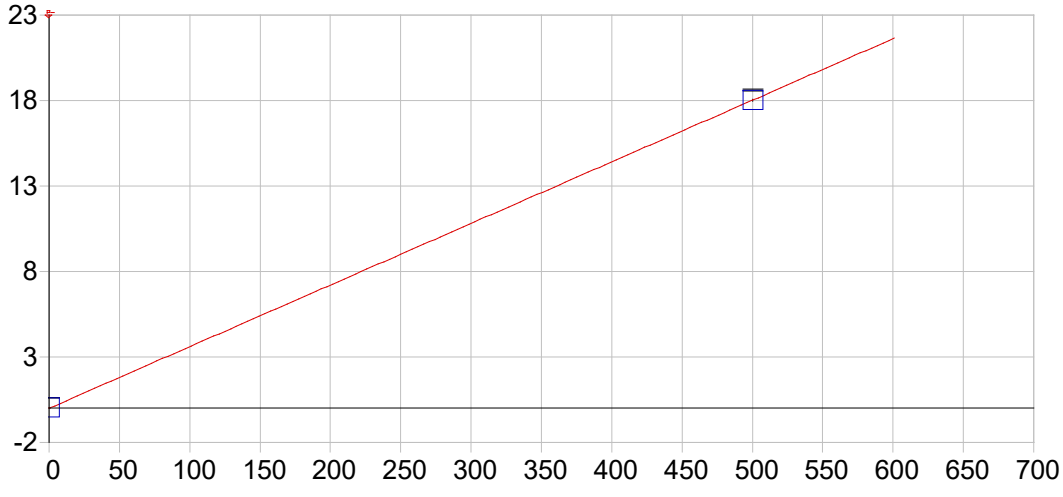


Al 396.152 { 85}

Date of Fit:	11/13/2020 12:27:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000237	Re-Slope:	1.000000
A1 (Gain):	0.007354	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.018896		
Predicted MQL:	0.062986		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00024	.000	1
CalibStd-500	500.00	500.00	.000	.000	3.6768	.025	1

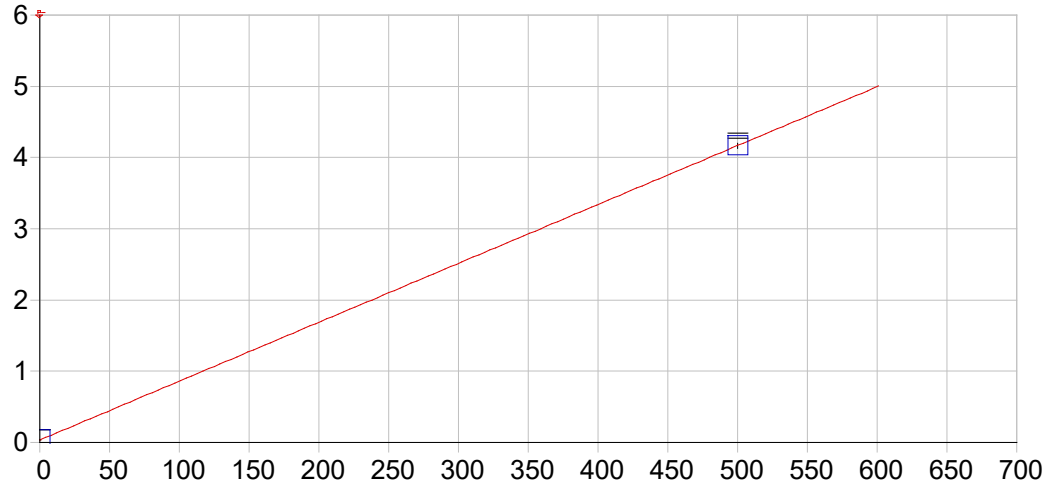


Mg 285.213 {118}

Date of Fit:	11/13/2020 12:27:31	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.000018	Re-Slope:	1.000000
A1 (Gain):	0.036035	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.001957		
Predicted MQL:	0.006524		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00002	.000	1
CalibStd-500	500.00	500.00	.000	.000	18.017	.041	1

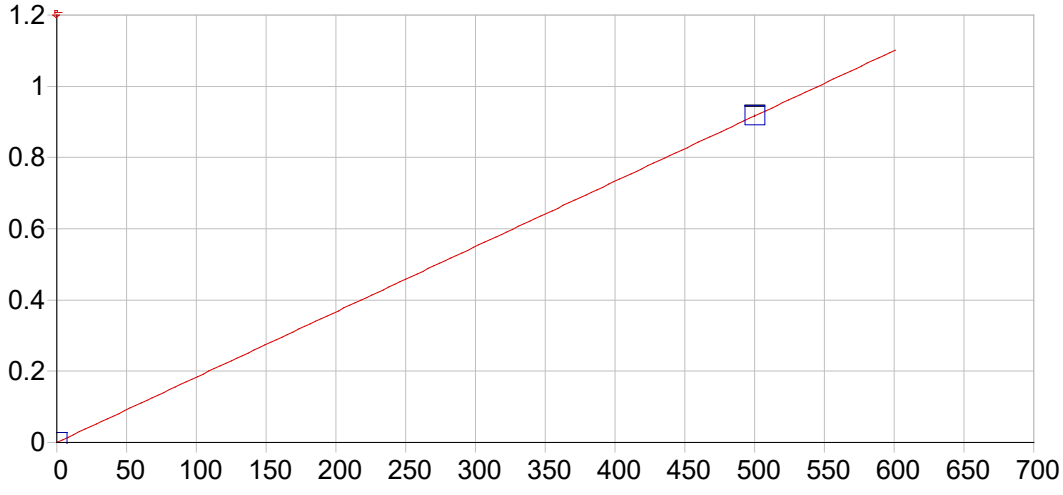


Ca 317.933 {106}

Date of Fit:	11/13/2020 12:27:31	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.034046	Re-Slope:	1.000000
A1 (Gain):	0.008267	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.007883		
Predicted MQL:	0.026275		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.03405	.000	1
CalibStd-500	500.00	500.00	.000	.000	4.1678	.035	1



Fe 234.349 {144}

Date of Fit:	11/13/2020 12:27:31	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000078	Re-Slope:	1.000000
A1 (Gain):	0.001833	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.012682		
Predicted MQL:	0.042273		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00008	.000	1
CalibStd-500	500.00	500.00	.000	.000	.91667	.001	1

Sample Name: Blank Acquired: 11/06/2020 09:16:56 Type: Cal
Method: Sodium and Potassium 1(v1287) Mode: IR Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.001**	**.000**	**.003**	**-.000**	**.000**	**.032**	**.000**
Stddev	.000	.000	.001	.000	.000	.000	.000
%RSD	20.3	65.4	40.8	3770.	24.0	.558	11.6

Int. Std.	Y_3203
Units	Cts/S
Avg	**32729.**
Stddev	78.
%RSD	.23707

Sample Name: CalibStd-0.5 Acquired: 11/06/2020 09:20:11 Type: Cal
Method: Sodium and Potassium 1(v1287) Mode: IR Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895
Units	Cts/S	Cts/S
Avg	**.003**	**.025**
Stddev	.000	.000
%RSD	5.65	1.79

Int. Std.	Y_3203
Units	Cts/S
Avg	**32902.**
Stddev	167.
%RSD	.50874

Sample Name: CalibStd-1.0 Acquired: 11/06/2020 09:23:13 Type: Cal
Method: Sodium and Potassium 1(v1287) Mode: IR Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895
Units	Cts/S	Cts/S
Avg	**.005**	**.046**
Stddev	.000	.000
%RSD	3.05	.827

Int. Std.	Y_3203
Units	Cts/S
Avg	**32815.**
Stddev	105.
%RSD	.32090

Sample Name: CalibStd-5.0 Acquired: 11/06/2020 09:26:00 Type: Cal
Method: Sodium and Potassium 1(v1287) Mode: IR Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Na5895
Units	Cts/S
Avg	.232
Stddev	.001
%RSD	.380

Int. Std.	Y_3203
Units	Cts/S
Avg	32549.
Stddev	147.
%RSD	.45201

Sample Name: CalibStd-10.0 Acquired: 11/06/2020 09:28:47 Type: Cal
Method: Sodium and Potassium 1(v1287) Mode: IR Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Na5895
Units	Cts/S	Cts/S	Cts/S
Avg	**.044**	**.001**	**.475**
Stddev	.001	.000	.003
%RSD	1.31	19.9	.729

Int. Std.	Y_3203
Units	Cts/S
Avg	**32185.**
Stddev	203.
%RSD	.62989

Sample Name: CalibStd-50 Acquired: 11/06/2020 09:31:35 Type: Cal
Method: Sodium and Potassium 1(v1287) Mode: IR Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Na5895
Units	Cts/S
Avg	**2.33**
Stddev	.01
%RSD	.486

Int. Std.	Y_3203
Units	Cts/S
Avg	**32098.**
Stddev	176.
%RSD	.54888

Sample Name: CalibStd-100 Acquired: 11/06/2020 09:34:23 Type: Cal
Method: Sodium and Potassium 1(v1287) Mode: IR Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Na5895
Units	Cts/S	Cts/S	Cts/S
Avg	**.425**	**.007**	**4.55**
Stddev	.001	.000	.01
%RSD	.246	2.55	.154

Int. Std.	Y_3203
Units	Cts/S
Avg	**32132.**
Stddev	80.
%RSD	.24742

Sample Name: CalibStd-200 Acquired: 11/06/2020 09:37:09 Type: Cal
Method: Sodium and Potassium 1(v1287) Mode: IR Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Na5895
Units	Cts/S	Cts/S	Cts/S
Avg	**.863**	**.014**	**9.28**
Stddev	.001	.000	.03
%RSD	.153	.726	.296

Int. Std.	Y_3203
Units	Cts/S
Avg	**31884.**
Stddev	37.
%RSD	.11503

Sample Name: CalibStd-500 Acquired: 11/06/2020 09:39:55 Type: Cal
Method: Sodium and Potassium 1(v1287) Mode: IR Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Mg2852	Ca3179	Fe2343
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.52**	**17.1**	**4.16**	**.916**
Stddev	.01	.2	.01	.002
%RSD	.298	1.01	.160	.225

Int. Std.	Y_3203
Units	Cts/S
Avg	**29827.**
Stddev	76.
%RSD	.25497

Sample Name: icv Acquired: 11/06/2020 09:43:08 Type: QC
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**104.**	**104.**	**.036**	**.078**	**.240**	**.186**
Stddev	.	1.	.029	.006	.024	.079
%RSD	.249	1.36	80.6	8.23	10.2	42.6
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_3203
Units	Cts/S
Avg	**31612.**
Stddev	30.
%RSD	.09498

Sample Name: ICVLL Acquired: 11/06/2020 09:45:55 Type: QC
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**3.07**	**3.50**	**-.034**	**.010**	**.233**	**-.025**
Stddev	.07	.00	.013	.003	.022	.017
%RSD	2.24	.099	38.3	27.8	9.53	67.3
Check ?	Chk Pass	Chk Pass	None	None	None	None
Value						
Range						

Int. Std.	Y_3203
Units	Cts/S
Avg	**31444.**
Stddev	151.
%RSD	.47989

Sample Name: icb Acquired: 11/06/2020 09:48:41 Type: QC
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**.115**	**.063**	**-.035**	**.009**	**.144**	**.007**
Stddev	.015	.003	.016	.002	.007	.019
%RSD	12.8	5.03	45.9	20.7	5.00	261.
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_3203
Units	Cts/S
Avg	**31582.**
Stddev	115.
%RSD	.36443

Sample Name: mrl Acquired: 11/06/2020 09:51:27 Type: QC
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**.995**	**1.05**	**-.044**	**-.001**	**.144**	**-.064**
Stddev	.038	.01	.009	.001	.031	.016
%RSD	3.79	.550	20.4	204.	21.3	24.9
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_3203
Units	Cts/S
Avg	**31779.**
Stddev	139.
%RSD	.43873

Sample Name: icsa Acquired: 11/06/2020 09:54:14 Type: QC
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**-.000**	**-.000**	**485.**	**496.**	**474.**	**455.**
Stddev	.067	.016	1.	2.	3.	1.
%RSD	228e15	2889e15	.164	.340	.691	.189
Check ?	Chk Pass	Chk Pass	None	None	None	None
High Limit						
Low Limit						

Int. Std.	Y_3203
Units	Cts/S
Avg	**29445.**
Stddev	89.
%RSD	.30075

Sample Name: icsab Acquired: 11/06/2020 09:57:20 Type: QC
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**115.**	**119.**	**503.**	**502.**	**489.**	**489.**
Stddev	.	2.	1.	2.	2.	2.
%RSD	.234	1.96	.138	.352	.437	.322
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_3203
Units	Cts/S
Avg	**29267.**
Stddev	21.
%RSD	.07073

Sample Name: ccv Acquired: 11/06/2020 10:28:08 Type: QC
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**103.**	**96.6**	**-.042**	**-.000**	**.313**	**-.068**
Stddev	.	2.0	.017	.002	.026	.011
%RSD	.354	2.10	40.1	542.	8.34	16.1
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_3203
Units	Cts/S
Avg	**30515.**
Stddev	162.
%RSD	.52935

Sample Name: ccb Acquired: 11/06/2020 10:30:54 Type: QC
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**.115**	**.115**	**-.040**	**.002**	**.297**	**-.062**
Stddev	.038	.012	.010	.001	.017	.019
%RSD	32.6	10.0	23.9	50.6	5.84	30.3
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_3203
Units	Cts/S
Avg	**30596.**
Stddev	94.
%RSD	.30695

Sample Name: lcsw78777 Acquired: 11/06/2020 10:58:32 Type: Unk
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**107.**	**96.9**	**.903**	**111.**	**194.**	**.334**
Stddev	.	.7	.018	.	1.	.007
%RSD	.234	.737	2.02	.360	.314	2.21

Int. Std.	Y_3203
Units	Cts/S
Avg	**29703.**
Stddev	106.
%RSD	.35674

Sample Name: ccv Acquired: 11/06/2020 11:01:19 Type: QC
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**104.**	**100.**	**-.052**	**.003**	**.288**	**-.078**
Stddev	.	1.	.005	.001	.033	.010
%RSD	.178	.952	9.78	40.3	11.3	12.8
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_3203
Units	Cts/S
Avg	**30456.**
Stddev	38.
%RSD	.12594

Sample Name: ccb Acquired: 11/06/2020 11:04:06 Type: QC
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**.126**	**.107**	**-.041**	**.002**	**.258**	**-.059**
Stddev	.030	.004	.005	.003	.008	.010
%RSD	23.8	3.76	11.3	163.	2.93	16.4
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_3203
Units	Cts/S
Avg	**30667.**
Stddev	99.
%RSD	.32366

Sample Name: mbw78777 Acquired: 11/06/2020 11:06:52 Type: Unk
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**-.017**	**-.000**	**-.044**	**-.003**	**.285**	**-.068**
Stddev	.050	.008	.020	.001	.017	.009
%RSD	303.	13600.	46.5	44.7	6.02	13.3

Int. Std.	Y_3203
Units	Cts/S
Avg	**30933.**
Stddev	63.
%RSD	.20214

Sample Name: 495127 Acquired: 11/06/2020 11:09:40 Type: Unk
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**.865**	**4.32**	**.066**	**27.0**	**55.8**	**.097**
Stddev	.057	.01	.018	.0	.2	.006
%RSD	6.63	.322	26.9	.121	.326	6.21

Int. Std.	Y_3203
Units	Cts/S
Avg	**30371.**
Stddev	152.
%RSD	.50030

Sample Name: 496544 Acquired: 11/06/2020 11:12:27 Type: Unk
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**5.43**	**18.8**	**2.06**	**44.8**	**75.1**	**2.31**
Stddev	.08	.1	.05	.1	.2	.03
%RSD	1.47	.284	2.64	.327	.326	1.41

Int. Std.	Y_3203
Units	Cts/S
Avg	**30355.**
Stddev	87.
%RSD	.28638

Sample Name: I496544 Acquired: 11/06/2020 11:15:12 Type: Unk
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**.918**	**3.28**	**.351**	**8.07**	**14.1**	**.372**
Stddev	.055	.01	.011	.02	.1	.004
%RSD	5.98	.393	3.07	.303	.570	1.16

Int. Std.	Y_3203
Units	Cts/S
Avg	**31259.**
Stddev	113.
%RSD	.36059

Sample Name: dup496544 Acquired: 11/06/2020 11:17:59 Type: Unk
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**5.16**	**18.9**	**1.34**	**44.7**	**75.0**	**2.24**
Stddev	.03	.1	.02	.1	.7	.02
%RSD	.583	.473	1.58	.246	.876	.933

Int. Std.	Y_3203
Units	Cts/S
Avg	**30518.**
Stddev	151.
%RSD	.49447

Sample Name: msw496544 Acquired: 11/06/2020 11:20:45 Type: Unk
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**112.**	**115.**	**3.09**	**151.**	**257.**	**2.79**
Stddev	.	3.	.03	1.	2.	.01
%RSD	.121	2.42	1.07	.403	.756	.447

Int. Std.	Y_3203
Units	Cts/S
Avg	**29559.**
Stddev	147.
%RSD	.49890

Sample Name: msdw496544 Acquired: 11/06/2020 11:23:30 Type: Unk
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**113.**	**116.**	**3.09**	**151.**	**258.**	**2.78**
Stddev	.	2.	.02	.	2.	.01
%RSD	.113	1.92	.743	.115	.592	.546

Int. Std.	Y_3203
Units	Cts/S
Avg	**29795.**
Stddev	59.
%RSD	.19872

Sample Name: pdsw496544 Acquired: 11/06/2020 11:26:13 Type: Unk
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**111.**	**116.**	**1.28**	**43.2**	**73.2**	**2.10**
Stddev	.	1.	.01	.1	.5	.03
%RSD	.208	.804	.942	.260	.646	1.44

Int. Std.	Y_3203
Units	Cts/S
Avg	**30290.**
Stddev	49.
%RSD	.16306

Sample Name: ccv Acquired: 11/06/2020 11:34:33 Type: QC
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na3302	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**103.**	**98.1**	**-.038**	**.004**	**.267**	**-.083**
Stddev	.	1.6	.026	.001	.019	.022
%RSD	.277	1.62	68.2	36.0	7.06	27.0
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_3203
Units	Cts/S
Avg	**30696.**
Stddev	143.
%RSD	.46590

Sample Name: ccb Acquired: 11/06/2020 11:37:20 Type: QC
Method: Sodium and Potassium 1(v1287) Mode: CONC Corr. Factor: 1.000000
User: MDS ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	K_7664	Na5895	Al3961	Mg2852	Ca3179	Fe2343
Units	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L
Avg	**.167**	**.124**	**-.037**	**.001**	**.268**	**-.060**
Stddev	.050	.001	.017	.001	.028	.008
%RSD	29.7	.912	44.8	103.	10.3	13.6
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_3203
Units	Cts/S
Avg	**30727.**
Stddev	104.
%RSD	.33877

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
Ag 328.068 {103}	11/10/2020 14:34:52	11/04/2020 13:00:33	Linear	1/Conc	0.000012	0.000003	0.000000	1.000000	0.998691	0.000000	0.918594	3.061981
Ag 338.289 {100}	11/10/2020 14:34:52	11/04/2020 13:47:16	Linear	1/Conc	0.000006	0.000001	0.000000	1.000000	0.999676	0.000000	7.899177	26.330589
Al 167.079 {501}	11/10/2020 14:34:52	11/04/2020 13:06:11	Linear	None	0.000011	0.000002	0.000000	1.000000	0.999986	0.000006	1.161027	3.870089
Al 308.215 {109}	11/10/2020 14:34:52	11/04/2020 13:26:56	Linear	1/Var	0.000038	0.000000	0.000000	1.000000	0.994146	0.000025	76.508290	255.02763
Al 396.152 { 85}	11/10/2020 14:34:52	11/04/2020 13:40:39	Curvili	1/Conc	-0.000035	0.000002	0.000000	1.000000	0.999993	0.000013	8.875662	29.585540
As 193.759 {474}	11/10/2020 14:34:52	11/04/2020 13:06:11	Linear	1/Conc	0.000011	0.000001	0.000000	1.000000	0.998678	0.000000	5.188854	17.296182
As 197.262 {471}	11/10/2020 14:34:52	11/04/2020 13:13:28	Linear	None	-0.000000	0.000001	0.000000	1.000000	0.999998	0.000005	8.076860	26.922866
Ba 233.527 {445}	11/10/2020 14:34:52	11/04/2020 13:06:12	Linear	1/Conc	-0.000000	0.000007	0.000000	1.000000	0.993799	0.000001	0.528960	1.763200
Ba 455.403 { 74}	11/10/2020 14:34:52	11/04/2020 13:13:28	Linear	1/Conc	0.000112	0.000049	0.000000	1.000000	0.999246	0.000007	0.268450	0.894835
Ba 493.409 { 68}	11/10/2020 14:34:52	11/04/2020 13:47:16	Linear	1/Conc	0.008995	0.000044	0.000000	1.000000	0.999988	0.000022	0.846131	2.820437
Be 313.042 {108}	11/10/2020 14:34:52	11/04/2020 13:06:12	Linear	1/Var	-0.000073	0.000066	0.000000	1.000000	0.997429	0.000020	0.030738	0.102459
Be 234.861 {144}	11/10/2020 14:34:52	11/04/2020 13:06:12	Linear	1/Conc	-0.000001	0.000005	0.000000	1.000000	0.999997	0.000000	0.540815	1.802718
Ca 315.887 {107}	11/10/2020 14:34:52	11/04/2020 13:40:39	Curvili	1/Var	0.000038	0.000000	0.000000	1.000000	0.999901	0.000010	12.032445	40.108149
Ca 317.933 {106}	11/10/2020 14:34:52	11/04/2020 13:40:39	Linear	1/Var	0.002030	0.000002	0.000000	1.000000	0.999967	0.000100	3.668814	12.229380
Ca 393.366 { 86}	11/10/2020 14:34:52	11/04/2020 13:06:13	Linear	1/Var	0.000034	0.000114	0.000000	1.000000	0.999808	0.000042	0.085818	0.286059
Ca 396.847 { 85}	11/10/2020 14:34:52	11/04/2020 13:13:28	Linear	1/Conc	0.000011	0.000055	0.000000	1.000000	0.999946	0.000027	0.170838	0.569461
Cd 226.502 {449}	11/10/2020 14:34:52	11/04/2020 13:06:13	Linear	1/Conc	-0.000002	0.000023	0.000000	1.000000	0.999794	0.000000	0.270060	0.900201
Cd 228.802 {447}	11/10/2020 14:34:52	11/04/2020 13:06:13	Curvili	1/Conc	0.000007	0.000033	-0.000000	1.000000	0.999913	0.000000	0.262828	0.876094
Co 228.616 {447}	11/10/2020 14:34:52	11/04/2020 13:13:29	Linear	1/Conc	0.000007	0.000018	0.000000	1.000000	0.999453	0.000001	0.437160	1.457200
Co 238.892 {141}	11/10/2020 14:34:52	11/04/2020 13:13:29	Linear	1/Conc	0.000004	0.000001	0.000000	1.000000	0.999955	0.000001	1.268100	4.227001
Cr 205.560 {464}	11/10/2020 14:34:52	11/04/2020 13:20:26	Linear	1/Var	0.000028	0.000019	0.000000	1.000000	0.999672	0.000032	0.286617	0.955390
Cr 267.716 {126}	11/10/2020 14:34:52	11/04/2020 13:13:29	Linear	1/Conc	0.000000	0.000003	0.000000	1.000000	0.999866	0.000000	0.729801	2.432671
Cu 224.700 {450}	11/10/2020 14:34:52	11/04/2020 13:20:26	Linear	1/Conc	-0.000001	0.000007	0.000000	1.000000	0.999153	0.000017	0.448504	1.495015
Cu 324.754 {104}	11/10/2020 14:34:52	11/04/2020 13:20:27	Linear	1/Conc	0.000287	0.000002	0.000000	1.000000	0.999782	0.000002	3.288598	10.961993
Cu 327.396 {103}	11/10/2020 14:34:52	11/04/2020 13:13:30	Linear	1/Var	0.000011	0.000001	0.000000	1.000000	0.999810	0.000011	7.877593	26.258644
Cu 223.008 {451}	11/10/2020 14:34:52	11/04/2020 13:06:14	Linear	1/Conc	0.000000	0.000007	0.000000	1.000000	0.993472	0.000004	1.073804	3.579348
Fe 234.349 {144}	11/10/2020 14:34:52	11/04/2020 13:26:57	Linear	1/Var	0.000016	0.000001	0.000000	1.000000	0.999908	0.000003	1.359162	4.530541
Fe 239.562 {140}	11/10/2020 14:34:52	11/04/2020 13:40:39	Linear	1/Var	0.000006	0.000001	0.000000	1.000000	0.999445	0.000047	4.539095	15.130318
Fe 259.940 {129}	11/10/2020 14:34:52	11/04/2020 13:33:30	Linear	1/Var	0.000001	0.000002	0.000000	1.000000	0.999815	0.000022	2.966193	9.887311
Mg 202.582 {466}	11/10/2020 14:34:52	11/04/2020 13:40:39	Full Fit	None	-0.000007	0.000000	0.000000	0.980000	1.000000	0.000016	2.443352	8.144507
Mg 279.079 {121}	11/10/2020 14:34:52	11/04/2020 13:40:39	Linear	1/Var	-0.000005	0.000000	0.000000	1.000000	0.999297	0.000016	29.915584	99.718614
Mg 280.270 {120}	11/10/2020 14:34:52	11/04/2020 13:13:31	Linear	1/Conc	0.000152	0.000036	0.000000	1.000000	0.999977	0.000004	0.030085	0.100283
Mn 257.610 {131}	11/10/2020 14:34:52	11/04/2020 13:13:31	Linear	1/Conc	-0.000003	0.000010	0.000000	1.000000	0.998915	0.000004	0.101945	0.339817
Mn 259.373 {130}	11/10/2020 14:34:52	11/04/2020 13:20:27	Linear	1/Var	0.000000	0.000006	0.000000	1.000000	0.999726	0.000022	0.758216	2.527387
Mo 202.030 {466}	11/10/2020 14:34:52	11/04/2020 13:06:16	Linear	None	0.000044	0.000010	0.000000	1.000000	0.999876	0.000064	0.494411	1.648037
Mo 203.844 {465}	11/10/2020 14:34:52	11/04/2020 13:06:16	Linear	1/Conc	-0.000000	0.000008	0.000000	1.000000	0.994447	0.000002	0.736882	2.456274
Mo 204.598 {464}	11/10/2020 14:34:52	11/04/2020 13:13:32	Linear	1/Conc	0.000002	0.000004	0.000000	1.000000	0.999337	0.000001	1.253074	4.176914
Ni 221.647 {452}	11/10/2020 14:34:52	11/04/2020 13:13:32	Linear	1/Conc	-0.000003	0.000012	0.000000	1.000000	0.999892	0.000009	0.677788	2.259292
Ni 231.604 {445}	11/10/2020 14:34:52	11/04/2020 13:13:32	Linear	1/Conc	-0.000037	0.000015	0.000000	1.000000	0.999787	0.000001	0.550493	1.834977
Pb 216.999 {455}	11/10/2020 14:34:52	11/04/2020 13:20:27	Curvili	1/Var	0.000034	0.000001	0.000000	1.000000	0.999537	0.000046	5.314102	17.713674
Pb 220.353 {453}	11/10/2020 14:34:52	11/04/2020 13:06:17	Linear	1/Conc	0.000021	0.000003	0.000000	1.000000	0.999068	0.000000	2.738301	9.127670
Pb 216.999 {456}	11/10/2020 14:34:52	11/04/2020 13:20:27	Curvili	1/Var	0.000005	0.000000	0.000000	1.000000	0.999921	0.000007	17.839797	59.465990
Pb 220.353 {153}	11/10/2020 14:34:52	11/04/2020 13:20:27	Linear	1/Conc	0.000002	0.000000	0.000000	1.000000	0.999730	0.000000	6.168954	20.563181
Sb 206.833 {463}	11/10/2020 14:34:52	11/04/2020 13:13:33	Linear	1/Conc	-0.000007	0.000002	0.000000	1.000000	0.999916	0.000000	2.534218	8.447392

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	OK.	1.000000	0.000000	1	0
	Ag 338.289 {100}	OK.	1.000000	0.000000	1	0
	Al 167.079 {501}	OK.	1.000000	0.000000	1	0
	Al 308.215 {109}	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	OK.	1.000000	0.000000	1	0
	As 193.759 {474}	OK.	1.000000	0.000000	1	0
	As 197.262 {471}	OK.	1.000000	0.000000	1	0
	Ba 233.527 {445}	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	OK.	1.000000	0.000000	1	0
	Ba 493.409 { 68}	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	OK.	1.000000	0.000000	1	0
	Be 234.861 {144}	OK.	1.000000	0.000000	1	0
	Ca 315.887 {107}	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	OK.	1.000000	0.000000	1	0
	Ca 393.366 { 86}	OK.	1.000000	0.000000	1	0
	Ca 396.847 { 85}	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	OK.	1.000000	0.000000	1	0
	Cd 228.802 {447}	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	OK.	1.000000	0.000000	1	0
	Co 238.892 {141}	OK.	1.000000	0.000000	1	0
	Cr 205.560 {464}	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	OK.	1.000000	0.000000	1	0
	Cu 224.700 {450}	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	OK.	1.000000	0.000000	1	0
	Cu 327.396 {103}	OK.	1.000000	0.000000	1	0
	Cu 223.008 {451}	OK.	1.000000	0.000000	1	0
	Fe 234.349 {144}	OK.	1.000000	0.000000	1	0
	Fe 239.562 {140}	OK.	1.000000	0.000000	1	0
	Fe 259.940 {129}	OK.	1.000000	0.000000	1	0
	Mg 202.582 {466}	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	OK.	1.000000	0.000000	1	0
	Mg 280.270 {120}	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	OK.	1.000000	0.000000	1	0
	Mn 259.373 {130}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {466}	OK.	1.000000	0.000000	1	0
	Mo 203.844 {465}	OK.	1.000000	0.000000	1	0
	Mo 204.598 {464}	OK.	1.000000	0.000000	1	0
	Ni 221.647 {452}	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {455}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {456}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {153}	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	OK.	1.000000	0.000000	1	0

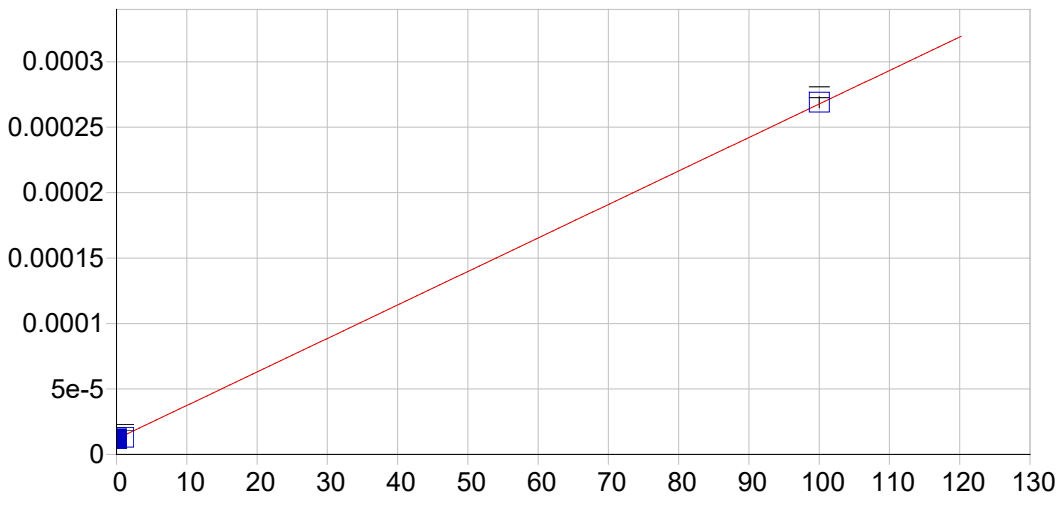
	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
	Sb 217.581 {455}	11/10/2020 14:34:52	11/04/2020 13:13:33	Linear	1/Conc	0.000001	0.000002	0.000000	1.000000	0.998822	0.000001	2.826117	9.420390
	Se 196.090 {472}	11/10/2020 14:34:52	11/04/2020 13:06:18	Linear	1/Var	0.000003	0.000001	0.000000	1.000000	0.999949	0.000003	6.642691	22.142304
	Se 203.985 {465}	11/10/2020 14:34:52	11/04/2020 13:06:18	Linear	1/Var	-0.000003	0.000001	0.000000	1.000000	0.999874	0.000003	8.074052	26.913508
	Se 206.279 {463}	11/10/2020 14:34:52	11/04/2020 13:13:33	Linear	1/Var	0.000004	0.000000	0.000000	1.000000	0.999949	0.000003	35.176493	117.25497
	Tl 190.856 {476}	11/10/2020 14:34:52	11/04/2020 13:06:18	Linear	1/Conc	0.000012	0.000003	0.000000	1.000000	0.999978	0.000000	2.000955	6.669849
	Tl 190.856 {477}	11/10/2020 14:34:52	11/04/2020 13:13:33	Linear	1/Conc	-0.000005	0.000001	0.000000	1.000000	0.999718	0.000000	5.783280	19.277601
	V 290.882 {116}	11/10/2020 14:34:52	11/04/2020 13:13:34	Linear	1/Conc	0.000008	0.000001	0.000000	1.000000	0.999936	0.000001	4.784983	15.949944
	V 292.402 {115}	11/10/2020 14:34:52	11/04/2020 13:13:34	Linear	1/Conc	0.000003	0.000004	0.000000	1.000000	0.999466	0.000001	0.970209	3.234029
	Zn 206.200 {463}	11/10/2020 14:34:52	11/04/2020 13:20:27	Curvili	1/Var	0.000036	0.000027	-0.000000	1.000000	0.999929	0.000031	0.224406	0.748021
	Zn 213.856 {457}	11/10/2020 14:34:52	11/04/2020 13:06:19	Linear	1/Conc	0.000018	0.000051	0.000000	1.000000	0.999704	0.000006	0.129493	0.431644
	Y 224.306 {450}*	11/10/2020 14:34:52	11/04/2020 12:16:26	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 324.228 {104}*	11/10/2020 14:34:52	11/04/2020 12:16:26	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 371.030 { 91}*	11/10/2020 14:34:52	11/04/2020 12:16:26	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Na 588.995 { 57}	11/10/2020 14:34:52	11/04/2020 13:26:58	Linear	1/Var	0.007087	0.000007	0.000000	1.000000	0.999967	0.000150	5.859409	19.531365
	Na 589.592 { 57}	11/10/2020 14:34:52	11/04/2020 13:40:40	Linear	1/Var	0.000051	0.000004	0.000000	1.000000	0.999978	0.000050	7.401246	24.670821
	Si 251.611 {134}	11/10/2020 14:34:52	11/04/2020 13:13:35	Linear	1/Conc	0.000006	0.000001	0.000000	1.000000	0.999996	0.000000	8.141037	27.136789
	Ti 323.452 {104}	11/10/2020 14:34:52	11/04/2020 13:13:35	Linear	1/Conc	0.000267	0.000007	0.000000	1.000000	0.999888	0.000001	1.351519	4.505064
	Ti 334.941 {101}	11/10/2020 14:34:52	11/04/2020 13:13:35	Linear	1/Conc	0.000004	0.000005	0.000000	1.000000	0.999897	0.000001	1.270058	4.233527
	Sr 407.771 { 83}	11/10/2020 14:34:52	11/04/2020 13:13:35	Linear	1/Conc	0.000039	0.000143	0.000000	1.000000	0.999925	0.000007	0.104749	0.349163
	Sr 421.552 { 80}	11/10/2020 14:34:52	11/04/2020 13:13:35	Linear	1/Conc	-0.000001	0.000092	0.000000	1.000000	0.999930	0.000004	0.143031	0.476770
	Sn 189.989 {477}	11/10/2020 14:34:52	11/04/2020 13:13:36	Linear	1/Conc	0.000008	0.000003	0.000000	1.000000	0.999887	0.000001	1.688225	5.627418
	B 249.678 {135}	11/10/2020 14:34:52	11/04/2020 13:13:36	Linear	1/Var	0.000008	0.000002	0.000000	1.000000	0.999941	0.000004	1.055450	3.518166
	B 249.773 {135}	11/10/2020 14:34:52	11/04/2020 13:13:36	Linear	1/Var	0.000006	0.000003	0.000000	1.000000	0.999908	0.000005	0.662497	2.208323
	Li 670.784 { 50}	11/10/2020 14:34:52	11/04/2020 13:13:36	Linear	1/Conc	-0.000083	0.000024	0.000000	1.000000	0.999915	0.000004	1.327484	4.424947
	K 766.490 { 44}	11/10/2020 14:34:52	11/04/2020 13:40:40	Curvili	1/Conc	-0.000031	0.000001	0.000000	1.000000	0.999993	0.000006	39.712393	132.37464
	K 769.896 { 44}	11/10/2020 14:34:52	11/04/2020 13:40:40	Curvili	1/Conc	0.000176	0.000000	0.000000	1.000000	0.999999	0.000000	99.497046	331.65682
	P 213.618 {457}	11/10/2020 14:34:52	11/04/2020 13:40:40	Linear	1/Conc	-0.000013	0.000001	0.000000	1.000000	0.999995	0.000004	6.460996	21.536652
	S 182.034 {485}	11/10/2020 14:34:52	11/04/2020 13:40:40	Linear	1/Conc	0.000010	0.000001	0.000000	1.000000	0.999763	0.000015	7.144971	23.816571
	Hg 184.950 {482}	11/10/2020 14:34:52	11/04/2020 13:06:22	Linear	1/Conc	0.000002	0.000000	0.000000	1.000000	0.999887	0.000000	1.147156	3.823853
	Ce 404.076 { 83}	11/10/2020 14:34:52	11/04/2020 13:06:22	Linear	1/Conc	0.000040	0.000000	0.000000	1.000000	1.000000	0.000000	26.054713	86.849042

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Sb 217.581 {455}	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	OK.	1.000000	0.000000	1	0
	Se 203.985 {465}	OK.	1.000000	0.000000	1	0
	Se 206.279 {463}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {476}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	OK.	1.000000	0.000000	1	0
	V 290.882 {116}	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	OK.	1.000000	0.000000	1	0
	Zn 206.200 {463}	OK.	1.000000	0.000000	1	0
	Zn 213.856 {457}	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	Warnin	1.000000	0.000000	1	0
	Y 324.228 {104}*	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	Warnin	1.000000	0.000000	1	0
	Na 588.995 { 57}	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	OK.	1.000000	0.000000	1	0
	Si 251.611 {134}	OK.	1.000000	0.000000	1	0
	Ti 323.452 {104}	OK.	1.000000	0.000000	1	0
	Ti 334.941 {101}	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	OK.	1.000000	0.000000	1	0
	Sr 421.552 { 80}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	OK.	1.000000	0.000000	1	0
	B 249.678 {135}	OK.	1.000000	0.000000	1	0
	B 249.773 {135}	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	OK.	1.000000	0.000000	1	0
	K 769.896 { 44}	OK.	1.000000	0.000000	1	0
	P 213.618 {457}	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	OK.	1.000000	0.000000	1	0
	Hg 184.950 {482}	OK.	1.000000	0.000000	1	0
	Ce 404.076 { 83}	OK.	1.000000	0.000000	1	0

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	1	Ce	-0.002849	0.000000	No
Ag 338.289 {100}	☒	3	Fe	0.000601	0.000000	No
			Ti	0.002000	0.000000	No
			Ce	0.000000	0.000000	No
Al 167.079 {501}	☒	None				
Al 308.215 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	4	Al	0.001463	0.000000	No
			Mn	-0.000003	0.000000	No
			Ni	-0.000722	0.000000	No
			Cr	0.000734	0.000000	No
As 197.262 {471}	☒	1	Al	0.000112	0.000000	No
Ba 233.527 {445}	☒	1	Fe	0.000033	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000002	0.000000	No
Ba 493.409 { 68}	☒	1	Fe	0.000009	0.000000	No
Be 313.042 {108}	☒	2	Fe	0.000020	0.000000	No
			Ni	0.000000	0.000000	No
Be 234.861 {144}	☒	1	Fe	-0.000013	0.000000	No
Ca 315.887 {107}	☒	1	Fe	0.000000	0.000000	No
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	None				
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	1	Fe	0.000183	0.000000	No
Cd 228.802 {447}	☒	1	Fe	-0.000005	0.000000	No
Co 228.616 {447}	☒	3	Fe	0.000000	0.000000	No
			Ba	-0.001175	0.000000	No
			Ti	0.001700	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000226	0.000000	No
Cr 205.560 {464}	☒	1	Fe	0.000000	0.000000	No
Cr 267.716 {126}	☒	4	Fe	0.000005	0.000000	No
			Mn	0.000157	0.000000	No
			Ti	0.000100	0.000000	No
			V	-0.000002	0.000000	No
Cu 224.700 {450}	☒	2	Fe	0.003134	0.000000	No
			Ni	-0.007040	0.000000	No
Cu 324.754 {104}	☒	1	Fe	-0.000081	0.000000	No
Cu 327.396 {103}	☒	2	Fe	-0.000028	0.000000	No
			Mo	-0.000319	0.000000	No
Cu 223.008 {451}	☒	2	Fe	0.000002	0.000000	No
			Mo	0.008000	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	0.000004	0.000000	No
Mn 259.373 {130}	☒	1	Mg	0.001207	0.000000	No
Mo 202.030 {466}	☒	1	Fe	-0.000022	0.000000	No
Mo 203.844 {465}	☒	1	Fe	0.000001	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000052	0.000000	No
Ni 221.647 {452}	☒	2	Ca	-0.000003	0.000000	No
			Mg	-0.000003	0.000000	No
Ni 231.604 {445}	☒	6	Fe	-0.000049	0.000000	No
			Co	-0.000134	0.000000	No
			Mo	0.000840	0.000000	No
			Al	0.000003	0.000000	No
			Mn	0.000019	0.000000	No
			Be	-0.000294	0.000000	No
Pb 216.999 {455}	☒	2	Al	0.003419	0.000000	No
			Na	0.000000	0.000000	No
Pb 220.353 {453}	☒	6	Si	0.000000	0.000000	No
			Al	0.000014	0.000000	No
			Ni	0.000106	0.000000	No
			Mo	-0.001644	0.000000	No
			V	-0.000018	0.000000	No
			Mn	0.000094	0.000000	No
Pb 216.999 {456}	☒	1	Al	0.003022	0.000000	No
Pb 220.353 {153}	☒	1	Fe	-0.000011	0.000000	No
Sb 206.833 {463}	☒	2	Fe	-0.000097	0.000000	No
			Cr	0.000000	0.000000	No
Sb 217.581 {455}	☒	2	Fe	-0.000023	0.000000	No
			Ni	0.000133	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000319	0.000000	No
Se 203.985 {465}	☒	1	Fe	-0.000160	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.000965	0.000000	No
Tl 190.856 {476}	☒	7	Fe	-0.000280	0.000000	No
			Be	-0.000013	0.000000	No
			Ti	0.000000	0.000000	No
			Mn	0.000000	0.000000	No
			Ni	0.000000	0.000000	No
			Co	0.002495	0.000000	No
			Cr	0.000220	0.000000	No
Tl 190.856 {477}	☒	2	Fe	-0.000126	0.000000	No
			Cr	0.000000	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000207	0.000000	No
V 292.402 {115}	☒	5	Fe	0.000045	0.000000	No
			Cr	-0.000051	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Al	0.000000	0.000000	No
			Ti	0.000420	0.000000	No
			Mo	-0.000481	0.000000	No
Zn 206.200 {463}	☒	1	Fe	0.000032	0.000000	No
Zn 213.856 {457}	☒	8	Fe	0.000163	0.000000	No
			Al	0.000000	0.000000	No
			Mn	0.000094	0.000000	No
			Ni	0.004500	0.000000	No
			Ti	-0.000307	0.000000	No
			Mg	0.000026	0.000000	No
			Mo	0.000034	0.000000	No
			Ca	0.000000	0.000000	No
Y 224.306 {450}*	☒	None				
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Na 588.995 { 57}	☒	1	Fe	0.000109	0.000000	No
Na 589.592 { 57}	☒	1	Fe	0.000106	0.000000	No
Si 251.611 {134}	☒	1	Fe	-0.000024	0.000000	No
Ti 323.452 {104}	☒	1	Fe	0.000008	0.000000	No
Ti 334.941 {101}	☒	1	Fe	0.000082	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000015	0.000000	No
Sr 421.552 { 80}	☒	1	Ca	0.000013	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000042	0.000000	No
B 249.678 {135}	☒	1	Fe	0.000002	0.000000	No
B 249.773 {135}	☒	1	Fe	0.001512	0.000000	No
Li 670.784 { 50}	☒	1	Fe	0.000016	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000112	0.000000	No
K 769.896 { 44}	☒	1	Fe	0.001120	0.000000	No
P 213.618 {457}	☒	1	Fe	-0.000011	0.000000	No
S 182.034 {485}	☒	2	Mn	0.002145	0.000000	No
			Fe	0.001405	0.000000	No
Hg 184.950 {482}	☒	1	Fe	0.000009	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

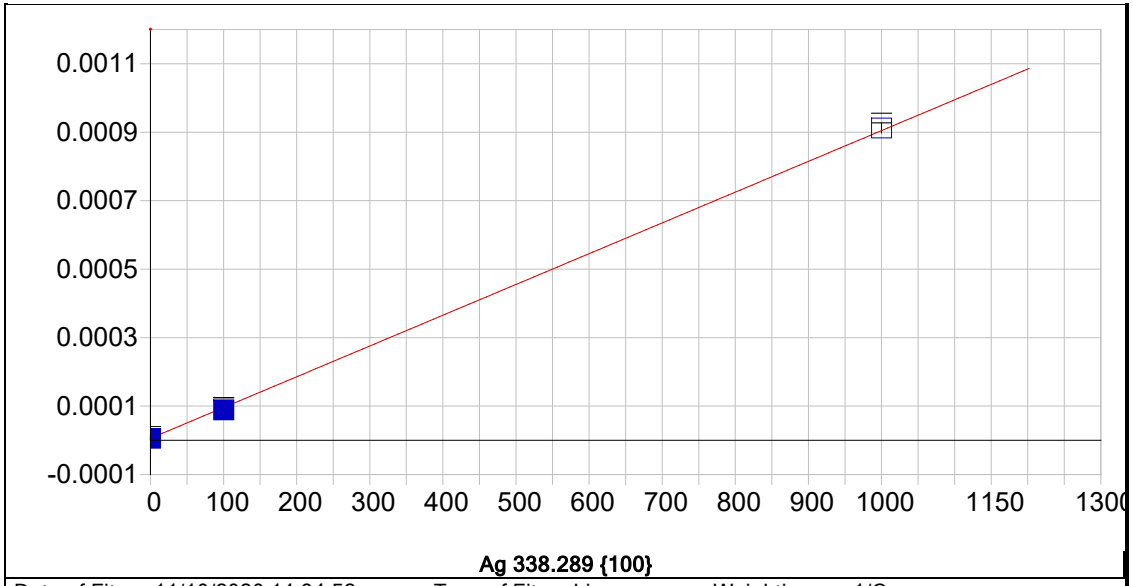


Ag 328.068 {103}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000012	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998691	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.918594		
Predicted MQL:	3.061981		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00051	.001	.000	.00001	.000	1
CalStd8=100	100.00	100.51	.512	.512	.00027	.000	1
CalStd3=1	1.0000	.48811	-.512	-51.2	.00001	.000	1

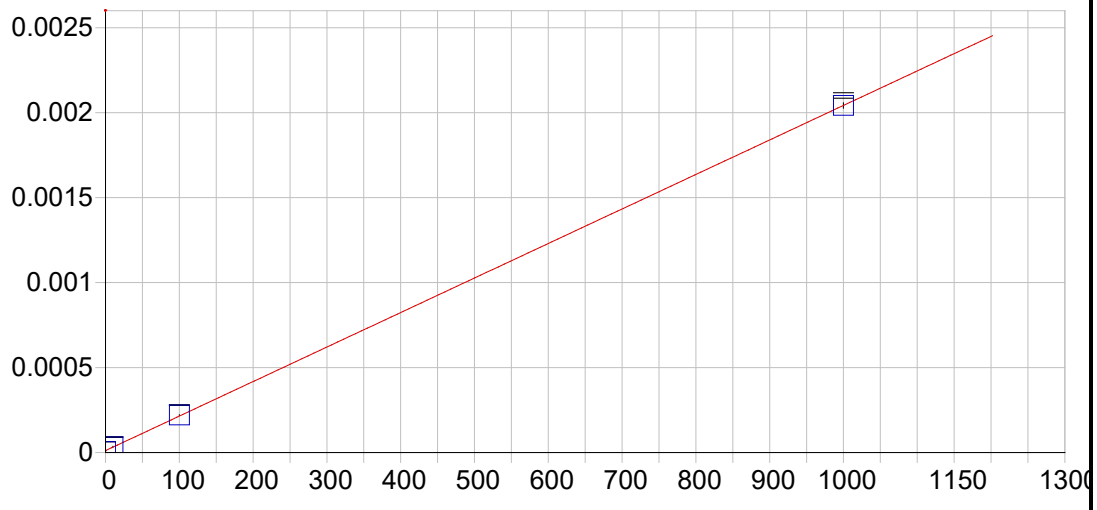


Ag 338.289 {100}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999676	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	7.899177		
Predicted MQL:	26.330589		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00724	.007	.000	.00001	.000	1
CalStd8=100	100.00	91.954	-8.05	-8.05	.00009	.000	1
Ag Ba 1000,	1000.0	1008.1	8.06	.806	.00091	.000	1

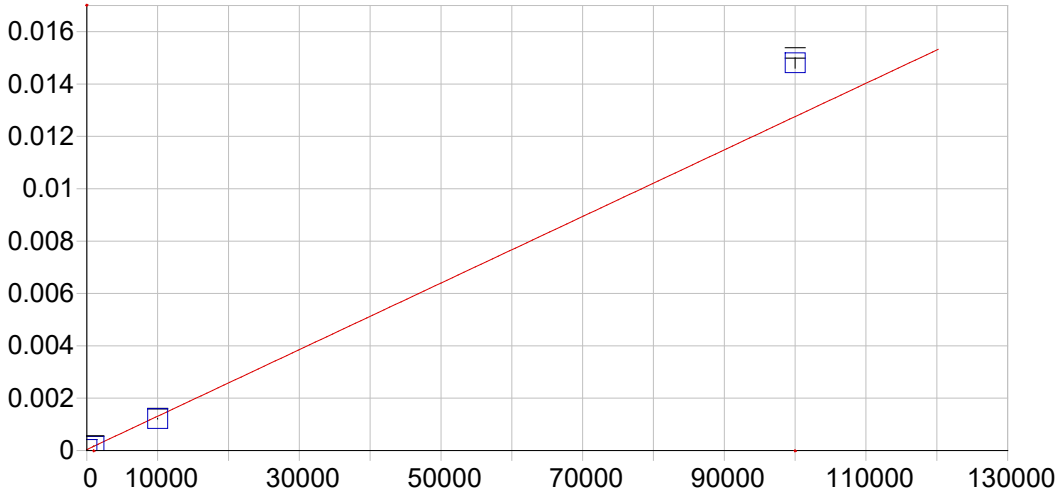


Al 167.079 {501}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000011	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	1.161027		
Predicted MQL:	3.870089		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.3075	-3.31	.000	.00000	.000	1
CalStd9=100	1000.0	999.70	-.304	-.030	.00204	.000	1
CalStd5=10	10.000	10.634	.634	6.34	.00003	.000	1
CalStd8=100	100.00	102.98	2.98	2.98	.00022	.000	1

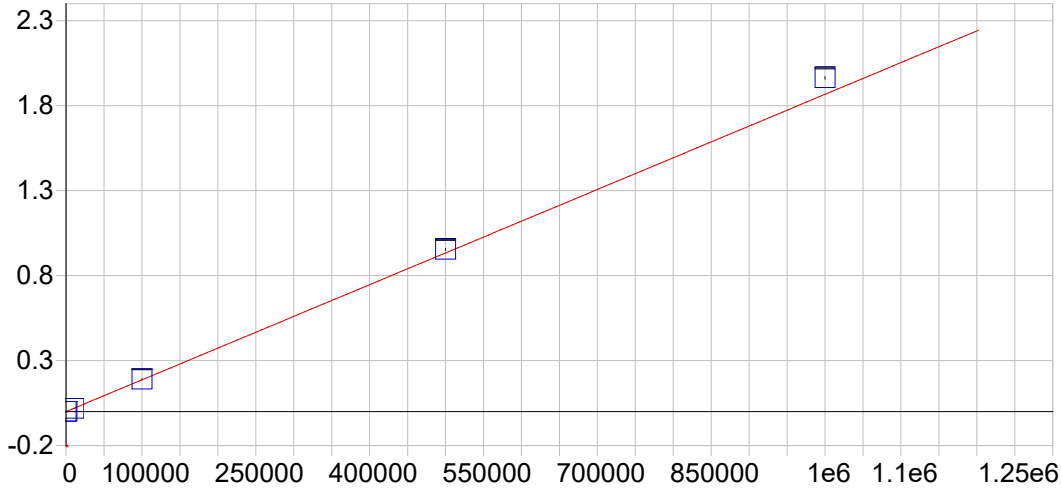


Al 308.215 {109}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000038	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.994146	Status:	OK.
Std Error of Est:	0.000025		
Predicted MDL:	76.508290		
Predicted MQL:	255.027633		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	7.0287	7.03	.000	.00004	.000	1
CalStd10=10	10000.	9269.2	-731.	-7.31	.00122	.000	1
CalStd9=100	1000.0	1029.5	29.5	2.95	.00017	.000	1
CalStd13=10	100000.	116110.	16100.	16.1	.01481	.000	1

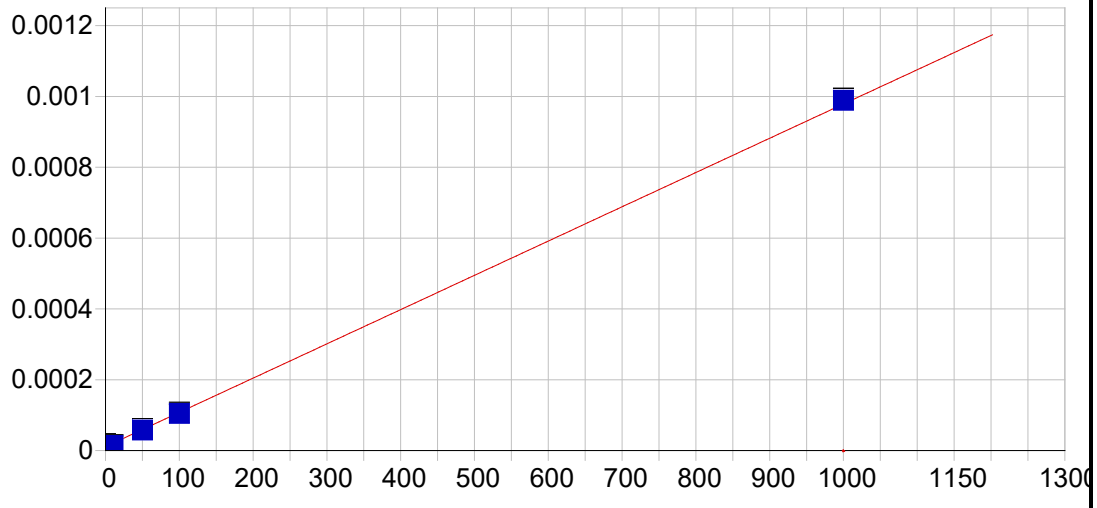


Al 396.152 { 85}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	-0.000035	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999993	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	8.875662		
Predicted MQL:	29.585540		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00516	-.005	.000	-.00004	.000	1
CalStd14=50	500000.	510920.	10900.	2.18	.95377	.005	1
CalStd13=10	100000.	101710.	1710.	1.71	.18984	.003	1
CalStd10=10	10000.	9836.8	-163.	-1.63	.01833	.000	1
CalStd9=100	1000.0	1013.0	13.0	1.30	.00186	.000	1
CalibStd15=	1000000.	1051900.	51900.	5.19	1.9636	.006	1

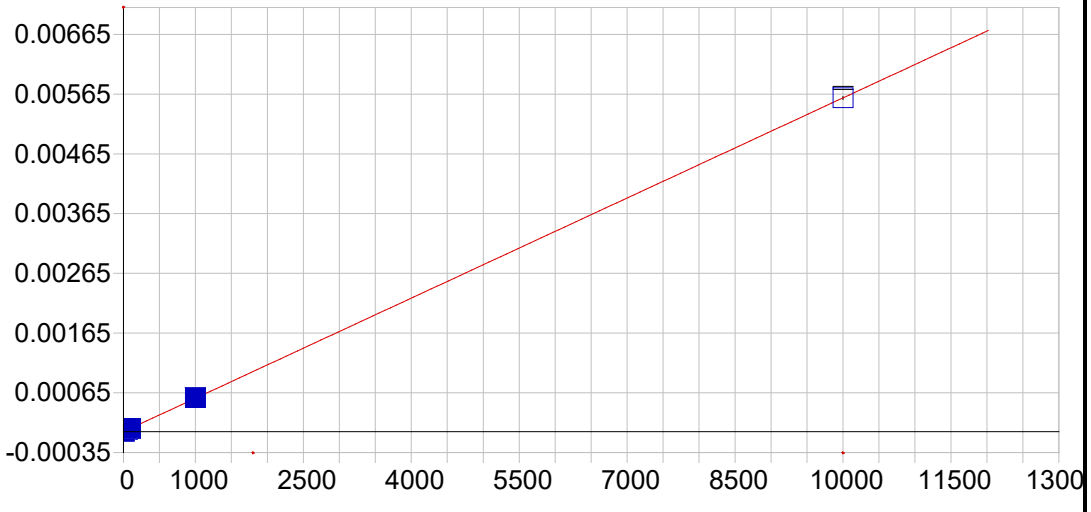


As 193.759 {474}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000011	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998678	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	5.188854		
Predicted MQL:	17.296182		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00588	.006	.000	.00001	.000	1
CalStd9=100	1000.0	1010.4	10.4	1.04	.00099	.000	1
CalStd7=50	50.000	48.137	-1.86	-3.73	.00006	.000	1
CalStd5=10	10.000	4.7113	-5.29	-52.9	.00002	.000	1
CalStd8=100	100.00	96.765	-3.23	-3.23	.00010	.000	1

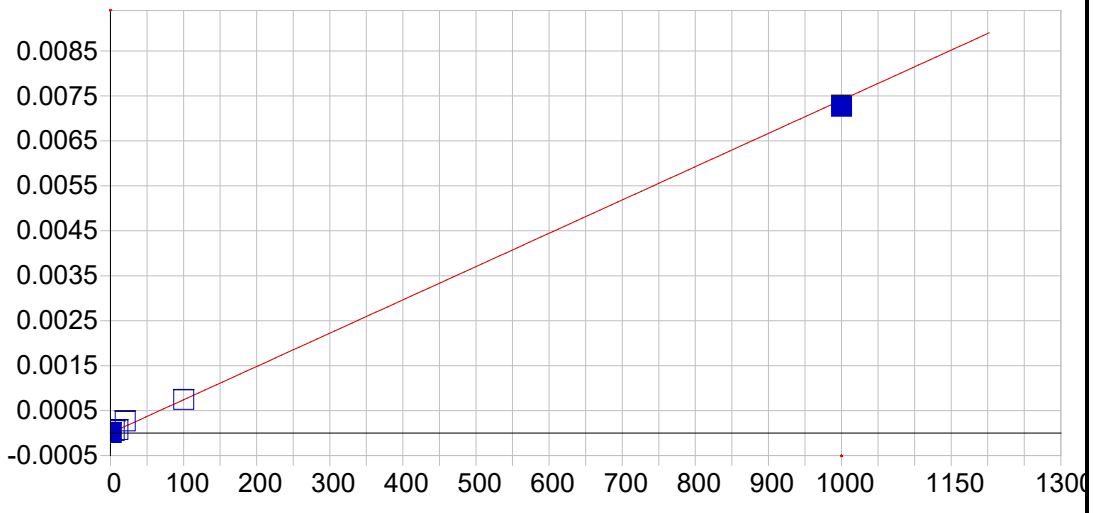


As 197.262 {471}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999998	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	8.076860		
Predicted MQL:	26.922866		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-2.9150	-2.92	.000	-.00000	.000	1
CalStd9=100	1000.0	1014.5	14.5	1.45	.00057	.000	1
CalStd7=50	50.000	48.830	-1.17	-2.34	.00003	.000	1
CalStd5=10	10.000	8.9033	-1.10	-11.0	.00000	.000	1
CalStd8=100	100.00	92.013	-7.99	-7.99	.00005	.000	1
CalStd10=10	10000.	9998.6	-1.37	-.014	.00559	.000	1

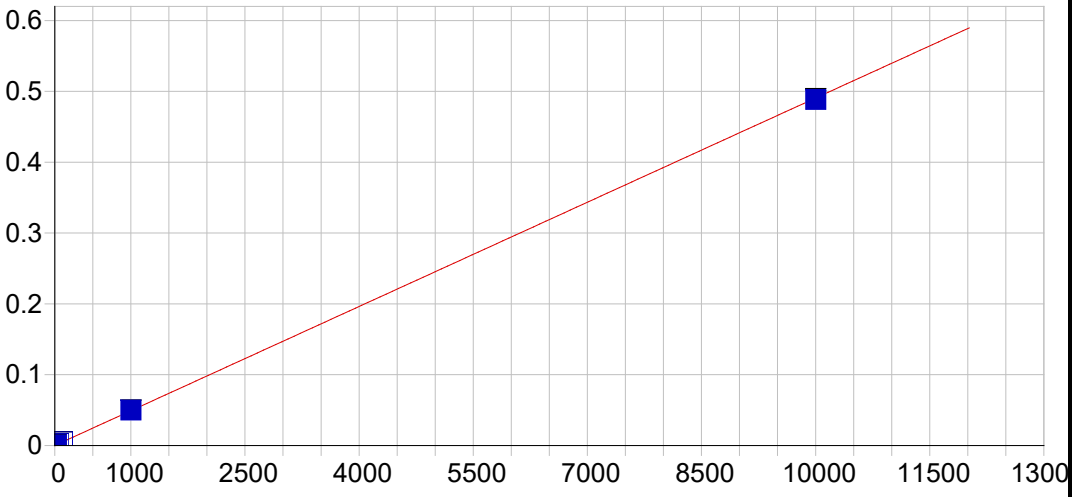


Ba 233.527 {445}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.993799	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.528960		
Predicted MQL:	1.763200		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00147	-.001	.000	-.00000	.000	1
CalStd5=10	10.000	10.263	.263	2.63	.00008	.000	1
CalStd6=20	20.000	36.091	16.1	80.5	.00027	.000	1
CalStd8=100	100.00	100.64	.638	.638	.00075	.000	1
CalStd4=5	5.0000	7.0404	2.04	40.8	.00005	.000	1
CalStd9=100	1000.0	980.73	-19.3	-1.93	.00727	.000	1
CalStd3=1	1.0000	1.2394	.239	23.9	.00001	.000	1

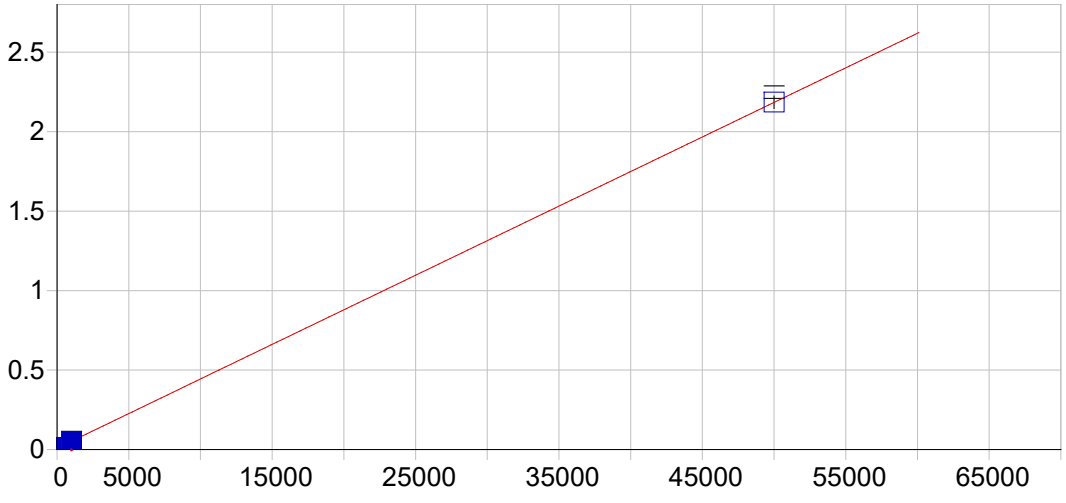


Ba 455.403 { 74}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000112	Re-Slope:	1.000000
A1 (Gain):	0.000049	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999246	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.268450		
Predicted MQL:	0.894835		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00187	-.002	.000	.00011	.000	1
CalStd7=50	50.000	55.177	5.18	10.4	.00282	.000	1
CalStd5=10	10.000	11.080	1.08	10.8	.00066	.000	1
CalStd6=20	20.000	36.962	17.0	84.8	.00192	.000	1
CalStd8=100	100.00	105.43	5.43	5.43	.00528	.000	1
CalStd4=5	5.0000	7.2937	2.29	45.9	.00047	.000	1
CalStd9=100	1000.0	1014.4	14.4	1.44	.04987	.000	1
CalStd3=1	1.0000	1.2835	.284	28.4	.00017	.000	1
CalStd10=10	10000.	9954.3	-45.7	-.457	.48841	.002	1

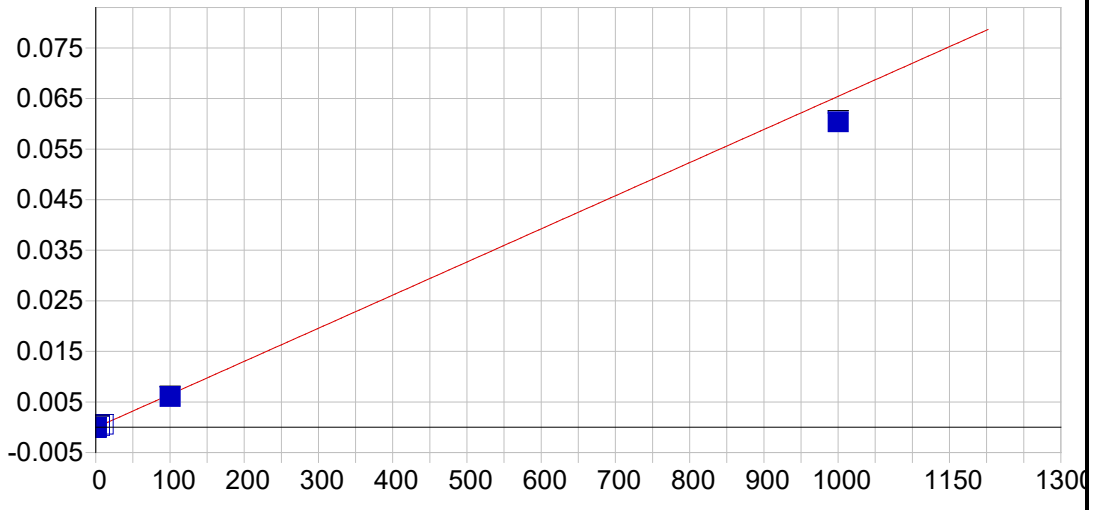


Ba 493.409 { 68}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008995	Re-Slope:	1.000000
A1 (Gain):	0.000044	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999988	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	0.846131		
Predicted MQL:	2.820437		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00113	.001	.000	.00899	.000	1
CalStd9=100	1000.0	965.40	-34.6	-3.46	.05099	.000	1
CalStd8=100	100.00	102.26	2.26	2.26	.01344	.000	1
Ag Ba 1000,	50000.	50032.	32.3	.065	2.1854	.039	1

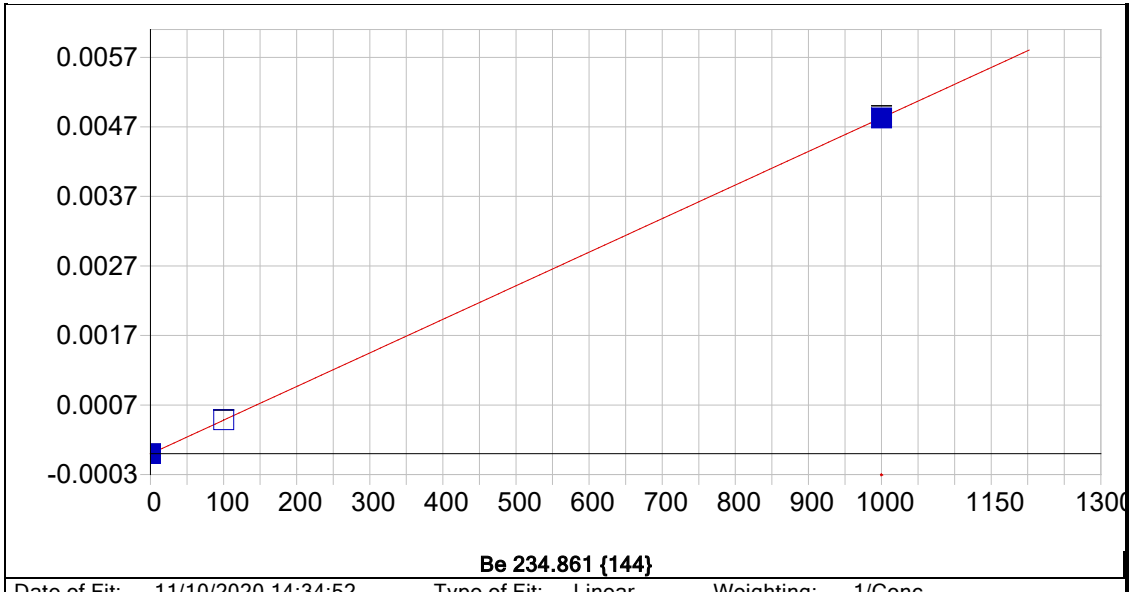


Be 313.042 {108}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000073	Re-Slope:	1.000000
A1 (Gain):	0.000066	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997429	Status:	OK.
Std Error of Est:	0.000020		
Predicted MDL:	0.030738		
Predicted MQL:	0.102459		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.12850	-.128	.000	-.00008	.000	1
CalStd5=10	10.000	9.7659	-.234	-2.34	.00057	.000	1
CalStd8=100	100.00	93.682	-6.32	-6.32	.00606	.000	1
CalStd2=0.5	.50000	.40032	-.100	-19.9	-.00005	.000	1
CalStd4=5	5.0000	5.2990	.299	5.98	.00027	.000	1
CalStd9=100	1000.0	922.85	-77.2	-7.72	.06038	.000	1
CalStd3=1	1.0000	.89529	-.105	-10.5	-.00001	.000	1

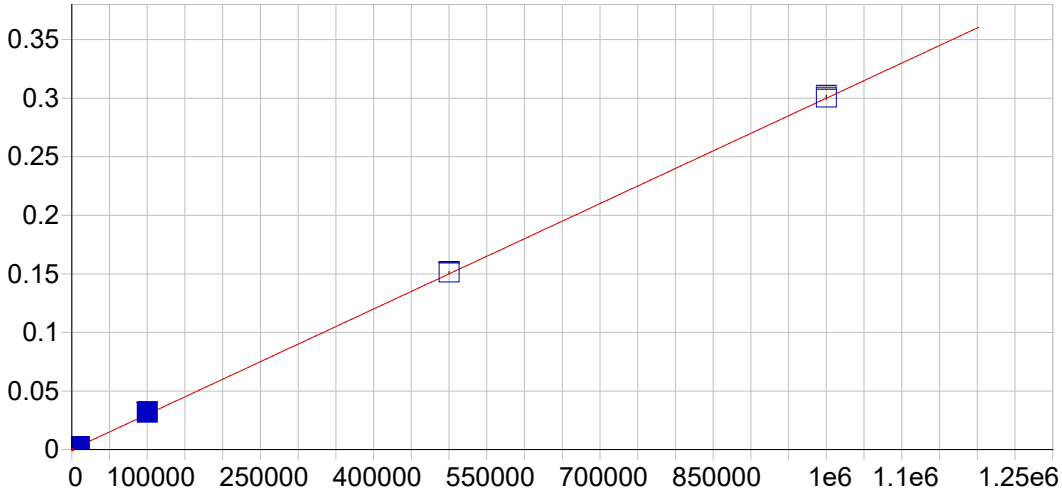


Be 234.861 {144}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.540815		
Predicted MQL:	1.802718		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00065	-.001	.000	-.00000	.000	1
CalStd9=100	1000.0	999.28	-.718	-.072	.00483	.000	1
CalStd8=100	100.00	100.72	.718	.718	.00049	.000	1

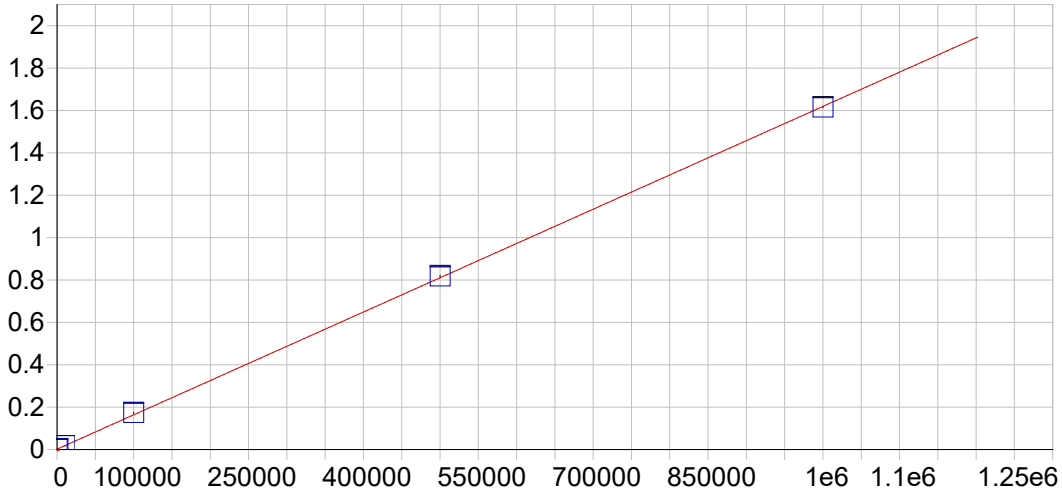


Ca 315.887 {107}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000038	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999901	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	12.032445		
Predicted MQL:	40.108149		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-25.219	-25.2	.000	.00003	.000	1
CalStd10=10	10000.	9911.3	-88.7	-.887	.00301	.000	1
CalStd13=10	100000.	105690.	5690.	5.69	.03174	.000	1
CalStd14=50	500000.	504520.	4520.	.904	.15138	.001	1
CalStd9=100	1000.0	1002.9	2.95	.295	.00034	.000	1
CalibStd15=	1000000.	1002700.	2730.	.273	.30083	.002	1

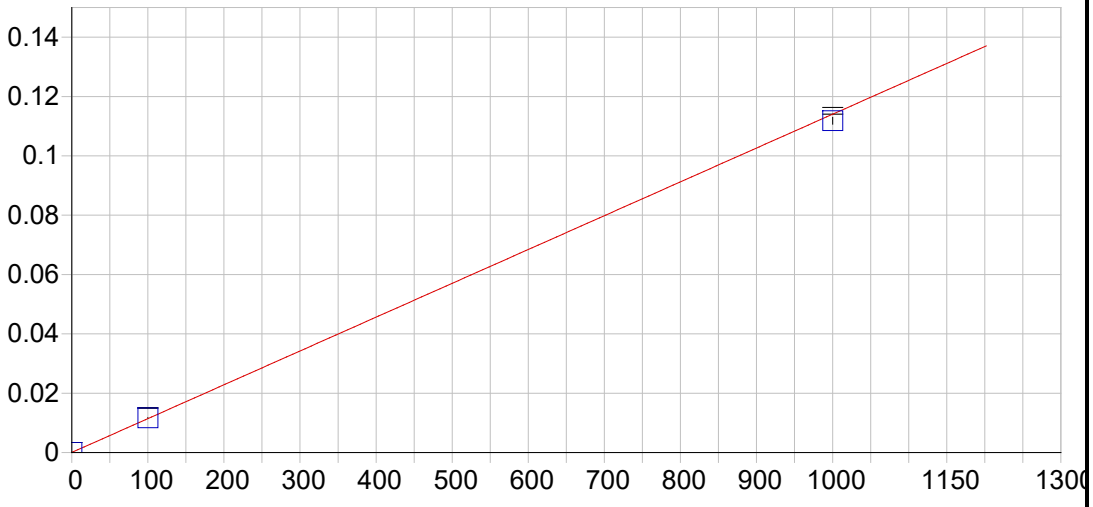


Ca 317.933 {106}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.002030	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.000100		
Predicted MDL:	3.668814		
Predicted MQL:	12.229380		

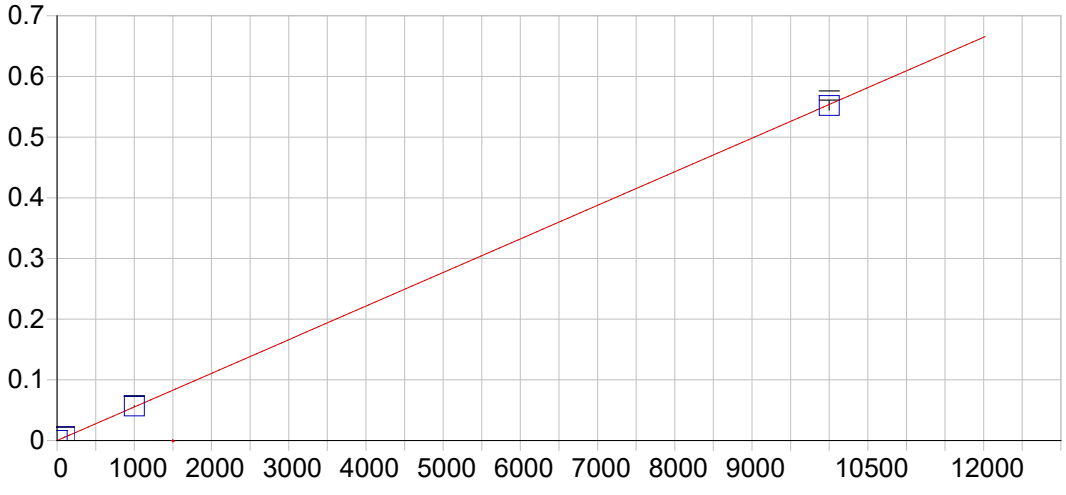
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-38.200	-38.2	.000	.00197	.000	1
CalStd10=10	10000.	10008.	8.02	.080	.01822	.000	1
CalStd13=10	100000.	106230.	6230.	6.23	.17382	.002	1
CalStd14=50	500000.	504720.	4720.	.943	.81827	.004	1
CalStd9=100	1000.0	1004.8	4.83	.483	.00366	.000	1
CalibStd15=	1000000.	997610.	-2390.	-.239	1.6154	.003	1



Ca 393.366 { 86}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000034		Re-Slope:	1.000000	
A1 (Gain):	0.000114		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999808		Status:	OK.	
Std Error of Est:	0.000042				
Predicted MDL:	0.085818				
Predicted MQL:	0.286059				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01046	-.010	.000	.00003	.000	1
CalStd9=100	1000.0	980.66	-19.3	-1.93	.11183	.001	1
CalStd8=100	100.00	101.98	1.98	1.98	.01166	.000	1

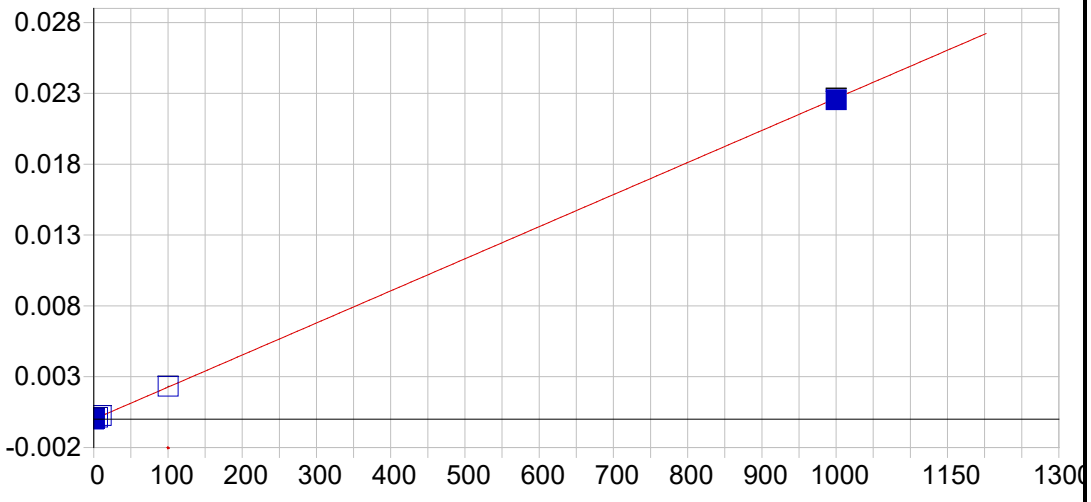


Ca 396.847 { 85}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000011	Re-Slope:	1.000000
A1 (Gain):	0.000055	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999946	Status:	OK.
Std Error of Est:	0.000027		
Predicted MDL:	0.170838		
Predicted MQL:	0.569461		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00937	-.009	.000	.00001	.000	1
CalStd10=10	10000.	9969.0	-31.0	-.310	.55203	.007	1
CalStd8=100	100.00	107.32	7.32	7.32	.00595	.000	1
CalStd9=100	1000.0	1023.7	23.7	2.37	.05669	.000	1

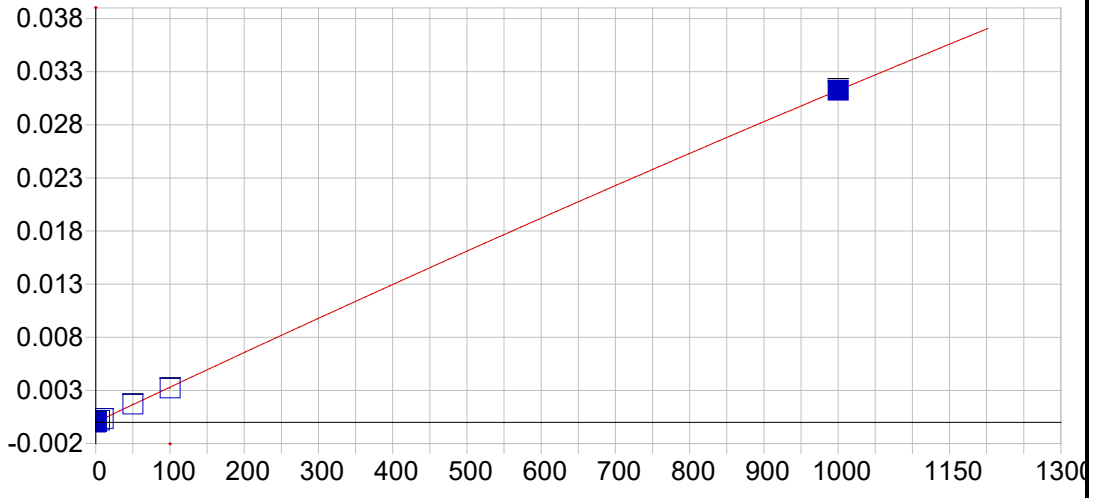


Cd 226.502 {449}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000023	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999794	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.270060		
Predicted MQL:	0.900201		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00039	-.000	.000	-.00000	.000	1
CalStd3=1	1.0000	1.2146	.215	21.5	.00003	.000	1
CalStd2=0.5	.50000	.62676	.127	25.4	.00001	.000	1
CalStd4=5	5.0000	6.0037	1.00	20.1	.00013	.000	1
CalStd8=100	100.00	102.46	2.46	2.46	.00232	.000	1
CalStd5=10	10.000	10.983	.983	9.83	.00025	.000	1
CalStd9=100	1000.0	995.21	-4.79	-.479	.02255	.000	1

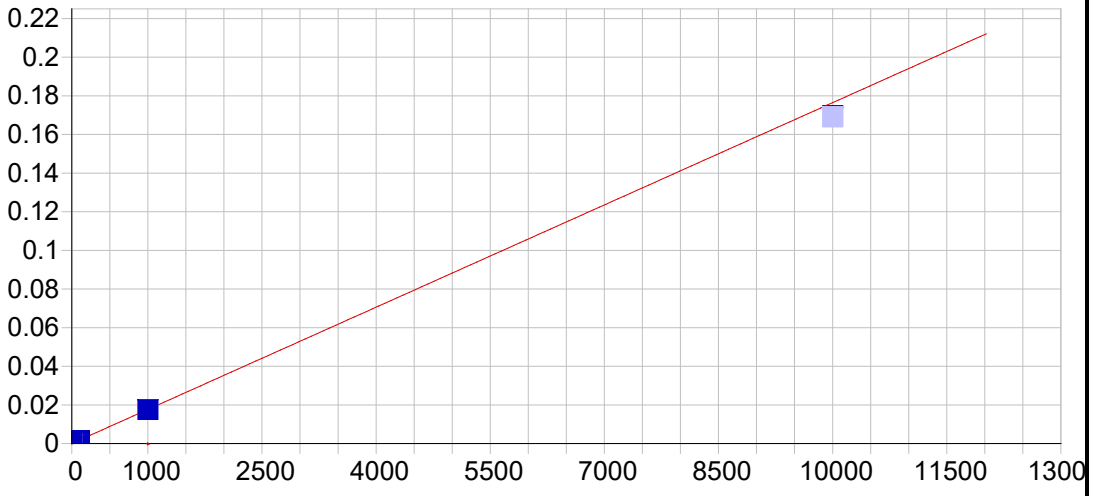


Cd 228.802 {447}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000033	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999913	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.262828		
Predicted MQL:	0.876094		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00014	-.000	.000	.00001	.000	1
CalStd7=50	50.000	51.516	1.52	3.03	.00171	.000	1
CalStd3=1	1.0000	1.0020	.002	.198	.00004	.000	1
CalStd2=0.5	.50000	.56801	.068	13.6	.00003	.000	1
CalStd4=5	5.0000	5.5647	.565	11.3	.00019	.000	1
CalStd8=100	100.00	97.485	-2.51	-2.51	.00322	.000	1
CalStd5=10	10.000	10.176	.176	1.76	.00034	.000	1
CalStd9=100	1000.0	1000.2	.191	.019	.03124	.000	1

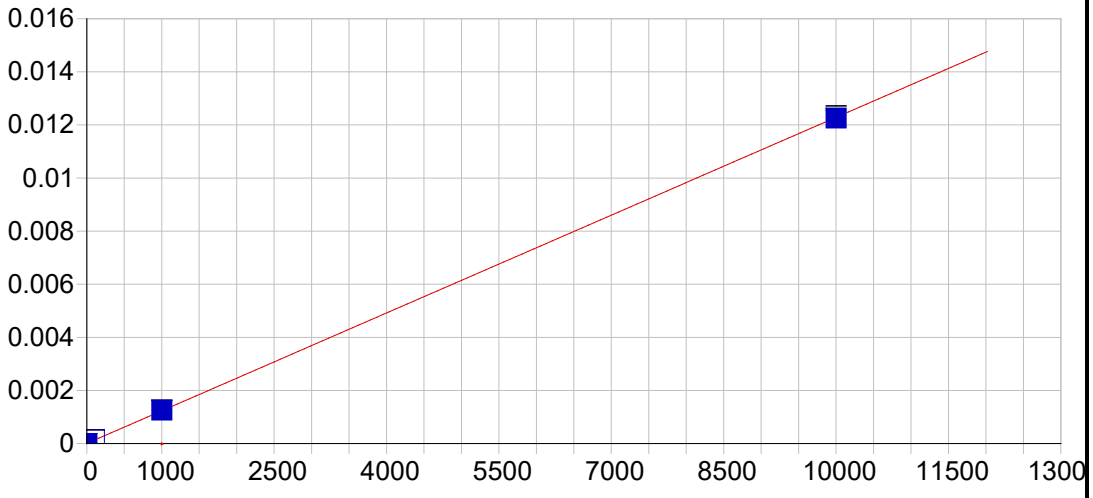


Co 228.616 {447}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000018	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999453	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.437160		
Predicted MQL:	1.457200		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00031	-.000	.000	.00001	.000	1
CalStd7=50	50.000	54.367	4.37	8.73	.00097	.000	1
CalStd5=10	10.000	10.792	.792	7.92	.00020	.000	1
CalStd4=5	5.0000	6.7842	1.78	35.7	.00013	.000	1
CalStd8=100	100.00	102.44	2.44	2.44	.00182	.000	1
CalStd9=100	1000.0	990.84	-9.16	-.916	.01750	.000	1
CalStd3=1	1.0000	.76651	-.233	-23.3	.00002	.000	1
CalStd10=10	10000.	9574.4	-426.	-4.26	.16924	.000	0

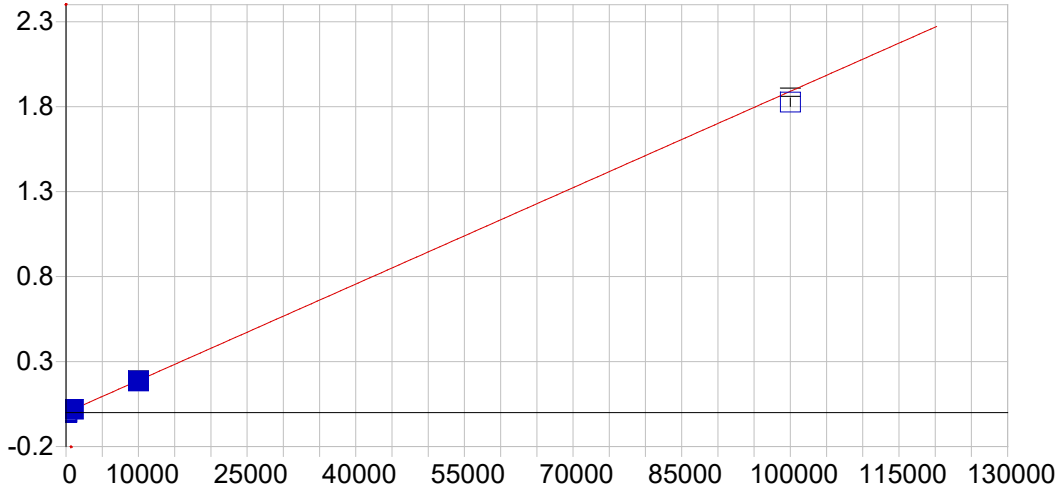


Co 238.892 {141}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999955	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.268100		
Predicted MQL:	4.227001		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00937	-.009	.000	.00000	.000	1
CalStd9=100	1000.0	1017.7	17.7	1.77	.00125	.000	1
CalStd10=10	10000.	9974.5	-25.5	-.255	.01226	.000	1
CalStd8=100	100.00	107.85	7.85	7.85	.00014	.000	1

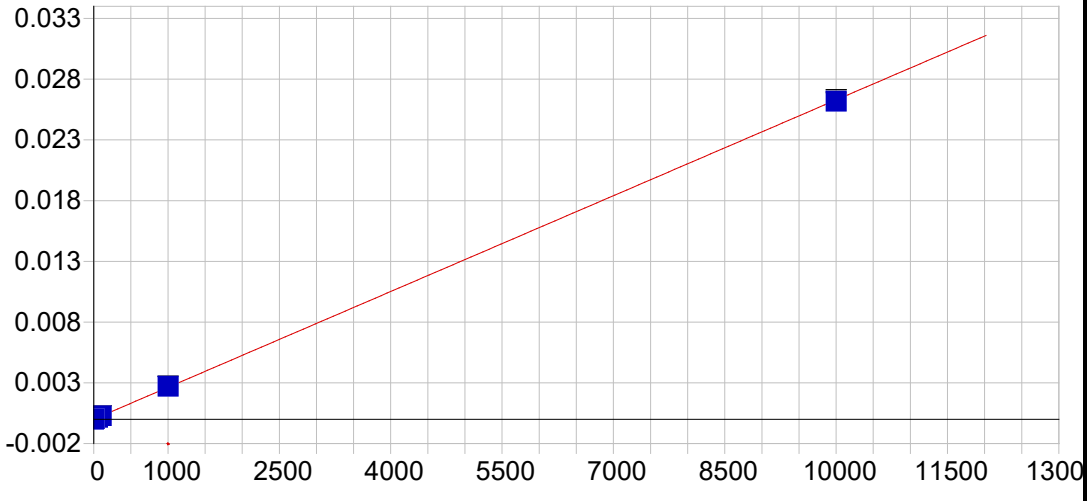


Cr 205.560 {464}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000028	Re-Slope:	1.000000
A1 (Gain):	0.000019	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999672	Status:	OK.
Std Error of Est:	0.000032		
Predicted MDL:	0.286617		
Predicted MQL:	0.955390		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.9220	-1.92	.000	-.00001	.000	1
CalStd5=10	10.000	8.5686	-1.43	-14.3	.00019	.000	1
CalStd7=50	50.000	53.186	3.19	6.37	.00103	.000	1
CalStd9=100	1000.0	1018.0	18.0	1.80	.01927	.000	1
CalStd8=100	100.00	101.95	1.95	1.95	.00196	.000	1
CalStd4=5	5.0000	5.0410	.041	.821	.00012	.000	1
CalStd3=1	1.0000	-.02189	-1.02	-102.	.00003	.000	1
CalStd10=10	10000.	9823.3	-177.	-1.77	.18571	.000	1
CalStd12=10	100000.	96619.	-3380.	-3.38	1.8263	.024	1

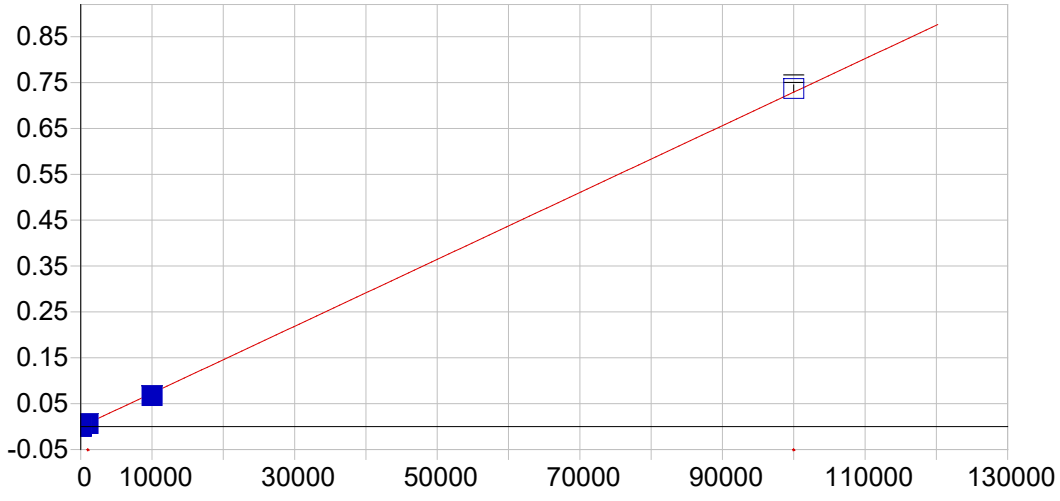


Cr 267.716 {126}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999866	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.729801		
Predicted MQL:	2.432671		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00365	-.004	.000	.00000	.000	1
CalStd5=10	10.000	10.917	.917	9.17	.00003	.000	1
CalStd7=50	50.000	55.341	5.34	10.7	.00015	.000	1
CalStd9=100	1000.0	1029.5	29.5	2.95	.00271	.000	1
CalStd8=100	100.00	104.94	4.94	4.94	.00028	.000	1
CalStd4=5	5.0000	7.2864	2.29	45.7	.00002	.000	1
CalStd10=10	10000.	9957.0	-43.0	-.430	.02619	.000	1

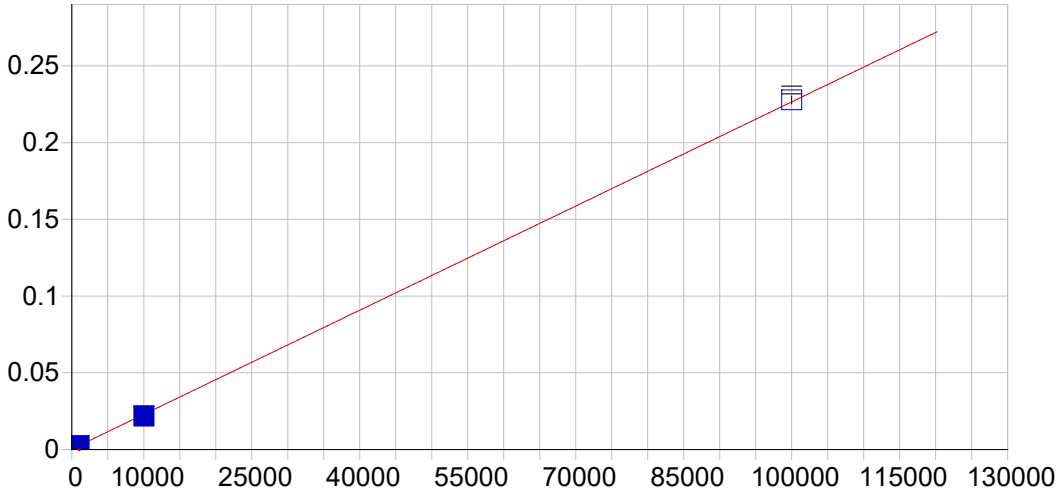


Cu 224.700 {450}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999153	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.448504		
Predicted MQL:	1.495015		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.05125	.051	.000	-.00000	.000	1
CalStd9=100	1000.0	868.67	-131.	-13.1	.00630	.000	1
CalStd7=50	50.000	6.4417	-43.6	-87.1	.00005	.000	1
CalStd8=100	100.00	28.854	-71.1	-71.1	.00020	.000	1
CalStd6=20	20.000	4.3661	-15.6	-78.2	.00003	.000	1
CalStd12=10	100000.	101030.	1030.	1.03	.73656	.008	1
CalStd10=10	10000.	9227.8	-772.	-7.72	.06699	.000	1

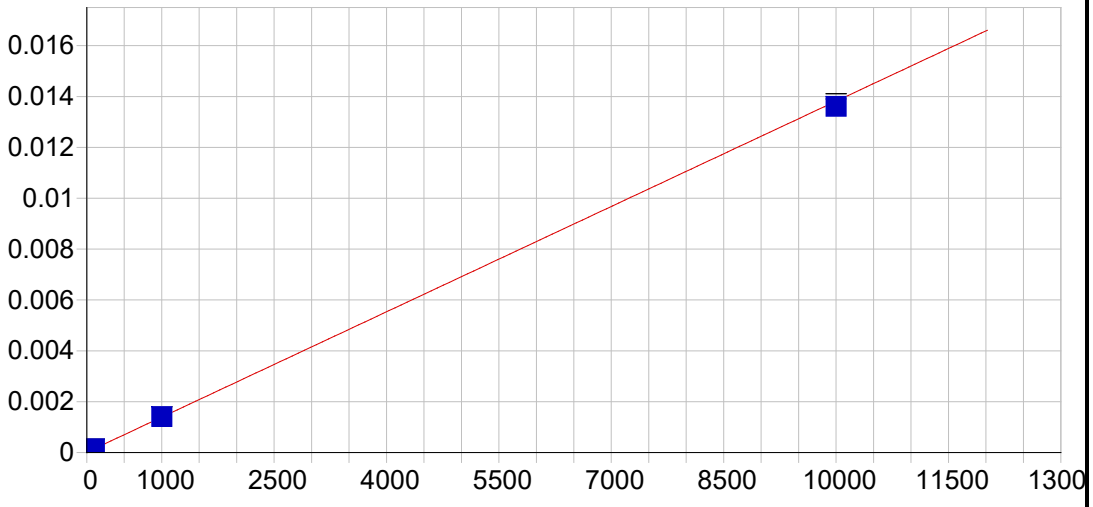


Cu 324.754 {104}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000287	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999782	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	3.288598		
Predicted MQL:	10.961993		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00360	-.004	.000	.00029	.000	1
CalStd9=100	1000.0	970.76	-29.2	-2.92	.00248	.000	1
CalStd8=100	100.00	101.20	1.20	1.20	.00052	.000	1
CalStd10=10	10000.	9461.6	-538.	-5.38	.02169	.000	1
CalStd12=10	100000.	100550.	553.	.553	.22780	.003	1
CalStd5=10	10.000	5.8148	-4.19	-41.9	.00030	.000	1
CalStd6=20	20.000	36.684	16.7	83.4	.00037	.000	1
CalStd7=50	50.000	50.519	.519	1.04	.00040	.000	1

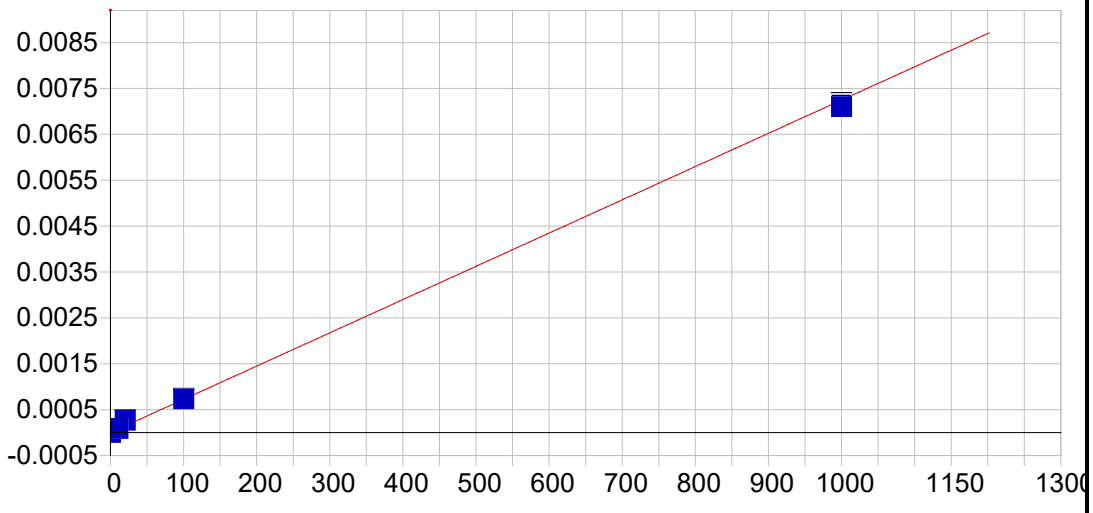


Cu 327.396 {103}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000011	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999810	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	7.877593		
Predicted MQL:	26.258644		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-4.0827	-4.08	.000	.00001	.000	1
CalStd6=20	20.000	31.905	11.9	59.5	.00006	.000	1
CalStd7=50	50.000	51.543	1.54	3.09	.00008	.000	1
CalStd8=100	100.00	95.799	-4.20	-4.20	.00014	.000	1
CalStd9=100	1000.0	1012.8	12.8	1.28	.00141	.000	1
CalStd10=10	10000.	9849.8	-150.	-1.50	.01361	.000	1
CalStd4=5	5.0000	2.0064	-2.99	-59.9	.00001	.000	1
CalStd5=10	10.000	6.5995	-3.40	-34.0	.00002	.000	1

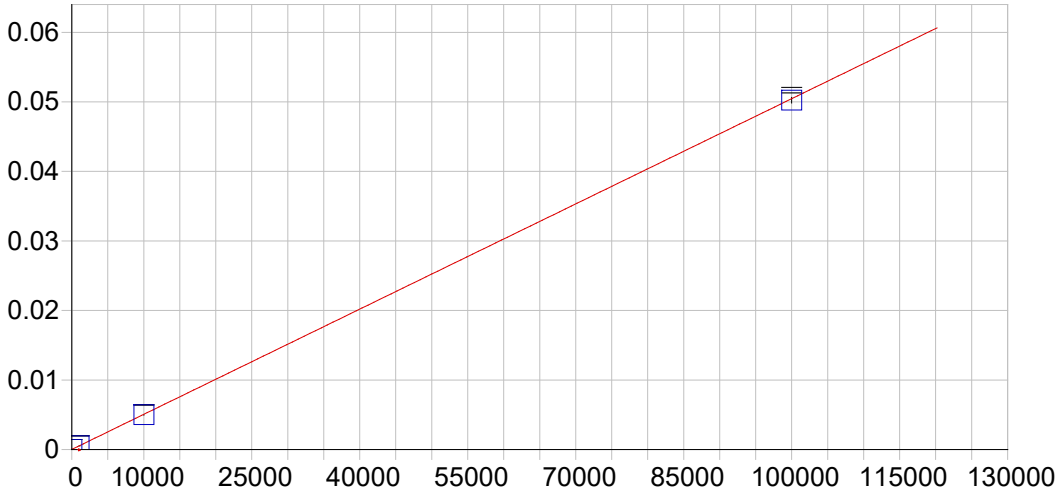


Cu 223.008 {451}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.993472	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	1.073804		
Predicted MQL:	3.579348		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01018	-.010	.000	.00000	.000	1
CalStd9=100	1000.0	979.98	-20.0	-2.00	.00716	.000	1
CalStd8=100	100.00	101.29	1.29	1.29	.00074	.000	1
CalStd6=20	20.000	36.969	17.0	84.8	.00027	.000	1
CalStd5=10	10.000	11.767	1.77	17.7	.00009	.000	1

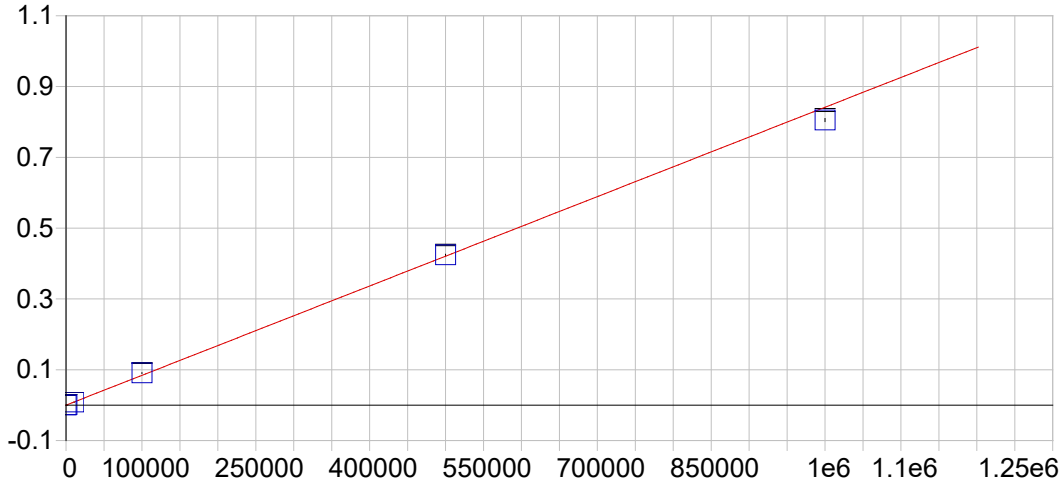


Fe 234.349 {144}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000016	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999908	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	1.359162		
Predicted MQL:	4.530541		

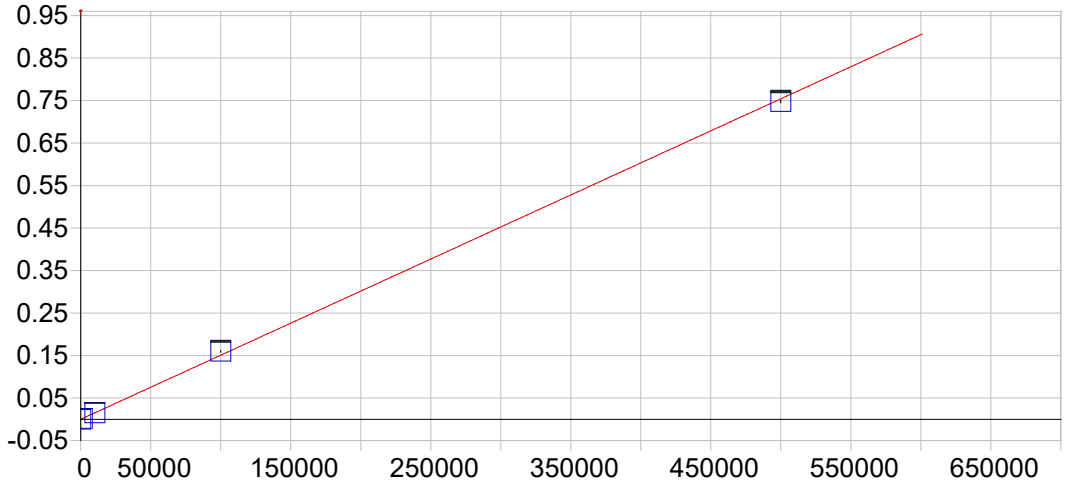
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.54292	-.543	.000	.00002	.000	1
CalStd10=10	10000.	9862.6	-137.	-1.37	.00499	.000	1
CalStd13=10	100000.	99571.	-429.	-.429	.05024	.000	1
CalStd9=100	1000.0	1016.7	16.7	1.67	.00053	.000	1



Fe 239.562 {140}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000006		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999445		Status:	OK.	
Std Error of Est:	0.000047				
Predicted MDL:	4.539095				
Predicted MQL:	15.130318				

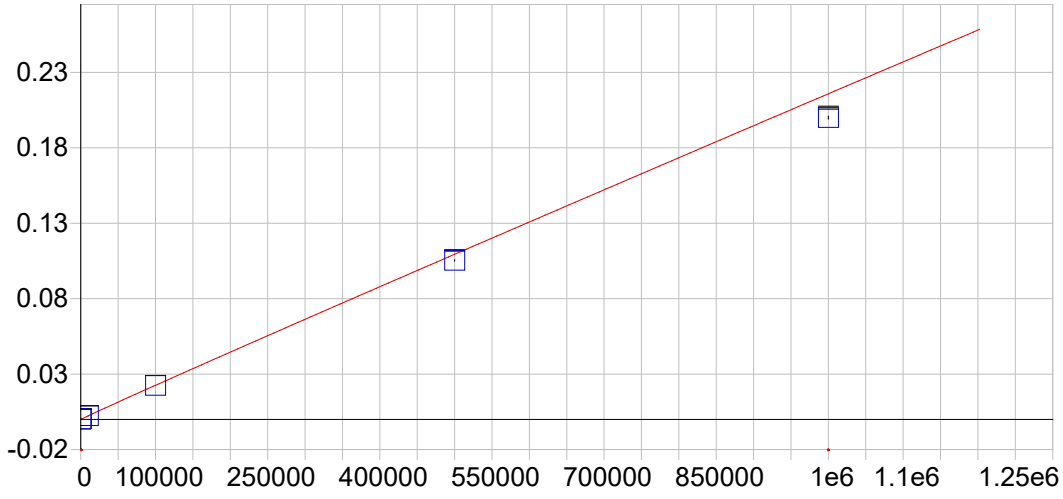
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-4.0282	-4.03	.000	.00000	.000	1
CalStd10=10	10000.	10243.	243.	2.43	.00863	.000	1
CalStd13=10	100000.	107870.	7870.	7.87	.09078	.001	1
CalStd14=50	500000.	504060.	4060.	.812	.42418	.002	1
CalStd9=100	1000.0	1050.1	50.1	5.01	.00089	.000	1
CalibStd15=	1000000.	957020.	-43000.	-4.30	.80535	.004	1



Fe 259.940 {129}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999815		Status:	OK.	
Std Error of Est:	0.000022				
Predicted MDL:	2.966193				
Predicted MQL:	9.887311				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.4572	-1.46	.000	-.00000	.000	1
CalStd10=10	10000.	9924.1	-75.9	-.759	.01497	.000	1
CalStd13=10	100000.	106170.	6170.	6.17	.16013	.002	1
CalStd14=50	500000.	495650.	-4350.	-.869	.74755	.003	1
CalStd9=100	1000.0	1031.5	31.5	3.15	.00156	.000	1

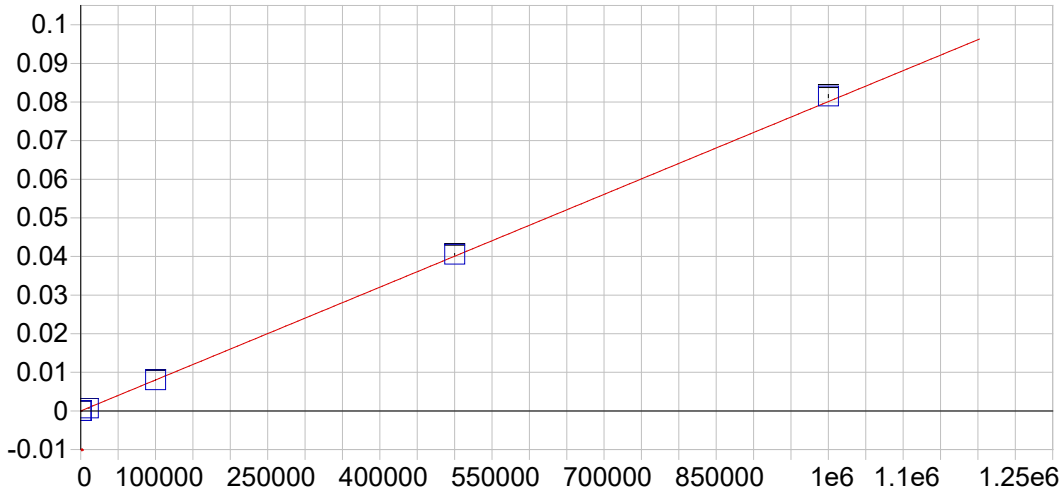


Mg 202.582 {466}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Full Fit	Weighting:	None

A0 (Offset):	-0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	0.980000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	2.443352		
Predicted MQL:	8.144507		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	17.961	18.0	.000	-.00000	.000	1
CalStd13=10	100000.	99177.	-823.	-.823	.02241	.000	1
CalStd10=10	10000.	9932.8	-67.2	-.672	.00234	.000	1
CalStd14=50	500000.	481040.	-19000.	-3.79	.10535	.000	1
CalStd9=100	1000.0	1059.9	59.9	5.99	.00026	.000	1
CalibStd15=	1000000.	925160.	-74800.	-7.48	.20000	.001	1

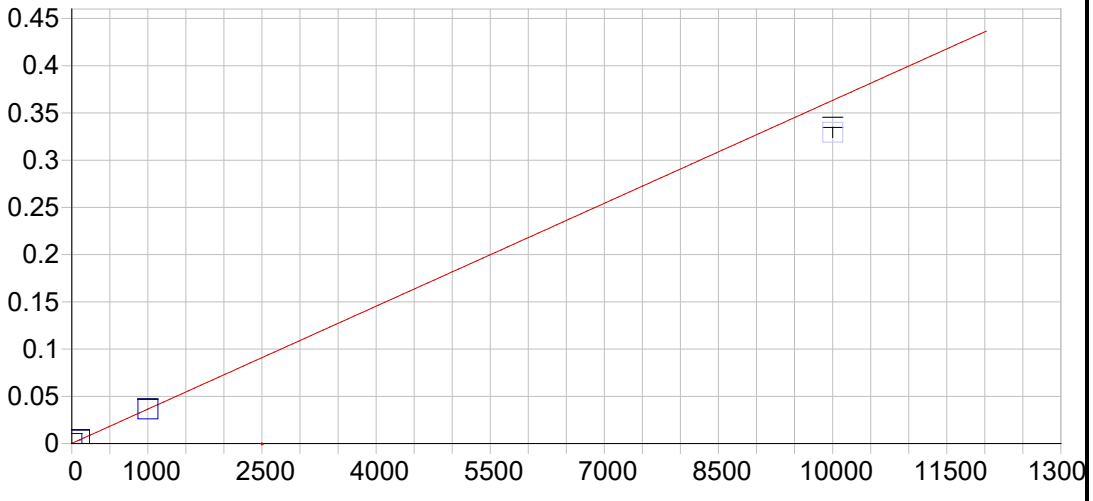


Mg 279.079 {121}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999297	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	29.915584		
Predicted MQL:	99.718614		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	45.096	45.1	.000	-.00000	.000	1
CalStd13=10	100000.	100130.	127.	.127	.00802	.000	1
CalStd10=10	10000.	9064.2	-936.	-9.36	.00072	.000	1
CalStd14=50	500000.	506270.	6270.	1.25	.04056	.000	1
CalStd9=100	1000.0	987.25	-12.7	-1.27	.00007	.000	1
CalibStd15=	1000000.	1017700.	17700.	1.77	.08154	.000	1

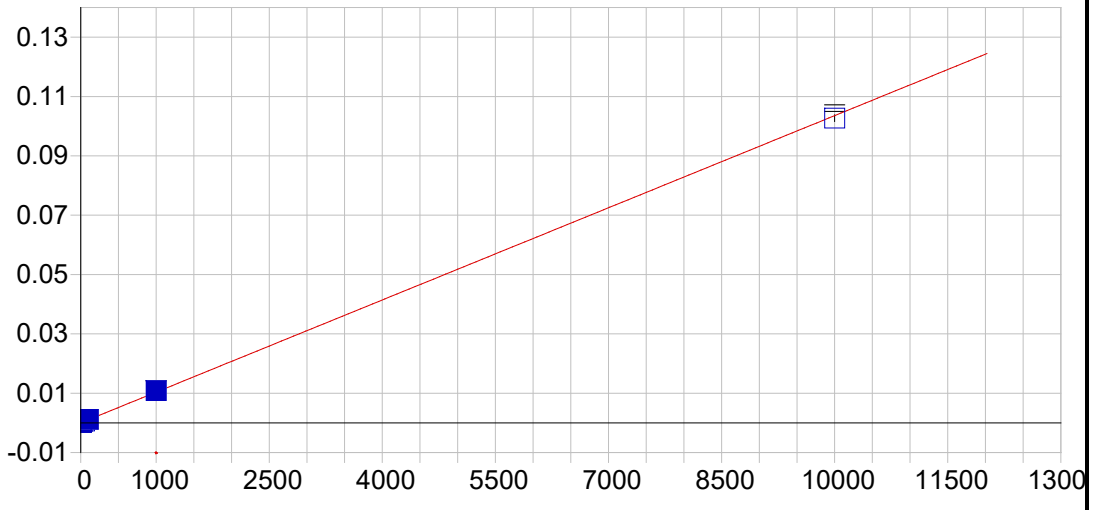


Mg 280.270 {120}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000152	Re-Slope:	1.000000
A1 (Gain):	0.000036	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999977	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.030085		
Predicted MQL:	0.100283		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00191	-.002	.000	.00015	.000	1
CalStd9=100	1000.0	997.87	-2.13	-.213	.03639	.000	1
CalStd10=10	10000.	9068.8	-931.	-9.31	.32947	.005	0
CalStd8=100	100.00	102.13	2.13	2.13	.00386	.000	1

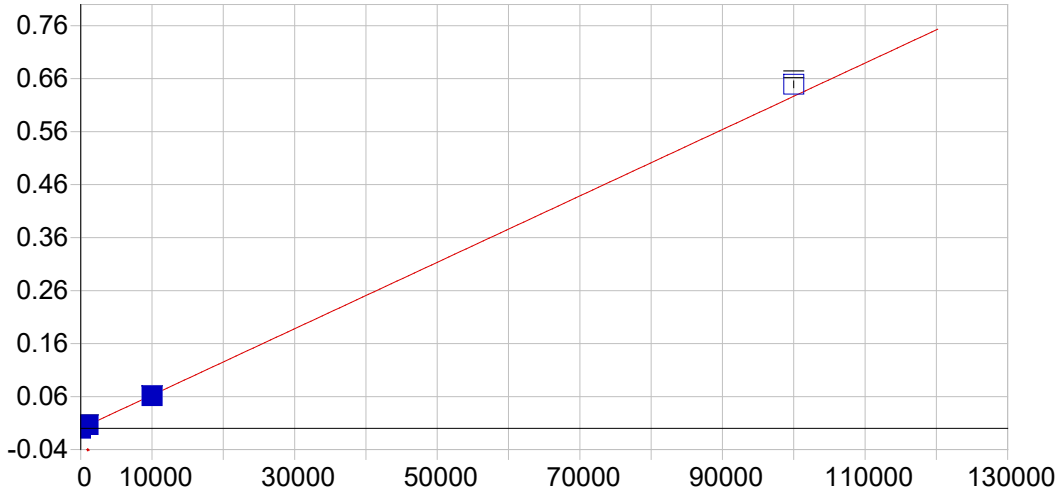


Mn 257.610 {131}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000010	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998915	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.101945		
Predicted MQL:	0.339817		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00963	-.010	.000	-.00000	.000	1
CalStd5=10	10.000	11.691	1.69	16.9	.00012	.000	1
CalStd7=50	50.000	57.943	7.94	15.9	.00060	.000	1
CalStd6=20	20.000	38.856	18.9	94.3	.00040	.000	1
CalStd8=100	100.00	108.35	8.35	8.35	.00112	.000	1
CalStd4=5	5.0000	7.6677	2.67	53.4	.00008	.000	1
CalStd9=100	1000.0	1046.0	46.0	4.60	.01083	.000	1
CalStd10=10	10000.	9914.4	-85.6	-.856	.10268	.001	1

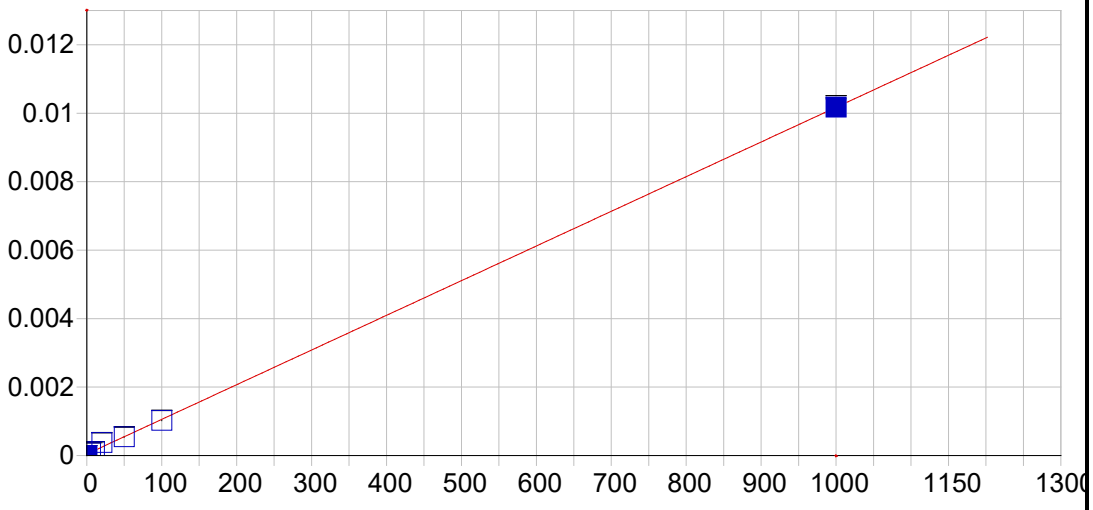


Mn 259.373 {130}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999726	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	0.758216		
Predicted MQL:	2.527387		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.02641	-.026	.000	-.00000	.000	1
CalStd10=10	10000.	9808.6	-191.	-1.91	.06155	.000	1
CalStd9=100	1000.0	1016.9	16.9	1.69	.00638	.000	1
CalStd12=10	100000.	103600.	3600.	3.60	.64933	.006	1

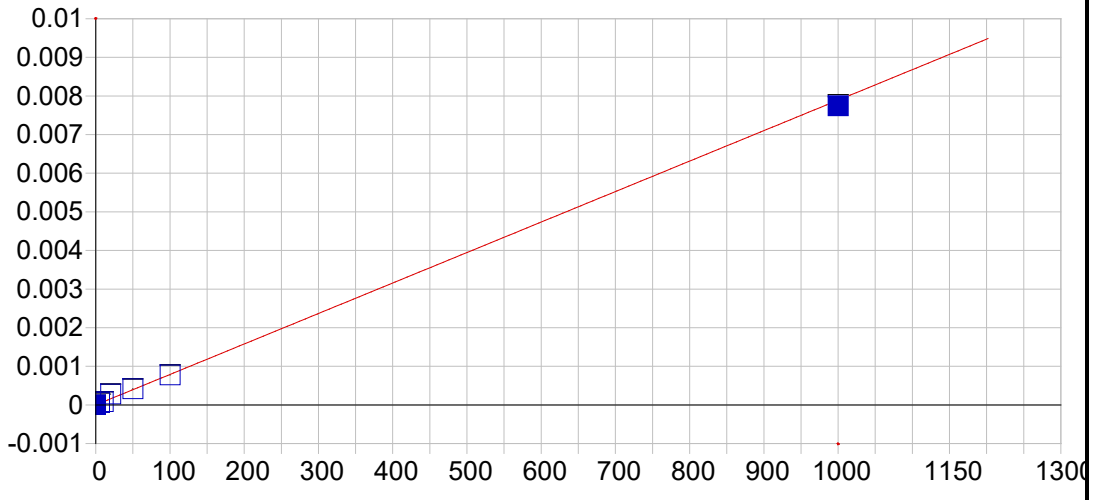


Mo 202.030 {466}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000044	Re-Slope:	1.000000
A1 (Gain):	0.000010	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999876	Status:	OK.
Std Error of Est:	0.000064		
Predicted MDL:	0.494411		
Predicted MQL:	1.648037		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-4.0249	-4.02	.000	.00000	.000	1
CalStd7=50	50.000	49.477	-.523	-1.05	.00054	.000	1
CalStd6=20	20.000	32.702	12.7	63.5	.00037	.000	1
CalStd5=10	10.000	6.6194	-3.38	-33.8	.00011	.000	1
CalStd8=100	100.00	96.971	-3.03	-3.03	.00103	.000	1
CalStd4=5	5.0000	3.1378	-1.86	-37.2	.00008	.000	1
CalStd9=100	1000.0	1000.1	.118	.012	.01017	.000	1

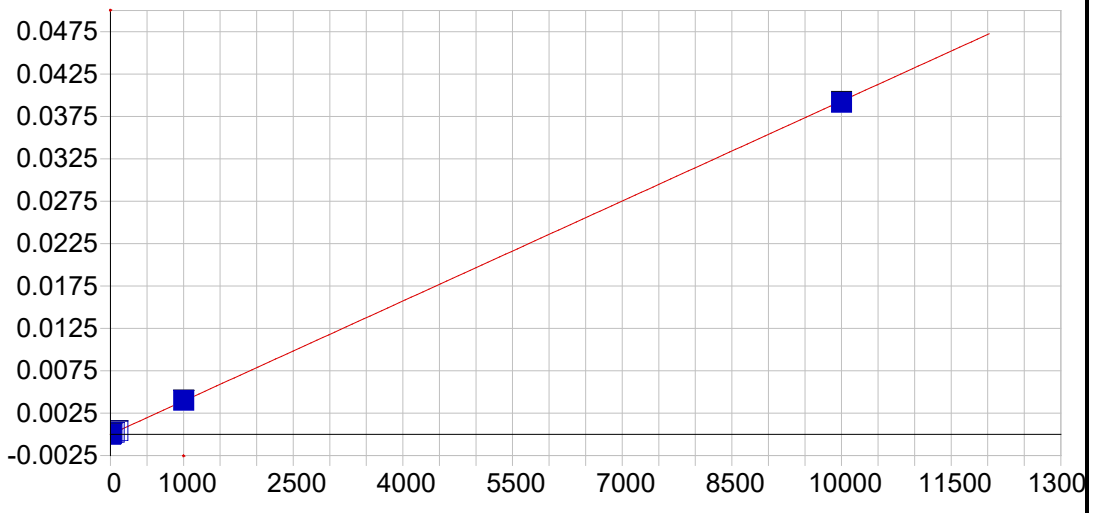


Mo 203.844 {465}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.994447	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.736882		
Predicted MQL:	2.456274		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00609	-.006	.000	-.00000	.000	1
CalStd7=50	50.000	52.576	2.58	5.15	.00041	.000	1
CalStd6=20	20.000	35.476	15.5	77.4	.00028	.000	1
CalStd5=10	10.000	10.389	.389	3.89	.00008	.000	1
CalStd8=100	100.00	98.362	-1.64	-1.64	.00078	.000	1
CalStd4=5	5.0000	6.9498	1.95	39.0	.00005	.000	1
CalStd9=100	1000.0	981.25	-18.8	-1.88	.00774	.000	1

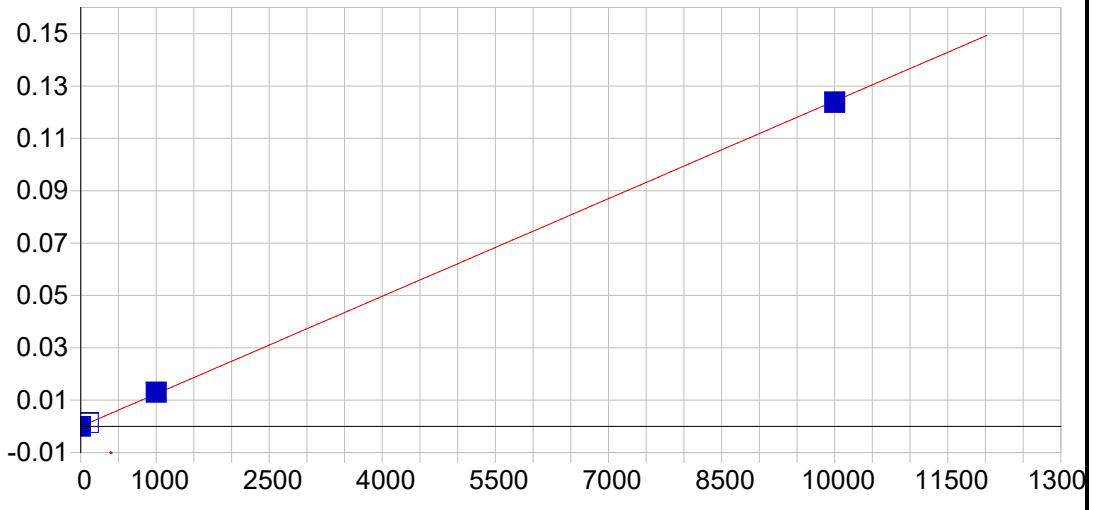


Mo 204.598 {464}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999337	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.253074		
Predicted MQL:	4.176914		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00641	-.006	.000	.00000	.000	1
CalStd7=50	50.000	54.574	4.57	9.15	.00022	.000	1
CalStd6=20	20.000	36.386	16.4	81.9	.00015	.000	1
CalStd5=10	10.000	10.441	.441	4.41	.00004	.000	1
CalStd8=100	100.00	102.20	2.20	2.20	.00040	.000	1
CalStd4=5	5.0000	6.4565	1.46	29.1	.00003	.000	1
CalStd9=100	1000.0	1018.1	18.1	1.81	.00400	.000	1
CalStd10=10	10000.	9956.9	-43.1	-.431	.03915	.000	1

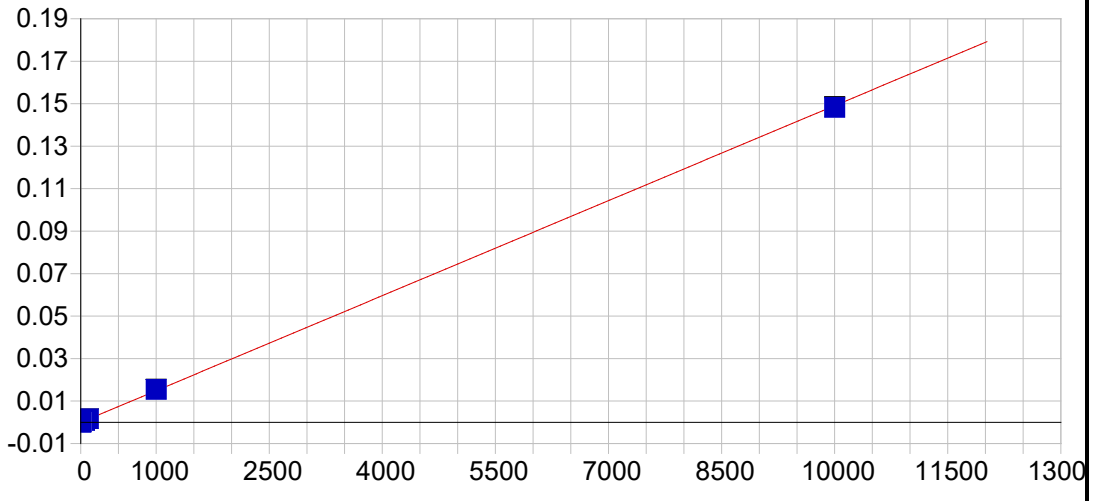


Ni 221.647 {452}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999892	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	0.677788		
Predicted MQL:	2.259292		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01029	-.010	.000	-.00000	.000	1
CalStd10=10	10000.	9951.9	-48.1	-.481	.12367	.000	1
CalStd8=100	100.00	106.62	6.62	6.62	.00132	.000	1
CalStd9=100	1000.0	1041.5	41.5	4.15	.01294	.000	1

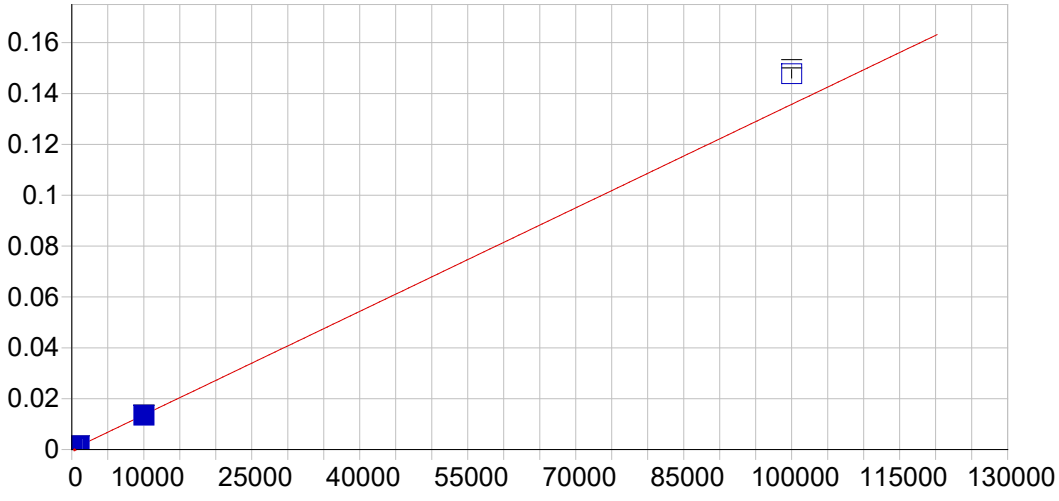


Ni 231.604 {445}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000037	Re-Slope:	1.000000
A1 (Gain):	0.000015	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999787	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.550493		
Predicted MQL:	1.834977		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00126	-.001	.000	-.00004	.000	1
CalStd7=50	50.000	56.624	6.62	13.2	.00081	.000	1
CalStd5=10	10.000	11.626	1.63	16.3	.00014	.000	1
CalStd8=100	100.00	107.01	7.01	7.01	.00156	.000	1
CalStd4=5	5.0000	7.4115	2.41	48.2	.00007	.000	1
CalStd9=100	1000.0	1038.7	38.7	3.87	.01546	.000	1
CalStd3=1	1.0000	1.3745	.375	37.5	-.00002	.000	1
CalStd10=10	10000.	9943.2	-56.8	-.568	.14822	.000	1

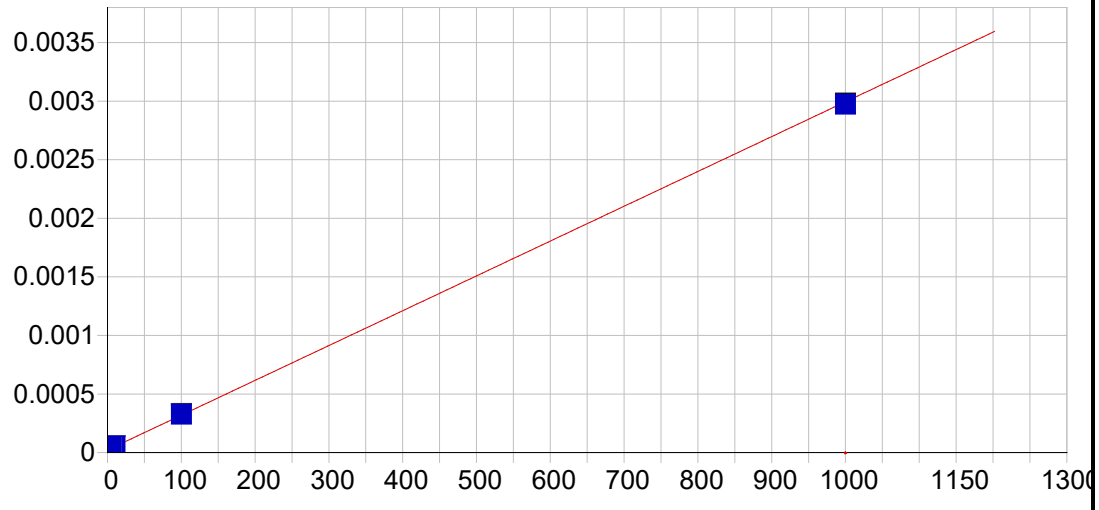


Pb 216.999 {455}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000034	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999537	Status:	OK.
Std Error of Est:	0.000046		
Predicted MDL:	5.314102		
Predicted MQL:	17.713674		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-14.471	-14.5	.000	.00001	.000	1
CalStd9=100	1000.0	1044.1	44.1	4.41	.00146	.000	1
CalStd10=10	10000.	9881.9	-118.	-1.18	.01345	.000	1
CalStd8=100	100.00	95.769	-4.23	-4.23	.00016	.000	1
CalStd5=10	10.000	1.3108	-8.69	-86.9	.00004	.000	1
CalStd12=10	100000.	108850.	8850.	8.85	.14775	.002	1

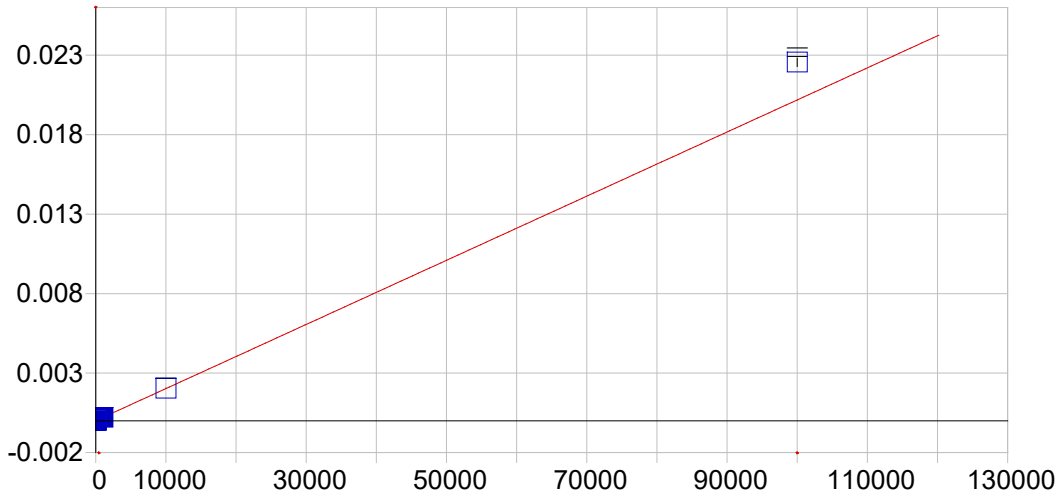


Pb 220.353 {453}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000021	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999068	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.738301		
Predicted MQL:	9.127670		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00383	-.004	.000	.00002	.000	1
CalStd5=10	10.000	11.725	1.73	17.3	.00006	.000	1
CalStd8=100	100.00	102.51	2.51	2.51	.00033	.000	1
CalStd4=5	5.0000	7.8824	2.88	57.6	.00004	.000	1
CalStd9=100	1000.0	992.89	-7.11	-.711	.00297	.000	1

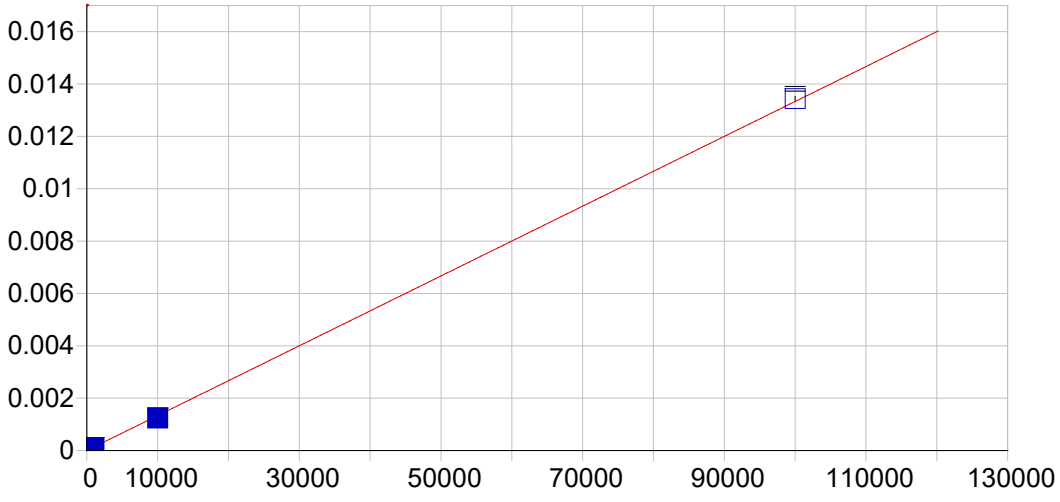


Pb 216.999 {456}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999921	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	17.839797		
Predicted MQL:	59.465990		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-23.196	-23.2	.000	.00000	.000	1
CalStd9=100	1000.0	1050.7	50.7	5.07	.00022	.000	1
CalStd10=10	10000.	10086.	86.1	.861	.00204	.000	1
CalStd8=100	100.00	94.336	-5.66	-5.66	.00002	.000	1
CalStd5=10	10.000	-1.3149	-11.3	-113.	.00000	.000	1
CalStd12=10	100000.	111760.	11800.	11.8	.02256	.000	1

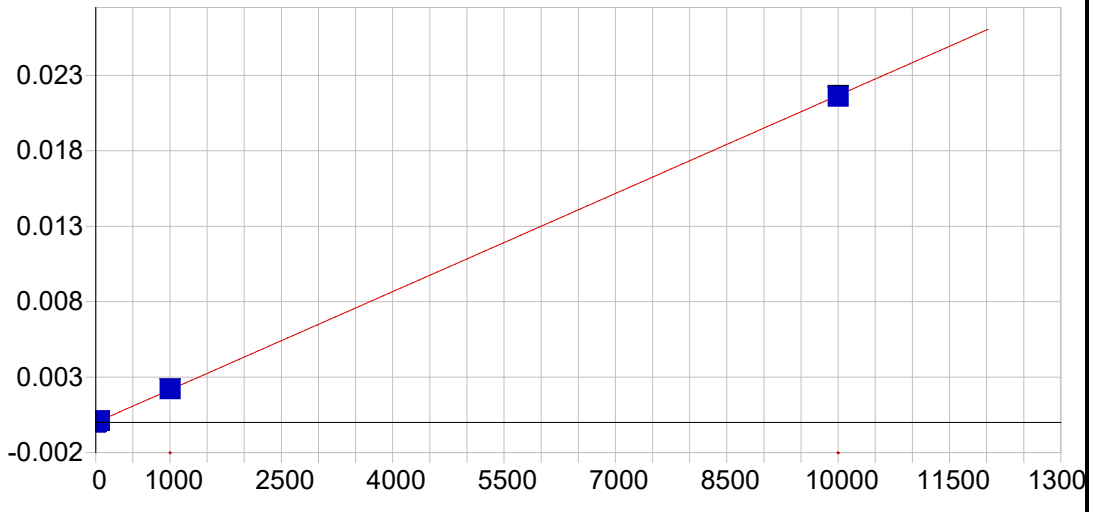


Pb 220.353 {153}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999730	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	6.168954		
Predicted MQL:	20.563181		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.01124	.011	.000	.00000	.000	1
CalStd9=100	1000.0	965.34	-34.7	-3.47	.00013	.000	1
CalStd10=10	10000.	9272.4	-728.	-7.28	.00124	.000	1
CalStd8=100	100.00	98.739	-1.26	-1.26	.00002	.000	1
CalStd12=10	100000.	100760.	763.	.763	.01344	.000	1

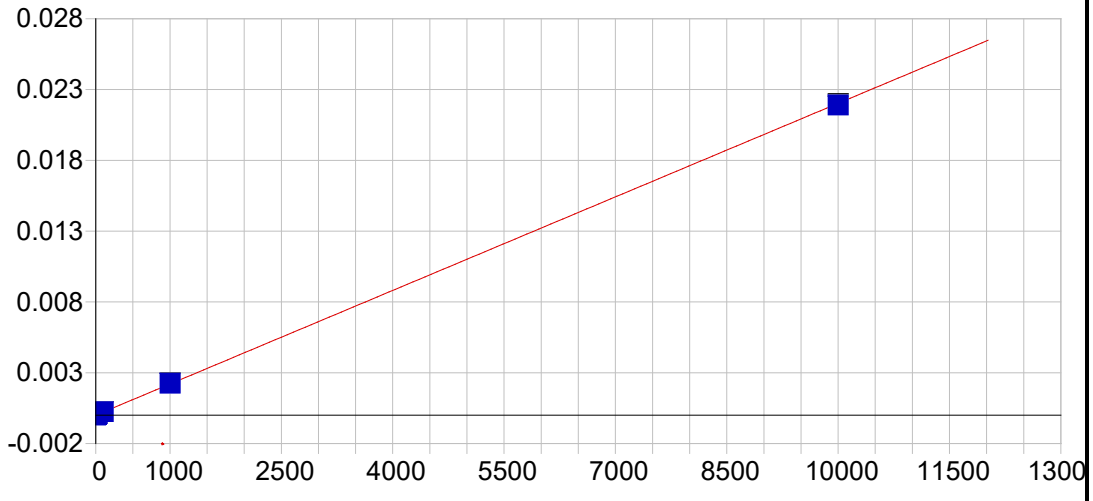


Sb 206.833 {463}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999916	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.534218		
Predicted MQL:	8.447392		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00307	-.003	.000	-.00001	.000	1
CalStd9=100	1000.0	1026.4	26.4	2.64	.00222	.000	1
CalStd5=10	10.000	11.580	1.58	15.8	.00002	.000	1
CalStd7=50	50.000	56.282	6.28	12.6	.00012	.000	1
CalStd10=10	10000.	9965.8	-34.2	-.342	.02160	.000	1

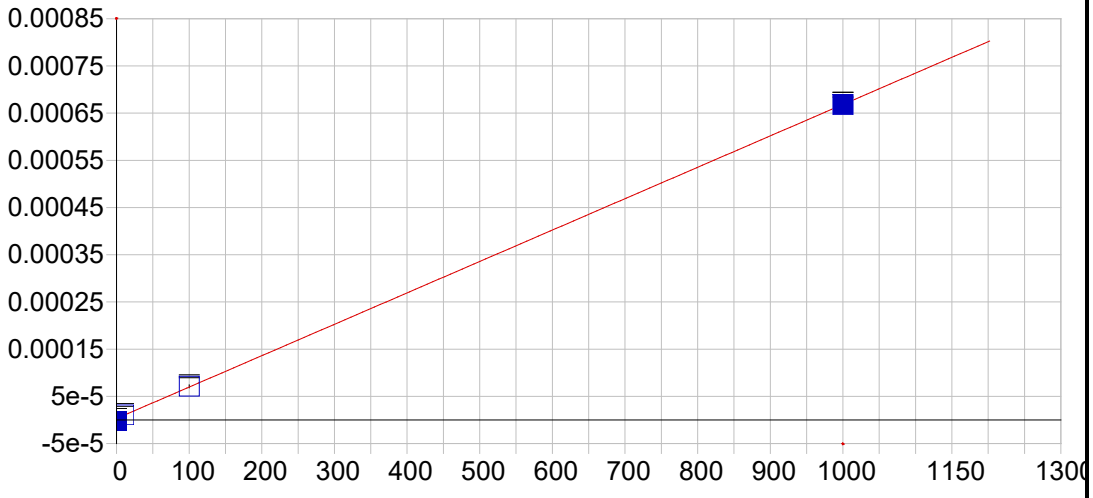


Sb 217.581 {455}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998822	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	2.826117		
Predicted MQL:	9.420390		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01244	-.012	.000	.00000	.000	1
CalStd9=100	1000.0	1025.0	25.0	2.50	.00226	.000	1
CalStd6=20	20.000	38.629	18.6	93.1	.00009	.000	1
CalStd5=10	10.000	13.544	3.54	35.4	.00003	.000	1
CalStd8=100	100.00	106.77	6.77	6.77	.00024	.000	1
CalStd4=5	5.0000	10.578	5.58	112.	.00002	.000	1
CalStd10=10	10000.	9940.5	-59.5	-.595	.02190	.000	1

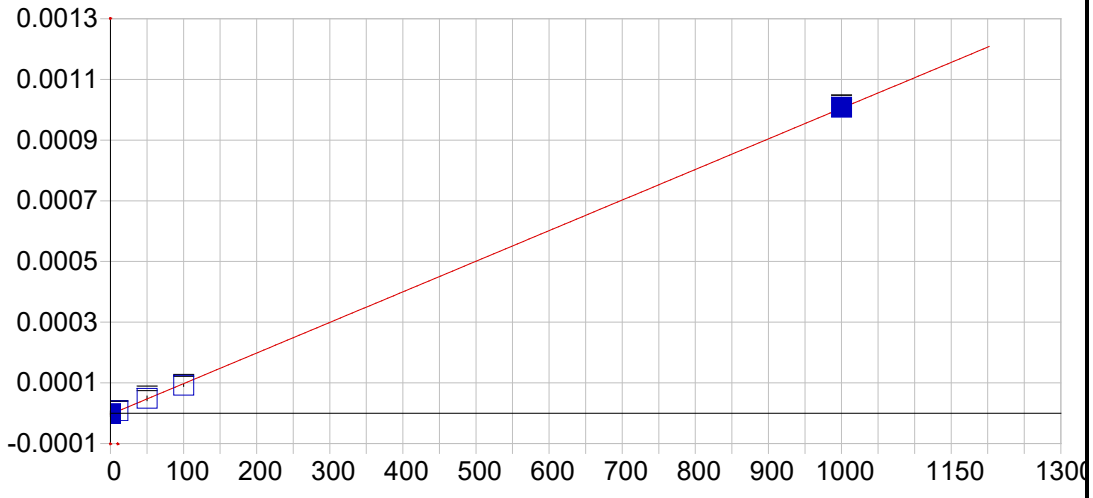


Se 196.090 {472}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999949	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	6.642691		
Predicted MQL:	22.142304		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-8.3014	-8.30	.000	-.00000	.000	1
CalStd9=100	1000.0	999.34	-.660	-.066	.00067	.000	1
CalStd5=10	10.000	10.903	.903	9.03	.00001	.000	1
CalStd8=100	100.00	102.27	2.27	2.27	.00007	.000	1

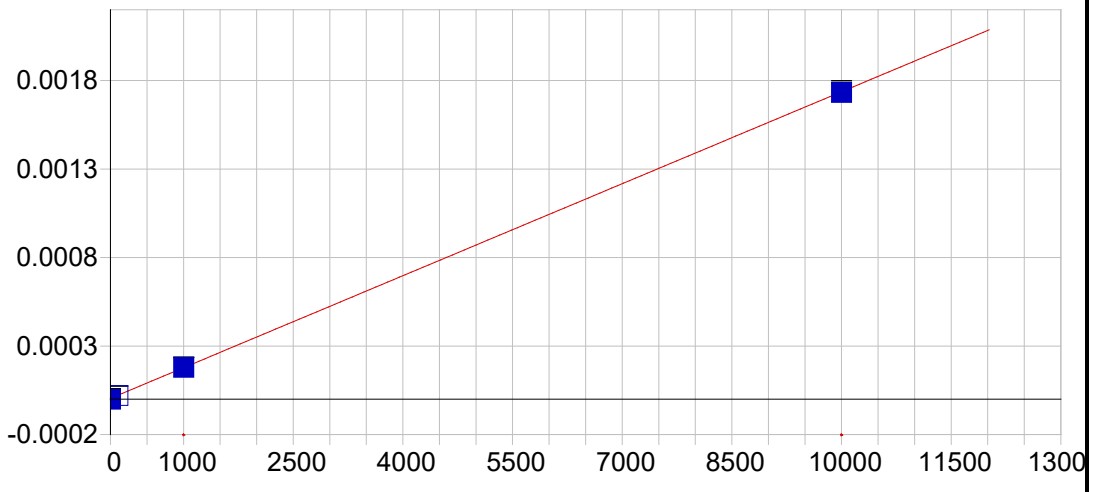


Se 203.985 {465}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999874	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	8.074052		
Predicted MQL:	26.913508		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	1.5096	1.51	.000	-.00000	.000	1
CalStd7=50	50.000	51.683	1.68	3.37	.00005	.000	1
CalStd9=100	1000.0	1003.1	3.13	.313	.00101	.000	1
CalStd5=10	10.000	10.923	.923	9.23	.00001	.000	1
CalStd8=100	100.00	94.224	-5.78	-5.78	.00009	.000	1

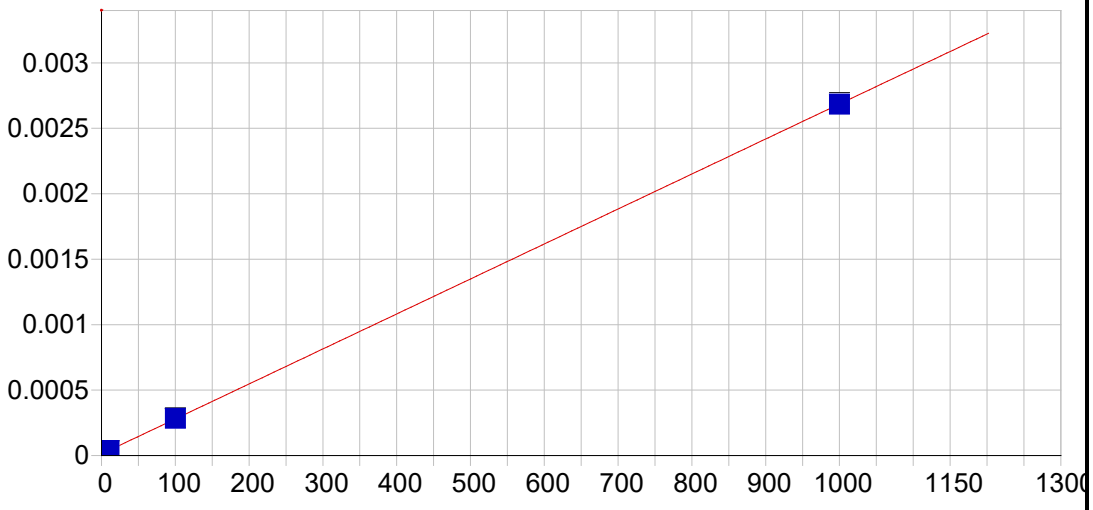


Se 206.279 {463}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999949	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	35.176493		
Predicted MQL:	117.254976		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-30.955	-31.0	.000	-.00000	.000	1
CalStd9=100	1000.0	1008.3	8.32	.832	.00018	.000	1
CalStd10=10	10000.	9971.2	-28.8	-.288	.00173	.000	1
CalStd8=100	100.00	85.573	-14.4	-14.4	.00002	.000	1

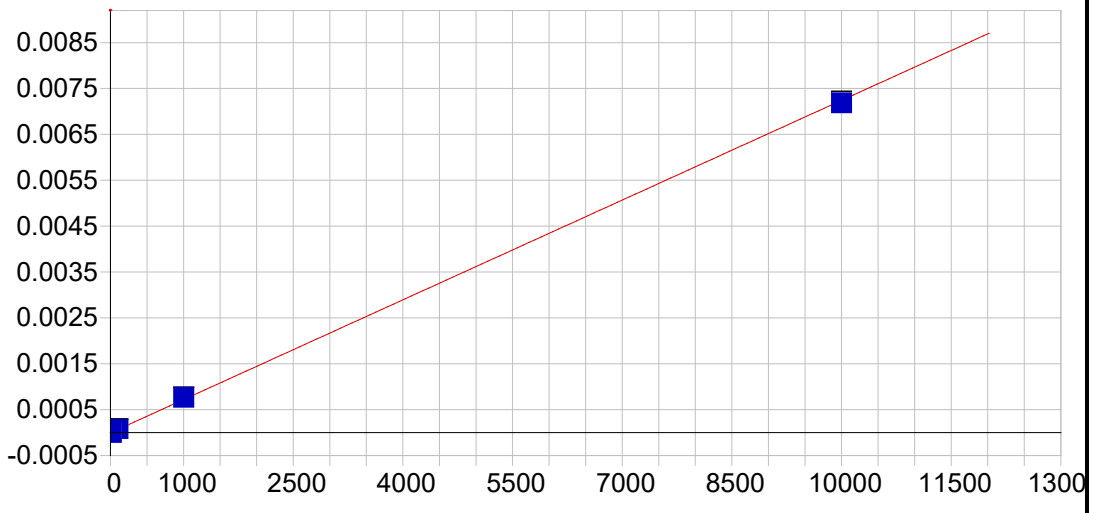


Tl 190.856 {476}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000012	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999978	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.000955		
Predicted MQL:	6.669849		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00041	.000	.000	.00001	.000	1
CalStd9=100	1000.0	999.14	-.857	-.086	.00269	.000	1
CalStd8=100	100.00	101.40	1.40	1.40	.00028	.000	1
CalStd5=10	10.000	9.4593	-.541	-5.41	.00004	.000	1

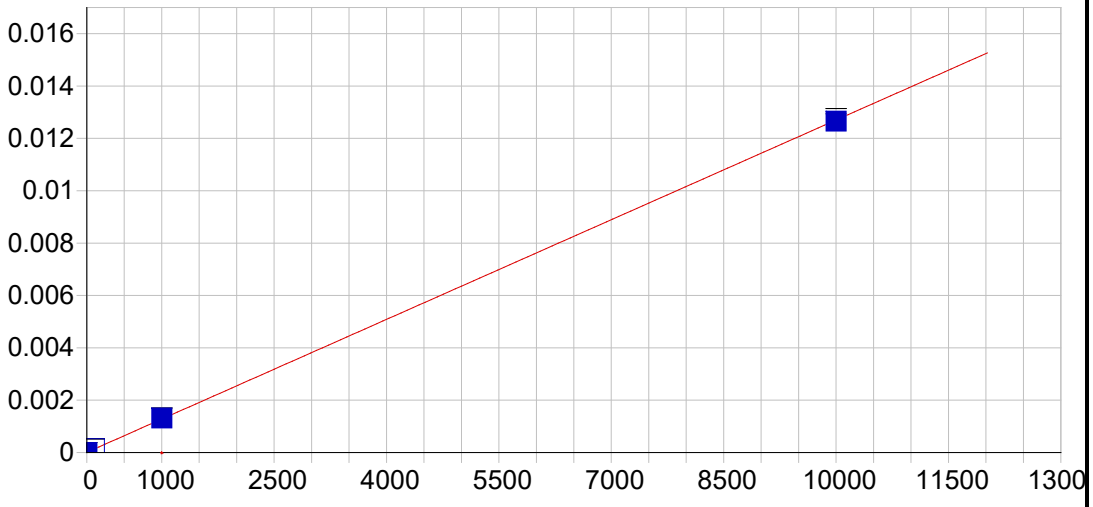


Tl 190.856 {477}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999718	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	5.783280		
Predicted MQL:	19.277601		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00062	-.001	.000	-.00001	.000	1
CalStd9=100	1000.0	1067.3	67.3	6.73	.00077	.000	1
CalStd8=100	100.00	110.25	10.2	10.2	.00007	.000	1
CalStd5=10	10.000	9.0023	-.998	-9.98	.00000	.000	1
CalStd10=10	10000.	9923.4	-76.6	-.766	.00719	.000	1

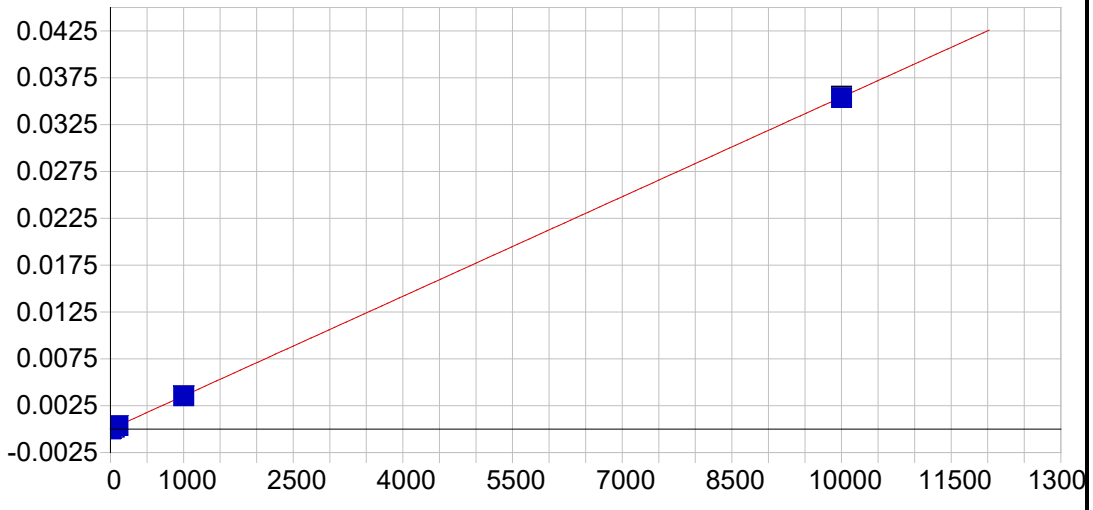


V 290.882 {116}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999936	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	4.784983		
Predicted MQL:	15.949944		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00909	-.009	.000	.00001	.000	1
CalStd9=100	1000.0	1029.4	29.4	2.94	.00132	.000	1
CalStd10=10	10000.	9964.1	-35.9	-.359	.01266	.000	1
CalStd8=100	100.00	106.51	6.51	6.51	.00014	.000	1

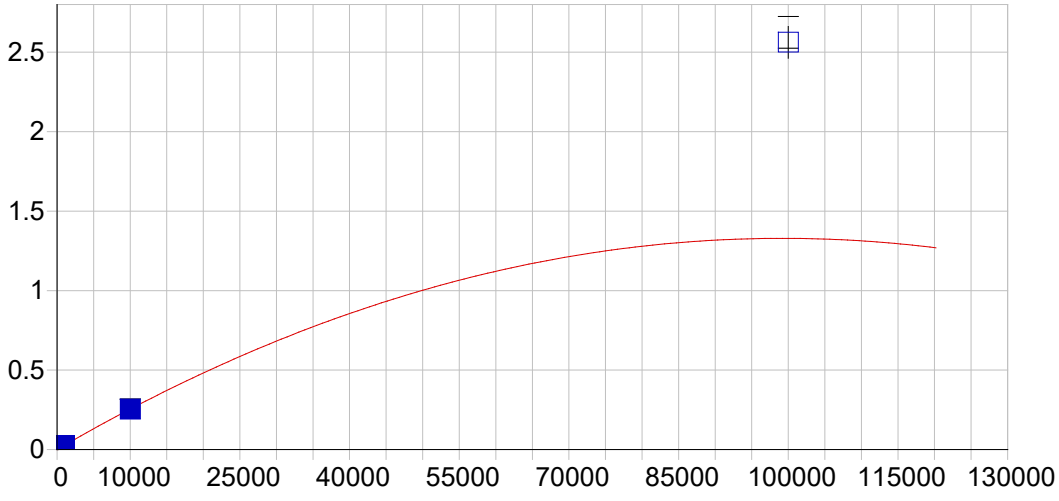


V 292.402 {115}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999466	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.970209		
Predicted MQL:	3.234029		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00728	-.007	.000	.00000	.000	1
CalStd7=50	50.000	53.304	3.30	6.61	.00019	.000	1
CalStd9=100	1000.0	997.85	-2.15	-.215	.00354	.000	1
CalStd6=20	20.000	35.174	15.2	75.9	.00013	.000	1
CalStd5=10	10.000	8.8431	-1.16	-11.6	.00003	.000	1
CalStd8=100	100.00	102.24	2.24	2.24	.00037	.000	1
CalStd10=10	10000.	9982.6	-17.4	-.174	.03539	.000	1

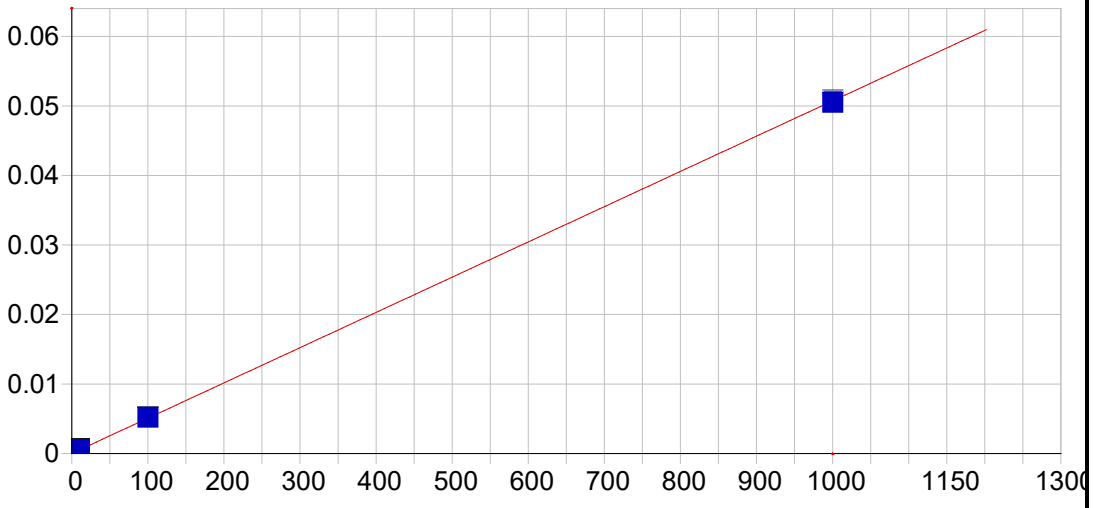


Zn 206.200 {463}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000036	Re-Slope:	1.000000
A1 (Gain):	0.000027	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999929	Status:	OK.
Std Error of Est:	0.000031		
Predicted MDL:	0.224406		
Predicted MQL:	0.748021		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CalStd10=10	10000.	9972.6	-27.4	-.274	.25378	.000	1
Blank	.00000	-1.1486	-1.15	.000	.00001	.000	1
CalStd9=100	1000.0	988.21	-11.8	-1.18	.02638	.000	1
CalStd12=10	100000.	.00000	-100000.	-100.	2.5620	.100	1
CalStd5=10	10.000	10.874	.874	8.74	.00033	.000	1
CalStd8=100	100.00	100.12	.122	.122	.00272	.000	1

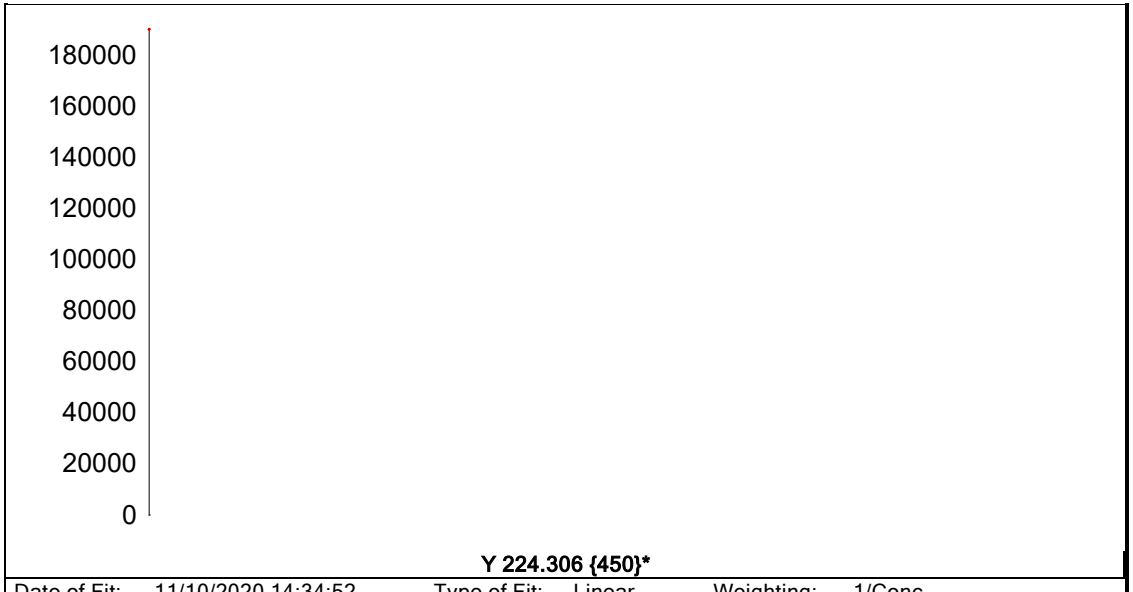


Zn 213.856 {457}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000018	Re-Slope:	1.000000
A1 (Gain):	0.000051	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999704	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.129493		
Predicted MQL:	0.431644		

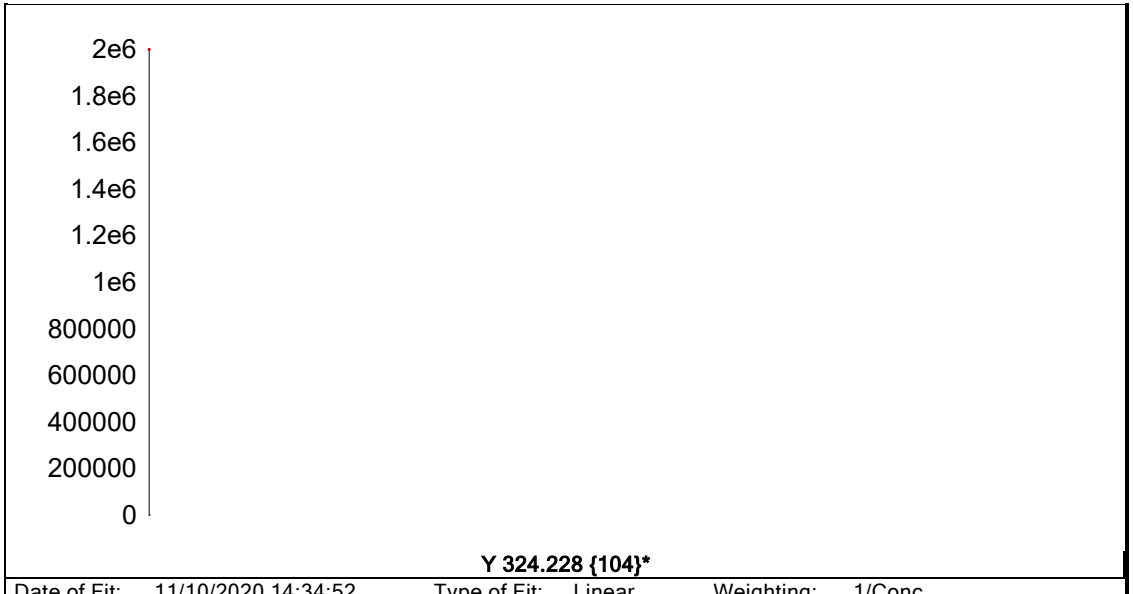
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00260	-.003	.000	.00002	.000	1
CalStd9=100	1000.0	995.16	-4.84	-.484	.05071	.000	1
CalStd5=10	10.000	12.405	2.40	24.0	.00065	.000	1
CalStd8=100	100.00	102.45	2.45	2.45	.00523	.000	1



Y 224.306 {450}*

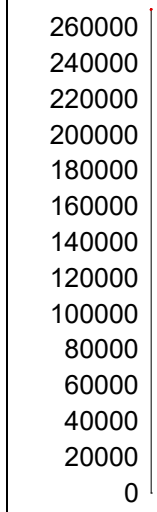
Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	178060.	345.	1



Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

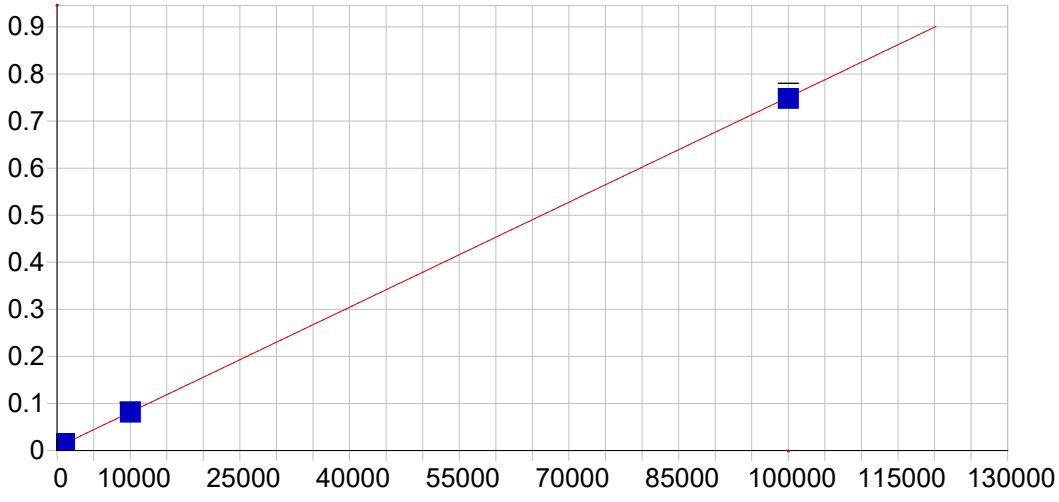
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	1809700.	10300.	1



Y 371.030 { 91}*

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	252000.	2800.	1

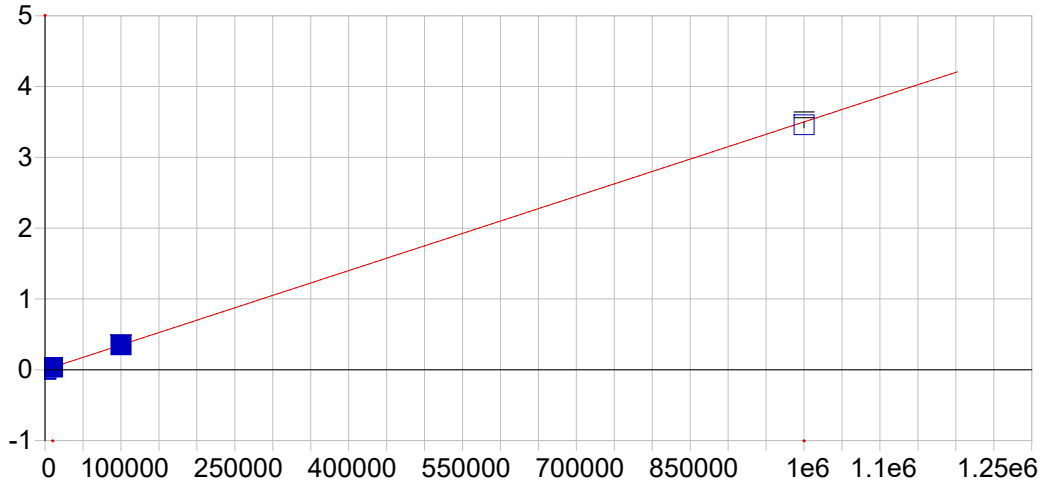


Na 588.995 { 57}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.007087	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.000150		
Predicted MDL:	5.859409		
Predicted MQL:	19.531365		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-6.6722	-6.67	.000	.00704	.000	1
CalStd9=100	1000.0	1028.2	28.2	2.82	.01473	.000	1
CalStd10=10	10000.	9983.5	-16.5	-.165	.08133	.000	1
CalStd13=10	100000.	99616.	-384.	-.384	.74788	.011	1

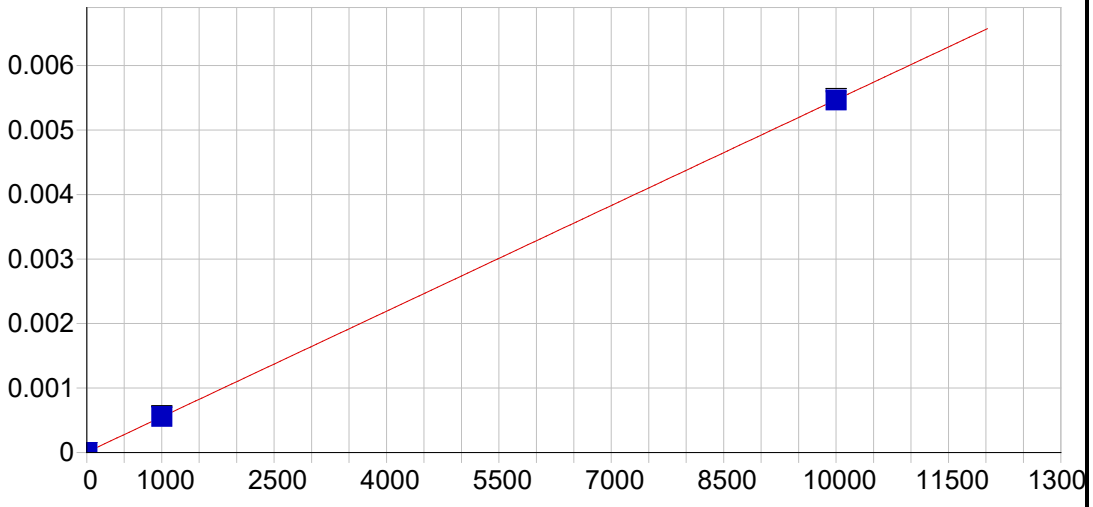


Na 589.592 { 57}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000051	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999978	Status:	OK.
Std Error of Est:	0.000050		
Predicted MDL:	7.401246		
Predicted MQL:	24.670821		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-12.905	-12.9	.000	.00001	.000	1
CalStd9=100	1000.0	1007.0	6.97	.697	.00358	.000	1
CalStd10=10	10000.	9992.9	-7.15	-.071	.03504	.000	1
CalibStd15=	1000000.	987790.	-12200.	-1.22	3.4579	.041	1
CalStd13=10	100000.	100060.	61.8	.062	.35037	.005	1

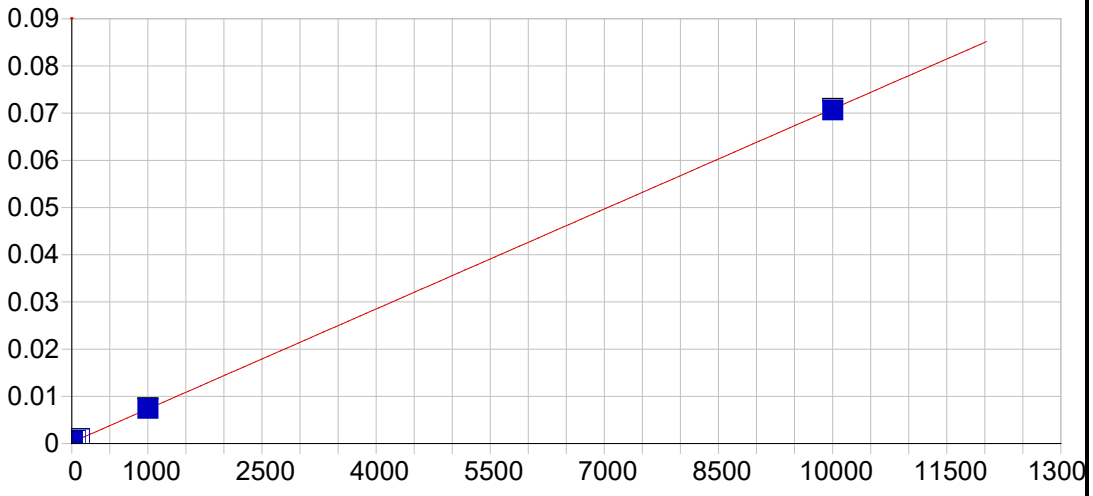


Si 251.611 {134}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999996	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	8.141037		
Predicted MQL:	27.136789		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00823	-.008	.000	.00001	.000	1
CalStd9=100	1000.0	1009.1	9.14	.914	.00056	.000	1
CalStd10=10	10000.	9990.9	-9.14	-.091	.00546	.000	1

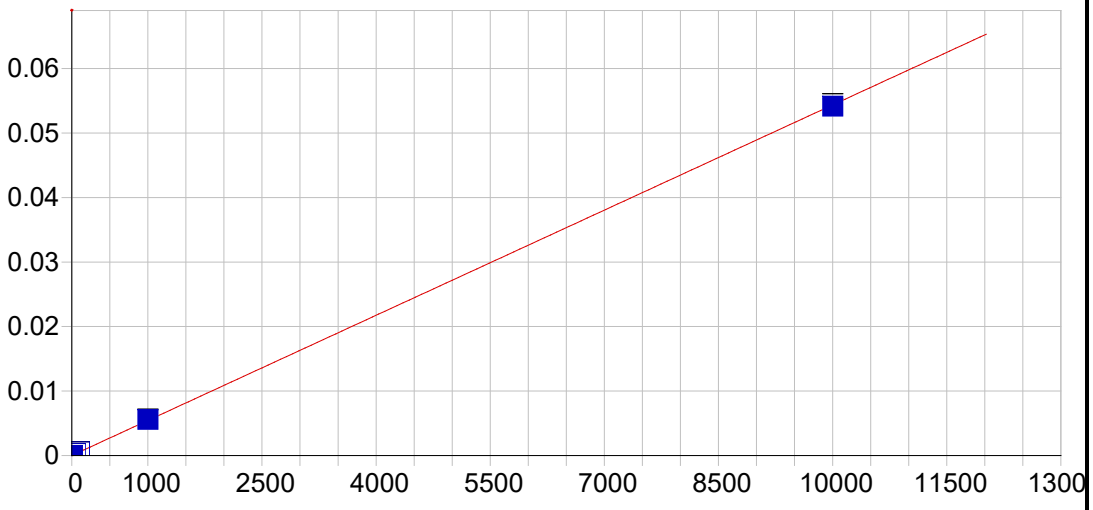


Ti 323.452 {104}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000267	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999888	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.351519		
Predicted MQL:	4.505064		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00371	-.004	.000	.00027	.000	1
CalStd5=10	10.000	10.791	.791	7.91	.00034	.000	1
CalStd8=100	100.00	104.83	4.83	4.83	.00101	.000	1
CalStd9=100	1000.0	1014.3	14.3	1.43	.00743	.000	1
CalStd10=10	10000.	9971.5	-28.5	-.285	.07067	.000	1
CalStd7=50	50.000	56.269	6.27	12.5	.00066	.000	1
CalStd4=5	5.0000	7.3899	2.39	47.8	.00032	.000	1

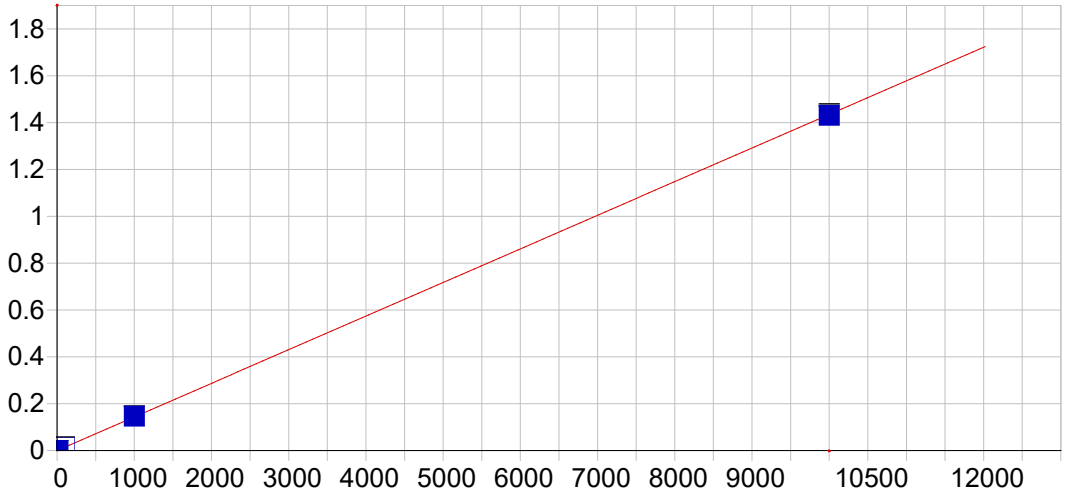


Ti 334.941 {101}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999897	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.270058		
Predicted MQL:	4.233527		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00309	-.003	.000	.00000	.000	1
CalStd5=10	10.000	11.144	1.14	11.4	.00006	.000	1
CalStd8=100	100.00	104.58	4.58	4.58	.00057	.000	1
CalStd9=100	1000.0	1027.1	27.1	2.71	.00559	.000	1
CalStd10=10	10000.	9960.4	-39.6	-.396	.05414	.000	1
CalStd7=50	50.000	55.100	5.10	10.2	.00030	.000	1
CalStd4=5	5.0000	6.6678	1.67	33.4	.00004	.000	1

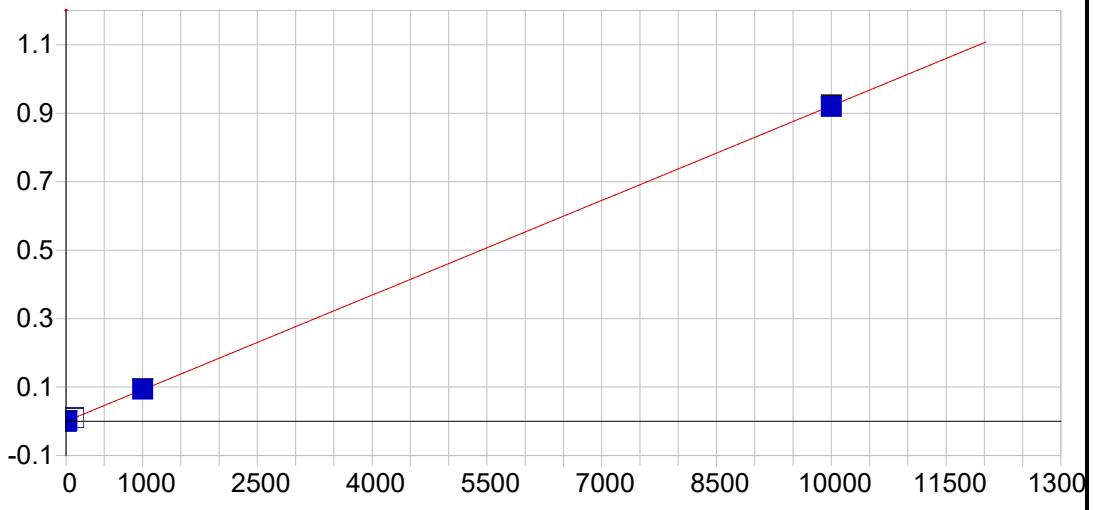


Sr 407.771 { 83}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000039	Re-Slope:	1.000000
A1 (Gain):	0.000143	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999925	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.104749		
Predicted MQL:	0.349163		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00066	-.001	.000	.00004	.000	1
CalStd3=1	1.0000	1.0947	.095	9.47	.00020	.000	1
CalStd4=5	5.0000	7.0303	2.03	40.6	.00105	.000	1
CalStd5=10	10.000	10.915	.915	9.15	.00161	.000	1
CalStd8=100	100.00	105.47	5.47	5.47	.01517	.000	1
CalStd9=100	1000.0	1019.5	19.5	1.95	.14634	.001	1
CalStd10=10	10000.	9971.9	-28.1	-.281	1.4310	.005	1

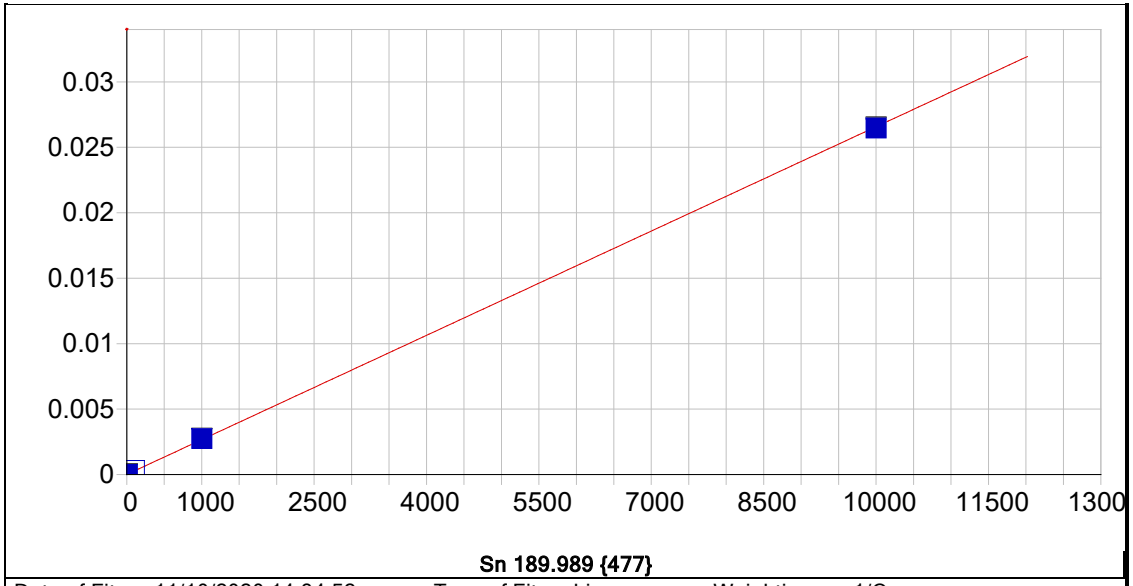


Sr 421.552 { 80}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000092	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999930	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.143031		
Predicted MQL:	0.476770		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00057	-.001	.000	-.00000	.000	1
CalStd3=1	1.0000	1.0022	.002	.221	.00009	.000	1
CalStd4=5	5.0000	7.1014	2.10	42.0	.00065	.000	1
CalStd5=10	10.000	10.871	.871	8.71	.00100	.000	1
CalStd8=100	100.00	104.65	4.65	4.65	.00964	.000	1
CalStd9=100	1000.0	1017.6	17.6	1.76	.09379	.001	1
CalStd10=10	10000.	9974.7	-25.3	-.253	.91935	.004	1

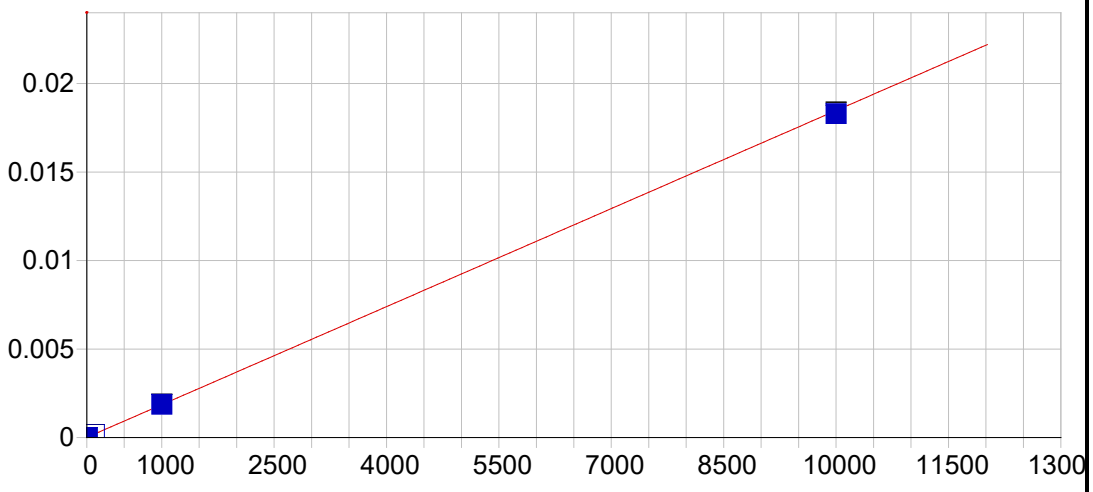


Sn 189.989 {477}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999887	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.688225		
Predicted MQL:	5.627418		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00343	-.003	.000	.00001	.000	1
CalStd10=10	10000.	9959.0	-41.0	-.410	.02646	.000	1
CalStd9=100	1000.0	1028.6	28.6	2.86	.00274	.000	1
CalStd8=100	100.00	110.21	10.2	10.2	.00030	.000	1
CalStd5=10	10.000	12.168	2.17	21.7	.00004	.000	1

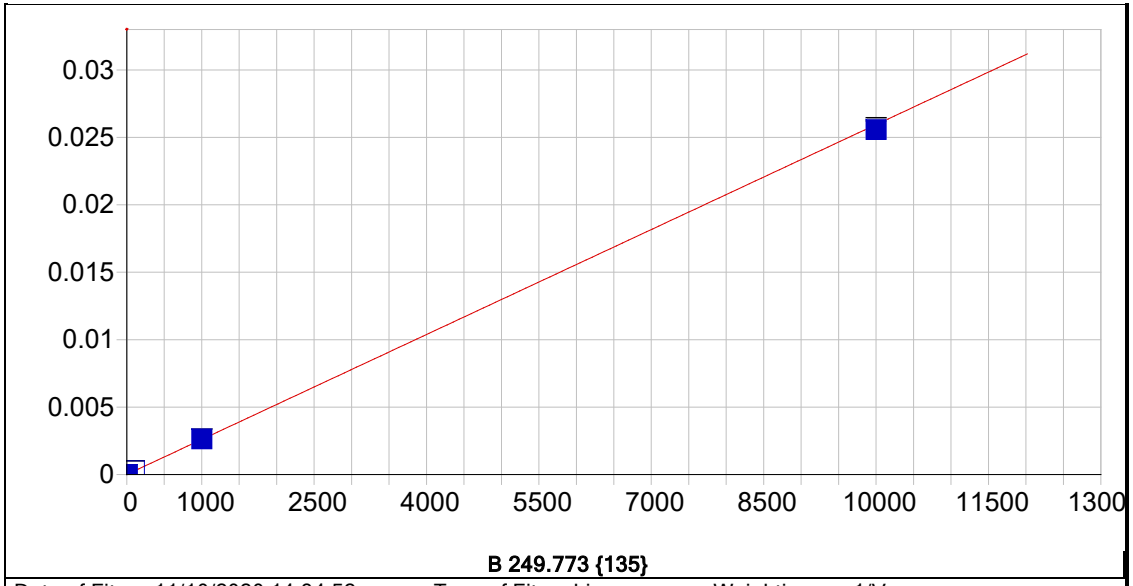


B 249.678 {135}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999941	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	1.055450		
Predicted MQL:	3.518166		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.11150	.112	.000	.00001	.000	1
CalStd8=100	100.00	98.752	-1.25	-1.25	.00019	.000	1
CalStd5=10	10.000	9.6887	-.311	-3.11	.00003	.000	1
CalStd9=100	1000.0	1011.2	11.2	1.12	.00188	.000	1
CalStd10=10	10000.	9900.7	-99.3	-.993	.01829	.000	1

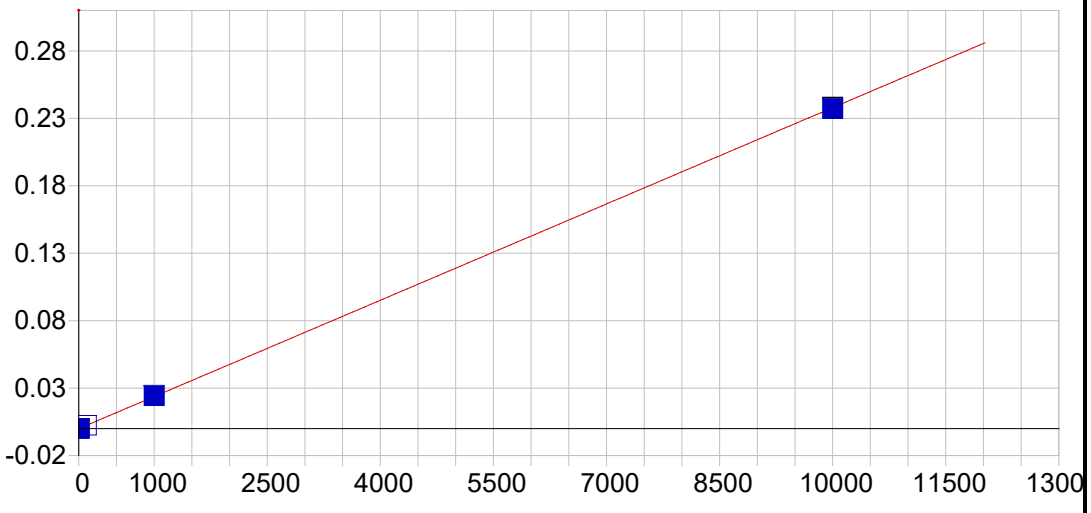


B 249.773 {135}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999908	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	0.662497		
Predicted MQL:	2.208323		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.29170	-.292	.000	.00001	.000	1
CalStd8=100	100.00	101.26	1.26	1.26	.00027	.000	1
CalStd5=10	10.000	9.7784	-.222	-2.22	.00003	.000	1
CalStd9=100	1000.0	1011.6	11.6	1.16	.00263	.000	1
CalStd10=10	10000.	9855.1	-145.	-1.45	.02561	.000	1

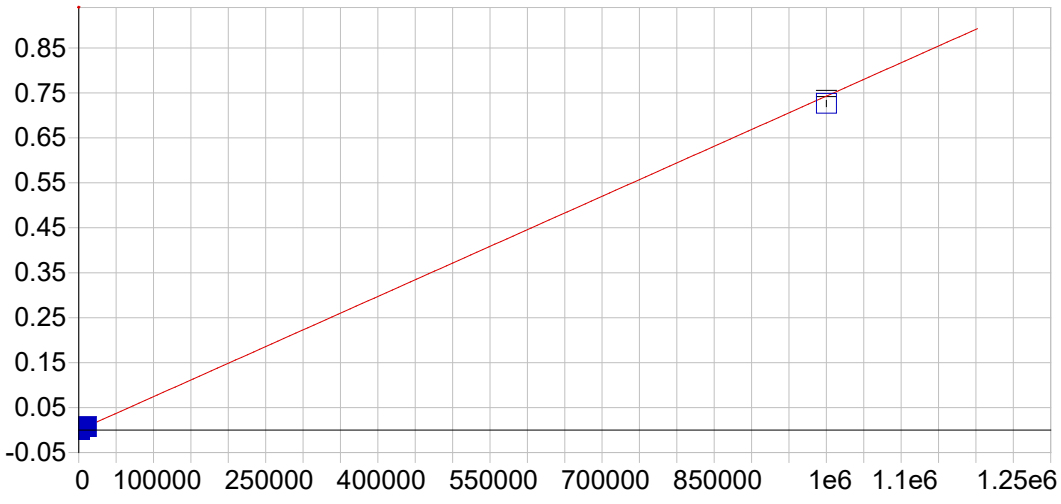


Li 670.784 { 50}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000083	Re-Slope:	1.000000
A1 (Gain):	0.000024	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999915	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	1.327484		
Predicted MQL:	4.424947		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00364	-.004	.000	-.00008	.000	1
CalStd5=10	10.000	12.816	2.82	28.2	.00022	.000	1
CalStd8=100	100.00	106.08	6.08	6.08	.00244	.000	1
CalStd9=100	1000.0	1024.7	24.7	2.47	.02431	.000	1
CalStd10=10	10000.	9966.4	-33.6	-.336	.23717	.001	1

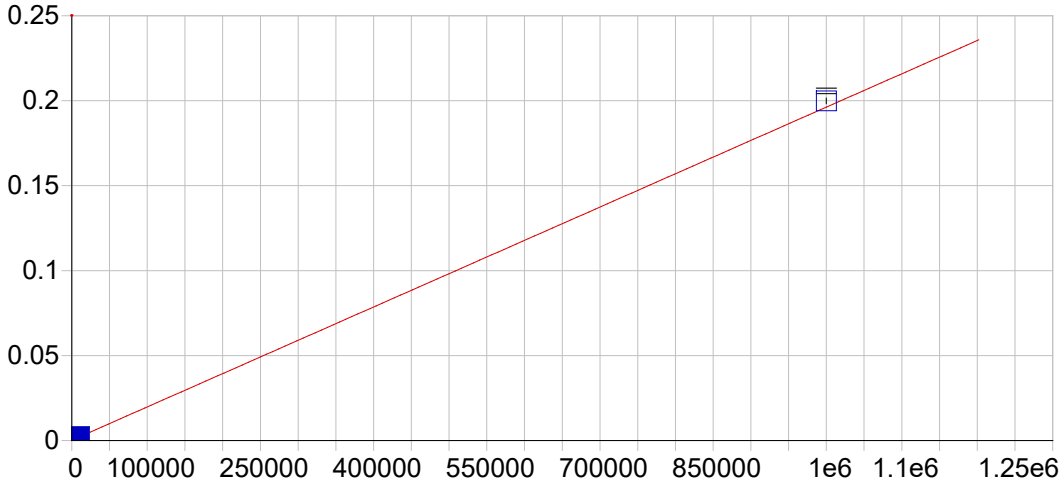


K 766.490 { 44}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	-0.000031	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999993	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	39.712393		
Predicted MQL:	132.374643		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.10047	.100	.000	-.00003	.000	1
CalStd9=100	1000.0	888.23	-112.	-11.2	.00063	.000	1
CalStd10=10	10000.	10111.	111.	1.11	.00748	.000	1
CalibStd15=	1000000.	977970.	-22000.	-2.20	.72653	.007	1

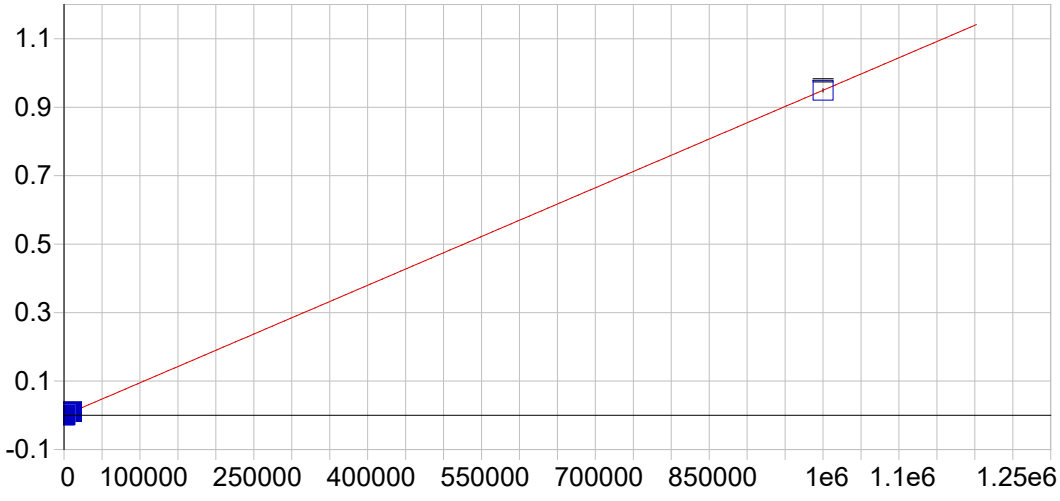


K 769.896 { 44}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000176	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	99.497046		
Predicted MQL:	331.656820		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.03377	.034	.000	.00018	.000	1
CalStd9=100	1000.0	962.46	-37.5	-3.75	.00037	.000	1
CalStd10=10	10000.	10040.	39.8	.398	.00215	.000	1
CalibStd15=	1000000.	1018500.	18500.	1.85	.19985	.002	1

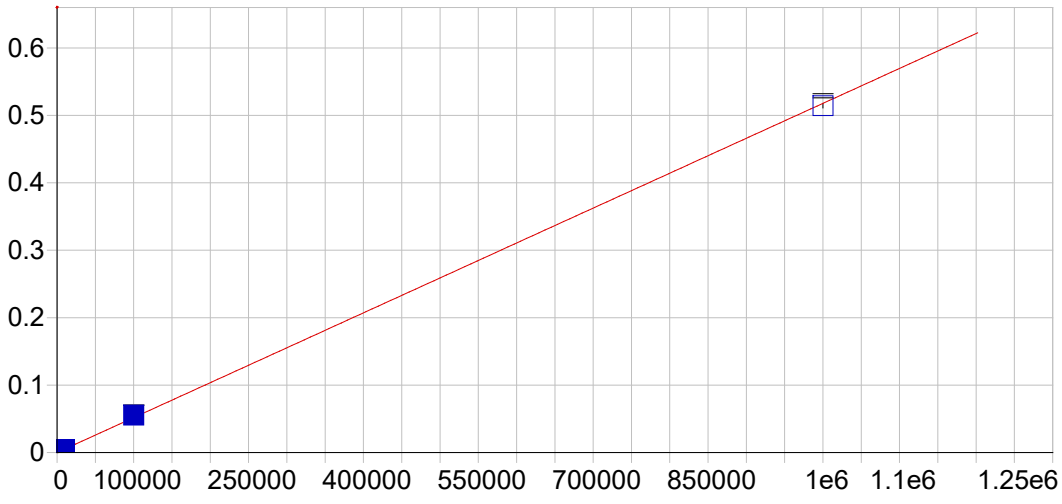


P 213.618 {457}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000013	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	6.460996		
Predicted MQL:	21.536652		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.05960	-.060	.000	-.00001	.000	1
CalStd10=10	10000.	10312.	312.	3.12	.00978	.000	1
CalStd9=100	1000.0	1028.7	28.7	2.87	.00096	.000	1
CalibStd15=	1000000.	999660.	-341.	-.034	.94914	.005	1

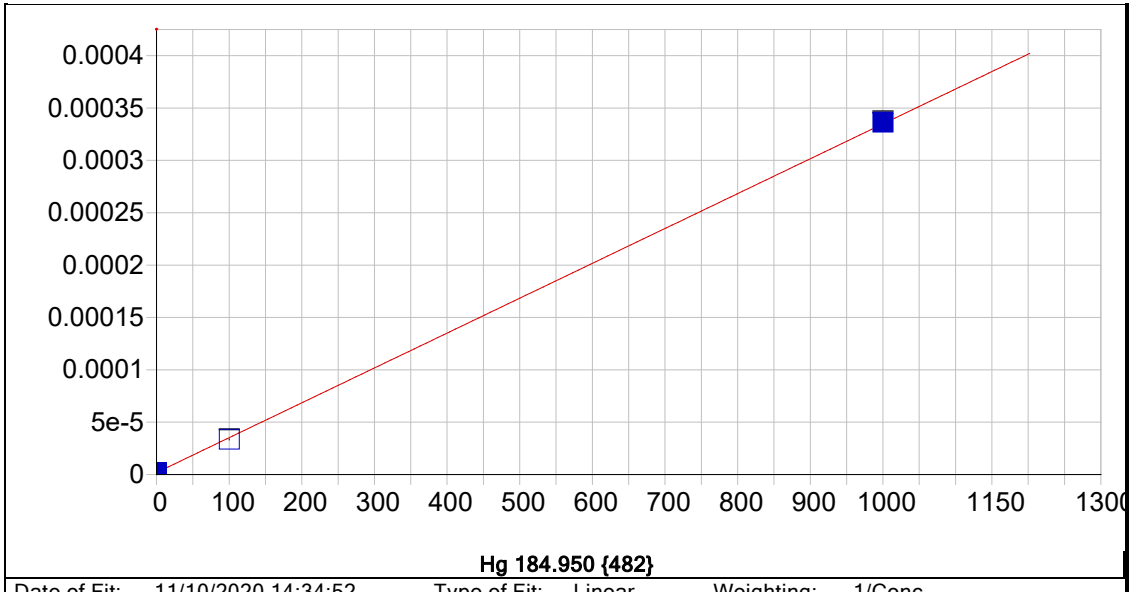


S 182.034 {485}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000010	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999763	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	7.144971		
Predicted MQL:	23.816571		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.05739	-.057	.000	.00001	.000	1
CalStd9=100	1000.0	989.14	-10.9	-1.09	.00052	.000	1
CalStd10=10	10000.	10062.	61.6	.616	.00524	.000	1
CalibStd15=	1000000.	993030.	-6970.	-.697	.51425	.003	1
CalStd13=10	100000.	106910.	6910.	6.91	.05544	.000	1

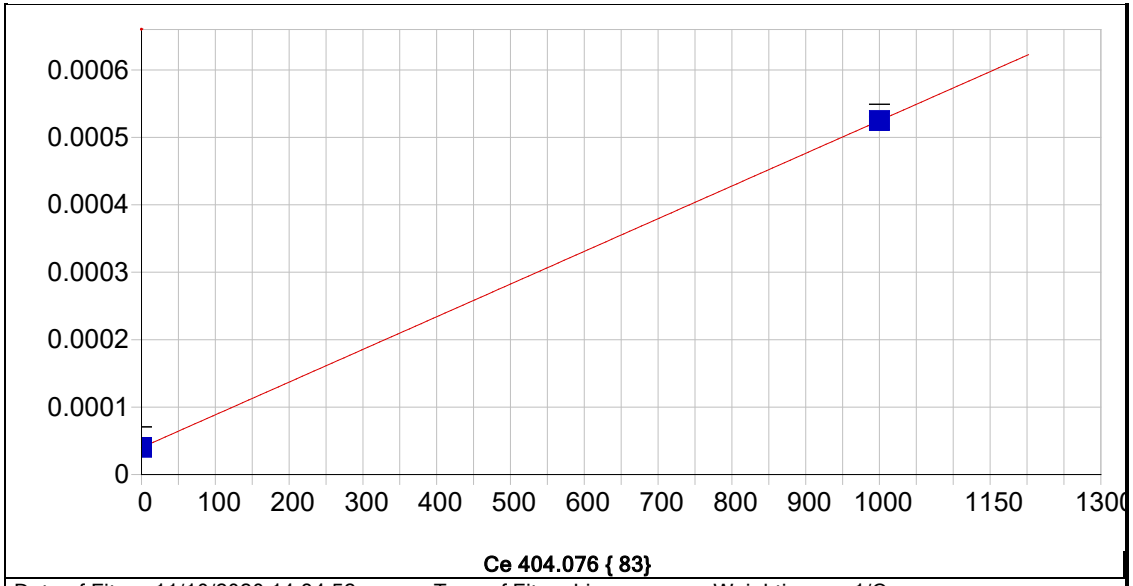


Hg 184.950 {482}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999887	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.147156		
Predicted MQL:	3.823853		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00428	.004	.000	.00000	.000	1
CalStd8=100	100.00	95.247	-4.75	-4.75	.00003	.000	1
CalStd9=100	1000.0	1004.8	4.75	.475	.00034	.000	1



Ce 404.076 { 83}

Date of Fit:	11/10/2020 14:34:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000040	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	26.054713		
Predicted MQL:	86.849042		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00004	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00052	.000	1

Sample Name: Blank Acquired: 11/04/2020 12:10:04 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	As1972	Ba2335	Ba4934	Be3130	Be2348	Ca3158	Ca3968	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**-.000**	**.000**	**-.000**	**-.000**	**.009**	**-.000**	**-.000**	**.000**	**.000**	**-.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	12.7	26.8	14.3	71.5	140.	279.	1.14	.847	158.	14.7	25.4	292.

Elem	Cd2288	Co2286	Co2388	Cr2055	Cr2677	Cu2247	Cu3247	Cu2230	Fe2599	Mg2025	Mg2802	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**-.000**	**.000**	**-.000**	**.000**	**.000**	**-.000**	**-.000**	**.000**	**-.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	123.	80.1	32.9	51.4	686.	232.	1.68	1290.	172.	19.7	.629	16.7

Elem	Mn2593	Mo2020	Mo2045	Ni2316	Pb2203	Pb2169	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**-.000**	**.000**	**-.000**	**-.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2220.	73.3	101.	8.83	49.1	5620.	26.8	833.	212.	456.	44.7	74.0

Elem	V_2924	Zn2062	Zn2138	Na5889	Na5895	B_2497	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.007**	**.000**	**.000**	**-.000**
Stddev	.000	.000	.000	.000	.000	.000	.000
%RSD	119.	82.0	15.5	.862	591.	21.3	42.8

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**178060.**	**1809700.**	**252000.**
Stddev	345.	10258.	2801.
%RSD	.19367	.56680	1.1114

Sample Name: CalStd2=0.5 Acquired: 11/04/2020 12:16:31 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Be3130	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**
Stddev	.000	.000	.000
%RSD	4.54	55.7	22.3

Int. Std.	Y_2243	Y_3242
Units	Cts/S	Cts/S
Avg	**173430.**	**1763900.**
Stddev	668.	8368.
%RSD	.38519	.47440

Sample Name: CalStd3=1 Acquired: 11/04/2020 12:22:53 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Ba2335	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**-.000**	**.000**	**.000**	**.000**	**.000**	**-.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	15.7	8.42	14.1	21.5	12.6	70.4	23.6	16.5

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**173370.**	**1777700.**	**249600.**
Stddev	432.	11133.	2519.
%RSD	.24910	.62628	1.0094

Sample Name: CalStd4=5 Acquired: 11/04/2020 12:29:13 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba2335	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Mo2045	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	6.14	.329	6.51	3.54	5.61	1.32	7.74	.874	3.92	7.16	6.94	5.48

Elem	Sb2175
Units	Cts/S
Avg	**.000**
Stddev	.000
%RSD	30.6

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**173420.**	**1771700.**	**250130.**
Stddev	373.	5107.	2024.
%RSD	.21481	.28824	.80927

Sample Name: CalStd5=10 Acquired: 11/04/2020 12:35:35 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al1670	As1937	As1972	Ba2335	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Cu3247	Cu2230
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.001**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	11.8	17.0	47.2	4.16	.392	1.44	3.16	3.22	2.50	5.31	3.00	3.72

Elem	Mn2576	Mo2020	Mo2045	Ni2316	Pb2203	Pb2169	Sb2068	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.51	3.10	3.08	4.06	7.73	88.1	34.0	21.5	33.6	6.59	6.00	2.23

Elem	Zn2138	B_2497
Units	Cts/S	Cts/S
Avg	**.001**	**.000**
Stddev	.000	.000
%RSD	1.08	6.97

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**172800.**	**1764100.**	**248140.**
Stddev	387.	8857.	1268.
%RSD	.22409	.50207	.51116

Sample Name: CalStd6=20 Acquired: 11/04/2020 12:41:59 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba2335	Cu2247	Cu3247	Cu2230	Mn2576	Mo2020	Mo2045	Sb2175	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.856	8.87	2.91	1.20	1.08	1.71	2.23	4.06	3.32

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**172530.**	**1760900.**	**245920.**
Stddev	138.	3732.	3506.
%RSD	.08018	.21196	1.4257

Sample Name: CalStd7=50 Acquired: 11/04/2020 12:48:14 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	As1937	As1972	Cd2288	Co2286	Cr2055	Cr2677	Cu2247	Cu3247	Mn2576	Mo2020	Mo2045	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.002**	**.001**	**.001**	**.000**	**.000**	**.000**	**.001**	**.001**	**.000**	**.001**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	8.10	12.7	.545	1.18	.601	.744	3.92	1.29	.698	1.63	2.10	1.21

Elem	Sb2068	V_2924
Units	Cts/S	Cts/S
Avg	**.000**	**.000**
Stddev	.000	.000
%RSD	5.06	2.74

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**173120.**	**1772400.**	**245960.**
Stddev	496.	2759.	1376.
%RSD	.28650	.15564	.55925

Sample Name: CalStd8=100 Acquired: 11/04/2020 12:54:30 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	As1972	Ba2335	Ba4934	Be3130	Be2348	Ca3968	Cd2265	Cd2288	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.001**	**.013**	**.006**	**.000**	**.006**	**.002**	**.003**	**.002**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.53	.832	3.08	8.04	.563	1.16	1.08	.627	.793	.175	.491	.781

Elem	Co2388	Cr2055	Cr2677	Cu2247	Cu3247	Cu2230	Mg2802	Mn2576	Mo2020	Mo2045	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.002**	**.000**	**.000**	**.001**	**.001**	**.004**	**.001**	**.001**	**.000**	**.002**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.26	.232	1.57	8.26	1.66	.641	1.08	1.08	.604	1.10	.387	2.26

Elem	Pb2169	Sb2175	Se1960	Se2062	Tl1908	V_2908	V_2924	Zn2062	Zn2138	B_2497
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.003**	**.005**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	8.99	2.17	4.22	14.9	.788	4.64	1.29	.057	.208	.878

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**173020.**	**1769600.**	**245050.**
Stddev	280.	11992.	2623.
%RSD	.16174	.67769	1.0702

Sample Name: CalStd9=1000 Acquired: 11/04/2020 13:00:45 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al1670	Al3961	As1937	As1972	Ba2335	Ba4934	Be3130	Be2348	Ca3158	Ca3968	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.002**	**.002**	**.001**	**.001**	**.007**	**.051**	**.060**	**.005**	**.000**	**.057**	**.023**	**.031**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.775	1.15	.528	.336	.343	.933	.423	.657	.362	.873	.507	.525

Elem	Co2286	Co2388	Cr2055	Cr2677	Cu2247	Cu3247	Cu2230	Fe2599	Mg2025	Mg2802	Mn2576	Mn2593
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.017**	**.001**	**.019**	**.003**	**.006**	**.002**	**.007**	**.002**	**.000**	**.036**	**.011**	**.006**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.516	.445	.265	.779	.730	.960	.431	.805	.514	.443	.481	1.01

Elem	Mo2020	Mo2045	Ni2316	Pb2203	Pb2169	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.010**	**.004**	**.015**	**.003**	**.000**	**.002**	**.002**	**.001**	**.000**	**.003**	**.001**	**.004**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.460	.413	.290	.316	1.76	.261	.499	.755	.840	.239	1.56	.345

Elem	Zn2062	Zn2138	Na5889	Na5895	B_2497	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.026**	**.051**	**.015**	**.004**	**.003**	**.001**
Stddev	.000	.000	.000	.000	.000	.000
%RSD	.388	.269	.810	.669	.456	1.44

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**172440.**	**1759300.**	**245380.**
Stddev	245.	4397.	2505.
%RSD	.14198	.24990	1.0209

Sample Name: CalStd10=10000 Acquired: 11/04/2020 13:06:26 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	As1972	Ca3158	Ca3968	Co2286	Co2388	Cr2055	Cr2677	Cu2247	Cu3247	Fe2599	Mg2025
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.018**	**.006**	**.003**	**.552**	**.169**	**.012**	**.186**	**.026**	**.067**	**.022**	**.015**	**.002**
Stddev	.000	.000	.000	.007	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.308	.463	.363	1.35	.259	.691	.163	.458	.180	.377	.731	.927

Elem	Mg2802	Mn2576	Mn2593	Mo2045	Ni2316	Pb2169	Sb2068	Sb2175	Se2062	V_2908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.329**	**.103**	**.062**	**.039**	**.148**	**.002**	**.022**	**.022**	**.002**	**.013**	**.035**	**.254**
Stddev	.005	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.63	1.07	.621	.297	.187	.441	.333	.389	.523	.795	.398	.091

Elem	Na5889	Na5895	B_2497	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.081**	**.035**	**.026**	**.007**
Stddev	.000	.000	.000	.000
%RSD	.385	.339	.463	.392

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**170150.**	**1731600.**	**246650.**
Stddev	115.	8379.	1189.
%RSD	.06757	.48390	.48208

Sample Name: CalStd12=100K Acquired: 11/04/2020 13:13:41 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Cr2055	Cu2247	Cu3247	Mn2593	Pb2169	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.83**	**.737**	**.228**	**.649**	**.023**	**2.56**
Stddev	.02	.008	.003	.006	.000	.10
%RSD	1.33	1.11	1.12	.973	1.17	3.89

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**170100.**	**1734700.**	**249040.**
Stddev	545.	4805.	2131.
%RSD	.32033	.27696	.85577

Sample Name: CalStd13=100000 Acquired: 11/04/2020 13:20:32 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2599	Mg2025	Na5889	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.190**	**.032**	**.160**	**.022**	**.748**	**.350**
Stddev	.003	.000	.002	.000	.011	.005
%RSD	1.36	1.15	1.36	.391	1.49	1.43

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**165830.**	**1683700.**	**243340.**
Stddev	53.	8285.	2430.
%RSD	.03217	.49207	.99845

Sample Name: CalStd14=500000 Acquired: 11/04/2020 13:27:03 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2599	Mg2025
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.954**	**.151**	**.748**	**.105**
Stddev	.005	.001	.003	.000
%RSD	.566	.408	.382	.379

Int. Std.	Y_3242	Y_3710
Units	Cts/S	Cts/S
Avg	**1587200.**	**236920.**
Stddev	10910.	1180.
%RSD	.68739	.49814

Sample Name: CalibStd15=1000k Acquired: 11/04/2020 13:33:35 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Mg2025	Na5895	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.96**	**.301**	**.200**	**3.46**	**.727**
Stddev	.01	.002	.001	.04	.007
%RSD	.306	.526	.486	1.18	.956

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**137120.**	**1409000.**	**223010.**
Stddev	330.	3229.	1441.
%RSD	.24038	.22920	.64615

Sample Name: Ag Ba 1000, 50000 Acquired: 11/04/2020 13:40:44 Type: Cal
Method: DOD Calibration Updated 060614(v4131) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba4934
Units	Cts/S
Avg	**2.19**
Stddev	.04
%RSD	1.77

Int. Std.	Y_3710
Units	Cts/S
Avg	**253380.**
Stddev	1566.
%RSD	.61799

Sample Name: icv Acquired: 11/04/2020 14:00:45 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599	Mg2025
Avg	**47.5**	**11500.**	**2060.**	**1900.**	**46.6**	**10200.**	**49.4**	**495.**	**209.**	**240.**	**5040.**	**10000.**
Stddev	1.0	154.	14.	32.	.3	114.	.2	1.	3.	.	84.	69.
%RSD	2.15	1.33	.668	1.69	.750	1.12	.435	.285	1.30	.166	1.67	.685
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Pb2169	Sb2175	Se2062	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Avg	**530.**	**523.**	**521.**	**496.**	**483.**	**515.**	**2090.**	**2010.**	**511.**	**512.**	**518.**	**5000.**
Stddev	4.	2.	2.	4.	20.	4.	38.	8.	6.	2.	2.	72.
%RSD	.827	.448	.359	.771	4.17	.719	1.82	.382	1.16	.332	.430	1.45
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	B_2497	K_7664
Avg	**530.**	**4990.**
Stddev	3.	104.
%RSD	.493	2.08
Check ?	None	None
Value		
Range		

Sample Name: icv Acquired: 11/04/2020 14:00:45 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**172280.**	**1763100.**	**248810.**
Stddev	549.	13744.	2826.
%RSD	.31849	.77949	1.1360

Sample Name: ICVLL Acquired: 11/04/2020 14:06:58 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Avg	F **35.0**	**1250.**	**1220.**	**55.4**	**31.3**	**11.9**	**1590.**	**15.9**	**31.3**	**32.8**	**32.6**	**967.**
Stddev	.7	4.	4.	1.6	.5	.0	25.	.1	.6	1.0	1.0	10.
%RSD	2.03	.290	.363	2.84	1.53	.209	1.57	.877	1.81	2.90	3.06	1.03
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	60.0											
Range	-30.0%											

Elem	Mg2025	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Avg	**1540.**	**1560.**	**34.5**	**30.2**	**33.4**	**32.6**	**65.3**	**66.4**	**61.6**	**31.7**	**32.0**	**33.9**
Stddev	7.	8.	.2	.3	.2	1.2	1.6	5.2	2.1	.3	.3	.1
%RSD	.437	.489	.714	.980	.559	3.55	2.43	7.75	3.40	.868	1.02	.221
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Na5889	B_2497	K_7664
Avg	**3080.**	**64.4**	**15100.**
Stddev	27.	.4	101.
%RSD	.859	.642	.669
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ICVLL Acquired: 11/04/2020 14:06:58 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**171510.**	**1751000.**	**244830.**
Stddev	304.	9092.	1373.
%RSD	.17739	.51923	.56064

Sample Name: icb Acquired: 11/04/2020 14:20:19 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Avg	**-.014**	**-2.79**	**1.31**	**-7.45**	**.279**	**-.101**	**.352**	**.113**	**.248**	**-.496**	**.614**	**.490**
Stddev	.524	.49	7.10	3.46	.748	.018	.191	.061	.261	.654	1.15	2.72
%RSD	3850.	17.4	541.	46.4	268.	17.9	54.1	54.0	105.	132.	188.	554.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Avg	**.215**	**.058**	**-4.08**	**.227**	**-.470**	**2.56**	**-.792**	**-1.82**	**-1.24**	**-1.14**	**.113**	**-20.8**
Stddev	.053	.026	.20	.133	2.82	.78	3.87	1.43	.60	.19	.082	13.9
%RSD	24.8	45.6	4.86	58.7	599.	30.2	488.	78.6	48.4	16.4	73.1	66.9
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	B_2497	K_7664
Avg	**-.569**	**34.3**
Stddev	.267	17.3
%RSD	46.9	50.4
Check ?	None	None
Value		
Range		

Sample Name: icb Acquired: 11/04/2020 14:20:19 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**177160.**	**1813500.**	**249710.**
Stddev	159.	6192.	1341.
%RSD	.08968	.34144	.53693

Sample Name: ICSA Acquired: 11/04/2020 14:32:35 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Avg	**-.373**	**578000.**	**17.1**	**-.000**	**.000**	**564000.**	**1.07**	**1.13**	**-.739**	**1.20**	**547000.**
Stddev	1.78	6950.	20.4	1.37	.161	7740.	1.32	.59	.539	1.65	7730.
%RSD	477.	1.20	119.	1930000.	3800000.	1.37	124.	52.1	73.0	137.	1.41
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Mg2025	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2908	V_2924	Zn2062
Avg	**525000.**	**-1.95**	**.000**	**-1.73**	**.434**	**4.33**	**.034**	**-4.30**	**24300.**	**23800.**	**.564**
Stddev	4990.	.12	.715	.80	2.56	4.55	11.6	4.91	277.	136.	.777
%RSD	.949	5.99	223000.	46.0	590.	105.	33900.	114.	1.14	.571	138.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	Chk Pass
High Limit											
Low Limit											

Elem	Zn2138	Na5889	B_2497	K_7664
Avg	**-14.4**	**44.2**	**-.059**	**-56.7**
Stddev	1.2	21.2	8.98	21.9
%RSD	8.18	48.1	15300.	38.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Sample Name: ICSA Acquired: 11/04/2020 14:32:35 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**153060.**	**1583400.**	**230870.**
Stddev	198.	8589.	3552.
%RSD	.12925	.54245	1.5386

Sample Name: ICSAB Acquired: 11/04/2020 14:39:02 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3382	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2288	Co2286	Cr2677	Cu2230	Fe2599
Avg	**405.**	**500000.**	**591.**	**498.**	**489.**	**493000.**	**530.**	**491.**	**537.**	**502.**	**478000.**
Stddev	15.	4390.	18.	5.	3.	4280.	5.	4.	4.	3.	4950.
%RSD	3.62	.879	2.96	.936	.638	.867	1.03	.891	.734	.608	1.04
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Mg2025	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Avg	**475000.**	**546.**	**533.**	**496.**	**456.**	**516.**	**483.**	**578.**	**568.**	**483.**	**514.**
Stddev	4690.	4.	5.	5.	3.	6.	14.	4.	5.	5.	5.
%RSD	.987	.650	.852	1.01	.583	1.11	2.98	.741	.828	.940	1.03
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Na5889	Na5895	B_2497	K_7664
Avg	**53600.**	**54000.**	**574.**	**52300.**
Stddev	485.	471.	9.	550.
%RSD	.905	.873	1.59	1.05
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Sample Name: ICSAB Acquired: 11/04/2020 14:39:02 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**154810.**	**1567100.**	**237470.**
Stddev	402.	8876.	1872.
%RSD	.25995	.56640	.78843

Sample Name: ICVLLag mn Acquired: 11/04/2020 14:52:04 Type: Unk
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**10.6**	**.885**	**6.80**	**-8.27**	**.434**	**-.032**	**5.27**	**.036**	**.263**	**.010**	**1.00**	**189.**
Stddev	.4	.788	5.36	2.77	.233	.031	.07	.310	.544	.485	.43	29.
%RSD	3.87	88.9	78.8	33.6	53.7	96.8	1.33	855.	207.	5050.	43.1	15.2

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**3.97**	**10.6**	**-3.92**	**.222**	**-.837**	**2.78**	**5.74**	**-1.80**	**-.464**	**-.919**	**.459**	**6.97**
Stddev	.08	.1	.07	.048	3.26	1.68	1.64	1.70	.410	.134	.029	14.4
%RSD	2.02	.911	1.91	21.4	390.	60.5	28.5	94.5	88.3	14.6	6.31	207.

Elem	B_2497	K_7664
Units	ug/L	ug/L
Avg	**-.755**	**55.7**
Stddev	.548	42.2
%RSD	72.6	75.8

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**173450.**	**1773100.**	**240850.**
Stddev	554.	4554.	1047.
%RSD	.31920	.25682	.43460

Sample Name: ccv1 Acquired: 11/05/2020 05:38:44 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2288	Co2388	Cr2055	Cu2247	Cu3247	Fe2599
Avg	**461.**	**4860.**	**4960.**	**4630.**	**469.**	**5000.**	**465.**	**4910.**	**4960.**	**4730.**	**4820.**	**4890.**
Stddev	5.	45.	13.	43.	2.	57.	2.	20.	9.	4.	42.	27.
%RSD	.996	.930	.259	.921	.483	1.15	.488	.399	.182	.092	.876	.549
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2025	Mn2593	Mo2045	Ni2316	Pb2169	Sb2068	Se2062	Tl1908	V_2908	V_2924	Zn2062	Na5889
Avg	**5020.**	**5070.**	**4960.**	**5110.**	**5120.**	**5150.**	**5420.**	**4810.**	**5040.**	**4800.**	**5090.**	**48000.**
Stddev	30.	32.	8.	5.	23.	16.	68.	11.	37.	39.	16.	428.
%RSD	.600	.637	.165	.107	.443	.303	1.25	.225	.741	.815	.314	.893
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Na5895	B_2497	K_7664
Avg	**48500.**	**5120.**	**46700.**
Stddev	450.	35.	419.
%RSD	.929	.686	.898
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv1 Acquired: 11/05/2020 05:38:44 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**173400.**	**1740400.**	**244570.**
Stddev	236.	8951.	2094.
%RSD	.13637	.51433	.85613

Sample Name: ccv2 Acquired: 11/05/2020 05:44:00 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2599	Mg2802
Avg	**48.3**	**487.**	**515.**	**509.**	**47.2**	**499.**	**52.1**	**488.**	**529.**	**502.**	**502.**	**520.**
Stddev	1.2	2.	3.	2.	.2	2.	.1	2.	1.	2.	3.	1.
%RSD	2.45	.446	.576	.337	.434	.497	.149	.458	.197	.403	.689	.220
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Pb2169	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Avg	**529.**	**522.**	**530.**	**508.**	**540.**	**524.**	**541.**	**517.**	**485.**	**509.**	**518.**	**4860.**
Stddev	3.	1.	.	2.	11.	1.	4.	4.	4.	1.	1.	21.
%RSD	.500	.264	.091	.404	2.07	.147	.756	.690	.757	.198	.246	.424
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	B_2497	K_7664
Avg	**521.**	**4830.**
Stddev	.	63.
%RSD	.084	1.30
Check ?	Chk Pass	Chk Pass
Value		
Range		

Sample Name: ccv2 Acquired: 11/05/2020 05:44:00 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**177420.**	**1782900.**	**249690.**
Stddev	250.	3324.	855.
%RSD	.14103	.18645	.34225

Sample Name: ccb Acquired: 11/05/2020 05:49:49 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Avg	**-1.13**	**-3.40**	**4.58**	**-7.54**	**.184**	**-.176**	**1.19**	**-.028**	**.818**	**-.474**	**1.02**	**1.44**
Stddev	.88	.96	.92	2.69	.469	.005	.17	.048	.205	.053	.38	1.79
%RSD	77.9	28.4	20.1	35.6	255.	3.03	14.3	168.	25.1	11.3	37.6	124.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Avg	**.478**	**.229**	**-2.99**	**.183**	**1.33**	**5.50**	**3.68**	**-.896**	**-.252**	**-.727**	**.365**	**-2.21**
Stddev	.034	.078	.47	.460	1.47	2.25	5.44	1.24	.367	.148	.113	17.7
%RSD	7.22	34.1	15.6	252.	111.	41.0	148.	138.	146.	20.4	30.9	801.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	B_2497	K_7664
Avg	**1.20**	**-2.64**
Stddev	.35	21.5
%RSD	29.2	815.
Check ?	None	None
Value		
Range		

Sample Name: ccb Acquired: 11/05/2020 05:49:49 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**181920.**	**1830500.**	**252880.**
Stddev	97.	5571.	3320.
%RSD	.05318	.30433	1.3130

Sample Name: lcsw78777 Acquired: 11/05/2020 06:22:02 Type: Unk
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**19.6**	**840.**	**854.**	**874.**	**805.**	**19.0**	**201000.**	**20.1**	**194.**	**86.6**	**104.**
Stddev	.9	4.	9.	6.	3.	.1	789.	.1	1.	.6	1.
%RSD	4.48	.502	1.03	.674	.392	.393	.393	.692	.531	.745	1.06

Elem	Fe2599	Mg2025	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Units	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**403.**	**95300.**	**213.**	**2080.**	**208.**	**203.**	**216.**	**854.**	**765.**	**203.**	**216.**
Stddev	5.	642.	2.	2.	.	2.	3.	5.	2.	1.	.
%RSD	1.13	.673	.786	.114	.207	1.21	1.23	.594	.236	.728	.226

Elem	Zn2138	Na5889	Na5895	B_2497	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**226.**	**97500.**	**98800.**	**-.968**	**97000.**
Stddev	.	907.	842.	.581	738.
%RSD	.175	.931	.852	60.1	.761

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**166120.**	**1677100.**	**241770.**
Stddev	156.	9698.	1407.
%RSD	.09391	.57827	.58199

Sample Name: mbw78777 Acquired: 11/05/2020 06:28:13 Type: Unk
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.311**	**-1.13**	**1.64**	**-4.62**	**.694**	**-.143**	**11.1**	**-.040**	**.001**	**-.497**	**.805**	**3.32**
Stddev	.619	.43	7.46	4.44	.265	.009	.7	.123	.193	.197	.856	2.23
%RSD	199.	38.6	454.	96.2	38.1	6.57	6.17	310.	34900.	39.6	106.	67.3

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**2.62**	**.076**	**-2.70**	**.198**	**.988**	**2.32**	**2.28**	**-2.16**	**-.803**	**-.813**	**.629**	**10.3**
Stddev	.14	.008	.42	.293	2.54	1.94	6.64	.80	1.13	.093	.016	4.0
%RSD	5.56	11.2	15.4	148.	257.	83.9	291.	37.2	141.	11.4	2.60	38.7

Elem	B_2497	K_7664
Units	ug/L	ug/L
Avg	**-.406**	**32.9**
Stddev	.609	27.9
%RSD	150.	84.6

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**178150.**	**1799300.**	**246540.**
Stddev	197.	4542.	1360.
%RSD	.11056	.25245	.55182

Sample Name: 495127 Acquired: 11/05/2020 06:34:35 Type: Unk
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-1.02**	**84.7**	**82.5**	**-9.01**	**53.5**	**-.103**	**59000.**	**-.098**	**.717**	**2.37**	**1.87**	**188.**
Stddev	.54	2.0	6.8	3.31	.3	.018	258.	.204	.109	.50	.53	3.
%RSD	53.2	2.30	8.24	36.7	.654	17.4	.438	209.	15.3	21.2	28.2	1.75

Elem	Mg2025	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Units	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**24000.**	**12.8**	**.687**	**-.013**	**8.73**	**4.45**	**-2.78**	**-2.22**	**.043**	**7.85**	**8.90**	**4060.**
Stddev	150.	.0	.409	.395	.95	2.82	2.96	1.62	.794	.27	.09	19.
%RSD	.625	.292	59.6	3130.	10.9	63.4	107.	73.1	1850.	3.46	.958	.473

Elem	B_2497	K_7664
Units	ug/L	ug/L
Avg	**14.3**	**848.**
Stddev	.9	8.
%RSD	6.06	.928

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**174370.**	**1774600.**	**242640.**
Stddev	219.	5133.	620.
%RSD	.12537	.28921	.25545

Sample Name: 496544 Acquired: 11/05/2020 06:41:19 Type: Unk
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.944**	**1470.**	**1370.**	**-5.69**	**129.**	**-.087**	**80400.**	**.177**	**2.43**	**5.25**	**9.85**	**2300.**
Stddev	.986	5.	6.	6.59	.	.042	814.	.303	.43	.48	.74	25.
%RSD	104.	.347	.426	116.	.243	48.3	1.01	171.	17.6	9.16	7.49	1.10

Elem	Mg2025	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Units	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**40900.**	**634.**	**-2.68**	**2.50**	**8.05**	**2.02**	**.542**	**-1.03**	**2.35**	**19.1**	**20.0**	**16900.**
Stddev	228.	4.	.13	.11	2.73	2.20	3.96	1.07	1.03	.2	.0	102.
%RSD	.558	.671	4.85	4.44	33.8	109.	731.	105.	43.9	1.08	.200	.603

Elem	Na5895	B_2497	K_7664
Units	ug/L	ug/L	ug/L
Avg	**17000.**	**12.2**	**4840.**
Stddev	84.	1.0	41.
%RSD	.497	8.12	.847

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**173340.**	**1738800.**	**241950.**
Stddev	244.	10574.	2443.
%RSD	.14091	.60814	1.0097

Sample Name: I496544 Acquired: 11/05/2020 06:47:50 Type: Unk
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-1.16**	**304.**	**390.**	**-6.12**	**24.5**	**-.100**	**21700.**	**-.142**	**.748**	**1.04**	**1.80**	**620.**
Stddev	.91	28.	29.	2.60	1.9	.019	1340.	.217	.511	.42	1.19	38.
%RSD	78.8	9.36	7.53	42.4	7.60	18.8	6.15	153.	68.3	40.2	66.3	6.13

Elem	Mg2025	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Units	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**7830.**	**146.**	**-3.85**	**.787**	**.594**	**3.95**	**-1.29**	**-.992**	**.857**	**2.74**	**4.11**	**4470.**
Stddev	680.	7.	.25	.124	1.07	2.47	3.44	.955	1.31	.39	.36	243.
%RSD	8.68	4.46	6.55	15.8	179.	62.4	267.	96.4	152.	14.2	8.78	5.43

Elem	B_2497	K_7664
Units	ug/L	ug/L
Avg	**1.70**	**1260.**
Stddev	.42	75.
%RSD	24.6	5.91

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**177450.**	**1797000.**	**251900.**
Stddev	332.	2131.	1045.
%RSD	.18698	.11859	.41502

Sample Name: dup496544 Acquired: 11/05/2020 06:54:37 Type: Unk
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.601**	**1770.**	**1630.**	**-1.55**	**131.**	**-.077**	**80200.**	**-.071**	**2.44**	**5.82**	**6.36**	**2460.**
Stddev	.478	9.	15.	5.00	1.	.022	1090.	.314	.59	.38	1.21	44.
%RSD	79.5	.504	.900	322.	1.00	28.5	1.36	439.	24.2	6.56	19.0	1.81

Elem	Mg2025	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Units	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**40900.**	**637.**	**-2.97**	**2.96**	**6.90**	**.851**	**.254**	**-1.34**	**3.30**	**17.0**	**18.1**	**16800.**
Stddev	349.	3.	.60	.45	2.39	2.95	3.58	2.21	.77	.3	.1	250.
%RSD	.855	.546	20.0	15.1	34.6	347.	1410.	165.	23.2	1.57	.409	1.49

Elem	Na5895	B_2497	K_7664
Units	ug/L	ug/L	ug/L
Avg	**16900.**	**13.1**	**4910.**
Stddev	212.	.2	77.
%RSD	1.26	1.24	1.57

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**172650.**	**1736800.**	**242640.**
Stddev	150.	7250.	2476.
%RSD	.08692	.41742	1.0204

Sample Name: ccv1 Acquired: 11/05/2020 07:01:07 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2288	Co2388	Cr2055	Cu2247	Cu3247	Fe2599
Avg	**475.**	**4930.**	**5090.**	**4690.**	**471.**	**5050.**	**482.**	**5080.**	**5020.**	**4690.**	**4830.**	**4980.**
Stddev	2.	10.	20.	17.	2.	25.	1.	22.	11.	13.	22.	44.
%RSD	.423	.200	.391	.369	.422	.493	.297	.432	.224	.277	.449	.892
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2025	Mn2593	Mo2045	Ni2316	Pb2169	Sb2068	Se2062	Tl1908	V_2908	V_2924	Zn2062	Na5889
Avg	**5000.**	**5040.**	**5060.**	**5110.**	**5090.**	**5110.**	**5280.**	**4780.**	**5070.**	**4940.**	**5090.**	**48600.**
Stddev	34.	35.	10.	8.	20.	19.	18.	12.	43.	26.	11.	92.
%RSD	.688	.690	.188	.149	.392	.380	.334	.249	.853	.523	.223	.189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Na5895	B_2497	K_7664
Avg	**49100.**	**5090.**	**47400.**
Stddev	67.	26.	221.
%RSD	.136	.515	.466
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv1 Acquired: 11/05/2020 07:01:07 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**173270.**	**1752200.**	**239350.**
Stddev	345.	8198.	1681.
%RSD	.19926	.46787	.70250

Sample Name: ccv2 Acquired: 11/05/2020 07:06:23 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Avg	**48.6**	**532.**	**502.**	**516.**	**500.**	**47.4**	**510.**	**51.3**	**499.**	**524.**	**497.**	**511.**
Stddev	.7	3.	5.	4.	3.	.2	4.	.6	2.	3.	1.	7.
%RSD	1.54	.473	1.02	.692	.534	.482	.841	1.14	.331	.510	.291	1.29
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Pb2169	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Avg	**508.**	**533.**	**515.**	**530.**	**506.**	**517.**	**524.**	**526.**	**514.**	**496.**	**506.**	**514.**
Stddev	4.	2.	1.	2.	2.	24.	1.	4.	2.	3.	2.	1.
%RSD	.709	.357	.167	.292	.474	4.61	.282	.845	.472	.570	.417	.223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Na5889	B_2497	K_7664
Avg	**4980.**	**517.**	**4890.**
Stddev	55.	3.	39.
%RSD	1.11	.523	.788
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv2 Acquired: 11/05/2020 07:06:23 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**177780.**	**1798700.**	**243190.**
Stddev	355.	8204.	1988.
%RSD	.19980	.45612	.81725

Sample Name: ccb Acquired: 11/05/2020 07:12:11 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Avg	**-.400**	**-4.01**	**-8.56**	**-5.10**	**.023**	**-.133**	**1.58**	**-.043**	**.458**	**-.131**	**.290**	**-.573**
Stddev	.552	1.21	7.07	6.87	.343	.036	.08	.155	.203	.412	.892	2.50
%RSD	138.	30.2	82.6	135.	1490.	27.0	5.26	360.	44.3	313.	307.	437.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Avg	**.627**	**.245**	**-3.09**	**.377**	**-.791**	**2.98**	**3.70**	**-1.30**	**-.518**	**-1.06**	**.399**	**-6.28**
Stddev	.026	.066	.19	.647	1.83	1.91	7.95	1.22	.682	.21	.055	4.94
%RSD	4.18	26.9	6.11	172.	232.	64.0	215.	93.7	132.	19.5	13.9	78.7
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	B_2497	K_7664
Avg	**1.76**	**-14.2**
Stddev	1.13	44.4
%RSD	64.6	313.
Check ?	None	None
Value		
Range		

Sample Name: ccb Acquired: 11/05/2020 07:12:11 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**182150.**	**1837000.**	**247880.**
Stddev	159.	5188.	2103.
%RSD	.08701	.28244	.84846

Sample Name: msw496544 Acquired: 11/05/2020 07:18:35 Type: Unk
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**19.5**	**3180.**	**867.**	**917.**	**19.2**	**277000.**	**19.8**	**196.**	**91.5**	**108.**	**2990.**
Stddev	.3	75.	10.	4.	.0	5750.	.1	1.	.3	2.	56.
%RSD	1.61	2.37	1.10	.459	.142	2.07	.586	.464	.318	1.41	1.86

Elem	Mg2025	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Units	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**133000.**	**826.**	**2080.**	**208.**	**200.**	**212.**	**838.**	**756.**	**209.**	**231.**	**241.**
Stddev	1030.	1.	4.	1.	2.	3.	13.	3.	1.	.	.
%RSD	.771	.148	.198	.433	1.17	1.21	1.50	.429	.668	.154	.092

Elem	Na5895	B_2497	K_7664
Units	ug/L	ug/L	ug/L
Avg	**116000.**	**16.5**	**103000.**
Stddev	2120.	1.0	1710.
%RSD	1.83	6.19	1.66

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**163390.**	**1660800.**	**232410.**
Stddev	502.	7654.	5629.
%RSD	.30715	.46084	2.4221

Sample Name: msdw496544 Acquired: 11/05/2020 07:24:35 Type: Unk
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**18.9**	**3190.**	**879.**	**927.**	**19.4**	**279000.**	**20.4**	**199.**	**92.0**	**109.**	**3010.**
Stddev	.6	19.	5.	4.	.1	1560.	.5	.	.7	.	17.
%RSD	3.02	.606	.511	.422	.408	.557	2.23	.177	.770	.415	.548

Elem	Mg2025	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Units	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**135000.**	**832.**	**2110.**	**210.**	**204.**	**216.**	**843.**	**759.**	**210.**	**233.**	**243.**
Stddev	430.	4.	2.	1.	3.	3.	11.	3.	1.	.	.
%RSD	.319	.496	.108	.305	1.36	1.35	1.25	.331	.399	.113	.149

Elem	Na5895	B_2497	K_7664
Units	ug/L	ug/L	ug/L
Avg	**116000.**	**16.2**	**103000.**
Stddev	497.	.5	269.
%RSD	.429	3.28	.261

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**163440.**	**1654700.**	**232180.**
Stddev	535.	9757.	1697.
%RSD	.32744	.58963	.73065

Sample Name: pdsw496544 Acquired: 11/05/2020 07:30:34 Type: Unk
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**89.8**	**5510.**	**3870.**	**3760.**	**84.5**	**459000.**	**87.2**	**869.**	**380.**	**441.**	**4220.**
Stddev	.3	224.	25.	151.	.3	15200.	.3	3.	3.	3.	103.
%RSD	.364	4.06	.632	4.01	.390	3.31	.293	.369	.663	.597	2.43

Elem	Mg2025	Mn2593	Mo2045	Ni2316	Pb2203	Pb2169	Sb2068	Se2062	Tl1908	V_2924	Zn2062
Units	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**212000.**	**1290.**	**1880.**	**908.**	**861.**	**956.**	**959.**	**3900.**	**3310.**	**919.**	**917.**
Stddev	1390.	37.	4.	2.	2.	11.	3.	41.	7.	5.	1.
%RSD	.657	2.84	.205	.167	.273	1.11	.321	1.04	.220	.596	.146

Elem	Zn2138	Na5895	B_2497	K_7664
Units	ug/L	ug/L	ug/L	ug/L
Avg	**972.**	**207000.**	**13.3**	**5010.**
Stddev	1.	7080.	.7	56.
%RSD	.052	3.42	5.54	1.12

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**160980.**	**1644400.**	**228600.**
Stddev	272.	9797.	2358.
%RSD	.16901	.59574	1.0313

Sample Name: ccv1 Acquired: 11/05/2020 08:21:00 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2288	Co2388	Cr2055	Cu2247	Cu3247	Fe2599
Avg	**481.**	**5080.**	**5230.**	**4810.**	**470.**	**5120.**	**497.**	**5160.**	**5090.**	**4690.**	**4910.**	**5100.**
Stddev	1.	64.	16.	58.	1.	49.	1.	18.	9.	7.	58.	60.
%RSD	.270	1.25	.306	1.20	.218	.952	.239	.355	.173	.140	1.19	1.17
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2025	Mn2593	Mo2045	Ni2316	Pb2169	Sb2068	Se2062	Tl1908	V_2908	V_2924	Zn2062	Na5889
Avg	**5000.**	**5040.**	**5170.**	**5120.**	**5130.**	**5110.**	**5120.**	**4770.**	**5100.**	**5050.**	**5090.**	**49200.**
Stddev	31.	49.	10.	4.	11.	9.	37.	10.	51.	19.	10.	560.
%RSD	.618	.963	.202	.074	.205	.166	.717	.211	1.01	.368	.189	1.14
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Na5895	B_2497	K_7664
Avg	**50200.**	**5050.**	**48600.**
Stddev	556.	29.	553.
%RSD	1.11	.580	1.14
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv1 Acquired: 11/05/2020 08:21:00 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**173830.**	**1774000.**	**234440.**
Stddev	380.	7722.	2701.
%RSD	.21847	.43528	1.1523

Sample Name: ccv2 Acquired: 11/05/2020 08:26:18 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Avg	**49.6**	**528.**	**514.**	**519.**	**500.**	**47.8**	**527.**	**51.5**	**514.**	**526.**	**502.**	**518.**
Stddev	.3	5.	12.	6.	2.	.1	9.	.2	3.	1.	2.	10.
%RSD	.505	.901	2.38	1.19	.443	.236	1.75	.444	.530	.217	.342	1.93
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Pb2169	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Avg	**506.**	**543.**	**517.**	**536.**	**510.**	**523.**	**529.**	**520.**	**519.**	**514.**	**512.**	**519.**
Stddev	2.	1.	1.	1.	3.	18.	2.	11.	2.	2.	1.	1.
%RSD	.362	.195	.184	.150	.518	3.51	.358	2.12	.414	.385	.208	.123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Na5889	B_2497	K_7664
Avg	**5150.**	**519.**	**5100.**
Stddev	100.	4.	119.
%RSD	1.94	.684	2.34
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv2 Acquired: 11/05/2020 08:26:18 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	176960.	1807600.	236250.
Stddev	328.	6251.	3857.
%RSD	.18516	.34583	1.6326

Sample Name: ccb Acquired: 11/05/2020 08:32:06 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Avg	**-.345**	**-4.15**	**-1.24**	**-6.60**	**-.112**	**-.094**	**2.12**	**.070**	**.358**	**-.650**	**.310**	**-.538**
Stddev	.361	1.05	6.82	3.47	.298	.012	.13	.128	.418	.715	.482	1.81
%RSD	105.	25.3	552.	52.6	266.	12.8	6.04	182.	117.	110.	155.	337.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

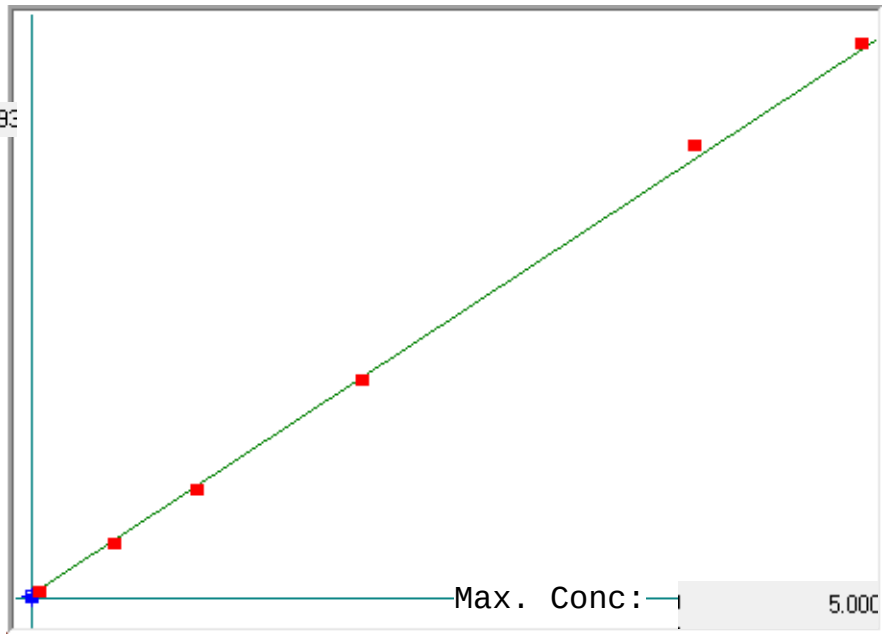
Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Avg	**.710**	**.129**	**-3.05**	**.107**	**.501**	**2.76**	**-.014**	**-1.98**	**-1.16**	**-.754**	**.409**	**33.6**
Stddev	.045	.039	.42	.441	1.07	2.01	7.74	1.74	.17	.099	.124	4.9
%RSD	6.38	30.5	14.0	411.	214.	72.9	55800.	88.2	15.0	13.1	30.2	14.6
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	B_2497	K_7664
Avg	**1.12**	**16.6**
Stddev	.43	39.5
%RSD	38.8	237.
Check ?	None	None
Value		
Range		

Sample Name: ccb Acquired: 11/05/2020 08:32:06 Type: QC
Method: DOD Calibration Updated 060614(v4131) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**181550.**	**1842500.**	**240830.**
Stddev	243.	6072.	2348.
%RSD	.13407	.32954	.97480

Hg WATERS



A= 0.0000e+000

B= 1.6463e-004

C= -3.0128e-002

Rho= 0.9996381

Accept= Accepted

Accepted Date=

11/05/20 13:17

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
CALIBRATION BLANK	0.000	0.000	0.000	183	3.192	188	184	184	179	
0.05	0.050	0.046	-0.004	464	3.8 %	434	471	474	479	
0.5	0.500	0.490	-0.010	3157	4.0 %	2988	3097	3217	3329	
1.0	1.000	0.991	-0.009	6205	3.2 %	5922	6125	6315	6458	
2.0	2.000	1.995	-0.005	12299	3.2 %	11756	12141	12502	12797	
4.0	4.000	4.146	0.146	25368	3.3 %	24179	25044	25813	26437	
5.0	5.000	5.072	0.072	30993	3.3 %	29549	30605	31579	32240	

110520w

Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2020 12:33:09

Sample ID	Date	Element	Units	Extended ID	LT Mean Conc
CALIBRATION BLANK	05 Nov 2020 12:55:21	Hg			183.750
0.05	05 Nov 2020 12:58:31	Hg			464.500
0.5	05 Nov 2020 13:01:43	Hg			3157.750
1.0	05 Nov 2020 13:04:55	Hg			6205.000
2.0	05 Nov 2020 13:08:07	Hg			12299.000
4.0	05 Nov 2020 13:11:19	Hg			25368.250
5.0	05 Nov 2020 13:14:29	Hg			30993.250
ICV	05 Nov 2020 13:17:40	Hg			2.751
ICB	05 Nov 2020 13:29:25	Hg			-0.015
lcsw	05 Nov 2020 13:32:34	Hg			1.815
mbw	05 Nov 2020 13:38:53	Hg			-0.001
495734	05 Nov 2020 13:42:03	Hg			-0.002
495737	05 Nov 2020 13:45:12	Hg			-0.009
495740	05 Nov 2020 13:48:22	Hg			-0.011
495742	05 Nov 2020 13:51:31	Hg			0.006
497248dup 495742	05 Nov 2020 13:54:42	Hg			0.006
495744	05 Nov 2020 13:57:52	Hg			-0.014
495747	05 Nov 2020 14:01:02	Hg			-0.017
CCV	05 Nov 2020 14:04:13	Hg			3.108
CCB	05 Nov 2020 14:10:33	Hg			-0.009
495750	05 Nov 2020 14:13:42	Hg			-0.016
495726	05 Nov 2020 14:16:54	Hg			-0.005
495736	05 Nov 2020 14:20:05	Hg			-0.003
495739	05 Nov 2020 14:23:15	Hg			0.011
495741	05 Nov 2020 14:26:24	Hg			0.050
497262dup 495741	05 Nov 2020 14:29:34	Hg			0.047
495743	05 Nov 2020 14:32:43	Hg			-0.009
495745	05 Nov 2020 14:35:53	Hg			-0.002
495749	05 Nov 2020 14:39:03	Hg			-0.009
498048	05 Nov 2020 14:42:13	Hg			0.003
CCV	05 Nov 2020 14:45:23	Hg			3.218
CCB	05 Nov 2020 14:51:42	Hg			-0.003
498700dup 498048	05 Nov 2020 14:54:52	Hg			0.006
498049	05 Nov 2020 14:58:03	Hg			0.002
495127	05 Nov 2020 15:01:14	Hg			-0.009
497257dup 495127	05 Nov 2020 15:04:25	Hg			-0.001
496544	05 Nov 2020 15:07:37	Hg			0.002
497258msw 495127	05 Nov 2020 15:10:46	Hg			2.034
497259msdw 495127	05 Nov 2020 15:13:56	Hg			1.897
498701msw 498048	05 Nov 2020 15:17:06	Hg			2.046
498702msdw 498048	05 Nov 2020 15:20:16	Hg			2.035
497263msw 495741	05 Nov 2020 15:23:26	Hg			2.016
CCV	05 Nov 2020 15:26:36	Hg			3.344

110520w detailed

Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2020 12:33:09

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CALIBRATION BLANK - 1	05 Nov 2020 12:55:21	Hg			188	-
CALIBRATION BLANK - 2	05 Nov 2020 12:55:21	Hg			184	-
CALIBRATION BLANK - 3	05 Nov 2020 12:55:21	Hg			184	-
CALIBRATION BLANK - 4	05 Nov 2020 12:55:21	Hg			179	-
0.05 - 1	05 Nov 2020 12:58:31	Hg			434	-
0.05 - 2	05 Nov 2020 12:58:31	Hg			471	-
0.05 - 3	05 Nov 2020 12:58:31	Hg			474	-
0.05 - 4	05 Nov 2020 12:58:31	Hg			479	-
0.5 - 1	05 Nov 2020 13:01:43	Hg			2988	-
0.5 - 2	05 Nov 2020 13:01:43	Hg			3097	-
0.5 - 3	05 Nov 2020 13:01:43	Hg			3217	-
0.5 - 4	05 Nov 2020 13:01:43	Hg			3329	-
1.0 - 1	05 Nov 2020 13:04:55	Hg			5922	-
1.0 - 2	05 Nov 2020 13:04:55	Hg			6125	-
1.0 - 3	05 Nov 2020 13:04:55	Hg			6315	-
1.0 - 4	05 Nov 2020 13:04:55	Hg			6458	-
2.0 - 1	05 Nov 2020 13:08:07	Hg			11756	-
2.0 - 2	05 Nov 2020 13:08:07	Hg			12141	-
2.0 - 3	05 Nov 2020 13:08:07	Hg			12502	-
2.0 - 4	05 Nov 2020 13:08:07	Hg			12797	-
4.0 - 1	05 Nov 2020 13:11:19	Hg			24179	-
4.0 - 2	05 Nov 2020 13:11:19	Hg			25044	-
4.0 - 3	05 Nov 2020 13:11:19	Hg			25813	-
4.0 - 4	05 Nov 2020 13:11:19	Hg			26437	-
5.0 - 1	05 Nov 2020 13:14:29	Hg			29549	-
5.0 - 2	05 Nov 2020 13:14:29	Hg			30605	-
5.0 - 3	05 Nov 2020 13:14:29	Hg			31579	-
5.0 - 4	05 Nov 2020 13:14:29	Hg			32240	-
ICV - 1	05 Nov 2020 13:17:40	Hg			16262	(L)88.2% 2.647
ICV - 2	05 Nov 2020 13:17:40	Hg			16663	(L)90.4% 2.713
ICV - 3	05 Nov 2020 13:17:40	Hg			17092	(L)92.8% 2.784
ICV - 4	05 Nov 2020 13:17:40	Hg			17587	95.5% 2.865
ICV - 1	05 Nov 2020 13:20:49	Hg			16114	(L)87.4% 2.623
ICV - 2	05 Nov 2020 13:20:49	Hg			16667	(L)90.5% 2.714
ICV - 3	05 Nov 2020 13:20:49	Hg			17153	(L)93.1% 2.794
ICV - 4	05 Nov 2020 13:20:49	Hg			17602	95.6% 2.868
ICB - 1	05 Nov 2020 13:29:25	Hg			101	-0.014
ICB - 2	05 Nov 2020 13:29:25	Hg			87	-0.016
ICB - 3	05 Nov 2020 13:29:25	Hg			90	-0.015
ICB - 4	05 Nov 2020 13:29:25	Hg			89	-0.015
lcsw - 1	05 Nov 2020 13:32:34	Hg			10683	1.729
lcsw - 2	05 Nov 2020 13:32:34	Hg			11021	1.784
lcsw - 3	05 Nov 2020 13:32:34	Hg			11397	1.846
lcsw - 4	05 Nov 2020 13:32:34	Hg			11724	1.900
mbw - 1	05 Nov 2020 13:38:53	Hg			173	-0.002 [ ]
mbw - 2	05 Nov 2020 13:38:53	Hg			169	-0.002 [ ]
mbw - 3	05 Nov 2020 13:38:53	Hg			178	-0.001 [ ]
mbw - 4	05 Nov 2020 13:38:53	Hg			190	0.001
495734 - 1	05 Nov 2020 13:42:03	Hg			168	-0.002 [ ]
495734 - 2	05 Nov 2020 13:42:03	Hg			176	-0.001 [ ]
495734 - 3	05 Nov 2020 13:42:03	Hg			166	-0.003 [ ]
495734 - 4	05 Nov 2020 13:42:03	Hg			171	-0.002 [ ]
495737 - 1	05 Nov 2020 13:45:12	Hg			123	-0.010 [ ]
495737 - 2	05 Nov 2020 13:45:12	Hg			122	-0.010 [ ]
495737 - 3	05 Nov 2020 13:45:12	Hg			128	-0.009 [ ]
495737 - 4	05 Nov 2020 13:45:12	Hg			136	-0.008 [ ]
495740 - 1	05 Nov 2020 13:48:22	Hg			106	-0.013 [ ]
495740 - 2	05 Nov 2020 13:48:22	Hg			118	-0.011 [ ]
495740 - 3	05 Nov 2020 13:48:22	Hg			119	-0.011 [ ]
495740 - 4	05 Nov 2020 13:48:22	Hg			110	-0.012 [ ]
495742 - 1	05 Nov 2020 13:51:31	Hg			206	0.004
495742 - 2	05 Nov 2020 13:51:31	Hg			215	0.005
495742 - 3	05 Nov 2020 13:51:31	Hg			224	0.007
495742 - 4	05 Nov 2020 13:51:31	Hg			237	0.009
497248dup 495742 - 1	05 Nov 2020 13:54:42	Hg			213	0.005
497248dup 495742 - 2	05 Nov 2020 13:54:42	Hg			217	0.006
497248dup 495742 - 3	05 Nov 2020 13:54:42	Hg			214	0.005
497248dup 495742 - 4	05 Nov 2020 13:54:42	Hg			222	0.006
495744 - 1	05 Nov 2020 13:57:52	Hg			96	-0.014 [ ]
495744 - 2	05 Nov 2020 13:57:52	Hg			101	-0.014 [ ]
495744 - 3	05 Nov 2020 13:57:52	Hg			98	-0.014 [ ]
495744 - 4	05 Nov 2020 13:57:52	Hg			99	-0.014 [ ]
495747 - 1	05 Nov 2020 14:01:02	Hg			92	-0.015 [ ]
495747 - 2	05 Nov 2020 14:01:02	Hg			86	-0.016 [ ]
495747 - 3	05 Nov 2020 14:01:02	Hg			77	-0.017 [ ]
495747 - 4	05 Nov 2020 14:01:02	Hg			73	-0.018 [ ]
CCV - 1	05 Nov 2020 14:04:13	Hg			18317	99.5% 2.985
CCV - 2	05 Nov 2020 14:04:13	Hg			18853	102.5% 3.074
CCV - 3	05 Nov 2020 14:04:13	Hg			19369	105.3% 3.159

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Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2020 12:33:09

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CCV - 4	05 Nov 2020 14:04:13	Hg			19712	107.2% 3.215
CCB - 1	05 Nov 2020 14:10:33	Hg			113	-0.012
CCB - 2	05 Nov 2020 14:10:33	Hg			119	-0.011
CCB - 3	05 Nov 2020 14:10:33	Hg			134	-0.008
CCB - 4	05 Nov 2020 14:10:33	Hg			140	-0.007
495750 - 1	05 Nov 2020 14:13:42	Hg			83	-0.016 [ ]
495750 - 2	05 Nov 2020 14:13:42	Hg			88	-0.016 [ ]
495750 - 3	05 Nov 2020 14:13:42	Hg			86	-0.016 [ ]
495750 - 4	05 Nov 2020 14:13:42	Hg			79	-0.017 [ ]
495726 - 1	05 Nov 2020 14:16:54	Hg			138	-0.007 [ ]
495726 - 2	05 Nov 2020 14:16:54	Hg			150	-0.005 [ ]
495726 - 3	05 Nov 2020 14:16:54	Hg			162	-0.003 [ ]
495726 - 4	05 Nov 2020 14:16:54	Hg			167	-0.003 [ ]
495736 - 1	05 Nov 2020 14:20:05	Hg			155	-0.005 [ ]
495736 - 2	05 Nov 2020 14:20:05	Hg			171	-0.002 [ ]
495736 - 3	05 Nov 2020 14:20:05	Hg			170	-0.002 [ ]
495736 - 4	05 Nov 2020 14:20:05	Hg			165	-0.003 [ ]
495739 - 1	05 Nov 2020 14:23:15	Hg			232	0.008
495739 - 2	05 Nov 2020 14:23:15	Hg			234	0.008
495739 - 3	05 Nov 2020 14:23:15	Hg			246	0.010
495739 - 4	05 Nov 2020 14:23:15	Hg			282	0.016
495741 - 1	05 Nov 2020 14:26:24	Hg			476	0.048
495741 - 2	05 Nov 2020 14:26:24	Hg			485	0.050
495741 - 3	05 Nov 2020 14:26:24	Hg			483	0.049
495741 - 4	05 Nov 2020 14:26:24	Hg			493	0.051
497262dup 495741 - 1	05 Nov 2020 14:29:34	Hg			453	0.044
497262dup 495741 - 2	05 Nov 2020 14:29:34	Hg			463	0.046
497262dup 495741 - 3	05 Nov 2020 14:29:34	Hg			477	0.048
497262dup 495741 - 4	05 Nov 2020 14:29:34	Hg			479	0.049
495743 - 1	05 Nov 2020 14:32:43	Hg			122	-0.010 [ ]
495743 - 2	05 Nov 2020 14:32:43	Hg			127	-0.009 [ ]
495743 - 3	05 Nov 2020 14:32:43	Hg			139	-0.007 [ ]
495743 - 4	05 Nov 2020 14:32:43	Hg			134	-0.008 [ ]
495745 - 1	05 Nov 2020 14:35:53	Hg			173	-0.002 [ ]
495745 - 2	05 Nov 2020 14:35:53	Hg			174	-0.001 [ ]
495745 - 3	05 Nov 2020 14:35:53	Hg			175	-0.001 [ ]
495745 - 4	05 Nov 2020 14:35:53	Hg			167	-0.003 [ ]
495749 - 1	05 Nov 2020 14:39:03	Hg			119	-0.011 [ ]
495749 - 2	05 Nov 2020 14:39:03	Hg			129	-0.009 [ ]
495749 - 3	05 Nov 2020 14:39:03	Hg			132	-0.008 [ ]
495749 - 4	05 Nov 2020 14:39:03	Hg			135	-0.008 [ ]
498048 - 1	05 Nov 2020 14:42:13	Hg			196	0.002
498048 - 2	05 Nov 2020 14:42:13	Hg			202	0.003
498048 - 3	05 Nov 2020 14:42:13	Hg			204	0.003
498048 - 4	05 Nov 2020 14:42:13	Hg			200	0.003
CCV - 1	05 Nov 2020 14:45:23	Hg			19083	103.7% 3.112
CCV - 2	05 Nov 2020 14:45:23	Hg			19538	106.2% 3.186
CCV - 3	05 Nov 2020 14:45:23	Hg			19927	108.4% 3.251
CCV - 4	05 Nov 2020 14:45:23	Hg			20375	(H)110.8% 3.324
CCB - 1	05 Nov 2020 14:51:42	Hg			160	-0.004
CCB - 2	05 Nov 2020 14:51:42	Hg			163	-0.003
CCB - 3	05 Nov 2020 14:51:42	Hg			165	-0.003
CCB - 4	05 Nov 2020 14:51:42	Hg			168	-0.002
498700dup 498048 - 1	05 Nov 2020 14:54:52	Hg			205	0.004
498700dup 498048 - 2	05 Nov 2020 14:54:52	Hg			213	0.005
498700dup 498048 - 3	05 Nov 2020 14:54:52	Hg			224	0.007
498700dup 498048 - 4	05 Nov 2020 14:54:52	Hg			226	0.007
498049 - 1	05 Nov 2020 14:58:03	Hg			188	0.001
498049 - 2	05 Nov 2020 14:58:03	Hg			195	0.002
498049 - 3	05 Nov 2020 14:58:03	Hg			195	0.002
498049 - 4	05 Nov 2020 14:58:03	Hg			209	0.004
495127 - 1	05 Nov 2020 15:01:14	Hg			125	-0.010 [ ]
495127 - 2	05 Nov 2020 15:01:14	Hg			127	-0.009 [ ]
495127 - 3	05 Nov 2020 15:01:14	Hg			128	-0.009 [ ]
495127 - 4	05 Nov 2020 15:01:14	Hg			130	-0.009 [ ]
497257dup 495127 - 1	05 Nov 2020 15:04:25	Hg			187	0.001
497257dup 495127 - 2	05 Nov 2020 15:04:25	Hg			185	0.000
497257dup 495127 - 3	05 Nov 2020 15:04:25	Hg			172	-0.002 [ ]
497257dup 495127 - 4	05 Nov 2020 15:04:25	Hg			170	-0.002 [ ]
496544 - 1	05 Nov 2020 15:07:37	Hg			200	0.003
496544 - 2	05 Nov 2020 15:07:37	Hg			201	0.003
496544 - 3	05 Nov 2020 15:07:37	Hg			195	0.002
496544 - 4	05 Nov 2020 15:07:37	Hg			192	0.001
497258msw 495127 - 1	05 Nov 2020 15:10:46	Hg			12143	1.969
497258msw 495127 - 2	05 Nov 2020 15:10:46	Hg			12527	2.032
497258msw 495127 - 3	05 Nov 2020 15:10:46	Hg			12693	2.060
497258msw 495127 - 4	05 Nov 2020 15:10:46	Hg			12777	2.073
497259msdw 495127 - 1	05 Nov 2020 15:13:56	Hg			11342	1.837
497259msdw 495127 - 2	05 Nov 2020 15:13:56	Hg			11584	1.877

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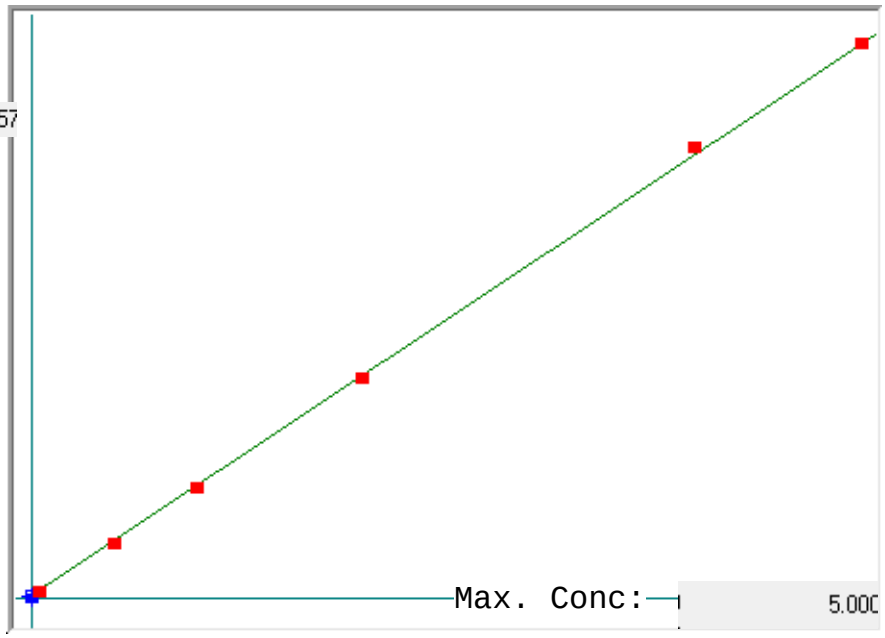
Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2020 12:33:09

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
497259msdw 495127 - 3	05 Nov 2020 15:13:56	Hg			11833	1.918
497259msdw 495127 - 4	05 Nov 2020 15:13:56	Hg			12075	1.958
498701msw 498048 - 1	05 Nov 2020 15:17:06	Hg			12168	1.973
498701msw 498048 - 2	05 Nov 2020 15:17:06	Hg			12473	2.023
498701msw 498048 - 3	05 Nov 2020 15:17:06	Hg			12775	2.073
498701msw 498048 - 4	05 Nov 2020 15:17:06	Hg			13017	2.113
498702msdw 498048 - 1	05 Nov 2020 15:20:16	Hg			12128	1.967
498702msdw 498048 - 2	05 Nov 2020 15:20:16	Hg			12421	2.015
498702msdw 498048 - 3	05 Nov 2020 15:20:16	Hg			12678	2.057
498702msdw 498048 - 4	05 Nov 2020 15:20:16	Hg			12950	2.102
497263msw 495741 - 1	05 Nov 2020 15:23:26	Hg			11987	1.943
497263msw 495741 - 2	05 Nov 2020 15:23:26	Hg			12304	1.996
497263msw 495741 - 3	05 Nov 2020 15:23:26	Hg			12589	2.042
497263msw 495741 - 4	05 Nov 2020 15:23:26	Hg			12833	2.083
CCV - 1	05 Nov 2020 15:26:36	Hg			19815	107.7% 3.232
CCV - 2	05 Nov 2020 15:26:36	Hg			20379	(H)110.8% 3.325
CCV - 3	05 Nov 2020 15:26:36	Hg			20829	(H)113.3% 3.399
CCV - 4	05 Nov 2020 15:26:36	Hg			21179	(H)115.2% 3.457
CCV - 1	05 Nov 2020 15:29:45	Hg			19734	107.3% 3.219
CCV - 2	05 Nov 2020 15:29:45	Hg			20240	(H)110.1% 3.302
CCV - 3	05 Nov 2020 15:29:45	Hg			20732	(H)112.8% 3.383
CCV - 4	05 Nov 2020 15:29:45	Hg			21049	(H)114.5% 3.435

Hg WATERS

Wt. Linear



A= 0.0000e+000

B= 1.4905e-004

C= -2.3940e-002

Rho= 0.9999287

Accept= Accepted

Accepted Date=

11/05/20 16:05

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
CALIBRATION BLANK	0.000	0.000	0.000	161	4.153	157	158	167	164	
0.05	0.050	0.049	-0.001	489	2.3 %	475	484	495	505	
0.5	0.500	0.497	-0.003	3495	2.7 %	3359	3468	3546	3610	
1.0	1.000	0.998	-0.002	6858	2.4 %	6637	6779	6933	7083	
2.0	2.000	1.989	-0.011	13504	2.4 %	13066	13365	13658	13928	
4.0	4.000	4.083	0.083	27555	2.5 %	26615	27257	27882	28469	
5.0	5.000	5.023	0.023	33856	3.0 %	32479	33422	34375	35150	

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Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2020 15:40:56

Sample ID	Date	Element	Units	Extended ID	Mean
CALIBRATION BLANK	05 Nov 2020 15:43:11	Hg			[ ] 161.500
0.05	05 Nov 2020 15:46:20	Hg			[ ] 489.750
0.5	05 Nov 2020 15:49:32	Hg			[ ] 3495.750
1.0	05 Nov 2020 15:52:43	Hg			[ ] 6858.000
2.0	05 Nov 2020 15:55:55	Hg			[ ] 13504.250
4.0	05 Nov 2020 15:59:06	Hg			[ ] 27555.750
5.0	05 Nov 2020 16:02:16	Hg			[ ] 33856.500
ICV	05 Nov 2020 16:05:26	Hg			92.3% 2.769
ICB	05 Nov 2020 16:11:46	Hg			0.003
mbw	05 Nov 2020 16:14:56	Hg			-0.004 [ ]
498700dup 498048	05 Nov 2020 16:18:05	Hg			0.002
498049	05 Nov 2020 16:21:16	Hg			0.015
495127	05 Nov 2020 16:24:27	Hg			-0.002 [ ]
497257dup 495127	05 Nov 2020 16:27:38	Hg			-0.006 [ ]
496544	05 Nov 2020 16:30:50	Hg			0.003
497258msw 495127	05 Nov 2020 16:34:00	Hg			1.803
497259msdw 495127	05 Nov 2020 16:37:10	Hg			1.739
498701msw 498048	05 Nov 2020 16:40:20	Hg			1.850
498702msdw 498048	05 Nov 2020 16:43:30	Hg			1.859
CCV	05 Nov 2020 16:46:40	Hg			98.3% 2.948
CCB	05 Nov 2020 16:52:59	Hg			0.005
497263msw 495741	05 Nov 2020 16:56:09	Hg			1.860
497264msdw 495741	05 Nov 2020 16:59:19	Hg			1.813
497249msw 495742	05 Nov 2020 17:02:29	Hg			1.765
497250msdw 495742	05 Nov 2020 17:05:39	Hg			1.756
lcsw	05 Nov 2020 17:08:50	Hg			1.878
mbw	05 Nov 2020 17:15:12	Hg			0.020
496074	05 Nov 2020 17:18:23	Hg			-0.007 [ ]
496223	05 Nov 2020 17:21:33	Hg			0.004
498733	05 Nov 2020 17:24:43	Hg			-0.003 [ ]
CCV	05 Nov 2020 17:27:53	Hg			99.6% 2.988
CCB	05 Nov 2020 17:34:12	Hg			-0.003
495359	05 Nov 2020 17:37:22	Hg			0.023
495361	05 Nov 2020 17:40:32	Hg			[ ] 32.655
495363	05 Nov 2020 17:43:42	Hg			0.167
495365	05 Nov 2020 17:46:52	Hg			0.022
498762msw 495359	05 Nov 2020 17:50:02	Hg			1.834
498768msw 498733	05 Nov 2020 17:53:12	Hg			1.472
498769msdw 498733	05 Nov 2020 17:56:23	Hg			1.423
497253msw 496074	05 Nov 2020 17:59:34	Hg			1.879
497254msdw 496074	05 Nov 2020 18:02:45	Hg			1.771
498758lcsw 78824	05 Nov 2020 18:05:57	Hg			1.894
CCV	05 Nov 2020 18:09:07	Hg			98.9% 2.968
CCB	05 Nov 2020 18:15:26	Hg			-0.001
498757mbw 78824	05 Nov 2020 18:21:45	Hg			-0.002 [ ]
493960	05 Nov 2020 18:24:55	Hg			0.004
498759msw 493960	05 Nov 2020 18:28:05	Hg			1.954
497207lcsw 78790	05 Nov 2020 18:31:15	Hg			1.885
497206mbw 78790	05 Nov 2020 18:37:36	Hg			0.012
493458	05 Nov 2020 18:40:46	Hg			0.008
497208msw 493458	05 Nov 2020 18:43:57	Hg			1.846
498764lcsw 78826	05 Nov 2020 18:47:08	Hg			1.890
CCV	05 Nov 2020 18:50:20	Hg			99.2% 2.975
CCB	05 Nov 2020 18:56:40	Hg			-0.001
498763mbw 78826	05 Nov 2020 19:03:01	Hg			-0.005 [ ]
495275	05 Nov 2020 19:06:12	Hg			0.000
498765msw 495275	05 Nov 2020 19:09:22	Hg			1.831
CCV	05 Nov 2020 19:12:33	Hg			98.3% 2.949
CCB	05 Nov 2020 19:18:52	Hg			0.001

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Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2020 15:40:56

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CALIBRATION BLANK - 1	05 Nov 2020 15:43:11	Hg			157	-
CALIBRATION BLANK - 2	05 Nov 2020 15:43:11	Hg			158	-
CALIBRATION BLANK - 3	05 Nov 2020 15:43:11	Hg			167	-
CALIBRATION BLANK - 4	05 Nov 2020 15:43:11	Hg			164	-
0.05 - 1	05 Nov 2020 15:46:20	Hg			475	-
0.05 - 2	05 Nov 2020 15:46:20	Hg			484	-
0.05 - 3	05 Nov 2020 15:46:20	Hg			495	-
0.05 - 4	05 Nov 2020 15:46:20	Hg			505	-
0.5 - 1	05 Nov 2020 15:49:32	Hg			3359	-
0.5 - 2	05 Nov 2020 15:49:32	Hg			3468	-
0.5 - 3	05 Nov 2020 15:49:32	Hg			3546	-
0.5 - 4	05 Nov 2020 15:49:32	Hg			3610	-
1.0 - 1	05 Nov 2020 15:52:43	Hg			6637	-
1.0 - 2	05 Nov 2020 15:52:43	Hg			6779	-
1.0 - 3	05 Nov 2020 15:52:43	Hg			6933	-
1.0 - 4	05 Nov 2020 15:52:43	Hg			7083	-
2.0 - 1	05 Nov 2020 15:55:55	Hg			13066	-
2.0 - 2	05 Nov 2020 15:55:55	Hg			13365	-
2.0 - 3	05 Nov 2020 15:55:55	Hg			13658	-
2.0 - 4	05 Nov 2020 15:55:55	Hg			13928	-
4.0 - 1	05 Nov 2020 15:59:06	Hg			26615	-
4.0 - 2	05 Nov 2020 15:59:06	Hg			27257	-
4.0 - 3	05 Nov 2020 15:59:06	Hg			27882	-
4.0 - 4	05 Nov 2020 15:59:06	Hg			28469	-
5.0 - 1	05 Nov 2020 16:02:16	Hg			32479	-
5.0 - 2	05 Nov 2020 16:02:16	Hg			33422	-
5.0 - 3	05 Nov 2020 16:02:16	Hg			34375	-
5.0 - 4	05 Nov 2020 16:02:16	Hg			35150	-
ICV - 1	05 Nov 2020 16:05:26	Hg			18257	(L)89.9% 2.697
ICV - 2	05 Nov 2020 16:05:26	Hg			18594	91.6% 2.748
ICV - 3	05 Nov 2020 16:05:26	Hg			18874	93.0% 2.789
ICV - 4	05 Nov 2020 16:05:26	Hg			19222	94.7% 2.841
ICB - 1	05 Nov 2020 16:11:46	Hg			167	0.001
ICB - 2	05 Nov 2020 16:11:46	Hg			175	0.002
ICB - 3	05 Nov 2020 16:11:46	Hg			189	0.004
ICB - 4	05 Nov 2020 16:11:46	Hg			186	0.004
mbw - 1	05 Nov 2020 16:14:56	Hg			136	-0.004 [ ]
mbw - 2	05 Nov 2020 16:14:56	Hg			132	-0.004 [ ]
mbw - 3	05 Nov 2020 16:14:56	Hg			133	-0.004 [ ]
mbw - 4	05 Nov 2020 16:14:56	Hg			141	-0.003 [ ]
498700dup 498048 - 1	05 Nov 2020 16:18:05	Hg			173	0.002
498700dup 498048 - 2	05 Nov 2020 16:18:05	Hg			168	0.001
498700dup 498048 - 3	05 Nov 2020 16:18:05	Hg			174	0.002
498700dup 498048 - 4	05 Nov 2020 16:18:05	Hg			180	0.003
498049 - 1	05 Nov 2020 16:21:16	Hg			252	0.014
498049 - 2	05 Nov 2020 16:21:16	Hg			261	0.015
498049 - 3	05 Nov 2020 16:21:16	Hg			270	0.016
498049 - 4	05 Nov 2020 16:21:16	Hg			274	0.017
495127 - 1	05 Nov 2020 16:24:27	Hg			150	-0.002 [ ]
495127 - 2	05 Nov 2020 16:24:27	Hg			149	-0.002 [ ]
495127 - 3	05 Nov 2020 16:24:27	Hg			151	-0.001 [ ]
495127 - 4	05 Nov 2020 16:24:27	Hg			145	-0.002 [ ]
497257dup 495127 - 1	05 Nov 2020 16:27:38	Hg			112	-0.007 [ ]
497257dup 495127 - 2	05 Nov 2020 16:27:38	Hg			115	-0.007 [ ]
497257dup 495127 - 3	05 Nov 2020 16:27:38	Hg			121	-0.006 [ ]
497257dup 495127 - 4	05 Nov 2020 16:27:38	Hg			126	-0.005 [ ]
496544 - 1	05 Nov 2020 16:30:50	Hg			169	0.001
496544 - 2	05 Nov 2020 16:30:50	Hg			174	0.002
496544 - 3	05 Nov 2020 16:30:50	Hg			182	0.003
496544 - 4	05 Nov 2020 16:30:50	Hg			185	0.004
497258msw 495127 - 1	05 Nov 2020 16:34:00	Hg			11958	1.758
497258msw 495127 - 2	05 Nov 2020 16:34:00	Hg			12221	1.798
497258msw 495127 - 3	05 Nov 2020 16:34:00	Hg			12385	1.822
497258msw 495127 - 4	05 Nov 2020 16:34:00	Hg			12475	1.836
497259msdw 495127 - 1	05 Nov 2020 16:37:10	Hg			11382	1.673
497259msdw 495127 - 2	05 Nov 2020 16:37:10	Hg			11676	1.716
497259msdw 495127 - 3	05 Nov 2020 16:37:10	Hg			11981	1.762
497259msdw 495127 - 4	05 Nov 2020 16:37:10	Hg			12276	1.806
498701msw 498048 - 1	05 Nov 2020 16:40:20	Hg			12228	1.799
498701msw 498048 - 2	05 Nov 2020 16:40:20	Hg			12448	1.831
498701msw 498048 - 3	05 Nov 2020 16:40:20	Hg			12690	1.868
498701msw 498048 - 4	05 Nov 2020 16:40:20	Hg			12920	1.902
498702msdw 498048 - 1	05 Nov 2020 16:43:30	Hg			12292	1.808
498702msdw 498048 - 2	05 Nov 2020 16:43:30	Hg			12519	1.842
498702msdw 498048 - 3	05 Nov 2020 16:43:30	Hg			12739	1.875
498702msdw 498048 - 4	05 Nov 2020 16:43:30	Hg			12984	1.911
CCV - 1	05 Nov 2020 16:46:40	Hg			19261	94.9% 2.847
CCV - 2	05 Nov 2020 16:46:40	Hg			19777	97.5% 2.924
CCV - 3	05 Nov 2020 16:46:40	Hg			20176	99.4% 2.983

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Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2020 15:40:56

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CCV - 4	05 Nov 2020 16:46:40	Hg			20532	101.2% 3.036
CCB - 1	05 Nov 2020 16:52:59	Hg			198	0.006
CCB - 2	05 Nov 2020 16:52:59	Hg			190	0.004
CCB - 3	05 Nov 2020 16:52:59	Hg			188	0.004
CCB - 4	05 Nov 2020 16:52:59	Hg			196	0.005
497263msw 495741 - 1	05 Nov 2020 16:56:09	Hg			12282	1.807
497263msw 495741 - 2	05 Nov 2020 16:56:09	Hg			12573	1.850
497263msw 495741 - 3	05 Nov 2020 16:56:09	Hg			12780	1.881
497263msw 495741 - 4	05 Nov 2020 16:56:09	Hg			12911	1.901
497264msdw 495741 - 1	05 Nov 2020 16:59:19	Hg			11941	1.756
497264msdw 495741 - 2	05 Nov 2020 16:59:19	Hg			12199	1.794
497264msdw 495741 - 3	05 Nov 2020 16:59:19	Hg			12447	1.831
497264msdw 495741 - 4	05 Nov 2020 16:59:19	Hg			12702	1.869
497249msw 495742 - 1	05 Nov 2020 17:02:29	Hg			11566	1.700
497249msw 495742 - 2	05 Nov 2020 17:02:29	Hg			11856	1.743
497249msw 495742 - 3	05 Nov 2020 17:02:29	Hg			12157	1.788
497249msw 495742 - 4	05 Nov 2020 17:02:29	Hg			12432	1.829
497250msdw 495742 - 1	05 Nov 2020 17:05:39	Hg			11517	1.693
497250msdw 495742 - 2	05 Nov 2020 17:05:39	Hg			11816	1.737
497250msdw 495742 - 3	05 Nov 2020 17:05:39	Hg			12094	1.779
497250msdw 495742 - 4	05 Nov 2020 17:05:39	Hg			12342	1.816
lcsw - 1	05 Nov 2020 17:08:50	Hg			12344	1.816
lcsw - 2	05 Nov 2020 17:08:50	Hg			12643	1.861
lcsw - 3	05 Nov 2020 17:08:50	Hg			12909	1.900
lcsw - 4	05 Nov 2020 17:08:50	Hg			13148	1.936
mbw - 1	05 Nov 2020 17:15:12	Hg			282	0.018
mbw - 2	05 Nov 2020 17:15:12	Hg			288	0.019
mbw - 3	05 Nov 2020 17:15:12	Hg			296	0.020
mbw - 4	05 Nov 2020 17:15:12	Hg			300	0.021
496074 - 1	05 Nov 2020 17:18:23	Hg			106	-0.008 [ ]
496074 - 2	05 Nov 2020 17:18:23	Hg			107	-0.008 [ ]
496074 - 3	05 Nov 2020 17:18:23	Hg			116	-0.007 [ ]
496074 - 4	05 Nov 2020 17:18:23	Hg			119	-0.006 [ ]
496223 - 1	05 Nov 2020 17:21:33	Hg			173	0.002
496223 - 2	05 Nov 2020 17:21:33	Hg			181	0.003
496223 - 3	05 Nov 2020 17:21:33	Hg			192	0.005
496223 - 4	05 Nov 2020 17:21:33	Hg			199	0.006
498733 - 1	05 Nov 2020 17:24:43	Hg			134	-0.004 [ ]
498733 - 2	05 Nov 2020 17:24:43	Hg			138	-0.003 [ ]
498733 - 3	05 Nov 2020 17:24:43	Hg			131	-0.004 [ ]
498733 - 4	05 Nov 2020 17:24:43	Hg			146	-0.002 [ ]
CCV - 1	05 Nov 2020 17:27:53	Hg			19510	96.1% 2.884
CCV - 2	05 Nov 2020 17:27:53	Hg			20006	98.6% 2.958
CCV - 3	05 Nov 2020 17:27:53	Hg			20483	101.0% 3.029
CCV - 4	05 Nov 2020 17:27:53	Hg			20827	102.7% 3.080
CCB - 1	05 Nov 2020 17:34:12	Hg			135	-0.004
CCB - 2	05 Nov 2020 17:34:12	Hg			132	-0.004
CCB - 3	05 Nov 2020 17:34:12	Hg			139	-0.003
CCB - 4	05 Nov 2020 17:34:12	Hg			145	-0.002
495359 - 1	05 Nov 2020 17:37:22	Hg			295	0.020
495359 - 2	05 Nov 2020 17:37:22	Hg			306	0.022
495359 - 3	05 Nov 2020 17:37:22	Hg			327	0.025
495359 - 4	05 Nov 2020 17:37:22	Hg			330	0.025
495361 - 1	05 Nov 2020 17:40:32	Hg			213411	[ ] 31.786
495361 - 2	05 Nov 2020 17:40:32	Hg			217561	[ ] 32.404
495361 - 3	05 Nov 2020 17:40:32	Hg			221285	[ ] 32.960
495361 - 4	05 Nov 2020 17:40:32	Hg			224711	[ ] 33.470
495363 - 1	05 Nov 2020 17:43:42	Hg			1247	0.162
495363 - 2	05 Nov 2020 17:43:42	Hg			1280	0.167
495363 - 3	05 Nov 2020 17:43:42	Hg			1296	0.169
495363 - 4	05 Nov 2020 17:43:42	Hg			1313	0.172
495365 - 1	05 Nov 2020 17:46:52	Hg			300	0.021
495365 - 2	05 Nov 2020 17:46:52	Hg			301	0.021
495365 - 3	05 Nov 2020 17:46:52	Hg			307	0.022
495365 - 4	05 Nov 2020 17:46:52	Hg			312	0.023
498762msw 495359 - 1	05 Nov 2020 17:50:02	Hg			11975	1.761
498762msw 495359 - 2	05 Nov 2020 17:50:02	Hg			12274	1.806
498762msw 495359 - 3	05 Nov 2020 17:50:02	Hg			12659	1.863
498762msw 495359 - 4	05 Nov 2020 17:50:02	Hg			12946	1.906
498768msw 498733 - 1	05 Nov 2020 17:53:12	Hg			9601	1.407
498768msw 498733 - 2	05 Nov 2020 17:53:12	Hg			9893	1.451
498768msw 498733 - 3	05 Nov 2020 17:53:12	Hg			10193	1.495
498768msw 498733 - 4	05 Nov 2020 17:53:12	Hg			10458	1.535
498769msdw 498733 - 1	05 Nov 2020 17:56:23	Hg			9258	1.356
498769msdw 498733 - 2	05 Nov 2020 17:56:23	Hg			9598	1.407
498769msdw 498733 - 3	05 Nov 2020 17:56:23	Hg			9879	1.449
498769msdw 498733 - 4	05 Nov 2020 17:56:23	Hg			10082	1.479
497253msw 496074 - 1	05 Nov 2020 17:59:34	Hg			12294	1.809
497253msw 496074 - 2	05 Nov 2020 17:59:34	Hg			12629	1.858

110520bw detailed

Method: Hg WATERS Operator: Admin Date of Analysis: 05 Nov 2020 15:40:56

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
497253msw 496074 - 3	05 Nov 2020 17:59:34	Hg			12957	1.907
497253msw 496074 - 4	05 Nov 2020 17:59:34	Hg			13185	1.941
497254msdw 496074 - 1	05 Nov 2020 18:02:45	Hg			11618	1.708
497254msdw 496074 - 2	05 Nov 2020 18:02:45	Hg			11924	1.753
497254msdw 496074 - 3	05 Nov 2020 18:02:45	Hg			12213	1.796
497254msdw 496074 - 4	05 Nov 2020 18:02:45	Hg			12416	1.827
498758lcsw 78824 - 1	05 Nov 2020 18:05:57	Hg			12510	1.841
498758lcsw 78824 - 2	05 Nov 2020 18:05:57	Hg			12799	1.884
498758lcsw 78824 - 3	05 Nov 2020 18:05:57	Hg			13008	1.915
498758lcsw 78824 - 4	05 Nov 2020 18:05:57	Hg			13161	1.938
CCV - 1	05 Nov 2020 18:09:07	Hg			19598	96.6% 2.897
CCV - 2	05 Nov 2020 18:09:07	Hg			19871	97.9% 2.938
CCV - 3	05 Nov 2020 18:09:07	Hg			20180	99.5% 2.984
CCV - 4	05 Nov 2020 18:09:07	Hg			20636	101.7% 3.052
CCB - 1	05 Nov 2020 18:15:26	Hg			145	-0.002
CCB - 2	05 Nov 2020 18:15:26	Hg			158	-0.000
CCB - 3	05 Nov 2020 18:15:26	Hg			162	0.000
CCB - 4	05 Nov 2020 18:15:26	Hg			157	-0.001
498757mbw 78824 - 1	05 Nov 2020 18:21:45	Hg			142	-0.003 [ ]
498757mbw 78824 - 2	05 Nov 2020 18:21:45	Hg			144	-0.002 [ ]
498757mbw 78824 - 3	05 Nov 2020 18:21:45	Hg			149	-0.002 [ ]
498757mbw 78824 - 4	05 Nov 2020 18:21:45	Hg			156	-0.001 [ ]
493960 - 1	05 Nov 2020 18:24:55	Hg			186	0.004
493960 - 2	05 Nov 2020 18:24:55	Hg			189	0.004
493960 - 3	05 Nov 2020 18:24:55	Hg			193	0.005
493960 - 4	05 Nov 2020 18:24:55	Hg			190	0.004
498759msw 493960 - 1	05 Nov 2020 18:28:05	Hg			12816	1.886
498759msw 493960 - 2	05 Nov 2020 18:28:05	Hg			13112	1.930
498759msw 493960 - 3	05 Nov 2020 18:28:05	Hg			13437	1.979
498759msw 493960 - 4	05 Nov 2020 18:28:05	Hg			13705	2.019
497207lcsw 78790 - 1	05 Nov 2020 18:31:15	Hg			12327	1.813
497207lcsw 78790 - 2	05 Nov 2020 18:31:15	Hg			12638	1.860
497207lcsw 78790 - 3	05 Nov 2020 18:31:15	Hg			13008	1.915
497207lcsw 78790 - 4	05 Nov 2020 18:31:15	Hg			13265	1.953
497206mbw 78790 - 1	05 Nov 2020 18:37:36	Hg			240	0.012
497206mbw 78790 - 2	05 Nov 2020 18:37:36	Hg			244	0.012
497206mbw 78790 - 3	05 Nov 2020 18:37:36	Hg			241	0.012
497206mbw 78790 - 4	05 Nov 2020 18:37:36	Hg			239	0.012
493458 - 1	05 Nov 2020 18:40:46	Hg			205	0.007
493458 - 2	05 Nov 2020 18:40:46	Hg			216	0.008
493458 - 3	05 Nov 2020 18:40:46	Hg			218	0.009
493458 - 4	05 Nov 2020 18:40:46	Hg			226	0.010
497208msw 493458 - 1	05 Nov 2020 18:43:57	Hg			12181	1.792
497208msw 493458 - 2	05 Nov 2020 18:43:57	Hg			12379	1.821
497208msw 493458 - 3	05 Nov 2020 18:43:57	Hg			12655	1.862
497208msw 493458 - 4	05 Nov 2020 18:43:57	Hg			12964	1.908
498764lcsw 78826 - 1	05 Nov 2020 18:47:08	Hg			12407	1.825
498764lcsw 78826 - 2	05 Nov 2020 18:47:08	Hg			12655	1.862
498764lcsw 78826 - 3	05 Nov 2020 18:47:08	Hg			12986	1.912
498764lcsw 78826 - 4	05 Nov 2020 18:47:08	Hg			13308	1.960
CCV - 1	05 Nov 2020 18:50:20	Hg			19637	96.8% 2.903
CCV - 2	05 Nov 2020 18:50:20	Hg			19962	98.4% 2.951
CCV - 3	05 Nov 2020 18:50:20	Hg			20247	99.8% 2.994
CCV - 4	05 Nov 2020 18:50:20	Hg			20636	101.7% 3.052
CCB - 1	05 Nov 2020 18:56:40	Hg			140	-0.003
CCB - 2	05 Nov 2020 18:56:40	Hg			151	-0.001
CCB - 3	05 Nov 2020 18:56:40	Hg			165	0.001
CCB - 4	05 Nov 2020 18:56:40	Hg			162	0.000
498763mbw 78826 - 1	05 Nov 2020 19:03:01	Hg			122	-0.006 [ ]
498763mbw 78826 - 2	05 Nov 2020 19:03:01	Hg			121	-0.006 [ ]
498763mbw 78826 - 3	05 Nov 2020 19:03:01	Hg			129	-0.005 [ ]
498763mbw 78826 - 4	05 Nov 2020 19:03:01	Hg			135	-0.004 [ ]
495275 - 1	05 Nov 2020 19:06:12	Hg			153	-0.001 [ ]
495275 - 2	05 Nov 2020 19:06:12	Hg			158	-0.000 [ ]
495275 - 3	05 Nov 2020 19:06:12	Hg			167	0.001
495275 - 4	05 Nov 2020 19:06:12	Hg			175	0.002
498765msw 495275 - 1	05 Nov 2020 19:09:22	Hg			12004	1.765
498765msw 495275 - 2	05 Nov 2020 19:09:22	Hg			12293	1.808
498765msw 495275 - 3	05 Nov 2020 19:09:22	Hg			12579	1.851
498765msw 495275 - 4	05 Nov 2020 19:09:22	Hg			12910	1.900
CCV - 1	05 Nov 2020 19:12:33	Hg			19247	94.8% 2.845
CCV - 2	05 Nov 2020 19:12:33	Hg			19701	97.1% 2.913
CCV - 3	05 Nov 2020 19:12:33	Hg			20219	99.7% 2.990
CCV - 4	05 Nov 2020 19:12:33	Hg			20614	101.6% 3.049
CCB - 1	05 Nov 2020 19:18:52	Hg			156	-0.001
CCB - 2	05 Nov 2020 19:18:52	Hg			163	0.000
CCB - 3	05 Nov 2020 19:18:52	Hg			171	0.002
CCB - 4	05 Nov 2020 19:18:52	Hg			182	0.003

METALS
LOGBOOK
DOCUMENTS

MICP WATER QSM Analytical Run
176769 on 11/20/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	504013								MICP WATER QSM				
					ICV					0			
	504014								MICP WATER QSM				
					ICVLL					0			
	504015								MICP WATER QSM				
					ICB					0			
	504016								MICP WATER QSM				
					ICSA					0			
	504017								MICP WATER QSM				
					ICSAB					0			
	504475								MICP WATER QSM				
					ICVLL								
	504019								MICP WATER QSM				
					CCV1					0			
	504020								MICP WATER QSM				
					CCV2					0			
	504021								MICP WATER QSM				
					CCB					0			
	497029								ICP TOTAL QSM 5.0				
					LCSW					78777			
	497028								ICP TOTAL QSM 5.0				
					MBW					78777			
157537	495127		10/26/2020	1600			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-54	ICP TOTAL QSM 5.0		GW	**4**	
		54IDW								78777			
157624	496544		10/29/2020	1100			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ICP TOTAL QSM 5.0		GW	**4**	
		48/49-IDW								78777			
	504022								ICP TOTAL QSM 5.0				
					L	496544				0			
	497030		10/29/2020	1100					ICP TOTAL QSM 5.0				
		48/49-IDW			DUP	496544				78777			
	504023								MICP WATER QSM				
					CCV1					0			
	504024								MICP WATER QSM				
					CCV2					0			
	504025								MICP WATER QSM				
					CCB					0			
	497031		10/29/2020	1100					ICP TOTAL QSM 5.0				
		48/49-IDW			MSW	496544				78777			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MICP WATER QSM Analytical Run
176769 on 11/20/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	497032		10/29/2020 1100				ICP TOTAL QSM 5.0				
		48/49-IDW		MSDW 497031				78777			
	504026						ICP TOTAL QSM 5.0				
				PDSW 496544				0			
	504027						MICP WATER QSM				
				CCV1				0			
	504028						MICP WATER QSM				
				CCV2				0			
	504029						MICP WATER QSM				
				CCB				0			

24 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MICP WATER QSM K&Na Analytical Run
176770 on 11/20/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	501270							MICP WATER QSM K&Na				
					ICV				0			
	501271							MICP WATER QSM K&Na				
					ICVLL				0			
	501272							MICP WATER QSM K&Na				
					ICB				0			
	501273							MICP WATER QSM K&Na				
					MRL				0			
	501274							MICP WATER QSM K&Na				
					ICSA				0			
	501275							MICP WATER QSM K&Na				
					ICSAB				0			
	501276							MICP WATER QSM K&Na				
					CCV				0			
	501277							MICP WATER QSM K&Na				
					CCB				0			
	497029							ICP K TOTAL QSM 5.0				
					LCSW				78777			
	497029							ICP NA TOTAL QSM 5.0				
					LCSW				78777			
	501278							MICP WATER QSM K&Na				
					CCV				0			
	501279							MICP WATER QSM K&Na				
					CCB				0			
	497028							ICP K TOTAL QSM 5.0				
					MBW				78777			
	497028							ICP NA TOTAL QSM 5.0				
					MBW				78777			
157537	495127		10/26/2020	1600		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-54	ICP K TOTAL QSM 5.0		GW	**4**	
		54IDW							78777			
157537	495127		10/26/2020	1600		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-54	ICP NA TOTAL QSM 5.0		GW	**4**	
		54IDW							78777			
157624	496544		10/29/2020	1100		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ICP K TOTAL QSM 5.0		GW	**4**	
		48/49-IDW							78777			
157624	496544		10/29/2020	1100		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ICP NA TOTAL QSM 5.0		GW	**4**	
		48/49-IDW							78777			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MICP WATER QSM K&Na Analytical Run
176770 on 11/20/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	501280							ICP K TOTAL QSM 5.0				
				L	496544				0			
	501280							ICP NA TOTAL QSM 5.0				
				L	496544				0			
	497030		10/29/2020 1100					ICP K TOTAL QSM 5.0				
		48/49-IDW		DUP	496544				78777			
	497030		10/29/2020 1100					ICP NA TOTAL QSM 5.0				
		48/49-IDW		DUP	496544				78777			
	497031		10/29/2020 1100					ICP K TOTAL QSM 5.0				
		48/49-IDW		MSW	496544				78777			
	497031		10/29/2020 1100					ICP NA TOTAL QSM 5.0				
		48/49-IDW		MSW	496544				78777			
	497032		10/29/2020 1100					ICP K TOTAL QSM 5.0				
		48/49-IDW		MSDW	497031				78777			
	497032		10/29/2020 1100					ICP NA TOTAL QSM 5.0				
		48/49-IDW		MSDW	497031				78777			
	501281							ICP K TOTAL QSM 5.0				
				PDSW	496544				0			
	501281							ICP NA TOTAL QSM 5.0				
				PDSW	496544				0			
	501282							MICP WATER QSM K&Na				
				CCV					0			
	501283							MICP WATER QSM K&Na				
				CCB					0			

30 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MERCURY QSM 5.0 Analytical Run
176863 on 11/20/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	500409								MERCURY QSM 5.0				
					ICV					0			
	500410								MERCURY QSM 5.0				
					ICB					0			
	497256								MERCURY TOTAL QSM 5.0				
					LCSW					78793			
	497255								MERCURY TOTAL QSM 5.0				
					MBW					78793			
	500411								MERCURY QSM 5.0				
					CCV					0			
	500412								MERCURY QSM 5.0				
					CCB					0			
	500290								MERCURY QSM 5.0				
					ICV					0			
	500291								MERCURY QSM 5.0				
					ICB					0			
157537	495127		10/26/2020	1600			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-54	MERCURY TOTAL QSM 5.0		GW	**4**	
		54IDW								78793			
	497257		10/26/2020	1600					MERCURY TOTAL QSM 5.0				
		54IDW			DUP	495127				78793			
157624	496544		10/29/2020	1100			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	MERCURY TOTAL QSM 5.0		GW	**4**	
		48/49-IDW								78793			
	497258		10/26/2020	1600					MERCURY TOTAL QSM 5.0				
		54IDW			MSW	495127				78793			
	497259		10/26/2020	1600					MERCURY TOTAL QSM 5.0				
		54IDW			MSDW	497258				78793			
	500395								MERCURY QSM 5.0				
					CCV					0			
	500396								MERCURY QSM 5.0				
					CCB					0			

15 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

PREP WORKSHEET
on 11/20/2020

Prep Batch **78,777** Date Prepped: 11/02/2020 Prepped By NAH

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	497028	MBW		ICP K TOTAL QSM 5.0	LIQUID	50		50.0		
	497028	MBW		ICP NA TOTAL QSM 5.0	LIQUID	50		50.0		
	497028	MBW		ICP TOTAL QSM 5.0	LIQUID	50		50.0		
	497029	LCSW		ICP K TOTAL QSM 5.0	LIQUID	50		50.0		
	497029	LCSW		ICP NA TOTAL QSM 5.0	LIQUID	50		50.0		
	497029	LCSW		ICP TOTAL QSM 5.0	LIQUID	50		50.0		
157537	495127			ICP TOTAL QSM 5.0	GROUND WATER	50		50.0	4	
	495127			ICP NA TOTAL QSM 5.0	GROUND WATER	50		50.0	4	
	495127			ICP K TOTAL QSM 5.0	GROUND WATER	50		50.0	4	
157624	496544			ICP TOTAL QSM 5.0	GROUND WATER	50		50.0	4	
	496544			ICP K TOTAL QSM 5.0	GROUND WATER	50		50.0	4	
	496544			ICP NA TOTAL QSM 5.0	GROUND WATER	50		50.0	4	
	497030	DUP	496544	ICP K TOTAL QSM 5.0	GROUND WATER	50		50.0		
	497030	DUP	496544	ICP NA TOTAL QSM 5.0	GROUND WATER	50		50.0		
	497030	DUP	496544	ICP TOTAL QSM 5.0	GROUND WATER	50		50.0		
	497031	MSW	496544	ICP K TOTAL QSM 5.0	GROUND WATER	50		50.0		
	497031	MSW	496544	ICP NA TOTAL QSM 5.0	GROUND WATER	50		50.0		

PREP WORKSHEET
on 11/20/2020

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	497031	MSW	496544	ICP TOTAL QSM 5.0	GROUND WATER	50		50.0		
	497032	MSDW	497031	ICP K TOTAL QSM 5.0	GROUND WATER	50		50.0		
	497032	MSDW	497031	ICP NA TOTAL QSM 5.0	GROUND WATER	50		50.0		
	497032	MSDW	497031	ICP TOTAL QSM 5.0	GROUND WATER	50		50.0		

Notes:_____

PREP WORKSHEET
on 11/20/2020

Prep Batch **78,793** Date Prepped: 11/05/2020 Prepped By MDS

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	497255	MBW		MERCURY TOTAL QSM	LIQUID	25		25.0		
	497256	LCSW		MERCURY TOTAL QSM	LIQUID	25		25.0		
157537	495127			MERCURY TOTAL QSM	GROUND WATER	25		25.0	4	
157624	496544			MERCURY TOTAL QSM	GROUND WATER	25		25.0	4	
	497257	DUP	495127	MERCURY TOTAL QSM	GROUND WATER	25		25.0		
	497258	MSW	495127	MERCURY TOTAL QSM	GROUND WATER	25		25.0		
	497259	MSDW	497258	MERCURY TOTAL QSM	GROUND WATER	25		25.0		

Notes:_____

Metals Digestion Bench Sheet

Program: EPA
*Matrix: Liquid

Prep Methods:
200.2= ICP/GFAA Liquids
3010= ICP Liquids
3020= GFAA Liquids
3005= Sb Liquids
3050= ICP/GFAA Solids
7060/7740= GFAA, As & Se Liquids

Prep Batch #:	78777
Prep Method:	200.2
Analyst:	NAH
Date:	11/2/2020
Start Time:	11:52

Prep Analyst: NAH
Balance ID:

End Date: 11/2/2020
End Time: 22:43
Digestion Tube Lot #: 3375
Block Used: D2
Cell Position for Temp. Check: 60
Initial-DigestionTemp (ºC): 94
Final-Digestion Temp (ºC): 94

Reagent:	Ref. #
Nitric Acid:	AB.700
Hydrochloric Acid:	AB.701
Hydrogen Peroxide:	

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
497028	(MB)			50.0	50
497029	(LCS)			50.0	50
495127				50.0	50
496544	**Comments:**			50.0	50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
497030	(DUP)			50.0	50
497031	(MS)	Parent Sample		50.0	50
497032	(MSD)	496544		50.0	50
	(DUP)				50
	(MS)	Parent Sample			50
	(MSD)				50
Leave >>	(DUP) if applicable				50
blank	(MS)	Parent Sample			50
if N/A	(MSD)				50

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

MS/MSD Spike Amount (ml)	Spike Ref. #
0.2	M14404
0.5	M14218
0.5	M14369
0.1	M14368

LCS Spike Amount (ml)	Spike Ref. #
0.2	M14404
0.5	M14218
0.5	M14369
0.1	M14368

Reviewed x

11/20/202009:50

FMT12-03

Mercury Digestion Bench Sheet

(Prep Methods 7470A & 7471A)

CCV ID: M14561
ICV/LCSW ID: M14562

*Matrix: GW
Balance ID:

Prep Batch #:	78793
Prep Method:	7470A
Analyst:	MDS
Date:	11/05/2020
Start Time:	09:50

7470A= Hg Liquids
7471A= Hg Solids

End Date: 11/05/2020
End Time: 11:50

Digestion Tube Lot #: 15020022
Block Used: A
Cell Position for Temp. Check: F-3
Initial-DigestionTemp (ºC): 91.5
Final-Digestion Temp (ºC): 92.1
Additional KMnO4 added (ml):
Aqua Regia added (ml)
Calibration Stds: M14560

Reagent:	Ref. #
HNO3:	AB.694
H2SO4:	AB.696
NaCl/Hydrox.SO4:	M14565
KMnO4:	M14563
K2S2O8:	M14564
Aqua-Regia:	

	Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
	497255	(MB)			25.0	25
	497256	(LCS)			25.0	25
	495127				25.0	25
	496544				25.0	25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
	497257	(DUP)			25.0	25
	497258	(MS)	Parent Sample		25.0	25
	497259	(MSD)	495127		25.0	25
Leave >>		(DUP)				25
blank		(MS)	Parent Sample			25
		(MSD)				25
		(DUP)				25
		(MS)	Parent Sample			25
if N/A		(MSD)				25

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

A: Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #
0.5	100	M14562

B: Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #

Reviewed By/Date: X

iCAP 6000 / 6500 Data Review Checklist	Analysis Date: 11/4/2020	Data File: 20Dresults	Date of review: 11/13/2020
Cal Std ID: M14335 LIMS # : 1766769	Analyst: [illegible]	Reviewer: MDS	Approved? (Yes) No

Is Audit Trail turned on or Manual Manipulations addressed? (Yes) No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)

Prep Batch Check X

QC Parameters : 6010 / 200.7 / QSM / Other	YES	NO	YES	NO	Comments:
1) Calibration linearity: r< 0.995 / r > 0.998	✓		✓		
2) ICV: (90-110%) / 95-105%	✓		✓		
2) ICVLL: 70-130% / (80-120%)	✓		✓		
3) ICB: < 3X IDL / (<LOD) / <LOQ	✓		✓		
4) ICSA: < ABS LOD	✓		✓		
5) ICSAB: 80-120%	✓		✓		
6) MRL: (70-130%) / 80-120%	✓		✓		
7) MDL Check: >LOD					
8) CCV1/CCB1 (CCV: 90-110%)	✓		✓		
9) CCV2/CCB2 (CCB: < 3X IDL / <LOD / <LOQ)					No MRL LL same
10) CCV3/CCB3					
11) CCV4/CCB4					
12) CCV5/CCB5					

Preparation Batch Parameters	YES	NO	YES	NO	
Prep Batch ID#: 78777 Dig. Meth. 200.2	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD or ≤ ½ RL	✓		✓		
Spiked samples in batch:					
a) 496544 matrix = GW	✓	✓	✓	✓	Al, Fe MS, MSD - PDS pass no flags.
b)_____ matrix = _____					
c)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#:_____					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#:_____					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#:_____					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#:_____					

iCAP 6000 / 6500 Data Review Checklist	Analysis Date: 11/6/2020	Data File: NAK110620v1287	Date of review: 11/9/2020
Cal Std ID: M14566 LIMS # : 176770	Analyst: MO	Reviewer: A	Approved? Yes No
Is Audit Trail turned on or Manual Manipulations addressed? Yes No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)			
Prep Batch Check ✓			

QC Parameters : 6010 / 200.7 / QSM / Other	YES	NO	YES	NO	Comments:
1) Calibration linearity: r ≥ 0.995 / r > 0.998	✓		✓		
2) ICV: 90-110% / 95-105%	✓		/		
2) ICVLL: 70-130% / 80-120%	✓		/		
3) ICB: < 3X IDL / <LOD / <LOQ	✓		/		
4) ICSA: < ABS LOD	✓		/		
5) ICSAB: 80-120%	✓		/		
6) MRL: 70-130% / 80-120%	✓		/		
7) MDL Check: >LOD					
8) CCV1/CCB1 (CCV: 90-110%)	✓		/		
9) CCV2/CCB2 (CCB: < 3X IDL / <LOD / <LOQ)					
10) CCV3/CCB3					
11) CCV4/CCB4					
12) CCV5/CCB5					

Preparation Batch Parameters	YES	NO	YES	NO	
Prep Batch ID#: 76777 Dig. Meth. 200.2	✓		/		
LCS - generated limits or project specific limits	✓		/		
MB - <LOD or ≤ ½ RL	✓		/		
Spiked samples in batch:					
a) 496544 matrix = SW	✓		/		
b) matrix =					
c) matrix =					
PDS: ±15% / 20% / 25% Sample#:					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
PDS: ±15% / 20% / 25% Sample#:					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
PDS: ±15% / 20% / 25% Sample#:					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
PDS: ±15% / 20% / 25% Sample#:					

GFAA / FLAA / CVAA Data Review checklist		Method: 200.9	7000 series AA	245.1 & 245.2	245.7	7470a / 7471a
Instrumentation:	THERMO M SERIES AA			Hydra II Hg ANALYZER		
Analysis Date: 11/5/2020	Data File: 110520, 110520bW	Date Review:	11/16/2020	Analyte: Hg		
Cal Std ID: M14560	LIMS #: 176963	Analyst: MOS	Reviewer:	Approved?	Yes	No

Prep Batch Check ✓

Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)

Calibration Parameters -	YES	NO	YES	NO	Comments:
1) Calibration ~~linearity~~ - r > 0.995	✓		✓		
2) ICV: 90-110% 95-105%	✓		✓		
2) ICVLL: 70-130% 80-120%					
3) ICB: <IDL / <LOD / <LOQ / <½ RL	✓		✓		
6) MRL: 70-130%					
7) CCV1/CCB1- (CCV: 90-110% / 80-120%)	✓		✓		
8) CCV2/CCB2 (CCB: <IDL / <LOD / <LOQ / <½ RL)					
9) CCV3/CCB3					
10) CCV4/CCB4					
11) CCV5/CCB5					

Preparation Batch Parameters	YES	NO	YES	NO	Comments:
Prep Batch ID#: 78793 Dig. Meth. 7470a	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD / <2.2X LOD / ≤ ½RL	✓		✓		
Spiked samples in batch:					
a) 495127 matrix = CSW	✓	✓	✓	✓	Dup invalid
b) matrix =					
c) matrix =					
d) matrix =					
e) matrix =					
PDS: ±15% / 20% / 25% Sample#					
MSA Performed? Yes No					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
d) matrix =					
e) matrix =					
PDS: ±15% / 20% / 25% Sample#					
MSA Performed? Yes No					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
d) matrix =					
e) matrix =					
PDS: ±15% / 20% / 25% Sample#					
MSA Performed? Yes No					

CT Laboratories Instrument Run Log

Instrument ID: ICP 6000 (See Journal for Wavelength Check)

Date	Time Start/End	Analyst	Method	LIMS# or Sample #	Sequence I.D.	Cal. Std	Alt. Source	Pressure (KPa) Comments	Analysis Tube Lot#	ICSA/ ICSAB
11/4/2020	1438 / 1724	MDS	NaK	176380 176471, 176383, 176543, 176527,	NaK110420 v1286	M14556	M14448 M14449	350	106716-05.120219	M14173 M14450
11/6/2020	0916 / 1422	MDS	NaK	176782, 176762, 176812, 176836 176846, 176779, 176770, 176768, 176811	NaK110620 v1287	M14556	M14448 M14449	350	106716-05.120219	M14173 M14450
11/13/2020	1201 / 1446	MDS	NaK	176812, 176924, 177022, 177049, 177017	NaK111320 v1288	M14556	M14582 M14583	350	380450-4851	M14173 M14584
	/								380450-4851	
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Checked by: _____ Verified by: _____

CT Laboratories, LLC — ***ICP-6500 Instrument Run Logbook***

Date	Time: Start / End	Analyst	Analytes / Sequence I.D.	Method	LIMS # or Sample Description	Nebulizer Pressure (kpa)	Calib. Std ID	Version	Comments
10/26/2020	0914 / 0504 (10/27)		10/26/2020	DODCal U	176538 176415 176371 176373 176418 176390 176374 176414 176377 176372	270	M14335 M14230 M14342	V4103	M14240 M14173 M14961 M14943
10/27/2020	1400 1354 / 1704 (10/28/20)		10/27/2020	DODCal U	176057	270	M14335 M14230 M14342	V4104	M14240 M14173 M14961 M14943
10/28/2020	1525 / 1413		10/28/2020	DODCal U	176554 176474 176506 176470 176546 176472	270	M14335 M14230 M14342	V4123 V4117 V4116	M14240 M14173 M14961 M14943
10/29/2020	1420 / 1455 (11/1)		10/29/2020	DODCal U	176481 176486 176487 176490 176480 176479 176491 176488 176482	270	M14335 M14230 M14342	V4113 V4118	M14240 M14173 M14961 M14943
11/4/2020	1210 / 1506 (11/6)		11/4/2020	DODCal U	176370 176544 176649 176526 176626 176647 176478 176627 176773	270	M14335 M14323 M14342	V4131	M14240 M14173 M14961 M14943
11/5/2020	1514 / 0714		11/5/2020	DODCal U	176774 176817 176764 176778 176816 176763 176813 176744 176765	270	M14335 M14325 M14342	V4125 V4124 V4119	M14240 M14173 M14961 M14943
11/6/2020	0735 / 2152		11/6/2020	DODCal U	176828 176810 176845 176828 176761 176883 176885	270	M14335 M14325 M14342	V4128 V4127 V4126 V4136	M14240 M14173 M14961 M14943
11/12/2020	0856 / 1103 (11/13)		11/12/2020	DODCal U	177010, 177012 177028, 27 177021 177013, 14, 177008 177031 177009 177025 177081 177029 177032	270	M14335 M14325 M14342	V4150 V4137	M14240 M14173 M14961 M14943
11/13/2020	1213 / 0156		11/13/2020	DODCal U	177125 177127 177123 177126	270	M14335 M14325 M14342	V4147 V4141	M14240 M14173 M14961 M14943
11/17/2020	/		11	DODCal U		270	M14335 M14325 M14342		M14240 M14173 M14961 M14943
	/								
	/								

Comments: * 11-12-2020

Checked By / Date: _____

CT Laboratories

Mercury Analyzer Instrument Run Log

Instrument ID: Cetac M-6000A

Analysis Date	Start Time	End Time	Analyst	LIMS Run # (s)	Method File ID #	Cal. Std. ID #	Lamp Current (mA)	Analysis Tube Lot #	Comments
10/5/2020	1358	2112	MDS	175276, 175273, 175272, 175274, 175275	100520S	M14511	—	370075-4757	$SnCl_2$: M14517
10/6/2020	0834	1332	MDS	175724, 175725, 175726	100620S	M14511	9.963	370075-4757	$SnCl_2$: M14517
10/8/2020	0853	1451	MDS	175830, 175827, 175828, 175829, 175822, 175823, 175824, 175825, 175826,	100820W	M14511	10.003	370075-4757	$SnCl_2$: M14520
10/9/2020	0757	0906	MDS	175869	100920S	M14511	—	370075-4757	$SnCl_2$: M14520
10/9/2020	1123	1433	MDS	175869, 175870	100920bS	M14511	~~9.941~~ 9.941 MDS 10/9/2020	370075-4757	$SnCl_2$: M14520
10/13/2020	1037	1855	MDS	175993, 175994, 175995, 175996, 175997	101320S	M14523	—	370075-4757	$SnCl_2$: M14529
10/14/2020	1055	1443	MDS	175995, 175996, 176021, 176022	101420S	M14523	—	370075-4757	$SnCl_2$: M14532
10/15/2020	0742	1111	MDS	176060, 176063, 176061, 176062, 176058, 176059	101520W	M14523	10.077	370075-4757	$SnCl_2$: M14532
10/21/2020	0809	0918	MDS	176252, 176253	102120S	M14536	9.985	370075-4757	$SnCl_2$: M14543
10/21/2020	1009	1135	MDS	176253	102120bS	M14536	10.003	370075-4757	$SnCl_2$: M14543
10/21/2020	1209	1516	MDS	176254, 176255, 176256, 176257	102120W	M14536	10.018	370075-4757	$SnCl_2$: M14543
10/29/2020	1036	1253	MDS	176550, 176549	102920bS	M14548	10.187	370075-4757	$SnCl_2$: M14555
10/29/2020	1324	1712	MDS	176591, 176592, 176593, 176589	102920W	M14548	—	370075-4757	$SnCl_2$: M14555
10/30/2020	0839	1008	MDS	176594, 176595, 176590	103020W	M14548	10.129	370075-4757	$SnCl_2$: M14555
11/5/2020	1255	1526	MDS	176860, 176861, 176862, 176863	110520W	M14560	—	370075-4757	$SnCl_2$: M14566
11/5/2020	1543	1918	MDS	176864, 176869, 176865, 176866, 176867, 176860, 176861, 176862, 176863, 176868,	110520bW	M14560	—	370075-4757	$SnCl_2$: M14566
11/12/2020	0821	1037	MDS	177077, 177076	111220S	M14573	10.033	370075-4757	$SnCl_2$: M14580
11/12/2020	1057	1434	MDS	177084, 177085, 176869, 177083, 177082, 177081	111220W	M14573	9.974	370075-4757	$SnCl_2$: M14580
								380450-4851	

Reviewed By/Date:_____

Type	Date/Time	Message	User name	Application	Sequence Name
	11/06/2020 08:53:36	Connected to instrument 20070314	MDS	iTEVA Control Center	
	11/06/2020 08:59:11	Plasma On	MDS	iTEVA Control Center	
	11/06/2020 08:59:16	Plasma ignition successful	MDS	Analyst	
	11/06/2020 08:59:55	D33534 - Debug:Wavelength check : x = -0.271, y =0.343	MDS	Analyst	
	11/06/2020 09:16:35	Sequence Started	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:16:35	Autosampler Run Started	MDS	Analyst	
	11/06/2020 09:16:56	Running Blank (1)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:20:11	Running CalibStd-0.5 (2)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:23:13	Running CalibStd-1.0 (3)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:26:00	Running CalibStd-5.0 (4)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:28:47	Running CalibStd-10.0 (5)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:31:35	Running CalibStd-50 (6)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:34:23	Running CalibStd-100 (7)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:37:09	Running CalibStd-200 (8)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:39:55	Running CalibStd-500 (9)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:43:08	Running icv (10)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:45:55	Running ICVLL (17)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:48:41	Running icb (11)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:51:27	Running mrl (16)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:54:14	Running icsa (12)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 09:57:20	Running icsab (13)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:00:25	Running lcsw (1)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:03:11	Running mbw (2)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:05:58	Running 477041 (3)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:08:43	Running msw477041 (4)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:11:29	Running msdw477041 (5)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:14:15	Running lcsw78775 (6)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:17:00	Running mbw78775 (7)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:19:47	Running 495726 (8)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:22:33	Running l495726 (9)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:25:21	Running dup495726 (10)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:28:08	Running ccv (14)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:30:54	Running ccb (15)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:33:42	Running msw495726 (11)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:36:28	Running msdw495726 (12)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:39:15	Running pdsw495726 (13)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:42:00	Running 495736 (14)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:44:46	Running 495739 (15)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:47:31	Running 495741 (16)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:50:15	Running 495743 (17)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:52:59	Running 495745 (18)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:55:45	Running 495749 (19)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 10:58:32	Running lcsw78777 (20)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:01:19	Running ccv (14)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:04:06	Running ccb (15)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:06:52	Running mbw78777 (21)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:09:40	Running 495127 (22)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:12:27	Running 496544 (23)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:15:12	Running l496544 (24)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:17:59	Running dup496544 (25)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:20:45	Running msw496544 (26)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:23:30	Running msdw496544 (27)	MDS	Analyst	S_Sodium and Potas

Type	Date/Time	Message	User name	Application	Sequence Name
	11/06/2020 11:26:13	Running pdsw496544 (28)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:28:59	Running lcsw78788 (29)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:31:46	Running mbw78788 (30)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:34:33	Running ccv (14)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:37:20	Running ccb (15)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:40:07	Running 495734 (31)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:42:52	Running l495734 (32)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:45:40	Running dup495734 (33)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:48:26	Running msw495734 (34)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:51:12	Running msdw495734 (35)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:53:59	Running pdsw495734 (36)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:56:46	Running 495737 (37)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 11:59:33	Running 495740 (38)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:02:19	Running 495742 (39)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:05:03	Running 495744 (40)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:07:48	Running ccv (14)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:10:35	Running ccb (15)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:13:22	Running 495747 (41)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:16:08	Running 495750 (42)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:18:56	Running lcsw78817 (43)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:21:42	Running mbw78817 (44)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:24:29	Running 498048 (45)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:27:15	Running l498048 (46)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:30:02	Running dup498048 (47)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:32:49	Running msw498048 (48)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:35:36	Running msdw498048 (49)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:38:23	Running pdsw498048 (50)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:41:09	Running ccv (14)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:43:56	Running ccb (15)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:46:43	Running 498049 (51)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:49:29	Running lcsw78782 (52)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:52:16	Running mbw78782 (53)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:55:03	Running 496287 (54)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 12:57:47	Running msw496287 (55)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:00:32	Running msdw496287 (56)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:03:17	Running pdsw496287 (57)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:06:01	Running lcsw78781 (58)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:08:48	Running mbw78781 (59)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:11:36	Running 495755 (60)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:14:34	Running ccv (14)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:17:22	Running ccb (15)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:20:09	Running msw495755 (61)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:23:07	Running msdw495755 (62)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:26:05	Running pdsw495755 (63)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:29:03	Running lcsw78830 (64)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:31:49	Running mbw78830 (65)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:34:37	Running 498482 (66)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:37:24	Running 498710 (67)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:40:23	Running 498711 (68)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:43:09	Running msw498711 (69)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:45:56	Running msdw498711 (70)	MDS	Analyst	S_Sodium and Potas
	11/06/2020 13:48:43	Running ccv (14)	MDS	Analyst	S_Sodium and Potas

Type	Date/Time	Message	User name	Application	Sequence Name
	11/03/2020 13:09:51	Plasma extinguished successfully	NAH	Analyst	
	11/03/2020 13:09:51	Plasma off	NAH	iTEVA Control Center	
	11/04/2020 07:02:32	Plasma On	NAH	iTEVA Control Center	
	11/04/2020 07:02:38	Plasma ignition successful	NAH	Analyst	
	11/04/2020 07:03:17	D33534 - Debug:Wavelength check : x = 0.849, y =-0.835	NAH	Analyst	
	11/04/2020 10:47:58	Autosampler Run Started	NAH	Analyst	
	11/04/2020 10:47:58	Sequence Started	NAH	Analyst	S_DOD Calibration
	11/04/2020 10:48:19	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	11/04/2020 10:54:49	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:01:11	Running CalStd3=1 (3)	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:07:31	Running CalStd4=5 (4)	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:13:52	Running CalStd5=10 (5)	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:20:15	Running CalStd6=20 (6)	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:26:31	Running CalStd7=50 (7)	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:32:46	Running CalStd8=100 (8)	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:39:03	Running CalStd9=1000 (9)	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:44:43	Running CalStd10=10000 (10)	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:50:41	Running CalStd12=100K (11)	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:57:11	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:58:29	Sequence Started	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:58:29	Autosampler Run Started	NAH	Analyst	
	11/04/2020 11:58:50	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	11/04/2020 11:59:40	Closing will close the method and all associated samples.	NAH	Analyst	
	11/04/2020 12:05:19	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	11/04/2020 12:09:20	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	11/04/2020 12:09:42	Sequence Started	NAH	Analyst	S_DOD Calibration
	11/04/2020 12:09:42	Autosampler Run Started	NAH	Analyst	
	11/04/2020 12:10:04	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	11/04/2020 12:16:31	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	11/04/2020 12:22:53	Running CalStd3=1 (3)	NAH	Analyst	S_DOD Calibration
	11/04/2020 12:29:13	Running CalStd4=5 (4)	NAH	Analyst	S_DOD Calibration
	11/04/2020 12:30:20	Closing will close the method and all associated samples.	NAH	Analyst	
	11/04/2020 12:35:35	Running CalStd5=10 (5)	NAH	Analyst	S_DOD Calibration
	11/04/2020 12:41:59	Running CalStd6=20 (6)	NAH	Analyst	S_DOD Calibration
	11/04/2020 12:48:14	Running CalStd7=50 (7)	NAH	Analyst	S_DOD Calibration
	11/04/2020 12:54:30	Running CalStd8=100 (8)	NAH	Analyst	S_DOD Calibration
	11/04/2020 13:00:45	Running CalStd9=1000 (9)	NAH	Analyst	S_DOD Calibration
	11/04/2020 13:06:26	Running CalStd10=10000 (10)	NAH	Analyst	S_DOD Calibration
	11/04/2020 13:13:41	Running CalStd12=100K (11)	NAH	Analyst	S_DOD Calibration
	11/04/2020 13:20:32	Running CalStd13=100000 (12)	NAH	Analyst	S_DOD Calibration
	11/04/2020 13:27:03	Running CalStd14=500000 (13)	NAH	Analyst	S_DOD Calibration
	11/04/2020 13:33:35	Running CalibStd15=1000k (14)	NAH	Analyst	S_DOD Calibration
	11/04/2020 13:40:44	Running Ag Ba 1000, 50000 (15)	NAH	Analyst	S_DOD Calibration
	11/04/2020 13:47:20	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	11/04/2020 13:53:40	Running icv (16)	NAH	Analyst	S_DOD Calibration
	11/04/2020 14:00:45	Running icv (16)	NAH	Analyst	S_DOD Calibration
	11/04/2020 14:06:58	Running ICVLL (24)	NAH	Analyst	S_DOD Calibration
	11/04/2020 14:13:56	Running icb (17)	NAH	Analyst	S_DOD Calibration
	11/04/2020 14:20:19	Running icb (17)	NAH	Analyst	S_DOD Calibration
	11/04/2020 14:26:42	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	11/04/2020 14:32:35	Running ICSA (20)	NAH	Analyst	S_DOD Calibration
	11/04/2020 14:39:02	Running ICSAB (21)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	11/04/2020 14:45:48	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	11/04/2020 14:52:04	Running ICVLLag mn (1)	NAH	Analyst	S_DOD Calibration
	11/04/2020 14:58:47	Running 495606 (159)	NAH	Analyst	S_DOD Calibration
	11/04/2020 15:05:31	Running 495607 (160)	NAH	Analyst	S_DOD Calibration
	11/04/2020 15:13:11	Running 495608 (161)	NAH	Analyst	S_DOD Calibration
	11/04/2020 15:21:57	Running msw495608 (162)	NAH	Analyst	S_DOD Calibration
	11/04/2020 15:23:03	Closing will close the method and all associated samples.	NAH	Analyst	
	11/04/2020 15:28:30	Running msdw495608 (163)	NAH	Analyst	S_DOD Calibration
	11/04/2020 15:35:03	Running 495609 (164)	NAH	Analyst	S_DOD Calibration
	11/04/2020 15:41:23	Running lcsw78649 (2)	NAH	Analyst	S_DOD Calibration
	11/04/2020 15:47:31	Running mbw78649 (3)	NAH	Analyst	S_DOD Calibration
	11/04/2020 15:53:50	Running 491775 (4)	NAH	Analyst	S_DOD Calibration
	11/04/2020 16:00:03	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	11/04/2020 16:05:20	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	11/04/2020 16:11:08	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	11/04/2020 16:17:29	Running 491781 (5)	NAH	Analyst	S_DOD Calibration
	11/04/2020 16:23:57	Running 491792 (6)	NAH	Analyst	S_DOD Calibration
	11/04/2020 16:30:22	Running 491799 (7)	NAH	Analyst	S_DOD Calibration
	11/04/2020 16:37:03	Running l491799 (8)	NAH	Analyst	S_DOD Calibration
	11/04/2020 16:43:16	Running dup491799 (9)	NAH	Analyst	S_DOD Calibration
	11/04/2020 16:49:57	Running msw491799 (10)	NAH	Analyst	S_DOD Calibration
	11/04/2020 16:56:00	Running msdw491799 (11)	NAH	Analyst	S_DOD Calibration
	11/04/2020 17:02:04	Running pdsw491799 (12)	NAH	Analyst	S_DOD Calibration
	11/04/2020 17:08:01	Running lcsw78688 (13)	NAH	Analyst	S_DOD Calibration
	11/04/2020 17:14:09	Running mbw78688 (14)	NAH	Analyst	S_DOD Calibration
	11/04/2020 17:20:29	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	11/04/2020 17:25:44	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	11/04/2020 17:31:31	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	11/04/2020 17:37:52	Running 493441 (15)	NAH	Analyst	S_DOD Calibration
	11/04/2020 17:44:34	Running 493442 (16)	NAH	Analyst	S_DOD Calibration
	11/04/2020 17:51:17	Running 493443 (17)	NAH	Analyst	S_DOD Calibration
	11/04/2020 17:57:59	Running 493444 (18)	NAH	Analyst	S_DOD Calibration
	11/04/2020 18:04:42	Running 493445 (19)	NAH	Analyst	S_DOD Calibration
	11/04/2020 18:10:28	Running 493446 (20)	NAH	Analyst	S_DOD Calibration
	11/04/2020 18:17:11	Running 493447 (21)	NAH	Analyst	S_DOD Calibration
	11/04/2020 18:23:55	Running 493448 (22)	NAH	Analyst	S_DOD Calibration
	11/04/2020 18:30:38	Running 493449 (23)	NAH	Analyst	S_DOD Calibration
	11/04/2020 18:37:21	Running 493450 (24)	NAH	Analyst	S_DOD Calibration
	11/04/2020 18:44:04	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	11/04/2020 18:49:17	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	11/04/2020 18:55:03	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	11/04/2020 19:01:25	Running 493451 (25)	NAH	Analyst	S_DOD Calibration
	11/04/2020 19:08:07	Running 493495 (26)	NAH	Analyst	S_DOD Calibration
	11/04/2020 19:14:52	Running msw493495 (27)	NAH	Analyst	S_DOD Calibration
	11/04/2020 19:20:57	Running msdw493495 (28)	NAH	Analyst	S_DOD Calibration
	11/04/2020 19:27:01	Running pdsw493495 (29)	NAH	Analyst	S_DOD Calibration
	11/04/2020 19:32:46	Running lcsw78686 (30)	NAH	Analyst	S_DOD Calibration
	11/04/2020 19:38:55	Running mbw78686 (31)	NAH	Analyst	S_DOD Calibration
	11/04/2020 19:45:15	Running 493146 (32)	NAH	Analyst	S_DOD Calibration
	11/04/2020 19:51:59	Running l493146 (33)	NAH	Analyst	S_DOD Calibration
	11/04/2020 19:58:44	Running dup493146 (34)	NAH	Analyst	S_DOD Calibration
	11/04/2020 20:05:27	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	11/04/2020 20:10:41	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	11/04/2020 20:16:27	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	11/04/2020 20:22:49	Running msw493146 (35)	NAH	Analyst	S_DOD Calibration
	11/04/2020 20:28:53	Running msdw493146 (36)	NAH	Analyst	S_DOD Calibration
	11/04/2020 20:34:55	Running pdsw493146 (37)	NAH	Analyst	S_DOD Calibration
	11/04/2020 20:40:53	Running 495596 (38)	NAH	Analyst	S_DOD Calibration
	11/04/2020 20:47:36	Running msw495596 (39)	NAH	Analyst	S_DOD Calibration
	11/04/2020 20:53:36	Running msdw495596 (40)	NAH	Analyst	S_DOD Calibration
	11/04/2020 20:59:34	Running 496597 (41)	NAH	Analyst	S_DOD Calibration
	11/04/2020 21:06:18	Running 496598 (42)	NAH	Analyst	S_DOD Calibration
	11/04/2020 21:13:02	Running 496599 (43)	NAH	Analyst	S_DOD Calibration
	11/04/2020 21:19:43	Running 496600 (44)	NAH	Analyst	S_DOD Calibration
	11/04/2020 21:26:25	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	11/04/2020 21:31:39	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	11/04/2020 21:37:26	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	11/04/2020 21:43:48	Running 496601 (45)	NAH	Analyst	S_DOD Calibration
	11/04/2020 21:50:29	Running 496602 (46)	NAH	Analyst	S_DOD Calibration
	11/04/2020 21:57:12	Running 496603 (47)	NAH	Analyst	S_DOD Calibration
	11/04/2020 22:03:51	Running 496604 (48)	NAH	Analyst	S_DOD Calibration
	11/04/2020 22:10:35	Running 496605 (49)	NAH	Analyst	S_DOD Calibration
	11/04/2020 22:17:18	Running 496038 (50)	NAH	Analyst	S_DOD Calibration
	11/04/2020 22:23:59	Running msw496038 (51)	NAH	Analyst	S_DOD Calibration
	11/04/2020 22:29:53	Running msdw496038 (52)	NAH	Analyst	S_DOD Calibration
	11/04/2020 22:35:47	Running 496041 (53)	NAH	Analyst	S_DOD Calibration
	11/04/2020 22:42:33	Running 496042 (54)	NAH	Analyst	S_DOD Calibration
	11/04/2020 22:49:17	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	11/04/2020 22:54:33	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	11/04/2020 23:00:20	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	11/04/2020 23:06:43	Running 496045 (55)	NAH	Analyst	S_DOD Calibration
	11/04/2020 23:13:18	Running 496046 (56)	NAH	Analyst	S_DOD Calibration
	11/04/2020 23:20:03	Running 496047 (57)	NAH	Analyst	S_DOD Calibration
	11/04/2020 23:26:43	Running 496048 (58)	NAH	Analyst	S_DOD Calibration
	11/04/2020 23:32:59	Running 496049 (59)	NAH	Analyst	S_DOD Calibration
	11/04/2020 23:39:14	Running 496050 (60)	NAH	Analyst	S_DOD Calibration
	11/04/2020 23:45:30	Running 496051 (61)	NAH	Analyst	S_DOD Calibration
	11/04/2020 23:51:45	Running 496052 (62)	NAH	Analyst	S_DOD Calibration
	11/04/2020 23:57:58	Running 496053 (63)	NAH	Analyst	S_DOD Calibration
	11/05/2020 00:04:13	Running 496054 (64)	NAH	Analyst	S_DOD Calibration
	11/05/2020 00:10:28	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	11/05/2020 00:15:44	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	11/05/2020 00:21:33	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	11/05/2020 00:27:56	Running 496214 (65)	NAH	Analyst	S_DOD Calibration
	11/05/2020 00:34:36	Running 496215 (66)	NAH	Analyst	S_DOD Calibration
	11/05/2020 00:41:22	Running 496216 (67)	NAH	Analyst	S_DOD Calibration
	11/05/2020 00:48:02	Running 496217 (68)	NAH	Analyst	S_DOD Calibration
	11/05/2020 00:54:45	Running 496218 (69)	NAH	Analyst	S_DOD Calibration
	11/05/2020 01:01:29	Running 496219 (70)	NAH	Analyst	S_DOD Calibration
	11/05/2020 01:08:13	Running 496509 (71)	NAH	Analyst	S_DOD Calibration
	11/05/2020 01:14:45	Running msw496509 (72)	NAH	Analyst	S_DOD Calibration
	11/05/2020 01:20:37	Running msdw496509 (73)	NAH	Analyst	S_DOD Calibration
	11/05/2020 01:26:35	Running 496510 (74)	NAH	Analyst	S_DOD Calibration
	11/05/2020 01:33:15	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	11/05/2020 01:38:32	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	11/05/2020 01:44:20	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	11/05/2020 01:50:44	Running 496511 (75)	NAH	Analyst	S_DOD Calibration
	11/05/2020 01:57:18	Running 496512 (76)	NAH	Analyst	S_DOD Calibration
	11/05/2020 02:03:51	Running 496513 (77)	NAH	Analyst	S_DOD Calibration
	11/05/2020 02:10:25	Running 496514 (78)	NAH	Analyst	S_DOD Calibration
	11/05/2020 02:16:58	Running 496515 (79)	NAH	Analyst	S_DOD Calibration
	11/05/2020 02:23:32	Running 496516 (80)	NAH	Analyst	S_DOD Calibration
	11/05/2020 02:30:09	Running 496517 (81)	NAH	Analyst	S_DOD Calibration
	11/05/2020 02:36:47	Running 496518 (82)	NAH	Analyst	S_DOD Calibration
	11/05/2020 02:43:21	Running 496519 (83)	NAH	Analyst	S_DOD Calibration
	11/05/2020 02:50:00	Running 496520 (84)	NAH	Analyst	S_DOD Calibration
	11/05/2020 02:56:33	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	11/05/2020 03:01:49	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	11/05/2020 03:07:38	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	11/05/2020 03:14:01	Running 496521 (85)	NAH	Analyst	S_DOD Calibration
	11/05/2020 03:20:37	Running 496451 (86)	NAH	Analyst	S_DOD Calibration
	11/05/2020 03:27:23	Running msw496451 (87)	NAH	Analyst	S_DOD Calibration
	11/05/2020 03:33:11	Running msdw496451 (88)	NAH	Analyst	S_DOD Calibration
	11/05/2020 03:39:03	Running 496452 (89)	NAH	Analyst	S_DOD Calibration
	11/05/2020 03:45:48	Running 496453 (90)	NAH	Analyst	S_DOD Calibration
	11/05/2020 03:52:05	Running 496454 (91)	NAH	Analyst	S_DOD Calibration
	11/05/2020 03:58:46	Running 496461 (92)	NAH	Analyst	S_DOD Calibration
	11/05/2020 04:05:33	Running 462462 (93)	NAH	Analyst	S_DOD Calibration
	11/05/2020 04:12:02	Running 462463 (94)	NAH	Analyst	S_DOD Calibration
	11/05/2020 04:18:46	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	11/05/2020 04:24:03	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	11/05/2020 04:29:51	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	11/05/2020 04:36:14	Running lcsw78788 (95)	NAH	Analyst	S_DOD Calibration
	11/05/2020 04:42:25	Running mbw78788 (96)	NAH	Analyst	S_DOD Calibration
	11/05/2020 04:48:46	Running 495734 (97)	NAH	Analyst	S_DOD Calibration
	11/05/2020 04:55:12	Running l495734 (98)	NAH	Analyst	S_DOD Calibration
	11/05/2020 05:01:30	Running dup495734 (99)	NAH	Analyst	S_DOD Calibration
	11/05/2020 05:07:54	Running msw495734 (100)	NAH	Analyst	S_DOD Calibration
	11/05/2020 05:14:00	Running msdw495734 (101)	NAH	Analyst	S_DOD Calibration
	11/05/2020 05:20:05	Running pdsw495734 (102)	NAH	Analyst	S_DOD Calibration
	11/05/2020 05:25:55	Running 495737 (103)	NAH	Analyst	S_DOD Calibration
	11/05/2020 05:32:19	Running 495740 (104)	NAH	Analyst	S_DOD Calibration
	11/05/2020 05:38:44	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	11/05/2020 05:44:00	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	11/05/2020 05:49:49	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	11/05/2020 05:56:12	Running 495742 (105)	NAH	Analyst	S_DOD Calibration
	11/05/2020 06:03:02	Running 495744 (106)	NAH	Analyst	S_DOD Calibration
	11/05/2020 06:09:22	Running 496447 (107)	NAH	Analyst	S_DOD Calibration
	11/05/2020 06:15:41	Running 496450 (108)	NAH	Analyst	S_DOD Calibration
	11/05/2020 06:22:02	Running lcsw78777 (109)	NAH	Analyst	S_DOD Calibration
	11/05/2020 06:28:13	Running mbw78777 (110)	NAH	Analyst	S_DOD Calibration
	11/05/2020 06:34:35	Running 495127 (111)	NAH	Analyst	S_DOD Calibration
	11/05/2020 06:41:19	Running 496544 (112)	NAH	Analyst	S_DOD Calibration
	11/05/2020 06:47:50	Running l496544 (113)	NAH	Analyst	S_DOD Calibration
	11/05/2020 06:54:37	Running dup496544 (114)	NAH	Analyst	S_DOD Calibration
	11/05/2020 07:01:07	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	11/05/2020 07:06:23	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	11/05/2020 07:12:11	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	11/05/2020 07:18:35	Running msw496544 (115)	NAH	Analyst	S_DOD Calibration
	11/05/2020 07:24:35	Running msdw496544 (116)	NAH	Analyst	S_DOD Calibration
	11/05/2020 07:30:34	Running pdsw496544 (117)	NAH	Analyst	S_DOD Calibration
	11/05/2020 07:36:22	Running lcsw78778 (118)	NAH	Analyst	S_DOD Calibration
	11/05/2020 07:42:32	Running mbw78778 (119)	NAH	Analyst	S_DOD Calibration
	11/05/2020 07:48:54	Running 495108 (120)	NAH	Analyst	S_DOD Calibration
	11/05/2020 07:55:40	Running l495108 (121)	NAH	Analyst	S_DOD Calibration
	11/05/2020 08:01:59	Running dup495108 (122)	NAH	Analyst	S_DOD Calibration
	11/05/2020 08:08:46	Running msw495108 (123)	NAH	Analyst	S_DOD Calibration
	11/05/2020 08:14:53	Running msdw495108 (124)	NAH	Analyst	S_DOD Calibration
	11/05/2020 08:21:00	Running ccv1 (31)	NAH	Analyst	S_DOD Calibration
	11/05/2020 08:26:18	Running ccv2 (29)	NAH	Analyst	S_DOD Calibration
	11/05/2020 08:32:06	Running ccb (30)	NAH	Analyst	S_DOD Calibration
	11/05/2020 08:38:30	Running pdsw495108 (125)	NAH	Analyst	S_DOD Calibration
	11/05/2020 08:44:25	Running 495114 (126)	NAH	Analyst	S_DOD Calibration
	11/05/2020 08:50:48	Running 495121 (127)	NAH	Analyst	S_DOD Calibration
	11/05/2020 08:57:17	Running lcsw78786 (128)	NAH	Analyst	S_DOD Calibration
	11/05/2020 09:03:28	Running mbw78786 (129)	NAH	Analyst	S_DOD Calibration
	11/05/2020 09:09:50	Running 496417 (130)	NAH	Analyst	S_DOD Calibration
	11/05/2020 09:16:26	Running l496417 (131)	NAH	Analyst	S_DOD Calibration
	11/05/2020 09:23:13	Running dup496417 (132)	NAH	Analyst	S_DOD Calibration
	11/05/2020 09:29:50	Running msw496417 (133)	NAH	Analyst	S_DOD Calibration
	11/05/2020 09:35:57	Running msdw496417 (134)	NAH	Analyst	S_DOD Calibration
	11/05/2020 09:42:04	Running ccv1 (31)	NAH	Analyst	S_DOD Calibration
	11/05/2020 09:47:22	Running ccv2 (29)	NAH	Analyst	S_DOD Calibration
	11/05/2020 09:53:11	Running ccb (30)	NAH	Analyst	S_DOD Calibration
	11/05/2020 09:59:36	Running pdsw496417 (135)	NAH	Analyst	S_DOD Calibration
	11/05/2020 10:05:36	Running 496419 (136)	NAH	Analyst	S_DOD Calibration
	11/05/2020 10:12:12	Running 496420 (137)	NAH	Analyst	S_DOD Calibration
	11/05/2020 10:18:35	Running lcsw78804 (138)	NAH	Analyst	S_DOD Calibration
	11/05/2020 10:24:45	Running mbw78804 (139)	NAH	Analyst	S_DOD Calibration
	11/05/2020 10:31:09	Running 497198 (140)	NAH	Analyst	S_DOD Calibration
	11/05/2020 10:36:44	Unable to Set Check Table, 1	NAH	Analyst	
	11/05/2020 10:37:59	Running l497198 (141)	NAH	Analyst	S_DOD Calibration
	11/05/2020 10:44:16	Running dup497198 (142)	NAH	Analyst	S_DOD Calibration
	11/05/2020 10:51:05	Running msw497198 (143)	NAH	Analyst	S_DOD Calibration
	11/05/2020 10:57:15	Running msdw497198 (144)	NAH	Analyst	S_DOD Calibration
	11/05/2020 11:03:25	Running ccv1 (31)	NAH	Analyst	S_DOD Calibration
	11/05/2020 11:08:43	Running ccv2 (29)	NAH	Analyst	S_DOD Calibration
	11/05/2020 11:14:32	Running ccb (30)	NAH	Analyst	S_DOD Calibration
	11/05/2020 11:20:57	Running pdsw497198 (145)	NAH	Analyst	S_DOD Calibration
	11/05/2020 11:27:04	Running 497203 (146)	NAH	Analyst	S_DOD Calibration
	11/05/2020 11:33:24	Running 497209 (147)	NAH	Analyst	S_DOD Calibration
	11/05/2020 11:39:46	Running 497224 (148)	NAH	Analyst	S_DOD Calibration
	11/05/2020 11:46:44	Running 497227 (149)	NAH	Analyst	S_DOD Calibration
	11/05/2020 11:52:54	Running 497229 (150)	NAH	Analyst	S_DOD Calibration
	11/05/2020 11:59:41	Running 497231 (151)	NAH	Analyst	S_DOD Calibration
	11/05/2020 12:05:44	Closing will close the method and all associated samples.	NAH	Analyst	
	11/05/2020 12:06:08	Running lcsw78808 (152)	NAH	Analyst	S_DOD Calibration
	11/05/2020 12:12:19	Running mbw78808 (153)	NAH	Analyst	S_DOD Calibration

		Instrument:	ICP 6000
Standard Log #:	M14582	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	11/13/2020	Expiration Date:	07/20/2021
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M14126 and Na (10,000 mg/L) M14473 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14583	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	11/13/2020	Expiration Date:	07/20/2021
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M14473 and **0.15 mL** K (10,000 µg/mL) M14126 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14584	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	11/13/2020	Expiration Date:	07/20/2021
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M14359, **2.5 mL** of K (10,000 mg/L) M14126, **2.5 mL** of Na (10,000 mg/L) M14473 and **7.5 mL** of Fe (10,000 mg/L) M14101 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M14585	Vendor:	Environmental Epress
Analyst:	BMM	Chemical:	Acid washed TCLP Filters
Date Received:	10/29/2020	Lot #:	400157-0277-D
Expiration Date (if any):	xxxxx	Catalog #:	FG77150MM

Standard Log #:	M14579	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/12/2020	Expiration Date:	12/12/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14580	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/12/2020	Expiration Date:	12/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

Standard ID#:	M14581	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	11/12/2020	Lot #:	55-080CR
Expiration Date (if any):	11/30/2021	Catalog #:	XSPIKE-1-250

Standard Log #:	M14576	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/11/2020	Expiration Date:	12/11/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14577	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/11/2020	Expiration Date:	12/11/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14578	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/11/2020	Expiration Date:	11/12/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14573	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/11/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14574	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/11/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14575	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/11/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14571	Vendor:	CPI International
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	11/05/2020	Lot #:	1084154-12
Expiration Date (if any):	05/02/2022	Catalog #:	S4400-1000331

Standard ID#:	M14572	Vendor:	SPEX Certiprep
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	11/05/2020	Lot #:	CL12-01HGY
Expiration Date (if any):	11/30/2021	Catalog #:	CLHG4-2Y

Standard ID#:	M14567	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	11/05/2020	Lot #:	1047570-22
Expiration Date (if any):	05/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14568	Vendor:	CPI
Analyst:	NAH	Chemical:	Ba 1000 mg/L
Date Received:	11/05/2020	Lot #:	994634-121
Expiration Date (if any):	05/2022	Catalog #:	S4400-100041

Standard ID#:	M14569	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	11/05/2020	Lot #:	1075718-2
Expiration Date (if any):	05/2022	Catalog #:	S4400-1000343

Standard ID#:	M14570	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	11/05/2020	Lot #:	1050965-25
Expiration Date (if any):	05/2022	Catalog #:	4400-10M544

Standard Log #:	M14563	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14564	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

Standard Log #:	M14565	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14566	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14560	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14561	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14562	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6000
Standard Log #:	M14556	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	11/03/2020	Expiration Date:	02/2022
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M14471 and K (1000 µg/mL) M14475 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14557	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	11/03/2020	Expiration Date:	02/2022
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M14471 and **0.5 mL** K (1000 µg/mL) M14475 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M14558	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	11/04/2020	Lot #:	997484-34
Expiration Date (if any):	02/2022	Catalog #:	4400-10M671

Standard ID#:	M14559	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 mg/L
Date Received:	11/04/20020	Lot #:	1055526-11
Expiration Date (if any):	02/2022	Catalog #:	4400-10M521

Standard Log #:	M14554	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/29/2020	Expiration Date:	11/29/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14555	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/29/2020	Expiration Date:	11/29/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

Standard Log #:	M14551	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/28/2020	Expiration Date:	11/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14552	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/28/2020	Expiration Date:	11/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14553	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/28/2020	Expiration Date:	10/29/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14548	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14549	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14550	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/28/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14545	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	10/26/2020	Expiration Date:	03/26/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC44 and brought up to volume.		

Standard Log #:	M14546	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/26/2020	Expiration Date:	10/26/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14547	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/26/2020	Expiration Date:	10/26/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M14543	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/21/2020	Expiration Date:	11/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

Standard ID#:	M14544	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	10/19/2020	Lot #:	202332
Expiration Date (if any):		Catalog #:	S271-3

Standard Log #:	M14539	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/20/2020	Expiration Date:	11/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14540	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/20/2020	Expiration Date:	11/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14541	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/20/2020	Expiration Date:	10/21/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14542	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/21/2020	Expiration Date:	11/21/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14536	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/20/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14537	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/20/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14538	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/20/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14533	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/19/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14534	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/19/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14535	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/19/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M14530	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/14/2020	Expiration Date:	10/15/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14531	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/14/2020	Expiration Date:	11/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14532	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/14/2020	Expiration Date:	11/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

Standard Log #:	M14526	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	11/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14527	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	10/14/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14528	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	11/13/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14529	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	11/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14523	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14524	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14525	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/13/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14521	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/08/2020	Expiration Date:	10/09/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14522	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/09/2020	Expiration Date:	04/2021
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M14508 and **10 mL** Mg (10,000 mg/L) M13984 and brought up to volume.		

Standard Log #:	M14519	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/07/2020	Expiration Date:	11/07/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14520	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/08/2020	Expiration Date:	11/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14461 and brought up to volume.		

Standard Log #:	M14514	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/05/2020	Expiration Date:	11/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14515	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/05/2020	Expiration Date:	10/06/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14516	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/05/2020	Expiration Date:	11/05/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14517	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/06/2020	Expiration Date:	11/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14461 and brought up to volume.		

Standard ID#:	M14518	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	10/05/2020	Lot #:	55-031CR
Expiration Date (if any):	09/30/2021	Catalog #:	XSPIKE-1-250

		Instrument:	HydraII
Standard Log #:	M14511	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14512	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14513	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14508	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	Palladium (Matrix Modifier)
Date Received:	10/02/2020	Lot #:	2003608-100
Expiration Date (if any):	09/30/2021	Catalog #:	HP1900-100

Standard ID#:	M14509	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/05/2020	Lot #:	K269-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14510	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/05/2020	Lot #:	K269-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14507	Vendor:	Fisher
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	09/29/2020	Lot #:	189407A
Expiration Date (if any):	05/2024	Catalog #:	H331

Standard Log #:	M14502	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/21/2020	Expiration Date:	10/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14503	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/21/2020	Expiration Date:	10/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14504	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/21/2020	Expiration Date:	09/22/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14505	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/23/2020	Expiration Date:	10/23/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14506	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/23/2020	Expiration Date:	10/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14461 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14499	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14500	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14501	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/21/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14497	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/16/2020	Expiration Date:	09/16/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14498	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/16/2020	Expiration Date:	09/16/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14492	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/15/2020	Expiration Date:	10/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14493	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/15/2020	Expiration Date:	10/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14494	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/15/2020	Expiration Date:	09/16/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14495	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/16/2020	Expiration Date:	10/16/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14496	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/16/2020	Expiration Date:	10/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14460 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14489	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/15/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14490	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/15/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14491	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/15/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14487	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/09/2020	Expiration Date:	10/09/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14488	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/09/2020	Expiration Date:	10/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14460 and brought up to volume.		

Standard Log #:	M14483	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/08/2020	Expiration Date:	10/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14484	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/08/2020	Expiration Date:	10/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14485	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/08/2020	Expiration Date:	09/09/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard ID#:	M14486	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	09/04/2020	Lot #:	1933801-500
Expiration Date (if any):	03/31/2022	Catalog #:	HP10M67-1-500

Standard ID#:	M14479	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	09/03/2020	Lot #:	A0410243
Expiration Date (if any):		Catalog #:	202015000

		Instrument:	HydraII
Standard Log #:	M14480	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/08/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14481	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/08/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14482	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/08/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14478	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	09/01/2020	Lot #:	992536-34
Expiration Date (if any):	02/2022	Catalog #:	4400-10M11

Standard ID#:	M14471	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 1000 mg/L
Date Received:	09/01/2020	Lot #:	1038021-64
Expiration Date (if any):	02/2022	Catalog #:	4400-1000521-500

Standard ID#:	M14472	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	09/01/2020	Lot #:	1013353-76
Expiration Date (if any):	02/2022	Catalog #:	4400-10m311

Standard ID#:	M14473	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 mg/L
Date Received:	09/01/2020	Lot #:	1055526-11
Expiration Date (if any):	02/2022	Catalog #:	4400-10M521

Standard ID#:	M14474	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10000 mg/L
Date Received:	09/01/2020	Lot #:	1079898-2
Expiration Date (if any):	02/2022	Catalog #:	S4400-10M391

Standard ID#:	M14475	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	09/01/2020	Lot #:	1023166-47
Expiration Date (if any):	02/2022	Catalog #:	4400-1000411-500

Standard ID#:	M14476	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	09/01/2020	Lot #:	1072921-5
Expiration Date (if any):	02/2022	Catalog #:	4400-10M91

Standard ID#:	M14477	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	09/01/2020	Lot #:	1047570-22
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000504F

Standard Log #:	M14466	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/01/2020	Expiration Date:	10/01/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14467	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/01/2020	Expiration Date:	10/01/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14468	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/02/2020	Expiration Date:	10/02/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14469	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/02/2020	Expiration Date:	10/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14460 and brought up to volume.		

Standard ID#:	M14470	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	09/01/2020	Lot #:	1034257-21
Expiration Date (if any):	02/2022	Catalog #:	4400-10m261

		Instrument:	HydraII
Standard Log #:	M14463	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/01/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14464	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/01/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14465	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/01/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14460	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	08/26/2020	Lot #:	K196-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14461	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	08/26/2020	Lot #:	K196-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14462	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/31/2020	Lot #:	2-155mf
Expiration Date (if any):	08/31/2021	Catalog #:	XCTWI-1-500

Standard Log #:	M14457	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/26/2020	Expiration Date:	09/26/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14458	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/26/2020	Expiration Date:	09/26/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14355 and brought up to volume.		

Standard Log #:	M14459	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/26/2020	Expiration Date:	09/26/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14453	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/25/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14454	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/25/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14455	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/25/2020	Expiration Date:	09/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14456	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/25/2020	Expiration Date:	08/26/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.694 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M14450	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	08/24/2020	Expiration Date:	06/30/2021
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M14359, **2.5 mL** of K (10,000 mg/L) M14126, **2.5 mL** of Na (10,000 mg/L) M14103 and **7.5 mL** of Fe (10,000 mg/L) M14101 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14451	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	08/24/2020	Expiration Date:	10/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13808 and **0.5 mL** K (1000 µg/mL) M13809 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M14452	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/25/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

Standard ID#:	M14446	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	08/24/2020	Lot #:	197591
Expiration Date (if any):		Catalog #:	S271-500

		Instrument:	ICP 6000
Standard Log #:	M14447	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	08/24/2020	Expiration Date:	10/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13808 and K (1000 µg/mL) M13809 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14448	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	08/24/2020	Expiration Date:	07/2021
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M14126 and Na (10,000 mg/L) M14103 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14449	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	08/24/2020	Expiration Date:	07/2021
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M14103 and **0.15 mL** K (10,000 µg/mL) M14126 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M14445	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/21/2020	Lot #:	2-140MF
Expiration Date (if any):	08/30/2021	Catalog #:	XCTWI-5-500

Standard Log #:	M14440	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/19/2020	Expiration Date:	09/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14441	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/19/2020	Expiration Date:	09/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14442	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/19/2020	Expiration Date:	08/20/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14443	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/20/2020	Expiration Date:	09/20/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14444	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/20/2020	Expiration Date:	09/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14355 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14437	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14438	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14439	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/19/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14434	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	08/17/2020	Lot #:	997484-34
Expiration Date (if any):	02/2022	Catalog #:	4400-10M671

Standard ID#:	M14435	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 mg/L
Date Received:	08/17/2020	Lot #:	1047570-22
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14436	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	08/17/2020	Lot #:	1053109-27
Expiration Date (if any):	02/2022	Catalog #:	4400-10M411-500

Standard Log #:	M14429	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/12/2020	Expiration Date:	09/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14430	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/12/2020	Expiration Date:	09/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

Standard Log #:	M14431	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/13/2020	Expiration Date:	09/13/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14432	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/13/2020	Expiration Date:	08/14/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14433	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/13/2020	Expiration Date:	09/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14355 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14426	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14427	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14428	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/12/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14425	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	08/10/2020	Expiration Date:	08/10/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14420	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/05/2020	Expiration Date:	09/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14421	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/05/2020	Expiration Date:	09/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14422	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/06/2020	Expiration Date:	08/07/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14423	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/06/2020	Expiration Date:	09/06/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14424	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/06/2020	Expiration Date:	09/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14417	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14418	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14419	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14416	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	08/03/2020	Lot #:	189407A
Expiration Date (if any):		Catalog #:	H331

		Instrument:	GFAA
Standard Log #:	M14413	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	07/30/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14414	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	07/30/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14415	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	07/30/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14408	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/28/2020	Expiration Date:	08/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14409	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/28/2020	Expiration Date:	08/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14410	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/28/2020	Expiration Date:	07/29/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14411	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/29/2020	Expiration Date:	08/29/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14412	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/29/2020	Expiration Date:	08/29/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14405	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14406	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14407	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/28/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14404	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	07/24/2020	Lot #:	54-207CR
Expiration Date (if any):	07/30/2020	Catalog #:	XSPIKE-1-250

Standard Log #:	M14399	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/21/2020	Expiration Date:	08/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14400	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/21/2020	Expiration Date:	08/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

Standard Log #:	M14401	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/22/2020	Expiration Date:	08/22/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14402	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/22/2020	Expiration Date:	07/23/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14403	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/22/2020	Expiration Date:	08/22/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14396	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/21/2020	Expiration Date:	07/21/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14397	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/21/2020	Expiration Date:	07/21/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14398	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/21/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14395	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	07/20/2020	Expiration Date:	09/30/2020
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13954 and **10 mL** Mg (10,000 mg/L) M13984 and brought up to volume.		

Standard Log #:	M14394	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	07/17/2020	Expiration Date:	07/17/2021
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14389	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/13/2020	Expiration Date:	08/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14390	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/13/2020	Expiration Date:	08/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14391	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/13/2020	Expiration Date:	07/14/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14392	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/14/2020	Expiration Date:	08/14/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14393	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/14/2020	Expiration Date:	08/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14386	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14387	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14388	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/13/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14384	Vendor:	Environmantal Express
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	07/08/2020	Lot #:	1933801-500
Expiration Date (if any):	01/31/2022	Catalog #:	HP10M67-1-500

Standard Log #:	M14385	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	12 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	07/08/2020	Expiration Date:	12/2020

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13863	10,000
Pb	0.1	10,000	M14202	10,000
Tl	1	1000	M14207	10,000
Se	1	1000	M13948	10,000
Sb	1	1000	M13950	10,000
Ag	0.1	1000	M13951	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.2	10,000	12
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

Standard Log #:	M14383	Reagent:	TCLP 1 N HCL
Analyst:	BMM		
Prep Date:	07/07/2020	Expiration Date:	07/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, added 83 mL HCL AB.685 and brought up to volume.		

Standard Log #:	M14381	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/03/2020	Expiration Date:	08/03/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14382	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/03/2020	Expiration Date:	08/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

Standard Log #:	M14378	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/02/2020	Expiration Date:	08/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14379	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/02/2020	Expiration Date:	08/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14380	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/02/2020	Expiration Date:	07/03/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14375	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/02/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14376	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/02/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14377	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/02/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14373	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/01/2020	Expiration Date:	07/01/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard ID#:	M14374	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	ACID WASHED TCLP FILTERS
Date Received:	06/18/2020	Lot #:	400169-0154-AG
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

Standard ID#:	M14368	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	06/30/2020	Lot #:	987189-75
Expiration Date (if any):	12/2021	Catalog #:	S4400-1000343

Standard ID#:	M14369	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	06/30/2020	Lot #:	1053109-22
Expiration Date (if any):	12/2021	Catalog #:	S4400-10M411-500

Standard ID#:	M14370	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	06/30/2020	Lot #:	1053109-8
Expiration Date (if any):	12/2021	Catalog #:	4400-10M411

Standard ID#:	M14371	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	06/30/2020	Lot #:	1047570-9
Expiration Date (if any):	12/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14372	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	06/30/2020	Lot #:	1050965-10
Expiration Date (if any):	12/2021	Catalog #:	4400-10M544

Standard Log #:	M14363	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/24/2020	Expiration Date:	07/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14364	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/24/2020	Expiration Date:	07/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14365	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/24/2020	Expiration Date:	06/25/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14366	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/25/2020	Expiration Date:	07/25/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14367	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/25/2020	Expiration Date:	07/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14360	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14361	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14362	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/24/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14358	Vendor:	Spex Certprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/22/2020	Lot #:	54-161CR
Expiration Date (if any):	06/30/2021	Catalog #:	XSOIKE-1-250

Standard ID#:	M14359	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/23/2020	Lot #:	52-213CRX
Expiration Date (if any):	06/30/2021	Catalog #:	INT-A1

Standard ID#:	M14355	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	06/17/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14356	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	06/17/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14357	Vendor:	Mettler toledo
Analyst:	NAH	Chemical:	Electrolyte Friscolyt-b
Date Received:	06/17/2020	Lot #:	1F091L
Expiration Date (if any):	03/31/2023	Catalog #:	51340053

Standard Log #:	M14350	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/16/2020	Expiration Date:	07/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14351	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/16/2020	Expiration Date:	07/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14352	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/16/2020	Expiration Date:	06/17/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14353	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/17/2020	Expiration Date:	07/17/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14354	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/17/2020	Expiration Date:	07/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14347	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/16/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14348	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/16/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14349	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/16/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14346	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	06/16/2020	Lot #:	196616
Expiration Date (if any):		Catalog #:	S271-500

Standard Log #:	M14344	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/12/2020	Expiration Date:	06/12/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14345	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/12/2020	Expiration Date:	06/12/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

		Instrument:	ICP 6500
Standard Log #:	M14342	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	06/11/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14214, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14120, **0.5 mL** Mo (1000 mg/L) M14121, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008 and **0.5 mL** Ti (1000 mg/L) M14009.		

		Instrument:	ICP 6500
Standard Log #:	M14343	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	06/11/2020	Expiration Date:	01/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14120, **15 mL** Fe (10,000 mg/L) M14101, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14340	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	06/11/2020	Expiration Date:	03/20/2021
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14195 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14341	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	06/11/2020	Expiration Date:	03/20/2021
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14195 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14337	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	06/11/2020	Expiration Date:	04/21
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M14196 5.0 **mL** 10000 mg/L Ti M14009 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14338	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ba, Be, and Sn
Prep Date:	06/11/2020	Expiration Date:	04/21
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M14130 5.0 **mL** 10000 mg/L Be M14203 5.0 **mL** 10000 mg/L Sn M14008 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14339	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	06/11/2020	Expiration Date:	07/21
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M14205 0.5 **mL** 10000 mg/L Cu M14199 5.0 **mL** 1000 mg/L Co M14204 5.0 **mL** 1000 mg/L Mo M14129 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14335	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/11/2020	Expiration Date:	12/2020
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **1 mL** of Si (1000 mg/L) M14006 and 1 mL M13859 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14104. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14103. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M13984, **10 mL** of Fe (10,000 mg/L) M14004, **10 mL** of Ca (10,000 mg/L) M13985 and **10 mL** Al (10,000 mg/L) M14105. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	ICP 6500
Standard Log #:	M14336	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	06/11/2020	Expiration Date:	04/21
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M14200 brought up to volume with milli-Q H_2O.		

		Instrument:	GFAA
Standard Log #:	M14332	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/11/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14333	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/11/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14334	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/11/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14327	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/09/2020	Expiration Date:	07/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14328	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/09/2020	Expiration Date:	07/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14329	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/10/2020	Expiration Date:	07/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

Standard Log #:	M14330	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/10/2020	Expiration Date:	07/10/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14331	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/10/2020	Expiration Date:	06/11/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14324	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/09/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14325	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/09/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14326	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/09/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14323	Vendor:	ThermoFisher
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	06/08/2020	Lot #:	216646
Expiration Date (if any):	11/30/2021	Catalog #:	39043

Standard Log #:	M14318	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/03/2020	Expiration Date:	07/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14319	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/03/2020	Expiration Date:	07/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14320	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/03/2020	Expiration Date:	06/04/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14321	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/04/2020	Expiration Date:	07/04/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14277 and brought up to volume.		

Standard Log #:	M14322	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/04/2020	Expiration Date:	07/04/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14315	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/03/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14316	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/03/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14317	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/03/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14310	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/27/2020	Expiration Date:	06/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14311	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/27/2020	Expiration Date:	06/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14312	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/28/2020	Expiration Date:	06/28/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14313	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	05/28/2020	Expiration Date:	05/29/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14314	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/28/2020	Expiration Date:	06/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14277 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14307	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14308	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14309	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/27/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14304	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/27/2020	Expiration Date:	05/27/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14305	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/27/2020	Expiration Date:	05/27/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard ID#:	M14306	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	05/27/2020	Lot #:	189407A
Expiration Date (if any):		Catalog #:	H331-500

Standard Log #:	M14299	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/19/2020	Expiration Date:	06/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14300	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/19/2020	Expiration Date:	06/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14301	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/20/2020	Expiration Date:	06/20/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14302	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/19/2020	Expiration Date:	05/20/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14303	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/20/2020	Expiration Date:	06/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14277 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14296	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14297	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14298	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/19/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14291	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14292	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14293	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14294	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	05/13/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14295	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14288	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14289	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14290	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/12/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14287	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	05/08/2020	Expiration Date:	05/08/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC07 and brought up to volume.		

Standard Log #:	M14282	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/05/2020	Expiration Date:	06/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14283	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/05/2020	Expiration Date:	06/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14284	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/06/2020	Expiration Date:	06/06/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14285	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/05/2020	Expiration Date:	05/06/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14286	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/06/2020	Expiration Date:	06/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14279	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14280	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14281	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14277	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	05/05/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14278	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	05/05/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14276	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	05/01/2020	Lot #:	195918
Expiration Date (if any):		Catalog #:	S271-500

		Instrument:	CETAC
Standard Log #:	M14275	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/29/2020	Expiration Date:	04/30/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14271	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/27/2020	Expiration Date:	05/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14272	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/27/2020	Expiration Date:	05/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14273	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/28/2020	Expiration Date:	05/28/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14274	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/28/2020	Expiration Date:	05/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14268	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14269	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14270	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/27/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14266	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/22/2020	Expiration Date:	05/22/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13463 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14267	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/22/2020	Expiration Date:	05/22/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14262	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/21/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14263	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/21/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14264	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/21/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14265	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/21/2020	Expiration Date:	04/22/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14259	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/21/2020	Expiration Date:	04/21/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

		Instrument:	HydraII
Standard Log #:	M14260	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14261	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M14254	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/14/2020	Expiration Date:	05/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14255	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/14/2020	Expiration Date:	05/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14256	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/15/2020	Expiration Date:	05/15/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14257	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/15/2020	Expiration Date:	05/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14258	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/14/2020	Expiration Date:	04/15/20220
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14251	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/14/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14252	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/14/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14253	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/14/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14250	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	04/14/2020	Expiration Date:	12/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M13951	1000	2
Al	800	M13982	**10000**	4
As	40	M13863	1000	2
Ba	20	M14130	1000	1
Be	8	M14203	1000	0.4
Ca	1000	M13985	**10000**	5
Cd	10	M14201	1000	0.5
Co	20	M14204	1000	1
Cr	20	M14205	**10000**	0.1
Cu	20	M14199	**10000**	0.1
Fe	600	M14101	**10000**	3
Mg	1000	M14108	**10000**	5
Mn	20	M14200	**10000**	0.1
Mo	20	M14129	1000	1
Ni	20	M14196	1000	1
Pb	20	M14202	**10000**	0.1
Sb	40	M13950	1000	2
Se	40	M13948	1000	2
Tl	40	M14207	1000	2
V	20	M14198	1000	1
Zn	20	M14197	**10000**	0.1
Na	10000	M14103	**10000**	50
K	10000	M14104	**10000**	50
B	40	M13947	1000	2
Si	200	M14106	1000	10
S	2000	M14102	**10000**	10
Li	40	M14127	1000	2
Sr	20	M14007	1000	1
Sn	100	M14008	1000	5
Ti	20	M14009	1000	10

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M14247	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/10/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14248	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/10/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14249	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/10/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M14246	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	04/08/2020	Lot #:	A0412553
Expiration Date (if any):		Catalog #:	424185000

Standard Log #:	M14242	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/06/2020	Expiration Date:	05/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14243	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/06/2020	Expiration Date:	05/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14244	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/07/2020	Expiration Date:	05/07/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14245	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/07/2020	Expiration Date:	05/07/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14239	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/06/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14240	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/06/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14241	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/06/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14234	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/31/2020	Expiration Date:	04/30/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14235	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/31/2020	Expiration Date:	04/30/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14236	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/01/2020	Expiration Date:	05/01/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14237	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/01/2020	Expiration Date:	05/01/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14158 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14238	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/01/2020	Expiration Date:	04/02/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14231	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/31/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14232	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/31/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14233	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/31/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

MRL BASE STD M14230 Analyst NAH

Prep Date 03/27/2020

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13951	1000	1	02/2021
Al	400	M14105	10000	2	07/2021
Ba	10	M14130	1000	0.5	07/2021
Be	4	M14203	1000	0.2	09/2021
Cd	5	M14201	1000	0.25	09/2021
Co	10	M14204	1000	0.5	09/2021
Cr	10	M14205	10000	0.05	09/2021
Cu	10	M14199	10000	0.05	09/2021
Mg	500	M14108	10000	2.5	07/2021
Mn	10	M14200	10000	0.05	09/2021
Mo	10	M14129	1000	0.5	07/2021
Ni	10	M14196	1000	0.5	09/2021
Pb	10	M14202	10000	0.05	09/2021
Sb	20	M13950	1000	1	02/2021
V	10	M14198	1000	0.5	09/2021
Zn	10	M14197	10000	0.05	09/2021
K	1000	M14104	10000	5	07/2021
Na	1000	M14103	10000	5	07/2021
As	20	M13863	1000	1	12/2020
Ca	500	M14107	10000	2.5	07/2021
Fe	300	M14101	10000	1.5	07/2021
Se	20	M13948	1000	1	02/2021
Tl	20	M14207	1000	1	09/2021
Si	100	M14106	1000	5	07/2021
B	20	M14131	1000	1	07/2021
Li	20	M14127	1000	1	07/2021
W	50	xxxxxxxd	1000	2.5	xxxxxxx
Ti	10	M14009	1000	0.5	04/2021
Sr	10	M14007	1000	0.5	04/2021
Sn	50	M14008	1000	2.5	04/2021
S	300	M14102	10000	1.5	07/2021

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M14224	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/25/2020	Expiration Date:	04/25/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14225	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/25/2020	Expiration Date:	04/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14158 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14226	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/25/2020	Expiration Date:	03/26/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

Standard ID#:	M14227	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV
Date Received:	03/25/2020	Lot #:	R2-MEB691217
Expiration Date (if any):		Catalog #:	CTI-SPK-1

Standard ID#:	M14228	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE
Date Received:	03/25/2020	Lot #:	R2-MEB691216
Expiration Date (if any):		Catalog #:	CTI-GFCAL-1

Standard ID#:	M14229	Vendor:	HACH
Analyst:	NAH	Chemical:	StablCal Standard 200 NTU
Date Received:	03/25/2020	Lot #:	A0038
Expiration Date (if any):	02/2022	Catalog #:	2660449

Standard Log #:	M14222	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/24/2020	Expiration Date:	04/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14223	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/24/2020	Expiration Date:	04/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14219	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14220	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14221	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/24/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14218	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	03/19/2020	Lot #:	54-035CR
Expiration Date (if any):	03/30/2021	Catalog #:	XCTWI-1-500

		Instrument:	CETAC
Standard Log #:	M14216	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	03/18/2020	Expiration Date:	03/19/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14217	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/18/2020	Expiration Date:	04/18/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14158 and brought up to volume.		

Standard Log #:	M14211	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/17/2020	Expiration Date:	04/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14212	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/17/2020	Expiration Date:	04/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14213	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/17/2020	Expiration Date:	04/17/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

Standard ID#:	M14214	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	03/17/2020	Lot #:	54-027CR
Expiration Date (if any):	03/30/2021	Catalog #:	XSPIKE-1-250

Standard ID#:	M14215	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	03/17/2020	Lot #:	54-028CR
Expiration Date (if any):	03/30/2021	Catalog #:	XCTWI-5-500

		Instrument:	HydraII
Standard Log #:	M14208	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14209	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14210	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/17/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14201	Vendor:	CPI
Analyst:	NAH	Chemical:	Cd 1000 mg/L
Date Received:	03/11/2020	Lot #:	996631-64
Expiration Date (if any):	09/2021	Catalog #:	S4400-100081

Standard ID#:	M14202	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 10000
Date Received:	03/11/2020	Lot #:	168223-44
Expiration Date (if any):	09/2021	Catalog #:	4400-10M281

Standard ID#:	M14203	Vendor:	CPI
Analyst:	NAH	Chemical:	Be 1000 mg/L
Date Received:	03/11/2020	Lot #:	998969-61
Expiration Date (if any):	09/2021	Catalog #:	S4400-100051

Standard ID#:	M14204	Vendor:	CPI
Analyst:	NAH	Chemical:	Co 1000 mg/L
Date Received:	03/11/2020	Lot #:	1024904-44
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000131

Standard ID#:	M14205	Vendor:	CPI
Analyst:	NAH	Chemical:	Cr 10000 mg/L
Date Received:	03/11/2020	Lot #:	880115-56
Expiration Date (if any):	09/2021	Catalog #:	S4400-10M121

Standard ID#:	M14206	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	03/11/2020	Lot #:	997484-19
Expiration Date (if any):	09/2021	Catalog #:	4400-10M671

Standard ID#:	M14207	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	03/11/2020	Lot #:	991734-85
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000581

Standard ID#:	M14195	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	03/09/2020	Lot #:	54-005CR
Expiration Date (if any):	3/30/2021	Catalog #:	XCTWI-4-500

Standard ID#:	M14196	Vendor:	CPI
Analyst:	NAH	Chemical:	Ni 1000 mg/L
Date Received:	03/11/2020	Lot #:	984273-111
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000361

Standard ID#:	M14197	Vendor:	CPI
Analyst:	NAH	Chemical:	Zn 10000 mg/L
Date Received:	03/11/2020	Lot #:	1025267-1
Expiration Date (if any):	09/2021	Catalog #:	4400-10M681

Standard ID#:	M14198	Vendor:	CPI
Analyst:	NAH	Chemical:	V 1000 mg/L
Date Received:	03/11/2020	Lot #:	990117-98
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000651

Standard ID#:	M14199	Vendor:	CPI
Analyst:	NAH	Chemical:	Cu 10000 mg/L
Date Received:	03/11/2020	Lot #:	982824-45
Expiration Date (if any):	09/2021	Catalog #:	S4400-10M141

Standard ID#:	M14200	Vendor:	CPI
Analyst:	NAH	Chemical:	Mn 10000 mg/L
Date Received:	03/11/2020	Lot #:	985851-17
Expiration Date (if any):	09/2021	Catalog #:	S4400-10M321

Standard ID#:	M14193	Vendor:	Fisher
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	03/09/2020	Lot #:	189407
Expiration Date (if any):		Catalog #:	H331-500

Standard ID#:	M14194	Vendor:	Fisher
Analyst:	NAH	Chemical:	Sodium Chloride
Date Received:	03/09/2020	Lot #:	193465
Expiration Date (if any):		Catalog #:	S271-500

		Instrument:	CETAC
Standard Log #:	M14189	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/10/2020	Expiration Date:	04/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M14190	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/09/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14191	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/09/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14192	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/09/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M14186	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14187	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14188	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14182	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/06/2020	Expiration Date:	04/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

Standard Log #:	M14183	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/06/2020	Expiration Date:	04/06/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

Standard Log #:	M14184	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14185	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14180	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/04/2020	Expiration Date:	04/04/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14181	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/04/2020	Expiration Date:	03/05/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14177	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/04/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14178	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/04/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14179	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/04/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14175	Vendor:	COLE-PARMER
Analyst:	BMM	Chemical:	Acid Washed TCLP Filters
Date Received:	03/02/2020	Lot #:	400168
Expiration Date (if any):		Catalog #:	FG77150MM

Standard Log #:	M14176	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/03/2020	Expiration Date:	03/03/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

		Instrument:	ICP 6500
Standard Log #:	M14172	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14121 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14173	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	02/25/2020	Expiration Date:	01/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14137 and 15 **mL** 10000 mg/L Fe M14004 5.0 **mL** 1000 mg/L V M13578 5.0 **mL** 1000 mg/L Ce M13859 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14174	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14137, **15 mL** Fe (10,000 mg/L) M14004, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14121, **2.5 mLs Na 10,000 ug/mL** M14103 ,**2.5 mLs k 10,000 ug/mL** M14126 **2.5 mLs S 10,000 ug/mL** M14102, **0.5 mls Si 1000 ug/mL** M13981 and brought up to volume with milli-Q .		

		Instrument:	ICP 6500
Standard Log #:	M14170	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	02/25/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14138, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14137, **0.5 mL** Mo (1000 mg/L) M14129, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008, **0.5 mL** Ti (1000 mg/L) M141009, **0.5 mL** W (1000 mg/L) Mxxxx, **0.5 mL** Si (1000 mg/L) M14106,**0.5 mL** S (10000 mg/L) M14102, **0.5 mL** K (10000 mg/L) M14126, and **0.5 mL** Na (10000 mg/L) M14103		

		Instrument:	ICP 6500
Standard Log #:	M14171	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14121 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M14168	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/24/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M14169	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14121, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827 and **1 mL** of Si (1000 mg/L) M14106 and 1 mL M13859 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14104. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M13618, **10 mL** of Mn (10,000 mg/L) M13616, **10 mL** of Cr (10,000 mg/L) M13617, **10 mL** Pb (10,000 mg/L) M13615, **10 mL** of Zn (10,000 mg/L) M13610 and **10 mL** of Na (10,000 mg/L) M14103. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14108, **10 mL** of Fe (10,000 mg/L) M14004, **10 mL** of Ca (10,000 mg/L) M14107 and **10 mL** Al (10,000 mg/L) M14105. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	HydraII
Standard Log #:	M14165	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14166	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14167	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/24/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6000
Standard Log #:	M14163	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	02/21/2020	Expiration Date:	07/2021
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M14103 and **0.15 mL** K (10,000 µg/mL) M14109 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14164	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	02/21/2020	Expiration Date:	01/30/2021
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M14120, **2.5 mL** of K (10,000 mg/L) M14109, **2.5 mL** of Na (10,000 mg/L) M14103 and **7.5 mL** of Fe (10,000 mg/L) M14101 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M14159	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/20/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	ICP 6000
Standard Log #:	M14160	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	02/21/2020	Expiration Date:	10/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13808 and K (1000 µg/mL) M13809 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14161	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	02/21/2020	Expiration Date:	10/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13808 and **0.5 mL** K (1000 µg/mL) M13809 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14162	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	02/21/2020	Expiration Date:	07/2021
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M14109 and Na (10,000 mg/L) M14103 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6500
Standard Log #:	M14156	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	02/19/2020	Expiration Date:	01/30/21
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14138, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14120, **0.5 mL** Mo (1000 mg/L) M14129, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M141008, **0.5 mL** Ti (1000 mg/L) M14009, **0.5 mL** W (1000 mg/L) Mxxxxxxx, **0.5 mL** Si (1000 mg/L) M13981,**0.5 mL** S (10000 mg/L) M14102, **0.5 mL** K (10000 mg/L) M14109, and **0.5 mL** Na (10000 mg/L) M14103		

Standard ID#:	M14157	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	02/19/2020	Lot #:	J347-07
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14158	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	02/19/2020	Lot #:	J347-07
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	CETAC
Standard Log #:	M14148	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/13/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

Standard Log #:	M14152	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14153	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14154	Reagent:	Potassium Persulfate Solution
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14155	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14149	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14150	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14151	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/17/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	HydraII
Standard Log #:	M14145	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/11/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14146	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/11/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14147	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/11/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14144	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/06/2020	Expiration Date:	03/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

Standard Log #:	M14142	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	02/05/2020	Expiration Date:	07/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14143	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	02/05/2020	Expiration Date:	02/06/2020
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14139	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14140	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14141	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14137	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/04/2020	Lot #:	53-196CR
Expiration Date (if any):	01/30/2021	Catalog #:	XCTIWI-1-500

Standard ID#:	M14138	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/04/2020	Lot #:	XSPIKE-1-250
Expiration Date (if any):	01/30/2021	Catalog #:	53-197CR

		Instrument:	CETAC
Standard Log #:	M14136	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/30/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14132	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/29/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14133	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/29/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14134	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/29/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14135	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	01/29/2020	Expiration Date:	01/30/2020
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

Standard ID#:	M14125	Vendor:	CPI International
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	01/24/2020	Lot #:	1009904-41
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-1000331

Standard ID#:	M14126	Vendor:	CPI International
Analyst:	MDS	Chemical:	Potassium 10,000 µg/mL
Date Received:	01/24/2020	Lot #:	980507-31
Expiration Date (if any):	07/20/2021	Catalog #:	4400-10M411

Standard ID#:	M14127	Vendor:	CPI International
Analyst:	MDS	Chemical:	Lithium 1000 µg/mL
Date Received:	01/24/2020	Lot #:	1017511-7
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-1000291

Standard ID#:	M14128	Vendor:	CPI International
Analyst:	MDS	Chemical:	Phosphorus 10,000 µg/mL
Date Received:	01/24/2020	Lot #:	979480-24
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-10M391

Standard ID#:	M14129	Vendor:	CPI International
Analyst:	MDS	Chemical:	Molybdenum 1000 µg/mL
Date Received:	01/24/2020	Lot #:	987189-55
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-1000343

Standard ID#:	M14130	Vendor:	CPI International
Analyst:	MDS	Chemical:	Barium 1000 µg/mL
Date Received:	01/24/2020	Lot #:	994634-53
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-100041

Standard ID#:	M14131	Vendor:	CPI International
Analyst:	MDS	Chemical:	Boron 1000 µg/mL
Date Received:	01/24/2020	Lot #:	1024903-6
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-100074

		Instrument:	HydraII
Standard Log #:	M14122	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/23/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14123	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/23/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14124	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/23/2020	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14119	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Hg 1000 ug/mL
Date Received:	01/21/2020	Lot #:	CL11-96HGY
Expiration Date (if any):	01/30/2021	Catalog #:	CLHG4-2Y

Standard ID#:	M14120	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	01/21/2020	Lot #:	2-96JX
Expiration Date (if any):	01/30/2021	Catalog #:	INT-A1

Standard ID#:	M14121	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	01/21/2020	Lot #:	1-008DMP
Expiration Date (if any):	01/21/2021	Catalog #:	XCTWI-5-500

		Instrument:	CETAC
Standard Log #:	M14117	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/17/2020	Expiration Date:	02/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

Standard Log #:	M14118	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	01/17/2020	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M13951	1000	0.01
As	2	M13863	1000	0.1
Pb	2	M13615	10000	0.01
Sb	2	M13950	1000	0.1
Se	2	M13948	1000	0.1
Tl	2	M13583	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	HydraII
Standard Log #:	M14114	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/16/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14115	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/16/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14116	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/16/2020	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14111	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/13/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14112	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/13/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14113	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/13/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M14106	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	01/13/2020	Lot #:	175213-60
Expiration Date (if any):	07/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14107	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 ug/mL
Date Received:	01/13/2020	Lot #:	855297-68
Expiration Date (if any):	07/2021	Catalog #:	4400-10M91

Standard ID#:	M14108	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 ug/mL
Date Received:	01/13/2020	Lot #:	1013353-36
Expiration Date (if any):	07/2021	Catalog #:	4400-10M311

Standard ID#:	M14109	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000ug/mL
Date Received:	01/13/2020	Lot #:	980507-79
Expiration Date (if any):	07/2021	Catalog #:	4400-10M411

Standard Log #:	M14110	Reagent:	TCLP EXTRACTION FLUID #2
Analyst:	BMM	pH:	2.88 ± 0.05
Prep Date:	01/14/2020	Expiration Date:	01/14/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 . Dilute to 20 L and mix.		

Standard ID#:	M14100	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 ug/mL
Date Received:	01/10/2020	Lot #:	1905324-500
Expiration Date (if any):	07/31/2021	Catalog #:	HP10M67-1-500

Standard ID#:	M14101	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 ug/mL
Date Received:	01/13/2020	Lot #:	998527-45
Expiration Date (if any):	07/2021	Catalog #:	4400-10M261

Standard ID#:	M14102	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10000 ug/mL
Date Received:	01/13/2020	Lot #:	9987745-28
Expiration Date (if any):	07/2021	Catalog #:	4400-10M544

Standard ID#:	M14103	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 10000 ug/mL
Date Received:	01/13/2020	Lot #:	752887-79
Expiration Date (if any):	01/2021	Catalog #:	4400-40M521

Standard ID#:	M14104	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10000 ug/mL
Date Received:	01/13/2020	Lot #:	980507-31
Expiration Date (if any):	07/2021	Catalog #:	4400-10M411

Standard ID#:	M14105	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 ug/mL
Date Received:	01/13/2020	Lot #:	992536-34
Expiration Date (if any):	07/2021	Catalog #:	4400-10M11

Standard Log #:	M14099revised below	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	01/09/2020	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M13951	1000	0.25
Al	10	M13962	**10000**	0.05
As	20	M13863	1000	1
Ba	2	M13949	1000	0.1
Be	0.5	M13579	1000	0.025
Ca	50	M13841	**10000**	0.25
Cd	0.5	M13570	1000	0.025
Co	2.5	M13575	1000	0.125
Cr	5.0	M13617	**10000**	0.025
Cu	10	M13618	**10000**	0.05
Fe	40	M13963	**10000**	0.2
Mg	25	M13752	**10000**	0.125
Mn	5	M13616	**10000**	0.025
Mo	2.5	M13860	1000	0.125
Ni	5	M13569	1000	0.25
Pb	10	M13615	**10000**	0.05
Sb	20	M13950	1000	1
Se	20	M13948	1000	1
Tl	20	M13583	1000	1
V	5	M13578	1000	0.25
Zn	5	M13610	**10000**	0.025

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14099	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	01/09/2020	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M13951	1000	0.25
Al	10	M13962	**10000**	0.05
As	20	M13863	1000	1
Ba	2	M13949	1000	0.1
Be	0.5	M13579	1000	0.025
Ca	50	M13841	**10000**	0.25
Cd	0.5	M13570	1000	0.025
Co	2.5	M13575	1000	0.125
Cr	5.0	M13617	**10000**	0.025
Cu	10	M13618	**10000**	0.05
Fe	40	M13963	**10000**	0.2
Mg	25	M13752	**10000**	0.125
Mn	5	M13616	**10000**	0.025
Mo	2.5	M13860	1000	0.125
Ni	5	M13569	1000	0.25
Pb	10	M13615	**10000**	0.05
Sb	20	M13950	1000	1
Se	20	M13948	1000	1
Tl	20	M13583	1000	1
V	5	M13578	1000	0.25
Zn	5	M13610	**10000**	0.025
Na	500	M13862	**10000**	2.5
K	500	M14003	**10000**	2.5
B	20	M13947	1000	1
Si	100	M13981	1000	5
S	200	M13696	**10000**	1
Li	20	M13577	1000	1
Sr	20	M14007	1000	1
Sn	20	M14008	1000	1
Ti	20	M14009	1000	1

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M14097	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/09/2020	Expiration Date:	02/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

Standard Log #:	M14098	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 S Spiking Solution
Prep Date:	01/09/2020	Expiration Date:	06/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	240	M13696	10000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M14096	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	01/08/2020	Expiration Date:	01/09/2020
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14093	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/08/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14094	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/08/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14095	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/08/2020	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14092	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/26/2019	Expiration Date:	01/26/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14088	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/20/2019	Expiration Date:	01/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14089	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/24/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14090	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/24/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14091	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/24/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14086	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/19/2019	Expiration Date:	12/20/2019
Prep:	Carefully mixed **3** parts HCl AB.862 with **1** part HNO_3 AB.861 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14087	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/24/2019	Expiration Date:	12/25/2019
Prep:	Carefully mixed **3** parts HCl AB.862 with **1** part HNO_3 AB.861 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14083	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/18/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14084	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/18/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14085	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/18/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14082	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	Acid Washed TCLP Filters
Date Received:	12/11/2019	Lot #:	400168-9329-CM
Expiration Date (if any):		Catalog #:	FG77150MM

Standard ID#:	M14079	Vendor:	Thermofisher Scientific
Analyst:	MDS	Chemical:	GFAA Nickel Nitrate Modifier
Date Received:	12/12/2019	Lot #:	9192422
Expiration Date (if any):	04/30/2021	Catalog #:	39043

Standard ID#:	M14080	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	12/12/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14081	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	12/12/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M14078A	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	12/11/2019	Expiration Date:	02/21

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13947	1000	0.8
Si	200	M13810	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14078b Combined with	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	12/11/2019	Expiration Date:	03/201

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M13604	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14077	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	12/11/2019	Expiration Date:	02/20

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13851	1000	0.2
Al	36	M13982	**10000**	0.18
As	24	M13863	1000	1.2
Ba	1.8	M13949	1000	0.09
Be	0.6	M13579	1000	0.03
Ca	100	M13841	**10000**	0.5
Cd	2.0	M13570	1000	0.1
Co	4	M13575	1000	0.2
Cr	4	M13617	**10000**	0.02
Cu	7	M13618	**10000**	0.035
Fe	100	M13983	**10000**	0.5
Mg	40	M13752	**10000**	0.2
Mn	4	M13616	**10000**	0.02
Mo	7	M13860	1000	0.35
Ni	6	M13569	1000	0.2
Pb	4	M13615	**10000**	0.02
Sb	12	M13950	1000	0.6
Se	13	M13948	1000	0.65
Tl	20	M13583	1000	0.75
V	5	M13578	1000	0.25
Zn	10	M13610	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14076	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	12/10/2019	Expiration Date:	02/20

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13951	1000	0.2
Al	9.6	M13982	**10000**	0.048
As	32	M13863	1000	1.6
Ba	2	M13949	1000	0.1
Be	1.6	M13579	1000	0.08
Ca	56	M13841	**10000**	0.28
Cd	1.6	M13570	1000	0.08
Co	9.6	M13575	1000	0.48
Cr	5.6	M13617	**10000**	0.028
Cu	16	M13618	**10000**	0.08
Fe	72	M13983	**10000**	0.36
Mg	32	M13752	**10000**	0.16
Mn	6	M13616	**10000**	0.03
Mo	9.6	M13860	1000	0.48
Ni	4.8	M13569	1000	0.24
Pb	10	M13615	**10000**	0.05
Sb	32	M13950	1000	1.6
Se	16	M13948	1000	0.8
Tl	19	M13583	1000	0.95
V	3.2	M13578	1000	0.16
Zn	12	M13610	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M14074	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	12/10/2019	Expiration Date:	02/2021
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13951 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M14075	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/10/2019	Expiration Date:	12/11/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	GFAA
Standard Log #:	M14072	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	12/10/2019	Expiration Date:	02/2020
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13950 **3.2 mL** of As (1000 mg/L) M13863 **3.2 mL** of Se (1000 mg/L) M13948 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M14073	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	12/10/2019	Expiration Date:	02/2020
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13950 **1.0 mL** of As (1000 mg/L) M13863 **2.0 mL** of Se (1000 mg/L) M13948 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M14071	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	12 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	12/10/2019	Expiration Date:	02/2020

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13863	10,000
Pb	0.1	10,000	M13615	10,000
Tl	1	1000	M13583	10,000
Se	1	1000	M13948	10,000
Sb	1	1000	M13950	10,000
Ag	0.1	1000	M13951	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.2	10,000	12
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

		Instrument:	HydraII
Standard Log #:	M14068	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/10/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14069	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	12/10/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13734 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M14070	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/10/2019	Expiration Date:	01/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14065	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/05/2019	Expiration Date:	01/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14066	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/06/2019	Expiration Date:	01/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14067	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/10/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M14063	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/03/2019	Expiration Date:	01/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14064	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/04/2019	Expiration Date:	12/05/2019
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14061	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/02/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14062	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	Acid Washed TCLP Filters
Date Received:	12/02/2019	Lot #:	400168-9305-CM
Expiration Date (if any):		Catalog #:	

		Instrument:	CETAC
Standard Log #:	M14058	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/20/2019	Expiration Date:	12/20/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M14017 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14059	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/02/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14060	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/02/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M14056	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/26/2019	Expiration Date:	11/26/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

Standard Log #:	M14057	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/26/2019	Expiration Date:	11/26/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

Standard ID#:	M14054	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	11/20/2019	Lot #:	53-042CR
Expiration Date (if any):	11/30/2020	Catalog #:	XCTWI-5-500

Standard ID#:	M14055	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	11/20/2019	Lot #:	53-041CR
Expiration Date (if any):	11/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	GFAA
Standard Log #:	M14051	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	11/20/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14052	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	11/20/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14053	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	11/20/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M14048	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/19/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14049	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/19/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14050	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	11/19/2019	Expiration Date:	11/20/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14045	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/11/2019	Expiration Date:	05/11/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.681 and dissolved **100 g** Stannous chloride M14017 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14046	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/13/19	Expiration Date:	05/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.681 and dissolved **100 g** Stannous chloride M14017 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14047	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/19/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

Standard Log #:	M14044	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/13/2019	Expiration Date:	11/13/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M14041	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	11/09/2019	Expiration Date:	11/10/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14042	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	11/12/2019	Expiration Date:	11/13/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M14043	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	11/12/2019	Expiration Date:	04/12/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13993 and **60 g** hydroxylamine sulfate M13874 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14038	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14039	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14040	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/07/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6000
Standard Log #:	M14035	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/04/2019	Expiration Date:	02/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M14008 Sr (1000 µg/mL) M14007 Ti (1000 µg/mL) M14009 W (1000 µg/mL) MXXXXX		

		Instrument:	ICP 6000
Standard Log #:	M14036	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	11/04/2019	Expiration Date:	02/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	MXXXX	1000	5	XX/XXXX
Ti	10/30	M14009	1000	0.5	04/2021
Sr	10/30	M14007	1000	0.5	04/2021
Sn	20/60	M14008	1000	1	04/2021

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	CETAC
Standard Log #:	M14037	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/04/2019	Expiration Date:	05/04/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13922 and brought up to volume.		

		Instrument:	ICP
Standard Log #:	M14033	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	11/04/2019	Expiration Date:	05/30/2020
Prep:	Standard Conc. (ug/L)	Pipette the following:	
	1	**0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.001 mL** W (1000 µg/mL) MXXXXX into 1L = *1 µg/L*	
	10	**0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.01 mL** W (1000 µg/mL) MXXXXX into 1L = *10 µg/L*	
	100	**1 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.1 mL** W (1000 µg/mL) MXXXXX into 1L = *100 µg/L*	
	1000 (CCV)	**2 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.2 mL** W (1000 µg/mL) MXXXXX into 200mL = *1000 µg/L*	
	10000	**20 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **2 mL** W (1000 µg/mL) MXXXXX into 200mL = *10000 µg/L*	

		Instrument:	ICP 6000
Standard Log #:	M14034	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/04/2019	Expiration Date:	02/28/2020
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **6 mL** of Fe (10,000 mg/L) M13751, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M14008, **0.1 mL** of Sr (1000 µg/mL) M14007, **0.1 mL** of Ti (1000 µg/mL) M14009, and **0.1 mL** of W (1000 µg/mL) MXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	CETAC
Standard Log #:	M14032	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/31/2019	Expiration Date:	10/31/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M14028	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	10/30/2019	Expiration Date:	10/2020
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13947 and Si (1000 mg/L) M13810 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14029	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/30/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **0.05 mL** of B (1000 µg/mL) M13947, **0.05 mL** of Si (1000 µg/mL) M13810 and **3 mL** of Fe (10,000 mg/L) M13751 and brought up to volume using Milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M14030	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	10/30/2019	Expiration Date:	05/30/2020
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13839 and **1.0 mL** Si (1000 mg/L) M13981 and brought up to volume using milli-Q H_2O.		

Standard ID#:	M14031	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Acid Washed TCLP filters
Date Received:	10/31/2019	Lot #:	400165
Expiration Date (if any):		Catalog #:	FG77150MM

		Instrument:	HydraII
Standard Log #:	M14024	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/29/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14025	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/29/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14026	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/29/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14027	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/30/2019	Expiration Date:	04/30/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13922 and brought up to volume.		

MRL BASE STD M14024 Analyst NAH

Prep Date 10/30/2019

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13951	1000	1	02/2021
Al	400	M13690	10000	2	06/2020
Ba	10	M13949	1000	0.5	02/2021
Be	4	M13579	1000	0.2	02/2020
Cd	5	M13570	1000	0.25	01/2020
Co	10	M13575	1000	0.5	01/2020
Cr	10	M13617	10000	0.05	03/2020
Cu	10	M13618	10000	0.05	03/2020
Mg	500	M13752	10000	2.5	09/2020
Mn	10	M13616	10000	0.05	03/2020
Mo	10	M13860	1000	0.5	12/2020
Ni	10	M13569	1000	0.5	01/2020
Pb	10	M13615	10000	0.05	03/2020
Sb	20	M13950	1000	1	02/2021
V	10	M13578	1000	0.5	02/2020
Zn	10	M13610	10000	0.05	03/2020
K	1000	M14003	10000	5	04/2021
Na	1000	M13862	10000	5	12/2020
As	20	M13763	1000	1	12/2020
Ca	500	M13985	10000	2.5	04/2021
Fe	300	M13751	10000	1.5	09/2020
Se	20	M13948	1000	1	02/2021
Tl	20	M13583	1000	1	02/2020
Si	100	M13810	1000	5	10/2020
B	20	M13947	1000	1	02/2021
Li	20	M13577	1000	1	02/2020
W	50	Mxxxxxx	1000	2.5	xxxxxxxx
Ti	10	M14009	1000	0.5	04/2021
Sr	10	M14007	1000	0.5	03/2020
Sn	50	M14008	1000	2.5	04/2021
S	300	M13604	10000	1.5	03/2020

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M14022	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13922 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M14023	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	10/30/2019	Expiration Date:	02/2020
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M13738 and 15 **mL** 10000 mg/L Fe M14004 5.0 **mL** 1000 mg/L V M13578 5.0 **mL** 1000 mg/L Ce M13859 and brought up to volume with milli-Q H_2O.		

Standard Log #:	M14020	Reagent:	Potassium Persulfate Solution
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14021	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13993 and **60 g** hydroxylamine sulfate M13874 and brought up to volume.		

Standard ID#:	M14016	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/23/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14017	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/23/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	CETAC
Standard Log #:	M14018	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	10/24/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M14019	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14012	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/21/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14013	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/21/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14014	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/21/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14015	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/22/2019	Expiration Date:	09/30/2020
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13954 and **10 mL** Mg (10,000 mg/L) M13752 and brought up to volume.		

Standard Log #:	M14010	Reagent:	SPLP ACID MIX
Analyst:	BMM		60/40 H_2SO_4 - HNO_3
Prep Date:	10/21/2019	Expiration Date:	10/21/2020
Prep:	Into a 200 mL volumetric flask, partially filled with DI H_2O, add **12 g** H_2SO_4 AB.674 and **8 g** HNO_3 AB.677 and bring up to volume using DI H_2O.		

Standard Log #:	M14011	Reagent:	SPLP EXTRACTION FLUID EAST #
Analyst:	BMM	pH:	4.20 ± 0.05
Prep Date:	10/21/2019	Expiration Date:	10/21/2020
Prep:	Into a 20 L carboy filled with DI H_2O, adjust pH to 4.20 ± 0.05 using 60/40 HNO_3 - H_2SO_4 M14010.		

Standard ID#:	M14005	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	10/17/2019	Lot #:	168189-30
Expiration Date (if any):	04/2021	Catalog #:	4400-110M671

Standard ID#:	M14006	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	10/17/2019	Lot #:	1004985-62
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14007	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	10/17/2019	Lot #:	168227-95
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000531

Standard ID#:	M14008	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/L
Date Received:	10/17/2019	Lot #:	977645-2
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000613

Standard ID#:	M14009	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	10/17/2019	Lot #:	987438-36
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000623

		Instrument:	CETAC
Standard Log #:	M14000	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/16/2019	Expiration Date:	04/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

Standard ID#:	M14001	Vendor:	ThermoFisher
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	10/17/2019	Lot #:	9192422
Expiration Date (if any):	04/30/2021	Catalog #:	39043

Standard Log #:	M14002	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	10/17/2019	Expiration Date:	10/17/2020
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W47366 and brought up to volume.		

Standard ID#:	M14003	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	10/17/2019	Lot #:	980507-31
Expiration Date (if any):	04/2021	Catalog #:	4400-10M411

Standard ID#:	M14004	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	10/17/2019	Lot #:	998527-45
Expiration Date (if any):	04/2021	Catalog #:	4400-10M261

		Instrument:	GFAA
Standard Log #:	M13997	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/16/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13998	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/16/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13999	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/16/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M13993	Vendor:	Thermo fisher Scientific
Analyst:	NAH	Chemical:	Sodium Chloride
Date Received:	10/15/2019	Lot #:	193463
Expiration Date (if any):	06/2024	Catalog #:	S271-500

Standard ID#:	M13994	Vendor:	Thermo Fisher Scientific
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	10/15/2019	Lot #:	189407
Expiration Date (if any):	05/2024	Catalog #:	H331-500

		Instrument:	CETAC
Standard Log #:	M13995	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/15/2019	Expiration Date:	10/16/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13996	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/16/2019	Expiration Date:	10/16/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

		Instrument:	ICP 6000
Standard Log #:	M13992	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	10/15/2019	Expiration Date:	01/2020
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **6 mL** of Fe (10,000 mg/L) M13751, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) MXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	ICP 6000
Standard Log #:	M13989	Standard:	Sulfur ICAL
Analyst:	MDS	Concentrations:	1000 10,000 100,000 1000K µg/L (S)
Prep Date:	10/14/2019	Expiration Date:	06/2020
Prep:	Into four, 100 mL volumetric flasks, pipetted the following from stock standard S (10,000 µg/mL) M13696 and brought up to volume using milli-Q H_2O. *1000 ug/L std.* - **0.01 mL** *10,000 ug/L std.* - **0.1 mL** *100,000 ug/L std.* -**1.0 mL**, also used as the CCV *1000K ug/L std.* - **10 mL**		

		Instrument:	ICP 6000
Standard Log #:	M13990	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	10/14/2019	Expiration Date:	03/2020
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M13604 and brought up to volume using Milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13991	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/14/2019	Expiration Date:	12/2019
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **0.05 mL** of B (1000 µg/mL) M13531, **0.05 mL** of Si (1000 µg/mL) M13861 and **3 mL** of Fe (10,000 mg/L) M13751 and brought up to volume using Milli-Q H_2O.		

		Instrument:	HydraII
Standard Log #:	M13986	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/15/2019	Expiration Date:	04/15/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13987	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/15/2019	Expiration Date:	04/15/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13988	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/15/2019	Expiration Date:	04/15/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M13982	Vendor:	CPI
Analyst:	NAH	Chemical:	Aluminum 10000 mg/L
Date Received:	10/09/2019	Lot #:	992536-16
Expiration Date (if any):	04/2021	Catalog #:	4400-10M11

Standard ID#:	M13983	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	10/09/2019	Lot #:	998527-45
Expiration Date (if any):	04/2021	Catalog #:	4400-10M261

Standard ID#:	M13984	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	10/09/2019	Lot #:	1013353-4
Expiration Date (if any):	04/2021	Catalog #:	4400-10M311

Standard ID#:	M13985	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	10/09/2019	Lot #:	855297-68
Expiration Date (if any):	04/2021	Catalog #:	4400-10M91

		Instrument:	CETAC
Standard Log #:	M13978	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/08/2019	Expiration Date:	04/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13979	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/09/2019	Expiration Date:	04/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

Standard ID#:	M13980	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	10/08/2019	Lot #:	52-248CR
Expiration Date (if any):	10/30/2020	Catalog #:	XSPIKE-1-250

Standard ID#:	M13981	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 mg/l
Date Received:	10/09/2019	Lot #:	1004985-62
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000504F

		Instrument:	HydraII
Standard Log #:	M13976	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	10/07/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13975 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13977	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/07/2019	Expiration Date:	10/07/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13973	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13974	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13975	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/07/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M13970	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/07/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13971	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/07/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13972	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/07/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13969	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	10/02/2019	Expiration Date:	10/02/2020
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13967	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	10/01/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13966 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13968	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/01/2019	Expiration Date:	10/01/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13964	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/01/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13965	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/01/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13966	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/01/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M13963	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/30/2019	Expiration Date:	09/30/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard ID#:	M13961	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	09/24/2019	Lot #:	7-093AB
Expiration Date (if any):	09/30/2020	Catalog #:	XCTWI-1-500

		Instrument:	CETAC
Standard Log #:	M13962	Reagent:	Stannous Chloride Solution
Analyst:	NAH		
Prep Date:	09/25/2019	Expiration Date:	09/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13960	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/19/2019	Expiration Date:	03/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.678 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M13958	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/17/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	HydraII
Standard Log #:	M13959	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	09/17/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13958 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13955	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	09/17/2019	Expiration Date:	09/17/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13956	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/17/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13957	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/17/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M13952	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/13/2019	Expiration Date:	09/13/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard Log #:	M13953	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/13/2019	Expiration Date:	09/13/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard ID#:	M13954	Vendor:	Environmental Expresss
Analyst:	MDS	Chemical:	1% Pd Matrix Modifier
Date Received:	09/13/2019	Lot #:	1925215
Expiration Date (if any):	09/30/2020	Catalog #:	HP1900-100

		Instrument:	CETAC
Standard Log #:	M13946	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/10/2019	Expiration Date:	03/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

Standard ID#:	M13947	Vendor:	CPI
Analyst:	NAH	Chemical:	Boron 1000 mg/lL
Date Received:	09/10/2019	Lot #:	982524-80
Expiration Date (if any):	02/2021	Catalog #:	S4400-100074

Standard ID#:	M13948	Vendor:	CPI
Analyst:	NAH	Chemical:	Selenium 1000 mg/L
Date Received:	09/10/2019	Lot #:	982461-61
Expiration Date (if any):	02/2021	Catalog #:	S4400-1000491

Standard ID#:	M13949	Vendor:	CPI
Analyst:	NAH	Chemical:	Barium 1000 mg/L
Date Received:	09/10/2019	Lot #:	994634-28
Expiration Date (if any):	02/2021	Catalog #:	S4400-100041

Standard ID#:	M13950	Vendor:	CPI
Analyst:	NAH	Chemical:	Antimony 1000 mg/L
Date Received:	09/10/2019	Lot #:	1013797-3
Expiration Date (if any):	02/2019	Catalog #:	S4400-100023

Standard ID#:	M13951	Vendor:	CPI
Analyst:	NAH	Chemical:	Silver 1000 mg/L
Date Received:	09/10/2019	Lot #:	975475-71
Expiration Date (if any):	02/2021	Catalog #:	S4400-1000511

		Instrument:	HydraII
Standard Log #:	M13944	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	09/09/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13943 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13945	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	09/09/2019	Expiration Date:	09/09/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13941	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/09/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13942	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/09/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13943	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/09/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M13938	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	09/09/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13939	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	09/09/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13940	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	09/09/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13937	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	09/06/2019	Expiration Date:	02/28/2020
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **2.5 mL** of K (10,000 mg/L) M13755, **2.5 mL** of Na (10,000 mg/L) M13691 and **7.5 mL** of Fe (10,000 mg/L) M13695 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13933	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	09/06/2019	Expiration Date:	03/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13607 and K (1000 µg/mL) M13606 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13934	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	09/06/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13607 and **0.5 mL** K (1000 µg/mL) M13606 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13935	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	09/06/2019	Expiration Date:	06/2020
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13755 and Na (10,000 mg/L) M13691 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13936	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	09/06/2019	Expiration Date:	06/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M13691 and **0.15 mL** K (10,000 µg/mL) M13755 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M13929	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13928 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13930	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/03/2019	Expiration Date:	10/03/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

Standard Log #:	M13931	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/03/2019	Expiration Date:	09/03/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard Log #:	M13932	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/03/2019	Expiration Date:	09/03/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

		Instrument:	HydraII
Standard Log #:	M13926	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13927	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13928	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M13924	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	08/29/2019	Lot #:	1833905
Expiration Date (if any):	02/28/2021	Catalog #:	HP10M67-1

		Instrument:	HydraII
Standard Log #:	M13920	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/27/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13919 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13921	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/28/2019	Expiration Date:	09/28/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

Standard ID#:	M13922	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	08/28/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M13923	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	08/28/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	HydraII
Standard Log #:	M13917	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/27/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13918	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/27/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13919	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/27/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M13916	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	08/26/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	GFAA
Standard Log #:	M13914	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	08/26/2019	Expiration Date:	10/2019
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13459 **3.2 mL** of As (1000 mg/L) M13863 **3.2 mL** of Se (1000 mg/L) M13460 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M13915	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	08/26/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13459 **1.0 mL** of As (1000 mg/L) M13863 **2.0 mL** of Se (1000 mg/L) M13460 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M13913 (A)	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	08/26/2019	Expiration Date:	12/19/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13531	1000	0.8
Si	200	M13861	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13913 combined with A	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	08/26/2019	Expiration Date:	06/20/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M13696	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M13911	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/21/2019	Expiration Date:	02/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13912	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	08/21/2019	Expiration Date:	08/21/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13909	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/20/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13908 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13910	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	08/20/2019	Expiration Date:	08/20/2020
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.655 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13906	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/20/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13907	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/20/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13908	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/20/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M13904	Reagent:	Potassium Persulfate Solution
Analyst:	BMM		
Prep Date:	08/19/2019	Expiration Date:	08/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

Standard Log #:	M13905	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	08/19/2019	Expiration Date:	08/19/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13728 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13902	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/15/2019	Expiration Date:	02/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

Standard ID#:	M13903	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/15/2019	Lot #:	52-161Cr
Expiration Date (if any):	8/30/2020	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13898	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	08/13/2019	Expiration Date:	08/13/2020
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13899	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/13/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13900	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/13/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13901	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/13/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13734 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13897	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	12 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	08/12/2019	Expiration Date:	10/2019

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13863	10,000
Pb	0.1	10,000	M13615	10,000
Tl	1	1000	M13583	10,000
Se	1	1000	M13460	10,000
Sb	1	1000	M13459	10,000
Ag	0.1	1000	M13458	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.2	10,000	12
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

Standard Log #:	M13896	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	08/09/2019	Expiration Date:	08/09/2020
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13895	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/06/2019	Expiration Date:	02/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13894	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/05/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13893 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13891	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/05/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13892	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/05/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13893	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/05/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13890	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/29/2019	Expiration Date:	01/29/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

Standard ID#:	M13888	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	07/25/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M13889	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	07/25/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	CETAC
Standard Log #:	M13884	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	07/22/2019	Expiration Date:	
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13885	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	07/22/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13886	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	07/22/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13887	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	07/22/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M13883	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/18/2019	Expiration Date:	01/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13879	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13880	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/18/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13881	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/18/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13882	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	07/18/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13881 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13876	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13877	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W45383 and brought up to volume.		

Standard Log #:	M13878	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M45383. Dilute to 20 L and mix.		

Standard Log #:	M13873	Reagent:	Potassium Permanganate Solution
Analyst:	NAH		
Prep Date:	07/17/2019	Expiration Date:	07/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard ID#:	M13874	Vendor:	Fisher
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	07/17/2019	Lot #:	175511
Expiration Date (if any):		Catalog #:	H331-500

Standard Log #:	M13875	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	NAH		
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13728 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13872	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/12/2019	Expiration Date:	07/12/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13871	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/11/2019	Expiration Date:	07/11/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13870	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/10/2019	Expiration Date:	07/10/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13869	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/08/2019	Expiration Date:	07/08/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13868	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	07/03/2019	Expiration Date:	01/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13864	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	07/02/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13865	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	01/02/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13728 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

Standard Log #:	M13866	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	01/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M13867	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	01/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13858	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/26/2019	Expiration Date:	06/26/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13859	Vendor:	CPI
Analyst:	NAH	Chemical:	Ce 1000 mg/L
Date Received:	06-26-2019	Lot #:	171633-12
Expiration Date (if any):	12/2020	Catalog #:	S4400-1000101

Standard ID#:	M13860	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	06-26-2019	Lot #:	987189-17
Expiration Date (if any):	12/2020	Catalog #:	S4400-1000343

Standard ID#:	M13861	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	06-26-2019	Lot #:	175213-60
Expiration Date (if any):	12/2020	Catalog #:	S4400-1000504F

Standard ID#:	M13862	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 mg/L
Date Received:	06-26-2019	Lot #:	752887-32
Expiration Date (if any):	12/2020	Catalog #:	4400-10M521

Standard ID#:	M13863	Vendor:	CPI
Analyst:	NAH	Chemical:	As 1000 mg/L
Date Received:	06-26-2019	Lot #:	175385-105
Expiration Date (if any):	12/2020	Catalog #:	S4400-100031

Standard Log #:	M13856	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/21/2019	Expiration Date:	06/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13857	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/21/2019	Expiration Date:	06/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M13855	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/19/2019	Expiration Date:	06/19/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13851	Vendor:	CPI
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06-19-2019	Lot #:	52-082CR
Expiration Date (if any):	06/30/2020	Catalog #:	XSPIKE-1-250

		Instrument:	GFAA
Standard Log #:	M13852	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13853	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13854	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M13850	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/14/2019	Expiration Date:	06/14/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13849	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	06/13/2019	Expiration Date:	07/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M13458	1000	0.01
As	2	M13392	1000	0.1
Pb	2	M13615	10000	0.01
Sb	2	M13459	1000	0.1
Se	2	M13460	1000	0.1
Tl	2	M13583	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13848	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	06/11/2019	Expiration Date:	10/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	36	M13611	**10000**	0.18
As	24	M13753	1000	1.2
Ba	1.8	M13457	1000	0.09
Be	0.6	M13579	1000	0.03
Ca	100	M13692	**10000**	0.5
Cd	2.0	M13570	1000	0.1
Co	4	M13575	1000	0.2
Cr	4	M13697	**10000**	0.02
Cu	7	M13618	**10000**	0.035
Fe	100	M13609	**10000**	0.5
Mg	40	M13694	**10000**	0.2
Mn	4	M13616	**10000**	0.02
Mo	7	M13697	1000	0.35
Ni	6	M13569	1000	0.2
Pb	4	M13615	**10000**	0.02
Sb	12	M13459	1000	0.6
Se	13	M13460	1000	0.65
Tl	20	M13583	1000	0.75
V	5	M13578	1000	0.25
Zn	10	M13610	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13847	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	06/11/2019	Expiration Date:	10/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	9.6	M13611	**10000**	0.048
As	32	M13753	1000	1.6
Ba	2	M13457	1000	0.1
Be	1.6	M13579	1000	0.08
Ca	56	M13692	**10000**	0.28
Cd	1.6	M13570	1000	0.08
Co	9.6	M13575	1000	0.48
Cr	5.6	M13697	**10000**	0.028
Cu	16	M13618	**10000**	0.08
Fe	72	M13609	**10000**	0.36
Mg	32	M13694	**10000**	0.16
Mn	6	M13616	**10000**	0.03
Mo	9.6	M13697	1000	0.48
Ni	4.8	M13569	1000	0.24
Pb	10	M13615	**10000**	0.05
Sb	32	M13459	1000	1.6
Se	16	M13460	1000	0.8
Tl	19	M13583	1000	0.95
V	3.2	M13578	1000	0.16
Zn	12	M13610	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13845	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 k&na Spiking Solution
Prep Date:	06/11/2019	Expiration Date:	06/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
K	500	M13811	10000	2.5
Na	600	M13691	10000	3

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13846	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 k&na Spiking Solution
Prep Date:	06/11/2019	Expiration Date:	06/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
K	2640	M13811	10000	13.2
Na	960	M13691	10000	4.8

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard ID#:	M13839	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/11/2019	Lot #:	52-038CR
Expiration Date (if any):	05/30/2020	Catalog #:	XCTWI-5-500

Standard ID#:	M13840	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/11/2019	Lot #:	5-244AB
Expiration Date (if any):	06/30/2020	Catalog #:	XCTWWI-1-500

Standard ID#:	M13841	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 mg/L
Date Received:	06/11/2019	Lot #:	855297-41
Expiration Date (if any):	11/2020	Catalog #:	4400-10M91

Standard ID#:	M13842	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 mg/L
Date Received:	06/11/2019	Lot #:	169484-36
Expiration Date (if any):	11/2020	Catalog #:	4400-10M11

Standard ID#:	M13843	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	06/11/2019	Lot #:	168189-30
Expiration Date (if any):	11/20	Catalog #:	4400-10M671

Standard ID#:	M13844	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	06/11/2019	Lot #:	175213-60
Expiration Date (if any):	11/2020	Catalog #:	S4400-1000504F

		Instrument:	GFAA
Standard Log #:	M13838	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	06/07/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	GFAA
Standard Log #:	M13836	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	06/07/2019	Expiration Date:	07/2019
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13459 **3.2 mL** of As (1000 mg/L) M13392 **3.2 mL** of Se (1000 mg/L) M13460 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M13837	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	06/07/2019	Expiration Date:	07/2019
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13459 **1.0 mL** of As (1000 mg/L) M13392 **2.0 mL** of Se (1000 mg/L) M13460 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

		Instrument:	CETAC
Standard Log #:	M13835	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/06/2019	Expiration Date:	06/06/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	ICP 6500
Standard Log #:	M13832	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13833	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13834	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M13738, **15 mL** Fe (10,000 mg/L) M13751, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and brought up to volume with milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M13830	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	06/03/2019	Expiration Date:	12/03/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M13831	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827 and **1 mL** of Si (1000 mg/L) M13810 and 1 mL M13703 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M13811. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M13618, **10 mL** of Mn (10,000 mg/L) M13616, **10 mL** of Cr (10,000 mg/L) M13617, **10 mL** Pb (10,000 mg/L) M13610, **10 mL** of Zn (10,000 mg/L) M13615 and **10 mL** of Na (10,000 mg/L) M13691. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M13752, **10 mL** of Fe (10,000 mg/L) M13751, **10 mL** of Ca (10,000 mg/L) M13690 and **10 mL** Al (10,000 mg/L) M13693. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	CETAC
Standard Log #:	M13829	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/31/2019	Expiration Date:	05/31/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13828	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/30/2019	Expiration Date:	05/30/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13827	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05-29-2019	Lot #:	XCTWI-4-500
Expiration Date (if any):	5/30/2020	Catalog #:	5-116AB

		Instrument:	CETAC
Standard Log #:	M13823	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	05/24/2019	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13824	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	05/24/2019	Expiration Date:	11/24/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

Standard Log #:	M13825	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	05/24/2019	Expiration Date:	11/24/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

Standard Log #:	M13826	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/24/2019	Expiration Date:	11/24/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13820	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/24/2019	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13821	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/24/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13822	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	05/24/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13734 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13818	Reagent:	TCLP 1 N HCL
Analyst:	BMM		
Prep Date:	05/22/2019	Expiration Date:	05/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, added 83 mL HCL AB.676 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13819	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/22/2019	Expiration Date:	05/22/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13817	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/16/2019	Expiration Date:	05/16/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13813	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	05/14/2019	Expiration Date:	09/30/2019
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13600 and **10 mL** Mg (10,000 mg/L) M13694 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M13814	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	05/14/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13815	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	05/14/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13816	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	05/14/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13812	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/13/2019	Expiration Date:	11/13/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard ID#:	M13808	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 ug/mL
Date Received:	05-09-2019	Lot #:	158237-121
Expiration Date (if any):	10/20	Catalog #:	4400-1000521-500

Standard ID#:	M13809	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 ug/mL
Date Received:	05-09-2019	Lot #:	832313-110
Expiration Date (if any):	10/20	Catalog #:	4400-1000411-500

Standard ID#:	M13810	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	05-09-2019	Lot #:	175213-60
Expiration Date (if any):	10/20	Catalog #:	S400-1000504F

Standard ID#:	M13811	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 ug/mL
Date Received:	05-09-2019	Lot #:	980507-14
Expiration Date (if any):	10/20	Catalog #:	4400-10M411-500

		Instrument:	CETAC
Standard Log #:	M13805	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/07/2019	Expiration Date:	05/07/2019
Prep:	Carefully mixed **3** parts HCl AB.677 with **1** part HNO_3 AB.676 in a hood.		

Standard Log #:	M13806	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/07/2019	Expiration Date:	05/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13807	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/07/2019	Expiration Date:	05/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

MRL BASE STD M13804 Analyst NAH

Prep Date 05/07/2019

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13458	1000	1	10/19
Al	400	M13611	10000	2	3/20
Ba	10	M13457	1000	0.5	10/19
Be	4	M13579	1000	0.2	2/20
Cd	5	M13570	1000	0.25	1/20
Co	10	M13575	1000	0.5	1/20
Cr	10	M13617	10000	0.05	3/20
Cu	10	M13618	10000	0.05	3/20
Mg	500	M13694	10000	2.5	6/20
Mn	10	M13616	10000	0.05	3/20
Mo	10	M13697	1000	0.5	6/20
Ni	10	M13569	1000	0.5	1/20
Pb	10	M13615	10000	0.05	3/20
Sb	20	M13579	1000	1	10/19
V	10	M13578	1000	0.5	2/20
Zn	10	M13610	10000	0.05	3/20
K	1000	M13755	10000	5	9/20
Na	1000	M13691	10000	5	6/20
As	20	M13753	1000	1	10000 std 0.1, 9/20
Ca	500	M13692	10000	2.5	6/20
Fe	300	M13695	10000	1.5	6/20
Se	20	M13460	1000	1	10/19
Tl	20	M13583	1000	1	2/20
Si	100	M13754	1000	5	9/20
B	20	M13531	1000	1	12/19
Li	20	M13577	1000	1	2/20
W	50	xxxx	1000	2.5	xxxx
Ti	10	M13573	1000	0.5	1/20
Sr	10	M13580	1000	0.5	2/20
Sn	50	M13572	1000	2.5	1/20
S	300	M13604	10000	1.5	3/20

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Expiration Date: 10/19

		Instrument:	CETAC
Standard Log #:	M13800	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	05/06/2019	Expiration Date:	11/06/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	ICP 6000
Standard Log #:	M13801	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	05/06/2019	Expiration Date:	12/2019
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13531 and Si (1000 mg/L) M13731 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13802	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	05/06/2019	Expiration Date:	02/28/2020
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and **1.0 mL** Si (1000 mg/L) M13754 and brought up to volume using milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13803	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	05/06/2019	Expiration Date:	09/30/2019
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **0.05 mL** of B (1000 µg/mL) M13531, **0.05 mL** of Si (1000 µg/mL) M13731 and **3 mL** of Fe (10,000 mg/L) M13609 and brought up to volume using Milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13798	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	05/03/2019	Expiration Date:	01/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M13572 Sr (1000 µg/mL) M13580 Ti (1000 µg/mL) M13573 W (1000 µg/mL) MXXXXX		

		Instrument:	ICP 6000
Standard Log #:	M13799	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	05/03/2019	Expiration Date:	01/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	MXXXXX	1000	5	XX/XXXX
Ti	10/30	M13573	1000	0.5	01/2020
Sr	10/30	M13580	1000	0.5	02/2020
Sn	20/60	M13572	1000	1	01/2020

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	CETAC
Standard Log #:	M13795	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/03/2019	Expiration Date:	05/03/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	ICP
Standard Log #:	M13796	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	05/03/2019	Expiration Date:	02/28/2020
Prep:	Standard Conc. (ug/L) — Pipette the following: 1 — **0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.001 mL** W (1000 µg/mL) MXXXXX into 1L = *1 µg/L* 10 — **0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.01 mL** W (1000 µg/mL) MXXXXX into 1L = *10 µg/L* 100 — **1 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.1 mL** W (1000 µg/mL) MXXXXX into 1L = *100 µg/L* 1000 (CCV) — **2 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.2 mL** W (1000 µg/mL) MXXXXX into 200mL = *1000 µg/L* 10000 — **20 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **2 mL** W (1000 µg/mL) MXXXXX into 200mL = *10000 µg/L*		

		Instrument:	ICP 6000
Standard Log #:	M13797	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	05/03/2019	Expiration Date:	09/30/2019
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **6 mL** of Fe (10,000 mg/L) M13609, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) MXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

Standard Log #:	M13793	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/02/2019	Expiration Date:	11/02/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13793 and brought up to volume.		

Standard Log #:	M13794	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	05/02/2019	Expiration Date:	11/02/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13511 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

Standard ID#:	M13790	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	04/29/2019	Lot #:	1833905
Expiration Date (if any):	10/31/2020	Catalog #:	HP10M67-1

Standard ID#:	M13791	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	04/29/2019	Lot #:	51-239CR
Expiration Date (if any):	02/28/2020	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13792	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/29/2019	Expiration Date:	04/29/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13785	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV BASE STD
Date Received:	04/19/2019	Lot #:	P2-MEB678822
Expiration Date (if any):	04/19/2020	Catalog #:	CTI-SPK-1

Standard ID#:	M13786	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE BASE STD
Date Received:	04/19/2019	Lot #:	P2-MEB678821
Expiration Date (if any):	04/19/2020	Catalog #:	CTI-GFCAL-1

		Instrument:	GFAA
Standard Log #:	M13787	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13788	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13789	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

Standard Log #:	M13782	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/18/2019	Expiration Date:	04/18/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard ID#:	M13783	Vendor:	Alfa Aesar
Analyst:	MDS	Chemical:	GFAA 1% Nickel Nitrate Matrix Mod.
Date Received:	04/18/2019	Lot #:	9166009
Expiration Date (if any):	09/30/2020	Catalog #:	39043

Standard Log #:	M13784	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	04/18/2019	Expiration Date:	10/18/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M13780	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	04/17/2019	Expiration Date:	10/17/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13781	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/17/2019	Expiration Date:	04/17/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M13779	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	04/12/2019	Expiration Date:	09/30/2019
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **2.5 mL** of K (10,000 mg/L) M13693, **2.5 mL** of Na (10,000 mg/L) M13605 and **7.5 mL** of Fe (10,000 mg/L) M13609 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M13778	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	04/11/2019	Expiration Date:	04/11/2020
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.672 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13777	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/09/2019	Expiration Date:	04/09/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

Standard Log #:	M13775	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	04/02/2019	Expiration Date:	09/30/2019
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13600 and **10 mL** Mg (10,000 mg/L) M13614 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13776	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/03/2019	Expiration Date:	04/03/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13771	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/26/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13772	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/26/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13773	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/26/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13774	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	03/26/2019	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M13770	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	03/25/2019	Expiration Date:	03/25/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13768	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	03/21/2019	Expiration Date:	01/01/2019
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13769	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	03/21/2019	Expiration Date:	09/21/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13765	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/21/2019	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13766	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/21/2019	Expiration Date:	04/30/2019
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13444 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13767	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	03/21/2019	Expiration Date:	04/30/2019
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13444 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13763	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/20/2019	Expiration Date:	03/20/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13764	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/20/2019	Expiration Date:	03/20/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M13761	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	03/19/2019	Expiration Date:	03/19/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard Log #:	M13762	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	03/19/2019	Expiration Date:	09/19/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13511 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M13758	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	03/13/2019	Expiration Date:	01/2020
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M13569 5.0 **mL** 10000 mg/L Ti M13573 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13759	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ba, Be, and Sn
Prep Date:	03/13/2019	Expiration Date:	10/2019
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M13457 5.0 **mL** 10000 mg/L Be M13579 5.0 **mL** 10000 mg/L Sn M13572 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13760	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	03/13/2019	Expiration Date:	09/2019
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M13635 and 15 **mL** 10000 mg/L Fe M13609 5.0 **mL** 1000 mg/L V M13578 5.0 **mL** 1000 mg/L Ce M13203 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13756	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	03/13/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M13616 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13757	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	03/13/2019	Expiration Date:	01/20
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M13617 0.5 **mL** 10000 mg/L Cu M13618 5.0 **mL** 1000 mg/L Co M13575 5.0 **mL** 1000 mg/L Mo M13697 brought up to volume with milli-Q H_2O.		

Standard ID#:	M13751	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	03/12/2019	Lot #:	998527-19
Expiration Date (if any):	09/2020	Catalog #:	4400-10M261

Standard ID#:	M13752	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	03/12/2019	Lot #:	982185-12
Expiration Date (if any):	09/2020	Catalog #:	4400-10M311

Standard ID#:	M13753	Vendor:	CPI
Analyst:	NAH	Chemical:	As 10000 mg/L
Date Received:	03/12/2019	Lot #:	166531-32
Expiration Date (if any):	09/2020	Catalog #:	S4400--10M31

Standard ID#:	M13754	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	03/12/2019	Lot #:	175213-60
Expiration Date (if any):	09/2020	Catalog #:	S4400-1000504F

Standard ID#:	M13755	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	03/12/2019	Lot #:	172053-77
Expiration Date (if any):	09/2020	Catalog #:	4400-10M411

		Instrument:	CETAC
Standard Log #:	M13749	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	03/08/2019	Expiration Date:	03/08/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard Log #:	M13750	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	03/08/2019	Expiration Date:	03/08/2020
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W45383 and brought up to volume.		

Standard ID#:	M13748	Vendor:	Potters Ind. LLC (Gainger)
Analyst:	NAH	Chemical:	Glass beads Extra Fine
Date Received:	03/07/2019	Lot #:	
Expiration Date (if any):	XXXXXX	Catalog #:	6ZC13

		Instrument:	ICP
Standard Log #:	M13746	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	03/04/2019	Expiration Date:	09/30/2019

Prep:

Standard Conc. (ug/L)	Pipette the following:
1	**0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.001 mL** W (1000 µg/mL) XXXXXX into 1L = *1 µg/L*
10	**0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.01 mL** W (1000 µg/mL) XXXXXX into 1L = *10 µg/L*
100	**1 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.1 mL** W (1000 µg/mL) XXXXXX into 1L = *100 µg/L*
1000 (CCV)	**2 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.2 mL** W (1000 µg/mL) XXXXXX into 200mL = *1000 µg/L*
10000	**20 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **2 mL** W (1000 µg/mL) XXXXXX into 200mL = *10000 µg/L*

		Instrument:	ICP 6000
Standard Log #:	M13747	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	03/04/2019	Expiration Date:	09/30/2019

Prep:

Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **6 mL** of Fe (10,000 mg/L) M13609, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) XXXXXX and brought up to volume using Milli-Q H_2O.
(0.5% HNO_3, 0.5% HCl)

Standard Log #:	M13743	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	02/26/2019	Expiration Date:	10/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M13458	1000	0.25
Al	10	M13611	**10000**	0.05
As	20	M13392	1000	1
Ba	2	M13457	1000	0.1
Be	0.5	M13579	1000	0.025
Ca	50	M13692	**10000**	0.25
Cd	0.5	M13570	1000	0.025
Co	2.5	M13575	1000	0.125
Cr	5.0	M13617	**10000**	0.025
Cu	10	M13618	**10000**	0.05
Fe	40	M13609	**10000**	0.2
Mg	25	M13694	**10000**	0.125
Mn	5	M13616	**10000**	0.025
Mo	2.5	M13697	1000	0.125
Ni	5	M13569	1000	0.25
Pb	10	M13615	**10000**	0.05
Sb	20	M13459	1000	1
Se	20	M13460	1000	1
Tl	20	M13583	1000	1
V	5	M13578	1000	0.25
Zn	5	M13610	**10000**	0.025
Na	500	M13605	**10000**	2.5
K	500	M13733	**10000**	2.5
B	20	M13531	1000	1
Si	100	M13731	1000	5
S	200	M13604	**10000**	1
Li	20	M13537	1000	1
Sr	20	M13572	1000	1
Sn	20	M13580	1000	1
Ti	20	M13573	1000	1

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	ICP 6000
Standard Log #:	M13740	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	02/26/2019	Expiration Date:	03/2020
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M13604 and brought up to volume using Milli-Q H_2O.		

Standard ID#:	M13741	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02-26-2019	Lot #:	3-153AB
Expiration Date (if any):	02/28/2020	Catalog #:	XCTWI-5-500

Standard ID#:	M13742	Vendor:	IKOHE Blasting Media
Analyst:	NAH	Chemical:	Glass Neads X-fine-20u
Date Received:	02/26/2019	Lot #:	52-144
Expiration Date (if any):	*********	Catalog #:	UL-49/52-1544

		Instrument:	CETAC
Standard Log #:	M13739	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/22/2019	Expiration Date:	02/22/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard ID#:	M13734	Vendor:	SPEX CERTIPREP
Analyst:	LJF	Chemical:	HG 1000 ug/mL
Date Received:	02/21/2019	Lot #:	CL10-136HGY
Expiration Date (if any):	02/28/2020	Catalog #:	CLHG4-2Y

Standard Log #:	M13735	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/21/2019	Expiration Date:	02/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13736	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/21/2019	Expiration Date:	02/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13737	Vendor:	SPEX CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	02/21/2019	Lot #:	51-117CR
Expiration Date (if any):	02/28/2020	Catalog #:	XSPIKE-1-250

Standard ID#:	M13738	Vendor:	SPEX CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	02/21/2019	Lot #:	2-230SGX
Expiration Date (if any):	02/28/2020	Catalog #:	INT-A1

		Instrument:	CETAC
Standard Log #:	M13730	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/14/2019	Expiration Date:	02/14/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard ID#:	M13731	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 ug/mL
Date Received:	02/14/2019	Lot #:	175213-60
Expiration Date (if any):	08/20	Catalog #:	S4400-1000504F

Standard ID#:	M13732	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10000 ug/mL
Date Received:	02/14/2019	Lot #:	139448-54
Expiration Date (if any):	08/20	Catalog #:	4400-10M671

Standard ID#:	M13733	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10000 ug/mL
Date Received:	02/14/2019	Lot #:	172053-36
Expiration Date (if any):	08/20	Catalog #:	4400-10M411

Standard ID#:	M13727	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	02/08/2019	Lot #:	175511
Expiration Date (if any):		Catalog #:	H331-500

Standard ID#:	M13728	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	02/08/2019	Lot #:	186819
Expiration Date (if any):		Catalog #:	S271-500

Standard Log #:	M13729	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	02/11/2019	Expiration Date:	08/11/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

Standard Log #:	M13724	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/07/2019	Expiration Date:	02/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13725	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/07/2019	Expiration Date:	02/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13726	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	02/07/2019	Expiration Date:	08/07/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13721	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/05/2019	Expiration Date:	02/05/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard Log #:	M13722	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	02/05/2019	Expiration Date:	08/05/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13723	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	02/05/2019	Expiration Date:	08/05/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.671 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13720	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	01/31/2019	Expiration Date:	01/31/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13716	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/30/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13717	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/30/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13718	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/30/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13719	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	01/30/2019	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13713	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	01/29/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

Standard ID#:	M13714	Vendor:	ACROS ORGANICS
Analyst:	LJF	Chemical:	POTASSIUM PERSULFATE
Date Received:	01/29/2019	Lot #:	A0391673
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M13715	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	1/29/2019	Lot #:	51-013CR
Expiration Date (if any):	01/30/2020	Catalog #:	XCTWI-1-500

		Instrument:	GFAA
Standard Log #:	M13711	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	01/29/2019	Expiration Date:	07/2019
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13459 **3.2 mL** of As (1000 mg/L) M13392 **3.2 mL** of Se (1000 mg/L) M13460 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M13712	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	01/29/2019	Expiration Date:	07/2019
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13459 **1.0 mL** of As (1000 mg/L) M13392 **2.0 mL** of Se (1000 mg/L) M13460 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

		Instrument:	CETAC
Standard Log #:	M13710	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	01/22/2019	Expiration Date:	01/22/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M13709	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	01/10/2019	Expiration Date:	09/30/2019
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **2.5 mL** of K (10,000 mg/L) M13689, **2.5 mL** of Na (10,000 mg/L) M13605 and **7.5 mL** of Fe (10,000 mg/L) M13609 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13705	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13607 and K (1000 µg/mL) M13606 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13706	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13607 and **0.5 mL** K (1000 µg/mL) M13606 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13707	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13689 and Na (10,000 mg/L) M13605 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13708	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M13605 and **0.15 mL** K (10,000 µg/mL) M13689 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M13703	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/20/2018	Expiration Date:	12/20/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13704	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/20/2018	Expiration Date:	12/20/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13701	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	12/13/2018	Expiration Date:	06/13/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

Standard ID#:	M13696	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10,000 mg/L
Date Received:	12/11/2018	Lot #:	167967-42
Expiration Date (if any):	06/20	Catalog #:	4400-10M544

Standard ID#:	M13697	Vendor:	CPI
Analyst:	NAH	Chemical:	Moybdenum 1000 mg/L
Date Received:	12/11/2018	Lot #:	169424-59
Expiration Date (if any):	06/20	Catalog #:	4400-1000343

Standard ID#:	M13698	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 mg/L
Date Received:	12/11/2018	Lot #:	175213-60
Expiration Date (if any):	06/20	Catalog #:	S4400-10005044F

Standard ID#:	M13699	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/11/2018	Lot #:	50-120CR
Expiration Date (if any):	12/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13700	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	12/12/2018	Expiration Date:	12/12/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

Standard ID#:	M13689	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	169484-36
Expiration Date (if any):	06/20	Catalog #:	4400-10M11

Standard ID#:	M13690	Vendor:	CPI
Analyst:	NAH	Chemical:	Aluminum 10,000 mg/L
Date Received:	12/11/2018	Lot #:	169484-36
Expiration Date (if any):	06/20	Catalog #:	4400-10M11

Standard ID#:	M13691	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	752887-32
Expiration Date (if any):	06/20	Catalog #:	4400-10M521

Standard ID#:	M13692	Vendor:	CPI
Analyst:	NAH	Chemical:	Calcium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	855297-1
Expiration Date (if any):	06/20	Catalog #:	4400-10M91

Standard ID#:	M13693	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	156651-78
Expiration Date (if any):	06/20	Catalog #:	4400-10M261

Standard ID#:	M13694	Vendor:	CPI
Analyst:	NAH	Chemical:	Magnesium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	148250-72
Expiration Date (if any):	06/20	Catalog #:	4400-10M311

Standard ID#:	M13695	Vendor:	CPI
Analyst:	NAH	Chemical:	Iron 10,000 mg/L
Date Received:	12/11/2018	Lot #:	156651-78
Expiration Date (if any):	06/20	Catalog #:	4400-10M261

		Instrument:	GFAA
Standard Log #:	M13686	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	12/07/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13687	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	12/07/2018	Expiration Date:	05/17/2018
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13688	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	12/07/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13684	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	12/04/2018	Expiration Date:	06/04/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard ID#:	M13683	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	10000 mg/L
Date Received:	11/30/2018	Lot #:	1805105
Expiration Date (if any):	5/31/2020	Catalog #:	HP10M67-1

Standard Log #:	M13681	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 B&Si Spiking Solution
Prep Date:	11/29/2018	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	52	M13531	1000	2.6
Si	192	M13394	1000	9.6

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M13682	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/29/2018	Expiration Date:	11/29/2018

Prep: Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.

Standard Log #:	M13679	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 L2 Spiking Solution
Prep Date:	11/29/2018	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Li	14.4	M13517	1000	0.72
Sn	20	M13572	1000	1
Sr	3.2	M13586	1000	0.16
Ti	9.6	M13573	1000	0.48
W	24	xxxxxxxx	1000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13680	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	11/29/2018	Expiration Date:	07/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13531	1000	0.8
Si	200	M13394	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13677	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	11/29/2018	Expiration Date:	04/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	9.6	M13562	**10000**	0.048
As	32	M13392	1000	1.6
Ba	2	M13457	1000	0.1
Be	1.6	M13579	1000	0.08
Ca	56	M13324	**10000**	0.28
Cd	1.6	M13570	1000	0.08
Co	9.6	M13575	1000	0.48
Cr	5.6	M13617	**10000**	0.028
Cu	16	M13618	**10000**	0.08
Fe	72	M13463	**10000**	0.36
Mg	32	M13319	**10000**	0.16
Mn	6	M13616	**10000**	0.03
Mo	9.6	M13608	1000	0.48
Ni	4.8	M13569	1000	0.24
Pb	10	M13610	**10000**	0.05
Sb	32	M13459	1000	1.6
Se	16	M13460	1000	0.8
Tl	19	M13583	1000	0.95
V	3.2	M13578	1000	0.16
Zn	12	M13610	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13676	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	11/29/2018	Expiration Date:	04/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	36	M13462	**10000**	0.18
As	24	M13392	1000	1.2
Ba	1.8	M13457	1000	0.09
Be	0.6	M13579	1000	0.03
Ca	100	M13324	**10000**	0.5
Cd	2.0	M13570	1000	0.1
Co	4	M13575	1000	0.2
Cr	4	M13617	**10000**	0.02
Cu	7	M13618	**10000**	0.035
Fe	100	M13463	**10000**	0.5
Mg	40	M13319	**10000**	0.2
Mn	4	M13616	**10000**	0.02
Mo	7	M13608	1000	0.35
Ni	6	M13569	1000	0.2
Pb	4	M13610	**10000**	0.02
Sb	12	M13459	1000	0.6
Se	13	M13460	1000	0.65
Tl	20	M13583	1000	0.75
V	5	M13578	1000	0.25
Zn	10	M13610	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M13675	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/26/2018	Expiration Date:	11/26/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13671	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	11/21/2018	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13672	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	11/21/2018	Expiration Date:	05/21/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.668 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

Standard Log #:	M13673	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	11/21/2018	Expiration Date:	05/21/2018
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M13674	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	11/21/2018	Expiration Date:	05/21/2018
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13668	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/21/2018	Expiration Date:	01/01/2019
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13669	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/21/2018	Expiration Date:	04/30/2019
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13444 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13670	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	11/21/2018	Expiration Date:	04/30/2019
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13444 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	ICP
Standard Log #:	M13666	Standard:	As Pb ICV1
Analyst:	MDS	Concentrations:	5000 ug/L (As,Pb)
Prep Date:	11/19/2018	Expiration Date:	07/2019
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** of As (1000 mg/L) M13392 and **0.5 mL** Pb (10,000 mg/L) M13615 and brought to volume with Milli-Q H_2O. (2% HNO_3, 2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13667	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/19/2018	Expiration Date:	11/19/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

Standard Log #:	M13664	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/16/2018	Expiration Date:	11/16/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13665	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/16/2018	Expiration Date:	11/16/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M13659	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/01/2018	Expiration Date:	11/01/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

		Instrument:	ICP 6500
Standard Log #:	M13660	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg
Prep Date:	11/01/2018	Expiration Date:	09/19
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M13635 and **15 mL** Fe (10000 mg/L) M13609 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13661	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	11/06/2018	Expiration Date:	10/19
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M13637, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M13635, **0.5 mL** Mo (1000 mg/L) M13608, **0.5 mL** B (1000 mg/L) M13531, **0.5 mL** Sr (1000 mg/L) M13580, **0.5 mL** Li (1000 mg/L) M13577, **0.5 mL** Sn (1000 mg/L) M13572, **0.5 mL** Ti (1000 mg/L) M13573, **0.5 mL** W (1000 mg/L) Mxxxxx, **0.5 mL** Si (1000 mg/L) M13571, **0.5 mL** S (10000 mg/L) M13530, **0.5 mL** K (10000 mg/L) M13612, and **0.5 mL** K (10000 mg/L)		

		Instrument:	ICP 6000
Standard Log #:	M13657	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/2/2018	Expiration Date:	01/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M13572 Sr (1000 µg/mL) M13580 Ti (1000 µg/mL) M13573 W (1000 µg/mL) XXX		

		Instrument:	ICP 6000
Standard Log #:	M13658	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	11/2/2018	Expiration Date:	01/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	XXX	1000	5	XXX
Ti	10/30	M13573	1000	0.5	01/2020
Sr	10/30	M13580	1000	0.5	02/2020
Sn	20/60	M13572	1000	1	01/2020

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	ICP
Standard Log #:	M13655	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	11/2/2018	Expiration Date:	02/28/2019
Prep:	Standard Conc. (ug/L) — Pipette the following: 1 — **0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.001 mL** W (1000 µg/mL) xxx into 1L = *1 µg/L* 10 — **0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.01 mL** W (1000 µg/mL) xxx into 1L = *10 µg/L* 100 — **1 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.1 mL** W (1000 µg/mL) xxx into 1L = *100 µg/L* 1000 (CCV) — **2 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.2 mL** W (1000 µg/mL) xxx into 200mL = *1000 µg/L* 10000 — **20 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **2 mL** W (1000 µg/mL) xxx into 200mL = *10000 µg/L*		

		Instrument:	ICP 6000
Standard Log #:	M13656	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/2/2018	Expiration Date:	02/28/2019
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13410, **6 mL** of Fe (10,000 mg/L) M13529, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) XXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	GFAA
Standard Log #:	M13651	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	10/29/2018	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13652	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	10/29/2018	Expiration Date:	10/2019
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13612 and Na (10,000 mg/L) M13461 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M13653	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance std
Date Received:	10/29/2018	Lot #:	2-036AB
Expiration Date (if any):	10/30/2019	Catalog #:	XCTWI-1-500

		Instrument:	ICP 6000
Standard Log #:	M13648	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	10/26/2018	Expiration Date:	07/2019
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13390 and Si (1000 mg/L) M13528 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13649	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	10/26/2018	Expiration Date:	07/30/2019
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13576 and **1.0 mL** Si (1000 mg/L) M13571 and brought up to volume using milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13650	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/27/2018	Expiration Date:	02/28/2019
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13410 , **0.05 mL** of B (1000 µg/mL) M13390 , **0.05 mL** of Si (1000 µg/mL) M13528 and **3 mL** of Fe (10,000 mg/L) M13529 and brought up to volume using Milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M13645	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/24/2018	Expiration Date:	10/24/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

Standard ID#:	M13646	Vendor:	Alfa Aesar
Analyst:	MDS	Chemical:	1% Nickel Nitrate Matrix Modifier
Date Received:	10/25/2018	Lot #:	8137324
Expiration Date (if any):	12/31/2019	Catalog #:	39043

Standard ID#:	M13647	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	10/24/2018	Lot #:	H226-02
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M13643	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/24/2018	Expiration Date:	10/24/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13644	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/24/2018	Expiration Date:	10/24/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

		Instrument:	GFAA
Standard Log #:	M13639	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/24/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13640	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/24/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13641	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/24/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13642	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/24/2018	Expiration Date:	10/24/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13638	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	10 µg/L As 6 µg/L Pb 12 µg/L Sb 20 µg/L Se 14 µg/L Tl 0.6 µg/L Ag
Prep Date:	10/23/2018	Expiration Date:	07/2019

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13392	10,000
Pb	0.1	10,000	M13615	10,000
Tl	1	1000	M13583	10,000
Se	1	1000	M13460	10,000
Sb	1	1000	M13459	10,000
Ag	0.1	1000	M13458	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.0	10,000	10
Pb	0.6	10,000	6
Tl	1.4	10,000	14
Se	2.0	10,000	20
Sb	1.2	10,000	12
Ag	0.6	1000	0.6

Standard ID#:	M13634	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,0000 mg/L
Date Received:	10/18/2018	Lot #:	139448-54
Expiration Date (if any):	04/20	Catalog #:	4400-10m671

Standard ID#:	M13635	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	10/18/2018	Lot #:	2-230sgx
Expiration Date (if any):	09/30/2019	Catalog #:	INT-A1

		Instrument:	CETAC
Standard Log #:	M13636	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/18/2018	Expiration Date:	10/18/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.665 in a hood.		

Standard ID#:	M13637	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance standard
Date Received:	10/18/2018	Lot #:	50-0007CR
Expiration Date (if any):	10/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13633	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/16/2018	Expiration Date:	10/16/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.665 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13632	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	10/16/2018	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

Standard Log #:	M13627	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/03/2018	Expiration Date:	10/03/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13628	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/03/2018	Expiration Date:	10/03/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

MRL BASE STD M13626

Analyst NAH

Prep Date 10/01/2018

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13458	1000	1	10/2019
Al	400	M13462	10000	2	10/2019
Ba	10	M13457	1000	0.5	10/2019
Be	4	M13579	1000	0.2	02/20
Cd	5	M13570	1000	0.25	01/20
Co	10	M13575	1000	0.5	01/20
Cr	10	M13617	10000	0.05	03/20
Cu	10	M13618	10000	0.05	03/20
Mg	500	M13319	10000	2.5	04/19
Mn	10	M13616	10000	0.05	03/20
Mo	10	M13608	1000	0.5	03/20
Ni	10	M13569	1000	0.5	03/20
Pb	10	M13610	10000	0.05	03/20
Sb	20	M13459	1000	1	03/20
V	10	M13578	1000	0.5	02/20
Zn	10	M13610	10000	0.05	02/20
K	1000	M13341	10000	5	05/19
Na	1000	M13402	10000	5	08/19
As	20	M13392	1000	1	07/19
Ca	500	M13324	10000	2.5	04/19
Fe	300	M13463	10000	1.5	10/19
Se	20	M13460	1000	1	10/19
Tl	20	M13583	1000	1	02/20
Si	100	M13394	1000	5	07/19
B	20	M13531	1000	1	07/19
Li	20	M13517	1000	1	02/20
W	50	xxxxxxx	1000	2.5	xxxxxxx
Ti	10	M13573	1000	0.5	02/20
Sr	10	M13586	1000	0.5	02/20
Sn	50	M13572	1000	2.5	02/20
S	300	M13391	10000	1.5	07/19

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M13625	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/03/2018	Expiration Date:	09/30/2019
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13600 and **10 mL** Mg (10,000 mg/L) M13464 and brought up to volume.		

Standard ID#:	M13618	Vendor:	CPI
Analyst:	NAH	Chemical:	Cu 10000 mg/L
Date Received:	09/20/2018	Lot #:	148796-39
Expiration Date (if any):	03/2020	Catalog #:	S4400-10M141

		Instrument:	CETAC
Standard Log #:	M13619	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	09/19/2018	Expiration Date:	09/19/2018
Prep:	Carefully mixed **3** parts HCl AB.664 with **1** part HNO_3 AB.665 in a hood.		

Standard ID#:	M13620	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	09/04/2018	Lot #:	177409
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13611	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	09/20/2018	Lot #:	169484-18
Expiration Date (if any):	03/2020	Catalog #:	4400-10M11

Standard ID#:	M13612	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	09/20/2018	Lot #:	172053-36
Expiration Date (if any):	03/2020	Catalog #:	440010M411

Standard ID#:	M13613	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	09/20/2018	Lot #:	855297-1
Expiration Date (if any):	03/2020	Catalog #:	4400-10M91

Standard ID#:	M13614	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	09/20/2018	Lot #:	148250-72
Expiration Date (if any):	03/2020	Catalog #:	4400-10M311

Standard ID#:	M13615	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 10000 mg/L
Date Received:	09/20/2018	Lot #:	168223-17
Expiration Date (if any):	03/2020	Catalog #:	4400-10M281

Standard ID#:	M13616	Vendor:	CPI
Analyst:	NAH	Chemical:	Mn 10000 mg/L
Date Received:	09/20/2018	Lot #:	167540-6
Expiration Date (if any):	03/2020	Catalog #:	S4400-10M321

Standard ID#:	M13617	Vendor:	CPI
Analyst:	NAH	Chemical:	Cr 10000 mg/L
Date Received:	09/20/2018	Lot #:	158236-7
Expiration Date (if any):	03/2020	Catalog #:	s4400-10M121

Standard ID#:	M13604	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10000 mg/L
Date Received:	09/20/2018	Lot #:	167967-37
Expiration Date (if any):	03/2020	Catalog #:	4400-10M544

Standard ID#:	M13605	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 10000 mg/L
Date Received:	09/20/2018	Lot #:	752887-3
Expiration Date (if any):	03/2020	Catalog #:	4400-10M521

Standard ID#:	M13606	Vendor:	CPI
Analyst:	NAH	Chemical:	K 1000 mg/L
Date Received:	09/20/2018	Lot #:	144467-179
Expiration Date (if any):	03/2020	Catalog #:	4400-1000411-500

Standard ID#:	M13607	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 1000 mg/L
Date Received:	09/20/2018	Lot #:	158237-113
Expiration Date (if any):	03/2020	Catalog #:	4400-1000521-500

Standard ID#:	M13608	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	09/20/2018	Lot #:	169424-37
Expiration Date (if any):	03/2020	Catalog #:	S4400-1000343

Standard ID#:	M13609	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	09/20/2018	Lot #:	156651-53
Expiration Date (if any):	03/2020	Catalog #:	4400-10M261

Standard ID#:	M13610	Vendor:	CPI
Analyst:	NAH	Chemical:	Zn 10000 mg/L
Date Received:	09/20/2018	Lot #:	979871-2
Expiration Date (if any):	03/2020	Catalog #:	4400-10M681

Standard Log #:	M13601	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/12/2018	Expiration Date:	09/12/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13602	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	09-12-2018	Lot #:	1-124AB
Expiration Date (if any):	09-30-2019	Catalog #:	XCTWI-5-500

Standard ID#:	M13600	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	1% Pd Matrix Modifier
Date Received:	09/11/2018	Lot #:	1808015
Expiration Date (if any):	09/30/2019	Catalog #:	HP1900-100

Standard Log #:	M13599	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/08/2018	Expiration Date:	09/08/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13595	Vendor:	SPEX CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	08/29/2018	Lot #:	49-151CR
Expiration Date (if any):	08/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13596	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	08/30/2018	Expiration Date:	08/30/2018
Prep:	Carefully mixed **3** parts HCl AB.664 with **1** part HNO_3 AB.665 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M13597	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	08/30/2018	Expiration Date:	05/2019
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13339 and K (1000 µg/mL) M13340 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13598	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	08/30/2018	Expiration Date:	05/2019
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13339 and **0.5 mL** K (1000 µg/mL) M13340 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M13588	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	08/21/2018	Expiration Date:	08/21/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13589	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	08/21/2018	Expiration Date:	08/21/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13590	Vendor:	AMCO Clear
Analyst:	NAH	Chemical:	turbidity std 2.0 ntu
Date Received:	08/21/2018	Lot #:	18272791
Expiration Date (if any):	08/2019	Catalog #:	8008

		Instrument:	ICP 6000
Standard Log #:	M13586	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	08/20/2018	Expiration Date:	01/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M13572 Sr (1000 µg/mL) M13580 Ti (1000 µg/mL) M13573 W (1000 µg/mL) MXXX		

		Instrument:	ICP 6000
Standard Log #:	M13587	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	08/20/2018	Expiration Date:	01/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	XXX	1000	5	XXX
Ti	10/30	M13573	1000	0.5	01/2020
Sr	10/30	M13580	1000	0.5	02/2020
Sn	20/60	M13572	1000	1	01/2020

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	ICP
Standard Log #:	M13584	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	08/20/2018	Expiration Date:	07/30/2019
Prep:	Standard Conc. (ug/L)	Pipette the following:	
	1	**0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.001 mL** W (1000 µg/mL) MXXX into 1L = *1 µg/L*	
	10	**0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.01 mL** W (1000 µg/mL) MXXX into 1L = *10 µg/L*	
	100	**1 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.1 mL** W (1000 µg/mL) MXXX into 1L = *100 µg/L*	
	1000 (CCV)	**2 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.2 mL** W (1000 µg/mL) MXXX into 200mL = *1000 µg/L*	
	10000	**20 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **2 mL** W (1000 µg/mL) MXXX into 200mL = *10000 µg/L*	

		Instrument:	ICP 6000
Standard Log #:	M13585	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	08/20/2018	Expiration Date:	
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13410, **6 mL** of Fe (10,000 mg/L) M13463, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) MXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

Standard ID#:	M13577	Vendor:	CPI
Analyst:	NAH	Chemical:	Li 1000 mg/L
Date Received:	08/17/2018	Lot #:	751942-25
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000291

Standard ID#:	M13578	Vendor:	CPI
Analyst:	NAH	Chemical:	V 1000 mg/L
Date Received:	08/17/2018	Lot #:	152207-68
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000651

Standard ID#:	M13579	Vendor:	CPI
Analyst:	NAH	Chemical:	Be 1000 mg/L
Date Received:	08/17/2018	Lot #:	660981-5
Expiration Date (if any):	02/2020	Catalog #:	S4400-100051

Standard ID#:	M13580	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	08/17/2018	Lot #:	168227-29
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000531

Standard ID#:	M13581	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	08/17/2018	Lot #:	172053-36
Expiration Date (if any):	02/2020	Catalog #:	4400-10411

Standard ID#:	M13582	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	08/17/2018	Lot #:	1805105
Expiration Date (if any):	02/2020	Catalog #:	HP10M67-1

Standard ID#:	M13583	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	08/17/2018	Lot #:	148983-70
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000581

Standard ID#:	M13576	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/04/2018	Lot #:	49-045CR
Expiration Date (if any):	07/30/2019	Catalog #:	XCTWI-5-500

Standard ID#:	M13569	Vendor:	CPI
Analyst:	NAH	Chemical:	Ni 1000 mg/L
Date Received:	07/27/2018	Lot #:	166665-86
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000361

Standard ID#:	M13570	Vendor:	CPI
Analyst:	NAH	Chemical:	Cd 1000 mg/L
Date Received:	07/27/2018	Lot #:	160499-32
Expiration Date (if any):	01/2020	Catalog #:	s4400-100081

Standard ID#:	M13571	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	07/27/2018	Lot #:	175213-28
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000504F

Standard ID#:	M13572	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/L
Date Received:	07/27/2018	Lot #:	144466-74
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000613

Standard ID#:	M13573	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	07/27/2018	Lot #:	152616-55
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000623

Standard ID#:	M13574	Vendor:	CPI
Analyst:	NAH	Chemical:	Hg 1000 mg/L
Date Received:	07/27/2018	Lot #:	175191-22
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000331

Standard ID#:	M13575	Vendor:	CPI
Analyst:	NAH	Chemical:	Co 1000 mg/L
Date Received:	07/27/2018	Lot #:	161693-10
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000131

Standard Log #:	M13563	Instrument:	ICP
Analyst:	LJF	Standard:	LOQ 3050 S Spiking Solution
Prep Date:	07/19/2018	Expiration Date:	10/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	240	M13466	10000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard ID#:	M13557	Vendor:	Alfa Aesar Specpure
Analyst:	MDS	Chemical:	1% Nickel Nitrate Matrix Modifier
Date Received:	07/17/2018	Lot #:	8137324
Expiration Date (if any):	12/31/2019	Catalog #:	39043

		Instrument:	ICP 6000
Standard Log #:	M13558	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	07/17/2018	Expiration Date:	05/2019
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13518 and **1.0 mL** Si (1000 mg/L) M13338 and brought up to volume using milli-Q H_2O.		

Standard Log #:	M13559	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	07/17/2018	Expiration Date:	01/17/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13559 and brought up to volume.		

Standard Log #:	M13554	Instrument:	ICP
Analyst:	LJF	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	07/13/2018	Expiration Date:	05/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13390	1000	0.8
Si	200	M13338	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13555	Instrument:	ICP
Analyst:	LJF	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	07/13/2018	Expiration Date:	10/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M13466	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M13553	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	07/12/2018	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13547	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	07/09/2018	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

Standard Log #:	M13548	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	07/10/2018	Expiration Date:	01/10/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13226 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M13549	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	07/10/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

Standard Log #:	M13534	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	10 µg/L As 6 µg/L Pb 12 µg/L Sb 20 µg/L Se 14 µg/L Tl 0.6 µg/L Ag
Prep Date:	07/02/2018	Expiration Date:	09/16/2018

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13392	10,000
Pb	0.1	10,000	M13169	10,000
Tl	1	1000	M13124	10,000
Se	1	1000	M13460	10,000
Sb	1	1000	M13459	10,000
Ag	0.1	1000	M13458	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.0	10,000	10
Pb	0.6	10,000	6
Tl	1.4	10,000	14
Se	2.0	10,000	20
Sb	1.2	10,000	12
Ag	0.6	1000	0.6

Standard ID#:	M13535	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	07/02/2018	Lot #:	48-179CR
Expiration Date (if any):	06/30/2019	Catalog #:	XSPIKE-1-250

Standard ID#:	M13526	Vendor:	CPI
Analyst:	NAH	Chemical:	YTTRIUM 10,000 ug/mL
Date Received:	06/22/2018	Lot #:	138448-54
Expiration Date (if any):	12/2019	Catalog #:	4400-10M671

Standard ID#:	M13527	Vendor:	CPI
Analyst:	NAH	Chemical:	POTASSIUM 10,000
Date Received:	06/22/2018	Lot #:	172053-32
Expiration Date (if any):	12/2019	Catalog #:	4400-104411

Standard ID#:	M13528	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	06/22/2018	Lot #:	142610-115
Expiration Date (if any):	12/2019	Catalog #:	S4400-1000504F

Standard ID#:	M13529	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10,000 ug/mL
Date Received:	06/22/2018	Lot #:	156651-42
Expiration Date (if any):	12/2019	Catalog #:	4400-10M261

Standard ID#:	M13530	Vendor:	CPI
Analyst:	NAH	Chemical:	SULFUR 10,000ug/mL
Date Received:	06/22/2018	Lot #:	129880-46
Expiration Date (if any):	12/2019	Catalog #:	4400-10M544

Standard ID#:	M13531	Vendor:	CPI
Analyst:	NAH	Chemical:	BORON 1000 ug/mL
Date Received:	06/22/2018	Lot #:	158372-91
Expiration Date (if any):	12/2019	Catalog #:	S4400-100074

Standard ID#:	M13532	Vendor:	CPI
Analyst:	NAH	Chemical:	CUSTOM ASSURANCE STANDARD
Date Received:	06/22/2018	Lot #:	48-146CR
Expiration Date (if any):	06/30/2019	Catalog #:	XCTWI-1-500

Standard ID#:	M13520	Vendor:	FRISCOLYT
Analyst:	NAH	Chemical:	Electrolyte Solution
Date Received:	06/13/2018	Lot #:	1DO71H
Expiration Date (if any):	12/03/2021	Catalog #:	51 340 053

		Instrument:	ICP
Standard Log #:	M13521	Standard:	As Pb ICV1
Analyst:	MDS	Concentrations:	5000 ug/L (As,Pb)
Prep Date:	06/13/2018	Expiration Date:	10/20/2018
Prep:	Into a 1 L volumetric flask, pipetted **0.5 mL** of As (10,000 mg/L) M13392 and **0.5 mL** Pb (10,000 mg/L) M13169 and brought to volume with Milli-Q H_2O. (2% HNO_3, 2% HCl)		

Standard ID#:	M13518	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/11/2018	Lot #:	48-060CR
Expiration Date (if any):	06/30/2019	Catalog #:	XCTWI-5-500

		Instrument:	ICP 6500
Standard Log #:	M13519	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/11/2018	Expiration Date:	06/30/2019

Prep:

Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O.
(5% HNO_3, 5% HCl)
1000 ug/L Std. - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13518, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13506 and **1 mL** of Si (1000 mg/L) M13394 and 1 mL M13203 Ce
0.25 ug/L Std. - **0.25 mL** of the 1000 ug/L Std.
0.5 ug/L Std. - **0.5 mL** of the 1000 ug/L Std.
1 ug/L Std. - **1 mL** of the 1000 ug/L Std.
5 ug/L Std. - **5 mL** of the 1000 ug/L Std.
10 ug/L Std. - **10 mL** of the 1000 ug/L Std.
20 ug/L Std. - **20 mL** of the 1000 ug/L Std.
50 ug/L Std. - **50 mL** of the 1000 ug/L Std.
100 ug/L Std. - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3
10,000 ug/L Std. - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M13465.
100k ug/L Std. - **10 mL** of Cu (10,000 mg/L) M13166, **10 mL** of Mn (10,000 mg/L) M13167, **10 mL** of Cr (10,000 mg/L) M13165, **10 mL** Pb (10,000 mg/L) M13169, **10 mL** of Zn (10,000 mg/L) M13168 and **10 mL** of Na (10,000 mg/L) M13461.
100,000 ug/L Std. - **10 mL** of Mg (10,000 mg/L) M13319, **10 mL** of Fe (10,000 mg/L) M13463, **10 mL** of Ca (10,000 mg/L) M13467 and **10 mL** Al (10,000 mg/L) M13462.
500,000 ug/L Std. - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L)
1000k ug/L Std. - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)

		Instrument:	CETAC
Standard Log #:	M13510	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/01/2018	Expiration Date:	06/01/2018
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.655 in a hood.		

Standard ID#:	M13511	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	06/04/2018	Lot #:	176877
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13506	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05/22/2018	Lot #:	48-042CR
Expiration Date (if any):	05/30/2019	Catalog #:	XCTWI-4-500

Standard ID#:	M13507	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05/22/2018	Lot #:	48-041CR
Expiration Date (if any):	05/30/2019	Catalog #:	XSPIKE-1-250

Standard ID#:	M13508	Vendor:	RESTEK
Analyst:	NAH	Chemical:	Diatomaceous earth (Celite 566)
Date Received:	05/22/2018	Lot #:	811030-BG
Expiration Date (if any):	N/A	Catalog #:	26033

Standard ID#:	M13495	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	05/15/2018	Lot #:	H052-17
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	ICP 6000
Standard Log #:	M13485	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	05/07/2018	Expiration Date:	05/2019
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13339 and K (1000 µg/mL) M13340 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13486	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	05/07/2018	Expiration Date:	08/2019
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13400 and Na (10,000 mg/L) M13402 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13487	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	05/07/2018	Expiration Date:	08/2019
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M13402 and **0.15 mL** K (10,000 µg/mL) M13400 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13488	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	05/07/2018	Expiration Date:	05/2019
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13339 and **0.5 mL** K (1000 µg/mL) M13340 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M13484	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	05/03/2018	Lot #:	1805105
Expiration Date (if any):	10/31/2019	Catalog #:	HP10M67-1

		Instrument:	ICP 6000
Standard Log #:	M13471	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	04/26/2018	Expiration Date:	07/2019
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13390 and Si (1000 mg/L) M13394 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13472	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	04/26/2018	Expiration Date:	07/02/2018
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13364 and **1.0 mL** Si (1000 mg/L) M13085 and brought up to volume using milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13473	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	04/26/2018	Expiration Date:	10/30/2018
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13305 , **0.05 mL** of B (1000 µg/mL) M13390 , **0.05 mL** of Si (1000 µg/mL) M13394 and **3 mL** of Fe (10,000 mg/L) M13321 and brought up to volume using Milli-Q H_2O.		

Standard ID#:	M13467	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	04/20/2018	Lot #:	147497-47
Expiration Date (if any):	10/2019	Catalog #:	4400-10M91

Standard ID#:	M13468	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	04/24/2018	Lot #:	174236
Expiration Date (if any):		Catalog #:	H331-500

		Instrument:	CETAC
Standard Log #:	M13469	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/24/2018	Expiration Date:	04/24/2018
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.655 in a hood.		

Standard ID#:	M13462	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	04/20/2018	Lot #:	158058-23
Expiration Date (if any):	10/2019	Catalog #:	4400-10M11

Standard ID#:	M13463	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	04/20/2018	Lot #:	156651-18
Expiration Date (if any):	10/2019	Catalog #:	4400-10M261

Standard ID#:	M13464	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	04/20/2018	Lot #:	148250-67
Expiration Date (if any):	10/2019	Catalog #:	4400-10M311

Standard ID#:	M13465	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	04/20/2018	Lot #:	172053-2
Expiration Date (if any):	10/2019	Catalog #:	4400-10M411

Standard ID#:	M13466	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	04/20/2018	Lot #:	129880-37
Expiration Date (if any):	10/2019	Catalog #:	4400-10M544

Standard ID#:	M13457	Vendor:	CPI
Analyst:	NAH	Chemical:	Barium 1000 mg/L
Date Received:	04/20/2018	Lot #:	158364-3
Expiration Date (if any):	10/2019	Catalog #:	S4400-100041

Standard ID#:	M13458	Vendor:	CPI
Analyst:	NAH	Chemical:	Ag 1000 mg/L
Date Received:	04/20/2018	Lot #:	162712-9
Expiration Date (if any):	10/2019	Catalog #:	S4400-1000511

Standard ID#:	M13459	Vendor:	CPI
Analyst:	NAH	Chemical:	Sb 1000 mg/L
Date Received:	04/20/2018	Lot #:	153992-1
Expiration Date (if any):	10/2019	Catalog #:	S4400-100023

Standard ID#:	M13460	Vendor:	CPI
Analyst:	NAH	Chemical:	Se 1000 mg/L
Date Received:	04/20/2018	Lot #:	154366-16
Expiration Date (if any):	10/2019	Catalog #:	S4400-1000491

Standard ID#:	M13461	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 mg/L
Date Received:	04/20/2018	Lot #:	107139-108
Expiration Date (if any):	10/2019	Catalog #:	4400-10M521

Standard Log #:	M13445	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	04/19/2018	Expiration Date:	10/19/2018
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M12652 and brought up to volume.		

		Instrument:	Hach 2100 turbidity meter
Standard Log #:	M13446	Standard:	Turbity ICAL
Analyst:	NAH	Concentrations:	20, 100, 200 ntu
Prep Date:	04/19/2018	Expiration Date:	12/2019
Prep:	Using the hach vials , pipet the following: *20 ntu Std.* = **1 ml** M13436 and 9 mls DI H20. *100 ntu Std.* = **5 mls** M13436 and 5 mls DI H20. *200 ntu Std.* = ***10 mls*** M13436 *and* 0 mls DI H20.		

LPMT1-04
Metals Reagents and Standards
Prep Logbook
Created: 12/19/17

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Author: nhenn on: 4/19/2018 11:15:48 AM
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Project: Unassigned
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		Instrument:	ICP 6000
Standard Log #:	M13438	Standard:	Sulfur ICAL
Analyst:	MDS	Concentrations:	1000 10,000 100,000 1000K µg/L (S)
Prep Date:	04/11/2018	Expiration Date:	07/2019
Prep:	Into four, 100 mL volumetric flasks, pipetted the following from stock standard S (10,000 µg/mL) M13391 and brought up to volume using milli-Q H_2O. *1000 ug/L std.* - **0.01 mL** *10,000 ug/L std.* - **0.1 mL** *100,000 ug/L std.* -**1.0 mL**, also used as the CCV *1000K ug/L std.* - **10 mL**		

		Instrument:	ICP 6000
Standard Log #:	M13439	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	04/11/2018	Expiration Date:	01/19/2019
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M13280 and brought up to volume using Milli-Q H_2O.		

Standard Log #:	M13437	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 B&Si Spiking Solution
Prep Date:	04/10/2018	Expiration Date:	07/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	52	M13390	1000	2.6
Si	192	M13394	1000	9.6

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Content below was appended to locked page by mszymanski on 4/19/2018 12:20:57 PM

Standard ID#:	M13436a	Vendor:	HACH
Analyst:	NAH	Chemical:	StablCal 200 NTU
Date Received:	04/10/2018	Lot #:	A7354
Expiration Date (if any):	12/2019	Catalog #:	2660449

Standard ID#:	M13400	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 ug/mL
Date Received:	02/15/2018	Lot #:	106958-116
Expiration Date (if any):	08/2019	Catalog #:	4400-10M411

Standard ID#:	M13401	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 ug/mL
Date Received:	02/15/2018	Lot #:	139448-54
Expiration Date (if any):	08/2019	Catalog #:	4400-10M671

Standard ID#:	M13402	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 ug/mL
Date Received:	02/15/2018	Lot #:	107139-126
Expiration Date (if any):	08/2019	Catalog #:	4400-10M521

Standard Log #:	M13388	Reagent:	SPLP EXTRACTION FLUID EAST #
Analyst:	BMM	pH:	4.20 ± 0.05
Prep Date:	01/23/2018	Expiration Date:	01/23/2019
Prep:	Into a 20 L carboy filled with DI H_2O, adjust pH to 4.20 ± 0.05 using 60/40 SPLP extraction fluid acid mixture M12457 .		

Standard Log #:	M13389	Reagent:	SPLP EXTRACTION FLUID WEST #
Analyst:	BMM	pH:	5.00 ± 0.05
Prep Date:	01/23/2018	Expiration Date:	01/23/2019
Prep:	Into a 20 L carboy filled with DI H_2O, adjust pH to 5.00 ± 0.05 using 60/40 SPLP extraction fluid acid mixture M12457 .		

Standard ID#:	M13390	Vendor:	CPI
Analyst:	NAH	Chemical:	Boron 1000 ug/mL
Date Received:	01/23/2018	Lot #:	158372-29
Expiration Date (if any):	07/2019	Catalog #:	S4400-100074

Standard ID#:	M13391	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10000 ug/mL
Date Received:	01/23/2018	Lot #:	129880-28
Expiration Date (if any):	07/2019	Catalog #:	4400-10M544

Standard ID#:	M13392	Vendor:	CPI
Analyst:	NAH	Chemical:	Arsenic 1000 ug/mL
Date Received:	01/23/2018	Lot #:	143356-61
Expiration Date (if any):	07/2019	Catalog #:	S4400-100031

Standard ID#:	M13393	Vendor:	CPI
Analyst:	NAH	Chemical:	Molybdenum 1000 ug/mL
Date Received:	01/23/2018	Lot #:	134169R-102
Expiration Date (if any):	07/2019	Catalog #:	S4400-1000343

Standard ID#:	M13394	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 ug/mL
Date Received:	01/23/2018	Lot #:	142610-58
Expiration Date (if any):	07/2019	Catalog #:	S4400-1000504F

Standard ID#:	M13350	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	12/12/2017	Lot #:	1729606
Expiration Date (if any):	06//2019	Catalog #:	10M67-1

Standard ID#:	M13226	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	07/21/2017	Lot #:	170229
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13199	Vendor:	National Institute of Standards and Te
Analyst:	NAH	Chemical:	SRM Montana I soil
Date Received:	05/15/2017	Lot #:	2710a
Expiration Date (if any):		Catalog #:	

Standard ID#:	M13200	Vendor:	National Institute of Standards and Te
Analyst:	NAH	Chemical:	SRM Montana II soil
Date Received:	05/15/2017	Lot #:	2711a
Expiration Date (if any):		Catalog #:	

Standard ID#:	M13186	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	05/22/2017	Lot #:	166161
Expiration Date (if any):		Catalog #:	H331-500

Standard ID#:	M13187	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10,000 ug/mL
Date Received:	05/22/2017	Lot #:	1705408
Expiration Date (if any):	11/16/2018	Catalog #:	HP10M67-1

Standard ID#:	M13080	Vendor:	FISHER
Analyst:	LJF	Chemical:	POTASSIUM PERMANGANATE
Date Received:	01/30/2017	Lot #:	164080
Expiration Date (if any):		Catalog #:	P279-212

Standard ID#:	M13059	Vendor:	ACROS ORGANICS
Analyst:	LJF	Chemical:	POTASSIUM PERSULFATE
Date Received:	12/19/2016	Lot #:	A0375670
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M13024	Vendor:	METTLER TOLEDO
Analyst:	LJF	Chemical:	FRISCOLYT
Date Received:	11/01/2016	Lot #:	1B167D
Expiration Date (if any):		Catalog #:	51340053

INORGANIC
CLP FORMS
DOCUMENTS

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495142
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 15:05
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7	M	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.17	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	48	M	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495142
Analytical Method:	EPA 9060A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176903	Analysis Date/Time	11/07/2020 19:04
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495139
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 14:04
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.7		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495139
Analytical Method:	EPA 9060A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176903	Analysis Date/Time	11/07/2020 17:33
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495139
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 22:10
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	110		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495137
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 13:44
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.63		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	46		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495137
Analytical Method:	EPA 9060A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176903	Analysis Date/Time	11/07/2020 17:12
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495140
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 14:24
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.7		0.12	0.20	0.40	0.40

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495140
Analytical Method:	EPA 9060A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176903	Analysis Date/Time	11/07/2020 17:54
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495140
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 22:30
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	100		4.0	7.5	15	15

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496544
Analytical Method:	EPA 9040C	Date Received:	10/30/2020
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176643	Analysis Date/Time	10/30/2020 14:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	6.51		0.1	0.1	0.1	0.1

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496544
Analytical Method:	EPA 410.4	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176665	Analysis Date/Time	11/02/2020 15:44
Analytical Prep Batch #:	78785	Prep. Date/Time:	11/02/2020 08:07
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	200	M	15	35	75	75

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496500
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/31/2020 10:47
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	130	M	4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496500
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 12:38
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	9.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.7	H	0.12	0.20	0.40	0.40

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496500
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 19:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496501
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/31/2020 12:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	61		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496501
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 13:59
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	9.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.1	H	0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496501
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 20:48
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496542
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176644	Analysis Date/Time	10/30/2020 22:06
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.6	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.82		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	6.1		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496542
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 22:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496543
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176644	Analysis Date/Time	10/30/2020 22:26
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.8	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	5.9		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	28		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496543
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 23:05
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496502
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 10:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.30	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	1.5	J	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496502
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 21:01
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496507
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 11:58
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.9	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.24	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	16		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496507
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 21:44
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495141
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 14:44
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.4		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.21	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	61		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495141
Analytical Method:	EPA 9060A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176903	Analysis Date/Time	11/07/2020 18:14
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49TW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496504
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 11:38
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.1	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.24	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	16		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49TW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496504
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 21:30
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496503
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 11:17
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	8.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	68		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496503
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 21:18
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

RNS-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496508
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 12:18
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.5	U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	1.5	U	0.80	1.5	3.0	3.0

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Sample Description

RNS-1

INORGANIC ANALYSIS DATA SHEET

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496508
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 22:02
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176516 Lab Sample ID: 501407

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	5/11/20	18:25	15.00	13.91	93	90	110
Nitrate Nitrogen	5/11/20	18:25	3.500	3.338	95	90	110
Sulfate	5/11/20	18:25	25.00	23.29	93	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176665 Lab Sample ID: 510167

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	10/5/20	08:59	400.0	401.6	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176903 Lab Sample ID: 502713

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	10/30/20 14:49	50.00	47.83	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176516

Lab Sample ID: 497096

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/28/20	08:07	15.00	14.75	98	90	110
Nitrate Nitrogen	10/28/20	08:07	3.500	3.637	104	90	110
Sulfate	10/28/20	08:07	25.00	25.58	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176516 Lab Sample ID: 497099

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/28/20	12:43	15.00	14.92	99	90	110
Nitrate Nitrogen	10/28/20	12:43	3.500	3.640	104	90	110
Sulfate	10/28/20	12:43	25.00	25.79	103	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176644

Lab Sample ID: 497120

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/30/20	18:43	15.00	15.09	101	90	110
Nitrate Nitrogen	10/30/20	18:43	3.500	3.799	109	90	110
Sulfate	10/30/20	18:43	25.00	26.62	106	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176633 Lab Sample ID: 497149

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/30/20	09:46	15.00	15.07	100	90	110
Nitrate Nitrogen	10/30/20	09:46	3.500	3.749	107	90	110
Sulfate	10/30/20	09:46	25.00	26.23	105	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176633

Lab Sample ID: 497161

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/30/20	14:19	15.00	15.11	101	90	110
Nitrate Nitrogen	10/30/20	14:19	3.500	3.789	108	90	110
Sulfate	10/30/20	14:19	25.00	26.34	105	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176644

Lab Sample ID: 497384

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/30/20	23:07	15.00	15.37	102	90	110
Nitrate Nitrogen	10/30/20	23:07	3.500	3.823	109	90	110
Sulfate	10/30/20	23:07	25.00	26.99	108	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176644

Lab Sample ID: 497386

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Nitrate Nitrogen	11/2/20	16:54	3.500	3.797	108	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176665

Lab Sample ID: 498285

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	11/2/20	15:44	400.0	399.2	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176665

Lab Sample ID: 498287

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	11/2/20 15:44	400.0	399.2	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176665

Lab Sample ID: 498289

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	11/2/20 15:44	400.0	399.2	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176633

Lab Sample ID: 498835

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Sulfate	10/31/20 10:07	25.00	25.95	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176633

Lab Sample ID: 498837

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Sulfate	10/31/20 12:29	25.00	26.94	108	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176644 Lab Sample ID: 498845

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/31/20	00:28	15.00	15.39	103	90	110
Sulfate	10/31/20	00:28	25.00	26.75	107	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176644

Lab Sample ID: 498848

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Nitrate Nitrogen	11/2/20	14:12	3.500	3.585	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176516

Lab Sample ID: 501089

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/28/20	16:46	15.00	14.86	99	90	110
Nitrate Nitrogen	10/28/20	16:46	3.500	3.622	103	90	110
Sulfate	10/28/20	16:46	25.00	25.61	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176516

Lab Sample ID: 501409

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/28/20	20:49	15.00	14.89	99	90	110
Nitrate Nitrogen	10/28/20	20:49	3.500	3.652	104	90	110
Sulfate	10/28/20	20:49	25.00	25.99	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176516

Lab Sample ID: 501411

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	10/28/20	23:11	15.00	15.11	101	90	110
Nitrate Nitrogen	10/28/20	23:11	3.500	3.640	104	90	110
Sulfate	10/28/20	23:11	25.00	25.91	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176903

Lab Sample ID: 502304

ICAL Calibration #: ICAL0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/7/20	12:07	50.00	47.59	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176903

Lab Sample ID: 502307

ICAL Calibration #: ICAL0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/7/20	15:18	50.00	48.69	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176903

Lab Sample ID: 502312

ICAL Calibration #: ICAL0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/7/20	18:28	50.00	46.83	94	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176903

Lab Sample ID: 502314

ICAL Calibration #: ICAL0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/7/20	19:18	50.00	48.07	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176996 Lab Sample ID: 503498

ICAL Calibration #: ICAL 0436 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/10/20 19:07	50.00	49.58	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176996

Lab Sample ID: 503504

ICAL Calibration #: ICAL 0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/10/20	22:23	50.00	49.69	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176996

Lab Sample ID: 503506

ICAL Calibration #: ICAL 0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/11/20	01:35	50.00	48.58	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176996 Lab Sample ID: 504168

ICAL Calibration #: ICAL 0436 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/11/20 19:42	50.00	49.08	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176996

Lab Sample ID: 504172

ICAL Calibration #: ICAL 0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	11/11/20	23:19	50.00	49.89	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176903

Lab Sample ID: 502714

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	10/30/2020 15:05	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176665

Lab Sample ID: 510168

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	10/05/2020 08:59	0.1000			35

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176516

Lab Sample ID: 501408

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	05/12/2020 08:00	0.5245	U	1.0	1.5
Nitrate Nitrogen	05/12/2020 08:00	0	U	0.12	0.20
Sulfate	05/12/2020 08:00	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176665

Lab Sample ID: 498286

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	11/02/2020 15:44	0			35

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176665

Lab Sample ID: 498288

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	11/02/2020 15:44	0			35

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176665

Lab Sample ID: 498290

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	11/02/2020 15:44	2.500			35

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176903 Lab Sample ID: 502308

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL0436 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/07/2020 15:33	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176903

Lab Sample ID: 502313

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/07/2020 18:43	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176903

Lab Sample ID: 502315

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/07/2020 19:32	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176996

Lab Sample ID: 503505

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/10/2020 22:38	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176996

Lab Sample ID: 503507

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/11/2020 01:50	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176996

Lab Sample ID: 503511

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/11/2020 20:11	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176996

Lab Sample ID: 504173

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/11/2020 23:34	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176516 Lab Sample ID: 497100

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/28/2020 13:03	0.4976	U	1.0	1.5
Nitrate Nitrogen	10/28/2020 13:03	0.05761	U	0.12	0.20
Sulfate	10/28/2020 13:03	0.5785	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176633 Lab Sample ID: 497151

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/30/2020 10:06	0	U	1.0	1.5
Nitrate Nitrogen	10/30/2020 10:06	0.05990	U	0.12	0.20
Sulfate	10/30/2020 10:06	0.5852	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176644

Lab Sample ID: 497385

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Nitrate Nitrogen	11/02/2020 17:14	0.05800	U	0.12	0.20

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176644 Lab Sample ID: 497387

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/30/2020 23:27	0.4970	U	1.0	1.5
Nitrate Nitrogen	10/30/2020 23:27	0.05760	U	0.12	0.20
Sulfate	10/30/2020 23:27	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176633

Lab Sample ID: 498836

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Sulfate	10/31/2020 10:27	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176633

Lab Sample ID: 498838

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Sulfate	10/31/2020 12:49	0.5752	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176644

Lab Sample ID: 498846

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/31/2020 00:48	0	U	1.0	1.5
Sulfate	10/31/2020 00:48	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176644

Lab Sample ID: 498849

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Nitrate Nitrogen	11/02/2020 14:52	0	U	0.12	0.20

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176516 Lab Sample ID: 501090

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/28/2020 17:06	0.5267	U	1.0	1.5
Nitrate Nitrogen	10/28/2020 17:06	0	U	0.12	0.20
Sulfate	10/28/2020 17:06	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176516 Lab Sample ID: 501410

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/28/2020 21:10	0	U	1.0	1.5
Nitrate Nitrogen	10/28/2020 21:10	0	U	0.12	0.20
Sulfate	10/28/2020 21:10	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176516 Lab Sample ID: 501412

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/28/2020 23:31	0	U	1.0	1.5
Nitrate Nitrogen	10/28/2020 23:31	0	U	0.12	0.20
Sulfate	10/28/2020 23:31	0.5789	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176903 Lab Sample ID: 502306

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL0436 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/07/2020 12:36	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176996 Lab Sample ID: 503500

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0436 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	11/10/2020 19:37	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176516 Lab Sample ID: 497098

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/28/2020 08:48	0	U	1.0	1.5
Nitrate Nitrogen	10/28/2020 08:48	0.06030	U	0.12	0.20
Sulfate	10/28/2020 08:48	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176644 Lab Sample ID: 497122

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/30/2020 19:23	0	U	1.0	1.5
Nitrate Nitrogen	10/30/2020 19:23	0	U	0.12	0.20
Sulfate	10/30/2020 19:23	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 157538

Analytical Run #: 176633 Lab Sample ID: 497165

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	10/30/2020 15:00	0	U	1.0	1.5
Nitrate Nitrogen	10/30/2020 15:00	0.06665	U	0.12	0.20
Sulfate	10/30/2020 15:00	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	497068	Parent Sample No.:	496544
Analytical Prep Batch #	78785	Analytical Preparation Date/Time:	11/02/2020 08:07
Analytical Run #:	176665	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 11/02/2020 Analysis Time: -------- 15:44

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
COD	90-110	203		200		148	2		SP	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	503502	Parent Sample No.:	496500
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	176996	ICAL Calibration #:	ICAL 0436 I

Analysis Type	*Initial Analysis*	Analysis Date: -----	11/10/2020	Analysis Time: --------	20:20

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	50.9		1.5	J	50.0	99		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	497156	Parent Sample No.:	496500
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	176633	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	10/30/2020	Analysis Time: --------	13:19

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	16.4		9.3		8.00	89		IC
Nitrate Nitrogen	88-111	4.90		2.7		2.00	110		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	497156	Parent Sample No.:	496500
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	176633	ICAL Calibration #:	

ReRun *Re-Analysis #1* Analysis Date: ----- 10/31/2020 Analysis Time: -------- 11:28

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Sulfate	87-112	162		130		40.0	80		IC	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	497389	Parent Sample No.:	496543
Analytical Prep Batch #		Analytical Preparation Date/Time:	
Analytical Run #:	176644	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	10/30/2020	Analysis Time: --------	23:47

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	9.68		2.8	J	8.00	86		IC	*FAIL*
Sulfate	87-112	35.5		28		8.00	94		IC	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	497389	Parent Sample No.:	496543
Analytical Prep Batch #		Analytical Preparation Date/Time:	
Analytical Run #:	176644	ICAL Calibration #:	

ReRun *Re-Analysis #1* Analysis Date: ----- 11/02/2020 Analysis Time: -------- 15:12

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Nitrate Nitrogen	88-111	15.4		5.9		10.0	95		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	501087	Parent Sample No.:	495142
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	176516	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	10/28/2020	Analysis Time: --------	15:45

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	11.4		4.7		8.00	84		IC	*FAIL*
Nitrate Nitrogen	88-111	2.19		0.17	J	2.00	101		IC	
Sulfate	87-112	54.8		48		8.00	85		IC	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	497069	Parent Sample No.:	497068
Analytical Prep Batch #	78785	Analytical Preparation Date/Time:	11/02/2020 08:07
Analytical Run #:	176665	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 11/02/2020 Analysis Time: -------- 15:44

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
COD	90-110	198		200		148	0		SP	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	503503	Parent Sample No.:	503502
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	176996	ICAL Calibration #:	ICAL 0436 I

Analysis Type	*Initial Analysis*	Analysis Date: -----	11/10/2020	Analysis Time: --------	20:34

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	50.9		1.5	J	50.0	99		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	497158	Parent Sample No.:	497156
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	176633	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	10/30/2020	Analysis Time: --------	13:39

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	16.4		9.3		8.00	89		IC
Nitrate Nitrogen	88-111	4.87		2.7		2.00	108		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **48MW06**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	497158	Parent Sample No.:	497156
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	176633	ICAL Calibration #:	

ReRun *Re-Analysis #1* Analysis Date: ----- 10/31/2020 Analysis Time: -------- 11:48

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Sulfate	87-112	162		130		40.0	80		IC	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **48MW3**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	498844	Parent Sample No.:	497389
Analytical Prep Batch #		Analytical Preparation Date/Time:	
Analytical Run #:	176644	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	10/31/2020	Analysis Time: --------	00:07

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	9.78		2.8	J	8.00	87		IC
Sulfate	87-112	35.6		28		8.00	95		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **48MW3**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	498844	Parent Sample No.:	497389
Analytical Prep Batch #		Analytical Preparation Date/Time:	
Analytical Run #:	176644	ICAL Calibration #:	

ReRun | *Re-Analysis #1* | Analysis Date: ----- 11/02/2020 | Analysis Time: -------- 15:33

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Nitrate Nitrogen	88-111	15.4		5.9		10.0	95		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **13MW2**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	157538
% Solids for Sample:		Concentration Units:	mg/L
Sample No	501088	Parent Sample No.:	501087
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	176516	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	10/28/2020	Analysis Time: --------	16:05

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	11.7		4.7		8.00	88		IC	
Nitrate Nitrogen	88-111	2.26		0.17	J	2.00	104		IC	
Sulfate	87-112	54.8		48		8.00	85		IC	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

48/49-IDW

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 157538

% Solid for Sample:

Concentration Units: S.U.

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 176643

ICAL Calibration #:

Sample #: 496857

Parent Sample #: 496544

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
pH	10/30/2020	14:00	1	6.51		6.52		0		ELEC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

48MW06

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 157538

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 176996

ICAL Calibration #: ICAL 0436 I

Sample #: 504171

Parent Sample #: 496500

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	11/11/2020	20:25	20	1.5	J	1.53	J	2		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

48MW06

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 157538

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 176633

ICAL Calibration #:

Sample #: 497154

Parent Sample #: 496500

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	10/30/2020	12:58	10	9.3		9.34		0		IC
Nitrate Nitrogen	10/30/2020	12:58	10	2.7		2.71		0		IC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

48MW06

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 157538

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 2

Analytical Preparation Date/Time 0

Analytical Run #: 176633

ICAL Calibration #:

Sample #: 497154

Parent Sample #: 496500

ReRun *Re-Analysis #1*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Sulfate	10/31/2020	11:08	10	130		125		4		IC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

48MW3

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 157538

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time

Analytical Run #: 176644

ICAL Calibration #:

Sample #: 497388

Parent Sample #: 496543

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	10/30/2020	22:46	10	2.8	J	2.82	J	1		IC
Nitrate Nitrogen	10/30/2020	22:46	10	5.9		5.83		1		IC
Sulfate	10/30/2020	22:46	10	28		28.3		1		IC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

13MW2

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID
SDG No.: 157538

% Solid for Sample:
Concentration Units: mg/L

Analytical Prep Batch # 1
Analytical Preparation Date/Time 0

Analytical Run #: 176516
ICAL Calibration #:

Sample #: 501086
Parent Sample #: 495142

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	10/28/2020	15:25	10	4.7		4.71		0		IC
Nitrate Nitrogen	10/28/2020	15:25	10	0.17	J	0.175	J	3		IC
Sulfate	10/28/2020	15:25	10	48		48.0		0		IC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **48/49-IDW**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 157538
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 78785
Analytical Preparation Date/Time: 11/02/2020 08:07
Analytical Run #: 176665
ICAL Calibration #:
Sample #: 497069
Parent Sample #: 497068

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
COD	11/02/2020	15:44	20	203		198		2		SP

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **48MW06**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 157538
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 176996
ICAL Calibration #: ICAL 0436 I
Sample #: 503503
Parent Sample #: 503502

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	11/10/2020	20:34	20	50.9		50.9		0		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description

48MW06

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID
SDG No.: 157538

% Solid for Sample:
Concentration Units: mg/L

Analytical Prep Batch # 0
Analytical Preparation Date/Time

Analytical Run #: 176633
ICAL Calibration #:

Sample #: 497158
Parent Sample #: 497156

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	10/30/2020	13:39	15	16.4		16.4		0		IC
Nitrate Nitrogen	10/30/2020	13:39	15	4.90		4.87		1		IC

CT LABORATORIES
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6A

MATRIX SPIKE DUPLICATES

Sample Description: **48MW06**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 157538
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 176633
ICAL Calibration #:
Sample #: 497158
Parent Sample #: 497156

ReRun *Re-Analysis #1*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Sulfate	10/31/2020	11:48	15	162		162		0		IC

CT LABORATORIES
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6A

MATRIX SPIKE DUPLICATES

Sample Description: **48MW3**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 157538
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 176644
ICAL Calibration #:
Sample #: 498844
Parent Sample #: 497389

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	10/31/2020	00:07	15	9.68		9.78		1		IC
Sulfate	10/31/2020	00:07	15	35.5		35.6		0		IC

CT LABORATORIES
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6A

MATRIX SPIKE DUPLICATES

Sample Description: **48MW3**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 157538
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 176644
ICAL Calibration #:
Sample #: 498844
Parent Sample #: 497389

ReRun *Re-Analysis #1*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Nitrate Nitrogen	11/02/2020	15:33	15	15.4		15.4		0		IC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 157538
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 176516
ICAL Calibration #:
Sample #: 501088
Parent Sample #: 501087

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	10/28/2020	16:05	15	11.4		11.7		2		IC
Nitrate Nitrogen	10/28/2020	16:05	15	2.19		2.26		3		IC
Sulfate	10/28/2020	16:05	15	54.8		54.8		0		IC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 157538

Concentration Units: mg/L

Analytical Run #: 176903

Sample No.:#: 502305

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #: ICAL0436 I

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Organic Carbon	11/07/2020 12:21	85-111	49.60		50.00	99		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 157538

Concentration Units: mg/L

Analytical Run #: 176996

Sample No.:#: 503499

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0436 I

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Organic Carbon	11/10/2020 19:22	85-111	49.49		50.00	99		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 157538

Concentration Units: mg/L

Analytical Run #: 176516 Sample No.:#: 497097

Analytical Prep Batch #: 0 Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	10/28/2020 08:27	87-111	15.47		15.00	103		IC
Nitrate Nitrogen	10/28/2020 08:27	88-111	3.552		3.500	101		IC
Sulfate	10/28/2020 08:27	87-112	27.19		25.00	109		IC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 157538

Concentration Units: mg/L

Analytical Run #: 176644 Sample No.:#: 497121

Analytical Prep Batch #: 0 Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	10/30/2020 19:03	87-111	15.63		15.00	104		IC
Nitrate Nitrogen	10/30/2020 19:03	88-111	3.687		3.500	105		IC
Sulfate	10/30/2020 19:03	87-112	27.52		25.00	110		IC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 157538

Concentration Units: mg/L

Analytical Run #: 176633 Sample No.:#: 497163

Analytical Prep Batch #: 0 Preparation Date/Time:

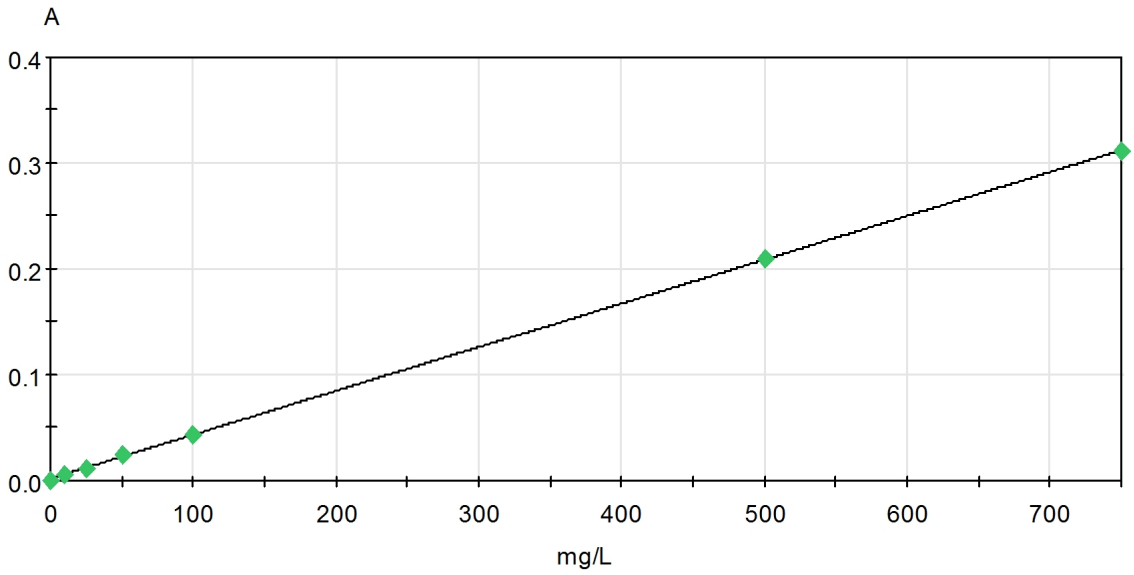
ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	10/30/2020 14:40	87-111	15.62		15.00	104		IC
Nitrate Nitrogen	10/30/2020 14:40	88-111	3.676		3.500	105		IC
Sulfate	10/30/2020 14:40	87-112	27.37		25.00	109		IC

INORGANICS
RAW DATA
DOCUMENTS

Method: COD W49500.mqa (600 nm)
Last modified: 10/05/2020 08:44:50 by CTLABORATORIES\Wetchem (WETCHEM)
Spectrophotometer: GENESYS 30
Serial number: 9A1W117104
Firmware: 104
Autozero: 10/05/2020 08:41:42
Autozero: 10/05/2020 08:55:30
Measured: 10/05/2020 08:59:51 by CTLABORATORIES\Wetchem (WETCHEM)
Result filename: 175595 DATA.rqa



Curve parameters: y = 4.134606E-04 x + 1.954856E-03
Residual error: 0.0014 Correlation coefficient: 0.99995
Date: 10/05/2020 08:44:50 Autozero 10/05/2020 08:41:42

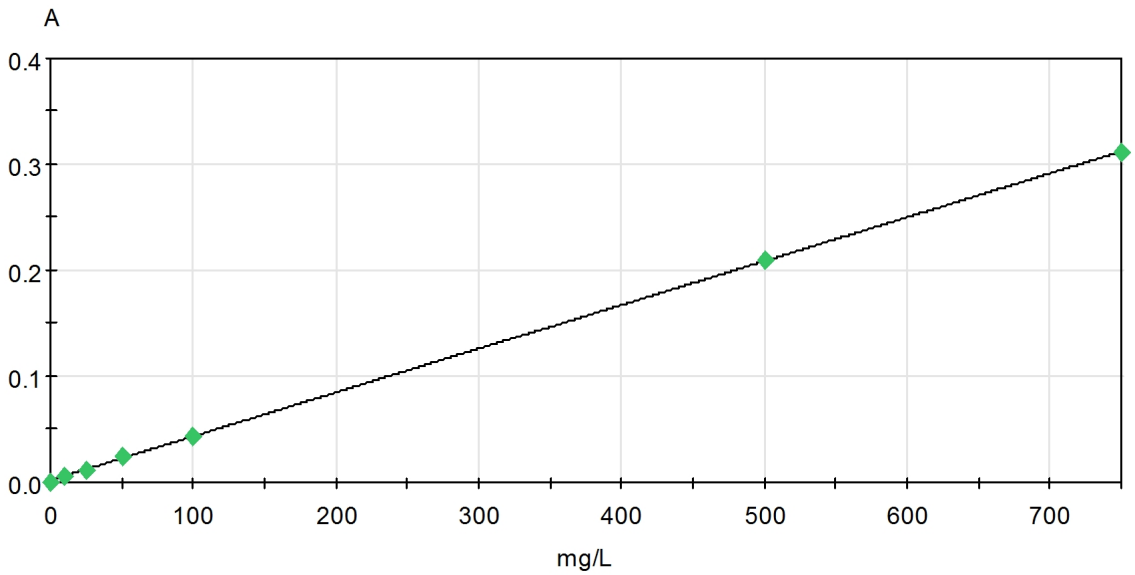
Standards

No.	Concentration [mg/L]	Ordinate [A]	Error [A]	Used
1	0.0	0.000	-0.002	Yes
2	10.0	0.006	0.000	Yes
3	25.0	0.012	0.000	Yes
4	50.0	0.024	0.001	Yes
5	100.0	0.044	0.001	Yes
6	500.0	0.210	0.001	Yes
7	750.0	0.311	-0.001	Yes

Sample	Dilution Factor	Ordinate [A]	Concentration [mg/L]

ICV	1	0.168	401.6
ICB	1	0.002	0.1

Method: COD W49500.mqa (600 nm)
Last modified: 10/05/2020 08:44:50 by CTLABORATORIES\Wetchem (WETCHEM)
Spectrophotometer: GENESYS 30
Serial number: 9A1W117104
Firmware: 104
Autozero: 11/02/2020 15:44:01
Measured: 11/02/2020 15:57:53 by CTLABORATORIES\Wetchem (WETCHEM)
Result filename: 176660 664 665 DATA.rqa



Curve parameters: y = 4.134606E-04 x + 1.954856E-03
Residual error: 0.0014 Correlation coefficient: 0.99995
Date: 10/05/2020 08:44:50 Autozero 10/05/2020 08:41:42

Sample	Dilution Factor	Ordinate [A]	Concentration [mg/L]
CCV	1	0.165	394.3
CCB	1	0.003	2.5
497043	1	0.167	399.2
497042	1	0.001	-2.3
494130	1	0.014	29.1
MSW494130	1	0.075	176.7
MSDW494130	1	0.069	162.2
495600	1	0.019	41.2
MSW495600	1	0.079	186.3
MSDW495600	1	0.074	174.2
495601	1	0.101	239.6
495605	1	0.015	31.6
CCV	1	0.172	411.3
CCB	1	0.001	-2.3
495606	1	0.010	19.5
495607	1	0.009	17.0

495608	1	0.020	43.6
495609	1	0.003	2.5
495755 (X50)	1	0.027	60.6
496220	1	0.047	108.9
496221	1	0.011	21.9
496223	1	0.043	99.3
MSW496223	1	0.111	263.7
MSDW496223	1	0.104	246.8
CCV	1	0.165	394.3
CCB	1	0.000	-4.7
497063	1	0.171	408.9
497062	1	0.000	-4.7
494138	1	0.026	58.2
MSW494138	1	0.089	210.5
MSDW494138	1	0.083	196.0
494144	1	0.026	58.2
494146	1	0.010	19.5
494148	1	0.011	21.9
494156	1	0.007	12.2
494159	1	0.012	24.3
CCV	1	0.167	399.2
CCB	1	0.000	-4.7
494161	1	0.011	21.9
494165	1	0.005	7.4
495127	1	0.009	17.0
495726	1	0.006	9.8
495736	1	0.013	26.7
495739	1	0.004	4.9
495741	1	0.020	43.6
495743	1	0.008	14.6
495745	1	0.006	9.8
495749	1	0.004	4.9
CCV	1	0.166	396.8
CCB	1	0.002	0.1
496544	1	0.085	200.9
MSW496544	1	0.086	203.3
MSDW496544	1	0.084	198.4
CCV	1	0.167	399.2
CCB	1	0.003	2.5

Schedule File: C:\INSTARCH\Sequences\System 2\051120 - ic3033.SCH

Line	Sample	Sample Type	Level	Method	Data File	Volume	Dilution
1	IB	Sample		ic3033.met	ib _001.dxd	1	1
2	STD1	Calibration St	1	ic3033.met	std1_002.dxd	1	1
3	STD2	Calibration St	2	ic3033.met	std2_003.dxd	1	1
4	STD3	Calibration St	3	ic3033.met	std3_004.dxd	1	1
5	STD4	Calibration St	4	ic3033.met	std4_005.dxd	1	1
6	STD5	Calibration St	5	ic3033.met	std5_006.dxd	1	1
7	STD6	Calibration St	6	ic3033.met	std6_007.dxd	1	1
8	STD7	Calibration St	7	ic3033.met	std7_008.dxd	1	1
9	STD8	Calibration St	8	ic3033.met	std8_009.dxd	1	1
10	STD9	Calibration St	9	ic3033.met	std9 _010.dxd	1	1
12	ICV	Sample		ic3033.met	icv_012.dxd	1	1
15	ICB	Sample		ic3033.met	icb_015.dxd	1	1

Calibration Concentrations

Instrument:	DX-120 (2)	Cal. File:	IC3033		ICV	IC3025 IC3035		Analyst/Date: TMG 05/11/2020		
Analyte	Cal Level 1 (mg/L)	Cal Level 2 (mg/L)	Cal Level 3 (mg/L)	Cal Level 4 (mg/L)	Cal Level 5 (mg/L)	Cal Level 6 (mg/L)	Cal Level 7 (mg/L)	Cal Level 8 (mg/L)	Cal Level 9 (mg/L)	ICV (mg/L)
Fluoride	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Chloride	0.0	0.5	0.75	1.0	5.0	10.0	20.0	30.0	40.0	15.0
Bromide	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrite	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrate	0.0	0.1	0.30	0.5	1.0	2.0	5.0	7.0		3.5
O-Phoshorous	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Sulfate	0.0	0.5	0.75	1.0	5.0	10.0	30.0	50.0	70.0	25.0

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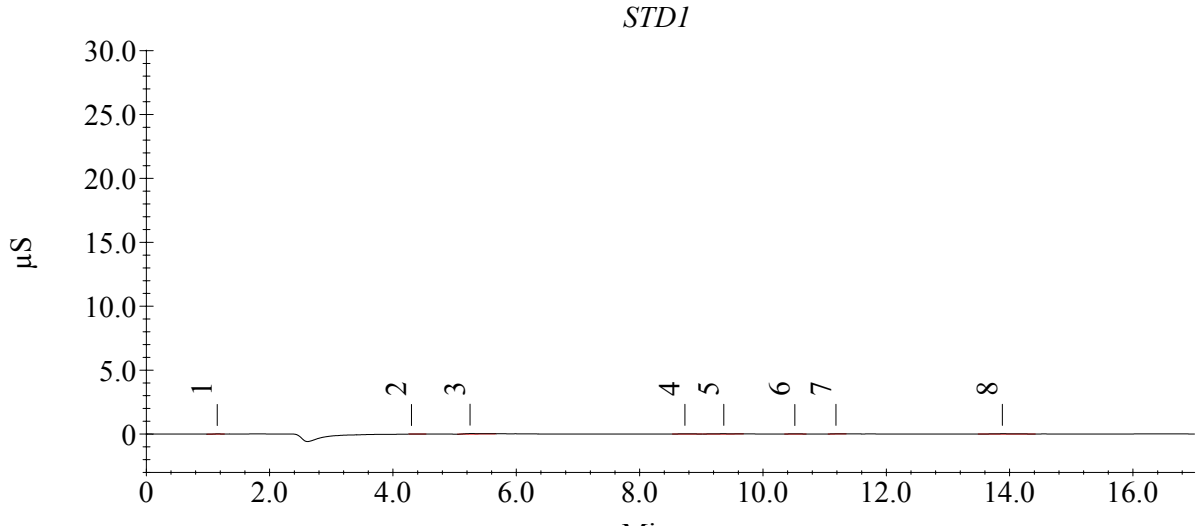
Calibration Update Report

Sample Name : STD1
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\051120 - IC3033\STD1_002.DXD

Method File Name : C:\INSTARCH\METHODS\System 2\IC3033.met
Schedule File Name : c:\instarch\sequences\system 2\051120 - ic3033.sch
Date Time Collected : 5/11/20 15:12
Calibration Date : 5/12/20 07:10
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
3	Chloride	5.25	6065	6065	6065
5	Nitrate	9.37	2020	3204	3204
8	Sulfate	13.88	4995	4995	4995



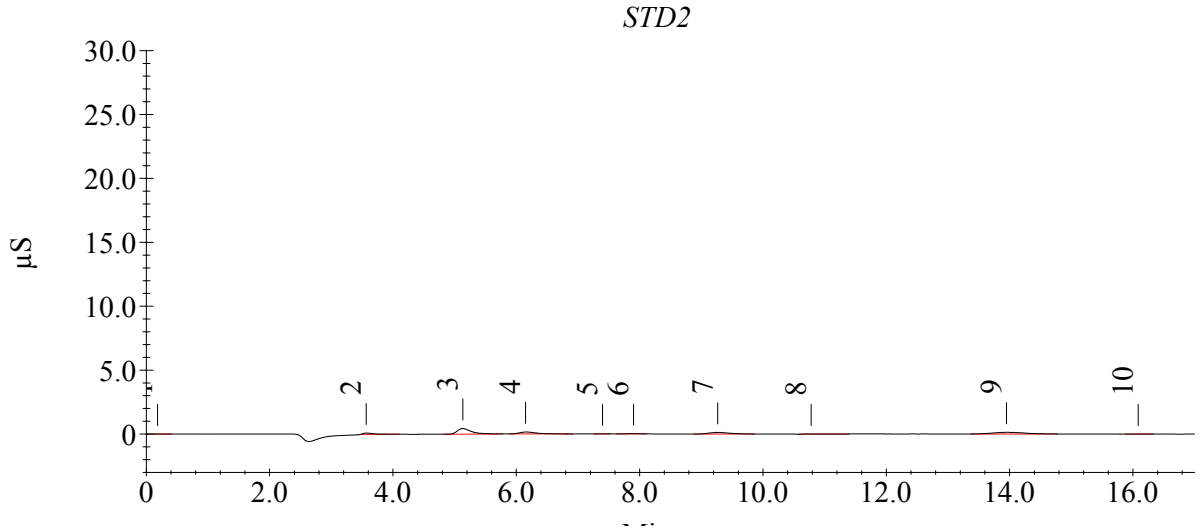
Calibration Update Report

Sample Name : STD2
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\051120 - IC3033\STD2_003.DXD

Method File Name : C:\INSTARCH\METHODS\System 2\IC3033.met
Schedule File Name : c:\instarch\sequences\system 2\051120 - ic3033.sch
Date Time Collected : 5/11/20 15:32
Calibration Date : 5/12/20 07:10
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
2	Fluoride	3.57	12132	12132	12132
3	Chloride	5.13	70502	70502	70502
4	Nitrite	6.15	29105	29105	29105
6	Bromide	7.90	2966	2966	2966
7	Nitrate	9.27	29747	29747	29747
8	O.Phos	10.78	0	1152	1152
9	Sulfate	13.95	47633	47633	47633



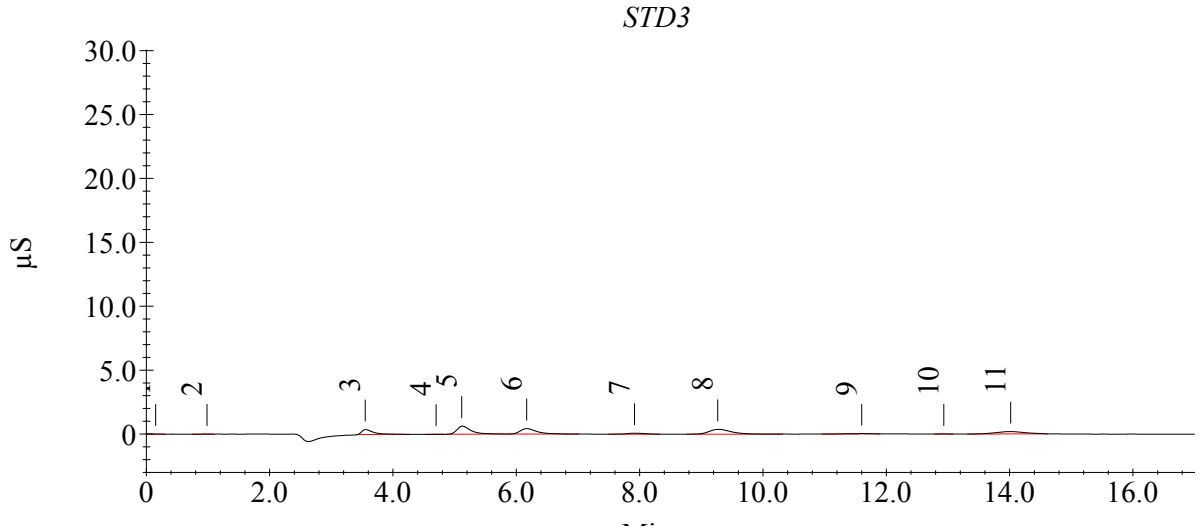
Calibration Update Report

Sample Name : STD3
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\051120 - IC3033\STD3_004.DXD

Method File Name : C:\INSTARCH\METHODS\System 2\IC3033.met
Schedule File Name : c:\instarch\sequences\system 2\051120 - ic3033.sch
Date Time Collected : 5/11/20 15:51
Calibration Date : 5/12/20 07:10
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
3	Fluoride	3.55	52366	52366	52366
5	Chloride	5.12	99856	99856	99856
6	Nitrite	6.17	81293	81293	81293
7	Bromide	7.92	15398	15398	15398
8	Nitrate	9.27	96206	96206	96206
9	O.Phos	11.60	7879	7879	7879
11	Sulfate	14.02	60658	60658	60658



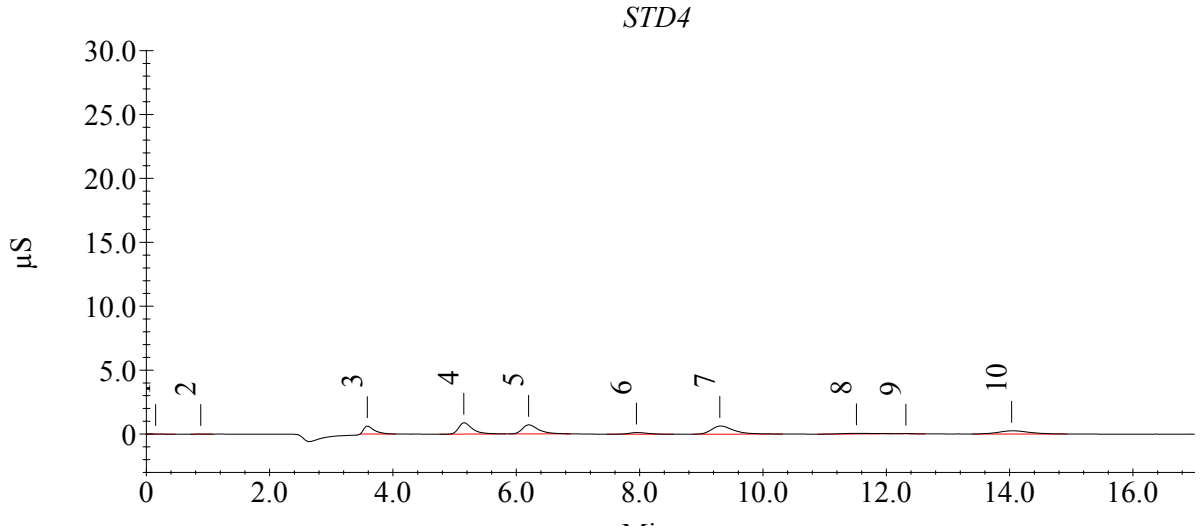
Calibration Update Report

Sample Name : STD4
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\051120 - IC3033\STD4_005.DXD

Method File Name : C:\INSTARCH\METHODS\System 2\IC3033.met
Schedule File Name : c:\instarch\sequences\system 2\051120 - ic3033.sch
Date Time Collected : 5/11/20 16:10
Calibration Date : 5/12/20 07:10
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
3	Fluoride	3.58	74093	74093	74093
4	Chloride	5.15	138401	138401	138401
5	Nitrite	6.20	129953	129953	129953
6	Bromide	7.95	28060	28060	28060
7	Nitrate	9.30	158735	158735	158735
8	O.Phos	11.52	16858	16858	16858
10	Sulfate	14.03	87889	87889	87889



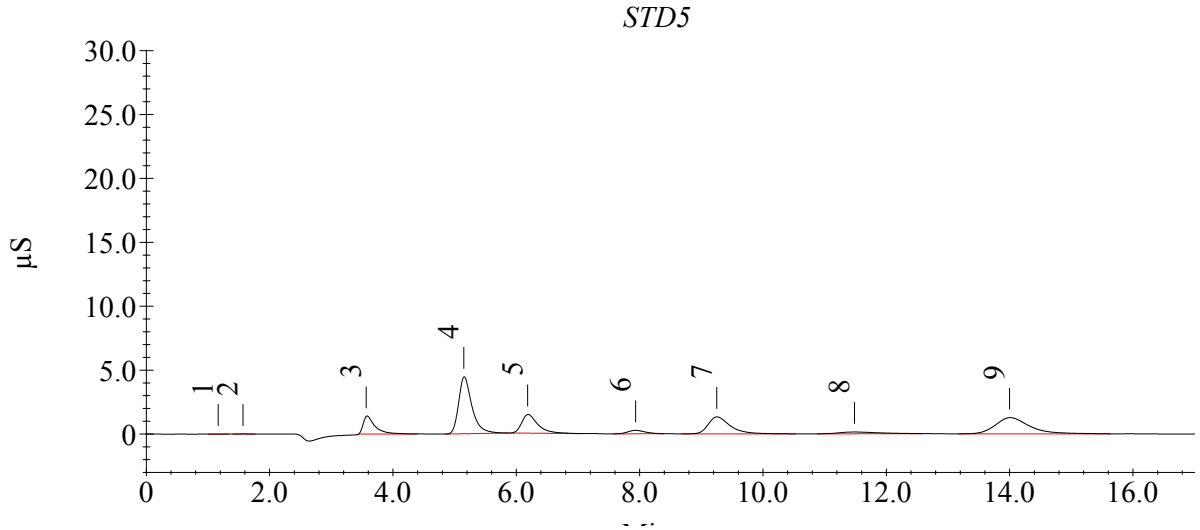
Calibration Update Report

Sample Name : STD5
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\051120 - IC3033\STD5_006.DXD

Method File Name : C:\INSTARCH\METHODS\System 2\IC3033.met
Schedule File Name : c:\instarch\sequences\system 2\051120 - ic3033.sch
Date Time Collected : 5/11/20 16:29
Calibration Date : 5/12/20 07:10
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
3	Fluoride	3.57	185774	185774	185774
4	Chloride	5.15	667018	667018	667018
5	Nitrite	6.18	266609	266609	266609
6	Bromide	7.93	51690	51690	51690
7	Nitrate	9.25	334252	334252	334252
8	O.Phos	11.48	64208	64208	64208
9	Sulfate	14.00	486729	486729	486729



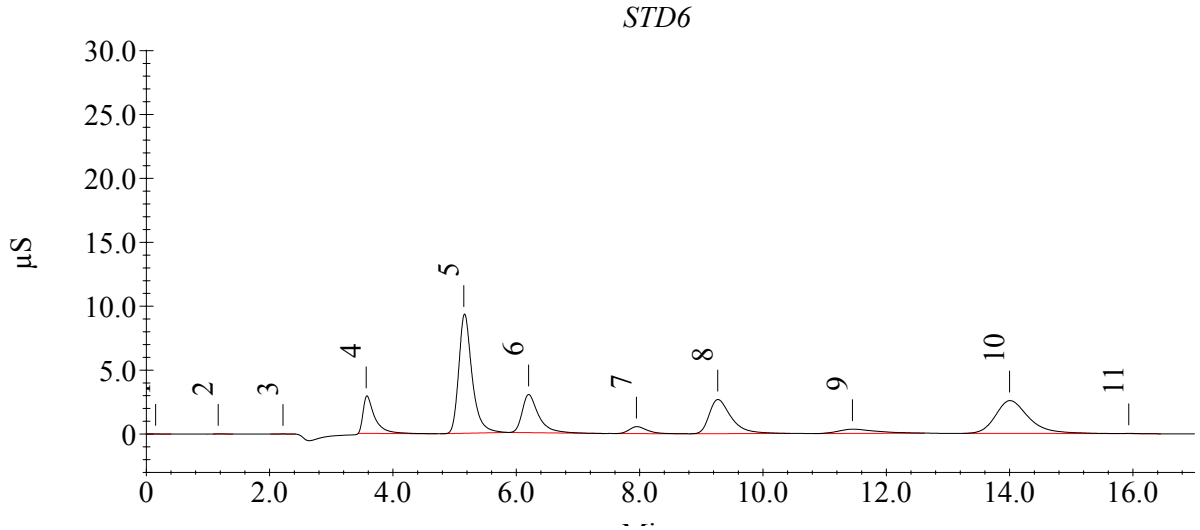
Calibration Update Report

Sample Name : STD6
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\051120 - IC3033\STD6_007.DXD

Method File Name : C:\INSTARCH\METHODS\System 2\IC3033.met
Schedule File Name : c:\instarch\sequences\system 2\051120 - ic3033.sch
Date Time Collected : 5/11/20 16:48
Calibration Date : 5/12/20 07:10
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
4	Fluoride	3.57	629660	383801	383801
5	Chloride	5.15	1401392	1401392	1401392
6	Nitrite	6.20	550800	550800	550800
7	Bromide	7.95	109578	109578	109578
8	Nitrate	9.27	661125	661125	661125
9	O.Phos	11.45	141949	141949	141949
10	Sulfate	14.00	960405	960405	960405



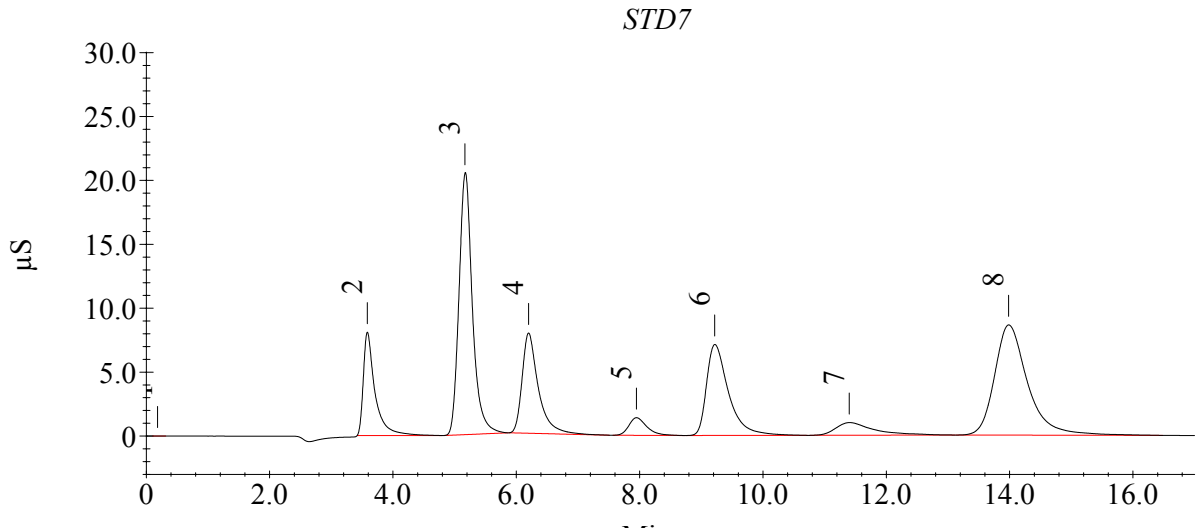
Calibration Update Report

Sample Name : STD7
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\051120 - IC3033\STD7_008.DXD

Method File Name : C:\INSTARCH\METHODS\System 2\IC3033.met
Schedule File Name : c:\instarch\sequences\system 2\051120 - ic3033.sch
Date Time Collected : 5/11/20 17:08
Calibration Date : 5/12/20 07:10
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
2	Fluoride	3.58	0	1062353	1062353
3	Chloride	5.17	0	3083198	3083198
4	Nitrite	6.20	0	1433292	1433292
5	Bromide	7.95	0	278593	278593
6	Nitrate	9.22	0	1759093	1759093
7	O.Phos	11.40	0	423517	423517
8	Sulfate	13.98	0	3210629	3210629



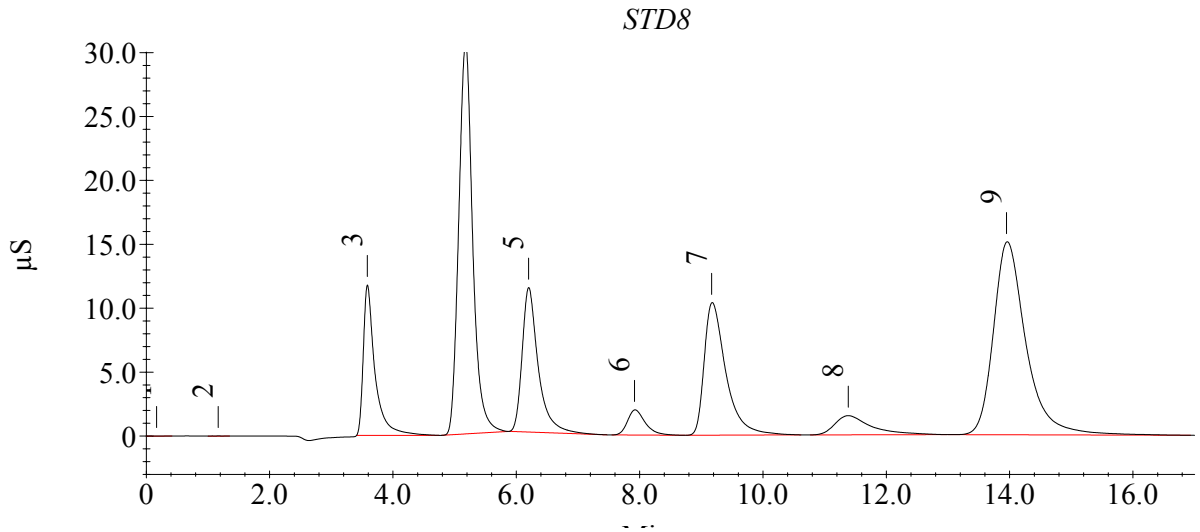
Calibration Update Report

Sample Name : STD8
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\051120 - IC3033\STD8_009.DXD

Method File Name : C:\INSTARCH\METHODS\System 2\IC3033.met
Schedule File Name : c:\instarch\sequences\system 2\051120 - ic3033.sch
Date Time Collected : 5/11/20 17:27
Calibration Date : 5/12/20 07:10
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
3	Fluoride	3.58		1550901	
4	Chloride	5.17	0	4799044	4799044
5	Nitrite	6.20		2048871	
6	Bromide	7.92		392681	
7	Nitrate	9.17	0	2528600	2528600
8	O.Phos	11.38		611468	
9	Sulfate	13.95	0	5531627	5531627



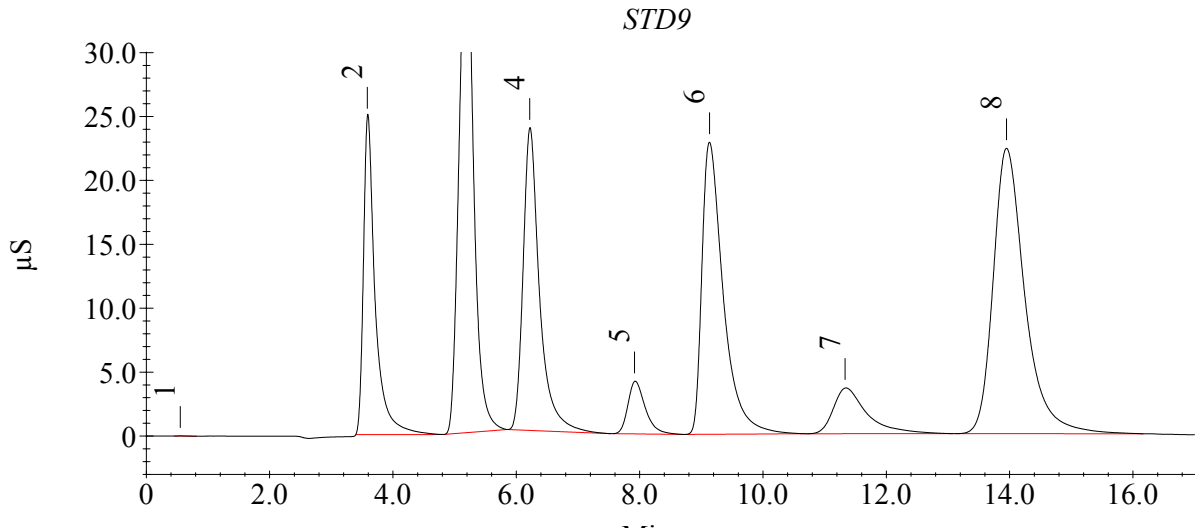
Calibration Update Report

Sample Name : STD9
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\051120 - IC3033\STD9_010.DXD

Method File Name : C:\INSTARCH\METHODS\System 2\IC3033.met
Schedule File Name : c:\instarch\sequences\system 2\051120 - ic3033.sch
Date Time Collected : 5/11/20 17:46
Calibration Date : 5/12/20 07:10
System Operator : TMG

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
2	Fluoride	3.58		3304569	
3	Chloride	5.18	0	6601665	6601665
4	Nitrite	6.22		4383613	
5	Bromide	7.92		803457	
6	Nitrate	9.13		5493174	
7	O.Phos	11.33		1350965	
8	Sulfate	13.95	0	7968632	7968632



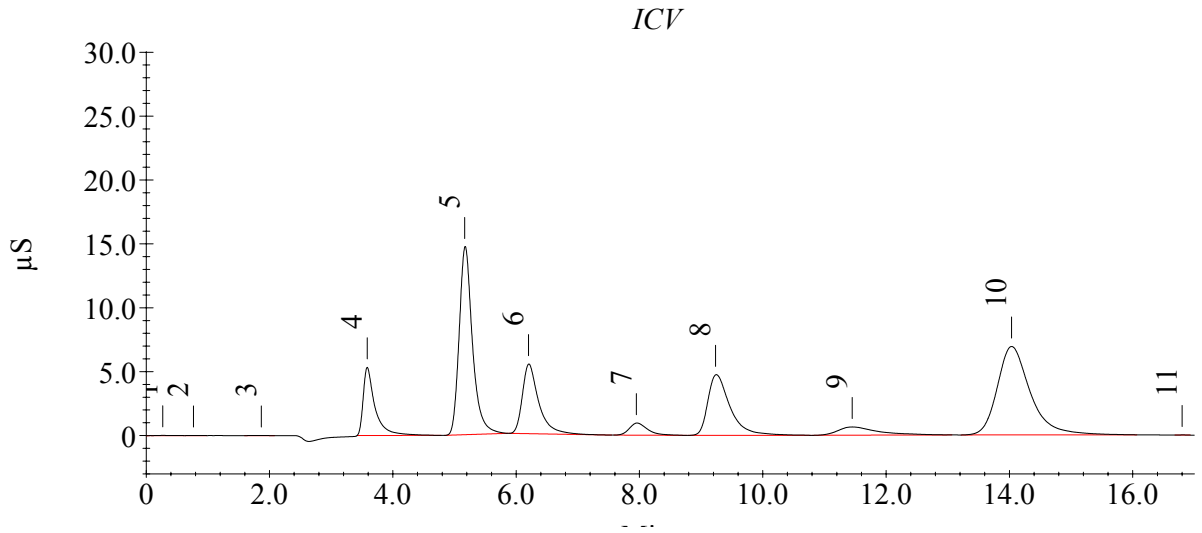
Sample Analysis Report

Sample Name : ICV
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\051120 - IC3033\ICV_012.DXD

Method File Name : C:\INSTARCH\METHODS\System 2\IC3033.met
Date Time Collected : 5/11/20 18:25
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.58	3.3824	704604	53186	
5	Chloride	5.17	13.9068	2200500	146700	
6	Nitrite	6.20	3.5257	1002755	54349	
7	Bromide	7.95	3.4965	193939	9444	
8	Nitrate	9.23	3.3376	1182739	47244	
9	O.Phos	11.45	3.5307	289415	6420	
10	Sulfate	14.03	23.2850	2572235	69148	



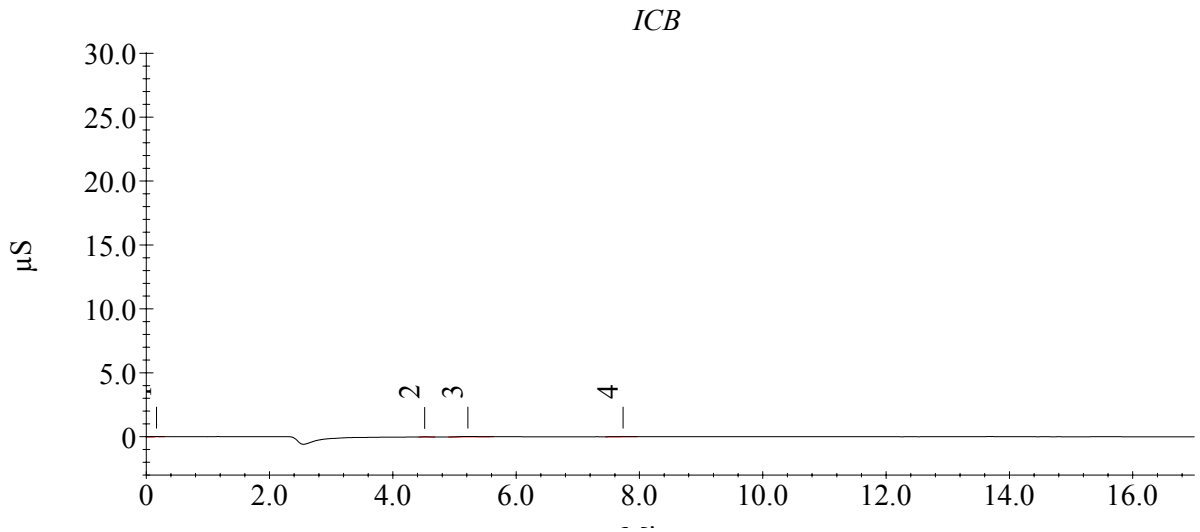
Sample Analysis Report

Sample Name : ICB
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\051120 - IC3033\ICB_015.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 5/12/20 08:00
System Operator : TMG

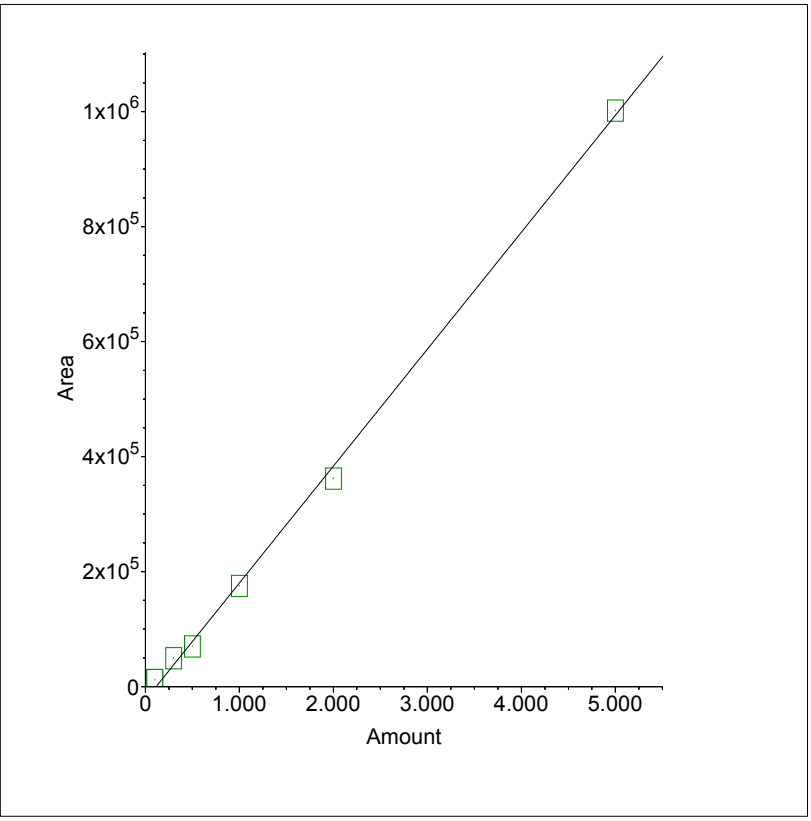
Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	5.22	0.5245	5907	240	
4	Bromide	7.73	0.0627	1382	88	

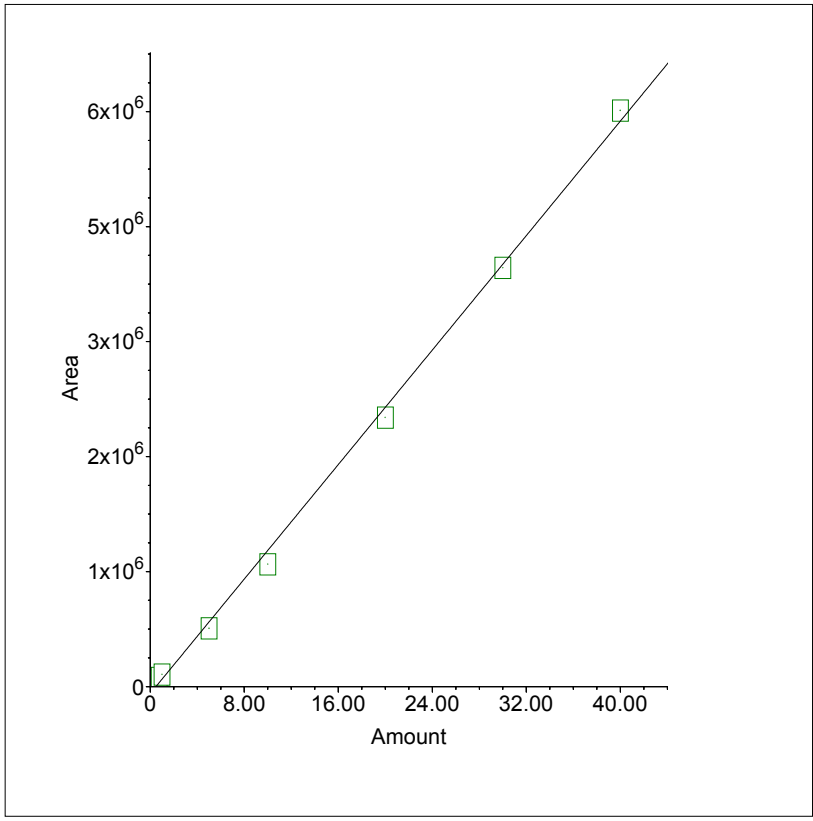


Method:C:\INSTARCH\METHODS\SYSTEM 2\IC3033.MET Updated:5/18/20 10:38 Total:7

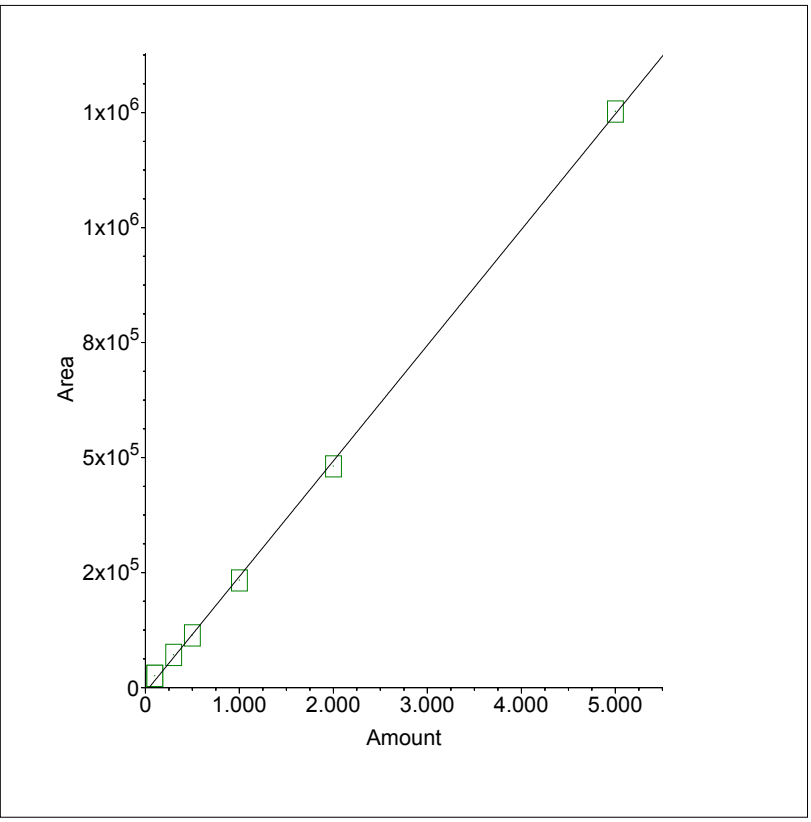
1. Component:Fluoride
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.998631
Amt=4.637e-006*Resp+0.1149



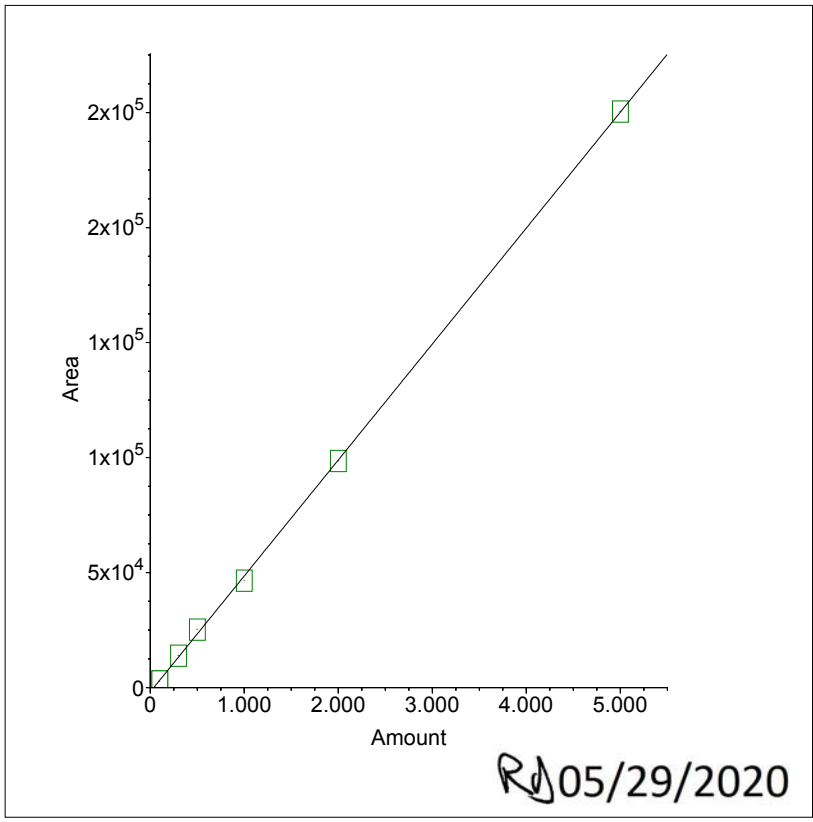
2. Component:Chloride
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.998323
Amt=6.098e-006*Resp+0.4885



3. Component:Nitrite
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999654
Amt=3.476e-006*Resp+0.04025



4. Component:Bromide
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999800
Amt=1.783e-005*Resp+0.03804



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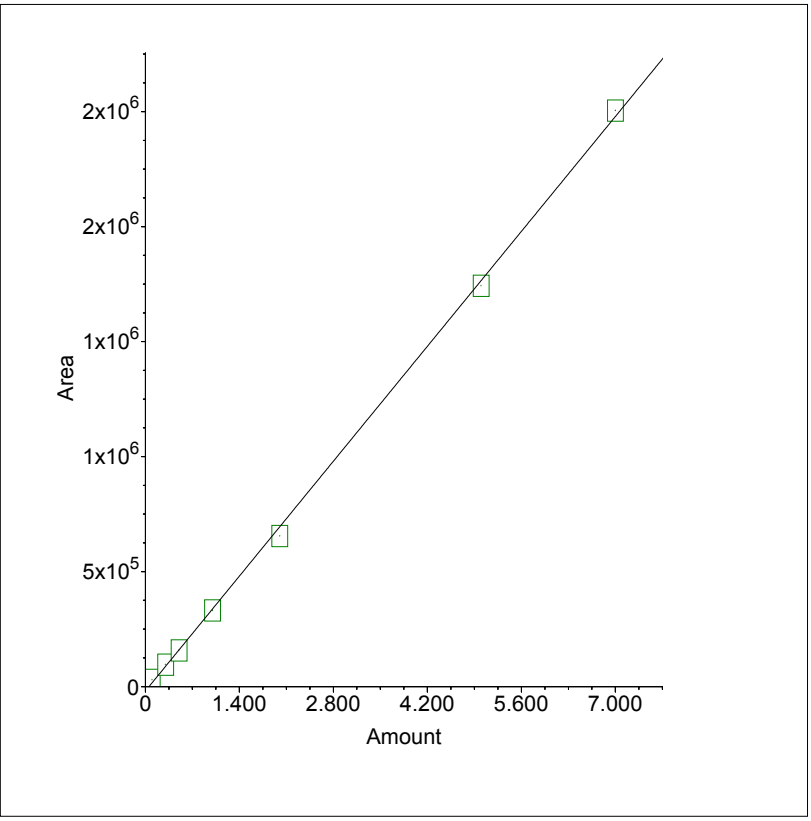
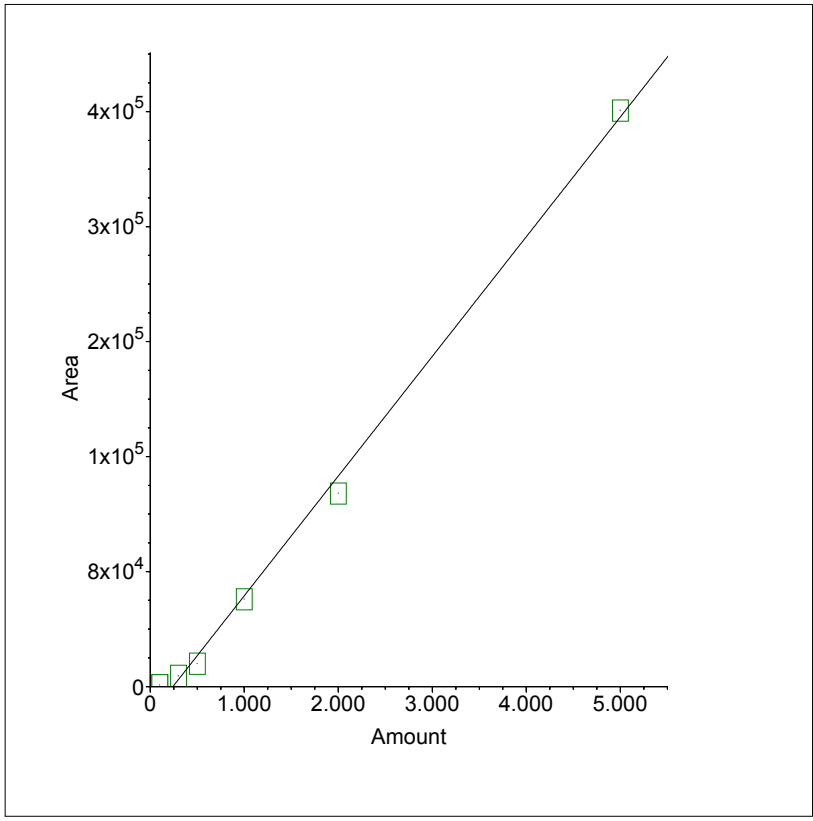
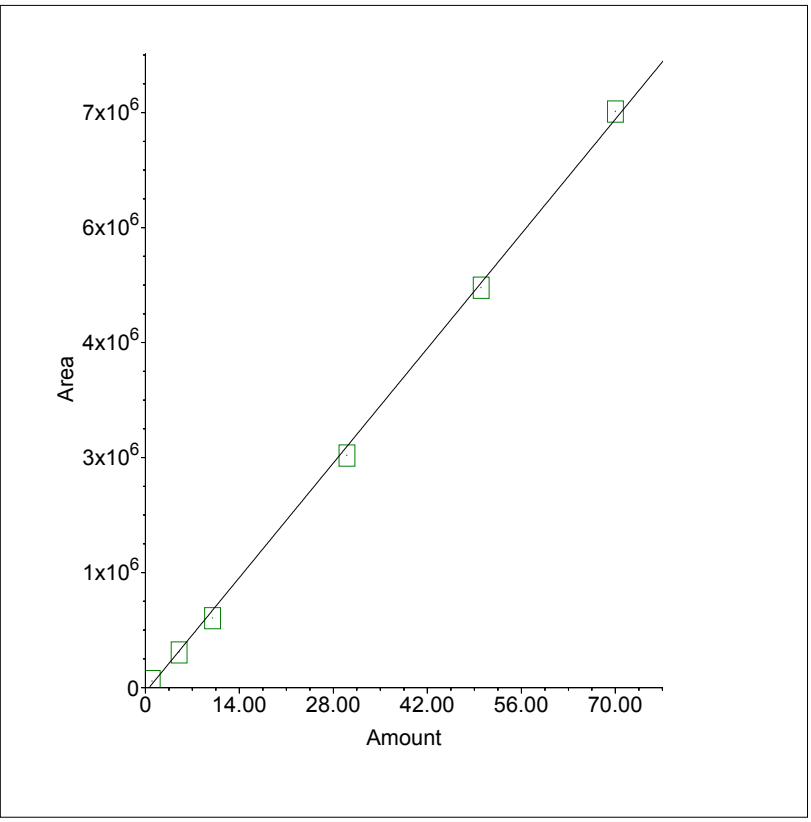
5. Component:Nitrate
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999420
Amt=2.776e-006*Resp+0.05443



6. Component:O.Phos
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.996836
Amt=1.136e-005*Resp+0.2417



7. Component:Sulfate
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999217
Amt=8.832e-006*Resp+0.5663



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Schedule File: C:\INSTARCH\Sequences\System 2\102720 -.SCH

Line	Sample	Sample Type	Level	Method	Data File
39	CCV	Sample		ic3033.met	ccv_039.dxd
40	LCSW	Sample		ic3033.met	lcsw_040.dxd
41	MBW-CCB	Sample		ic3033.met	mbw-ccb_041.dxd
52	CCV	Sample		ic3033.met	ccv_052.dxd
53	CCB	Sample		ic3033.met	ccb_053.dxd
55	495137	Sample		ic3033.met	495137_055.dxd
56	495139	Sample		ic3033.met	495139_056.dxd
57	495140	Sample		ic3033.met	495140_057.dxd
58	495141	Sample		ic3033.met	495141_058.dxd
59	495142	Sample		ic3033.met	495142_059.dxd
60	DUP495142	Sample		ic3033.met	dup495142_060.dxd
61	MSW495142	Sample		ic3033.met	msw495142_061.dxd
62	MSDW495142	Sample		ic3033.met	msdw495142_062.dxd

Line	Sample	Sample Type	Level	Method	Data File
64	CCV	Sample		ic3033.met	ccv_064.dxd
65	CCB	Sample		ic3033.met	ccb_065.dxd
76	CCV	Sample		ic3033.met	ccv_076.dxd
77	CCB	Sample		ic3033.met	ccb_077.dxd
80	495139X5	Sample		ic3033.met	495139x5_080.dxd
81	495140X5	Sample		ic3033.met	495140x5_081.dxd
83	CCV	Sample		ic3033.met	ccv_083.dxd
84	CCB	Sample		ic3033.met	ccb_084.dxd

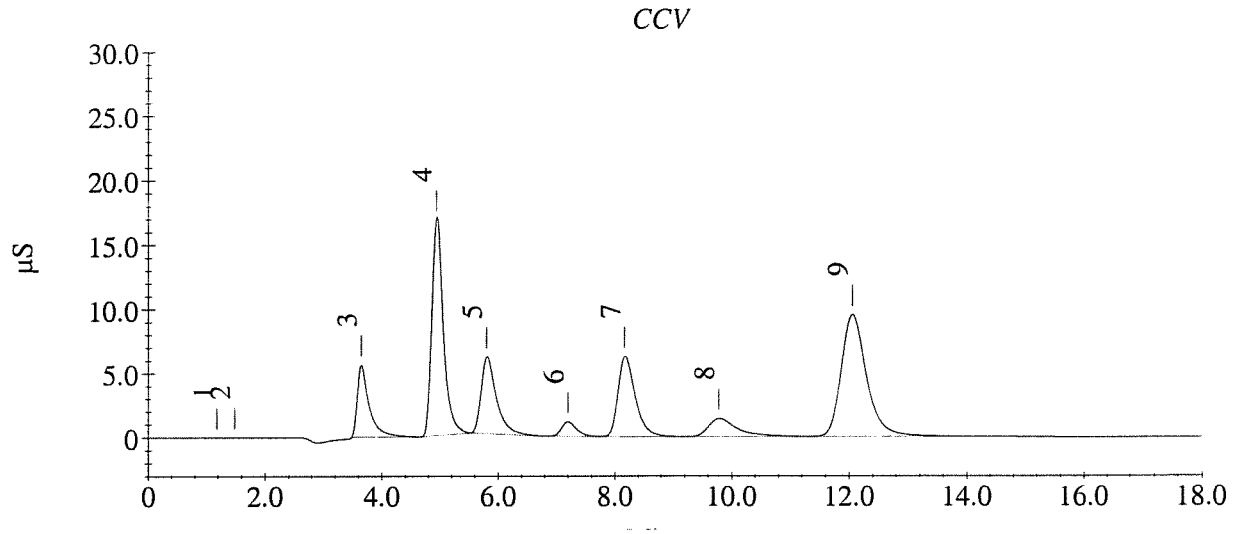
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\102720 -\CCV_039.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 08:07
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.65	3.7808	790517	56231	
4	Chloride	4.93	14.7503	2338811	167659	
5	Nitrite	5.80	3.8006	1081843	59666	
6	Bromide	7.20	3.6345	201680	11232	
7	Nitrate	8.17	3.6374	1290747	62527	
8	O.Phos	9.78	5.7136	481501	14143	+
9	Sulfate	12.05	25.5768	2831716	95013	



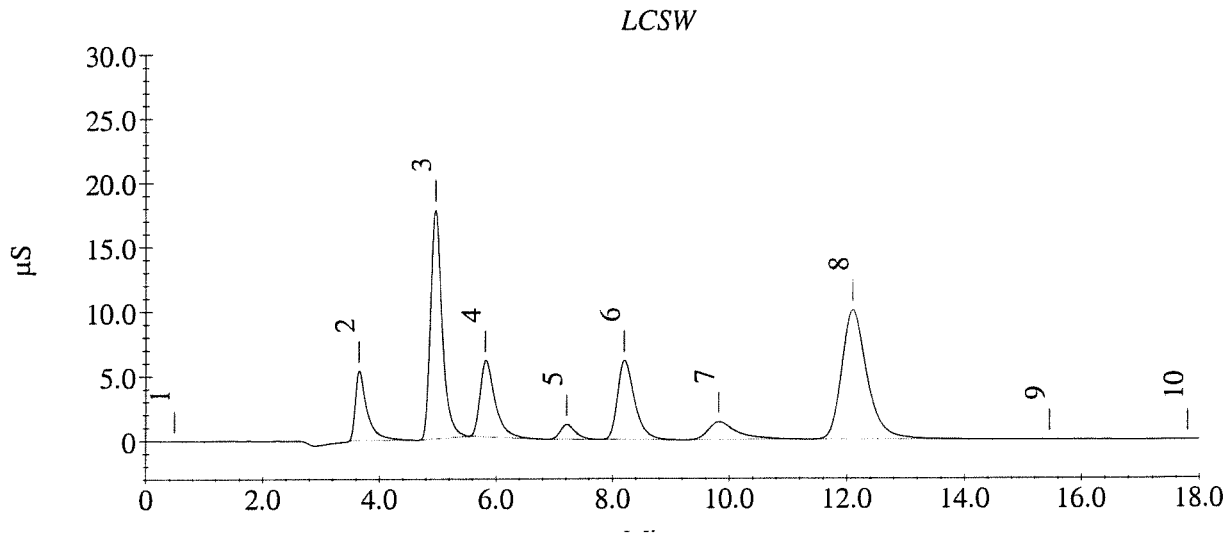
Sample Analysis Report

Sample Name : LCSW
Data File Name : c:\instarch\data\system 2\102720 -\LCSW_040.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 08:27
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.65	3.5942	750280	53653	
3	Chloride	4.97	15.4657	2456144	177092	
4	Nitrite	5.82	3.6936	1051065	58854	
5	Bromide	7.22	3.7284	206944	11460	
6	Nitrate	8.20	3.5515	1259781	61227	
7	O.Phos	9.82	5.6455	475509	13769	+
8	Sulfate	12.10	27.1871	3014041	100037	



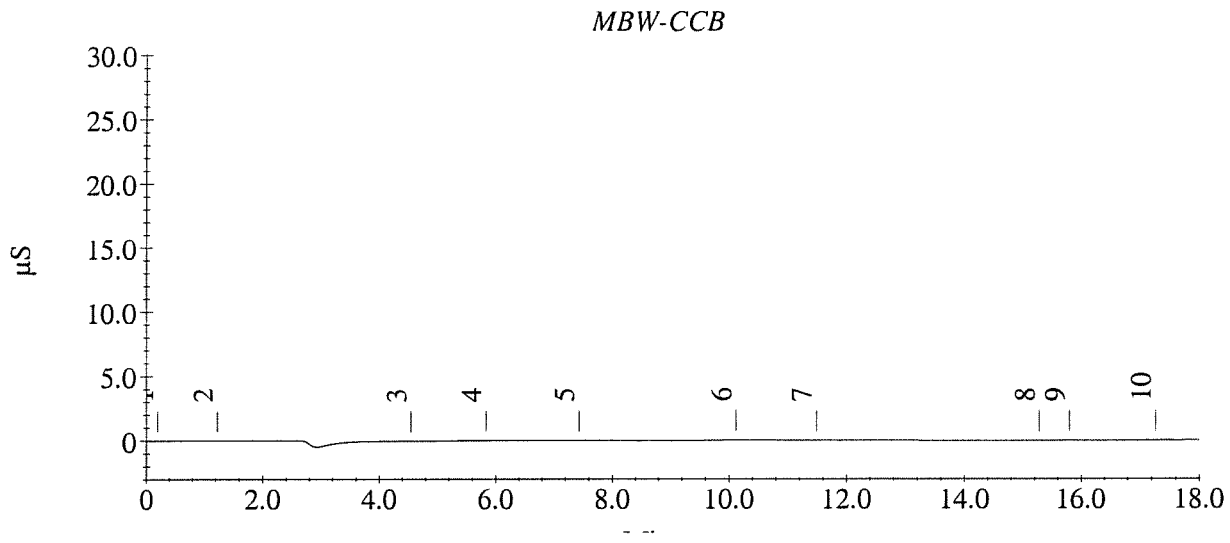
Sample Analysis Report

Sample Name : MBW-CCB
Data File Name : c:\instarch\data\system 2\102720 -\MBW-CCB_041.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 08:48
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Nitrite	5.83	0.0749	9980	207	
5	Bromide	7.43	0.0757	2114	84	
6	O.Phos	10.12	0.2845	3767	172	



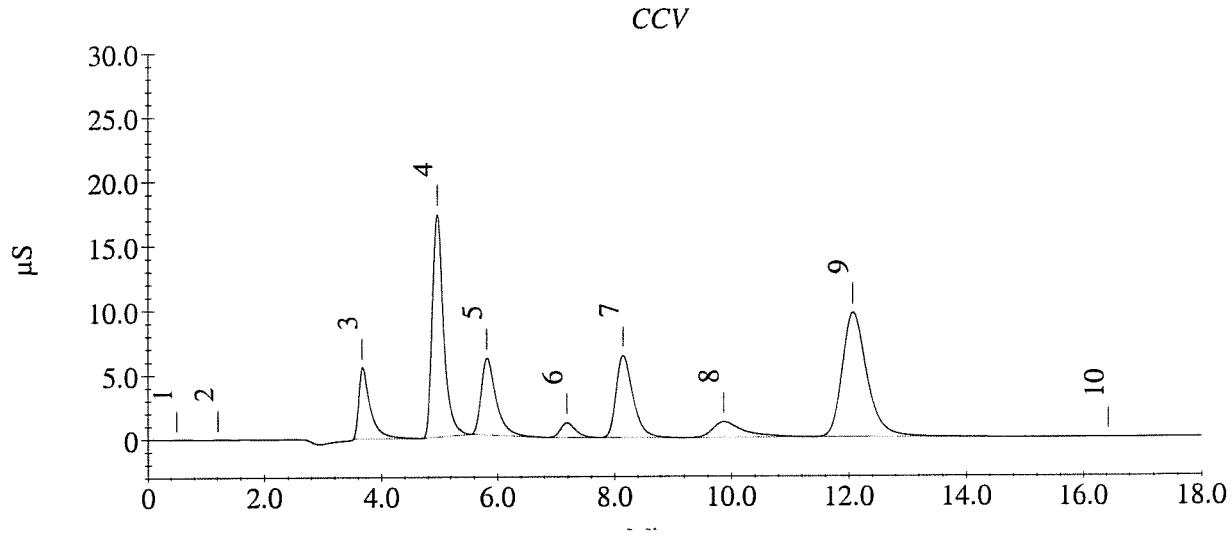
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\102720 -\CCV_052.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 12:43
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.67	3.6520	762753	54873	
4	Chloride	4.97	14.9173	2366208	172449	
5	Nitrite	5.82	3.7156	1057401	59646	
6	Bromide	7.18	3.6761	204009	11463	
7	Nitrate	8.15	3.6402	1291741	63691	
8	O.Phos	9.87	5.3395	448581	12240	+
9	Sulfate	12.07	25.7905	2855912	96450	



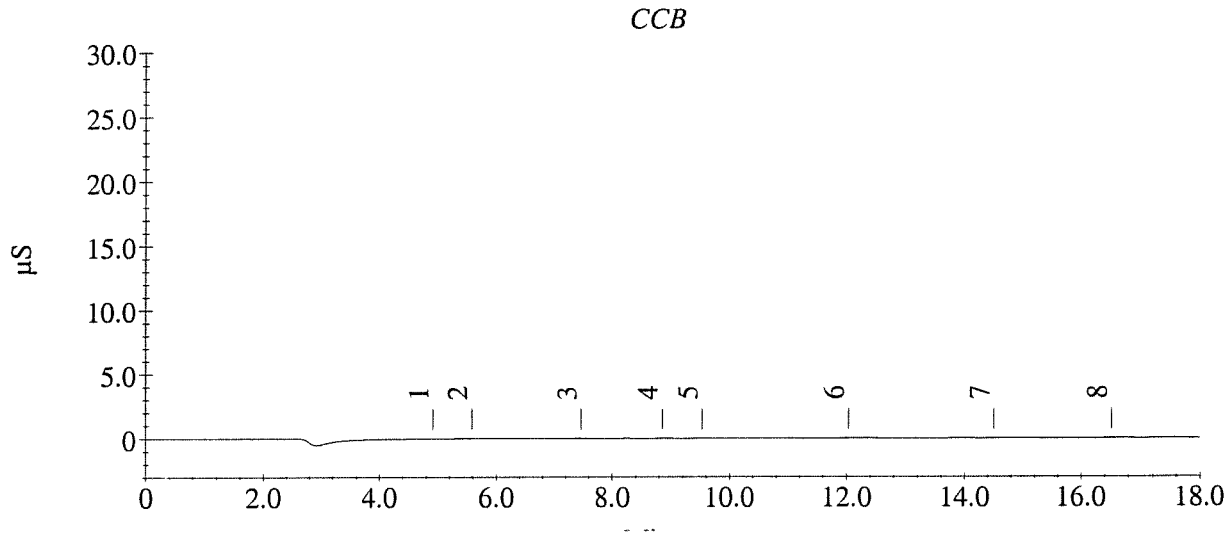
Sample Analysis Report

Sample Name : CCB
Data File Name : c:\instarch\data\system 2\102720 -\CCB_053.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 13:03
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Chloride	4.92	0.4976	1495	155	
2	Nitrite	5.58	0.0605	5815	190	
3	Bromide	7.47	0.0584	1144	73	
4	Nitrate	8.85	0.0574	1071	84	
6	Sulfate	12.03	0.5785	1384	94	



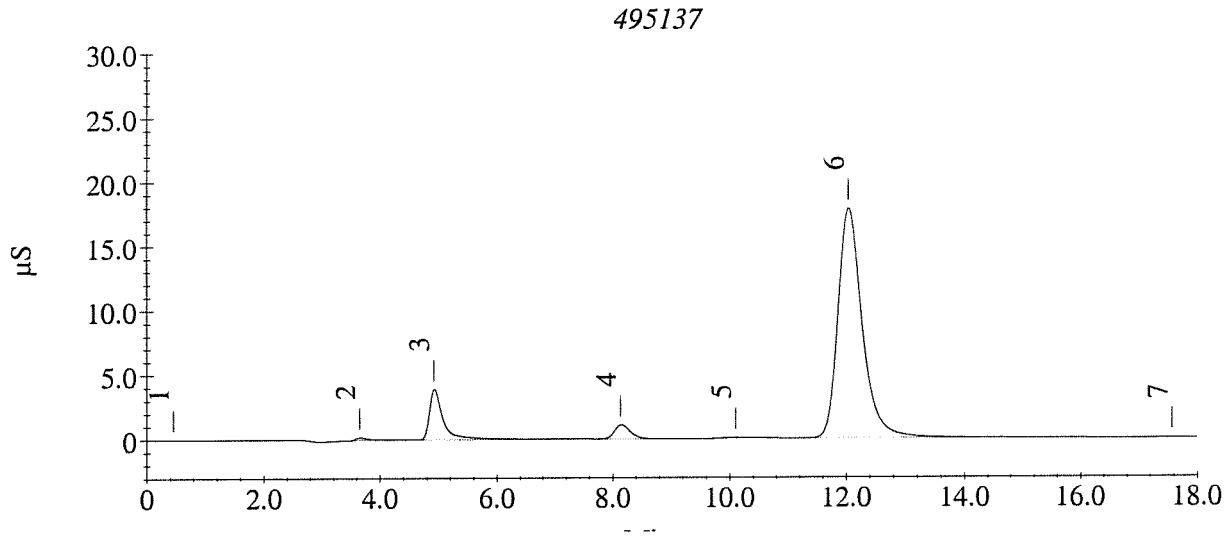
Sample Analysis Report

Sample Name : 495137
Data File Name : c:\instarch\data\system 2\102720 -\495137_055.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 13:44
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.65	0.2127	21084	1685	
3	Chloride	4.92	4.2976	624672	38495	
4	Nitrate	8.13	0.6258	205826	10755	
5	O.Phos	10.10	0.3609	10493	420	
6	Sulfate	12.03	45.8513	5127226	177951	



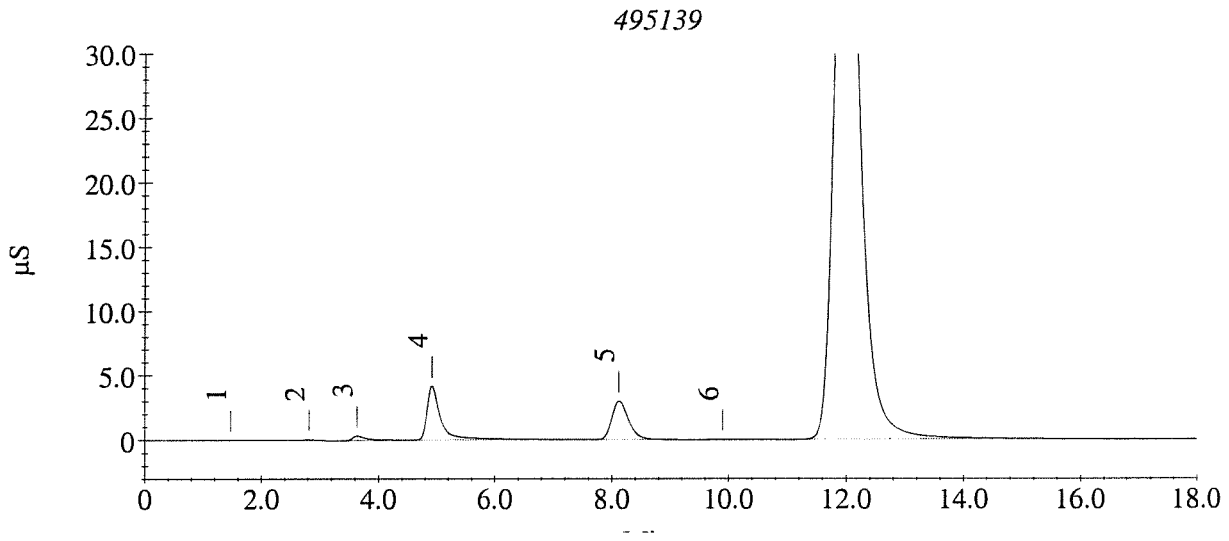
Sample Analysis Report

Sample Name : 495139
Data File Name : c:\instarch\data\system 2\102720 -\495139_056.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 14:04
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.63	0.3821	57613	3548	
4	Chloride	4.92	4.6685	685482	41606	
5	Nitrate	8.12	1.6878	588402	29776	
6	O.Phos	9.90	0.3869	12780	223	
7	Sulfate	11.95	134.9086	15210403	528432	+



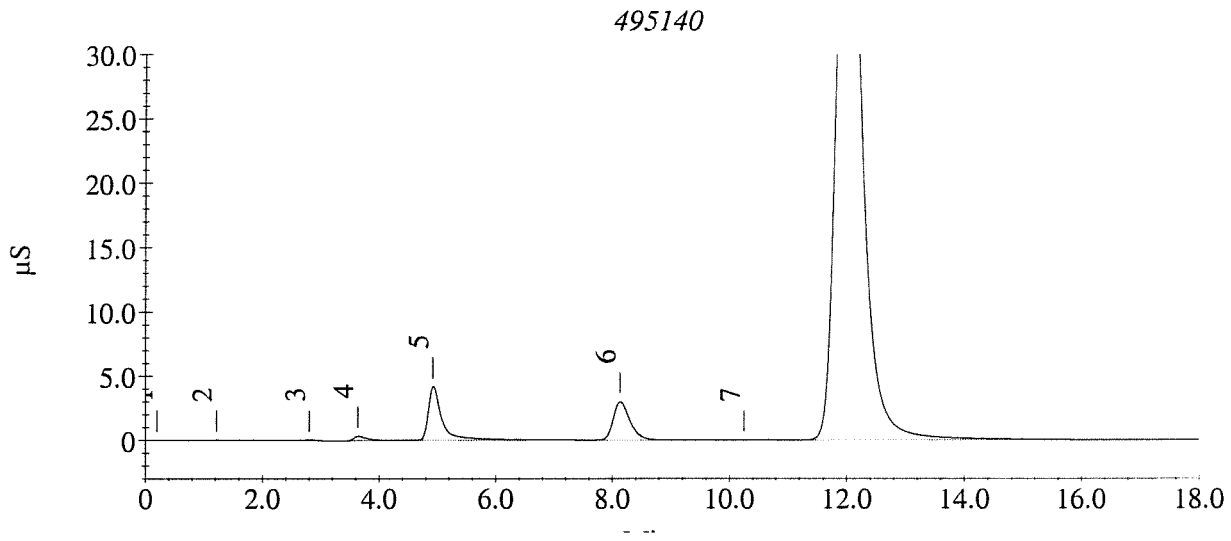
Sample Analysis Report

Sample Name : 495140
Data File Name : c:\instarch\data\system 2\102720 -\495140_057.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 14:24
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.63	0.3560	51979	3434	
5	Chloride	4.92	4.6793	687251	41321	
6	Nitrate	8.13	1.6810	585960	29713	
7	O.Phos	10.25	0.2651	2059	87	
8	Sulfate	11.98	135.6799	15297734	528062	+



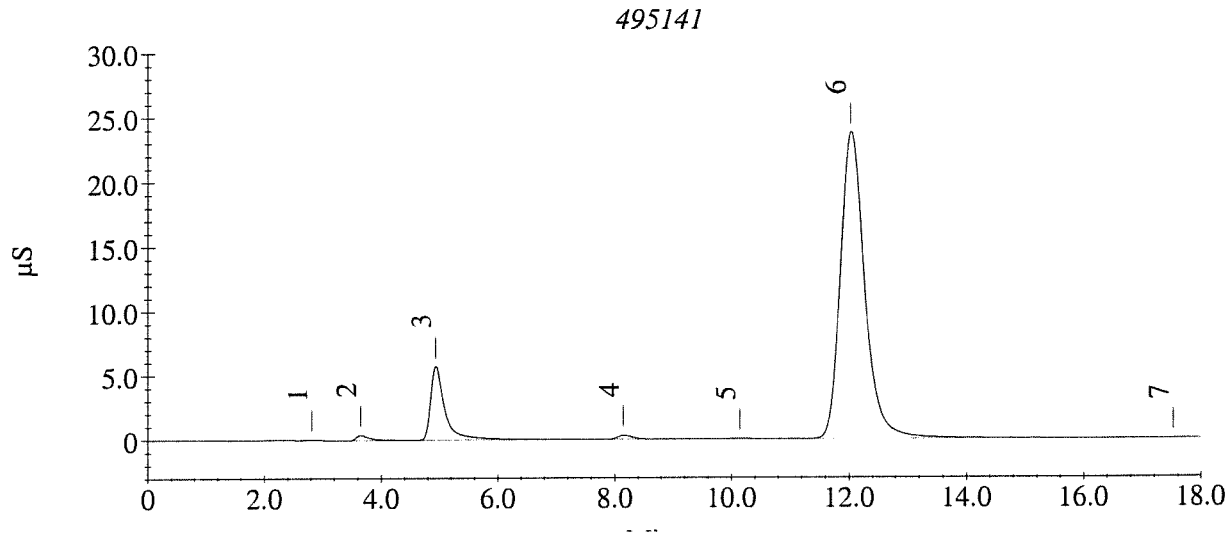
Sample Analysis Report

Sample Name : 495141
Data File Name : c:\instarch\data\system 2\102720 -\495141_058.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 14:44
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.65	0.4039	62321	4032	
3	Chloride	4.93	6.4384	975742	57099	
4	Nitrate	8.15	0.2087	55584	3097	
5	O.Phos	10.15	0.2875	4036	126	
6	Sulfate	12.02	60.5743	6794182	237008	



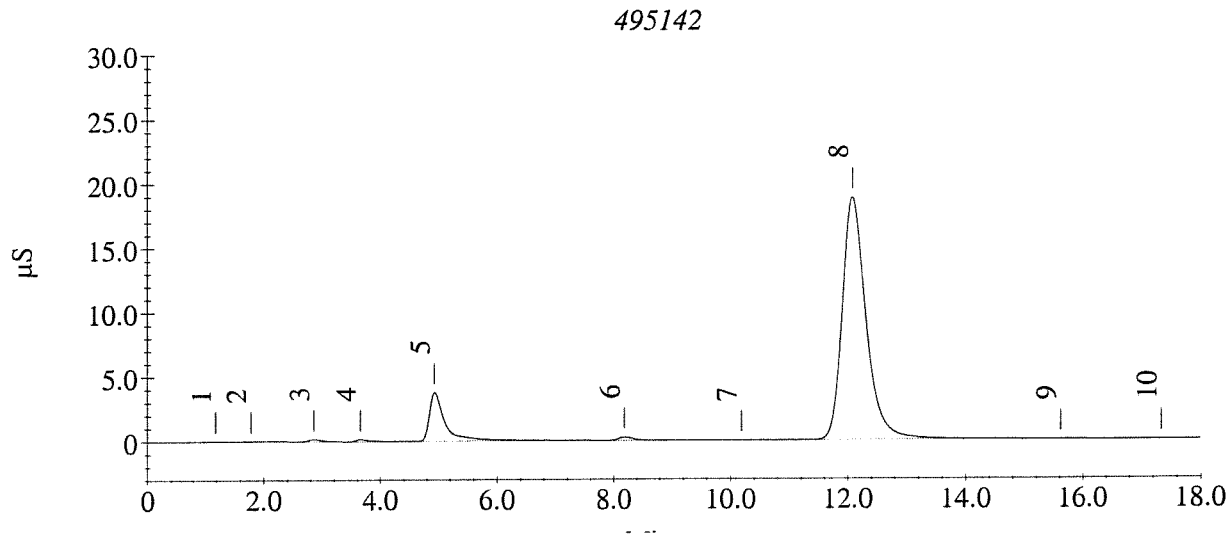
Sample Analysis Report

Sample Name : 495142
Data File Name : c:\instarch\data\system 2\102720 -\495142_059.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 15:05
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.65	0.2315	25133	1582	
5	Chloride	4.93	4.7163	693322	37410	
6	Nitrate	8.18	0.1711	42024	2516	
7	O.Phos	10.18	0.2758	3001	127	
8	Sulfate	12.08	47.5908	5324174	187955	



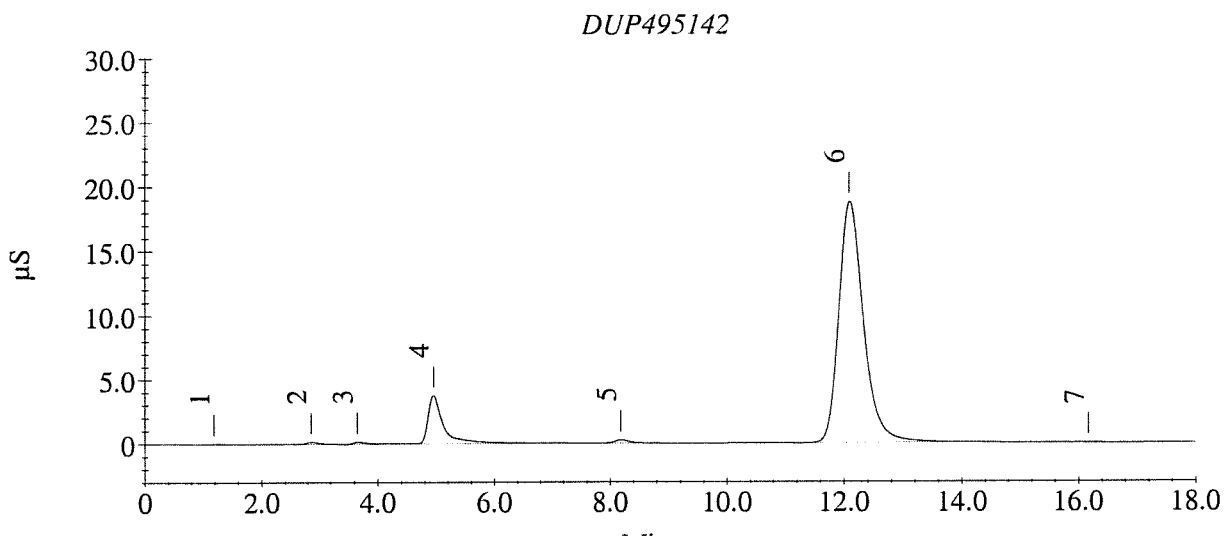
Sample Analysis Report

Sample Name : DUP495142
Data File Name : c:\instarch\data\system 2\102720 -\DUP495142_060.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 15:25
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.65	0.2238	23468	1585	
4	Chloride	4.95	4.7099	692281	37374	
5	Nitrate	8.18	0.1747	43331	2463	
6	Sulfate	12.08	47.9936	5369779	187254	



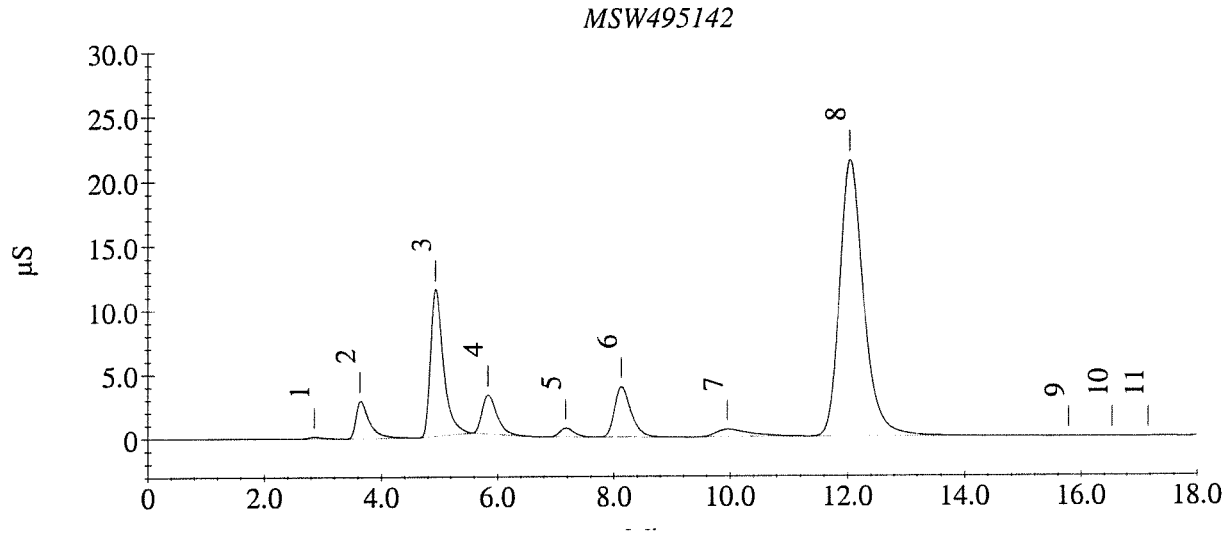
Sample Analysis Report

Sample Name : MSW495142
Data File Name : c:\instarch\data\system 2\102720 -\MSW495142_061.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 15:45
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.63	2.2626	463123	29013	
3	Chloride	4.93	11.4332	1794849	113928	
4	Nitrite	5.83	1.9028	535868	30424	
5	Bromide	7.17	2.1427	118021	6863	
6	Nitrate	8.13	2.1923	770150	39180	
7	O.Phos	9.95	2.9957	242341	5905	
8	Sulfate	12.03	54.7500	6134749	214267	



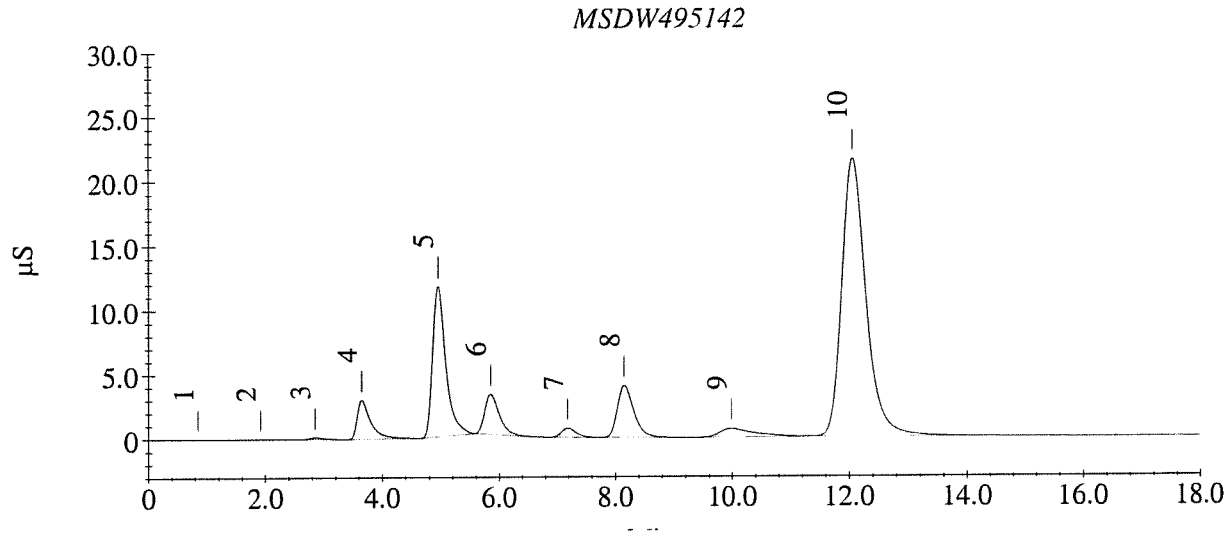
Sample Analysis Report

Sample Name : MSDW495142
Data File Name : c:\instarch\data\system 2\102720 -\MSDW495142_062.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 16:05
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.65	2.3371	479190	30253	
5	Chloride	4.95	11.7215	1842125	116657	
6	Nitrite	5.85	1.9661	554070	31258	
7	Bromide	7.18	2.2277	122788	7100	
8	Nitrate	8.15	2.2613	795015	40356	
9	O.Phos	9.98	3.3840	276509	6703	
10	Sulfate	12.05	54.7715	6137177	215490	



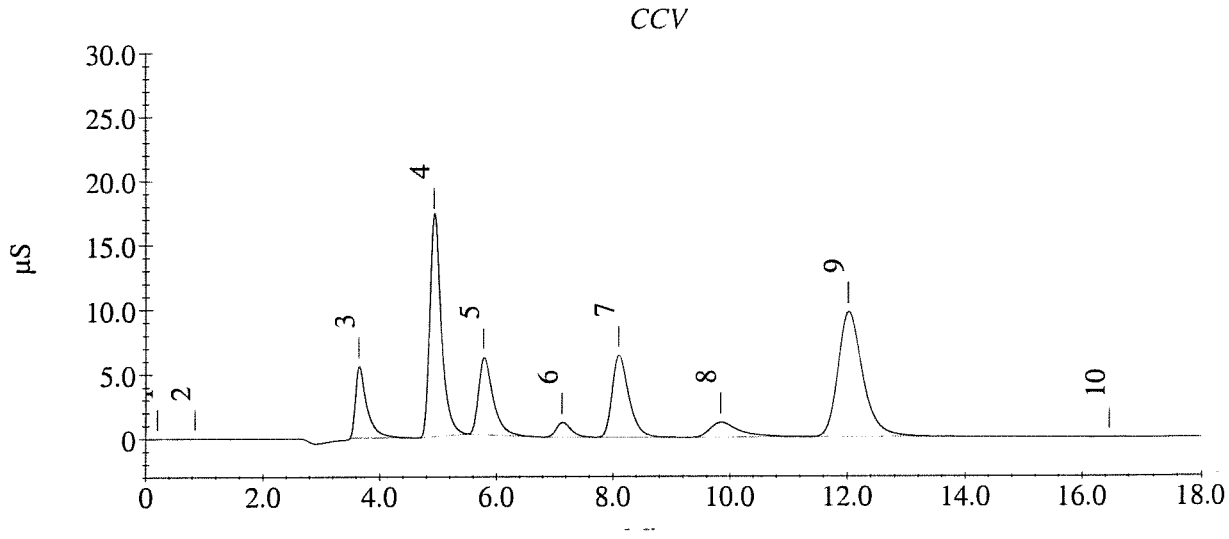
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\102720 -\CCV_064.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 16:46
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.65	3.6134	754428	55215	
4	Chloride	4.93	14.8635	2357389	170181	
5	Nitrite	5.78	3.6732	1045206	59592	
6	Bromide	7.13	3.6488	202480	11406	
7	Nitrate	8.10	3.6216	1285035	63520	
8	O.Phos	9.83	4.9524	414521	11730	
9	Sulfate	12.02	25.6146	2836000	96641	



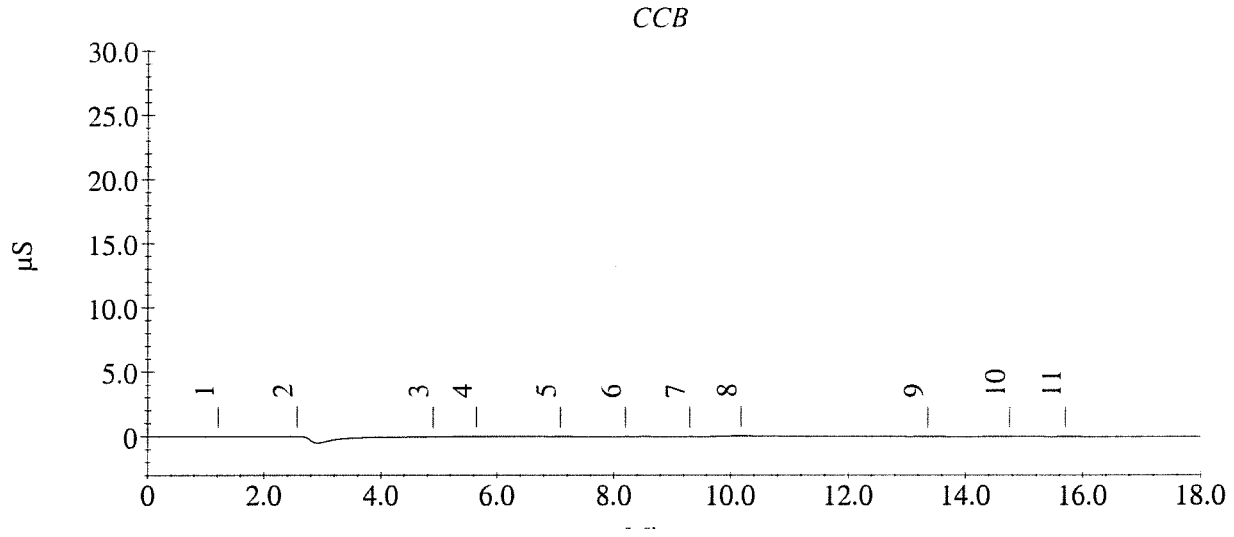
Sample Analysis Report

Sample Name : CCB
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\102720 -\CCB_065.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 17:06
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	4.90	0.5267	6266	92	
4	Nitrite	5.65	0.0721	9169	227	
5	Bromide	7.08	0.0705	1819	111	
8	O.Phos	10.18	0.3978	13741	377	



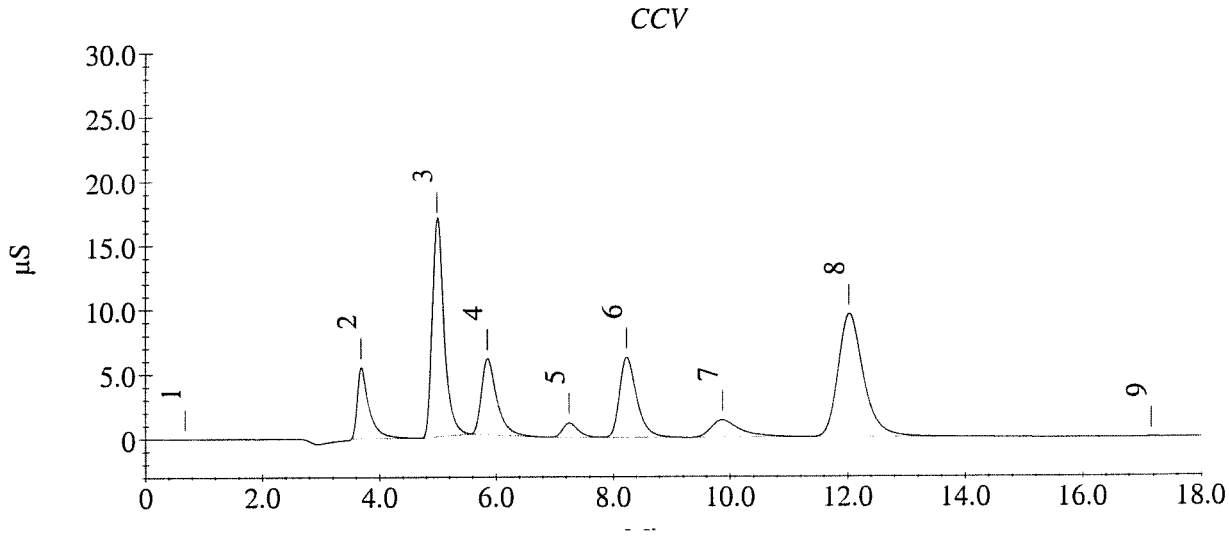
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\102720 -\CCV_076.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 20:49
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.68	3.6521	762764	54678	
3	Chloride	4.98	14.8941	2362397	167446	
4	Nitrite	5.85	3.7104	1055912	58633	
5	Bromide	7.25	3.6313	201501	11065	
6	Nitrate	8.23	3.6522	1296055	61892	
7	O.Phos	9.87	5.5697	468835	13456	+
8	Sulfate	12.02	25.9884	2878322	95032	



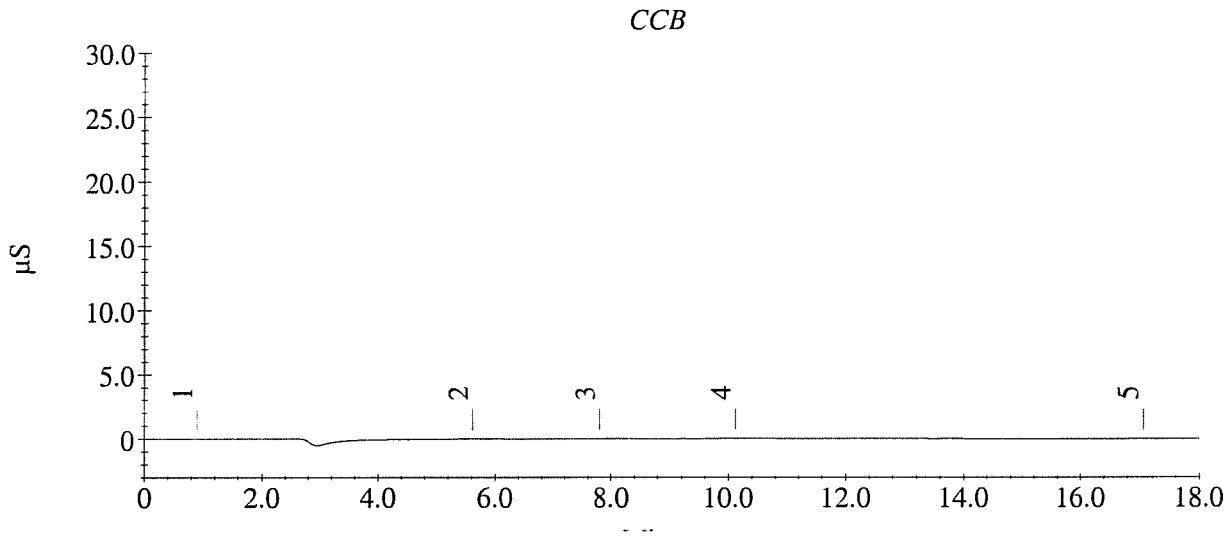
Sample Analysis Report

Sample Name : CCB
Data File Name : c:\instarch\data\system 2\102720 -\CCB_077.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 21:10
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Nitrite	5.62	0.0681	8005	270	
4	O.Phos	10.12	0.3186	6769	251	



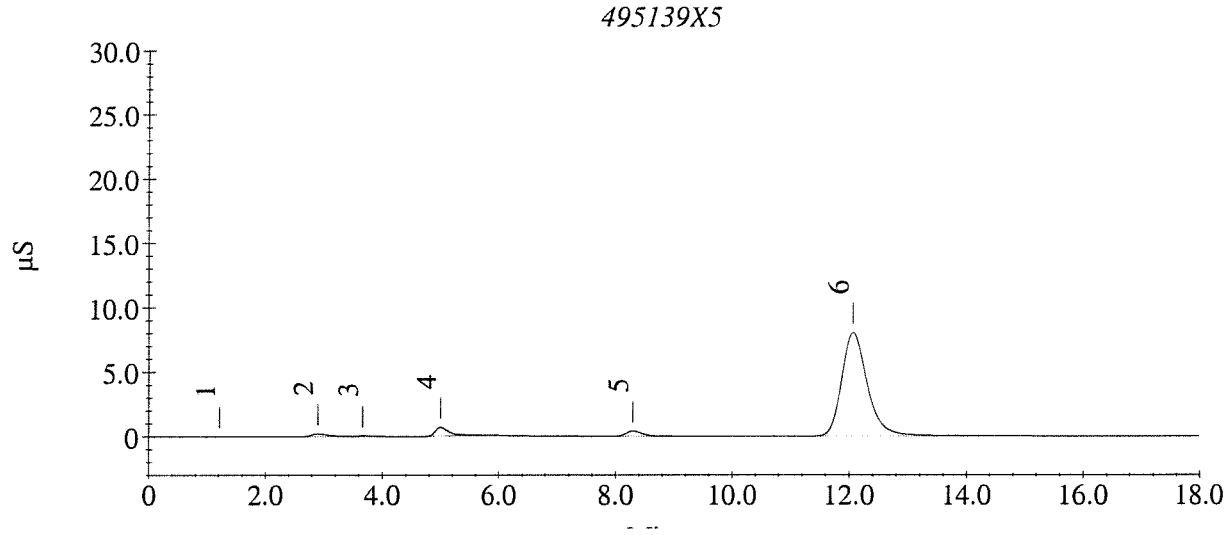
Sample Analysis Report

Sample Name : 495139X5
Data File Name : c:\instarch\data\system 2\102720 -\495139X5_080.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 22:10
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.67	0.1546	8552	583	
4	Chloride	5.00	1.2239	120604	6875	
5	Nitrate	8.30	0.2693	77407	4027	
6	Sulfate	12.07	22.0278	2429894	80386	



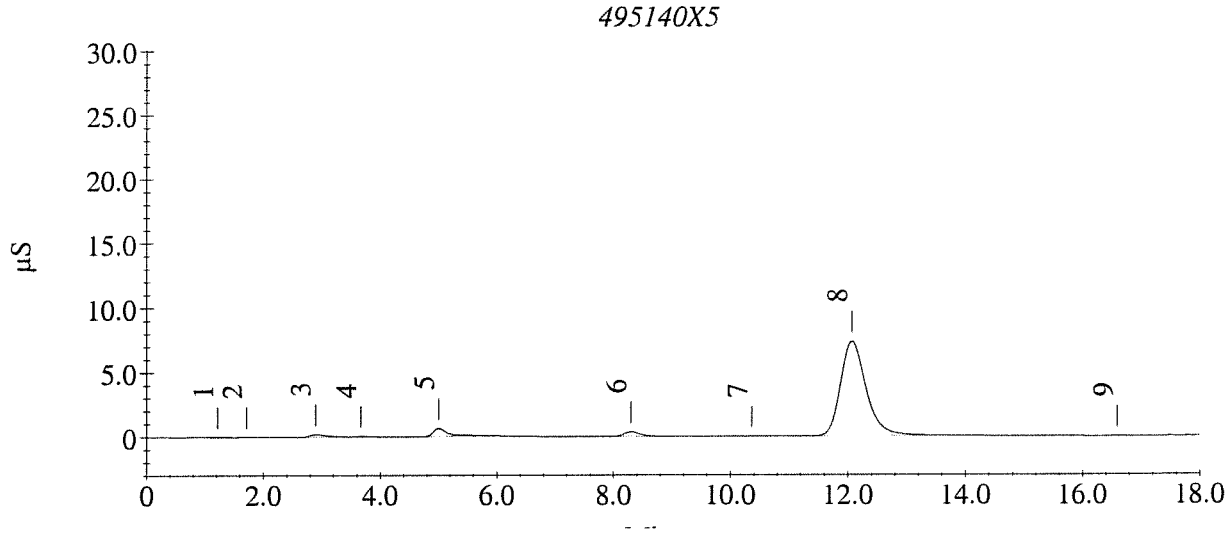
Sample Analysis Report

Sample Name : 495140X5
Data File Name : c:\instarch\data\system 2\102720 -\495140X5_081.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 22:30
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.67	0.1501	7575	482	
5	Chloride	5.00	1.1876	114644	6347	
6	Nitrate	8.30	0.2379	66084	3577	
8	Sulfate	12.07	19.9310	2192493	73277	



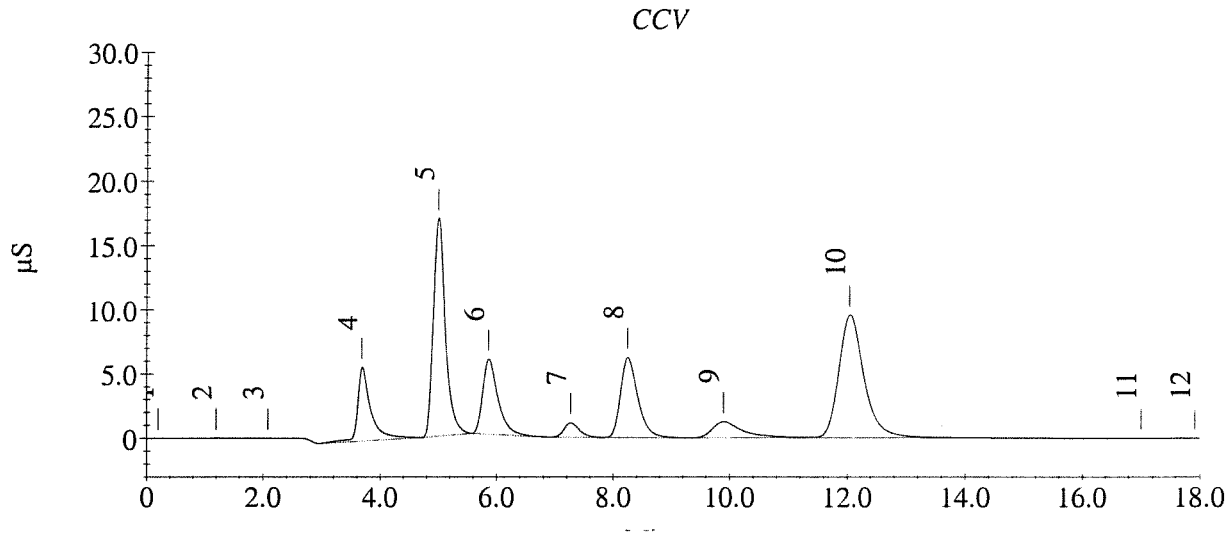
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\102720 -\CCV_083.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 23:11
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.68	4.3158	905889	56823	
5	Chloride	5.00	15.1141	2398476	168906	
6	Nitrite	5.87	3.7082	1055279	58395	
7	Bromide	7.27	3.7006	205387	11162	
8	Nitrate	8.25	3.6403	1291785	62033	
9	O.Phos	9.90	5.2873	443990	12467	+
10	Sulfate	12.03	25.9115	2869614	95239	



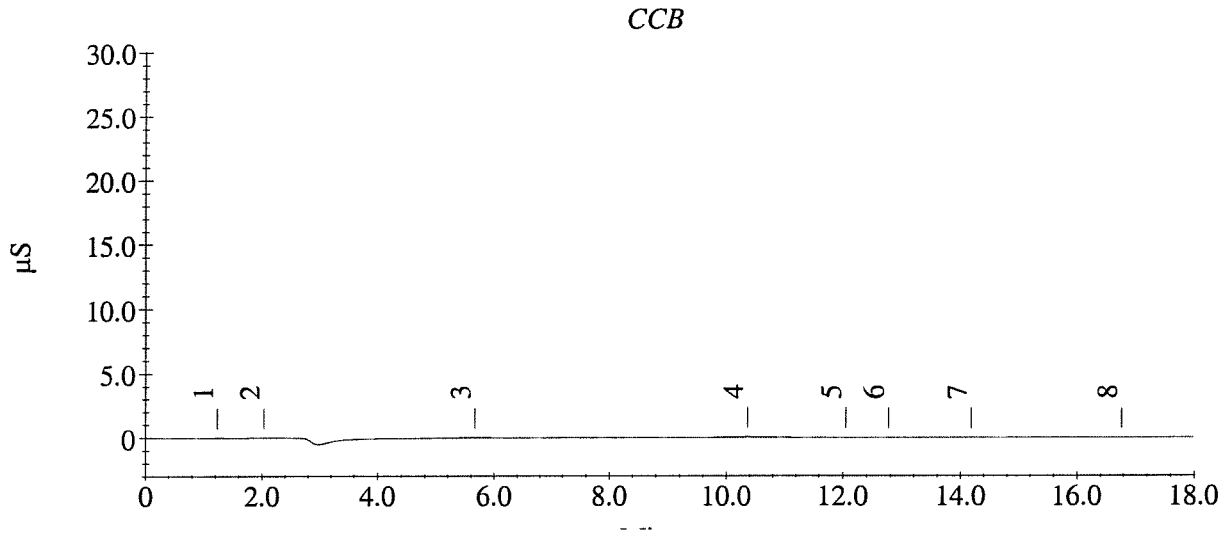
Sample Analysis Report

Sample Name : CCB
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\102720 -\CCB_084.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/28/20 23:31
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Nitrite	5.67	0.0864	13265	256	
4	O.Phos	10.37	0.5927	30890	573	
5	Sulfate	12.05	0.5789	1422	92	



Schedule File: C:\INSTARCH\Sequences\System 2\102920 -.SCH

Line	Sample	Sample Type	Level	Method	Data File
49	CCV	Sample		ic3033.met	ccv_049.dxd
50	CCB	Sample		ic3033.met	ccb_050.dxd
51	496502	Sample		ic3033.met	496502_051.dxd
52	496503	Sample		ic3033.met	496503_052.dxd
53	496504	Sample		ic3033.met	496504_053.dxd
54	496507	Sample		ic3033.met	496507_054.dxd
55	496508	Sample		ic3033.met	496508_055.dxd
56	496500	Sample		ic3033.met	496500_056.dxd
57	DUP496500	Sample		ic3033.met	dup496500_057.dxd
58	MSW496500	Sample		ic3033.met	msw496500_058.dxd
59	MSDW496500	Sample		ic3033.met	msdw496500_059.dxd
60	496501	Sample		ic3033.met	496501_060.dxd
61	CCV	Sample		ic3033.met	ccv_061.dxd
62	LCSW	Sample		ic3033.met	lcsw_062.dxd
63	MBW-CCB	Sample		ic3033.met	mbw-ccb_063.dxd

Schedule File: C:\INSTARCH\Sequences\System 2\102920 -.SCH

Line	Sample	Sample Type	Level	Method	Data File
74	CCV	Sample		ic3033.met	ccv_074.dxd
75	LCSW	Sample		ic3033.met	lcsw_075.dxd
76	MBW-CCB	Sample		ic3033.met	mbw-ccb_076.dxd
84	496542	Sample		ic3033.met	496542_084.dxd
85	496543	Sample		ic3033.met	496543_085.dxd
86	DUP496543	Sample		ic3033.met	dup496543_086.dxd
87	CCV	Sample		ic3033.met	ccv_087.dxd
88	CCB	Sample		ic3033.met	ccb_088.dxd
89	MSW496543	Sample		ic3033.met	msw496543_089.dxd
90	MSDW496543	Sample		ic3033.met	msdw496543_090.dxd
91	CCV	Sample		ic3033.met	ccv_091.dxd
92	CCB	Sample		ic3033.met	ccb_092.dxd
93	CCV	Sample		ic3033.met	ccv_093.dxd
94	CCB	Sample		ic3033.met	ccb_094.dxd
95	496500X5	Sample		ic3033.met	496500x5_095.dxd
96	DUP496500X5	Sample		ic3033.met	dup496500x5_096.dxd
97	MSW496500X5	Sample		ic3033.met	msw496500x5_097.dxd
98	MSDW496500X5	Sample		ic3033.met	msdw496500x5_098.dxd
99	496501X5	Sample		ic3033.met	496501x5_099.dxd
100	CCV	Sample		ic3033.met	ccv_100.dxd
101	CCB	Sample		ic3033.met	ccb_101.dxd
102	CCV	Sample		ic3033.met	ccv_102.dxd
104	MBW-CCB	Sample		ic3033.met	mbw-ccb_104.dxd
105	MSW496543X5	Sample		ic3033.met	msw496543x5_105.dxd
106	MSDW496543X5	Sample		ic3033.met	msdw496543x5_106.dxd
110	CCV	Sample		ic3033.met	ccv_110.dxd
111	CCB	Sample		ic3033.met	ccb_111.dxd

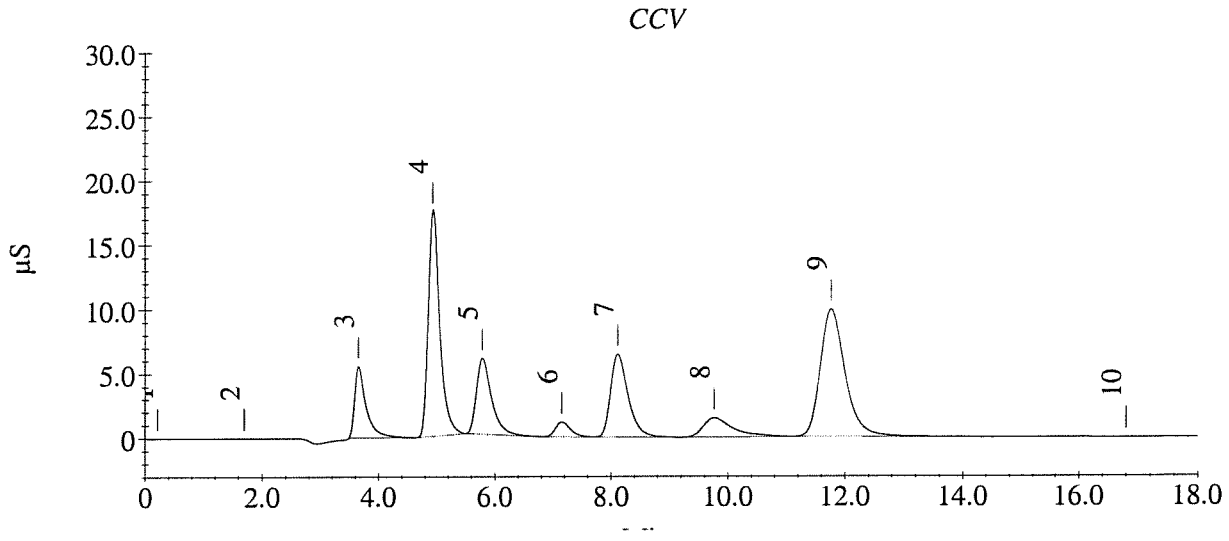
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\102920 -\CCV_049.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 09:46
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.65	3.6970	772449	55354	
4	Chloride	4.93	15.0746	2392000	174043	
5	Nitrite	5.78	3.6983	1052420	58903	
6	Bromide	7.15	3.7354	207335	11426	
7	Nitrate	8.12	3.7492	1331021	64135	
8	O.Phos	9.77	6.1964	523985	14854	+
9	Sulfate	11.77	26.2319	2905888	98865	



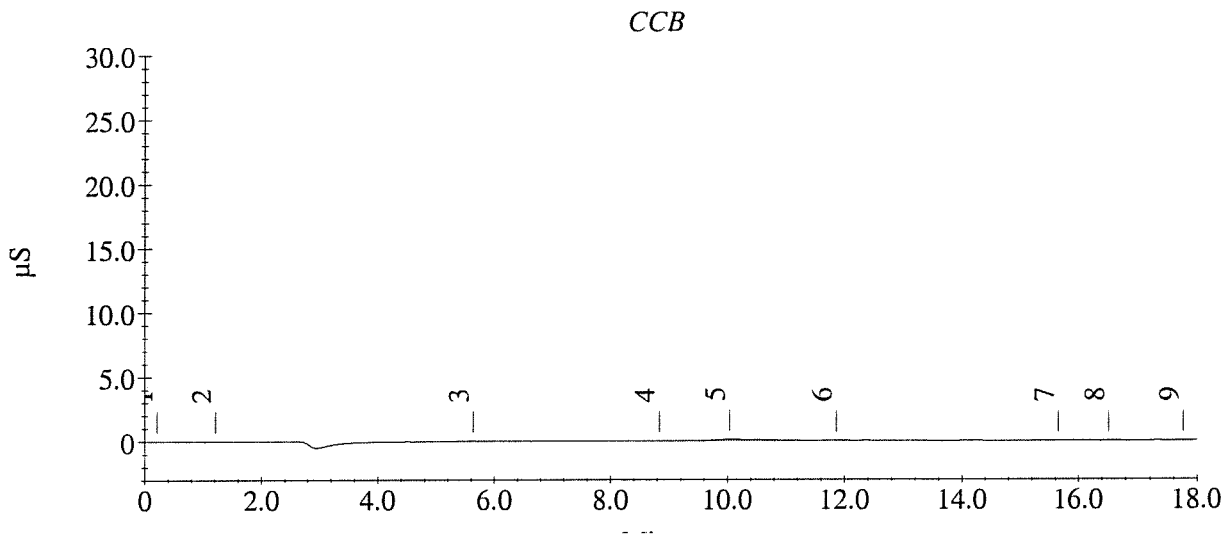
Sample Analysis Report

Sample Name : CCB
Data File Name : c:\instarch\data\system 2\102920 -\CCB_050.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 10:06
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Nitrite	5.63	0.0508	3028	114	
4	Nitrate	8.83	0.0599	1969	86	
5	O.Phos	10.03	0.8453	53119	930	
6	Sulfate	11.87	0.5852	2143	108	



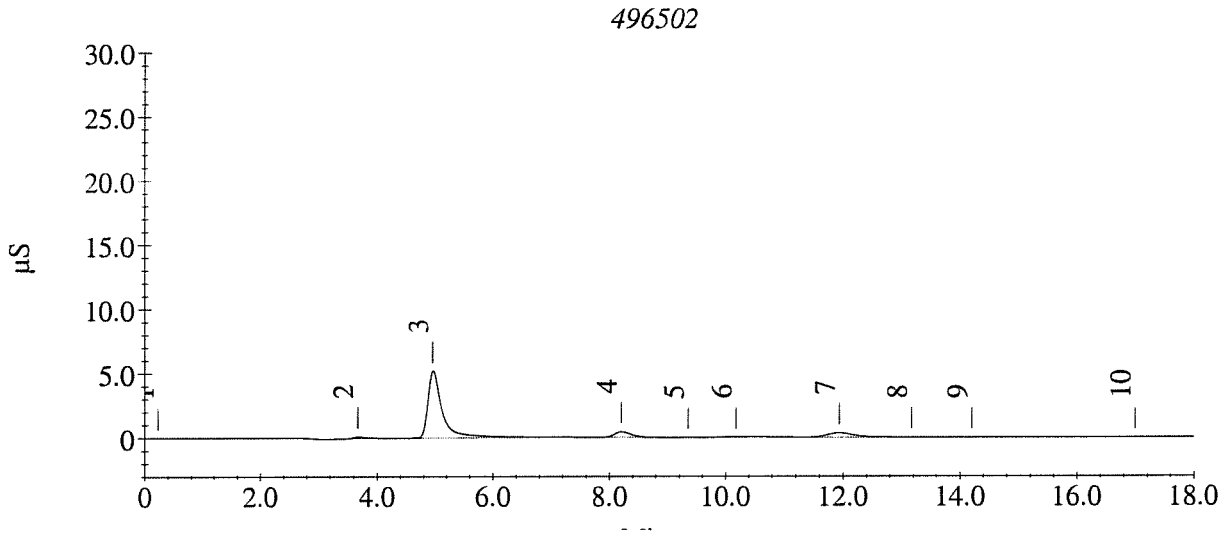
Sample Analysis Report

Sample Name : 496502
Data File Name : c:\instarch\data\system 2\102920 -\496502_051.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 10:57
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.67	0.1792	13865	1053	
3	Chloride	4.95	6.0421	910740	51680	
4	Nitrate	8.20	0.2969	87332	4380	
6	O.Phos	10.18	0.2950	4693	176	
7	Sulfate	11.93	1.5204	108026	3375	



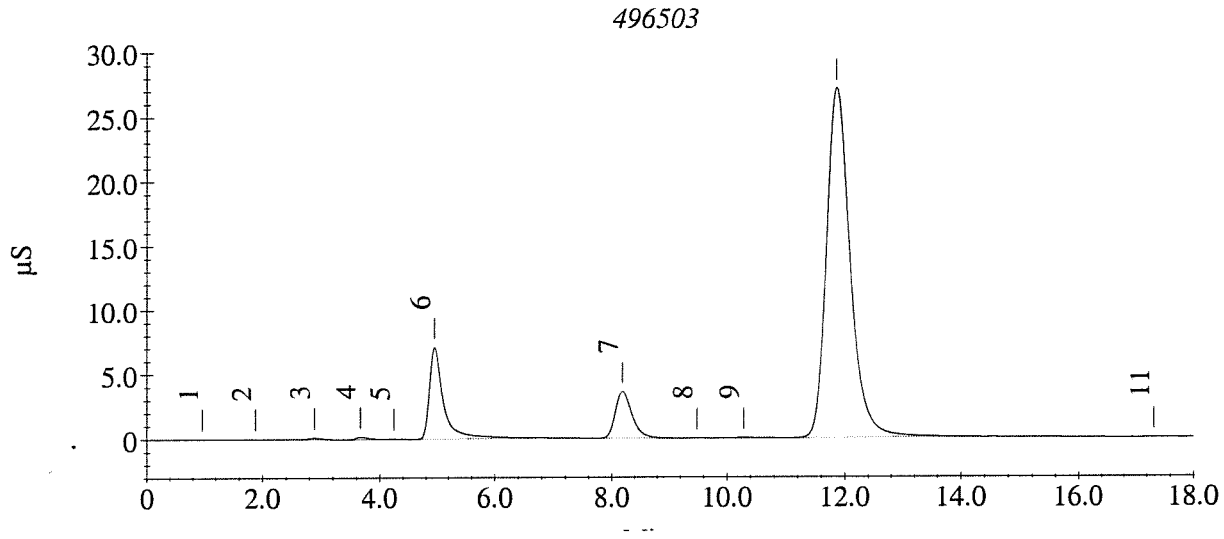
Sample Analysis Report

Sample Name : 496503
Data File Name : c:\instarch\data\system 2\102920 -\496503_052.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 11:17
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.67	0.2386	26671	1806	
6	Chloride	4.95	7.9760	1227883	70579	
7	Nitrate	8.18	2.0870	732197	36004	
9	O.Phos	10.28	0.3665	10990	305	
10	Sulfate	11.85	68.3944	7679588	271043	



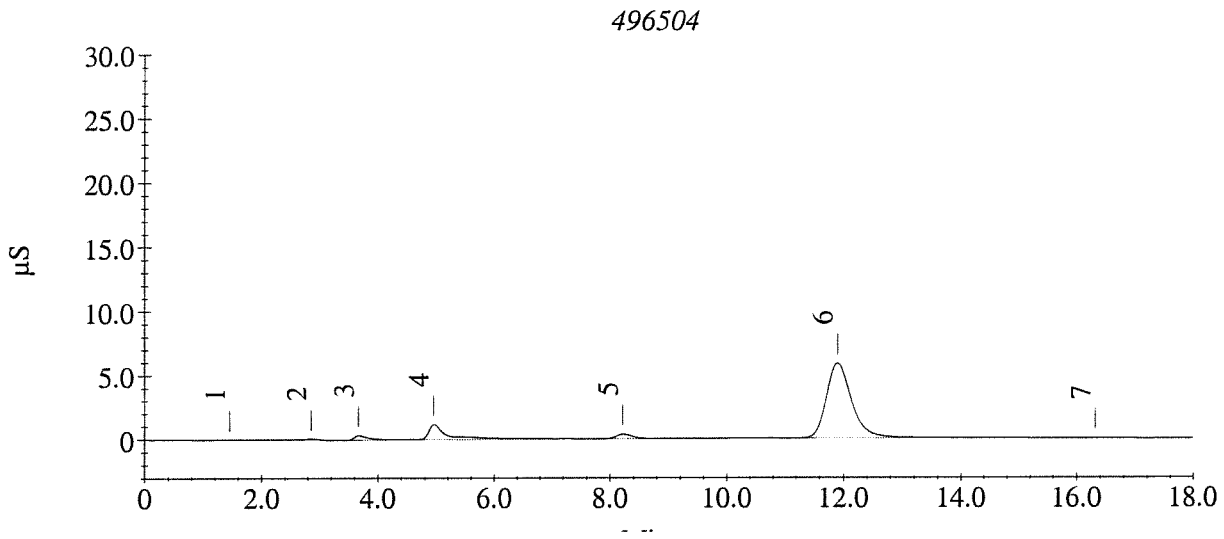
Sample Analysis Report

Sample Name : 496504
Data File Name : c:\instarch\data\system 2\102920 -\496504_053.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 11:38
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.67	0.3826	57723	3500	
4	Chloride	4.95	2.0899	262612	11432	
5	Nitrate	8.22	0.2397	66756	3486	
6	Sulfate	11.90	15.6500	1707799	58339	



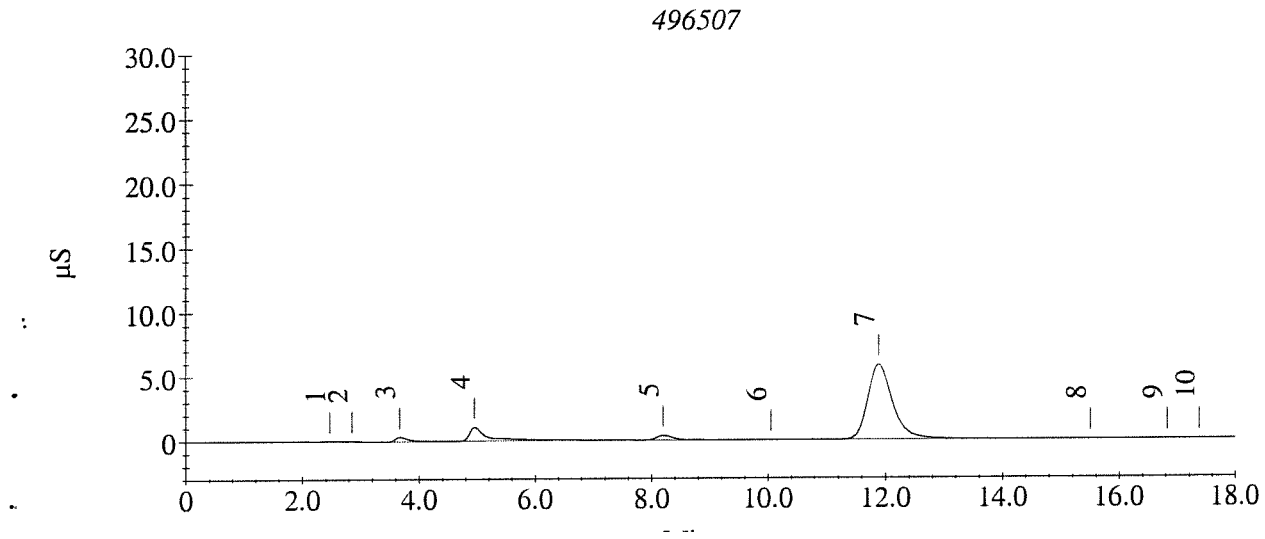
Sample Analysis Report

Sample Name : 496507
Data File Name : c:\instarch\data\system 2\102920 -\496507_054.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 11:58
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.67	0.3730	55652	3443	
4	Chloride	4.95	1.8727	226997	10573	
5	Nitrate	8.20	0.2435	68120	3477	
6	O.Phos	10.05	0.2626	1847	88	
7	Sulfate	11.88	15.6284	1705351	58064	



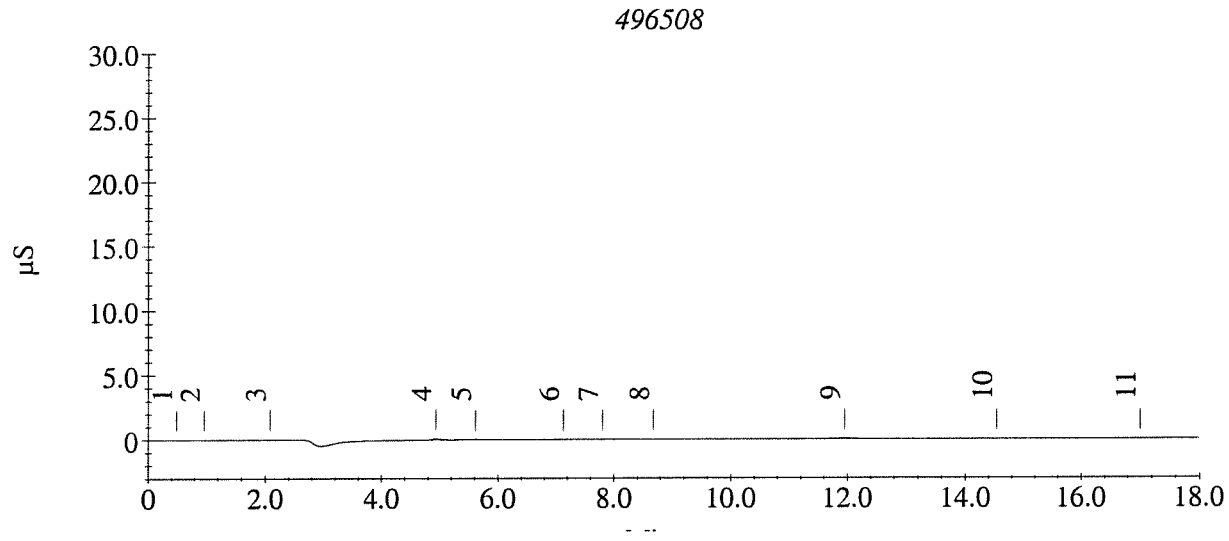
Sample Analysis Report

Sample Name : 496508
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\102920 -\496508_055.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 12:18
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Chloride	4.93	0.5569	11220	827	
5	Nitrite	5.62	0.0548	4187	200	
6	Bromide	7.13	0.0586	1155	83	
7	Nitrate	7.80	0.0578	1221	87	
9	Sulfate	11.95	0.7138	16694	435	



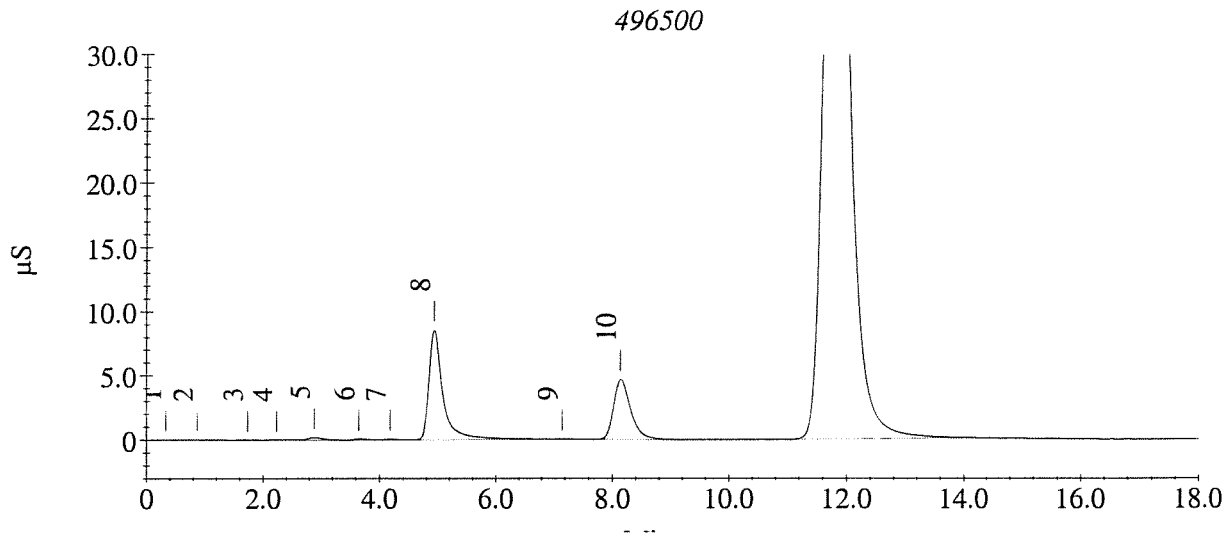
Sample Analysis Report

Sample Name : 496500
Data File Name : c:\instarch\data\system 2\102920 -\496500_056.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 12:38
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
6	Fluoride	3.65	0.1674	11316	872	
8	Chloride	4.93	9.3121	1447000	85195	
9	Bromide	7.15	0.0745	2046	115	
10	Nitrate	8.13	2.6830	946916	46369	
11	Sulfate	11.77	158.0196	17827067	617009	+



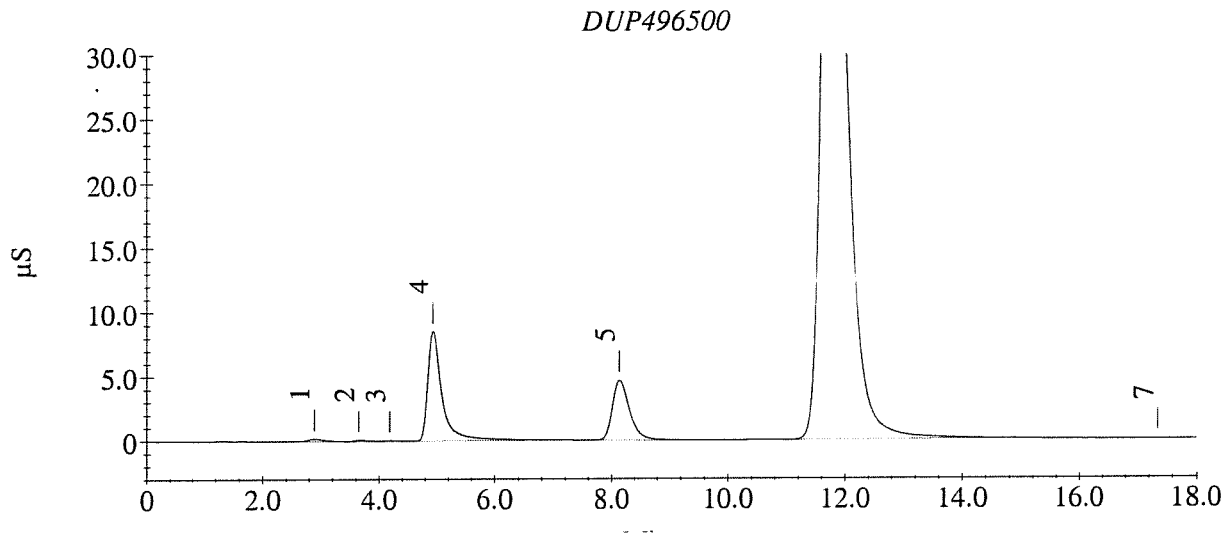
Sample Analysis Report

Sample Name : DUP496500
Data File Name : c:\instarch\data\system 2\102920 -\DUP496500_057.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 12:58
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.65	0.1757	13109	916	
4	Chloride	4.93	9.3377	1451193	84855	
5	Nitrate	8.13	2.7053	954938	46423	
6	Sulfate	11.77	158.0757	17833418	618173	+



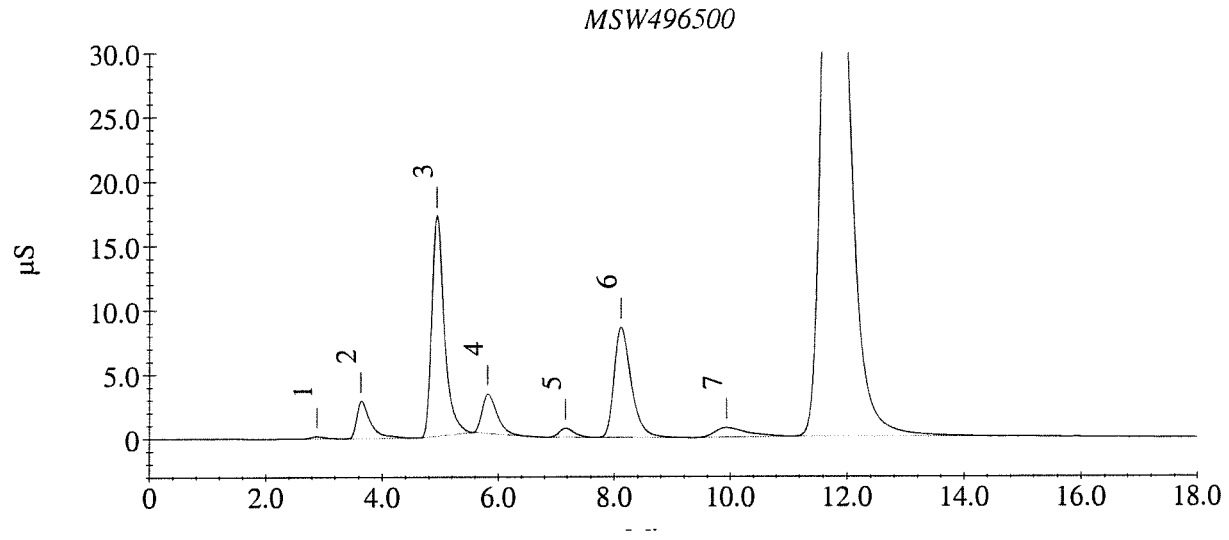
Sample Analysis Report

Sample Name : MSW496500
Data File Name : c:\instarch\data\system 2\102920 -\MSW496500_058.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 13:19
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.63	2.3209	475700	28856	
3	Chloride	4.93	16.3547	2601922	170876	
4	Nitrite	5.82	1.9632	553245	30667	
5	Bromide	7.17	2.2805	125749	6983	
6	Nitrate	8.12	4.9010	1745921	85908	
7	O.Phos	9.93	3.5639	292339	7470	
8	Sulfate	11.73	158.8737	17923769	616530	+



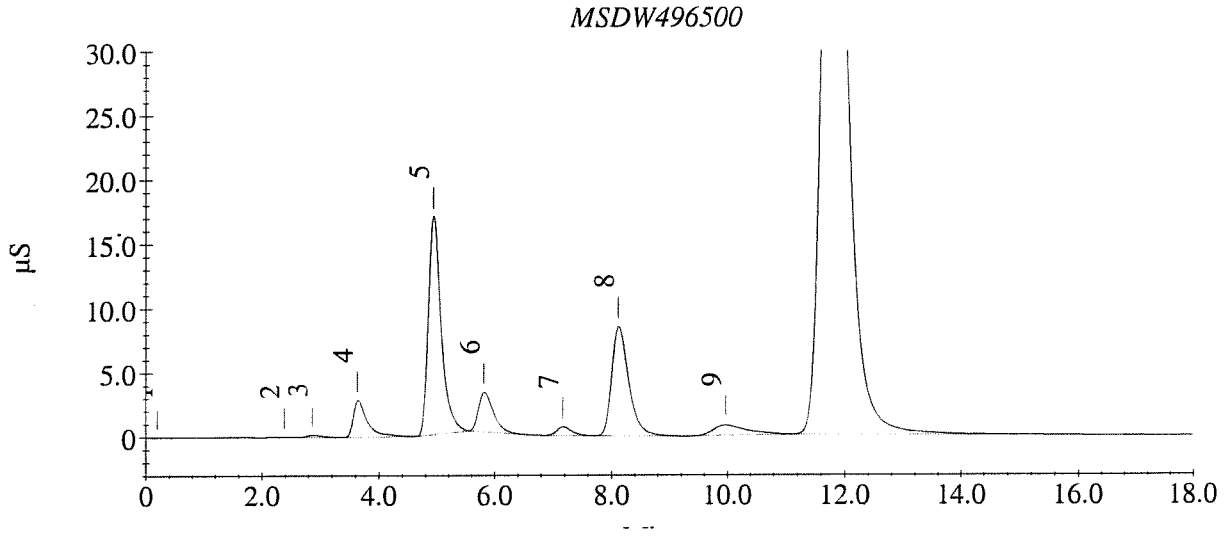
Sample Analysis Report

Sample Name : MSDW496500
Data File Name : c:\instarch\data\system 2\102920 -\MSDW496500_059.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 13:39
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.63	2.3080	472916	28382	
5	Chloride	4.93	16.3738	2605053	168814	
6	Nitrite	5.82	1.9759	556894	30710	
7	Bromide	7.17	2.2319	123022	6836	
8	Nitrate	8.12	4.8662	1733381	84978	
9	O.Phos	9.97	3.9301	324559	8031	
10	Sulfate	11.77	158.2334	17851266	616299	+



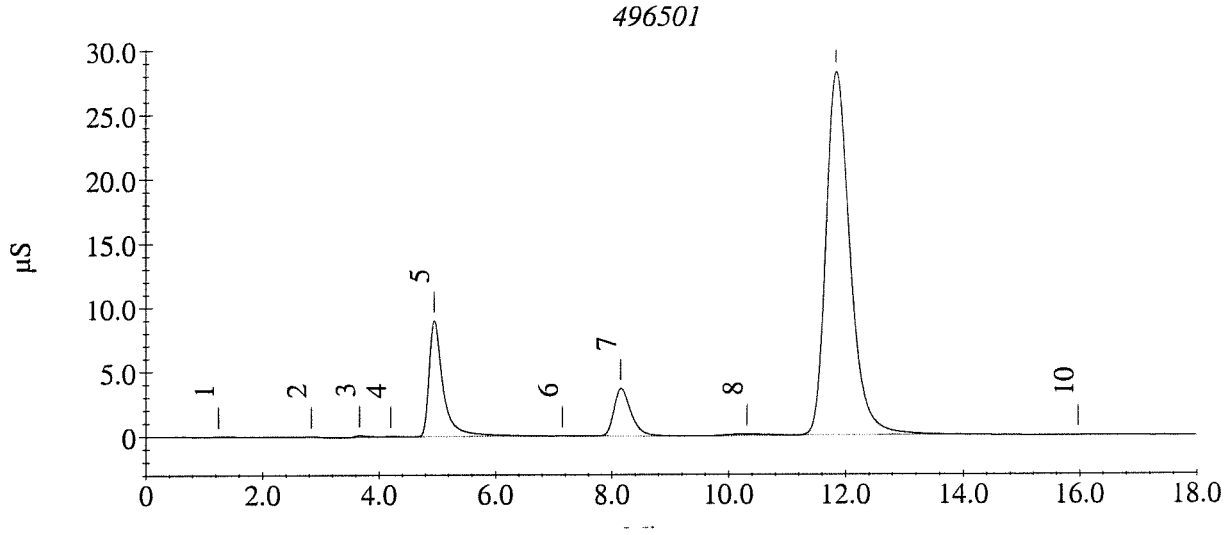
Sample Analysis Report

Sample Name : 496501
Data File Name : c:\instarch\data\system 2\102920 -\496501_060.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 13:59
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.67	0.2002	18397	1302	
5	Chloride	4.95	9.6823	1507705	89597	
6	Bromide	7.15	0.0877	2784	162	
7	Nitrate	8.15	2.1172	743103	36544	
8	O.Phos	10.32	0.8405	52694	1074	
9	Sulfate	11.83	71.6183	8044597	281572	+



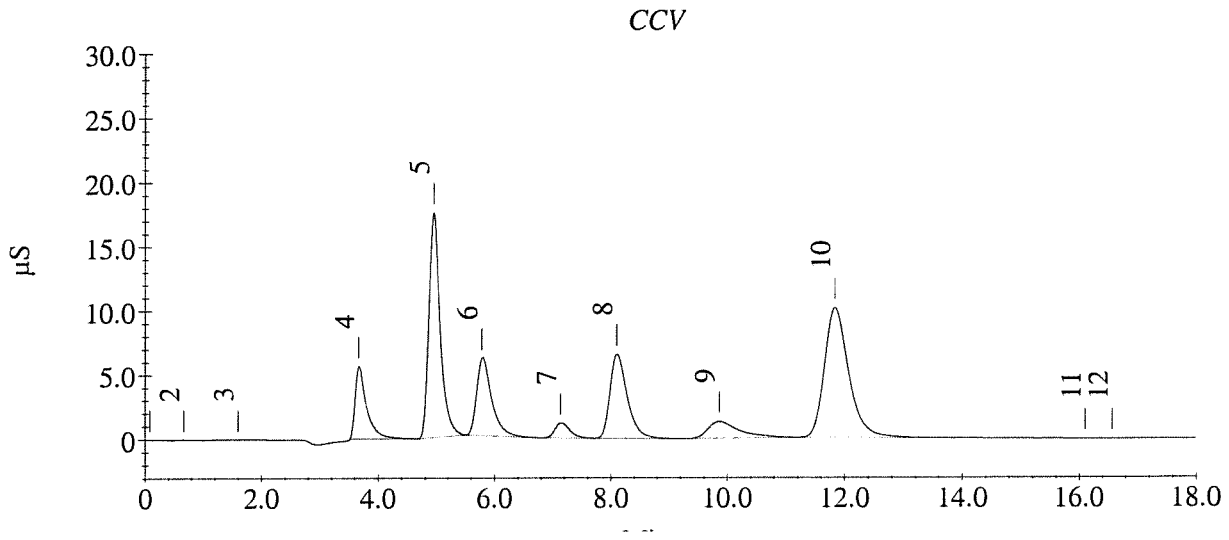
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\102920 -\CCV_061.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 14:19
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.67	3.7212	777657	56102	
5	Chloride	4.95	15.1078	2397444	174677	
6	Nitrite	5.78	3.7858	1077594	60082	
7	Bromide	7.13	3.7965	210760	11601	
8	Nitrate	8.10	3.7891	1345388	65381	
9	O.Phos	9.87	5.6864	479109	12945	+
10	Sulfate	11.83	26.3445	2918637	100882	



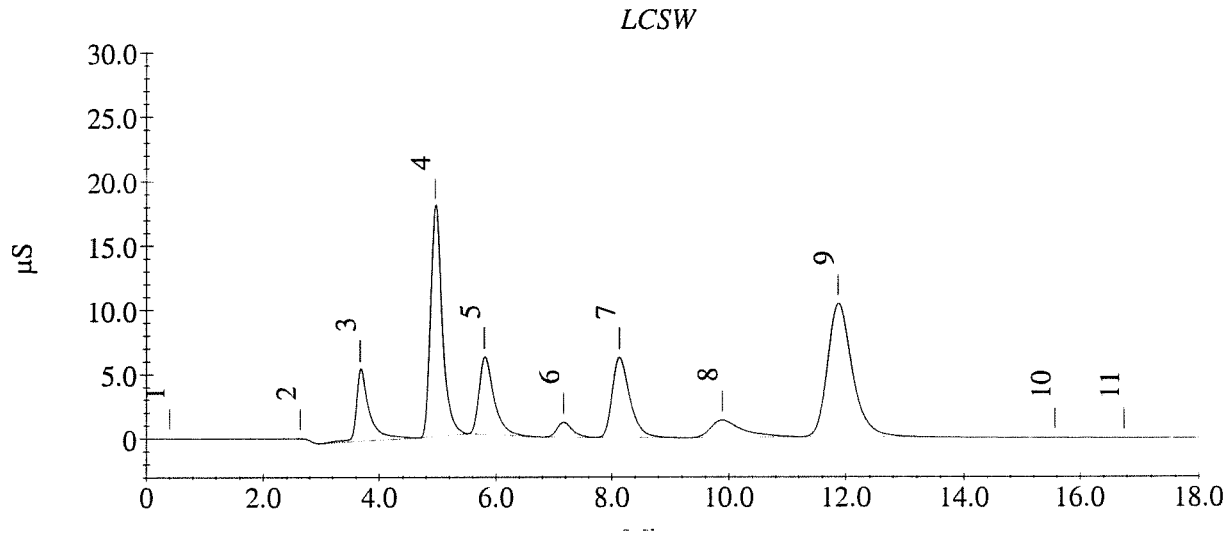
Sample Analysis Report

Sample Name : LCSW
Data File Name : c:\instarch\data\system 2\102920 -\LCSW_062.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 14:40
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.67	4.2319	887791	55357	
4	Chloride	4.95	15.6211	2481621	177550	
5	Nitrite	5.80	3.7804	1076030	60053	
6	Bromide	7.17	3.7948	210670	11570	
7	Nitrate	8.13	3.6760	1304623	62261	
8	O.Phos	9.88	5.9348	500964	13506	+
9	Sulfate	11.87	27.3698	3034725	103581	



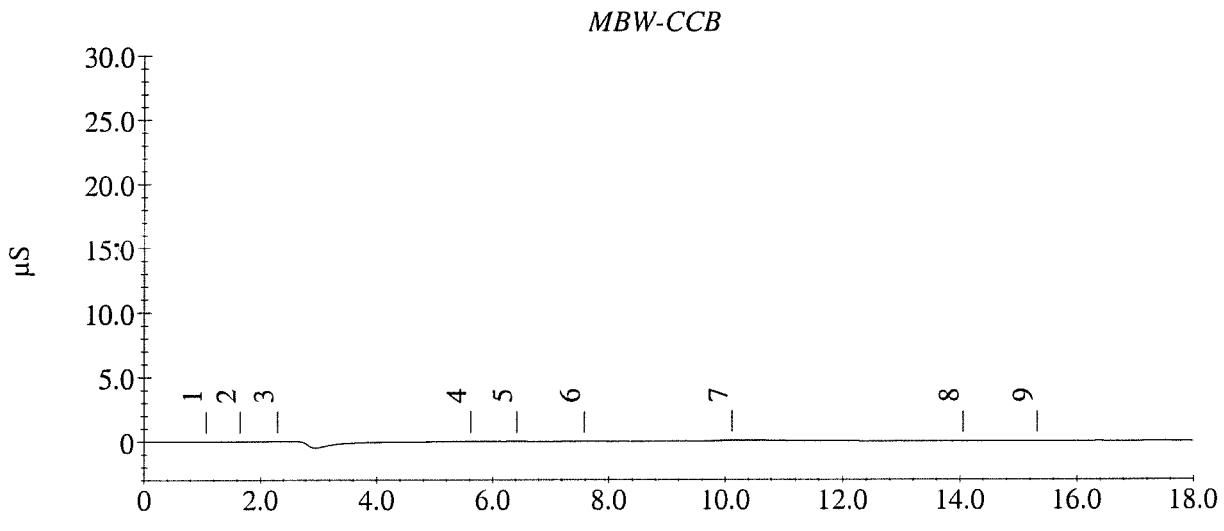
Sample Analysis Report

Sample Name : MBW-CCB
Data File Name : c:\instarch\data\system 2\102920 -\MBW-CCB_063.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 15:00
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Nitrite	5.62	0.0809	11699	278	
6	Nitrate	7.58	0.0667	4402	112	
7	O.Phos	10.12	0.6769	38301	653	



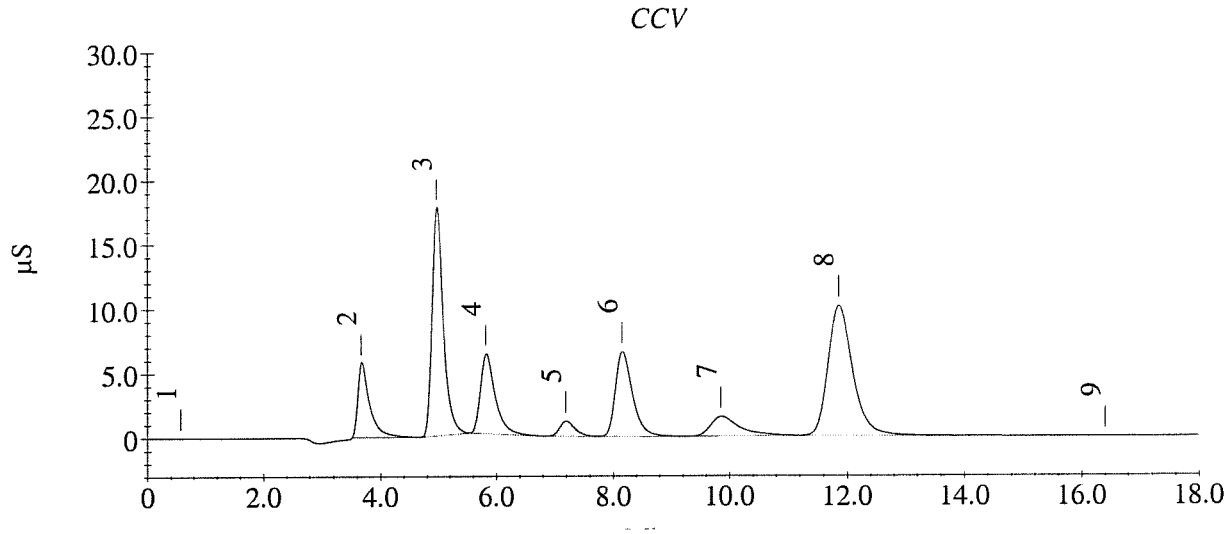
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\102920 -\CCV_074.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 18:43
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.67	3.9253	821676	57202	
3	Chloride	4.97	15.0855	2393795	175872	
4	Nitrite	5.82	3.8313	1090689	61443	
5	Bromide	7.18	3.8079	211401	11673	
6	Nitrate	8.15	3.7994	1349077	65633	
7	O.Phos	9.85	6.2899	532214	15267	+
8	Sulfate	11.85	26.6185	2949667	100725	



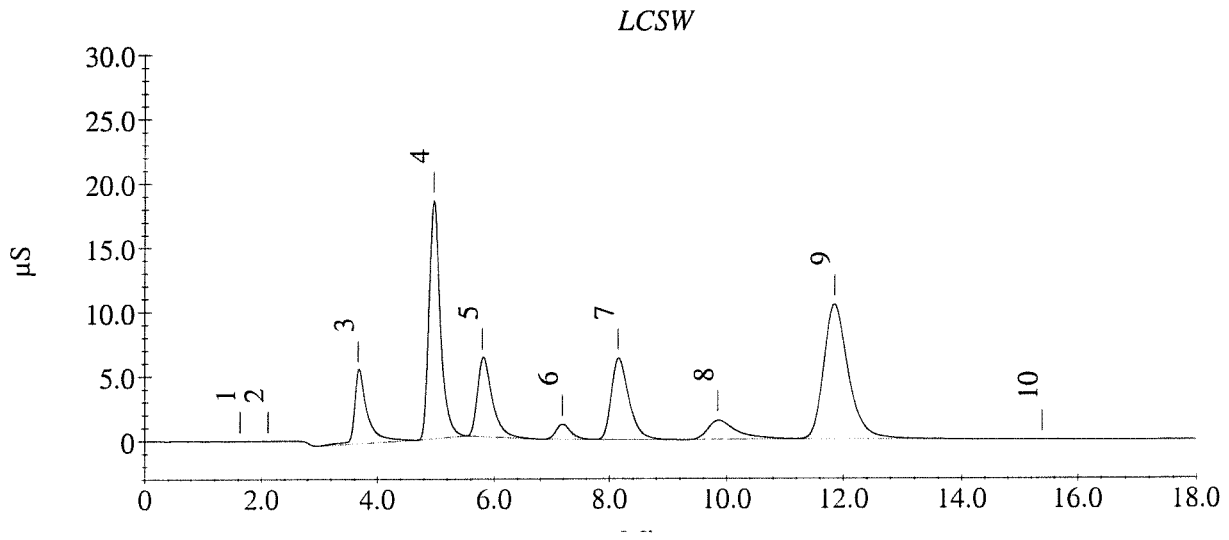
Sample Analysis Report

Sample Name : LCSW
Data File Name : c:\instarch\data\system 2\102920 -\LCSW_075.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 19:03
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.67	4.2736	896780	56519	
4	Chloride	4.97	15.6312	2483287	184122	
5	Nitrite	5.80	3.8005	1081812	60692	
6	Bromide	7.18	3.7954	210700	11674	
7	Nitrate	8.15	3.6870	1308598	62974	
8	O.Phos	9.85	6.0639	512327	14731	+
9	Sulfate	11.85	27.5174	3051437	104396	



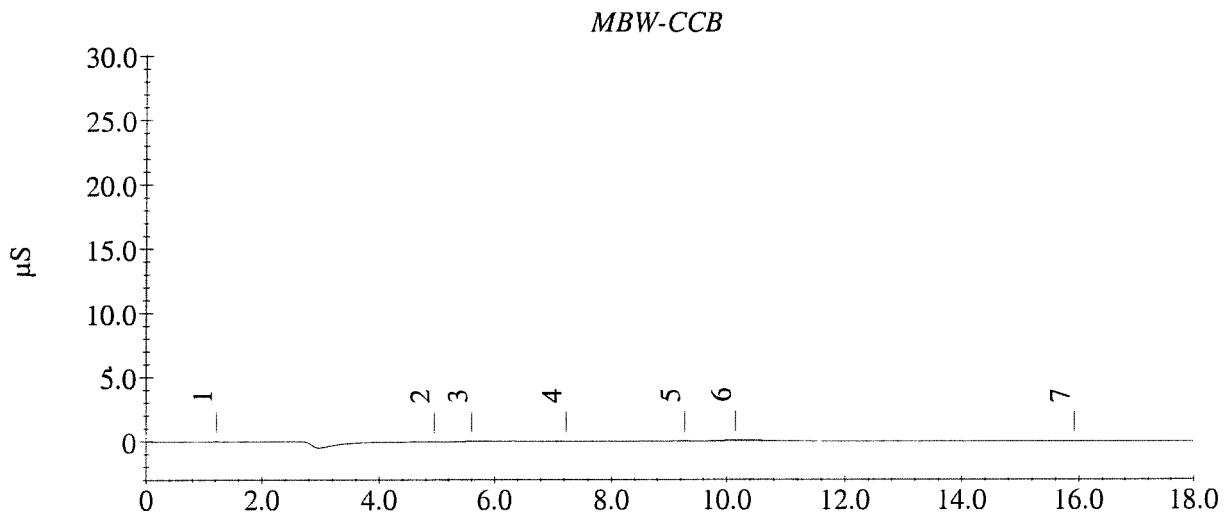
Sample Analysis Report

Sample Name : MBW-CCB
Data File Name : c:\instarch\data\system 2\102920 -\MBW-CCB_076.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 19:23
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Nitrite	5.60	0.0608	5925	219	
6	O.Phos	10.15	0.6247	33708	644	



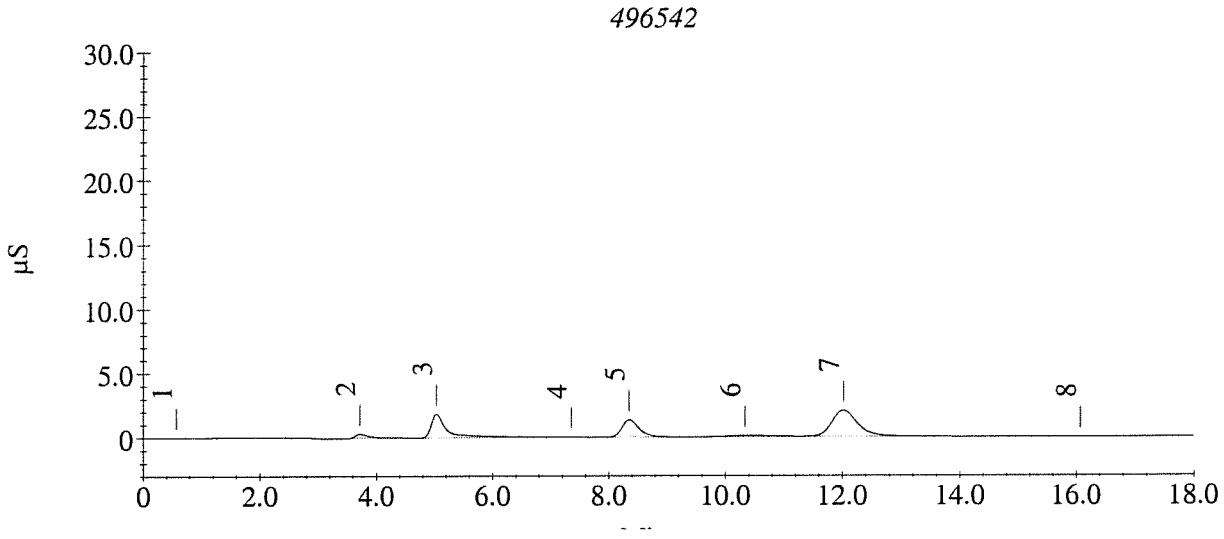
Sample Analysis Report

Sample Name : 496542
Data File Name : c:\instarch\data\system 2\102920 -\496542_084.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 22:06
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.72	0.3037	40704	2973	
3	Chloride	5.03	2.6056	347193	18351	
4	Bromide	7.35	0.0747	2055	138	
5	Nitrate	8.35	0.8184	275209	13478	
6	O.Phos	10.33	0.7415	43981	906	
7	Sulfate	12.02	6.0522	621121	20245	



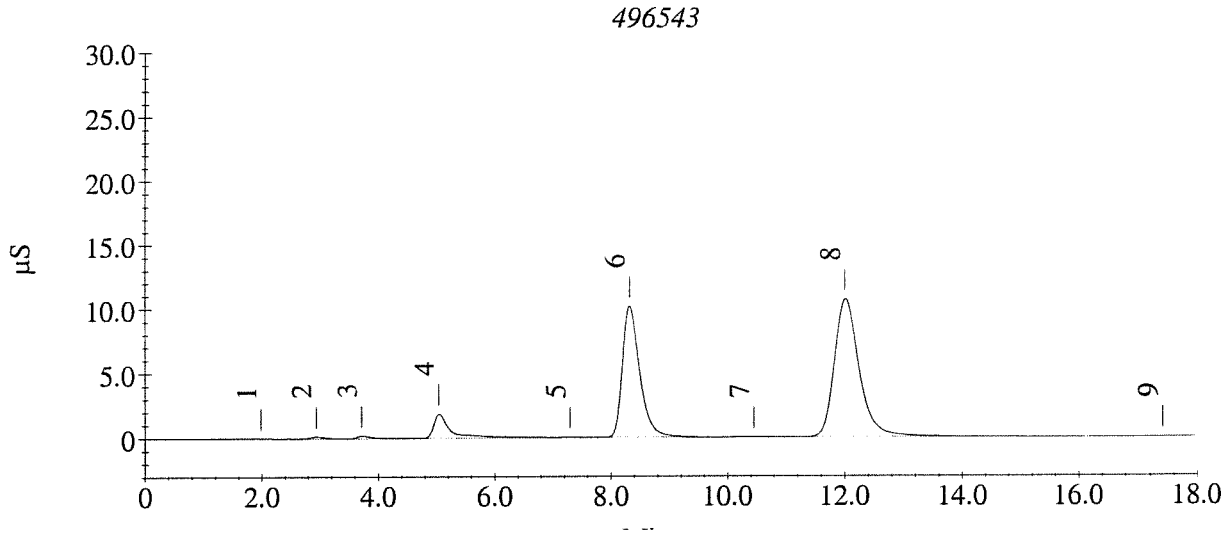
Sample Analysis Report

Sample Name : 496543
Data File Name : c:\instarch\data\system 2\102920 -\496543_085.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 22:26
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.72	0.2474	28570	1922	
4	Chloride	5.03	2.8355	384889	18595	
5	Bromide	7.30	0.1124	4168	248	
6	Nitrate	8.32	5.8589	2090996	101229	
7	O.Phos	10.45	0.3495	9491	281	
8	Sulfate	12.00	28.1924	3127858	106395	



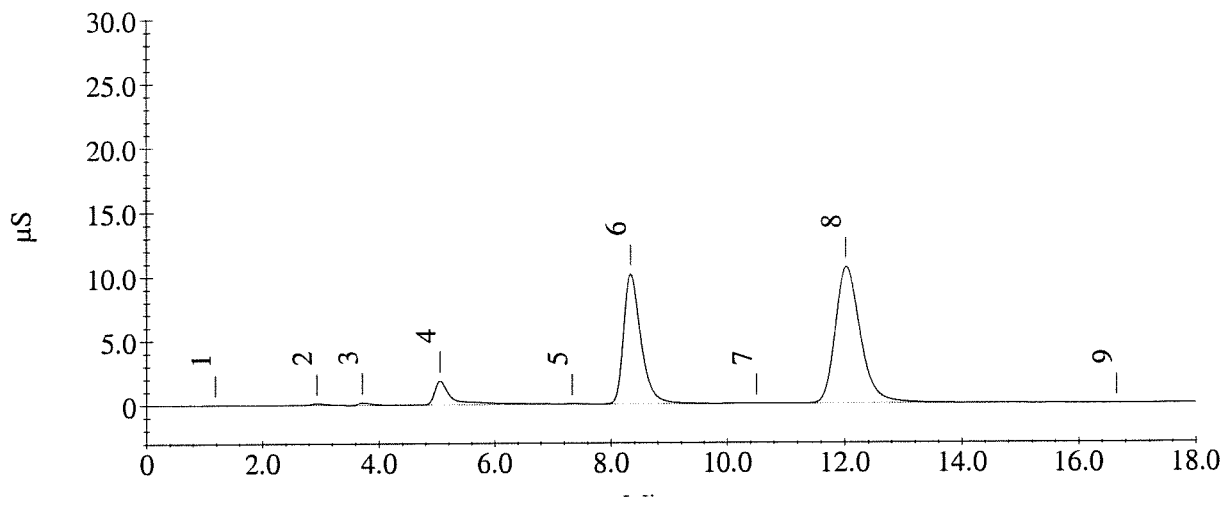
Sample Analysis Report

Sample Name : DUP496543
Data File Name : c:\instarch\data\system 2\102920 -\DUP496543_086.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 22:46
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.72	0.2645	32259	1926	
4	Chloride	5.05	2.8185	382097	18502	
5	Bromide	7.33	0.0862	2702	149	
6	Nitrate	8.33	5.8300	2080590	101097	
7	O.Phos	10.50	0.2751	2940	82	
8	Sulfate	12.02	28.3033	3140423	105974	



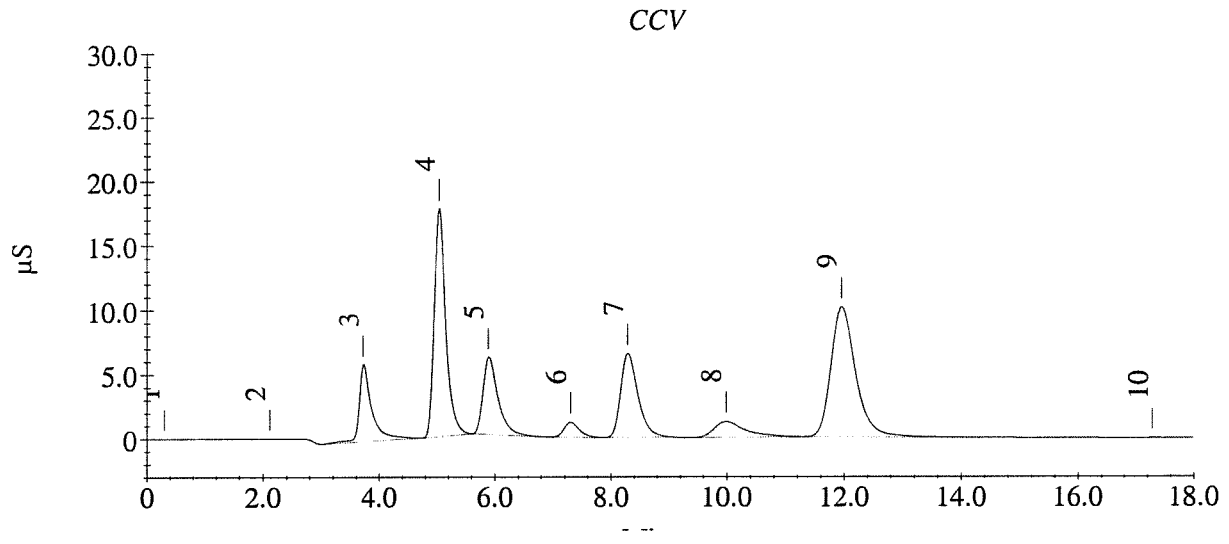
Sample Analysis Report

Sample Name : CCV
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\102920 -\CCV_087.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 23:07
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.72	4.4368	931982	59436	
4	Chloride	5.03	15.3702	2440485	176506	
5	Nitrite	5.88	3.7877	1078148	59616	
6	Bromide	7.30	3.8847	215711	11700	
7	Nitrate	8.28	3.8230	1357603	65045	
8	O.Phos	9.98	5.4246	456069	12430	+
9	Sulfate	11.95	26.9908	2991816	100808	



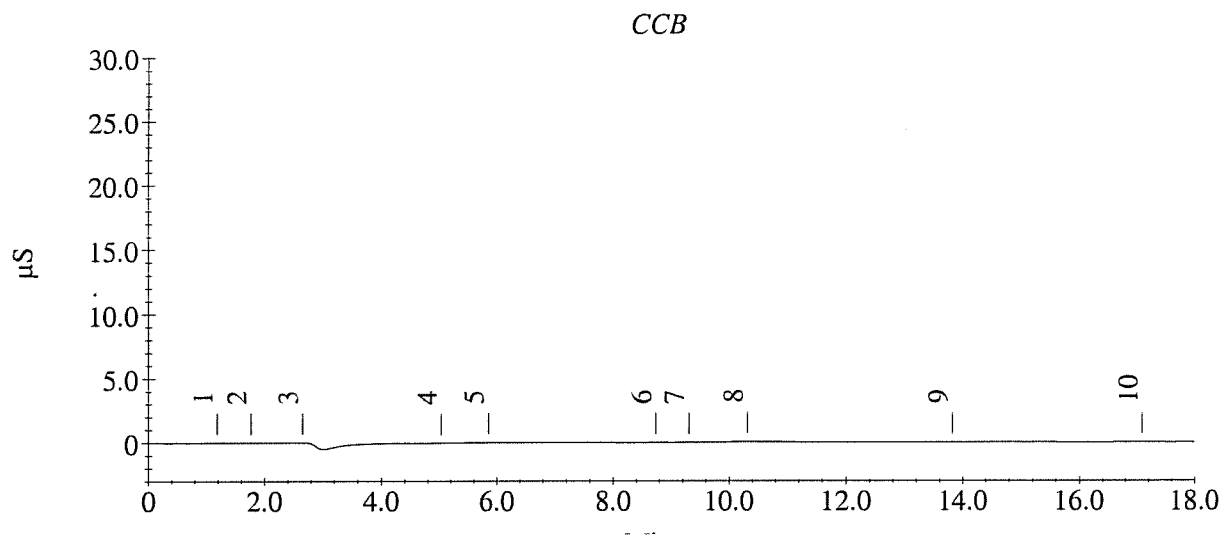
Sample Analysis Report

Sample Name : CCB
Data File Name : c:\instarch\data\system 2\102920 -\CCB_088.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 23:27
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Chloride	5.03	0.4970	1394	125	
5	Nitrite	5.85	0.0623	6354	166	
6	Nitrate	8.73	0.0576	1150	81	
8	O.Phos	10.32	0.6532	36215	733	



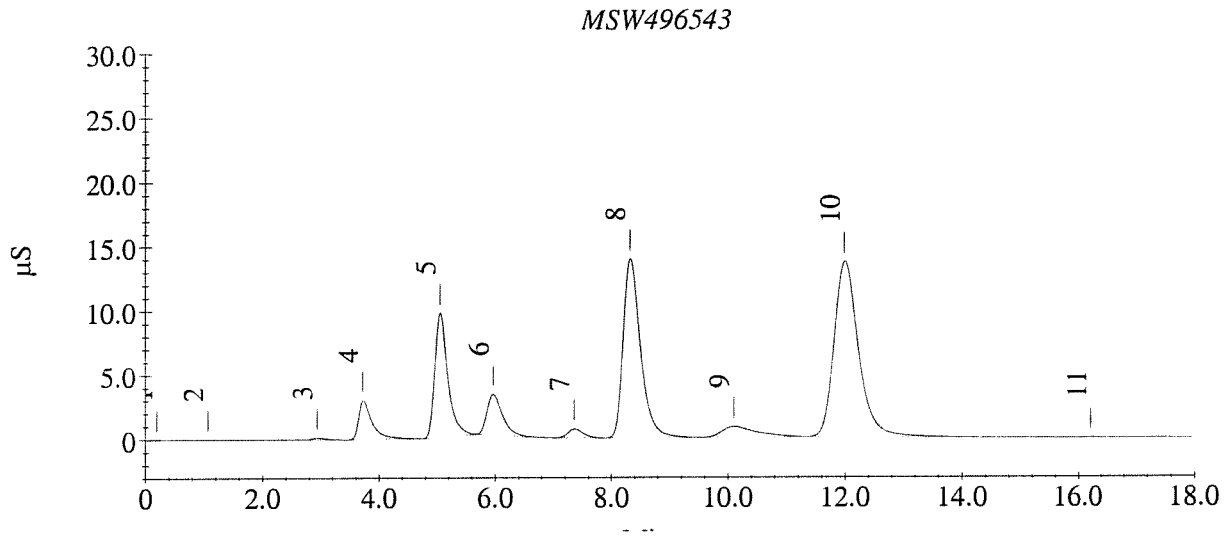
Sample Analysis Report

Sample Name : MSW496543
Data File Name : c:\instarch\data\system 2\102920 -\MSW496543_089.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/30/20 23:47
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.72	2.4033	493462	30142	
5	Chloride	5.05	9.6838	1507958	96567	
6	Nitrite	5.97	2.0629	581924	31703	
7	Bromide	7.35	2.2572	124443	6851	
8	Nitrate	8.32	8.0450	2878539	138871	+
9	O.Phos	10.10	4.0654	336469	8325	
10	Sulfate	11.98	35.5191	3957399	135982	



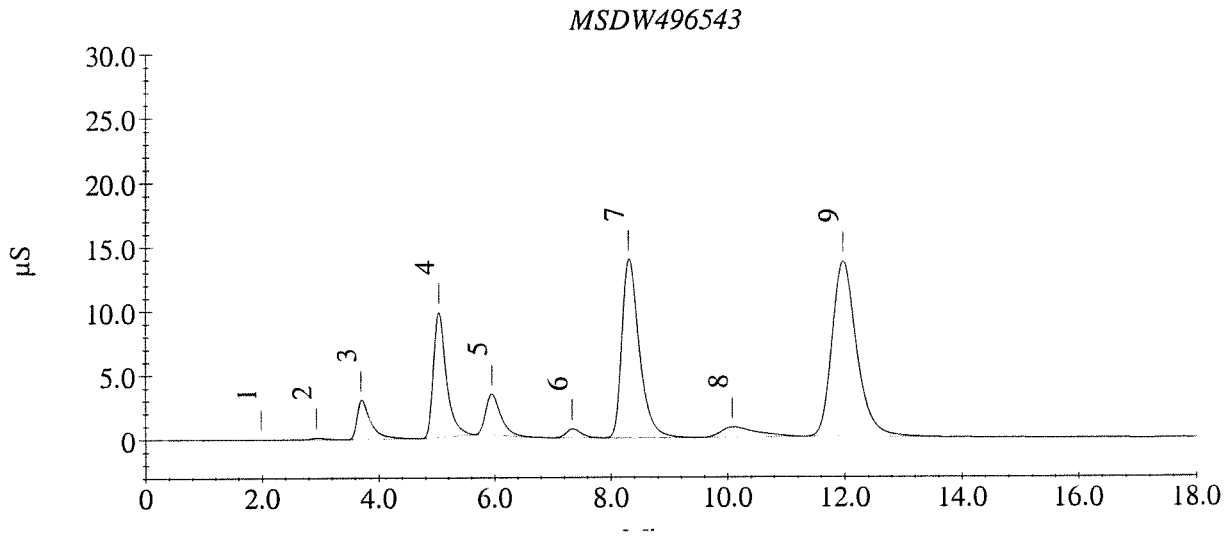
Sample Analysis Report

Sample Name : MSDW496543
Data File Name : c:\instarch\data\system 2\102920 -\MSDW496543_090.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/31/20 00:07
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.70	2.4115	495236	30260	
4	Chloride	5.03	9.7764	1523144	97071	
5	Nitrite	5.95	2.0895	589582	32002	
6	Bromide	7.33	2.2984	126756	6938	
7	Nitrate	8.30	8.0287	2872662	138713	+
8	O.Phos	10.08	4.0550	335555	7998	
9	Sulfate	11.97	35.5831	3964642	136518	



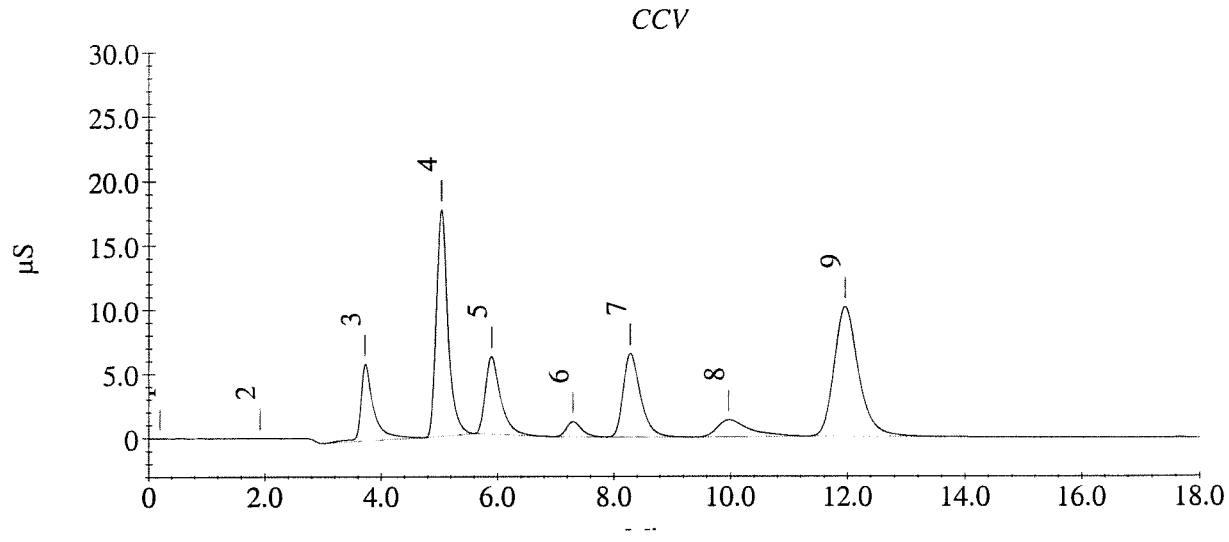
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\102920 -\CCV_091.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/31/20 00:28
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.72	4.4371	932049	59569	
4	Chloride	5.03	15.3907	2443837	176190	
5	Nitrite	5.90	3.8064	1083538	60388	
6	Bromide	7.30	3.9092	217083	11803	
7	Nitrate	8.28	3.8554	1369257	65243	
8	O.Phos	9.97	5.9173	499428	13226	+
9	Sulfate	11.95	26.7500	2964549	100935	



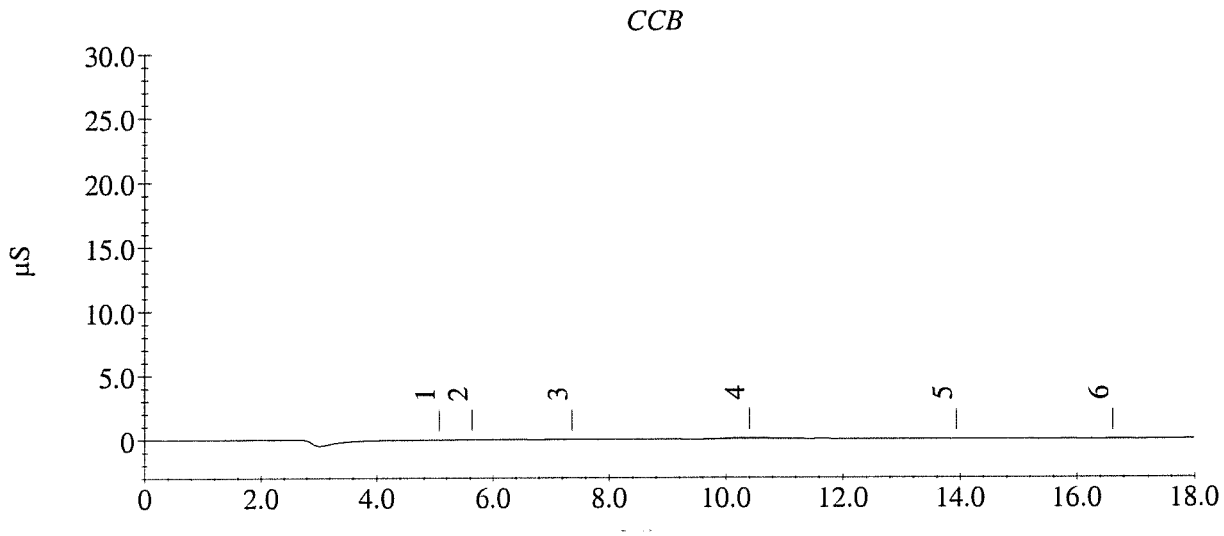
Sample Analysis Report

Sample Name : CCB
Data File Name : c:\instarch\data\system 2\102920 -\CCB_092.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/31/20 00:48
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Nitrite	5.63	0.0560	4540	195	
3	Bromide	7.37	0.0727	1942	71	
4	O.Phos	10.40	0.7929	48502	807	



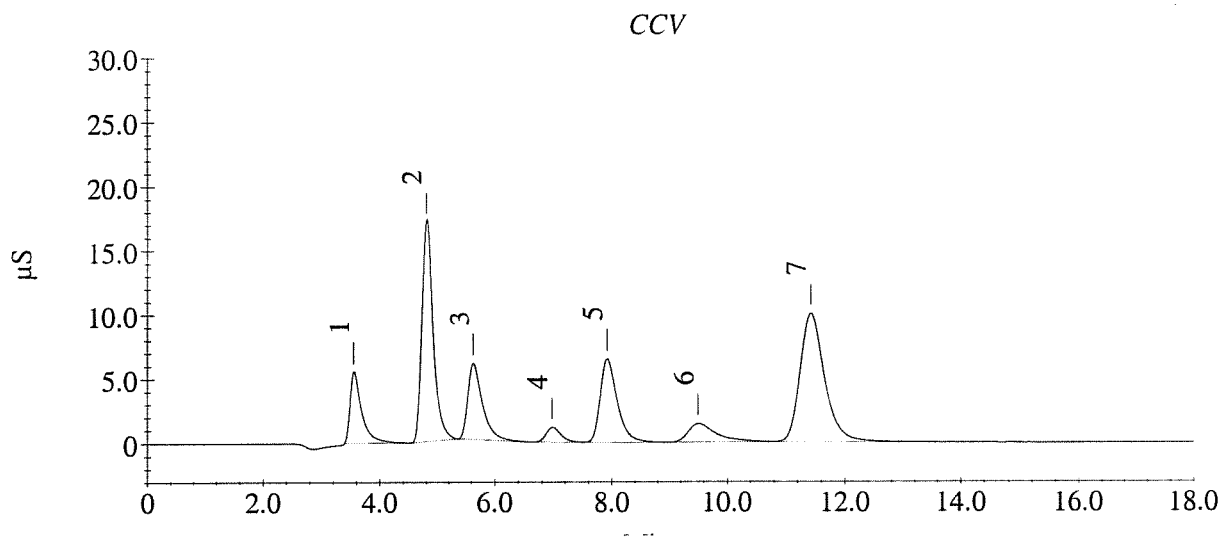
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\102920 -\CCV_093.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/31/20 10:07
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	3.55	3.6791	768585	55118	
2	Chloride	4.80	14.7178	2333486	170272	
3	Nitrite	5.63	3.6538	1039620	58924	
4	Bromide	6.97	3.6614	203189	11307	
5	Nitrate	7.92	3.7454	1329623	64656	
6	O.Phos	9.50	5.6940	479776	14275	+
7	Sulfate	11.42	25.9466	2873584	99778	



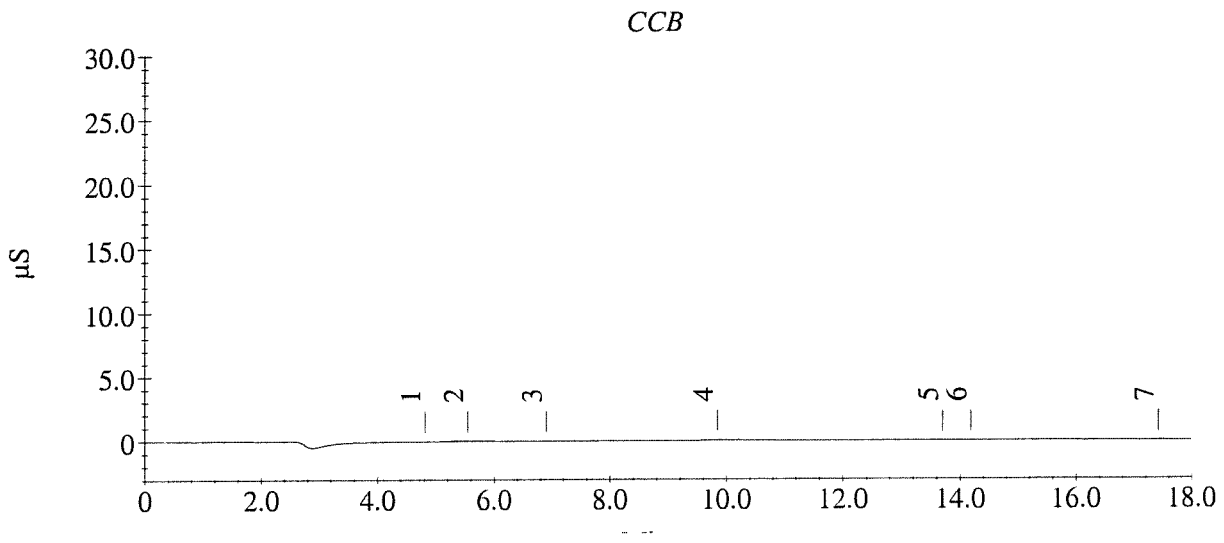
Sample Analysis Report

Sample Name : CCB
Data File Name : c:\instarch\data\system 2\102920 -\CCB_094.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/31/20 10:27
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Nitrite	5.55	0.0834	12422	303	
3	Bromide	6.90	0.0719	1900	100	
4	O.Phos	9.85	0.2914	4377	180	



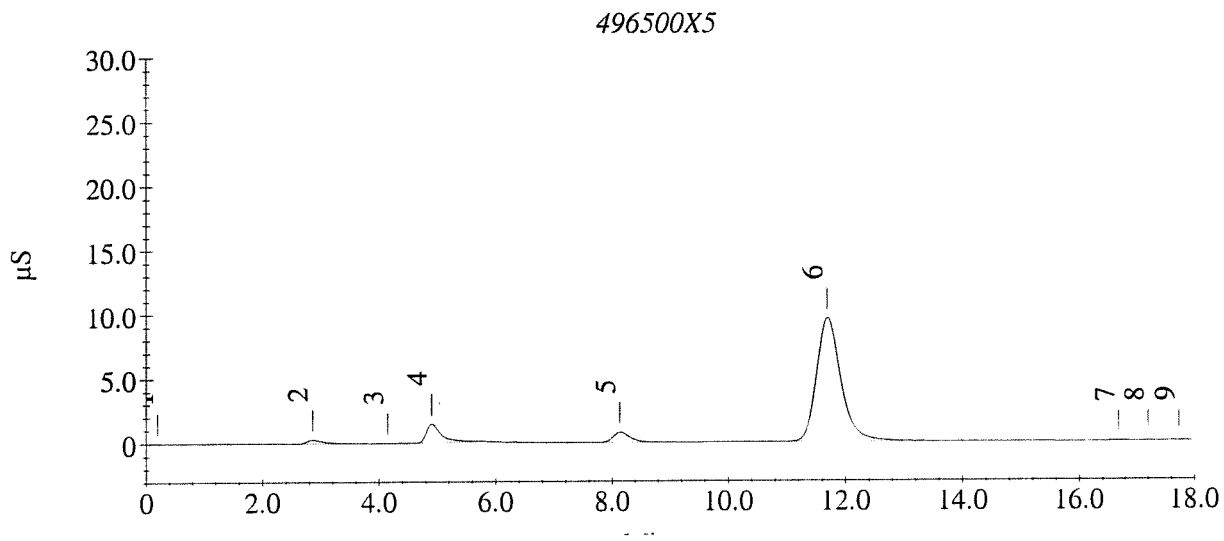
Sample Analysis Report

Sample Name : 496500X5
Data File Name : c:\instarch\data\system 2\102920 -\496500X5_095.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/31/20 10:47
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Chloride	4.90	2.0420	254765	14452	
5	Nitrate	8.13	0.4843	154865	7731	
6	Sulfate	11.68	25.2788	2797981	95922	



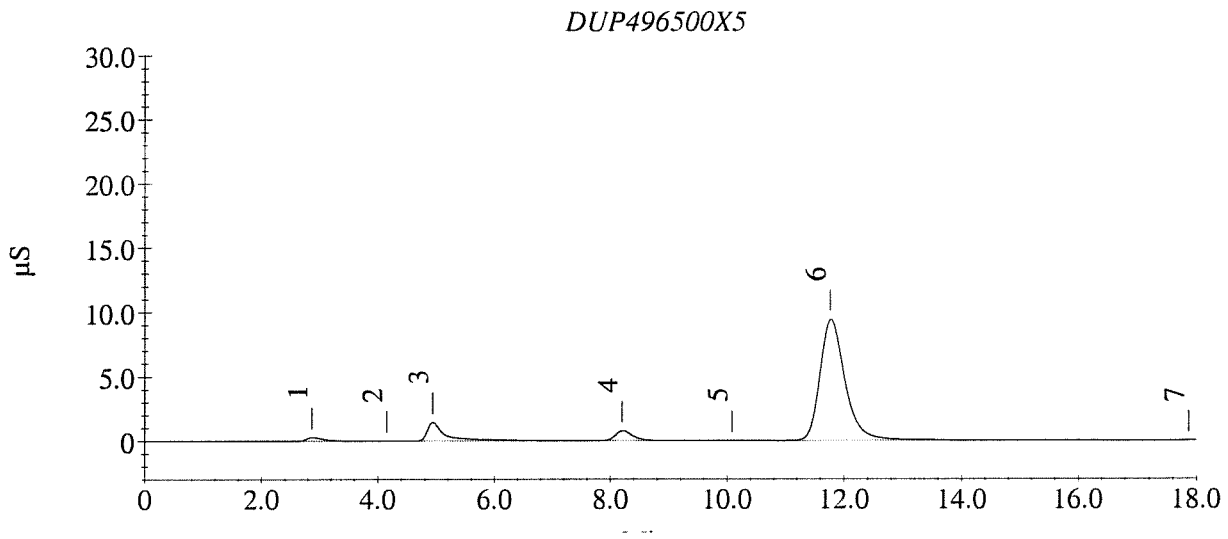
Sample Analysis Report

Sample Name : DUP496500X5
Data File Name : c:\instarch\data\system 2\102920 -\DUP496500X5_096.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/31/20 11:08
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	4.93	2.4450	320851	14453	
4	Nitrate	8.20	0.4803	153402	7561	
5	O.Phos	10.08	0.2649	2046	90	
6	Sulfate	11.77	25.0284	2769635	93730	



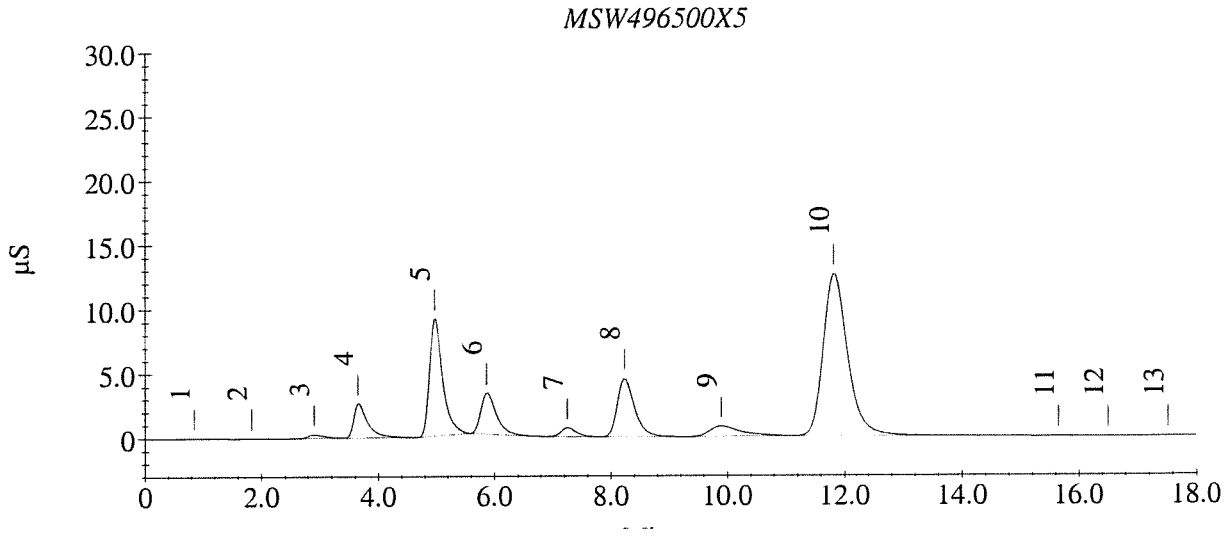
Sample Analysis Report

Sample Name : MSW496500X5
Data File Name : c:\instarch\data\system 2\102920 -\MSW496500X5_097.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/31/20 11:28
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.65	2.1708	443341	26374	
5	Chloride	4.97	9.3228	1448762	90697	
6	Nitrite	5.87	2.0946	591024	31861	
7	Bromide	7.25	2.2681	125053	6905	
8	Nitrate	8.23	2.6505	935202	45040	
9	O.Phos	9.90	3.6338	298491	8005	
10	Sulfate	11.82	32.3788	3601854	125504	



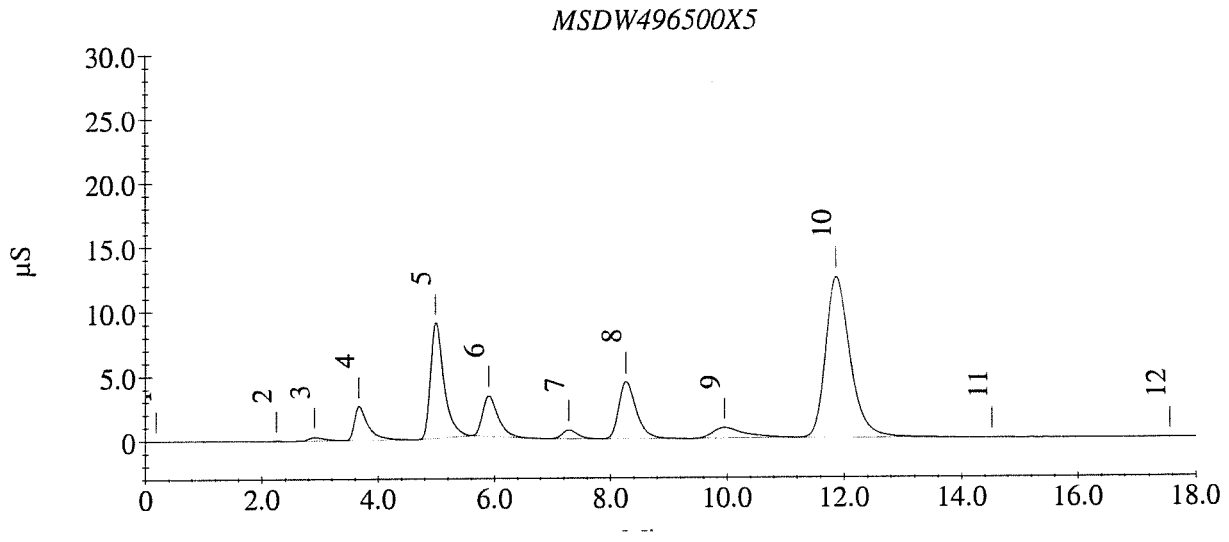
Sample Analysis Report

Sample Name : MSDW496500X5
Data File Name : c:\instarch\data\system 2\102920 -\MSDW496500X5_098.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/31/20 11:48
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.67	2.1434	437417	26234	
5	Chloride	4.98	9.2436	1435773	88701	
6	Nitrite	5.90	2.0533	579158	31306	
7	Bromide	7.28	2.2328	123074	6755	
8	Nitrate	8.27	2.6086	920114	44235	
9	O.Phos	9.95	3.8526	317741	8272	
10	Sulfate	11.87	32.4319	3607860	124267	



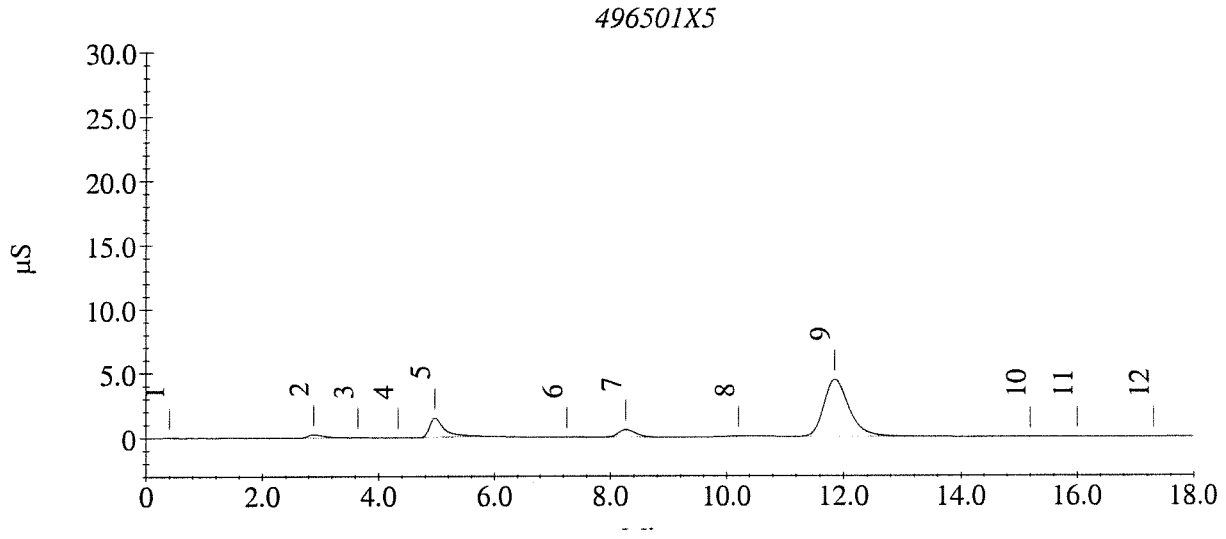
Sample Analysis Report

Sample Name : 496501X5
Data File Name : c:\instarch\data\system 2\102920 -\496501X5_099.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/31/20 12:09
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Fluoride	3.65	0.1282	2858	177	
5	Chloride	4.97	2.0893	262520	14910	
6	Bromide	7.27	0.0968	3295	121	
7	Nitrate	8.27	0.3728	114706	5811	
8	O.Phos	10.22	0.2858	3884	192	
9	Sulfate	11.85	12.1814	1315080	44358	



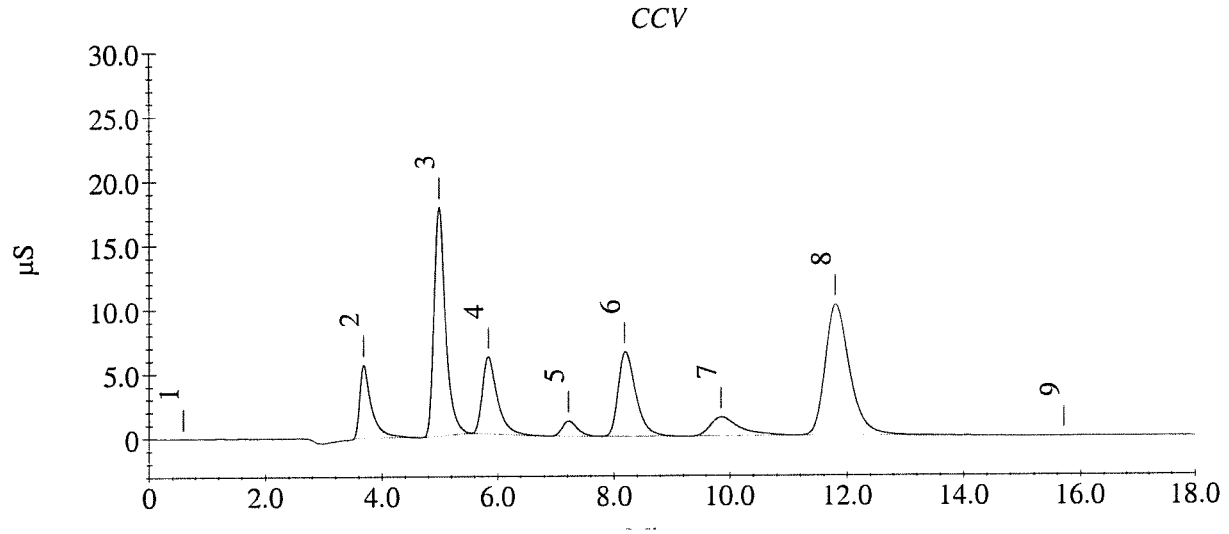
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\102920 -\CCV_100.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/31/20 12:29
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.68	3.8058	795912	56546	
3	Chloride	4.98	15.3903	2443766	177692	
4	Nitrite	5.83	3.7879	1078202	59861	
5	Bromide	7.22	3.8636	214523	11735	
6	Nitrate	8.18	3.9174	1391616	65473	
7	O.Phos	9.85	6.0344	509726	14702	+
8	Sulfate	11.80	26.9352	2985524	101789	



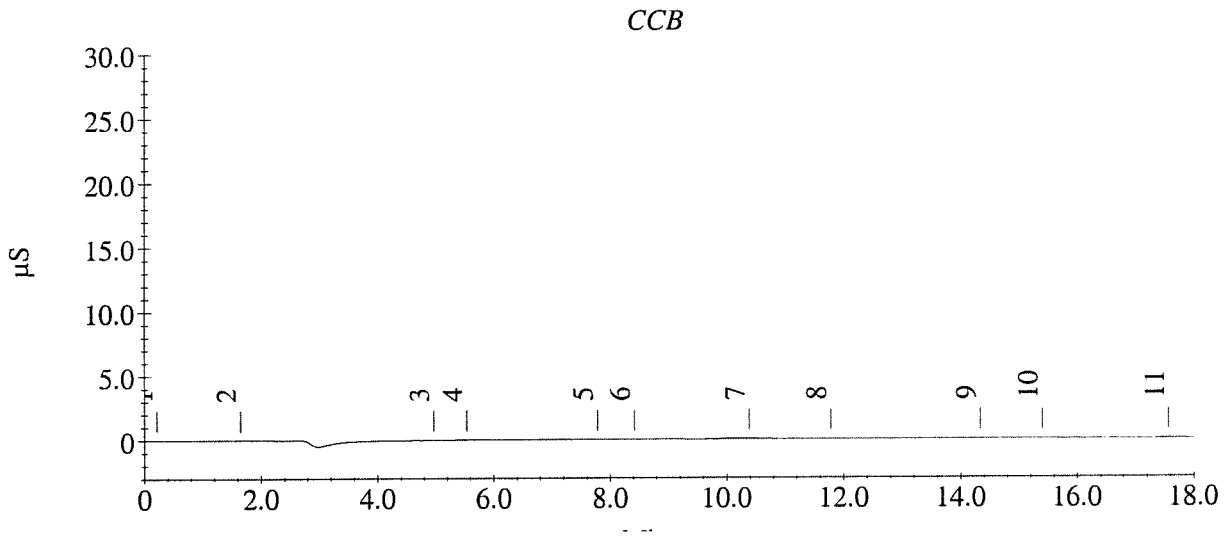
Sample Analysis Report

Sample Name : CCB
Data File Name : c:\instarch\data\system 2\102920 -\CCB_101.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 10/31/20 12:49
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
3	Chloride	4.97	0.4961	1245	139	
4	Nitrite	5.53	0.0575	4963	217	
5	Nitrate	7.78	0.0574	1062	75	
7	O.Phos	10.38	0.5355	25853	505	
8	Sulfate	11.78	0.5752	1010	83	



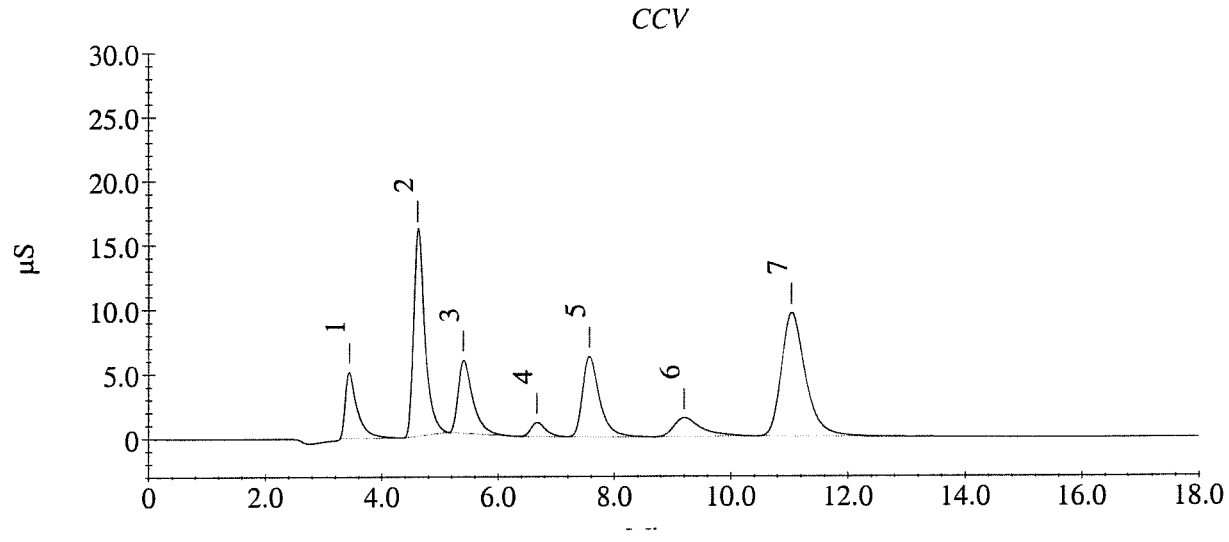
Sample Analysis Report

Sample Name : CCV
Data File Name : C:\INSTARCH\DATA\SYSTEM 2\102920 -\CCV_102.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 11/2/20 14:12
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
1	Fluoride	3.43	3.4846	726651	50922	
2	Chloride	4.62	13.6386	2156517	159177	
3	Nitrite	5.40	3.4827	990398	56287	
4	Bromide	6.67	3.4044	188773	10852	
5	Nitrate	7.57	3.5849	1271807	62148	
6	O.Phos	9.20	5.6912	479532	14557	+
7	Sulfate	11.03	24.6949	2731872	95528	



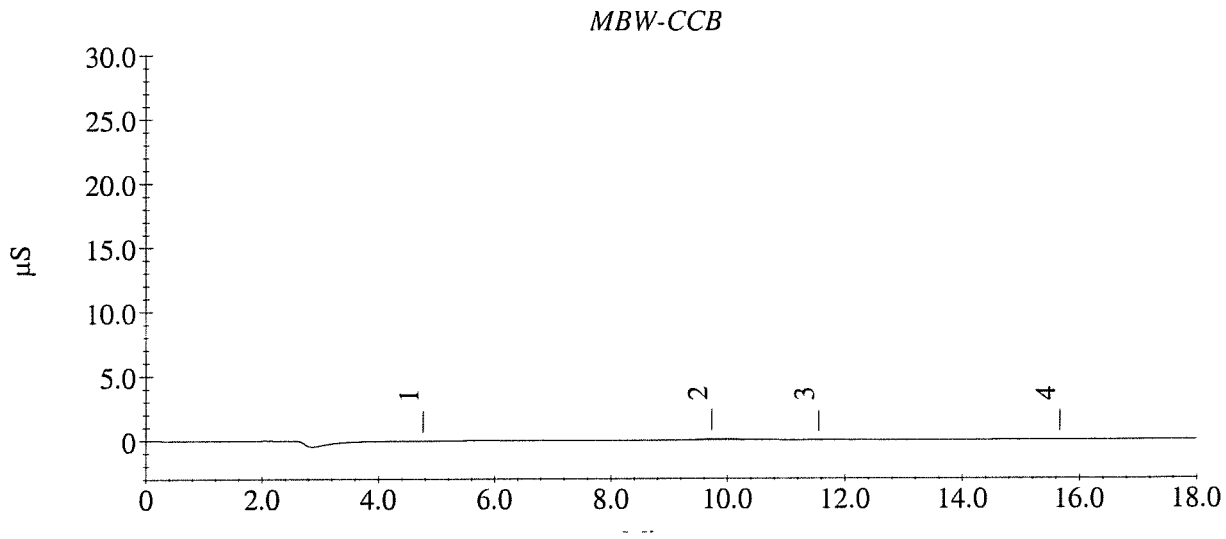
Sample Analysis Report

Sample Name : MBW-CCB
Data File Name : c:\instarch\data\system 2\102920 -\MBW-CCB_104.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 11/2/20 14:52
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	O.Phos	9.73	0.6402	35069	689	
3	Sulfate	11.55	0.5972	3497	138	



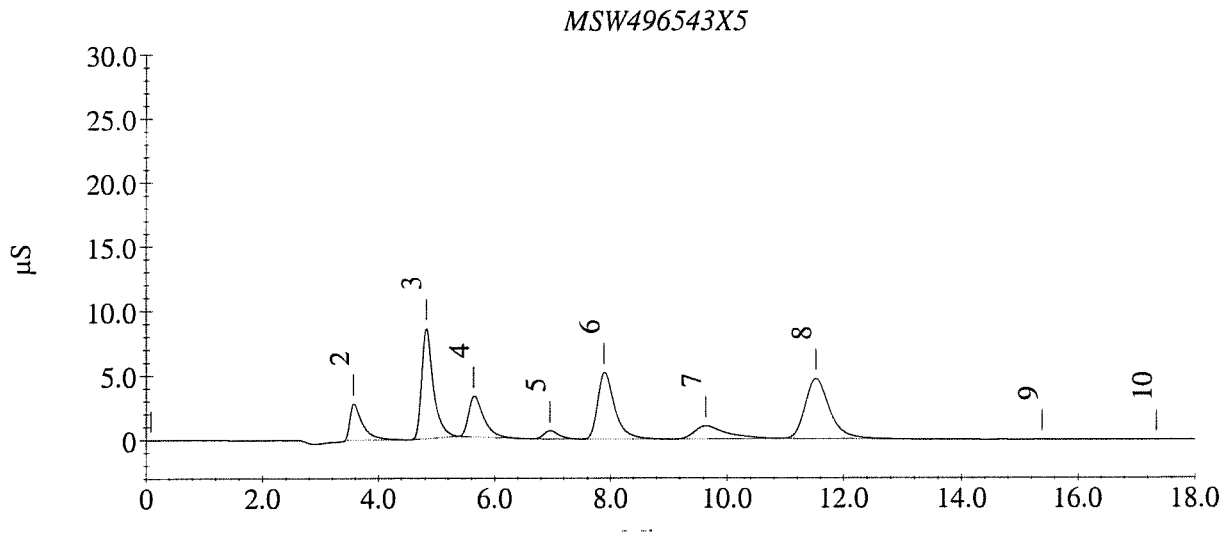
Sample Analysis Report

Sample Name : MSW496543X5
Data File Name : c:\instarch\data\system 2\102920 -\MSW496543X5_105.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 11/2/20 15:12
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.57	2.0785	423426	27877	
3	Chloride	4.82	7.7990	1198871	85116	
4	Nitrite	5.63	2.0423	575977	31473	
5	Bromide	6.95	2.0963	115420	6449	
6	Nitrate	7.88	3.0828	1090949	51684	
7	O.Phos	9.63	4.5717	381017	10169	
8	Sulfate	11.52	12.6432	1367365	46450	



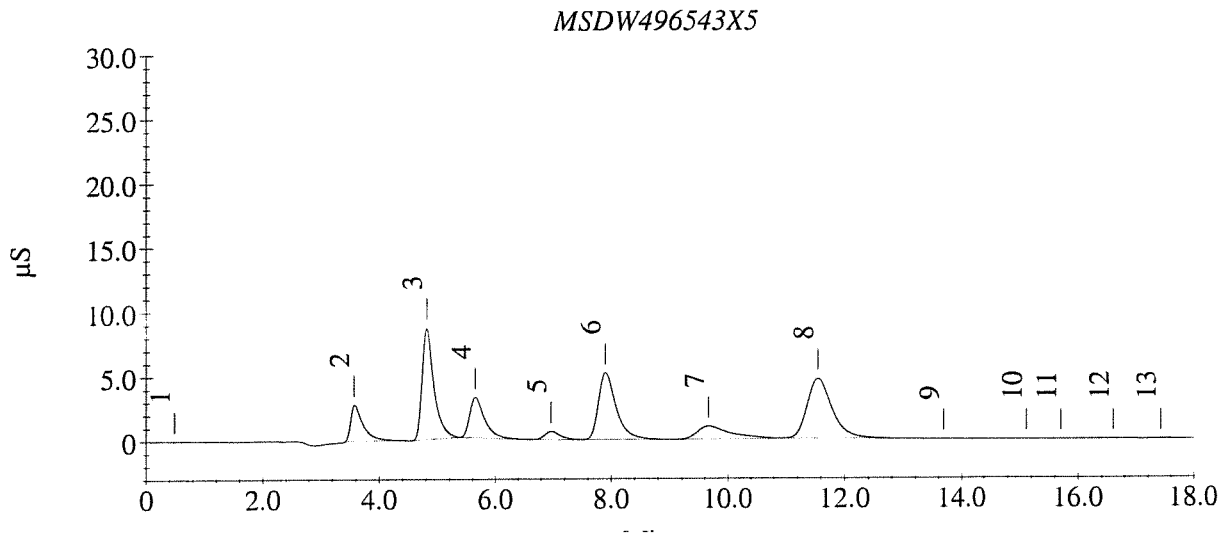
Sample Analysis Report

Sample Name : MSDW496543X5
Data File Name : c:\instarch\data\system 2\102920 -\MSDW496543X5_106.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 11/2/20 15:33
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
2	Fluoride	3.57	2.0746	422584	27711	
3	Chloride	4.82	7.9065	1216485	86260	
4	Nitrite	5.65	2.0314	572867	31556	
5	Bromide	6.97	2.1242	116983	6494	
6	Nitrate	7.90	3.0845	1091562	51984	
7	O.Phos	9.67	4.7562	397251	10194	
8	Sulfate	11.55	12.6560	1368808	46524	



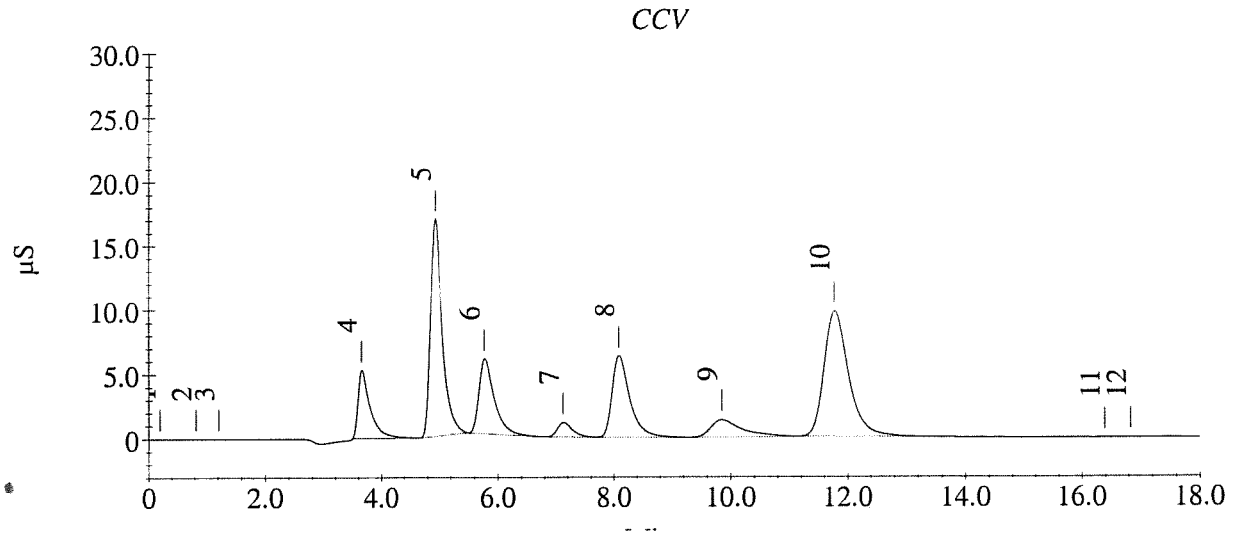
Sample Analysis Report

Sample Name : CCV
Data File Name : c:\instarch\data\system 2\102920 -\CCV_110.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 11/2/20 16:54
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Fluoride	3.65	3.6845	769747	52379	
5	Chloride	4.93	14.8302	2351929	168642	
6	Nitrite	5.77	3.7186	1058256	57937	
7	Bromide	7.12	3.6451	202273	10977	
8	Nitrate	8.08	3.7969	1348182	62983	
9	O.Phos	9.85	5.8208	490931	13419	+
10	Sulfate	11.77	25.7249	2848493	97035	



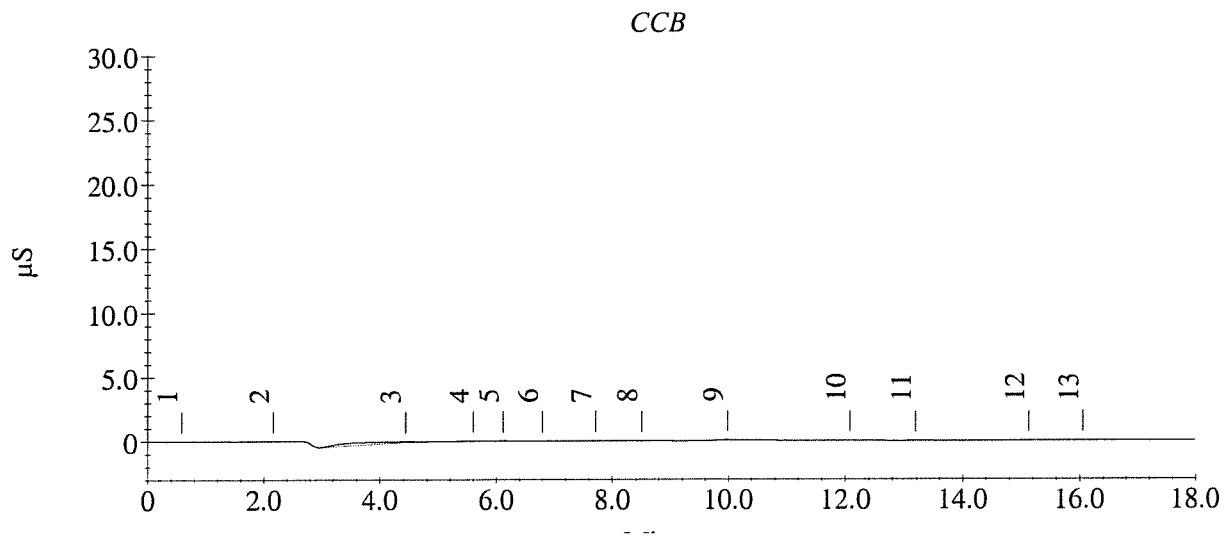
Sample Analysis Report

Sample Name : CCB
Data File Name : c:\instarch\data\system 2\102920 -\CCB_111.DXD

Method File Name : c:\instarch\methods\system 2\ic3033.met
Date Time Collected : 11/2/20 17:14
System Operator : TMG

Peak Information : Found Components

Peak #	Component Name	Retention Time	Amount	Peak Area	Peak Height	Limit Exceeded
4	Nitrite	5.60	0.0500	2795	107	
8	Nitrate	8.50	0.0580	1300	111	
10	Sulfate	12.08	0.5922	2927	97	



pH - Mettler Toledo Seven Easy

Date:	10/30/2020	Analyst:	HLB	Lims #:	176643	Slope (%)	97%

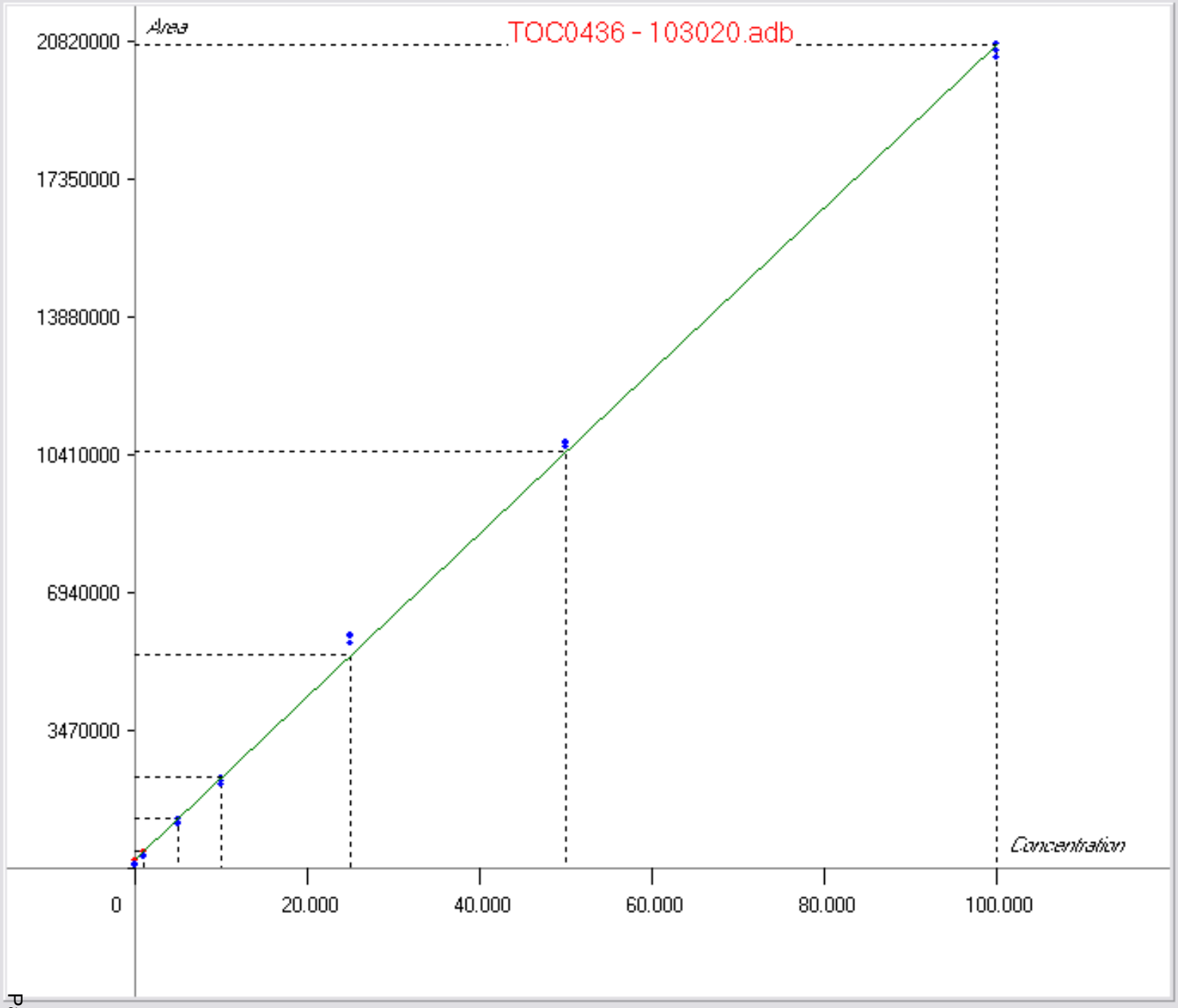
GRP	Sample ID#	Matrix	Corrected Temp (°C)*	Result	
1	BUFFER 7	QC	19.4	7.02	
2					
3					
4					
5					
6	496557	WW	16.1	7.80	
7	496657	WW	10.7	8.19	
8	496658	WW	9.9	8.74	
9	496659	WW	10.5	7.75	
10	496671	WW	10.6	7.68	
11	496673	WW	11.4	7.45	
dup 11	496673	WW	11.6	7.44	
12	BUFFER 7	QC	19.3	7.04	
13					
14					
15					
16					
17					
18					
19					
20					
21					
23	496544	GW	16.3	6.51	
dup 23	496544	GW	16.3	6.52	
24	BUFFER 7				
25	484250	GW	20.8	9.62	
dup 25	484250	GW	20.8	9.63	
26					
dup 26					

To datacapture: Save CSV file under the TSS datacapture folder.

*Temperature of samples should be room temperature around 25°C

Buffer Standard IDs:

pH 4: WC38 pH 7: WC70 pH 10: WC105



Cursor Position

Concentration	Area
118.200 mg/l	3296500

A2	0
A1	205104
A0	265065
Correlation	0.99946
Order	1
Volume	100 µl
Conc.	100.00
Area	20780031

☐ Confidence Intervals 95%

☐ Detection/Determination 95%

Conc.	Area	Sel.
0	223522	☐
0	121156	☑
0	137139	☑
0	91454	☑
0	132703	☑
1	435934	☐
1	329899	☑
1	353518	☑

• Used Value
• Ignored Value

CurveNo:1 CurveType:TC

<-- --> Print... Exit

RJ 11/11/2020

Analysis Name TOC0436 - 103020.adb

Template Name CURVE TEMP.tdb
Method Name N / A
Operator TMG

Date Friday, October 30, 2020
Time 11:40

Start Oven Temp. 750 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL0436 INSTRUMENT:TOCW

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	This Analysis	Oct 30 2020, 11:40	20780031	100	1	0.99946	100 µl	Yes
	A2: 0		*A1: 205103.50438464*		*A0: 265064.880361966*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**75682**	**131.55**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	10 30 2020 11:51:34	5.32	1356430	1	755	2	-	-
2	10 30 2020 11:56:04	ZERO !	209792	1	755	2	-	Yes
3	10 30 2020 11:58:45	ZERO !	92937	1	755	2	-	Yes
4	10 30 2020 12:01:15	0.00	0	0	755	2	-	Yes
5	10 30 2020 12:05:17	0.00	0	0	757	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	2	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**171959**	**8.48**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	10 30 2020 12:10:08	ZERO !	180387	1	758	2	-	Yes
2	10 30 2020 12:13:21	ZERO !	120698	1	758	2	-	-
3	10 30 2020 12:15:54	ZERO !	150228	1	757	2	-	Yes
4	10 30 2020 12:18:30	ZERO !	176836	1	758	2	-	Yes
5	10 30 2020 12:21:07	ZERO !	180387	1	758	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	3	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**156300**	**18.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	10 30 2020 12:24:42	ZERO !	193626	1	759	2	-	Yes
2	10 30 2020 12:27:55	ZERO !	161852	1	758	2	-	Yes
3	10 30 2020 12:30:33	ZERO !	130951	1	758	2	-	Yes
4	10 30 2020 12:33:04	ZERO !	138771	1	758	2	-	Yes
5	10 30 2020 12:35:38	ZERO !	229087	1	757	2	-	-

Inj. Order	Position	Type	Identification	Dilution Factor
4	4	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**201124**	**33.05**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	10 30 2020 12:39:08	0.01	267168	1	758	2	-	Yes
2	10 30 2020 12:42:29	ZERO !	152990	1	758	2	-	Yes
3	10 30 2020 12:44:59	ZERO !	127959	1	757	2	-	-
4	10 30 2020 12:47:30	ZERO !	135515	1	757	2	-	Yes
5	10 30 2020 12:50:01	ZERO !	248826	1	756	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
5	5	Unknown	BLANK	1 x

		TC	**ZERO !**	**146794**	**18.25**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 12:54:02	ZERO !	253328	1	757	2	-	-
2		10 30 2020 12:57:23	ZERO !	152226	1	757	2	-	Yes
3		10 30 2020 12:59:55	ZERO !	108902	1	757	2	-	Yes
4		10 30 2020 13:02:22	ZERO !	154028	1	756	2	-	Yes
5		10 30 2020 13:04:52	ZERO !	172023	1	756	2	-	Yes

---

6 S1 Standard TC Std 0.00 mg/l 1 x

		TC	**ZERO !**	**120613**	**17.06**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 13:08:13	ZERO !	223522	1	758	2	-	-
2		10 30 2020 13:11:31	ZERO !	121156	1	757	2	-	Yes
3		10 30 2020 13:14:03	ZERO !	137139	1	756	2	-	Yes
4		10 30 2020 13:16:39	ZERO !	91454	1	756	2	-	Yes
5		10 30 2020 13:19:10	ZERO !	132703	1	756	2	-	Yes

---

7 S2 Standard TC Std 1.00 mg/l 1 x

		TC	**0.38**	**343200**	**3.20**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 13:22:33	0.83	435934	1	756	2	-	-
2		10 30 2020 13:25:54	0.32	329899	1	755	2	-	Yes
3		10 30 2020 13:28:31	0.43	353518	1	755	2	-	Yes
4		10 30 2020 13:31:10	0.36	338580	1	755	2	-	Yes
5		10 30 2020 13:33:51	0.42	350803	1	755	2	-	Yes

---

8 S3 Standard TC Std. 5.00 mg/l 1 x

		TC	**4.57**	**1202349**	**4.13**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 13:37:24	4.91	1272898	1	755	2	-	Yes
2		10 30 2020 13:40:58	4.38	1163298	1	755	2	-	Yes
3		10 30 2020 13:43:53	4.42	1172482	1	754	2	-	Yes
4		10 30 2020 13:46:45	4.56	1200718	1	754	2	-	Yes

---

9 S4 Standard TC Std. 10.00 mg/l 1 x

		TC	**9.56**	**2226027**	**3.18**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 13:50:26	10.03	2322958	1	754	2	-	Yes
2		10 30 2020 13:54:20	9.20	2152977	1	754	2	-	Yes
3		10 30 2020 13:57:26	9.50	2212552	1	754	2	-	Yes
4		10 30 2020 14:00:25	9.51	2215624	1	754	2	-	Yes

---

10 S5 Standard TC Std. 25.00 mg/l 1 x

		TC	**27.22**	**5848729**	**1.58**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 14:04:24	27.62	5930537	1	754	2	-	Yes
2		10 30 2020 14:08:14	26.58	5716380	1	753	2	-	Yes
3		10 30 2020 14:11:25	27.35	5875124	1	753	2	-	Yes
4		10 30 2020 14:14:39	27.34	5872876	1	753	2	-	Yes

---

11 S6 Standard TC Std. 50.00 mg/l 1 x

		TC	**50.91**	**10706199**	**0.56**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 14:18:36	51.07	10740506	1	753	2	-	Yes
2		10 30 2020 14:22:37	50.71	10666748	1	753	2	-	Yes
3		10 30 2020 14:26:02	51.23	10771823	1	753	2	-	Yes
4		10 30 2020 14:29:24	50.61	10645721	1	753	2	-	Yes

---

12 S7 Standard TC Std. 100.00 mg/l 1 x

		TC	**99.06**	**20583105**	**0.77**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 14:33:36	100.02	20780031	1	753	2	-	Yes
2		10 30 2020 14:37:51	98.40	20446420	1	753	2	-	Yes
3		10 30 2020 14:41:27	99.34	20639986	1	753	2	-	Yes
4		10 30 2020 14:45:15	98.49	20465983	1	752	2	-	Yes

13	S8	Unknown	ICV - 50.00 mg/L				1 x		
		TC	**47.83**	**10075246**		**0.60**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	10 30 2020 14:49:40	47.90	10088692	1	753	2	-	Yes
	2	10 30 2020 14:53:36	48.17	10144712	1	752	2	-	Yes
	3	10 30 2020 14:57:16	47.80	10068983	1	753	2	-	Yes
	4	10 30 2020 15:00:36	47.46	9998600	1	752	2	-	Yes

14	S9	Unknown	ICB				1 x		
		TC	**ZERO !**	**197714**		**13.43**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	10 30 2020 15:05:03	0.41	348588	1	753	2	-	-
	2	10 30 2020 15:08:29	ZERO !	171682	1	752	2	-	Yes
	3	10 30 2020 15:10:57	ZERO !	234740	1	751	2	-	Yes
	4	10 30 2020 15:13:31	ZERO !	193881	1	752	2	-	Yes
	5	10 30 2020 15:16:09	ZERO !	190555	1	752	2	-	Yes

Analysis Name 110720 - 176901 176902 176903.adb

Template Name 110620 - 176901 176902 176903.tdb
Method Name N / A
Operator TMG

Date Saturday, November 7, 2020
Time 11:35

Start Oven Temp. 756 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL0436 INSTRUMENT:TOCW
CCV0437 LCS0438 SPIKE0359

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0436 - 103020	Oct 30 2020, 11:40	20780031	100	1	0.99946	100 µl	Yes
	A2: 0		*A1: 205103.50438464*		*A0: 265064.880361966*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 11:46:36	4.41	1169329	1	758	2	-	-
2	11 7 2020 11:50:27	0	0	0	757	2	-	Yes
3	11 7 2020 11:54:29	0	0	0	758	2	-	Yes
4	11 7 2020 11:58:29	0	0	0	758	2	-	Yes
5	11 7 2020 12:02:30	0	0	0	757	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**47.59**	**10026365**	**1.92**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 12:07:22	48.91	10297200	1	758	2	-	Yes
2	11 7 2020 12:11:16	47.12	9928601	1	758	2	-	Yes
3	11 7 2020 12:14:33	47.57	10022784	1	758	2	-	Yes
4	11 7 2020 12:17:47	46.77	9856878	1	757	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	S5	Unknown	LCSW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**49.60**	**10438843**	**0.89**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 12:21:50	50.27	10574937	1	758	2	-	Yes
2	11 7 2020 12:25:52	49.24	10363350	1	758	2	-	Yes
3	11 7 2020 12:29:10	49.46	10409471	1	757	2	-	Yes
4	11 7 2020 12:32:28	49.45	10407616	1	757	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	2	Unknown	MBW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**72461**	**72.64**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 12:36:37	0.27	320664	1	757	2	-	-
2	11 7 2020 12:40:02	0	0	0	756	2	-	Yes
3	11 7 2020 12:44:03	ZERO !	67806	1	756	2	-	Yes
4	11 7 2020 12:46:28	ZERO !	116706	1	755	2	-	Yes
5	11 7 2020 12:48:57	ZERO !	105334	1	755	2	-	Yes

13	11	Unknown	495118	1 x

		TC	**1.19**	**508345**	**9.95**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11 7 2020 14:49:38	2.37	750547	1	752	2	-	-
	2	11 7 2020 14:53:07	1.33	538560	1	752	2	-	Yes
	3	11 7 2020 14:55:45	1.34	539743	1	752	2	-	Yes
	4	11 7 2020 14:58:26	1.25	521587	1	752	2	-	Yes
	5	11 7 2020 15:01:08	0.82	433490	1	752	2	-	Yes

---

14 12 Unknown 495123 1 x

		TC	**0.83**	**435509**	**9.39**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11 7 2020 15:04:33	1.79	631597	1	752	2	-	-
	2	11 7 2020 15:07:53	1.06	482019	1	752	2	-	Yes
	3	11 7 2020 15:10:29	0.89	447875	1	751	2	-	Yes
	4	11 7 2020 15:13:01	0.79	428016	1	750	2	-	Yes
	5	11 7 2020 15:15:32	0.58	384129	1	751	2	-	Yes

---

15 S1 Unknown CCV 1 x

		TC	**48.69**	**10251937**	**1.16**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11 7 2020 15:18:54	49.55	10427436	1	751	2	-	Yes
	2	11 7 2020 15:22:54	48.47	10206344	1	751	2	-	Yes
	3	11 7 2020 15:26:02	48.28	10166537	1	751	2	-	Yes
	4	11 7 2020 15:29:20	48.47	10207432	1	752	2	-	Yes

---

16 13 Unknown CCB 1 x

		TC	**ZERO !**	**170240**	**14.53**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11 7 2020 15:33:21	0.34	334381	1	752	2	-	-
	2	11 7 2020 15:36:37	ZERO !	159868	1	751	2	-	Yes
	3	11 7 2020 15:39:00	ZERO !	207191	1	751	2	-	Yes
	4	11 7 2020 15:41:29	ZERO !	159086	1	751	2	-	Yes
	5	11 7 2020 15:43:52	ZERO !	154816	1	751	2	-	Yes

---

17 14 Unknown 495124 1 x

		TC	**1.19**	**508747**	**7.16**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11 7 2020 15:47:10	2.03	682152	1	751	2	-	-
	2	11 7 2020 15:50:28	1.38	547314	1	751	2	-	Yes
	3	11 7 2020 15:53:00	1.11	493544	1	751	2	-	Yes
	4	11 7 2020 15:55:29	1.28	528561	1	751	2	-	Yes
	5	11 7 2020 15:57:59	0.98	465571	1	751	2	-	Yes

---

18 15 Unknown 495125 1 x

		TC	**ZERO !**	**288400**	**34.30**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11 7 2020 16:01:19	0.80	429605	1	752	2	-	Yes
	2	11 7 2020 16:04:29	0.04	272613	1	751	2	-	Yes
	3	11 7 2020 16:06:50	ZERO !	72168	1	751	2	-	-
	4	11 7 2020 16:10:50	ZERO !	251220	1	752	2	-	Yes
	5	11 7 2020 16:13:08	ZERO !	200162	1	751	2	-	Yes

---

19 16 Unknown DUP495125 1 x

		TC	**ZERO !**	**202874**	**12.99**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11 7 2020 16:16:24	0.26	317554	1	752	2	-	-
	2	11 7 2020 16:19:22	ZERO !	215667	1	751	2	-	Yes
	3	11 7 2020 16:21:35	ZERO !	221231	1	751	2	-	Yes
	4	11 7 2020 16:23:48	ZERO !	210740	1	751	2	-	Yes
	5	11 7 2020 16:25:59	ZERO !	163859	1	751	2	-	Yes

---

20 17 Unknown MSW495125 1 x

		TC	**49.66**	**10450966**	**0.72**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.

1	11 7 2020 16:29:02	49.89	10496805	1	752	2	-	Yes
2	11 7 2020 16:32:45	49.51	10419939	1	752	2	-	Yes
3	11 7 2020 16:35:47	50.03	10527270	1	752	2	-	Yes
4	11 7 2020 16:38:51	49.22	10359853	1	751	2	-	Yes

21 18 Unknown MSDW495125 1 x

TC	**49.39**	**10394992**	**0.73**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 16:42:43	49.69	10457562	1	752	2	-	Yes
2	11 7 2020 16:46:26	48.88	10290066	1	752	2	-	Yes
3	11 7 2020 16:49:27	49.36	10389923	1	751	2	-	Yes
4	11 7 2020 16:52:27	49.62	10442419	1	752	2	-	Yes

22 19 Unknown 495126 1 x

TC	**ZERO !**	**198492**	**88.12**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 16:56:19	0.28	323109	1	752	2	-	Yes
2	11 7 2020 16:59:13	ZERO !	-133938	1	751	2	-	-
3	11 7 2020 17:03:14	ZERO !	252498	1	752	2	-	Yes
4	11 7 2020 17:05:25	ZERO !	-60209	1	751	2	-	Yes
5	11 7 2020 17:09:02	0.07	278572	1	752	2	-	Yes

23 20 Unknown 495137 1 x

TC	**ZERO !**	**-249975**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 17:12:10	ZERO !	-68804	1	752	2	-	Yes
2	11 7 2020 17:16:48	ZERO !	-320519	1	752	2	-	Yes
3	11 7 2020 17:20:42	ZERO !	-319224	1	752	2	-	Yes
4	11 7 2020 17:24:43	ZERO !	-291353	1	752	2	-	Yes
5	11 7 2020 17:28:25	ZERO !	20328	1	752	2	-	-

24 21 Unknown 495139 1 x

TC	**ZERO !**	**-111715**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 17:33:20	ZERO !	-266672	1	753	2	-	Yes
2	11 7 2020 17:37:58	ZERO !	135135	1	753	2	-	-
3	11 7 2020 17:41:59	ZERO !	-309815	1	753	2	-	Yes
4	11 7 2020 17:45:55	ZERO !	129625	1	753	2	-	Yes
5	11 7 2020 17:49:52	0	0	0	753	2	-	Yes

25 22 Unknown 495140 1 x

TC	**ZERO !**	**-27071**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 17:54:45	ZERO !	-190984	1	754	2	-	Yes
2	11 7 2020 17:58:47	ZERO !	180018	1	753	2	-	-
3	11 7 2020 18:02:49	ZERO !	140367	1	754	2	-	Yes
4	11 7 2020 18:06:49	ZERO !	137187	1	753	2	-	Yes
5	11 7 2020 18:10:32	ZERO !	-194857	1	754	2	-	Yes

26 23 Unknown 495141 1 x

TC	**ZERO !**	**260260**	**52.45**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 18:14:56	ZERO !	236849	1	753	2	-	Yes
2	11 7 2020 18:17:46	ZERO !	172080	1	753	2	-	Yes
3	11 7 2020 18:19:52	0.95	459832	1	752	2	-	Yes
4	11 7 2020 18:21:59	ZERO !	-112368	1	752	2	-	-
5	11 7 2020 18:25:47	ZERO !	172282	1	752	2	-	Yes

27 S1 Unknown CCV 1 x

TC	**46.83**	**9869018**	**0.75**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 18:28:47	46.40	9781452	1	752	2	-	Yes
2	11 7 2020 18:32:50	46.89	9881773	1	753	2	-	Yes

3	11 7 2020 18:36:04	46.74	9851745	1	753	2	-	Yes
4	11 7 2020 18:39:13	47.27	9961104	1	753	2	-	Yes

28 24 Unknown CCB 1 x

	TC	**ZERO !**	**-251**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 18:43:18	ZERO !	-1007	1	753	2	-	Yes
2	11 7 2020 18:47:28	0	0	0	753	2	-	-
3	11 7 2020 18:51:30	0	0	0	753	2	-	Yes
4	11 7 2020 18:55:31	0	0	0	753	2	-	Yes
5	11 7 2020 18:59:33	0	0	0	753	2	-	Yes

29 25 Unknown 495142 1 x

	TC	**ZERO !**	**275959**	**3.40**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 19:04:27	0.62	392909	1	753	2	-	-
2	11 7 2020 19:07:33	0.05	275681	1	752	2	-	Yes
3	11 7 2020 19:09:57	0.09	284371	1	752	2	-	Yes
4	11 7 2020 19:12:18	ZERO !	262936	1	752	2	-	Yes
5	11 7 2020 19:14:35	0.08	280851	1	752	2	-	Yes

30 S2 Unknown CCV 1 x

	TC	**48.07**	**10123785**	**0.67**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 19:18:03	47.75	10057969	1	753	2	-	Yes
2	11 7 2020 19:22:03	47.92	10092911	1	753	2	-	Yes
3	11 7 2020 19:25:21	48.09	10128699	1	752	2	-	Yes
4	11 7 2020 19:28:32	48.51	10215562	1	752	2	-	Yes

31 26 Unknown CCB 1 x

	TC	**0.00**	**0**	**0.00**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 7 2020 19:32:44	ZERO !	114547	1	752	2	-	-
2	11 7 2020 19:35:48	0	0	0	752	2	-	Yes
3	11 7 2020 19:39:49	0	0	0	752	2	-	Yes
4	11 7 2020 19:43:51	0	0	0	752	2	-	Yes
5	11 7 2020 19:47:52	0	0	0	752	2	-	Yes

Analysis Name 111020 - 176996 176997 176999 177000.adb

Template Name	111020 - 176996 176997 176999 177000.tdb
Method Name	N / A
Operator	KMT
Date	Tuesday, November 10, 2020
Time	18:36
Start Oven Temp.	739 °C
Start Cooler Temp.	2 °C
Version	2.55 Release
Info	ICAL 0436 INST: TOCW CCV 0437 LCS 0438 SPIKE 0359

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0436 - 103020	Oct 30 2020, 11:40	20780031	100	1	0.99946	100 µl	Yes
	A2: 0		*A1: 205103.50438464*		*A0: 265064.880361966*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 18:47:31	0.03	271557	1	749	2	-	-
2	11 10 2020 18:50:51	0	0	0	749	2	-	Yes
3	11 10 2020 18:54:53	0	0	0	751	2	-	Yes
4	11 10 2020 18:58:54	0	0	0	754	2	-	Yes
5	11 10 2020 19:02:55	0	0	0	755	2	-	Yes

2	S1	Unknown	CCV	1 x

TC	**49.58**	**10432791**	**1.01**	**100 µl**	

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 19:07:47	49.97	10513447	1	757	2	-	Yes
2	11 10 2020 19:11:45	48.82	10278465	1	757	2	-	Yes
3	11 10 2020 19:14:55	49.74	10466696	1	758	2	-	Yes
4	11 10 2020 19:18:10	49.77	10472557	1	758	2	-	Yes

3	S5	Unknown	LCSW	1 x

TC	**49.49**	**10416679**	**0.83**	**100 µl**	

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 19:22:24	50.12	10544088	1	759	2	-	Yes
2	11 10 2020 19:26:30	49.23	10362280	1	759	2	-	Yes
3	11 10 2020 19:29:48	49.22	10360277	1	759	2	-	Yes
4	11 10 2020 19:33:10	49.41	10400073	1	759	2	-	Yes

4	2	Unknown	MBW	1 x

TC	**ZERO !**	**125980**	**15.17**	**100 µl**	

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 19:37:21	0.44	355846	1	760	2	-	-
2	11 10 2020 19:40:52	ZERO !	121044	1	760	2	-	Yes
3	11 10 2020 19:43:21	ZERO !	102614	1	759	2	-	Yes
4	11 10 2020 19:45:46	ZERO !	148025	1	759	2	-	Yes
5	11 10 2020 19:48:17	ZERO !	132237	1	759	2	-	Yes

5 3 Unknown 496500 1 x

	TC	1.54	582208	3.28		100 µl	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 19:51:33	2.49	775020	1	759	2	-	-
2	11 10 2020 19:55:01	1.62	598238	1	758	2	-	Yes
3	11 10 2020 19:57:43	1.57	588065	1	758	2	-	Yes
4	11 10 2020 20:00:25	1.57	588004	1	758	2	-	Yes
5	11 10 2020 20:03:00	1.41	554525	1	758	2	-	Yes

---

6 4 Unknown DUP496500 1 x

NOT USED

	TC	1.07	484230	7.95		100 µl	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 20:06:26	2.18	711178	1	758	2	-	-
2	11 10 2020 20:09:45	1.21	512640	1	758	2	-	Yes
3	11 10 2020 20:12:17	1.25	520421	1	758	2	-	Yes
4	11 10 2020 20:14:48	0.97	463009	1	758	2	-	Yes
5	11 10 2020 20:17:15	0.86	440851	1	758	2	-	Yes

---

7 5 Unknown MSW496500 1 x

	TC	50.86	10696775	1.76		100 µl	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 20:20:33	51.84	10898508	1	758	2	-	Yes
2	11 10 2020 20:24:27	51.41	10810272	1	757	2	-	Yes
3	11 10 2020 20:27:33	50.27	10574709	1	757	2	-	Yes
4	11 10 2020 20:30:39	49.92	10503614	1	757	2	-	Yes

---

8 6 Unknown MSDW496500 1 x

	TC	50.85	10694630	1.76		100 µl	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 20:34:33	52.12	10954761	1	757	2	-	Yes
2	11 10 2020 20:38:23	50.90	10704085	1	756	2	-	Yes
3	11 10 2020 20:41:35	50.35	10592317	1	756	2	-	Yes
4	11 10 2020 20:44:39	50.03	10527357	1	755	2	-	Yes

---

9 7 Unknown 496501 1 x

	TC	ZERO !	208627	6.33		100 µl	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 20:48:34	0.63	394788	1	756	2	-	-
2	11 10 2020 20:51:36	ZERO !	200539	1	755	2	-	Yes
3	11 10 2020 20:53:48	ZERO !	224459	1	755	2	-	Yes
4	11 10 2020 20:56:03	ZERO !	214183	1	754	2	-	Yes
5	11 10 2020 20:58:16	ZERO !	195330	1	754	2	-	Yes

---

10 8 Unknown 496502 1 x

	TC	ZERO !	-107276	0.00		100 µl	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 21:01:16	0.15	295317	1	754	2	-	-
2	11 10 2020 21:04:11	ZERO !	192091	1	754	2	-	Yes
3	11 10 2020 21:06:20	ZERO !	-191003	1	754	2	-	Yes
4	11 10 2020 21:10:16	ZERO !	-208981	1	754	2	-	Yes
5	11 10 2020 21:14:17	ZERO !	-221214	1	754	2	-	Yes

---

11 9 Unknown 496503 1 x

	TC	ZERO !	145861	7.20		100 µl	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 21:18:47	ZERO !	203064	1	754	2	-	-
2	11 10 2020 21:21:36	ZERO !	141529	1	753	2	-	Yes
3	11 10 2020 21:23:43	ZERO !	147342	1	753	2	-	Yes
4	11 10 2020 21:25:51	ZERO !	159654	1	753	2	-	Yes
5	11 10 2020 21:27:58	ZERO !	134921	1	753	2	-	Yes

---

12 10 Unknown 496504 1 x

	TC	ZERO !	155346	13.00		100 µl	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 21:30:55	ZERO !	177438	1	753	2	-	Yes

2	11 10 2020 21:33:43	ZERO !	-229253	1	753	2	-	-
3	11 10 2020 21:37:44	ZERO !	132889	1	753	2	-	Yes
4	11 10 2020 21:39:51	ZERO !	166264	1	753	2	-	Yes
5	11 10 2020 21:41:59	ZERO !	144796	1	752	2	-	Yes

13 11 Unknown 496507 1 x

TC **ZERO !** **-115068** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 21:44:56	ZERO !	211642	1	753	2	-	-
2	11 10 2020 21:47:47	ZERO !	-180850	1	753	2	-	Yes
3	11 10 2020 21:51:49	ZERO !	152980	1	753	2	-	Yes
4	11 10 2020 21:53:57	ZERO !	-226047	1	753	2	-	Yes
5	11 10 2020 21:57:59	ZERO !	-206355	1	753	2	-	Yes

14 12 Unknown 496508 1 x

TC **ZERO !** **-46873** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 22:02:51	ZERO !	-187493	1	753	2	-	Yes
2	11 10 2020 22:06:59	0	0	0	753	2	-	-
3	11 10 2020 22:10:59	0	0	0	753	2	-	Yes
4	11 10 2020 22:15:00	0	0	0	753	2	-	Yes
5	11 10 2020 22:19:02	0	0	0	753	2	-	Yes

15 S1 Unknown CCV 1 x

TC **49.69** **10457319** **0.30** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 22:23:54	49.63	10444619	1	753	2	-	Yes
2	11 10 2020 22:27:57	49.52	10421606	1	753	2	-	Yes
3	11 10 2020 22:31:21	49.88	10496356	1	752	2	-	Yes
4	11 10 2020 22:34:40	49.74	10466695	1	752	2	-	Yes

16 13 Unknown CCB 1 x

TC **ZERO !** **134362** **4.83** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 22:38:49	ZERO !	141617	1	752	2	-	Yes
2	11 10 2020 22:41:44	ZERO !	102291	1	751	2	-	-
3	11 10 2020 22:43:58	ZERO !	125969	1	751	2	-	Yes
4	11 10 2020 22:46:13	ZERO !	136050	1	751	2	-	Yes
5	11 10 2020 22:48:28	ZERO !	133815	1	751	2	-	Yes

17 14 Unknown 496542 1 x

TC **ZERO !** **263448** **12.02** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 22:51:36	0.38	343949	1	752	2	-	-
2	11 10 2020 22:54:46	0.11	288603	1	751	2	-	Yes
3	11 10 2020 22:57:15	0.12	290411	1	751	2	-	Yes
4	11 10 2020 22:59:37	ZERO !	249483	1	751	2	-	Yes
5	11 10 2020 23:01:57	ZERO !	225297	1	752	2	-	Yes

18 15 Unknown 496543 1 x

TC **ZERO !** **206304** **16.05** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 10 2020 23:05:05	0.26	317953	1	752	2	-	-
2	11 10 2020 23:08:08	ZERO !	241392	1	752	2	-	Yes
3	11 10 2020 23:10:25	ZERO !	213415	1	751	2	-	Yes
4	11 10 2020 23:12:39	ZERO !	161579	1	751	2	-	Yes
5	11 10 2020 23:14:49	ZERO !	208830	1	751	2	-	Yes

27 S1 Unknown CCV 1 x

	TC	48.58	10228698	0.99		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 11 2020 1:35:35	48.23	10157587	1	751	2	-	Yes
2	11 11 2020 1:39:32	48.10	10129563	1	751	2	-	Yes
3	11 11 2020 1:42:46	48.88	10289863	1	751	2	-	Yes
4	11 11 2020 1:45:58	49.11	10337779	1	751	2	-	Yes

28 24 Unknown CCB 1 x

	TC	ZERO !	136975	6.75		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 11 2020 1:50:13	ZERO !	193285	1	751	2	-	-
2	11 11 2020 1:53:15	ZERO !	133535	1	751	2	-	Yes
3	11 11 2020 1:55:26	ZERO !	126839	1	751	2	-	Yes
4	11 11 2020 1:57:39	ZERO !	138770	1	750	2	-	Yes
5	11 11 2020 1:59:57	ZERO !	148759	1	750	2	-	Yes

Analysis Name 111120 - 176998.adb

Template Name 111120 - 176998.tdb
Method Name N / A
Operator KMT

Date Wednesday, November 11, 2020
Time 19:13

Start Oven Temp. 734 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0436 INST: TOCW
CCV 0437 LCS 0438 SPIKE 0359

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0436 - 103020	Oct 30 2020, 11:40	20780031	100	1	0.99946	100 µl	Yes
	A2: 0		*A1: 205103.50438464*		*A0: 265064.880361966*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 11 2020 19:24:31	0	0	0	747	2	-	Yes
2	11 11 2020 19:29:10	0	0	0	748	2	-	Yes
3	11 11 2020 19:33:11	0	0	0	751	2	-	Yes
4	11 11 2020 19:37:12	0	0	0	753	2	-	Yes

2	S1	Unknown	CCV	1 x

TC		**49.08**	**10331526**	**1.71**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 11 2020 19:42:06	48.56	10225604	1	755	2	-	Yes
2	11 11 2020 19:45:58	48.15	10140483	1	756	2	-	Yes
3	11 11 2020 19:49:10	49.93	10506321	1	756	2	-	Yes
4	11 11 2020 19:52:24	49.68	10453696	1	757	2	-	Yes

4	2	Unknown	MBW-CCB	1 x

TC		**ZERO !**	**202251**	**12.78**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 11 2020 20:11:21	0.17	300511	1	760	2	-	-
2	11 11 2020 20:14:40	ZERO !	172178	1	759	2	-	Yes
3	11 11 2020 20:17:14	ZERO !	208219	1	759	2	-	Yes
4	11 11 2020 20:19:41	ZERO !	233969	1	758	2	-	Yes
5	11 11 2020 20:22:18	ZERO !	194638	1	758	2	-	Yes

5	3	Unknown	DUP496500	1 x

TC		**1.53**	**578736**	**6.34**		**100 µl**		

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	11 11 2020 20:25:39	2.63	804001	1	758	2	-	-
2	11 11 2020 20:29:05	1.72	617961	1	758	2	-	Yes
3	11 11 2020 20:31:47	1.53	579651	1	758	2	-	Yes
4	11 11 2020 20:34:28	1.57	587729	1	758	2	-	Yes
5	11 11 2020 20:37:12	1.29	529604	1	758	2	-	Yes

15	S1	Unknown	CCV				1 x		
		TC	**49.89**	**10498722**	**0.91**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11 11 2020 23:19:50	49.35	10385921	1	752	2	-	Yes
	2	11 11 2020 23:23:48	50.02	10524116	1	752	2	-	Yes
	3	11 11 2020 23:27:06	49.76	10471567	1	752	2	-	Yes
	4	11 11 2020 23:30:21	50.45	10613286	1	752	2	-	Yes

16	13	Unknown	CCB				1 x		
		TC	**ZERO !**	**156131**	**5.31**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	11 11 2020 23:34:31	0.17	300237	1	753	2	-	-
	2	11 11 2020 23:37:39	ZERO !	157667	1	752	2	-	Yes
	3	11 11 2020 23:39:57	ZERO !	145960	1	752	2	-	Yes
	4	11 11 2020 23:42:16	ZERO !	154830	1	751	2	-	Yes
	5	11 11 2020 23:44:34	ZERO !	166067	1	751	2	-	Yes

INORGANICS
LOGBOOK
DOCUMENTS

WCOD QSM Analytical Run
176665 on 11/18/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
157624	496544		10/29/2020	1100			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	COD QSM		GW	4	
		48/49-IDW								78785			
	497068		10/29/2020	1100					COD QSM				
		48/49-IDW			MSW	496544				78785			
	497069		10/29/2020	1100					COD QSM				
		48/49-IDW			MSDW	497068				78785			
	498285								WCOD QSM				
					CCV								
	498286								WCOD QSM				
					CCB								
	498287								WCOD QSM				
					CCV								
	498288								WCOD QSM				
					CCB								
	498289								WCOD QSM				
					CCV								
	498290								WCOD QSM				
					CCB								

10 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

PREP WORKSHEET 2
on 11/02/2020

Prep Batch: 78779

Date Prepped: 10 11-2-2020

Prepped By: ATS

Date Entered: _____

CCV1

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	497042 3	MBW	0	COD TOTAL			LIQUID				
	497043 2	LCSW	0	COD TOTAL			LIQUID				
157507	494130 4,5,6			COD TOTAL	SAPUTO CHEESE, INC.	POLISHER WATER	WASTE WATER	10/26/20	1200	11/8/20	1
157564	495600 7,8,9			COD DISSOLVED	MI-TECH	TW-3	GROUND WATER	10/28/20	1340	11/10/20	
	495601 10			COD DISSOLVED	MI-TECH	TW-4	GROUND WATER	10/28/20	1200	11/10/20	
	495605 11			COD DISSOLVED	MI-TECH	TW-8R	GROUND WATER	10/28/20	1430	11/10/20	
	495606 12			COD DISSOLVED	MI-TECH	TW-12	GROUND WATER	10/28/20	1245	11/10/20	
	495607 13			COD DISSOLVED	MI-TECH	TW-13	GROUND WATER	10/28/20	1130	11/10/20	
	495608 15			COD DISSOLVED	MI-TECH	DUP-1 (TW-3)	GROUND WATER	10/28/20	1345	11/10/20	
	495609 16			COD DISSOLVED	MI-TECH	FB-1	GROUND WATER	10/28/20	1230	11/10/20	
157578	495755 17	X50		COD TOTAL	ANDERSON CUSTOM PROC	WW	WASTE WATER	10/28/20	1400	11/10/20	
157606	496220 18			COD TOTAL	JUNEAU COUNTY LANDFILL	TANK WELL	GROUND WATER	10/29/20	1300	11/10/20	1
	496221 19			COD TOTAL	JUNEAU COUNTY LANDFILL	LYSIMETER	GROUND WATER	10/29/20	1300	11/10/20	1
	496223 20,21,22			COD TOTAL	JUNEAU COUNTY LANDFILL	#2 LEACHATE	LEACHATE	10/29/20	1300	11/10/20	1

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

PREP WORKSHEET 2
on 11/02/2020

Prep Batch: 78785
Date Prepped: 11-2-2020

CCV 23

Prepped By:
Date Entered:

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	49706225	MBW	0	COD QSM			LIQUID			
	497063 24	LCSW	0	COD QSM			LIQUID			
157510	494138 26,27,28			COD QSM	ECC	PAALF-PW19-102620	GROUND WATER	10/26/20 1045	11/8/20	2
	494144 29			COD QSM	ECC	PAALF-PW19-102620DUP	GROUND WATER	10/26/20 1045	11/8/20	2
	494146 30			COD QSM	ECC	PAALF-PW20-102620	GROUND WATER	10/26/20 1100	11/8/20	2
	494148 31			COD QSM	ECC	PAALF-PW17-102620	GROUND WATER	10/26/20 1225	11/8/20	2
	494156 32			COD QSM	ECC	PAALF-PW16-102620	GROUND WATER	10/26/20 1315	11/8/20	2
	494159 33			COD QSM	ECC	PAALF-PW12-102620	GROUND WATER	10/26/20 1500	11/8/20	2
	494161 34			COD QSM	ECC	PAALF-PW11-102620	GROUND WATER	10/26/20 1435	11/8/20	2
	494165 35			COD QSM	ECC	PAALF-PW12-102620RB	GROUND WATER	10/26/20 1510	11/8/20	2
157537	495127 36			COD QSM	WESTON SOLUTIONS, INC.	54IDW	GROUND WATER	10/26/20 1600	11/9/20	4
157571	495726 37			COD QSM	ECC	WWLF-WW10-102820	GROUND WATER	10/28/20 1020	11/10/20	2
	495736 38			COD QSM	ECC	WWLF-WW10-102820DUP	GROUND WATER	10/28/20 1020	11/10/20	2
	495739 39			COD QSM	ECC	WWLF-WW04R-102820	GROUND WATER	10/28/20 1040	11/10/20	2
	495741 40			COD QSM	ECC	WWLF-WW09-102820	GROUND WATER	10/28/20 1230	11/10/20	2
	495743 41			COD QSM	ECC	WWLF-WW05-102820	GROUND WATER	10/28/20 1150	11/10/20	2
	495745 42			COD QSM	ECC	WWLF-WW11R-102820	GROUND WATER	10/28/20 1355	11/10/20	2

PREP WORKSHEET 2
on 11/02/2020

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
157571	495749	43		COD QSM	ECC	WWLF-WW11R-102820RB	GROUND WATER	10/28/20	1415	11/10/20	2
157624	496544	44,45,46		COD QSM	WESTON SOLUTIONS, INC.	48/49-IDW	GROUND WATER	10/29/20	1100	11/11/20	4

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

COD Data Validation Checklist

		Method: Chemical Oxygen Demand EPA 410.4			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
176660 664 665	11/02/2020	ATJ	HLB	11/09/2020	Yes

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Does a digestion sheet accompany the data package?	---	Yes		Yes		
2. Does the digestion sheet include all reagent and standard prep log numbers?	---	Yes		Yes		
3. Was a passing calibration test applied to sample analysis?	≥0.995	Yes		Yes		
4. Was a passing ICV analyzed immediately after the calibration?	90-110%	Yes		Yes		
5. Was a passing ICB analyzed immediately after the ICV?	< |LOD|or client/project specific	Yes		Yes		
6. Were CCVs and CCB analyzed at the required frequency?	1 per 10 samples	Yes		Yes		
7. Did analyzed CCVs meet the required acceptance criteria?	90-110%	Yes		Yes		
8. Did analyzed CCBs meet the acceptance criteria?	< |LOD|or client/project specific	Yes		Yes		
9. Was a Method Blank prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes		Yes		
10. Was the method blank within acceptance criteria?	< |LOD|or client/project specific	Yes		Yes		
11. Was an LCS prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes		Yes		
12. Did the LCS meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits	Yes		Yes		
13. Was an MS and MSD prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes		Yes		
14. Did the MS/ MSD's meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits	Yes		Yes		

15. Did the MS/MSD's meet the RPD criteria?	Within in-house or contract/program specific limits		No		No	M Flagged
16. Was a Duplicate prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes		Yes		
17. Did the Duplicate meet the RPD criteria?	Within in-house or contract/program specific limits	Yes		Yes		
18. Were the samples digested within hold time?	28 days	Yes		Yes		
19. Was the max temperature(s) for reactor(s) documented?	---	Yes		Yes		
20. Was the method specifed temperature reached?		Yes		Yes		
21. Were reagents/standards used before expiration date?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		

CHEMICAL OXYGEN DEMAND REAGENT LOG

Prep Batch(es): 78779 78785
Date/Time/Analyst: 11-02-2020 10:00/13:00 ATJ
Run(s): 176660 664 665
Date/Time/Analyst: 11-02-2020 15:44:00 ATJ

Reagents:	W #	Exp Date
ICAL Preparation	49496	01/02/2021
CCV Preparation	49498	01/02/2021
LCS/ICV Preparation	49499	01/02/2021
Silver Sulfate Acid	48975	06/25/2021
Potassium Dichromate Dig Solution	49362	09/04/2021

Spiked Samples:	W #	Exp Date
Spiking Solution	49497	01/02/2021
Concentration 2000 mg/L		
Volume of Spike Used 0.2 mL		
Final Sample Volume 2.5 mL		
Final Spike Concentration 148.2 mg/L		

Date: 11/02/2020
Time: 10:00 / 13:00

COD DIGESTION BLOCK TEMPS

	A	B
Temperature (Max) 150°C ± 2°C:		

	E	D
Temperature (Max) 150°C ± 2°C:	148.7	

GENESYS 30 Instrument Run Logbook

Date	Start Time	End Time	Analyst	Test/Analyte	Calibration Test #	Run #/ Comments
11/02/20	14:00	14:30	ATJ	COD	CODW49500	176660 664 665

WANIONS IC QSM 5.0 Analytical Run
176516 on 11/12/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	501407						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICV							
		Chloride		ICV							
		Sulfate		ICV							
	501408						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICB							
		Chloride		ICB							
		Sulfate		ICB							
	497096						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	497097						WANIONS IC QSM 5.0				
		Chloride		LCSW				0			
		Nitrate Nitrogen		LCSW				0			
		Sulfate		LCSW				0			
	497098						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		MBW				0			
		Chloride		MBW				0			
		Sulfate		MBW				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
176516 on 11/12/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	497099							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	497100							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB				0			
		Chloride			CCB				0			
		Sulfate			CCB				0			
157538	495137		10/27/2020	0920		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
157538	495139		10/27/2020	1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Sulfate										
		Nitrate Nitrogen										
157538	495140		10/27/2020	1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
176516 on 11/12/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
157538	495141		10/27/2020	1120		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
157538	495142		10/27/2020	1230		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
	501086		10/27/2020	1230				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			DUP	495142			0			
		Chloride			DUP	495142			0			
		Sulfate			DUP	495142			0			
	501087		10/27/2020	1230				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSW	495142			0			
		Chloride			MSW	495142			0			
		Sulfate			MSW	495142			0			
	501088		10/27/2020	1230				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSDW	501087			0			
		Chloride			MSDW	501087			0			
		Sulfate			MSDW	501087			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
176516 on 11/12/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	501089							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	501090							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB				0			
		Chloride			CCB				0			
		Sulfate			CCB				0			
	501409							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV							
		Chloride			CCV							
		Sulfate			CCV							
	501410							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB							
		Chloride			CCB							
		Sulfate			CCB							
157538	495139		10/27/2020	1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***									
		Sulfate	***RERUN***									
		Nitrate Nitrogen	***RERUN***									

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
176516 on 11/12/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
157538	495140		10/27/2020 1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Sulfate	***RERUN***								
	501411						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV							
		Chloride		CCV							
		Sulfate		CCV							
	501412						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB							
		Chloride		CCB							
		Sulfate		CCB							

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

FWC37-01 Data Review Checklist

		Method: Anions by Ion Chromatography 300.0/9056		Independent Data Review Checklist		Instrument: DX120-System 2
LIMS Run #(s)	**Analysis Date**		**Analyst/Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes/No)**
176492 176493 176503 176516 176517 176518	10/27/2020		TMG	RLD	11/09/2020	Yes

Instructions: Complete one checklist per *analytical sequence*. Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments**
		Yes	**No**	**Yes**	**No**	**(Indicate reference to an attachment if necessary)**
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3	Yes		Yes		
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits		No		No	Affected sample results were "M" flagged
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)		No		No	Affected sample results were "Y" flagged
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits	Yes		Yes		
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments: _____

Dionex Run Log - System 2

Start Date	Start Time	End Date	End Time	Analyst	Lims Run #(s)	Calibration ID#	Data File	CCV ID's	LCS ID's	Spike ID's	Total Cond.	Pressure (Mpa)	Flow (mL/min)	Comments	Reviwed by/Date
08/28/20	12:06	08/31/20	11:07	TMG	174499 174510 174533	IC3033	082820 -	IC3240 IC3243	IC3241 IC3244	IC3242 IC3245	18.1	2069	0.96	IC3223	RLD 10/01/2020
08/31/20	12:16	09/01/20	12:42	TMG	174500 174565	IC3033	083120 -	IC3240 IC3243	IC3241 IC3244	IC3242 IC3245	19	2056	0.96	IC3223	RLD 10/01/2020
09/01/20	14:45	09/01/20	17:27	TMG	174584	IC3033	090120 -	IC3240 IC3243	IC3241 IC3244	IC3242 IC3245	18.8	2051	0.96	IC3223	RLD 10/01/2020
09/02/20	14:42	09/03/20	10:09	TMG	174638	IC3033	090220 -	IC3240 IC3243	IC3241 IC3244	IC3242 IC3245	18.6	2077	0.96	IC3223	RLD 10/01/2020
09/03/20	15:10	09/04/20	11:23	TMG	174686 174687 174688 174689	IC3033	090320 -	IC3246 IC3249	IC3247 IC3250	IC3248 IC3251	18.5	2056	0.96	IC3223	RLD 10/01/2020
09/04/20	11:56	09/09/20	11:14	TMG	174710 174711	ic3033	090420 -	IC3246 IC3249	IC3247 IC3250	IC3248 IC3251	18.2	2157	0.96	IC3223	RLD 10/01/2020
09/10/20	10:41	09/11/20	09:26	TMG	174821 174822	IC3033	091020 -	IC3256 IC3259	IC3257 IC3260	IC3258 IC3261	18.4	1978	0.96	IC3223	RLD 10/01/2020
09/11/20	14:20	09/14/20	13:48	TMG	174868 174869	IC3033	091120 -	IC3256 IC3259	IC3257 IC3260	IC3258 IC3261	18.2	2015	0.97	IC3223	RLD 10/01/2020
09/14/20	14:13	09/15/20	12:31	TMG	174912 174913 174950	IC3033	091420 -	IC3256 IC3259	IC3257 IC3260	IC3258 IC3261	18.9	2100	0.97	IC3223	RLD 10/01/2020
09/17/20	8:09	09/17/20	23:40	TMG	174994 175015 175068	IC3033	091620 -	IC3264 IC3267	IC3265 IC3268	IC3266 IC3269	18.9	2115	0.97	IC3223	RLD 10/01/2020
09/18/20	12:57	09/18/20	19:22	TMG	175115	IC3033	091820 -	IC3264 IC3267	IC3265 IC3268	IC3266 IC3269	18.3	2241	0.97	IC3223	RLD 10/01/2020
09/21/20	11:07	09/22/20	11:07	TMG	175126 175180	IC3033	092120 -	IC3264 IC3267	IC3265 IC3268	IC3266 IC3269	18.2	2177	0.96	IC3223	RLD 10/01/2020
09/22/20	15:04	09/23/20	04:14	TMG	175233 175235	IC3033	092220 -	IC3264 IC3273	IC3265 IC3274	IC3266 IC3275	18.3	2150	0.96	IC3223	RLD 10/01/2020
09/23/20	11:07	09/24/20	06:22	TMG	175253 175254	IC3033	092320 -	IC3264 IC3273	IC3265 IC3274	IC3266 IC3275	18.2	2155	0.96	IC3223	RLD 10/01/2020
09/24/20	12:02	09/28/20	09:13	TMG	175340 175341	IC3033	092420 -	IC3276 IC3279	IC3277 IC3280	IC3278 IC3281	18.3	2259	0.95	IC3223	RLD 10/01/2020
09/25/20	12:14	09/25/20	23:03	TMG	174762 175367	IC3033	092520 -	IC3276 IC3279	IC3277 IC3280 IC3272	IC3278 IC3281	18.3	2200	0.95	IC3223	RLD 10/01/2020
09/28/20	12:27	09/29/20	09:54	TMG	175431 175432	IC3033	092820 -	IC3276 IC3288	IC3277 IC3289	IC3278 IC3290	18.5	2121	0.95	IC3223	RLD 10/01/2020
09/29/20	11:39	09/30/20	11:37	TMG	175465 175466	IC3033	092920 -	IC3276 IC3288	IC3277 IC3289	IC3278 IC3290	18.5	2183	0.95	IC3223	RLD 10/01/2020
10/01/20	11:52	10/02/20	09:16	TMG	175549 175550	IC3033	100120 -	IC3294 IC3297	IC3295 IC3298	IC3296 IC3299	18.1	2111	0.95	IC3223	
10/05/20	14:35	10/06/20	09:55	TMG	175668	IC3033	100520 -	IC3294 IC3297	IC3295 IC3298	IC3296 IC3299	18.4	2254	0.95	IC3223	
10/07/20	12:07	10/08/20	10:09	TMG	175769 175770 175771	IC3033	100720 -	IC3294 IC3297	IC3295 IC3298	IC3296 IC3299	18.1	2074	0.95	IC3300	
10/12/20	12:36	10/13/20	10:44	TMG	175934 175935	IC3033	101120 -	IC3301 IC3304	IC3302 IC3305	IC3303 IC3306	18.4	2029	0.97	IC3300	
10/14/20	15:20	10/15/20	11:16	TMG	176037 176038	IC3033	101420 -	IC3310 IC3313	IC3311 IC3314	IC3312 IC3315	18.2	2015	0.97	IC3300	
10/16/20	13:41	10/19/20	10:01	TMG	176122	IC3033	101620 -	IC3310 IC3313	IC3311 IC3314	IC3312 IC3315	18.9	2073	0.94	IC3300	
10/19/20	11:20	10/20/20	23:28	TMG	176161 176162	IC3033	101920 -	IC3310 IC3313	IC3311 IC3314	IC3312 IC3315	18.6	2052	0.94	IC3300	
10/21/20	10:36	10/22/20	10:15	TMG	176266 176267	IC3033	102120 -	IC3310 IC3316	IC3311 IC3317	IC3312 IC3318	18.2	2240	0.92	IC3300	
10/22/20	14:17	10/26/20	11:51	TMG	176320 176333	IC3033	102220 -	IC3319 IC3322	IC3320 IC3323	IC3321 IC3324	18.7	2257	0.97	IC3300	
10/23/20	12:05	10/27/20	13:16	TMG	176399 176402 176403	IC3033	102320 -	IC3319 IC3322	IC3320 IC3323	IC3321 IC3324	18.3	2316	0.97	IC3300	
10/26/20	13:55	10/27/20	09:51	TMG	176431 176432	IC3033	102620 -	IC3319 IC3322	IC3320 IC3323	IC3321 IC3324	18.4	2396	0.96	IC3300	
10/27/20	14:16	10/28/20	23:31	TMG	176492 176493 176503 176516 176517 176518	IC3033	102720 -	IC3319 IC3328	IC3320 IC3329	IC3321 IC3330	18.5	2505	0.98	IC3300	
10/29/20	12:33	11/02/20	17:14	TMG	176600 176604 176633 176634 176644 176700	IC3033	102920 -	IC3331 IC3334	IC3332 IC3335	IC3333 IC3336	18.5	2482	0.98	IC3300	
11/04/20	10:40	11/04/20	20:02	TMG	176714 176715	IC3033	110320 -	IC3331 IC3338	IC3332 IC3339	IC3333 IC3340	18.4	2452	0.98	IC3300	
11/05/20	12:00	11/06/20	09:39	TMG	176803 176847 176875	IC3033	110520 -	IC3341 IC3344	IC3342 IC3345	IC3343 IC3346	18.5	2562	0.98	IC3300	
11/06/20	13:49	11/07/20	17:14	TMG	176907	IC3033	110620 -	IC3341 IC3344	IC3342 IC3345	IC3343 IC3346	18.6	2461	0.98	IC3300	
11/09/20				TMG	IC3352	IC3352	110920 -	IC3341 IC3353	IC3342 IC3354	IC3343 IC3355	18.5	2562	1	IC3300	
11/10/20	11:56	11/10/20	22:12	TMG	176980 176966 176965	IC3352	111020 -	IC3341 IC3353	IC3342 IC3354	IC3343 IC3355	18.6	2317	0.96	IC3300	
11/11/20				TMG	177037 177038	IC3352	111120 -	IC3341 IC3353	IC3342 IC3354	IC3343 IC3355	19	2230	0.95	IC3300	

WANIONS IC QSM 5.0 Analytical Run
176633 on 12/02/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	497149							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	497151							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB				0			
		Chloride			CCB				0			
		Sulfate			CCB				0			
157621	496502		10/28/2020	1210		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
157621	496503		10/28/2020	1320		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
157621	496504		10/28/2020	1500		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
176633 on 12/02/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
157621	496507		10/28/2020	1500		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
157621	496508		10/28/2020	1530		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
157621	496500		10/28/2020	0855		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride			*							
		Nitrate Nitrogen			*							
		Sulfate			*							
	497154		10/28/2020	0855				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			DUP	496500			0			
		Chloride			DUP	496500			0			
		Sulfate			DUP	496500			0			
	497156		10/28/2020	0855				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSW	496500			0			
		Chloride			MSW	496500			0			
		Sulfate			MSW	496500			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
176633 on 12/02/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	497158		10/28/2020 0855				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSDW 497156				0			
		Chloride		MSDW 497156				0			
		Sulfate		MSDW 497156				0			
157621	496501		10/28/2020 1025		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
	497161						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	497163						WANIONS IC QSM 5.0				
		Chloride		LCSW				0			
		Nitrate Nitrogen		LCSW				0			
		Sulfate		LCSW				0			
	497165						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		MBW				0			
		Chloride		MBW				0			
		Sulfate		MBW				0			
	498835						WANIONS IC QSM 5.0				
		Sulfate		CCV							

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
176633 on 12/02/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	498836						WANIONS IC QSM 5.0				
		Sulfate		CCB							
157621	496500		10/28/2020 0855		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***	*							
		Nitrate Nitrogen	***RERUN***	*							
		Sulfate	***RERUN***	*							
	497154		10/28/2020 0855				ANIONS IC QSM 5.0				
		Nitrate Nitrogen	***RERUN***	DUP	496500			0			
		Chloride	***RERUN***	DUP	496500			0			
		Sulfate	***RERUN***	DUP	496500			0			
	497156		10/28/2020 0855				ANIONS IC QSM 5.0				
		Nitrate Nitrogen	***RERUN***	MSW	496500			0			
		Chloride	***RERUN***	MSW	496500			0			
		Sulfate	***RERUN***	MSW	496500			0			
	497158		10/28/2020 0855				ANIONS IC QSM 5.0				
		Nitrate Nitrogen	***RERUN***	MSDW	497156			0			
		Chloride	***RERUN***	MSDW	497156			0			
		Sulfate	***RERUN***	MSDW	497156			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
176633 on 12/02/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
157621	496501		10/28/2020 1025		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Sulfate	***RERUN***								
	498837						WANIONS IC QSM 5.0				
		Sulfate		CCV							
	498838						WANIONS IC QSM 5.0				
		Sulfate		CCB							

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
176644 on 12/02/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	497120							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	497121							WANIONS IC QSM 5.0				
		Chloride			LCSW				0			
		Nitrate Nitrogen			LCSW				0			
		Sulfate			LCSW				0			
	497122							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			MBW				0			
		Chloride			MBW				0			
		Sulfate			MBW				0			
157624	496542		10/29/2020	1015		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
157624	496543		10/29/2020	0845		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
176644 on 12/02/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	497388		10/29/2020 0845				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		DUP 496543							
		Chloride		DUP 496543							
		Sulfate		DUP 496543							
	497384						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV							
		Chloride		CCV							
		Sulfate		CCV							
	497387						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB							
		Chloride		CCB							
		Sulfate		CCB							
	497389		10/29/2020 0845				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSW 496543							
		Chloride		MSW 496543							
		Sulfate		MSW 496543							
	498844		10/29/2020 0845				ANIONS IC QSM 5.0				
		Sulfate		MSDW 497389							
		Chloride		MSDW 497389							
		Nitrate Nitrogen		MSDW 497389							

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
176644 on 12/02/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	498845						WANIONS IC QSM 5.0				
		Chloride		CCV							
		Sulfate		CCV							
	498846						WANIONS IC QSM 5.0				
		Chloride		CCB							
		Sulfate		CCB							
	498848						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV							
	498849						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB							
	497389		10/29/2020 0845				ANIONS IC QSM 5.0				
		Nitrate Nitrogen	***RERUN***	MSW 496543							
		Chloride	***RERUN***	MSW 496543							
		Sulfate	***RERUN***	MSW 496543							
	498844		10/29/2020 0845				ANIONS IC QSM 5.0				
		Sulfate	***RERUN***	MSDW 497389							
		Chloride	***RERUN***	MSDW 497389							
		Nitrate Nitrogen	***RERUN***	MSDW 497389							
	497386						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV							
	497385						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB							

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
176644 on 12/02/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

FWC37-01 Data Review Checklist

	Method: Anions by Ion Chromatography 300.0/9056	Independent Data Review Checklist	Instrument: DX120-System 2

LIMS Run #(s)	Analysis Date	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes/No)
176600 17664 176633 176634 176644	10/29/2020	TMG			

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3		No		No	
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits		No		No	Affected sample results were "M" flagged
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits		No		No	Affected sample results were "Y" flagged
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

Dionex Run Log - System 2

Start Date	Start Time	End Date	End Time	Analyst	Lims Run #(s)	Calibration ID#	Data File	CCV ID's	LCS ID's	Spike ID's	Total Cond.	Pressure (Mpa)	Flow (mL/min)	Comments	Reviwed by/Date
08/28/20	12:06	08/31/20	11:07	TMG	174499 174510 174533	IC3033	082820 -	IC3240 IC3243	IC3241 IC3244	IC3242 IC3245	18.1	2069	0.96	IC3223	RLD 10/01/2020
08/31/20	12:16	09/01/20	12:42	TMG	174500 174565	IC3033	083120 -	IC3240 IC3243	IC3241 IC3244	IC3242 IC3245	19	2056	0.96	IC3223	RLD 10/01/2020
09/01/20	14:45	09/01/20	17:27	TMG	174584	IC3033	090120 -	IC3240 IC3243	IC3241 IC3244	IC3242 IC3245	18.8	2051	0.96	IC3223	RLD 10/01/2020
09/02/20	14:42	09/03/20	10:09	TMG	174638	IC3033	090220 -	IC3240 IC3243	IC3241 IC3244	IC3242 IC3245	18.6	2077	0.96	IC3223	RLD 10/01/2020
09/03/20	15:10	09/04/20	11:23	TMG	174686 174687 174688 174689	IC3033	090320 -	IC3246 IC3249	IC3247 IC3250	IC3248 IC3251	18.5	2056	0.96	IC3223	RLD 10/01/2020
09/04/20	11:56	09/09/20	11:14	TMG	174710 174711	ic3033	090420 -	IC3246 IC3249	IC3247 IC3250	IC3248 IC3251	18.2	2157	0.96	IC3223	RLD 10/01/2020
09/10/20	10:41	09/11/20	09:26	TMG	174821 174822	IC3033	091020 -	IC3256 IC3259	IC3257 IC3260	IC3258 IC3261	18.4	1978	0.96	IC3223	RLD 10/01/2020
09/11/20	14:20	09/14/20	13:48	TMG	174868 174869	IC3033	091120 -	IC3256 IC3259	IC3257 IC3260	IC3258 IC3261	18.2	2015	0.97	IC3223	RLD 10/01/2020
09/14/20	14:13	09/15/20	12:31	TMG	174912 174913 174950	IC3033	091420 -	IC3256 IC3259	IC3257 IC3260	IC3258 IC3261	18.9	2100	0.97	IC3223	RLD 10/01/2020
09/17/20	8:09	09/17/20	23:40	TMG	174994 175015 175068	IC3033	091620 -	IC3264 IC3267	IC3265 IC3268	IC3266 IC3269	18.9	2115	0.97	IC3223	RLD 10/01/2020
09/18/20	12:57	09/18/20	19:22	TMG	175115	IC3033	091820 -	IC3264 IC3267	IC3265 IC3268	IC3266 IC3269	18.3	2241	0.97	IC3223	RLD 10/01/2020
09/21/20	11:07	09/22/20	11:07	TMG	175126 175180	IC3033	092120 -	IC3264 IC3267	IC3265 IC3268	IC3266 IC3269	18.2	2177	0.96	IC3223	RLD 10/01/2020
09/22/20	15:04	09/23/20	04:14	TMG	175233 175235	IC3033	092220 -	IC3264 IC3273	IC3265 IC3274	IC3266 IC3275	18.3	2150	0.96	IC3223	RLD 10/01/2020
09/23/20	11:07	09/24/20	06:22	TMG	175253 175254	IC3033	092320 -	IC3264 IC3273	IC3265 IC3274	IC3266 IC3275	18.2	2155	0.96	IC3223	RLD 10/01/2020
09/24/20	12:02	09/28/20	09:13	TMG	175340 175341	IC3033	092420 -	IC3276 IC3279	IC3277 IC3280	IC3278 IC3281	18.3	2259	0.95	IC3223	RLD 10/01/2020
09/25/20	12:14	09/25/20	23:03	TMG	174762 175367	IC3033	092520 -	IC3276 IC3279	IC3277 IC3280 IC3272	IC3278 IC3281	18.3	2200	0.95	IC3223	RLD 10/01/2020
09/28/20	12:27	09/29/20	09:54	TMG	175431 175432	IC3033	092820 -	IC3276 IC3288	IC3277 IC3289	IC3278 IC3290	18.5	2121	0.95	IC3223	RLD 10/01/2020
09/29/20	11:39	09/30/20	11:37	TMG	175465 175466	IC3033	092920 -	IC3276 IC3288	IC3277 IC3289	IC3278 IC3290	18.5	2183	0.95	IC3223	RLD 10/01/2020
10/01/20	11:52	10/02/20	09:16	TMG	175549 175550	IC3033	100120 -	IC3294 IC3297	IC3295 IC3298	IC3296 IC3299	18.1	2111	0.95	IC3223	
10/05/20	14:35	10/06/20	09:55	TMG	175668	IC3033	100520 -	IC3294 IC3297	IC3295 IC3298	IC3296 IC3299	18.4	2254	0.95	IC3223	
10/07/20	12:07	10/08/20	10:09	TMG	175769 175770 175771	IC3033	100720 -	IC3294 IC3297	IC3295 IC3298	IC3296 IC3299	18.1	2074	0.95	IC3300	
10/12/20	12:36	10/13/20	10:44	TMG	175934 175935	IC3033	101120 -	IC3301 IC3304	IC3302 IC3305	IC3303 IC3306	18.4	2029	0.97	IC3300	
10/14/20	15:20	10/15/20	11:16	TMG	176037 176038	IC3033	101420 -	IC3310 IC3313	IC3311 IC3314	IC3312 IC3315	18.2	2015	0.97	IC3300	
10/16/20	13:41	10/19/20	10:01	TMG	176122	IC3033	101620 -	IC3310 IC3313	IC3311 IC3314	IC3312 IC3315	18.9	2073	0.94	IC3300	
10/19/20	11:20	10/20/20	23:28	TMG	176161 176162	IC3033	101920 -	IC3310 IC3313	IC3311 IC3314	IC3312 IC3315	18.6	2052	0.94	IC3300	
10/21/20	10:36	10/22/20	10:15	TMG	176266 176267	IC3033	102120 -	IC3310 IC3316	IC3311 IC3317	IC3312 IC3318	18.2	2240	0.92	IC3300	
10/22/20	14:17	10/26/20	11:51	TMG	176320 176333	IC3033	102220 -	IC3319 IC3322	IC3320 IC3323	IC3321 IC3324	18.7	2257	0.97	IC3300	
10/23/20	12:05	10/27/20	13:16	TMG	176399 176402 176403	IC3033	102320 -	IC3319 IC3322	IC3320 IC3323	IC3321 IC3324	18.3	2316	0.97	IC3300	
10/26/20	13:55	10/27/20	09:51	TMG	176431 176432	IC3033	102620 -	IC3319 IC3322	IC3320 IC3323	IC3321 IC3324	18.4	2396	0.96	IC3300	
10/27/20	14:16	10/28/20	23:31	TMG	176492 176493 176503 176516 176517 176518	IC3033	102720 -	IC3319 IC3328	IC3320 IC3329	IC3321 IC3330	18.5	2505	0.98	IC3300	
10/29/20	12:33	11/02/20	17:14	TMG	176600 176604 176633 176634 176644 176700	IC3033	102920 -	IC3331 IC3334	IC3332 IC3335	IC3333 IC3336	18.5	2482	0.98	IC3300	
11/04/20	10:40	11/04/20	20:02	TMG	176714 176715	IC3033	110320 -	IC3331 IC3338	IC3332 IC3339	IC3333 IC3340	18.4	2452	0.98	IC3300	
11/05/20	12:00	11/06/20	09:39	TMG	176803 176847 176875	IC3033	110520 -	IC3341 IC3344	IC3342 IC3345	IC3343 IC3346	18.5	2562	0.98	IC3300	
11/06/20	13:49	11/07/20	17:14	TMG	176907	IC3033	110620 -	IC3341 IC3344	IC3342 IC3345	IC3343 IC3346	18.6	2461	0.98	IC3300	
11/09/20				TMG	IC3352	IC3352	110920 -	IC3341 IC3353	IC3342 IC3354	IC3343 IC3355	18.5	2562	1	IC3300	
11/10/20	11:56	11/10/20	22:12	TMG	176980 176966 176965	IC3352	111020 -	IC3341 IC3353	IC3342 IC3354	IC3343 IC3355	18.6	2317	0.96	IC3300	
11/11/20				TMG	177037 177038	IC3352	111120 -	IC3341 IC3353	IC3342 IC3354	IC3343 IC3355	19	2230	0.95	IC3300	

WPH Analytical Run
176643 on 11/18/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
157624	496544	48/49-IDW	10/29/2020 1100		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	PH		GW	4	
	496857	48/49-IDW	10/29/2020 1100	DUP 496544			PH	0			

15 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

pH Data Validation Checklist

		Method: pH EPA 150.1, SM 4500-H+B, EPA 9040C, EPA 9045D			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
176643	10/30/2020	HLB	etk	11/04/2020	yes

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Was the calibration slope recorded on the bench sheet?	95-110%	Yes		Yes		
2. Were reagents/standards used before expiration date?	---	Yes		Yes		
3. Were duplicates analyzed at the appropriate frequency?	1 every 20 samples of the same matrix	Yes		Yes		
4. Were the duplicates within acceptable limits?	Differ by $\leq$ 0.10 pH units	Yes		Yes		
5. Are all samples on the job lists accounted for?	---	Yes		Yes		
6. Were SM 4500-H+B samples bracketed by calibration buffer 7?	Every 10 samples, Differ by $\leq$ 0.10 pH units	Yes		Yes		

Mettler Toledo (Easy Seven) Instrument Run Logbook

Date	Start Time	End Time	Analyst	Analyte	Lims Run #(s)
10/30/20	15:00	15:30	HLB	PH	176643
11/02/20	14:15	14:30	RLB	PH	176701
11/03/20	13:56	14:01	LAY	PH	176725
11/03/20	15:05	15:10	HLB	PH	176727
11/04/20	15:45	16:30	SRW	PH	176804
11/05/20	16:00	16:25	HLB	PH	176878
11-6-202	14:00	14:20	HLB	PH	176909
11/09/20	14:15	14:35	RLB	PH	176954
11/10/20	14:06	14:16	LAY	PH	176986
11/11/20	15:00	15:30	SRW	PH	177052
11/16/20	14:15	14:25	RLB	PH	177197
11/17/20	14:00	14:04	LAY	PH	177237

Mettler Toledo (Easy Seven) pH Calibration & Maintenance Run Logbook

		pH Buffer Reference ID #			3 Point Calibration						
Date	Analyst	pH 7	pH 4	pH 10	1st Buffer	2nd Buffer	3rd Buffer	Slope (95-110%)	Temp ° C	Comments	Review
10/27/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.06	97%	19.8		
10/28/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.06	98%	19.7		
10/29/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.06	98%	19.7		
10/30/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.06	97%	19.7		
11/02/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.06	98%	19.8		
11/03/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.06	98%	19.8		
11/04/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.06	98%	19.8		
11/05/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.06	98%	19.6		
11/06/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.07	98%	19		
11/09/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.06	97%	20.3		
11/10/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.07	96%	19		
11/11/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.03	4	10.08	99%	18.6		
11/12/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.03	4	10.08	97%	18.3		
11/13/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.03	4	10.09	96%	17.7		
11/16/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.03	4	10.09	96%	17.8		
11/17/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.03	4	10.09	97%	17.6		
11/18/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.03	4	10.09	97%	17.9		
11/19/20	RLB	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.07	98%	18.8		
11/20/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.07	96%	19.3		
11/23/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.03	4	10.08	97%	18.4		
11/24/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.03	4	10.09	97%	17.9		
11/25/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.03	4	10.09	98%	17.5		
11/30/20	LAY	WC70 EX: 02/13/21	WC38 EX: 12/30/20	WC105 EX:05/04/21	7.02	4	10.06	97%	19.9		

WORGANIC CARBON QSM 5.0 Analytical Run
176903 on 11/11/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	502713						WORGANIC CARBON QSM 5.0				
				ICV							
	502714						WORGANIC CARBON QSM 5.0				
				ICB							
	502304						WORGANIC CARBON QSM 5.0				
				CCV				0			
	502305						WORGANIC CARBON QSM 5.0				
				LCSW				0			
	502306						WORGANIC CARBON QSM 5.0				
				MBW				0			
	495118		10/26/2020 0940				ORGAN CARBON T QSM 5.0		GW		4
		54MW13									
	495123		10/26/2020 0940				ORGAN CARBON T QSM 5.0		GW		4
		54TW13									
	502307						WORGANIC CARBON QSM 5.0				
				CCV				0			
	502308						WORGANIC CARBON QSM 5.0				
				CCB				0			
	495124		10/26/2020 1150				ORGAN CARBON T QSM 5.0		GW		4
		54MW10									
	495125		10/26/2020 1325				ORGAN CARBON T QSM 5.0		GW		4
		54MW12		Designated MS/MSD							
	502309		10/26/2020 1325				ORGAN CARBON T QSM 5.0				
		54MW12		DUP 495125				0			
	502310		10/26/2020 1325				ORGAN CARBON T QSM 5.0				
		54MW12		MSW 495125				0			
	502311		10/26/2020 1325				ORGAN CARBON T QSM 5.0				
		54MW12		MSDW 502310				0			
	495126		10/26/2020 1440				ORGAN CARBON T QSM 5.0		GW		4
		54MW1									
157538	495137		10/27/2020 0920		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW		4
		13MW4									
157538	495139		10/27/2020 1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW		4
		13MW3									

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WORGANIC CARBON QSM 5.0 Analytical Run
176903 on 11/11/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
157538	495140	13TW3	10/27/2020 1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
157538	495141	49MW04	10/27/2020 1120		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
	502312						WORGANIC CARBON QSM 5.0				
				CCV				0			
	502313						WORGANIC CARBON QSM 5.0				
				CCB				0			
157538	495142	13MW2	10/27/2020 1230		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
	502314						WORGANIC CARBON QSM 5.0				
				CCV				0			
	502315						WORGANIC CARBON QSM 5.0				
				CCB				0			

24 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

FWC39-01 Data Review Checklist

	Method: Total Organic Carbon Method 415.1/9060	Independent Data Review Checklist	Instrument: TOCW

LIMS Run #(s)	Analysis Date	Analyst / Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes or No)
176901 176902 176903	11/07/2020	TMG	RLD	11/11/2020	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples preserved prior to analysis and analyzed within hold time?	pH <2, 28 days or program/project specific	Yes		Yes		
2. Was the calibration curve performed using the required number of standards?	3 standards and a blank	Yes		Yes		
3. Was the correlation coefficient acceptable?	r ≥ .995	Yes		Yes		
4. Were the ICV and ICB analyzed?	---	Yes		Yes		
5. Was the ICV result acceptable?	90 – 110 % Rec. or contract/program specific	Yes		Yes		
6. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
7. Was an LCS & MB run with each batch of samples?	One each per analytical batch or contract/program specific frequency.	Yes		Yes		
8. Was the LCS recovery acceptable?	In-house derived or contract/program specific limits.	Yes		Yes		
9. Were the MB results acceptable?	< LOD or project/ program specific (<1/2 RL for DOD-QSM).	Yes		Yes		
10. Were the CCV's analyzed at the required frequency?	Beginning, after every 10 sample, & at the end of a sequence.	Yes		Yes		
11. Were the CCB's analyzed at the required frequency?	After each CCV (unless MB analyzed after CCV)	Yes		Yes		
12. Were the CCV recoveries acceptable?	90 – 110 % Rec. or project/ program specific	Yes		Yes		
13. Were the CCB results acceptable?	< LOD or project/ program specific	Yes		Yes		

14. Were all positive results that were reported within the calibration curve?	---	Yes		Yes		
15. Was an MS and MSD analyzed at the required frequency?	1 / 20 of the same matrix or project/ program specific	Yes		Yes		
16. Were the MS and MSD recoveries acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
17. Was the RPD between the MS and MSD acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
18. Was a Duplicate analyzed at the required frequency?	1 per 20 of the same matrix or contract/program specific	Yes		Yes		
19. Was the RPD between the Duplicate (if valid) and the sample acceptable?	In-house derived or project/ program specific limits (QSM samples, duplicate only valid when sample result ≥5x the LOQ)	Yes		Yes		
20. Are all samples on the job lists accounted for?	---	Yes		Yes		
21. Is the standards prep log numbers noted on the analytical report?	---	Yes		Yes		
22. Were post analysis corrections addressed and/or the Audit Trail function turned on (if available)?	Correction should be initialed, dated, and reason given. Audit trail must be on (if available)	Yes		Yes		
23. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

WORGANIC CARBON QSM 5.0 Analytical Run
176996 on 12/02/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	503498						WORGANIC CARBON QSM 5.0				
				CCV				0			
	503499						WORGANIC CARBON QSM 5.0				
				LCSW				0			
	503500						WORGANIC CARBON QSM 5.0				
				MBW				0			
157621	496500		10/28/2020 0855		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		48MW06		Designated MS/MSD							
	503502		10/28/2020 0855				ORGAN CARBON T QSM 5.0				
		48MW06		MSW 496500				0			
	503503		10/28/2020 0855				ORGAN CARBON T QSM 5.0				
		48MW06		MSDW 503502				0			
157621	496501		10/28/2020 1025		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		48MW1									
157621	496502		10/28/2020 1210		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		49MW01									
157621	496503		10/28/2020 1320		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		50MW02									
157621	496504		10/28/2020 1500		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		49TW02									
157621	496507		10/28/2020 1500		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		49MW02									
157621	496508		10/28/2020 1530		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		RNS-1									
	503504						WORGANIC CARBON QSM 5.0				
				CCV				0			
	503505						WORGANIC CARBON QSM 5.0				
				CCB				0			
157624	496542		10/29/2020 1015		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		48MW2									
157624	496543		10/29/2020 0845		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		48MW3									
	503506						WORGANIC CARBON QSM 5.0				
				CCV				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\LIMSREPS\ANALYTICALRUN.RPT

WORGANIC CARBON QSM 5.0 Analytical Run
176996 on 12/02/2020

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	503507						WORGANIC CARBON QSM 5.0				
				CCB				0			
	504168						WORGANIC CARBON QSM 5.0				
				CCV				0			
	503511						WORGANIC CARBON QSM 5.0				
				CCB				0			
	504171		10/28/2020 0855				ORGAN CARBON T QSM 5.0				
		48MW06		DUP	496500			0			
	504172						WORGANIC CARBON QSM 5.0				
				CCV				0			
	504173						WORGANIC CARBON QSM 5.0				
				CCB				0			

23 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

FWC39-01 Data Review Checklist

	Method: Total Organic Carbon Method 415.1/9060	Independent Data Review Checklist	Instrument: TOCW

LIMS Run #(s)	Analysis Date	Analyst / Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes or No)
176996 176997 176999 177000	11/10/2020, 11/11/2020	KMT	RLD	11/13/2020	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples preserved prior to analysis and analyzed within hold time?	pH <2, 28 days or program/project specific	Yes		Yes		
2. Was the calibration curve performed using the required number of standards?	3 standards and a blank	Yes		Yes		
3. Was the correlation coefficient acceptable?	r ≥ .995	Yes		Yes		
4. Were the ICV and ICB analyzed?	---	Yes		Yes		
5. Was the ICV result acceptable?	90 – 110 % Rec. or contract/program specific	Yes		Yes		
6. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
7. Was an LCS & MB run with each batch of samples?	One each per analytical batch or contract/program specific frequency.	Yes		Yes		
8. Was the LCS recovery acceptable?	In-house derived or contract/program specific limits.	Yes		Yes		
9. Were the MB results acceptable?	< LOD or project/ program specific (<1/2 RL for DOD-QSM).	Yes		Yes		
10. Were the CCV's analyzed at the required frequency?	Beginning, after every 10 sample, & at the end of a sequence.	Yes		Yes		
11. Were the CCB's analyzed at the required frequency?	After each CCV (unless MB analyzed after CCV)	Yes		Yes		
12. Were the CCV recoveries acceptable?	90 – 110 % Rec. or project/ program specific	Yes		Yes		
13. Were the CCB results acceptable?	< LOD or project/ program specific	Yes		Yes		

14. Were all positive results that were reported within the calibration curve?	---	Yes		Yes		
15. Was an MS and MSD analyzed at the required frequency?	1 / 20 of the same matrix or project/ program specific	Yes		Yes		
16. Were the MS and MSD recoveries acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
17. Was the RPD between the MS and MSD acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
18. Was a Duplicate analyzed at the required frequency?	1 per 20 of the same matrix or contract/program specific	Yes		Yes		
19. Was the RPD between the Duplicate (if valid) and the sample acceptable?	In-house derived or project/ program specific limits (QSM samples, duplicate only valid when sample result ≥5x the LOQ)		No		No	Affected analyte Y flagged
20. Are all samples on the job lists accounted for?	---	Yes		Yes		
21. Is the standards prep log numbers noted on the analytical report?	---	Yes		Yes		
22. Were post analysis corrections addressed and/or the Audit Trail function turned on (if available)?	Correction should be initialed, dated, and reason given. Audit trail must be on (if available)	Yes		Yes		
23. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

TOC Instrument Run Logbook

Start Date	Start Time	End Date	End Time	Analyst	LIMs Run #	Matrix (S or W)	Calibration ID #	COMMENTS
~~10/21/2020~~ 10/20/2020	15:01	10/21/2020	19:22	KMT	176167	W	0398	
10/23/2020	09:29	10/23/2020	15:23	KMT	176223	W	0398	
10/28/2020	10:18	10/28/2020	17:59	KMT	~~176340~~ 176430	W	0398	
~~10/29/2020~~				~~KMT~~	~~176340RR, 176577~~ ① 176430	~~W~~	~~0398~~	~~N/A KMT 11/3/2020~~
10/30/2020	11:51	10/30/2020	15:16	TMG	TOC0436	W	0436	
10/31/2020	10:14	10/31/2020	12:57	TMG	176577	W	0436	
11/2/2020	15:37	11/2/2020	23:15	TMG	176430	W	0436	
11/3/2020	09:19	11/3/2020	14:46	TMG	176430R 176576	W	0436	
11/3/2020	18:42	11/4/2020	04:38	KMT	176578	W	0381	
11/4/2020	09:03	11/4/2020	19:18	TMG	176738 176740	W	0436	
11/4/2020B	21:35	11/5/2020	5:19	KMT	176739	W	0436	
11/5/2020	10:56	11/5/2020	23:05	TMG	176831 176832	W	0436	
11/6/2020	11:50	11/6/2020	19:55	TMG	176901, 176902, 176903	W	0436	failing CCV
11/7/2020	11:46	11/7/2020	19:47	TMG	176901, 176902, 176905	W	0436	
11/9/2020	18:40	11/10/2020	3:34	KMT	176961	W	0436	
11/10/2020	18:47	11/11/2020	05:43	KMT	176996, 176997, 176999, 177000	W	0436	
11/11/2020	19:24	11/12/2020	03:25	KMT	176998 + RR	W	0436	
② ~~11/12/2020~~				~~KMT~~	~~177060, 177061, 177062,~~ ③ ~~RT: 177063, 177064, 177065~~	~~S~~	~~0412~~ ② KMT 11/13/2020	

Reviewed By: _____

① KMT 10/28/2020

CHAIN OF CUSTODY,
PM CONFIRMATION
AND
SAMPLE CONDITION FORMS
DOCUMENTS

Rev. 02/2017

CHAIN OF CUSTODY

Company: WESTON SOLUTIONS
Project Contact: TONY PACE
Telephone: 757 419 5310
Project Name: RADFORD AAP
Project #:
Location: RADFORD VA
Sampled By: BOUNDS

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 157538
Company: WESTON SOLUTIONS,
Project: RADFORD AAP
Logged By: ERC PM: BM

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To:
EMAIL: TONY.PACE@WESTONSOLUTIONS.C
Company: WESTON SOLUTIONS
Address: 2 EATON ST STE 605
HAMPTON VA 23669

Invoice To:*
EMAIL:
Company: SAME
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	VOC	MEE	TOC	ANIONS	COD	PH	TAL METALS	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test										
10/27/20	1400	GW	G	2	TRIP BLANK		X									495136
10/27/20	920	GW	G	7	13MW4		X	X	X	X						495137
10/27/20	1010	GW	G	7	13MW3		X	X	X	X						495139
10/27/20	1010	GW	G	7	13TW3		X	X	X	X						495140
10/27/20	1120	GW	G	7	49MW04		X	X	X	X						495141
10/27/20	1230	GW	G	7	13MW2		X	X	X	X						495142

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Relinquished By:	Date/Time	Received By:	Date/Time
[signature] 10/27/20	10/27/20 1700	FEDEX ERK	10/28/20 1024
Received by:	Date/Time	Received for Laboratory by: ERK	Date/Time 10/28/20 1039

Lab Use Only
Ice Present (Yes) No
Temp 5.1, 5.7 IR Gun 27
Cooler # 6594

Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 5.2

Actual Temperature 5.7

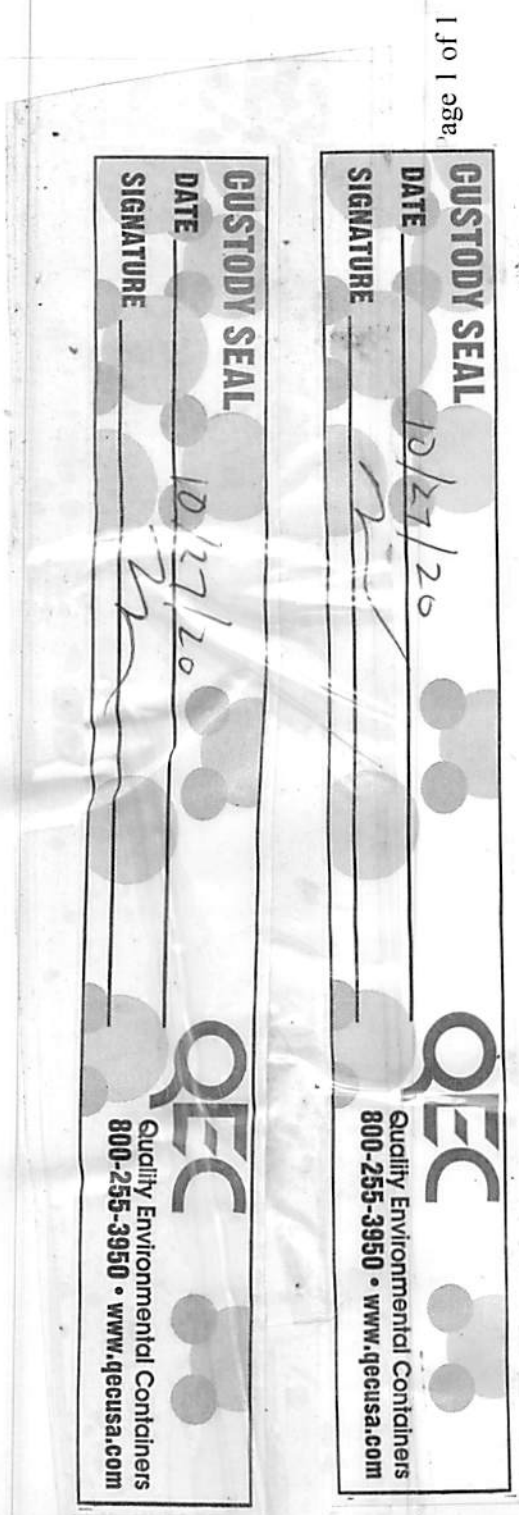
IR Gun # 27

Initials BRL

Date 10/28/20 Time 1029

Cooler #: 6599

Page 1 of 1



ORIGIN ID:PHFA (757) 416-2449
BILL BOUNDS
WESTON SOLUTIONS, INC.
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
UNITED STATES US

SHIP DATE: 27OCT20
ACTWGT: 40.00 LB
CAD: 109455225/INET4280
DIMS: 26x15x14 IN

BILL SENDER

TO SAMPLE RECEIVING
CT LABORATORIES
1230 LANGE COURT

BARABOO WI 53913
(608) 356-2760 REF 03886 552 500
INV
PO DEPT

558J2/A27E8/65

FedEx Express

WED - 28 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7718 9900 3627

XH LNRA

53913
WI-US MSN

Folder #: 157538

PM LOGIN CONFIRMATION

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 158204

Project Manager: *BMS* **Date Received:** 10/28/20 **Log Date:** 10/28/2020

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 5.7 oC

SAMPLE #: 495136 DESCR: TRIP BLANK **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED: 10/27/2020 Time: 1400**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/10/2020	11/09/2020		Logged

SAMPLE #: 495137 DESCR: 13MW4 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED: 10/27/2020 Time: 0920**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/10/2020	11/09/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/10/2020	11/09/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/29/2020	11/09/2020		Logged
			Chloride						
			Nitrate Nitrogen						

Folder #: 157538 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 495137 **DESCR:** 13MW4 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2020 **Time:** 0920

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				11/24/2020	11/09/2020		Logged

SAMPLE #: 495139 **DESCR:** 13MW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2020 **Time:** 1010

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/10/2020	11/09/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/10/2020	11/09/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/29/2020	11/09/2020		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				11/24/2020	11/09/2020		Logged

SAMPLE #: 495140 **DESCR:** 13TW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2020 **Time:** 1010

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/10/2020	11/09/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/10/2020	11/09/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/29/2020	11/09/2020		Logged
			Chloride						

Folder #: 157538 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 495140 **DESCR:** 13TW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2020 **Time:** 1010

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				11/24/2020	11/09/2020		Logged

SAMPLE #: 495141 **DESCR:** 49MW04 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2020 **Time:** 1120

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/10/2020	11/09/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/10/2020	11/09/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/29/2020	11/09/2020		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				11/24/2020	11/09/2020		Logged

SAMPLE #: 495142 **DESCR:** 13MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2020 **Time:** 1230

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/10/2020	11/09/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/10/2020	11/09/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/29/2020	11/09/2020		Logged

Folder #: 157538 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 495142 **DESCR:** 13MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/27/2020 **Time:** 1230

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	EPA 9060A)				11/24/2020	11/09/2020		Logged

Invoice Number: 158204 **Preliminary Invoice Estimate:** $ 920.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	5	$ 12.00	0.00	$ 60.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	5	$ 12.00	0.00	$ 60.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	5	$ 12.00	0.00	$ 60.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	5	$ 16.00	0.00	$ 80.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	5	$ 16.00	0.00	$ 80.00
METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	5	$ 16.00	0.00	$ 80.00
ORGAN CARBON T QSM 5.0	GROUND WATER	5	$ 28.00	0.00	$ 140.00
VOC 8260 QSM 5.0	GROUND WATER	5	$ 60.00	0.00	$ 300.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$ 60.00	0.00	$ 60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$ 0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**5**	TOC
UNPRES PL	**5**	Anions
VOA HCL	**27**	VOC

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #: 157538
Client: WESTON SOLUTIONS, INC.

Project Name: RADFORD AAP SWMU-49
Project Phase: RADFORD, VA

Coolers: 6594
Custody Seals Present : **Y**

Seal Intact? **Y**
Ship Method: FEDEX EXPRESS
Adequate Packaging: **Y**

Print Date / Time: 10/28/2020 10:46
Received Date / Time / By: 10/28/2020 10:24 ERC

Log-In Date / Time / By: 10/28/2020 10:38 ERC
Project #: PM: BMS

Temperature: 5.7 C On Ice: **Y**
COC Present:? **Y** Complete? **Y**

Numbers: DATED AND SIGNED
Tracking Number: 7718 9900 3627
Temp Blank Enclosed? **Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 10/27/20 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
495136 TRIP BLANK				
	VOA HCL	1	/	VOC
	VOA HCL	1	/	VOC
	Total # of Containers of Type	(***VOA HCL***) = **2**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
495137 13MW4				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
495137 13MW4				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
495137 13MW4				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
495139 13MW3				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
495139 13MW3				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
495139 13MW3				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		
495140 13TW3				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
495140 13TW3				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
495140 13TW3				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		
495141 49MW04				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
495141 49MW04				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
495141 49MW04				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		
495142 13MW2				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
495142 13MW2				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
495142 13MW2				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Condition Code	*Condition Description*
1	Sample Received OK

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: WESTON SOLUTIONS
Project Contact: TONY PACE
Telephone: 757 819 5310
Project Name: RADFORD AAP
Project #:
Location: RADFORD VA
Sampled By: BOUNDS / KORMOS

CT LABORATORIES

Folder #: 157621
Company: WESTON SOLUTIONS,
Project: RADFORD AAP
Logged By: EKB PM: BM

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To:
EMAIL: TONY.PACE@WESTONSOLUTIONS.COM
Company: WESTON SOLUTIONS
Address: 2 EATON ST STE 603
HAMPTON VA 23669

Invoice To:*
EMAIL:
Company: SAME
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	ANALYSES REQUESTED: TOC	ANIONS	VOC	MEE	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
					Fill in Spaces with Bottles per Test								
10/28/20	855	GW	G	21	48MW06		X	X	X	X	21	X	496500
10/28/20	1025	GW	G	7	48 MW 1		X	X	X	Y	7		496501
10/28/20	1210	GW	G	7	49 MW 01		X	X	X	Y	7		496502
10/28/20	1250	GW	G	7	50 MW 02		X	X	X	X	7		496503
~~10/28/20~~	1320				~~49 DUP 02~~		X	X	X	X	~~7~~ 3		~~496504~~
10/28/20	1500	GW	G	7	49TW02		X	X	X	X	7		496504
10/28/20	1600	W	G	3	TB-2 (TRIP BLANK)				X		3		496505
10/28/20	1500	GW	G	7	49MW02		X	X	X	X	7		496507
10/28/20	1530	GW	G	7	RNS-1 (RINSE ATE)		X	X	X	Y	7		496508

Relinquished By:	Date/Time	Received By:	Date/Time	Lab Use Only
	10/28/20 1700	FEDEX ELS/BMS	10-30-20 10:20	Ice Present (Yes) No
Received by:	Date/Time	Received for Laboratory by: ELS	Date/Time 10-30-20 11:00	Temp 1.4/1.7 IR Gun 27
				Cooler # 6208

Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 1.4°C

Actual Temperature 1.7°C

IR Gun # SRT 28

Initials BMS

Date 10/30/2020 Time 10:20

Cooler #: 6208

ORIGIN ID:PHFA (757) 416-2449
BILL BOUNDS
WESTON SOLUTIONS, INC.
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
UNITED STATES US

SHIP DATE: 28OCT20
ACTWGT: 40.00 LB
CAD: 109455225/INET4280
DIMS: 26x15x14 IN

BILL SENDER

TO SAMPLE RECEIVING
CT LABORATORIES
1230 LANGE COURT

BARABOO WI 53913
(608) 356-2760 REF: 03886.552.500
INV:
PO: DEPT:

56BJ2/A27E/B766

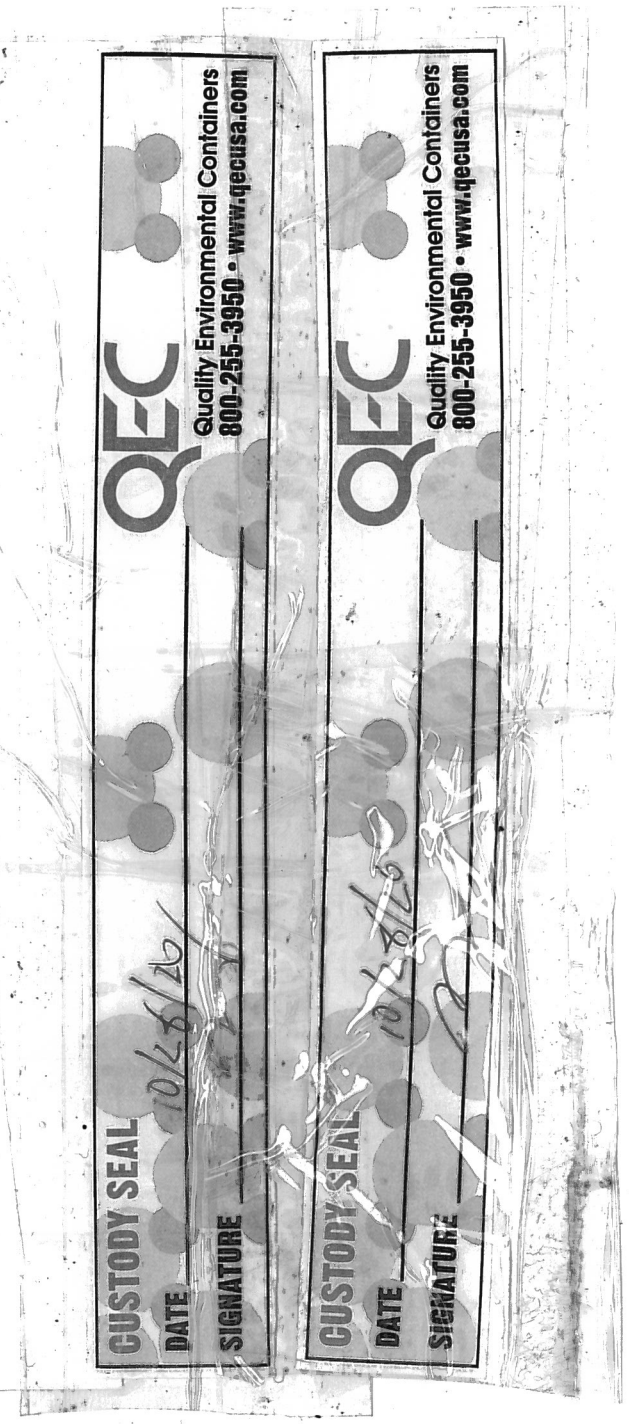
FedEx Express

THU - 29 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7718 9905 8060

XH LNRA

53913
WI-US MSN



Folder #: 157621

PM LOGIN CONFIRMATION

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 158288

Project Manager: *BMS* **Date Received:** 10/30/20 **Log Date:** 10/30/2020

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 1.7 oC

SAMPLE #: 496500 DESCR: 48MW06 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED: 10/28/2020 Time: 0855**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			***Y*** ***DESIGNATED MATRIX SPIKE***	11/11/2020	11/11/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)			***DESIGNATED MATRIX SPIKE***	11/11/2020	11/11/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)			***DESIGNATED MATRIX SPIKE***	10/30/2020	11/11/2020		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)			***DESIGNATED MATRIX SPIKE***	11/25/2020	11/11/2020		Logged

Folder #: 157621 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 496501 **DESCR:** 48MW1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/28/2020 **Time:** 1025

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/11/2020	11/11/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/11/2020	11/11/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/30/2020	11/11/2020		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				11/25/2020	11/11/2020		Logged

SAMPLE #: 496502 **DESCR:** 49MW01 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/28/2020 **Time:** 1210

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/11/2020	11/11/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/11/2020	11/11/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/30/2020	11/11/2020		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				11/25/2020	11/11/2020		Logged

Folder #: 157621 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 496503 **DESCR:** 50MW02 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/28/2020 **Time:** 1320

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/11/2020	11/11/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/11/2020	11/11/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/30/2020	11/11/2020		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				11/25/2020	11/11/2020		Logged

SAMPLE #: 496504 **DESCR:** 49TW02 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/28/2020 **Time:** 1500

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/11/2020	11/11/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/11/2020	11/11/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/30/2020	11/11/2020		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				11/25/2020	11/11/2020		Logged

Folder #: 157621 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 496505 **DESCR:** TB-2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED:** 10/28/2020 **Time:** 1600

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/11/2020	11/11/2020		Logged

SAMPLE #: 496507 **DESCR:** 49MW02 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/28/2020 **Time:** 1500

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/11/2020	11/11/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/11/2020	11/11/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/30/2020	11/11/2020		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	EPA 9060A)				11/25/2020	11/11/2020		Logged

SAMPLE #: 496508 **DESCR:** RNS-1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/28/2020 **Time:** 1530

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/11/2020	11/11/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/11/2020	11/11/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/30/2020	11/11/2020		Entered
			Chloride						
			Nitrate Nitrogen						

Folder #: 157621 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 496508 **DESCR:** RNS-1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/28/2020 **Time:** 1530

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				11/25/2020	11/11/2020		Logged

Invoice Number: 158288 **Preliminary Invoice Estimate:** $ 1,608.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	9	$ 12.00	0.00	$ 108.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	9	$ 12.00	0.00	$ 108.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	9	$ 12.00	0.00	$ 108.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	9	$ 16.00	0.00	$ 144.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	9	$ 16.00	0.00	$ 144.00
METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	9	$ 16.00	0.00	$ 144.00
ORGAN CARBON T QSM 5.0	GROUND WATER	9	$ 28.00	0.00	$ 252.00
VOC 8260 QSM 5.0	GROUND WATER	9	$ 60.00	0.00	$ 540.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$ 60.00	0.00	$ 60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$ 0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**9**	TOC
UNPRES PL	**9**	Anions
VOA HCL	**47**	GAS,VOC

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #: 157621
Client: WESTON SOLUTIONS, INC.

Print Date / Time: 10/30/2020 11:15
Received Date / Time / By: 10/30/2020 10:20 BMS

Project Name: RADFORD AAP SWMU-49
Project Phase: RADFORD, VA

Log-In Date / Time / By: 10/30/2020 11:00 EKB
Project #: PM: BMS

Coolers: 6208
Custody Seals Present : **Y**

Temperature: 1.7 C On Ice: **Y**
COC Present:? **Y** Complete? **Y**

Seal Intact? **Y**
Ship Method: FEDEX EXPRESS
Adequate Packaging: **Y**

Numbers: DATED AND SIGNED
Tracking Number: 771899058060
Temp Blank Enclosed? **Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 10/28/20 AND SIGNED.

SAMPLES 48MW06 AND 48MW1 WERE RECEIVED PAST THE 48-HOUR HOLD TIME FOR NITRATE ANALYSIS DUE TO A FEDEX SHIPPING DELAY. THE CLIENT CONFIRMED THAT THE LAB SHOULD PROCEED WITH THE ANALYSIS OF THESE SAMPLES.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
496500 48MW06				
	UNPRES PL	1	/	Anions
	UNPRES PL	1	/	Anions
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	**(*UNPRES PL*) = 3**		
496500 48MW06				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	**(*VOA HCL*) = 15**		
496500 48MW06				
	H2SO4 PL	1	Y /	TOC
	H2SO4 PL	1	Y /	TOC
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	**(*H2SO4 PL*) = 3**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
496501 48MW1				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	**(*UNPRES PL*) = 1**		

496501 48MW1

VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC

Total # of Containers of Type (*VOA HCL*) = 5

496501 48MW1

H2SO4 PL	1	Y	/	TOC

Total # of Containers of Type (*H2SO4 PL*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

496502 49MW01

UNPRES PL	1		/	Anions

Total # of Containers of Type (*UNPRES PL*) = 1

496502 49MW01

VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC

Total # of Containers of Type (*VOA HCL*) = 5

496502 49MW01

H2SO4 PL	1	Y	/	TOC

Total # of Containers of Type (*H2SO4 PL*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

496503 50MW02

UNPRES PL	1		/	Anions

Total # of Containers of Type (*UNPRES PL*) = 1

496503 50MW02

VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC

Total # of Containers of Type (*VOA HCL*) = 5

496503 50MW02

H2SO4 PL	1	Y	/	TOC

Total # of Containers of Type (*H2SO4 PL*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

496504 49TW02

UNPRES PL	1		/	Anions

Total # of Containers of Type (*UNPRES PL*) = 1

496504 49TW02

VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC
VOA HCL	1		/	GAS,VOC

Total # of Containers of Type (*VOA HCL*) = 5

496504 49TW02

H2SO4 PL	1	Y	/	TOC

157621

		Total # of Containers of Type	(***H2SO4 PL***) = **1**		
Sample ID / Description		**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
496505	TB-2				
		VOA HCL	1	/	VOC
		VOA HCL	1	/	VOC
		Total # of Containers of Type	(***VOA HCL***) = **2**		
Sample ID / Description		**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
496507	49MW02				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**		
496507	49MW02				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	(***VOA HCL***) = **5**		
496507	49MW02				
		H2SO4 PL	1	Y /	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**		
Sample ID / Description		**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
496508	RNS-1				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**		
496508	RNS-1				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	(***VOA HCL***) = **5**		
496508	RNS-1				
		H2SO4 PL	1	Y /	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Condition Code	*Condition Description*
1	Sample Received OK

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: WESTON SOLUTIONS
Project Contact: TONY PACE
Telephone: 757 819 5310
Project Name: RADFORD AAP
Project #:
Location: RADFORD VA
Sampled By: BOUNDS

CT LABORATORIES

Folder #: 157624
Company: WESTON SOLUTIONS,
Project: RADFORD AAP
Logged By: ERC PM: BM

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To:
EMAIL: TONY.PACE@WESTONSOLUTIONS.COM
Company: WESTON SOLUTIONS
Address: 2 EATON ST STE 603
HAMPTON VA 23669

Invoice To:*
EMAIL:
Company: SAME
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	VOC	MEE	TOC	ANIONS	PH	COD	TAL METALS	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test										
10/29/20	1015	GW	G	7	46 MW2		X	X	X	X						496542
10/28/20	0845	GW	G	7	48 MW3		X	X	X	X						496543
10/29/20	1100	GW	G	3	48/49 - IDW						X	X	X			496544
10/29/20	1130	W	G	2	TB-3 (TRIP BLANK)		X									496545

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Relinquished By:	Date/Time	Received By:	Date/Time
		EMC	10/30/20 1116
Received by:	Date/Time	Received for Laboratory by:	Date/Time
		EMC	10/30/20 1127

Lab Use Only
Ice Present Yes No
Temp 1.6/2.1 IR Gun 27
Cooler # G284

Cooler Receipt Form

Ice Present YES NO

Observed Temperature 1.6

Actual Temperature 2.1

IR Gun # 27

Initials EM

Date 10/30/20 Time 1116

Cooler #: 6284

ORIGIN ID:PHFA (757) 416-2449
BILL BOUNDS
WESTON SOLUTIONS, INC.
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
UNITED STATES US

SHIP DATE: 29OCT20
ACTWGT: 40.00 LB
CAD: 109455225/INET4280
DIMS: 26x15x14 IN

BILL SENDER

TO SAMPLE RECEIVING
CT LABORATORIES
1230 LANGE COURT

BARABOO WI 53913
(608) 356-2760 REF 03896 552 500
INV
PO: DEPT.

568J/A27E/6766

FedEx Express

FRI - 30 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7718 9907 5729

53913
WI-US MSN

XH LNRA

Folder #: 157624

PM LOGIN CONFIRMATION

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 158291

Project Manager: *BMS* **Date Received:** 10/30/20 **Log Date:** 10/30/2020

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 2.1 oC

SAMPLE #: 496542 DESCR: 48MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED: 10/29/2020 Time: 1015**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/12/2020	11/11/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/12/2020	11/11/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/31/2020	11/11/2020		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				11/26/2020	11/11/2020		Logged

Folder #: 157624 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 496543 **DESCR:** 48MW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/29/2020 **Time:** 0845

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/12/2020	11/11/2020		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				11/12/2020	11/11/2020		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				10/31/2020	11/11/2020		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				11/26/2020	11/11/2020		Logged

SAMPLE #: 496544 **DESCR:** 48/49-IDW **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/29/2020 **Time:** 1100

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
203	PH	(EPA 9040C)					11/11/2020		Entered
989	COD QSM	(EPA 410.4)					11/11/2020		Logged
1183	ICP K TOTAL QSM 5.0	(EPA 6010C)					11/11/2020		NeedPrep
1190	ICP NA TOTAL QSM 5.0	(EPA 6010C)					11/11/2020		NeedPrep
1200	ICP TOTAL QSM 5.0	(EPA 6010C)					11/11/2020		NeedPrep
			Total Aluminum						
			Total Antimony						
			Total Arsenic						
			Total Barium						
			Total Beryllium						
			Total Cadmium						
			Total Calcium						
			Total Chromium						

SAMPLE #: 496544 **DESCR:** 48/49-IDW **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 10/29/2020 **Time:** 1100

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Total Cobalt						
			Total Copper						
			Total Iron						
			Total Lead						
			Total Magnesium						
			Total Manganese						
			Total Nickel						
			Total Selenium						
			Total Silver						
			Total Thallium						
			Total Vanadium						
			Total Zinc						
1208	MERCURY TOTAL QSM 5.0	(EPA 7470A)					11/11/2020		NeedPrep

SAMPLE #: 496545 **DESCR:** TB-3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED:** 10/29/2020 **Time:** 1130

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	11/12/2020	11/11/2020		Logged

Folder #: 157624 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

Invoice Number: 158291 **Preliminary Invoice Estimate:** $ 532.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	2	$ 12.00	0.00	$ 24.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	2	$ 12.00	0.00	$ 24.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	2	$ 12.00	0.00	$ 24.00
COD QSM	GROUND WATER	1	$ 18.00	0.00	$ 18.00
ICP K TOTAL QSM 5.0	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP NA TOTAL QSM 5.0	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Aluminum	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Antimony	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Arsenic	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Barium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Beryllium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Cadmium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Calcium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Chromium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Cobalt	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Copper	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Iron	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Lead	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Magnesium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Manganese	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Nickel	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Selenium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Silver	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Thallium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Vanadium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Zinc	GROUND WATER	1	$ 3.50	0.00	$ 3.50
MERCURY TOTAL QSM 5.0	GROUND WATER	1	$ 23.00	0.00	$ 23.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	2	$ 16.00	0.00	$ 32.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	2	$ 16.00	0.00	$ 32.00

METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	2	$ 16.00	0.00	$ 32.00
ORGAN CARBON T QSM 5.0	GROUND WATER	2	$ 28.00	0.00	$ 56.00
PH	GROUND WATER	1	$ 10.00	0.00	$ 10.00
VOC 8260 QSM 5.0	GROUND WATER	2	$ 60.00	0.00	$ 120.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$ 60.00	0.00	$ 60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$ 0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**3**	COD
HNO3	**1**	HG,ICP,K,NA
UNPRES PL	**3**	Anions
VOA HCL	**12**	VOC

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #: 157624
Client: WESTON SOLUTIONS, INC.

Project Name: RADFORD AAP SWMU-49
Project Phase: RADFORD, VA

Coolers: 6284
Custody Seals Present : **Y**

Seal Intact? **Y**
Ship Method: FEDEX EXPRESS
Adequate Packaging: **Y**

Print Date / Time: 10/30/2020 13:16
Received Date / Time / By: 10/30/2020 11:16 ERC

Log-In Date / Time / By: 10/30/2020 11:27 ERC
Project #: PM: BMS

Temperature: 2.1 C On Ice: **Y**
COC Present:? **Y** Complete? **Y**

Numbers: DATED AND SIGNED
Tracking Number: 7718 9907 5729
Temp Blank Enclosed? **Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT ON THE COOLER UPON RECEIPT - BOTH WERE DATED 10/29/20 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
496542 48MW2				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
496542 48MW2				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
496542 48MW2				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
496543 48MW3				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
496543 48MW3				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
496543 48MW3				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**

496544 48/49-IDW

H2SO4 PL	1	Y	/	COD

Total # of Containers of Type (*H2SO4 PL*) = 1

496544 48/49-IDW

HNO3	1	Y	/	HG,ICP,K,NA

Total # of Containers of Type (*HNO3*) = 1

496544 48/49-IDW

UNPRES PL	1		/	pH

Total # of Containers of Type (*UNPRES PL*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

496545 TB-3

VOA HCL	1		/	VOC
VOA HCL	1		/	VOC

Total # of Containers of Type (*VOA HCL*) = 2

Condition Code	*Condition Description*
1	Sample Received OK

157624

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Weston Solutions, Inc

Radford AAP; VA

SGS Job Number: FA80202

Sampling Date: 10/26/20

Report to:

Weston Solutions, Inc
2 Eaton St Suite 603
Hampton, VA 23669
pacea@westonsolutions.com

ATTN: Tony Pace

Total number of pages in report: **674**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

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Test results relate only to samples analyzed.

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Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

November 17, 2020

Mr. Tony Pace
Weston Solutions, Inc
2 Eaton St
Hampton, VA 23669

RE: SGS North America Inc. - Orlando job FA80202 Reissue

Dear Mr. Pace,

The final report for job number FA80202 has been edited to reflect requested corrections. These edits have been incorporated into the revised report.

The 8330 sample results have been corrected using the correct ICAL.

SGS North America Inc. - Orlando apologies for any inconvenience this may have caused. Please feel free to contact us if we can be of further assistance.

Sincerely,

SGS North America, Inc. - Orlando

Florida ♦ 4405 Vineland Road ♦ Suite C-15 ♦ Orlando, FL 32811 ♦ tel: 407 425-6700 ♦ fax: 407 425-0707

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SGS North America Inc.

Sample Summary

Weston Solutions, Inc

Radford AAP; VA

Job No: FA80202

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA80202-1	10/26/20	09:40	WZ	10/27/20	AQ	Ground Water	54MW13
FA80202-2	10/26/20	09:40	WZ	10/27/20	AQ	Ground Water	54TW13
FA80202-3	10/26/20	11:50	WZ	10/27/20	AQ	Ground Water	54MW10
FA80202-4	10/26/20	13:25	WZ	10/27/20	AQ	Ground Water	54MW12
FA80202-4D	10/26/20	13:25	WZ	10/27/20	AQ	Water Dup/MSD	54MW12
FA80202-4S	10/26/20	13:25	WZ	10/27/20	AQ	Water Matrix Spike	54MW12
FA80202-5	10/26/20	14:40	WZ	10/27/20	AQ	Ground Water	54MW1

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Weston Solutions, Inc **Job No:** FA80202

Site: Radford AAP; VA **Report Date** 11/10/2020 2:09:28

5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 10/26/2020 and were received at SGS North America Inc - Orlando on 10/27/2020 properly preserved, at 3.8 Deg. C and intact. These Samples received an SGS Orlando job number of FA80202. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Semi-volatiles By Method SW846 6850

Matrix: AQ **Batch ID:** OP82733

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) FA80202-4MSD, FA80202-4MS were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recovery(s) for Perchlorate are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix Spike Duplicate Recovery(s) for Perchlorate are outside control limits. Probable cause is due to matrix interference.

GC/LC Semi-volatiles By Method SW846 8330B

Matrix: AQ **Batch ID:** OP82734

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) FA80202-4MS, FA80202-4MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Blank Spike Recovery(s) for TNX are outside control limits.

Matrix Spike Recovery(s) for 2,6-Dinitrotoluene are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 2,6-Dinitrotoluene are outside control limits. Probable cause is due to matrix interference.

FA80202-1 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA80202-1: All hits confirmed by reanalysis on a dissimilar column.

FA80202-1: Confirmation run.

FA80202-1 for TNX: Associated BS recovery outside control limits.

FA80202-2 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA80202-2 for TNX: Associated Confirmation CCV outside control limits. Associated BS recovery outside control limits.

FA80202-2: All hits confirmed by reanalysis on a dissimilar column.

FA80202-2: Confirmation run.

FA80202-3 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA80202-3: All hits confirmed by reanalysis on a dissimilar column.

FA80202-3: Confirmation run.

FA80202-3 for TNX: Primary and confirmation results differ by more than 40%. Associated Confirmation CCV outside control limits. Associated BS recovery outside control limits.

FA80202-4 for TNX: Associated BS recovery outside control limits.

FA80202-4 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA80202-4: All hits confirmed by reanalysis on a dissimilar column.

FA80202-4: Confirmation run.

FA80202-5: Confirmation run.

FA80202-5 for TNX: Associated BS recovery outside control limits.

FA80202-5 for Tetryl: Confirmed ND by reanalysis on a dissimilar column.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Ariel Hartney, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA80202
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 10/26/20

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA80202-1	**54MW13**					
Perchlorate		7.9	4.0	2.0	ug/l	SW846 6850
HMX [a]		4.6	0.19	0.095	ug/l	SW846 8330B
RDX [a]		0.58	0.19	0.095	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.46	0.19	0.095	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		1.4	0.19	0.095	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		0.81	0.19	0.095	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		11.5	0.19	0.095	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		12.7	0.19	0.095	ug/l	SW846 8330B
FA80202-2	**54TW13**					
Perchlorate		6.4	4.0	2.0	ug/l	SW846 6850
HMX [a]		5.0	0.19	0.094	ug/l	SW846 8330B
RDX [a]		0.53	0.19	0.094	ug/l	SW846 8330B
TNX [c]		0.17 J	0.19	0.094	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.54	0.19	0.094	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		1.3	0.19	0.094	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [b]		0.84	0.19	0.094	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		9.9	0.19	0.094	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		11.7	0.19	0.094	ug/l	SW846 8330B
FA80202-3	**54MW10**					
Perchlorate		6.2	4.0	2.0	ug/l	SW846 6850
HMX [a]		5.4	0.19	0.095	ug/l	SW846 8330B
RDX [a]		1.8	0.19	0.095	ug/l	SW846 8330B
TNX [c]		0.39	0.19	0.095	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.36	0.19	0.095	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		1.5	0.19	0.095	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [b]		1.2	0.19	0.095	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		4.9	0.19	0.095	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		11.4	0.19	0.095	ug/l	SW846 8330B
FA80202-4	**54MW12**					
Perchlorate		8.2	4.0	2.0	ug/l	SW846 6850
HMX [a]		19.1	0.19	0.095	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.29	0.19	0.095	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		3.8	0.19	0.095	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		2.0	0.19	0.095	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		9.4	0.19	0.095	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		7.8	0.19	0.095	ug/l	SW846 8330B

Summary of Hits

Job Number: FA80202
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 10/26/20

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method

FA80202-5 **54MW1**

No hits reported in this sample.

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) All hits confirmed by reanalysis on a dissimilar column. Primary and confirmation results differ by more than 40%.
(c) All hits confirmed by reanalysis on a dissimilar column. Associated BS recovery outside control limits. Associated confirmation CCV outside control limits.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW13		
Lab Sample ID:	FA80202-1	**Date Sampled:**	10/26/20
Matrix:	AQ - Ground Water	**Date Received:**	10/27/20
Method:	SW846 6850 SW846 6850	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q73623.D	20	10/29/20 18:00	MRE	10/29/20 11:00	OP82733	SQ1673
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	7.9	4.0	2.0	1.0	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA80202-1
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 10/26/20
Date Received: 10/27/20
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP388846.D	1	10/30/20 22:47	JB	10/29/20 10:00	OP82734	GPP2355
Run #2 [b]	GG619917.D	1	11/02/20 15:13	JB	10/29/20 10:00	OP82734	GGG2889

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	4.6	0.19	0.095	0.076	ug/l	
121-82-4	RDX	0.58	0.19	0.095	0.076	ug/l	
	DNX	0.095 U	0.19	0.095	0.076	ug/l	
	MNX	0.095 U	0.19	0.095	0.076	ug/l	
	TNX [c]	0.095 U	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [d]	0.46	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.4	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.81	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	11.5	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	12.7	0.19	0.095	0.076	ug/l	
55-63-0	Nitroglycerine	0.95 U	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	98%	100%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Associated BS recovery outside control limits.
(d) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54TW13
Lab Sample ID: FA80202-2
Matrix: AQ - Ground Water
Method: SW846 6850 SW846 6850
Project: Radford AAP; VA

Date Sampled: 10/26/20
Date Received: 10/27/20
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q73624.D	20	10/29/20 18:09	MRE	10/29/20 11:00	OP82733	SQ1673
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	6.4	4.0	2.0	1.0	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54TW13		
Lab Sample ID:	FA80202-2	**Date Sampled:**	10/26/20
Matrix:	AQ - Ground Water	**Date Received:**	10/27/20
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP388847.D	1	10/30/20 23:18	JB	10/29/20 10:00	OP82734	GPP2355
Run #2 [b]	GG619918.D	1	11/02/20 15:43	JB	10/29/20 10:00	OP82734	GGG2889

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2	1060 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	5.0	0.19	0.094	0.075	ug/l	
121-82-4	RDX	0.53	0.19	0.094	0.075	ug/l	
	DNX	0.094 U	0.19	0.094	0.075	ug/l	
	MNX	0.094 U	0.19	0.094	0.075	ug/l	
	TNX [c]	0.17	0.19	0.094	0.075	ug/l	J
618-87-1	3,5-Dinitroaniline [d]	0.54	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.3	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene [d]	0.84	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	9.9	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	11.7	0.19	0.094	0.075	ug/l	
55-63-0	Nitroglycerine	0.94 U	1.9	0.94	0.47	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	98%	100%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Associated BS recovery outside control limits. Associated confirmation CCV outside control limits.
(d) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA80202-3	**Date Sampled:**	10/26/20
Matrix:	AQ - Ground Water	**Date Received:**	10/27/20
Method:	SW846 6850 SW846 6850	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q73625.D	20	10/29/20 18:18	MRE	10/29/20 11:00	OP82733	SQ1673
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	6.2	4.0	2.0	1.0	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA80202-3	**Date Sampled:**	10/26/20
Matrix:	AQ - Ground Water	**Date Received:**	10/27/20
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP388848.D	1	10/30/20 23:49	JB	10/29/20 10:00	OP82734	GPP2355
Run #2 [b]	GG619919.D	1	11/02/20 16:12	JB	10/29/20 10:00	OP82734	GGG2889

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	5.4	0.19	0.095	0.076	ug/l	
121-82-4	RDX	1.8	0.19	0.095	0.076	ug/l	
	DNX	0.095 U	0.19	0.095	0.076	ug/l	
	MNX	0.095 U	0.19	0.095	0.076	ug/l	
	TNX [c]	0.39	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [d]	0.36	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.5	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene [d]	1.2	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	4.9	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	11.4	0.19	0.095	0.076	ug/l	
55-63-0	Nitroglycerine	0.95 U	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	98%	97%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Associated BS recovery outside control limits. Associated confirmation CCV outside control limits.
(d) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW12		
Lab Sample ID:	FA80202-4	**Date Sampled:**	10/26/20
Matrix:	AQ - Ground Water	**Date Received:**	10/27/20
Method:	SW846 6850 SW846 6850	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q73626.D	20	10/29/20 18:27	MRE	10/29/20 11:00	OP82733	SQ1673
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	8.2	4.0	2.0	1.0	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW12
Lab Sample ID: FA80202-4
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 10/26/20
Date Received: 10/27/20
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP388849.D	1	10/31/20 00:20	JB	10/29/20 10:00	OP82734	GPP2355
Run #2 [b]	GG619920.D	1	11/02/20 16:41	JB	10/29/20 10:00	OP82734	GGG2889

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	19.1	0.19	0.095	0.076	ug/l	
121-82-4	RDX	0.095 U	0.19	0.095	0.076	ug/l	
	DNX	0.095 U	0.19	0.095	0.076	ug/l	
	MNX	0.095 U	0.19	0.095	0.076	ug/l	
	TNX [c]	0.095 U	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [d]	0.29	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	3.8	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	2.0	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	9.4	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	7.8	0.19	0.095	0.076	ug/l	
55-63-0	Nitroglycerine	0.95 U	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	103%	102%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Associated BS recovery outside control limits.
(d) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW1		
Lab Sample ID:	FA80202-5	**Date Sampled:**	10/26/20
Matrix:	AQ - Ground Water	**Date Received:**	10/27/20
Method:	SW846 6850 SW846 6850	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q73629.D	20	10/29/20 18:54	MRE	10/29/20 11:00	OP82733	SQ1673
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	2.0 U	4.0	2.0	1.0	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW1
Lab Sample ID: FA80202-5
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 10/26/20
Date Received: 10/27/20
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP388852.D	1	10/31/20 01:53	JB	10/29/20 10:00	OP82734	GPP2355
Run #2 [a]	GG619921.D	1	11/02/20 17:11	JB	10/29/20 10:00	OP82734	GGG2889

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U	0.19	0.096	0.077	ug/l	
121-82-4	RDX	0.096 U	0.19	0.096	0.077	ug/l	
	DNX	0.096 U	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX [b]	0.096 U	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline	0.096 U	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl [c]	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.096 U	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
55-63-0	Nitroglycerine	0.96 U	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	99%	100%	70-136%

(a) Confirmation run.
(b) Associated BS recovery outside control limits.
(c) Confirmed ND by reanalysis on a dissimilar column. Associated CCV outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

FA80202.

SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

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SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: WESTON SOLUTIONS
Address: 2 EATON ST STE 603
City: HAMPTON State: VA Zip: 23669
Project Contact: TONY PACE Email: TONY.PACE@WESTONSOLUTIONS.COM
Phone #: 757 819 5310
Sampler(s) Name(s) (Printed) Sampler 1: Sampler 2:

Project Information

Project Name: RADFORD AAP - SWMU 54
Street
City RADFORD State VA
Project # 43308
Fax #
Client Purchase Order #

Analytical Information

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNA	DI WATER	MEOH	EXPLOSIVES ONLY + MNO4	PERCHLORATE 6850								LAB USE ONLY
1	54MW13	10/26/20	940	WJ	GW	3		X								X	X								
2	54TW13	10/26/20	940	WJ	GW	3		X								X	X								
3	54MW10	10/26/20	1150	WJ	GW	3		X								X	X								
4	54MW12	10/26/20	1325	WJ	GW	9		X								X	X	MS/MSD							
5	54MW1	10/26/20	1410	WJ	GW	3		X								X	X								

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

INITIAL ASSESSMENT
AR VERIFICATION DO

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	WESTON	10/26/20 1800	2 FEDEX	3 FX	10/27/20 0915	4
	Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5			6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 3.5

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (4).xls Rev 031318

5.1 5

FA80202: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA80202 **Client:** WESTON SOLUTIONS **Project:** RADFORD AAP-SMWU 54

Date / Time Received: 10/27/2020 9:15:00 AM **Delivery Method:** FED EX **Airbill #'s:** 771898939512

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.6);

Cooler Temps (Corrected) °C: Cooler 1: (3.8);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: CARLOSD Date: 10/27/2020 9:15:00 A Reviewer: _____ Date: _____

FA80202: Chain of Custody
Page 2 of 2

QC Evaluation: DOD QSM5.x Limits

Job Number: FA80202
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 10/26/20

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP82733	SW846 6850						
OP82733-BS	14797-73-0	Perchlorate	BSP	REC	95	%	84-119
OP82733-MS2	14797-73-0	Perchlorate	MS	REC	2100 [a]	%	84-119
OP82733-MSD2	14797-73-0	Perchlorate	MSD	REC	2250 [a]	%	84-119
OP82733-MSD2	14797-73-0	Perchlorate	MSD	RPD	2	%	15
OP82734	SW846 8330B						
OP82734-BS	2691-41-0	HMX	BSP	REC	100	%	65-135
OP82734-BS	121-82-4	RDX	BSP	REC	94	%	68-130
OP82734-BS		DNX	BSP	REC	80	%	66-119
OP82734-BS		MNX	BSP	REC	90	%	57-132
OP82734-BS	618-87-1	3,5-Dinitroaniline	BSP	REC	96	%	71-117
OP82734-BS	99-65-0	1,3-Dinitrobenzene	BSP	REC	100	%	78-120
OP82734-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	120	%	77-127
OP82734-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	96	%	78-120
OP82734-BS	35572-78-2	2-amino-4,6-Dinitrotoluene	BSP	REC	98	%	79-120
OP82734-BS	19406-51-0	4-amino-2,6-Dinitrotoluene	BSP	REC	88	%	76-125
OP82734-BS	98-95-3	Nitrobenzene	BSP	REC	102	%	65-134
OP82734-BS	88-72-2	o-Nitrotoluene	BSP	REC	104	%	70-127
OP82734-BS	99-08-1	m-Nitrotoluene	BSP	REC	102	%	73-125
OP82734-BS	99-99-0	p-Nitrotoluene	BSP	REC	104	%	71-127
OP82734-BS	479-45-8	Tetryl	BSP	REC	70	%	64-128
OP82734-BS	99-35-4	1,3,5-Trinitrobenzene	BSP	REC	90	%	73-125
OP82734-BS	118-96-7	2,4,6-Trinitrotoluene	BSP	REC	90	%	71-123
OP82734-BS	55-63-0	Nitroglycerine	BSP	REC	92	%	74-127
OP82734-BS	78-11-5	PETN	BSP	REC	116	%	73-127
OP82734-MS	2691-41-0	HMX	MS	REC	108	%	65-135
OP82734-MS	121-82-4	RDX	MS	REC	96	%	68-130
OP82734-MS		DNX	MS	REC	98	%	66-119
OP82734-MS		MNX	MS	REC	94	%	57-132
OP82734-MS	618-87-1	3,5-Dinitroaniline	MS	REC	97	%	71-117
OP82734-MS	99-65-0	1,3-Dinitrobenzene	MS	REC	101	%	78-120
OP82734-MS	606-20-2	2,6-Dinitrotoluene	MS	REC	145	%	77-127
OP82734-MS	121-14-2	2,4-Dinitrotoluene	MS	REC	90	%	78-120
OP82734-MS	35572-78-2	2-amino-4,6-Dinitrotoluene	MS	REC	94	%	79-120
OP82734-MS	19406-51-0	4-amino-2,6-Dinitrotoluene	MS	REC	86	%	76-125
OP82734-MS	98-95-3	Nitrobenzene	MS	REC	97	%	65-134
OP82734-MS	88-72-2	o-Nitrotoluene	MS	REC	108	%	70-127
OP82734-MS	99-08-1	m-Nitrotoluene	MS	REC	107	%	73-125
OP82734-MS	99-99-0	p-Nitrotoluene	MS	REC	114	%	71-127
OP82734-MS	479-45-8	Tetryl	MS	REC	67	%	64-128
OP82734-MS	99-35-4	1,3,5-Trinitrobenzene	MS	REC	99	%	73-125

* Sample used for QC is not from job FA80202

QC Evaluation: DOD QSM5.x Limits

Job Number: FA80202
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 10/26/20

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP82734-MS	118-96-7	2,4,6-Trinitrotoluene	MS	REC	79	%	71-123
OP82734-MS	55-63-0	Nitroglycerine	MS	REC	90	%	74-127
OP82734-MS	78-11-5	PETN	MS	REC	121	%	73-127
OP82734-MSD	2691-41-0	HMX	MSD	REC	108	%	65-135
OP82734-MSD	2691-41-0	HMX	MSD	RPD	0	%	20
OP82734-MSD	121-82-4	RDX	MSD	REC	94	%	68-130
OP82734-MSD	121-82-4	RDX	MSD	RPD	2	%	20
OP82734-MSD		DNX	MSD	REC	95	%	66-119
OP82734-MSD		DNX	MSD	RPD	3	%	20
OP82734-MSD		MNX	MSD	REC	94	%	57-132
OP82734-MSD		MNX	MSD	RPD	0	%	20
OP82734-MSD	618-87-1	3,5-Dinitroaniline	MSD	REC	96	%	71-117
OP82734-MSD	618-87-1	3,5-Dinitroaniline	MSD	RPD	1	%	20
OP82734-MSD	99-65-0	1,3-Dinitrobenzene	MSD	REC	101	%	78-120
OP82734-MSD	99-65-0	1,3-Dinitrobenzene	MSD	RPD	0	%	20
OP82734-MSD	606-20-2	2,6-Dinitrotoluene	MSD	REC	148	%	77-127
OP82734-MSD	606-20-2	2,6-Dinitrotoluene	MSD	RPD	2	%	20
OP82734-MSD	121-14-2	2,4-Dinitrotoluene	MSD	REC	90	%	78-120
OP82734-MSD	121-14-2	2,4-Dinitrotoluene	MSD	RPD	0	%	20
OP82734-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	REC	94	%	79-120
OP82734-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	RPD	0	%	20
OP82734-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	REC	85	%	76-125
OP82734-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	RPD	1	%	20
OP82734-MSD	98-95-3	Nitrobenzene	MSD	REC	96	%	65-134
OP82734-MSD	98-95-3	Nitrobenzene	MSD	RPD	1	%	20
OP82734-MSD	88-72-2	o-Nitrotoluene	MSD	REC	112	%	70-127
OP82734-MSD	88-72-2	o-Nitrotoluene	MSD	RPD	4	%	20
OP82734-MSD	99-08-1	m-Nitrotoluene	MSD	REC	116	%	73-125
OP82734-MSD	99-08-1	m-Nitrotoluene	MSD	RPD	8	%	20
OP82734-MSD	99-99-0	p-Nitrotoluene	MSD	REC	122	%	71-127
OP82734-MSD	99-99-0	p-Nitrotoluene	MSD	RPD	6	%	20
OP82734-MSD	479-45-8	Tetryl	MSD	REC	68	%	64-128
OP82734-MSD	479-45-8	Tetryl	MSD	RPD	2	%	20
OP82734-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	REC	100	%	73-125
OP82734-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	RPD	1	%	20
OP82734-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	REC	80	%	71-123
OP82734-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	RPD	1	%	20
OP82734-MSD	55-63-0	Nitroglycerine	MSD	REC	90	%	74-127
OP82734-MSD	55-63-0	Nitroglycerine	MSD	RPD	0	%	20
OP82734-MSD	78-11-5	PETN	MSD	REC	119	%	73-127
OP82734-MSD	78-11-5	PETN	MSD	RPD	2	%	20

(a) Outside control limits due to high level in sample relative to spike amount.

* Sample used for QC is not from job FA80202

MS Semi-volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP82733-MB	Q73606.D	1	10/29/20	MRE	10/29/20	OP82733	SQ1673

The QC reported here applies to the following samples: **Method:** SW846 6850

FA80202-1, FA80202-2, FA80202-3, FA80202-4, FA80202-5

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Blank Spike Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP82733-BS	Q73605.D	1	10/29/20	MRE	10/29/20	OP82733	SQ1673

The QC reported here applies to the following samples: **Method:** SW846 6850

FA80202-1, FA80202-2, FA80202-3, FA80202-4, FA80202-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
14797-73-0	Perchlorate	0.2	0.19	95	80-120

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP82733-MS2	Q73627.D	20	10/29/20	MRE	10/29/20	OP82733	SQ1673
OP82733-MSD2	Q73628.D	20	10/29/20	MRE	10/29/20	OP82733	SQ1673
FA80202-4	Q73626.D	20	10/29/20	MRE	10/29/20	OP82733	SQ1673

The QC reported here applies to the following samples: **Method:** SW846 6850

FA80202-1, FA80202-2, FA80202-3, FA80202-4, FA80202-5

CAS No.	Compound	FA80202-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
14797-73-0	Perchlorate	8.2		0.2	12.4	2100* [a]	0.2	12.7	2250* [a]	2	80-120/15

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1672-CC1670	**Injection Date:**	10/29/20
Lab File ID:	Q73583.D	**Injection Time:**	08:32
Instrument ID:	GCMSQ	**Method:**	SW846 6850

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]			103699	4.01	114392	7.13	228406	7.13	53243	7.68	78629	8.10
Check Std [b]			98797	4.00	109877	7.08	222109	7.10	53007	7.64	92440	8.06
Upper Limit [c]			138316	5.00	153828	8.08	310953	8.10	74210	8.64	129416	9.06
Lower Limit [d]			69158	3.00	76914	6.08	155476	6.10	37105	6.64	64708	7.06
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
ZZZZZZ			84872	3.95	97535	7.08	194128	7.10	45622	7.65	80059	8.07
SQ1672-ECC1670			101076	3.98	110737	7.08	231910	7.10	54209	7.65	94036	8.07
OP82733-BS	149206*	6.03										
OP82733-MB	155104*	6.03										
ZZZZZZ	129639*	5.83										
ZZZZZZ	148252*	5.79										
ZZZZZZ	112156*	5.77										
ZZZZZZ	162406*	5.98										
ZZZZZZ	165022*	5.96										
ZZZZZZ	164557*	5.99										
ZZZZZZ	159671*	6.00										
ZZZZZZ	113543*	5.71										
ZZZZZZ	145419*	5.74										
FA80202-1	108643*	5.78										
FA80202-2	128817*	5.78										
FA80202-3	108685*	5.71										
FA80202-4	135506*	5.76										
OP82733-MS2	133263*	5.76										
OP82733-MSD2	126075*	5.75										
FA80202-5	130097*	5.76										
FA79898-10	176896*	5.66										
OP82733-MS	190810*	5.65										
OP82733-MSD	182936*	5.65										

IS 1 = Cl18O4 (ISTD)
IS 2 = 13C3-PFPeA
IS 3 = 13C2-6:2FTS
IS 4 = 13C2-PFOA
IS 5 = 13C4-PFOS
IS 6 = d3-MeFOSAA

(a) Initial Cal is: SQ1670-ICC1670 Q73506.D 10/27/20 12:40. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to + 50% of initial cal area.

Internal Standard Area Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1672-CC1670	**Injection Date:**	10/29/20
Lab File ID:	Q73583.D	**Injection Time:**	08:32
Instrument ID:	GCMSQ	**Method:**	SW846 6850

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT	IS 4 AREA	IS 4 RT	IS 5 AREA	IS 5 RT	IS 6 AREA	IS 6 RT

(c) Upper Limit = + 40% of check standard area; Retention time + 1 minutes.
(d) Lower Limit = -30% of check standard area; Retention time -1 minutes.

Internal Standard Area Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1673-ICC1673	**Injection Date:**	10/29/20
Lab File ID:	Q73597.D	**Injection Time:**	13:14
Instrument ID:	GCMSQ	**Method:**	SW846 6850

	IS 1 AREA	RT
Initial Cal [a]	158537	6.11
Check Std [b]	167183	6.11
Upper Limit [c]	237806	8.11
Lower Limit [d]	79269	4.11

Lab Sample ID	IS 1 AREA	RT
OP82733-BS	149206	6.03
OP82733-MB	155104	6.03
ZZZZZZ	129639	5.83
ZZZZZZ	148252	5.79
ZZZZZZ	112156	5.77
ZZZZZZ	162406	5.98
ZZZZZZ	165022	5.96
ZZZZZZ	164557	5.99
ZZZZZZ	159671	6.00

IS 1 = Cl18O4 (ISTD)

(a) Initial Cal is: SQ1673-ICC1673 Q73597.D 10/29/20 13:14. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to + 50% of initial cal area.
(c) Upper Limit = + 50% of initial standard area; Retention time + 2 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -2 minutes of check standard.

Internal Standard Area Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1673-CC1673	**Injection Date:**	10/29/20
Lab File ID:	Q73621.D	**Injection Time:**	17:42
Instrument ID:	GCMSQ	**Method:**	SW846 6850

	IS 1 AREA	RT
Initial Cal [a]	158537	6.11
Check Std [b]	173662	5.96
Upper Limit [c]	237806	7.96
Lower Limit [d]	79269	3.96

Lab Sample ID	IS 1 AREA	RT
FA80202-1	108643	5.78
FA80202-2	128817	5.78
FA80202-3	108685	5.71
FA80202-4	135506	5.76
OP82733-MS2	133263	5.76
OP82733-MSD2	126075	5.75
FA80202-5	130097	5.76

IS 1 = Cl18O4 (ISTD)

(a) Initial Cal is: SQ1673-ICC1673 Q73597.D 10/29/20 13:14. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to + 50% of initial cal area.
(c) Upper Limit = + 50% of initial standard area; Retention time + 2 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -2 minutes of check standard.

Initial Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1670-ICC1670
Lab FileID: Q73506.D

Initial Calibration Report

Method Path	D:\MassHunter\Methods
Method File	537_1027_SQ1670.quantmethod.xml
Batch Name	D:\MassHunter\Data\1027_537_SQ1670\QuantResults\SQ1670.batch.bin
Last Calib Update	10/28/2020 11:11:41 AM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\1027_537_SQ1670\Q73501.d	10/27/2020 11:20:02 AM	10/28/2020 11:11:41 AM
2	D:\MassHunter\Data\1027_537_SQ1670\Q73502.d	10/27/2020 11:35:38 AM	10/28/2020 11:11:41 AM
3	D:\MassHunter\Data\1027_537_SQ1670\Q73503.d	10/27/2020 11:54:04 AM	10/28/2020 11:11:41 AM
4	D:\MassHunter\Data\1027_537_SQ1670\Q73504.d	10/27/2020 12:09:42 PM	10/28/2020 11:11:41 AM
5	D:\MassHunter\Data\1027_537_SQ1670\Q73505.d	10/27/2020 12:25:19 PM	10/28/2020 11:11:41 AM
6	D:\MassHunter\Data\1027_537_SQ1670\Q73506.d	10/27/2020 12:40:57 PM	10/28/2020 11:11:41 AM
7	D:\MassHunter\Data\1027_537_SQ1670\Q73507.d	10/27/2020 12:56:36 PM	10/28/2020 11:11:41 AM
8	D:\MassHunter\Data\1027_537_SQ1670\Q73508.d	10/27/2020 1:12:14 PM	10/28/2020 11:11:41 AM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I 13C2-6:2FTS						ISTD					
T 6:2FTS	Avg RF	1.0106	1.0434	0.9349	0.9594	0.9309	0.9355	0.8496	0.7160	0.9226	10.998
T 8:2FTS	Avg RF	0.7607	0.8405	0.7126	0.7052	0.7241	0.7140	0.6583	0.5565	0.7090	11.442
I 13C2-PFOA						ISTD					
T PFBA	Linear	0.2739	0.2897	0.2547	0.2591	0.2570	0.2617	0.2666	0.2632	0.2657	4.272
S 13C2-PFHxA	Linear	0.9809	0.9994	0.8973	0.9217	0.9361	0.9414	0.9416	0.8917	0.9388	3.964
T PFHxA	Linear	0.8862	0.9207	0.8121	0.8380	0.8365	0.8510	0.8569	0.8135	0.8519	4.308
S 13C3-HFPO-DA	Linear	0.1509	0.1643	0.1485	0.1523	0.1506	0.1516	0.1498	0.1388	0.1509	4.598
T HFPO-DA	Linear	0.2464	0.2406	0.2164	0.2150	0.2152	0.2160	0.2117	0.1992	0.2201	7.082
T PFHpA	Linear	0.5848	0.6163	0.5590	0.5679	0.5732	0.5770	0.5769	0.5508	0.5757	3.411
T ADONA	Linear	1.6185	1.6859	1.5206	1.5565	1.5726	1.6008	1.6563	1.5870	1.5998	3.341
T br-PFOA	Linear	1.0425	1.0651	0.9636	0.9829	0.9819	0.9915	0.9708	0.8936	0.9865	5.249
T LN-PFOA	Quadratic	1.0425	1.0651	0.9636	0.9829	0.9819	0.9915	0.9708	0.8936	0.9865	5.249
T PFOA	Quadratic	1.0425	1.0651	0.9636	0.9829	0.9819	0.9915	0.9708	0.8936	0.9865	5.249
T PFNA	Linear	0.8190	0.8652	0.7778	0.7850	0.7937	0.7884	0.7697	0.7017	0.7876	5.848
T 9Cl-PF3ONS	Linear	0.3600	0.3691	0.3319	0.3277	0.3347	0.3412	0.3331	0.3100	0.3385	5.498
S 13C2-PFDA	Linear	0.8902	0.9508	0.8447	0.8334	0.8469	0.8448	0.7820	0.7007	0.8367	8.762
T PFDA	Quadratic	1.0961	1.1749	1.0271	1.0392	1.0557	1.0391	0.9734	0.8735	1.0349	8.465
T 11Cl-PF3OUdS	Linear	0.8288	0.8794	0.7516	0.7742	0.7813	0.8002	0.7929	0.7499	0.7948	5.388
I 13C3-PFPeA						ISTD					
T PFPeA	Linear	0.6808	0.7092	0.6098	0.6249	0.6145	0.6249	0.6154	0.5711	0.6313	6.884
I 13C4-PFOS						ISTD					
T PFBS	Linear	0.7203	0.7550	0.6536	0.6773	0.6770	0.6712	0.6692	0.6486	0.6840	5.245
T br-PFHxS	Linear	0.8931	0.9628	0.8786	0.8672	0.8985	0.8563	0.8585	0.8322	0.8809	4.467
T LN-PFHxS	Linear	0.7973	0.8862	0.7507	0.7744	0.7766	0.7831	0.7790	0.7446	0.7865	5.564
T PFHxS	Linear	0.8035	0.8913	0.7643	0.7876	0.7905	0.7924	0.7883	0.7554	0.7967	5.187
T PFHpS	Linear	0.8266	0.9526	0.8009	0.8042	0.8168	0.8166	0.8013	0.7371	0.8195	7.363

Generated at 11:12 AM on 10/28/2020

Initial Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1670-ICC1670
Lab FileID: Q73506.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
T br-PFOS	Quadratic	1.5558	1.6401	1.3581	1.3517	1.3780	1.3711	1.3101	1.2722	1.4046	8.988
T LN-PFOS	Quadratic	1.0939	1.1017	0.9200	0.9429	0.9348	0.9244	0.9109	0.8352	0.9580	9.645
T PFOS	Quadratic	1.2052	1.2392	1.0246	1.0430	1.0407	1.0322	1.0058	0.9165	1.0634	10.010
T PFUnDA	Linear	3.7361	4.1866	3.6211	3.7984	3.7731	3.8036	3.6492	3.4221	3.7488	5.800
T PFDoDA	Linear	5.2695	5.5503	4.9429	5.1308	5.2030	5.2226	5.1019	4.8548	5.1595	4.109
T PFTrDA	Linear	6.4745	6.8705	6.0737	6.3788	6.5608	6.5812	6.6574	6.4823	6.5099	3.527
T PFTeDA	Avg RF	5.9981	6.5830	5.6559	6.0830	6.2700	6.5613	6.6406	6.5475	6.2924	5.632
						ISTD					
I d3-MeFOSAA											
T MeFOSAA	Linear	0.9022	0.9835	0.8823	0.9006	0.9458	0.9041	0.9299	0.8531	0.9127	4.386
S d5-EtFOSAA	Linear	1.0293	1.1431	0.9858	1.0030	1.0610	1.0533	1.0506	1.0198	1.0432	4.599
T EtFOSAA	Linear	1.0381	0.9827	0.8250	0.8894	0.8756	0.8860	0.9047	0.8864	0.9110	7.383

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1670-ICC1670
Lab FileID: Q73506.D

Initial Calibration Report

Compounds with Curve fitting not using Avg Response Factor:

Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
T PFBA	Linear	y = 0.263772 * x	0.999949
T PFPeA	Linear	y = 0.581698 * x	0.998285
T PFBS	Linear	y = 0.653546 * x	0.999708
S 13C2-PFHxA	Linear	y = 0.903188 * x	0.999174
T PFHxA	Linear	y = 0.823240 * x	0.999287
S 13C3-HFPO-DA	Linear	y = 0.141419 * x	0.998233
T HFPO-DA	Linear	y = 0.202269 * x	0.998801
T br-PFHxS	Linear	y = 0.838612 * x	0.999678
T PFHpA	Linear	y = 0.556847 * x	0.999405
T LN-PFHxS	Linear	y = 0.752706 * x	0.999408
T PFHxS	Linear	y = 0.763194 * x	0.999470
T ADONA	Linear	y = 1.600571 * x	0.999556
T br-PFOA	Linear	y = 0.912320 * x	0.997827
T LN-PFOA	Quadratic	y = -0.027694 * x ^ 2 + 1.032843 * x	0.999941
T PFOA	Quadratic	y = -0.027694 * x ^ 2 + 1.032843 * x	0.999941
T PFHpS	Linear	y = 0.752661 * x	0.997791
T br-PFOS	Quadratic	y = -0.077892 * x ^ 2 + 1.364885 * x	0.999960
T LN-PFOS	Quadratic	y = -0.035683 * x ^ 2 + 0.971472 * x	0.999936
T PFOS	Quadratic	y = -0.032865 * x ^ 2 + 1.081455 * x	0.999954
T PFNA	Linear	y = 0.718285 * x	0.997202
T 9Cl-PF3ONS	Linear	y = 0.315609 * x	0.998344
T MeFOSAA	Linear	y = 0.870186 * x	0.997981
S 13C2-PFDA	Linear	y = 0.752163 * x	0.993001
T PFDA	Quadratic	y = -0.040257 * x ^ 2 + 1.074740 * x	0.999993
S d5-EtFOSAA	Linear	y = 1.026982 * x	0.999740
T EtFOSAA	Linear	y = 0.889818 * x	0.999893
T PFUnDA	Linear	y = 3.480922 * x	0.998441
T 11Cl-PF3OUdS	Linear	y = 0.759968 * x	0.999091
T PFDoDA	Linear	y = 4.916780 * x	0.999162
T PFTrDA	Linear	y = 6.519257 * x	0.999823

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Verification

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1670-ICV1670
Lab FileID: Q73509.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1027_537_SQ1670\SQ1670.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1027_537_SQ1670\Q73501.d
2:D:\MassHunter\Data\1027_537_SQ1670\Q73502.d
3:D:\MassHunter\Data\1027_537_SQ1670\Q73503.d
4:D:\MassHunter\Data\1027_537_SQ1670\Q73504.d
5:D:\MassHunter\Data\1027_537_SQ1670\Q73505.d
6:D:\MassHunter\Data\1027_537_SQ1670\Q73506.d
7:D:\MassHunter\Data\1027_537_SQ1670\Q73507.d
8:D:\MassHunter\Data\1027_537_SQ1670\Q73508.d

Data File: Q73509
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	0.000	# -100.0	0.0
br-PFHxS	2.400	0.000	# -100.0	0.0
13C2-PFHxA	20.000	0.000	# -100.0	0.0
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
LN-PFHxS	17.600	0.000	# -100.0	0.0
6:2FTS	20.000	0.000	# -100.0	0.0
8:2FTS	20.000	0.000	# -100.0	0.0
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	0.000	# -100.0	0.0
EtFOSAA	20.000	0.000	# -100.0	0.0
LN-PFOA	20.000	14.577	-27.1	72.9
MeFOSAA	20.000	0.000	# -100.0	0.0
PFBA	20.000	0.000	# -100.0	0.0
PFBS	20.000	0.000	# -100.0	0.0
PFDA	20.000	0.000	# -100.0	0.0
PFDoDA	20.000	0.000	# -100.0	0.0
br-PFOA	20.000	2.366	# -88.2	11.8
PFHpA	20.000	0.000	# -100.0	0.0
PFHpS	20.000	0.000	# -100.0	0.0
PFHxA	20.000	0.000	# -100.0	0.0
PFHxS	20.000	0.000	# -100.0	0.0
PFNA	20.000	0.000	# -100.0	0.0
LN-PFOS	15.200	0.000	# -100.0	0.0
PFOA	20.000	16.757	-16.2	83.8
PFOS	20.000	0.000	# -100.0	0.0
PFPeA	20.000	0.000	# -100.0	0.0
br-PFOS	4.800	0.000	# -100.0	0.0
PFTeDA	20.000	0.000	# -100.0	0.0
PFTrDA	20.000	0.000	# -100.0	0.0
PFUnDA	20.000	0.000	# -100.0	0.0
ADONA	20.000	0.000	# -100.0	0.0
9Cl-PF3ONS	20.000	0.000	# -100.0	0.0
11Cl-PF3OUdS	20.000	0.000	# -100.0	0.0
13C3-HFPO-DA	40.000	0.000	# -100.0	0.0

Initial Calibration Verification

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1670-ICV1670
Lab FileID: Q73509.D

HFPO-DA	20.000	0.000	# -100.0	0.0

CC Criteria: +/- 30%

Initial Calibration Verification

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1670-ICV1670
Lab FileID: Q73510.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1027_537_SQ1670\SQ1670.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1027_537_SQ1670\Q73501.d
2:D:\MassHunter\Data\1027_537_SQ1670\Q73502.d
3:D:\MassHunter\Data\1027_537_SQ1670\Q73503.d
4:D:\MassHunter\Data\1027_537_SQ1670\Q73504.d
5:D:\MassHunter\Data\1027_537_SQ1670\Q73505.d
6:D:\MassHunter\Data\1027_537_SQ1670\Q73506.d
7:D:\MassHunter\Data\1027_537_SQ1670\Q73507.d
8:D:\MassHunter\Data\1027_537_SQ1670\Q73508.d

Data File: Q73510
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	0.000	# -100.0	0.0
br-PFHxS	2.400	2.803	16.8	116.8
13C2-PFHxA	20.000	0.000	# -100.0	0.0
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
LN-PFHxS	17.600	15.898	-9.7	90.3
6:2FTS	20.000	21.117	5.6	105.6
8:2FTS	20.000	20.523	2.6	102.6
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	0.000	# -100.0	0.0
EtFOSAA	20.000	20.859	4.3	104.3
LN-PFOA	20.000	21.166	5.8	105.8
MeFOSAA	20.000	22.049	10.2	110.2
PFBA	20.000	21.207	6.0	106.0
PFBS	20.000	19.186	-4.1	95.9
PFDA	20.000	20.846	4.2	104.2
PFDoDA	20.000	21.871	9.4	109.4
br-PFOA	20.000	0.000	# -100.0	0.0
PFHpA	20.000	21.541	7.7	107.7
PFHpS	20.000	21.404	7.0	107.0
PFHxA	20.000	21.282	6.4	106.4
PFHxS	20.000	18.780	-6.1	93.9
PFNA	20.000	20.777	3.9	103.9
LN-PFOS	15.200	17.778	17.0	117.0
PFOA	20.000	21.166	5.8	105.8
PFOS	20.000	21.112	5.6	105.6
PFPeA	20.000	22.734	13.7	113.7
br-PFOS	4.800	4.014	-16.4	83.6
PFTeDA	20.000	19.652	-1.7	98.3
PFTrDA	20.000	23.678	18.4	118.4
PFUnDA	20.000	23.000	15.0	115.0
ADONA	20.000	20.962	4.8	104.8
9Cl-PF3ONS	20.000	20.871	4.4	104.4
11Cl-PF3OUdS	20.000	21.117	5.6	105.6
13C3-HFPO-DA	40.000	0.000	# -100.0	0.0

Initial Calibration Verification

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1670-ICV1670
Lab FileID: Q73510.D

HFPO-DA	20.000	22.310	11.6	111.6

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1672-CC1670
Lab FileID: Q73583.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1029_537_SQ1672\SQ1672.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1027_537_SQ1670\Q73501.d
2:D:\MassHunter\Data\1027_537_SQ1670\Q73502.d
3:D:\MassHunter\Data\1027_537_SQ1670\Q73503.d
4:D:\MassHunter\Data\1027_537_SQ1670\Q73504.d
5:D:\MassHunter\Data\1027_537_SQ1670\Q73505.d
6:D:\MassHunter\Data\1027_537_SQ1670\Q73506.d
7:D:\MassHunter\Data\1027_537_SQ1670\Q73507.d
8:D:\MassHunter\Data\1027_537_SQ1670\Q73508.d

Data File: Q73583
Type : CC
Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	0.500	0.572	14.4	114.4
br-PFHxS	0.060	0.075	24.9	124.9
13C2-PFHxA	0.500	0.533	6.6	106.6
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
LN-PFHxS	0.440	0.447	1.5	101.5
6:2FTS	0.500	0.560	12.0	112.0
8:2FTS	0.500	0.522	4.4	104.4
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	1.000	1.051	5.1	105.1
EtFOSAA	0.500	0.543	8.5	108.5
LN-PFOA	0.500	0.513	2.6	102.6
MeFOSAA	0.500	0.548	9.6	109.6
PFBA	0.500	0.535	6.9	106.9
PFBS	0.500	0.529	5.8	105.8
PFDA	0.500	0.516	3.2	103.2
PFDoDA	0.500	0.557	11.4	111.4
br-PFOA	0.500	0.000	# -100.0	0.0
PFHpA	0.500	0.565	13.1	113.1
PFHpS	0.500	0.507	1.5	101.5
PFHxA	0.500	0.515	3.1	103.1
PFHxS	0.500	0.523	4.7	104.7
PFNA	0.500	0.616	23.1	123.1
LN-PFOS	0.380	0.428	12.5	112.5
PFOA	0.500	0.513	2.6	102.6
PFOS	0.500	0.503	0.7	100.7
PFPeA	0.500	0.615	22.9	122.9
br-PFOS	0.120	0.113	-5.5	94.5
PFTeDA	0.500	0.435	-12.9	87.1
PFTrDA	0.500	0.483	-3.4	96.6
PFUnDA	0.500	0.561	12.2	112.2
ADONA	0.500	0.502	0.3	100.3
9Cl-PF3ONS	0.500	0.536	7.2	107.2
11Cl-PF3OUdS	0.500	0.541	8.2	108.2
13C3-HFPO-DA	1.000	1.137	13.7	113.7

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1672-CC1670
Lab FileID: Q73583.D

HFPO-DA	0.500	0.621	24.2	124.2

CC Criteria: +/- 50%

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1672-ECC1670
Lab FileID: Q73588.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1029_537_SQ1672\SQ1672.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1027_537_SQ1670\Q73501.d
2:D:\MassHunter\Data\1027_537_SQ1670\Q73502.d
3:D:\MassHunter\Data\1027_537_SQ1670\Q73503.d
4:D:\MassHunter\Data\1027_537_SQ1670\Q73504.d
5:D:\MassHunter\Data\1027_537_SQ1670\Q73505.d
6:D:\MassHunter\Data\1027_537_SQ1670\Q73506.d
7:D:\MassHunter\Data\1027_537_SQ1670\Q73507.d
8:D:\MassHunter\Data\1027_537_SQ1670\Q73508.d

Data File: Q73588
Type : CC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	22.679	13.4	113.4
br-PFHxS	2.400	2.484	3.5	103.5
13C2-PFHxA	20.000	20.483	2.4	102.4
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
LN-PFHxS	17.600	17.611	0.1	100.1
6:2FTS	20.000	19.968	-0.2	99.8
8:2FTS	20.000	19.655	-1.7	98.3
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	41.158	2.9	102.9
EtFOSAA	20.000	20.479	2.4	102.4
LN-PFOA	20.000	19.396	-3.0	97.0
MeFOSAA	20.000	21.034	5.2	105.2
PFBA	20.000	20.581	2.9	102.9
PFBS	20.000	19.997	0.0	100.0
PFDA	20.000	20.190	1.0	101.0
PFDoDA	20.000	21.599	8.0	108.0
br-PFOA	20.000	0.000	# -100.0	0.0
PFHpA	20.000	21.139	5.7	105.7
PFHpS	20.000	20.161	0.8	100.8
PFHxA	20.000	20.281	1.4	101.4
PFHxS	20.000	20.054	0.3	100.3
PFNA	20.000	23.231	16.2	116.2
LN-PFOS	15.200	14.939	-1.7	98.3
PFOA	20.000	19.396	-3.0	97.0
PFOS	20.000	19.502	-2.5	97.5
PFPeA	20.000	22.573	12.9	112.9
br-PFOS	4.800	4.709	-1.9	98.1
PFTeDA	20.000	19.845	-0.8	99.2
PFTrDA	20.000	20.240	1.2	101.2
PFUnDA	20.000	21.960	9.8	109.8
ADONA	20.000	19.479	-2.6	97.4
9Cl-PF3ONS	20.000	19.755	-1.2	98.8
11Cl-PF3OUdS	20.000	20.677	3.4	103.4
13C3-HFPO-DA	40.000	42.519	6.3	106.3

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1672-ECC1670
Lab FileID: Q73588.D

HFPO-DA	20.000	21.935	9.7	109.7

CC Criteria: +/- 30%

Initial Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1673-ICC1673
Lab FileID: Q73597.D

Initial Calibration Report

Method Path	D:\MassHunter\Methods
Method File	6850_102920_SQ1672.quantmethod.xml
Batch Name	D:\MassHunter\Data\1029_6850_SQ1673\QuantResults\sq1673.batch.bin
Last Calib Update	10/29/2020 2:53:10 PM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\1029_6850_SQ1673\Q73594.d	10/29/2020 12:47:51 PM	10/29/2020 2:53:10 PM
2	D:\MassHunter\Data\1029_6850_SQ1673\Q73595.d	10/29/2020 12:56:48 PM	10/29/2020 2:53:10 PM
3	D:\MassHunter\Data\1029_6850_SQ1673\Q73596.d	10/29/2020 1:05:45 PM	10/29/2020 2:53:10 PM
4	D:\MassHunter\Data\1029_6850_SQ1673\Q73597.d	10/29/2020 1:14:43 PM	10/29/2020 2:53:10 PM
5	D:\MassHunter\Data\1029_6850_SQ1673\Q73598.d	10/29/2020 1:23:41 PM	10/29/2020 2:53:10 PM
6	D:\MassHunter\Data\1029_6850_SQ1673\Q73599.d	10/29/2020 2:14:56 PM	10/29/2020 2:53:10 PM
7	D:\MassHunter\Data\1029_6850_SQ1673\Q73600.d	10/29/2020 2:23:54 PM	10/29/2020 2:53:10 PM
8	D:\MassHunter\Data\1029_6850_SQ1673\Q73601.d	10/29/2020 2:32:54 PM	10/29/2020 2:53:10 PM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I Cl18O4						ISTD					
T Perchlorate	Avg RF	1.2393	1.1634	1.2345	1.2286	1.4505	1.4498	1.4602	1.5101	1.3420	10.250

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Generated at 2:53 PM on 10/29/2020

Initial Calibration Verification

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1673-ICV1673
Lab FileID: Q73602.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1029_6850_SQ1673\sq1673.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1029_6850_SQ1673\Q73594.d
2:D:\MassHunter\Data\1029_6850_SQ1673\Q73595.d
3:D:\MassHunter\Data\1029_6850_SQ1673\Q73596.d
4:D:\MassHunter\Data\1029_6850_SQ1673\Q73597.d
5:D:\MassHunter\Data\1029_6850_SQ1673\Q73598.d
6:D:\MassHunter\Data\1029_6850_SQ1673\Q73599.d
7:D:\MassHunter\Data\1029_6850_SQ1673\Q73600.d
8:D:\MassHunter\Data\1029_6850_SQ1673\Q73601.d

Data File: Q73602
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	2.129	6.4	106.4

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1673-CC1673
Lab FileID: Q73614.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1029_6850_SQ1673\sq1673.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1029_6850_SQ1673\Q73594.d
2:D:\MassHunter\Data\1029_6850_SQ1673\Q73595.d
3:D:\MassHunter\Data\1029_6850_SQ1673\Q73596.d
4:D:\MassHunter\Data\1029_6850_SQ1673\Q73597.d
5:D:\MassHunter\Data\1029_6850_SQ1673\Q73598.d
6:D:\MassHunter\Data\1029_6850_SQ1673\Q73599.d
7:D:\MassHunter\Data\1029_6850_SQ1673\Q73600.d
8:D:\MassHunter\Data\1029_6850_SQ1673\Q73601.d

Data File: Q73614
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.810	-9.5	90.5

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1673-CC1673
Lab FileID: Q73615.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1029_6850_SQ1673\sq1673.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1029_6850_SQ1673\Q73594.d
2:D:\MassHunter\Data\1029_6850_SQ1673\Q73595.d
3:D:\MassHunter\Data\1029_6850_SQ1673\Q73596.d
4:D:\MassHunter\Data\1029_6850_SQ1673\Q73597.d
5:D:\MassHunter\Data\1029_6850_SQ1673\Q73598.d
6:D:\MassHunter\Data\1029_6850_SQ1673\Q73599.d
7:D:\MassHunter\Data\1029_6850_SQ1673\Q73600.d
8:D:\MassHunter\Data\1029_6850_SQ1673\Q73601.d

Data File: Q73615
Type : QC
Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	0.200	0.183	-8.3	91.7

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1673-CC1673
Lab FileID: Q73621.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1029_6850_SQ1673\sq1673.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1029_6850_SQ1673\Q73594.d
2:D:\MassHunter\Data\1029_6850_SQ1673\Q73595.d
3:D:\MassHunter\Data\1029_6850_SQ1673\Q73596.d
4:D:\MassHunter\Data\1029_6850_SQ1673\Q73597.d
5:D:\MassHunter\Data\1029_6850_SQ1673\Q73598.d
6:D:\MassHunter\Data\1029_6850_SQ1673\Q73599.d
7:D:\MassHunter\Data\1029_6850_SQ1673\Q73600.d
8:D:\MassHunter\Data\1029_6850_SQ1673\Q73601.d

Data File: Q73621
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.801	-9.9	90.1

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1673-CC1673
Lab FileID: Q73622.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1029_6850_SQ1673\sq1673.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1029_6850_SQ1673\Q73594.d
2:D:\MassHunter\Data\1029_6850_SQ1673\Q73595.d
3:D:\MassHunter\Data\1029_6850_SQ1673\Q73596.d
4:D:\MassHunter\Data\1029_6850_SQ1673\Q73597.d
5:D:\MassHunter\Data\1029_6850_SQ1673\Q73598.d
6:D:\MassHunter\Data\1029_6850_SQ1673\Q73599.d
7:D:\MassHunter\Data\1029_6850_SQ1673\Q73600.d
8:D:\MassHunter\Data\1029_6850_SQ1673\Q73601.d

Data File: Q73622
Type : QC
Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	0.200	0.184	-8.2	91.8

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1673-CC1673
Lab FileID: Q73630.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\1029_6850_SQ1673\sq1673.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\1029_6850_SQ1673\Q73594.d
2:D:\MassHunter\Data\1029_6850_SQ1673\Q73595.d
3:D:\MassHunter\Data\1029_6850_SQ1673\Q73596.d
4:D:\MassHunter\Data\1029_6850_SQ1673\Q73597.d
5:D:\MassHunter\Data\1029_6850_SQ1673\Q73598.d
6:D:\MassHunter\Data\1029_6850_SQ1673\Q73599.d
7:D:\MassHunter\Data\1029_6850_SQ1673\Q73600.d
8:D:\MassHunter\Data\1029_6850_SQ1673\Q73601.d

Data File: Q73630
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.808	-9.6	90.4

CC Criteria: +/- 15%

Run Sequence Report

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: SQ1670 **Method:** EPA 537.1 REV 1.0 **Instrument ID:** GCMSQ

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ1670-IC1670	Q73500.D	10/27/20 11:04	n/a	Mass Calibration Verification
SQ1670-IC1670	Q73501.D	10/27/20 11:20	n/a	Initial cal 0.5
SQ1670-IC1670	Q73502.D	10/27/20 11:35	n/a	Initial cal 1.0
SQ1670-IC1670	Q73503.D	10/27/20 11:54	n/a	Initial cal 2.0
SQ1670-IC1670	Q73504.D	10/27/20 12:09	n/a	Initial cal 5.0
SQ1670-IC1670	Q73505.D	10/27/20 12:25	n/a	Initial cal 10
SQ1670-ICC1670	Q73506.D	10/27/20 12:40	n/a	Initial cal 20
SQ1670-IC1670	Q73507.D	10/27/20 12:56	n/a	Initial cal 50
SQ1670-IC1670	Q73508.D	10/27/20 13:12	n/a	Initial cal 100
SQ1670-ICV1670	Q73509.D	10/27/20 13:27	n/a	Initial cal verification 20
SQ1670-ICV1670	Q73510.D	10/27/20 13:43	n/a	Initial cal verification 20
ZZZZZZ	Q73512.D	10/27/20 14:14	OP82619	(unrelated sample)
SQ1670-CC1670	Q73514.D	10/27/20 14:45	n/a	Continuing cal 0.5LL
SQ1670-CC1670	Q73526.D	10/27/20 19:08	n/a	Continuing cal 20
SQ1670-CC1670	Q73536.D	10/27/20 21:44	n/a	Continuing cal 20
ZZZZZZ	Q73541.D	10/27/20 23:02	OP82619	(unrelated sample)
SQ1670-ECC1670	Q73542.D	10/27/20 23:18	n/a	Ending cal 50

Run Sequence Report

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: SQ1672	**Method:** EPA 537.1 REV 1.0	**Instrument ID:** GCMSQ

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ1672-CC1670	Q73583.D	10/29/20 08:32	n/a	Continuing cal 0.5LL
ZZZZZZ	Q73587.D	10/29/20 09:53	OP82647	(unrelated sample)
SQ1672-ECC1670	Q73588.D	10/29/20 10:09	n/a	Ending cal 20

Run Sequence Report

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: SQ1673 **Method:** SW846 6850 **Instrument ID:** GCMSQ

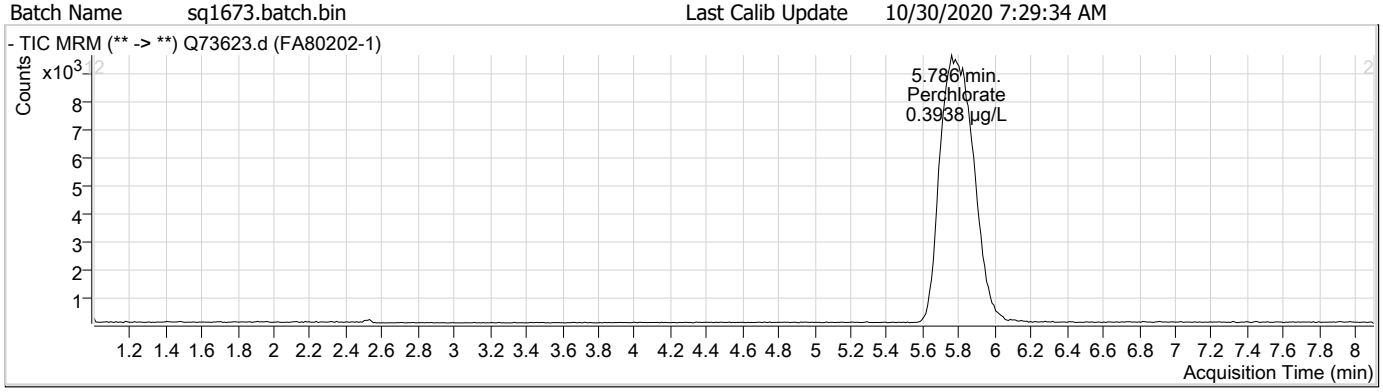
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ1673-IC1673	Q73593.D	10/29/20 12:38	n/a	Mass Calibration Verification
SQ1673-IC1673	Q73594.D	10/29/20 12:47	n/a	Initial cal 0.2
SQ1673-IC1673	Q73595.D	10/29/20 12:56	n/a	Initial cal 0.5
SQ1673-IC1673	Q73596.D	10/29/20 13:05	n/a	Initial cal 1.0
SQ1673-ICC1673	Q73597.D	10/29/20 13:14	n/a	Initial cal 2.0
SQ1673-IC1673	Q73598.D	10/29/20 13:23	n/a	Initial cal 5.0
SQ1673-IC1673	Q73599.D	10/29/20 14:14	n/a	Initial cal 10
SQ1673-IC1673	Q73600.D	10/29/20 14:23	n/a	Initial cal 25
SQ1673-IC1673	Q73601.D	10/29/20 14:32	n/a	Initial cal 50
SQ1673-ICV1673	Q73602.D	10/29/20 14:41	n/a	Initial cal verification 2
OP82733-BS	Q73605.D	10/29/20 15:19	OP82733	Blank Spike
OP82733-MB	Q73606.D	10/29/20 15:28	OP82733	Method Blank
ZZZZZZ	Q73607.D	10/29/20 15:37	OP82733	(unrelated sample)
ZZZZZZ	Q73608.D	10/29/20 15:46	OP82733	(unrelated sample)
ZZZZZZ	Q73609.D	10/29/20 15:55	OP82733	(unrelated sample)
ZZZZZZ	Q73610.D	10/29/20 16:04	OP82733	(unrelated sample)
ZZZZZZ	Q73611.D	10/29/20 16:13	OP82733	(unrelated sample)
ZZZZZZ	Q73612.D	10/29/20 16:22	OP82733	(unrelated sample)
ZZZZZZ	Q73613.D	10/29/20 16:31	OP82733	(unrelated sample)
SQ1673-CC1673	Q73614.D	10/29/20 16:40	n/a	Continuing cal 2.0
SQ1673-CC1673	Q73615.D	10/29/20 16:48	n/a	Continuing cal 0.2
ZZZZZZ	Q73616.D	10/29/20 16:57	OP82733	(unrelated sample)
ZZZZZZ	Q73617.D	10/29/20 17:06	OP82733	(unrelated sample)
SQ1673-CC1673	Q73621.D	10/29/20 17:42	n/a	Continuing cal 2.0
SQ1673-CC1673	Q73622.D	10/29/20 17:51	n/a	Continuing cal 0.2
FA80202-1	Q73623.D	10/29/20 18:00	OP82733	54MW13
FA80202-2	Q73624.D	10/29/20 18:09	OP82733	54TW13
FA80202-3	Q73625.D	10/29/20 18:18	OP82733	54MW10
FA80202-4	Q73626.D	10/29/20 18:27	OP82733	54MW12
OP82733-MS2	Q73627.D	10/29/20 18:36	OP82733	Matrix Spike
OP82733-MSD2	Q73628.D	10/29/20 18:45	OP82733	Matrix Spike Duplicate
FA80202-5	Q73629.D	10/29/20 18:54	OP82733	54MW1
SQ1673-CC1673	Q73630.D	10/29/20 19:03	n/a	Continuing cal 2.0
SQ1673-ECC1673	Q73631.D	10/29/20 19:12	n/a	Ending cal 0.2

MS Semi-volatiles

Raw Data

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73623.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 6:00:40 PM
Sample Name	FA80202-1	Instrument	Instrument 1
Vial	Vial 26	Sample Information	OP82733,SQ1673,10,,,10,20,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

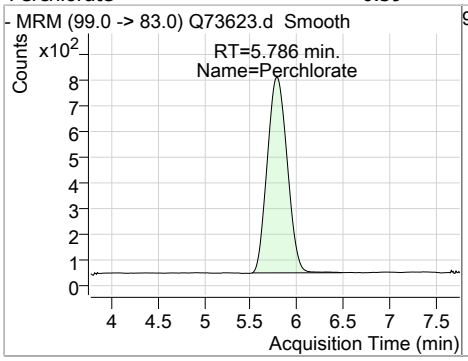


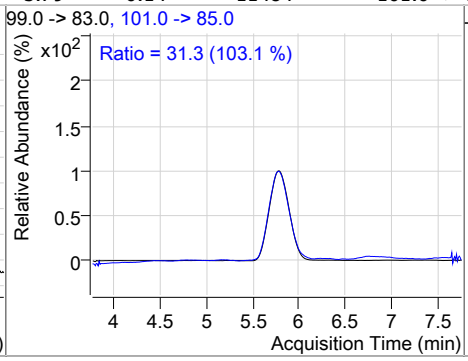
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.779	107.0 -> 89.0	108643	NoQ	5.00	µg/L	-0.163
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.786	99.0 -> 83.0	11484	3.2	0.39	µg/L	98

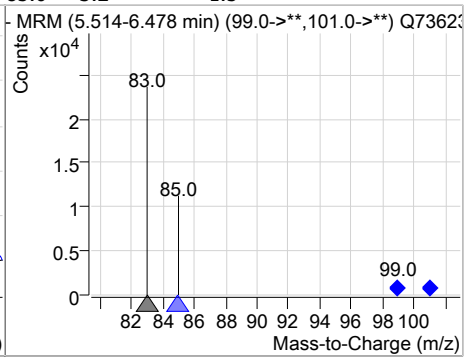
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.39	5.79	-0.14	11484	101.0 -> 85.0	3.2	1.5	

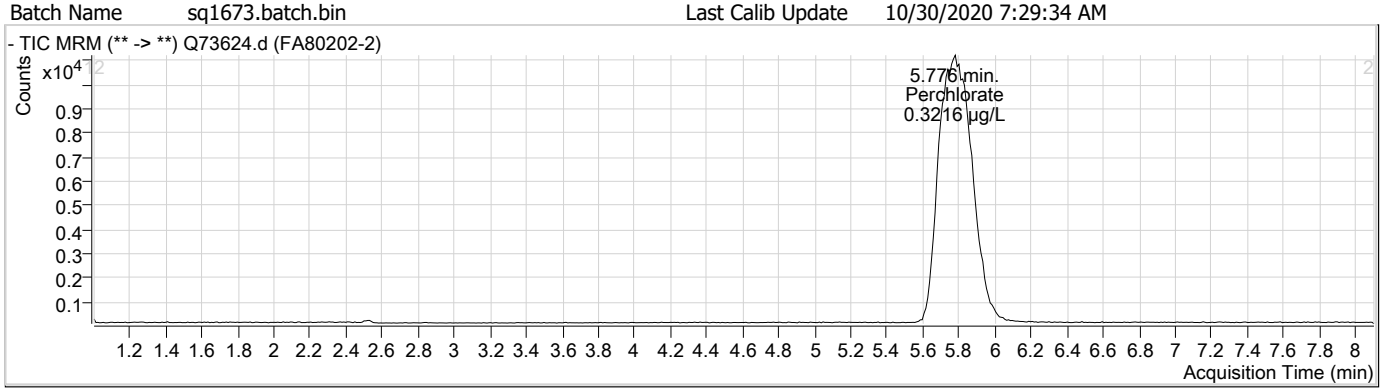






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73624.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 6:09:37 PM
Sample Name	FA80202-2	Instrument	Instrument 1
Vial	Vial 27	Sample Information	OP82733,SQ1673,10,,,10,20,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

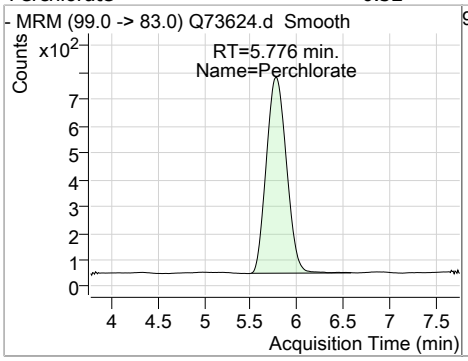


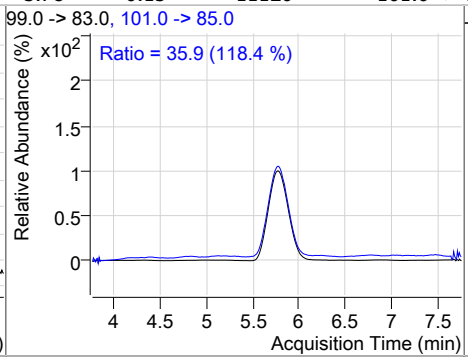
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.779	107.0 -> 89.0	128817	NoQ	5.00	µg/L	-0.163
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.776	99.0 -> 83.0	11120	2.8	0.32	µg/L	90

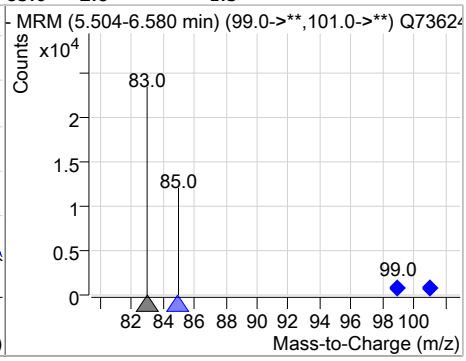
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.32	5.78	-0.15	11120	101.0 -> 85.0	2.8	1.5	

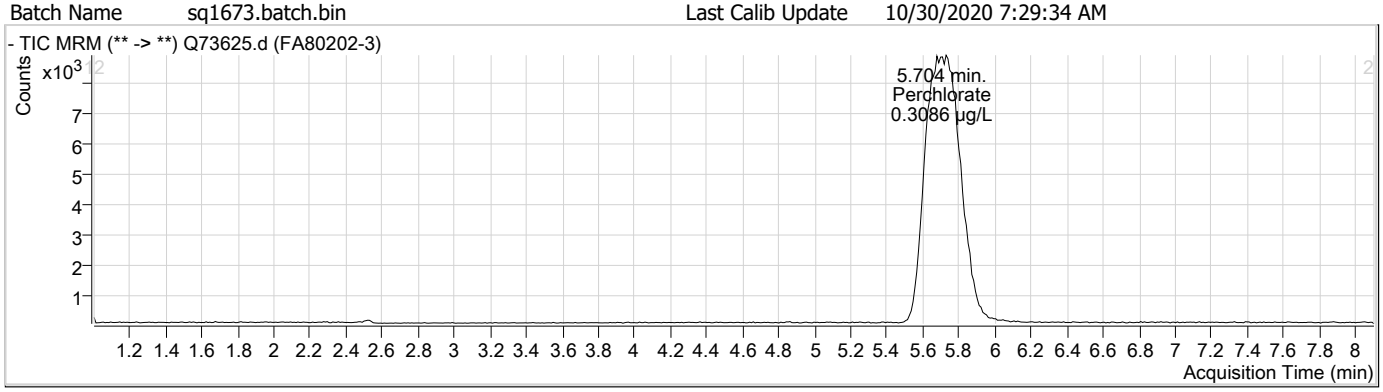






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73625.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 6:18:36 PM
Sample Name	FA80202-3	Instrument	Instrument 1
Vial	Vial 28	Sample Information	OP82733,SQ1673,10,,,10,20,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

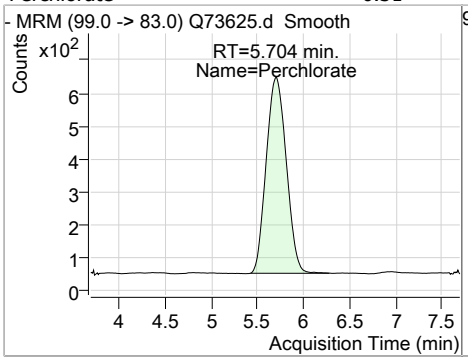


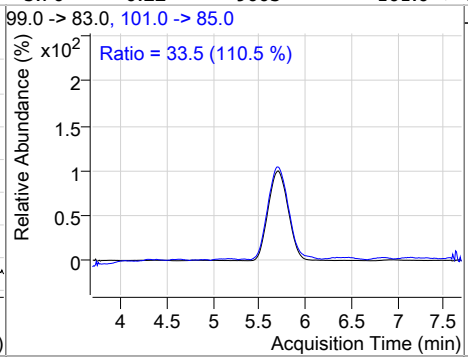
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.708	107.0 -> 89.0	108685	NoQ	5.00	µg/L	-0.234
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.704	99.0 -> 83.0	9003	3.0	0.31	µg/L	94

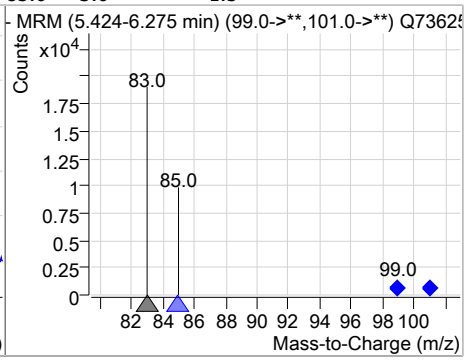
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.31	5.70	-0.22	9003	101.0 -> 85.0	3.0	1.5	

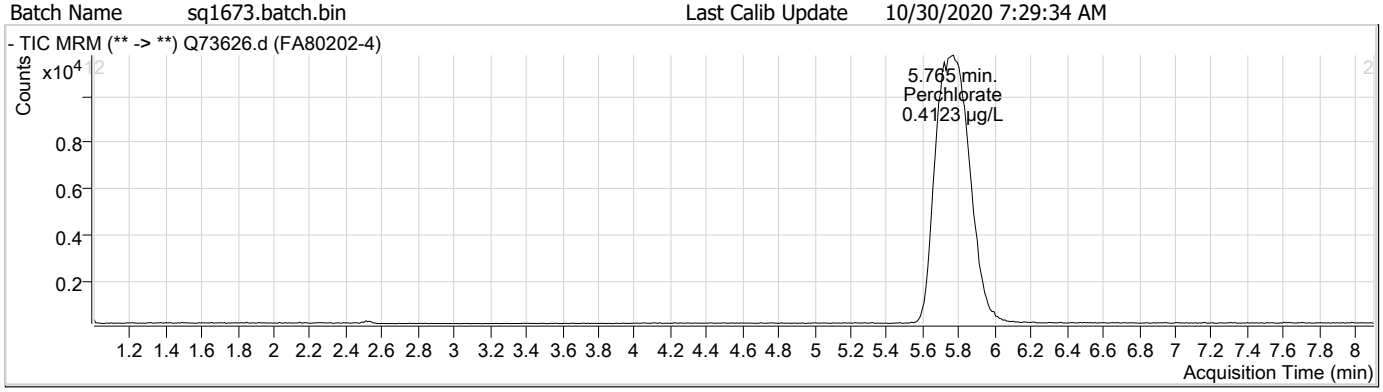






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73626.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 6:27:35 PM
Sample Name	FA80202-4	Instrument	Instrument 1
Vial	Vial 29	Sample Information	OP82733,SQ1673,10,,,10,20,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

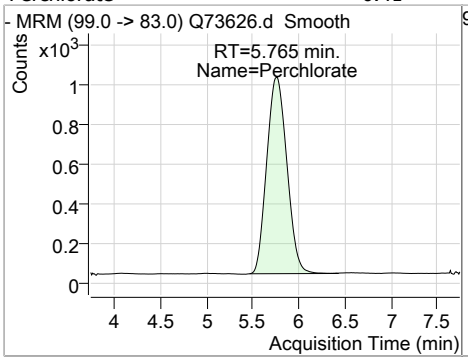


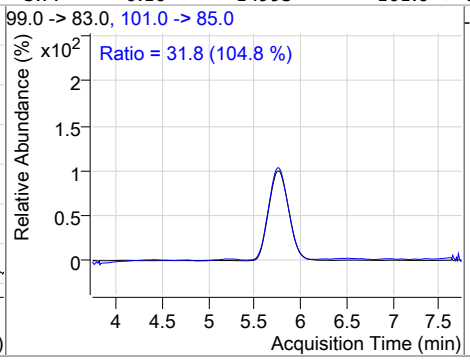
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.759	107.0 -> 89.0	135506	NoQ	5.00	µg/L	-0.183
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.765	99.0 -> 83.0	14995	3.1	0.41	µg/L	97

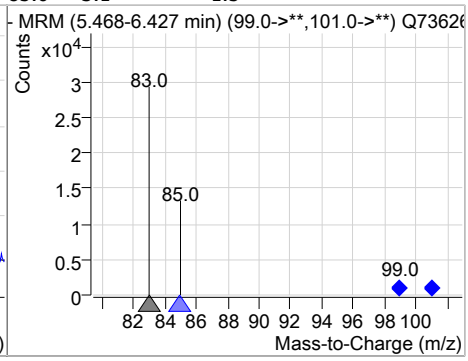
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.41	5.77	-0.16	14995	101.0 -> 85.0	3.1	1.5	

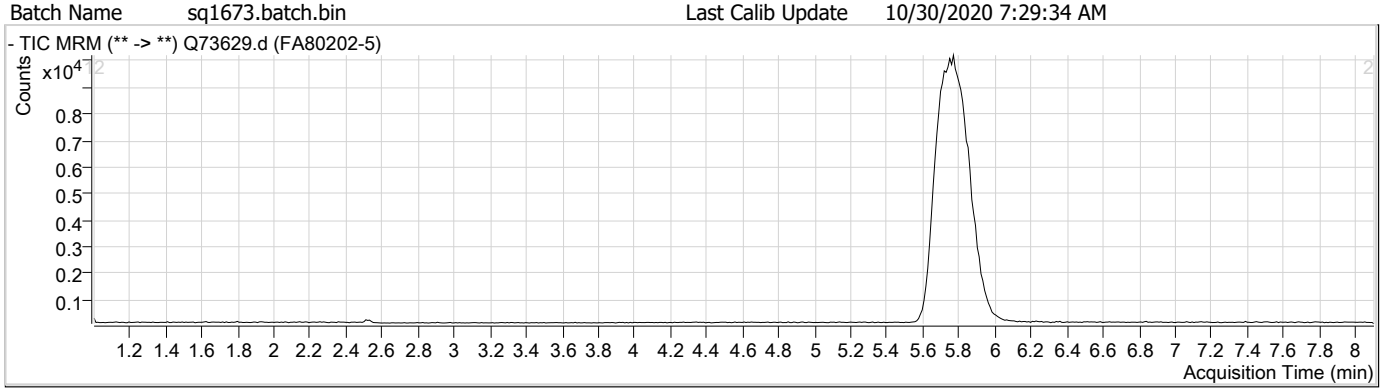






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73629.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 6:54:28 PM
Sample Name	FA80202-5	Instrument	Instrument 1
Vial	Vial 32	Sample Information	OP82733,SQ1673,10,,,10,20,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

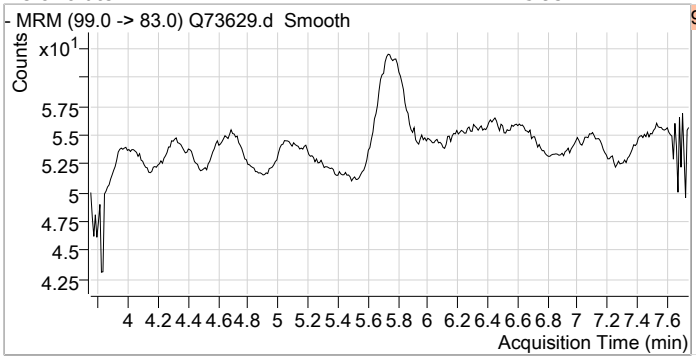


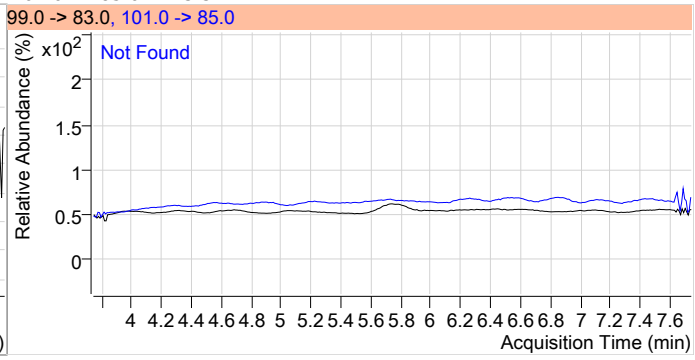
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.759	107.0 -> 89.0	130097	NoQ	5.00 µg/L	-0.183
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	-	99.0 -> 83.0		-	N.D.	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

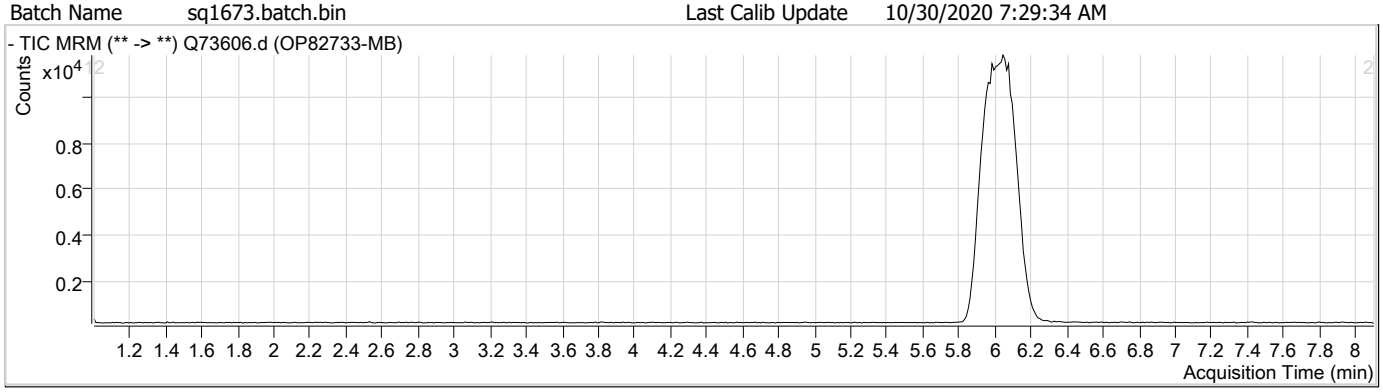
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	5.93	101.0 -> 85.0	3.3





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73606.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 3:28:14 PM
Sample Name	OP82733-MB	Instrument	Instrument 1
Vial	Vial 13	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

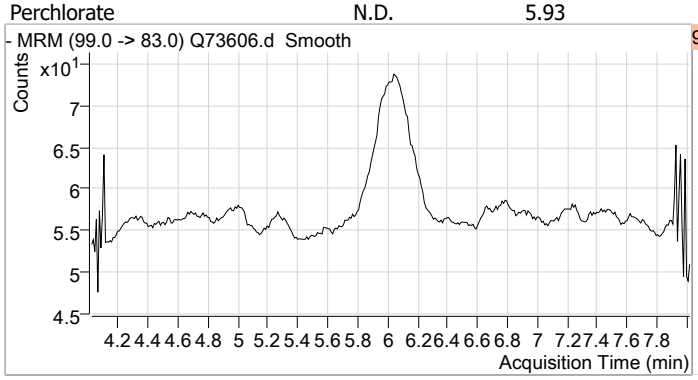


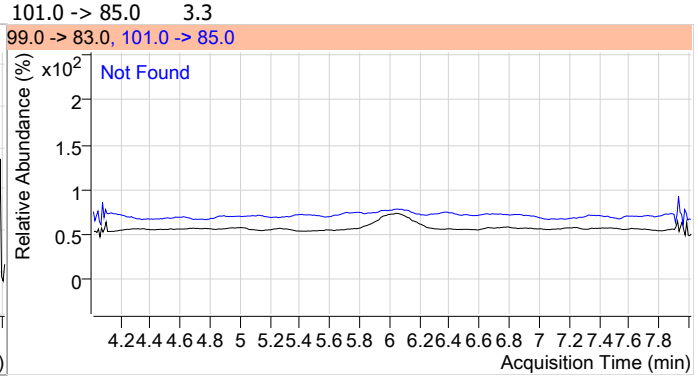
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.034	107.0 -> 89.0	155104	NoQ	5.00 µg/L	0.092
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	-	99.0 -> 83.0		-	N.D.	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

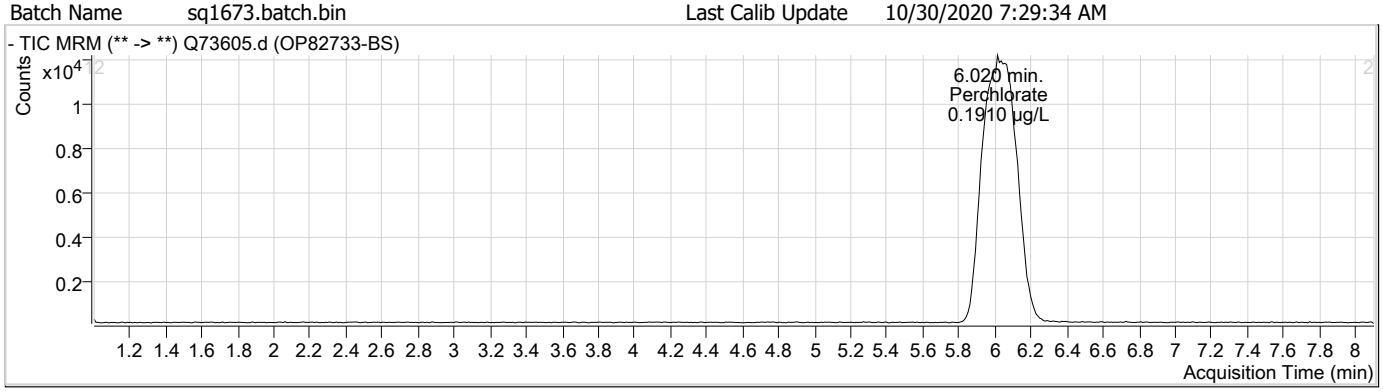
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	5.93	101.0 -> 85.0	3.3





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73605.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 3:19:17 PM
Sample Name	OP82733-BS	Instrument	Instrument 1
Vial	Vial 12	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

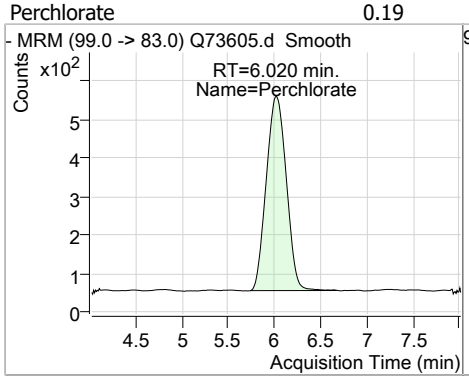


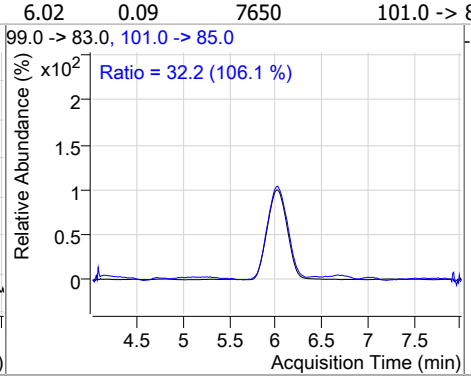
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.034	107.0 -> 89.0	149206	NoQ	5.00	µg/L	0.092
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.020	99.0 -> 83.0	7650	3.1	0.19	µg/L	97

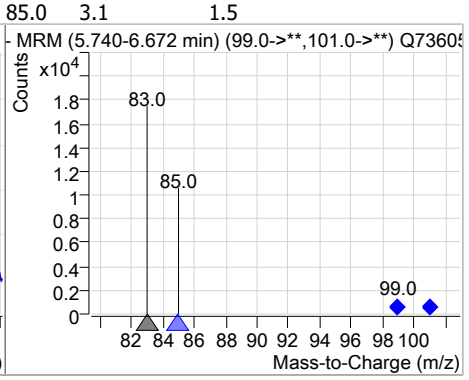
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.19	6.02	0.09	7650	101.0 -> 85.0	3.1	1.5	

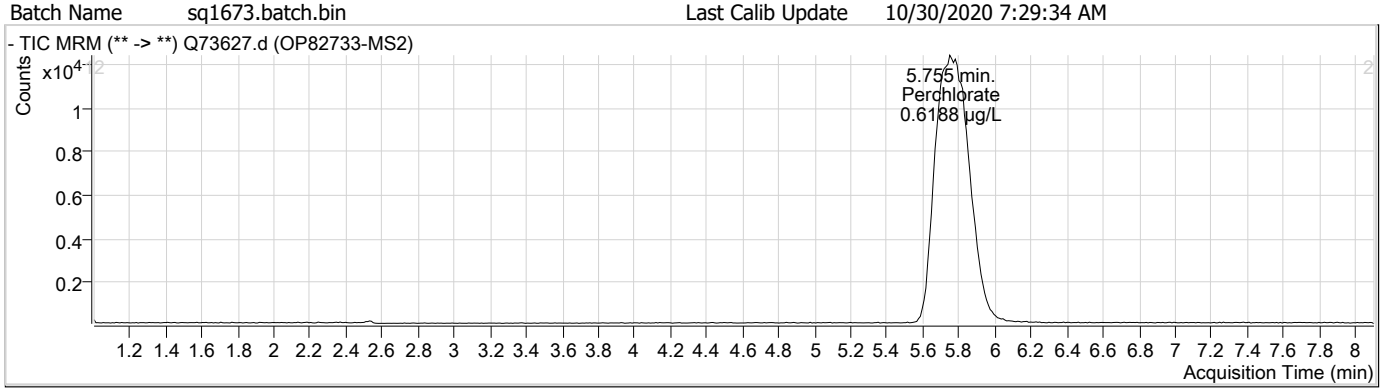






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73627.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 6:36:33 PM
Sample Name	OP82733-MS2	Instrument	Instrument 1
Vial	Vial 30	Sample Information	OP82733,SQ1673,10,,,10,20,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

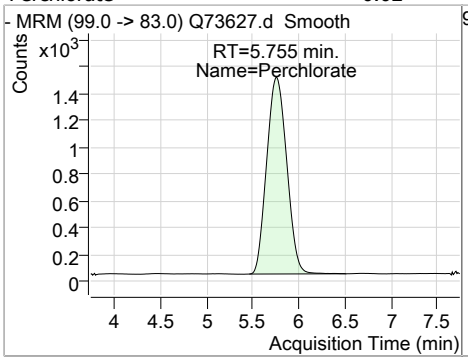


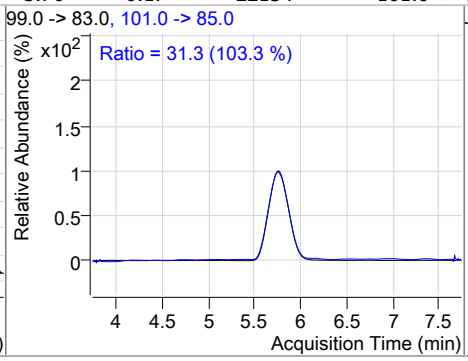
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.759	107.0 -> 89.0	133263	NoQ	5.00	µg/L	-0.183
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.755	99.0 -> 83.0	22134	3.2	0.62	µg/L	98

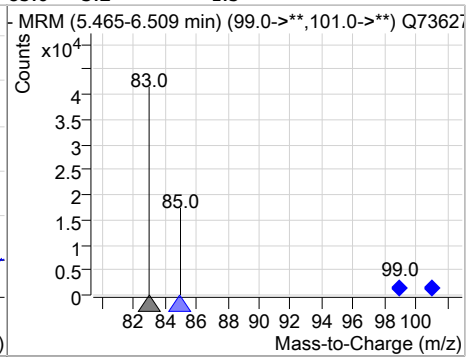
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.62	5.76	-0.17	22134	101.0 -> 85.0	3.2	1.5	

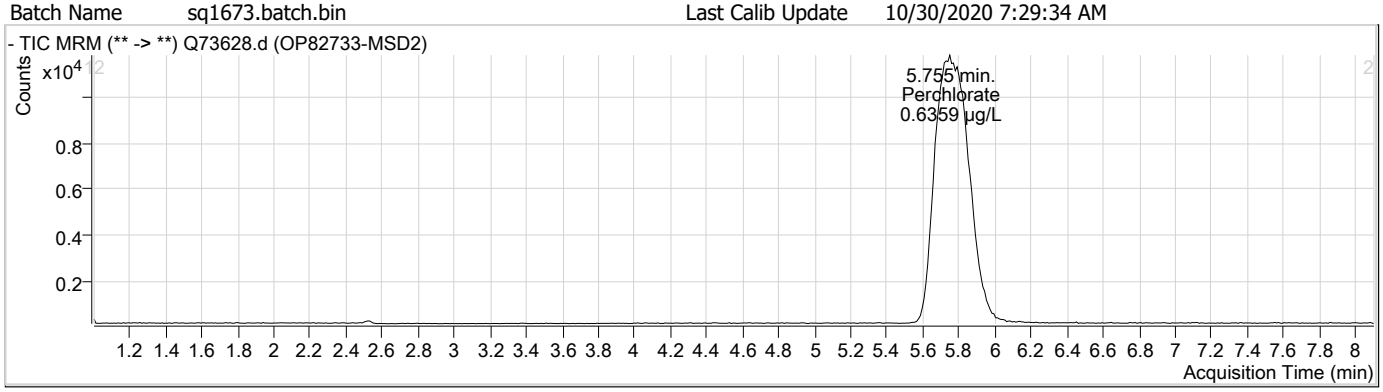






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73628.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 6:45:30 PM
Sample Name	OP82733-MSD2	Instrument	Instrument 1
Vial	Vial 31	Sample Information	OP82733,SQ1673,10,,,10,20,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

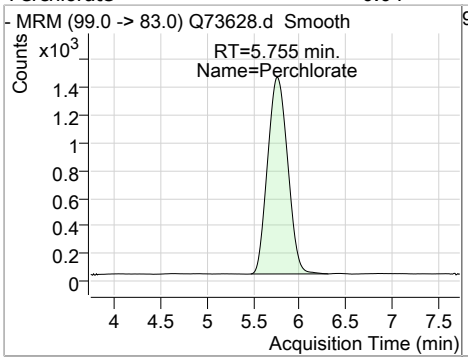


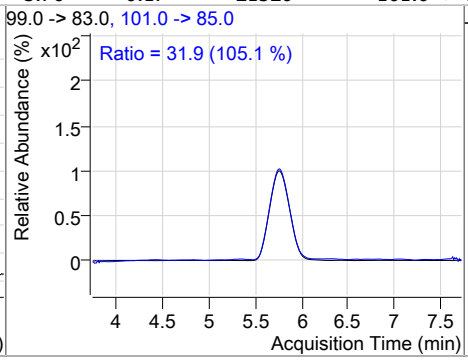
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.748	107.0 -> 89.0	126075	NoQ	5.00	µg/L	-0.194
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.755	99.0 -> 83.0	21520	3.1	0.64	µg/L	97

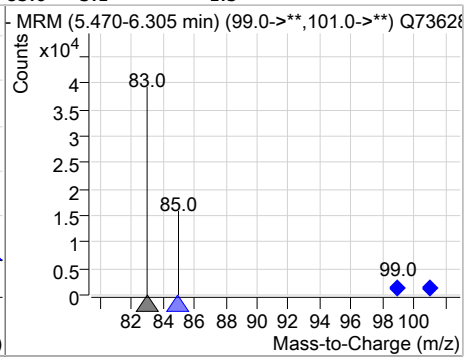
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.64	5.76	-0.17	21520	101.0 -> 85.0	3.1	1.5	







QQQ Check Tune Report

Agilent Technologies

Instrument Name	Instrument 1
MS Model	G6460A
MS Instrument Serial	SG10447001
Software_Firmware Version	B.08.02.B8260.0, FW: A.00.08.62
Tune Date & Time	27 October 2020 07:42:46
Data Path	D:\MassHunter\Tune\QQQ\G6460A\atunes.TUNE.XML
Ion Source	AJS ESI
Ionization Mode	AJS ESI
Tuned Resolution	All
Vacuum Pressure	1.85E+0[R]; 2.53E-5[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	10
Nebulizer	15
Capillary	4000
Nozzle Voltage	1500
Sheath Gas Temp	250
Sheath Gas Flow	7

Positive Results

Analyzer: MS1 Polarity: Positive Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.08	-0.01	Pass	0.70	0.69	-0.01	Pass	105720
322.05	322.08	0.03	Pass	0.70	0.72	0.02	Pass	27426
622.03	622.02	-0.01	Pass	0.70	0.66	-0.04	Pass	33168
922.01	922.02	0.01	Pass	0.70	0.67	-0.03	Pass	50977
1521.97	1522.00	0.03	Pass	0.70	0.68	-0.02	Pass	37491
2121.93	2122.01	0.08	Pass	0.70	0.74	0.04	Pass	22809

Analyzer: MS2 Polarity: Positive Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
58.07	58.07	0.00	Pass	0.70	0.78	0.08	Pass	19306
118.09	118.05	-0.04	Pass	0.70	0.80	0.10	Pass	128998
322.05	322.01	-0.04	Pass	0.70	0.75	0.05	Pass	34914
622.03	622.01	-0.02	Pass	0.70	0.71	0.01	Pass	38730
922.01	922.00	-0.01	Pass	0.70	0.72	0.02	Pass	60545
1521.97	1521.97	0.00	Pass	0.70	0.83	0.13	Pass	46202
2121.93	2121.78	-0.15	Pass	0.70	0.79	0.09	Pass	3239

Analyzer: MS1 Polarity: Positive Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.06	-0.03	Pass	1.20	1.15	-0.05	Pass	137171
322.05	322.12	0.07	Pass	1.20	1.02	-0.18	Pass	32753
622.03	622.03	0.00	Pass	1.20	0.95	-0.25	Pass	55694
922.01	922.00	-0.01	Pass	1.20	0.93	-0.27	Pass	90034
1521.97	1521.96	-0.01	Pass	1.20	1.01	-0.19	Pass	132183
2121.93	2121.99	0.06	Pass	1.20	1.23	0.03	Pass	157421

Analyzer: MS2 Polarity: Positive Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
58.07	58.05	-0.02	Pass	1.20	1.27	0.07	Pass	27327
118.09	118.06	-0.03	Pass	1.20	1.20	0.00	Pass	198539
322.05	321.96	-0.09	Pass	1.20	1.49	0.29	Pass	67639
622.03	621.98	-0.05	Pass	1.20	0.94	-0.26	Pass	92618
922.01	921.93	-0.08	Pass	1.20	1.04	-0.16	Pass	114793
1521.97	1521.89	-0.08	Pass	1.20	1.04	-0.16	Pass	72315
2121.93	2121.76	-0.17	Pass	1.20	1.21	0.01	Pass	79474

Analyzer: MS1 Polarity: Positive Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	117.97	-0.12	Pass	2.50	2.42	-0.08	Pass	207433
322.05	322.14	0.09	Pass	2.50	2.14	-0.36	Pass	59593
622.03	622.04	0.01	Pass	2.50	2.08	-0.42	Pass	100422
922.01	922.01	0.00	Pass	2.50	2.04	-0.46	Pass	173590
1521.97	1521.96	-0.01	Pass	2.50	2.10	-0.40	Pass	263478
2121.93	2121.98	0.05	Pass	2.50	2.28	-0.22	Pass	331839

QQQ Check Tune Report

Agilent Technologies

Analyzer: MS2 Polarity: Positive Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
58.07	58.07	0.00	Pass	2.50	2.79	0.29	Pass	39373
118.09	118.07	-0.02	Pass	2.50	2.74	0.24	Pass	281295
322.05	321.97	-0.08	Pass	2.50	2.87	0.37	Pass	113263
622.03	621.89	-0.14	Pass	2.50	2.33	-0.17	Pass	161236
922.01	921.91	-0.10	Pass	2.50	2.37	-0.13	Pass	226885
1521.97	1521.85	-0.12	Pass	2.50	2.18	-0.32	Pass	202257
2121.93	2121.78	-0.15	Pass	2.50	2.43	-0.07	Pass	221071

QQQ Check Tune Report

Agilent Technologies

Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.98	-0.01	Pass	0.70	0.66	-0.04	Pass	179538
302.00	302.00	0.00	Pass	0.70	0.72	0.02	Pass	25095
601.98	601.96	-0.02	Pass	0.70	0.69	-0.01	Pass	82142
1033.99	1033.96	-0.03	Pass	0.70	0.71	0.01	Pass	291211
1633.95	1633.98	0.03	Pass	0.70	0.68	-0.02	Pass	531298
2233.91	2233.92	0.01	Pass	0.70	0.72	0.02	Pass	417948

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.01	0.01	Pass	0.70	0.75	0.05	Pass	60565
112.99	112.96	-0.03	Pass	0.70	0.79	0.09	Pass	292893
302.00	301.95	-0.05	Pass	0.70	0.76	0.06	Pass	43105
601.98	601.92	-0.06	Pass	0.70	0.73	0.03	Pass	86652
1033.99	1033.92	-0.07	Pass	0.70	0.75	0.05	Pass	299662
1633.95	1633.90	-0.05	Pass	0.70	0.71	0.01	Pass	484836
2233.91	2233.83	-0.08	Pass	0.70	0.69	-0.01	Pass	170739

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.89	-0.10	Pass	1.20	1.15	-0.05	Pass	250519
302.00	302.03	0.03	Pass	1.20	1.06	-0.14	Pass	31975
601.98	601.98	0.00	Pass	1.20	0.97	-0.23	Pass	101467
1033.99	1034.02	0.03	Pass	1.20	0.90	-0.30	Pass	409786
1633.95	1633.96	0.01	Pass	1.20	0.96	-0.24	Pass	1149211
2233.91	2233.94	0.03	Pass	1.20	1.06	-0.14	Pass	1245777

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.02	0.02	Pass	1.20	1.25	0.05	Pass	74435
112.99	112.94	-0.05	Pass	1.20	1.29	0.09	Pass	388272
302.00	301.90	-0.10	Pass	1.20	1.23	0.03	Pass	69280
601.98	601.83	-0.15	Pass	1.20	1.09	-0.11	Pass	146579
1033.99	1033.88	-0.11	Pass	1.20	0.96	-0.24	Pass	496096
1633.95	1633.82	-0.13	Pass	1.20	0.97	-0.23	Pass	1122968
2233.91	2233.80	-0.11	Pass	1.20	1.12	-0.08	Pass	1091873

Analyzer: MS1 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.64	-0.35	Pass	2.50	2.65	0.15	Pass	331446
302.00	302.09	0.09	Pass	2.50	2.55	0.05	Pass	44231
601.98	602.00	0.02	Pass	2.50	2.42	-0.08	Pass	155346
1033.99	1033.97	-0.02	Pass	2.50	2.31	-0.19	Pass	770704
1633.95	1633.92	-0.03	Pass	2.50	2.36	-0.14	Pass	2412413
2233.91	2233.91	0.00	Pass	2.50	2.43	-0.07	Pass	2841540

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.05	0.05	Pass	2.50	2.51	0.01	Pass	90584
112.99	112.92	-0.07	Pass	2.50	2.64	0.14	Pass	453581
302.00	301.89	-0.11	Pass	2.50	2.57	0.07	Pass	84073
601.98	601.81	-0.17	Pass	2.50	2.53	0.03	Pass	232257
1033.99	1033.83	-0.16	Pass	2.50	2.20	-0.30	Pass	1146427
1633.95	1633.77	-0.18	Pass	2.50	2.34	-0.16	Pass	3347556
2233.91	2233.72	-0.19	Pass	2.50	2.57	0.07	Pass	3864785

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
10/29/20 08:25

Perfluorinated Compounds by LC/MS/MS

Data File : Q73501.d
Operator : mikee
Acq. Method : 537.m
Acq. Date-Time : 10/27/2020 11:20:02 AM
Sample Name : IC1670-0.5
Vial : Vial 2
DA Method File : 537_1027_SQ1670.quantmethod.xml
Batch Name : SQ1670.batch.bin
Sample Information : OP82561,SQ1670,250,,,1.0,1,water

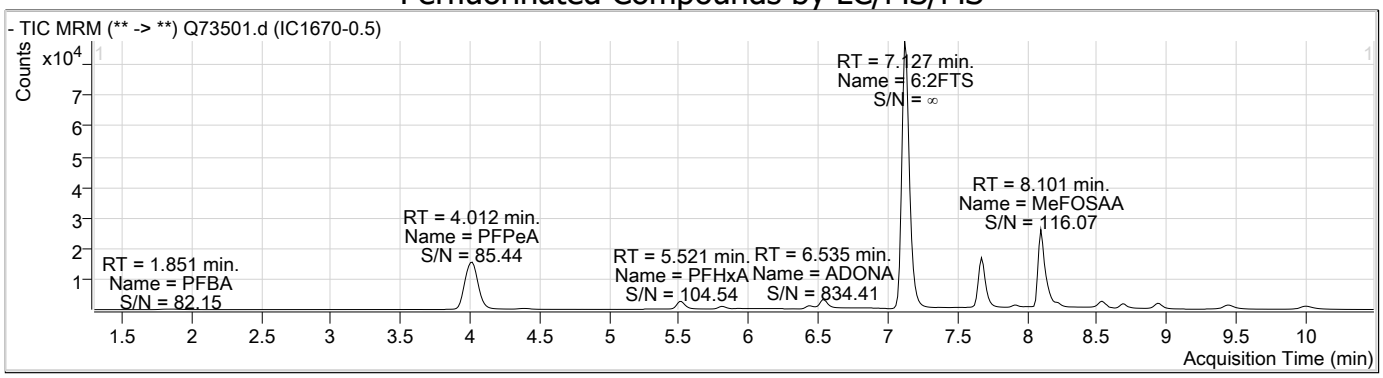
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	7.126	429.0 -> 409.0	109866	20.00	µg/L		0.041
13C2-PFOA	7.142	415.0 -> 370.0	223317	20.00	µg/L		0.039
13C3-PFPeA	4.022	266.0 -> 222.0	101062	20.00	µg/L		0.025
13C4-PFOS	7.679	503.0 -> 80.0	52364	20.00	µg/L		0.037
d3-MeFOSAA	8.100	573.0 -> 419.0	77266	40.00	µg/L		0.012
System Monitoring Compounds							
13C2-PFDA	8.146	515.0 -> 470.0	4970	0.59	µg/L		0.040
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 3.0%			
13C2-PFHxA	5.519	315.0 -> 270.0	5476	0.54	µg/L		0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 2.7%			
d5-EtFOSAA	8.225	589.0 -> 419.0	1988	1.00	µg/L		0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 2.5%			
13C3-HFPO-DA	5.813	287.0 -> 169.0	1685	1.07	µg/L		0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 2.7%			
Target Compounds							QValue
br-PFHxS	6.318	399.0 -> 80.0	140	0.06	µg/L		100
LN-PFHxS	6.493	399.0 -> 80.0	918	0.47	µg/L		100
6:2FTS	7.127	427.0 -> 407.0	2776	0.55	µg/L		96
8:2FTS	8.169	527.0 -> 507.0	2090	0.54	µg/L		94
EtFOSAA	8.226	584.0 -> 419.0	1003	0.58	µg/L	m	89
LN-PFOA	7.130	413.0 -> 369.0	5820	0.51	µg/L		100
MeFOSAA	8.101	570.0 -> 419.0	871	0.52	µg/L	m	99
PFBA	1.851	213.0 -> 169.0	1529	0.52	µg/L		100
PFBS	4.391	299.0 -> 80.0	943	0.55	µg/L		99
PFDA	8.146	513.0 -> 469.0	6120	0.51	µg/L		92
PFDoDA	8.942	613.0 -> 569.0	6898	0.54	µg/L		97
br-PFOA	7.130	413.0 -> 369.0	5820	0.57	µg/L		100
PFHpA	6.439	363.0 -> 319.0	3265	0.53	µg/L		99
PFHpS	7.137	449.0 -> 80.0	1082	0.55	µg/L		97
PFHxA	5.521	313.0 -> 269.0	4948	0.54	µg/L		99
PFHxS	6.493	399.0 -> 80.0	1052	0.53	µg/L	m	98
PFNA	7.695	463.0 -> 419.0	4572	0.57	µg/L		89
LN-PFOS	7.680	499.0 -> 80.0	1088	0.43	µg/L		100
PFOA	7.130	413.0 -> 369.0	5820	0.51	µg/L		100
PFOS	7.680	499.0 -> 80.0	1578	0.56	µg/L	m	83
PFPeA	4.012	263.0 -> 219.0	1720	0.59	µg/L		100
br-PFOS	7.511	499.0 -> 80.0	489	0.14	µg/L		100
PFTeDA	10.001	713.0 -> 669.0	7852	0.48	µg/L		98
PFTrDA	9.444	663.0 -> 619.0	8476	0.50	µg/L		99
PFUnDA	8.544	563.0 -> 519.0	4891	0.54	µg/L		99
ADONA	6.535	377.0 -> 251.0	9036	0.51	µg/L		98
9Cl-PF3ONS	7.914	531.0 -> 351.0	2010	0.57	µg/L		97
11Cl-PF3OUdS	8.688	631.0 -> 451.0	4627	0.55	µg/L		98
HFPO-DA	5.817	329.0 -> 169.0	1376	0.61	µg/L		99

Perfluorinated Compounds by LC/MS/MS

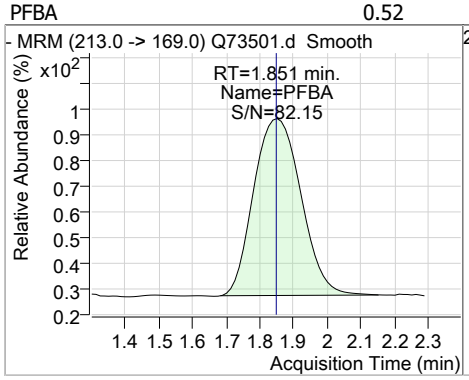
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

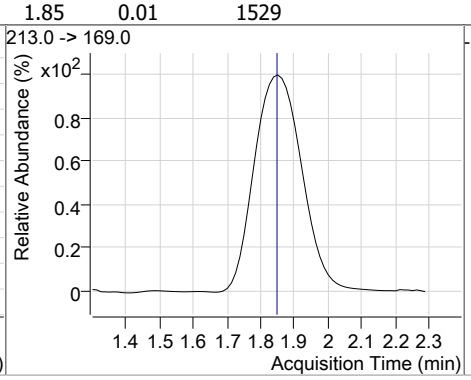
= Qualifier out of range, m = manually integrated, + = Area summed

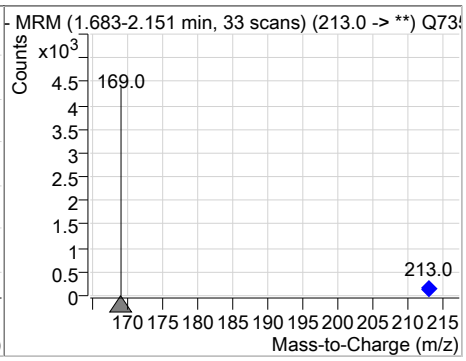
Perfluorinated Compounds by LC/MS/MS



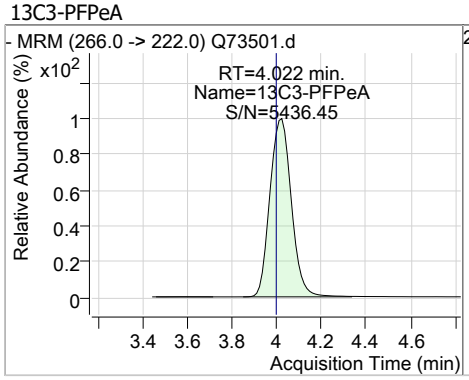
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.52	1.85	0.01	1529				

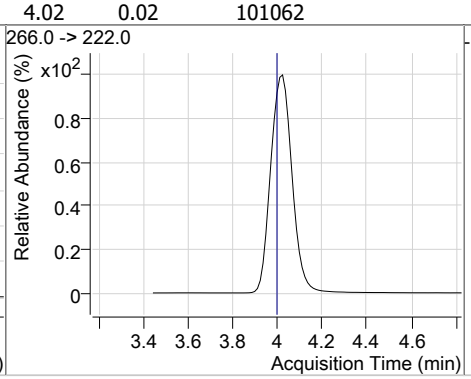


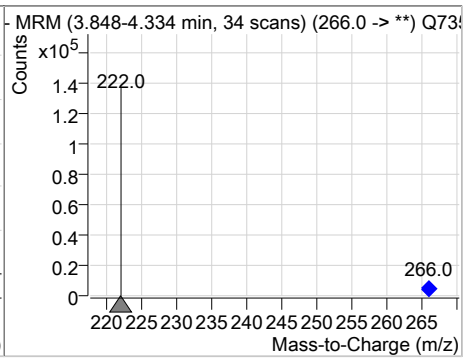




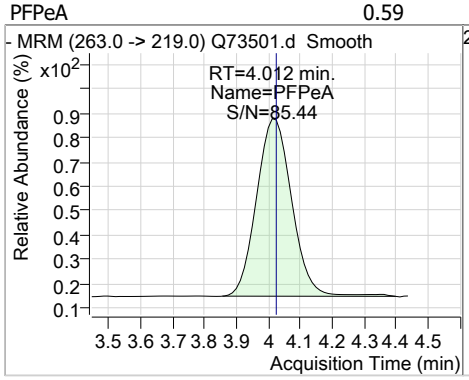
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.02	0.02	101062				

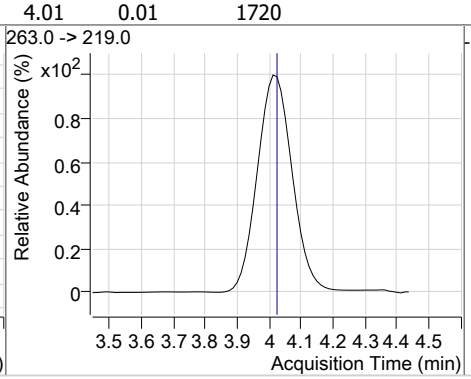


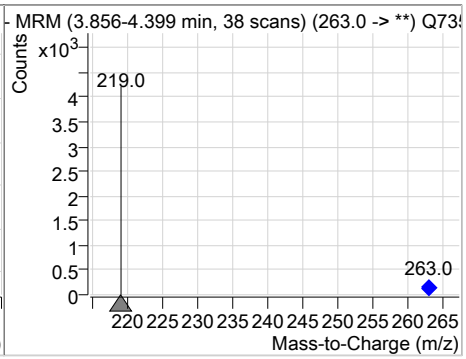




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.59	4.01	0.01	1720				

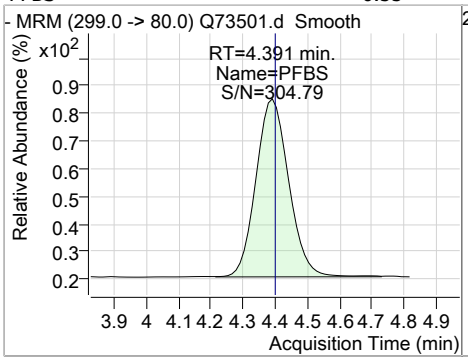


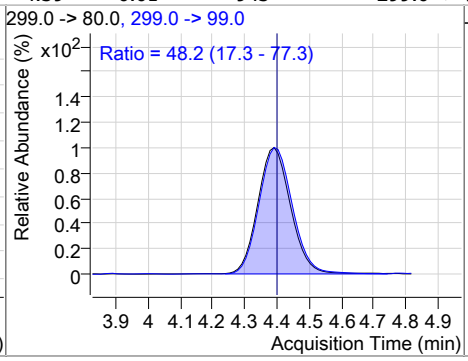


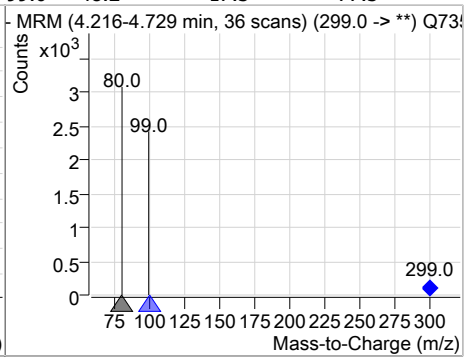


Perfluorinated Compounds by LC/MS/MS

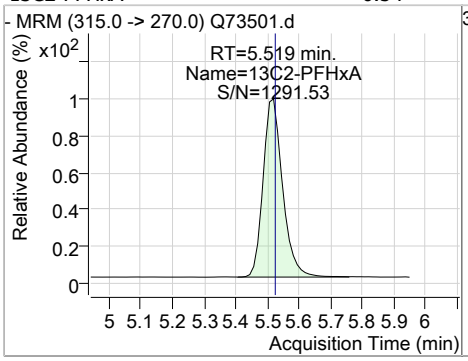
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.55	4.39	0.01	943	299.0 -> 99.0	48.2	17.3	77.3

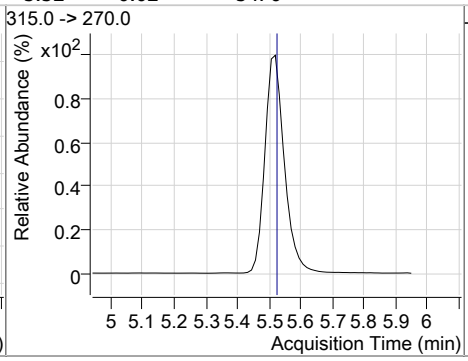


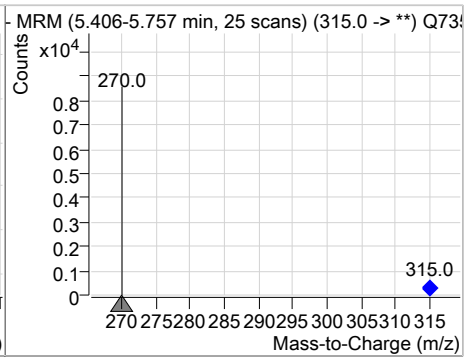




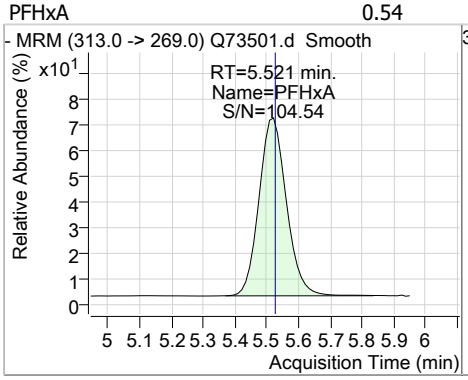
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	0.54	5.52	0.02	5476				

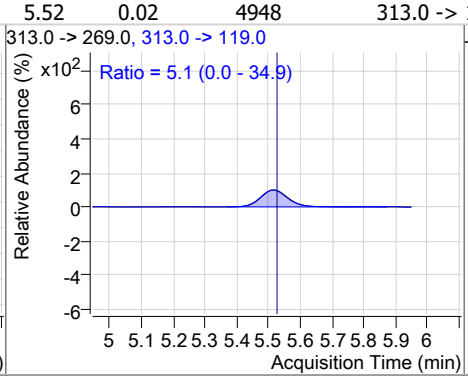


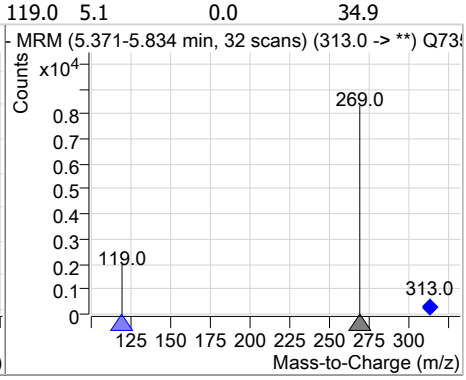




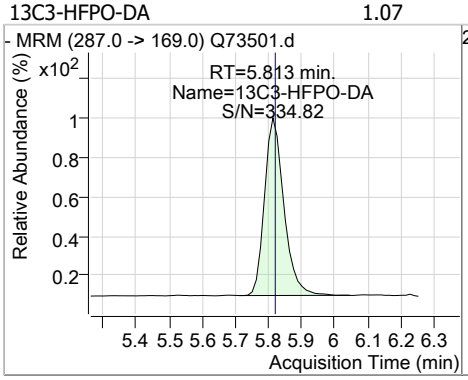
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.54	5.52	0.02	4948	313.0 -> 119.0	5.1	0.0	34.9

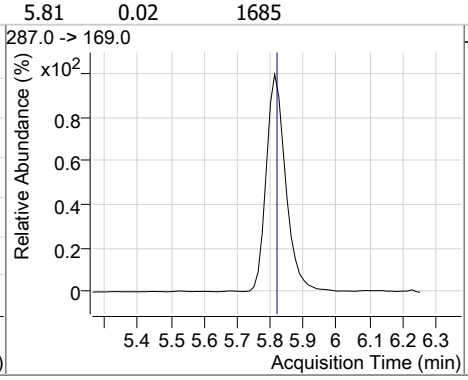


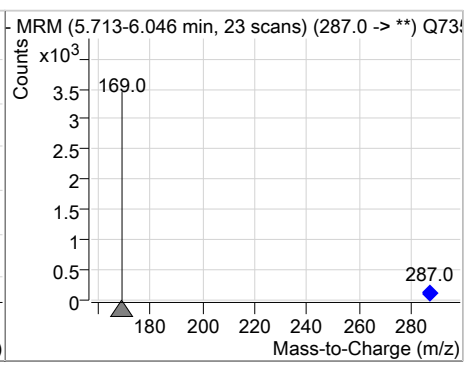




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	1.07	5.81	0.02	1685				

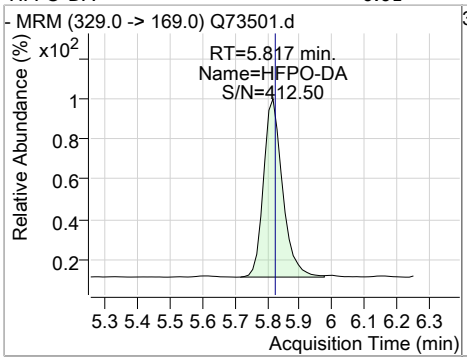


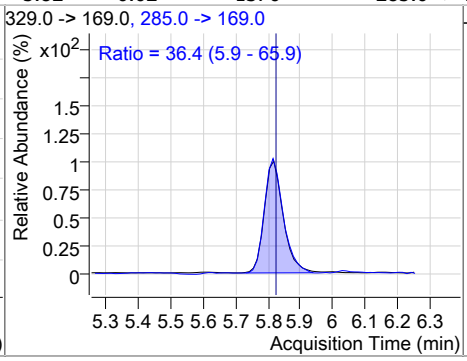


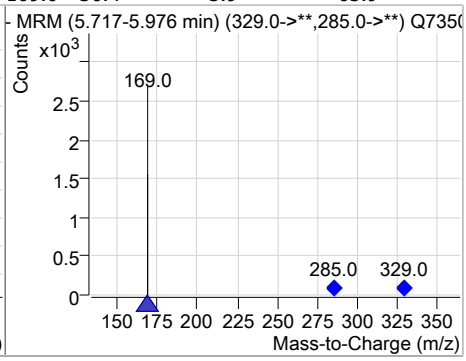


Perfluorinated Compounds by LC/MS/MS

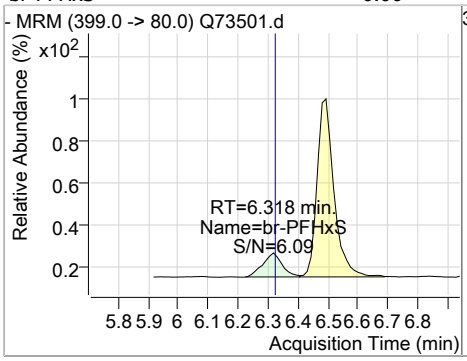
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.61	5.82	0.02	1376	285.0 -> 169.0	36.4	5.9	65.9

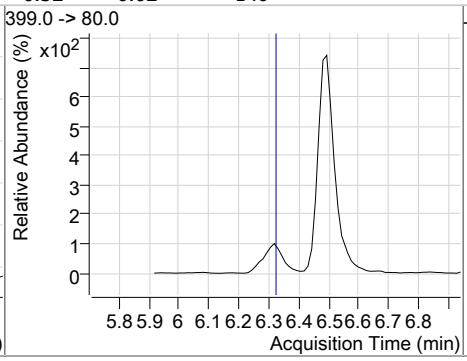


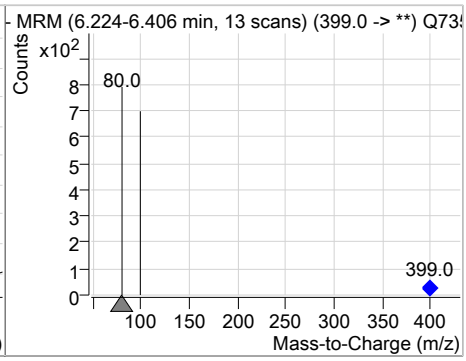




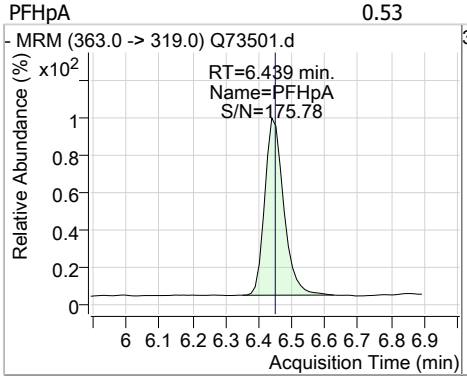
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.06	6.32	0.02	140				

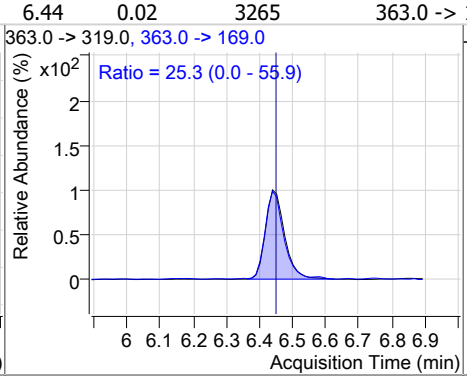


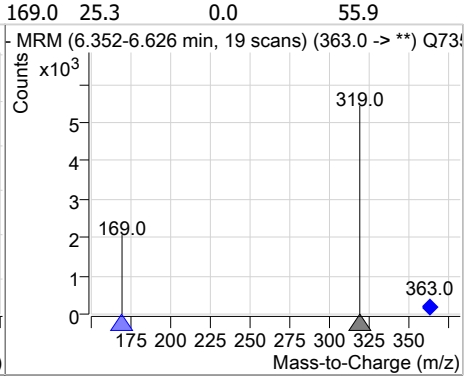




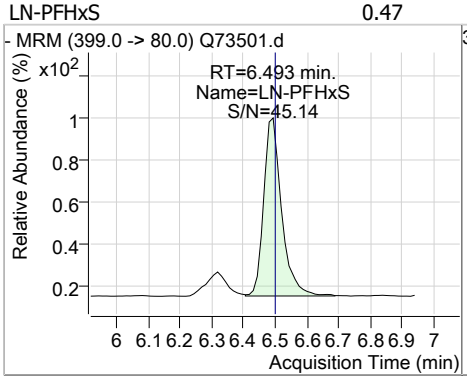
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.53	6.44	0.02	3265	363.0 -> 169.0	25.3	0.0	55.9

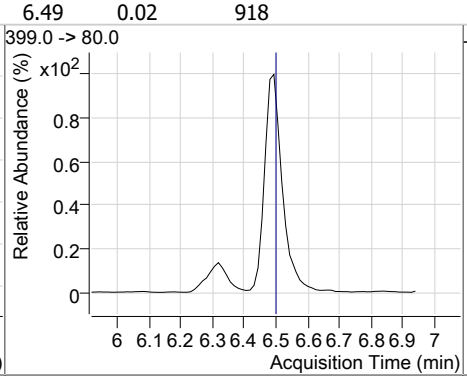


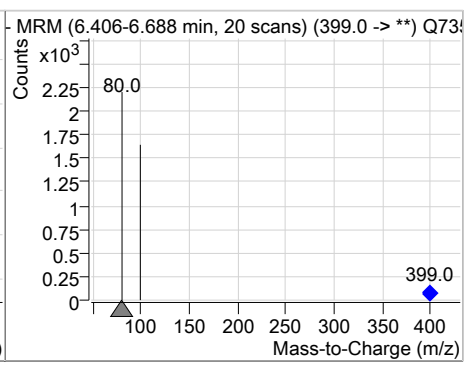




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	0.47	6.49	0.02	918				

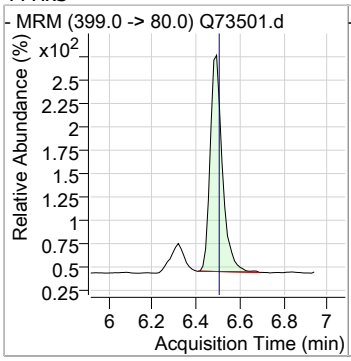


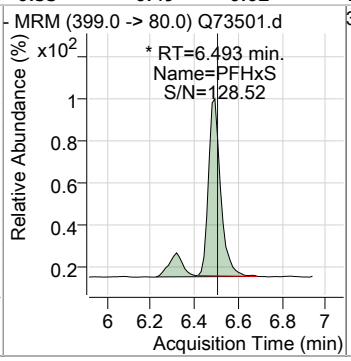


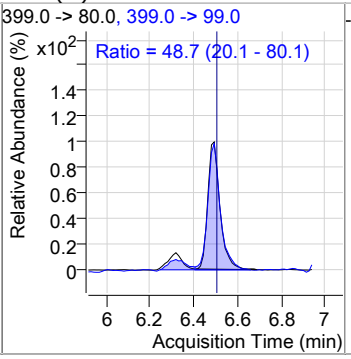


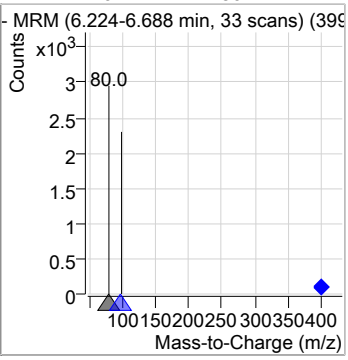
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.53	6.49	0.02	1052 (m)	399.0 -> 99.0	48.7	20.1	80.1

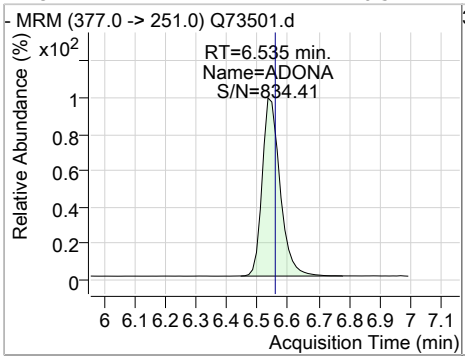


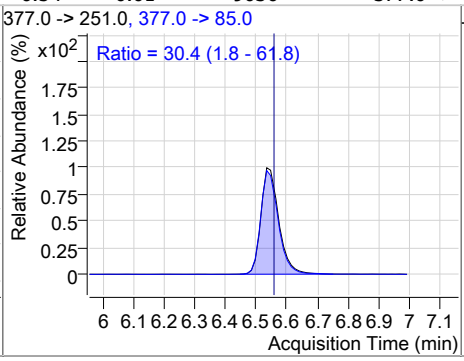


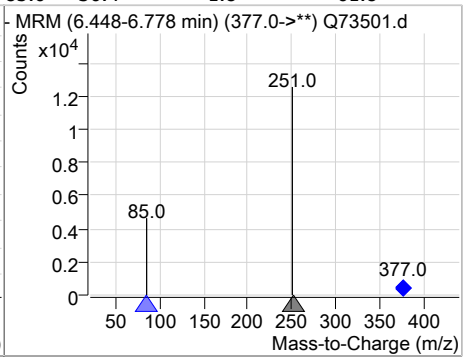




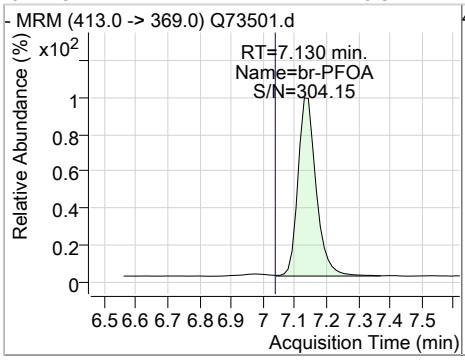
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.51	6.54	0.01	9036	377.0 -> 85.0	30.4	1.8	61.8

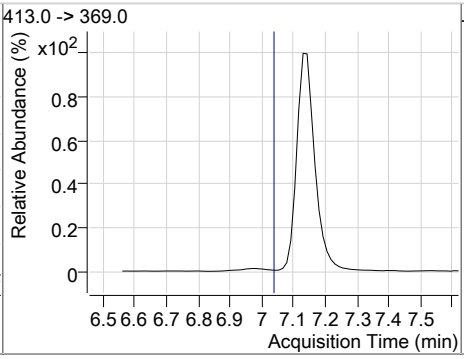


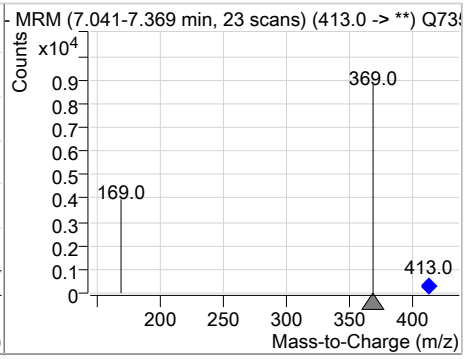




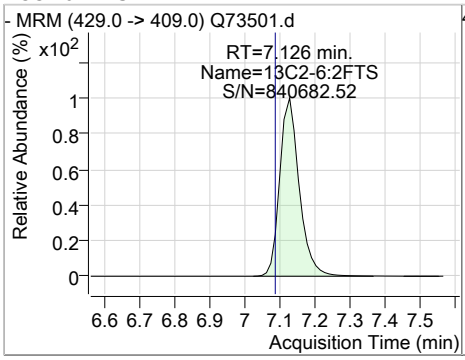
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	0.57	7.13	0.13	5820				

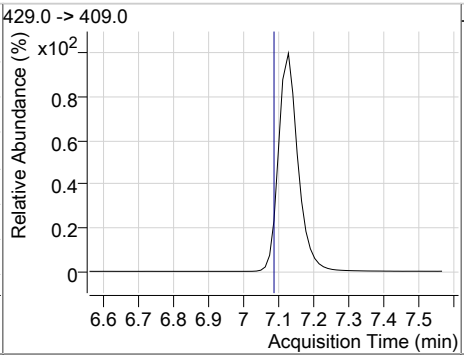


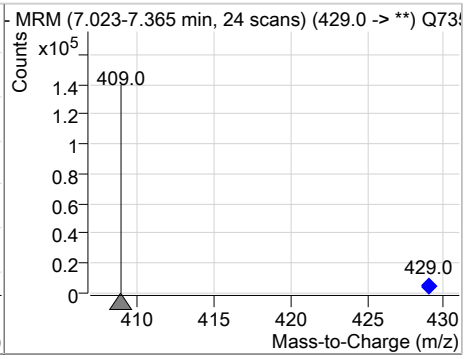




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.13	0.04	109866				

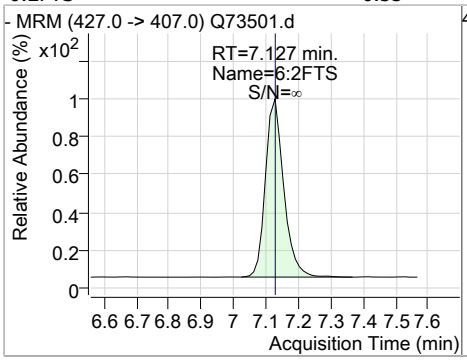


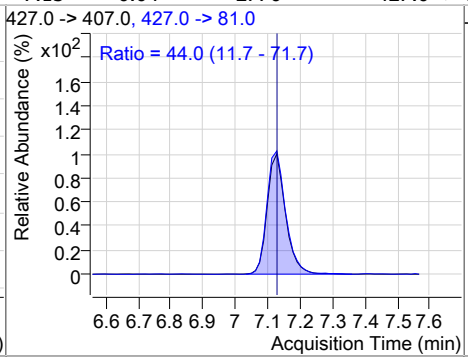


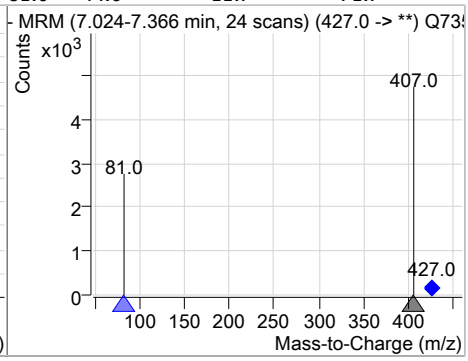


Perfluorinated Compounds by LC/MS/MS

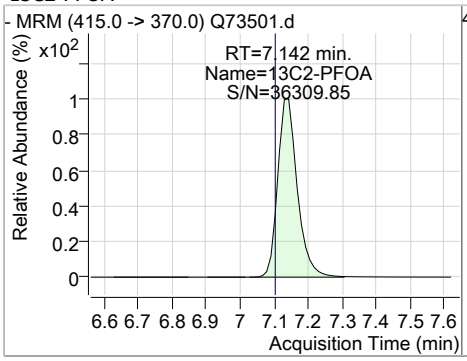
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.55	7.13	0.04	2776	427.0 -> 81.0	44.0	11.7	71.7

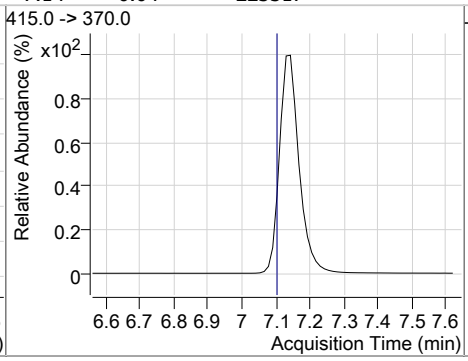


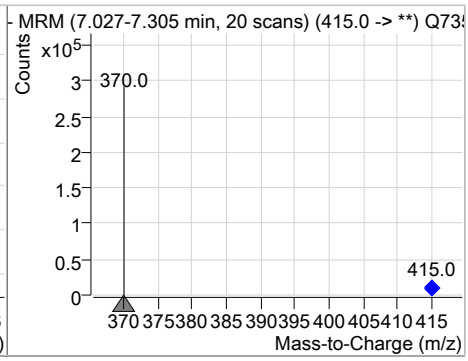




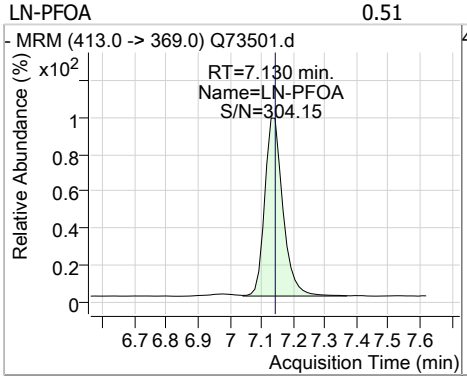
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.14	0.04	223317				

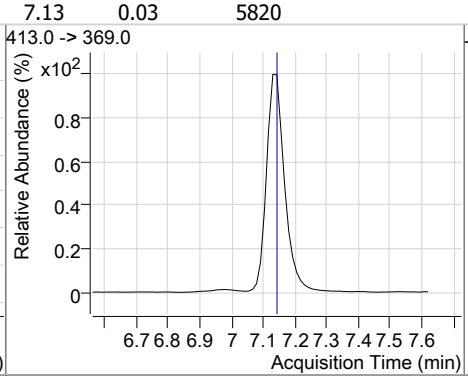


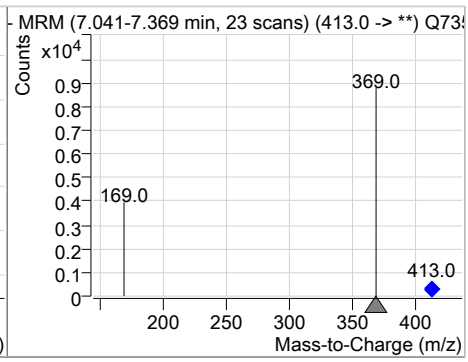




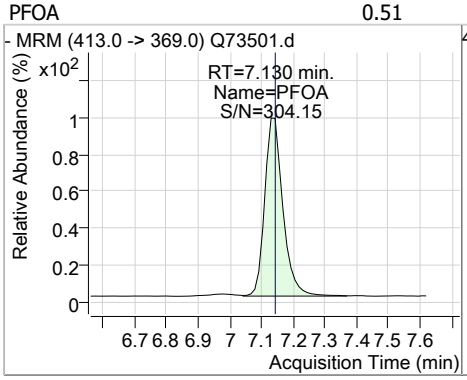
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	0.51	7.13	0.03	5820				

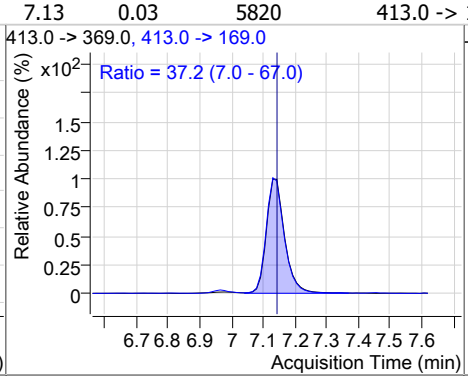


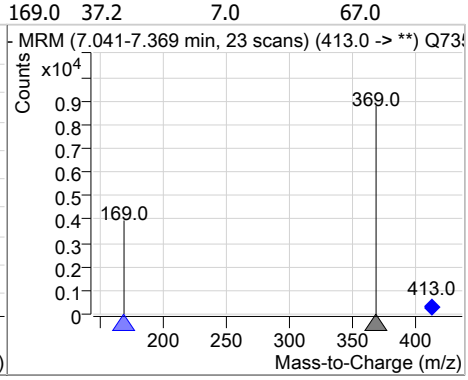




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.51	7.13	0.03	5820	413.0 -> 169.0	37.2	7.0	67.0

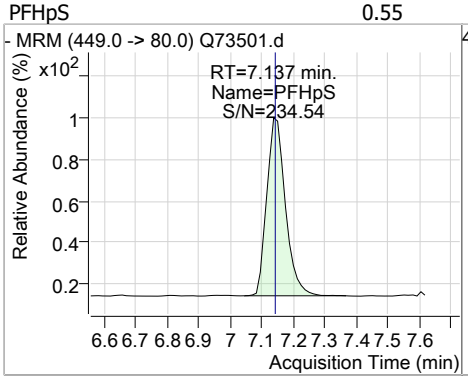


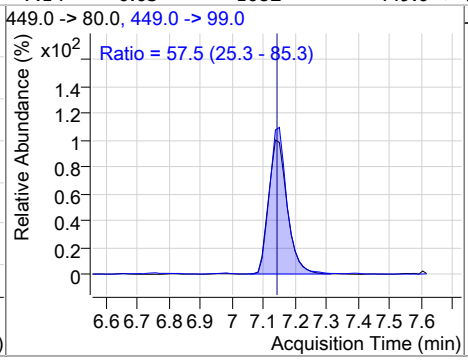


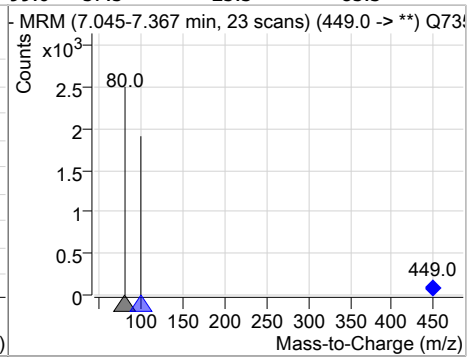


Perfluorinated Compounds by LC/MS/MS

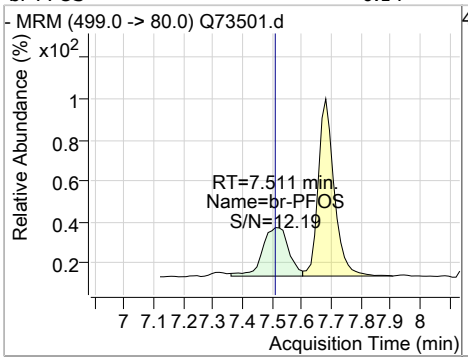
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.55	7.14	0.03	1082	449.0 -> 99.0	57.5	25.3	85.3

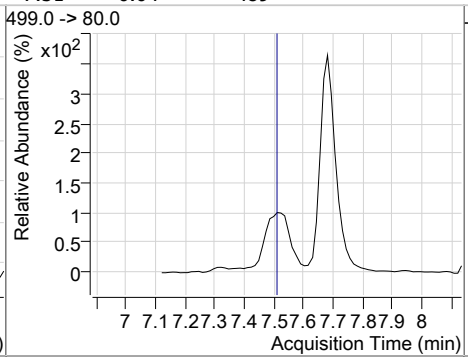


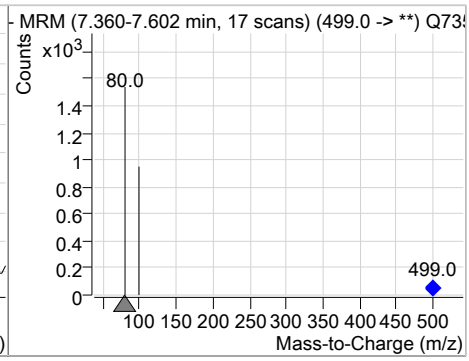




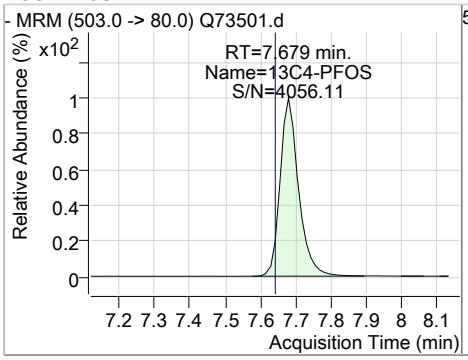
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	0.14	7.51	0.04	489				

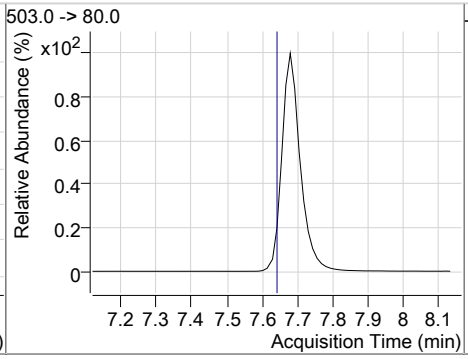


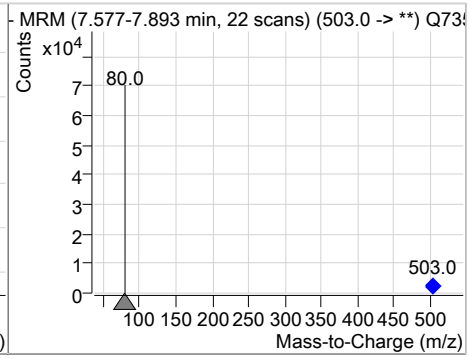




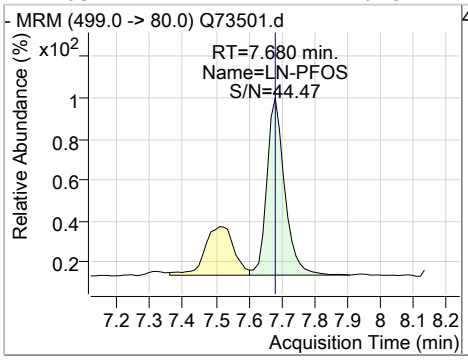
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.68	0.04	52364				

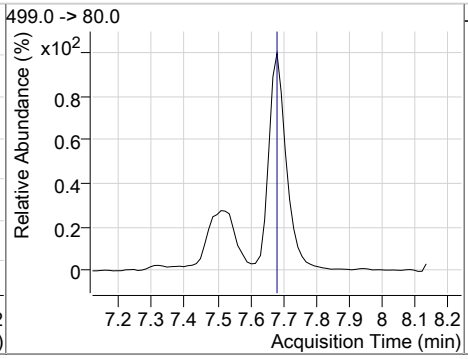


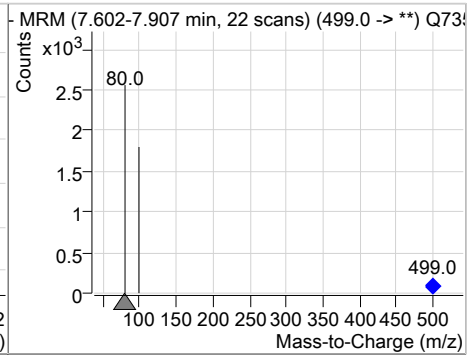




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	0.43	7.68	0.04	1088				

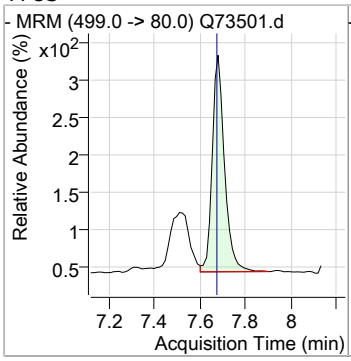


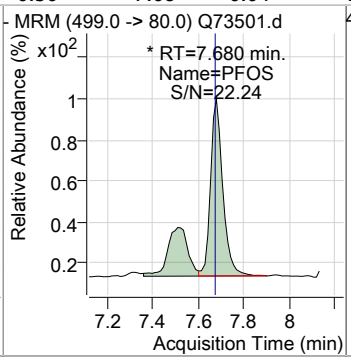


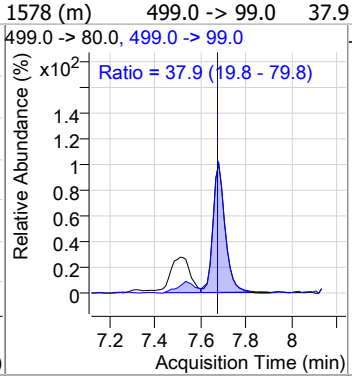


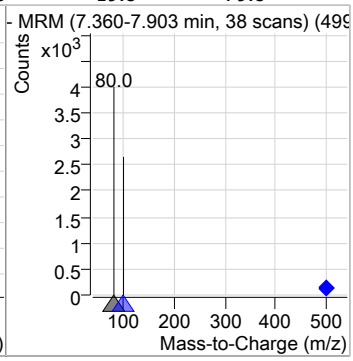
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.56	7.68	0.04	1578 (m)	499.0 -> 99.0	37.9	19.8	79.8

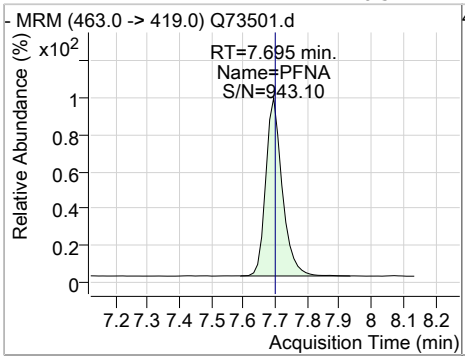


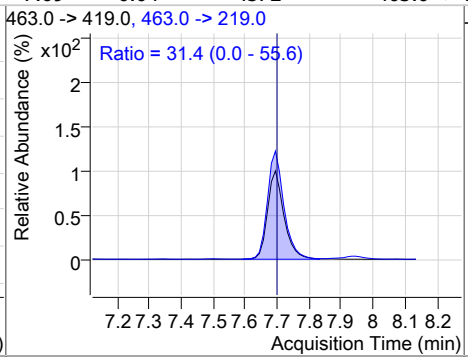


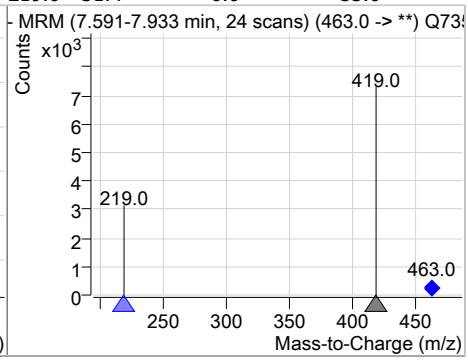




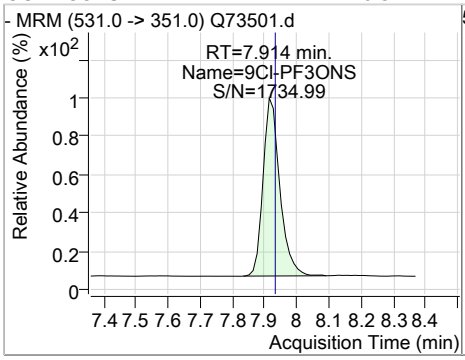
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.57	7.69	0.04	4572	463.0 -> 219.0	31.4	0.0	55.6

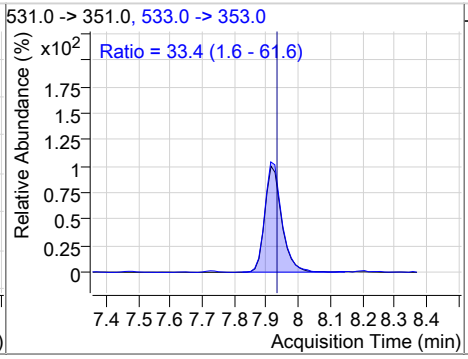


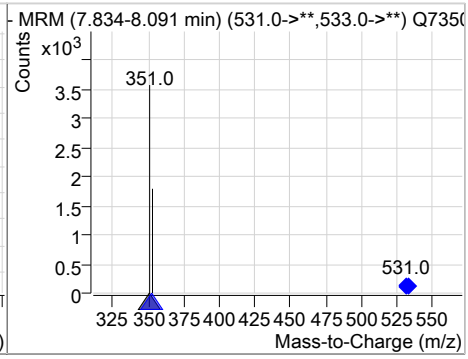




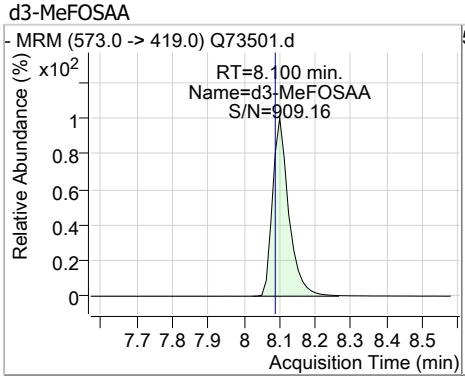
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.57	7.91	0.02	2010	533.0 -> 353.0	33.4	1.6	61.6

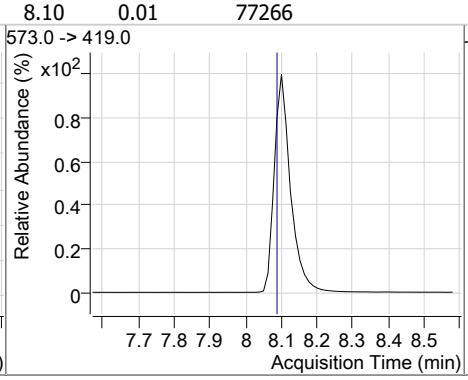


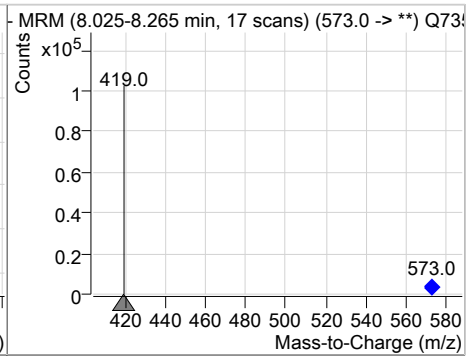




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.10	0.01	77266				

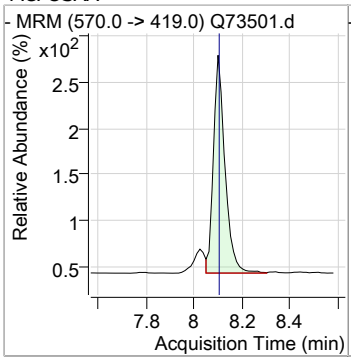


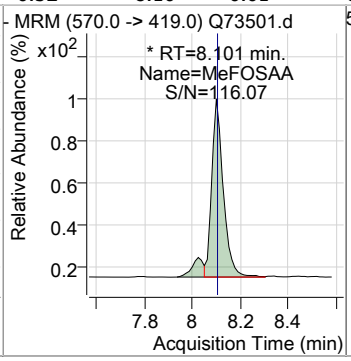


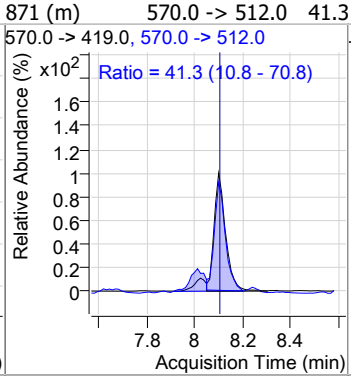


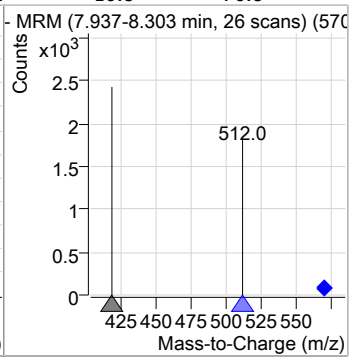
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.52	8.10	0.01	871 (m)	570.0 -> 512.0	41.3	10.8	70.8

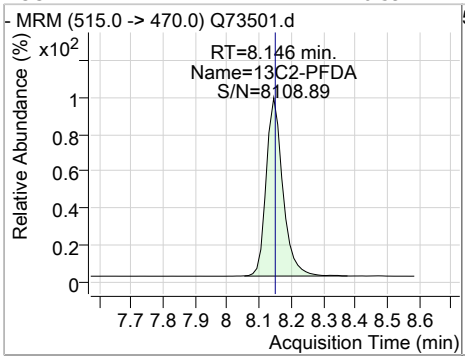


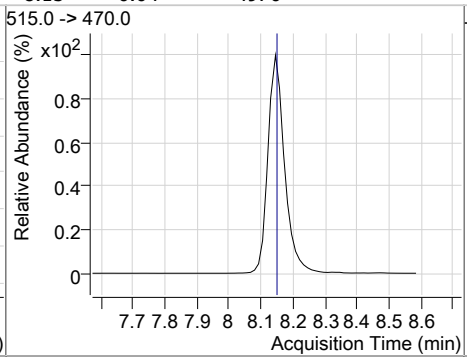


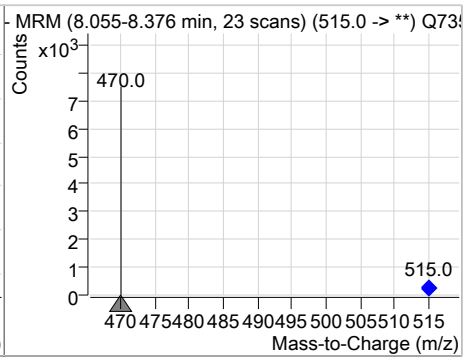




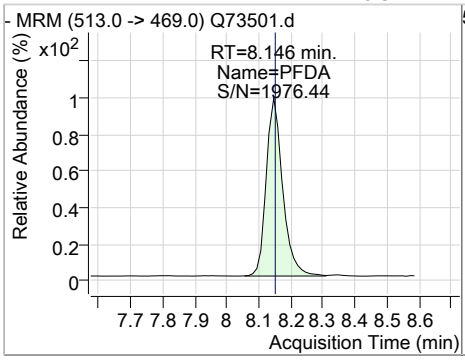
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	0.59	8.15	0.04	4970				

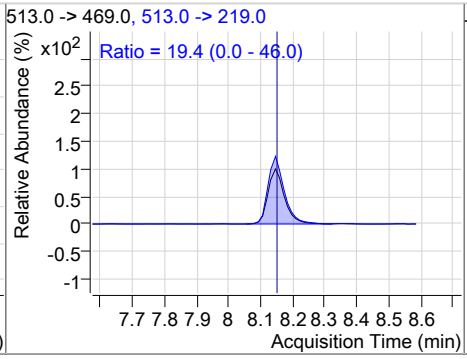


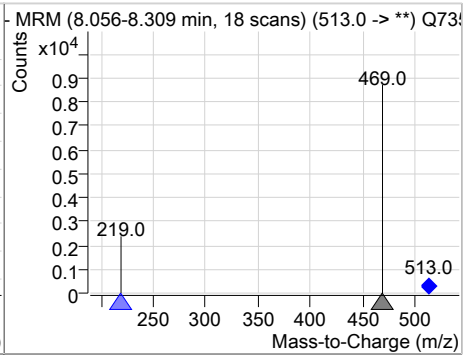




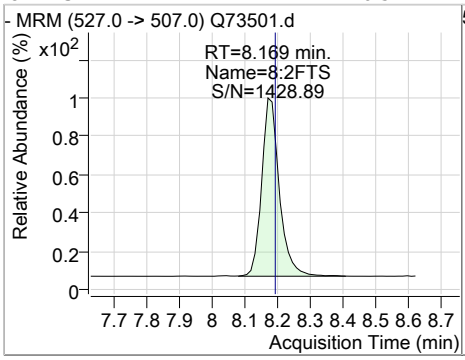
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.51	8.15	0.04	6120	513.0 -> 219.0	19.4	0.0	46.0

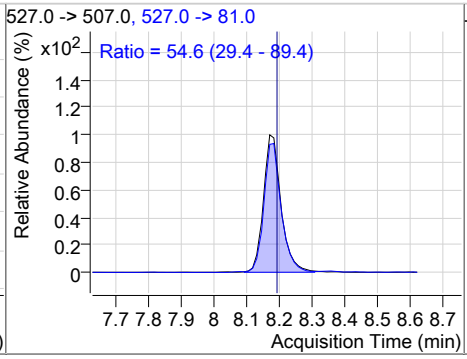


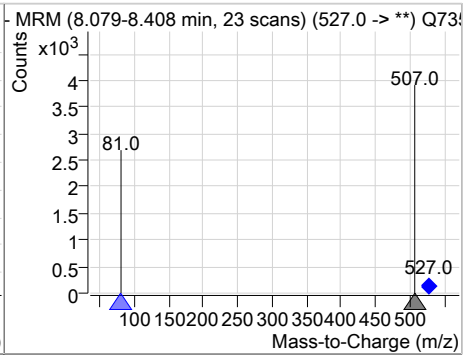




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	0.54	8.17	0.02	2090	527.0 -> 81.0	54.6	29.4	89.4

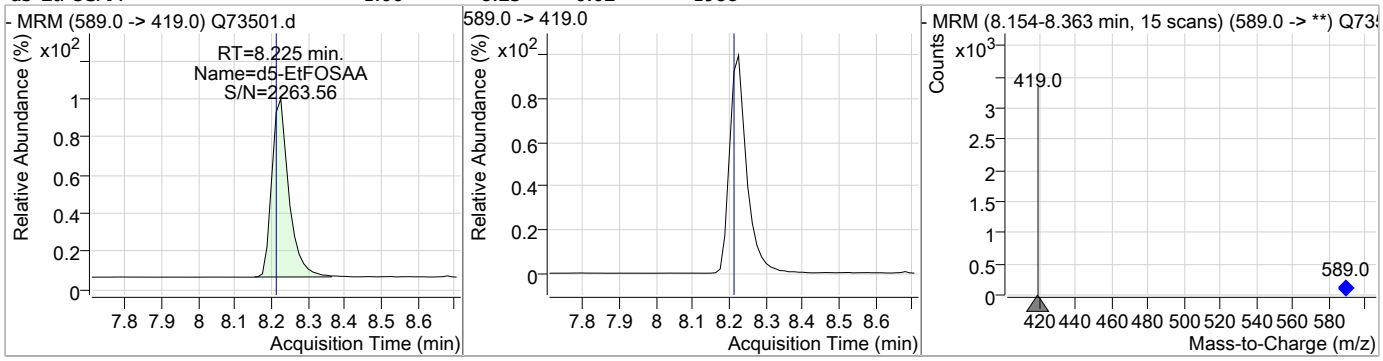




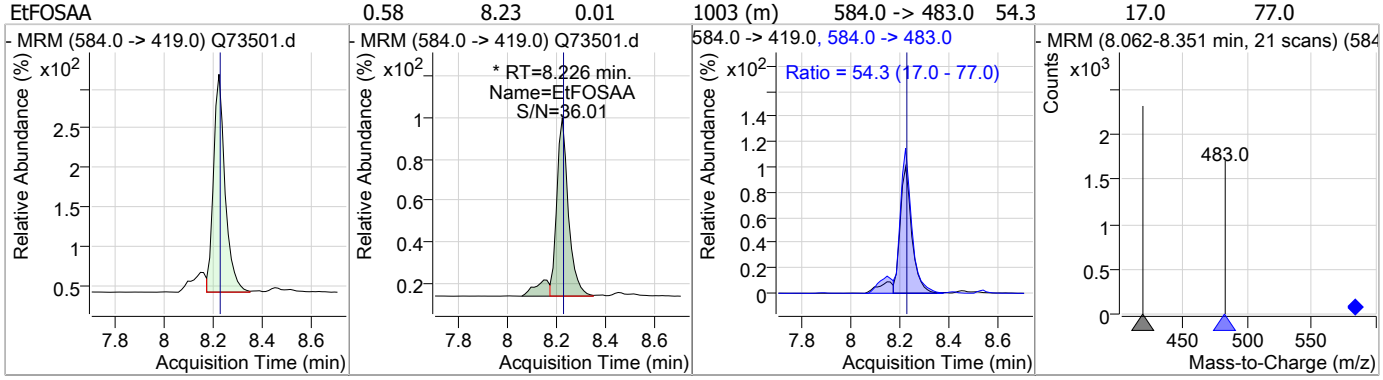


Perfluorinated Compounds by LC/MS/MS

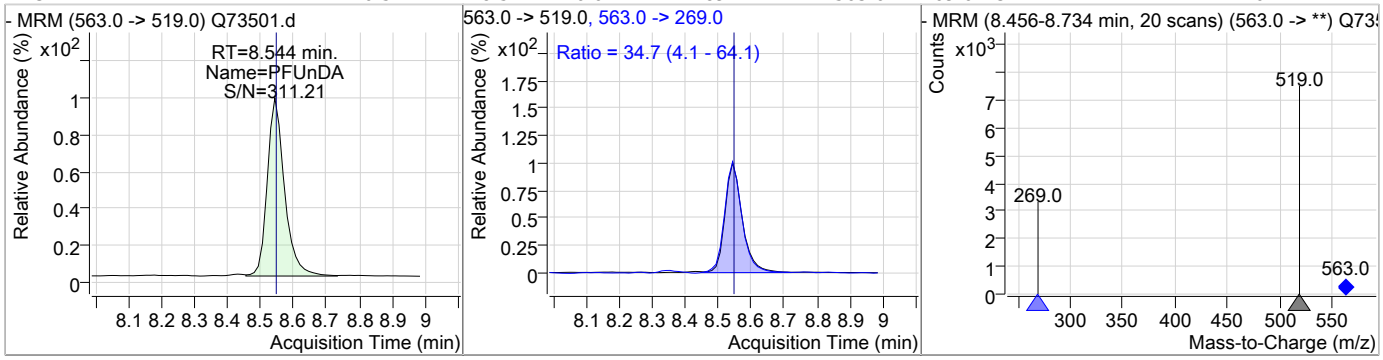
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	1.00	8.23	0.02	1988				



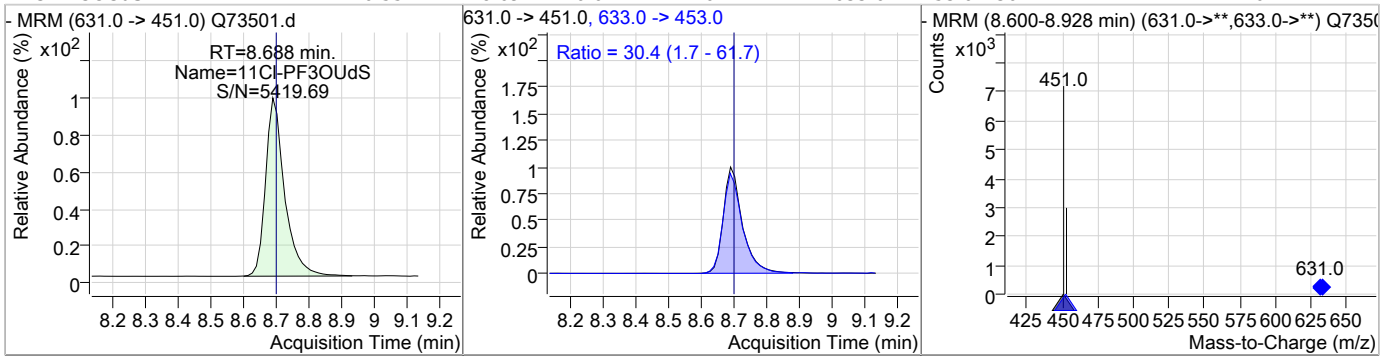
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.58	8.23	0.01	1003 (m)	584.0 -> 483.0	54.3	17.0	77.0



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.54	8.54	0.04	4891	563.0 -> 269.0	34.7	4.1	64.1

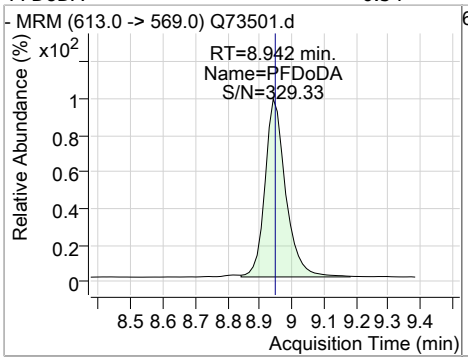


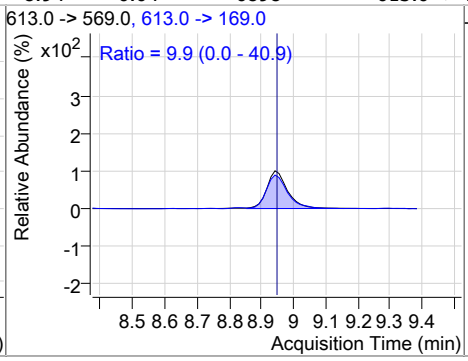
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.55	8.69	0.04	4627	633.0 -> 453.0	30.4	1.7	61.7

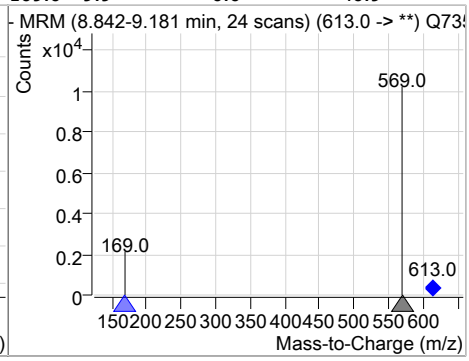


Perfluorinated Compounds by LC/MS/MS

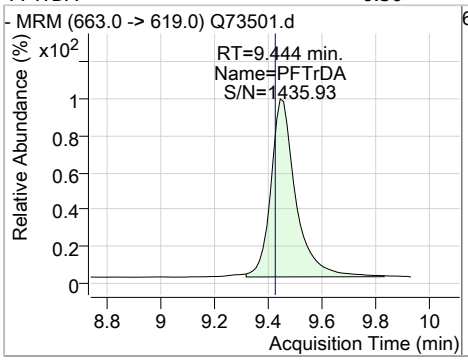
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.54	8.94	0.04	6898	613.0 -> 169.0	9.9	0.0	40.9

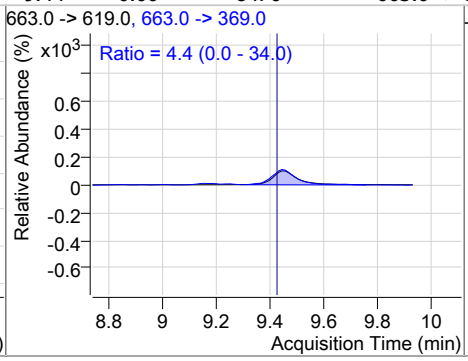


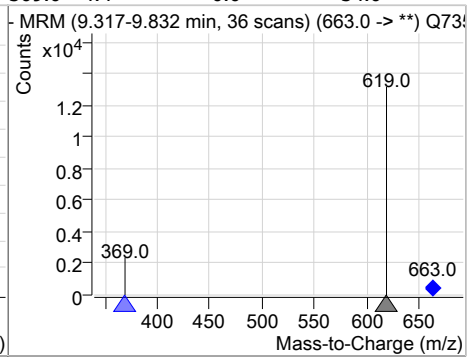




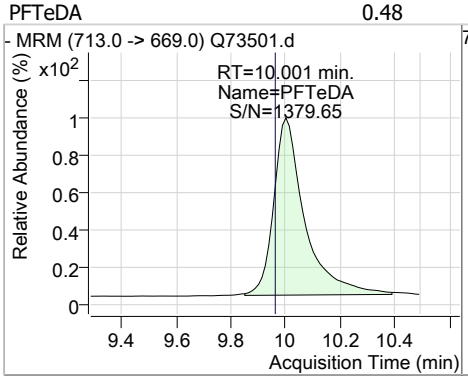
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.50	9.44	0.06	8476	663.0 -> 369.0	4.4	0.0	34.0

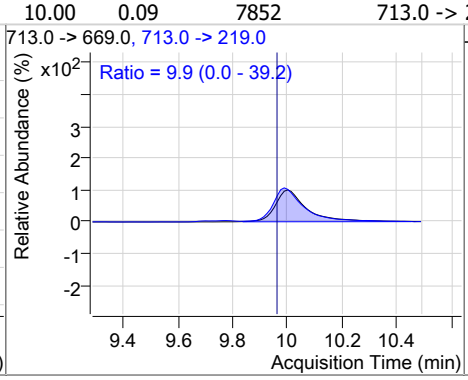


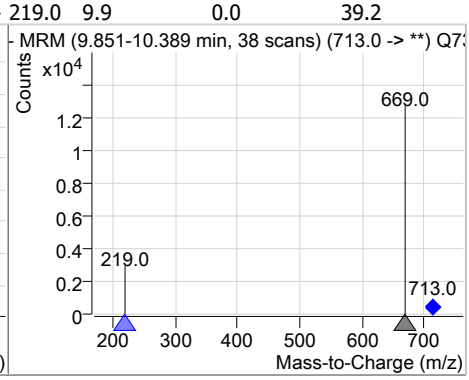




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.48	10.00	0.09	7852	713.0 -> 219.0	9.9	0.0	39.2







Manual Integration Approval Summary

Sample Number: SQ1670-IC1670
Lab FileID: Q73501.D
Injection Time: 10/27/20 11:20
Method: EPA 537.1 REV 1.0
Analyst approved: 10/29/20 08:24 Mike Eger
Supervisor approved: 10/29/20 08:25 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.49	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.68	Split peak
MeFOSAA	2355-31-9		8.10	Split peak
EtFOSAA	2991-50-6		8.23	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
10/29/20 08:25

Perfluorinated Compounds by LC/MS/MS

Data File : Q73502.d
Operator : mikee
Acq. Method : 537.m
Acq. Date-Time : 10/27/2020 11:35:38 AM
Sample Name : IC1670-1.0
Vial : Vial 3
DA Method File : 537_1027_SQ1670.quantmethod.xml
Batch Name : SQ1670.batch.bin
Sample Information : OP82561,SQ1670,250,,,1.0,1,water

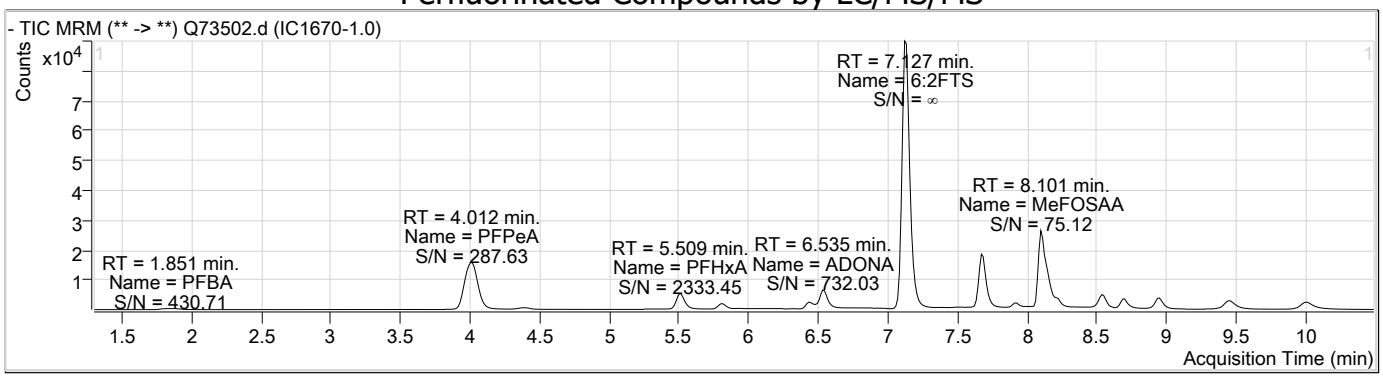
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	7.126	429.0 -> 409.0	110301	20.00	µg/L		0.041
13C2-PFOA	7.142	415.0 -> 370.0	225236	20.00	µg/L		0.039
13C3-PFPeA	4.009	266.0 -> 222.0	101316	20.00	µg/L		0.012
13C4-PFOS	7.679	503.0 -> 80.0	51990	20.00	µg/L		0.037
d3-MeFOSAA	8.100	573.0 -> 419.0	76676	40.00	µg/L		0.012
System Monitoring Compounds							
13C2-PFDA	8.146	515.0 -> 470.0	10708	1.26	µg/L		0.040
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 6.3%			
13C2-PFHxA	5.507	315.0 -> 270.0	11255	1.11	µg/L		0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 5.5%			
d5-EtFOSAA	8.225	589.0 -> 419.0	4382	2.23	µg/L		0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 5.6%			
13C3-HFPO-DA	5.813	287.0 -> 169.0	3701	2.32	µg/L		0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 5.8%			
Target Compounds							**QValue**
br-PFHxS	6.318	399.0 -> 80.0	300	0.14	µg/L		100
LN-PFHxS	6.493	399.0 -> 80.0	2027	1.04	µg/L		100
6:2FTS	7.127	427.0 -> 407.0	5754	1.13	µg/L		100
8:2FTS	8.182	527.0 -> 507.0	4635	1.19	µg/L		94
EtFOSAA	8.226	584.0 -> 419.0	1884	1.10	µg/L	m	100
LN-PFOA	7.143	413.0 -> 369.0	11995	1.03	µg/L		100
MeFOSAA	8.101	570.0 -> 419.0	1885	1.13	µg/L	m	98
PFBA	1.851	213.0 -> 169.0	3262	1.10	µg/L		100
PFBS	4.391	299.0 -> 80.0	1963	1.16	µg/L		98
PFDA	8.146	513.0 -> 469.0	13232	1.10	µg/L		94
PFDoDA	8.955	613.0 -> 569.0	14428	1.13	µg/L		95
br-PFOA	7.143	413.0 -> 369.0	11995	1.17	µg/L		100
PFHpA	6.439	363.0 -> 319.0	6941	1.11	µg/L		99
PFHpS	7.150	449.0 -> 80.0	2476	1.27	µg/L		91
PFHxA	5.509	313.0 -> 269.0	10369	1.12	µg/L		98
PFHxS	6.493	399.0 -> 80.0	2317	1.17	µg/L	m	95
PFNA	7.695	463.0 -> 419.0	9743	1.20	µg/L		92
LN-PFOS	7.680	499.0 -> 80.0	2177	0.86	µg/L		100
PFOA	7.143	413.0 -> 369.0	11995	1.03	µg/L		99
PFOS	7.680	499.0 -> 80.0	3221	1.15	µg/L	m	84
PFPeA	4.012	263.0 -> 219.0	3593	1.22	µg/L		100
br-PFOS	7.511	499.0 -> 80.0	1023	0.29	µg/L		100
PFTeDA	10.001	713.0 -> 669.0	17112	1.05	µg/L		97
PFTrDA	9.457	663.0 -> 619.0	17860	1.05	µg/L		100
PFUnDA	8.544	563.0 -> 519.0	10883	1.20	µg/L		98
ADONA	6.535	377.0 -> 251.0	18986	1.05	µg/L		97
9Cl-PF3ONS	7.927	531.0 -> 351.0	4157	1.17	µg/L		99
11Cl-PF3OUdS	8.688	631.0 -> 451.0	9904	1.16	µg/L		99
HFPO-DA	5.817	329.0 -> 169.0	2710	1.19	µg/L		97

Perfluorinated Compounds by LC/MS/MS

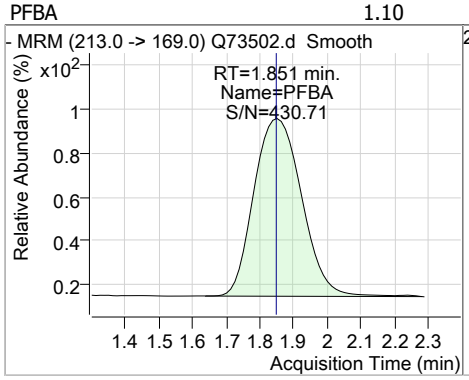
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

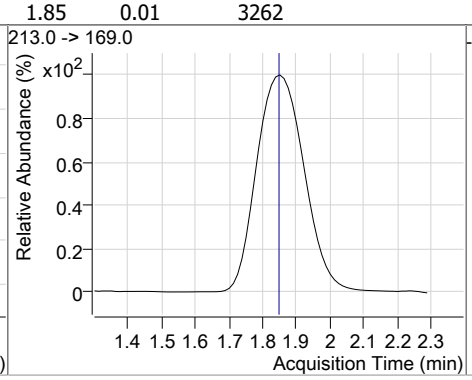
= Qualifier out of range, m = manually integrated, + = Area summed

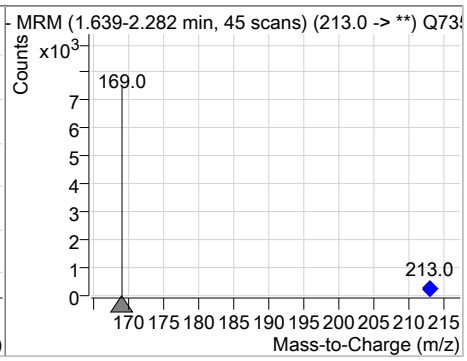
Perfluorinated Compounds by LC/MS/MS



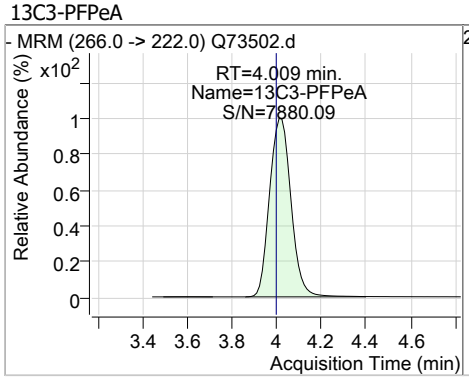
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	1.10	1.85	0.01	3262				

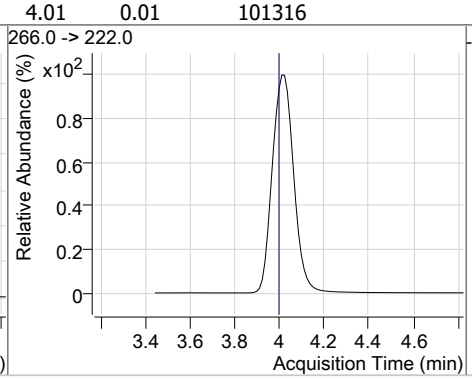


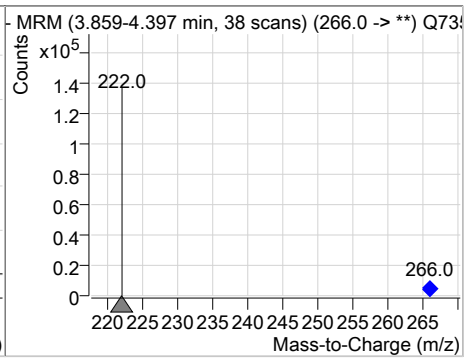




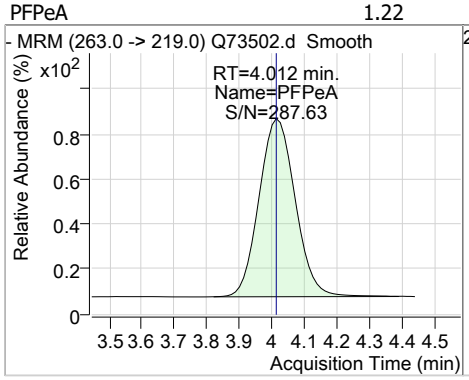
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.01	0.01	101316				

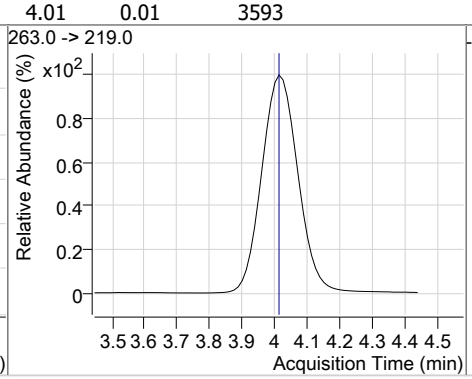


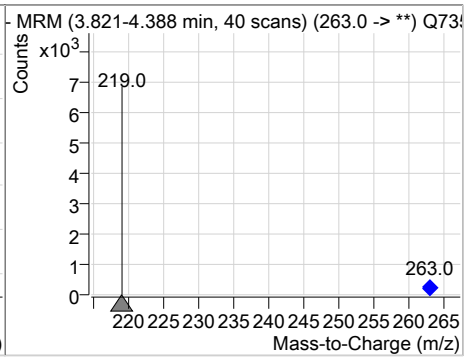




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	1.22	4.01	0.01	3593				

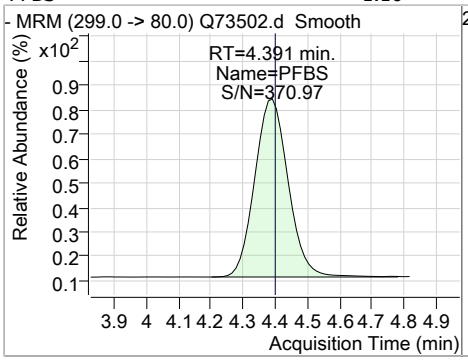


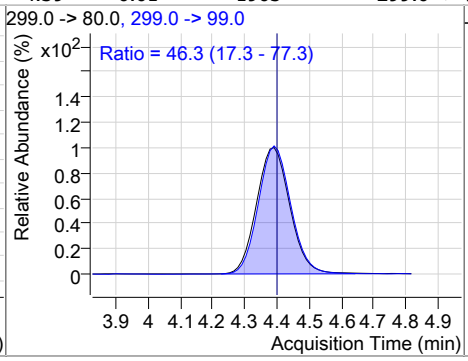


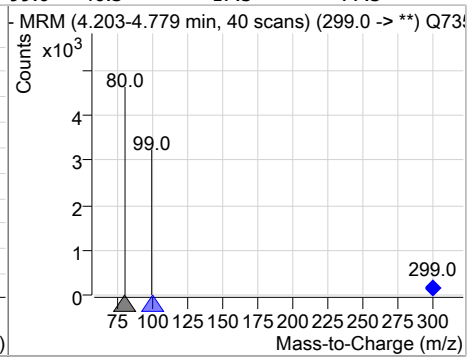


Perfluorinated Compounds by LC/MS/MS

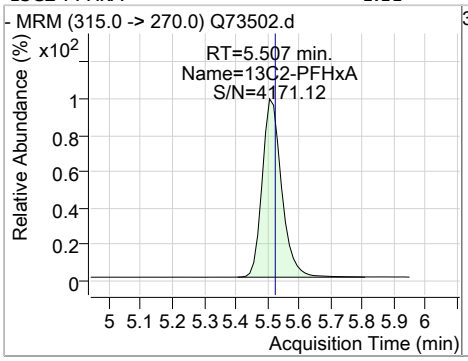
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	1.16	4.39	0.01	1963	299.0 -> 99.0	46.3	17.3	77.3

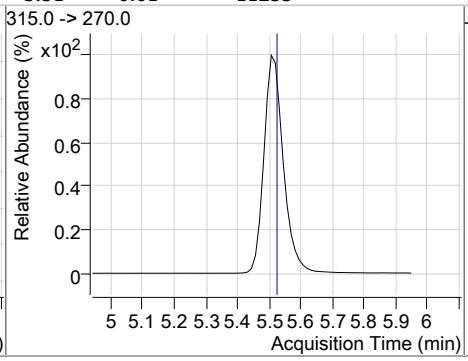


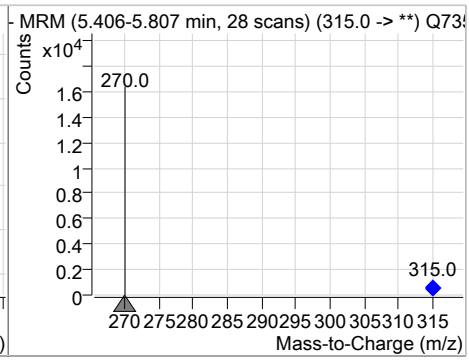




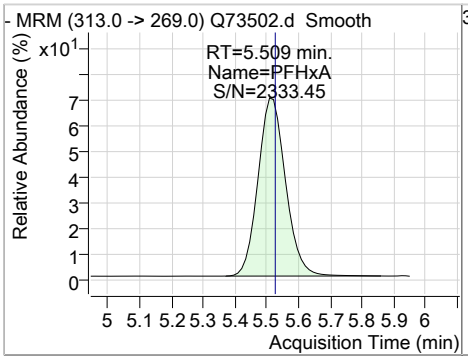
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	1.11	5.51	0.01	11255				

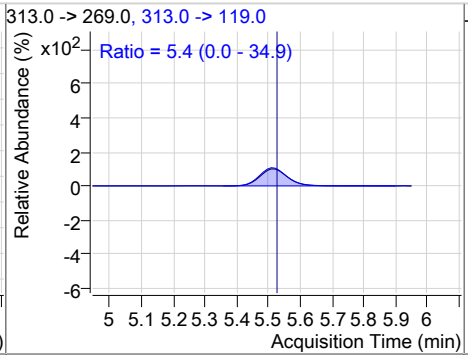


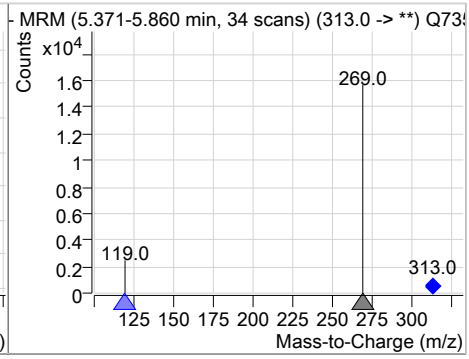




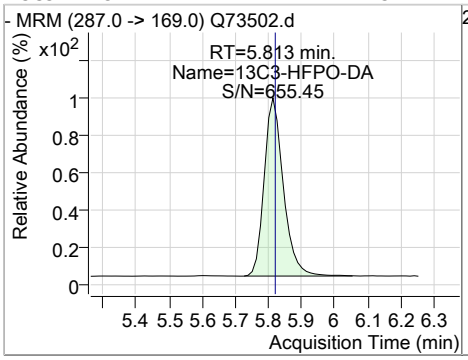
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	1.12	5.51	0.01	10369	313.0 -> 119.0	5.4	0.0	34.9

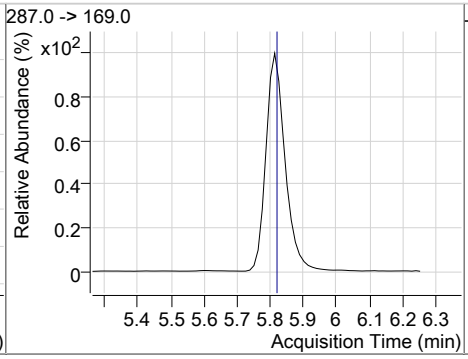


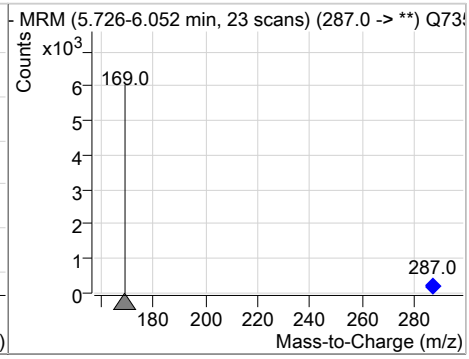




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	2.32	5.81	0.02	3701				

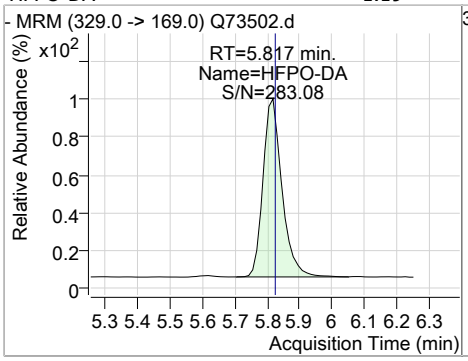


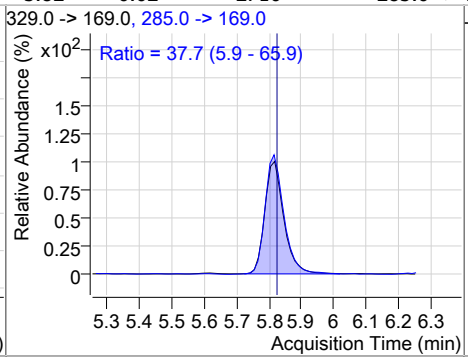


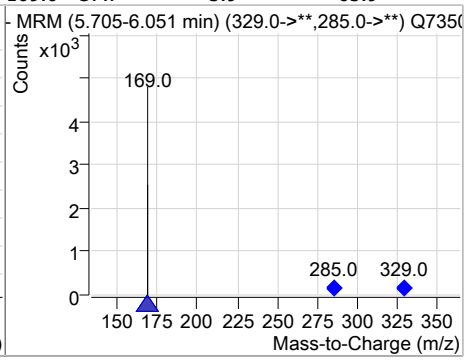


Perfluorinated Compounds by LC/MS/MS

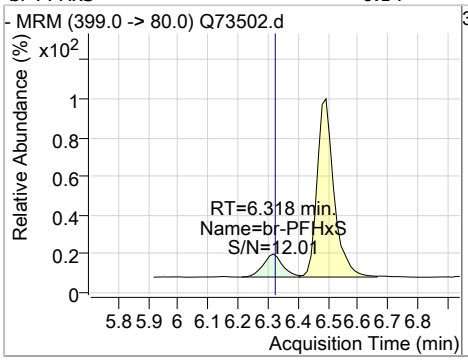
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	1.19	5.82	0.02	2710	285.0 -> 169.0	37.7	5.9	65.9

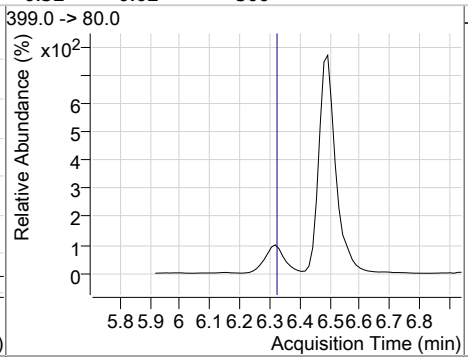


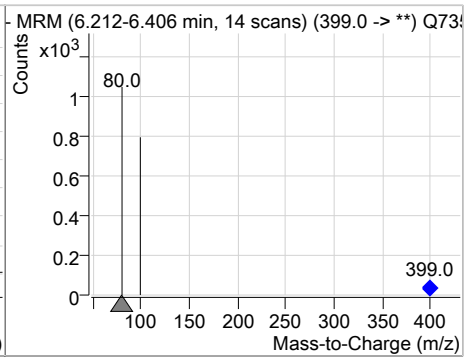




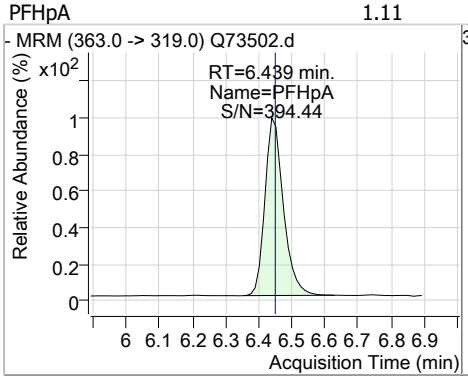
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.14	6.32	0.02	300				

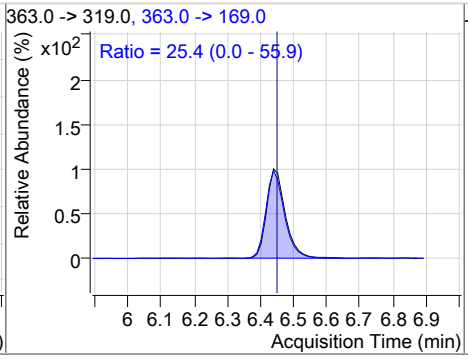


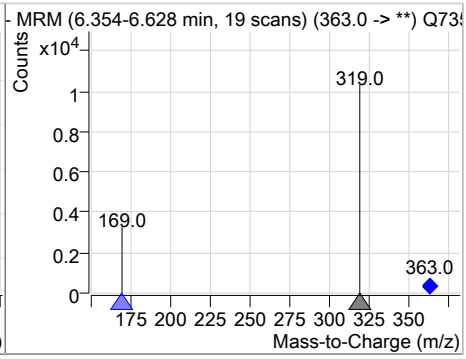




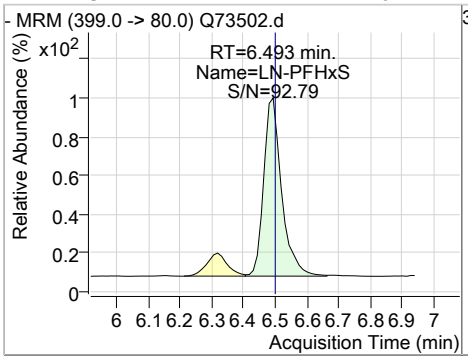
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	1.11	6.44	0.02	6941	363.0 -> 169.0	25.4	0.0	55.9

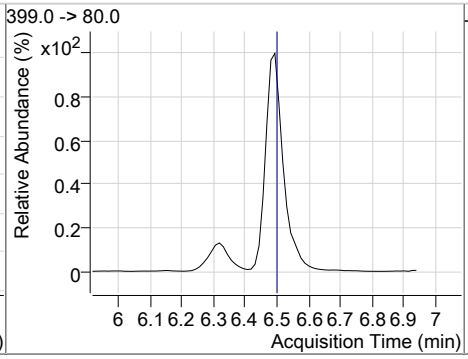


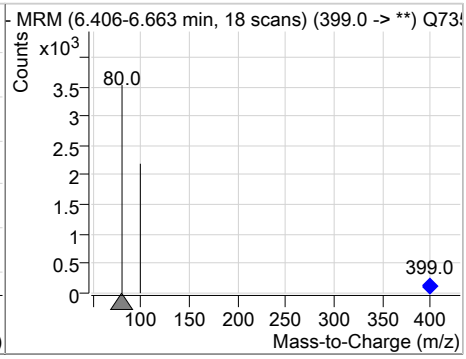




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	1.04	6.49	0.02	2027				

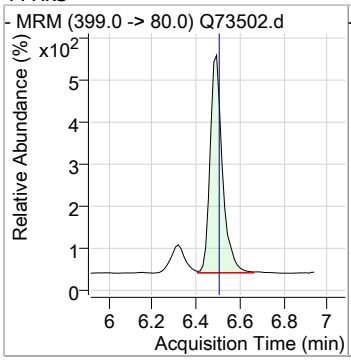


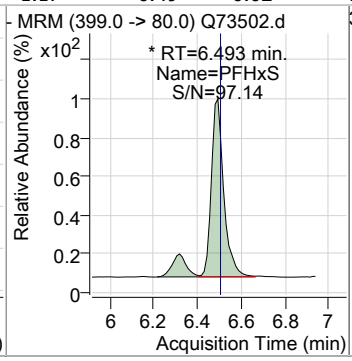


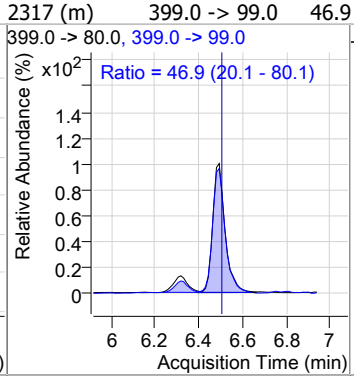


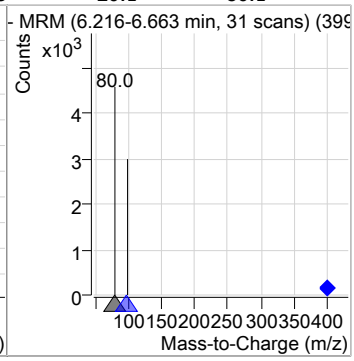
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	1.17	6.49	0.02	2317 (m)	399.0 -> 99.0	46.9	20.1	80.1

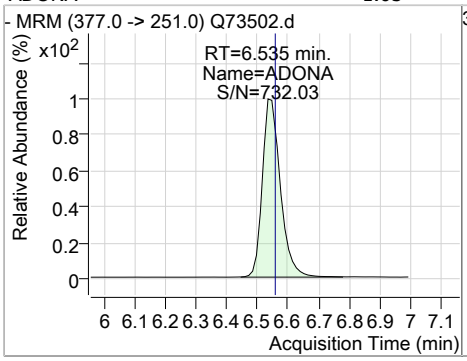


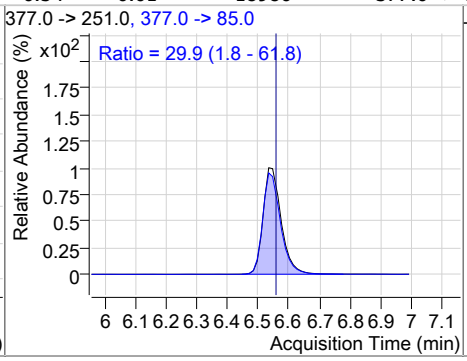


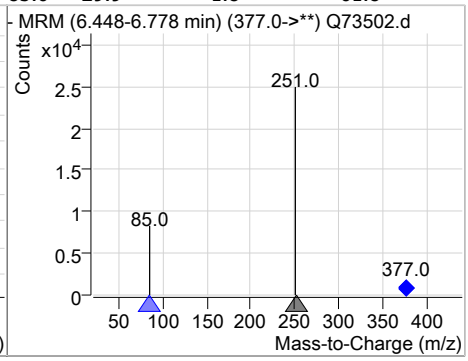




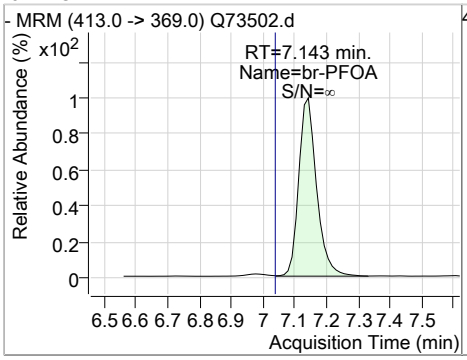
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	1.05	6.54	0.01	18986	377.0 -> 85.0	29.9	1.8	61.8

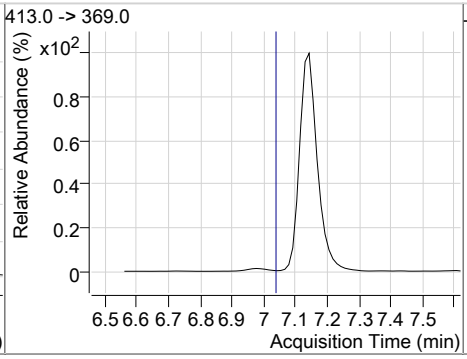


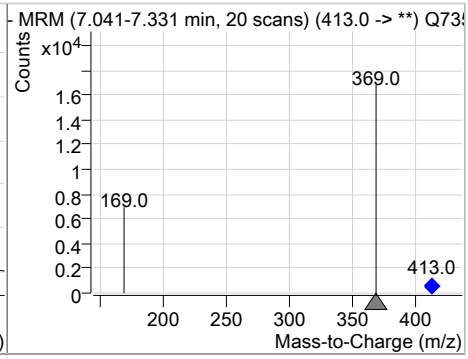




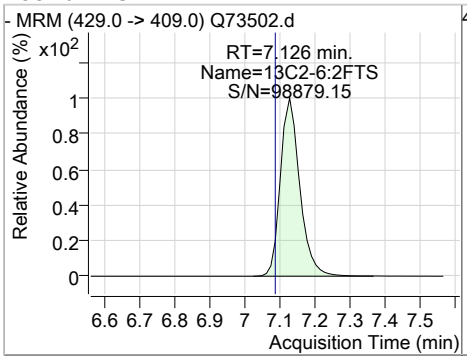
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	1.17	7.14	0.14	11995				

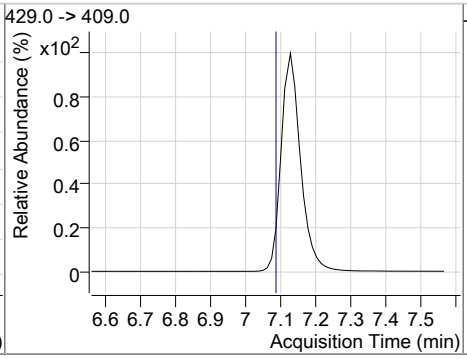


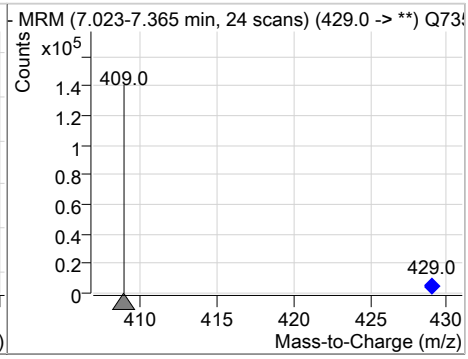




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.13	0.04	110301				

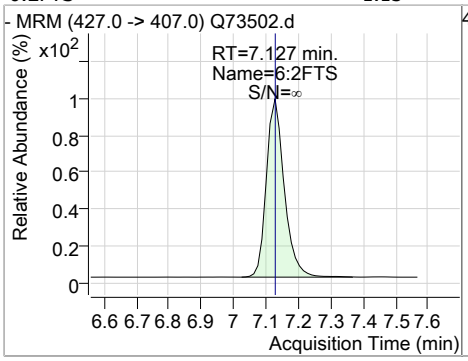


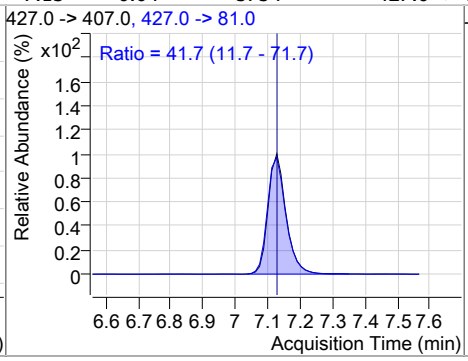


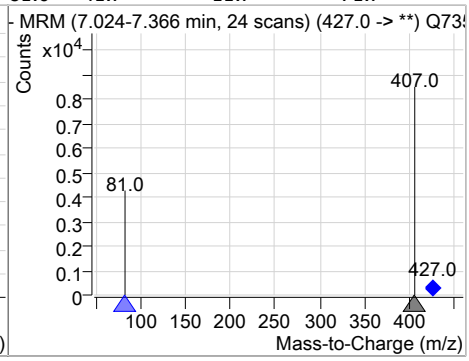


Perfluorinated Compounds by LC/MS/MS

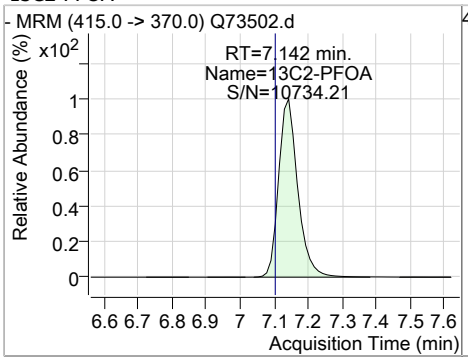
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	1.13	7.13	0.04	5754	427.0 -> 81.0	41.7	11.7	71.7

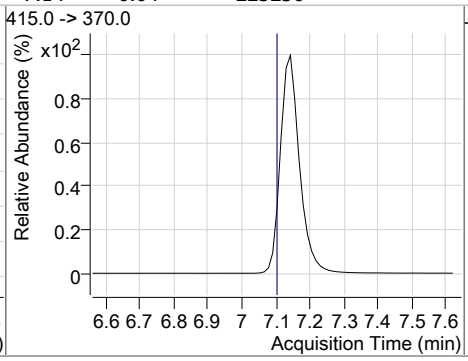


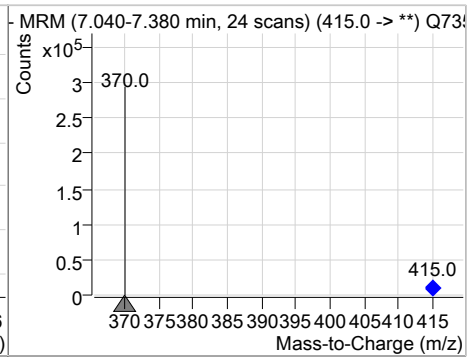




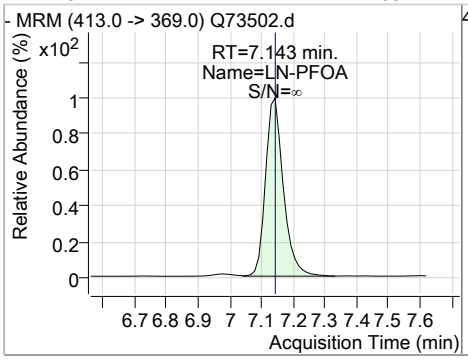
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.14	0.04	225236				

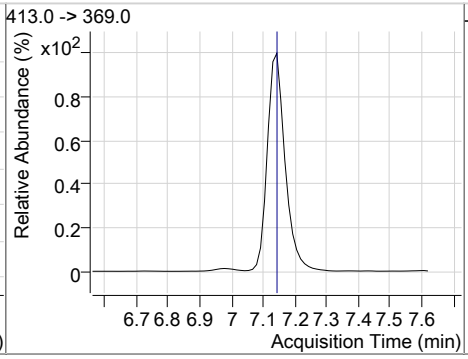


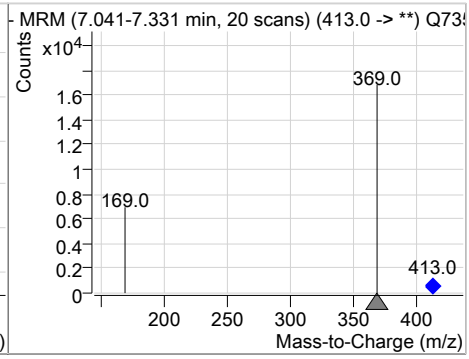




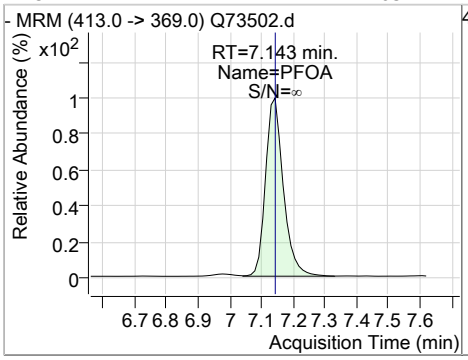
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	1.03	7.14	0.04	11995				

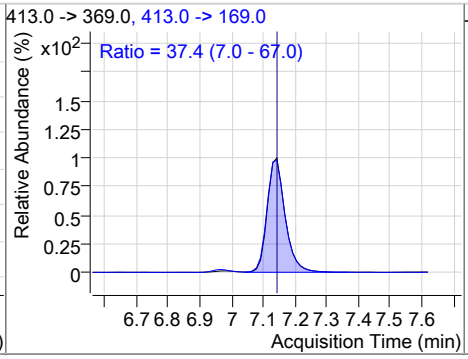


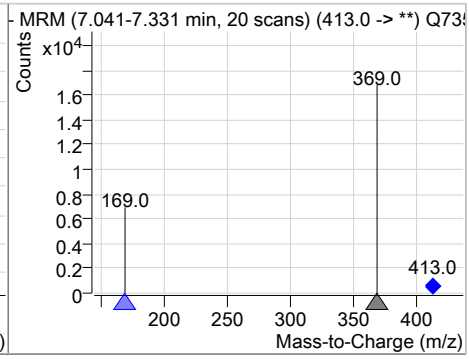




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.03	7.14	0.04	11995	413.0 -> 169.0	37.4	7.0	67.0

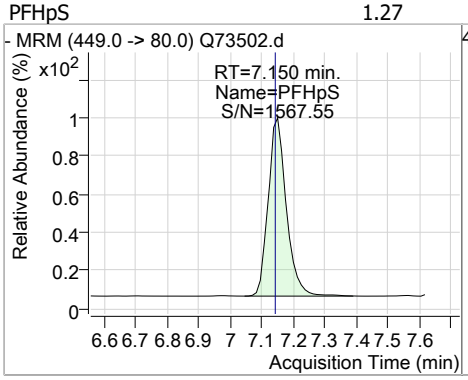


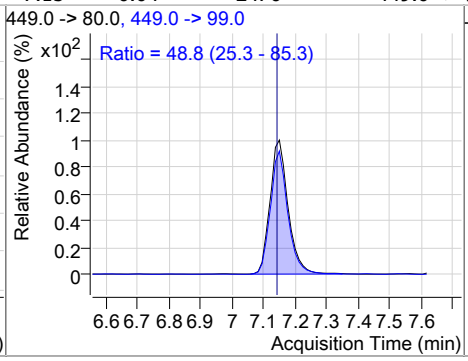


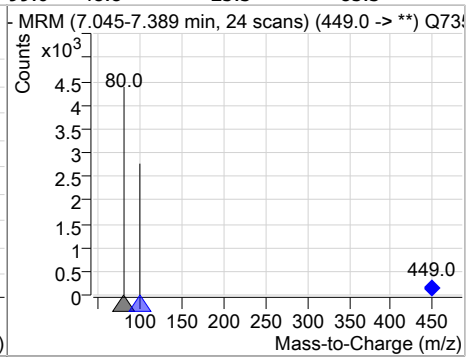


Perfluorinated Compounds by LC/MS/MS

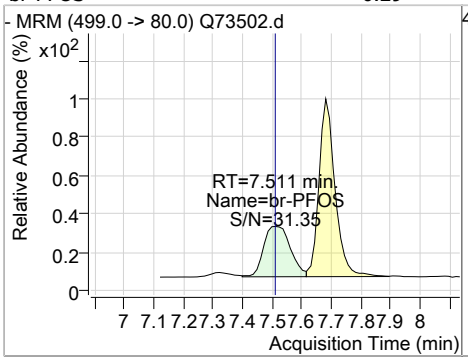
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	1.27	7.15	0.04	2476	449.0 -> 99.0	48.8	25.3	85.3

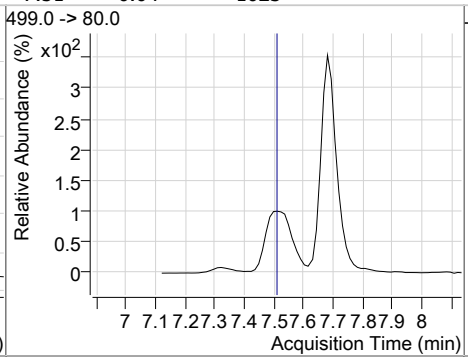


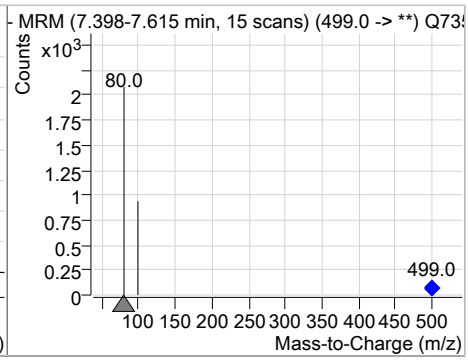




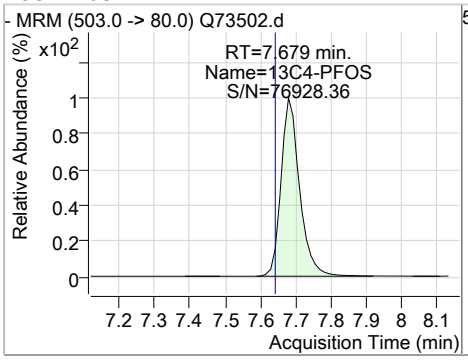
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	0.29	7.51	0.04	1023				

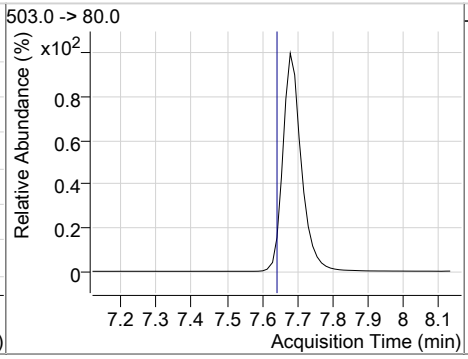


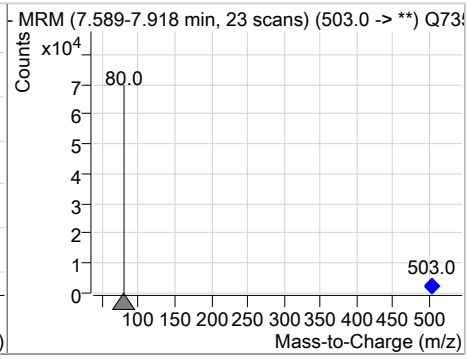




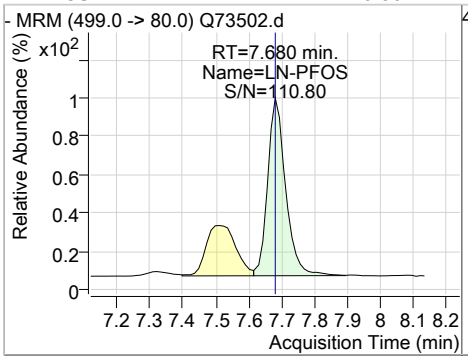
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.68	0.04	51990				

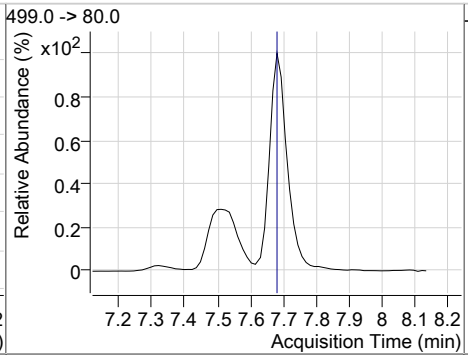


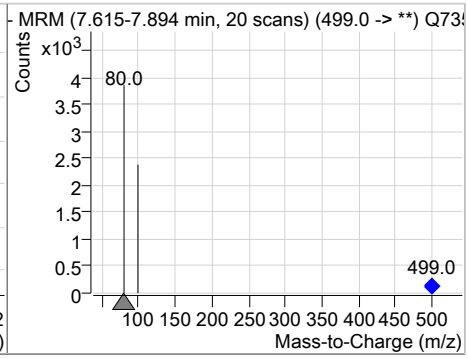




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	0.86	7.68	0.04	2177				

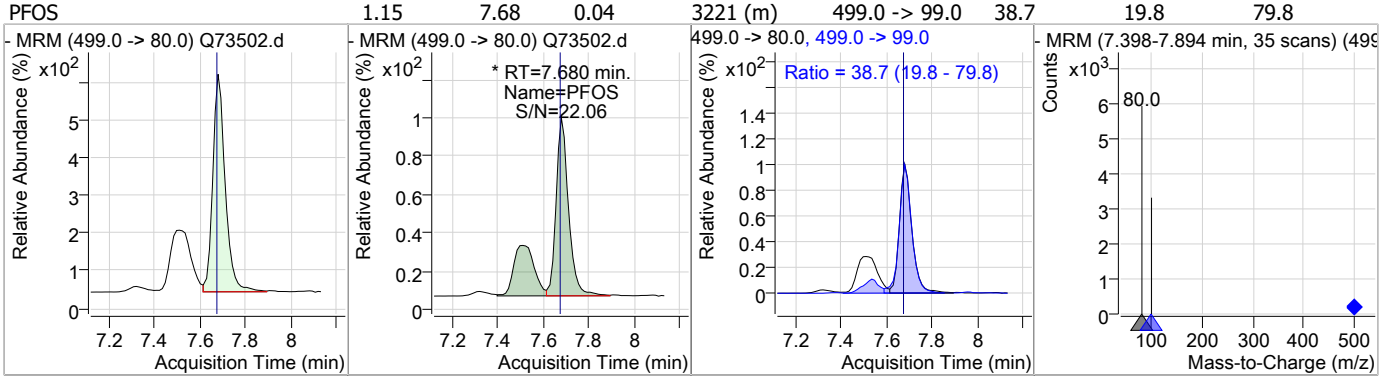




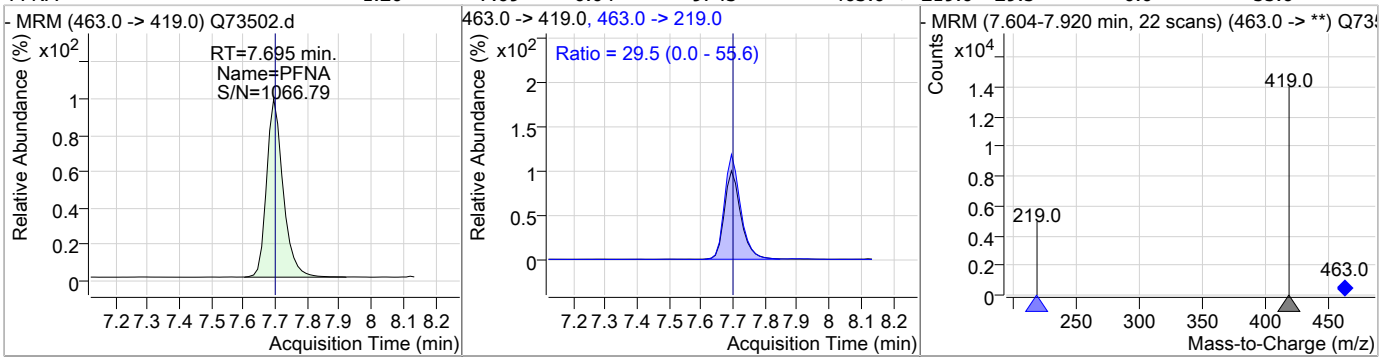


Perfluorinated Compounds by LC/MS/MS

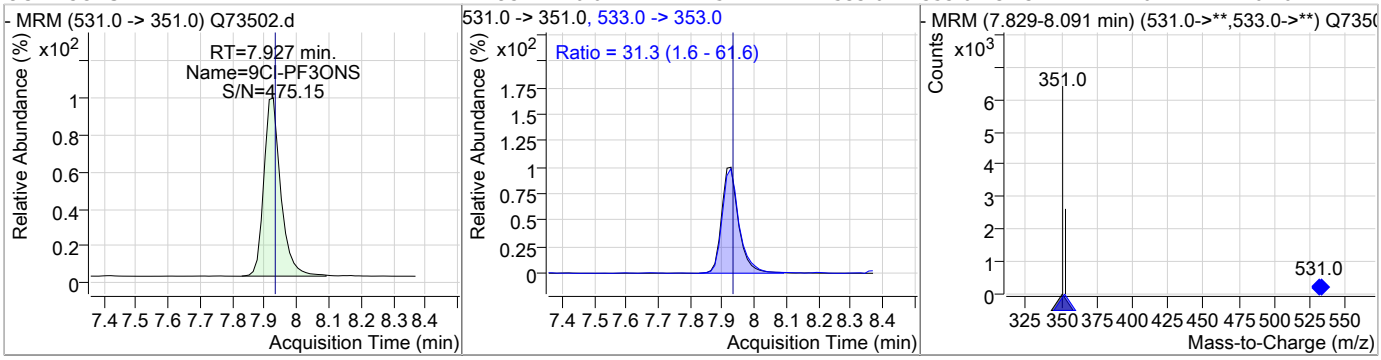
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.15	7.68	0.04	3221 (m)	499.0 -> 99.0	38.7	19.8	79.8



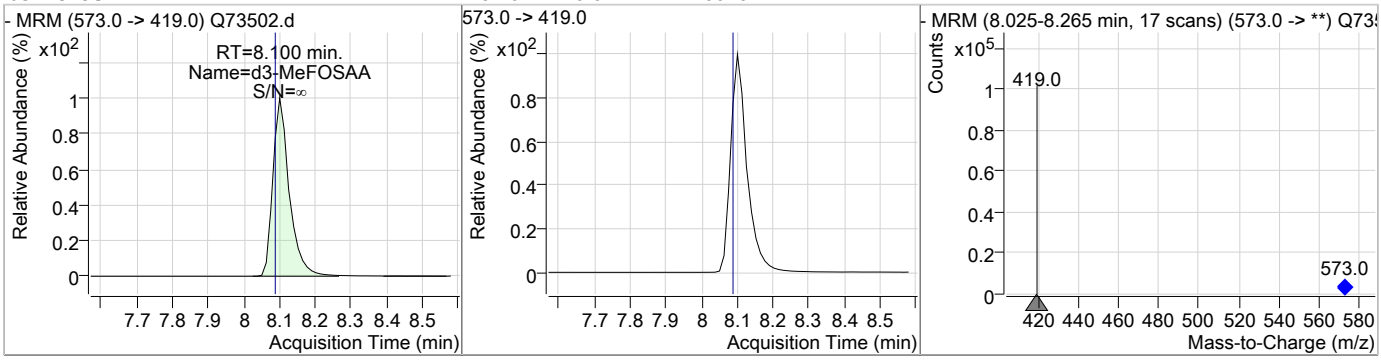
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	1.20	7.69	0.04	9743	463.0 -> 219.0	29.5	0.0	55.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	1.17	7.93	0.04	4157	533.0 -> 353.0	31.3	1.6	61.6

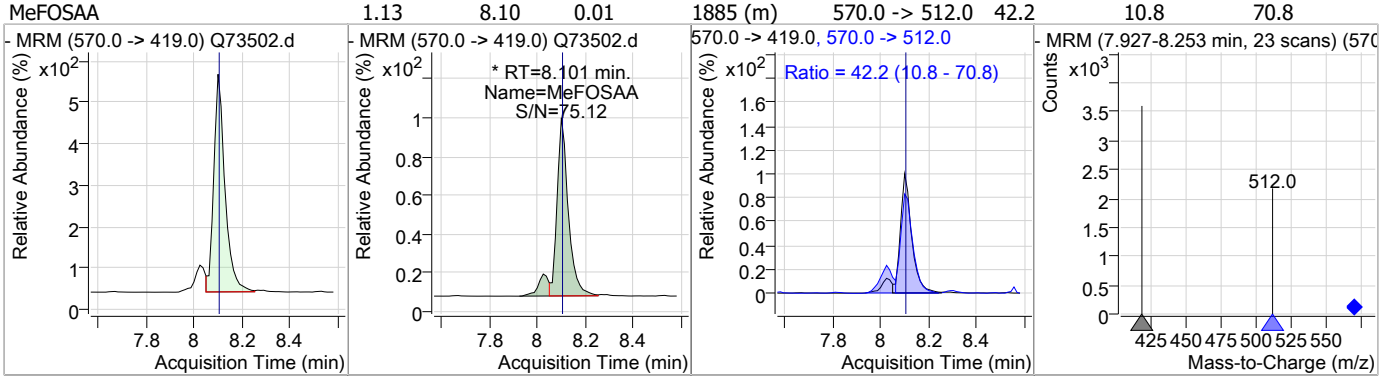


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.10	0.01	76676				

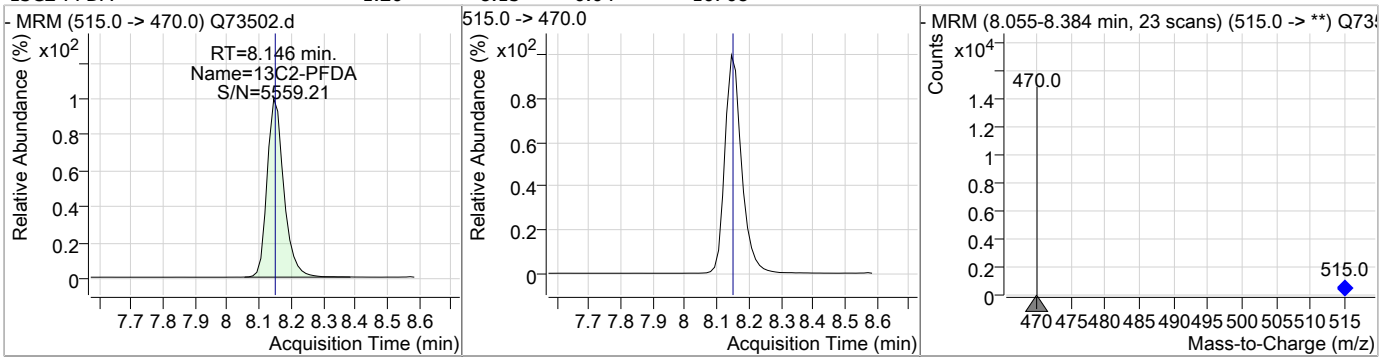


Perfluorinated Compounds by LC/MS/MS

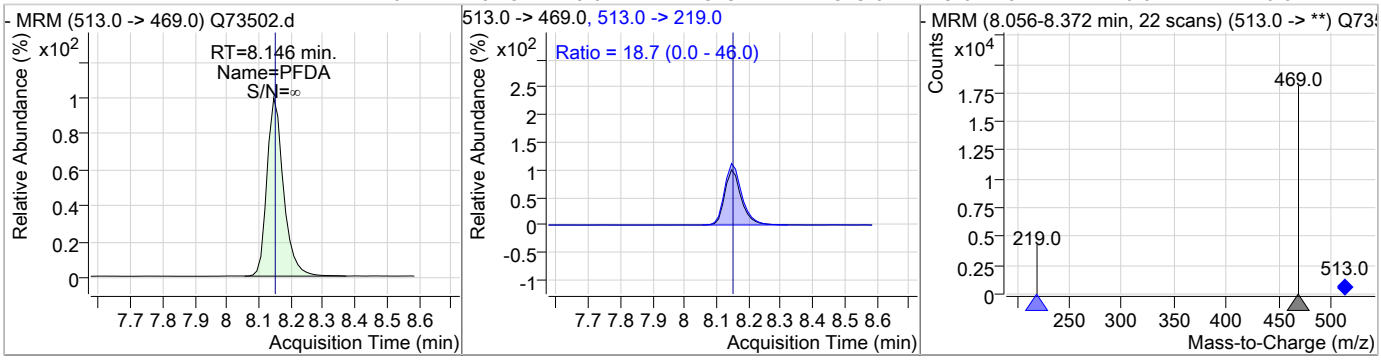
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	1.13	8.10	0.01	1885 (m)	570.0 -> 512.0	42.2	10.8	70.8



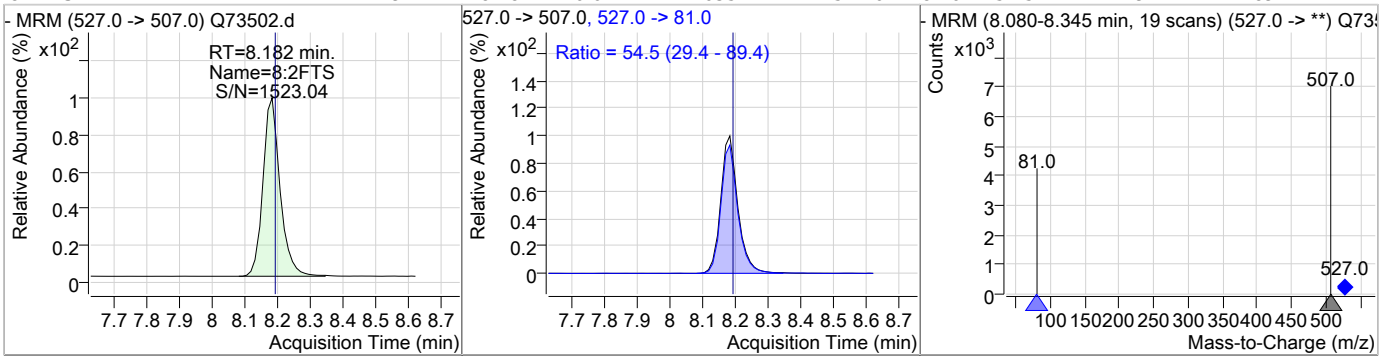
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	1.26	8.15	0.04	10708				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	1.10	8.15	0.04	13232	513.0 -> 219.0	18.7	0.0	46.0

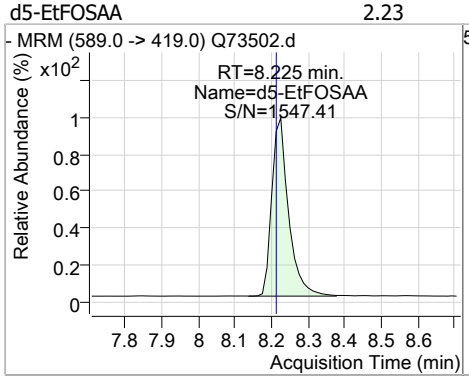


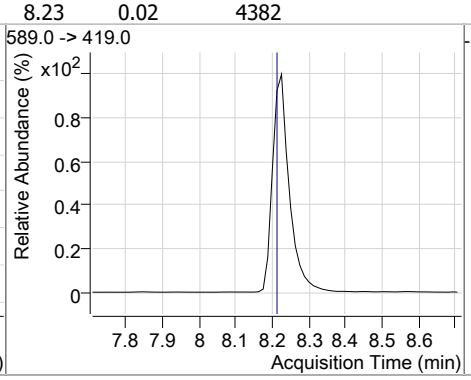
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.19	8.18	0.04	4635	527.0 -> 81.0	54.5	29.4	89.4

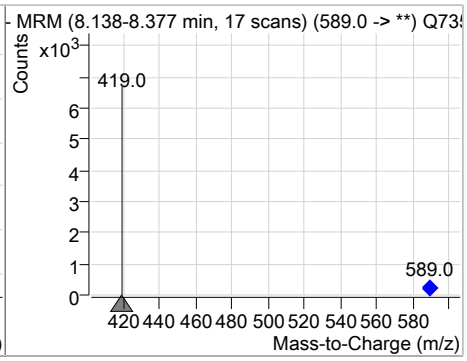


Perfluorinated Compounds by LC/MS/MS

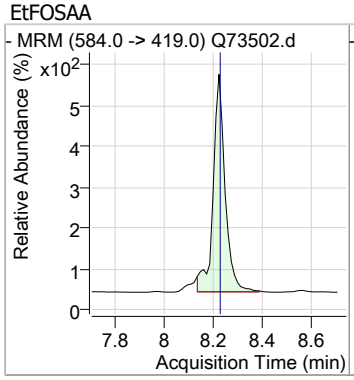
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	2.23	8.23	0.02	4382				

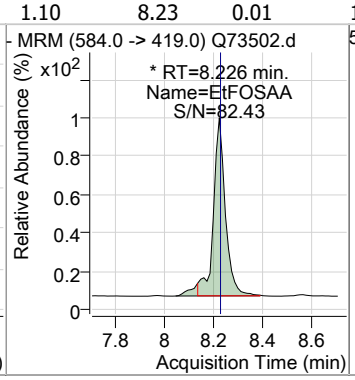


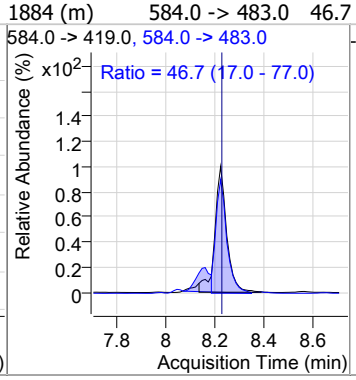


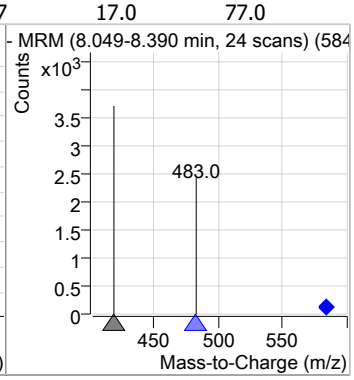


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	1.10	8.23	0.01	1884 (m)	584.0 -> 483.0	46.7	17.0	77.0

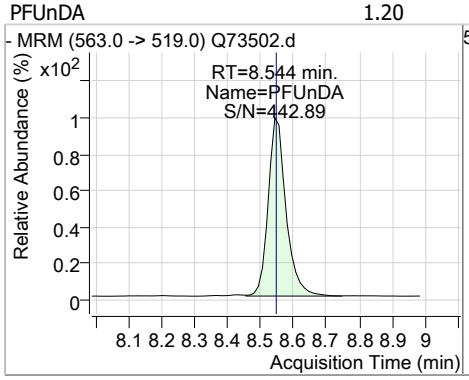


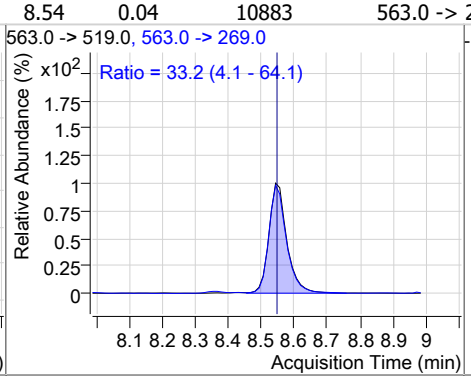


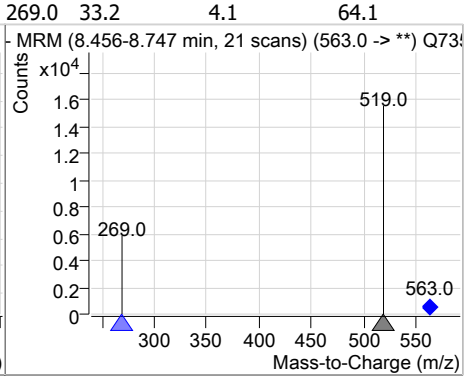




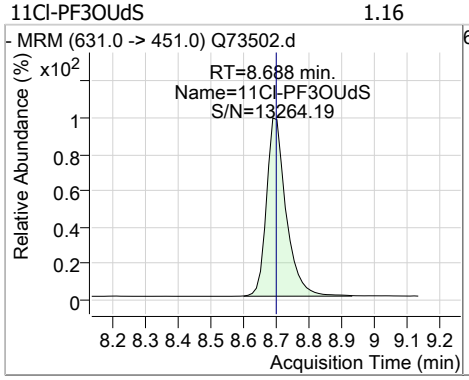
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	1.20	8.54	0.04	10883	563.0 -> 269.0	33.2	4.1	64.1

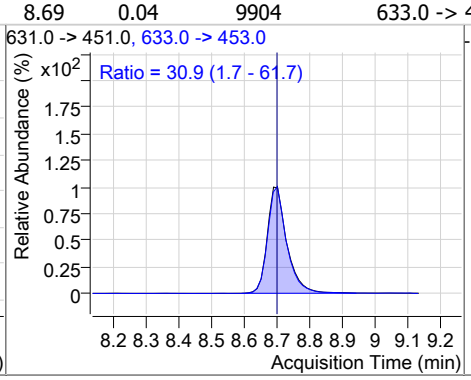


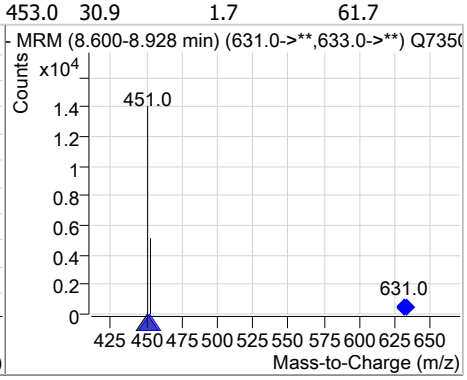




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	1.16	8.69	0.04	9904	633.0 -> 453.0	30.9	1.7	61.7

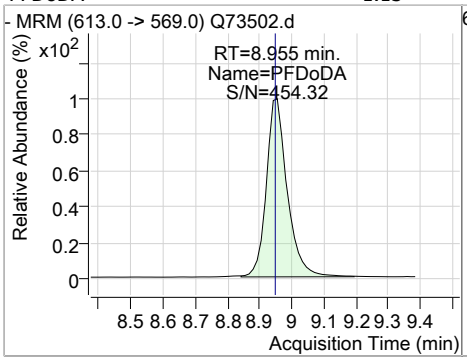


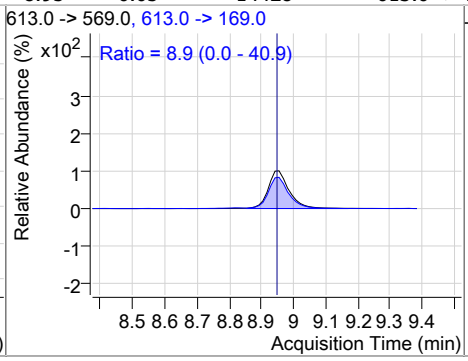


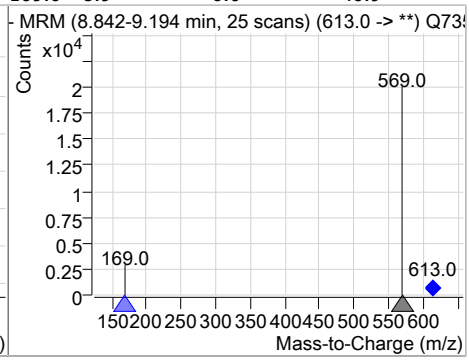


Perfluorinated Compounds by LC/MS/MS

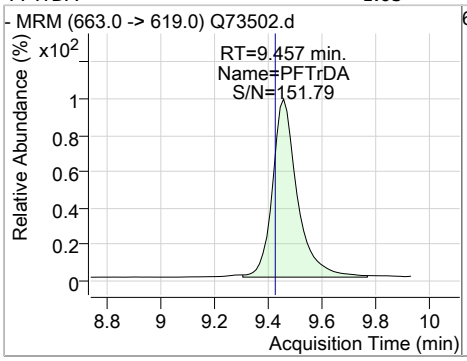
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	1.13	8.95	0.05	14428	613.0 -> 169.0	8.9	0.0	40.9

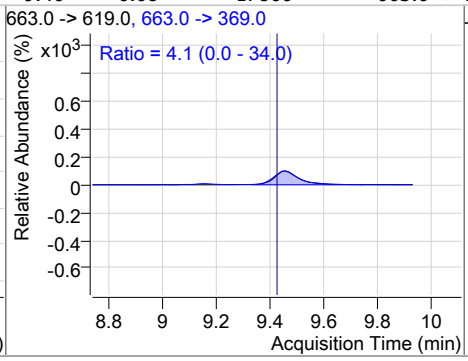


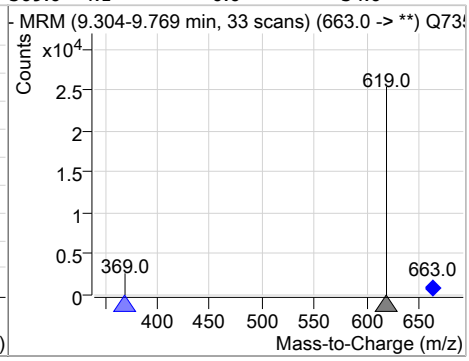




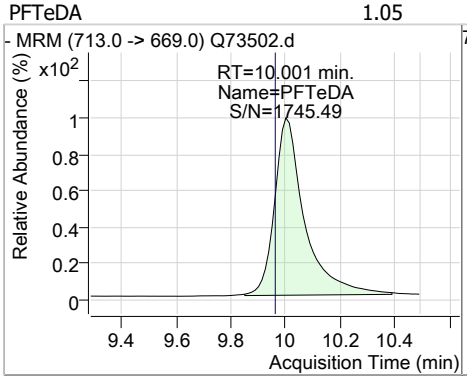
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	1.05	9.46	0.08	17860	663.0 -> 369.0	4.1	0.0	34.0

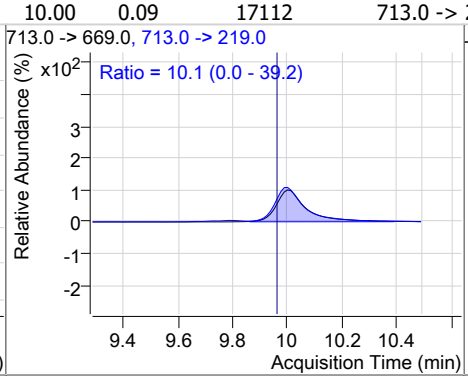


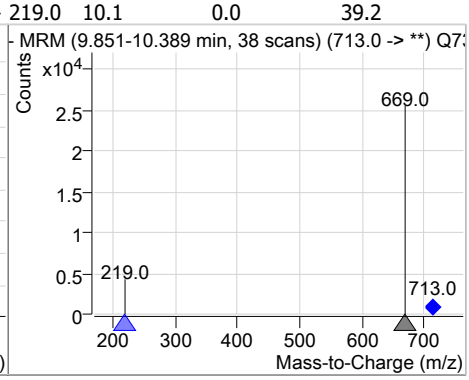




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	1.05	10.00	0.09	17112	713.0 -> 219.0	10.1	0.0	39.2







Manual Integration Approval Summary

Sample Number: SQ1670-IC1670
Lab FileID: Q73502.D
Injection Time: 10/27/20 11:35
Method: EPA 537.1 REV 1.0
Analyst approved: 10/29/20 08:24 Mike Eger
Supervisor approved: 10/29/20 08:25 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.49	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.68	Split peak
MeFOSAA	2355-31-9		8.10	Split peak
EtFOSAA	2991-50-6		8.23	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 10/29/20 08:25

Perfluorinated Compounds by LC/MS/MS

Data File : Q73503.d
Operator : mikee
Acq. Method : 537.m
Acq. Date-Time : 10/27/2020 11:54:04 AM
Sample Name : IC1670-2.0
Vial : Vial 4
DA Method File : 537_1027_SQ1670.quantmethod.xml
Batch Name : SQ1670.batch.bin
Sample Information : OP82561,SQ1670,250,,,1.0,1,water

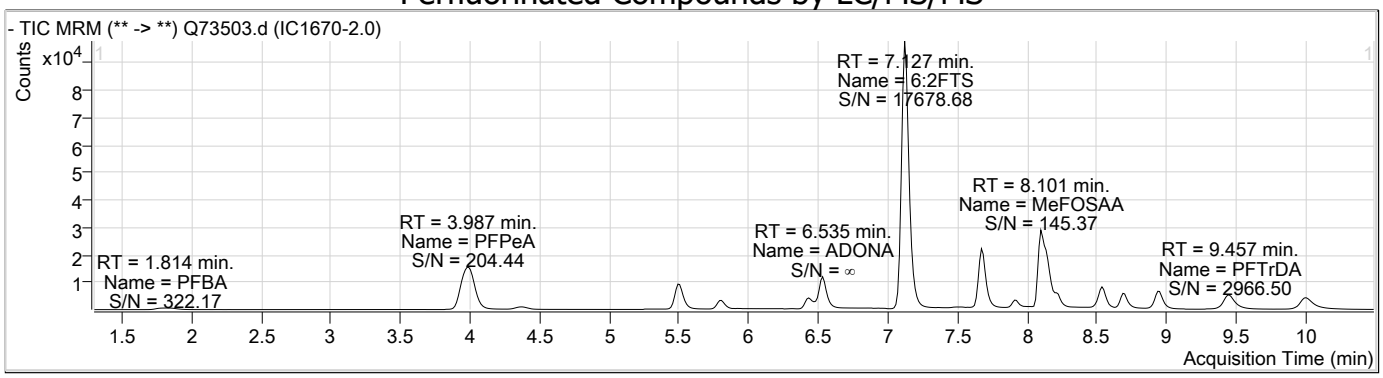
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	7.126	429.0 -> 409.0	109638	20.00	µg/L		0.041
13C2-PFOA	7.129	415.0 -> 370.0	224643	20.00	µg/L		0.027
13C3-PFPeA	3.997	266.0 -> 222.0	100590	20.00	µg/L		0.000
13C4-PFOS	7.679	503.0 -> 80.0	52830	20.00	µg/L		0.037
d3-MeFOSAA	8.100	573.0 -> 419.0	79610	40.00	µg/L		0.012
System Monitoring Compounds							
13C2-PFDA	8.146	515.0 -> 470.0	18977	2.25	µg/L		0.040
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 11.2%			
13C2-PFHxA	5.494	315.0 -> 270.0	20158	1.99	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 9.9%			
d5-EtFOSAA	8.225	589.0 -> 419.0	7848	3.84	µg/L		0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 9.6%			
13C3-HFPO-DA	5.801	287.0 -> 169.0	6670	4.20	µg/L		0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 10.5%			
Target Compounds							QValue
br-PFHxS	6.306	399.0 -> 80.0	557	0.25	µg/L		100
LN-PFHxS	6.481	399.0 -> 80.0	3490	1.76	µg/L		100
6:2FTS	7.127	427.0 -> 407.0	10250	2.03	µg/L		98
8:2FTS	8.182	527.0 -> 507.0	7813	2.01	µg/L		99
EtFOSAA	8.226	584.0 -> 419.0	3284	1.85	µg/L	m	96
LN-PFOA	7.130	413.0 -> 369.0	21647	1.87	µg/L		100
MeFOSAA	8.101	570.0 -> 419.0	3512	2.03	µg/L	m	96
PFBA	1.814	213.0 -> 169.0	5722	1.93	µg/L		100
PFBS	4.366	299.0 -> 80.0	3453	2.00	µg/L		99
PFDA	8.146	513.0 -> 469.0	23072	1.92	µg/L		93
PFDoDA	8.942	613.0 -> 569.0	26113	2.01	µg/L		94
br-PFOA	7.130	413.0 -> 369.0	21647	2.11	µg/L		100
PFHpA	6.439	363.0 -> 319.0	12558	2.01	µg/L		96
PFHpS	7.137	449.0 -> 80.0	4231	2.13	µg/L		97
PFHxA	5.509	313.0 -> 269.0	18243	1.97	µg/L		99
PFHxS	6.481	399.0 -> 80.0	4038	2.00	µg/L	m	97
PFNA	7.695	463.0 -> 419.0	17473	2.17	µg/L		94
LN-PFOS	7.680	499.0 -> 80.0	3694	1.44	µg/L		100
PFOA	7.130	413.0 -> 369.0	21647	1.87	µg/L		98
PFOS	7.680	499.0 -> 80.0	5413	1.90	µg/L	m	87
PFPeA	3.987	263.0 -> 219.0	6134	2.10	µg/L		100
br-PFOS	7.498	499.0 -> 80.0	1722	0.48	µg/L		100
PFTeDA	10.001	713.0 -> 669.0	29880	1.80	µg/L		98
PFTrDA	9.457	663.0 -> 619.0	32088	1.86	µg/L		100
PFUnDA	8.544	563.0 -> 519.0	19130	2.08	µg/L		96
ADONA	6.535	377.0 -> 251.0	34159	1.90	µg/L		97
9Cl-PF3ONS	7.914	531.0 -> 351.0	7456	2.10	µg/L		99
11Cl-PF3OUdS	8.688	631.0 -> 451.0	16885	1.98	µg/L		100
HFPO-DA	5.805	329.0 -> 169.0	4860	2.14	µg/L		99

Perfluorinated Compounds by LC/MS/MS

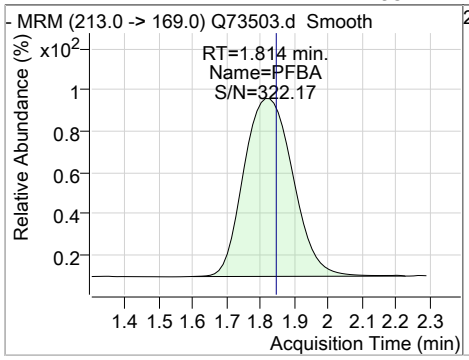
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

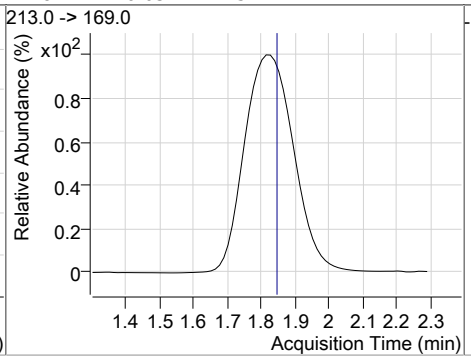
= Qualifier out of range, m = manually integrated, + = Area summed

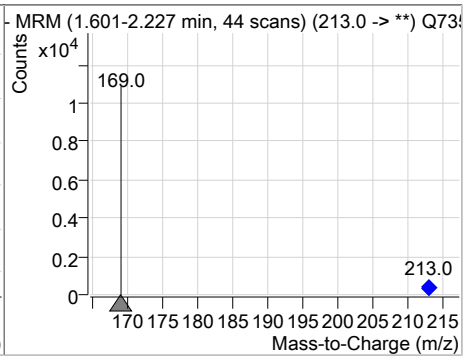
Perfluorinated Compounds by LC/MS/MS



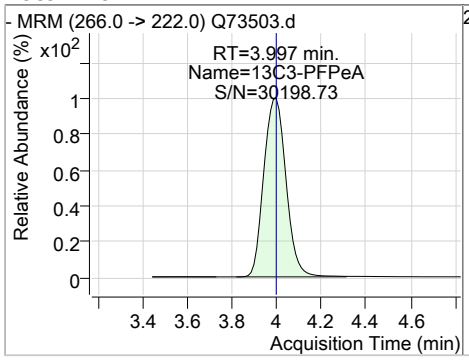
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	1.93	1.81	-0.03	5722				

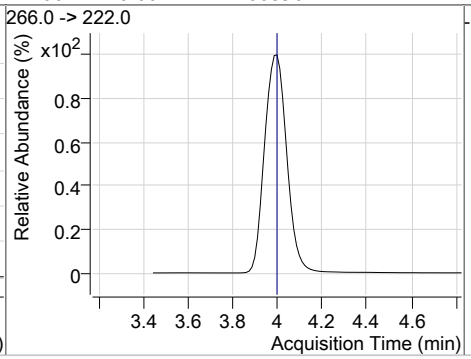


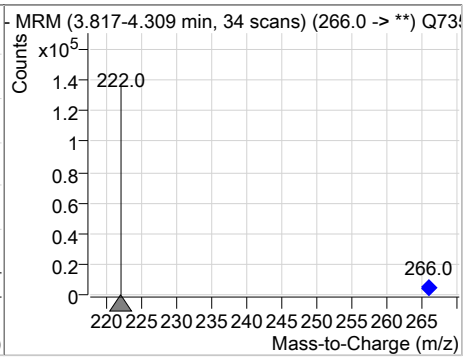




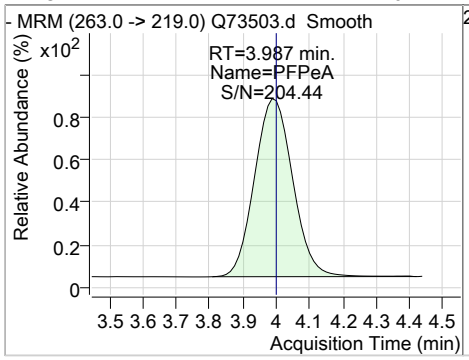
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.00	0.00	100590				

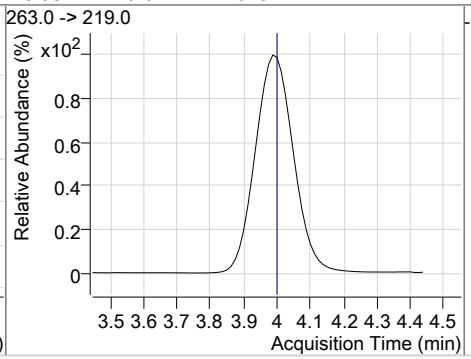


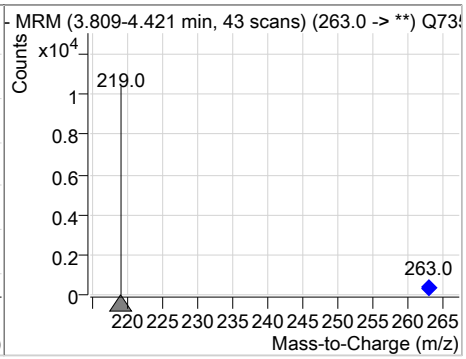




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	2.10	3.99	-0.01	6134				

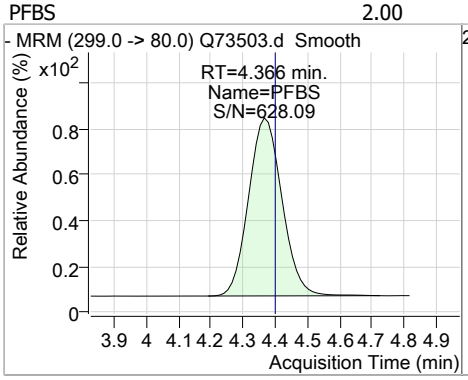


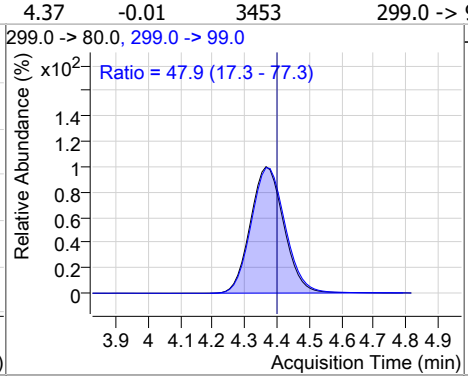


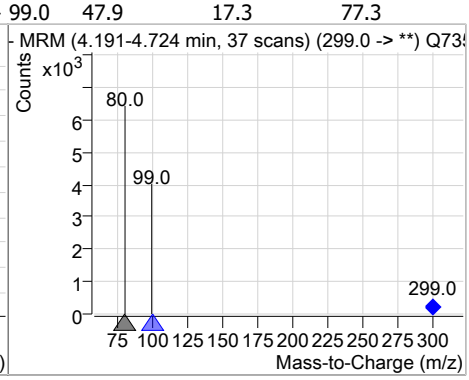


Perfluorinated Compounds by LC/MS/MS

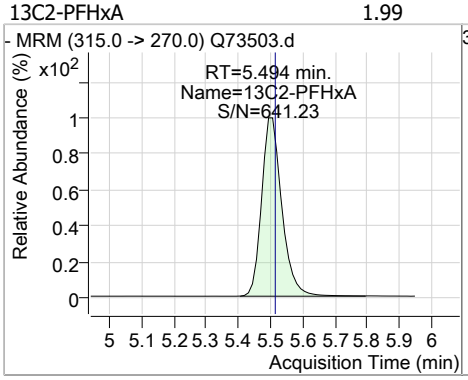
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	2.00	4.37	-0.01	3453	299.0 -> 99.0	47.9	17.3	77.3

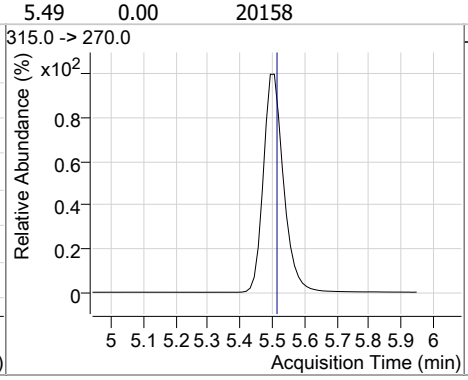


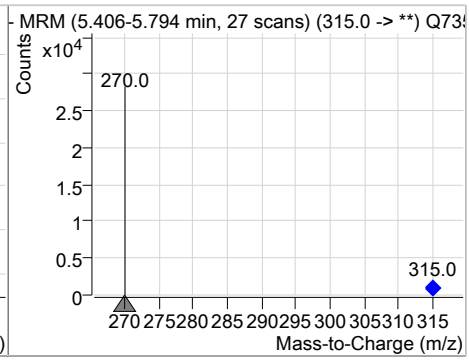




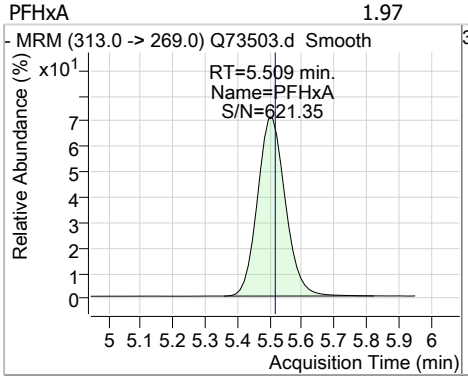
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	1.99	5.49	0.00	20158				

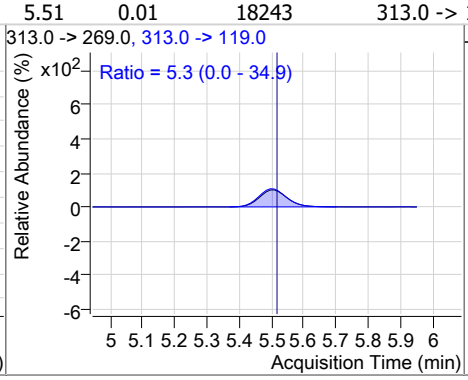


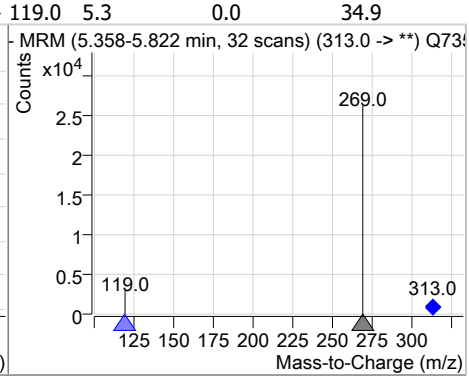




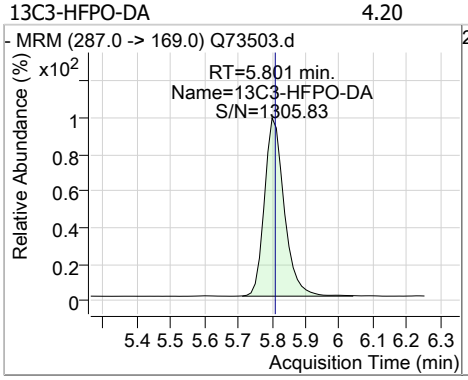
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	1.97	5.51	0.01	18243	313.0 -> 119.0	5.3	0.0	34.9

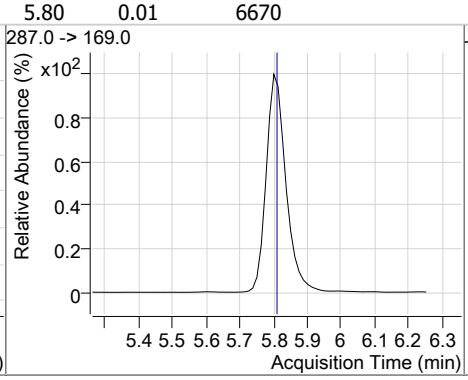


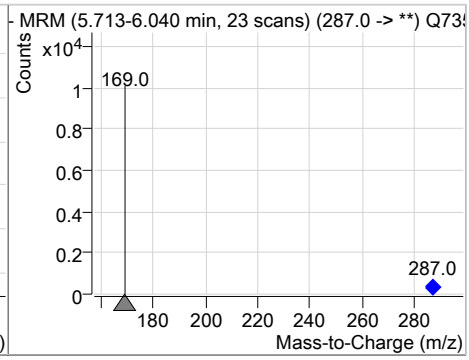




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	4.20	5.80	0.01	6670				

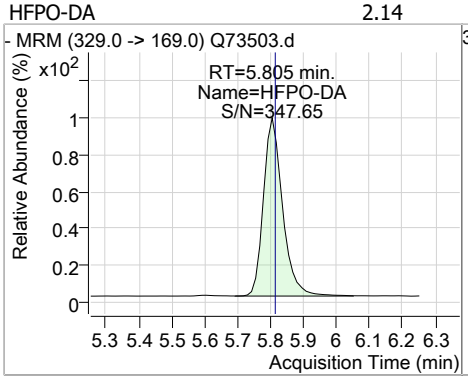


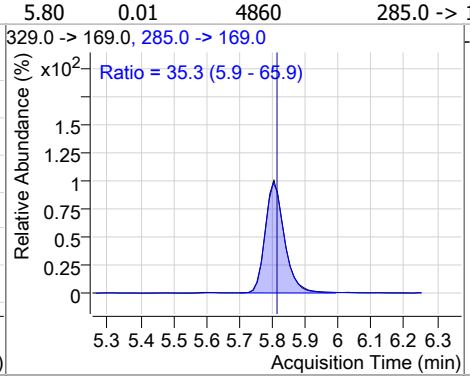


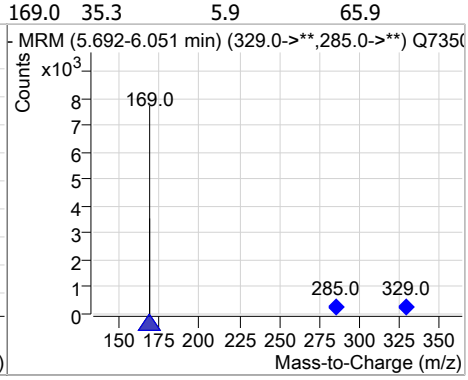


Perfluorinated Compounds by LC/MS/MS

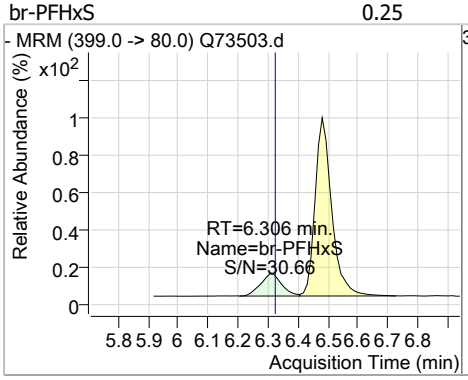
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	2.14	5.80	0.01	4860	285.0 -> 169.0	35.3	5.9	65.9

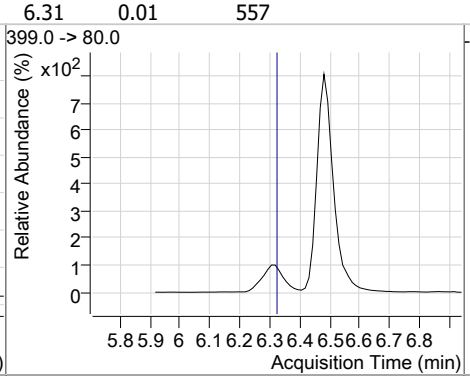


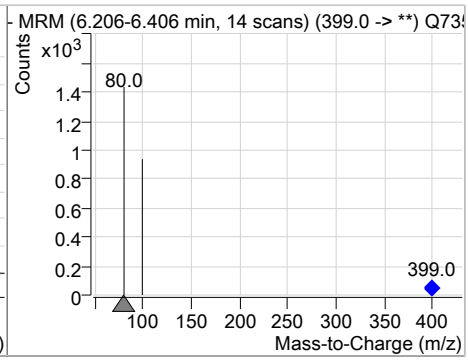




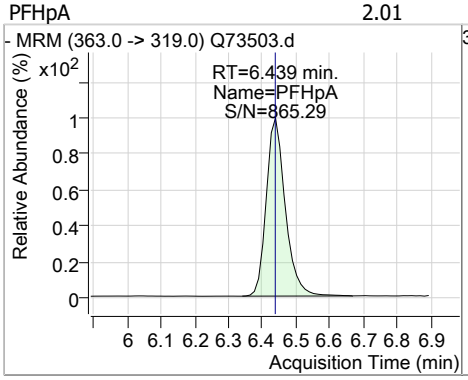
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.25	6.31	0.01	557				

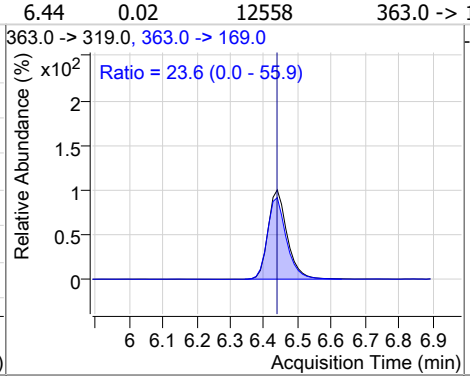


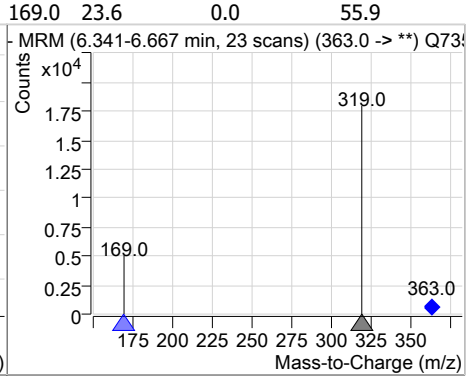




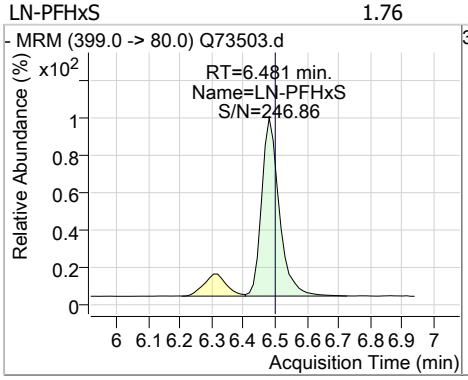
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	2.01	6.44	0.02	12558	363.0 -> 169.0	23.6	0.0	55.9

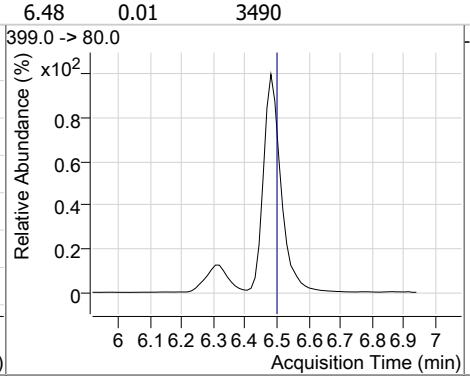


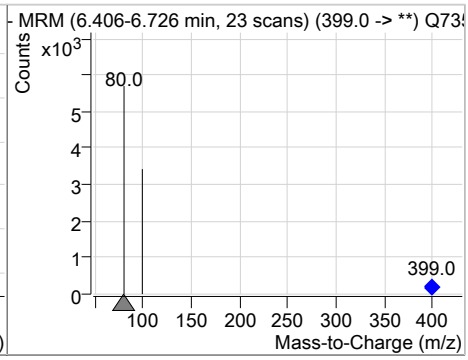




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	1.76	6.48	0.01	3490				

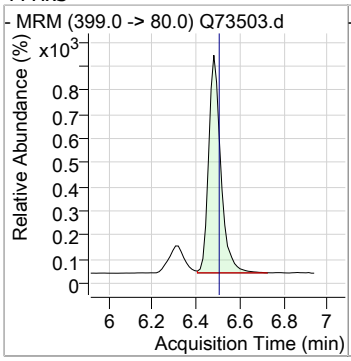


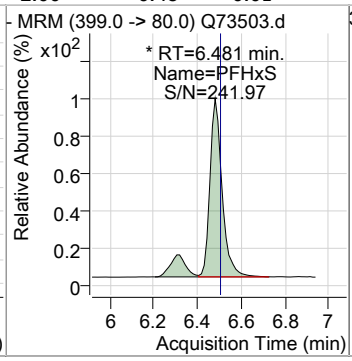


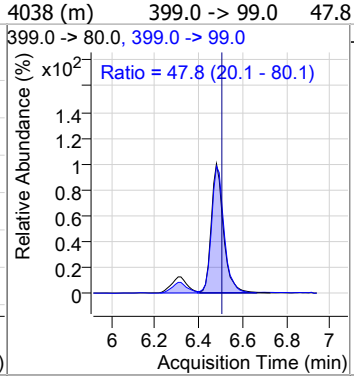


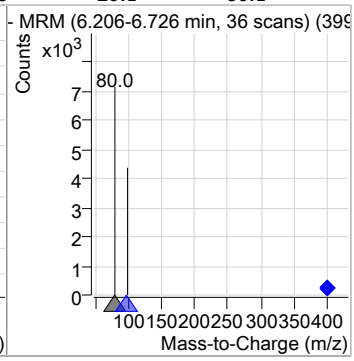
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	2.00	6.48	0.01	4038 (m)	399.0 -> 99.0	47.8	20.1	80.1

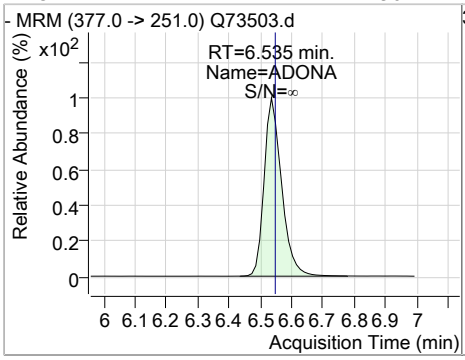


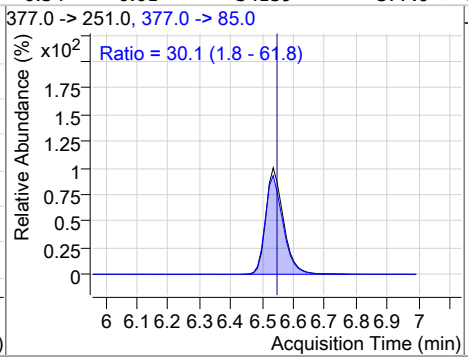


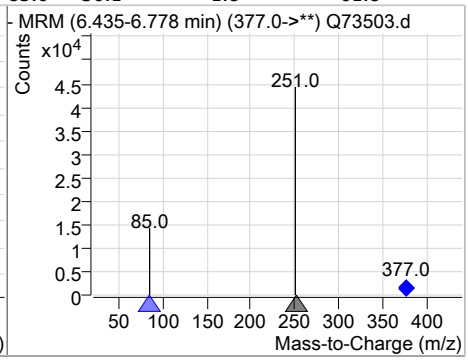




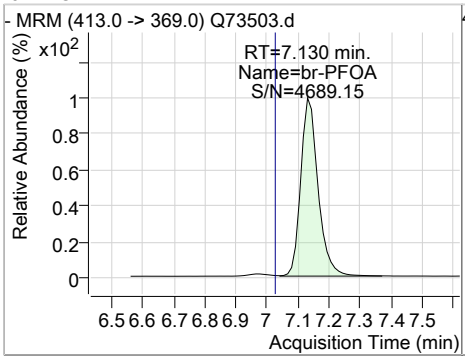
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	1.90	6.54	0.01	34159	377.0 -> 85.0	30.1	1.8	61.8

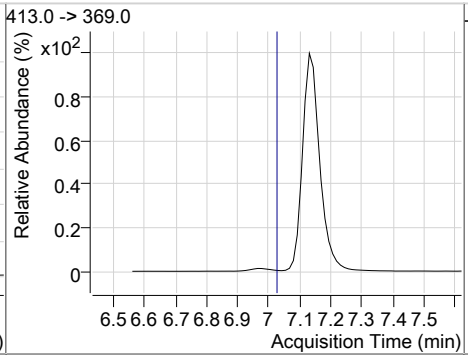


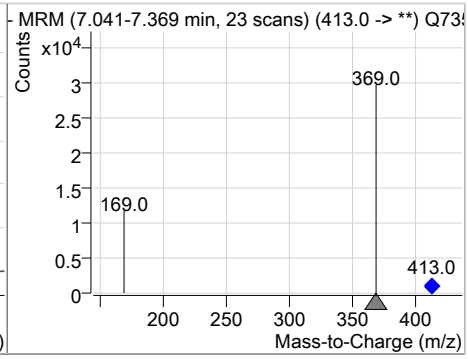




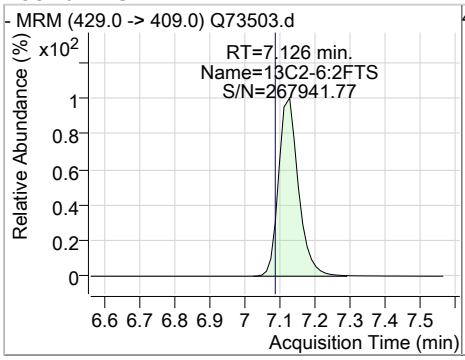
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	2.11	7.13	0.13	21647				

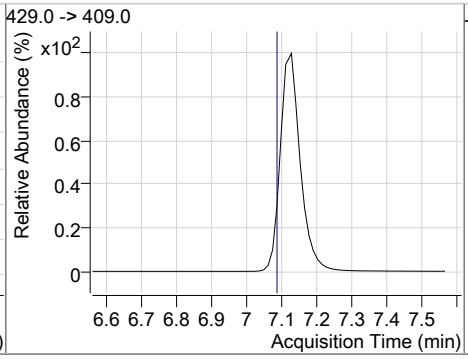


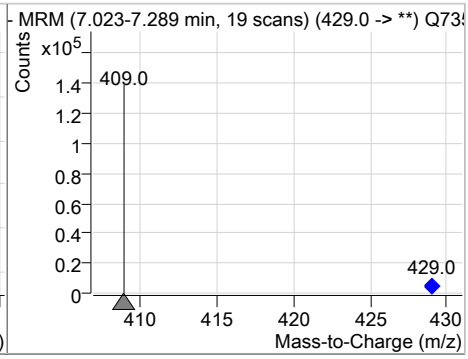




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.13	0.04	109638				

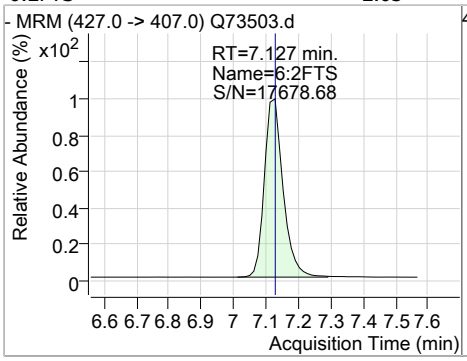


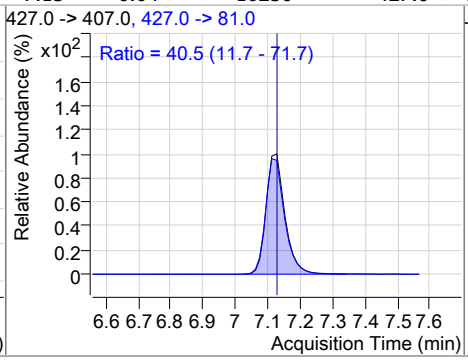


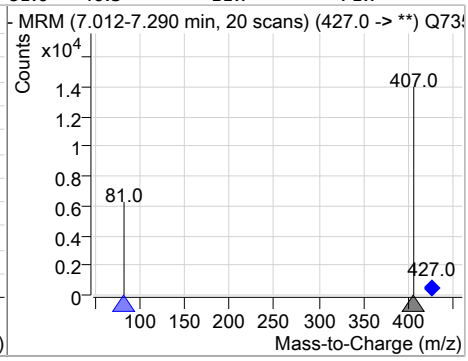


Perfluorinated Compounds by LC/MS/MS

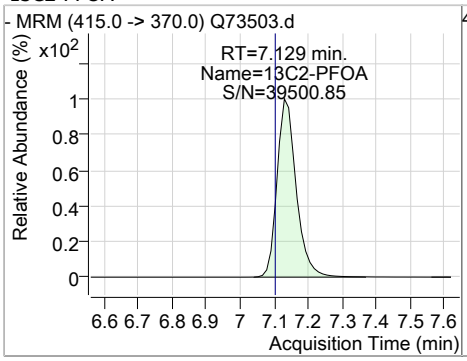
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	2.03	7.13	0.04	10250	427.0 -> 81.0	40.5	11.7	71.7

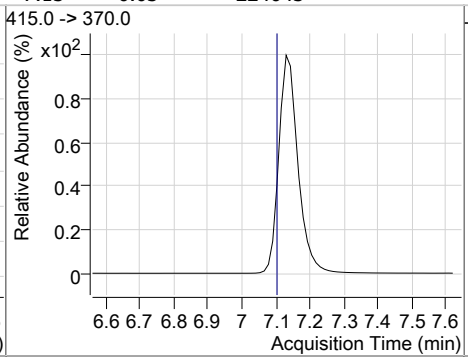


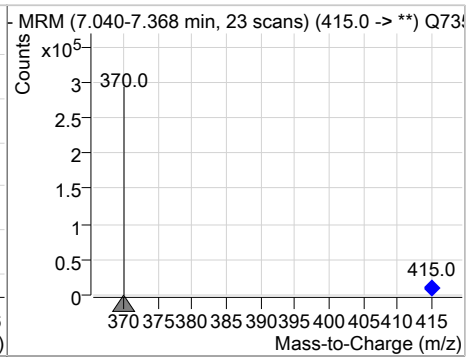




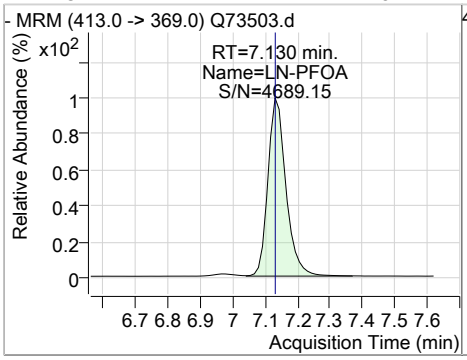
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.13	0.03	224643				

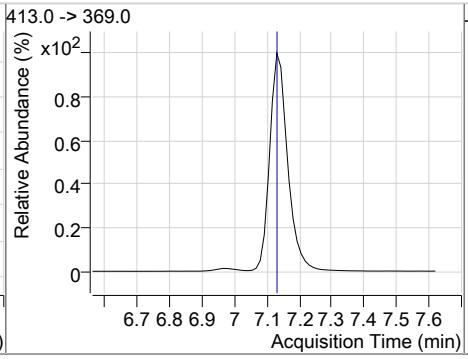


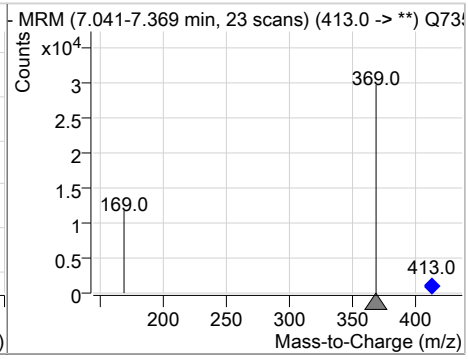




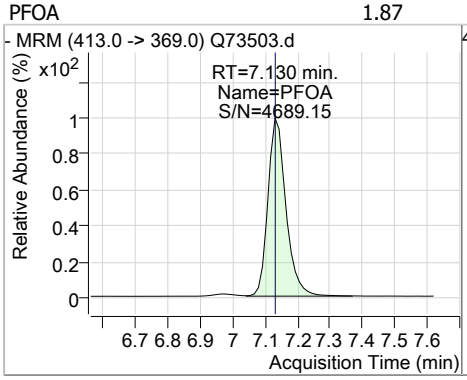
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	1.87	7.13	0.03	21647				

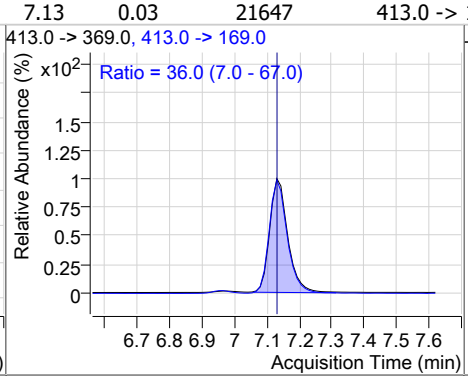


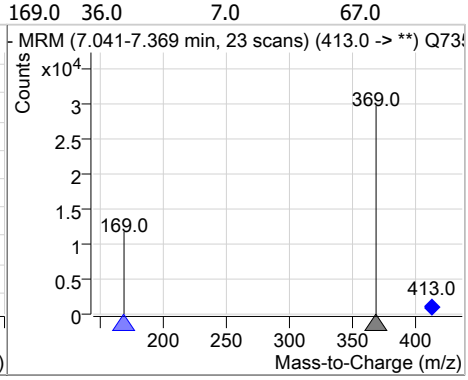




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.87	7.13	0.03	21647	413.0 -> 169.0	36.0	7.0	67.0

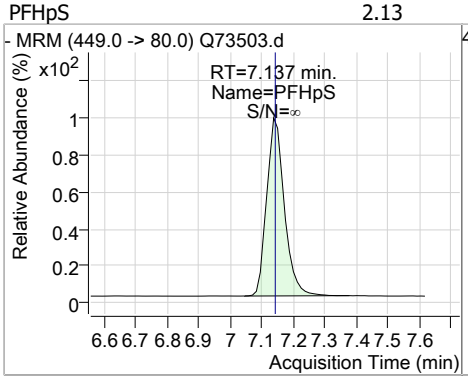


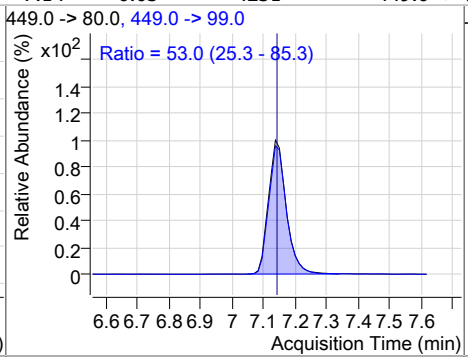


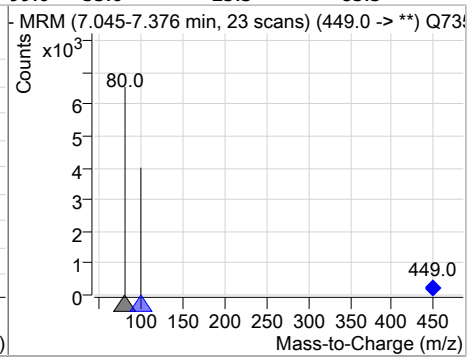


Perfluorinated Compounds by LC/MS/MS

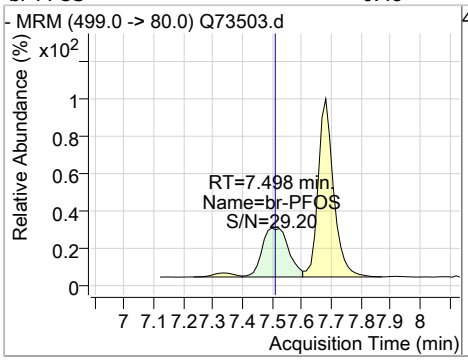
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	2.13	7.14	0.03	4231	449.0 -> 99.0	53.0	25.3	85.3

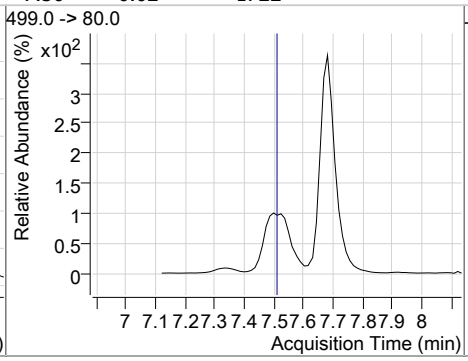


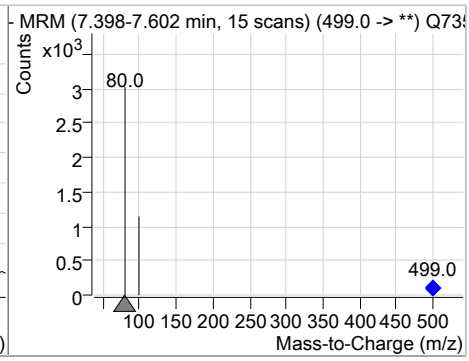




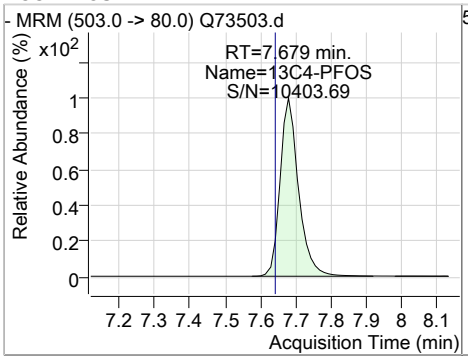
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	0.48	7.50	0.02	1722				

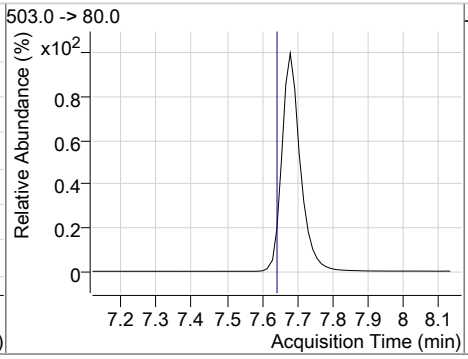


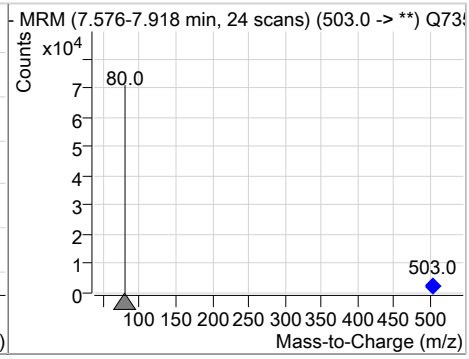




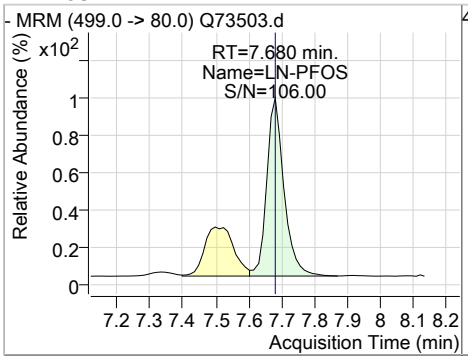
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.68	0.04	52830				

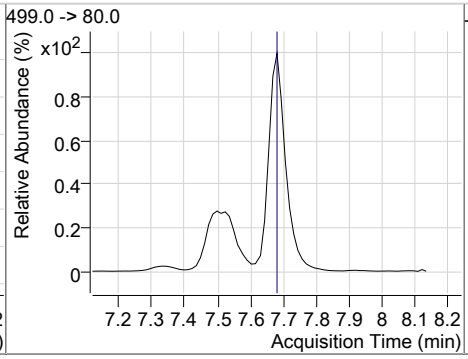


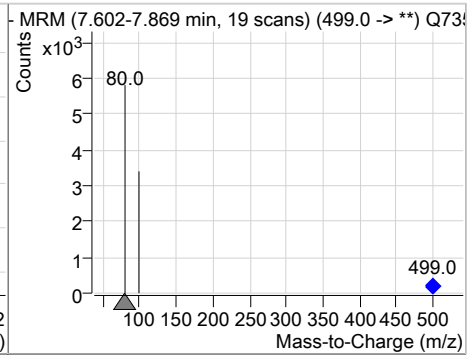




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	1.44	7.68	0.04	3694				

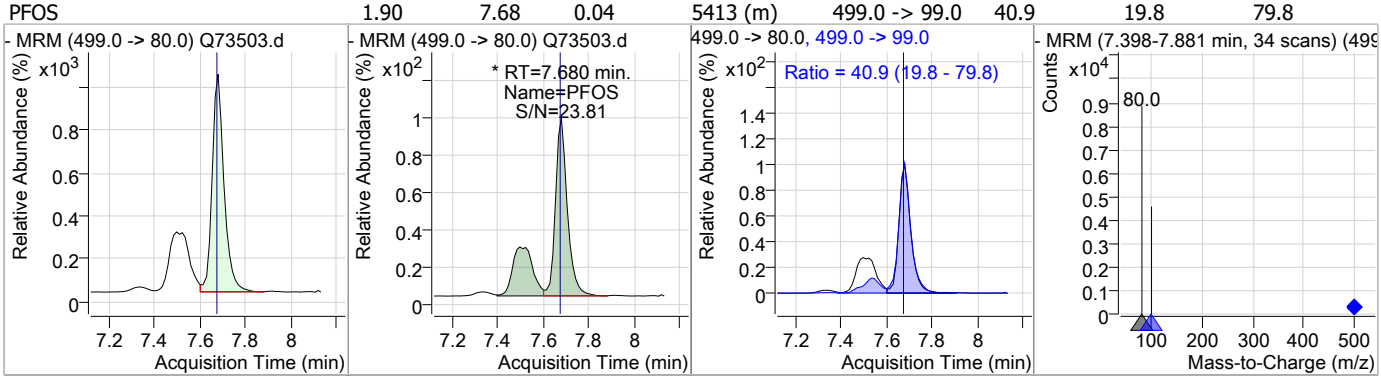




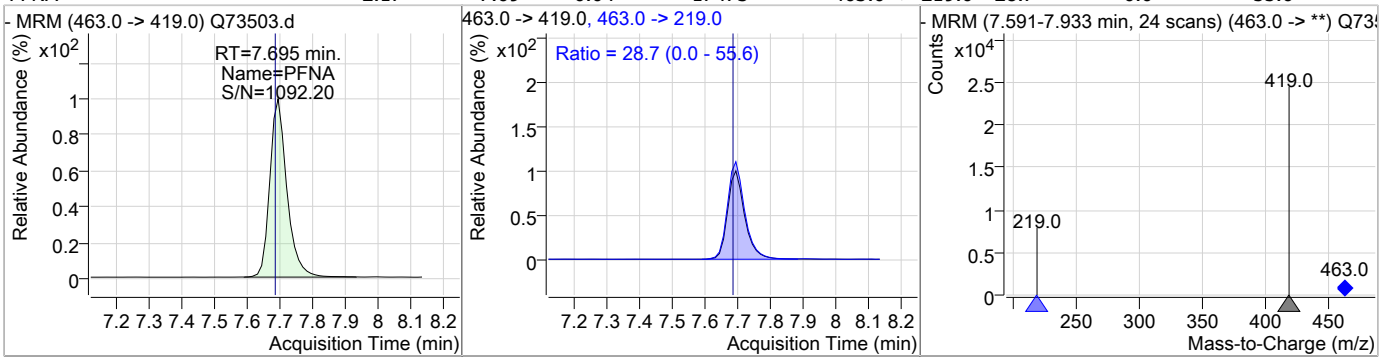


Perfluorinated Compounds by LC/MS/MS

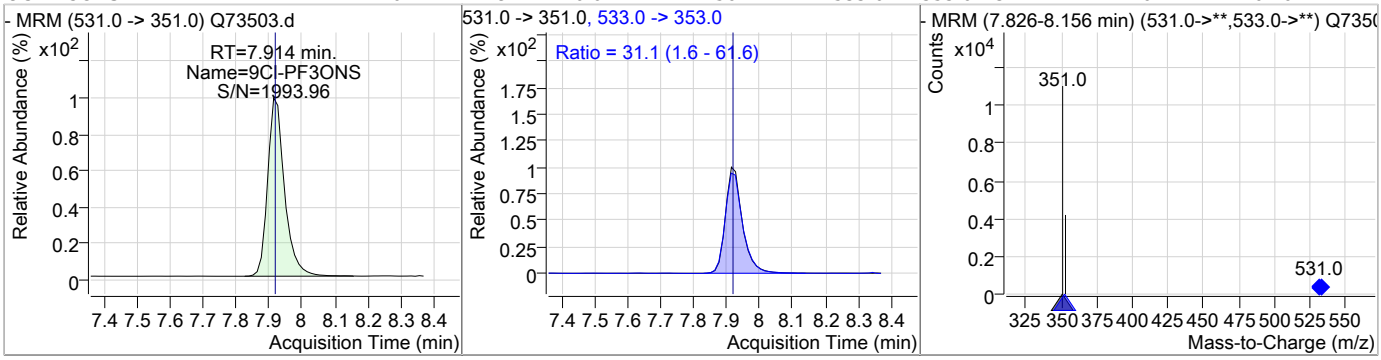
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.90	7.68	0.04	5413 (m)	499.0 -> 99.0	40.9	19.8	79.8



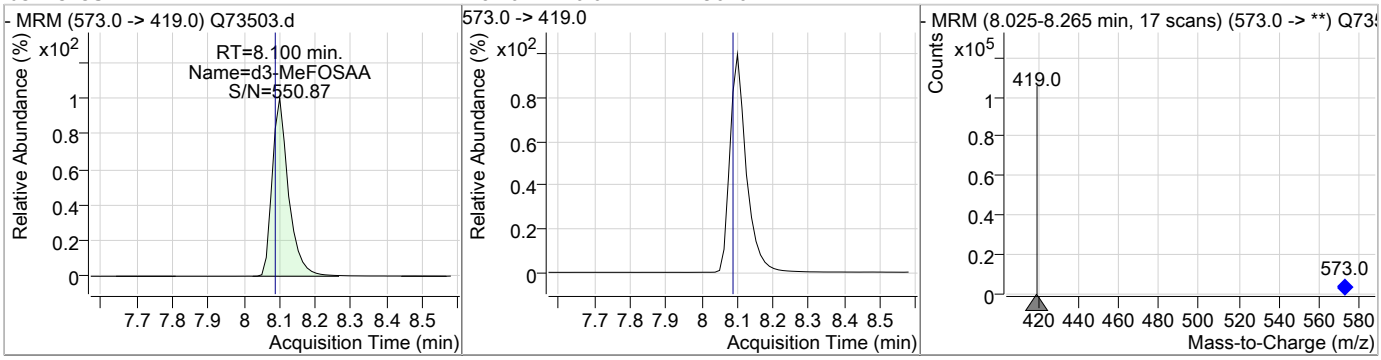
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	2.17	7.69	0.04	17473	463.0 -> 219.0	28.7	0.0	55.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	2.10	7.91	0.02	7456	533.0 -> 353.0	31.1	1.6	61.6

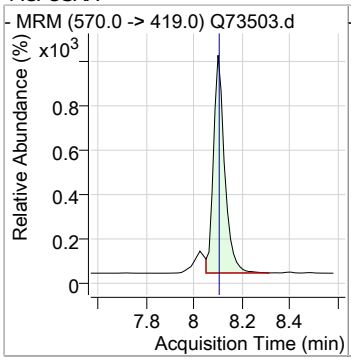


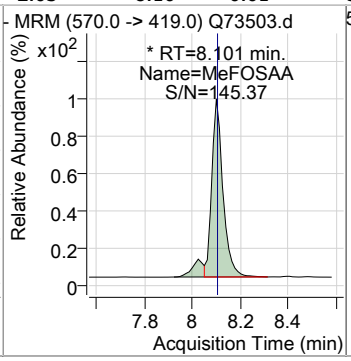
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.10	0.01	79610				

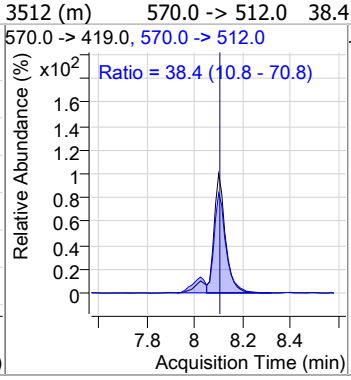


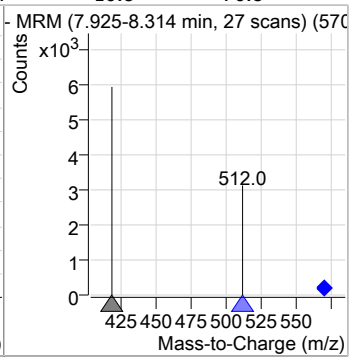
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	2.03	8.10	0.01	3512 (m)	570.0 -> 512.0	38.4	10.8	70.8

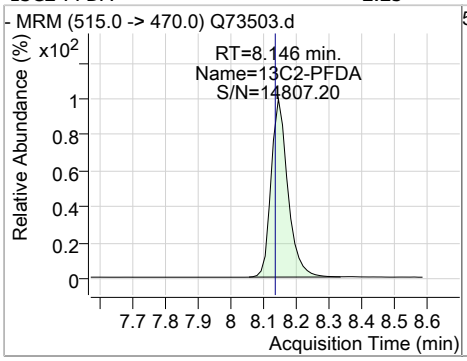


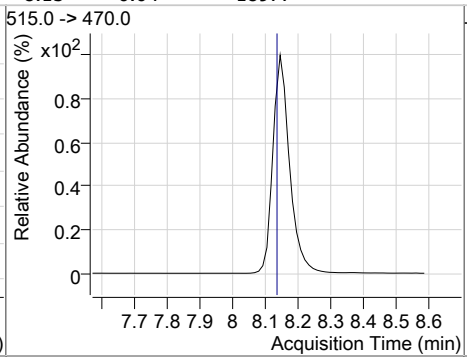


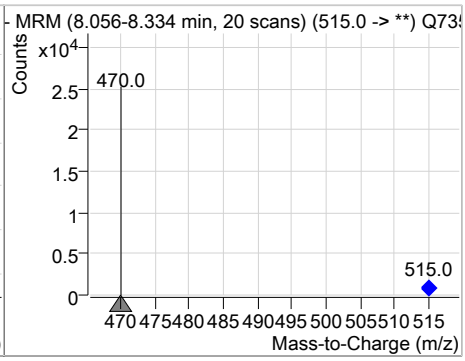




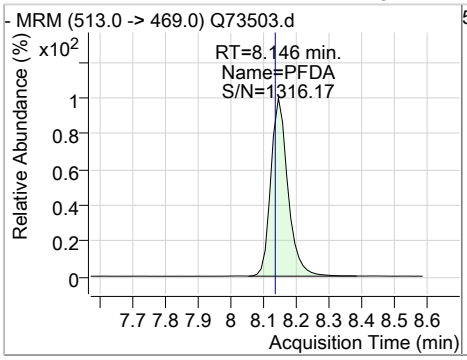
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	2.25	8.15	0.04	18977				

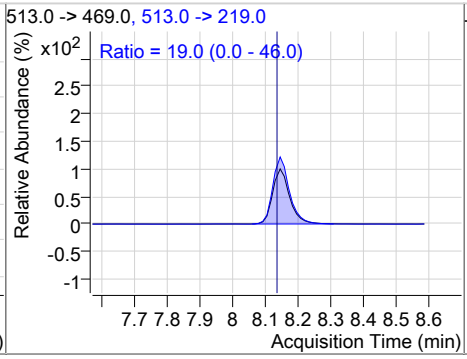


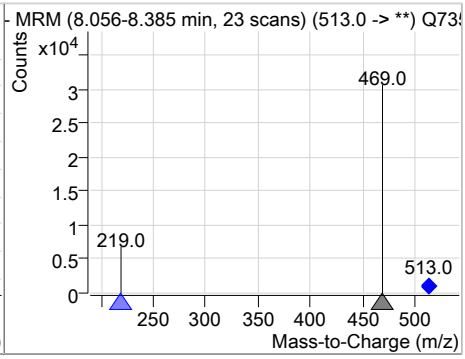




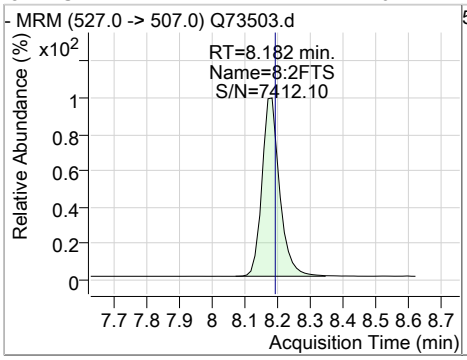
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	1.92	8.15	0.04	23072	513.0 -> 219.0	19.0	0.0	46.0

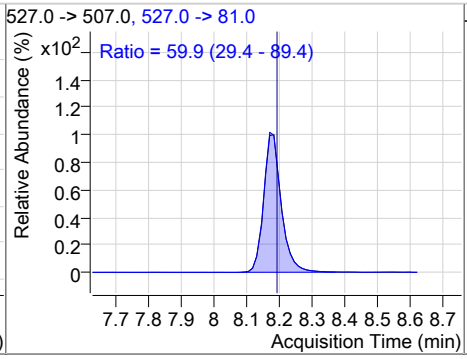


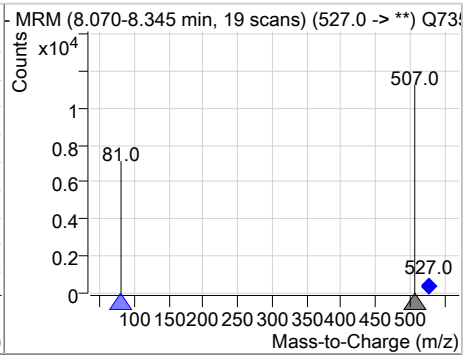




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	2.01	8.18	0.04	7813	527.0 -> 81.0	59.9	29.4	89.4

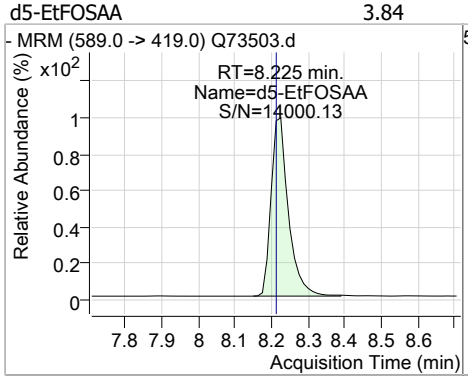


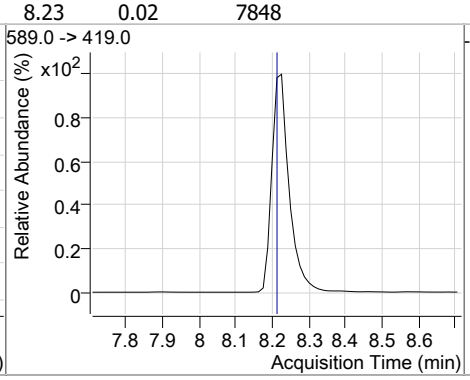


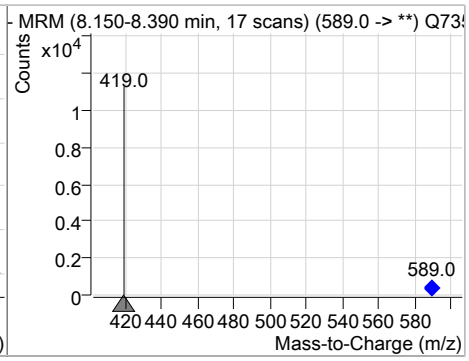


Perfluorinated Compounds by LC/MS/MS

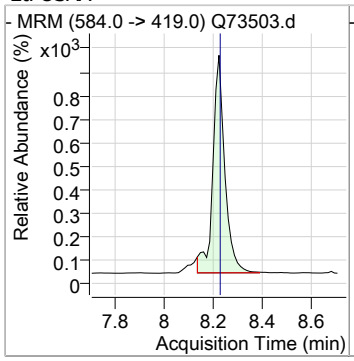
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	3.84	8.23	0.02	7848				

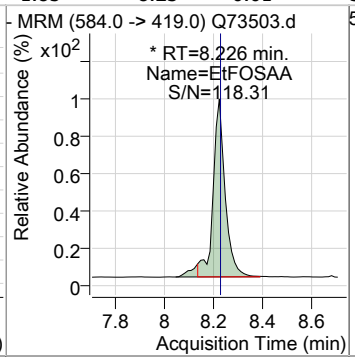


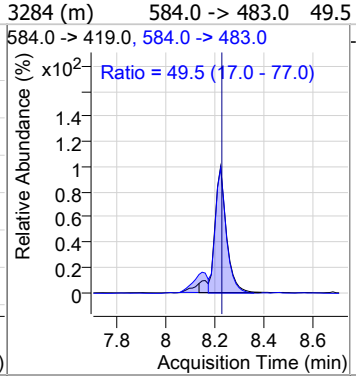


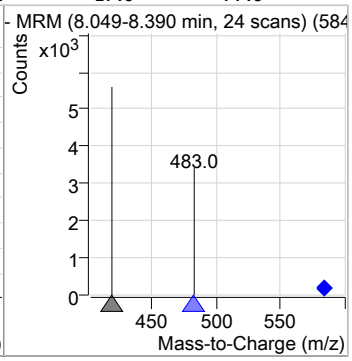


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	1.85	8.23	0.01	3284 (m)	584.0 -> 483.0	49.5	17.0	77.0

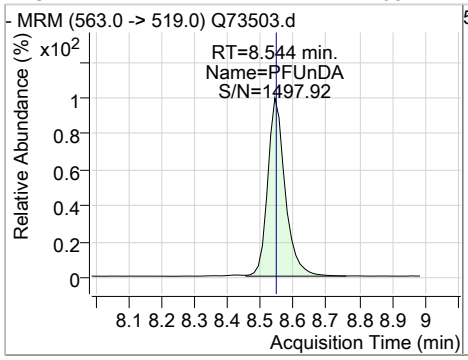


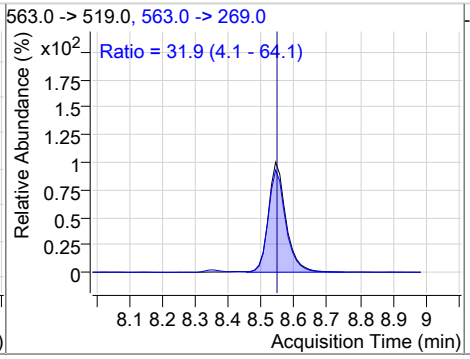


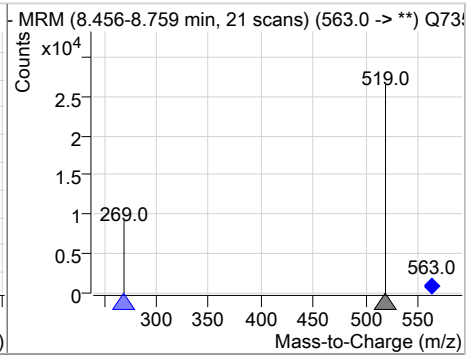




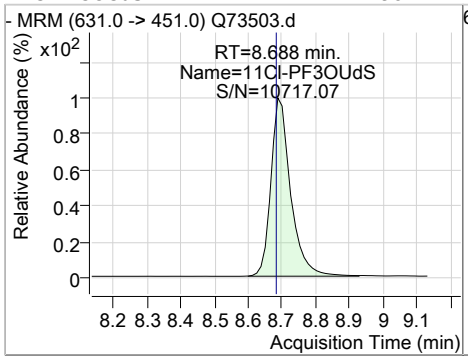
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	2.08	8.54	0.04	19130	563.0 -> 269.0	31.9	4.1	64.1

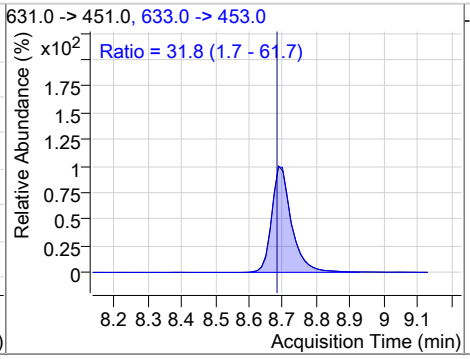


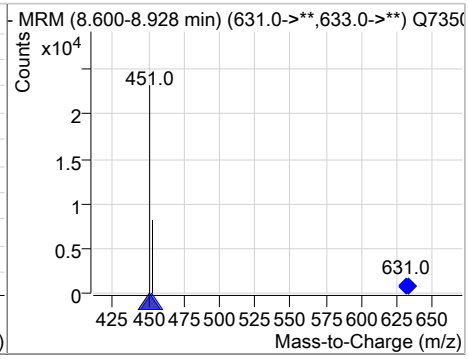




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	1.98	8.69	0.04	16885	633.0 -> 453.0	31.8	1.7	61.7

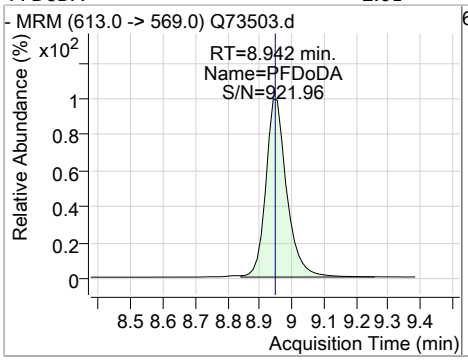


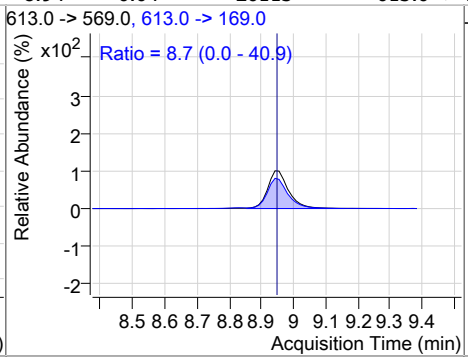


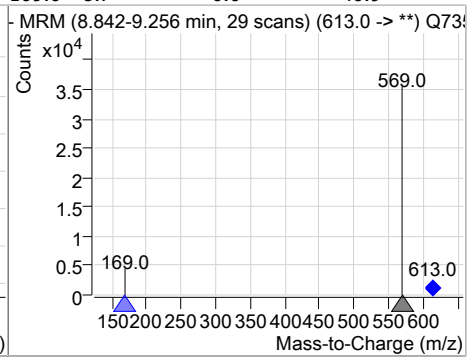


Perfluorinated Compounds by LC/MS/MS

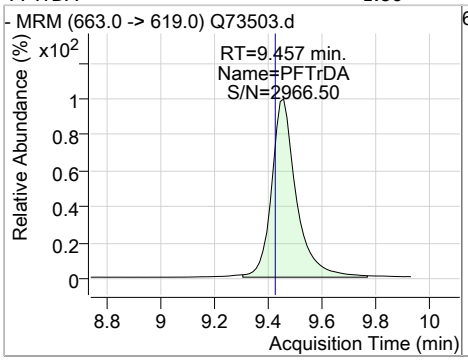
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	2.01	8.94	0.04	26113	613.0 -> 169.0	8.7	0.0	40.9

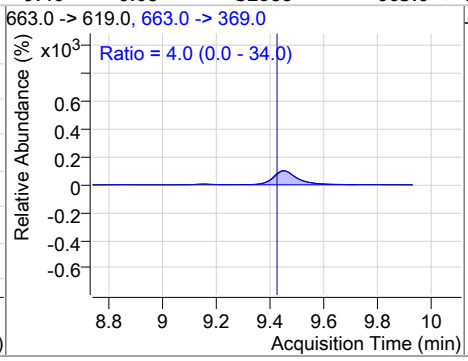


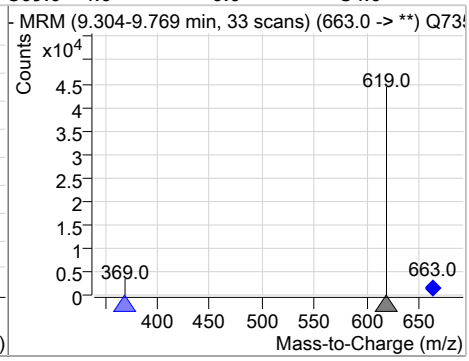




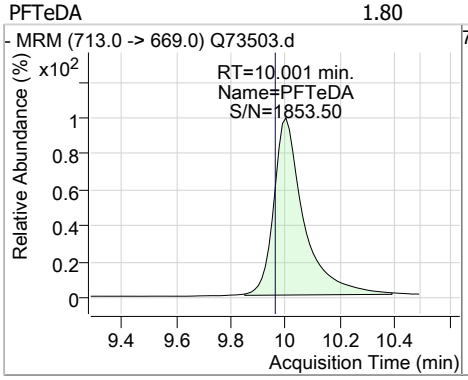
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	1.86	9.46	0.08	32088	663.0 -> 369.0	4.0	0.0	34.0

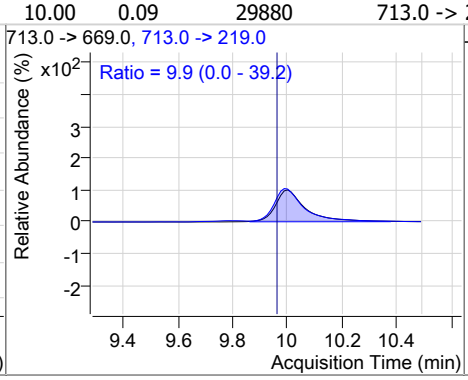


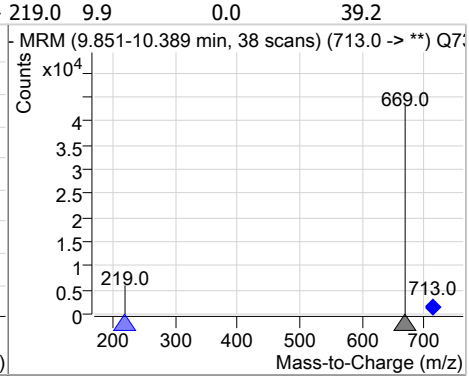




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	1.80	10.00	0.09	29880	713.0 -> 219.0	9.9	0.0	39.2







Manual Integration Approval Summary

Sample Number: SQ1670-IC1670
Lab FileID: Q73503.D
Injection Time: 10/27/20 11:54
Method: EPA 537.1 REV 1.0
Analyst approved: 10/29/20 08:24 Mike Eger
Supervisor approved: 10/29/20 08:25 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.48	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.68	Split peak
MeFOSAA	2355-31-9		8.10	Split peak
EtFOSAA	2991-50-6		8.23	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 10/29/20 08:25

Perfluorinated Compounds by LC/MS/MS

Data File : Q73504.d
Operator : mikee
Acq. Method : 537.m
Acq. Date-Time : 10/27/2020 12:09:42 PM
Sample Name : IC1670-5.0
Vial : Vial 5
DA Method File : 537_1027_SQ1670.quantmethod.xml
Batch Name : SQ1670.batch.bin
Sample Information : OP82561,SQ1670,250,,,1.0,1,water

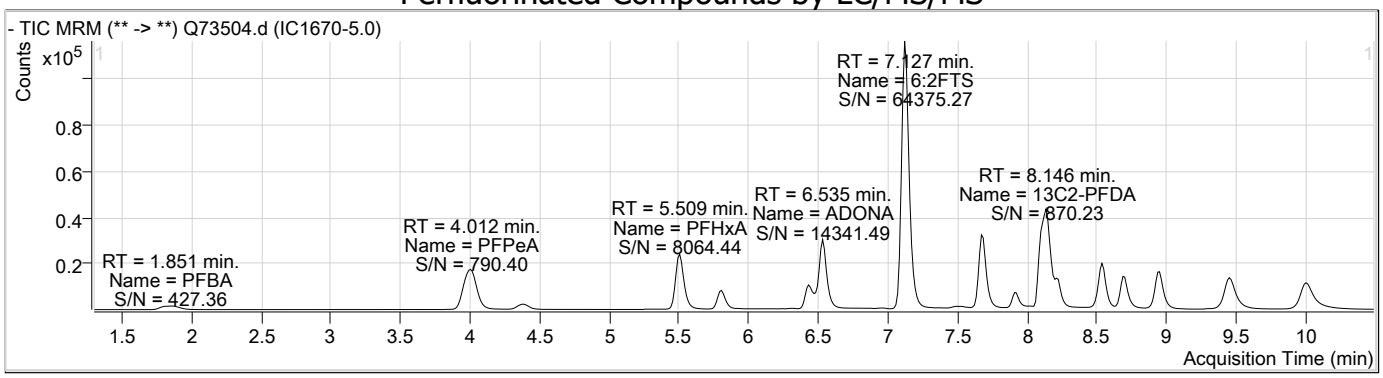
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	7.126	429.0 -> 409.0	108746	20.00	µg/L		0.041
13C2-PFOA	7.129	415.0 -> 370.0	223548	20.00	µg/L		0.027
13C3-PFPeA	4.009	266.0 -> 222.0	100048	20.00	µg/L		0.012
13C4-PFOS	7.680	503.0 -> 80.0	51891	20.00	µg/L		0.038
d3-MeFOSAA	8.100	573.0 -> 419.0	79709	40.00	µg/L		0.012
System Monitoring Compounds							
13C2-PFDA	8.146	515.0 -> 470.0	46578	5.54	µg/L		0.040
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 27.7%			
13C2-PFHxA	5.507	315.0 -> 270.0	51512	5.10	µg/L		0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 25.5%			
d5-EtFOSAA	8.225	589.0 -> 419.0	19986	9.77	µg/L		0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 24.4%			
13C3-HFPO-DA	5.813	287.0 -> 169.0	17027	10.77	µg/L		0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 26.9%			
Target Compounds							**QValue**
br-PFHxS	6.318	399.0 -> 80.0	1350	0.62	µg/L		100
LN-PFHxS	6.481	399.0 -> 80.0	8840	4.53	µg/L		100
6:2FTS	7.127	427.0 -> 407.0	26084	5.20	µg/L		100
8:2FTS	8.182	527.0 -> 507.0	19172	4.97	µg/L		100
EtFOSAA	8.226	584.0 -> 419.0	8862	5.00	µg/L	m	98
LN-PFOA	7.130	413.0 -> 369.0	54933	4.79	µg/L		100
MeFOSAA	8.101	570.0 -> 419.0	8974	5.17	µg/L	m	99
PFBA	1.851	213.0 -> 169.0	14480	4.91	µg/L		100
PFBS	4.378	299.0 -> 80.0	8786	5.18	µg/L		100
PFDA	8.146	513.0 -> 469.0	58075	4.88	µg/L		94
PFDoDA	8.955	613.0 -> 569.0	66560	5.22	µg/L		95
br-PFOA	7.130	413.0 -> 369.0	54933	5.39	µg/L	m	100
PFHpA	6.439	363.0 -> 319.0	31739	5.10	µg/L		98
PFHpS	7.137	449.0 -> 80.0	10433	5.34	µg/L		97
PFHxA	5.509	313.0 -> 269.0	46831	5.09	µg/L		99
PFHxS	6.481	399.0 -> 80.0	10218	5.16	µg/L	m	97
PFNA	7.695	463.0 -> 419.0	43870	5.46	µg/L		95
LN-PFOS	7.680	499.0 -> 80.0	9297	3.71	µg/L		100
PFOA	7.130	413.0 -> 369.0	54933	4.79	µg/L		100
PFOS	7.680	499.0 -> 80.0	13531	4.86	µg/L	m	87
PFPeA	4.012	263.0 -> 219.0	15630	5.37	µg/L		100
br-PFOS	7.498	499.0 -> 80.0	4209	1.19	µg/L		100
PFTeDA	10.001	713.0 -> 669.0	78913	4.83	µg/L		97
PFTrDA	9.457	663.0 -> 619.0	82751	4.89	µg/L		100
PFUnDA	8.544	563.0 -> 519.0	49276	5.46	µg/L		98
ADONA	6.535	377.0 -> 251.0	86989	4.86	µg/L		97
9Cl-PF3ONS	7.914	531.0 -> 351.0	18314	5.19	µg/L		100
11Cl-PF3OUdS	8.688	631.0 -> 451.0	43270	5.09	µg/L		100
HFPO-DA	5.805	329.0 -> 169.0	12016	5.31	µg/L		99

Perfluorinated Compounds by LC/MS/MS

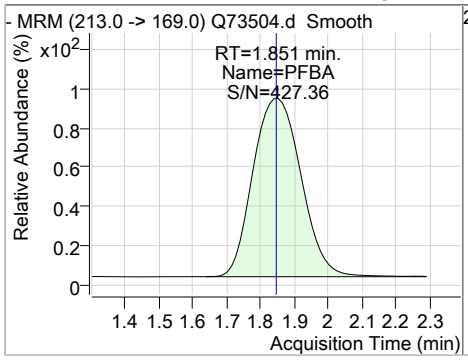
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

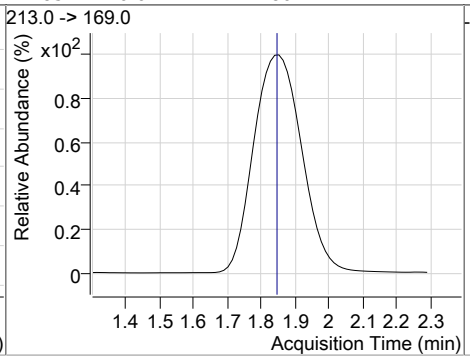
= Qualifier out of range, m = manually integrated, + = Area summed

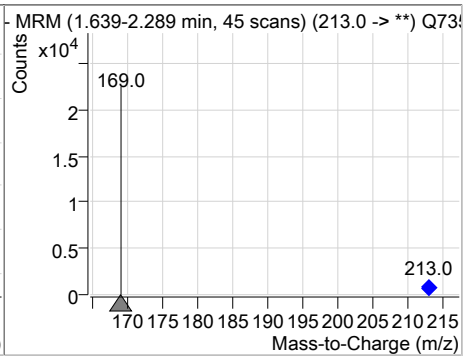
Perfluorinated Compounds by LC/MS/MS



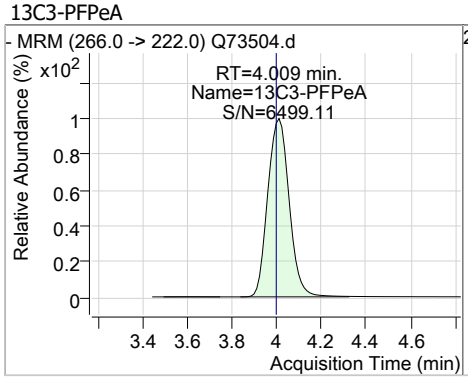
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	4.91	1.85	0.01	14480				

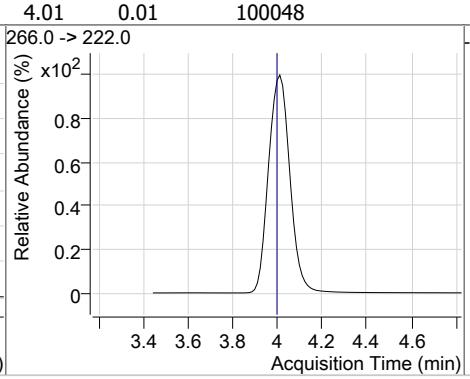


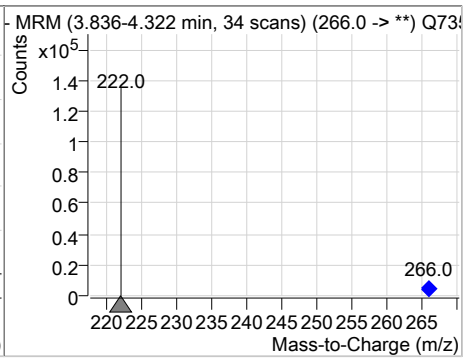




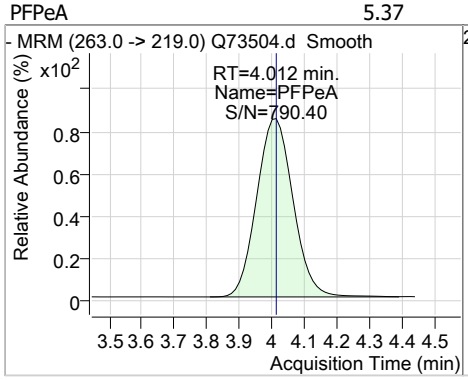
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.01	0.01	100048				

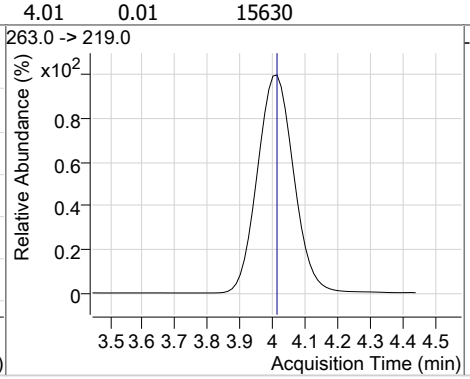


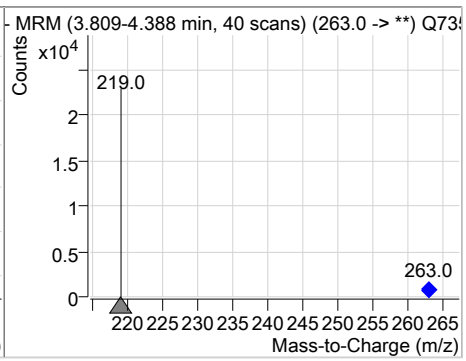




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	5.37	4.01	0.01	15630				

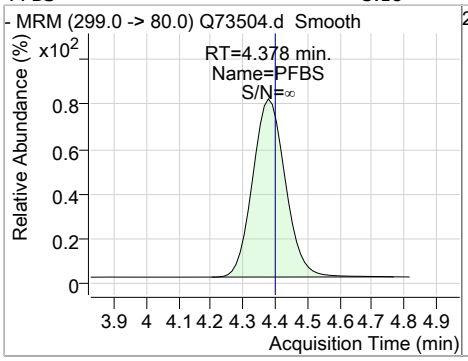


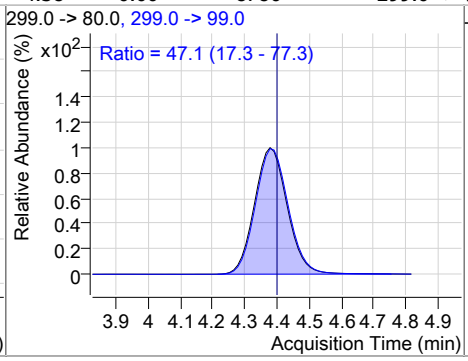


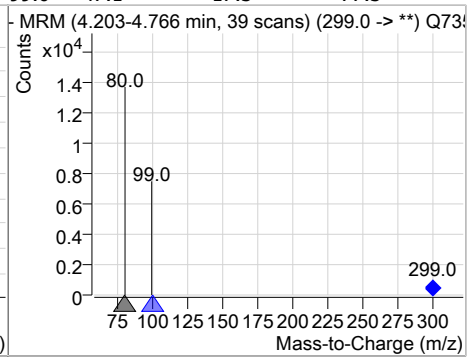


Perfluorinated Compounds by LC/MS/MS

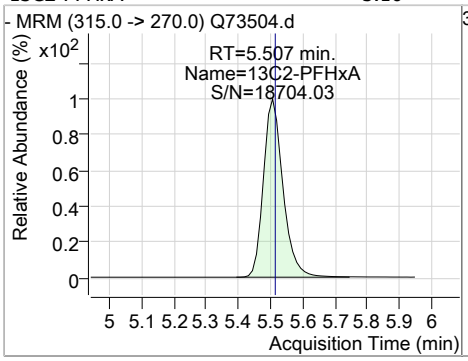
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	5.18	4.38	0.00	8786	299.0 -> 99.0	47.1	17.3	77.3

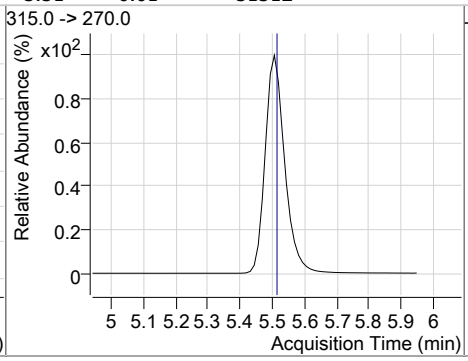


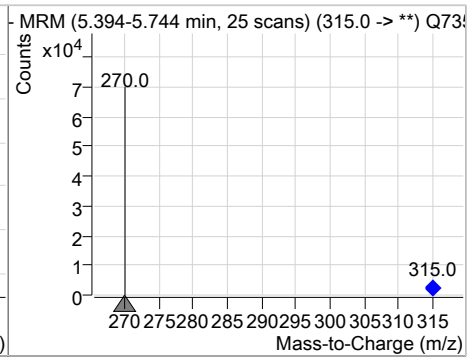




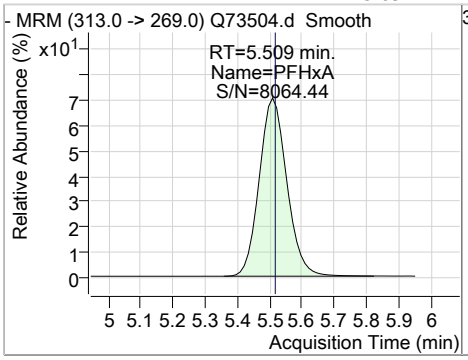
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	5.10	5.51	0.01	51512				

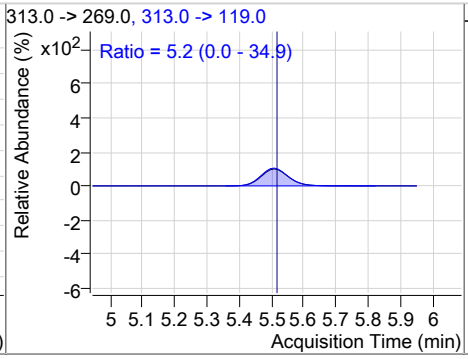


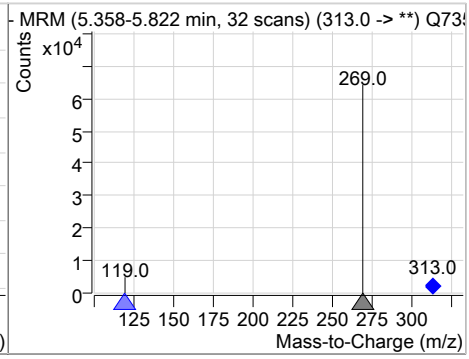




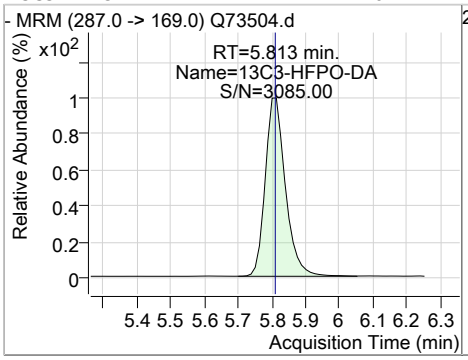
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	5.09	5.51	0.01	46831	313.0 -> 119.0	5.2	0.0	34.9

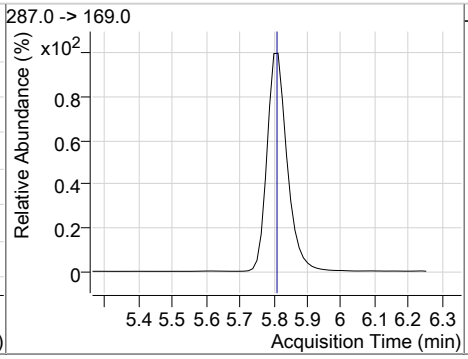


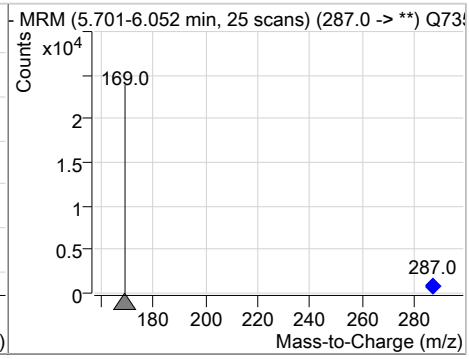




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	10.77	5.81	0.02	17027				

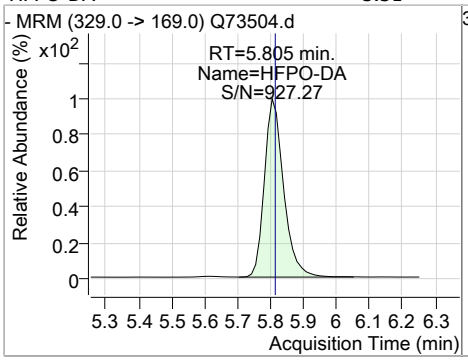


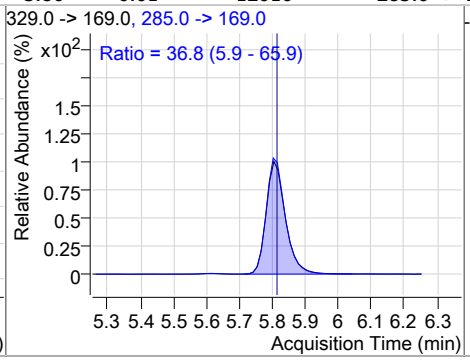


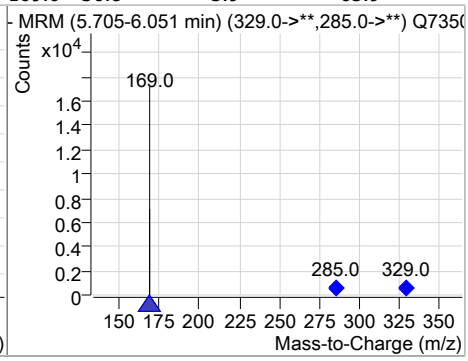


Perfluorinated Compounds by LC/MS/MS

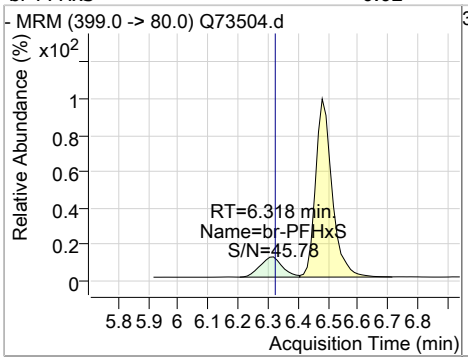
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	5.31	5.80	0.01	12016	285.0 -> 169.0	36.8	5.9	65.9

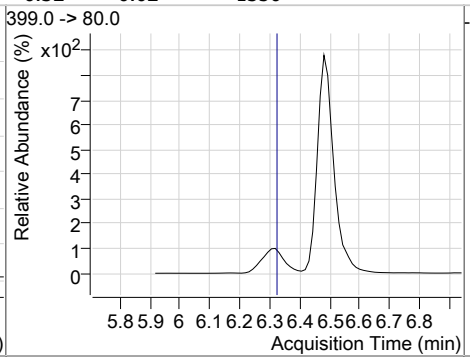


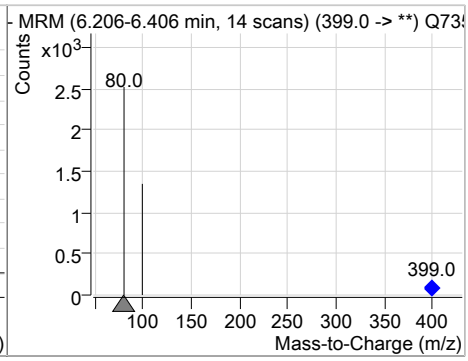




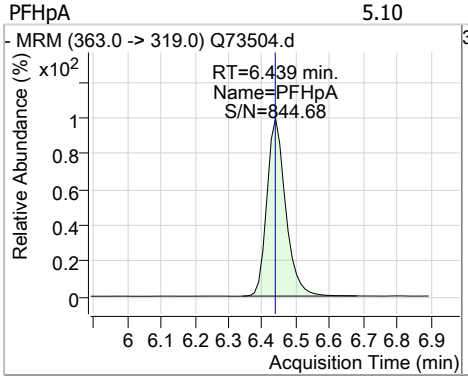
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.62	6.32	0.02	1350				

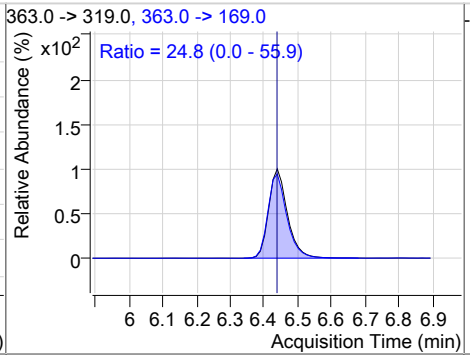


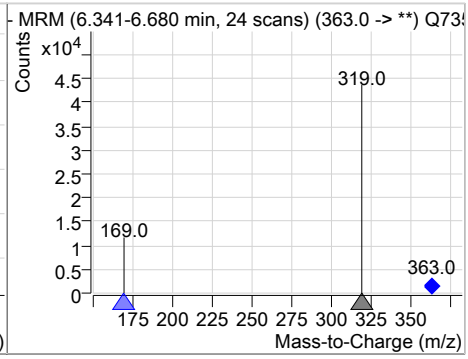




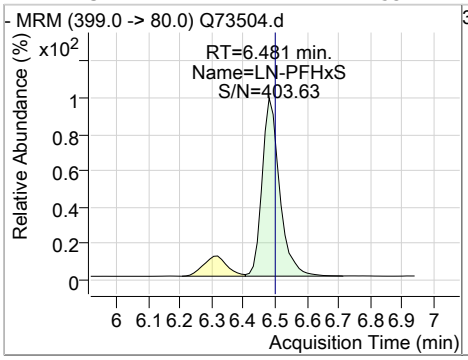
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	5.10	6.44	0.02	31739	363.0 -> 169.0	24.8	0.0	55.9

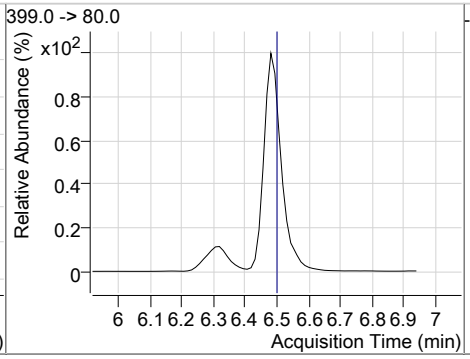


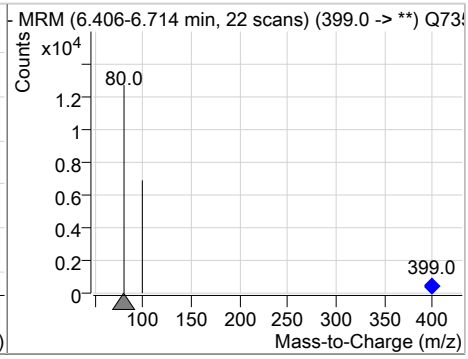




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	4.53	6.48	0.01	8840				

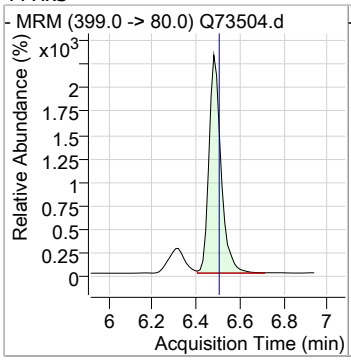


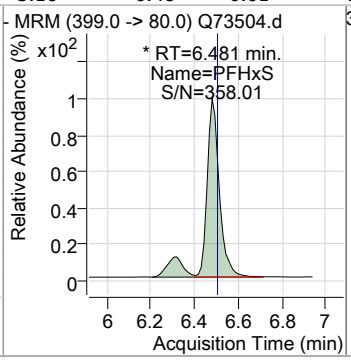


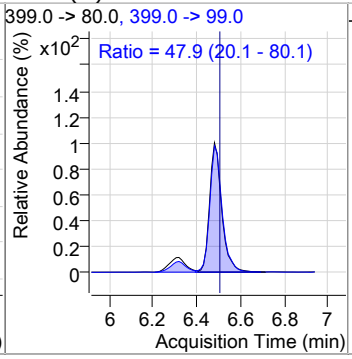


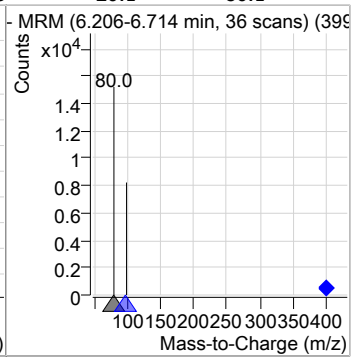
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	5.16	6.48	0.01	10218 (m)	399.0 -> 99.0	47.9	20.1	80.1

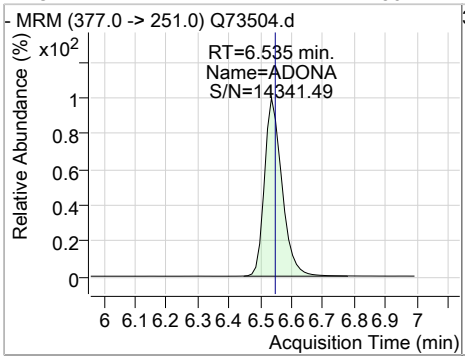


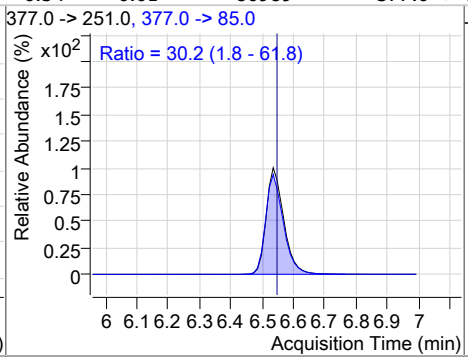


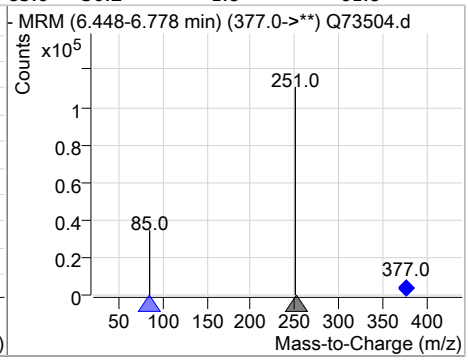




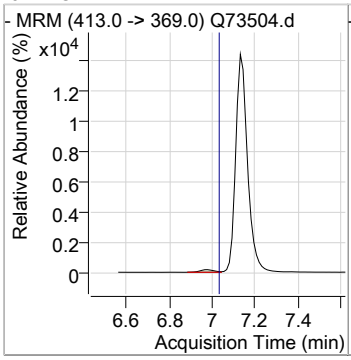
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	4.86	6.54	0.01	86989	377.0 -> 85.0	30.2	1.8	61.8

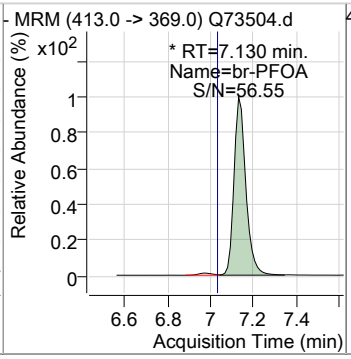


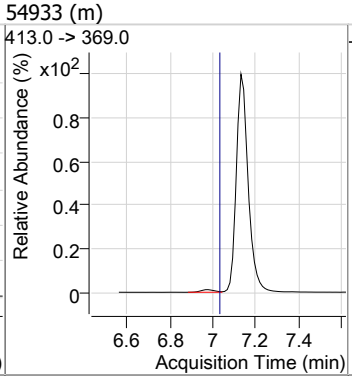


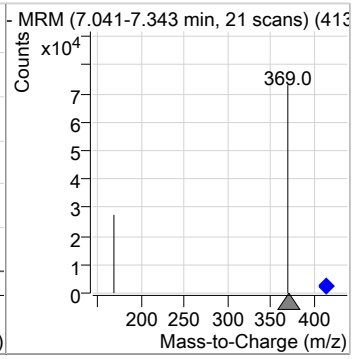


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	5.39	7.13	0.13	54933 (m)				

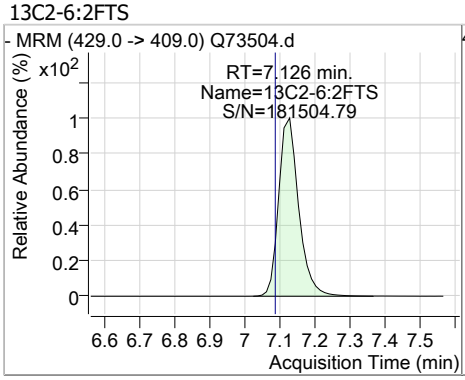


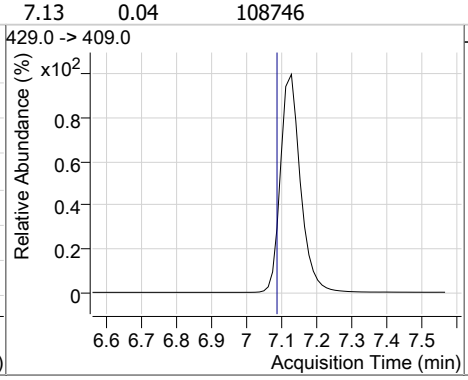


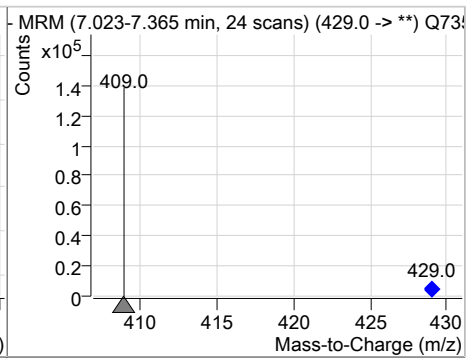




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.13	0.04	108746				

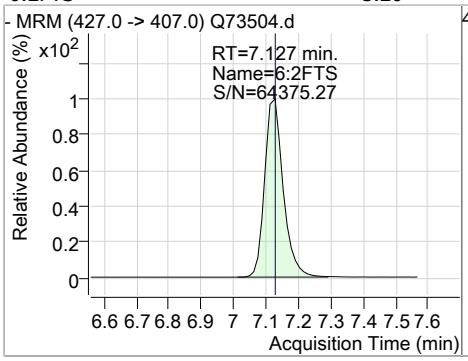


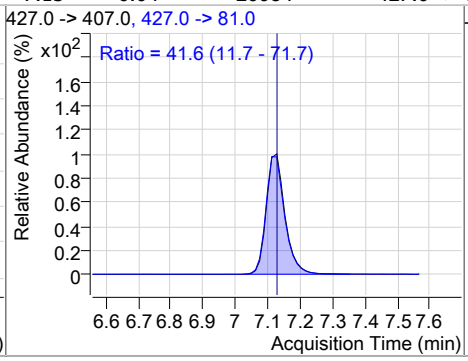


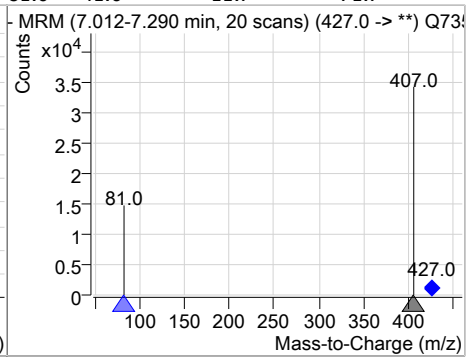


Perfluorinated Compounds by LC/MS/MS

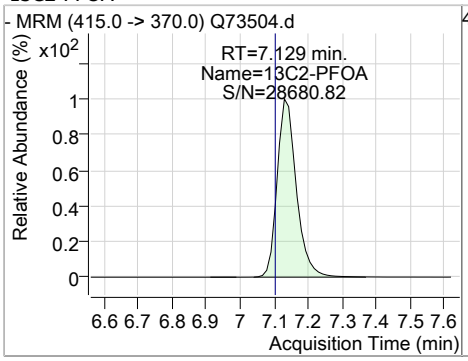
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	5.20	7.13	0.04	26084	427.0 -> 81.0	41.6	11.7	71.7

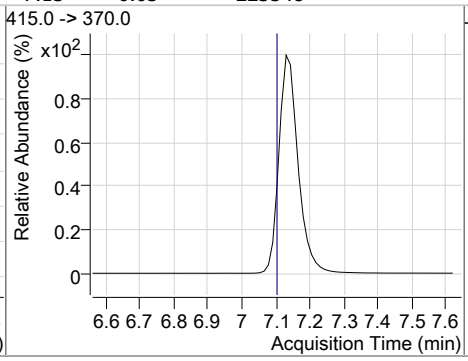


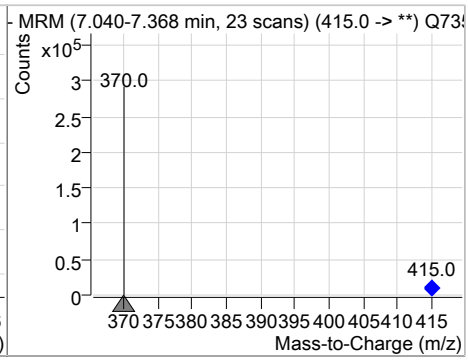




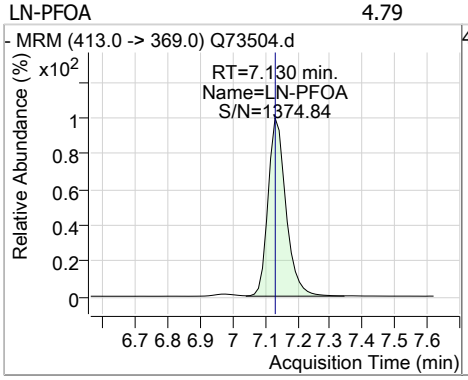
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.13	0.03	223548				

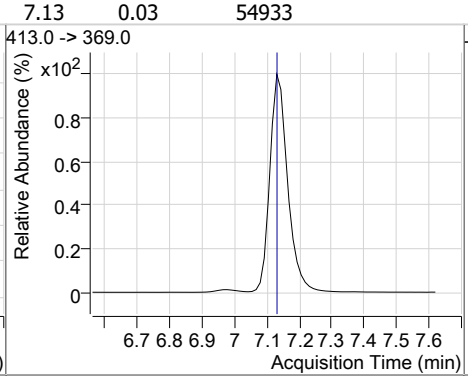


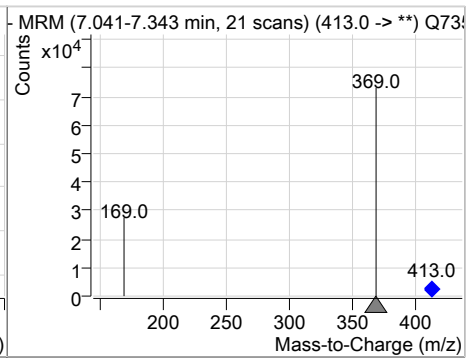




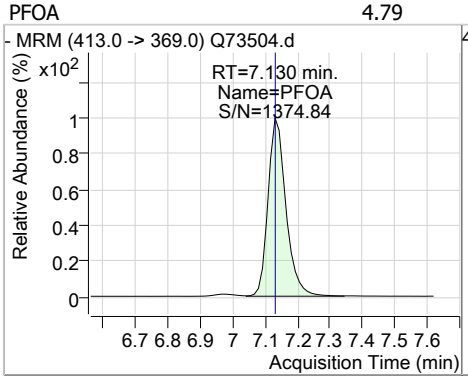
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	4.79	7.13	0.03	54933				

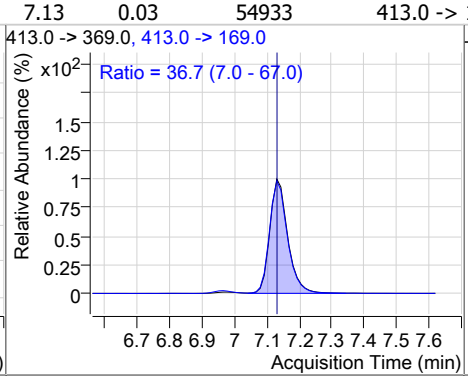


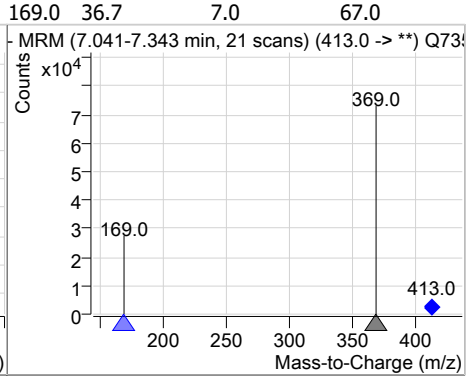




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	4.79	7.13	0.03	54933	413.0 -> 169.0	36.7	7.0	67.0

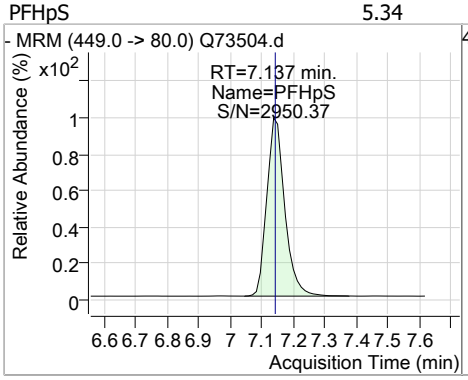


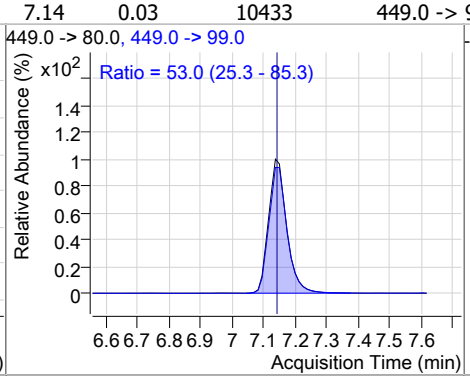


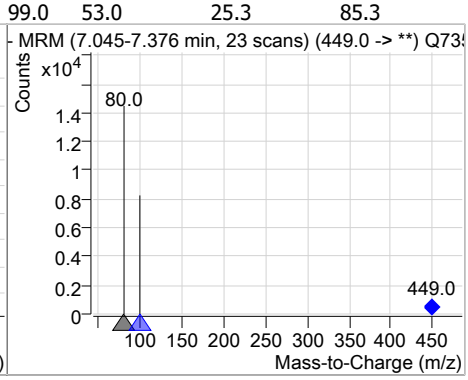


Perfluorinated Compounds by LC/MS/MS

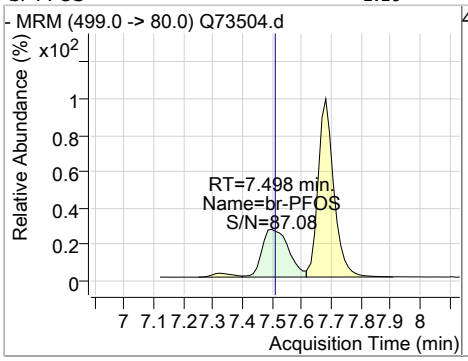
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	5.34	7.14	0.03	10433	449.0 -> 99.0	53.0	25.3	85.3

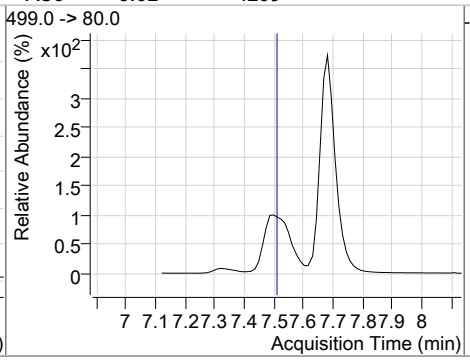


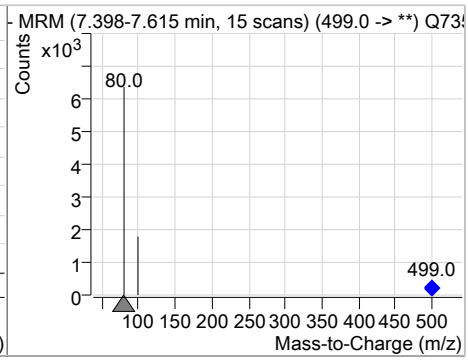




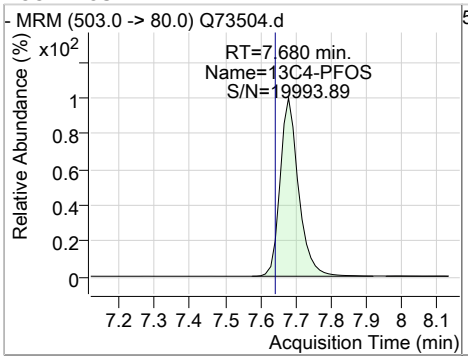
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	1.19	7.50	0.02	4209				

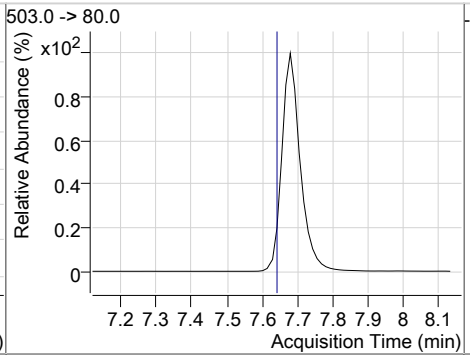


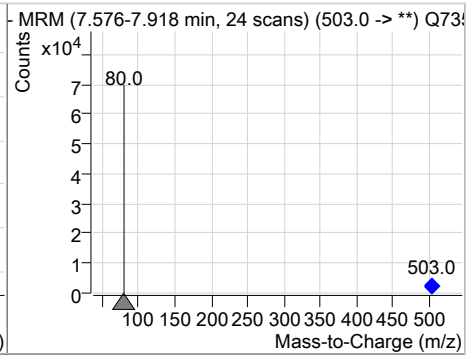




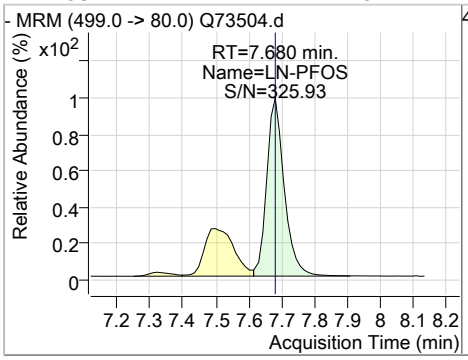
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.68	0.04	51891				

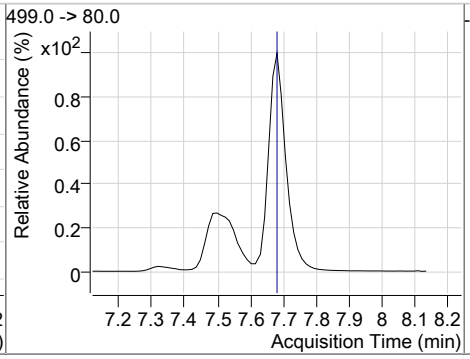


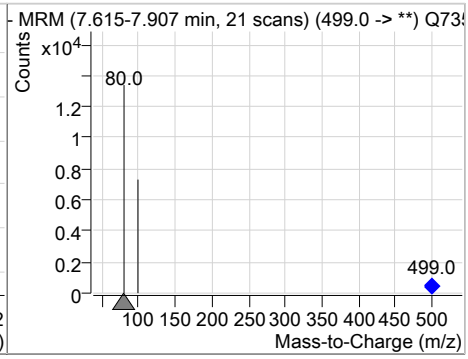




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	3.71	7.68	0.04	9297				

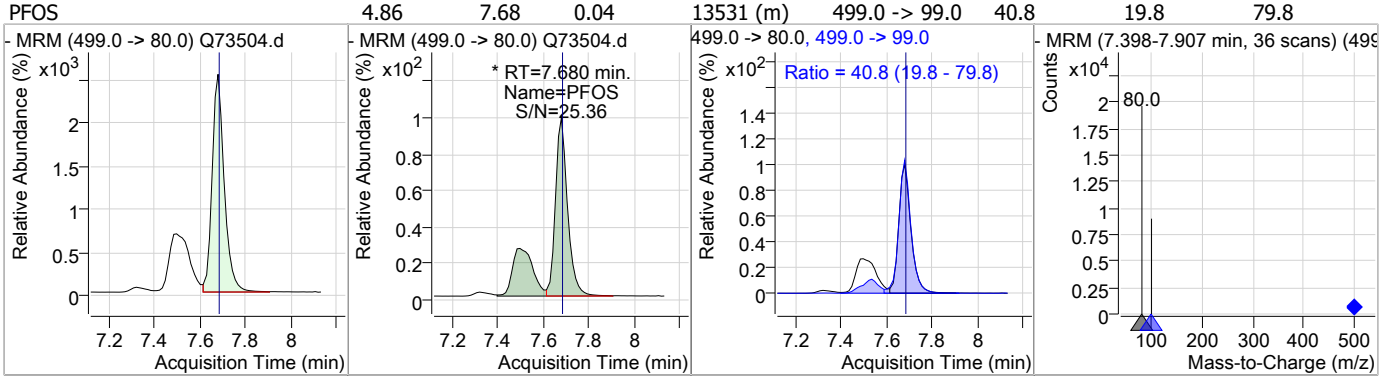




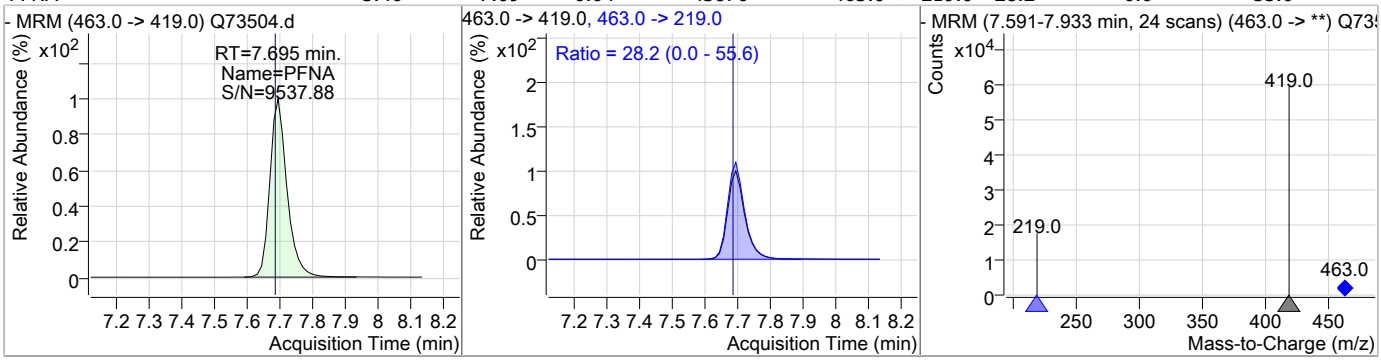


Perfluorinated Compounds by LC/MS/MS

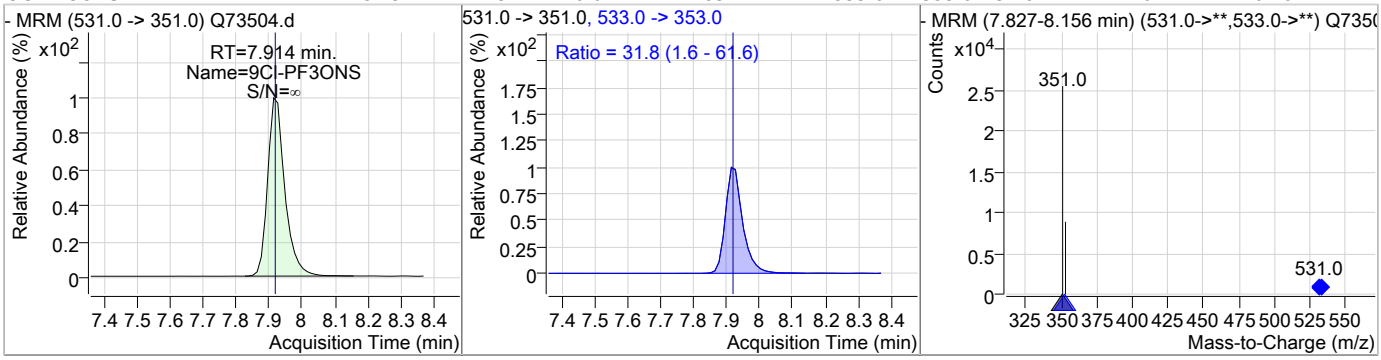
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	4.86	7.68	0.04	13531 (m)	499.0 -> 99.0	40.8	19.8	79.8



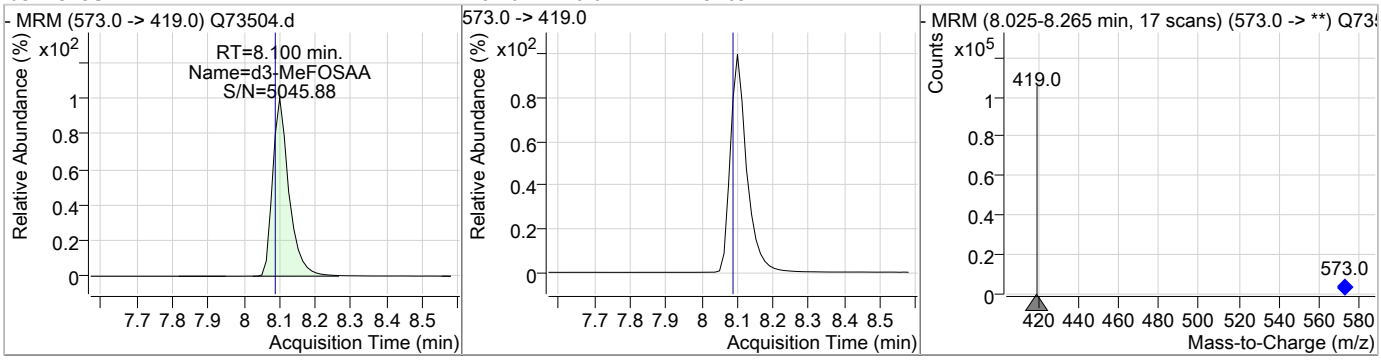
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	5.46	7.69	0.04	43870	463.0 -> 219.0	28.2	0.0	55.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	5.19	7.91	0.02	18314	533.0 -> 353.0	31.8	1.6	61.6

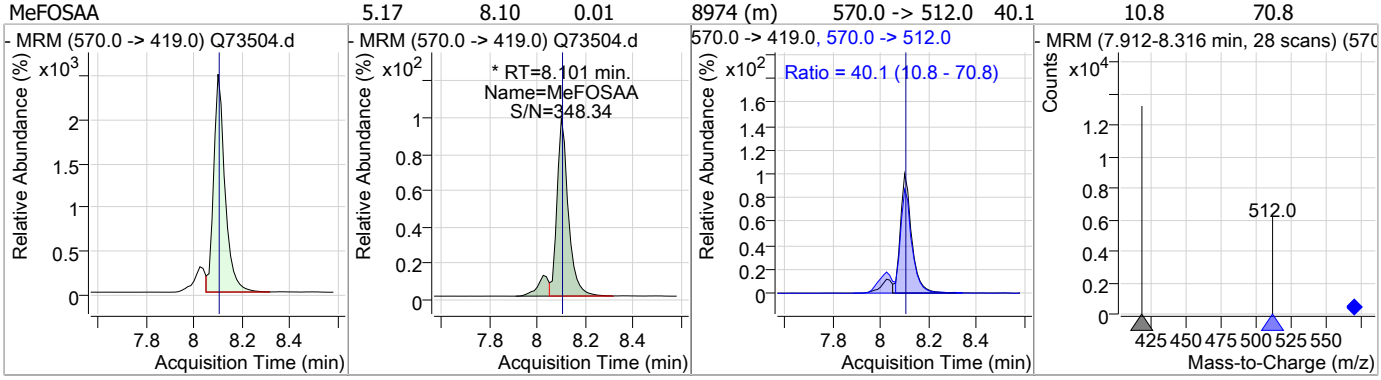


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.10	0.01	79709				

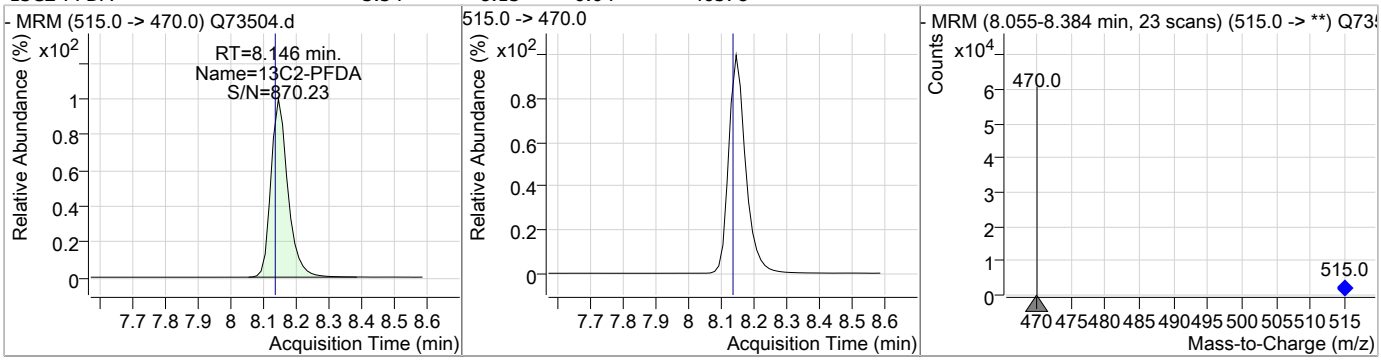


Perfluorinated Compounds by LC/MS/MS

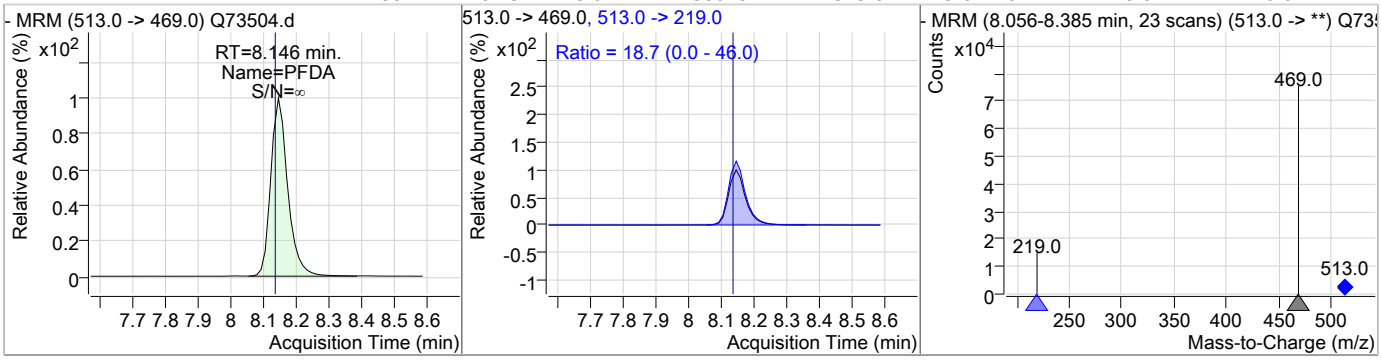
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	5.17	8.10	0.01	8974 (m)	570.0 -> 512.0	40.1	10.8	70.8



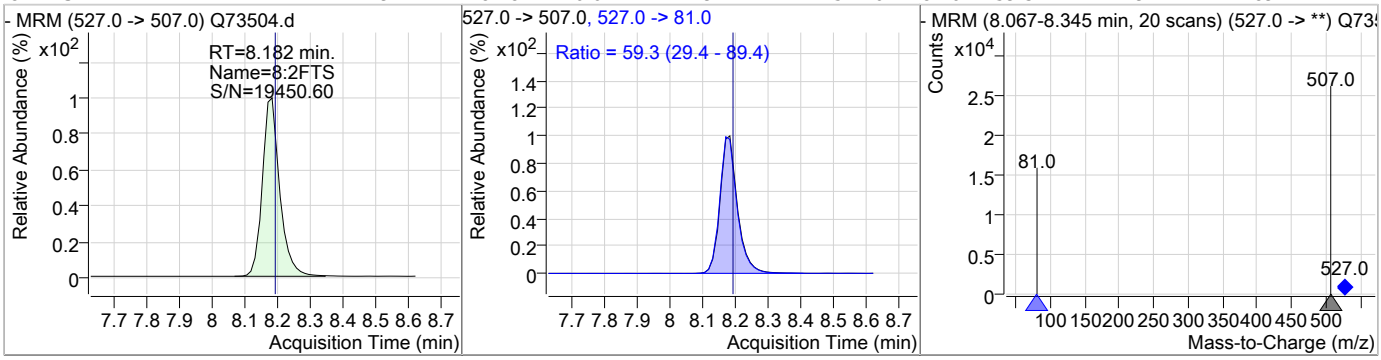
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	5.54	8.15	0.04	46578				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	4.88	8.15	0.04	58075	513.0 -> 219.0	18.7	0.0	46.0

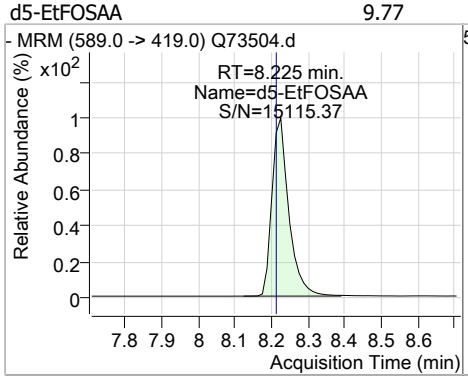


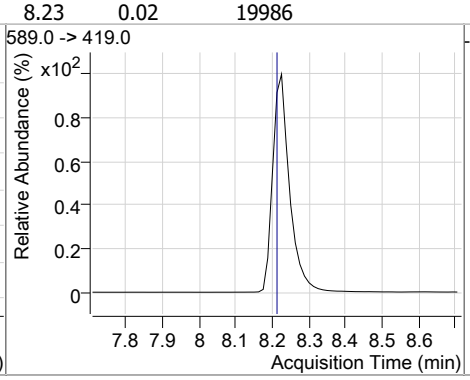
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	4.97	8.18	0.04	19172	527.0 -> 81.0	59.3	29.4	89.4

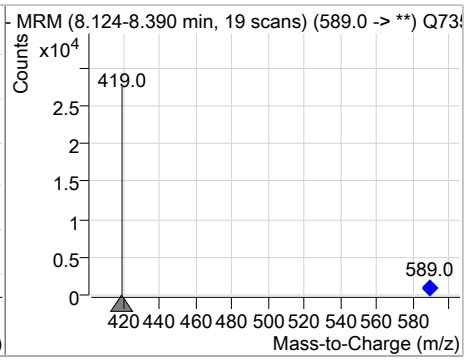


Perfluorinated Compounds by LC/MS/MS

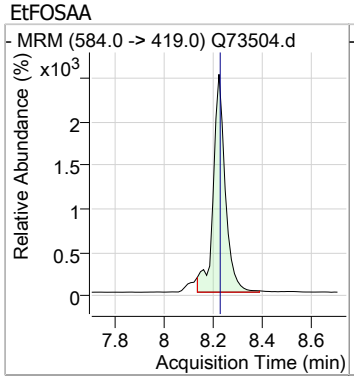
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	9.77	8.23	0.02	19986				

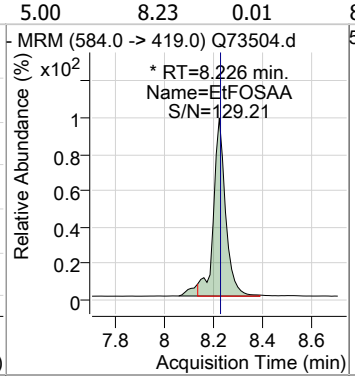


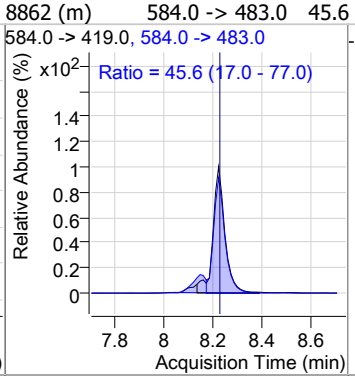


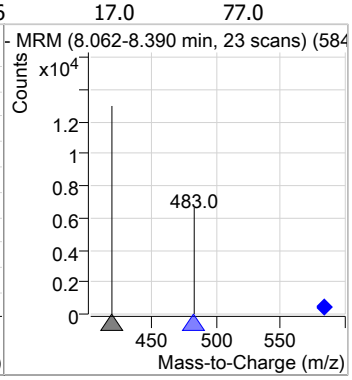


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	5.00	8.23	0.01	8862 (m)	584.0 -> 483.0	45.6	17.0	77.0

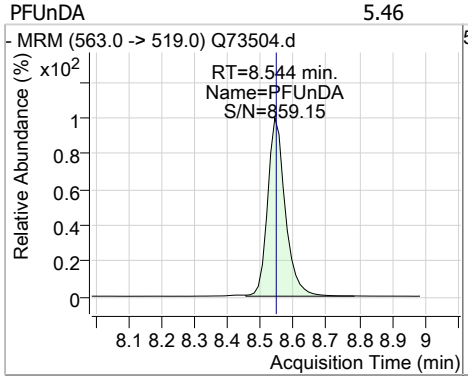


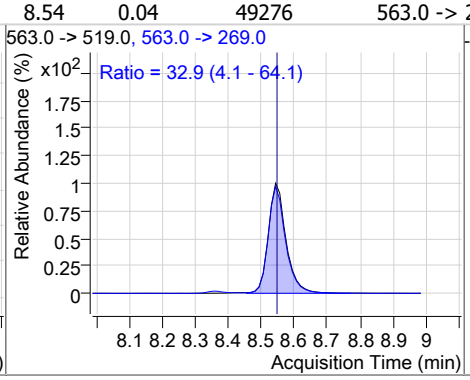


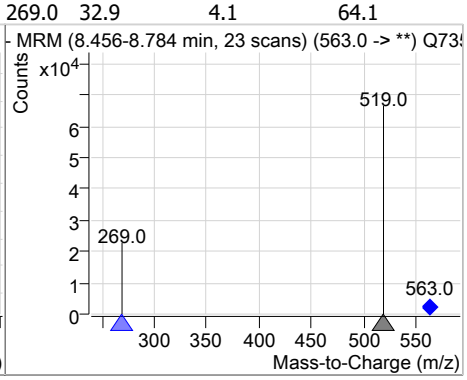




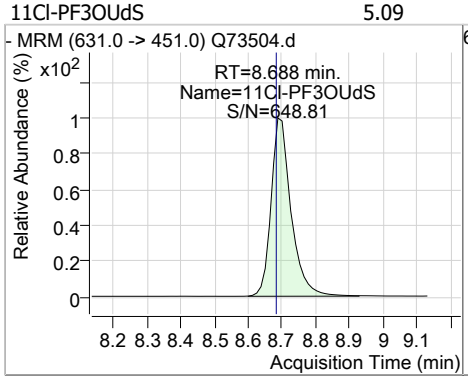
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	5.46	8.54	0.04	49276	563.0 -> 269.0	32.9	4.1	64.1

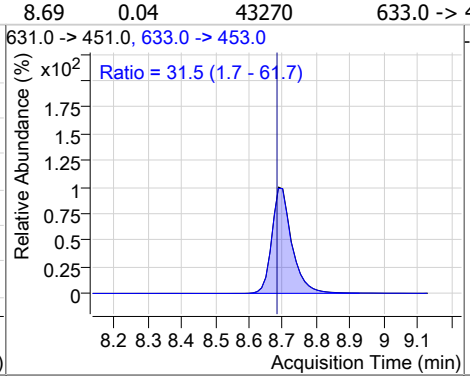


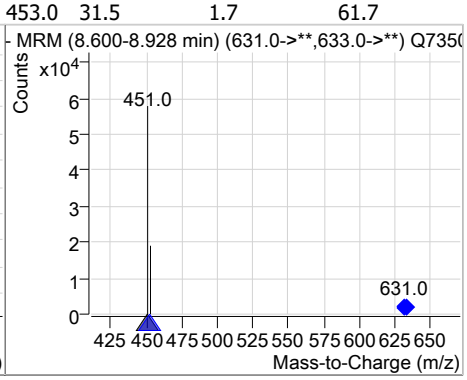




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	5.09	8.69	0.04	43270	633.0 -> 453.0	31.5	1.7	61.7

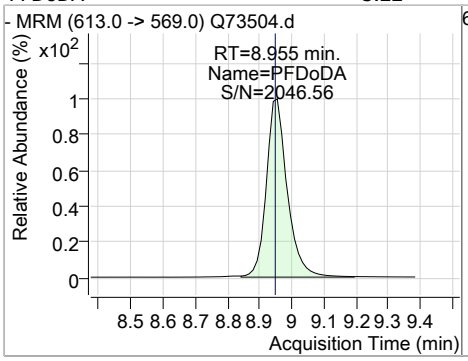


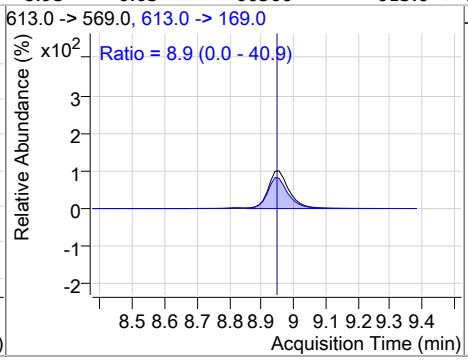


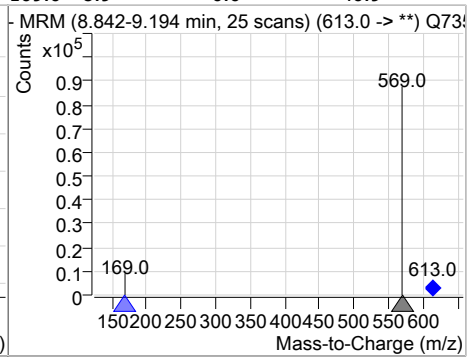


Perfluorinated Compounds by LC/MS/MS

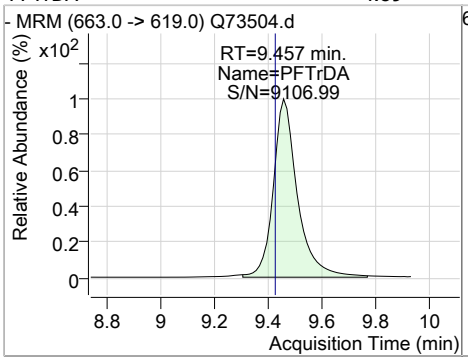
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	5.22	8.95	0.05	66560	613.0 -> 169.0	8.9	0.0	40.9

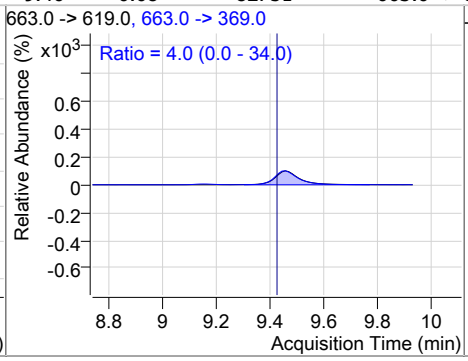


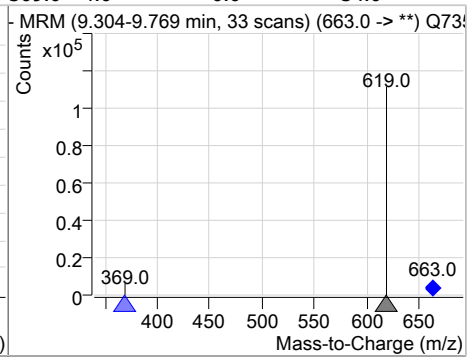




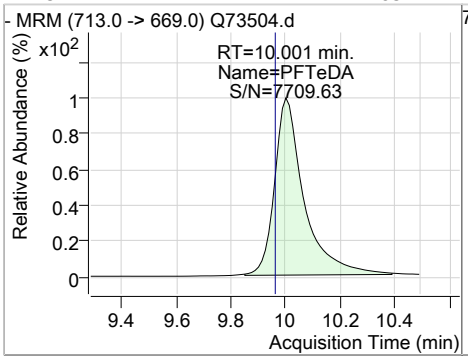
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	4.89	9.46	0.08	82751	663.0 -> 369.0	4.0	0.0	34.0

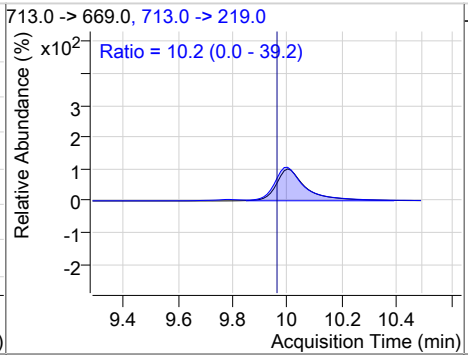


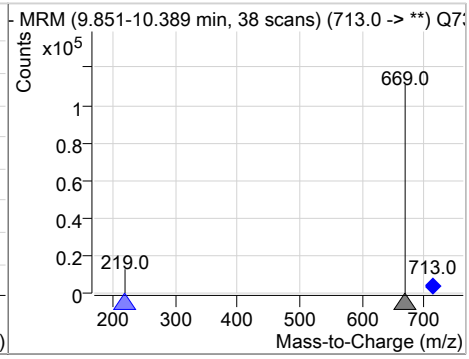




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	4.83	10.00	0.09	78913	713.0 -> 219.0	10.2	0.0	39.2







Manual Integration Approval Summary

Sample Number: SQ1670-IC1670
Lab FileID: Q73504.D
Injection Time: 10/27/20 12:09
Method: EPA 537.1 REV 1.0
Analyst approved: 10/29/20 08:24 Mike Eger
Supervisor approved: 10/29/20 08:25 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.48	Split peak
PFOA (Branched Isomers)			7.13	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.68	Split peak
MeFOSAA	2355-31-9		8.10	Split peak
EtFOSAA	2991-50-6		8.23	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 10/29/20 08:25

Perfluorinated Compounds by LC/MS/MS

Data File : Q73505.d
Operator : mikee
Acq. Method : 537.m
Acq. Date-Time : 10/27/2020 12:25:19 PM
Sample Name : IC1670-10
Vial : Vial 6
DA Method File : 537_1027_SQ1670.quantmethod.xml
Batch Name : SQ1670.batch.bin
Sample Information : OP82561,SQ1670,250,,,1.0,1,water

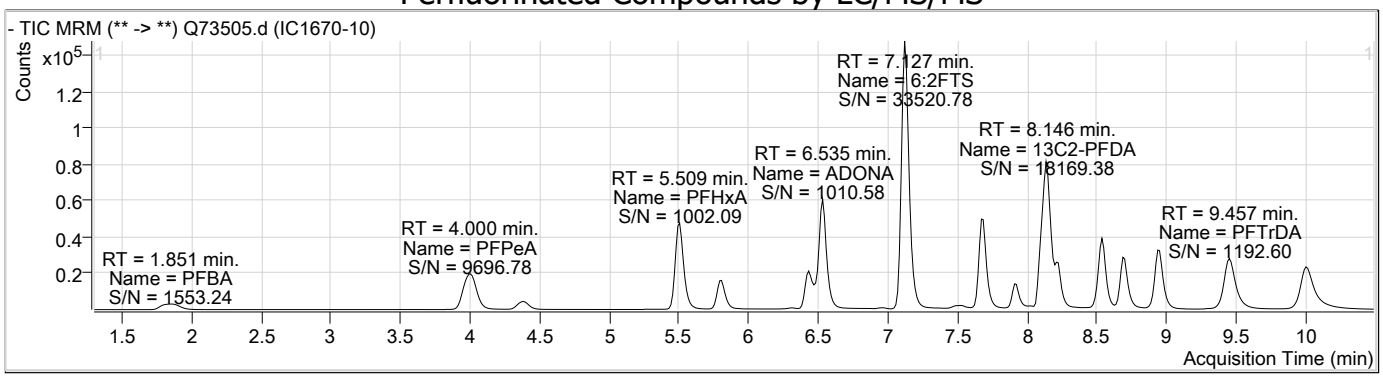
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	7.126	429.0 -> 409.0	110774	20.00	µg/L		0.041
13C2-PFOA	7.129	415.0 -> 370.0	222776	20.00	µg/L		0.027
13C3-PFPeA	4.009	266.0 -> 222.0	100255	20.00	µg/L		0.012
13C4-PFOS	7.680	503.0 -> 80.0	51107	20.00	µg/L		0.038
d3-MeFOSAA	8.100	573.0 -> 419.0	78181	40.00	µg/L		0.012
System Monitoring Compounds							
13C2-PFDA	8.146	515.0 -> 470.0	94340	11.26	µg/L		0.040
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 56.3%			
13C2-PFHxA	5.507	315.0 -> 270.0	104273	10.36	µg/L		0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 51.8%			
d5-EtFOSAA	8.225	589.0 -> 419.0	41476	20.66	µg/L		0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 51.7%			
13C3-HFPO-DA	5.801	287.0 -> 169.0	33548	21.30	µg/L		0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 53.2%			
Target Compounds							QValue
br-PFHxS	6.306	399.0 -> 80.0	2755	1.29	µg/L		100
LN-PFHxS	6.481	399.0 -> 80.0	17463	9.08	µg/L		100
6:2FTS	7.127	427.0 -> 407.0	51560	10.09	µg/L		98
8:2FTS	8.169	527.0 -> 507.0	40106	10.21	µg/L		99
EtFOSAA	8.226	584.0 -> 419.0	17114	9.84	µg/L	m	100
LN-PFOA	7.130	413.0 -> 369.0	109377	9.63	µg/L		100
MeFOSAA	8.101	570.0 -> 419.0	18486	10.87	µg/L	m	93
PFBA	1.851	213.0 -> 169.0	28631	9.74	µg/L		100
PFBS	4.378	299.0 -> 80.0	17299	10.36	µg/L		99
PFDA	8.146	513.0 -> 469.0	117594	10.01	µg/L		94
PFDoDA	8.942	613.0 -> 569.0	132954	10.58	µg/L		94
br-PFOA	7.130	413.0 -> 369.0	109377	10.76	µg/L	m	100
PFHpA	6.439	363.0 -> 319.0	63844	10.29	µg/L		97
PFHpS	7.137	449.0 -> 80.0	20872	10.85	µg/L		96
PFHxA	5.509	313.0 -> 269.0	93171	10.16	µg/L		99
PFHxS	6.481	399.0 -> 80.0	20201	10.36	µg/L	m	96
PFNA	7.695	463.0 -> 419.0	88411	11.05	µg/L		96
LN-PFOS	7.680	499.0 -> 80.0	18154	7.41	µg/L		100
PFOA	7.130	413.0 -> 369.0	109377	9.63	µg/L		100
PFOS	7.680	499.0 -> 80.0	26592	9.77	µg/L	m	87
PFPeA	4.000	263.0 -> 219.0	30803	10.56	µg/L		100
br-PFOS	7.498	499.0 -> 80.0	8451	2.44	µg/L		100
PFTeDA	10.001	713.0 -> 669.0	160220	9.96	µg/L		98
PFTrDA	9.457	663.0 -> 619.0	167652	10.06	µg/L		100
PFUnDA	8.544	563.0 -> 519.0	96416	10.84	µg/L		99
ADONA	6.535	377.0 -> 251.0	175170	9.83	µg/L		97
9Cl-PF3ONS	7.914	531.0 -> 351.0	37282	10.61	µg/L		99
11Cl-PF3OUdS	8.688	631.0 -> 451.0	87032	10.28	µg/L		100
HFPO-DA	5.805	329.0 -> 169.0	23973	10.64	µg/L		98

Perfluorinated Compounds by LC/MS/MS

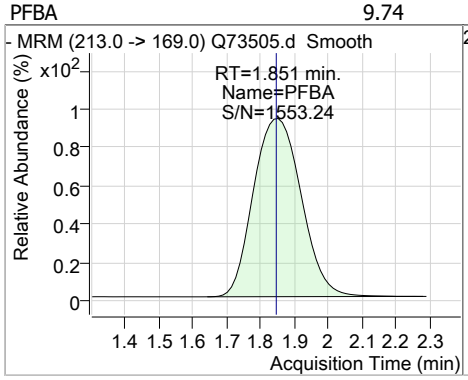
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

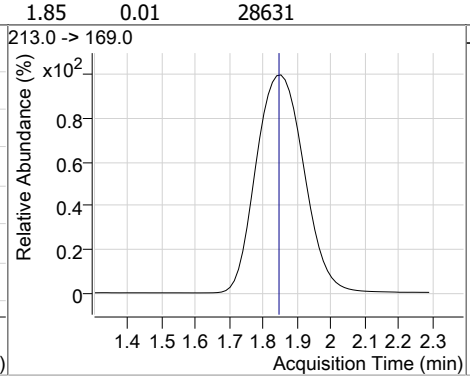
= Qualifier out of range, m = manually integrated, + = Area summed

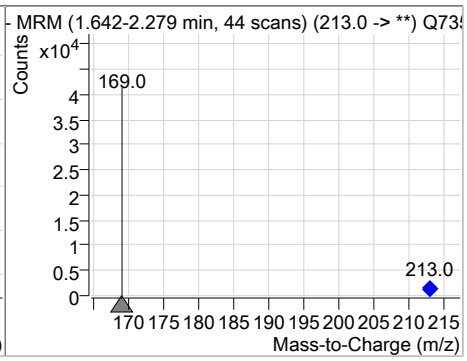
Perfluorinated Compounds by LC/MS/MS



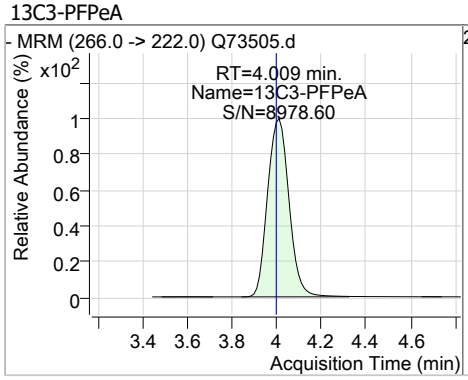
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	9.74	1.85	0.01	28631				

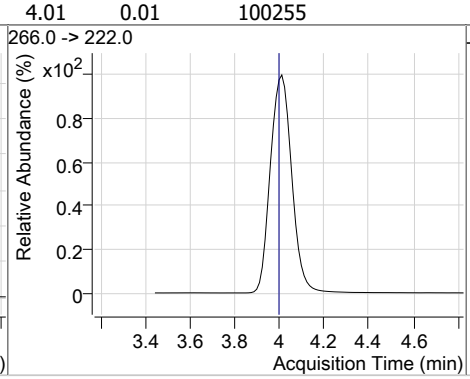


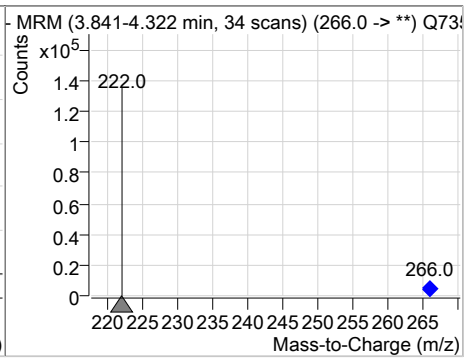




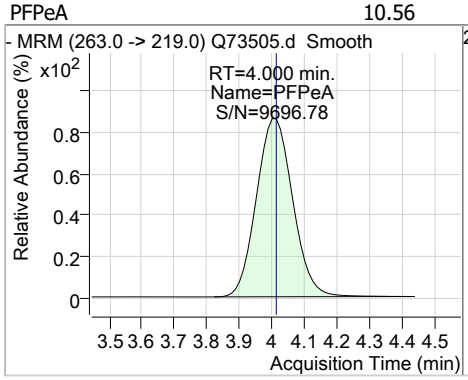
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.01	0.01	100255				

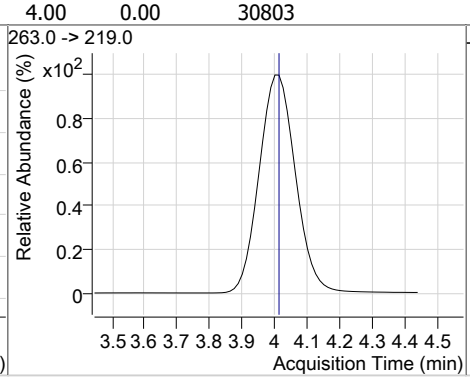


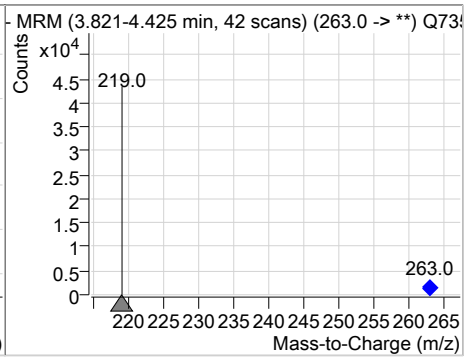




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	10.56	4.00	0.00	30803				

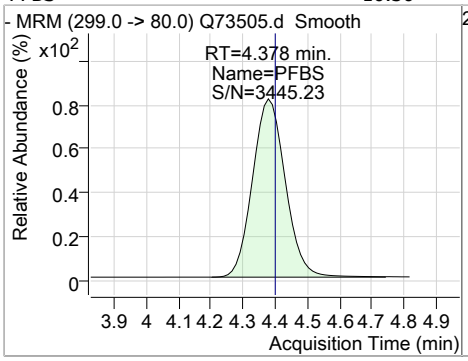


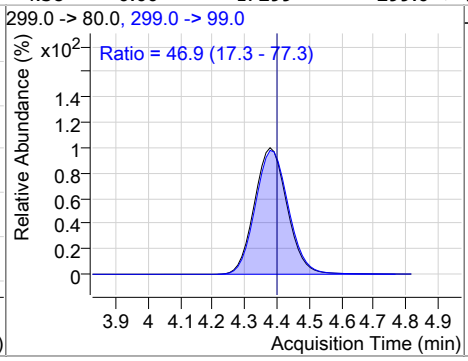


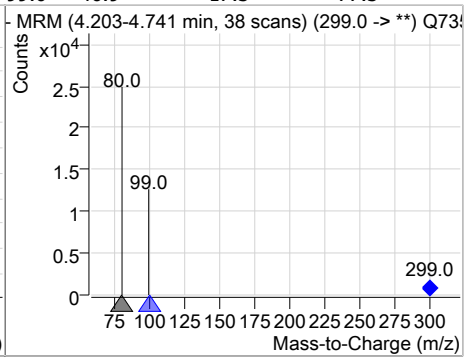


Perfluorinated Compounds by LC/MS/MS

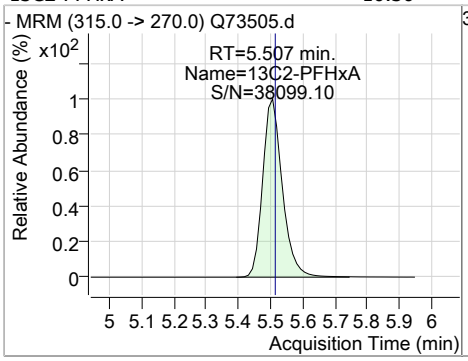
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	10.36	4.38	0.00	17299	299.0 -> 99.0	46.9	17.3	77.3

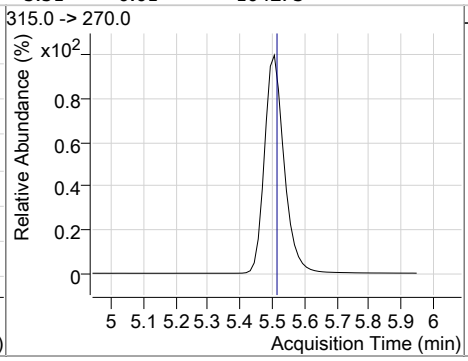


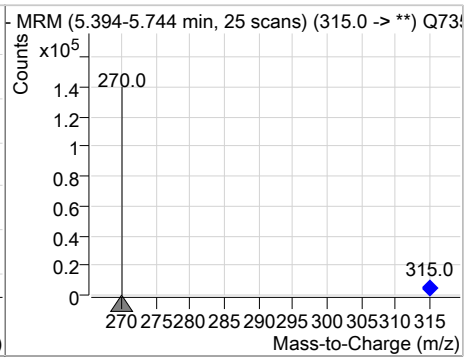




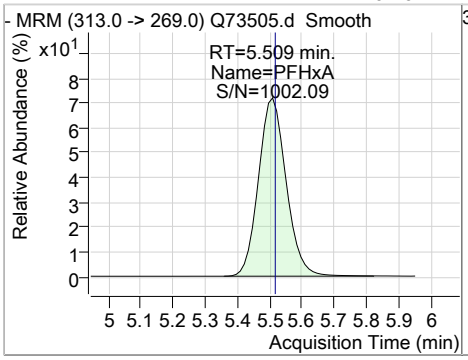
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	10.36	5.51	0.01	104273				

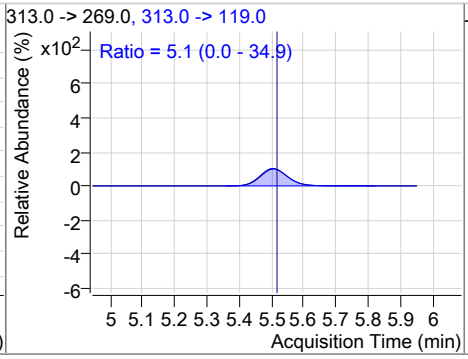


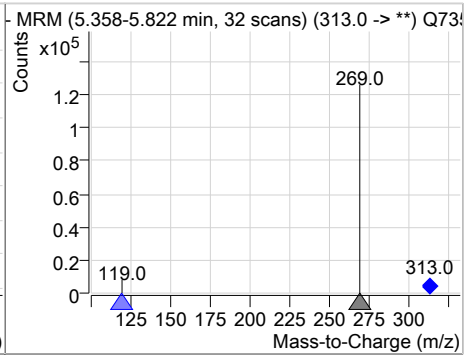




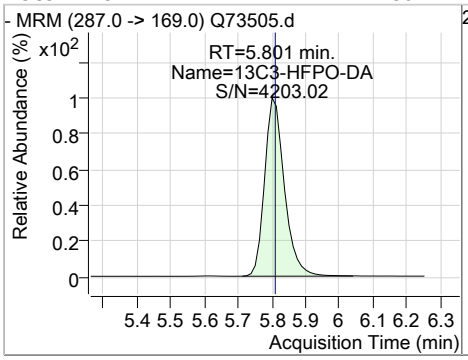
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	10.16	5.51	0.01	93171	313.0 -> 119.0	5.1	0.0	34.9

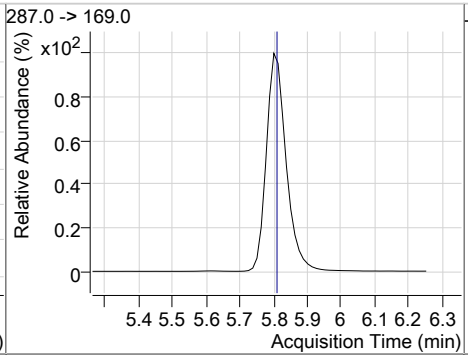


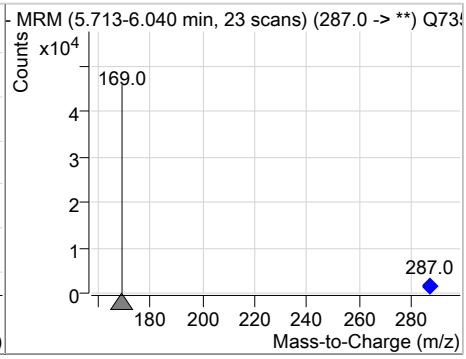




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	21.30	5.80	0.01	33548				

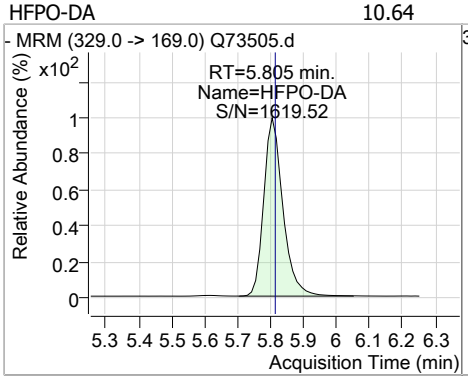


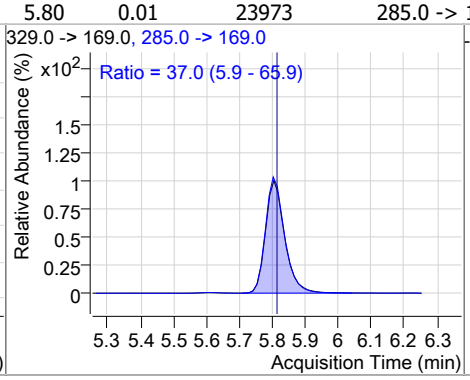


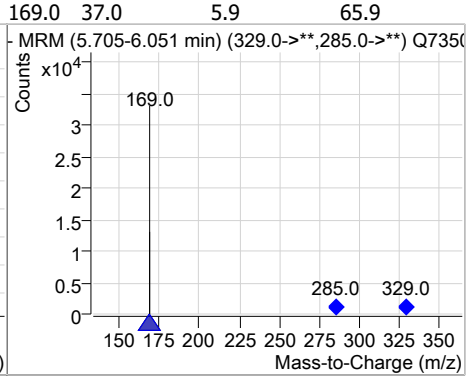


Perfluorinated Compounds by LC/MS/MS

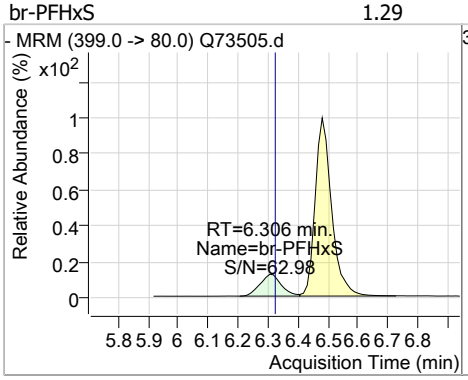
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	10.64	5.80	0.01	23973	285.0 -> 169.0	37.0	5.9	65.9

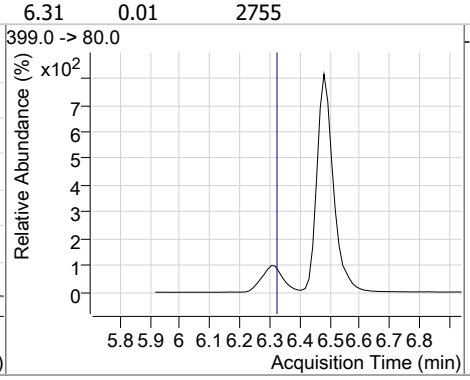


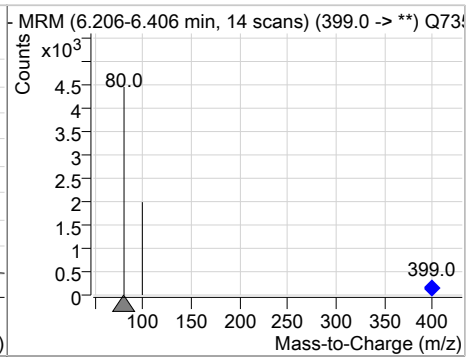




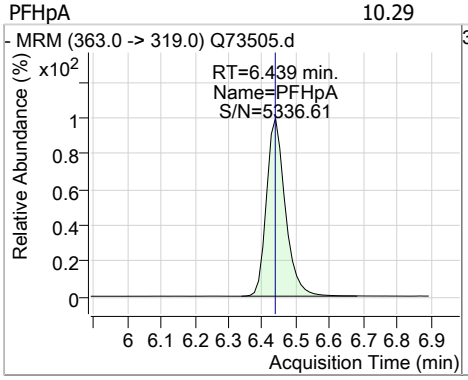
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	1.29	6.31	0.01	2755				

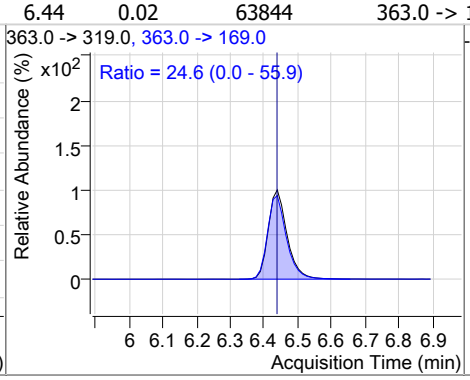


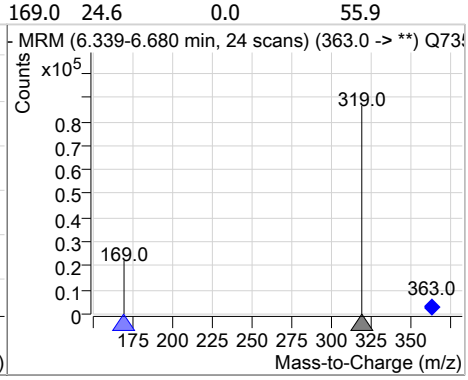




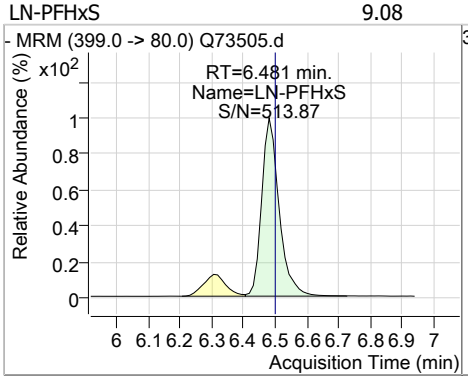
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	10.29	6.44	0.02	63844	363.0 -> 169.0	24.6	0.0	55.9

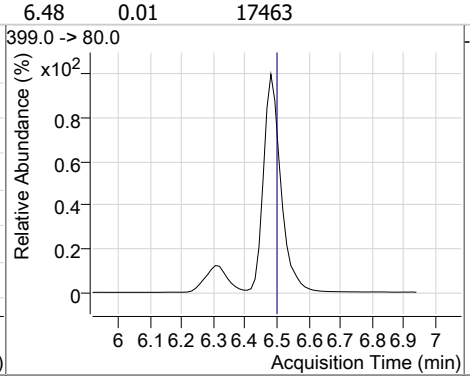


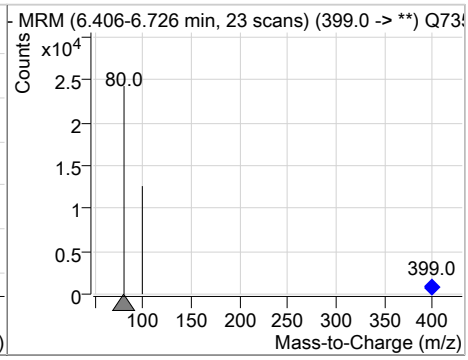




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	9.08	6.48	0.01	17463				

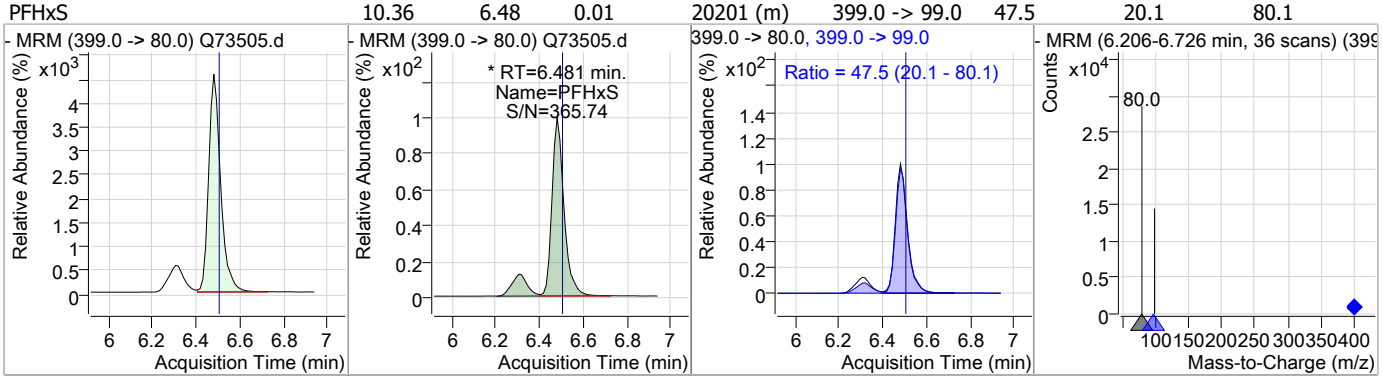




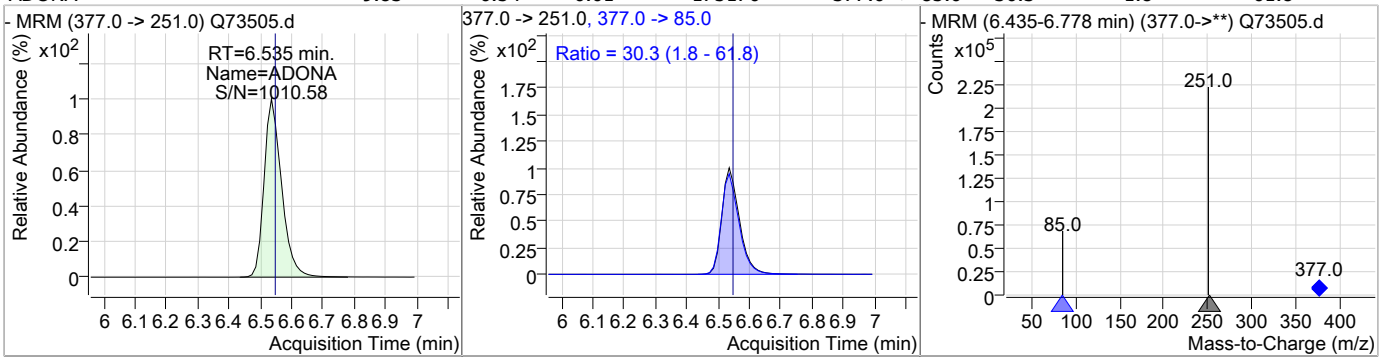


Perfluorinated Compounds by LC/MS/MS

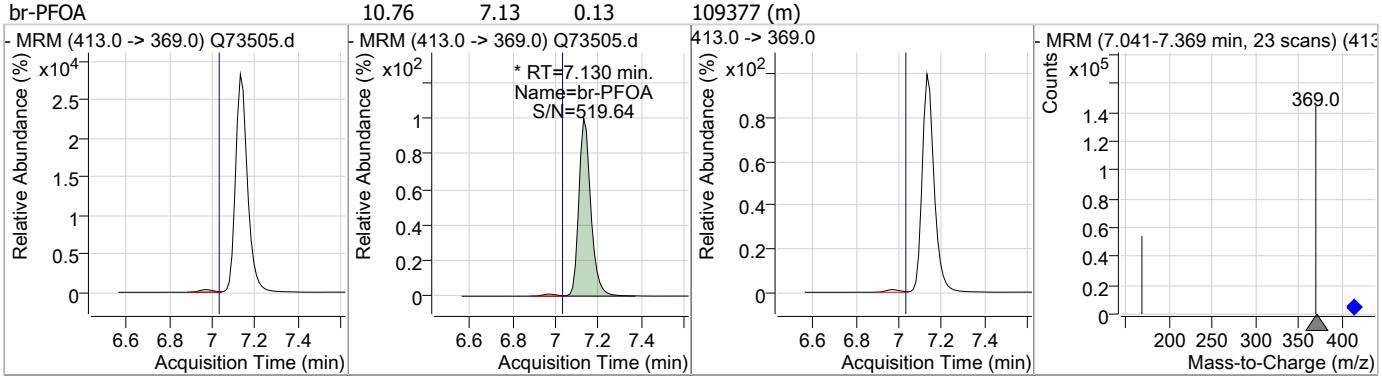
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	10.36	6.48	0.01	20201 (m)	399.0 -> 99.0	47.5	20.1	80.1



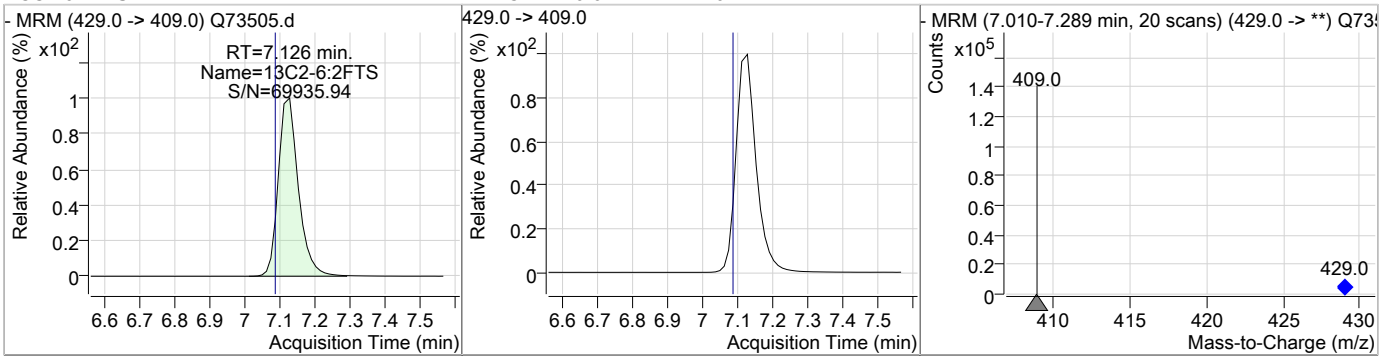
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	9.83	6.54	0.01	175170	377.0 -> 85.0	30.3	1.8	61.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	10.76	7.13	0.13	109377 (m)				

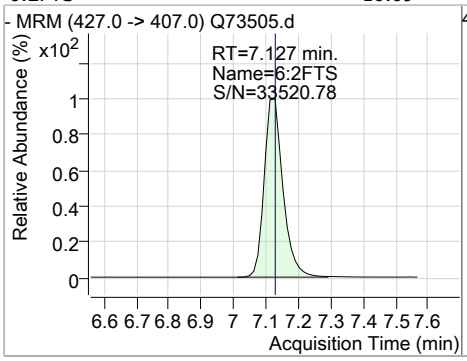


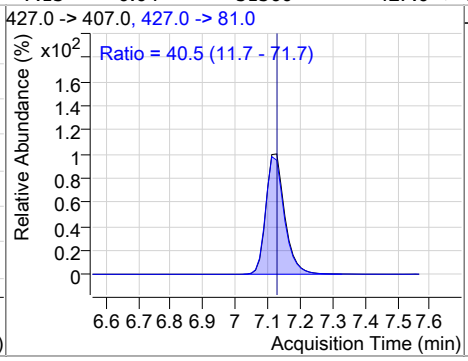
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.13	0.04	110774				

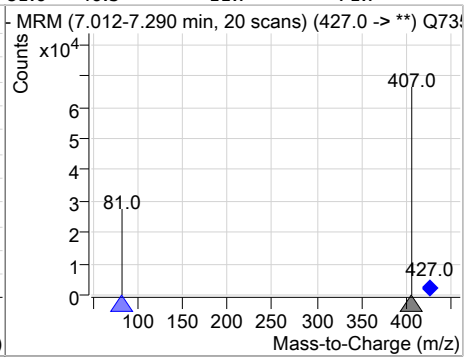


Perfluorinated Compounds by LC/MS/MS

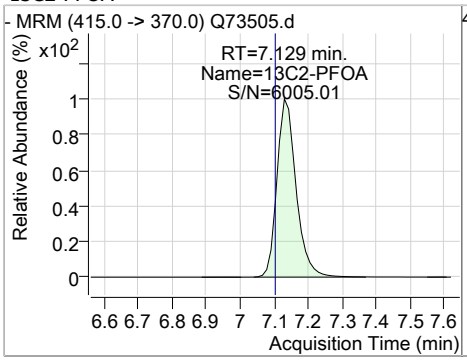
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	10.09	7.13	0.04	51560	427.0 -> 81.0	40.5	11.7	71.7

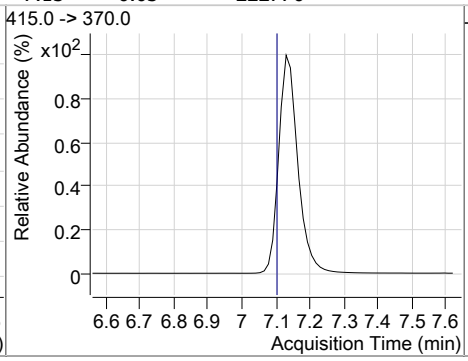


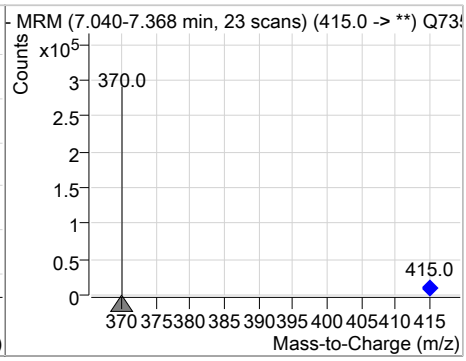




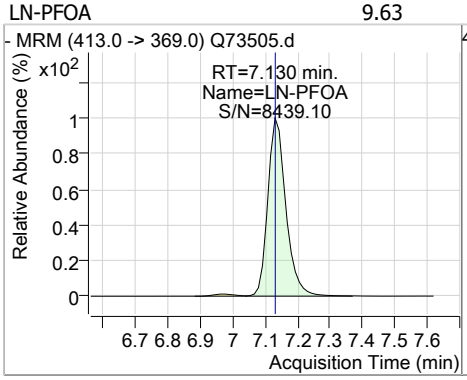
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.13	0.03	222776				

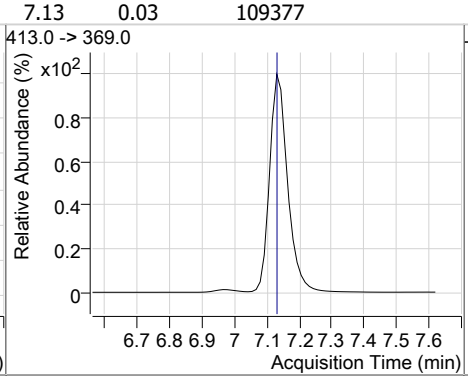


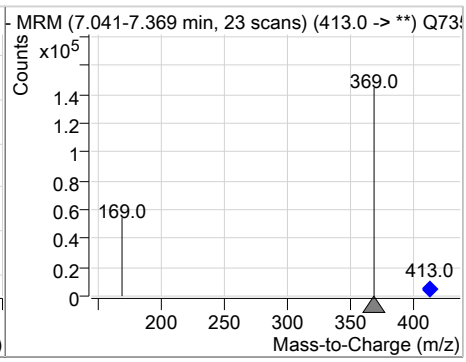




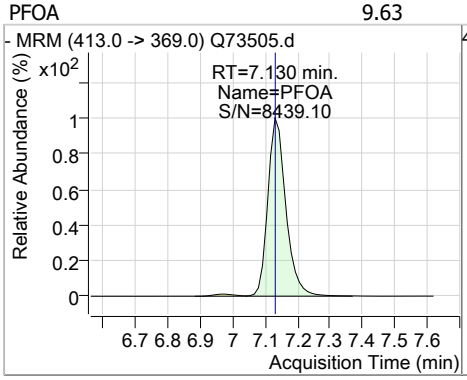
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	9.63	7.13	0.03	109377				

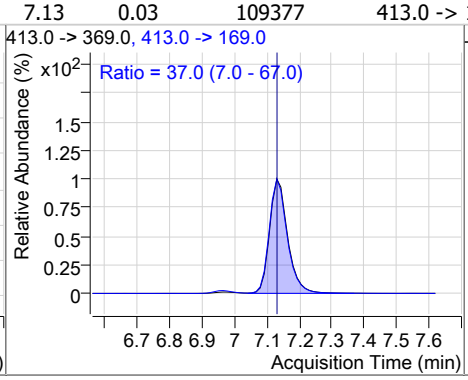


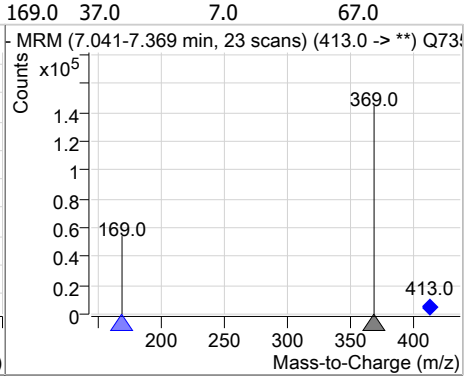




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	9.63	7.13	0.03	109377	413.0 -> 169.0	37.0	7.0	67.0

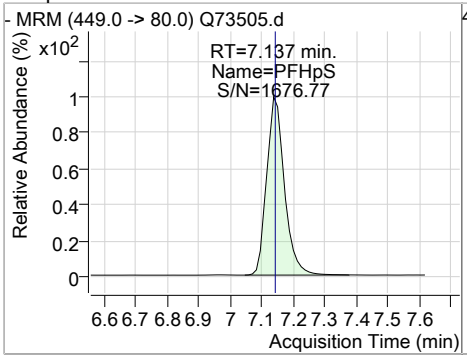


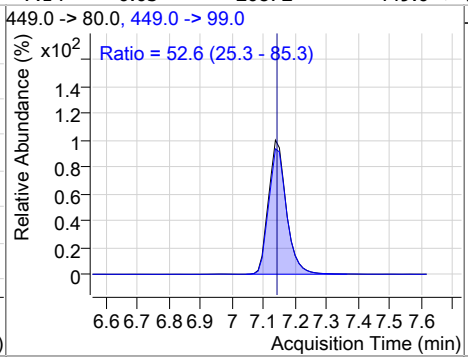


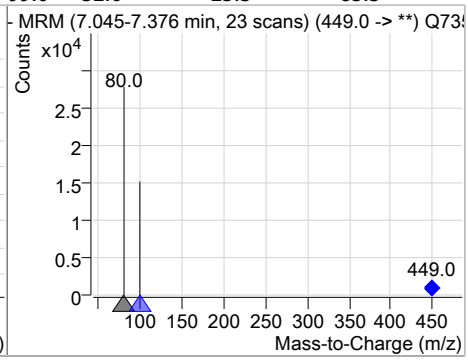


Perfluorinated Compounds by LC/MS/MS

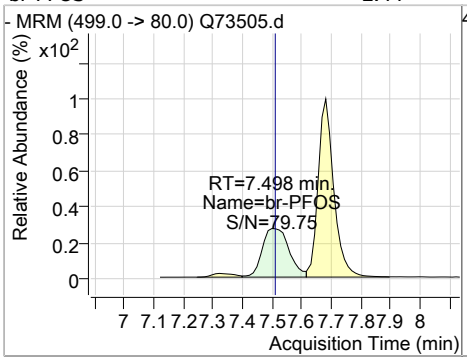
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	10.85	7.14	0.03	20872	449.0 -> 99.0	52.6	25.3	85.3

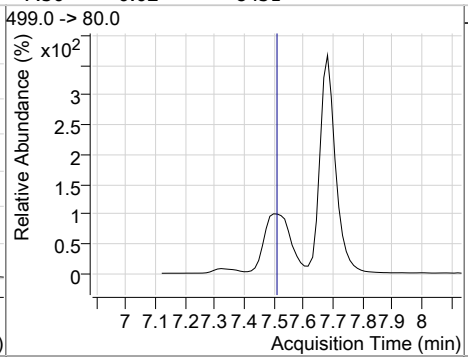


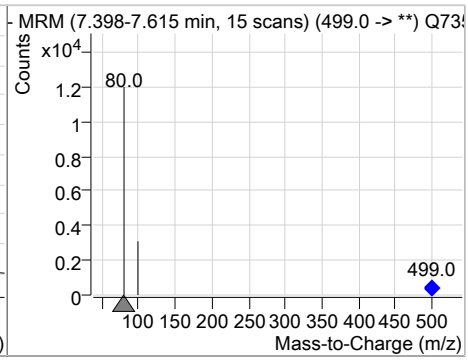




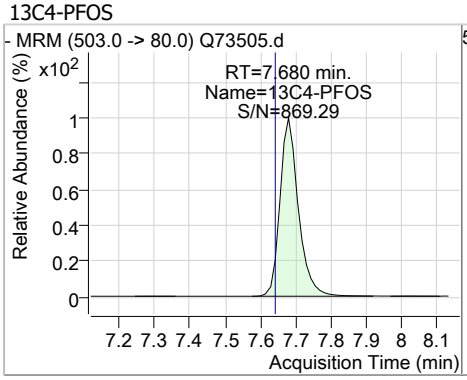
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	2.44	7.50	0.02	8451				

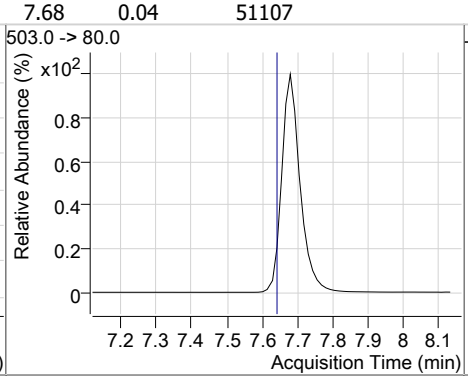


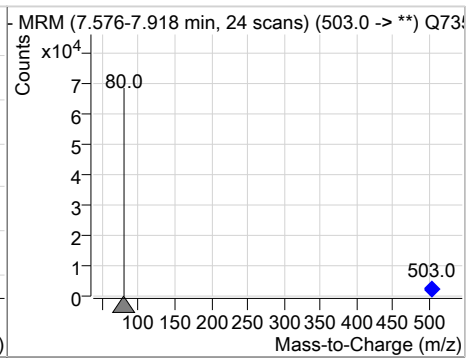




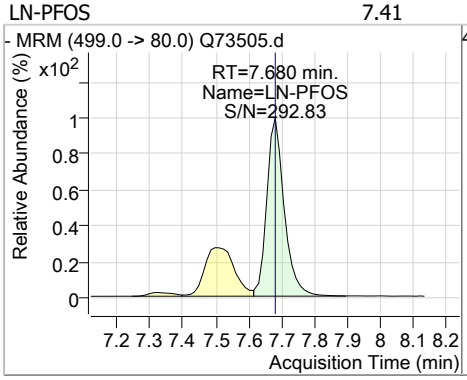
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.68	0.04	51107				

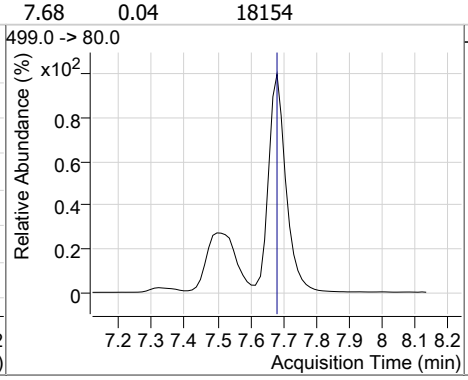


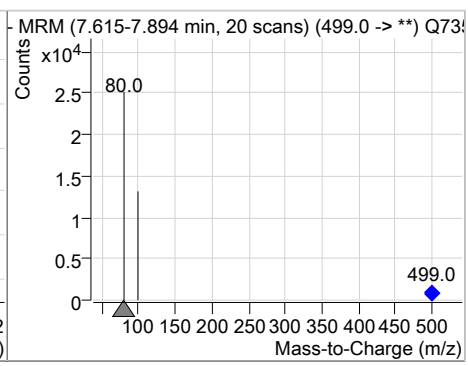




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	7.41	7.68	0.04	18154				

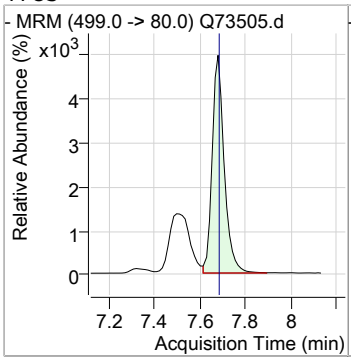


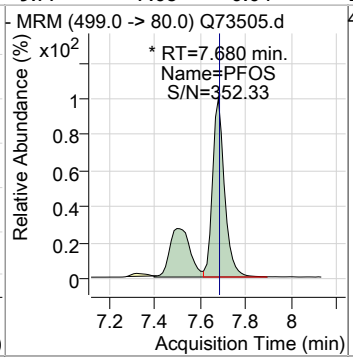


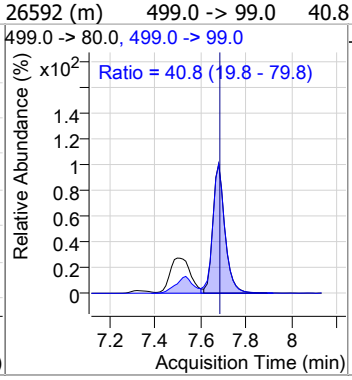


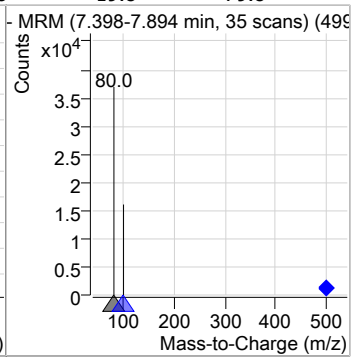
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	9.77	7.68	0.04	26592 (m)	499.0 -> 99.0	40.8	19.8	79.8

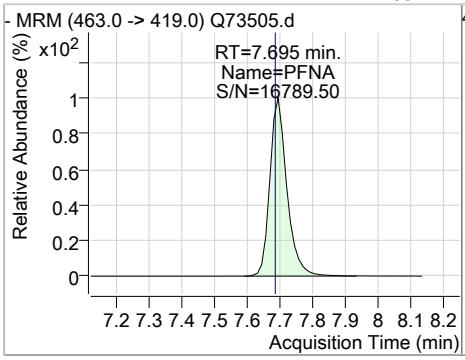


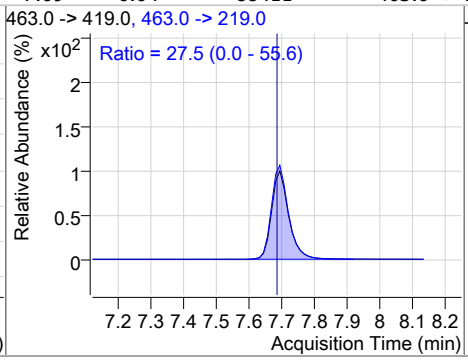


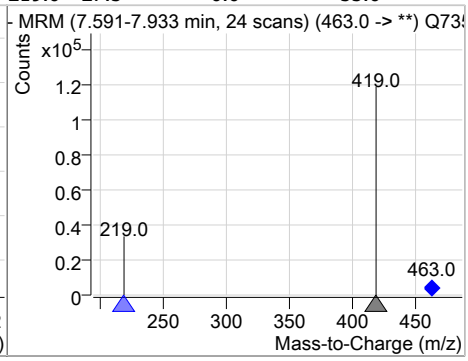




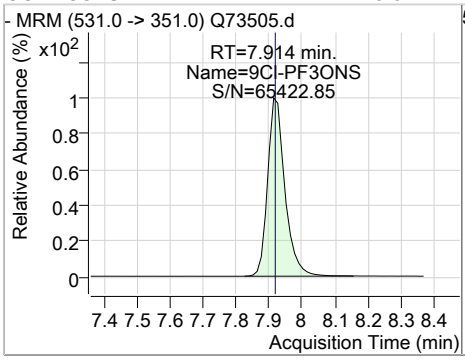
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	11.05	7.69	0.04	88411	463.0 -> 219.0	27.5	0.0	55.6

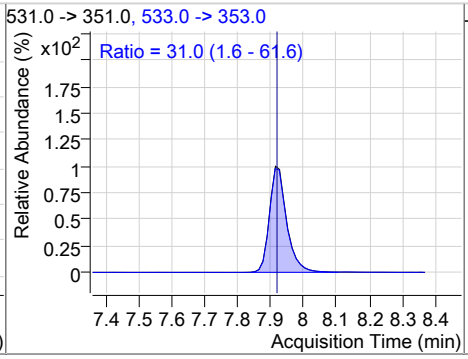


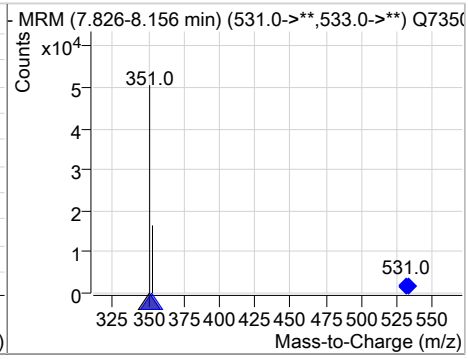




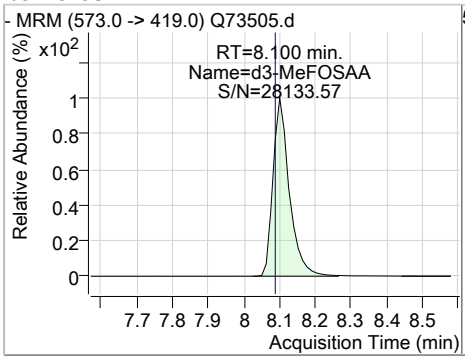
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	10.61	7.91	0.02	37282	533.0 -> 353.0	31.0	1.6	61.6

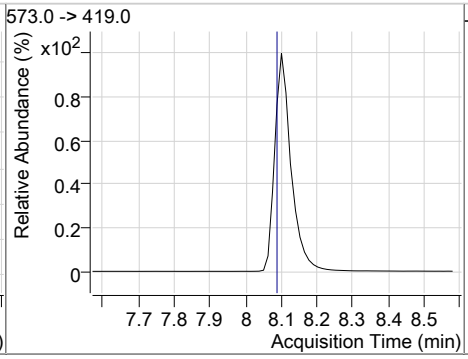


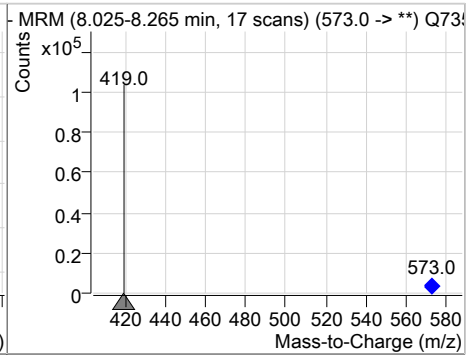




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.10	0.01	78181				

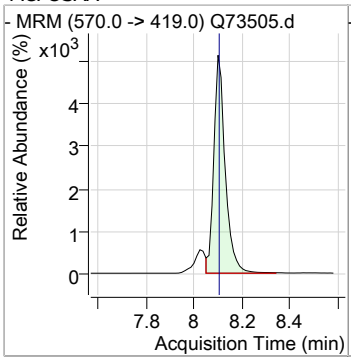


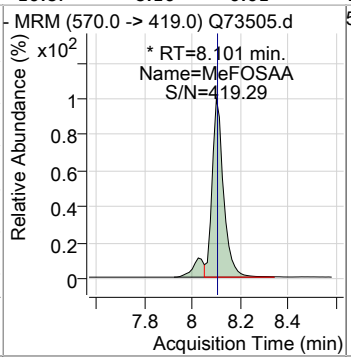


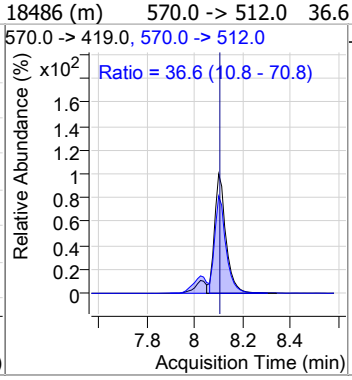


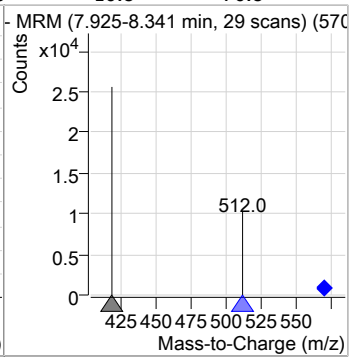
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	10.87	8.10	0.01	18486 (m)	570.0 -> 512.0	36.6	10.8	70.8

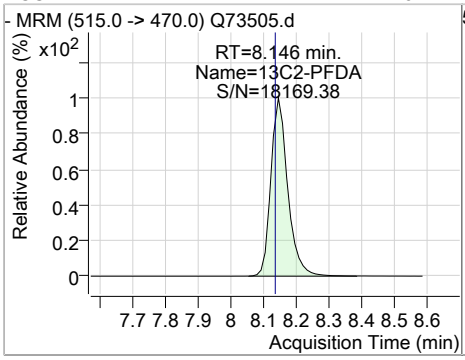


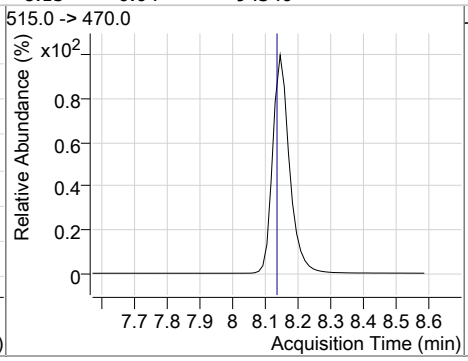


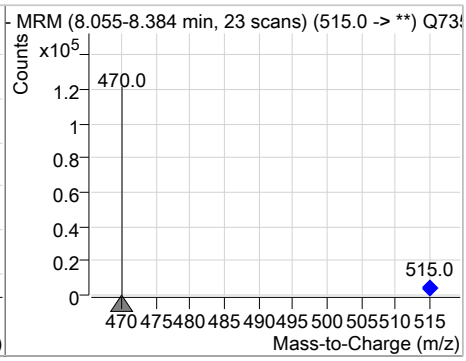




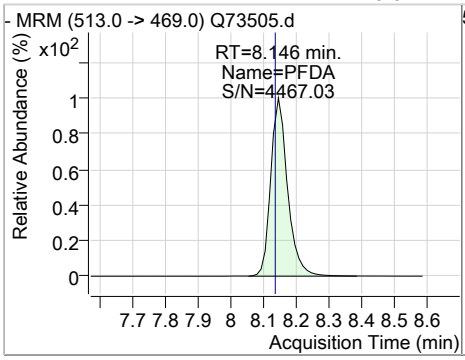
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	11.26	8.15	0.04	94340				

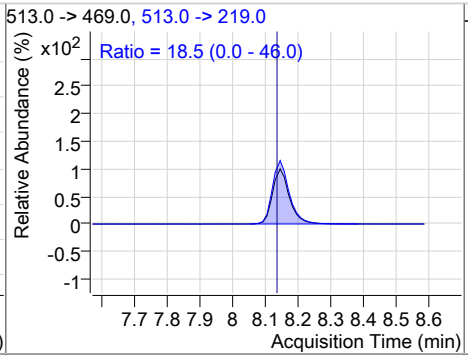


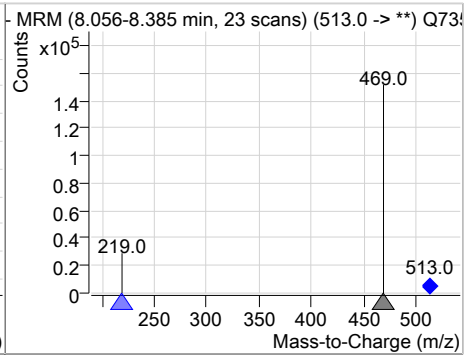




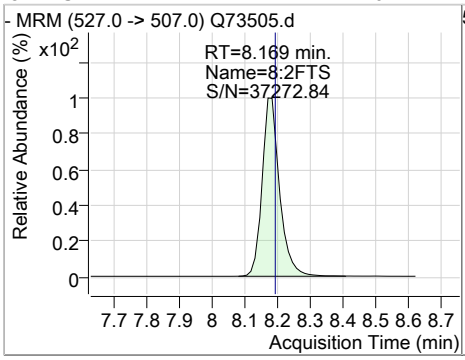
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	10.01	8.15	0.04	117594	513.0 -> 219.0	18.5	0.0	46.0

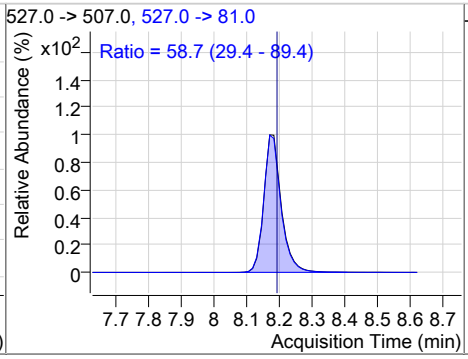


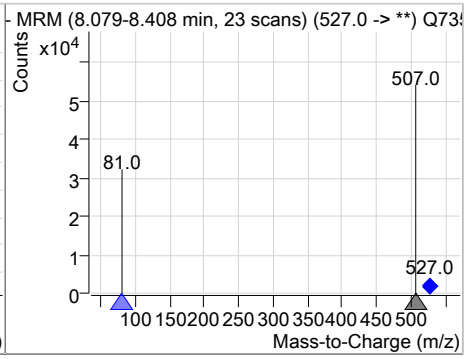




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	10.21	8.17	0.02	40106	527.0 -> 81.0	58.7	29.4	89.4

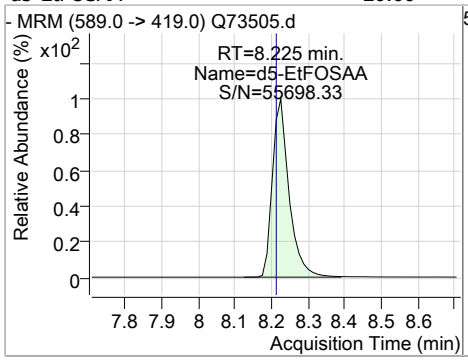


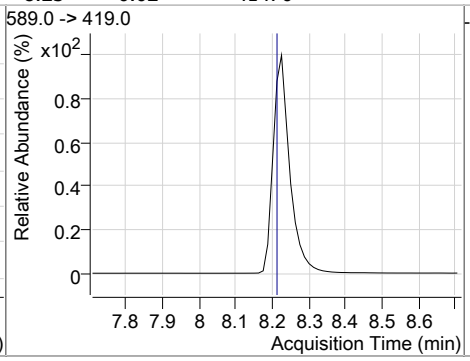


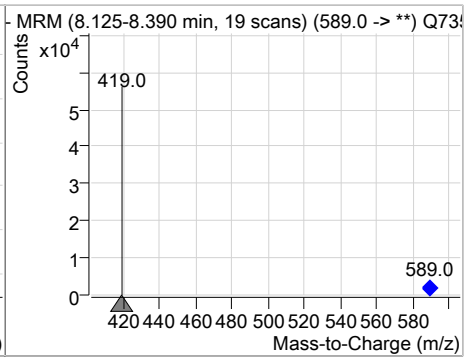


Perfluorinated Compounds by LC/MS/MS

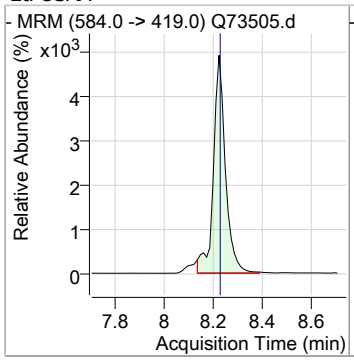
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.66	8.23	0.02	41476				

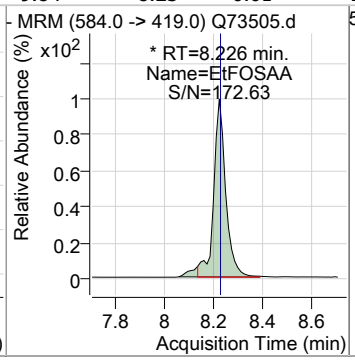


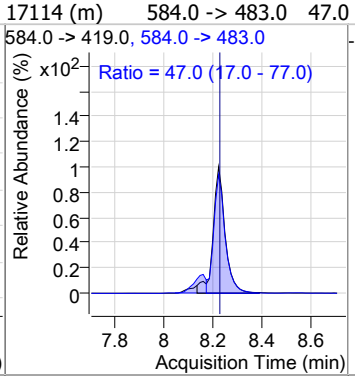


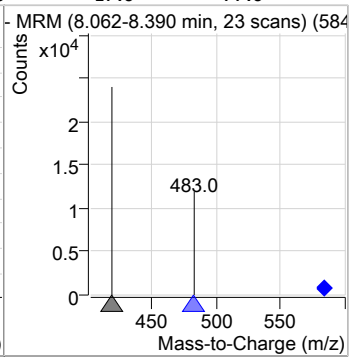


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	9.84	8.23	0.01	17114 (m)	584.0 -> 483.0	47.0	17.0	77.0

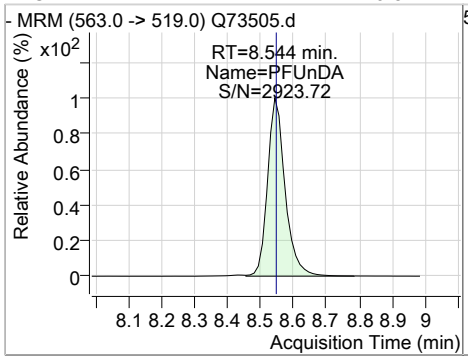


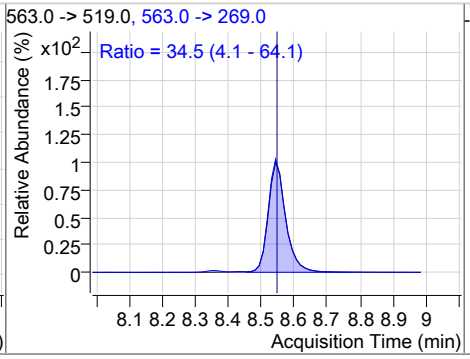


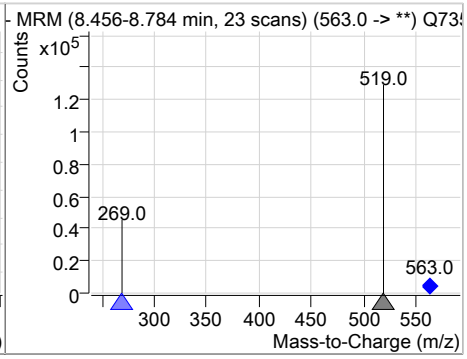




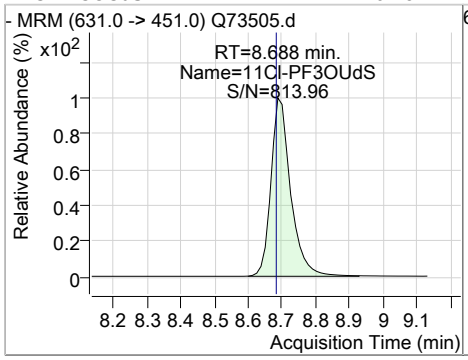
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	10.84	8.54	0.04	96416	563.0 -> 269.0	34.5	4.1	64.1

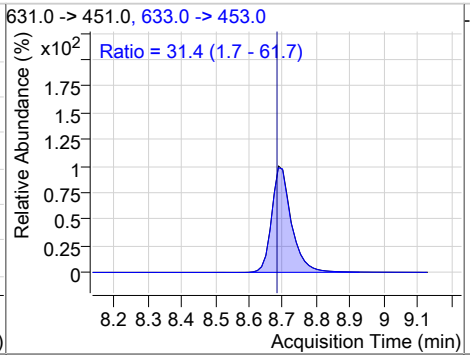


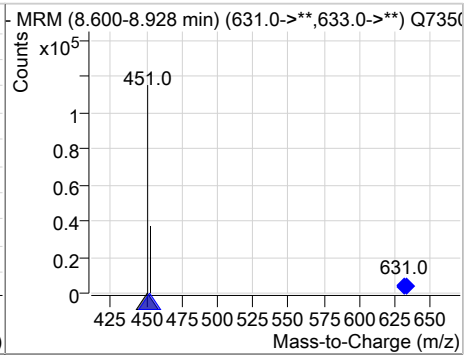




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	10.28	8.69	0.04	87032	633.0 -> 453.0	31.4	1.7	61.7

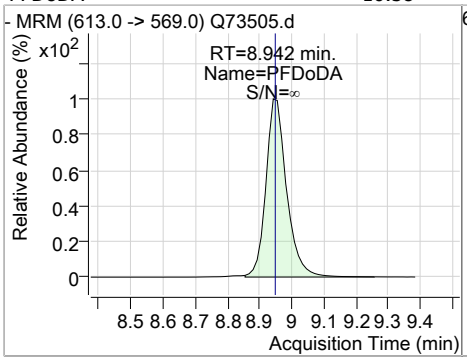


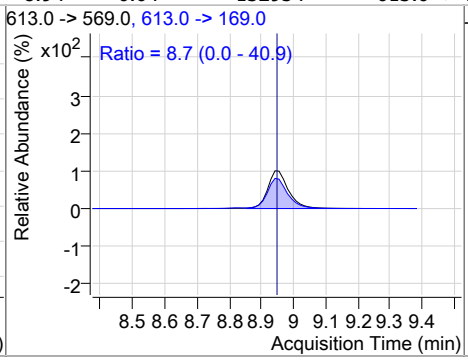


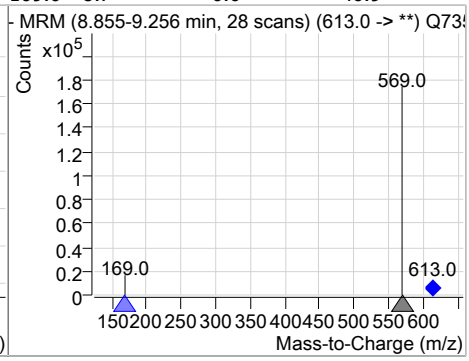


Perfluorinated Compounds by LC/MS/MS

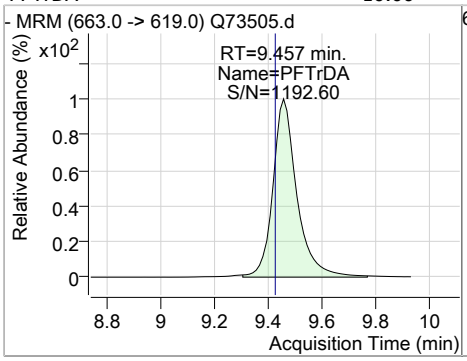
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	10.58	8.94	0.04	132954	613.0 -> 169.0	8.7	0.0	40.9

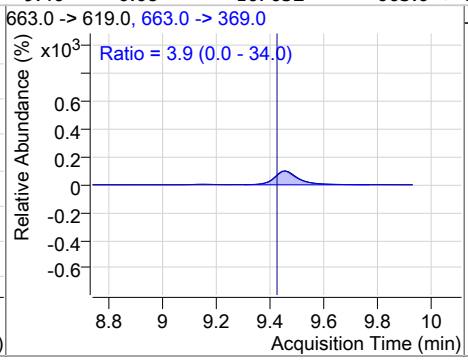


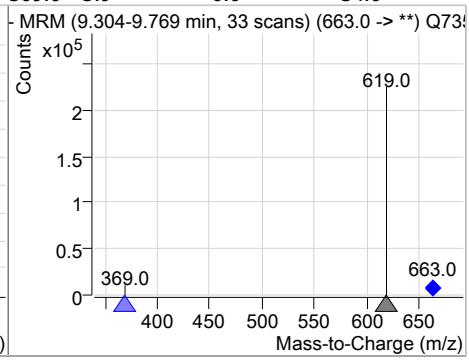




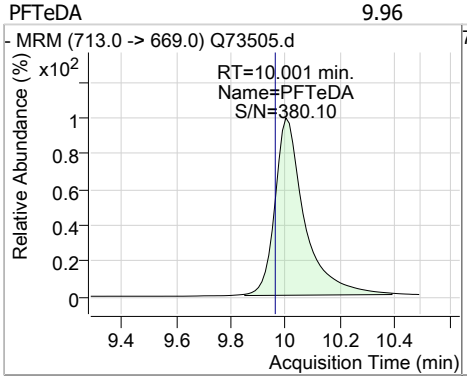
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	10.06	9.46	0.08	167652	663.0 -> 369.0	3.9	0.0	34.0

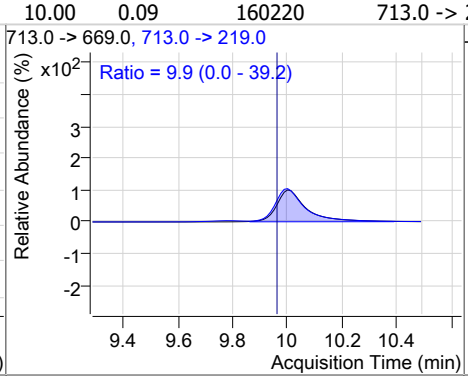


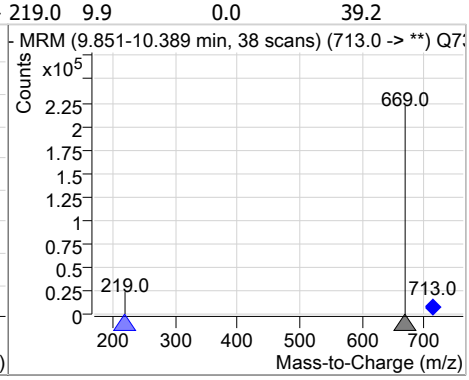




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	9.96	10.00	0.09	160220	713.0 -> 219.0	9.9	0.0	39.2







Manual Integration Approval Summary

Sample Number: SQ1670-IC1670
Lab FileID: Q73505.D
Injection Time: 10/27/20 12:25
Method: EPA 537.1 REV 1.0
Analyst approved: 10/29/20 08:24 Mike Eger
Supervisor approved: 10/29/20 08:25 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.48	Split peak
PFOA (Branched Isomers)			7.13	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.68	Split peak
MeFOSAA	2355-31-9		8.10	Split peak
EtFOSAA	2991-50-6		8.23	Split peak

Q73506.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger 10/29/20 08:25

Perfluorinated Compounds by LC/MS/MS

Data File : Q73506.d
Operator : mikee
Acq. Method : 537.m
Acq. Date-Time : 10/27/2020 12:40:57 PM
Sample Name : ICC1670-20
Vial : Vial 7
DA Method File : 537_1027_SQ1670.quantmethod.xml
Batch Name : SQ1670.batch.bin
Sample Information : OP82561,SQ1670,250,,,1.0,1,water

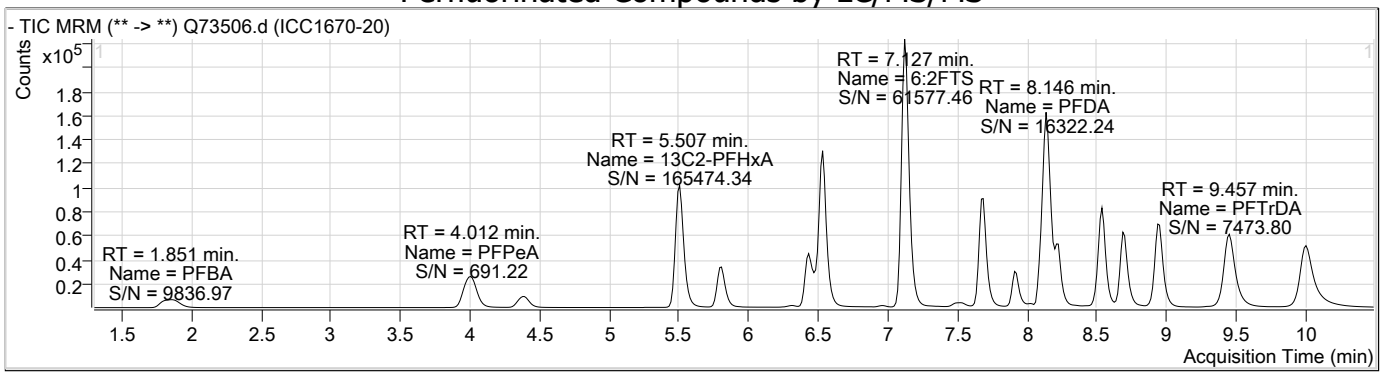
Compound	RT	QIon	Resp.	Symmetry	Conc.	Units		Dev(Min)
Internal Standards								
13C2-6:2FTS	7.126	429.0 -> 409.0	117561	1.15	20.00	µg/L		0.041
13C2-PFOA	7.129	415.0 -> 370.0	235328	1.60	20.00	µg/L		0.027
13C3-PFPeA	4.009	266.0 -> 222.0	106031	1.10	20.00	µg/L		0.012
13C4-PFOS	7.680	503.0 -> 80.0	54476	1.36	20.00	µg/L		0.038
d3-MeFOSAA	8.100	573.0 -> 419.0	82848	1.70	40.00	µg/L		0.012
System Monitoring Compounds								
13C2-PFDA	8.146	515.0 -> 470.0	198803		22.46	µg/L		0.040
Spiked Amount: 20.00	Range: 70.0 - 130.0%				Recovery = 112.3%			
13C2-PFHxA	5.507	315.0 -> 270.0	221548		20.85	µg/L		0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%				Recovery = 104.2%			
d5-EtFOSAA	8.225	589.0 -> 419.0	87261		41.02	µg/L		0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%				Recovery = 102.6%			
13C3-HFPO-DA	5.801	287.0 -> 169.0	71359		42.88	µg/L		0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%				Recovery = 107.2%			
Target Compounds								QValue
br-PFHxS	6.306	399.0 -> 80.0	5597		2.45	µg/L		100
LN-PFHxS	6.481	399.0 -> 80.0	37543		18.31	µg/L		100
6:2FTS	7.127	427.0 -> 407.0	109982		20.28	µg/L		98
8:2FTS	8.169	527.0 -> 507.0	83943		20.14	µg/L		99
EtFOSAA	8.226	584.0 -> 419.0	36700		19.91	µg/L	m	99
LN-PFOA	7.130	413.0 -> 369.0	233335		19.72	µg/L		100
MeFOSAA	8.101	570.0 -> 419.0	37452		20.78	µg/L	m	94
PFBA	1.851	213.0 -> 169.0	61594	1.09	19.85	µg/L		100
PFBS	4.378	299.0 -> 80.0	36564		20.54	µg/L		99
PFDA	8.146	513.0 -> 469.0	244521		20.09	µg/L		94
PFDoDA	8.942	613.0 -> 569.0	284507		21.24	µg/L		94
br-PFOA	7.130	413.0 -> 369.0	233335		21.74	µg/L	m	100
PFHpA	6.439	363.0 -> 319.0	135786	1.32	20.72	µg/L		98
PFHpS	7.137	449.0 -> 80.0	44483		21.70	µg/L		98
PFHxA	5.509	313.0 -> 269.0	200264	1.12	20.67	µg/L		100
PFHxS	6.481	399.0 -> 80.0	43169		20.77	µg/L	m	97
PFNA	7.695	463.0 -> 419.0	185541		21.95	µg/L		95
LN-PFOS	7.680	499.0 -> 80.0	38270		14.87	µg/L		100
PFOA	7.130	413.0 -> 369.0	233335		19.72	µg/L		100
PFOS	7.680	499.0 -> 80.0	56230		19.68	µg/L	m	86
PFPeA	4.012	263.0 -> 219.0	66263	1.02	21.49	µg/L		100
br-PFOS	7.498	499.0 -> 80.0	17926		4.89	µg/L		100
PFTeDA	10.001	713.0 -> 669.0	357434		20.85	µg/L		98
PFTrDA	9.457	663.0 -> 619.0	358515		20.19	µg/L		100
PFUnDA	8.544	563.0 -> 519.0	207203		21.85	µg/L		99
ADONA	6.535	377.0 -> 251.0	376721		20.00	µg/L		98
9Cl-PF3ONS	7.914	531.0 -> 351.0	80289		21.62	µg/L		98
11Cl-PF3OUdS	8.688	631.0 -> 451.0	188310		21.06	µg/L		99
HFPO-DA	5.805	329.0 -> 169.0	50829		21.36	µg/L		98

Perfluorinated Compounds by LC/MS/MS

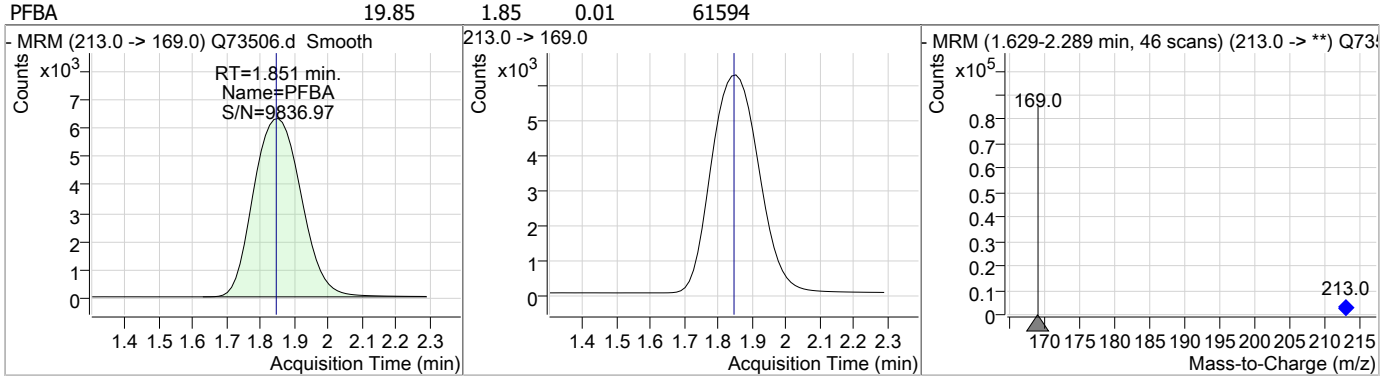
Compound	RT	QIon	Resp.	Symmetry	Conc.	Units	Dev(Min)

= Qualifier out of range, m = manually integrated, + = Area summed

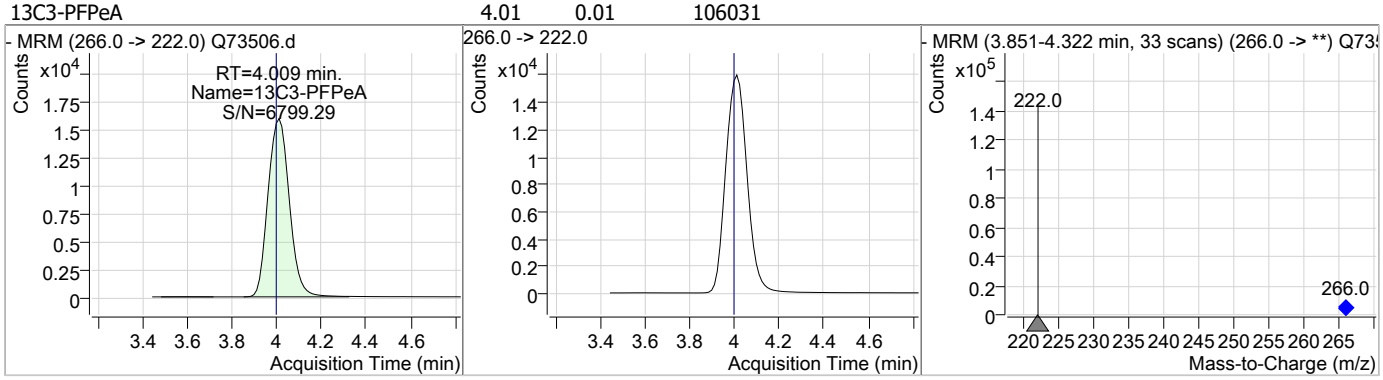
Perfluorinated Compounds by LC/MS/MS



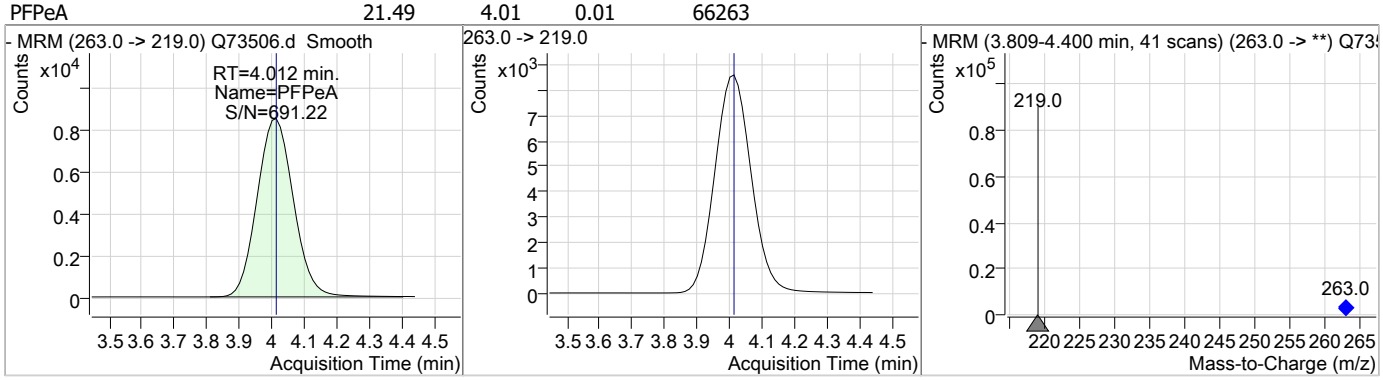
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.85	1.85	0.01	61594				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.01	0.01	106031				

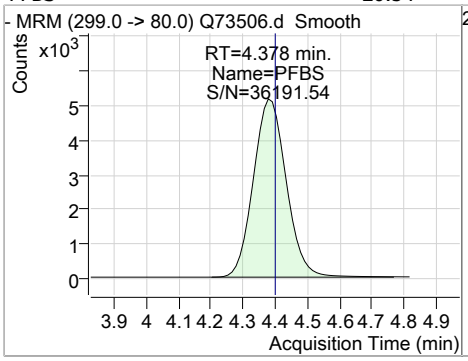


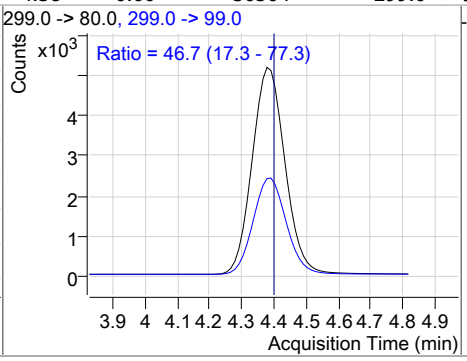
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	21.49	4.01	0.01	66263				

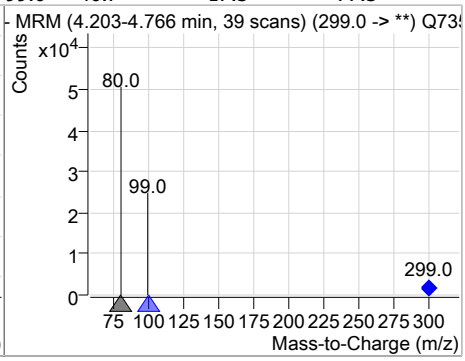


Perfluorinated Compounds by LC/MS/MS

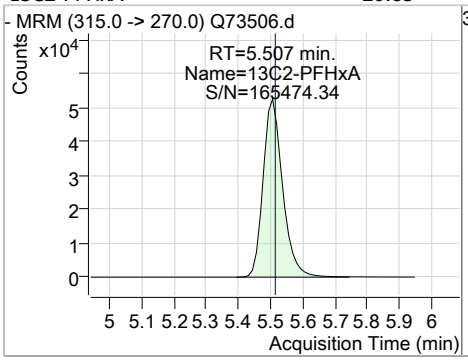
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.54	4.38	0.00	36564	299.0 -> 99.0	46.7	17.3	77.3

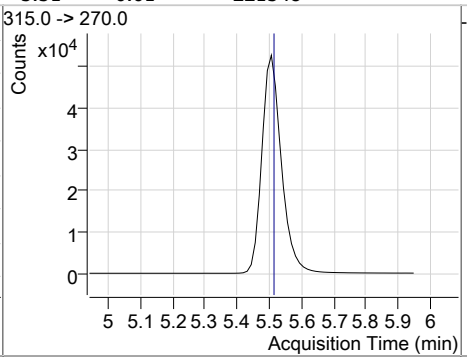


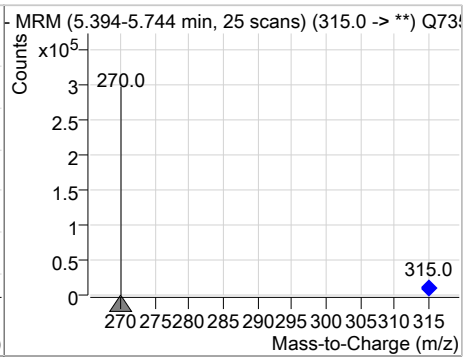




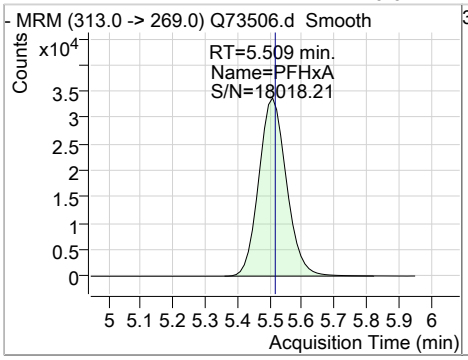
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	20.85	5.51	0.01	221548				

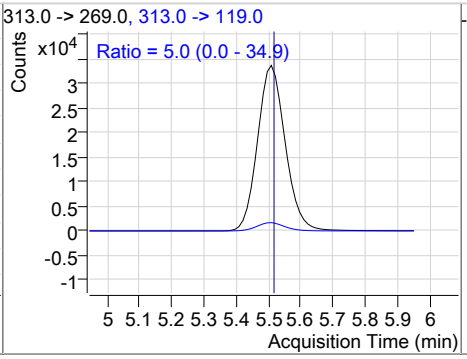


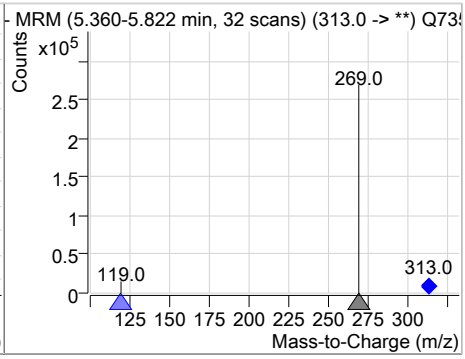




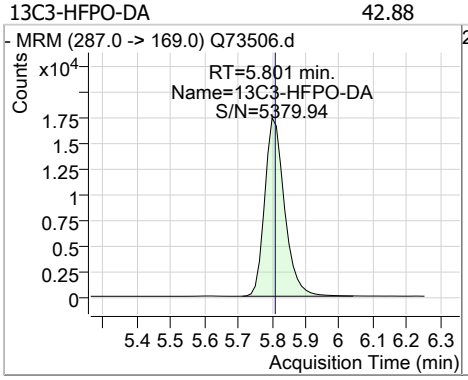
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.67	5.51	0.01	200264	313.0 -> 119.0	5.0	0.0	34.9

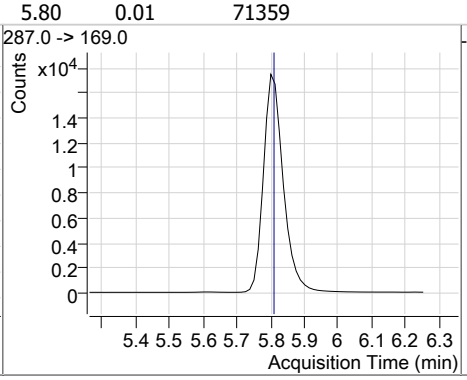


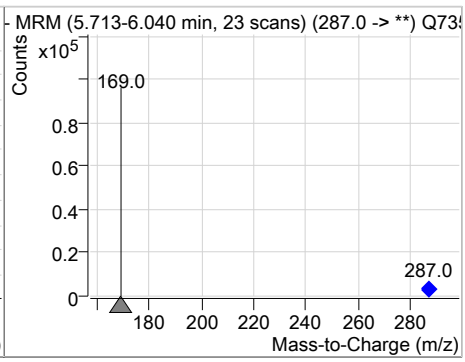




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	42.88	5.80	0.01	71359				

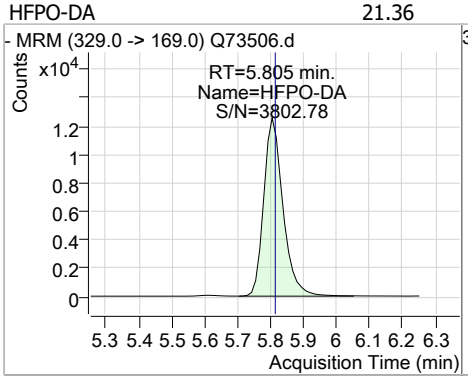


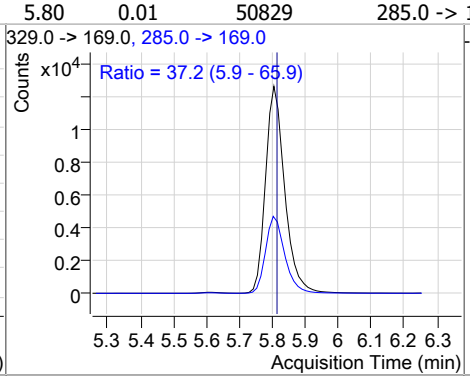


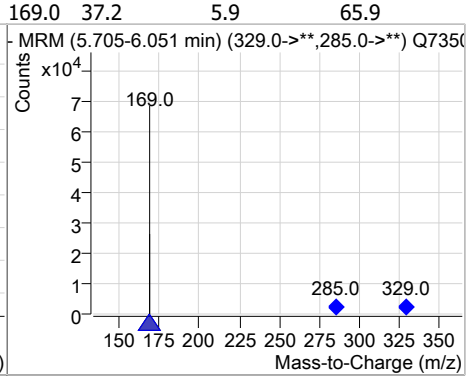


Perfluorinated Compounds by LC/MS/MS

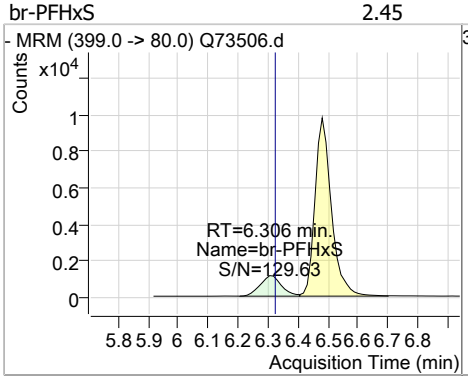
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	21.36	5.80	0.01	50829	285.0 -> 169.0	37.2	5.9	65.9

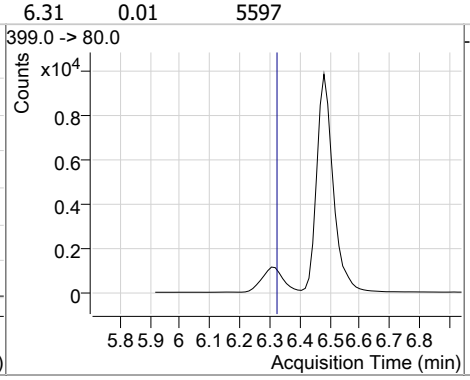


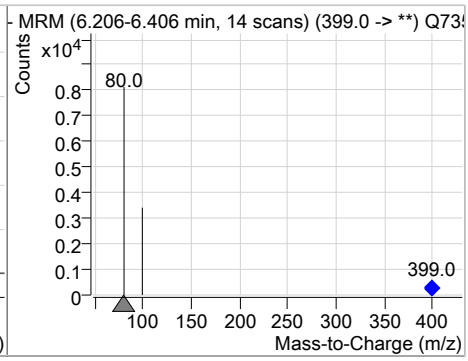




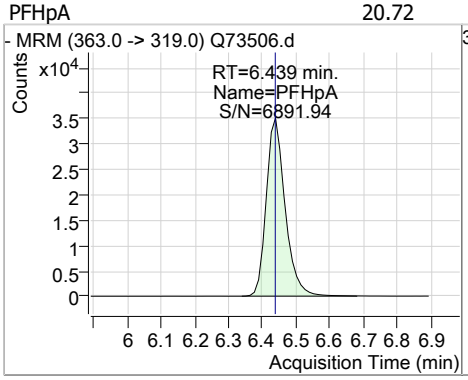
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	2.45	6.31	0.01	5597				

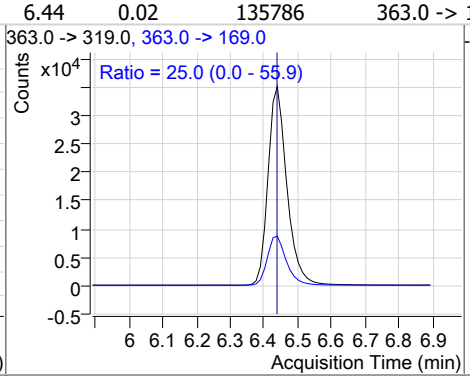


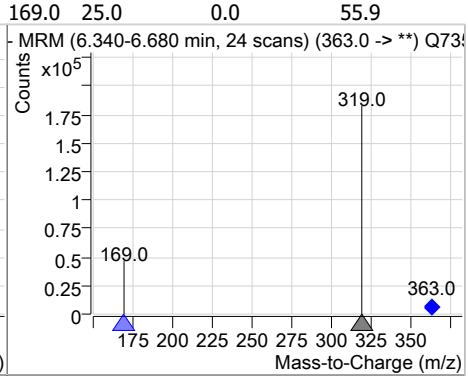




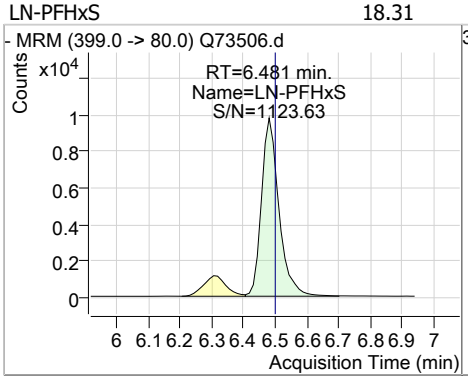
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	20.72	6.44	0.02	135786	363.0 -> 169.0	25.0	0.0	55.9

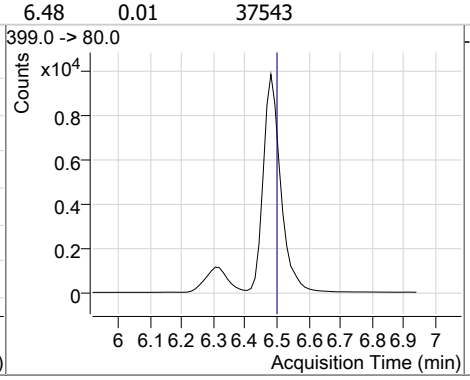


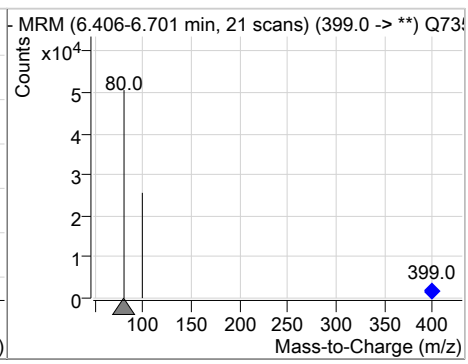




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	18.31	6.48	0.01	37543				

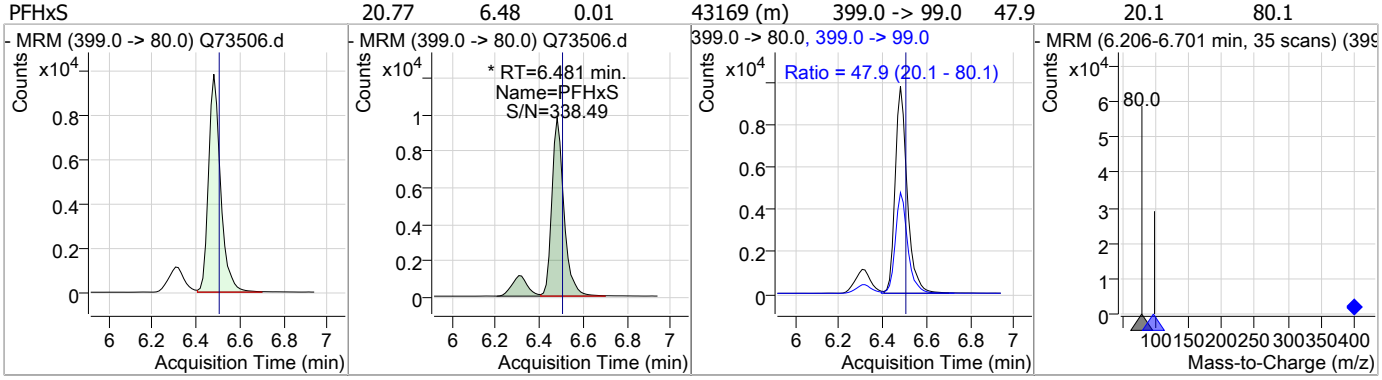




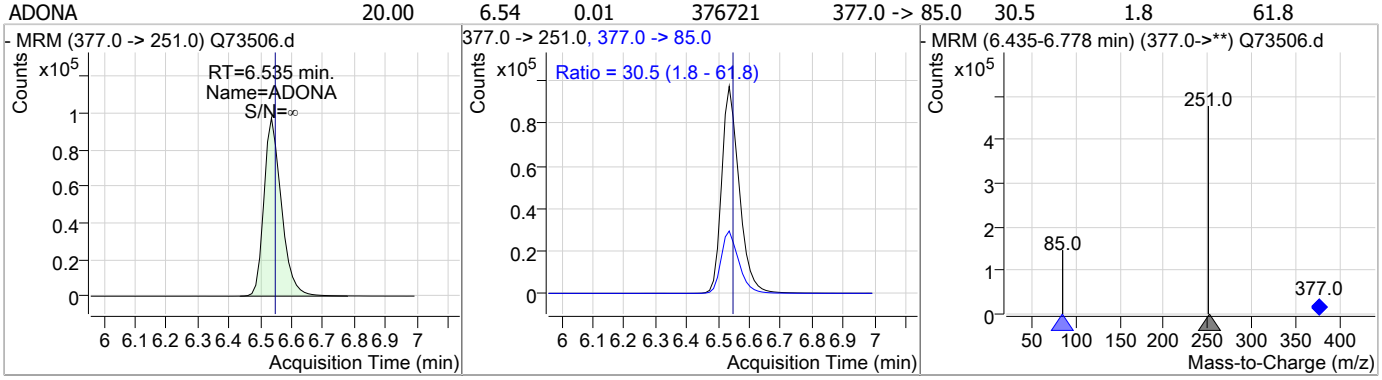


Perfluorinated Compounds by LC/MS/MS

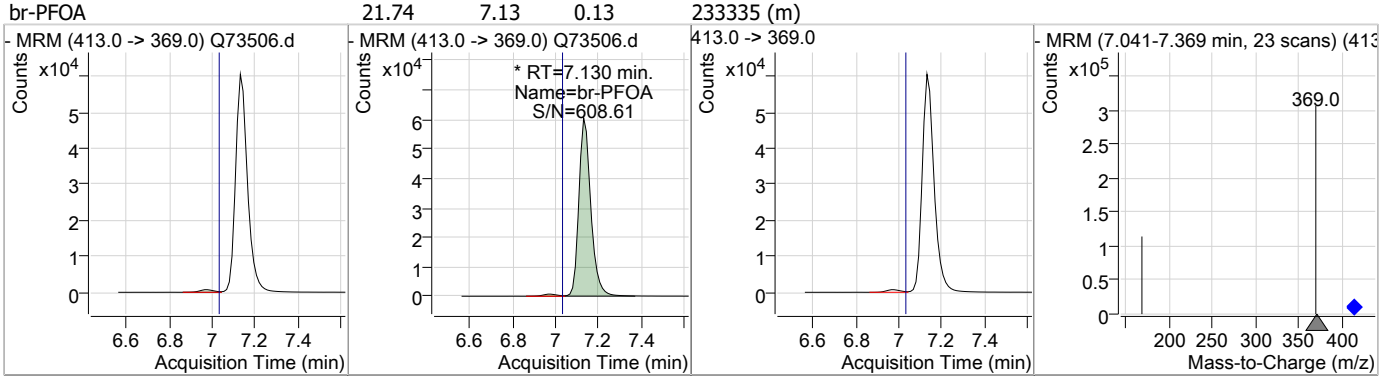
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	20.77	6.48	0.01	43169 (m)	399.0 -> 99.0	47.9	20.1	80.1



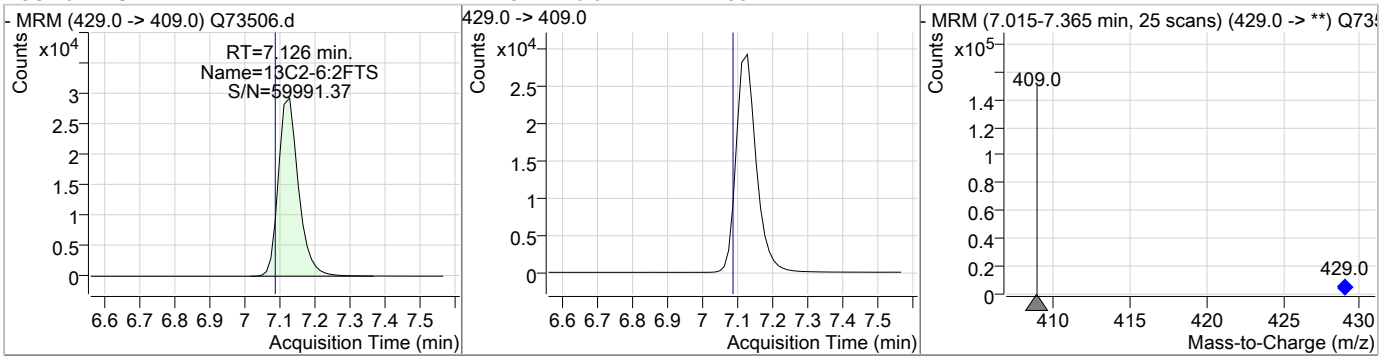
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	20.00	6.54	0.01	376721	377.0 -> 85.0	30.5	1.8	61.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	21.74	7.13	0.13	233335 (m)				

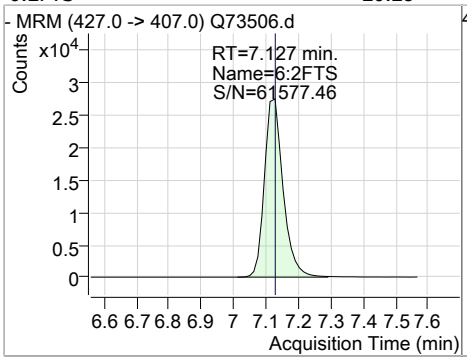


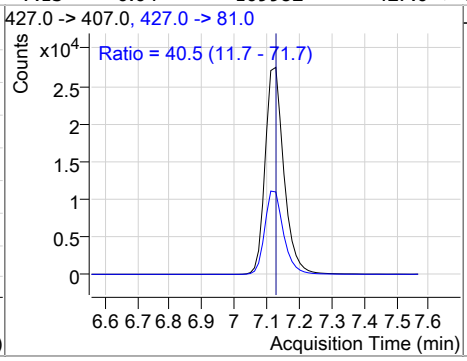
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.13	0.04	117561				

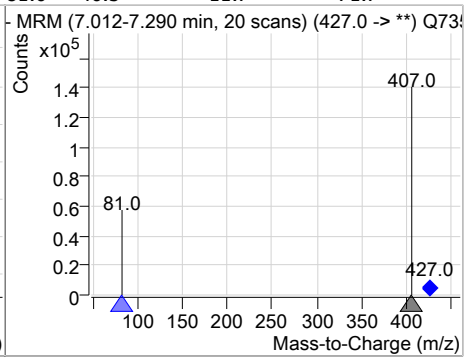


Perfluorinated Compounds by LC/MS/MS

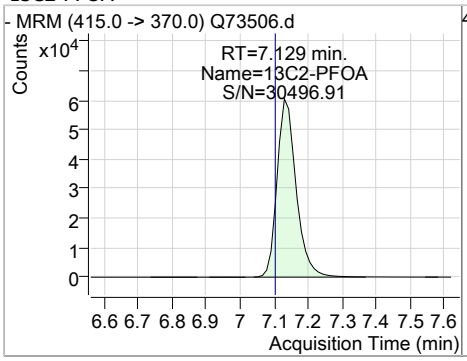
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.28	7.13	0.04	109982	427.0 -> 81.0	40.5	11.7	71.7

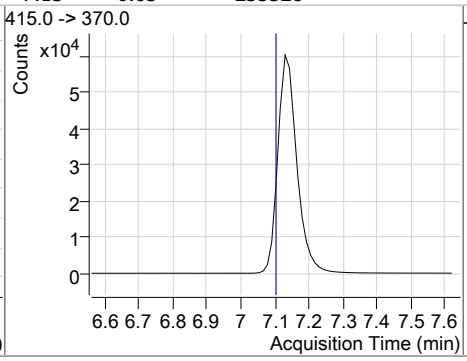


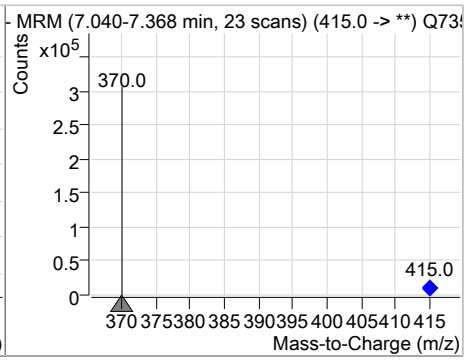




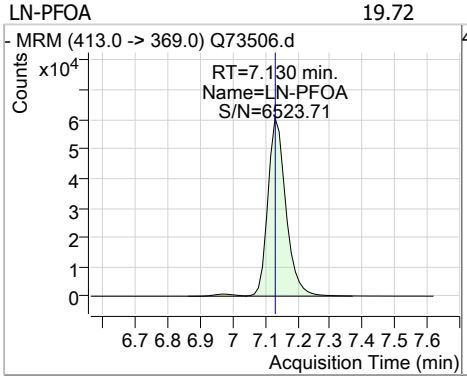
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.13	0.03	235328				

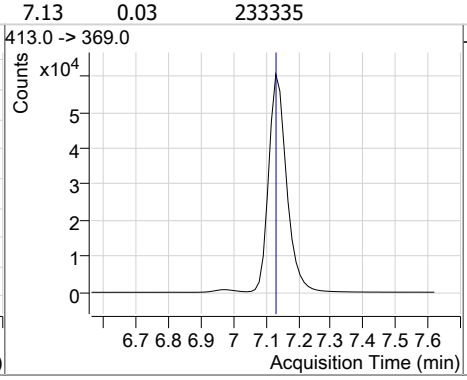


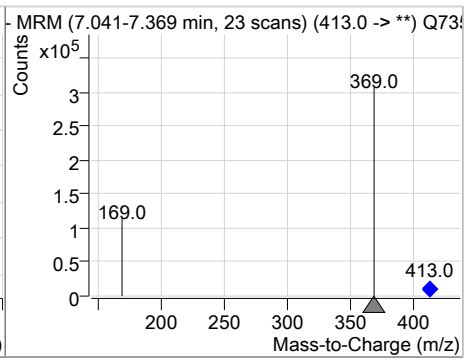




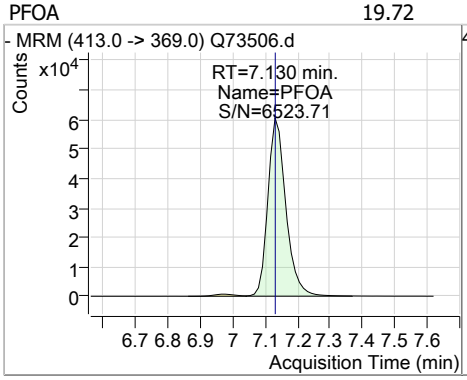
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	19.72	7.13	0.03	233335				

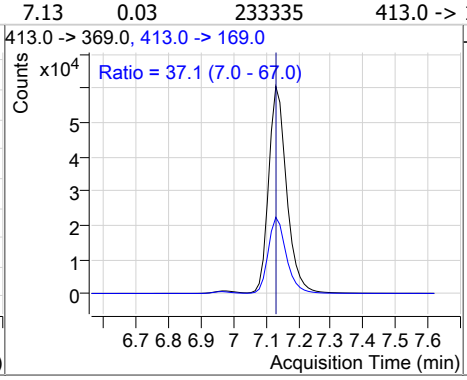


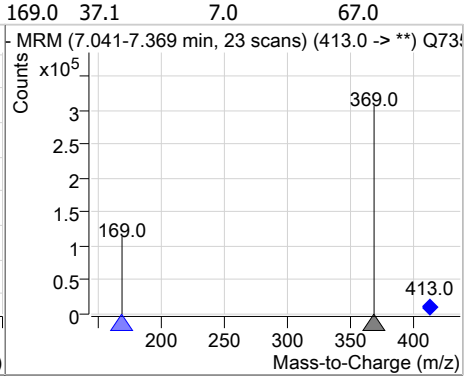




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.72	7.13	0.03	233335	413.0 -> 169.0	37.1	7.0	67.0

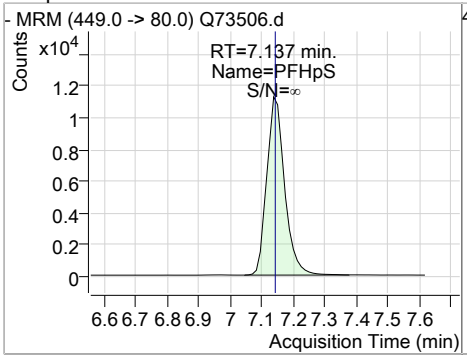


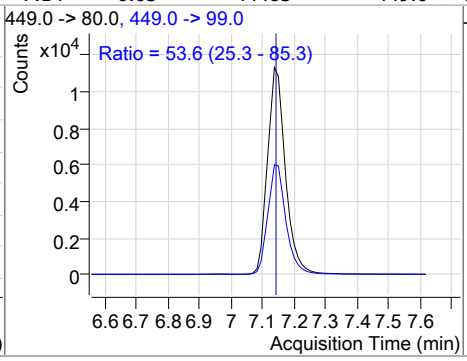


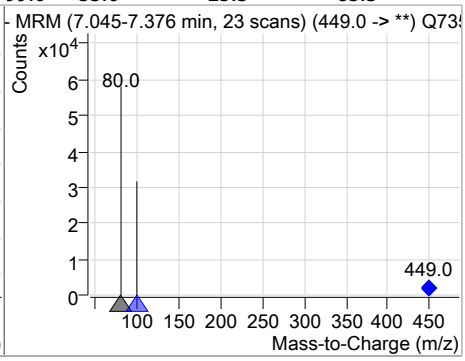


Perfluorinated Compounds by LC/MS/MS

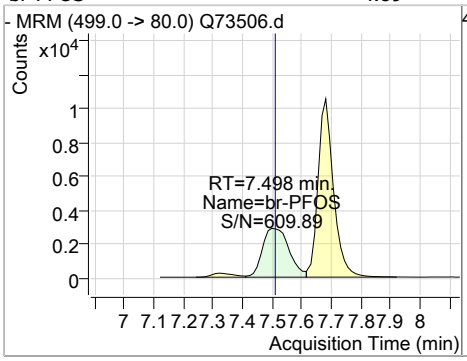
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	21.70	7.14	0.03	44483	449.0 -> 99.0	53.6	25.3	85.3

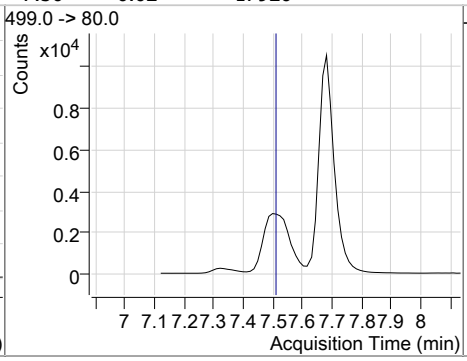


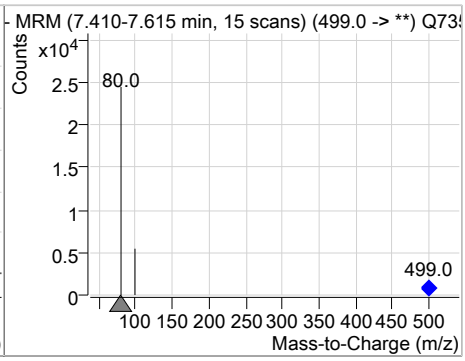




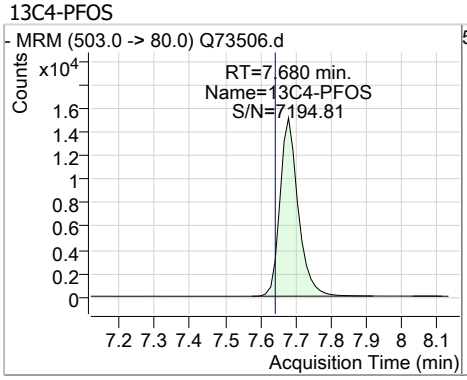
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	4.89	7.50	0.02	17926				

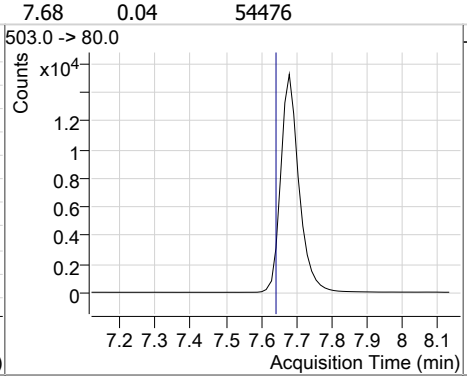


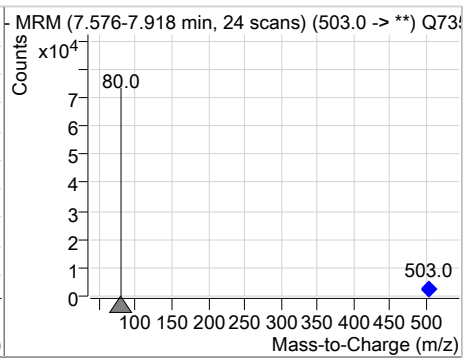




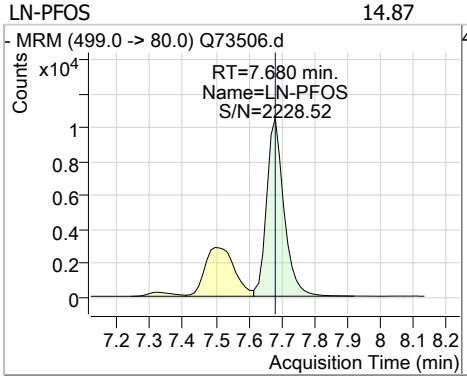
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.68	0.04	54476				

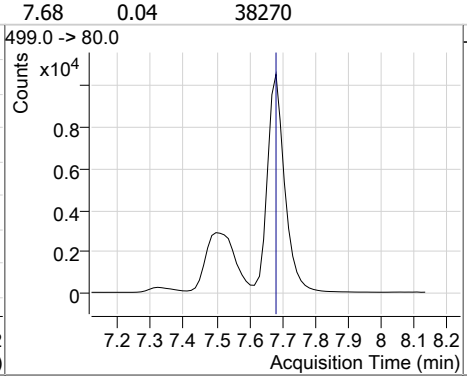


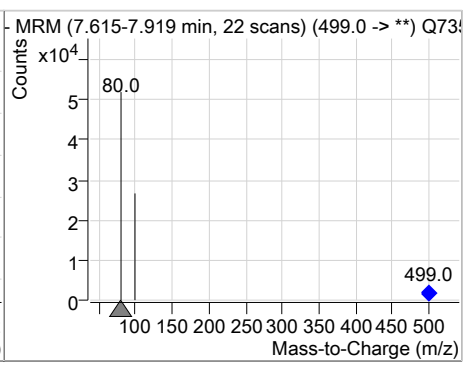




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	14.87	7.68	0.04	38270				

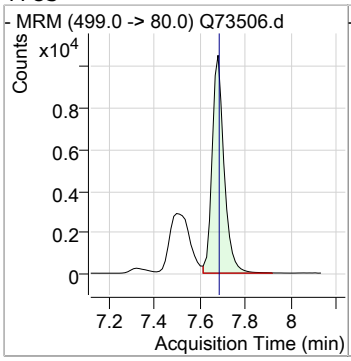


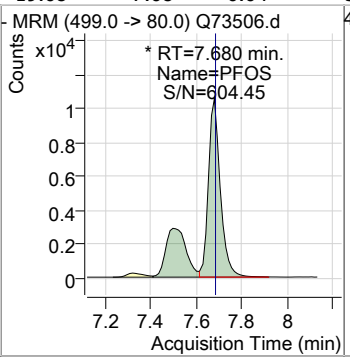


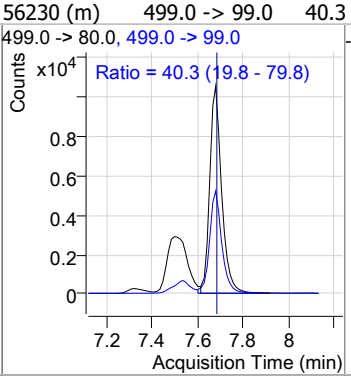


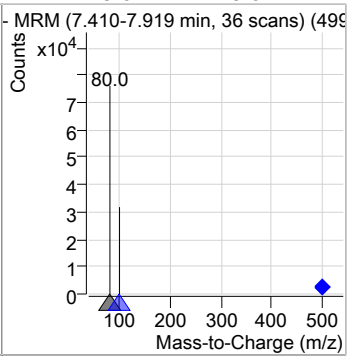
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.68	7.68	0.04	56230 (m)	499.0 -> 99.0	40.3	19.8	79.8

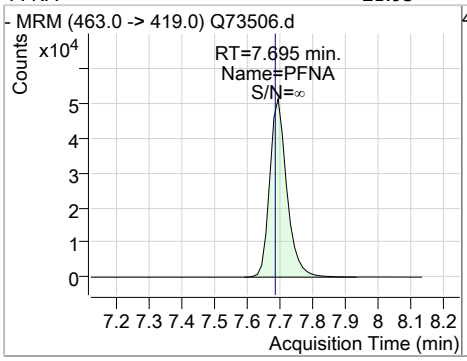


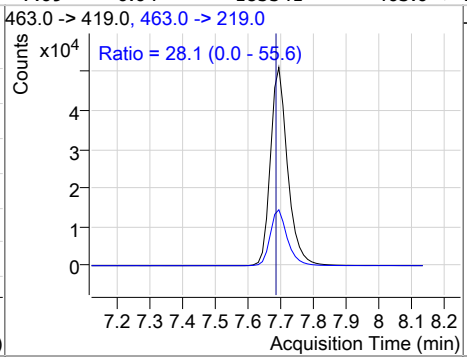


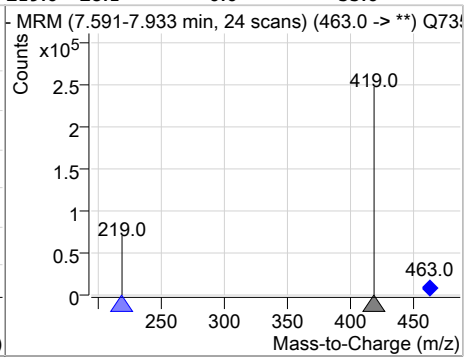




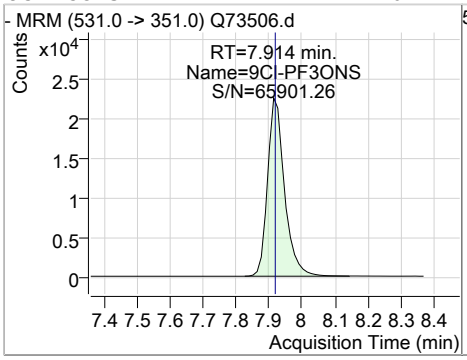
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	21.95	7.69	0.04	185541	463.0 -> 219.0	28.1	0.0	55.6

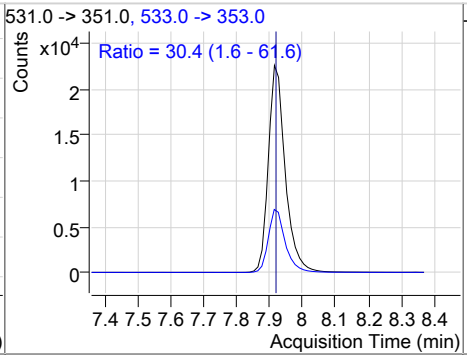


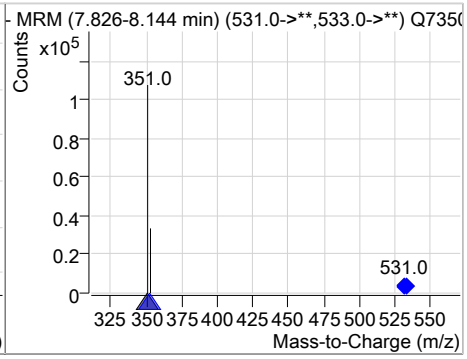




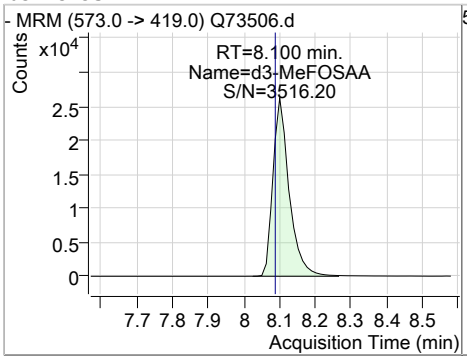
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	21.62	7.91	0.02	80289	533.0 -> 353.0	30.4	1.6	61.6

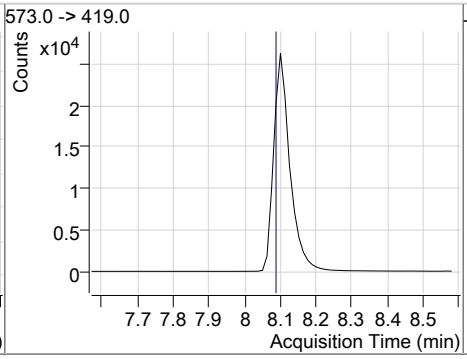


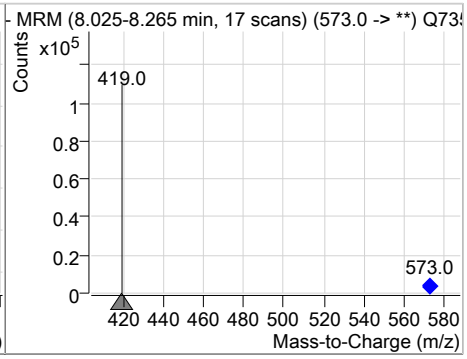




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.10	0.01	82848				

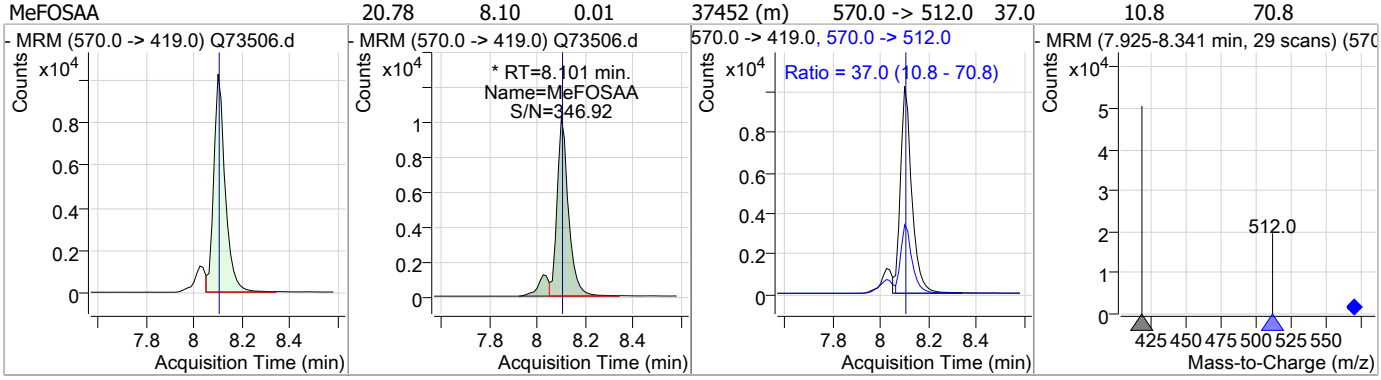




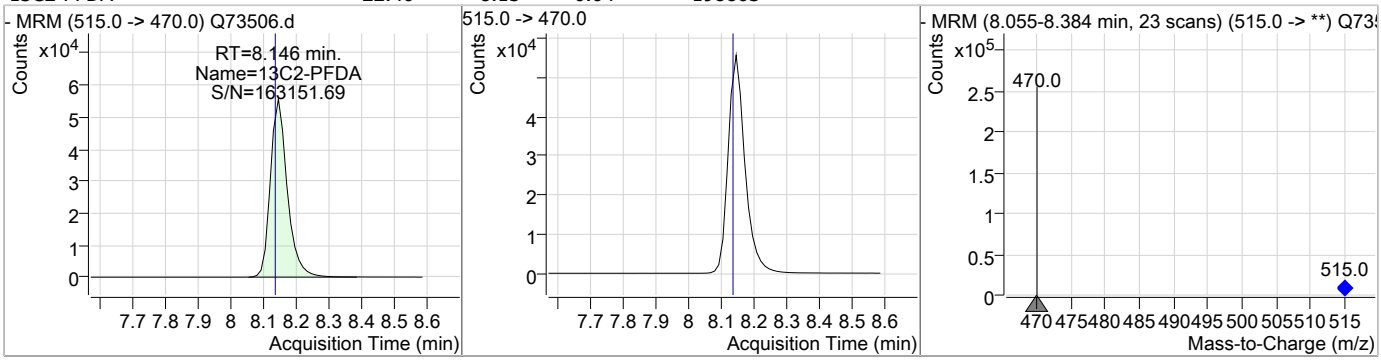


Perfluorinated Compounds by LC/MS/MS

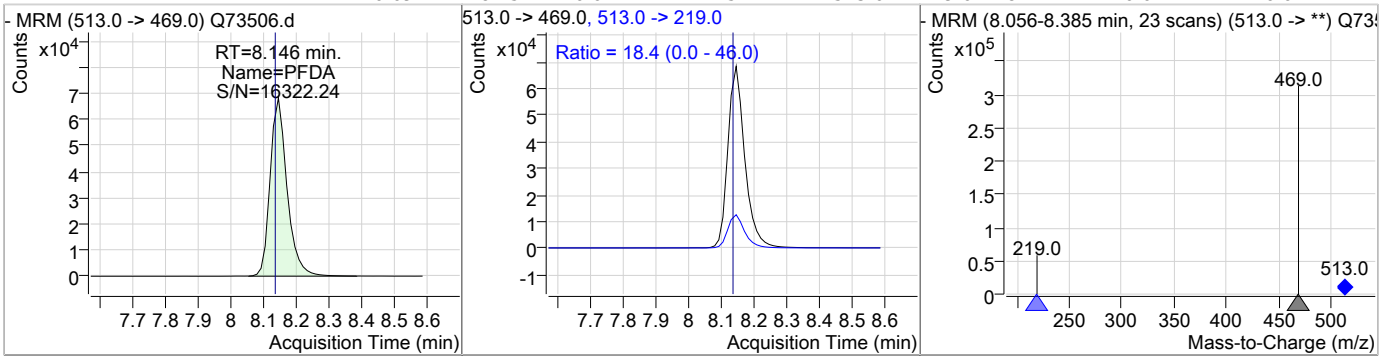
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	20.78	8.10	0.01	37452 (m)	570.0 -> 512.0	37.0	10.8	70.8



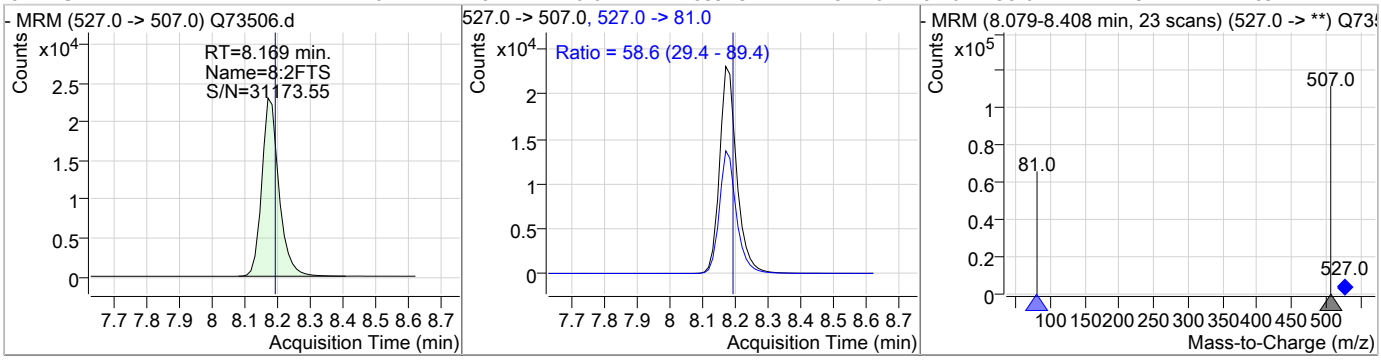
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	22.46	8.15	0.04	198803				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	20.09	8.15	0.04	244521	513.0 -> 219.0	18.4	0.0	46.0

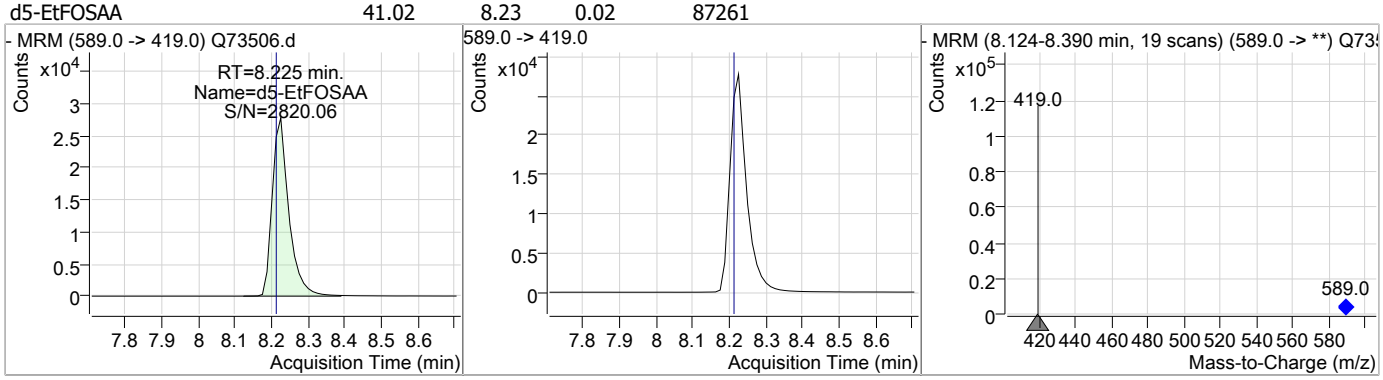


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.14	8.17	0.02	83943	527.0 -> 81.0	58.6	29.4	89.4

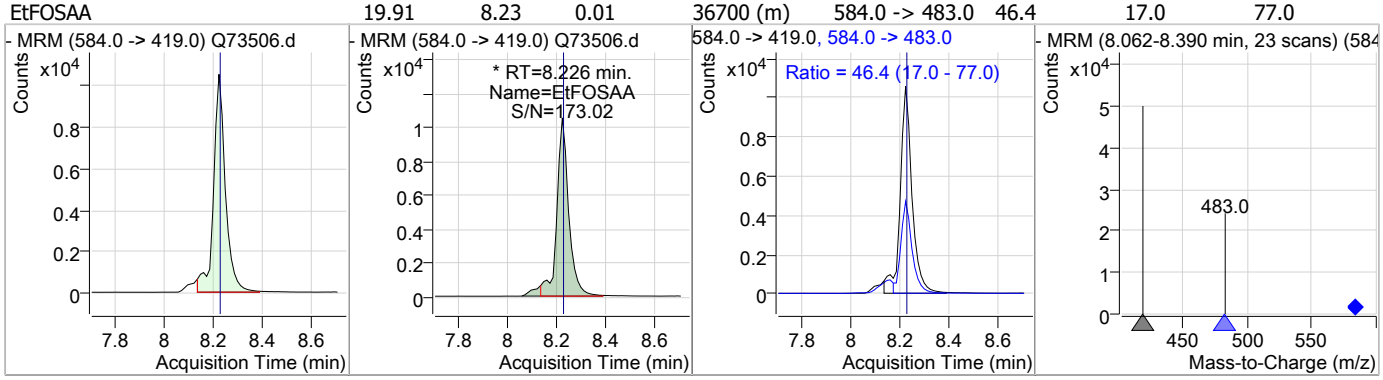


Perfluorinated Compounds by LC/MS/MS

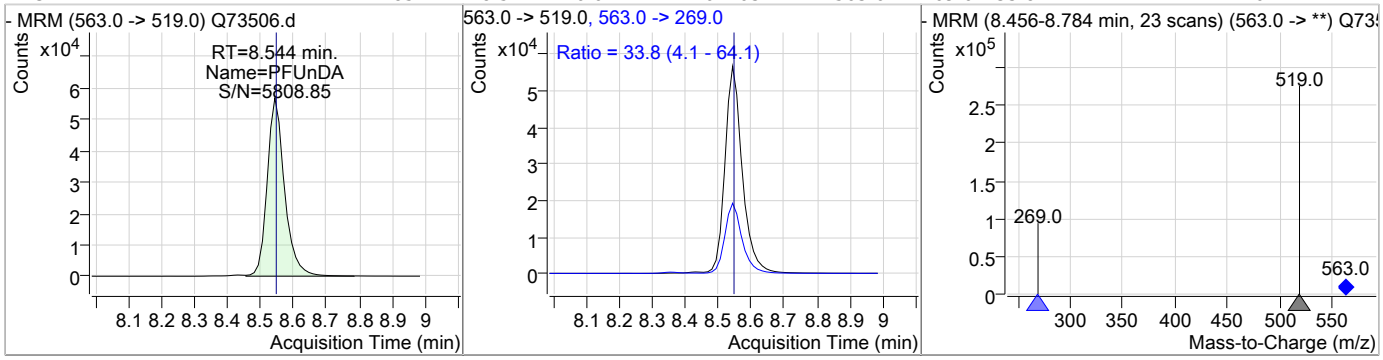
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	41.02	8.23	0.02	87261				



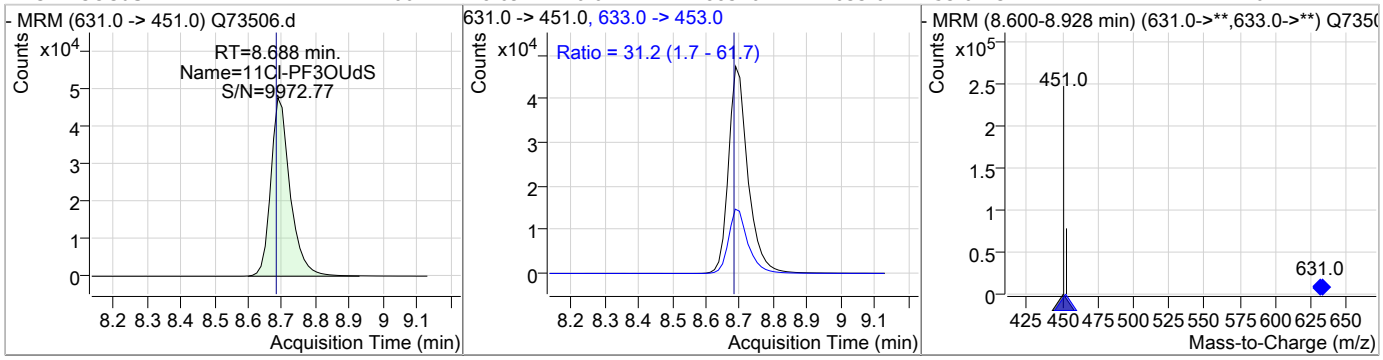
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.91	8.23	0.01	36700 (m)	584.0 -> 483.0	46.4	17.0	77.0



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	21.85	8.54	0.04	207203	563.0 -> 269.0	33.8	4.1	64.1

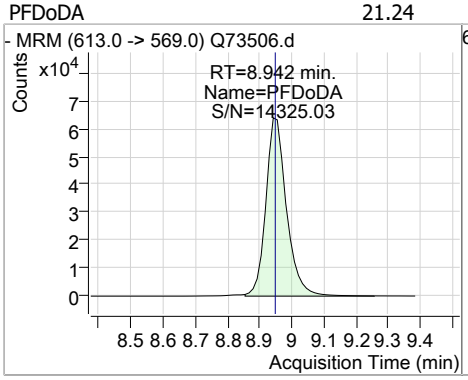


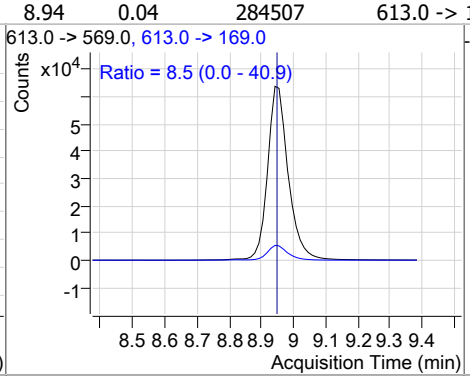
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	21.06	8.69	0.04	188310	633.0 -> 453.0	31.2	1.7	61.7

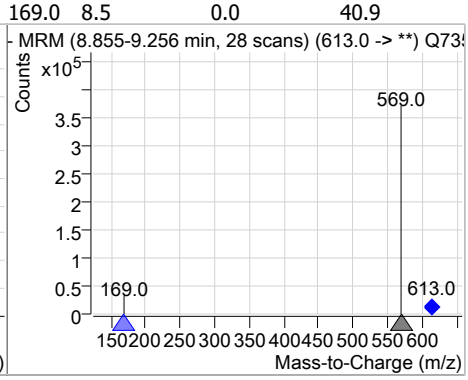


Perfluorinated Compounds by LC/MS/MS

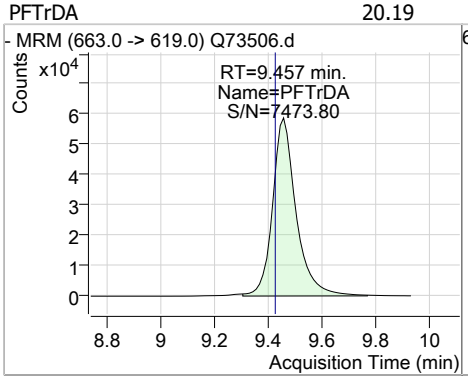
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	21.24	8.94	0.04	284507	613.0 -> 169.0	8.5	0.0	40.9

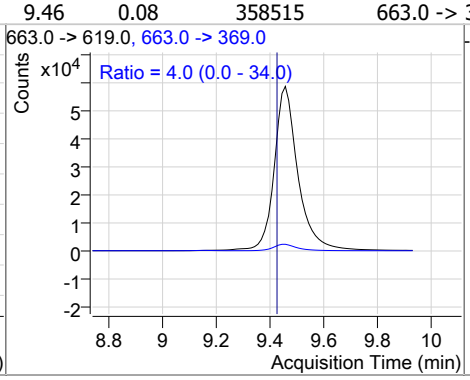


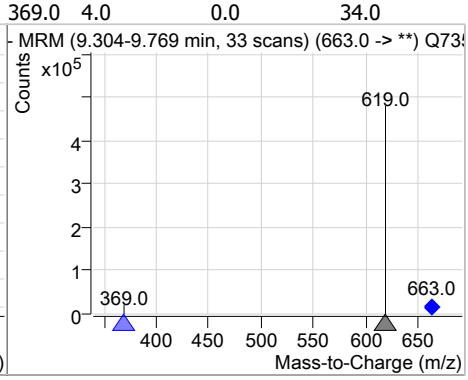




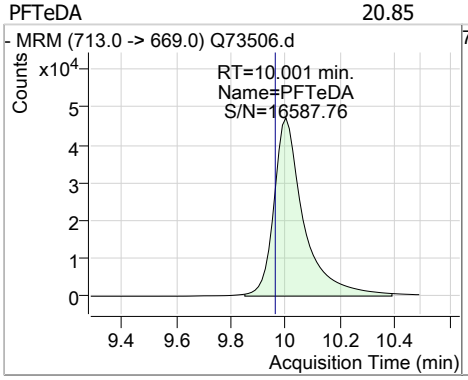
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	20.19	9.46	0.08	358515	663.0 -> 369.0	4.0	0.0	34.0

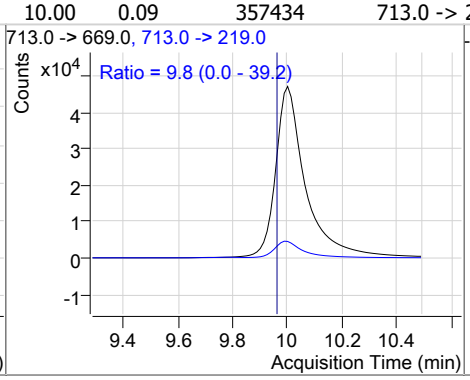


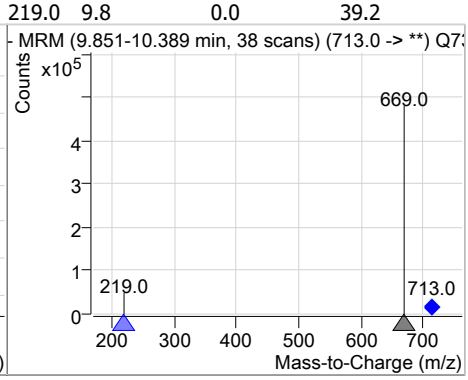




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.85	10.00	0.09	357434	713.0 -> 219.0	9.8	0.0	39.2







Manual Integration Approval Summary

Sample Number: SQ1670-ICC1670
Lab FileID: Q73506.D
Injection Time: 10/27/20 12:40
Method: EPA 537.1 REV 1.0
Analyst approved: 10/29/20 08:24 Mike Eger
Supervisor approved: 10/29/20 08:25 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.48	Split peak
PFOA (Branched Isomers)			7.13	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.68	Split peak
MeFOSAA	2355-31-9		8.10	Split peak
EtFOSAA	2991-50-6		8.23	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 10/29/20 08:25

Perfluorinated Compounds by LC/MS/MS

Data File : Q73507.d
Operator : mikee
Acq. Method : 537.m
Acq. Date-Time : 10/27/2020 12:56:36 PM
Sample Name : IC1670-50
Vial : Vial 8
DA Method File : 537_1027_SQ1670.quantmethod.xml
Batch Name : SQ1670.batch.bin
Sample Information : OP82561,SQ1670,250,,,1.0,1,water

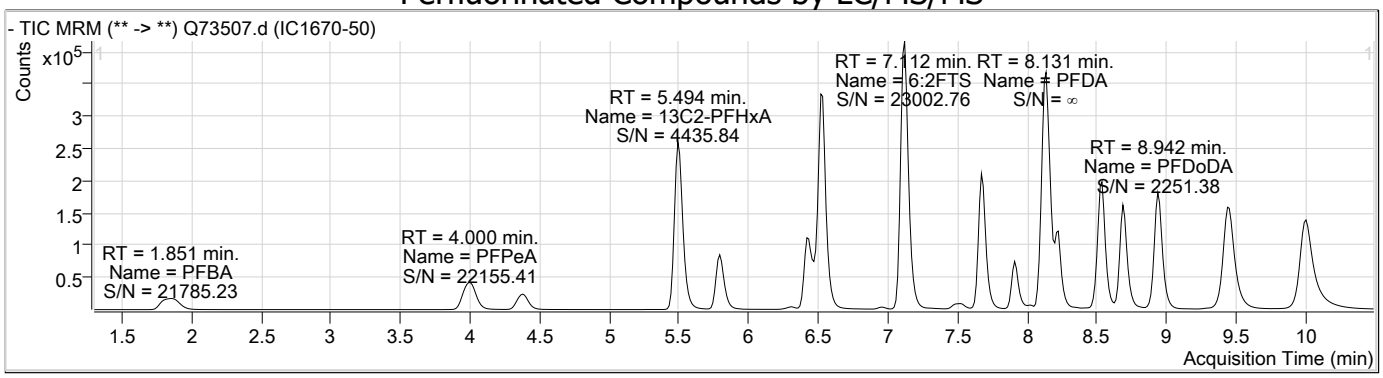
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	7.110	429.0 -> 409.0	127965	20.00	µg/L		0.025
13C2-PFOA	7.129	415.0 -> 370.0	239818	20.00	µg/L		0.027
13C3-PFPeA	4.009	266.0 -> 222.0	110083	20.00	µg/L		0.012
13C4-PFOS	7.667	503.0 -> 80.0	56209	20.00	µg/L		0.025
d3-MeFOSAA	8.100	573.0 -> 419.0	80384	40.00	µg/L		0.012
System Monitoring Compounds							
13C2-PFDA	8.131	515.0 -> 470.0	468828	51.98	µg/L		0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 259.9%			
13C2-PFHxA	5.494	315.0 -> 270.0	564502	52.12	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 260.6%			
d5-EtFOSAA	8.225	589.0 -> 419.0	211120	102.30	µg/L		0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 255.7%			
13C3-HFPO-DA	5.801	287.0 -> 169.0	179607	105.92	µg/L		0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 264.8%			
Target Compounds							QValue
br-PFHxS	6.306	399.0 -> 80.0	14477	6.14	µg/L		100
LN-PFHxS	6.481	399.0 -> 80.0	96337	45.54	µg/L		100
6:2FTS	7.112	427.0 -> 407.0	271812	46.05	µg/L		99
8:2FTS	8.169	527.0 -> 507.0	210609	46.43	µg/L		99
EtFOSAA	8.226	584.0 -> 419.0	90905	50.84	µg/L	m	99
LN-PFOA	7.130	413.0 -> 369.0	582012	50.40	µg/L		100
MeFOSAA	8.101	570.0 -> 419.0	93432	53.43	µg/L	m	95
PFBA	1.851	213.0 -> 169.0	159831	50.53	µg/L		100
PFBS	4.378	299.0 -> 80.0	94039	51.20	µg/L		99
PFDA	8.131	513.0 -> 469.0	583585	49.96	µg/L		95
PFDoDA	8.942	613.0 -> 569.0	716943	51.88	µg/L		94
br-PFOA	7.130	413.0 -> 369.0	582012	53.20	µg/L	m	100
PFHpA	6.427	363.0 -> 319.0	345902	51.80	µg/L		98
PFHpS	7.137	449.0 -> 80.0	112607	53.23	µg/L		97
PFHxA	5.496	313.0 -> 269.0	513732	52.04	µg/L		99
PFHxS	6.481	399.0 -> 80.0	110768	51.64	µg/L	m	97
PFNA	7.682	463.0 -> 419.0	461498	53.58	µg/L		95
LN-PFOS	7.668	499.0 -> 80.0	97282	38.33	µg/L		100
PFOA	7.130	413.0 -> 369.0	582012	50.40	µg/L		99
PFOS	7.668	499.0 -> 80.0	141343	50.36	µg/L	m	86
PFPeA	4.000	263.0 -> 219.0	169356	52.89	µg/L		100
br-PFOS	7.498	499.0 -> 80.0	44184	11.92	µg/L		100
PFTeDA	10.001	713.0 -> 669.0	933155	52.77	µg/L		98
PFTrDA	9.444	663.0 -> 619.0	935523	51.06	µg/L		100
PFUnDA	8.544	563.0 -> 519.0	512804	52.42	µg/L		99
ADONA	6.535	377.0 -> 251.0	993019	51.74	µg/L		97
9Cl-PF3ONS	7.914	531.0 -> 351.0	199719	52.77	µg/L		98
11Cl-PF3OUdS	8.688	631.0 -> 451.0	475398	52.17	µg/L		99
HFPO-DA	5.792	329.0 -> 169.0	126899	52.32	µg/L		98

Perfluorinated Compounds by LC/MS/MS

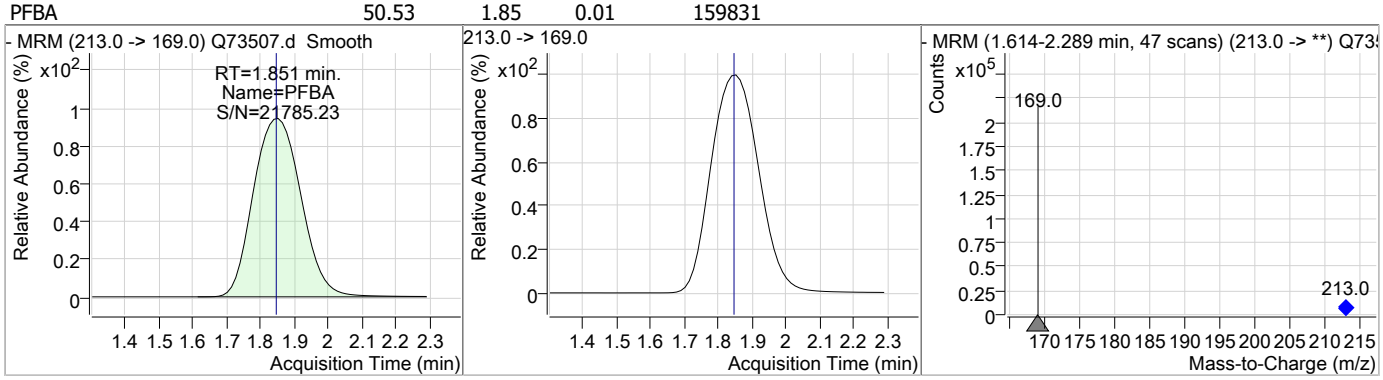
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

= Qualifier out of range, m = manually integrated, + = Area summed

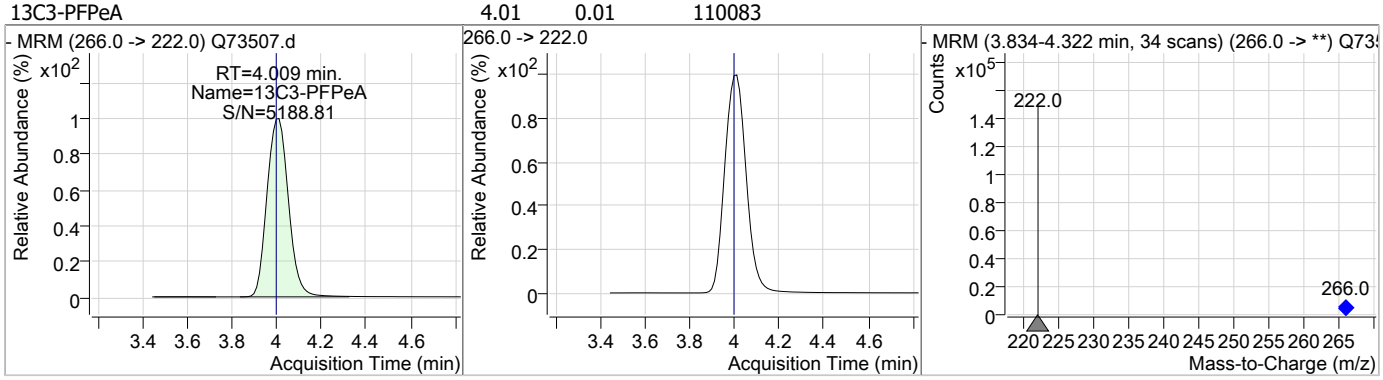
Perfluorinated Compounds by LC/MS/MS



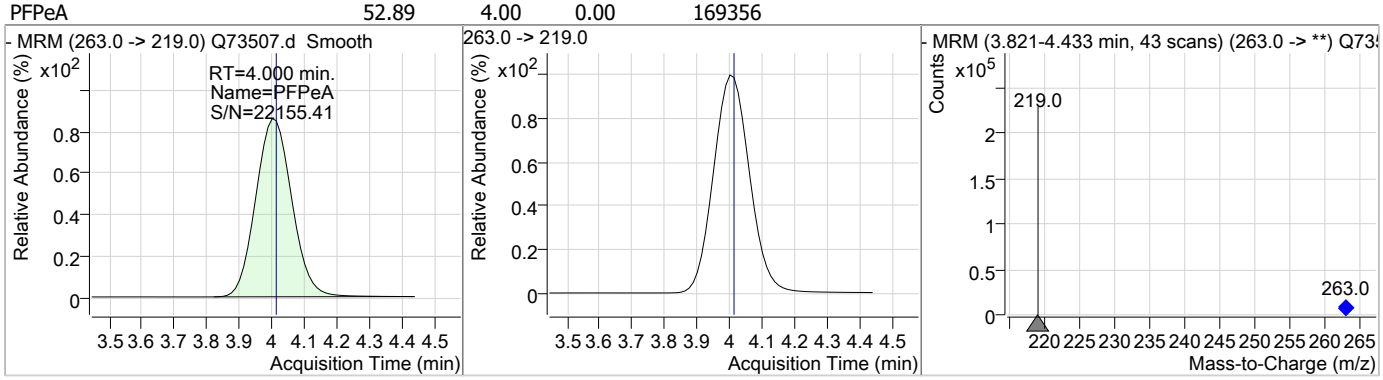
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	50.53	1.85	0.01	159831				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.01	0.01	110083				

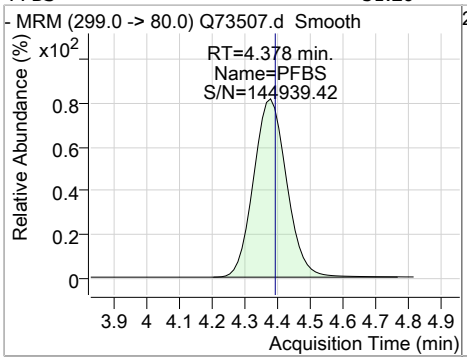


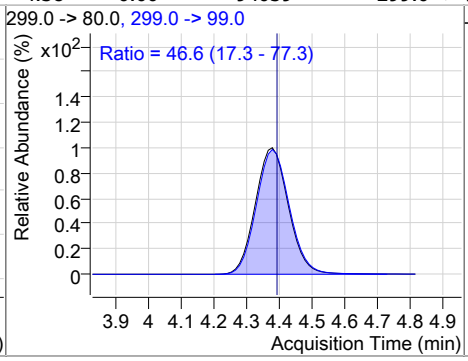
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	52.89	4.00	0.00	169356				

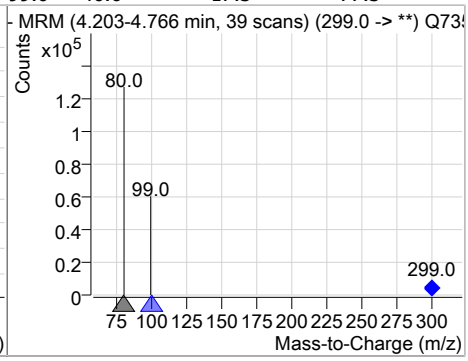


Perfluorinated Compounds by LC/MS/MS

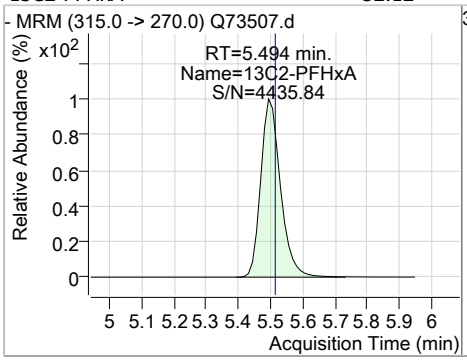
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	51.20	4.38	0.00	94039	299.0 -> 99.0	46.6	17.3	77.3

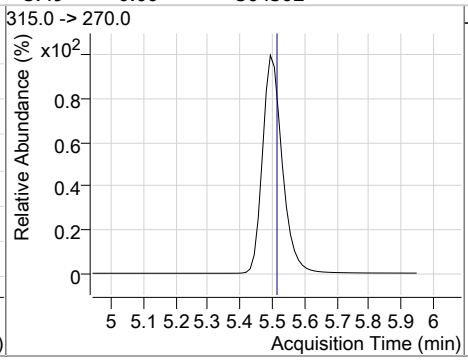


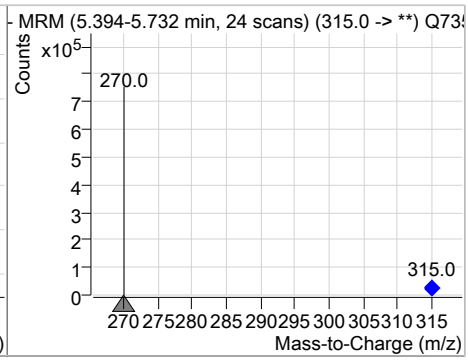




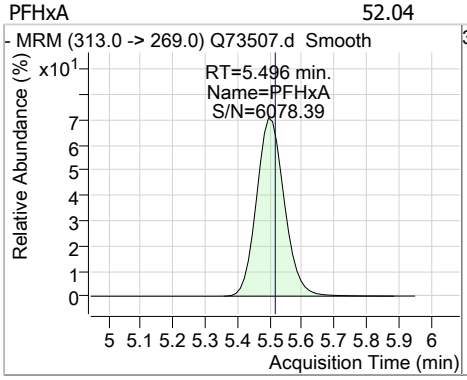
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	52.12	5.49	0.00	564502				

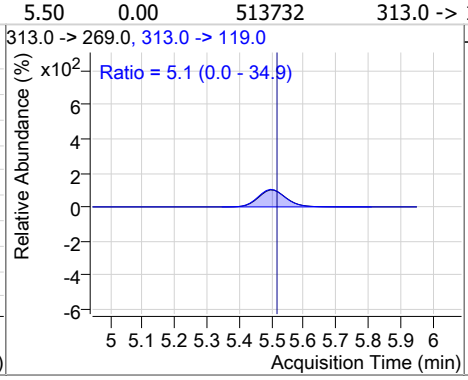


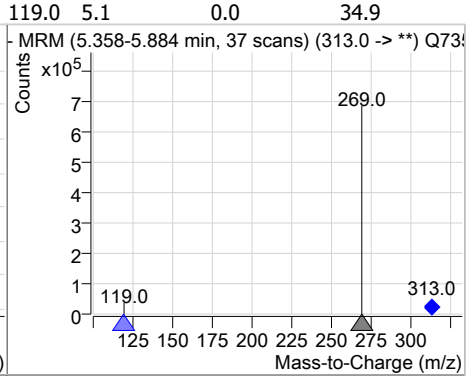




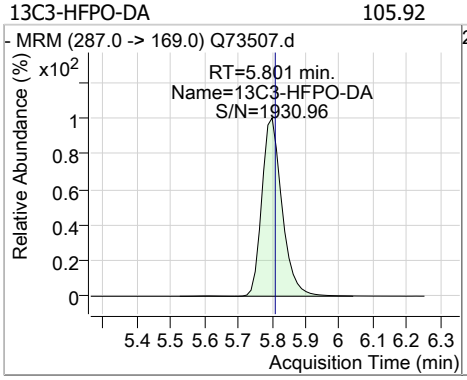
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	52.04	5.50	0.00	513732	313.0 -> 119.0	5.1	0.0	34.9

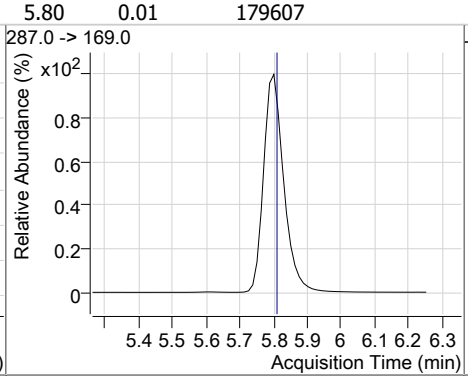


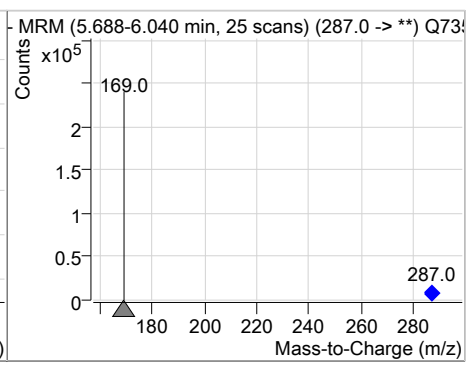




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	105.92	5.80	0.01	179607				

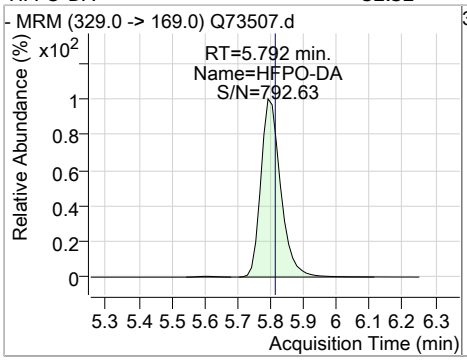


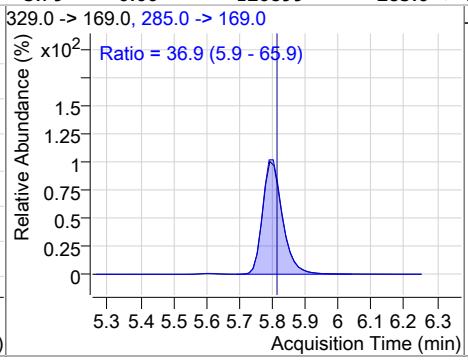


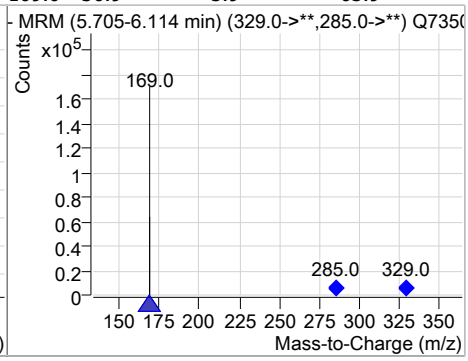


Perfluorinated Compounds by LC/MS/MS

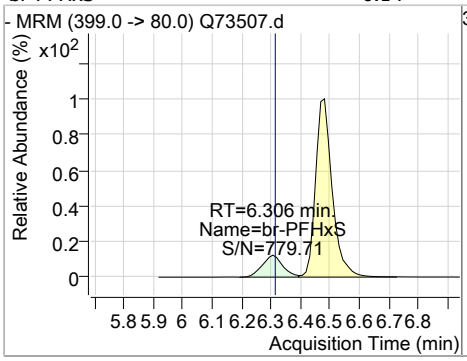
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	52.32	5.79	0.00	126899	285.0 -> 169.0	36.9	5.9	65.9

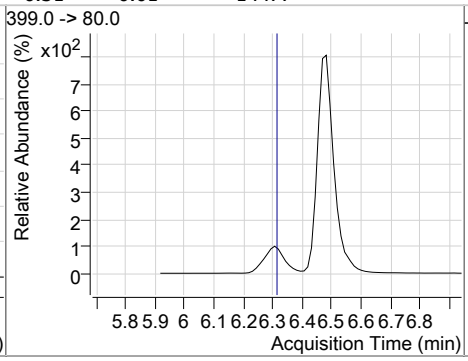


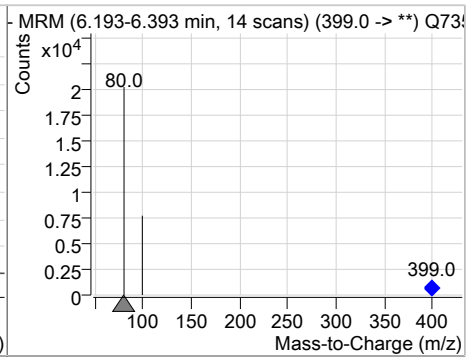




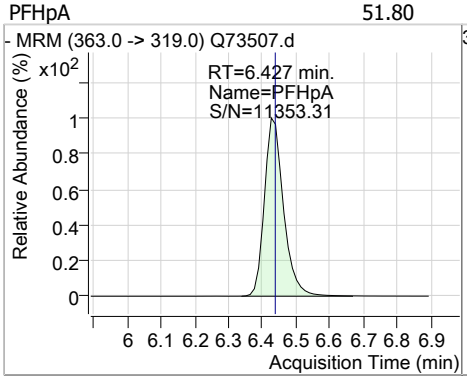
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	6.14	6.31	0.01	14477				

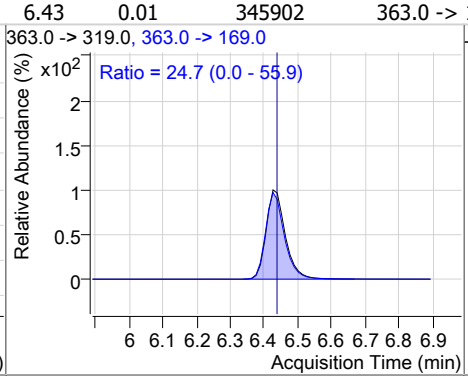


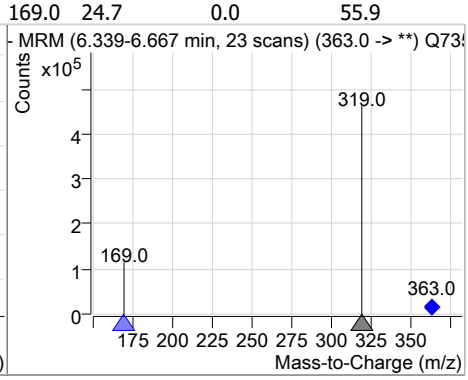




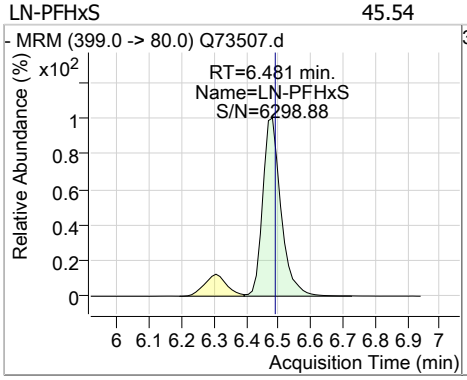
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	51.80	6.43	0.01	345902	363.0 -> 169.0	24.7	0.0	55.9

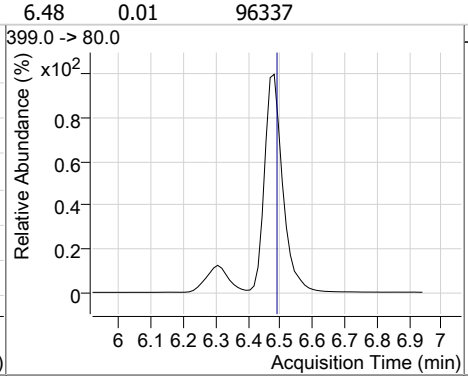


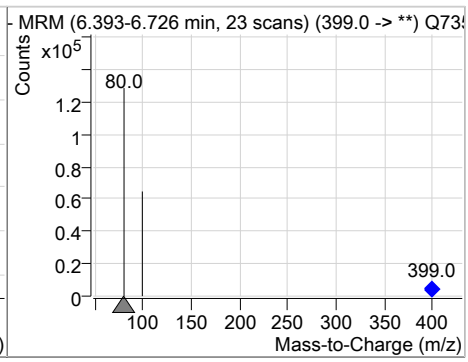




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	45.54	6.48	0.01	96337				

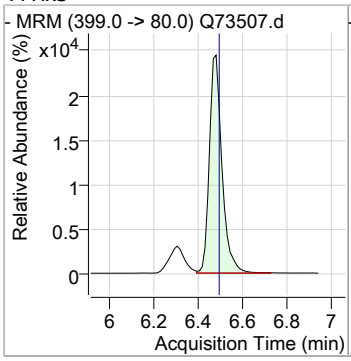


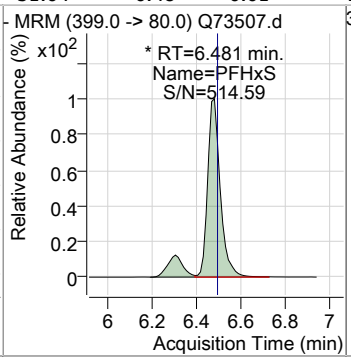


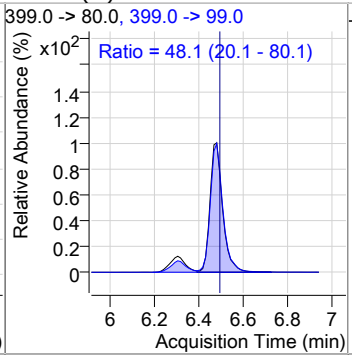


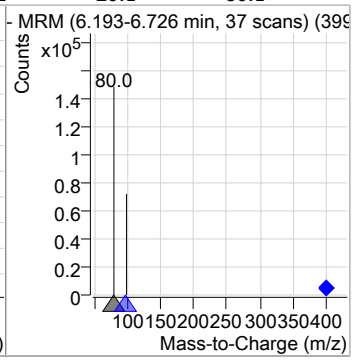
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	51.64	6.48	0.01	110768 (m)	399.0 -> 99.0	48.1	20.1	80.1

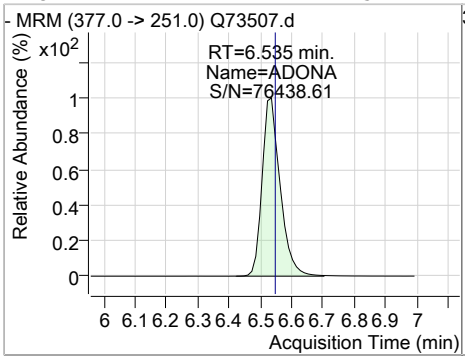


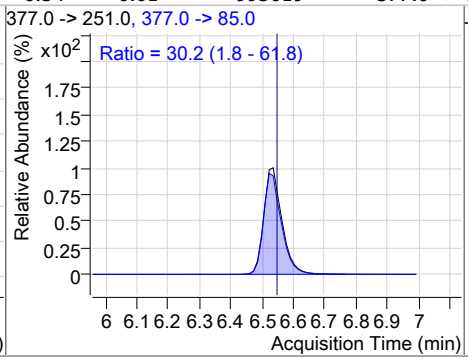


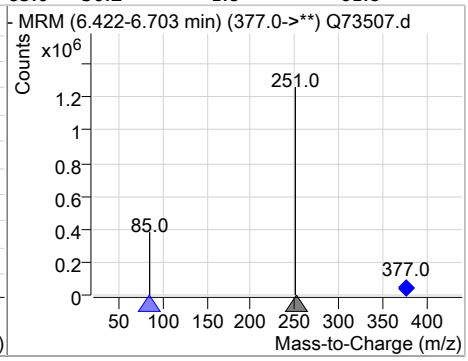




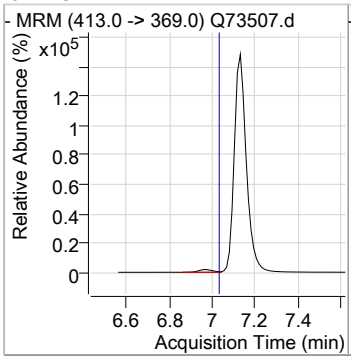
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	51.74	6.54	0.01	993019	377.0 -> 85.0	30.2	1.8	61.8

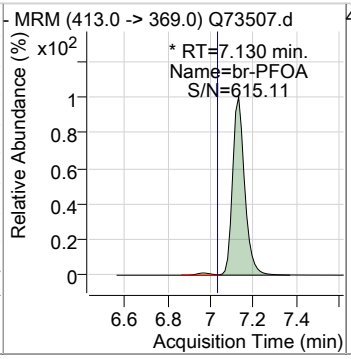


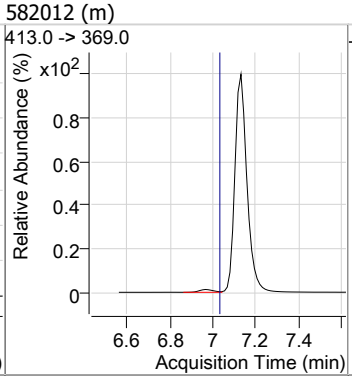


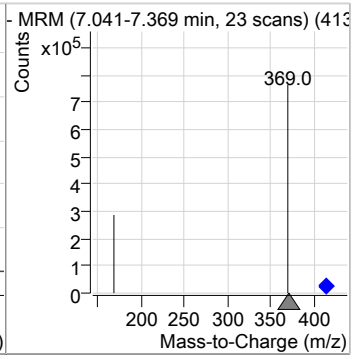


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	53.20	7.13	0.13	582012 (m)				

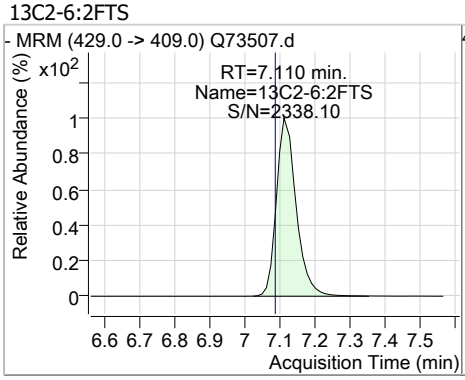


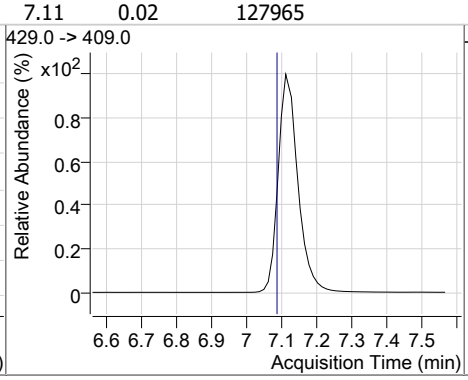


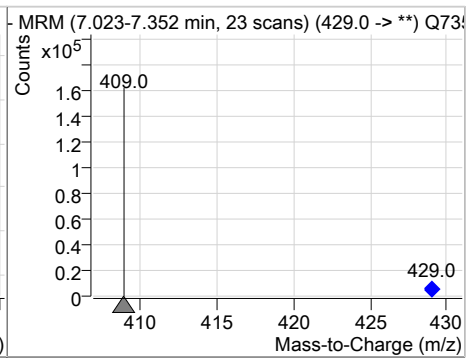




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.11	0.02	127965				

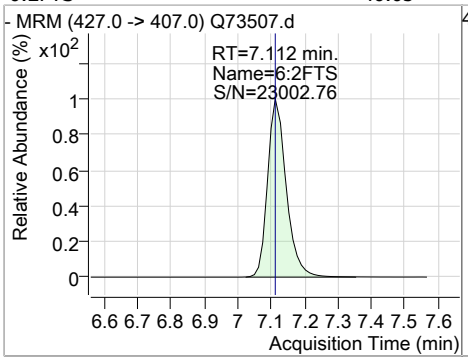


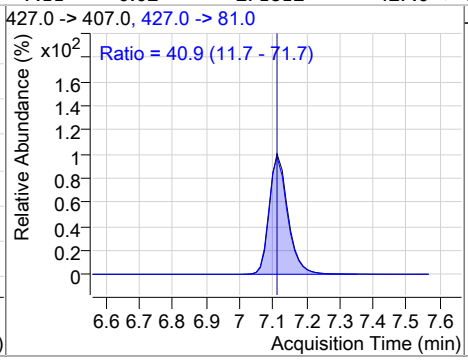


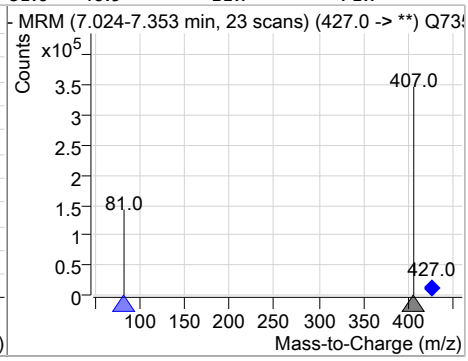


Perfluorinated Compounds by LC/MS/MS

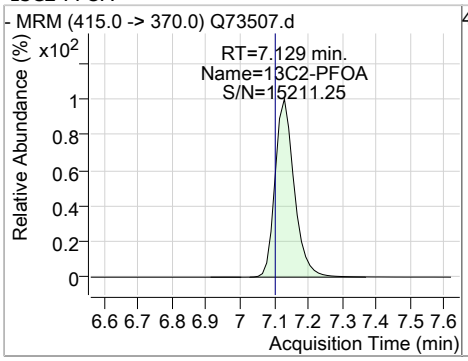
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	46.05	7.11	0.02	271812	427.0 -> 81.0	40.9	11.7	71.7

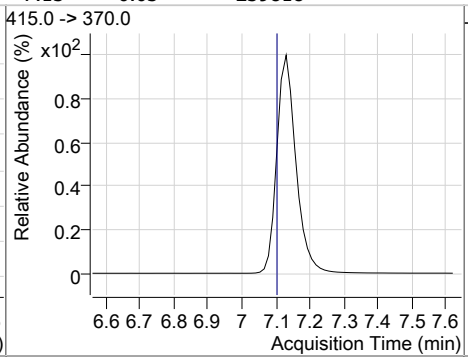


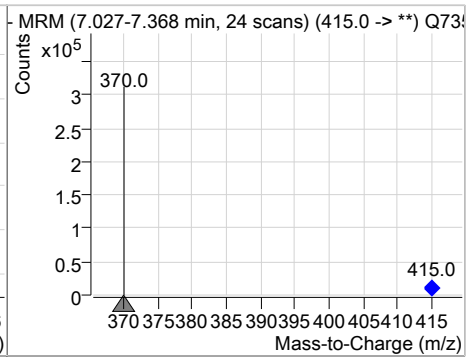




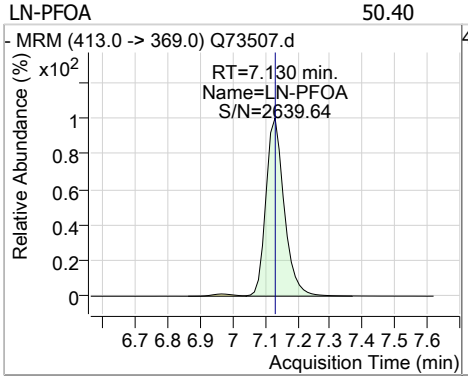
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.13	0.03	239818				

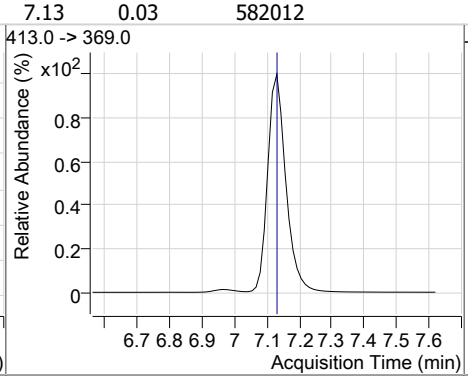


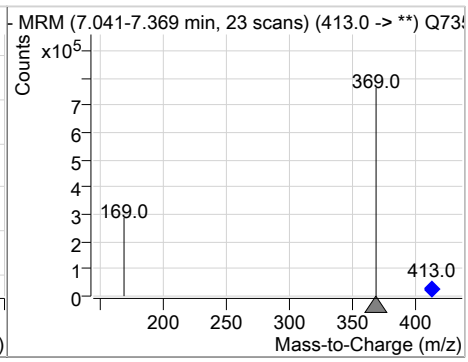




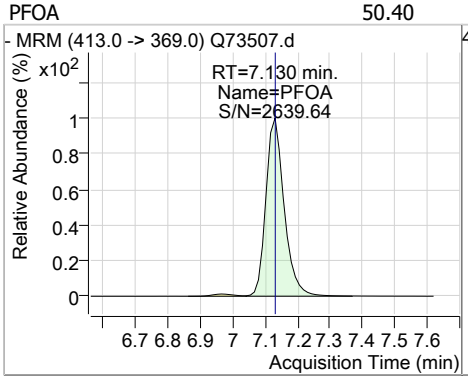
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	50.40	7.13	0.03	582012				

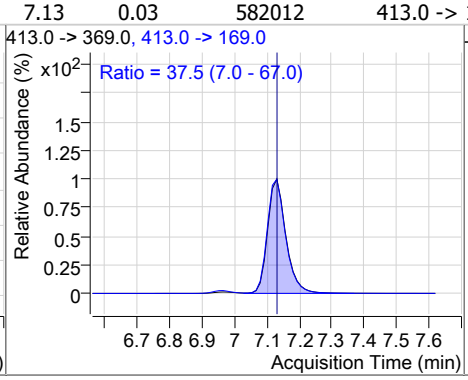


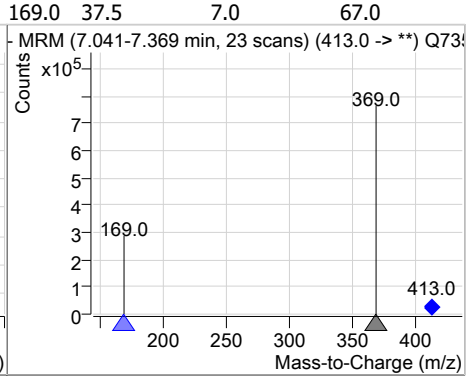




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	50.40	7.13	0.03	582012	413.0 -> 169.0	37.5	7.0	67.0

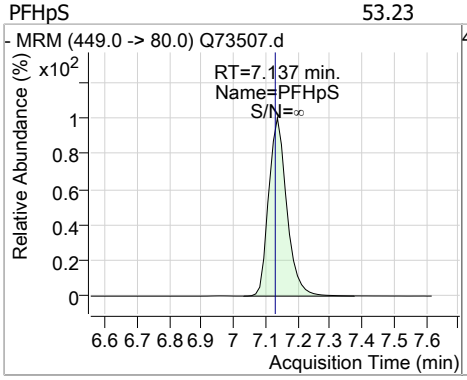


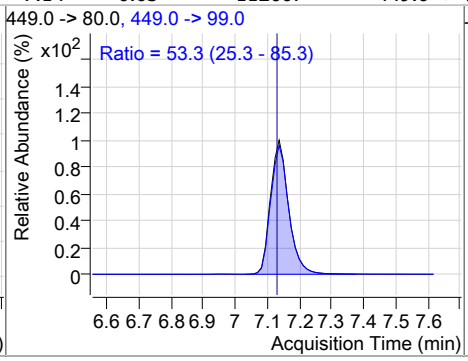


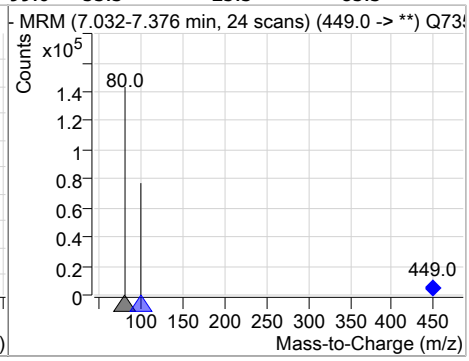


Perfluorinated Compounds by LC/MS/MS

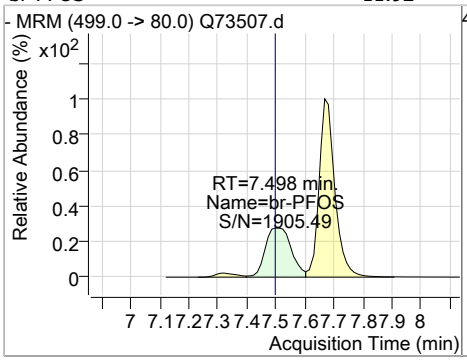
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	53.23	7.14	0.03	112607	449.0 -> 99.0	53.3	25.3	85.3

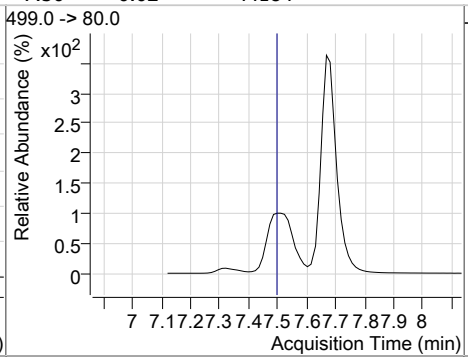


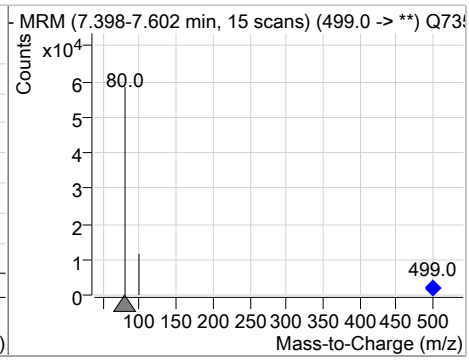




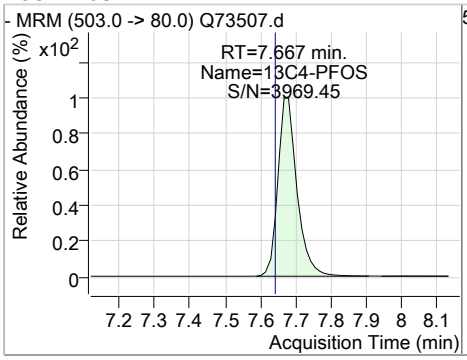
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	11.92	7.50	0.02	44184				

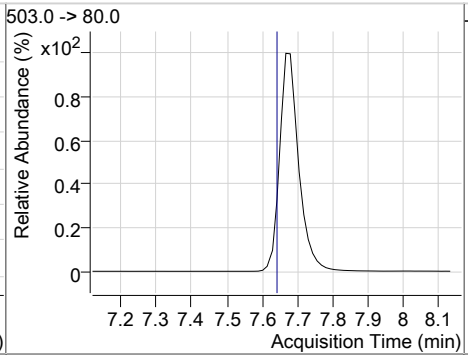


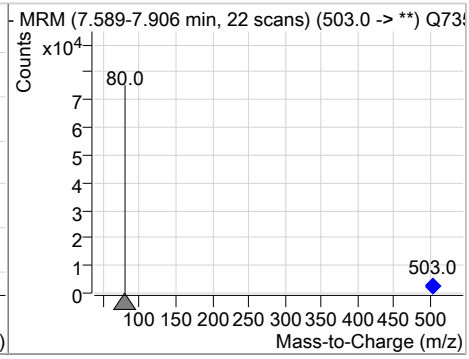




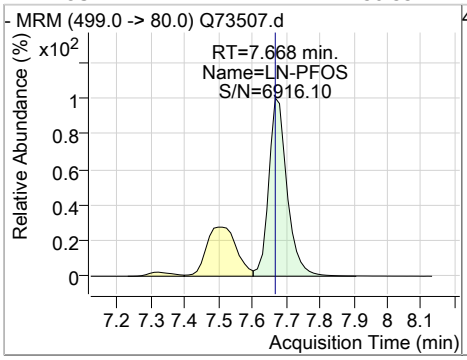
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.67	0.02	56209				

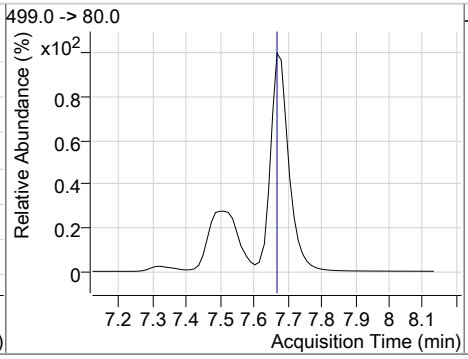


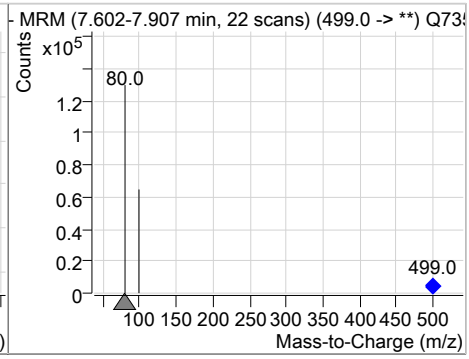




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	38.33	7.67	0.02	97282				

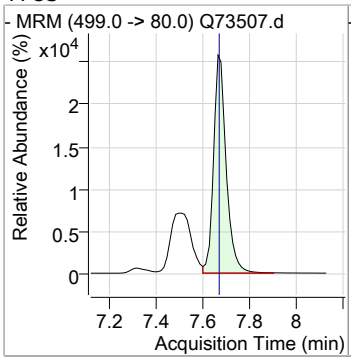


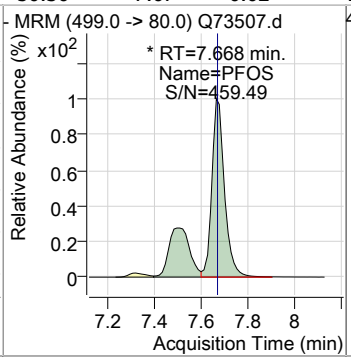


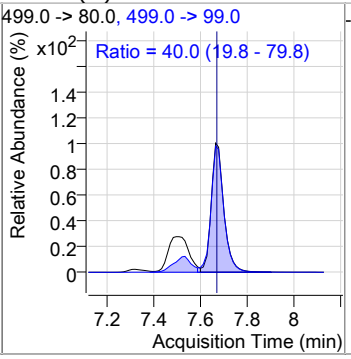


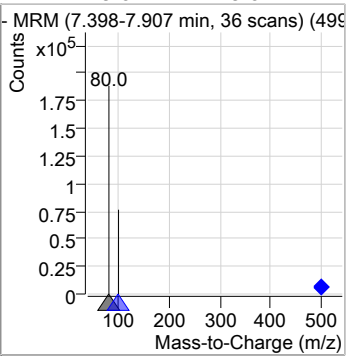
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	50.36	7.67	0.02	141343 (m)	499.0 -> 99.0	40.0	19.8	79.8

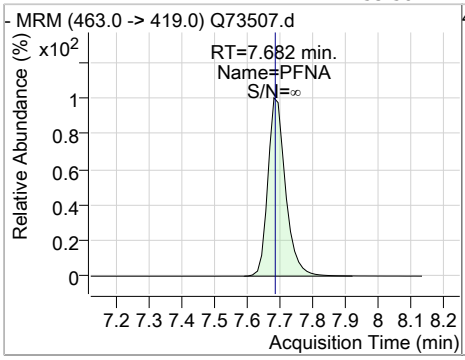


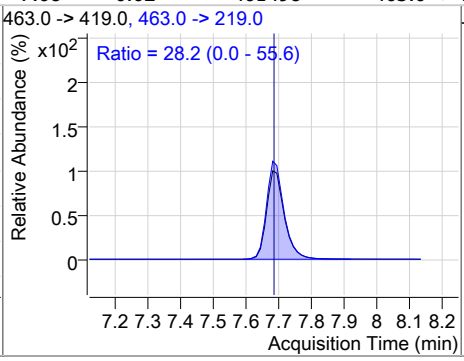


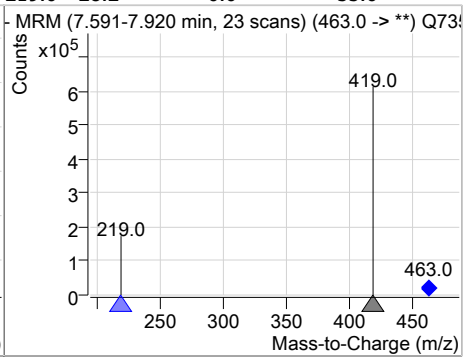




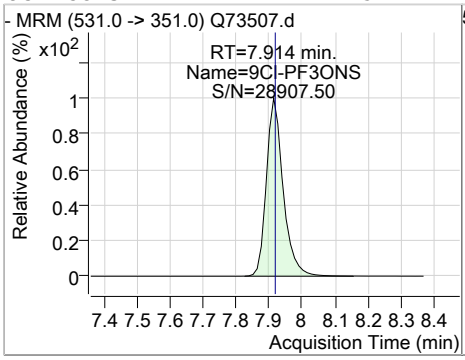
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	53.58	7.68	0.02	461498	463.0 -> 219.0	28.2	0.0	55.6

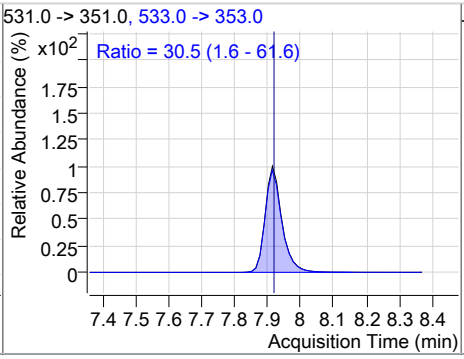


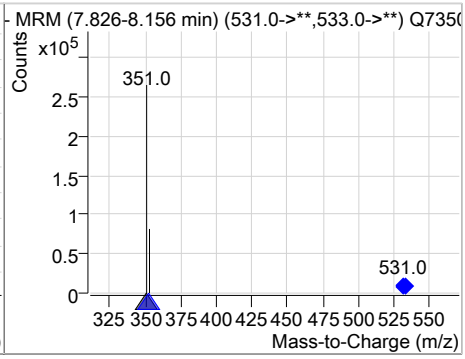




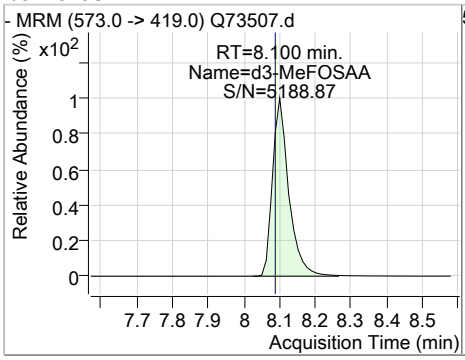
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	52.77	7.91	0.02	199719	533.0 -> 353.0	30.5	1.6	61.6

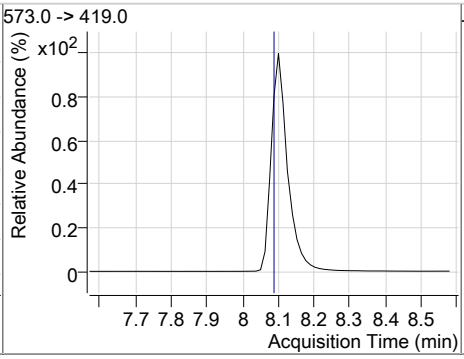


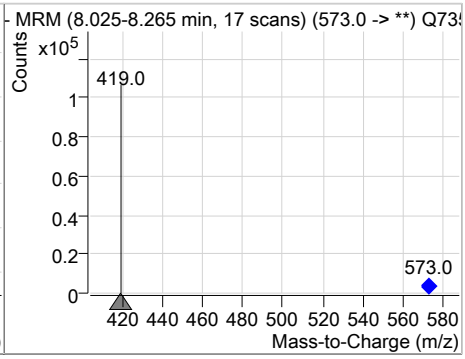




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.10	0.01	80384				

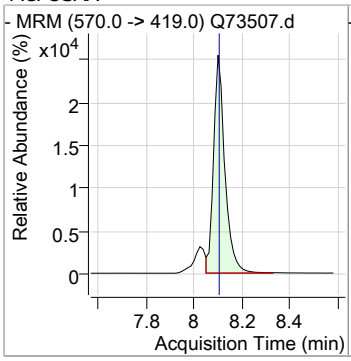


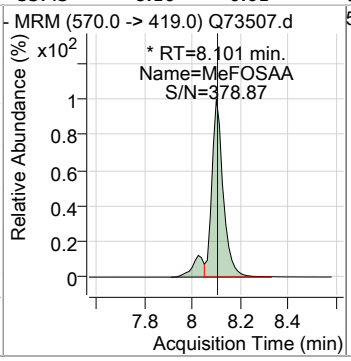


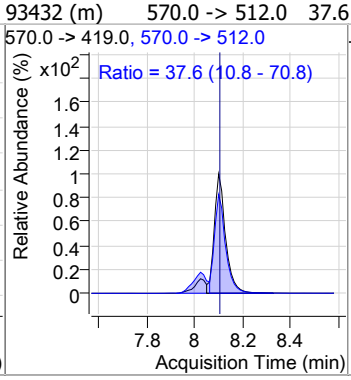


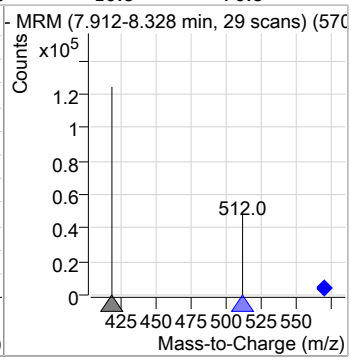
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	53.43	8.10	0.01	93432 (m)	570.0 -> 512.0	37.6	10.8	70.8

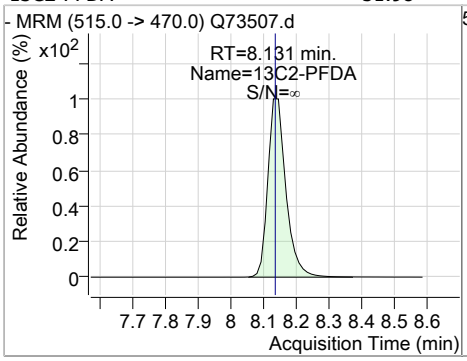


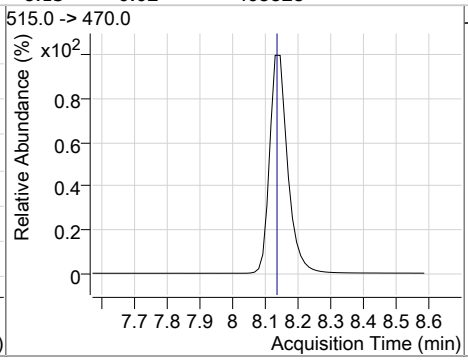


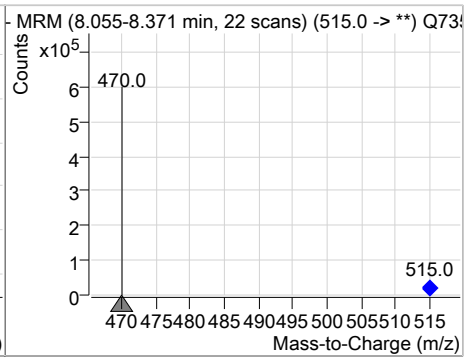




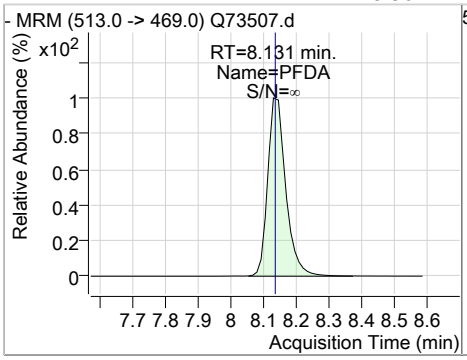
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	51.98	8.13	0.02	468828				

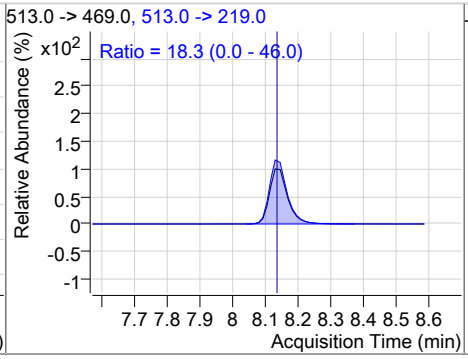


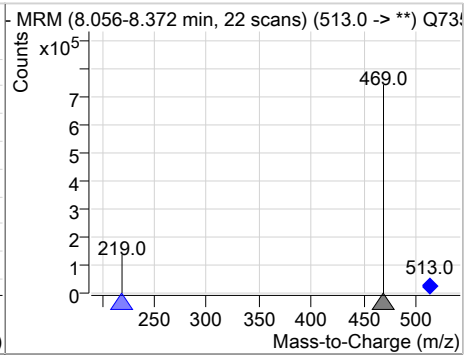




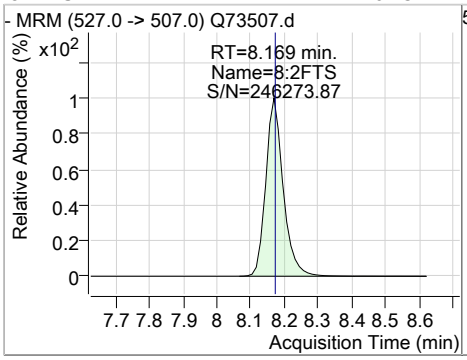
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	49.96	8.13	0.02	583585	513.0 -> 219.0	18.3	0.0	46.0

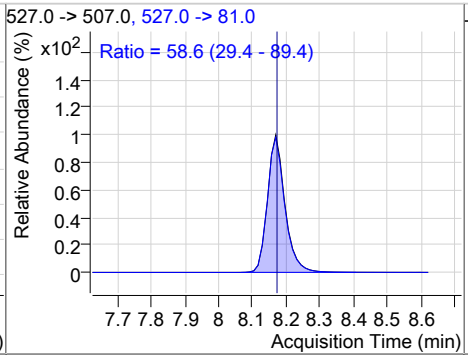


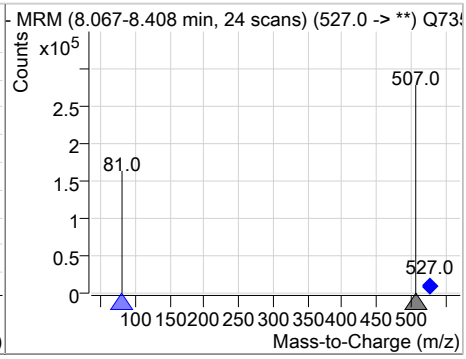




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	46.43	8.17	0.02	210609	527.0 -> 81.0	58.6	29.4	89.4

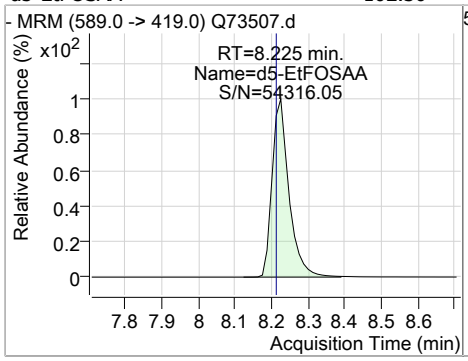


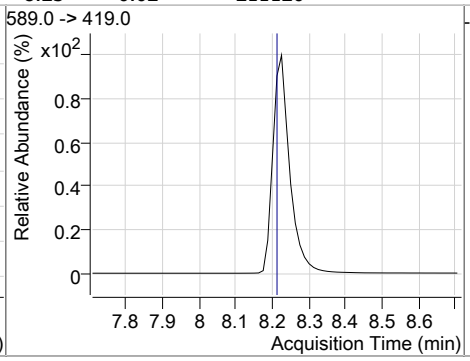


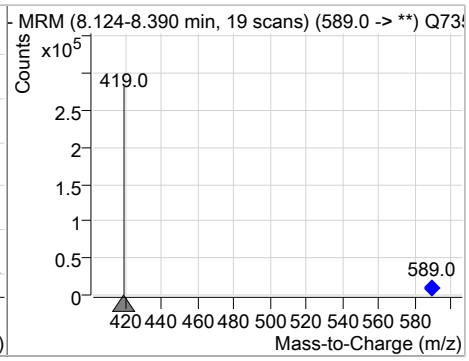


Perfluorinated Compounds by LC/MS/MS

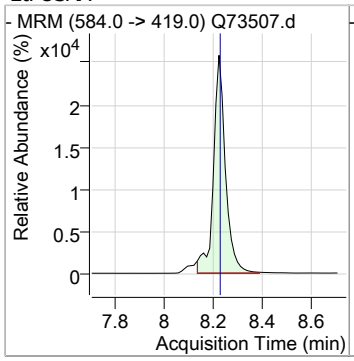
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	102.30	8.23	0.02	211120				

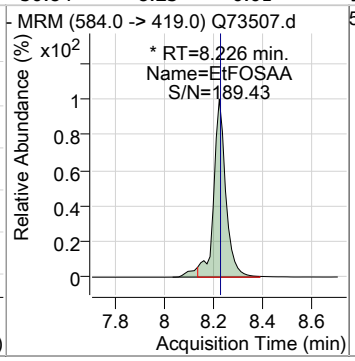


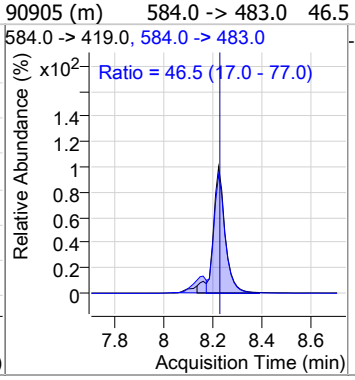


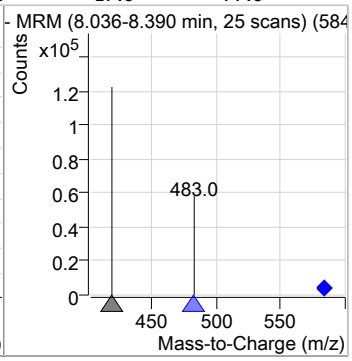


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	50.84	8.23	0.01	90905 (m)	584.0 -> 483.0	46.5	17.0	77.0

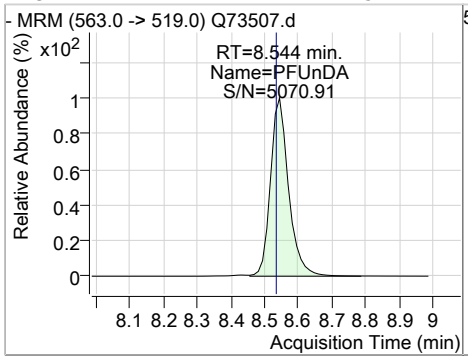


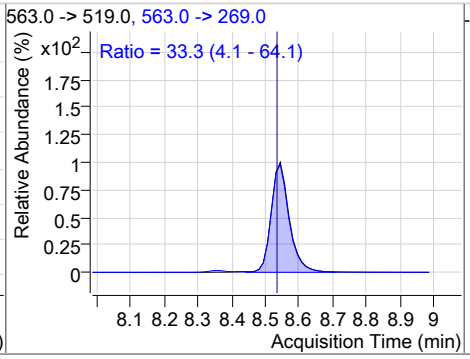


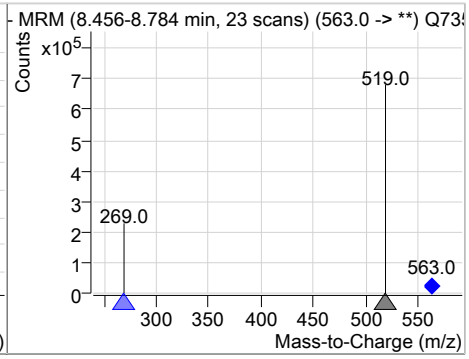




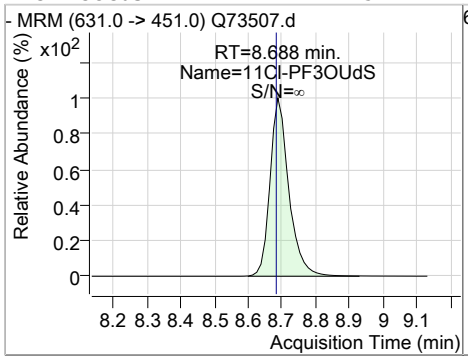
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	52.42	8.54	0.04	512804	563.0 -> 269.0	33.3	4.1	64.1

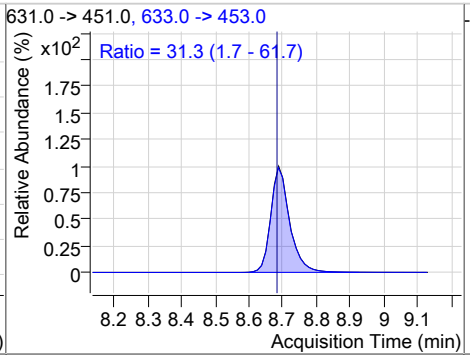


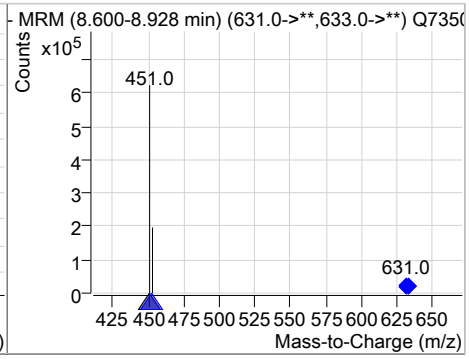




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	52.17	8.69	0.04	475398	633.0 -> 453.0	31.3	1.7	61.7

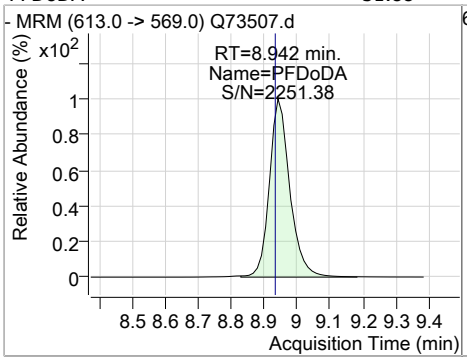


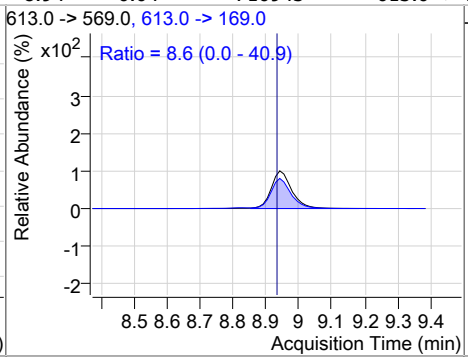


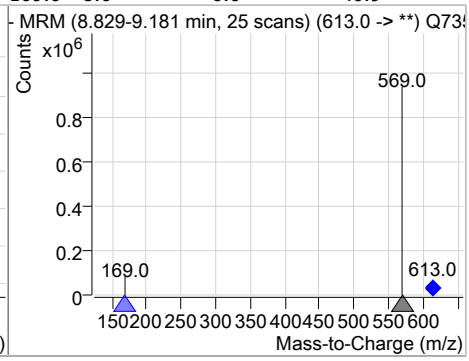


Perfluorinated Compounds by LC/MS/MS

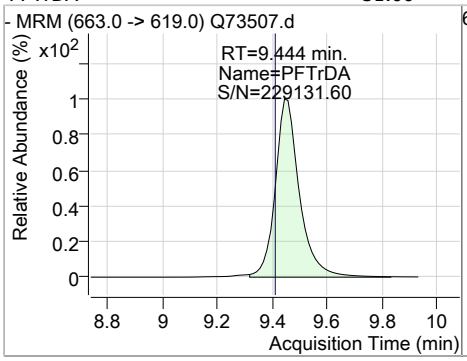
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	51.88	8.94	0.04	716943	613.0 -> 169.0	8.6	0.0	40.9

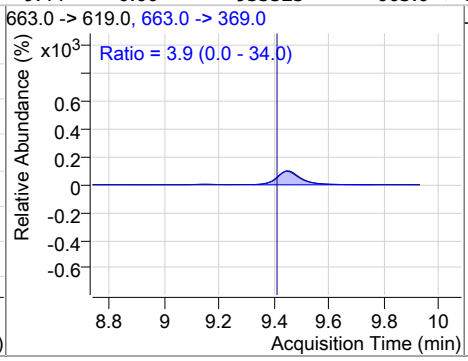


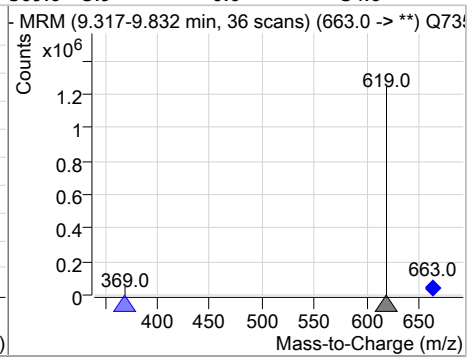




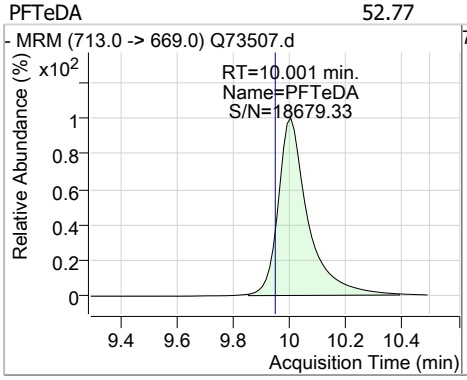
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	51.06	9.44	0.06	935523	663.0 -> 369.0	3.9	0.0	34.0

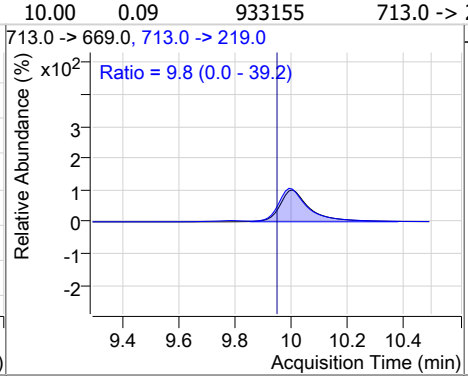


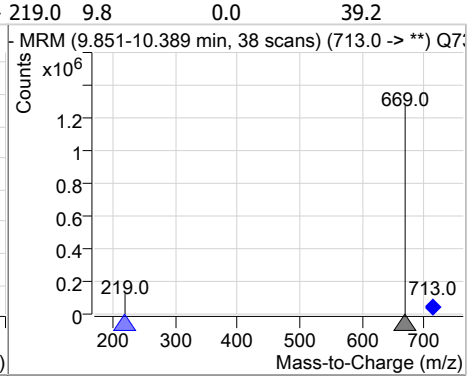




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	52.77	10.00	0.09	933155	713.0 -> 219.0	9.8	0.0	39.2







Manual Integration Approval Summary

Sample Number: SQ1670-IC1670
Lab FileID: Q73507.D
Injection Time: 10/27/20 12:56
Method: EPA 537.1 REV 1.0
Analyst approved: 10/29/20 08:24 Mike Eger
Supervisor approved: 10/29/20 08:25 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.48	Split peak
PFOA (Branched Isomers)			7.13	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.67	Split peak
MeFOSAA	2355-31-9		8.10	Split peak
EtFOSAA	2991-50-6		8.23	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
10/29/20 08:25

Perfluorinated Compounds by LC/MS/MS

Data File : Q73508.d
Operator : mikee
Acq. Method : 537.m
Acq. Date-Time : 10/27/2020 1:12:14 PM
Sample Name : IC1670-100
Vial : Vial 9
DA Method File : 537_1027_SQ1670.quantmethod.xml
Batch Name : SQ1670.batch.bin
Sample Information : OP82561,SQ1670,250,,,1.0,1,water

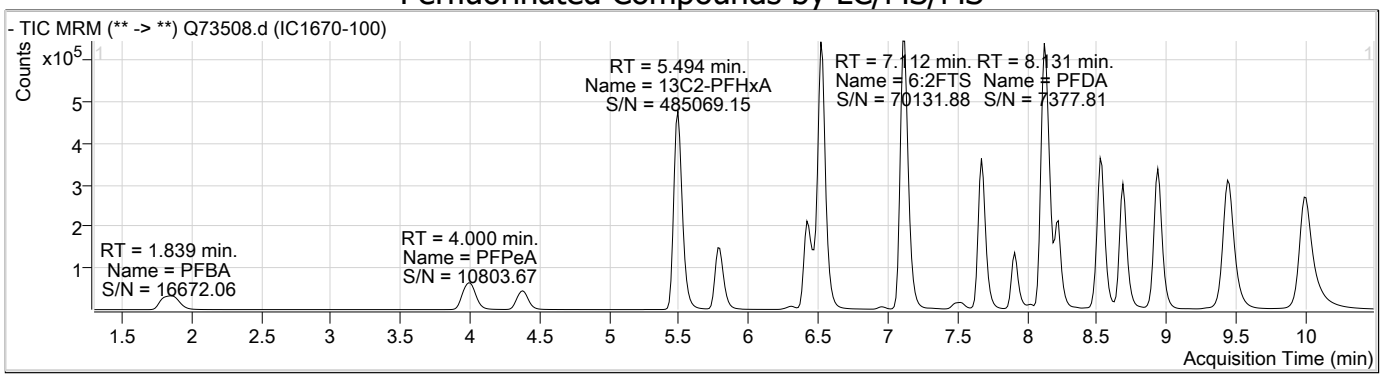
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	7.110	429.0 -> 409.0	126281	20.00	µg/L		0.025
13C2-PFOA	7.129	415.0 -> 370.0	236402	20.00	µg/L		0.027
13C3-PFPeA	3.997	266.0 -> 222.0	112819	20.00	µg/L		0.000
13C4-PFOS	7.667	503.0 -> 80.0	55284	20.00	µg/L		0.025
d3-MeFOSAA	8.100	573.0 -> 419.0	76547	40.00	µg/L		0.012
System Monitoring Compounds							
13C2-PFDA	8.131	515.0 -> 470.0	828187	93.15	µg/L		0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 465.8%			
13C2-PFHxA	5.494	315.0 -> 270.0	1053974	98.73	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 493.6%			
d5-EtFOSAA	8.226	589.0 -> 419.0	390298	198.59	µg/L		0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 496.5%			
13C3-HFPO-DA	5.788	287.0 -> 169.0	328114	196.29	µg/L		0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 490.7%			
Target Compounds							QValue
br-PFHxS	6.306	399.0 -> 80.0	27606	11.91	µg/L		100
LN-PFHxS	6.468	399.0 -> 80.0	181124	87.05	µg/L		100
6:2FTS	7.112	427.0 -> 407.0	452118	77.62	µg/L		98
8:2FTS	8.157	527.0 -> 507.0	351382	78.49	µg/L		100
EtFOSAA	8.226	584.0 -> 419.0	169629	99.62	µg/L	m	97
LN-PFOA	7.130	413.0 -> 369.0	1056278	99.90	µg/L		100
MeFOSAA	8.101	570.0 -> 419.0	163248	98.03	µg/L	m	96
PFBA	1.839	213.0 -> 169.0	311139	99.79	µg/L		100
PFBS	4.378	299.0 -> 80.0	179293	99.25	µg/L		99
PFDA	8.131	513.0 -> 469.0	1032494	100.01	µg/L		94
PFDoDA	8.942	613.0 -> 569.0	1341965	98.74	µg/L		95
br-PFOA	7.130	413.0 -> 369.0	1056278	97.95	µg/L	m	100
PFHpA	6.427	363.0 -> 319.0	651072	98.92	µg/L		98
PFHpS	7.137	449.0 -> 80.0	203757	97.94	µg/L		98
PFHxA	5.496	313.0 -> 269.0	961618	98.82	µg/L		99
PFHxS	6.468	399.0 -> 80.0	208812	98.98	µg/L	m	97
PFNA	7.682	463.0 -> 419.0	829357	97.68	µg/L		95
LN-PFOS	7.668	499.0 -> 80.0	175451	75.92	µg/L		100
PFOA	7.130	413.0 -> 369.0	1056278	99.90	µg/L		99
PFOS	7.668	499.0 -> 80.0	253332	99.91	µg/L	m	88
PFPeA	4.000	263.0 -> 219.0	322148	98.18	µg/L		100
br-PFOS	7.511	499.0 -> 80.0	84399	24.02	µg/L		100
PFTeDA	9.988	713.0 -> 669.0	1809863	104.05	µg/L		98
PFTrDA	9.444	663.0 -> 619.0	1791853	99.43	µg/L		100
PFUnDA	8.532	563.0 -> 519.0	945939	98.31	µg/L		98
ADONA	6.523	377.0 -> 251.0	1875898	99.15	µg/L		98
9Cl-PF3ONS	7.914	531.0 -> 351.0	366393	98.21	µg/L		99
11Cl-PF3OUdS	8.688	631.0 -> 451.0	886338	98.67	µg/L		100
HFPO-DA	5.792	329.0 -> 169.0	235457	98.48	µg/L		98

Perfluorinated Compounds by LC/MS/MS

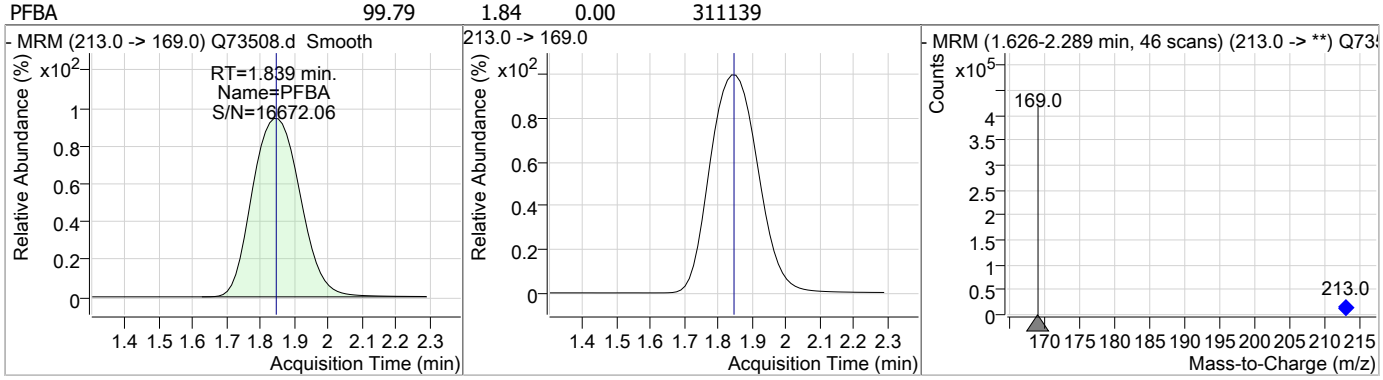
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

= Qualifier out of range, m = manually integrated, + = Area summed

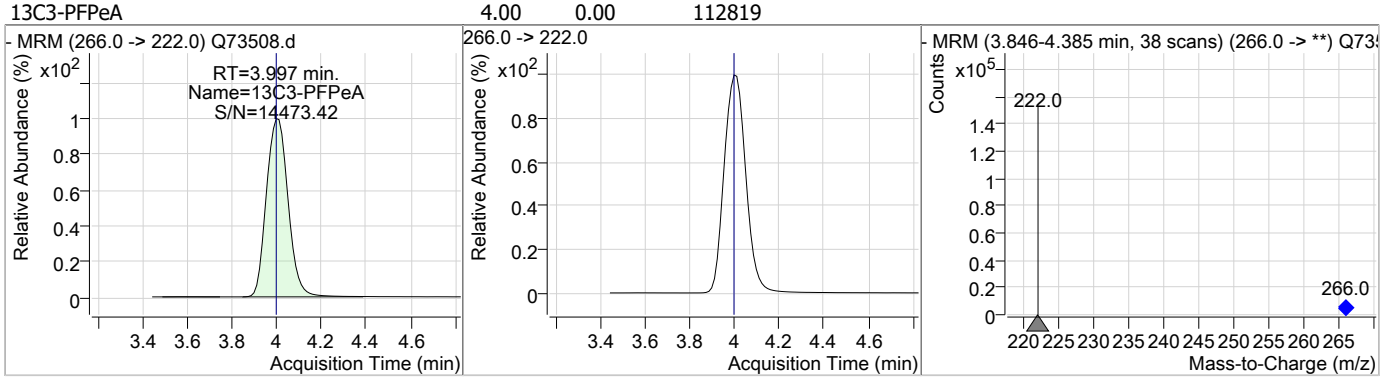
Perfluorinated Compounds by LC/MS/MS



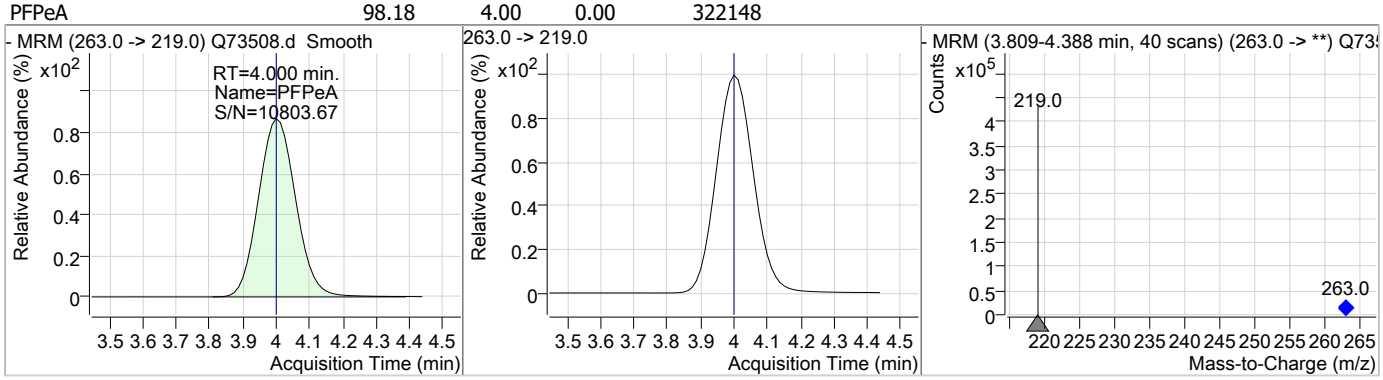
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	99.79	1.84	0.00	311139				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.00	0.00	112819				

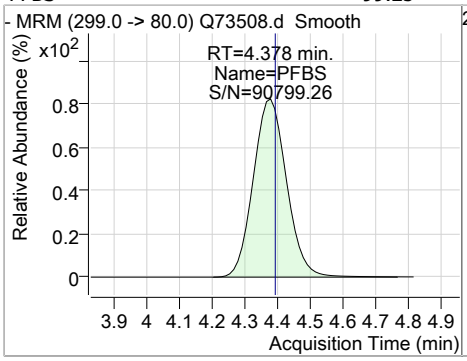


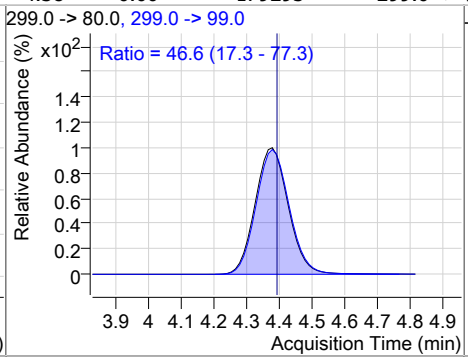
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	98.18	4.00	0.00	322148				

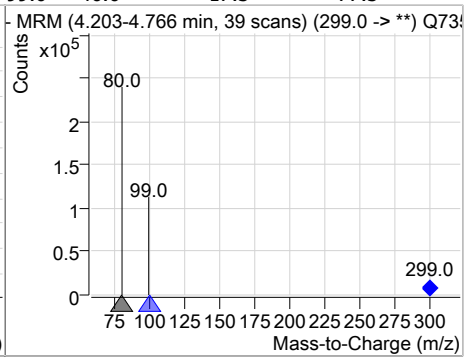


Perfluorinated Compounds by LC/MS/MS

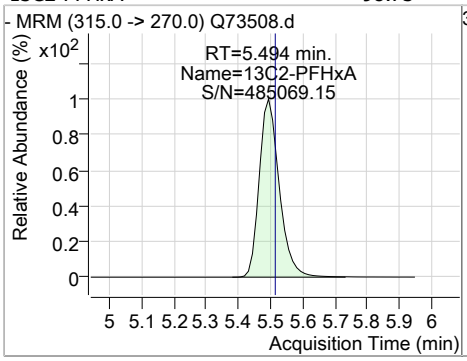
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	99.25	4.38	0.00	179293	299.0 -> 99.0	46.6	17.3	77.3

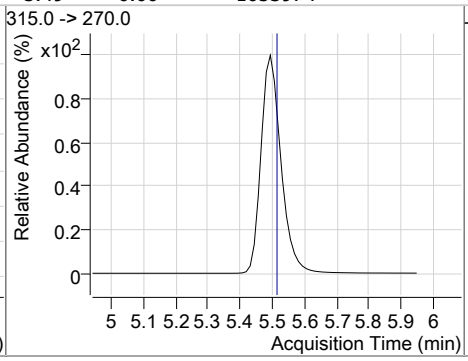


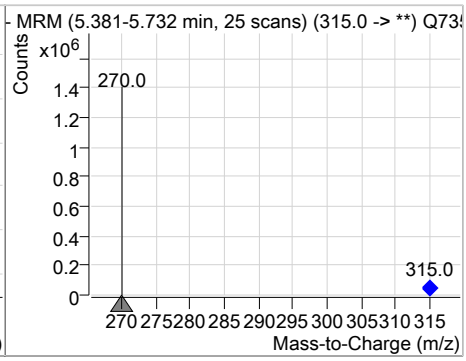




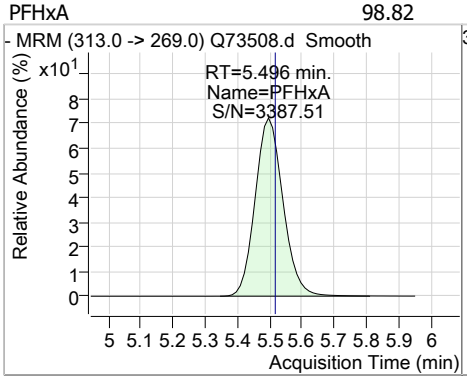
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	98.73	5.49	0.00	1053974				

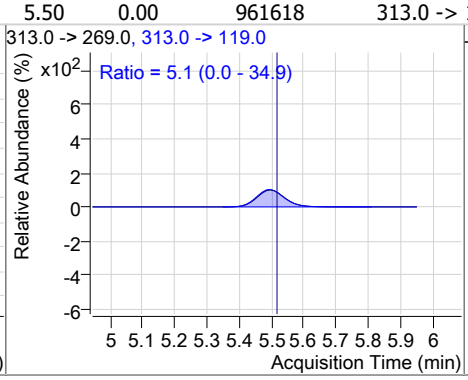


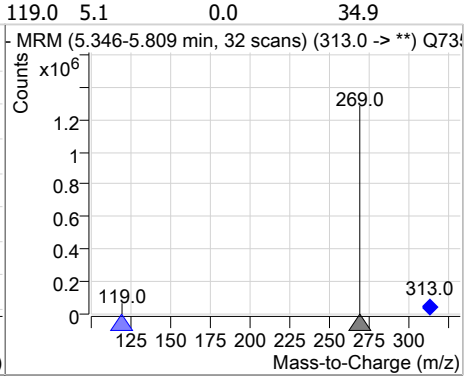




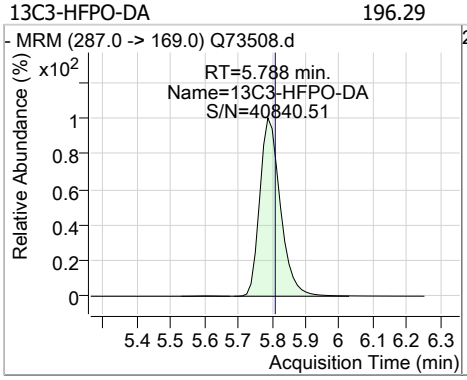
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	98.82	5.50	0.00	961618	313.0 -> 119.0	5.1	0.0	34.9

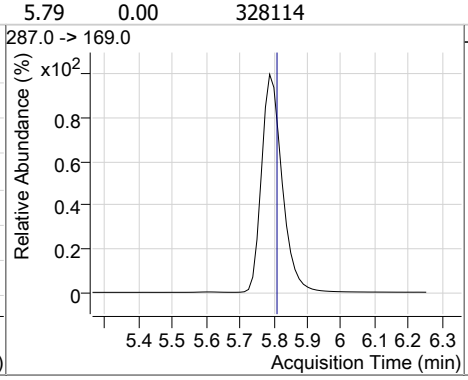


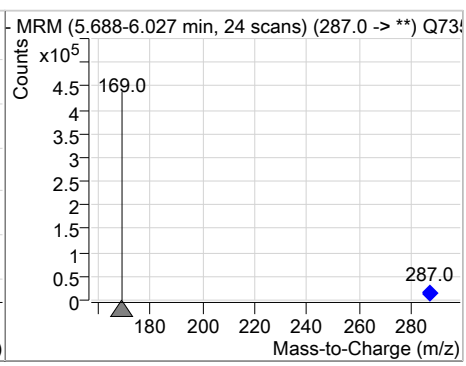




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	196.29	5.79	0.00	328114				

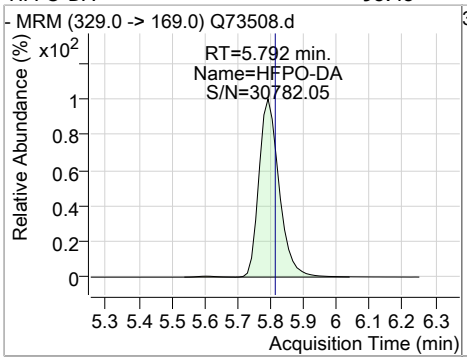


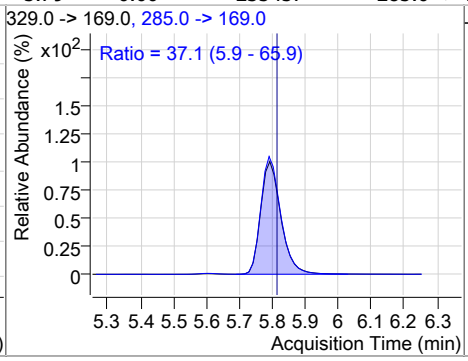


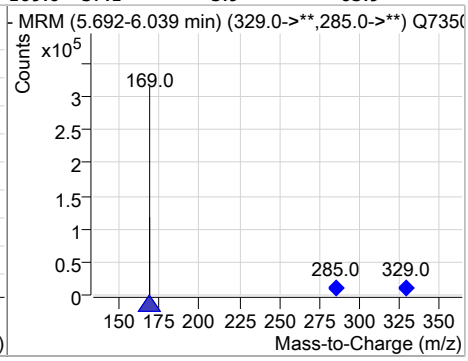


Perfluorinated Compounds by LC/MS/MS

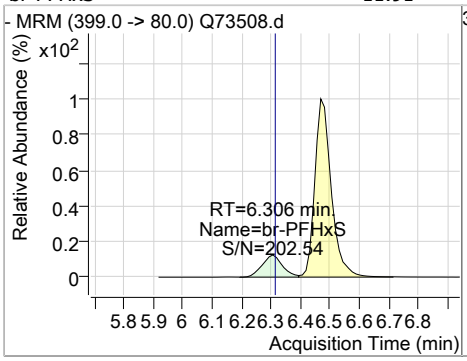
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	98.48	5.79	0.00	235457	285.0 -> 169.0	37.1	5.9	65.9

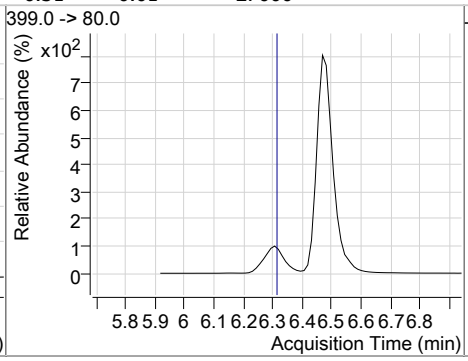


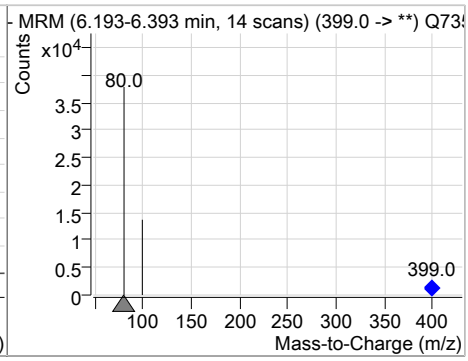




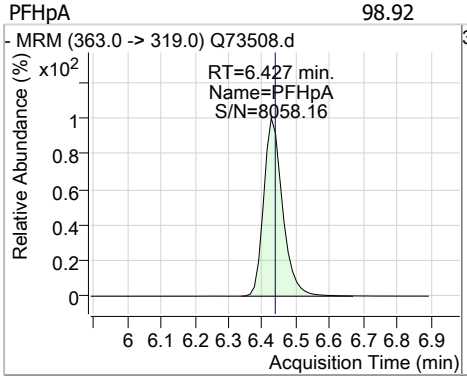
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	11.91	6.31	0.01	27606				

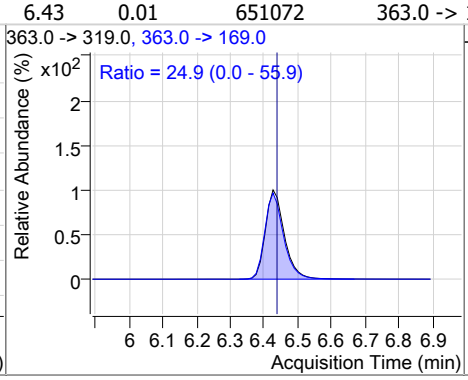


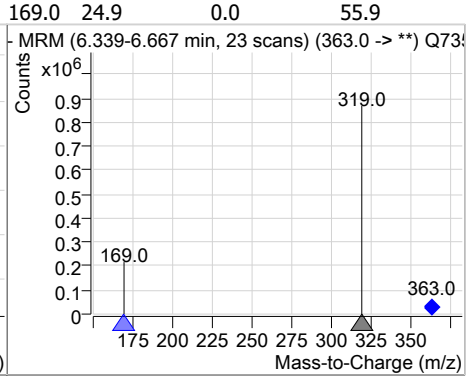




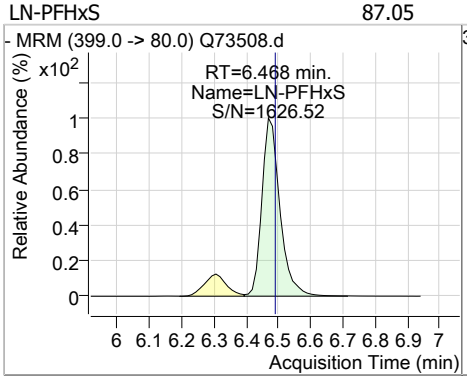
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	98.92	6.43	0.01	651072	363.0 -> 169.0	24.9	0.0	55.9

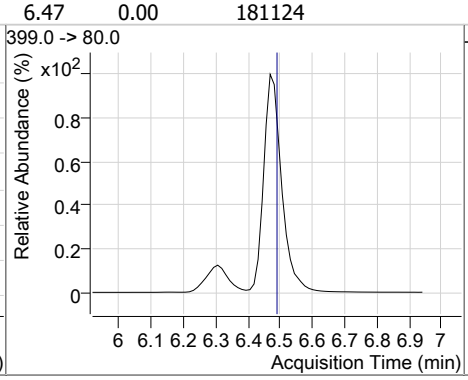


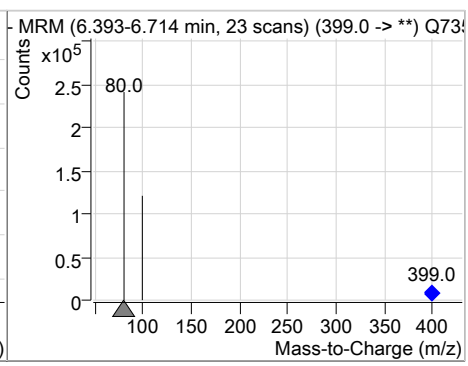




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	87.05	6.47	0.00	181124				

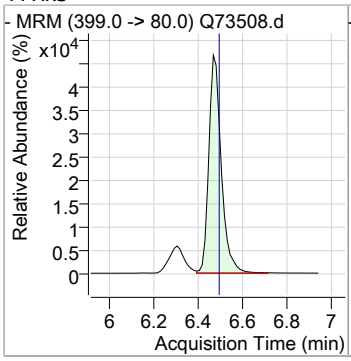


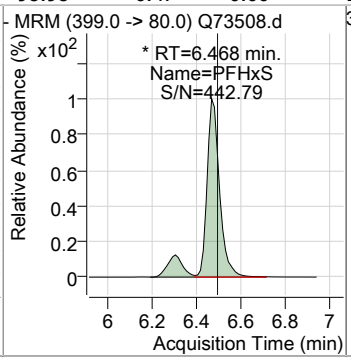


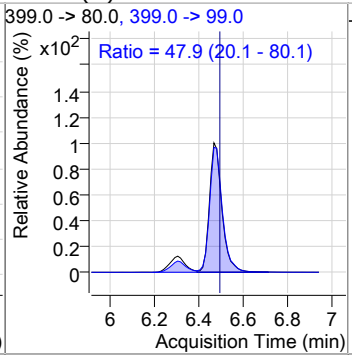


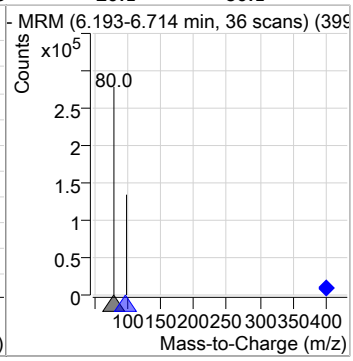
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	98.98	6.47	0.00	208812 (m)	399.0 -> 99.0	47.9	20.1	80.1

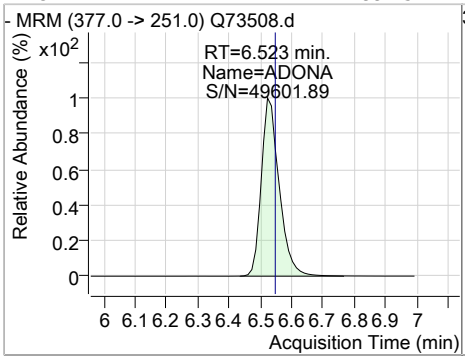


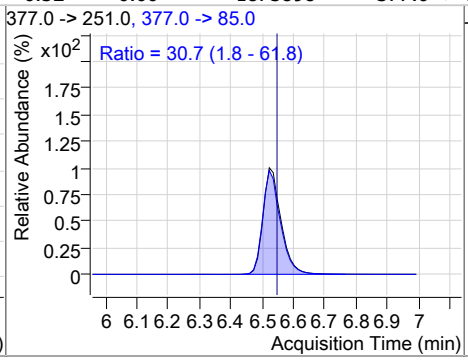


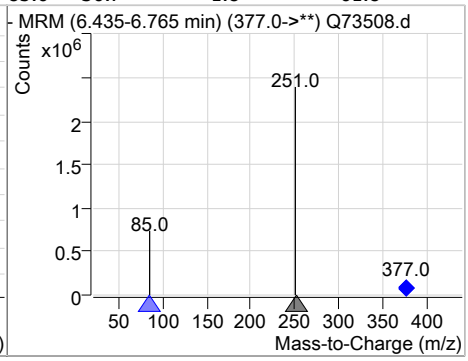




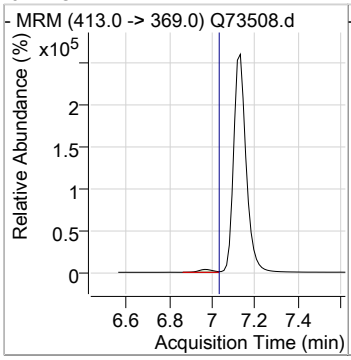
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	99.15	6.52	0.00	1875898	377.0 -> 85.0	30.7	1.8	61.8

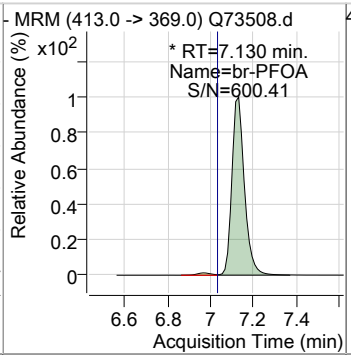


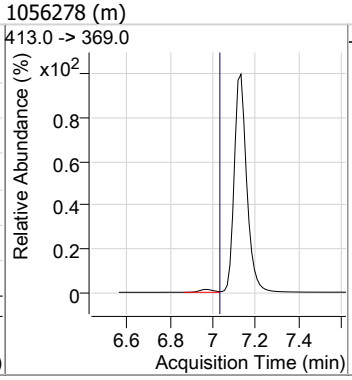


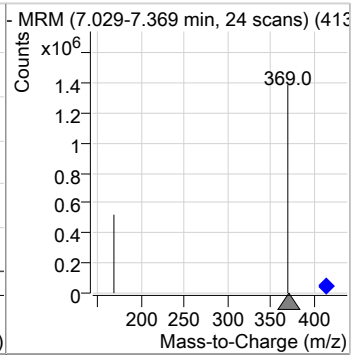


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	97.95	7.13	0.13	1056278 (m)				

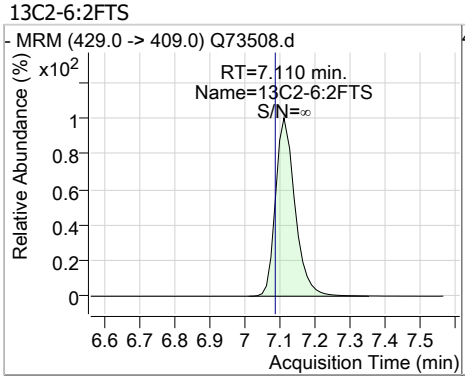


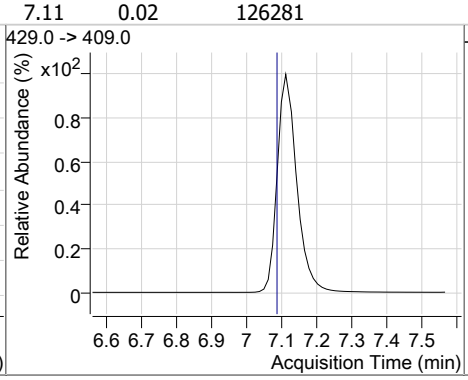


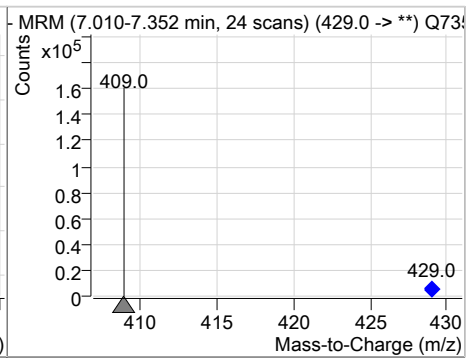




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.11	0.02	126281				

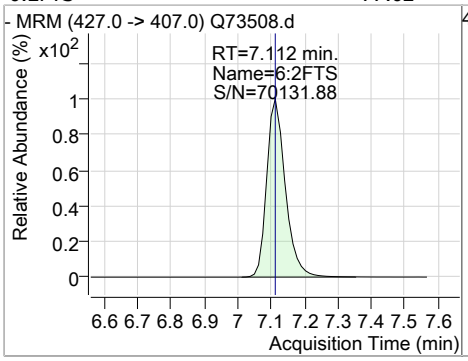


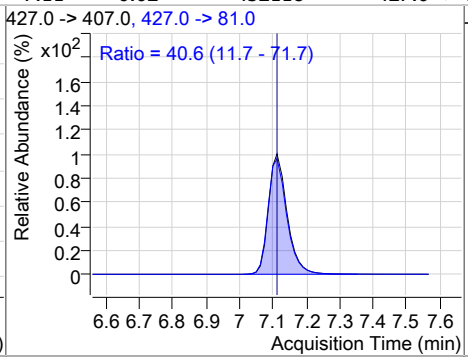


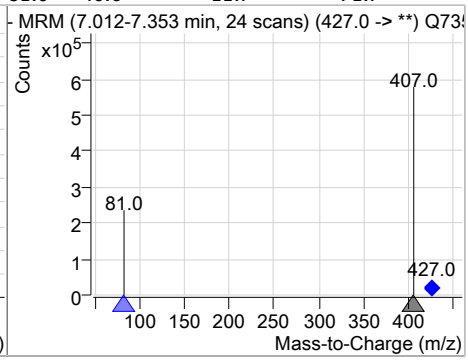


Perfluorinated Compounds by LC/MS/MS

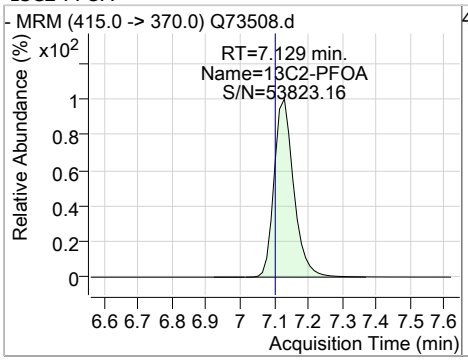
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	77.62	7.11	0.02	452118	427.0 -> 81.0	40.6	11.7	71.7

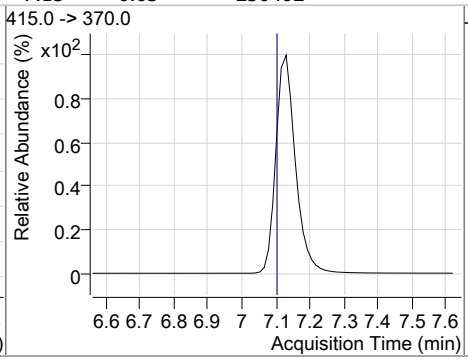


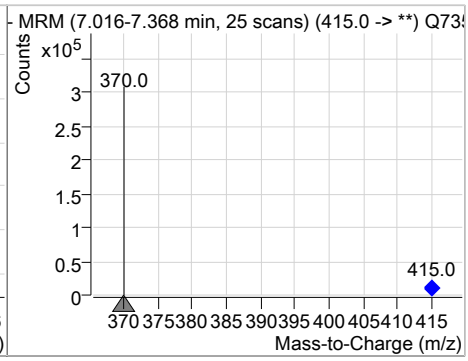




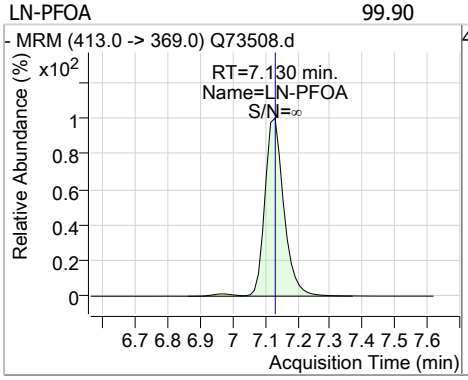
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.13	0.03	236402				

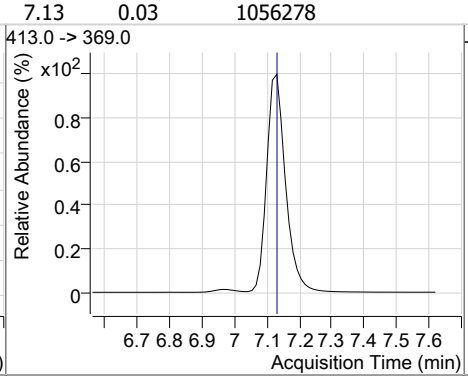


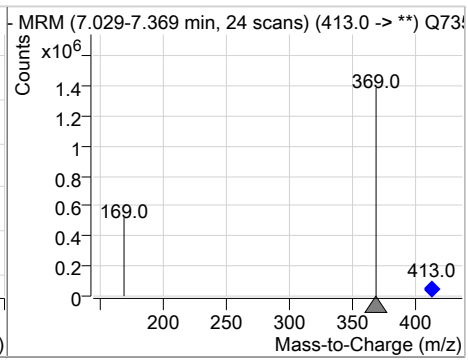




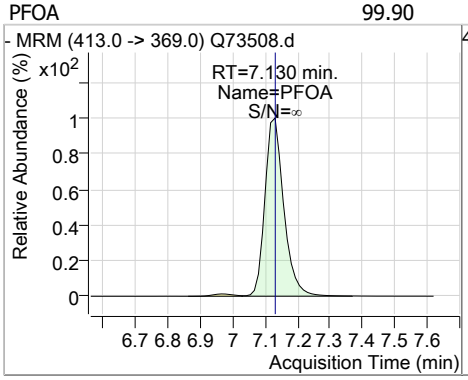
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	99.90	7.13	0.03	1056278				

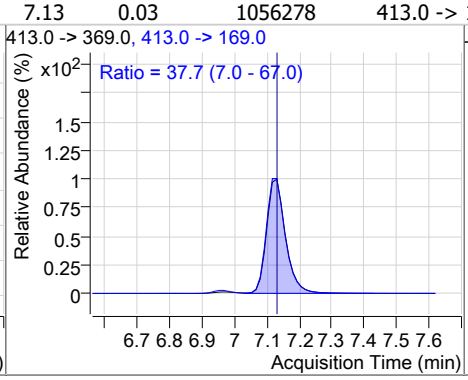


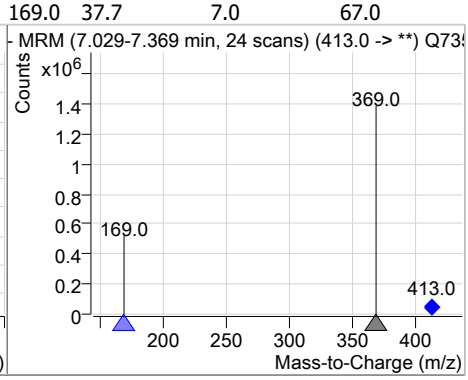




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	99.90	7.13	0.03	1056278	413.0 -> 169.0	37.7	7.0	67.0

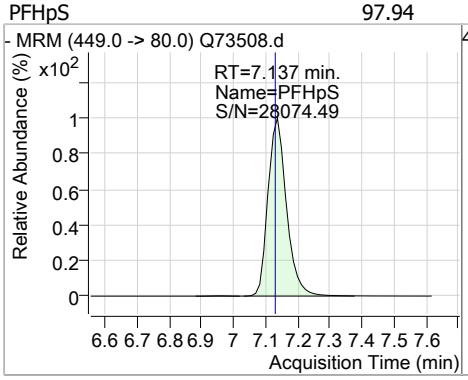


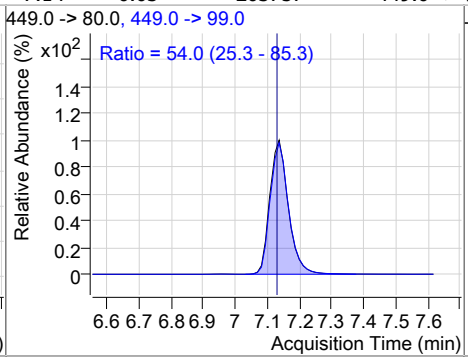


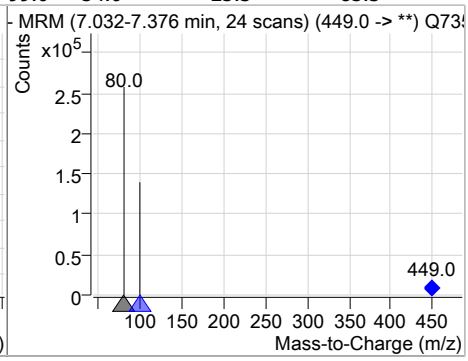


Perfluorinated Compounds by LC/MS/MS

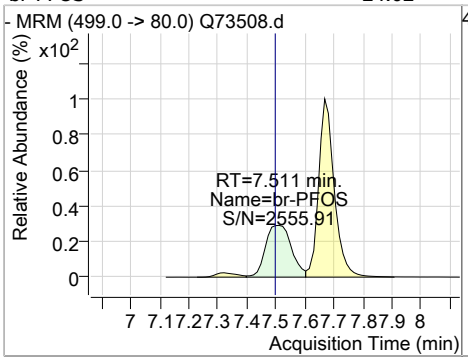
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	97.94	7.14	0.03	203757	449.0 -> 99.0	54.0	25.3	85.3

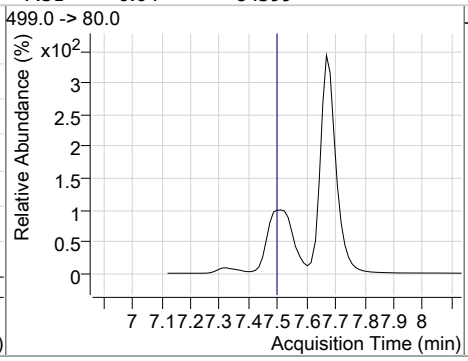


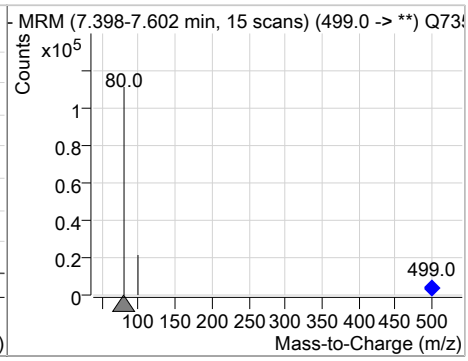




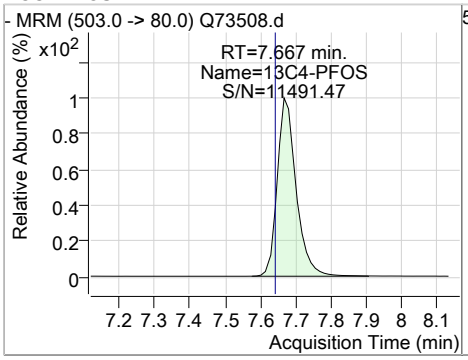
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	24.02	7.51	0.04	84399				

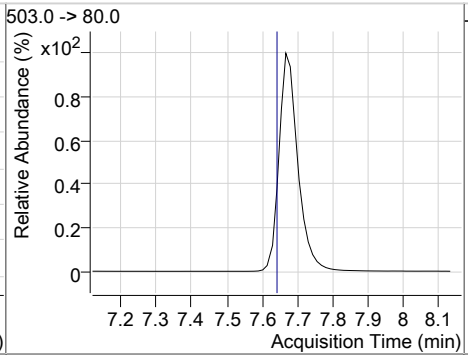


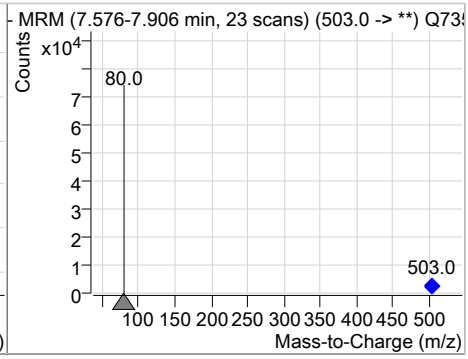




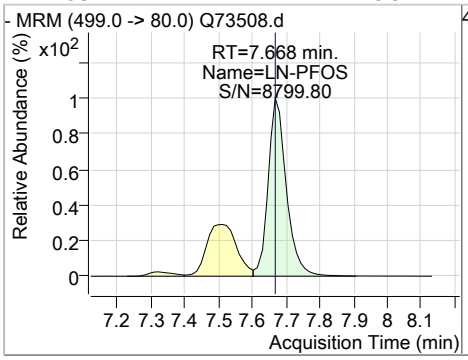
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.67	0.02	55284				

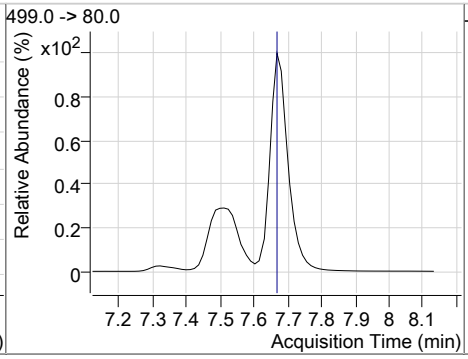


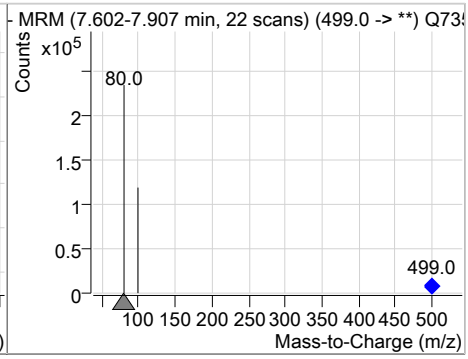




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	75.92	7.67	0.03	175451				

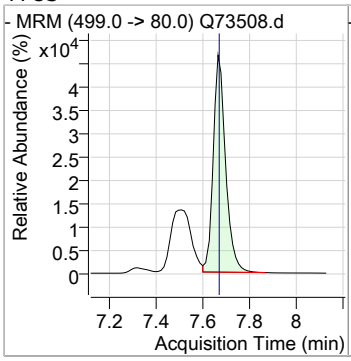


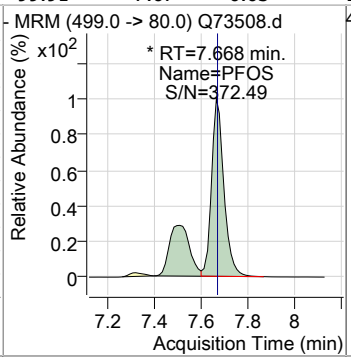


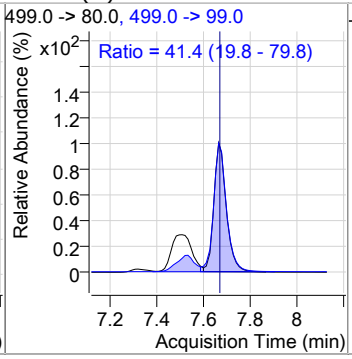


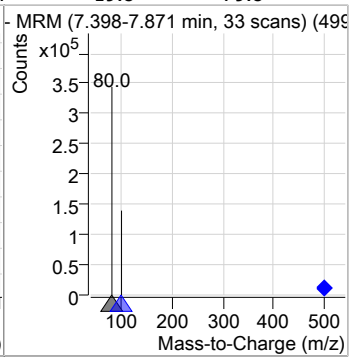
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	99.91	7.67	0.03	253332 (m)	499.0 -> 99.0	41.4	19.8	79.8

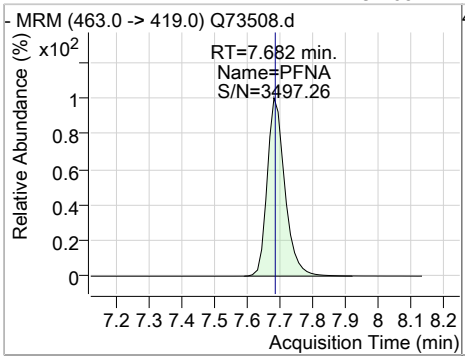


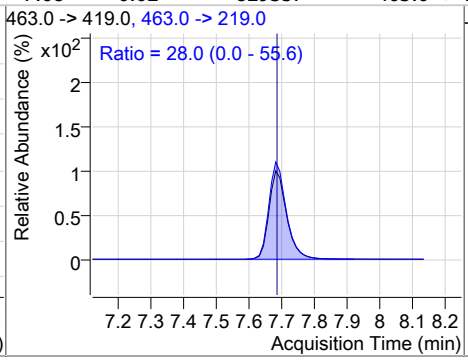


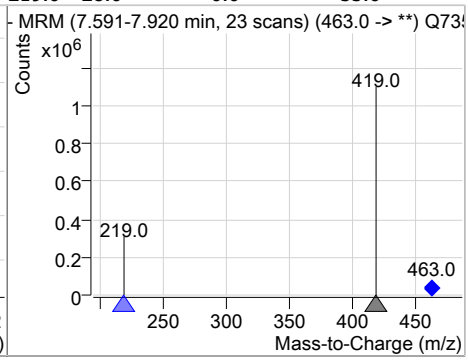




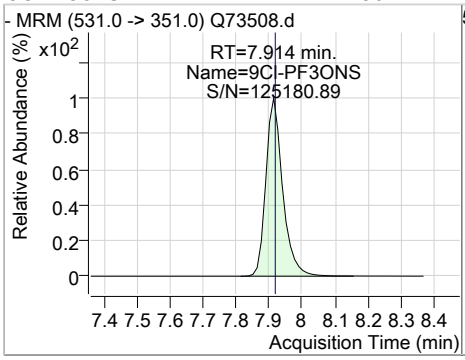
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	97.68	7.68	0.02	829357	463.0 -> 219.0	28.0	0.0	55.6

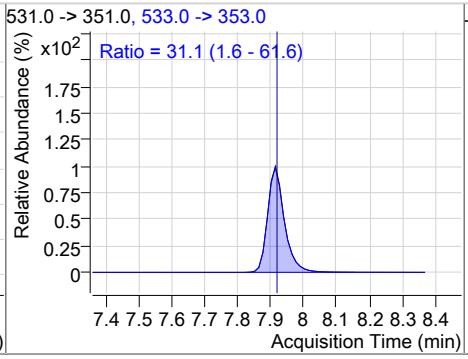


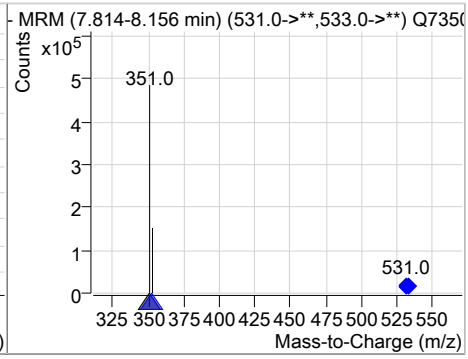




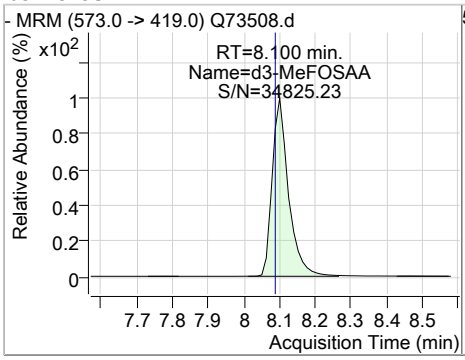
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	98.21	7.91	0.02	366393	533.0 -> 353.0	31.1	1.6	61.6

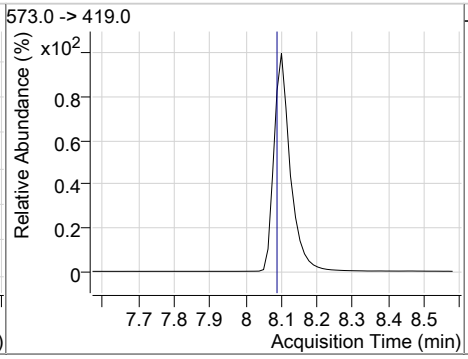


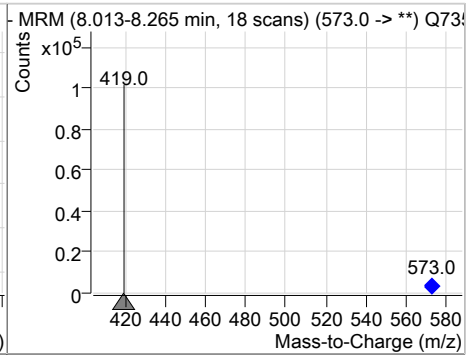




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.10	0.01	76547				

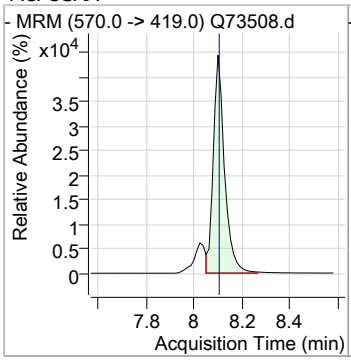


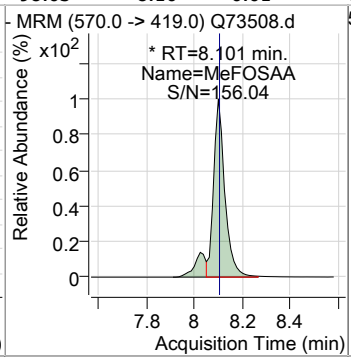


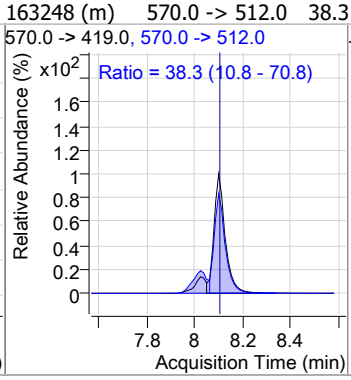


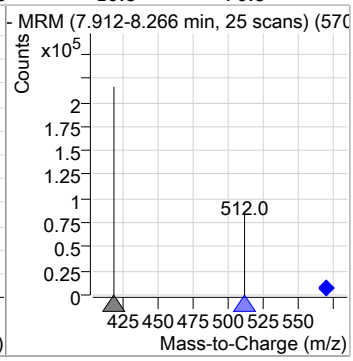
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	98.03	8.10	0.01	163248 (m)	570.0 -> 512.0	38.3	10.8	70.8

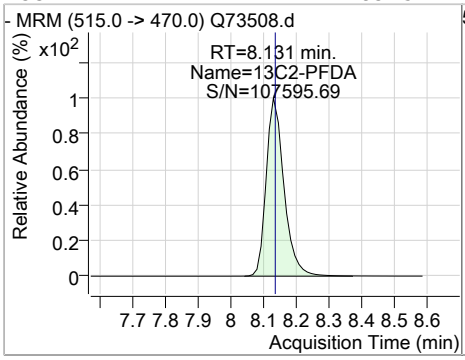


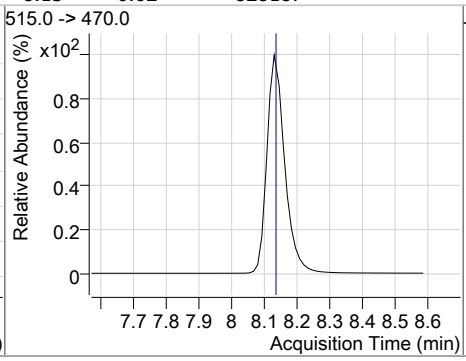


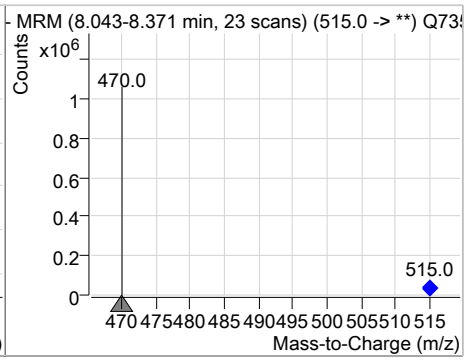




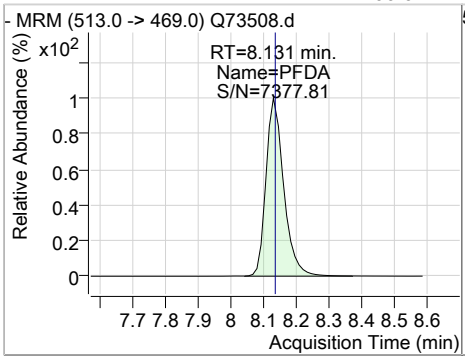
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	93.15	8.13	0.02	828187				

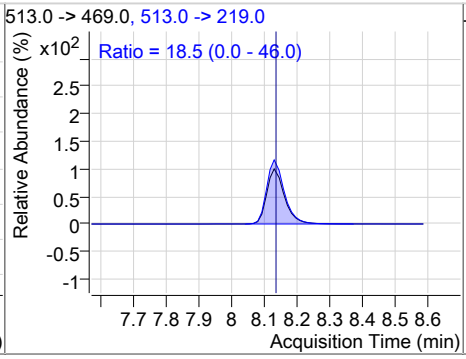


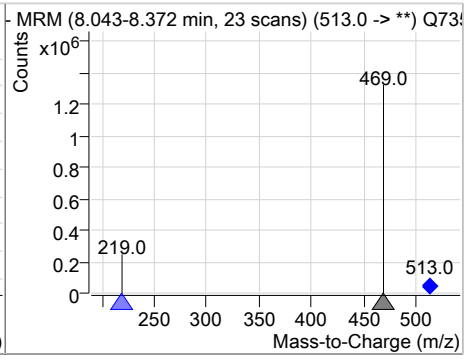




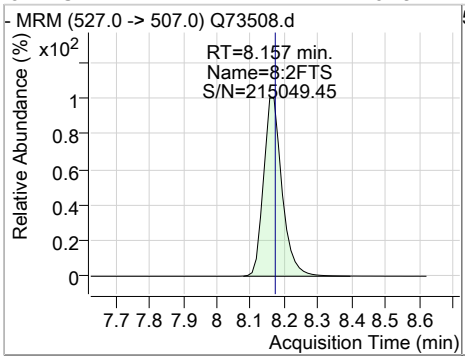
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	100.01	8.13	0.02	1032494	513.0 -> 219.0	18.5	0.0	46.0

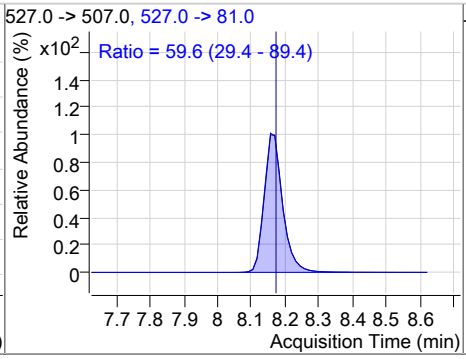


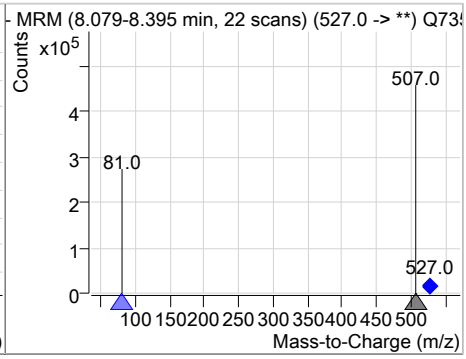




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	78.49	8.16	0.01	351382	527.0 -> 81.0	59.6	29.4	89.4

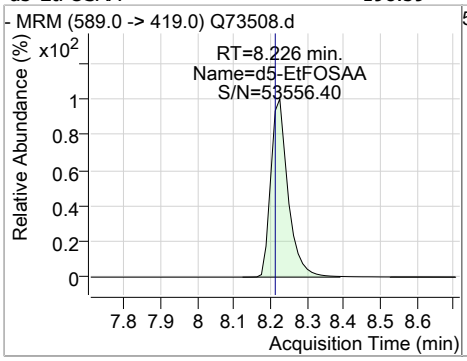


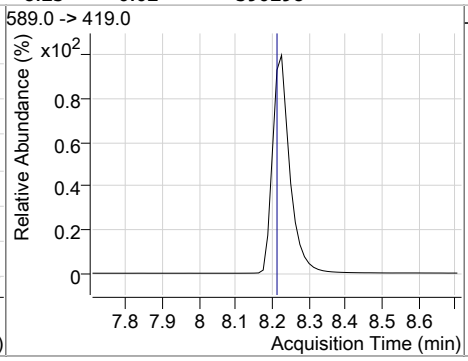


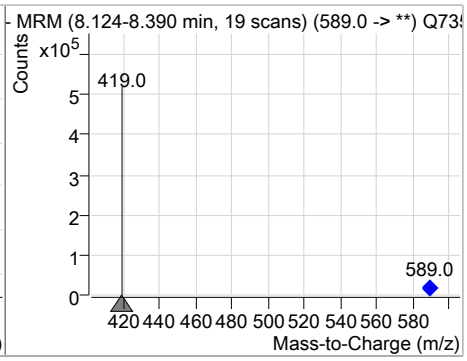


Perfluorinated Compounds by LC/MS/MS

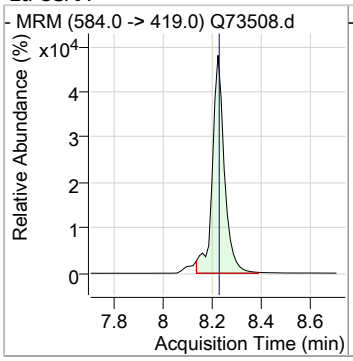
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	198.59	8.23	0.02	390298				

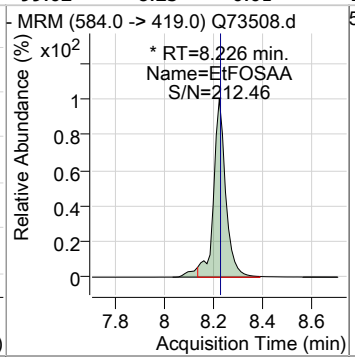


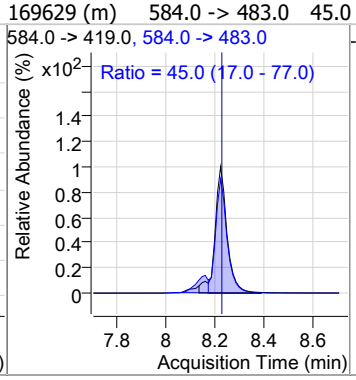


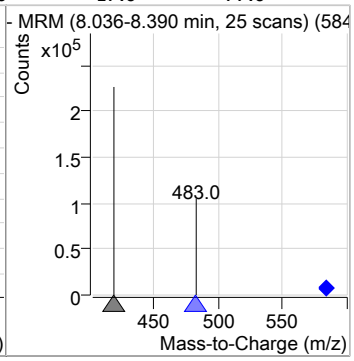


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	99.62	8.23	0.01	169629 (m)	584.0 -> 483.0	45.0	17.0	77.0

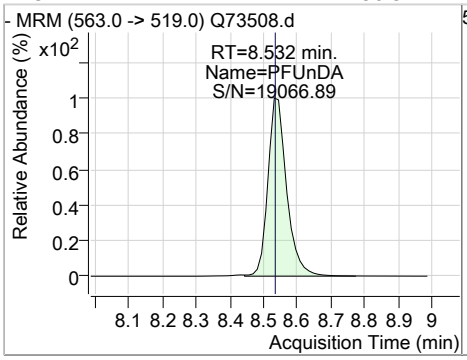


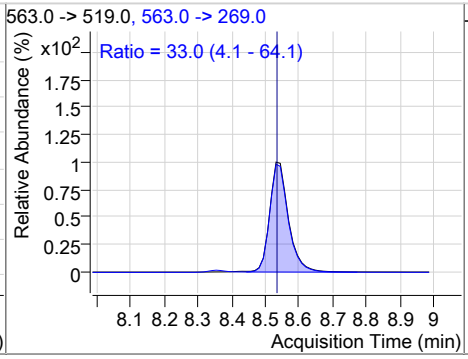


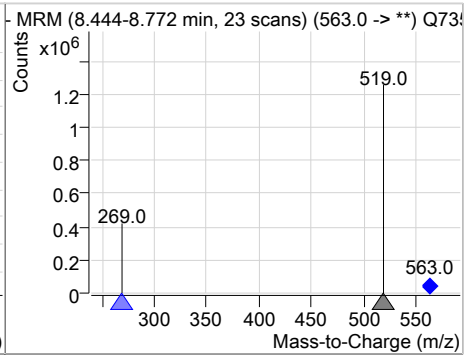




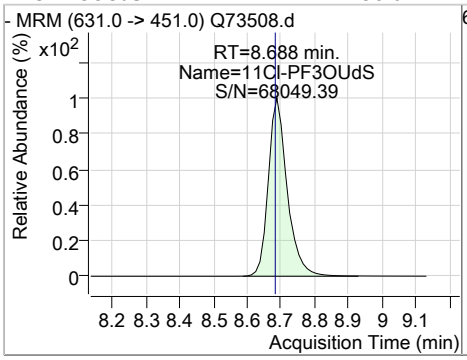
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	98.31	8.53	0.02	945939	563.0 -> 269.0	33.0	4.1	64.1

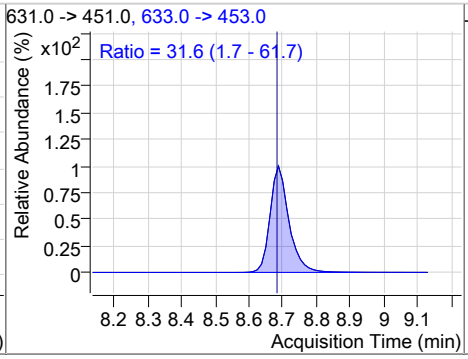


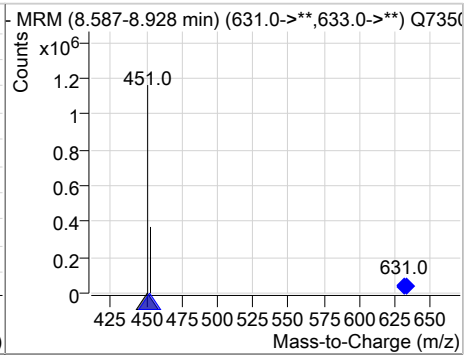




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	98.67	8.69	0.04	886338	633.0 -> 453.0	31.6	1.7	61.7

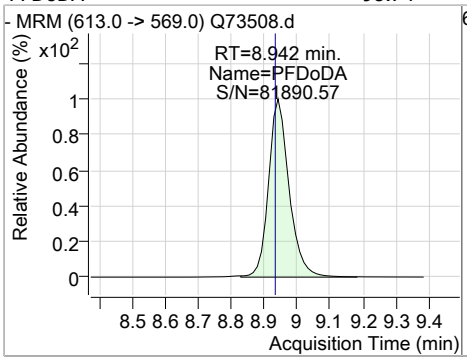


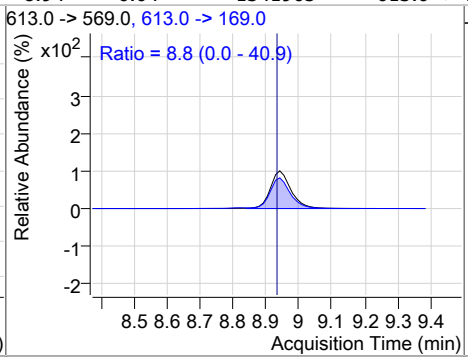


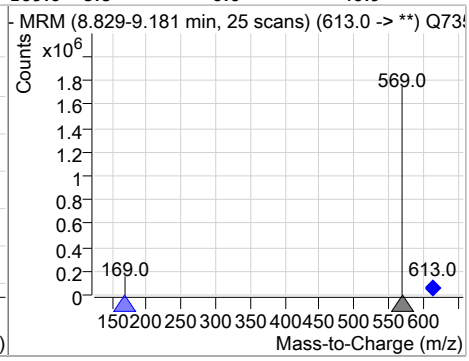


Perfluorinated Compounds by LC/MS/MS

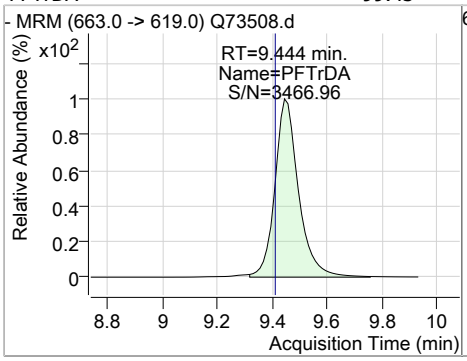
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	98.74	8.94	0.04	1341965	613.0 -> 169.0	8.8	0.0	40.9

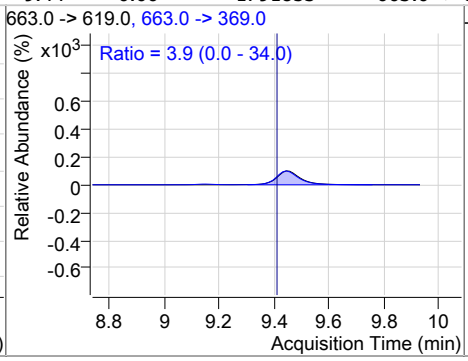


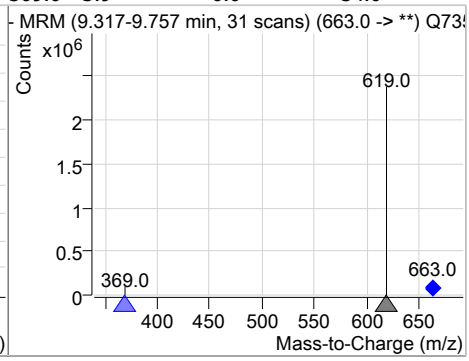




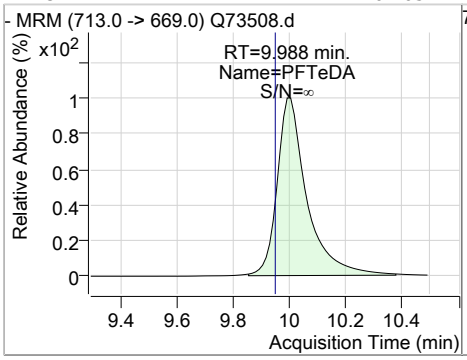
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	99.43	9.44	0.06	1791853	663.0 -> 369.0	3.9	0.0	34.0

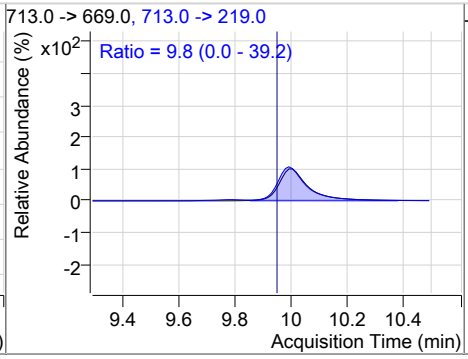


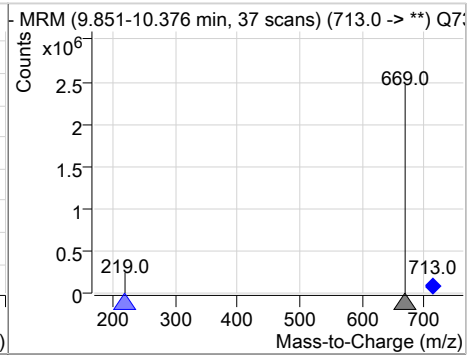




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	104.05	9.99	0.07	1809863	713.0 -> 219.0	9.8	0.0	39.2







Manual Integration Approval Summary

Sample Number: SQ1670-IC1670
Lab FileID: Q73508.D
Injection Time: 10/27/20 13:12
Method: EPA 537.1 REV 1.0
Analyst approved: 10/29/20 08:24 Mike Eger
Supervisor approved: 10/29/20 08:25 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.47	Split peak
PFOA (Branched Isomers)			7.13	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.67	Split peak
MeFOSAA	2355-31-9		8.10	Split peak
EtFOSAA	2991-50-6		8.23	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
10/29/20 08:25

Perfluorinated Compounds by LC/MS/MS

Data File : Q73509.d
Operator : mikee
Acq. Method : 537.m
Acq. Date-Time : 10/27/2020 1:27:51 PM
Sample Name : ICV1670-20 TPFOA
Vial : Vial 10
DA Method File : 537_1027_SQ1670.quantmethod.xml
Batch Name : SQ1670.batch.bin
Sample Information : OP82561,SQ1670,250,,,1.0,1,water

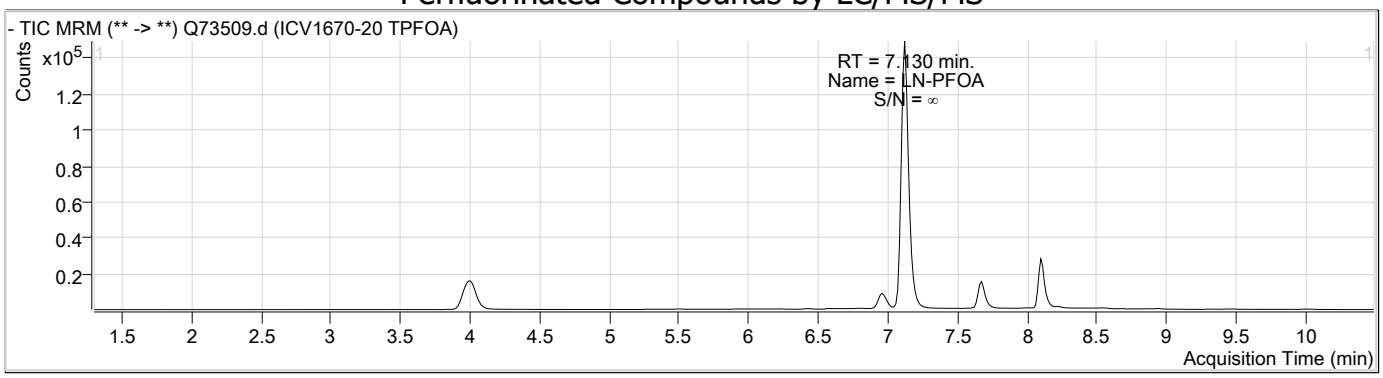
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	7.110	429.0 -> 409.0	107452	20.00	µg/L		0.025
13C2-PFOA	7.129	415.0 -> 370.0	233140	20.00	µg/L		0.027
13C3-PFPeA	3.997	266.0 -> 222.0	104863	20.00	µg/L		0.000
13C4-PFOS	7.680	503.0 -> 80.0	54106	20.00	µg/L		0.038
d3-MeFOSAA	8.100	573.0 -> 419.0	87204	40.00	µg/L		0.012
System Monitoring Compounds							
13C2-PFDA	-	515.0 -> 470.0	-	N.D.			
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = NA%			
13C2-PFHxA	-	315.0 -> 270.0	-	N.D.			
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = NA%			
d5-EtFOSAA	8.225	589.0 -> 419.0	0	0.00	µg/L	m	0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = NA%			
13C3-HFPO-DA	-	287.0 -> 169.0	-	N.D.			
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = NA%			
Target Compounds							QValue
br-PFHxS	-	399.0 -> 80.0	-	N.D.			
LN-PFHxS	-	399.0 -> 80.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	8.226	584.0 -> 419.0	0	0.00	µg/L	m	1
LN-PFOA	7.130	413.0 -> 369.0	172076	14.58	µg/L		100
MeFOSAA	8.101	570.0 -> 419.0	0	0.00	µg/L	m	1
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	-	299.0 -> 80.0	-	N.D.			
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
br-PFOA	6.964	413.0 -> 369.0	25159	2.37	µg/L		100
PFHpA	6.427	363.0 -> 319.0	0	0.00	µg/L	m	1
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	-	313.0 -> 269.0	-	N.D.			
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	-	463.0 -> 419.0	-	N.D.			
LN-PFOS	-	499.0 -> 80.0	-	N.D.			
PFOA	7.130	413.0 -> 369.0	197220	16.76	µg/L	m	96
PFOS	-	499.0 -> 80.0	-	N.D.			
PFPeA	-	263.0 -> 219.0	-	N.D.			
br-PFOS	-	499.0 -> 80.0	-	N.D.			
PFTeDA	10.013	713.0 -> 669.0	0	0.00	µg/L	m	1
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			

Perfluorinated Compounds by LC/MS/MS

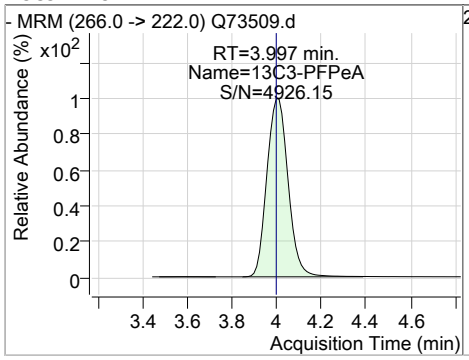
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

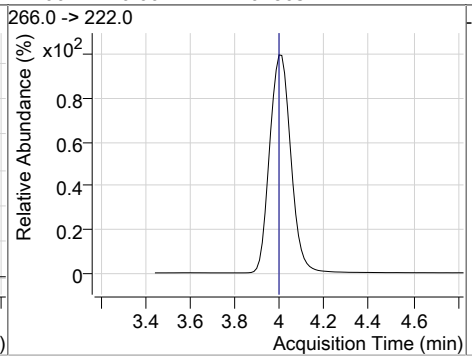
= Qualifier out of range, m = manually integrated, + = Area summed

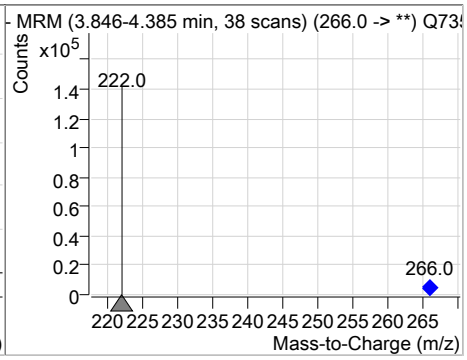
Perfluorinated Compounds by LC/MS/MS



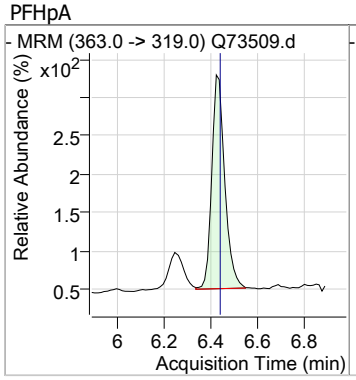
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.00	0.00	104863				

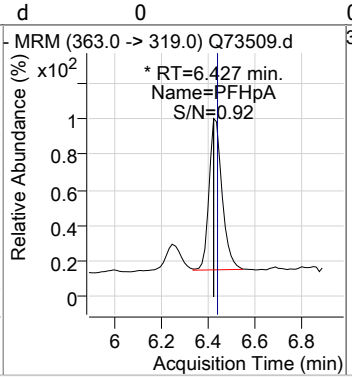


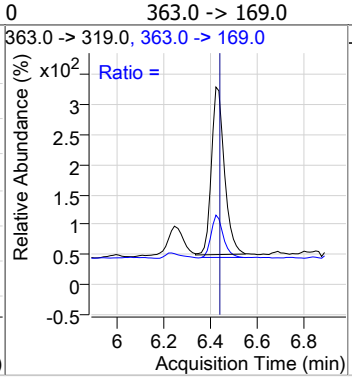


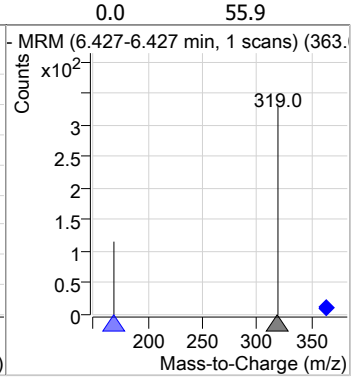


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	d	0		0	363.0 -> 169.0		0.0	55.9

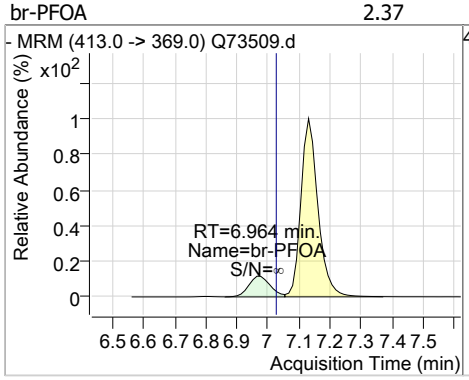


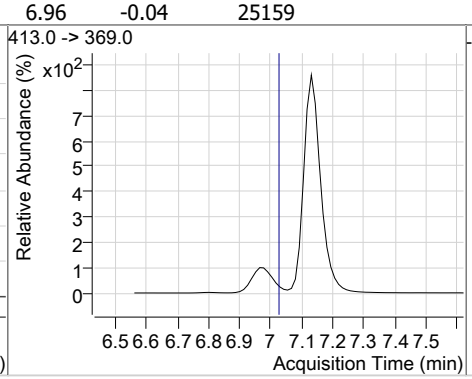


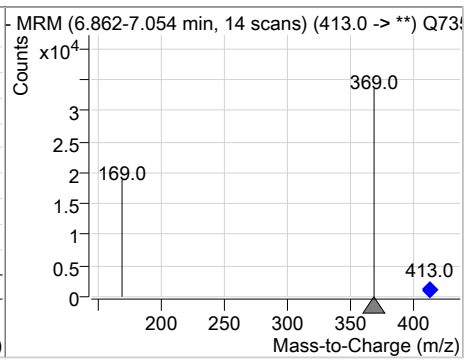




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	2.37	6.96	-0.04	25159				

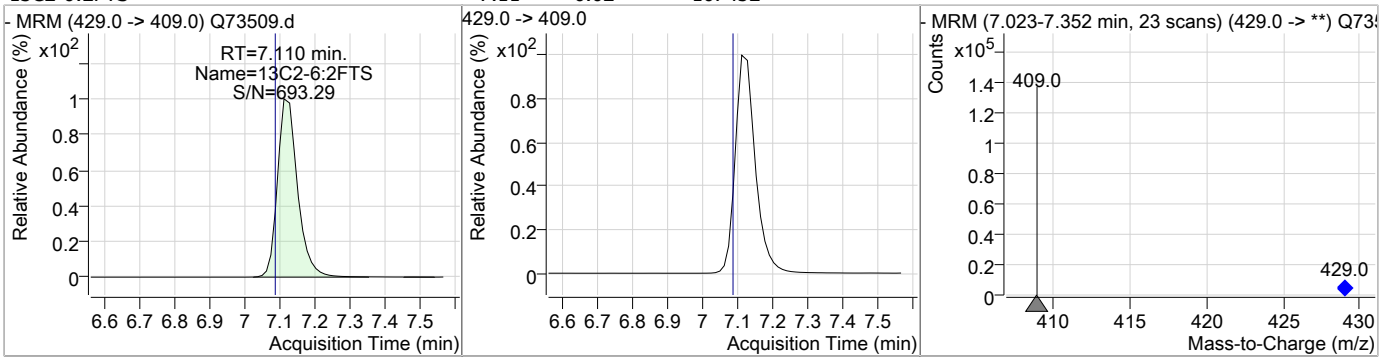




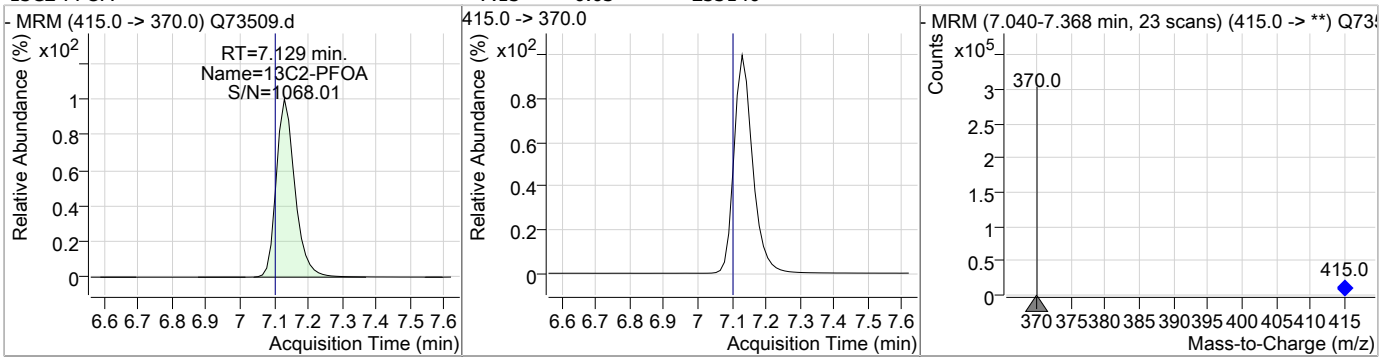


Perfluorinated Compounds by LC/MS/MS

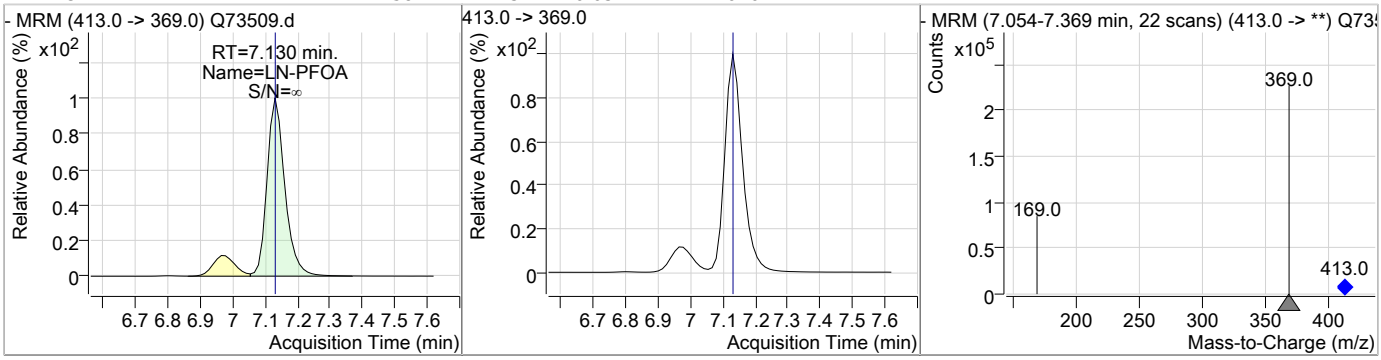
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.11	0.02	107452				



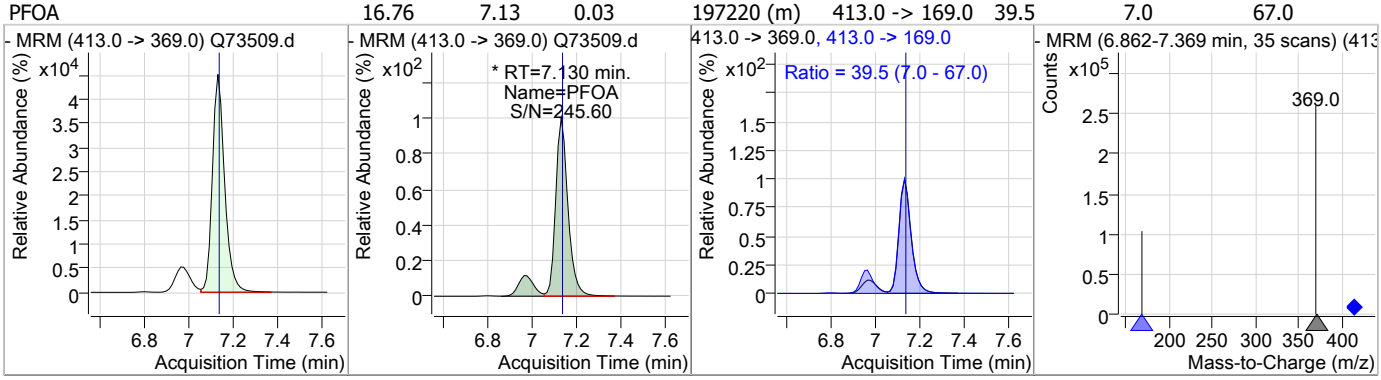
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.13	0.03	233140				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	14.58	7.13	0.03	172076				

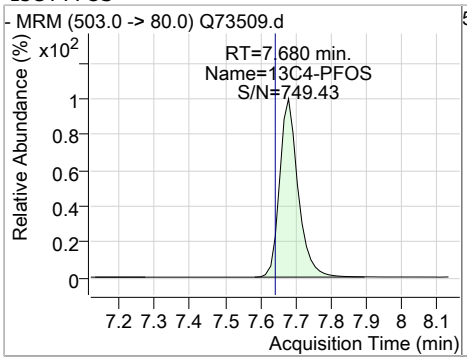


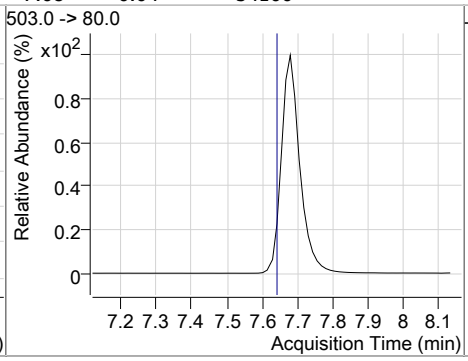
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	16.76	7.13	0.03	197220 (m)	413.0 -> 169.0	39.5	7.0	67.0

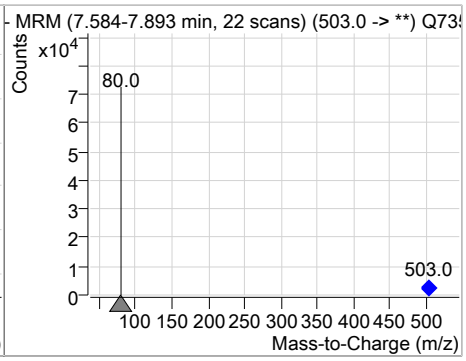


Perfluorinated Compounds by LC/MS/MS

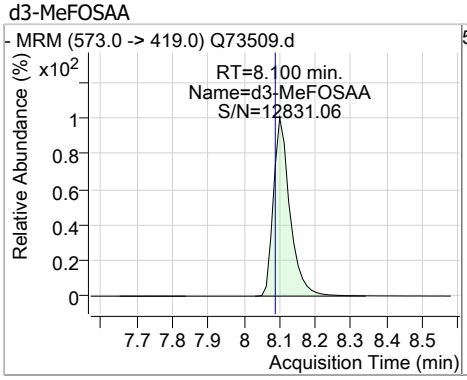
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.68	0.04	54106				

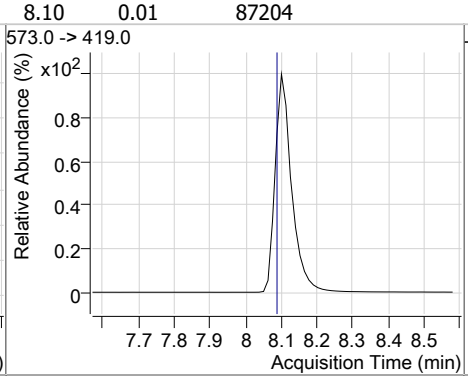


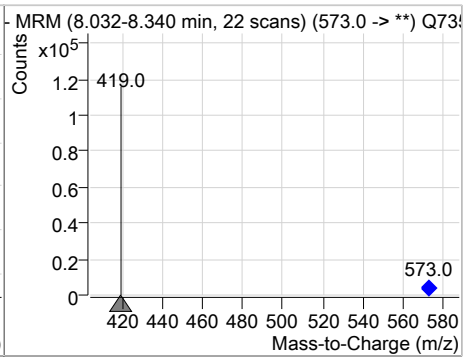




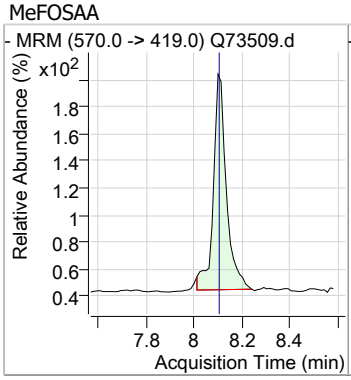
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.10	0.01	87204				

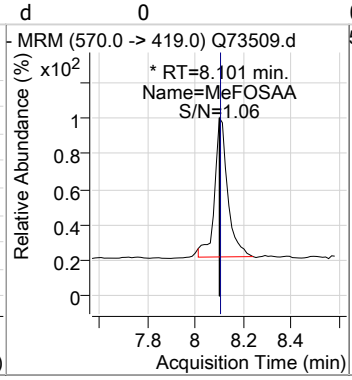


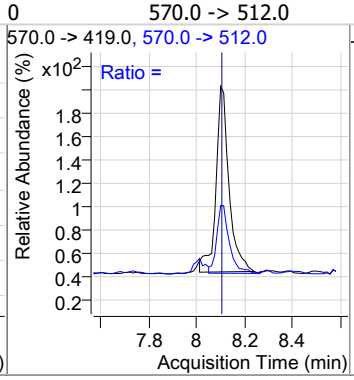


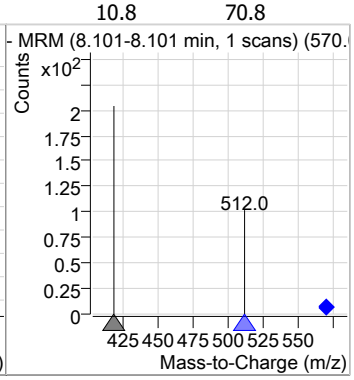


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	d	0		0	570.0 -> 512.0		10.8	70.8

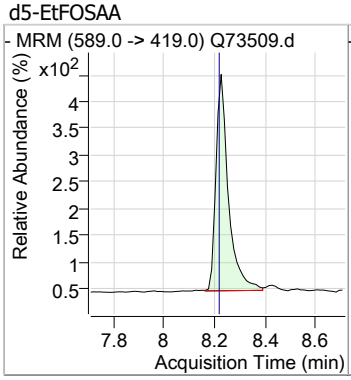


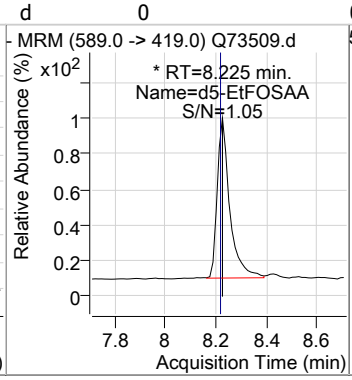


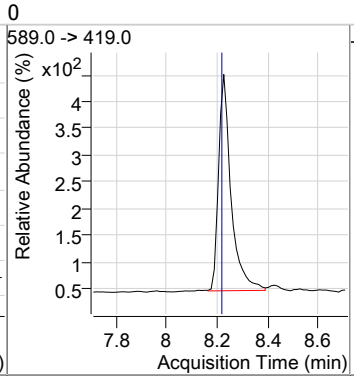


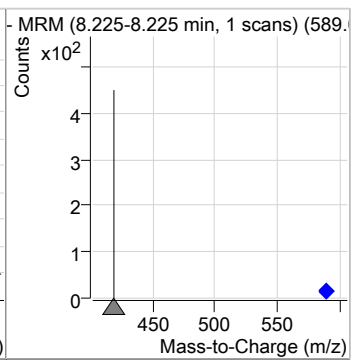


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	d	0		0				



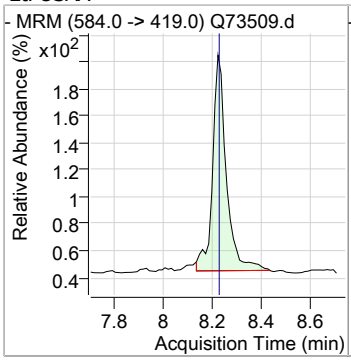


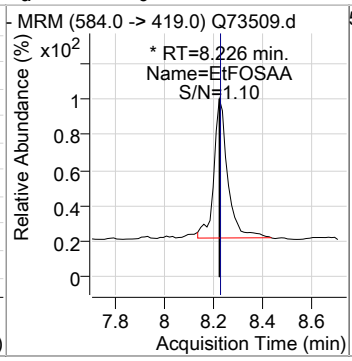


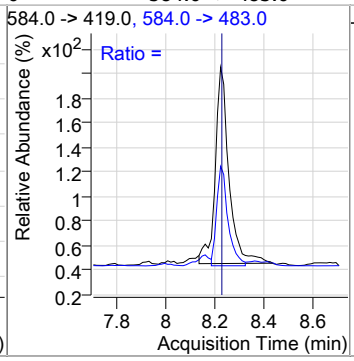


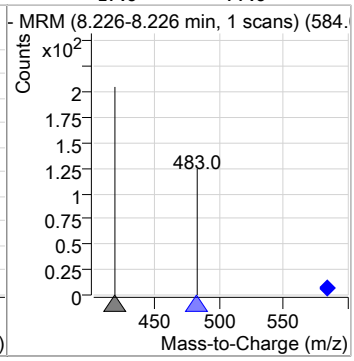
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	d	0		0	584.0 -> 483.0		17.0	77.0

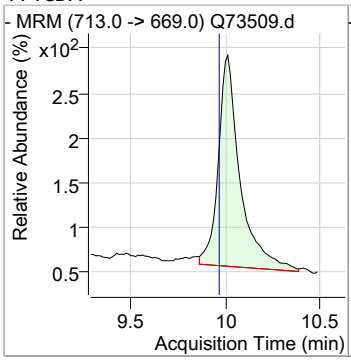


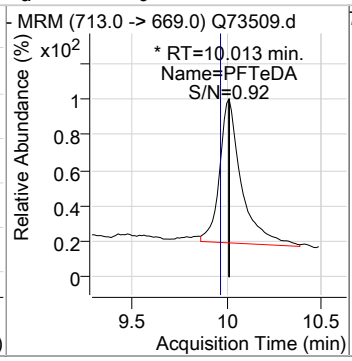


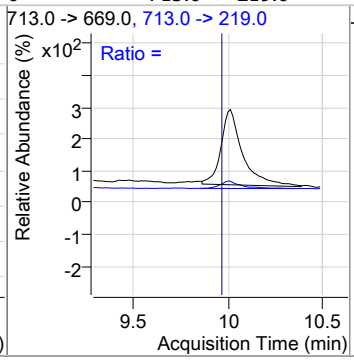


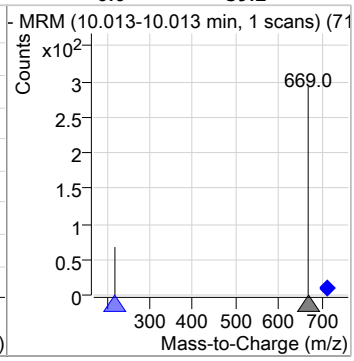


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	d	0		0	713.0 -> 219.0		0.0	39.2









Manual Integration Approval Summary

Sample Number: SQ1670-ICV1670
Lab FileID: Q73509.D
Injection Time: 10/27/20 13:27
Method: EPA 537.1 REV 1.0
Analyst approved: 10/29/20 08:24 Mike Eger
Supervisor approved: 10/29/20 08:25 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		7.13	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 10/29/20 08:25

Perfluorinated Compounds by LC/MS/MS

Data File : Q73510.d
Operator : mikee
Acq. Method : 537.m
Acq. Date-Time : 10/27/2020 1:43:30 PM
Sample Name : ICV1670-20
Vial : Vial 11
DA Method File : 537_1027_SQ1670.quantmethod.xml
Batch Name : SQ1670.batch.bin
Sample Information : OP82619,SQ1670,250,,,1.0,1,water

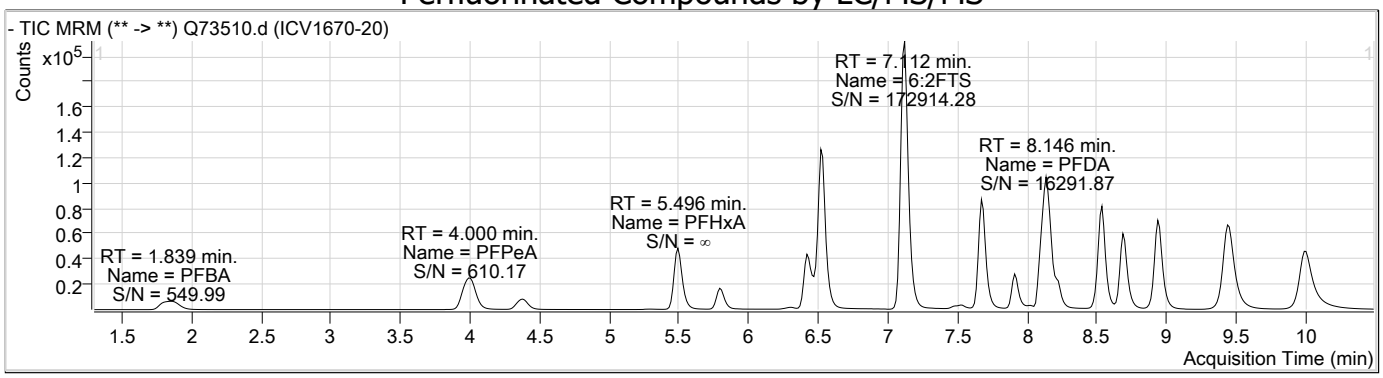
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	7.110	429.0 -> 409.0	108109	20.00	µg/L		0.025
13C2-PFOA	7.129	415.0 -> 370.0	219462	20.00	µg/L		0.027
13C3-PFPeA	3.997	266.0 -> 222.0	99847	20.00	µg/L		0.000
13C4-PFOS	7.680	503.0 -> 80.0	51145	20.00	µg/L		0.038
d3-MeFOSAA	8.100	573.0 -> 419.0	80221	40.00	µg/L		0.012
System Monitoring Compounds							
13C2-PFDA	-	515.0 -> 470.0	-	N.D.			
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = NA%			
13C2-PFHxA	-	315.0 -> 270.0	-	N.D.			
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = NA%			
d5-EtFOSAA	8.225	589.0 -> 419.0	0	0.00	µg/L	m	0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = NA%			
13C3-HFPO-DA	-	287.0 -> 169.0	-	N.D.			
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = NA%			
Target Compounds							QValue
br-PFHxS	6.306	399.0 -> 80.0	6011	2.80	µg/L		100
LN-PFHxS	6.468	399.0 -> 80.0	30601	15.90	µg/L		100
6:2FTS	7.112	427.0 -> 407.0	105308	21.12	µg/L		98
8:2FTS	8.169	527.0 -> 507.0	78653	20.52	µg/L		98
EtFOSAA	8.226	584.0 -> 419.0	37224	20.86	µg/L	m	100
LN-PFOA	7.130	413.0 -> 369.0	233079	21.17	µg/L		100
MeFOSAA	8.101	570.0 -> 419.0	38480	22.05	µg/L	m	93
PFBA	1.839	213.0 -> 169.0	61383	21.21	µg/L		100
PFBS	4.378	299.0 -> 80.0	32066	19.19	µg/L		100
PFDA	8.146	513.0 -> 469.0	236240	20.85	µg/L		96
PFDoDA	8.942	613.0 -> 569.0	274994	21.87	µg/L		94
br-PFOA	7.130	413.0 -> 369.0	0	0.00	µg/L	m	1
PFHpA	6.427	363.0 -> 319.0	131620	21.54	µg/L		98
PFHpS	7.137	449.0 -> 80.0	41197	21.40	µg/L		97
PFHxA	5.496	313.0 -> 269.0	192250	21.28	µg/L		100
PFHxS	6.468	399.0 -> 80.0	36652	18.78	µg/L	m	99
PFNA	7.695	463.0 -> 419.0	163761	20.78	µg/L		96
LN-PFOS	7.668	499.0 -> 80.0	42724	17.78	µg/L		100
PFOA	7.130	413.0 -> 369.0	233079	21.17	µg/L		100
PFOS	7.668	499.0 -> 80.0	56514	21.11	µg/L	m	89
PFPeA	4.000	263.0 -> 219.0	66020	22.73	µg/L		100
br-PFOS	7.523	499.0 -> 80.0	13848	4.01	µg/L		100
PFTeDA	10.001	713.0 -> 669.0	316223	19.65	µg/L		99
PFTrDA	9.444	663.0 -> 619.0	394746	23.68	µg/L		100
PFUnDA	8.544	563.0 -> 519.0	204735	23.00	µg/L		99
ADONA	6.523	377.0 -> 251.0	368158	20.96	µg/L		97
9Cl-PF3ONS	7.914	531.0 -> 351.0	72280	20.87	µg/L		99
11Cl-PF3OUdS	8.688	631.0 -> 451.0	176102	21.12	µg/L		99
HFPO-DA	5.792	329.0 -> 169.0	49518	22.31	µg/L		99

Perfluorinated Compounds by LC/MS/MS

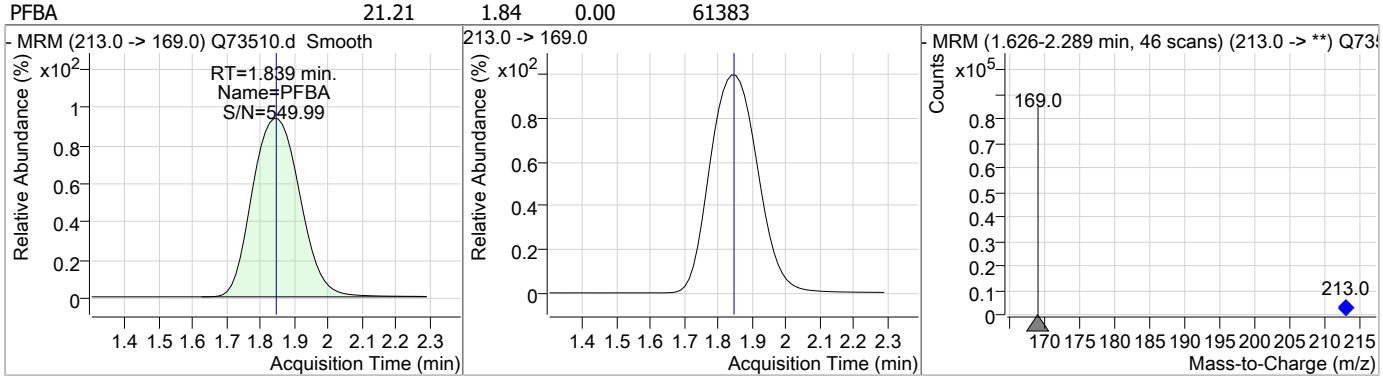
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

= Qualifier out of range, m = manually integrated, + = Area summed

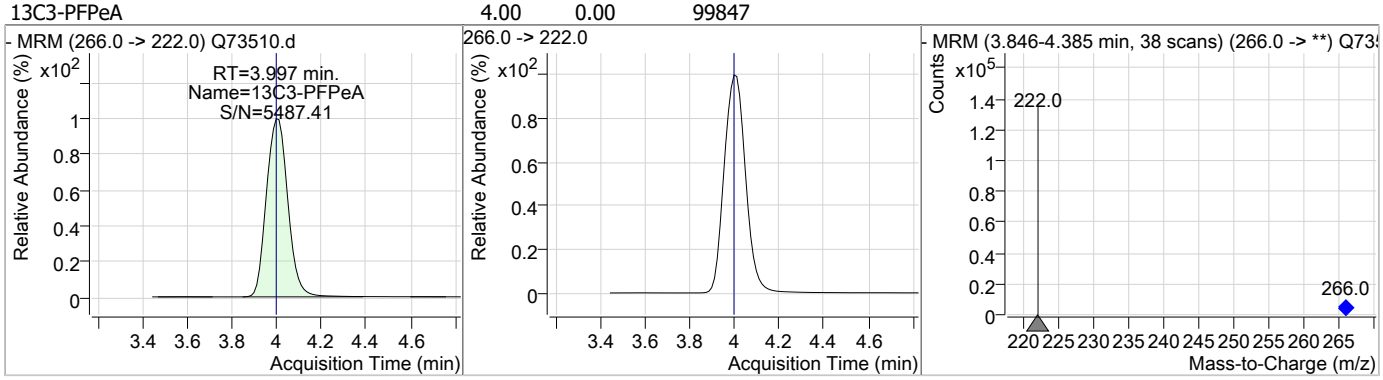
Perfluorinated Compounds by LC/MS/MS



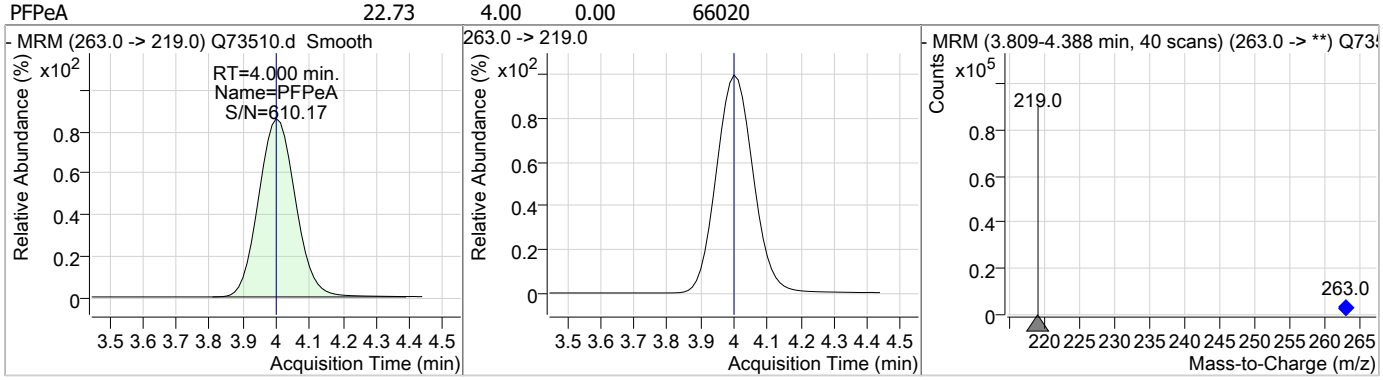
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	21.21	1.84	0.00	61383				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.00	0.00	99847				

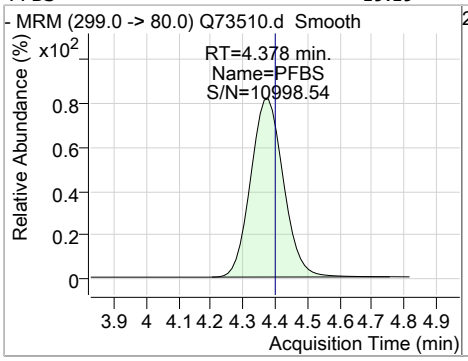


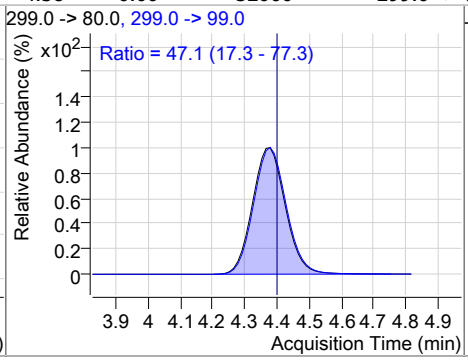
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	22.73	4.00	0.00	66020				

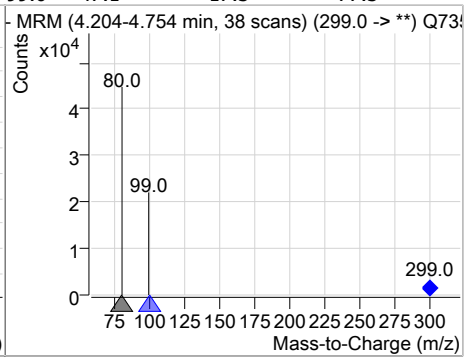


Perfluorinated Compounds by LC/MS/MS

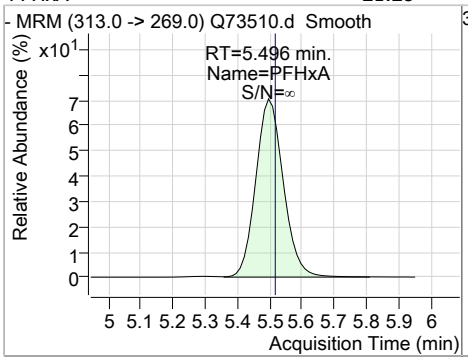
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.19	4.38	0.00	32066	299.0 -> 99.0	47.1	17.3	77.3

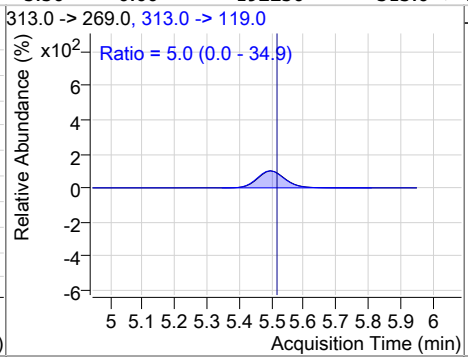


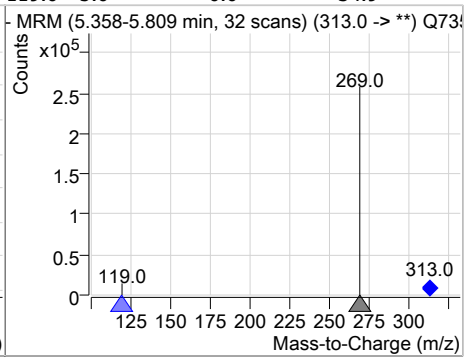




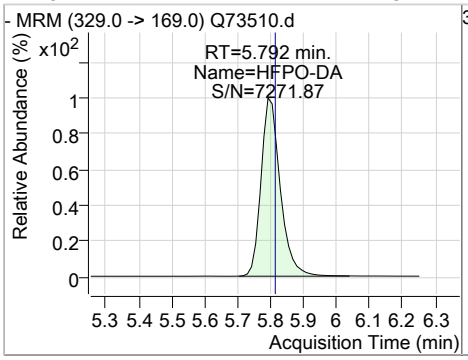
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	21.28	5.50	0.00	192250	313.0 -> 119.0	5.0	0.0	34.9

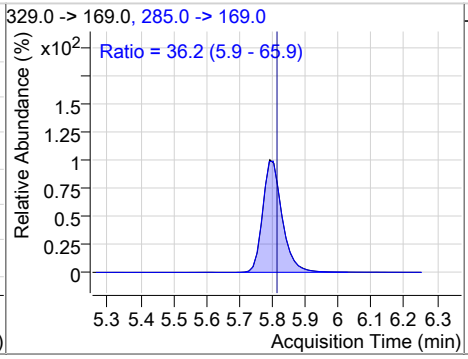


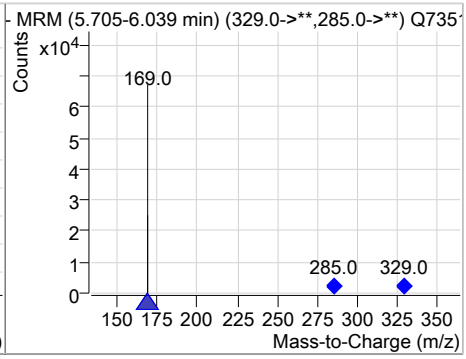




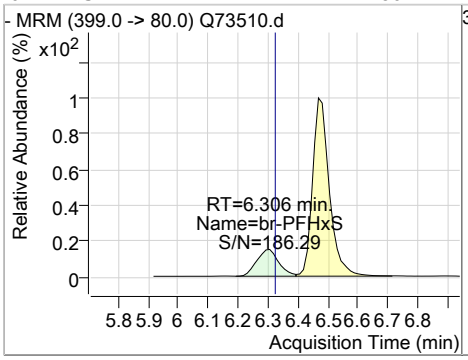
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	22.31	5.79	0.00	49518	285.0 -> 169.0	36.2	5.9	65.9

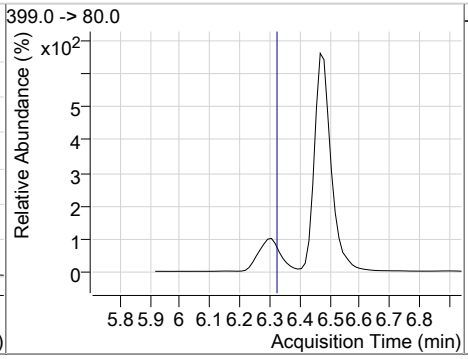


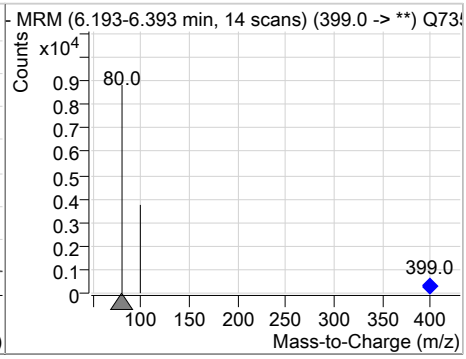




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	2.80	6.31	0.01	6011				

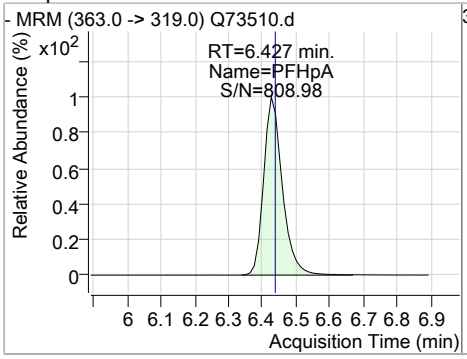


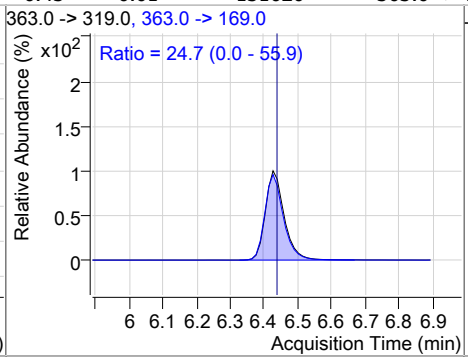


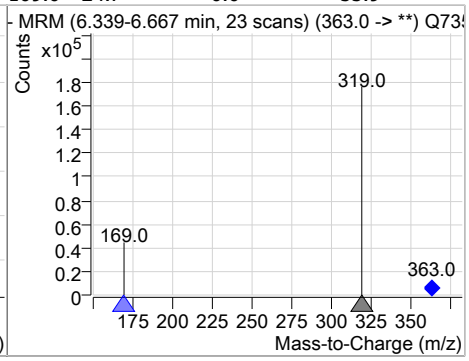


Perfluorinated Compounds by LC/MS/MS

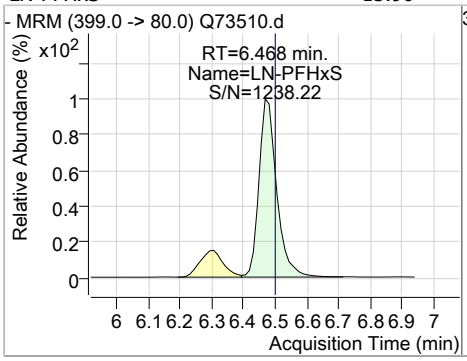
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	21.54	6.43	0.01	131620	363.0 -> 169.0	24.7	0.0	55.9

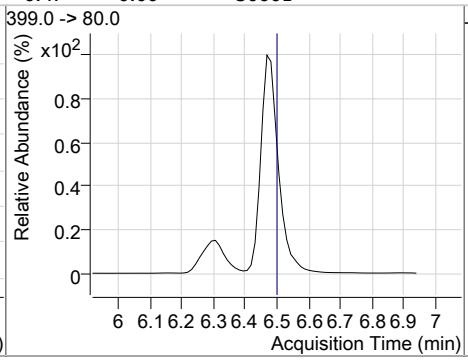


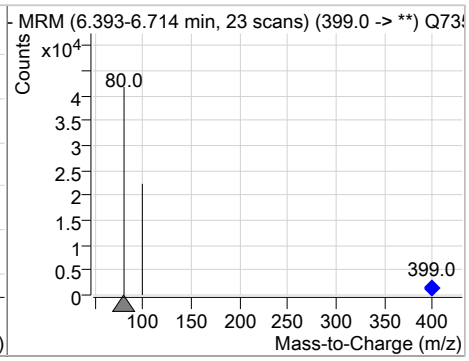




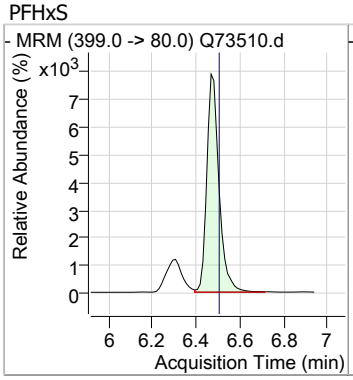
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	15.90	6.47	0.00	30601				

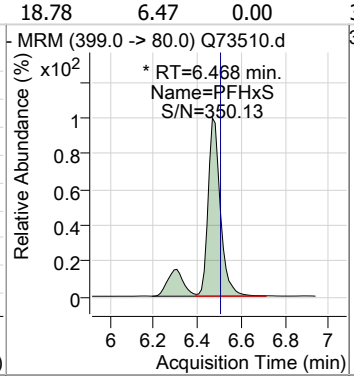


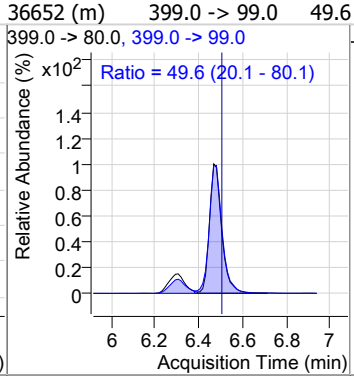


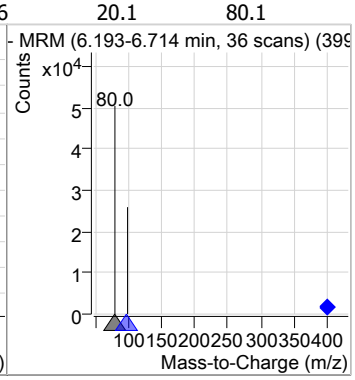


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	18.78	6.47	0.00	36652 (m)	399.0 -> 99.0	49.6	20.1	80.1

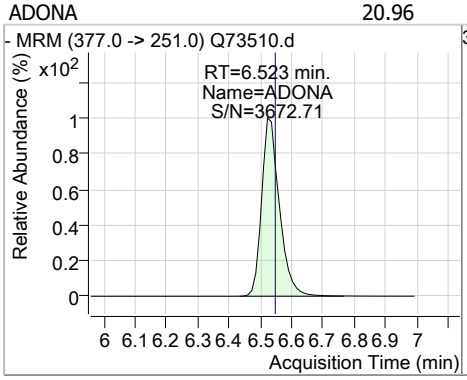


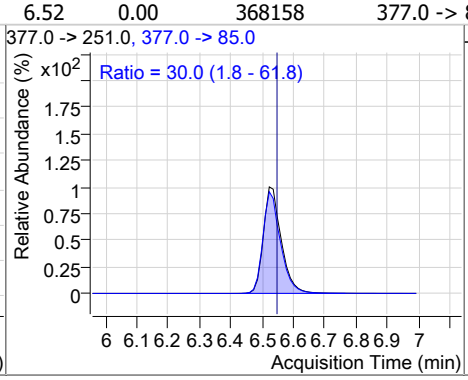


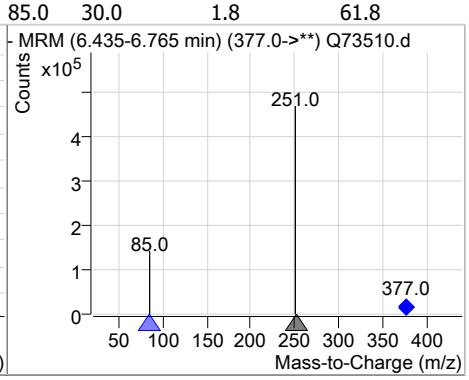




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	20.96	6.52	0.00	368158	377.0 -> 85.0	30.0	1.8	61.8

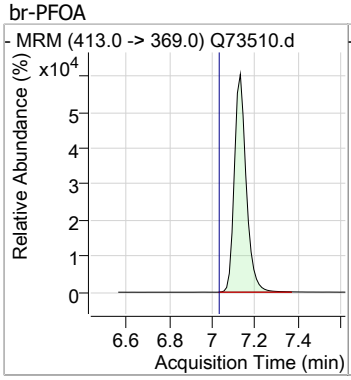


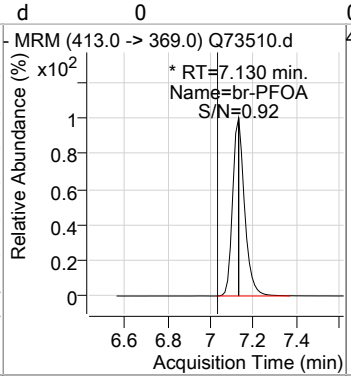


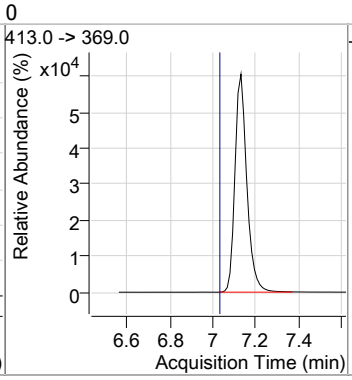


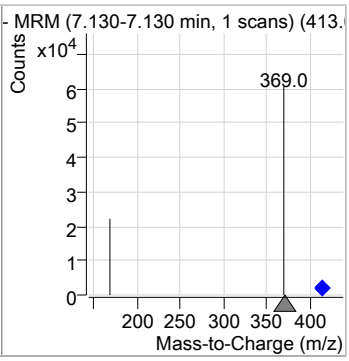
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	d	0		0				

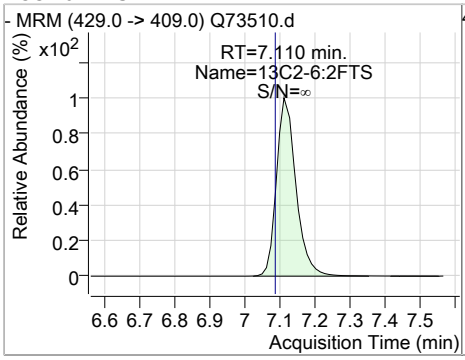


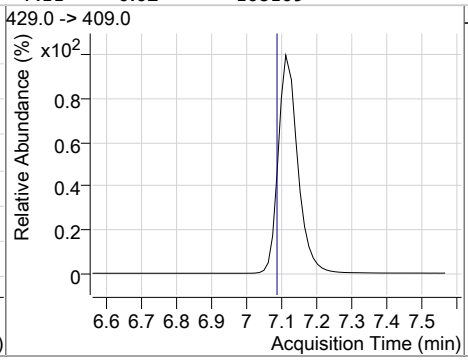


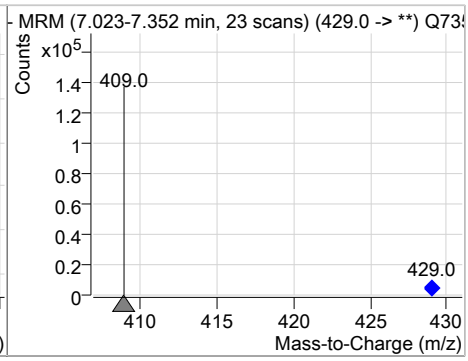




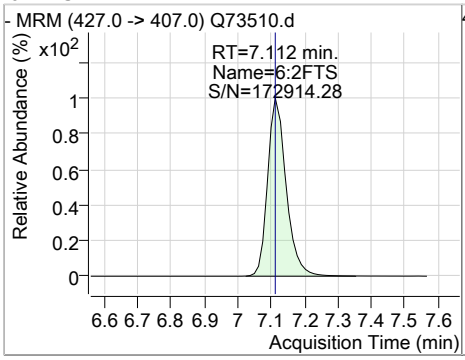
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.11	0.02	108109				

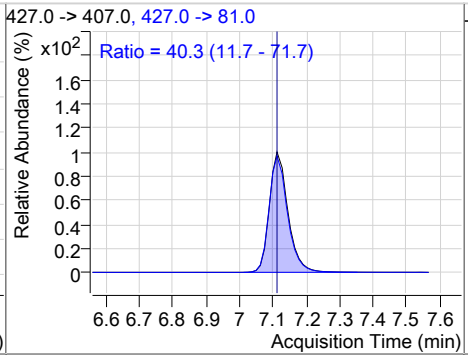


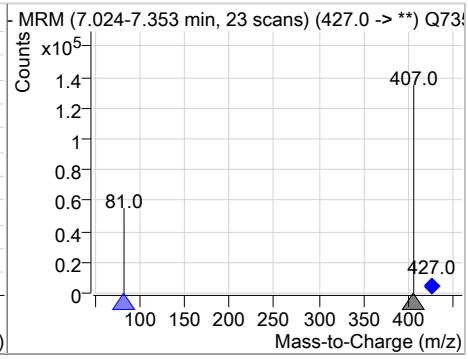




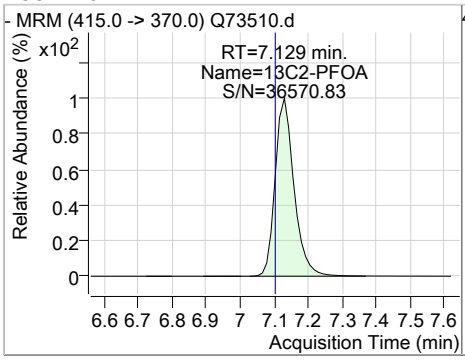
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	21.12	7.11	0.02	105308	427.0 -> 81.0	40.3	11.7	71.7

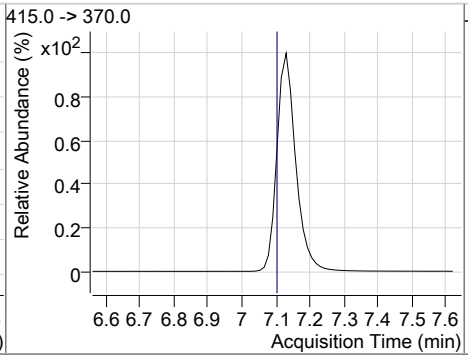


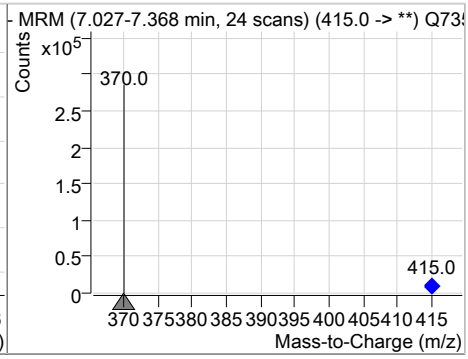




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.13	0.03	219462				

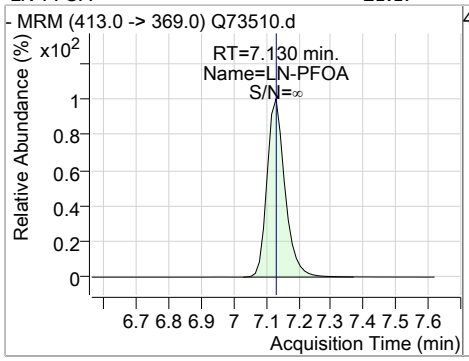


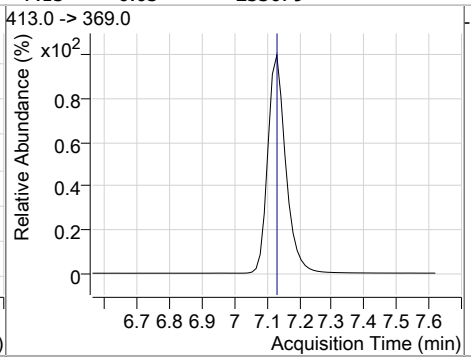


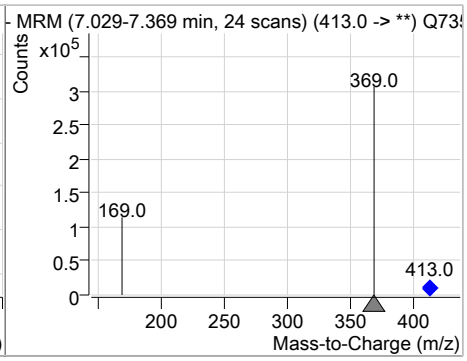


Perfluorinated Compounds by LC/MS/MS

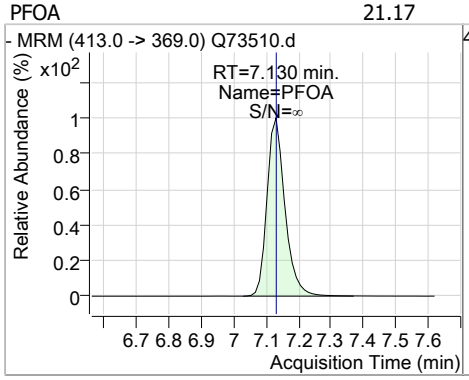
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	21.17	7.13	0.03	233079				

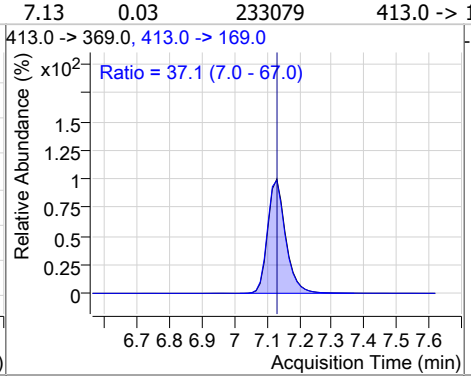


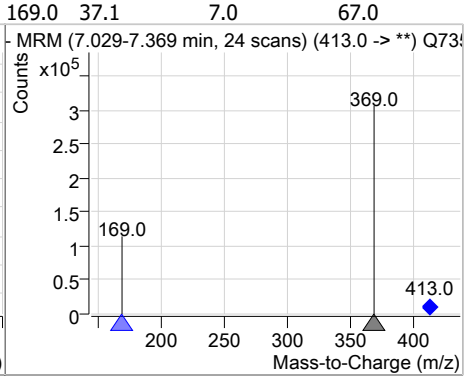




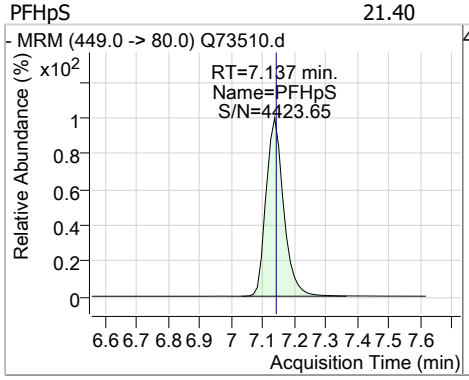
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	21.17	7.13	0.03	233079	413.0 -> 169.0	37.1	7.0	67.0

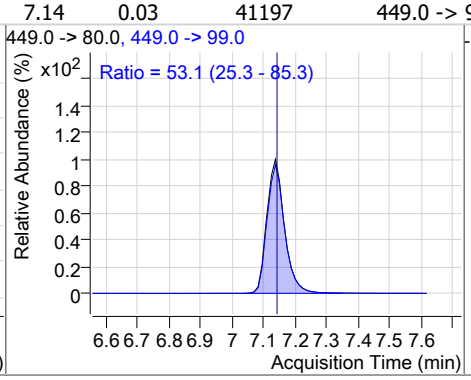


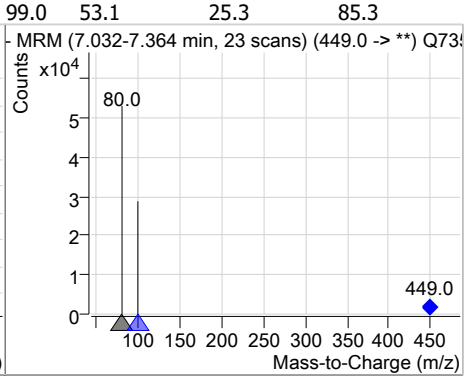




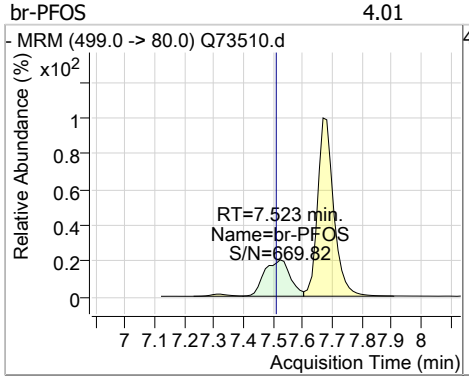
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	21.40	7.14	0.03	41197	449.0 -> 99.0	53.1	25.3	85.3

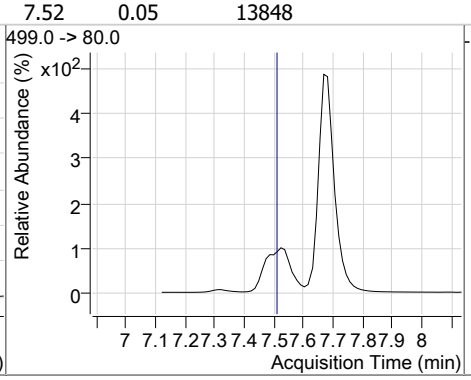


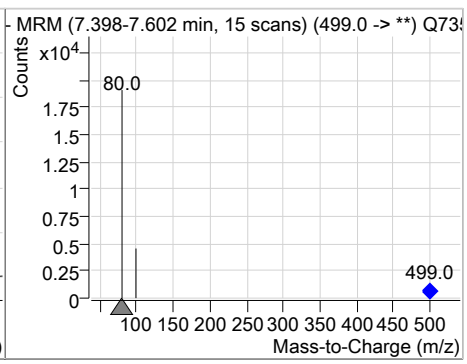




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	4.01	7.52	0.05	13848				

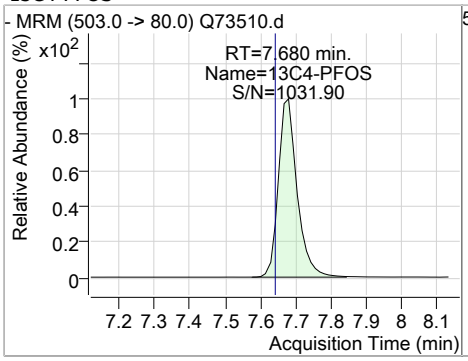


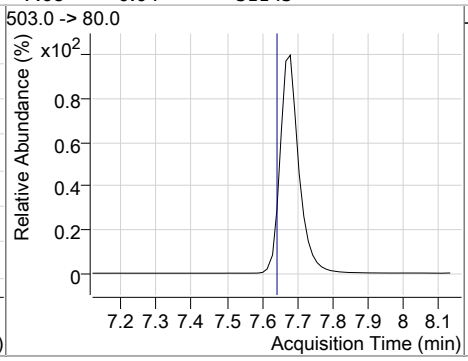


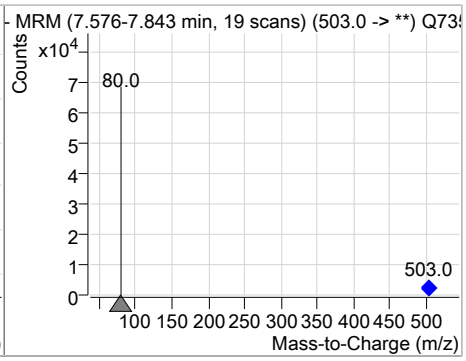


Perfluorinated Compounds by LC/MS/MS

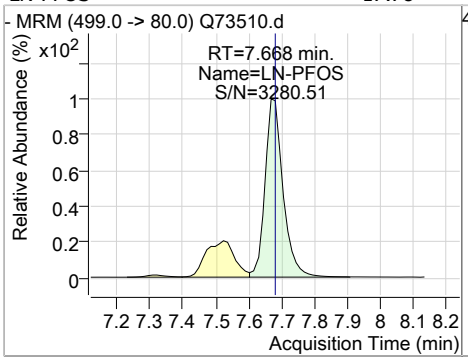
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.68	0.04	51145				

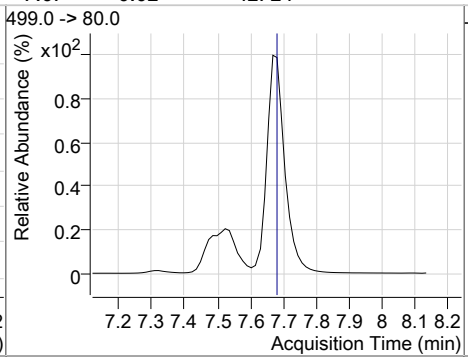


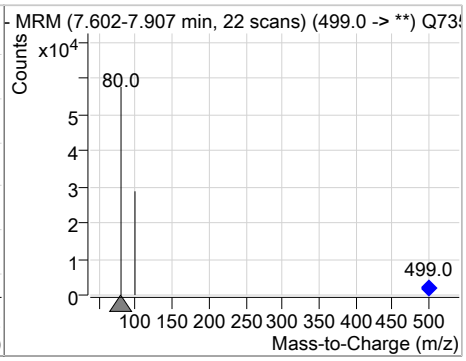




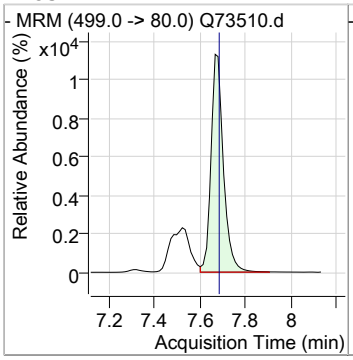
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	17.78	7.67	0.02	42724				

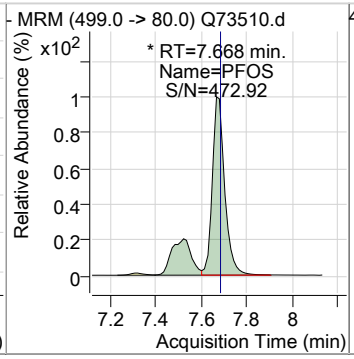


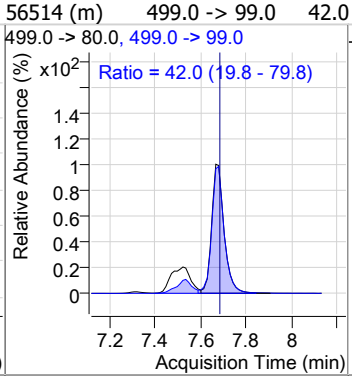


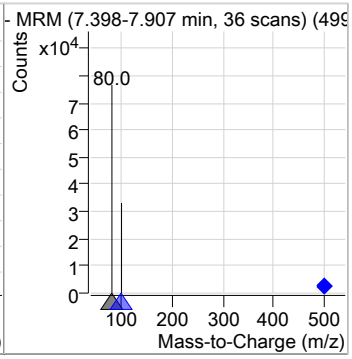


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	21.11	7.67	0.02	56514 (m)	499.0 -> 99.0	42.0	19.8	79.8

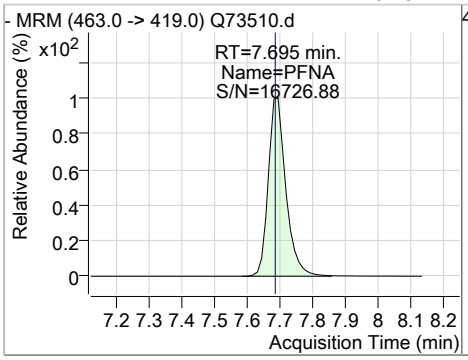


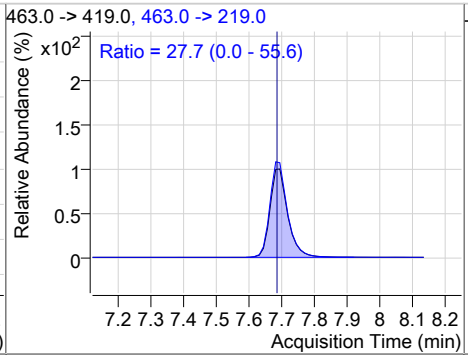


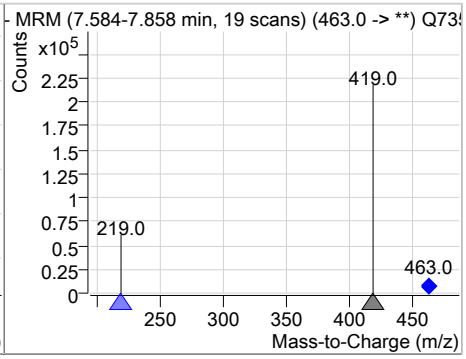




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	20.78	7.69	0.04	163761	463.0 -> 219.0	27.7	0.0	55.6

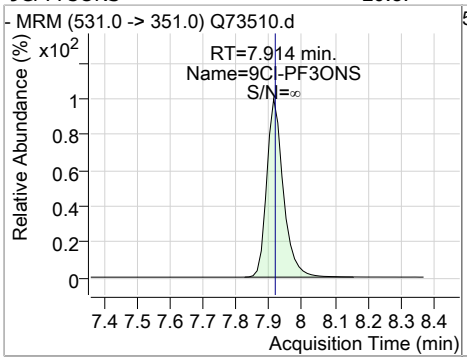


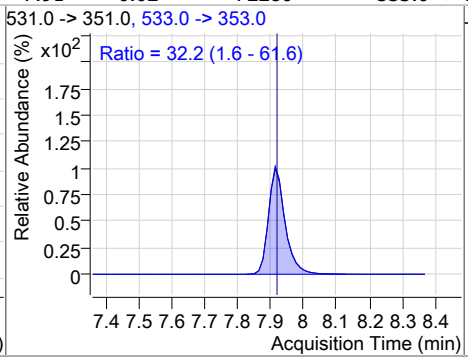


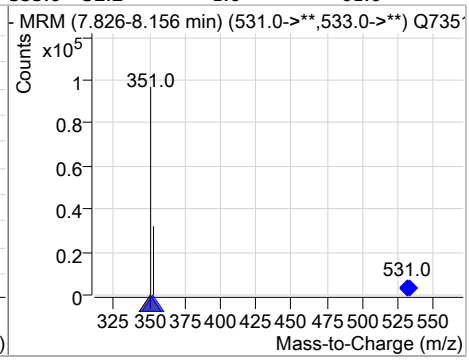


Perfluorinated Compounds by LC/MS/MS

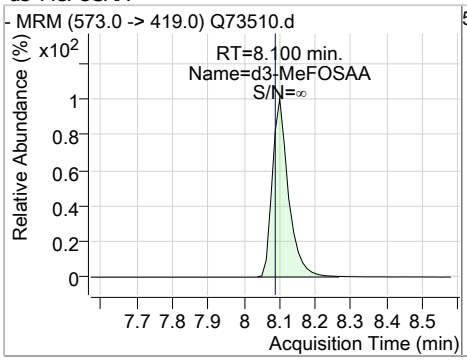
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	20.87	7.91	0.02	72280	533.0 -> 353.0	32.2	1.6	61.6

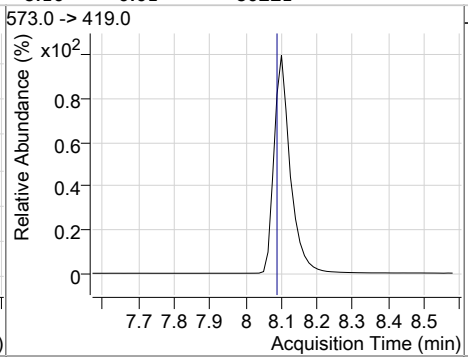


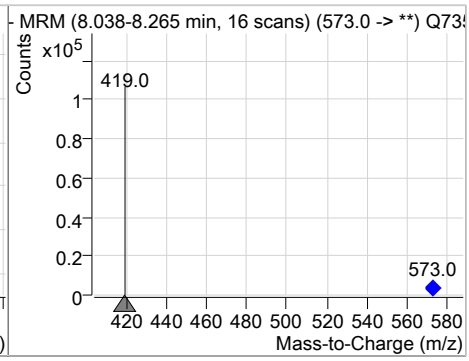




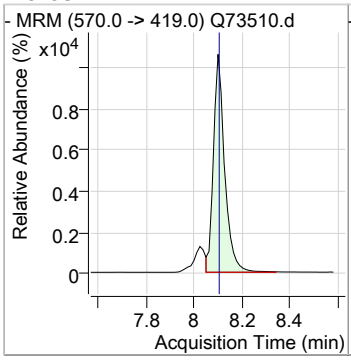
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.10	0.01	80221				

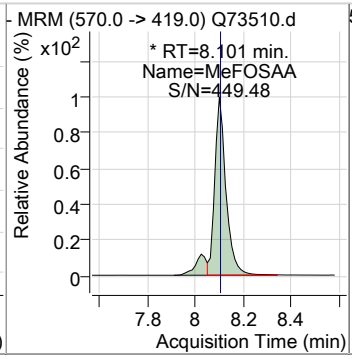


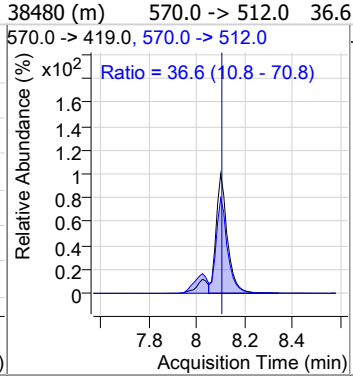


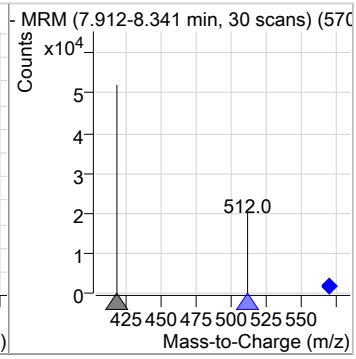


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	22.05	8.10	0.01	38480 (m)	570.0 -> 512.0	36.6	10.8	70.8

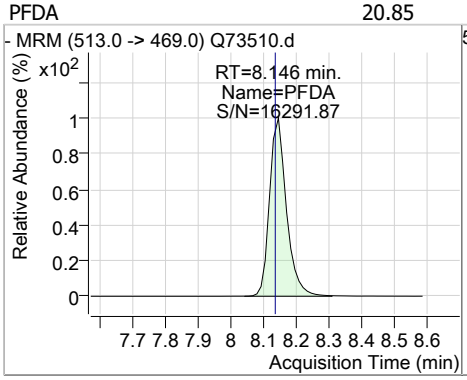


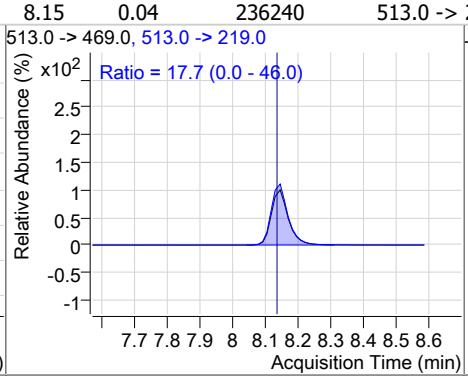


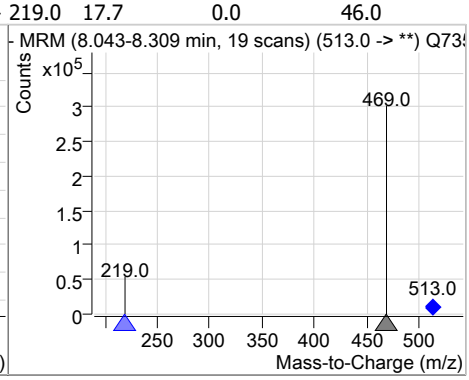




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	20.85	8.15	0.04	236240	513.0 -> 219.0	17.7	0.0	46.0

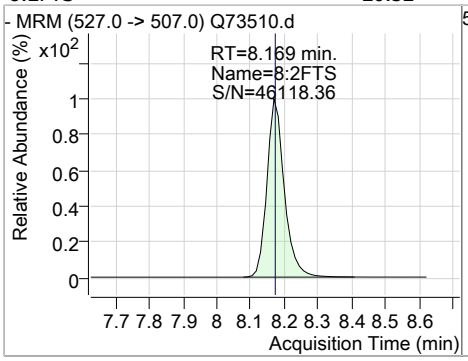


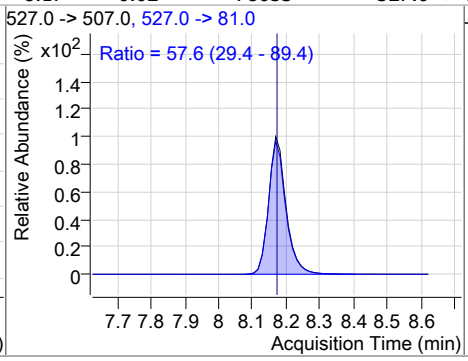


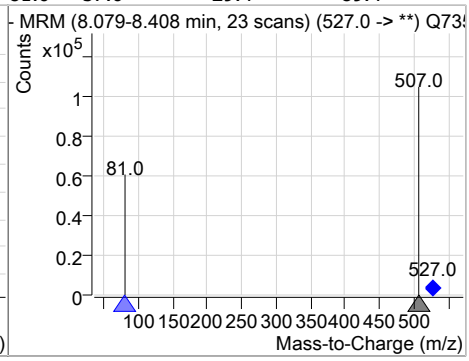


Perfluorinated Compounds by LC/MS/MS

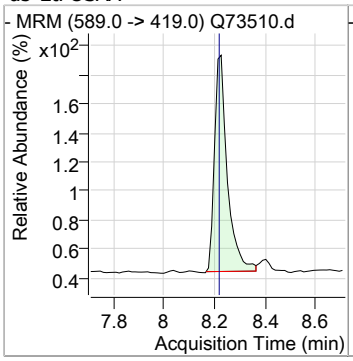
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.52	8.17	0.02	78653	527.0 -> 81.0	57.6	29.4	89.4

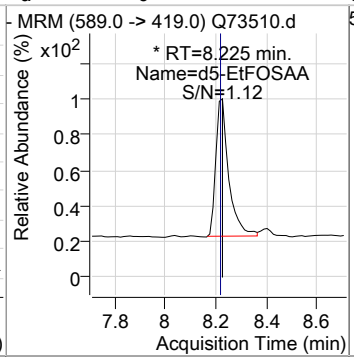


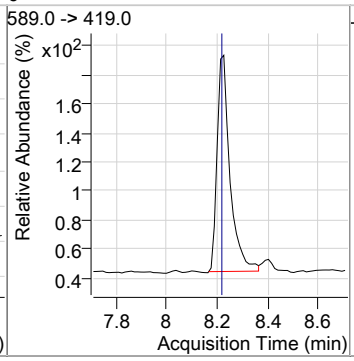


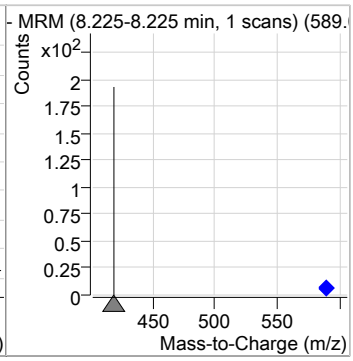


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	d	0		0				

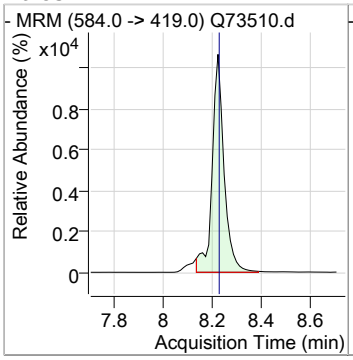


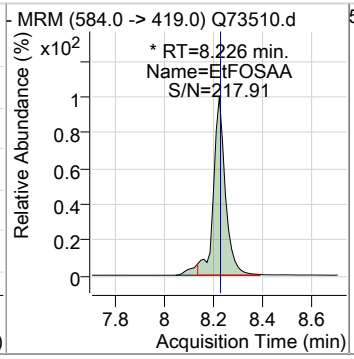


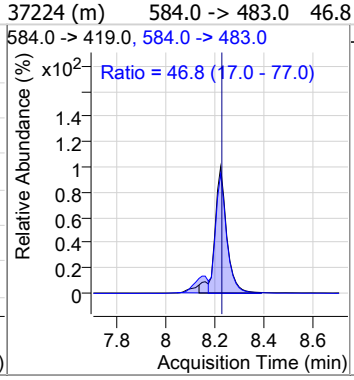


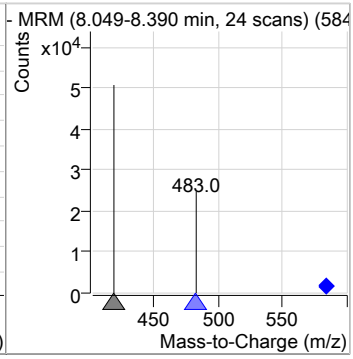


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	20.86	8.23	0.01	37224 (m)	584.0 -> 483.0	46.8	17.0	77.0

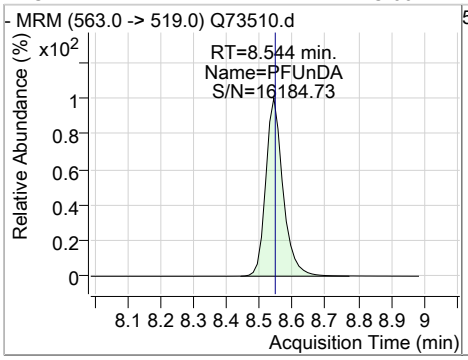


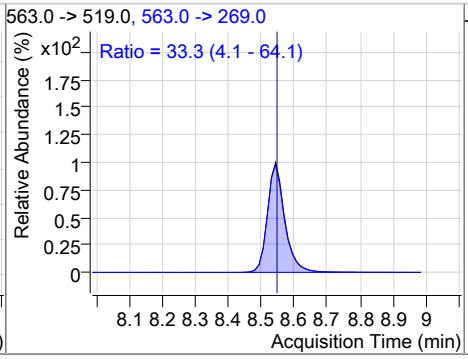


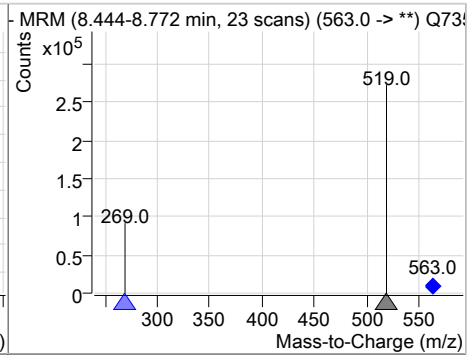




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	23.00	8.54	0.04	204735	563.0 -> 269.0	33.3	4.1	64.1

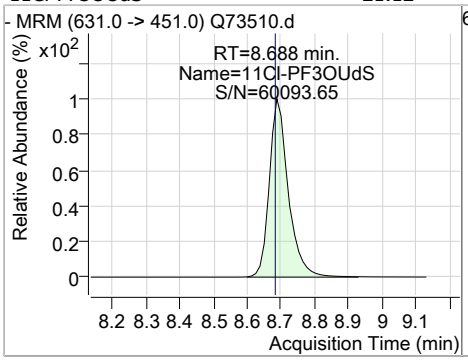


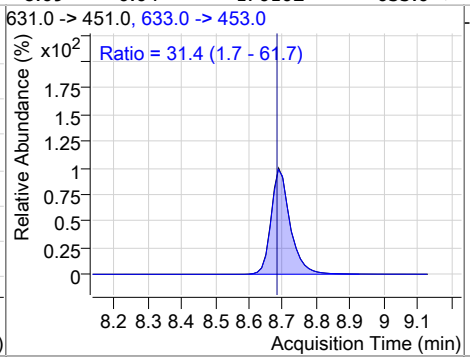


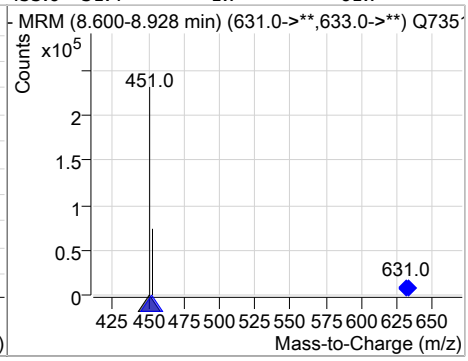


Perfluorinated Compounds by LC/MS/MS

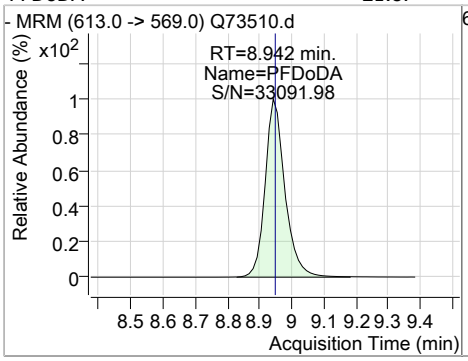
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	21.12	8.69	0.04	176102	633.0 -> 453.0	31.4	1.7	61.7

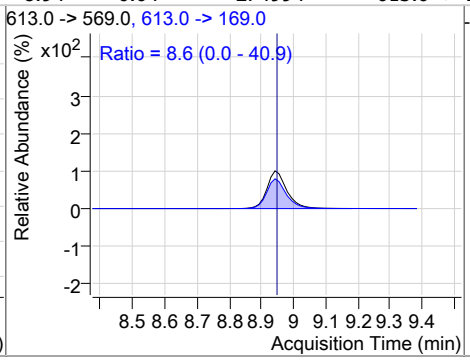


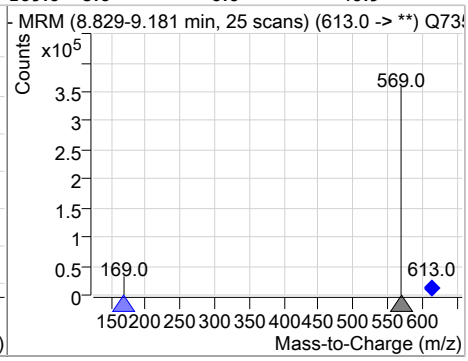




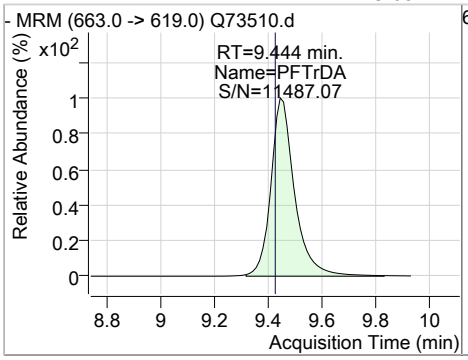
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	21.87	8.94	0.04	274994	613.0 -> 169.0	8.6	0.0	40.9

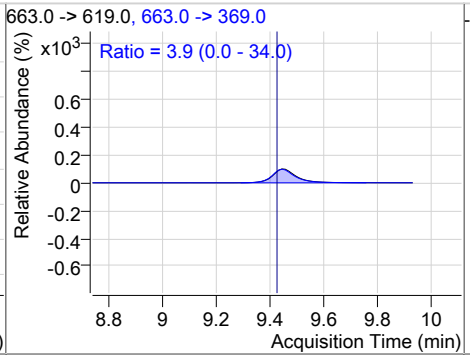


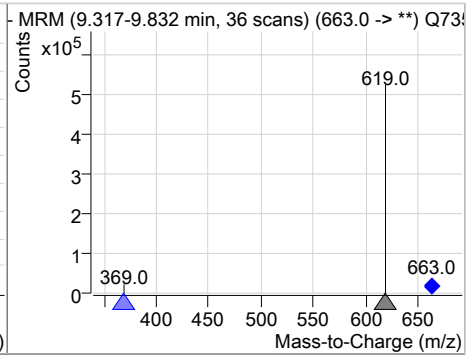




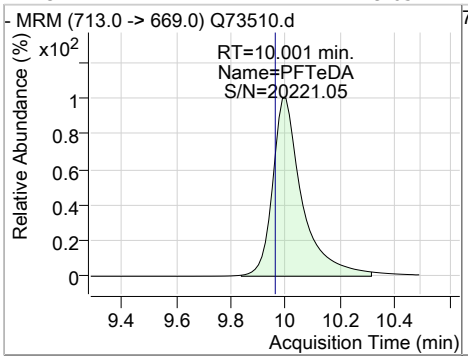
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	23.68	9.44	0.06	394746	663.0 -> 369.0	3.9	0.0	34.0

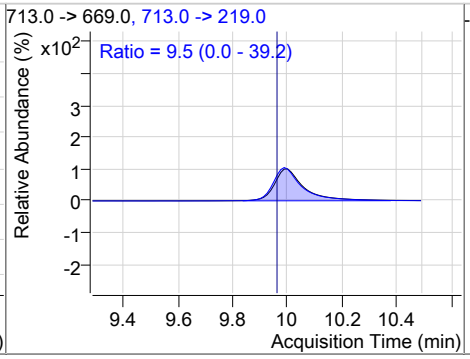


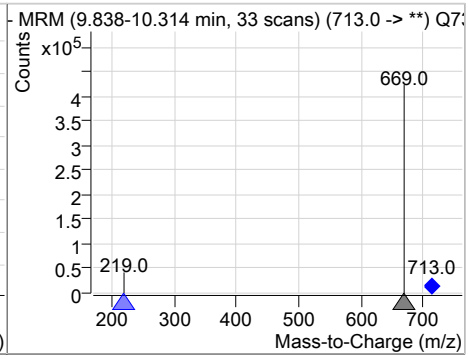




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.65	10.00	0.09	316223	713.0 -> 219.0	9.5	0.0	39.2







Manual Integration Approval Summary

Sample Number: SQ1670-ICV1670
Lab FileID: Q73510.D
Injection Time: 10/27/20 13:43

Method: EPA 537.1 REV 1.0
Analyst approved: 10/29/20 08:24 Mike Eger
Supervisor approved: 10/29/20 08:25 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.47	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.67	Split peak
MeFOSAA	2355-31-9		8.10	Split peak
EtFOSAA	2991-50-6		8.23	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Norman Farmer 10/29/20 13:55

Perfluorinated Compounds by LC/MS/MS

Data File : Q73583.d
Operator : mikee
Acq. Method : 537.m
Acq. Date-Time : 10/29/2020 8:32:23 AM
Sample Name : CC1670-0.5LL
Vial : Vial 2
DA Method File : 537_1027_SQ1670.quantmethod.xml
Batch Name : SQ1672.batch.bin
Sample Information : OP82561,SQ1672,250,,,1.0,1,water

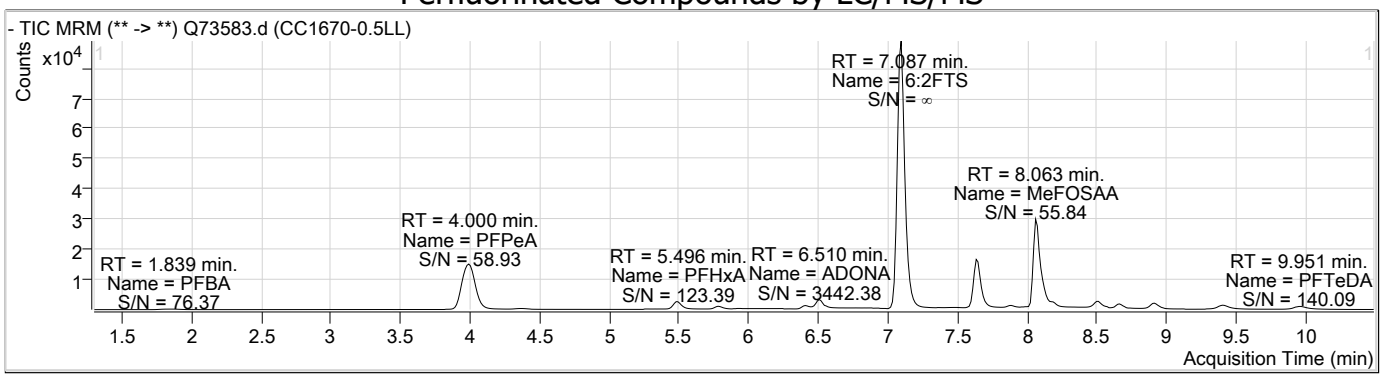
Compound	RT	QIon	Resp.	Conc. Units		Dev(Min)
Internal Standards						
13C2-6:2FTS	7.085	429.0 -> 409.0	109877	20.00 µg/L		0.000
13C2-PFOA	7.103	415.0 -> 370.0	222109	20.00 µg/L		0.000
13C3-PFPeA	3.997	266.0 -> 222.0	98797	20.00 µg/L		0.000
13C4-PFOS	7.642	503.0 -> 80.0	53007	20.00 µg/L		0.000
d3-MeFOSAA	8.063	573.0 -> 419.0	92440	40.00 µg/L		-0.025
System Monitoring Compounds						
13C2-PFDA	8.118	515.0 -> 470.0	4777	0.57 µg/L		0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 2.9%		
13C2-PFHxA	5.494	315.0 -> 270.0	5348	0.53 µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 2.7%		
d5-EtFOSAA	8.188	589.0 -> 419.0	2495	1.05 µg/L		-0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 2.6%		
13C3-HFPO-DA	5.788	287.0 -> 169.0	1786	1.14 µg/L		0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 2.8%		
Target Compounds						**QValue**
br-PFHxS	6.293	399.0 -> 80.0	167	0.07 µg/L		100
LN-PFHxS	6.456	399.0 -> 80.0	891	0.45 µg/L		100
6:2FTS	7.087	427.0 -> 407.0	2838	0.56 µg/L		99
8:2FTS	8.144	527.0 -> 507.0	2033	0.52 µg/L		98
EtFOSAA	8.189	584.0 -> 419.0	1116	0.54 µg/L	m	99
LN-PFOA	7.104	413.0 -> 369.0	5882	0.51 µg/L		100
MeFOSAA	8.063	570.0 -> 419.0	1102	0.55 µg/L	m	94
PFBA	1.839	213.0 -> 169.0	1566	0.53 µg/L		100
PFBS	4.366	299.0 -> 80.0	916	0.53 µg/L		97
PFDA	8.119	513.0 -> 469.0	6152	0.52 µg/L		92
PFDoDA	8.917	613.0 -> 569.0	7256	0.56 µg/L		94
br-PFOA	7.104	413.0 -> 369.0	0	0.00 µg/L	m	1
PFHpA	6.414	363.0 -> 319.0	3497	0.57 µg/L		95
PFHpS	7.107	449.0 -> 80.0	1012	0.51 µg/L		94
PFHxA	5.496	313.0 -> 269.0	4712	0.52 µg/L		98
PFHxS	6.456	399.0 -> 80.0	1059	0.52 µg/L	m	96
PFNA	7.657	463.0 -> 419.0	4912	0.62 µg/L		92
LN-PFOS	7.643	499.0 -> 80.0	1100	0.43 µg/L		100
PFOA	7.104	413.0 -> 369.0	5882	0.51 µg/L		99
PFOS	7.643	499.0 -> 80.0	1442	0.50 µg/L	m	86
PFPeA	4.000	263.0 -> 219.0	1766	0.61 µg/L		100
br-PFOS	7.486	499.0 -> 80.0	410	0.11 µg/L		100
PFTeDA	9.951	713.0 -> 669.0	7260	0.44 µg/L		99
PFTrDA	9.407	663.0 -> 619.0	8343	0.48 µg/L		99
PFUnDA	8.519	563.0 -> 519.0	5176	0.56 µg/L		95
ADONA	6.510	377.0 -> 251.0	8915	0.50 µg/L		98
9Cl-PF3ONS	7.889	531.0 -> 351.0	1878	0.54 µg/L		91
11Cl-PF3OUdS	8.663	631.0 -> 451.0	4566	0.54 µg/L		97
HFPO-DA	5.780	329.0 -> 169.0	1395	0.62 µg/L		99

Perfluorinated Compounds by LC/MS/MS

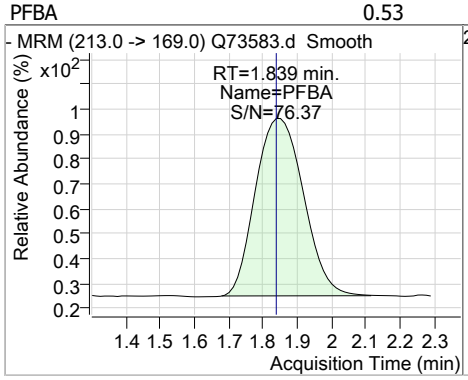
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

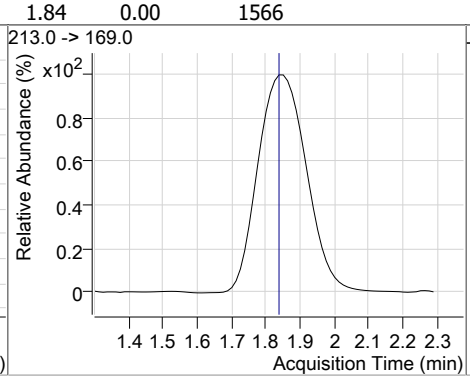
= Qualifier out of range, m = manually integrated, + = Area summed

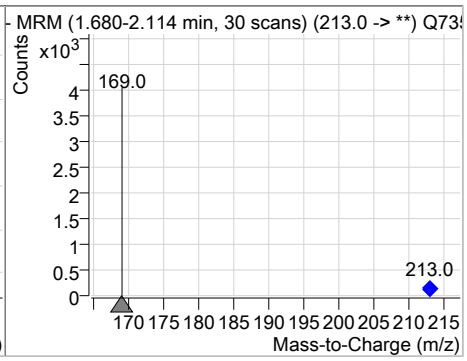
Perfluorinated Compounds by LC/MS/MS



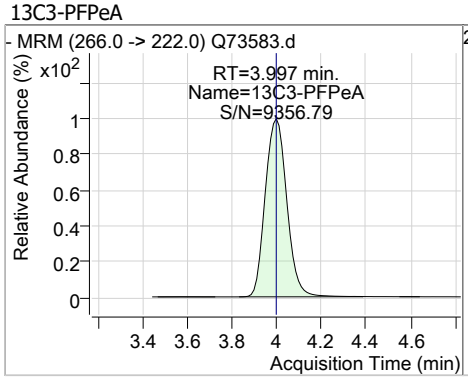
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.53	1.84	0.00	1566				

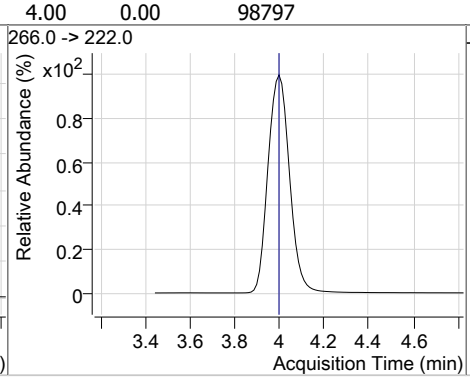


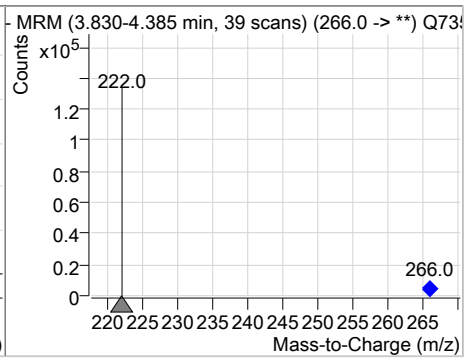




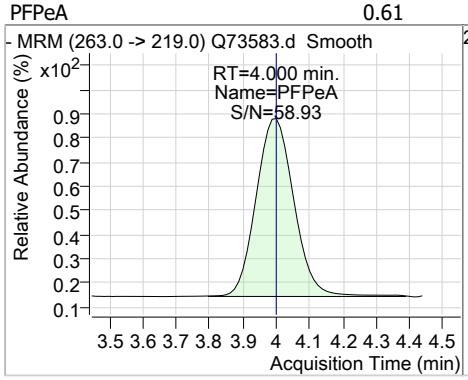
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.00	0.00	98797				

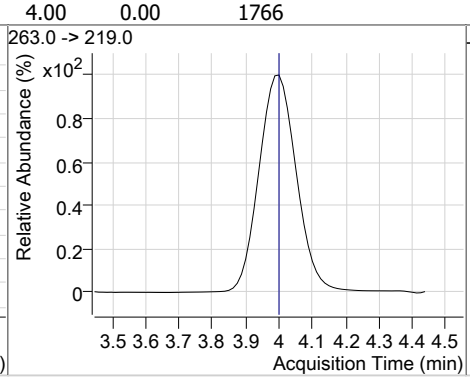


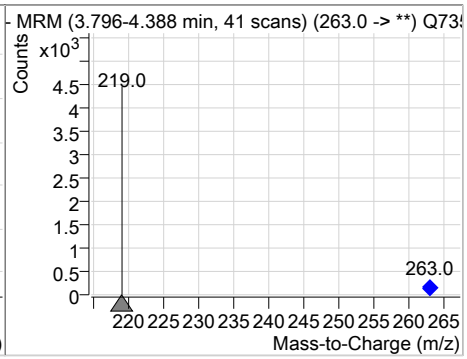




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.61	4.00	0.00	1766				

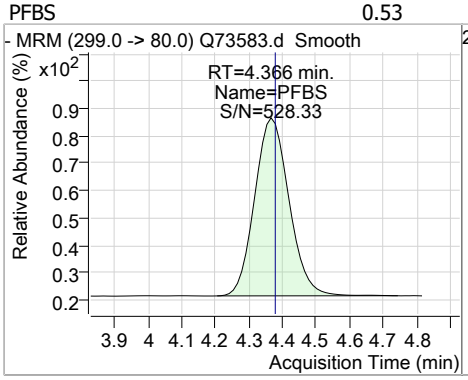


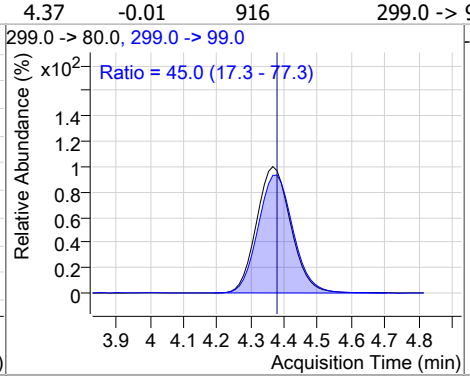


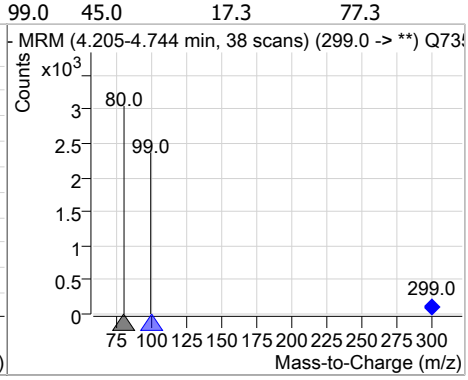


Perfluorinated Compounds by LC/MS/MS

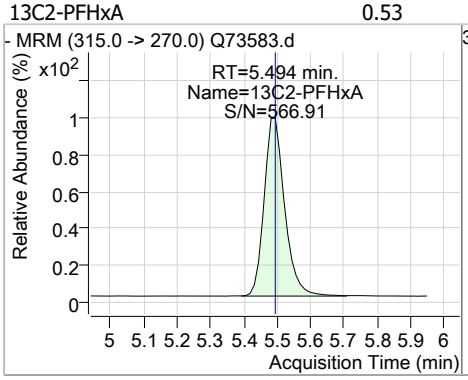
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.53	4.37	-0.01	916	299.0 -> 99.0	45.0	17.3	77.3

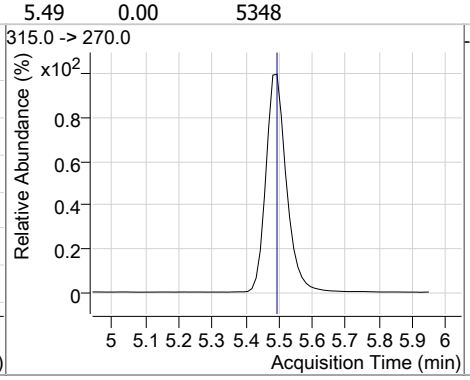


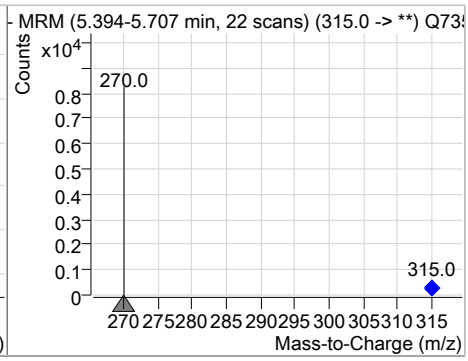




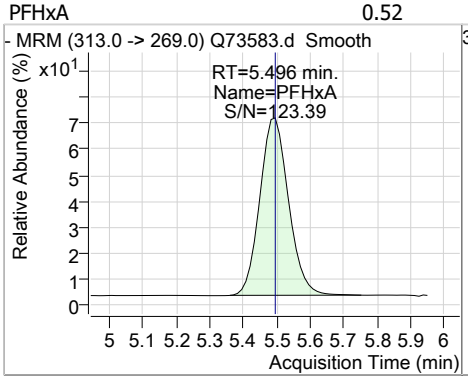
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	0.53	5.49	0.00	5348				

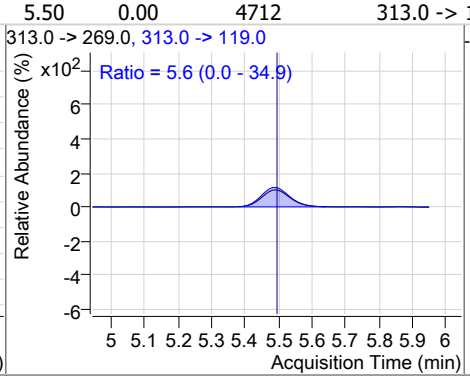


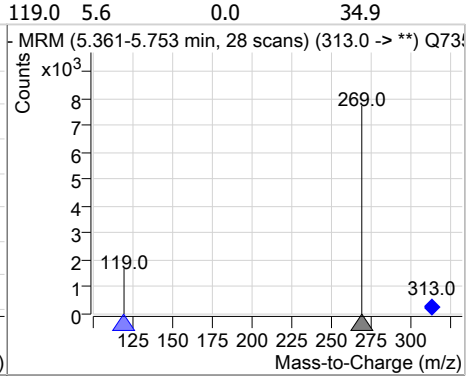




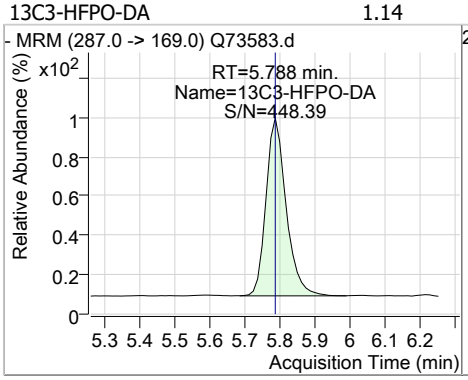
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.52	5.50	0.00	4712	313.0 -> 119.0	5.6	0.0	34.9

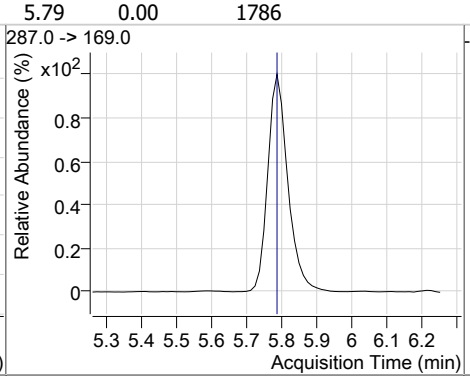


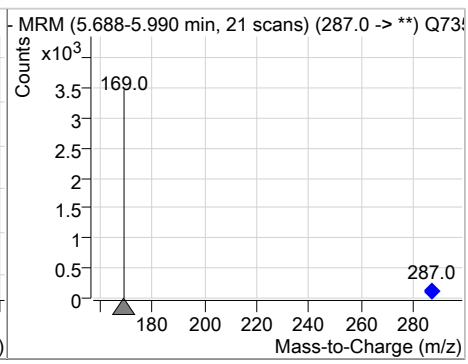




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	1.14	5.79	0.00	1786				

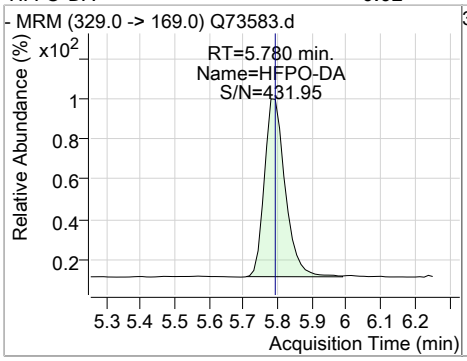


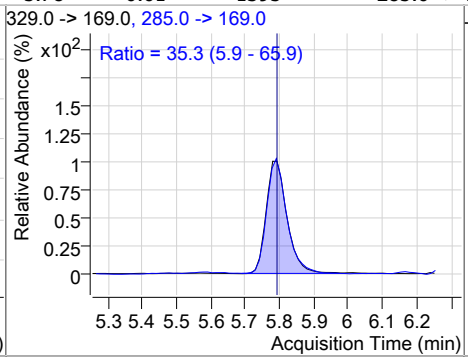


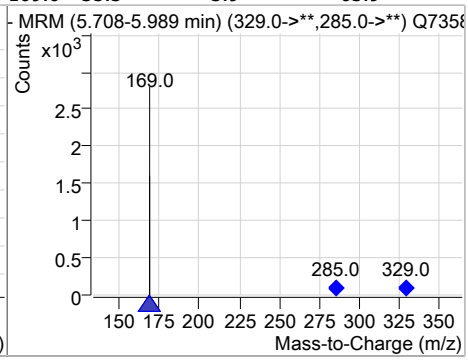


Perfluorinated Compounds by LC/MS/MS

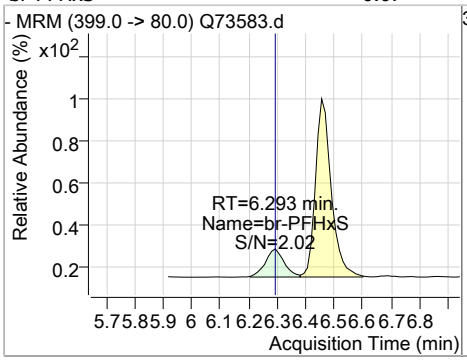
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.62	5.78	-0.01	1395	285.0 -> 169.0	35.3	5.9	65.9

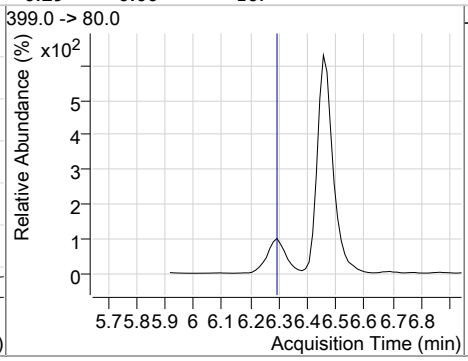


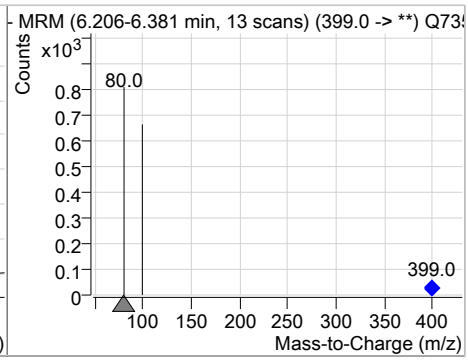




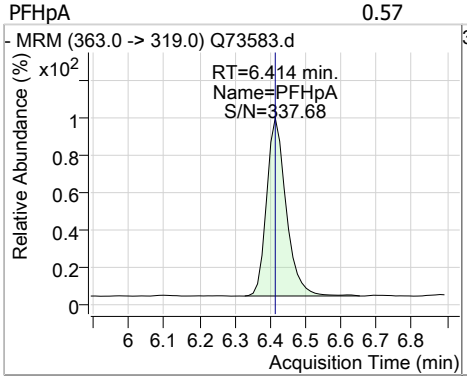
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.07	6.29	0.00	167				

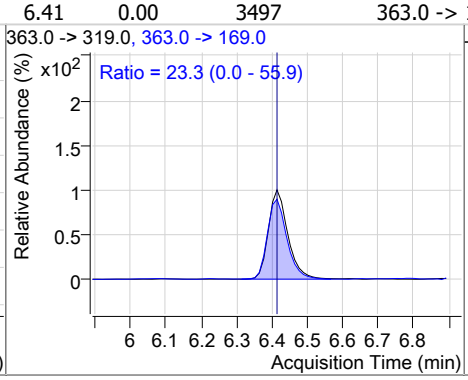


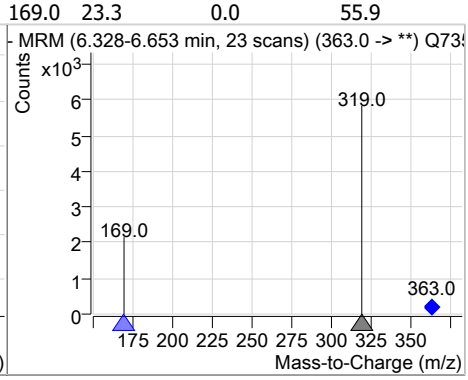




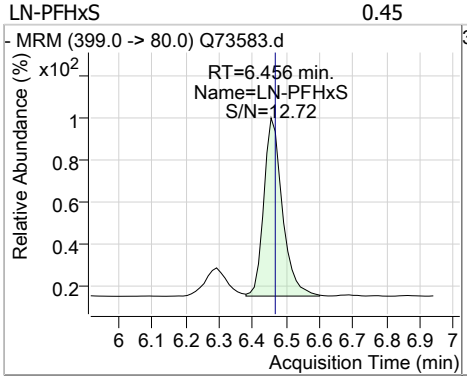
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.57	6.41	0.00	3497	363.0 -> 169.0	23.3	0.0	55.9

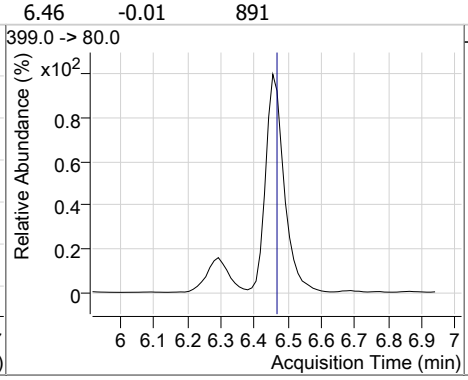


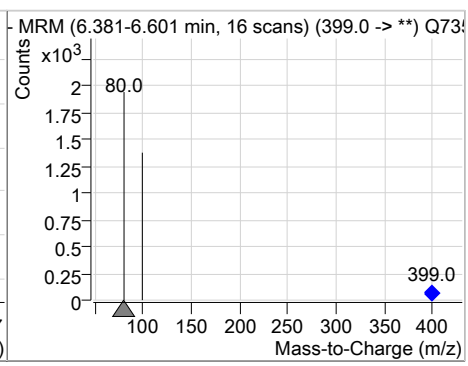




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	0.45	6.46	-0.01	891				

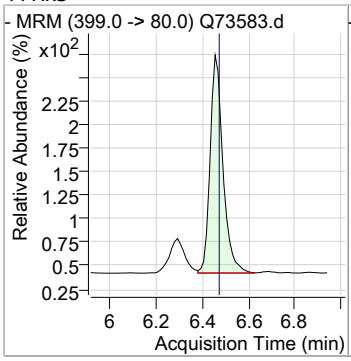


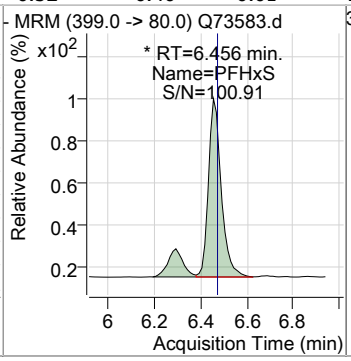


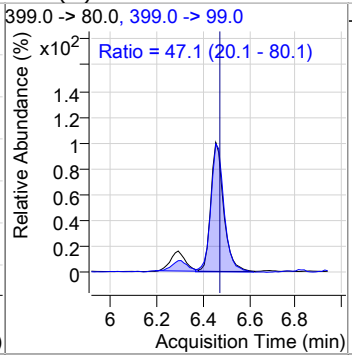


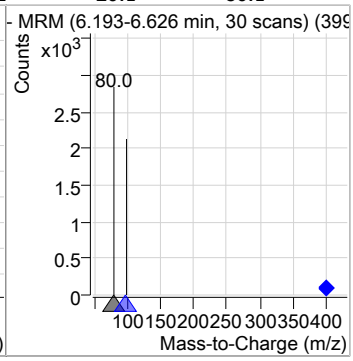
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.52	6.46	-0.01	1059 (m)	399.0 -> 99.0	47.1	20.1	80.1

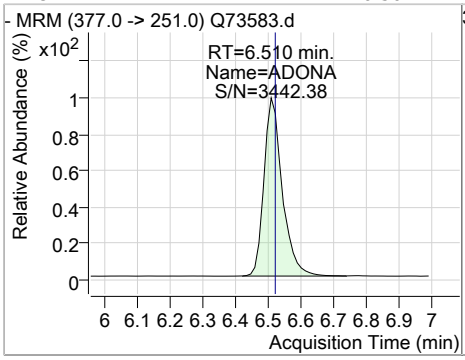


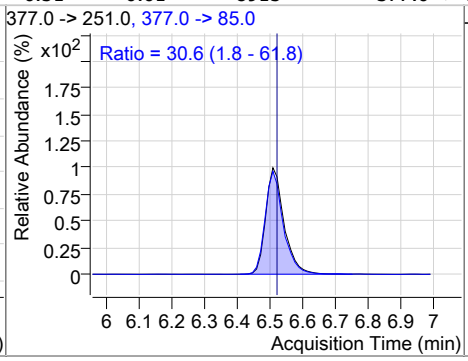


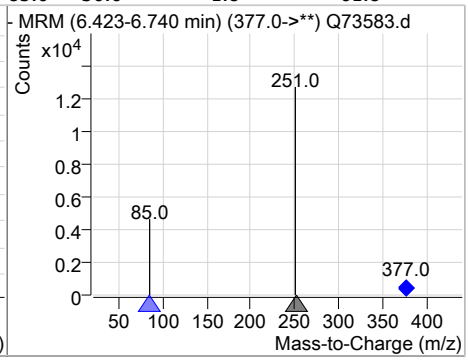




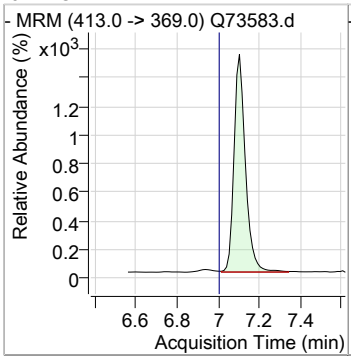
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.50	6.51	-0.01	8915	377.0 -> 85.0	30.6	1.8	61.8

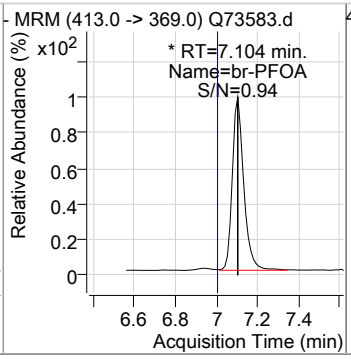


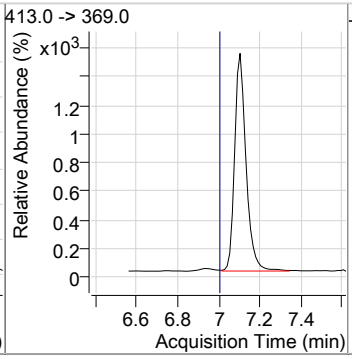


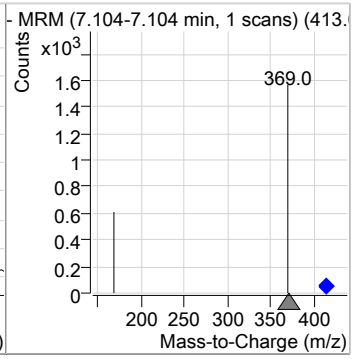


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	d	0		0				

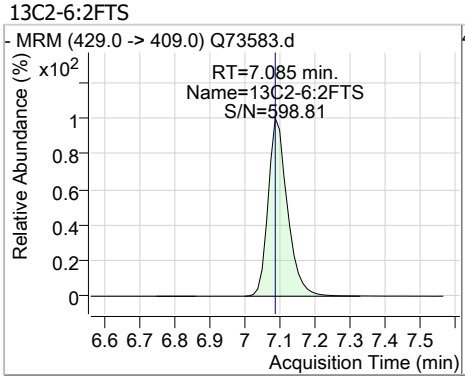


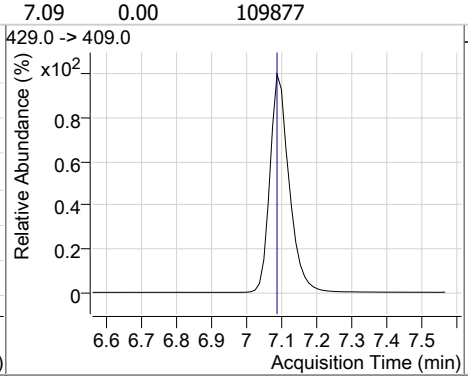


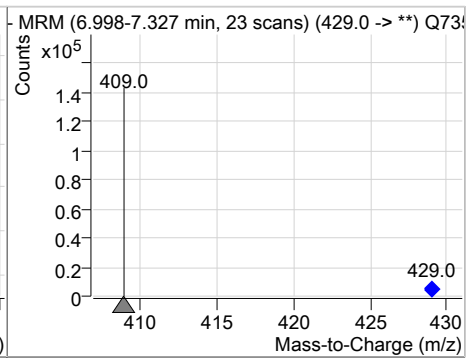




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.09	0.00	109877				

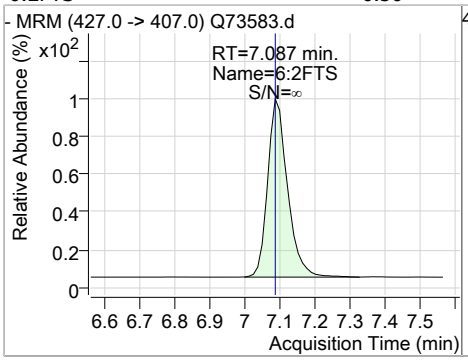


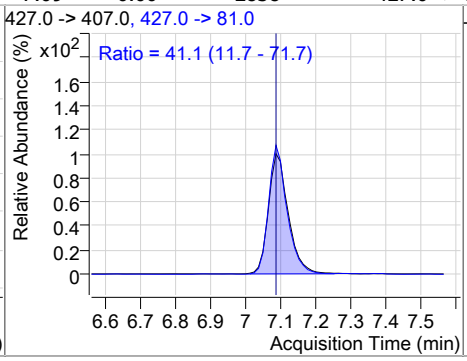


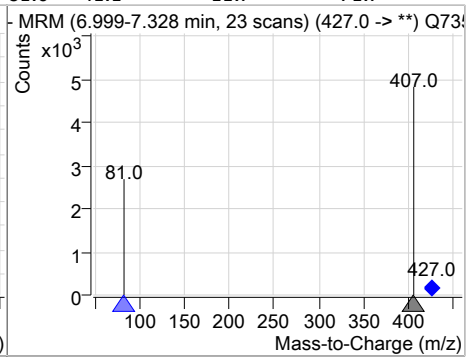


Perfluorinated Compounds by LC/MS/MS

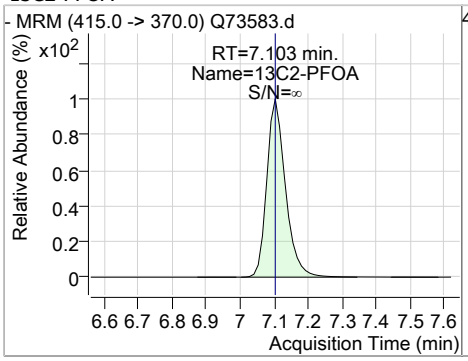
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.56	7.09	0.00	2838	427.0 -> 81.0	41.1	11.7	71.7

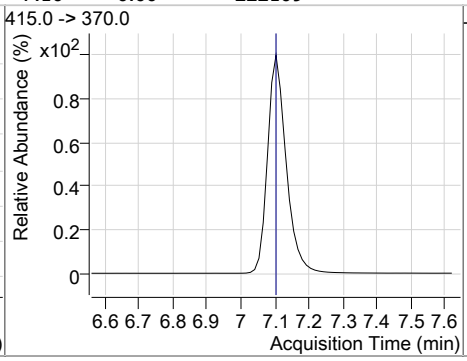


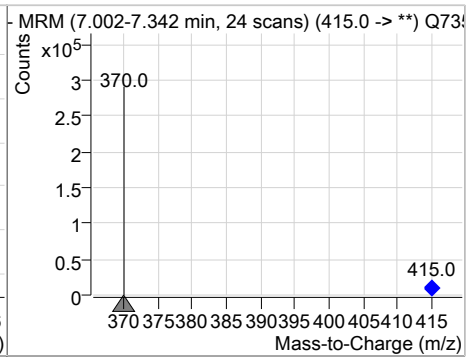




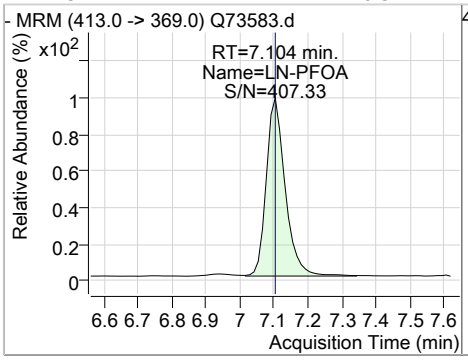
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.10	0.00	222109				

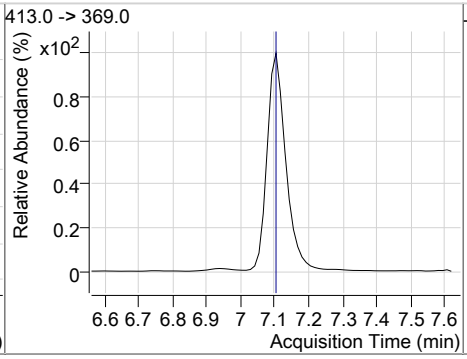


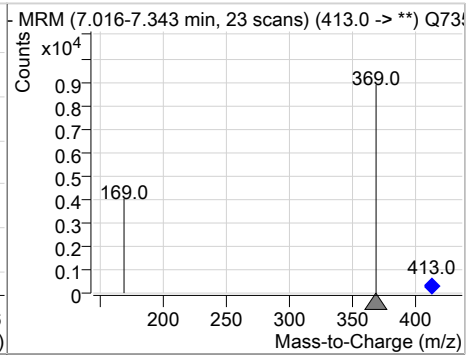




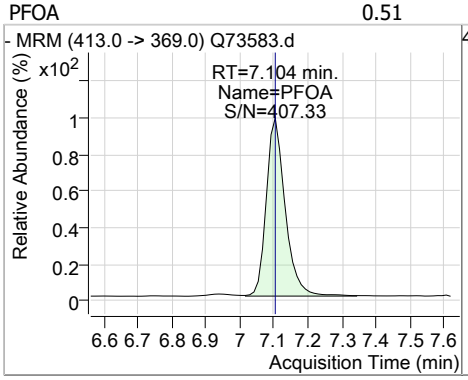
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	0.51	7.10	0.00	5882				

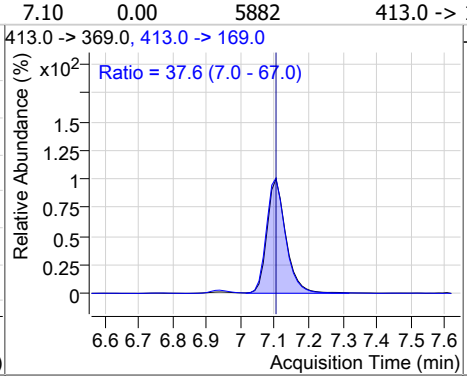


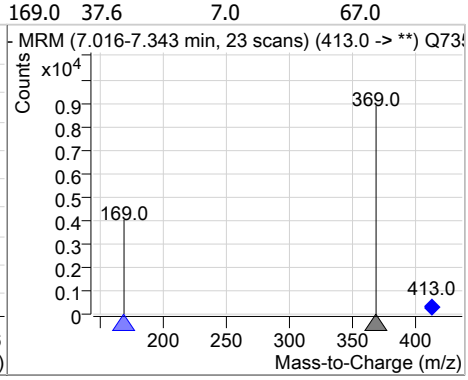




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.51	7.10	0.00	5882	413.0 -> 169.0	37.6	7.0	67.0

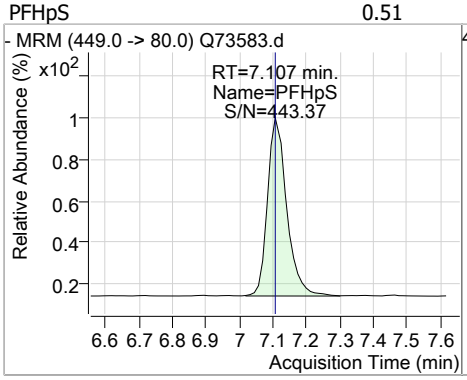


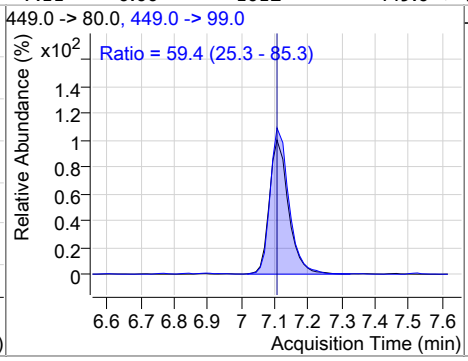


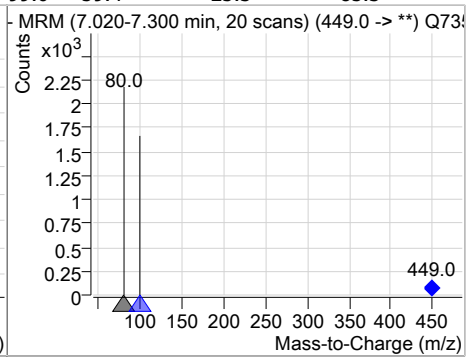


Perfluorinated Compounds by LC/MS/MS

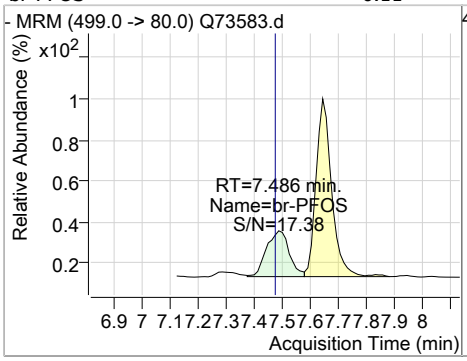
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.51	7.11	0.00	1012	449.0 -> 99.0	59.4	25.3	85.3

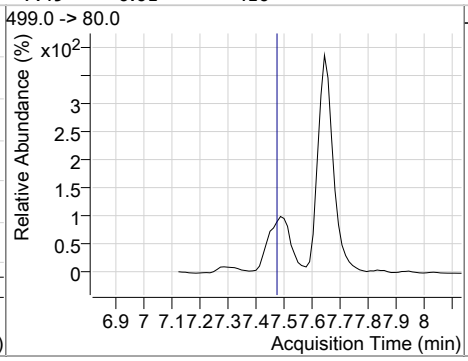


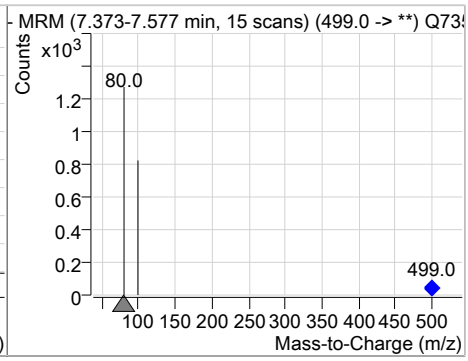




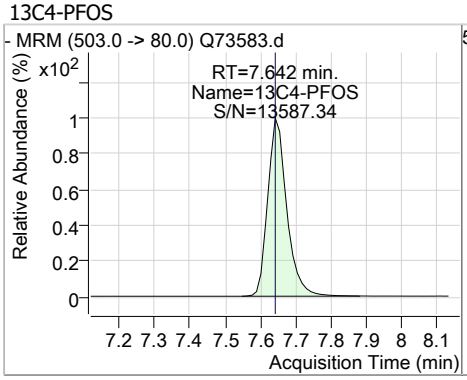
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	0.11	7.49	0.01	410				

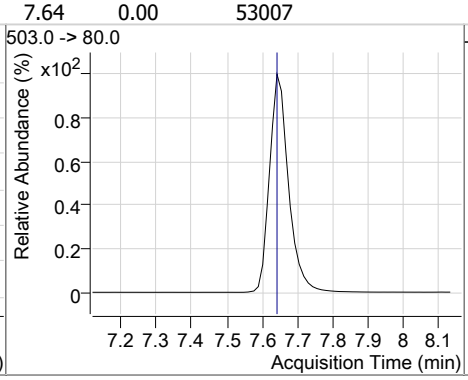


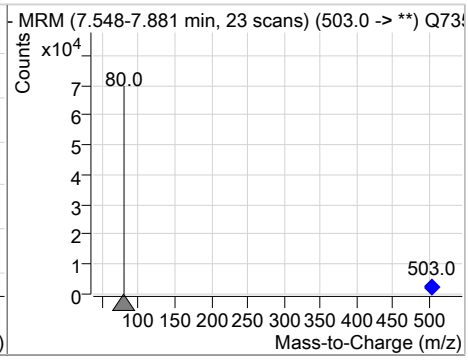




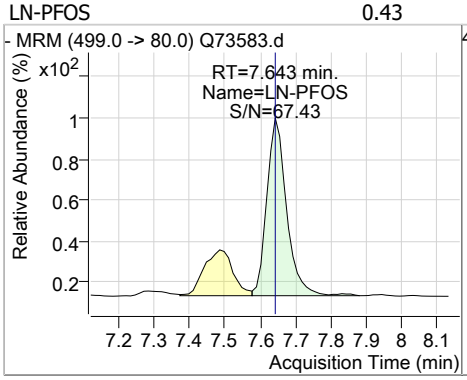
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.64	0.00	53007				

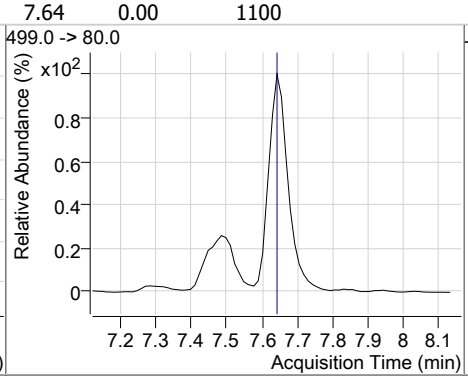


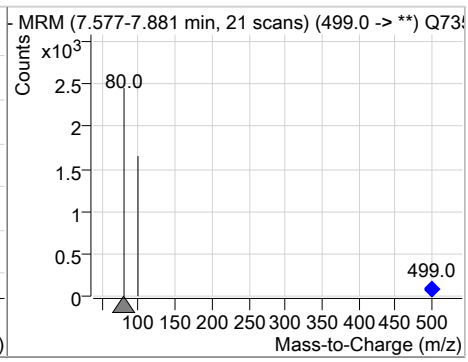




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	0.43	7.64	0.00	1100				

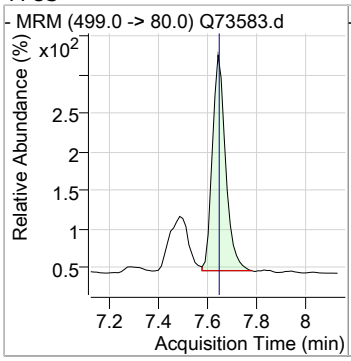


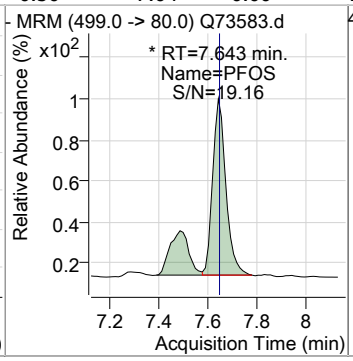


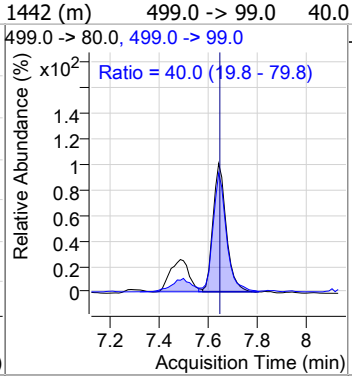


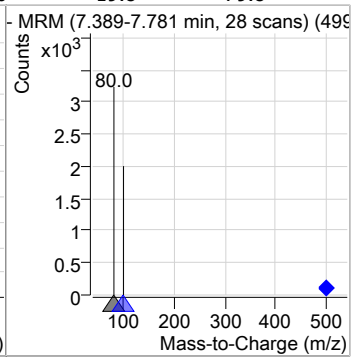
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.50	7.64	0.00	1442 (m)	499.0 -> 99.0	40.0	19.8	79.8

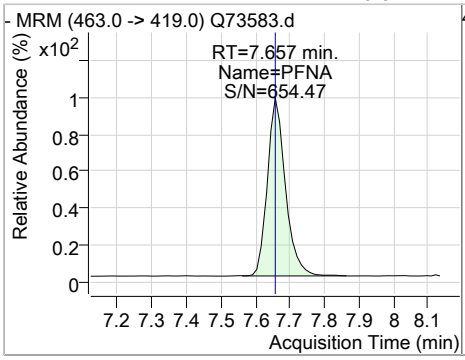


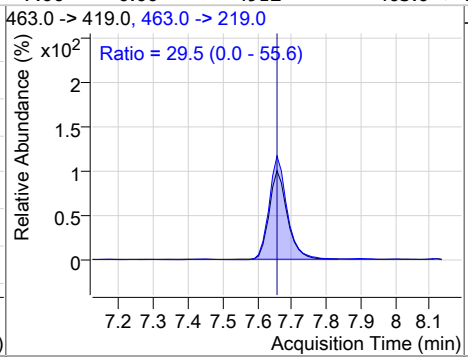


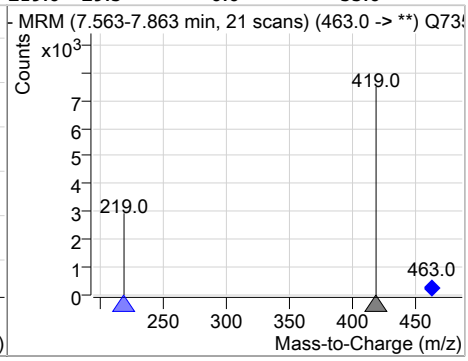




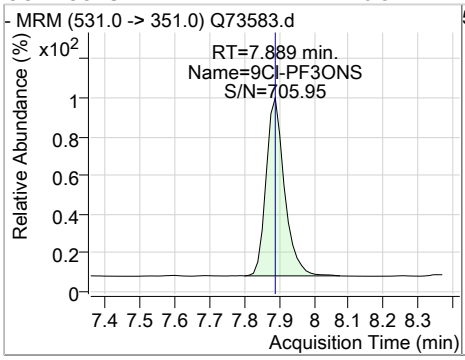
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.62	7.66	0.00	4912	463.0 -> 219.0	29.5	0.0	55.6

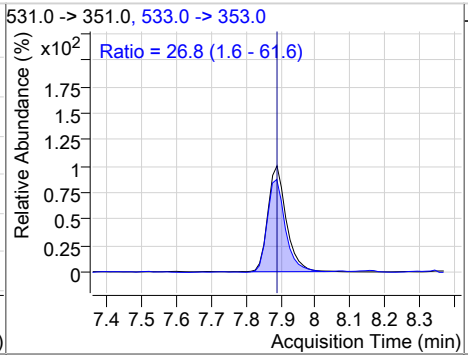


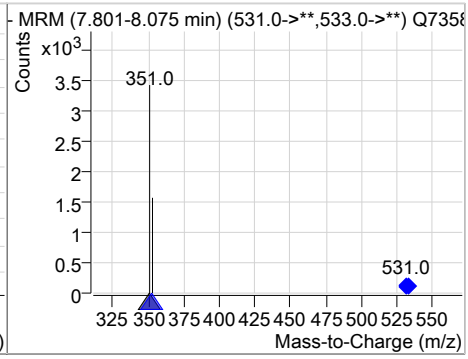




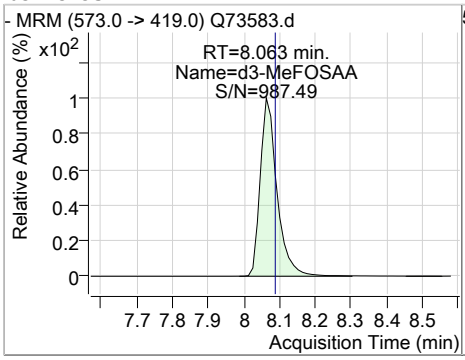
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.54	7.89	0.00	1878	533.0 -> 353.0	26.8	1.6	61.6

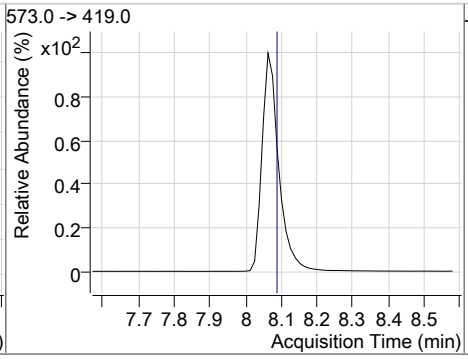


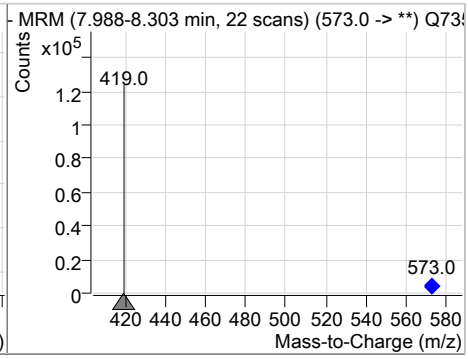




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.06	-0.03	92440				

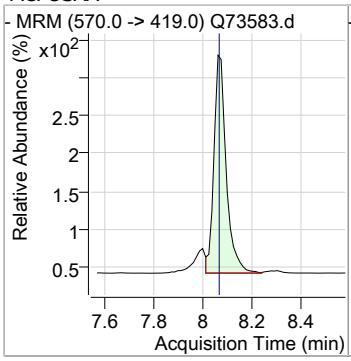


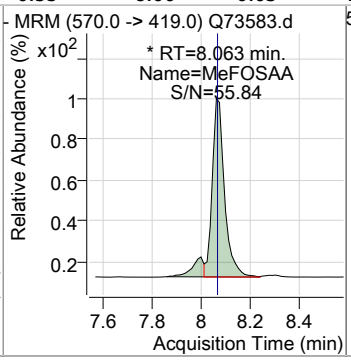


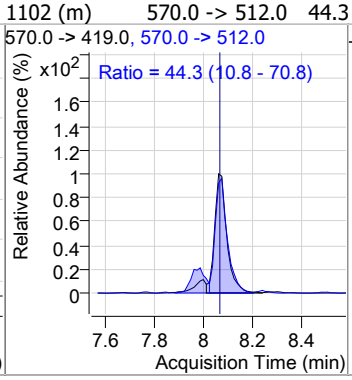


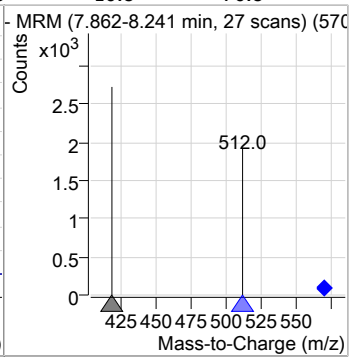
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.55	8.06	-0.03	1102 (m)	570.0 -> 512.0	44.3	10.8	70.8

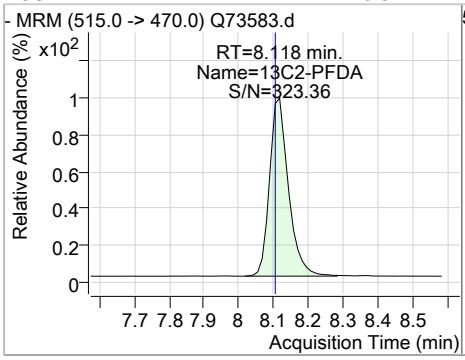


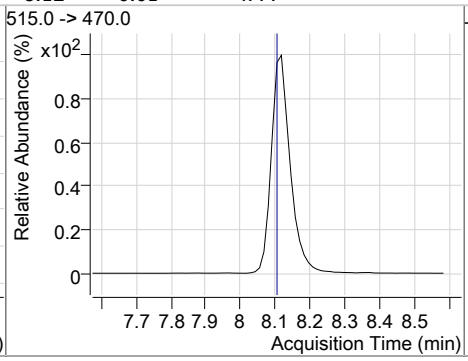


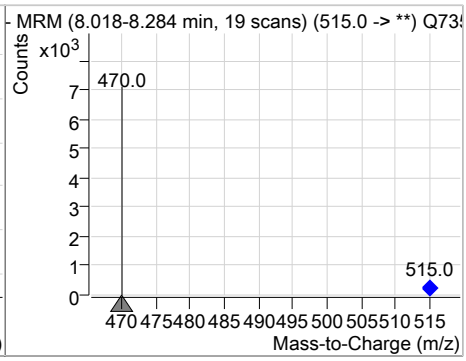




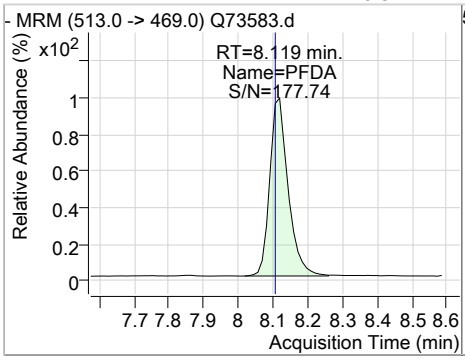
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	0.57	8.12	0.01	4777				

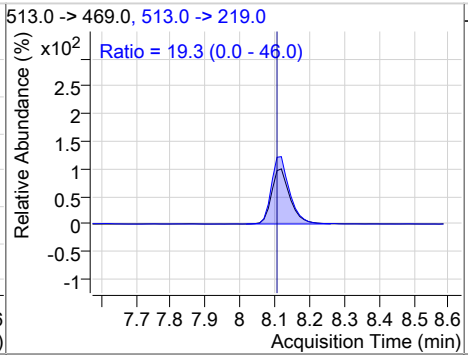


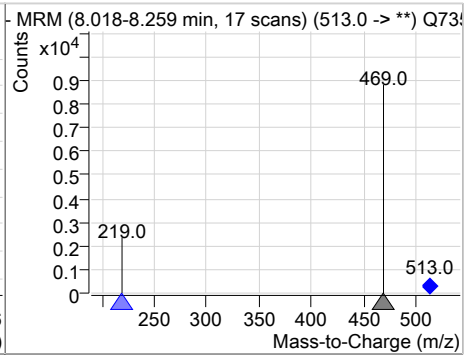




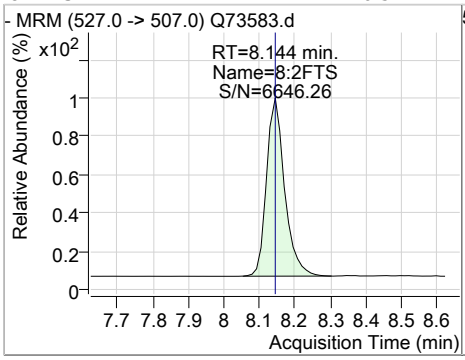
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.52	8.12	0.01	6152	513.0 -> 219.0	19.3	0.0	46.0

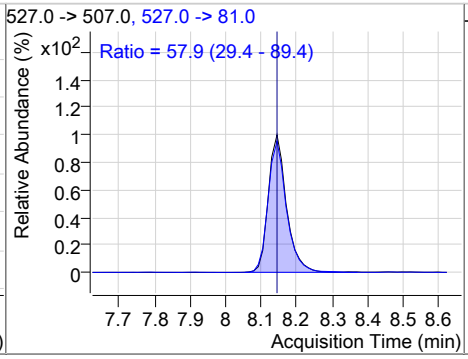


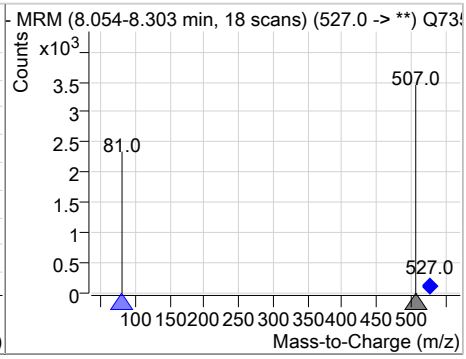




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	0.52	8.14	0.00	2033	527.0 -> 81.0	57.9	29.4	89.4

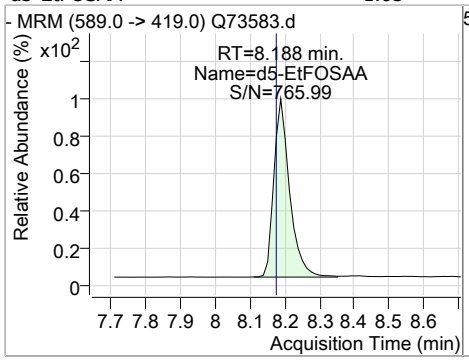


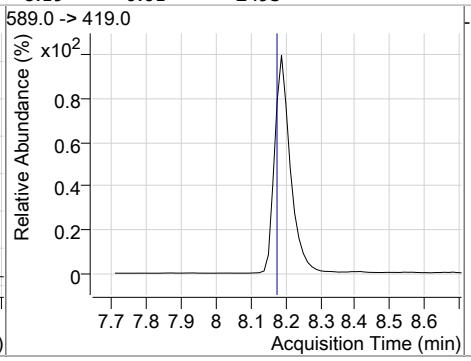


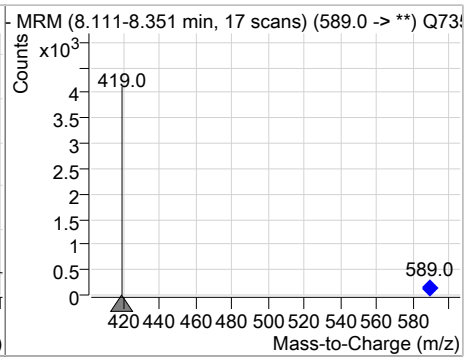


Perfluorinated Compounds by LC/MS/MS

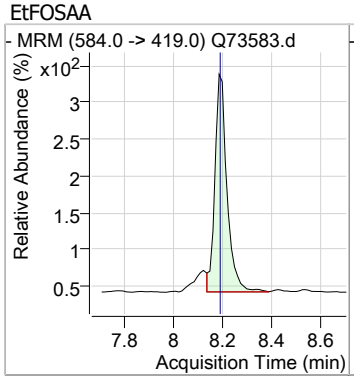
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	1.05	8.19	-0.01	2495				

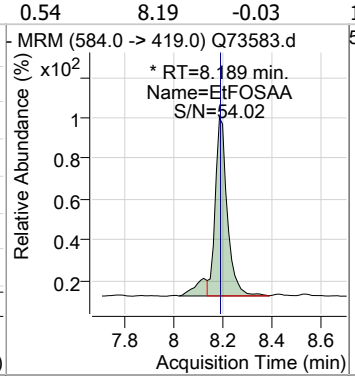


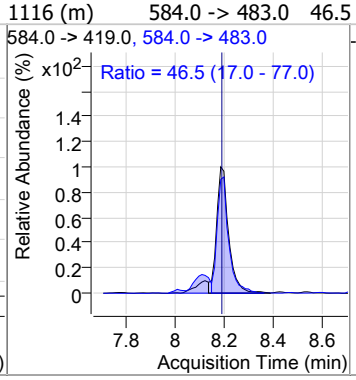


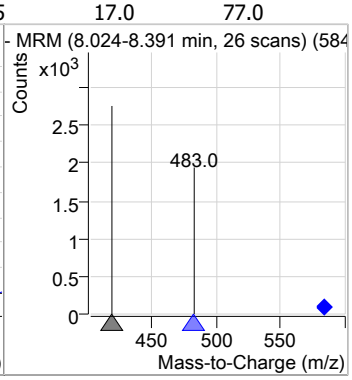


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.54	8.19	-0.03	1116 (m)	584.0 -> 483.0	46.5	17.0	77.0

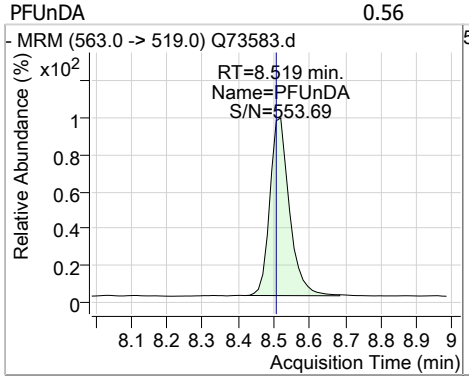


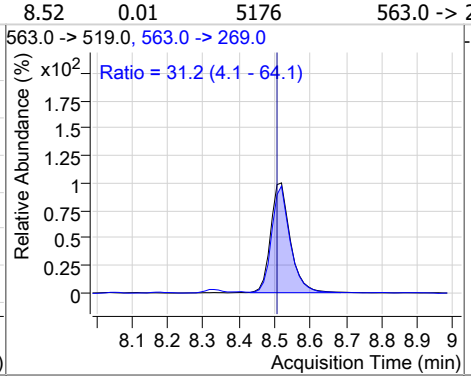


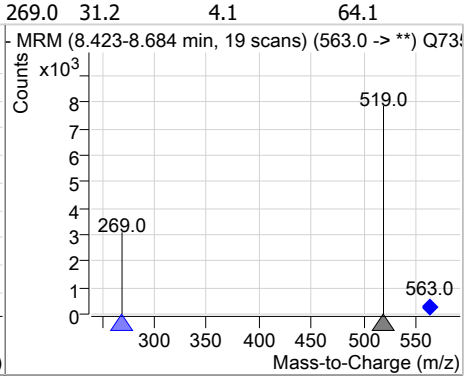




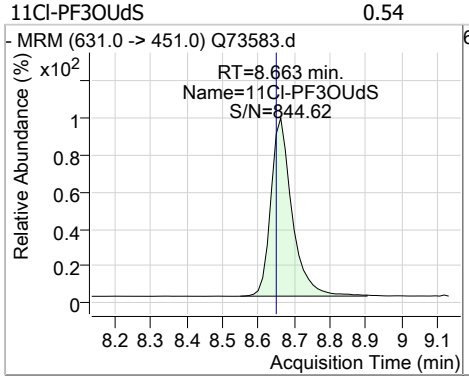
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.56	8.52	0.01	5176	563.0 -> 269.0	31.2	4.1	64.1

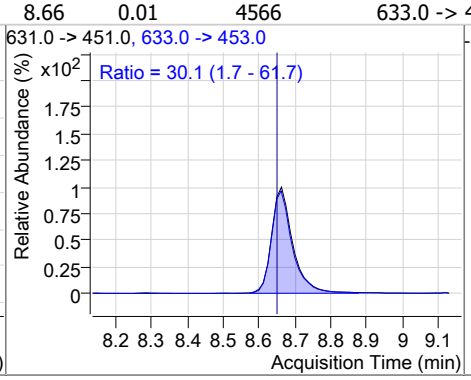


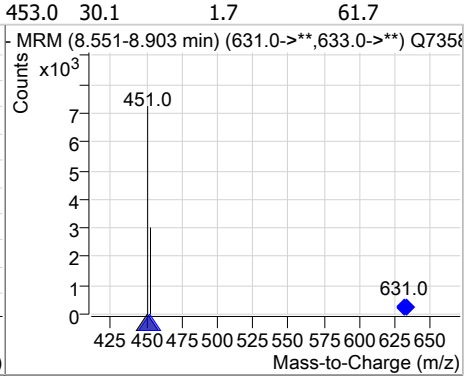




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.54	8.66	0.01	4566	633.0 -> 453.0	30.1	1.7	61.7

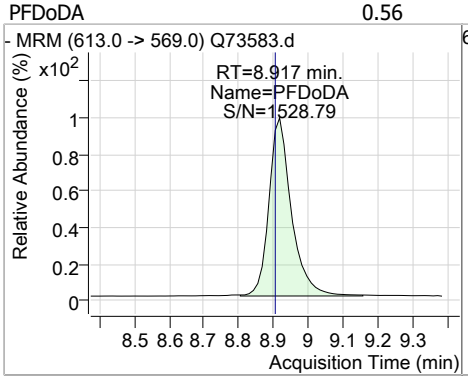


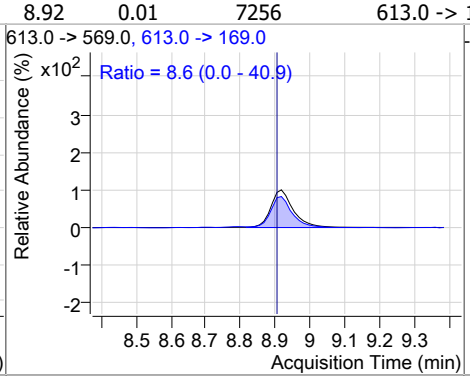


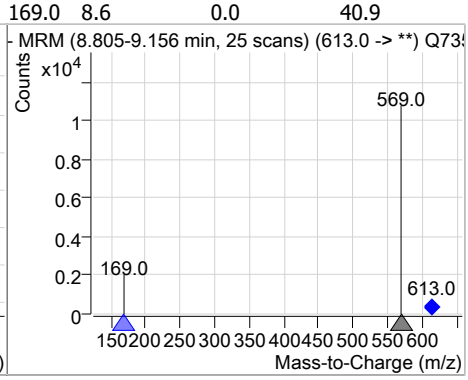


Perfluorinated Compounds by LC/MS/MS

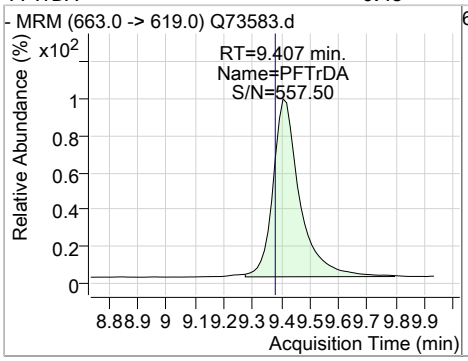
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.56	8.92	0.01	7256	613.0 -> 169.0	8.6	0.0	40.9

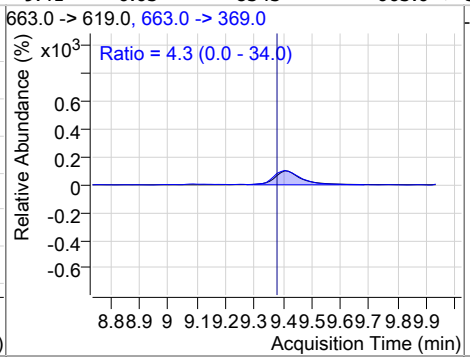


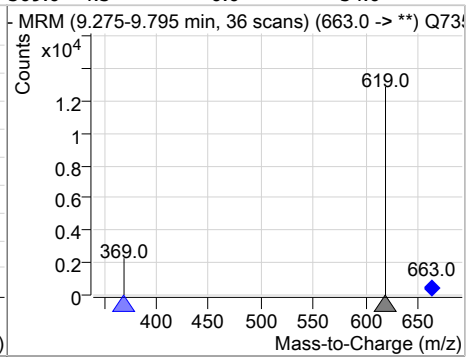




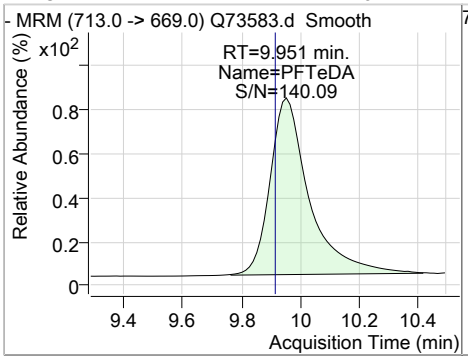
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.48	9.41	0.03	8343	663.0 -> 369.0	4.3	0.0	34.0

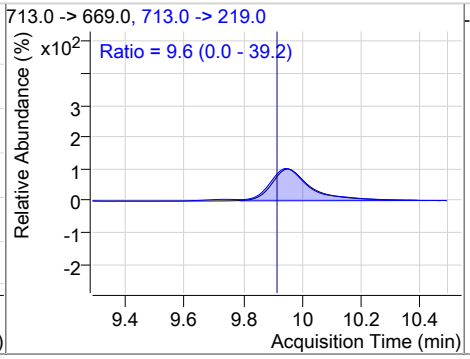


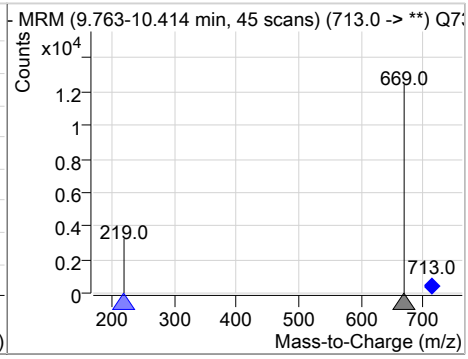




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.44	9.95	0.04	7260	713.0 -> 219.0	9.6	0.0	39.2







Manual Integration Approval Summary

Sample Number: SQ1672-CC1670
Lab FileID: Q73583.D
Injection Time: 10/29/20 08:32
Method: EPA 537.1 REV 1.0
Analyst approved: 10/29/20 11:38 Mike Eger
Supervisor approved: 10/29/20 13:55 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.64	Split peak
MeFOSAA	2355-31-9		8.06	Split peak
EtFOSAA	2991-50-6		8.19	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Norman Farmer 10/29/20 13:55

Perfluorinated Compounds by LC/MS/MS

Data File : Q73588.d
Operator : mikee
Acq. Method : 537.m
Acq. Date-Time : 10/29/2020 10:09:28 AM
Sample Name : ECC1670-20
Vial : Vial 7
DA Method File : 537_1027_SQ1670.quantmethod.xml
Batch Name : SQ1672.batch.bin
Sample Information : OP82561,SQ1672,250,,,1.0,1,water

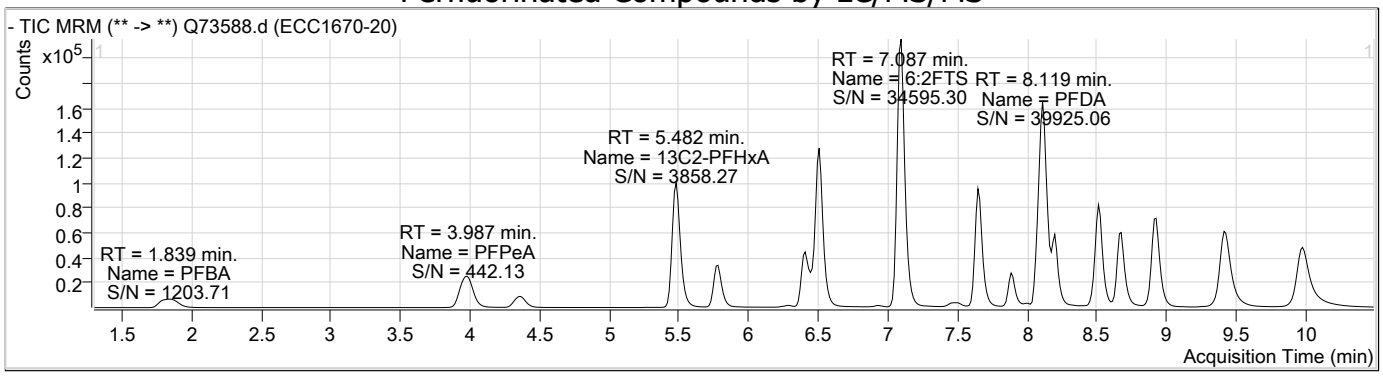
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	7.085	429.0 -> 409.0	110737	20.00	µg/L		0.000
13C2-PFOA	7.103	415.0 -> 370.0	231910	20.00	µg/L		0.000
13C3-PFPeA	3.984	266.0 -> 222.0	101076	20.00	µg/L		-0.013
13C4-PFOS	7.654	503.0 -> 80.0	54209	20.00	µg/L		0.012
d3-MeFOSAA	8.075	573.0 -> 419.0	94036	40.00	µg/L		-0.013
System Monitoring Compounds							
13C2-PFDA	8.118	515.0 -> 470.0	197802	22.68	µg/L		0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 113.4%			
13C2-PFHxA	5.482	315.0 -> 270.0	214516	20.48	µg/L		-0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 102.4%			
d5-EtFOSAA	8.200	589.0 -> 419.0	99369	41.16	µg/L		0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 102.9%			
13C3-HFPO-DA	5.776	287.0 -> 169.0	69723	42.52	µg/L		-0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 106.3%			
Target Compounds							QValue
br-PFHxS	6.281	399.0 -> 80.0	5646	2.48	µg/L		100
LN-PFHxS	6.456	399.0 -> 80.0	35930	17.61	µg/L		100
6:2FTS	7.087	427.0 -> 407.0	101995	19.97	µg/L		98
8:2FTS	8.144	527.0 -> 507.0	77159	19.66	µg/L		97
EtFOSAA	8.201	584.0 -> 419.0	42840	20.48	µg/L	m	98
LN-PFOA	7.104	413.0 -> 369.0	226250	19.40	µg/L		100
MeFOSAA	8.076	570.0 -> 419.0	43030	21.03	µg/L	m	94
PFBA	1.839	213.0 -> 169.0	62948	20.58	µg/L		100
PFBS	4.353	299.0 -> 80.0	35423	20.00	µg/L		99
PFDA	8.119	513.0 -> 469.0	242097	20.19	µg/L		95
PFDoDA	8.930	613.0 -> 569.0	287843	21.60	µg/L		93
br-PFOA	6.938	413.0 -> 369.0	0	0.00	µg/L	m	1
PFHpA	6.414	363.0 -> 319.0	136492	21.14	µg/L		95
PFHpS	7.107	449.0 -> 80.0	41130	20.16	µg/L		96
PFHxA	5.484	313.0 -> 269.0	193601	20.28	µg/L		99
PFHxS	6.456	399.0 -> 80.0	41484	20.05	µg/L	m	96
PFNA	7.657	463.0 -> 419.0	193484	23.23	µg/L		98
LN-PFOS	7.643	499.0 -> 80.0	38257	14.94	µg/L		100
PFOA	7.104	413.0 -> 369.0	226250	19.40	µg/L		98
PFOS	7.643	499.0 -> 80.0	55470	19.50	µg/L	m	87
PFPeA	3.987	263.0 -> 219.0	66361	22.57	µg/L		100
br-PFOS	7.473	499.0 -> 80.0	17187	4.71	µg/L		100
PFTeDA	9.964	713.0 -> 669.0	338464	19.84	µg/L		100
PFTrDA	9.419	663.0 -> 619.0	357642	20.24	µg/L		100
PFUnDA	8.519	563.0 -> 519.0	207188	21.96	µg/L		97
ADONA	6.510	377.0 -> 251.0	361525	19.48	µg/L		99
9Cl-PF3ONS	7.889	531.0 -> 351.0	72295	19.75	µg/L		98
11Cl-PF3OUdS	8.675	631.0 -> 451.0	182208	20.68	µg/L		99
HFPO-DA	5.780	329.0 -> 169.0	51446	21.93	µg/L		99

Perfluorinated Compounds by LC/MS/MS

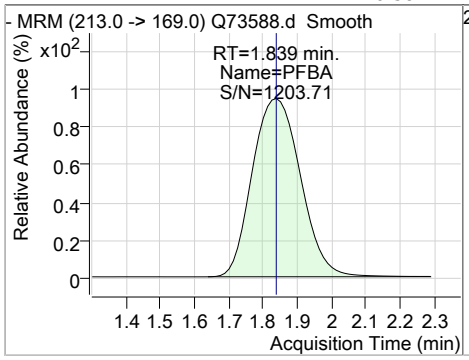
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

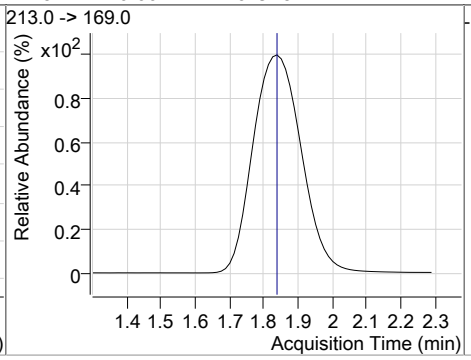
= Qualifier out of range, m = manually integrated, + = Area summed

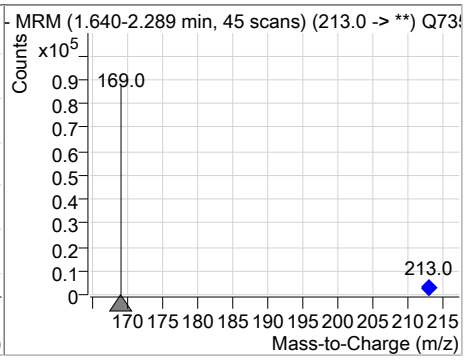
Perfluorinated Compounds by LC/MS/MS



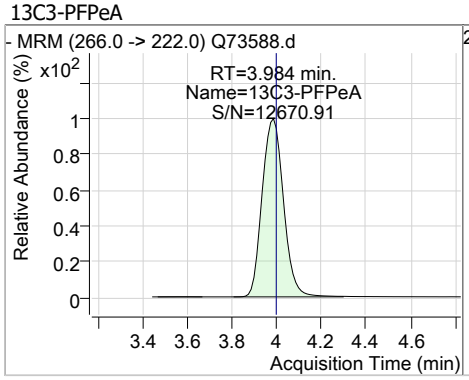
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	20.58	1.84	0.00	62948				

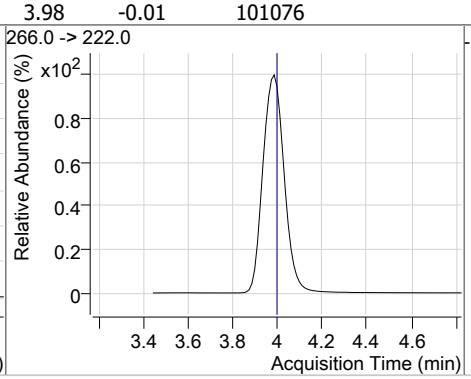


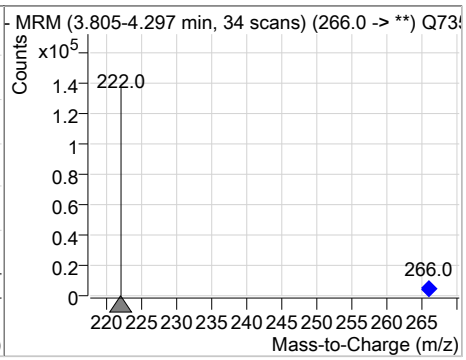




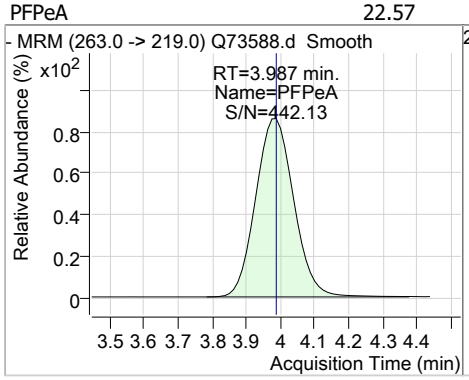
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		3.98	-0.01	101076				

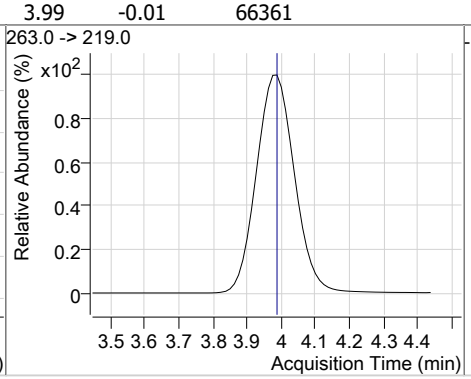


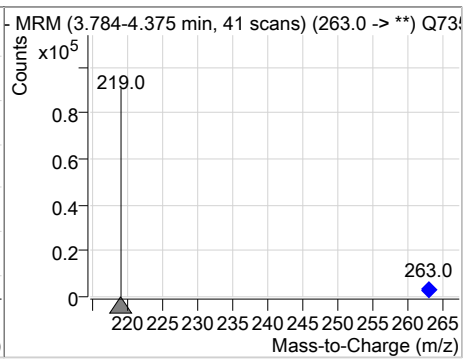




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	22.57	3.99	-0.01	66361				

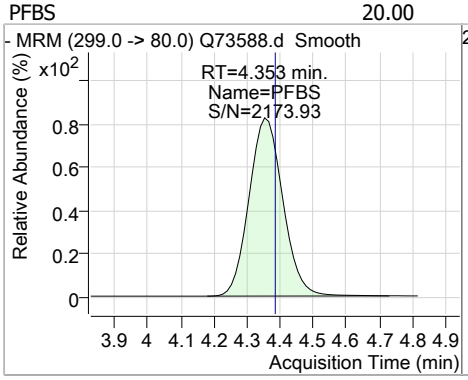


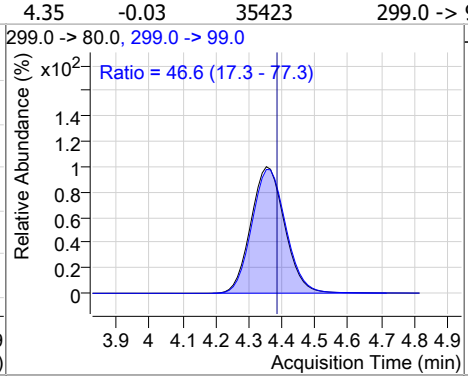


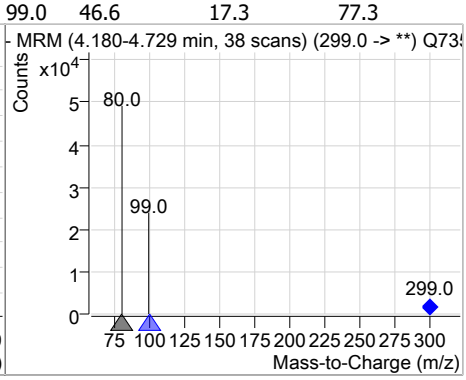


Perfluorinated Compounds by LC/MS/MS

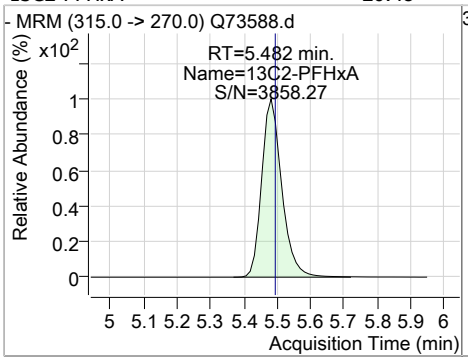
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.00	4.35	-0.03	35423	299.0 -> 99.0	46.6	17.3	77.3

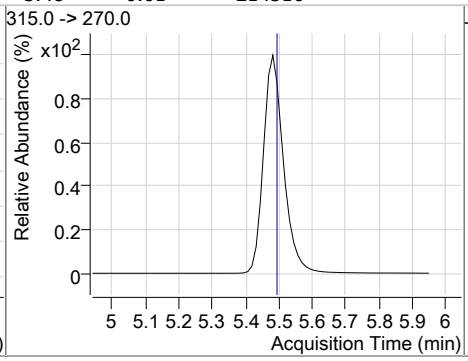


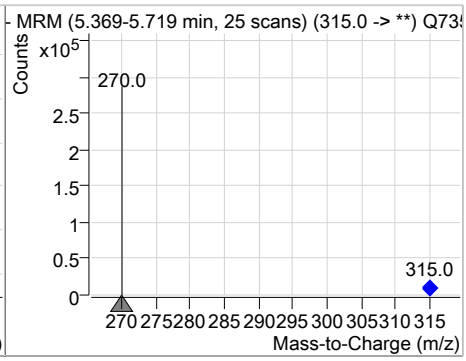




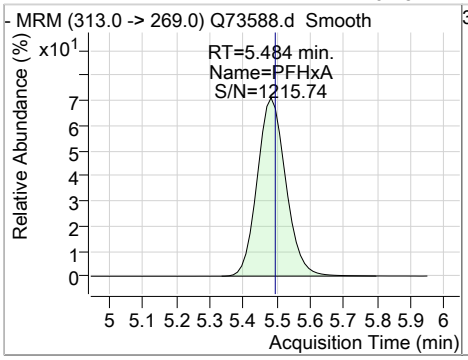
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	20.48	5.48	-0.01	214516				

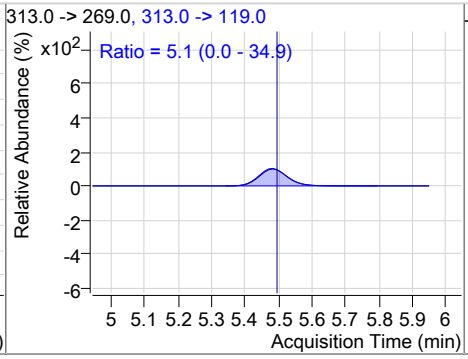


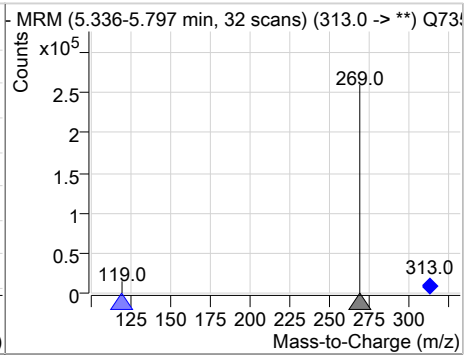




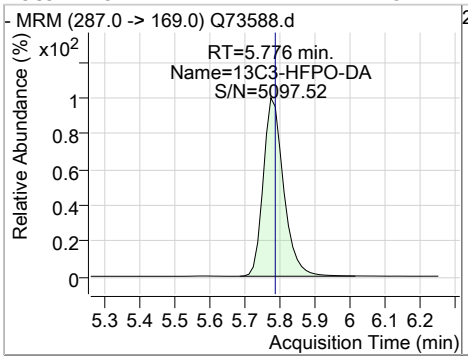
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.28	5.48	-0.01	193601	313.0 -> 119.0	5.1	0.0	34.9

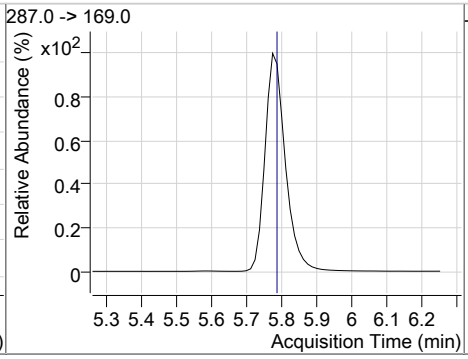


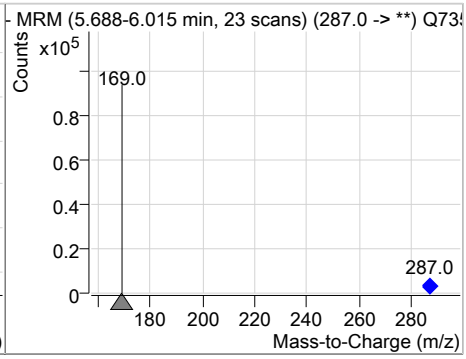




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	42.52	5.78	-0.01	69723				

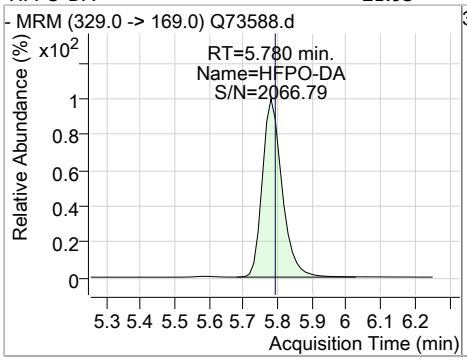


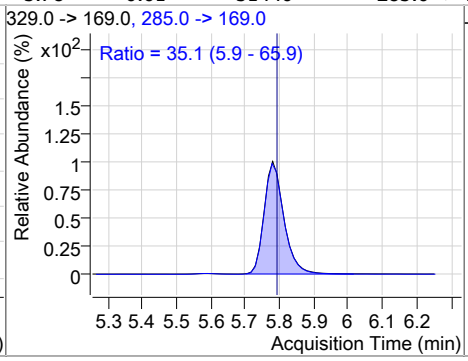


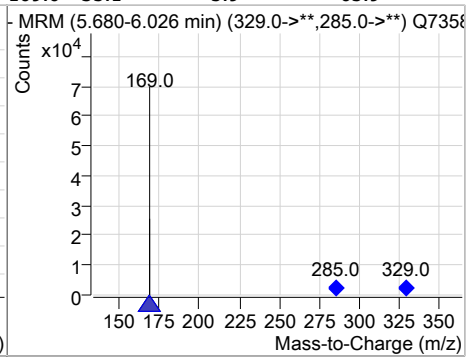


Perfluorinated Compounds by LC/MS/MS

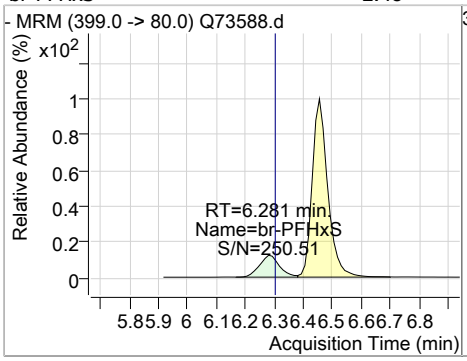
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	21.93	5.78	-0.01	51446	285.0 -> 169.0	35.1	5.9	65.9

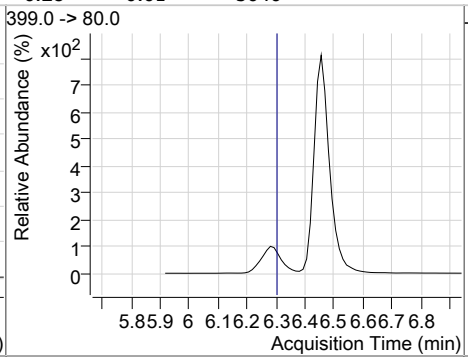


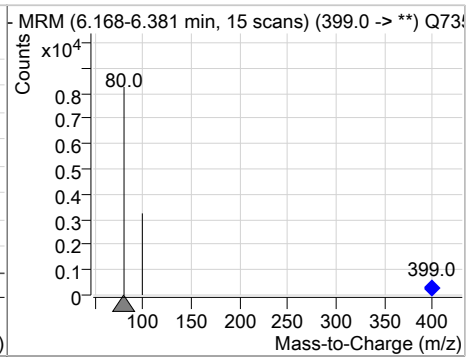




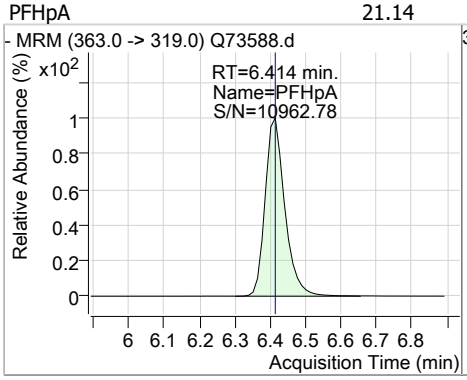
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	2.48	6.28	-0.01	5646				

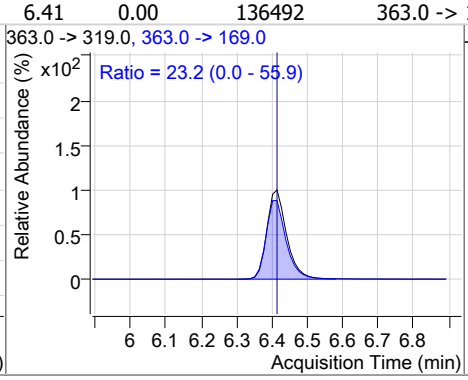


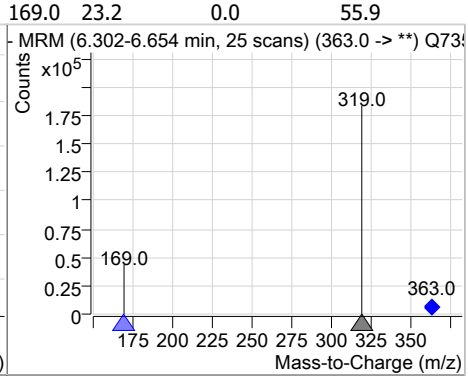




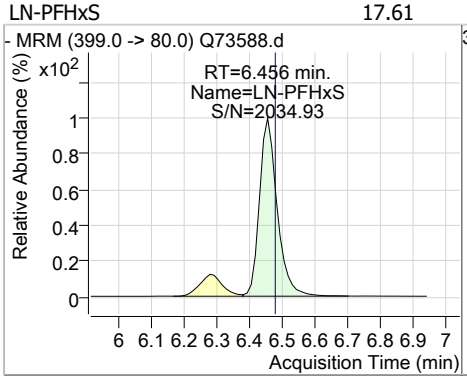
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	21.14	6.41	0.00	136492	363.0 -> 169.0	23.2	0.0	55.9

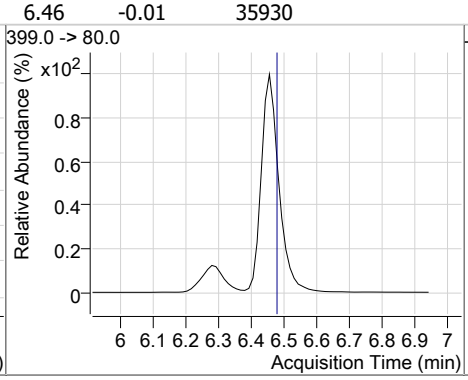


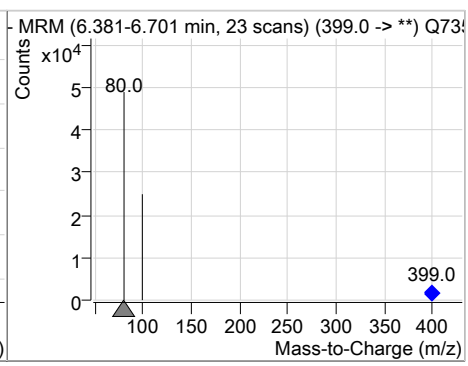




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	17.61	6.46	-0.01	35930				

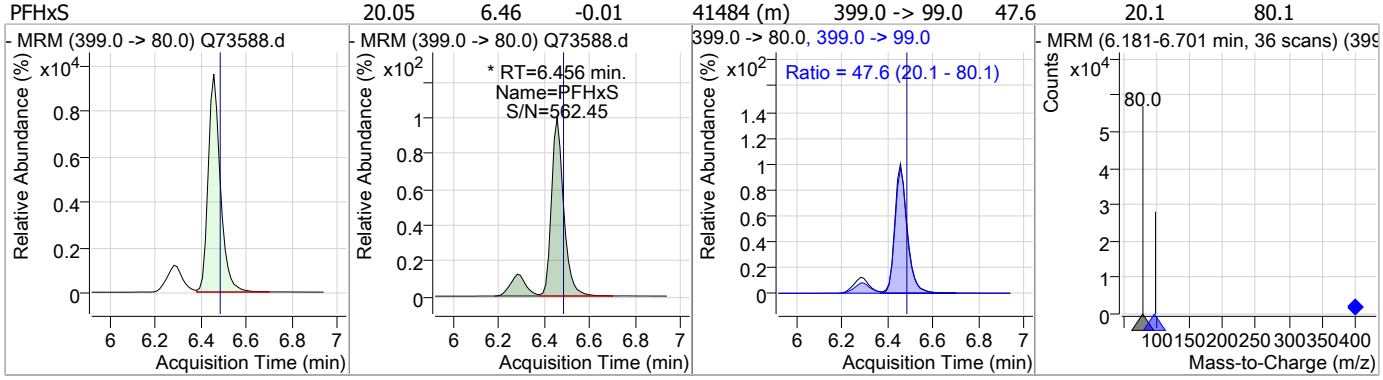




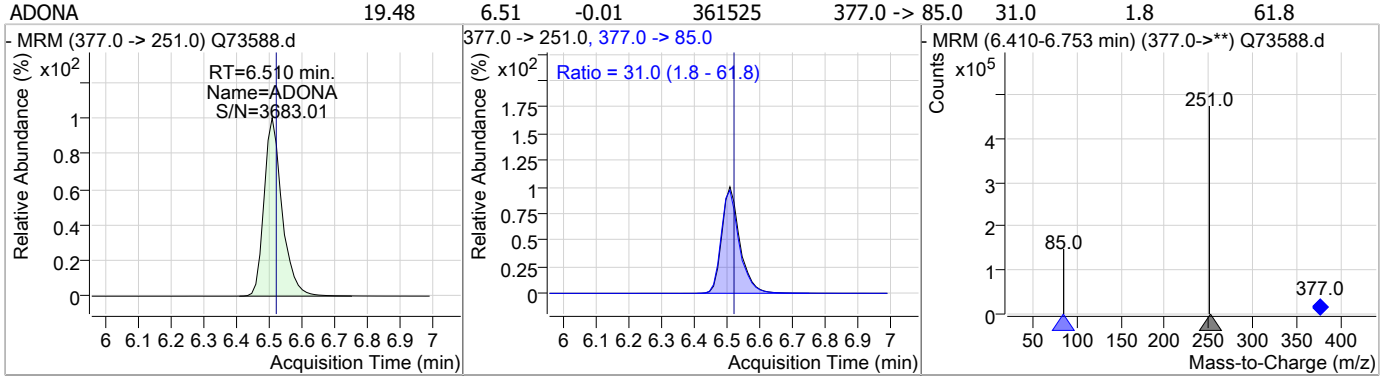


Perfluorinated Compounds by LC/MS/MS

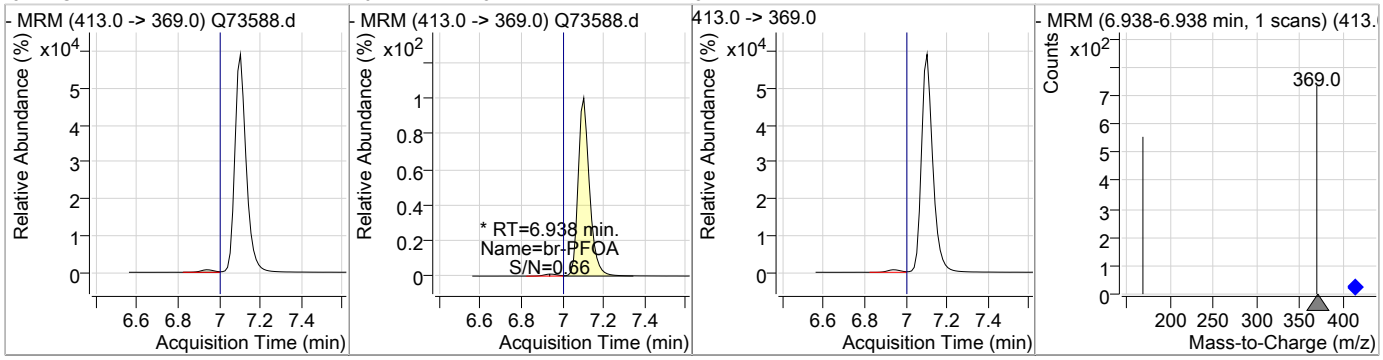
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	20.05	6.46	-0.01	41484 (m)	399.0 -> 99.0	47.6	20.1	80.1



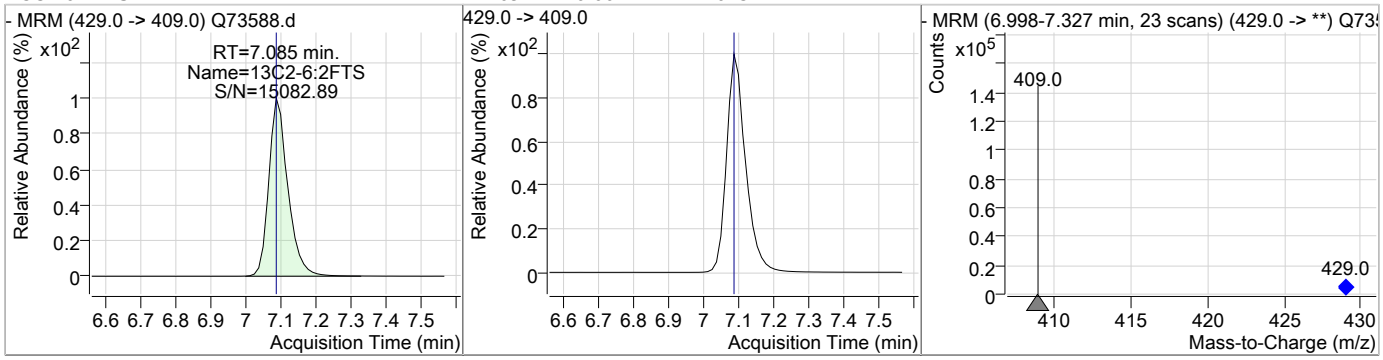
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.48	6.51	-0.01	361525	377.0 -> 85.0	31.0	1.8	61.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	d	0		0				

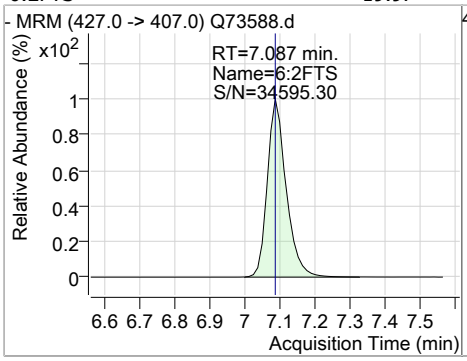


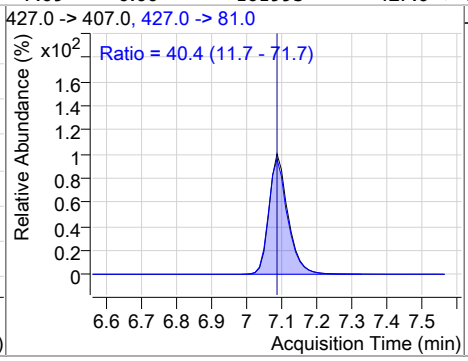
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.09	0.00	110737				

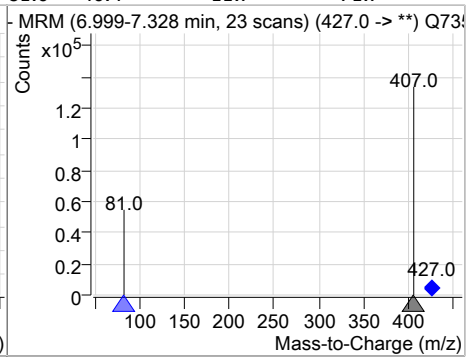


Perfluorinated Compounds by LC/MS/MS

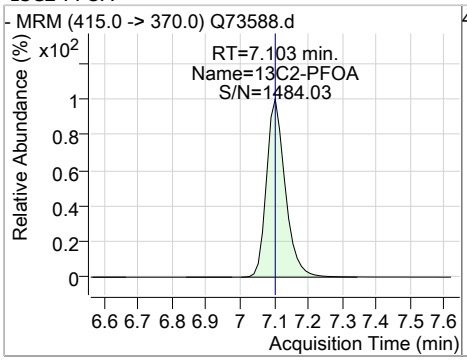
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	19.97	7.09	0.00	101995	427.0 -> 81.0	40.4	11.7	71.7

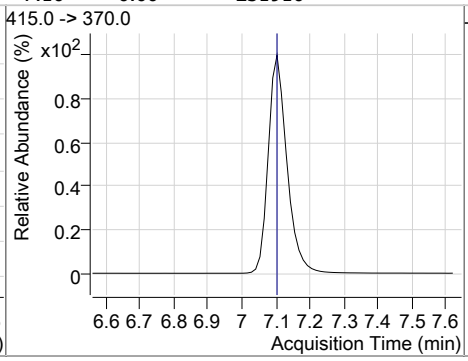


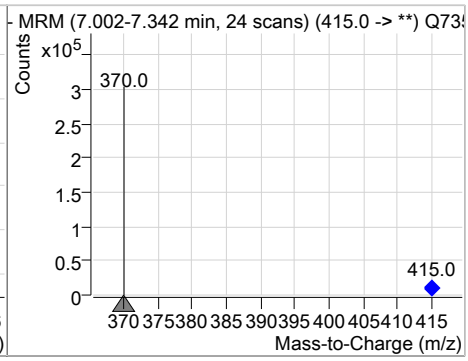




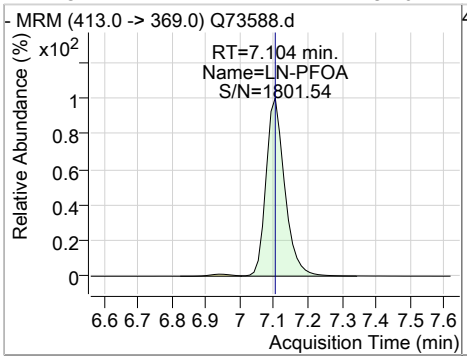
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.10	0.00	231910				

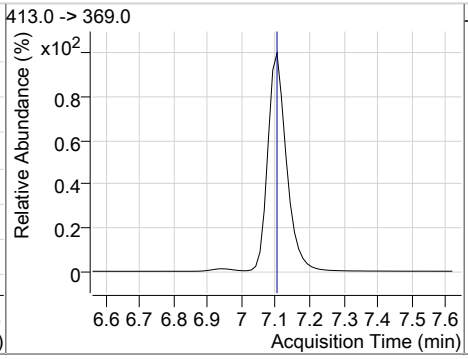


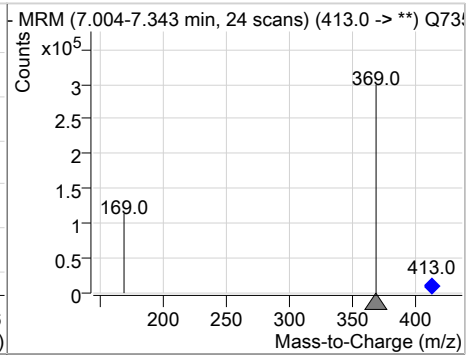




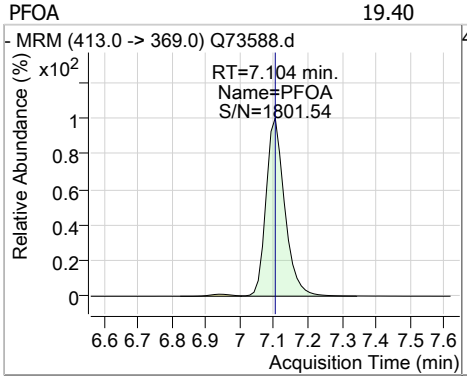
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	19.40	7.10	0.00	226250				

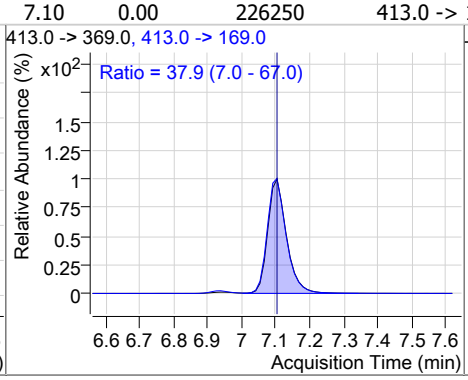


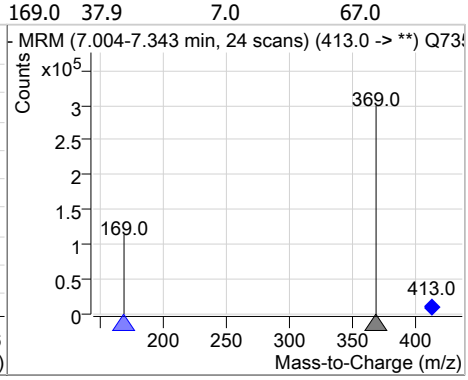




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.40	7.10	0.00	226250	413.0 -> 169.0	37.9	7.0	67.0

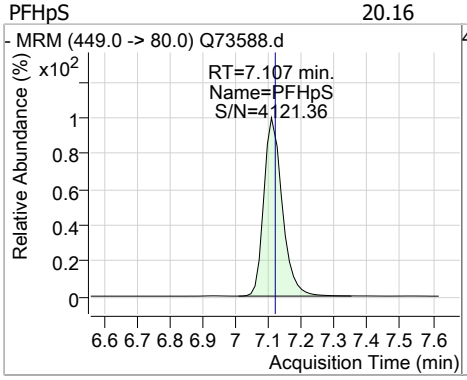


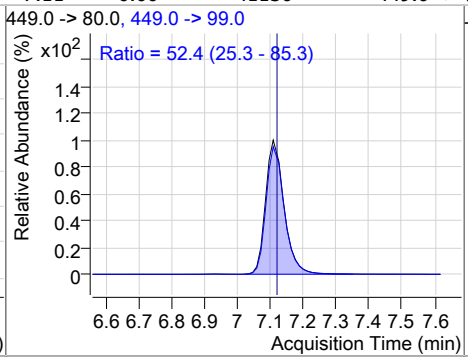


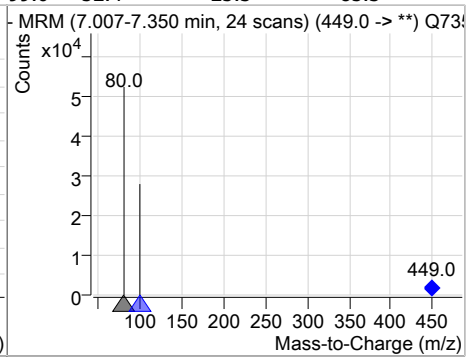


Perfluorinated Compounds by LC/MS/MS

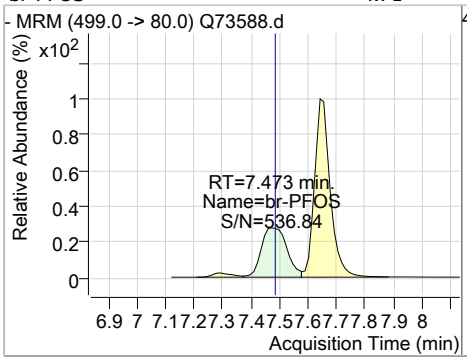
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	20.16	7.11	0.00	41130	449.0 -> 99.0	52.4	25.3	85.3

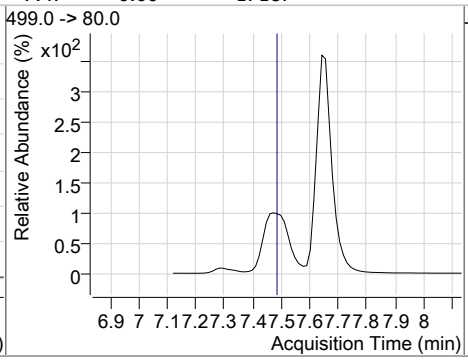


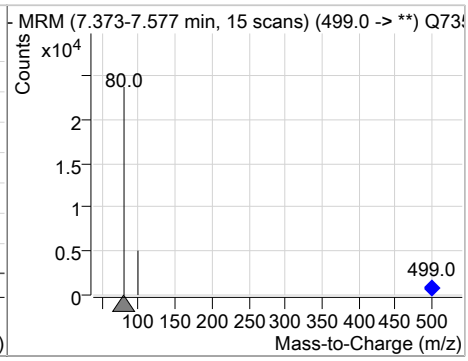




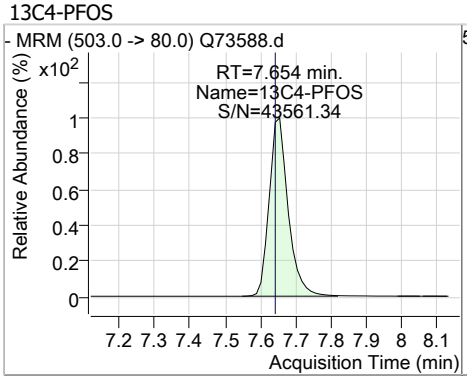
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	4.71	7.47	0.00	17187				

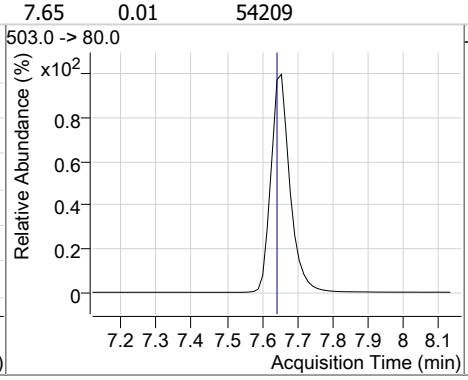


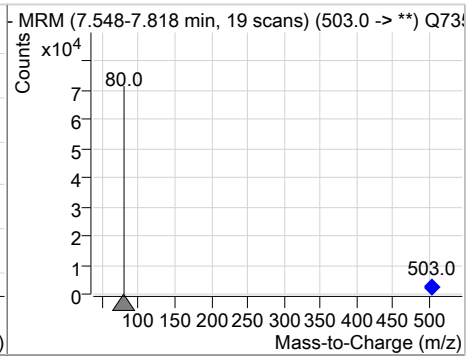




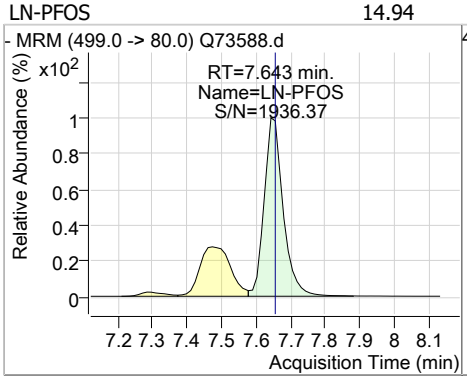
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.65	0.01	54209				

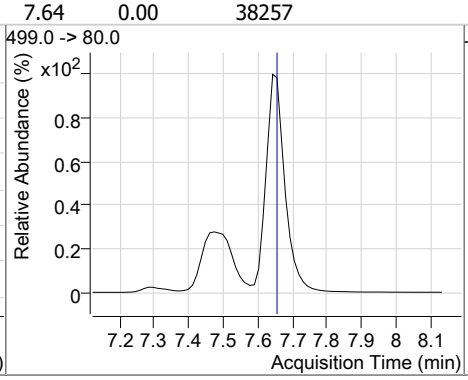


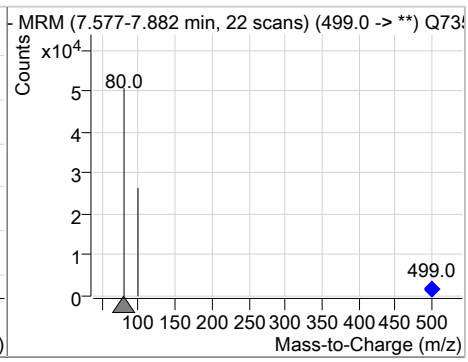




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	14.94	7.64	0.00	38257				

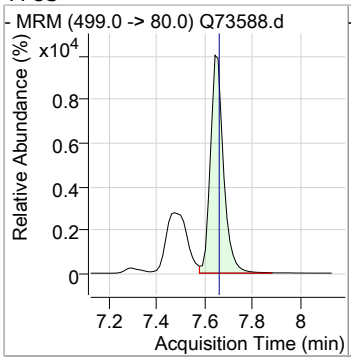


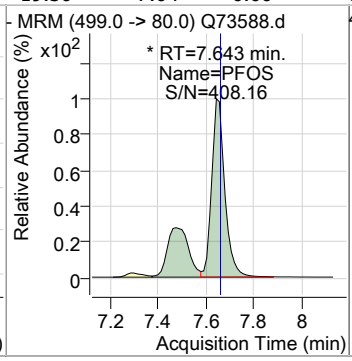


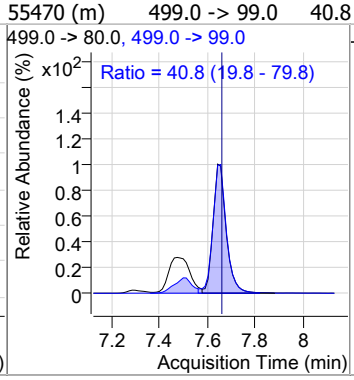


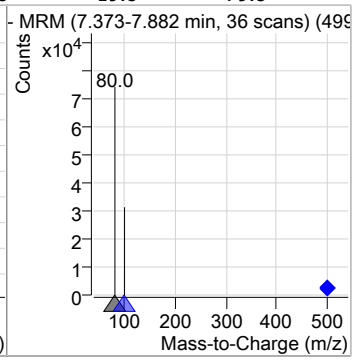
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.50	7.64	0.00	55470 (m)	499.0 -> 99.0	40.8	19.8	79.8

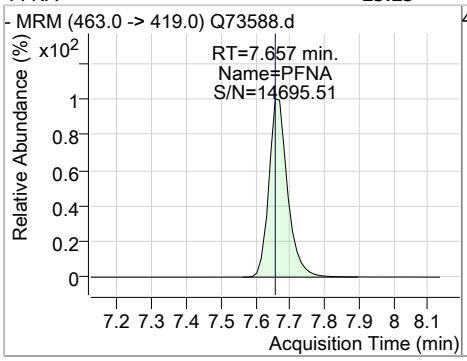


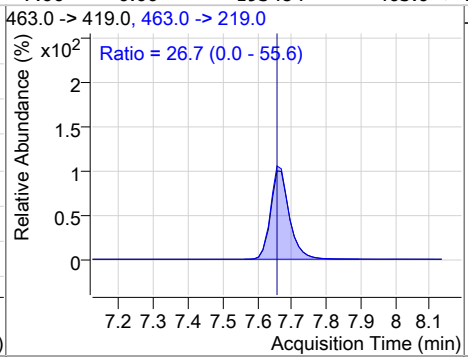


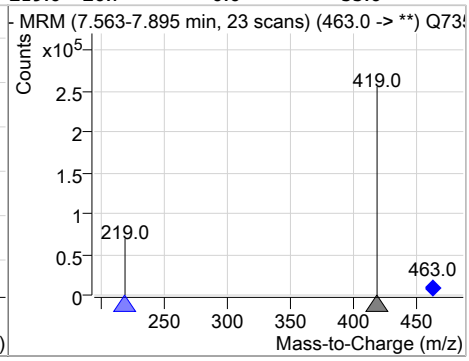




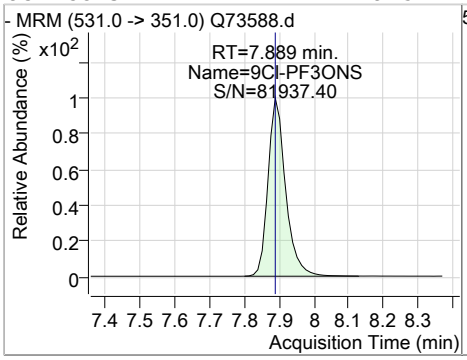
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	23.23	7.66	0.00	193484	463.0 -> 219.0	26.7	0.0	55.6

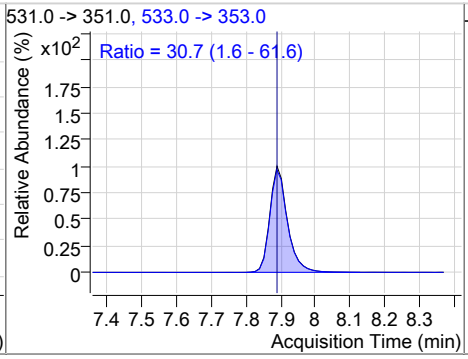


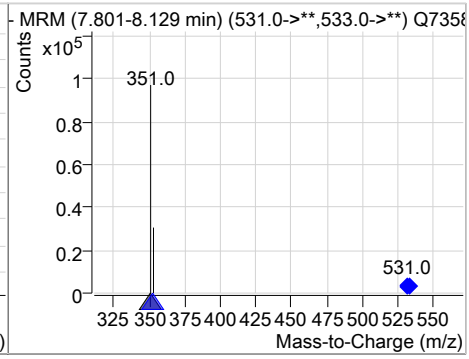




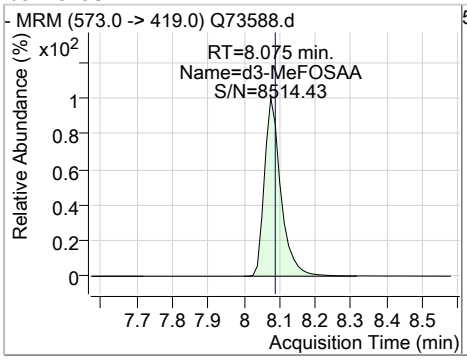
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	19.75	7.89	0.00	72295	533.0 -> 353.0	30.7	1.6	61.6

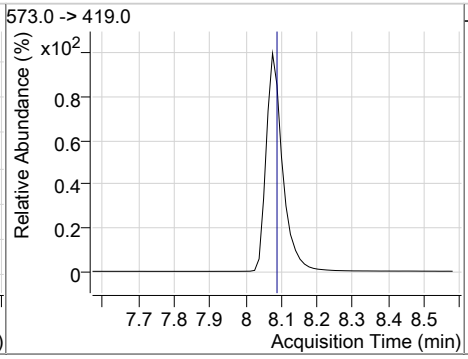


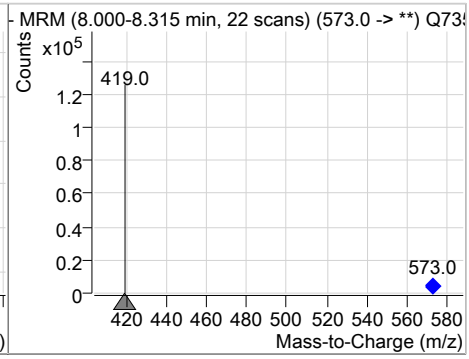




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.08	-0.01	94036				

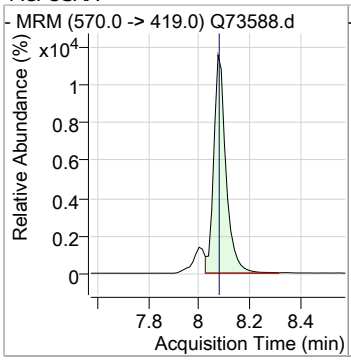


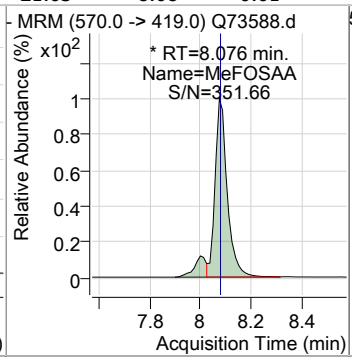


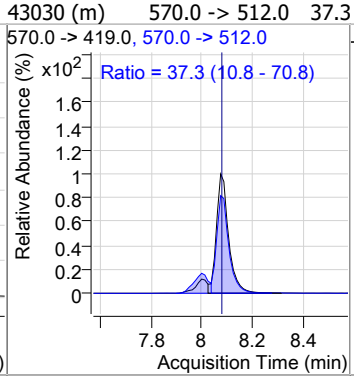


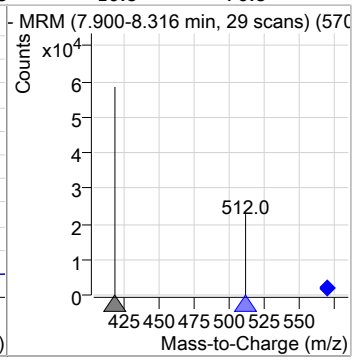
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	21.03	8.08	-0.01	43030 (m)	570.0 -> 512.0	37.3	10.8	70.8

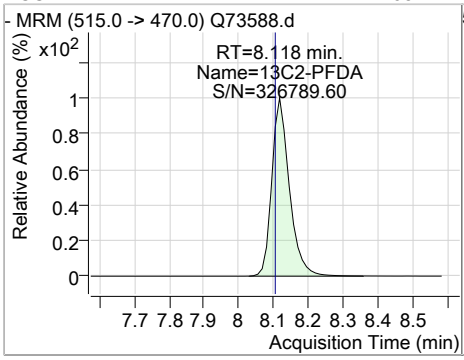


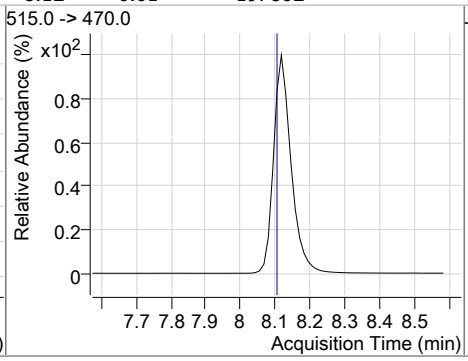


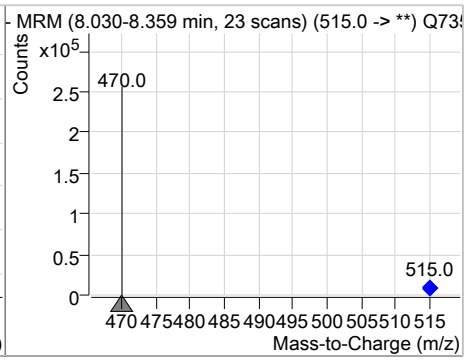




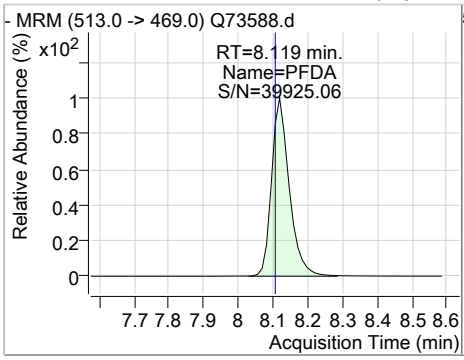
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	22.68	8.12	0.01	197802				

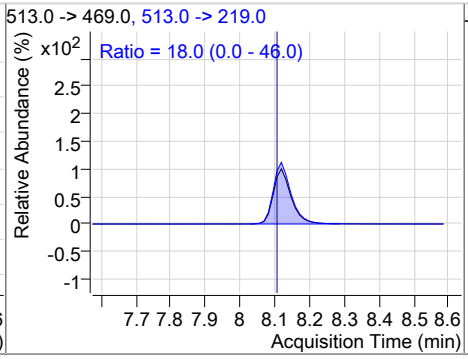


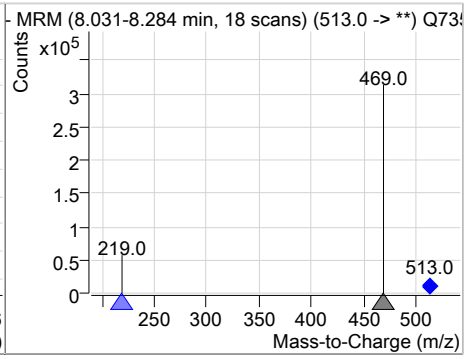




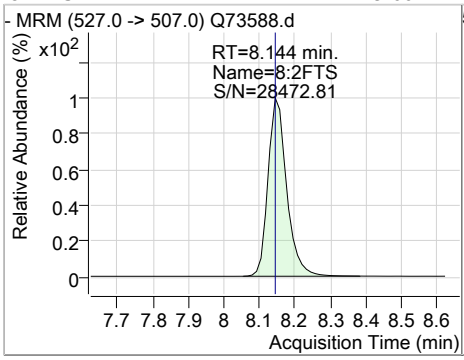
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	20.19	8.12	0.01	242097	513.0 -> 219.0	18.0	0.0	46.0

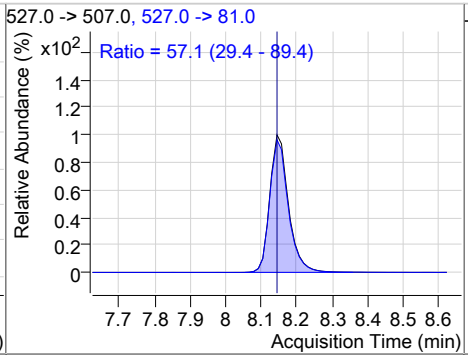


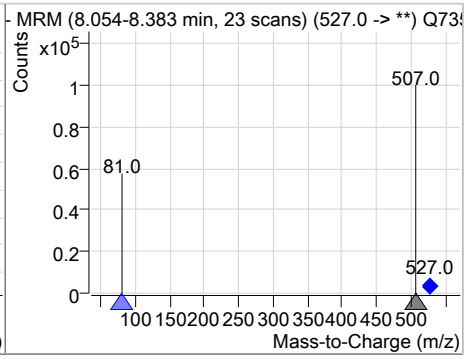




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	19.66	8.14	0.00	77159	527.0 -> 81.0	57.1	29.4	89.4

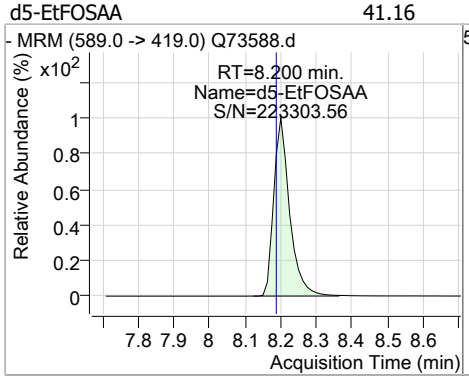


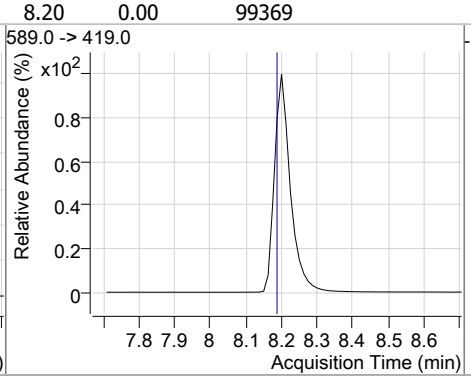


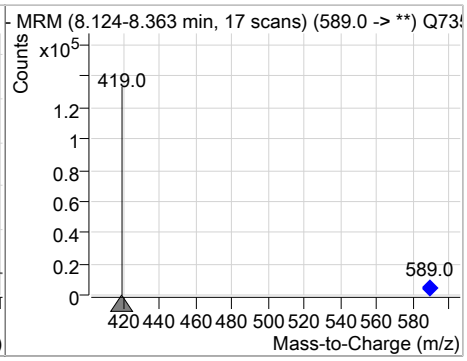


Perfluorinated Compounds by LC/MS/MS

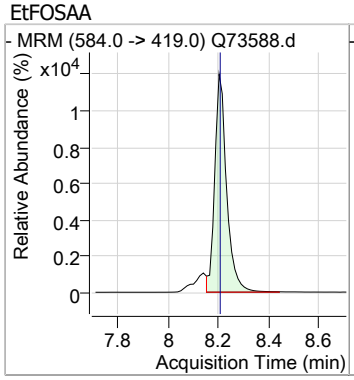
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	41.16	8.20	0.00	99369				

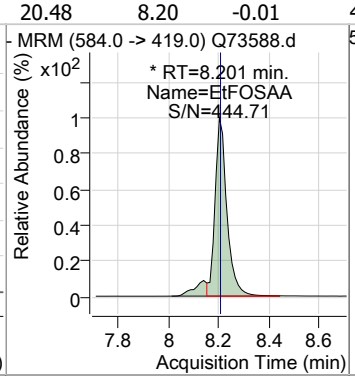


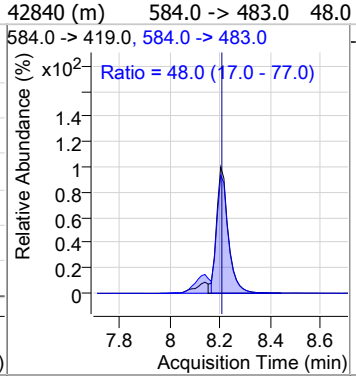


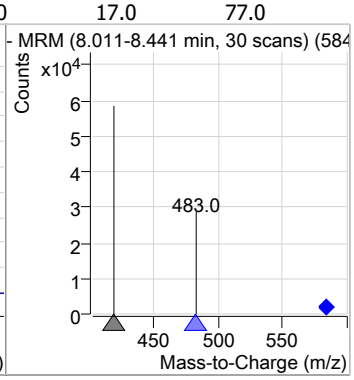


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	20.48	8.20	-0.01	42840 (m)	584.0 -> 483.0	48.0	17.0	77.0

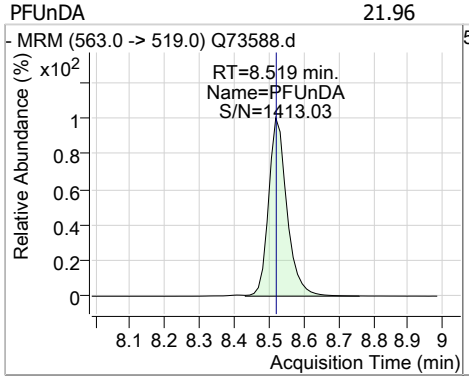


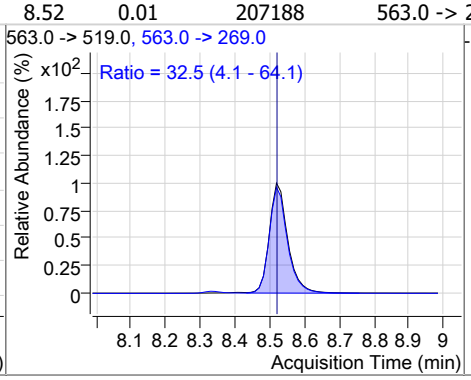


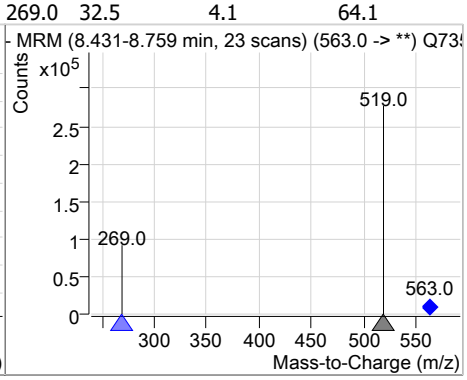




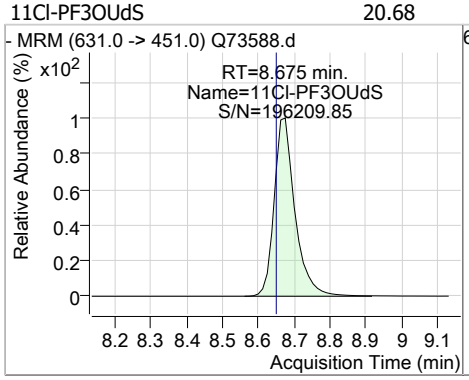
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	21.96	8.52	0.01	207188	563.0 -> 269.0	32.5	4.1	64.1

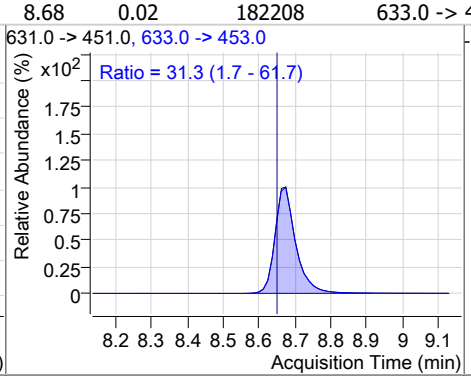


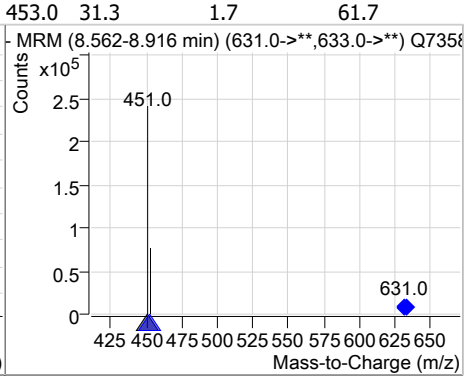




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	20.68	8.68	0.02	182208	633.0 -> 453.0	31.3	1.7	61.7

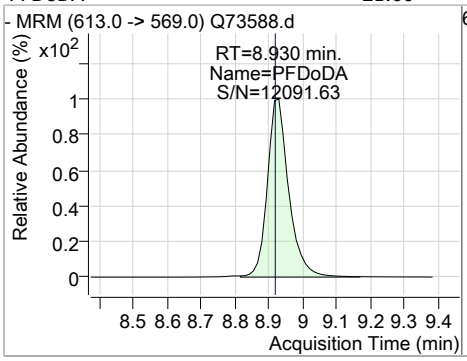


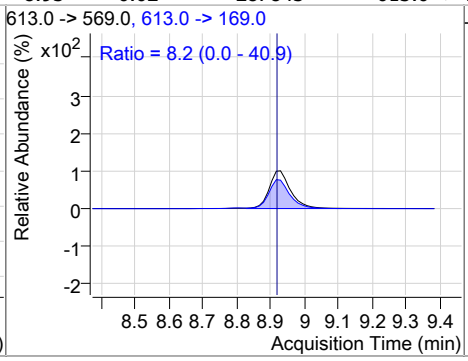


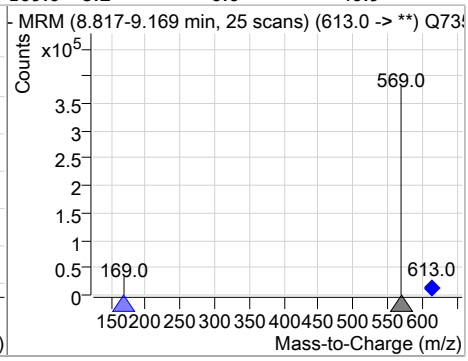


Perfluorinated Compounds by LC/MS/MS

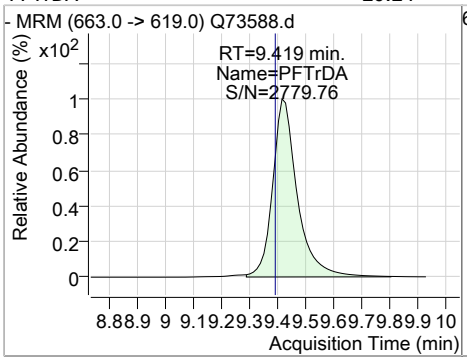
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	21.60	8.93	0.02	287843	613.0 -> 169.0	8.2	0.0	40.9

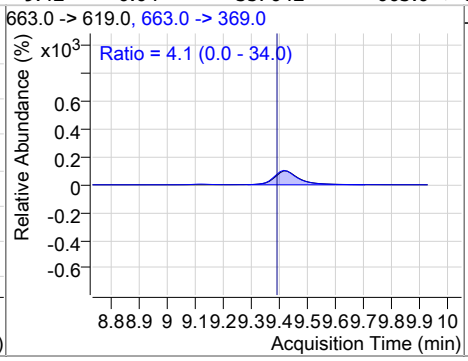


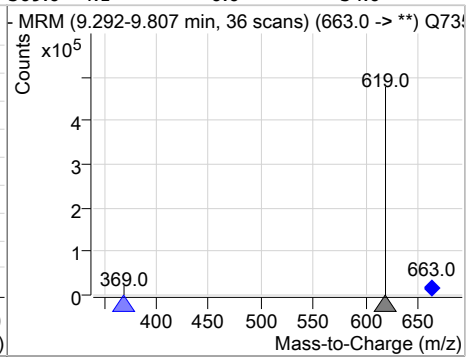




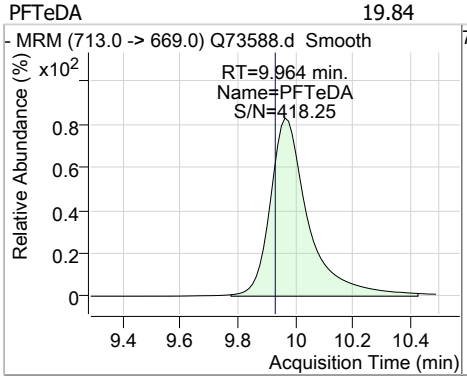
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	20.24	9.42	0.04	357642	663.0 -> 369.0	4.1	0.0	34.0

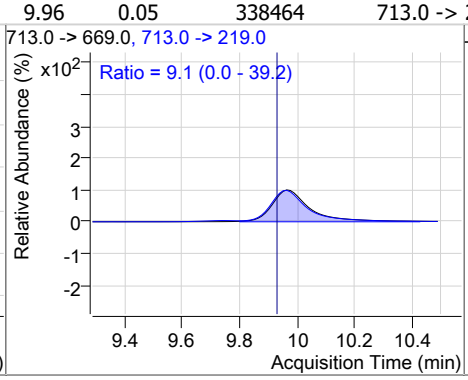


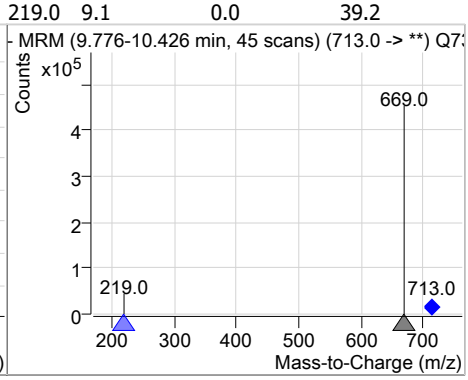




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.84	9.96	0.05	338464	713.0 -> 219.0	9.1	0.0	39.2







Manual Integration Approval Summary

Sample Number: SQ1672-ECC1670
Lab FileID: Q73588.D
Injection Time: 10/29/20 10:09
Method: EPA 537.1 REV 1.0
Analyst approved: 10/29/20 11:38 Mike Eger
Supervisor approved: 10/29/20 13:55 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.64	Split peak
MeFOSAA	2355-31-9		8.08	Split peak
EtFOSAA	2991-50-6		8.20	Split peak

QQQ Check Tune Report

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Instrument Name	Instrument 1
MS Model	G6460A
MS Instrument Serial	SG10447001
Software_Firmware Version	B.08.02.B8260.0, FW: A.00.08.62
Tune Date & Time	27 October 2020 07:42:46
Data Path	D:\MassHunter\Tune\QQQ\G6460A\atunes.TUNE.XML
Ion Source	AJS ESI
Ionization Mode	AJS ESI
Tuned Resolution	All
Vacuum Pressure	1.85E+0[R]; 2.53E-5[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	10
Nebulizer	15
Capillary	4000
Nozzle Voltage	1500
Sheath Gas Temp	250
Sheath Gas Flow	7

Positive Results

Analyzer: MS1 Polarity: Positive Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.08	-0.01	Pass	0.70	0.69	-0.01	Pass	105720
322.05	322.08	0.03	Pass	0.70	0.72	0.02	Pass	27426
622.03	622.02	-0.01	Pass	0.70	0.66	-0.04	Pass	33168
922.01	922.02	0.01	Pass	0.70	0.67	-0.03	Pass	50977
1521.97	1522.00	0.03	Pass	0.70	0.68	-0.02	Pass	37491
2121.93	2122.01	0.08	Pass	0.70	0.74	0.04	Pass	22809

Analyzer: MS2 Polarity: Positive Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
58.07	58.07	0.00	Pass	0.70	0.78	0.08	Pass	19306
118.09	118.05	-0.04	Pass	0.70	0.80	0.10	Pass	128998
322.05	322.01	-0.04	Pass	0.70	0.75	0.05	Pass	34914
622.03	622.01	-0.02	Pass	0.70	0.71	0.01	Pass	38730
922.01	922.00	-0.01	Pass	0.70	0.72	0.02	Pass	60545
1521.97	1521.97	0.00	Pass	0.70	0.83	0.13	Pass	46202
2121.93	2121.78	-0.15	Pass	0.70	0.79	0.09	Pass	3239

Analyzer: MS1 Polarity: Positive Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.06	-0.03	Pass	1.20	1.15	-0.05	Pass	137171
322.05	322.12	0.07	Pass	1.20	1.02	-0.18	Pass	32753
622.03	622.03	0.00	Pass	1.20	0.95	-0.25	Pass	55694
922.01	922.00	-0.01	Pass	1.20	0.93	-0.27	Pass	90034
1521.97	1521.96	-0.01	Pass	1.20	1.01	-0.19	Pass	132183
2121.93	2121.99	0.06	Pass	1.20	1.23	0.03	Pass	157421

Analyzer: MS2 Polarity: Positive Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
58.07	58.05	-0.02	Pass	1.20	1.27	0.07	Pass	27327
118.09	118.06	-0.03	Pass	1.20	1.20	0.00	Pass	198539
322.05	321.96	-0.09	Pass	1.20	1.49	0.29	Pass	67639
622.03	621.98	-0.05	Pass	1.20	0.94	-0.26	Pass	92618
922.01	921.93	-0.08	Pass	1.20	1.04	-0.16	Pass	114793
1521.97	1521.89	-0.08	Pass	1.20	1.04	-0.16	Pass	72315
2121.93	2121.76	-0.17	Pass	1.20	1.21	0.01	Pass	79474

Analyzer: MS1 Polarity: Positive Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	117.97	-0.12	Pass	2.50	2.42	-0.08	Pass	207433
322.05	322.14	0.09	Pass	2.50	2.14	-0.36	Pass	59593
622.03	622.04	0.01	Pass	2.50	2.08	-0.42	Pass	100422
922.01	922.01	0.00	Pass	2.50	2.04	-0.46	Pass	173590
1521.97	1521.96	-0.01	Pass	2.50	2.10	-0.40	Pass	263478
2121.93	2121.98	0.05	Pass	2.50	2.28	-0.22	Pass	331839

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Analyzer: MS2 Polarity: Positive Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
58.07	58.07	0.00	Pass	2.50	2.79	0.29	Pass	39373
118.09	118.07	-0.02	Pass	2.50	2.74	0.24	Pass	281295
322.05	321.97	-0.08	Pass	2.50	2.87	0.37	Pass	113263
622.03	621.89	-0.14	Pass	2.50	2.33	-0.17	Pass	161236
922.01	921.91	-0.10	Pass	2.50	2.37	-0.13	Pass	226885
1521.97	1521.85	-0.12	Pass	2.50	2.18	-0.32	Pass	202257
2121.93	2121.78	-0.15	Pass	2.50	2.43	-0.07	Pass	221071

QQQ Check Tune Report

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Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.98	-0.01	Pass	0.70	0.66	-0.04	Pass	179538
302.00	302.00	0.00	Pass	0.70	0.72	0.02	Pass	25095
601.98	601.96	-0.02	Pass	0.70	0.69	-0.01	Pass	82142
1033.99	1033.96	-0.03	Pass	0.70	0.71	0.01	Pass	291211
1633.95	1633.98	0.03	Pass	0.70	0.68	-0.02	Pass	531298
2233.91	2233.92	0.01	Pass	0.70	0.72	0.02	Pass	417948

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.01	0.01	Pass	0.70	0.75	0.05	Pass	60565
112.99	112.96	-0.03	Pass	0.70	0.79	0.09	Pass	292893
302.00	301.95	-0.05	Pass	0.70	0.76	0.06	Pass	43105
601.98	601.92	-0.06	Pass	0.70	0.73	0.03	Pass	86652
1033.99	1033.92	-0.07	Pass	0.70	0.75	0.05	Pass	299662
1633.95	1633.90	-0.05	Pass	0.70	0.71	0.01	Pass	484836
2233.91	2233.83	-0.08	Pass	0.70	0.69	-0.01	Pass	170739

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.89	-0.10	Pass	1.20	1.15	-0.05	Pass	250519
302.00	302.03	0.03	Pass	1.20	1.06	-0.14	Pass	31975
601.98	601.98	0.00	Pass	1.20	0.97	-0.23	Pass	101467
1033.99	1034.02	0.03	Pass	1.20	0.90	-0.30	Pass	409786
1633.95	1633.96	0.01	Pass	1.20	0.96	-0.24	Pass	1149211
2233.91	2233.94	0.03	Pass	1.20	1.06	-0.14	Pass	1245777

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.02	0.02	Pass	1.20	1.25	0.05	Pass	74435
112.99	112.94	-0.05	Pass	1.20	1.29	0.09	Pass	388272
302.00	301.90	-0.10	Pass	1.20	1.23	0.03	Pass	69280
601.98	601.83	-0.15	Pass	1.20	1.09	-0.11	Pass	146579
1033.99	1033.88	-0.11	Pass	1.20	0.96	-0.24	Pass	496096
1633.95	1633.82	-0.13	Pass	1.20	0.97	-0.23	Pass	1122968
2233.91	2233.80	-0.11	Pass	1.20	1.12	-0.08	Pass	1091873

Analyzer: MS1 Polarity: Negative Width: Widest

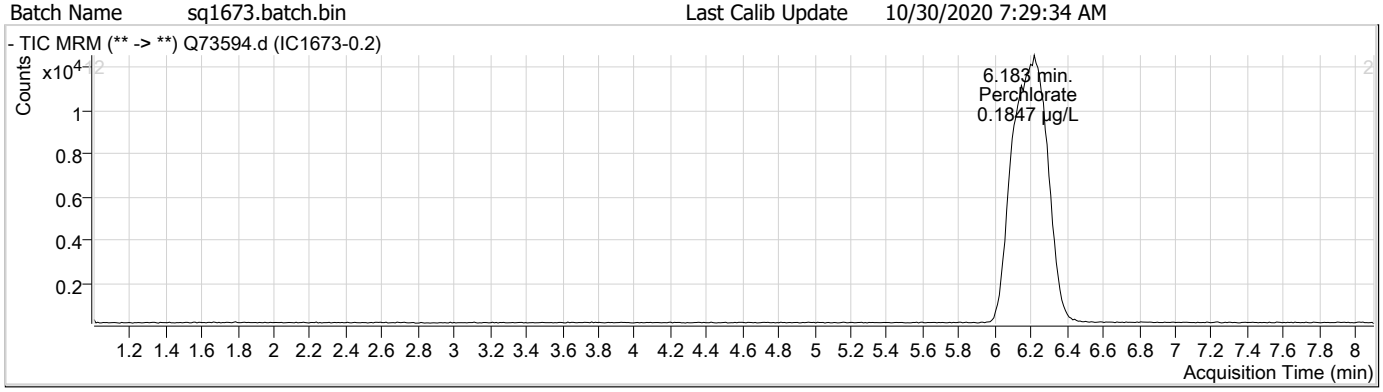
m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.64	-0.35	Pass	2.50	2.65	0.15	Pass	331446
302.00	302.09	0.09	Pass	2.50	2.55	0.05	Pass	44231
601.98	602.00	0.02	Pass	2.50	2.42	-0.08	Pass	155346
1033.99	1033.97	-0.02	Pass	2.50	2.31	-0.19	Pass	770704
1633.95	1633.92	-0.03	Pass	2.50	2.36	-0.14	Pass	2412413
2233.91	2233.91	0.00	Pass	2.50	2.43	-0.07	Pass	2841540

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.05	0.05	Pass	2.50	2.51	0.01	Pass	90584
112.99	112.92	-0.07	Pass	2.50	2.64	0.14	Pass	453581
302.00	301.89	-0.11	Pass	2.50	2.57	0.07	Pass	84073
601.98	601.81	-0.17	Pass	2.50	2.53	0.03	Pass	232257
1033.99	1033.83	-0.16	Pass	2.50	2.20	-0.30	Pass	1146427
1633.95	1633.77	-0.18	Pass	2.50	2.34	-0.16	Pass	3347556
2233.91	2233.72	-0.19	Pass	2.50	2.57	0.07	Pass	3864785

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73594.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 12:47:51 PM
Sample Name	IC1673-0.2	Instrument	Instrument 1
Vial	Vial 2	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

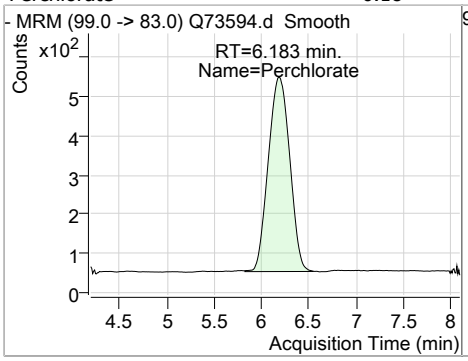


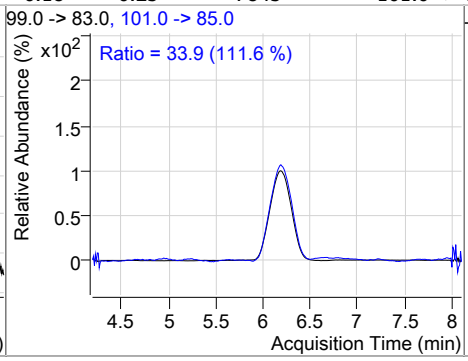
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.207	107.0 -> 89.0	158258	NoQ	5.00 µg/L	0.265
System Monitoring Compounds						
Target Compounds						QValue
Perchlorate	6.183	99.0 -> 83.0	7845	3.0	0.18 µg/L	93

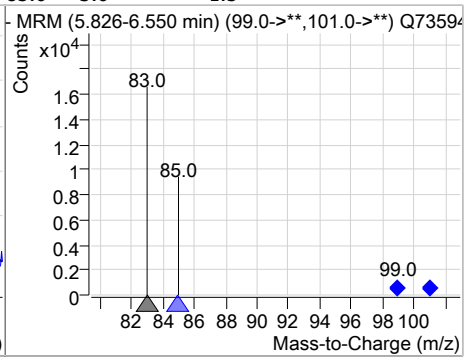
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.18	6.18	0.25	7845	101.0 -> 85.0	3.0	1.5	

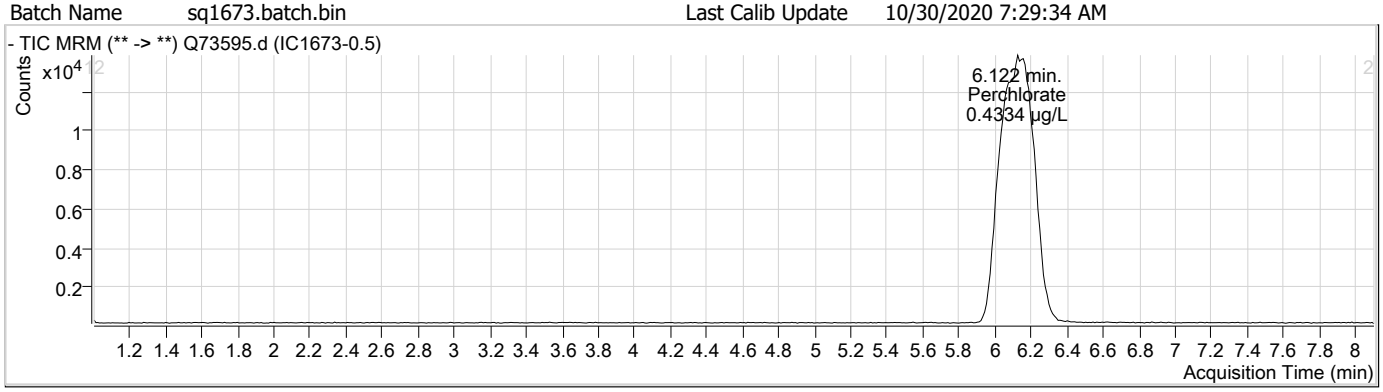






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73595.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 12:56:48 PM
Sample Name	IC1673-0.5	Instrument	Instrument 1
Vial	Vial 3	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

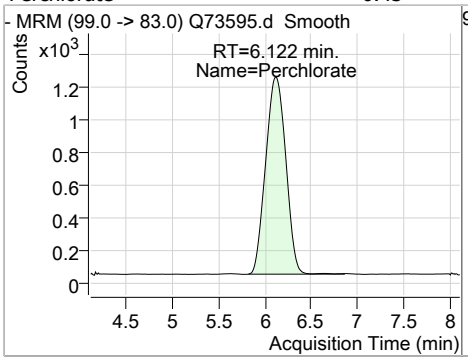


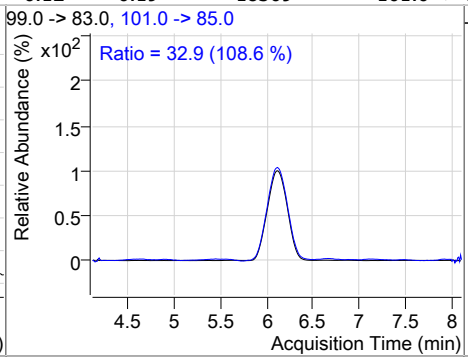
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.135	107.0 -> 89.0	157375	NoQ	5.00 µg/L	0.194
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.122	99.0 -> 83.0	18309	3.0	0.43 µg/L	95

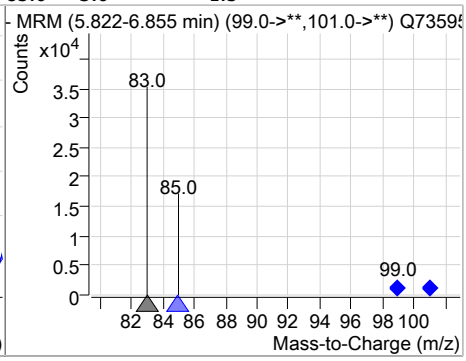
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.43	6.12	0.19	18309	101.0 -> 85.0	3.0	1.5	

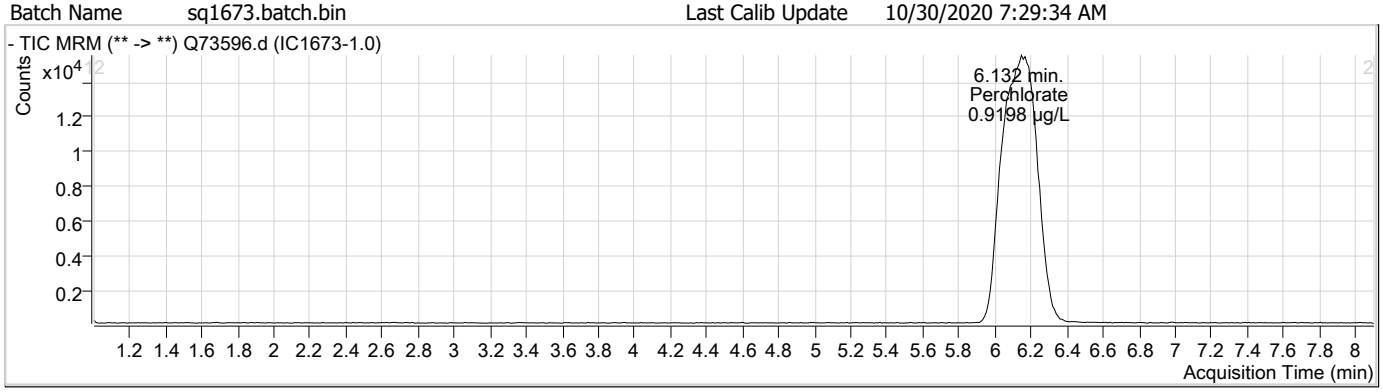






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73596.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 1:05:45 PM
Sample Name	IC1673-1.0	Instrument	Instrument 1
Vial	Vial 4	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

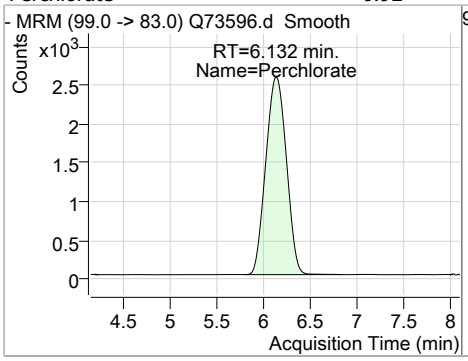


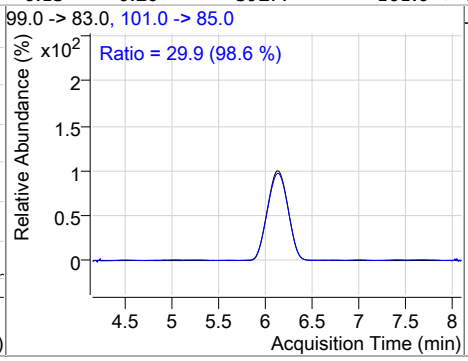
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.156	107.0 -> 89.0	159086	NoQ	5.00 µg/L	0.214
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.132	99.0 -> 83.0	39277	3.3	0.92 µg/L	99

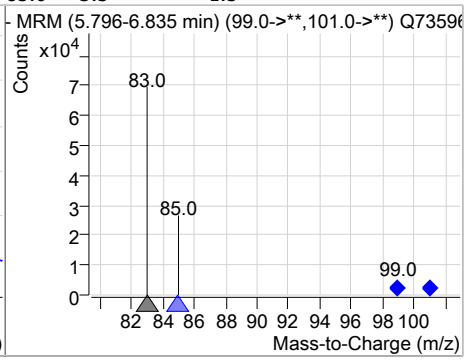
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.92	6.13	0.20	39277	101.0 -> 85.0	3.3	1.5	

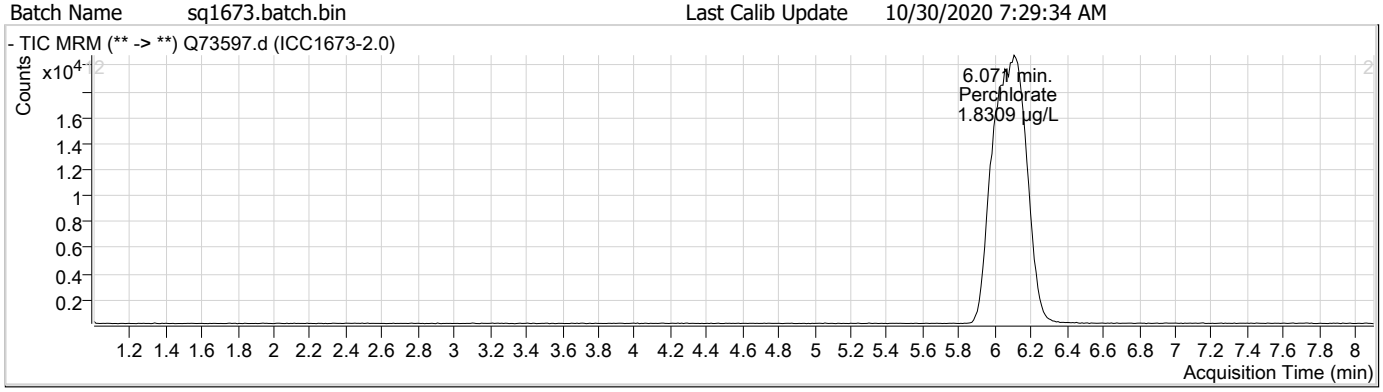






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73597.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 1:14:43 PM
Sample Name	ICC1673-2.0	Instrument	Instrument 1
Vial	Vial 5	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

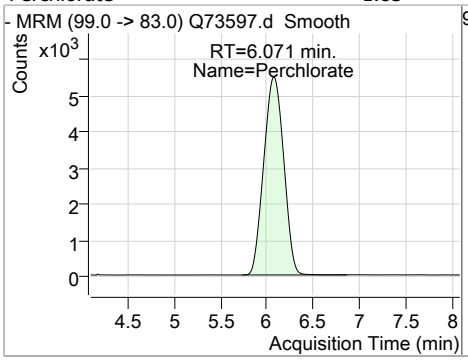


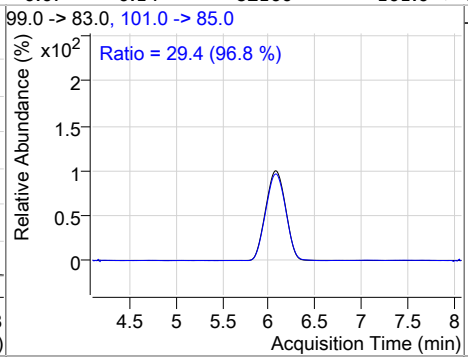
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.105	107.0 -> 89.0	167183	NoQ	5.00 µg/L	0.163
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.071	99.0 -> 83.0	82160	3.4	1.83 µg/L	98

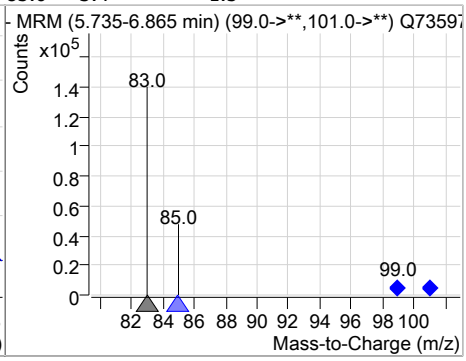
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.83	6.07	0.14	82160	101.0 -> 85.0	3.4	1.5	

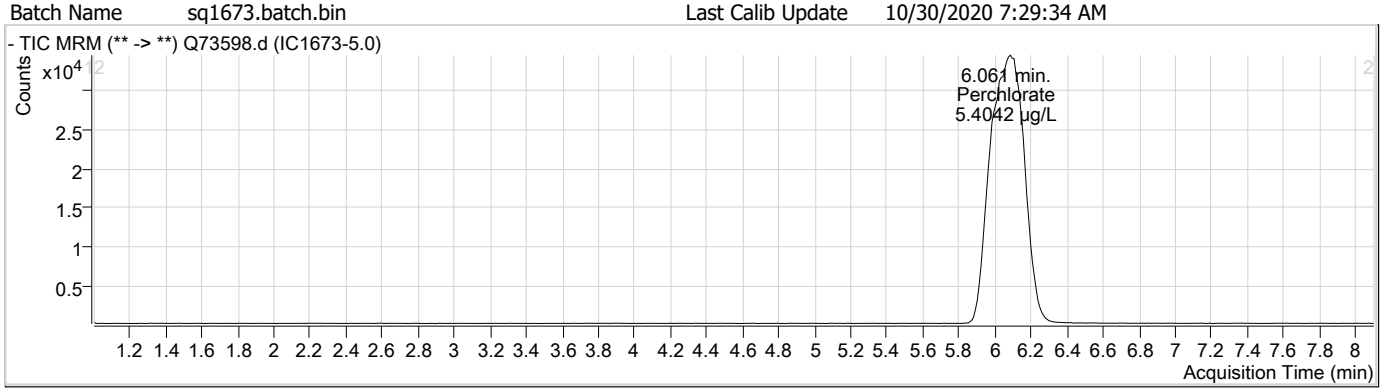






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73598.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 1:23:41 PM
Sample Name	IC1673-5.0	Instrument	Instrument 1
Vial	Vial 6	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

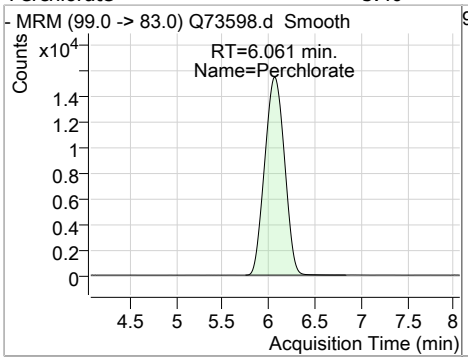


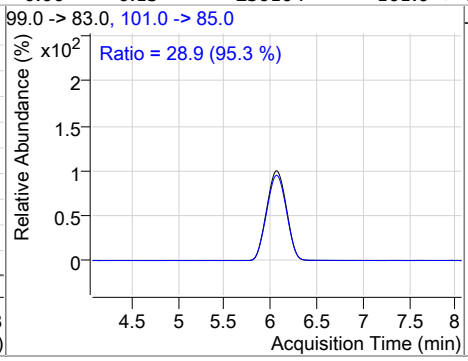
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.085	107.0 -> 89.0	158635	NoQ	5.00 µg/L	0.143
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.061	99.0 -> 83.0	230104	3.5	5.40 µg/L	97

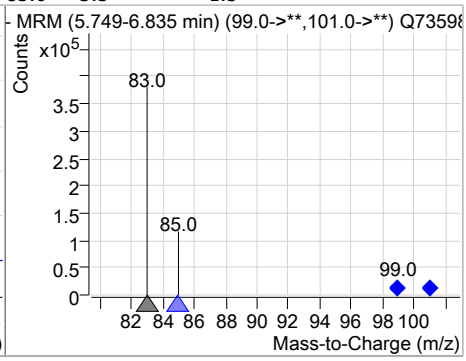
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	5.40	6.06	0.13	230104	101.0 -> 85.0	3.5	1.5	

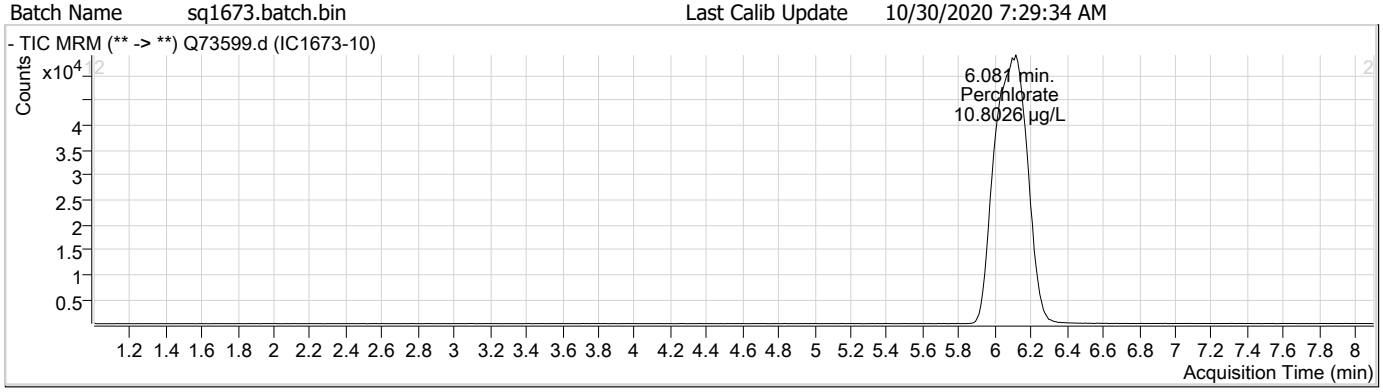






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73599.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 2:14:56 PM
Sample Name	IC1673-10	Instrument	Instrument 1
Vial	Vial 7	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

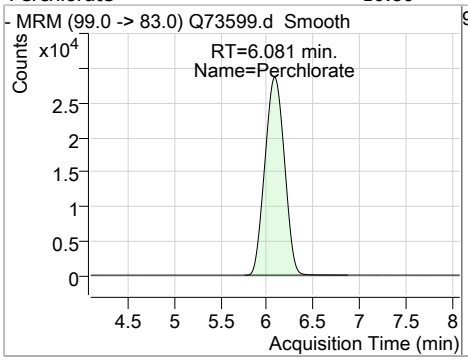


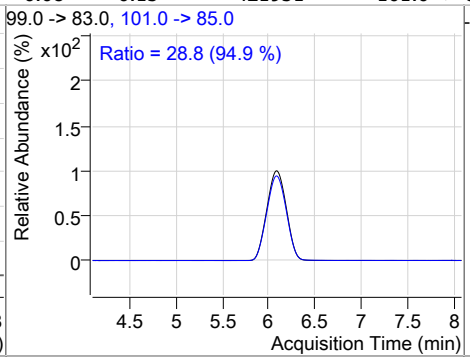
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.105	107.0 -> 89.0	145525	NoQ	5.00 µg/L	0.163
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.081	99.0 -> 83.0	421951	3.5	10.80 µg/L	97

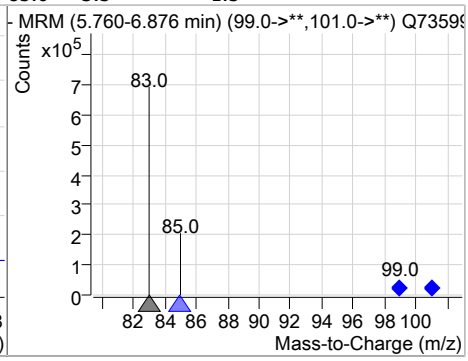
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	10.80	6.08	0.15	421951	101.0 -> 85.0	3.5	1.5	

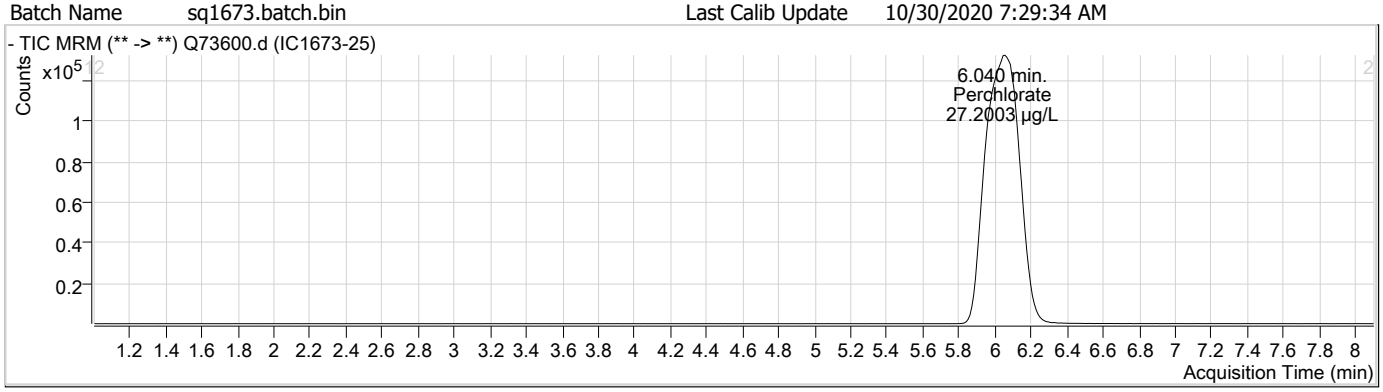






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73600.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 2:23:54 PM
Sample Name	IC1673-25	Instrument	Instrument 1
Vial	Vial 8	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

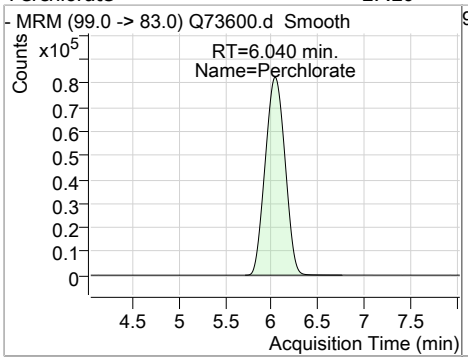


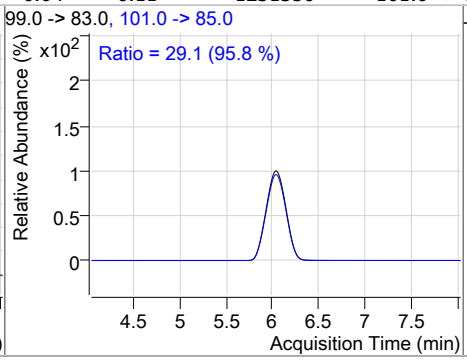
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.054	107.0 -> 89.0	168661	NoQ	5.00	µg/L	0.112
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.040	99.0 -> 83.0	1231356	3.4	27.20	µg/L	98

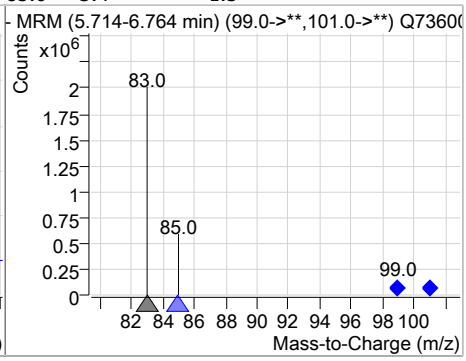
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	27.20	6.04	0.11	1231356	101.0 -> 85.0	3.4	1.5	

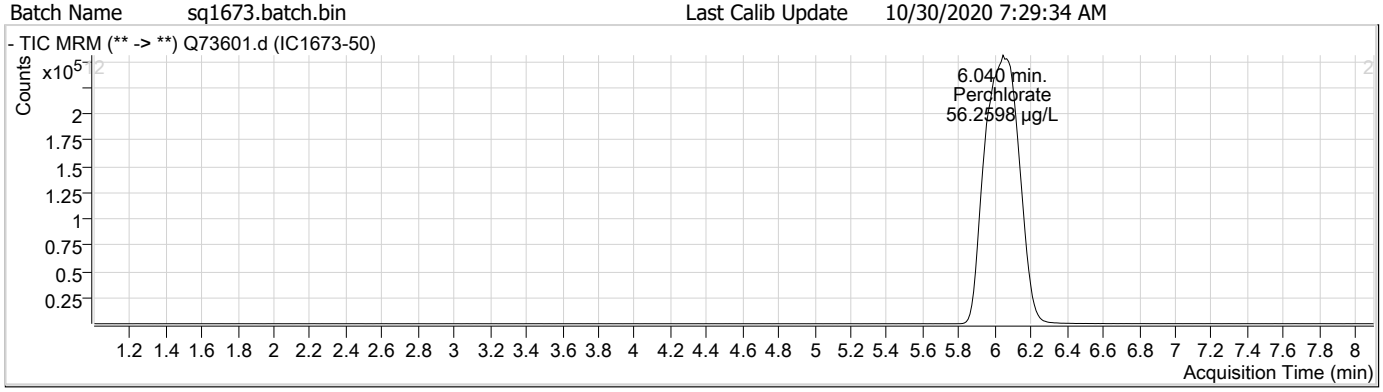






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73601.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 2:32:54 PM
Sample Name	IC1673-50	Instrument	Instrument 1
Vial	Vial 9	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

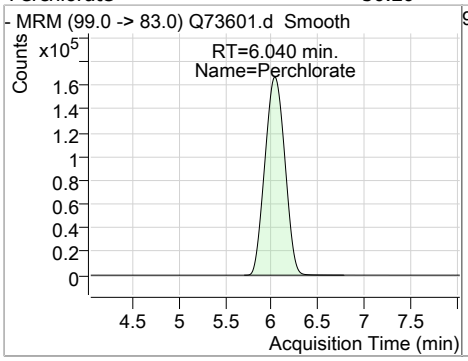


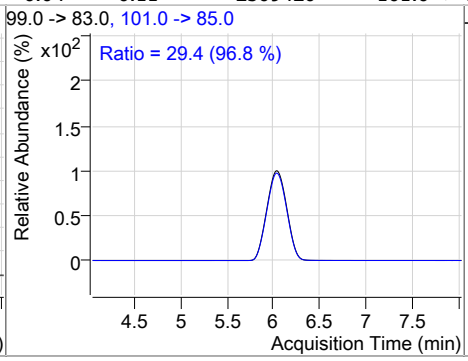
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.054	107.0 -> 89.0	166181	NoQ	5.00	µg/L	0.112
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.040	99.0 -> 83.0	2509420	3.4	56.26	µg/L	98

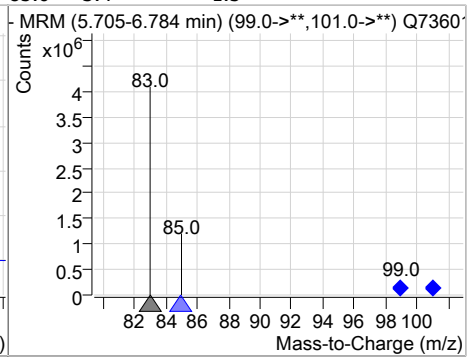
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	56.26	6.04	0.11	2509420	101.0 -> 85.0	3.4	1.5	

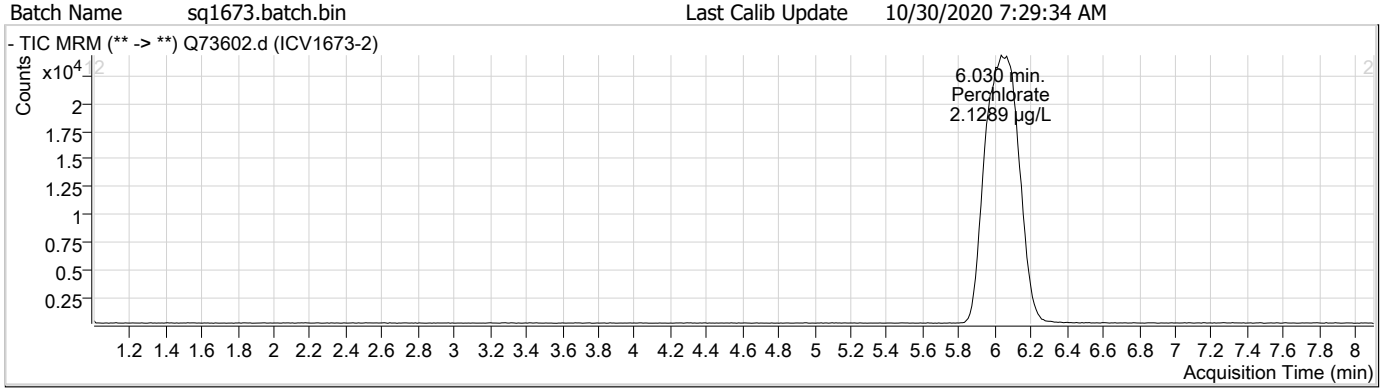






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73602.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 2:41:53 PM
Sample Name	ICV1673-2	Instrument	Instrument 1
Vial	Vial 10	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

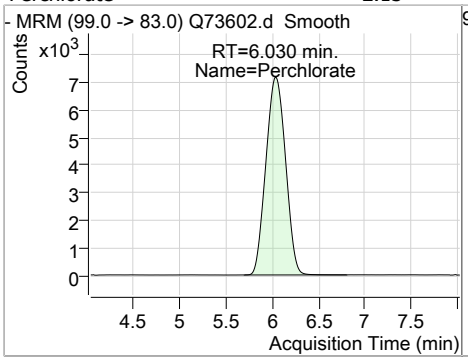


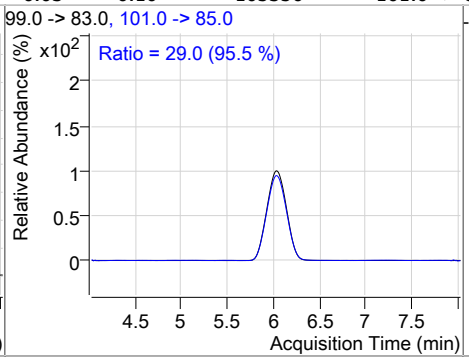
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.044	107.0 -> 89.0	184378	NoQ	5.00 µg/L	0.102
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.030	99.0 -> 83.0	105356	3.5	2.13 µg/L	98

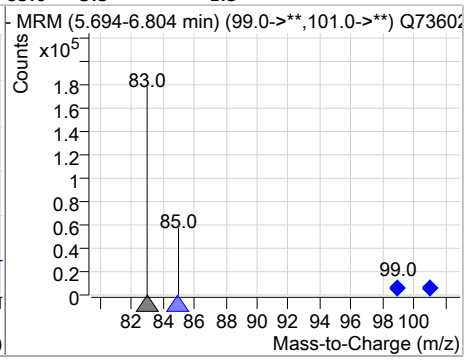
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	2.13	6.03	0.10	105356	101.0 -> 85.0	3.5	1.5	

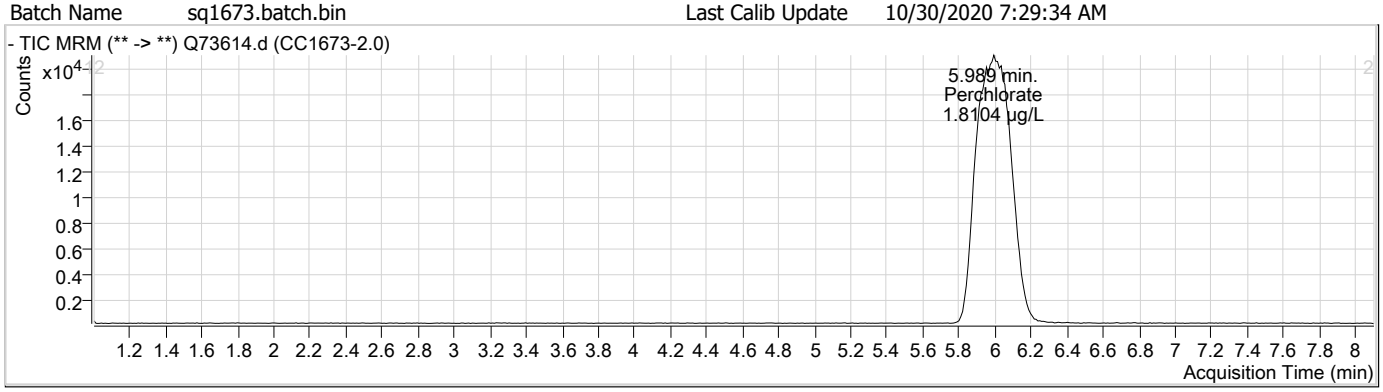






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73614.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 4:40:01 PM
Sample Name	CC1673-2.0	Instrument	Instrument 1
Vial	Vial 5	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

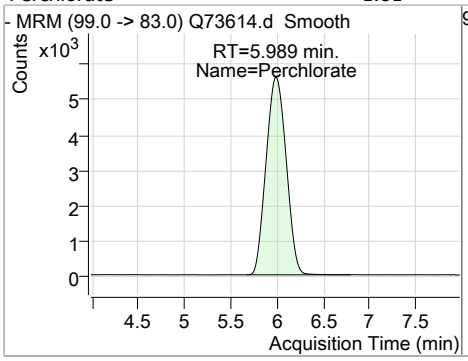


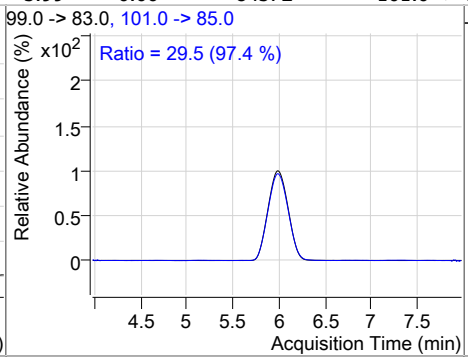
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.993	107.0 -> 89.0	174046	NoQ	5.00	µg/L	0.051
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.989	99.0 -> 83.0	84572	3.4	1.81	µg/L	99

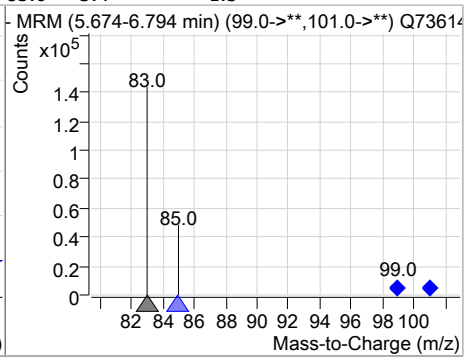
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.81	5.99	0.06	84572	101.0 -> 85.0	3.4	1.5	

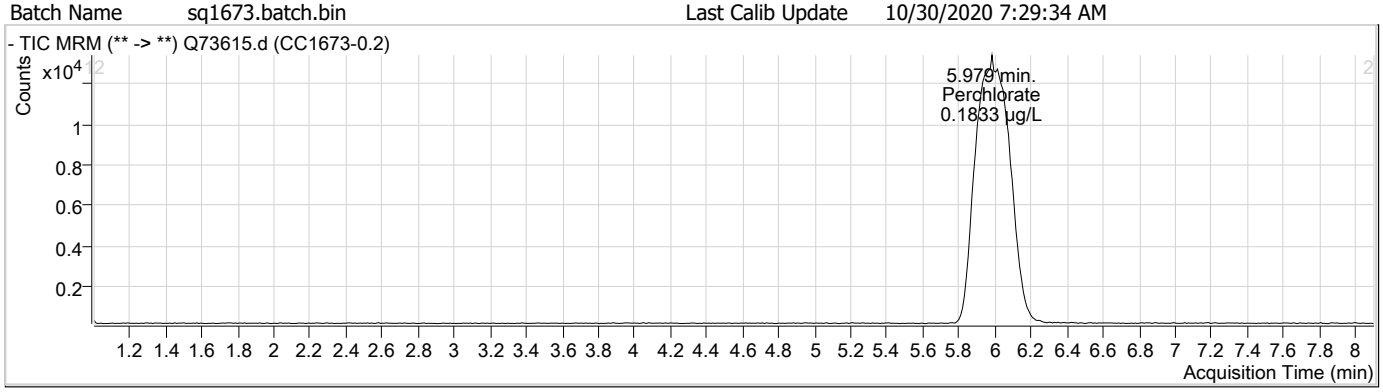






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73615.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 4:48:58 PM
Sample Name	CC1673-0.2	Instrument	Instrument 1
Vial	Vial 2	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

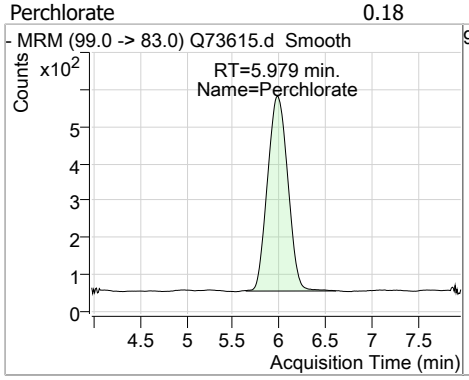


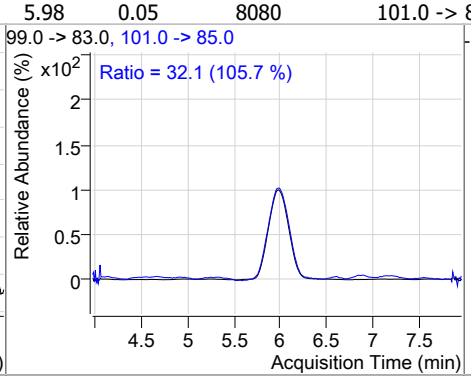
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.983	107.0 -> 89.0	164207	NoQ	5.00 µg/L	0.041
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.979	99.0 -> 83.0	8080	3.1	0.18 µg/L	97

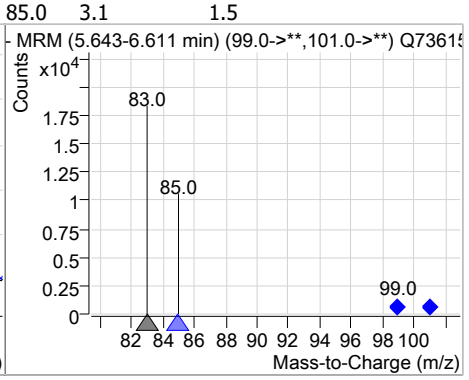
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.18	5.98	0.05	8080	101.0 -> 85.0	3.1	1.5	

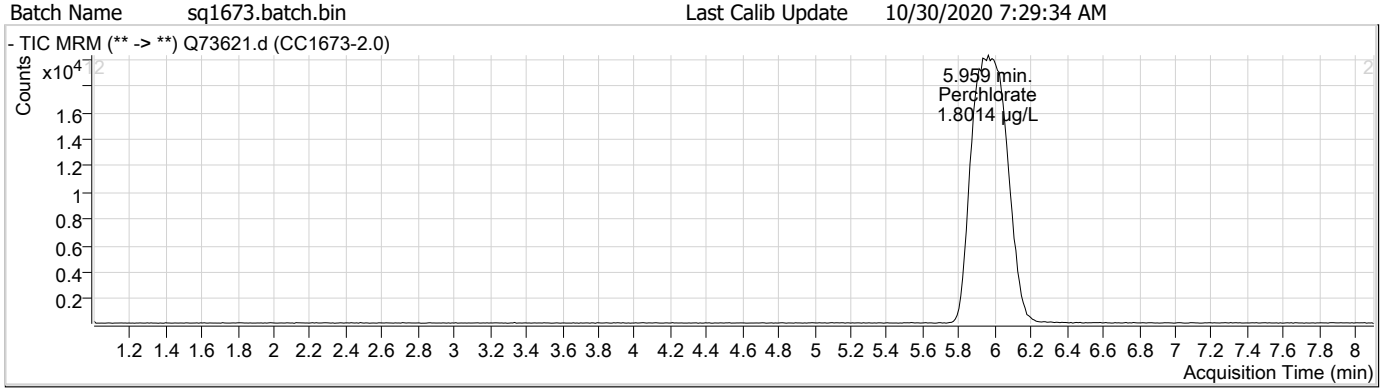






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73621.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 5:42:45 PM
Sample Name	CC1673-2.0	Instrument	Instrument 1
Vial	Vial 5	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

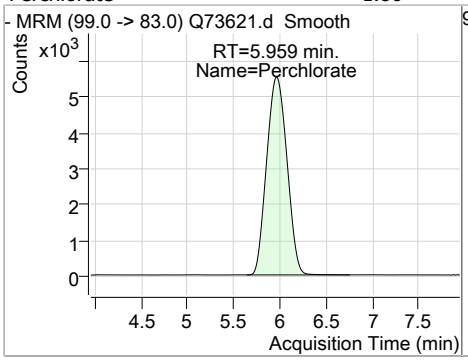


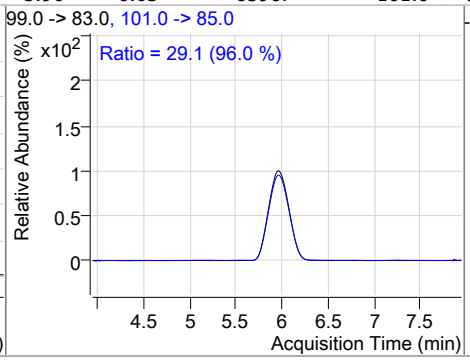
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.962	107.0 -> 89.0	173662	NoQ	5.00	µg/L	0.020
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.959	99.0 -> 83.0	83967	3.4	1.80	µg/L	98

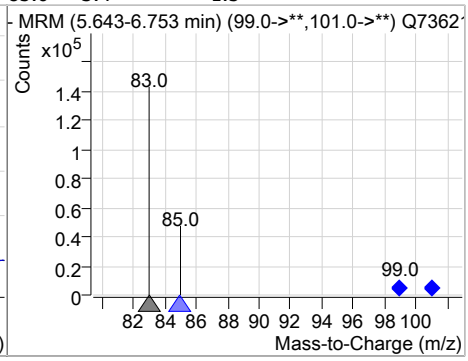
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.80	5.96	0.03	83967	101.0 -> 85.0	3.4	1.5	

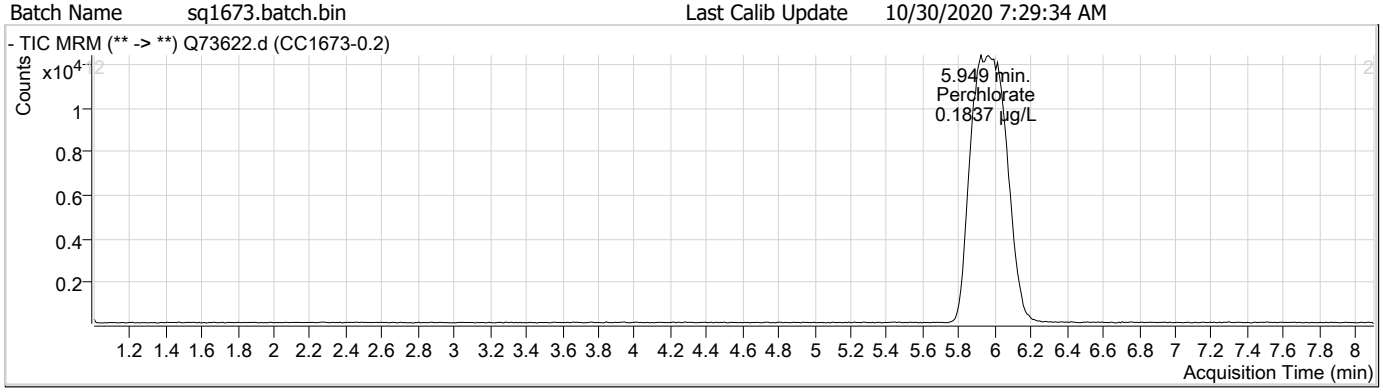






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73622.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 5:51:42 PM
Sample Name	CC1673-0.2	Instrument	Instrument 1
Vial	Vial 2	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

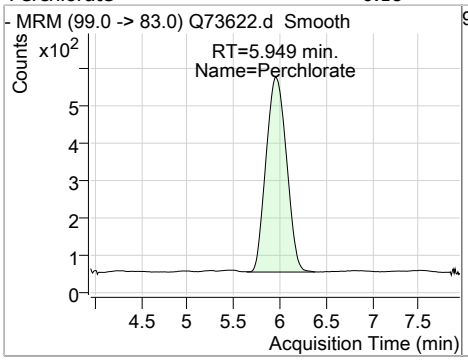


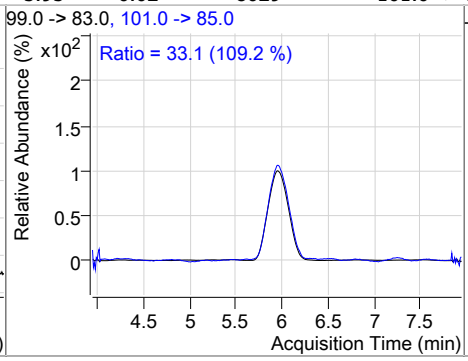
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.962	107.0 -> 89.0	162844	NoQ	5.00 µg/L	0.020
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.949	99.0 -> 83.0	8029	3.0	0.18 µg/L	95

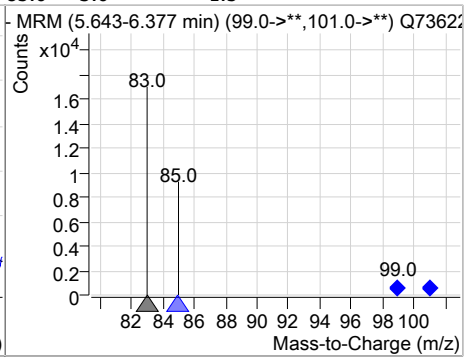
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.18	5.95	0.02	8029	101.0 -> 85.0	3.0	1.5	

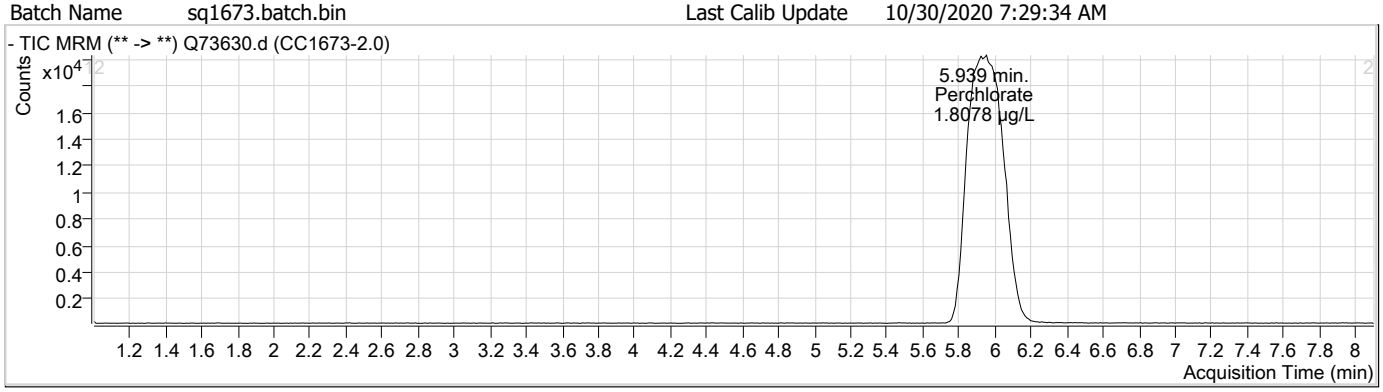






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q73630.d	Operator	mikee
Acq. Method	Perchlorate2.m	Acq. Date-Time	10/29/2020 7:03:25 PM
Sample Name	CC1673-2.0	Instrument	Instrument 1
Vial	Vial 5	Sample Information	OP82733,SQ1673,10,,,10,1,water
DA Method File	6850_102920_SQ1672.quantmethod.xml	Comment	
Batch Name	sq1673.batch.bin	Last Calib Update	10/30/2020 7:29:34 AM

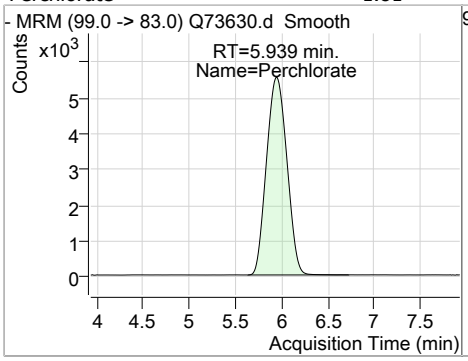


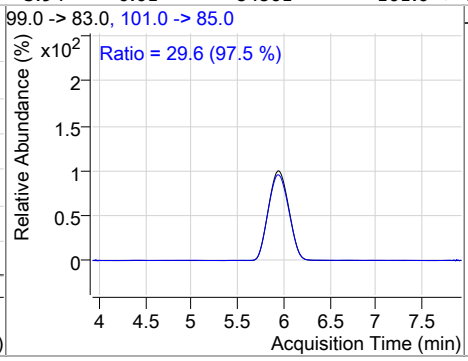
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.942	107.0 -> 89.0	174888	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.939	99.0 -> 83.0	84861	3.4	1.81	µg/L	99

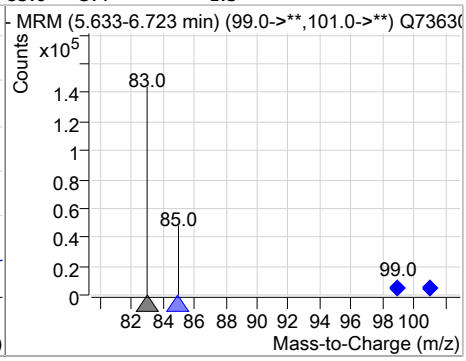
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.81	5.94	0.01	84861	101.0 -> 85.0	3.4	1.5	







SGS ORLANDO

LCMS1-Q ANALYSIS LOG

DATE:	10/27/20
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS1-Q

METHODS:	537/537.1
PROC. METH:	537_1027_SQ1670
CAL DATE:	10/27/20
ANALYST:	MRE
RUN BATCH:	SQ1670

ELUENT A LOT #:	203951 W/0.1% AA
ELUENT B LOT #:	202383 W/0.1% AA
IC/CC STD LOT #:	LCMS1544
ICV STD LOT #:	9851
ISTD/ID STD LOT #:	LCMS 1543

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	Q73496.d	Vial 1	ccb	537.m	Sample		OP82561,SQ1670,250,,,1.0,1,water	✓
2	Q73497.d	Vial 1	ccb	537.m	Sample		OP82561,SQ1670,250,,,1.0,1,water	✓
3	Q73498.d	Vial 7	CHECK STD	537.m	ConCal	6	OP82561,SQ1670,250,,,1.0,1,water	✓
4	Q73499.d	Vial 1	ccb	537.m	Sample		OP82561,SQ1670,250,,,1.0,1,water	✓
5	Q73500.d	Vial 1	IC1670-0	537.m	Sample		OP82561,SQ1670,250,,,1.0,1,water	✓
6	Q73501.d	Vial 2	IC1670-0.5	537.m	Calibration	1	OP82561,SQ1670,250,,,1.0,1,water	✓
7	Q73502.d	Vial 3	IC1670-1.0	537.m	Calibration	2	OP82561,SQ1670,250,,,1.0,1,water	✓
8	Q73503.d	Vial 4	IC1670-2.0	537.m	Calibration	3	OP82561,SQ1670,250,,,1.0,1,water	✓
9	Q73504.d	Vial 5	IC1670-5.0	537.m	Calibration	4	OP82561,SQ1670,250,,,1.0,1,water	✓
10	Q73505.d	Vial 6	IC1670-10	537.m	Calibration	5	OP82561,SQ1670,250,,,1.0,1,water	✓
11	Q73506.d	Vial 7	ICC1670-20	537.m	Calibration	6	OP82561,SQ1670,250,,,1.0,1,water	✓
12	Q73507.d	Vial 8	IC1670-50	537.m	Calibration	7	OP82561,SQ1670,250,,,1.0,1,water	✓
13	Q73508.d	Vial 9	IC1670-100	537.m	Calibration	8	OP82561,SQ1670,250,,,1.0,1,water	✓
14	Q73509.d	Vial 10	ICV1670-20 TPFOA	537.m	QC	6	OP82561,SQ1670,250,,,1.0,1,water	PASS
15	Q73510.d	Vial 11	ICV1670-20	537.m	QC	6	OP82619,SQ1670,250,,,1.0,1,water	PASS
16	Q73511.d	Vial 12	FA79696-3	537.m	Sample		OP82619,SQ1670,280,,,1.0,1,water	RR
17	Q73512.d	Vial 13	FA79698-2	537.m	Sample		OP82619,SQ1670,280,,,1.0,1,water	REDO
18	Q73513.d	Vial 14	FA79698-2	537.m	Sample		OP82619,SQ1670,280,,,1.0,5,water	REDO
19	Q73514.d	Vial 2	CC1670-0.5LL	537.m	QC	1	OP82561,SQ1670,250,,,1.0,1,water	PASS
20	Q73515.d	Vial 1	ccb	537.m	Sample		OP82647,SQ1670,250,,,1.0,1,water	✓
21	Q73516.d	Vial 15	OP82647-BS	537.m	Sample		OP82647,SQ1670,250,,,1.0,1,water	LOW RR
22	Q73517.d	Vial 16	OP82647-MB	537.m	Sample		OP82647,SQ1670,250,,,1.0,1,water	RR
23	Q73518.d	Vial 17	FA80045-1	537.m	Sample		OP82647,SQ1670,290,,,1.0,1,water	RR
24	Q73519.d	Vial 34	FA80045-1	537.m	Sample		OP82647,SQ1670,290,,,1.0,5,water	RR
25	Q73520.d	Vial 15	OP82647-BS	537.m	Sample		OP82647,SQ1670,250,,,1.0,1,water	LOW RR
26	Q73521.d	Vial 18	FA80045-2	537.m	Sample		OP82647,SQ1670,240,,,1.0,1,water	RR
27	Q73522.d	Vial 19	FA80045-3	537.m	Sample		OP82647,SQ1670,230,,,1.0,1,water	RR
28	Q73523.d	Vial 20	FA80045-4	537.m	Sample		OP82647,SQ1670,220,,,1.0,1,water	RR
29	Q73524.d	Vial 21	FA80045-5	537.m	Sample		OP82647,SQ1670,210,,,1.0,1,water	RR
30	Q73525.d	Vial 22	FA80045-6	537.m	Sample		OP82647,SQ1670,230,,,1.0,1,water	RR
31	Q73526.d	Vial 7	CC1670-20	537.m	QC	6	OP82561,SQ1670,250,,,1.0,1,water	PASS
32	Q73527.d	Vial 1	ccb	537.m	Sample		OP82647,SQ1670,250,,,1.0,1,water	✓
33	Q73528.d	Vial 23	FA80045-7	537.m	Sample		OP82647,SQ1670,200,,,1.0,1,water	RR
34	Q73529.d	Vial 24	OP82647-MS	537.m	Sample		OP82647,SQ1670,220,,,1.0,1,water	RR
35	Q73530.d	Vial 25	OP82647-MSD	537.m	Sample		OP82647,SQ1670,230,,,1.0,1,water	RR

SGS ORLANDO LCMS1-Q ANALYSIS LOG

36	Q73531.d	Vial 26	FA80045-8	537.m	Sample		OP82647,SQ1670,200,,,1.0,1,water	RR
37	Q73532.d	Vial 27	FA80045-9	537.m	Sample		OP82647,SQ1670,250,,,1.0,1,water	RR 1X 5X ISTD LOW
38	Q73533.d	Vial 28	FA80045-10	537.m	Sample		OP82647,SQ1670,260,,,1.0,1,water	RR
39	Q73534.d	Vial 29	FA80045-11	537.m	Sample		OP82647,SQ1670,290,,,1.0,1,water	RR
40	Q73535.d	Vial 30	FA80045-12	537.m	Sample		OP82647,SQ1670,190,,,1.0,1,water	RR
41	Q73536.d	Vial 7	CC1670-20	537.m	QC	6	OP82561,SQ1670,250,,,1.0,1,water	PASS
42	Q73537.d	Vial 1	ccb	537.m	Sample		OP82647,SQ1670,250,,,1.0,1,water	✓
43	Q73538.d	Vial 31	FA80045-13	537.m	Sample		OP82647,SQ1670,280,,,1.0,1,water	RR
44	Q73539.d	Vial 32	FA80045-14	537.m	Sample		OP82647,SQ1670,260,,,1.0,1,water	RR
45	Q73540.d	Vial 33	FA80045-15	537.m	Sample		OP82647,SQ1670,270,,,1.0,1,water	RR
46	Q73541.d	Vial 12	FA79696-3	537.m	Sample		OP82619,SQ1670,280,,,1.0,1,water	RR
47	Q73542.d	Vial 8	ECC1670-50	537.m	QC	7	OP82561,SQ1670,250,,,1.0,1,water	PASS
48	Q73543.d	Vial 1	ccb	537.m	Sample		OP82647,SQ1670,250,,,1.0,1,water	✓

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LCMS1-Q ANALYSIS LOG

DATE:	10/29/20
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS1-Q

METHODS:	537/537.1
PROC. METH:	537_1027_SQ1670
CAL DATE:	10/27/20
ANALYST:	MRE
RUN BATCH:	SQ1672

ELUENT A LOT #:	203951 W/0.1% AA
ELUENT B LOT #:	202383 W/0.1% AA
IC/CC STD LOT #:	LCMS1544
ICV STD LOT #:	9851
ISTD/ID STD LOT #:	LCMS 1543

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	Q73580.d	Vial 1	ccb	537.m	Sample		OP82561,SQ1672,250,,,1.0,1,water	✓
2	Q73581.d	Vial 1	ccb	537.m	Sample		OP82561,SQ1672,250,,,1.0,1,water	✓
3	Q73582.d	Vial 10	TPFOA	537.m	Sample	6	OP82561,SQ1672,250,,,1.0,1,water	✓
4	Q73583.d	Vial 2	CC1670-0.5LL	537.m	ConCal	1	OP82561,SQ1672,250,,,1.0,1,water	PASS
5	Q73584.d	Vial 15	OP82647-MB	537.m	Sample		OP82647,SQ1672,250,,,1.0,1,water	✓
6	Q73585.d	Vial 16	OP82647-BS	537.m	Sample		OP82647,SQ1672,250,,,1.0,1,water	✓
7	Q73586.d	Vial 33	FA80045-15	537.m	Sample		OP82647,SQ1672,270,,,1.0,,water	✓
8	Q73587.d	Vial 36	FA80045-15	537.m	Sample		OP82647,SQ1672,270,,,1.0,2,water	✓
9	Q73588.d	Vial 7	ECC1670-20	537.m	ConCal	6	OP82561,SQ1672,250,,,1.0,1,water	PASS
10	Q73589.d	Vial 1	ccb	537.m	Sample		OP82647,SQ1672,250,,,1.0,1,water	✓

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LCMS1-Q ANALYSIS LOG

DATE:	10/29/20
COLUMN TYPE:	K PRIME
AMOUNT INJ:	7.5 ul
INSTRUMENT:	LCMS1-Q

METHODS:	SW846 6850
PROC. METH:	6850_102920_SQ1673
CAL DATE:	10/13/20
ANALYST:	MRE
RUN BATCH:	SQ1673

ELUENT A LOT #:	60155 W/0.1% AA
ELUENT B LOT #:	198527 W/0.1% AA
IC/CC STD LOT #:	LCMS1521
ICV STD LOT #:	LCMS1522
ISTD/ID STD LOT #:	10241

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	Q73590.d	Vial 1	ccb	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,1,water	✓
2	Q73591.d	Vial 1	ccb	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,1,water	✓
3	Q73592.d	Vial 1	ccb	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,1,water	✓
4	Q73593.d	Vial 1	IC1673-0	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,1,water	✓
5	Q73594.d	Vial 2	IC1673-0.2	Perchlorate2.m	Calibration	1	OP82733,SQ1673,10,,,10,1,water	✓
6	Q73595.d	Vial 3	IC1673-0.5	Perchlorate2.m	Calibration	2	OP82733,SQ1673,10,,,10,1,water	✓
7	Q73596.d	Vial 4	IC1673-1.0	Perchlorate2.m	Calibration	3	OP82733,SQ1673,10,,,10,1,water	✓
8	Q73597.d	Vial 5	ICC1673-2.0	Perchlorate2.m	Calibration	4	OP82733,SQ1673,10,,,10,1,water	✓
9	Q73598.d	Vial 6	IC1673-5.0	Perchlorate2.m	Calibration	5	OP82733,SQ1673,10,,,10,1,water	✓
10	Q73599.d	Vial 7	IC1673-10	Perchlorate2.m	Calibration	6	OP82733,SQ1673,10,,,10,1,water	✓
11	Q73600.d	Vial 8	IC1673-25	Perchlorate2.m	Calibration	7	OP82733,SQ1673,10,,,10,1,water	✓
12	Q73601.d	Vial 9	IC1673-50	Perchlorate2.m	Calibration	8	OP82733,SQ1673,10,,,10,1,water	✓
13	Q73602.d	Vial 10	ICV1673-2	Perchlorate2.m	QC	4	OP82733,SQ1673,10,,,10,1,water	PASS
14	Q73603.d	Vial 11	ICS1673-0.2	Perchlorate2.m	Sample	1	OP82733,SQ1673,10,,,10,1,water	PASS
15	Q73604.d	Vial 1	ccb	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,1,water	✓
16	Q73605.d	Vial 12	OP82733-BS	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,1,water	✓
17	Q73606.d	Vial 13	OP82733-MB	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,1,water	✓
18	Q73607.d	Vial 14	FA79898-1	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,1,water	✓
19	Q73608.d	Vial 15	FA79898-2	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,1,water	✓
20	Q73609.d	Vial 16	FA79898-3	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,1,water	✓
21	Q73610.d	Vial 17	FA79898-4	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,20,water	✓
22	Q73611.d	Vial 18	FA79898-5	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,20,water	✓
23	Q73612.d	Vial 19	FA79898-6	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,50,water	✓
24	Q73613.d	Vial 20	FA79898-7	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,200,water	✓
25	Q73614.d	Vial 5	CC1673-2.0	Perchlorate2.m	QC	4	OP82733,SQ1673,10,,,10,1,water	PASS
26	Q73615.d	Vial 2	CC1673-0.2	Perchlorate2.m	QC	1	OP82733,SQ1673,10,,,10,1,water	PASS
27	Q73616.d	Vial 21	FA79898-8	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,1,water	✓
28	Q73617.d	Vial 22	FA79898-9	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,1,water	✓
29	Q73618.d	Vial 23	FA79898-10	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,20,water	RR 1X
30	Q73619.d	Vial 24	OP82733-MS	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,20,water	RR 1X
31	Q73620.d	Vial 25	OP82733-MSD	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,20,water	RR 1X
32	Q73621.d	Vial 5	CC1673-2.0	Perchlorate2.m	QC	4	OP82733,SQ1673,10,,,10,1,water	PASS
33	Q73622.d	Vial 2	CC1673-0.2	Perchlorate2.m	QC	1	OP82733,SQ1673,10,,,10,1,water	PASS
34	Q73623.d	Vial 26	FA80202-1	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,20,water	✓
35	Q73624.d	Vial 27	FA80202-2	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,20,water	✓

SGS ORLANDO LCMS1-Q ANALYSIS LOG

36	Q73625.d	Vial 28	FA80202-3	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,20,water	✓
37	Q73626.d	Vial 29	FA80202-4	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,20,water	✓
38	Q73627.d	Vial 30	OP82733-MS2	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,20,water	✓
39	Q73628.d	Vial 31	OP82733-MSD2	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,20,water	✓
40	Q73629.d	Vial 32	FA80202-5	Perchlorate2.m	Sample		OP82733,SQ1673,10,,,10,20,water	✓
41	Q73630.d	Vial 5	CC1673-2.0	Perchlorate2.m	QC	4	OP82733,SQ1673,10,,,10,1,water	PASS
42	Q73631.d	Vial 2	ECC1673-0.2	Perchlorate2.m	QC	1	OP82733,SQ1673,10,,,10,1,water	PASS

SGS - ORLANDO

LIQUID SAMPLE PREP REPORT

Date/Time: 10/29/2020 1100 Started {mm/dd/yy 24:00}

Date/Time: 10/29/2020 1230 Finished {mm/dd/yy 24:00}

Prep Method: 3510C 3580A or Method (circle)

Analytical Method: 6850

Batch#: OP82733 Ext. By: MM Conc. By: — Vialed By: MM

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 82733 MB		10					10	
OP 1 BS								
FA79858-1	1					20		
-2								
-3								
-4								
-5								
-6								
-7								
-8								
-9								
-10								
FA80202-1								
-2								
-3								
-4								
-5								
FA79858-10MS	1							
1 MSD	1					20		
FA80202-4 MS	2					20		
1 MSD	2					20		
DUP						20		

Comments:

Surr. ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

Spk. ID: LCMS1522 Conc: 100ppb Exp. Date: 2/2/21 Inj. By: MM Ver. By NG

Initial Bath Temp (Therm ID):

Observed Temp °C: Corr. Temp °C:

Exchange Bath/N-Evap Temp (Therm ID):

Observed Temp °C: Corr. Temp °C:

CH2CL2 Lot #: Hexane Lot #: Na2SO4 Lot#:

Acetonitrile Lot #: Methanol Lot #: Acetone Lot#:

Syringe Filter Lot#: pH Paper #: ~~Reagent~~ H2O #: 203951

Copper Lot #: If Sulfur Cleaning is performed in Extractions (3660B)

Relinquished By: Date: 10/29/2020

Accepted By: Date: 10/29/2020

ORLD-EXT-0001-1-06-FORM-extwater.xls 032718

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- GC Identification Summaries (Explosives)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP82734-MB	PP388844.D	1	10/30/20	JB	10/29/20	OP82734	GPP2355

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA80202-1, FA80202-2, FA80202-3, FA80202-4, FA80202-5

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	97%	70-136%

Method Blank Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP82734-MB	GG619939.D	1	11/03/20	JB	10/29/20	OP82734	GGG2890

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA80202-1, FA80202-2, FA80202-3, FA80202-4, FA80202-5

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	98%	70-136%

Blank Spike Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP82734-BS	PP388845.D	1	10/30/20	JB	10/29/20	OP82734	GPP2355

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA80202-1, FA80202-2, FA80202-3, FA80202-4, FA80202-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
2691-41-0	HMX	5	5.0	100	77-144
121-82-4	RDX	5	4.7	94	77-125
	DNX	5	4.0	80	66-127
	MNX	5	4.5	90	71-137
	TNX	5	2.9	58*	60-126
618-87-1	3,5-Dinitroaniline	5	4.8	96	77-115
99-65-0	1,3-Dinitrobenzene	5	5.0	100	79-122
606-20-2	2,6-Dinitrotoluene	5	6.0	120	81-131
121-14-2	2,4-Dinitrotoluene	5	4.8	96	80-123
35572-78-2	2-amino-4,6-Dinitrotoluene	5	4.9	98	81-120
19406-51-0	4-amino-2,6-Dinitrotoluene	5	4.4	88	79-119
98-95-3	Nitrobenzene	5	5.1	102	78-130
88-72-2	o-Nitrotoluene	5	5.2	104	76-131
99-08-1	m-Nitrotoluene	5	5.1	102	78-122
99-99-0	p-Nitrotoluene	5	5.2	104	79-124
479-45-8	Tetryl	5	3.5	70	65-124
99-35-4	1,3,5-Trinitrobenzene	5	4.5	90	79-128
118-96-7	2,4,6-Trinitrotoluene	5	4.5	90	72-112
55-63-0	Nitroglycerine	5	4.6	92	69-123
78-11-5	PETN	5	5.8	116	73-145

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	108%	70-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP82734-MS	PP388853.D	1	10/31/20	JB	10/29/20	OP82734	GPP2355
OP82734-MSD	PP388854.D	1	10/31/20	JB	10/29/20	OP82734	GPP2355
FA80202-4 [a]	PP388849.D	1	10/31/20	JB	10/29/20	OP82734	GPP2355
FA80202-4 [b]	GG619920.D	1	11/02/20	JB	10/29/20	OP82734	GGG2889

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA80202-1, FA80202-2, FA80202-3, FA80202-4, FA80202-5

CAS No.	Compound	FA80202-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	19.1		9.62	29.5	108	9.62	29.5	108	0	77-144/21
121-82-4	RDX	0.19	U	9.62	9.2	96	9.62	9.0	94	2	77-125/19
	DNX	0.19	U	9.62	9.4	98	9.62	9.1	95	3	66-127/25
	MNX	0.19	U	9.62	9.0	94	9.62	9.0	94	0	71-137/20
	TNX	0.19	U	9.62	9.1	95	9.62	9.0	94	1	60-126/18
618-87-1	3,5-Dinitroaniline	0.29		9.62	9.6	97	9.62	9.5	96	1	77-115/19
99-65-0	1,3-Dinitrobenzene	0.19	U	9.62	9.7	101	9.62	9.7	101	0	79-122/17
606-20-2	2,6-Dinitrotoluene	0.19	U	9.62	13.9	145*	9.62	14.2	148*	2	81-131/17
121-14-2	2,4-Dinitrotoluene	0.19	U	9.62	8.7	90	9.62	8.7	90	0	80-123/19
35572-78-2	2-amino-4,6-Dinitrotoluene	3.8		9.62	12.8	94	9.62	12.8	94	0	81-120/19
19406-51-0	4-amino-2,6-Dinitrotoluene	2.0		9.62	10.3	86	9.62	10.2	85	1	79-119/20
98-95-3	Nitrobenzene	0.19	U	9.62	9.3	97	9.62	9.2	96	1	78-130/19
88-72-2	o-Nitrotoluene	0.19	U	9.62	10.4	108	9.62	10.8	112	4	76-131/20
99-08-1	m-Nitrotoluene	0.19	U	9.62	10.3	107	9.62	11.2	116	8	78-122/18
99-99-0	p-Nitrotoluene	0.19	U	9.62	11.0	114	9.62	11.7	122	6	79-124/18
479-45-8	Tetryl	0.19	U	9.62	6.4	67	9.62	6.5	68	2	65-124/20
99-35-4	1,3,5-Trinitrobenzene	9.4		9.62	18.9	99	9.62	19.0	100	1	79-128/16
118-96-7	2,4,6-Trinitrotoluene	7.8		9.62	15.4	79	9.62	15.5	80	1	72-112/16
55-63-0	Nitroglycerine	1.9	U	9.62	8.7	90	9.62	8.7	90	0	69-123/18
78-11-5	PETN	1.9	U	9.62	11.6	121	9.62	11.4	119	2	73-145/18

CAS No.	Surrogate Recoveries	MS	MSD	FA80202-4	FA80202-4	Limits
610-39-9	3,4-Dinitrotoluene	98%	99%	103%	102%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.

* = Outside of Control Limits.

GC Identification Summary (Explosives)

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA80202-1	**Method:**	SW846 8330B
Client ID:	54MW13		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP388846.D	1	OP82734	GPP2355	10/30/20 22:47	GCPP
Confirmation	GG619917.D	1	OP82734	GGG2889	11/02/20 15:13	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	PP388846.D	1	1	4.6		ug/l	0.0
HMX	GG619917.D	1	1	4.6		ug/l	
RDX	PP388846.D	1	1	.58		ug/l	34.3
RDX	GG619917.D	1	1	.41		ug/l	
3,5-Dinitroaniline [a]	PP388846.D	1	1	.46		ug/l	110.7
3,5-Dinitroaniline	GG619917.D	1	1	1.6		ug/l	
2-amino-4,6-Dinitrotoluene	PP388846.D	1	1	1.4		ug/l	6.9
2-amino-4,6-Dinitrotoluene	GG619917.D	1	1	1.5		ug/l	
4-amino-2,6-Dinitrotoluene	PP388846.D	1	1	.81		ug/l	38.8
4-amino-2,6-Dinitrotoluene	GG619917.D	1	1	1.2		ug/l	
1,3,5-Trinitrobenzene	PP388846.D	1	1	11.5		ug/l	3.4
1,3,5-Trinitrobenzene	GG619917.D	1	1	11.9		ug/l	
2,4,6-Trinitrotoluene	PP388846.D	1	1	12.7		ug/l	3.9
2,4,6-Trinitrotoluene	GG619917.D	1	1	13.2		ug/l	

(a) Primary and confirmation results differ by more than 40%.

GC Identification Summary (Explosives)

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA80202-2	**Method:**	SW846 8330B
Client ID:	54TW13		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP388847.D	1	OP82734	GPP2355	10/30/20 23:18	GCPP
Confirmation	GG619918.D	1	OP82734	GGG2889	11/02/20 15:43	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	PP388847.D	1	1	5		ug/l	17.4
HMX	GG619918.D	1	1	4.2		ug/l	
RDX	PP388847.D	1	1	.53		ug/l	21.8
RDX	GG619918.D	1	1	.66		ug/l	
TNX [a]	PP388847.D	1	1	.17	J	ug/l	5.7
TNX [b]	GG619918.D	1	1	.18	J	ug/l	
3,5-Dinitroaniline [c]	PP388847.D	1	1	.54		ug/l	94.1
3,5-Dinitroaniline	GG619918.D	1	1	1.5		ug/l	
2-amino-4,6-Dinitrotoluene	PP388847.D	1	1	1.3		ug/l	0.0
2-amino-4,6-Dinitrotoluene	GG619918.D	1	1	1.3		ug/l	
4-amino-2,6-Dinitrotoluene [c]	PP388847.D	1	1	.84		ug/l	50.0
4-amino-2,6-Dinitrotoluene	GG619918.D	1	1	1.4		ug/l	
1,3,5-Trinitrobenzene	PP388847.D	1	1	9.9		ug/l	4.0
1,3,5-Trinitrobenzene	GG619918.D	1	1	10.3		ug/l	
2,4,6-Trinitrotoluene	PP388847.D	1	1	11.7		ug/l	2.5
2,4,6-Trinitrotoluene	GG619918.D	1	1	12		ug/l	

(a) Associated BS recovery outside control limits. Associated confirmation CCV outside control limits.
(b) Associated CCV outside of DoD control limits high.
(c) Primary and confirmation results differ by more than 40%.

GC Identification Summary (Explosives)

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA80202-3	**Method:**	SW846 8330B
Client ID:	54MW10		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP388848.D	1	OP82734	GPP2355	10/30/20 23:49	GCPP
Confirmation	GG619919.D	1	OP82734	GGG2889	11/02/20 16:12	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	PP388848.D	1	1	5.4		ug/l	37.4
HMX	GG619919.D	1	1	3.7		ug/l	
RDX	PP388848.D	1	1	1.8		ug/l	5.4
RDX	GG619919.D	1	1	1.9		ug/l	
TNX [a]	PP388848.D	1	1	.39		ug/l	100.0
TNX [b]	GG619919.D	1	1	.13	J	ug/l	
3,5-Dinitroaniline [c]	PP388848.D	1	1	.36		ug/l	51.5
3,5-Dinitroaniline	GG619919.D	1	1	.61		ug/l	
2-amino-4,6-Dinitrotoluene	PP388848.D	1	1	1.5		ug/l	0.0
2-amino-4,6-Dinitrotoluene	GG619919.D	1	1	1.5		ug/l	
4-amino-2,6-Dinitrotoluene [c]	PP388848.D	1	1	1.2		ug/l	45.2
4-amino-2,6-Dinitrotoluene	GG619919.D	1	1	1.9		ug/l	
1,3,5-Trinitrobenzene	PP388848.D	1	1	4.9		ug/l	4.0
1,3,5-Trinitrobenzene	GG619919.D	1	1	5.1		ug/l	
2,4,6-Trinitrotoluene	PP388848.D	1	1	11.4		ug/l	3.4
2,4,6-Trinitrotoluene	GG619919.D	1	1	11.8		ug/l	

(a) Associated BS recovery outside control limits. Associated confirmation CCV outside control limits.
(b) Associated CCV outside of DoD control limits high.
(c) Primary and confirmation results differ by more than 40%.

GC Identification Summary (Explosives)

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA80202-4	**Method:**	SW846 8330B
Client ID:	54MW12		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP388849.D	1	OP82734	GPP2355	10/31/20 00:20	GCPP
Confirmation	GG619920.D	1	OP82734	GGG2889	11/02/20 16:41	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	PP388849.D	1	1	19.1		ug/l	8.2
HMX	GG619920.D	1	1	17.6		ug/l	
3,5-Dinitroaniline [a]	PP388849.D	1	1	.29		ug/l	116.5
3,5-Dinitroaniline	GG619920.D	1	1	1.1		ug/l	
2-amino-4,6-Dinitrotoluene	PP388849.D	1	1	3.8		ug/l	5.4
2-amino-4,6-Dinitrotoluene	GG619920.D	1	1	3.6		ug/l	
4-amino-2,6-Dinitrotoluene	PP388849.D	1	1	2		ug/l	29.8
4-amino-2,6-Dinitrotoluene	GG619920.D	1	1	2.7		ug/l	
1,3,5-Trinitrobenzene	PP388849.D	1	1	9.4		ug/l	3.1
1,3,5-Trinitrobenzene	GG619920.D	1	1	9.7		ug/l	
2,4,6-Trinitrotoluene	PP388849.D	1	1	7.8		ug/l	5.0
2,4,6-Trinitrotoluene	GG619920.D	1	1	8.2		ug/l	

(a) Primary and confirmation results differ by more than 40%.

Surrogate Recovery Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Method: SW846 8330B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
FA80202-1	GG619917.D	100
FA80202-1	PP388846.D	98
FA80202-2	GG619918.D	100
FA80202-2	PP388847.D	98
FA80202-3	GG619919.D	97
FA80202-3	PP388848.D	98
FA80202-4	GG619920.D	102
FA80202-4	PP388849.D	103
FA80202-5	GG619921.D	100
FA80202-5	PP388852.D	99
OP82734-BS	PP388845.D	108
OP82734-MB	PP388844.D	97
OP82734-MB	GG619939.D	98
OP82734-MS	PP388853.D	98
OP82734-MSD	PP388854.D	99

Surrogate Compounds	Recovery Limits
S1 = 3,4-Dinitrotoluene	70-136%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GGG2889-CC2870	**Injection Date:**	11/02/20
Lab File ID:	GG619914.D	**Injection Time:**	13:45
Instrument ID:	GCGG	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	13.81

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
FA80222-1	GG619915.D	11/02/20	14:14	13.81
ZZZZZZ	GG619916.D	11/02/20	14:44	13.84
FA80202-1	GG619917.D	11/02/20	15:13	13.84
FA80202-2	GG619918.D	11/02/20	15:43	13.82
FA80202-3	GG619919.D	11/02/20	16:12	13.85
FA80202-4	GG619920.D	11/02/20	16:41	13.85
FA80202-5	GG619921.D	11/02/20	17:11	13.89
ZZZZZZ	GG619924.D	11/02/20	18:39	13.90

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GGG2890-CC2870	**Injection Date:**	11/03/20
Lab File ID:	GG619937.D	**Injection Time:**	12:31
Instrument ID:	GCGG	**Method:**	SW846 8330B

	S1 [a] RT	S1 [b] RT
Check Std	13.80	13.80

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP82713-MB	GG619938.D	11/03/20	13:01		13.81
OP82734-MB	GG619939.D	11/03/20	13:30		13.80
OP82735-MB	GG619940.D	11/03/20	13:59		13.82
GGG2890-ECC2870	GG619941.D	11/03/20	14:29	13.83	13.84

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GPP2355-CC2336	**Injection Date:**	10/30/20
Lab File ID:	PP388839.D	**Injection Time:**	19:10
Instrument ID:	GCPP	**Method:**	SW846 8330B

	S1 [a] RT	S1 [b] RT
Check Std	11.12	11.12

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	PP388840.D	10/30/20	19:41		11.49
ZZZZZZ	PP388841.D	10/30/20	20:12	11.48	11.48
OP82735-MS	PP388842.D	10/30/20	20:43		11.47
OP82735-MSD	PP388843.D	10/30/20	21:14		11.47
OP82734-MB	PP388844.D	10/30/20	21:45		11.49
OP82734-BS	PP388845.D	10/30/20	22:16		11.46
FA80202-1	PP388846.D	10/30/20	22:47		11.47
FA80202-2	PP388847.D	10/30/20	23:18		11.48
FA80202-3	PP388848.D	10/30/20	23:49		11.47
FA80202-4	PP388849.D	10/31/20	00:20		11.47

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GPP2355-CC2336	**Injection Date:**	10/31/20
Lab File ID:	PP388851.D	**Injection Time:**	01:22
Instrument ID:	GCPP	**Method:**	SW846 8330B

	S1 [a] RT	S1 [b] RT
Check Std	11.46	11.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
FA80202-5	PP388852.D	10/31/20	01:53		11.47
OP82734-MS	PP388853.D	10/31/20	02:24		11.45
OP82734-MSD	PP388854.D	10/31/20	02:55		11.44
GPP2355-ECC2336	PP388856.D	10/31/20	03:57	11.47	11.47

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2870-ICC2870
Lab FileID: GG619505.D

Response Factor Report G1315B

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 16:42:48 2020
Response via : Initial Calibration

Calibration Files
20 =GG619500.D 50 =GG619501.D 100 =GG619502.D 200 =GG619503.D
500 =GG619504.D 1000=GG619505.D 2500=GG619506.D 5000=GG619507.D

Compound	20	50	100	200	500	1000	2500	5000	Avg		%RSD
1) TNX	6.254	6.546	5.603	6.407	5.943	6.127	5.861	5.735	6.060	E3	5.46
2) HMX	3.366	3.956	3.596	3.836	3.609	3.547	3.363	3.272	3.568	E3	6.66
3) DNX	3.186	3.148	2.617	2.716	2.452	2.579	2.348	2.273	2.665	E3	12.81
4) MNX	4.574	4.516	4.594	4.676	4.558	4.757	4.587	4.519	4.598	E3	1.77
5) 1,3,5-Trinit	0.955	1.023	0.979	0.982	0.958	0.988	0.955	0.936	0.972	E4	2.77
6) RDX	4.034	4.567	4.495	4.511	4.496	4.649	4.445	4.373	4.446	E3	4.17
7) 1,3-Dinitrob	1.116	1.285	1.263	1.320	1.302	1.352	1.293	1.271	1.275	E4	5.52
8) Nitrobenzene	9.723	8.405	8.667	8.725	8.674	8.867	8.464	8.314	8.730	E3	5.05
9) 2,4,6-Trinit	7.967	8.809	8.862	9.497	9.241	9.554	9.127	8.977	9.004	E3	5.56
10) Nitroglyceri									0.000		-1.00
11) Tetryl	5.453	6.721	6.003	7.150	7.204	7.414	7.030	7.024	6.750	E3	10.02
12) 3,4-Dinitrot	4.050	5.850	5.694	5.555	5.654	5.807	5.590	5.427	5.453	E3	10.69
13) 2,6-Dinitrot	5.165	6.425	5.232	6.457	6.287	6.480	6.245	6.165	6.057	E3	8.93
14) 2,4-Dinitrot	1.165	1.187	1.060	1.203	1.193	1.218	1.178	1.161	1.171	E4	4.15
15) o-Nitrotolue	4.229	5.306	4.809	5.533	5.536	5.628	5.434	5.328	5.225	E3	9.10
16) 3,5-Dinitroa	1.084	1.035	0.916	1.028	1.006	1.037	0.998	0.981	1.011	E4	4.88
17) p-Nitrotolue	4.985	5.614	5.353	5.609	5.590	5.717	5.518	5.427	5.477	E3	4.18
18) 4-Amino-2,6-	4.985	5.614	5.503	5.609	5.590	5.717	5.518	5.427	5.495	E3	4.07
19) m-Nitrotolue	4.592	5.515	6.499	5.891	6.104	6.169	5.959	5.848	5.822	E3	9.82
20) 2-Amino-4,6-	9.015	9.159	9.005	8.927	8.923	9.139	8.833	8.666	8.958	E3	1.80
21) PETN									0.000		-1.00

Signal #2

1) TNX	6.347	6.434	5.853	6.407	5.984	6.127	5.861	5.735	6.094	E3	4.52
2) HMX	3.279	4.058	3.609	3.836	3.609	3.547	3.363	3.272	3.572	E3	7.70
3) DNX	3.114	3.111	2.676	2.717	2.457	2.579	2.348	2.273	2.659	E3	11.96
4) MNX	4.574	4.516	4.594	4.676	4.558	4.757	4.587	4.519	4.598	E3	1.77
5) 1,3,5-Trinit	0.924	1.028	0.979	0.989	0.958	0.984	0.955	0.936	0.969	E4	3.43
6) RDX	3.984	4.567	4.495	4.704	4.496	4.546	4.445	4.375	4.452	E3	4.76
7) 1,3-Dinitrob	0.727	0.889	0.927	0.995	0.964	1.081	1.000	0.973	0.945	E4	11.05
8) Nitrobenzene	7.955	7.446	8.230	7.835	7.907	9.073	8.260	7.893	8.075	E3	5.89
9) 2,4,6-Trinit	0.853	1.259	1.104	1.155	1.170	1.331	1.232	1.194	1.162	E4	12.29
10) Nitroglyceri		3.358	2.810	2.415	2.661	3.878	3.375	3.215	3.102	E3	16.17
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9983											
Response Ratio = 0.00000 + 3570.94912 *A + -0.07129 *A^2											
11) Tetryl	1.404	0.852	0.963	1.104	1.138	1.339	1.259	1.235	1.162	E4	16.08
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997											
Response Ratio = 0.00000 + 12874.40241 *A + -0.10536 *A^2											
12) 3,4-Dinitrot	0.927	0.926	1.043	1.052	1.019	1.150	1.116	1.075	1.039	E4	7.75
13) 2,6-Dinitrot	1.006	0.922	0.738	0.792	0.789	0.932	0.903	0.892	0.872	E4	10.32
14) 2,4-Dinitrot	7.464	6.111	7.747	7.716	7.495	8.786	8.502	8.393	7.777	E3	10.74
15) o-Nitrotolue	6.308	9.265	6.770	8.394	7.868	8.271	8.012	7.938	7.853	E3	11.84
16) 3,5-Dinitroa	1.453	1.620	1.472	1.651	1.678	1.695	1.653	1.630	1.607	E4	5.73
17) p-Nitrotolue	1.009	1.153	0.942	1.042	1.000	1.030	1.008	0.994	1.022	E4	5.92

Initial Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2870-ICC2870
Lab FileID: GG619505.D

18) 4-Amino-2,6-	1.009	1.153	0.982	1.042	1.000	1.030	1.008	0.994	1.027	E4	5.28
19) m-Nitrotolue	0.972	0.736	1.008	1.139	1.055	1.036	1.008	0.995	0.994	E4	11.65
20) 2-Amino-4,6-	1.349	1.266	1.244	1.279	1.257	1.330	1.263	1.250	1.280	E4	3.03
21) PETN			2.971	2.565	2.863	3.141	3.067	3.243	2.975	E3	8.07

(#) = Out of Range ### Number of calibration levels exceeded format ###

8330RPB.M_090920.M Wed Sep 09 17:13:15 2020

Initial Calibration Verification

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2870-ICV2870
Lab FileID: GG619508.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1A.ch
Acq On : 09-Sep-2020, 16:45:57 Operator: williamh
Sample : icv2870-1000 Inst : G1315B
Misc : op81814,GGG2869,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 16:42:48 2020
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	1000.000	1196.865	-19.7#	118	0.00	4.56- 5.56
2		HMX	1000.000	1049.216	-4.9	106	0.00	4.91- 5.91
3		DNX	1000.000	951.963	4.8	98	0.00	5.09- 6.09
4		MNX	1000.000	1025.228	-2.5	99	0.00	6.01- 7.01
5		1,3,5-Trinitrobenzene	1000.000	1018.280	-1.8	100	0.00	6.98- 7.98
6		RDX	1000.000	1067.002	-6.7	102	0.00	7.31- 8.31
7		1,3-Dinitrobenzene	1000.000	1060.868	-6.1	100	0.00	9.39-10.39
8		Nitrobenzene	1000.000	1025.875	-2.6	101	0.00	10.39-11.39
9		2,4,6-Trinitrotoluene	1000.000	1110.852	-11.1	105	0.00	11.12-12.12
10		Nitroglycerin	----------	NA	----------			
11		Tetryl	1000.000	1037.958	-3.8	94	0.00	12.40-13.40
12	S	3,4-Dinitrotoluene	----------	NA	----------			
13		2,6-Dinitrotoluene	1000.000	1008.064	-0.8	94	0.00	14.03-15.03
14		2,4-Dinitrotoluene	1000.000	1060.522	-6.1	102	0.00	14.70-15.70
15		o-Nitrotoluene	1000.000	1125.738	-12.6	105	0.00	16.30-17.30
16		3,5-Dinitroaniline	1000.000	1012.046	-1.2	99	0.00	15.48-16.48
17		p-Nitrotoluene	2000.000	2124.233	-6.2	102	0.01	17.29-18.29
18		4-Amino-2,6-Dinitrotol	2000.000	2117.029	-5.9	102	0.01	17.29-18.29
19		m-Nitrotoluene	1000.000	1097.967	-9.8	104	0.00	18.64-19.64
20		2-Amino-4,6-Dinitrotol	1000.000	1005.873	-0.6	99	0.00	19.22-20.22
21		PETN	5000.000	0.000	100.0#	0	-0.02	19.25-20.25

***** Signal #2 *****

1		TNX	1000.000	1182.692	-18.3#	118	0.00	4.56- 5.56
2		HMX	1000.000	1048.155	-4.8	106	0.00	4.91- 5.91
3		DNX	1000.000	953.954	4.6	98	0.00	5.09- 6.09
4		MNX	1000.000	1025.228	-2.5	99	0.00	6.01- 7.01
5		1,3,5-Trinitrobenzene	1000.000	1020.375	-2.0	100	0.00	6.98- 7.98
6		RDX	1000.000	1060.207	-6.0	104	0.00	7.31- 8.31
7		1,3-Dinitrobenzene	1000.000	1146.811	-14.7	100	0.00	9.39-10.39
8		Nitrobenzene	1000.000	1007.134	-0.7	90	0.00	10.39-11.39
9		2,4,6-Trinitrotoluene	1000.000	1089.624	-9.0	95	0.00	11.12-12.12

		----------	Amount	Calc.	%Drift			----------
10		Nitroglycerin	1000.000	958.346	4.2	87	-0.01	11.79-12.79
11		Tetryl	1000.000	959.216	4.1	92	0.00	12.40-13.40

		----------	Amount	Calc.	%Drift			----------
12	S	3,4-Dinitrotoluene	----------	NA	----------			
13		2,6-Dinitrotoluene	1000.000	1053.474	-5.3	98	0.00	14.03-15.03

Initial Calibration Verification

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2870-ICV2870
Lab FileID: GG619508.D

14	2,4-Dinitrotoluene	1000.000	1145.606	-14.6	101	0.00	14.69-15.69
15	o-Nitrotoluene	1000.000	1089.893	-9.0	103	0.00	16.30-17.30
16	3,5-Dinitroaniline	1000.000	1052.031	-5.2	100	0.00	15.47-16.47
17	p-Nitrotoluene	2000.000	2058.391	-2.9	102	0.01	17.28-18.28
18	4-Amino-2,6-Dinitrotol	2000.000	2048.384	-2.4	102	0.01	17.28-18.28
19	m-Nitrotoluene	1000.000	1088.005	-8.8	104	0.00	18.64-19.64
20	2-Amino-4,6-Dinitrotol	1000.000	1002.663	-0.3	96	0.00	19.22-20.22
21	PETN	1000.000	1026.135	-2.6	97	-0.01	20.96-21.96

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG619505.D 8330RPB.M_090920.M Wed Sep 09 17:13:40 2020

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2889-CC2870
Lab FileID: GG619914.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619914.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619914.D\dad1A.ch
Acq On : 02-Nov-2020, 13:45:24 Operator: jamesb
Sample : cc2870-1000 Inst : G1315B
Misc : op82735,GGG2889,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1370.525	-37.1#	136	0.00	4.55- 5.55
2	HMX	1000.000	940.122	6.0	95	0.00	4.90- 5.90
3	DNX	1000.000	2555.552	-155.6#	264	0.00	5.08- 6.08
4	MNX	1000.000	1450.327	-45.0#	140	0.01	5.93- 6.93
5	1,3,5-Trinitrobenzene	1000.000	969.574	3.0	95	0.00	6.82- 7.82
6	RDX	1000.000	975.218	2.5	93	0.01	7.16- 8.16
7	1,3-Dinitrobenzene	1000.000	1004.024	-0.4	95	0.00	9.20-10.20
8	Nitrobenzene	1000.000	936.733	6.3	92	0.00	10.18-11.18
9	2,4,6-Trinitrotoluene	1000.000	996.936	0.3	94	-0.01	10.80-11.80
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	1024.970	-2.5	93	-0.02	11.89-12.89
12 S	3,4-Dinitrotoluene	1000.000	959.386	4.1	90	-0.01	13.33-14.33
13	2,6-Dinitrotoluene	1000.000	1011.427	-1.1	95	-0.02	13.68-14.68
14	2,4-Dinitrotoluene	1000.000	996.075	0.4	96	-0.03	14.33-15.33
15	o-Nitrotoluene	1000.000	999.228	0.1	93	-0.04	15.92-16.92
16	3,5-Dinitroaniline	1000.000	969.231	3.1	94	-0.02	15.01-16.01
17	p-Nitrotoluene	2000.000	1965.776	1.7	94	-0.04	16.83-17.83
18	4-Amino-2,6-Dinitrotol	2000.000	1959.109	2.0	94	-0.05	16.83-17.83
19	m-Nitrotoluene	1000.000	998.653	0.1	94	-0.05	18.21-19.21
20	2-Amino-4,6-Dinitrotol	1000.000	956.299	4.4	94	-0.05	18.69-19.69
21	PETN	----------	----------	NA	----------		

***** Signal #2 *****

1	TNX	1000.000	1362.870	-36.3#	136	0.00	4.55- 5.55
2	HMX	1000.000	939.171	6.1	95	0.00	4.90- 5.90
3	DNX	1000.000	2560.896	-156.1#	264	0.00	5.08- 6.08
4	MNX	1000.000	1450.327	-45.0#	140	0.01	5.93- 6.93
5	1,3,5-Trinitrobenzene	1000.000	972.376	2.8	96	0.00	6.82- 7.82
6	RDX	1000.000	974.073	2.6	95	0.01	7.16- 8.16
7	1,3-Dinitrobenzene	1000.000	1092.692	-9.3	95	0.00	9.20-10.20
8	Nitrobenzene	1000.000	1095.555	-9.6	97	0.00	10.18-11.18
9	2,4,6-Trinitrotoluene	1000.000	1105.672	-10.6	97	-0.01	10.80-11.80

		---------- Amount	Calc.	%Drift	----------		
10	Nitroglycerin	1000.000	1062.136	-6.2	96	-0.02	11.43-12.43
11	Tetryl	1000.000	1020.755	-2.1	97	-0.02	11.89-12.89

		---------- Amount	Calc.	%Drift	----------		
12 S	3,4-Dinitrotoluene	1000.000	1043.009	-4.3	94	-0.01	13.32-14.32
13	2,6-Dinitrotoluene	1000.000	1065.509	-6.6	100	-0.02	13.68-14.68

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2889-CC2870
Lab FileID: GG619914.D

14	2,4-Dinitrotoluene	1000.000	1125.598	-12.6	100	-0.03	14.33-15.33
15	o-Nitrotoluene	1000.000	1012.701	-1.3	96	-0.04	15.92-16.92
16	3,5-Dinitroaniline	1000.000	1034.147	-3.4	98	-0.02	15.01-16.01
17	p-Nitrotoluene	2000.000	1950.346	2.5	97	-0.04	16.81-17.81
18	4-Amino-2,6-Dinitrotol	2000.000	1940.865	3.0	97	-0.04	16.80-17.80
19	m-Nitrotoluene	1000.000	1024.234	-2.4	98	-0.05	18.21-19.21
20	2-Amino-4,6-Dinitrotol	1000.000	960.700	3.9	92	-0.05	18.69-19.69
21	PETN	1000.000	1017.773	-1.8	96	-0.08	20.13-21.13

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG619505.D 8330RPB.M_090920.M Tue Nov 03 11:16:12 2020

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2889-CC2870
Lab FileID: GG619925.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619925.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619925.D\dad1A.ch
Acq On : 02-Nov-2020, 19:09:05 Operator: jamesb
Sample : cc2870-1000 Inst : G1315B
Misc : op82734,GGG2889,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1371.667	-37.2#	136	0.00	4.55- 5.55
2	HMX	1000.000	937.366	6.3	94	0.01	4.90- 5.90
3	DNX	1000.000	2567.400	-156.7#	265	0.01	5.08- 6.08
4	MNX	1000.000	1451.573	-45.2#	140	0.04	5.93- 6.93
5	1,3,5-Trinitrobenzene	1000.000	965.670	3.4	95	0.03	6.82- 7.82
6	RDX	1000.000	980.767	1.9	94	0.06	7.16- 8.16
7	1,3-Dinitrobenzene	1000.000	1000.356	-0.0	94	0.04	9.20-10.20
8	Nitrobenzene	1000.000	925.641	7.4	91	0.04	10.18-11.18
9	2,4,6-Trinitrotoluene	1000.000	990.980	0.9	93	0.04	10.80-11.80
10	Nitroglycerin	----------		NA	----------		
11	Tetryl	1000.000	1025.744	-2.6	93	0.06	11.89-12.89
12 S	3,4-Dinitrotoluene	1000.000	952.726	4.7	89	0.07	13.33-14.33
13	2,6-Dinitrotoluene	1000.000	1013.364	-1.3	95	0.06	13.68-14.68
14	2,4-Dinitrotoluene	1000.000	994.318	0.6	96	0.06	14.33-15.33
15	o-Nitrotoluene	1000.000	987.049	1.3	92	0.05	15.92-16.92
16	3,5-Dinitroaniline	1000.000	968.075	3.2	94	0.09	15.01-16.01
17	p-Nitrotoluene	2000.000	1958.813	2.1	94	0.09	16.83-17.83
18	4-Amino-2,6-Dinitrotol	2000.000	1952.169	2.4	94	0.08	16.83-17.83
19	m-Nitrotoluene	1000.000	983.277	1.7	93	0.05	18.21-19.21
20	2-Amino-4,6-Dinitrotol	1000.000	962.822	3.7	94	0.11	18.69-19.69
21	PETN	----------		NA	----------		

***** Signal #2 *****

1	TNX	1000.000	1364.005	-36.4#	136	0.00	4.55- 5.55
2	HMX	1000.000	936.418	6.4	94	0.01	4.90- 5.90
3	DNX	1000.000	2572.770	-157.3#	265	0.01	5.08- 6.08
4	MNX	1000.000	1451.573	-45.2#	140	0.04	5.93- 6.93
5	1,3,5-Trinitrobenzene	1000.000	968.461	3.2	95	0.03	6.82- 7.82
6	RDX	1000.000	979.615	2.0	96	0.06	7.16- 8.16
7	1,3-Dinitrobenzene	1000.000	1085.901	-8.6	95	0.04	9.20-10.20
8	Nitrobenzene	1000.000	1049.301	-4.9	93	0.04	10.18-11.18
9	2,4,6-Trinitrotoluene	1000.000	1092.876	-9.3	95	0.04	10.80-11.80

	----------	Amount	Calc.	%Drift	----------		
10	Nitroglycerin	1000.000	1071.958	-7.2	97	0.04	11.43-12.43
11	Tetryl	1000.000	1012.329	-1.2	97	0.06	11.89-12.89

	----------	Amount	Calc.	%Drift	----------		
12 S	3,4-Dinitrotoluene	1000.000	1056.492	-5.6	95	0.07	13.32-14.32
13	2,6-Dinitrotoluene	1000.000	1046.550	-4.7	98	0.06	13.68-14.68

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2889-CC2870
Lab FileID: GG619925.D

14	2,4-Dinitrotoluene	1000.000	1115.301	-11.5	99	0.06	14.33-15.33
15	o-Nitrotoluene	1000.000	985.001	1.5	94	0.05	15.92-16.92
16	3,5-Dinitroaniline	1000.000	1018.950	-1.9	97	0.09	15.01-16.01
17	p-Nitrotoluene	2000.000	1915.076	4.2	95	0.10	16.81-17.81
18	4-Amino-2,6-Dinitrotol	2000.000	1905.766	4.7	95	0.10	16.80-17.80
19	m-Nitrotoluene	1000.000	986.481	1.4	95	0.05	18.21-19.21
20	2-Amino-4,6-Dinitrotol	1000.000	961.903	3.8	93	0.11	18.69-19.69
21	PETN	1000.000	987.987	1.2	94	0.04	20.13-21.13

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG619505.D 8330RPB.M_090920.M Tue Nov 03 11:16:13 2020

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2890-CC2870
Lab FileID: GG619937.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG2890\GG619937.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2890\GG619937.D\dad1A.ch
Acq On : 03-Nov-2020, 12:31:36 Operator: jamesb
Sample : cc2870-1000 Inst : G1315B
Misc : op82713,GGG2890,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1373.292	-37.3#	136	0.00	4.55- 5.55
2	HMX	1000.000	938.393	6.2	94	0.00	4.90- 5.90
3	DNX	1000.000	2566.292	-156.6#	265	0.00	5.08- 6.08
4	MNX	1000.000	1450.239	-45.0#	140	0.01	5.93- 6.93
5	1,3,5-Trinitrobenzene	1000.000	968.639	3.1	95	0.00	6.82- 7.82
6	RDX	1000.000	982.172	1.8	94	0.02	7.16- 8.16
7	1,3-Dinitrobenzene	1000.000	1001.387	-0.1	94	0.00	9.20-10.20
8	Nitrobenzene	1000.000	937.235	6.3	92	-0.02	10.18-11.18
9	2,4,6-Trinitrotoluene	1000.000	991.720	0.8	93	-0.02	10.80-11.80
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	1025.645	-2.6	93	-0.02	11.89-12.89
12 S	3,4-Dinitrotoluene	1000.000	949.449	5.1	89	-0.03	13.33-14.33
13	2,6-Dinitrotoluene	1000.000	1014.501	-1.5	95	-0.03	13.68-14.68
14	2,4-Dinitrotoluene	1000.000	994.416	0.6	96	-0.03	14.33-15.33
15	o-Nitrotoluene	1000.000	998.931	0.1	93	-0.05	15.92-16.92
16	3,5-Dinitroaniline	1000.000	968.403	3.2	94	0.00	15.01-16.01
17	p-Nitrotoluene	2000.000	1962.897	1.9	94	-0.03	16.83-17.83
18	4-Amino-2,6-Dinitrotol	2000.000	1956.239	2.2	94	-0.04	16.83-17.83
19	m-Nitrotoluene	1000.000	992.923	0.7	94	-0.07	18.21-19.21
20	2-Amino-4,6-Dinitrotol	1000.000	961.163	3.9	94	-0.03	18.69-19.69
21	PETN	----------	----------	NA	----------		

***** Signal #2 *****

1	TNX	1000.000	1365.621	-36.6#	136	0.00	4.55- 5.55
2	HMX	1000.000	937.443	6.3	94	0.00	4.90- 5.90
3	DNX	1000.000	2571.659	-157.2#	265	0.00	5.08- 6.08
4	MNX	1000.000	1450.239	-45.0#	140	0.01	5.93- 6.93
5	1,3,5-Trinitrobenzene	1000.000	971.438	2.9	96	0.00	6.82- 7.82
6	RDX	1000.000	981.018	1.9	96	0.02	7.16- 8.16
7	1,3-Dinitrobenzene	1000.000	1085.005	-8.5	95	0.00	9.20-10.20
8	Nitrobenzene	1000.000	1075.606	-7.6	96	-0.02	10.18-11.18
9	2,4,6-Trinitrotoluene	1000.000	1088.170	-8.8	95	-0.02	10.80-11.80
	----------	Amount	Calc.	%Drift	----------		
10	Nitroglycerin	1000.000	1067.544	-6.8	96	-0.02	11.43-12.43
11	Tetryl	1000.000	1053.980	-5.4	100	-0.02	11.89-12.89
	----------	Amount	Calc.	%Drift	----------		
12 S	3,4-Dinitrotoluene	1000.000	1042.879	-4.3	94	-0.03	13.32-14.32
13	2,6-Dinitrotoluene	1000.000	1058.027	-5.8	99	-0.03	13.68-14.68

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2890-CC2870
Lab FileID: GG619937.D

14	2,4-Dinitrotoluene	1000.000	1094.168	-9.4	97	-0.03	14.33-15.33
15	o-Nitrotoluene	1000.000	1008.402	-0.8	96	-0.05	15.92-16.92
16	3,5-Dinitroaniline	1000.000	1023.320	-2.3	97	0.00	15.01-16.01
17	p-Nitrotoluene	2000.000	1961.208	1.9	97	-0.03	16.81-17.81
18	4-Amino-2,6-Dinitrotol	2000.000	1951.674	2.4	97	-0.02	16.80-17.80
19	m-Nitrotoluene	1000.000	1001.604	-0.2	96	-0.07	18.21-19.21
20	2-Amino-4,6-Dinitrotol	1000.000	969.287	3.1	93	-0.03	18.69-19.69
21	PETN	1000.000	1085.733	-8.6	103	-0.09	20.13-21.13

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG619505.D 8330RPB.M_090920.M Tue Nov 03 14:11:00 2020

8.7.5

8

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2890-ECC2870
Lab FileID: GG619941.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG2890\GG619941.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2890\GG619941.D\dad1A.ch
Acq On : 03-Nov-2020, 14:29:14 Operator: jamesb
Sample : ecc2870-1000 Inst : G1315B
Misc : op82713,GGG2890,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1371.547	-37.2#	136	0.00	4.55- 5.55
2	HMX	1000.000	938.109	6.2	94	0.00	4.90- 5.90
3	DNX	1000.000	2573.154	-157.3#	266	0.00	5.08- 6.08
4	MNX	1000.000	1450.774	-45.1#	140	0.02	5.93- 6.93
5	1,3,5-Trinitrobenzene	1000.000	968.630	3.1	95	0.00	6.82- 7.82
6	RDX	1000.000	983.400	1.7	94	0.02	7.16- 8.16
7	1,3-Dinitrobenzene	1000.000	1002.099	-0.2	95	0.00	9.20-10.20
8	Nitrobenzene	1000.000	940.089	6.0	93	0.00	10.18-11.18
9	2,4,6-Trinitrotoluene	1000.000	996.983	0.3	94	0.00	10.80-11.80
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	1028.615	-2.9	94	0.00	11.89-12.89
12 S	3,4-Dinitrotoluene	1000.000	959.474	4.1	90	0.00	13.33-14.33
13	2,6-Dinitrotoluene	1000.000	1018.233	-1.8	95	0.00	13.68-14.68
14	2,4-Dinitrotoluene	1000.000	998.924	0.1	96	0.00	14.33-15.33
15	o-Nitrotoluene	1000.000	1010.630	-1.1	94	0.00	15.92-16.92
16	3,5-Dinitroaniline	1000.000	973.511	2.6	95	0.01	15.01-16.01
17	p-Nitrotoluene	2000.000	1978.547	1.1	95	0.01	16.83-17.83
18	4-Amino-2,6-Dinitrotol	2000.000	1971.837	1.4	95	0.00	16.83-17.83
19	m-Nitrotoluene	1000.000	1001.760	-0.2	95	0.00	18.21-19.21
20	2-Amino-4,6-Dinitrotol	1000.000	967.145	3.3	95	0.02	18.69-19.69
21	PETN	----------	----------	NA	----------		

***** Signal #2 *****

1	TNX	1000.000	1363.886	-36.4#	136	0.00	4.55- 5.55
2	HMX	1000.000	937.160	6.3	94	0.00	4.90- 5.90
3	DNX	1000.000	2578.535	-157.9#	266	0.00	5.08- 6.08
4	MNX	1000.000	1450.774	-45.1#	140	0.02	5.93- 6.93
5	1,3,5-Trinitrobenzene	1000.000	971.429	2.9	96	0.00	6.82- 7.82
6	RDX	1000.000	982.245	1.8	96	0.02	7.16- 8.16
7	1,3-Dinitrobenzene	1000.000	1086.367	-8.6	95	0.00	9.20-10.20
8	Nitrobenzene	1000.000	1037.089	-3.7	92	0.00	10.18-11.18
9	2,4,6-Trinitrotoluene	1000.000	1098.259	-9.8	96	0.00	10.80-11.80

	----------	Amount	Calc.	%Drift	----------		
10	Nitroglycerin	1000.000	1060.665	-6.1	96	0.00	11.43-12.43
11	Tetryl	1000.000	1019.141	-1.9	97	0.00	11.89-12.89

	----------	Amount	Calc.	%Drift	----------		
12 S	3,4-Dinitrotoluene	1000.000	1065.922	-6.6	96	0.00	13.32-14.32
13	2,6-Dinitrotoluene	1000.000	1055.947	-5.6	99	0.00	13.68-14.68

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2890-ECC2870
Lab FileID: GG619941.D

14	2,4-Dinitrotoluene	1000.000	1105.464	-10.5	98	0.00	14.33-15.33
15	o-Nitrotoluene	1000.000	994.428	0.6	94	0.00	15.92-16.92
16	3,5-Dinitroaniline	1000.000	1026.167	-2.6	97	0.01	15.01-16.01
17	p-Nitrotoluene	2000.000	1937.321	3.1	96	0.01	16.81-17.81
18	4-Amino-2,6-Dinitrotol	2000.000	1927.904	3.6	96	0.02	16.80-17.80
19	m-Nitrotoluene	1000.000	989.233	1.1	95	0.00	18.21-19.21
20	2-Amino-4,6-Dinitrotol	1000.000	964.124	3.6	93	0.02	18.69-19.69
21	PETN	1000.000	993.270	0.7	94	0.00	20.13-21.13

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG619505.D 8330RPB.M_090920.M Tue Nov 03 14:11:01 2020

8.7.6

8

Initial Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2336-ICC2336
Lab FileID: PP388312.D

Response Factor Report G1315B

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Sep 25 11:31:04 2020
Response via : Initial Calibration

Calibration Files
20 =PP388307.D 50 =PP388308.D 100 =PP388309.D 200 =PP388310.D
500 =PP388311.D 1000=PP388312.D 2500=PP388313.D 5000=PP388314.D

Compound	20	50	100	200	500	1000	2500	5000	Avg	%RSD
1) TNX	2.488	2.722	2.907	3.266	3.220	3.191	3.250	3.228	3.034 E3	9.72
2) HMX	1.545	1.461	1.393	1.531	1.530	1.481	1.484	1.464	1.486 E3	3.33
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 1501.50805 *A + -0.00754 *A^2										
3) DNX	2.506	2.454	2.471	2.541	2.508	2.478	2.507	2.500	2.496 E3	1.08
4) MNX	2.997	2.667	2.673	2.686	2.664	2.647	2.689	2.677	2.713 E3	4.27
5) RDX	2.089	1.839	1.709	1.815	1.739	1.728	1.747	1.740	1.801 E3	6.93
6) 1,3,5-Trinit	4.622	3.946	3.785	3.960	3.870	3.821	3.883	3.863	3.969 E3	6.81
7) 1,3-Dinitrob	4.800	4.868	4.866	4.966	4.957	4.899	4.983	4.954	4.912 E3	1.30
8) 3,5-Dinitroa	4.258	3.836	3.657	3.819	3.704	3.671	3.751	3.745	3.805 E3	5.10
9) Nitrobenzene	2.989	2.876	2.871	2.864	2.793	2.912	2.807	2.732	2.855 E3	2.75
10) Nitroglyceri									0.000	-1.00
11) Tetryl	3.428	2.660	2.704	2.732	2.767	2.722	2.762	2.765	2.817 E3	8.85
12) 2,4,6-Trinit	4.805	3.352	3.609	3.644	3.556	3.498	3.560	3.547	3.696 E3	12.35
---- Linear regr., Force(0,0) ---- Coefficient = 0.9940										
Response Ratio = 0.00000 + 3696.47866 *A										
13) 2-Amino-4,6-	4.219	2.798	3.242	3.316	3.193	3.146	3.197	3.183	3.287 E3	12.38
14) 4-Amino-2,6-	3.645	2.287	2.300	2.350	2.262	2.218	2.249	2.228	2.442 E3	19.97
15) 3,4-Dinitrot	1.978	1.793	2.035	2.111	2.065	2.019	2.074	2.076	2.019 E3	4.94
16) 2,4-Dinitrot	5.231	4.362	4.344	4.494	4.434	4.362	4.451	4.425	4.513 E3	6.53
17) 2,6-Dinitrot	2.844	2.310	2.573	2.600	2.555	2.500	2.551	2.543	2.560 E3	5.70
18) o-Nitrotolue	2.412	1.879	2.088	2.067	2.008	2.086	1.996	1.948	2.060 E3	7.73
19) p-Nitrotolue	3.520	3.161	3.270	3.208	3.187	3.214	3.176	3.127	3.233 E3	3.81
20) m-Nitrotolue	3.120	2.854	3.043	3.027	3.006	3.096	3.023	2.967	3.017 E3	2.71
21) PETN									0.000	-1.00

Signal #2

1) TNX	4.901	4.789	4.811	5.141	5.012	4.970	5.041	5.001	4.958 E3	2.39
2) HMX	3.483	4.891	4.351	4.308	4.415	4.235	4.186	4.125	4.249 E3	9.16
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 4271.21101 *A + -0.02958 *A^2										
3) DNX	3.140	3.530	3.585	4.138	4.008	4.063	4.023	3.974	3.808 E3	9.21
4) MNX	4.637	4.076	3.982	4.107	4.251	4.277	4.233	4.190	4.219 E3	4.65
5) RDX	3.045	2.822	2.787	2.877	2.889	2.854	2.845	2.825	2.868 E3	2.73
6) 1,3,5-Trinit	8.586	7.681	7.285	7.738	7.559	7.435	7.611	7.574	7.684 E3	5.09
7) 1,3-Dinitrob	3.532	3.402	3.366	3.410	3.460	3.486	3.501	3.456	3.452 E3	1.61
8) 3,5-Dinitroa	7.077	6.681	6.136	6.391	6.307	6.407	6.501	6.460	6.495 E3	4.34
9) Nitrobenzene	2.528	2.866	2.611	2.719	2.691	2.821	2.714	2.693	2.705 E3	3.96
10) Nitroglyceri	1.459	1.199	1.001	1.076	1.090	1.081	1.125	1.117	1.143 E3	12.15
11) Tetryl	4.564	4.398	4.261	4.290	4.408	4.434	4.527	4.545	4.428 E3	2.56
12) 2,4,6-Trinit	4.786	4.164	4.084	4.188	4.223	4.237	4.363	4.361	4.301 E3	5.06
13) 2-Amino-4,6-	5.406	4.503	4.455	4.559	4.694	4.736	4.879	4.891	4.766 E3	6.41
14) 4-Amino-2,6-	3.861	3.791	4.000	4.308	4.464	4.508	4.635	4.630	4.275 E3	8.05

Initial Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2336-ICC2336
Lab FileID: PP388312.D

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15) 3,4-Dinitrot 2.380 2.927 3.215 3.463 3.603 3.600 3.741 3.775 3.338 E3  14.36
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  1.0000
              Response Ratio = 0.00000 + 3648.94231 *A + 0.02575 *A^2

16) 2,4-Dinitrot 3.393 2.607 2.825 2.883 2.942 2.899 2.964 2.961 2.934 E3   7.45
17) 2,6-Dinitrot 3.430 2.795 3.317 3.279 3.353 3.289 3.353 3.353 3.271 E3   6.05
18) o-Nitrotolue 1.810 2.269 2.592 2.622 2.694 2.793 2.720 2.601 2.513 E3  12.89
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  1.0000
              Response Ratio = 0.00000 + 2823.57325 *A + -0.04439 *A^2

19) p-Nitrotolue 1.097 1.453 1.774 2.040 2.354 2.534 2.559 2.611 2.053 E3  27.57
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 2480.79010 *A + 0.02635 *A^2

20) m-Nitrotolue 1.897 3.111 3.044 3.360 3.480 3.717 3.542 3.555 3.213 E3  18.01
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 3579.00530 *A + -0.00514 *A^2

21) PETN         1.483 0.812 0.985 1.215 1.220 1.266 1.296 1.312 1.199 E3  17.37
------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          GPP2336_092420PRI.M        Fri Sep 25 11:33:50 2020
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8.7.7

8

Initial Calibration Verification

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA
Sample: GPP2336-ICV2336
Lab FileID: PP388315.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1A.ch
Acq On : 24-Sep-2020, 16:49:55 Operator: williamh
Sample : icv2336-1000 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Sep 25 11:31:04 2020
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1070.711	-7.1	102	0.00	1.05- 1.65
	Amount Calc. %Drift						
2	HMX	1000.000	1012.231	-1.2	102	0.00	1.19- 1.79
	Amount Calc. %Drift						
3	DNX	1000.000	1015.157	-1.5	102	0.00	1.44- 2.04
4	MNX	1000.000	1008.129	-0.8	103	0.00	2.04- 2.64
5	RDX	1000.000	980.889	1.9	102	0.00	2.58- 3.38
6	1,3,5-Trinitrobenzene	1000.000	936.823	6.3	97	0.00	4.35- 5.15
7	1,3-Dinitrobenzene	1000.000	994.330	0.6	100	0.00	5.54- 6.34
8	3,5-Dinitroaniline	1000.000	1142.379	-14.2	118	0.00	5.97- 6.77
9	Nitrobenzene	1000.000	1027.759	-2.8	101	0.00	7.10- 7.90
10	Nitroglycerin	----------NA----------					
11	Tetryl	1000.000	973.691	2.6	101	0.01	9.22-10.02
	Amount Calc. %Drift						
12	2,4,6-Trinitrotoluene	1000.000	1002.782	-0.3	106	0.01	9.60-10.40
	Amount Calc. %Drift						
13	2-Amino-4,6-Dinitrotol	1000.000	953.263	4.7	100	0.01	10.06-10.86
14	4-Amino-2,6-Dinitrotol	1000.000	933.069	6.7	103	0.01	10.56-11.36
15 S	3,4-Dinitrotoluene	----------NA----------					
16	2,4-Dinitrotoluene	1000.000	978.410	2.2	101	0.00	11.57-12.37
17	2,6-Dinitrotoluene	1000.000	1003.337	-0.3	103	0.00	11.94-12.84
18	o-Nitrotoluene	1000.000	1037.074	-3.7	102	0.00	14.94-15.94
19	p-Nitrotoluene	1000.000	1005.902	-0.6	101	0.00	15.53-16.53
20	m-Nitrotoluene	1000.000	1030.240	-3.0	100	0.00	16.34-17.34
21	PETN	----------NA----------					
*****	Signal #2 *****						
1	TNX	1000.000	1019.973	-2.0	102	0.00	1.05- 1.65
	Amount Calc. %Drift						
2	HMX	1000.000	1017.022	-1.7	102	0.00	1.19- 1.79
	Amount Calc. %Drift						
3	DNX	1000.000	1088.971	-8.9	102	0.00	1.44- 2.04
4	MNX	1000.000	1039.582	-4.0	103	0.00	2.04- 2.64
5	RDX	1000.000	1022.136	-2.2	103	0.00	2.58- 3.38

Initial Calibration Verification

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2336-ICV2336
Lab FileID: PP388315.D

6	1,3,5-Trinitrobenzene	1000.000	943.828	5.6	98	0.00	4.35- 5.15
7	1,3-Dinitrobenzene	1000.000	979.321	2.1	97	0.00	5.54- 6.34
8	3,5-Dinitroaniline	1000.000	1149.277	-14.9	117	0.00	5.97- 6.77
9	Nitrobenzene	1000.000	1049.781	-5.0	101	0.00	7.10- 7.90
10	Nitroglycerin	1000.000	980.461	2.0	104	0.00	8.64- 9.64
11	Tetryl	1000.000	1009.676	-1.0	101	0.01	9.22-10.02
12	2,4,6-Trinitrotoluene	1000.000	1054.091	-5.4	107	0.01	9.60-10.40
13	2-Amino-4,6-Dinitrotol	1000.000	996.874	0.3	100	0.01	10.06-10.86
14	4-Amino-2,6-Dinitrotol	1000.000	1063.126	-6.3	101	0.01	10.56-11.36

		Amount	Calc.	%Drift			
15 S	3,4-Dinitrotoluene	----------NA----------					

		Amount	Calc.	%Drift			
16	2,4-Dinitrotoluene	1000.000	1013.507	-1.4	103	0.00	10.77-12.37
17	2,6-Dinitrotoluene	1000.000	1033.834	-3.4	103	0.00	11.11-12.84

		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	1063.549	-6.4	106	0.00	13.13-15.94
19	p-Nitrotoluene	1000.000	1017.098	-1.7	101	0.00	13.48-16.53
20	m-Nitrotoluene	1000.000	1031.644	-3.2	99	0.00	16.34-17.34

		Amount	Calc.	%Drift			
21	PETN	1000.000	1086.175	-8.6	103	0.00	14.99-19.11

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP388312.D GPP2336_092420PRI.M Fri Sep 25 11:33:42 2020

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2355-CC2336
Lab FileID: PP388839.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388839.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388839.D\dad1A.ch
Acq On : 30-Oct-2020, 19:10:45 Operator: jamesb
Sample : cc2336-1000 Inst : G1315B
Misc : op82735,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1018.579	-1.9	97	0.02	1.05- 1.65
2	HMX	1000.000	1016.262	-1.6	102	0.02	1.19- 1.79
3	DNX	1000.000	1013.534	-1.4	102	0.02	1.44- 2.04
4	MNX	1000.000	984.610	1.5	101	0.03	2.04- 2.64
5	RDX	1000.000	973.601	2.6	101	0.03	2.58- 3.38
6	1,3,5-Trinitrobenzene	1000.000	932.707	6.7	97	0.07	4.35- 5.15
7	1,3-Dinitrobenzene	1000.000	1006.685	-0.7	101	0.08	5.54- 6.34
8	3,5-Dinitroaniline	1000.000	971.583	2.8	101	0.06	5.97- 6.77
9	Nitrobenzene	1000.000	1013.617	-1.4	99	0.10	7.10- 7.90
10	Nitroglycerin	----------NA----------					
11	Tetryl	1000.000	863.805	13.6	89	0.16	9.22-10.02
12	2,4,6-Trinitrotoluene	1000.000	954.891	4.5	101	0.17	9.60-10.40
13	2-Amino-4,6-Dinitrotol	1000.000	979.880	2.0	102	0.14	10.06-10.86
14	4-Amino-2,6-Dinitrotol	1000.000	899.657	10.0	99	0.15	10.56-11.36
15 S	3,4-Dinitrotoluene	1000.000	1088.356	-8.8	109	-0.17	10.89-11.69
16	2,4-Dinitrotoluene	1000.000	971.578	2.8	101	0.18	11.57-12.37
17	2,6-Dinitrotoluene	1000.000	1021.832	-2.2	105	0.18	11.94-12.84
18	o-Nitrotoluene	1000.000	963.766	3.6	95	0.17	14.94-15.94
19	p-Nitrotoluene	1000.000	1017.956	-1.8	102	0.18	15.53-16.53
20	m-Nitrotoluene	1000.000	1012.526	-1.3	99	0.15	16.34-17.34
21	PETN	----------NA----------					

***** Signal #2 *****

1	TNX	1000.000	956.980	4.3	95	0.02	1.05- 1.65
2	HMX	1000.000	997.462	0.3	100	0.02	1.19- 1.79
3	DNX	1000.000	1083.841	-8.4	102	0.02	1.44- 2.04
4	MNX	1000.000	1010.750	-1.1	100	0.03	2.04- 2.64
5	RDX	1000.000	998.018	0.2	100	0.03	2.58- 3.38

8.7.9

8

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2355-CC2336
Lab FileID: PP388839.D

6	1,3,5-Trinitrobenzene	1000.000	945.512	5.4	98	0.07	4.35- 5.15
7	1,3-Dinitrobenzene	1000.000	1025.682	-2.6	102	0.08	5.54- 6.34
8	3,5-Dinitroaniline	1000.000	1004.153	-0.4	102	0.06	5.97- 6.77
9	Nitrobenzene	1000.000	1028.501	-2.9	99	0.10	7.10- 7.90
10	Nitroglycerin	1000.000	914.434	8.6	97	0.14	8.64- 9.64
11	Tetryl	1000.000	888.831	11.1	89	0.16	9.22-10.02
12	2,4,6-Trinitrotoluene	1000.000	973.321	2.7	99	0.17	9.60-10.40
13	2-Amino-4,6-Dinitrotol	1000.000	989.581	1.0	100	0.14	10.06-10.86
14	4-Amino-2,6-Dinitrotol	1000.000	1013.082	-1.3	96	0.15	10.56-11.36
		Amount	Calc.	%Drift			
15 S	3,4-Dinitrotoluene	1000.000	1177.013	-17.7#	120	-0.17	10.89-11.69
		Amount	Calc.	%Drift			
16	2,4-Dinitrotoluene	1000.000	936.487	6.4	95	0.18	10.77-12.37
17	2,6-Dinitrotoluene	1000.000	1022.924	-2.3	102	0.18	11.11-12.84
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	1004.529	-0.5	100	0.17	13.13-15.94
19	p-Nitrotoluene	1000.000	949.851	5.0	94	0.18	13.48-16.53
20	m-Nitrotoluene	1000.000	977.160	2.3	94	0.15	16.34-17.34
		Amount	Calc.	%Drift			
21	PETN	1000.000	1057.172	-5.7	100	0.12	14.99-19.11

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP388312.D GPP2336_092420_DV.M Thu Nov 12 15:58:54 2020

8.7.9

8

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2355-CC2336
Lab FileID: PP388851.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388851.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388851.D\dad1A.ch
Acq On : 31-Oct-2020, 01:22:32 Operator: jamesb
Sample : cc2336-1000 Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1015.179	-1.5	97	0.02	1.05- 1.65
2	HMX	1000.000	1011.356	-1.1	102	0.02	1.19- 1.79
3	DNX	1000.000	1002.257	-0.2	101	0.02	1.44- 2.04
4	MNX	1000.000	978.767	2.1	100	0.03	2.04- 2.64
5	RDX	1000.000	972.936	2.7	101	0.03	2.58- 3.38
6	1,3,5-Trinitrobenzene	1000.000	925.360	7.5	96	0.07	4.35- 5.15
7	1,3-Dinitrobenzene	1000.000	1007.658	-0.8	101	0.07	5.54- 6.34
8	3,5-Dinitroaniline	1000.000	980.195	2.0	102	0.06	5.97- 6.77
9	Nitrobenzene	1000.000	993.065	0.7	97	0.09	7.10- 7.90
10	Nitroglycerin	----------	NA	----------			
11	Tetryl	1000.000	852.307	14.8	88	0.15	9.22-10.02
12	2,4,6-Trinitrotoluene	1000.000	950.123	5.0	100	0.16	9.60-10.40
13	2-Amino-4,6-Dinitrotol	1000.000	981.205	1.9	103	0.12	10.06-10.86
14	4-Amino-2,6-Dinitrotol	1000.000	891.334	10.9	98	0.14	10.56-11.36
15 S	3,4-Dinitrotoluene	1000.000	997.945	0.2	100	0.18	10.89-11.69
16	2,4-Dinitrotoluene	1000.000	969.691	3.0	100	0.17	11.57-12.37
17	2,6-Dinitrotoluene	1000.000	1029.050	-2.9	105	0.16	11.94-12.84
18	o-Nitrotoluene	1000.000	995.431	0.5	98	0.16	14.94-15.94
19	p-Nitrotoluene	1000.000	1016.057	-1.6	102	0.16	15.53-16.53
20	m-Nitrotoluene	1000.000	1001.378	-0.1	98	0.14	16.34-17.34
21	PETN	----------	NA	----------			

***** Signal #2 *****

1	TNX	1000.000	955.537	4.4	95	0.02	1.05- 1.65
2	HMX	1000.000	997.076	0.3	100	0.02	1.19- 1.79
3	DNX	1000.000	1083.313	-8.3	102	0.02	1.44- 2.04
4	MNX	1000.000	1008.448	-0.8	99	0.03	2.04- 2.64
5	RDX	1000.000	1006.417	-0.6	101	0.03	2.58- 3.38

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2355-CC2336
Lab FileID: PP388851.D

6	1,3,5-Trinitrobenzene	1000.000	942.188	5.8	97	0.07	4.35- 5.15
7	1,3-Dinitrobenzene	1000.000	1026.842	-2.7	102	0.07	5.54- 6.34
8	3,5-Dinitroaniline	1000.000	1005.054	-0.5	102	0.06	5.97- 6.77
9	Nitrobenzene	1000.000	1016.382	-1.6	97	0.09	7.10- 7.90
10	Nitroglycerin	1000.000	888.880	11.1	94	0.13	8.64- 9.64
11	Tetryl	1000.000	871.576	12.8	87	0.15	9.22-10.02
12	2,4,6-Trinitrotoluene	1000.000	964.737	3.5	98	0.16	9.60-10.40
13	2-Amino-4,6-Dinitrotol	1000.000	978.129	2.2	98	0.12	10.06-10.86
14	4-Amino-2,6-Dinitrotol	1000.000	991.154	0.9	94	0.14	10.56-11.36
		Amount	Calc.	%Drift			
15 S	3,4-Dinitrotoluene	1000.000	922.667	7.7	94	0.18	10.89-11.69
		Amount	Calc.	%Drift			
16	2,4-Dinitrotoluene	1000.000	915.225	8.5	93	0.17	10.77-12.37
17	2,6-Dinitrotoluene	1000.000	1025.945	-2.6	102	0.17	11.11-12.84
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	966.509	3.3	96	0.17	13.13-15.94
19	p-Nitrotoluene	1000.000	920.846	7.9	91	0.17	13.48-16.53
20	m-Nitrotoluene	1000.000	1005.650	-0.6	97	0.13	16.34-17.34
		Amount	Calc.	%Drift			
21	PETN	1000.000	1103.203	-10.3	104	0.11	14.99-19.11

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP388312.D GPP2336_092420_DV.M Thu Nov 12 15:58:55 2020

8.7.10

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Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2355-ECC2336
Lab FileID: PP388856.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388856.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388856.D\dad1A.ch
Acq On : 31-Oct-2020, 03:57:27 Operator: jamesb
Sample : ecc2336-1000 Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	1000.000	1013.628	-1.4	96	0.01	1.05- 1.65
		Amount	Calc.	%Drift				
2		HMX	1000.000	1014.800	-1.5	102	0.02	1.19- 1.79
		Amount	Calc.	%Drift				
3		DNX	1000.000	1001.779	-0.2	101	0.02	1.44- 2.04
4		MNX	1000.000	964.586	3.5	99	0.03	2.04- 2.64
5		RDX	1000.000	958.841	4.1	100	0.03	2.58- 3.38
6		1,3,5-Trinitrobenzene	1000.000	926.164	7.4	96	0.07	4.35- 5.15
7		1,3-Dinitrobenzene	1000.000	1008.325	-0.8	101	0.07	5.54- 6.34
8		3,5-Dinitroaniline	1000.000	969.455	3.1	100	0.06	5.97- 6.77
9		Nitrobenzene	1000.000	989.573	1.0	97	0.09	7.10- 7.90
10		Nitroglycerin	----------NA----------					
11		Tetryl	1000.000	830.146	17.0#	86	0.16	9.22-10.02
		Amount	Calc.	%Drift				
12		2,4,6-Trinitrotoluene	1000.000	946.857	5.3	100	0.16	9.60-10.40
		Amount	Calc.	%Drift				
13		2-Amino-4,6-Dinitrotol	1000.000	980.549	1.9	102	0.13	10.06-10.86
14		4-Amino-2,6-Dinitrotol	1000.000	876.170	12.4	96	0.15	10.56-11.36
15	S	3,4-Dinitrotoluene	1000.000	979.775	2.0	98	0.18	10.89-11.69
16		2,4-Dinitrotoluene	1000.000	966.110	3.4	100	0.18	11.57-12.37
17		2,6-Dinitrotoluene	1000.000	1046.603	-4.7	107	0.17	11.94-12.84
18		o-Nitrotoluene	1000.000	978.912	2.1	97	0.18	14.94-15.94
19		p-Nitrotoluene	1000.000	1013.443	-1.3	102	0.18	15.53-16.53
20		m-Nitrotoluene	1000.000	987.034	1.3	96	0.15	16.34-17.34
21		PETN	1000.000	0.000	100.0#	0	0.20	18.04-19.04
*****		Signal #2 *****						
1		TNX	1000.000	950.512	4.9	95	0.01	1.05- 1.65
		Amount	Calc.	%Drift				
2		HMX	1000.000	993.694	0.6	100	0.02	1.19- 1.79
		Amount	Calc.	%Drift				
3		DNX	1000.000	1078.100	-7.8	101	0.02	1.44- 2.04
4		MNX	1000.000	1004.939	-0.5	99	0.03	2.04- 2.64
5		RDX	1000.000	1005.003	-0.5	101	0.03	2.58- 3.38

8.7.11

8

Continuing Calibration Summary

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2355-ECC2336
Lab FileID: PP388856.D

6	1,3,5-Trinitrobenzene	1000.000	940.994	5.9	97	0.07	4.35- 5.15
7	1,3-Dinitrobenzene	1000.000	1050.772	-5.1	104	0.07	5.54- 6.34
8	3,5-Dinitroaniline	1000.000	1034.380	-3.4	105	0.06	5.97- 6.77
9	Nitrobenzene	1000.000	1067.532	-6.8	102	0.09	7.10- 7.90
10	Nitroglycerin	1000.000	931.220	6.9	99	0.14	8.64- 9.64
11	Tetryl	1000.000	860.959	13.9	86	0.15	9.22-10.02
12	2,4,6-Trinitrotoluene	1000.000	968.461	3.2	98	0.16	9.60-10.40
13	2-Amino-4,6-Dinitrotol	1000.000	981.694	1.8	99	0.13	10.06-10.86
14	4-Amino-2,6-Dinitrotol	1000.000	978.190	2.2	93	0.15	10.56-11.36
		Amount	Calc.	%Drift			
15 S	3,4-Dinitrotoluene	1000.000	945.187	5.5	96	0.18	10.89-11.69
		Amount	Calc.	%Drift			
16	2,4-Dinitrotoluene	1000.000	905.058	9.5	92	0.18	10.77-12.37
17	2,6-Dinitrotoluene	1000.000	1034.661	-3.5	103	0.18	11.11-12.84
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	917.771	8.2	91	0.18	13.13-15.94
19	p-Nitrotoluene	1000.000	974.509	2.5	96	0.18	13.48-16.53
20	m-Nitrotoluene	1000.000	952.750	4.7	92	0.15	16.34-17.34
		Amount	Calc.	%Drift			
21	PETN	1000.000	1088.565	-8.9	103	0.12	14.99-19.11

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP388312.D GPP2336_092420_DV.M Thu Nov 12 15:58:56 2020

8.7.11

8

Run Sequence Report

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG2870 **Method:** SW846 8330A **Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG2870-IC2870	GG619500.D	09/09/20 12:42	n/a	Initial cal 20
GGG2870-IC2870	GG619501.D	09/09/20 13:12	n/a	Initial cal 50
GGG2870-IC2870	GG619502.D	09/09/20 13:43	n/a	Initial cal 100
GGG2870-IC2870	GG619503.D	09/09/20 14:13	n/a	Initial cal 200
GGG2870-IC2870	GG619504.D	09/09/20 14:44	n/a	Initial cal 500
GGG2870-ICC2870	GG619505.D	09/09/20 15:14	n/a	Initial cal 1000
GGG2870-IC2870	GG619506.D	09/09/20 15:45	n/a	Initial cal 2500
GGG2870-IC2870	GG619507.D	09/09/20 16:15	n/a	Initial cal 5000
GGG2870-ICV2870	GG619508.D	09/09/20 16:45	n/a	Initial cal verification 1000
OP81842-MB	GG619509.D	09/09/20 17:16	OP81842	Method Blank
ZZZZZZ	GG619510.D	09/09/20 17:46	OP81842	(unrelated sample)
ZZZZZZ	GG619511.D	09/09/20 18:17	OP81842	(unrelated sample)
ZZZZZZ	GG619512.D	09/09/20 18:47	OP81842	(unrelated sample)
FA78268-3	GG619513.D	09/09/20 19:18	OP81842	(used for QC only; not part of job FA80202)
ZZZZZZ	GG619514.D	09/09/20 19:48	OP81842	(unrelated sample)
ZZZZZZ	GG619515.D	09/09/20 20:18	OP81842	(unrelated sample)
ZZZZZZ	GG619516.D	09/09/20 20:49	OP81842	(unrelated sample)
ZZZZZZ	GG619517.D	09/09/20 21:19	OP81842	(unrelated sample)
ZZZZZZ	GG619518.D	09/09/20 21:50	OP81842	(unrelated sample)
GGG2870-CC2870	GG619519.D	09/09/20 22:20	n/a	Continuing cal 1000
ZZZZZZ	GG619521.D	09/09/20 23:21	OP81842	(unrelated sample)
ZZZZZZ	GG619522.D	09/09/20 23:51	OP81842	(unrelated sample)
OP81877-MB	GG619523.D	09/10/20 00:22	OP81877	Method Blank
FA78392-1	GG619524.D	09/10/20 00:52	OP81877	(used for QC only; not part of job FA80202)
ZZZZZZ	GG619525.D	09/10/20 01:23	OP81877	(unrelated sample)
ZZZZZZ	GG619526.D	09/10/20 01:53	OP81877	(unrelated sample)
ZZZZZZ	GG619527.D	09/10/20 02:24	OP81877	(unrelated sample)
ZZZZZZ	GG619528.D	09/10/20 02:54	OP81877	(unrelated sample)
ZZZZZZ	GG619529.D	09/10/20 03:24	OP81877	(unrelated sample)
ZZZZZZ	GG619530.D	09/10/20 03:55	OP81877	(unrelated sample)
GGG2870-CC2870	GG619531.D	09/10/20 04:25	n/a	Continuing cal 1000
ZZZZZZ	GG619533.D	09/10/20 05:26	OP81877	(unrelated sample)
ZZZZZZ	GG619534.D	09/10/20 05:57	OP81877	(unrelated sample)
ZZZZZZ	GG619535.D	09/10/20 06:27	OP81877	(unrelated sample)
OP81901-MB	GG619536.D	09/10/20 06:57	OP81901	Method Blank
ZZZZZZ	GG619537.D	09/10/20 07:28	OP81901	(unrelated sample)
ZZZZZZ	GG619538.D	09/10/20 07:58	OP81901	(unrelated sample)
FA78403-2	GG619539.D	09/10/20 08:29	OP81901	(used for QC only; not part of job FA80202)
ZZZZZZ	GG619540.D	09/10/20 08:59	OP81901	(unrelated sample)
ZZZZZZ	GG619541.D	09/10/20 09:30	OP81901	(unrelated sample)
ZZZZZZ	GG619542.D	09/10/20 10:00	OP81901	(unrelated sample)
GGG2870-CC2870	GG619543.D	09/10/20 10:31	n/a	Continuing cal 1000
ZZZZZZ	GG619545.D	09/10/20 11:32	OP81901	(unrelated sample)
ZZZZZZ	GG619546.D	09/10/20 12:02	OP81901	(unrelated sample)
ZZZZZZ	GG619547.D	09/10/20 12:32	OP81901	(unrelated sample)
ZZZZZZ	GG619548.D	09/10/20 13:03	OP81901	(unrelated sample)

Run Sequence Report

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG2870	**Method:** SW846 8330A	**Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
ZZZZZZ	GG619549.D	09/10/20 13:33	OP81901	(unrelated sample)
ZZZZZZ	GG619550.D	09/10/20 14:04	OP81901	(unrelated sample)
GGG2870-ECC2870	GG619551.D	09/10/20 14:34	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG2889 **Method:** SW846 8330A **Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG2889-CC2870	GG619914.D	11/02/20 13:45	n/a	Continuing cal 1000
FA80222-1	GG619915.D	11/02/20 14:14	OP82735	(used for QC only; not part of job FA80202)
ZZZZZZ	GG619916.D	11/02/20 14:44	OP82735	(unrelated sample)
FA80202-1	GG619917.D	11/02/20 15:13	OP82734	54MW13
FA80202-2	GG619918.D	11/02/20 15:43	OP82734	54TW13
FA80202-3	GG619919.D	11/02/20 16:12	OP82734	54MW10
FA80202-4	GG619920.D	11/02/20 16:41	OP82734	54MW12
FA80202-5	GG619921.D	11/02/20 17:11	OP82734	54MW1
ZZZZZZ	GG619924.D	11/02/20 18:39	OP82713	(unrelated sample)
GGG2889-CC2870	GG619925.D	11/02/20 19:09	n/a	Continuing cal 1000
ZZZZZZ	GG619927.D	11/02/20 20:07	OP82713	(unrelated sample)
ZZZZZZ	GG619928.D	11/02/20 20:37	OP82713	(unrelated sample)
ZZZZZZ	GG619929.D	11/02/20 21:06	OP82713	(unrelated sample)
ZZZZZZ	GG619930.D	11/02/20 21:36	OP82713	(unrelated sample)
ZZZZZZ	GG619931.D	11/02/20 22:05	OP82713	(unrelated sample)
ZZZZZZ	GG619932.D	11/02/20 22:34	OP82713	(unrelated sample)
ZZZZZZ	GG619933.D	11/02/20 23:04	OP82713	(unrelated sample)
FA80096-1	GG619934.D	11/02/20 23:33	OP82713	(used for QC only; not part of job FA80202)
GGG2889-ECC2870	GG619935.D	11/03/20 00:03	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG2890 **Method:** SW846 8330A **Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG2890-CC2870	GG619937.D	11/03/20 12:31	n/a	Continuing cal 1000
OP82713-MB	GG619938.D	11/03/20 13:01	OP82713	Method Blank
OP82734-MB	GG619939.D	11/03/20 13:30	OP82734	Method Blank
OP82735-MB	GG619940.D	11/03/20 13:59	OP82735	Method Blank
GGG2890-ECC2870	GG619941.D	11/03/20 14:29	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GPP2336 **Method:** SW846 8330A **Instrument ID:** GCPP

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GPP2336-IC2336	PP388307.D	09/24/20 12:33	n/a	Initial cal 20
GPP2336-IC2336	PP388308.D	09/24/20 13:05	n/a	Initial cal 50
GPP2336-IC2336	PP388309.D	09/24/20 13:37	n/a	Initial cal 100
GPP2336-IC2336	PP388310.D	09/24/20 14:09	n/a	Initial cal 200
GPP2336-IC2336	PP388311.D	09/24/20 14:41	n/a	Initial cal 500
GPP2336-ICC2336	PP388312.D	09/24/20 15:13	n/a	Initial cal 1000
GPP2336-IC2336	PP388313.D	09/24/20 15:45	n/a	Initial cal 2500
GPP2336-IC2336	PP388314.D	09/24/20 16:17	n/a	Initial cal 5000
GPP2336-ICV2336	PP388315.D	09/24/20 16:49	n/a	Initial cal verification 1000
ZZZZZZ	PP388316.D	09/24/20 17:21	OP82110	(unrelated sample)
ZZZZZZ	PP388317.D	09/24/20 17:53	OP82110	(unrelated sample)
ZZZZZZ	PP388318.D	09/24/20 18:25	OP82110	(unrelated sample)
ZZZZZZ	PP388319.D	09/24/20 18:57	OP82110	(unrelated sample)
ZZZZZZ	PP388320.D	09/24/20 19:29	OP82110	(unrelated sample)
ZZZZZZ	PP388321.D	09/24/20 20:01	OP82110	(unrelated sample)
ZZZZZZ	PP388322.D	09/24/20 20:33	OP82110	(unrelated sample)
OP82127-BS	PP388324.D	09/24/20 21:37	OP82127	Blank Spike
OP82127-MB	PP388325.D	09/24/20 22:10	OP82127	Method Blank
ZZZZZZ	PP388326.D	09/24/20 22:41	OP82127	(unrelated sample)
GPP2336-ECC2336	PP388327.D	09/24/20 23:13	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA80202
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GPP2355 **Method:** SW846 8330A **Instrument ID:** GCPP

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GPP2355-CC2336	PP388827.D	10/30/20 12:58	n/a	Continuing cal 1000
ZZZZZZ	PP388828.D	10/30/20 13:29	OP82713	(unrelated sample)
ZZZZZZ	PP388829.D	10/30/20 14:00	OP82713	(unrelated sample)
ZZZZZZ	PP388830.D	10/30/20 14:31	OP82713	(unrelated sample)
ZZZZZZ	PP388831.D	10/30/20 15:02	OP82713	(unrelated sample)
ZZZZZZ	PP388832.D	10/30/20 15:33	OP82713	(unrelated sample)
ZZZZZZ	PP388833.D	10/30/20 16:04	OP82713	(unrelated sample)
ZZZZZZ	PP388834.D	10/30/20 16:35	OP82713	(unrelated sample)
OP82735-MB	PP388835.D	10/30/20 17:06	OP82735	Method Blank
OP82735-BS	PP388836.D	10/30/20 17:37	OP82735	Blank Spike
FA80222-1	PP388837.D	10/30/20 18:08	OP82735	(used for QC only; not part of job FA80202)
GPP2355-CC2336	PP388839.D	10/30/20 19:10	n/a	Continuing cal 1000
ZZZZZZ	PP388840.D	10/30/20 19:41	OP82735	(unrelated sample)
ZZZZZZ	PP388841.D	10/30/20 20:12	OP82735	(unrelated sample)
OP82735-MS	PP388842.D	10/30/20 20:43	OP82735	Matrix Spike
OP82735-MSD	PP388843.D	10/30/20 21:14	OP82735	Matrix Spike Duplicate
OP82734-MB	PP388844.D	10/30/20 21:45	OP82734	Method Blank
OP82734-BS	PP388845.D	10/30/20 22:16	OP82734	Blank Spike
FA80202-1	PP388846.D	10/30/20 22:47	OP82734	54MW13
FA80202-2	PP388847.D	10/30/20 23:18	OP82734	54TW13
FA80202-3	PP388848.D	10/30/20 23:49	OP82734	54MW10
FA80202-4	PP388849.D	10/31/20 00:20	OP82734	54MW12
GPP2355-CC2336	PP388851.D	10/31/20 01:22	n/a	Continuing cal 1000
FA80202-5	PP388852.D	10/31/20 01:53	OP82734	54MW1
OP82734-MS	PP388853.D	10/31/20 02:24	OP82734	Matrix Spike
OP82734-MSD	PP388854.D	10/31/20 02:55	OP82734	Matrix Spike Duplicate
GPP2355-ECC2336	PP388856.D	10/31/20 03:57	n/a	Ending cal 1000

GC/LC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/20 18:24

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1A.ch
Acq On : 30-Oct-2020, 22:47:36 Operator: jamesb
Sample : FA80202-1 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16:56 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.47	11.47	989342	1731521	490.041m	472.948
	Spiked Amount 500.000	Range 70 - 136		Recovery =		98.01%	94.59%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.50	1.50	730707	2120911	487.844m	498.279m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	3.01	3.01	109309	172785	60.710	60.240m
6)	1,3,5-Trinitrobe	4.81	4.81	4778408	9394459	1203.990	1222.669
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.43	6.43	182575	302852	47.980	46.628m
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	10.15	10.15	4932196	6025546	1334.296	1401.073
13)	2-Amino-4,6-Dini	10.58	10.58	496210	686969	150.969	144.152
14)	4-Amino-2,6-Dini	11.11	11.10	208620	353451	85.418	82.686
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

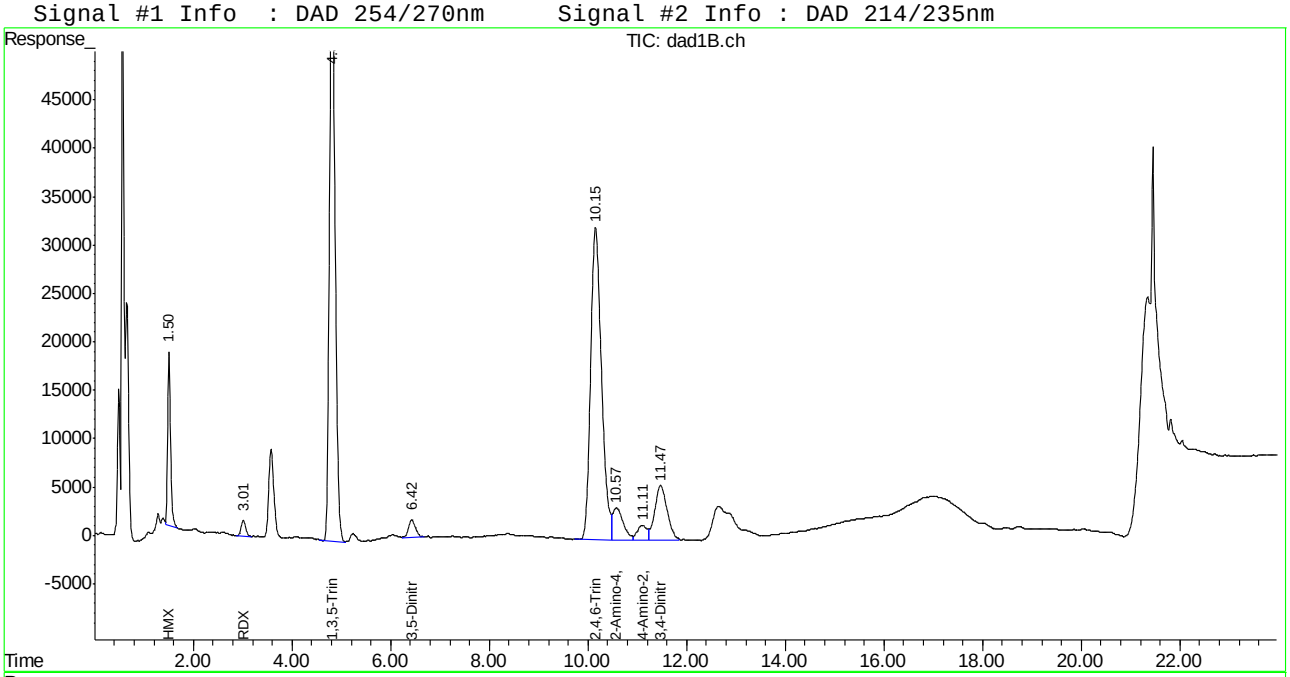
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388846.D GPP2336_092420_DV.M Thu Nov 12 15:58:19 2020 Page 1

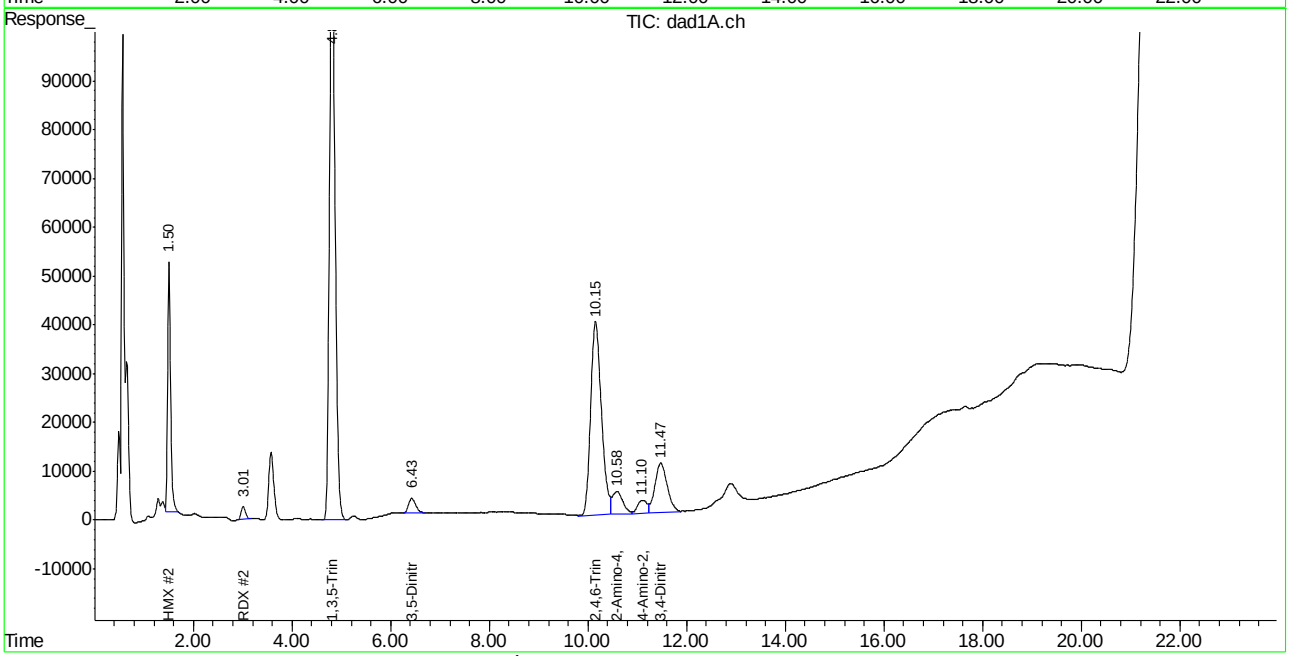
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1A.ch
Acq On : 30-Oct-2020, 22:47:36 Operator: jamesb
Sample : FA80202-1 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:48 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

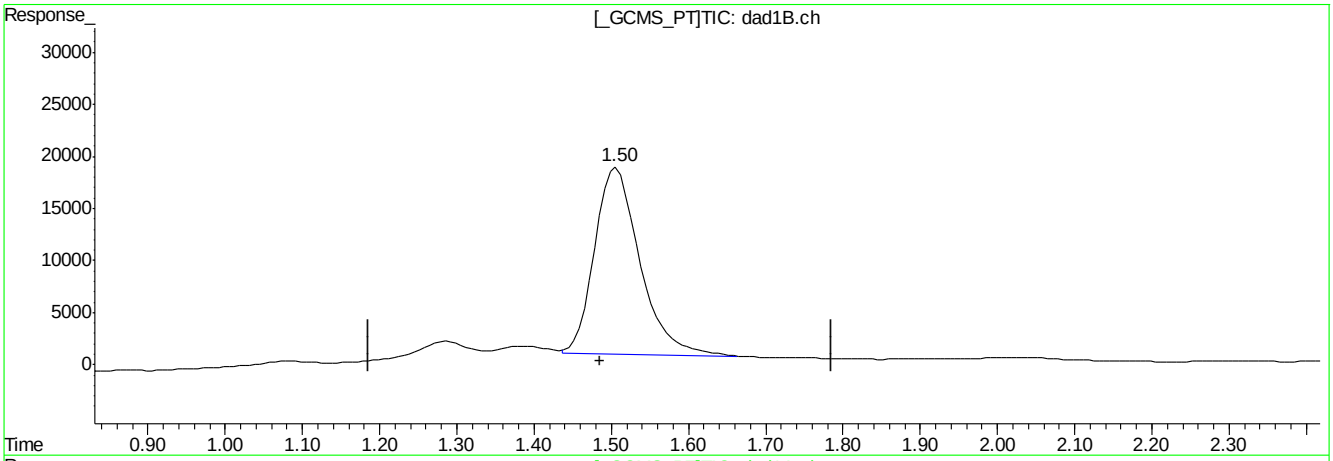
Sample Number: FA80202-1
Lab FileID: PP388846.D
Injection Time: 10/30/20 22:47
Method: SW846 8330B
Analyst approved: 11/12/20 16:16 William Hustedde
Supervisor approved: 11/12/20 18:24 Naresh Jiawan

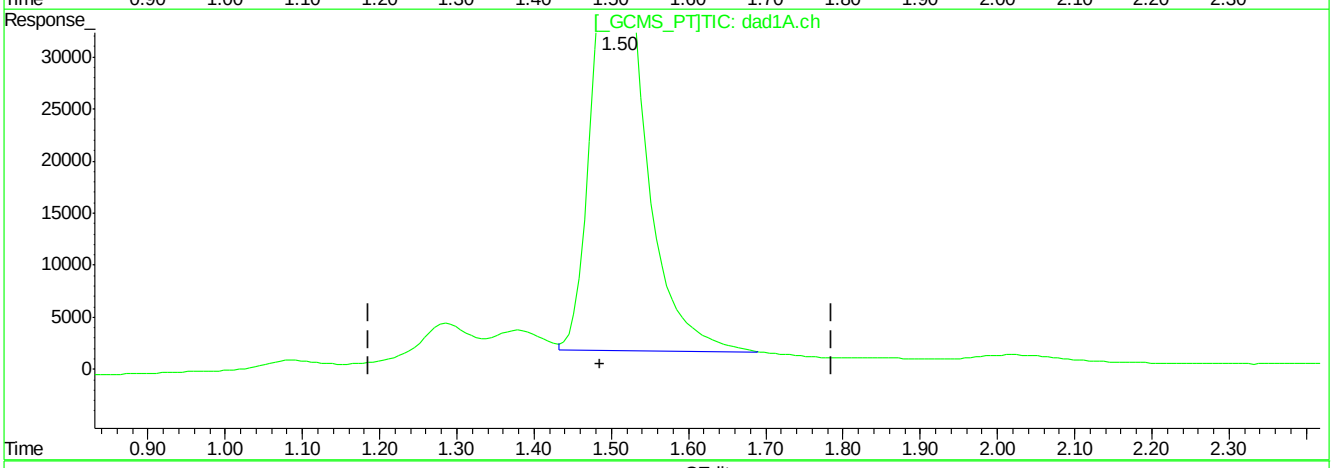
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.50	Poor instrument integration
HMX	2691-41-0	2	1.50	Poor instrument integration
RDX	121-82-4	2	3.01	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.43	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.47	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1A.ch
Acq On : 30-Oct-2020, 22:47:36 Operator: jamesb
Sample : FA80202-1 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:47 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.50min 487.844ppb m

response 730707

(2) HMX #2

1.50min 498.279ppb m

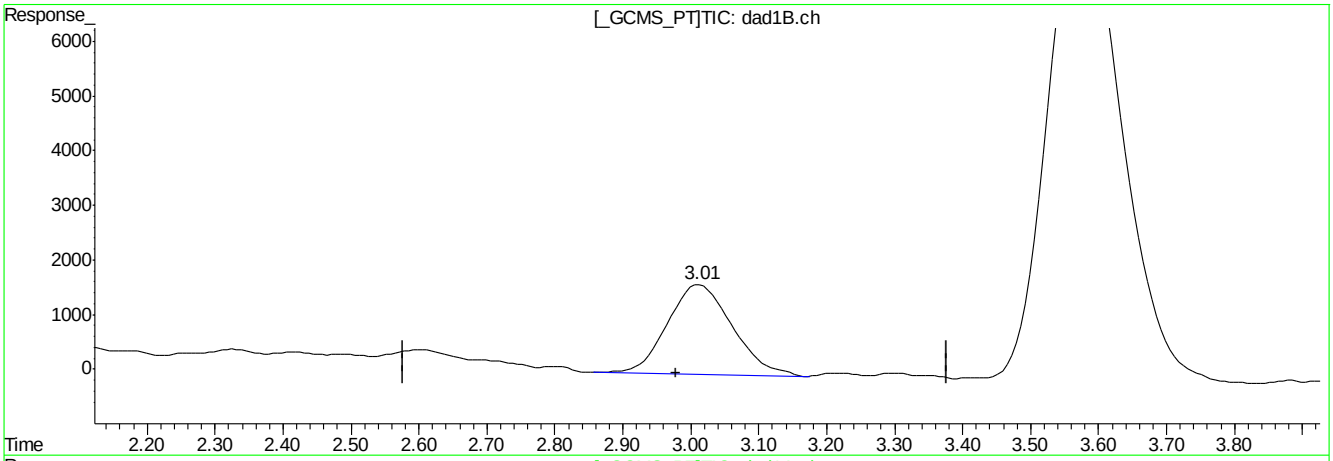
response 2120911

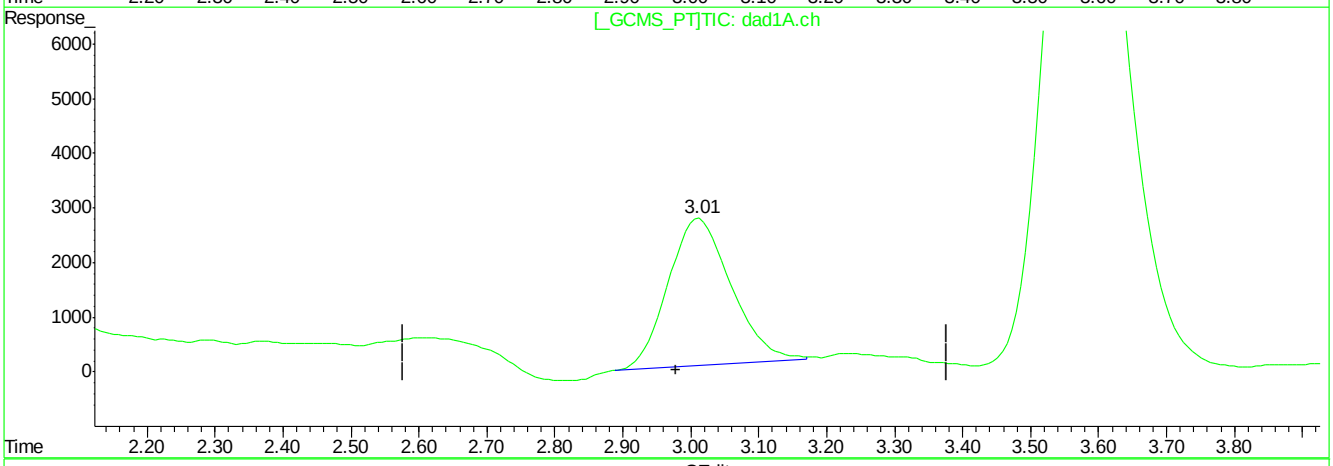
(+) = Expected Retention Time
PP388846.D GPP2336_092420_DV.M Thu Nov 12 15:47:42 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1A.ch
Acq On : 30-Oct-2020, 22:47:36 Operator: jamesb
Sample : FA80202-1 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:47 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.01min 60.710ppb

response 109309

(5) RDX #2

3.01min 60.240ppb m

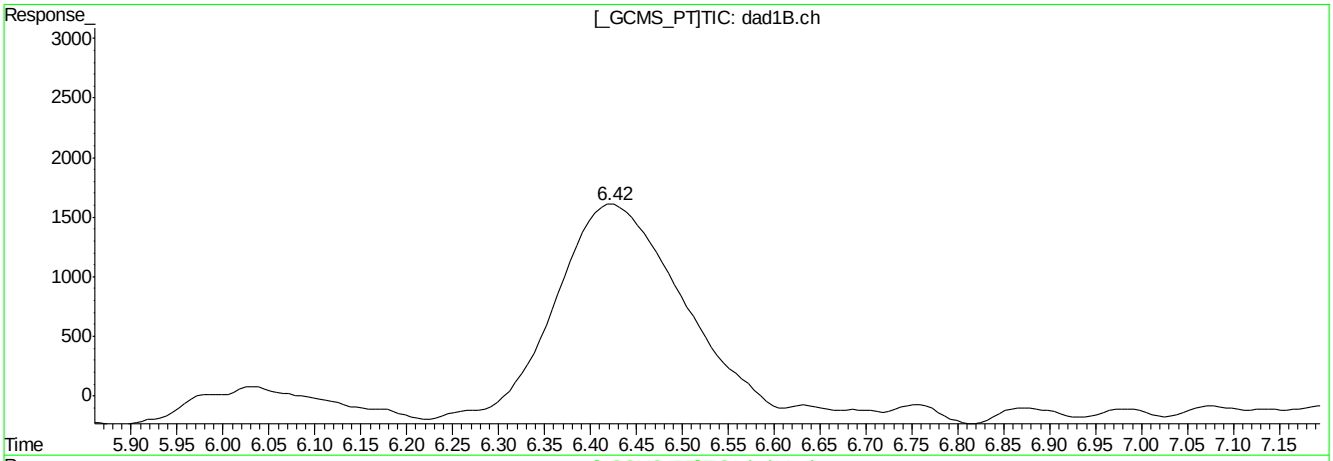
response 172785

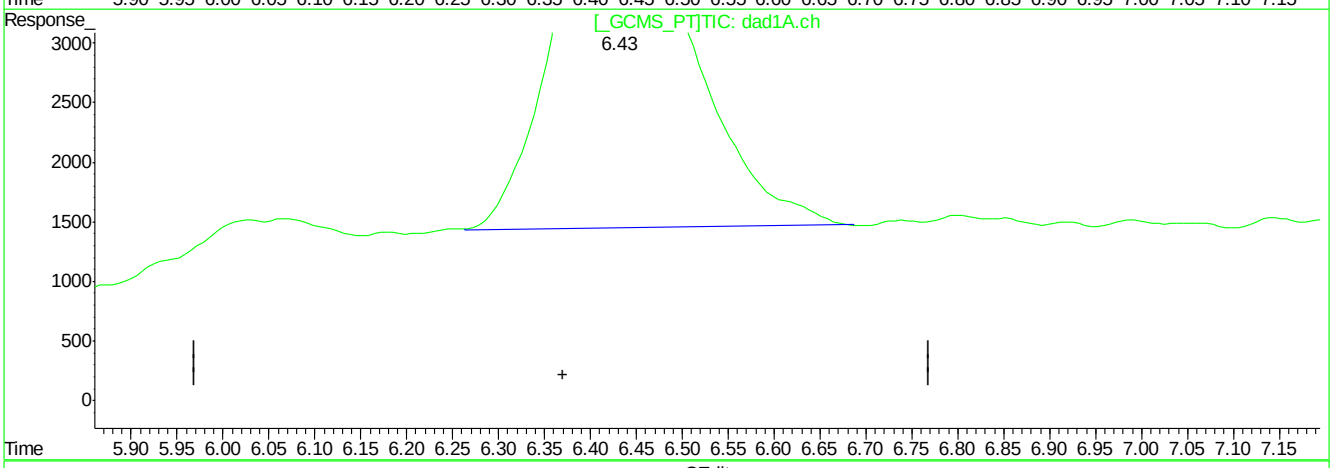
(+) = Expected Retention Time
PP388846.D GPP2336_092420_DV.M Thu Nov 12 15:47:48 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1A.ch
Acq On : 30-Oct-2020, 22:47:36 Operator: jamesb
Sample : FA80202-1 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:47 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.43min 47.980ppb

response 182575

(8) 3,5-Dinitroaniline #2

6.43min 46.628ppb m

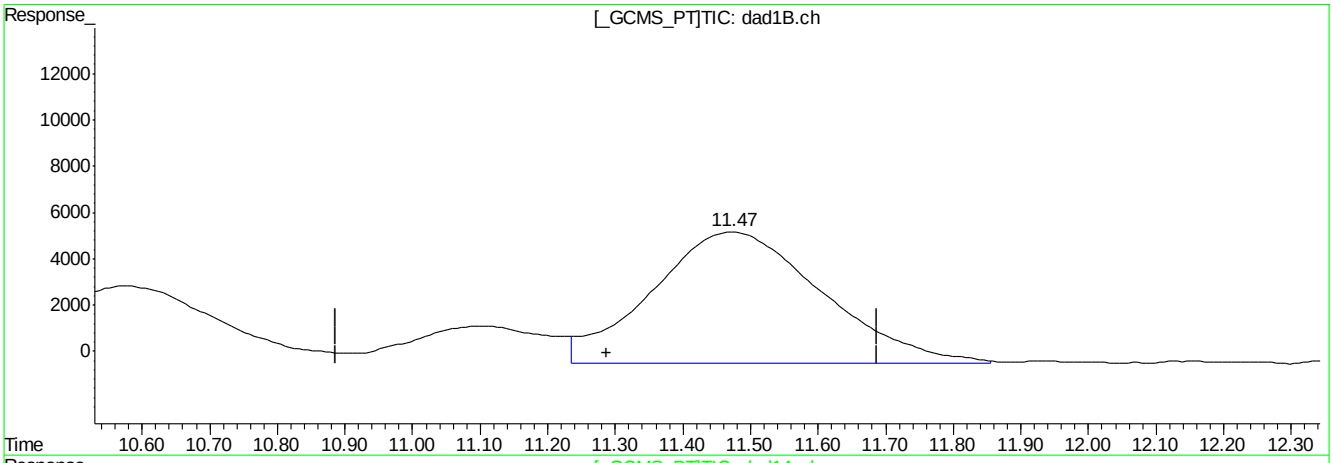
response 302852

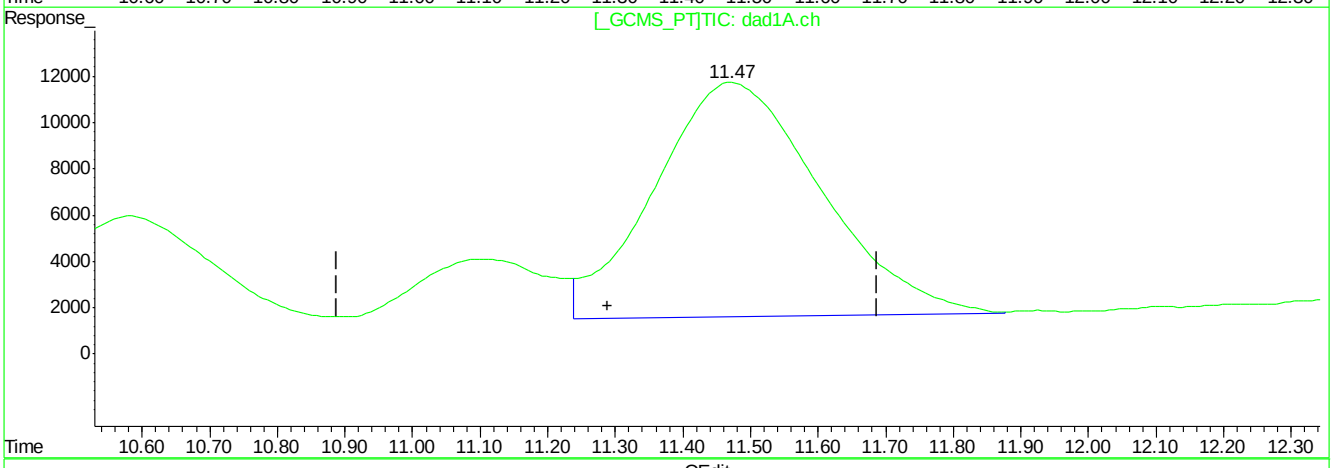
(+) = Expected Retention Time
PP388846.D GPP2336_092420_DV.M Thu Nov 12 15:48:00 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1A.ch
Acq On : 30-Oct-2020, 22:47:36 Operator: jamesb
Sample : FA80202-1 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:47 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.47min 490.041ppb m

response 989342

(15) 3,4-Dinitrotoluene #2 (S)

11.47min 472.948ppb

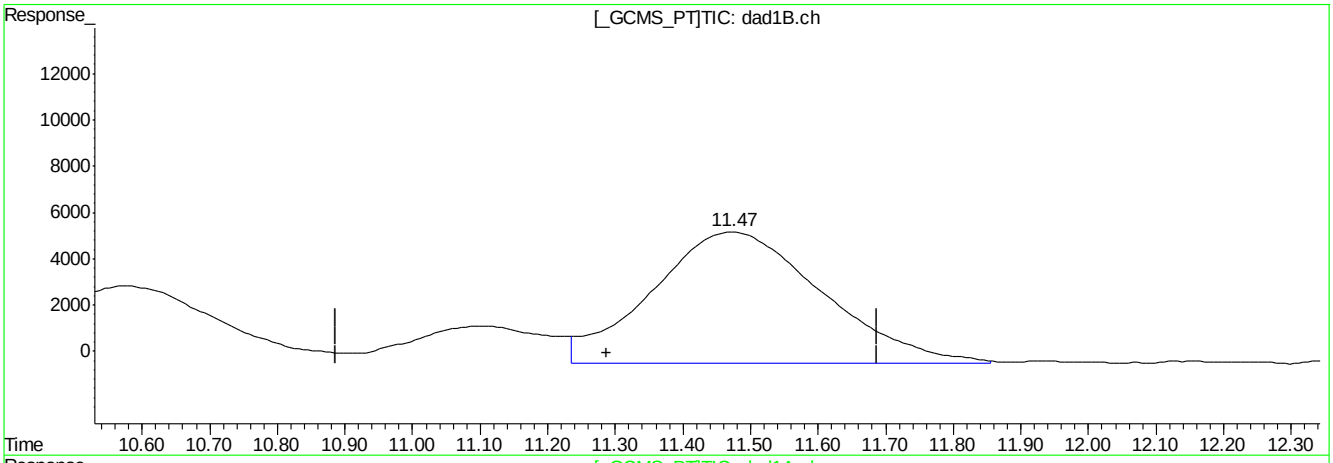
response 1731521

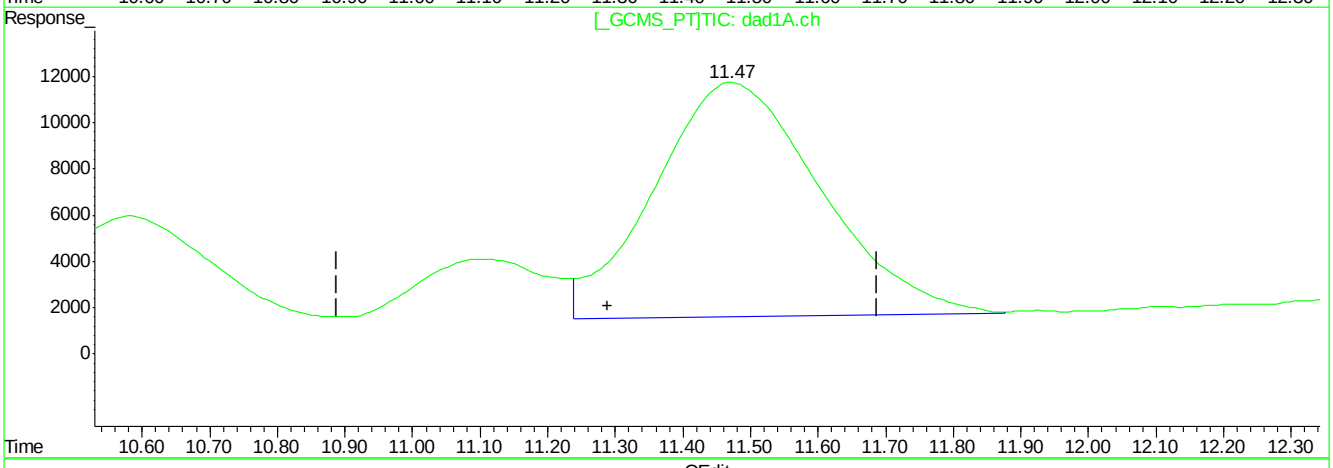
(+) = Expected Retention Time
PP388846.D GPP2336_092420_DV.M Thu Nov 12 15:48:12 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388846.D\dad1A.ch
Acq On : 30-Oct-2020, 22:47:36 Operator: jamesb
Sample : FA80202-1 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:47 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.47min 490.041ppb m

response 989342

(15) 3,4-Dinitrotoluene #2 (S)

11.47min 472.948ppb

response 1731521

(+) = Expected Retention Time
PP388846.D GPP2336_092420_DV.M Thu Nov 12 15:48:18 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/03/20 16:10

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1A.ch
Acq On : 02-Nov-2020, 15:13:37 Operator: jamesb
Sample : FA80202-1cf Inst : G1315B
Misc : op82734,GGG2889,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 03 09:20:47 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.84	13.84	2734553	5090618	501.458	490.169
	Spiked Amount 500.000	Range 70 - 136		Recovery =		100.29%	98.03%
	Target Compounds						
1)	TNX	5.10	5.10	320211	320211	52.844	52.549
2)	HMX	5.40	5.40	1725303	1712231	483.541m	479.392m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.33	7.33	12108171	12120882	1245.683m	1250.594m
6)	RDX	7.62	7.62	190817	248495	42.916m	55.822m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.31	11.31	12488750	16605469	1386.974	1428.506m
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
16)	3,5-Dinitroanili	15.60	15.61	1654449	2965570	163.706	184.591
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.27	17.27	702841	1248801	127.902m	121.566m
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.22	19.21	1392770	2206640	155.471	172.424
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

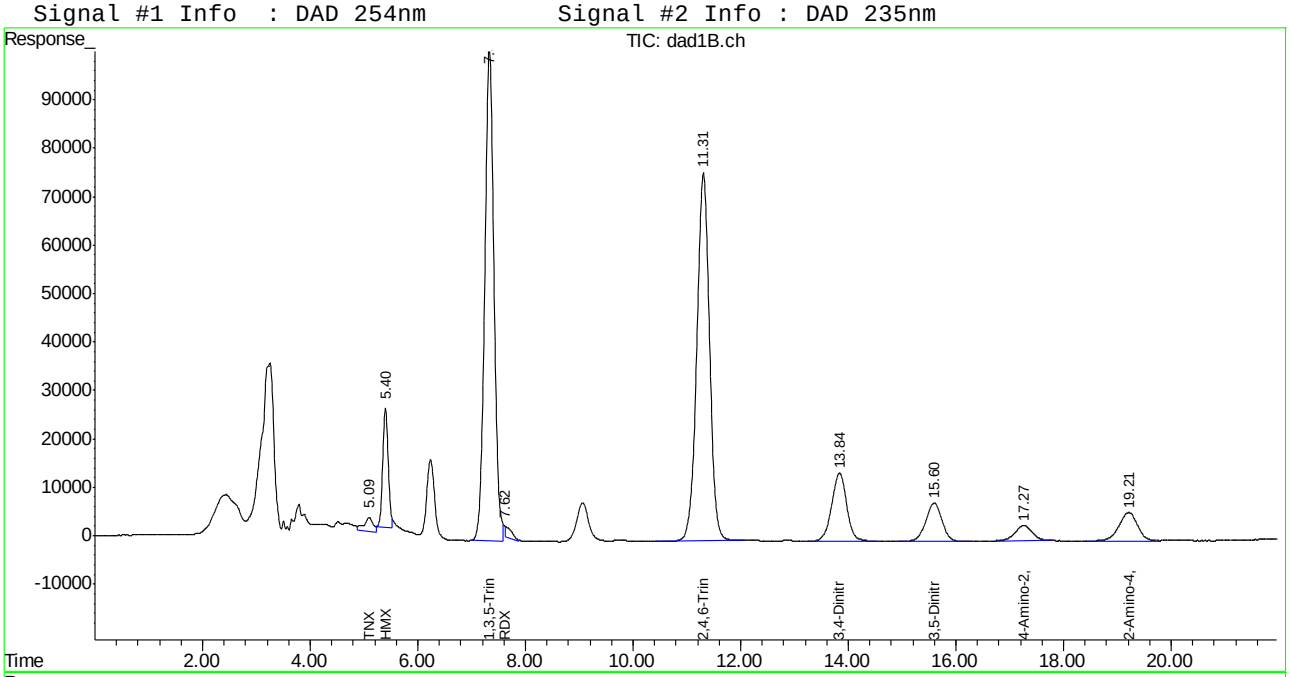
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

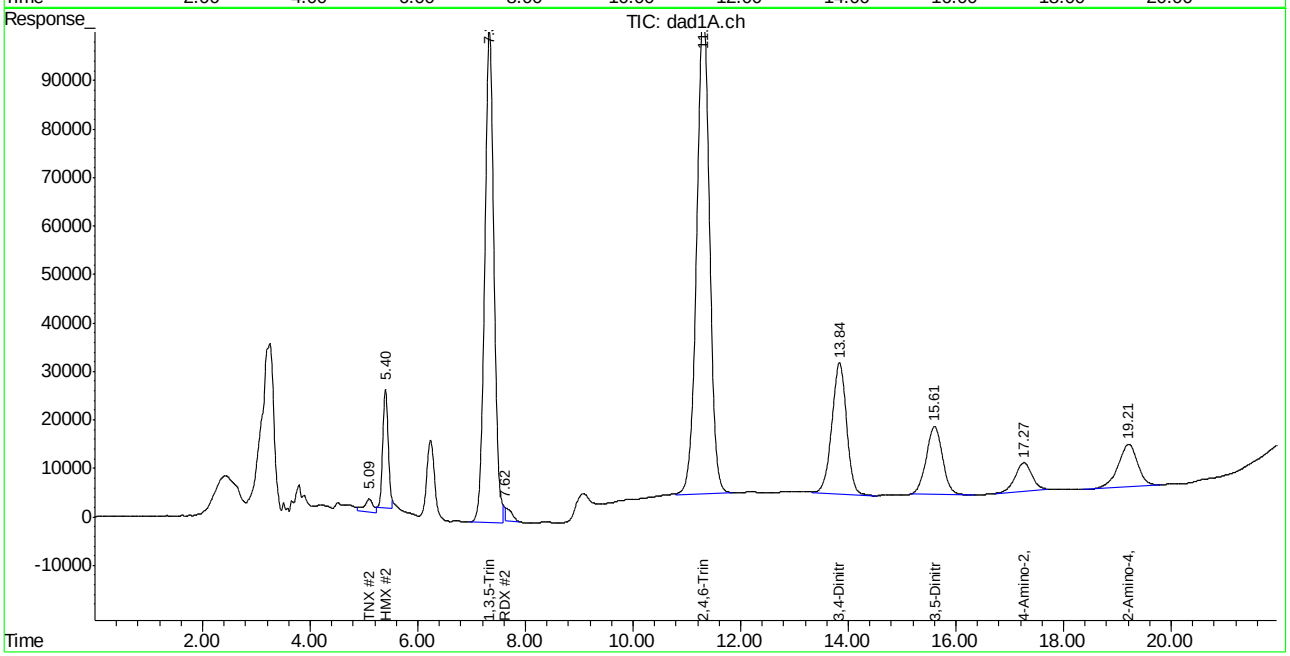
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1A.ch
Acq On : 02-Nov-2020, 15:13:37 Operator: jamesb
Sample : FA80202-1cf Inst : G1315B
Misc : op82734,GGG2889,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:29 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

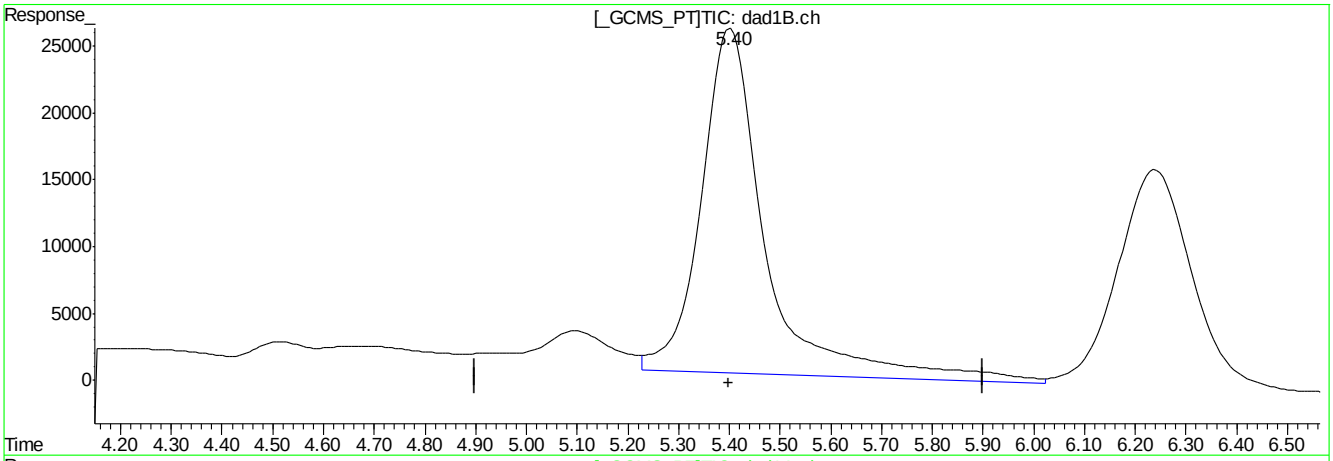
Sample Number: FA80202-1
Lab FileID: GG619917.D
Injection Time: 11/02/20 15:13
Method: SW846 8330B
Analyst approved: 11/03/20 14:43 James Boone
Supervisor approved: 11/03/20 16:10 Naresh Jiawan

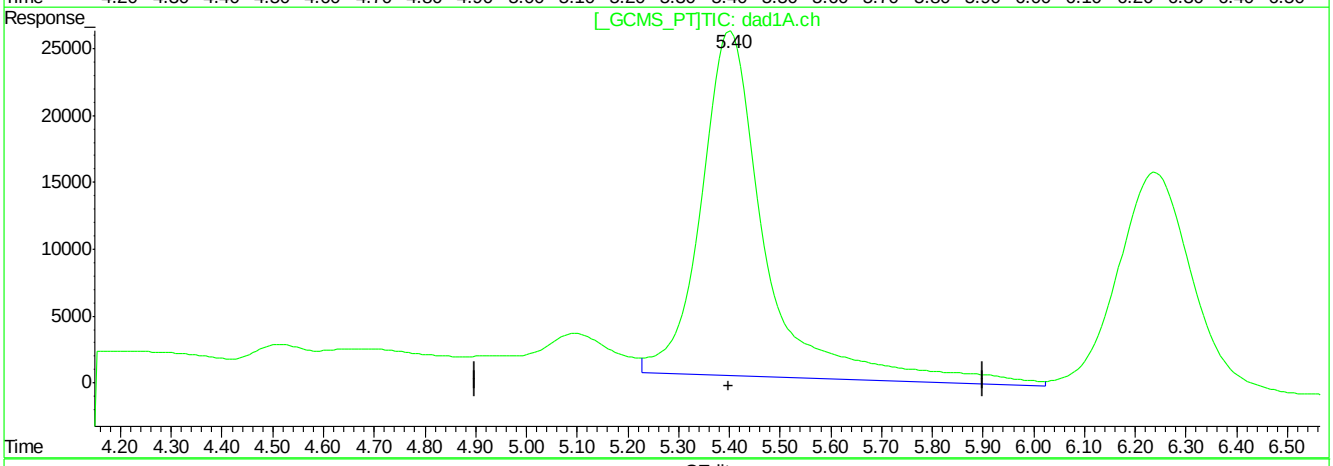
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	5.40	Poor instrument integration
HMX	2691-41-0	2	5.40	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	7.33	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.33	Poor instrument integration
RDX	121-82-4	1	7.62	Poor instrument integration
RDX	121-82-4	2	7.62	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.31	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	17.27	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.27	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1A.ch
Acq On : 02-Nov-2020, 15:13:37 Operator: jamesb
Sample : FA80202-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.40min 633.853ppb

response 2261623

(2) HMX #2

5.40min 633.211ppb

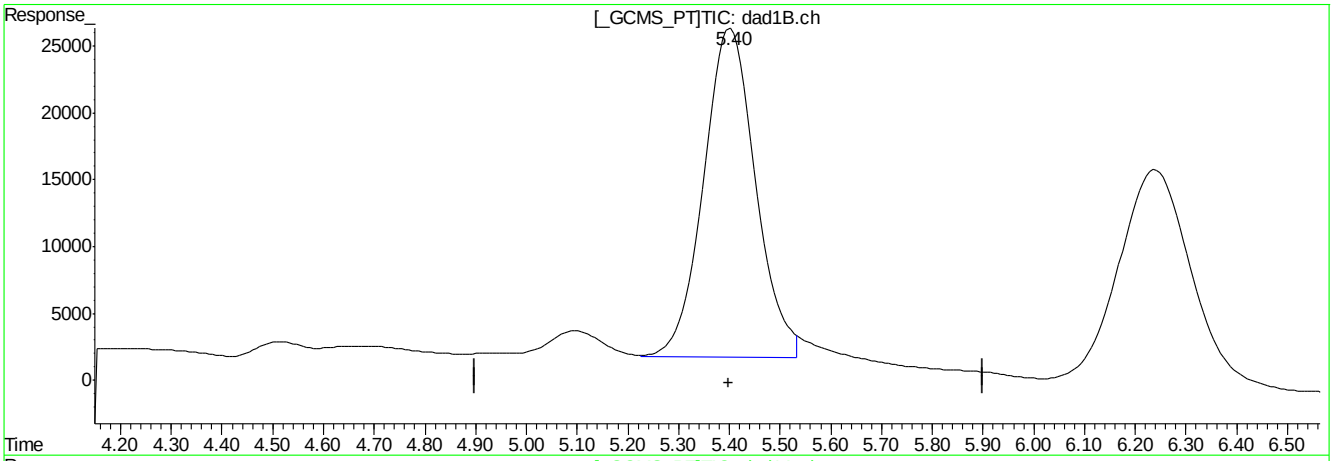
response 2261623

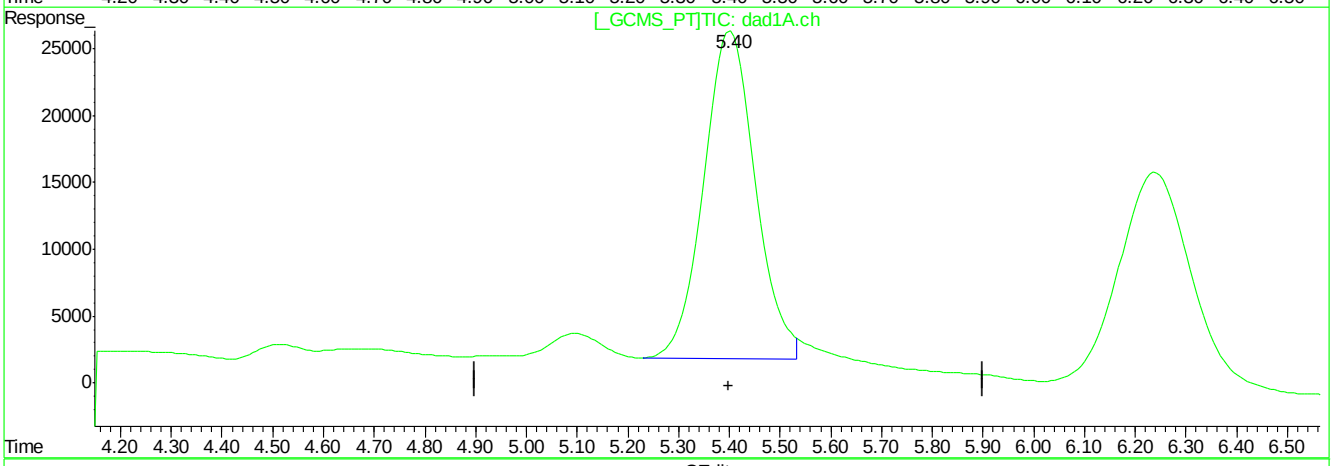
(+) = Expected Retention Time
GG619917.D 8330RPB.M_090920.M Tue Nov 03 09:27:46 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1A.ch
Acq On : 02-Nov-2020, 15:13:37 Operator: jamesb
Sample : FA80202-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.40min 483.541ppb m

response 1725303

(2) HMX #2

5.40min 479.392ppb m

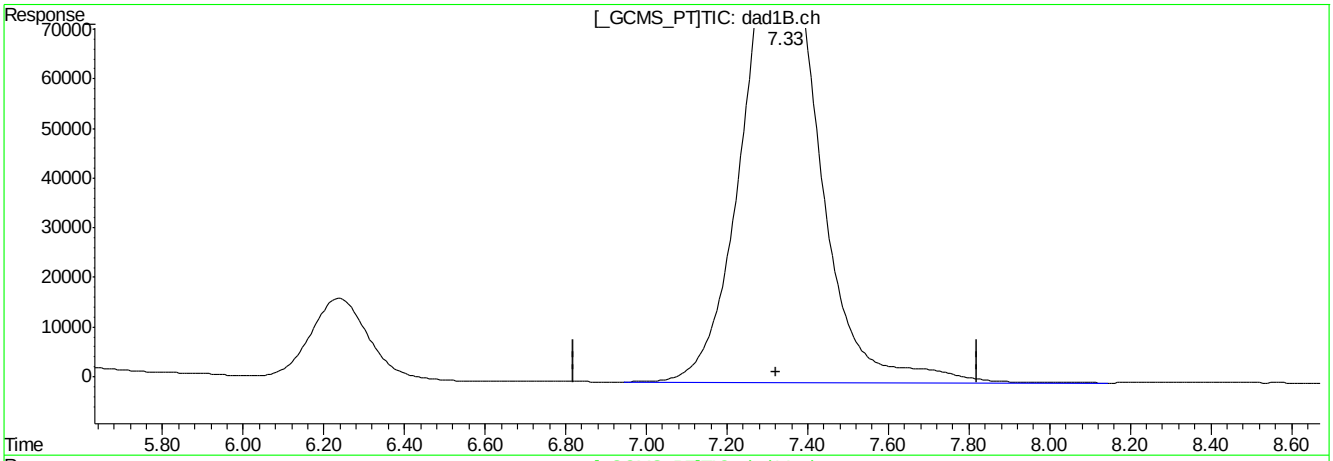
response 1712231

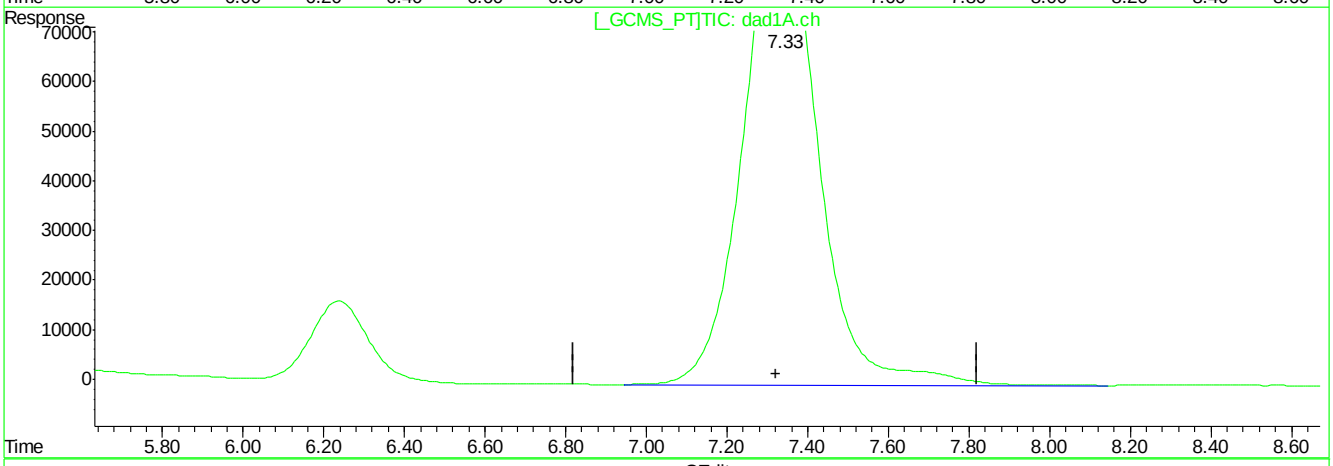
(+) = Expected Retention Time
GG619917.D 8330RPB.M_090920.M Tue Nov 03 09:27:59 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1A.ch
Acq On : 02-Nov-2020, 15:13:37 Operator: jamesb
Sample : FA80202-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.33min 1282.728ppb

response 12468260

(5) 1,3,5-Trinitrobenzene #2

7.33min 1286.435ppb

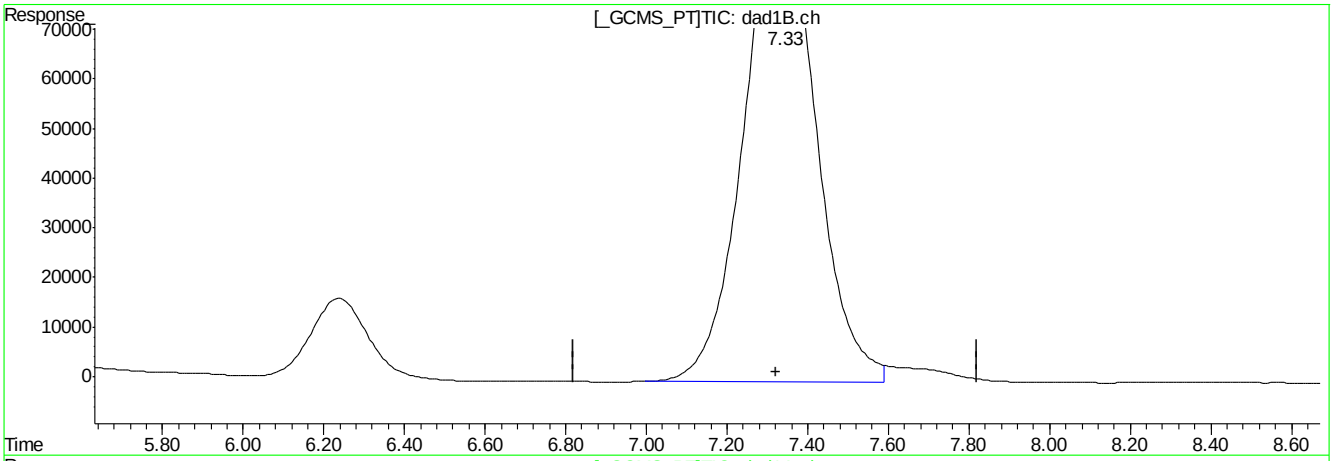
response 12468260

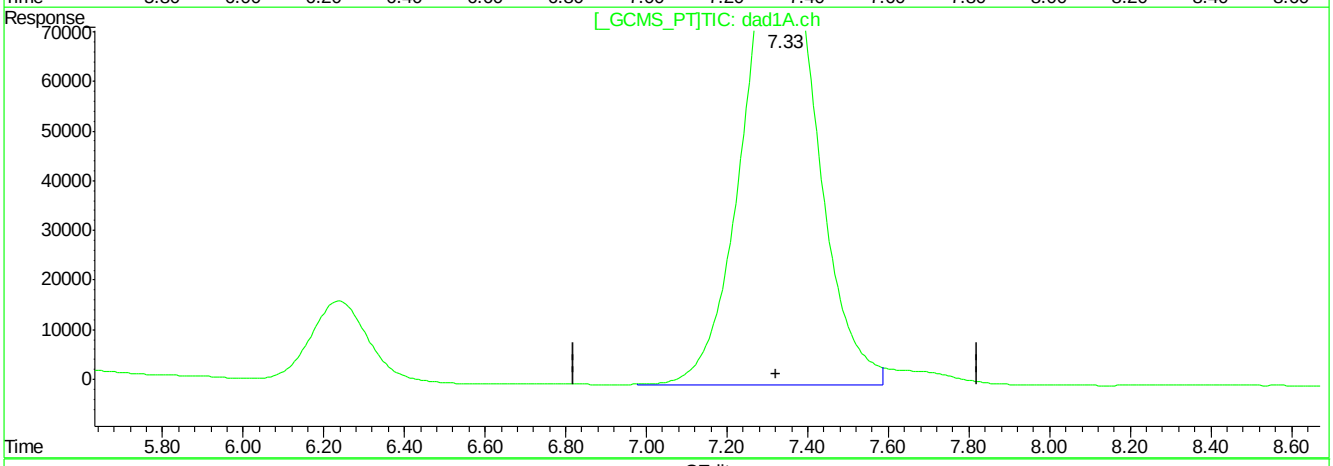
(+) = Expected Retention Time
GG619917.D 8330RPB.M_090920.M Tue Nov 03 09:28:12 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1A.ch
Acq On : 02-Nov-2020, 15:13:37 Operator: jamesb
Sample : FA80202-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.33min 1245.683ppb m

response 12108171

(5) 1,3,5-Trinitrobenzene #2

7.33min 1250.594ppb m

response 12120882

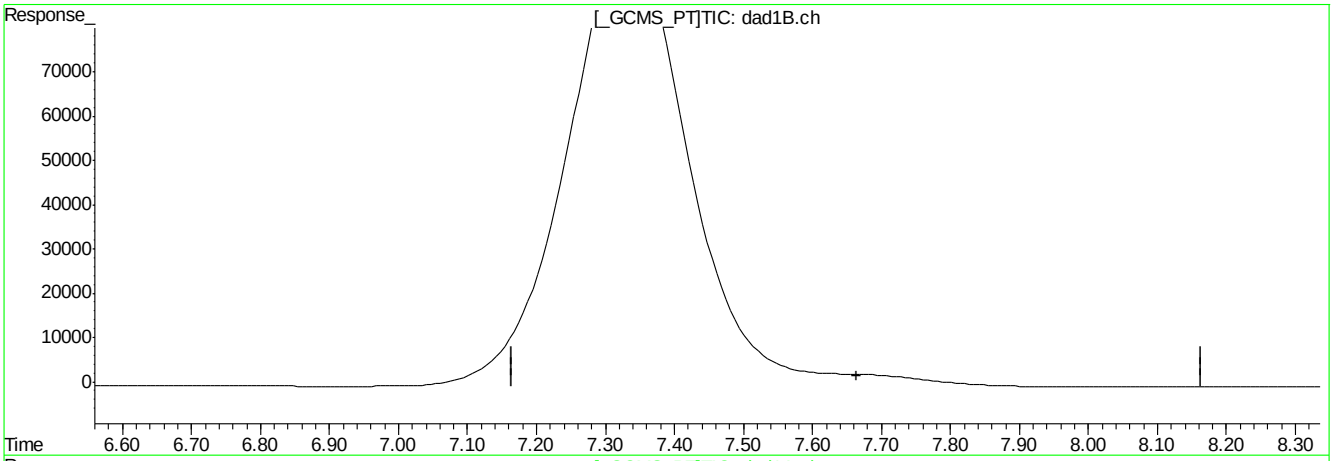
(+) = Expected Retention Time
GG619917.D 8330RPB.M_090920.M Tue Nov 03 09:28:25 2020

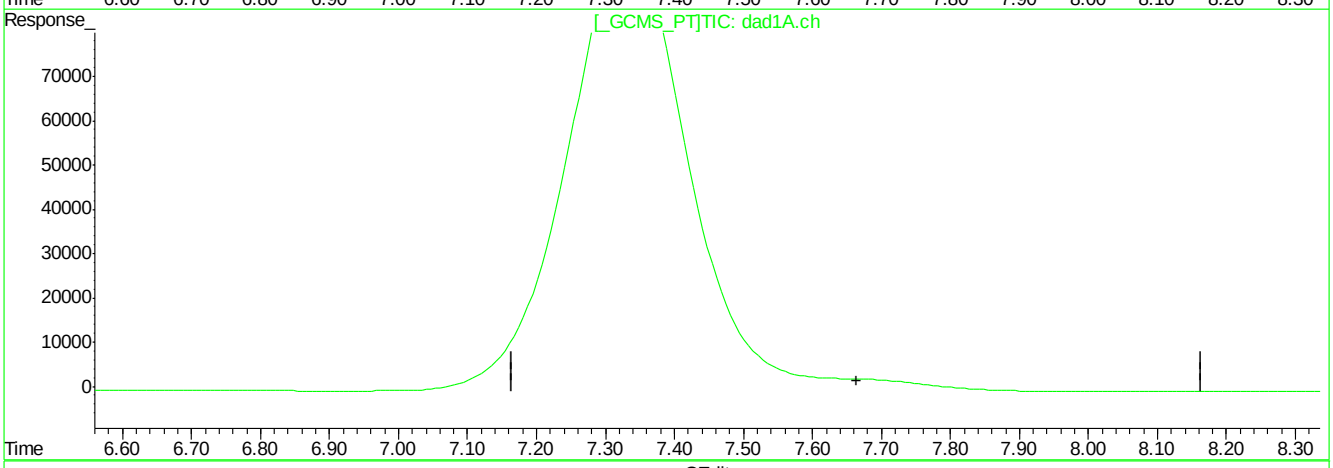
GG619917.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1A.ch
Acq On : 02-Nov-2020, 15:13:37 Operator: jamesb
Sample : FA80202-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(6) RDX

0.00min 0.000ppb

response 0

(6) RDX #2

0.00min 0.000ppb

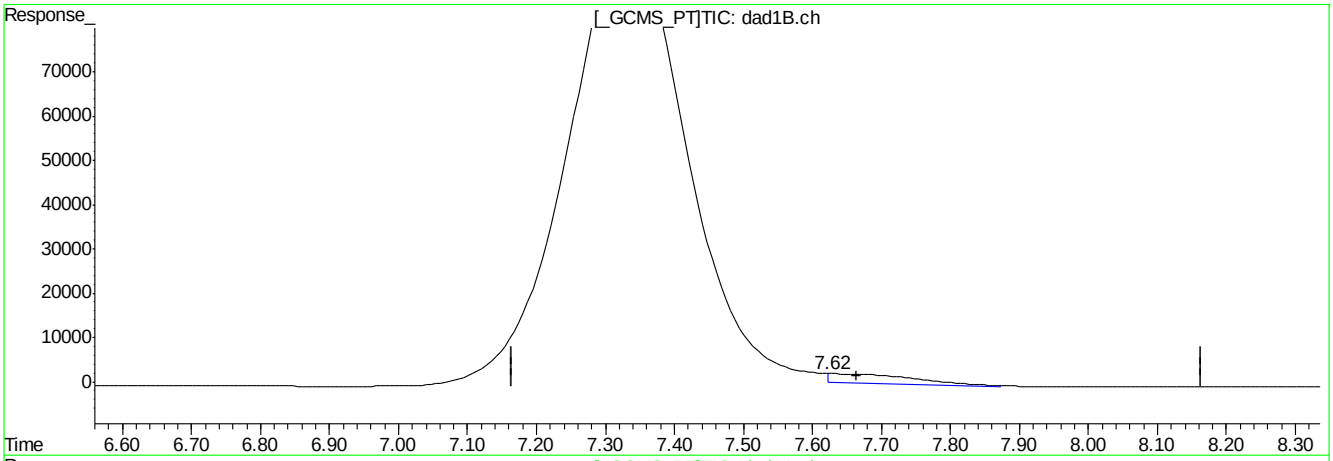
response 0

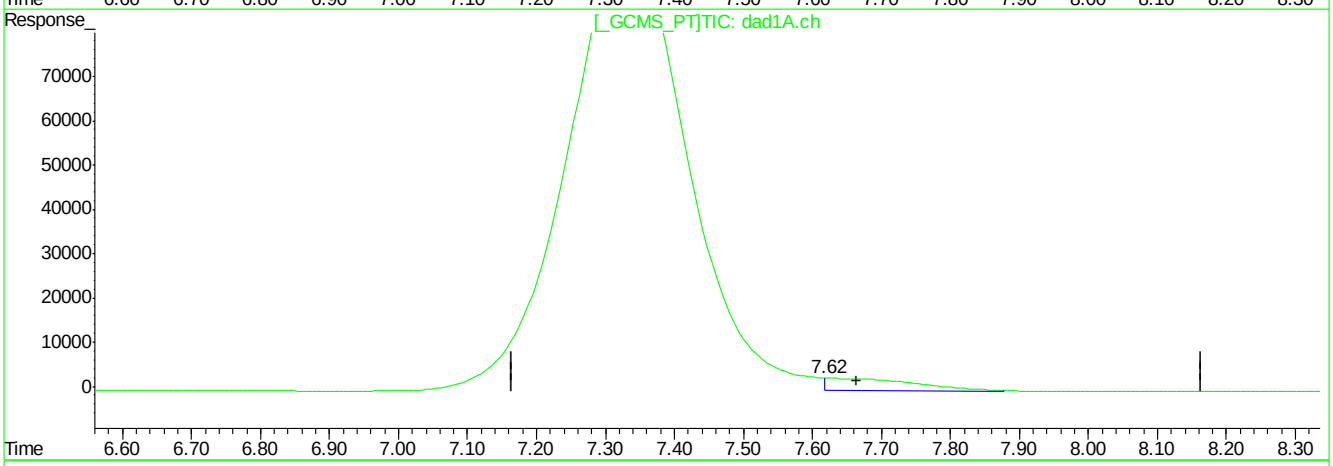
(+) = Expected Retention Time
GG619917.D 8330RPB.M_090920.M Tue Nov 03 09:28:37 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1A.ch
Acq On : 02-Nov-2020, 15:13:37 Operator: jamesb
Sample : FA80202-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.62min 42.916ppb m

response 190817

(6) RDX #2

7.62min 55.822ppb m

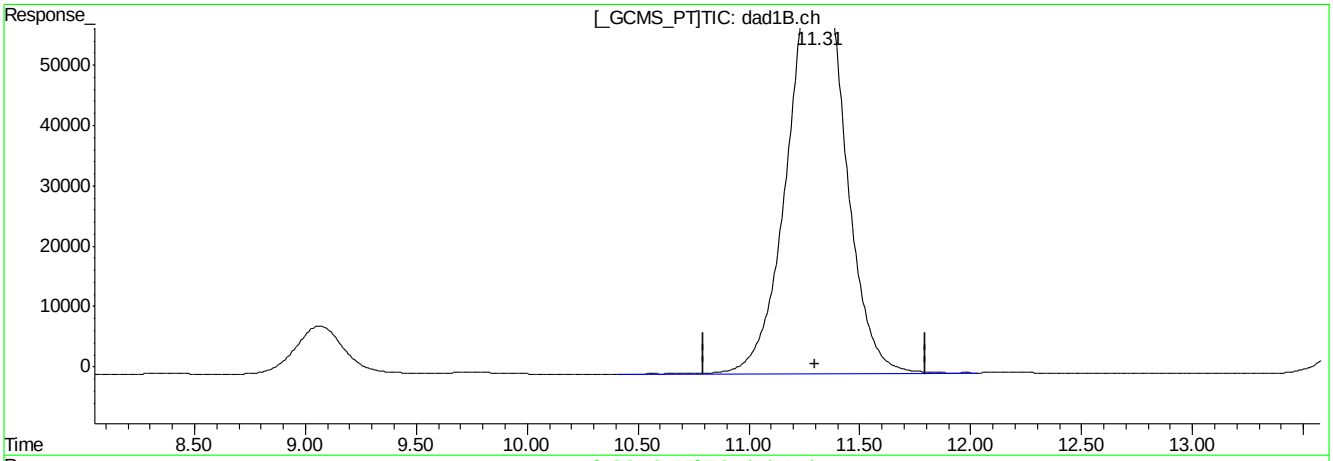
response 248495

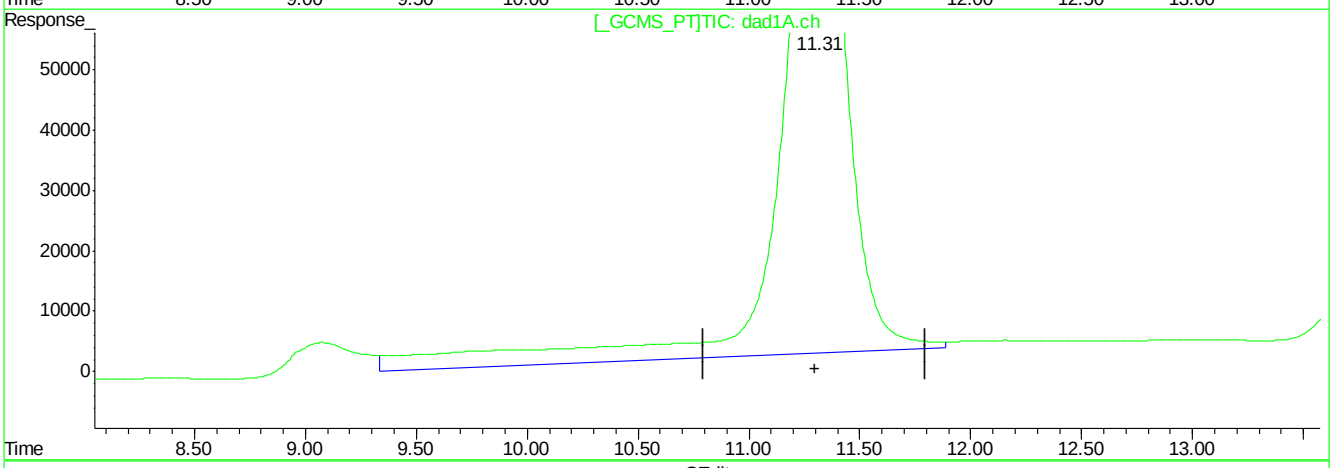
(+) = Expected Retention Time
GG619917.D 8330RPB.M_090920.M Tue Nov 03 09:28:56 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1A.ch
Acq On : 02-Nov-2020, 15:13:37 Operator: jamesb
Sample : FA80202-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.31min 1386.974ppb

response 12488750

(9) 2,4,6-Trinitrotoluene #2

11.31min 1717.140ppb

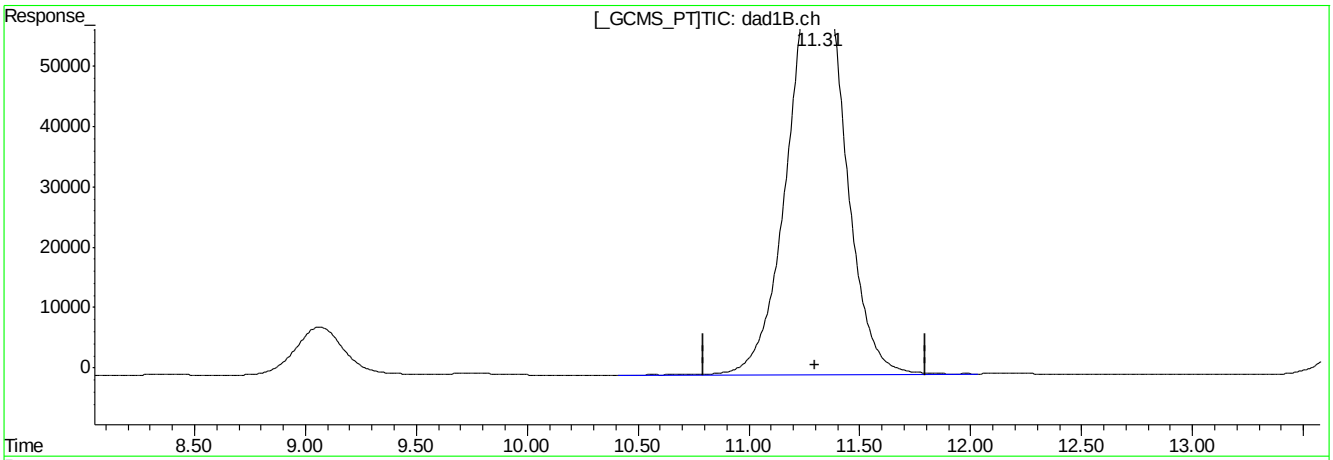
response 19960656

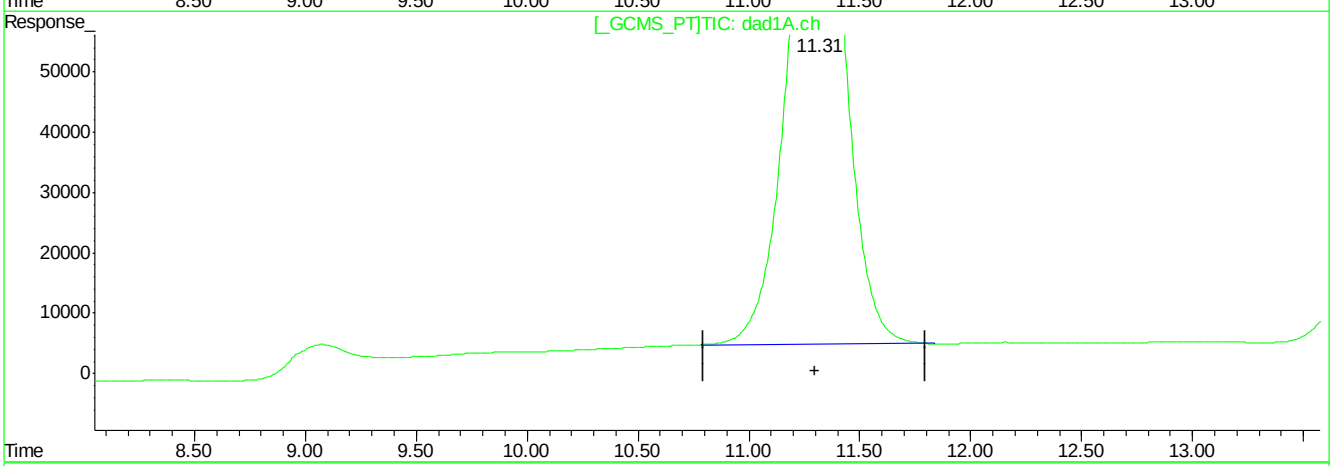
(+) = Expected Retention Time
GG619917.D 8330RPB.M_090920.M Tue Nov 03 09:29:11 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1A.ch
Acq On : 02-Nov-2020, 15:13:37 Operator: jamesb
Sample : FA80202-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.31min 1386.974ppb

response 12488750

(9) 2,4,6-Trinitrotoluene #2

11.31min 1428.506ppb m

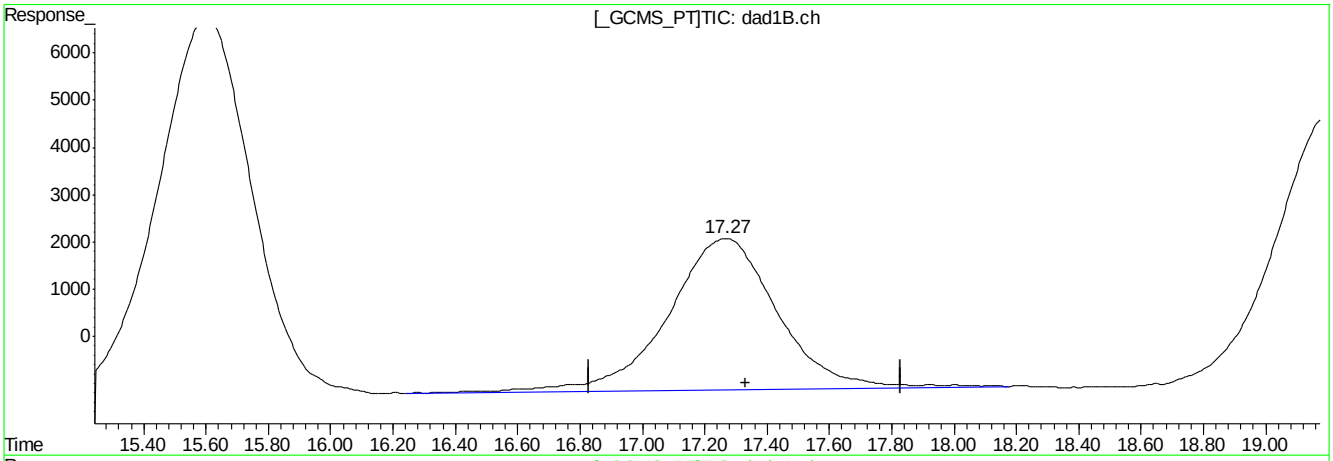
response 16605469

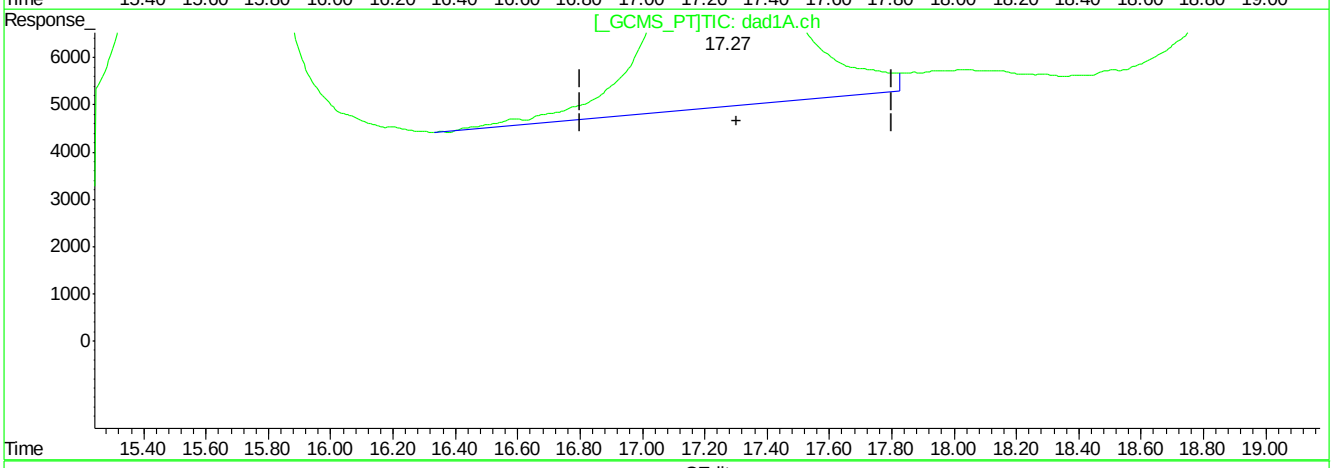
(+) = Expected Retention Time
GG619917.D 8330RPB.M_090920.M Tue Nov 03 09:29:16 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1A.ch
Acq On : 02-Nov-2020, 15:13:37 Operator: jamesb
Sample : FA80202-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.27min 143.135ppb

response 786549

(18) 4-Amino-2,6-Dinitrotoluene #2

17.27min 147.903ppb

response 1519352

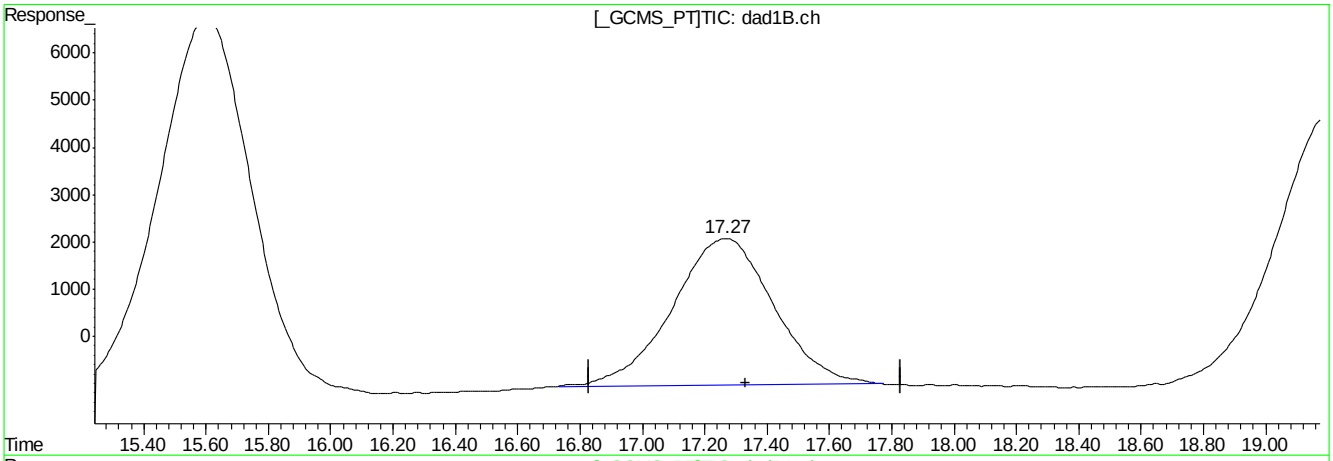
(+) = Expected Retention Time
GG619917.D 8330RPB.M_090920.M Tue Nov 03 09:29:46 2020

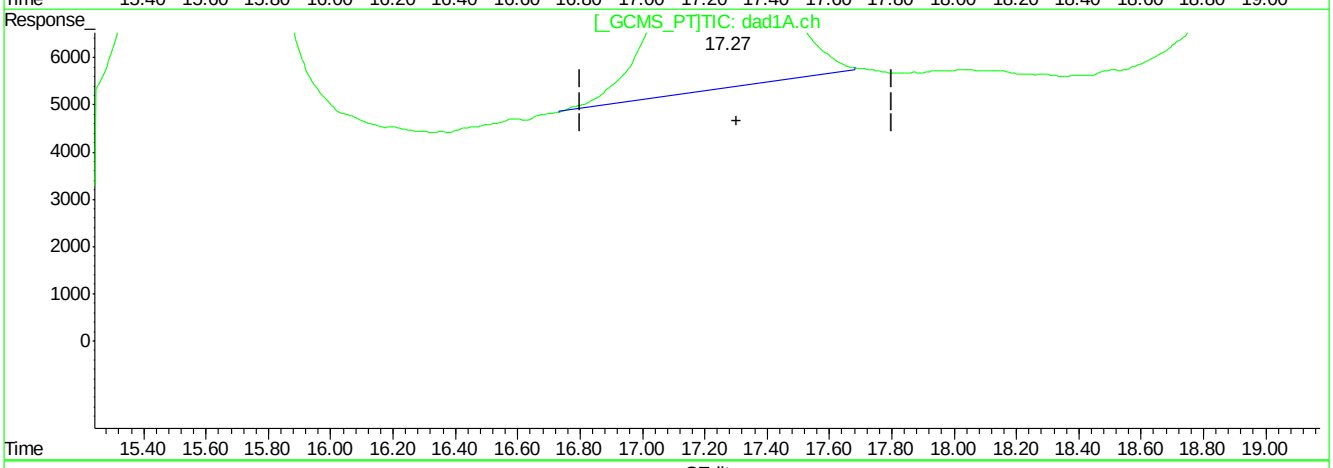
GG619917.D edits: 4-Amino-2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619917.D\dad1A.ch
Acq On : 02-Nov-2020, 15:13:37 Operator: jamesb
Sample : FA80202-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.27min 127.902ppb m

response 702841

(18) 4-Amino-2,6-Dinitrotoluene #2

17.27min 121.566ppb m

response 1248801

(+) = Expected Retention Time
GG619917.D 8330RPB.M_090920.M Tue Nov 03 09:29:57 2020

GG619917.D edits: 4-Amino-2,6-Dinitrotoluene

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/20 18:24

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388847.D\dad1B.ch Vial: 20
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388847.D\dad1A.ch
Acq On : 30-Oct-2020, 23:18:35 Operator: jamesb
Sample : FA80202-2 Inst : G1315B
Misc : op82734,GPP2355,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16:57 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.48	11.48	985460	1727033	488.118m	471.726m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	97.62%	94.35%
	Target Compounds						
1)	TNX	1.38	1.38	54648	77729	18.011m	15.677m
2)	HMX	1.51	1.51	799016	2431149	533.572	571.456
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	3.01	3.01	100466	215382	55.799	75.091
6)	1,3,5-Trinitrobe	4.81	4.81	4182879	8204757	1053.938	1067.832
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.43	6.43	217769	363375	57.229	55.946m
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	10.16	10.16	4575014	5505595	1237.668	1280.173
13)	2-Amino-4,6-Dini	10.59	10.59	460086	609888	139.979	127.978
14)	4-Amino-2,6-Dini	11.12	11.12	216306	311390	88.564	72.846
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

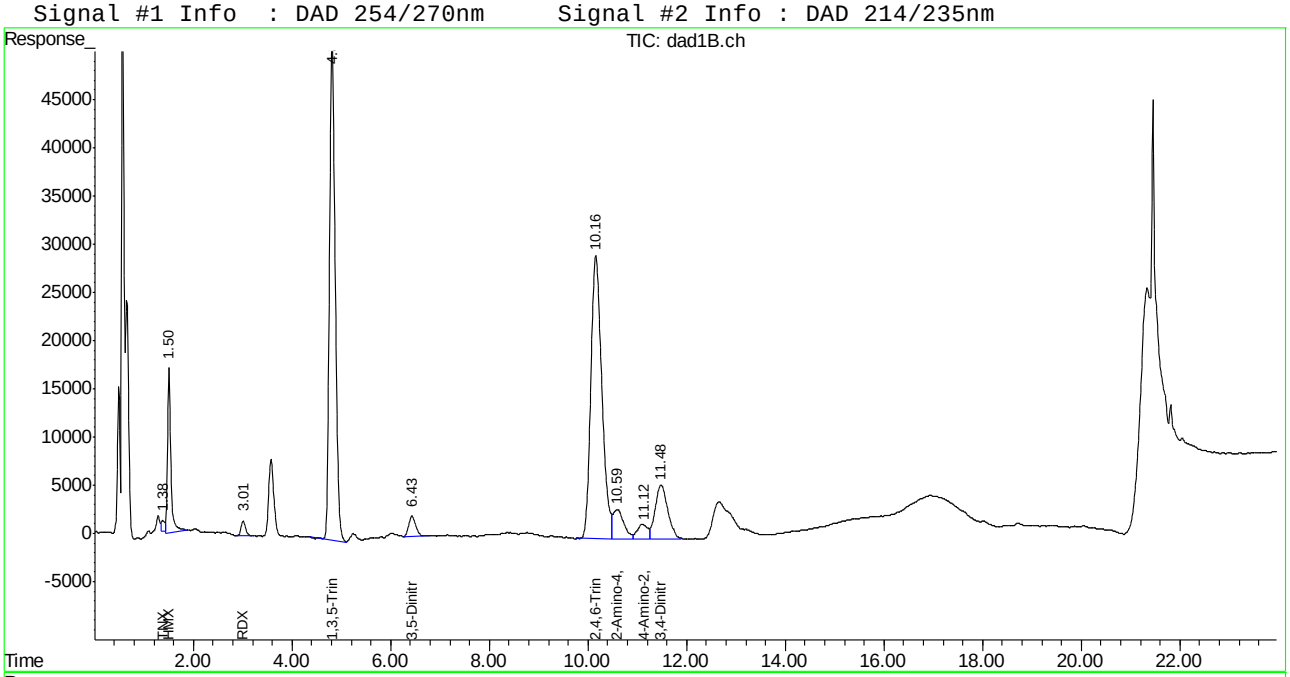
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388847.D GPP2336_092420_DV.M Thu Nov 12 15:58:20 2020 Page 1

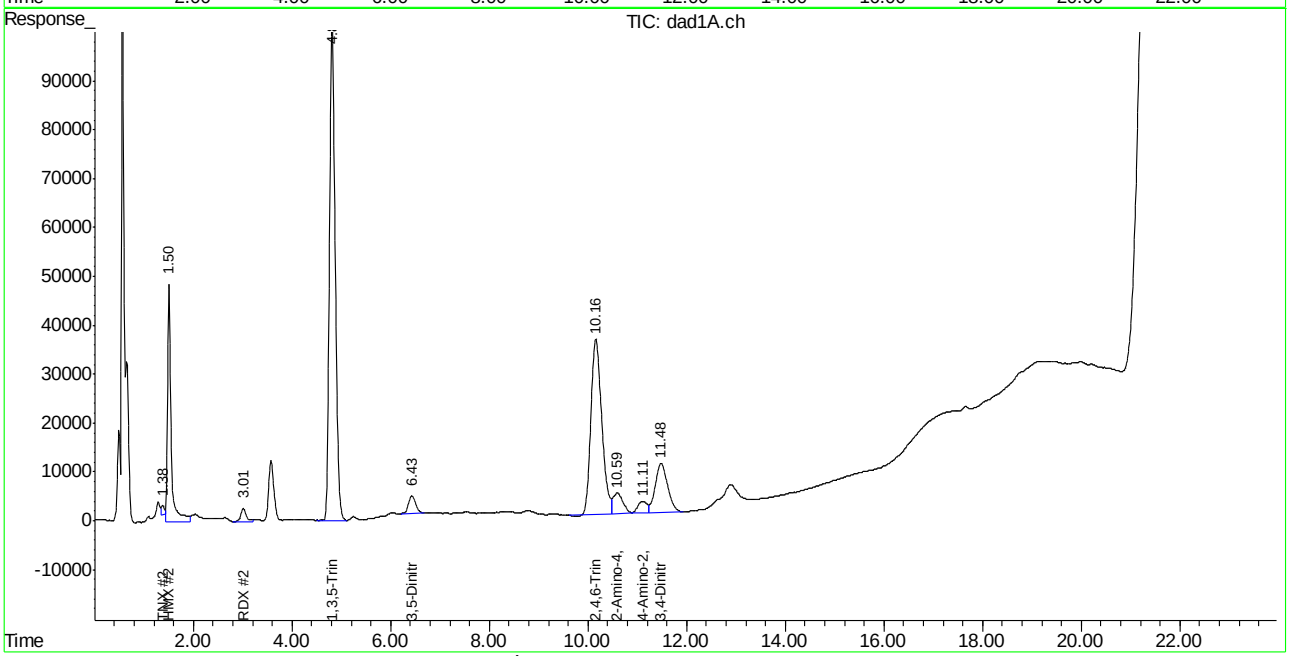
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388847.D\dad1B.ch Vial: 20
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388847.D\dad1A.ch
Acq On : 30-Oct-2020, 23:18:35 Operator: jamesb
Sample : FA80202-2 Inst : G1315B
Misc : op82734,GPP2355,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:52 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

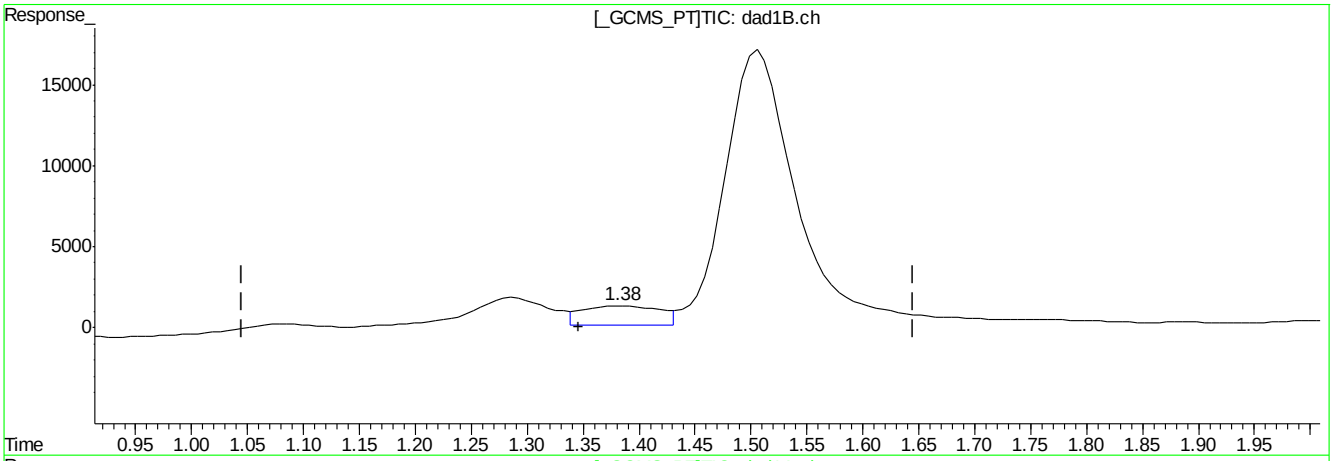
Sample Number: FA80202-2
Lab FileID: PP388847.D
Injection Time: 10/30/20 23:18
Method: SW846 8330B
Analyst approved: 11/12/20 16:16 William Hustedde
Supervisor approved: 11/12/20 18:24 Naresh Jiawan

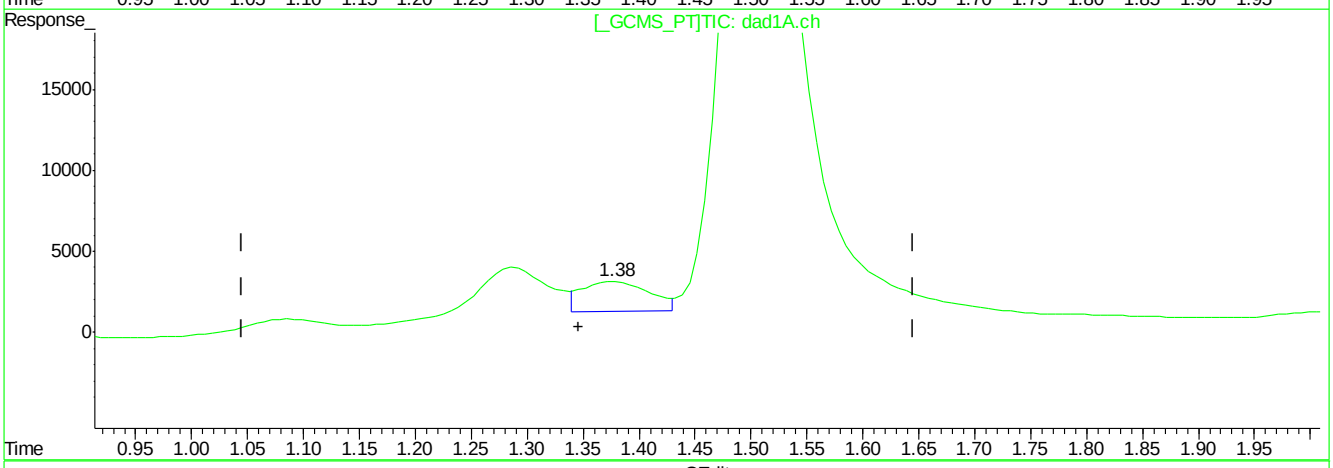
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.38	Poor instrument integration
TNX		2	1.38	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.43	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.48	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.48	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388847.D\dad1B.ch Vial: 20
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388847.D\dad1A.ch
Acq On : 30-Oct-2020, 23:18:35 Operator: jamesb
Sample : FA80202-2 Inst : G1315B
Misc : op82734,GPP2355,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.38min 18.011ppb m

response 54648

(1) TNX #2

1.38min 15.677ppb m

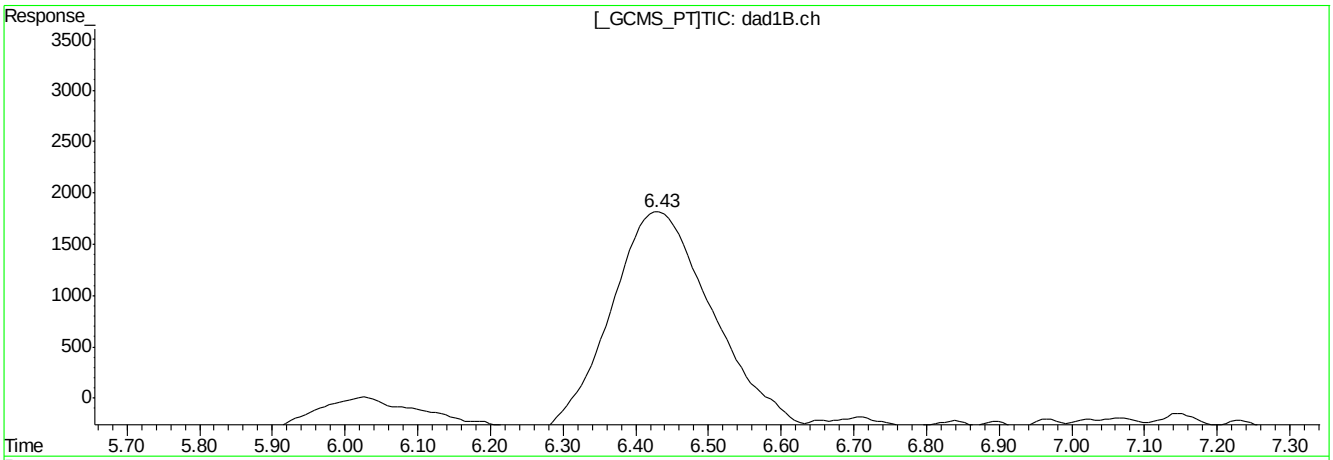
response 77729

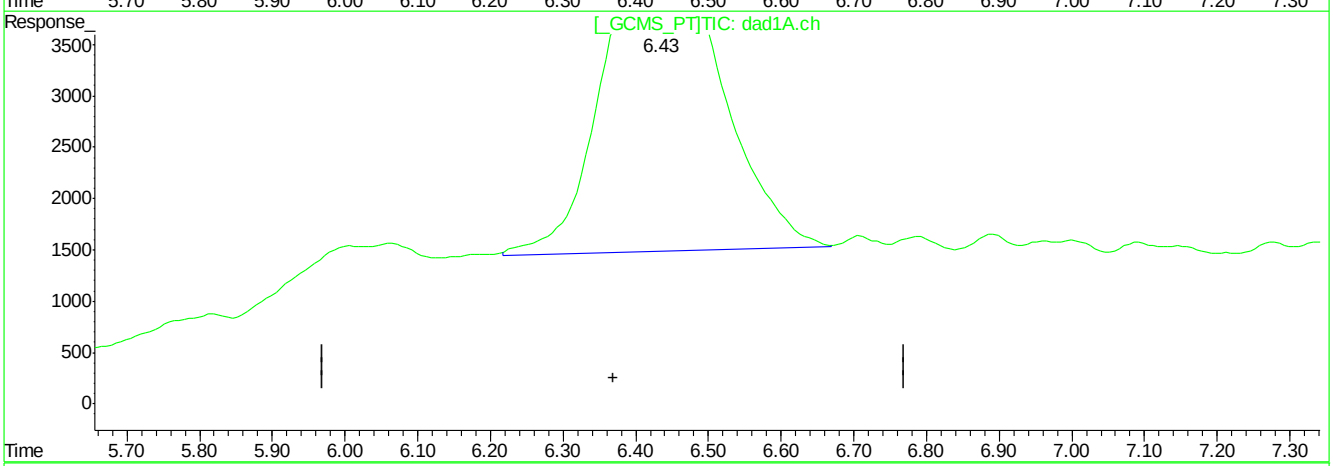
(+) = Expected Retention Time
PP388847.D GPP2336_092420_DV.M Thu Nov 12 15:49:09 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388847.D\dad1B.ch Vial: 20
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388847.D\dad1A.ch
Acq On : 30-Oct-2020, 23:18:35 Operator: jamesb
Sample : FA80202-2 Inst : G1315B
Misc : op82734,GPP2355,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:49 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.43min 57.229ppb

response 217769

(8) 3,5-Dinitroaniline #2

6.43min 55.946ppb m

response 363375

(+) = Expected Retention Time
PP388847.D GPP2336_092420_DV.M Thu Nov 12 15:52:18 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/03/20 16:10

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : op82734,GGG2889,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 03 09:20:48 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.82	13.82	2728653	5301280	500.376m	510.453m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		100.08%	102.09%
	Target Compounds						
1)	TNX	5.09	5.09	115772	118921	19.106m	19.516m
2)	HMX	5.40	5.40	1578553	1577415	442.412m	441.646m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.33	7.33	10586837	10526848	1089.169m	1086.127m
6)	RDX	7.60	7.59	310264	285138	69.780m	64.053m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.30	11.30	11442357	15094581	1270.764m	1298.530m
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
16)	3,5-Dinitroanili	15.57	15.57	1619915	2540619	160.289m	158.140m
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.23	17.23	787821	1447699	143.366	140.928
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.18	19.18	1267934	2000778	141.536m	156.338m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

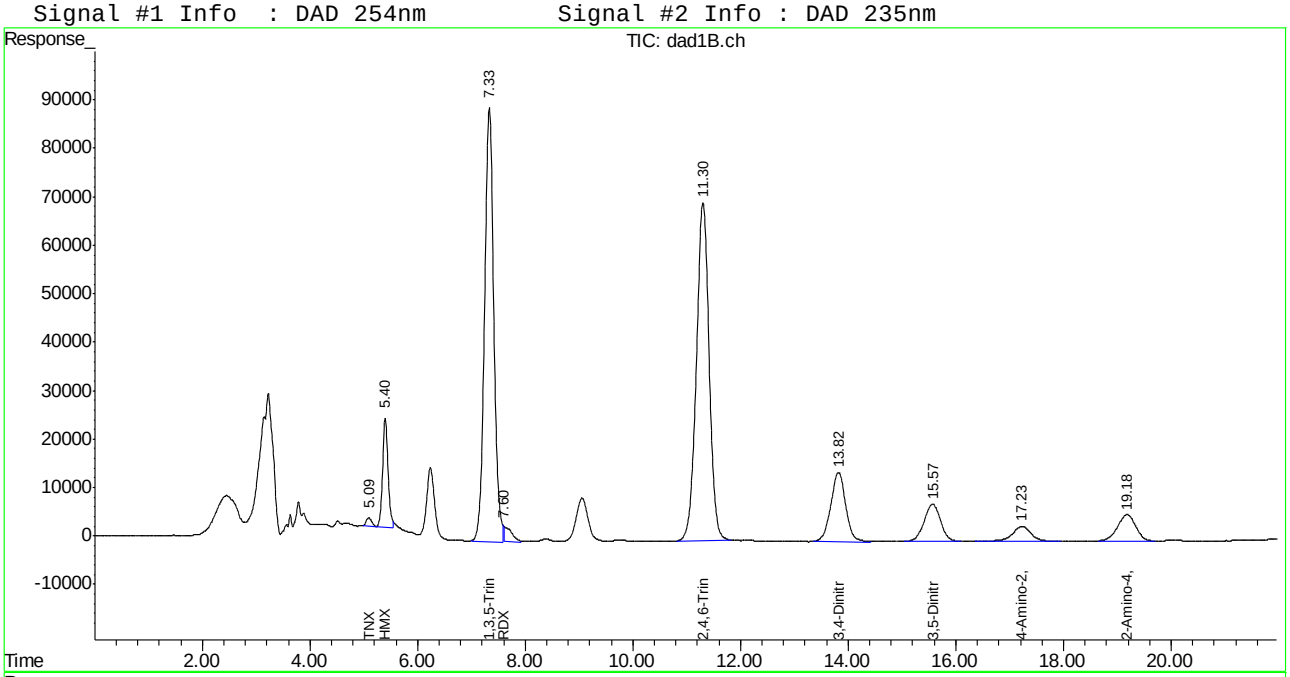
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619918.D 8330RPB.M_090920.M Tue Nov 03 11:14:44 2020 Page 1

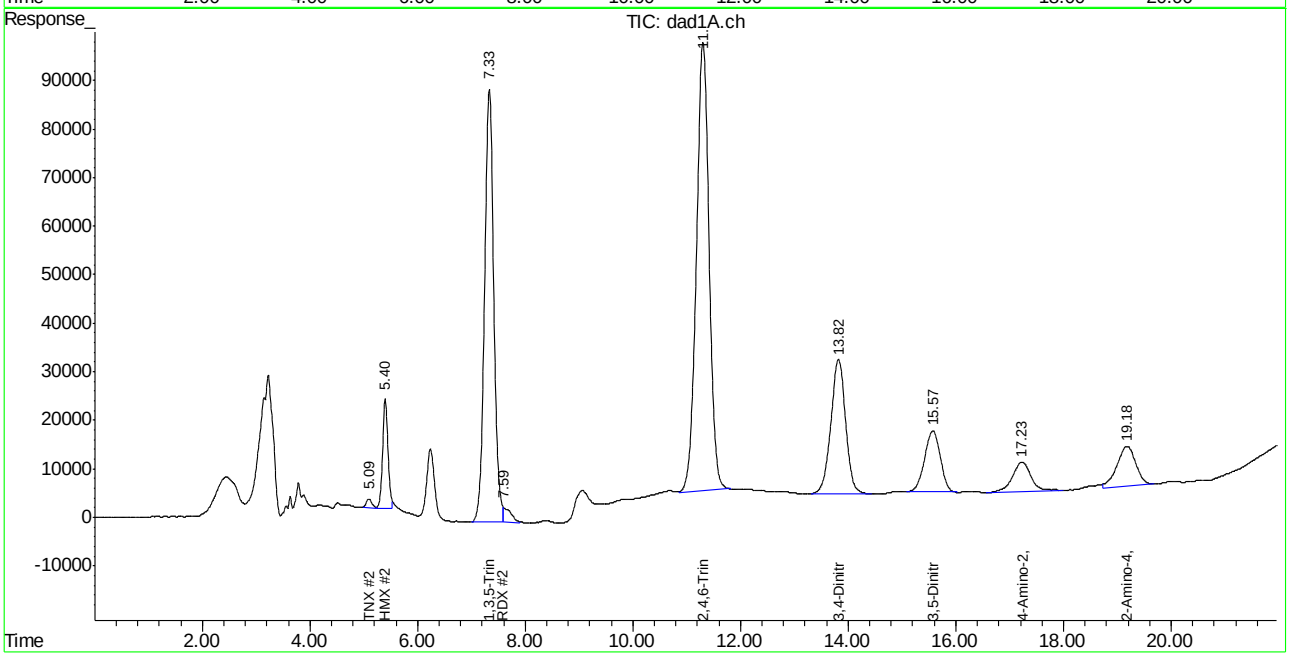
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : op82734,GGG2889,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:40 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

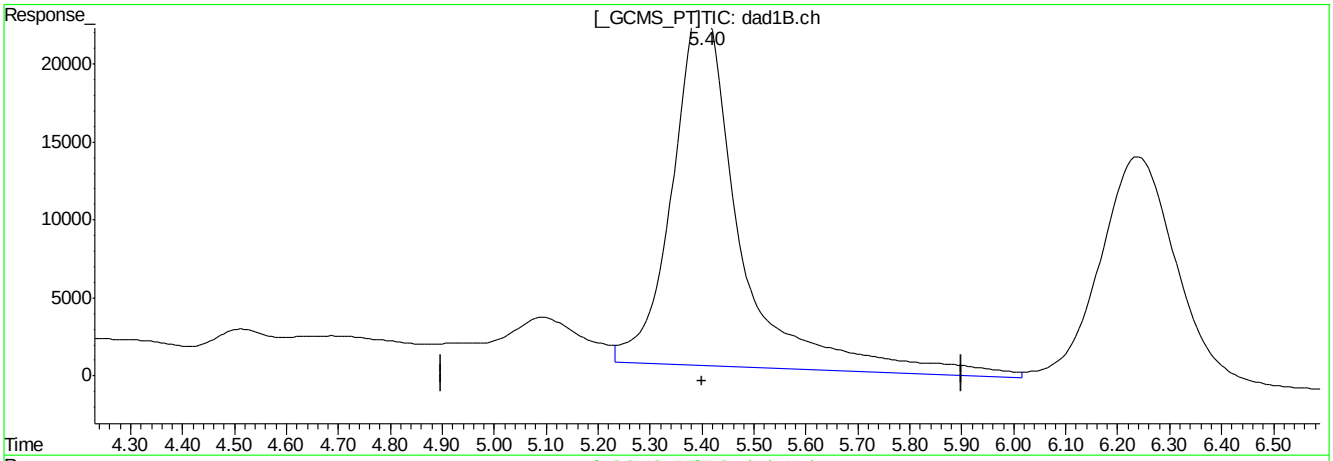
Sample Number: FA80202-2
Lab FileID: GG619918.D
Injection Time: 11/02/20 15:43
Method: SW846 8330B
Analyst approved: 11/03/20 14:43 James Boone
Supervisor approved: 11/03/20 16:10 Naresh Jiawan

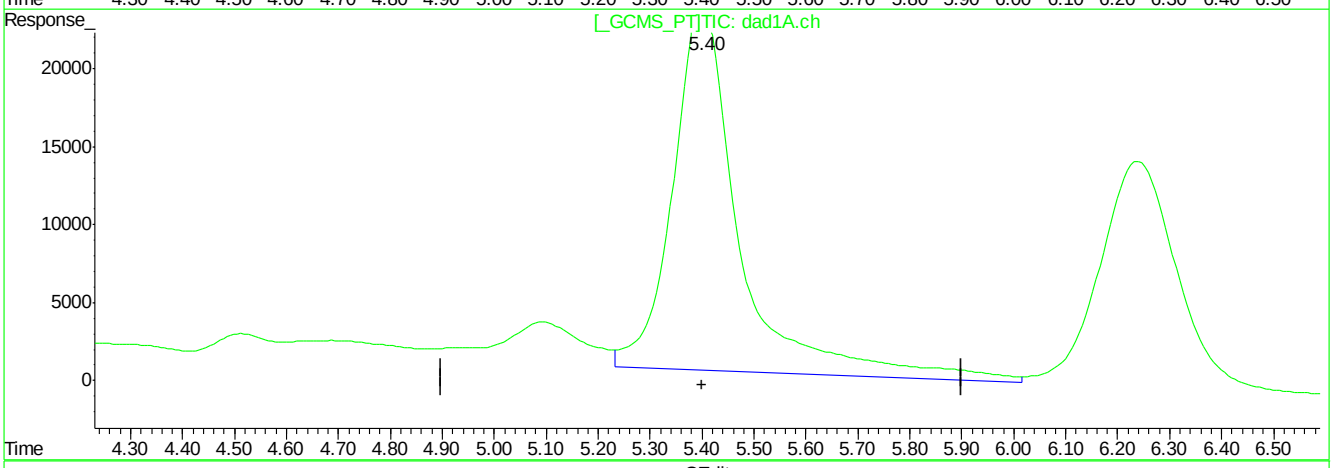
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	5.09	Poor instrument integration
TNX		2	5.09	Poor instrument integration
HMX	2691-41-0	1	5.40	Poor instrument integration
HMX	2691-41-0	2	5.40	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	7.33	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.33	Poor instrument integration
RDX	121-82-4	2	7.59	Poor instrument integration
RDX	121-82-4	1	7.60	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	11.30	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.30	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	13.82	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	13.82	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	15.57	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	15.57	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	19.18	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.18	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.40min 588.166ppb

response 2098611

(2) HMX #2

5.40min 587.571ppb

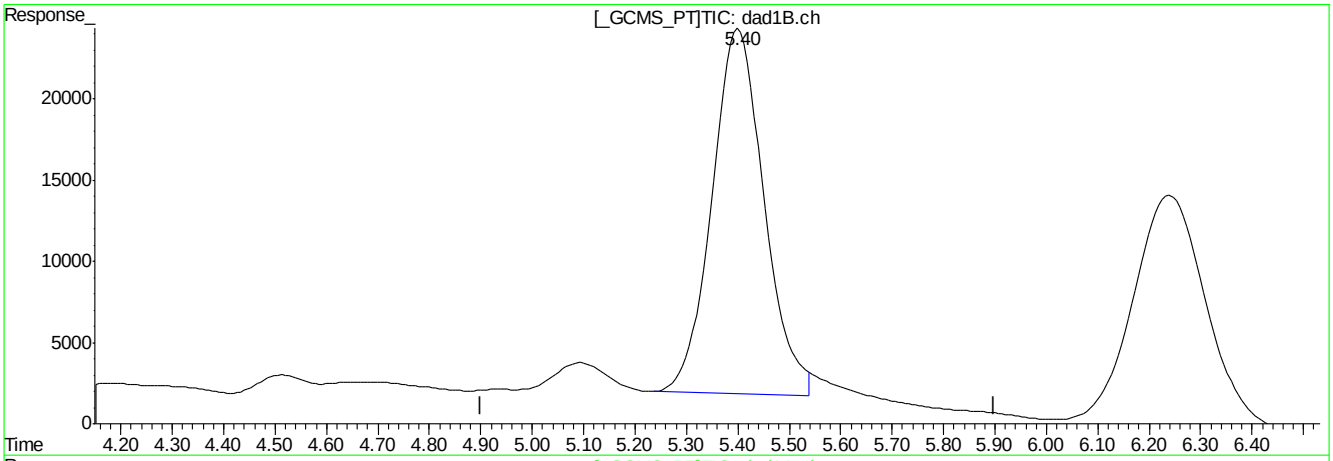
response 2098611

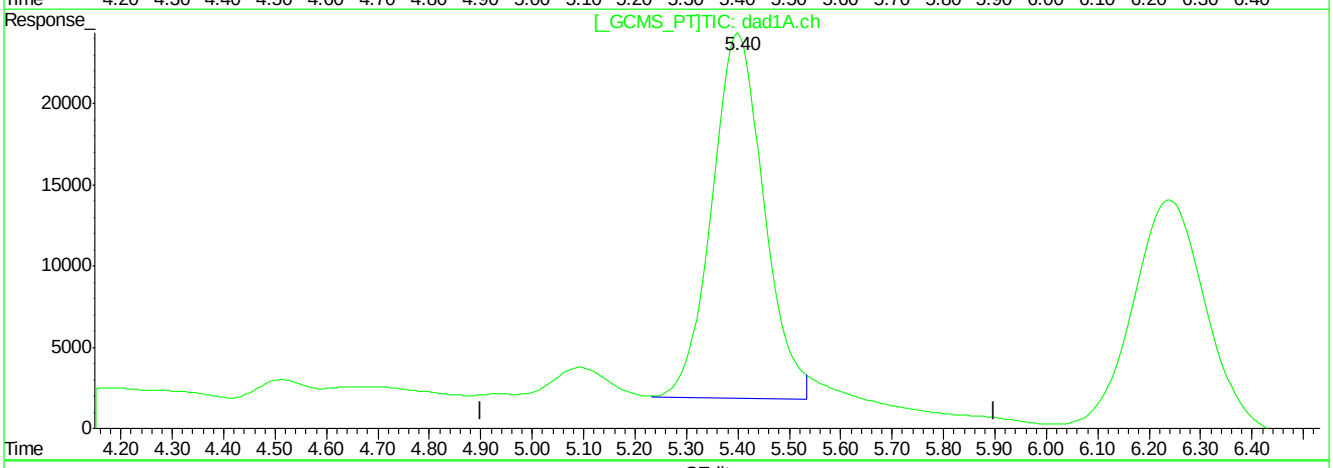
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:37:20 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.40min 442.412ppb m

response 1578553

(2) HMX #2

5.40min 441.646ppb m

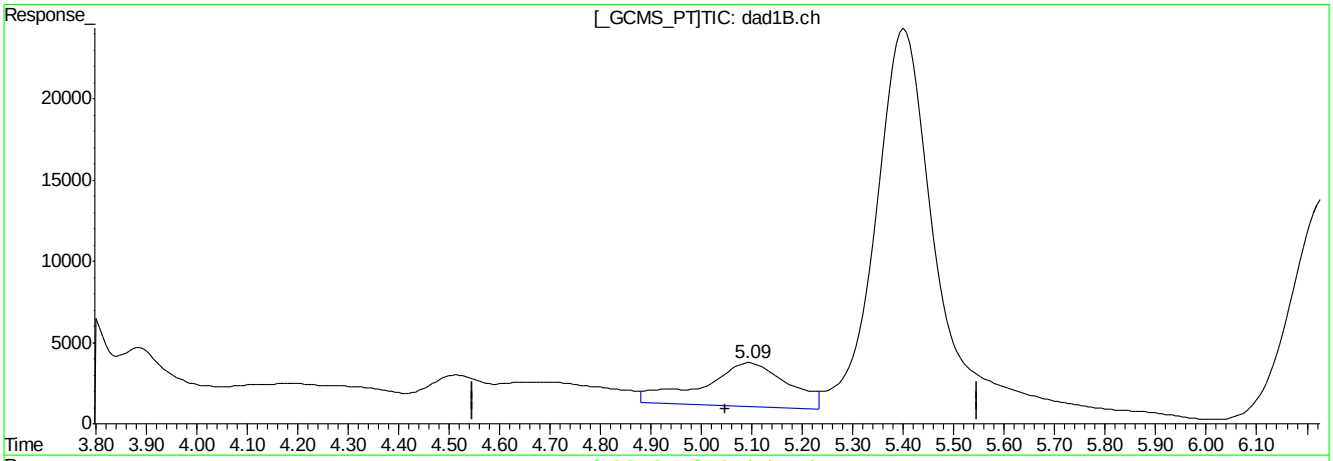
response 1577415

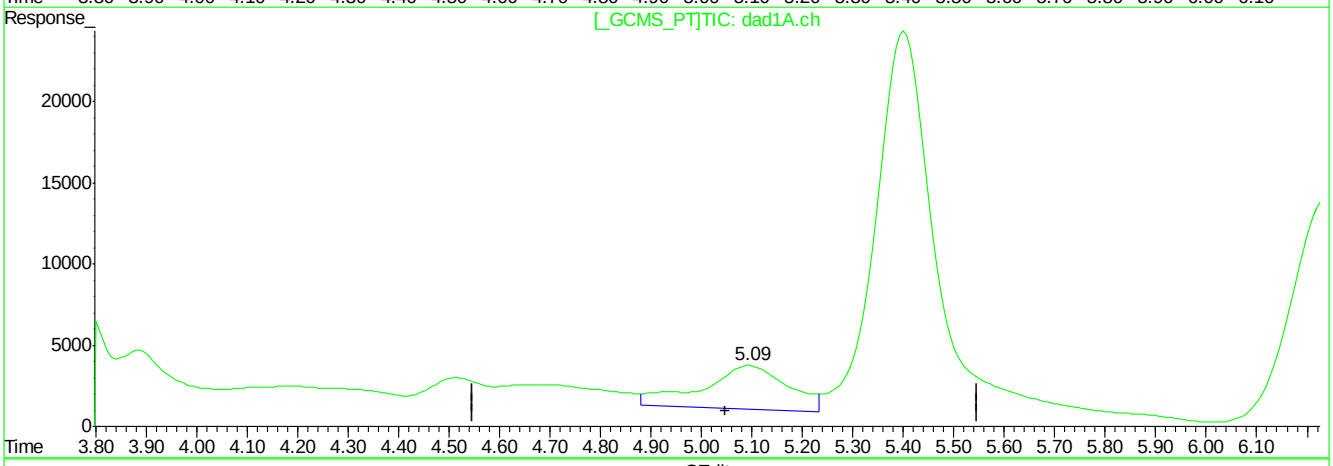
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:37:39 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(1) TNX

5.10min 53.143ppb

response 322024

(1) TNX #2

5.10min 52.846ppb

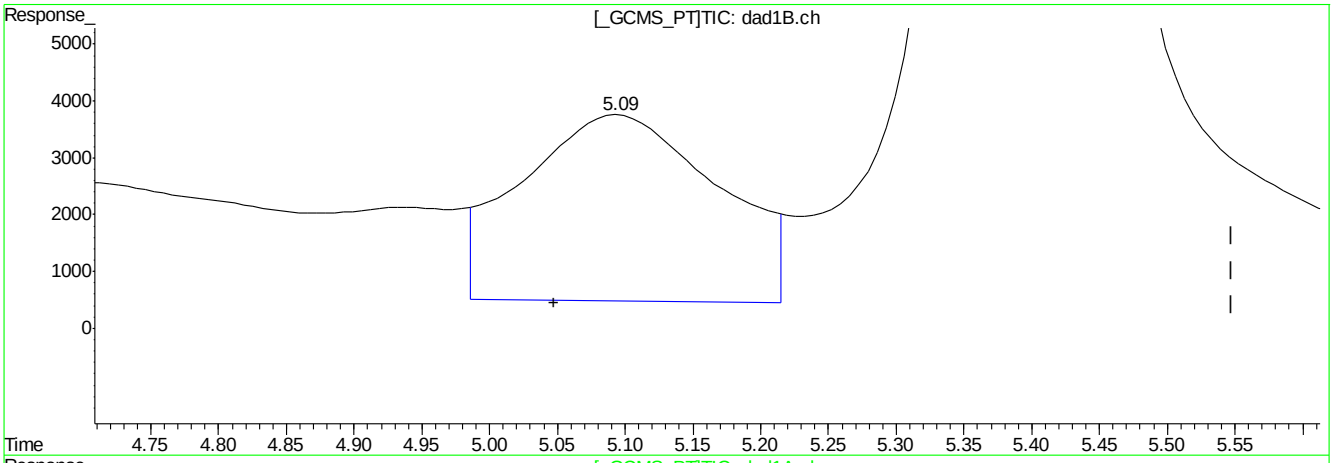
response 322024

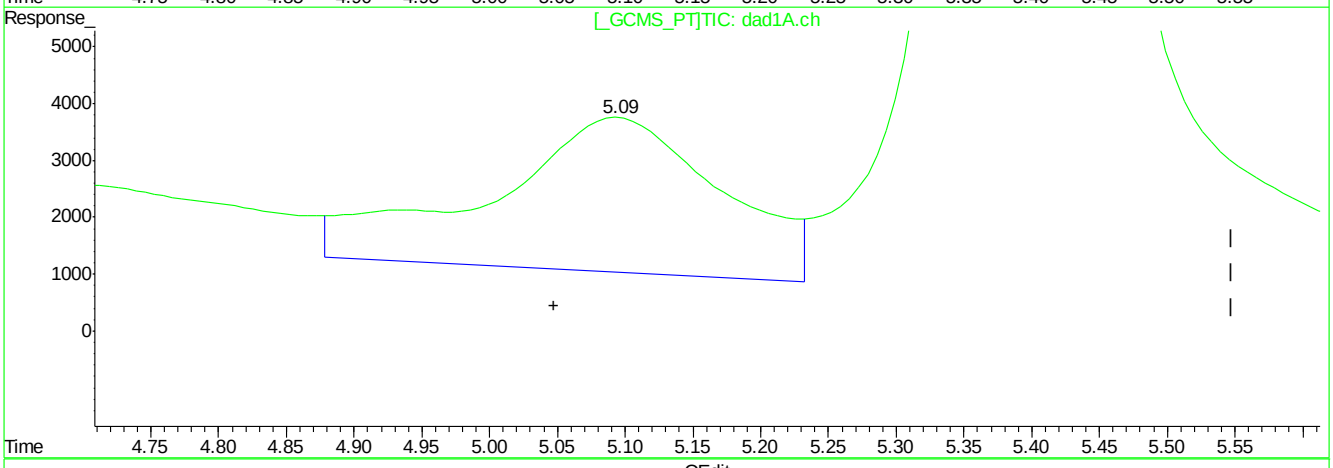
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:37:44 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(1) TNX

5.09min 54.652ppb m

response 331170

(1) TNX #2

5.10min 52.846ppb

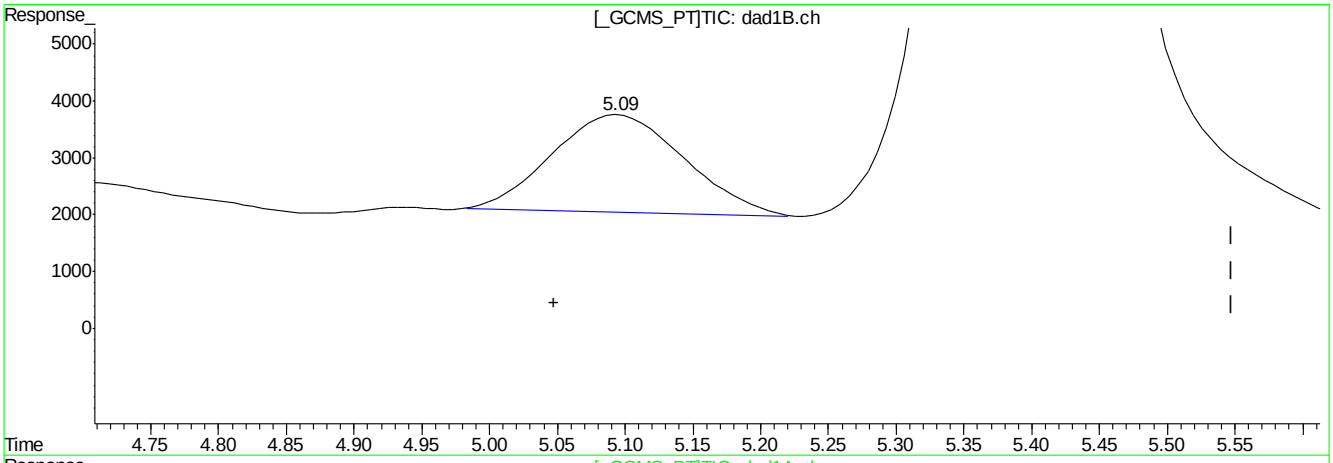
response 322024

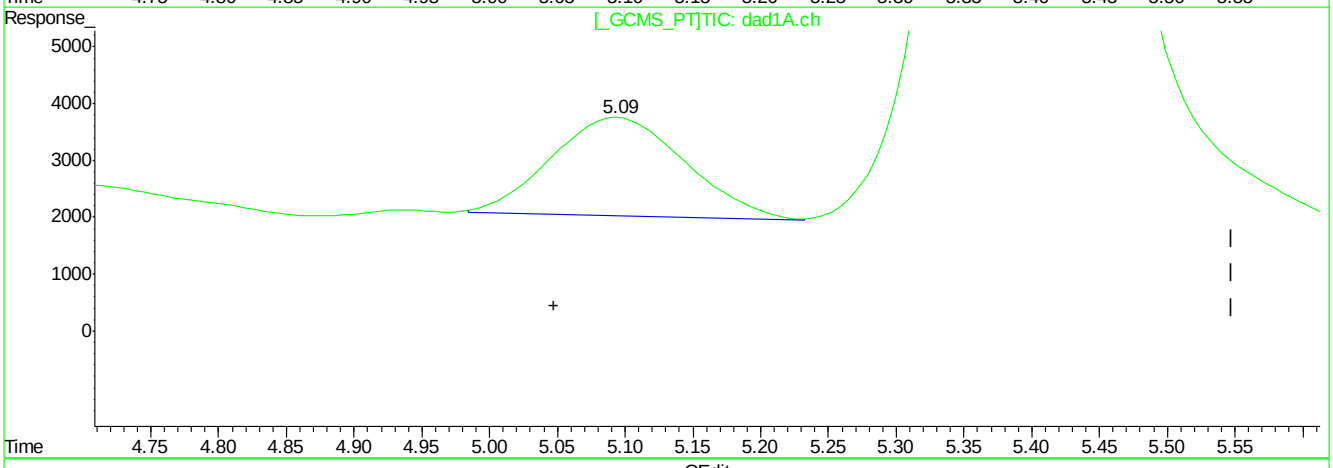
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:37:50 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(1) TNX

5.09min 19.106ppb m

response 115772

(1) TNX #2

5.09min 19.516ppb m

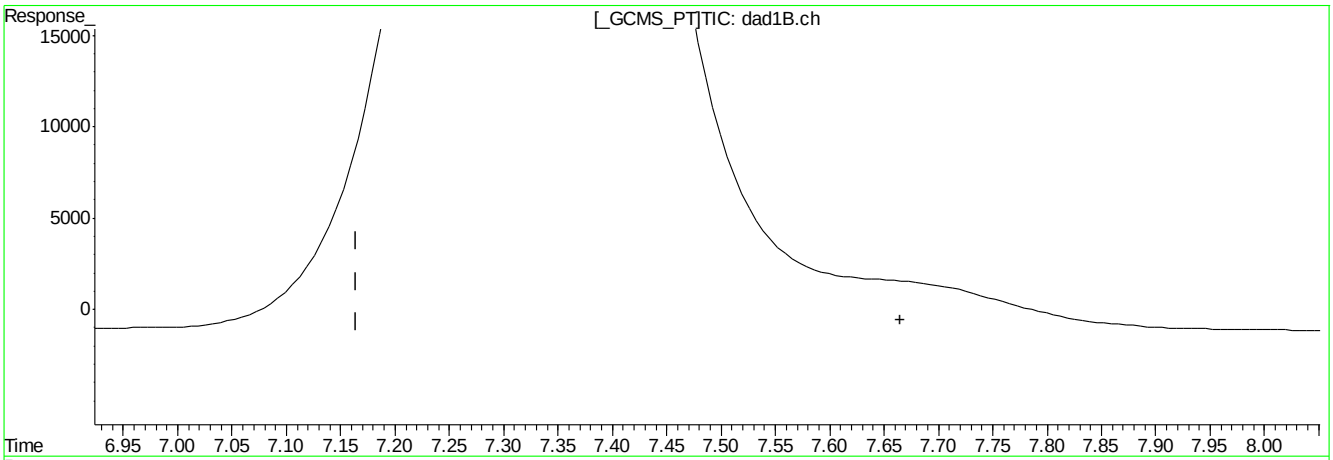
response 118921

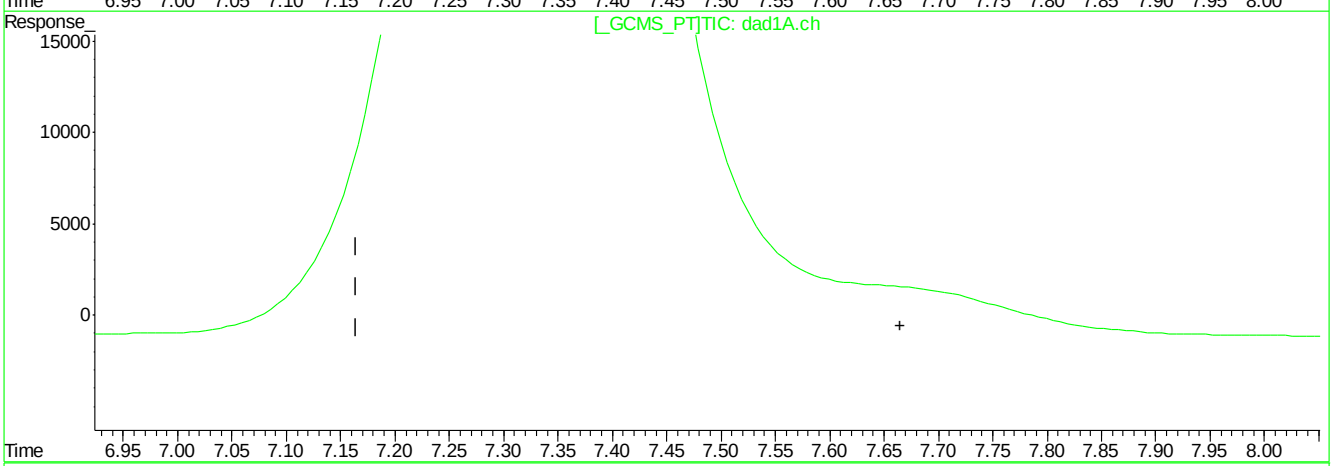
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:37:57 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(6) RDX

0.00min 0.000ppb

response 0

(6) RDX #2

0.00min 0.000ppb

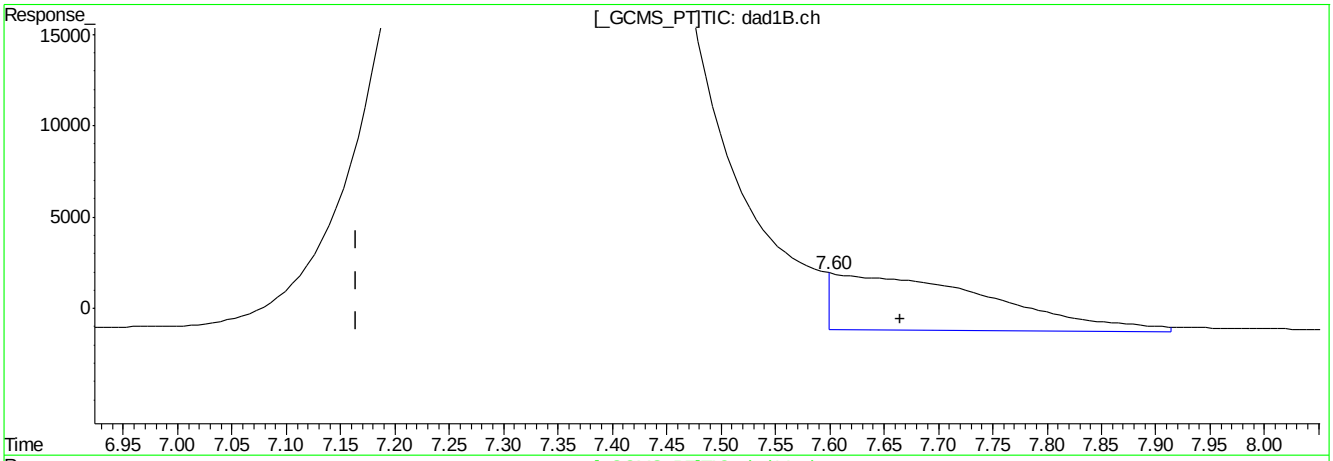
response 0

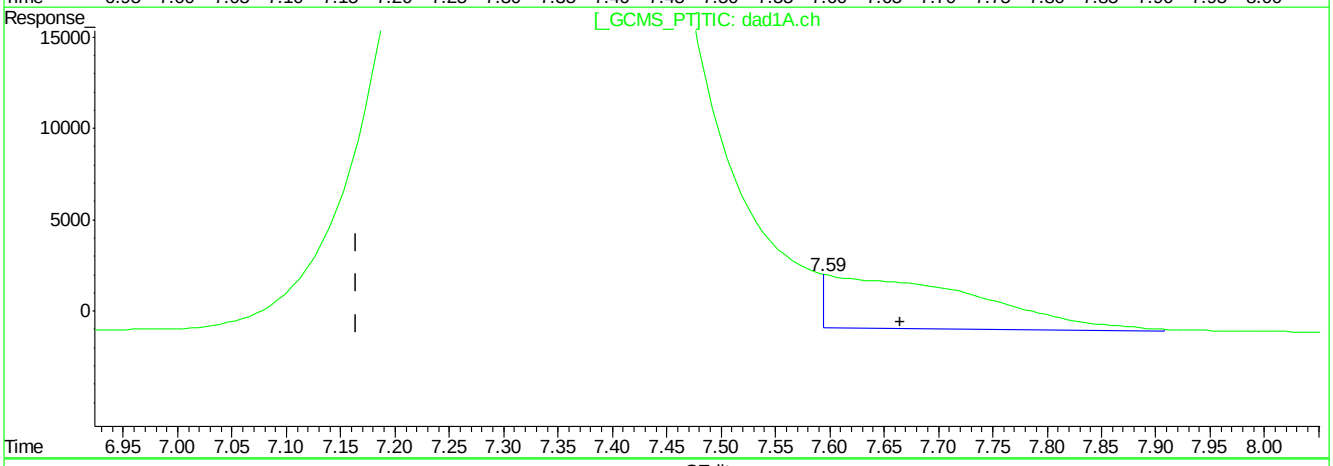
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:38:10 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.60min 69.780ppb m

response 310264

(6) RDX #2

7.59min 64.053ppb m

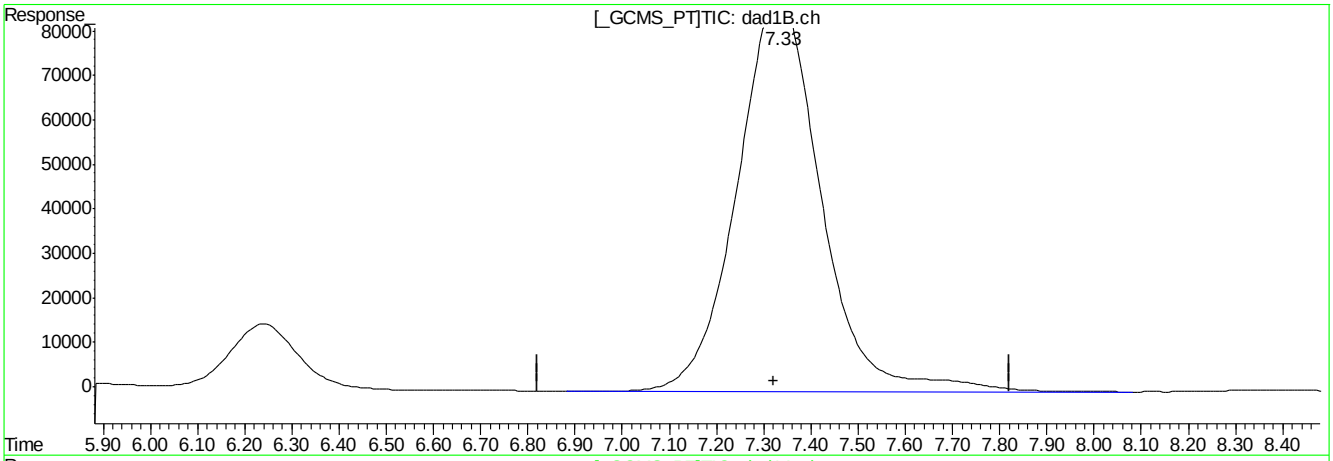
response 285138

(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:38:22 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration



(5) 1,3,5-Trinitrobenzene

7.33min 1120.815ppb

response 10894447

(5) 1,3,5-Trinitrobenzene #2

7.33min 1124.054ppb

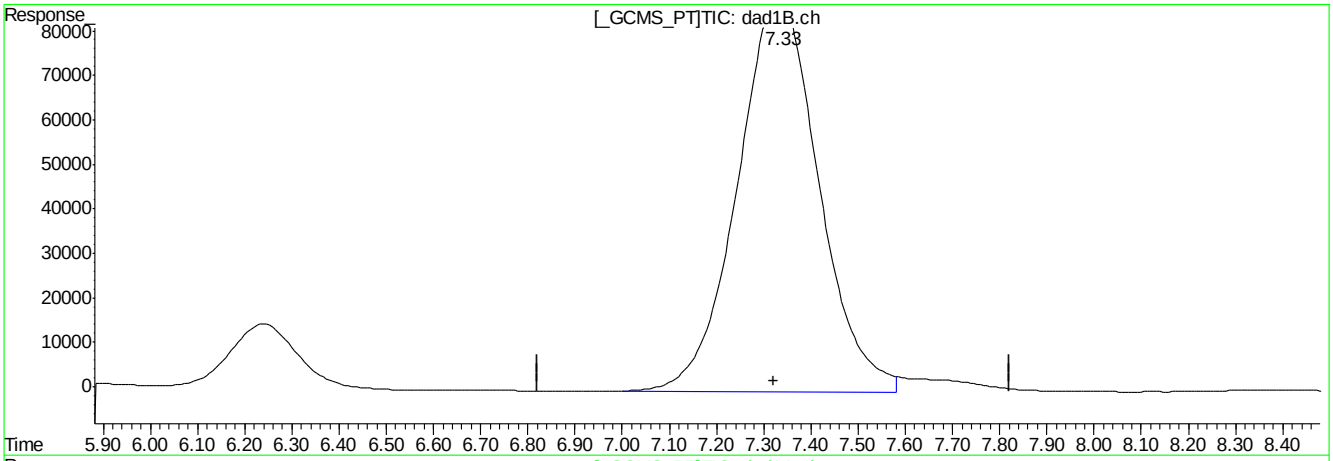
response 10894447

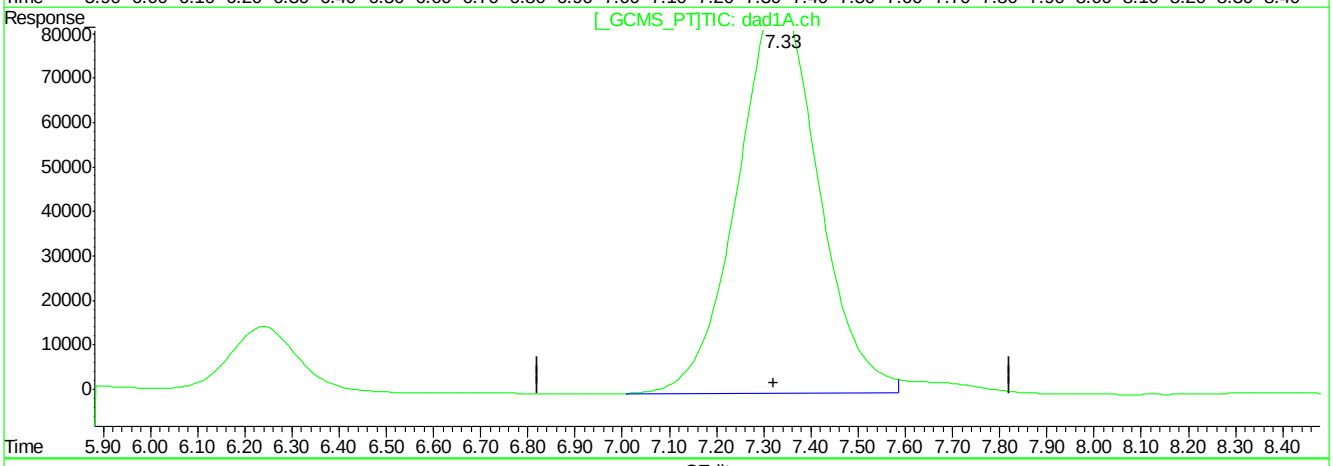
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:38:28 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.33min 1089.169ppb m

response 10586837

(5) 1,3,5-Trinitrobenzene #2

7.33min 1086.127ppb m

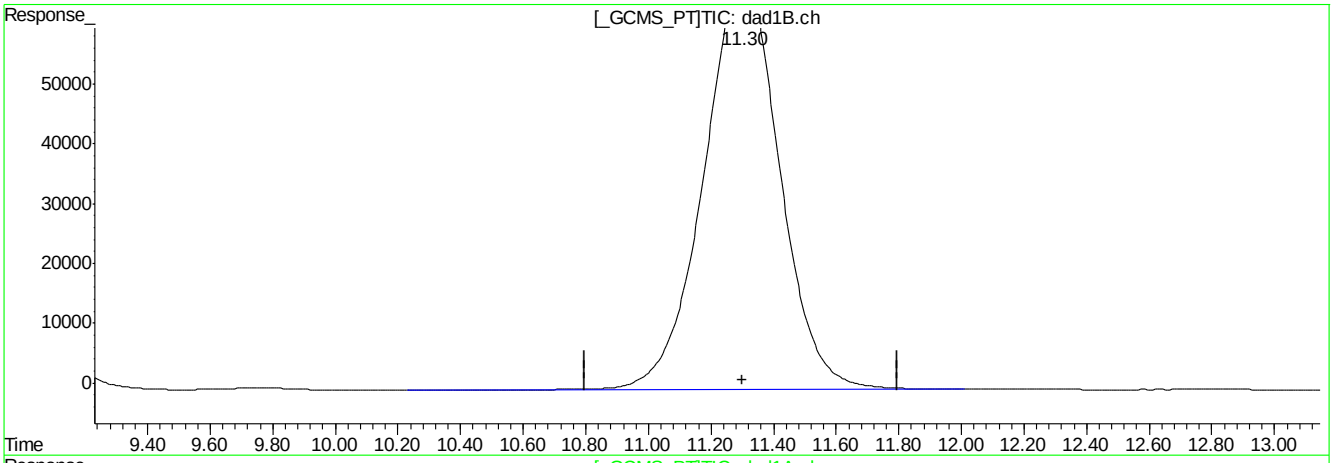
response 10526848

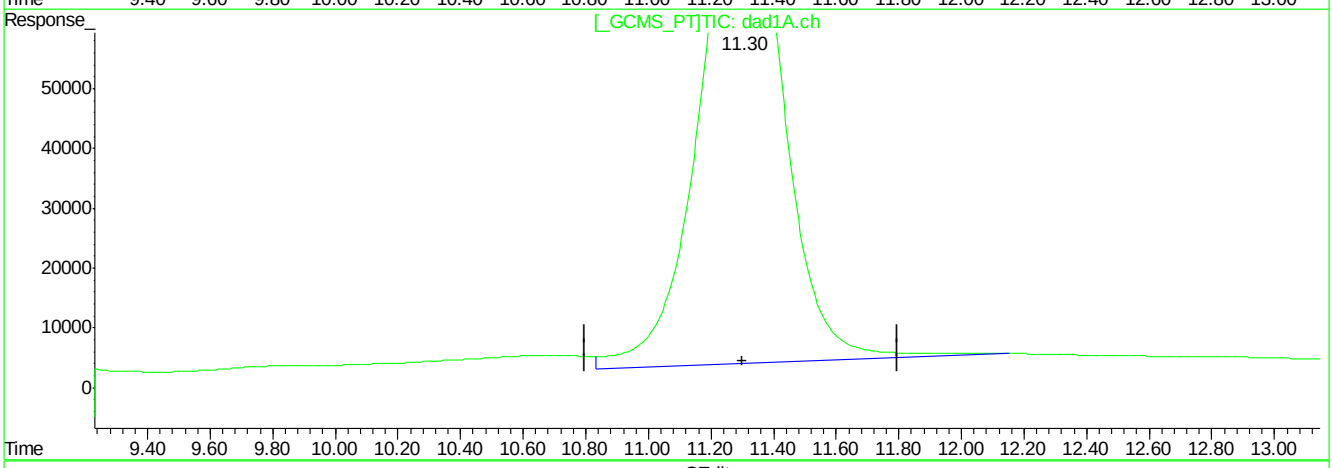
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:38:38 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.30min 1282.099ppb

response 11544417

(9) 2,4,6-Trinitrotoluene #2

11.30min 1376.380ppb

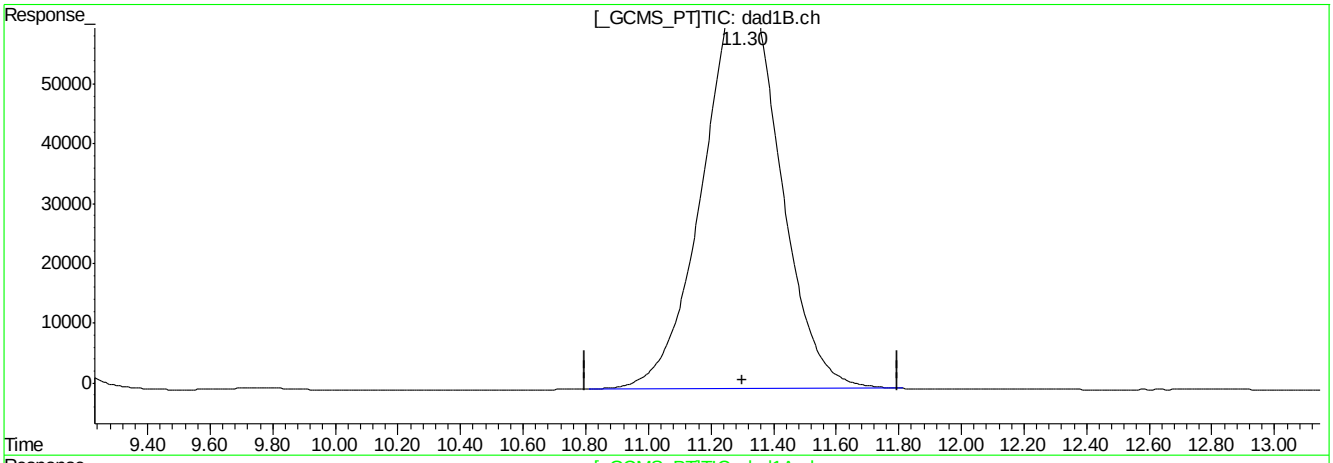
response 15999547

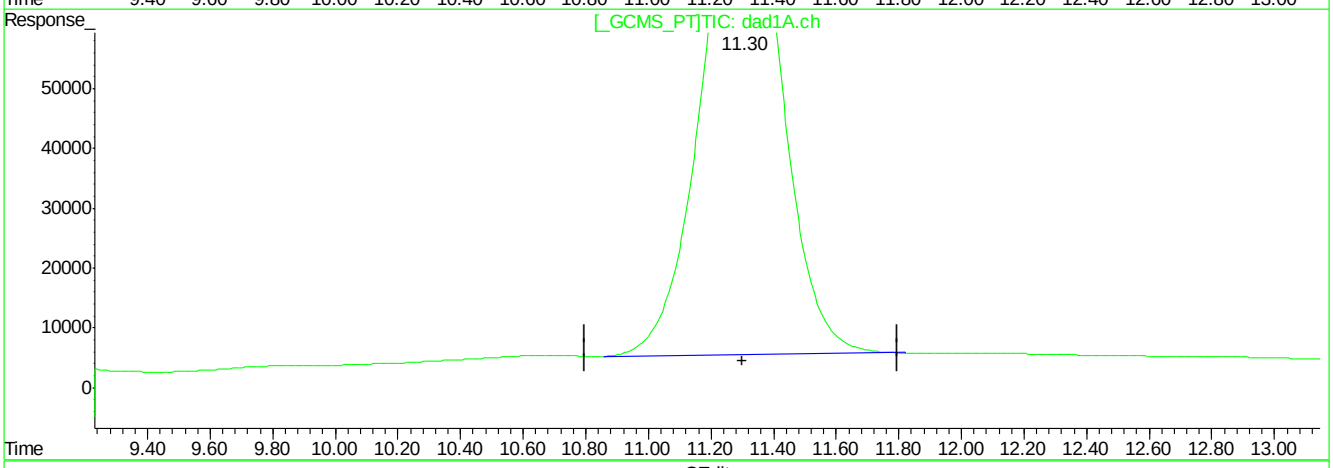
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:38:50 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.30min 1270.764ppb m

response 11442357

(9) 2,4,6-Trinitrotoluene #2

11.30min 1298.530ppb m

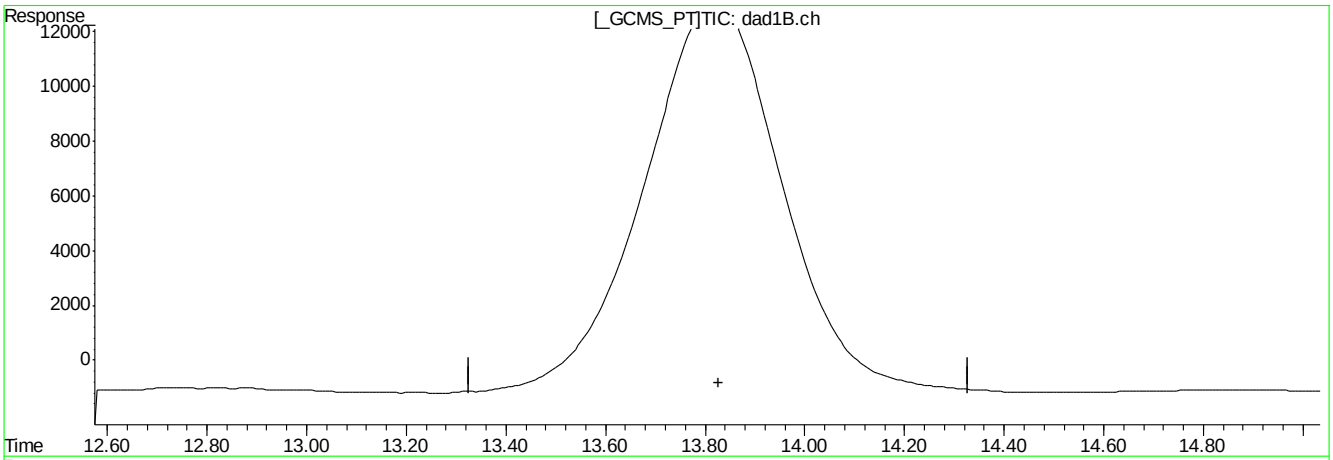
response 15094581

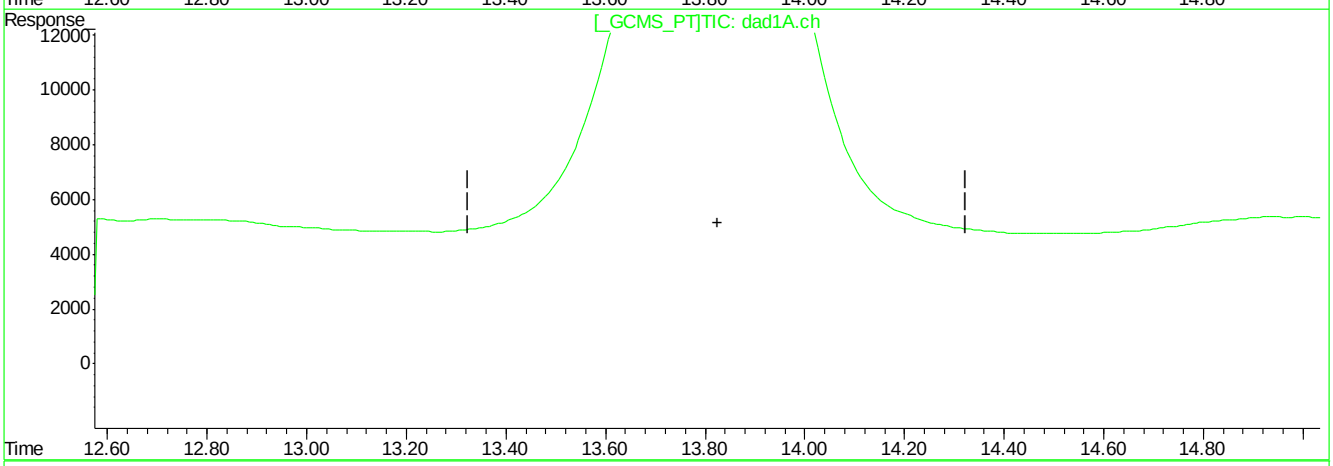
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:38:57 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

0.00min 0.000ppb d

response 0

(12) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb d

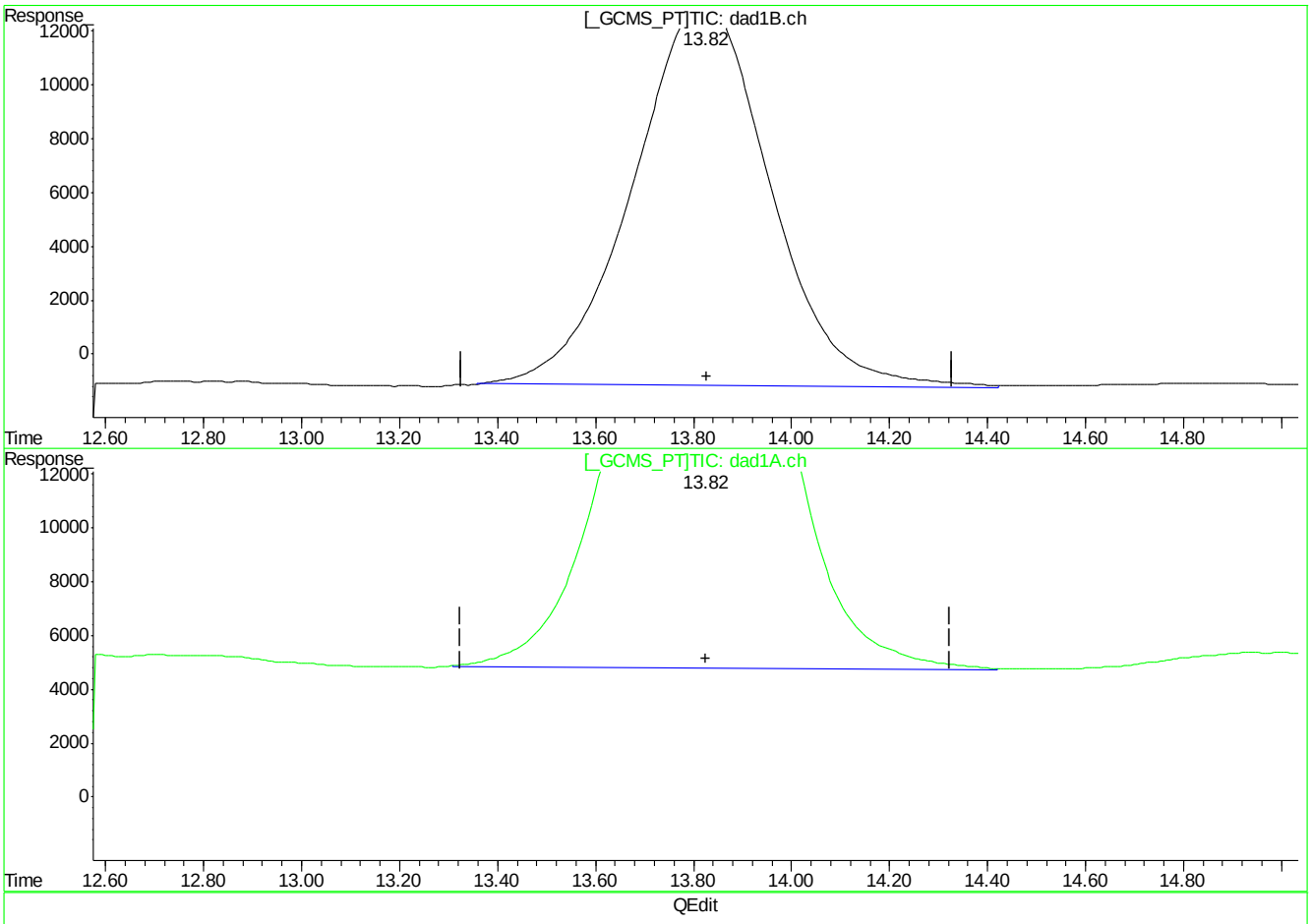
response 0

(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:39:03 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration



(12) 3,4-Dinitrotoluene (S)

13.82min 500.376ppb m

response 2728653

(12) 3,4-Dinitrotoluene #2 (S)

13.82min 510.453ppb m

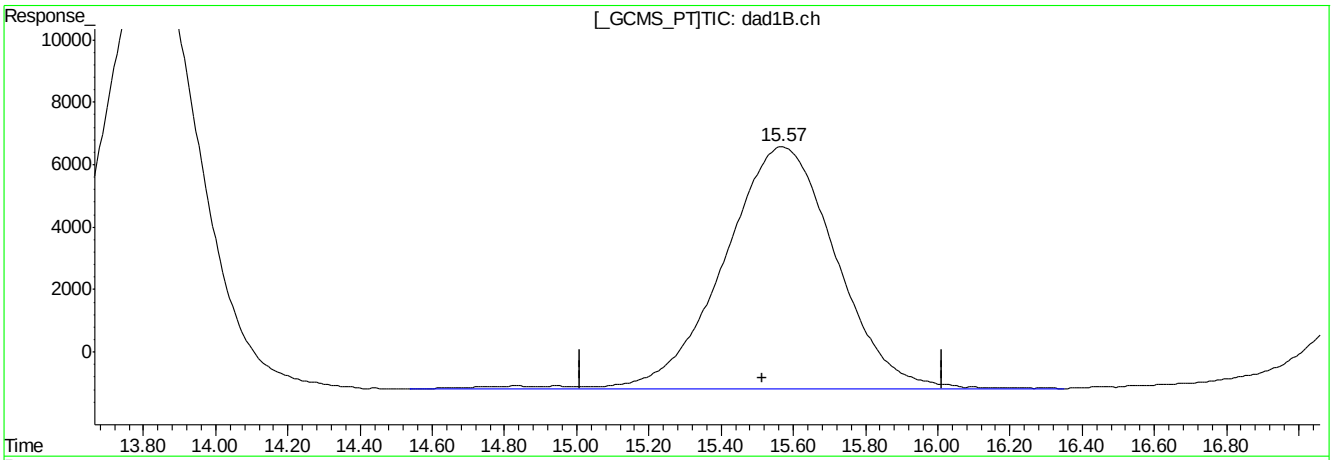
response 5301280

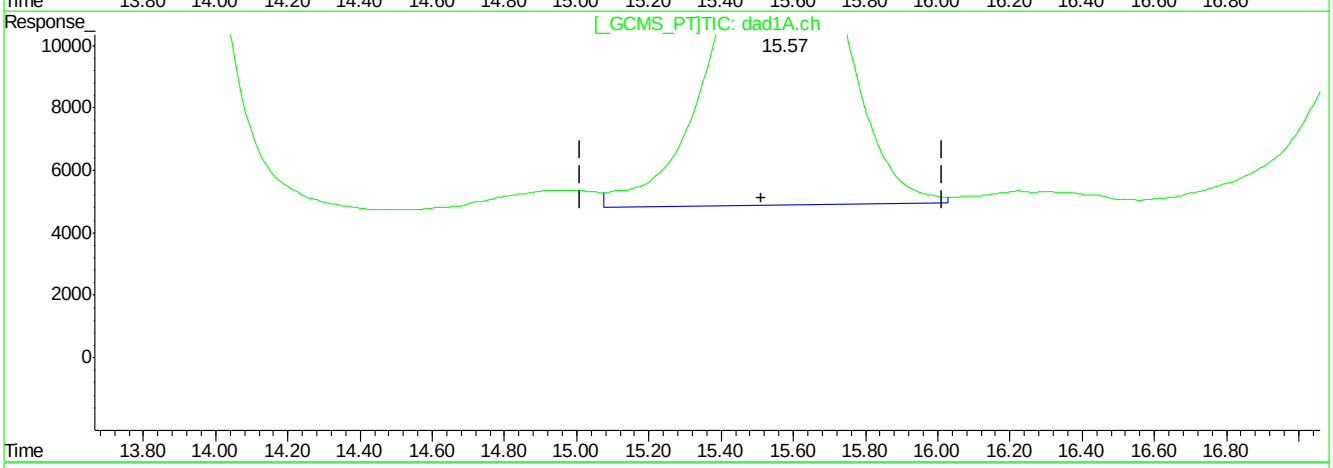
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:39:17 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(16) 3,5-Dinitroaniline

15.57min 166.903ppb

response 1686757

(16) 3,5-Dinitroaniline #2

15.57min 170.934ppb

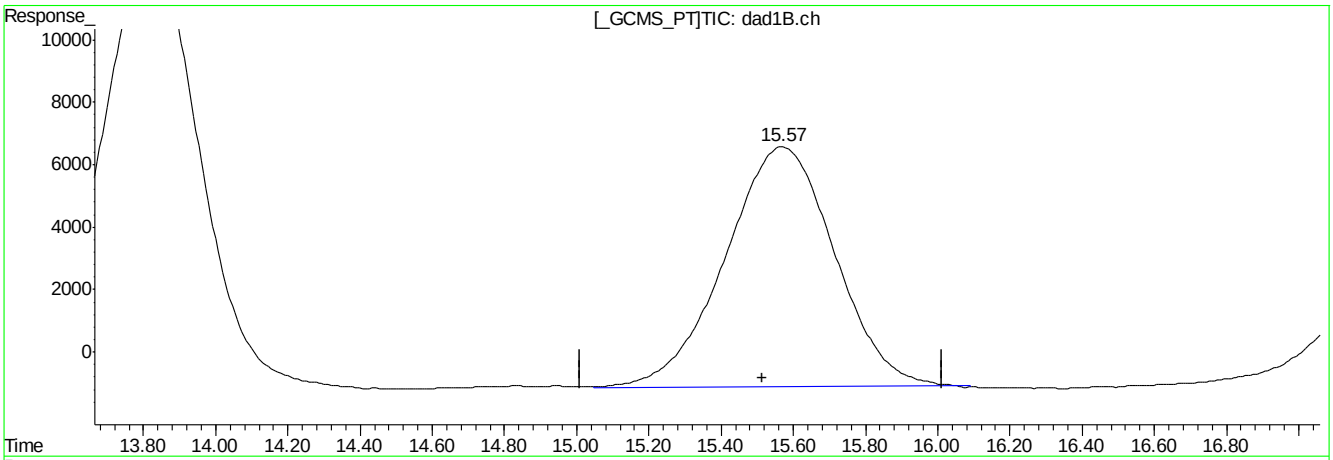
response 2746170

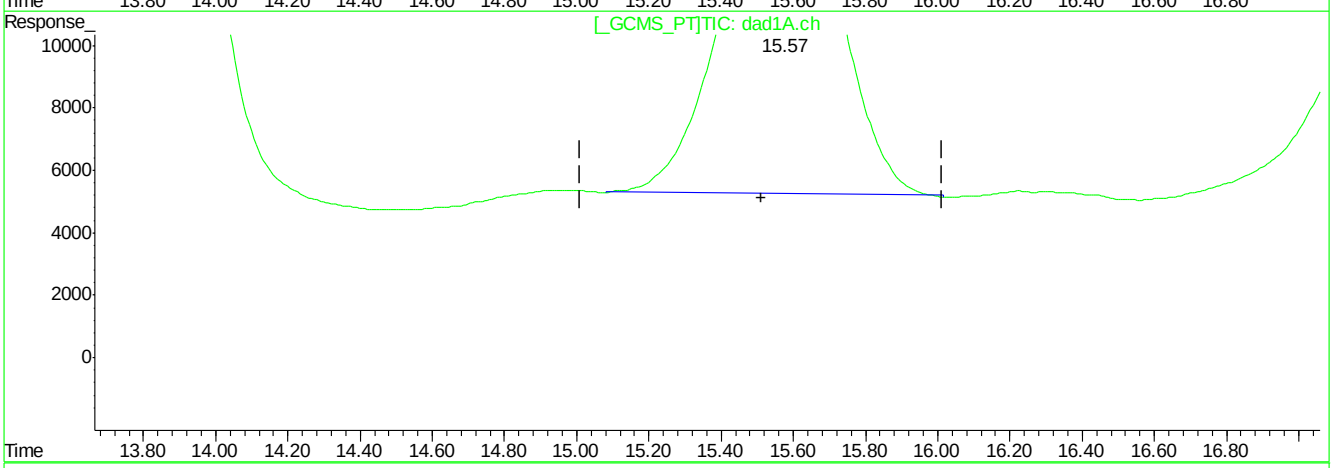
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:39:27 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(16) 3,5-Dinitroaniline

15.57min 160.289ppb m

response 1619915

(16) 3,5-Dinitroaniline #2

15.57min 158.140ppb m

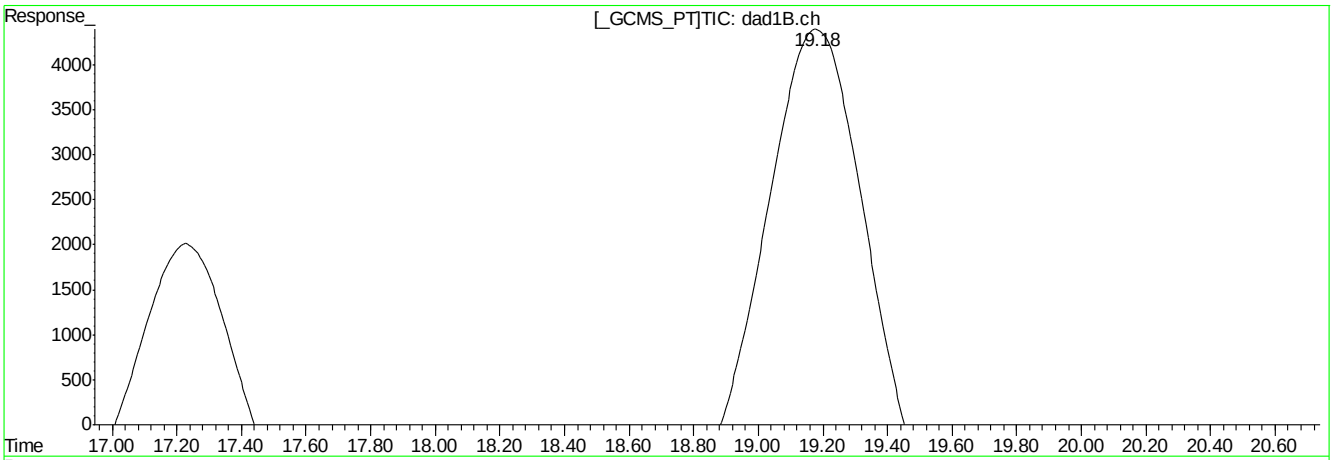
response 2540619

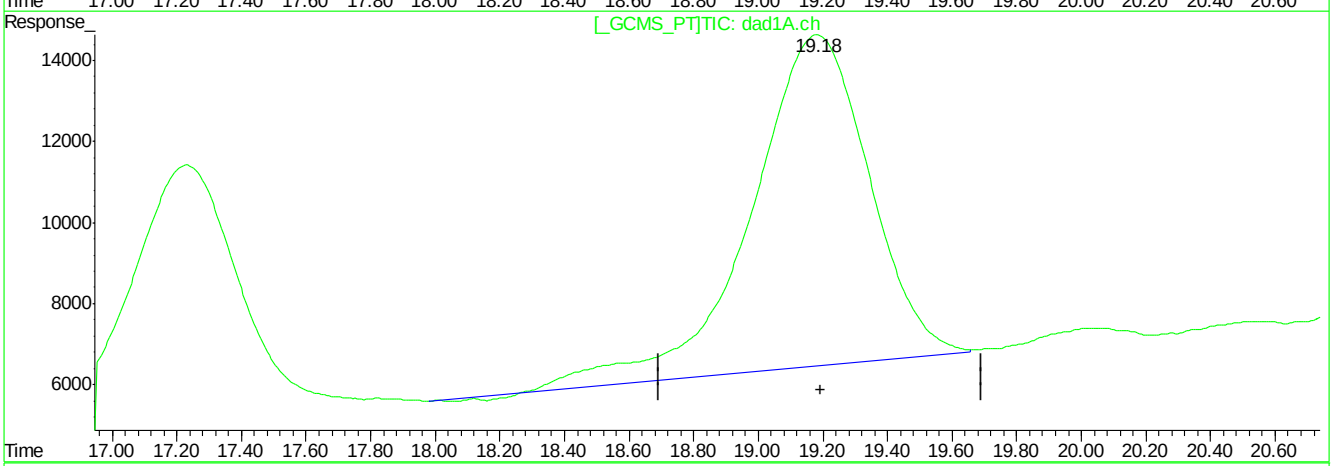
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:39:35 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.18min 146.512ppb

response 1312513

(20) 2-Amino-4,6-Dinitrotoluene #2

19.18min 162.352ppb

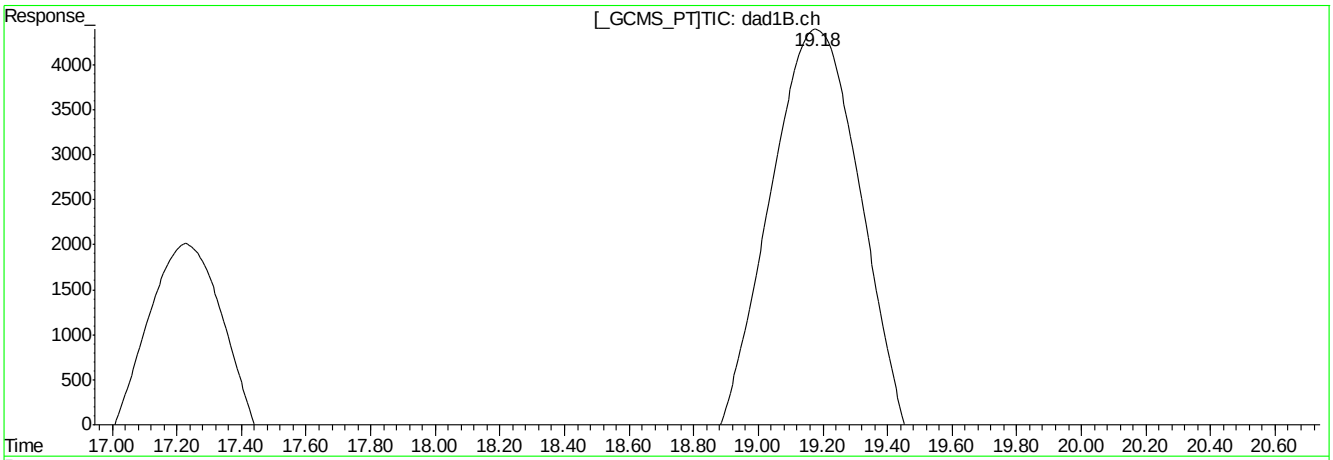
response 2077744

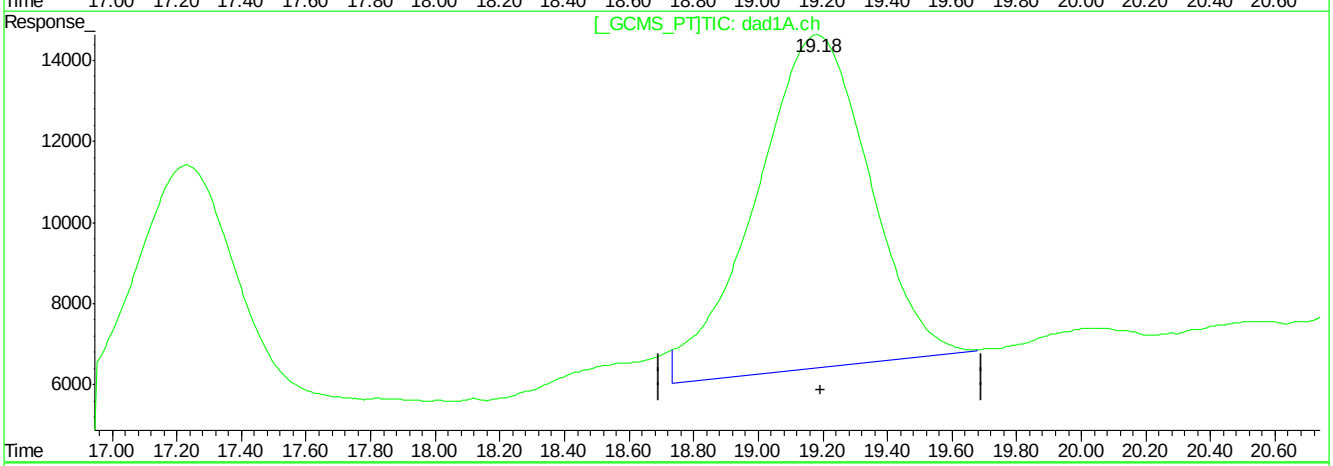
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:40:00 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.18min 146.512ppb

response 1312513

(20) 2-Amino-4,6-Dinitrotoluene #2

19.18min 156.338ppb m

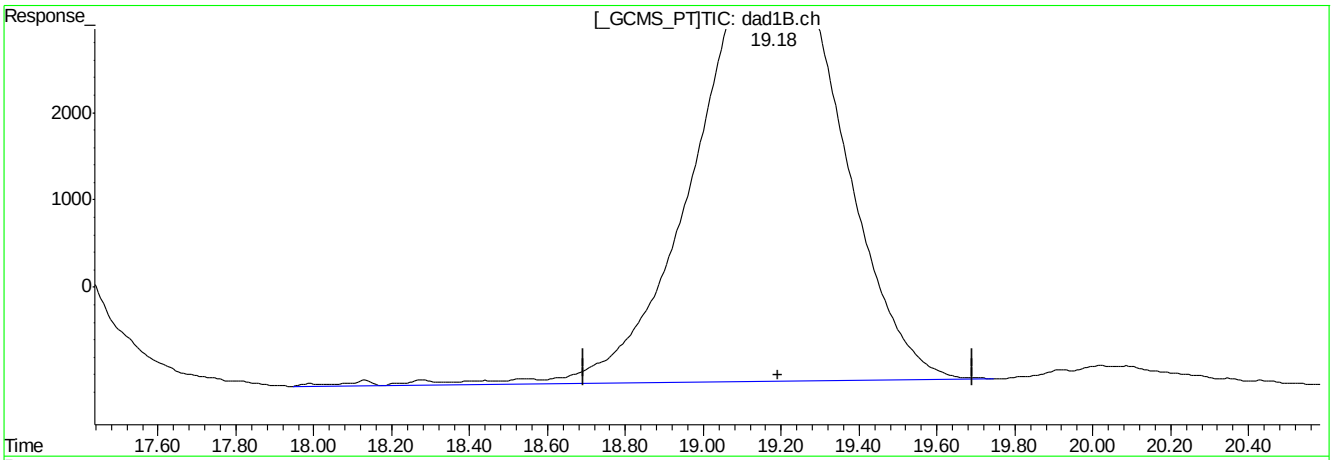
response 2000778

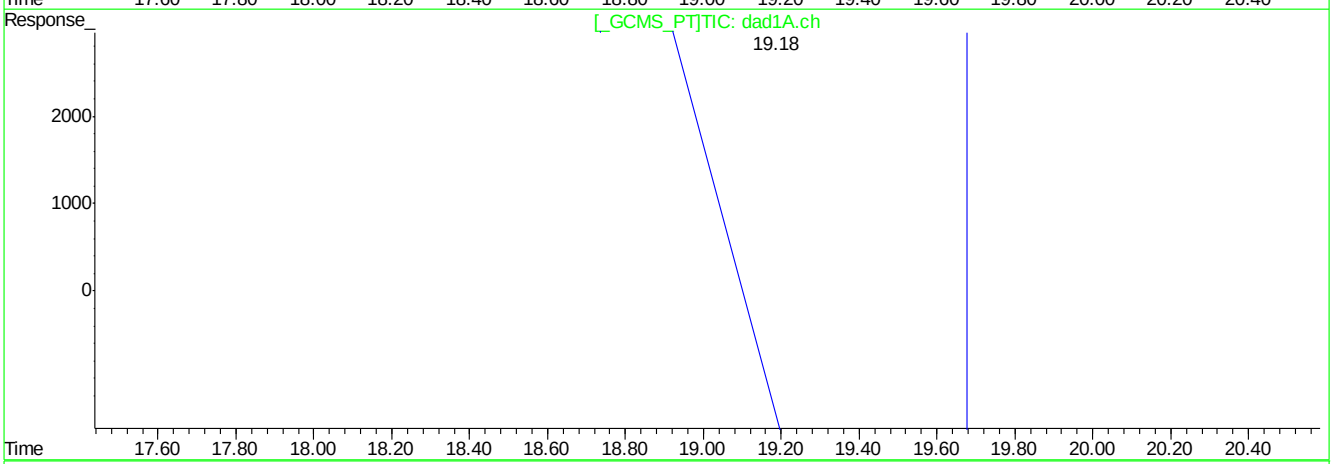
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:40:07 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.18min 146.512ppb

response 1312513

(20) 2-Amino-4,6-Dinitrotoluene #2

19.18min 156.338ppb m

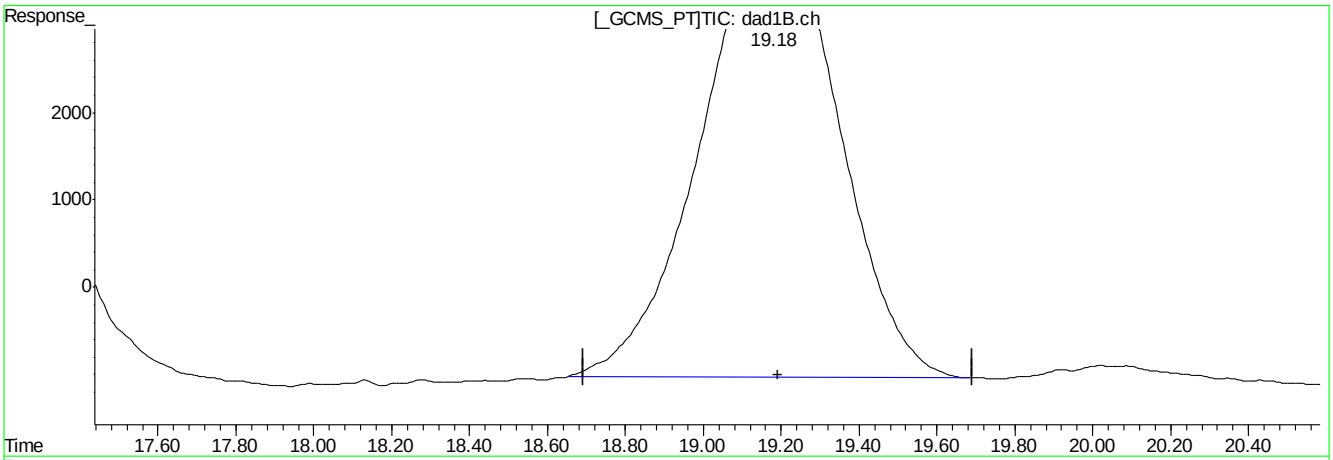
response 2000778

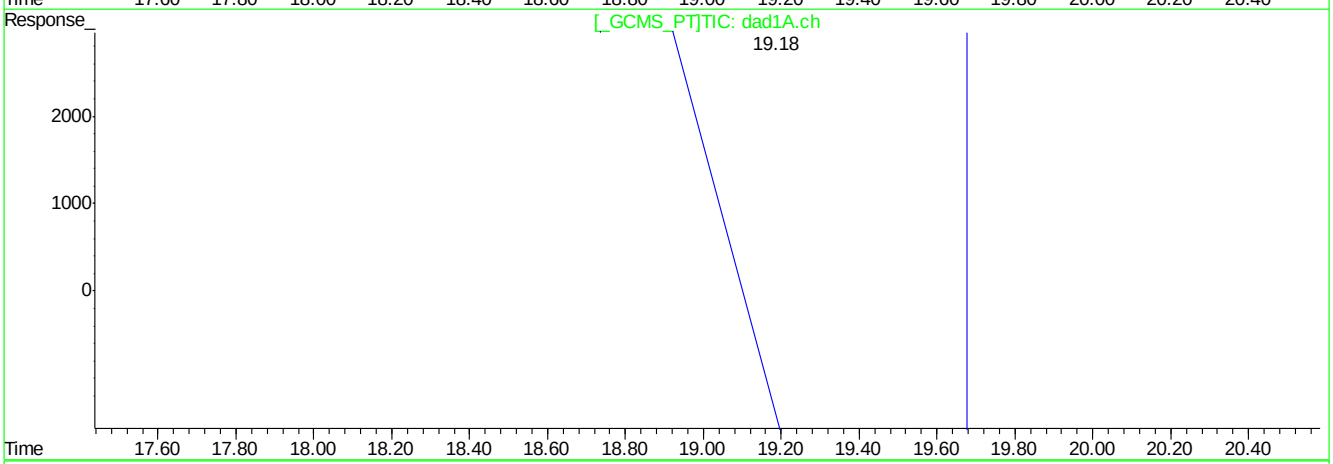
(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:40:11 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619918.D\dad1A.ch
Acq On : 02-Nov-2020, 15:43:02 Operator: jamesb
Sample : FA80202-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.18min 141.536ppb m

response 1267934

(20) 2-Amino-4,6-Dinitrotoluene #2

19.18min 156.338ppb m

response 2000778

(+) = Expected Retention Time
GG619918.D 8330RPB.M_090920.M Tue Nov 03 09:40:16 2020

GG619918.D edits: 2-Amino-4,6-Dinitrotoluene

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/20 18:24

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388848.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388848.D\dad1A.ch
Acq On : 30-Oct-2020, 23:49:37 Operator: jamesb
Sample : FA80202-3 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16:58 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.47	11.48	992374	1741137	491.543m	475.566m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		98.31%	95.11%
	Target Compounds						
1)	TNX	1.29	1.38	125249	111438	41.281	22.476 #
2)	HMX	1.51	1.51	849223	2053243	567.196	482.328
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	3.01	3.01	346546	614594	192.472	214.272
6)	1,3,5-Trinitrobe	4.81	4.81	2023504	4000147	509.852	520.611
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	6.43	6.43	145264	269974	38.175m	41.566m
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	10.16	10.16	4408024	5343084	1192.493	1242.385
13)	2-Amino-4,6-Dini	10.58	10.60	516322	686405	157.088	144.034
14)	4-Amino-2,6-Dini	11.11	11.11	309615	537896	126.769	125.835
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

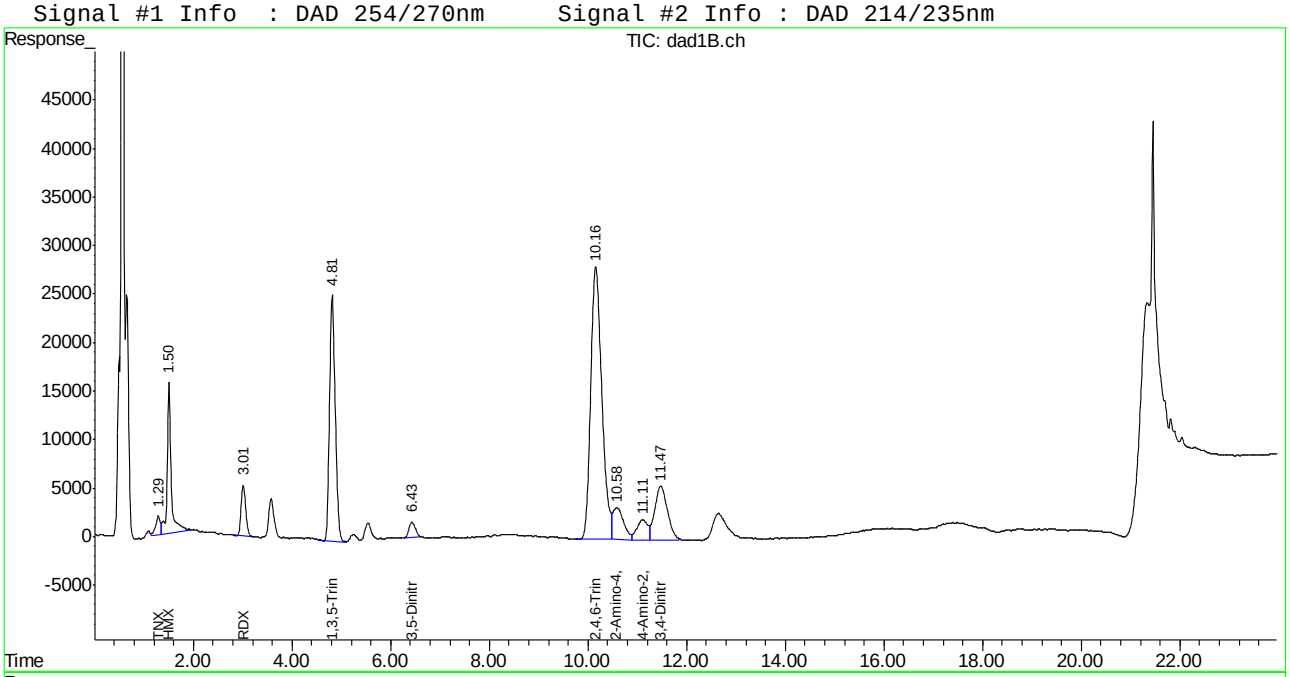
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388848.D GPP2336_092420_DV.M Thu Nov 12 15:58:21 2020 Page 1

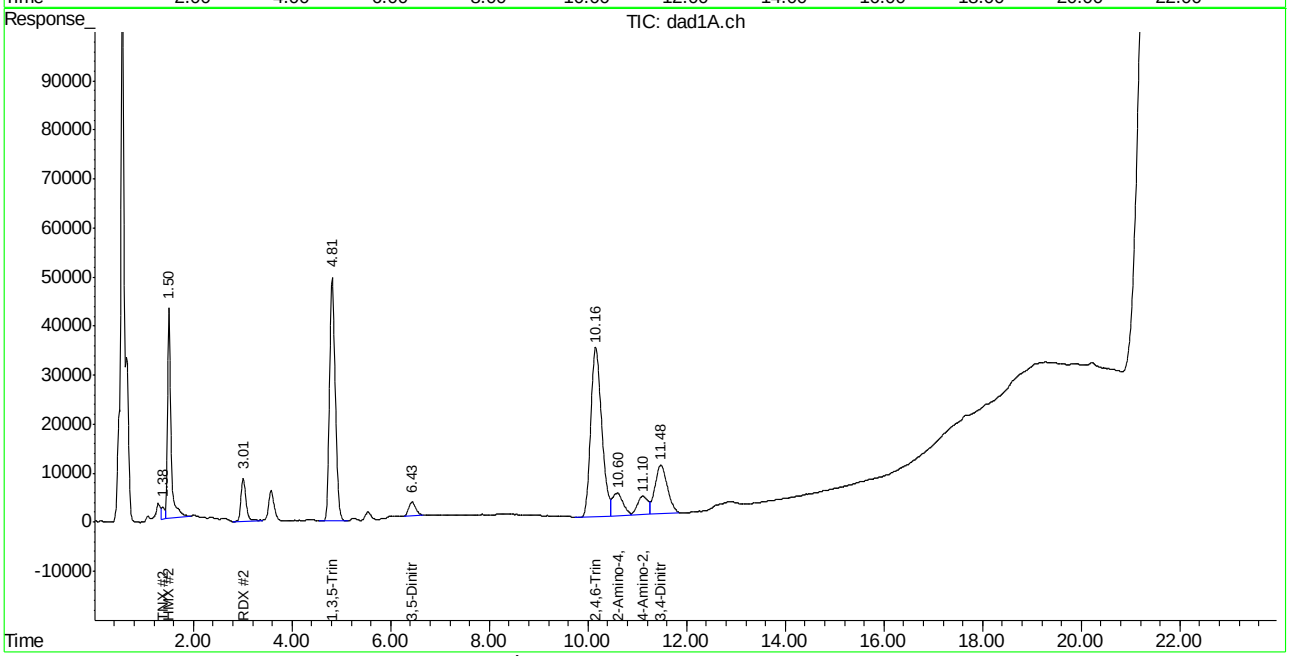
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388848.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388848.D\dad1A.ch
Acq On : 30-Oct-2020, 23:49:37 Operator: jamesb
Sample : FA80202-3 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:51 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

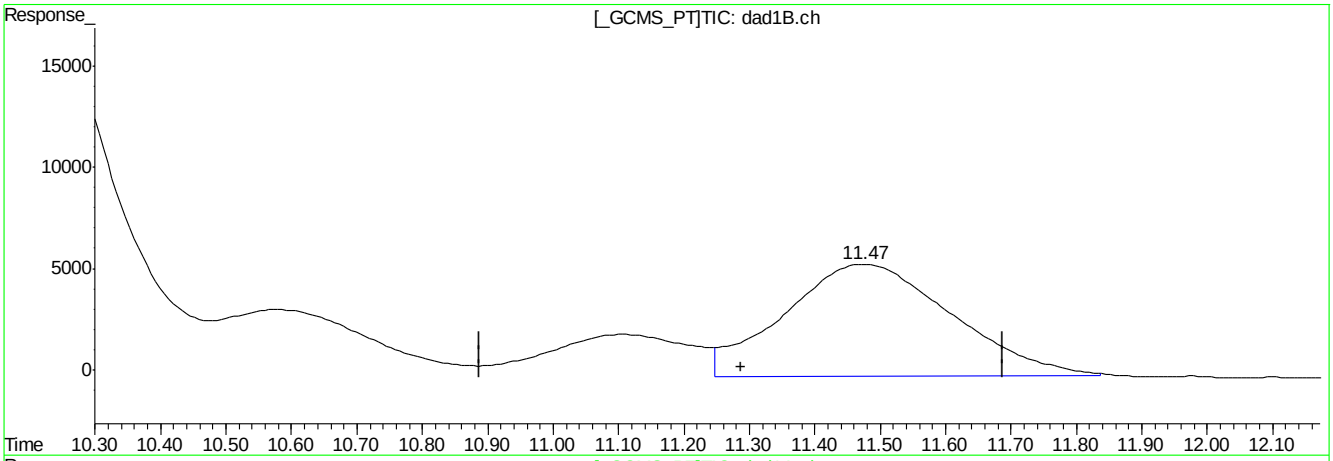
Sample Number: FA80202-3
Lab FileID: PP388848.D
Injection Time: 10/30/20 23:49
Method: SW846 8330B
Analyst approved: 11/12/20 16:16 William Hustedde
Supervisor approved: 11/12/20 18:24 Naresh Jiawan

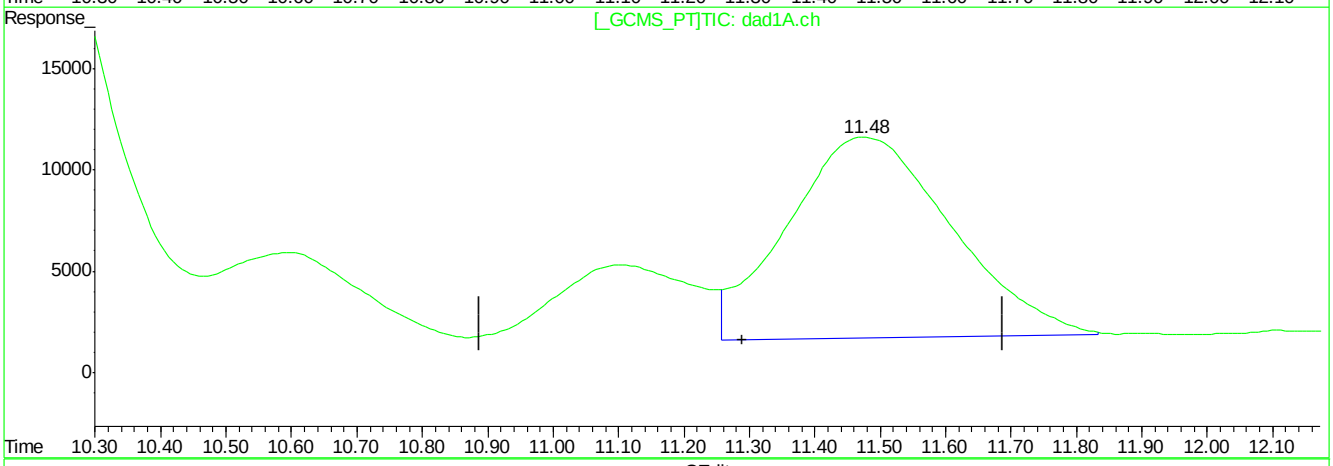
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,5-Dinitroaniline	618-87-1	1	6.43	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.43	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.47	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.48	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388848.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388848.D\dad1A.ch
Acq On : 30-Oct-2020, 23:49:37 Operator: jamesb
Sample : FA80202-3 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.47min 491.543ppb m

response 992374

(15) 3,4-Dinitrotoluene #2 (S)

11.48min 475.566ppb m

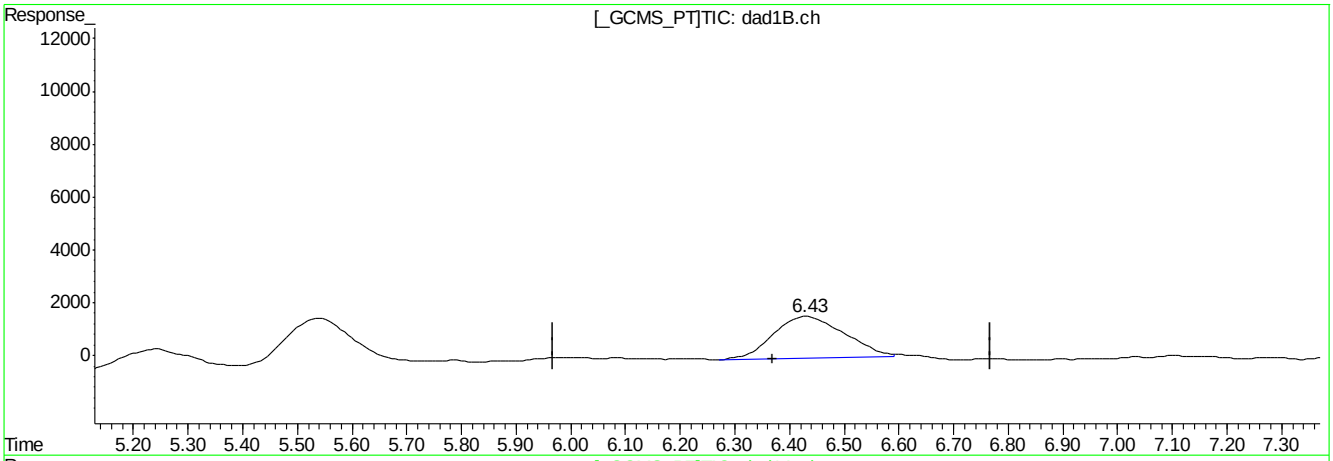
response 1741137

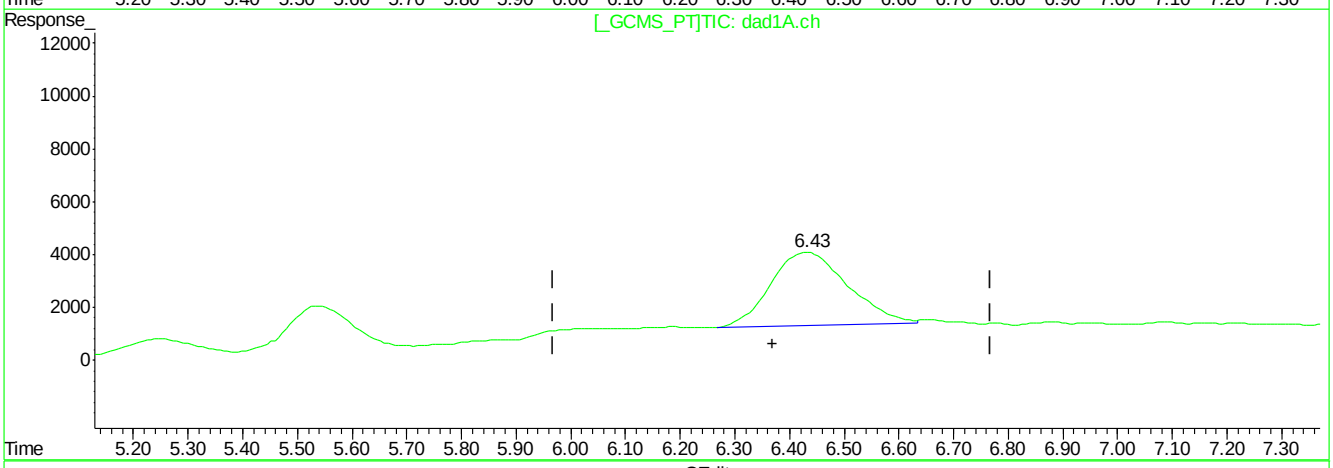
(+) = Expected Retention Time
PP388848.D GPP2336_092420_DV.M Thu Nov 12 15:50:26 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388848.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388848.D\dad1A.ch
Acq On : 30-Oct-2020, 23:49:37 Operator: jamesb
Sample : FA80202-3 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.43min 38.175ppb m

response 145264

(8) 3,5-Dinitroaniline #2

6.43min 41.566ppb m

response 269974

(+) = Expected Retention Time
PP388848.D GPP2336_092420_DV.M Thu Nov 12 15:51:56 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/03/20 16:10

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1A.ch
Acq On : 02-Nov-2020, 16:12:28 Operator: jamesb
Sample : FA80202-3cf Inst : G1315B
Misc : op82734,GGG2889,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 03 09:20:49 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.85	13.85	2644495	5082885	484.943	489.424
	Spiked Amount 500.000	Range 70 - 136		Recovery =		96.99%	97.88%
	Target Compounds						
1)	TNX	5.09	5.09	84212	82593	13.897m	13.554m
2)	HMX	5.40	5.40	1369887	1367435	383.931m	382.856m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.35	7.35	5209999	5209999	536.002	537.551
6)	RDX	7.70	7.70	902683	902683	203.017	202.779
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.33	11.32	11163723	14607301	1239.820	1256.611m
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
16)	3,5-Dinitroanili	15.57	15.58	651280	1043664	64.443	64.962
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.27	17.27	1067606	2113789	194.281	205.769
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.22	19.21	1419470	1961356	158.451	153.258m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

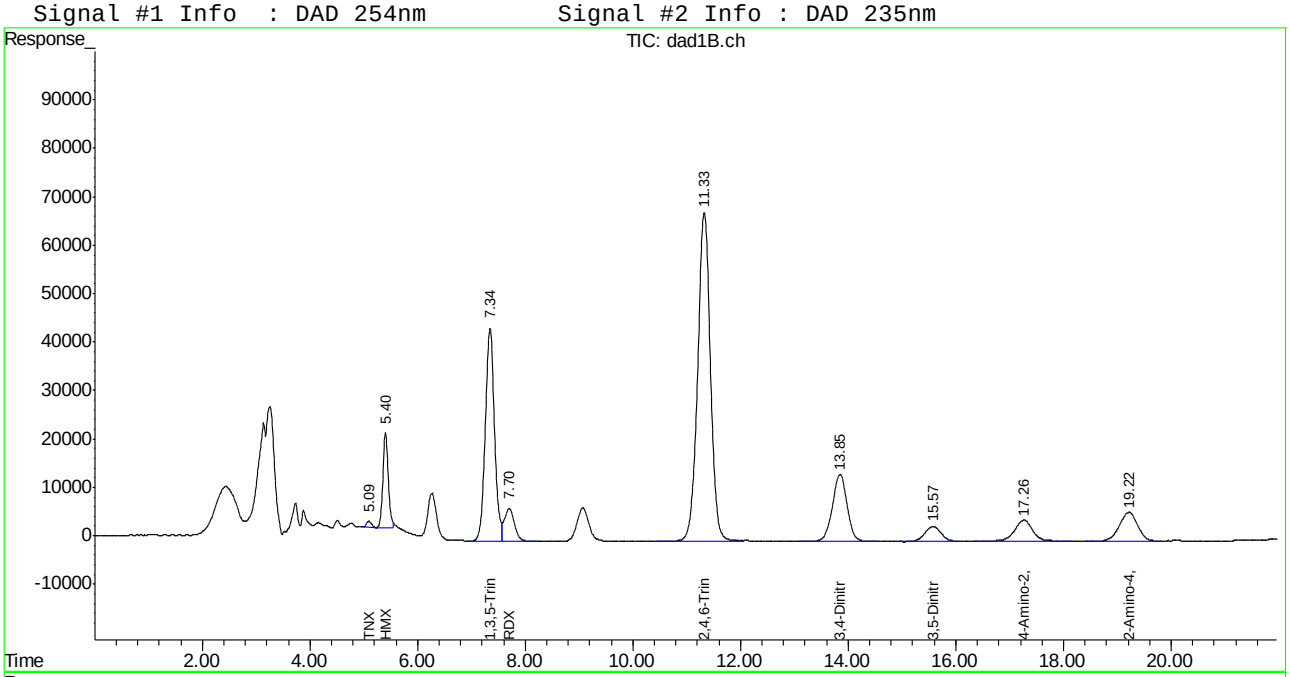
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619919.D 8330RPB.M_090920.M Tue Nov 03 11:14:45 2020 Page 1

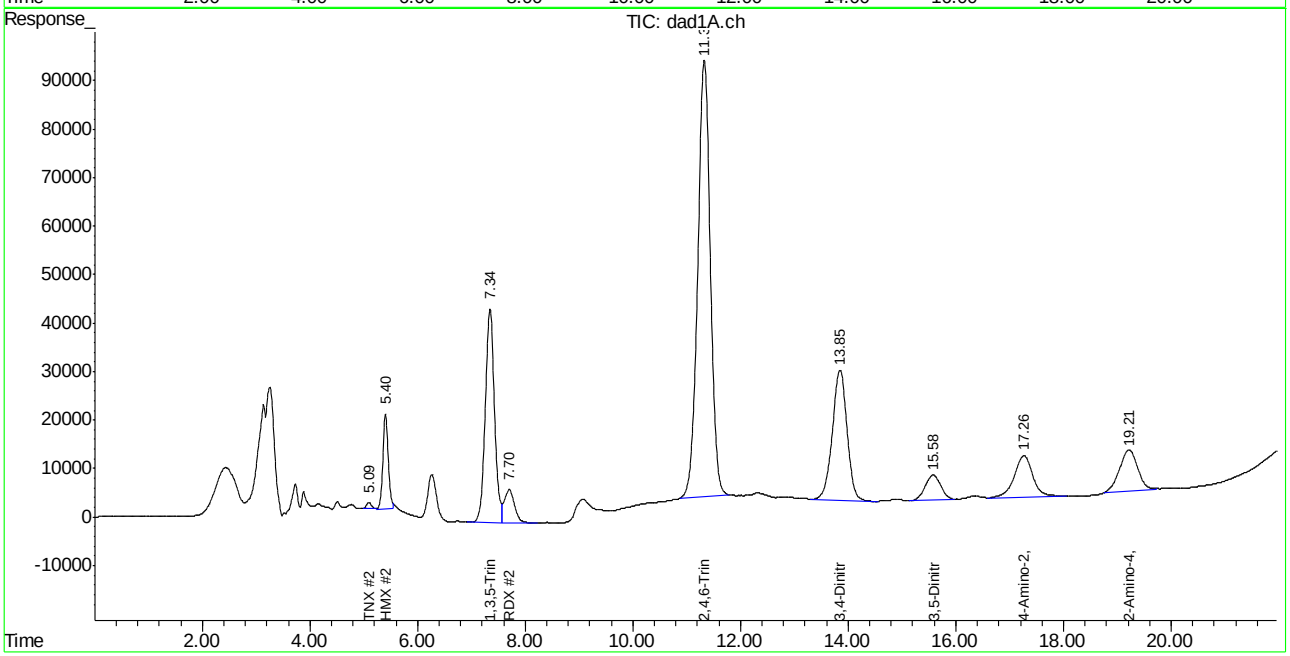
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1A.ch
Acq On : 02-Nov-2020, 16:12:28 Operator: jamesb
Sample : FA80202-3cf Inst : G1315B
Misc : op82734,GGG2889,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:45 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

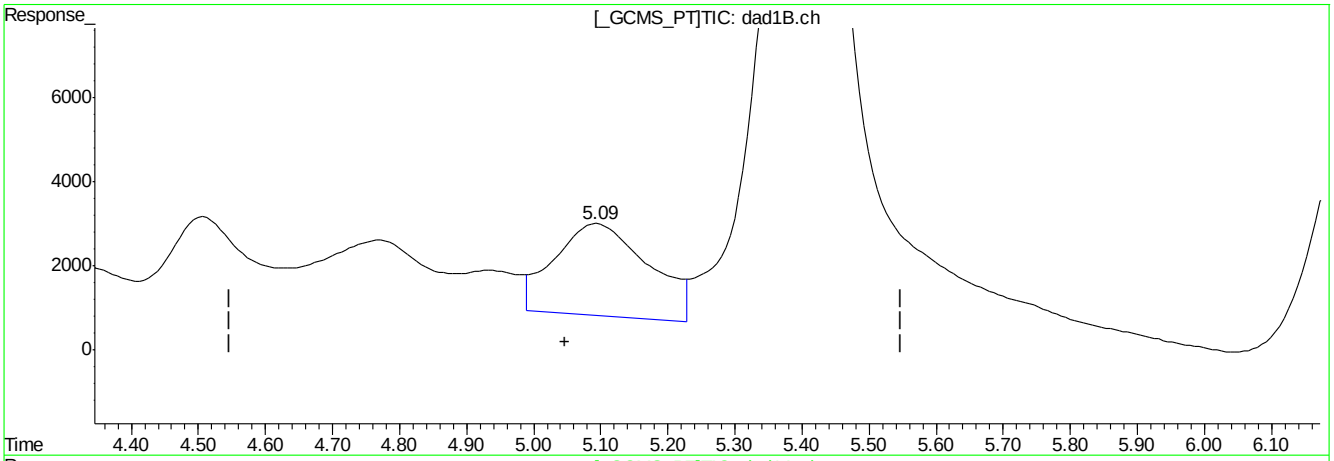
Sample Number: FA80202-3
Lab FileID: GG619919.D
Injection Time: 11/02/20 16:12
Method: SW846 8330B
Analyst approved: 11/03/20 14:45 James Boone
Supervisor approved: 11/03/20 16:10 Naresh Jiawan

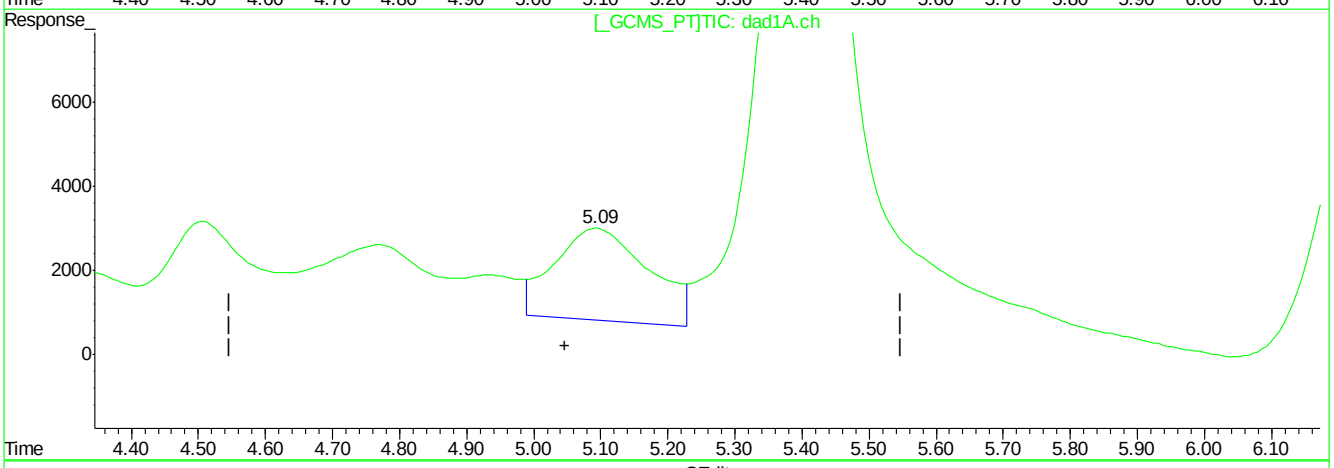
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	5.09	Poor instrument integration
TNX		2	5.09	Poor instrument integration
HMX	2691-41-0	1	5.40	Poor instrument integration
HMX	2691-41-0	2	5.40	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.32	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.21	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1A.ch
Acq On : 02-Nov-2020, 16:12:28 Operator: jamesb
Sample : FA80202-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(1) TNX

5.09min 35.420ppb

response 214631

(1) TNX #2

5.09min 35.222ppb

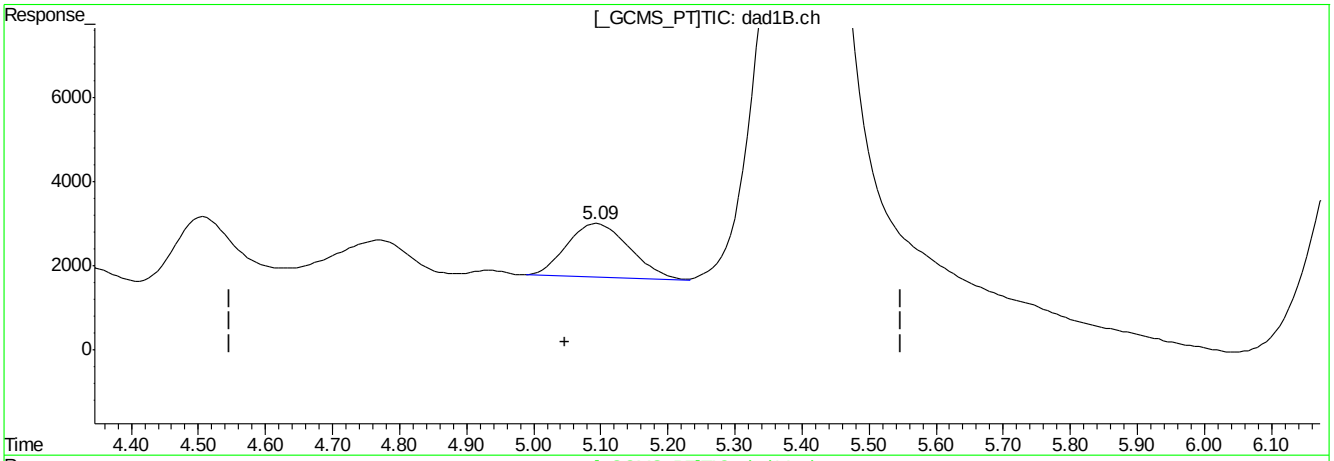
response 214631

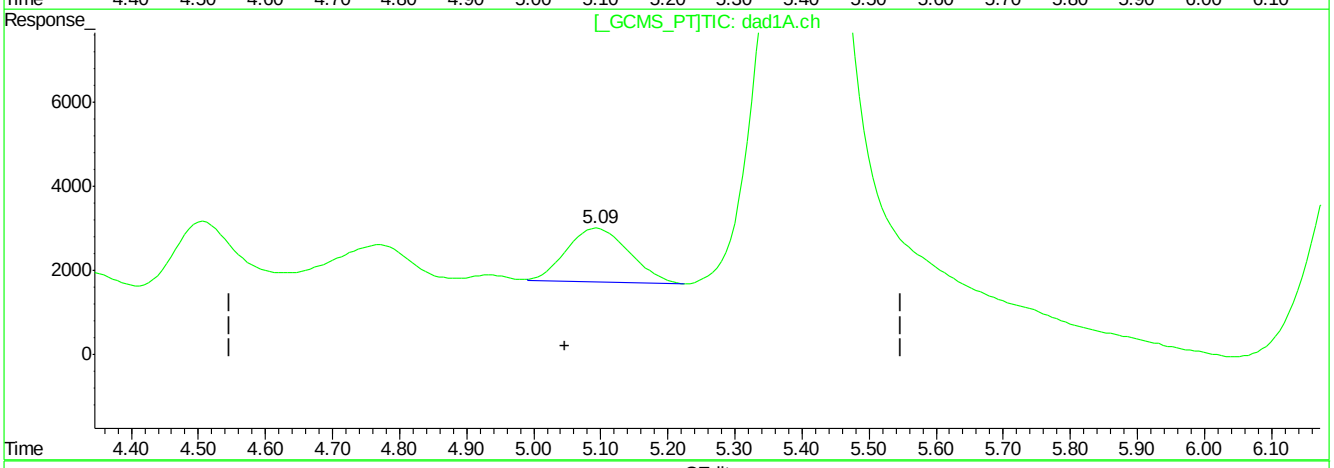
(+) = Expected Retention Time
GG619919.D 8330RPB.M_090920.M Tue Nov 03 09:44:05 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1A.ch
Acq On : 02-Nov-2020, 16:12:28 Operator: jamesb
Sample : FA80202-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(1) TNX

5.09min 13.897ppb m

response 84212

(1) TNX #2

5.09min 13.554ppb m

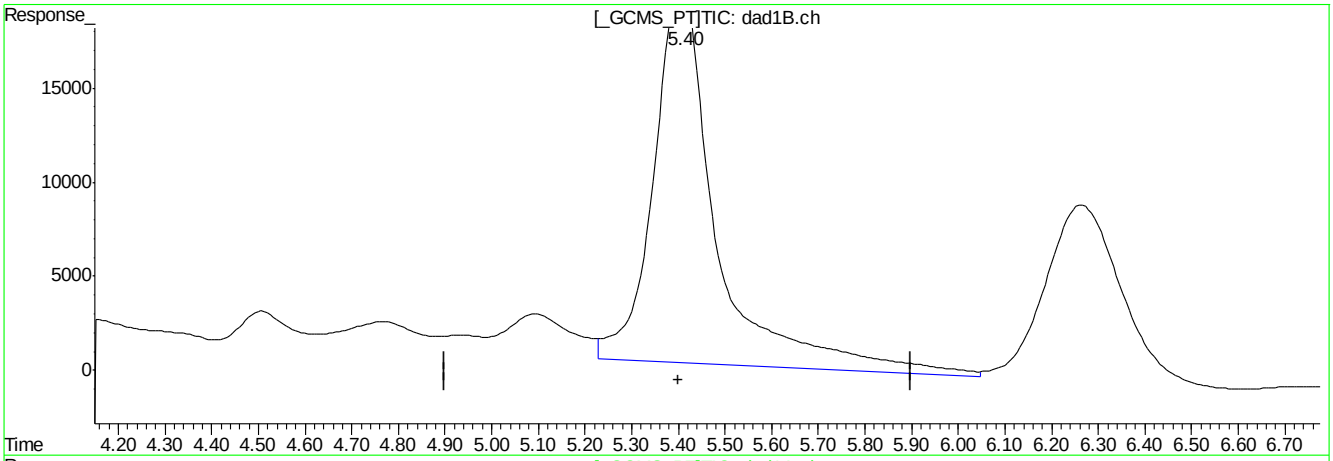
response 82593

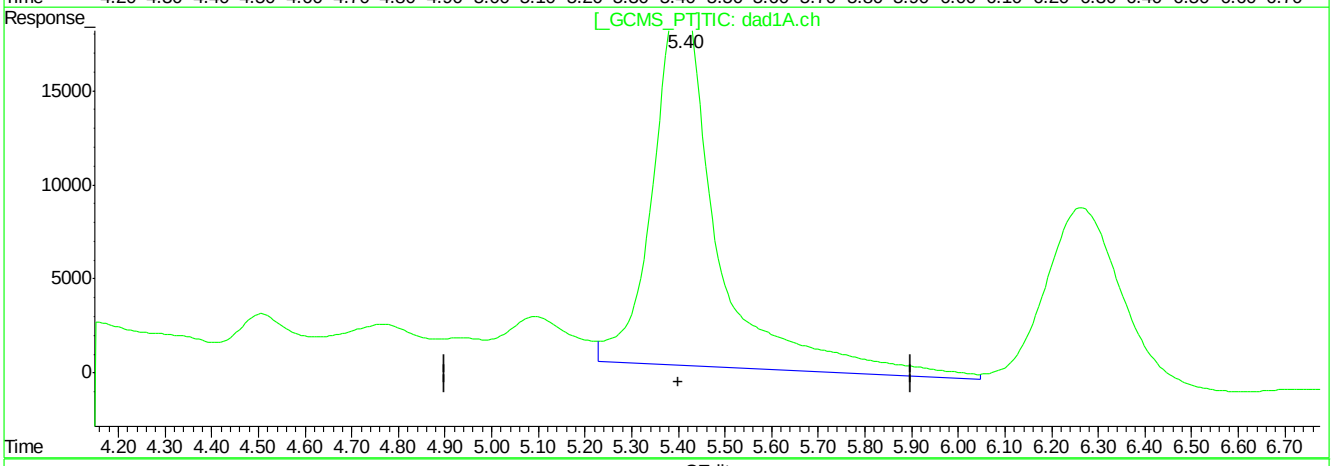
(+) = Expected Retention Time
GG619919.D 8330RPB.M_090920.M Tue Nov 03 09:44:23 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1A.ch
Acq On : 02-Nov-2020, 16:12:28 Operator: jamesb
Sample : FA80202-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.41min 527.933ppb

response 1883696

(2) HMX #2

5.41min 527.399ppb

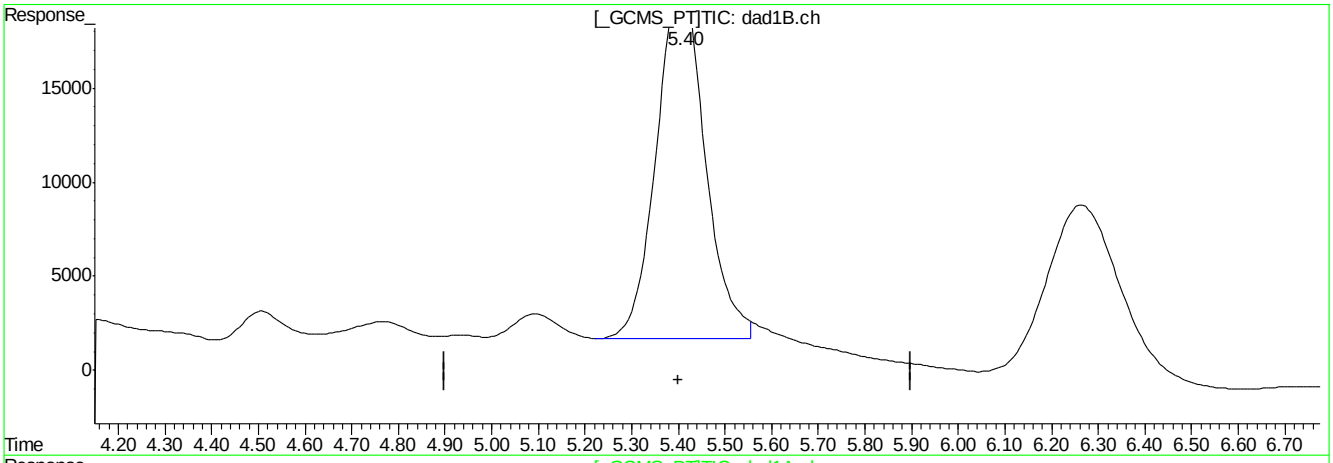
response 1883696

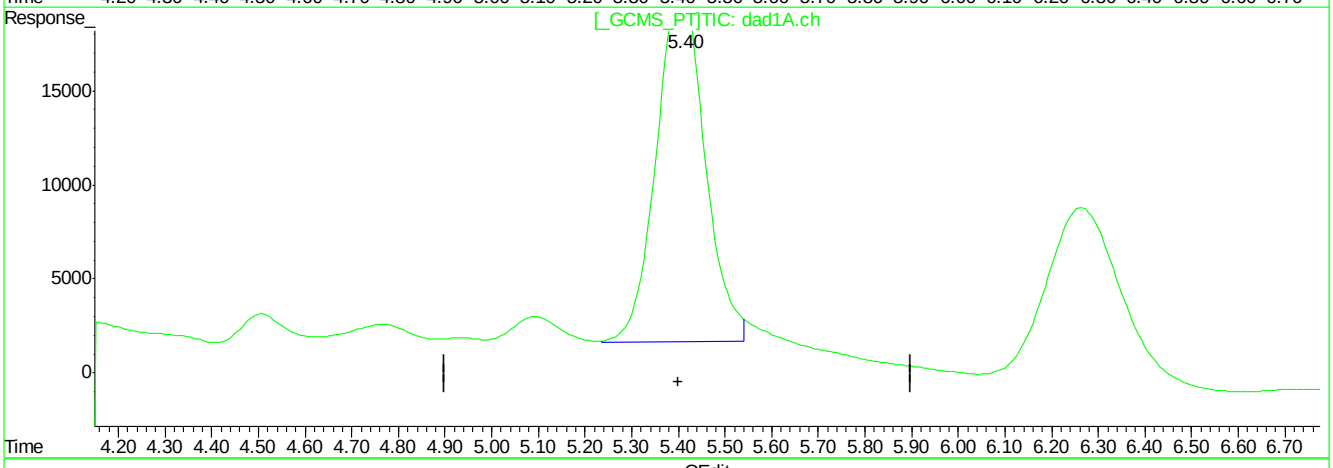
(+) = Expected Retention Time
GG619919.D 8330RPB.M_090920.M Tue Nov 03 09:44:32 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1A.ch
Acq On : 02-Nov-2020, 16:12:28 Operator: jamesb
Sample : FA80202-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.40min 383.931ppb m

response 1369887

(2) HMX #2

5.40min 382.856ppb m

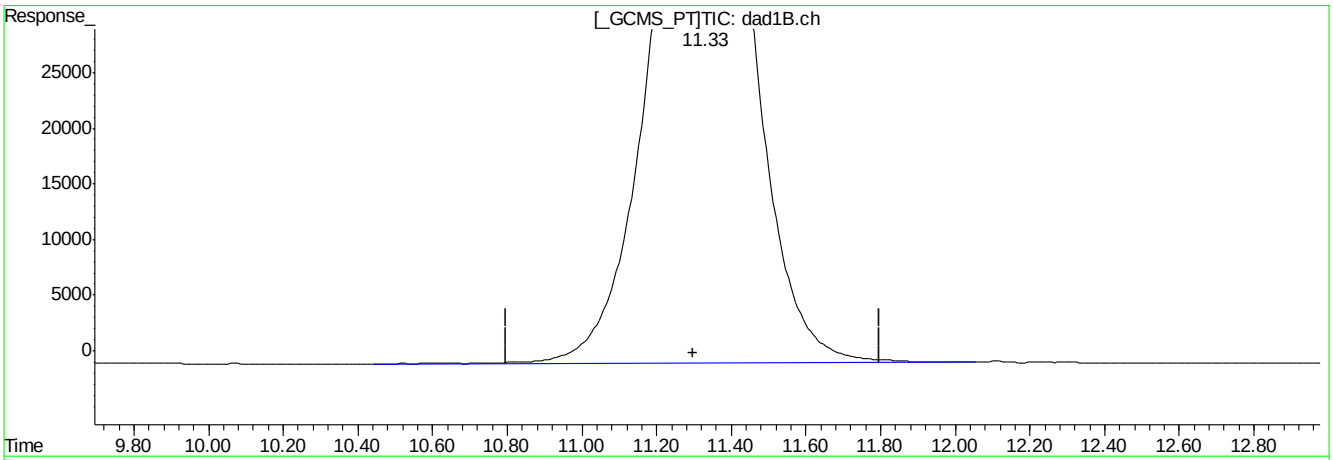
response 1367435

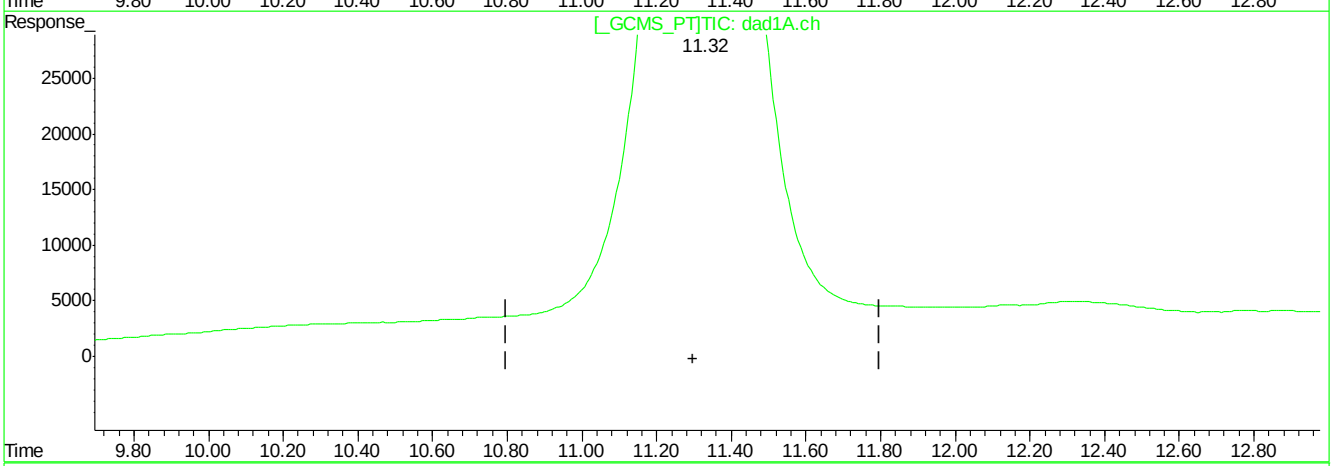
(+) = Expected Retention Time
GG619919.D 8330RPB.M_090920.M Tue Nov 03 09:44:42 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1A.ch
Acq On : 02-Nov-2020, 16:12:28 Operator: jamesb
Sample : FA80202-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.33min 1239.820ppb

response 11163723

(9) 2,4,6-Trinitrotoluene #2

11.33min 1535.533ppb

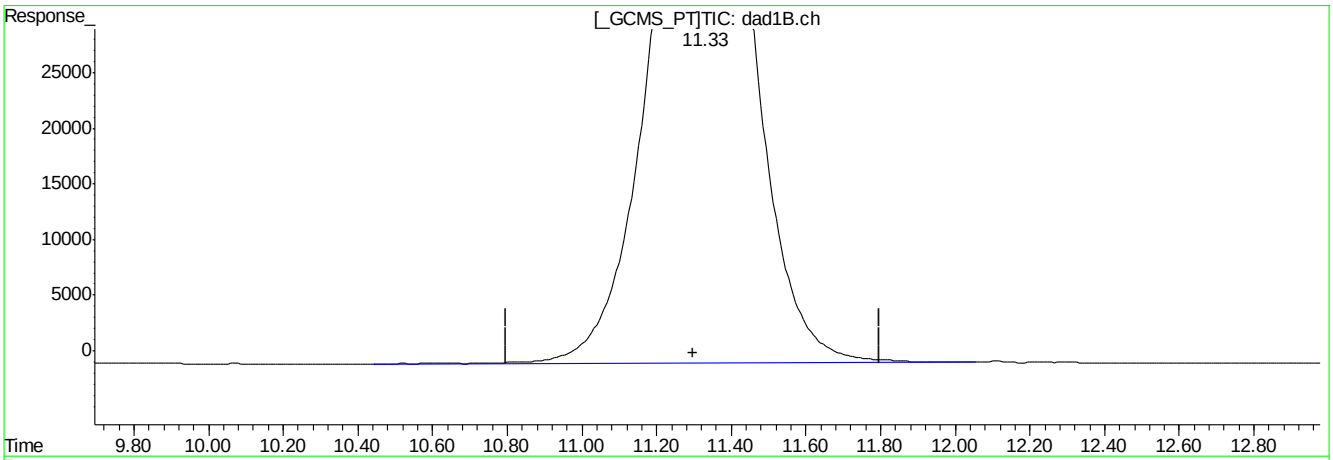
response 17849594

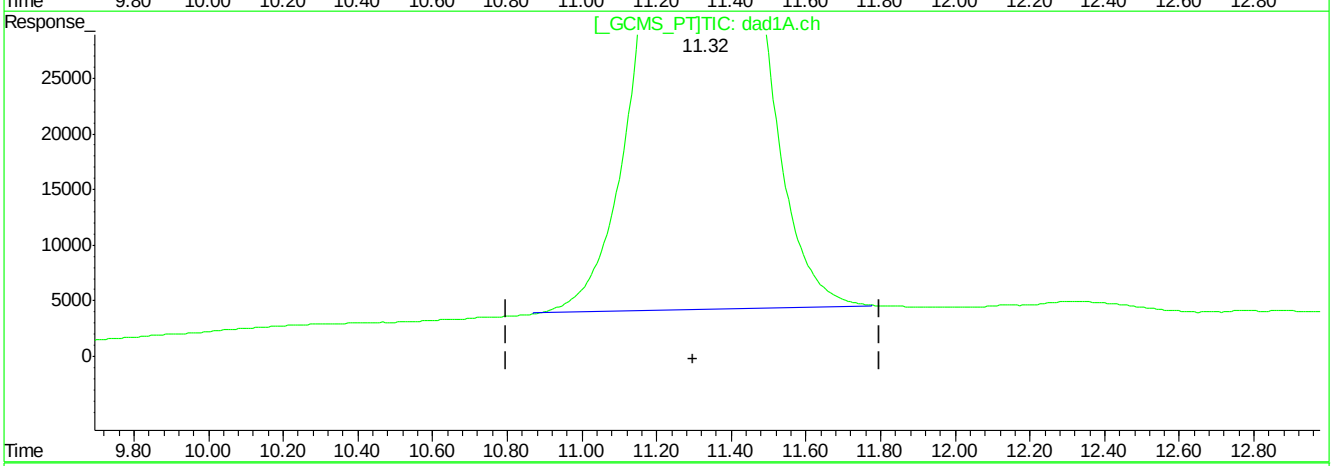
(+) = Expected Retention Time
GG619919.D 8330RPB.M_090920.M Tue Nov 03 09:45:01 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1A.ch
Acq On : 02-Nov-2020, 16:12:28 Operator: jamesb
Sample : FA80202-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.33min 1239.820ppb

response 11163723

(9) 2,4,6-Trinitrotoluene #2

11.32min 1256.611ppb m

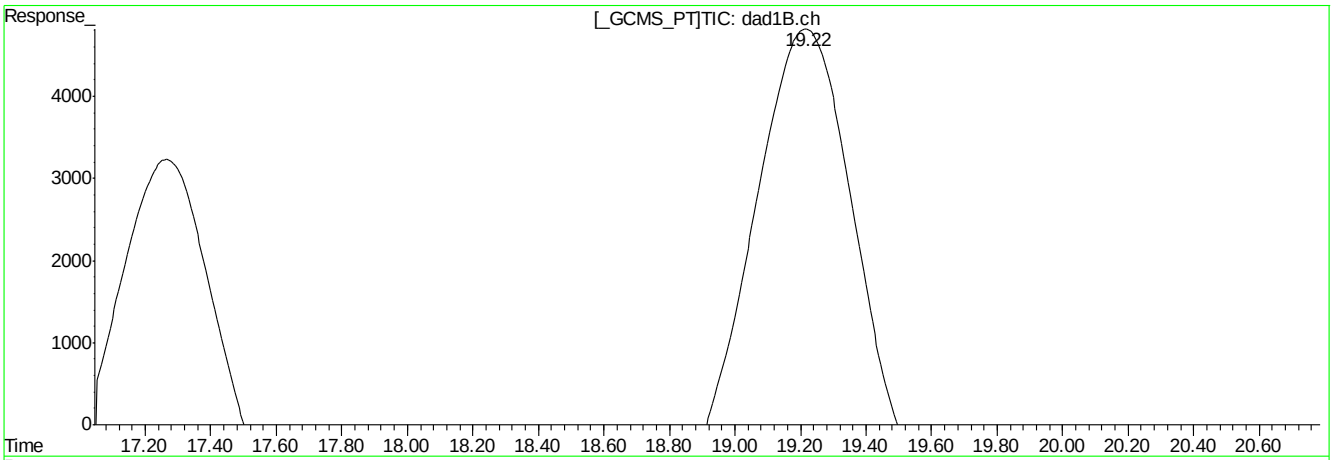
response 14607301

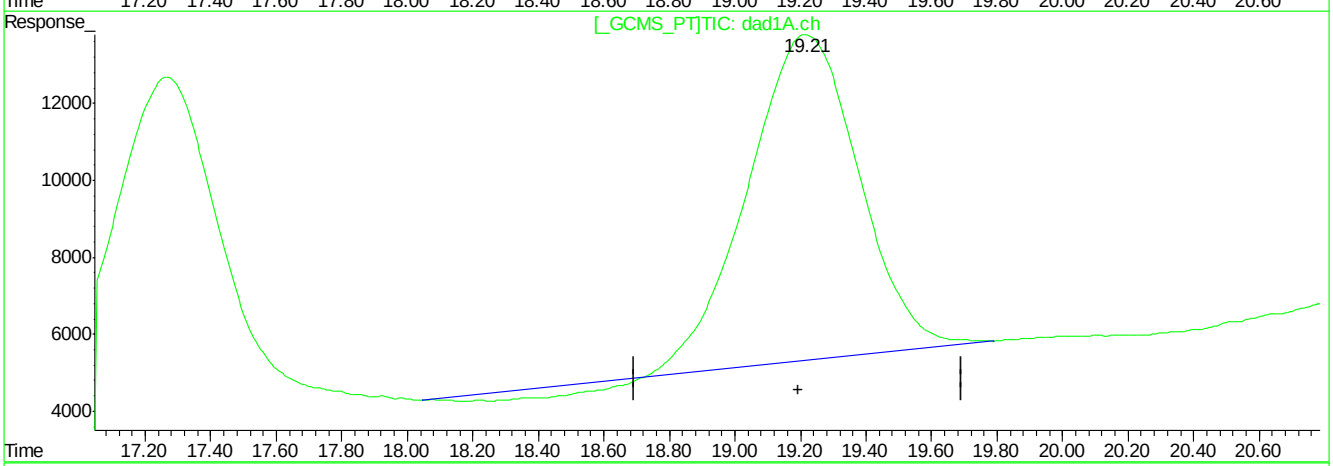
(+) = Expected Retention Time
GG619919.D 8330RPB.M_090920.M Tue Nov 03 09:45:06 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1A.ch
Acq On : 02-Nov-2020, 16:12:28 Operator: jamesb
Sample : FA80202-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.22min 158.451ppb

response 1419470

(20) 2-Amino-4,6-Dinitrotoluene #2

19.22min 151.902ppb

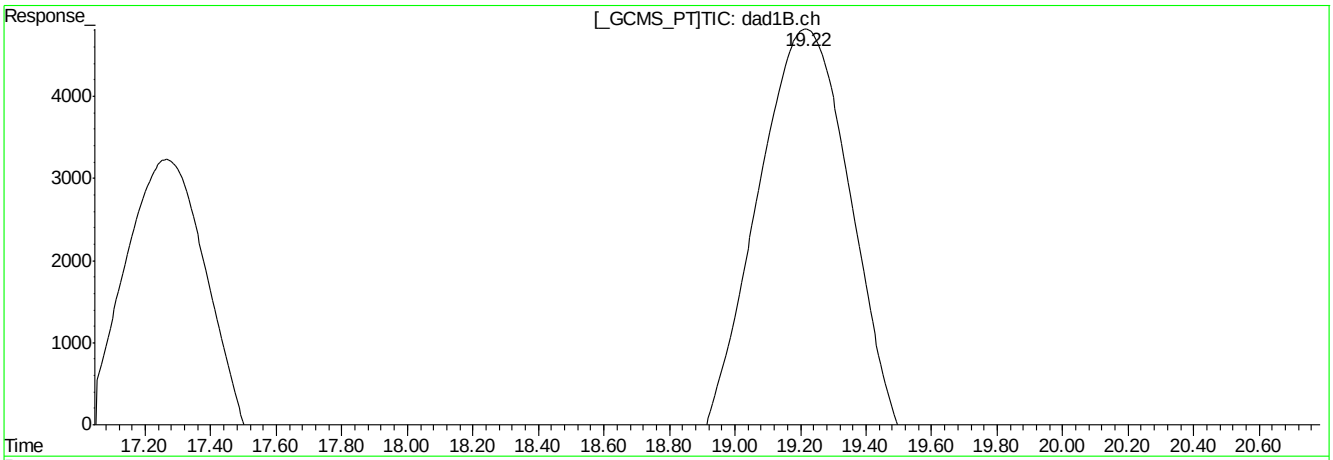
response 1944002

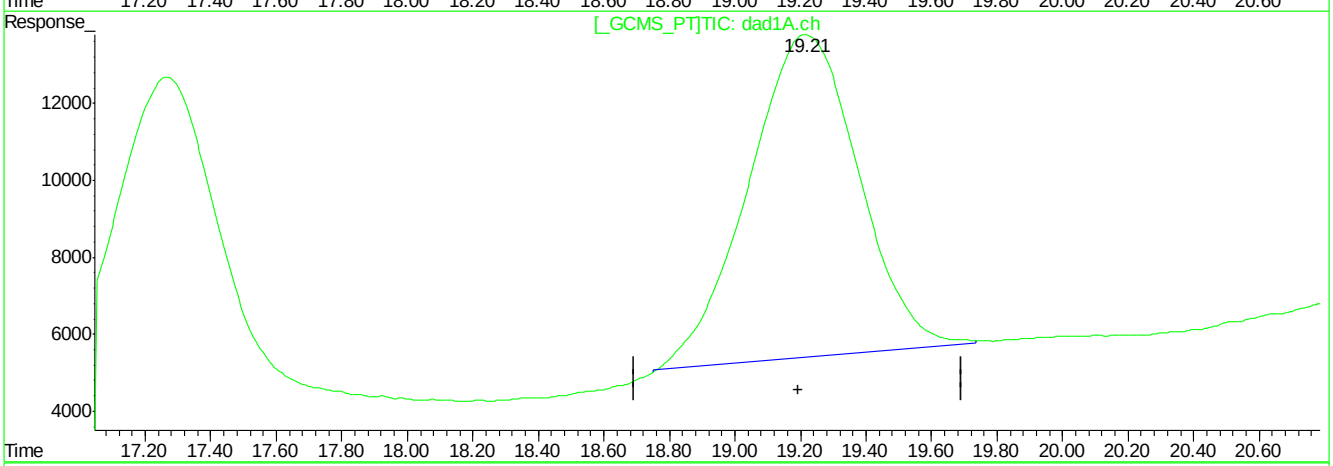
(+) = Expected Retention Time
GG619919.D 8330RPB.M_090920.M Tue Nov 03 09:45:41 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619919.D\dad1A.ch
Acq On : 02-Nov-2020, 16:12:28 Operator: jamesb
Sample : FA80202-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.22min 158.451ppb

response 1419470

(20) 2-Amino-4,6-Dinitrotoluene #2

19.21min 153.258ppb m

response 1961356

(+) = Expected Retention Time
GG619919.D 8330RPB.M_090920.M Tue Nov 03 09:45:48 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/20 18:24

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388849.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388849.D\dad1A.ch
Acq On : 31-Oct-2020, 00:20:34 Operator: jamesb
Sample : FA80202-4 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16:59 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.47	11.48	1040851	1844513	515.554m	503.702m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		103.11%	100.74%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.51	1.51	2975388	8223930	2001.726	1951.817
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	3.00	3.00	9044	18591	5.023m	6.482m
6)	1,3,5-Trinitrobe	4.81	4.81	3929905	7696280	990.198	1001.654
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.43	6.42	114812	190236	30.172	29.289m
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	10.16	10.16	3038483	3656116	821.994	850.128
13)	2-Amino-4,6-Dini	10.60	10.60	1295869	1926704	394.261	404.296
14)	4-Amino-2,6-Dini	11.11	11.11	524630	995113	214.805	232.796
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

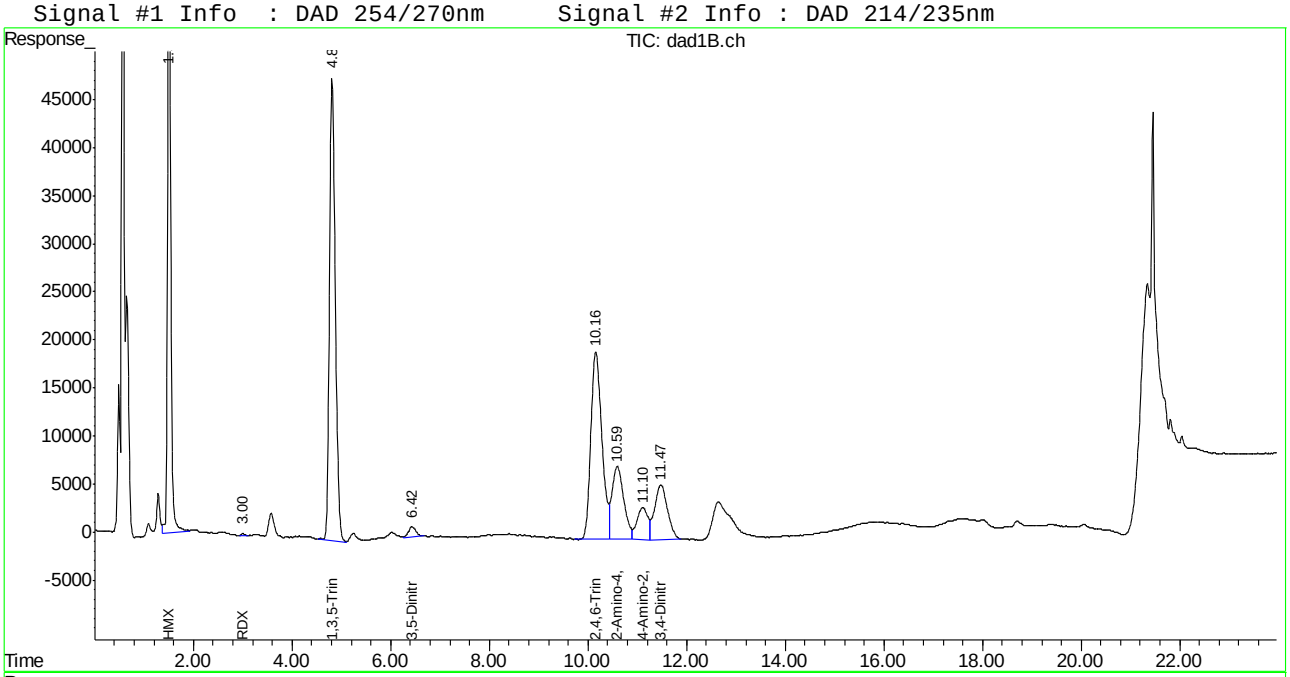
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388849.D GPP2336_092420_DV.M Thu Nov 12 15:58:22 2020 Page 1

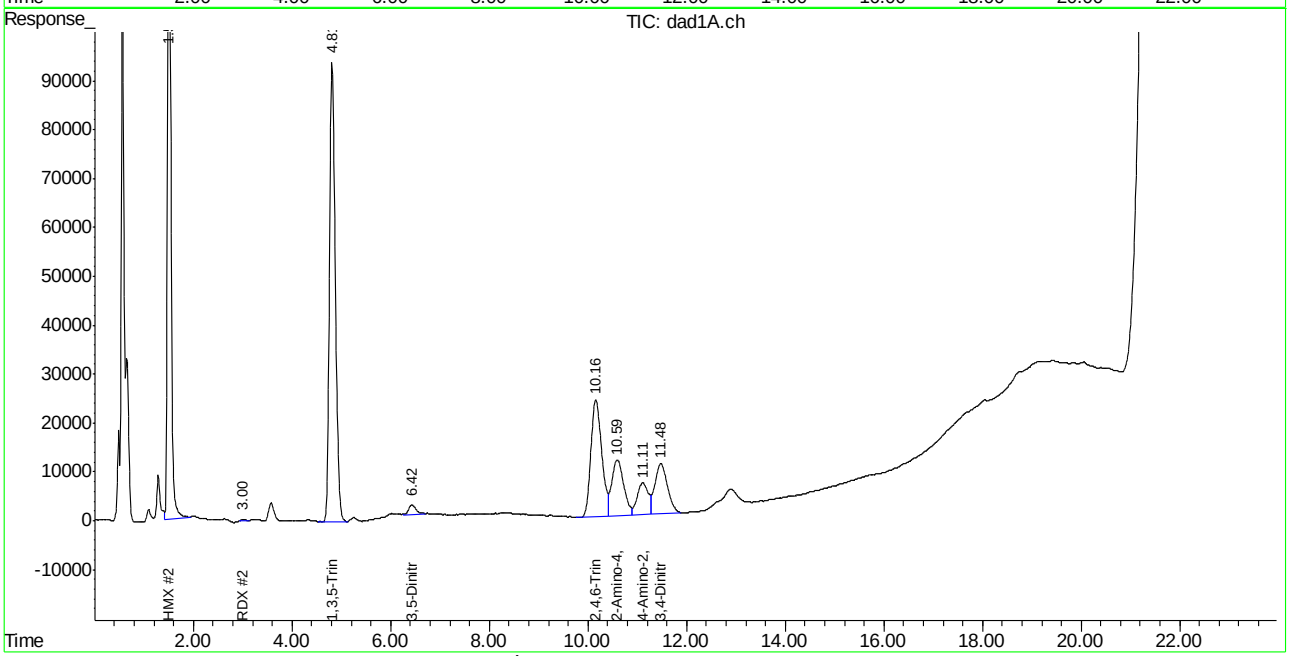
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388849.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388849.D\dad1A.ch
Acq On : 31-Oct-2020, 00:20:34 Operator: jamesb
Sample : FA80202-4 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:53 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

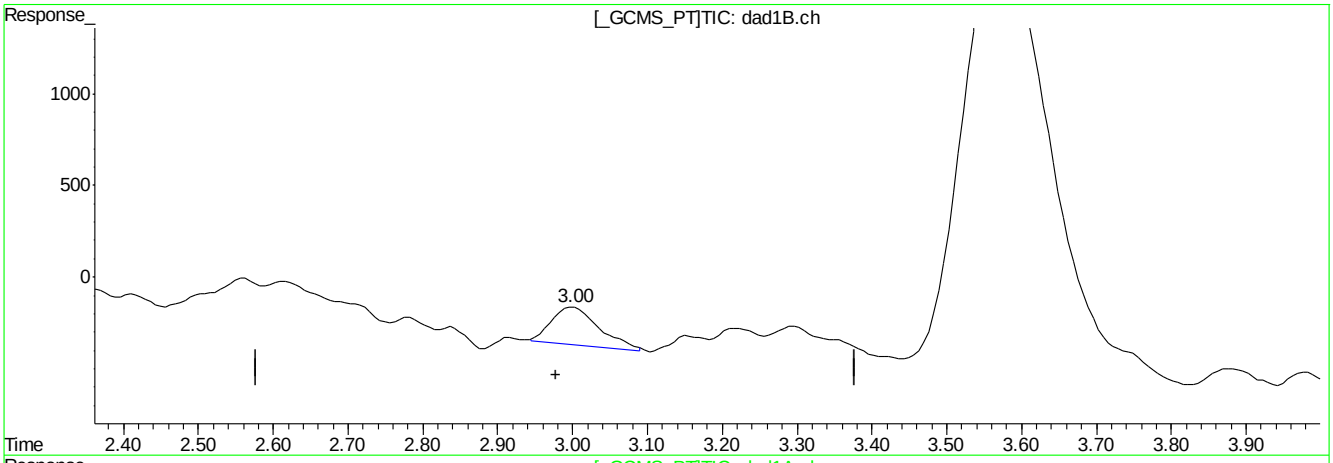
Sample Number: FA80202-4
Lab FileID: PP388849.D
Injection Time: 10/31/20 00:20
Method: SW846 8330B
Analyst approved: 11/12/20 16:16 William Hustedde
Supervisor approved: 11/12/20 18:24 Naresh Jiawan

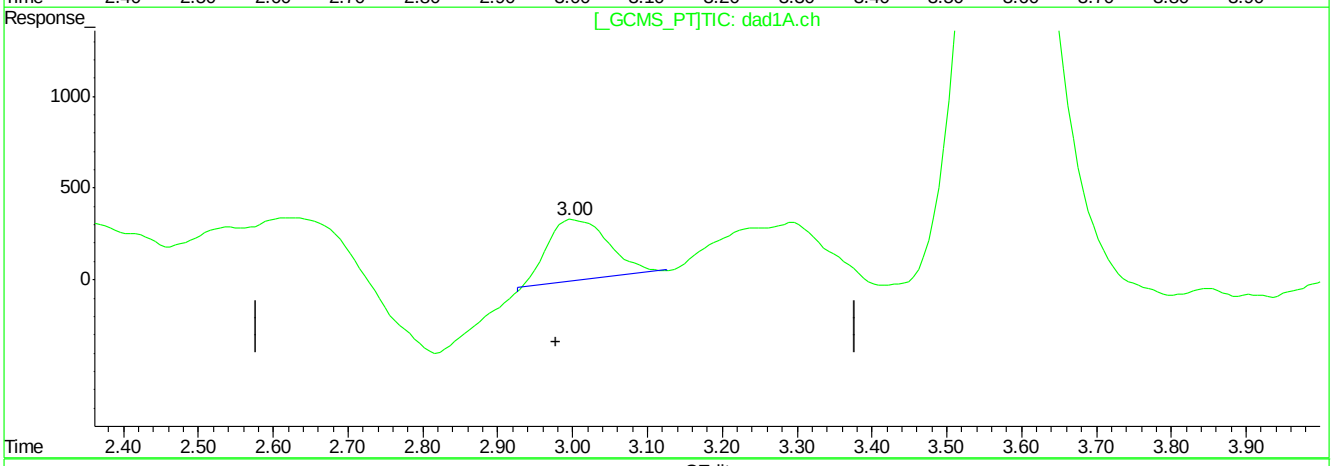
Parameter	CAS	Sig#	R.T. (min.)	Reason
RDX	121-82-4	1	3.00	Poor instrument integration
RDX	121-82-4	2	3.00	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.42	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.47	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.48	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388849.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388849.D\dad1A.ch
Acq On : 31-Oct-2020, 00:20:34 Operator: jamesb
Sample : FA80202-4 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.00min 5.023ppb m

response 9044

(5) RDX #2

3.00min 6.482ppb m

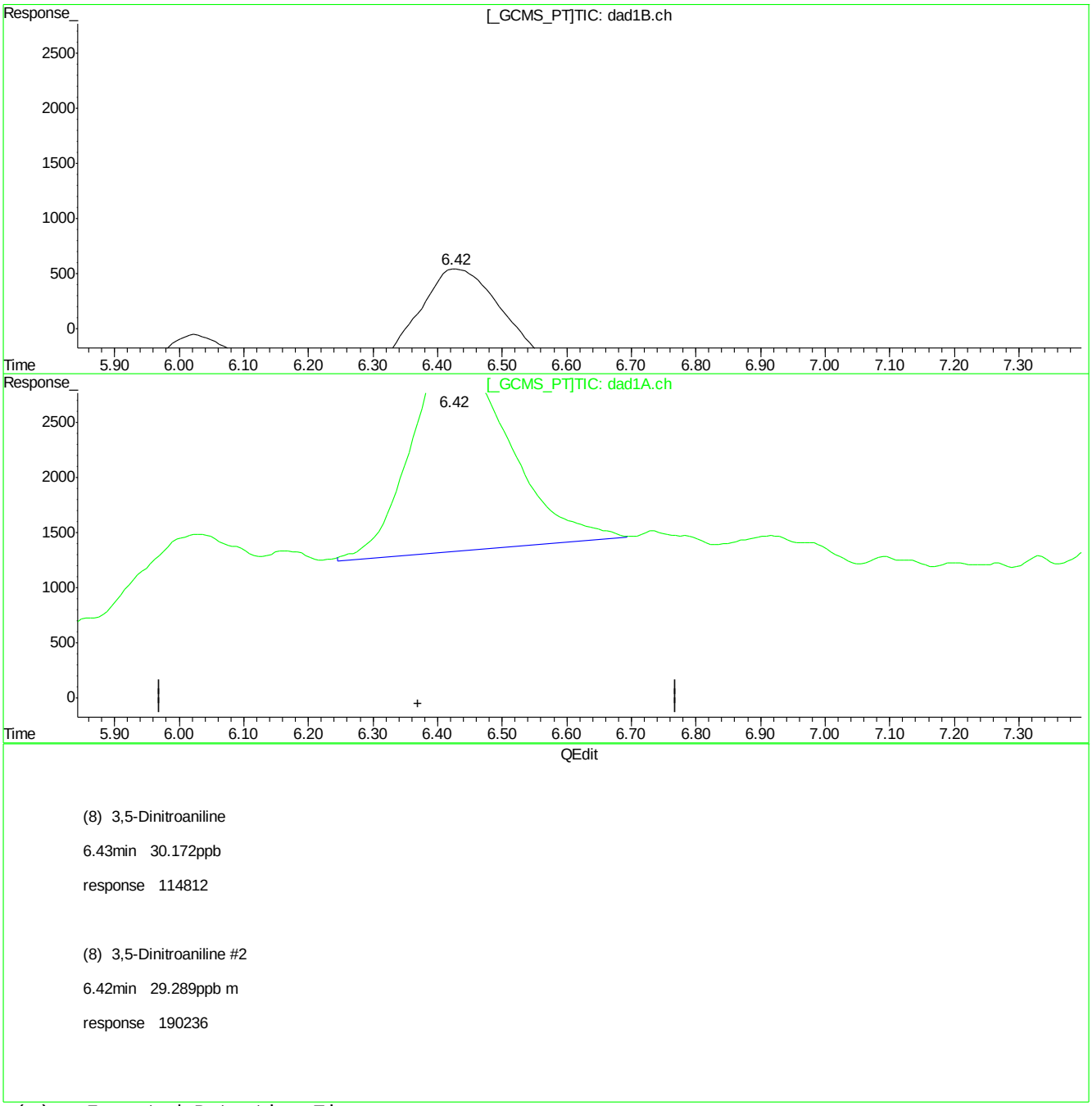
response 18591

(+) = Expected Retention Time
PP388849.D GPP2336_092420_DV.M Thu Nov 12 15:52:57 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388849.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388849.D\dad1A.ch
Acq On : 31-Oct-2020, 00:20:34 Operator: jamesb
Sample : FA80202-4 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.43min 30.172ppb

response 114812

(8) 3,5-Dinitroaniline #2

6.42min 29.289ppb m

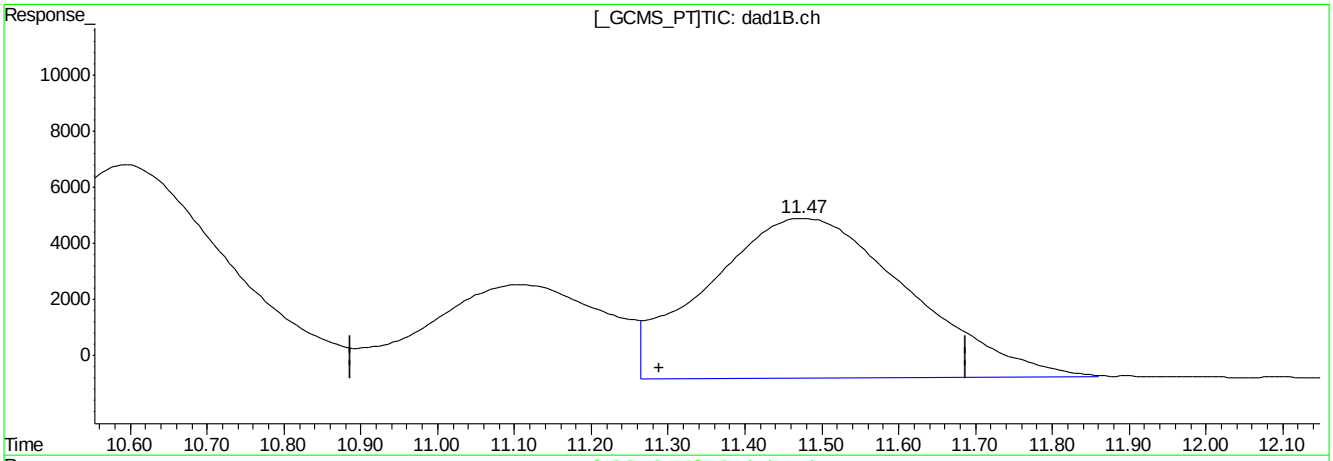
response 190236

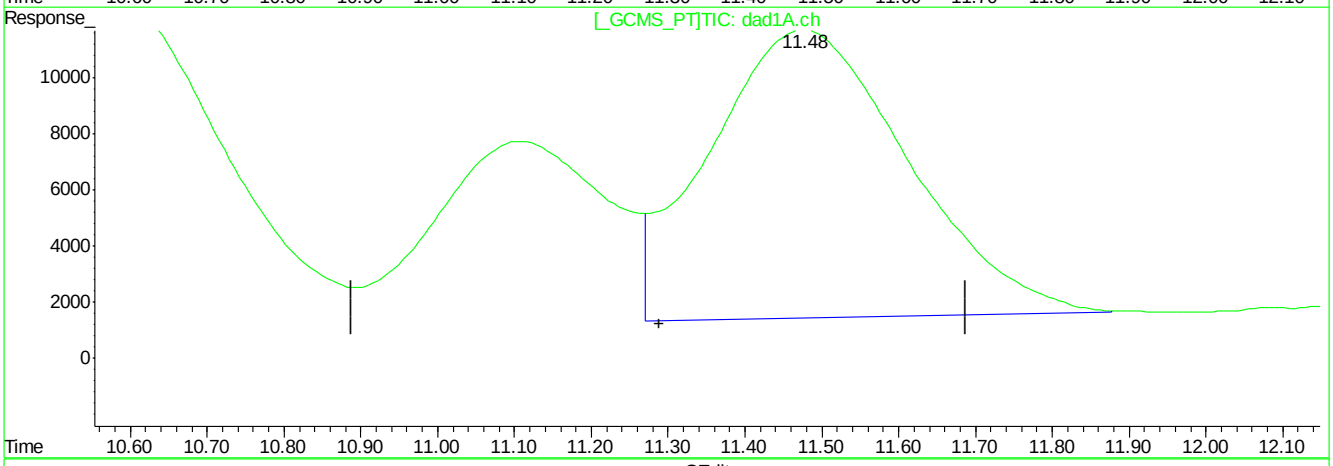
(+) = Expected Retention Time
PP388849.D GPP2336_092420_DV.M Thu Nov 12 15:53:12 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388849.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388849.D\dad1A.ch
Acq On : 31-Oct-2020, 00:20:34 Operator: jamesb
Sample : FA80202-4 Inst : G1315B
Misc : op82734,GPP2355,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.47min 515.554ppb m

response 1040851

(15) 3,4-Dinitrotoluene #2 (S)

11.48min 503.702ppb m

response 1844513

(+) = Expected Retention Time
PP388849.D GPP2336_092420_DV.M Thu Nov 12 15:53:24 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/03/20 16:10

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : op82734,GGG2889,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 03 09:20:50 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.85	13.85	2776739	5309378	509.194	511.233m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		101.84%	102.25%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.40	5.40	6610863	6618089	1852.790m	1852.939m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.34	7.34	9899253	9968712	1018.430m	1028.540m
6)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.32	11.32	7727277	10376682	858.175m	892.667m
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
16)	3,5-Dinitroanili	15.61	15.61	1159676	2172390	114.749m	135.220m
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.26	17.26	1535321	2671909	279.395m	260.100m
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.22	19.22	3368242	5024975	375.987m	392.644m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

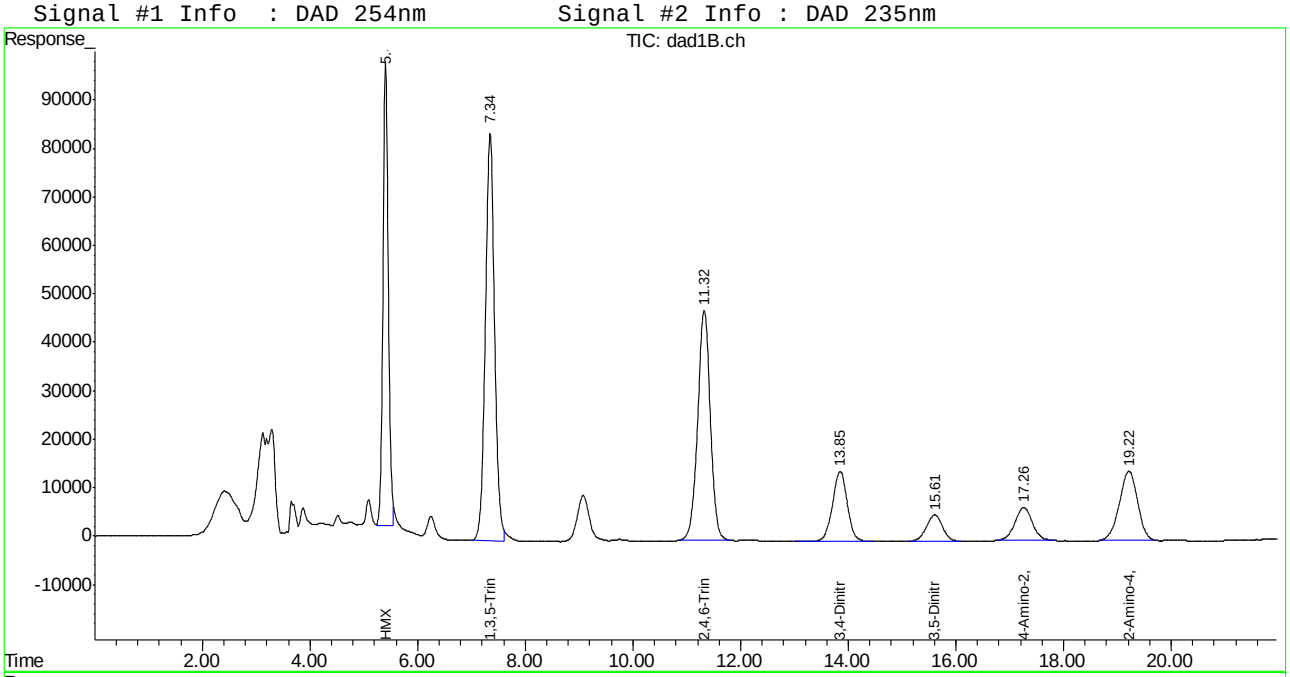
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619920.D 8330RPB.M_090920.M Tue Nov 03 14:46:51 2020 Page 1

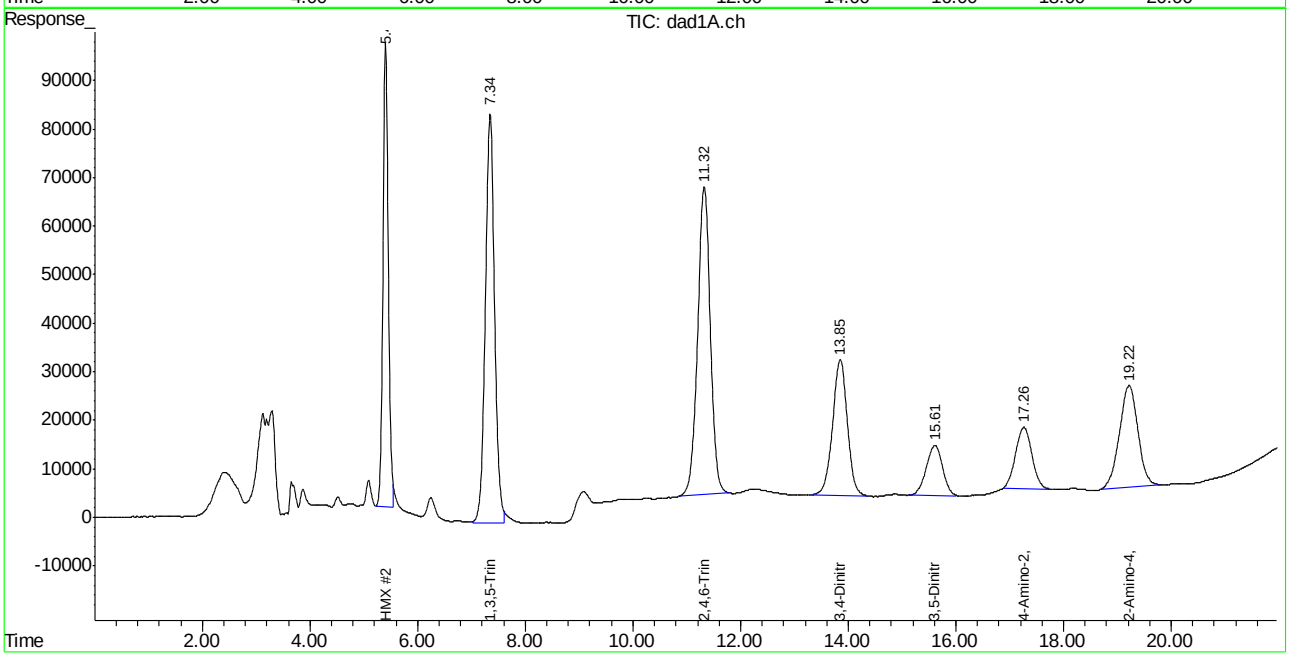
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : op82734,GGG2889,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 14:46 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

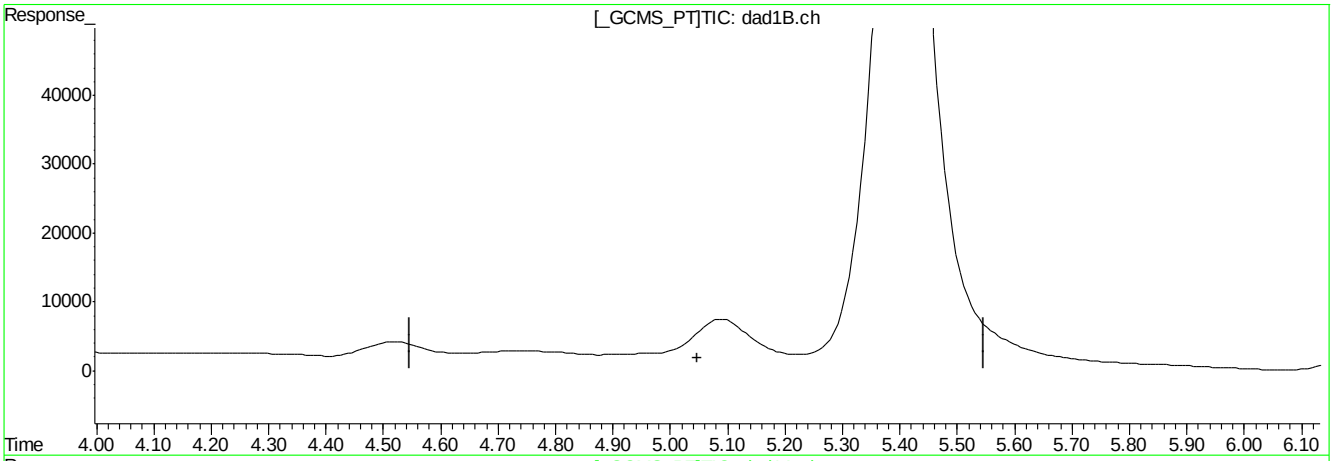
Sample Number: FA80202-4
Lab FileID: GG619920.D
Injection Time: 11/02/20 16:41
Method: SW846 8330B
Analyst approved: 11/03/20 14:47 James Boone
Supervisor approved: 11/03/20 16:10 Naresh Jiawan

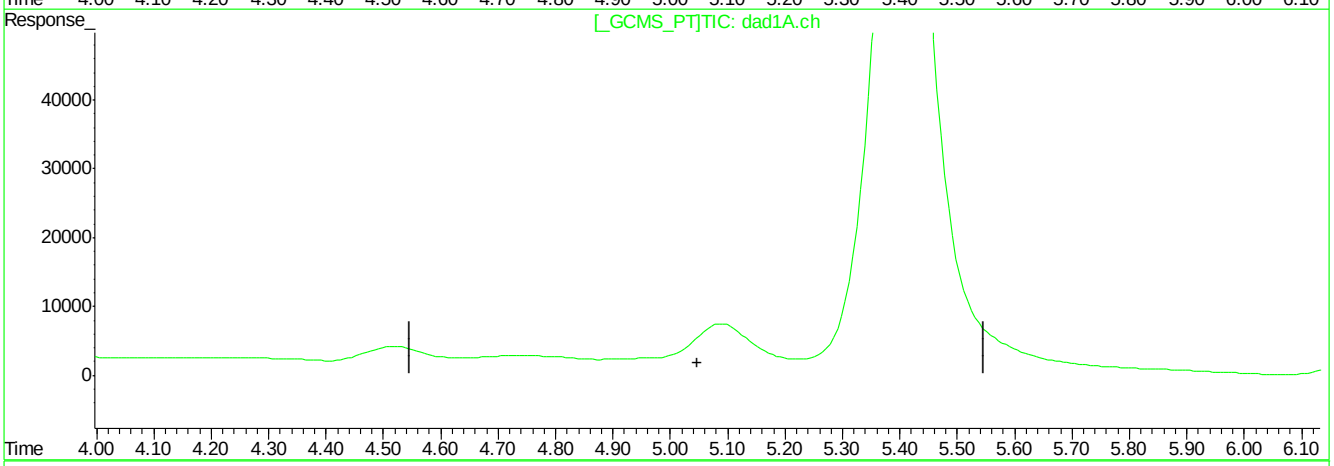
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	5.40	Poor instrument integration
HMX	2691-41-0	2	5.40	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	7.34	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.34	Poor instrument integration
RDX	121-82-4	1	7.63	Poor instrument integration
RDX	121-82-4	2	7.63	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	11.32	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.32	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	13.85	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	15.61	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	15.61	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	17.26	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.26	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	19.22	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.22	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(1) TNX

0.00min 0.000ppb d

response 0

(1) TNX #2

0.00min 0.000ppb d

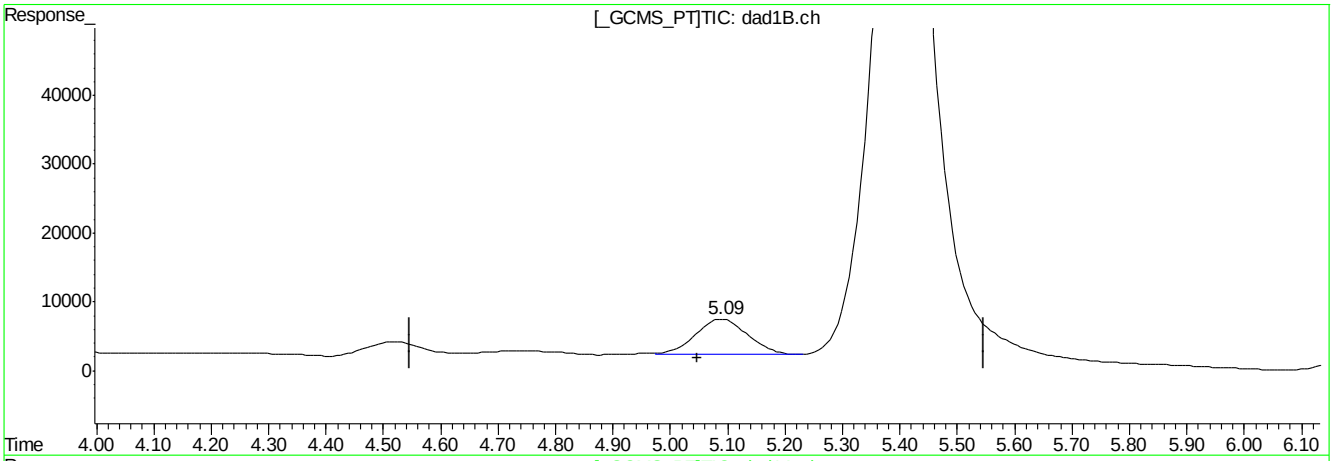
response 0

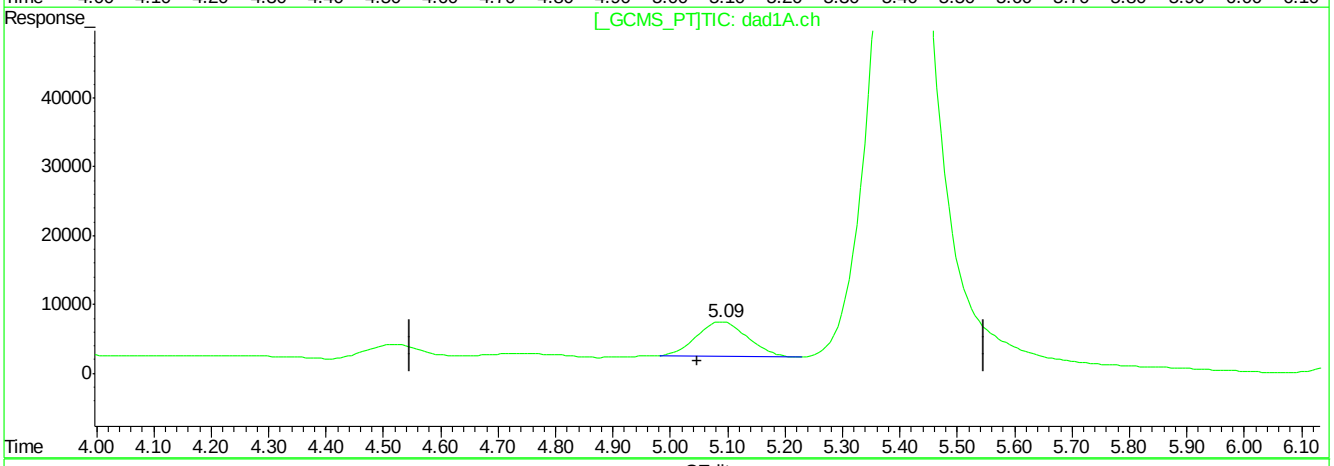
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:54:27 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(1) TNX

5.09min 52.441ppb m

response 317766

(1) TNX #2

5.09min 50.375ppb m

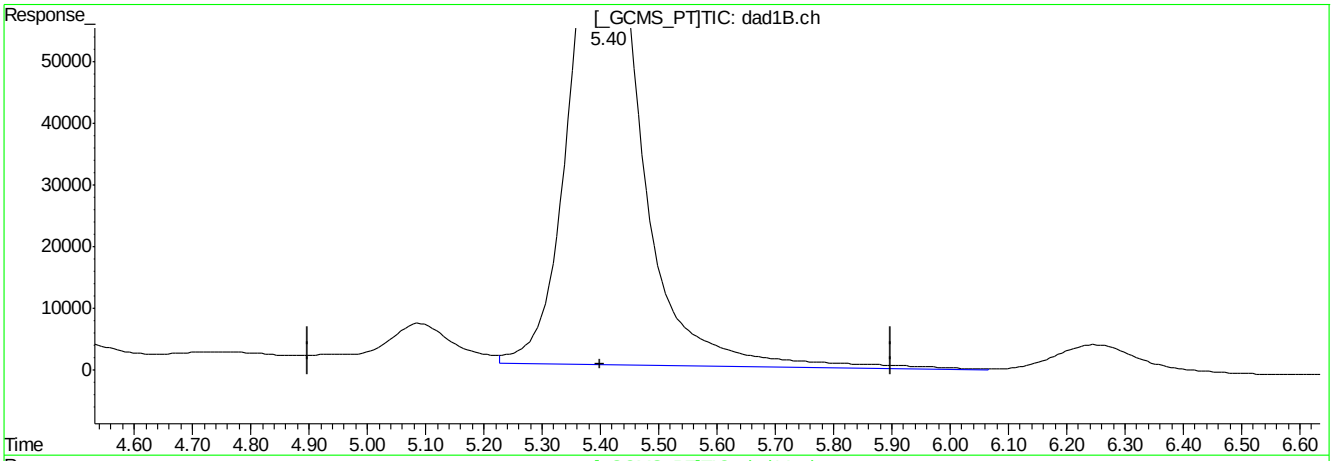
response 306967

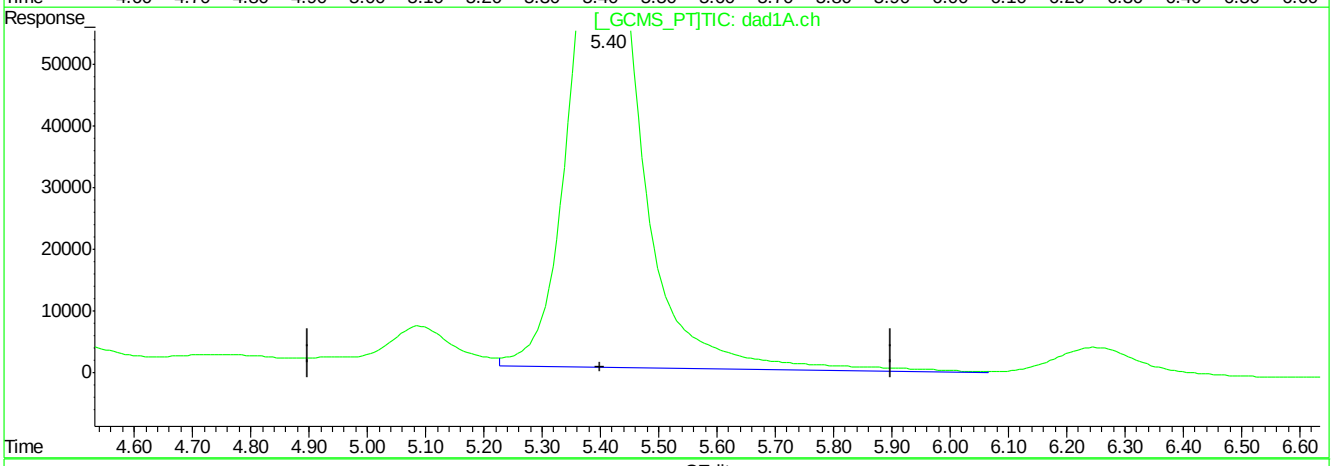
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:54:35 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.41min 2041.114ppb

response 7282813

(2) HMX #2

5.41min 2039.049ppb

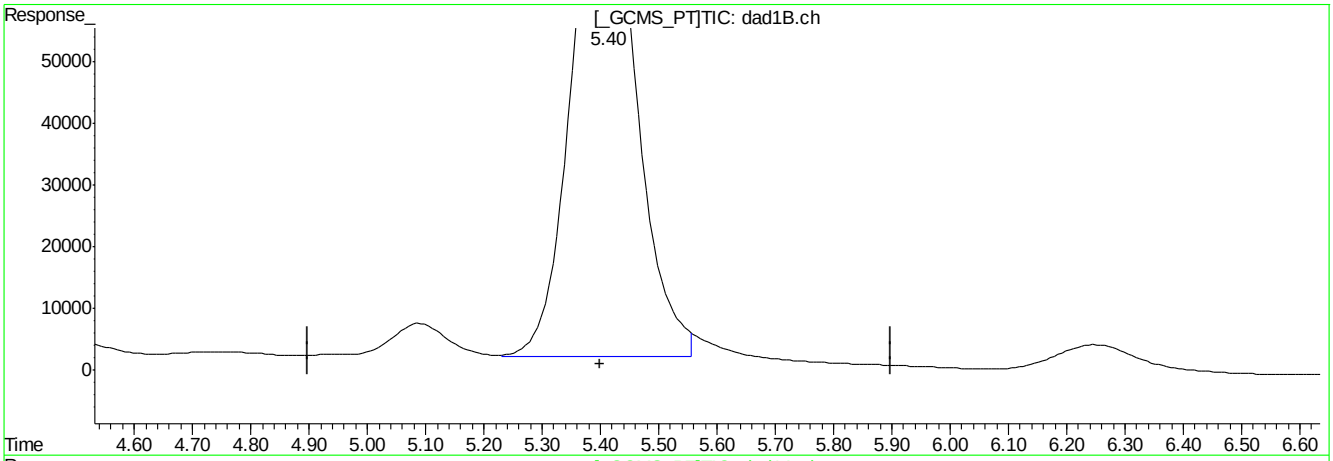
response 7282813

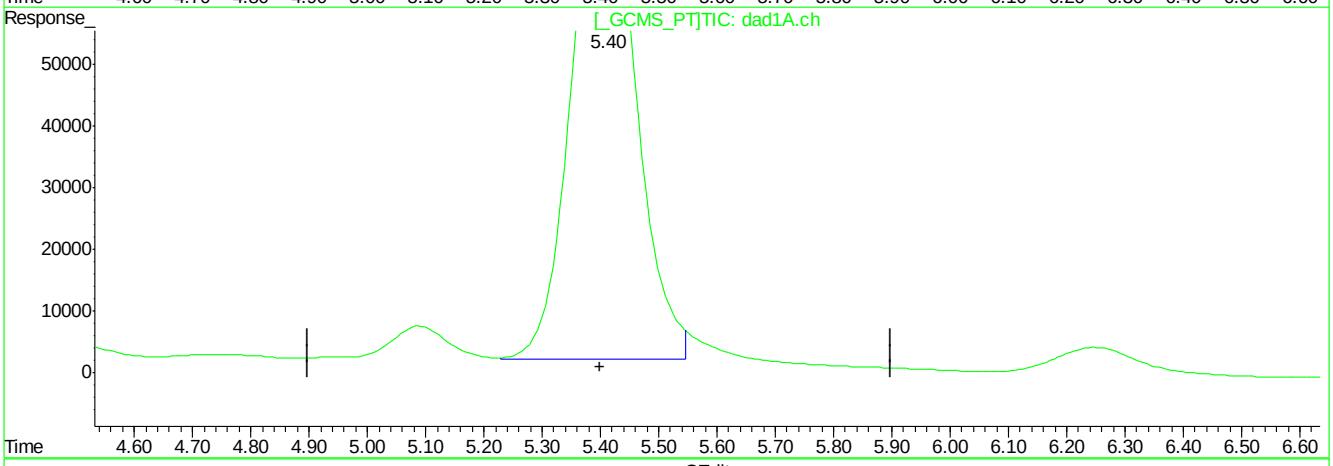
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:54:41 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.40min 1852.790ppb m

response 6610863

(2) HMX #2

5.40min 1852.939ppb m

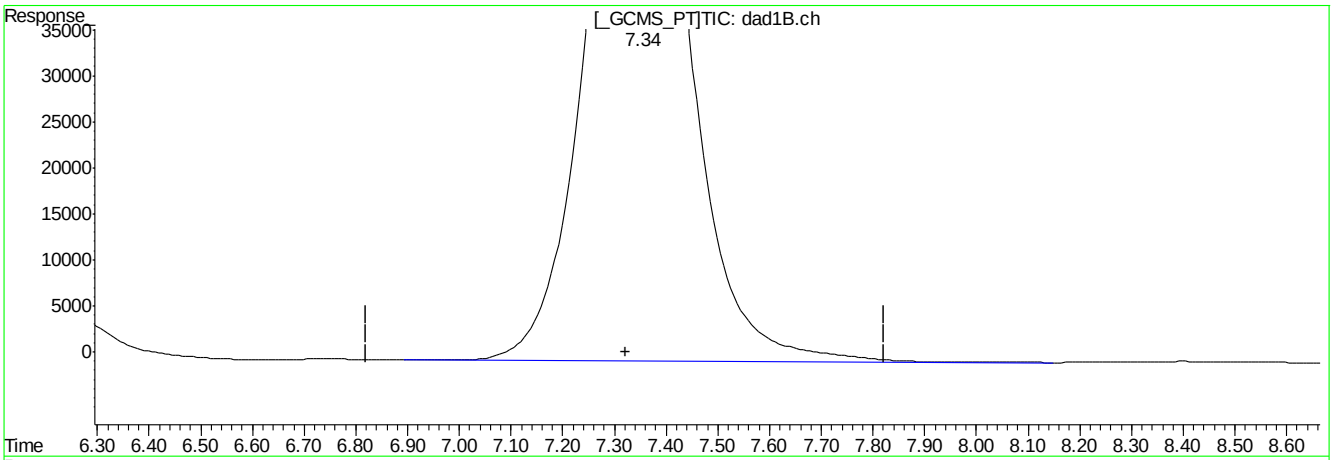
response 6618089

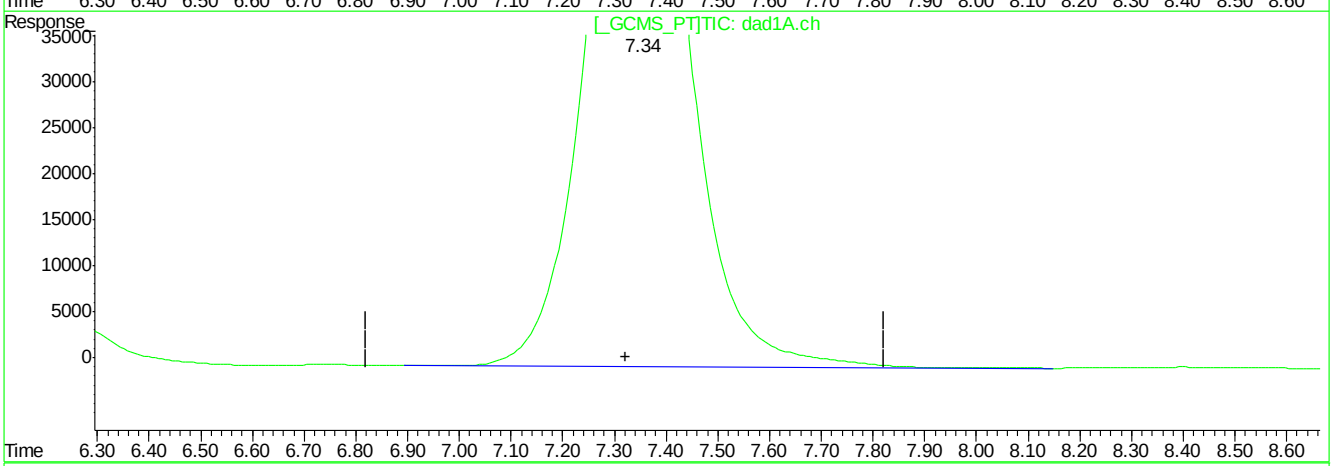
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:54:52 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.35min 1034.718ppb

response 10057576

(5) 1,3,5-Trinitrobenzene #2

7.35min 1037.709ppb

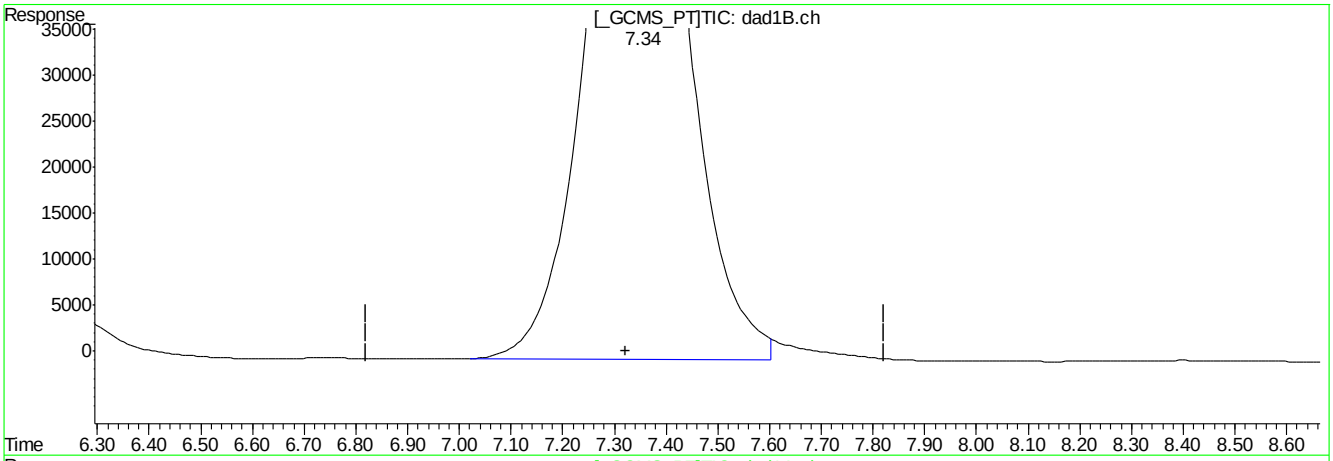
response 10057576

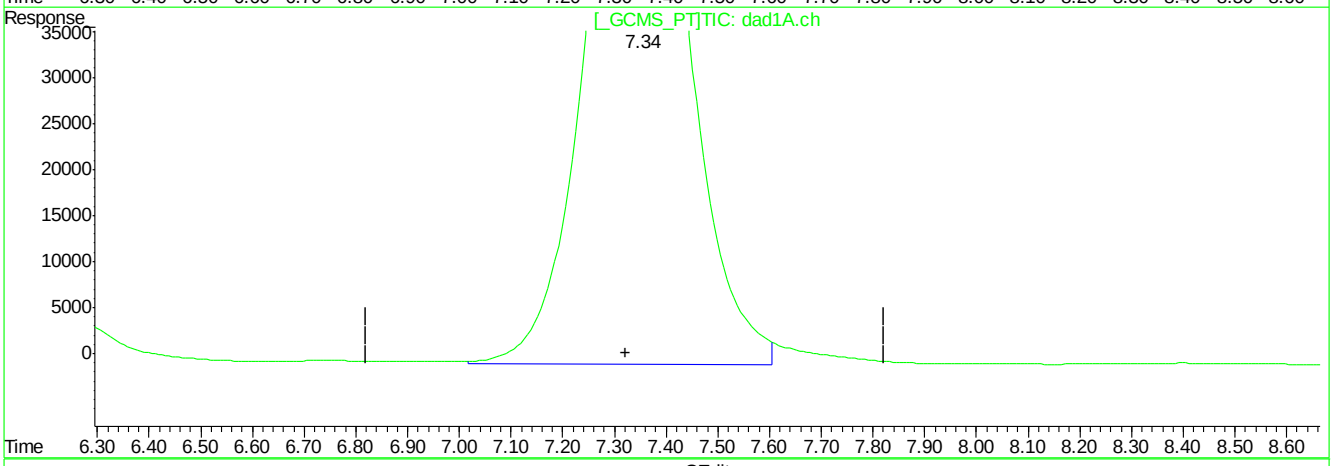
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:55:06 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.34min 1018.430ppb m

response 9899253

(5) 1,3,5-Trinitrobenzene #2

7.34min 1028.540ppb m

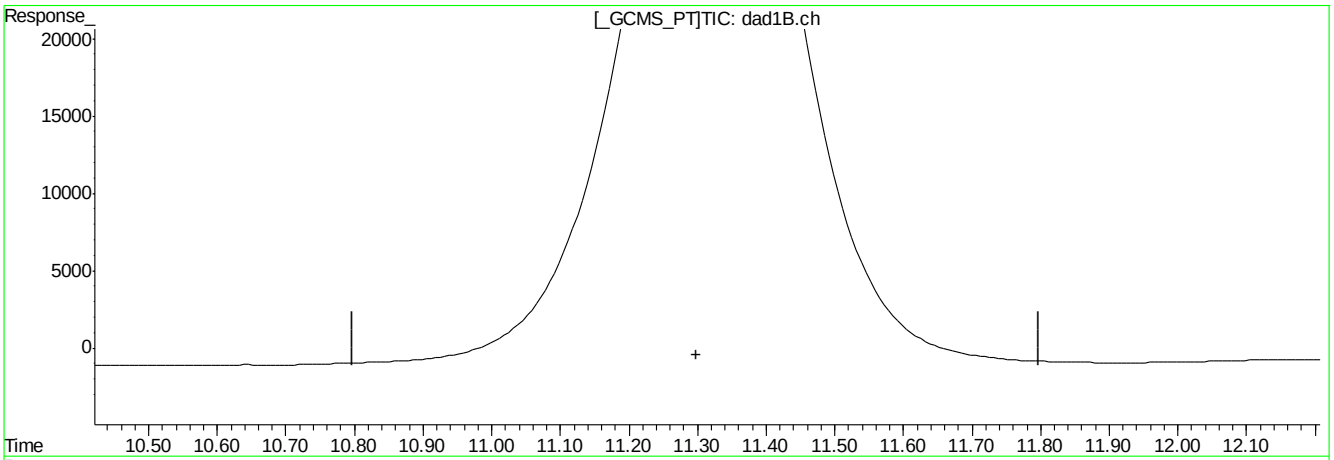
response 9968712

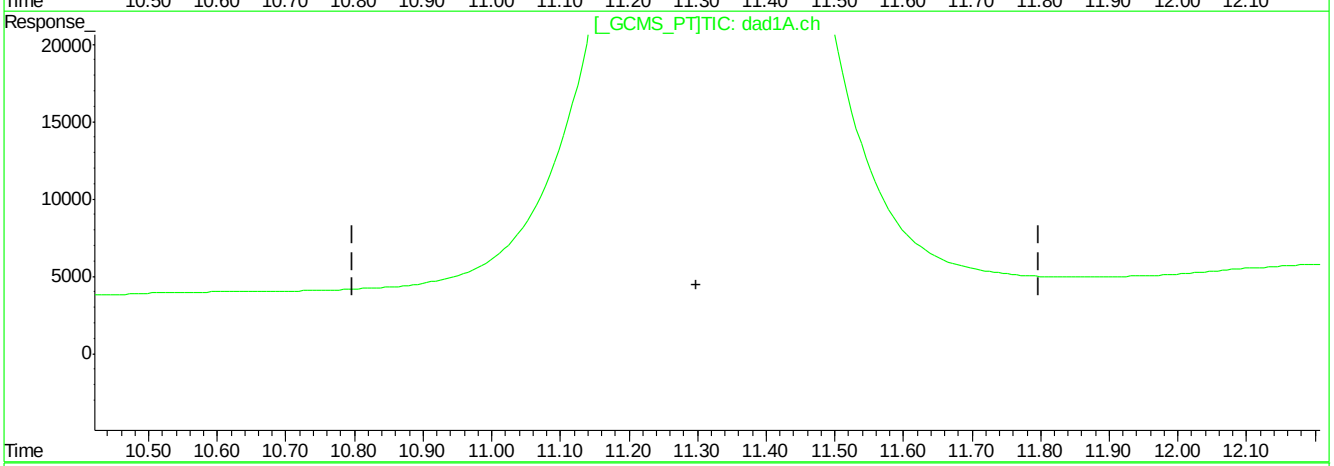
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:55:19 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

0.00min 0.000ppb d

response 0

(9) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb d

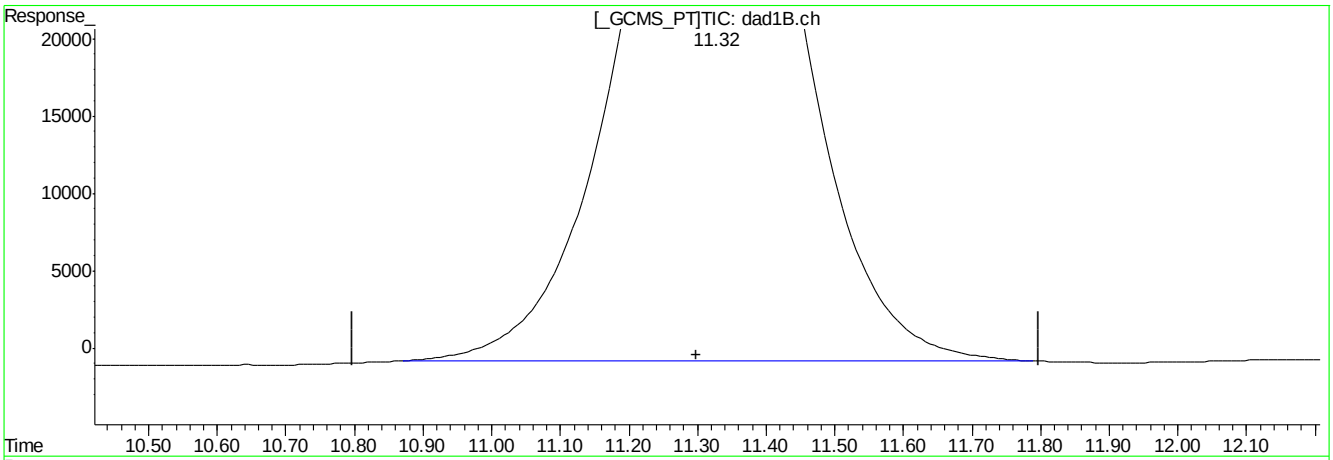
response 0

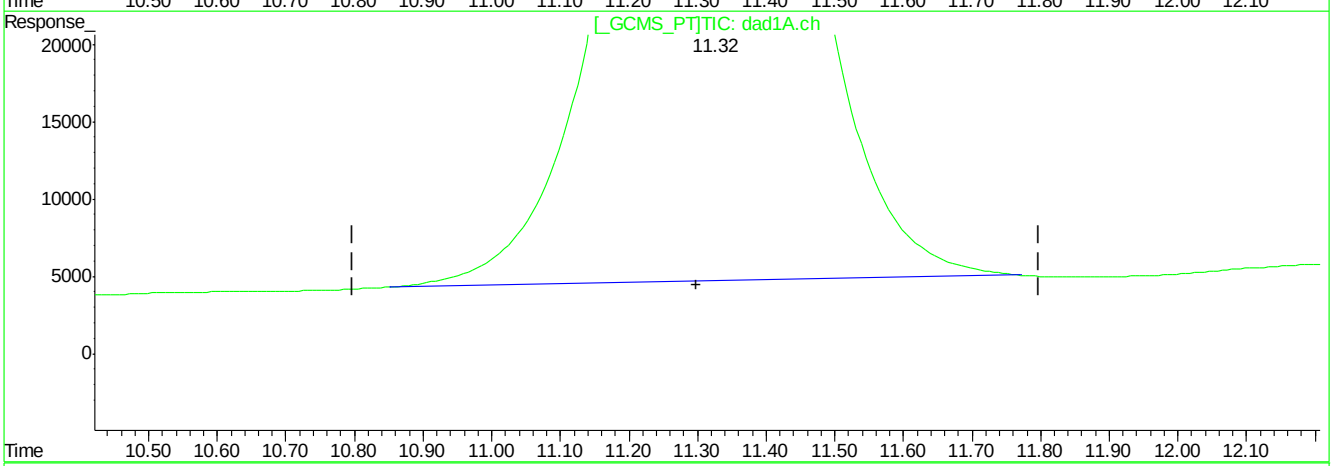
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:55:29 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.32min 858.175ppb m

response 7727277

(9) 2,4,6-Trinitrotoluene #2

11.32min 892.667ppb m

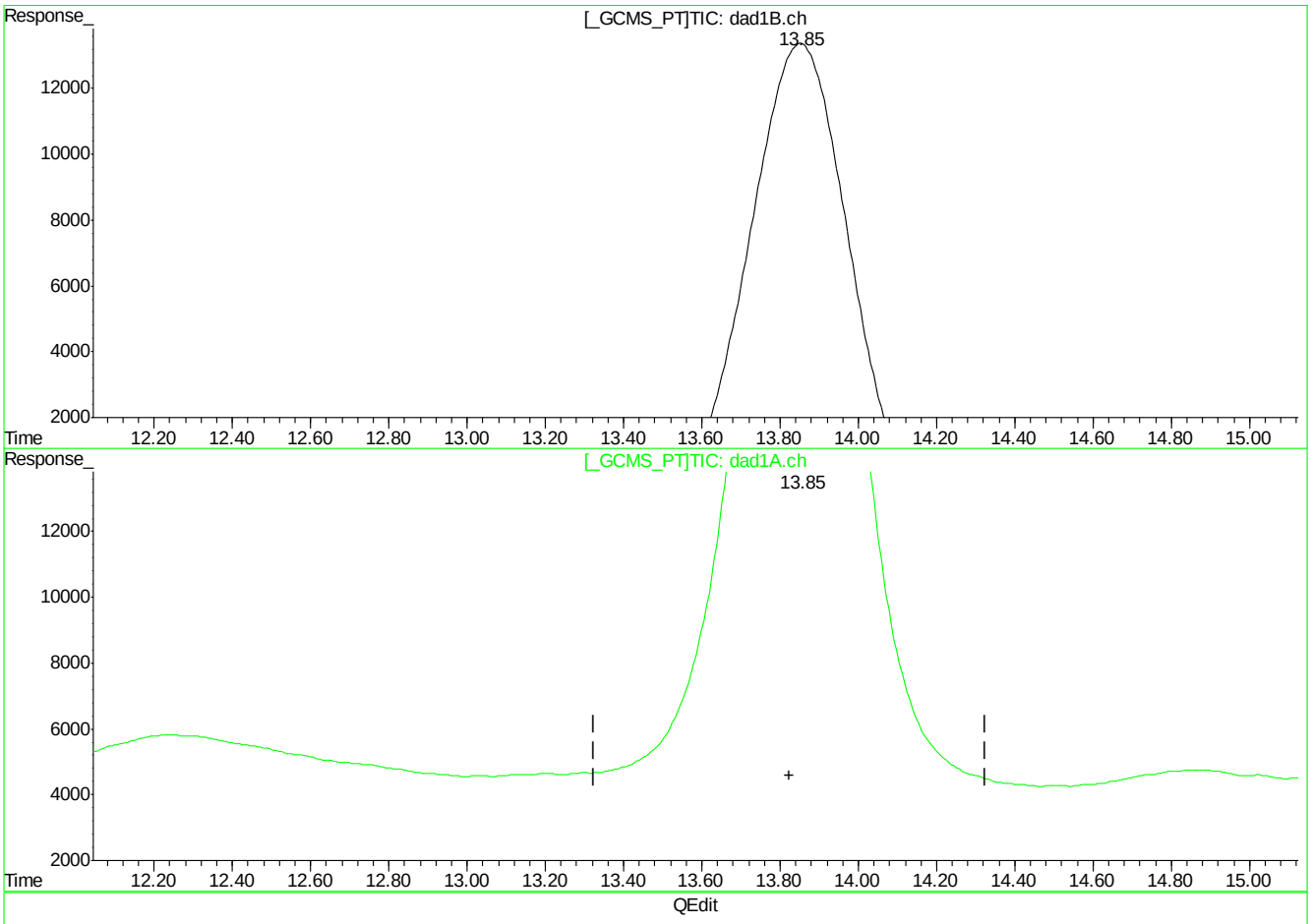
response 10376682

(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:55:36 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration



(12) 3,4-Dinitrotoluene (S)

13.85min 509.194ppb

response 2776739

(12) 3,4-Dinitrotoluene #2 (S)

13.85min 707.257ppb

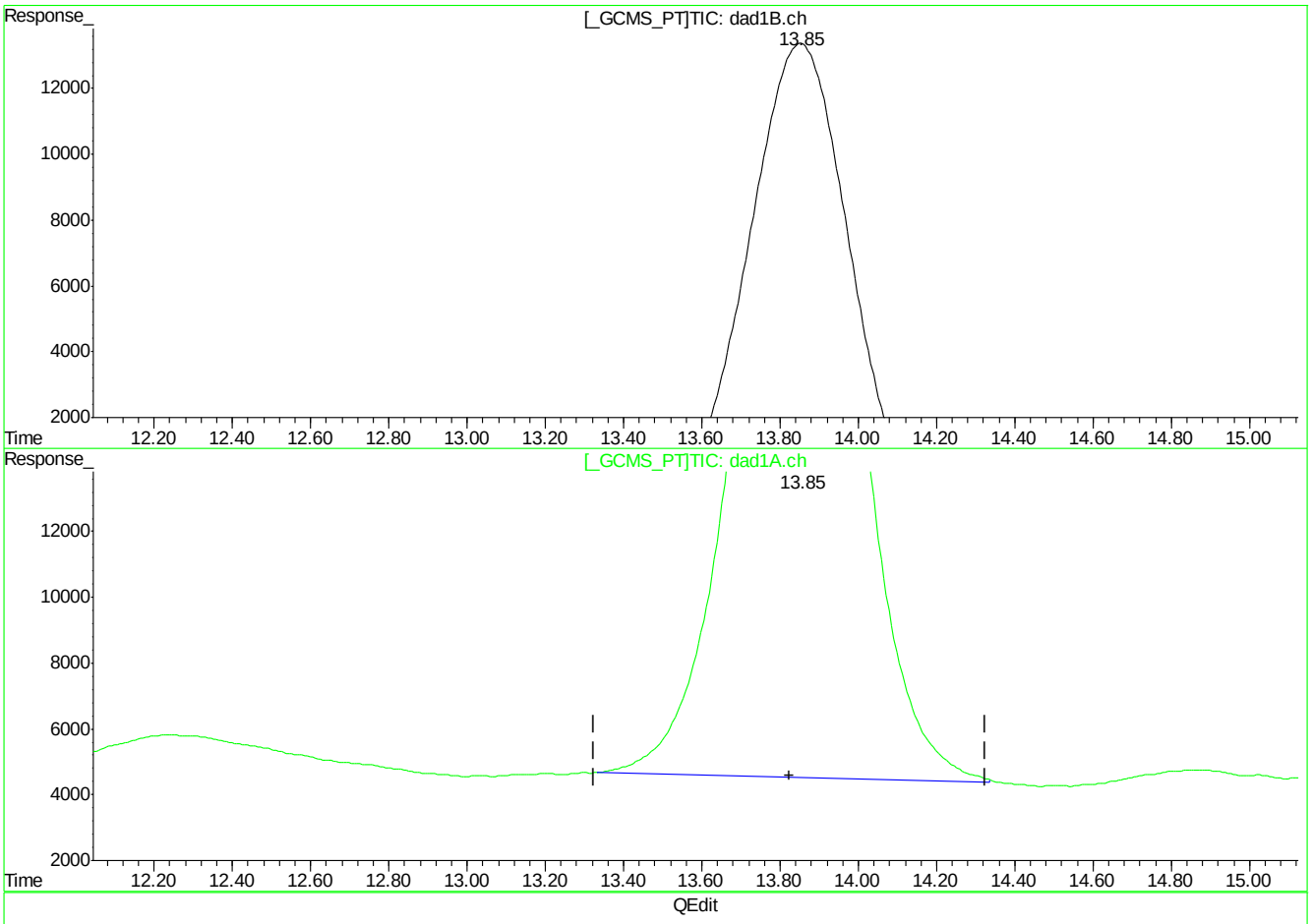
response 7345168

(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:55:47 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration



(12) 3,4-Dinitrotoluene (S)

13.85min 509.194ppb

response 2776739

(12) 3,4-Dinitrotoluene #2 (S)

13.85min 511.233ppb m

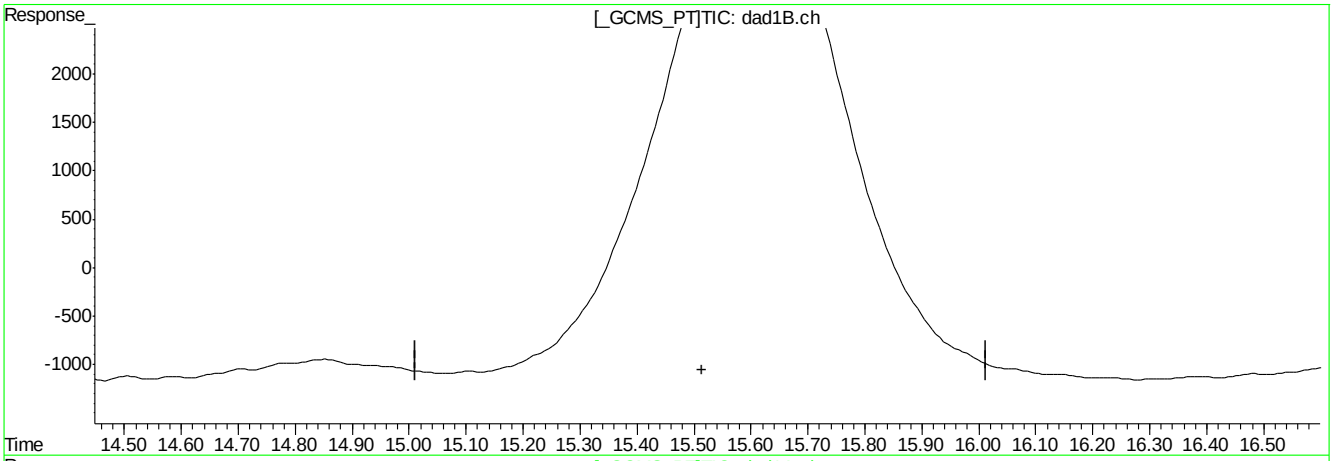
response 5309378

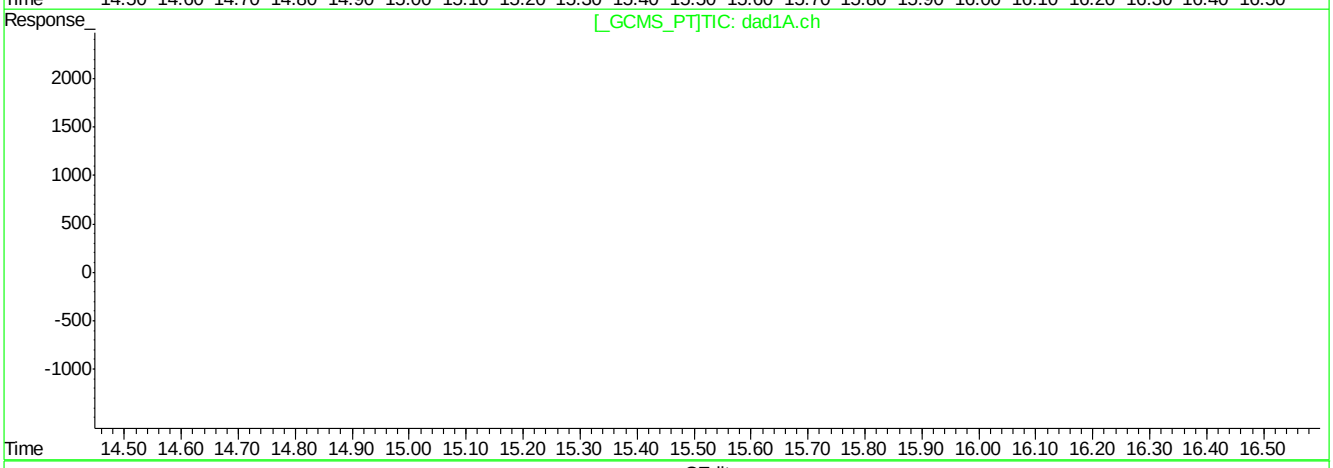
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:55:53 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(16) 3,5-Dinitroaniline

0.00min 0.000ppb d

response 0

(16) 3,5-Dinitroaniline #2

0.00min 0.000ppb d

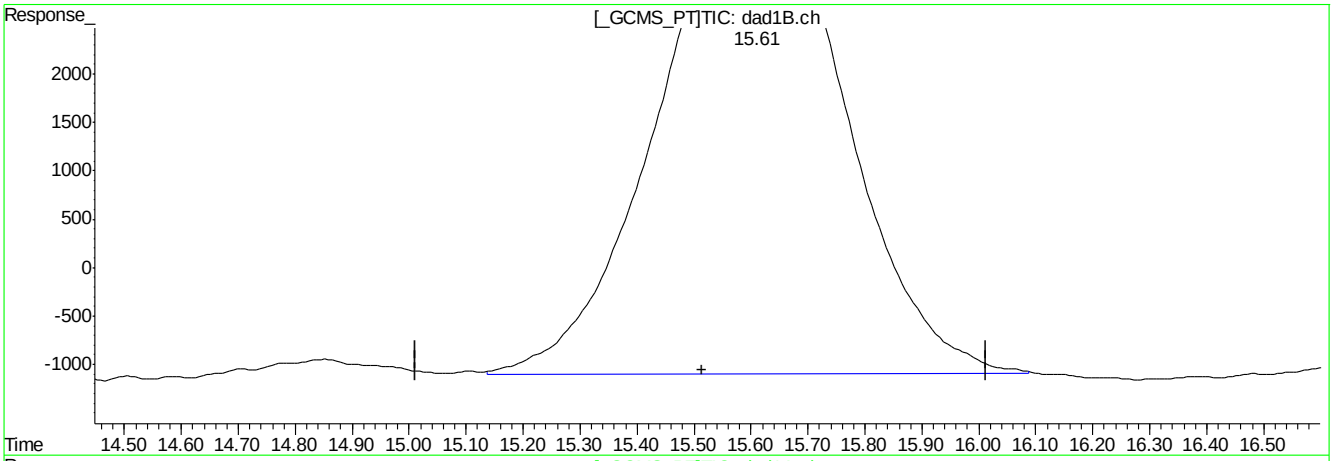
response 0

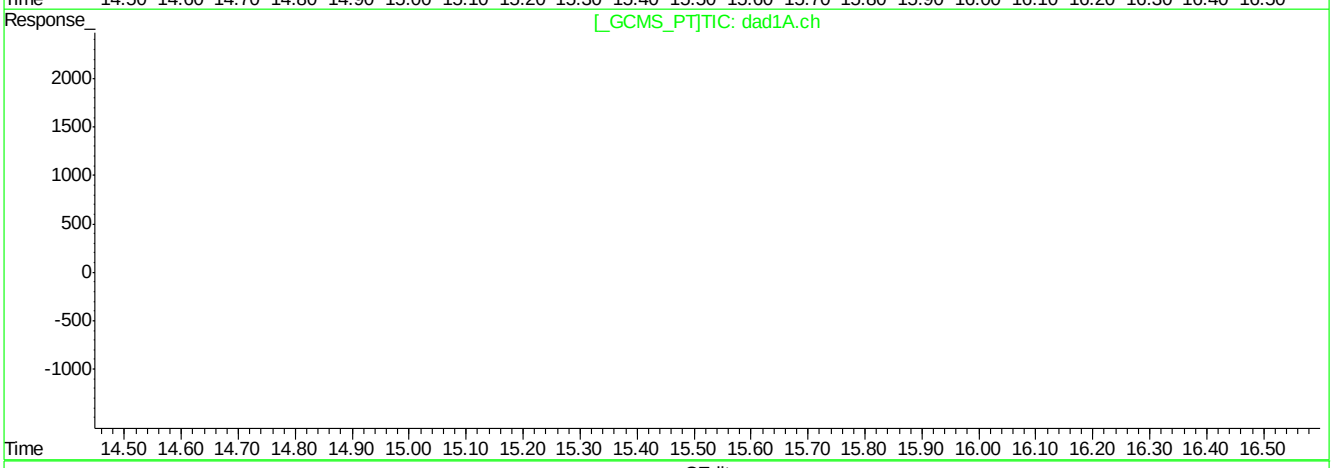
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:56:35 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(16) 3,5-Dinitroaniline

15.61min 114.749ppb m

response 1159676

(16) 3,5-Dinitroaniline #2

0.00min 0.000ppb d

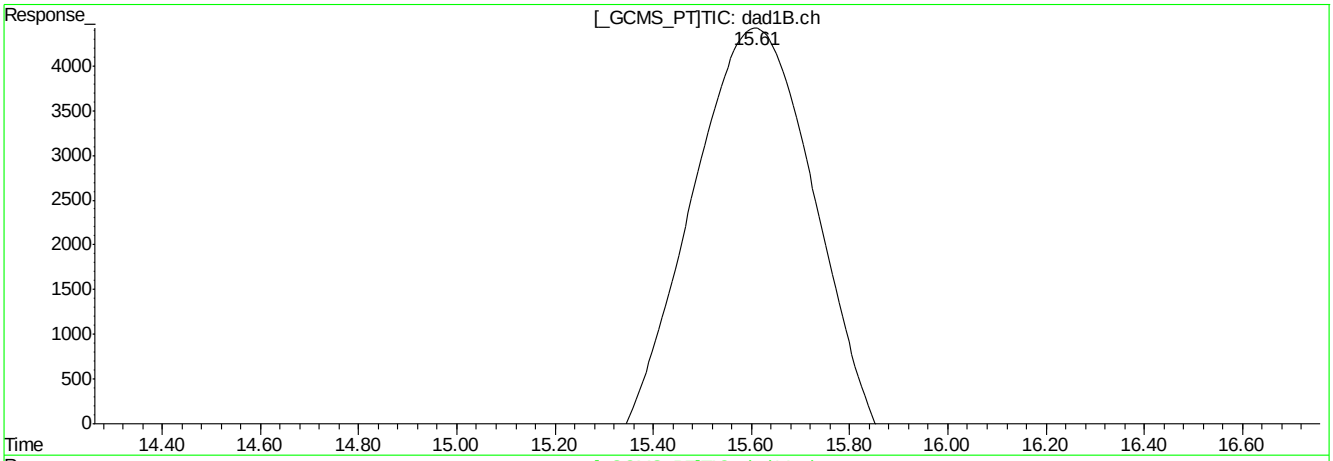
response 0

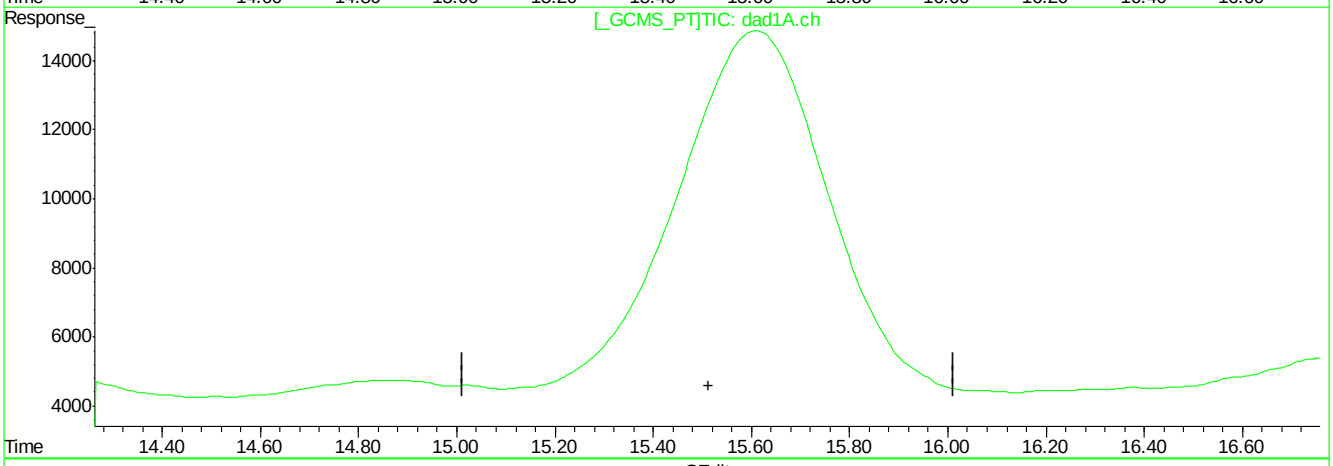
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:56:39 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(16) 3,5-Dinitroaniline

15.61min 114.749ppb m

response 1159676

(16) 3,5-Dinitroaniline #2

0.00min 0.000ppb d

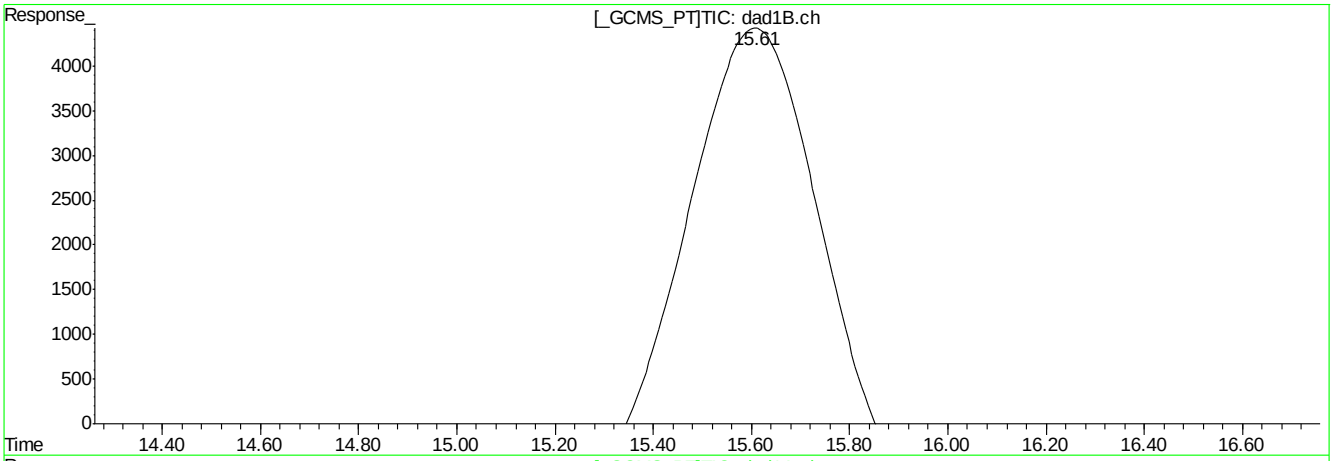
response 0

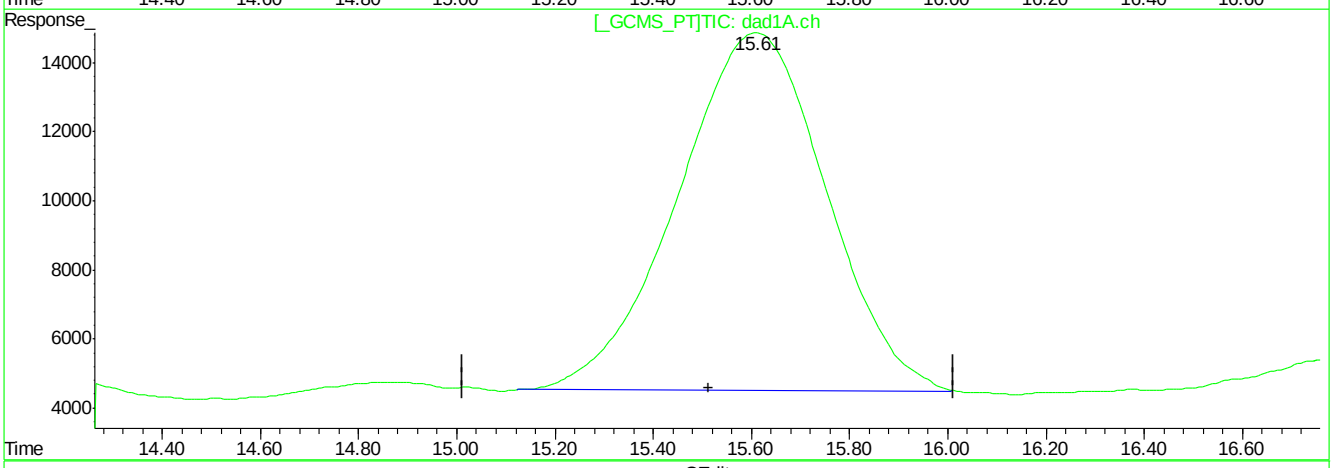
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:56:42 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(16) 3,5-Dinitroaniline

15.61min 114.749ppb m

response 1159676

(16) 3,5-Dinitroaniline #2

15.61min 135.220ppb m

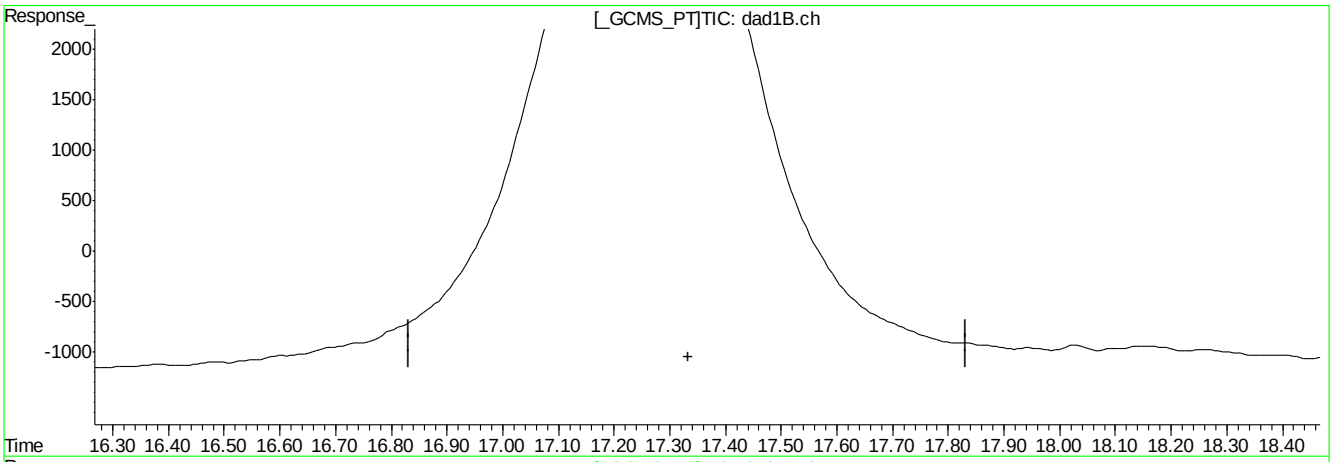
response 2172390

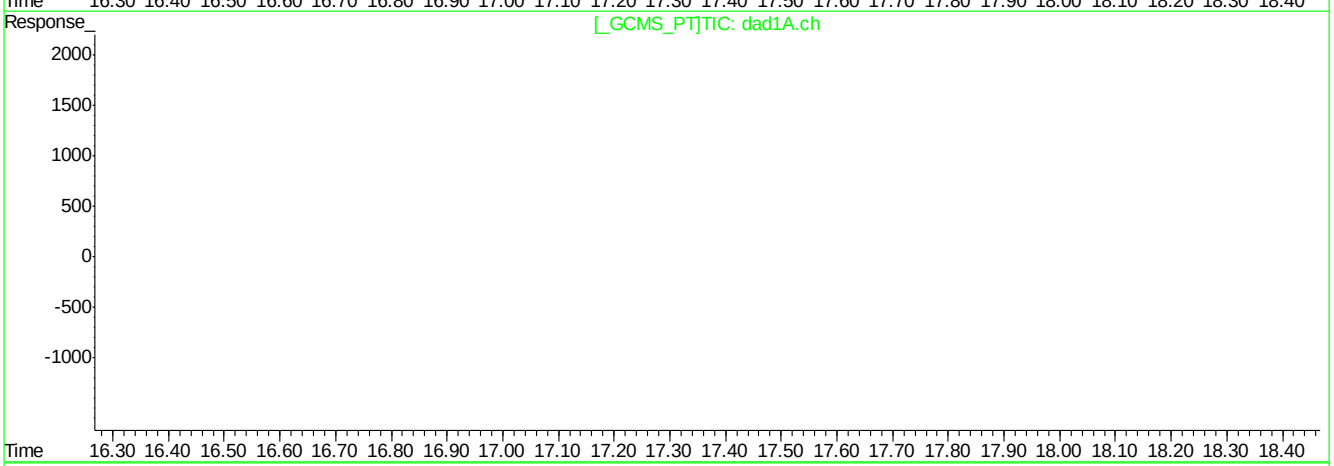
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:56:49 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

0.00min 0.000ppb d

response 0

(18) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb d

response 0

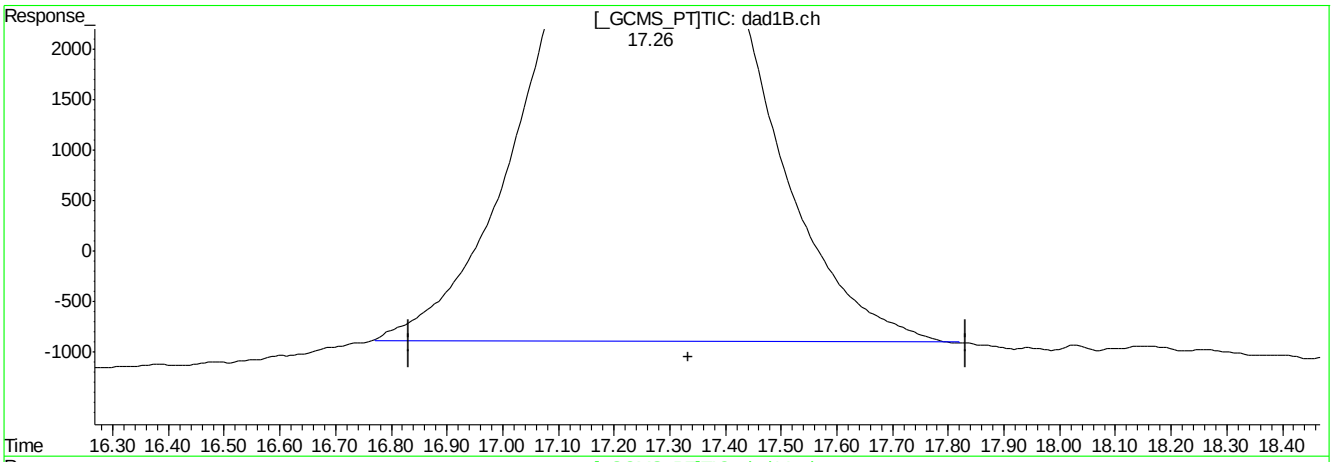
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:57:01 2020

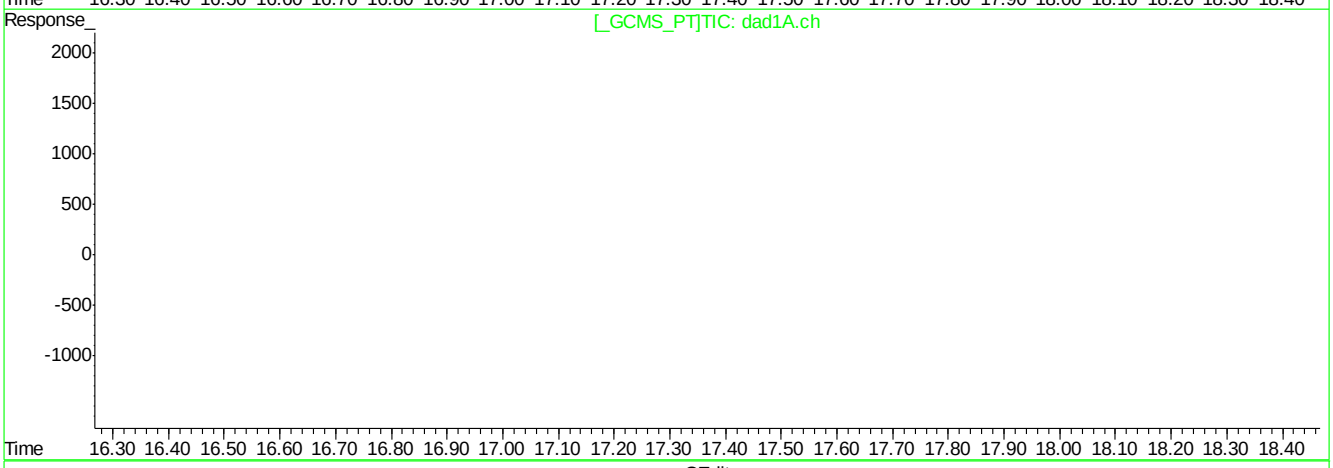
GG619920.D edits: 4-Amino-2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.26min 279.395ppb m

response 1535321

(18) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb d

response 0

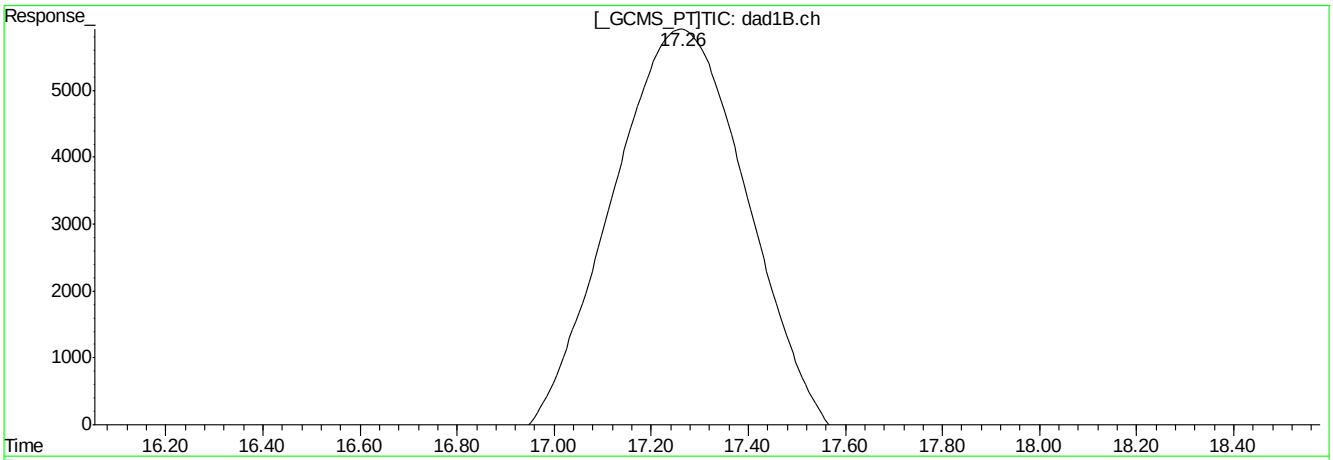
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:57:05 2020

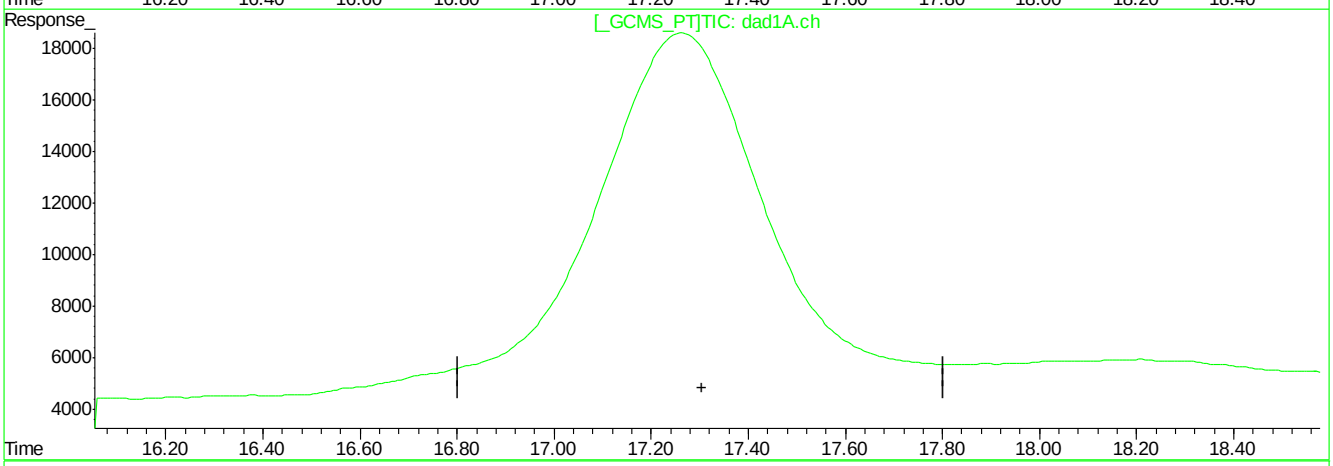
GG619920.D edits: 4-Amino-2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.26min 279.395ppb m

response 1535321

(18) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb d

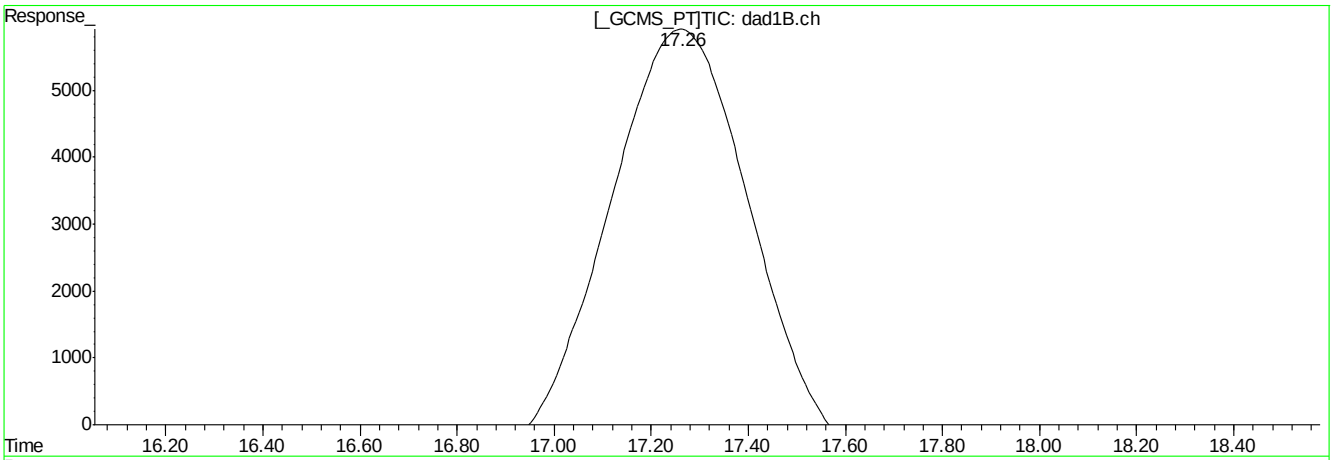
response 0

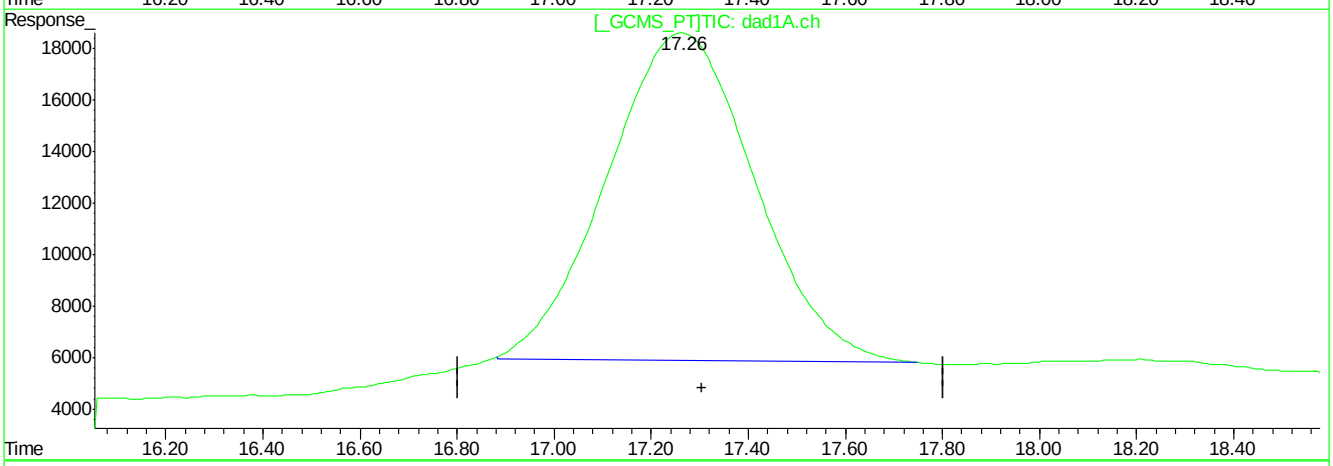
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:57:07 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.26min 279.395ppb m

response 1535321

(18) 4-Amino-2,6-Dinitrotoluene #2

17.26min 260.100ppb m

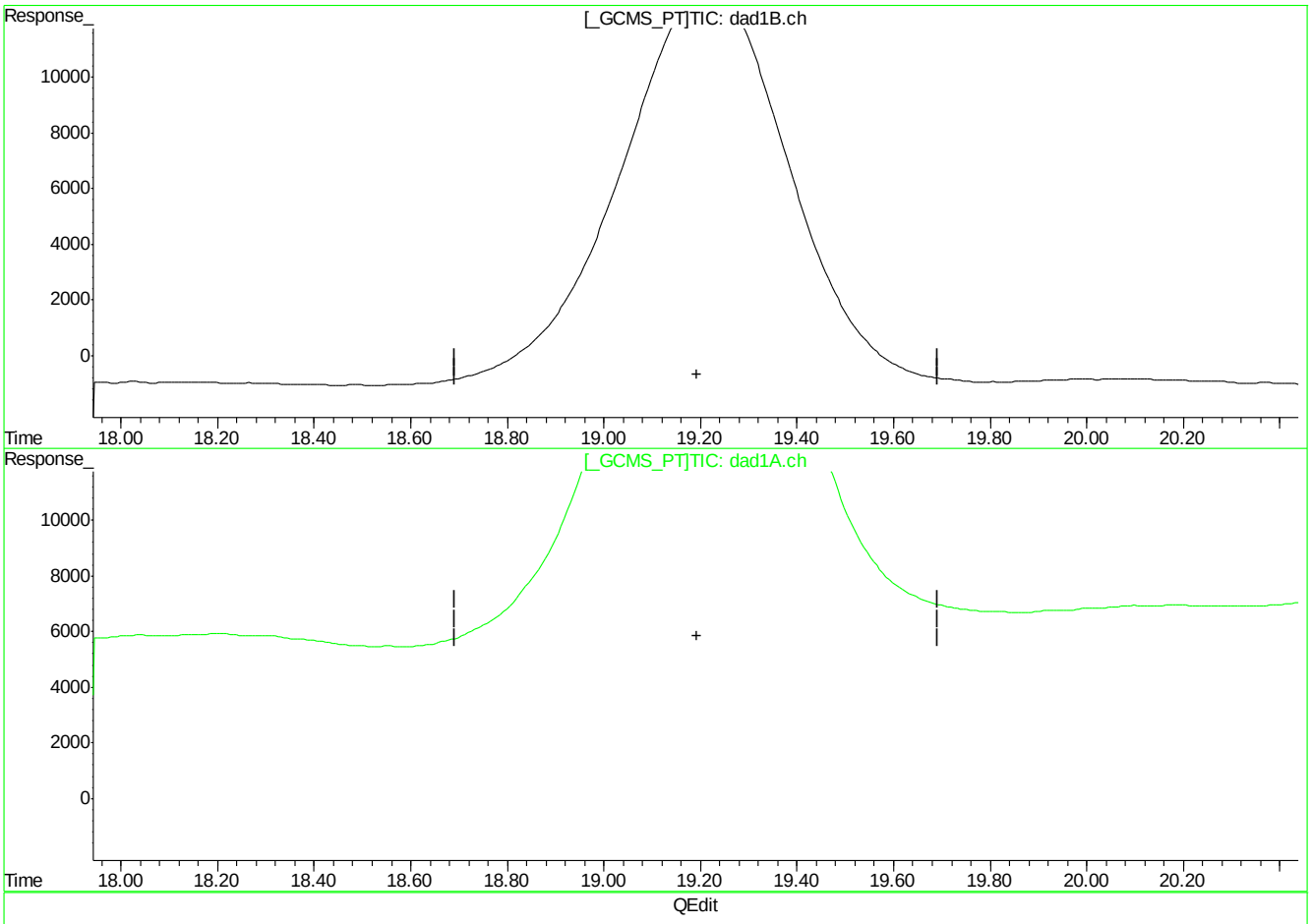
response 2671909

(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:57:13 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration



QEdit

(20) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb d

response 0

(20) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb d

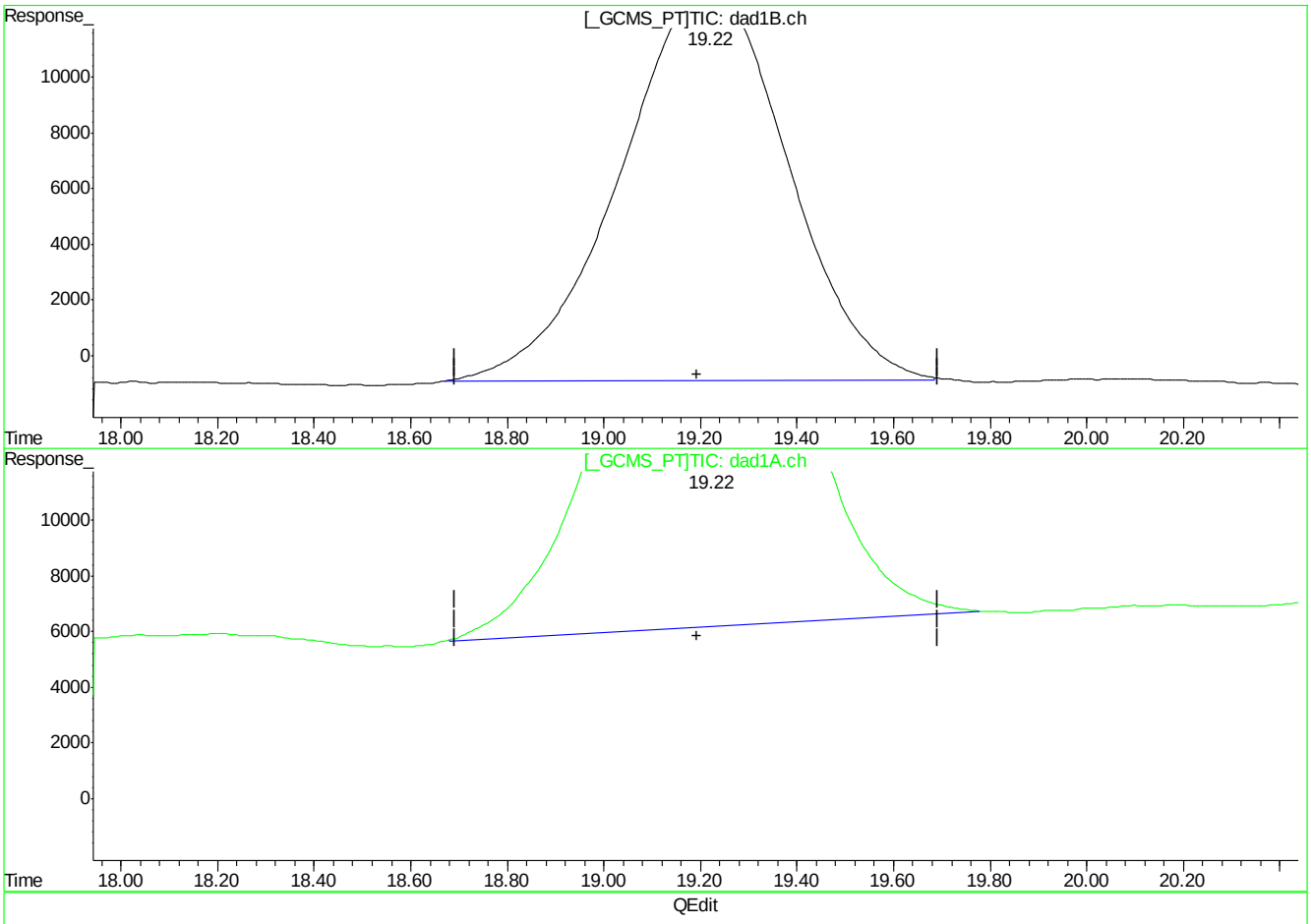
response 0

(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:57:20 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration



(20) 2-Amino-4,6-Dinitrotoluene

19.22min 375.987ppb m

response 3368242

(20) 2-Amino-4,6-Dinitrotoluene #2

19.22min 392.644ppb m

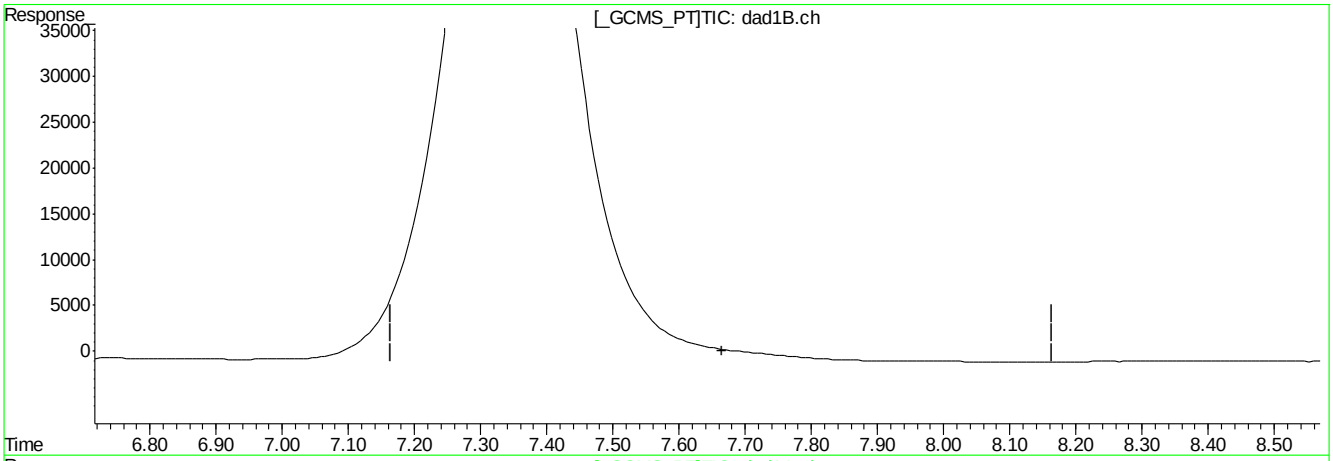
response 5024975

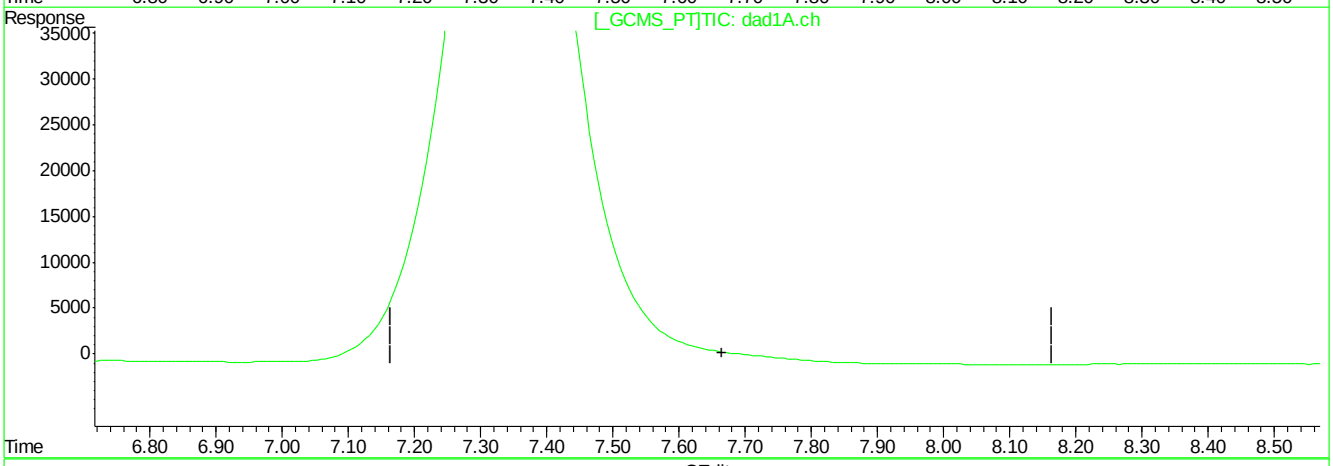
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:57:27 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(6) RDX

0.00min 0.000ppb

response 0

(6) RDX #2

0.00min 0.000ppb

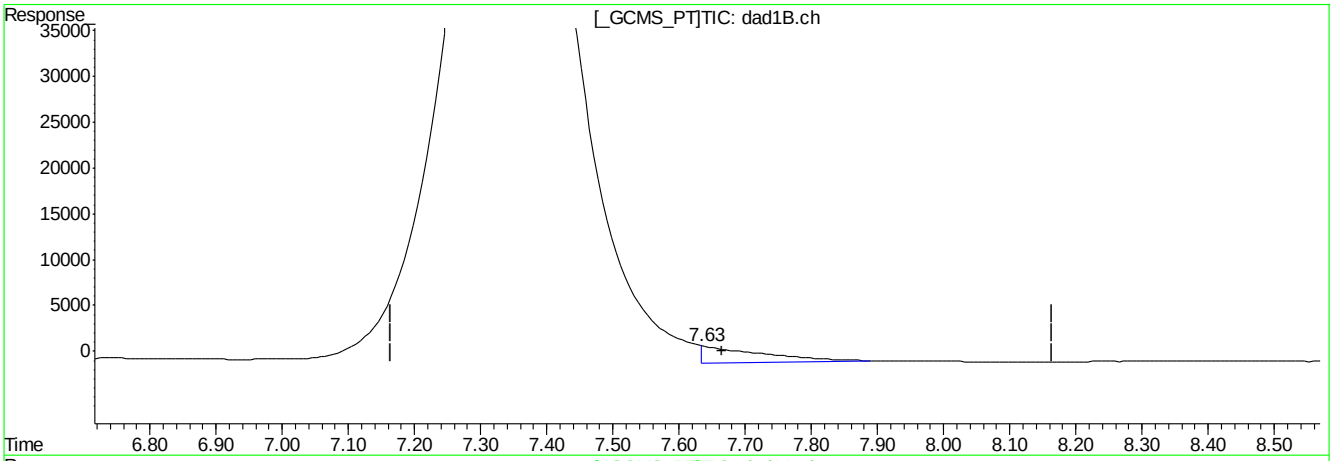
response 0

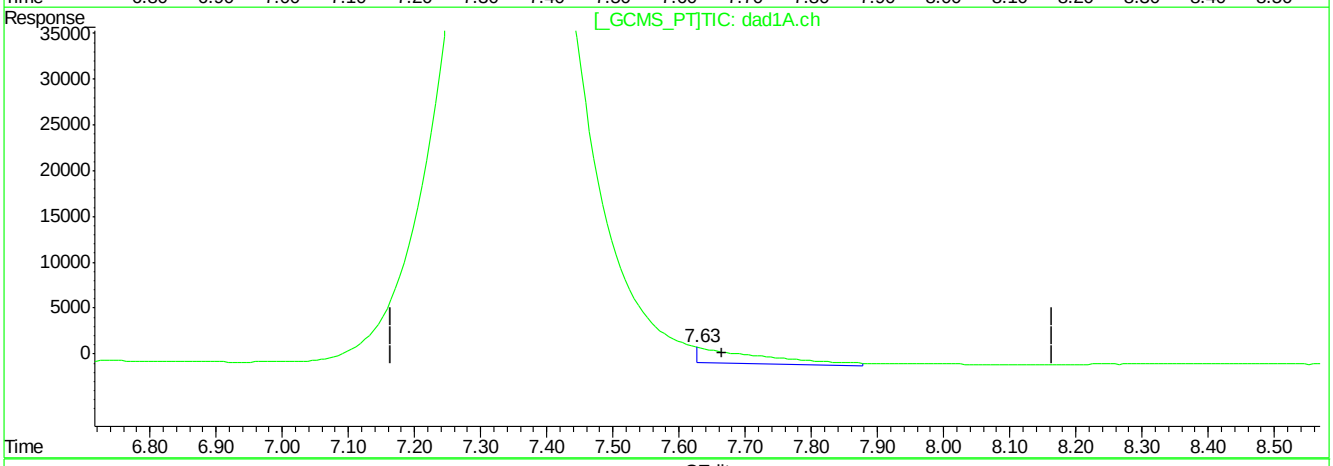
(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:58:39 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619920.D\dad1A.ch
Acq On : 02-Nov-2020, 16:41:54 Operator: jamesb
Sample : FA80202-4cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:48 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.63min 26.648ppb m

response 118484

(6) RDX #2

7.63min 24.417ppb m

response 108694

(+) = Expected Retention Time
GG619920.D 8330RPB.M_090920.M Tue Nov 03 09:58:57 2020

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388852.D\dad1B.ch Vial: 23
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388852.D\dad1A.ch
Acq On : 31-Oct-2020, 01:53:30 Operator: jamesb
Sample : FA80202-5 Inst : G1315B
Misc : op82734,GPP2355,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17:01 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.47	11.47	995581	1835634	493.131	501.286
	Spiked Amount 500.000	Range 70 - 136		Recovery =		98.63%	100.26%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

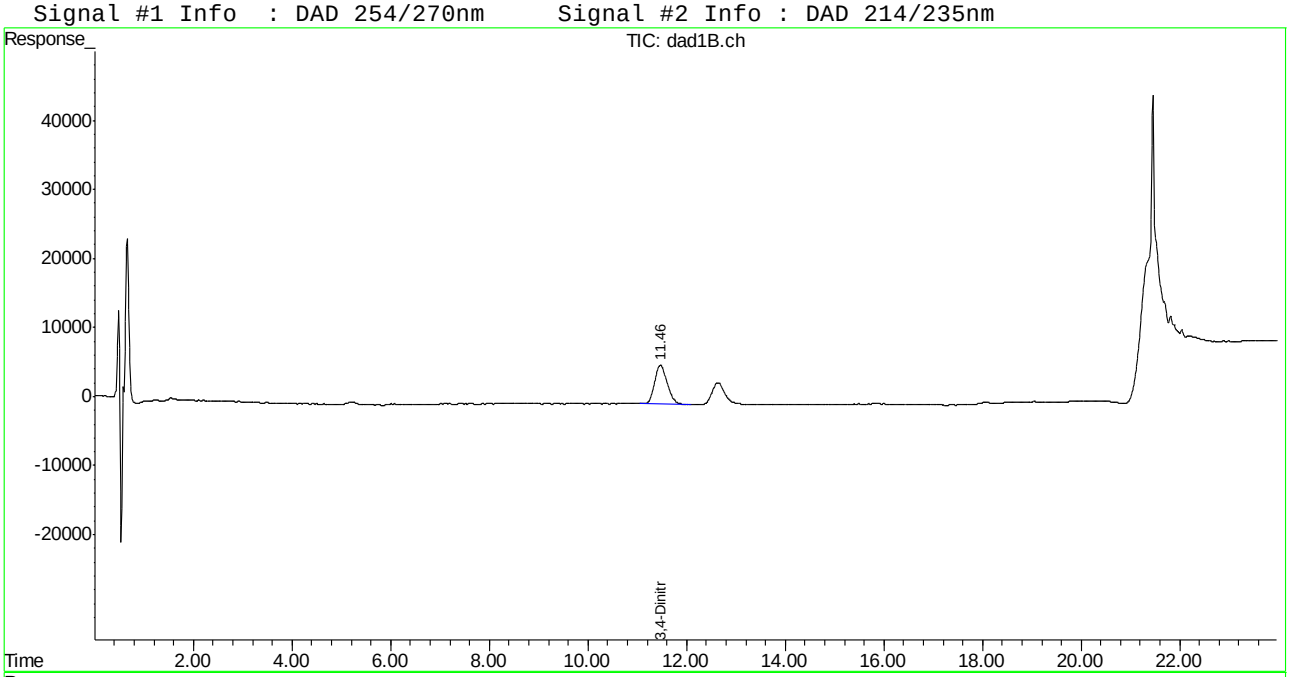
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388852.D GPP2336_092420_DV.M Thu Nov 12 15:58:24 2020 Page 1

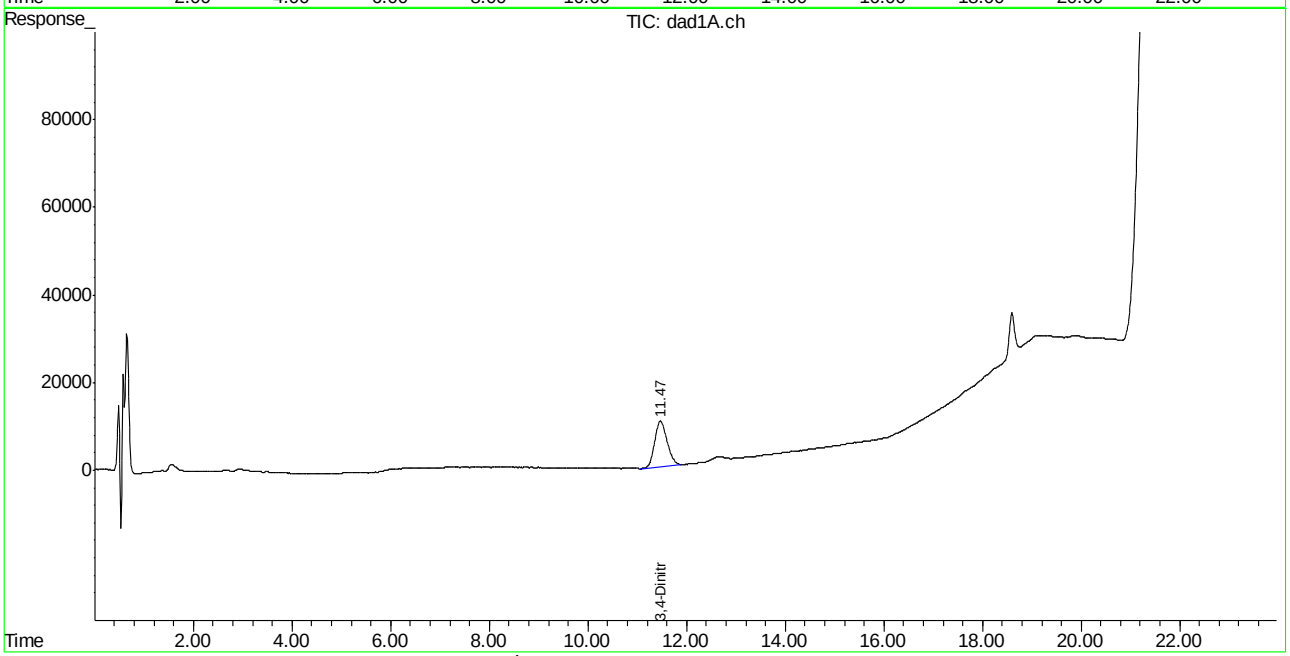
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388852.D\dad1B.ch Vial: 23
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388852.D\dad1A.ch
Acq On : 31-Oct-2020, 01:53:30 Operator: jamesb
Sample : FA80202-5 Inst : G1315B
Misc : op82734,GPP2355,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:56 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/03/20 16:10

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619921.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619921.D\dad1A.ch
Acq On : 02-Nov-2020, 17:11:20 Operator: jamesb
Sample : FA80202-5cf Inst : G1315B
Misc : op82734,GGG2889,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 03 09:20:51 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.89	13.89	2734748	5198249	501.493	500.533m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		100.30%	100.11%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
6)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
16)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

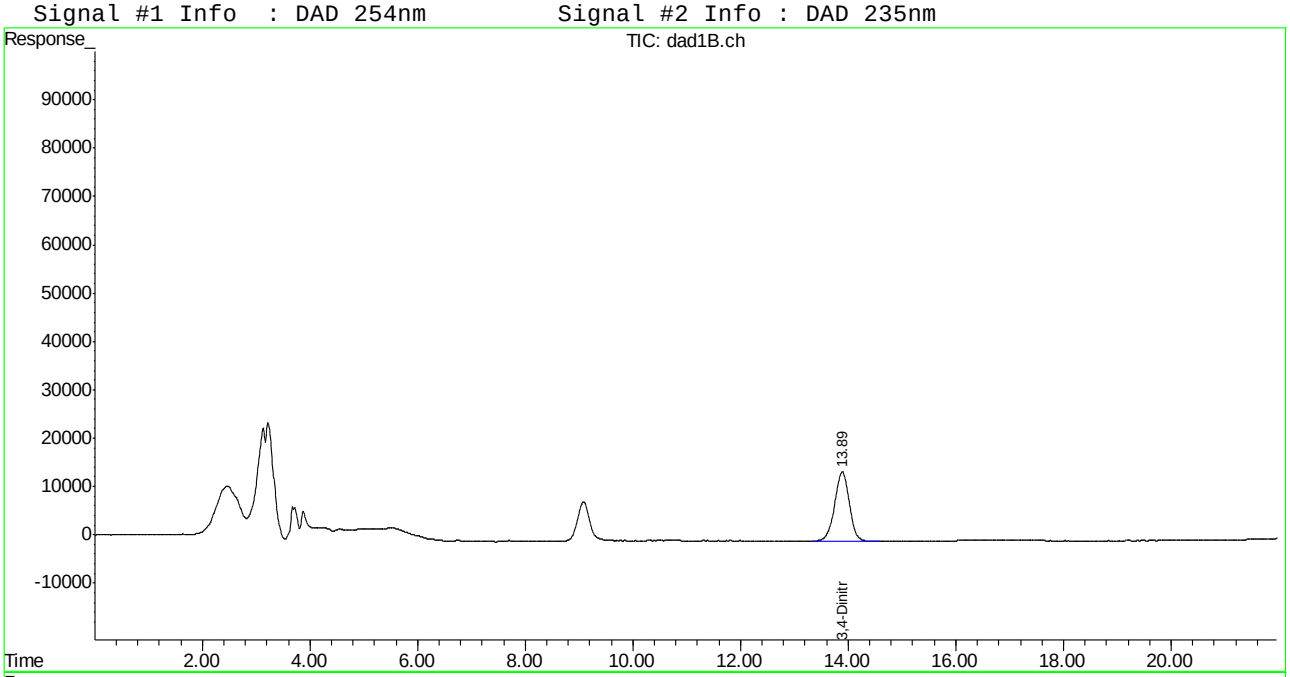
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619921.D 8330RPB.M_090920.M Tue Nov 03 15:46:58 2020 Page 1

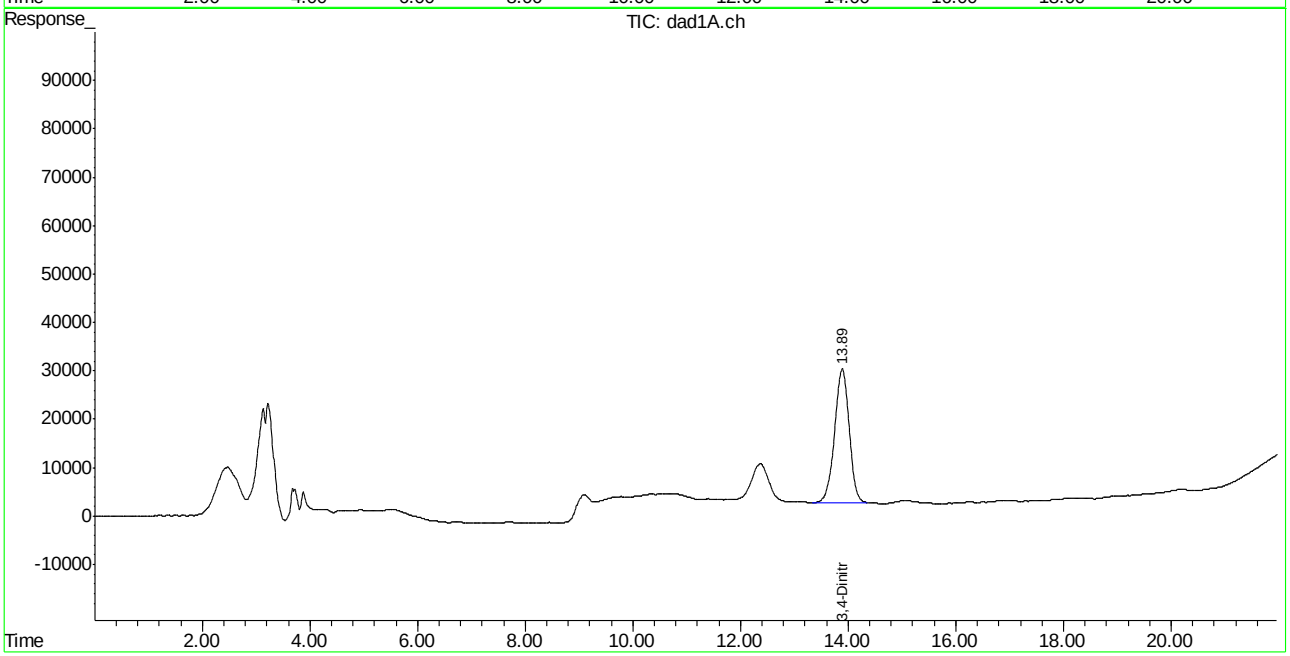
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619921.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619921.D\dad1A.ch
Acq On : 02-Nov-2020, 17:11:20 Operator: jamesb
Sample : FA80202-5cf Inst : G1315B
Misc : op82734,GGG2889,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 10:04 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

Sample Number: FA80202-5
Lab FileID: GG619921.D
Injection Time: 11/02/20 17:11

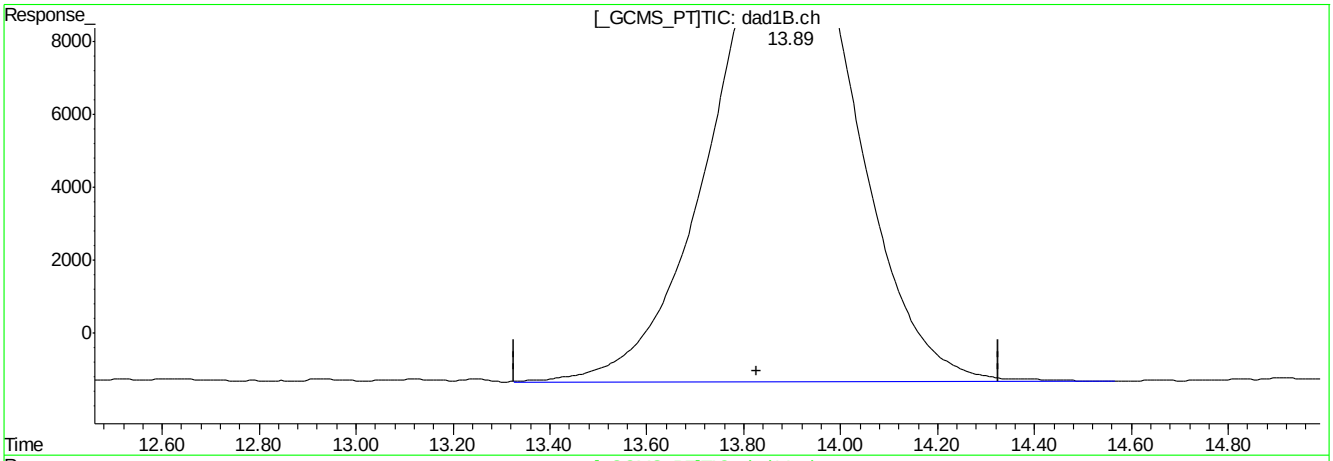
Method: SW846 8330B
Analyst approved: 11/03/20 15:49 William Hustedde
Supervisor approved: 11/03/20 16:10 Naresh Jiawan

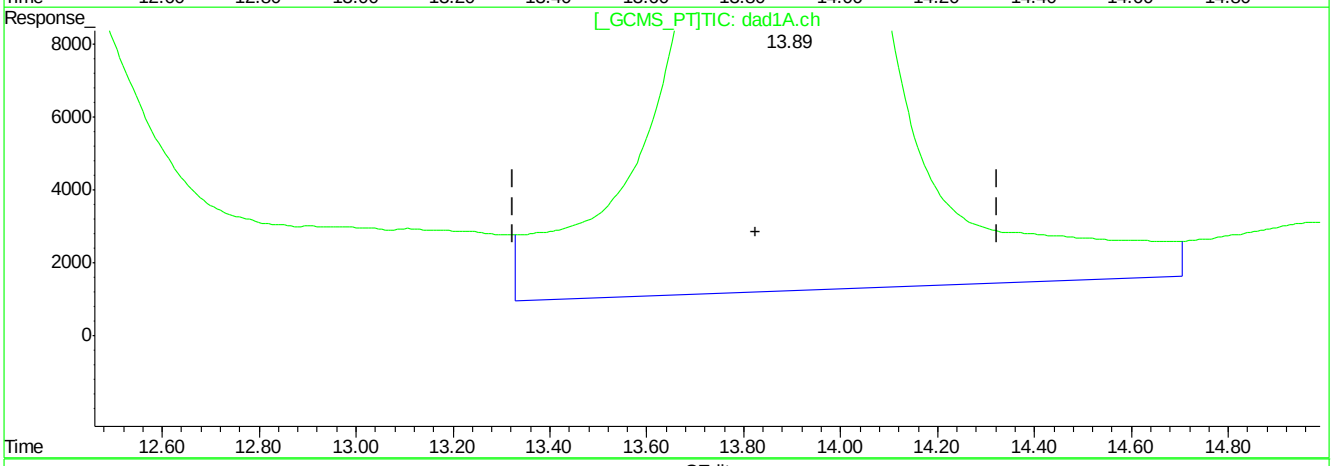
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,4-Dinitrotoluene	610-39-9	2	13.89	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619921.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619921.D\dad1A.ch
Acq On : 02-Nov-2020, 17:11:20 Operator: jamesb
Sample : FA80202-5cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.89min 501.493ppb

response 2734748

(12) 3,4-Dinitrotoluene #2 (S)

13.89min 617.917ppb

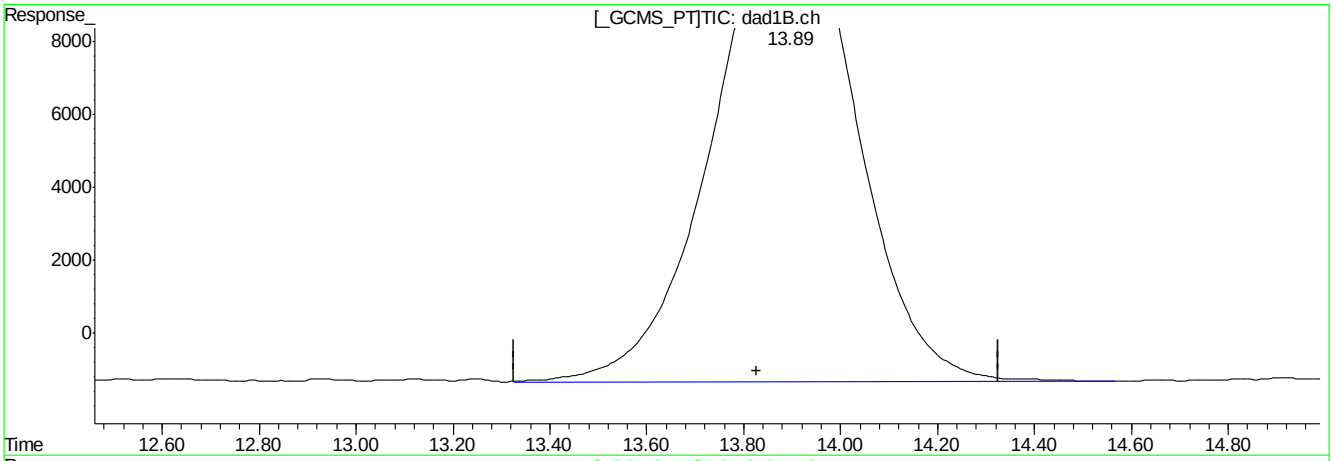
response 6417334

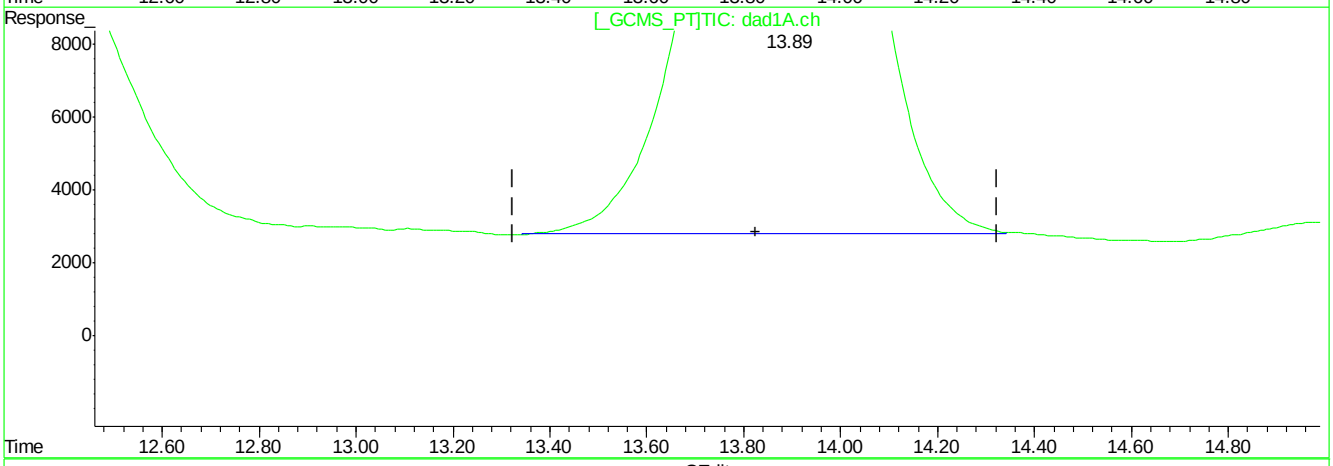
(+) = Expected Retention Time
GG619921.D 8330RPB.M_090920.M Tue Nov 03 10:04:29 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619921.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619921.D\dad1A.ch
Acq On : 02-Nov-2020, 17:11:20 Operator: jamesb
Sample : FA80202-5cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.89min 501.493ppb

response 2734748

(12) 3,4-Dinitrotoluene #2 (S)

13.89min 500.533ppb m

response 5198249

(+) = Expected Retention Time
GG619921.D 8330RPB.M_090920.M Tue Nov 03 10:04:33 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/20 18:20

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388844.D\dad1B.ch Vial: 17
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388844.D\dad1A.ch
Acq On : 30-Oct-2020, 21:45:34 Operator: jamesb
Sample : op82734-MB Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16:54 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.49f	11.49f	977828	1837580	484.337	501.815m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		96.87%	100.36%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

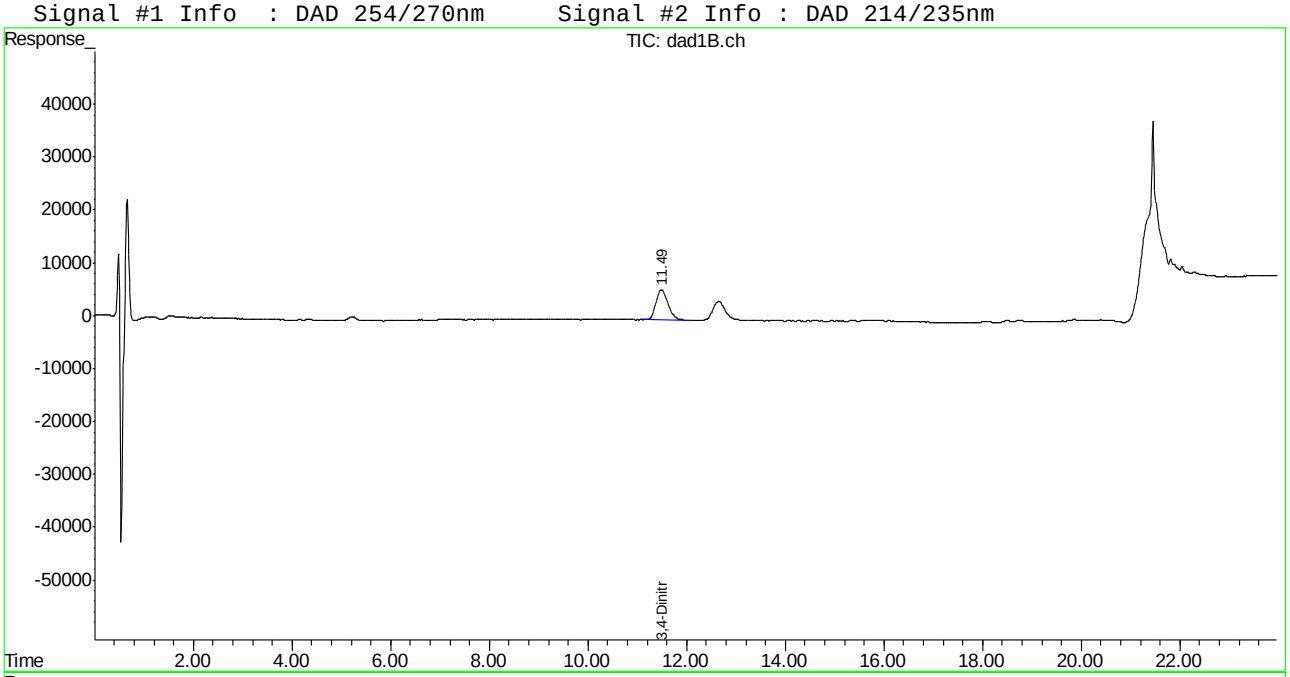
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

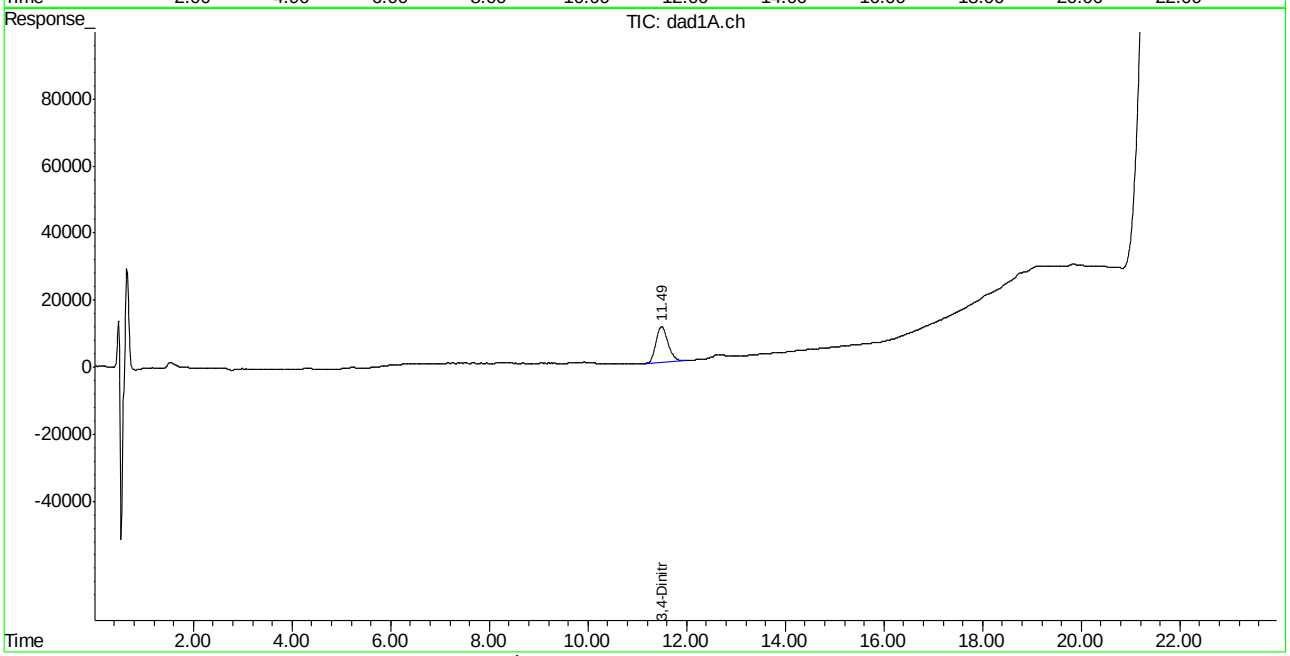
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388844.D\dad1B.ch Vial: 17
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388844.D\dad1A.ch
Acq On : 30-Oct-2020, 21:45:34 Operator: jamesb
Sample : op82734-MB Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:45 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

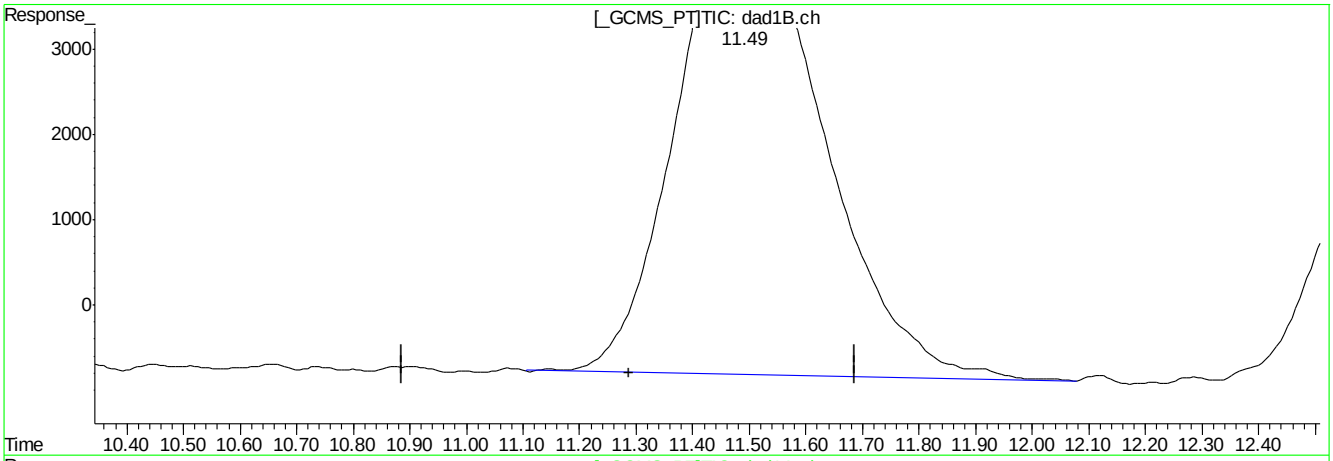
Sample Number: OP82734-MB
Lab FileID: PP388844.D
Injection Time: 10/30/20 21:45
Method: SW846 8330B
Analyst approved: 11/12/20 16:02 William Hustedde
Supervisor approved: 11/12/20 18:20 Naresh Jiawan

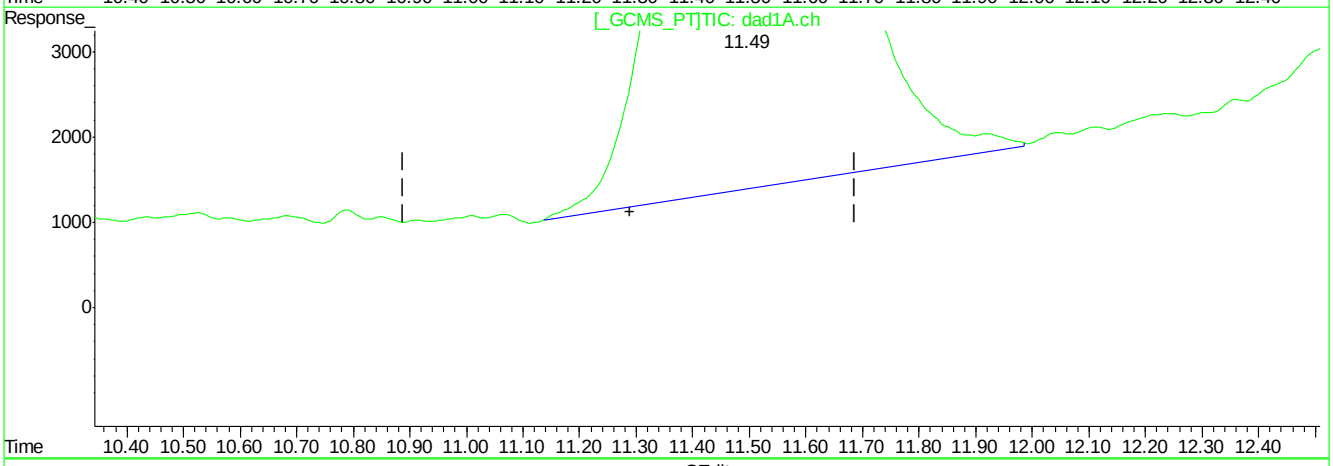
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,4-Dinitrotoluene	610-39-9	2	11.49	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388844.D\dad1B.ch Vial: 17
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388844.D\dad1A.ch
Acq On : 30-Oct-2020, 21:45:34 Operator: jamesb
Sample : op82734-MB Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.49min 484.337ppb

response 977828

(15) 3,4-Dinitrotoluene #2 (S)

11.49min 501.815ppb m

response 1837580

(+) = Expected Retention Time
PP388844.D GPP2336_092420_DV.M Thu Nov 12 15:45:54 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
11/03/20 15:33

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2890\GG619939.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2890\GG619939.D\dad1A.ch
Acq On : 03-Nov-2020, 13:30:25 Operator: jamesb
Sample : op82734-MB Inst : G1315B
Misc : op82734,GGG2890,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 03 13:07:46 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.80	13.80	2675073	5090636	490.550	490.171m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		98.11%	98.03%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
6)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
16)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

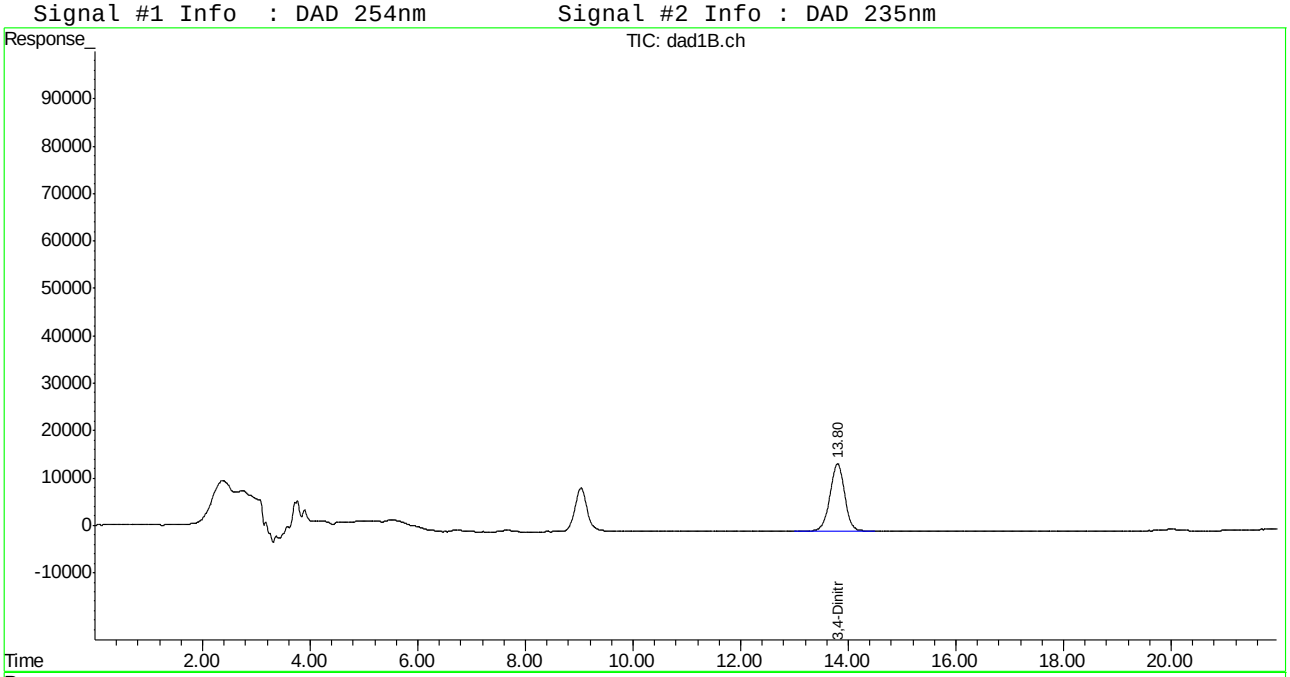
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619939.D 8330RPB.M_090920.M Tue Nov 03 14:10:20 2020 Page 1

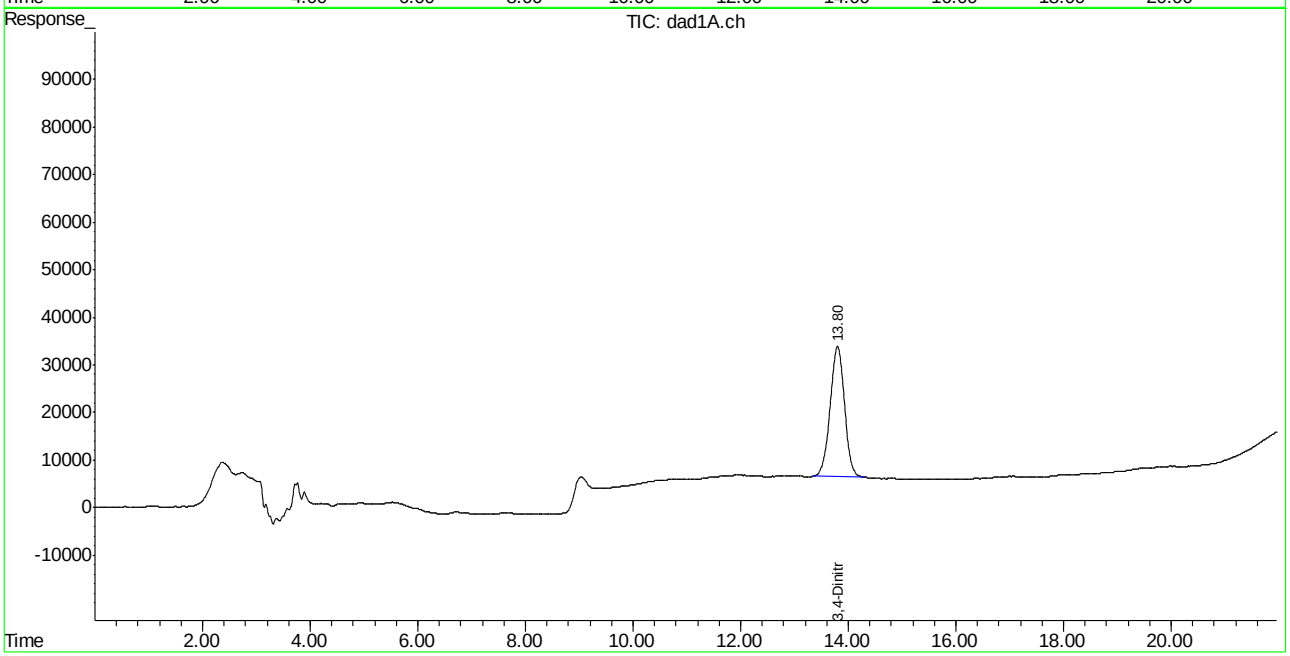
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2890\GG619939.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2890\GG619939.D\dad1A.ch
Acq On : 03-Nov-2020, 13:30:25 Operator: jamesb
Sample : op82734-MB Inst : G1315B
Misc : op82734,GGG2890,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 13:09 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

Sample Number: OP82734-MB
Lab FileID: GG619939.D
Injection Time: 11/03/20 13:30

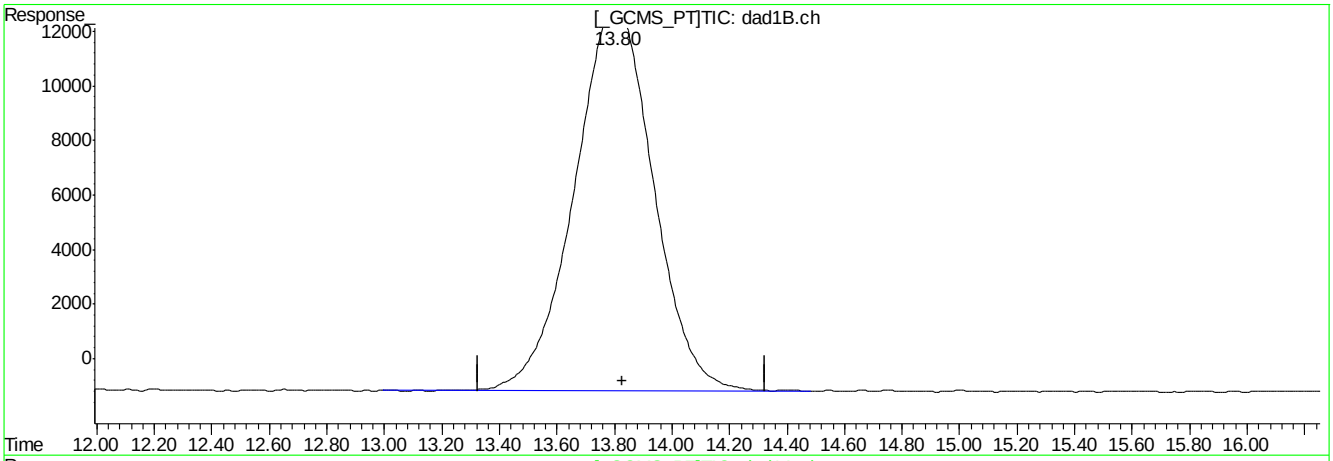
Method: SW846 8330B
Analyst approved: 11/03/20 14:14 James Boone
Supervisor approved: 11/03/20 15:33 Naresh Jiawan

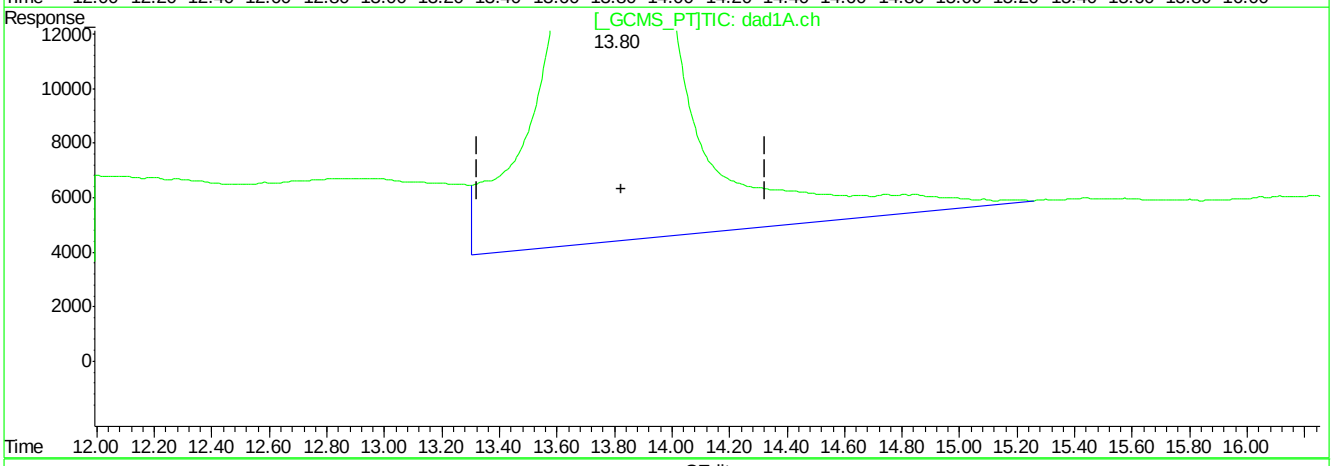
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,4-Dinitrotoluene	610-39-9	2	13.80	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2890\GG619939.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2890\GG619939.D\dad1A.ch
Acq On : 03-Nov-2020, 13:30:25 Operator: jamesb
Sample : op82734-MB Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 13:07 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.80min 490.550ppb

response 2675073

(12) 3,4-Dinitrotoluene #2 (S)

13.80min 646.608ppb

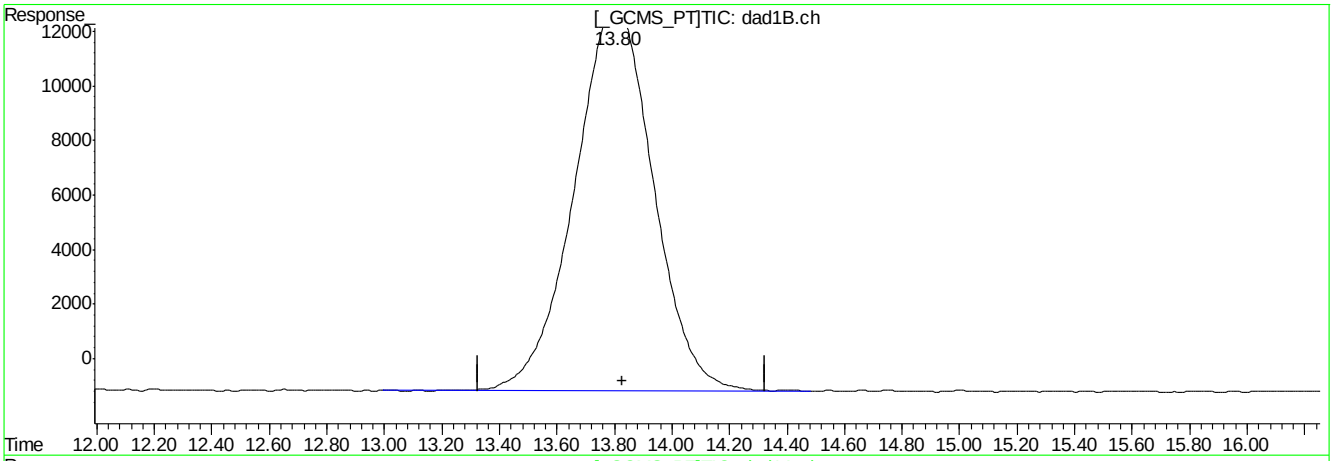
response 6715303

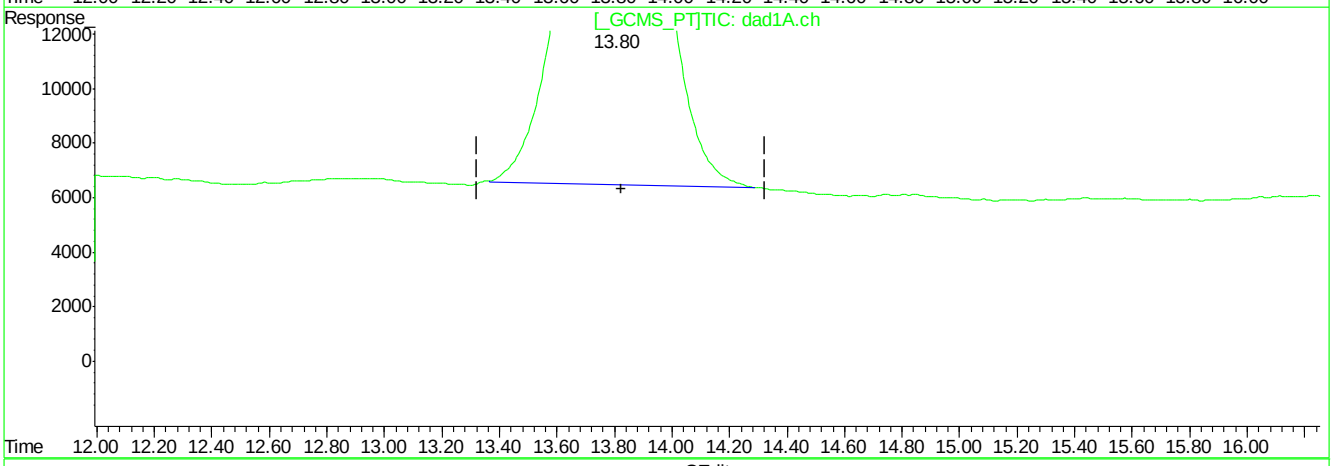
(+) = Expected Retention Time
GG619939.D 8330RPB.M_090920.M Tue Nov 03 13:09:00 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2890\GG619939.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2890\GG619939.D\dad1A.ch
Acq On : 03-Nov-2020, 13:30:25 Operator: jamesb
Sample : op82734-MB Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 13:07 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.80min 490.550ppb

response 2675073

(12) 3,4-Dinitrotoluene #2 (S)

13.80min 490.171ppb m

response 5090636

(+) = Expected Retention Time
GG619939.D 8330RPB.M_090920.M Tue Nov 03 13:09:06 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/20 18:24

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388845.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388845.D\dad1A.ch
Acq On : 30-Oct-2020, 22:16:31 Operator: jamesb
Sample : op82734-BS Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16:55 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.46	11.46	1091043	1784666	540.415	487.415
	Spiked Amount 500.000	Range 70 - 136		Recovery =		108.08%	97.48%
	Target Compounds						
1)	TNX	1.35	1.35	886808	1371971	292.284	276.708
2)	HMX	1.50	1.50	750097	2108065	500.822	495.251
3)	DNX	1.75	1.75	1003619	1704330	402.140	447.619
4)	MNX	2.36	2.36	1212422	2001058	446.962	474.278
5)	RDX	3.00	3.00	851291	1451410	472.808	506.019
6)	1,3,5-Trinitrobe	4.81	4.81	1782353	3556660	449.090	462.892
7)	1,3-Dinitrobenze	6.01	6.01	2464826	1786722	501.824	517.636
8)	3,5-Dinitroanili	6.42	6.42	1831209	3223648	481.232	496.324
9)	Nitrobenzene	7.58	7.58	1458309	1414182	510.711	522.722
10)	Nitroglycerin	0.00	9.27	0	530454	N.D.	463.913 #
11)	Tetryl	9.77	9.77	982150	1504036	348.622	339.643
12)	2,4,6-Trinitroto	10.15	10.15	1655777	1967203	447.934	457.418
13)	2-Amino-4,6-Dini	10.57	10.57	1617761	2258640	492.195	473.949
14)	4-Amino-2,6-Dini	11.09	11.09	1077075	1992172	440.999	466.048
16)	2,4-Dinitrotolue	12.13	12.13	2177619	1315729	482.538	448.418
17)	2,6-Dinitrotolue	12.60	12.60	1540339	1699293	601.810	519.489
18)	o-Nitrotoluene	15.60	15.60	1070837	1318306	519.712	470.371m
19)	p-Nitrotoluene	16.19	16.20	1677475	1102350	518.868	442.277
20)	m-Nitrotoluene	16.98	16.98	1528683	1761177	506.688	492.434m
21)	PETN	0.00	18.72	0	691076	N.D.	576.574m#

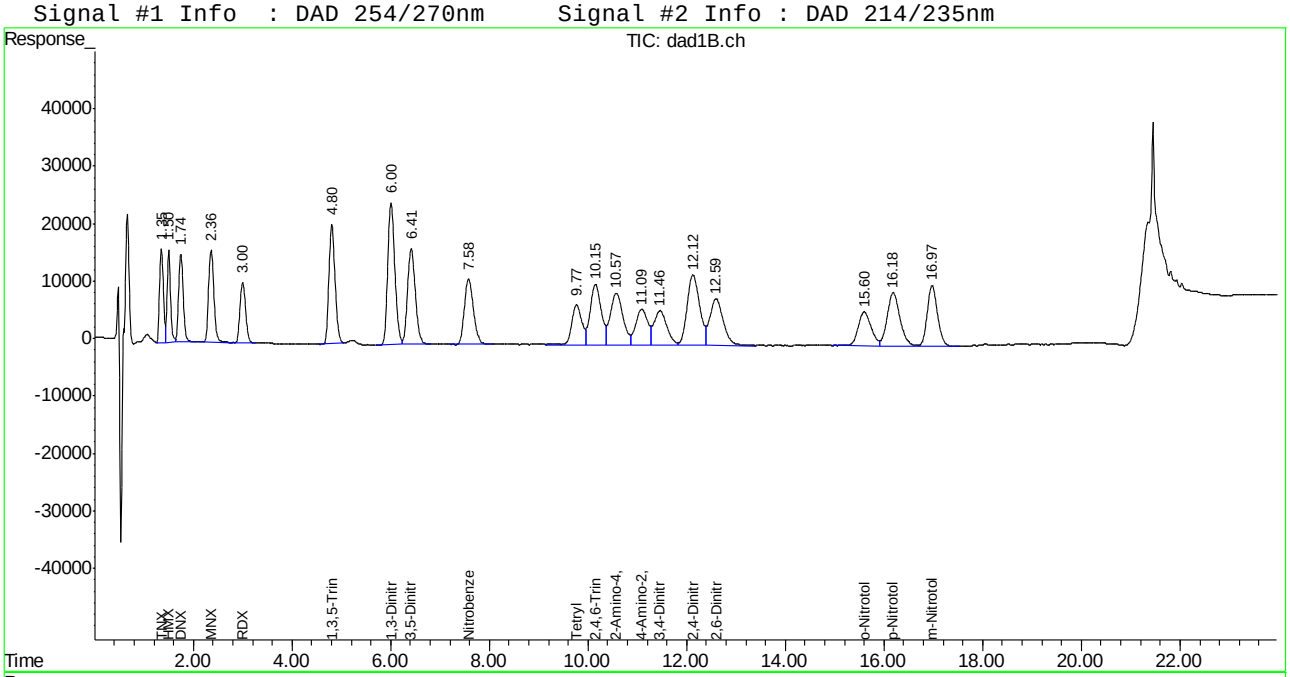
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

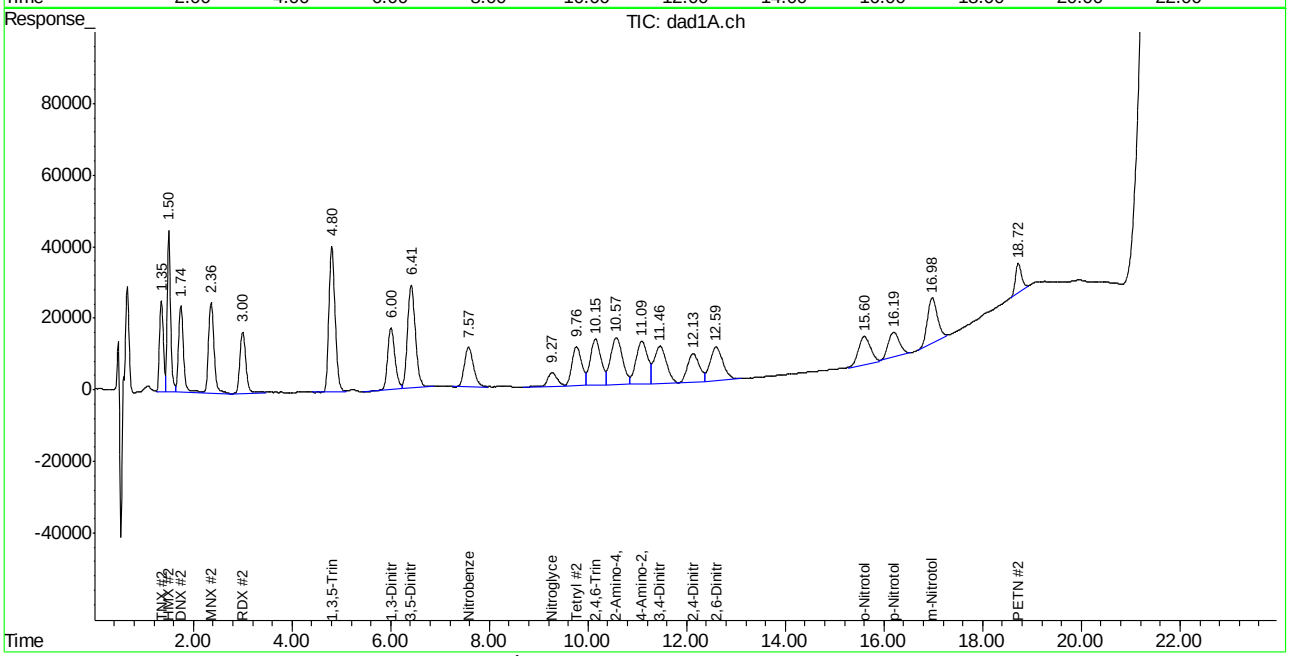
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388845.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388845.D\dad1A.ch
Acq On : 30-Oct-2020, 22:16:31 Operator: jamesb
Sample : op82734-BS Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:46 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

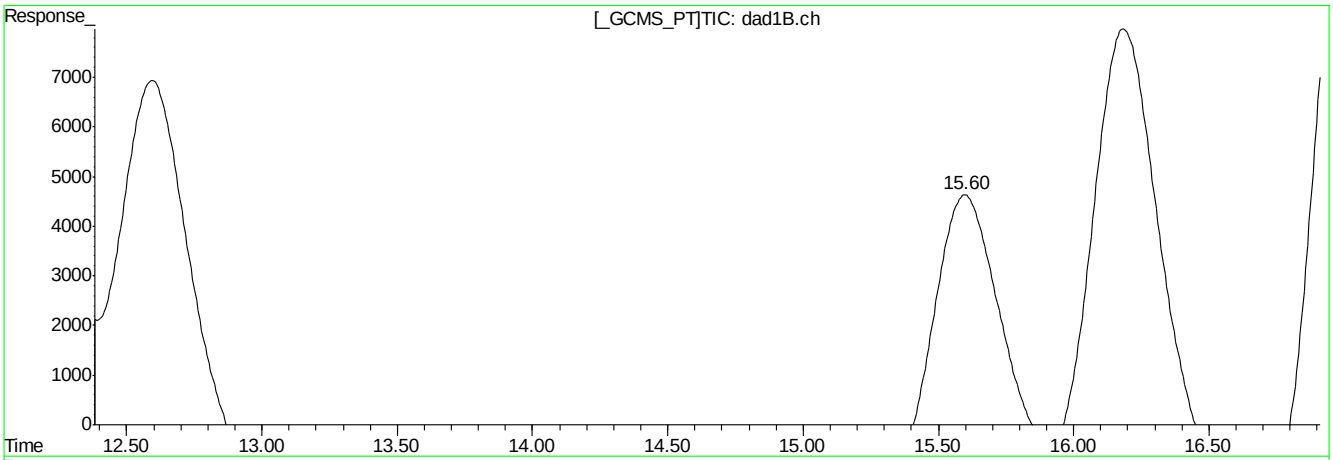
Sample Number: OP82734-BS
Lab FileID: PP388845.D
Injection Time: 10/30/20 22:16
Method: SW846 8330B
Analyst approved: 11/12/20 16:02 William Hustedde
Supervisor approved: 11/12/20 18:24 Naresh Jiawan

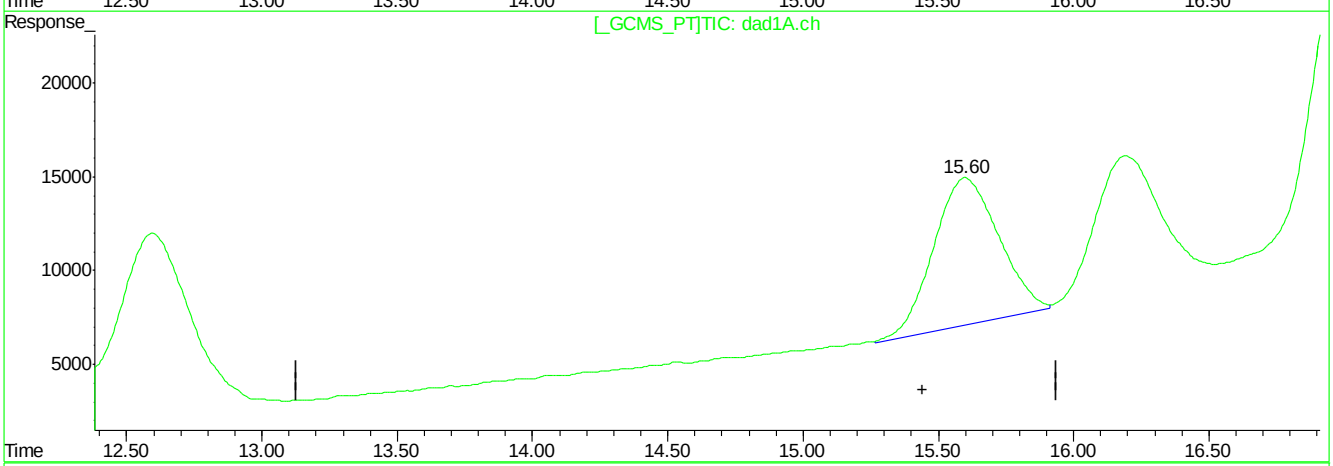
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.60	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.98	Poor instrument integration
PETN	78-11-5	2	18.72	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388845.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388845.D\dad1A.ch
Acq On : 30-Oct-2020, 22:16:31 Operator: jamesb
Sample : op82734-BS Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.60min 519.712ppb

response 1070837

(18) o-Nitrotoluene #2

15.60min 470.371ppb m

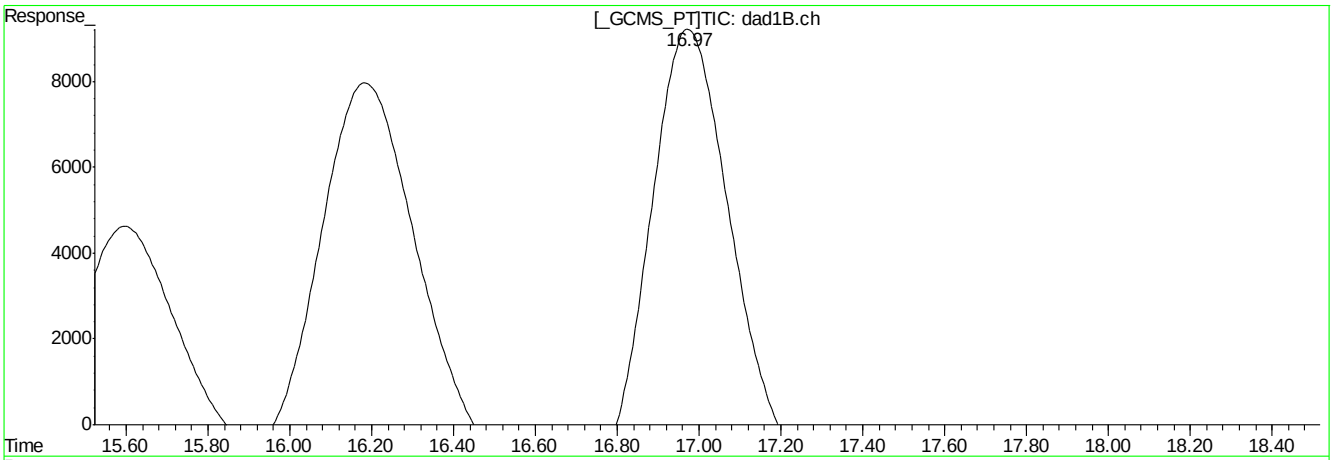
response 1318306

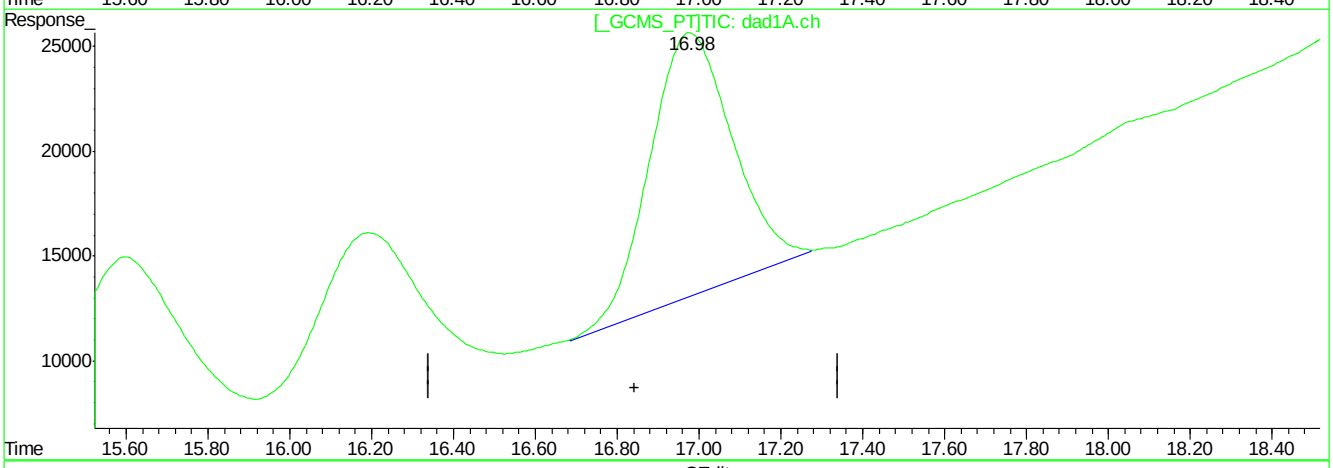
(+) = Expected Retention Time
PP388845.D GPP2336_092420_DV.M Thu Nov 12 15:46:14 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388845.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388845.D\dad1A.ch
Acq On : 30-Oct-2020, 22:16:31 Operator: jamesb
Sample : op82734-BS Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.98min 506.688ppb

response 1528683

(20) m-Nitrotoluene #2

16.98min 492.434ppb m

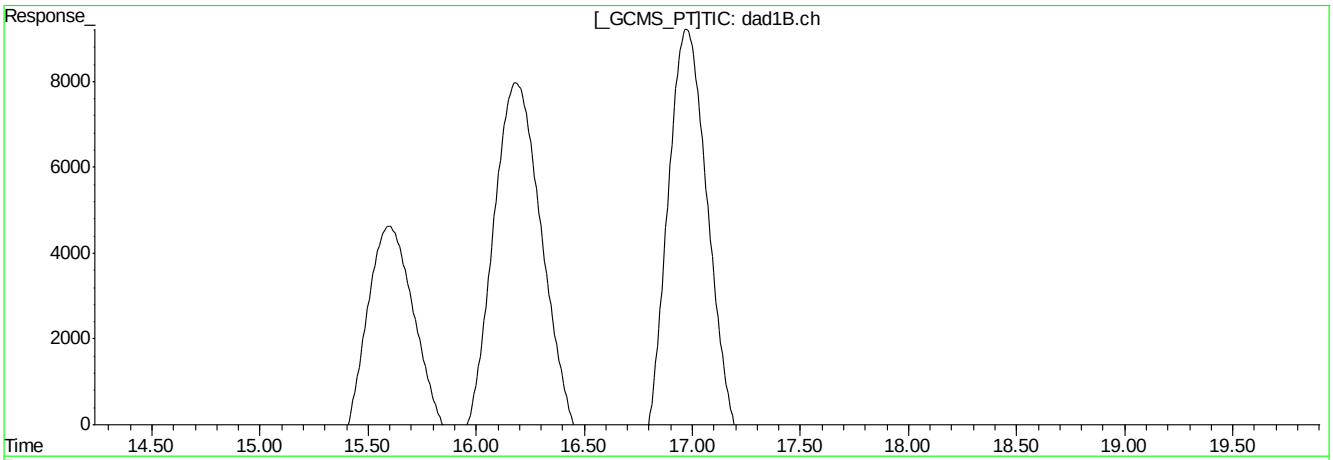
response 1761177

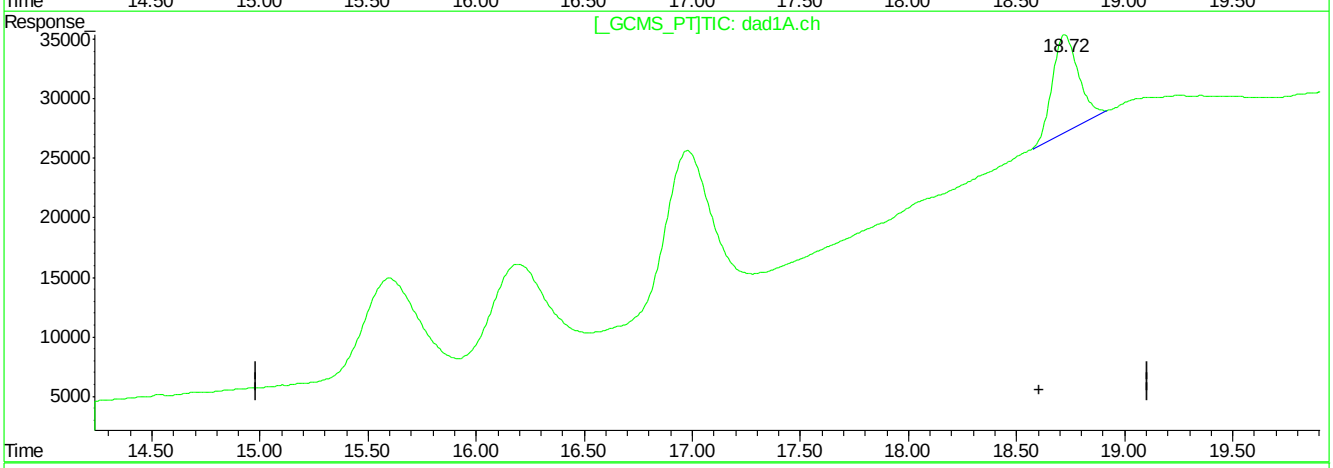
(+) = Expected Retention Time
PP388845.D GPP2336_092420_DV.M Thu Nov 12 15:46:20 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388845.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388845.D\dad1A.ch
Acq On : 30-Oct-2020, 22:16:31 Operator: jamesb
Sample : op82734-BS Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.72min 576.574ppb m

response 691076

(+) = Expected Retention Time
PP388845.D GPP2336_092420_DV.M Thu Nov 12 15:46:25 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
11/12/20 18:28

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388853.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388853.D\dad1A.ch
Acq On : 31-Oct-2020, 02:24:29 Operator: jamesb
Sample : op82734-MS Inst : G1315B
Misc : op82734,GPP2355,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17:02 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.45	11.45	987099	1722365	488.930	470.456
	Spiked Amount 500.000	Range 70 - 136		Recovery =		97.79%	94.09%
	Target Compounds						
1)	TNX	1.36	1.36	1432578	2265816	472.164	456.985
2)	HMX	1.50	1.50	2288559	6410931	1536.024	1516.899
3)	DNX	1.76	1.76	1225624	2017152	491.095	529.777
4)	MNX	2.37	2.37	1269338	2001733	467.944	474.437
5)	RDX	3.01	3.01	856881	1330458	475.912	463.851
6)	1,3,5-Trinitrobe	4.81	4.81	3900883	7651941	982.885	995.884
7)	1,3-Dinitrobenze	6.01	6.01	2474807	1862569	503.857	539.610
8)	3,5-Dinitroanili	6.42	6.42	1894900	3339239	497.970	514.120
9)	Nitrobenzene	7.59	7.59	1382108	1353732	484.025	500.378
10)	Nitroglycerin	0.00	9.26	0	516135	N.D.	451.391 #
11)	Tetryl	9.76	9.76	936271	1526251	332.336	344.660
12)	2,4,6-Trinitroto	10.14	10.14	2963212	3613402	801.631	840.196
13)	2-Amino-4,6-Dini	10.58	10.58	2185936	3228606	665.059	677.485
14)	4-Amino-2,6-Dini	11.09	11.09	1306000	2588273	534.730	605.499
16)	2,4-Dinitrotolue	12.13	12.13	2032628	1247459	450.409	425.151
17)	2,6-Dinitrotolue	12.61	12.60	1852680	1977487	723.842	604.536
18)	o-Nitrotoluene	15.61	15.60	1115232	1234656	541.258	440.315m
19)	p-Nitrotoluene	16.19	16.20	1857636	1069995	574.595	429.354
20)	m-Nitrotoluene	16.98	16.98	1613227	1681454	534.710	470.128m
21)	PETN	0.00	18.72	0	726067	N.D. d	605.768m

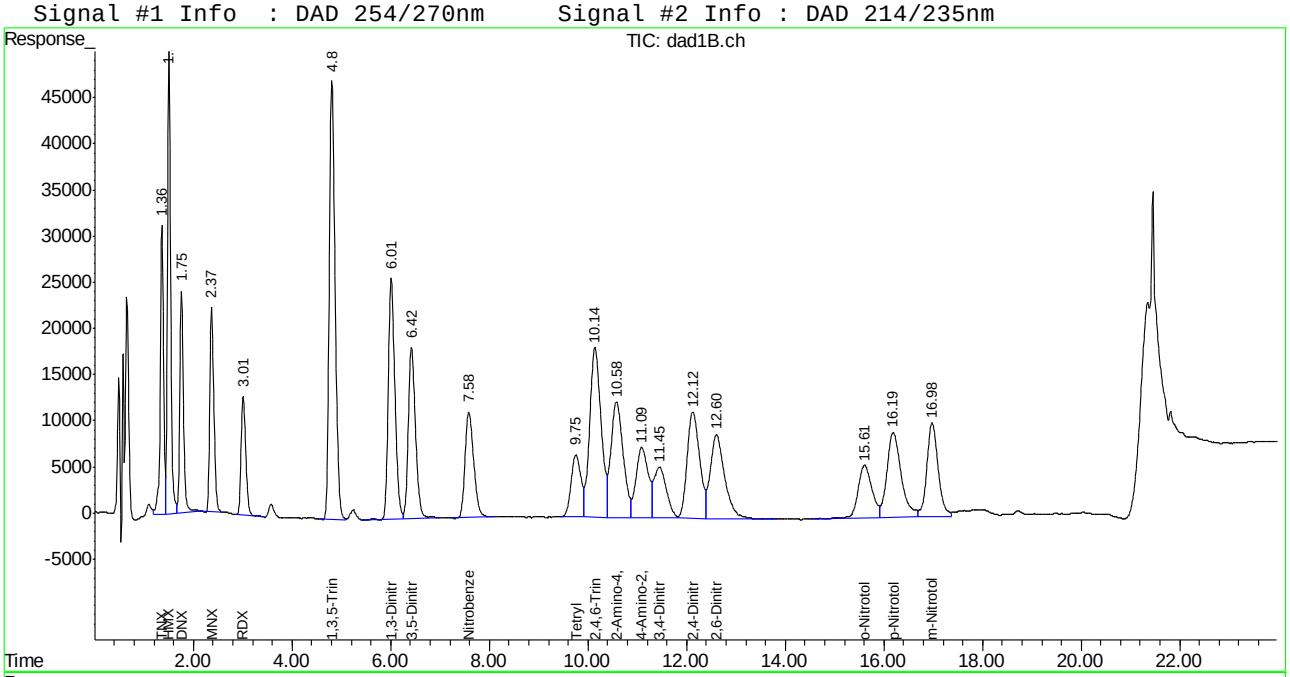
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

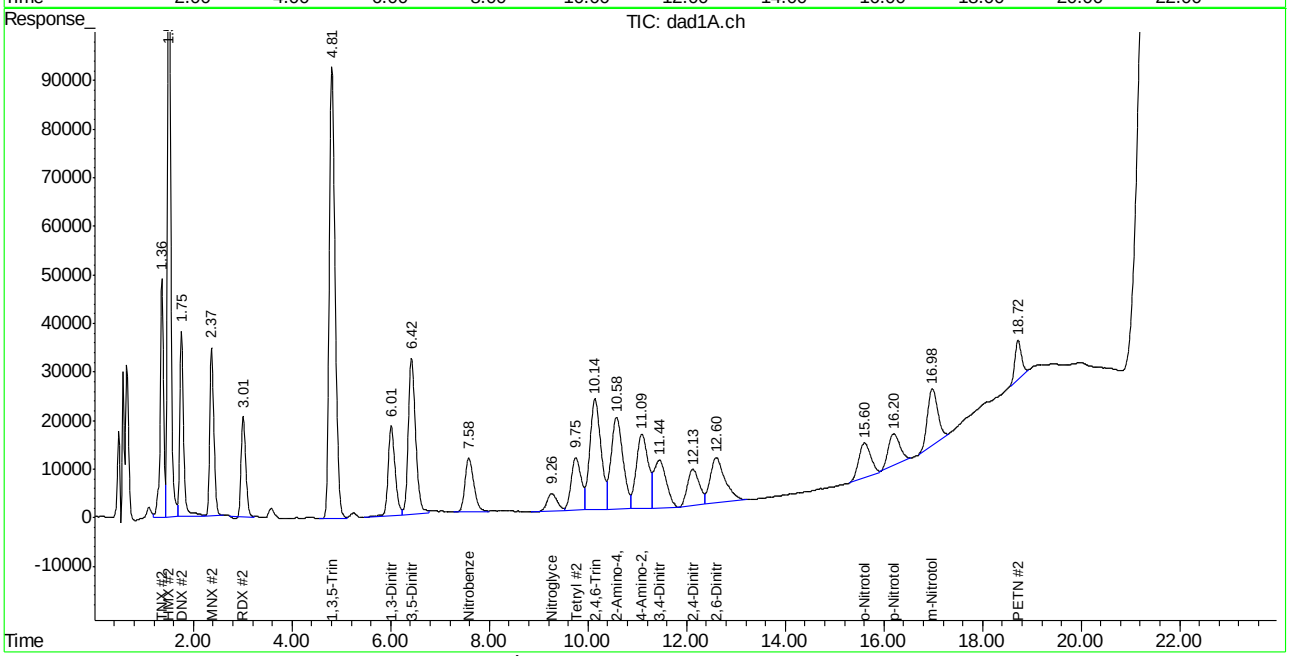
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388853.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388853.D\dad1A.ch
Acq On : 31-Oct-2020, 02:24:29 Operator: jamesb
Sample : op82734-MS Inst : G1315B
Misc : op82734,GPP2355,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:56 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

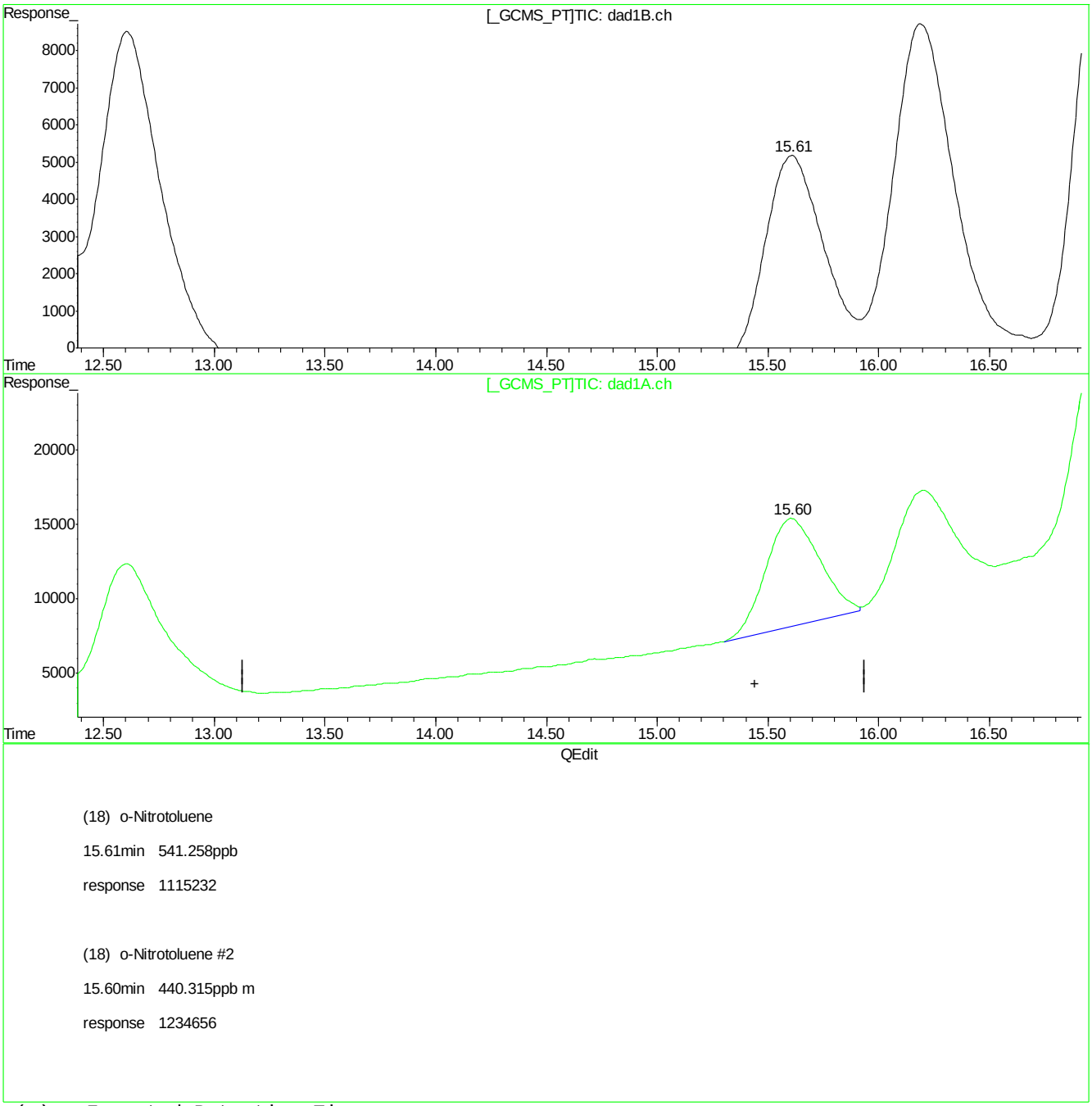
Sample Number: OP82734-MS
Lab FileID: PP388853.D
Injection Time: 10/31/20 02:24
Method: SW846 8330B
Analyst approved: 11/12/20 18:20 Naresh Jiawan
Supervisor approved: 11/12/20 18:28 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.60	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.98	Poorly defined baseline
PETN	78-11-5	2	18.72	Poorly defined baseline

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388853.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388853.D\dad1A.ch
Acq On : 31-Oct-2020, 02:24:29 Operator: jamesb
Sample : op82734-MS Inst : G1315B
Misc : op82734,GPP2355,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.61min 541.258ppb

response 1115232

(18) o-Nitrotoluene #2

15.60min 440.315ppb m

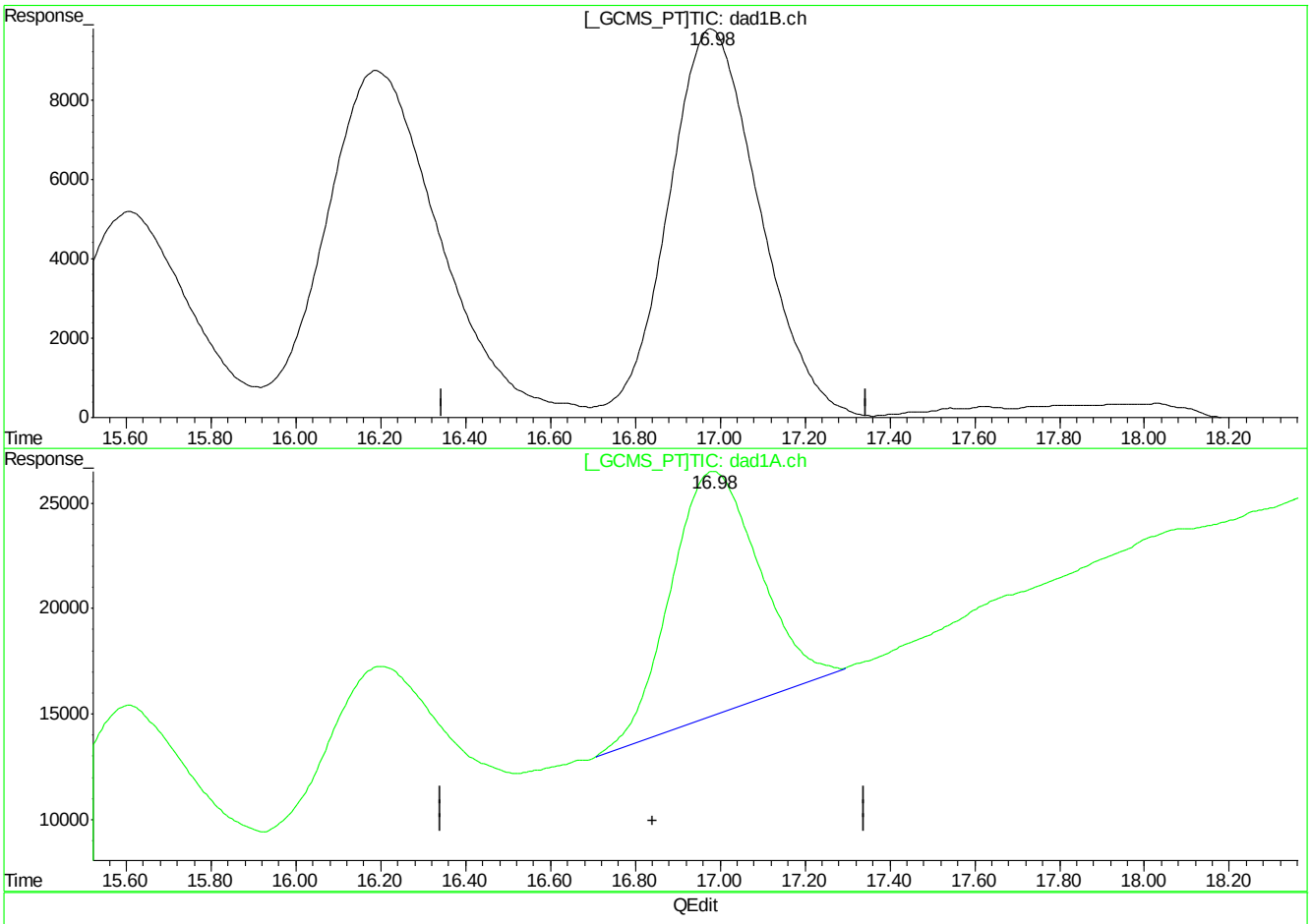
response 1234656

(+) = Expected Retention Time
PP388853.D GPP2336_092420_DV.M Thu Nov 12 15:56:47 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388853.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388853.D\dad1A.ch
Acq On : 31-Oct-2020, 02:24:29 Operator: jamesb
Sample : op82734-MS Inst : G1315B
Misc : op82734,GPP2355,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.98min 534.710ppb

response 1613227

(20) m-Nitrotoluene #2

16.98min 470.128ppb m

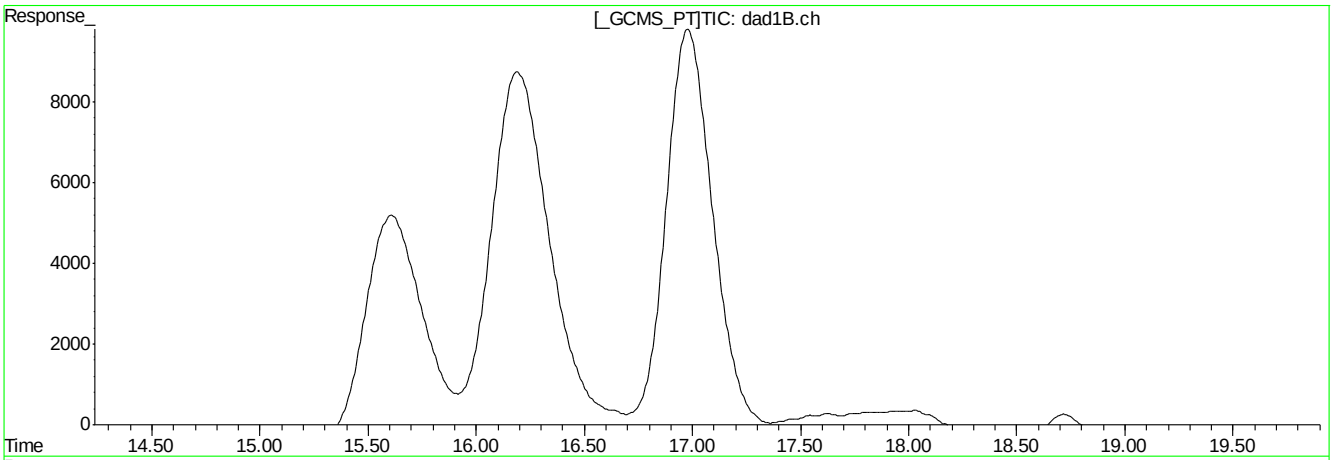
response 1681454

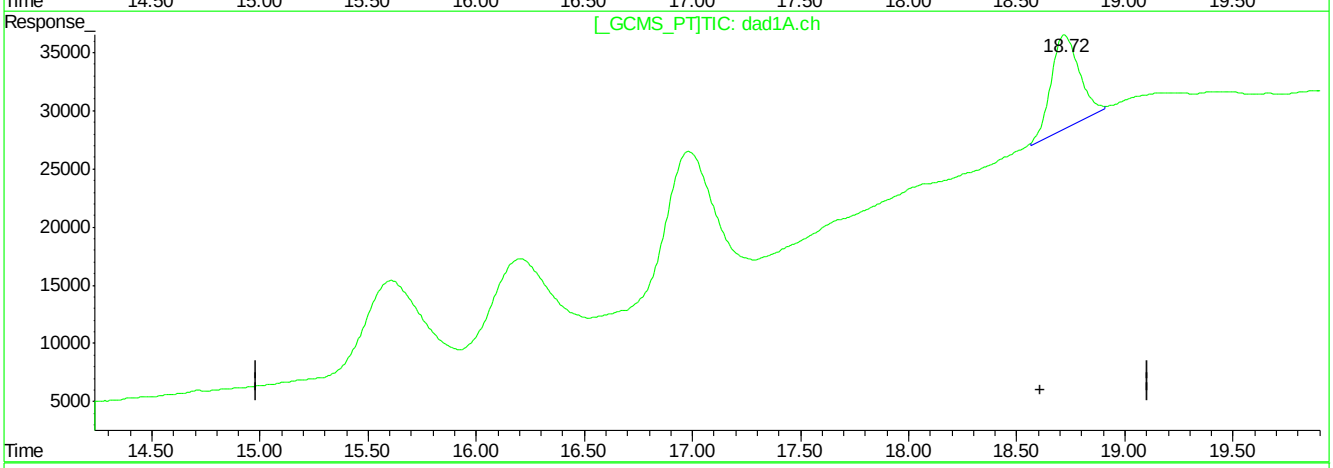
(+) = Expected Retention Time
PP388853.D GPP2336_092420_DV.M Thu Nov 12 15:56:53 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388853.D\dad1B.ch Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388853.D\dad1A.ch
Acq On : 31-Oct-2020, 02:24:29 Operator: jamesb
Sample : op82734-MS Inst : G1315B
Misc : op82734,GPP2355,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.72min 605.768ppb m

response 726067

(+) = Expected Retention Time
PP388853.D GPP2336_092420_DV.M Thu Nov 12 15:56:59 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/20 18:28

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388854.D\dad1B.ch Vial: 25
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388854.D\dad1A.ch
Acq On : 31-Oct-2020, 02:55:27 Operator: jamesb
Sample : op82734-MSD Inst : G1315B
Misc : op82734,GPP2355,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17:03 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.44	11.44	1003719	1722882	497.162	470.596
Spiked Amount	500.000	Range	70 - 136	Recovery	=	99.43%	94.12%
	Target Compounds						
1)	TNX	1.36	1.36	1417438	2232131	467.174	450.191
2)	HMX	1.50	1.50	2283204	6361625	1532.402	1505.109
3)	DNX	1.76	1.76	1185374	1865239	474.968	489.879
4)	MNX	2.37	2.37	1272521	2018042	469.117	478.303
5)	RDX	3.01	3.01	841841	1447677	467.559	504.718
6)	1,3,5-Trinitrobe	4.81	4.81	3914362	7679699	986.281	999.497
7)	1,3-Dinitrobenze	6.01	6.01	2472198	1844667	503.325	534.423
8)	3,5-Dinitroanili	6.42	6.42	1876472	3292176	493.127	506.874
9)	Nitrobenzene	7.58	7.59	1371690	1331865	480.377	492.295
10)	Nitroglycerin	0.00	9.26	0	514577	N.D.	450.028 #
11)	Tetryl	9.75	9.75	952443	1502809	338.077	339.366
12)	2,4,6-Trinitroto	10.14	10.14	2981813	3617660	806.663	841.186
13)	2-Amino-4,6-Dini	10.57	10.57	2190986	3211675	666.595	673.932
14)	4-Amino-2,6-Dini	11.08	11.09	1295826	2592753	530.565	606.547
16)	2,4-Dinitrotolue	12.12	12.13	2043170	1258488	452.745	428.910
17)	2,6-Dinitrotolue	12.60	12.60	1887118	2009961	737.296	614.464
18)	o-Nitrotoluene	15.60	15.59	1155763	1221567	560.929	435.615m
19)	p-Nitrotoluene	16.19	16.20	1959144	1022388	605.993	410.334
20)	m-Nitrotoluene	16.98	16.98	1755299	1612050	581.800	450.711m
21)	PETN	0.00	18.71	0	712315	N.D. d	594.295m

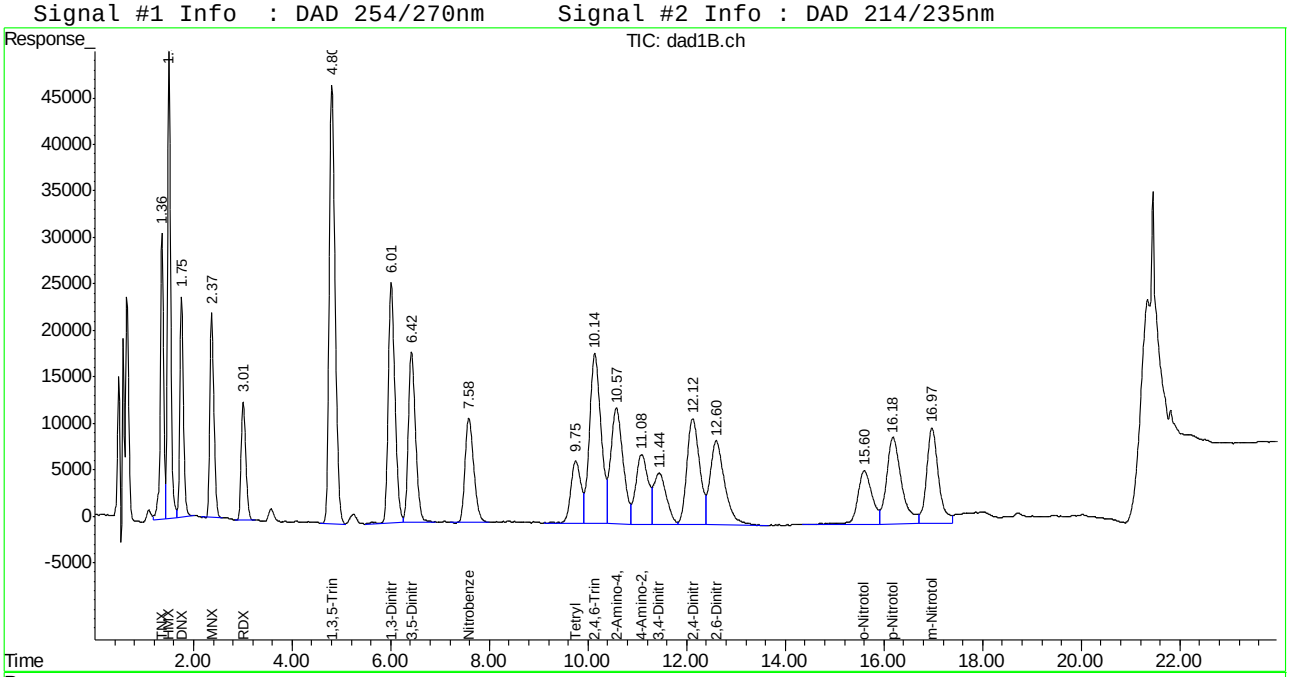
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388854.D GPP2336_092420_DV.M Thu Nov 12 15:58:26 2020 Page 1

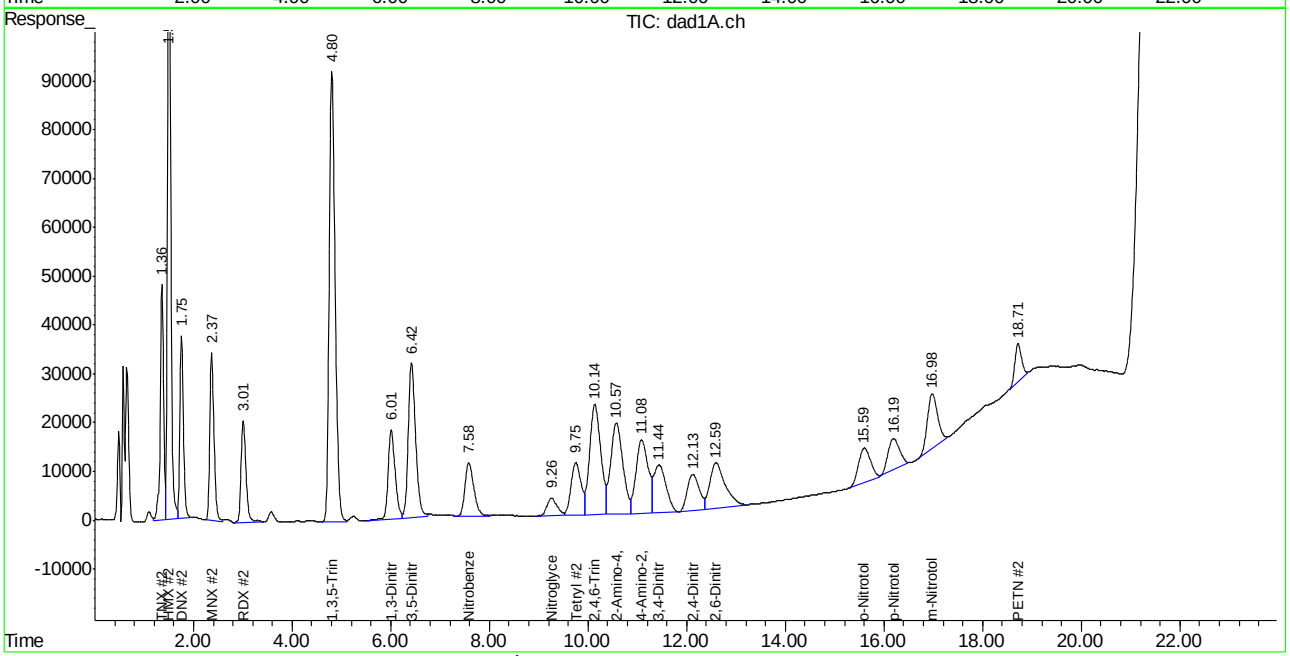
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388854.D\dad1B.ch Vial: 25
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388854.D\dad1A.ch
Acq On : 31-Oct-2020, 02:55:27 Operator: jamesb
Sample : op82734-MSD Inst : G1315B
Misc : op82734,GPP2355,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:57 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

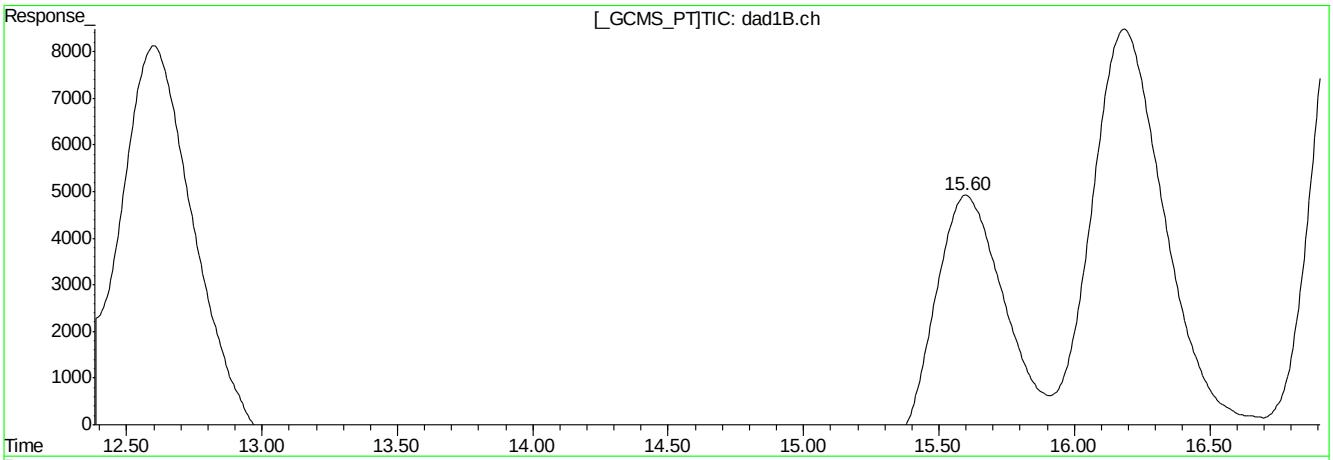
Sample Number: OP82734-MSD
Lab FileID: PP388854.D
Injection Time: 10/31/20 02:55
Method: SW846 8330B
Analyst approved: 11/12/20 18:20 Naresh Jiawan
Supervisor approved: 11/12/20 18:28 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.59	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.98	Poorly defined baseline
PETN	78-11-5	2	18.71	Poorly defined baseline

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388854.D\dad1B.ch Vial: 25
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388854.D\dad1A.ch
Acq On : 31-Oct-2020, 02:55:27 Operator: jamesb
Sample : op82734-MSD Inst : G1315B
Misc : op82734,GPP2355,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.60min 560.929ppb

response 1155763

(18) o-Nitrotoluene #2

15.59min 435.615ppb m

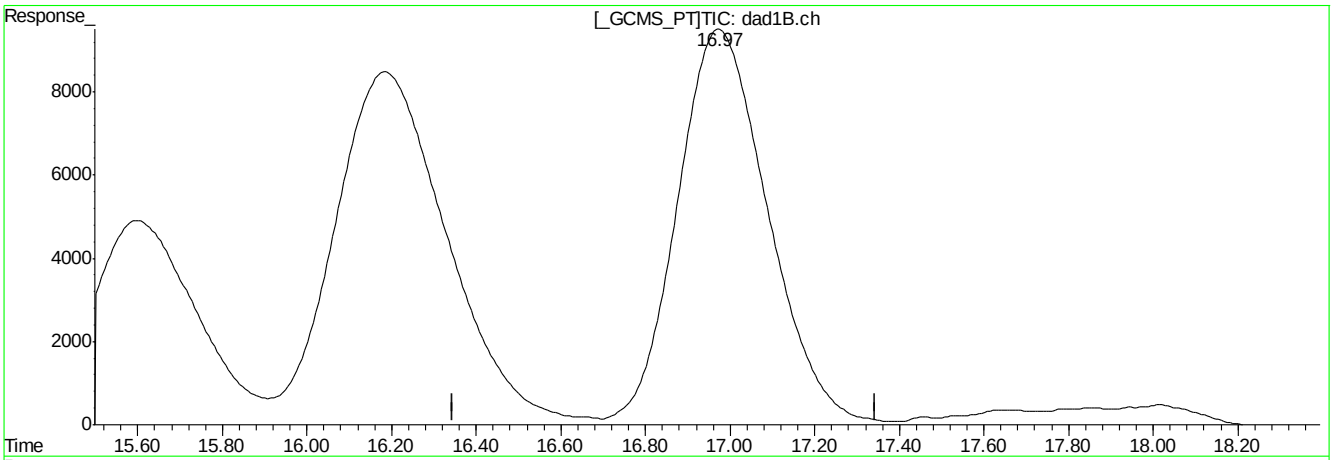
response 1221567

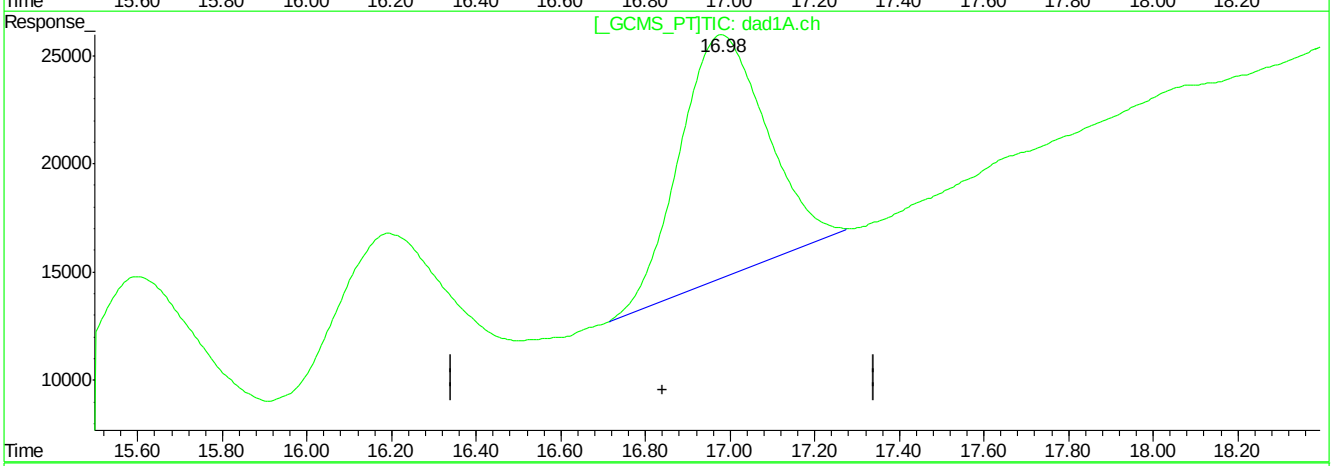
(+) = Expected Retention Time
PP388854.D GPP2336_092420_DV.M Thu Nov 12 15:57:26 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388854.D\dad1B.ch Vial: 25
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388854.D\dad1A.ch
Acq On : 31-Oct-2020, 02:55:27 Operator: jamesb
Sample : op82734-MSD Inst : G1315B
Misc : op82734,GPP2355,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.98min 581.800ppb

response 1755299

(20) m-Nitrotoluene #2

16.98min 450.711ppb m

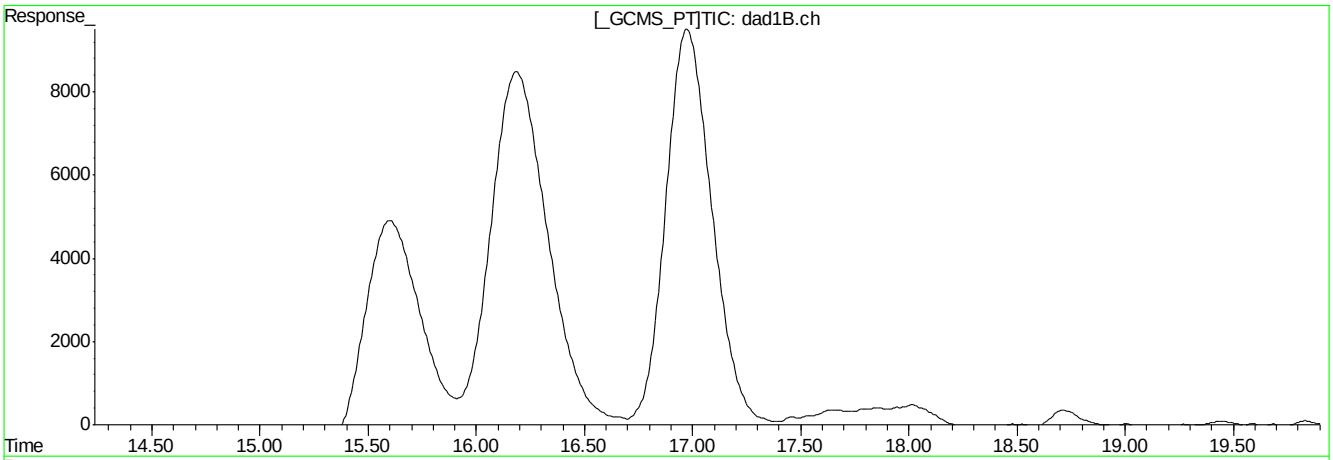
response 1612050

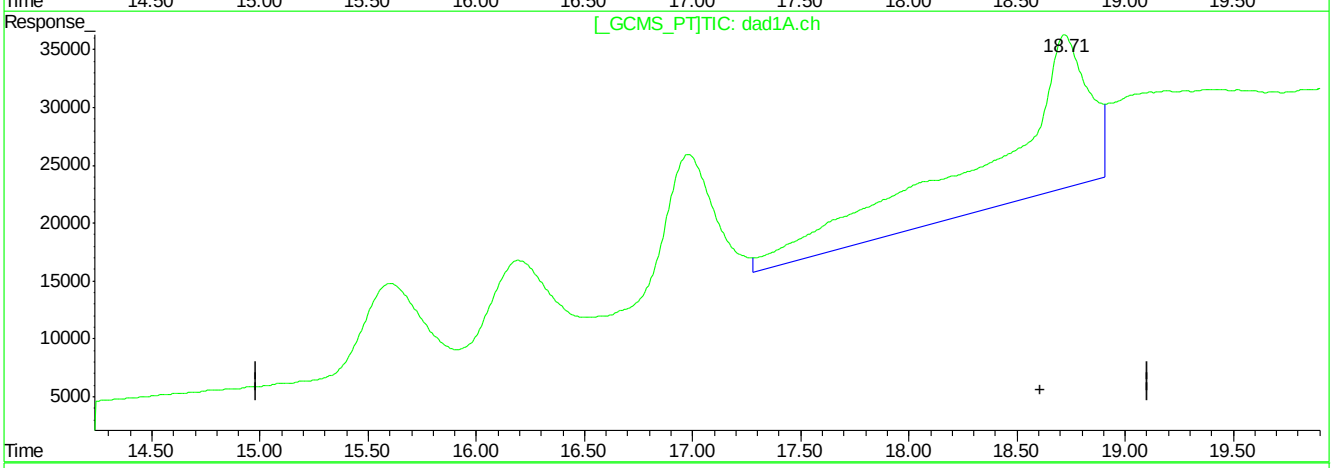
(+) = Expected Retention Time
PP388854.D GPP2336_092420_DV.M Thu Nov 12 15:57:32 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388854.D\dad1B.ch Vial: 25
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388854.D\dad1A.ch
Acq On : 31-Oct-2020, 02:55:27 Operator: jamesb
Sample : op82734-MSD Inst : G1315B
Misc : op82734,GPP2355,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.72min 3488.059ppb

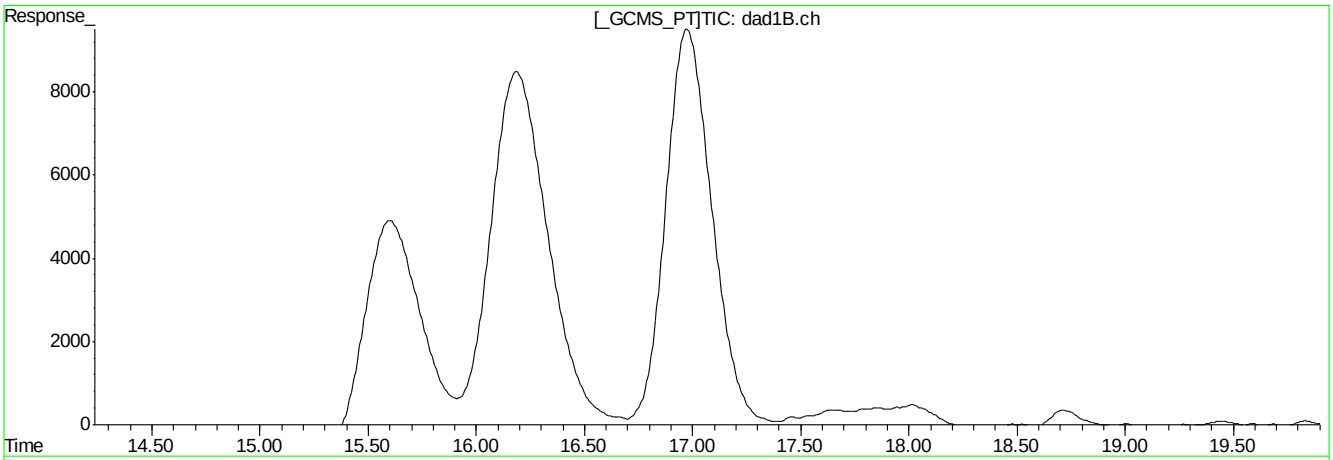
response 4180750

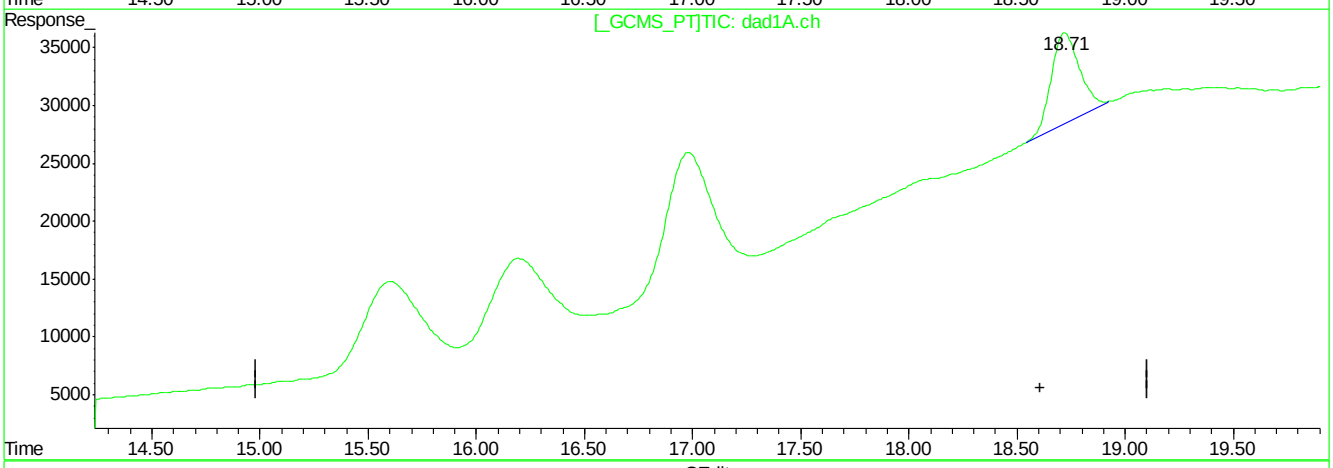
(+) = Expected Retention Time
PP388854.D GPP2336_092420_DV.M Thu Nov 12 15:57:36 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388854.D\dad1B.ch Vial: 25
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388854.D\dad1A.ch
Acq On : 31-Oct-2020, 02:55:27 Operator: jamesb
Sample : op82734-MSD Inst : G1315B
Misc : op82734,GPP2355,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.71min 594.295ppb m

response 712315

(+) = Expected Retention Time
PP388854.D GPP2336_092420_DV.M Thu Nov 12 15:57:41 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/09/20 17:32

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 09 16:01:28 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:54:39 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.30	14.18	80990	185470	15.715m	18.650
	Spiked Amount 500.000	Range 70 - 136		Recovery =		3.14%#	3.73%#
	Target Compounds						
1)	TNX	5.06	5.06	125083	126939	22.196m	22.441m
2)	HMX	5.43	5.43	67315	65577	20.379m	19.660m
3)	DNX	5.61	5.61	63713	62277	27.939m	26.180m
4)	MNX	6.54	6.54	91485	91485	22.637	22.696
5)	1,3,5-Trinitrobe	7.49	7.49	191005	184732	20.368	19.651m
6)	RDX	7.88	7.88	80673	79686	18.560m	18.351m
7)	1,3-Dinitrobenze	9.88	9.92	223173	145432	17.710m	15.340m
8)	Nitrobenzene	10.91	10.96	194453	159102	21.899	21.721m
9)	2,4,6-Trinitroto	11.58	11.59	159340	170643	20.120m	15.757m
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	12.92	12.88	109054	280772	17.755m	27.613m#
13)	2,6-Dinitrotolue	14.55	14.55	103309	201140	17.072	23.762
14)	2,4-Dinitrotolue	15.19	15.20	232933	149273	20.027	18.157
15)	o-Nitrotoluene	16.78	16.83	84573	126166	17.627m	16.065m
16)	3,5-Dinitroanili	16.01	16.02	216746	290693	22.904	18.409m
17)	p-Nitrotoluene	17.78	17.86	199404	403584	92.290	117.528
18)	4-Amino-2,6-Dini	17.78	17.86	199404	403584	68.537	67.856
19)	m-Nitrotoluene	19.09	19.20	91846	194380	6.468m	8.654m
20)	2-Amino-4,6-Dini	19.72	19.71	180291	269792	12.698m	12.003m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D.

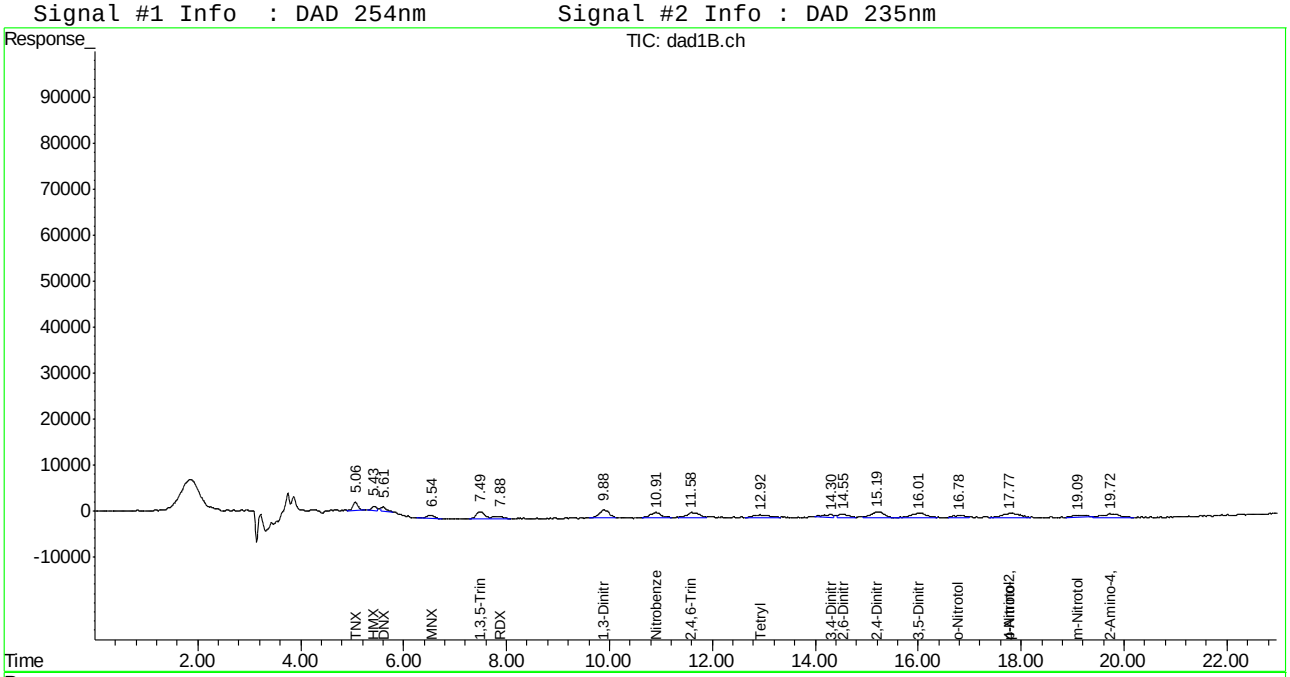
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

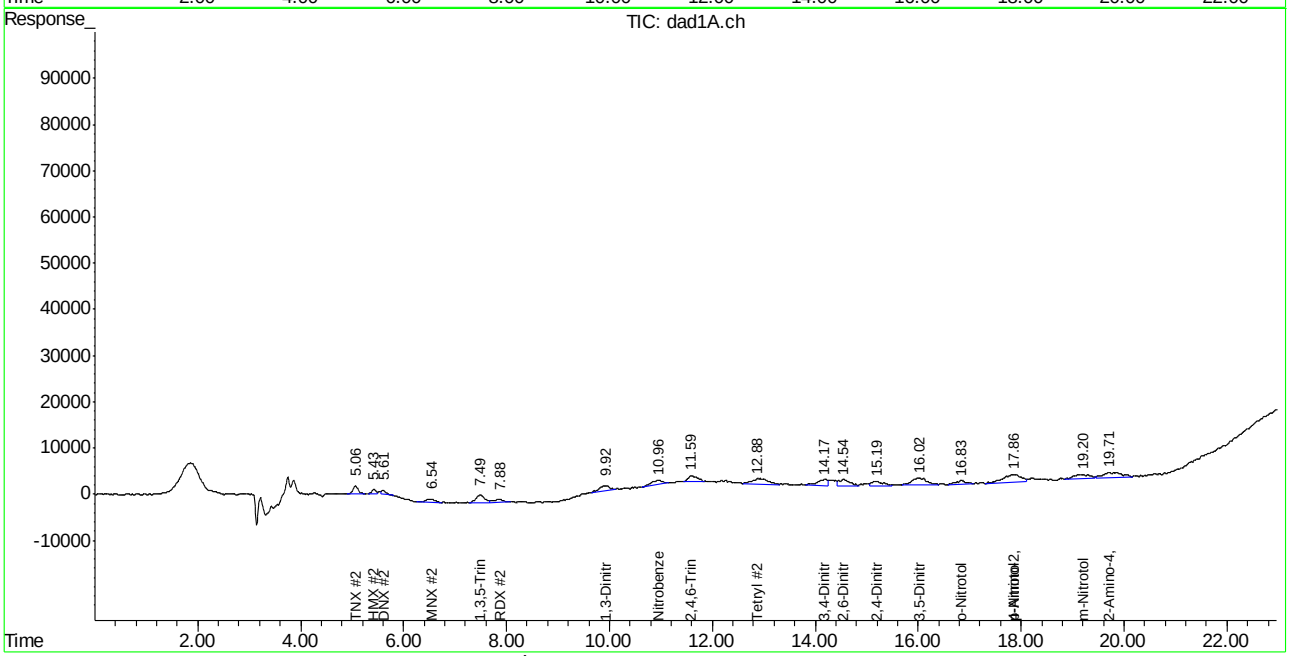
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:41 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:54:39 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

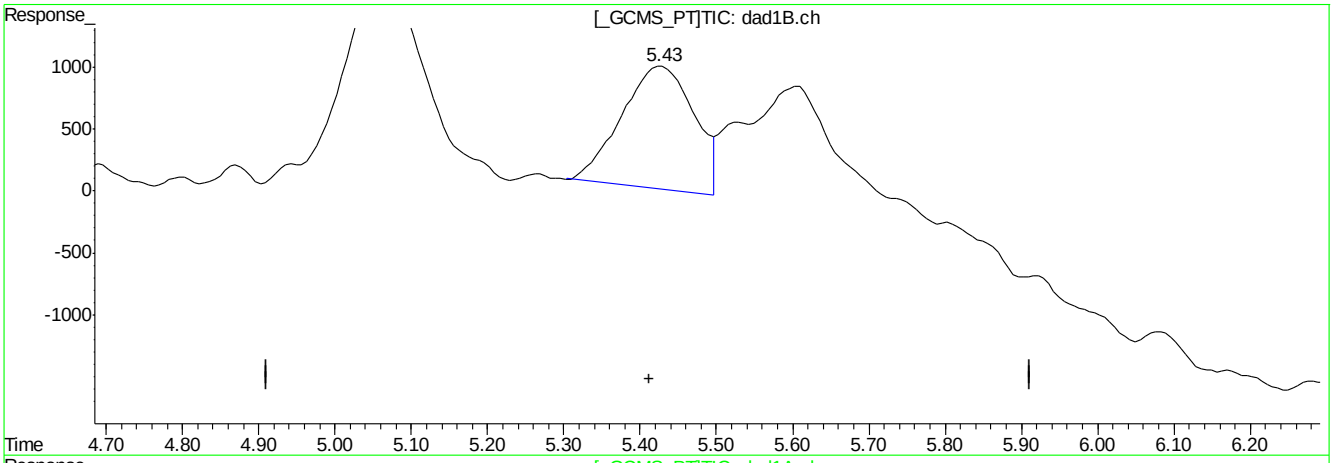
Sample Number: GGG2870-IC2870
Lab FileID: GG619500.D
Injection Time: 09/09/20 12:42
Method: SW846 8330A
Analyst approved: 09/09/20 17:12 William Hustedde
Supervisor approved: 09/09/20 17:32 Naresh Jiawan

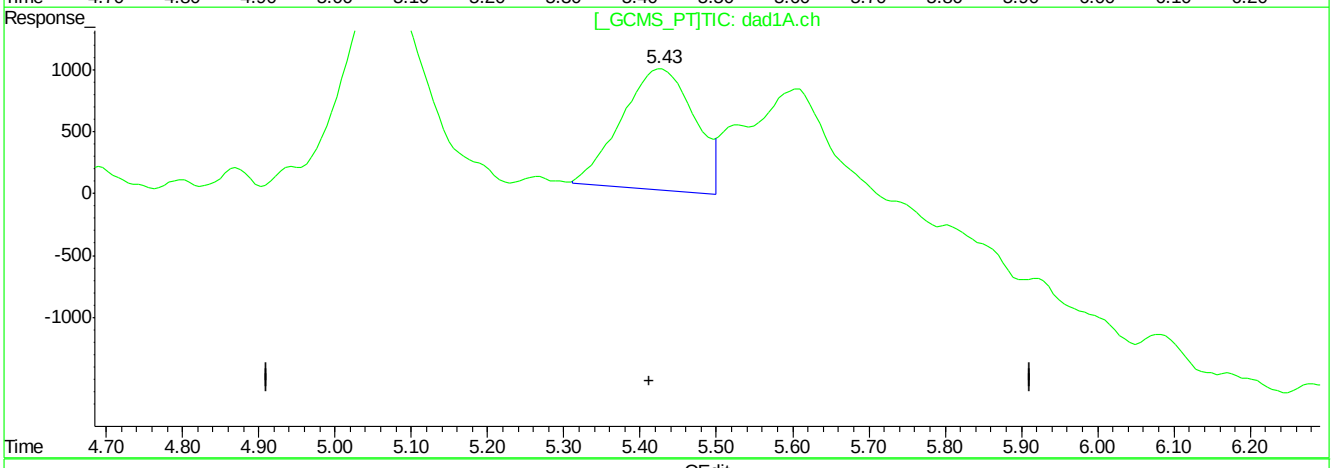
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	5.06	Poor instrument integration
TNX		2	5.06	Poor instrument integration
HMX	2691-41-0	1	5.43	Poor instrument integration
HMX	2691-41-0	2	5.43	Poor instrument integration
DNX		1	5.61	Poor instrument integration
DNX		2	5.61	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.49	Poor instrument integration
RDX	121-82-4	1	7.88	Poor instrument integration
RDX	121-82-4	2	7.88	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	9.88	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.92	Poor instrument integration
Nitrobenzene	98-95-3	2	10.96	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	11.58	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.59	Poor instrument integration
Tetryl	479-45-8	2	12.88	Poor instrument integration
Tetryl	479-45-8	1	12.92	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	14.30	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	16.02	Poor instrument integration
o-Nitrotoluene	88-72-2	1	16.78	Poor instrument integration
o-Nitrotoluene	88-72-2	2	16.83	Poor instrument integration
m-Nitrotoluene	99-08-1	1	19.09	Poor instrument integration
m-Nitrotoluene	99-08-1	2	19.20	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.71	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	19.72	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.43min 20.379ppb m

response 67315

(2) HMX #2

5.43min 19.660ppb m

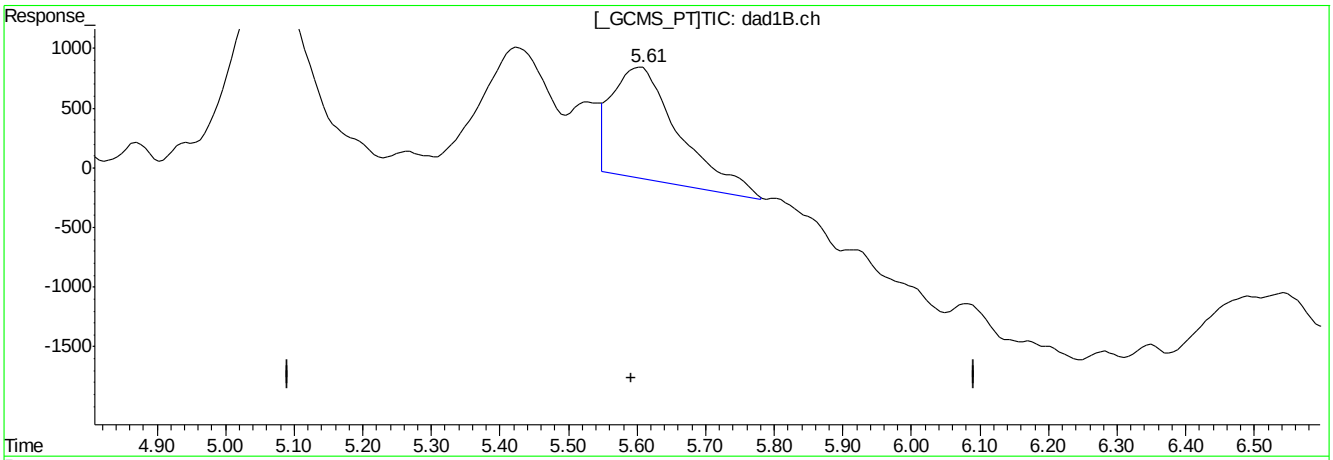
response 65577

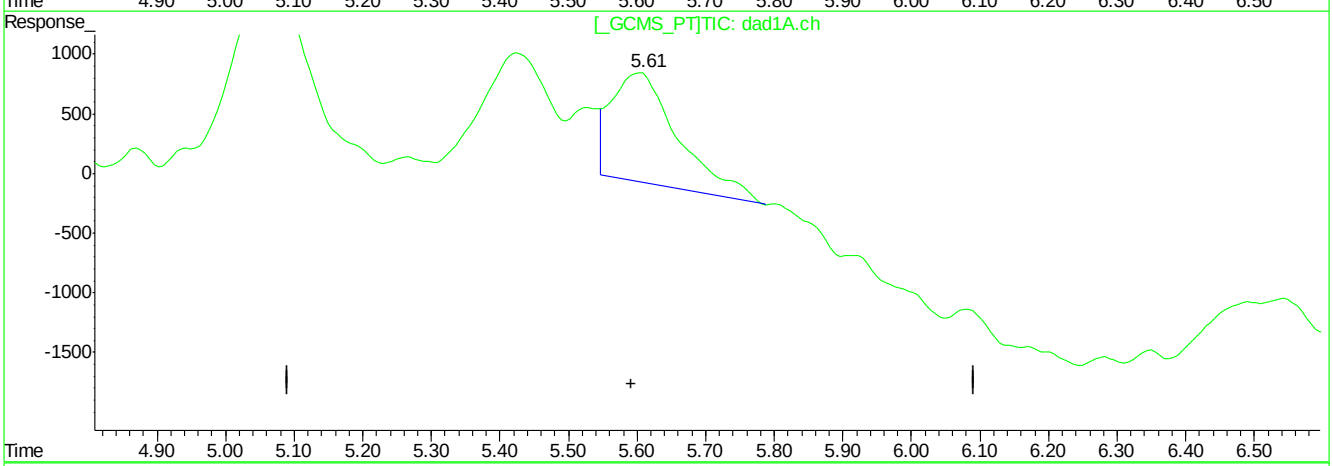
(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:02:56 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.61min 27.939ppb m

response 63713

(3) DNX #2

5.61min 26.180ppb m

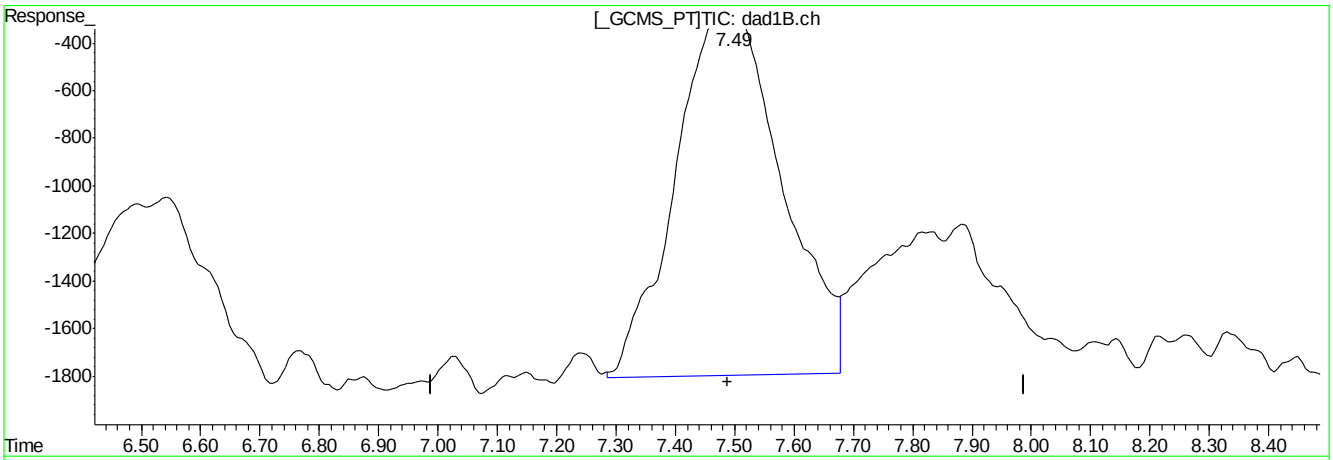
response 62277

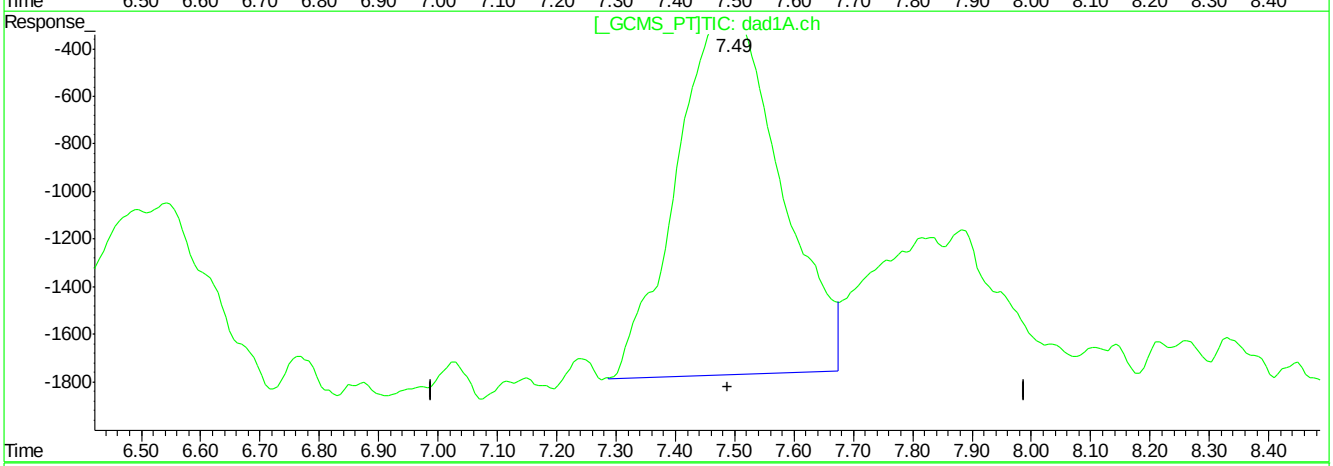
(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:03:07 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.49min 20.368ppb

response 191005

(5) 1,3,5-Trinitrobenzene #2

7.49min 19.651ppb m

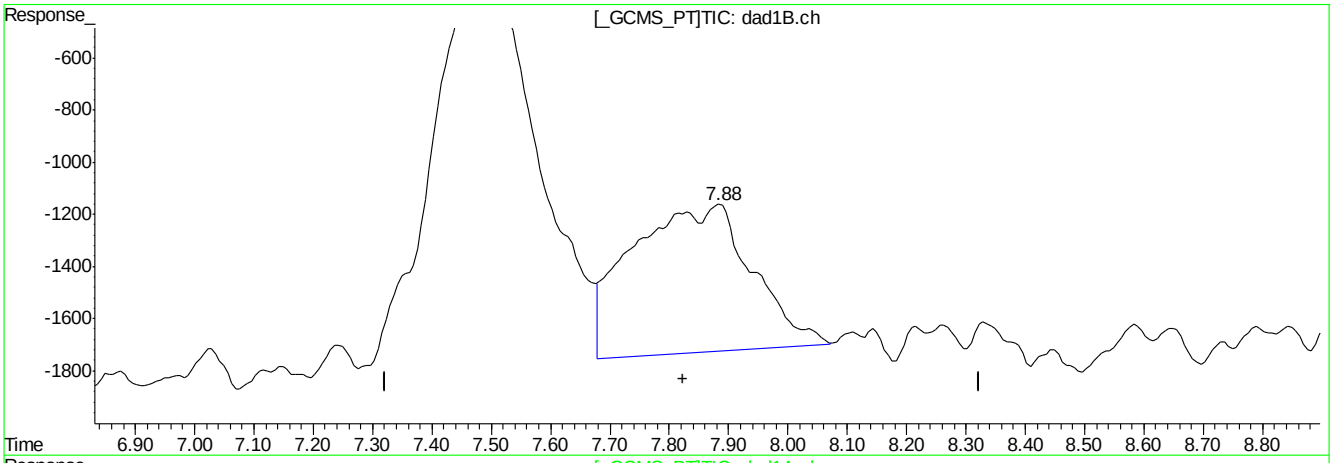
response 184732

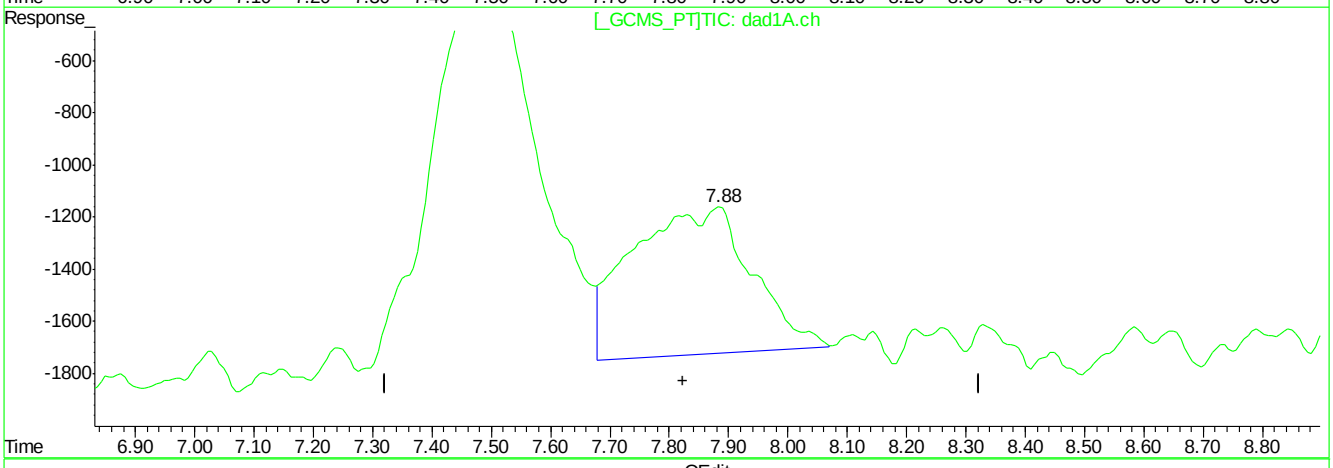
(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:03:19 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.88min 18.560ppb m

response 80673

(6) RDX #2

7.88min 18.351ppb m

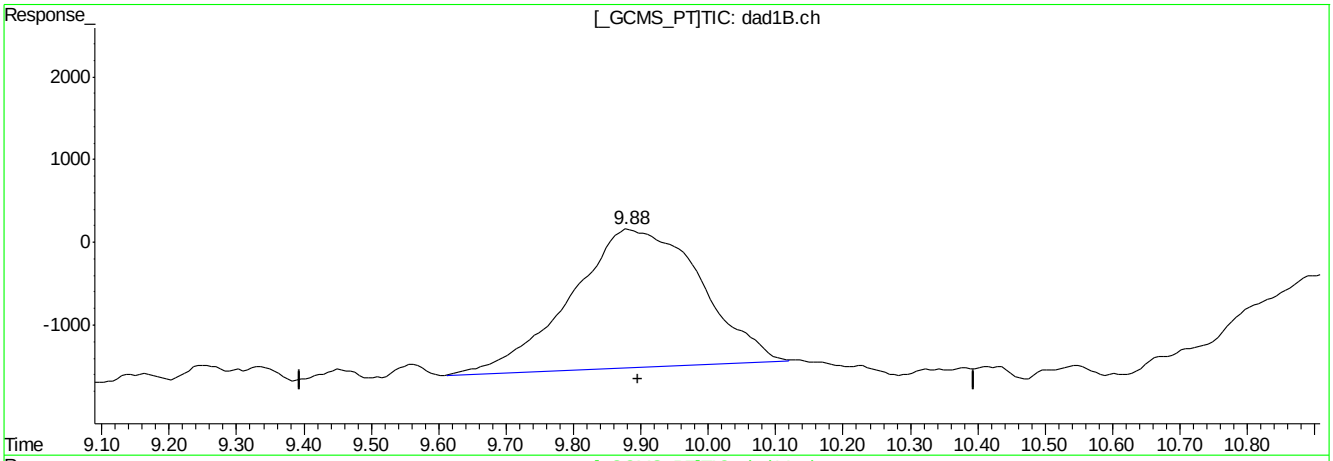
response 79686

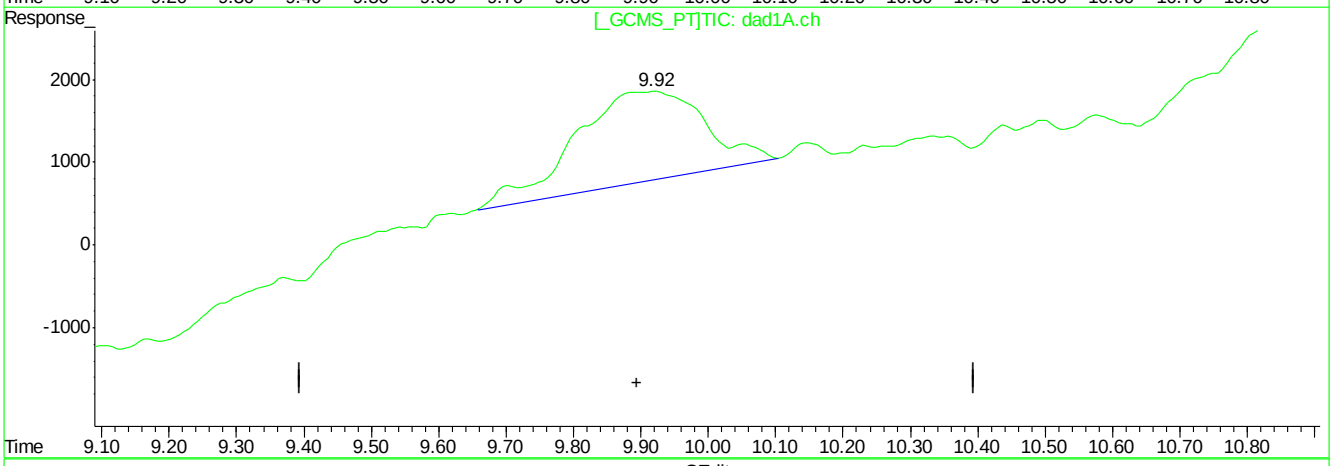
(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:05:25 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.88min 17.710ppb m

response 223173

(7) 1,3-Dinitrobenzene #2

9.92min 15.340ppb m

response 145432

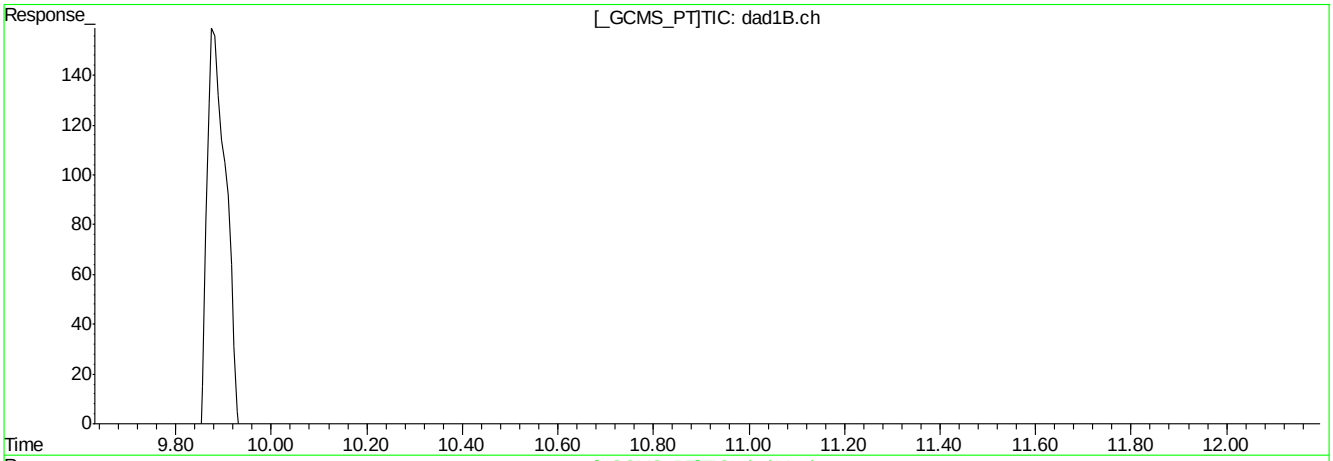
(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:05:37 2020

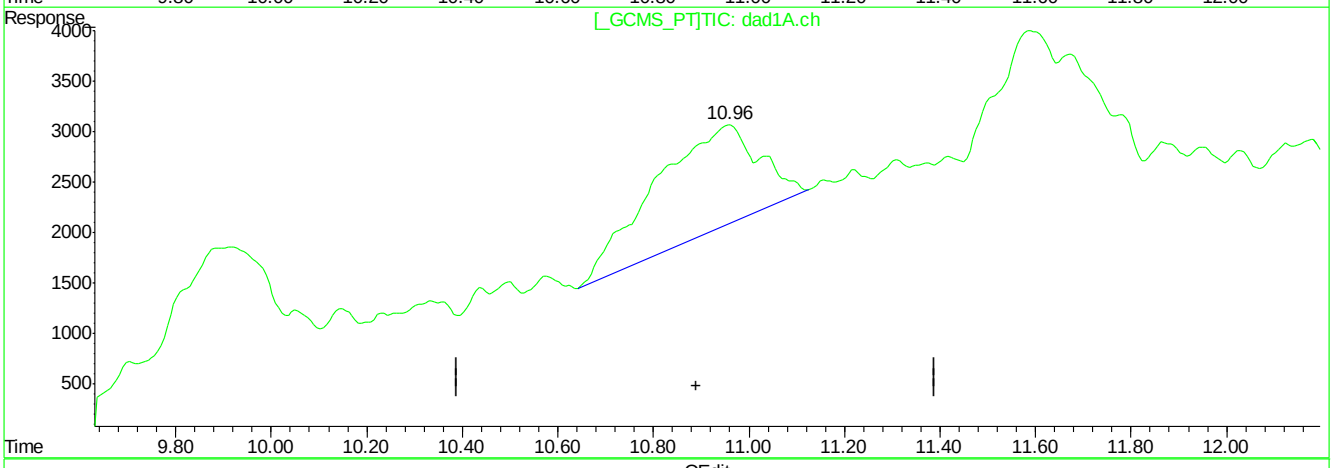
GG619500.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.91min 21.899ppb

response 194453

(8) Nitrobenzene #2

10.96min 21.721ppb m

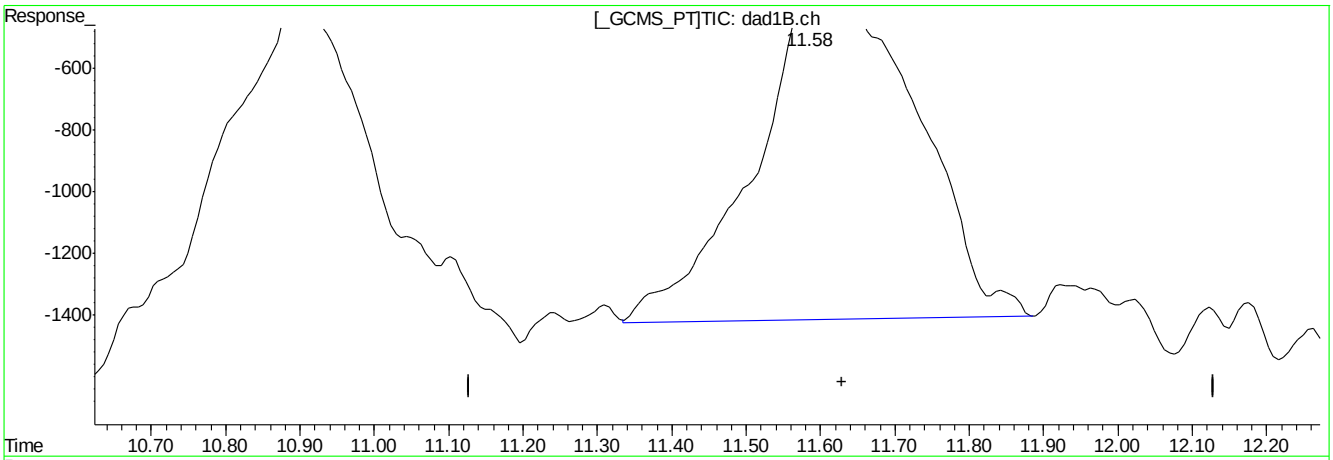
response 159102

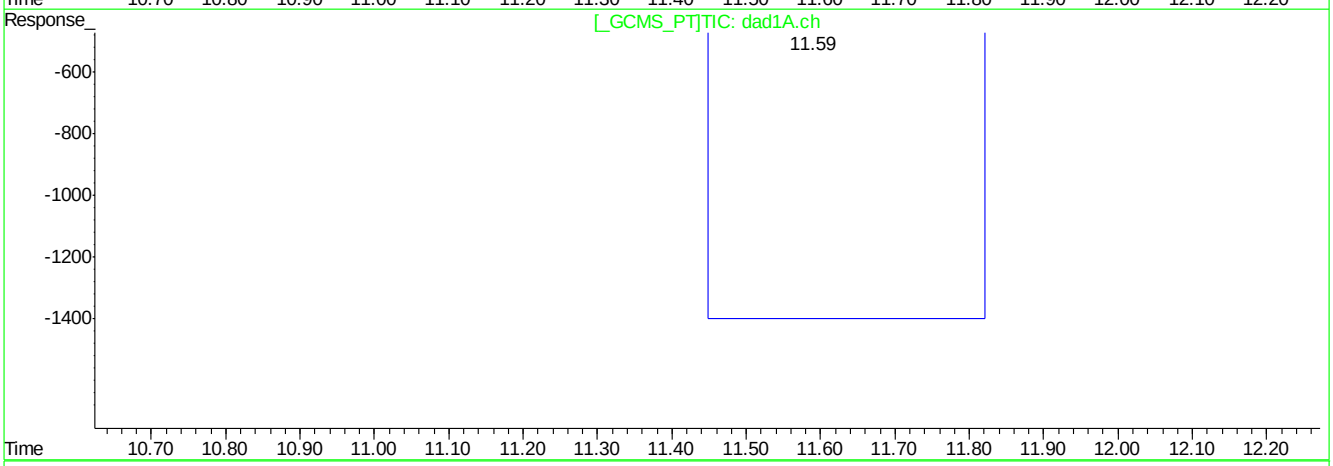
(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:05:44 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.58min 20.120ppb m

response 159340

(9) 2,4,6-Trinitrotoluene #2

11.59min 15.757ppb m

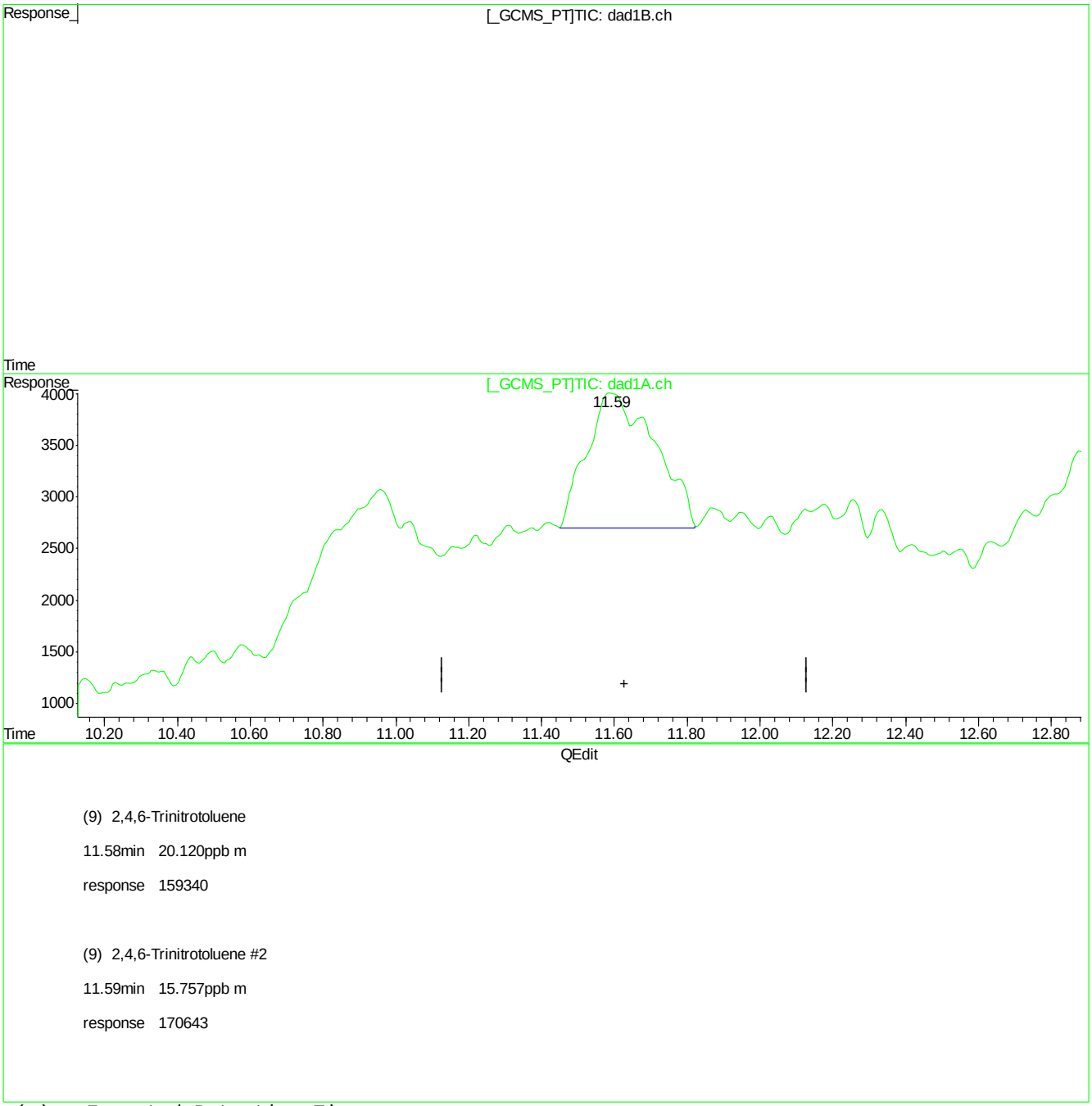
response 170643

(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:05:55 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration



(9) 2,4,6-Trinitrotoluene

11.58min 20.120ppb m

response 159340

(9) 2,4,6-Trinitrotoluene #2

11.59min 15.757ppb m

response 170643

(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:05:58 2020

GG619500.D edits: 2,4,6-Trinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration

(11) Tetryl

12.92min 17.755ppb m

response 109054

(11) Tetryl #2

12.88min 27.613ppb m

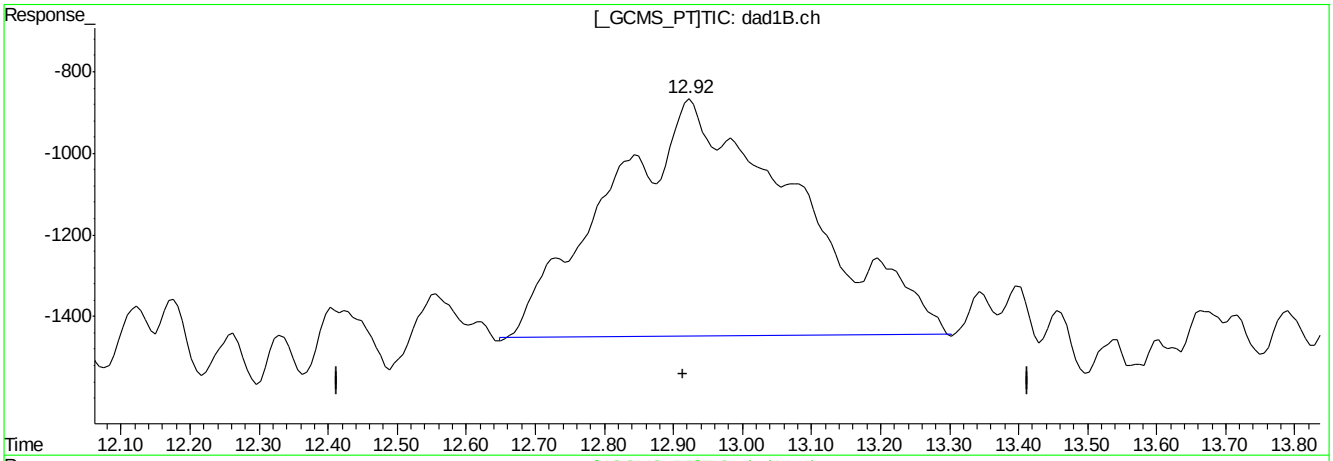
response 280772

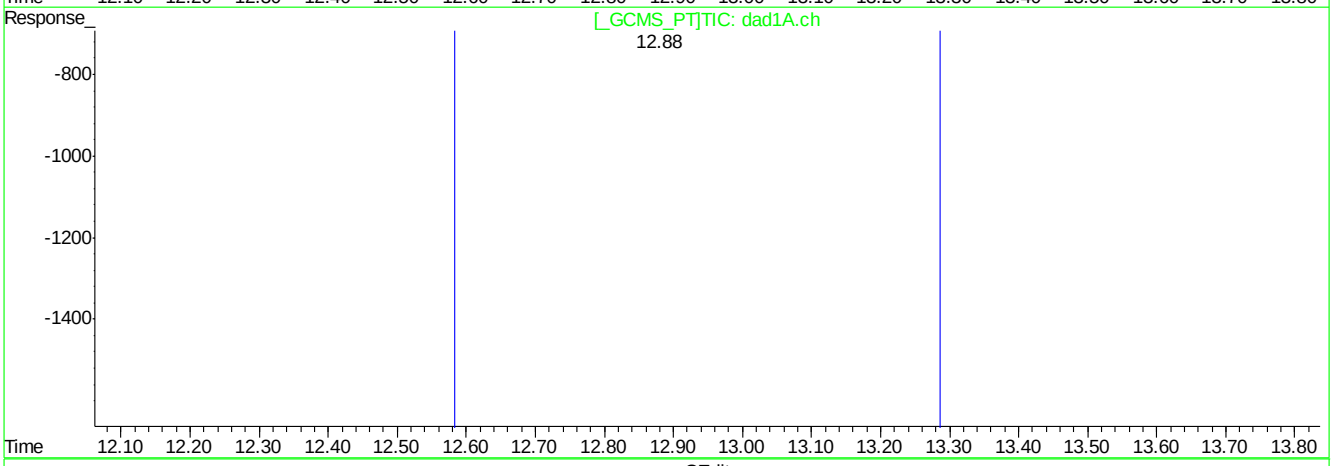
(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:06:20 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.92min 17.755ppb m

response 109054

(11) Tetryl #2

12.88min 27.613ppb m

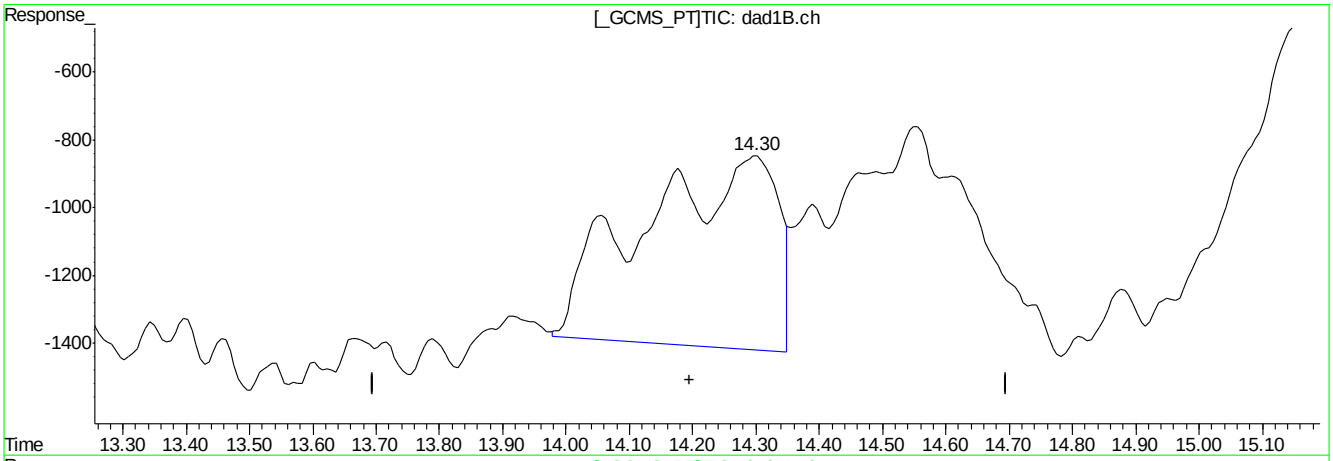
response 280772

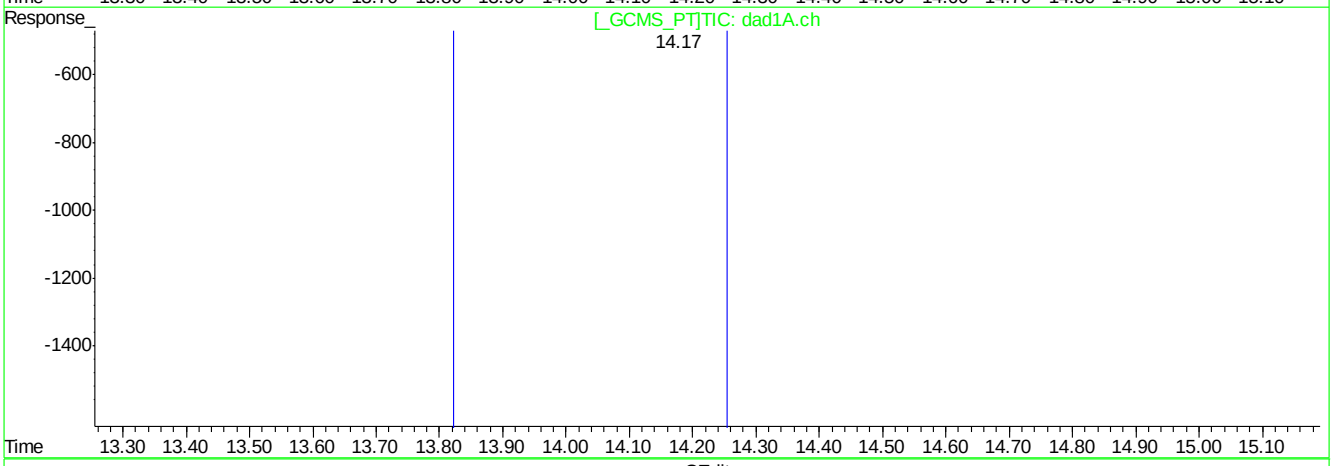
(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:06:23 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

14.30min 15.715ppb m

response 80990

(12) 3,4-Dinitrotoluene #2 (S)

14.18min 18.650ppb

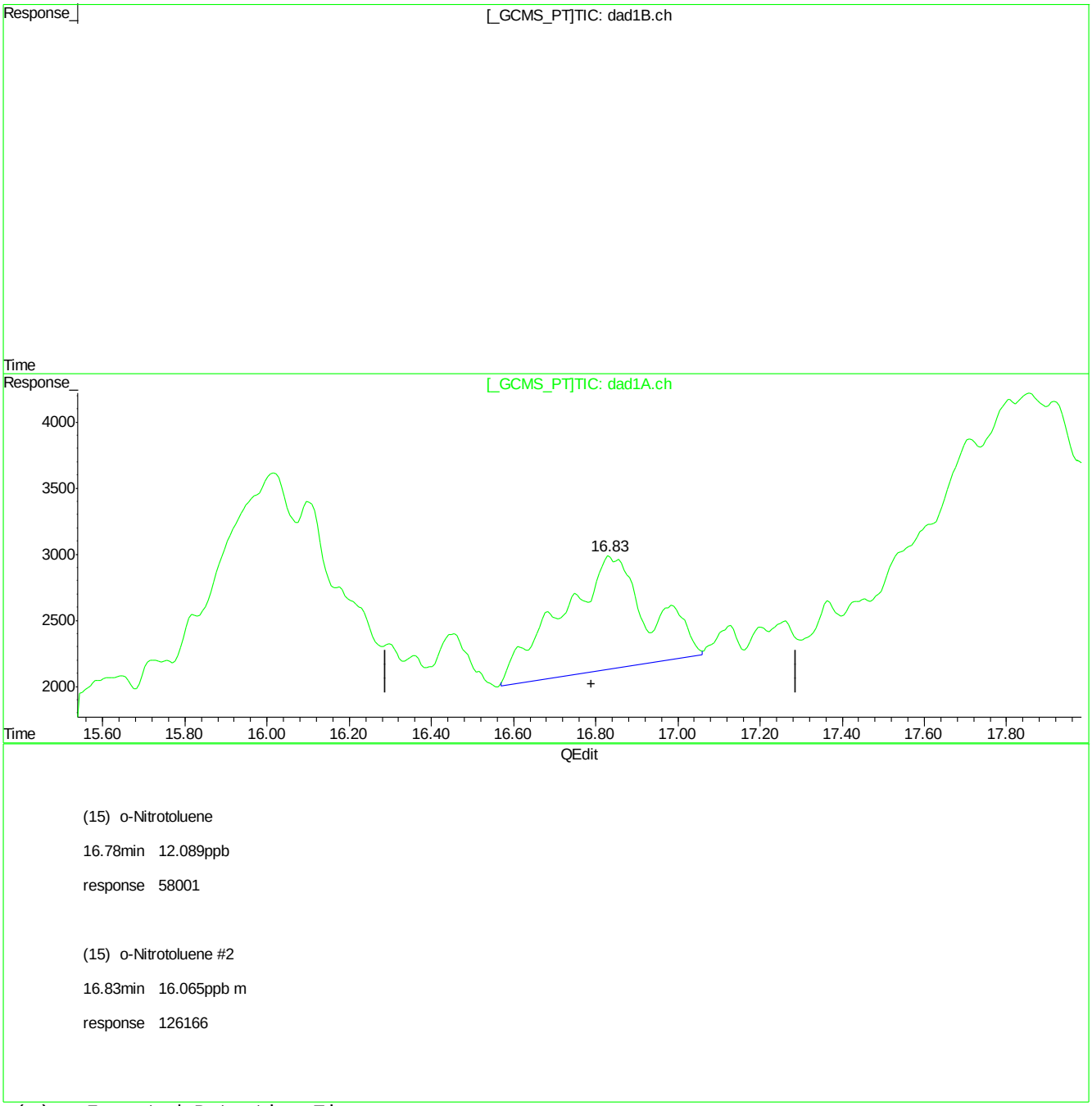
response 185470

(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:07:57 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration



(15) o-Nitrotoluene

16.78min 12.089ppb

response 58001

(15) o-Nitrotoluene #2

16.83min 16.065ppb m

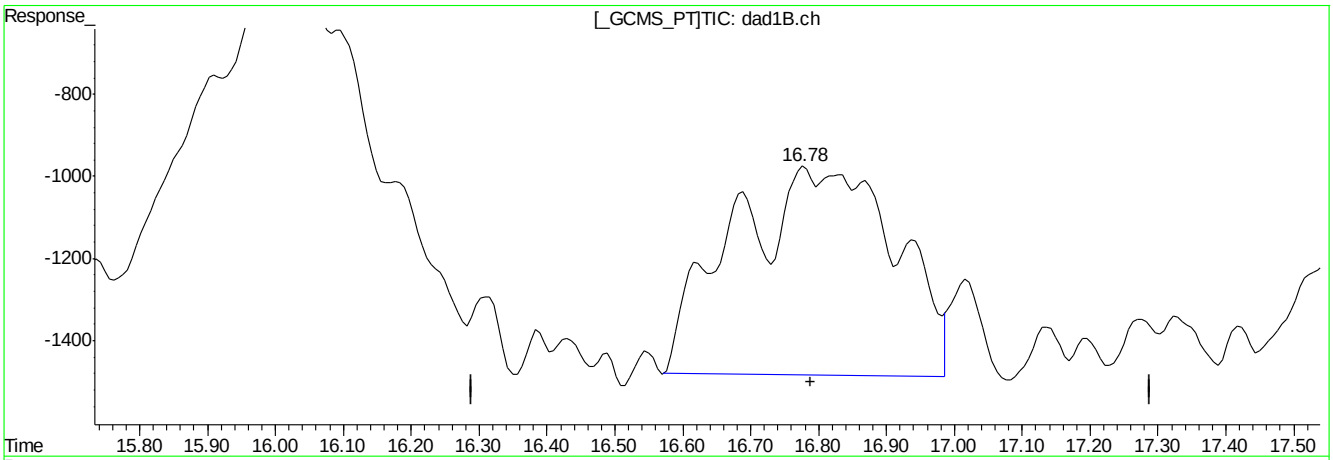
response 126166

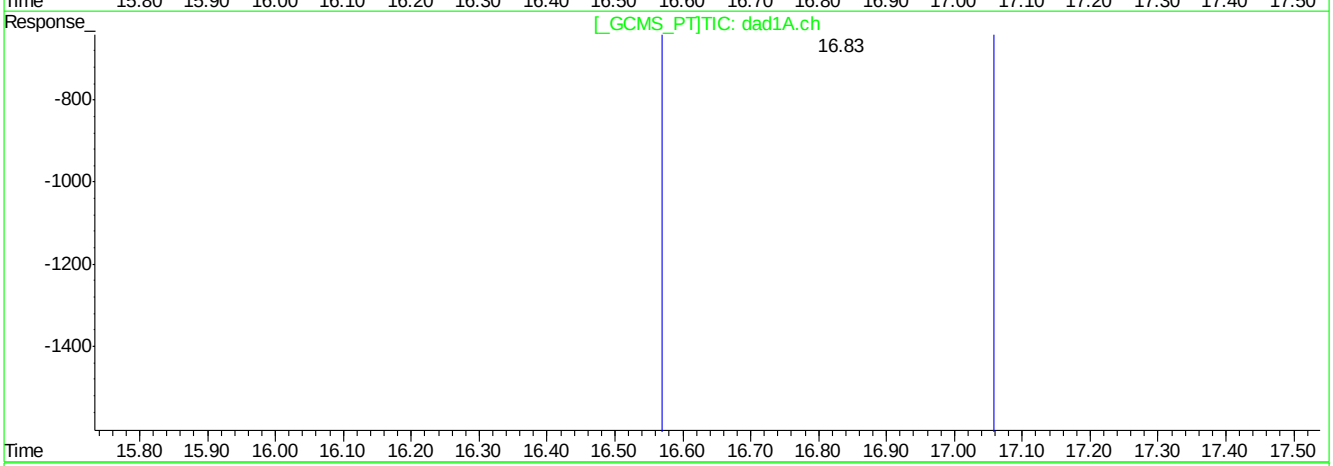
(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:08:10 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(15) o-Nitrotoluene

16.78min 17.627ppb m

response 84573

(15) o-Nitrotoluene #2

16.83min 16.065ppb m

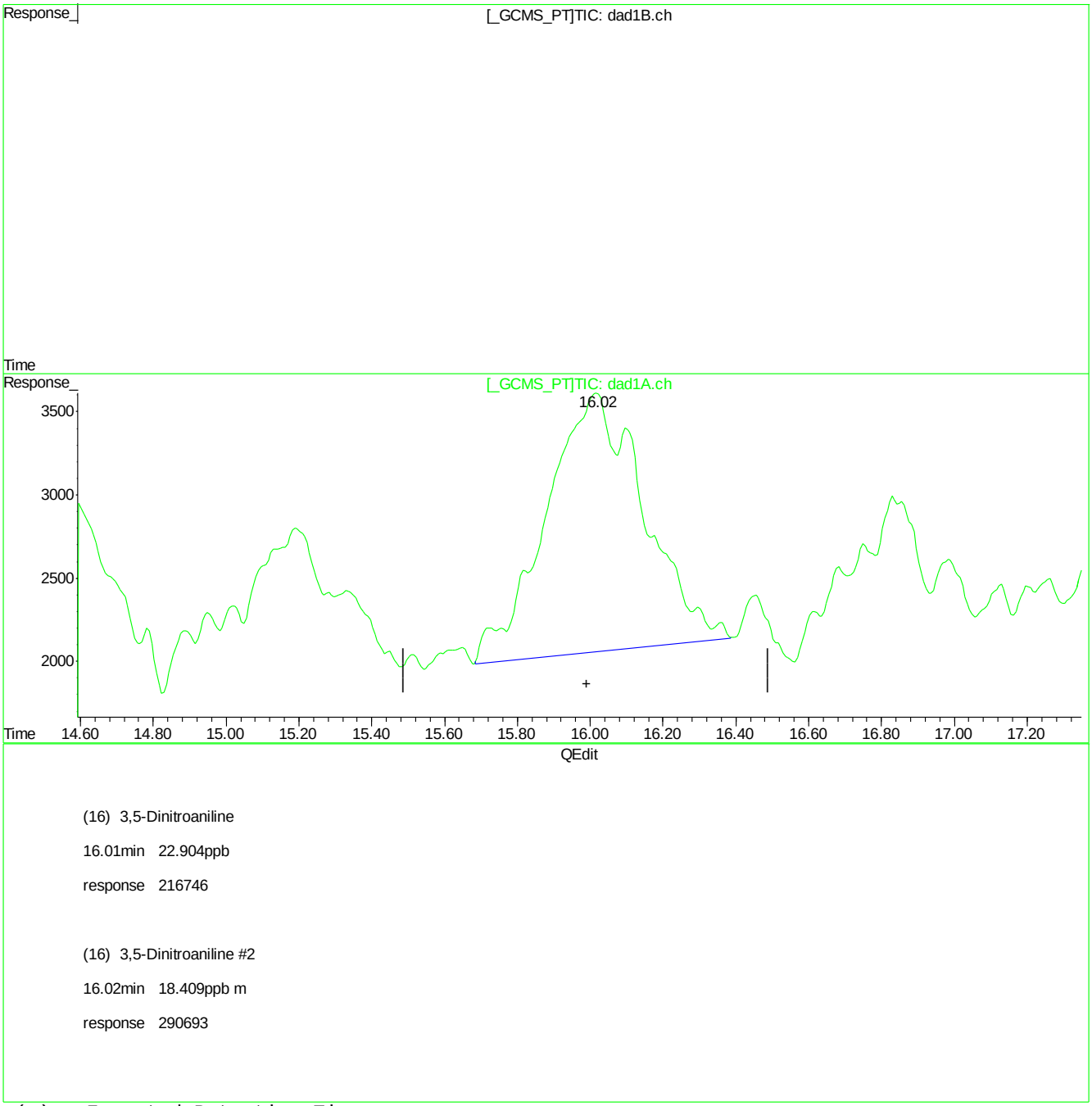
response 126166

(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:08:15 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration



(16) 3,5-Dinitroaniline

16.01min 22.904ppb

response 216746

(16) 3,5-Dinitroaniline #2

16.02min 18.409ppb m

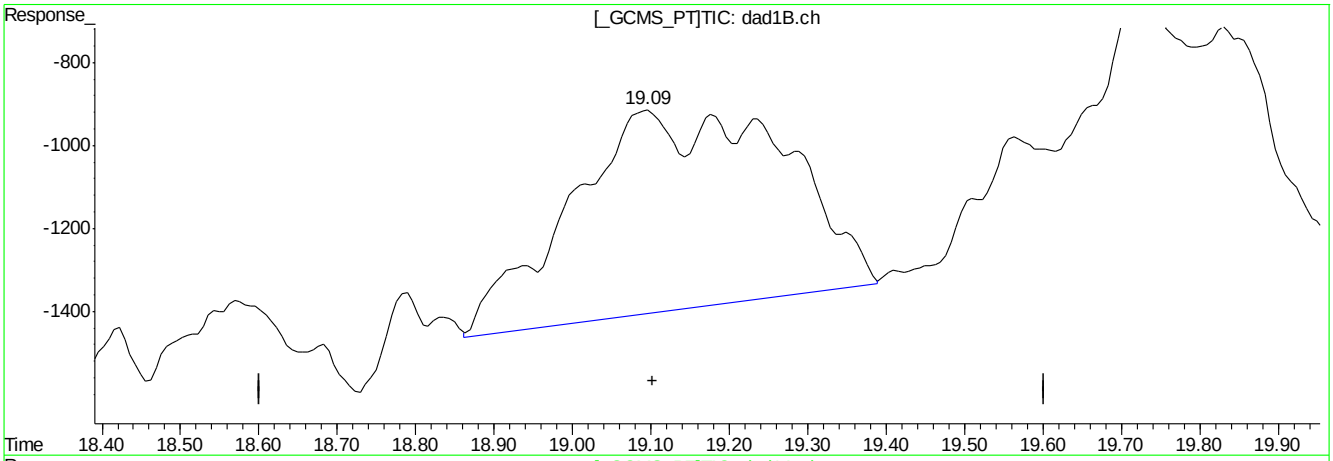
response 290693

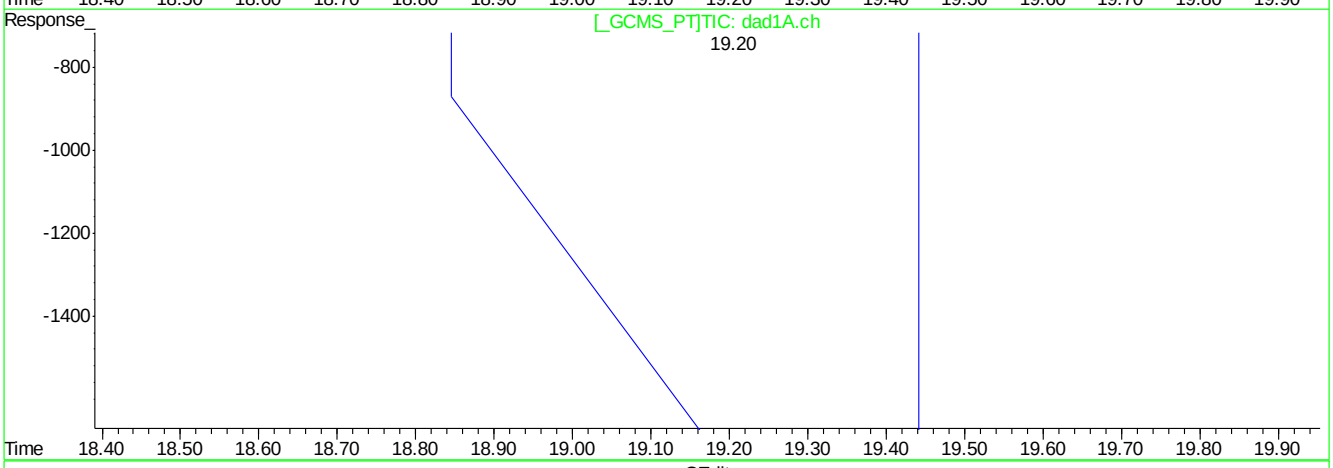
(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:08:23 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.09min 6.468ppb m

response 91846

(19) m-Nitrotoluene #2

19.20min 7.172ppb m

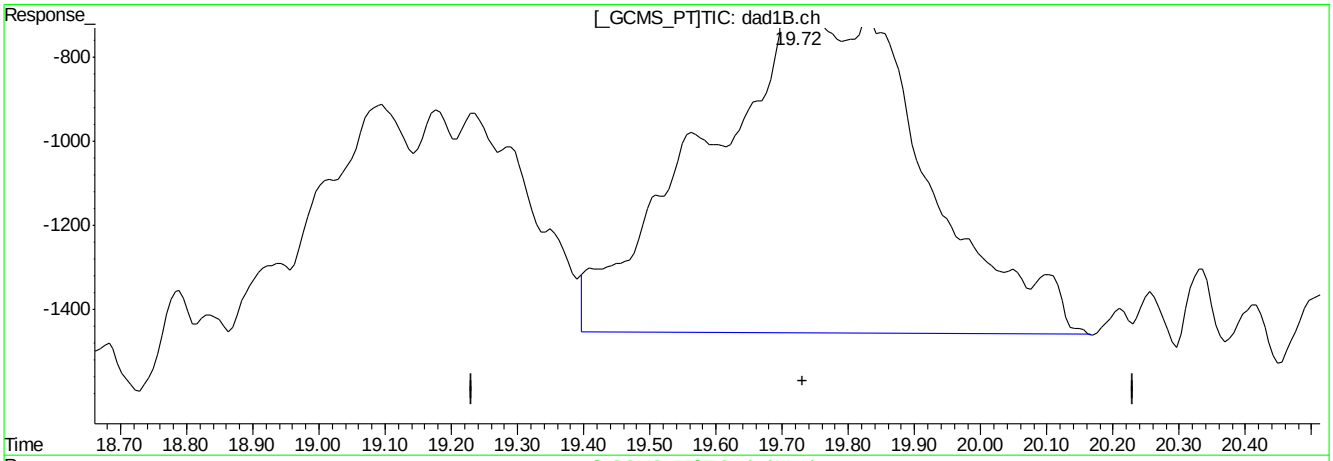
response 161095

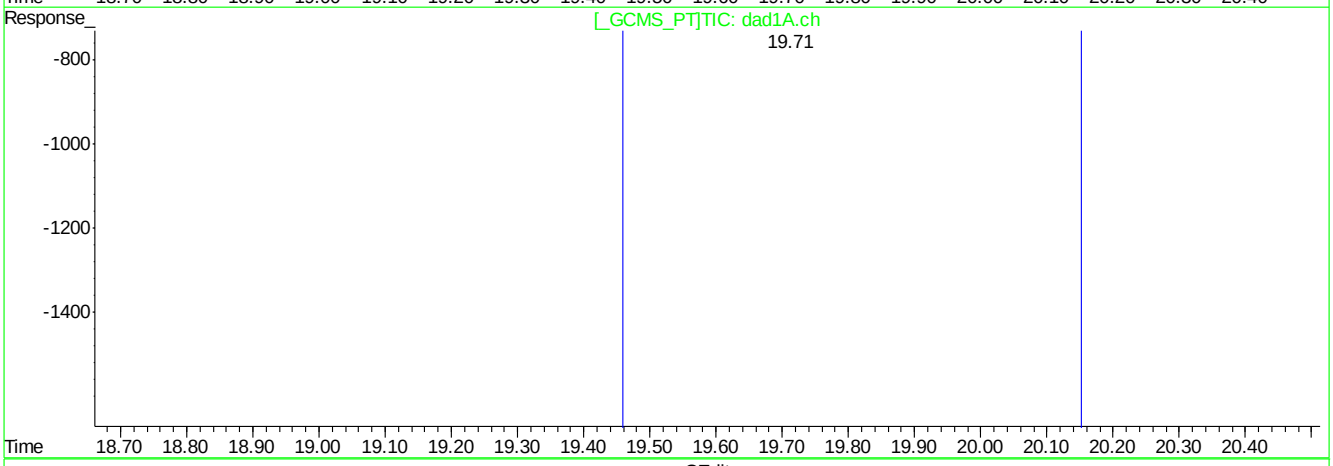
(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:08:36 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.72min 12.698ppb m

response 180291

(20) 2-Amino-4,6-Dinitrotoluene #2

19.71min 12.003ppb m

response 269792

(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:08:48 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration

(20) 2-Amino-4,6-Dinitrotoluene

19.72min 12.698ppb m

response 180291

(20) 2-Amino-4,6-Dinitrotoluene #2

19.71min 12.003ppb m

response 269792

(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:08:51 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619500.D\dad1A.ch
Acq On : 09-Sep-2020, 12:42:30 Operator: williamh
Sample : ic2870-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration

(19) m-Nitrotoluene

19.09min 6.468ppb m

response 91846

(19) m-Nitrotoluene #2

19.20min 8.654ppb m

response 194380

(+) = Expected Retention Time
GG619500.D 8330RPB.M_090920.M Wed Sep 09 16:08:57 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/09/20 17:32

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 09 16:01:29 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.17	14.20	292492	462989	56.753	46.555
	Spiked Amount 500.000	Range 70 - 136		Recovery =		11.35%#	9.31%#
	Target Compounds						
1)	TNX	5.06	5.06	327314	321707	58.083m	56.874m
2)	HMX	5.42	5.42	197801	202908	59.882m	60.833m
3)	DNX	5.60	5.60	157398	155547	69.021m	65.390m
4)	MNX	6.52	6.52	225787	225787	55.868	56.014
5)	1,3,5-Trinitrobe	7.49	7.49	511327	514232	54.527m	54.701m
6)	RDX	7.83	7.83	228358	228358	52.538	52.590
7)	1,3-Dinitrobenze	9.90	9.92	642724	444457	51.005	46.880m
8)	Nitrobenzene	10.90	10.87	420273	372296	47.330	50.827m
9)	2,4,6-Trinitroto	11.63	11.64	440435	629710	55.614m	58.145m
10)	Nitroglycerin	0.00	12.36	0	167923	N.D. d	73.162m
11)	Tetryl	12.97	12.90	336074	426016	54.717m	41.891m
13)	2,6-Dinitrotolue	14.49	14.52	321234	460753	53.083	54.431
14)	2,4-Dinitrotolue	15.20	15.20	593478	305567	51.027	37.168
15)	o-Nitrotoluene	16.78	16.80	265285	463250	55.291	58.986
16)	3,5-Dinitroanili	16.01	15.98	517646	809857	54.700	51.287
17)	p-Nitrotoluene	17.81	17.80	561351	1152638	259.811	335.661
18)	4-Amino-2,6-Dini	17.81	17.80	561351	1152638	192.942	193.798
19)	m-Nitrotoluene	19.11	19.11	275757	368231	19.419	16.393m
20)	2-Amino-4,6-Dini	19.70	19.73	457955	632844	32.253	28.155m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D.

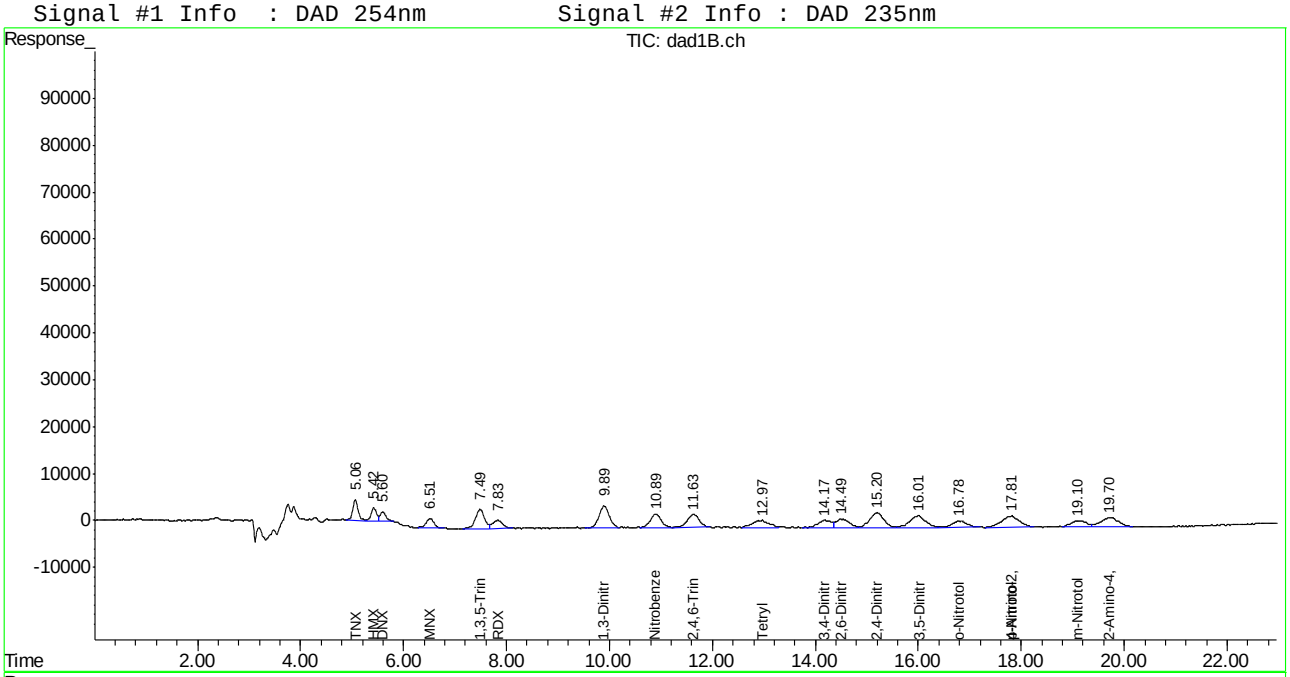
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

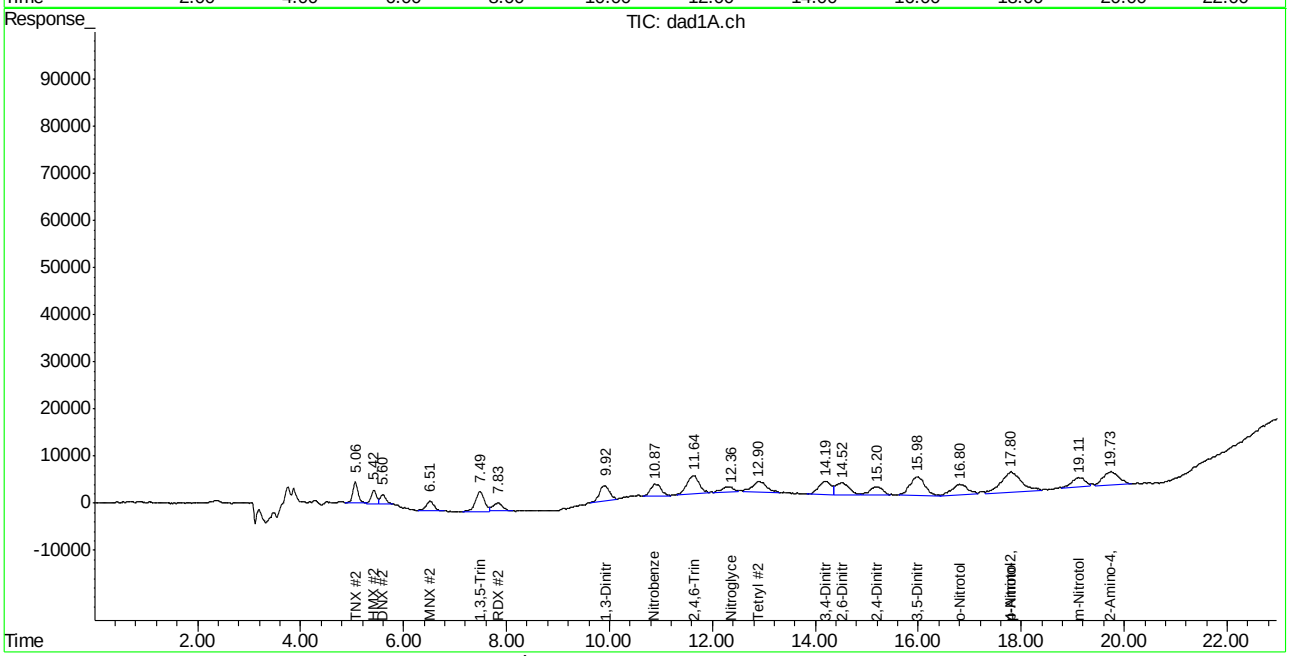
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:41 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

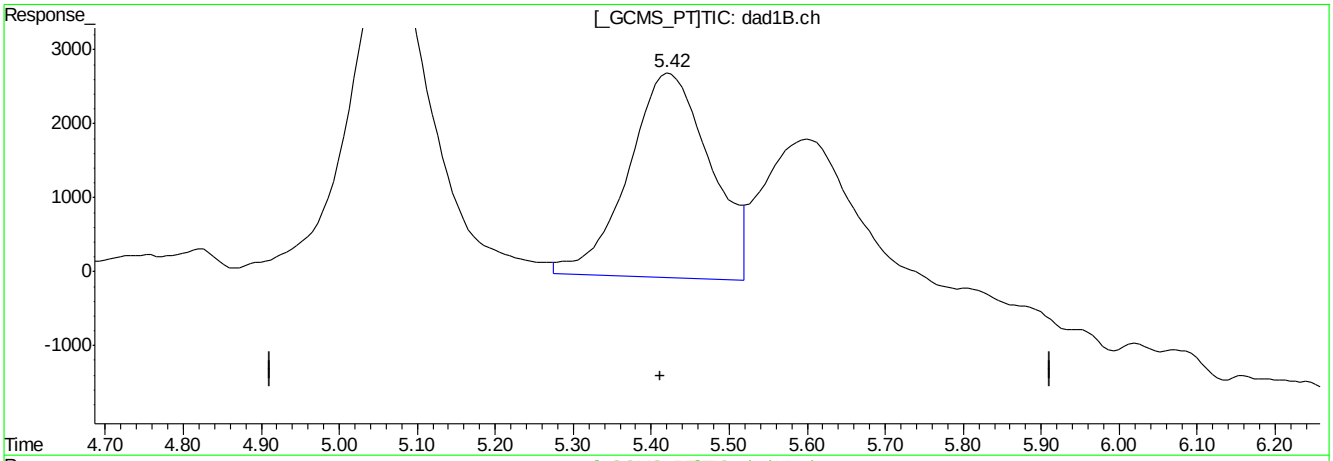
Sample Number: GGG2870-IC2870
Lab FileID: GG619501.D
Injection Time: 09/09/20 13:12
Method: SW846 8330A
Analyst approved: 09/09/20 17:12 William Hustedde
Supervisor approved: 09/09/20 17:32 Naresh Jiawan

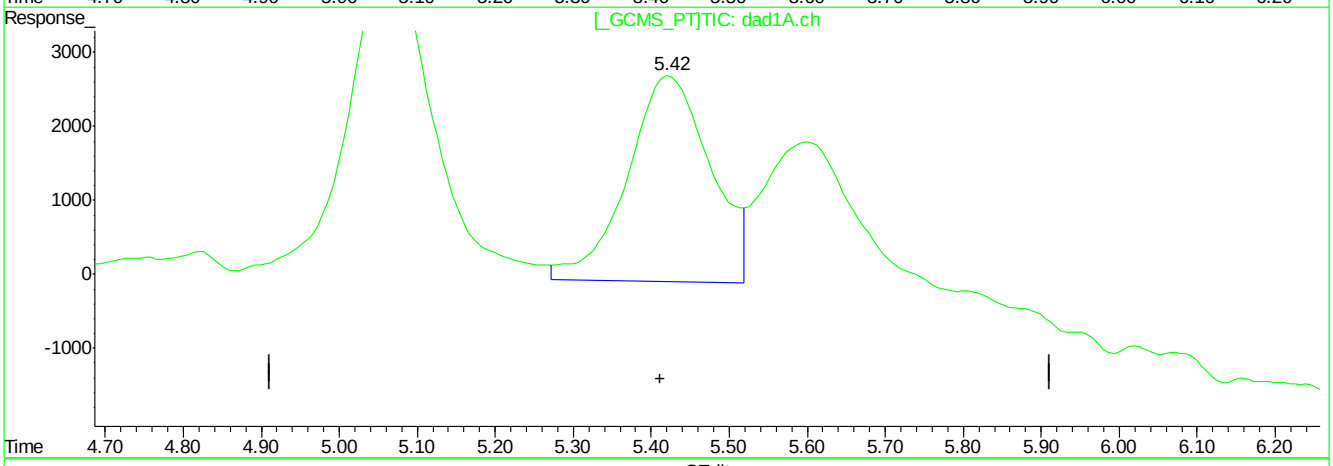
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	5.06	Poor instrument integration
TNX		2	5.06	Poor instrument integration
HMX	2691-41-0	1	5.42	Poor instrument integration
HMX	2691-41-0	2	5.42	Poor instrument integration
DNX		1	5.60	Poor instrument integration
DNX		2	5.60	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	7.49	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.49	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.92	Poor instrument integration
Nitrobenzene	98-95-3	2	10.87	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	11.63	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.64	Poor instrument integration
Nitroglycerine	55-63-0	2	12.36	Poor instrument integration
Tetryl	479-45-8	2	12.90	Poor instrument integration
Tetryl	479-45-8	1	12.97	Poor instrument integration
m-Nitrotoluene	99-08-1	2	19.11	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.73	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.42min 59.882ppb m

response 197801

(2) HMX #2

5.42min 60.833ppb m

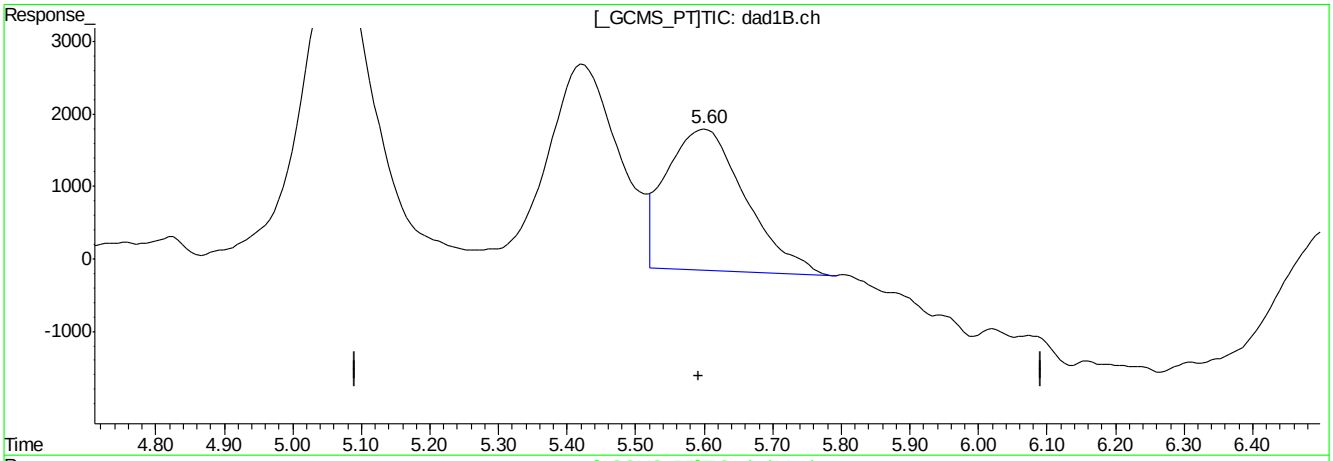
response 202908

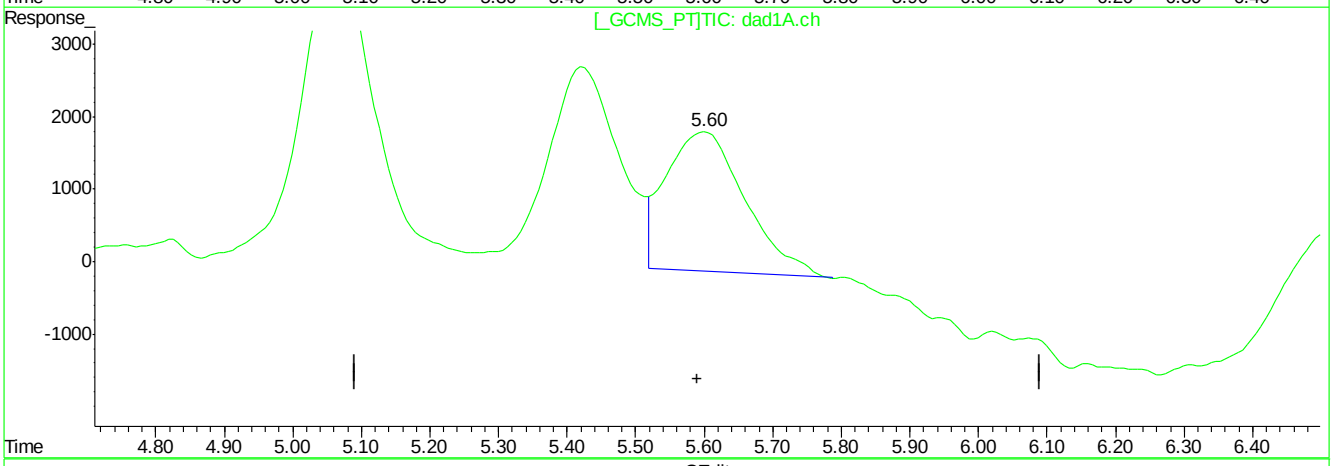
(+) = Expected Retention Time
GG619501.D 8330RPB.M_090920.M Wed Sep 09 16:14:43 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.60min 69.021ppb m

response 157398

(3) DNX #2

5.60min 65.390ppb m

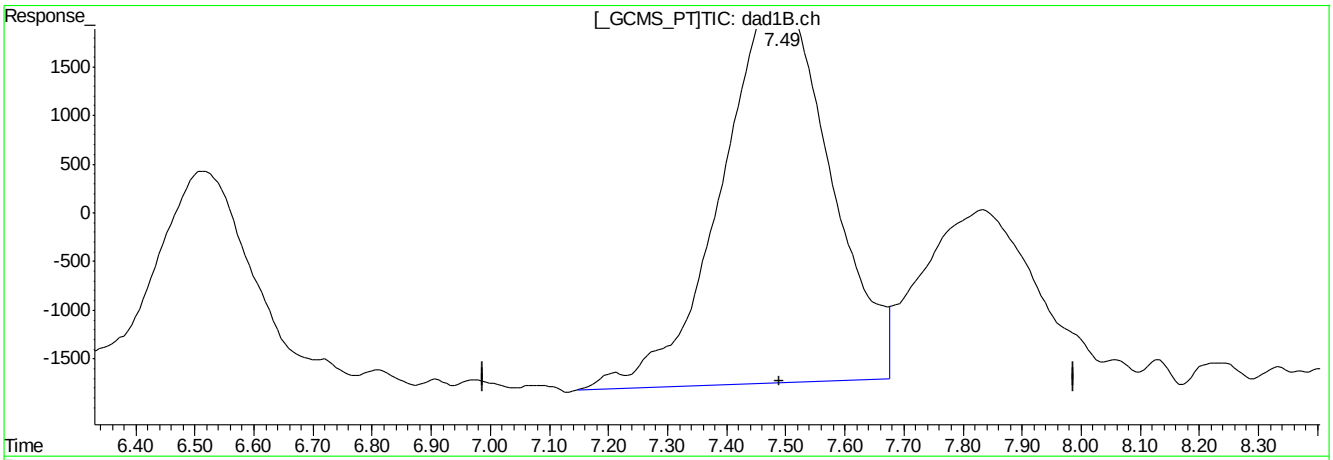
response 155547

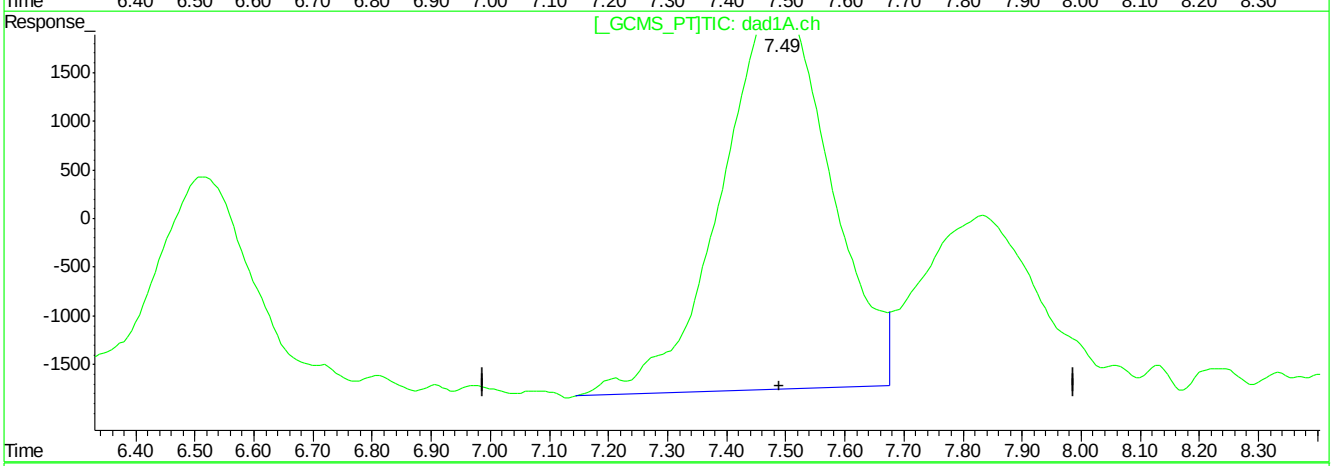
(+) = Expected Retention Time
GG619501.D 8330RPB.M_090920.M Wed Sep 09 16:14:53 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.49min 54.527ppb m

response 511327

(5) 1,3,5-Trinitrobenzene #2

7.49min 54.701ppb m

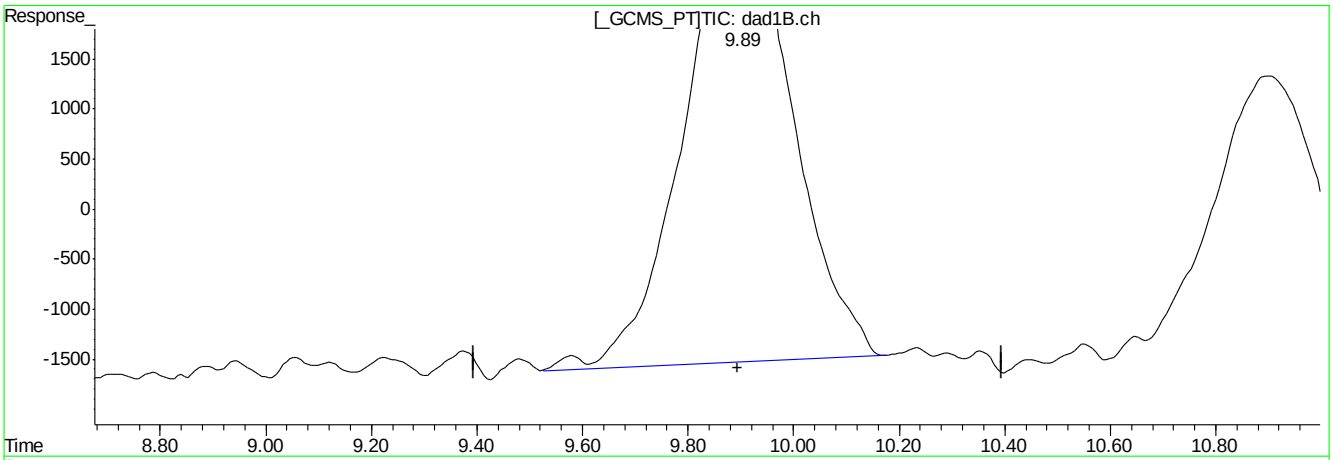
response 514232

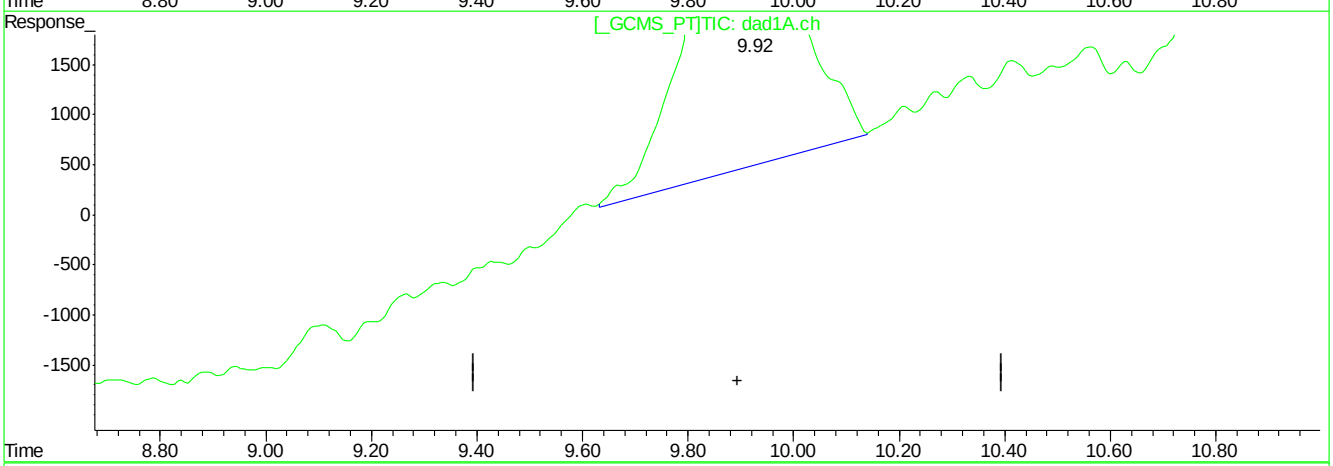
(+) = Expected Retention Time
GG619501.D 8330RPB.M_090920.M Wed Sep 09 16:15:06 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.90min 51.005ppb

response 642724

(7) 1,3-Dinitrobenzene #2

9.92min 46.880ppb m

response 444457

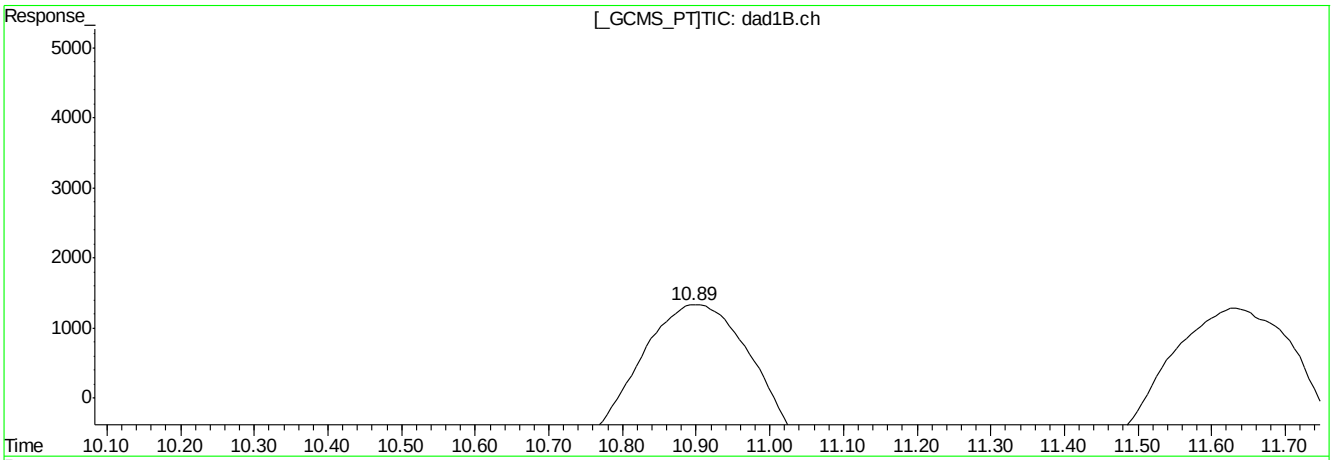
(+) = Expected Retention Time
GG619501.D 8330RPB.M_090920.M Wed Sep 09 16:15:16 2020

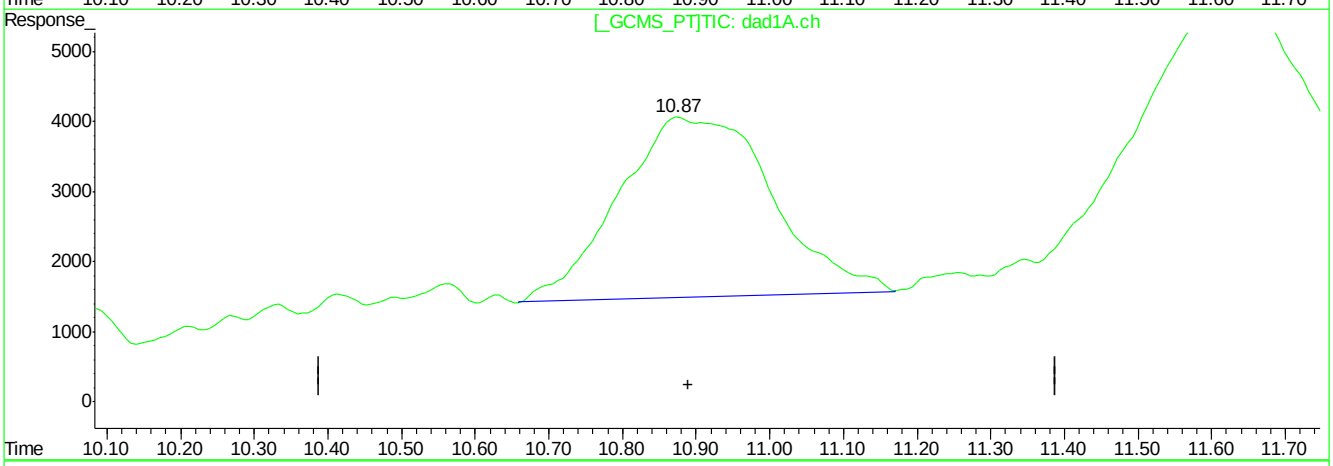
GG619501.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.90min 47.330ppb

response 420273

(8) Nitrobenzene #2

10.87min 50.827ppb m

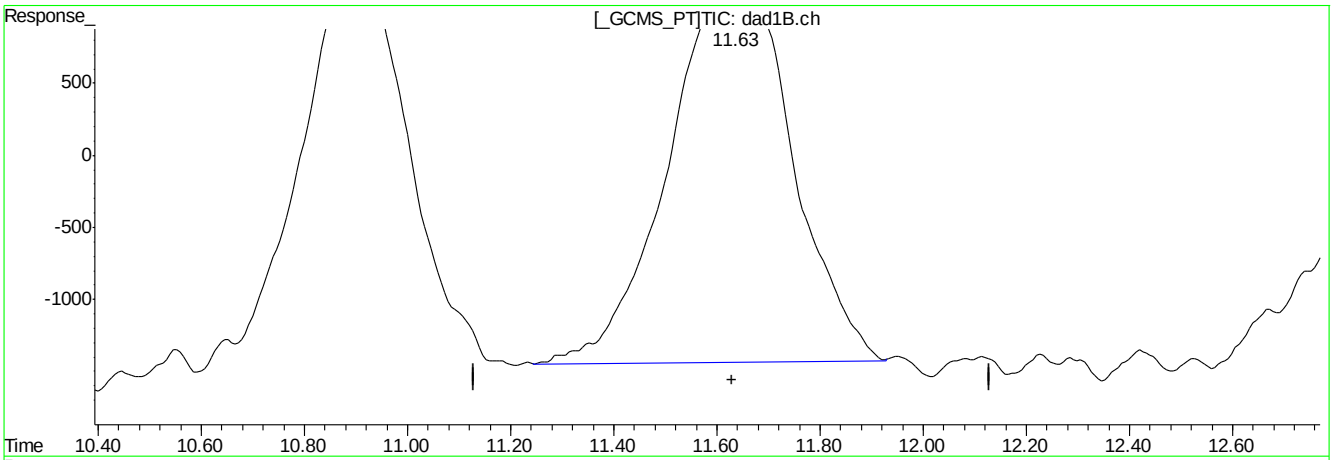
response 372296

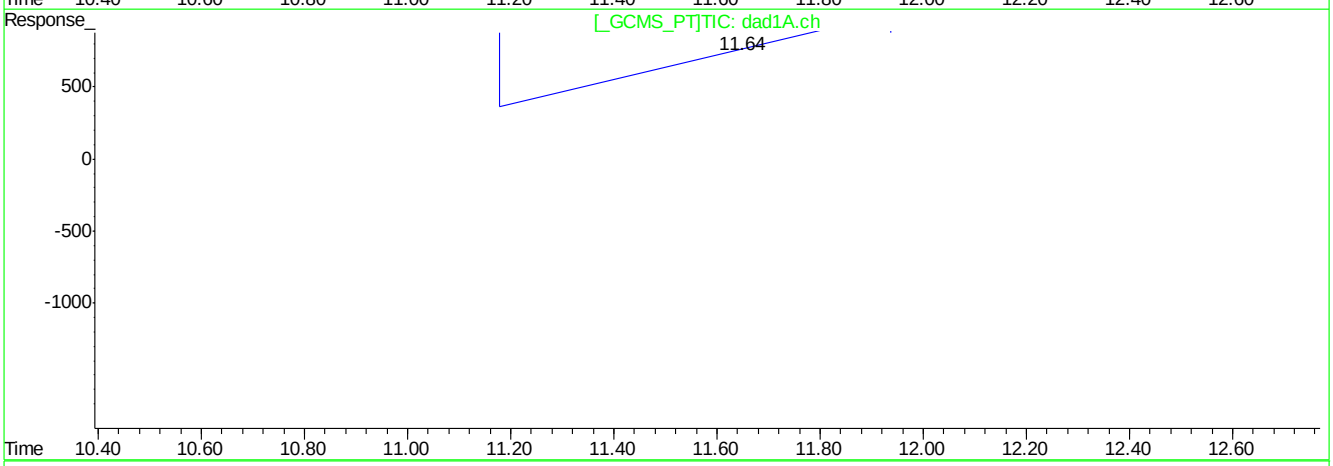
(+) = Expected Retention Time
GG619501.D 8330RPB.M_090920.M Wed Sep 09 16:15:23 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.63min 55.614ppb m

response 440435

(9) 2,4,6-Trinitrotoluene #2

11.64min 111.820ppb

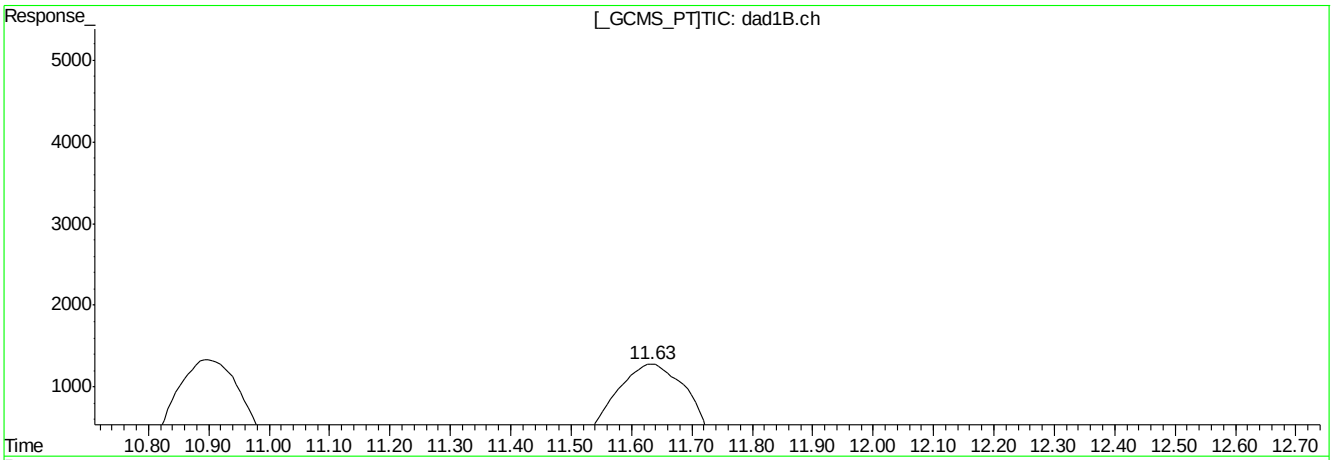
response 1211009

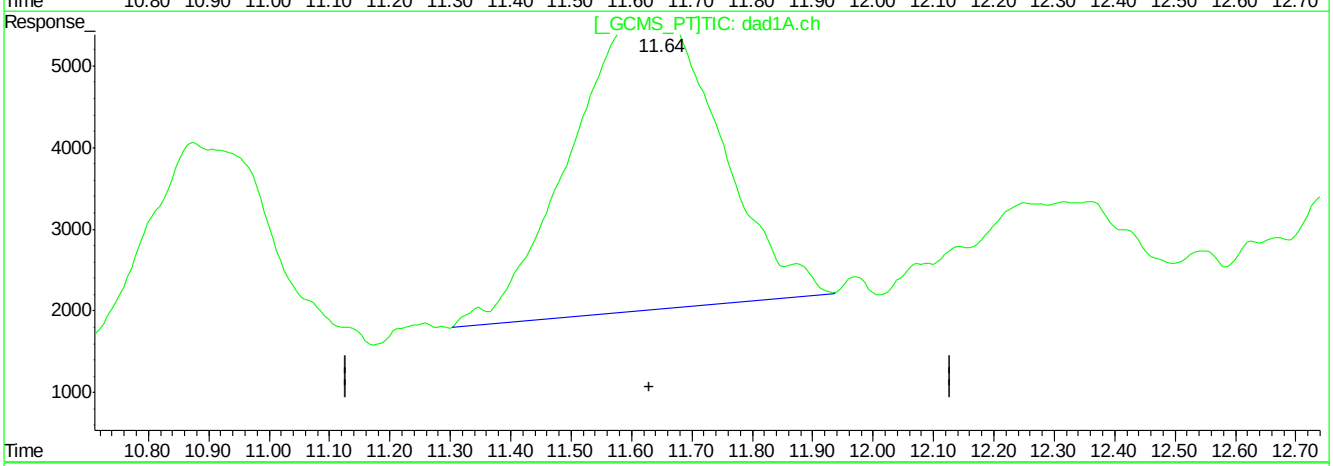
(+) = Expected Retention Time
GG619501.D 8330RPB.M_090920.M Wed Sep 09 16:15:31 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.63min 55.614ppb m

response 440435

(9) 2,4,6-Trinitrotoluene #2

11.64min 58.145ppb m

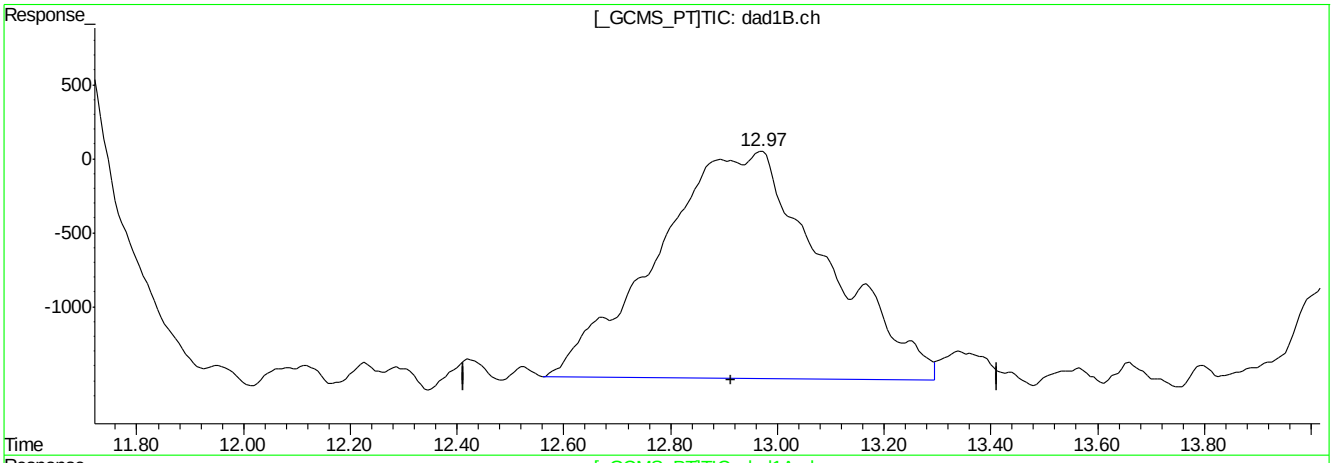
response 629710

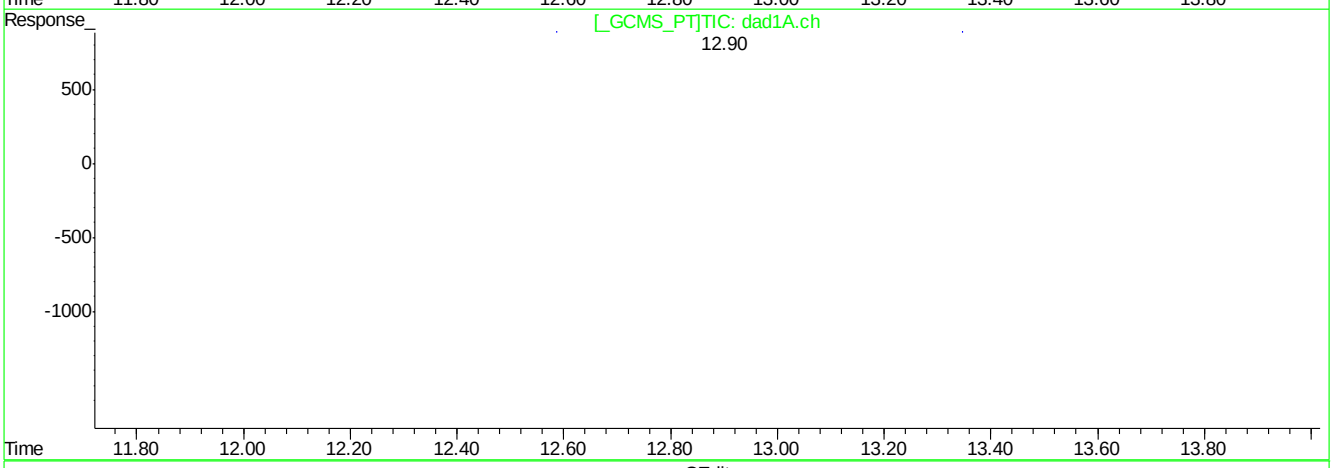
(+) = Expected Retention Time
GG619501.D 8330RPB.M_090920.M Wed Sep 09 16:15:37 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.97min 54.717ppb m

response 336074

(11) Tetryl #2

12.90min 63.573ppb

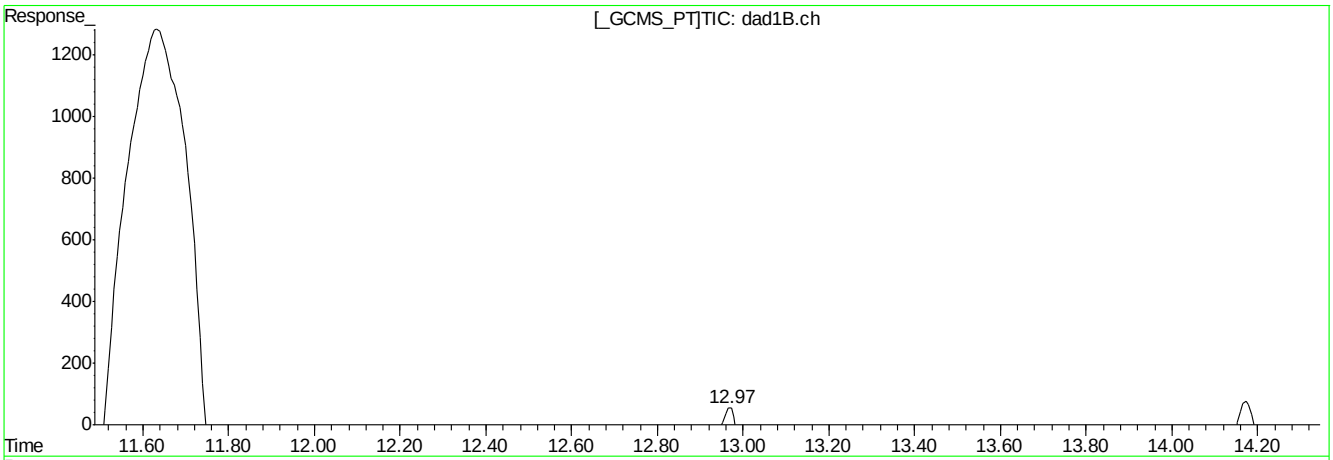
response 646659

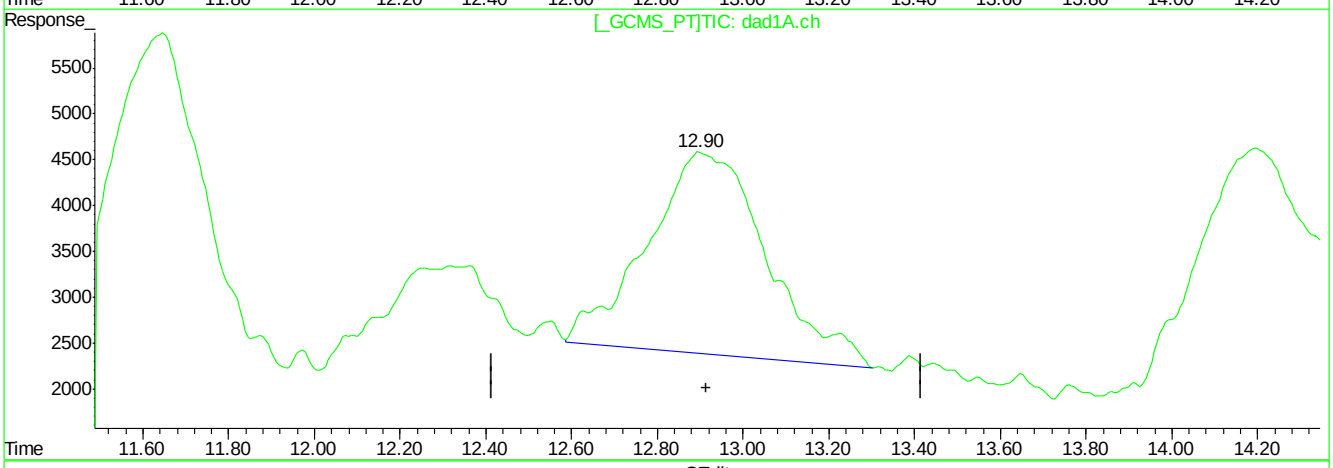
(+) = Expected Retention Time
GG619501.D 8330RPB.M_090920.M Wed Sep 09 16:15:53 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.97min 54.717ppb m

response 336074

(11) Tetryl #2

12.90min 41.891ppb m

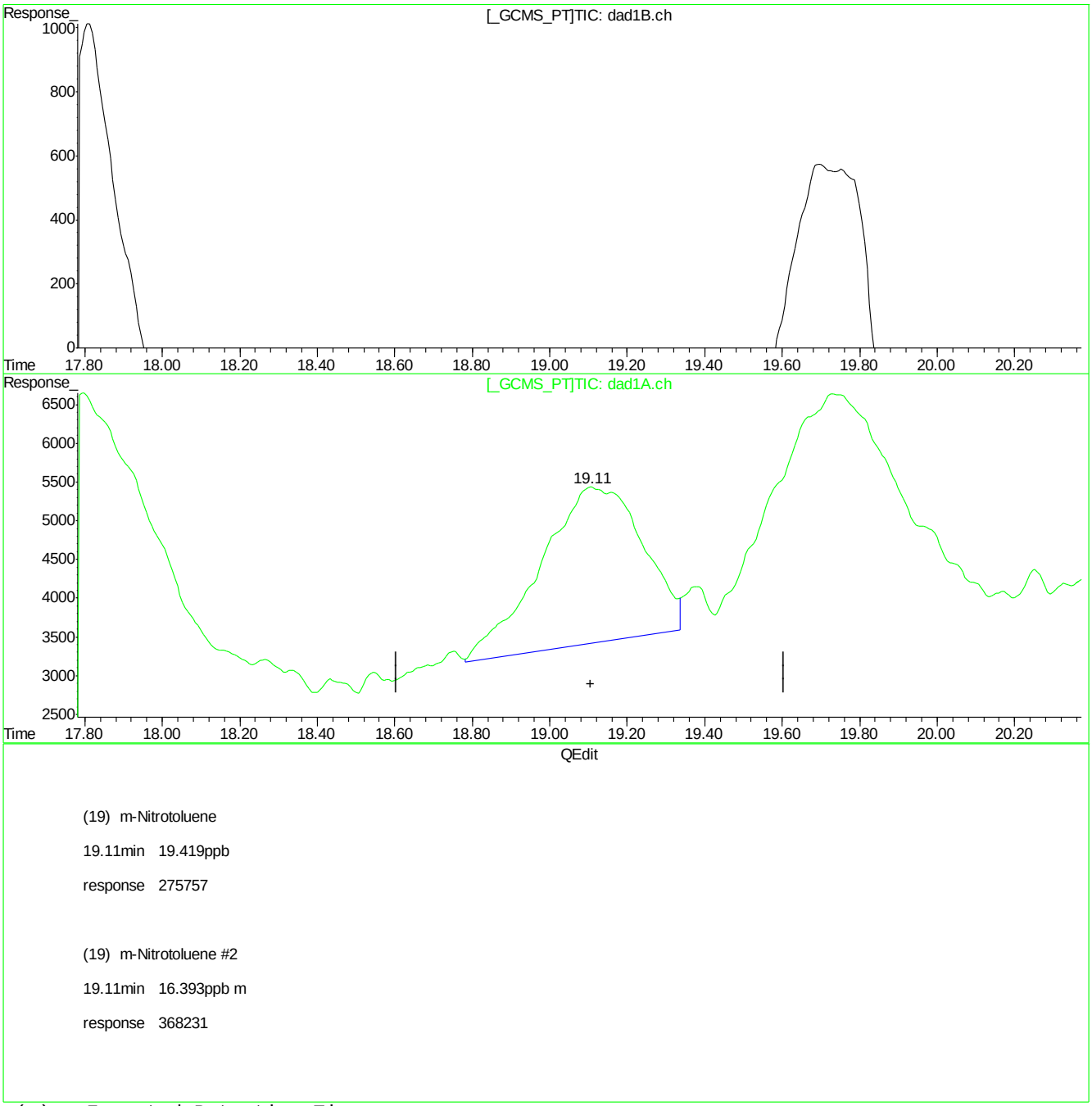
response 426016

(+) = Expected Retention Time
GG619501.D 8330RPB.M_090920.M Wed Sep 09 16:15:58 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration



(19) m-Nitrotoluene

19.11min 19.419ppb

response 275757

(19) m-Nitrotoluene #2

19.11min 16.393ppb m

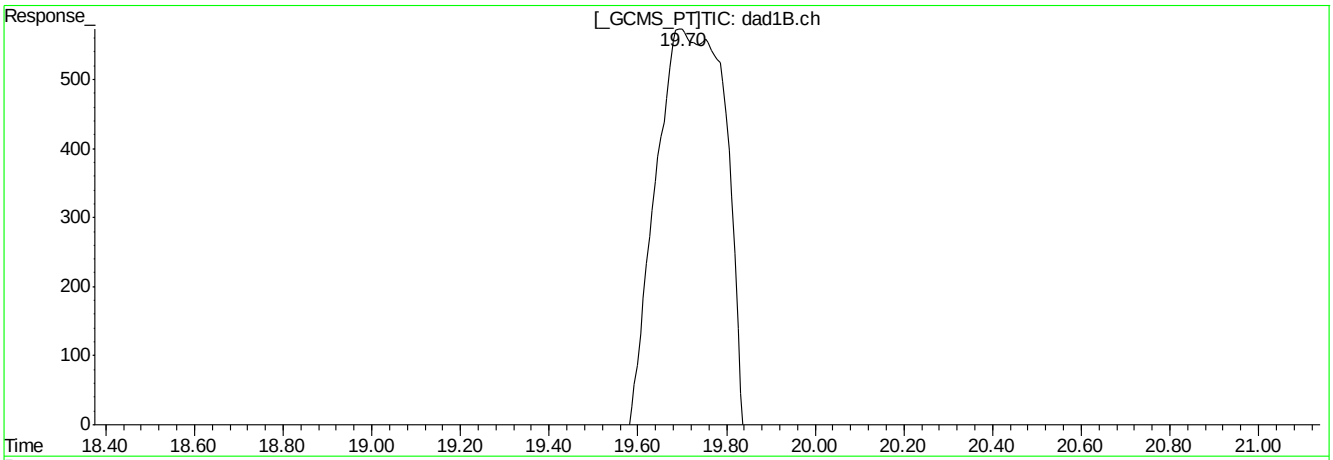
response 368231

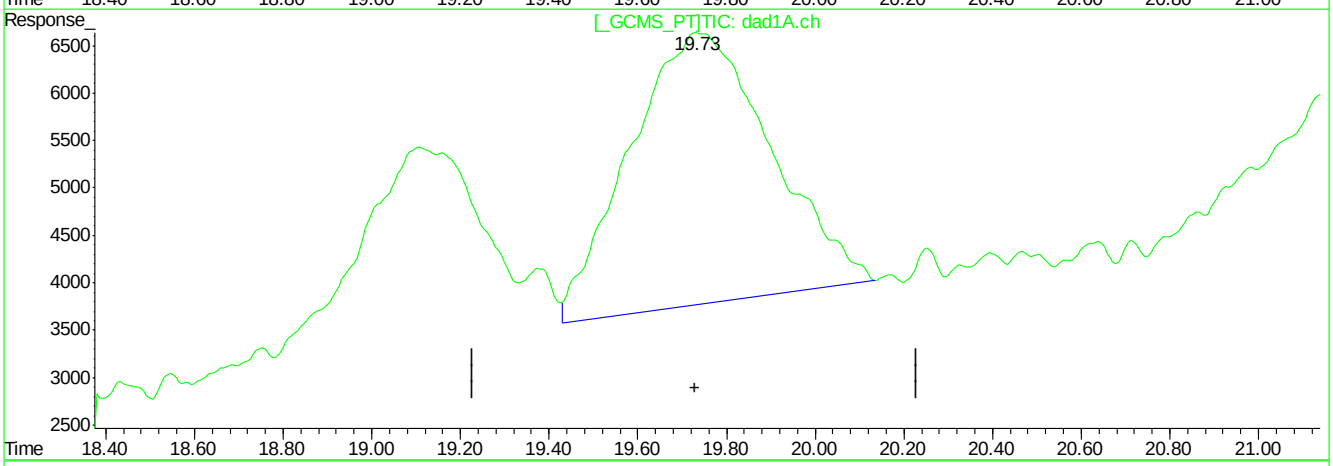
(+) = Expected Retention Time
GG619501.D 8330RPB.M_090920.M Wed Sep 09 16:16:22 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619501.D\dad1A.ch
Acq On : 09-Sep-2020, 13:12:54 Operator: williamh
Sample : ic2870-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.70min 32.253ppb

response 457955

(20) 2-Amino-4,6-Dinitrotoluene #2

19.73min 28.155ppb m

response 632844

(+) = Expected Retention Time
GG619501.D 8330RPB.M_090920.M Wed Sep 09 16:16:29 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/09/20 17:32

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 09 16:01:30 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.22	14.18	569370	1042663	110.477	104.843m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	22.10%#	20.97%#
	Target Compounds						
1)	TNX	5.06	5.06	560272	585294	99.423m	103.473m
2)	HMX	5.42	5.42	359578	360947	108.857m	108.213m
3)	DNX	5.59	5.59	261713	267584	114.764m	112.489m
4)	MNX	6.51	6.51	459383	459383	113.667	113.965
5)	1,3,5-Trinitrobe	7.48	7.48	979381	979381	104.439	104.180
6)	RDX	7.82	7.82	449504	449504	103.416	103.519
7)	1,3-Dinitrobenze	9.91	9.91	1263327	927274	100.254m	97.806m
8)	Nitrobenzene	10.91	10.91	866662	823024	97.602	112.361m
9)	2,4,6-Trinitroto	11.63	11.64	886214	1103800	111.902	101.921m
10)	Nitroglycerin	0.00	12.29	0	280956	N.D. d	121.871m
11)	Tetryl	12.94	12.93	600287	962952	97.734m	94.636m
13)	2,6-Dinitrotolue	14.53	14.53	523247	737590	86.465m	87.136m
14)	2,4-Dinitrotolue	15.20	15.19	1059965	774701	91.135m	94.231m
15)	o-Nitrotoluene	16.80	16.80	480855	676980	100.220m	86.201m
16)	3,5-Dinitroanili	16.02	16.01	915880	1472172	96.781m	93.230m
17)	p-Nitrotoluene	17.80	17.83	1070695	1883212	495.552m	548.412m
18)	4-Amino-2,6-Dini	17.80	17.83	1100514	1963113	378.258	330.067
19)	m-Nitrotoluene	19.14	19.14	649922	1008275	45.768	44.888
20)	2-Amino-4,6-Dini	19.73	19.76	900538	1244113	63.424	55.350
21)	PETN	0.00	21.69	0	297124	N.D. d	90.188m

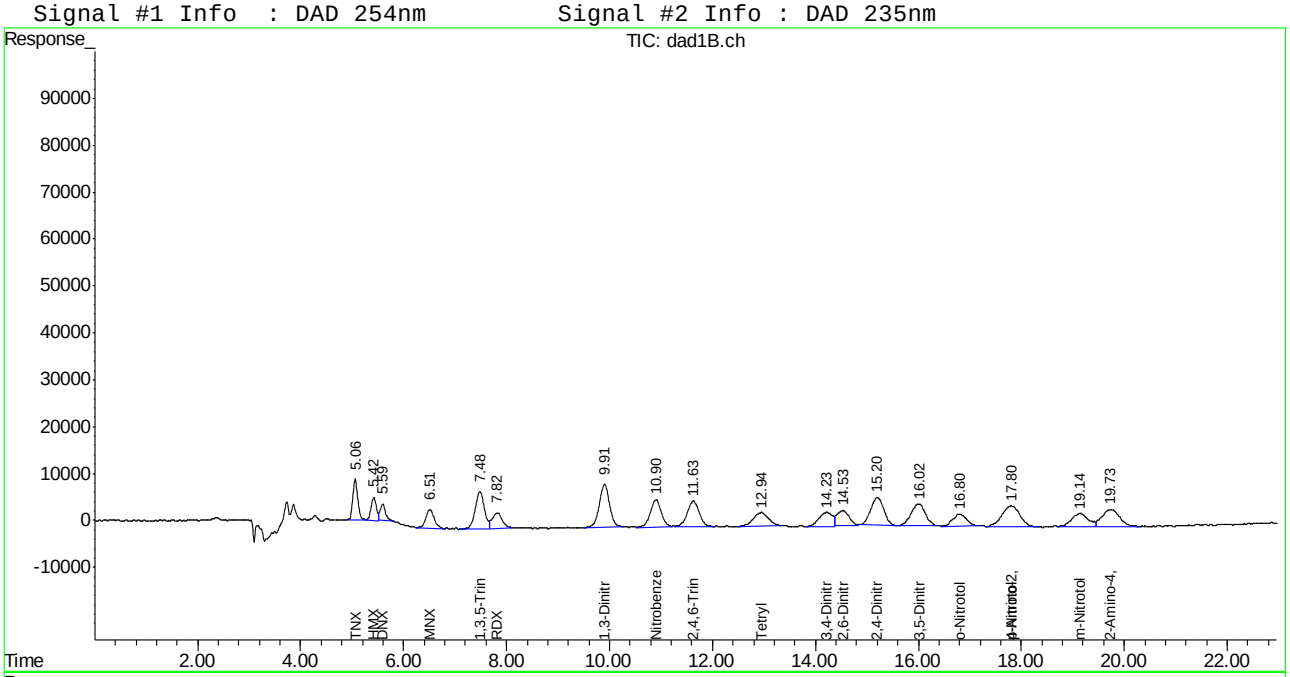
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619502.D 8330RPB.M_090920.M Wed Sep 09 17:12:57 2020 Page 1

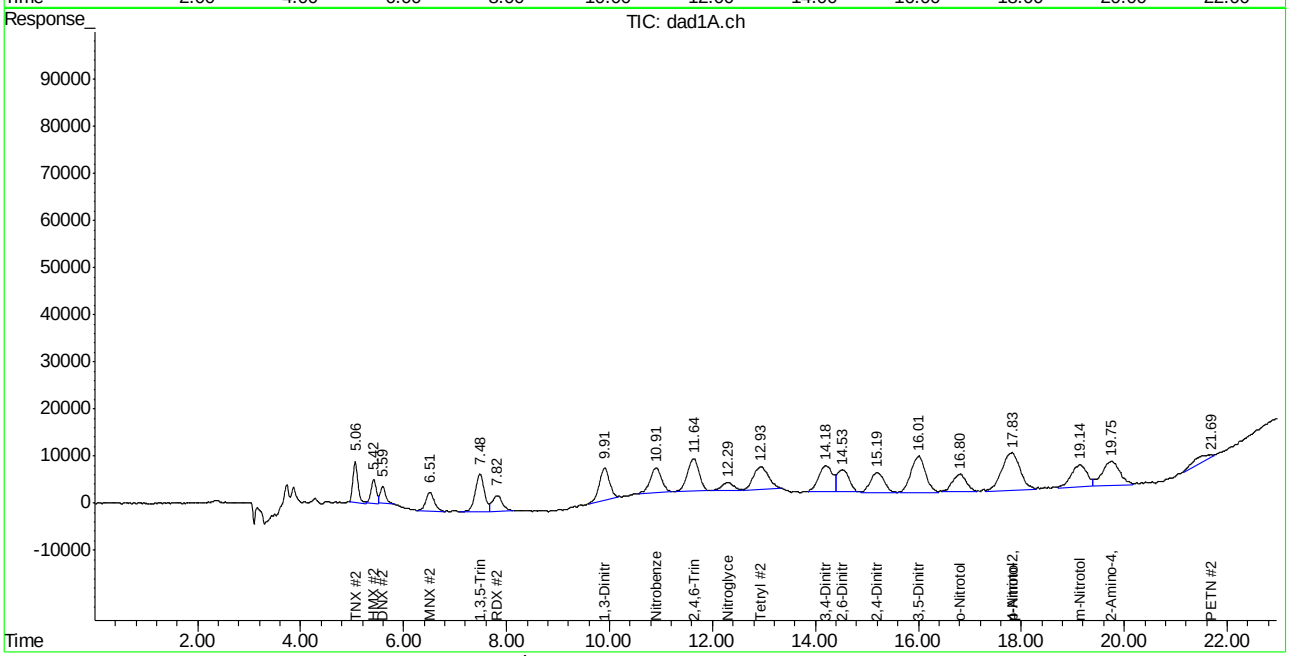
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:41 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

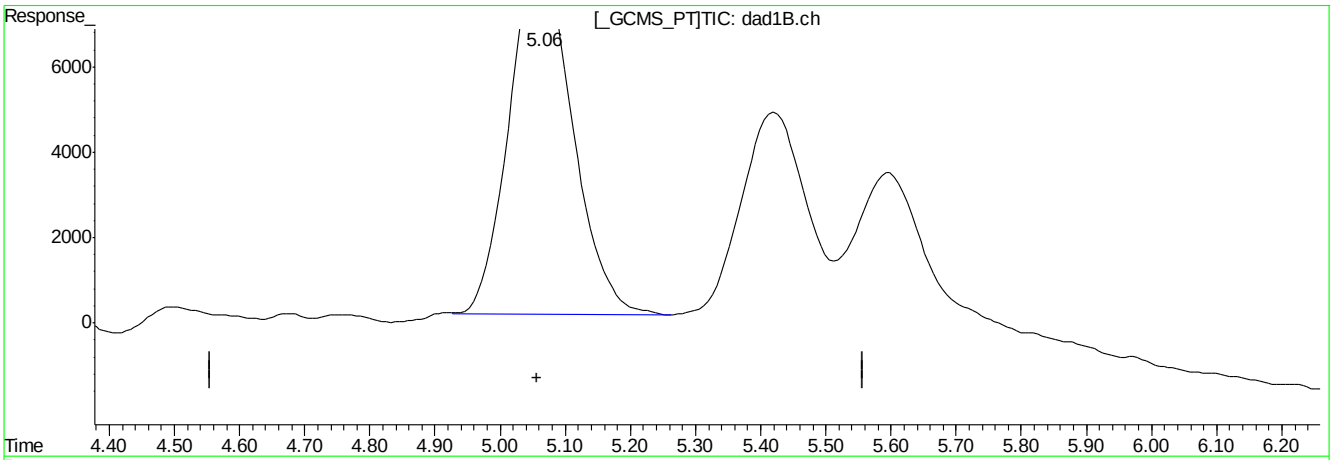
Sample Number: GGG2870-IC2870
Lab FileID: GG619502.D
Injection Time: 09/09/20 13:43
Method: SW846 8330A
Analyst approved: 09/09/20 17:12 William Hustedde
Supervisor approved: 09/09/20 17:32 Naresh Jiawan

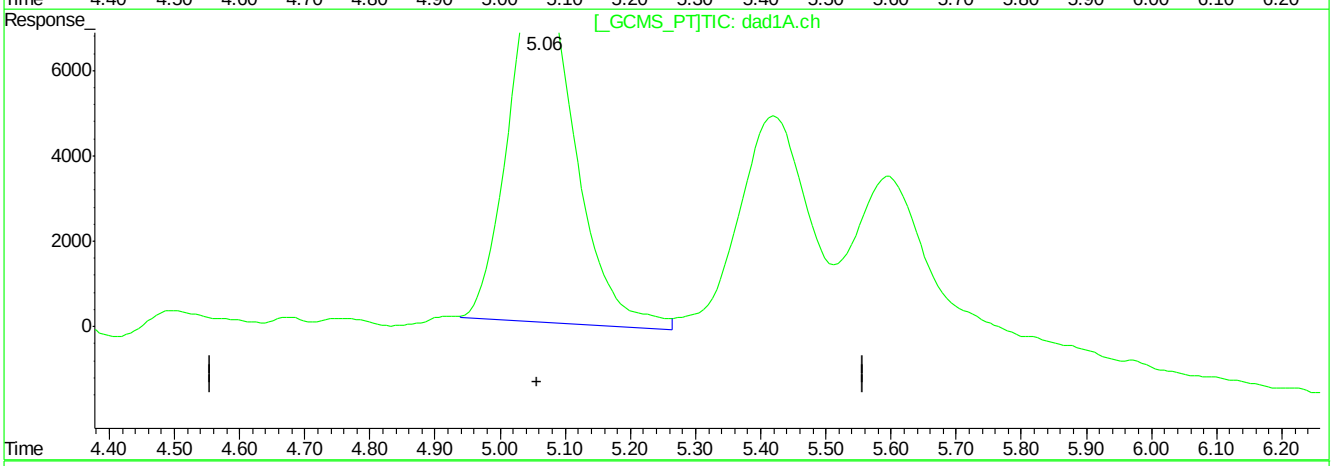
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	5.06	Poor instrument integration
TNX		2	5.06	Poor instrument integration
HMX	2691-41-0	1	5.42	Poor instrument integration
HMX	2691-41-0	2	5.42	Poor instrument integration
DNX		1	5.59	Poor instrument integration
DNX		2	5.59	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	9.91	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.91	Poor instrument integration
Nitrobenzene	98-95-3	2	10.91	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.64	Poor instrument integration
Nitroglycerine	55-63-0	2	12.29	Poor instrument integration
Tetryl	479-45-8	2	12.93	Poor instrument integration
Tetryl	479-45-8	1	12.94	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	14.18	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	14.53	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	14.53	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	15.19	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	15.20	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	16.01	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	16.02	Poor instrument integration
o-Nitrotoluene	88-72-2	1	16.80	Poor instrument integration
o-Nitrotoluene	88-72-2	2	16.80	Poor instrument integration
p-Nitrotoluene	99-99-0	1	17.80	Poor instrument integration
p-Nitrotoluene	99-99-0	2	17.83	Poor instrument integration
PETN	78-11-5	2	21.69	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(1) TNX

5.06min 99.423ppb m

response 560272

(1) TNX #2

5.06min 103.473ppb m

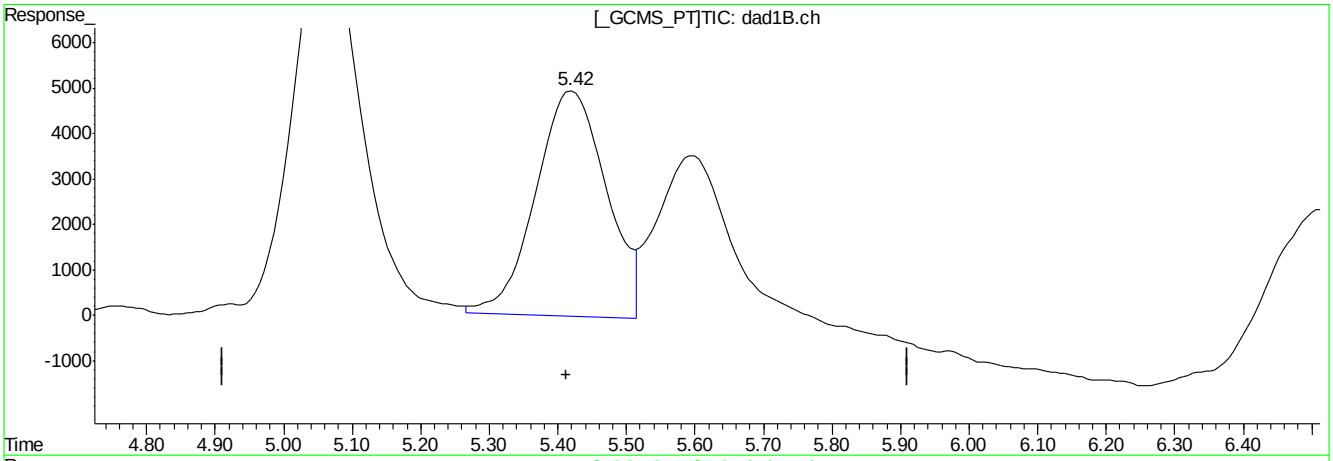
response 585294

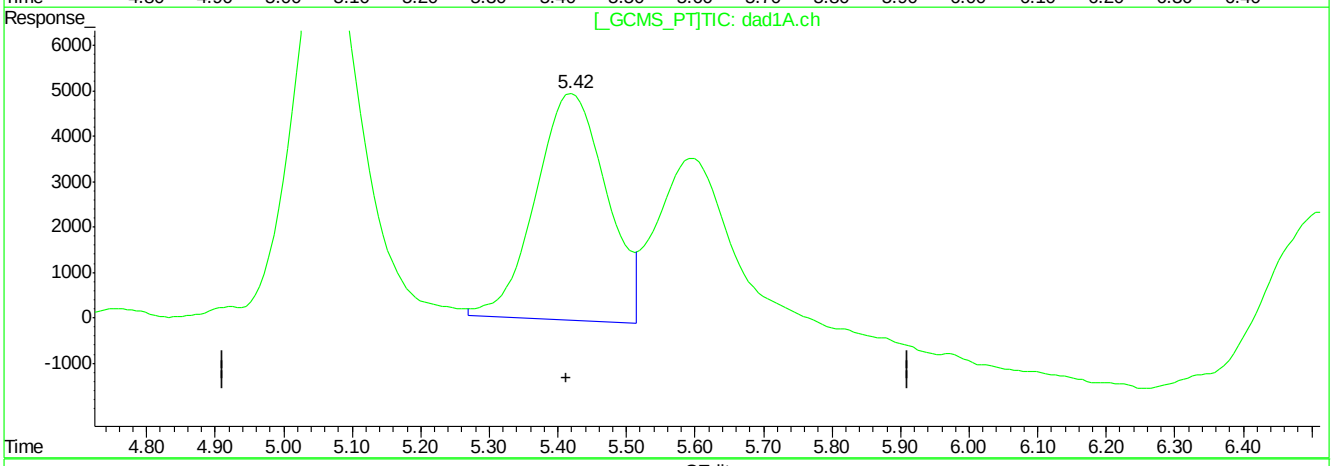
(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:10:17 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.42min 108.857ppb m

response 359578

(2) HMX #2

5.42min 108.213ppb m

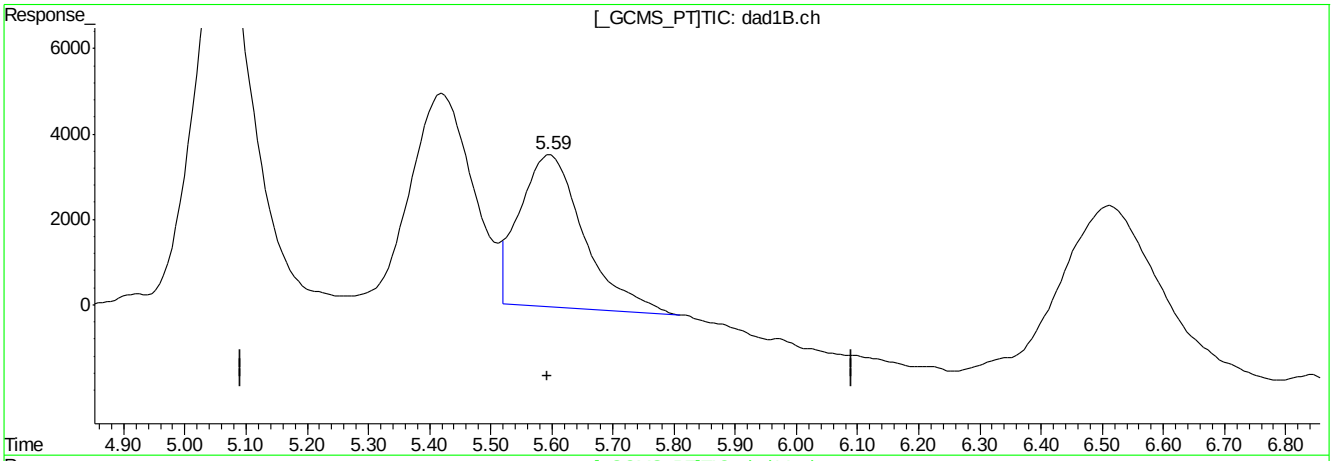
response 360947

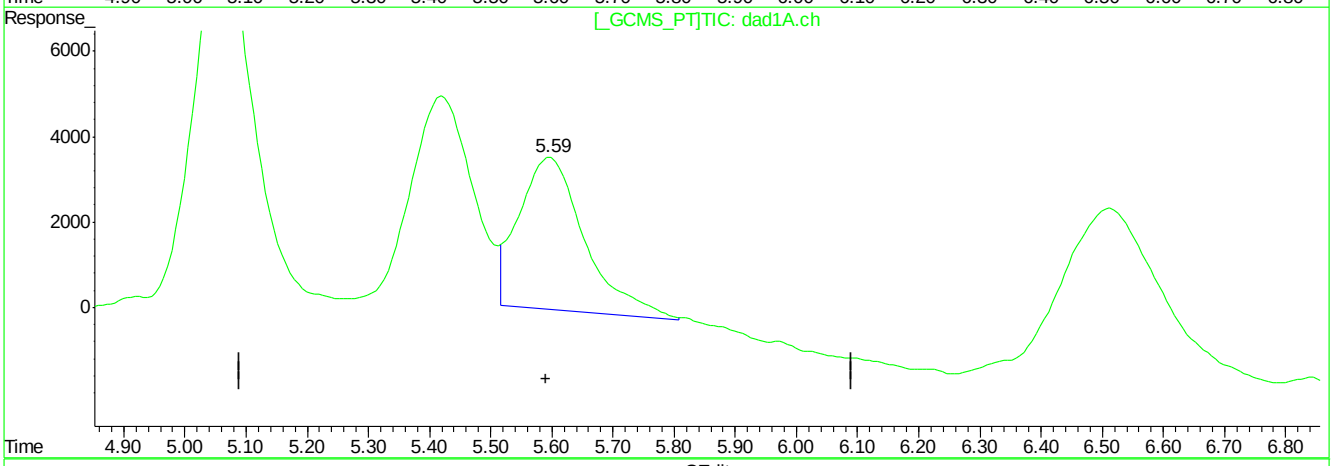
(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:10:26 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.59min 114.764ppb m

response 261713

(3) DNX #2

5.59min 112.489ppb m

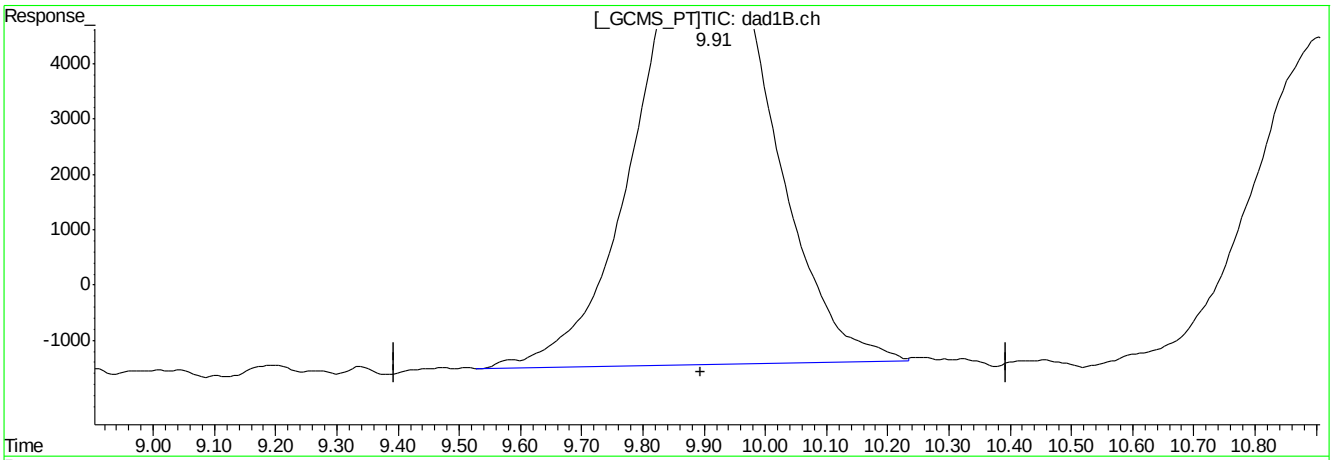
response 267584

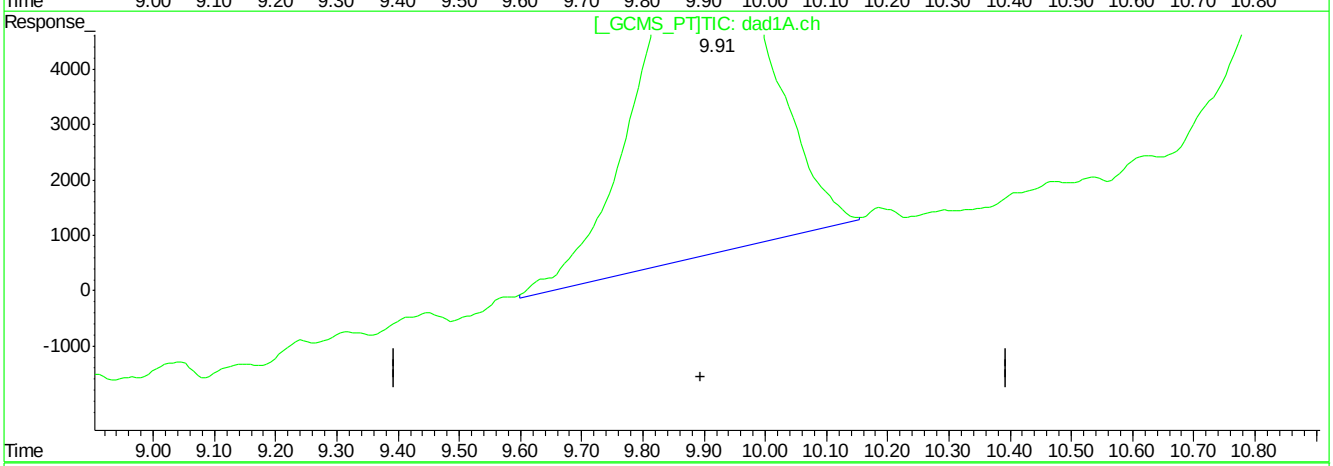
(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:10:34 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.91min 100.254ppb m

response 1263327

(7) 1,3-Dinitrobenzene #2

9.91min 97.806ppb m

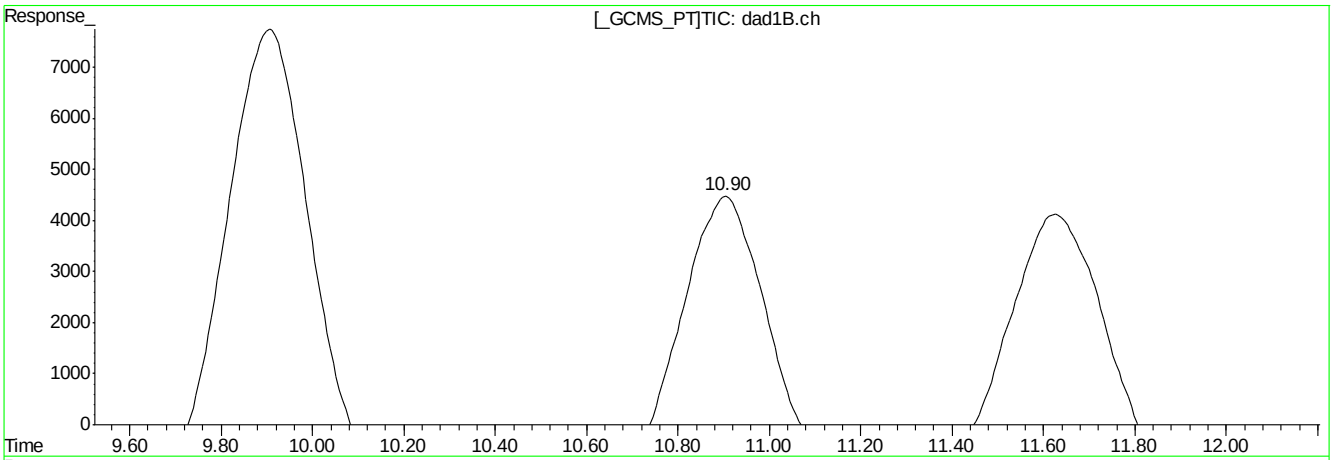
response 927274

(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:10:47 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration



(8) Nitrobenzene

10.91min 97.602ppb

response 866662

(8) Nitrobenzene #2

10.91min 112.361ppb m

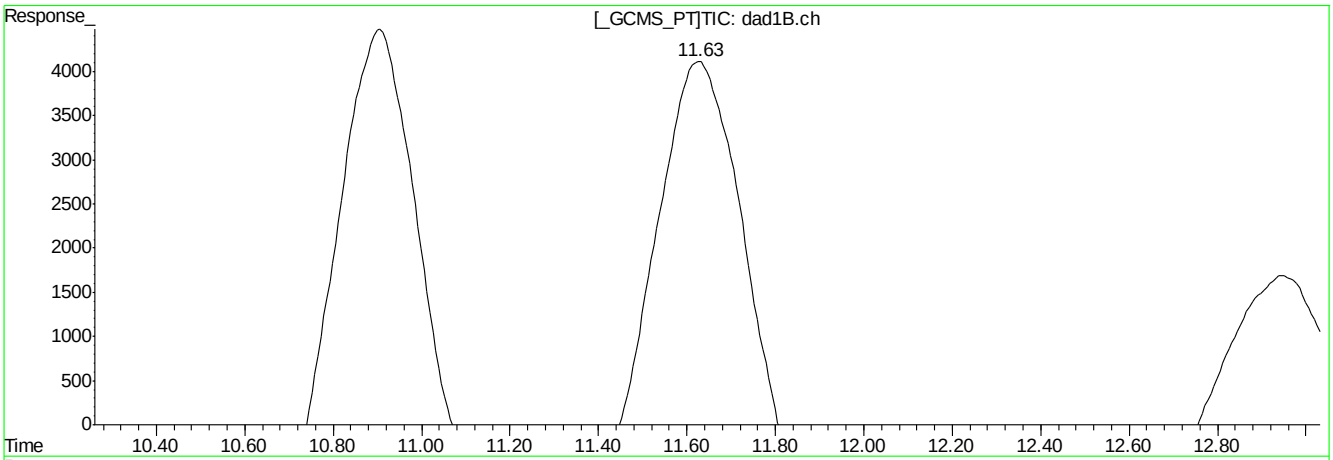
response 823024

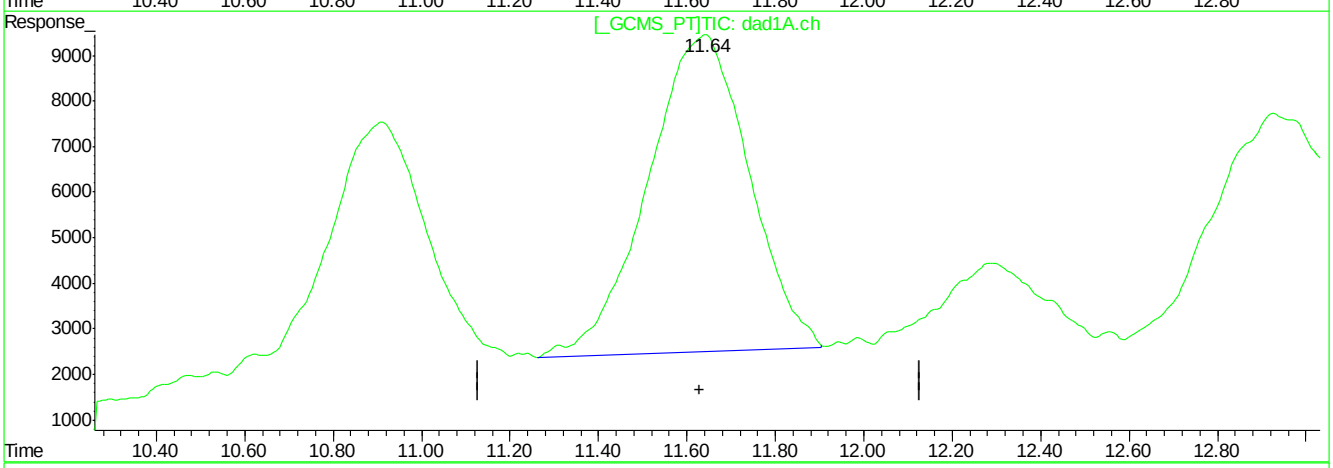
(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:12:37 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.63min 111.902ppb

response 886214

(9) 2,4,6-Trinitrotoluene #2

11.64min 101.921ppb m

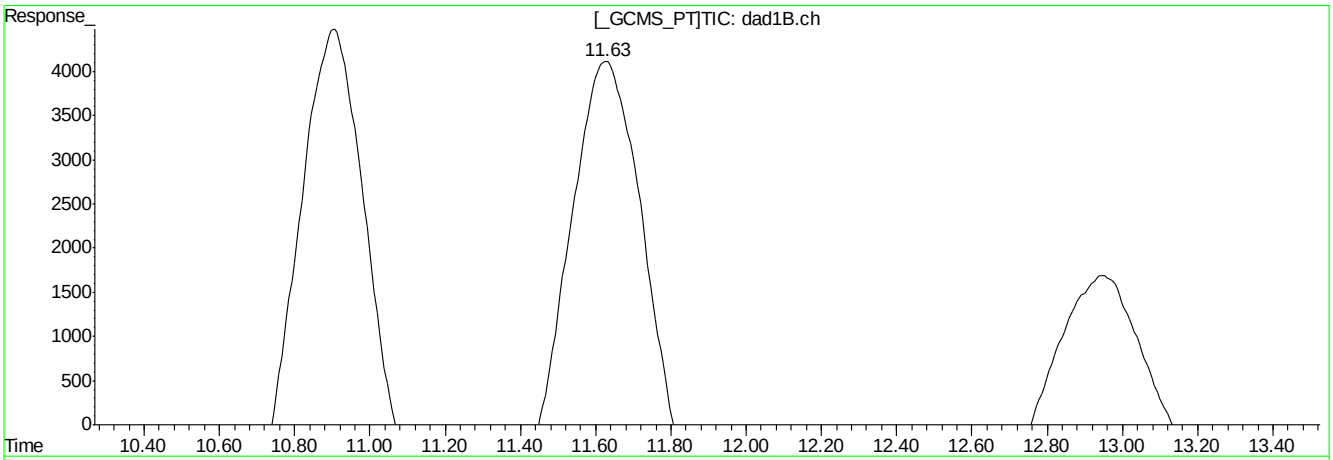
response 1103800

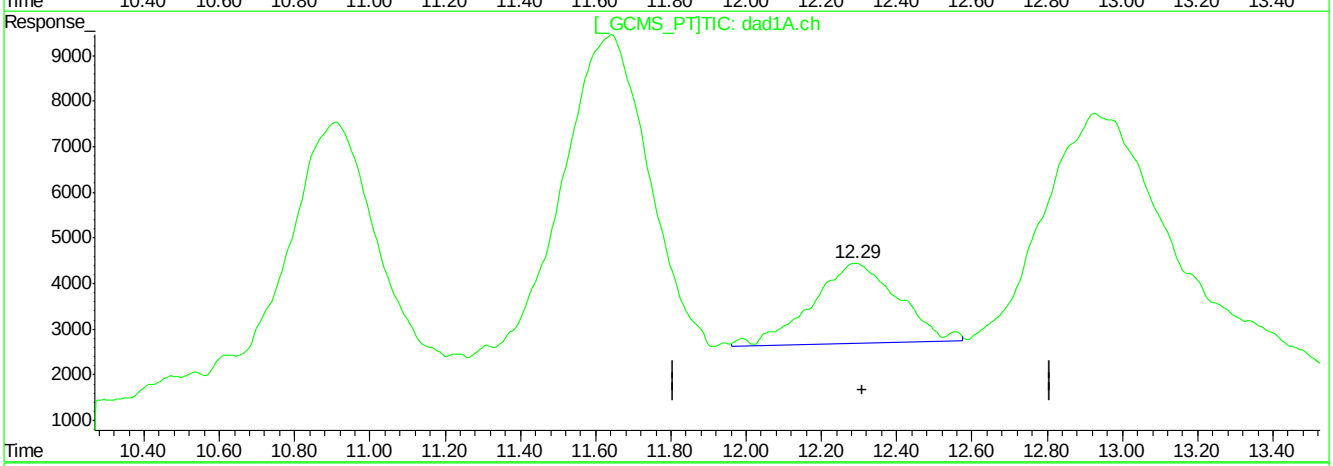
(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:12:44 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

11.63min 0.000ppb

response 886214

(10) Nitroglycerin #2

12.29min 121.871ppb m

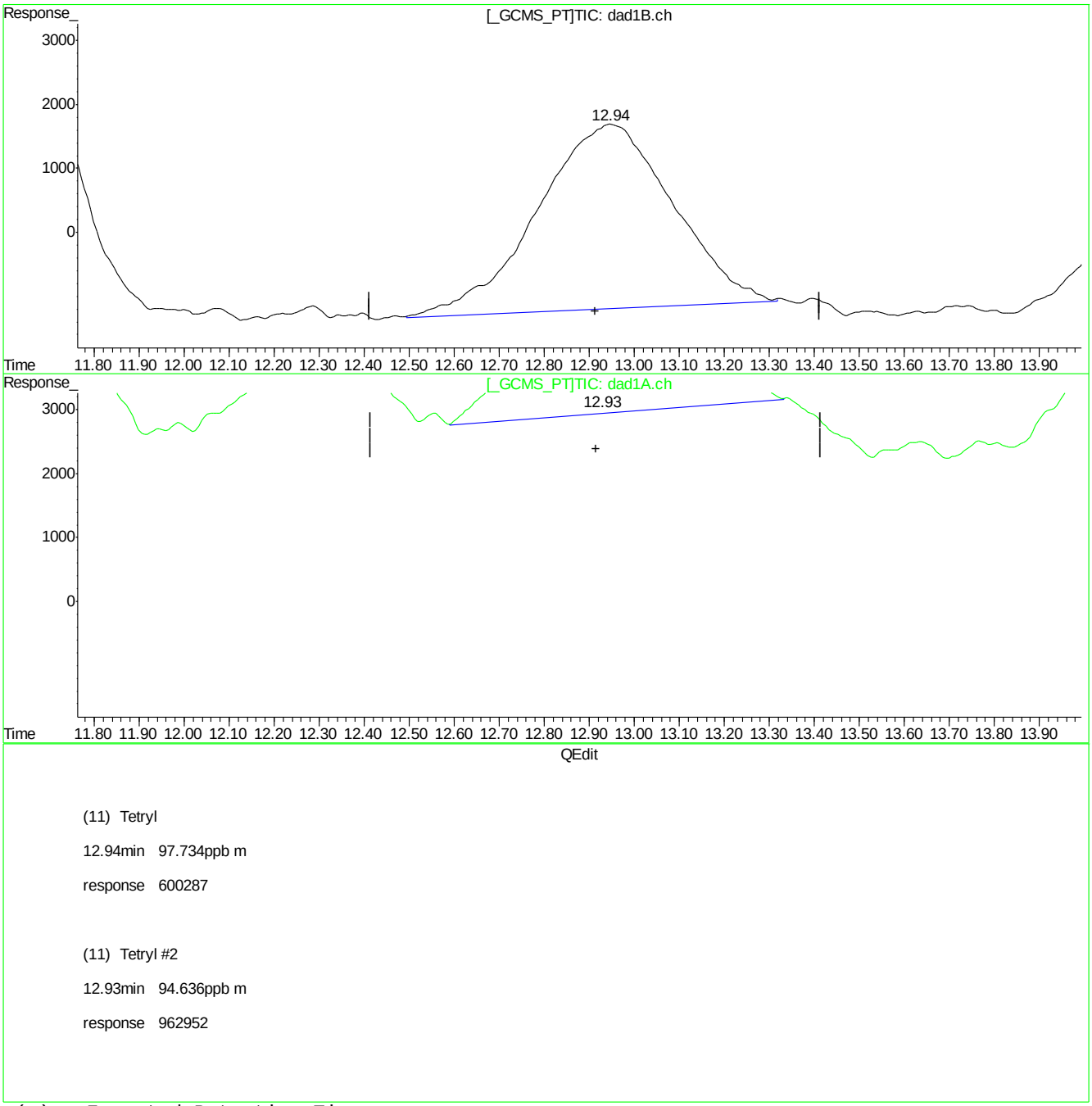
response 280956

(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:12:49 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration



(11) Tetryl

12.94min 97.734ppb m

response 600287

(11) Tetryl #2

12.93min 94.636ppb m

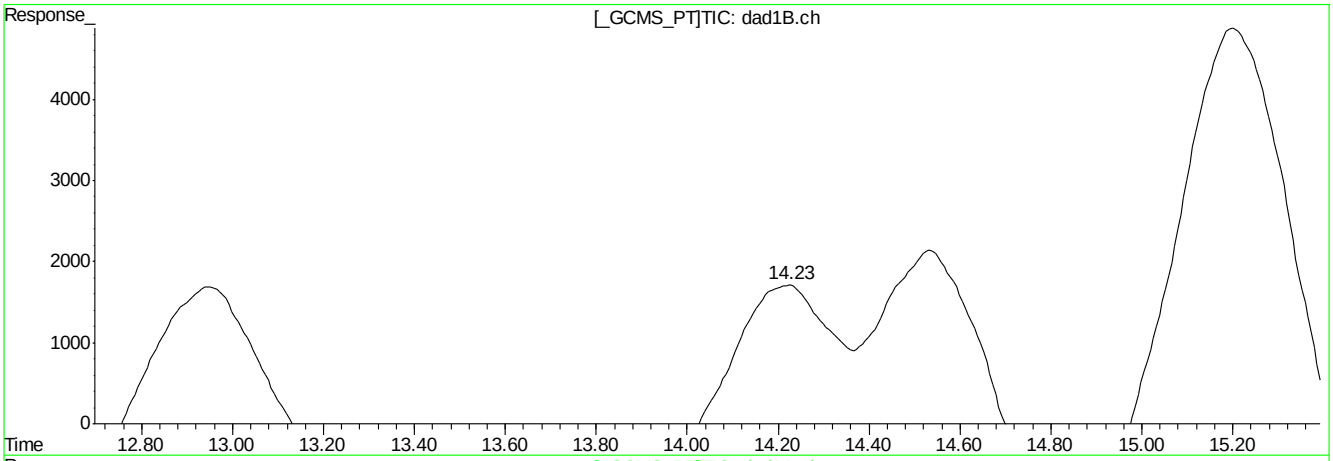
response 962952

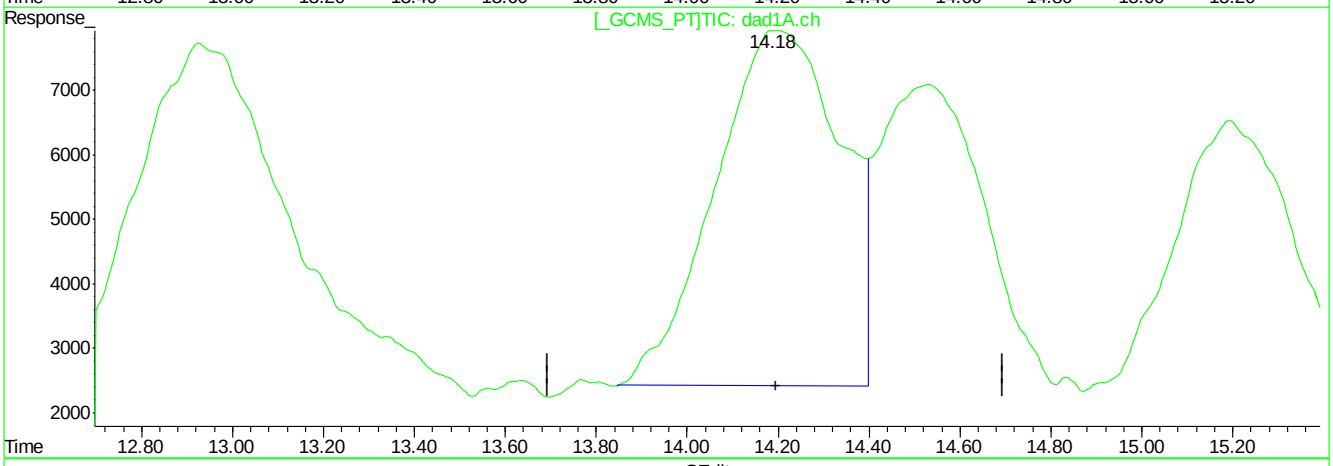
(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:13:00 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

14.22min 110.477ppb

response 569370

(12) 3,4-Dinitrotoluene #2 (S)

14.18min 104.843ppb m

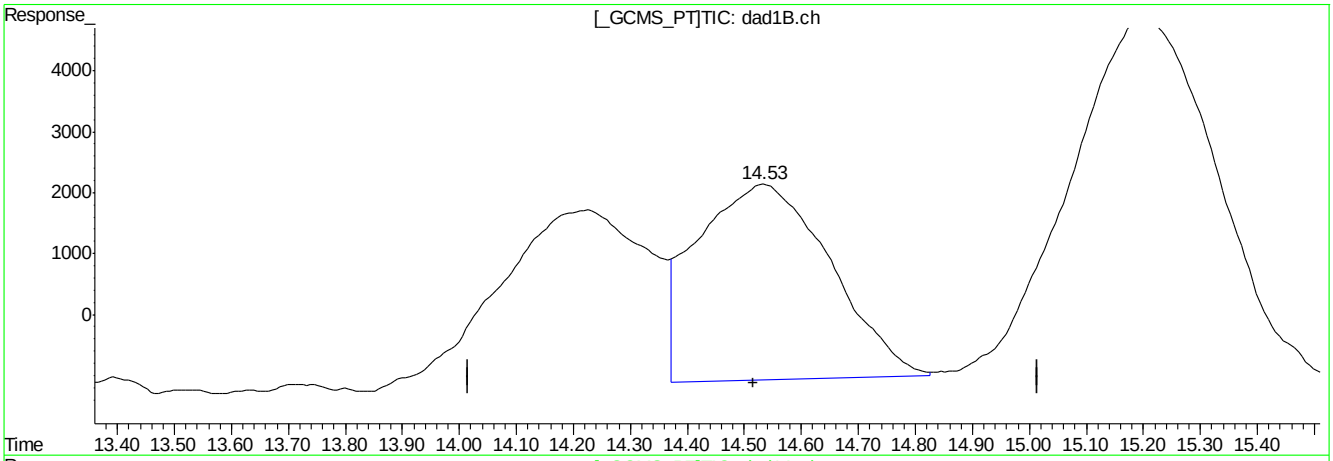
response 1042663

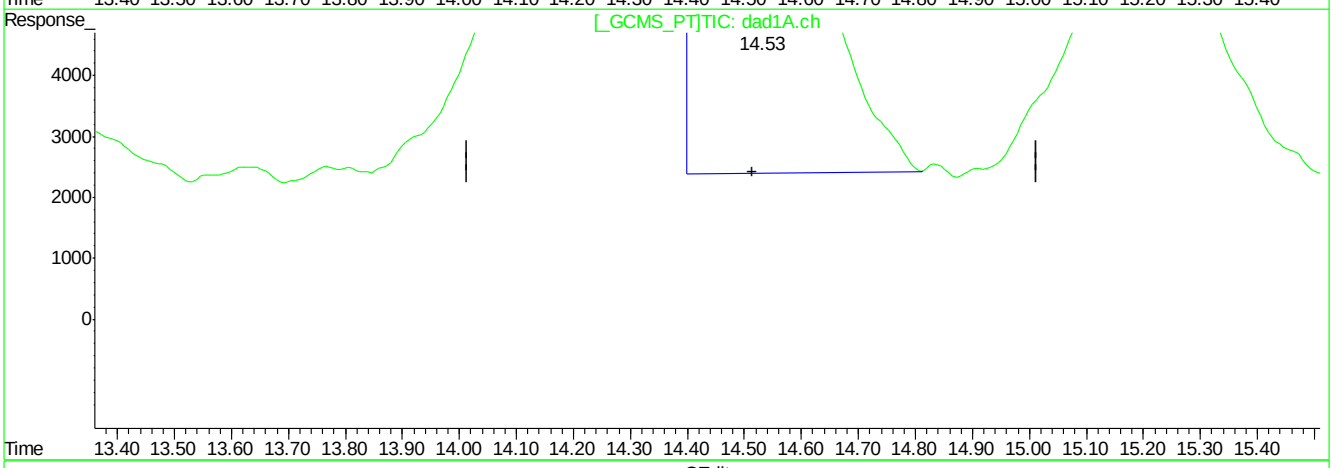
(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:13:08 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(13) 2,6-Dinitrotoluene

14.53min 86.465ppb m

response 523247

(13) 2,6-Dinitrotoluene #2

14.53min 87.136ppb m

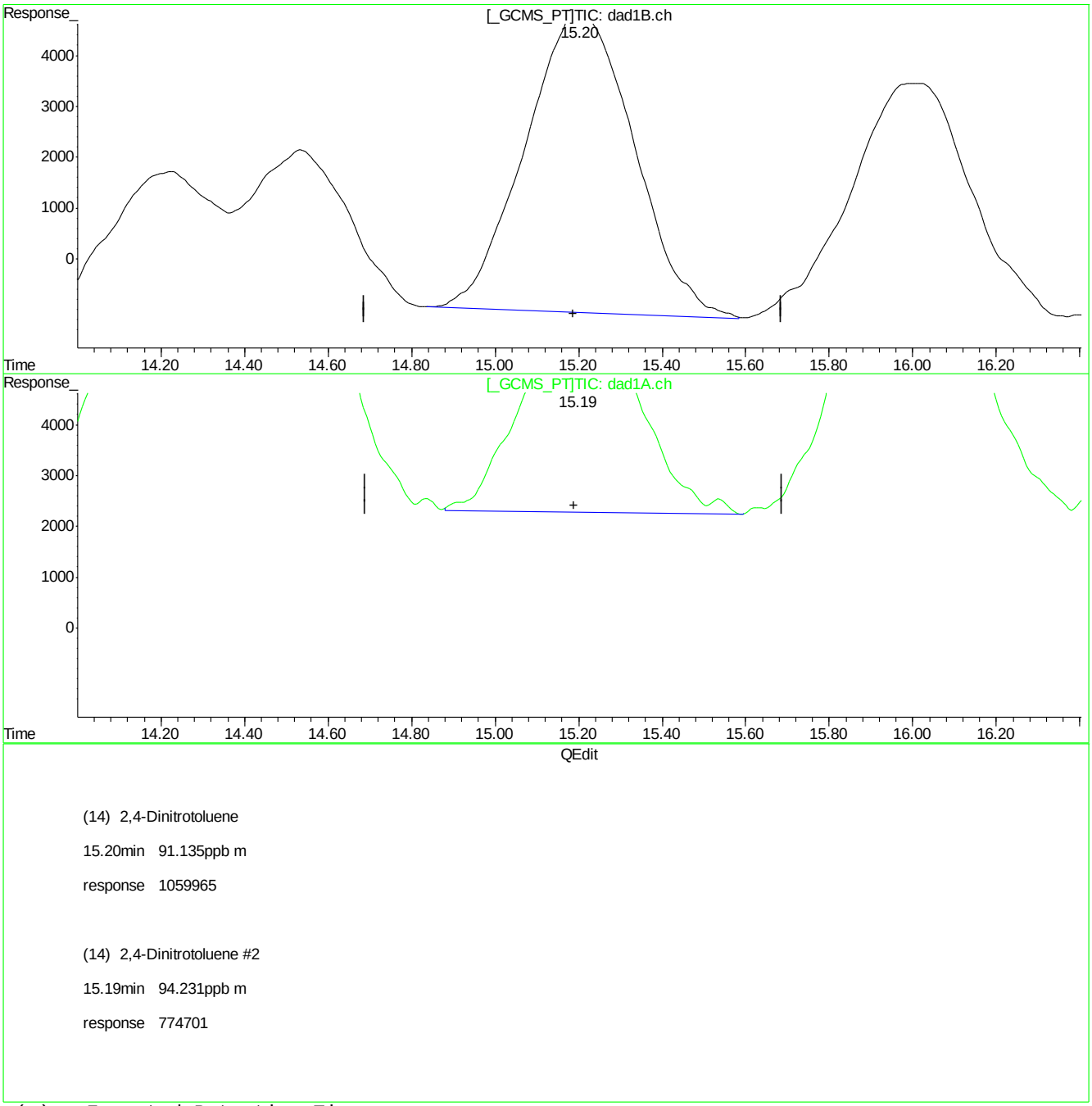
response 737590

(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:13:18 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration



(14) 2,4-Dinitrotoluene

15.20min 91.135ppb m

response 1059965

(14) 2,4-Dinitrotoluene #2

15.19min 94.231ppb m

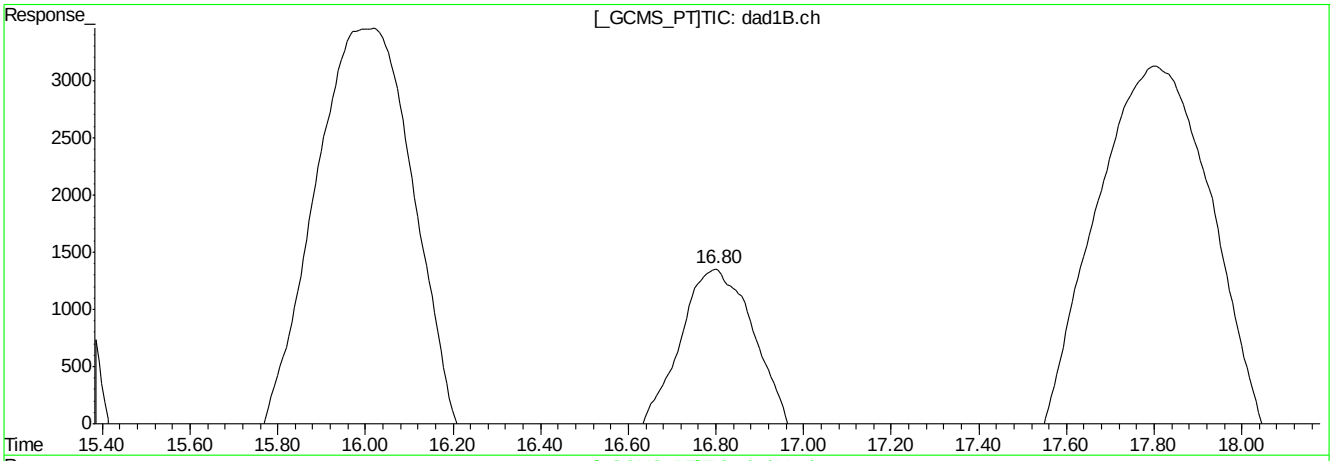
response 774701

(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:13:27 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration



(15) o-Nitrotoluene

16.80min 100.220ppb m

response 480855

(15) o-Nitrotoluene #2

16.80min 86.201ppb m

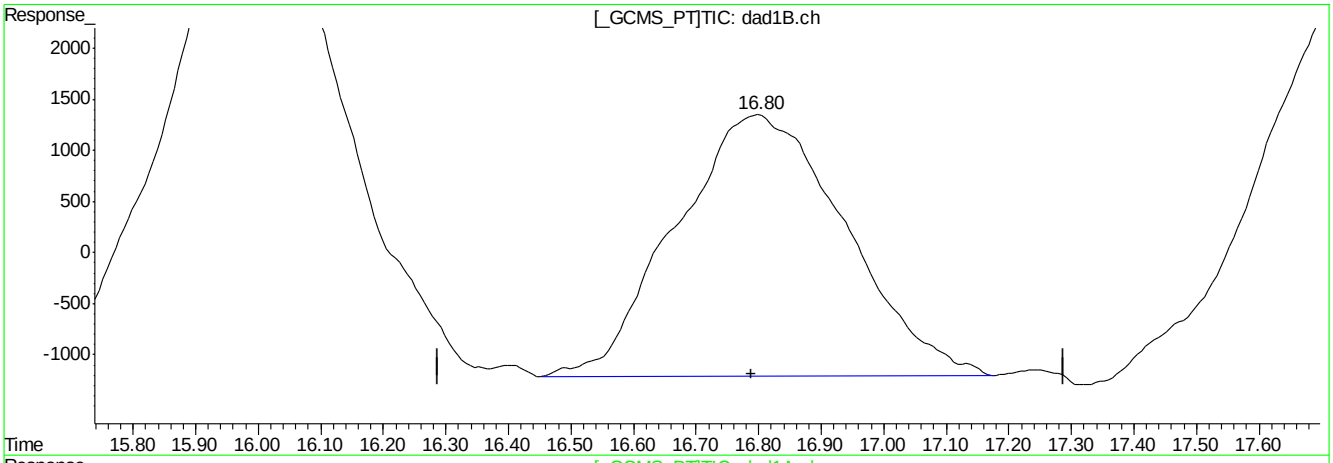
response 676980

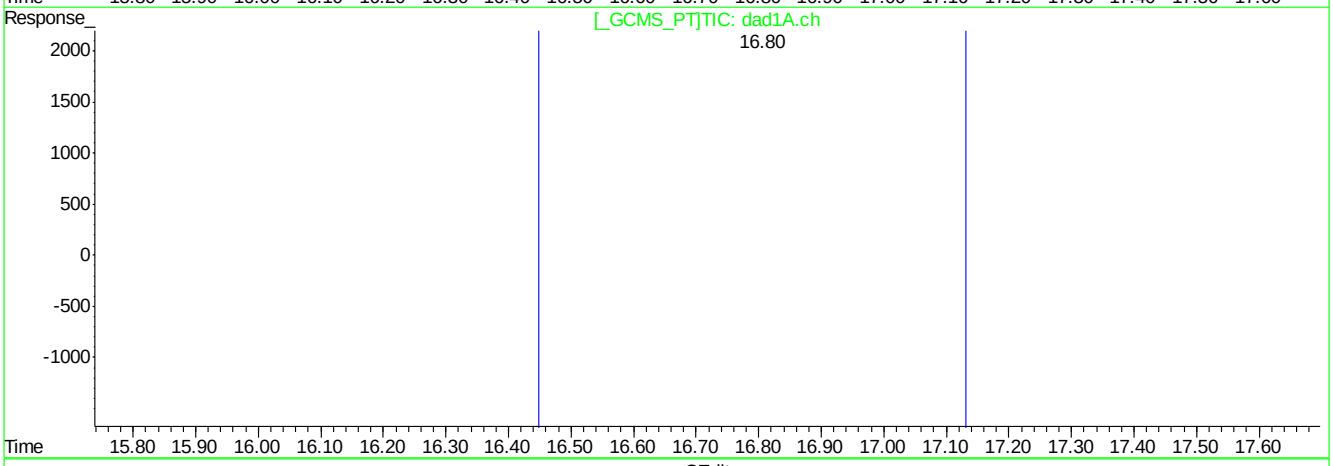
(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:13:35 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(15) o-Nitrotoluene

16.80min 100.220ppb m

response 480855

(15) o-Nitrotoluene #2

16.80min 86.201ppb m

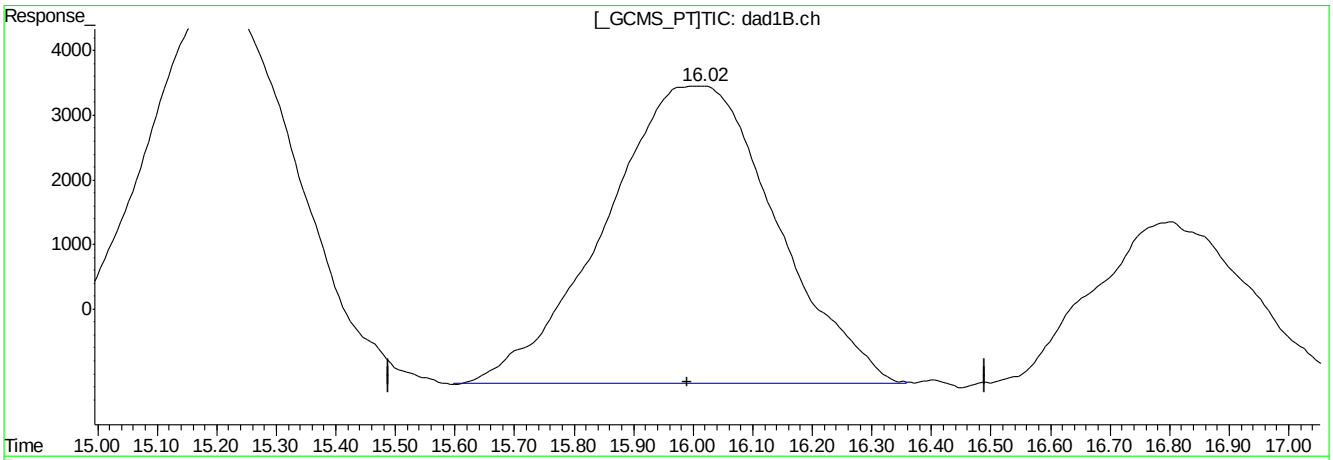
response 676980

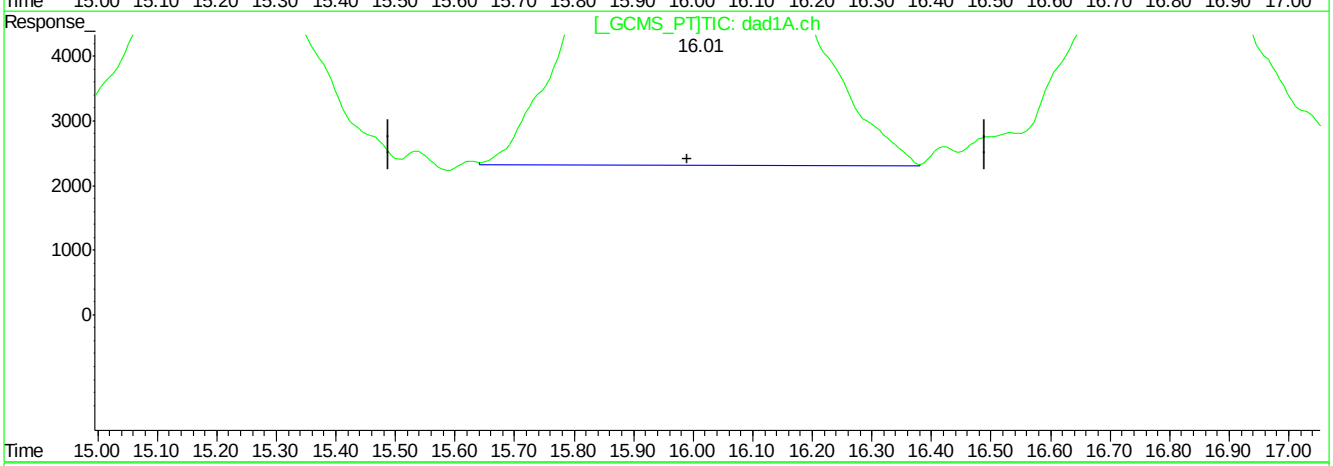
(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:13:37 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(16) 3,5-Dinitroaniline

16.02min 96.781ppb m

response 915880

(16) 3,5-Dinitroaniline #2

16.01min 93.230ppb m

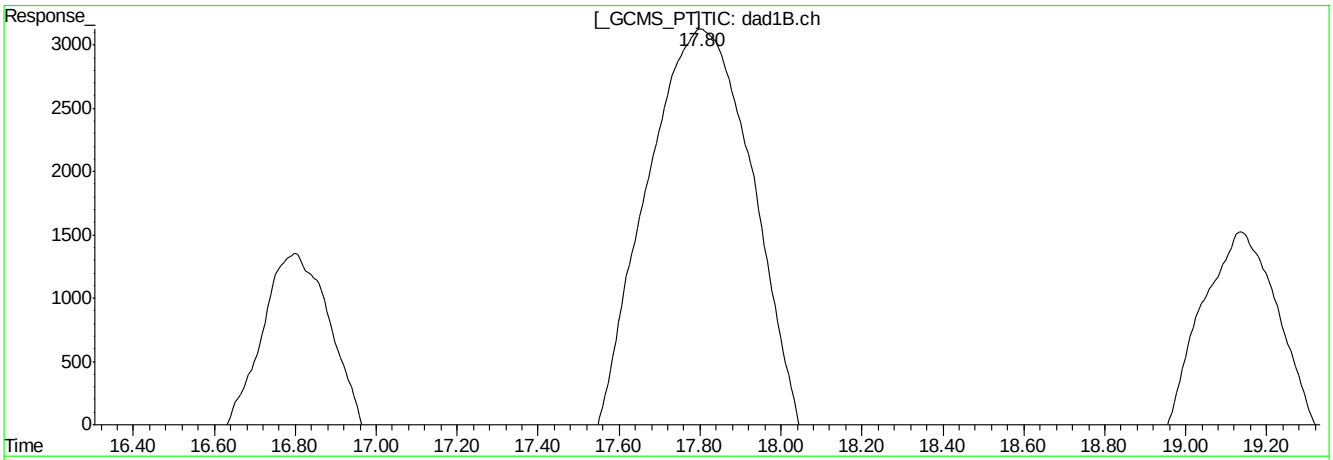
response 1472172

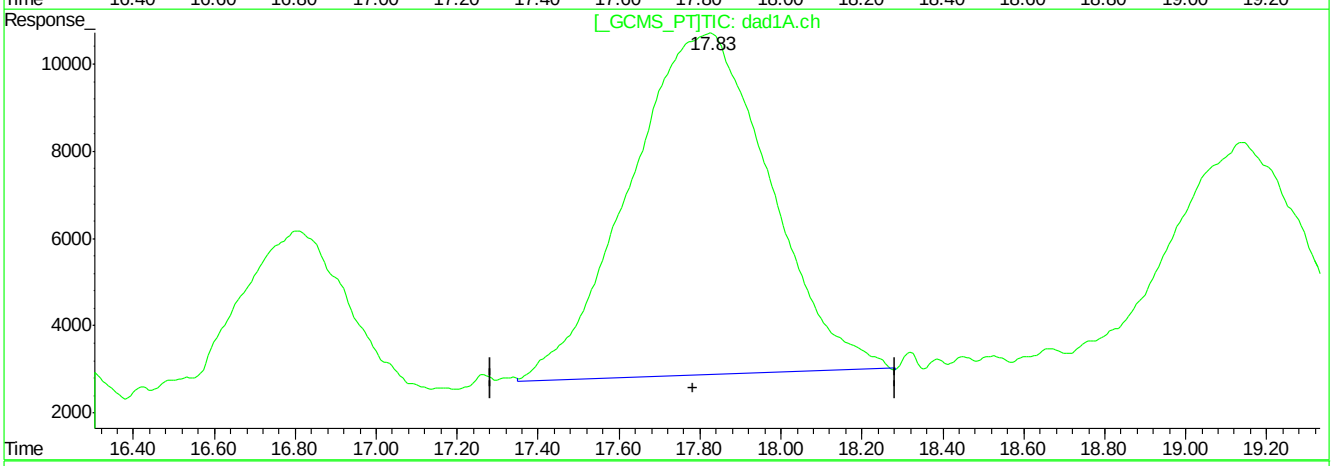
(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:13:46 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619502.D\dad1A.ch
Acq On : 09-Sep-2020, 13:43:20 Operator: williamh
Sample : ic2870-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.80min 495.552ppb m

response 1070695

(17) p-Nitrotoluene #2

17.83min 548.412ppb m

response 1883212

(+) = Expected Retention Time
GG619502.D 8330RPB.M_090920.M Wed Sep 09 16:13:56 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 09/09/20 17:32

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 09 16:01:31 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.18	14.17	1110991	2103955	215.569	211.559m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		43.11%#	42.31%#
	Target Compounds						
1)	TNX	5.06	5.06	1281403	1281403	227.390	226.536
2)	HMX	5.42	5.42	767225	767225	232.267	230.017
3)	DNX	5.59	5.59	543209	543483	238.202m	228.474m
4)	MNX	6.50	6.50	935143	935143	231.387	231.993
5)	1,3,5-Trinitrobe	7.47	7.47	1964131	1978286	209.450	210.438
6)	RDX	7.80	7.80	902276	940745	207.585	216.649
7)	1,3-Dinitrobenze	9.88	9.88	2640494	1989753	209.542	209.873m
8)	Nitrobenzene	10.88	10.88	1745099	1567038	196.530	213.936m
9)	2,4,6-Trinitroto	11.61	11.60	1899468	2310430	239.846	213.336m
10)	Nitroglycerin	0.00	12.26	0	482908	N.D. d	207.862m
11)	Tetryl	12.89	12.88	1429917	2207678	232.809	216.680m
13)	2,6-Dinitrotolue	14.52	14.50	1291357	1583783	213.393	187.101m
14)	2,4-Dinitrotolue	15.17	15.17	2406326	1543172	206.894	187.704m
15)	o-Nitrotoluene	16.78	16.78	1106689	1678830	230.658	213.768
16)	3,5-Dinitroanili	15.96	15.95	2056805	3302092	217.343	209.114m
17)	p-Nitrotoluene	17.77	17.76	2243487	4169309	1038.357	1214.147
18)	4-Amino-2,6-Dini	17.77	17.76	2243487	4169309	771.110	701.004
19)	m-Nitrotoluene	19.10	19.11	1178139	2278567	82.965	101.441
20)	2-Amino-4,6-Dini	19.71	19.70	1785490	2558087	125.750	113.808
21)	PETN	0.00	21.47	0	513033	N.D. d	155.785m

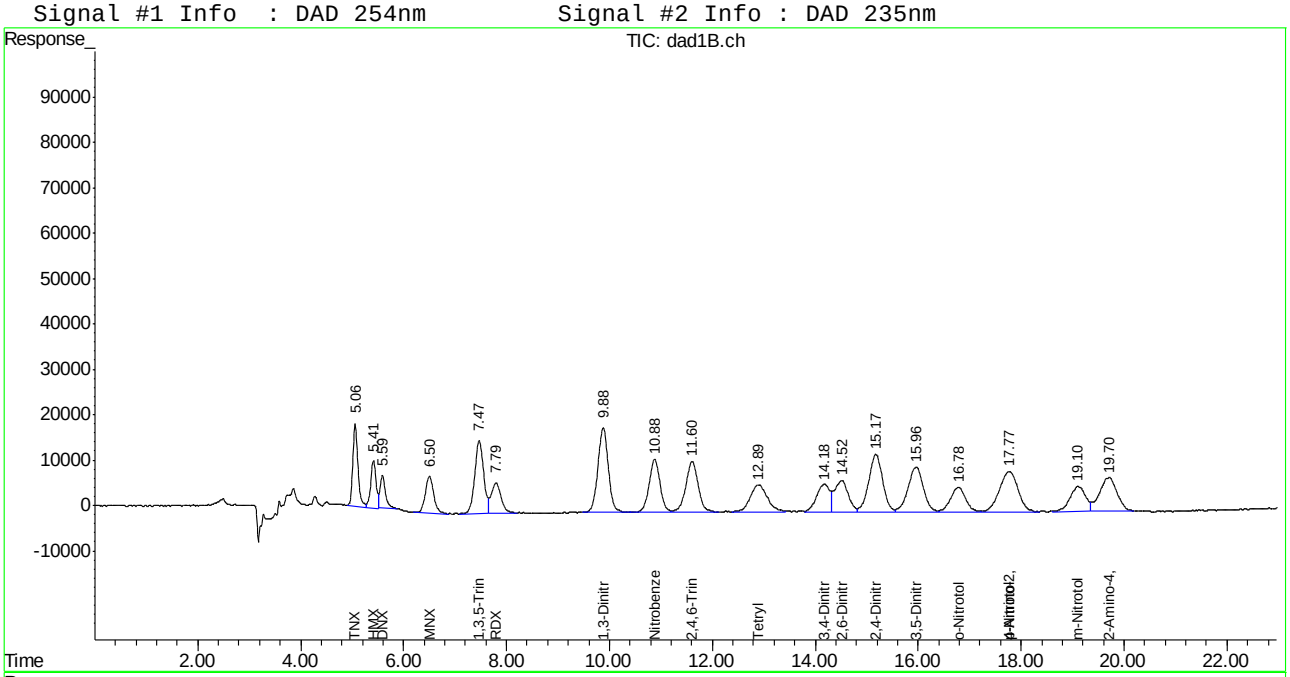
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

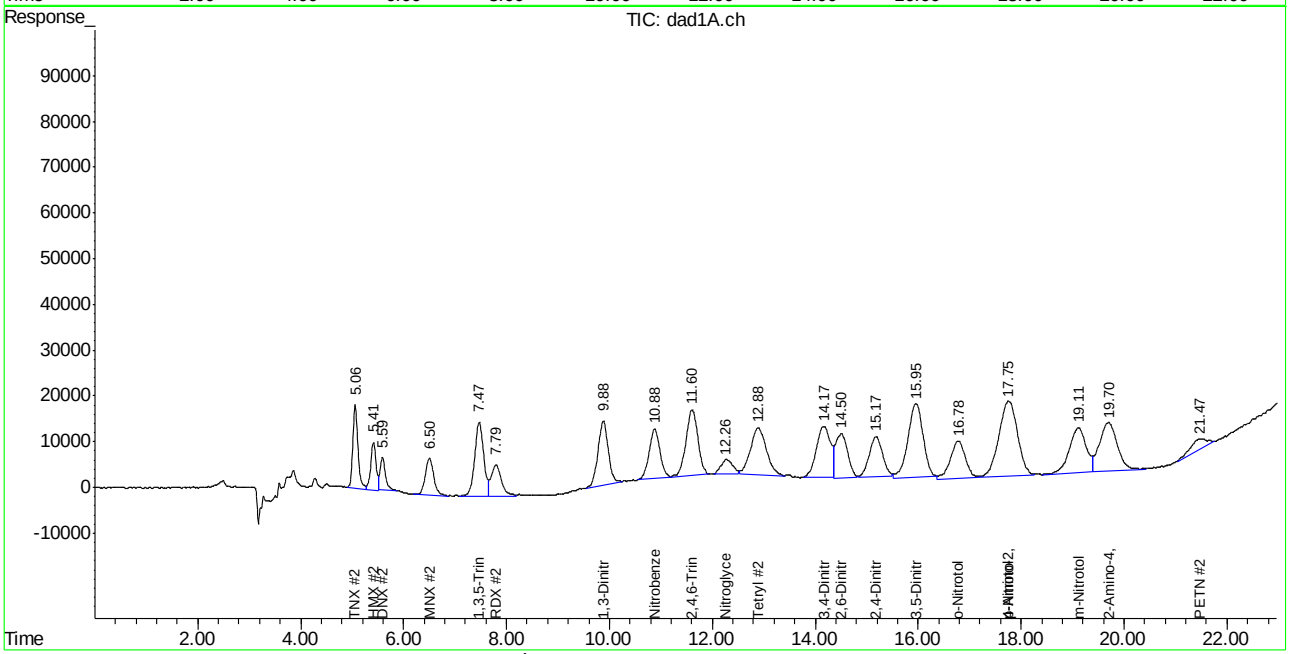
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:41 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

Sample Number: GGG2870-IC2870
Lab FileID: GG619503.D
Injection Time: 09/09/20 14:13

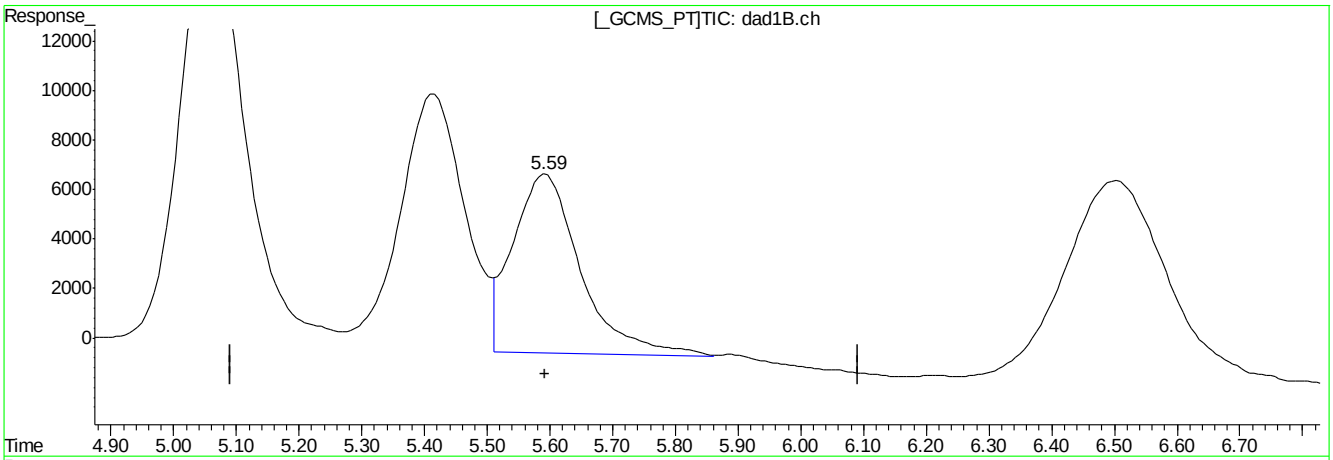
Method: SW846 8330A
Analyst approved: 09/09/20 17:12 William Hustedde
Supervisor approved: 09/09/20 17:32 Naresh Jiawan

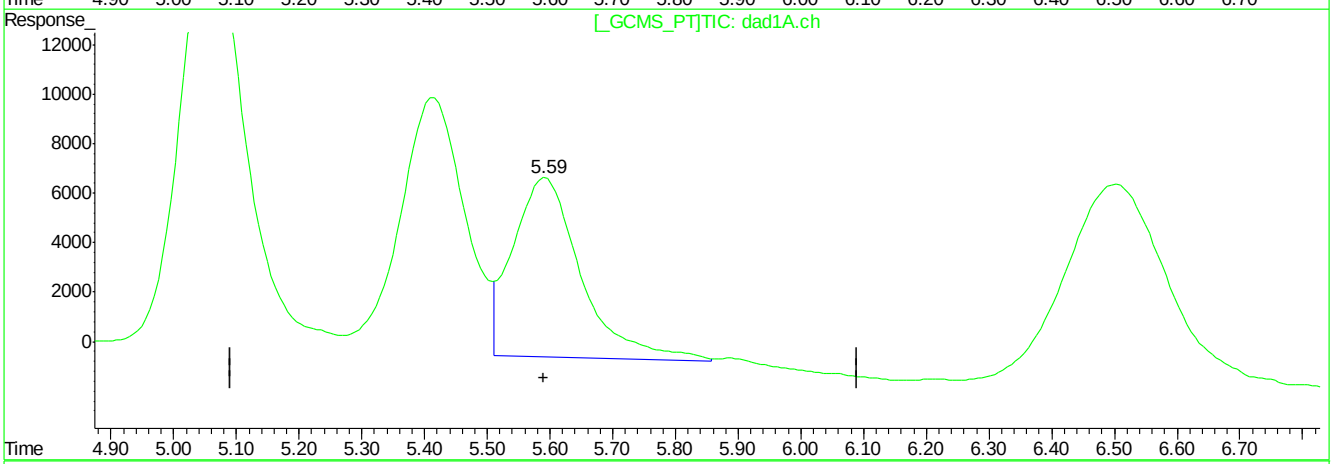
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.59	Poor instrument integration
DNX		2	5.59	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.88	Poor instrument integration
Nitrobenzene	98-95-3	2	10.88	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.60	Poor instrument integration
Nitroglycerine	55-63-0	2	12.26	Poor instrument integration
Tetryl	479-45-8	2	12.88	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	14.17	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	14.50	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	15.17	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	15.95	Poor instrument integration
PETN	78-11-5	2	21.47	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.59min 238.202ppb m

response 543209

(3) DNX #2

5.59min 228.474ppb m

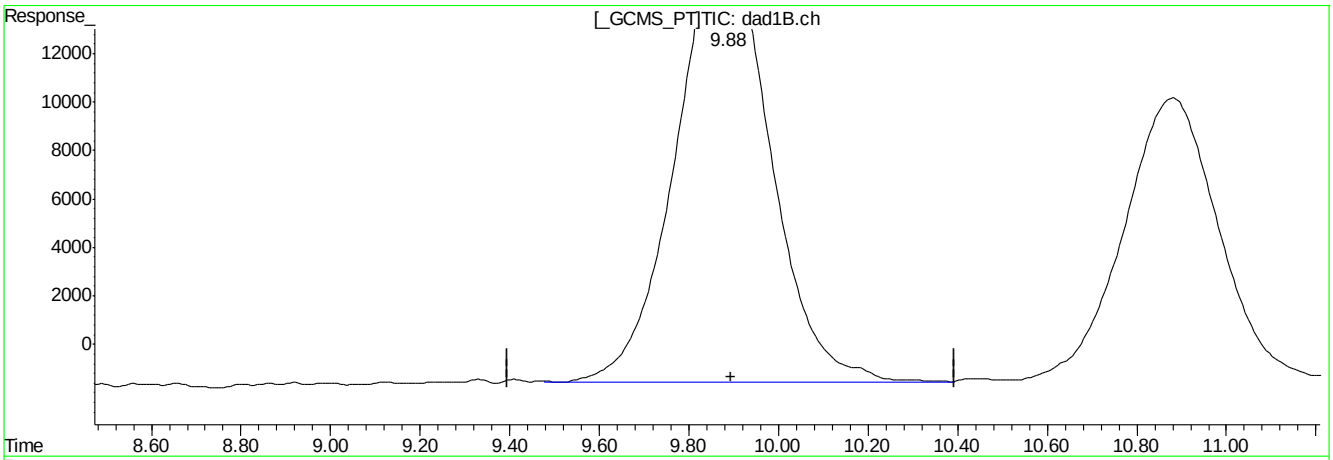
response 543483

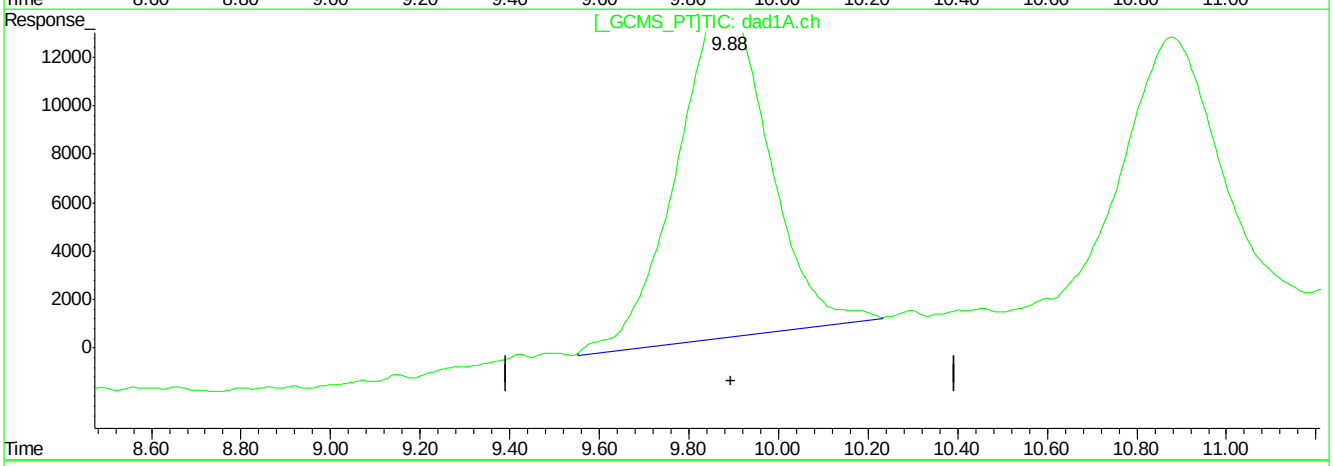
(+) = Expected Retention Time
GG619503.D 8330RPB.M_090920.M Wed Sep 09 16:16:50 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.88min 209.542ppb

response 2640494

(7) 1,3-Dinitrobenzene #2

9.88min 209.873ppb m

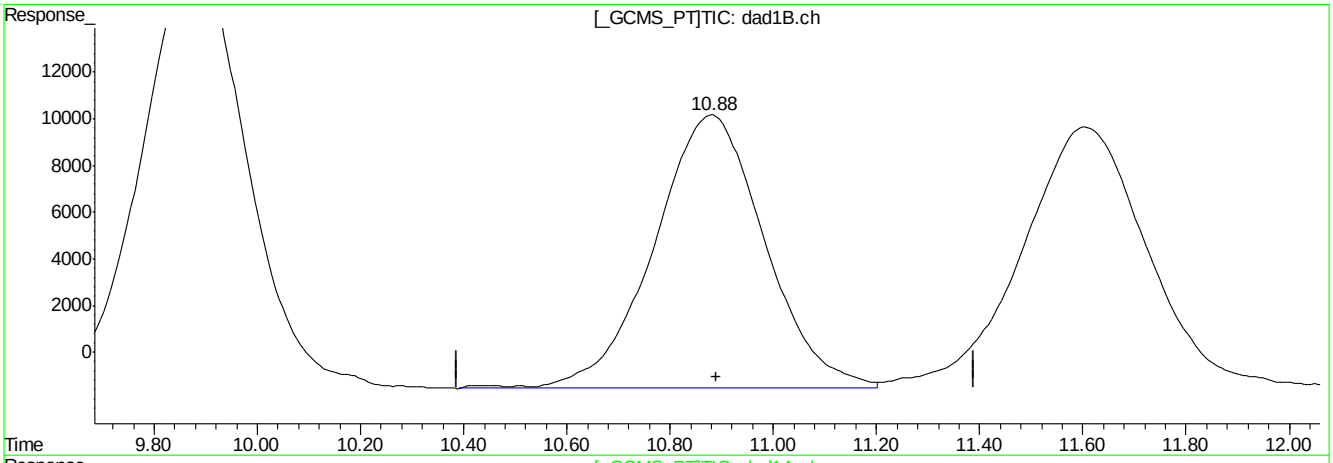
response 1989753

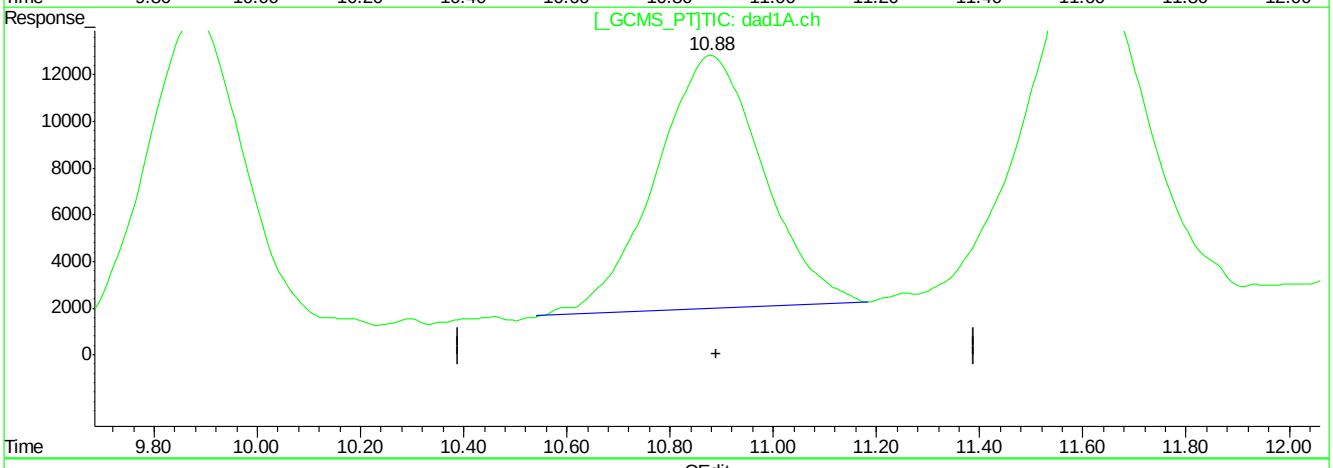
(+) = Expected Retention Time
GG619503.D 8330RPB.M_090920.M Wed Sep 09 16:17:32 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.88min 196.530ppb

response 1745099

(8) Nitrobenzene #2

10.88min 213.936ppb m

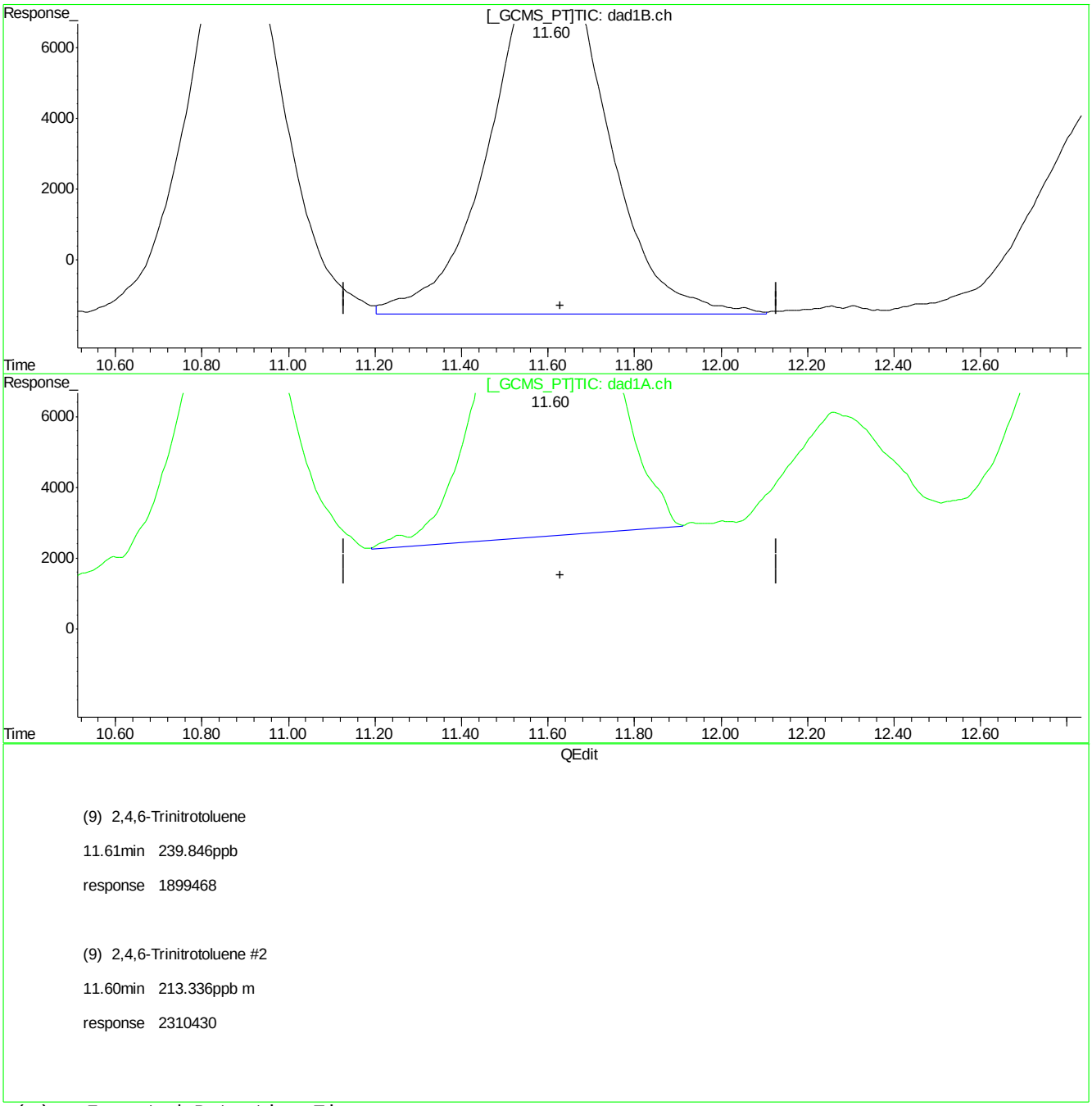
response 1567038

(+) = Expected Retention Time
GG619503.D 8330RPB.M_090920.M Wed Sep 09 16:17:39 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration



(9) 2,4,6-Trinitrotoluene

11.61min 239.846ppb

response 1899468

(9) 2,4,6-Trinitrotoluene #2

11.60min 213.336ppb m

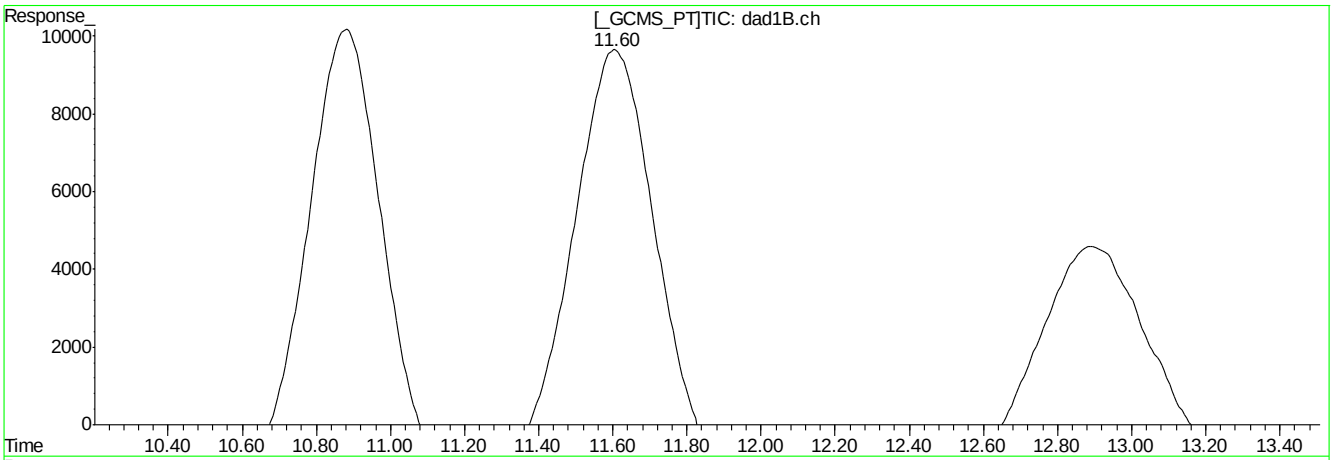
response 2310430

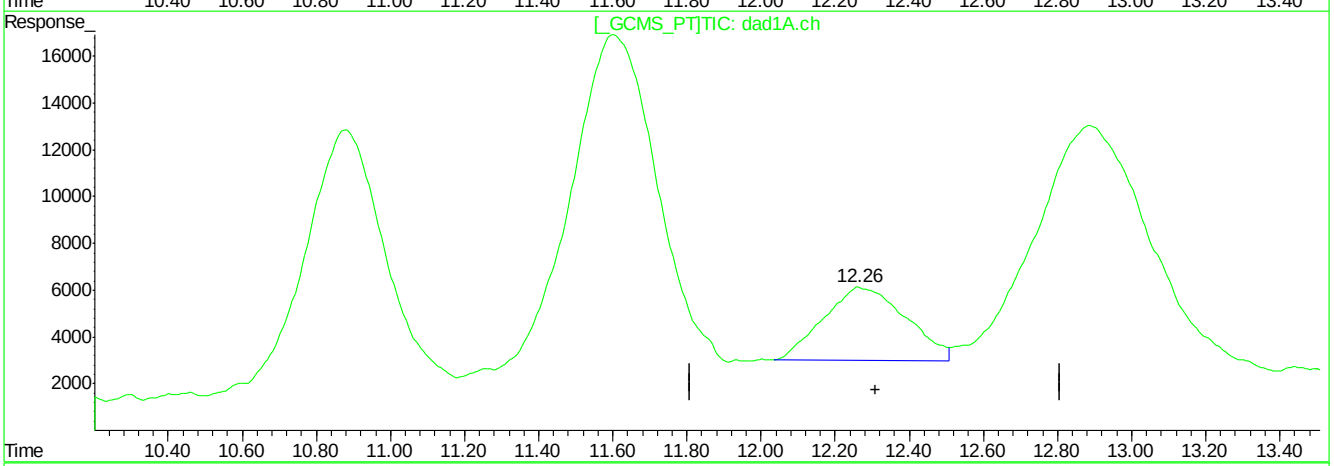
(+) = Expected Retention Time
GG619503.D 8330RPB.M_090920.M Wed Sep 09 16:17:47 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

11.61min 0.000ppb

response 1899468

(10) Nitroglycerin #2

12.26min 207.862ppb m

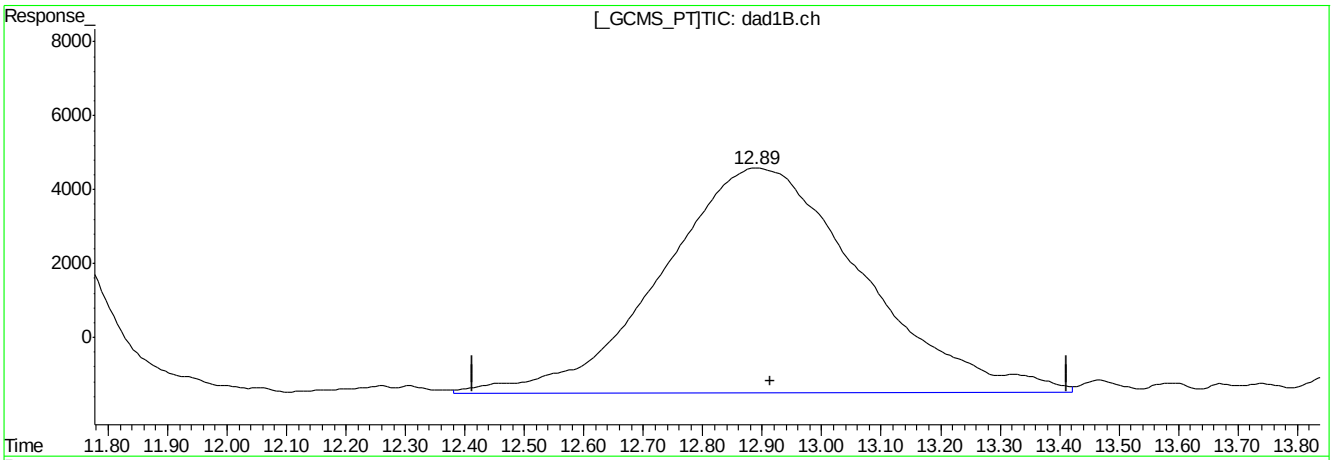
response 482908

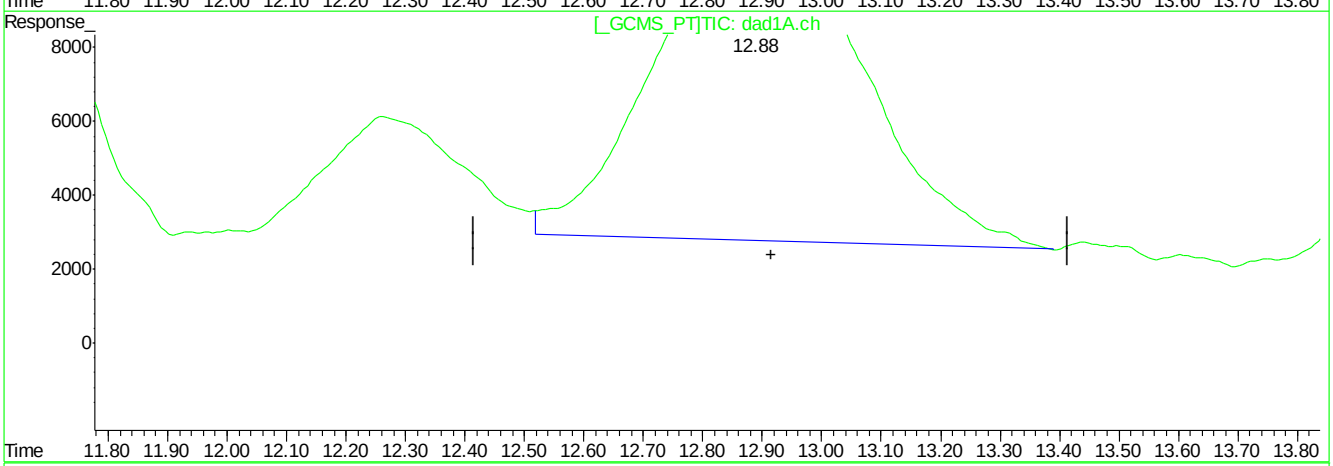
(+) = Expected Retention Time
GG619503.D 8330RPB.M_090920.M Wed Sep 09 16:17:52 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.89min 232.809ppb

response 1429917

(11) Tetryl #2

12.88min 216.680ppb m

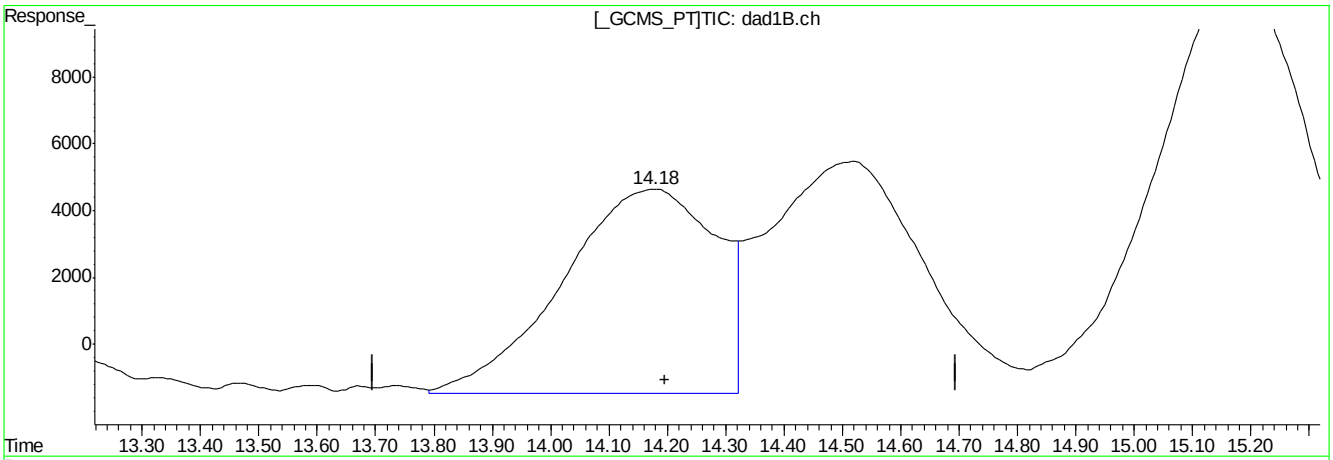
response 2207678

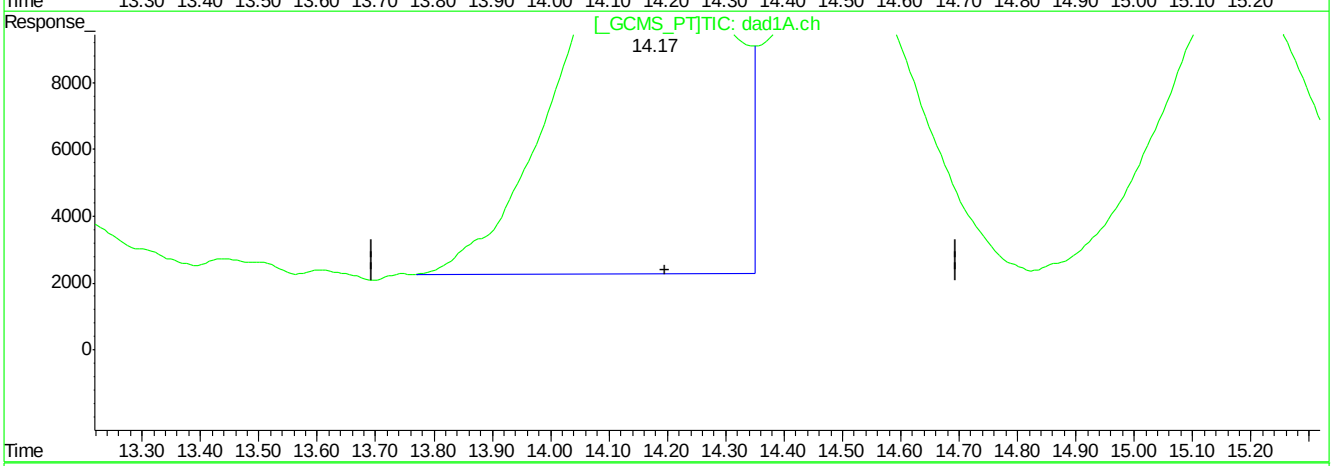
(+) = Expected Retention Time
GG619503.D 8330RPB.M_090920.M Wed Sep 09 16:18:02 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

14.18min 215.569ppb

response 1110991

(12) 3,4-Dinitrotoluene #2 (S)

14.17min 211.559ppb m

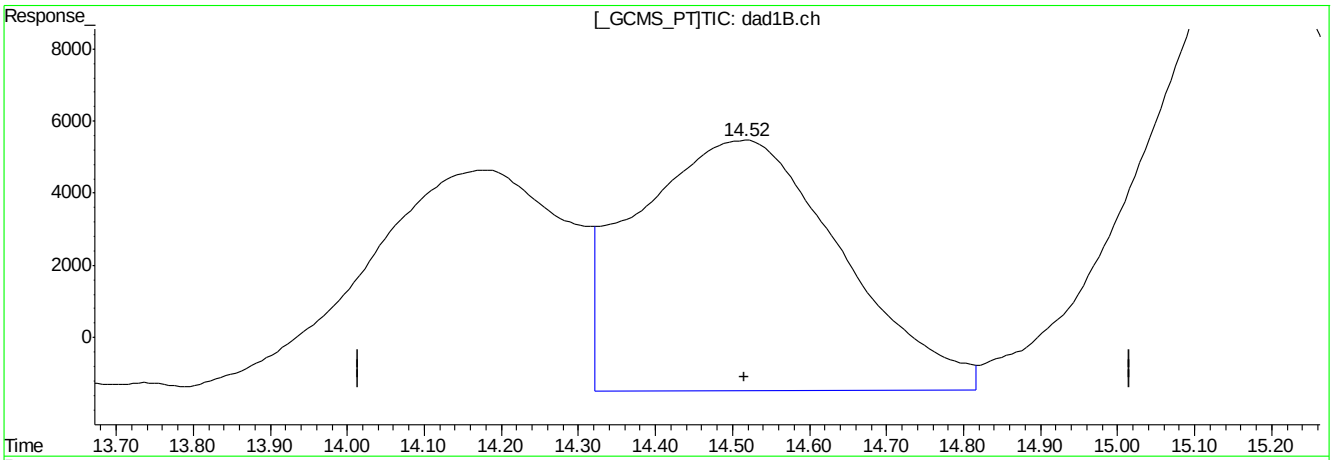
response 2103955

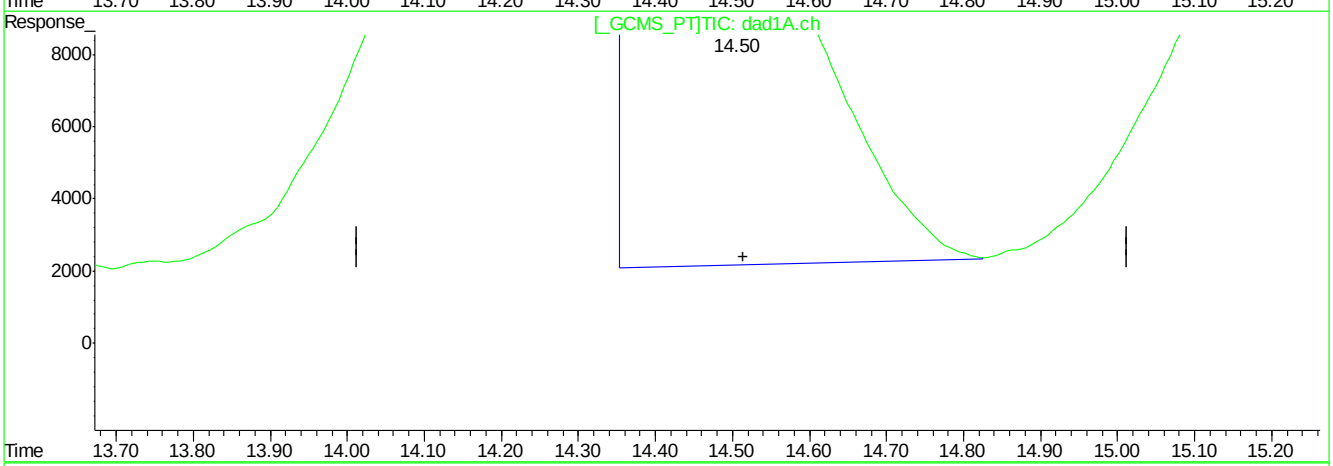
(+) = Expected Retention Time
GG619503.D 8330RPB.M_090920.M Wed Sep 09 16:18:09 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(13) 2,6-Dinitrotoluene

14.52min 213.393ppb

response 1291357

(13) 2,6-Dinitrotoluene #2

14.50min 187.101ppb m

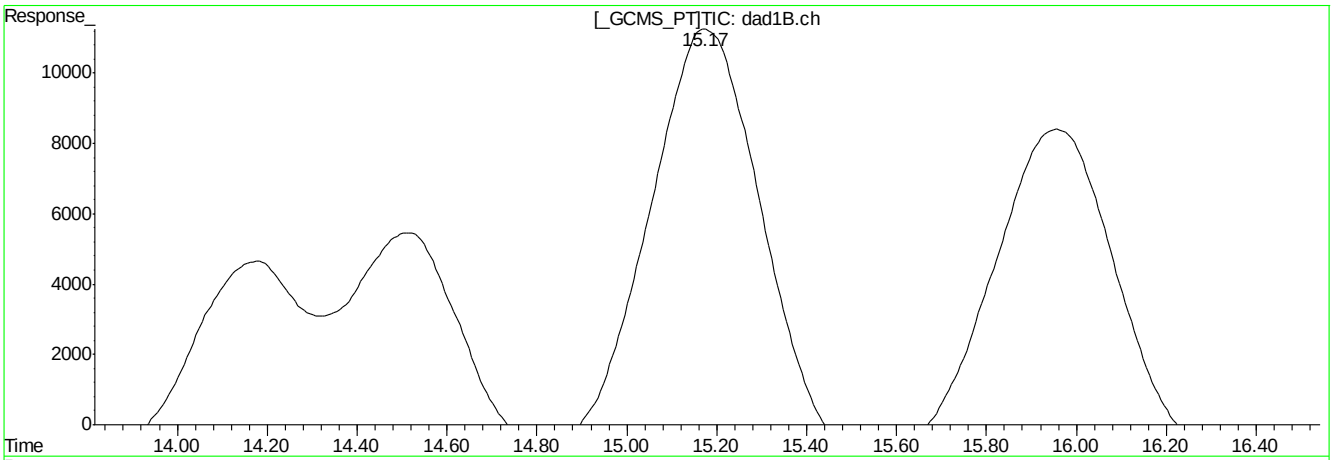
response 1583783

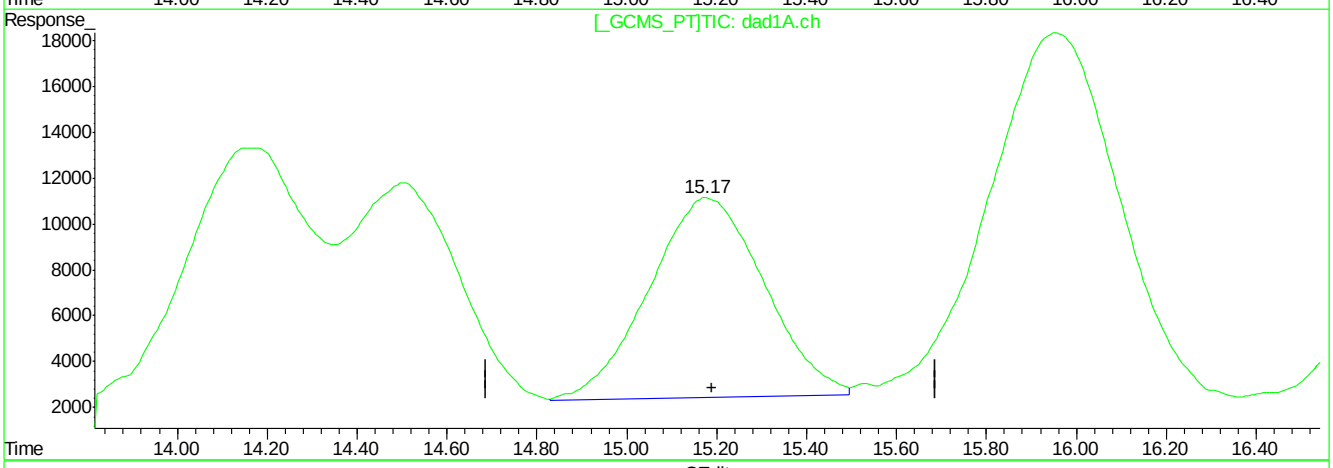
(+) = Expected Retention Time
GG619503.D 8330RPB.M_090920.M Wed Sep 09 16:18:15 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(14) 2,4-Dinitrotoluene

15.17min 206.894ppb

response 2406326

(14) 2,4-Dinitrotoluene #2

15.17min 187.704ppb m

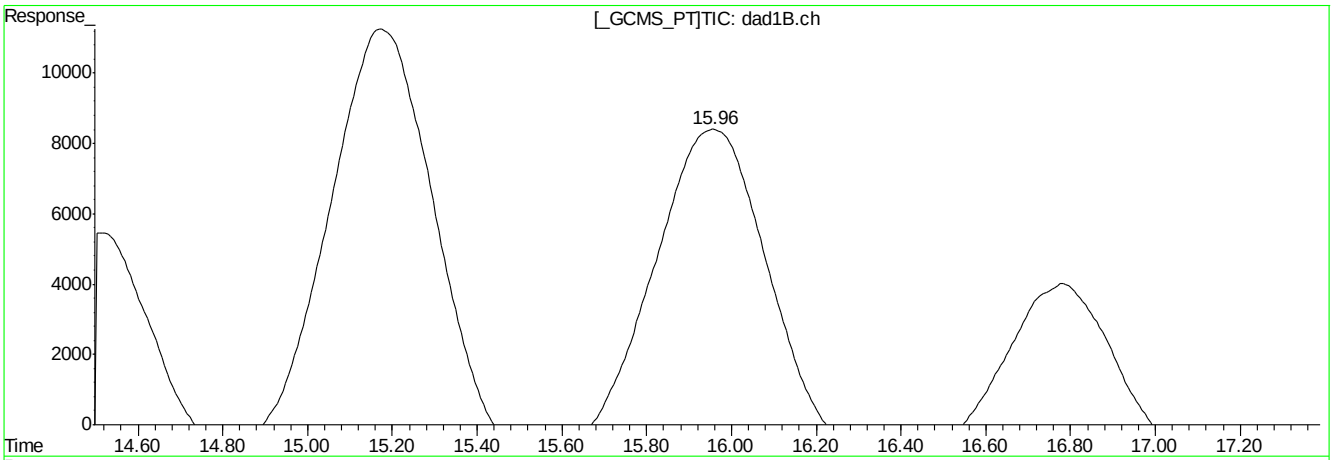
response 1543172

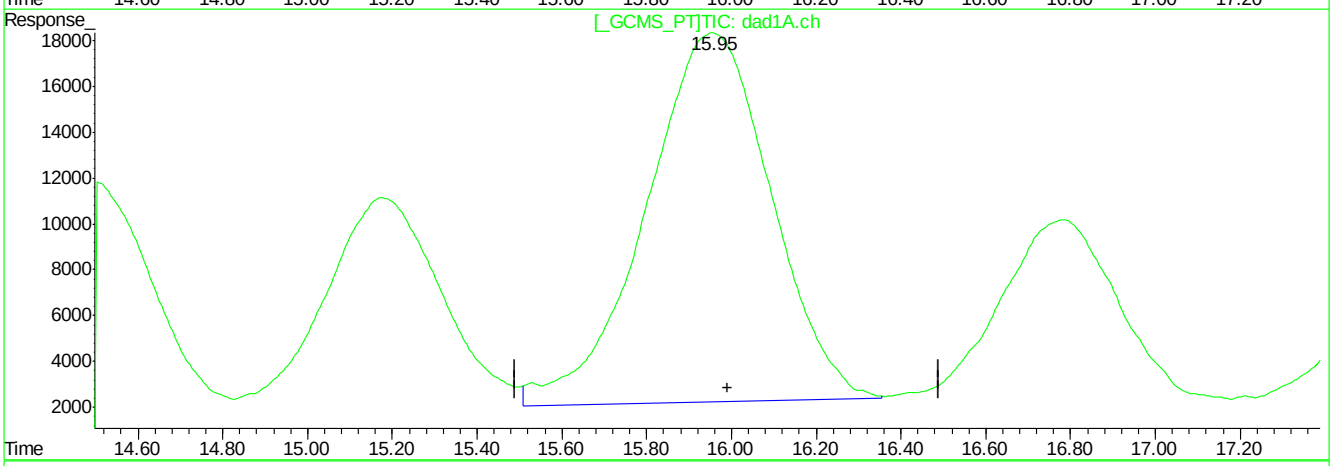
(+) = Expected Retention Time
GG619503.D 8330RPB.M_090920.M Wed Sep 09 16:18:21 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(16) 3,5-Dinitroaniline

15.96min 217.343ppb

response 2056805

(16) 3,5-Dinitroaniline #2

15.95min 209.114ppb m

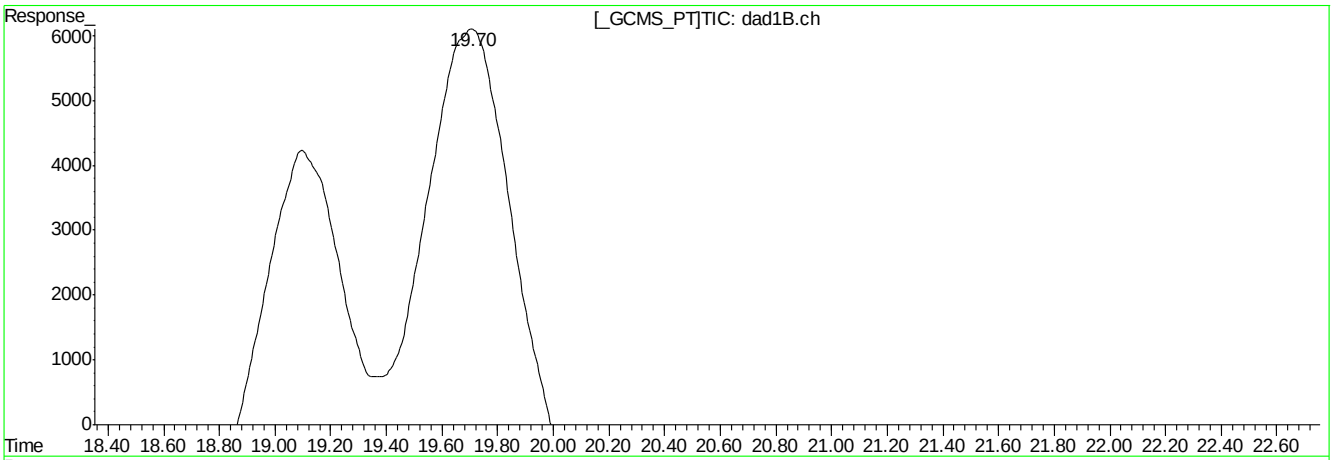
response 3302092

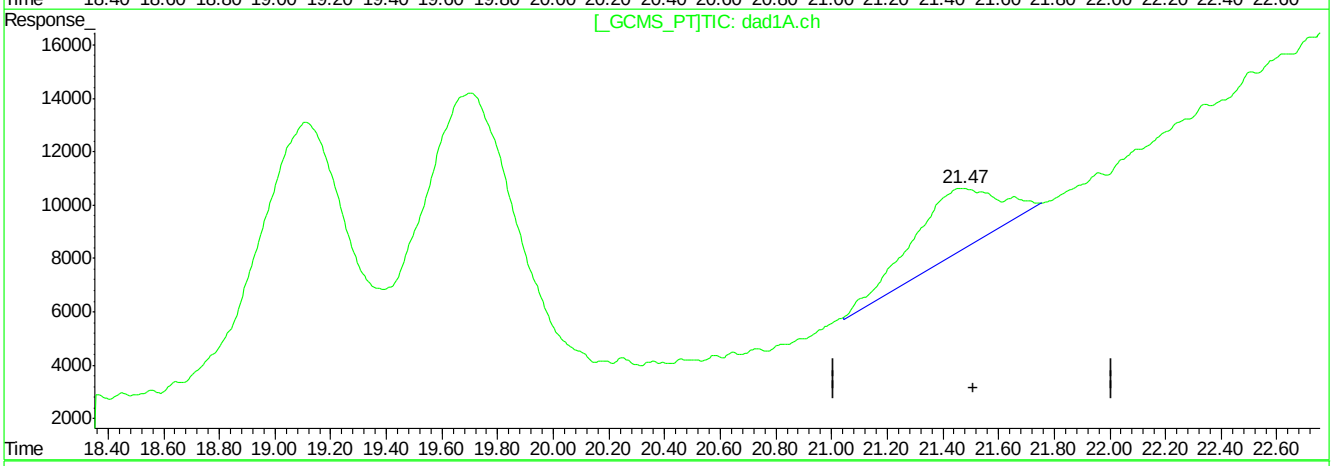
(+) = Expected Retention Time
GG619503.D 8330RPB.M_090920.M Wed Sep 09 16:18:30 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619503.D\dad1A.ch
Acq On : 09-Sep-2020, 14:13:45 Operator: williamh
Sample : ic2870-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

19.71min 0.000ppb

response 1785490

(21) PETN #2

21.47min 155.785ppb m

response 513033

(+) = Expected Retention Time
GG619503.D 8330RPB.M_090920.M Wed Sep 09 16:18:42 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/09/20 17:32

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 09 16:01:32 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.18	14.18	2827180	5095834	548.566	512.402m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		109.71%	102.48%
	Target Compounds						
1)	TNX	5.06	5.06	2971286	2991993	527.267m	528.947m
2)	HMX	5.42	5.42	1804300	1804300	546.228	540.937
3)	DNX	5.59	5.59	1226232	1228356	537.715m	516.386m
4)	MNX	6.51	6.51	2278958	2278958	563.894	565.370
5)	1,3,5-Trinitrobe	7.48	7.48	4787775	4787775	510.556	509.294
6)	RDX	7.81	7.81	2248157	2248157	517.228	517.739
7)	1,3-Dinitrobenze	9.89	9.89	6512103	4819591	516.783	508.356m
8)	Nitrobenzene	10.89	10.89	4336879	3953356	488.411	539.721m
9)	2,4,6-Trinitroto	11.62	11.61	4620650	5852494	583.449	540.397m
10)	Nitroglycerin	0.00	12.29	0	1330338	N.D. d	555.366m
11)	Tetryl	12.91	12.90	3601978	5688858	586.449	556.328m
13)	2,6-Dinitrotolue	14.53	14.53	3143546	3945362	519.463	466.088m
14)	2,4-Dinitrotolue	15.19	15.19	5963090	3747746	512.702	455.858m
15)	o-Nitrotoluene	16.80	16.80	2767883	3933814	576.886	500.900
16)	3,5-Dinitroanili	15.97	15.97	5029980	8388406	531.519	531.220
17)	p-Nitrotoluene	17.80	17.79	5590081	9997002	2587.267	2911.235
18)	4-Amino-2,6-Dini	17.80	17.79	5590081	9997002	1921.369	1680.839
19)	m-Nitrotoluene	19.14	19.14	3052037	5272888	214.924	234.747
20)	2-Amino-4,6-Dini	19.72	19.72	4461254	6285467	314.202	279.638
21)	PETN	0.00	21.49	0	1431684	N.D. d	435.450m

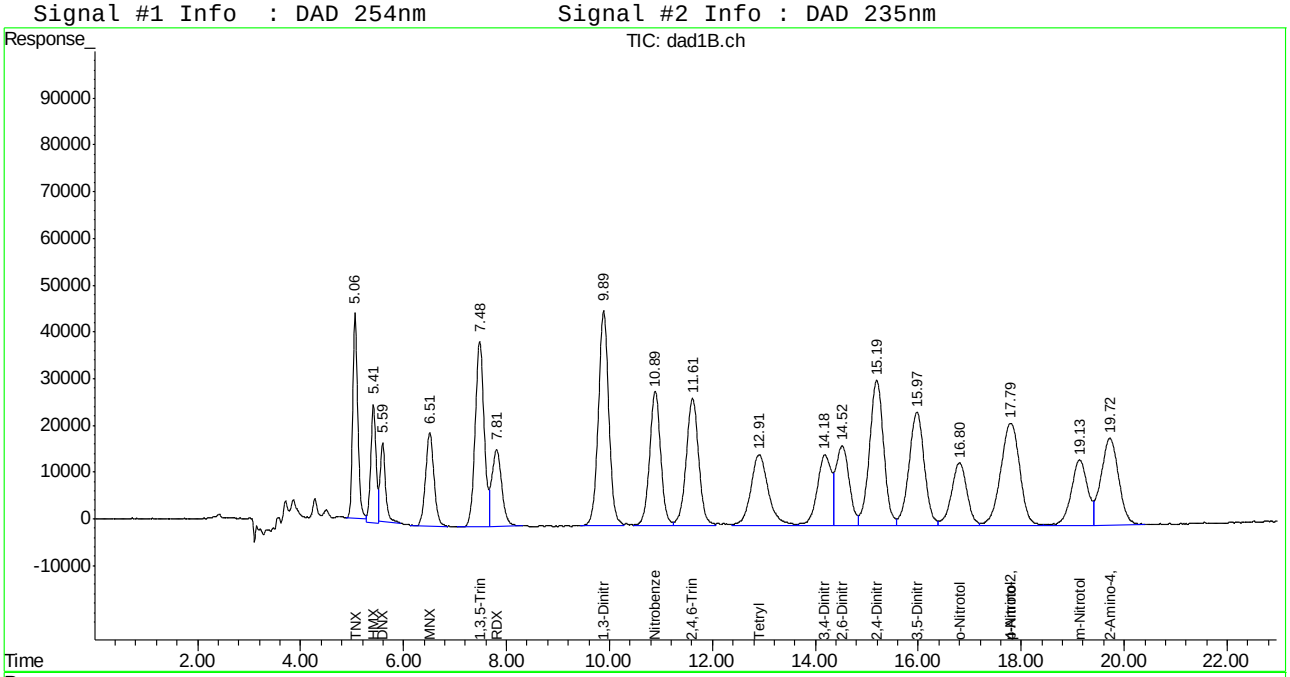
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

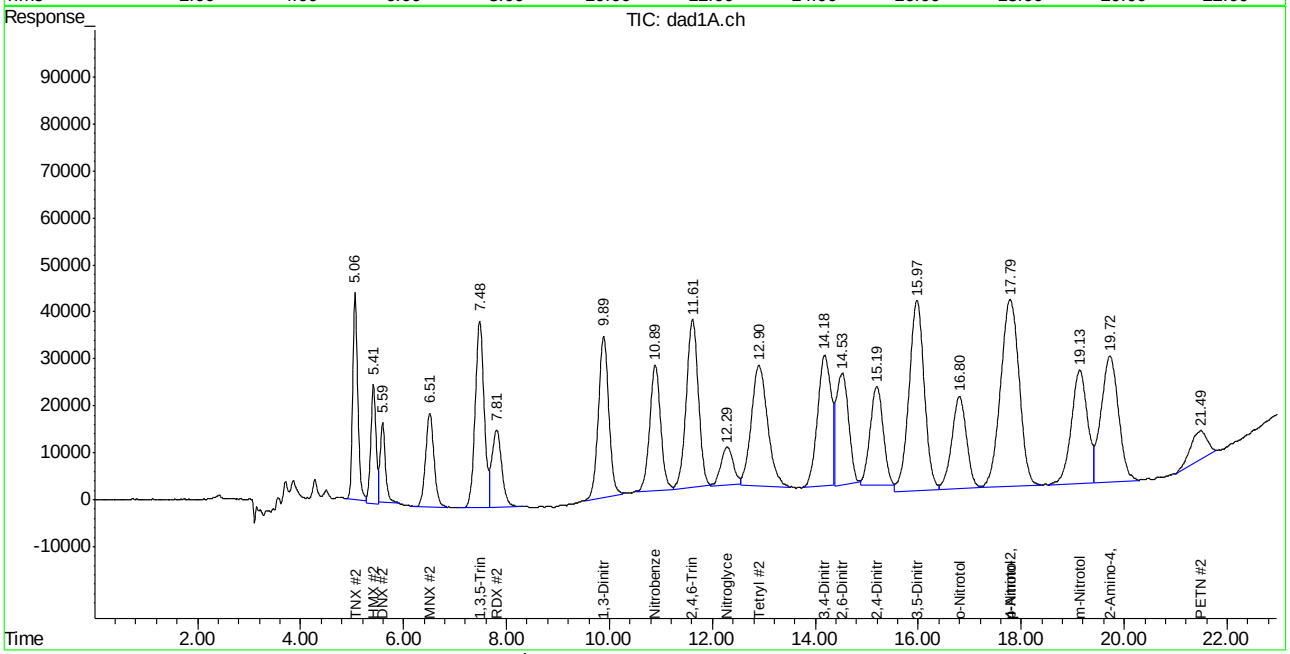
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:41 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

Sample Number: GGG2870-IC2870
Lab FileID: GG619504.D
Injection Time: 09/09/20 14:44

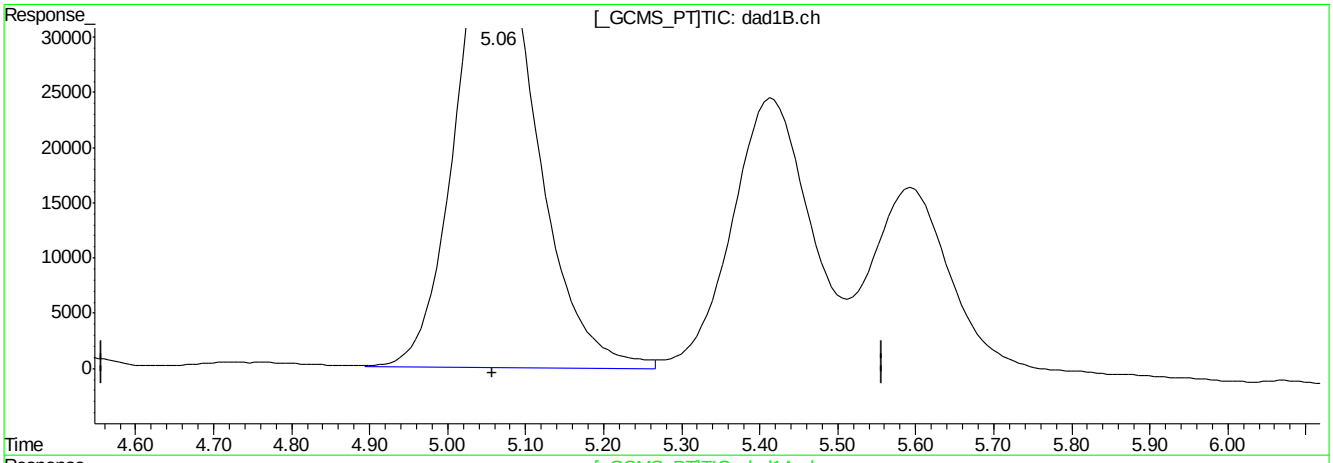
Method: SW846 8330A
Analyst approved: 09/09/20 17:12 William Hustedde
Supervisor approved: 09/09/20 17:32 Naresh Jiawan

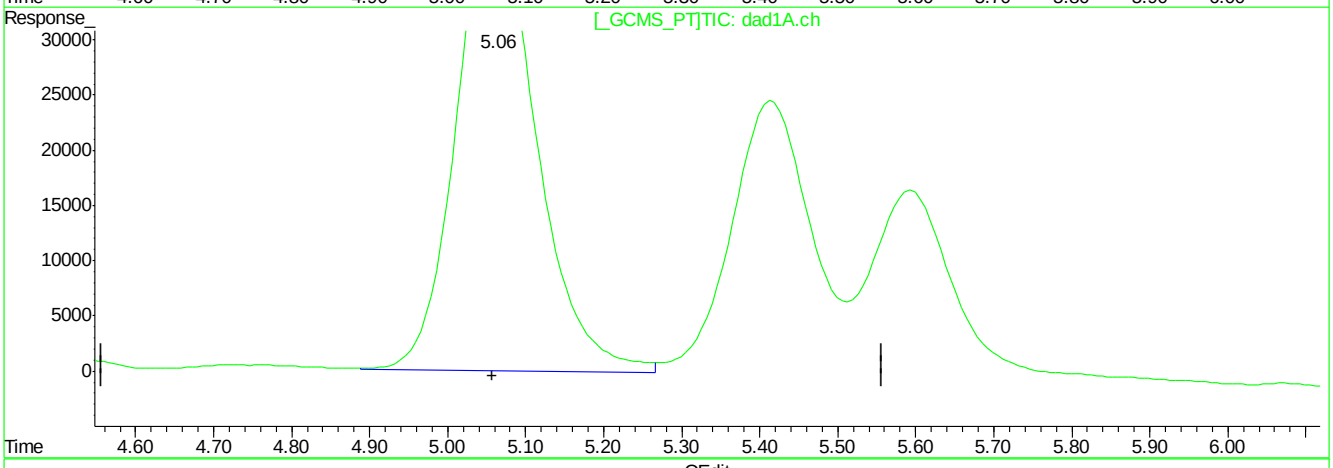
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	5.06	Poor instrument integration
TNX		2	5.06	Poor instrument integration
DNX		1	5.59	Poor instrument integration
DNX		2	5.59	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.89	Poor instrument integration
Nitrobenzene	98-95-3	2	10.89	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.61	Poor instrument integration
Nitroglycerine	55-63-0	2	12.29	Poor instrument integration
Tetryl	479-45-8	2	12.90	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	14.18	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	14.53	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	15.19	Poor instrument integration
PETN	78-11-5	2	21.49	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(1) TNX

5.06min 527.267ppb m

response 2971286

(1) TNX #2

5.06min 528.947ppb m

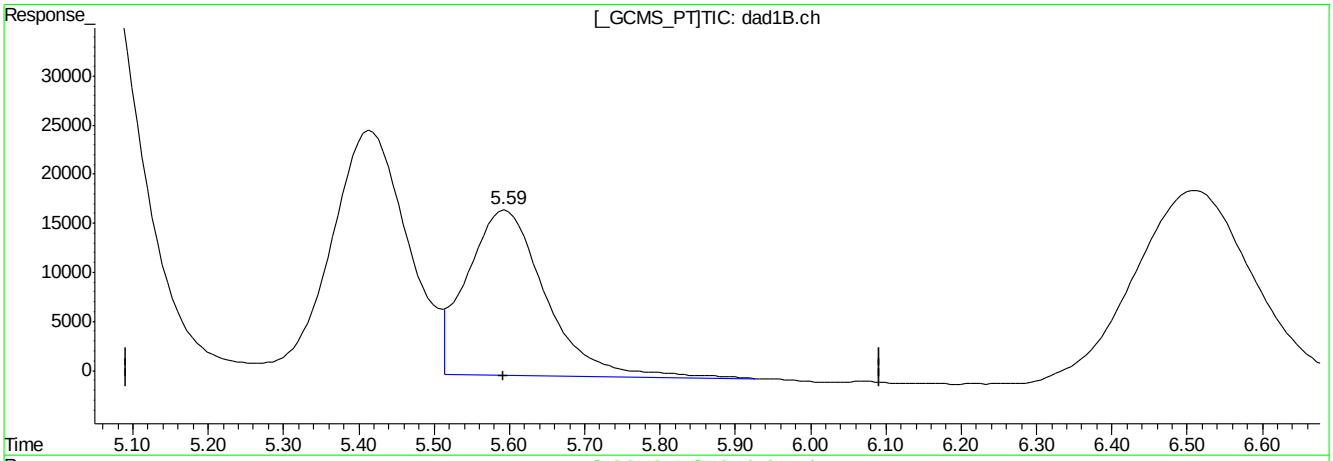
response 2991993

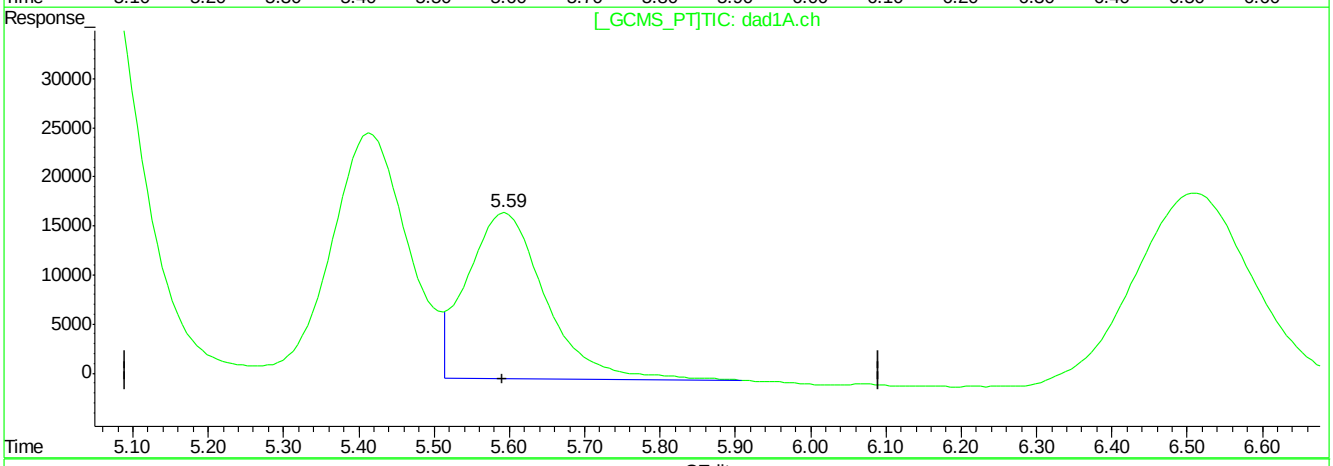
(+) = Expected Retention Time
GG619504.D 8330RPB.M_090920.M Wed Sep 09 16:18:58 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.59min 537.715ppb m

response 1226232

(3) DNX #2

5.59min 516.386ppb m

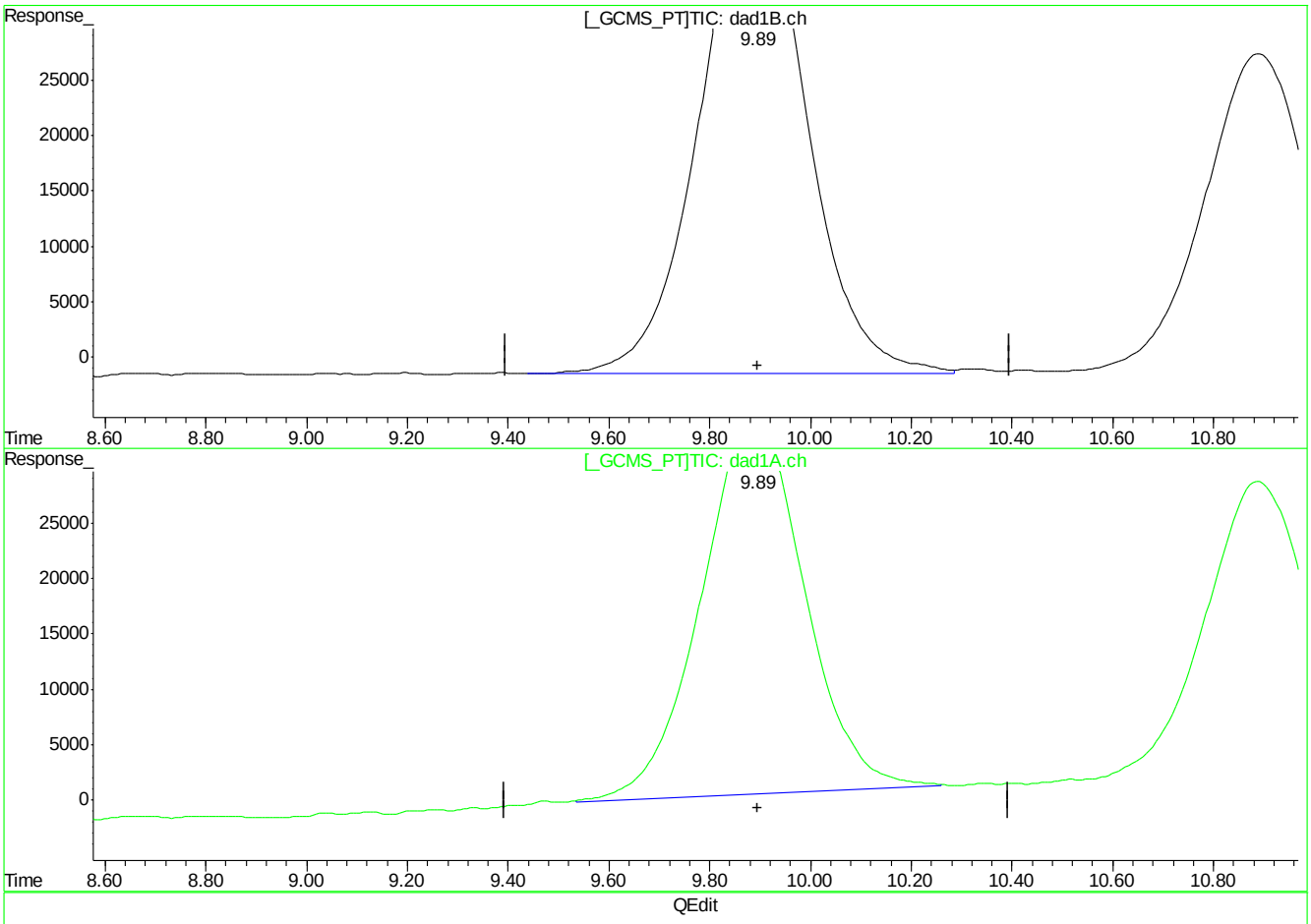
response 1228356

(+) = Expected Retention Time
GG619504.D 8330RPB.M_090920.M Wed Sep 09 16:19:10 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.89min 516.783ppb

response 6512103

(7) 1,3-Dinitrobenzene #2

9.89min 508.356ppb m

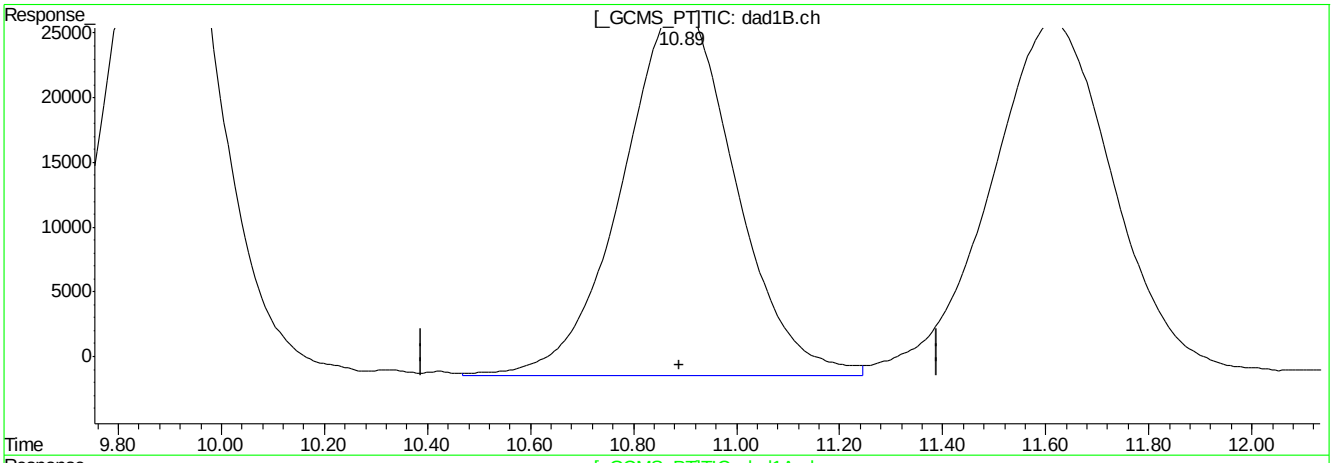
response 4819591

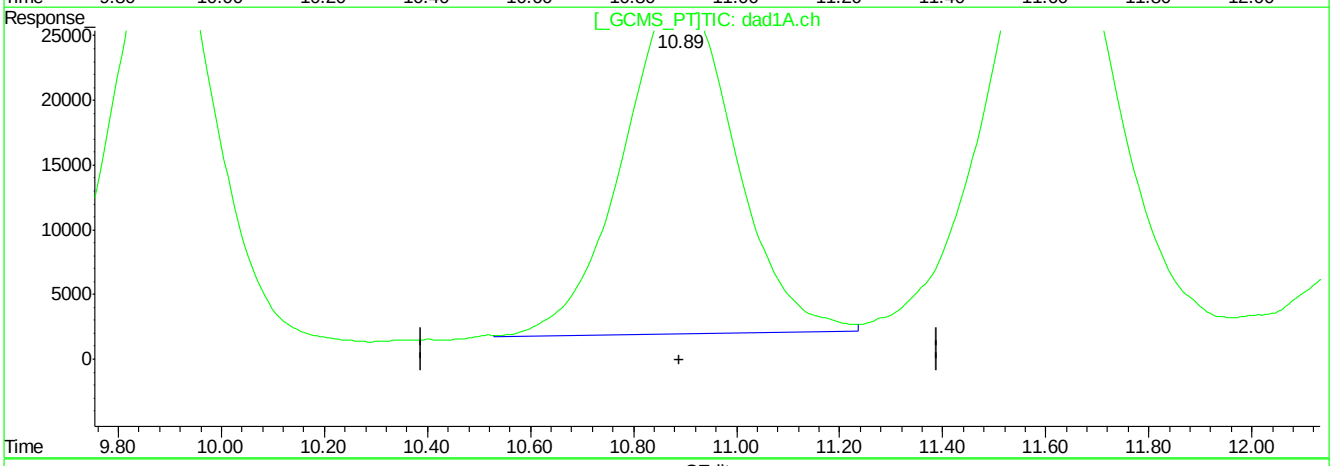
(+) = Expected Retention Time
GG619504.D 8330RPB.M_090920.M Wed Sep 09 16:19:22 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.89min 488.411ppb

response 4336879

(8) Nitrobenzene #2

10.89min 539.721ppb m

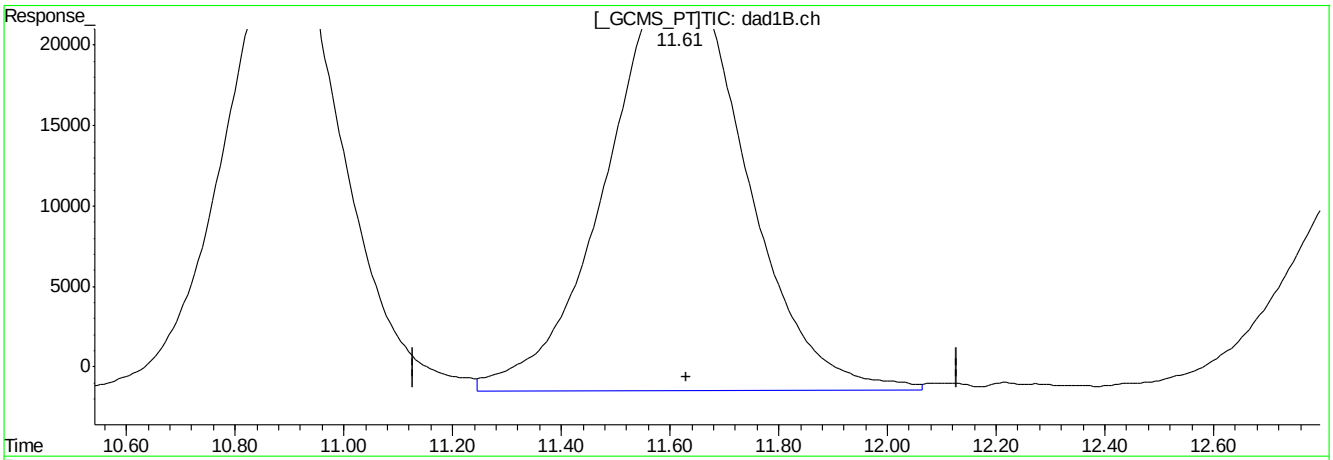
response 3953356

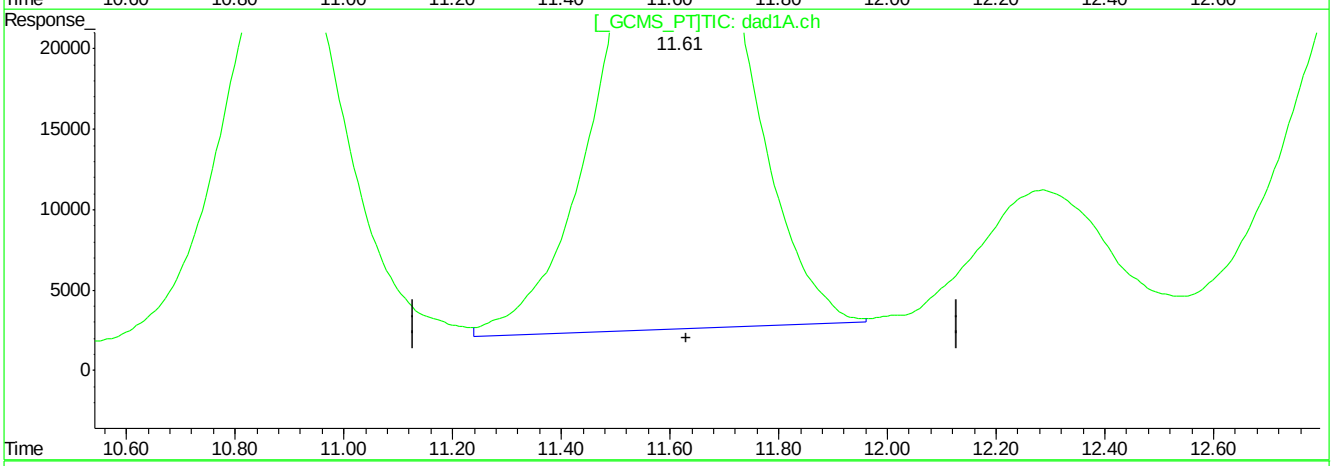
(+) = Expected Retention Time
GG619504.D 8330RPB.M_090920.M Wed Sep 09 16:19:28 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.62min 583.449ppb

response 4620650

(9) 2,4,6-Trinitrotoluene #2

11.61min 540.397ppb m

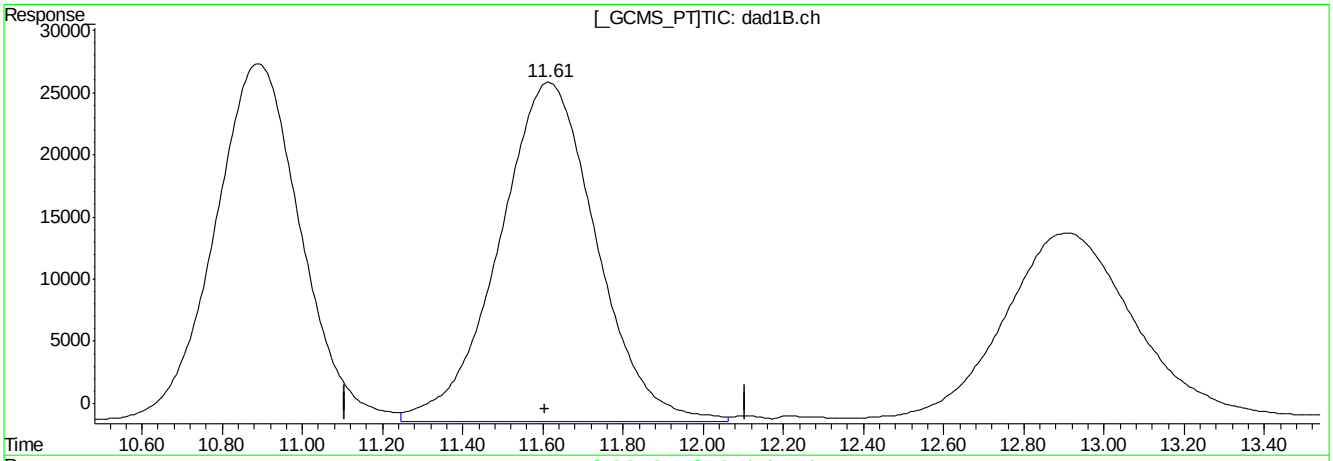
response 5852494

(+) = Expected Retention Time
GG619504.D 8330RPB.M_090920.M Wed Sep 09 16:19:34 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration



(10) Nitroglycerin

11.62min 0.000ppb

response 4620650

(10) Nitroglycerin #2

12.29min 555.366ppb m

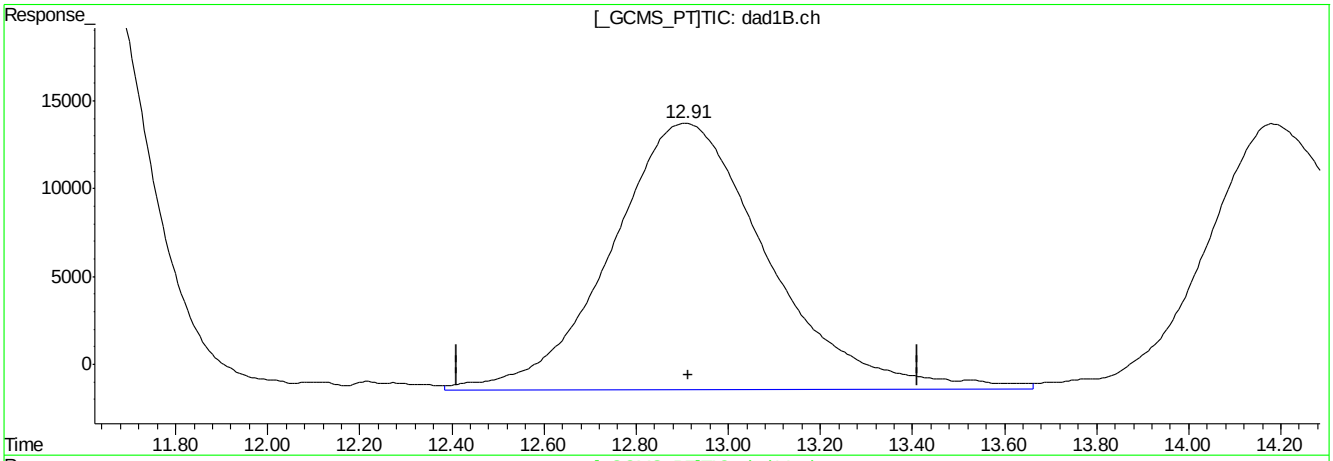
response 1330338

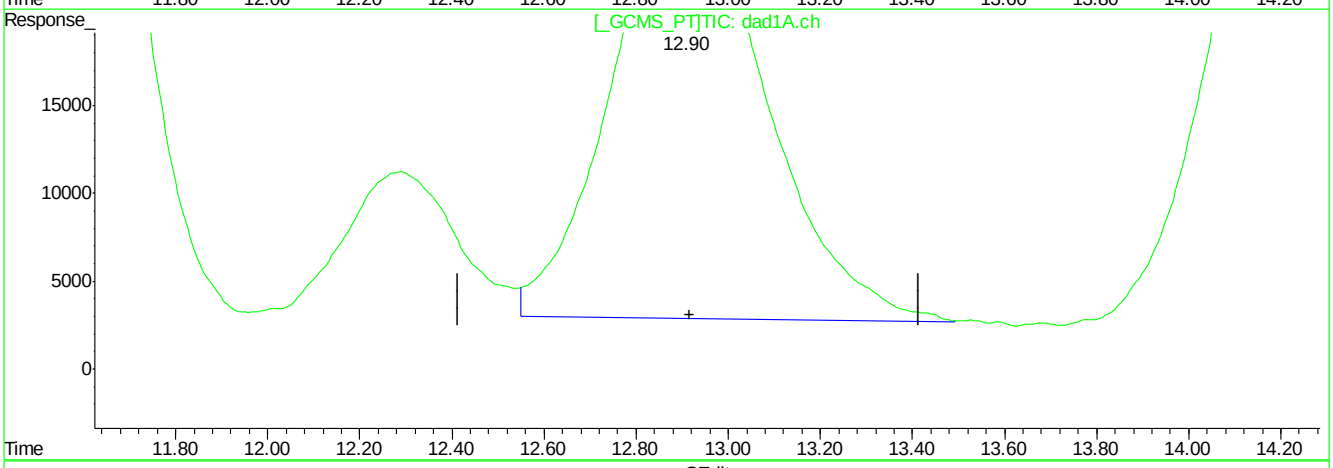
(+) = Expected Retention Time
GG619504.D 8330RPB.M_090920.M Wed Sep 09 16:19:41 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.91min 586.449ppb

response 3601978

(11) Tetryl #2

12.90min 556.328ppb m

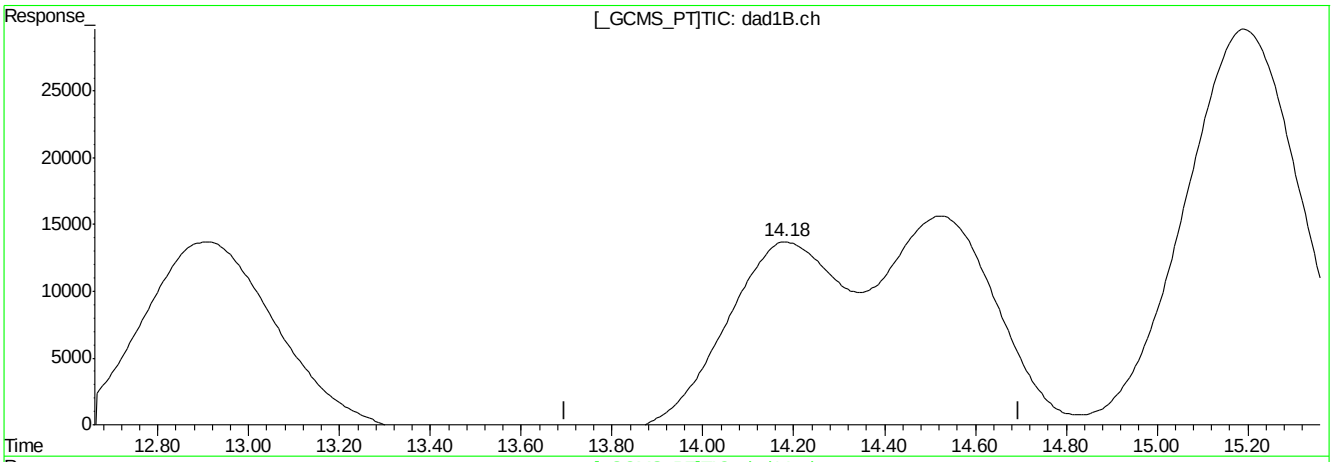
response 5688858

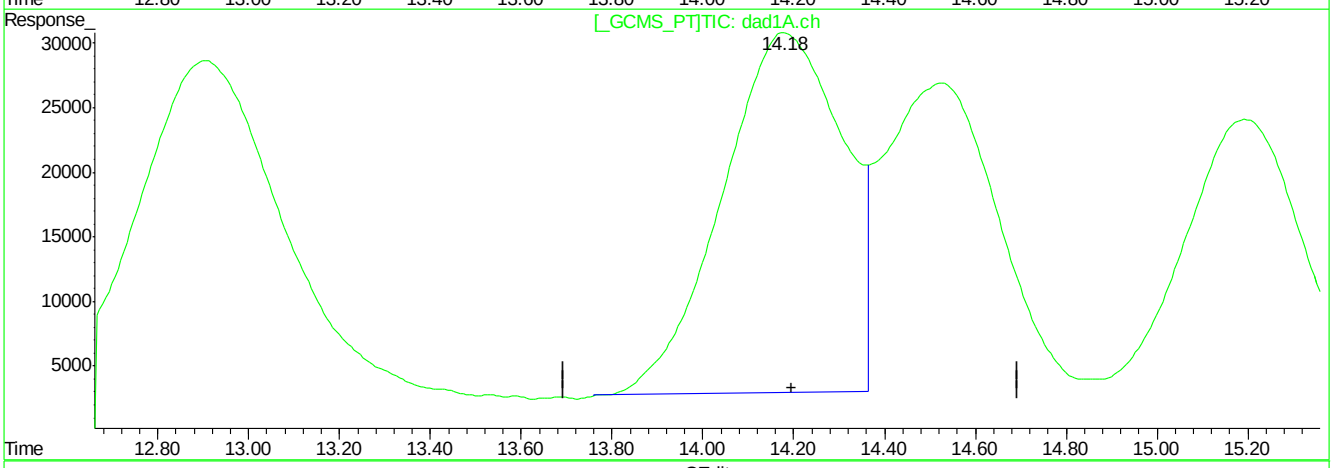
(+) = Expected Retention Time
GG619504.D 8330RPB.M_090920.M Wed Sep 09 16:19:48 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

14.18min 548.566ppb

response 2827180

(12) 3,4-Dinitrotoluene #2 (S)

14.18min 512.402ppb m

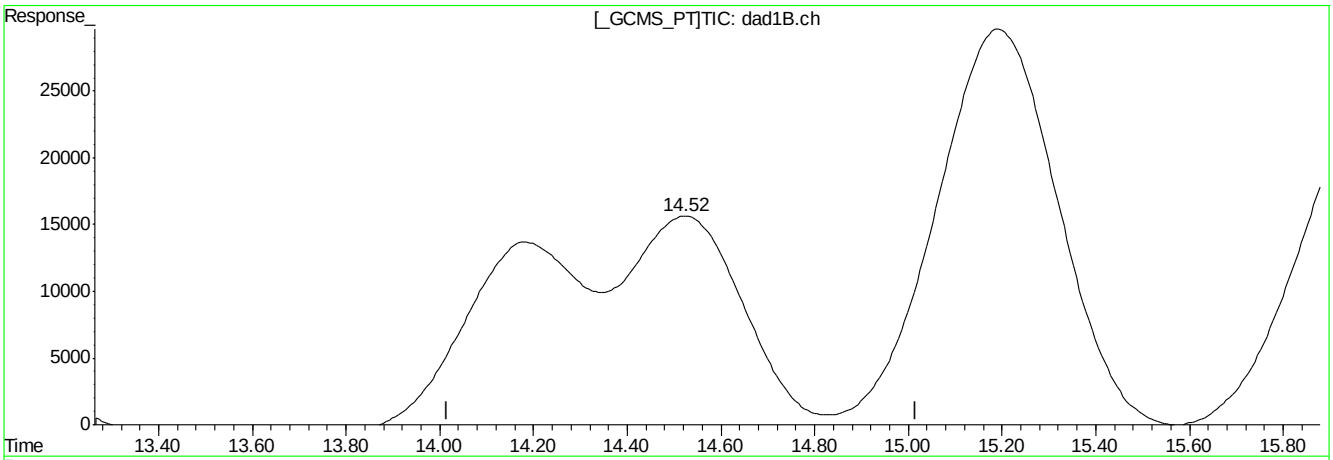
response 5095834

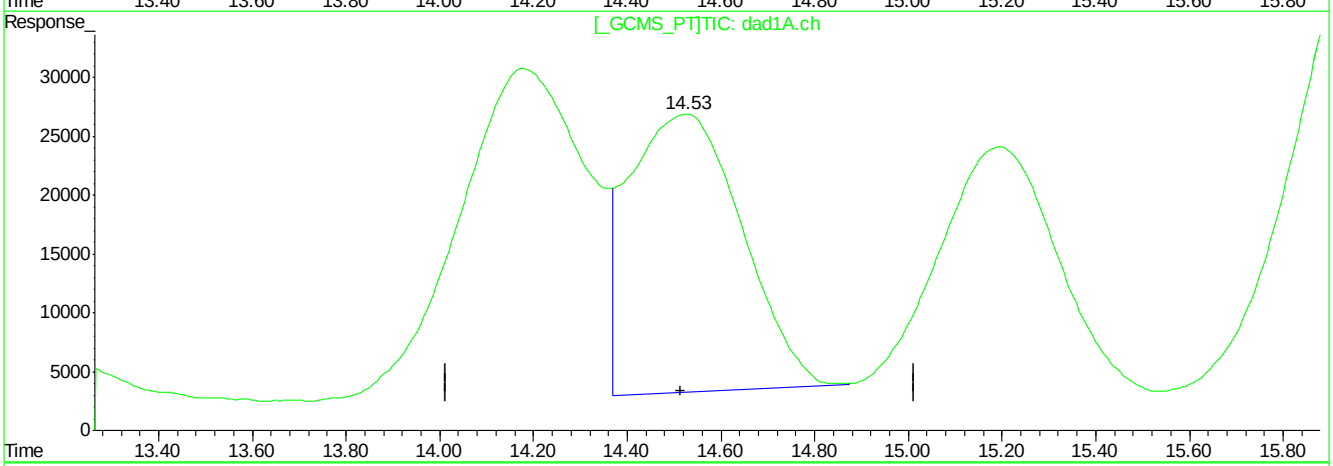
(+) = Expected Retention Time
GG619504.D 8330RPB.M_090920.M Wed Sep 09 16:19:55 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(13) 2,6-Dinitrotoluene

14.53min 519.463ppb

response 3143546

(13) 2,6-Dinitrotoluene #2

14.53min 466.088ppb m

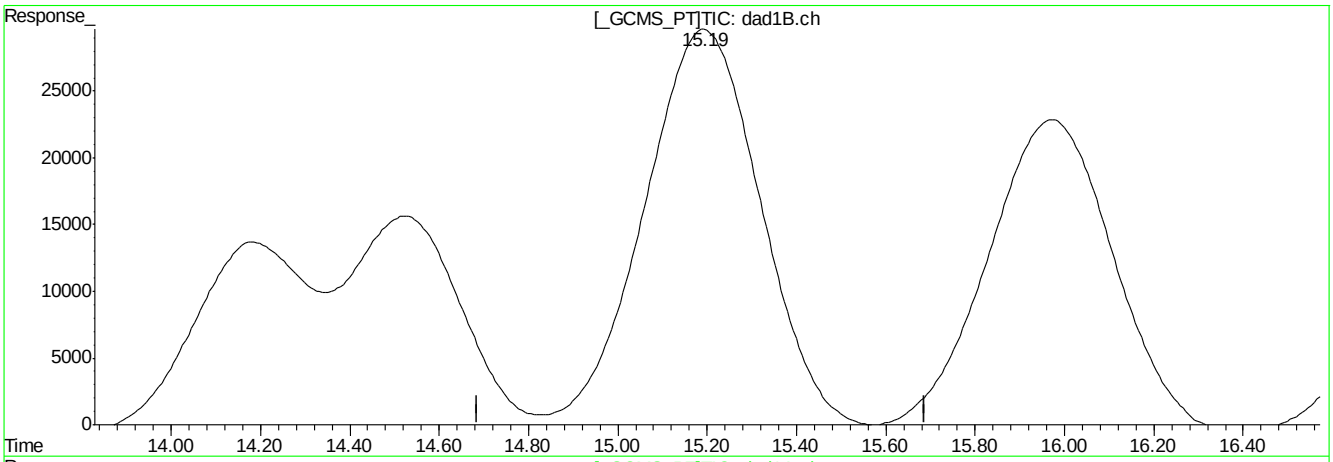
response 3945362

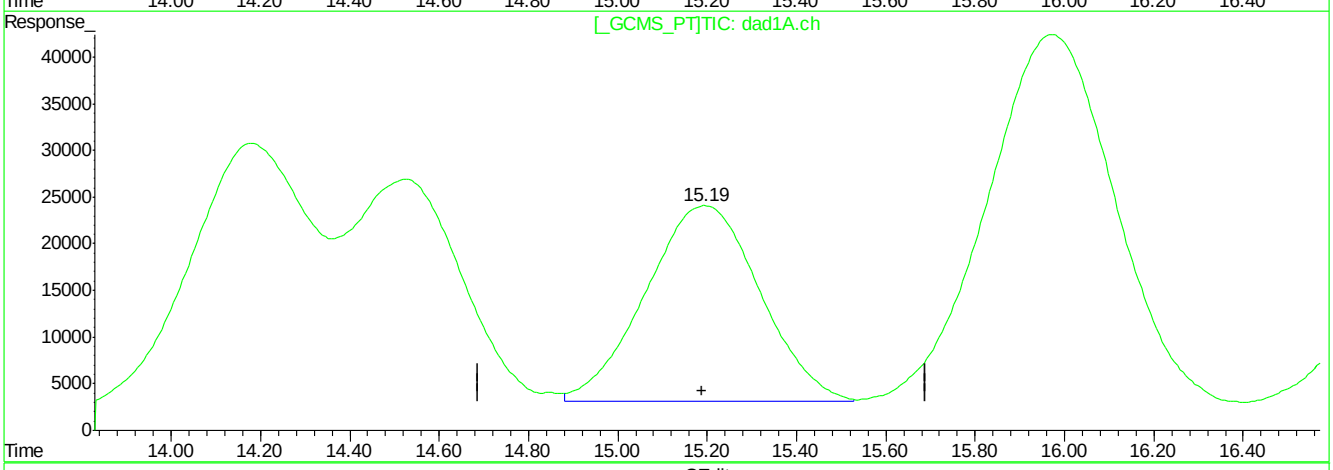
(+) = Expected Retention Time
GG619504.D 8330RPB.M_090920.M Wed Sep 09 16:20:00 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(14) 2,4-Dinitrotoluene

15.19min 512.702ppb

response 5963090

(14) 2,4-Dinitrotoluene #2

15.19min 455.858ppb m

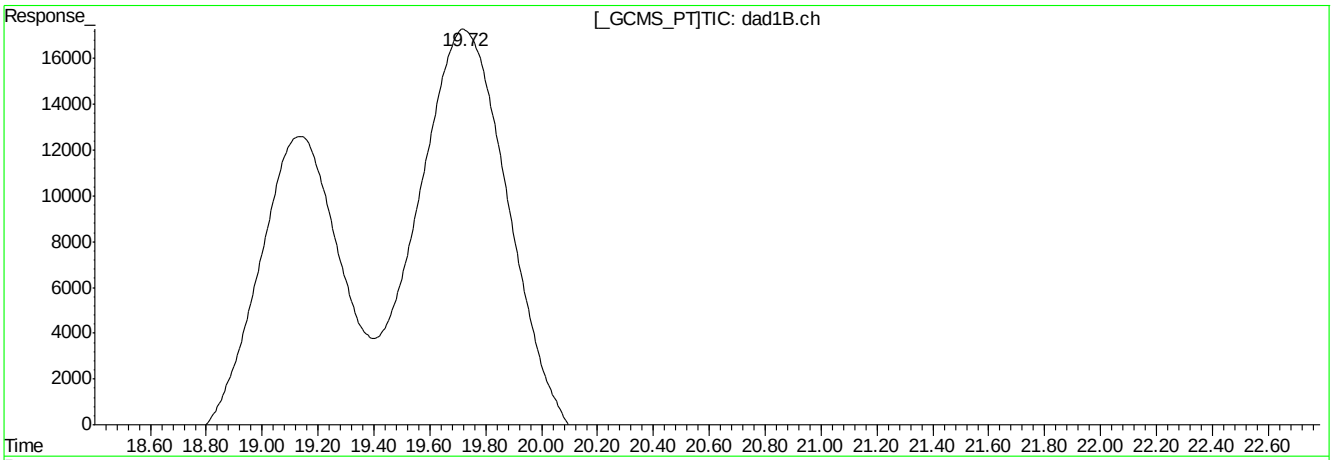
response 3747746

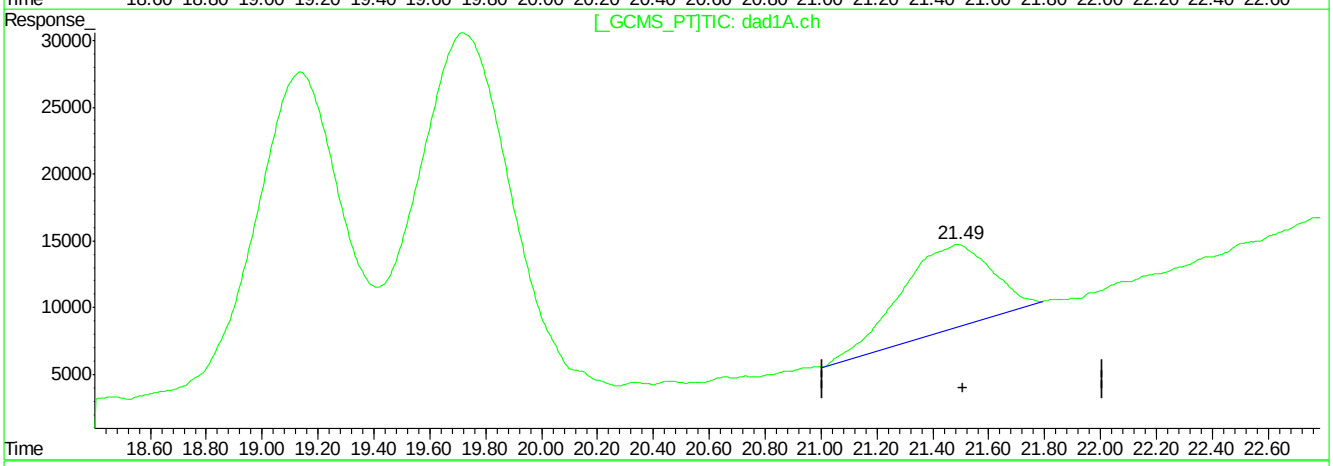
(+) = Expected Retention Time
GG619504.D 8330RPB.M_090920.M Wed Sep 09 16:20:07 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619504.D\dad1A.ch
Acq On : 09-Sep-2020, 14:44:12 Operator: williamh
Sample : ic2870-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

19.72min 0.000ppb

response 4461254

(21) PETN #2

21.49min 435.450ppb m

response 1431684

(+) = Expected Retention Time
GG619504.D 8330RPB.M_090920.M Wed Sep 09 16:20:18 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/09/20 17:32

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619505.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619505.D\dad1A.ch
Acq On : 09-Sep-2020, 15:14:35 Operator: williamh
Sample : icc2870-1000 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 09 16:01:33 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.19	14.19	5806892	11502651	1126.729	1156.628
	Spiked Amount 500.000	Range 70 - 136		Recovery =		225.35%#	231.33%#
	Target Compounds						
1)	TNX	5.06	5.06	6127454	6127454	1087.342	1083.258
2)	HMX	5.41	5.41	3547170	3547170	1073.859	1063.456
3)	DNX	5.59	5.59	2578659	2578659	1130.767	1084.036
4)	MNX	6.51	6.51	4756582	4756582	1176.946	1180.025
5)	1,3,5-Trinitrobe	7.48	7.48	9881561	9841902	1053.743	1046.921
6)	RDX	7.81	7.81	4649134	4545887	1069.616	1046.895
7)	1,3-Dinitrobenze	9.89	9.89	13523549	10814575	1073.192	1140.688
8)	Nitrobenzene	10.89	10.89	8866872	9073410	998.569	1238.723
9)	2,4,6-Trinitroto	11.62	11.62	9553738	13307020	1206.350	1228.719
10)	Nitroglycerin	0.00	12.29	0	3878168	N.D. d	1496.760
11)	Tetryl	12.90	12.90	7414116	13387087	1207.114	1298.867
13)	2,6-Dinitrotolue	14.53	14.53	6479682	9323624	1070.751	1101.452
14)	2,4-Dinitrotolue	15.20	15.19	12180849	8786073	1047.301	1068.695
15)	o-Nitrotoluene	16.80	16.80	5628368	8270655	1173.073	1053.117
16)	3,5-Dinitroanili	15.98	15.97	10374712	16950702	1096.298	1073.452
17)	p-Nitrotoluene	17.79	17.78	11433212	20605987	5291.653	6000.685
18)	4-Amino-2,6-Dini	17.79	17.78	11433212	20605987	3929.715	3464.574
19)	m-Nitrotoluene	19.14	19.14	6168809	10364987	434.407	461.445
20)	2-Amino-4,6-Dini	19.72	19.72	9139308	13303036	643.673	591.847
21)	PETN	0.00	21.46	0	3140989	N.D. d	958.278m

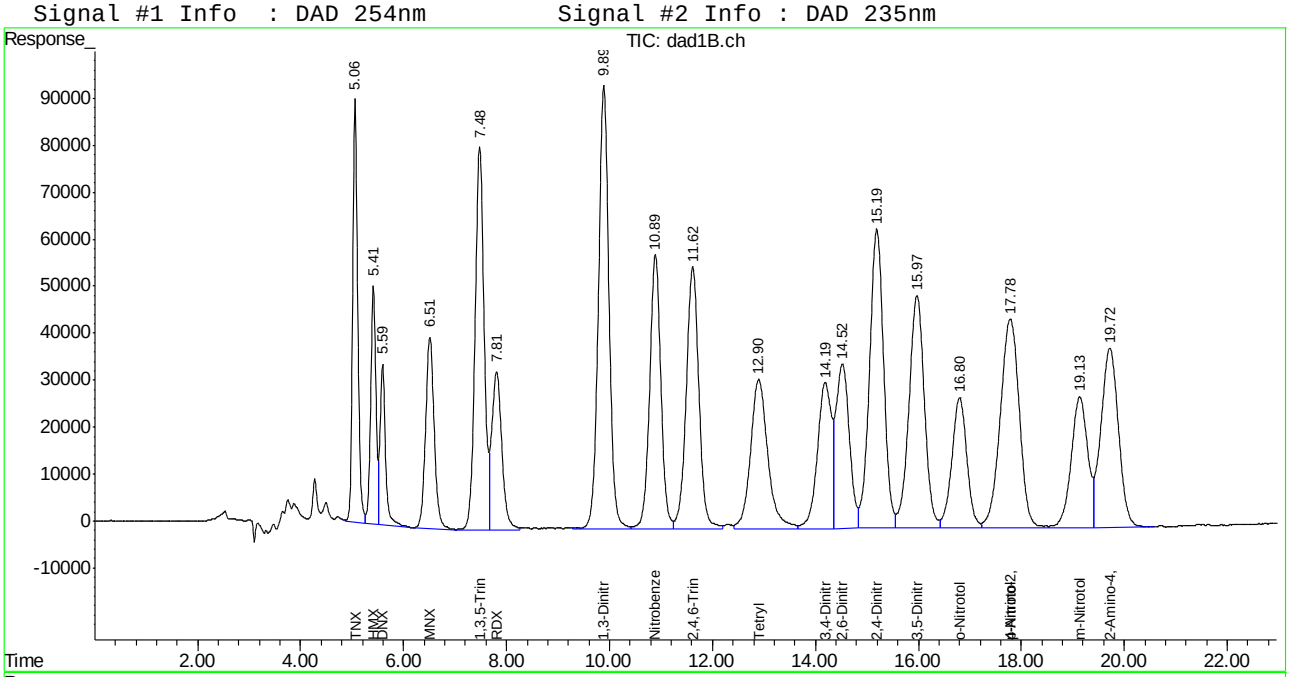
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619505.D 8330RPB.M_090920.M Wed Sep 09 17:13:00 2020 Page 1

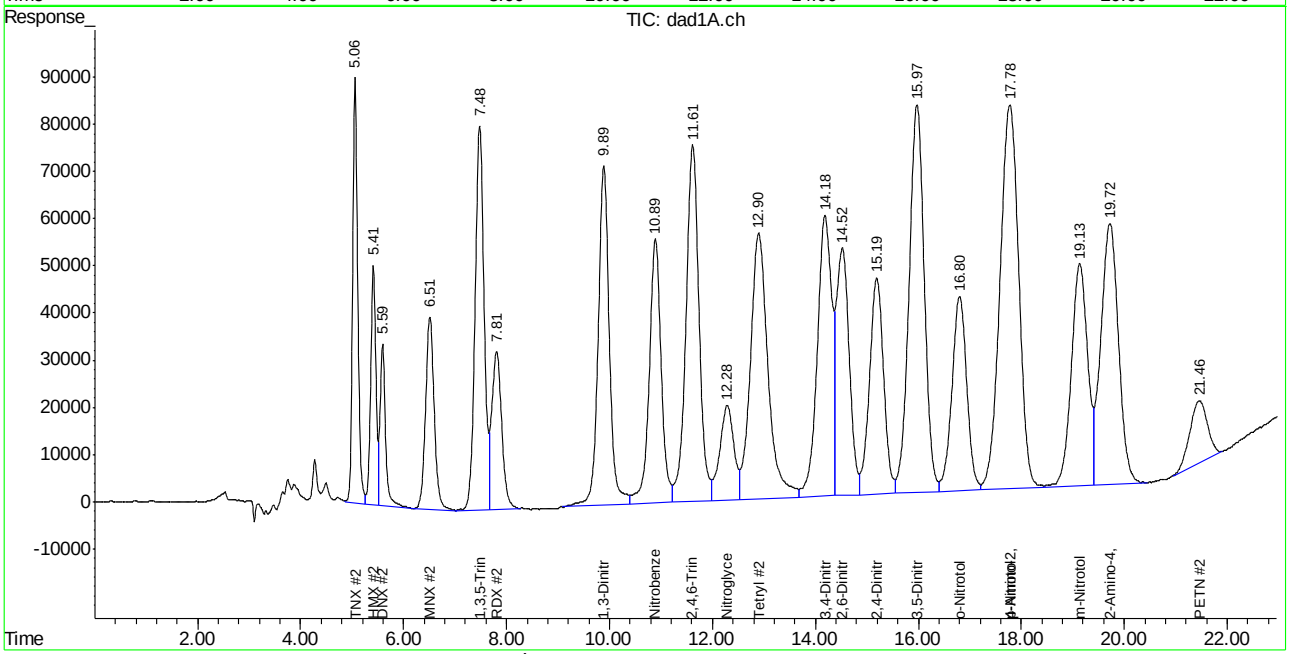
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619505.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619505.D\dad1A.ch
Acq On : 09-Sep-2020, 15:14:35 Operator: williamh
Sample : icc2870-1000 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:41 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

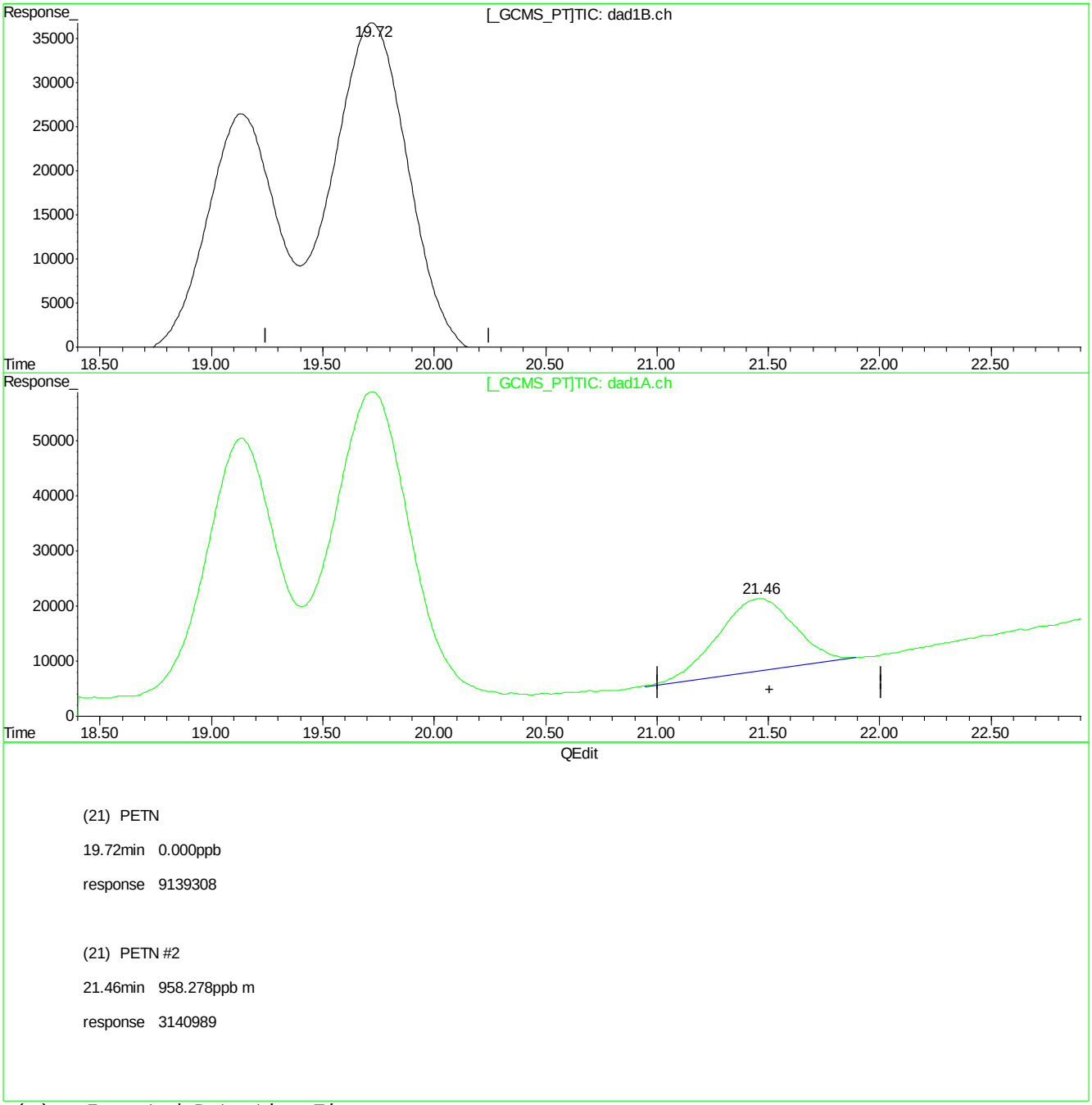
Sample Number:	GGG2870-ICC2870	**Method:**	SW846 8330A
Lab FileID:	GG619505.D	**Analyst approved:**	09/09/20 17:12 William Hustedde
Injection Time:	09/09/20 15:14	**Supervisor approved:**	09/09/20 17:32 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.46	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619505.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619505.D\dad1A.ch
Acq On : 09-Sep-2020, 15:14:35 Operator: williamh
Sample : icc2870-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:01 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration



(21) PETN

19.72min 0.000ppb

response 9139308

(21) PETN #2

21.46min 958.278ppb m

response 3140989

(+) = Expected Retention Time
GG619505.D 8330RPB.M_090920.M Wed Sep 09 16:20:43 2020

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619506.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619506.D\dad1A.ch
Acq On : 09-Sep-2020, 15:45:01 Operator: williamh
Sample : ic2870-2500 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 09 16:20:50 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.18	14.18	13974703	27895525	2711.554	2804.983
	Spiked Amount 500.000	Range 70 - 136		Recovery =		542.31%#	561.00%#
	Target Compounds						
1)	TNX	5.06	5.06	14653505	14653505	2600.324	2590.558
2)	HMX	5.41	5.41	8406715	8406715	2545.021	2520.367
3)	DNX	5.59	5.59	5870085	5870085	2574.090	2467.711
4)	MNX	6.51	6.51	11466689	11466689	2837.262	2844.684
5)	1,3,5-Trinitrobe	7.48	7.48	23885689	23885689	2547.106	2540.812
6)	RDX	7.80	7.80	11113263	11113263	2556.803	2559.329
7)	1,3-Dinitrobenze	9.89	9.89	32315970	25004969	2564.508	2637.447
8)	Nitrobenzene	10.89	10.89	21160545	20650575	2383.058	2819.265
9)	2,4,6-Trinitroto	11.62	11.62	22818540	30807643	2881.295	2844.659
10)	Nitroglycerin	0.00	12.29	0	8438409	N.D. d	2922.576
11)	Tetryl	12.88	12.88	17575565	31481213	2861.529	3000.392
13)	2,6-Dinitrotolue	14.52	14.52	15611297	22571425	2579.727	2666.488
14)	2,4-Dinitrotolue	15.19	15.19	29457842	21255273	2532.764	2585.388
15)	o-Nitrotoluene	16.80	16.80	13584943	20030101	2831.394	2550.469
16)	3,5-Dinitroanili	15.97	15.97	24939302	41333128	2635.341	2617.539
17)	p-Nitrotoluene	17.79	17.78	27588658	50417417	12768.906	14682.094
18)	4-Amino-2,6-Dini	17.79	17.78	27588658	50417417	9482.510	8476.900
19)	m-Nitrotoluene	19.13	19.13	14898306	25204175	1049.138	1122.080
20)	2-Amino-4,6-Dini	19.72	19.72	22082405	31583673	1555.243	1405.145
21)	PETN	0.00	21.45	0	7666337	N.D. d	2358.327

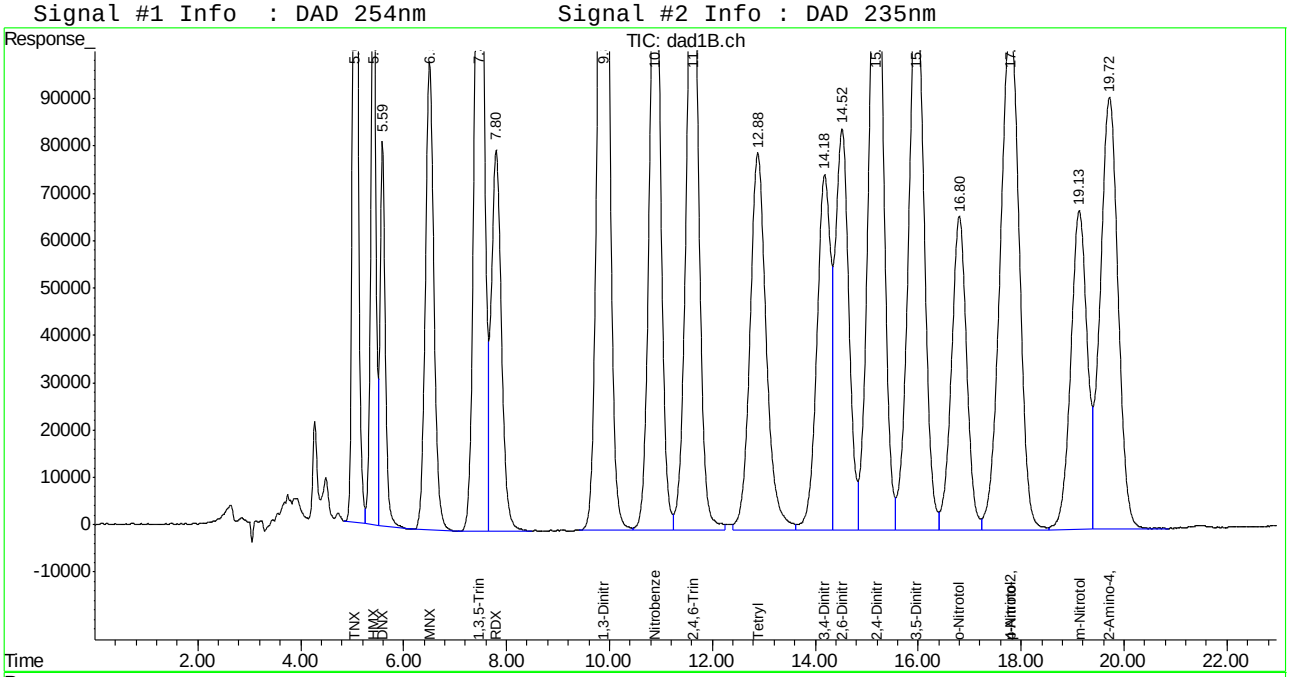
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619506.D 8330RPB.M_090920.M Wed Sep 09 17:13:01 2020 Page 1

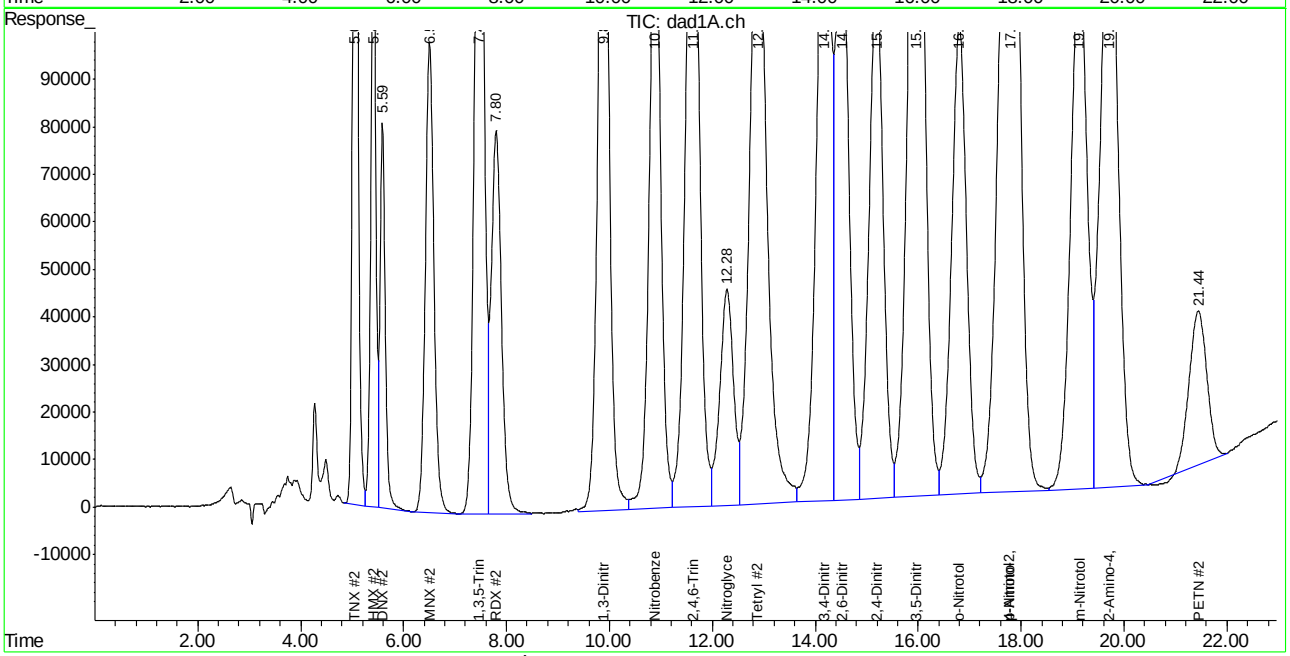
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619506.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619506.D\dad1A.ch
Acq On : 09-Sep-2020, 15:45:01 Operator: williamh
Sample : ic2870-2500 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:41 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619507.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619507.D\dad1A.ch
Acq On : 09-Sep-2020, 16:15:27 Operator: williamh
Sample : ic2870-5000 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 09 16:40:46 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.18	14.18	27132617	53756240	5264.624	5405.359
	Spiked Amount 500.000	Range 70 - 136		Recovery = 1052.92%#		1081.07%#	
	Target Compounds						
1)	TNX	5.06	5.06	28674318	28674318	5088.375	5069.264
2)	HMX	5.41	5.41	16361634	16361634	4953.266	4905.284
3)	DNX	5.59	5.59	11364975	11364975	4983.654	4777.695
4)	MNX	6.50	6.50	22596648	22596648	5591.205	5605.832
5)	1,3,5-Trinitrobe	7.48	7.48	46791254	46792997	4989.695	4977.549
6)	RDX	7.80	7.80	21863789	21873996	5030.152	5037.471
7)	1,3-Dinitrobenze	9.89	9.89	63533069	48658219	5041.812	5132.319
8)	Nitrobenzene	10.89	10.89	41570016	39464258	4681.532	5387.753
9)	2,4,6-Trinitroto	11.61	11.61	44884330	59716769	5667.541	5514.017
10)	Nitroglycerin	0.00	12.28	0	16072967	N.D. d	4879.523
11)	Tetryl	12.87	12.87	35120104	61732749	5718.007	5721.693
13)	2,6-Dinitrotolue	14.52	14.52	30824128	44594015	5093.609	5268.139
14)	2,4-Dinitrotolue	15.19	15.19	58025013	41965226	4988.949	5104.446
15)	o-Nitrotoluene	16.80	16.80	26641447	39692292	5552.650	5054.091
16)	3,5-Dinitroanili	15.96	15.96	49031705	81502469	5181.189	5161.378
17)	p-Nitrotoluene	17.79	17.78	54270133	99426083	25117.938	28953.945
18)	4-Amino-2,6-Dini	17.79	17.78	54270133	99426083	18653.213	16716.940
19)	m-Nitrotoluene	19.14	19.14	29238221	49756012	2058.955	2215.118
20)	2-Amino-4,6-Dini	19.72	19.72	43329576	62483605	3051.661	2779.870
21)	PETN	0.00	21.43	0	16215320	N.D. d	5069.696

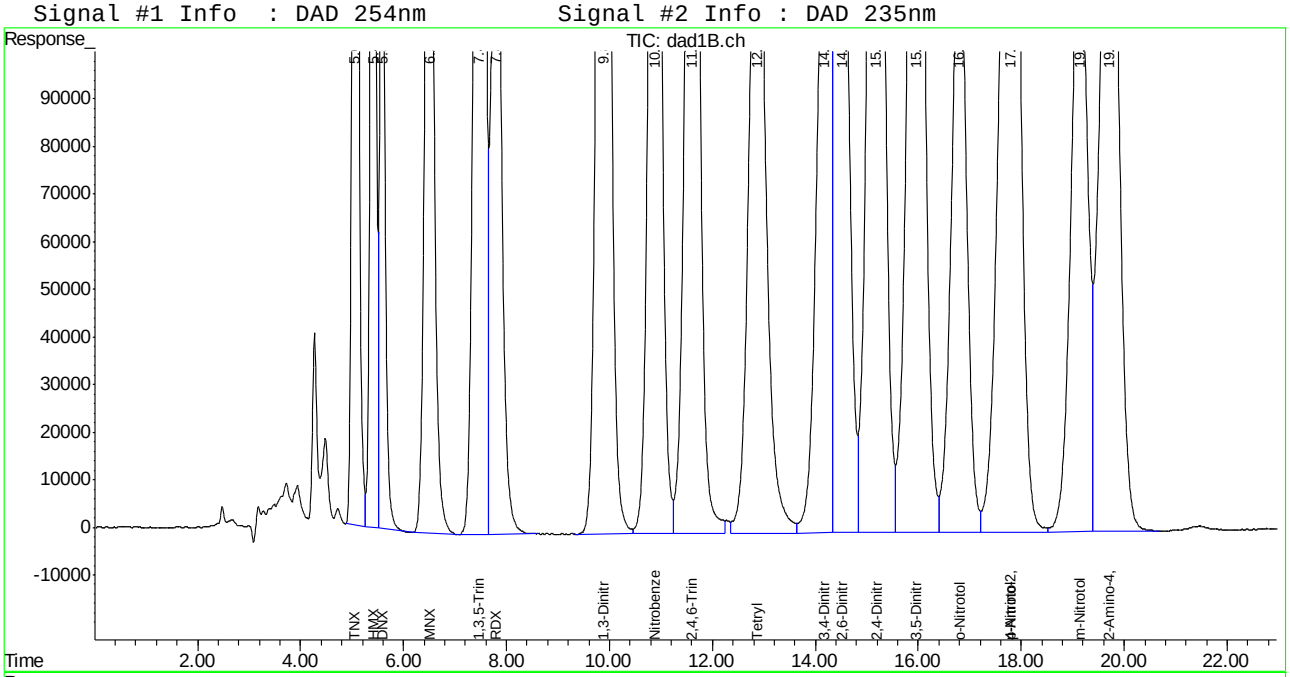
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619507.D 8330RPB.M_090920.M Wed Sep 09 17:13:02 2020 Page 1

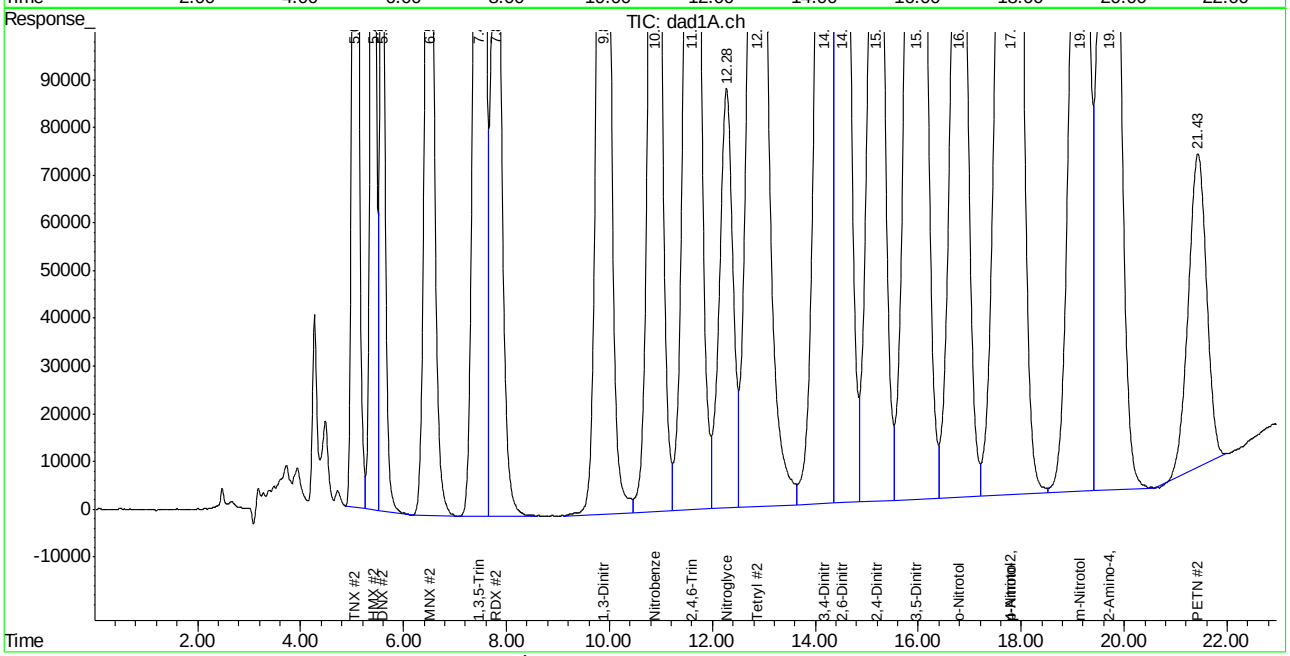
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619507.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619507.D\dad1A.ch
Acq On : 09-Sep-2020, 16:15:27 Operator: williamh
Sample : ic2870-5000 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 16:41 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 15:58:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/09/20 17:32

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1A.ch
Acq On : 09-Sep-2020, 16:45:57 Operator: williamh
Sample : icv2870-1000 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 09 17:09:16 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 16:42:48 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
	Spiked Amount 500.000	Range 70 - 136		Recovery =		0.00%#	0.00%#
	Target Compounds						
1)	TNX	5.06	5.06	7252473	7206848	1196.865m	1182.692m
2)	HMX	5.42	5.42	3743664	3743664	1049.216	1048.155
3)	DNX	5.60	5.60	2536853	2536853	951.963	953.954
4)	MNX	6.51	6.51	4713491	4713491	1025.228	1025.228
5)	1,3,5-Trinitrobe	7.47	7.47	9897790	9889572	1018.280	1020.375
6)	RDX	7.80	7.80	4744252	4719586	1067.002	1060.207
7)	1,3-Dinitrobenze	9.89	9.89	13529999	10833005	1060.868	1146.811
8)	Nitrobenzene	10.90	10.89	8955765	8132569	1025.875	1007.134m
9)	2,4,6-Trinitroto	11.61	11.61	10002460	12666187	1110.852	1089.624m
10)	Nitroglycerin	0.00	12.27	0	3356729	N.D. d	958.346m
11)	Tetryl	12.89	12.89	7006074	12252387	1037.958m	959.216m
13)	2,6-Dinitrotolue	14.53	14.53	6105785	9182154	1008.064m	1053.474m
14)	2,4-Dinitrotolue	15.20	15.20	12413766	8909173	1060.522	1145.606
15)	o-Nitrotoluene	16.81	16.81	5882363	8559206	1125.738	1089.893
16)	3,5-Dinitroanili	15.98	15.98	10227964	16901561	1012.046	1052.031
17)	p-Nitrotoluene	17.80	17.79	11633426	21042257	2124.233	2058.391
18)	4-Amino-2,6-Dini	17.80	17.79	11633426	21042257	2117.029	2048.384
19)	m-Nitrotoluene	19.14	19.14	6392531	10812434	1097.967	1088.005
20)	2-Amino-4,6-Dini	19.73	19.73	9011010	12831852	1005.873	1002.663
21)	PETN	19.73	21.44	9011010	3052815	NoCal	1026.135m#

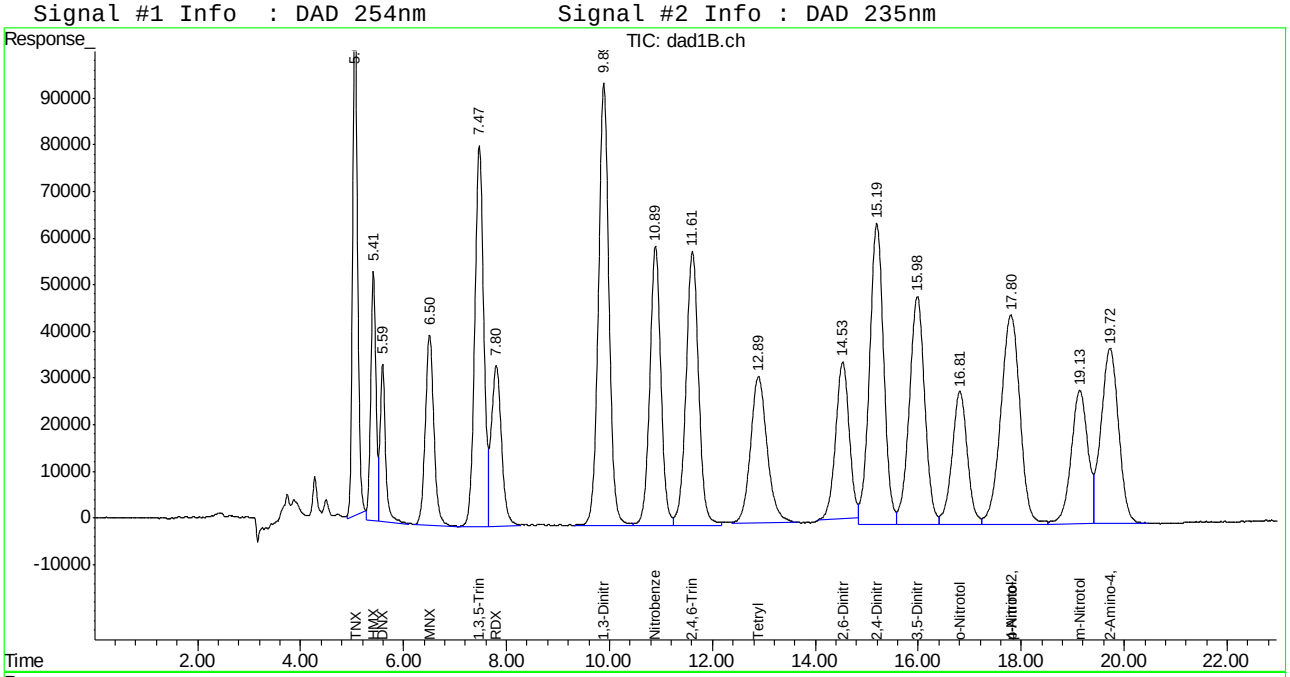
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619508.D 8330RPB.M_090920.M Wed Sep 09 17:14:41 2020 Page 1

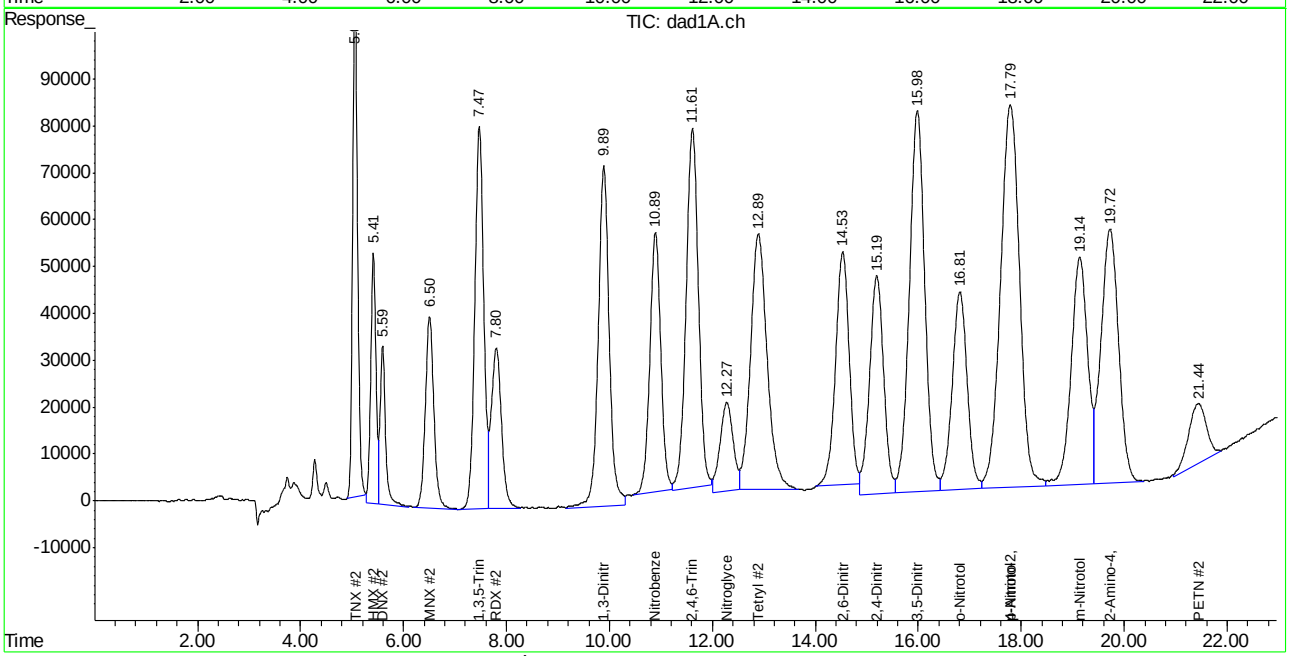
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1A.ch
Acq On : 09-Sep-2020, 16:45:57 Operator: williamh
Sample : icv2870-1000 Inst : G1315B
Misc : op81814,GGG2870,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 17:10 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 16:42:48 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

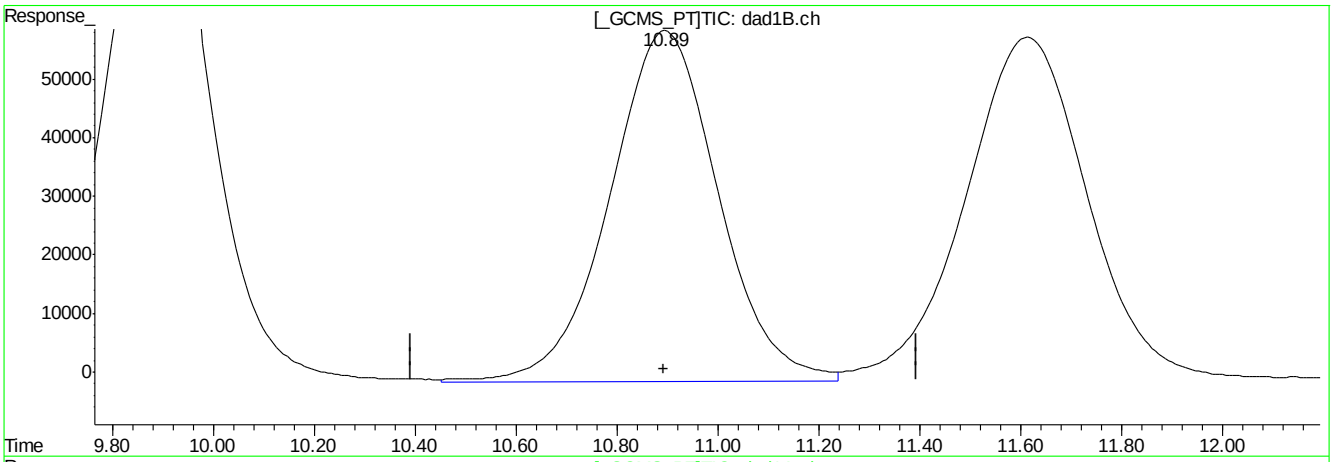
Sample Number: GGG2870-ICV2870 **Method:** SW846 8330A
Lab FileID: GG619508.D **Analyst approved:** 09/09/20 17:12 William Hustedde
Injection Time: 09/09/20 16:45 **Supervisor approved:** 09/09/20 17:32 Naresh Jiawan

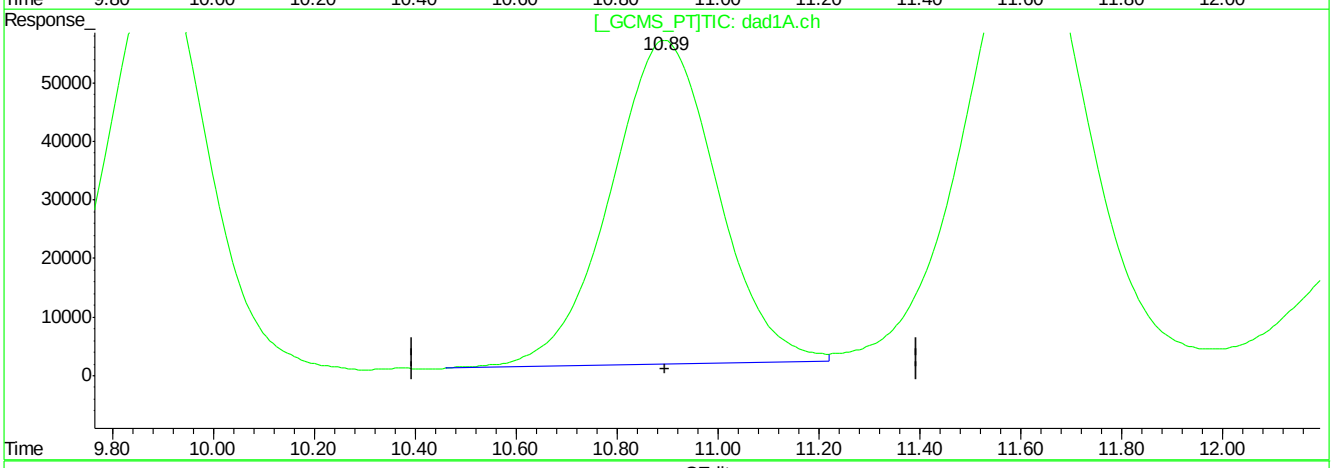
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	5.06	Poor instrument integration
TNX		2	5.06	Poor instrument integration
Nitrobenzene	98-95-3	2	10.89	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.61	Poor instrument integration
Nitroglycerine	55-63-0	2	12.27	Poor instrument integration
Tetryl	479-45-8	1	12.89	Poor instrument integration
Tetryl	479-45-8	2	12.89	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	14.53	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	14.53	Poor instrument integration
PETN	78-11-5	2	21.44	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1A.ch
Acq On : 09-Sep-2020, 16:45:57 Operator: williamh
Sample : icv2870-1000 Inst : G1315B
Misc : op81814,GGG2869,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 17:09 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 16:42:48 2020
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.90min 1025.875ppb

response 8955765

(8) Nitrobenzene #2

10.89min 1007.134ppb m

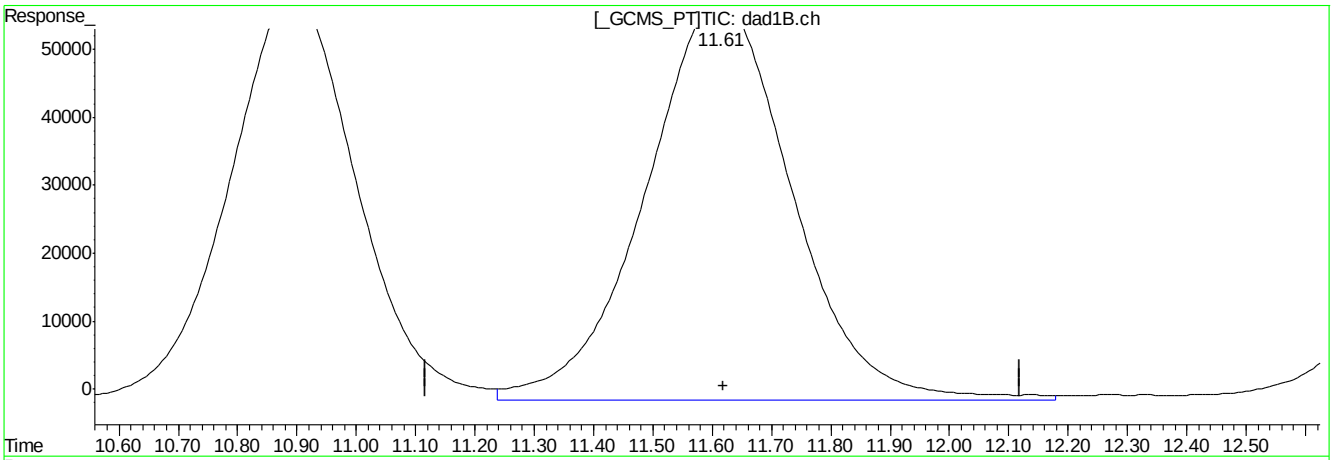
response 8132569

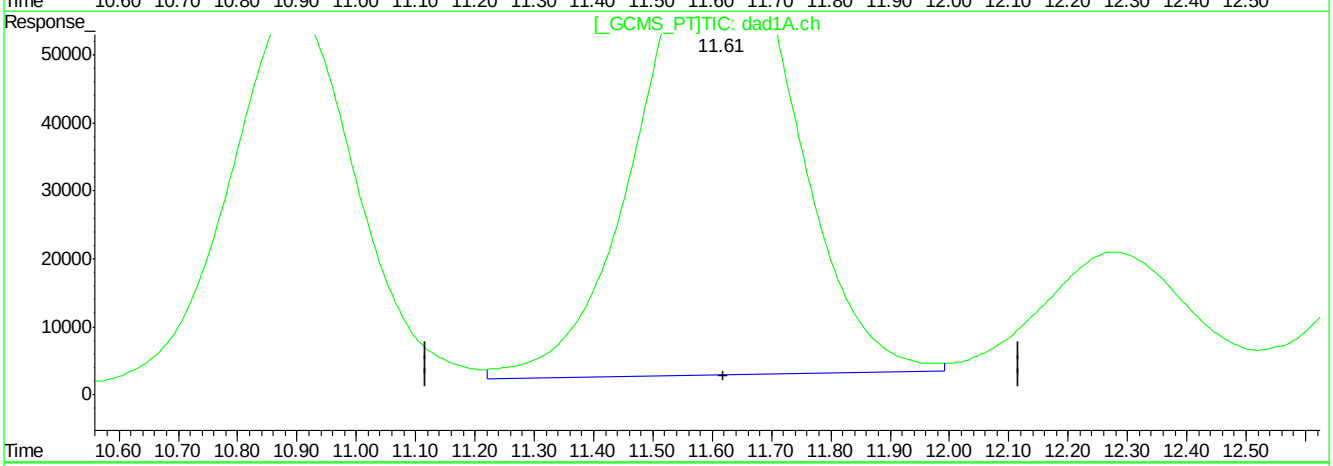
(+) = Expected Retention Time
GG619508.D 8330RPB.M_090920.M Wed Sep 09 17:09:38 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1A.ch
Acq On : 09-Sep-2020, 16:45:57 Operator: williamh
Sample : icv2870-1000 Inst : G1315B
Misc : op81814,GGG2869,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 17:09 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 16:42:48 2020
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.61min 1110.852ppb

response 10002460

(9) 2,4,6-Trinitrotoluene #2

11.61min 1089.624ppb m

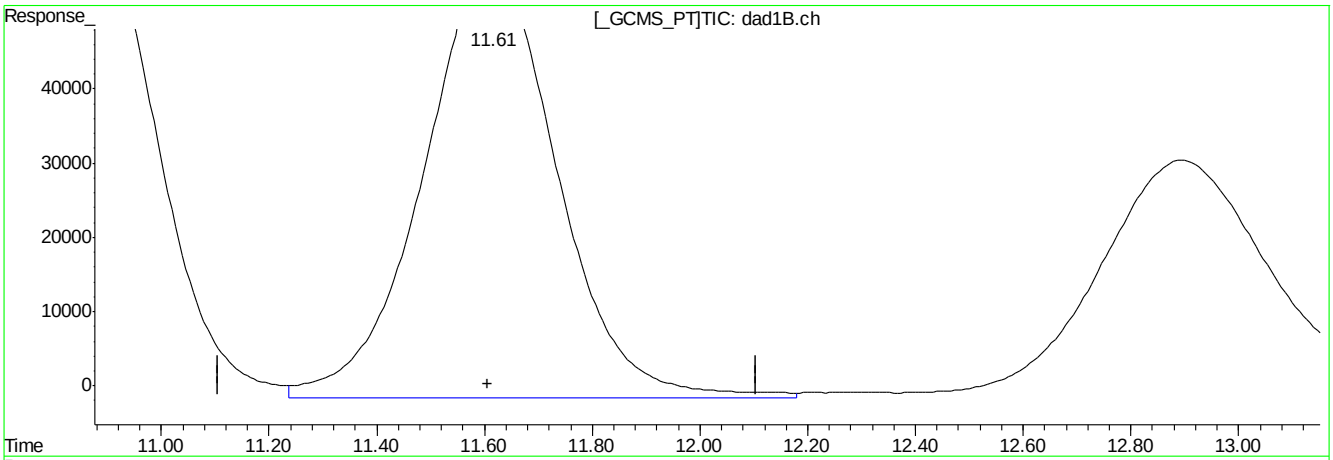
response 12666187

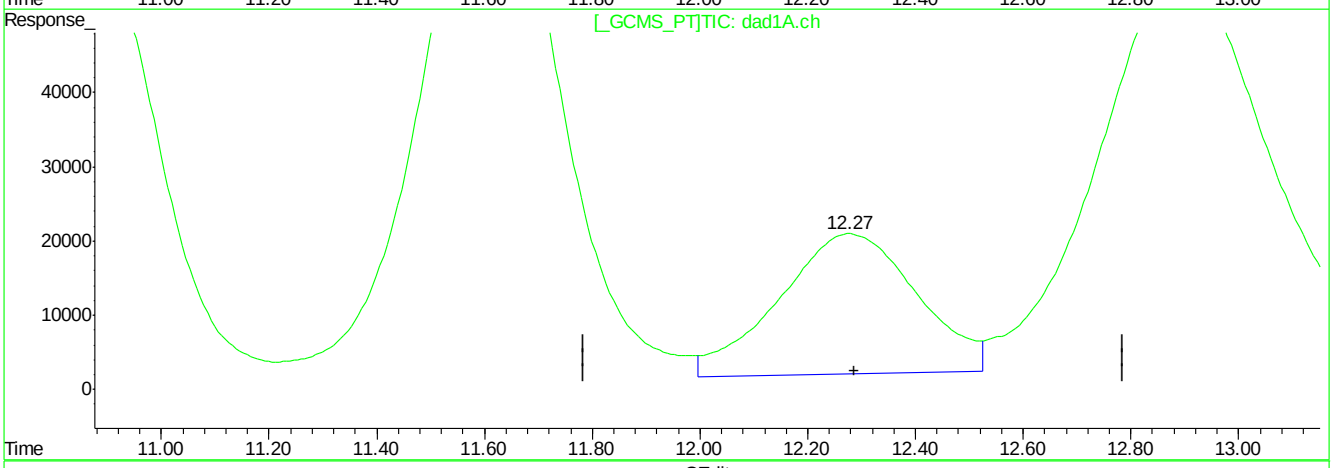
(+) = Expected Retention Time
GG619508.D 8330RPB.M_090920.M Wed Sep 09 17:09:44 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1A.ch
Acq On : 09-Sep-2020, 16:45:57 Operator: williamh
Sample : icv2870-1000 Inst : G1315B
Misc : op81814,GGG2869,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 17:09 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 16:42:48 2020
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

11.61min 0.000ppb

response 10002460

(10) Nitroglycerin #2

12.27min 958.346ppb m

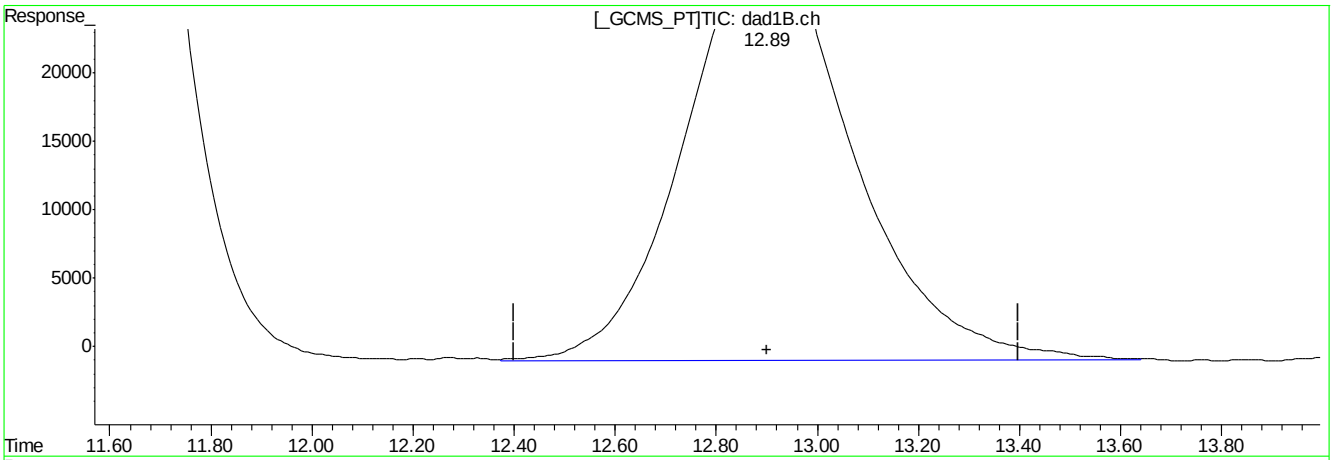
response 3356729

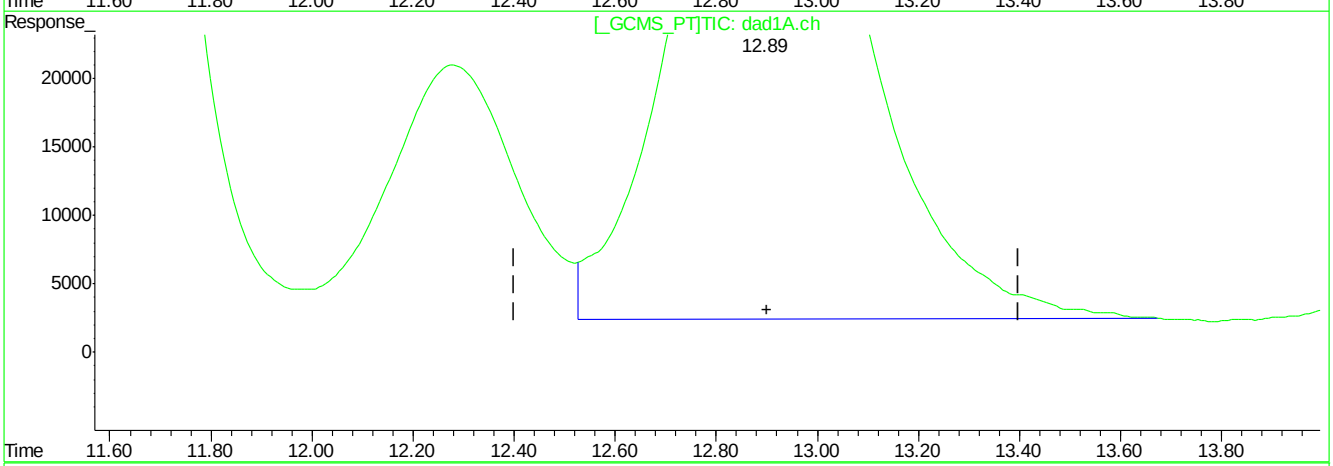
(+) = Expected Retention Time
GG619508.D 8330RPB.M_090920.M Wed Sep 09 17:09:55 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1A.ch
Acq On : 09-Sep-2020, 16:45:57 Operator: williamh
Sample : icv2870-1000 Inst : G1315B
Misc : op81814,GGG2869,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 17:09 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 16:42:48 2020
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.89min 1037.958ppb m

response 7006074

(11) Tetryl #2

12.89min 959.216ppb m

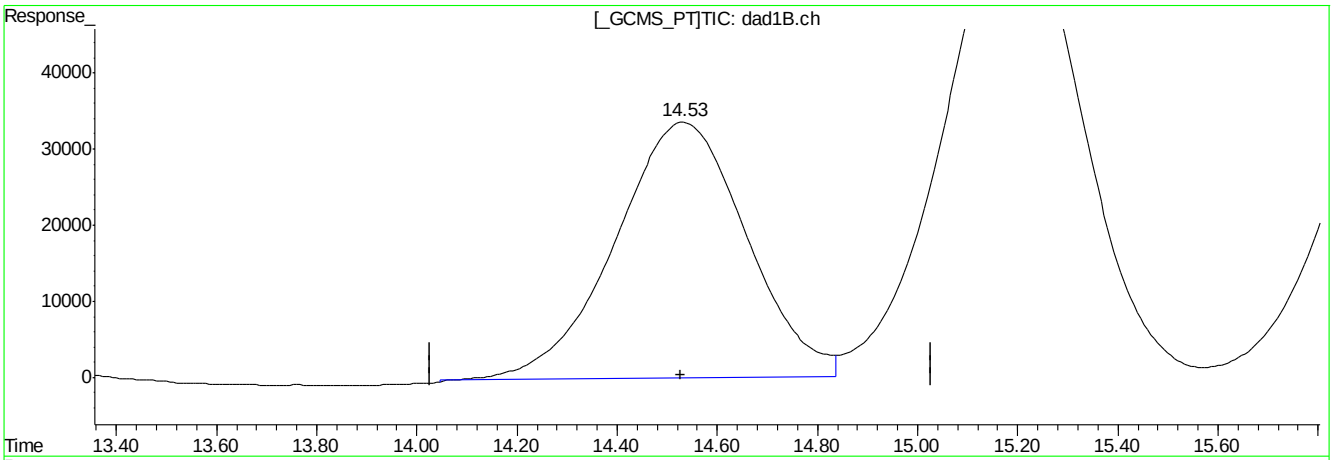
response 12252387

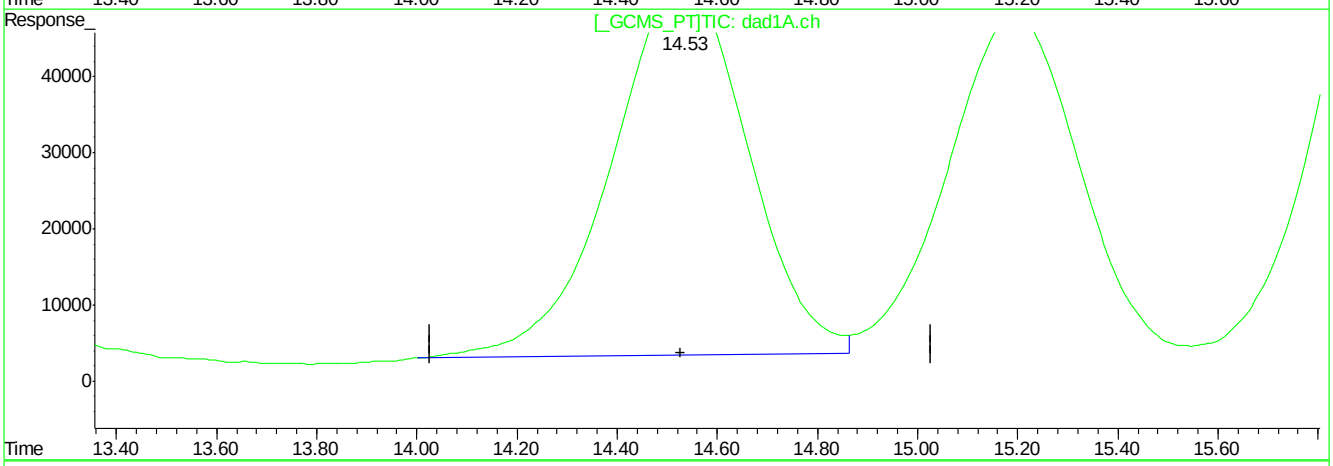
(+) = Expected Retention Time
GG619508.D 8330RPB.M_090920.M Wed Sep 09 17:10:05 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1A.ch
Acq On : 09-Sep-2020, 16:45:57 Operator: williamh
Sample : icv2870-1000 Inst : G1315B
Misc : op81814,GGG2869,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 17:09 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 16:42:48 2020
Response via : Multiple Level Calibration





QEdit

(13) 2,6-Dinitrotoluene

14.53min 1008.064ppb m

response 6105785

(13) 2,6-Dinitrotoluene #2

14.53min 1053.474ppb m

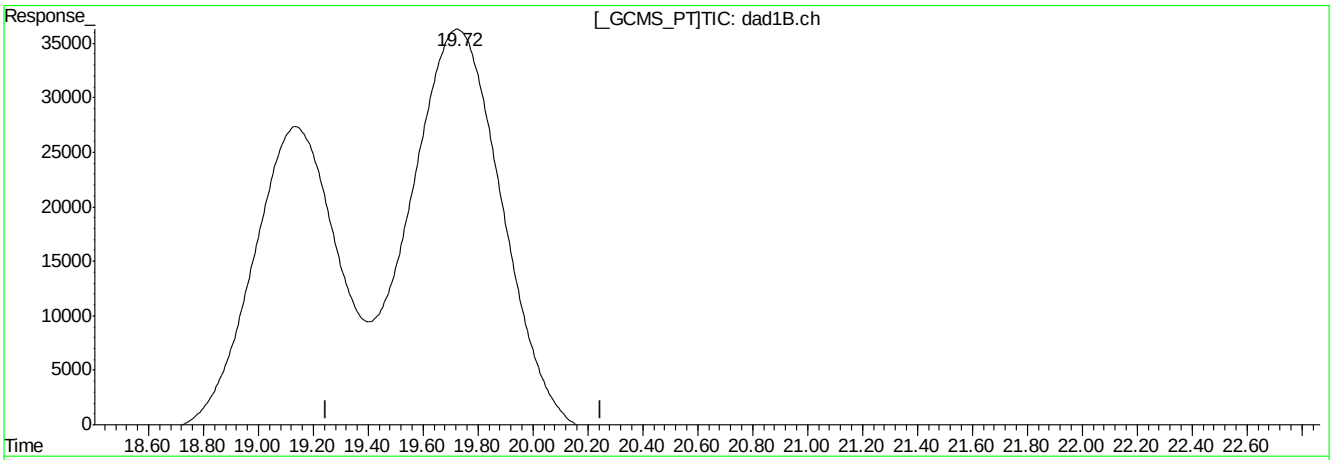
response 9182154

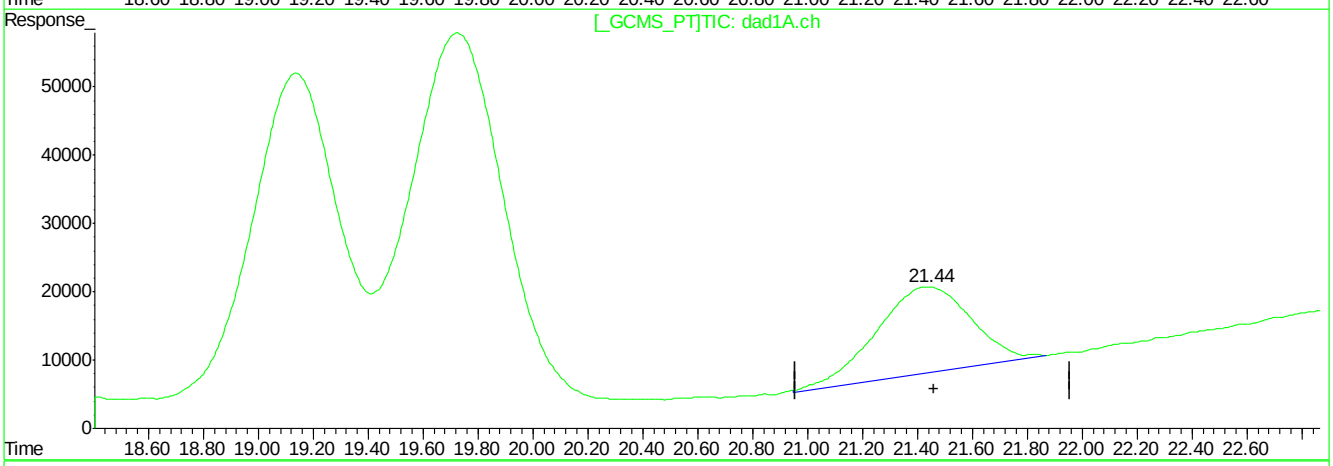
(+) = Expected Retention Time
GG619508.D 8330RPB.M_090920.M Wed Sep 09 17:10:17 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2870\GG619508.D\dad1A.ch
Acq On : 09-Sep-2020, 16:45:57 Operator: williamh
Sample : icv2870-1000 Inst : G1315B
Misc : op81814,GGG2869,1060,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Sep 9 17:09 2020 Quant Results File: 8330RPB.M_090920.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Sep 09 16:42:48 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

19.73min 0.000ppb

response 9011010

(21) PETN #2

21.44min 1026.135ppb m

response 3052815

(+) = Expected Retention Time
GG619508.D 8330RPB.M_090920.M Wed Sep 09 17:10:33 2020

GG619508.D edits: PETN

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619914.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619914.D\dad1A.ch
Acq On : 02-Nov-2020, 13:45:24 Operator: jamesb
Sample : cc2870-1000 Inst : G1315B
Misc : op82735,GGG2889,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 03 09:20:44 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
12) S	3,4-Dinitrotolue	13.81	13.81	5231733	10832107	959.386	1043.009	
Spiked Amount	500.000	Range	70 - 136	Recovery	=	191.88%#	208.60%#	
	Target Compounds							
1)	TNX	5.04	5.04	8304776	8304776	1370.525	1362.870	
2)	HMX	5.40	5.40	3354409	3354409	940.122	939.171	
3)	DNX	5.57	5.57	6810201	6810201	2555.552	2560.896	
4)	MNX	6.45	6.45	6667885	6667885	1450.327	1450.327	
5)	1,3,5-Trinitrobe	7.32	7.32	9424361	9424361	969.574	972.376	
6)	RDX	7.68	7.68	4336153	4336153	975.218	974.073	
7)	1,3-Dinitrobenze	9.70	9.70	12805017	10321790	1004.024	1092.692	
8)	Nitrobenzene	10.68	10.68	8177569	8846562	936.733	1095.555	
9)	2,4,6-Trinitroto	11.28	11.28	8976725	12852736	996.936	1105.672	
10)	Nitroglycerin	0.00	11.91	0	3712410	N.D.	1062.136	#
11)	Tetryl	12.37	12.37	6918410	13031833	1024.970	1020.755	
13)	2,6-Dinitrotolue	14.16	14.16	6126156	9287058	1011.427	1065.509	
14)	2,4-Dinitrotolue	14.80	14.80	11659387	8753577	996.075	1125.598	
15)	o-Nitrotoluene	16.38	16.38	5221308	7953002	999.228	1012.701	
16)	3,5-Dinitroanili	15.49	15.49	9795264	16614242	969.231	1034.147	
17)	p-Nitrotoluene	17.29	17.26	10765631	19937753	1965.776	1950.346	
18)	4-Amino-2,6-Dini	17.29	17.26	10765631	19937753	1959.109	1940.865	
19)	m-Nitrotoluene	18.66	18.65	5814310	10178686	998.653	1024.234	
20)	2-Amino-4,6-Dini	19.15	19.14	8566907	12294823	956.299	960.700	
21)	PETN	0.00	20.55	0	3027937	N.D.	1017.773	#

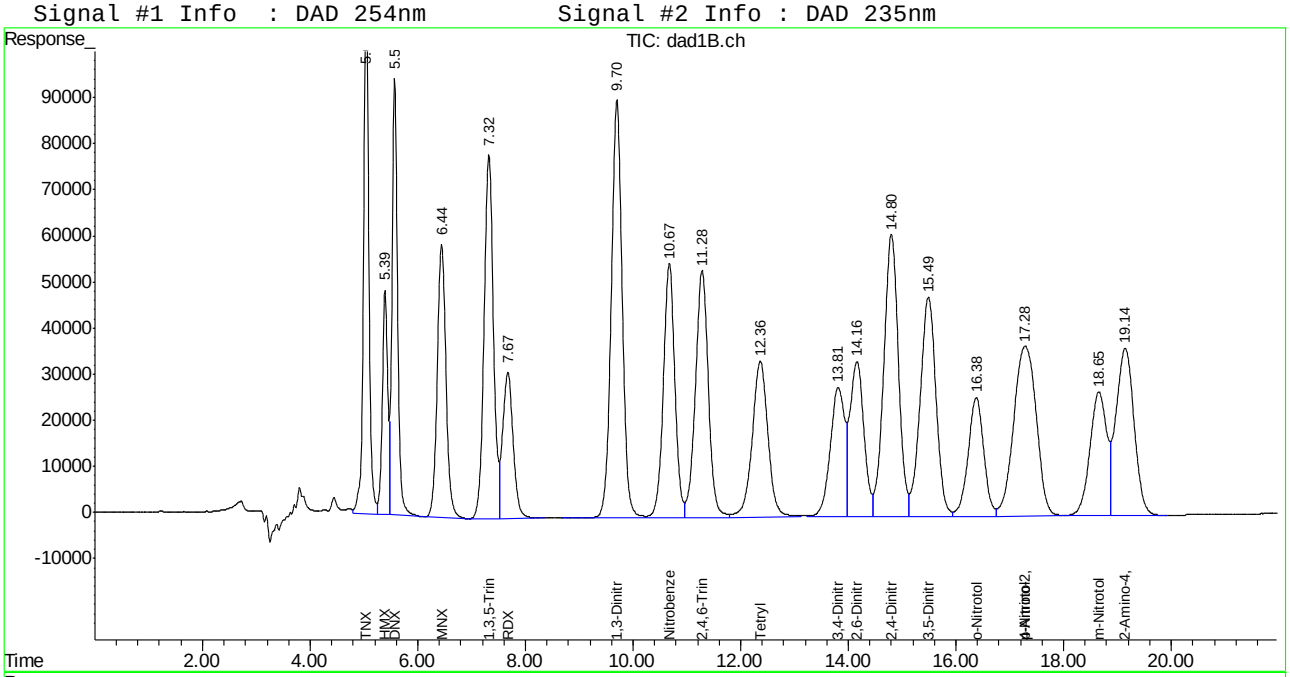
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619914.D 8330RPB.M_090920.M Tue Nov 03 11:14:40 2020 Page 1

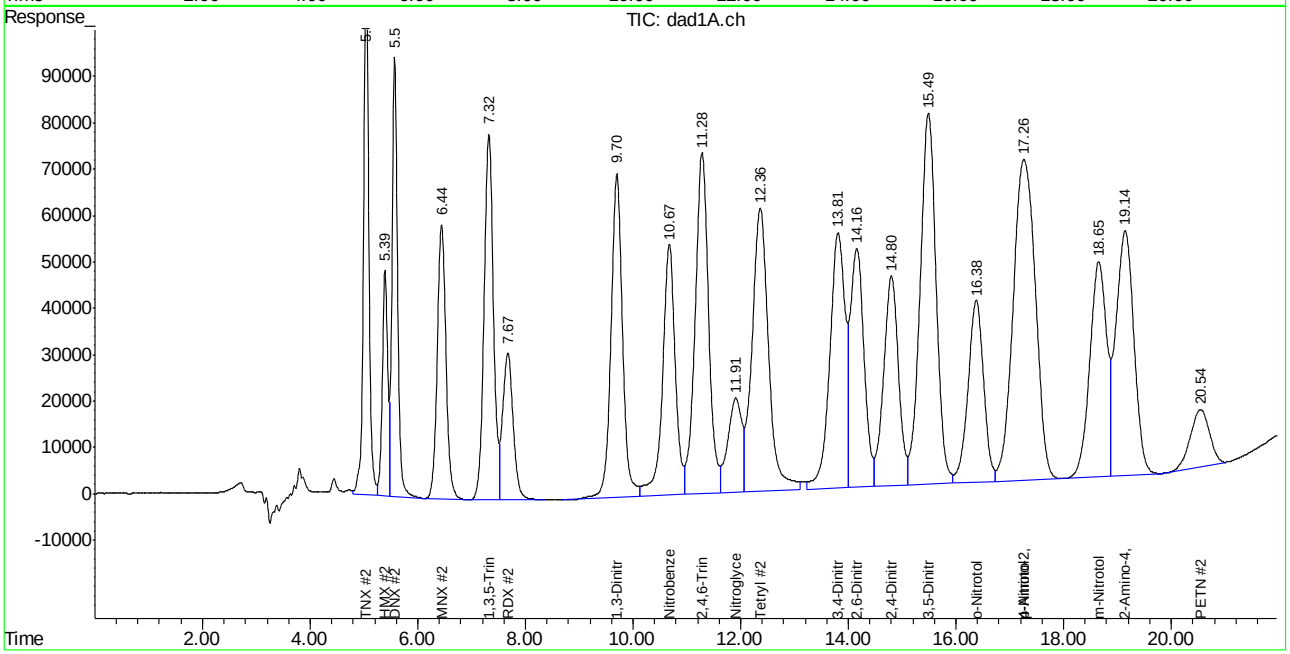
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619914.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619914.D\dad1A.ch
Acq On : 02-Nov-2020, 13:45:24 Operator: jamesb
Sample : cc2870-1000 Inst : G1315B
Misc : op82735,GGG2889,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619925.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619925.D\dad1A.ch
Acq On : 02-Nov-2020, 19:09:05 Operator: jamesb
Sample : cc2870-1000 Inst : G1315B
Misc : op82734,GGG2889,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 03 09:20:55 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
12) S	3,4-Dinitrotolue	13.90	13.89	5195415	10972126	952.726	1056.492	
Spiked Amount	500.000	Range	70 - 136	Recovery	=	190.55%#	211.30%#	
	Target Compounds							
1)	TNX	5.06	5.06	8311697	8311697	1371.667	1364.005	
2)	HMX	5.41	5.41	3344577	3344577	937.366	936.418	
3)	DNX	5.59	5.59	6841776	6841776	2567.400	2572.770	
4)	MNX	6.48	6.48	6673615	6673615	1451.573	1451.573	
5)	1,3,5-Trinitrobe	7.35	7.35	9386420	9386420	965.670	968.461	
6)	RDX	7.72	7.72	4360823	4360823	980.767	979.615	
7)	1,3-Dinitrobenze	9.75	9.75	12758236	10257643	1000.356	1085.901	
8)	Nitrobenzene	10.73	10.73	8080737	8473062	925.641	1049.301	
9)	2,4,6-Trinitroto	11.34	11.34	8923092	12703989	990.980	1092.876	
10)	Nitroglycerin	0.00	11.97	0	3745989	N.D.	1071.958	#
11)	Tetryl	12.45	12.45	6923634	12925156	1025.744	1012.329	
13)	2,6-Dinitrotolue	14.24	14.24	6137887	9121806	1013.364	1046.550	
14)	2,4-Dinitrotolue	14.89	14.89	11638820	8673498	994.318	1115.301	
15)	o-Nitrotoluene	16.47	16.47	5157669	7735466	987.049	985.001	
16)	3,5-Dinitroanili	15.60	15.60	9783580	16370093	968.075	1018.950	
17)	p-Nitrotoluene	17.42	17.40	10727494	19577194	1958.813	1915.076	
18)	4-Amino-2,6-Dini	17.42	17.40	10727494	19577194	1952.169	1905.766	
19)	m-Nitrotoluene	18.76	18.76	5724786	9803504	983.277	986.481	
20)	2-Amino-4,6-Dini	19.30	19.30	8625341	12310217	962.822	961.903	
21)	PETN	0.00	20.66	0	2939322	N.D.	987.987	#

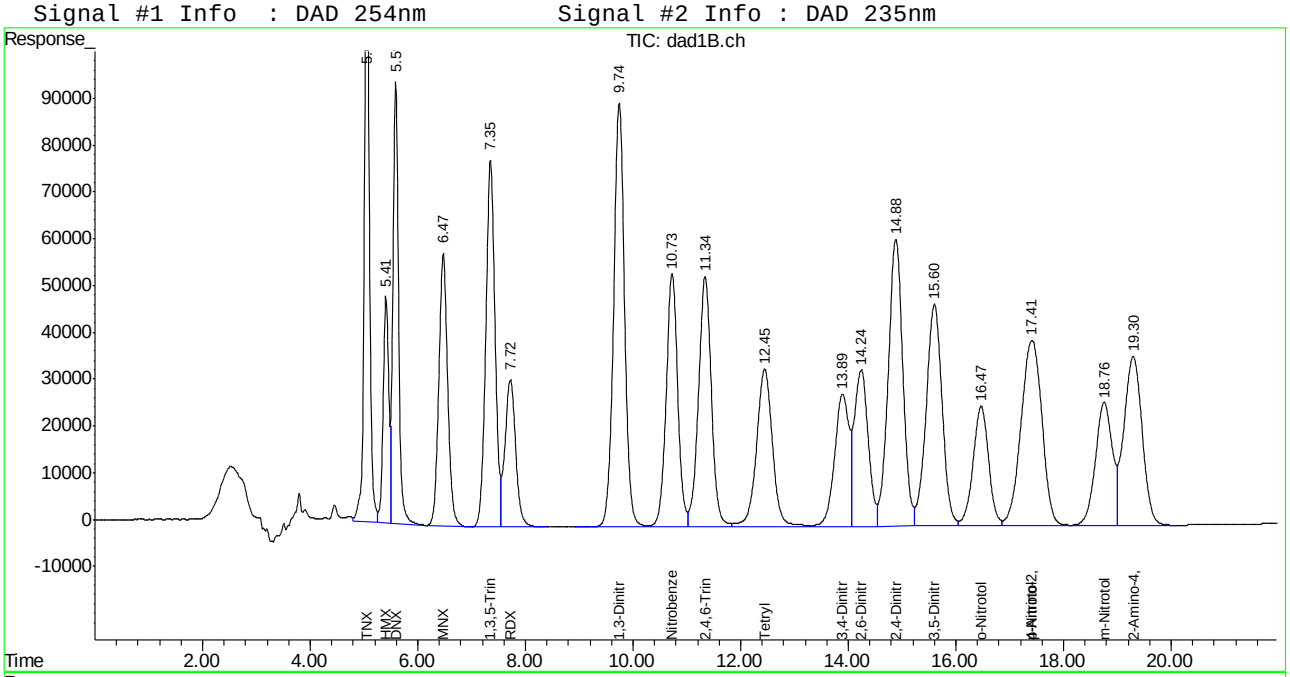
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619925.D 8330RPB.M_090920.M Tue Nov 03 11:14:51 2020 Page 1

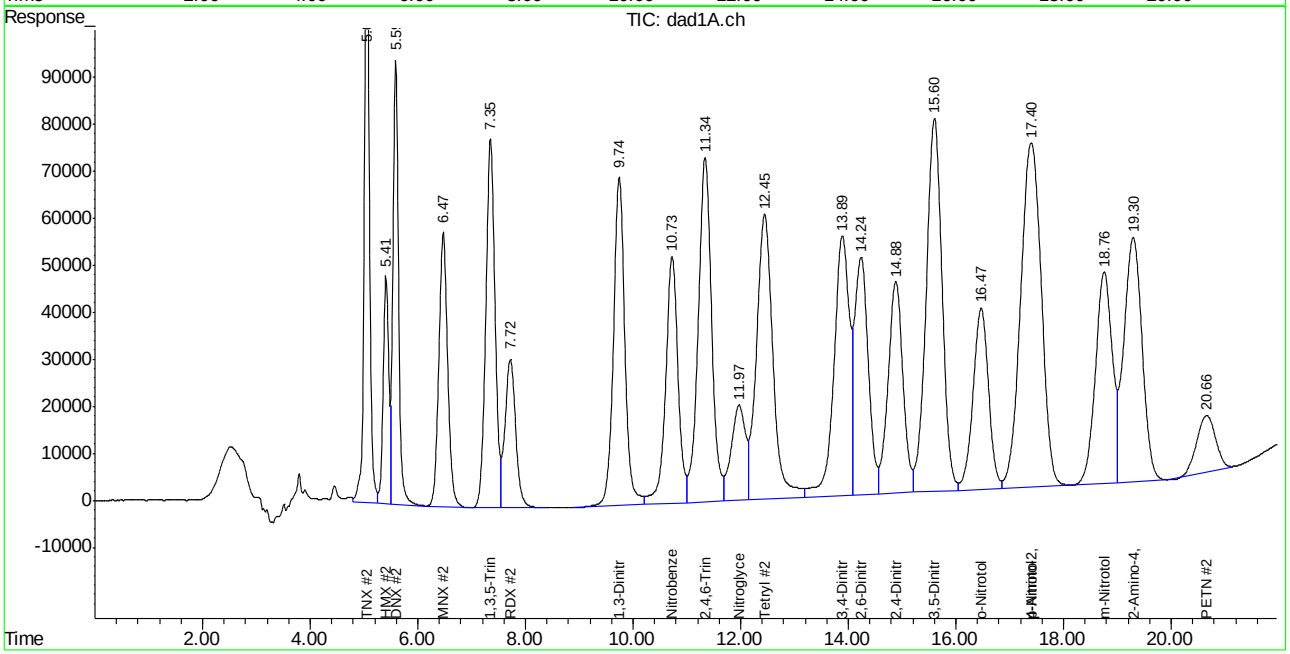
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2889\GG619925.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2889\GG619925.D\dad1A.ch
Acq On : 02-Nov-2020, 19:09:05 Operator: jamesb
Sample : cc2870-1000 Inst : G1315B
Misc : op82734,GGG2889,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 9:20 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2890\GG619937.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2890\GG619937.D\dad1A.ch
Acq On : 03-Nov-2020, 12:31:36 Operator: jamesb
Sample : cc2870-1000 Inst : G1315B
Misc : op82713,GGG2890,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 03 12:18:09 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
12) S	3,4-Dinitrotolue	13.80	13.80	5177545	10830755	949.449	1042.879	
	Spiked Amount 500.000	Range 70 - 136		Recovery =		189.89%#	208.58%#	
	Target Compounds							
1)	TNX	5.05	5.05	8321540	8321540	1373.292	1365.621	
2)	HMX	5.40	5.40	3348240	3348240	938.393	937.443	
3)	DNX	5.58	5.58	6838821	6838821	2566.292	2571.659	
4)	MNX	6.45	6.45	6667479	6667479	1450.239	1450.239	
5)	1,3,5-Trinitrobe	7.32	7.32	9415275	9415275	968.639	971.438	
6)	RDX	7.68	7.68	4367069	4367069	982.172	981.018	
7)	1,3-Dinitrobenze	9.70	9.70	12771391	10249177	1001.387	1085.005	
8)	Nitrobenzene	10.67	10.67	8181950	8685476	937.235	1075.606	
9)	2,4,6-Trinitroto	11.28	11.28	8929754	12649280	991.720	1088.170	
10)	Nitroglycerin	0.00	11.91	0	3730900	N.D.	1067.544	#
11)	Tetryl	12.37	12.37	6922962	13452314	1025.645	1053.980	
13)	2,6-Dinitrotolue	14.15	14.15	6144770	9221842	1014.501	1058.027	
14)	2,4-Dinitrotolue	14.80	14.79	11639976	8509149	994.416	1094.168	
15)	o-Nitrotoluene	16.37	16.37	5219755	7919237	998.931	1008.402	
16)	3,5-Dinitroanili	15.51	15.51	9786893	16440304	968.403	1023.320	
17)	p-Nitrotoluene	17.30	17.28	10749860	20048793	1962.897	1961.208	
18)	4-Amino-2,6-Dini	17.30	17.28	10749860	20048793	1956.239	1951.674	
19)	m-Nitrotoluene	18.64	18.64	5780952	9953795	992.923	1001.604	
20)	2-Amino-4,6-Dini	19.16	19.16	8610484	12404714	961.163	969.287	
21)	PETN	0.00	20.53	0	3230122	N.D.	1085.733	#

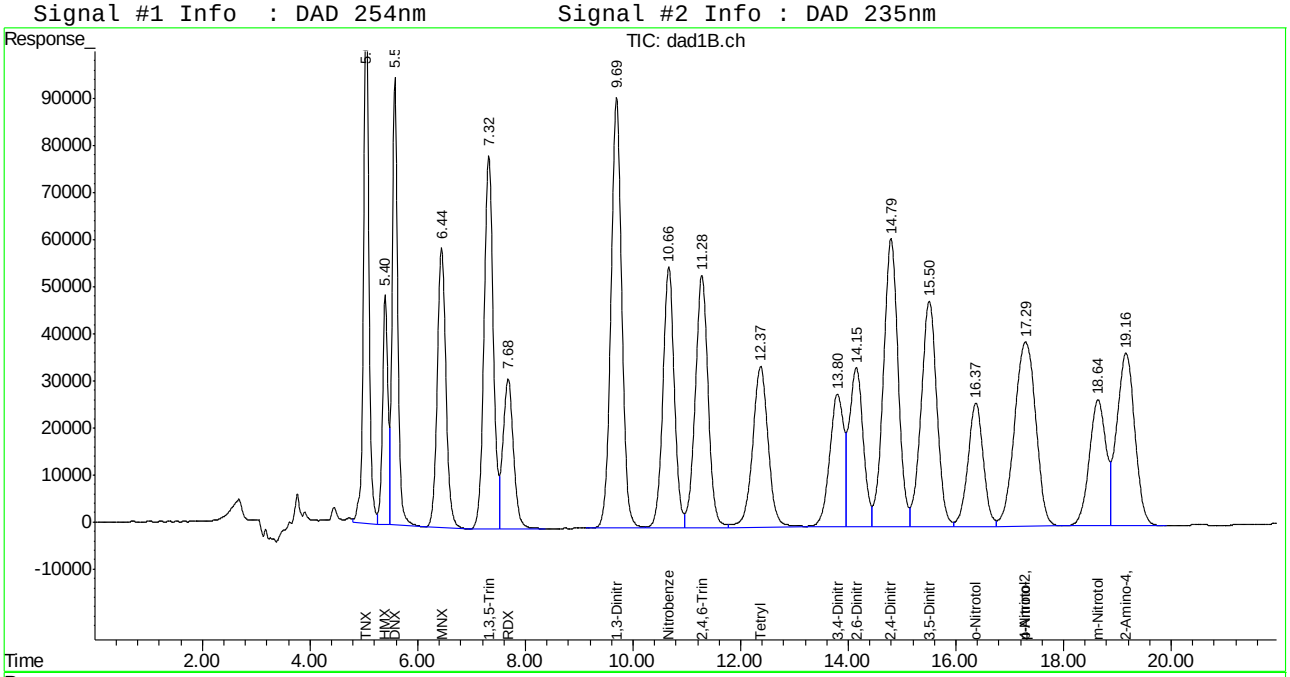
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG619937.D 8330RPB.M_090920.M Tue Nov 03 14:10:18 2020 Page 1

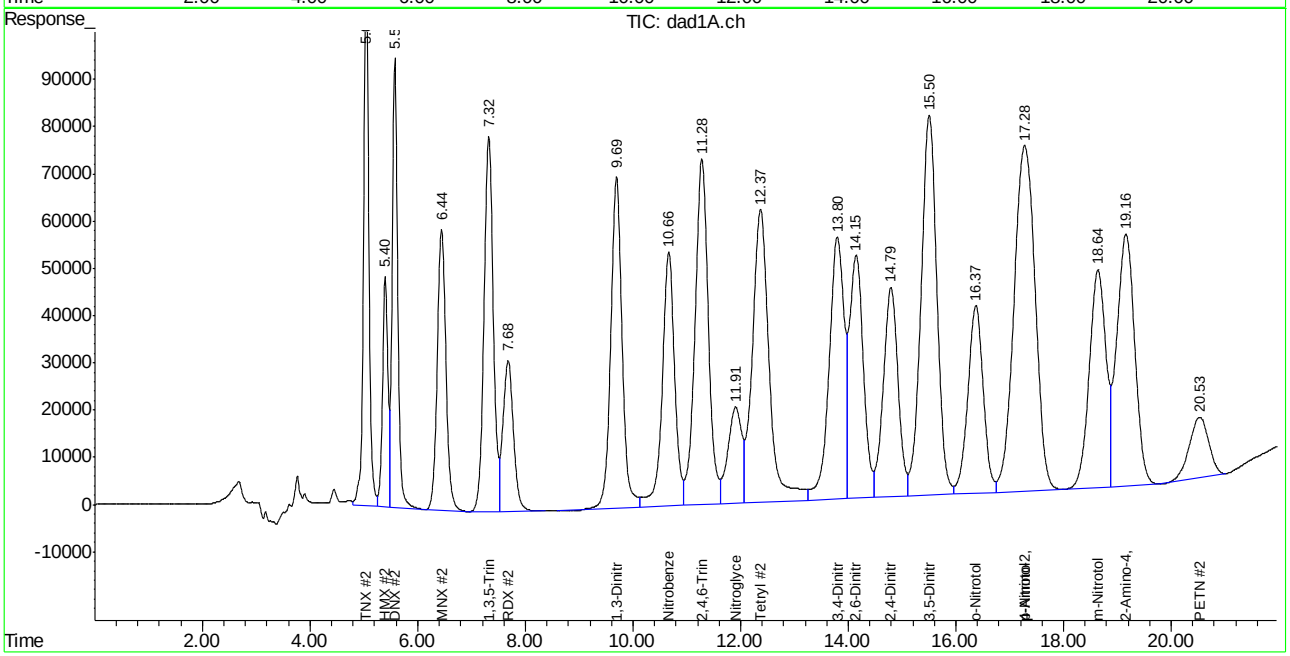
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2890\GG619937.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2890\GG619937.D\dad1A.ch
Acq On : 03-Nov-2020, 12:31:36 Operator: jamesb
Sample : cc2870-1000 Inst : G1315B
Misc : op82713,GGG2890,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 12:18 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2890\GG619941.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2890\GG619941.D\dad1A.ch
Acq On : 03-Nov-2020, 14:29:14 Operator: jamesb
Sample : ecc2870-1000 Inst : G1315B
Misc : op82713,GGG2890,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 03 14:08:25 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
12)	S 3,4-Dinitrotolue	13.84	13.83	5232212	11070066	959.474	1065.922	
	Spiked Amount 500.000	Range 70 - 136		Recovery =		191.89%#	213.18%#	
	Target Compounds							
1)	TNX	5.05	5.05	8310967	8310967	1371.547	1363.886	
2)	HMX	5.41	5.41	3347228	3347228	938.109	937.160	
3)	DNX	5.58	5.58	6857108	6857108	2573.154	2578.535	
4)	MNX	6.45	6.45	6669940	6669940	1450.774	1450.774	
5)	1,3,5-Trinitrobe	7.33	7.33	9415188	9415188	968.630	971.429	
6)	RDX	7.69	7.69	4372531	4372531	983.400	982.245	
7)	1,3-Dinitrobenze	9.71	9.71	12780476	10262048	1002.099	1086.367	
8)	Nitrobenzene	10.69	10.69	8206863	8374450	940.089	1037.089	
9)	2,4,6-Trinitroto	11.31	11.31	8977148	12766564	996.983	1098.259	
10)	Nitroglycerin	0.00	11.94	0	3707379	N.D.	1060.665	#
11)	Tetryl	12.40	12.40	6943011	13011393	1028.615	1019.141	
13)	2,6-Dinitrotolue	14.19	14.18	6167376	9203711	1018.233	1055.947	
14)	2,4-Dinitrotolue	14.83	14.83	11692734	8596995	998.924	1105.464	
15)	o-Nitrotoluene	16.41	16.42	5280885	7809497	1010.630	994.428	
16)	3,5-Dinitroanili	15.53	15.53	9838520	16486039	973.511	1026.167	
17)	p-Nitrotoluene	17.34	17.32	10835571	19804607	1978.547	1937.321	
18)	4-Amino-2,6-Dini	17.34	17.32	10835571	19804607	1971.837	1927.904	
19)	m-Nitrotoluene	18.70	18.70	5832400	9830850	1001.760	989.233	
20)	2-Amino-4,6-Dini	19.21	19.21	8664071	12338648	967.145	964.124	
21)	PETN	0.00	20.62	0	2955037	N.D.	993.270	#

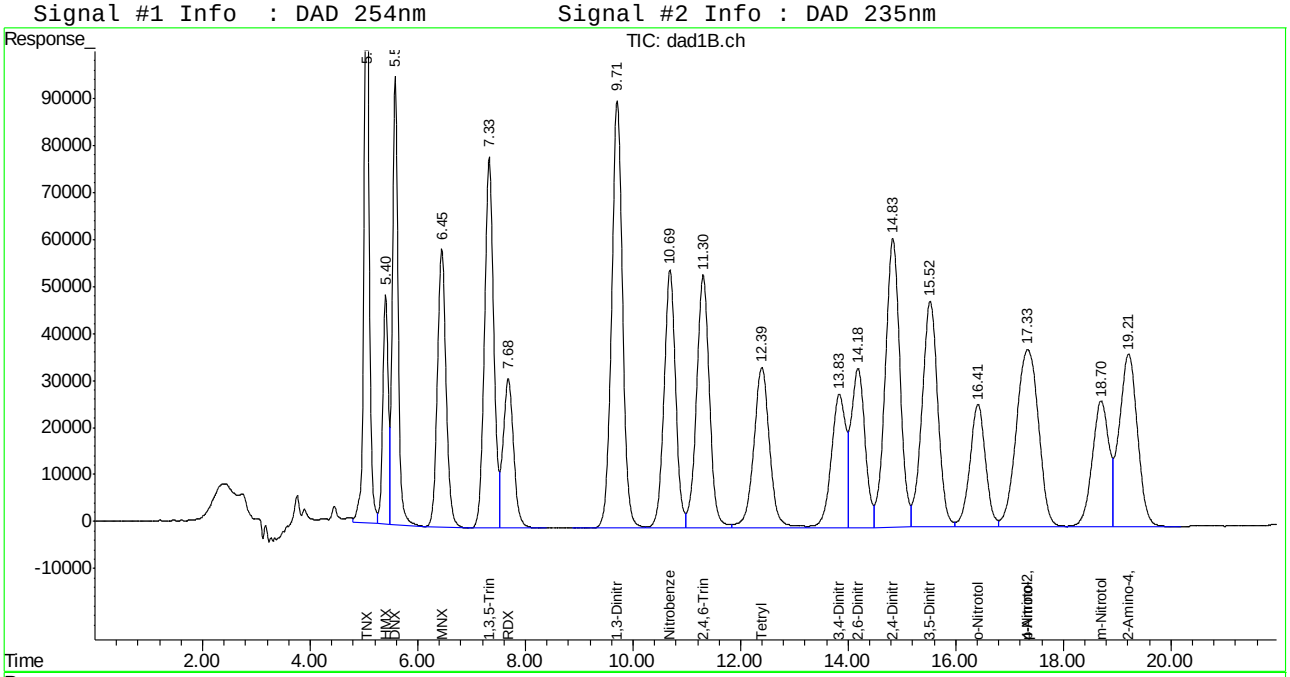
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

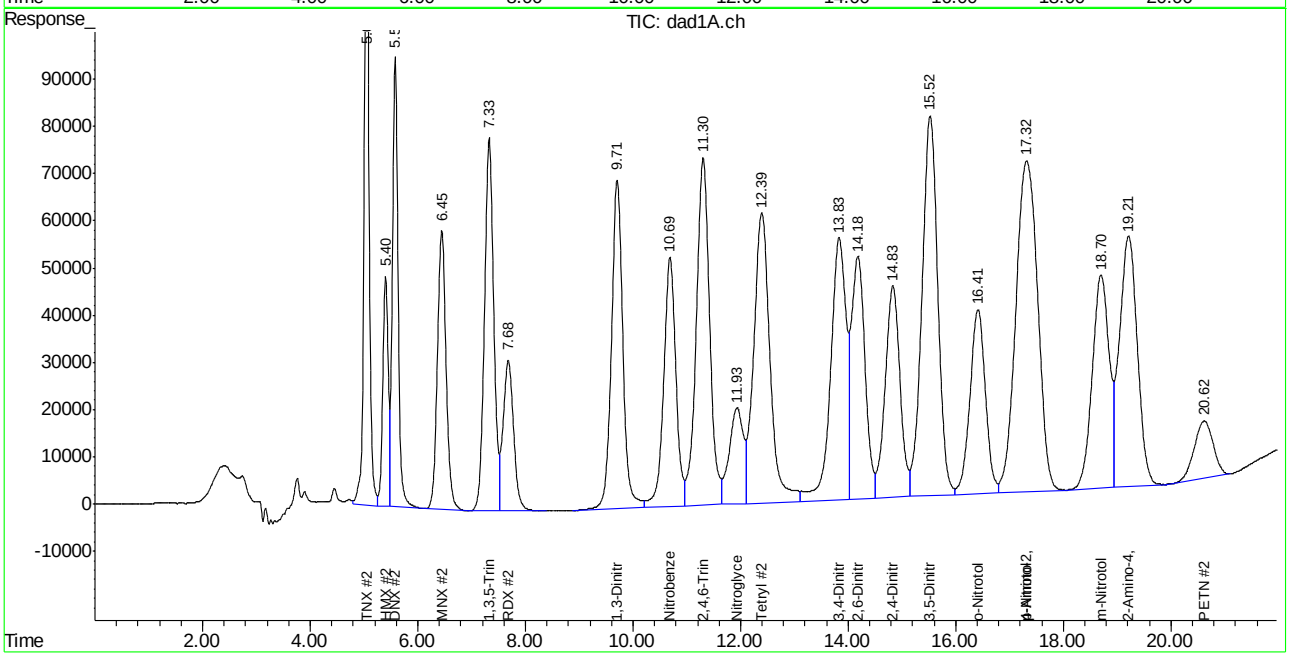
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2890\GG619941.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2890\GG619941.D\dad1A.ch
Acq On : 03-Nov-2020, 14:29:14 Operator: jamesb
Sample : ecc2870-1000 Inst : G1315B
Misc : op82713,GGG2890,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Nov 3 14:08 2020 Quant Results File: 8330RPB.M_090920.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_090920.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Nov 02 16:31:20 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/25/20 13:58

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34:38 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.25	11.29	39561	47603	19.104m	12.816
	Spiked Amount 500.000	Range 70 - 136		Recovery =		3.82%#	2.56%#
	Target Compounds						
1)	TNX	1.34	1.34	49759	98014	16.512m	19.936m
2)	HMX	1.48	1.48	30892	69662	20.777m	16.307m
3)	DNX	1.73	1.73	50119	62801	20.385m	15.587m
4)	MNX	2.33	2.33	59940	92734	22.053m	21.601m
5)	RDX	2.97	2.97	41774	60904	23.192m	20.638m
6)	1,3,5-Trinitrobe	4.73	4.73	92442	171722	23.556	22.293m
7)	1,3-Dinitrobenze	5.93	5.93	96001	70644	19.335m	20.659m
8)	3,5-Dinitroanili	6.36	6.35	85169	141532	22.390m	21.947m
9)	Nitrobenzene	7.49	7.48	59778	50559	20.640m	17.868m
10)	Nitroglycerin	0.00	9.09	0	29174	N.D.	27.150m#
11)	Tetryl	9.59	9.60	68553	91279	24.523m	20.131
12)	2,4,6-Trinitroto	9.97	9.97	96100	95719	27.123m	22.576
13)	2-Amino-4,6-Dini	10.42	10.46	84381	108127	26.619m	23.325
14)	4-Amino-2,6-Dini	10.92	10.93	72893	77220	31.394m	18.419 #
16)	2,4-Dinitrotolue	11.94	11.93	104627	67855	24.196m	23.648m
17)	2,6-Dinitrotolue	12.38	12.42	56879	68593	22.837m	21.241
18)	o-Nitrotoluene	15.43	15.47	48246	36196	22.317m	12.653m#
19)	p-Nitrotoluene	16.00	16.07	70397	21935	21.562m	8.595m#
20)	m-Nitrotoluene	16.82	16.82	62390	37935	20.170m	10.189m#
21)	PETN	0.00	18.59	0	29664	N.D.	24.010m#

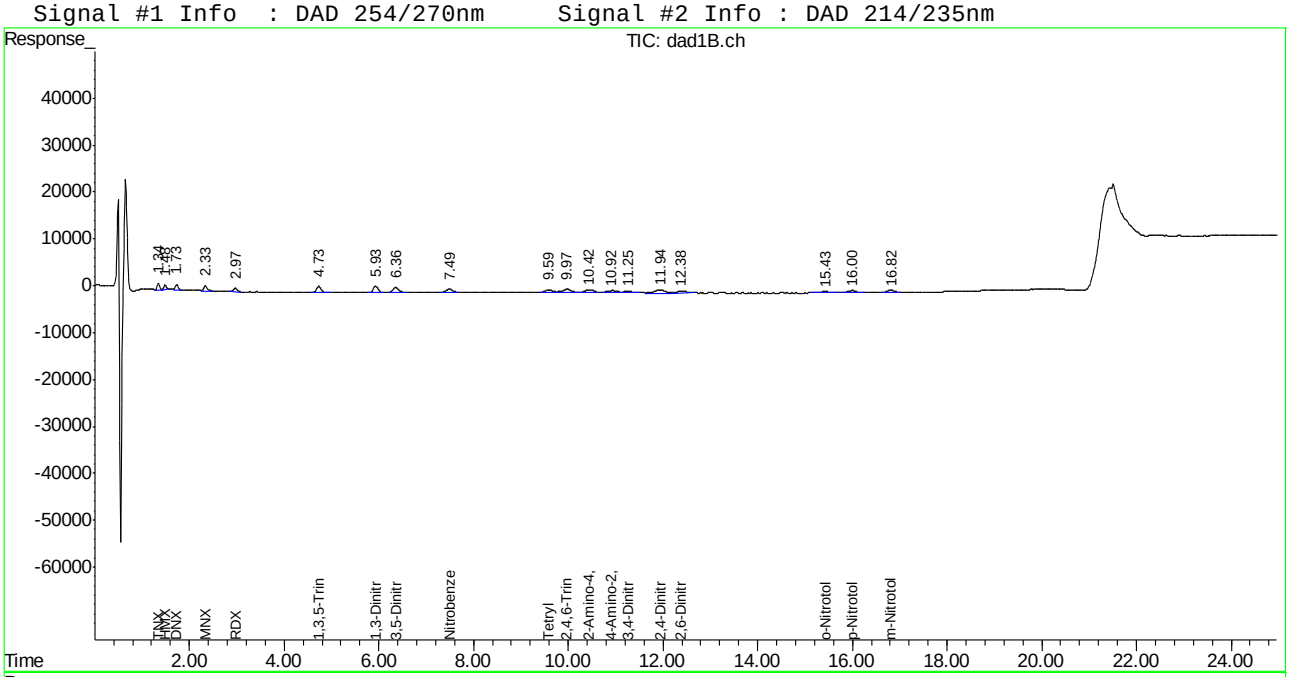
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388307.D GPP2336_092420PRI.M Fri Sep 25 10:23:40 2020 Page 1

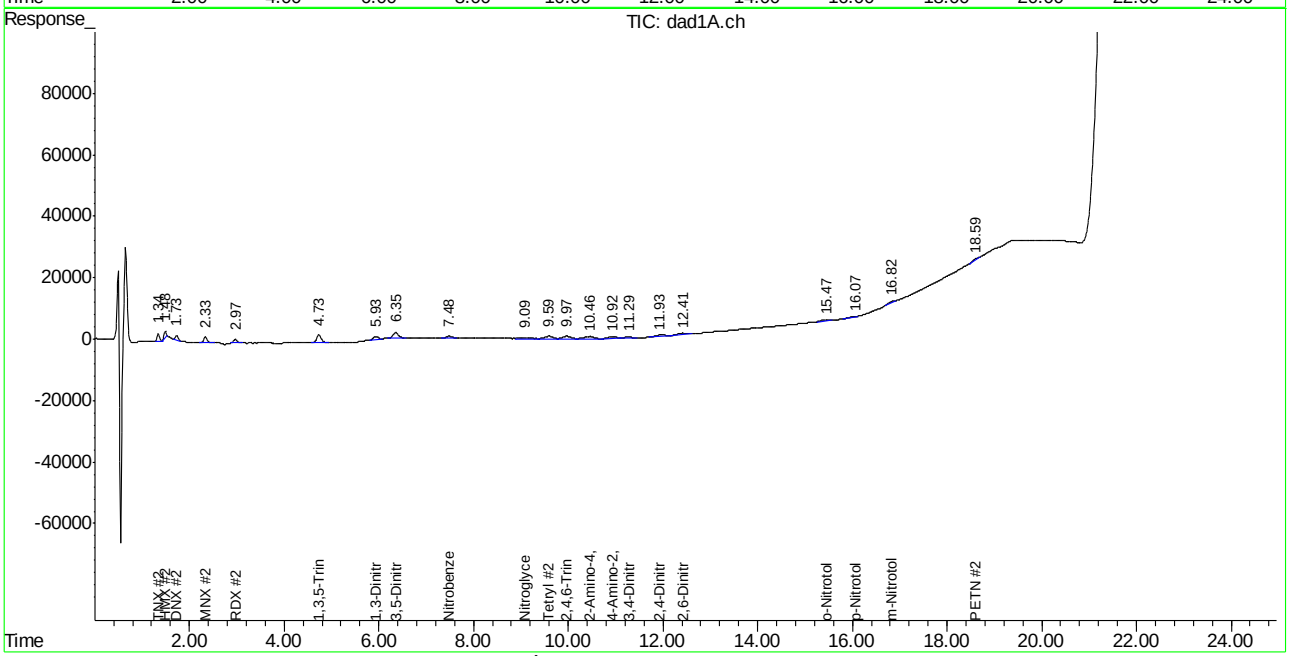
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:41 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

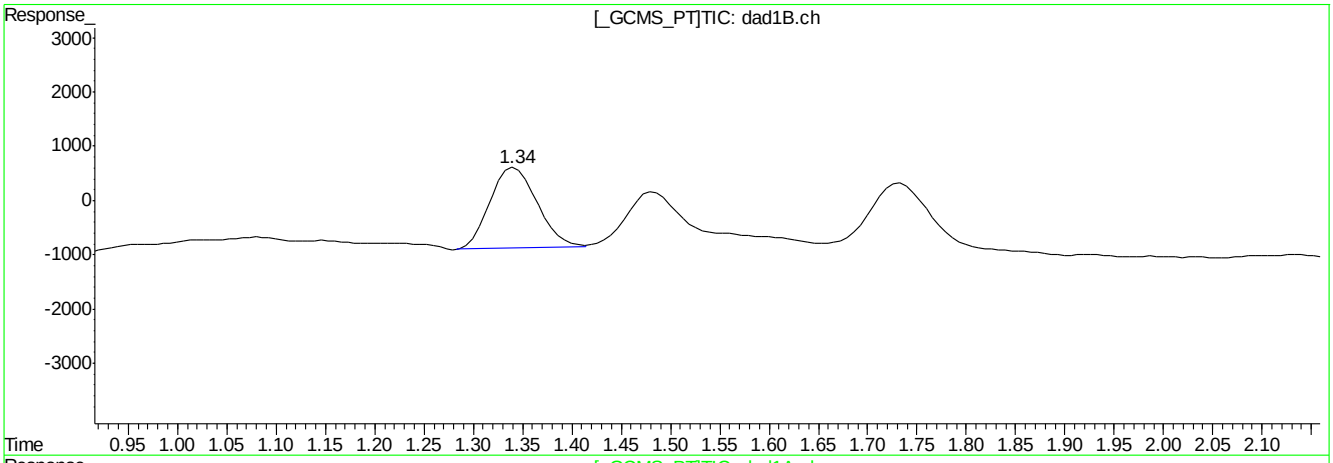
Sample Number: GPP2336-IC2336
Lab FileID: PP388307.D
Injection Time: 09/24/20 12:33
Method: SW846 8330A
Analyst approved: 09/25/20 10:27 William Hustedde
Supervisor approved: 09/25/20 13:58 Naresh Jiawan

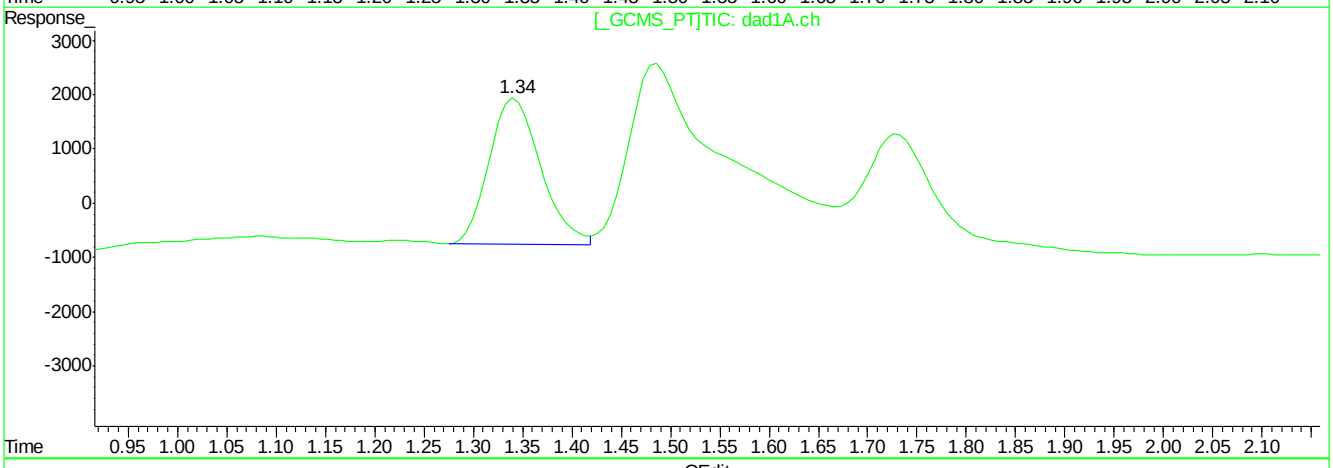
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.34	Poor instrument integration
TNX		2	1.34	Poor instrument integration
HMX	2691-41-0	1	1.48	Poor instrument integration
HMX	2691-41-0	2	1.48	Poor instrument integration
DNX		1	1.73	Poor instrument integration
DNX		2	1.73	Poor instrument integration
MNX		1	2.33	Poor instrument integration
MNX		2	2.33	Poor instrument integration
RDX	121-82-4	1	2.97	Poor instrument integration
RDX	121-82-4	2	2.97	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.73	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	5.93	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.93	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.35	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.36	Poor instrument integration
Nitrobenzene	98-95-3	2	7.48	Poor instrument integration
Nitrobenzene	98-95-3	1	7.49	Poor instrument integration
Nitroglycerine	55-63-0	2	9.09	Poor instrument integration
Tetryl	479-45-8	1	9.59	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.97	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.42	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.92	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.25	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	11.93	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	11.94	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.38	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.43	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.47	Poor instrument integration
p-Nitrotoluene	99-99-0	1	16.00	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.07	Poor instrument integration
m-Nitrotoluene	99-08-1	1	16.82	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.82	Poor instrument integration
PETN	78-11-5	2	18.59	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.34min 16.512ppb m

response 49759

(1) TNX #2

1.34min 19.936ppb m

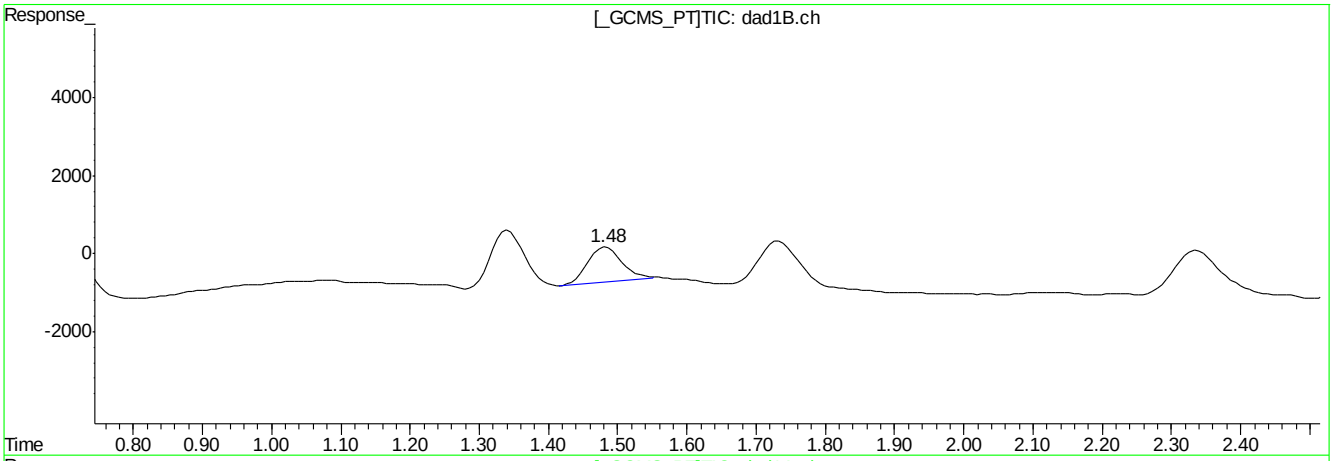
response 98014

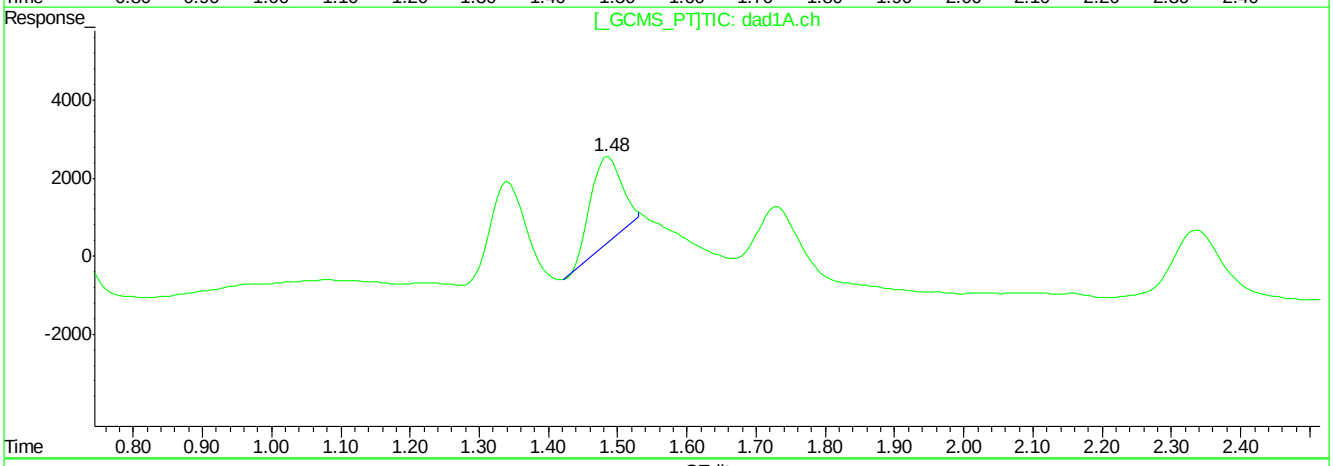
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:35:09 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.48min 20.777ppb m

response 30892

(2) HMX #2

1.48min 16.307ppb m

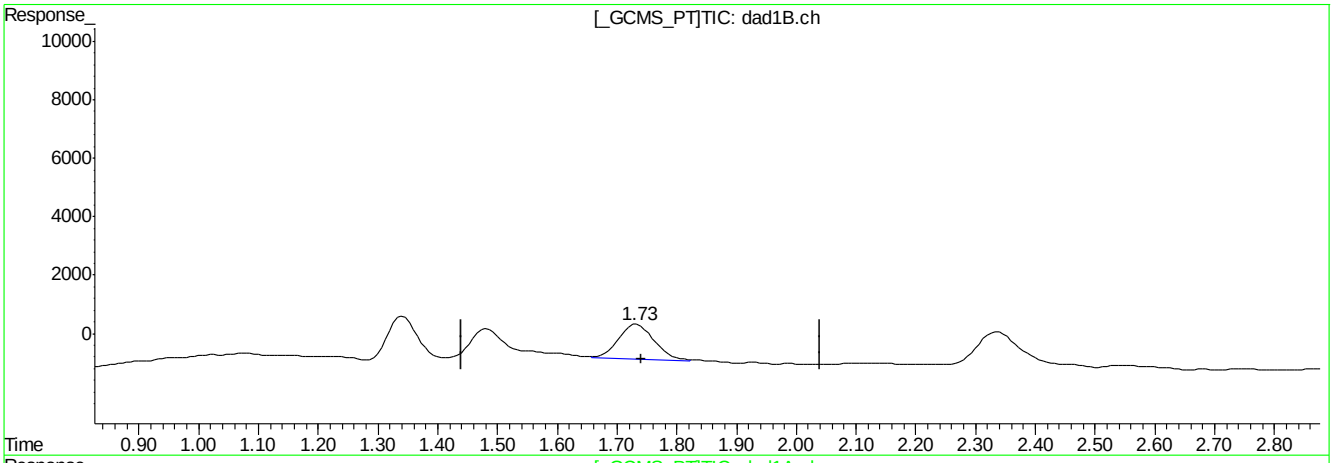
response 69662

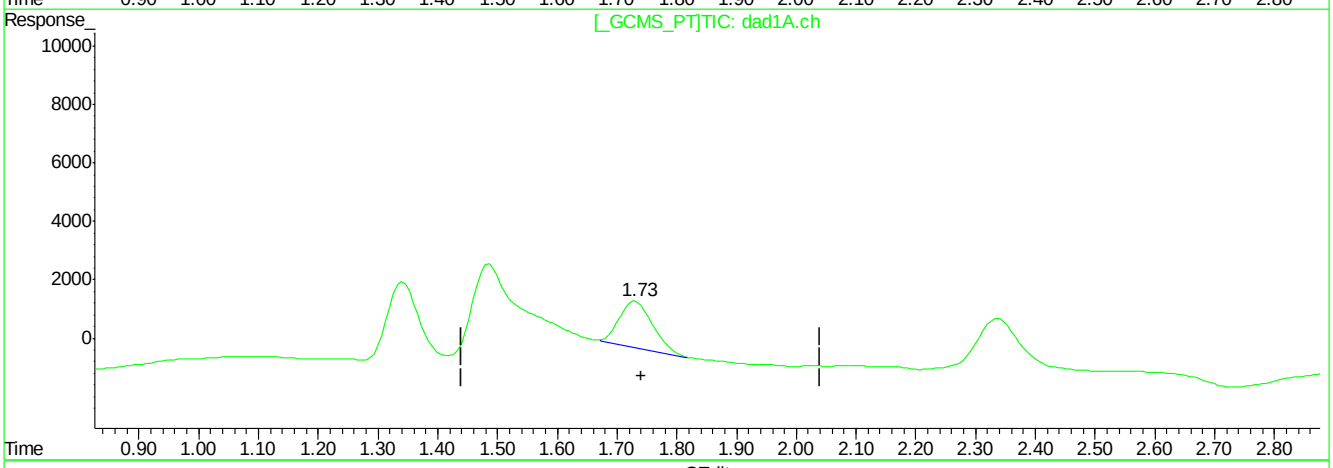
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:35:27 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.73min 20.385ppb m

response 50119

(3) DNX #2

1.73min 15.587ppb m

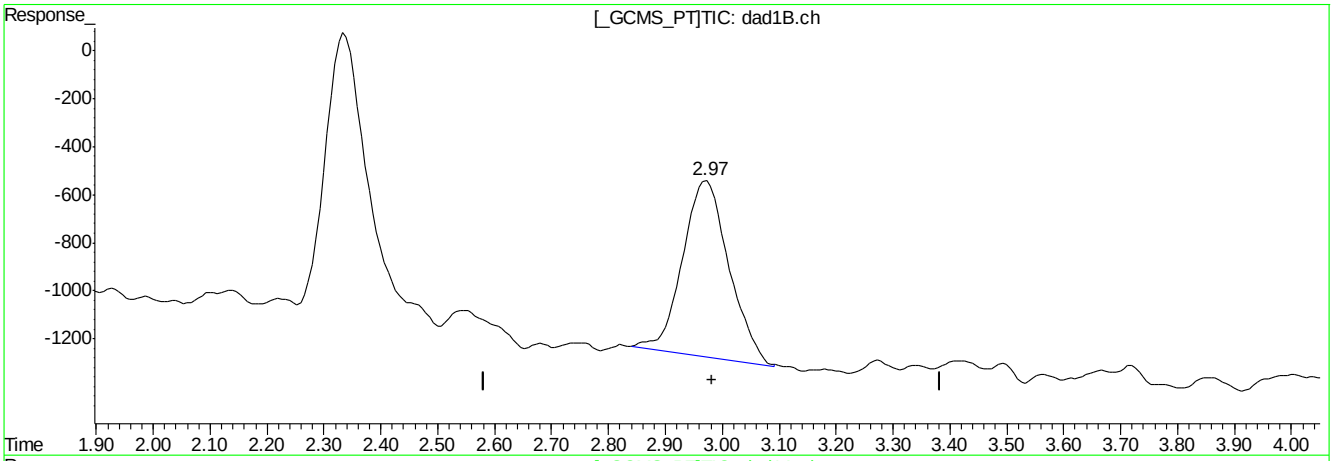
response 62801

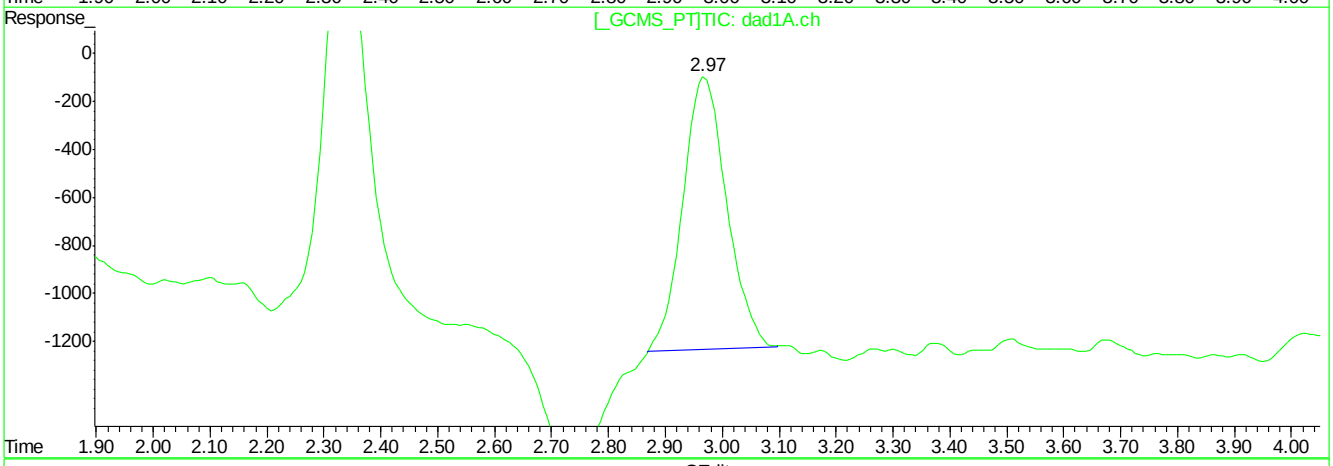
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:35:35 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.97min 23.192ppb m

response 41774

(5) RDX #2

2.97min 20.638ppb m

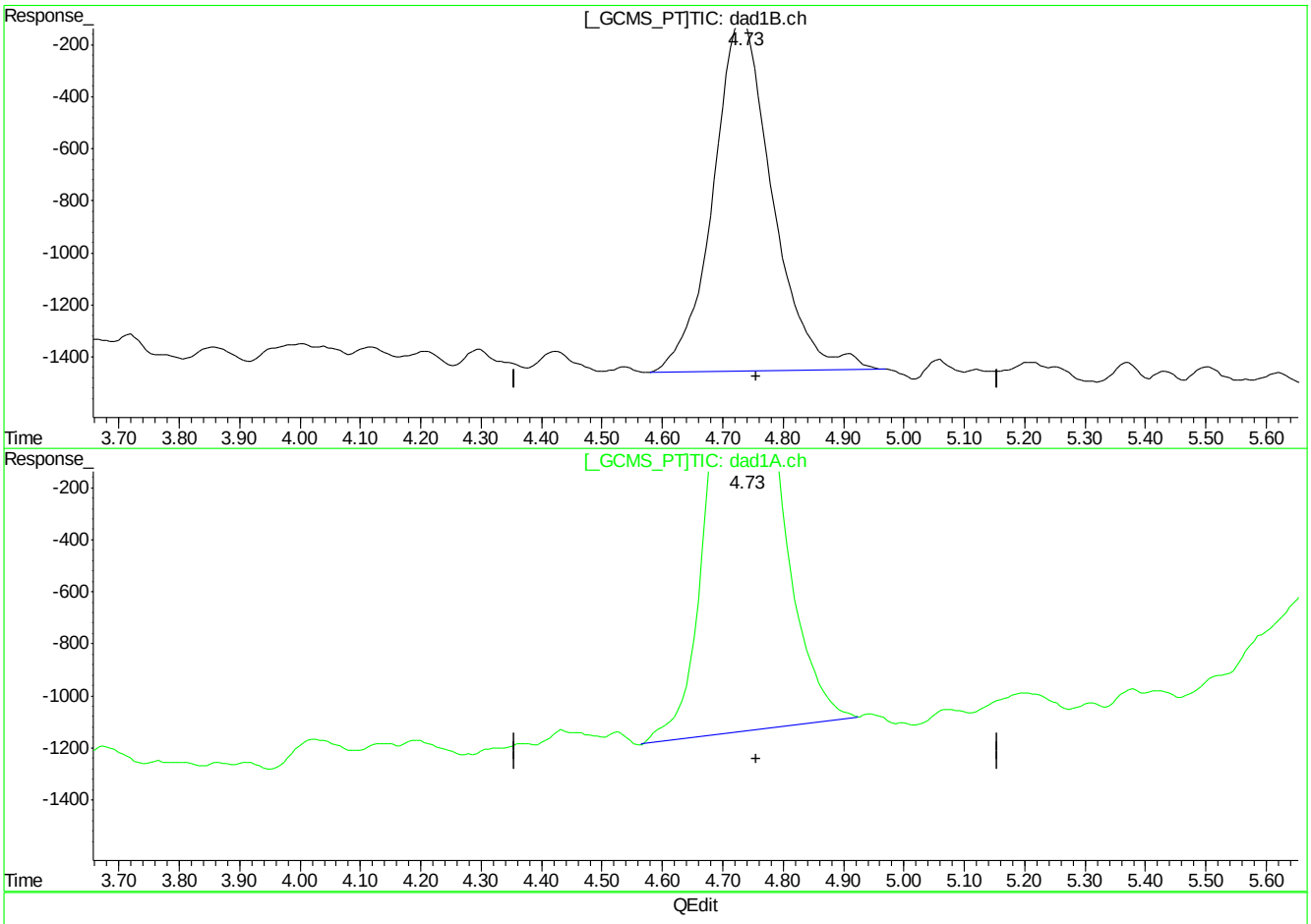
response 60904

(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:36:41 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(6) 1,3,5-Trinitrobenzene

4.73min 23.556ppb

response 92442

(6) 1,3,5-Trinitrobenzene #2

4.73min 22.293ppb m

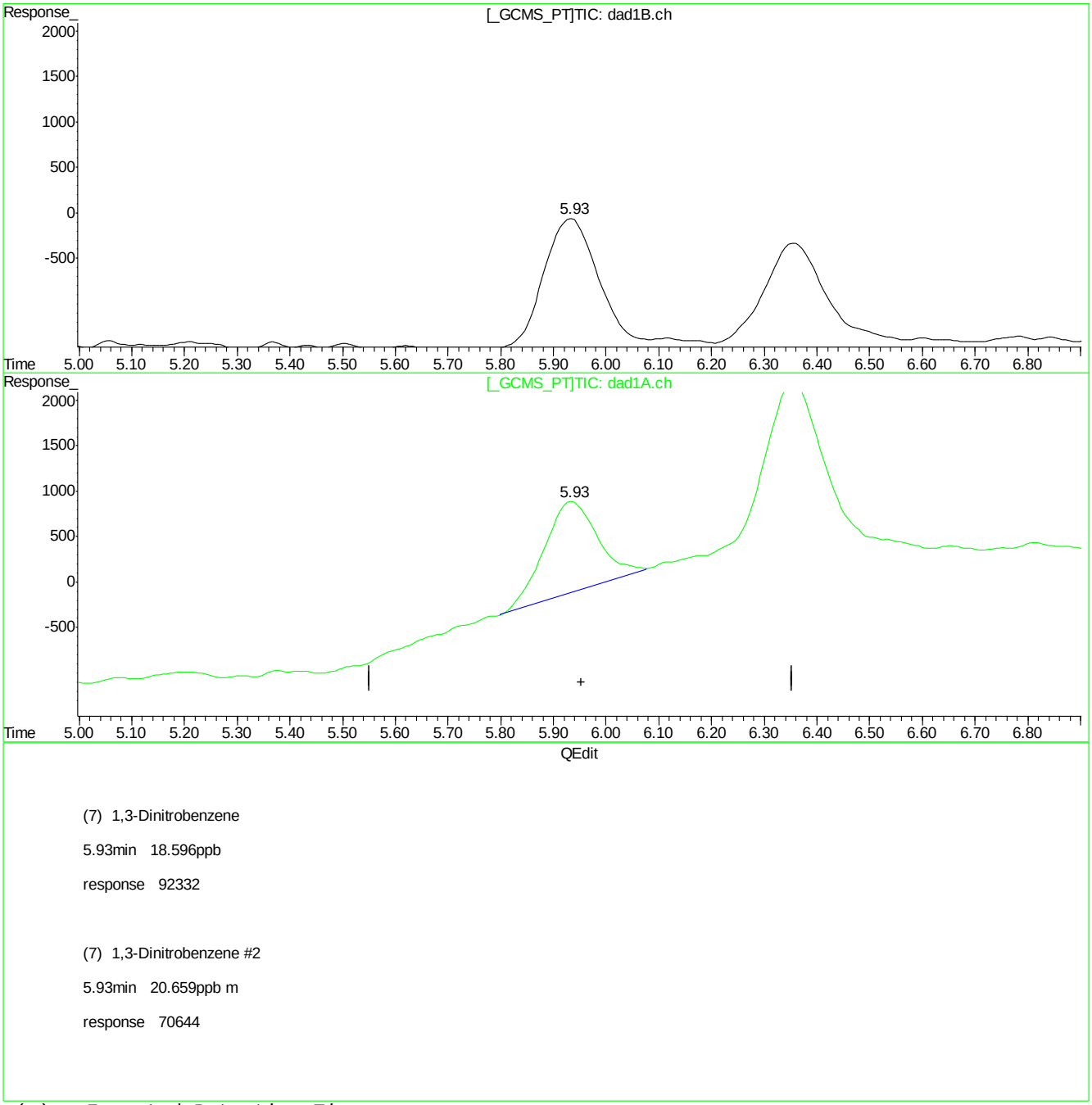
response 171722

(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:36:48 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.93min 18.596ppb

response 92332

(7) 1,3-Dinitrobenzene #2

5.93min 20.659ppb m

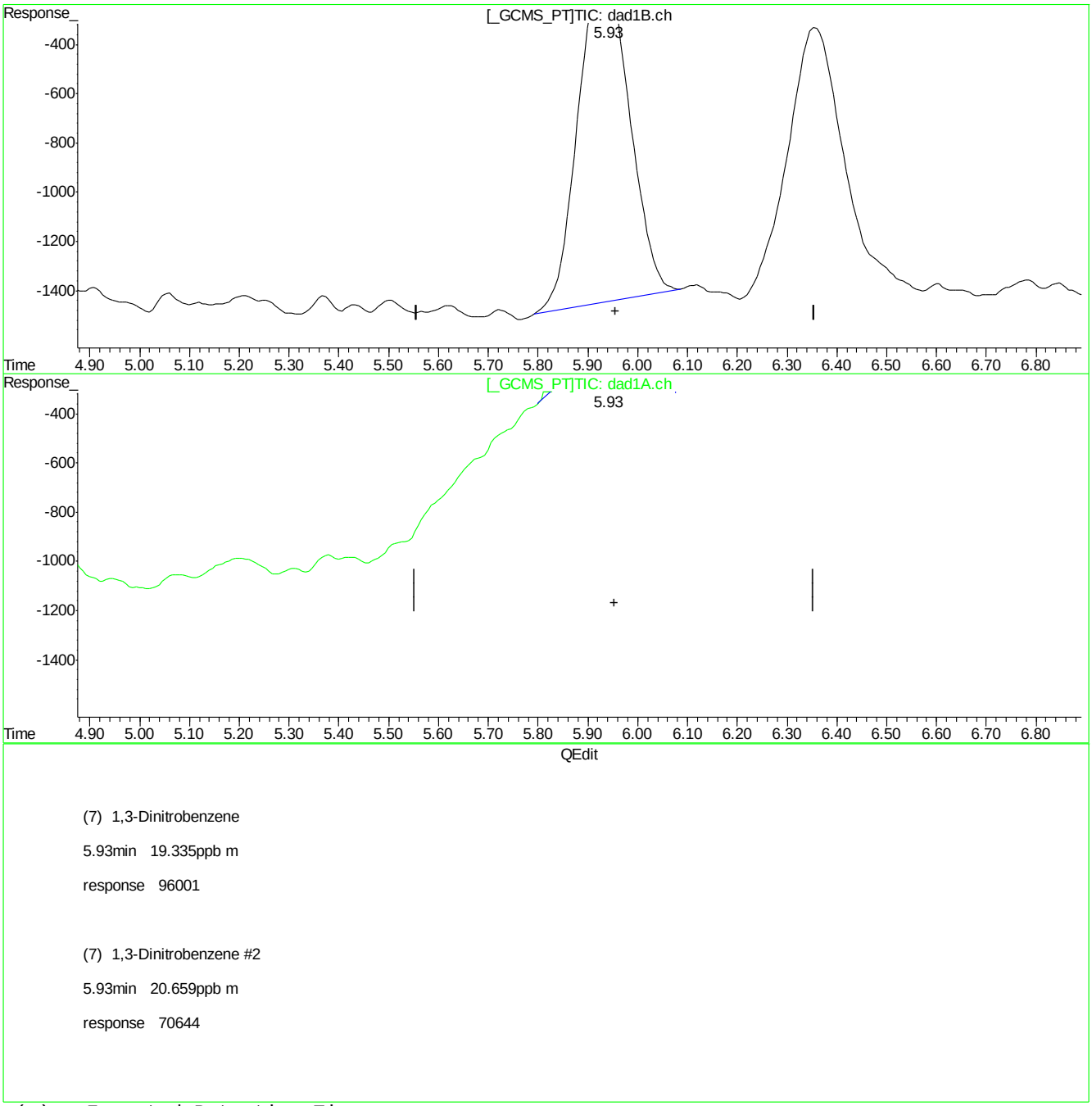
response 70644

(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:36:56 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.93min 19.335ppb m

response 96001

(7) 1,3-Dinitrobenzene #2

5.93min 20.659ppb m

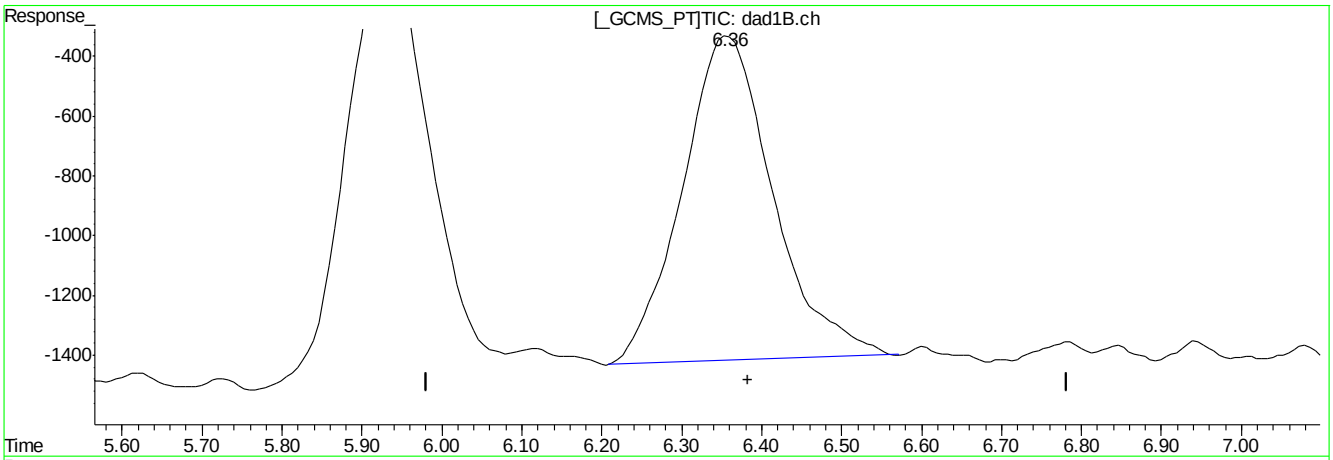
response 70644

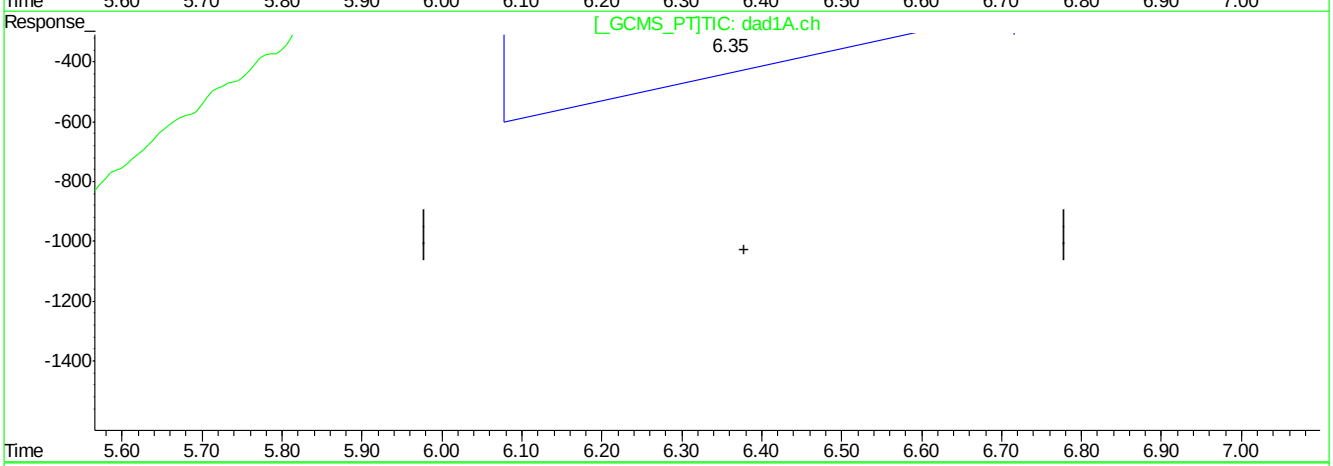
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:37:02 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.36min 22.390ppb m

response 85169

(8) 3,5-Dinitroaniline #2

6.36min 67.306ppb

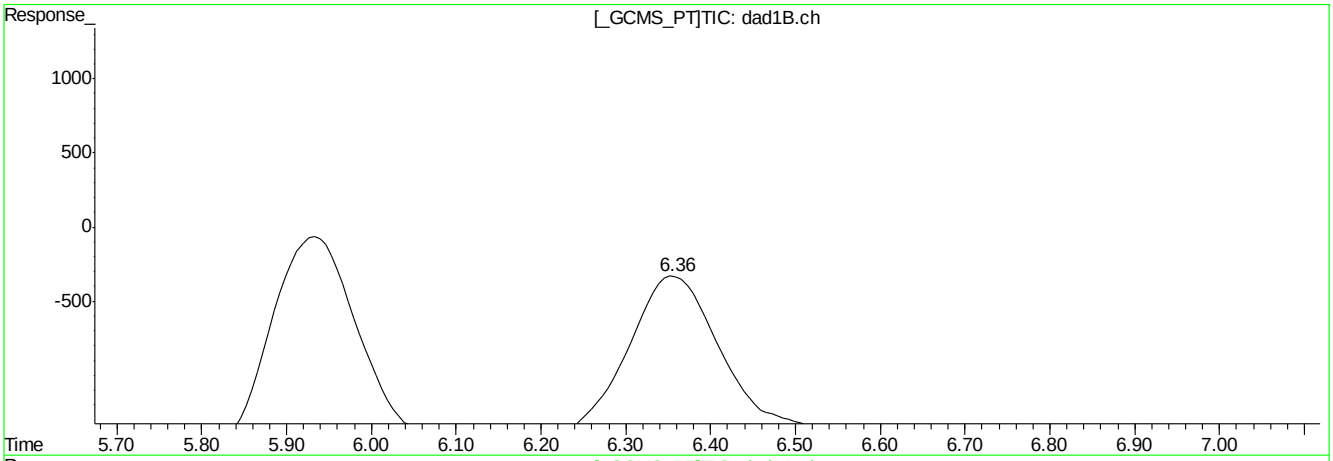
response 434050

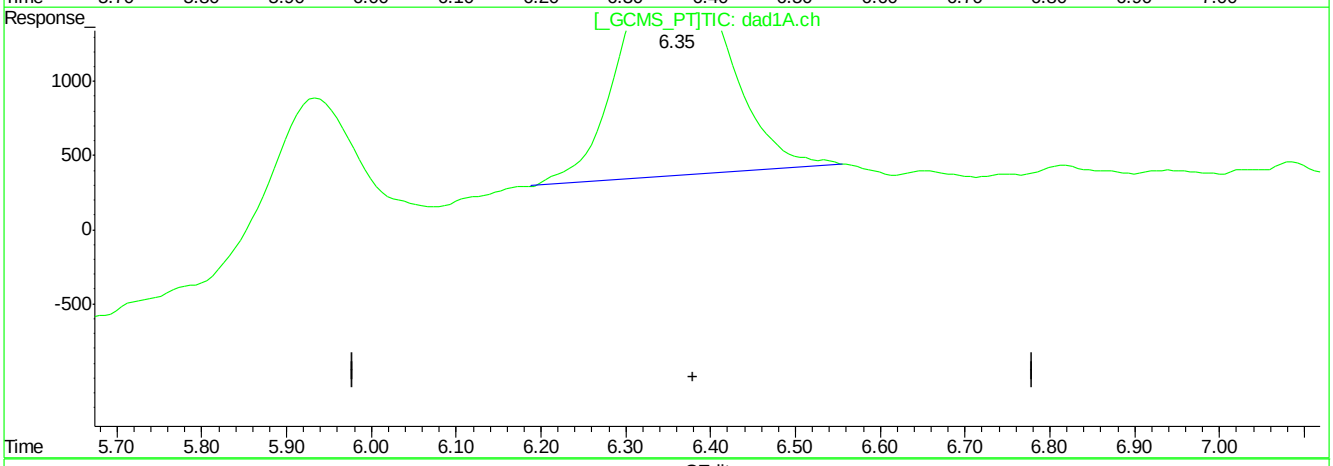
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:37:08 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.36min 22.390ppb m

response 85169

(8) 3,5-Dinitroaniline #2

6.35min 21.947ppb m

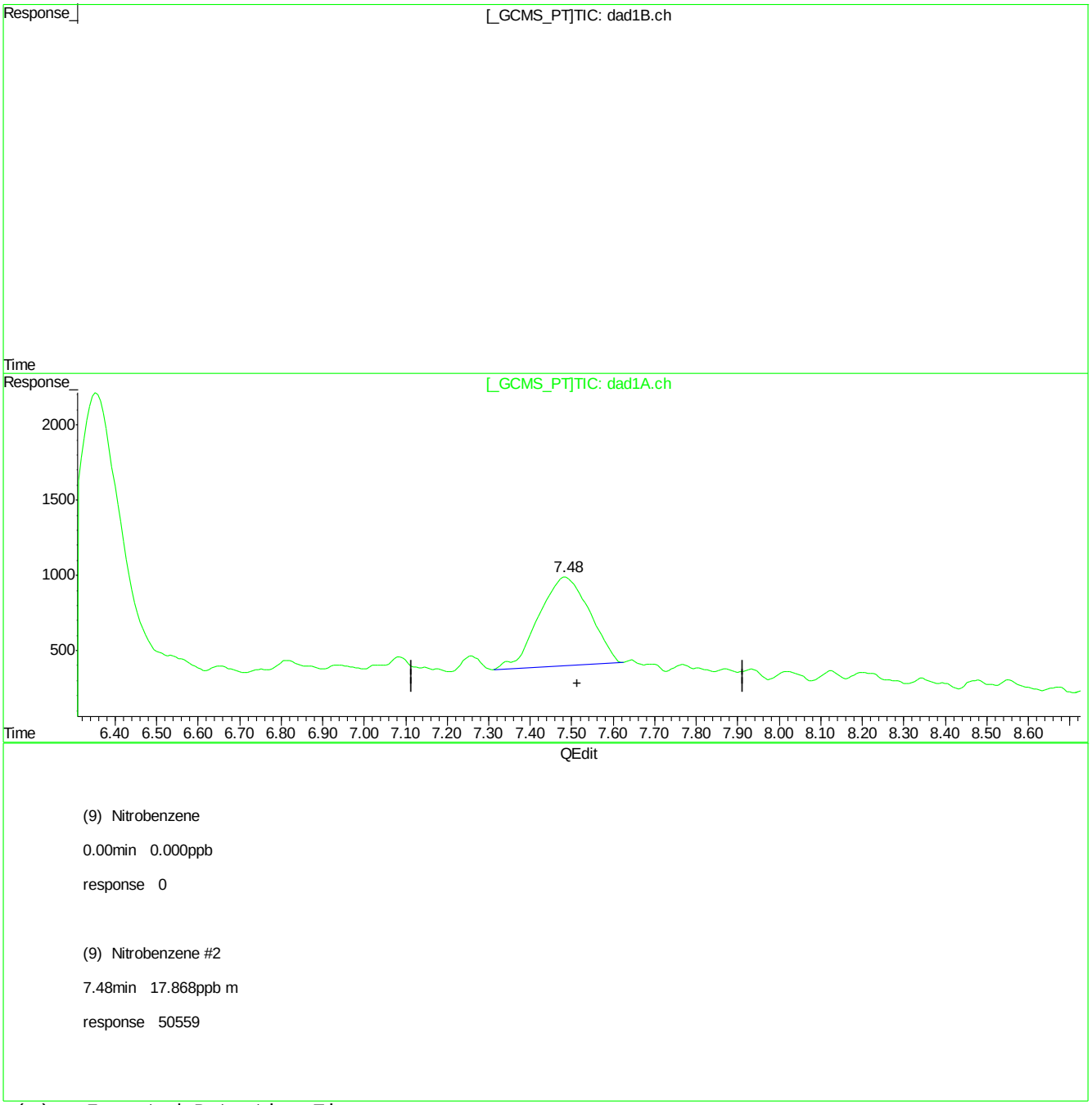
response 141532

(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:37:14 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(9) Nitrobenzene

0.00min 0.000ppb

response 0

(9) Nitrobenzene #2

7.48min 17.868ppb m

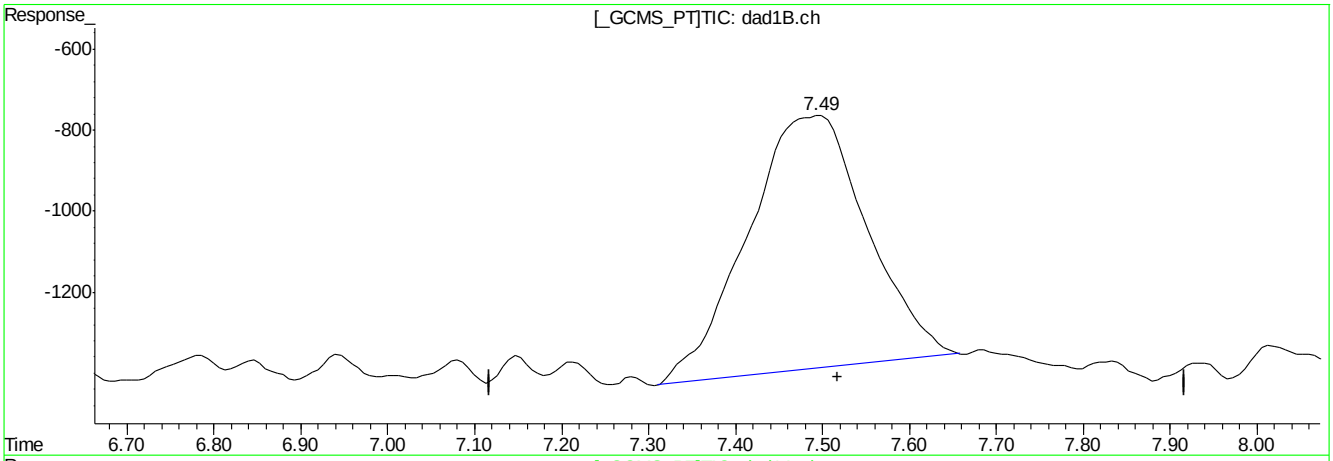
response 50559

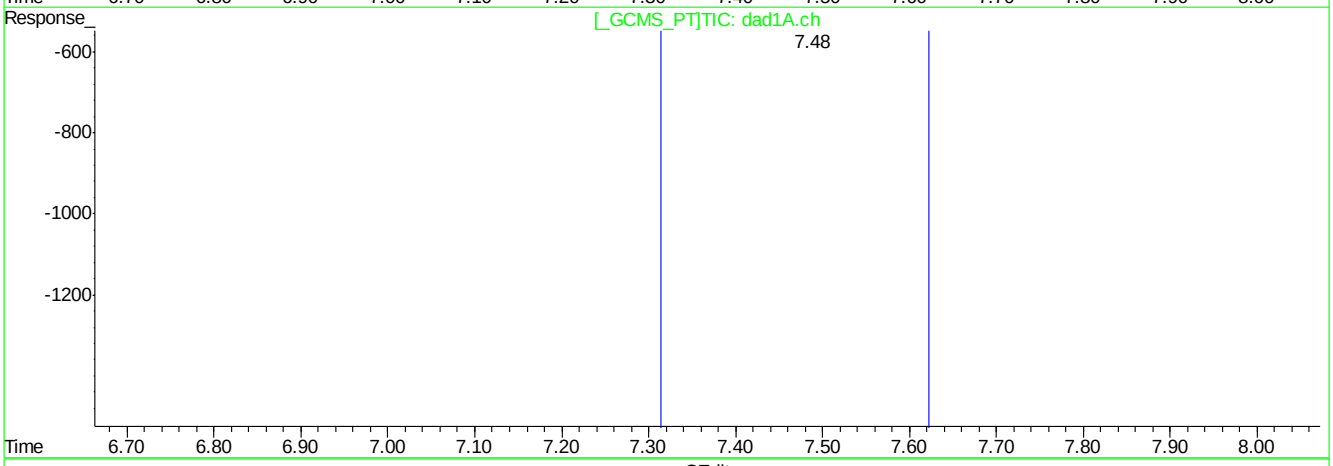
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:37:20 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.49min 20.640ppb m

response 59778

(9) Nitrobenzene #2

7.48min 17.868ppb m

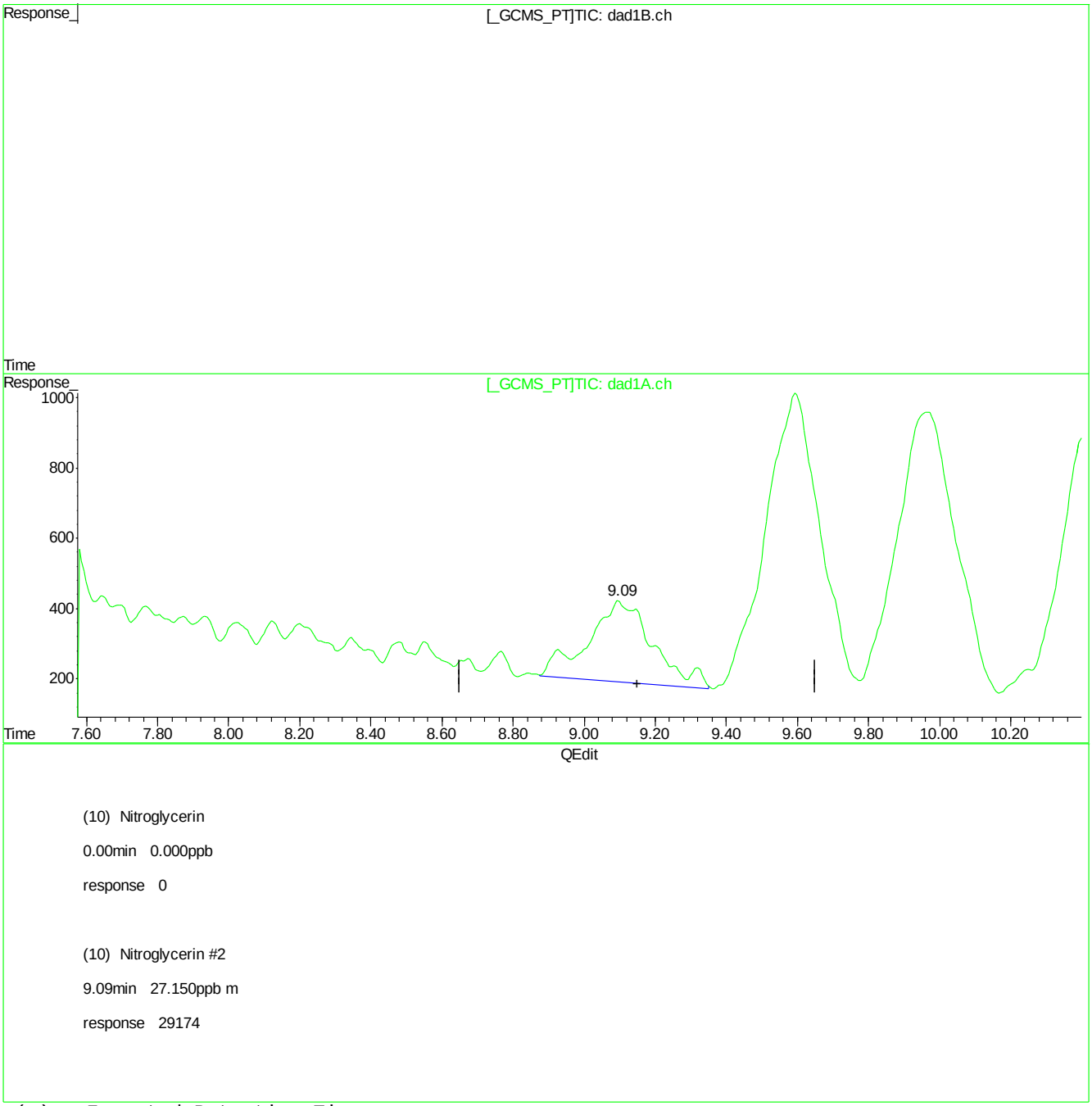
response 50559

(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:37:24 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.09min 27.150ppb m

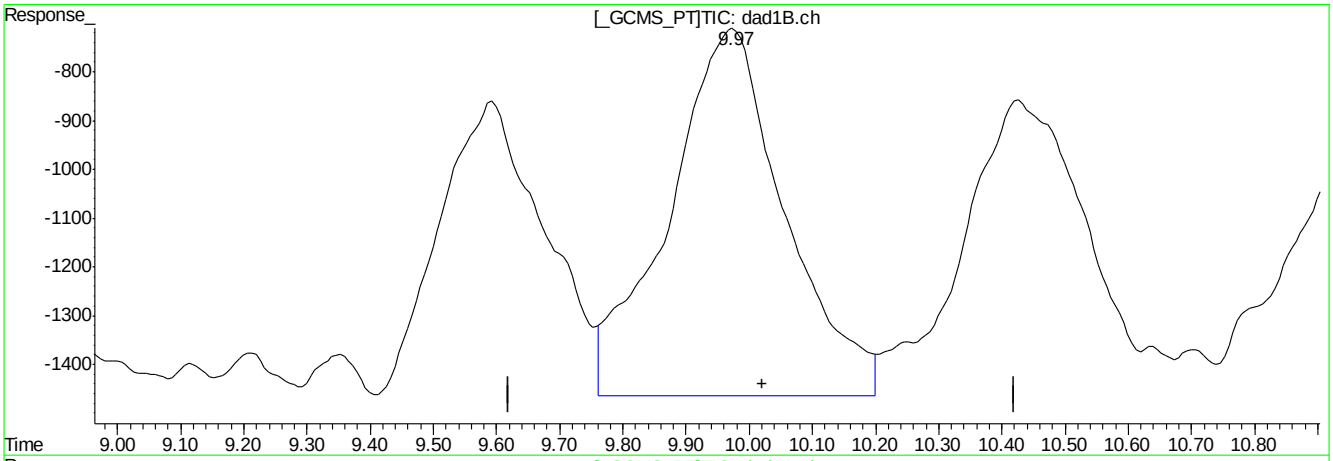
response 29174

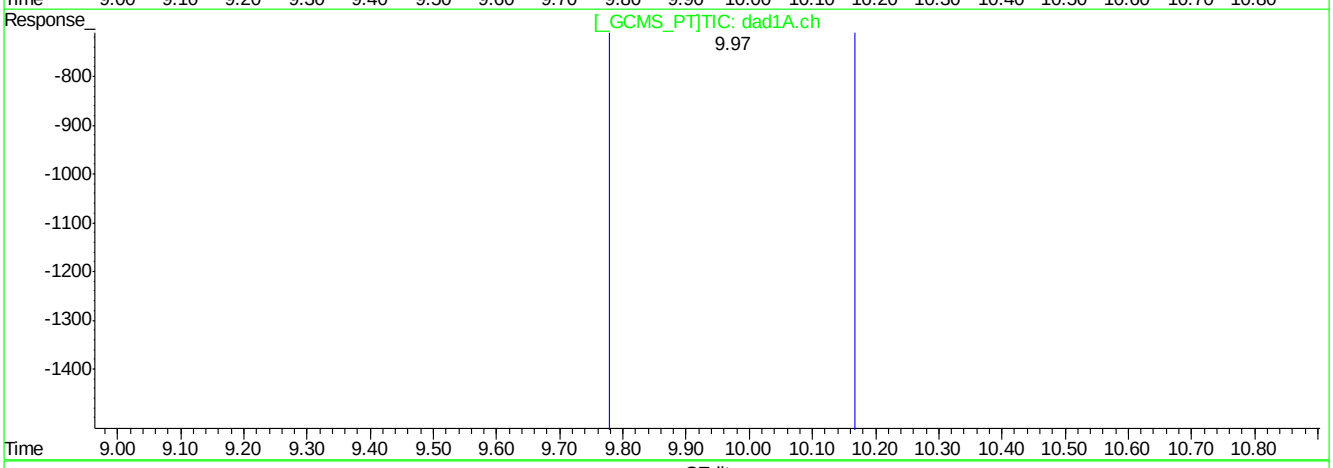
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:37:34 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.97min 27.123ppb m

response 96100

(12) 2,4,6-Trinitrotoluene #2

9.97min 22.576ppb

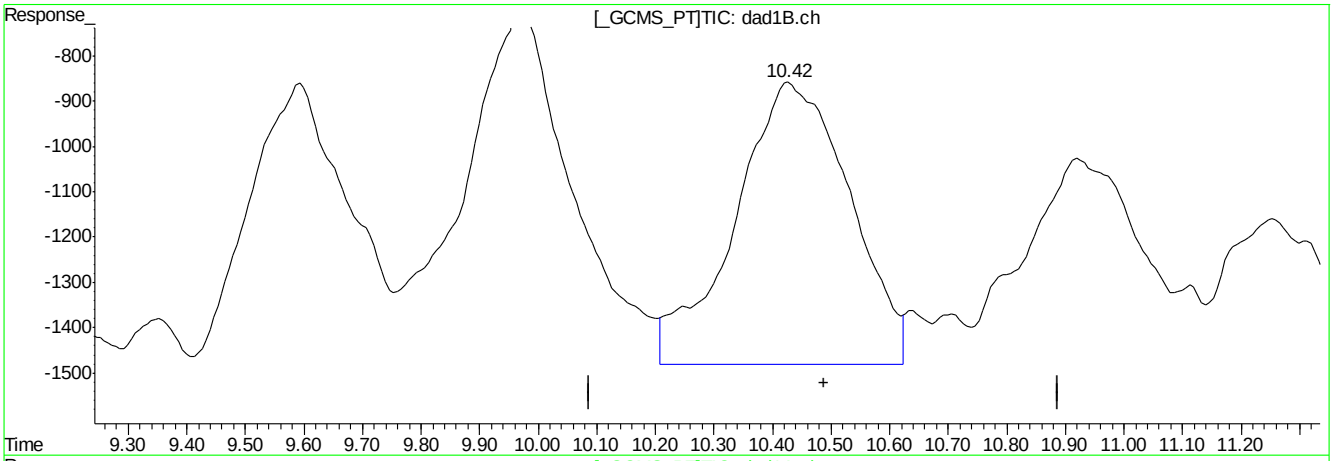
response 95719

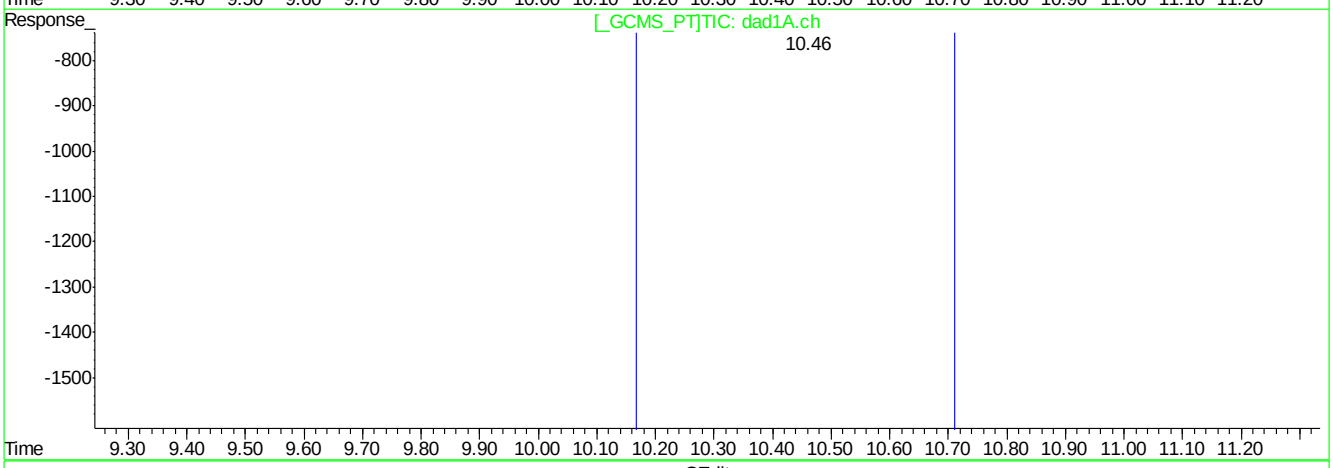
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:38:17 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.42min 26.619ppb m

response 84381

(13) 2-Amino-4,6-Dinitrotoluene #2

10.46min 23.325ppb

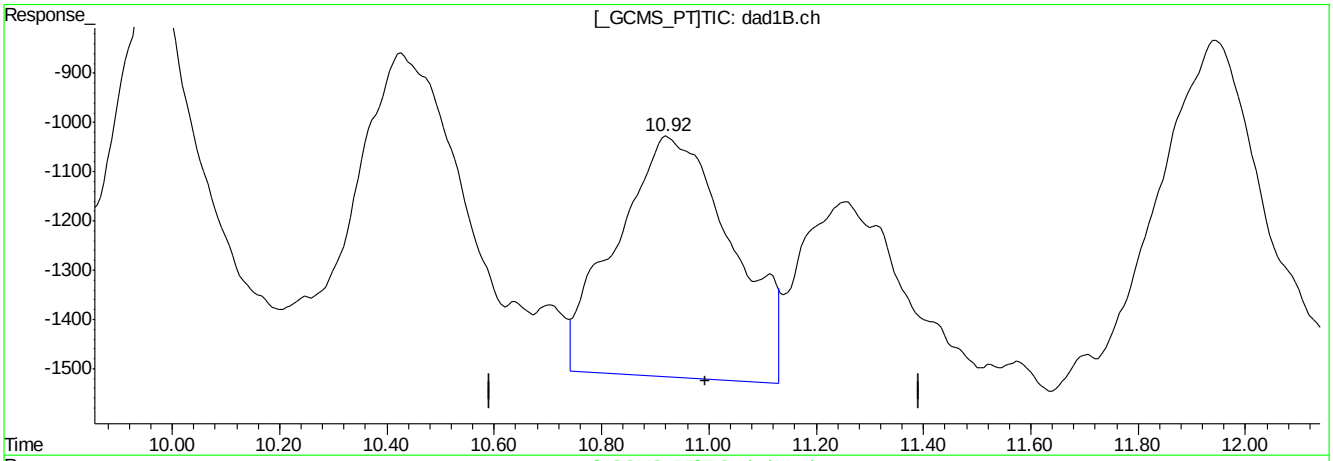
response 108127

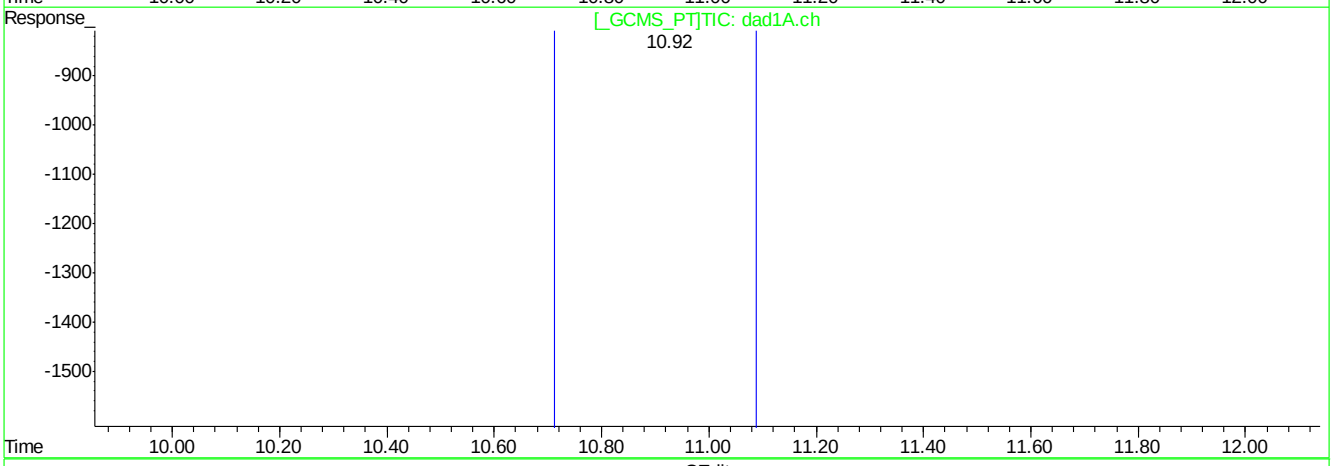
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:38:25 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.92min 31.394ppb m

response 72893

(14) 4-Amino-2,6-Dinitrotoluene #2

10.93min 18.419ppb

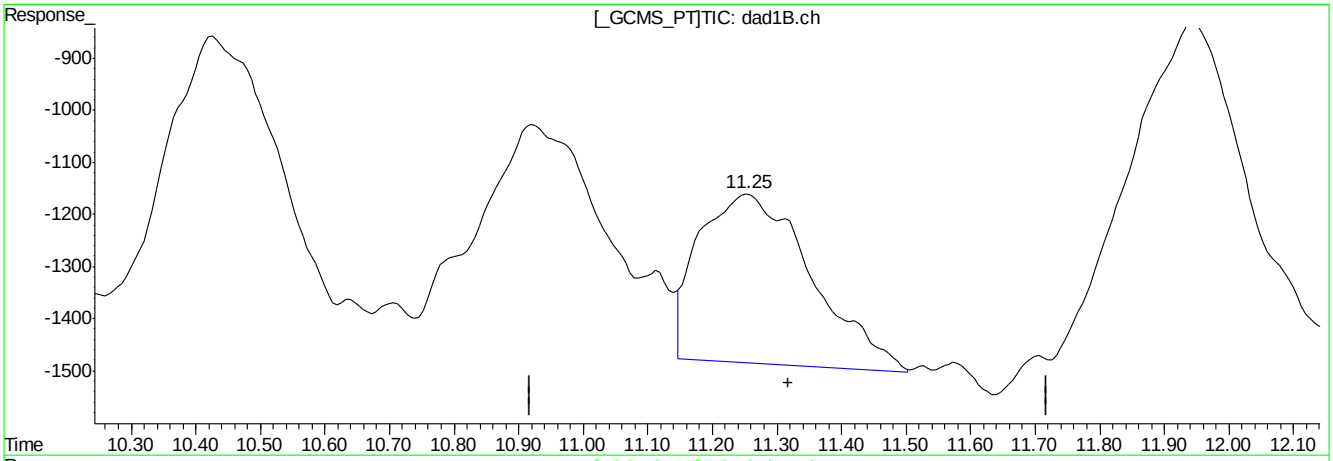
response 77220

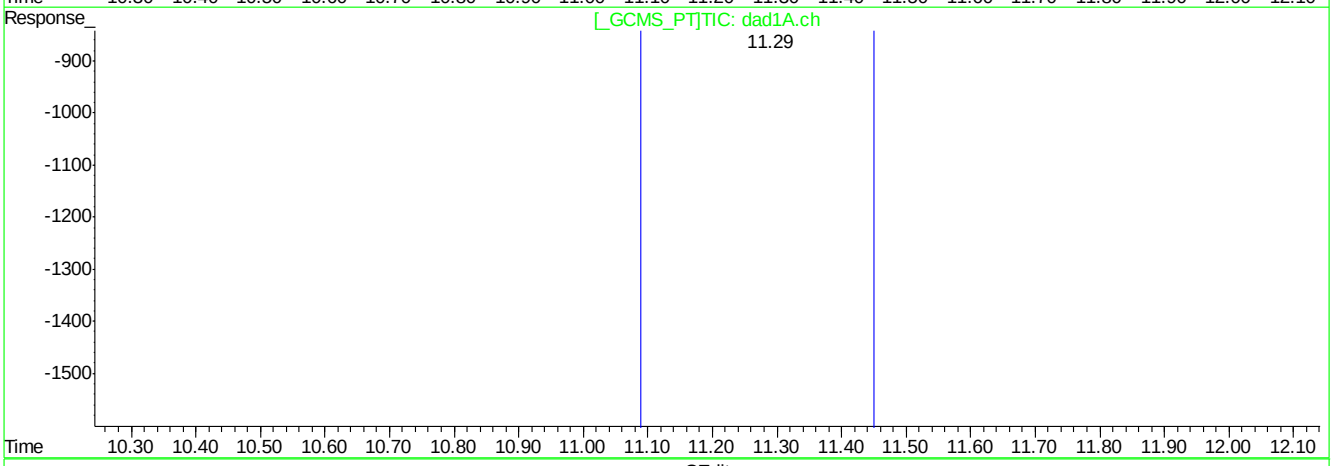
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:38:33 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.25min 19.104ppb m

response 39561

(15) 3,4-Dinitrotoluene #2 (S)

11.29min 12.816ppb

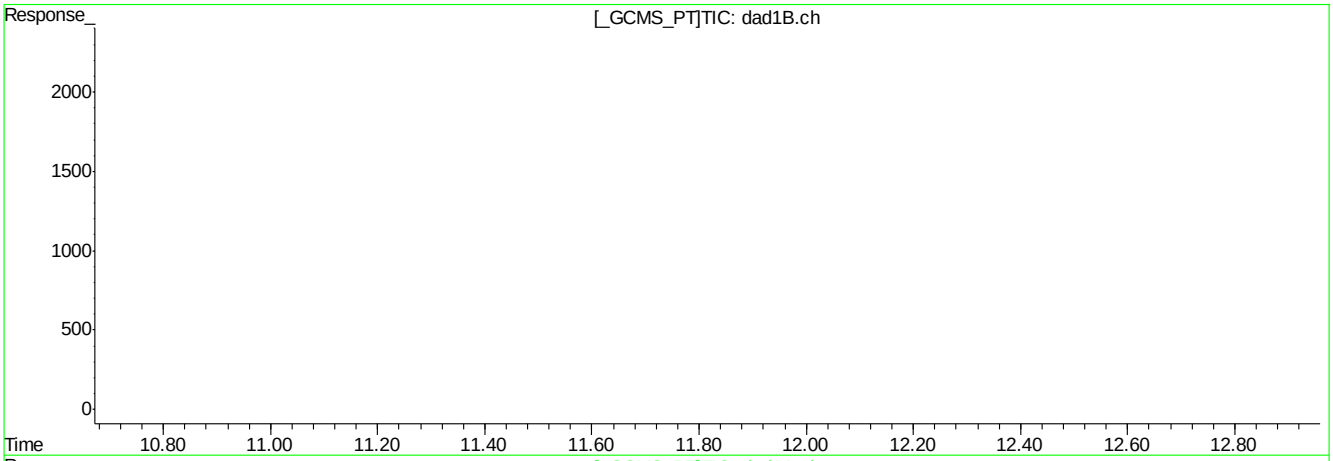
response 47603

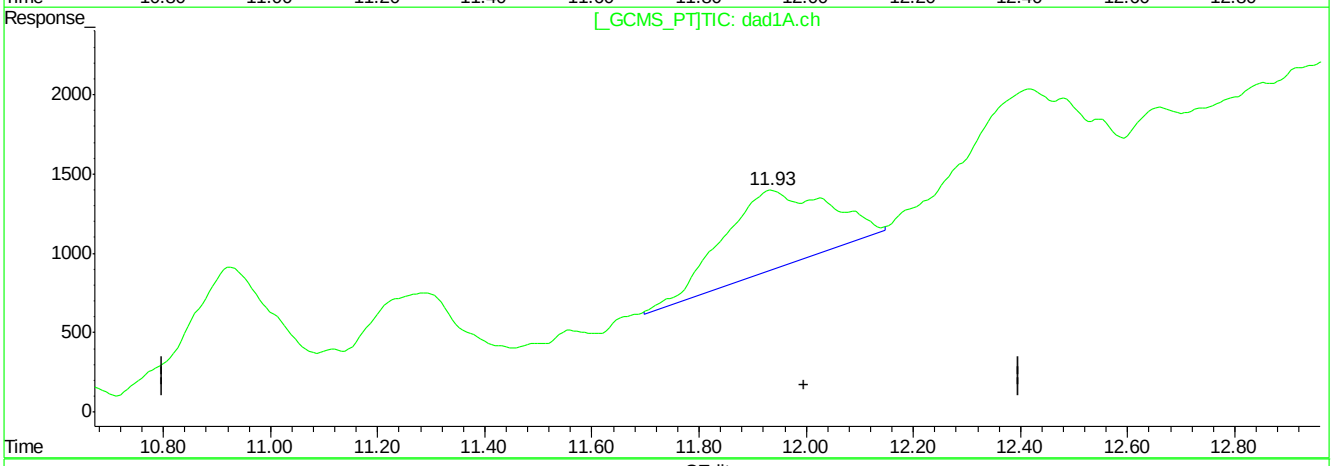
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:38:40 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

0.00min 0.000ppb

response 0

(16) 2,4-Dinitrotoluene #2

11.93min 23.648ppb m

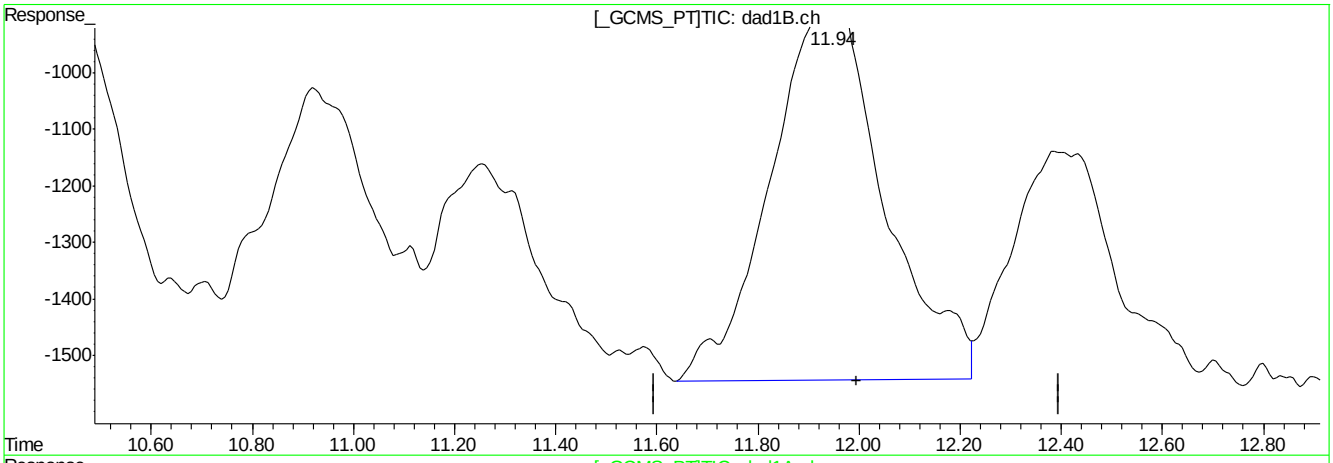
response 67855

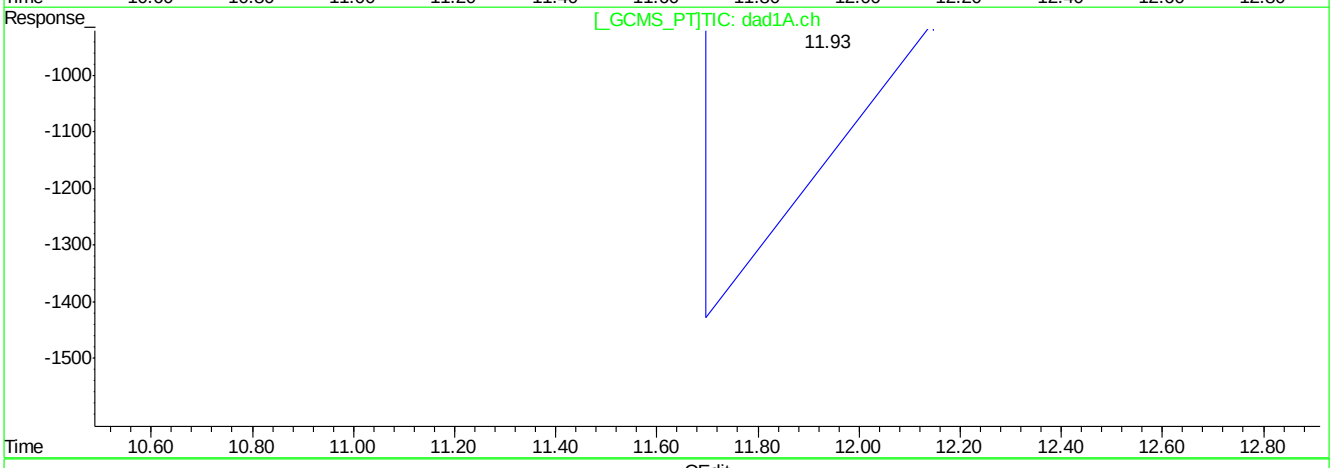
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:38:51 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.94min 24.196ppb m

response 104627

(16) 2,4-Dinitrotoluene #2

11.93min 23.648ppb m

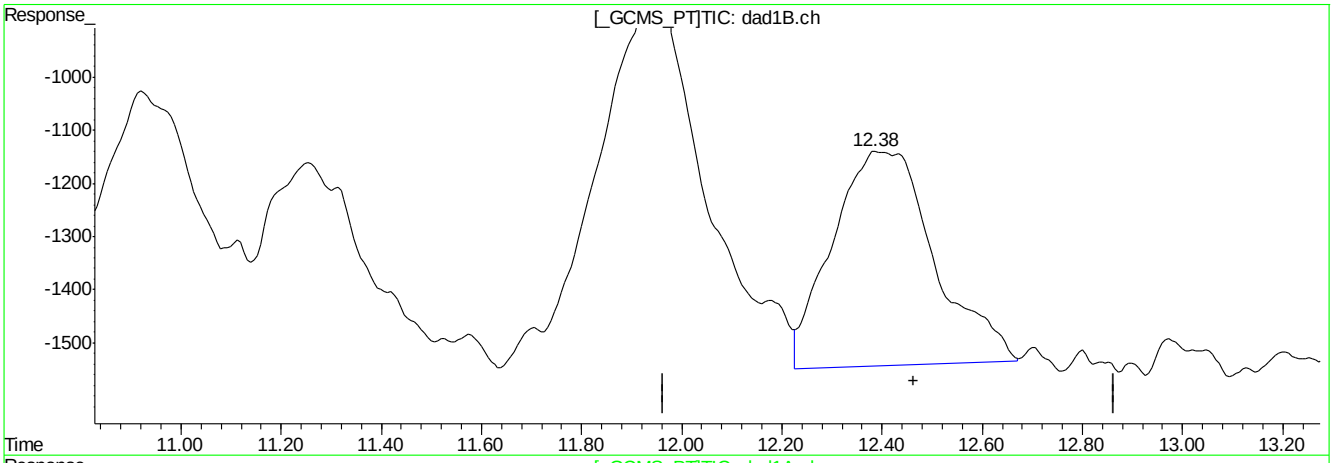
response 67855

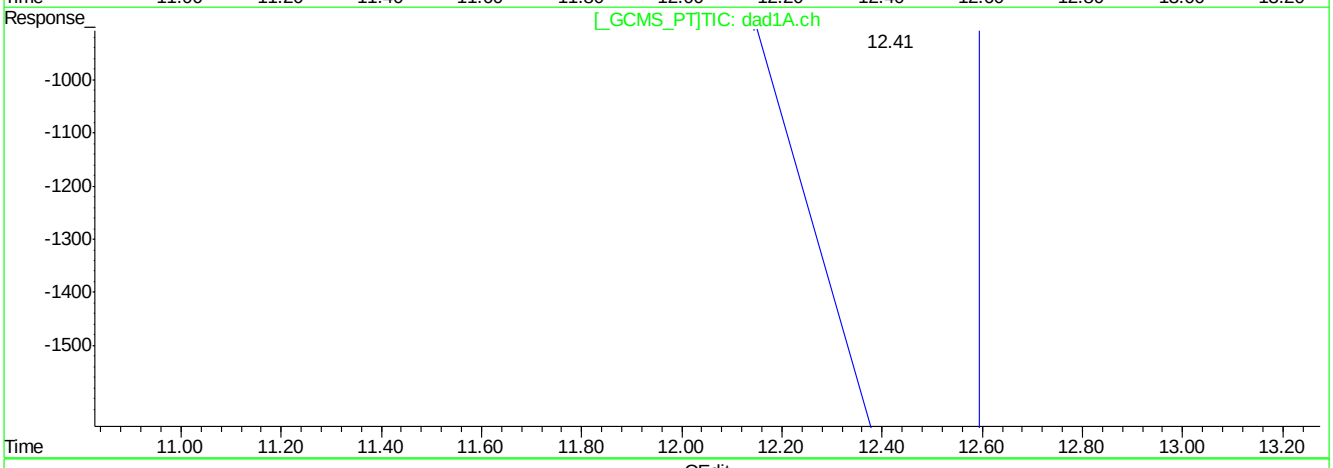
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:38:58 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.38min 22.837ppb m

response 56879

(17) 2,6-Dinitrotoluene #2

12.42min 21.241ppb

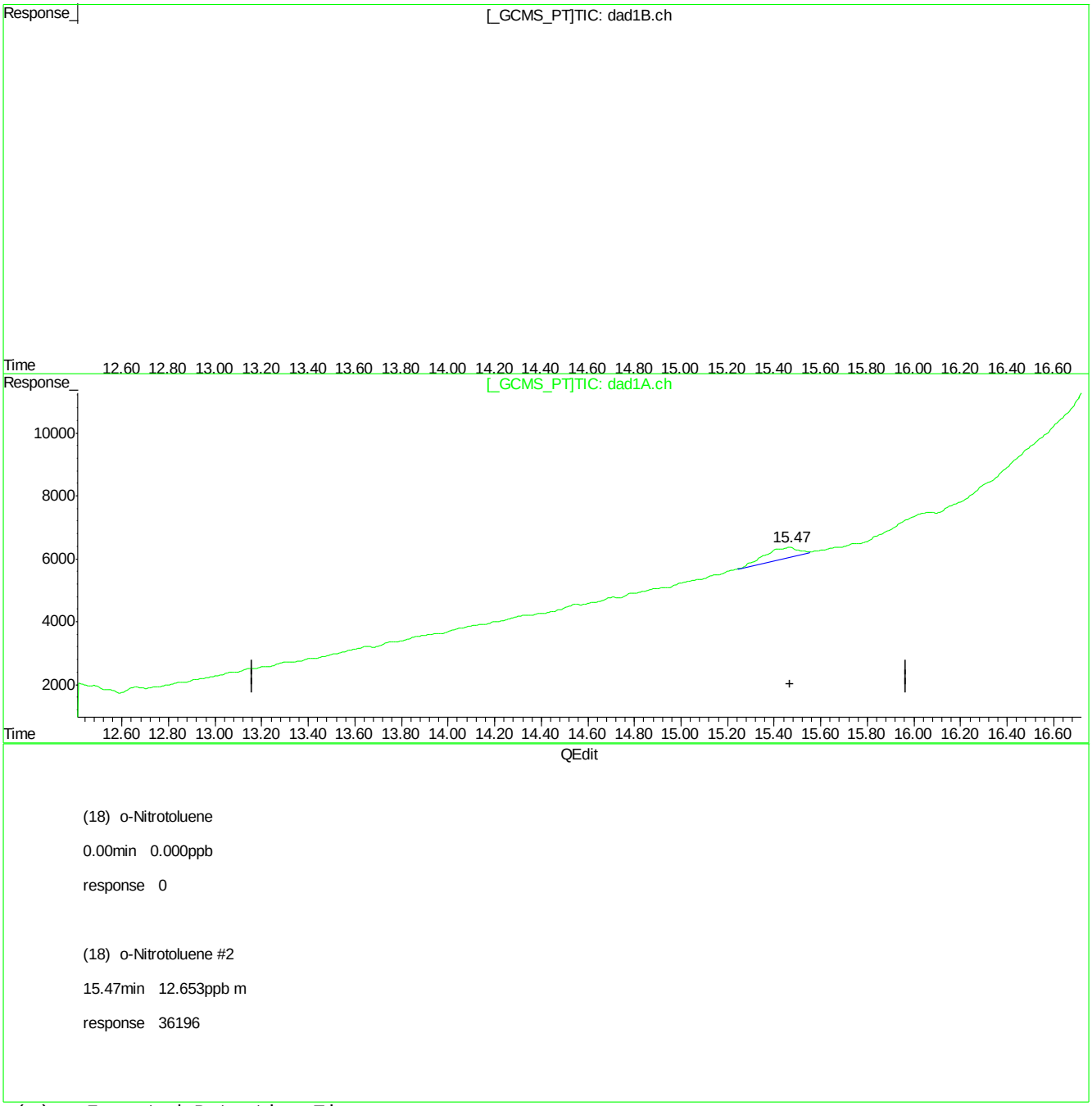
response 68593

(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:39:07 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

0.00min 0.000ppb

response 0

(18) o-Nitrotoluene #2

15.47min 12.653ppb m

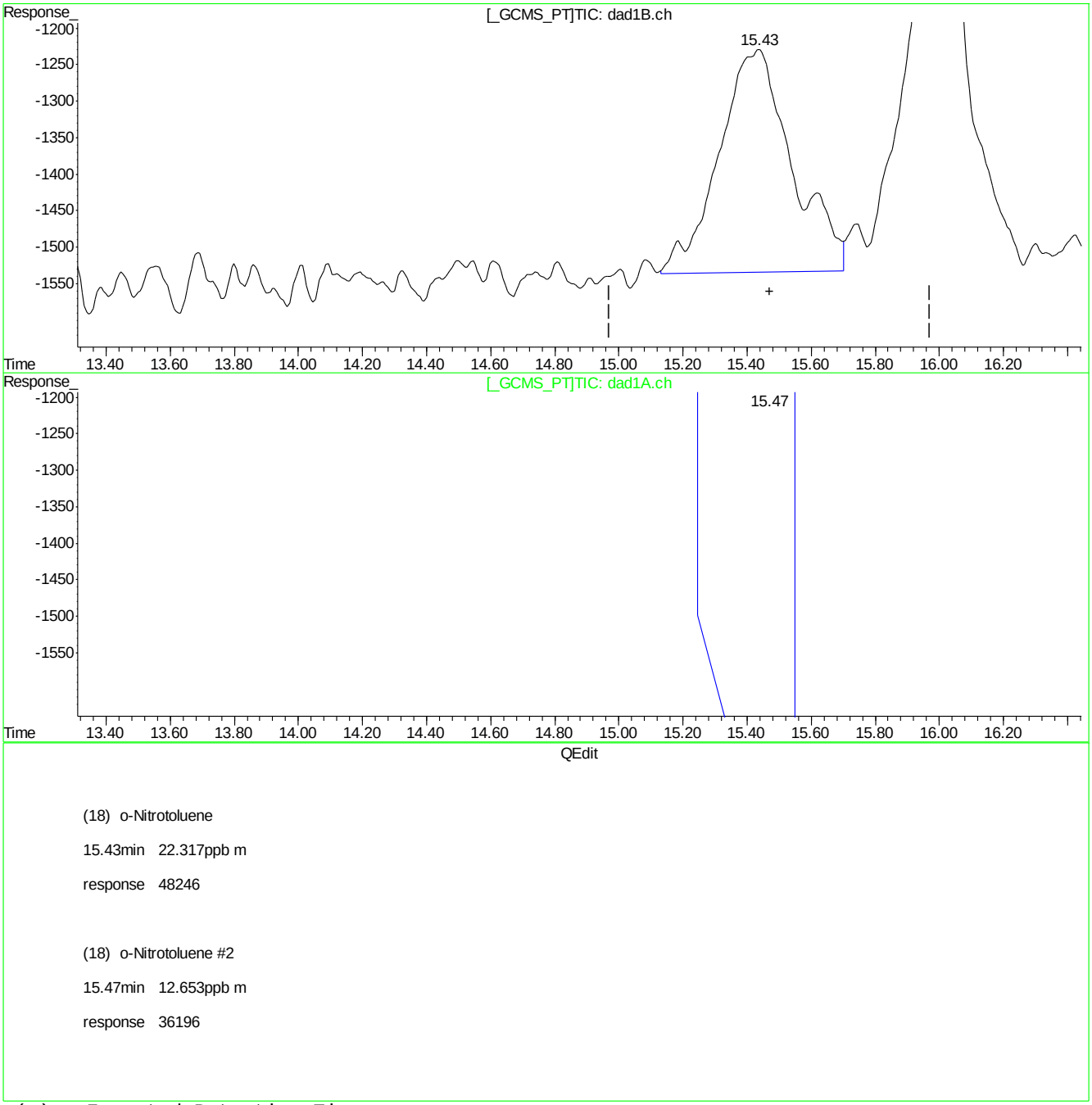
response 36196

(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:40:17 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration

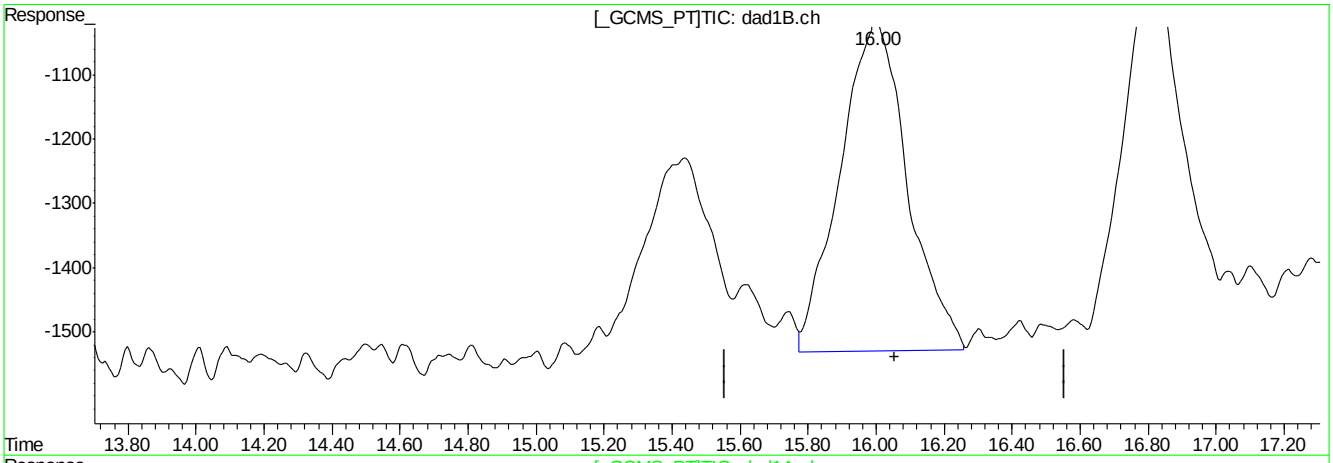


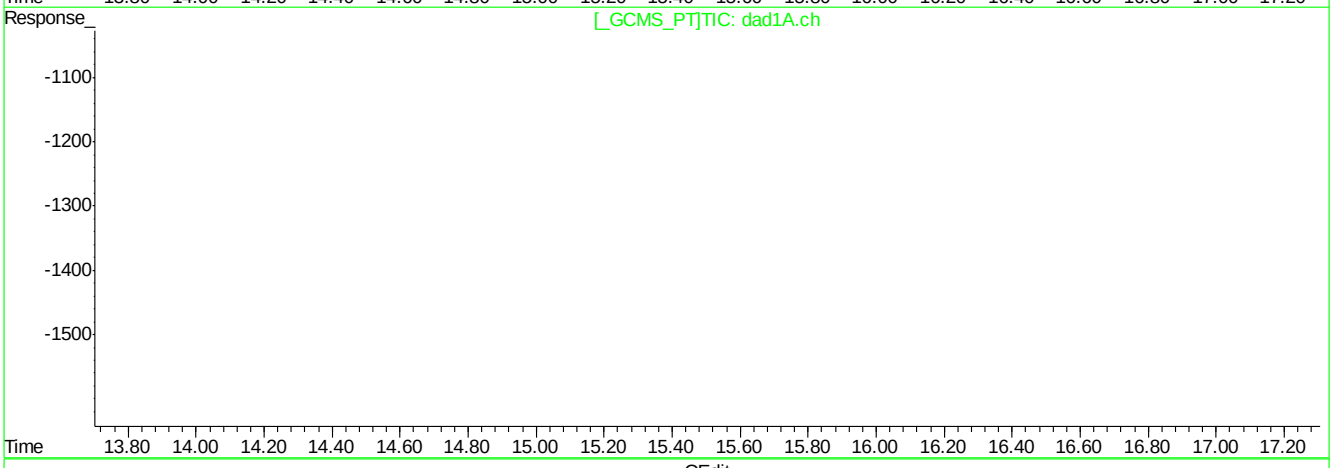
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:40:22 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.00min 21.562ppb m

response 70397

(19) p-Nitrotoluene #2

0.00min 0.000ppb

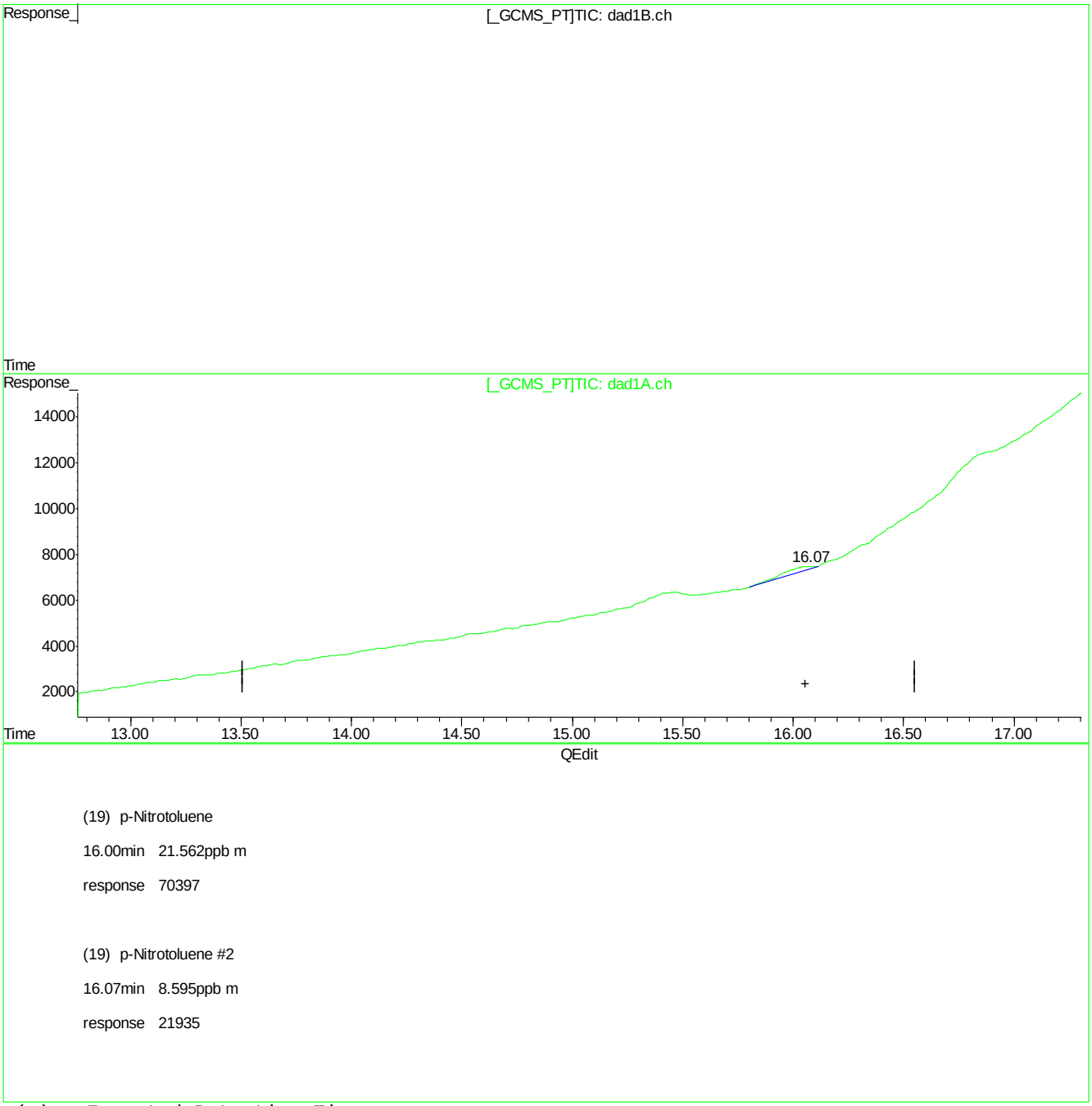
response 0

(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:40:28 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.00min 21.562ppb m

response 70397

(19) p-Nitrotoluene #2

16.07min 8.595ppb m

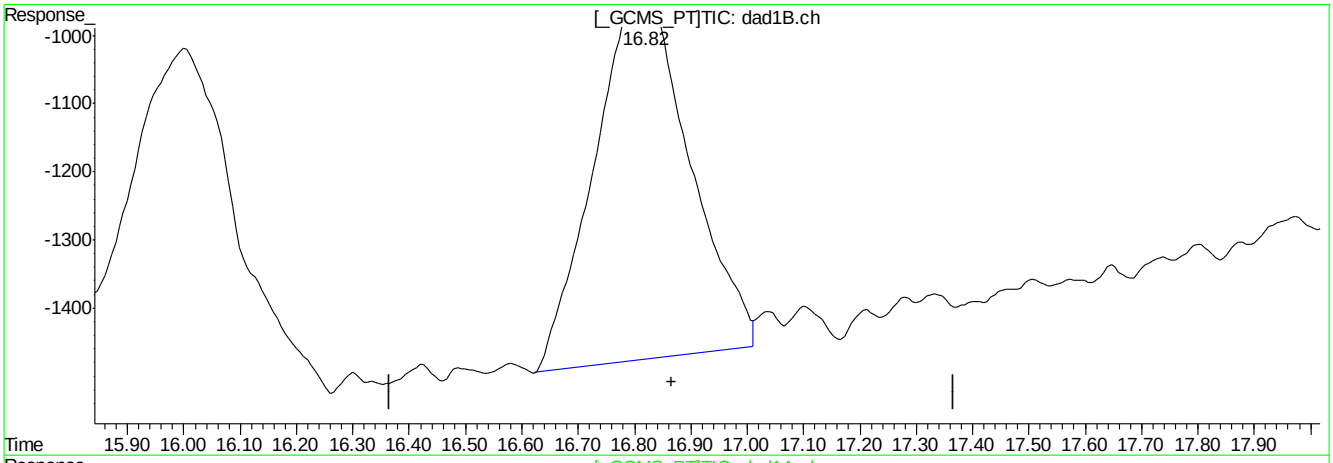
response 21935

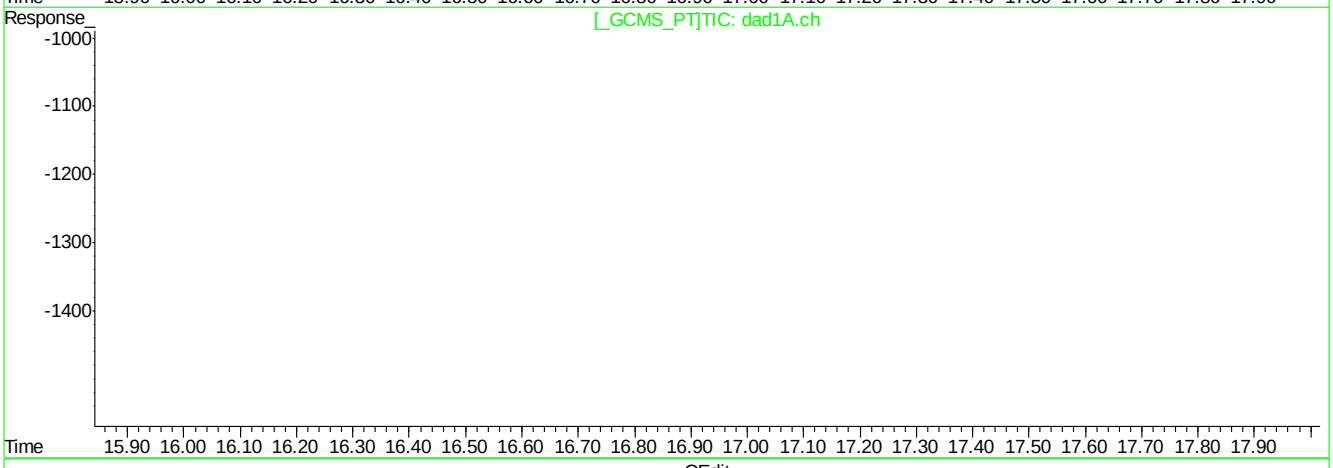
(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:40:34 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.82min 20.170ppb m

response 62390

(20) m-Nitrotoluene #2

0.00min 0.000ppb

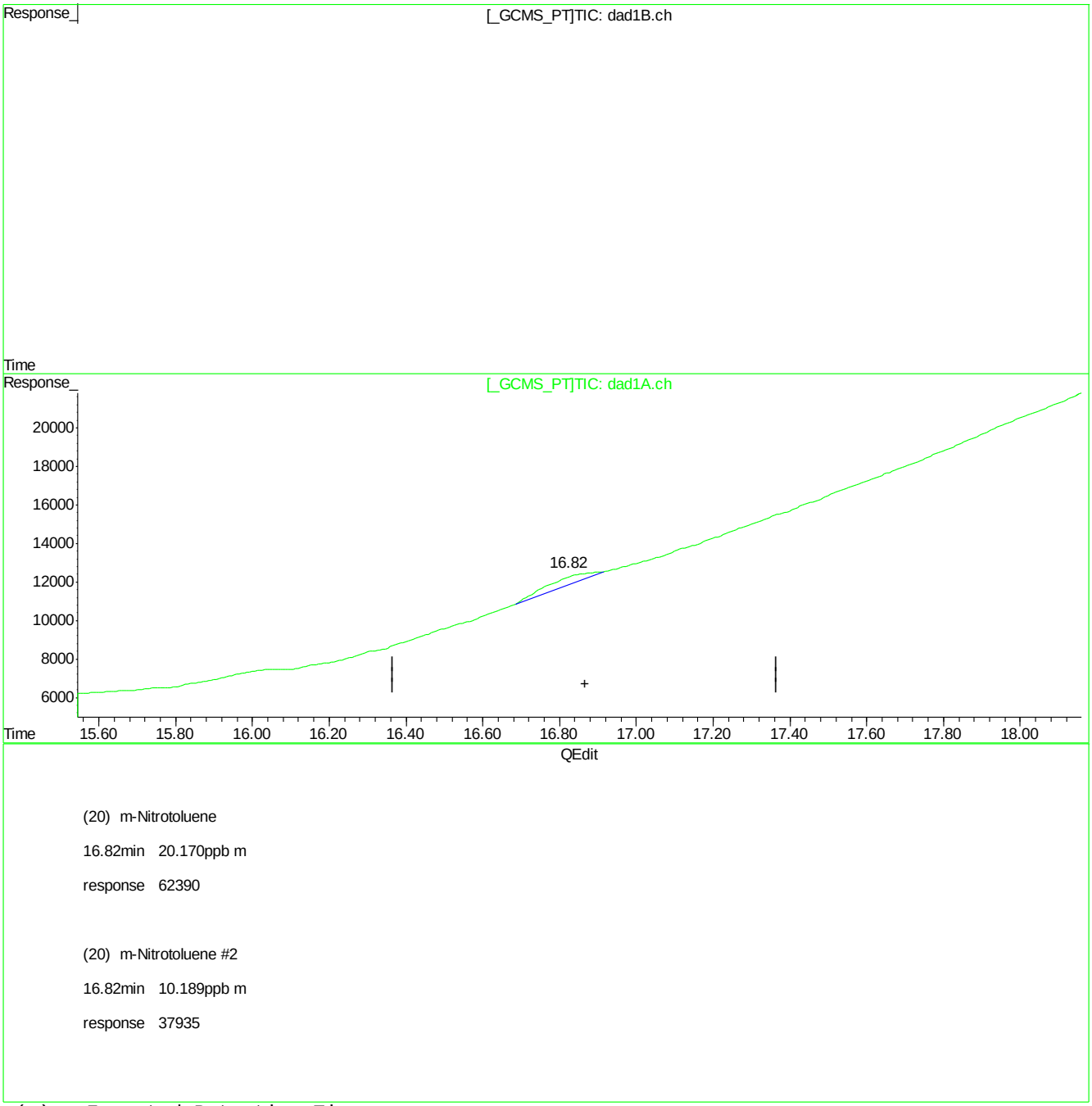
response 0

(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:41:37 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.82min 20.170ppb m

response 62390

(20) m-Nitrotoluene #2

16.82min 10.189ppb m

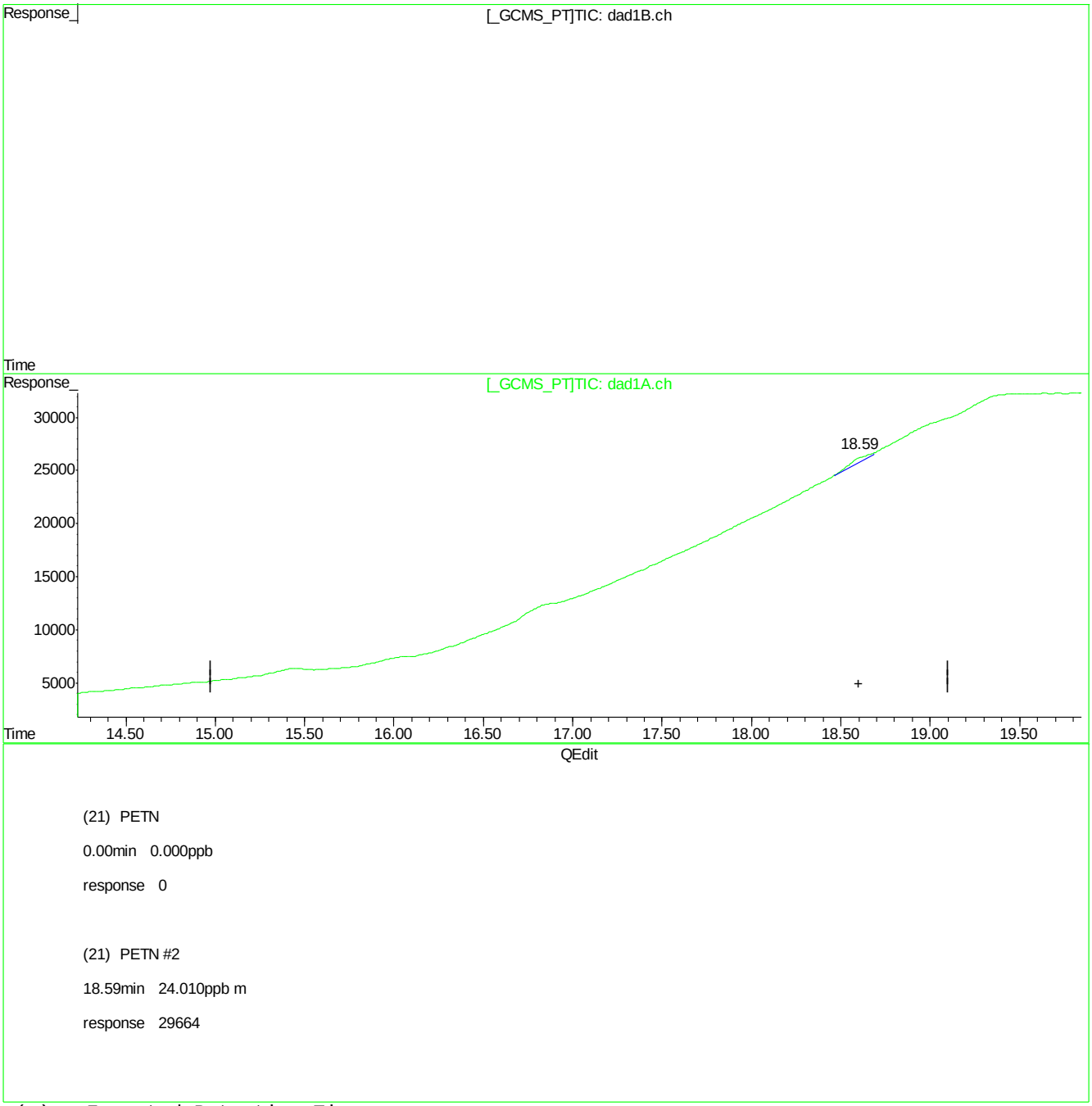
response 37935

(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:41:44 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388307.D\dad1A.ch
Acq On : 24-Sep-2020, 12:33:54 Operator: williamh
Sample : ic2336-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(+) = Expected Retention Time
PP388307.D GPP2336_092420PRI.M Thu Sep 24 15:41:51 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/25/20 13:58

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34:39 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.25	11.27	89654	146364	43.294m	39.401
Spiked Amount	500.000	Range 70 - 136		Recovery =		8.66%#	7.88%#
	Target Compounds						
1)	TNX	1.34	1.34	136108	239459	45.167	48.706
2)	HMX	1.48	1.48	73030	244530	49.123m	57.259m
3)	DNX	1.73	1.73	122692	176476	49.904m	43.800m
4)	MNX	2.34	2.34	133330	203800	49.054	47.472m
5)	RDX	2.97	2.97	91946	141125	51.047m	47.822m
6)	1,3,5-Trinitrobe	4.74	4.74	197278	384044	50.269	49.858m
7)	1,3-Dinitrobenze	5.94	5.94	243401	170118	49.023	49.748m
8)	3,5-Dinitroanili	6.36	6.36	191820	334060	50.428	51.801m
9)	Nitrobenzene	7.49	7.49	143799	143284	49.651m	50.637
10)	Nitroglycerin	0.00	9.14	0	59931	N.D.	55.772 #
11)	Tetryl	9.61	9.61	132994	219876	47.575	48.492
12)	2,4,6-Trinitroto	9.98	9.98	167607	208202	47.306	49.106
13)	2-Amino-4,6-Dini	10.45	10.44	139894	225159	44.132	48.570
14)	4-Amino-2,6-Dini	10.93	10.95	114350	189539	49.249m	45.209
16)	2,4-Dinitrotolue	11.96	11.96	218092	130342	50.435m	45.425m
17)	2,6-Dinitrotolue	12.40	12.42	115478	139755	46.365m	43.279
18)	o-Nitrotoluene	15.43	15.43	93937	113447	43.453m	39.662m
19)	p-Nitrotoluene	16.00	16.06	158037	72665	48.405	28.467m#
20)	m-Nitrotoluene	16.82	16.84	142710	155531	46.137m	41.771m
21)	PETN	0.00	18.62	0	40619	N.D.	32.877m#

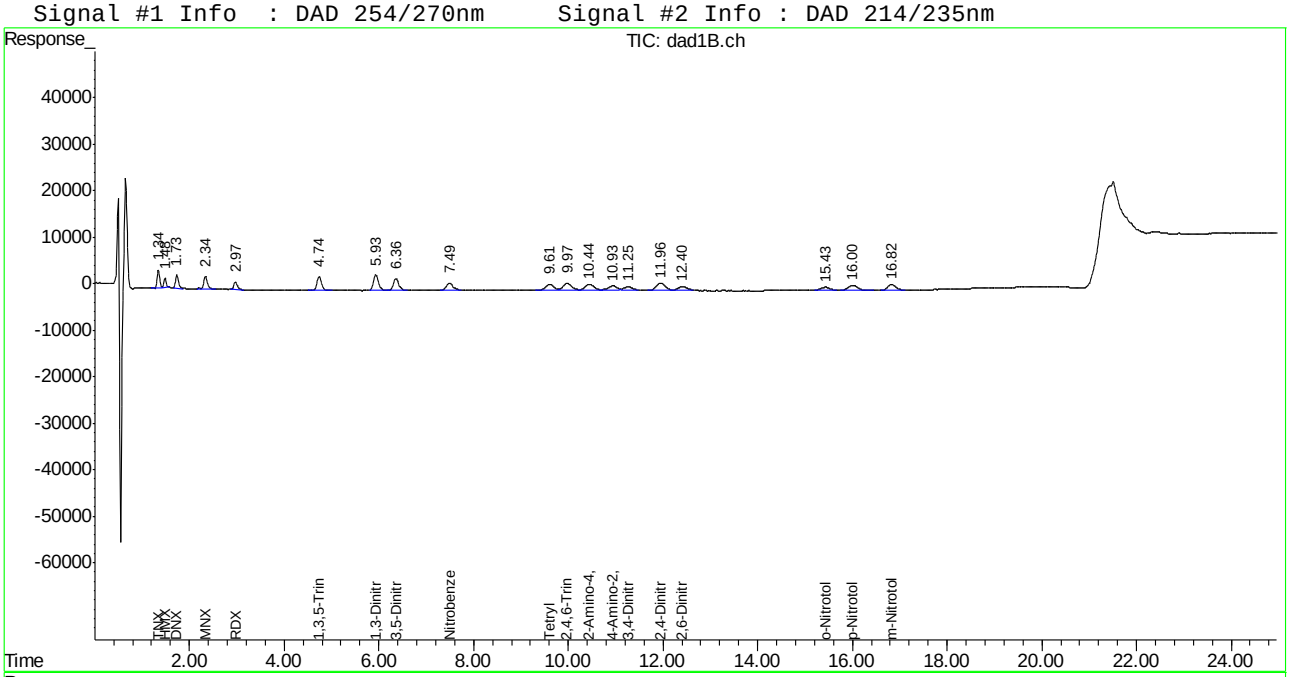
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

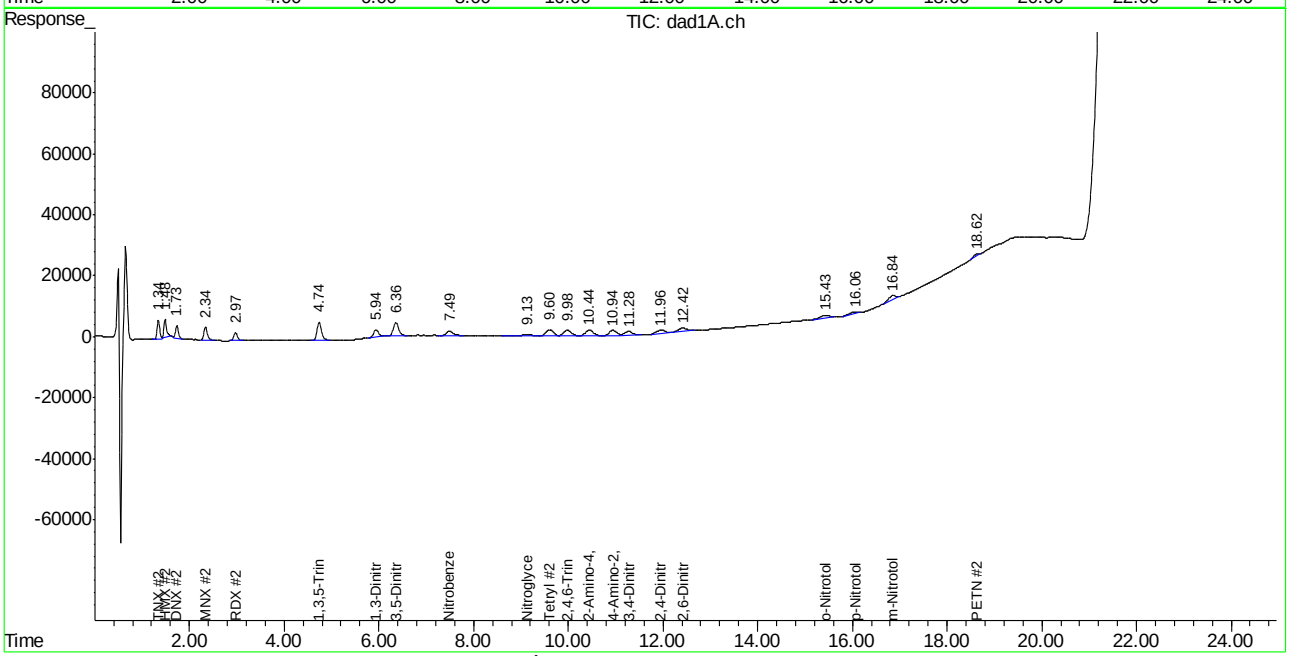
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:47 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

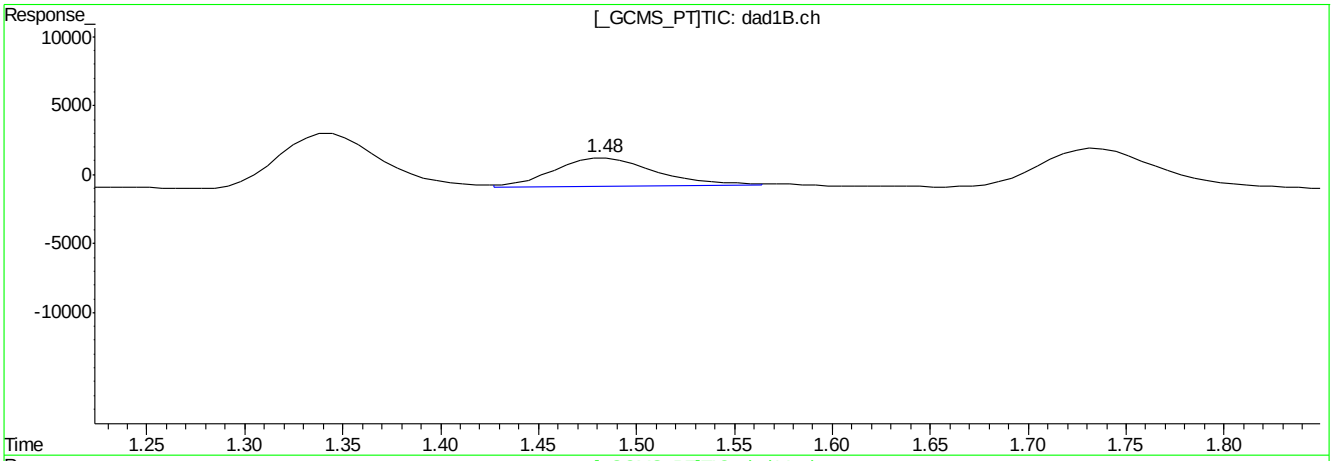
Sample Number: GPP2336-IC2336
Lab FileID: PP388308.D
Injection Time: 09/24/20 13:05
Method: SW846 8330A
Analyst approved: 09/25/20 10:27 William Hustedde
Supervisor approved: 09/25/20 13:58 Naresh Jiawan

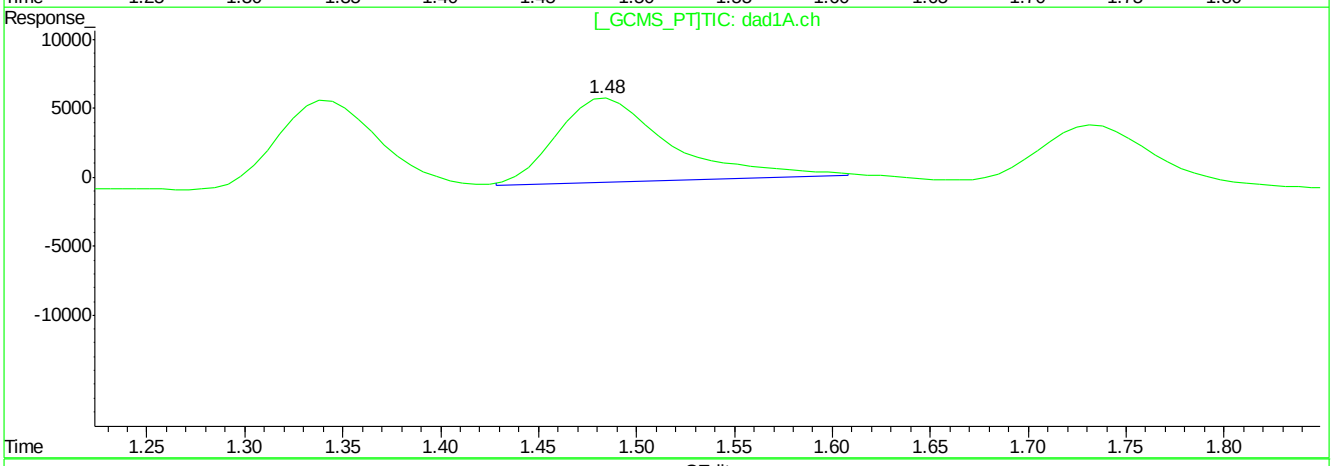
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.48	Poor instrument integration
HMX	2691-41-0	2	1.48	Poor instrument integration
DNX		1	1.73	Poor instrument integration
DNX		2	1.73	Poor instrument integration
MNX		2	2.34	Poor instrument integration
RDX	121-82-4	1	2.97	Poor instrument integration
RDX	121-82-4	2	2.97	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.74	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.94	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.36	Poor instrument integration
Nitrobenzene	98-95-3	1	7.49	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.93	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.25	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	11.96	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	11.96	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.40	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.43	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.43	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.06	Poor instrument integration
m-Nitrotoluene	99-08-1	1	16.82	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.84	Poor instrument integration
PETN	78-11-5	2	18.62	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.48min 49.123ppb m

response 73030

(2) HMX #2

1.48min 57.259ppb m

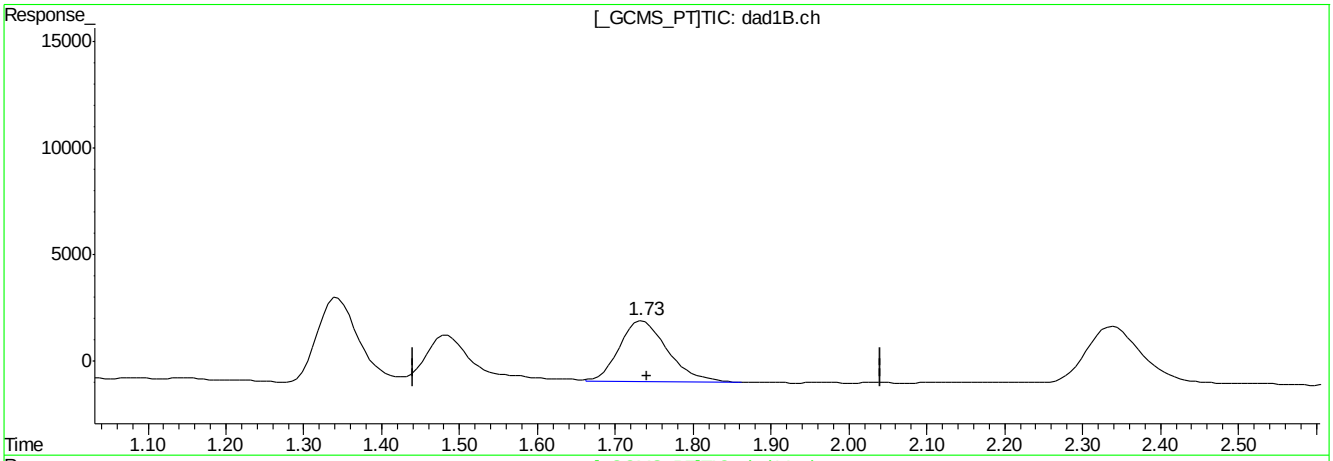
response 244530

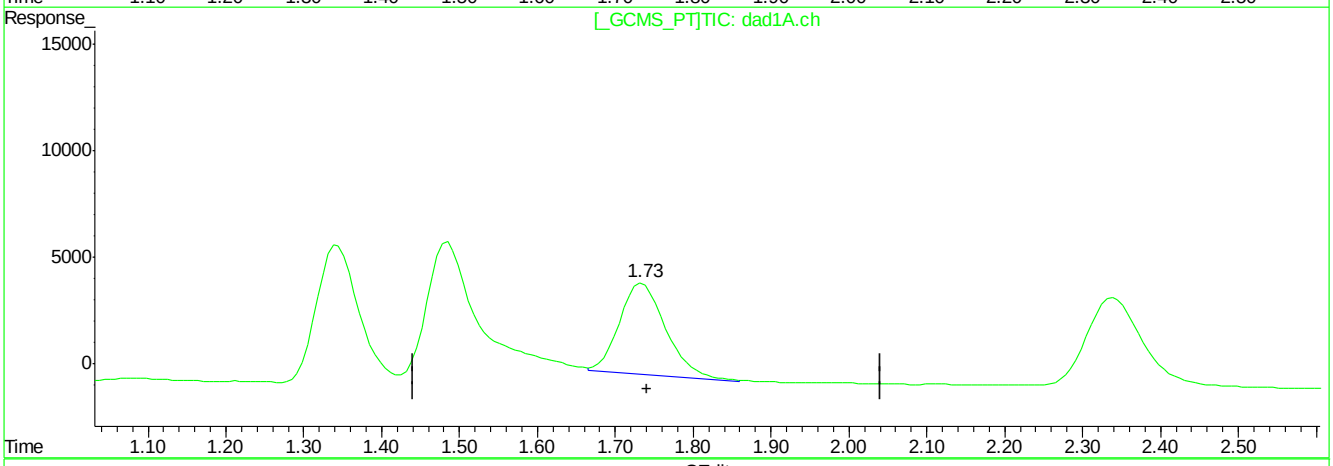
(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:45:12 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.73min 49.904ppb m

response 122692

(3) DNX #2

1.73min 43.800ppb m

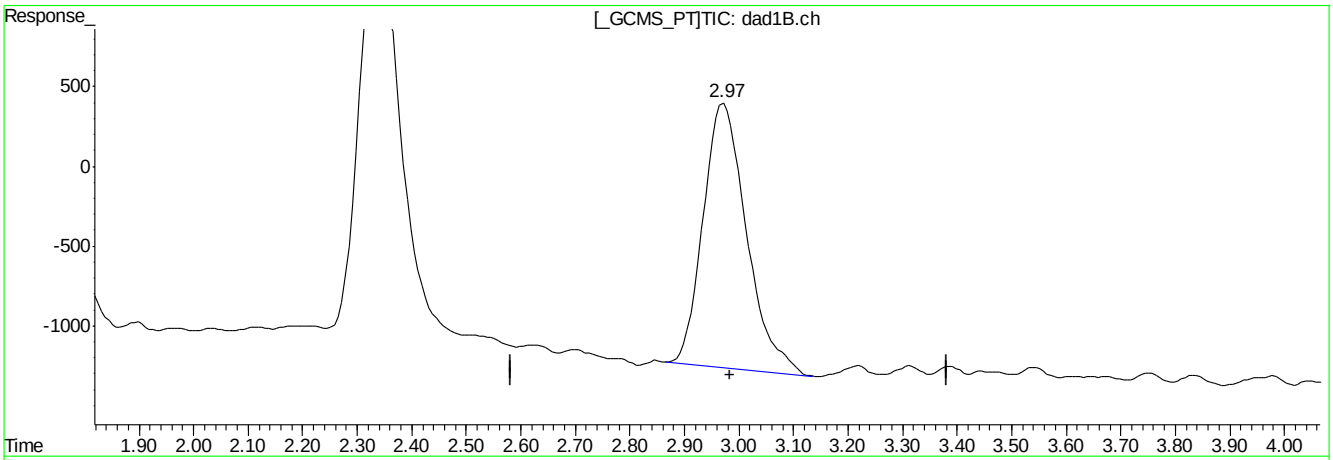
response 176476

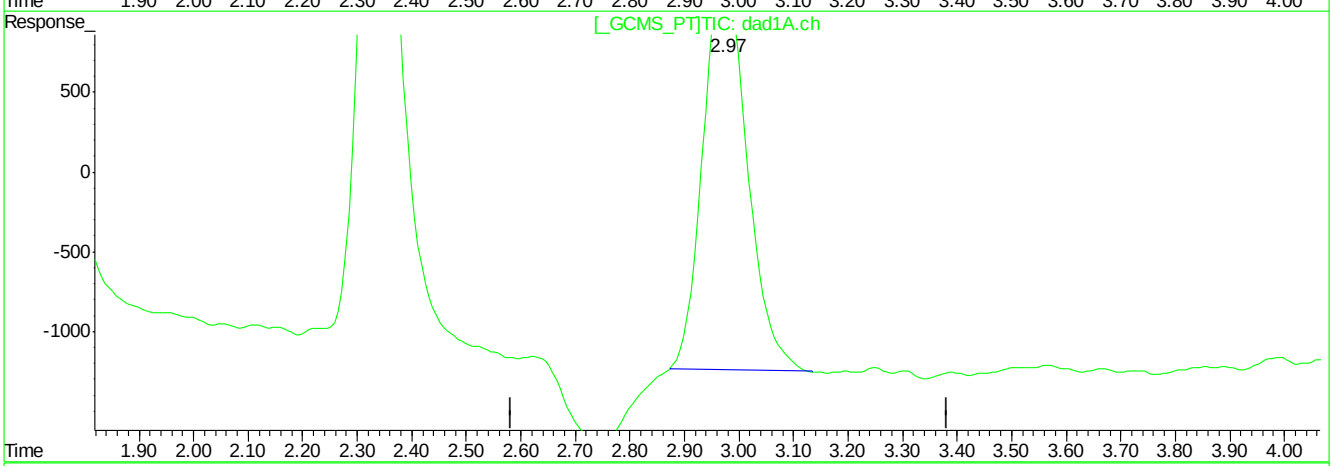
(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:45:21 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.97min 51.047ppb m

response 91946

(5) RDX #2

2.97min 47.822ppb m

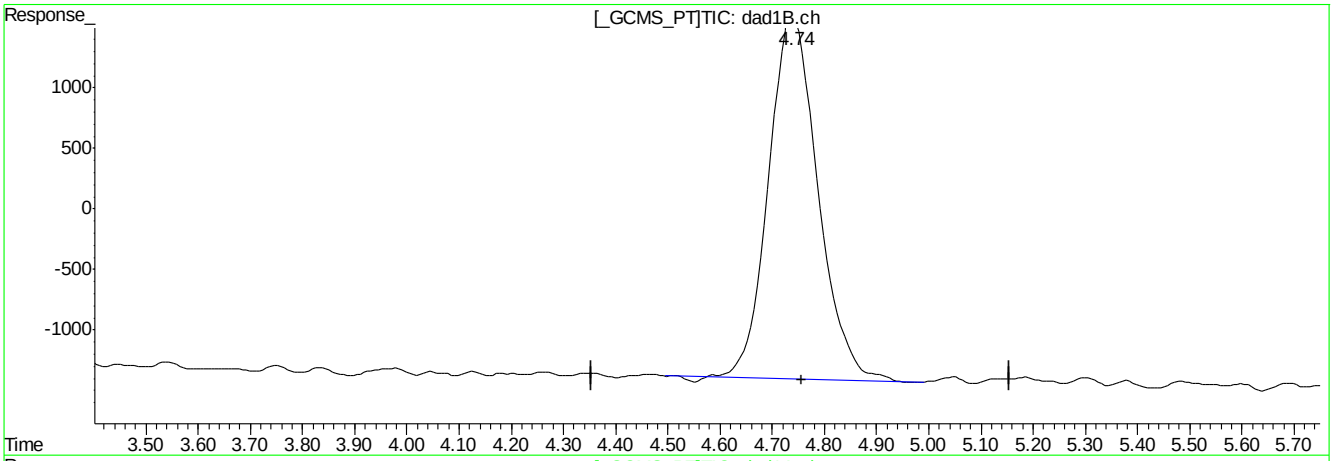
response 141125

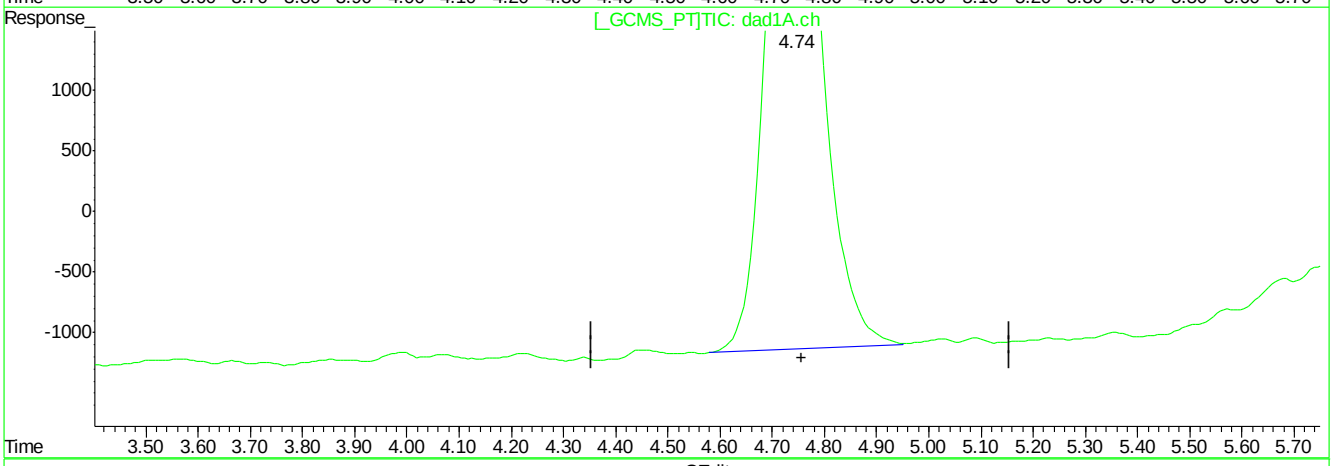
(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:45:44 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.74min 50.269ppb

response 197278

(6) 1,3,5-Trinitrobenzene #2

4.74min 49.858ppb m

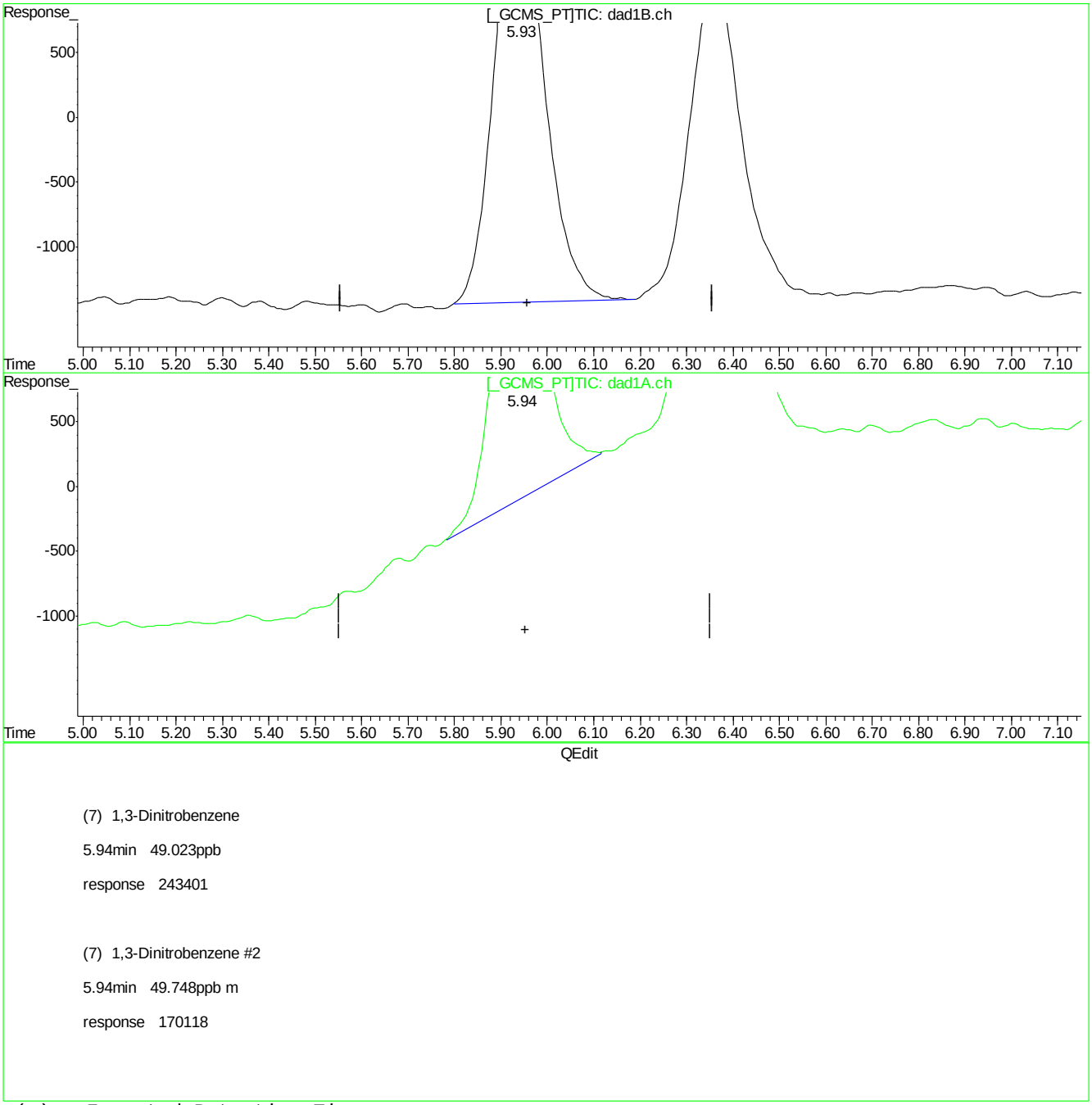
response 384044

(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:45:50 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.94min 49.023ppb

response 243401

(7) 1,3-Dinitrobenzene #2

5.94min 49.748ppb m

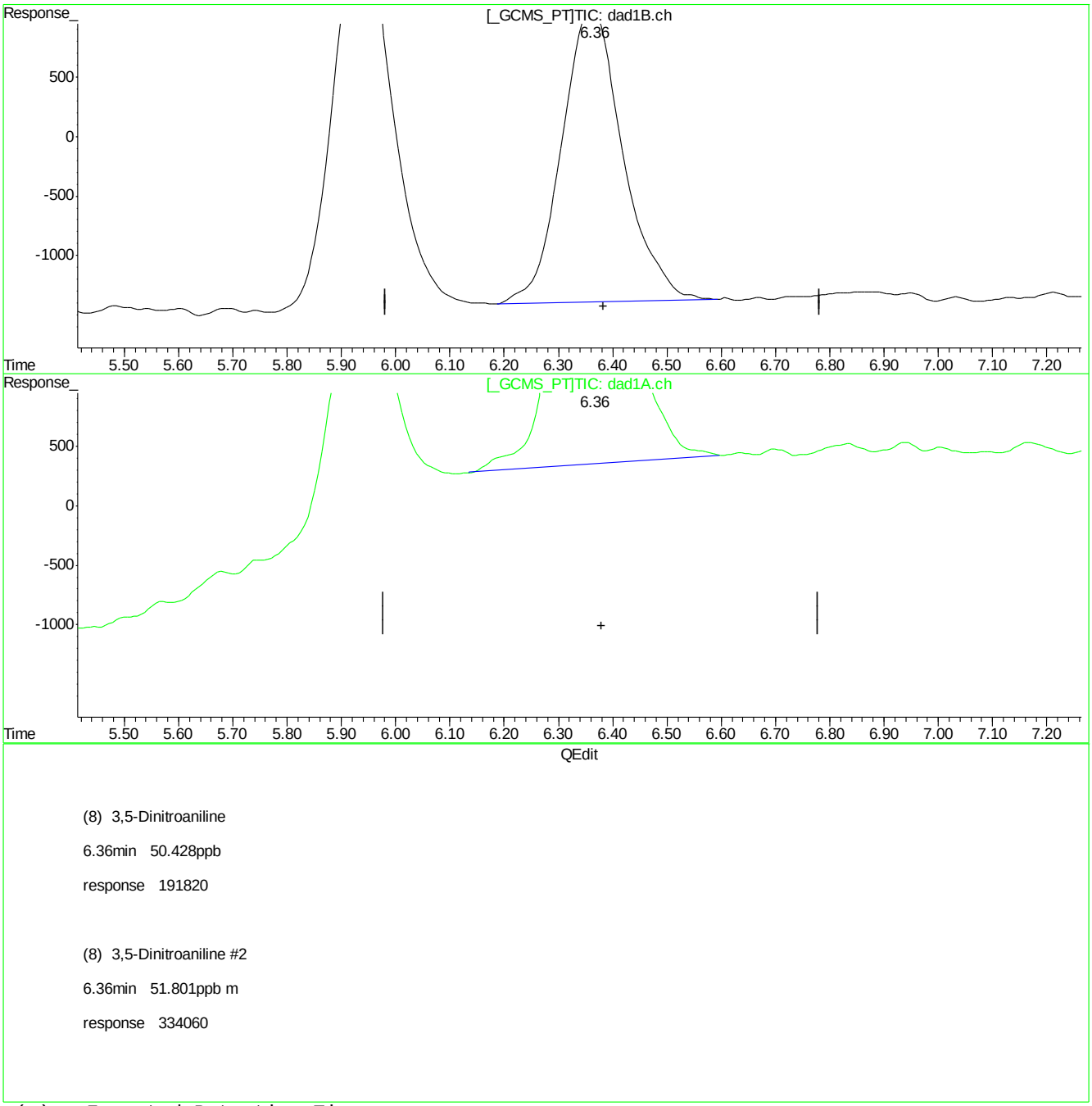
response 170118

(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:45:57 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.36min 50.428ppb

response 191820

(8) 3,5-Dinitroaniline #2

6.36min 51.801ppb m

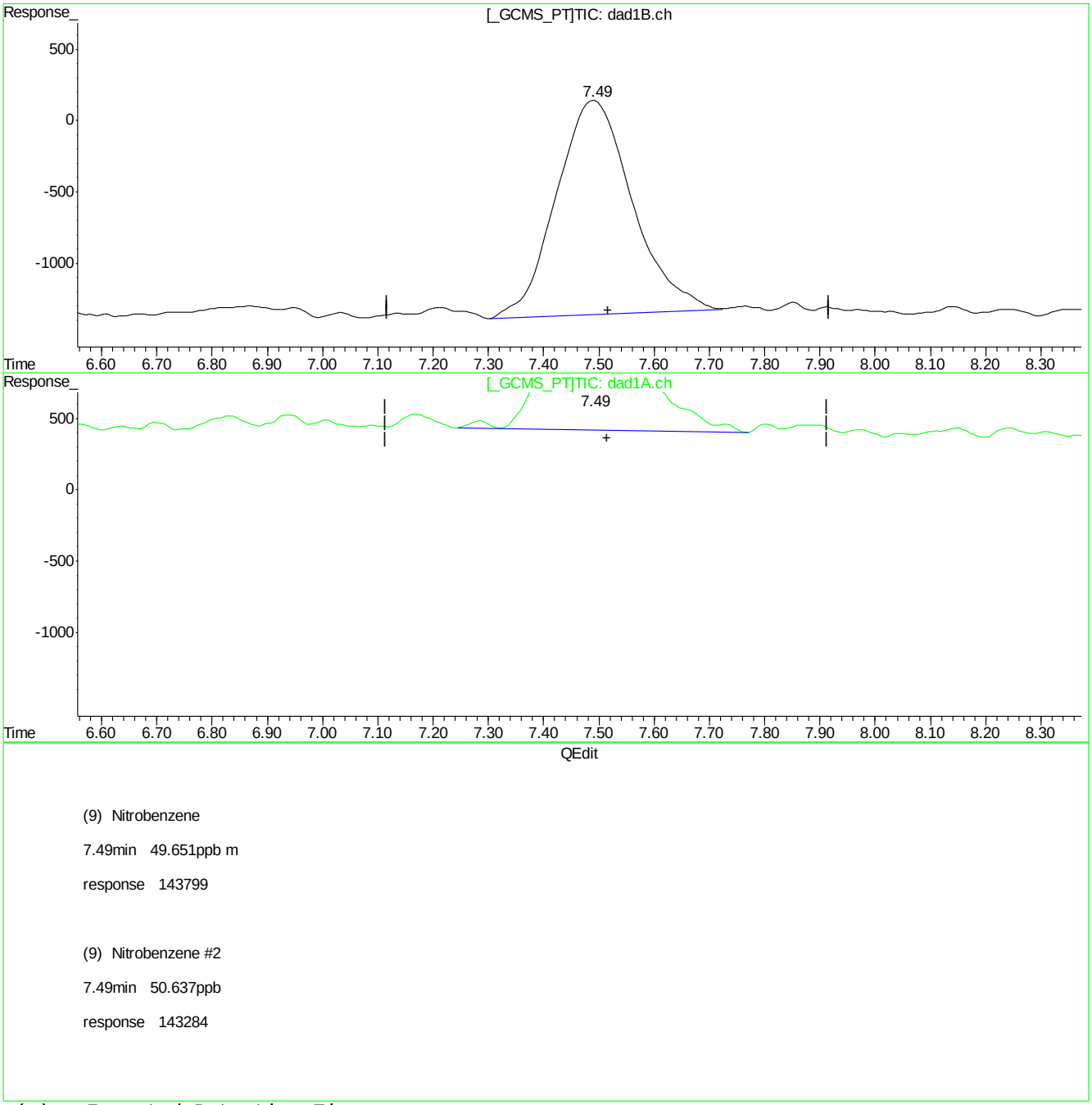
response 334060

(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:46:04 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration

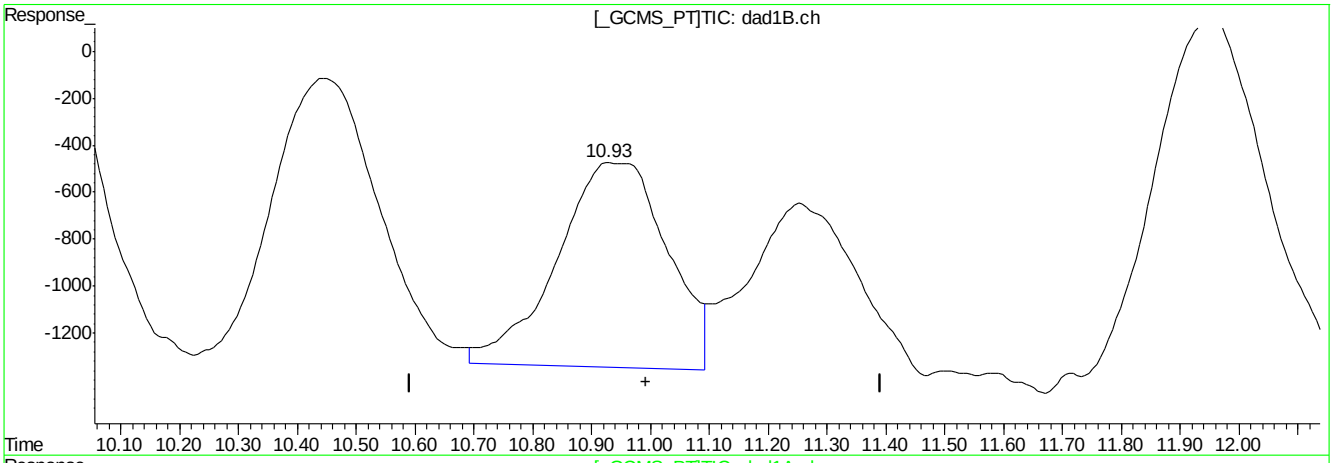


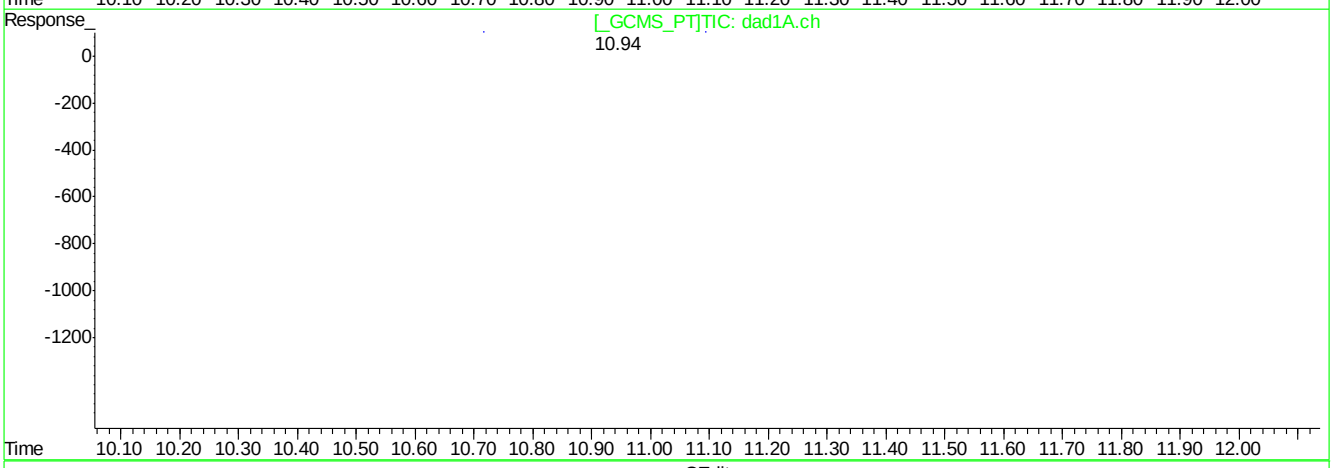
(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:46:11 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 49.249ppb m

response 114350

(14) 4-Amino-2,6-Dinitrotoluene #2

10.95min 45.209ppb

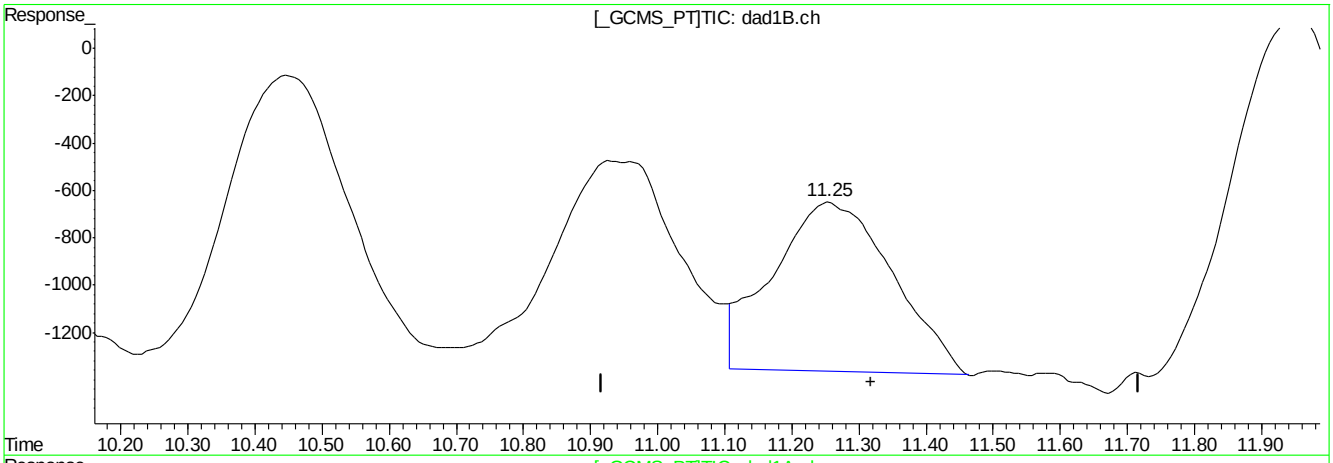
response 189539

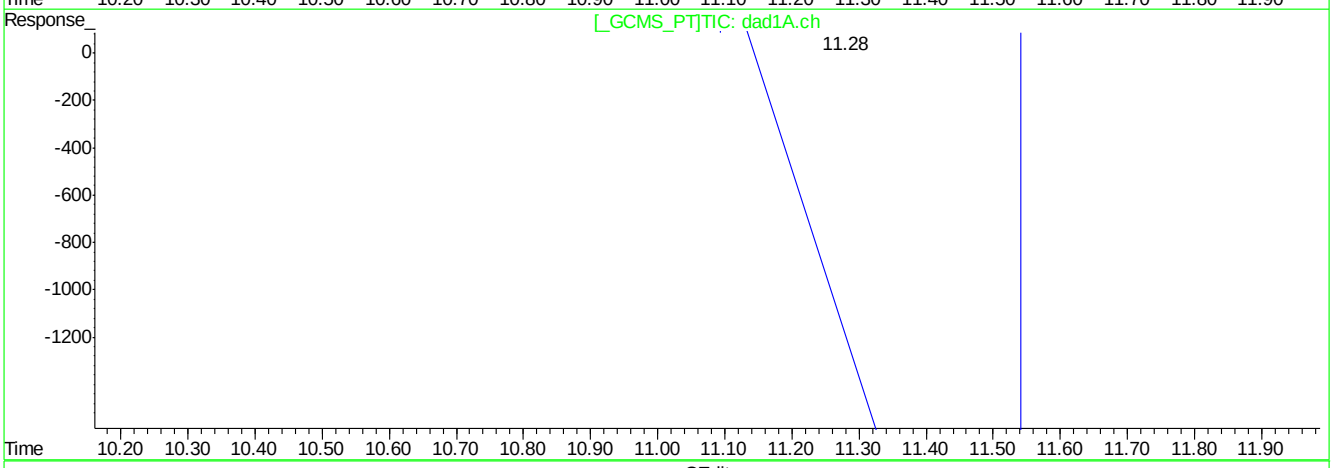
(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:46:48 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.25min 43.294ppb m

response 89654

(15) 3,4-Dinitrotoluene #2 (S)

11.27min 39.401ppb

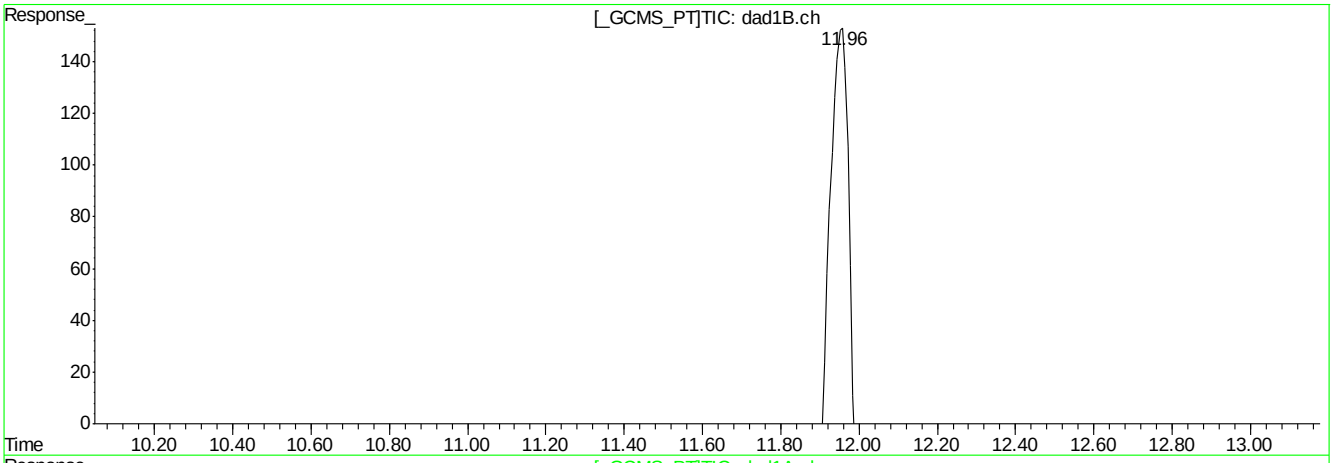
response 146364

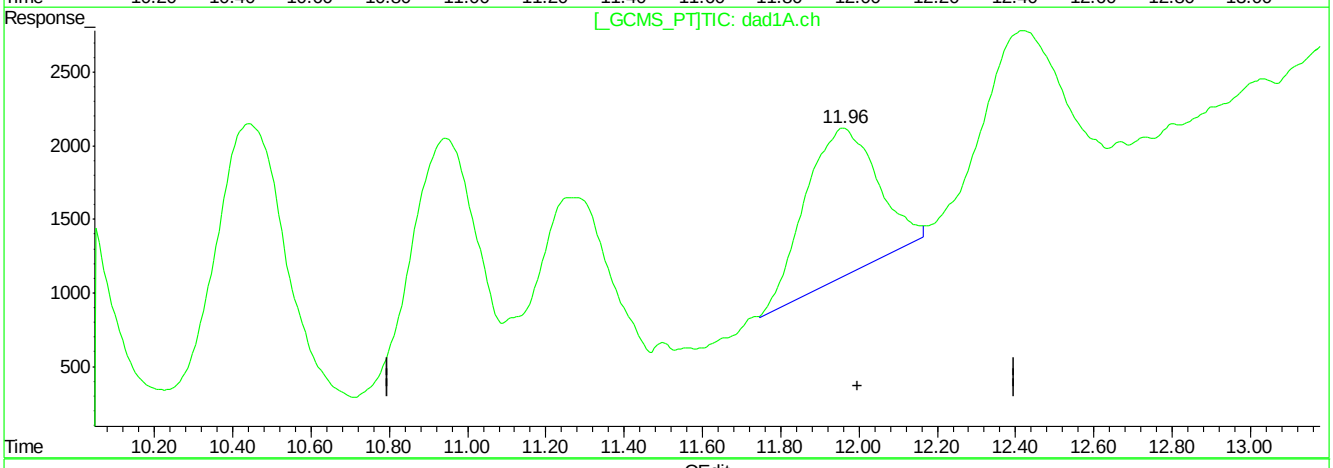
(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:46:56 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.96min 42.412ppb

response 183400

(16) 2,4-Dinitrotoluene #2

11.96min 45.425ppb m

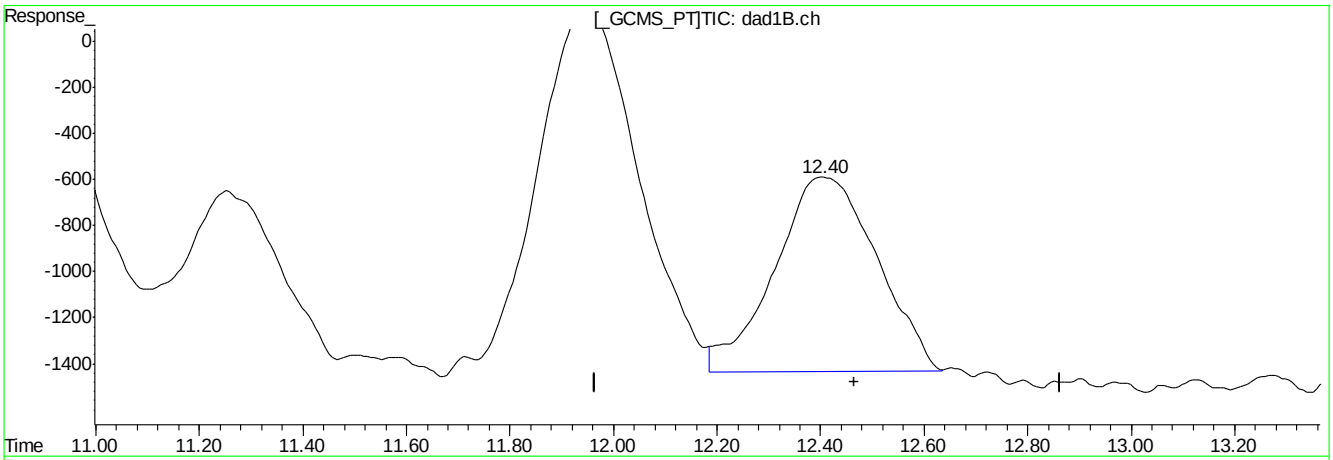
response 130342

(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:47:02 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(17) 2,6-Dinitrotoluene

12.40min 46.365ppb m

response 115478

(17) 2,6-Dinitrotoluene #2

12.42min 43.279ppb

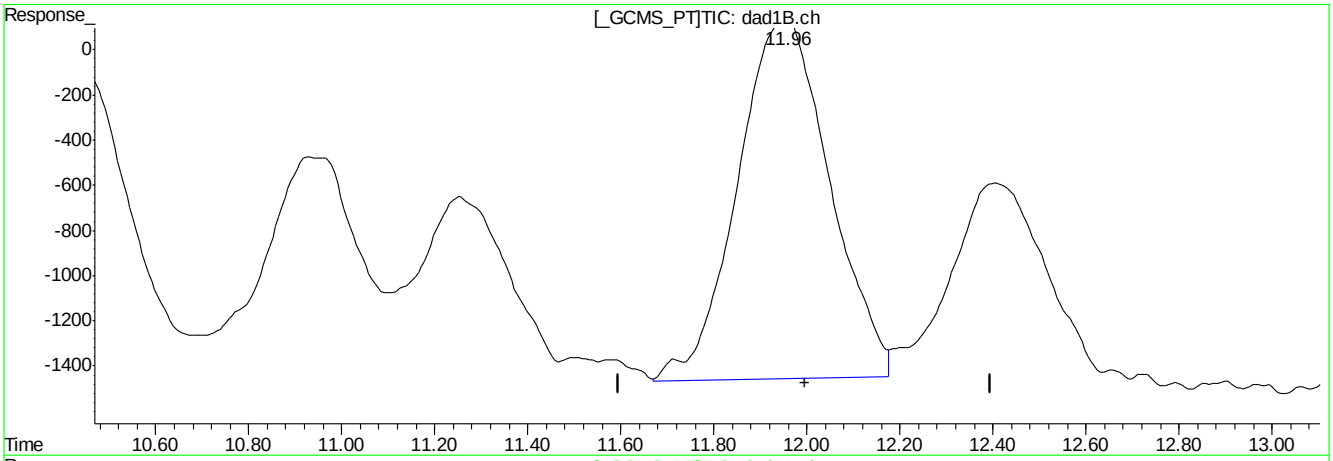
response 139755

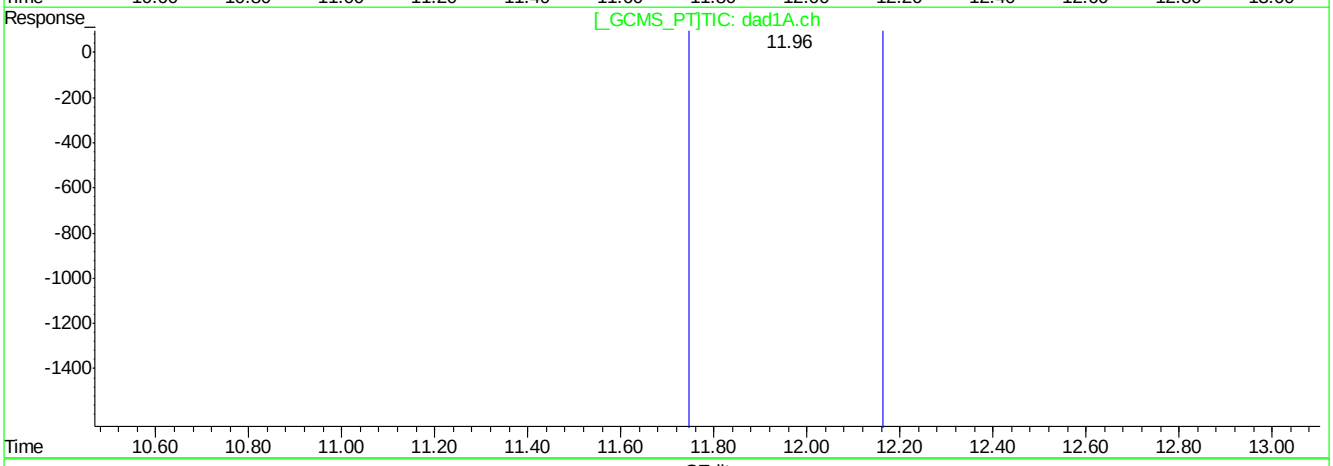
(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:47:08 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.96min 50.435ppb m

response 218092

(16) 2,4-Dinitrotoluene #2

11.96min 45.425ppb m

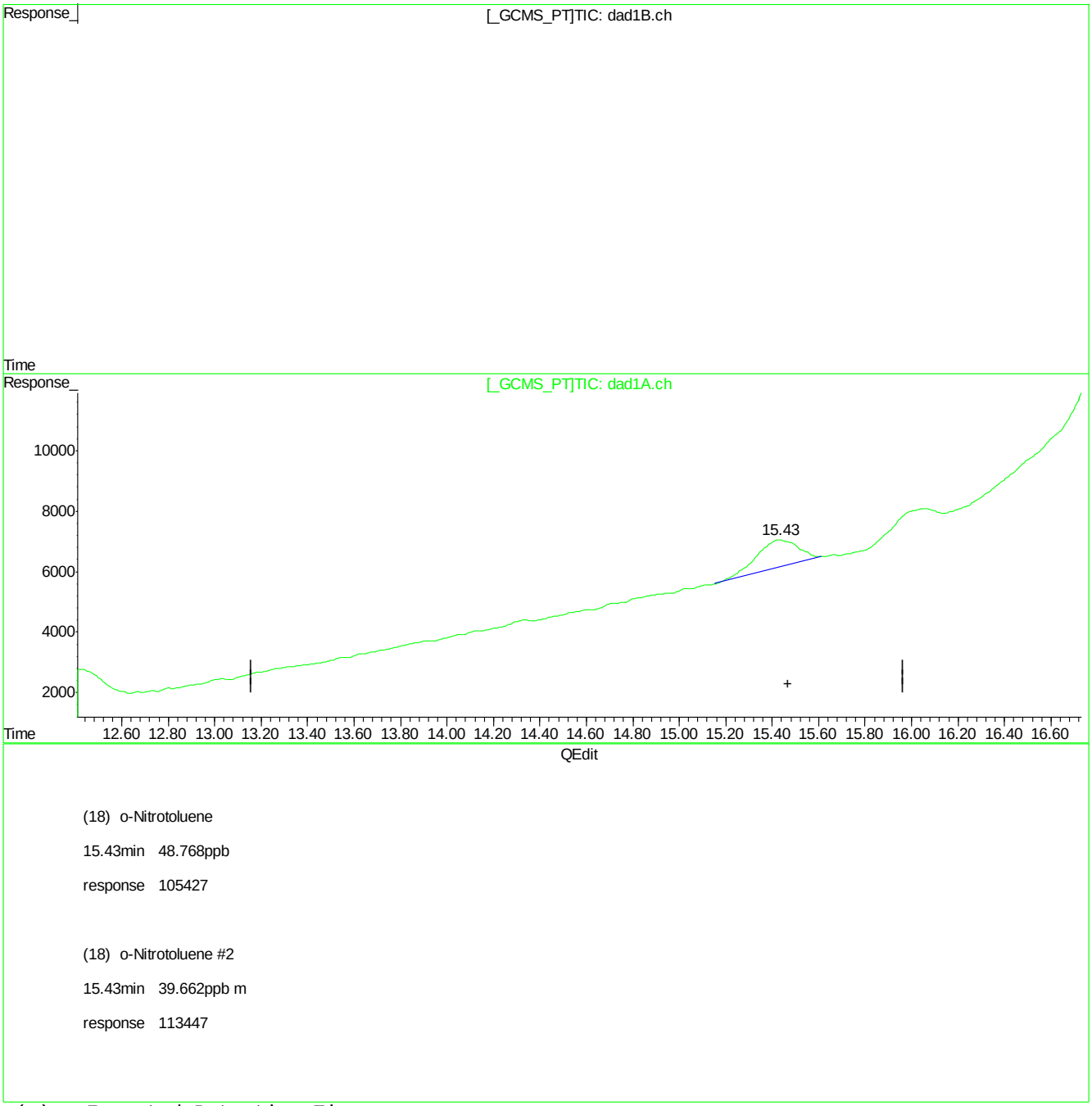
response 130342

(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:47:14 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.43min 48.768ppb

response 105427

(18) o-Nitrotoluene #2

15.43min 39.662ppb m

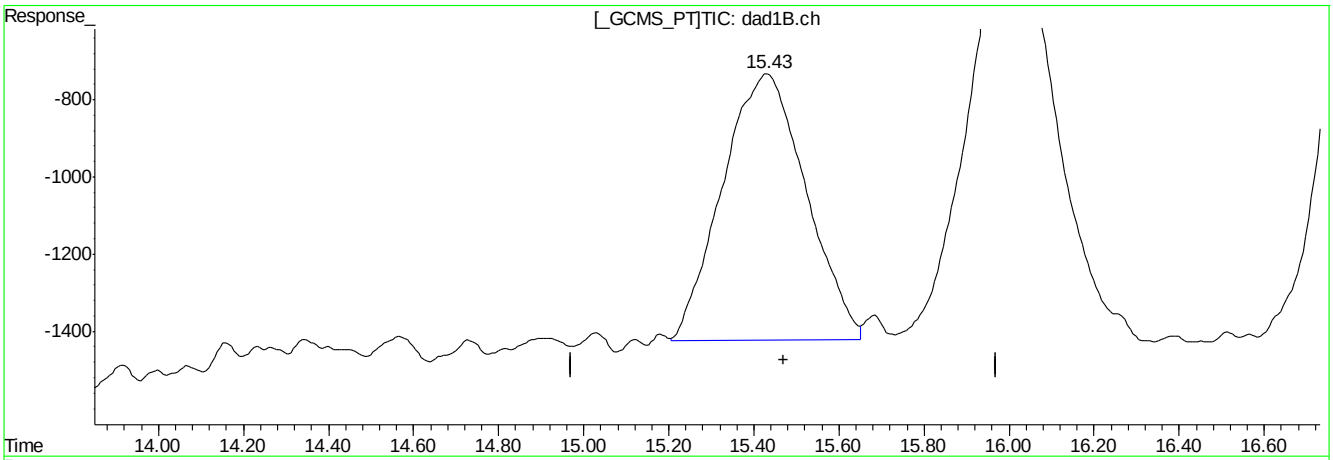
response 113447

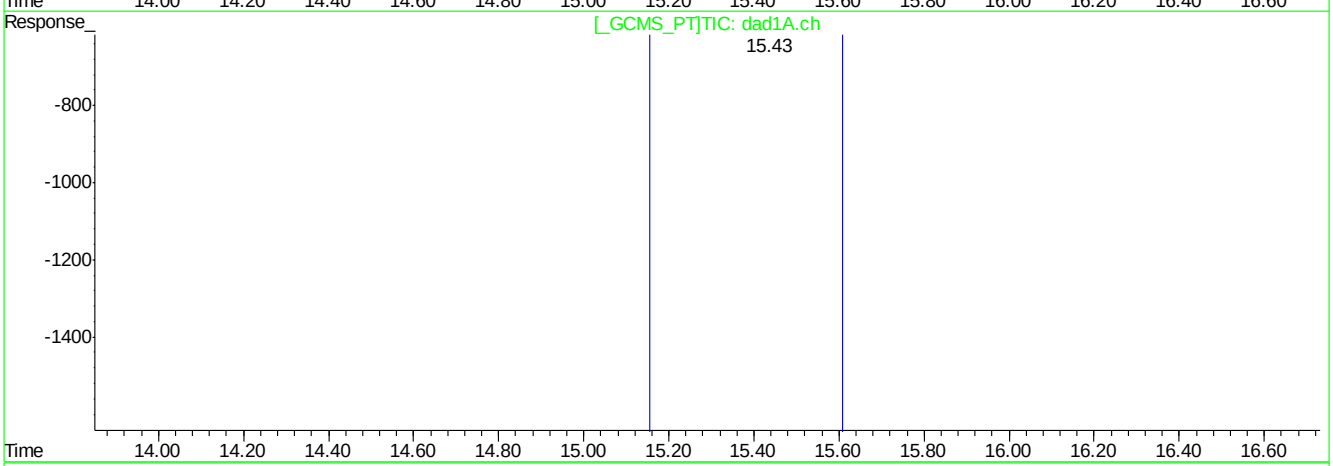
(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:47:21 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.43min 43.453ppb m

response 93937

(18) o-Nitrotoluene #2

15.43min 39.662ppb m

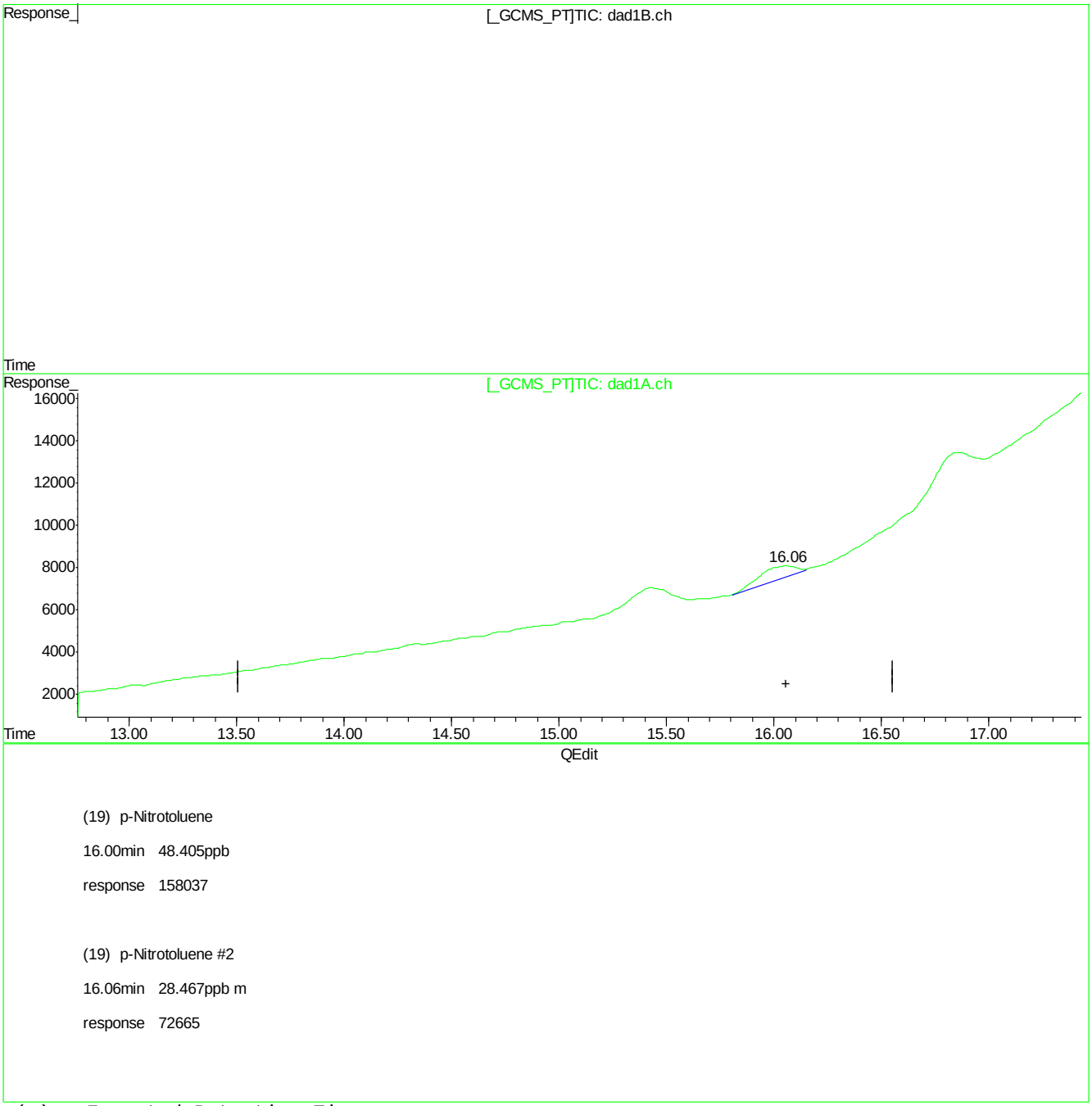
response 113447

(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:47:26 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.00min 48.405ppb

response 158037

(19) p-Nitrotoluene #2

16.06min 28.467ppb m

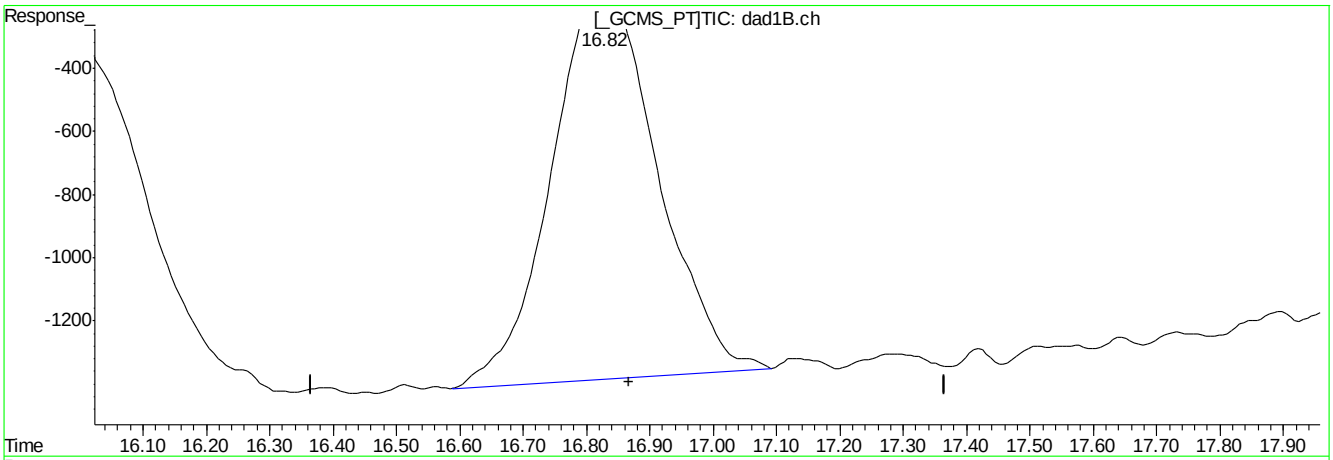
response 72665

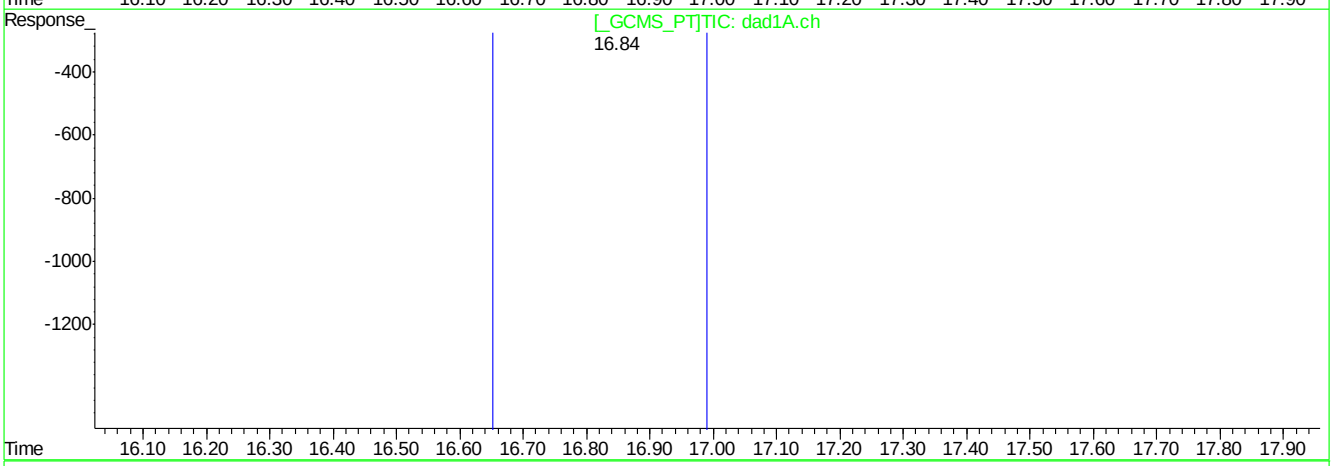
(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:47:33 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.82min 46.137ppb m

response 142710

(20) m-Nitrotoluene #2

16.84min 41.771ppb m

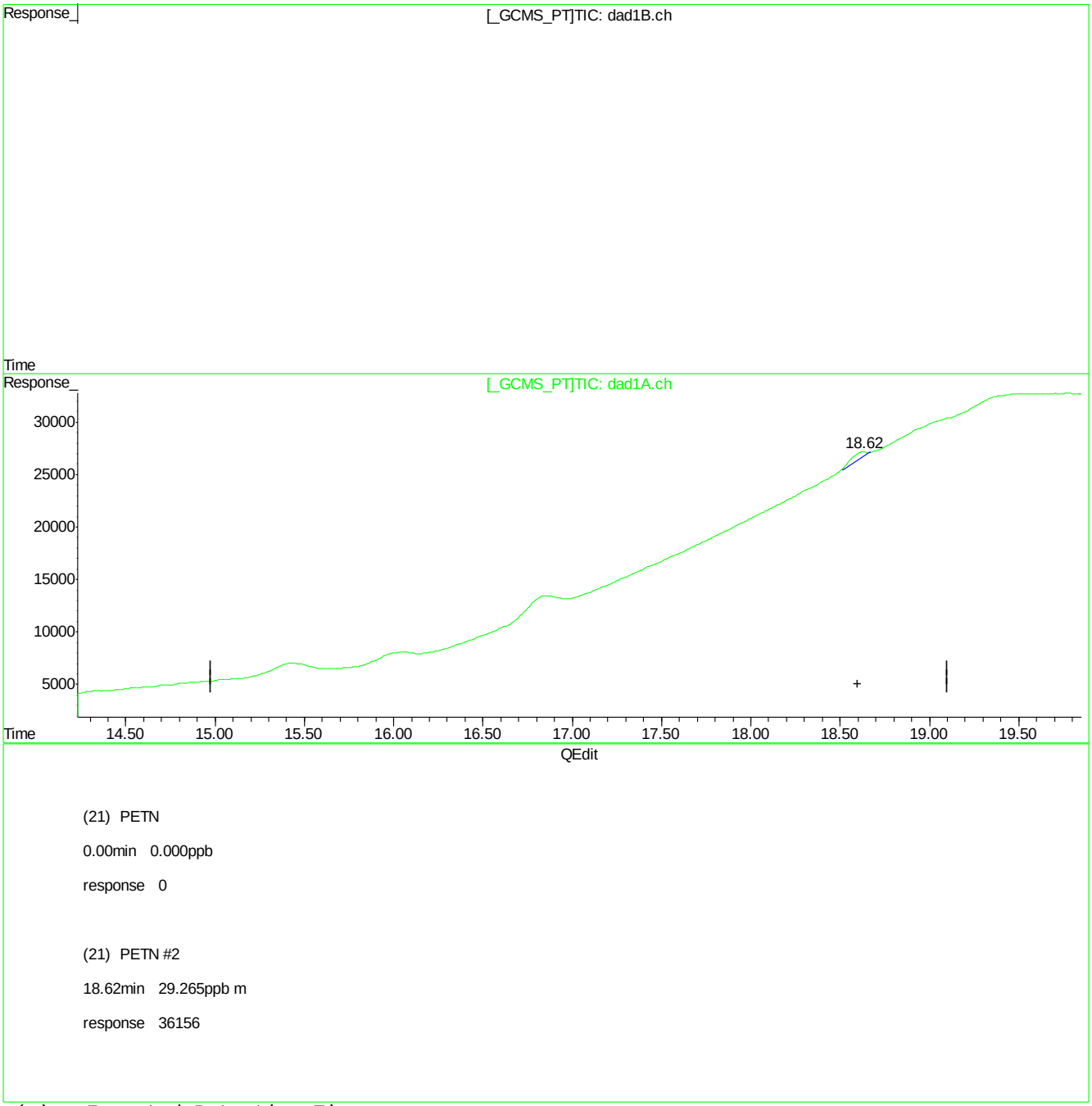
response 155531

(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:47:43 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration

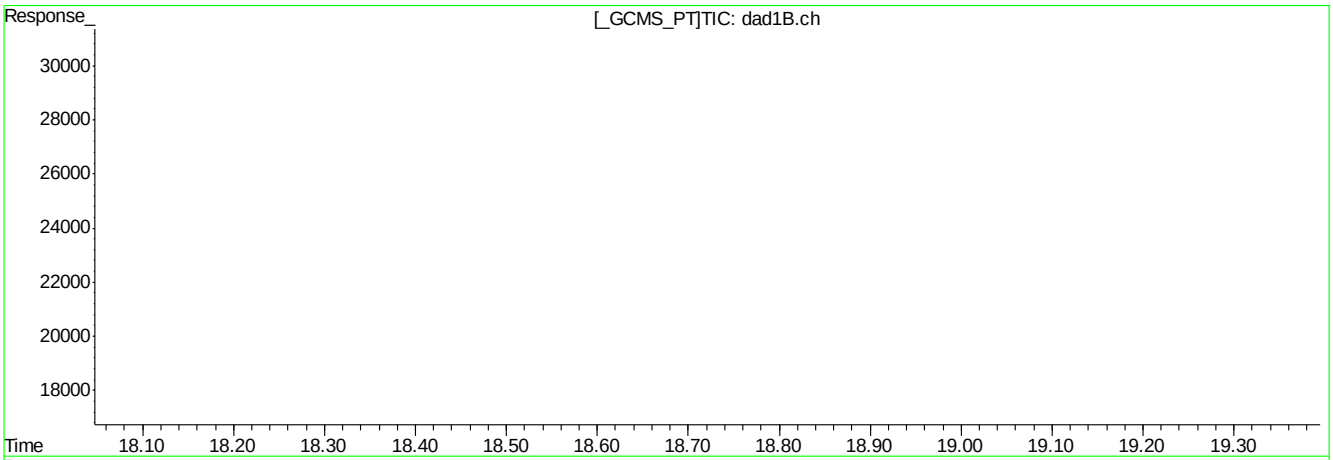


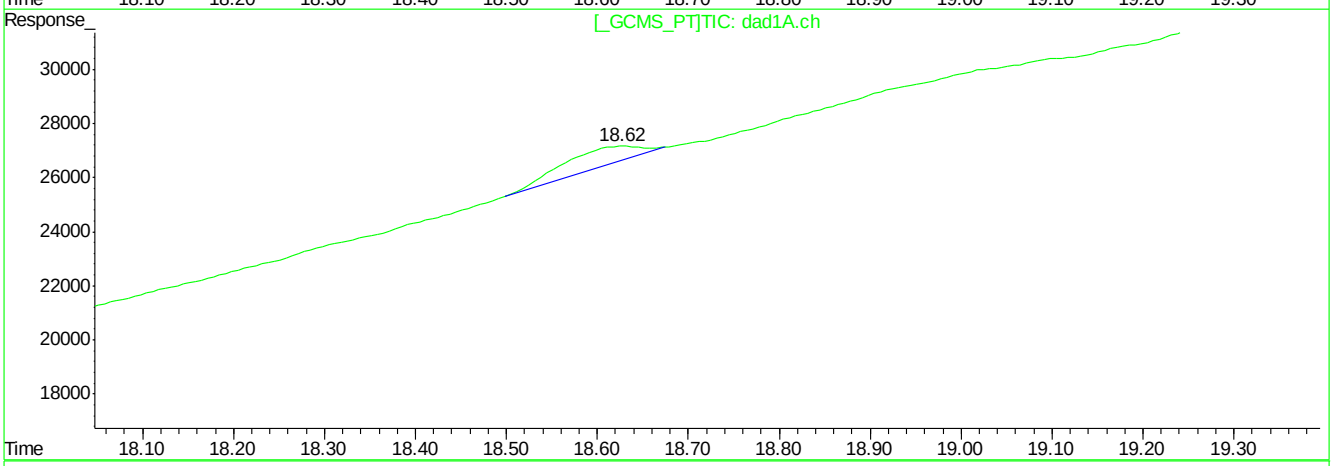
(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:47:49 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388308.D\dad1A.ch
Acq On : 24-Sep-2020, 13:05:52 Operator: williamh
Sample : ic2336-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.62min 32.877ppb m

response 40619

(+) = Expected Retention Time
PP388308.D GPP2336_092420PRI.M Thu Sep 24 15:47:56 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/25/20 13:58

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1A.ch
Acq On : 24-Sep-2020, 13:37:52 Operator: williamh
Sample : ic2336-100 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34:40 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.28	11.28	203527	321548	98.282	86.549
	Spiked Amount 500.000	Range 70 - 136		Recovery =		19.66%#	17.31%#
	Target Compounds						
1)	TNX	1.35	1.35	290722	481146	96.475	97.865
2)	HMX	1.48	1.48	139335	435092	93.740m	101.918m
3)	DNX	1.74	1.73	247122	358504	100.514	88.978m
4)	MNX	2.34	2.34	267287	398243	98.339m	92.765m
5)	RDX	2.97	2.97	170858	278721	94.859m	94.449m
6)	1,3,5-Trinitrobe	4.74	4.74	378483	728467	96.442	94.571
7)	1,3-Dinitrobenze	5.94	5.94	486596	336644	98.004	98.446m
8)	3,5-Dinitroanili	6.37	6.36	365726	613556	96.147	95.141m
9)	Nitrobenzene	7.50	7.49	287086	261086	99.125	92.269m
10)	Nitroglycerin	0.00	9.14	0	100129	N.D.	93.180 #
11)	Tetryl	9.61	9.61	270385	426081	96.723	93.969
12)	2,4,6-Trinitroto	9.98	9.99	360925	408361	101.869	96.314
13)	2-Amino-4,6-Dini	10.46	10.45	324222	445505	102.281	96.103
14)	4-Amino-2,6-Dini	10.96	10.95	229951	399993	99.036	95.407
16)	2,4-Dinitrotolue	11.96	11.97	434388	282471	100.455	98.443
17)	2,6-Dinitrotolue	12.43	12.43	257348	331689	103.326	102.715
18)	o-Nitrotoluene	15.44	15.43	208777	259171	96.575	90.618m
19)	p-Nitrotoluene	16.02	16.04	327047	177379	100.172	69.450
20)	m-Nitrotoluene	16.84	16.84	304289	304446	98.374	81.758m
21)	PETN	0.00	18.61	0	98487	N.D.	79.716m#

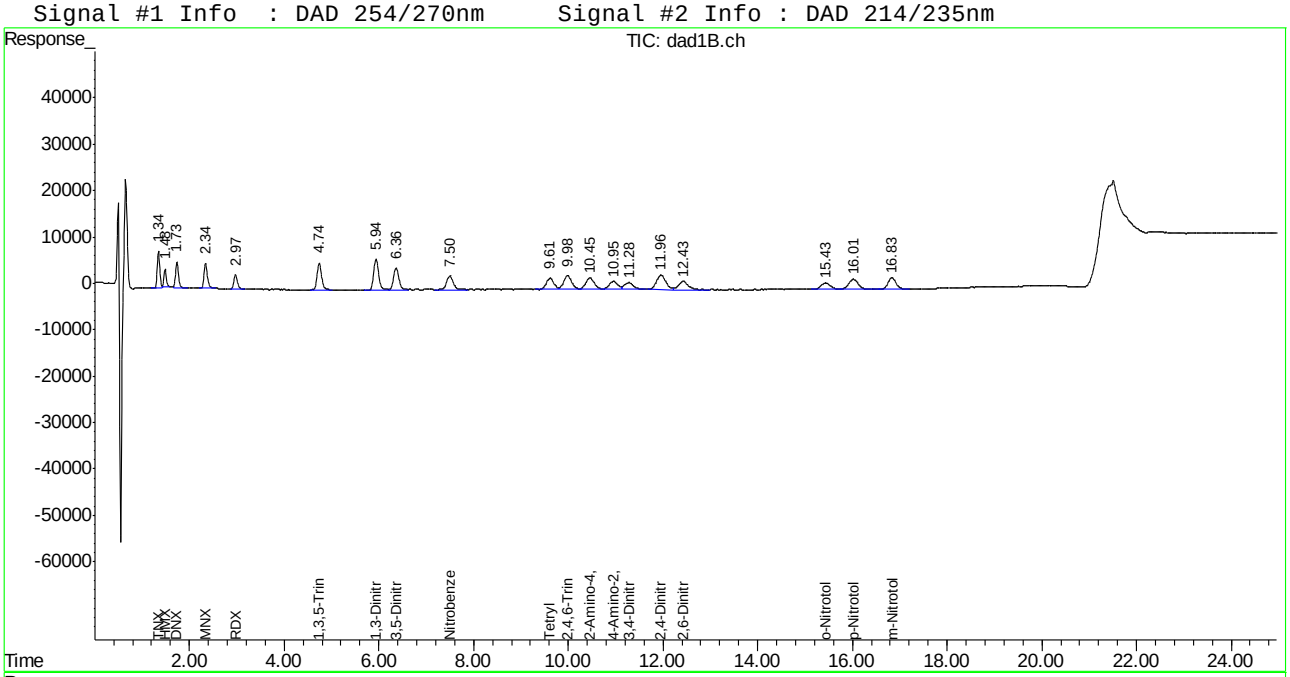
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388309.D GPP2336_092420PRI.M Fri Sep 25 10:23:42 2020 Page 1

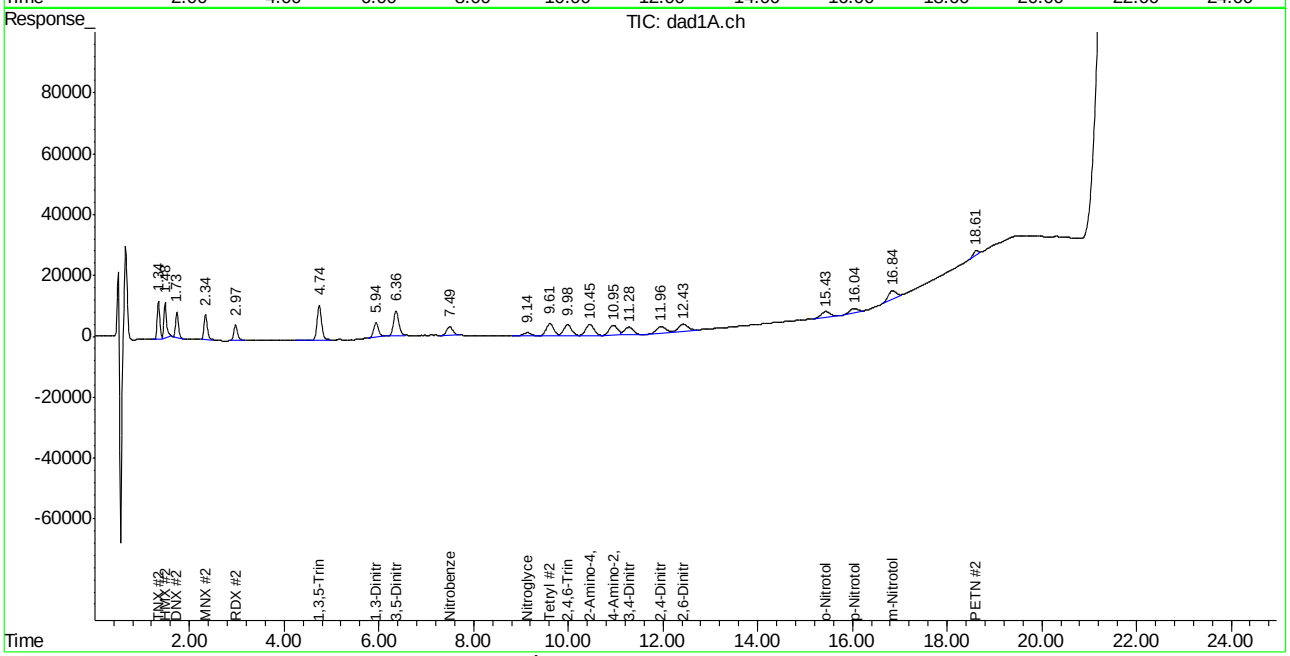
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1A.ch
Acq On : 24-Sep-2020, 13:37:52 Operator: williamh
Sample : ic2336-100 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:52 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

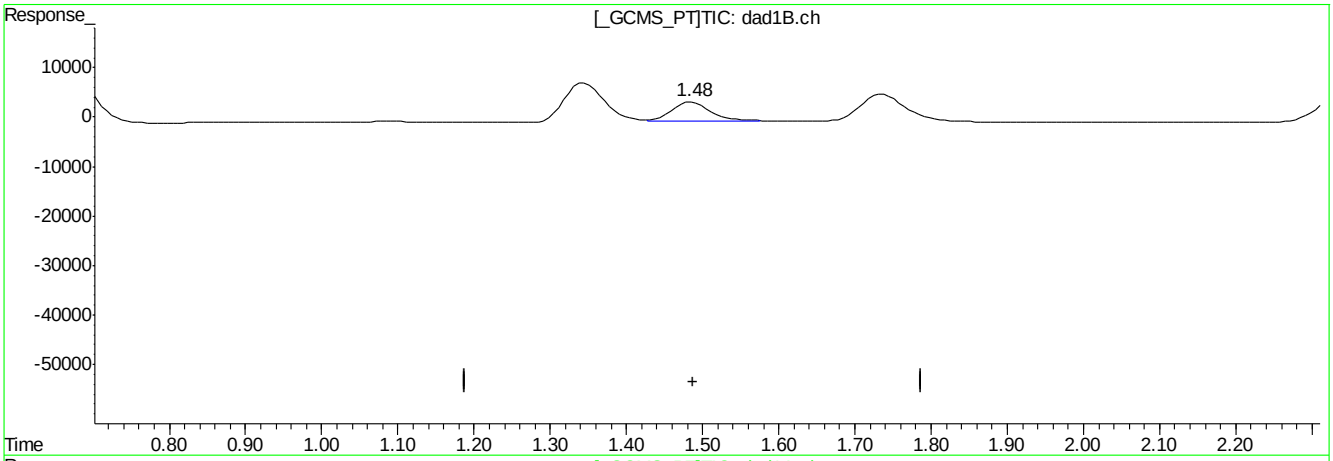
Sample Number: GPP2336-IC2336
Lab FileID: PP388309.D
Injection Time: 09/24/20 13:37
Method: SW846 8330A
Analyst approved: 09/25/20 10:27 William Hustedde
Supervisor approved: 09/25/20 13:58 Naresh Jiawan

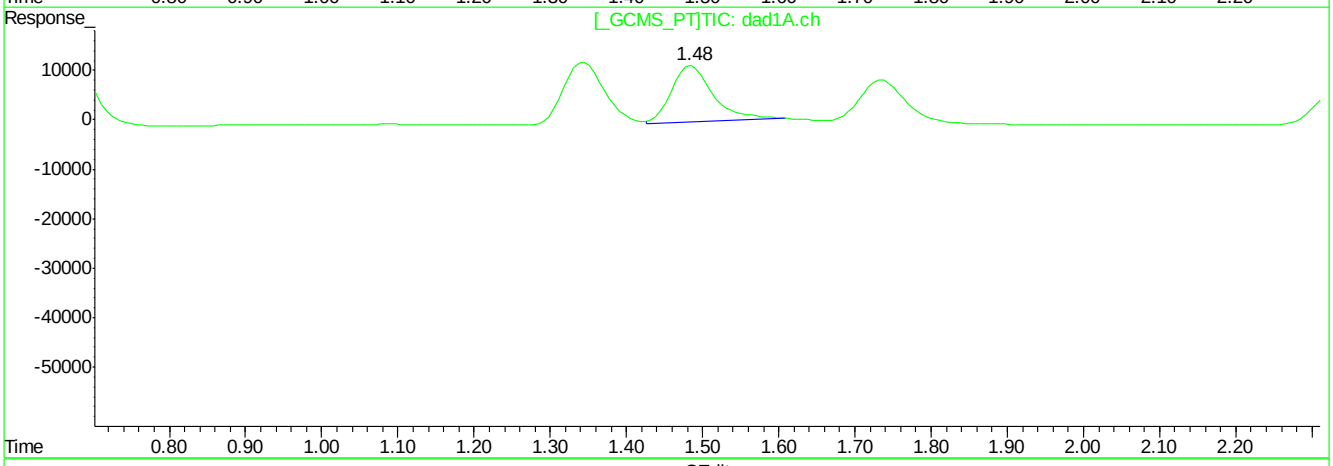
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.48	Poor instrument integration
HMX	2691-41-0	2	1.48	Poor instrument integration
DNX		2	1.73	Poor instrument integration
MNX		1	2.34	Poor instrument integration
MNX		2	2.34	Poor instrument integration
RDX	121-82-4	1	2.97	Poor instrument integration
RDX	121-82-4	2	2.97	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.94	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.36	Poor instrument integration
Nitrobenzene	98-95-3	2	7.49	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.43	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.84	Poor instrument integration
PETN	78-11-5	2	18.61	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1A.ch
Acq On : 24-Sep-2020, 13:37:52 Operator: williamh
Sample : ic2336-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.48min 93.740ppb m

response 139335

(2) HMX #2

1.48min 101.918ppb m

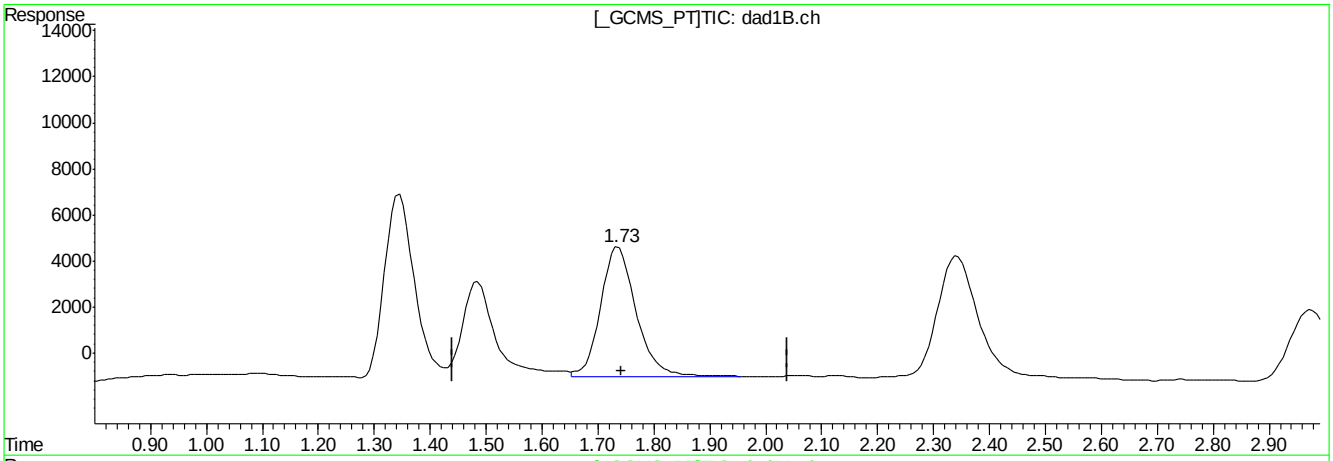
response 435092

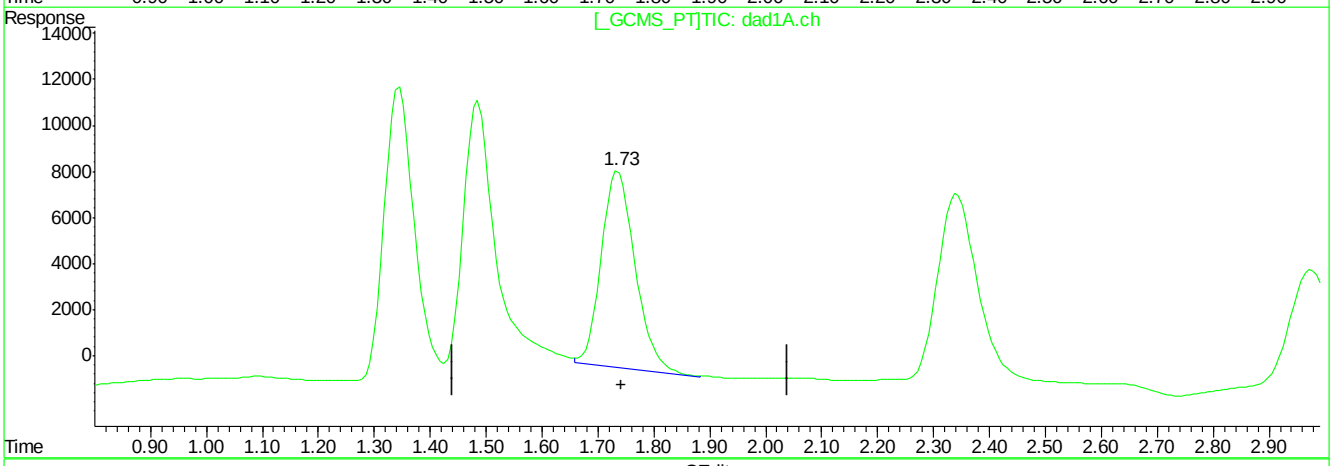
(+) = Expected Retention Time
PP388309.D GPP2336_092420PRI.M Thu Sep 24 15:48:36 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1A.ch
Acq On : 24-Sep-2020, 13:37:52 Operator: williamh
Sample : ic2336-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.74min 100.514ppb

response 247122

(3) DNX #2

1.73min 88.978ppb m

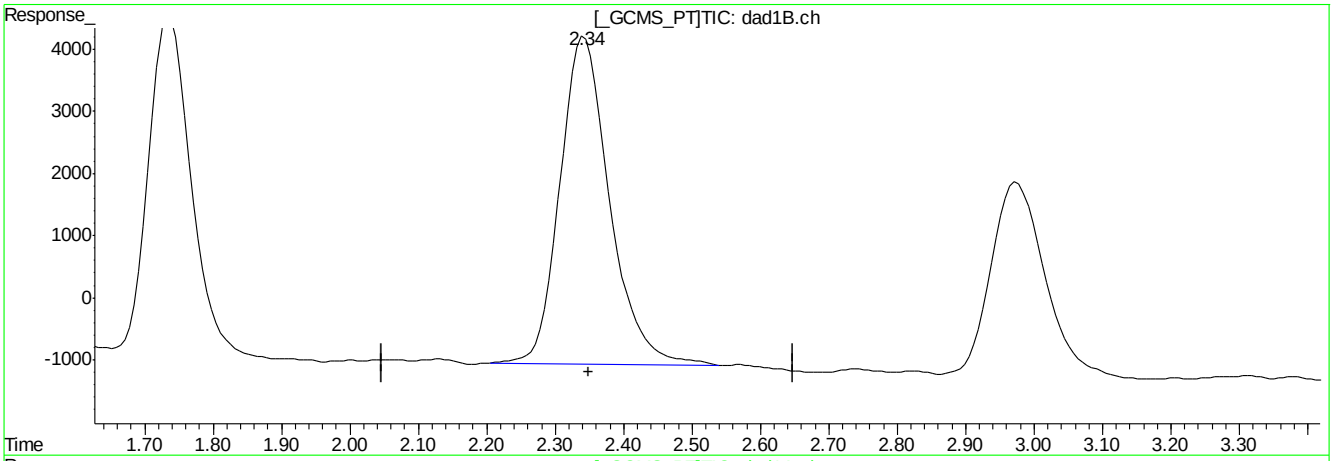
response 358504

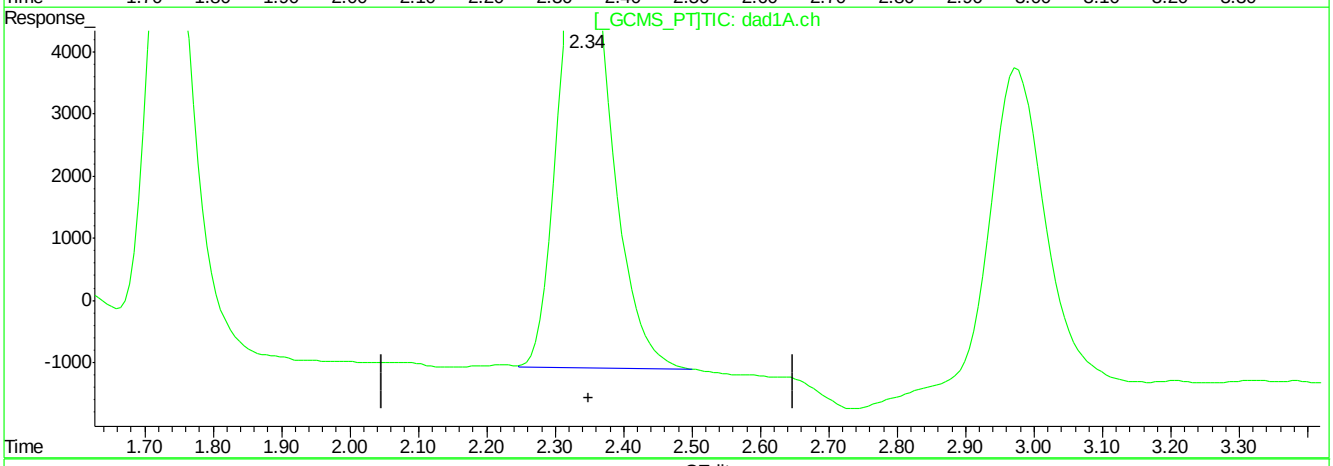
(+) = Expected Retention Time
PP388309.D GPP2336_092420PRI.M Thu Sep 24 15:48:43 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1A.ch
Acq On : 24-Sep-2020, 13:37:52 Operator: williamh
Sample : ic2336-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.34min 98.339ppb m

response 267287

(4) MNX #2

2.34min 92.765ppb m

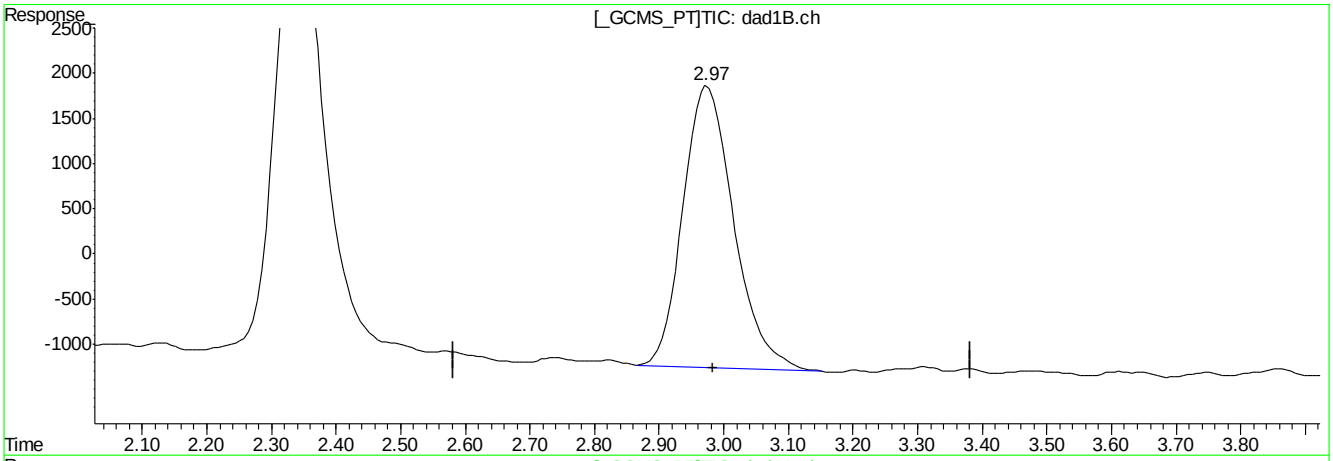
response 398243

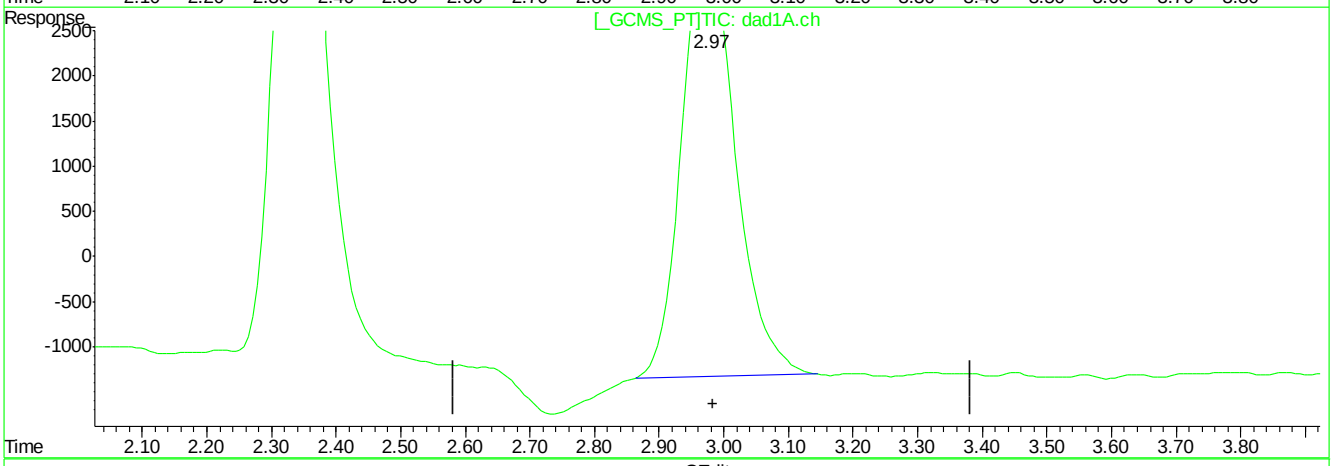
(+) = Expected Retention Time
PP388309.D GPP2336_092420PRI.M Thu Sep 24 15:48:52 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1A.ch
Acq On : 24-Sep-2020, 13:37:52 Operator: williamh
Sample : ic2336-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.97min 94.859ppb m

response 170858

(5) RDX #2

2.97min 94.449ppb m

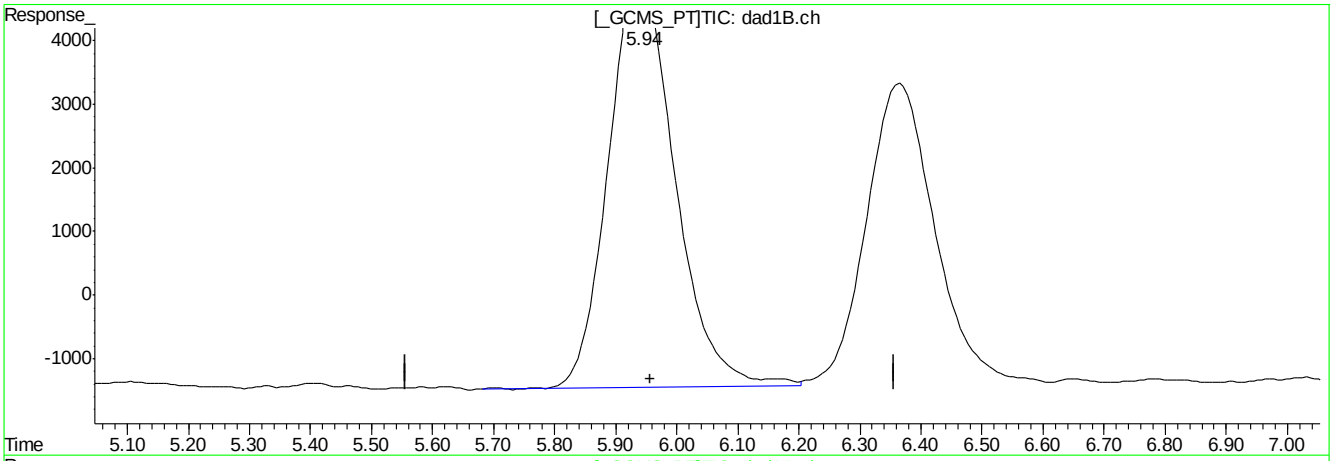
response 278721

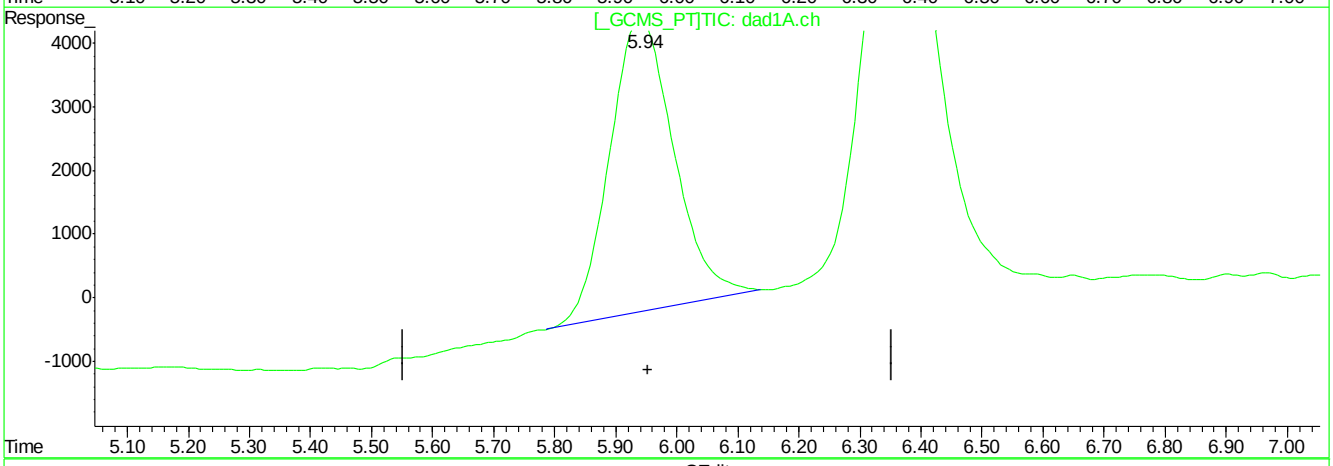
(+) = Expected Retention Time
PP388309.D GPP2336_092420PRI.M Thu Sep 24 15:49:01 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1A.ch
Acq On : 24-Sep-2020, 13:37:52 Operator: williamh
Sample : ic2336-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.94min 98.004ppb

response 486596

(7) 1,3-Dinitrobenzene #2

5.94min 98.446ppb m

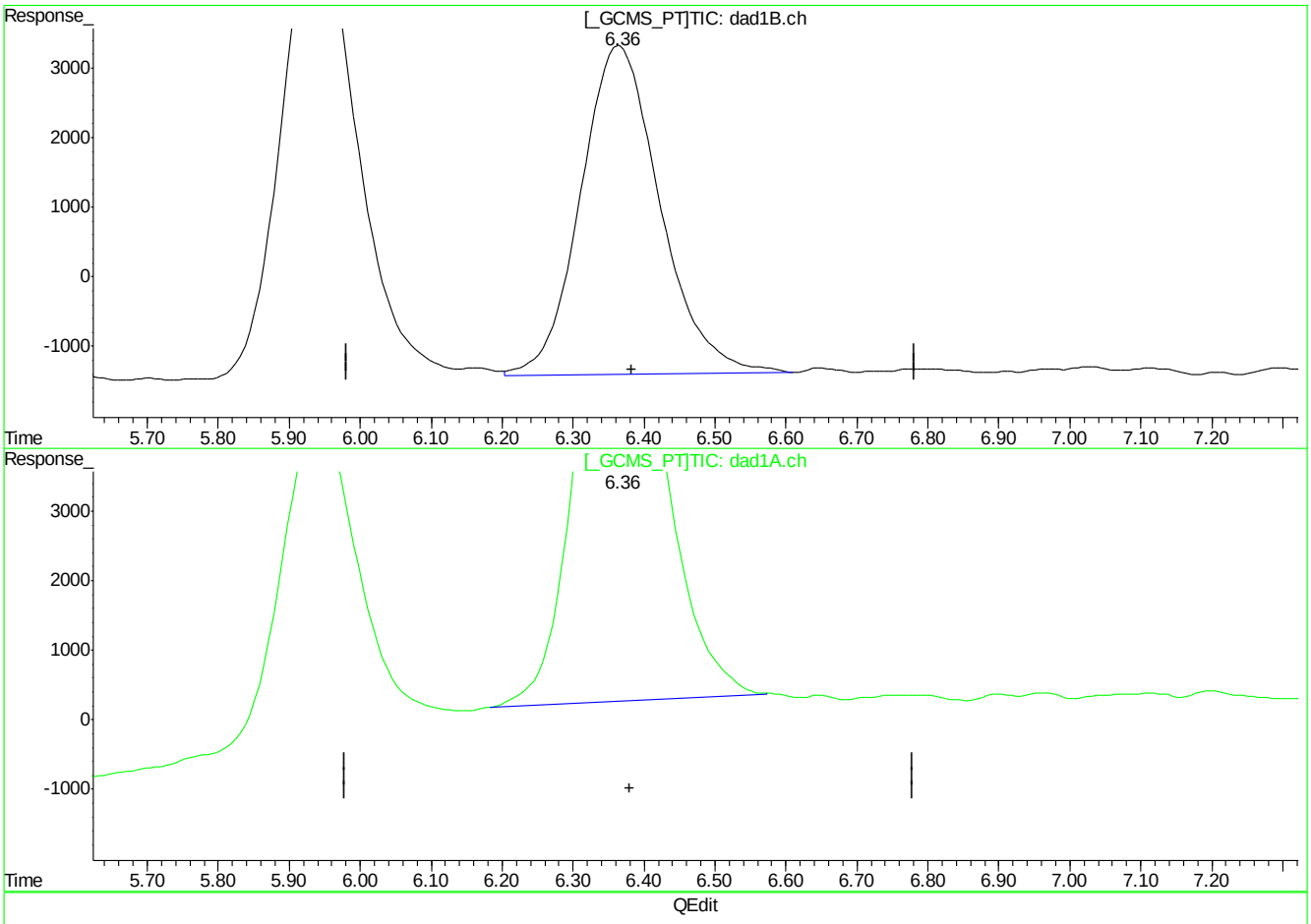
response 336644

(+) = Expected Retention Time
PP388309.D GPP2336_092420PRI.M Thu Sep 24 15:51:20 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1A.ch
Acq On : 24-Sep-2020, 13:37:52 Operator: williamh
Sample : ic2336-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.37min 96.147ppb

response 365726

(8) 3,5-Dinitroaniline #2

6.36min 95.141ppb m

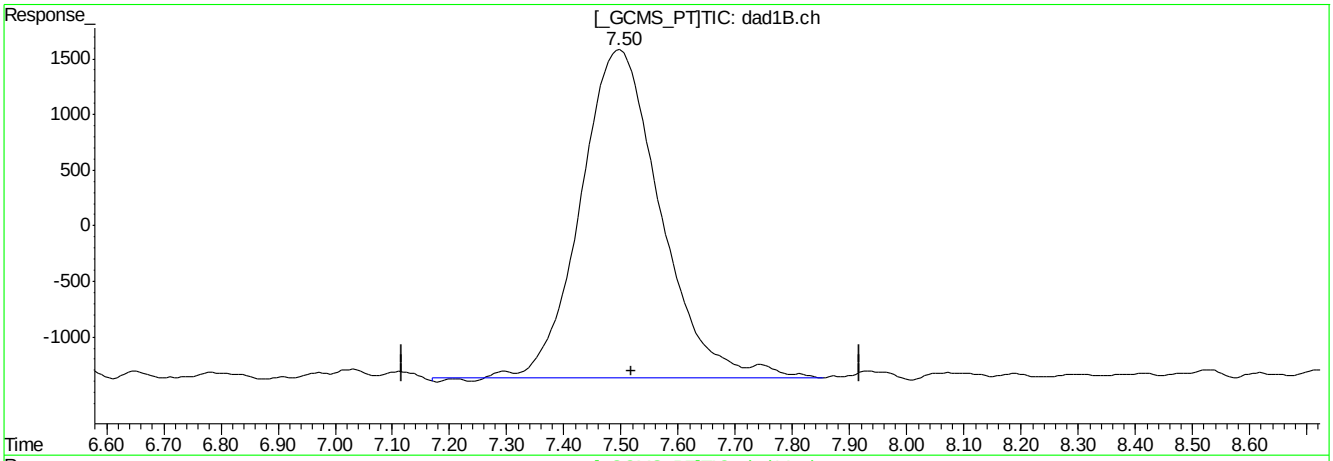
response 613556

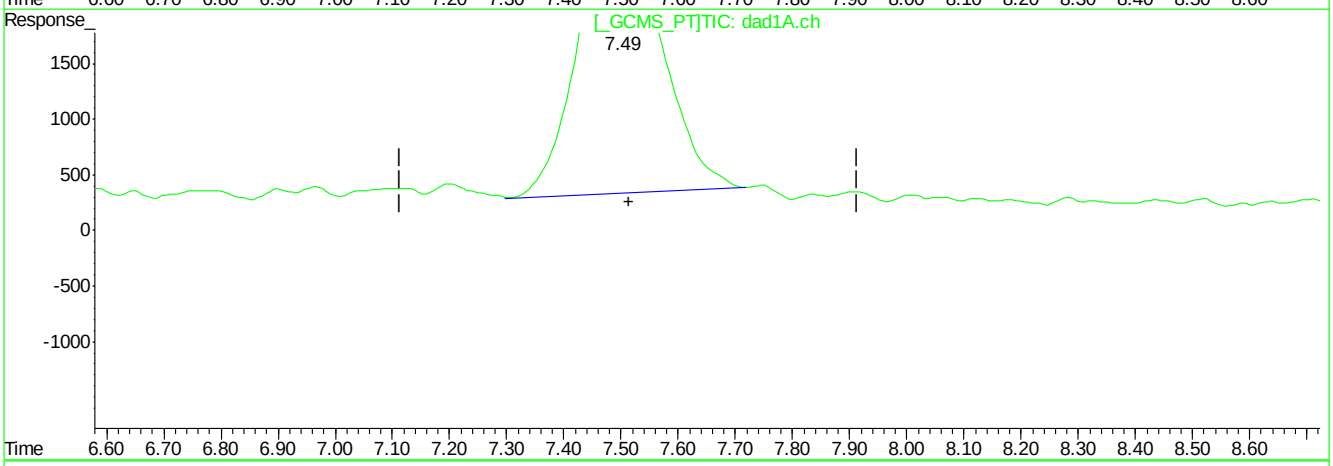
(+) = Expected Retention Time
PP388309.D GPP2336_092420PRI.M Thu Sep 24 15:51:26 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1A.ch
Acq On : 24-Sep-2020, 13:37:52 Operator: williamh
Sample : ic2336-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.50min 99.125ppb

response 287086

(9) Nitrobenzene #2

7.49min 92.269ppb m

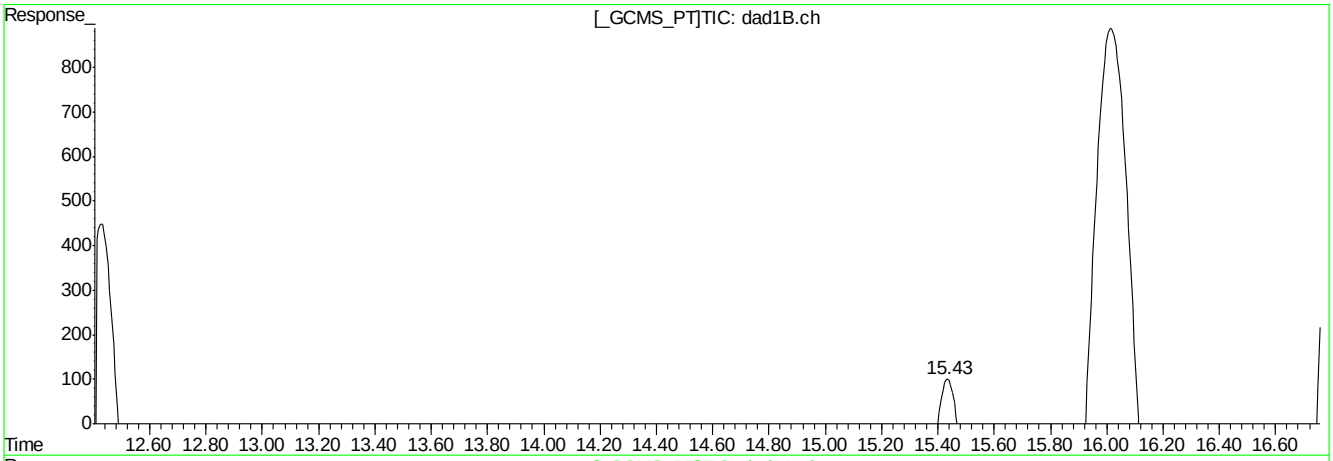
response 261086

(+) = Expected Retention Time
PP388309.D GPP2336_092420PRI.M Thu Sep 24 15:51:32 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1A.ch
Acq On : 24-Sep-2020, 13:37:52 Operator: williamh
Sample : ic2336-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.44min 96.575ppb

response 208777

(18) o-Nitrotoluene #2

15.43min 90.618ppb m

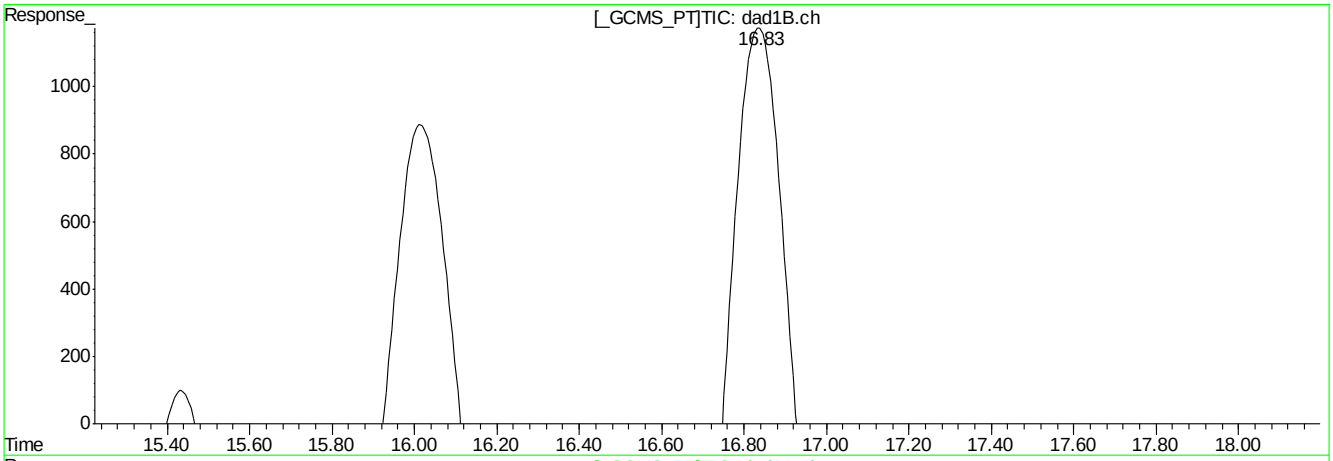
response 259171

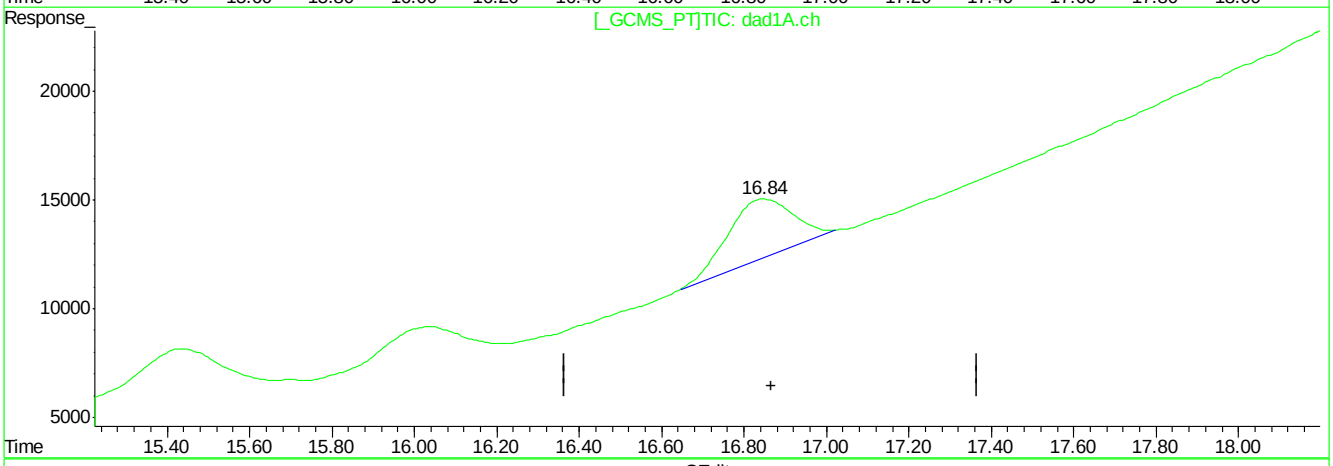
(+) = Expected Retention Time
PP388309.D GPP2336_092420PRI.M Thu Sep 24 15:51:57 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1A.ch
Acq On : 24-Sep-2020, 13:37:52 Operator: williamh
Sample : ic2336-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.84min 98.374ppb

response 304289

(20) m-Nitrotoluene #2

16.84min 81.758ppb m

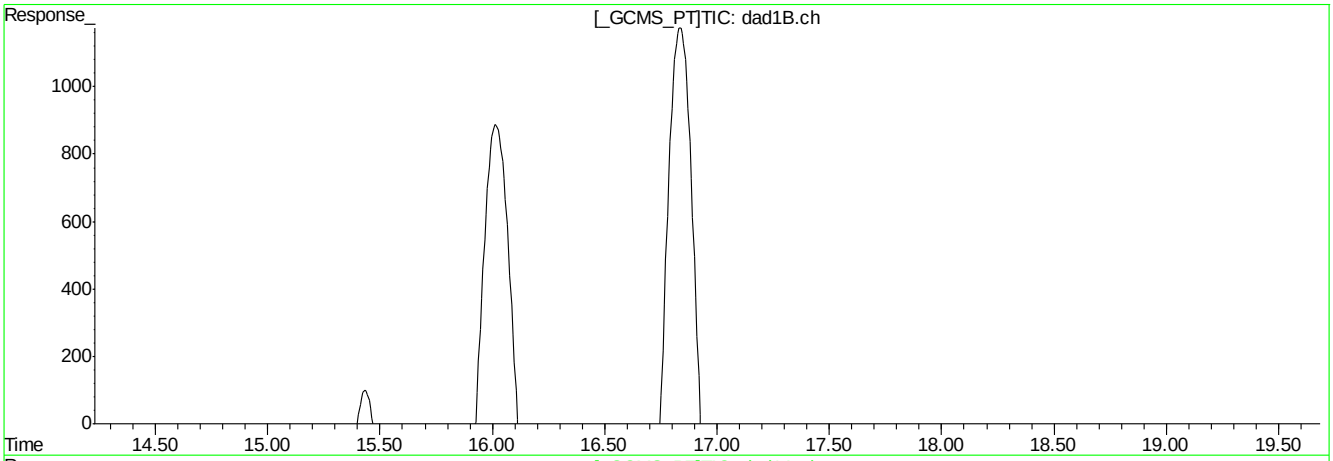
response 304446

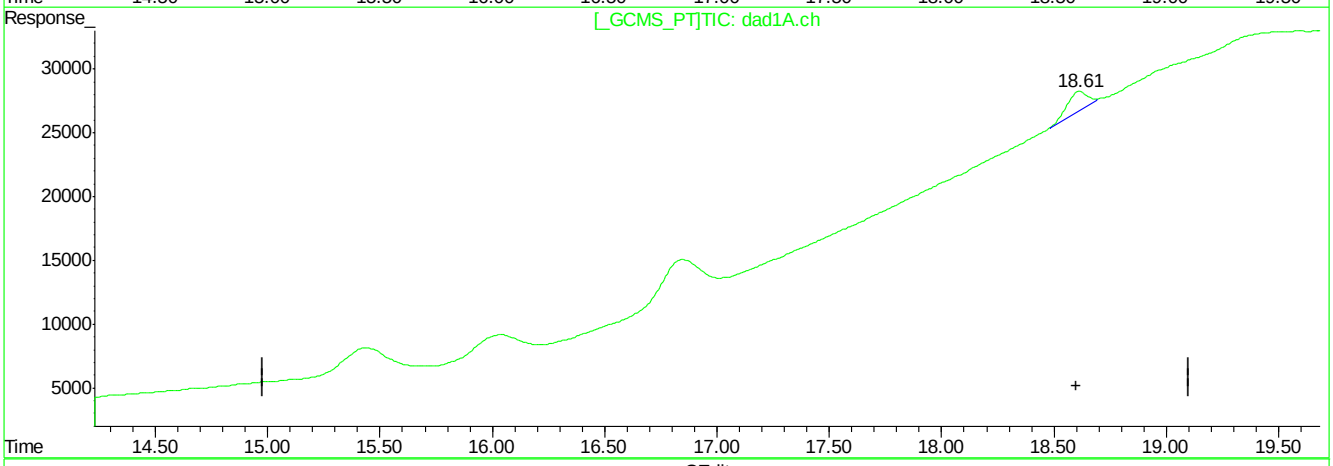
(+) = Expected Retention Time
PP388309.D GPP2336_092420PRI.M Thu Sep 24 15:52:06 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388309.D\dad1A.ch
Acq On : 24-Sep-2020, 13:37:52 Operator: williamh
Sample : ic2336-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.61min 79.716ppb m

response 98487

(+) = Expected Retention Time
PP388309.D GPP2336_092420PRI.M Thu Sep 24 15:52:12 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 09/25/20 13:58

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1A.ch
Acq On : 24-Sep-2020, 14:09:49 Operator: williamh
Sample : ic2336-200 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34:41 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.28	11.28	422159	692682	203.859	186.389
	Spiked Amount 500.000	Range 70 - 136		Recovery =		40.77%#	37.28%#
	Target Compounds						
1)	TNX	1.35	1.35	653104	1028191	216.731	209.133
2)	HMX	1.48	1.48	306165	861628	206.074m	201.999m
3)	DNX	1.74	1.74	508148	827685	206.684	205.424
4)	MNX	2.34	2.34	537296	821414	197.678	191.336m
5)	RDX	2.98	2.97	362980	575440	201.523	194.997m
6)	1,3,5-Trinitrobe	4.74	4.74	792089	1547641	201.835	200.919
7)	1,3-Dinitrobenze	5.94	5.94	993255	682012	200.048m	199.443m
8)	3,5-Dinitroanili	6.37	6.36	763794	1278237	200.796	198.210m
9)	Nitrobenzene	7.50	7.50	572703	543818	197.743	192.187
10)	Nitroglycerin	0.00	9.14	0	215200	N.D.	200.266 #
11)	Tetryl	9.62	9.62	546315	858094	195.430	189.247
12)	2,4,6-Trinitroto	9.99	9.99	728873	837599	205.719	197.553
13)	2-Amino-4,6-Dini	10.46	10.46	663267	911726	209.238	196.674
14)	4-Amino-2,6-Dini	10.96	10.96	469997	861650	202.420	205.522
16)	2,4-Dinitrotolue	11.96	11.97	898836	576662	207.861	200.971
17)	2,6-Dinitrotolue	12.43	12.44	520016	655834	208.789	203.094
18)	o-Nitrotoluene	15.44	15.44	413336	524492	191.198	183.427m
19)	p-Nitrotoluene	16.02	16.03	641598	408013	196.516	159.557
20)	m-Nitrotoluene	16.84	16.84	605486	672065	195.748	180.441m
21)	PETN	0.00	18.61	0	242971	N.D.	196.662m#

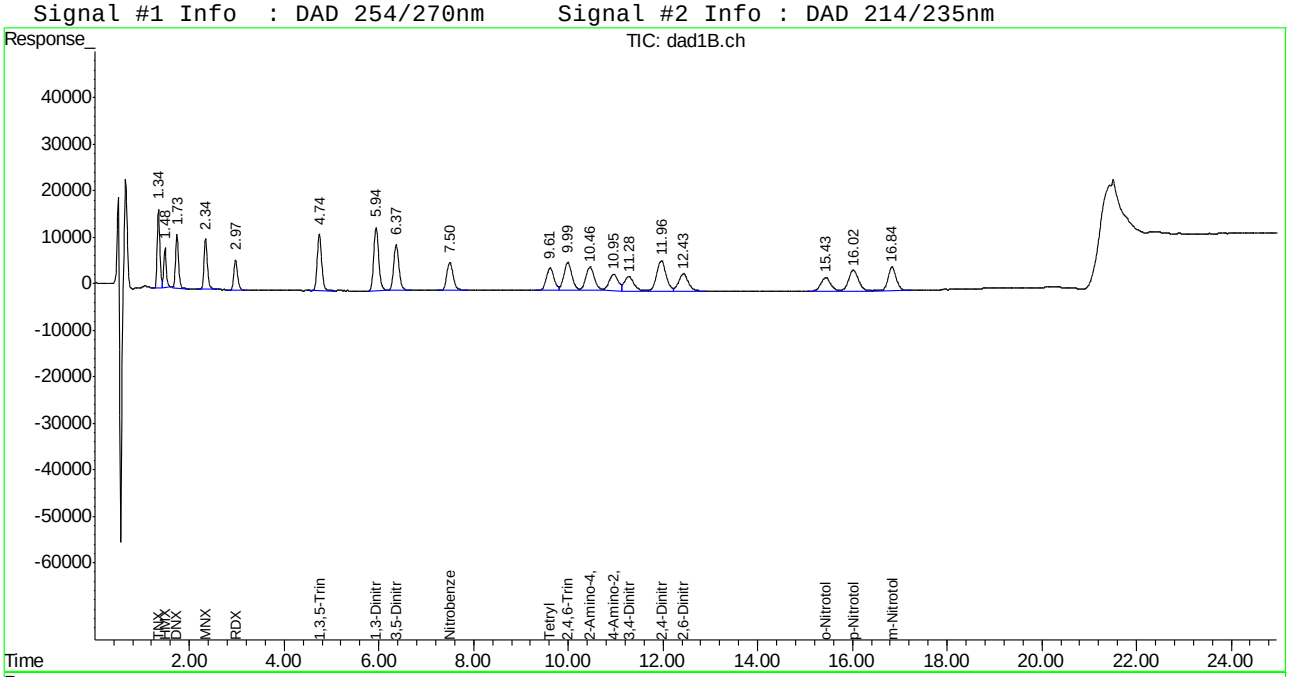
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388310.D GPP2336_092420PRI.M Fri Sep 25 10:23:43 2020 Page 1

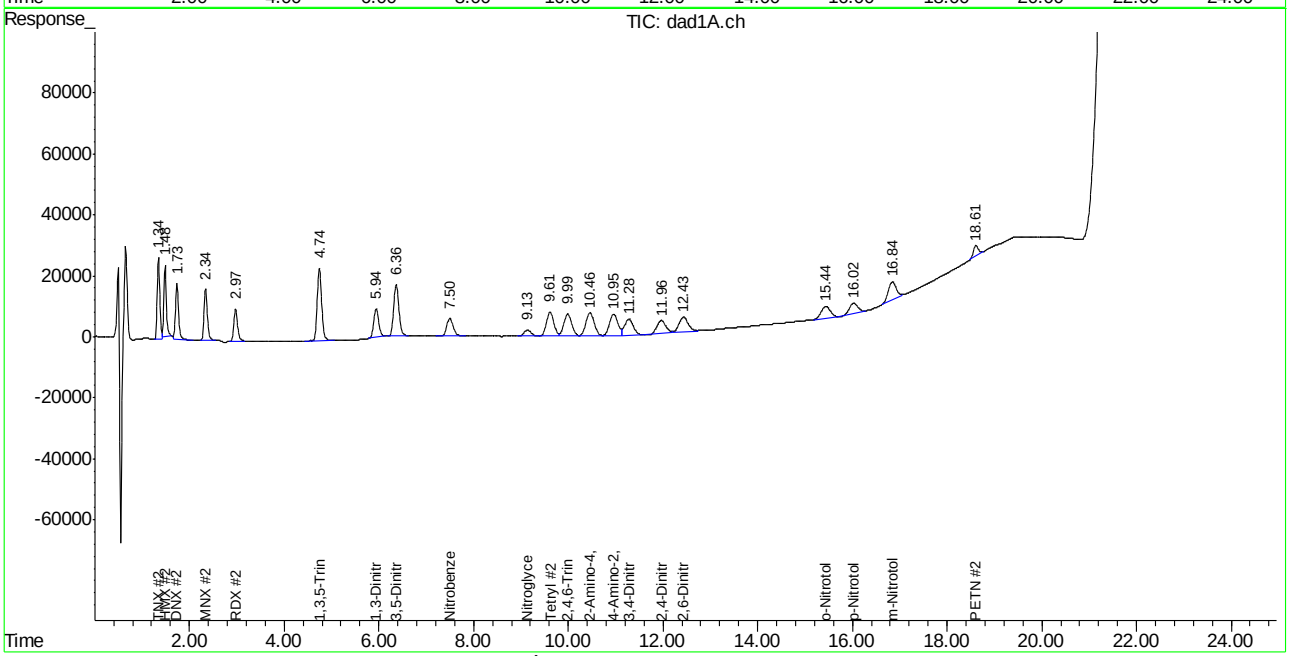
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1A.ch
Acq On : 24-Sep-2020, 14:09:49 Operator: williamh
Sample : ic2336-200 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:56 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

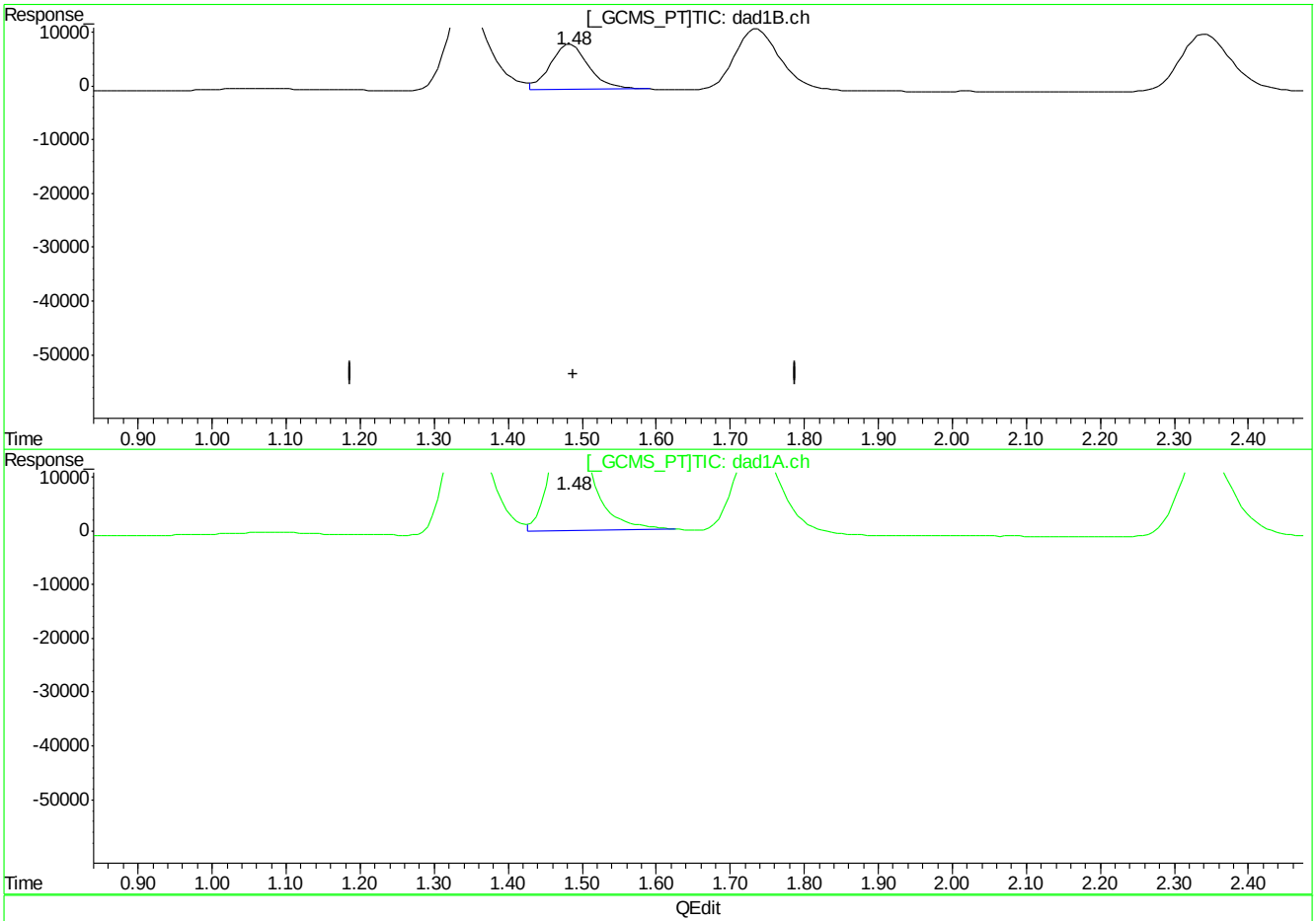
Sample Number: GPP2336-IC2336
Lab FileID: PP388310.D
Injection Time: 09/24/20 14:09
Method: SW846 8330A
Analyst approved: 09/25/20 10:27 William Hustedde
Supervisor approved: 09/25/20 13:58 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.48	Poor instrument integration
HMX	2691-41-0	2	1.48	Poor instrument integration
MNX		2	2.34	Poor instrument integration
RDX	121-82-4	2	2.97	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	5.94	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.94	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.36	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.44	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.84	Poor instrument integration
PETN	78-11-5	2	18.61	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1A.ch
Acq On : 24-Sep-2020, 14:09:49 Operator: williamh
Sample : ic2336-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



QEdit

(2) HMX

1.48min 206.074ppb m

response 306165

(2) HMX #2

1.48min 201.999ppb m

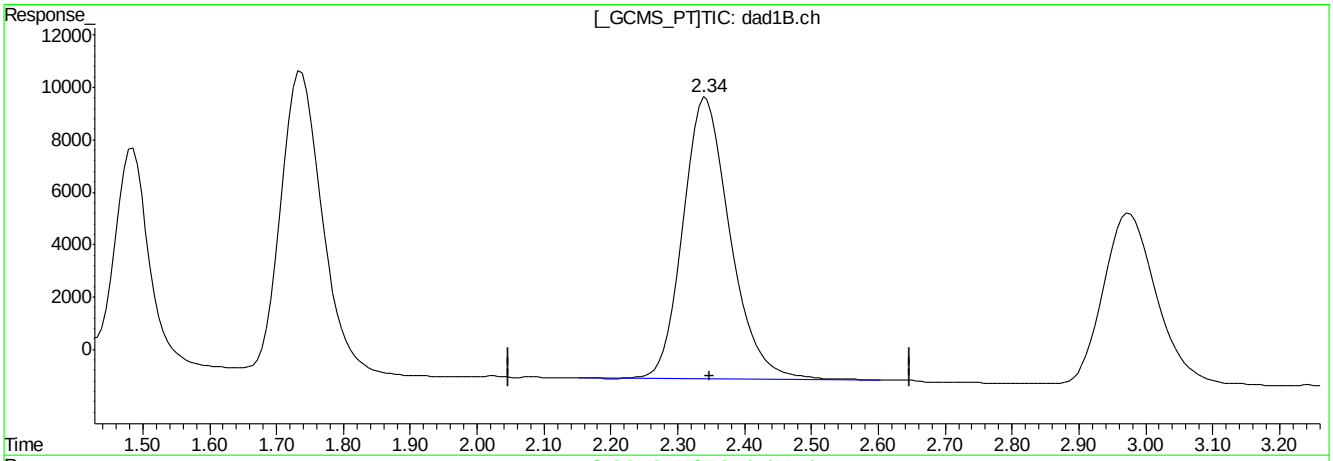
response 861628

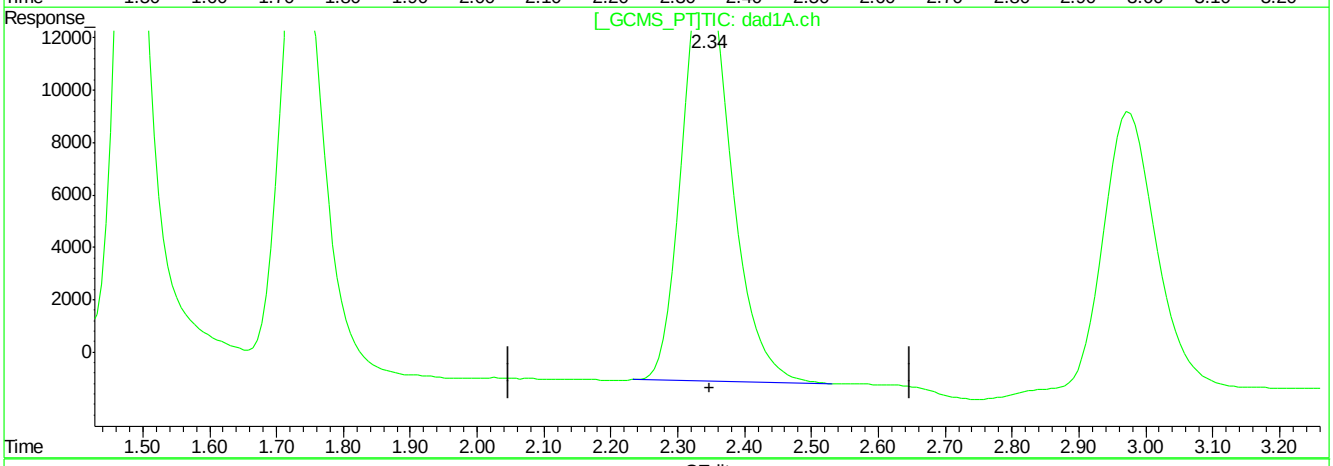
(+) = Expected Retention Time
PP388310.D GPP2336_092420PRI.M Thu Sep 24 15:54:14 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1A.ch
Acq On : 24-Sep-2020, 14:09:49 Operator: williamh
Sample : ic2336-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.34min 197.678ppb

response 537296

(4) MNX #2

2.34min 191.336ppb m

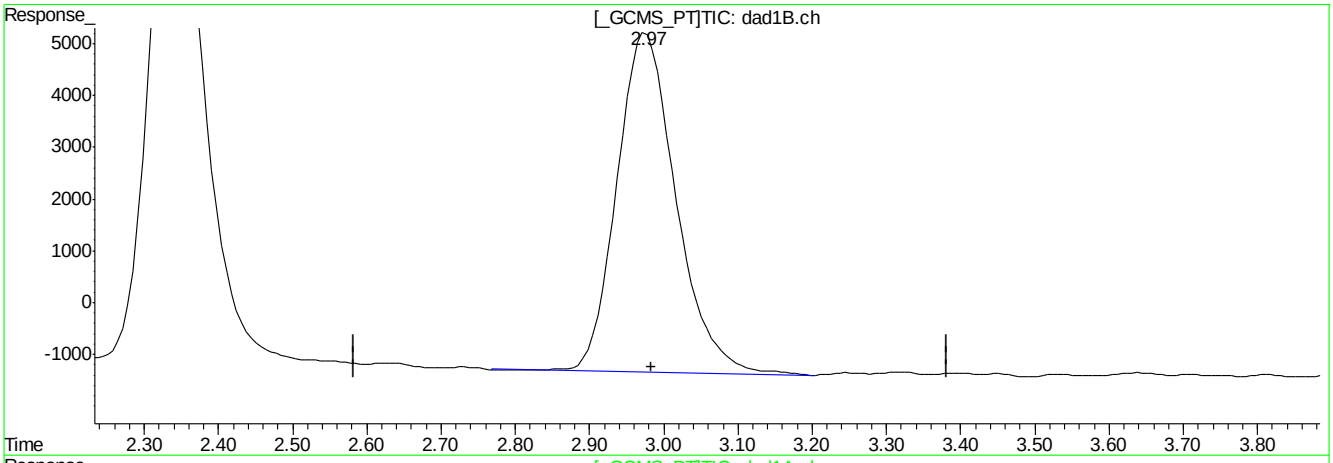
response 821414

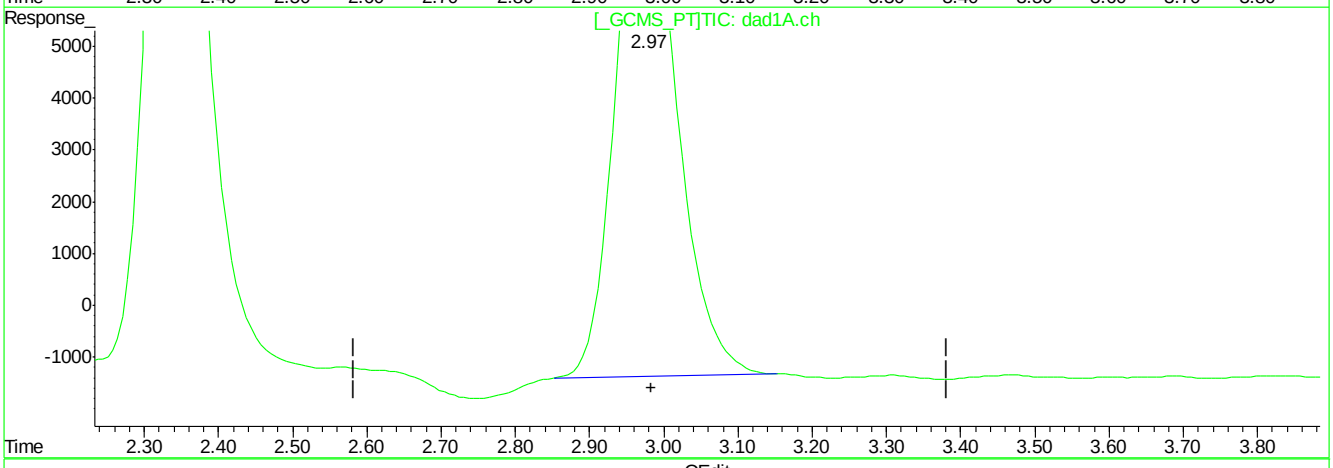
(+) = Expected Retention Time
PP388310.D GPP2336_092420PRI.M Thu Sep 24 15:54:25 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1A.ch
Acq On : 24-Sep-2020, 14:09:49 Operator: williamh
Sample : ic2336-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.98min 201.523ppb

response 362980

(5) RDX #2

2.97min 194.997ppb m

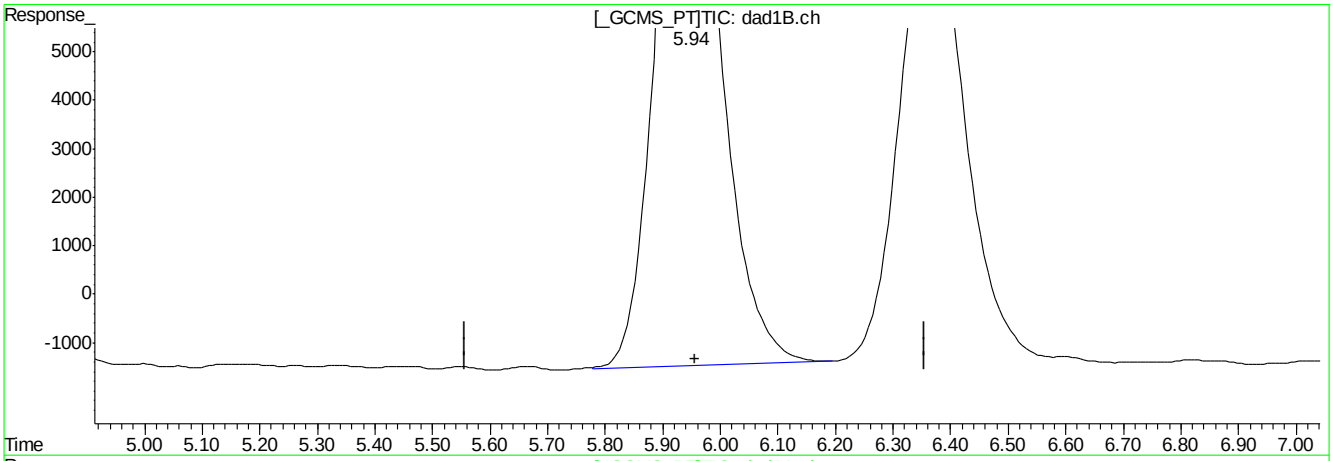
response 575440

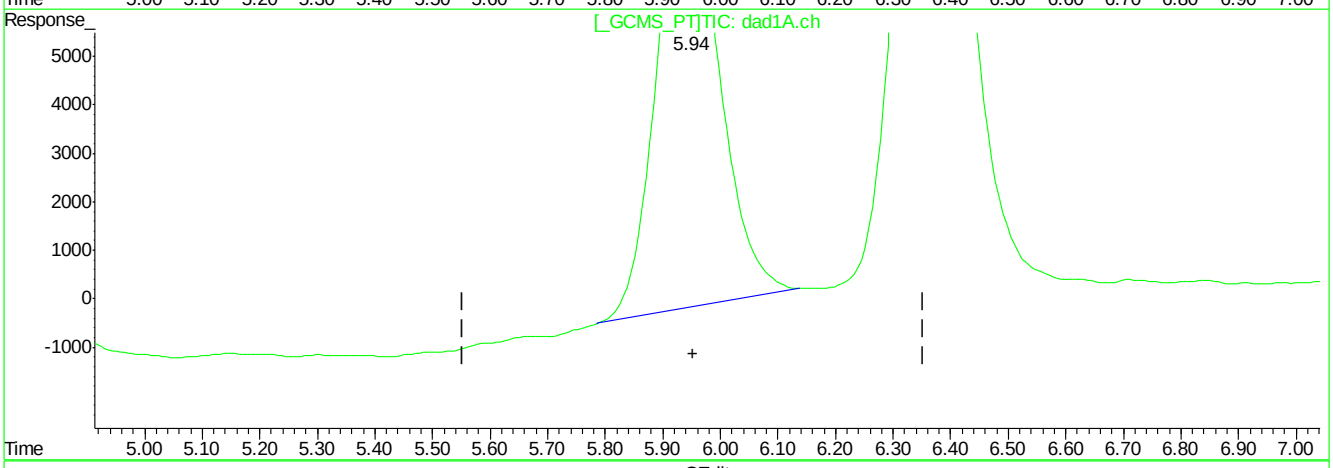
(+) = Expected Retention Time
PP388310.D GPP2336_092420PRI.M Thu Sep 24 15:54:31 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1A.ch
Acq On : 24-Sep-2020, 14:09:49 Operator: williamh
Sample : ic2336-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.94min 200.048ppb m

response 993255

(7) 1,3-Dinitrobenzene #2

5.94min 199.443ppb m

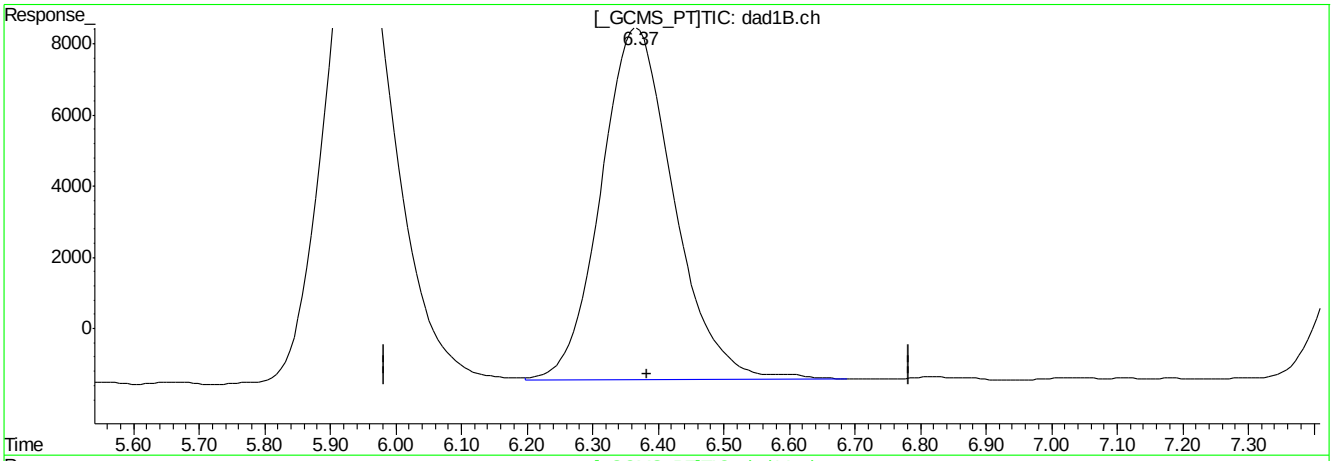
response 682012

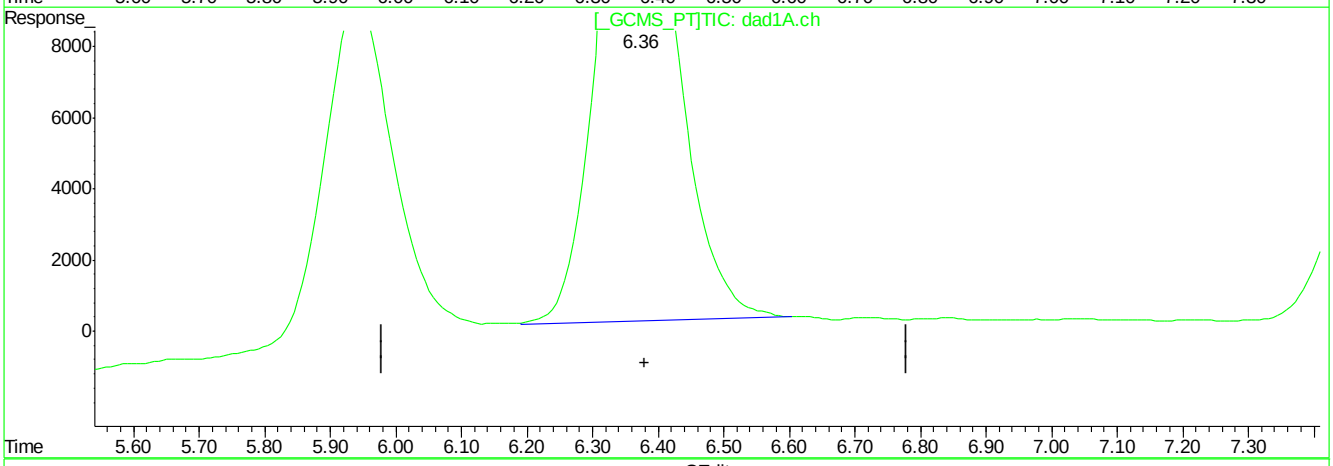
(+) = Expected Retention Time
PP388310.D GPP2336_092420PRI.M Thu Sep 24 15:55:20 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1A.ch
Acq On : 24-Sep-2020, 14:09:49 Operator: williamh
Sample : ic2336-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.37min 200.796ppb

response 763794

(8) 3,5-Dinitroaniline #2

6.36min 198.210ppb m

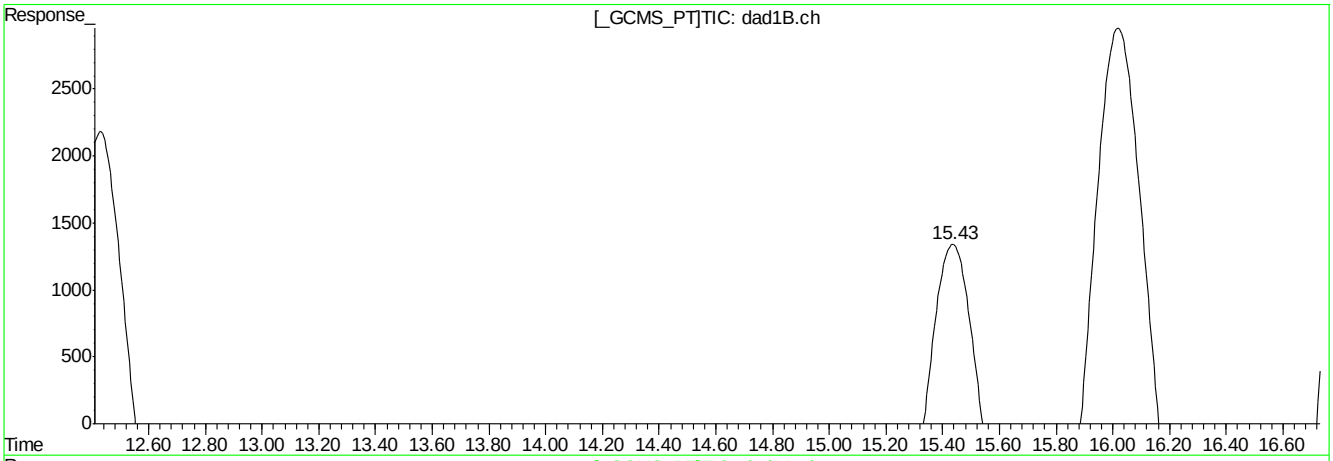
response 1278237

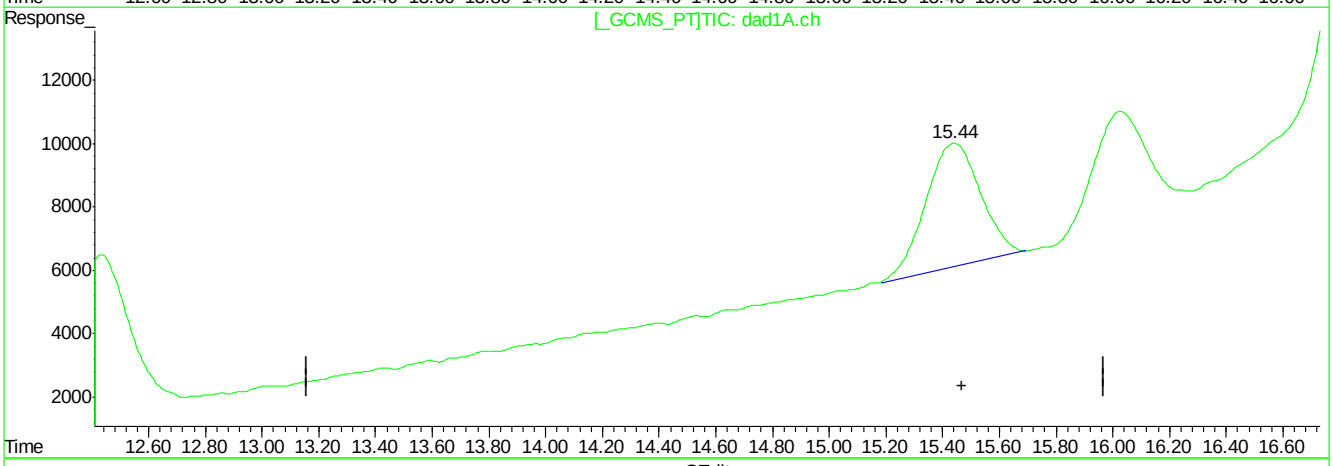
(+) = Expected Retention Time
PP388310.D GPP2336_092420PRI.M Thu Sep 24 15:55:27 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1A.ch
Acq On : 24-Sep-2020, 14:09:49 Operator: williamh
Sample : ic2336-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.44min 191.198ppb

response 413336

(18) o-Nitrotoluene #2

15.44min 183.427ppb m

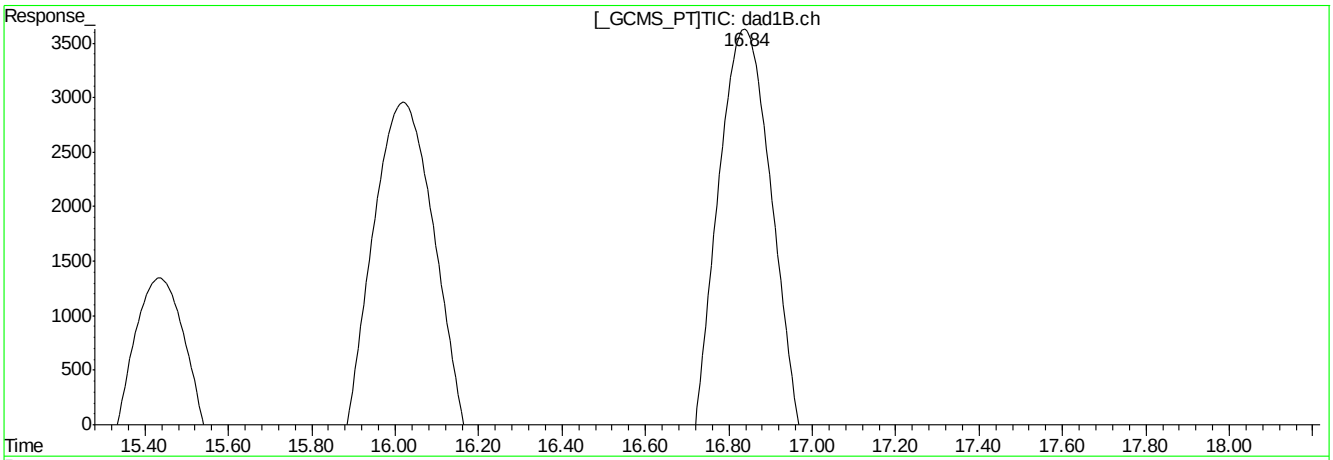
response 524492

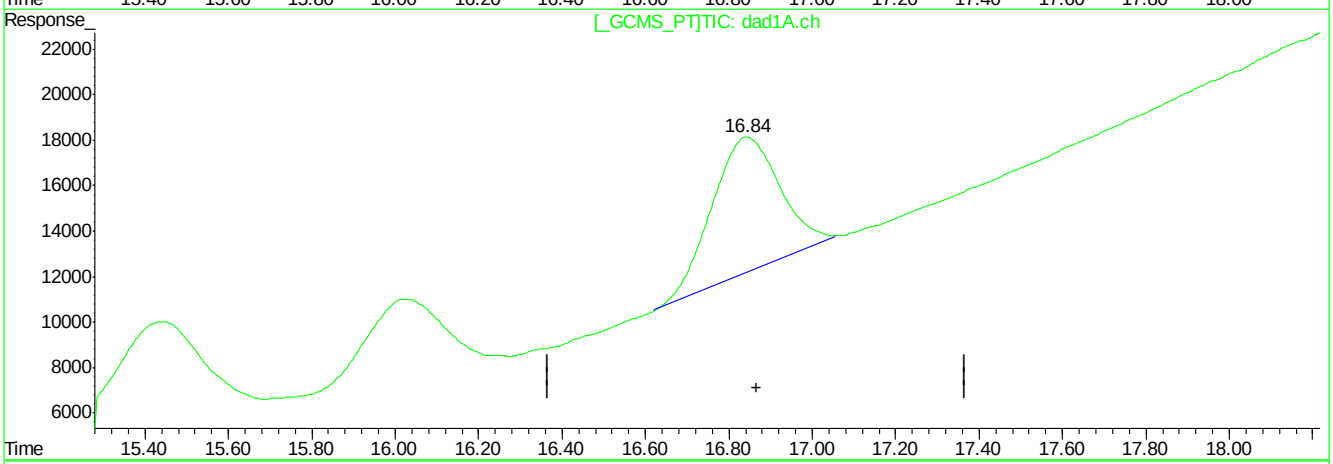
(+) = Expected Retention Time
PP388310.D GPP2336_092420PRI.M Thu Sep 24 15:55:49 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1A.ch
Acq On : 24-Sep-2020, 14:09:49 Operator: williamh
Sample : ic2336-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.84min 195.748ppb

response 605486

(20) m-Nitrotoluene #2

16.84min 180.441ppb m

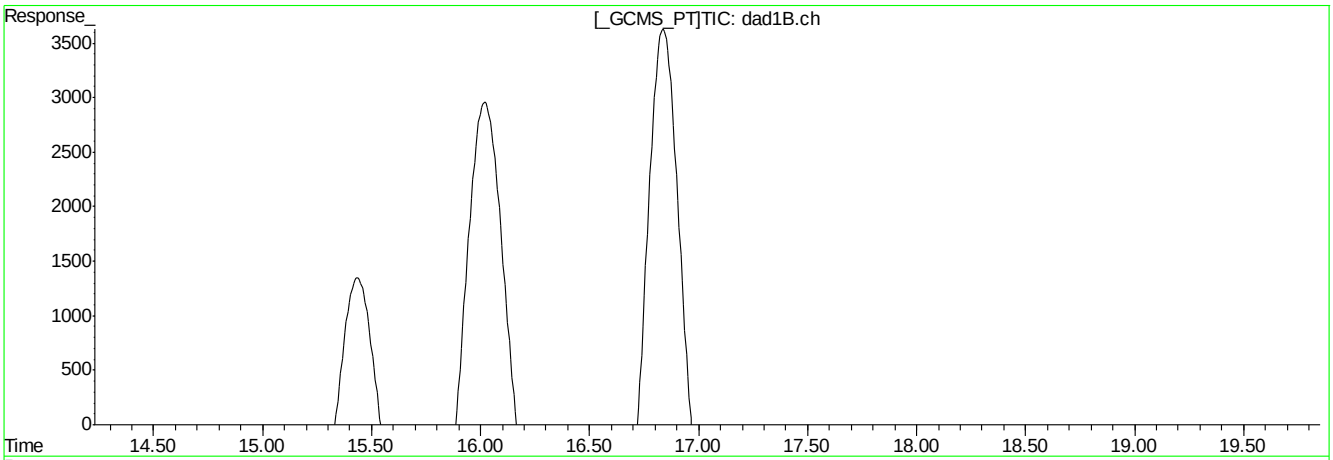
response 672065

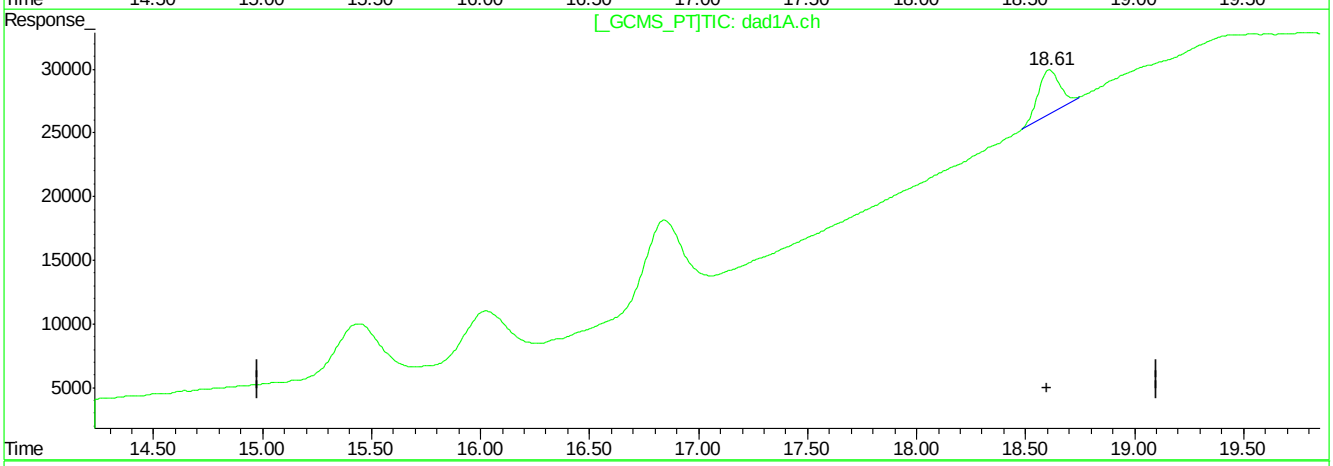
(+) = Expected Retention Time
PP388310.D GPP2336_092420PRI.M Thu Sep 24 15:55:59 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388310.D\dad1A.ch
Acq On : 24-Sep-2020, 14:09:49 Operator: williamh
Sample : ic2336-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.61min 196.662ppb m

response 242971

(+) = Expected Retention Time
PP388310.D GPP2336_092420PRI.M Thu Sep 24 15:56:17 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 09/25/20 13:58

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1A.ch
Acq On : 24-Sep-2020, 14:41:49 Operator: williamh
Sample : ic2336-500 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34:42 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.29	11.29	1032316	1801724	498.502	484.383
	Spiked Amount 500.000	Range 70 - 136		Recovery =		99.70%	96.88%
	Target Compounds						
1)	TNX	1.35	1.35	1610163	2505787	534.329	509.675
2)	HMX	1.49	1.49	765159	2207735	515.674	518.935
3)	DNX	1.74	1.74	1254150	2003810	510.112	497.328
4)	MNX	2.35	2.35	1331958	2125491	490.045	495.102
5)	RDX	2.98	2.98	869452	1444452	482.712	489.475
6)	1,3,5-Trinitrobe	4.75	4.75	1935221	3779576	493.120	490.674
7)	1,3-Dinitrobenze	5.95	5.95	2478582	1729983	499.203	505.904m
8)	3,5-Dinitroanili	6.37	6.37	1851762	3153680	486.816	489.026m
9)	Nitrobenzene	7.50	7.50	1396354	1345388	482.132	475.464
10)	Nitroglycerin	0.00	9.15	0	545070	N.D.	507.244 #
11)	Tetryl	9.63	9.63	1383278	2203983	494.831	486.073
12)	2,4,6-Trinitroto	10.00	10.00	1778201	2111285	501.884	497.959
13)	2-Amino-4,6-Dini	10.47	10.47	1596414	2347244	503.613	506.339
14)	4-Amino-2,6-Dini	10.97	10.97	1131211	2231845	487.194	532.344
16)	2,4-Dinitrotolue	11.98	11.98	2216854	1471178	512.661	512.716
17)	2,6-Dinitrotolue	12.44	12.44	1277537	1676325	512.938	519.113
18)	o-Nitrotoluene	15.44	15.44	1004148	1346914	464.492	471.364m
19)	p-Nitrotoluene	16.03	16.03	1593664	1177205	488.126	458.499
20)	m-Nitrotoluene	16.85	16.84	1503203	1739869	485.973	466.828m
21)	PETN	0.00	18.61	0	609911	N.D.	493.665m#

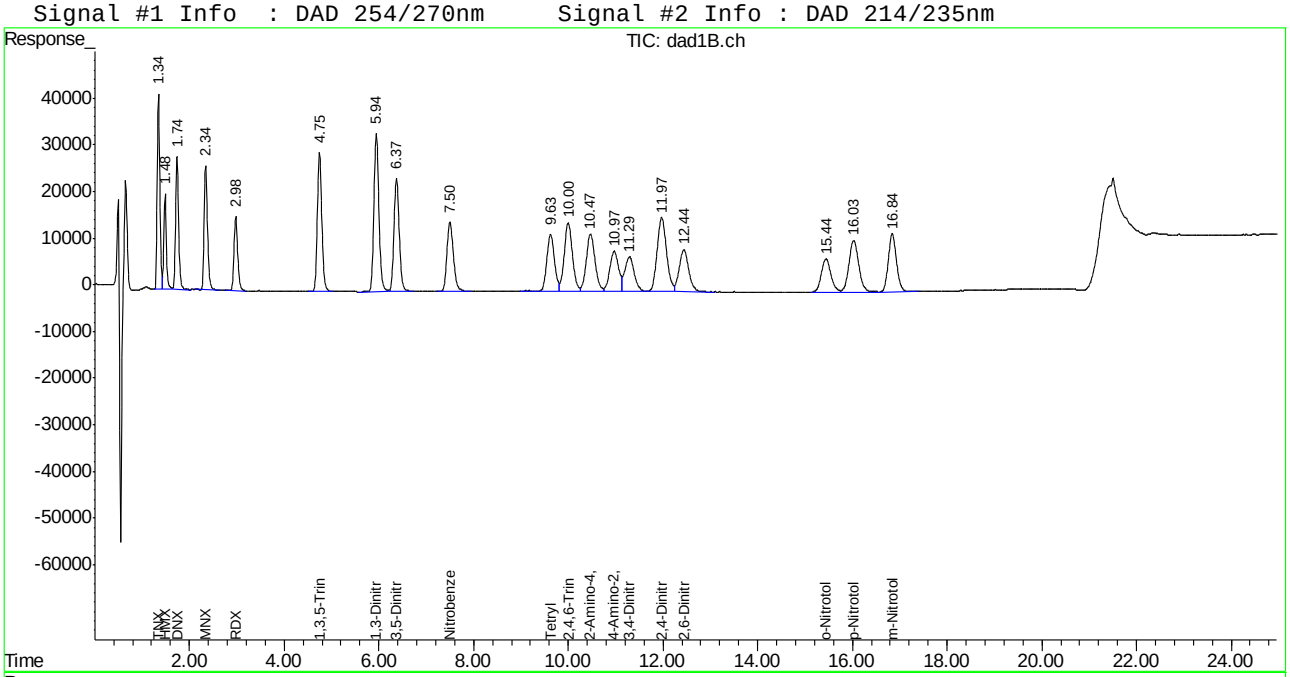
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388311.D GPP2336_092420PRI.M Fri Sep 25 10:23:44 2020 Page 1

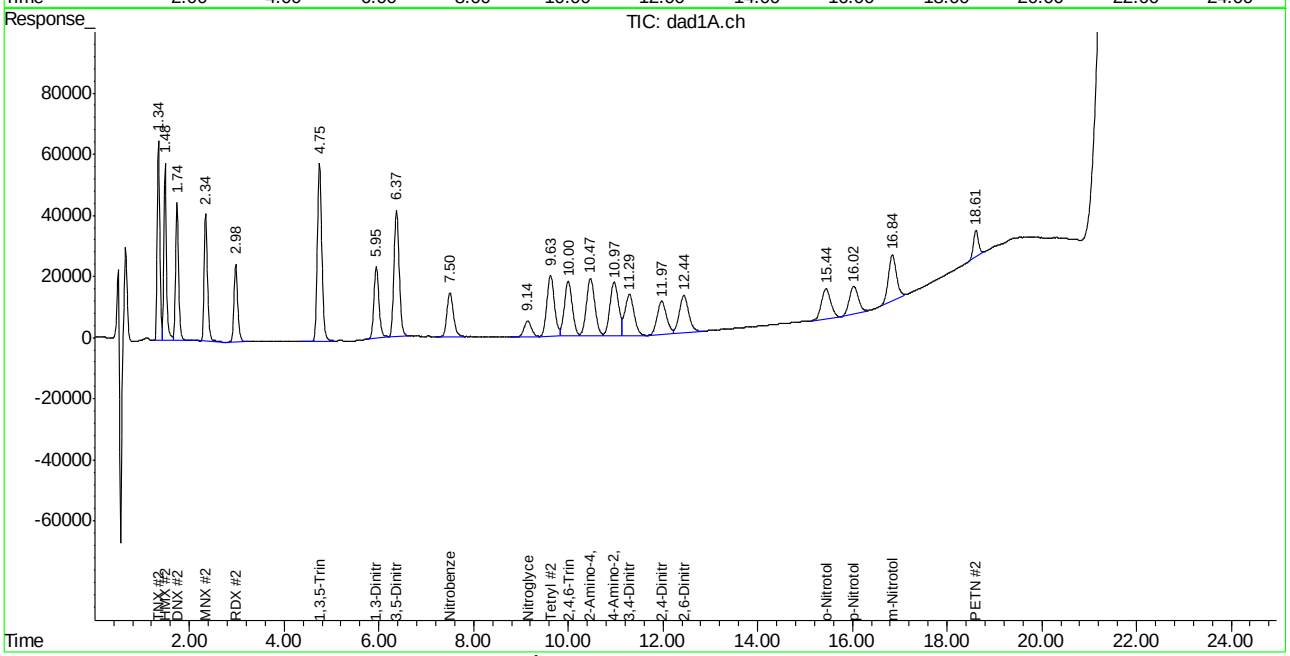
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1A.ch
Acq On : 24-Sep-2020, 14:41:49 Operator: williamh
Sample : ic2336-500 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:57 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

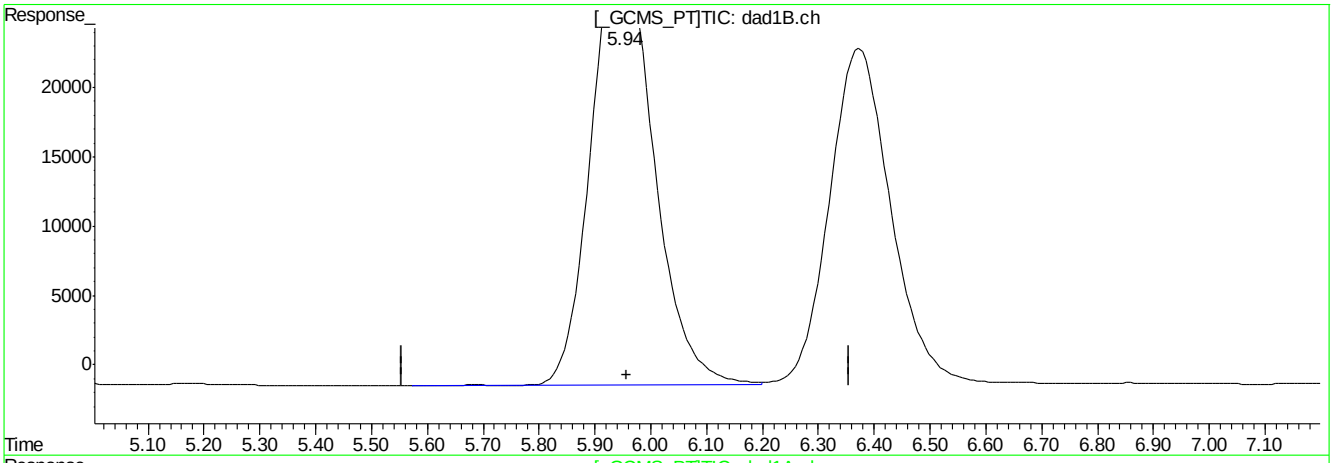
Sample Number: GPP2336-IC2336
Lab FileID: PP388311.D
Injection Time: 09/24/20 14:41
Method: SW846 8330A
Analyst approved: 09/25/20 10:27 William Hustedde
Supervisor approved: 09/25/20 13:58 Naresh Jiawan

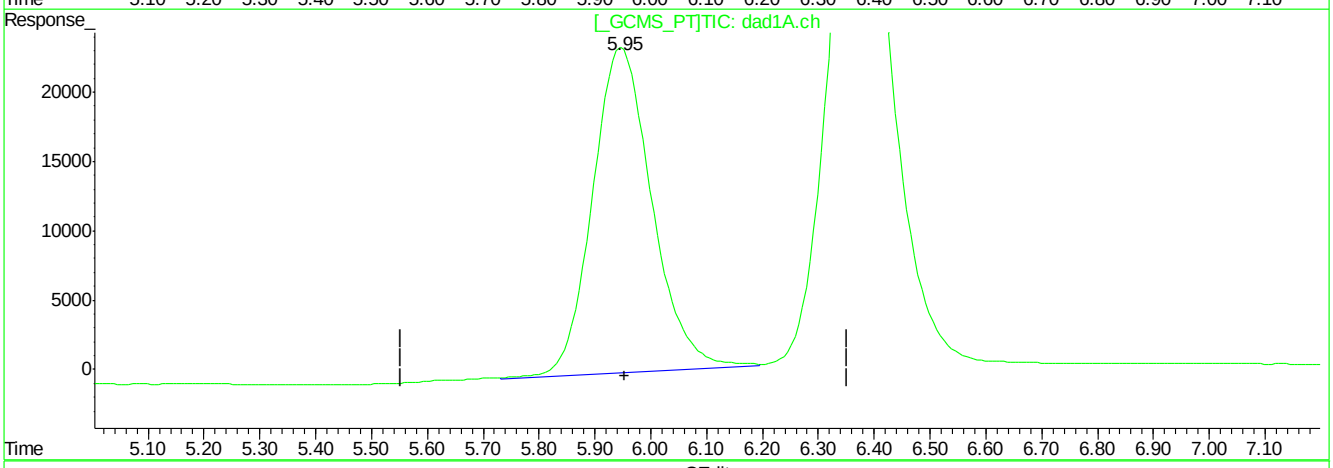
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	5.95	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.37	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.44	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.84	Poor instrument integration
PETN	78-11-5	2	18.61	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1A.ch
Acq On : 24-Sep-2020, 14:41:49 Operator: williamh
Sample : ic2336-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.95min 499.203ppb

response 2478582

(7) 1,3-Dinitrobenzene #2

5.95min 505.904ppb m

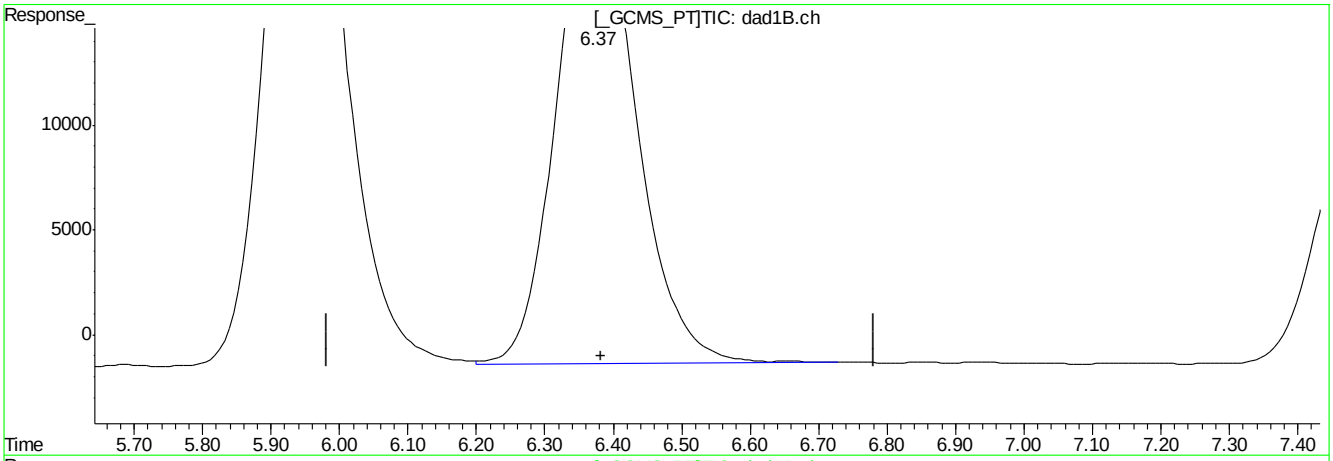
response 1729983

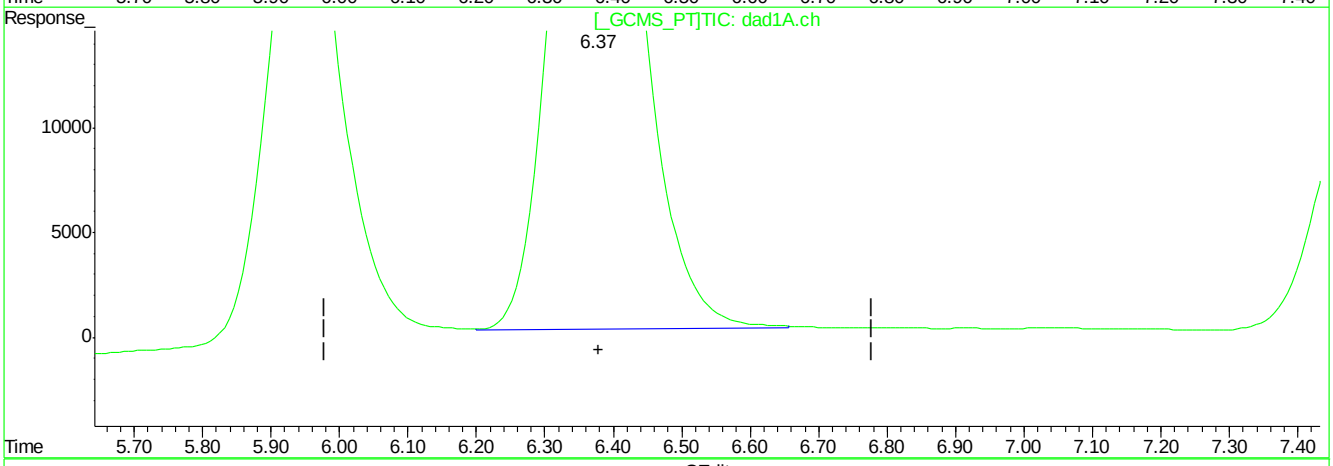
(+) = Expected Retention Time
PP388311.D GPP2336_092420PRI.M Thu Sep 24 15:56:38 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1A.ch
Acq On : 24-Sep-2020, 14:41:49 Operator: williamh
Sample : ic2336-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.37min 486.816ppb

response 1851762

(8) 3,5-Dinitroaniline #2

6.37min 489.026ppb m

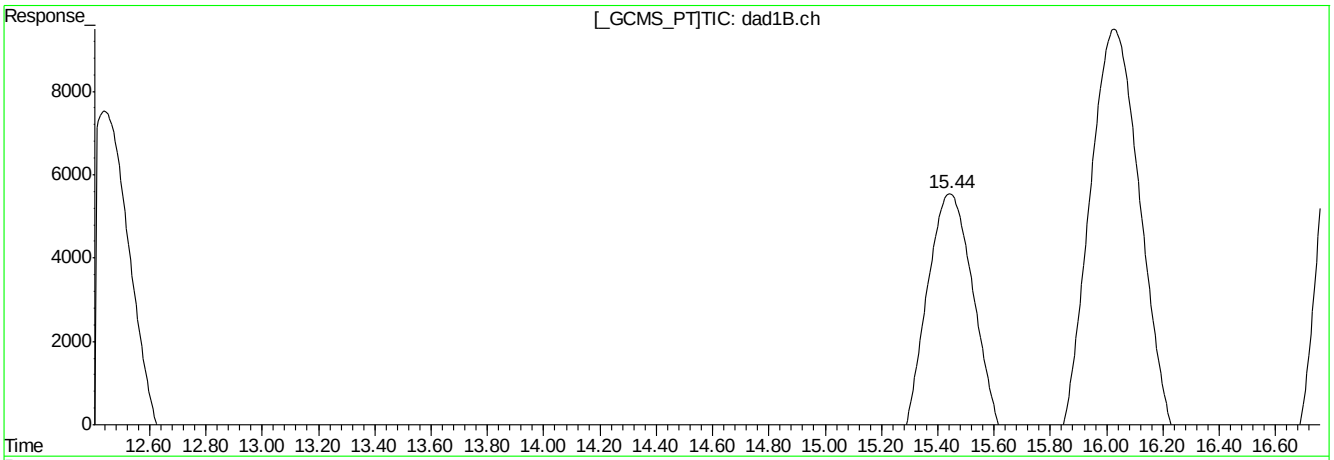
response 3153680

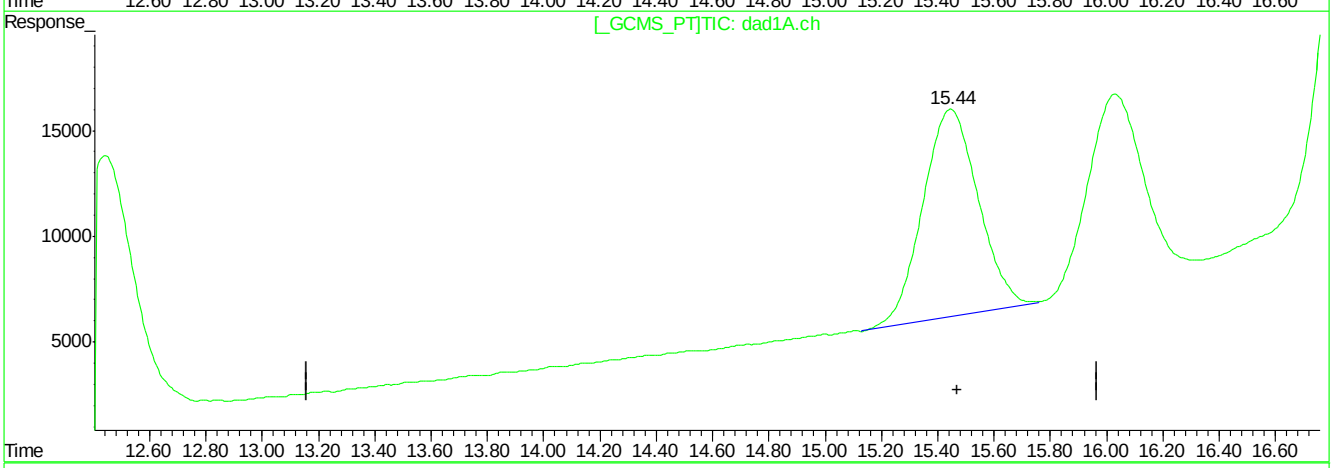
(+) = Expected Retention Time
PP388311.D GPP2336_092420PRI.M Thu Sep 24 15:56:44 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1A.ch
Acq On : 24-Sep-2020, 14:41:49 Operator: williamh
Sample : ic2336-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.44min 464.492ppb

response 1004148

(18) o-Nitrotoluene #2

15.44min 471.364ppb m

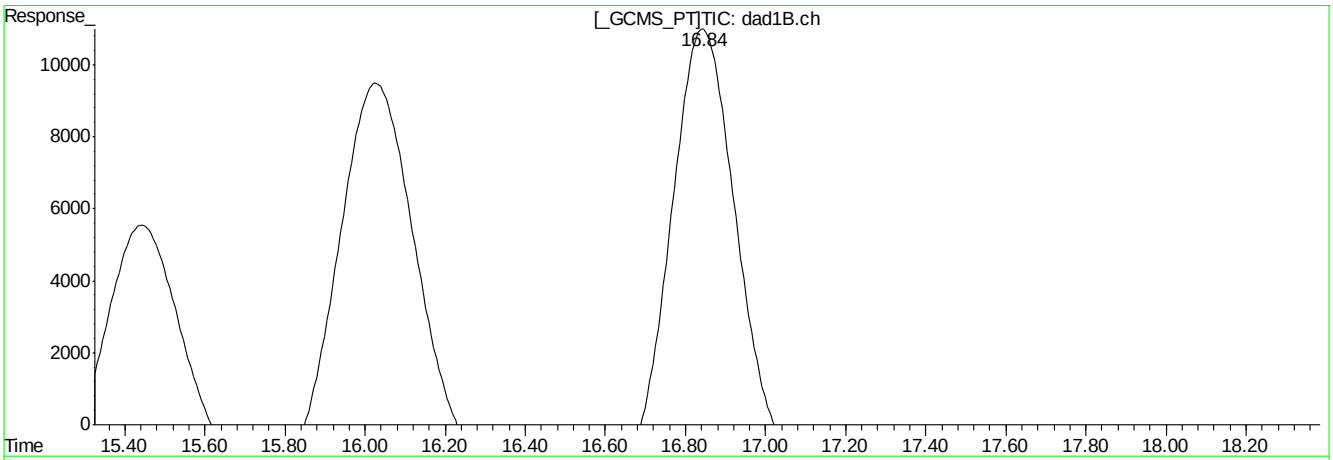
response 1346914

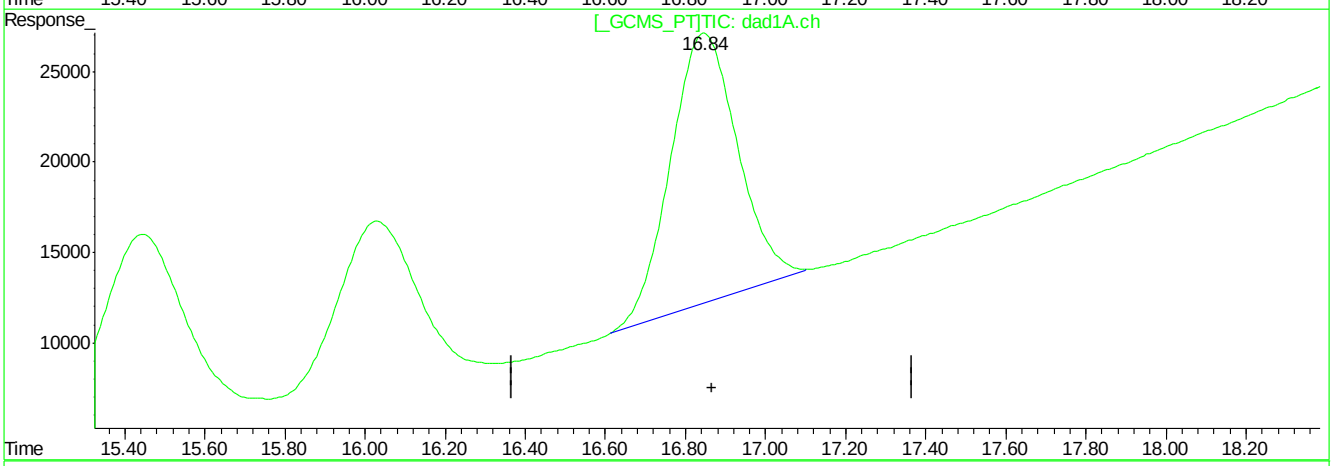
(+) = Expected Retention Time
PP388311.D GPP2336_092420PRI.M Thu Sep 24 15:56:58 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1A.ch
Acq On : 24-Sep-2020, 14:41:49 Operator: williamh
Sample : ic2336-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.85min 485.973ppb

response 1503203

(20) m-Nitrotoluene #2

16.84min 466.828ppb m

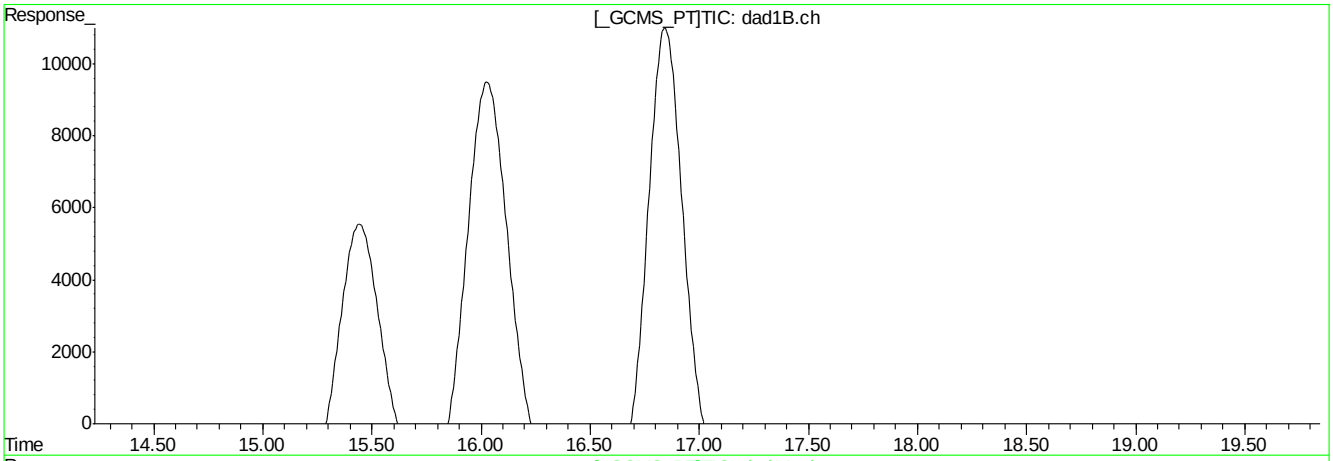
response 1739869

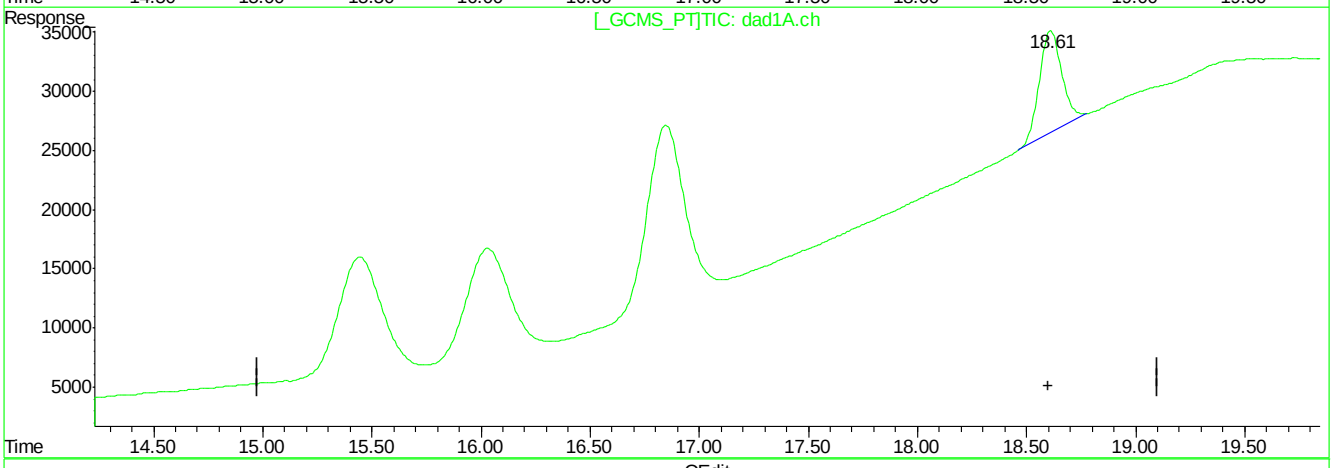
(+) = Expected Retention Time
PP388311.D GPP2336_092420PRI.M Thu Sep 24 15:57:04 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388311.D\dad1A.ch
Acq On : 24-Sep-2020, 14:41:49 Operator: williamh
Sample : ic2336-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:34 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.61min 493.665ppb m

response 609911

(+) = Expected Retention Time
PP388311.D GPP2336_092420PRI.M Thu Sep 24 15:57:10 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 09/25/20 13:58

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388312.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388312.D\dad1A.ch
Acq On : 24-Sep-2020, 15:13:48 Operator: williamh
Sample : icc2336-1000 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:57:19 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.29	11.29	2019412	3600213	975.167	966.507
	Spiked Amount 500.000	Range 70 - 136		Recovery =		195.03%#	193.30%#
	Target Compounds						
1)	TNX	1.35	1.35	3190803	4969558	1058.862	1010.804
2)	HMX	1.49	1.49	1481299	4235148	1000.318	999.455
3)	DNX	1.74	1.74	2478119	4063366	1007.949	1008.492
4)	MNX	2.34	2.34	2647476	4277231	974.041	996.318
5)	RDX	2.98	2.98	1727884	2854459	959.305	967.277
6)	1,3,5-Trinitrobe	4.75	4.75	3821030	7434866	973.649	965.213
7)	1,3-Dinitrobenze	5.94	5.94	4899184	3485820	986.729	1019.368
8)	3,5-Dinitroanili	6.37	6.37	3671125	6407088	965.114	993.517
9)	Nitrobenzene	7.50	7.50	2912141	2821236	1005.502	997.034
10)	Nitroglycerin	0.00	9.14	0	1080986	N.D.	1005.970 #
11)	Tetryl	9.62	9.62	2721716	4433618	973.622	977.804
12)	2,4,6-Trinitroto	10.00	10.00	3497684	4237095	987.196	999.345
13)	2-Amino-4,6-Dini	10.46	10.46	3146239	4736428	992.529	1021.725
14)	4-Amino-2,6-Dini	10.96	10.96	2218489	4508087	955.467	1075.277
16)	2,4-Dinitrotolue	11.97	11.97	4361549	2898833	1008.635	1010.263
17)	2,6-Dinitrotolue	12.44	12.44	2500002	3288883	1003.764	1018.480
18)	o-Nitrotoluene	15.44	15.44	2085911	2793179	964.887	978.661m
19)	p-Nitrotoluene	16.03	16.03	3213991	2533987	984.418	980.041
20)	m-Nitrotoluene	16.84	16.84	3096024	3716515	1000.918	995.987m
21)	PETN	0.00	18.61	0	1266188	N.D.	1024.859m#

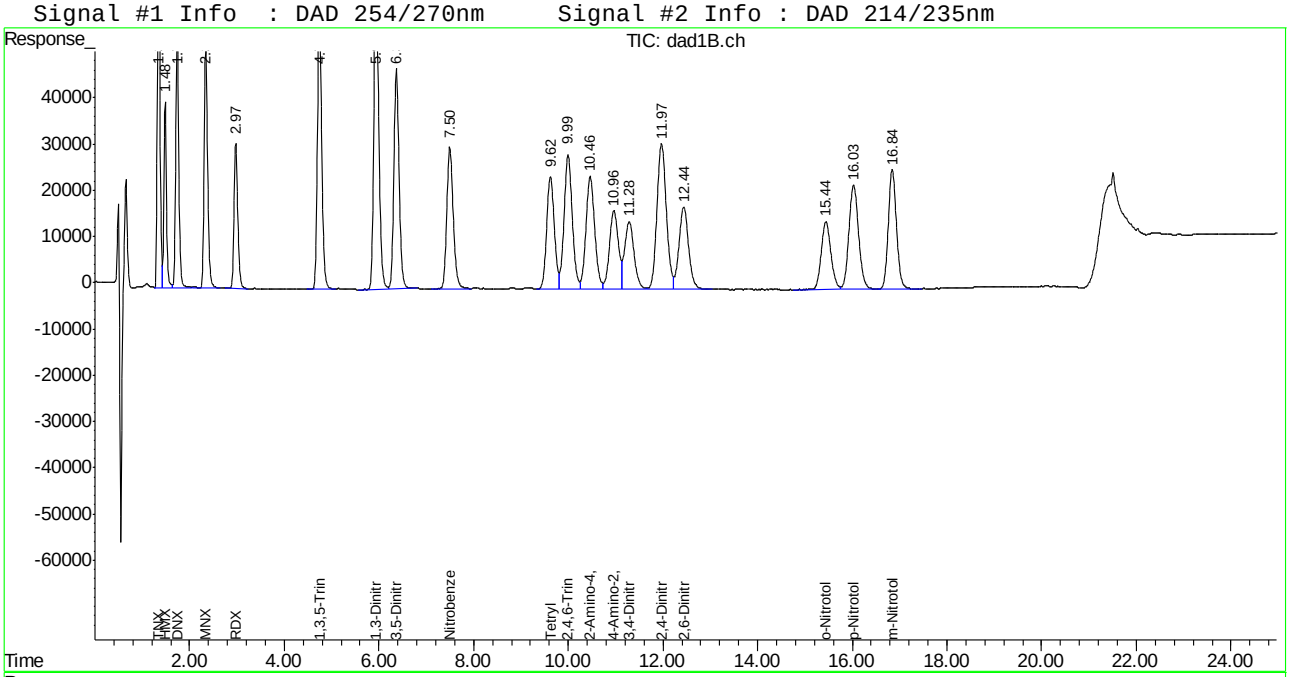
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388312.D GPP2336_092420PRI.M Fri Sep 25 10:23:45 2020 Page 1

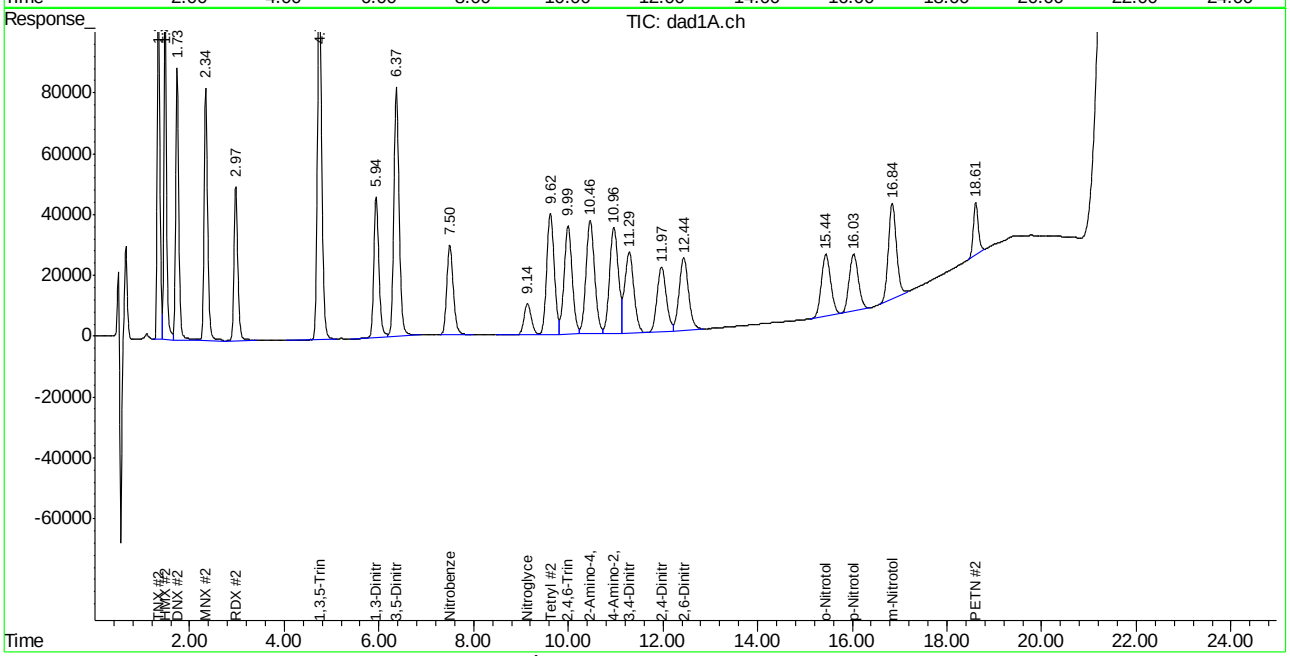
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388312.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388312.D\dad1A.ch
Acq On : 24-Sep-2020, 15:13:48 Operator: williamh
Sample : icc2336-1000 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:57 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

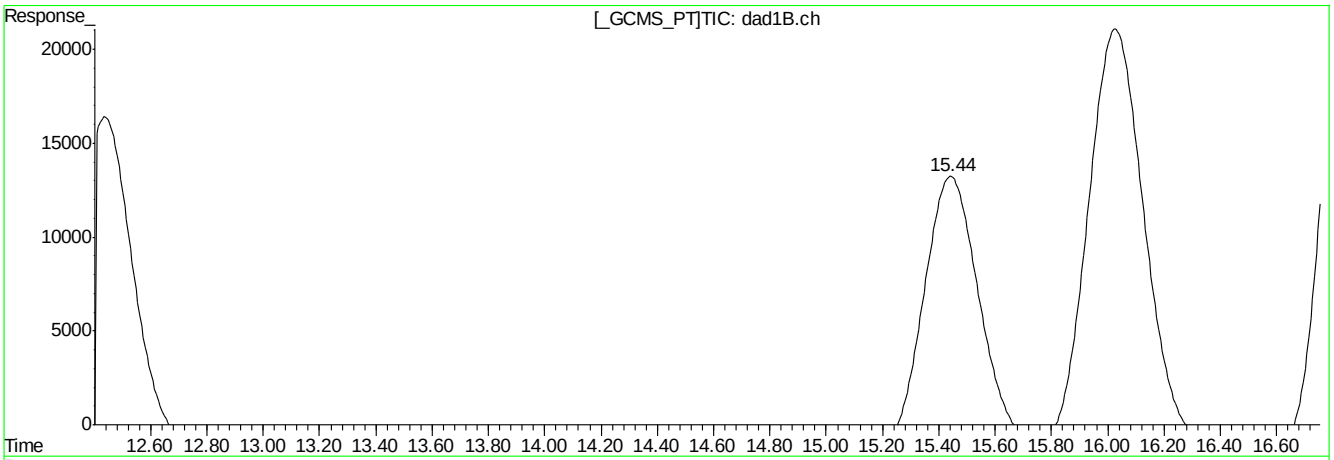
Sample Number: GPP2336-ICC2336
Lab FileID: PP388312.D
Injection Time: 09/24/20 15:13
Method: SW846 8330A
Analyst approved: 09/25/20 10:27 William Hustedde
Supervisor approved: 09/25/20 13:58 Naresh Jiawan

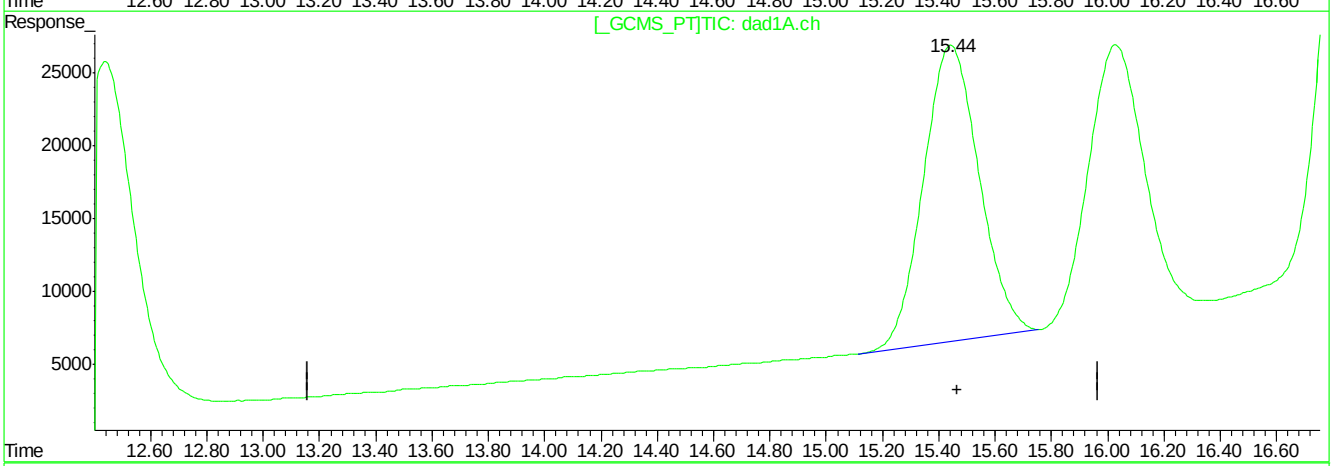
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.44	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.84	Poor instrument integration
PETN	78-11-5	2	18.61	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388312.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388312.D\dad1A.ch
Acq On : 24-Sep-2020, 15:13:48 Operator: williamh
Sample : icc2336-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:57 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.44min 964.887ppb

response 2085911

(18) o-Nitrotoluene #2

15.44min 978.661ppb m

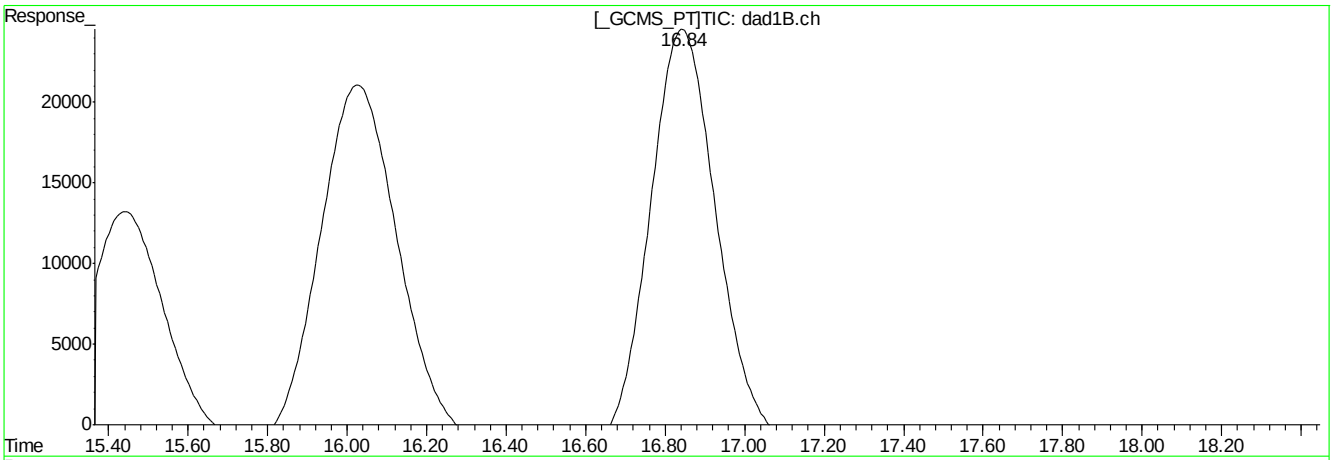
response 2793179

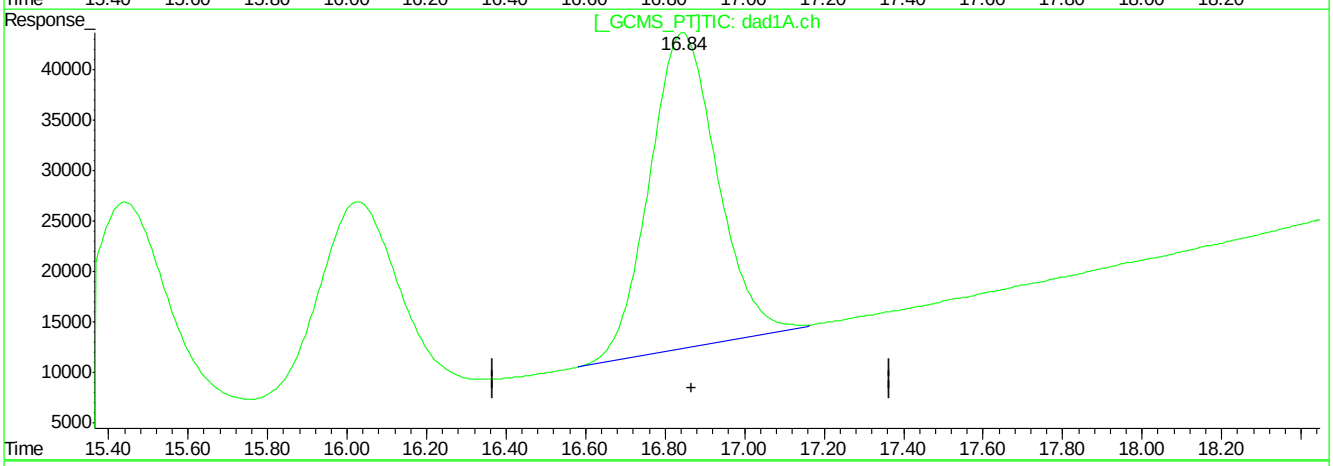
(+) = Expected Retention Time
PP388312.D GPP2336_092420PRI.M Thu Sep 24 15:57:32 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388312.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388312.D\dad1A.ch
Acq On : 24-Sep-2020, 15:13:48 Operator: williamh
Sample : icc2336-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:57 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.84min 1000.918ppb

response 3096024

(20) m-Nitrotoluene #2

16.84min 995.987ppb m

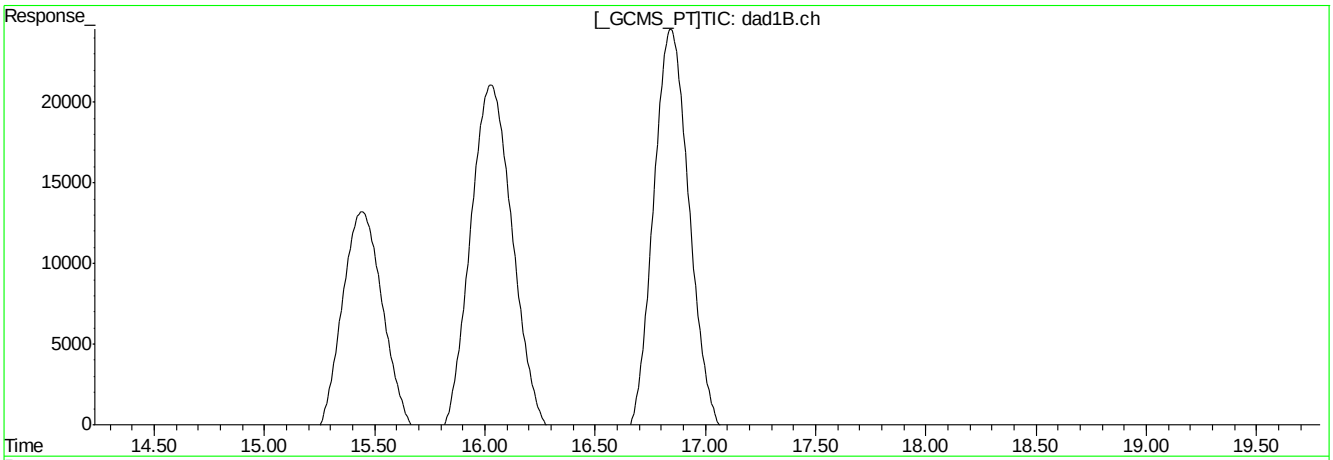
response 3716515

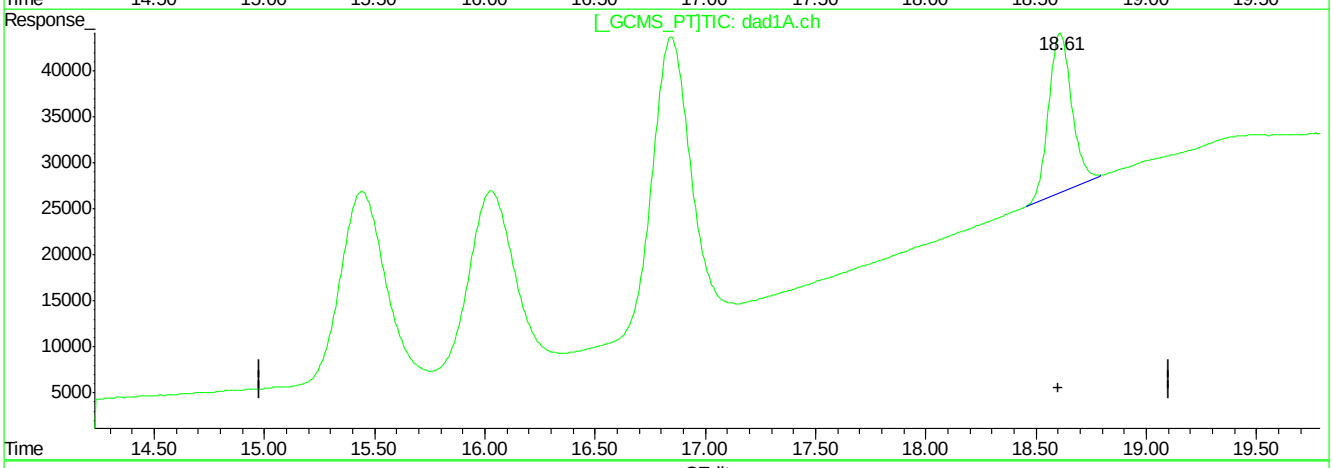
(+) = Expected Retention Time
PP388312.D GPP2336_092420PRI.M Thu Sep 24 15:57:39 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388312.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388312.D\dad1A.ch
Acq On : 24-Sep-2020, 15:13:48 Operator: williamh
Sample : icc2336-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 15:57 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.61min 1024.859ppb m

response 1266188

(+) = Expected Retention Time
PP388312.D GPP2336_092420PRI.M Thu Sep 24 15:57:44 2020

PP388313.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 09/25/20 13:58

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388313.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388313.D\dad1A.ch
Acq On : 24-Sep-2020, 15:45:47 Operator: williamh
Sample : ic2336-2500 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 16:13:54 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.30	11.30	5185267	9352598	2503.947	2499.366
	Spiked Amount 500.000	Range 70 - 136		Recovery =		500.79%#	499.87%#
	Target Compounds						
1)	TNX	1.35	1.35	8126208	12603382	2696.666	2563.519
2)	HMX	1.49	1.49	3708838	10465723	2520.459	2500.985
3)	DNX	1.74	1.74	6267875	10056718	2549.392	2495.989
4)	MNX	2.35	2.35	6723408	10583220	2473.631	2465.204
5)	RDX	2.98	2.98	4366369	7113662	2424.168	2410.572
6)	1,3,5-Trinitrobe	4.75	4.75	9707914	19026317	2473.705	2470.044
7)	1,3-Dinitrobenze	5.95	5.95	12457423	8751978	2509.010	2559.366
8)	3,5-Dinitroanili	6.37	6.37	9377875	16253684	2465.381	2520.383
9)	Nitrobenzene	7.50	7.50	7018076	6785787	2423.197	2398.119
10)	Nitroglycerin	0.00	9.14	0	2811926	N.D.	2616.788 #
11)	Tetryl	9.63	9.63	6904287	11316811	2469.827	2495.846
12)	2,4,6-Trinitroto	10.01	10.01	8900954	10907442	2512.229	2572.587
13)	2-Amino-4,6-Dini	10.47	10.47	7991538	12198000	2521.051	2631.307
14)	4-Amino-2,6-Dini	10.97	10.97	5621400	11588430	2421.045	2764.092
16)	2,4-Dinitrotolue	11.98	11.98	11127227	7409612	2573.239	2582.301
17)	2,6-Dinitrotolue	12.45	12.45	6378245	8382821	2560.899	2595.937
18)	o-Nitrotoluene	15.45	15.44	4989095	6801000	2307.823	2390.829m
19)	p-Nitrotoluene	16.03	16.03	7940943	6396330	2432.243	2426.781
20)	m-Nitrotoluene	16.85	16.85	7557016	8853807	2443.119	2365.364
21)	PETN	0.00	18.61	0	3239578	N.D.	2622.133m#

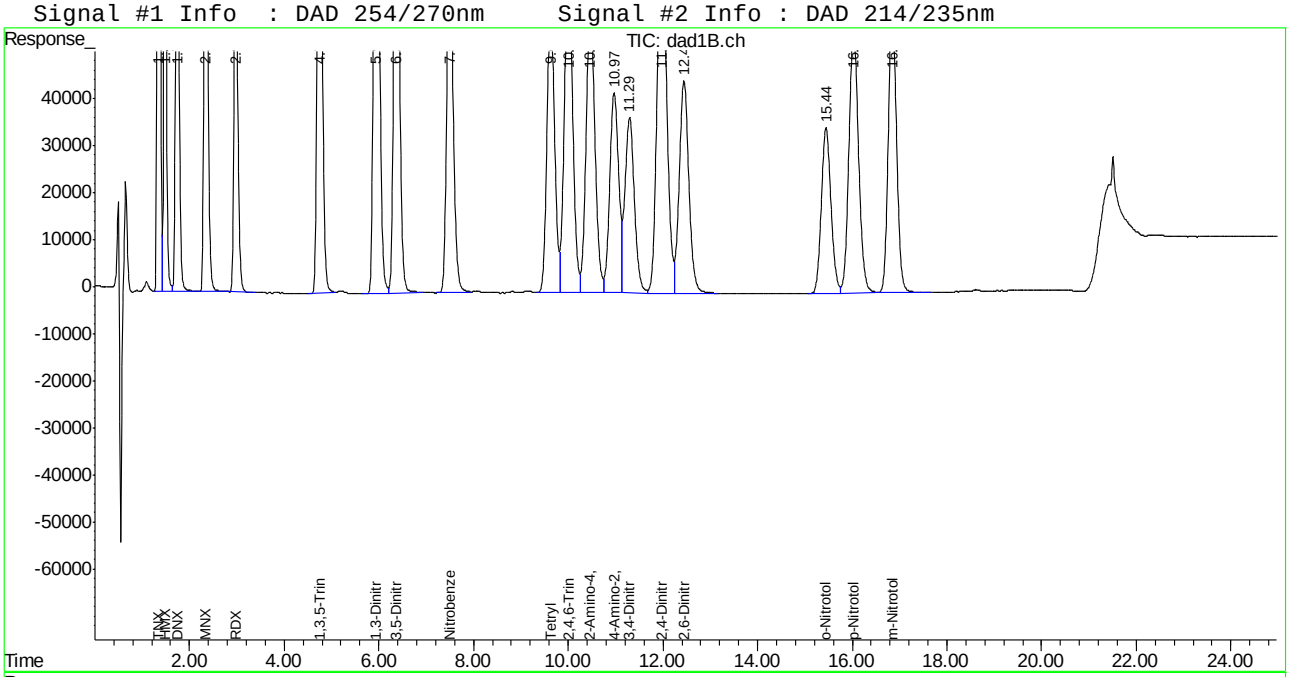
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

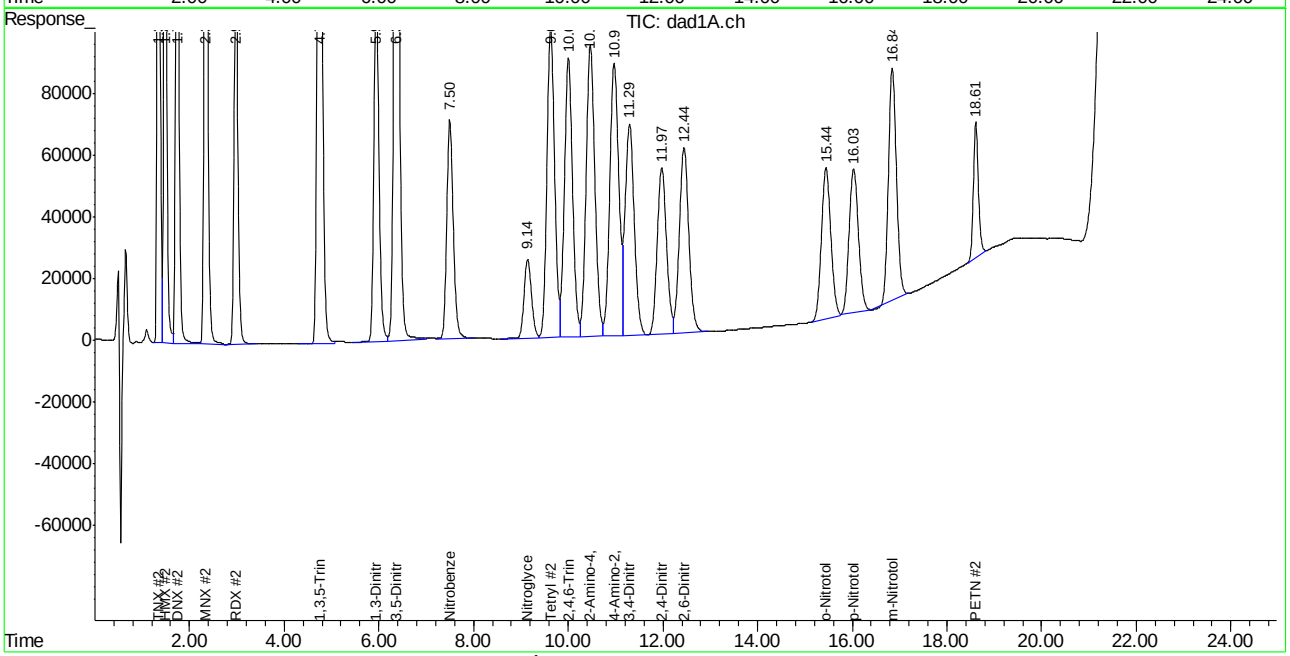
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388313.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388313.D\dad1A.ch
Acq On : 24-Sep-2020, 15:45:47 Operator: williamh
Sample : ic2336-2500 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 16:14 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

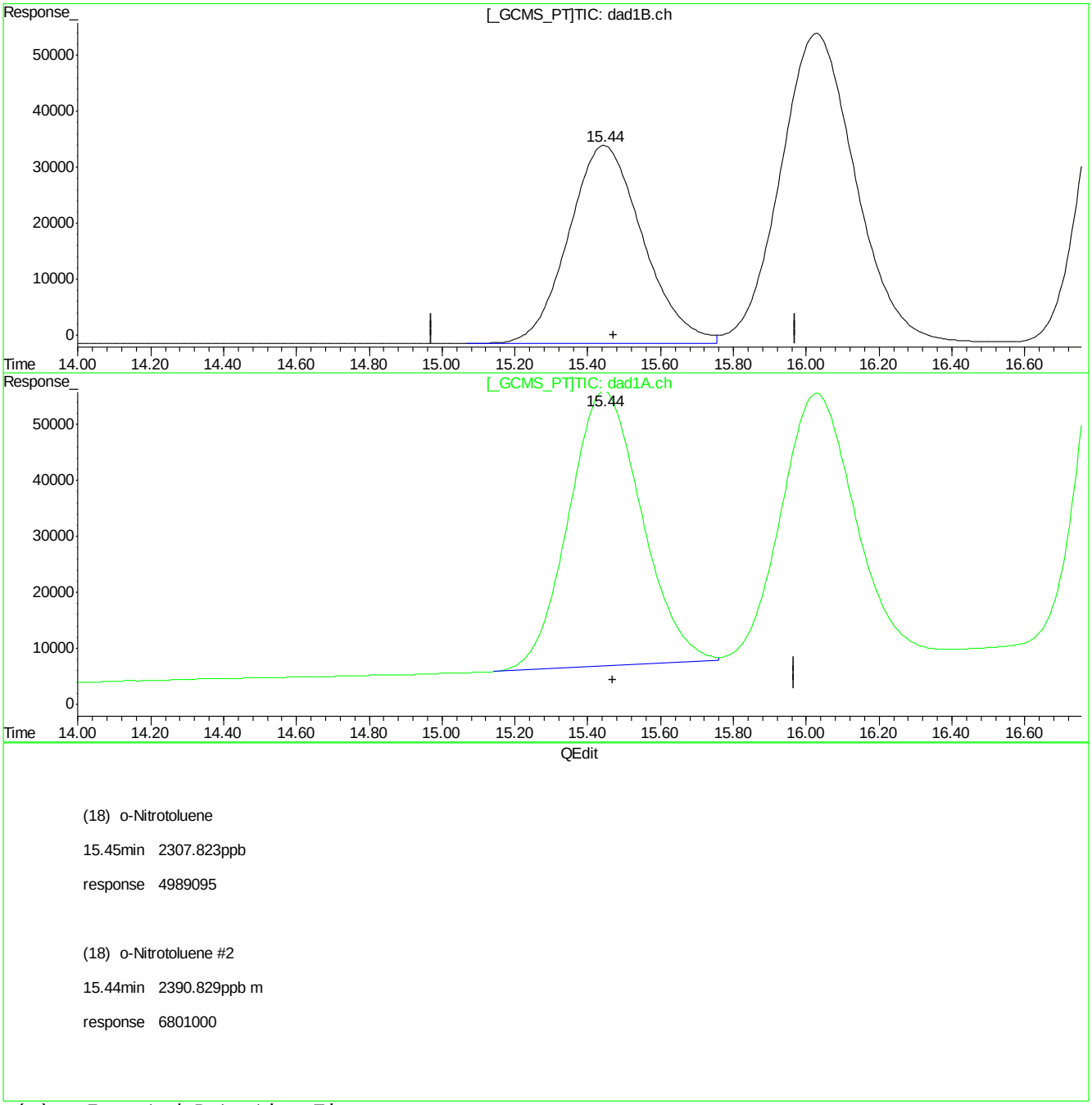
Sample Number: GPP2336-IC2336
Lab FileID: PP388313.D
Injection Time: 09/24/20 15:45
Method: SW846 8330A
Analyst approved: 09/25/20 10:27 William Hustedde
Supervisor approved: 09/25/20 13:58 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.44	Poor instrument integration
PETN	78-11-5	2	18.61	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388313.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388313.D\dad1A.ch
Acq On : 24-Sep-2020, 15:45:47 Operator: williamh
Sample : ic2336-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 16:13 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.45min 2307.823ppb

response 4989095

(18) o-Nitrotoluene #2

15.44min 2390.829ppb m

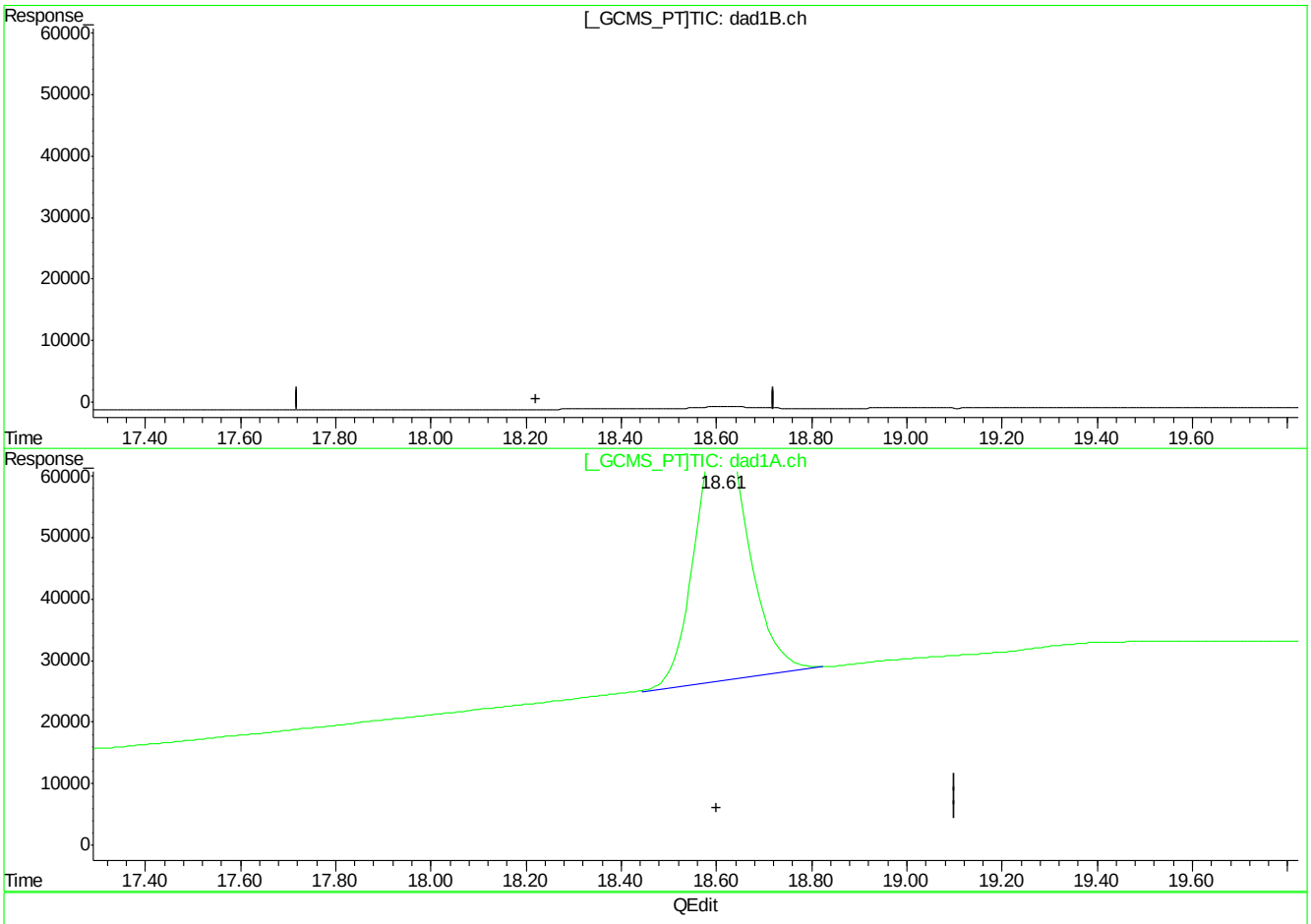
response 6801000

(+) = Expected Retention Time
PP388313.D GPP2336_092420PRI.M Thu Sep 24 16:14:25 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388313.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388313.D\dad1A.ch
Acq On : 24-Sep-2020, 15:45:47 Operator: williamh
Sample : ic2336-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 16:13 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.61min 2622.133ppb m

response 3239578

(+) = Expected Retention Time
PP388313.D GPP2336_092420PRI.M Thu Sep 24 16:14:38 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 09/25/20 13:58

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388314.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388314.D\dad1A.ch
Acq On : 24-Sep-2020, 16:17:54 Operator: williamh
Sample : ic2336-5000 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 16:44:05 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.31	11.31	10379265	18874563	5012.110	5006.756
	Spiked Amount 500.000	Range 70 - 136		Recovery =		1002.42%#	1001.35%#
	Target Compounds						
1)	TNX	1.34	1.34	16140442	25003650	5356.173	5085.724
2)	HMX	1.49	1.49	7318781	20622830	5026.270	5035.500
3)	DNX	1.74	1.74	12501189	19868456	5084.726	4931.177
4)	MNX	2.34	2.34	13384782	20948369	4924.438	4879.612
5)	RDX	2.98	2.98	8697949	14127004	4829.021	4787.150
6)	1,3,5-Trinitrobe	4.75	4.75	19314351	37870826	4921.552	4916.485
7)	1,3-Dinitrobenze	5.95	5.95	24771008	17279688	4989.051	5053.148
8)	3,5-Dinitroanili	6.37	6.37	18725663	32299798	4922.852	5008.579
9)	Nitrobenzene	7.50	7.50	13661111	13467121	4716.899	4759.324
10)	Nitroglycerin	0.00	9.15	0	5584690	N.D.	5197.132 #
11)	Tetryl	9.64	9.64	13824741	22726153	4945.437	5012.099
12)	2,4,6-Trinitroto	10.02	10.02	17733130	21805469	5005.046	5142.954
13)	2-Amino-4,6-Dini	10.47	10.47	15917479	24456606	5021.409	5275.688
14)	4-Amino-2,6-Dini	10.98	10.98	11140977	23148832	4798.237	5521.500
16)	2,4-Dinitrotolue	11.98	11.98	22126834	14802917	5116.966	5158.919
17)	2,6-Dinitrotolue	12.45	12.45	12713108	16765937	5104.381	5191.965
18)	o-Nitrotoluene	15.45	15.45	9741096	13003283	4505.972	4595.044
19)	p-Nitrotoluene	16.03	16.03	15634153	13055033	4788.607	4803.049
20)	m-Nitrotoluene	16.85	16.85	14834078	17776691	4795.731	4723.932
21)	PETN	0.00	18.61	0	6557888	N.D.	5307.992m#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388314.D GPP2336_092420PRI.M Fri Sep 25 10:23:47 2020 Page 1

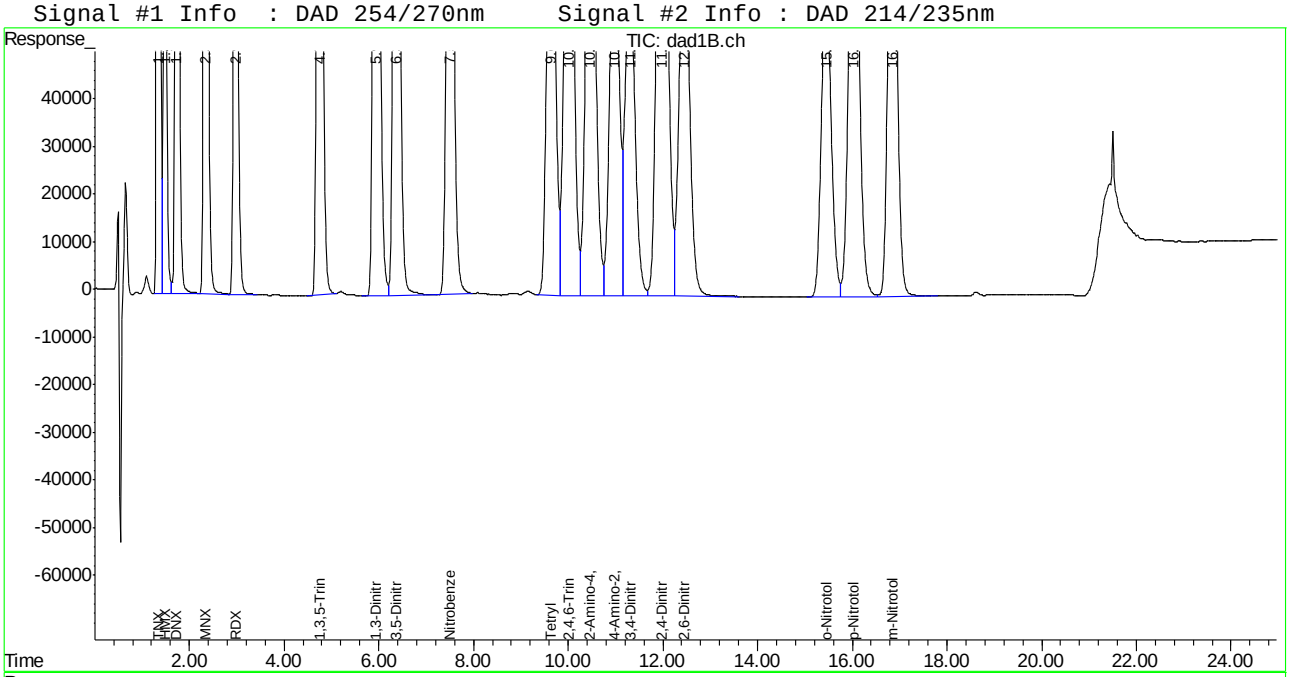
9.5.21
9

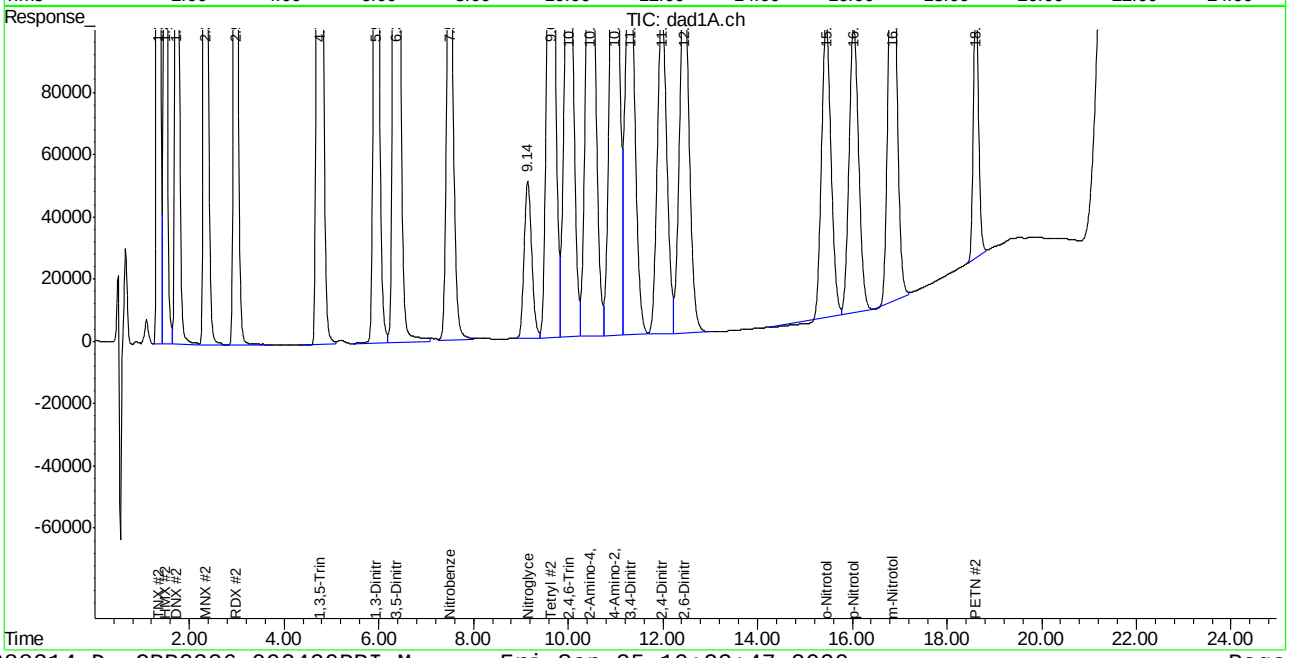
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388314.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388314.D\dad1A.ch
Acq On : 24-Sep-2020, 16:17:54 Operator: williamh
Sample : ic2336-5000 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 16:44 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

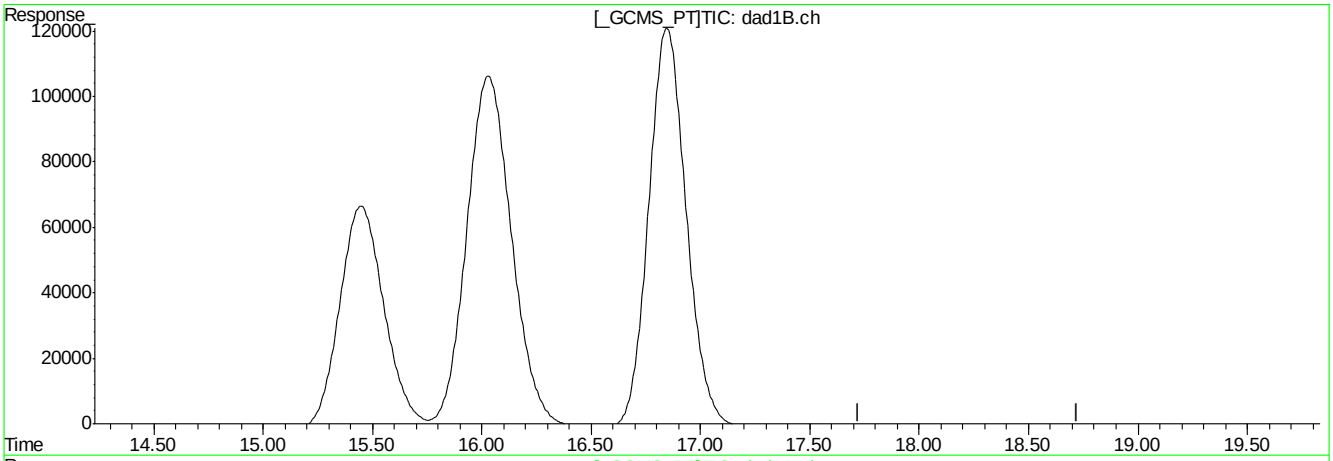
Sample Number: GPP2336-IC2336
Lab FileID: PP388314.D
Injection Time: 09/24/20 16:17
Method: SW846 8330A
Analyst approved: 09/25/20 10:27 William Hustedde
Supervisor approved: 09/25/20 13:58 Naresh Jiawan

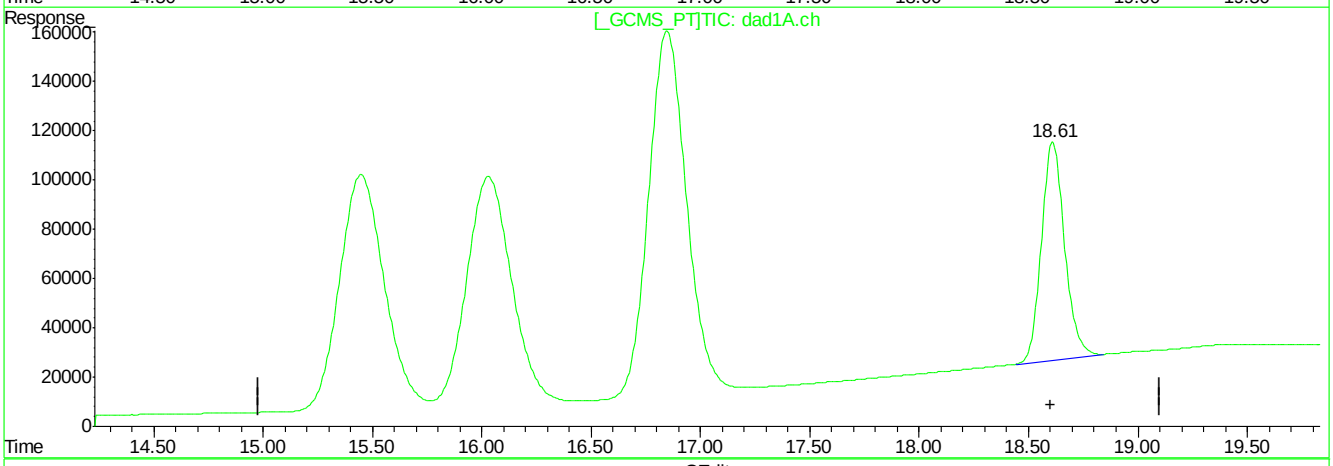
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.61	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388314.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388314.D\dad1A.ch
Acq On : 24-Sep-2020, 16:17:54 Operator: williamh
Sample : ic2336-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 16:44 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 12:18:19 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.61min 5307.992ppb m

response 6557888

(+) = Expected Retention Time
PP388314.D GPP2336_092420PRI.M Thu Sep 24 16:44:28 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/25/20 13:58

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1A.ch
Acq On : 24-Sep-2020, 16:49:55 Operator: williamh
Sample : icv2336-1000 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 25 11:31:22 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Sep 25 11:31:04 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	1.35	1.35	3248612	5057217	1070.711	1019.973
2)	HMX	1.49	1.49	1512146	4313317	1012.231	1017.022
3)	DNX	1.74	1.74	2533521	4146312	1015.157	1088.971
4)	MNX	2.34	2.34	2734638	4386175	1008.129	1039.582
5)	RDX	2.98	2.98	1766092	2931782	980.889	1022.136
6)	1,3,5-Trinitrobe	4.75	4.75	3718073	7251967	936.823	943.828
7)	1,3-Dinitrobenze	5.94	5.94	4883880	3380319	994.330m	979.321m
8)	3,5-Dinitroanili	6.37	6.37	4347041	7464614	1142.379m	1149.277m
9)	Nitrobenzene	7.50	7.50	2934711	2840097	1027.759	1049.781
10)	Nitroglycerin	0.00	9.15	0	1121092	N.D.	980.461 #
11)	Tetryl	9.64	9.64	2743120	4471132	973.691	1009.676
12)	2,4,6-Trinitroto	10.01	10.01	3706764	4533295	1002.782	1054.091
13)	2-Amino-4,6-Dini	10.48	10.47	3133214	4750679	953.263	996.874
14)	4-Amino-2,6-Dini	10.98	10.98	2278885	4544450	933.069	1063.126
16)	2,4-Dinitrotolue	11.98	11.98	4415414	2973787	978.410	1013.507
17)	2,6-Dinitrotolue	12.45	12.45	2568052	3381758	1003.337	1033.834
18)	o-Nitrotoluene	15.45	15.44	2136832	2952798	1037.074	1063.549m
19)	p-Nitrotoluene	16.03	16.04	3252030	2550464	1005.902	1017.098
20)	m-Nitrotoluene	16.85	16.84	3108245	3686785	1030.240	1031.644m
21)	PETN	0.00	18.61	0	1301877	N.D.	1086.175m#

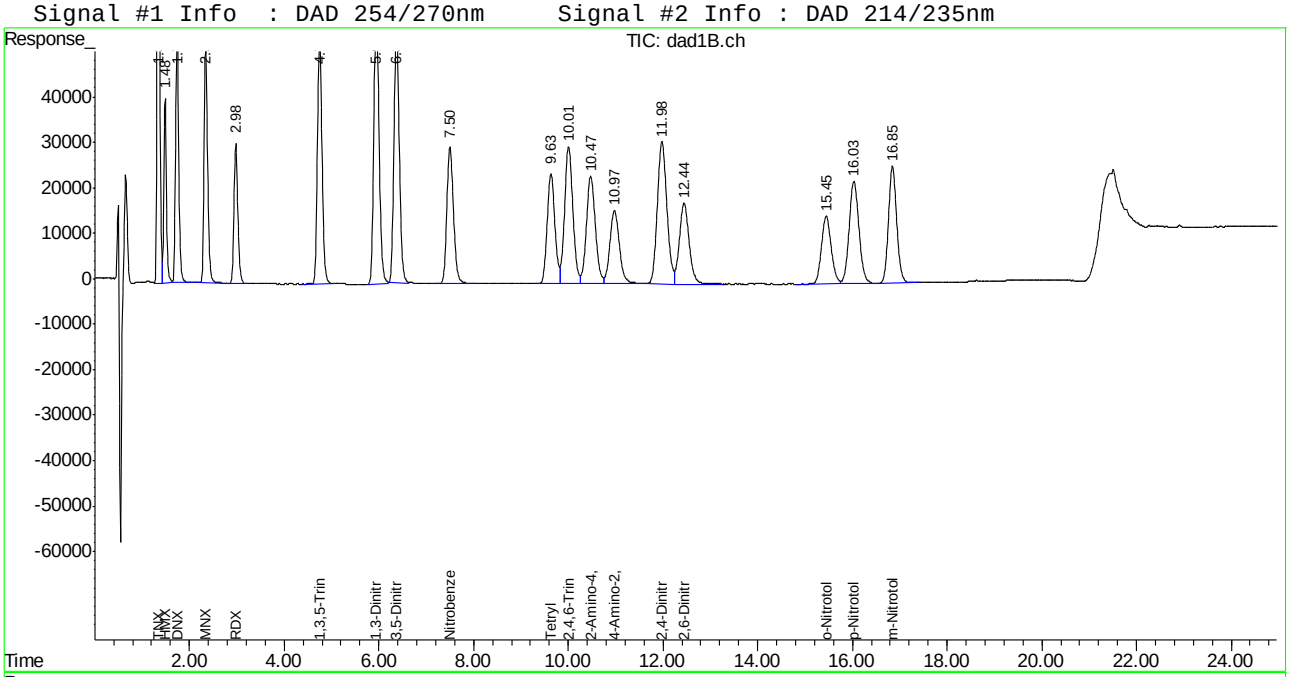
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388315.D GPP2336_092420PRI.M Fri Sep 25 11:33:27 2020 Page 1

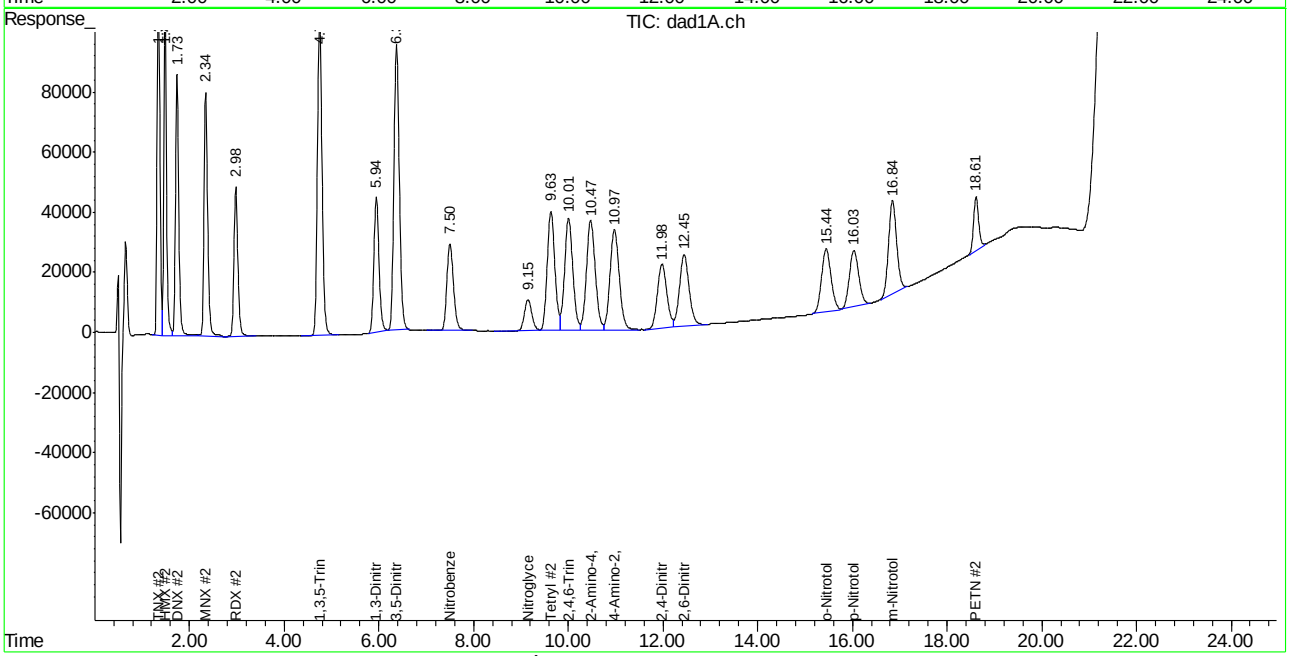
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1A.ch
Acq On : 24-Sep-2020, 16:49:55 Operator: williamh
Sample : icv2336-1000 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 25 11:33 2020 Quant Results File: GPP2336_092420PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Sep 25 11:31:04 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

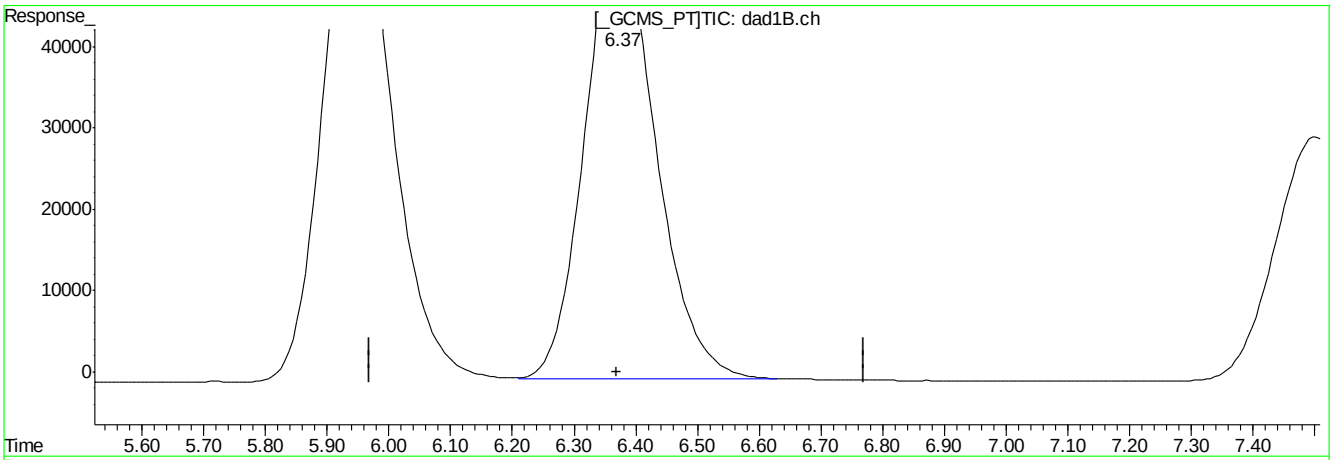
Sample Number: GPP2336-ICV2336 **Method:** SW846 8330A
Lab FileID: PP388315.D **Analyst approved:** 09/25/20 11:42 William Hustedde
Injection Time: 09/24/20 16:49 **Supervisor approved:** 09/25/20 13:58 Naresh Jiawan

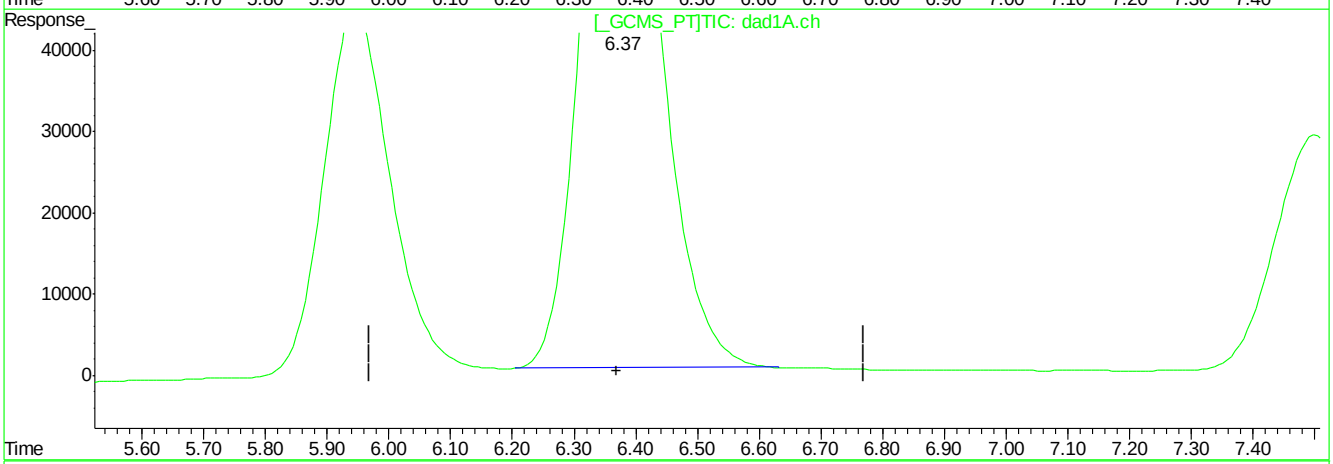
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	1	5.94	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.94	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.37	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.37	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.44	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.84	Poor instrument integration
PETN	78-11-5	2	18.61	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1A.ch
Acq On : 24-Sep-2020, 16:49:55 Operator: williamh
Sample : icv2336-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 17:15 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 16:46:52 2020
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.37min 1141.095ppb m

response 4342154

(8) 3,5-Dinitroaniline #2

6.37min 1145.731ppb m

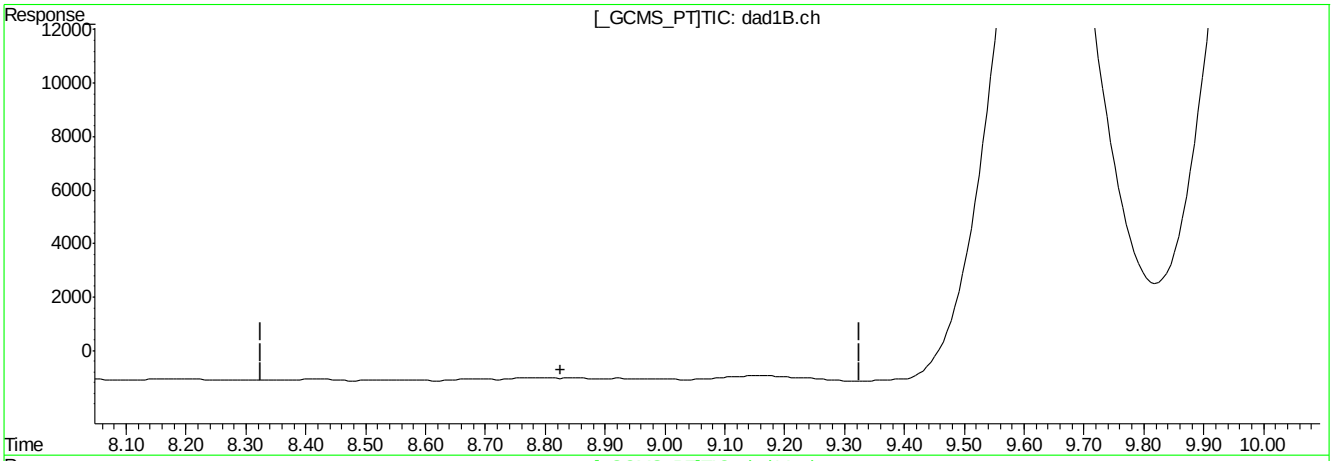
response 7441580

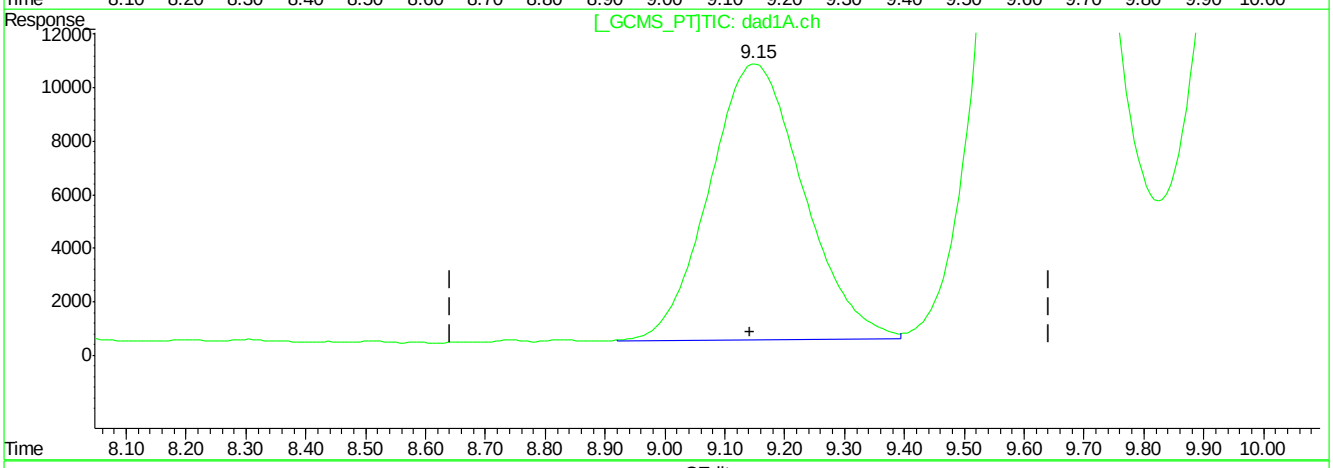
(+) = Expected Retention Time
PP388315.D GPP2336_092420PRI.M Thu Sep 24 17:16:17 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1A.ch
Acq On : 24-Sep-2020, 16:49:55 Operator: williamh
Sample : icv2336-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 17:15 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 16:46:52 2020
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.15min 982.854ppb m

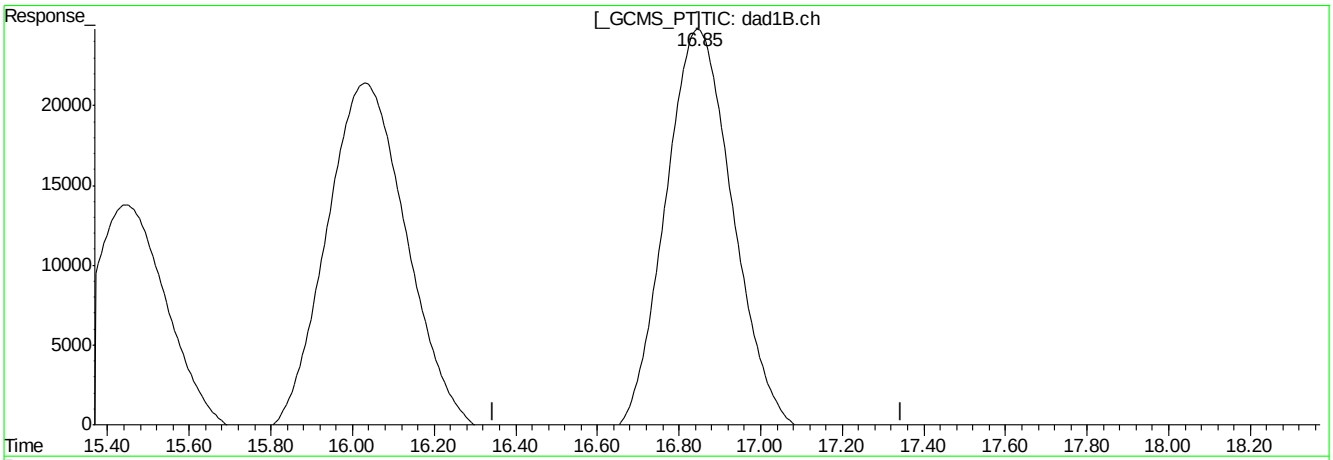
response 1123828

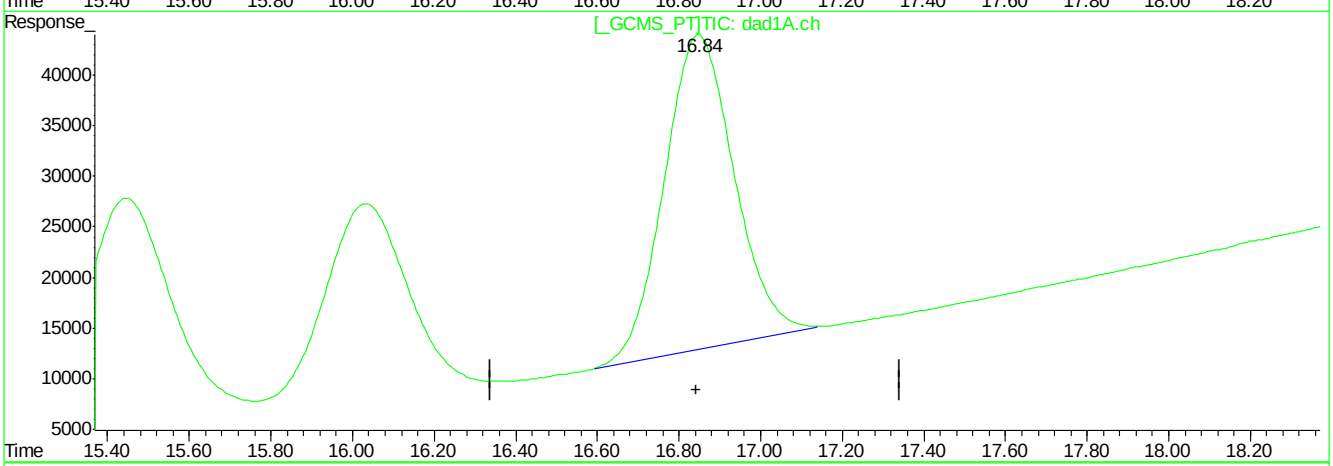
(+) = Expected Retention Time
PP388315.D GPP2336_092420PRI.M Thu Sep 24 17:17:10 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1A.ch
Acq On : 24-Sep-2020, 16:49:55 Operator: williamh
Sample : icv2336-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 24 17:15 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Sep 24 16:46:52 2020
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.85min 1030.240ppb

response 3108245

(20) m-Nitrotoluene #2

16.84min 1031.728ppb m

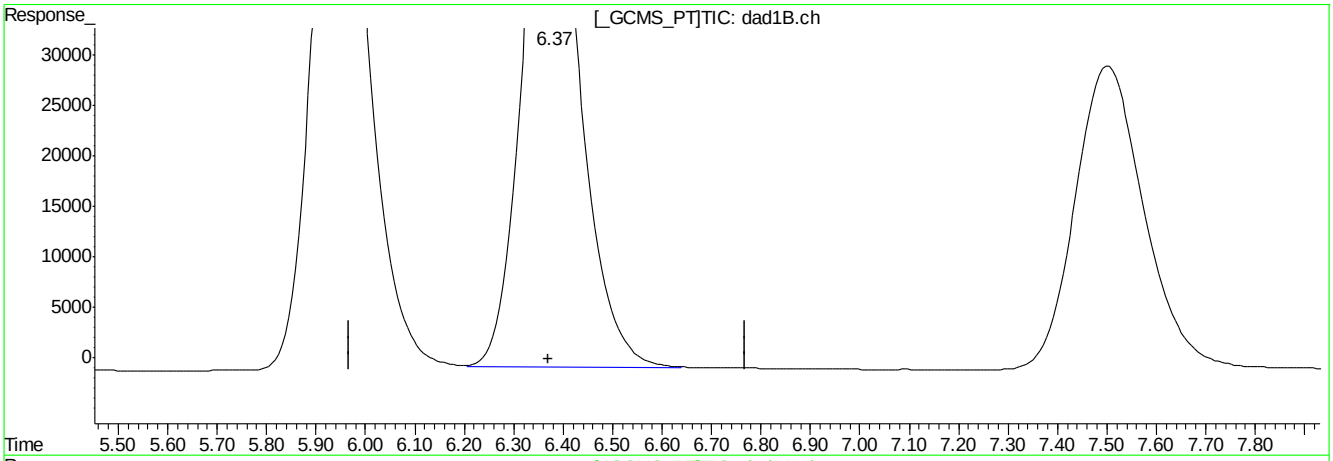
response 3687085

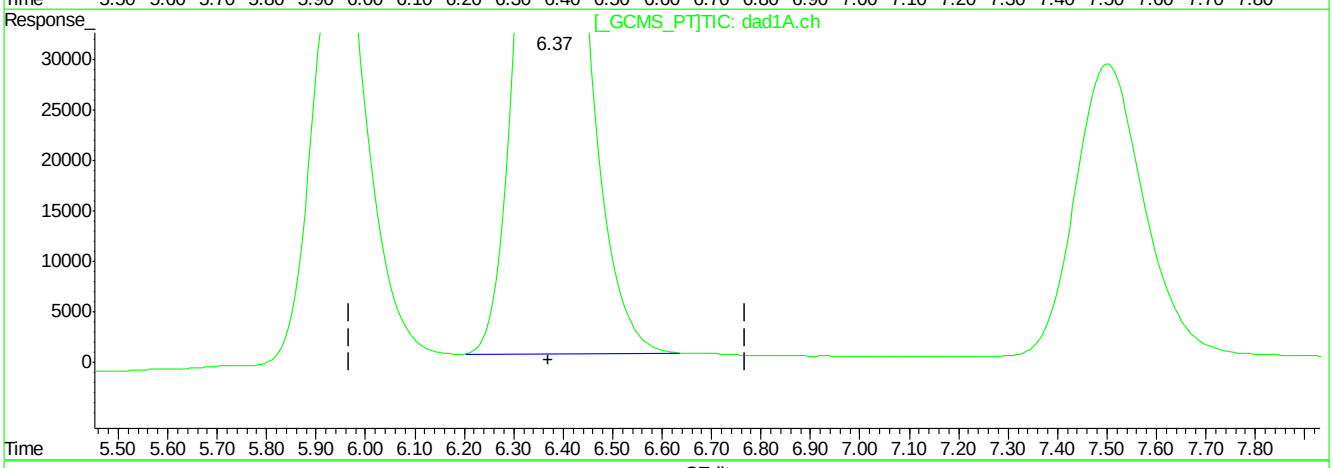
(+) = Expected Retention Time
PP388315.D GPP2336_092420PRI.M Thu Sep 24 17:19:56 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1A.ch
Acq On : 24-Sep-2020, 16:49:55 Operator: williamh
Sample : icv2336-1000 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 25 11:31 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Sep 25 11:31:04 2020
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.37min 1142.379ppb m

response 4347041

(8) 3,5-Dinitroaniline #2

6.37min 1149.277ppb m

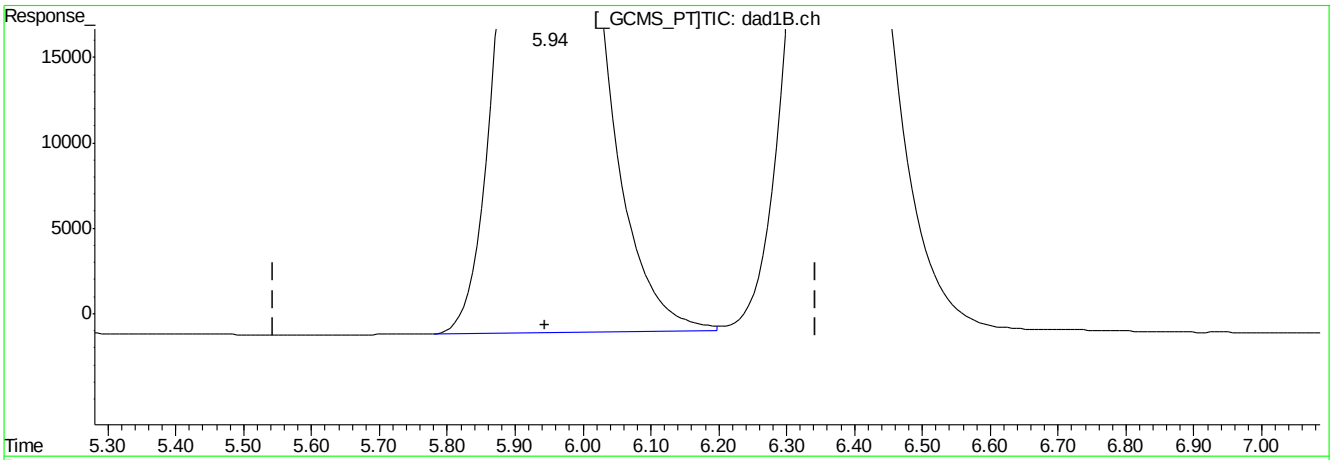
response 7464614

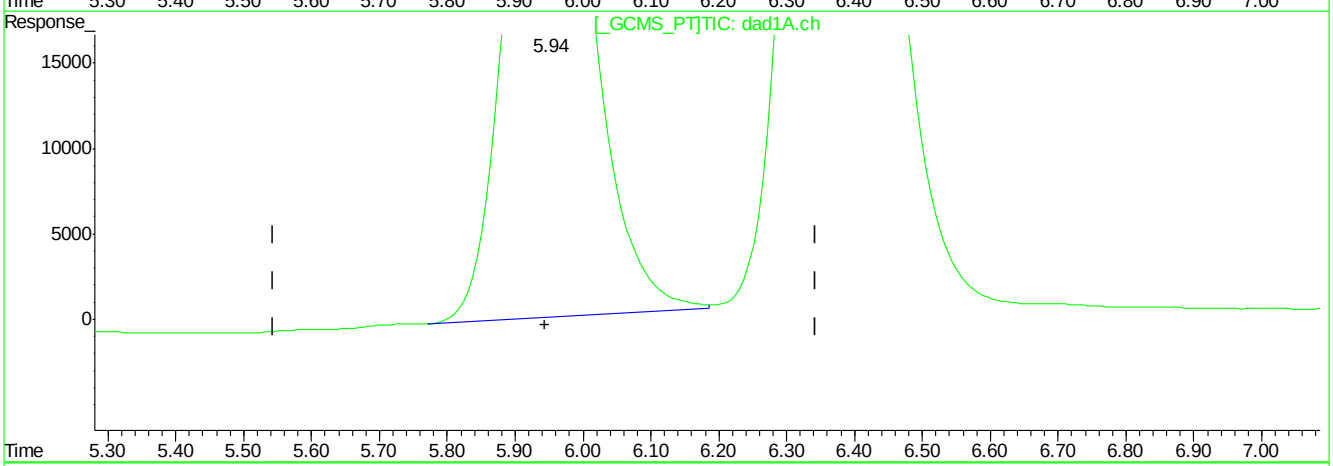
(+) = Expected Retention Time
PP388315.D GPP2336_092420PRI.M Fri Sep 25 11:32:42 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1A.ch
Acq On : 24-Sep-2020, 16:49:55 Operator: williamh
Sample : icv2336-1000 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 25 11:31 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Sep 25 11:31:04 2020
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.94min 994.330ppb m

response 4883880

(7) 1,3-Dinitrobenzene #2

5.94min 979.321ppb m

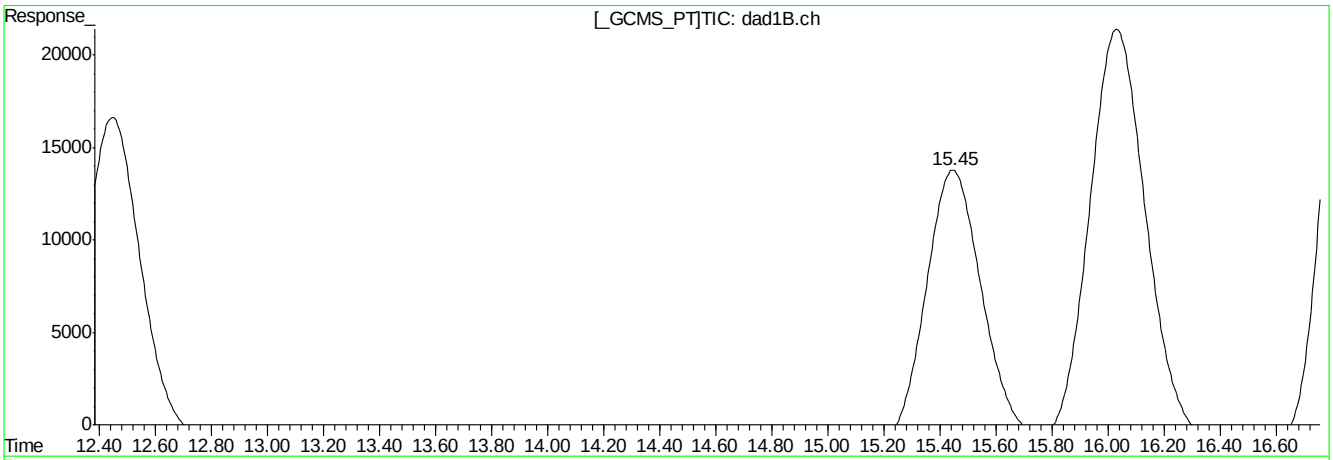
response 3380319

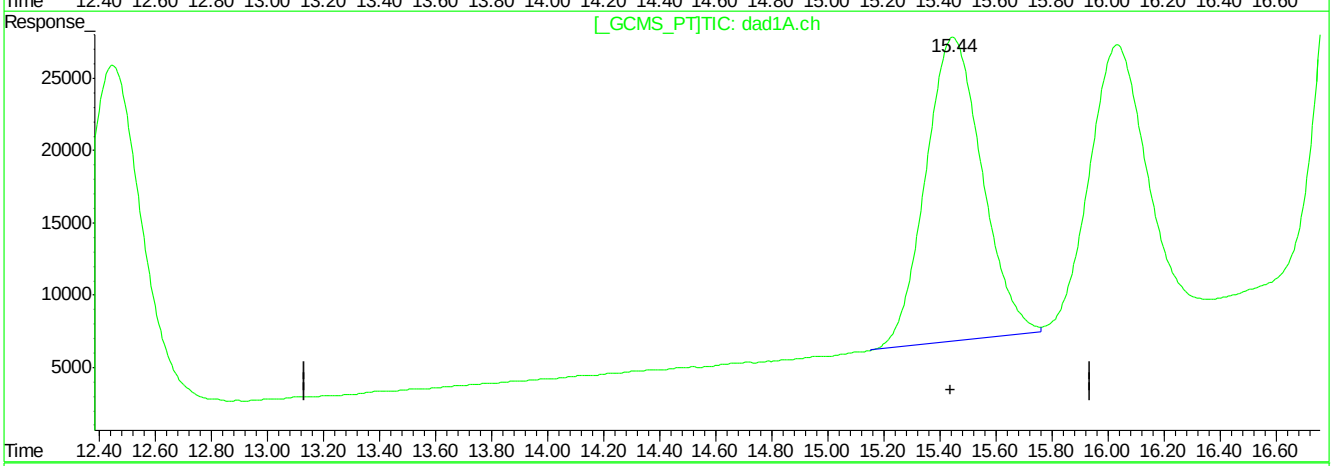
(+) = Expected Retention Time
PP388315.D GPP2336_092420PRI.M Fri Sep 25 11:32:52 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1A.ch
Acq On : 24-Sep-2020, 16:49:55 Operator: williamh
Sample : icv2336-1000 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 25 11:31 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Sep 25 11:31:04 2020
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.45min 1037.074ppb

response 2136832

(18) o-Nitrotoluene #2

15.44min 1063.549ppb m

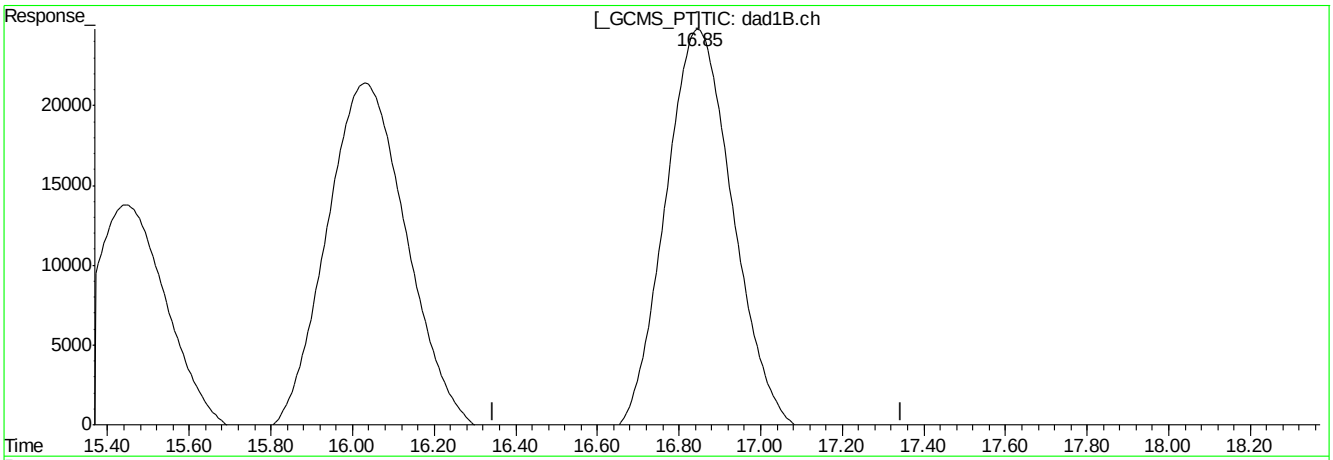
response 2952798

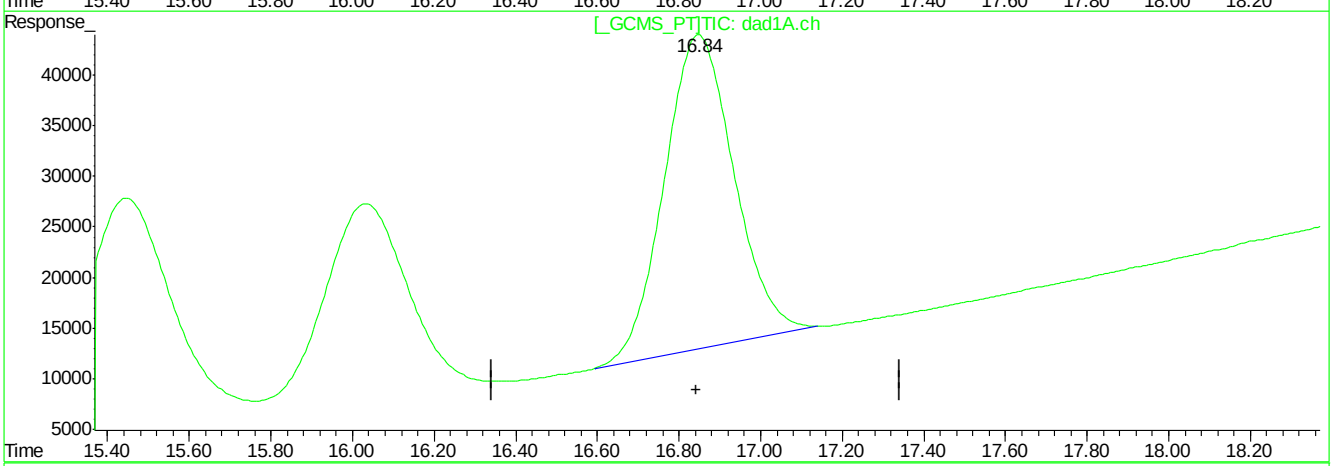
(+) = Expected Retention Time
PP388315.D GPP2336_092420PRI.M Fri Sep 25 11:33:06 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1A.ch
Acq On : 24-Sep-2020, 16:49:55 Operator: williamh
Sample : icv2336-1000 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 25 11:31 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Sep 25 11:31:04 2020
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.85min 1030.240ppb

response 3108245

(20) m-Nitrotoluene #2

16.84min 1031.644ppb m

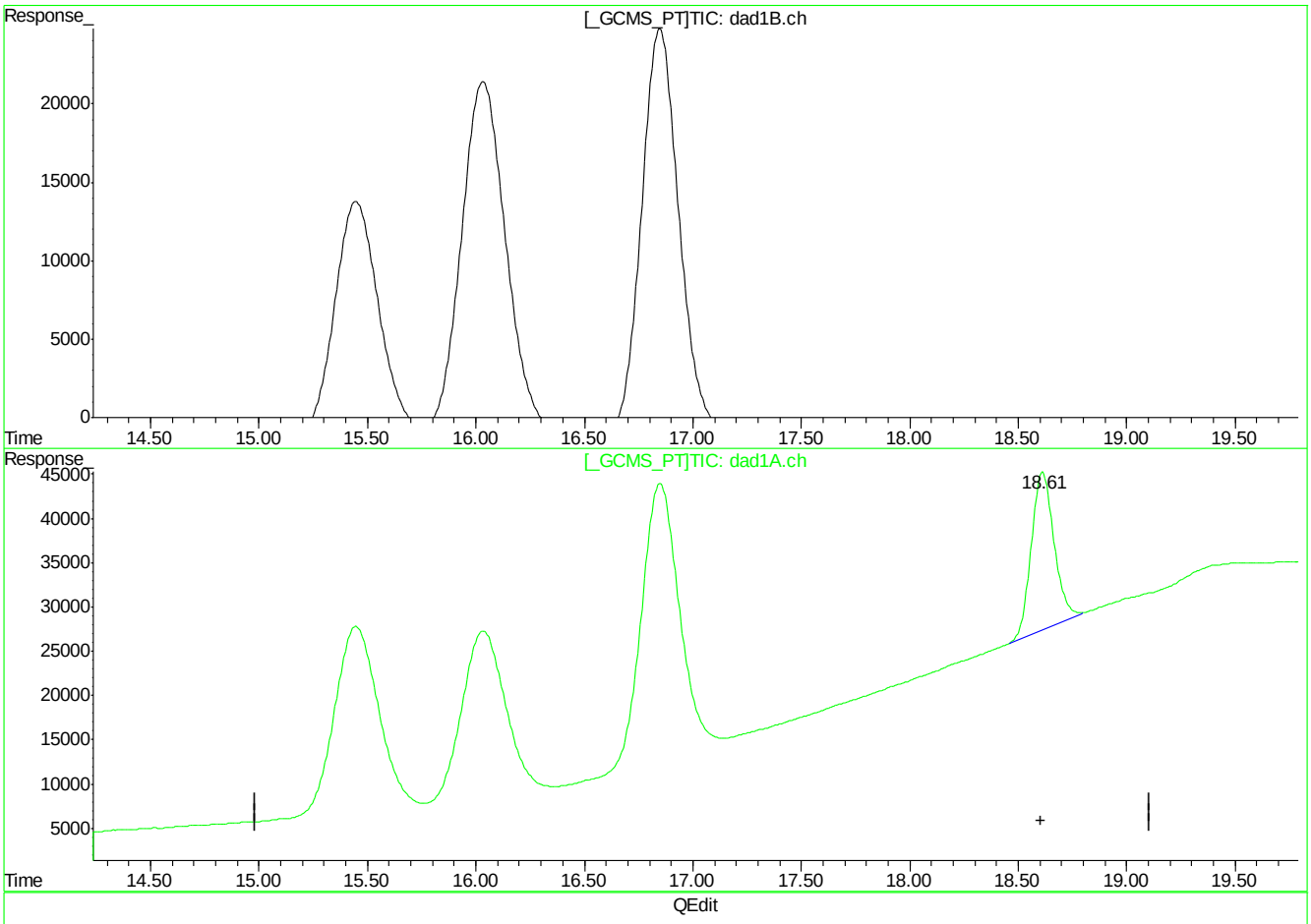
response 3686785

(+) = Expected Retention Time
PP388315.D GPP2336_092420PRI.M Fri Sep 25 11:33:12 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2336\PP388315.D\dad1A.ch
Acq On : 24-Sep-2020, 16:49:55 Operator: williamh
Sample : icv2336-1000 Inst : G1315B
Misc : op82110,GPP2336,1000,,,10,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 25 11:31 2020 Quant Results File: GPP2336_092420PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Sep 25 11:31:04 2020
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.61min 1086.175ppb m

response 1301877

(+) = Expected Retention Time
PP388315.D GPP2336_092420PRI.M Fri Sep 25 11:33:16 2020

PP388315.D edits: PETN

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/20 18:20

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388839.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388839.D\dad1A.ch
Acq On : 30-Oct-2020, 19:10:45 Operator: jamesb
Sample : cc2336-1000 Inst : G1315B
Misc : op82735,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16:49 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.12	11.12	2197280	4330528	1088.356	1177.013
	Spiked Amount 500.000	Range 70 - 136		Recovery =		217.67%#	235.40%#
	Target Compounds						
1)	TNX	1.36	1.36	3090439	4744885	1018.579	956.980
2)	HMX	1.51	1.51	1518136	4230942	1016.262	997.462
3)	DNX	1.76	1.76	2529470	4126778	1013.534	1083.841
4)	MNX	2.37	2.37	2670840	4264527	984.610	1010.750
5)	RDX	3.01	3.01	1752970	2862603	973.601	998.018
6)	1,3,5-Trinitrobe	4.82	4.82	3701737	7264901	932.707	945.512
7)	1,3-Dinitrobenze	6.02	6.02	4944565	3540343	1006.685	1025.682
8)	3,5-Dinitroanili	6.43	6.43	3697118	6522022	971.583	1004.153
9)	Nitrobenzene	7.60	7.60	2894329	2782526	1013.617	1028.501
10)	Nitroglycerin	0.00	9.29	0	1045594	N.D.	914.434 #
11)	Tetryl	9.78	9.78	2433545	3935998	863.805	888.831
12)	2,4,6-Trinitroto	10.17	10.17	3529733	4185928	954.891	973.321
13)	2-Amino-4,6-Dini	10.60	10.60	3220700	4715926	979.880	989.581
14)	4-Amino-2,6-Dini	11.12	11.12	2197280	4330528	899.657	1013.082
16)	2,4-Dinitrotolue	12.15	12.15	4384585	2747800	971.578	936.487
17)	2,6-Dinitrotolue	12.62	12.62	2615390	3346070	1021.832	1022.924
18)	o-Nitrotoluene	15.62	15.62	1985786	2791567	963.766m	1004.529m
19)	p-Nitrotoluene	16.21	16.21	3291001	2380151	1017.956	949.851
20)	m-Nitrotoluene	16.99	16.99	3054802	3492347	1012.526	977.160
21)	PETN	0.00	18.72	0	1267116	N.D.	1057.172m#

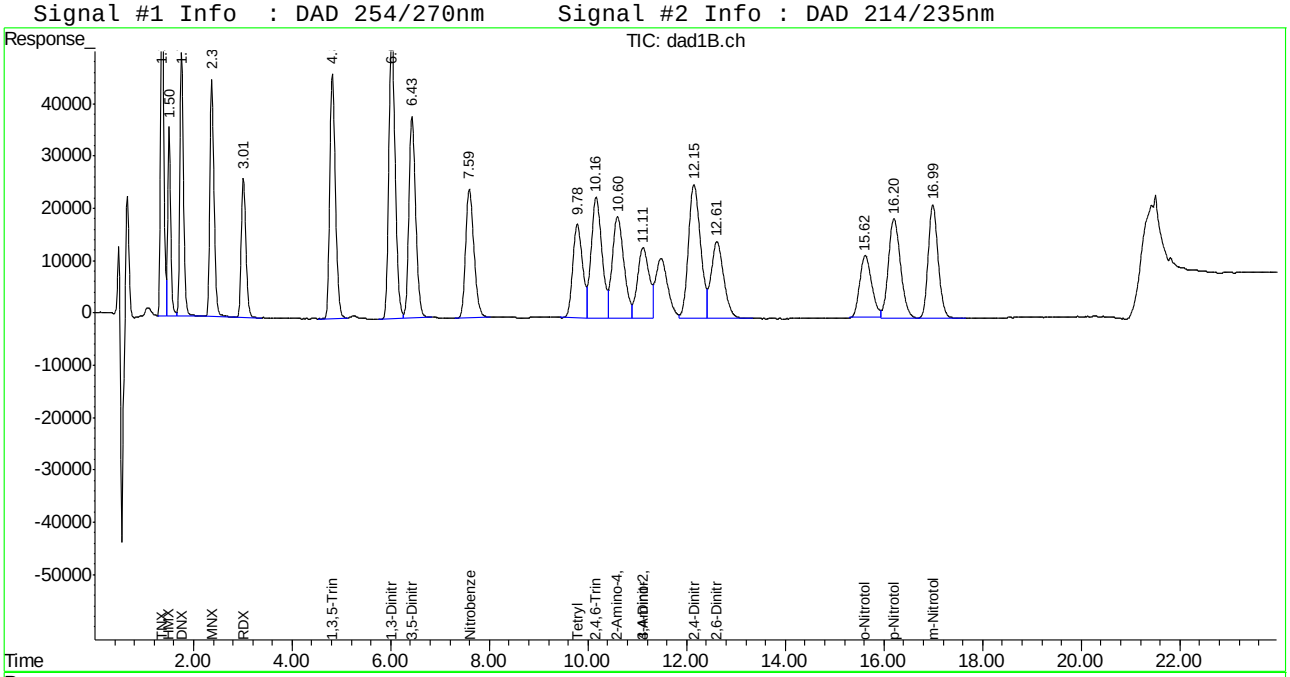
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388839.D GPP2336_092420_DV.M Thu Nov 12 15:58:12 2020 Page 1

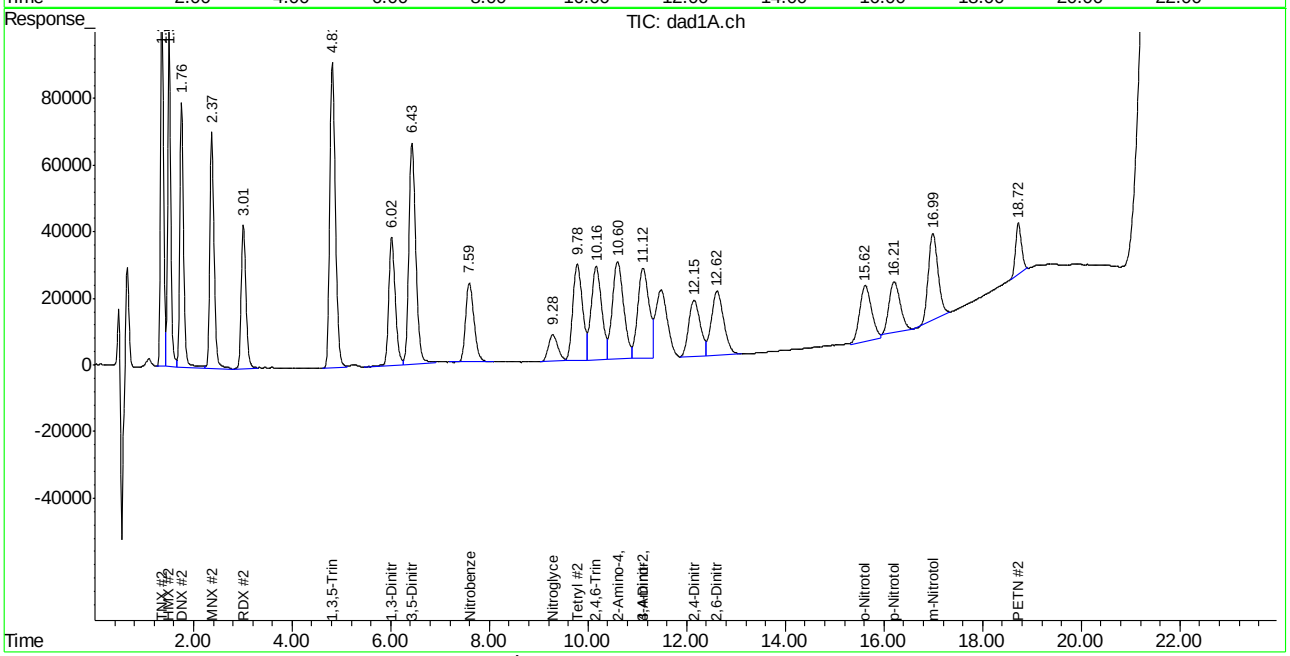
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388839.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388839.D\dad1A.ch
Acq On : 30-Oct-2020, 19:10:45 Operator: jamesb
Sample : cc2336-1000 Inst : G1315B
Misc : op82735,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:21 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

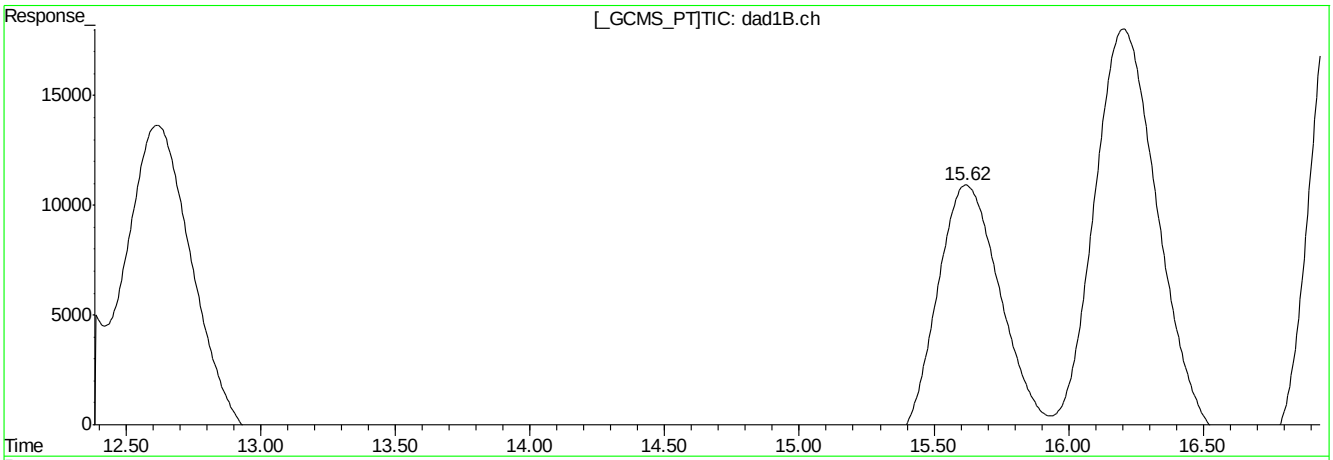
Sample Number: GPP2355-CC2336
Lab FileID: PP388839.D
Injection Time: 10/30/20 19:10
Method: SW846 8330A
Analyst approved: 11/12/20 16:02 William Hustedde
Supervisor approved: 11/12/20 18:20 Naresh Jiawan

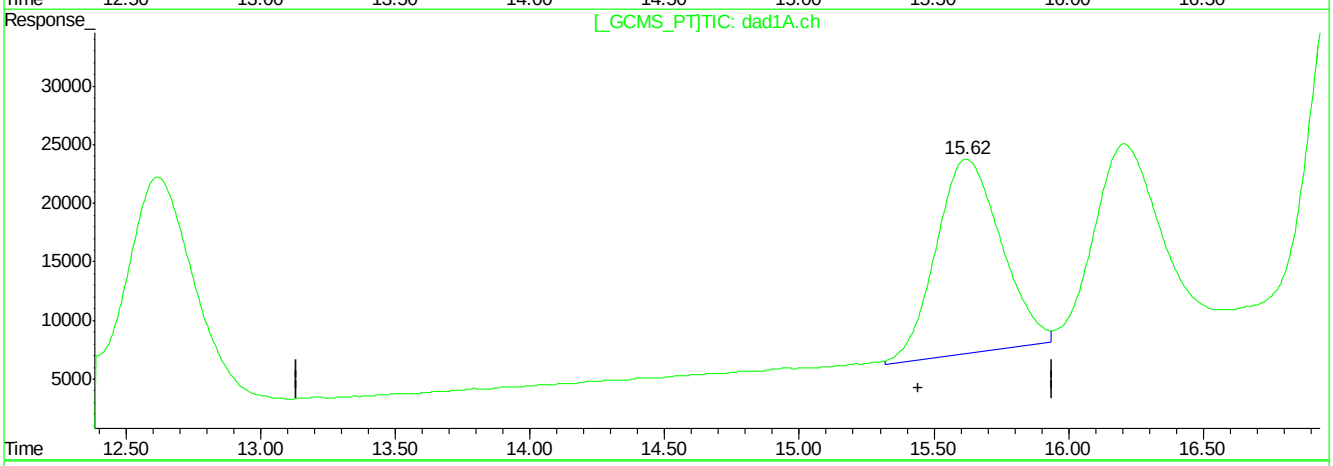
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	1	15.62	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.62	Poor instrument integration
PETN	78-11-5	2	18.72	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388839.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388839.D\dad1A.ch
Acq On : 30-Oct-2020, 19:10:45 Operator: jamesb
Sample : cc2336-1000 Inst : G1315B
Misc : op82735,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.62min 1005.123ppb

response 2071000

(18) o-Nitrotoluene #2

15.62min 1004.529ppb m

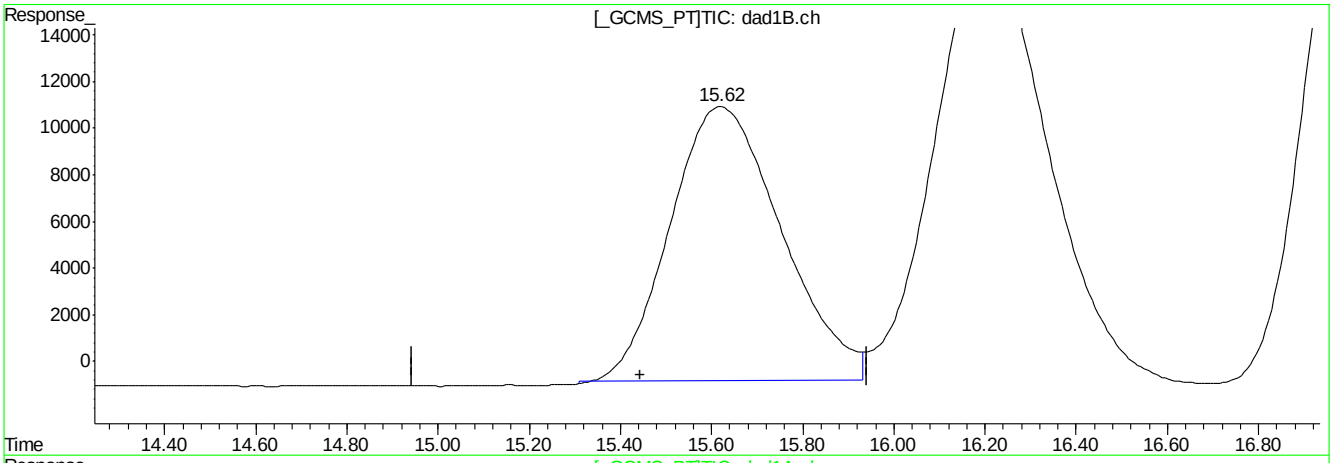
response 2791567

(+) = Expected Retention Time
PP388839.D GPP2336_092420_DV.M Thu Nov 12 15:21:03 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388839.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388839.D\dad1A.ch
Acq On : 30-Oct-2020, 19:10:45 Operator: jamesb
Sample : cc2336-1000 Inst : G1315B
Misc : op82735,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.62min 963.766ppb m

response 1985786

(18) o-Nitrotoluene #2

15.62min 1004.529ppb m

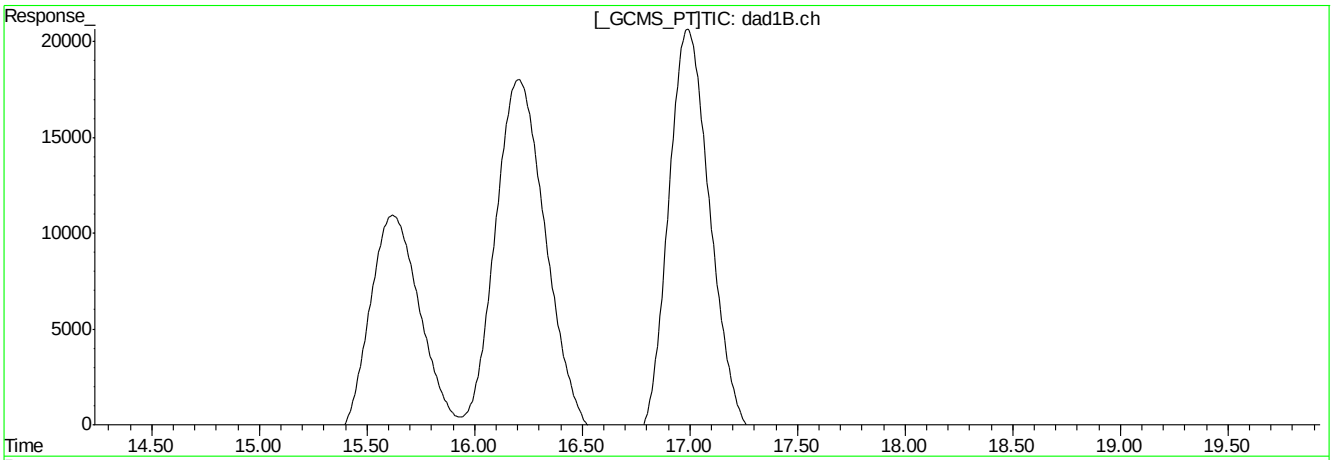
response 2791567

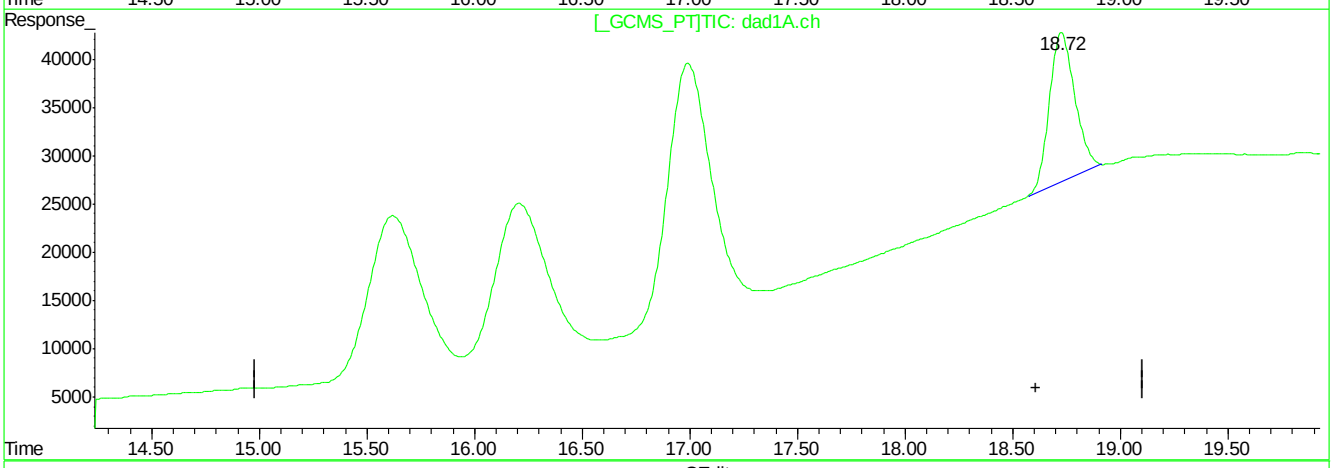
(+) = Expected Retention Time
PP388839.D GPP2336_092420_DV.M Thu Nov 12 15:21:19 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388839.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388839.D\dad1A.ch
Acq On : 30-Oct-2020, 19:10:45 Operator: jamesb
Sample : cc2336-1000 Inst : G1315B
Misc : op82735,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:16 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.72min 1057.172ppb m

response 1267116

(+) = Expected Retention Time
PP388839.D GPP2336_092420_DV.M Thu Nov 12 15:21:26 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/20 18:20

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388851.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388851.D\dad1A.ch
Acq On : 31-Oct-2020, 01:22:32 Operator: jamesb
Sample : cc2336-1000 Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17:00 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.46	11.46	2014748	3388682	997.945	922.667
	Spiked Amount 500.000	Range 70 - 136		Recovery =		199.59%#	184.53%#
	Target Compounds						
1)	TNX	1.36	1.36	3080121	4737731	1015.179	955.537
2)	HMX	1.51	1.51	1510845	4229315	1011.356	997.076
3)	DNX	1.76	1.76	2501326	4124765	1002.257	1083.313
4)	MNX	2.37	2.37	2654991	4254816	978.767	1008.448
5)	RDX	3.01	3.01	1751772	2886694	972.936	1006.417
6)	1,3,5-Trinitrobe	4.81	4.81	3672578	7239362	925.360	942.188
7)	1,3-Dinitrobenze	6.01	6.01	4949341	3544346	1007.658	1026.842
8)	3,5-Dinitroanili	6.43	6.43	3729888	6527875	980.195	1005.054
9)	Nitrobenzene	7.59	7.59	2835644	2749740	993.065	1016.382
10)	Nitroglycerin	0.00	9.28	0	1016375	N.D.	888.880 #
11)	Tetryl	9.77	9.77	2401151	3859589	852.307	871.576
12)	2,4,6-Trinitroto	10.15	10.15	3512109	4149014	950.123	964.737
13)	2-Amino-4,6-Dini	10.59	10.59	3225057	4661347	981.205	978.129
14)	4-Amino-2,6-Dini	11.10	11.10	2176952	4236796	891.334	991.154
16)	2,4-Dinitrotolue	12.14	12.14	4376067	2685414	969.691	915.225
17)	2,6-Dinitrotolue	12.60	12.61	2633863	3355951	1029.050	1025.945
18)	o-Nitrotoluene	15.61	15.61	2051030	2687544	995.431	966.509m
19)	p-Nitrotoluene	16.19	16.20	3284861	2306767	1016.057	920.846
20)	m-Nitrotoluene	16.98	16.98	3021169	3594024	1001.378	1005.650m
21)	PETN	0.00	18.72	0	1322287	N.D.	1103.203m#

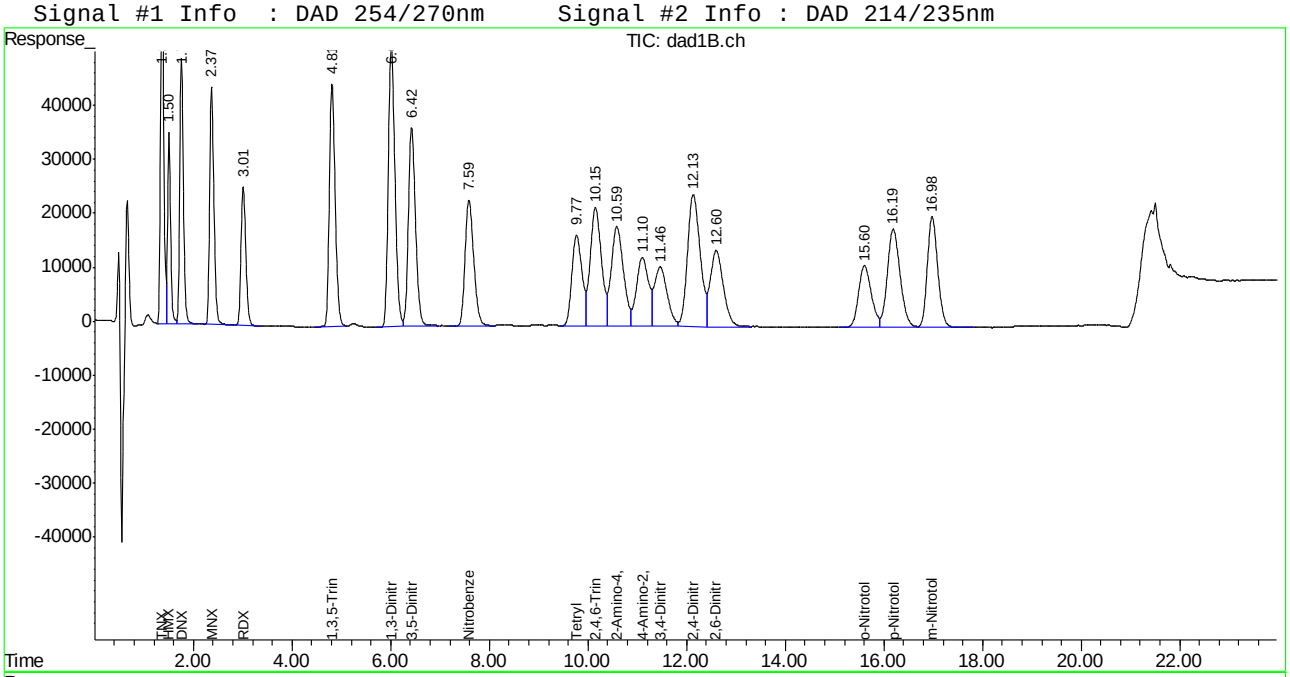
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP388851.D GPP2336_092420_DV.M Thu Nov 12 15:58:23 2020 Page 1

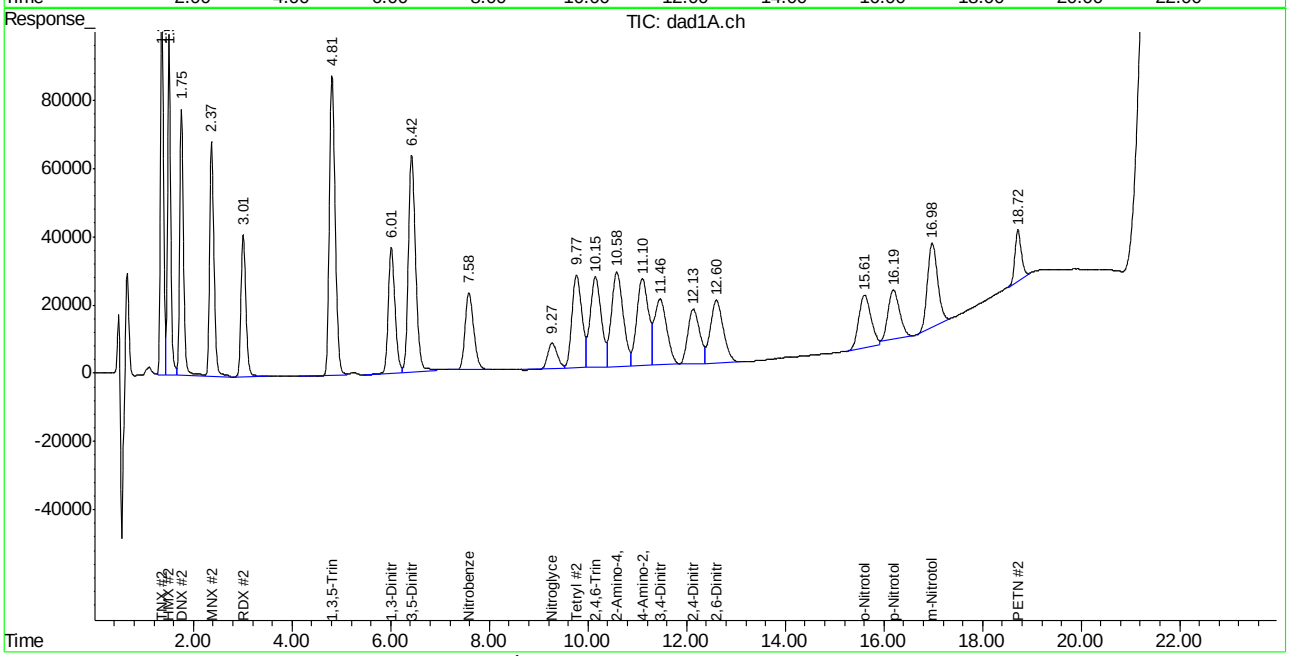
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388851.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388851.D\dad1A.ch
Acq On : 31-Oct-2020, 01:22:32 Operator: jamesb
Sample : cc2336-1000 Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:20 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

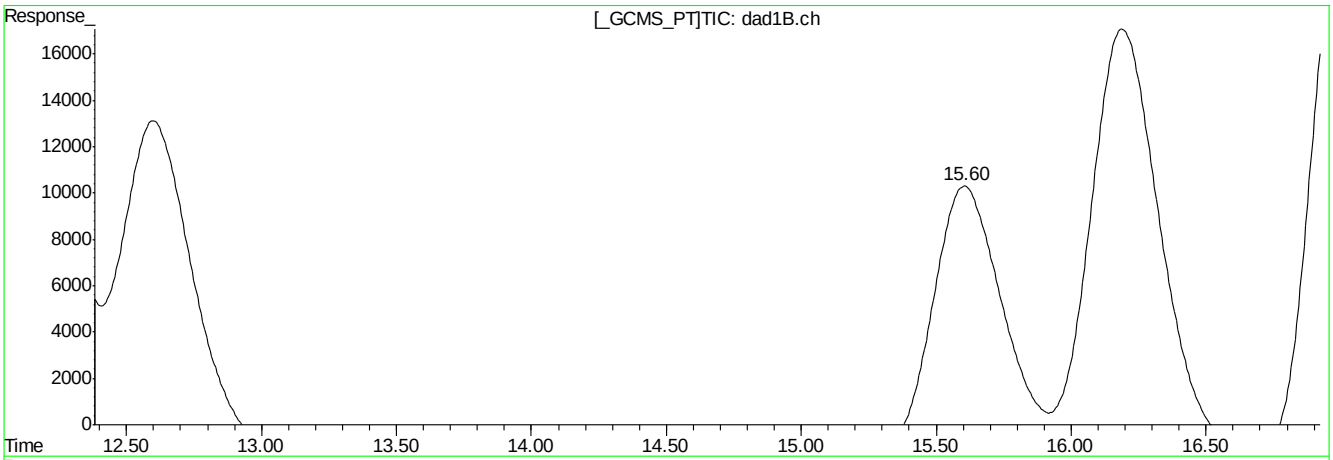
Sample Number: GPP2355-CC2336
Lab FileID: PP388851.D
Injection Time: 10/31/20 01:22
Method: SW846 8330B
Analyst approved: 11/12/20 16:02 William Hustedde
Supervisor approved: 11/12/20 18:20 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.61	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.98	Poor instrument integration
PETN	78-11-5	2	18.72	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388851.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388851.D\dad1A.ch
Acq On : 31-Oct-2020, 01:22:32 Operator: jamesb
Sample : cc2336-1000 Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.61min 995.431ppb

response 2051030

(18) o-Nitrotoluene #2

15.61min 966.509ppb m

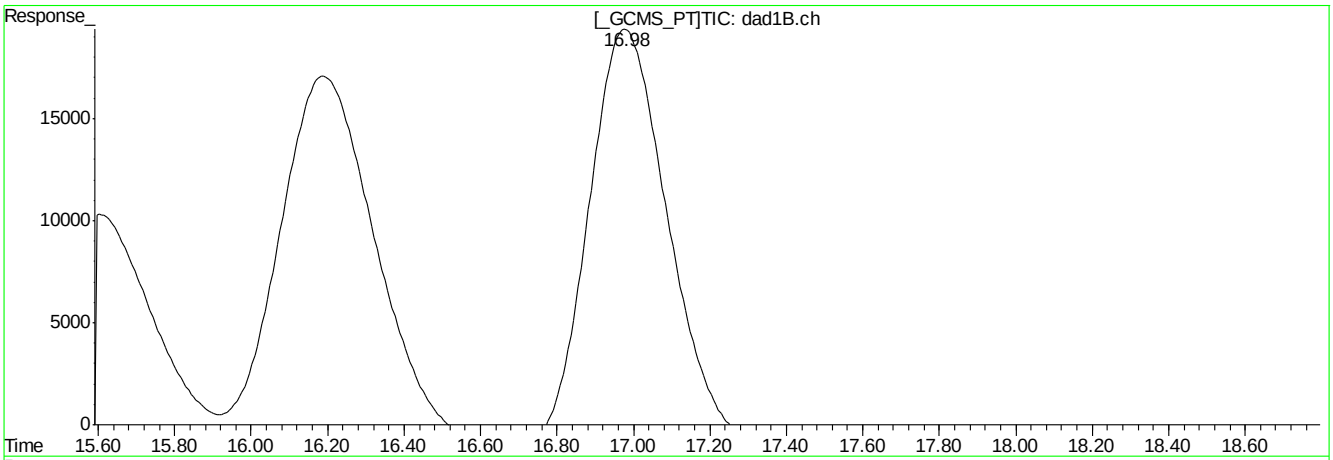
response 2687544

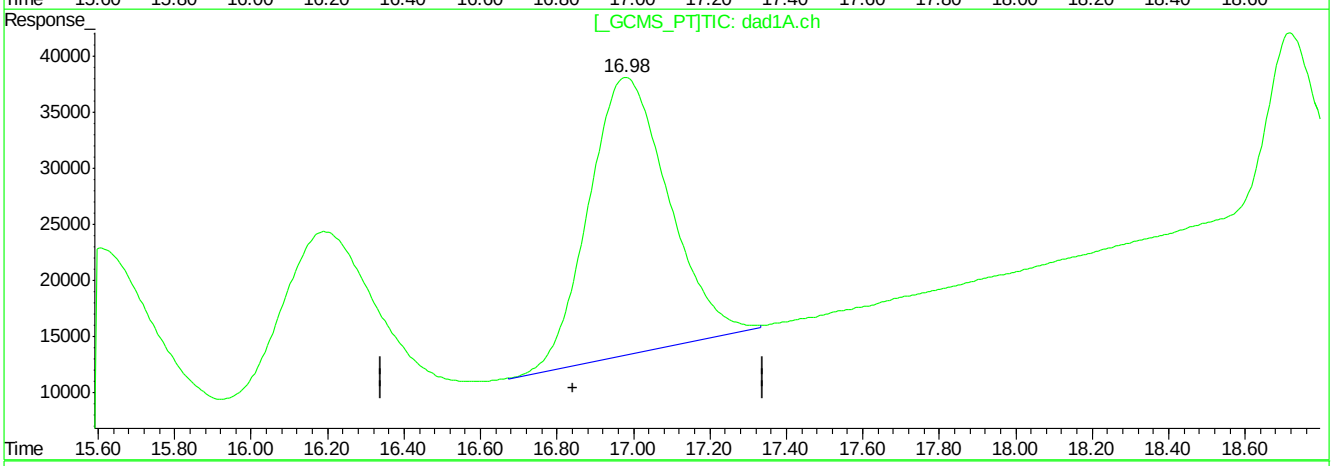
(+) = Expected Retention Time
PP388851.D GPP2336_092420_DV.M Thu Nov 12 15:19:38 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388851.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388851.D\dad1A.ch
Acq On : 31-Oct-2020, 01:22:32 Operator: jamesb
Sample : cc2336-1000 Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.98min 1001.378ppb

response 3021169

(20) m-Nitrotoluene #2

16.98min 1005.650ppb m

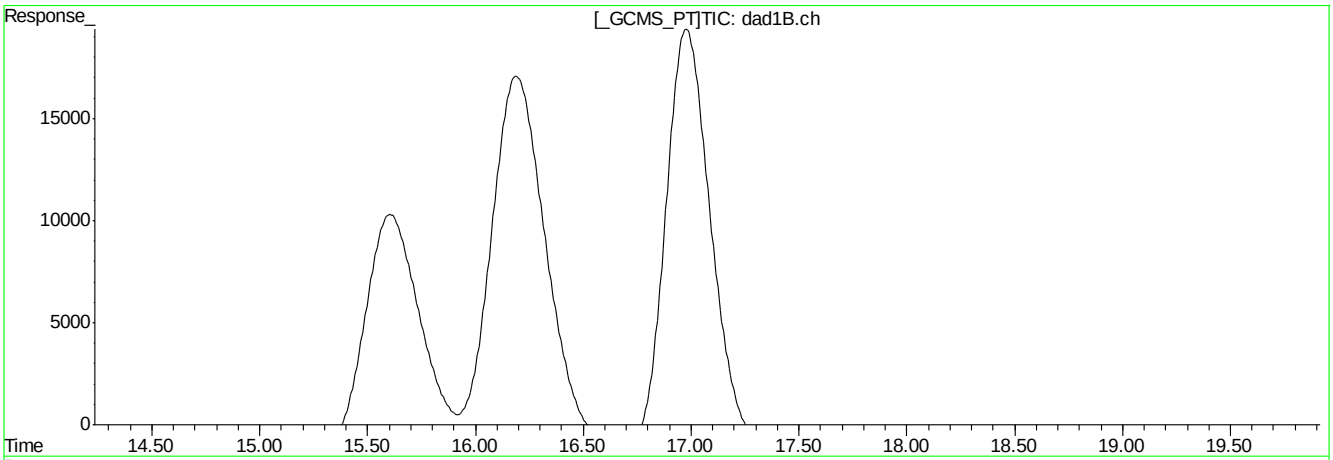
response 3594024

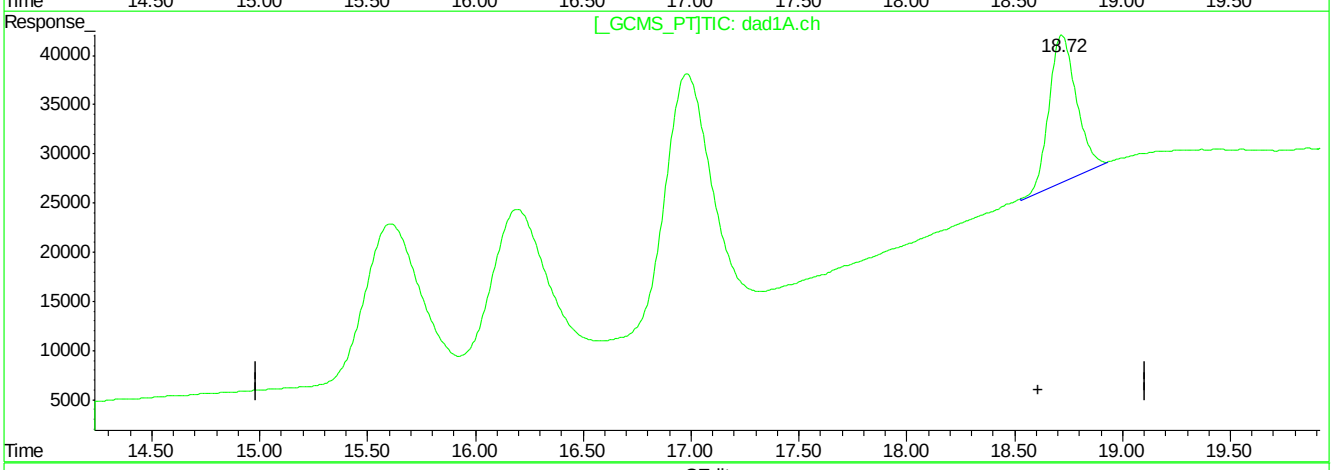
(+) = Expected Retention Time
PP388851.D GPP2336_092420_DV.M Thu Nov 12 15:19:57 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388851.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388851.D\dad1A.ch
Acq On : 31-Oct-2020, 01:22:32 Operator: jamesb
Sample : cc2336-1000 Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:19 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.72min 1103.203ppb m

response 1322287

(+) = Expected Retention Time
PP388851.D GPP2336_092420_DV.M Thu Nov 12 15:20:17 2020

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 11/12/20 18:20

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388856.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388856.D\dad1A.ch
Acq On : 31-Oct-2020, 03:57:27 Operator: jamesb
Sample : ecc2336-1000 Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17:04 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.47	11.47	1978064	3471939	979.775m	945.187m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	195.95%#	189.04%#
	Target Compounds						
1)	TNX	1.36	1.36	3075418	4712813	1013.628	950.512
2)	HMX	1.50	1.51	1515964	4215069	1014.800	993.694
3)	DNX	1.76	1.76	2500133	4104920	1001.779	1078.100
4)	MNX	2.37	2.37	2616522	4240009	964.586	1004.939
5)	RDX	3.01	3.01	1726395	2882639	958.841	1005.003
6)	1,3,5-Trinitrobe	4.81	4.81	3675768	7230193	926.164	940.994
7)	1,3-Dinitrobenze	6.02	6.02	4952620	3626944	1008.325	1050.772
8)	3,5-Dinitroanili	6.43	6.43	3689021	6718352	969.455	1034.380
9)	Nitrobenzene	7.59	7.59	2825673	2888122	989.573	1067.532
10)	Nitroglycerin	0.00	9.28	0	1064789	N.D.	931.220 #
11)	Tetryl	9.78	9.78	2338719	3812572	830.146	860.959
12)	2,4,6-Trinitroto	10.16	10.16	3500038	4165029	946.857	968.461
13)	2-Amino-4,6-Dini	10.59	10.60	3222897	4678339	980.549	981.694
14)	4-Amino-2,6-Dini	11.11	11.11	2139917	4181381	876.170	978.190
16)	2,4-Dinitrotolue	12.15	12.15	4359907	2655583	966.110	905.058
17)	2,6-Dinitrotolue	12.61	12.62	2678791	3384464	1046.603	1034.661
18)	o-Nitrotoluene	15.62	15.62	2016992	2554004	978.912	917.771m
19)	p-Nitrotoluene	16.20	16.21	3276410	2442574	1013.443	974.509m
20)	m-Nitrotoluene	16.99	16.99	2977894	3405229	987.034	952.750
21)	PETN	18.74	18.72	127542	1304743	NoCal	1088.565m#

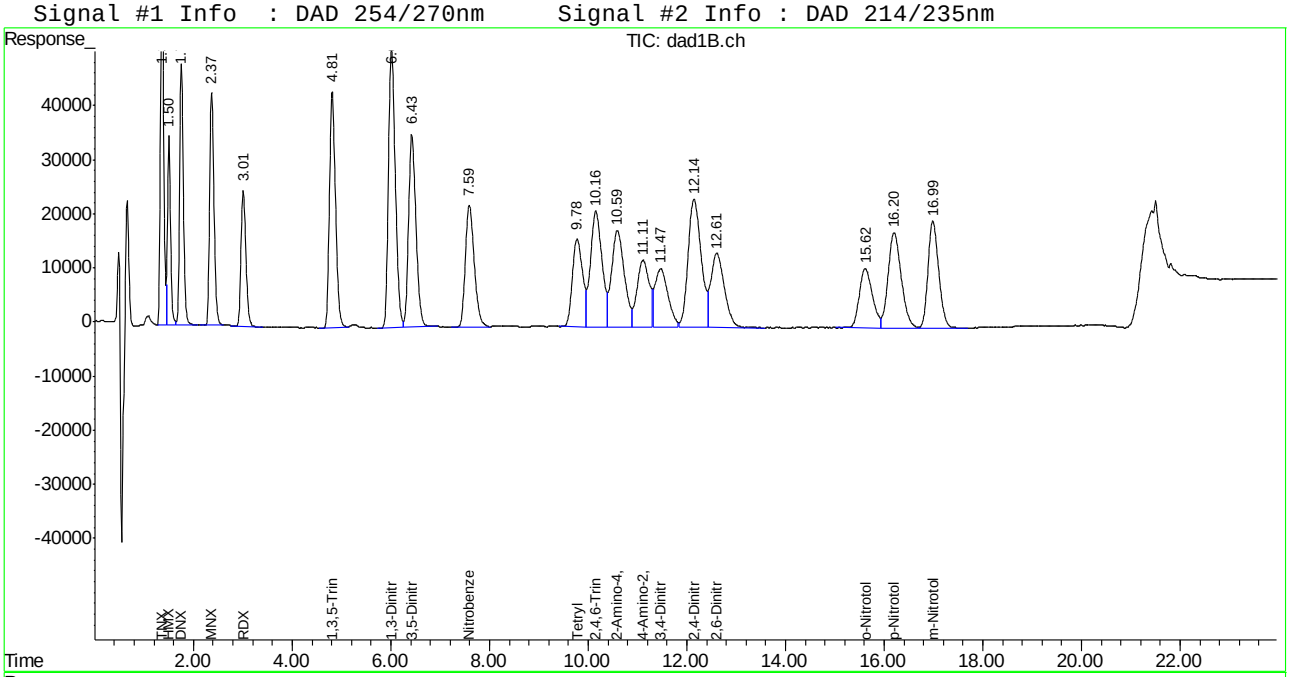
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

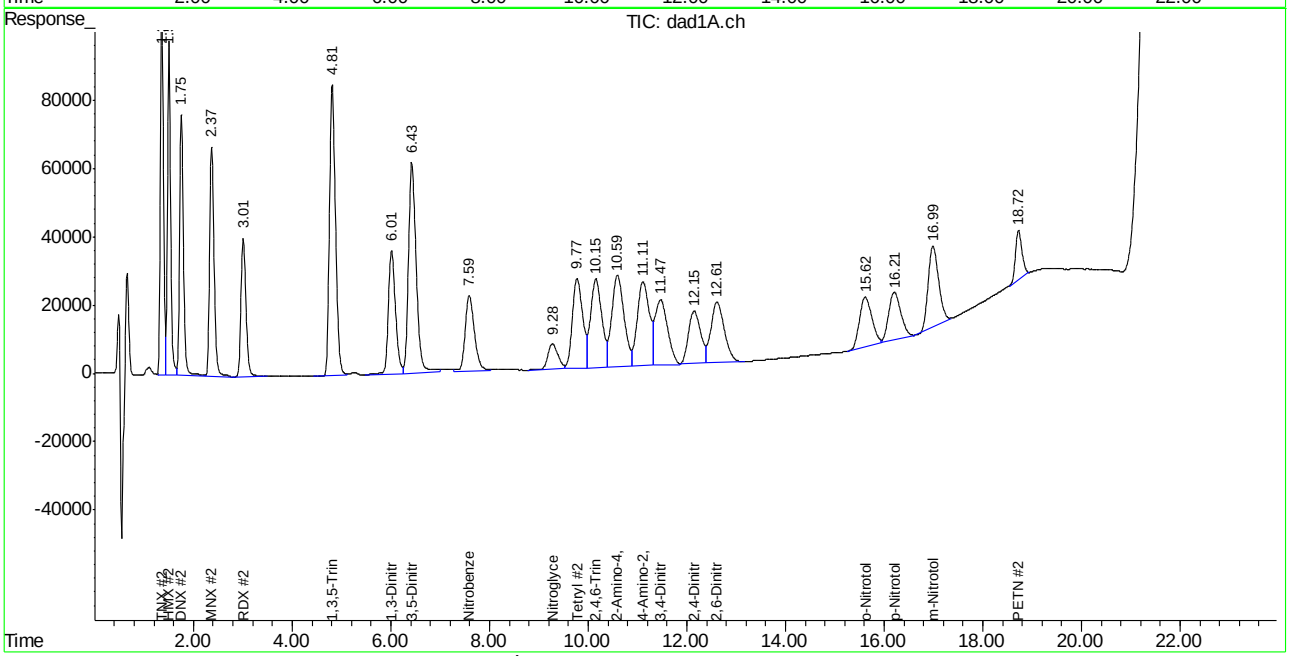
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388856.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388856.D\dad1A.ch
Acq On : 31-Oct-2020, 03:57:27 Operator: jamesb
Sample : ecc2336-1000 Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Quant Method : C:\MSDCHEM\2...\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

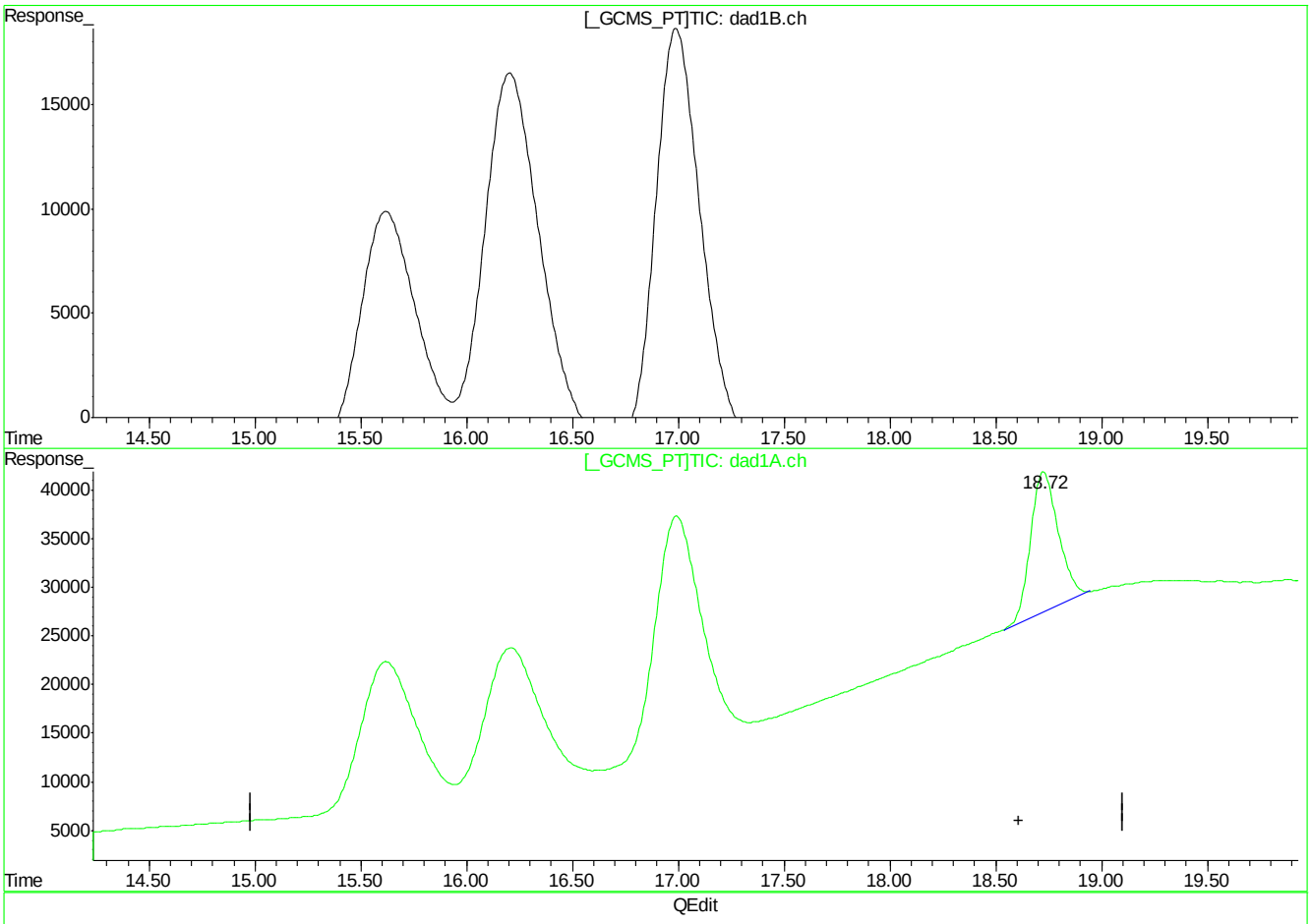
Sample Number: GPP2355-ECC2336 **Method:** SW846 8330B
Lab FileID: PP388856.D **Analyst approved:** 11/12/20 16:02 William Hustedde
Injection Time: 10/31/20 03:57 **Supervisor approved:** 11/12/20 18:20 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
3,4-Dinitrotoluene	610-39-9	1	11.47	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.47	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.62	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.21	Poor instrument integration
PETN	78-11-5	2	18.72	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388856.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388856.D\dad1A.ch
Acq On : 31-Oct-2020, 03:57:27 Operator: jamesb
Sample : ecc2336-1000 Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration



(21) PETN

18.74min 0.000ppb

response 127542

(21) PETN #2

18.72min 1088.565ppb m

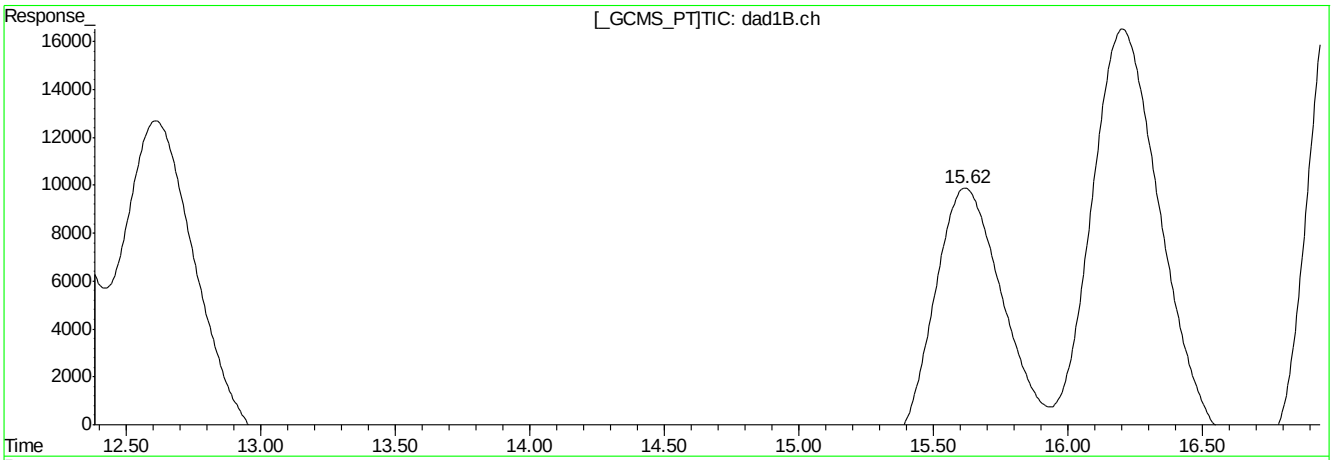
response 1304743

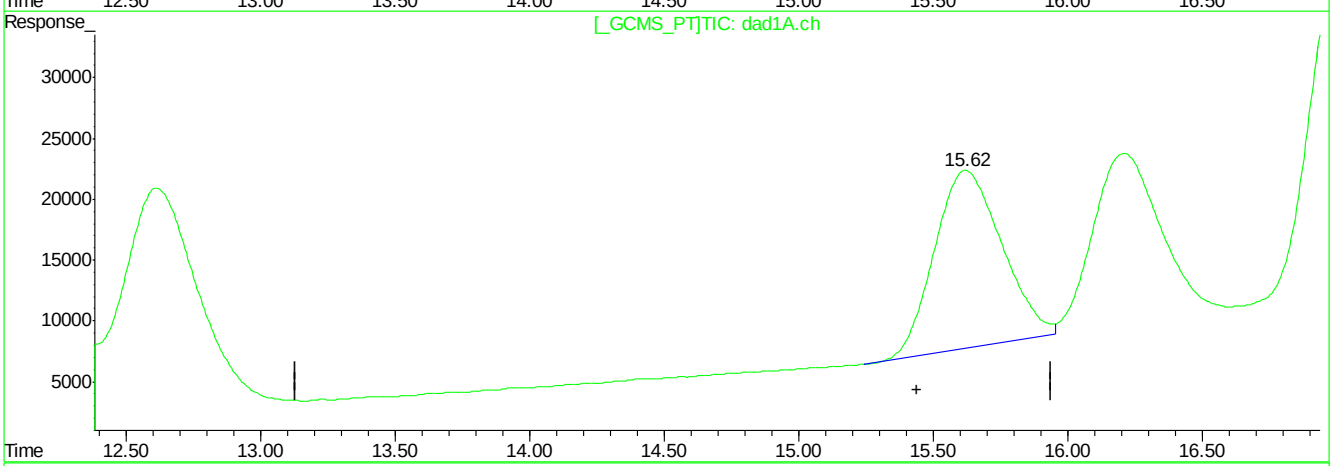
(+) = Expected Retention Time
PP388856.D GPP2336_092420_DV.M Thu Nov 12 15:17:25 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388856.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388856.D\dad1A.ch
Acq On : 31-Oct-2020, 03:57:27 Operator: jamesb
Sample : ecc2336-1000 Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.62min 978.912ppb

response 2016992

(18) o-Nitrotoluene #2

15.62min 917.771ppb m

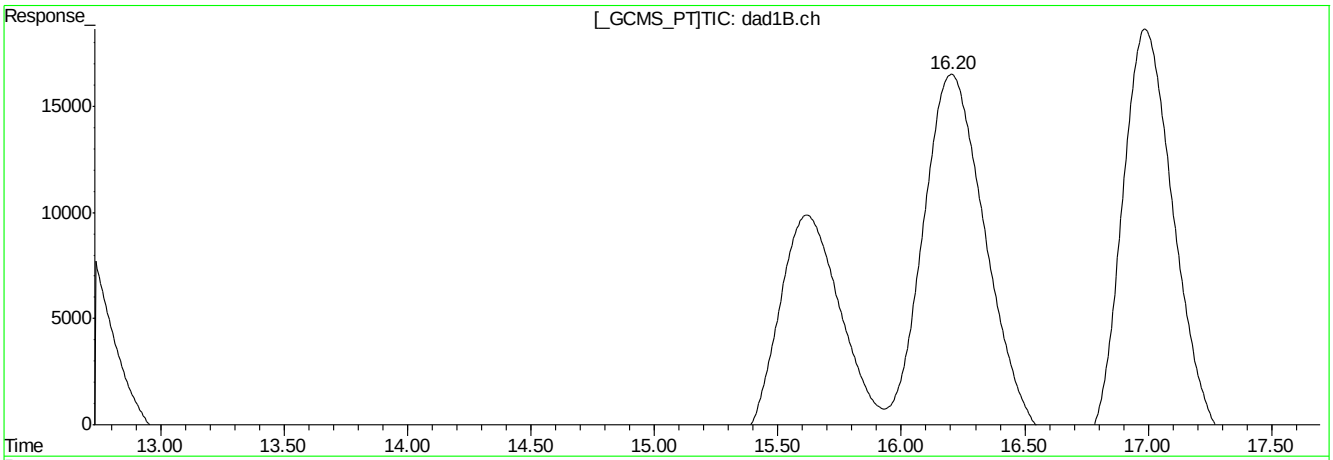
response 2554004

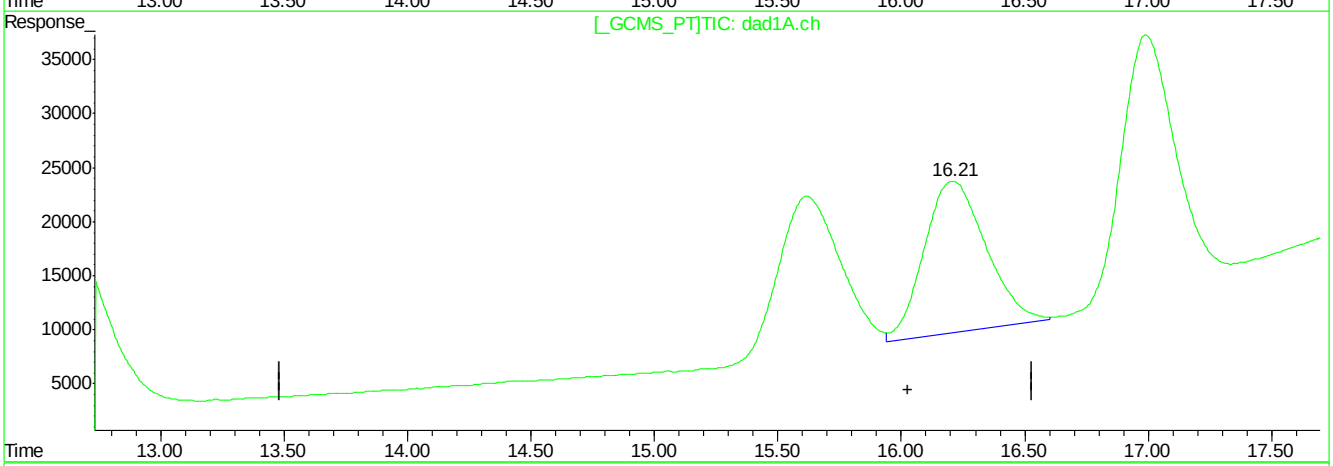
(+) = Expected Retention Time
PP388856.D GPP2336_092420_DV.M Thu Nov 12 15:17:33 2020

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2355\PP388856.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2355\PP388856.D\dad1A.ch
Acq On : 31-Oct-2020, 03:57:27 Operator: jamesb
Sample : ecc2336-1000 Inst : G1315B
Misc : op82734,GPP2355,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Nov 12 15:17 2020 Quant Results File: GPP2336_092420_DV.RES

Method : C:\MSDCHEM\2\METHODS\GPP2336_092420_DV.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Nov 12 13:32:55 2020
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.20min 1013.443ppb

response 3276410

(19) p-Nitrotoluene #2

16.21min 974.509ppb m

response 2442574

(+) = Expected Retention Time
PP388856.D GPP2336_092420_DV.M Thu Nov 12 15:17:39 2020

DATE	9/9/2020	METHODS	8330	IC/ICC STD LOT	LC1300
COLUMN TYPE	Bonus-rp	ACQ. METHOD	8330RPB3	ICV STD LOT	LC1280
AMOUNT INJ	100 uL	PROC. METHOD	8330RPB.M_092519.M	SOLVENT	
INSTRUMENT	HPLC3-GG	CALIB. DATE	9/25/2019	SOLVENT	
ANALYST	WFH	RUN BATCH	GGG2870	HEAD PRESSURE	

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG619496	1	ccb	8330	1	op81814,GGG2870,1000,,,10,1,Water	
GG619497	2	cc2868-1000	8330	100/500	op81814,GGG2870,1000,,,10,100/500,Water	elution shift, recal
GG619498	3	op81842-MB	8330	1	op81814,GGG2870,1060,,,10,1,Water	RR
GG619499	4	FA78268-1cf	8330	1	op81814,GGG2870,1040,,,10,1,Water	RR
GG619500	91	ic2870-20	8330	2/500	op81814,GGG2870,1040,,,10,2/500,Water	\
GG619501	92	ic2870-50	8330	5/500	op81814,GGG2870,1050,,,10,5/500,Water	\
GG619502	93	ic2870-100	8330	10/500	op81814,GGG2870,1050,,,10,10/500,Water	\
GG619503	94	ic2870-200	8330	20/500	op81814,GGG2870,1050,,,10,20/500,Water	\
GG619504	95	ic2870-500	8330	50/500	op81814,GGG2870,1060,,,10,50/500,Water	\
GG619505	96	icc2870-1000	8330	100/500	op81814,GGG2870,1060,,,10,100/500,Water	\
GG619506	97	ic2870-2500	8330	250/500	op81814,GGG2870,1060,,,10,250/500,Water	\
GG619507	98	ic2870-5000	8330	500/500	op81814,GGG2870,1060,,,10,500/500,Water	\
GG619508	99	icv2870-1000	8330	1	op81814,GGG2870,1000,,,10,1,Water	TNX-FH
GG619509	3	op81842-MB	8330	1	op81842,GGG2870,1000,,,10,1,Water	\
GG619510	4	FA78628-1cf	8330	1	op81842,GGG2870,1040,,,10,1,Water	\
GG619511	5	FA78268-2cf	8330	1	op81842,GGG2870,1040,,,10,1,Water	\
GG619512	6	FA78268-2cf,25	8330	25	op81842,GGG2870,1040,,,10,25,Water	\
GG619513	7	FA78268-3cf	8330	1	op81842,GGG2870,1050,,,10,1,Water	\
GG619514	8	FA78268-4cf	8330	1	op81842,GGG2870,1030,,,10,1,Water	\
GG619515	9	FA78268-4cf,25	8330	25	op81842,GGG2870,1030,,,10,25,Water	\
GG619516	10	FA78268-5cf	8330	1	op81842,GGG2870,1030,,,10,1,Water	X-26
GG619517	11	FA78268-6cf	8330	1	op81842,GGG2870,1040,,,10,1,Water	\
GG619518	12	FA78268-7cf	8330	1	op81842,GGG2870,1020,,,10,1,Water	X-24,26
GG619519	2	cc2870-1000	8330	100/500	op81842,GGG2870,1000,,,10,100/500,Water	pass
GG619520	1	ccb	8330	1	op81842,GGG2870,1000,,,10,1,Water	
GG619521	13	FA78268-8cf	8330	1	op81842,GGG2870,1050,,,10,1,Water	\
GG619522	14	FA78268-9cf	8330	1	op81842,GGG2870,1030,,,10,1,Water	\
GG619523	15	op81877-MB	8330	1	op81877,GGG2870,1000,,,10,1,Water	\
GG619524	16	FA78392-1cf	8330	1	op81877,GGG2870,1040,,,10,1,Water	\
GG619525	17	FA78392-2cf	8330	1	op81877,GGG2870,1050,,,10,1,Water	\
GG619526	18	FA78392-2cf,10	8330	10	op81877,GGG2870,1050,,,10,10,Water	\
GG619527	19	FA78392-3cf	8330	1	op81877,GGG2870,1040,,,10,1,Water	\

GG619528	20	FA78392-3cf,10	8330	10	op81877,GGG2870,1040,,,10,10,Water	\
GG619529	21	FA78392-4cf	8330	1	op81877,GGG2870,1030,,,10,1,Water	\
GG619530	22	FA78392-5cf	8330	1	op81877,GGG2870,1060,,,10,1,Water	\
GG619531	96	cc2870-1000	8330	100/500	op81877,GGG2870,1000,,,10,100/500,Water	pass
GG619532	1	ccb	8330	1	op81877,GGG2870,1000,,,10,1,Water	
GG619533	23	FA78392-5cf,10	8330	10	op81877,GGG2870,1060,,,10,10,Water	\
GG619534	24	FA78392-6cf	8330	1	op81877,GGG2870,1060,,,10,1,Water	\
GG619535	25	FA78392-6cf,10	8330	10	op81877,GGG2870,1060,,,10,10,Water	\
GG619536	26	op81901-MB	8330	1	op81901,GGG2870,1000,,,10,1,Water	\
GG619537	27	FA78403-1cf	8330	1	op81901,GGG2870,1050,,,10,1,Water	X-TNB
GG619538	28	FA78403-1cf,10	8330	10	op81901,GGG2870,1050,,,10,10,Water	\
GG619539	29	FA78403-2cf	8330	1	op81901,GGG2870,1050,,,10,1,Wate	\
GG619540	30	FA78403-3cf	8330	1	op81901,GGG2870,1040,,,10,1,Wate	\
GG619541	31	FA78403-4cf	8330	1	op81901,GGG2870,1030,,,10,1,Wate	\
GG619542	32	FA78403-5cf	8330	1	op81901,GGG2870,1050,,,10,1,Wate	X-TNB
GG619543	2	cc2870-1000	8330	100/500	1901,GGG2870,1000,,,10,100/500,W	pass
GG619544	1	ccb	8330	1	op81901,GGG2870,1000,,,10,1,Wate	\
GG619545	33	FA78403-5cf,10	8330	10	p81901,GGG2870,1050,,,10,10,Wat	\
GG619546	34	FA78403-6cf	8330	1	op81901,GGG2870,1060,,,10,1,Wate	\
GG619547	35	FA78403-7cf	8330	1	op81901,GGG2870,1060,,,10,1,Wate	\
GG619548	36	FA78403-8cf	8330	1	op81901,GGG2870,1040,,,10,1,Wate	\
GG619549	37	FA78403-9cf	8330	1	op81901,GGG2870,1050,,,10,1,Wate	X-TNB
GG619550	38	FA78403-9cf,10	8330	10	p81901,GGG2870,1050,,,10,10,Wat	\
GG619551	2	ecc2870-1000	8330	100/500	1901,GGG2870,1000,,,10,100/500,W	pass

DATE	11/2/2020	METHODS	8330	IC/ICC STD LOT	LC1300
COLUMN TYPE	Bonus-RP	ACQ. METHOD	8330RPB3	ICV STD LOT	LC1280
AMOUNT INJ	100uL	PROC. METHOD	8330RPB.M_092519.M	SOLVENT	
INSTRUMENT	HPLC3-GG	CALIB. DATE	9/25/2019	SOLVENT	
ANALYST	JB	RUN BATCH	GGG2889	HEAD PRESSURE	

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG619913	1	ccb	8330	1	op82735,GGG2889,1000,,,10,1,water	/
GG619914	2	cc2870-1000	8330	100/500	op82735,GGG2889,1000,,,10,1,water	TNX DMX MNX-FH
GG619915	3	FA80222-1cf	8330	1	op82735,GGG2889,1050,,,10,1,water	/
GG619916	4	FA80222-2cf	8330	1	op82735,GGG2889,1050,,,10,1,water	/
GG619917	5	FA80202-1cf	8330	1	op82734,GGG2889,1050,,,10,1,water	x-TNX
GG619918	6	FA80202-2cf	8330	1	op82734,GGG2889,1060,,,10,1,water	x-13
GG619919	7	FA80202-3cf	8330	1	op82734,GGG2889,1050,,,10,1,water	/
GG619920	8	FA80202-4cf	8330	1	op82734,GGG2889,1050,,,10,1,water	/
GG619921	9	FA80202-5cf	8330	1	op82734,GGG2889,1040,,,10,1,water	x-PETN DNR
GG619922	10	FA80009-2cf	8330	1	op82735,GGG2889,1050,,,10,1,water	DNR dislexya
GG619923	11	FA80009-2cf,10	8330	10	op82735,GGG2889,1040,,,10,10,water	DNR dislexya
GG619924	12	FA80096-2	8330	1	op82713,GGG2889,1040,,,10,1,water	/
GG619925	2	cc2870-1000	8330	100/500	op82734,GGG2889,1000,,,10,1,water	TNX DMX MNX-FH
GG619926	1	ccb	8330	1	op82713,GGG2889,1000,,,10,1,water	/
GG619927	13	FA80091-6cf,10	8330	10	op82713,GGG2889,1040,,,10,10,water	/
GG619928	14	FA80091-7cf	8330	1	op82713,GGG2889,1040,,,10,1,water	x-35 24 PETN
GG619929	15	FA80091-7cf10	8330	10	op82713,GGG2889,1040,,,10,10,water	/
GG619930	16	FA80091-8cf	8330	1	op82713,GGG2889,1050,,,10,1,water	x-PETN DNR
GG619931	17	FA80091-9cf	8330	1	op82713,GGG2889,1050,,,10,1,water	/
GG619932	18	FA80091-9cf,10	8330	10	op82713,GGG2889,1050,,,10,10,water	/
GG619933	19	FA80091-10cf	8330	1	op82713,GGG2889,1030,,,10,1,water	/
GG619934	20	FA80096.-1cf	8330	1	op82713,GGG2889,1040,,,10,1,water	/
GG619935	2	cc2870-1000	8330	100/500	op82734,GGG2889,1000,,,10,1,water	TNX DMX MNX-FH

DATE	11/3/2020	**METHODS**	8330	**IC/ICC STD LOT**	**LC1300**
COLUMN TYPE	Bonus-RP	**ACQ. METHOD**	8330RPB3	**ICV STD LOT**	**LC1280**
AMOUNT INJ	100uL	**PROC. METHOD**	8330RPB.M_092519.M	**SOLVENT**	
INSTRUMENT	HPLC3-GG	**CALIB. DATE**	9/25/2019	**SOLVENT**	
ANALYST	JB	**RUN BATCH**	GGG2890	**HEAD PRESSURE**	

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG619936	1	ccb	8330	1	op82713,GGG2890,1000,,,10,1,water	/
GG619937	2	cc2870-1000	8330	100/500	op82713,GGG2890,1000,,,10,1,water	TNX DNX MNX-FH
GG619938	3	op82713-MB	8330	1	op82713,GGG2890,1000,,,10,1,water	/
GG619939	4	op82734-MB	8330	1	op82734,GGG2890,1000,,,10,1,water	/
GG619940	5	op82735-MB	8330	1	op82735,GGG2890,1000,,,10,1,water	/
GG619941	2	ecc2870-1000	8330	100/500	op82713,GGG2890,1000,,,10,1,water	TNX DNX MNX-FH

DATE	9/24/2020	METHODS	8330	IC/ICC STD LOT	LC1384
COLUMN TYPE	Extend C18	ACQ. METHOD	8330BPL	ICV STD LOT	LC1385
AMOUNT INJ	100 µL	PROC. METHOD	GPP2336_092420PRI.M	SOLVENT	
INSTRUMENT	HPLC4-PP	CALIB. DATE	8/24/2020	SOLVENT	
ANALYST	WFH	RUN BATCH	GPP2336	HEAD PRESSURE	

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
PP388306	1	ccb	8330	1	op82110,GPP2336,1000,,,10,1,Water	
PP388307	2	ic2336-20	8330	2/500	op82110,GPP2336,1000,,,10,2/500,Water	\
PP388308	3	ic2336-50	8330	5/500	op82110,GPP2336,1000,,,10,5/500,Water	\
PP388309	4	ic2336-100	8330	10/500	op82110,GPP2336,1000,,,10,10/500,Water	\
PP388310	5	ic2336-200	8330	20/500	op82110,GPP2336,1000,,,10,20/500,Water	\
PP388311	6	ic2336-500	8330	50/500	op82110,GPP2336,1050,,,10,50/500,Water	\
PP388312	7	ic2336-1000	8330	100/500	op82110,GPP2336,520,,,10,100/500,Water	\
PP388313	8	ic2336-2500	8330	250/500	op82110,GPP2336,520,,,10,250/500,Water	\
PP388314	9	ic2336-5000	8330	500	op82110,GPP2336,1050,,,10,500,Water	\
PP388315	10	ic2336-1000	8330	1	op82110,GPP2336,1060,,,10,1,Water	pass
PP388316	23	FA78817-1,25	8330	25	op82110,GPP2336,1050,,,10,25,Water	cf-RDX,TNT
PP388317	24	FA78817-2,10	8330	10	op82110,GPP2336,1060,,,10,10,Water	cf-RDX,TNT
PP388318	25	FA78817-3,10	8330	10	op82110,GPP2336,1050,,,10,10,Water	cf-HMX,TNB,24
PP388319	26	FA78817-3,250	8330	250	op82110,GPP2336,1050,,,10,250,Water	cf-RDX,TNT
PP388320	27	FA78817-4,25	8330	25	op82110,GPP2336,1060,,,10,25,Water	cf-RDX,TNT
PP388321	28	FA78817-8,25	8330	25	op82110,GPP2336,1030,,,10,25,Water	cf-RDX,TNT
PP388322	29	FA78817-9,10	8330	10	op82110,GPP2336,1050,,,10,10,Water	cf-RDX,TNT
PP388323	11	FA78403-1,10	8330	10	op81901,GPP2336,1000,,,10,10,Water	RDX confirms
PP388324	30	op82127-BS	8330	1	op82127,GPP2336,1000,,,10,1,Water	RR-GGG for AllX
PP388325	31	op82127-MB	8330	1	op82127,GPP2336,1000,,,10,1,Water	\
PP388326	32	FA78887-1	8330	1	op82127,GPP2336,1060,,,10,1,Water	\
PP388327	7	ecc2336-1000	8330	1	op82127,GPP2336,1000,,,10,1,Water	pass
PP388328	1	ccb	8330	100/500	op82127,GPP2336,1000,,,10,100/500,Water	
PP388329	33	FA78887-2	8330	1	op82127,GPP2336,1060,,,10,1,Water	RR
PP388330	34	FA78924-1	8330	1	op82127,GPP2336,1040,,,10,1,Water	RR
PP388331	35	FA78924-1,10	8330	10	op82127,GPP2336,1040,,,10,10,Water	RR
PP388332	36	FA78924-1,25	8330	25	op82127,GPP2336,1040,,,10,25,Water	RR
PP388333	37	op82127-MS,25	8330	25	op82127,GPP2336,520,,,10,25,Water	RR
PP388334	38	op82127-MSD,25	8330	25	op82127,GPP2336,520,,,10,25,Water	RR
PP388335	39	FA78924-2,25	8330	25	op82127,GPP2336,1040,,,10,25,Water	RR
PP388336	40	FA78924-2,250	8330	250	op82127,GPP2336,1040,,,10,250,Water	RR
PP388337	41	FA78924-3,10	8330	10	op82127,GPP2336,1050,,,10,10,Water	RR
PP388338	42	FA78924-3,100	8330	100	op82127,GPP2336,1050,,,10,100,Water	Power Out, RR

DATE	10/30/2020	METHODS	8330	IC/ICC STD LOT	LC1384
COLUMN TYPE	Extend C18	ACQ. METHOD	8330BPL	ICV STD LOT	LC1385
AMOUNT INJ	100uL	PROC. METHOD	GPP2336_092420PRI.M	SOLVENT	205227
INSTRUMENT	HPLC4-PP	CALIB. DATE	9/24/2020	SOLVENT	203405
ANALYST	JB	RUN BATCH	GPP2355	HEAD PRESSURE	224

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
PP388826	1	ccb	8330	1	op82713,GPP2355,1000,,,10,1,water	/
PP388827	2	cc2336-1000	8330	100/500	op82713,GPP2355,1000,,,10,1,water	pass
PP388828	3	FA80091-1,10	8330	10	op82713,GPP2355,1050,,,10,10,water	/
PP388829	4	FA80091-2,10	8330	10	op82713,GPP2355,1060,,,10,10,water	/
PP388830	5	FA80091-4,10	8330	10	op82713,GPP2355,1040,,,10,10,water	/
PP388831	6	FA80091-5,10	8330	10	op82713,GPP2355,1050,,,10,10,water	/
PP388832	7	FA80091-6,10	8330	10	op82713,GPP2355,1040,,,10,10,water	/
PP388833	8	FA80091-7,10	8330	10	op82713,GPP2355,1040,,,10,10,water	/
PP388834	9	FA80091-9,10	8330	10	op82713,GPP2355,1050,,,10,10,water	/
PP388835	10	op82735-MB	8330	1	op82735,GPP2355,1000,,,10,1,water	/
PP388836	11	op82735-BS	8330	1	op82735,GPP2355,1000,,,10,1,water	/
PP388837	12	FA80222-1	8330	1	op82735,GPP2355,1050,,,10,1,water	cf-RDX
PP388838	1	ccb	8330	1	op82735,GPP2355,1000,,,10,1,water	/
PP388839	2	cc2336-1000	8330	100/500	op82735,GPP2355,1000,,,10,1,water	pass
PP388840	13	FA80222-2	8330	1	op82735,GPP2355,1050,,,10,1,water	cf-RDX
PP388841	14	FA80002-9	8330	1	op82735,GPP2355,1050,,,10,1,water	/
PP388842	15	op82735-MS	8330	1	op82735,GPP2355,1000,,,10,1,water	/
PP388843	16	op82735-MSD	8330	1	op82735,GPP2355,1000,,,10,1,water	/
PP388844	17	op82734-MB	8330	1	op82734,GPP2355,1000,,,10,1,water	/
PP388845	18	op82734-BS	8330	1	op82734,GPP2355,1000,,,10,1,water	/
PP388846	19	FA80202-1	8330	1	op82734,GPP2355,1050,,,10,1,water	cf-TNX HMX RDX 135 35 TNT 2a 4a 26
PP388847	20	FA80202-2	8330	1	op82734,GPP2355,1060,,,10,1,water	cf-TNX HMX RDX 135 13 35 TNT 2a 4a 26
PP388848	21	FA80202-3	8330	1	op82734,GPP2355,1050,,,10,1,water	cf-TNX HMX RDX 135 35 TNT 2a 4a
PP388849	22	FA80202-4	8330	1	op82734,GPP2355,1050,,,10,1,water	cf-HMX RDX 135 13 35 TNT 2a 4a
PP388850	1	ccb	8330	1	op82734,GPP2355,1000,,,10,1,water	/
PP388851	2	cc2336-1000	8330	100/500	op82734,GPP2355,1000,,,10,1,water	pass
PP388852	23	FA80202-5	8330	1	op82734,GPP2355,1040,,,10,1,water	cf-PETN
PP388853	24	op82734-MS	8330	1	op82734,GPP2355,520,,,10,1,water	/
PP388854	25	op82734-MSD	8330	1	op82734,GPP2355,520,,,10,1,water	/
PP388855	1	ccb	8330	1	op82734,GPP2355,1000,,,10,1,water	/
PP388856	2	ecc2336-1000	8330	100/500	op82734,GPP2355,1000,,,10,1,water	pass

SGS - ORLANDO

SPE LIQUID SAMPLE PREP REPORT

Date/Time Started: 10/29/2020 1000 {mm/dd/yy 24:00}

Date/Time Finished: 10/29/2020 1700 {mm/dd/yy 24:00}

Prep Method: (3535A) or 537 or 537MOD (circle)

Analytical Method: 8330B

Batch#: OP82734 Ext. By: MB Conc. By: — Vialed By: MB

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP 82734 MB	X	1000	6	N/A	250ul		10ml	AT-2	
OP 82734 BS	X	1000	↓	↓	↓	200+250ul	↓	↓	
FA 80202-1	2	1050							
-2	2	1060							
-3	2	1050							
-4	4	1050							
-5	2	1040	↓	↓	↓		↓	↓	
FA									
FA 80202-4MS	5	520	6	N/A	250ul	200+250ul	10ml	AT-2	
-4MSD	5	520	↓	↓	↓	↓	↓	↓	
DUP									

MB 10/29/2020

Comments:

Surr.1 ID: LC1393 Conc: 20 ppm Exp. Date: 04/27/21 Inj. By: MB Ver. By MB

Spk.1 ID: LC1390 Conc: 20 ppm Exp. Date: 04/15/21 Inj. By: MB Ver. By MB

Spk.2 ID: LC1383 Conc: 25 ppm Exp. Date: 03/21/21 Inj. By: MB Ver. By MB

Spk.3 ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

TurboVap Temp (Therm ID): — N-Evap Temp (Therm ID): —

Observed Temp °C: — Corr. Temp °C: — Observed Temp °C: — Corr. Temp °C: —

Methanol Lot # —

Acetonitrile Lot # 198527

Water Lot# DI H2O

Solvent# —

SPE Lot # 5214-0107

Syringe filter Lot # —

Pre-filter Lot# —

Carbon Lot# —

pH Paper # 232019

Reagent # —

Reagent # —

Other —

Relinquished By: MB Date: 10/29/2020

Accepted By: Date: 10/30/20

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718

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ANALYTICAL RESULTS FOR:

ANTHONY PACE
WESTON SOLUTIONS, INC.
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

PROJECT SITE:	RFAAP SWMU-49; RADFORD, VA
DOD CONTRACT #:	
PROJECT #:	
SDG:	***159400***
FOLDERS:	159400, 159482, 159483
PREPARED:	February 16, 2021
TOTAL # OF PAGES:	1493

The data contained in the following report have been reviewed by the appropriate CT Laboratories' LLC staff members. In addition, CT Laboratories LLC certifies that to the best of our knowledge that the analyses reported herein are true, complete and correct within the limits of the methods employed and that they follow the applicable requirements as specified by the project plan, state-specific, NELAC or DOD QSM requirements. The estimated uncertainty of measurement is only available upon request. The reported results relate only to the tested samples. This report shall not be reproduced, except in full, without written approval of CT Laboratories LLC.

APPROVED BY: Brett Szymanski
PROJECT MANAGER

Certifications: IL (NELAP 200073), KS (NELAP E-10368), WI (157066030), DOD ELAP (A2LA 3806.01), VA (NELAP 4602038), MD (WI 00061), LA (NELAP ACC20160002), ISO17025 (A2LA 3806.01), GA EDP Stipulation (Accreditor: LA NELAP, ACC#: ACC20160002, Scope: Non-potable water solid and chemical materials, biological tissue, Effective: 12/10/2014, Expires: annually)

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Case Narrative

Client: Weston Solutions
Project: RFAAP SWMU-49, Radford, VA
Sample Receipt Dates: 01/26/2021 & 01/29/2021
SDG #: *159400* (Folder #'s 159400, 159482, & 159483)

Nineteen water samples were received and analyzed for a variety of parameters, including: VOCs, Dissolved Gases, Metals, pH, COD, Anions, and TOC. Three Trip Blanks were included with the VOCs. The assigned sample ID number, date sampled, and date received are indicated in the attached Project Summary. The samples were received intact and at a temperature within method specified acceptance limits. A breakdown of sample receipt information can be found on the Sample Condition Report located in the last section of the data package and any exceptions are noted below. The analyses were performed following DOD QSM 5.3 requirements.

Manual integrations may have been performed on the data provided with this package. If manual integrations were performed, a Reason #(s) was included on the raw data that corresponds to the "Index Key for Manual Integration Rationale." The raw data includes a "Before" and "After" manual integration illustration. The manual integrations were initialed and dated by the analyst, as well as, by the person reviewing the data.

Sample Analysis and Quality Control

Volatile Analysis:

The samples were analyzed using US EPA Methods 8260C (VOC) and RSK-175 (Dissolved Gases). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Surrogate Recovery Data
Matrix Spike/Matrix Spike Duplicate Recovery Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log
Chromatograms

All analysis results met the method specified quality control criteria with the following exceptions:

Detailed reports were provided for the 8260 data for all detected compounds, as well as, for those compounds manually integrated (if applicable). Compounds not reported on the form 1's were either not detected or did not meet identification criteria so they were reported as non-detects.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

VOC (8260C) Water Analysis

1,4-Dioxane was detected in the Initial Calibration Blank (ICB) for ICAL # W012921.

Analytical Run # 179112

CCV1 (analyzed 02/02/2021 @ 10:54 on VMS3) had a low recovery outside of specified criteria for 1,4-dioxane. This compound was qualified with a "Z" flag in the associated samples.

Sample # 529220 had a pH > 2. This sample was qualified with a "T" flag for being insufficiently preserved.

The Matrix Spike (MS) for sample # 529217 had a low recovery for 1,4-dioxane. The parent sample for this compound was qualified with an "M" flag. The Relative Percent Difference (RPD) limits between the MS and the Matrix Spike Duplicate (MSD) was exceeded for 1,4-dioxane. The parent sample result for this compound was qualified with a "Y" flag.

Analytical Run # 178893

CCV1 (analyzed 02/03/2021 @ 13:32 on VMS3) had a high recovery outside of specified criteria for 1,4-dioxane. This compound was qualified with a "Z" flag in the associated samples.

CCV2 had high recoveries outside of specified criteria for dichlorodifluoromethane, bromomethane, 1,1,2-trichloro-1,2,2-trifluoroethane, and 1,4-dioxane. The matrix spikes for this run were the only analysis associated with this CCV.

The Laboratory Control Sample (LCS) had a high recovery for 1,4-dioxane. This compound was qualified with a "Q" flag in the associated samples.

1,4-Dioxane was detected in the Method Blank (MB). This compound was not detected in the associated samples so the data were not qualified.

The MS and the MSD for sample # 527966 had a high recovery for 1,4-dioxane. The parent sample for this compound was qualified with an "M" flag.

Dissolved Gases (RSK-175) Analysis

Analytical Run # 179084

Sample #'s 529220 & 529227 had a pH > 2. These samples were qualified with a "T" flag for being insufficiently preserved.

Metals Analysis:

The samples were analyzed using US EPA Methods 6010C (ICP) and 7470A (Hg). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Initial and Continuing Calibration Verification
Blanks Summary
ICP Interference Check Data
Spike Sample Recovery
Duplicates Data
Laboratory Control Sample Data
Analysis Run Log

All analysis results met the method specified quality control criteria with the following exceptions:

ICP Metals (6010C) Water Analysis

Continuing Calibration Verification (CCV) standards were analyzed at two levels (CCV1 & CCV2) with potentially differing wavelengths. Data associated with CCV's were evaluated based on the concentration of the element in the samples and compared to the appropriate CCV level/wavelength.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Analytical Run # 179107

The MS and/or MSD for sample # 529230 had recoveries outside of acceptable limits for aluminum, antimony, arsenic, barium, cadmium, calcium, iron, lead, nickel, and thallium. A Serial Dilution (L) was analyzed and was not applicable for antimony, arsenic, barium, cadmium, lead, nickel, and thallium because the parent sample raw result was less than 50 times the Limit of Quantitation (LOQ). The L was not acceptable for aluminum, calcium, and iron because the results exceeded the RPD limit. A Post Digestion Spike (PDS) was analyzed and was unacceptable for iron, nickel, lead, and thallium. The parent sample was reported and qualified with an "M" flag for the failing elements.

The Duplicate (DUP) for sample # 529230 was not applicable for antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc because the parent sample results were less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

ICP Sodium & Potassium (6010C) Water Analysis

Analytical Run # 179108

All analytical results for this run met the method/project specified quality control criteria.

CVAA Mercury (7470A) Water Analysis

Analytical Run # 179138

The sample QC was performed on a sample from SDG # 159442.

All analytical results for this run met the method/project specified quality control criteria.

Inorganic Analysis:

The samples were analyzed using US EPA Methods 9060A (TOC), 9040C (pH), 410.4 (COD) and 9056A (Anions). All samples were analyzed within the holding time unless noted below. The following summaries of quality control procedures are included:

Duplicate Analysis Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Anions (9056A) Water Analysis

Analytical Run # 178954

All analytical results for this run met the method/project specified quality control criteria.

Analytical Run # 179049

Sample #'s 529217, 529218, & 529219 were analyzed past the 48-hour hold time for nitrate due to a FedEx shipping delay. The nitrate results for these samples were qualified with an "H" flag.

The MS for sample # 529224 had a low recovery for chloride. The parent sample result for this analyte was qualified with an "M" flag.

Analytical Run # 179053

All analytical results for this run met the method/project specified quality control criteria.

COD (410.4) Water Analysis

Analytical Run # 179079

All analytical results for this run met the method/project specified quality control criteria.

pH (9040C) Water Analysis

Analytical Run # 179066

All analytical results for this run met the method/project specified quality control criteria.

TOC (9060A) Water Analysis

Analytical Run # 178964

All analytical results for this run met the method/project specified quality control criteria.

Analytical Run # 179074

The DUP for sample # 529217 exceeded RPD limits. The parent sample result was qualified with a "Y" flag.

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Data Qualifiers

Code	Description
A	Analyte averaged calibration criteria within acceptable limits.
B	Analyte detected in associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was not above the detection level.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Calibration criteria exceeded.

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MANUAL INTEGRATION REASON CODES

CTLaboratories has identified four general cases with valid reasons supporting the use of manual integration techniques. These codes are used on chromatograms in this data package to document the reasons for manual integrations per CTLaboratories' SOP SS-10 current revision.

#1: **Data system failed to select the correct peak or missed the peak entirely.**
In some cases the chromatography system selects and integrates the "wrong peak". In this case the analyst must correct the selection and force the system to integrate the proper peak. In other instances the system may miss the peak completely. In this case the analyst manually integrated the peak

#2: **Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.**
This phenomenon is common at low concentrations where the signal to noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low or high area counts for the target compound.

#3: Improperly Integrated Isomers and/or coeluting compounds.
For when the system fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations may be inaccurate, and they must be corrected by manual integration. Prime examples are compounds that are unresolved and integrated improperly when present at low concentrations in standards or samples.

#4: System Established Incorrect Baseline.
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and may be corrected via manual procedures.

#5: Miscellaneous.
Some situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the group supervisor. If the form of manual integration is not clearly covered by these four cases, then review and approval by the group supervisor or the *QA/QC* Supervisor will be required.

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1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

Sample Delivery Group

159400

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMU-49
Project #:

	CT Sample #	Folder #	Client Sample #	Sample Description	Matrix	Date Sampled	Date Received
1	527961	159400		13MW5	GROUND WATER	01/25/2021	01/26/2021
2	527962	159400		13MW4	GROUND WATER	01/25/2021	01/26/2021
3	527963	159400		13MW3	GROUND WATER	01/25/2021	01/26/2021
4	527964	159400		13TW3	GROUND WATER	01/25/2021	01/26/2021
5	527965	159400		49MW04	GROUND WATER	01/25/2021	01/26/2021
6	527966	159400		13MW2	GROUND WATER	01/25/2021	01/26/2021
7	527967	159400		49MW05	GROUND WATER	01/25/2021	01/26/2021
8	527969	159400		TB-01	TRIP BLANK	01/25/2021	01/26/2021
9	529217	159482		48MW06	GROUND WATER	01/27/2021	01/29/2021
10	529218	159482		48MW07	GROUND WATER	01/27/2021	01/29/2021
11	529219	159482		49MW03	GROUND WATER	01/27/2021	01/29/2021
12	529220	159482		49MW02	GROUND WATER	01/27/2021	01/29/2021
13	529221	159482		48MW3	GROUND WATER	01/27/2021	01/29/2021
14	529222	159482		48TW3	GROUND WATER	01/27/2021	01/29/2021
15	529223	159482		50MW02	GROUND WATER	01/27/2021	01/29/2021
16	529224	159482		EQB-50MW02	GROUND WATER	01/27/2021	01/29/2021
17	529225	159482		TB-2	TRIP BLANK	01/27/2021	01/29/2021
18	529226	159483		48MW2	GROUND WATER	01/28/2021	01/29/2021
19	529227	159483		49MW01	GROUND WATER	01/28/2021	01/29/2021
20	529228	159483		48MW1	GROUND WATER	01/28/2021	01/29/2021
21	529229	159483		TB-3	TRIP BLANK	01/28/2021	01/29/2021
22	529230	159483		IDW-48/49	GROUND WATER	01/28/2021	01/29/2021

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QC Batch Cross Reference Summary

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMU-49
Project #:
Report Date: 02/15/2021
Date Received: 01/29/2021
SDG #: 159400

Inorganic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
529230	pH	EPA 9040C	GROUND WATER		179066

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
529230	COD QSM	EPA 410.4	GROUND WATER	79869	179079

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
527961	Anions QSM 5.0	EPA 9056A	GROUND WATER		178954
527962	Anions QSM 5.0	EPA 9056A	GROUND WATER		178954
527963	Anions QSM 5.0	EPA 9056A	GROUND WATER		178954
527964	Anions QSM 5.0	EPA 9056A	GROUND WATER		178954
527965	Anions QSM 5.0	EPA 9056A	GROUND WATER		178954
527966	Anions QSM 5.0	EPA 9056A	GROUND WATER		178954
527967	Anions QSM 5.0	EPA 9056A	GROUND WATER		178954
529217	Anions QSM 5.0	EPA 9056A	GROUND WATER		179049
529218	Anions QSM 5.0	EPA 9056A	GROUND WATER		179049
529219	Anions QSM 5.0	EPA 9056A	GROUND WATER		179049
529220	Anions QSM 5.0	EPA 9056A	GROUND WATER		179049
529221	Anions QSM 5.0	EPA 9056A	GROUND WATER		179049
529222	Anions QSM 5.0	EPA 9056A	GROUND WATER		179049
529223	Anions QSM 5.0	EPA 9056A	GROUND WATER		179049
529224	Anions QSM 5.0	EPA 9056A	GROUND WATER		179049
529226	Anions QSM 5.0	EPA 9056A	GROUND WATER		179053
529227	Anions QSM 5.0	EPA 9056A	GROUND WATER		179053
529228	Anions QSM 5.0	EPA 9056A	GROUND WATER		179053
527961	Anions QSM 5.0	EPA 9056A	GROUND WATER		178954
527963	Anions QSM 5.0	EPA 9056A	GROUND WATER		178954
527964	Anions QSM 5.0	EPA 9056A	GROUND WATER		178954
527967	Anions QSM 5.0	EPA 9056A	GROUND WATER		178954

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Project Name: RADFORD AAP SWMU-49
Project #:
SDG #: 159400

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
529217	Anions QSM 5.0	EPA 9056A	GROUND WATER		179049

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
527961	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		178964
527962	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		178964
527963	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		178964
527964	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		178964
527965	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		178964
527966	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		178964
527967	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		178964
529217	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		179074
529218	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		179074
529219	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		179074
529220	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		179074
529221	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		179074
529222	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		179074
529223	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		179074
529224	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		179074
529226	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		179074
529227	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		179074
529228	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		179074

Metal Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
529230	Potassium, Total QSM 5.0	EPA 6010C	GROUND WATER	79854	179108

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
529230	Sodium, Total QSM 5.0	EPA 6010C	GROUND WATER	79854	179108

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
529230	ICP Metals, Total QSM 5.0	EPA 6010C	GROUND WATER	79854	179107
529230	ICP Metals, Total QSM 5.0	EPA 6010C	GROUND WATER	79854	179107

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
529230	Mercury, Total QSM	EPA 7470A	GROUND WATER	79874	179138

Organic Parameters

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Project Name: RADFORD AAP SWMU-49
Project #:
SDG #: 159400

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
527961	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		178983
527962	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		178983
527963	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		178983
527964	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		178983
527965	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		178983
527966	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		178983
527967	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		178983
527969	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		178983
529217	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112
529218	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112
529219	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112
529220	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112
529221	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112
529222	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112
529223	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112
529224	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112
529225	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		179112
529226	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112
529227	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112
529228	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112
529229	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		179112
529221	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112
529222	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		179112

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
527961	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
527962	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
527963	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
527964	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
527965	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
527966	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
527967	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
529217	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
529218	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
529219	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
529220	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
529221	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
529222	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
529223	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
529224	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
529226	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084
529227	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084

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Project Name: RADFORD AAP SWMU-49
Project #:
SDG #: 159400

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
529228	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	79881	179084

VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL SUMMARY
DOCUMENTS

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1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527966
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 12:10	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527966
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 21:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q,M	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527966
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 21:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527966
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 21:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527963
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 11:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527963
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 19:42	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527963
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 19:42	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	6.8		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	J	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527963
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 19:42	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.1		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527962
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 11:38	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527962
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 19:11	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527962
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 19:11	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527962
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 19:11	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.80	J	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527961
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 11:33	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527961
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 18:41	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527961
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 18:41	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527961
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 18:41	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527964
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 11:48	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527964
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 20:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527964
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 20:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	6.8		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.65	J	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527964
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 20:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.2		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529217
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 12:36	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529217
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 15:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.76	J	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	4.2		0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,M,Y	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529217
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 15:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	8.2		0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.98	J	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529217
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 15:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	6.1		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW07

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529218
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 12:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description: **48MW07**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529218
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 15:59	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW07

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529218
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 15:59	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.49	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW07

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529218
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 15:59	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529228
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:33	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529228
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 20:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.35	J	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.79	J	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529228
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 20:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.89	J	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.25	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529228
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 20:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	2.2		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529226
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	2.3		0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529226
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 19:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529226
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 19:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	14		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	2.5		0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.45	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529226
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 19:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	2.1		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529221
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	5.00
Date & Time Analyzed:	02/03/2021 / 10:10	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	94		1.5	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529221
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:05	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529221
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 17:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	1.2		0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529221
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 17:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	16		0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.38	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0
79-01-6	Trichloroethene	21		0.30	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529221
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 17:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529222
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	5.00
Date & Time Analyzed:	02/03/2021 / 10:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	95		1.5	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529222
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:10	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529222
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 18:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	1.2		0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529222
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 18:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	16		0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.40	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0
79-01-6	Trichloroethene	22		0.30	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529222
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 18:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529227
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U T	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U T	0.59	1.2	1.4	1.4
74-82-8	Methane	0.54	J T	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529227
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 20:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529227
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 20:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.4		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.34	J	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.43	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529227
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 20:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529220
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U T	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U T	0.59	1.2	1.4	1.4
74-82-8	Methane	2.0	T	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529220
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 17:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U T	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U T	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U T	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U T	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U T	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U T	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U T	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U T	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U T	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U T	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U T	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U T	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U T	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U TZ	34	50	100	100
78-93-3	2-Butanone	6.0	U T	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U T	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U T	2.2	6.0	10	10
67-64-1	Acetone	10	U T	4.0	10	20	20
71-43-2	Benzene	1.0	U T	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U T	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U T	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U T	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U T	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U T	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529220
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 17:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U T	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U T	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U T	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U T	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U T	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U T	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U T	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U T	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U T	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U T	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U T	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U T	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U T	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U T	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U T	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U T	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U T	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U T	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U T	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U T	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U T	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U T	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U T	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U T	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529220
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 17:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U T	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U T	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U T	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529219
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 12:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529219
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 16:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529219
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 16:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.58	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529219
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 16:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	0.48	J	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527965
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 11:51	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527965
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 20:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527965
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 20:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.61	J	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527965
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 20:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527967
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 12:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527967
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 21:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527967
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 21:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527967
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 21:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529223
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 09:37	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.33	J	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529223
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 09:37	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.89	J	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.37	J	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.34	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529223
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 09:37	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.4		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529223
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:16	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.71	J	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529224
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:21	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529224
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 19:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	2.2		0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529224
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 19:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	6.1		0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.74	J	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529224
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 19:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527969
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 15:36	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527969
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 15:36	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527969
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 15:36	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529225
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 14:27	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529225
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 14:27	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529225
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 14:27	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529229
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 14:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529229
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 14:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529229
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 14:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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Sample Description

METHOD BLANK

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529956
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
74-84-0	Ethane	02/03/2021	11:27	0.38	U	0.38	1.0	***0.4***
74-85-1	Ethene	02/03/2021	11:27	0.59	U	0.59	1.4	***0.6***
74-82-8	Methane	02/03/2021	11:27	0.45	U	0.45	1.0	***0.4***

CT LABORATORIES
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Sample Description

METHOD BLANK

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	530279
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	179112	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	02/02/2021	11:55	0.38	U	0.38	1.0	***0.50***
79-34-5	1,1,2,2-Tetrachloroethane	02/02/2021	11:55	0.36	U	0.36	1.0	***0.5***
79-00-5	1,1,2-Trichloroethane	02/02/2021	11:55	0.27	U	0.27	1.0	***0.50***
75-34-3	1,1-Dichloroethane	02/02/2021	11:55	0.28	U	0.28	1.0	***0.50***
75-35-4	1,1-Dichloroethene	02/02/2021	11:55	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	02/02/2021	11:55	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	02/02/2021	11:55	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	02/02/2021	11:55	0.50	U	0.50	2.0	***1.0***
106-93-4	1,2-Dibromoethane	02/02/2021	11:55	0.33	U	0.33	1.0	***0.50***
95-50-1	1,2-Dichlorobenzene	02/02/2021	11:55	0.35	U	0.35	1.0	***0.50***
107-06-2	1,2-Dichloroethane	02/02/2021	11:55	0.69	U	0.69	2.0	***1.0***
78-87-5	1,2-Dichloropropane	02/02/2021	11:55	0.37	U	0.37	1.0	***0.50***
541-73-1	1,3-Dichlorobenzene	02/02/2021	11:55	0.30	U	0.30	1.0	***0.50***
123-91-1	1,4-Dioxane	02/02/2021	11:55	34	U	34	100	***50***
78-93-3	2-Butanone	02/02/2021	11:55	2.9	U	2.9	10	***5.0***
591-78-6	2-Hexanone	02/02/2021	11:55	3.3	U	3.3	10	***5.0***
108-10-1	4-Methyl-2-pentanone	02/02/2021	11:55	3.7	U	3.7	10	***5.0***
67-64-1	Acetone	02/02/2021	11:55	4.1	U	4.1	20	***10***
71-43-2	Benzene	02/02/2021	11:55	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	02/02/2021	11:55	0.26	U	0.26	1.0	***0.50***
75-27-4	Bromodichloromethane	02/02/2021	11:55	0.29	U	0.29	1.0	***0.50***
75-25-2	Bromoform	02/02/2021	11:55	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	02/02/2021	11:55	0.49	U	0.49	2.0	***1.0***

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1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **METHOD BLANK**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	530279
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	179112	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
75-15-0	Carbon disulfide	02/02/2021	11:55	0.83	U	0.83	4.0	***2.0***
56-23-5	Carbon tetrachloride	02/02/2021	11:55	0.37	U	0.37	1.0	***0.50***
108-90-7	Chlorobenzene	02/02/2021	11:55	0.37	U	0.37	1.0	***0.50***
75-00-3	Chloroethane	02/02/2021	11:55	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	02/02/2021	11:55	0.46	U	0.46	1.0	***0.50***
74-87-3	Chloromethane	02/02/2021	11:55	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	02/02/2021	11:55	0.41	U	0.41	1.0	***0.50***
10061-01-5	cis-1,3-Dichloropropene	02/02/2021	11:55	0.34	U	0.34	1.0	***0.50***
110-82-7	Cyclohexane	02/02/2021	11:55	0.71	U	0.71	2.0	***1.0***
124-48-1	Dibromochloromethane	02/02/2021	11:55	0.35	U	0.35	1.0	***0.50***
75-71-8	Dichlorodifluoromethane	02/02/2021	11:55	0.63	U	0.63	2.0	***1.0***
100-41-4	Ethylbenzene	02/02/2021	11:55	0.42	U	0.42	1.0	***0.50***
76-13-1	Freon 113	02/02/2021	11:55	1.5	U	1.5	4.0	***2.0***
98-82-8	Isopropylbenzene	02/02/2021	11:55	0.39	U	0.39	1.0	***0.50***
179601-23-1	m & p-Xylene	02/02/2021	11:55	0.74	U	0.74	2.0	***1.0***
79-20-9	Methyl Acetate	02/02/2021	11:55	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	02/02/2021	11:55	0.28	U	0.28	1.0	***0.50***
108-87-2	Methylcyclohexane	02/02/2021	11:55	0.78	U	0.78	2.0	***1.0***
75-09-2	Methylene chloride	02/02/2021	11:55	1.2	U	1.2	4.0	***2.0***
95-47-6	o-Xylene	02/02/2021	11:55	0.72	U	0.72	2.0	***1.0***
100-42-5	Styrene	02/02/2021	11:55	0.33	U	0.33	1.0	***0.50***
127-18-4	Tetrachloroethene	02/02/2021	11:55	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	02/02/2021	11:55	0.27	U	0.27	1.0	***0.50***

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	530279
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	179112	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
156-60-5	trans-1,2-Dichloroethene	02/02/2021	11:55	0.35	U	0.35	1.0	***0.50***
10061-02-6	trans-1,3-Dichloropropene	02/02/2021	11:55	0.56	U	0.56	2.0	***1.0***
79-01-6	Trichloroethene	02/02/2021	11:55	0.39	U	0.39	1.0	***0.50***
75-69-4	Trichlorofluoromethane	02/02/2021	11:55	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	02/02/2021	11:55	0.14	U	0.14	0.60	***0.30***

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	530639
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	179112	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	02/03/2021	09:07	0.38	U	0.38	1.0	***0.50***
79-34-5	1,1,2,2-Tetrachloroethane	02/03/2021	09:07	0.36	U	0.36	1.0	***0.50***
79-00-5	1,1,2-Trichloroethane	02/03/2021	09:07	0.27	U	0.27	1.0	***0.50***
75-34-3	1,1-Dichloroethane	02/03/2021	09:07	0.28	U	0.28	1.0	***0.50***
75-35-4	1,1-Dichloroethene	02/03/2021	09:07	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	02/03/2021	09:07	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	02/03/2021	09:07	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	02/03/2021	09:07	0.50	U	0.50	2.0	***1.0***
106-93-4	1,2-Dibromoethane	02/03/2021	09:07	0.33	U	0.33	1.0	***0.5***
95-50-1	1,2-Dichlorobenzene	02/03/2021	09:07	0.35	U	0.35	1.0	***0.50***
107-06-2	1,2-Dichloroethane	02/03/2021	09:07	0.69	U	0.69	2.0	***1.0***
78-87-5	1,2-Dichloropropane	02/03/2021	09:07	0.37	U	0.37	1.0	***0.50***
541-73-1	1,3-Dichlorobenzene	02/03/2021	09:07	0.30	U	0.30	1.0	***0.50***
78-93-3	2-Butanone	02/03/2021	09:07	2.9	U	2.9	10	***5.0***
591-78-6	2-Hexanone	02/03/2021	09:07	3.3	U	3.3	10	***5.0***
108-10-1	4-Methyl-2-pentanone	02/03/2021	09:07	3.7	U	3.7	10	***5.0***
67-64-1	Acetone	02/03/2021	09:07	4.1	U	4.1	20	***10***
71-43-2	Benzene	02/03/2021	09:07	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	02/03/2021	09:07	0.26	U	0.26	1.0	***0.50***
75-27-4	Bromodichloromethane	02/03/2021	09:07	0.29	U	0.29	1.0	***0.50***
75-25-2	Bromoform	02/03/2021	09:07	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	02/03/2021	09:07	0.49	U	0.49	2.0	***1.0***
75-15-0	Carbon disulfide	02/03/2021	09:07	0.83	U	0.83	4.0	***2.0***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	530639
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	179112	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
56-23-5	Carbon tetrachloride	02/03/2021	09:07	0.37	U	0.37	1.0	***0.50***
108-90-7	Chlorobenzene	02/03/2021	09:07	0.37	U	0.37	1.0	***0.50***
75-00-3	Chloroethane	02/03/2021	09:07	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	02/03/2021	09:07	0.46	U	0.46	1.0	***0.50***
74-87-3	Chloromethane	02/03/2021	09:07	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	02/03/2021	09:07	0.41	U	0.41	1.0	***0.50***
10061-01-5	cis-1,3-Dichloropropene	02/03/2021	09:07	0.34	U	0.34	1.0	***0.50***
110-82-7	Cyclohexane	02/03/2021	09:07	0.71	U	0.71	2.0	***1.0***
124-48-1	Dibromochloromethane	02/03/2021	09:07	0.35	U	0.35	1.0	***0.50***
75-71-8	Dichlorodifluoromethane	02/03/2021	09:07	0.63	U	0.63	2.0	***1.0***
100-41-4	Ethylbenzene	02/03/2021	09:07	0.42	U	0.42	1.0	***0.50***
76-13-1	Freon 113	02/03/2021	09:07	1.5	U	1.5	4.0	***2.0***
98-82-8	Isopropylbenzene	02/03/2021	09:07	0.39	U	0.39	1.0	***0.50***
179601-23-1	m & p-Xylene	02/03/2021	09:07	0.74	U	0.74	2.0	***1.0***
79-20-9	Methyl Acetate	02/03/2021	09:07	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	02/03/2021	09:07	0.28	U	0.28	1.0	***0.50***
75-09-2	Methylene chloride	02/03/2021	09:07	1.2	U	1.2	4.0	***2.0***
95-47-6	o-Xylene	02/03/2021	09:07	0.72	U	0.72	2.0	***1.0***
100-42-5	Styrene	02/03/2021	09:07	0.33	U	0.33	1.0	***0.50***
127-18-4	Tetrachloroethene	02/03/2021	09:07	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	02/03/2021	09:07	0.27	U	0.27	1.0	***0.50***
156-60-5	trans-1,2-Dichloroethene	02/03/2021	09:07	0.35	U	0.35	1.0	***0.50***
10061-02-6	trans-1,3-Dichloropropene	02/03/2021	09:07	0.56	U	0.56	2.0	***1.0***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	530639
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	179112	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
79-01-6	Trichloroethene	02/03/2021	09:07	0.39	U	0.39	1.0	***0.50***
75-69-4	Trichlorofluoromethane	02/03/2021	09:07	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	02/03/2021	09:07	0.14	U	0.14	0.60	***0.30***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **METHOD BLANK**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	530870
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	178983	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	02/03/2021	15:05	0.38	U	0.38	1.0	***0.50***
79-34-5	1,1,2,2-Tetrachloroethane	02/03/2021	15:05	0.36	U	0.36	1.0	***0.5***
79-00-5	1,1,2-Trichloroethane	02/03/2021	15:05	0.27	U	0.27	1.0	***0.50***
75-34-3	1,1-Dichloroethane	02/03/2021	15:05	0.28	U	0.28	1.0	***0.50***
75-35-4	1,1-Dichloroethene	02/03/2021	15:05	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	02/03/2021	15:05	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	02/03/2021	15:05	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	02/03/2021	15:05	0.50	U	0.50	2.0	***1.0***
106-93-4	1,2-Dibromoethane	02/03/2021	15:05	0.33	U	0.33	1.0	***0.50***
95-50-1	1,2-Dichlorobenzene	02/03/2021	15:05	0.35	U	0.35	1.0	***0.50***
107-06-2	1,2-Dichloroethane	02/03/2021	15:05	0.69	U	0.69	2.0	***1.0***
78-87-5	1,2-Dichloropropane	02/03/2021	15:05	0.37	U	0.37	1.0	***0.50***
541-73-1	1,3-Dichlorobenzene	02/03/2021	15:05	0.30	U	0.30	1.0	***0.50***
123-91-1	1,4-Dioxane	02/03/2021	15:05	247	B	34	100	***50***
78-93-3	2-Butanone	02/03/2021	15:05	2.9	U	2.9	10	***5.0***
591-78-6	2-Hexanone	02/03/2021	15:05	3.3	U	3.3	10	***5.0***
108-10-1	4-Methyl-2-pentanone	02/03/2021	15:05	3.7	U	3.7	10	***5.0***
67-64-1	Acetone	02/03/2021	15:05	4.1	U	4.1	20	***10***
71-43-2	Benzene	02/03/2021	15:05	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	02/03/2021	15:05	0.26	U	0.26	1.0	***0.50***
75-27-4	Bromodichloromethane	02/03/2021	15:05	0.29	U	0.29	1.0	***0.50***
75-25-2	Bromoform	02/03/2021	15:05	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	02/03/2021	15:05	0.49	U	0.49	2.0	***1.0***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	530870
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	178983	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
75-15-0	Carbon disulfide	02/03/2021	15:05	0.83	U	0.83	4.0	***2.0***
56-23-5	Carbon tetrachloride	02/03/2021	15:05	0.37	U	0.37	1.0	***0.50***
108-90-7	Chlorobenzene	02/03/2021	15:05	0.37	U	0.37	1.0	***0.50***
75-00-3	Chloroethane	02/03/2021	15:05	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	02/03/2021	15:05	0.46	U	0.46	1.0	***0.50***
74-87-3	Chloromethane	02/03/2021	15:05	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	02/03/2021	15:05	0.41	U	0.41	1.0	***0.50***
10061-01-5	cis-1,3-Dichloropropene	02/03/2021	15:05	0.34	U	0.34	1.0	***0.50***
110-82-7	Cyclohexane	02/03/2021	15:05	0.71	U	0.71	2.0	***1.0***
124-48-1	Dibromochloromethane	02/03/2021	15:05	0.35	U	0.35	1.0	***0.50***
75-71-8	Dichlorodifluoromethane	02/03/2021	15:05	0.63	U	0.63	2.0	***1.0***
100-41-4	Ethylbenzene	02/03/2021	15:05	0.42	U	0.42	1.0	***0.50***
76-13-1	Freon 113	02/03/2021	15:05	1.5	U	1.5	4.0	***2.0***
98-82-8	Isopropylbenzene	02/03/2021	15:05	0.39	U	0.39	1.0	***0.50***
179601-23-1	m & p-Xylene	02/03/2021	15:05	0.74	U	0.74	2.0	***1.0***
79-20-9	Methyl Acetate	02/03/2021	15:05	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	02/03/2021	15:05	0.28	U	0.28	1.0	***0.50***
108-87-2	Methylcyclohexane	02/03/2021	15:05	0.78	U	0.78	2.0	***1.0***
75-09-2	Methylene chloride	02/03/2021	15:05	1.2	U	1.2	4.0	***2.0***
95-47-6	o-Xylene	02/03/2021	15:05	0.72	U	0.72	2.0	***1.0***
100-42-5	Styrene	02/03/2021	15:05	0.33	U	0.33	1.0	***0.50***
127-18-4	Tetrachloroethene	02/03/2021	15:05	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	02/03/2021	15:05	0.27	U	0.27	1.0	***0.50***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	530870
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	178983	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
156-60-5	trans-1,2-Dichloroethene	02/03/2021	15:05	0.35	U	0.35	1.0	***0.50***
10061-02-6	trans-1,3-Dichloropropene	02/03/2021	15:05	0.56	U	0.56	2.0	***1.0***
79-01-6	Trichloroethene	02/03/2021	15:05	0.39	U	0.39	1.0	***0.50***
75-69-4	Trichlorofluoromethane	02/03/2021	15:05	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	02/03/2021	15:05	0.14	U	0.14	0.60	***0.30***

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	531749
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	178983	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	02/04/2021	09:27	0.38	U	0.38	1.0	***0.50***
79-34-5	1,1,2,2-Tetrachloroethane	02/04/2021	09:27	0.36	U	0.36	1.0	***0.50***
79-00-5	1,1,2-Trichloroethane	02/04/2021	09:27	0.27	U	0.27	1.0	***0.50***
75-34-3	1,1-Dichloroethane	02/04/2021	09:27	0.28	U	0.28	1.0	***0.50***
75-35-4	1,1-Dichloroethene	02/04/2021	09:27	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	02/04/2021	09:27	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	02/04/2021	09:27	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	02/04/2021	09:27	0.50	U	0.50	2.0	***1.0***
106-93-4	1,2-Dibromoethane	02/04/2021	09:27	0.33	U	0.33	1.0	***0.5***
95-50-1	1,2-Dichlorobenzene	02/04/2021	09:27	0.35	U	0.35	1.0	***0.50***
107-06-2	1,2-Dichloroethane	02/04/2021	09:27	0.69	U	0.69	2.0	***1.0***
78-87-5	1,2-Dichloropropane	02/04/2021	09:27	0.37	U	0.37	1.0	***0.50***
541-73-1	1,3-Dichlorobenzene	02/04/2021	09:27	0.30	U	0.30	1.0	***0.50***
78-93-3	2-Butanone	02/04/2021	09:27	2.9	U	2.9	10	***5.0***
591-78-6	2-Hexanone	02/04/2021	09:27	3.3	U	3.3	10	***5.0***
108-10-1	4-Methyl-2-pentanone	02/04/2021	09:27	3.7	U	3.7	10	***5.0***
67-64-1	Acetone	02/04/2021	09:27	4.1	U	4.1	20	***10***
71-43-2	Benzene	02/04/2021	09:27	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	02/04/2021	09:27	0.26	U	0.26	1.0	***0.50***
75-27-4	Bromodichloromethane	02/04/2021	09:27	0.29	U	0.29	1.0	***0.50***
75-25-2	Bromoform	02/04/2021	09:27	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	02/04/2021	09:27	0.49	U	0.49	2.0	***1.0***
75-15-0	Carbon disulfide	02/04/2021	09:27	0.83	U	0.83	4.0	***2.0***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	531749
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	178983	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
56-23-5	Carbon tetrachloride	02/04/2021	09:27	0.37	U	0.37	1.0	***0.50***
108-90-7	Chlorobenzene	02/04/2021	09:27	0.37	U	0.37	1.0	***0.50***
75-00-3	Chloroethane	02/04/2021	09:27	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	02/04/2021	09:27	0.46	U	0.46	1.0	***0.50***
74-87-3	Chloromethane	02/04/2021	09:27	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	02/04/2021	09:27	0.41	U	0.41	1.0	***0.50***
10061-01-5	cis-1,3-Dichloropropene	02/04/2021	09:27	0.34	U	0.34	1.0	***0.50***
110-82-7	Cyclohexane	02/04/2021	09:27	0.71	U	0.71	2.0	***1.0***
124-48-1	Dibromochloromethane	02/04/2021	09:27	0.35	U	0.35	1.0	***0.50***
75-71-8	Dichlorodifluoromethane	02/04/2021	09:27	0.63	U	0.63	2.0	***1.0***
100-41-4	Ethylbenzene	02/04/2021	09:27	0.42	U	0.42	1.0	***0.50***
76-13-1	Freon 113	02/04/2021	09:27	1.5	U	1.5	4.0	***2.0***
98-82-8	Isopropylbenzene	02/04/2021	09:27	0.39	U	0.39	1.0	***0.50***
179601-23-1	m & p-Xylene	02/04/2021	09:27	0.74	U	0.74	2.0	***1.0***
79-20-9	Methyl Acetate	02/04/2021	09:27	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	02/04/2021	09:27	0.28	U	0.28	1.0	***0.50***
75-09-2	Methylene chloride	02/04/2021	09:27	1.2	U	1.2	4.0	***2.0***
95-47-6	o-Xylene	02/04/2021	09:27	0.72	U	0.72	2.0	***1.0***
100-42-5	Styrene	02/04/2021	09:27	0.33	U	0.33	1.0	***0.50***
127-18-4	Tetrachloroethene	02/04/2021	09:27	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	02/04/2021	09:27	0.27	U	0.27	1.0	***0.50***
156-60-5	trans-1,2-Dichloroethene	02/04/2021	09:27	0.35	U	0.35	1.0	***0.50***
10061-02-6	trans-1,3-Dichloropropene	02/04/2021	09:27	0.56	U	0.56	2.0	***1.0***

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **CCB**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	531749
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	178983	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
79-01-6	Trichloroethene	02/04/2021	09:27	0.39	U	0.39	1.0	***0.50***
75-69-4	Trichlorofluoromethane	02/04/2021	09:27	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	02/04/2021	09:27	0.14	U	0.14	0.60	***0.30***

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	159400
Analytical Run #:	178983	ICAL Calibration #:	W012921.

CTLab #	527961				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	102	80	119	
CTLab #	**527962**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	100	80	119	
CTLab #	**527963**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	98	80	119	
CTLab #	**527964**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	103	81	118	
Bromofluorobenzene	100	98	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	104	80	119	
CTLab #	**527965**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	99	89	112	
Dibromofluoromethane	100	100	80	119	
CTLab #	**527966**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99	81	118	
Bromofluorobenzene	100	102	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	100	80	119	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	159400
Analytical Run #:	178983	ICAL Calibration #:	W012921.

CTLab #	527967				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	96	81	118	
Bromofluorobenzene	100	101	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	100	80	119	

CTLab #	527969				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99	81	118	
Bromofluorobenzene	100	99	85	114	
d8-Toluene	100	108	89	112	
Dibromofluoromethane	100	100	80	119	

CTLab #	530865	Sample Type:	Lab Control Spike		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	101	85	114	
d8-Toluene	100	99.0	89	112	
Dibromofluoromethane	100	102	80	119	

CTLab #	530866	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	70	120	
Bromofluorobenzene	100	101	70	120	
d8-Toluene	100	99.0	85	120	
Dibromofluoromethane	100	102	85	115	

CTLab #	530870	Sample Type:	Method Blank		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	70	120	
Bromofluorobenzene	100	101	75	120	
d8-Toluene	100	103	85	120	
Dibromofluoromethane	100	91.0	85	115	

CTLab #	530916	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	70	120	
Bromofluorobenzene	100	102	70	120	
d8-Toluene	100	102	85	120	
Dibromofluoromethane	100	98.0	85	115	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	159400
Analytical Run #:	178983	ICAL Calibration #:	W012921.

CTLab #	530917	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	50	150	
Bromofluorobenzene	100	102	50	150	
d8-Toluene	100	102	50	150	
Dibromofluoromethane	100	98.0	50	150	
CTLab #	**531063**	Sample Type:		Matrix Spike	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	103	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	101	80	119	
CTLab #	**531125**	Sample Type:		Matrix Spike Duplicate	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	99.0	80	119	
CTLab #	**531205**	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	104	50	150	
Bromofluorobenzene	100	100	50	150	
d8-Toluene	100	102	50	150	
Dibromofluoromethane	100	102	50	150	
CTLab #	**531749**	Sample Type:		Normal Field Sample	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	70	120	
Bromofluorobenzene	100	100	75	120	
d8-Toluene	100	101	85	120	
Dibromofluoromethane	100	102	85	115	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	159400
Analytical Run #:	179112	ICAL Calibration #:	W012921.

CTLab #	529217				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	81	118	
Bromofluorobenzene	100	99	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	100	80	119	

CTLab #	529218				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	104	80	119	

CTLab #	529219				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	101	80	119	

CTLab #	529220				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	101	80	119	

CTLab #	529221				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	104	81	118	
Bromofluorobenzene	100	102	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	104	80	119	

CTLab #	529222				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	101	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	102	80	119	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	159400
Analytical Run #:	179112	ICAL Calibration #:	W012921.

CTLab #	529223				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	98	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	101	80	119	

CTLab #	529224				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99	81	118	
Bromofluorobenzene	100	102	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	101	80	119	

CTLab #	529225				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	99	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	102	80	119	

CTLab #	529226				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	102	80	119	

CTLab #	529227				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99	81	118	
Bromofluorobenzene	100	99	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	100	80	119	

CTLab #	529228				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97	81	118	
Bromofluorobenzene	100	101	85	114	
d8-Toluene	100	103	89	112	
Dibromofluoromethane	100	102	80	119	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Analytical Method: EPA 8260C | SDG: 159400

Analytical Run #: 179112 | ICAL Calibration #: W012921.

CTLab #	529229				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99	81	118	
Bromofluorobenzene	100	99	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	101	80	119	

CTLab #	530209	Sample Type:	Lab Control Spike		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	103	89	112	
Dibromofluoromethane	100	102	80	119	

CTLab #	530262	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	70	120	
Bromofluorobenzene	100	98.0	70	120	
d8-Toluene	100	103	85	120	
Dibromofluoromethane	100	102	85	115	

CTLab #	530279	Sample Type:	Method Blank		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	70	120	
Bromofluorobenzene	100	103	75	120	
d8-Toluene	100	101	85	120	
Dibromofluoromethane	100	103	85	115	

CTLab #	530575	Sample Type:	Matrix Spike		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	104	80	119	

CTLab #	530576	Sample Type:	Matrix Spike Duplicate		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	102	80	119	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	159400
Analytical Run #:	179112	ICAL Calibration #:	W012921.

CTLab #	530577	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	50	150	
Bromofluorobenzene	100	100	50	150	
d8-Toluene	100	102	50	150	
Dibromofluoromethane	100	102	50	150	

CTLab #	530621	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	70	120	
Bromofluorobenzene	100	101	70	120	
d8-Toluene	100	102	85	120	
Dibromofluoromethane	100	102	85	115	

CTLab #	530639	Sample Type:		Normal Field Sample	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	70	120	
Bromofluorobenzene	100	101	75	120	
d8-Toluene	100	99.0	85	120	
Dibromofluoromethane	100	101	85	115	

CTLab #	530698	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	105	50	150	
Bromofluorobenzene	100	98.0	50	150	
d8-Toluene	100	104	50	150	
Dibromofluoromethane	100	102	50	150	

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WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: GROUND WATER
SDG No.: 159400
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 178983
Sample No.: 531063
Parent Sample No.: 527966
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W012921.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R	
1,1,1-Trichloroethane	02/04/2021	11:00	74-131	11.8	BDL	10.0	118	
1,1,2,2-Tetrachloroethane	02/04/2021	11:00	71-121	8.92	BDL	10.0	89	
1,1,2-Trichloroethane	02/04/2021	11:00	80-119	9.67	BDL	10.0	97	
1,1-Dichloroethane	02/04/2021	11:00	77-125	10.4	BDL	10.0	104	
1,1-Dichloroethene	02/04/2021	11:00	71-131	11.3	BDL	10.0	113	
1,2,3-Trichlorobenzene	02/04/2021	11:00	69-129	9.19	BDL	10.0	92	
1,2,4-Trichlorobenzene	02/04/2021	11:00	69-130	9.11	BDL	10.0	91	
1,2-Dibromo-3-chloropropane	02/04/2021	11:00	62-128	8.97	BDL	10.0	90	
1,2-Dibromoethane	02/04/2021	11:00	77-121	9.44	BDL	10.0	94	
1,2-Dichlorobenzene	02/04/2021	11:00	80-119	8.98	BDL	10.0	90	
1,2-Dichloroethane	02/04/2021	11:00	73-128	9.84	BDL	10.0	98	
1,2-Dichloropropane	02/04/2021	11:00	78-122	10.2	BDL	10.0	102	
1,3-Dichlorobenzene	02/04/2021	11:00	80-119	9.33	BDL	10.0	93	
1,4-Dioxane	02/04/2021	11:00	59-139	753	BDL	500	151	*FAIL*
2-Butanone	02/04/2021	11:00	56-143	98.4	BDL	100	98	
2-Hexanone	02/04/2021	11:00	57-139	96.5	BDL	100	96	
4-Methyl-2-pentanone	02/04/2021	11:00	67-130	99.7	BDL	100	100	
Acetone	02/04/2021	11:00	39-160	101	BDL	100	101	
Benzene	02/04/2021	11:00	79-120	10.5	BDL	10.0	105	
Bromochloromethane	02/04/2021	11:00	78-123	9.37	BDL	10.0	94	
Bromodichloromethane	02/04/2021	11:00	79-125	9.95	BDL	10.0	100	
Bromoform	02/04/2021	11:00	66-130	9.13	BDL	10.0	91	
Bromomethane	02/04/2021	11:00	53-141	11.7	BDL	10.0	117	
Carbon disulfide	02/04/2021	11:00	64-133	21.7	BDL	20.0	108	
Carbon tetrachloride	02/04/2021	11:00	72-136	11.7	BDL	10.0	117	
Chlorobenzene	02/04/2021	11:00	82-118	9.56	BDL	10.0	96	
Chloroethane	02/04/2021	11:00	60-138	10.5	BDL	10.0	105	
Chloroform	02/04/2021	11:00	79-124	9.91	BDL	10.0	99	
Chloromethane	02/04/2021	11:00	50-139	11.6	BDL	10.0	116	
cis-1,2-Dichloroethene	02/04/2021	11:00	78-123	10.2	BDL	10.0	102	
cis-1,3-Dichloropropene	02/04/2021	11:00	75-124	9.51	BDL	10.0	95	

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WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: GROUND WATER
SDG No.: 159400
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 178983
Sample No.: 531063
Parent Sample No.: 527966
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W012921.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Cyclohexane	02/04/2021	11:00	71-130	12.1	BDL	10.0	121
Dibromochloromethane	02/04/2021	11:00	74-126	9.06	BDL	10.0	91
Dichlorodifluoromethane	02/04/2021	11:00	32-152	11.9	BDL	10.0	119
Ethylbenzene	02/04/2021	11:00	79-121	10.3	BDL	10.0	103
Freon 113	02/04/2021	11:00	70-136	23.0	BDL	20.0	115
Isopropylbenzene	02/04/2021	11:00	72-131	10.7	BDL	10.0	107
m & p-Xylene	02/04/2021	11:00	80-121	20.1	BDL	20.0	100
Methyl Acetate	02/04/2021	11:00	56-136	9.05	BDL	10.0	90
Methyl tert-butyl ether	02/04/2021	11:00	71-124	10.0	BDL	10.0	100
Methylcyclohexane	02/04/2021	11:00	72-132	11.4	BDL	10.0	114
Methylene chloride	02/04/2021	11:00	74-124	10.3	BDL	10.0	103
o-Xylene	02/04/2021	11:00	78-122	9.99	BDL	10.0	100
Styrene	02/04/2021	11:00	78-123	9.98	BDL	10.0	100
Tetrachloroethene	02/04/2021	11:00	74-129	10.2	BDL	10.0	102
Toluene	02/04/2021	11:00	80-121	10.4	BDL	10.0	104
trans-1,2-Dichloroethene	02/04/2021	11:00	75-124	10.6	BDL	10.0	106
trans-1,3-Dichloropropene	02/04/2021	11:00	73-127	9.72	BDL	10.0	97
Trichloroethene	02/04/2021	11:00	79-123	10.7	BDL	10.0	107
Trichlorofluoromethane	02/04/2021	11:00	65-141	11.8	BDL	10.0	118
Vinyl chloride	02/04/2021	11:00	58-137	11.8	BDL	10.0	118

Spike Recovery: 1 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description

13MW2

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 159400

Analytical Method: Mod RSK 175 Concentration Units: ug/L

Analytical Run #: 179084 Sample No.: 529954 Parent Sample No.: 527966

Analytical Prep Batch #: 79881 Analytical Preparation Date/Time: 02/01/2021 13:05

ICAL Calibration #: P4DG121720

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Ethane	02/03/2021	12:22	74-131	4.12	BDL	4.77	86
Ethene	02/03/2021	12:22	72-133	6.04	BDL	6.79	89
Methane	02/03/2021	12:22	73-125	2.08	BDL	2.29	91

Spike Recovery: 0 out of 3 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **48MW06**

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER | SDG No.: 159400

Analytical Method: EPA 8260C | Concentration Units: ug/L

Analytical Run #: 179112 | Sample No.: 530575 | Parent Sample No.: 529217

Analytical Prep Batch #: 0 | Analytical Preparation Date/Time:

ICAL Calibration #: W012921.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R	
1,1,1-Trichloroethane	02/02/2021	21:00	74-131	11.6	0.76	10.0	108	
1,1,2,2-Tetrachloroethane	02/02/2021	21:00	71-121	8.25	BDL	10.0	82	
1,1,2-Trichloroethane	02/02/2021	21:00	80-119	9.51	BDL	10.0	95	
1,1-Dichloroethane	02/02/2021	21:00	77-125	14.4	4.2	10.0	102	
1,1-Dichloroethene	02/02/2021	21:00	71-131	11.3	BDL	10.0	113	
1,2,3-Trichlorobenzene	02/02/2021	21:00	69-129	8.86	BDL	10.0	89	
1,2,4-Trichlorobenzene	02/02/2021	21:00	69-130	8.89	BDL	10.0	89	
1,2-Dibromo-3-chloropropane	02/02/2021	21:00	62-128	7.84	BDL	10.0	78	
1,2-Dibromoethane	02/02/2021	21:00	77-121	9.02	BDL	10.0	90	
1,2-Dichlorobenzene	02/02/2021	21:00	80-119	9.03	BDL	10.0	90	
1,2-Dichloroethane	02/02/2021	21:00	73-128	9.53	BDL	10.0	95	
1,2-Dichloropropane	02/02/2021	21:00	78-122	9.72	BDL	10.0	97	
1,3-Dichlorobenzene	02/02/2021	21:00	80-119	8.90	BDL	10.0	89	
1,4-Dioxane	02/02/2021	21:00	59-139	279	BDL	500	56	*FAIL*
2-Butanone	02/02/2021	21:00	56-143	84.8	BDL	100	85	
2-Hexanone	02/02/2021	21:00	57-139	88.4	BDL	100	88	
4-Methyl-2-pentanone	02/02/2021	21:00	67-130	92.5	BDL	100	92	
Acetone	02/02/2021	21:00	39-160	80.9	BDL	100	81	
Benzene	02/02/2021	21:00	79-120	10.5	BDL	10.0	105	
Bromochloromethane	02/02/2021	21:00	78-123	9.77	BDL	10.0	98	
Bromodichloromethane	02/02/2021	21:00	79-125	9.51	BDL	10.0	95	
Bromoform	02/02/2021	21:00	66-130	7.49	BDL	10.0	75	
Bromomethane	02/02/2021	21:00	53-141	12.5	BDL	10.0	125	
Carbon disulfide	02/02/2021	21:00	64-133	21.0	BDL	20.0	105	
Carbon tetrachloride	02/02/2021	21:00	72-136	10.8	BDL	10.0	108	
Chlorobenzene	02/02/2021	21:00	82-118	9.52	BDL	10.0	95	
Chloroethane	02/02/2021	21:00	60-138	10.4	BDL	10.0	104	
Chloroform	02/02/2021	21:00	79-124	9.63	BDL	10.0	96	
Chloromethane	02/02/2021	21:00	50-139	11.3	BDL	10.0	113	
cis-1,2-Dichloroethene	02/02/2021	21:00	78-123	18.0	8.2	10.0	98	
cis-1,3-Dichloropropene	02/02/2021	21:00	75-124	9.38	BDL	10.0	94	

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **48MW06**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: GROUND WATER
SDG No.: 159400
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 179112
Sample No.: 530575
Parent Sample No.: 529217
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W012921.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Cyclohexane	02/02/2021	21:00	71-130	11.3	BDL	10.0	113
Dibromochloromethane	02/02/2021	21:00	74-126	8.48	BDL	10.0	85
Dichlorodifluoromethane	02/02/2021	21:00	32-152	11.4	BDL	10.0	114
Ethylbenzene	02/02/2021	21:00	79-121	10.1	BDL	10.0	101
Freon 113	02/02/2021	21:00	70-136	22.3	BDL	20.0	112
Isopropylbenzene	02/02/2021	21:00	72-131	10.3	BDL	10.0	103
m & p-Xylene	02/02/2021	21:00	80-121	20.2	BDL	20.0	101
Methyl Acetate	02/02/2021	21:00	56-136	8.93	BDL	10.0	89
Methyl tert-butyl ether	02/02/2021	21:00	71-124	9.32	BDL	10.0	93
Methylcyclohexane	02/02/2021	21:00	72-132	11.0	BDL	10.0	110
Methylene chloride	02/02/2021	21:00	74-124	9.89	BDL	10.0	99
o-Xylene	02/02/2021	21:00	78-122	9.46	BDL	10.0	95
Styrene	02/02/2021	21:00	78-123	9.48	BDL	10.0	95
Tetrachloroethene	02/02/2021	21:00	74-129	11.6	0.98	10.0	106
Toluene	02/02/2021	21:00	80-121	10.6	0.60	10.0	100
trans-1,2-Dichloroethene	02/02/2021	21:00	75-124	10.2	BDL	10.0	102
trans-1,3-Dichloropropene	02/02/2021	21:00	73-127	9.01	BDL	10.0	90
Trichloroethene	02/02/2021	21:00	79-123	15.8	6.1	10.0	97
Trichlorofluoromethane	02/02/2021	21:00	65-141	11.6	BDL	10.0	116
Vinyl chloride	02/02/2021	21:00	58-137	11.7	BDL	10.0	117

Spike Recovery: 1 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

13MW2

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 159400

Analytical Method: EPA 8260C Concentration Units: ug/L

Analytical Run #: 178983 Sample No.: 531125 Parent Sample No.: 531063

Analytical Prep Batch #: 0 Analytical Preparation Date/Time:

ICAL Calibration #: W012921.

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)	
1,1,1-Trichloroethane	02/04/2021	11:31	12.0	10.0	120	2	74-131	20	
1,1,2,2-Tetrachloroethane	02/04/2021	11:31	9.38	10.0	94	5	71-121	20	
1,1,2-Trichloroethane	02/04/2021	11:31	10.7	10.0	107	10	80-119	20	
1,1-Dichloroethane	02/04/2021	11:31	11.2	10.0	112	7	77-125	20	
1,1-Dichloroethene	02/04/2021	11:31	11.6	10.0	116	3	71-131	20	
1,2,3-Trichlorobenzene	02/04/2021	11:31	9.54	10.0	95	4	69-129	20	
1,2,4-Trichlorobenzene	02/04/2021	11:31	9.68	10.0	97	6	69-130	20	
1,2-Dibromo-3-chloropropane	02/04/2021	11:31	9.80	10.0	98	9	62-128	20	
1,2-Dibromoethane	02/04/2021	11:31	10.2	10.0	102	8	77-121	20	
1,2-Dichlorobenzene	02/04/2021	11:31	9.58	10.0	96	6	80-119	20	
1,2-Dichloroethane	02/04/2021	11:31	9.97	10.0	100	1	73-128	20	
1,2-Dichloropropane	02/04/2021	11:31	10.8	10.0	108	5	78-122	20	
1,3-Dichlorobenzene	02/04/2021	11:31	9.67	10.0	97	4	80-119	20	
1,4-Dioxane	02/04/2021	11:31	818	500	164	8	59-139	20	*FAIL*
2-Butanone	02/04/2021	11:31	103	100	103	5	56-143	20	
2-Hexanone	02/04/2021	11:31	102	100	102	6	57-139	20	
4-Methyl-2-pentanone	02/04/2021	11:31	106	100	106	6	67-130	20	
Acetone	02/04/2021	11:31	105	100	105	4	39-160	20	
Benzene	02/04/2021	11:31	10.9	10.0	109	4	79-120	20	
Bromochloromethane	02/04/2021	11:31	10.1	10.0	101	7	78-123	20	
Bromodichloromethane	02/04/2021	11:31	10.1	10.0	101	1	79-125	20	
Bromoform	02/04/2021	11:31	9.23	10.0	92	1	66-130	20	
Bromomethane	02/04/2021	11:31	11.7	10.0	117	0	53-141	20	
Carbon disulfide	02/04/2021	11:31	22.4	20.0	112	3	64-133	20	
Carbon tetrachloride	02/04/2021	11:31	11.8	10.0	118	1	72-136	20	
Chlorobenzene	02/04/2021	11:31	9.98	10.0	100	4	82-118	20	
Chloroethane	02/04/2021	11:31	10.8	10.0	108	3	60-138	20	
Chloroform	02/04/2021	11:31	10.4	10.0	104	4	79-124	20	
Chloromethane	02/04/2021	11:31	11.5	10.0	115	1	50-139	20	
cis-1,2-Dichloroethene	02/04/2021	11:31	10.7	10.0	107	6	78-123	20	
cis-1,3-Dichloropropene	02/04/2021	11:31	9.87	10.0	99	4	75-124	20	

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

13MW2

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 159400

Analytical Method: EPA 8260C Concentration Units: ug/L

Analytical Run #: 178983 Sample No.: 531125 Parent Sample No.: 531063

Analytical Prep Batch #: 0 Analytical Preparation Date/Time:

ICAL Calibration #: W012921.

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)
Cyclohexane	02/04/2021	11:31	12.2	10.0	122	2	71-130	20
Dibromochloromethane	02/04/2021	11:31	9.51	10.0	95	5	74-126	20
Dichlorodifluoromethane	02/04/2021	11:31	12.4	10.0	124	4	32-152	20
Ethylbenzene	02/04/2021	11:31	10.7	10.0	107	4	79-121	20
Freon 113	02/04/2021	11:31	23.6	20.0	118	3	70-136	20
Isopropylbenzene	02/04/2021	11:31	10.7	10.0	107	0	72-131	20
m & p-Xylene	02/04/2021	11:31	21.0	20.0	105	4	80-121	20
Methyl Acetate	02/04/2021	11:31	9.16	10.0	92	1	56-136	20
Methyl tert-butyl ether	02/04/2021	11:31	10.5	10.0	105	5	71-124	20
Methylcyclohexane	02/04/2021	11:31	11.7	10.0	117	2	72-132	20
Methylene chloride	02/04/2021	11:31	10.8	10.0	108	5	74-124	20
o-Xylene	02/04/2021	11:31	9.91	10.0	99	1	78-122	20
Styrene	02/04/2021	11:31	10.1	10.0	101	1	78-123	20
Tetrachloroethene	02/04/2021	11:31	10.7	10.0	107	5	74-129	20
Toluene	02/04/2021	11:31	10.8	10.0	108	4	80-121	20
trans-1,2-Dichloroethene	02/04/2021	11:31	10.9	10.0	109	3	75-124	20
trans-1,3-Dichloropropene	02/04/2021	11:31	9.90	10.0	99	2	73-127	20
Trichloroethene	02/04/2021	11:31	11.0	10.0	110	3	79-123	20
Trichlorofluoromethane	02/04/2021	11:31	12.5	10.0	125	6	65-141	20
Vinyl chloride	02/04/2021	11:31	12.3	10.0	123	5	58-137	20

RPD or Spike Recovery: 1 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

13MW2

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 159400

Analytical Method: Mod RSK 175 Concentration Units: ug/L

Analytical Run #: 179084 Sample No.: 529955 Parent Sample No.: 529954

Analytical Prep Batch #: 79881 Analytical Preparation Date/Time: 02/01/2021 13:05

ICAL Calibration #: P4DG121720

Analyte	Analysis Date/Time	Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)
Ethane	02/03/2021 12:26	4.30	4.77	90	4	74-131	30
Ethene	02/03/2021 12:26	6.28	6.79	92	4	72-133	30
Methane	02/03/2021 12:26	2.15	2.29	94	3	73-125	30

RPD or Spike Recovery: 0 out of 3 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

Sample Description: **48MW06**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: GROUND WATER
SDG No.: 159400
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 179112
Sample No.: 530576
Parent Sample No.: 530575
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W012921.

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)	
1,1,1-Trichloroethane	02/02/2021	21:30	12.6	10.0	118	9	74-131	20	
1,1,2,2-Tetrachloroethane	02/02/2021	21:30	8.89	10.0	89	7	71-121	20	
1,1,2-Trichloroethane	02/02/2021	21:30	9.95	10.0	100	5	80-119	20	
1,1-Dichloroethane	02/02/2021	21:30	14.6	10.0	104	2	77-125	20	
1,1-Dichloroethene	02/02/2021	21:30	11.8	10.0	118	5	71-131	20	
1,2,3-Trichlorobenzene	02/02/2021	21:30	9.68	10.0	97	9	69-129	20	
1,2,4-Trichlorobenzene	02/02/2021	21:30	9.43	10.0	94	6	69-130	20	
1,2-Dibromo-3-chloropropane	02/02/2021	21:30	8.78	10.0	88	11	62-128	20	
1,2-Dibromoethane	02/02/2021	21:30	9.26	10.0	93	3	77-121	20	
1,2-Dichlorobenzene	02/02/2021	21:30	10.0	10.0	100	11	80-119	20	
1,2-Dichloroethane	02/02/2021	21:30	10.1	10.0	101	6	73-128	20	
1,2-Dichloropropane	02/02/2021	21:30	10.4	10.0	104	7	78-122	20	
1,3-Dichlorobenzene	02/02/2021	21:30	9.99	10.0	100	12	80-119	20	
1,4-Dioxane	02/02/2021	21:30	525	500	105	61	59-139	20	*FAIL*
2-Butanone	02/02/2021	21:30	88.3	100	88	4	56-143	20	
2-Hexanone	02/02/2021	21:30	94.3	100	94	6	57-139	20	
4-Methyl-2-pentanone	02/02/2021	21:30	96.7	100	97	4	67-130	20	
Acetone	02/02/2021	21:30	86.2	100	86	6	39-160	20	
Benzene	02/02/2021	21:30	11.0	10.0	110	4	79-120	20	
Bromochloromethane	02/02/2021	21:30	10.1	10.0	101	3	78-123	20	
Bromodichloromethane	02/02/2021	21:30	10.2	10.0	102	7	79-125	20	
Bromoform	02/02/2021	21:30	8.42	10.0	84	12	66-130	20	
Bromomethane	02/02/2021	21:30	13.2	10.0	132	6	53-141	20	
Carbon disulfide	02/02/2021	21:30	22.0	20.0	110	5	64-133	20	
Carbon tetrachloride	02/02/2021	21:30	11.5	10.0	115	6	72-136	20	
Chlorobenzene	02/02/2021	21:30	10.1	10.0	101	6	82-118	20	
Chloroethane	02/02/2021	21:30	11.3	10.0	113	9	60-138	20	
Chloroform	02/02/2021	21:30	10.3	10.0	103	7	79-124	20	
Chloromethane	02/02/2021	21:30	12.0	10.0	120	6	50-139	20	
cis-1,2-Dichloroethene	02/02/2021	21:30	18.3	10.0	101	2	78-123	20	
cis-1,3-Dichloropropene	02/02/2021	21:30	10.0	10.0	100	6	75-124	20	

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

48MW06

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 159400

Analytical Method: EPA 8260C Concentration Units: ug/L

Analytical Run #: 179112 Sample No.: 530576 Parent Sample No.: 530575

Analytical Prep Batch #: 0 Analytical Preparation Date/Time:

ICAL Calibration #: W012921.

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)
Cyclohexane	02/02/2021	21:30	12.0	10.0	120	7	71-130	20
Dibromochloromethane	02/02/2021	21:30	9.29	10.0	93	9	74-126	20
Dichlorodifluoromethane	02/02/2021	21:30	12.7	10.0	127	11	32-152	20
Ethylbenzene	02/02/2021	21:30	10.9	10.0	109	7	79-121	20
Freon 113	02/02/2021	21:30	24.1	20.0	120	8	70-136	20
Isopropylbenzene	02/02/2021	21:30	10.8	10.0	108	5	72-131	20
m & p-Xylene	02/02/2021	21:30	21.6	20.0	108	7	80-121	20
Methyl Acetate	02/02/2021	21:30	8.68	10.0	87	3	56-136	20
Methyl tert-butyl ether	02/02/2021	21:30	9.92	10.0	99	6	71-124	20
Methylcyclohexane	02/02/2021	21:30	12.1	10.0	121	10	72-132	20
Methylene chloride	02/02/2021	21:30	10.7	10.0	107	8	74-124	20
o-Xylene	02/02/2021	21:30	10.4	10.0	104	9	78-122	20
Styrene	02/02/2021	21:30	10.2	10.0	102	8	78-123	20
Tetrachloroethene	02/02/2021	21:30	11.9	10.0	109	3	74-129	20
Toluene	02/02/2021	21:30	11.2	10.0	106	6	80-121	20
trans-1,2-Dichloroethene	02/02/2021	21:30	10.9	10.0	109	7	75-124	20
trans-1,3-Dichloropropene	02/02/2021	21:30	9.69	10.0	97	7	73-127	20
Trichloroethene	02/02/2021	21:30	16.6	10.0	105	5	79-123	20
Trichlorofluoromethane	02/02/2021	21:30	12.3	10.0	123	5	65-141	20
Vinyl chloride	02/02/2021	21:30	12.1	10.0	121	4	58-137	20

RPD or Spike Recovery: 1 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

LCS

WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 529957
SDG No.: 159400
Analytical Method: Mod RSK 175
Concentration Units: ug/L

Sample No.: 529957
Parent Sample No.: 0
Analytical Prep Batch #: 79881
Analytical Preparation Date/Time: 02/01/2021 13:05
Analytical Run #: 179084
ICAL Calibration #: P4DG121720

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Ethane	02/03/2021	11:20	74-131	4.13		4.77	87
Ethene	02/03/2021	11:20	72-133	5.72		6.79	84
Methane	02/03/2021	11:20	73-125	2.22		2.29	97

Spike Recovery: 0 out of 3 outside limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 530209
SDG No.: 159400
Analytical Method: EPA 8260C
Concentration Units: ug/L

Sample No.: 530209
Parent Sample No.: 0
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 179112
ICAL Calibration #: W012921.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1,1-Trichloroethane	02/02/2021	10:54	74-131	10.6		10.0	106
1,1,2,2-Tetrachloroethane	02/02/2021	10:54	71-121	9.28		10.0	93
1,1,2-Trichloroethane	02/02/2021	10:54	80-119	10.1		10.0	101
1,1-Dichloroethane	02/02/2021	10:54	77-125	9.97		10.0	100
1,1-Dichloroethene	02/02/2021	10:54	71-131	10.7		10.0	107
1,2,3-Trichlorobenzene	02/02/2021	10:54	69-129	9.45		10.0	94
1,2,4-Trichlorobenzene	02/02/2021	10:54	69-130	10.1		10.0	101
1,2-Dibromo-3-chloropropane	02/02/2021	10:54	62-128	8.64		10.0	86
1,2-Dibromoethane	02/02/2021	10:54	77-121	9.93		10.0	99
1,2-Dichlorobenzene	02/02/2021	10:54	80-119	9.34		10.0	93
1,2-Dichloroethane	02/02/2021	10:54	73-128	9.84		10.0	98
1,2-Dichloropropane	02/02/2021	10:54	78-122	9.88		10.0	99
1,3-Dichlorobenzene	02/02/2021	10:54	80-119	9.60		10.0	96
1,4-Dioxane	02/02/2021	10:54	59-139	350		500	70
2-Butanone	02/02/2021	10:54	56-143	96.2		100	96
2-Hexanone	02/02/2021	10:54	57-139	94.5		100	94
4-Methyl-2-pentanone	02/02/2021	10:54	67-130	97.4		100	97
Acetone	02/02/2021	10:54	39-160	100		100	100
Benzene	02/02/2021	10:54	79-120	10.2		10.0	102
Bromochloromethane	02/02/2021	10:54	78-123	9.46		10.0	95
Bromodichloromethane	02/02/2021	10:54	79-125	9.58		10.0	96
Bromoform	02/02/2021	10:54	66-130	8.79		10.0	88
Bromomethane	02/02/2021	10:54	53-141	11.5		10.0	115
Carbon disulfide	02/02/2021	10:54	64-133	20.9		20.0	104
Carbon tetrachloride	02/02/2021	10:54	72-136	10.9		10.0	109
Chlorobenzene	02/02/2021	10:54	82-118	9.69		10.0	97
Chloroethane	02/02/2021	10:54	60-138	10.2		10.0	102
Chloroform	02/02/2021	10:54	79-124	9.67		10.0	97

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Sample No.: 530209

SDG No.: 159400

Analytical Method: EPA 8260C

Concentration Units: ug/L

Sample No.: 530209

Parent Sample No.: 0

Analytical Prep Batch #: 0

Analytical Preparation Date/Time:

Analytical Run #: 179112

ICAL Calibration #: W012921.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Chloromethane	02/02/2021	10:54	50-139	10.2		10.0	102
cis-1,2-Dichloroethene	02/02/2021	10:54	78-123	9.66		10.0	97
cis-1,3-Dichloropropene	02/02/2021	10:54	75-124	10.1		10.0	101
Cyclohexane	02/02/2021	10:54	71-130	10.9		10.0	109
Dibromochloromethane	02/02/2021	10:54	74-126	9.44		10.0	94
Dichlorodifluoromethane	02/02/2021	10:54	32-152	11.0		10.0	110
Ethylbenzene	02/02/2021	10:54	79-121	10.2		10.0	102
Freon 113	02/02/2021	10:54	70-136	23.0		20.0	115
Isopropylbenzene	02/02/2021	10:54	72-131	10.2		10.0	102
m & p-Xylene	02/02/2021	10:54	80-121	20.0		20.0	100
Methyl Acetate	02/02/2021	10:54	56-136	9.47		10.0	95
Methyl tert-butyl ether	02/02/2021	10:54	71-124	9.76		10.0	98
Methylcyclohexane	02/02/2021	10:54	72-132	10.9		10.0	109
Methylene chloride	02/02/2021	10:54	74-124	9.62		10.0	96
o-Xylene	02/02/2021	10:54	78-122	9.60		10.0	96
Styrene	02/02/2021	10:54	78-123	9.81		10.0	98
Tetrachloroethene	02/02/2021	10:54	74-129	10.3		10.0	103
Toluene	02/02/2021	10:54	80-121	10.1		10.0	101
trans-1,2-Dichloroethene	02/02/2021	10:54	75-124	10.1		10.0	101
trans-1,3-Dichloropropene	02/02/2021	10:54	73-127	10.1		10.0	101
Trichloroethene	02/02/2021	10:54	79-123	9.86		10.0	99
Trichlorofluoromethane	02/02/2021	10:54	65-141	11.4		10.0	114
Vinyl chloride	02/02/2021	10:54	58-137	10.6		10.0	106

Spike Recovery: 0 out of 51 outside limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 530865
SDG No.: 159400
Analytical Method: EPA 8260C
Concentration Units: ug/L

Sample No.: 530865
Parent Sample No.: 0
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 178983
ICAL Calibration #: W012921.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R	
1,1,1-Trichloroethane	02/03/2021	13:32	74-131	11.2		10.0	112	
1,1,2,2-Tetrachloroethane	02/03/2021	13:32	71-121	9.59		10.0	96	
1,1,2-Trichloroethane	02/03/2021	13:32	80-119	9.64		10.0	96	
1,1-Dichloroethane	02/03/2021	13:32	77-125	10.1		10.0	101	
1,1-Dichloroethene	02/03/2021	13:32	71-131	10.5		10.0	105	
1,2,3-Trichlorobenzene	02/03/2021	13:32	69-129	10.1		10.0	101	
1,2,4-Trichlorobenzene	02/03/2021	13:32	69-130	10.4		10.0	104	
1,2-Dibromo-3-chloropropane	02/03/2021	13:32	62-128	10.4		10.0	104	
1,2-Dibromoethane	02/03/2021	13:32	77-121	10.7		10.0	107	
1,2-Dichlorobenzene	02/03/2021	13:32	80-119	9.65		10.0	96	
1,2-Dichloroethane	02/03/2021	13:32	73-128	9.73		10.0	97	
1,2-Dichloropropane	02/03/2021	13:32	78-122	10.0		10.0	100	
1,3-Dichlorobenzene	02/03/2021	13:32	80-119	9.94		10.0	99	
1,4-Dioxane	02/03/2021	13:32	59-139	741		500	148	*FAIL*
2-Butanone	02/03/2021	13:32	56-143	106		100	106	
2-Hexanone	02/03/2021	13:32	57-139	114		100	114	
4-Methyl-2-pentanone	02/03/2021	13:32	67-130	106		100	106	
Acetone	02/03/2021	13:32	39-160	114		100	114	
Benzene	02/03/2021	13:32	79-120	10.4		10.0	104	
Bromochloromethane	02/03/2021	13:32	78-123	9.92		10.0	99	
Bromodichloromethane	02/03/2021	13:32	79-125	10.2		10.0	102	
Bromoform	02/03/2021	13:32	66-130	9.66		10.0	97	
Bromomethane	02/03/2021	13:32	53-141	10.8		10.0	108	
Carbon disulfide	02/03/2021	13:32	64-133	20.6		20.0	103	
Carbon tetrachloride	02/03/2021	13:32	72-136	11.2		10.0	112	
Chlorobenzene	02/03/2021	13:32	82-118	9.91		10.0	99	
Chloroethane	02/03/2021	13:32	60-138	10.5		10.0	105	
Chloroform	02/03/2021	13:32	79-124	9.83		10.0	98	

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Sample No.: 530865

SDG No.: 159400

Analytical Method: EPA 8260C

Concentration Units: ug/L

Sample No.: 530865

Parent Sample No.: 0

Analytical Prep Batch #: 0

Analytical Preparation Date/Time:

Analytical Run #: 178983

ICAL Calibration #: W012921.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Chloromethane	02/03/2021	13:32	50-139	10.8		10.0	108
cis-1,2-Dichloroethene	02/03/2021	13:32	78-123	9.85		10.0	98
cis-1,3-Dichloropropene	02/03/2021	13:32	75-124	10.0		10.0	100
Cyclohexane	02/03/2021	13:32	71-130	11.5		10.0	115
Dibromochloromethane	02/03/2021	13:32	74-126	10.2		10.0	102
Dichlorodifluoromethane	02/03/2021	13:32	32-152	11.6		10.0	116
Ethylbenzene	02/03/2021	13:32	79-121	10.4		10.0	104
Freon 113	02/03/2021	13:32	70-136	22.9		20.0	114
Isopropylbenzene	02/03/2021	13:32	72-131	11.5		10.0	115
m & p-Xylene	02/03/2021	13:32	80-121	20.7		20.0	104
Methyl Acetate	02/03/2021	13:32	56-136	10.0		10.0	100
Methyl tert-butyl ether	02/03/2021	13:32	71-124	10.2		10.0	102
Methylcyclohexane	02/03/2021	13:32	72-132	11.8		10.0	118
Methylene chloride	02/03/2021	13:32	74-124	9.75		10.0	98
o-Xylene	02/03/2021	13:32	78-122	9.83		10.0	98
Styrene	02/03/2021	13:32	78-123	10.0		10.0	100
Tetrachloroethene	02/03/2021	13:32	74-129	9.94		10.0	99
Toluene	02/03/2021	13:32	80-121	9.96		10.0	100
trans-1,2-Dichloroethene	02/03/2021	13:32	75-124	10.4		10.0	104
trans-1,3-Dichloropropene	02/03/2021	13:32	73-127	10.1		10.0	101
Trichloroethene	02/03/2021	13:32	79-123	10.5		10.0	105
Trichlorofluoromethane	02/03/2021	13:32	65-141	11.0		10.0	110
Vinyl chloride	02/03/2021	13:32	58-137	11.4		10.0	114

Spike Recovery: 1 out of 51 outside limits

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	529956	SDG No.:	159400
Matrix:	LIQUID	Date Extracted:	02/01/2021
Date Analyzed:	02/03/2021	Time Analyzed:	11:27
Analytical Method:	Mod RSK 175	Extraction Method:	METHOD
Analytical Run #:	179084	Extraction Batch #:	79881
		ICAL Calibration #:	P4DG121720

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	CCV	530860	02/03/2021 11:12	P4DG121720
2	LCSW	529957	02/03/2021 11:20	P4DG121720
3	MBW	529956	02/03/2021 11:27	P4DG121720
4	13MW5	527961	02/03/2021 11:33	P4DG121720
5	13MW4	527962	02/03/2021 11:38	P4DG121720
6	13MW3	527963	02/03/2021 11:43	P4DG121720
7	13TW3	527964	02/03/2021 11:48	P4DG121720
8	49MW04	527965	02/03/2021 11:51	P4DG121720
9	13MW2	527966	02/03/2021 12:10	P4DG121720
10	49MW02MSW	529954	02/03/2021 12:22	P4DG121720
11	49MW02MSDW	529955	02/03/2021 12:26	P4DG121720
12	49MW05	527967	02/03/2021 12:30	P4DG121720
13	48MW06	529217	02/03/2021 12:36	P4DG121720
14	48MW07	529218	02/03/2021 12:44	P4DG121720
15	49MW03	529219	02/03/2021 12:49	P4DG121720
16	CCV	530861	02/03/2021 12:53	P4DG121720
17	49MW02	529220	02/03/2021 13:01	P4DG121720
18	48MW3	529221	02/03/2021 13:05	P4DG121720
19	48TW3	529222	02/03/2021 13:10	P4DG121720
20	50MW02	529223	02/03/2021 13:16	P4DG121720
21	EQB-50MW02	529224	02/03/2021 13:21	P4DG121720
22	48MW2	529226	02/03/2021 13:25	P4DG121720
23	49MW01	529227	02/03/2021 13:30	P4DG121720
24	48MW1	529228	02/03/2021 13:33	P4DG121720
25	CCV	530862	02/03/2021 13:36	P4DG121720

CT LABORATORIES
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4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	530279	SDG No.:	159400
Matrix:	LIQUID	Date Extracted:	
Date Analyzed:	02/02/2021	Time Analyzed:	11:55
Analytical Method:	EPA 8260C	Extraction Method:	NONE
Analytical Run #:	179112	Extraction Batch #:	0
		ICAL Calibration #:	W012921.

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	BFB	530894	02/02/2021 10:39	
2	LCSW	530209	02/02/2021 10:54	W012921.
3	CCV	530262	02/02/2021 10:54	W012921.
4	MBW	530279	02/02/2021 11:55	W012921.
5	TB-2	529225	02/02/2021 14:27	W012921.
6	TB-3	529229	02/02/2021 14:58	W012921.
7	48MW06	529217	02/02/2021 15:29	W012921.
8	48MW07	529218	02/02/2021 15:59	W012921.
9	49MW03	529219	02/02/2021 16:30	W012921.
10	49MW02	529220	02/02/2021 17:00	W012921.
11	48MW3	529221	02/02/2021 17:31	W012921.
12	48TW3	529222	02/02/2021 18:01	W012921.
13	EQB-50MW02	529224	02/02/2021 19:01	W012921.
14	48MW2	529226	02/02/2021 19:31	W012921.
15	49MW01	529227	02/02/2021 20:00	W012921.
16	48MW1	529228	02/02/2021 20:30	W012921.
17	48MW06MSW	530575	02/02/2021 21:00	W012921.
18	48MW06MSDW	530576	02/02/2021 21:30	W012921.
19	CCVF	530577	02/02/2021 22:00	W012921.
20	BFB	530895	02/03/2021 07:50	
21	CCV	530621	02/03/2021 08:06	W012921.
22	CCB	530639	02/03/2021 09:07	W012921.
23	50MW02	529223	02/03/2021 09:37	W012921.
24	48MW3	529221	02/03/2021 10:10	W012921.
25	48TW3	529222	02/03/2021 10:45	W012921.
26	CCVF	530698	02/03/2021 11:22	W012921.

CT LABORATORIES
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4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	530870	SDG No.:	159400
Matrix:	LIQUID	Date Extracted:	
Date Analyzed:	02/03/2021	Time Analyzed:	15:05
Analytical Method:	EPA 8260C	Extraction Method:	NONE
Analytical Run #:	178983	Extraction Batch #:	0
		ICAL Calibration #:	W012921.

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	BFB	531507	02/03/2021 13:16	
2	LCSW	530865	02/03/2021 13:32	W012921.
3	CCV	530866	02/03/2021 13:32	W012921.
4	MBW	530870	02/03/2021 15:05	W012921.
5	TB-01	527969	02/03/2021 15:36	W012921.
6	13MW5	527961	02/03/2021 18:41	W012921.
7	13MW4	527962	02/03/2021 19:11	W012921.
8	13MW3	527963	02/03/2021 19:42	W012921.
9	13TW3	527964	02/03/2021 20:13	W012921.
10	49MW04	527965	02/03/2021 20:43	W012921.
11	13MW2	527966	02/03/2021 21:14	W012921.
12	49MW05	527967	02/03/2021 21:44	W012921.
13	BFB	531506	02/04/2021 07:38	
14	CCV	530916	02/04/2021 08:25	W012921.
15	CCVF	530917	02/04/2021 08:25	W012921.
16	CCB	531749	02/04/2021 09:27	W012921.
17	13MW2MSW	531063	02/04/2021 11:00	W012921.
18	13MW2MSDW	531125	02/04/2021 11:31	W012921.
19	CCVF	531205	02/04/2021 12:02	W012921.

BFB

Data File : C:\INSTARCH\DATA\JAN2921\BFB1.D Vial: 1
Acq On : 29 Jan 2021 11:59 Operator: RLD-DGS
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W012921.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.675 to 4.687 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.2	21155	PASS
75	95	30	60	52.6	52588	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.9	6926	PASS
173	174	0.00	2	0.5	401	PASS
174	95	50	100	87.5	87477	PASS
175	174	5	9	7.9	6875	PASS
176	174	95	101	95.8	83820	PASS
177	176	5	9	8.0	6742	PASS

W012921.M Wed Feb 03 14:37:40 2021

pl_ilog
Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W012921.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\JAN2921\BFB1.D
Injection Date : 29 Jan 2021 Log Time Period (hrs) : ALL
Injection Time : 11:59 Total files within period : 17
Sample Directory : C:\INSTARCH\DATA\JAN2921\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT1 0.5/5.0 ug/L, 5.0 mL	29 Jan 2021	13:44
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT2 1.00/10.00 ug/L, 5.0	29 Jan 2021	14:14
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT3 2.00/20.0 ug/L, 5.0	29 Jan 2021	14:44
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT4 5.00/50.0 ug/L, 5.0	29 Jan 2021	15:14
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT5 10.0/100.0 ug/L, 5.0	29 Jan 2021	15:43
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT6 20.0/200.0 ug/L, 5.0	29 Jan 2021	16:13
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT7 30.0/300.0 ug/L, 5.0	29 Jan 2021	16:43
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT8 40.0/400.0 ug/L, 5.0	29 Jan 2021	17:12
WCAL9	1.00	1.00	1.00	INITIAL CALIB. PT9 80.0/800.0 ug/L, 5.0	29 Jan 2021	17:42
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	29 Jan 2021	18:41
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF 30.0/300 ug/L, 5.0 m	29 Jan 2021	19:10
ICB1	1.00	1.00	1.00	INITIAL CALIB. BLANK 5.0 mL DI H20 Purged	29 Jan 2021	20:08

Data File : C:\Instarch\Data\FEB0221\BFB1.D Vial: 1
Acq On : 2 Feb 2021 10:39 Operator: RLD-DGS
Sample : 179112,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W012921.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.657 to 4.681 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.1	24070	PASS
75	95	30	60	54.1	54108	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	7.6	7600	PASS
173	174	0.00	2	0.6	529	PASS
174	95	50	100	83.2	83234	PASS
175	174	5	9	7.9	6536	PASS
176	174	95	101	98.2	81769	PASS
177	176	5	9	6.6	5360	PASS

W012921.M Thu Feb 04 08:17:12 2021

Data File : C:\Instarch\Data\FEB0221\BFB2.D Vial: 25
Acq On : 3 Feb 2021 7:50 Operator: RLD-DGS
Sample : 179112,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W012921.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.663 to 4.681 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.2	23245	PASS
75	95	30	60	54.5	54540	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	7.2	7246	PASS
173	174	0.00	2	0.8	671	PASS
174	95	50	100	84.2	84203	PASS
175	174	5	9	8.2	6904	PASS
176	174	95	101	98.6	82986	PASS
177	176	5	9	7.2	5998	PASS

W012921.M Thu Feb 04 08:18:46 2021

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\FEB0221\BFB1.D
Injection Date : 2 Feb 2021 Log Time Period (hrs) : ALL
Injection Time : 10:39 Total files within period : 31
Sample Directory : C:\INSTARCH\DATA\FEB0221\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	179112,LCSW, 10.0/100 ug/L, 5.0 mL Pur	2 Feb 2021	10:54
MB1	1.00	1.00	1.00	179112,MBW, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	11:55
529225	1.00	1.00	1.00	179112,529225, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	14:27
529229	1.00	1.00	1.00	179112,529229, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	14:58
529217	1.00	1.00	1.00	179112,529217, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	15:29
529218	1.00	1.00	1.00	179112,529218, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	15:59
529219	1.00	1.00	1.00	179112,529219, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	16:30
529220	1.00	1.00	1.00	179112,529220, pH 7,5.0 mL DI H20 Purged	2 Feb 2021	17:00
529221	1.00	1.00	1.00	179112,529221, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	17:31
529222	1.00	1.00	1.00	179112,529222, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	18:01
529223	1.00	1.00	1.00	179112,529223, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	18:31
529224	1.00	1.00	1.00	179112,529224, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	19:01
529226	1.00	1.00	1.00	179112,529226, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	19:31
529227	1.00	1.00	1.00	179112,529227, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	20:00
529228	1.00	1.00	1.00	179112,529228, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	20:30
529217MS	1.00	1.00	1.00	179112,MSW529217, 10.0/100 ug/L,pH<2,5.0 mL	2 Feb 2021	21:00
529217SD	1.00	1.00	1.00	179112,MSDW529217, 10.0/100 ug/L,pH<2,5.0 mL	2 Feb 2021	21:30

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\FEB0221\BFB1.D
Injection Date : 2 Feb 2021 Log Time Period (hrs) : ALL
Injection Time : 10:39 Total files within period : 31
Sample Directory : C:\INSTARCH\DATA\FEB0221\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
CCVF-L~1	1.00	1.00	1.00	179112,LCSDW, 10.0/100 ug/L, 5.0 mL Pur	2 Feb 2021	22:00
BFB2	1.00	1.00	1.00	179112,BFB, 50 ng Inj.	3 Feb 2021	07:50
CCV2	1.00	1.00	1.00	179112,LCSW, 10.0/100 ug/L, 5.0 mL Pur	3 Feb 2021	08:06
CCB1	1.00	1.00	1.00	179112,MBW, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	09:07
529223R	1.00	1.00	1.00	179112,529223, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	09:37
529221R	1.00	1.00	1.00	179112,529221,5 pH<2,5.0 mL DI H20 Purged	3 Feb 2021	10:10
529222R	1.00	1.00	1.00	179112,529222,5 pH<2,5.0 mL DI H20 Purged	3 Feb 2021	10:45
CCVF2	1.00	1.00	1.00	179112,CCVF, 10.0/100 ug/L, 5.0 mL Pur	3 Feb 2021	11:22

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : CT Laboratories, LLC Contract :
Project : Site : Location : Group :
Lab File ID (Standard): WCAL5.D Date Analyzed : 29 Jan 2021
Instrument ID : VMS3 Time Analyzed : 15:43
GC Column : DB-624UI ID : VMS3 Heated Purge (Y:N) : N

	IS1		IS2		IS3	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	1307244	7.71	1055238	11.62	603676	14.92
UPPER LIMIT	2614488	8.21	2110476	12.12	1207352	15.42
LOWER LIMIT	653622	7.21	527619	11.12	301838	14.42
File ID Sample						
529217 179112,52	1296547	7.71	1111197	11.62	637415	14.92
529217MS 179112,MS	1292336	7.71	1105876	11.62	659977	14.92
529217SD 179112,MS	1334019	7.71	1121095	11.62	665183	14.93
529218 179112,52	1290550	7.71	1110292	11.62	628477	14.92
529219 179112,52	1293922	7.71	1109461	11.62	612615	14.92
529220 179112,52	1290973	7.71	1086346	11.62	618892	14.92
529221 179112,52	1294632	7.71	1097548	11.62	613654	14.92
529221R 179112,52	1266853	7.70	1079449	11.62	616803	14.92
529222 179112,52	1282088	7.71	1089275	11.62	607274	14.92
529222R 179112,52	1283089	7.70	1077596	11.62	612971	14.92
529223 179112,52	1280363	7.71	1077860	11.62	605495	14.92
529223R 179112,52	1289432	7.71	1099210	11.62	633454	14.92
529224 179112,52	1295518	7.71	1085640	11.62	610439	14.92
529225 179112,52	1270894	7.71	1087466	11.62	623933	14.93
529226 179112,52	1274941	7.70	1090961	11.62	611925	14.92
529227 179112,52	1272683	7.71	1074663	11.62	612784	14.92
529228 179112,52	1262960	7.71	1099052	11.62	608203	14.92
529229 179112,52	1304565	7.71	1110405	11.62	638075	14.92
CCB1 179112,MB	1309664	7.71	1096059	11.62	618716	14.92
CCV2 179112,LC	1303575	7.71	1108976	11.62	639507	14.92
CCVF2 179112,CC	1322263	7.69	1123483	11.62	668287	14.92
CCVF-L~1 179112,LC	**1334578**	**7.71**	**1127833**	**11.62**	**659199**	**14.92**
CCV-LCS1 179112,LC	**1356085**	**7.71**	**1125791**	**11.62**	**652349**	**14.92**
MB1 179112,MB	**1323006**	**7.71**	**1097378**	**11.62**	**606148**	**14.92**

IS1 = FLUOROBENZENE**ISTD**
IS2 = d5-CHLOROBENZENE**ISTD**
IS3 = d4-1,4-DICHLOROBENZENE**IS
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

BFB

Data File : C:\Instarch\Data\FEB0321\BFB1.D Vial: 1
Acq On : 3 Feb 2021 13:16 Operator: RLD-DGS
Sample : 178983,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W012921.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.657 to 4.663 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.9	22859	PASS
75	95	30	60	51.1	51104	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	7.8	7774	PASS
173	174	0.00	2	1.3	949	PASS
174	95	50	100	74.0	74020	PASS
175	174	5	9	7.2	5318	PASS
176	174	95	101	97.5	72149	PASS
177	176	5	9	6.9	4989	PASS

W012921.M Fri Feb 05 07:57:47 2021

BFB

Data File : C:\Instarch\Data\FEB0321\BFB2.D Vial: 19
Acq On : 4 Feb 2021 7:38 Operator: RLD-DGS
Sample : 178983,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W012921.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.656 to 4.675 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.5	20498	PASS
75	95	30	60	52.4	52371	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	5.7	5675	PASS
173	174	0.00	2	1.1	921	PASS
174	95	50	100	80.2	80212	PASS
175	174	5	9	7.2	5786	PASS
176	174	95	101	99.6	79875	PASS
177	176	5	9	7.1	5635	PASS

W012921.M Fri Feb 05 07:59:33 2021

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\FEB0321\BFB1.D
Injection Date : 3 Feb 2021 Log Time Period (hrs) : ALL
Injection Time : 13:16 Total files within period : 27
Sample Directory : C:\INSTARCH\DATA\FEB0321\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	178983,LCSW, 10.0/100 ug/L, 5.0 mL Pur	3 Feb 2021	13:32
CCVQ1	1.00	1.00	1.00	178983,CCV1, 30.0/300 ug/L, 5.0 mL Pur	3 Feb 2021	14:03
MB1	1.00	1.00	1.00	178983,MBW, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	15:05
527969	1.00	1.00	1.00	178983,527969, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	15:36
527961	1.00	1.00	1.00	178983,527961, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	18:41
527962	1.00	1.00	1.00	178983,527962, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	19:11
527963	1.00	1.00	1.00	178983,527963, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	19:42
527964	1.00	1.00	1.00	178983,527964, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	20:13
527965	1.00	1.00	1.00	178983,527965, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	20:43
527966	1.00	1.00	1.00	178983,527966, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	21:14
527967	1.00	1.00	1.00	178983,527967, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	21:44
BFB2	1.00	1.00	1.00	178983,BFB, 50 ng Inj.	4 Feb 2021	07:38
CCV2-C~1	1.00	1.00	1.00	178983,LCSW, 10.0/100 ug/L, 5.0 mL Pur	4 Feb 2021	08:25
CCB1	1.00	1.00	1.00	178983,CCB, pH<2,5.0 mL DI H20 Purged	4 Feb 2021	09:27
527966MS	1.00	1.00	1.00	178983,MSW527966, pH<2,5.0 mL DI H20 Purged	4 Feb 2021	11:00
527966SD	1.00	1.00	1.00	178983,MSDW527966, pH<2,5.0 mL DI H20 Purged	4 Feb 2021	11:31
CCVF2	1.00	1.00	1.00	178983,CCVF, 10.0/100 ug/L, 5.0 mL Pur	4 Feb 2021	12:02

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : CT Laboratories, LLC Contract :
Project : Site : Location : Group :
Lab File ID (Standard): WCAL5.D Date Analyzed : 29 Jan 2021
Instrument ID : VMS3 Time Analyzed : 15:43
GC Column : DB-624UI ID : VMS3(mm) Heated Purge (Y:N) : N

	IS1		IS2		IS3	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	1307244	7.71	1055238	11.62	603676	14.92
UPPER LIMIT	2614488	8.21	2110476	12.12	1207352	15.42
LOWER LIMIT	653622	7.21	527619	11.12	301838	14.42
File ID Sample						
527961 178983,52	1243949	7.71	1073579	11.62	603481	14.92
527962 178983,52	1233657	7.71	1067167	11.62	602069	14.92
527963 178983,52	1243946	7.71	1058891	11.62	596069	14.92
527964 178983,52	1223288	7.71	1070156	11.62	605688	14.92
527965 178983,52	1239863	7.71	1055550	11.62	586001	14.92
527966 178983,52	1219388	7.71	1037935	11.62	592421	14.92
527966MS 178983,MS	1303637	7.71	1119613	11.62	660844	14.92
527966SD 178983,MS	1310157	7.71	1116729	11.62	662421	14.92
527967 178983,52	1217502	7.71	1059500	11.62	590137	14.92
527969 178983,52	1170338	7.71	1085831	11.62	613831	14.92
CCB1 178983,CC	1238552	7.71	1072775	11.62	606201	14.92
CCV2-C~1 178983,LC	1280134	7.71	1069139	11.62	632450	14.92
CCVF2 178983,CC	1289467	7.71	1116548	11.62	649210	14.92
CCV-LCS1 178983,LC	1358966	7.71	1020436	11.62	643452	14.92
MB1 178983,MB	1289356	7.71	1047554	11.62	557255	14.92

IS1 = FLUOROBENZENE**ISTD**
IS2 = d5-CHLOROBENZENE**ISTD**
IS3 = d4-1,4-DICHLOROBENZENE**IS

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

VOLATILE ORGANIC ANALYSIS
SAMPLE DATA
DOCUMENTS

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529225.D Vial: 9
Acq On : 2 Feb 2021 14:27 Operator: RLD-DGS
Sample : 179112,529225, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 14:48:35 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1270894	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1087466	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	623933	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.86	113	333549	20.461 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %		
45) SURR12DCAd4	7.27	102	92447	20.488 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102 %		
61) SURRd8Tolule	9.72	98	1320352	20.440 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %		
83) SURR4BrFBenz	13.26	95	559204	19.766 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	4248	Below Cal #	45
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.64	84	12321	Below Cal	89
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.66	42	3708	Below Cal #	35

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529225.D Vial: 9
Acq On : 2 Feb 2021 14:27 Operator: RLD-DGS
Sample : 179112,529225, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 14:48:35 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	8.62	88	2563	97.2663 ug/L #	24
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.63	91	3182	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.47	91	2695	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529225.D Vial: 9
Acq On : 2 Feb 2021 14:27 Operator: RLD-DGS
Sample : 179112,529225, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 14:48:35 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

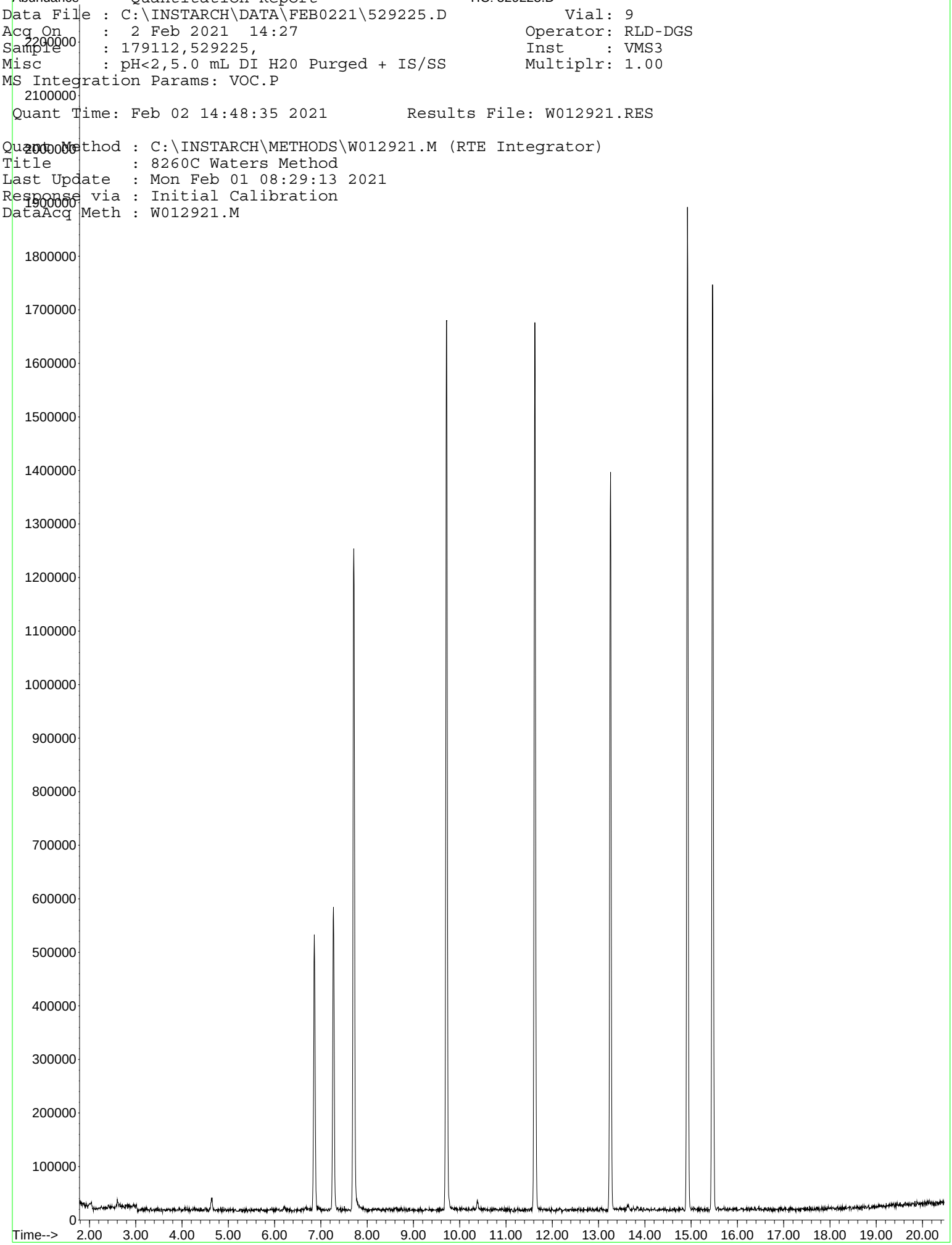
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	0.00	180	0	N.D.		
103)	Hexachlorobu	0.00	225	0	N.D.		
104)	Naphthalene	0.00	128	0	N.D.		
105)	123Trichlben	0.00	180	0	N.D.		

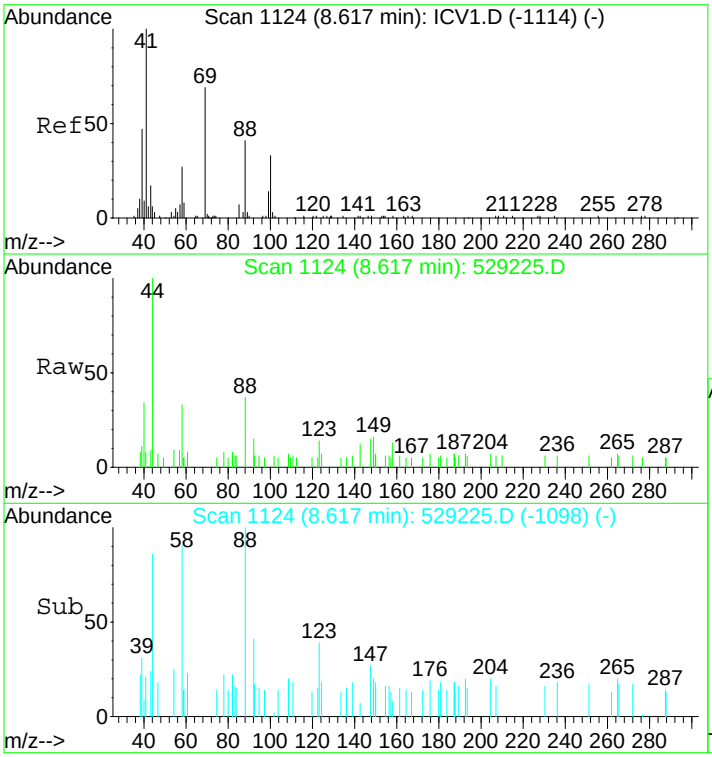
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\FEB0221\529225.D Vial: 9
Acq On : 2 Feb 2021 14:27 Operator: RLD-DGS
Sample : 179112,529225, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 14:48:35 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

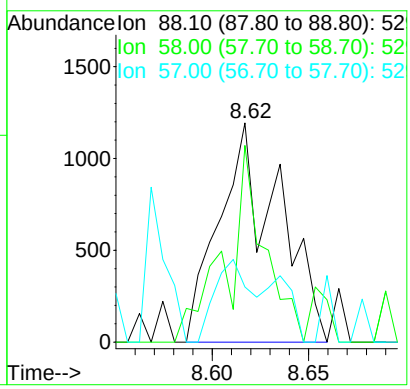




#55
14dioxane
Concen: 97.27 ug/L
RT: 8.62 min Scan# 1124
Delta R.T. 0.01 min
Lab File: 529225.D
Acq: 2 Feb 2021 14:27

Tgt Ion: 88 Resp: 2563

Ion	Ratio	Lower	Upper
88	100		
58	0.0	49.9	89.9#
57	0.0	1.2	41.2#



Negative Library Identification

[redacted]

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529229.D Vial: 10
Acq On : 2 Feb 2021 14:58 Operator: RLD-DGS
Sample : 179112,529229, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 15:19:11 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1304565	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1110405	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	638075	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.86	113	336594	20.115 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %		
45) SURR12DCAd4	7.27	102	91735	19.805 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %		
61) SURRd8Tolule	9.71	98	1324320	19.973 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %		
83) SURR4BrFBenz	13.26	95	570007	19.701 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		
Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	4361	Below Cal #	45
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.64	84	12059	Below Cal	97
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.66	42	3598	Below Cal #	35

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529229.D Vial: 10
Acq On : 2 Feb 2021 14:58 Operator: RLD-DGS
Sample : 179112,529229, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 15:19:11 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	2769	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529229.D Vial: 10
Acq On : 2 Feb 2021 14:58 Operator: RLD-DGS
Sample : 179112,529229, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 15:19:11 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

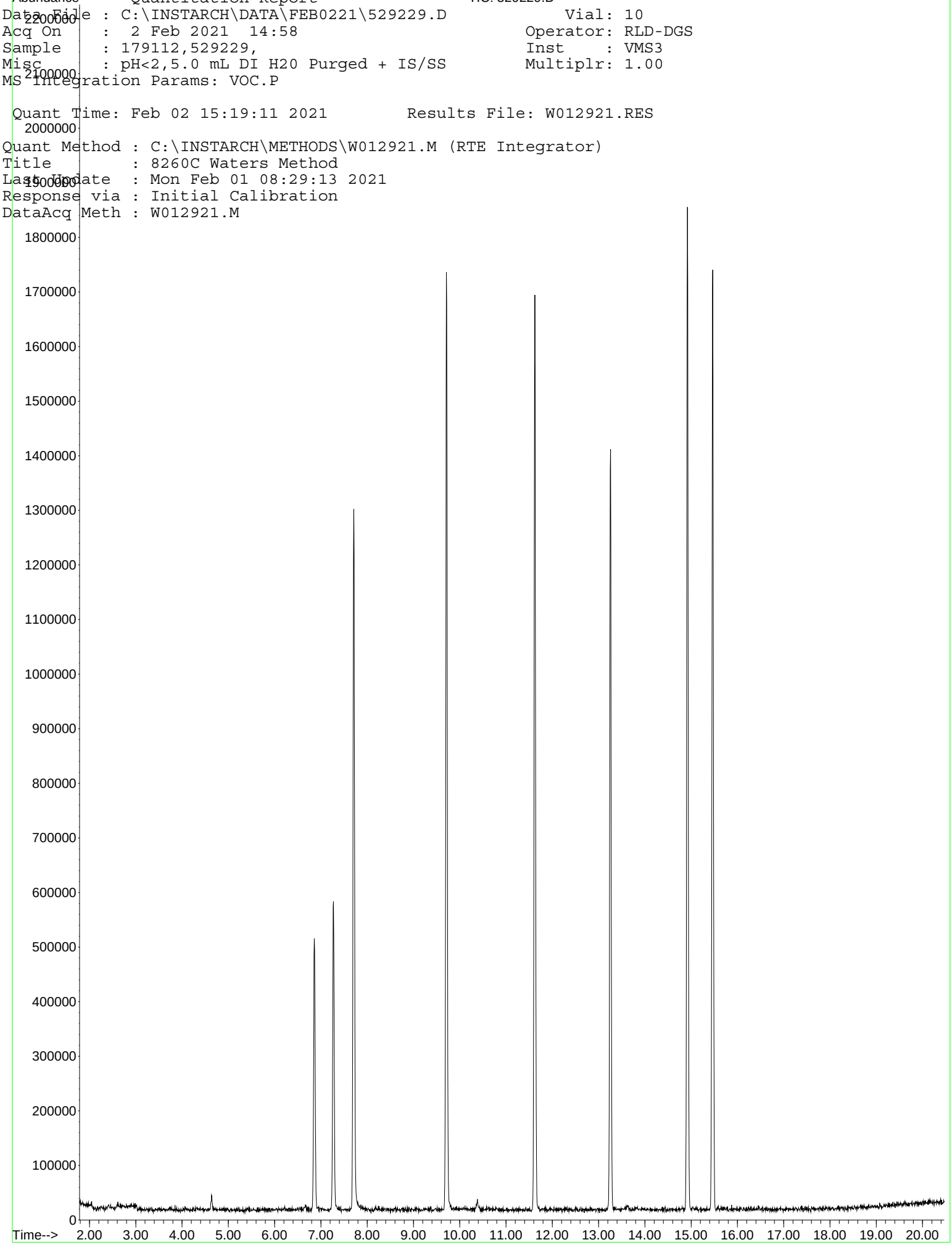
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 529229.D

Data File : C:\INSTARCH\DATA\FEB0221\529229.D Vial: 10
Acq On : 2 Feb 2021 14:58 Operator: RLD-DGS
Sample : 179112,529229, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 15:19:11 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529217.D Vial: 11
Acq On : 2 Feb 2021 15:29 Operator: RLD-DGS
Sample : 179112,529217, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 15:49:47 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1296547	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1111197	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	637415	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	331589	19.938	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	92470	20.087	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100	%		
61) SURRd8Tolule	9.71	98	1317485	19.992	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.26	95	570826	19.750	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	3.73	67	6343	0.3349	ug/L #	68
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	4.01	96	3273	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	2812	Below Cal	#	45
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	3725	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.54	63	130349	4.2092	ug/L	98
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	6.27	96	160999	8.1946	ug/L	90
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529217.D Vial: 11
Acq On : 2 Feb 2021 15:29 Operator: RLD-DGS
Sample : 179112,529217, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 15:49:47 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	6.91	97	17253	0.7582 ug/L	92
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	7.36	78	22062	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.17	95	110033	6.0752 ug/L	95
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.80	92	27470	0.6011 ug/L	100
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	10.53	166	19207	0.9822 ug/L	88
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3813	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	11.83	91	3150	N.D.	
76)	m p-Xylene	11.98	106	2835	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	14.70	105	3735	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.47	91	2954	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529217.D Vial: 11
Acq On : 2 Feb 2021 15:29 Operator: RLD-DGS
Sample : 179112,529217, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 15:49:47 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

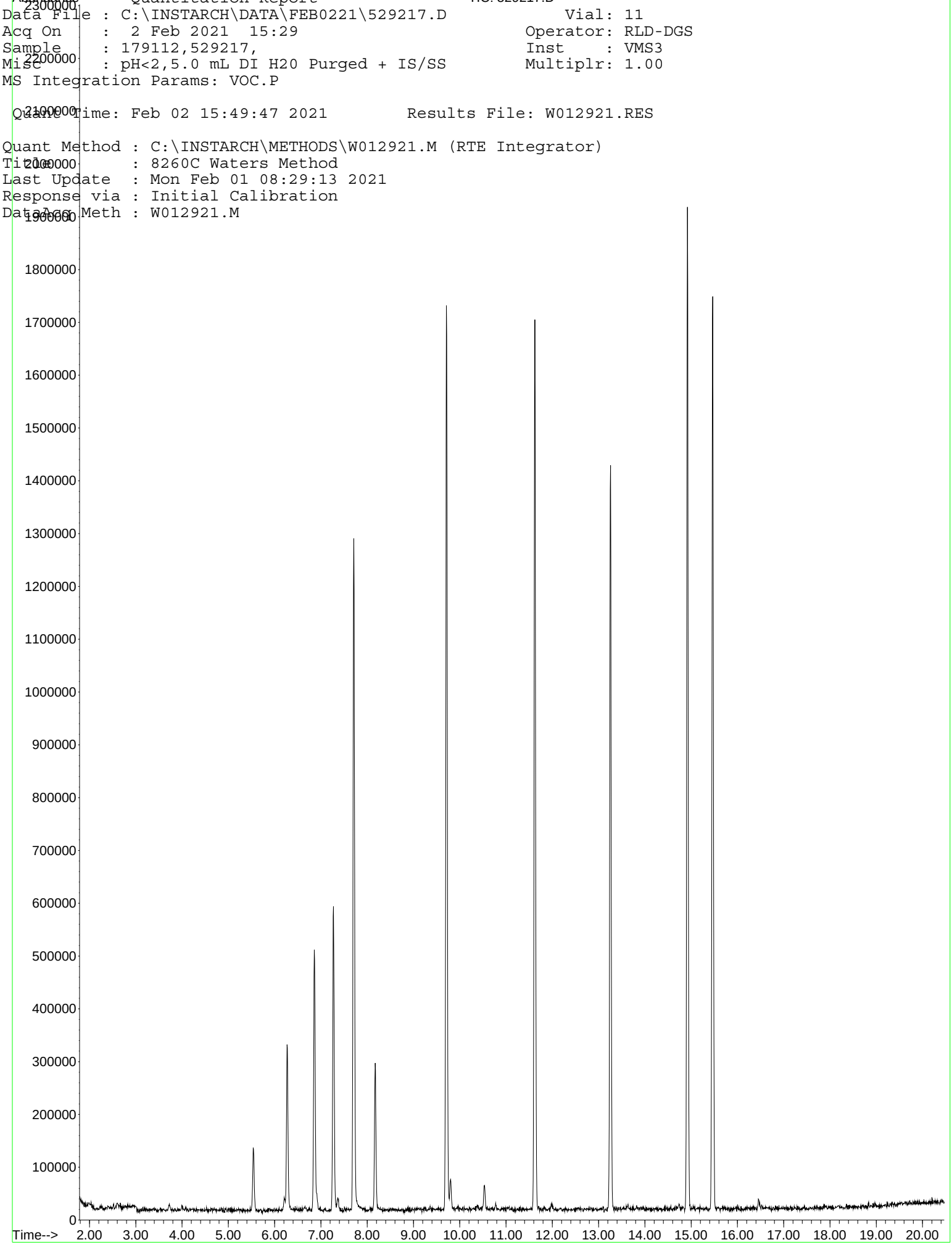
(#) = qualifier out of range (m) = manual integration

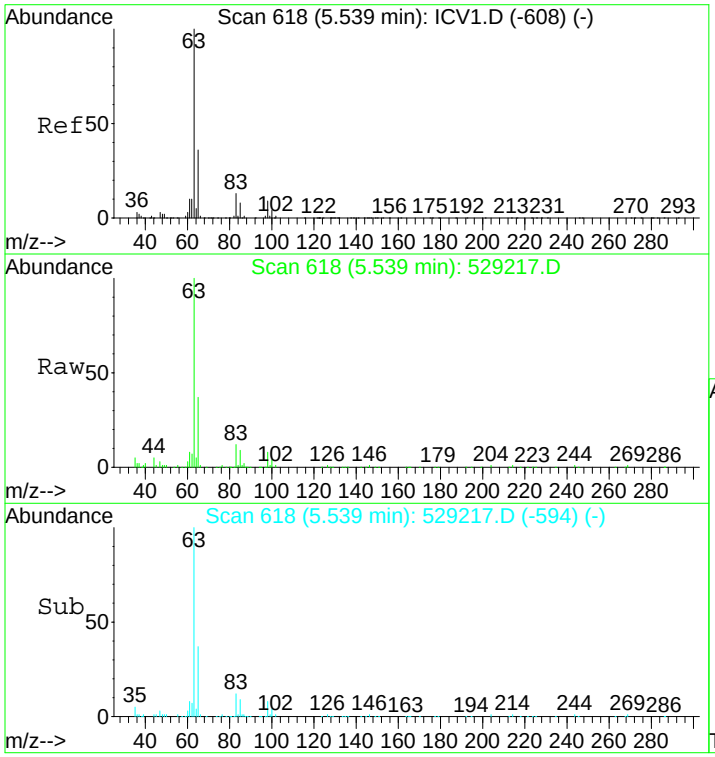
Abundance Quantitation Report TIC: 529217.D

Data File : C:\INSTARCH\DATA\FEB0221\529217.D Vial: 11
Acq On : 2 Feb 2021 15:29 Operator: RLD-DGS
Sample : 179112,529217, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 15:49:47 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

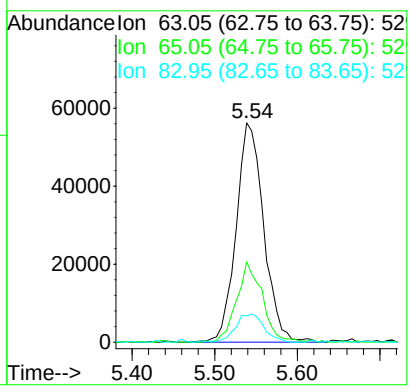


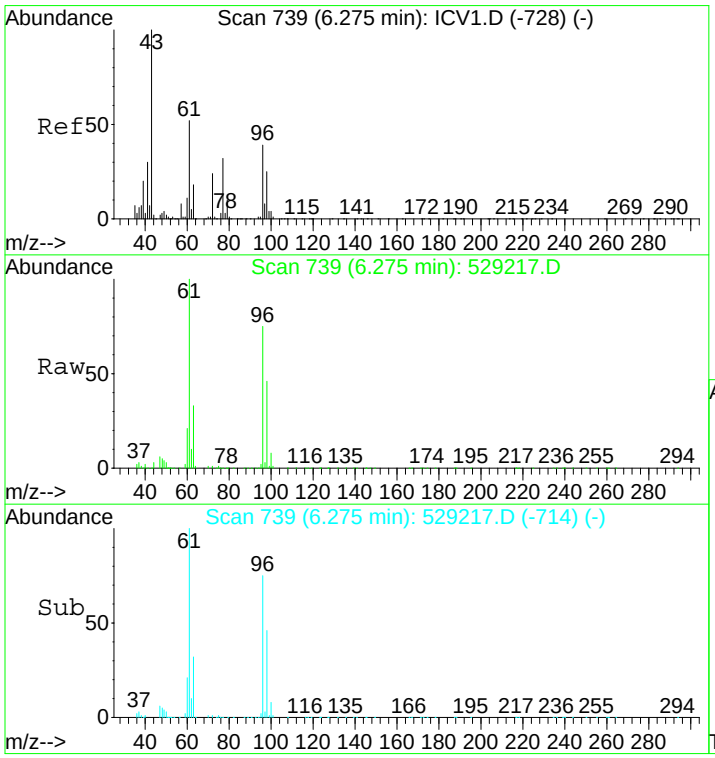


#26
11dichlorota
Concen: 4.21 ug/L
RT: 5.54 min Scan# 618
Delta R.T. -0.01 min
Lab File: 529217.D
Acq: 2 Feb 2021 15:29

Tgt Ion: 63 Resp: 130349

Ion	Ratio	Lower	Upper
63	100		
65	34.3	12.9	52.9
83	13.4	0.0	32.9

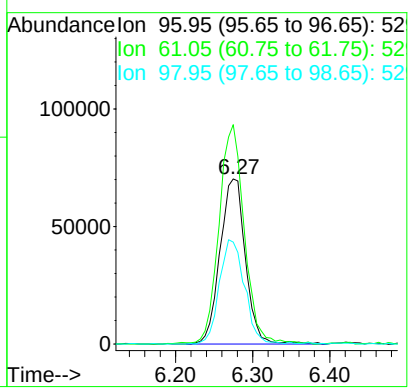


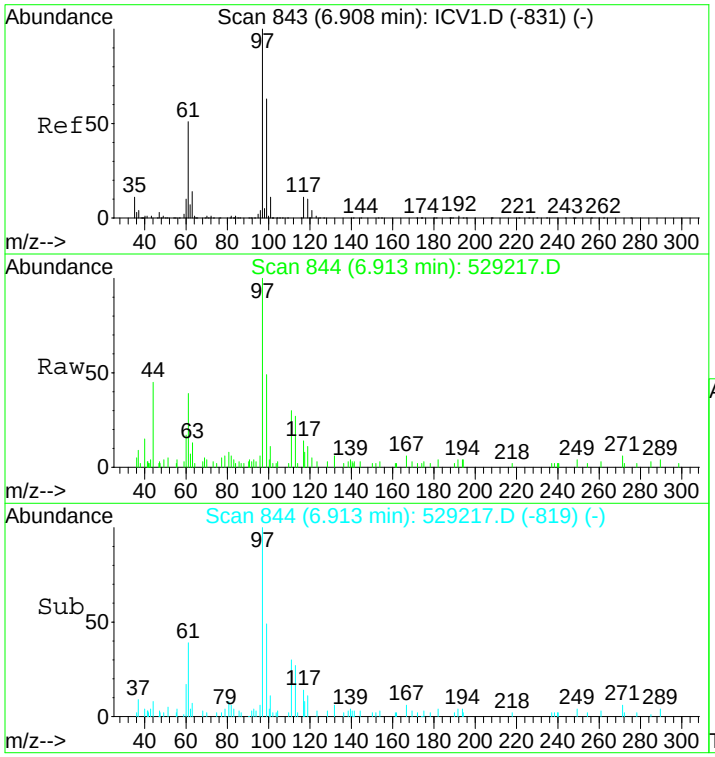


#32
c12dichlorte
Concen: 8.19 ug/L
RT: 6.27 min Scan# 739
Delta R.T. -0.00 min
Lab File: 529217.D
Acq: 2 Feb 2021 15:29

Tgt Ion: 96 Resp: 160999

Ion	Ratio	Lower	Upper
96	100		
61	132.5	129.4	169.4
98	62.5	45.0	85.0

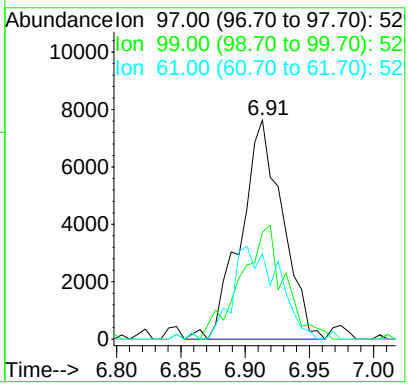


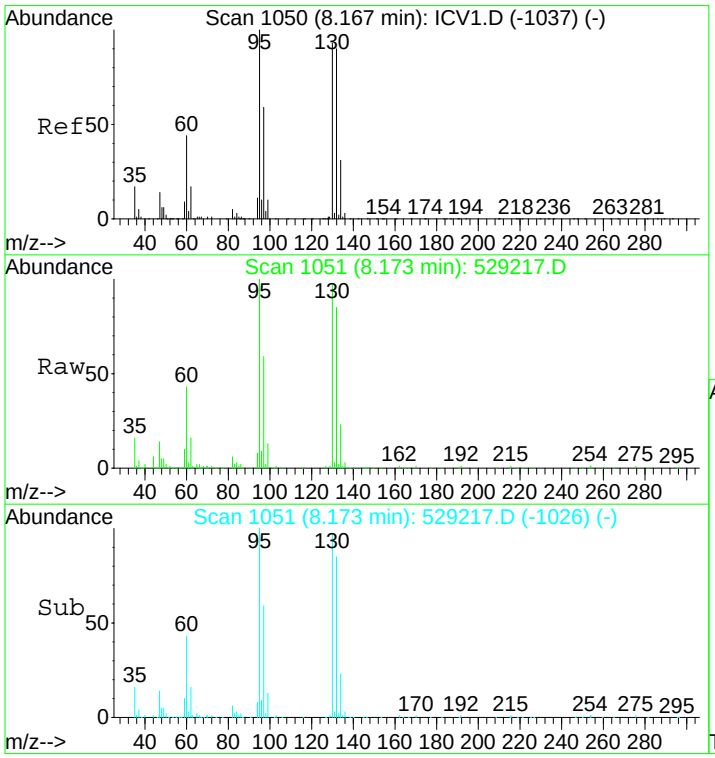


#40
111trichlota
Concen: 0.76 ug/L
RT: 6.91 min Scan# 844
Delta R.T. -0.00 min
Lab File: 529217.D
Acq: 2 Feb 2021 15:29

Tgt Ion: 97 Resp: 17253

Ion	Ratio	Lower	Upper
97	100		
99	54.7	43.2	83.2
61	46.5	29.4	69.4

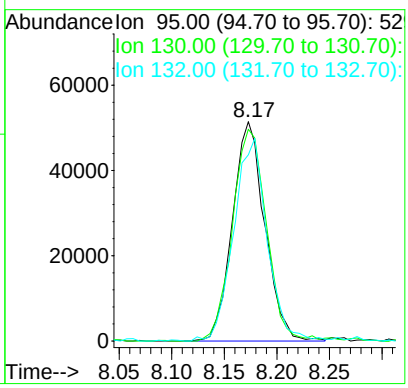


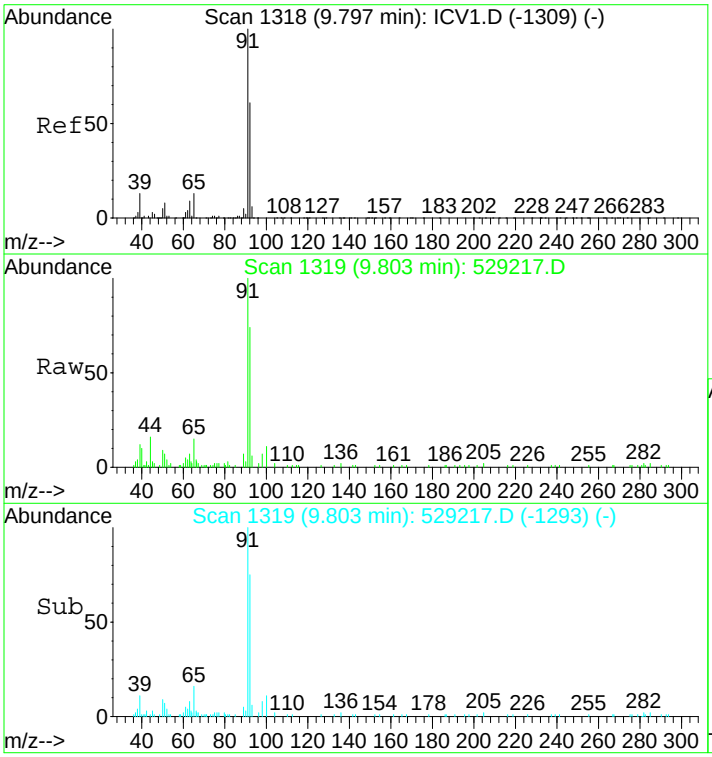


#49
trichloroete
Concen: 6.08 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. -0.00 min
Lab File: 529217.D
Acq: 2 Feb 2021 15:29

Tgt Ion: 95 Resp: 110033

Ion	Ratio	Lower	Upper
95	100		
130	102.1	86.7	126.7
132	96.5	83.1	123.1

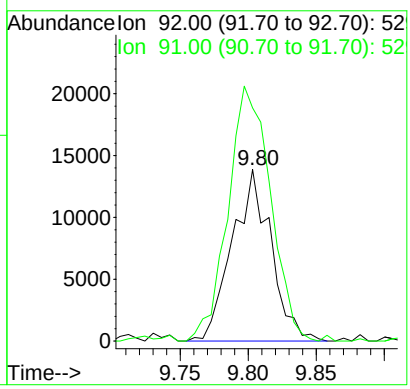


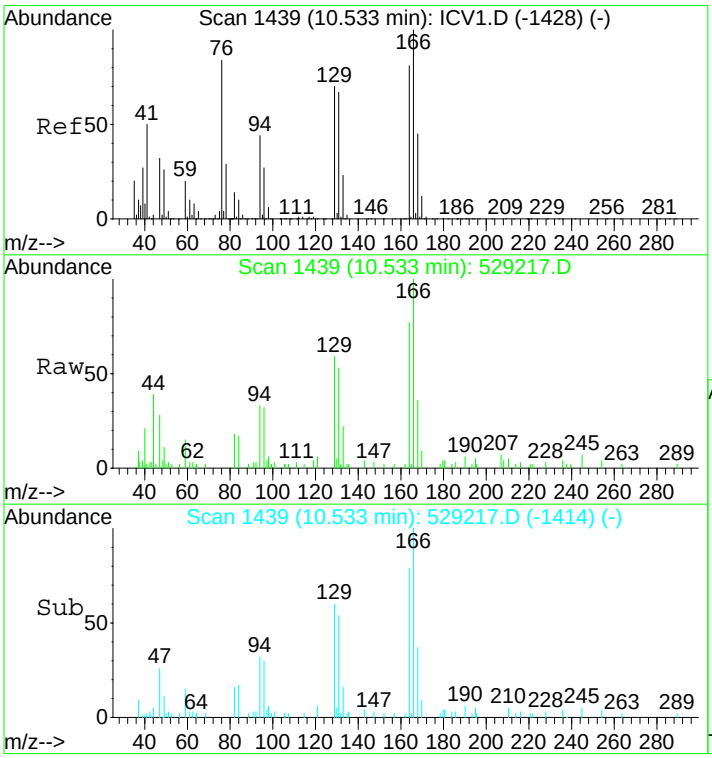


#62
Toluene
Concen: 0.60 ug/L
RT: 9.80 min Scan# 1319
Delta R.T. 0.01 min
Lab File: 529217.D
Acq: 2 Feb 2021 15:29

Tgt Ion: 92 Resp: 27470

Ion	Ratio	Lower	Upper
92	100		
91	162.8	143.0	183.0

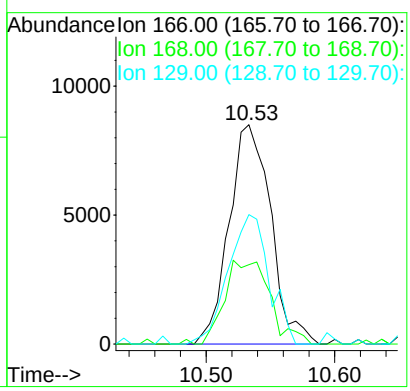




#66
Tetrachlorte
Concen: 0.98 ug/L
RT: 10.53 min Scan# 1439
Delta R.T. -0.00 min
Lab File: 529217.D
Acq: 2 Feb 2021 15:29

Tgt Ion:166 Resp: 19207

Ion	Ratio	Lower	Upper
166	100		
168	41.7	25.5	65.5
129	58.0	51.6	91.6



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529218.D Vial: 12
Acq On : 2 Feb 2021 15:59 Operator: RLD-DGS
Sample : 179112,529218, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 16:20:18 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1290550	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1110292	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	628477	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.86	113	343798	20.768 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 104 %		
45) SURR12DCAd4	7.27	102	88827	19.386 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %		
61) SURRd8Tolule	9.72	98	1321813	20.151 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.26	95	571972	20.071 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	4749	Below Cal # 45	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	3832	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529218.D Vial: 12
Acq On : 2 Feb 2021 15:59 Operator: RLD-DGS
Sample : 179112,529218, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 16:20:18 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.80	92	22441	0.4934	ug/L	97
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.61	91	3162	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529218.D Vial: 12
Acq On : 2 Feb 2021 15:59 Operator: RLD-DGS
Sample : 179112,529218, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 16:20:18 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

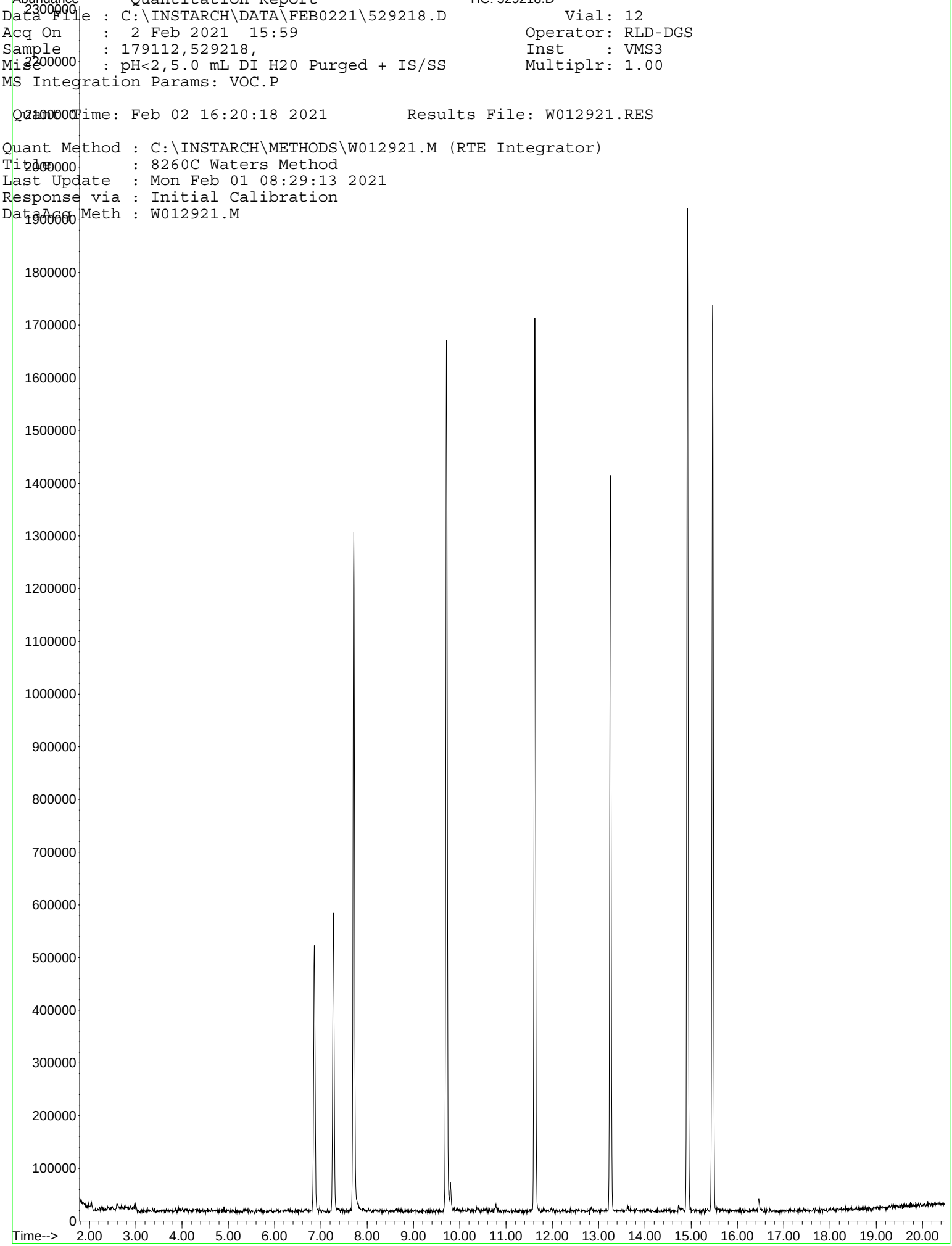
(#) = qualifier out of range (m) = manual integration

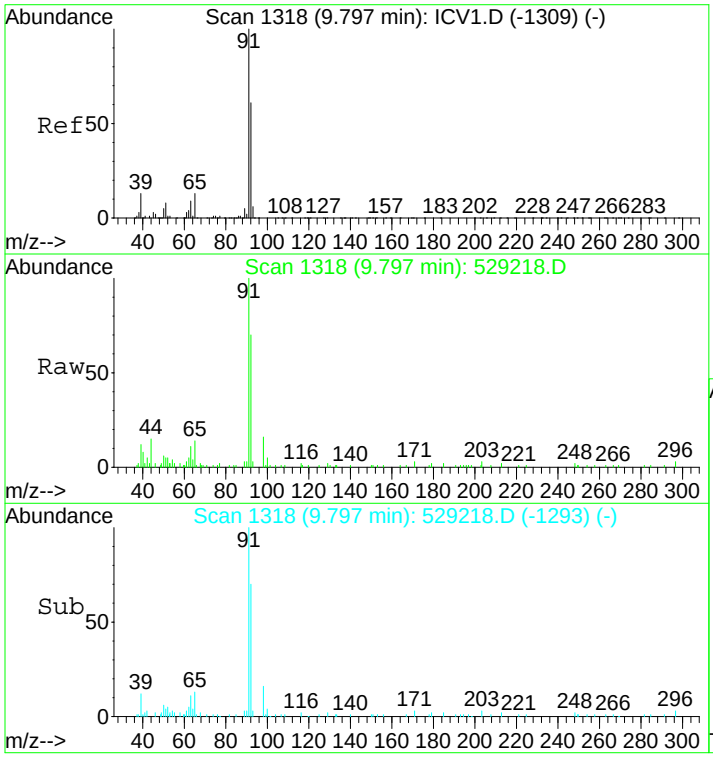
Abundance Quantitation Report TIC: 529218.D

Data File : C:\INSTARCH\DATA\FEB0221\529218.D Vial: 12
Acq On : 2 Feb 2021 15:59 Operator: RLD-DGS
Sample : 179112,529218, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 16:20:18 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

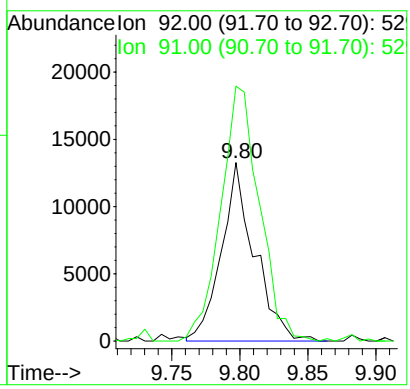




#62
Toluene
Concen: 0.49 ug/L
RT: 9.80 min Scan# 1318
Delta R.T. -0.00 min
Lab File: 529218.D
Acq: 2 Feb 2021 15:59

Tgt Ion: 92 Resp: 22441

Ion	Ratio	Lower	Upper
92	100		
91	166.8	143.0	183.0



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529219.D Vial: 13
Acq On : 2 Feb 2021 16:30 Operator: RLD-DGS
Sample : 179112,529219, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 16:50:47 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1293922	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1109461	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	612615	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	335009	20.185	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.27	102	92839	20.208	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1326265	20.166	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%		
83) SURR4BrFBenz	13.25	95	570070	20.522	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103	%		
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	3214	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	3.21	67	2708	N.D.		
8) Trichlorofma	3.28	101	10983	0.4753	ug/L #	86
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	3270	Below Cal	#	45
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	2715	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.68	42	3158	Below Cal	#	35

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529219.D Vial: 13
Acq On : 2 Feb 2021 16:30 Operator: RLD-DGS
Sample : 179112,529219, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 16:50:47 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.80	92	26622	0.5837	ug/L	96
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.63	91	2943	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	11.99	106	3865	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.47	91	2649	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529219.D Vial: 13
Acq On : 2 Feb 2021 16:30 Operator: RLD-DGS
Sample : 179112,529219, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 16:50:47 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

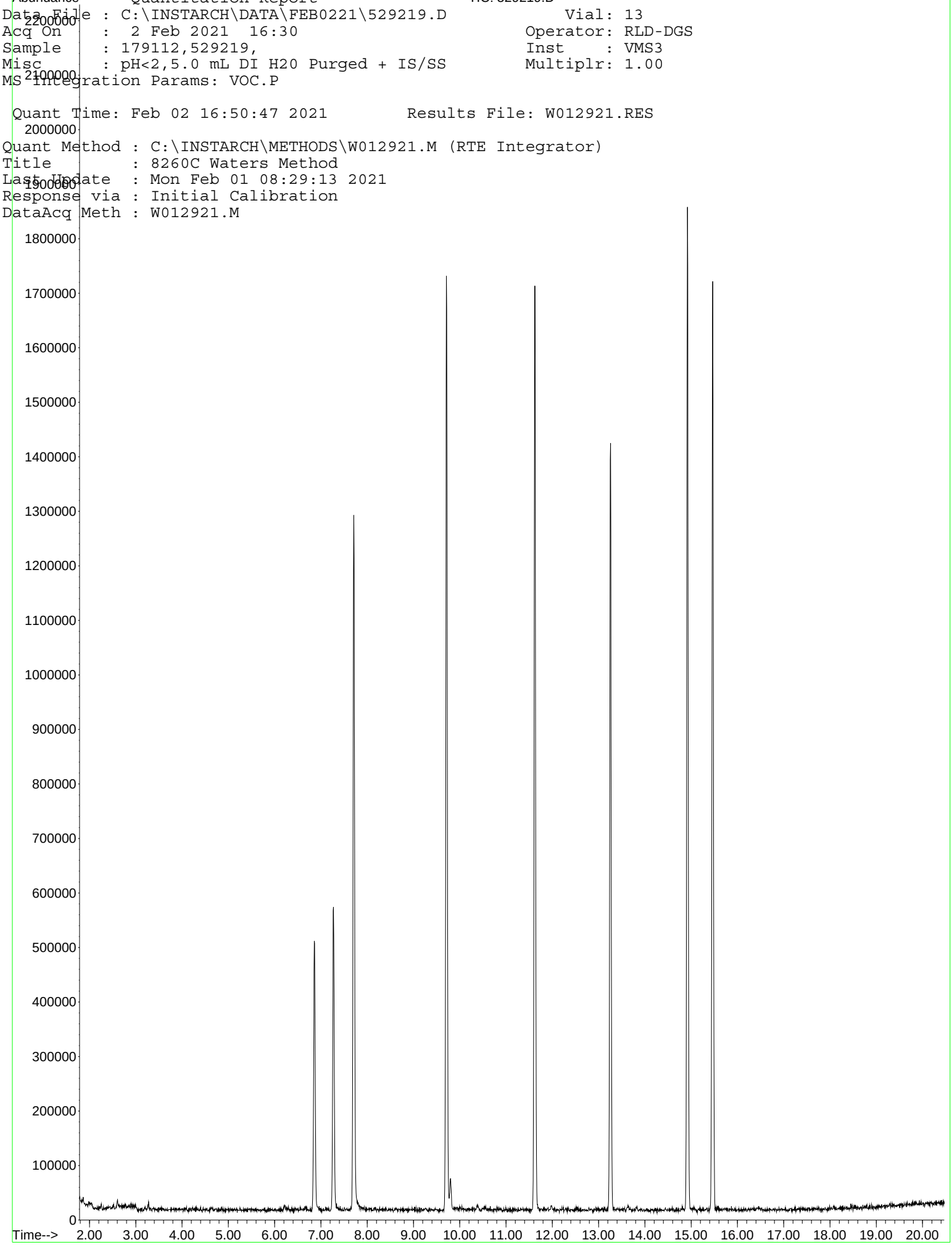
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

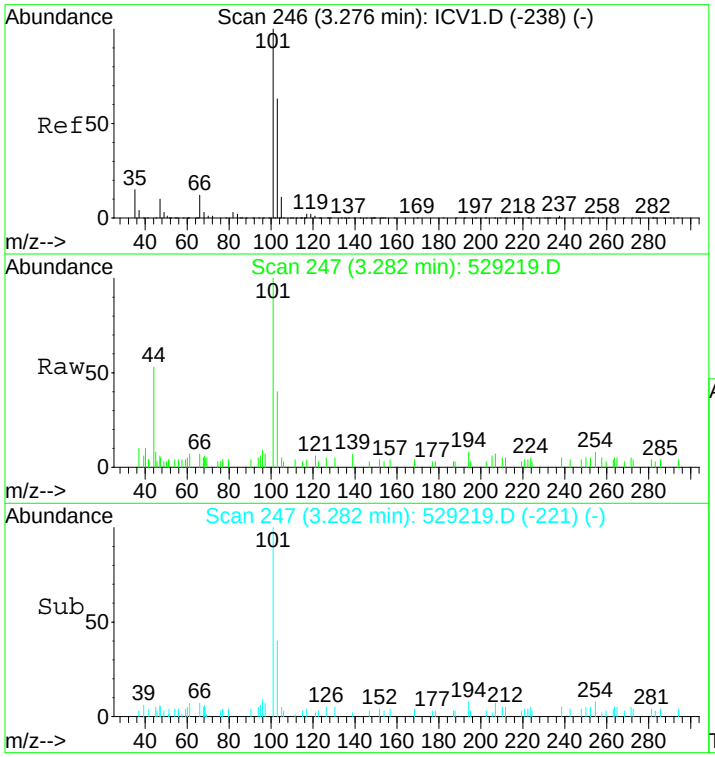
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\FEB0221\529219.D Vial: 13
Acq On : 2 Feb 2021 16:30 Operator: RLD-DGS
Sample : 179112,529219, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 16:50:47 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

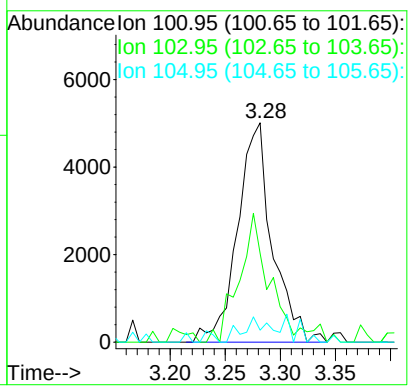


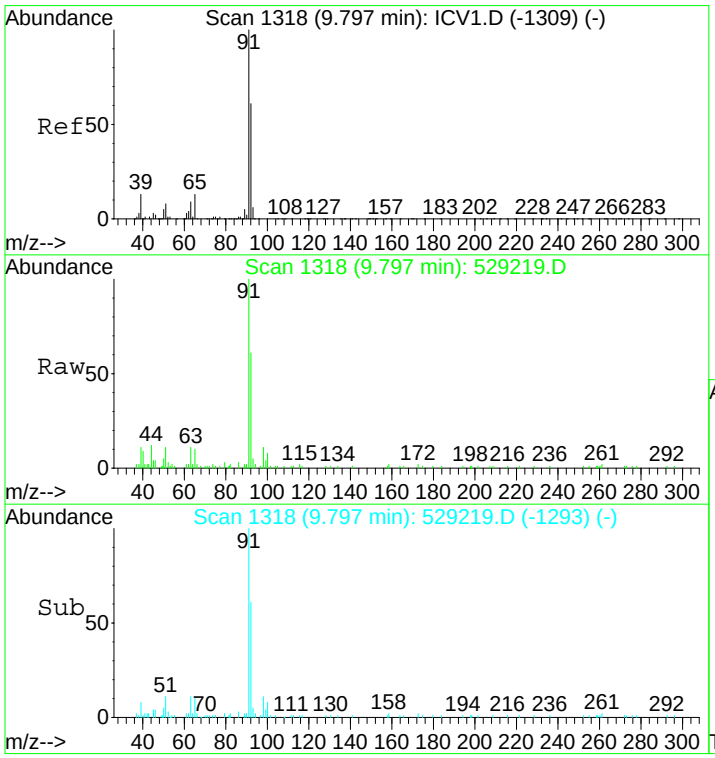


#8
Trichlorofma
Concen: 0.48 ug/L
RT: 3.28 min Scan# 247
Delta R.T. 0.01 min
Lab File: 529219.D
Acq: 2 Feb 2021 16:30

Tgt Ion:101 Resp: 10983

Ion	Ratio	Lower	Upper
101	100		
103	54.4	43.4	83.4
105	0.0	0.0	31.1

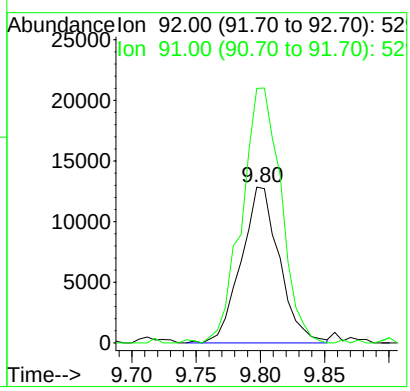




#62
Toluene
Concen: 0.58 ug/L
RT: 9.80 min Scan# 1318
Delta R.T. -0.00 min
Lab File: 529219.D
Acq: 2 Feb 2021 16:30

Tgt Ion: 92 Resp: 26622

Ion	Ratio	Lower	Upper
92	100		
91	168.0	143.0	183.0



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529220.D Vial: 14
Acq On : 2 Feb 2021 17:00 Operator: RLD-DGS
Sample : 179112,529220, Inst : VMS3
Misc : pH 7,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 17:21:20 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1290973	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1086346	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	618892	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.86	113	333492	20.139 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %		
45) SURR12DCAd4	7.27	102	93534	20.406 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102 %		
61) SURRd8Tolule	9.71	98	1312753	20.007 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %		
83) SURR4BrFBenz	13.26	95	560099	19.959 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	2.08	50	2820	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	7497	Below Cal # 45	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	3834	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529220.D Vial: 14
Acq On : 2 Feb 2021 17:00 Operator: RLD-DGS
Sample : 179112,529220, Inst : VMS3
Misc : pH 7,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 17:21:20 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.81	92	2689	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	2984	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

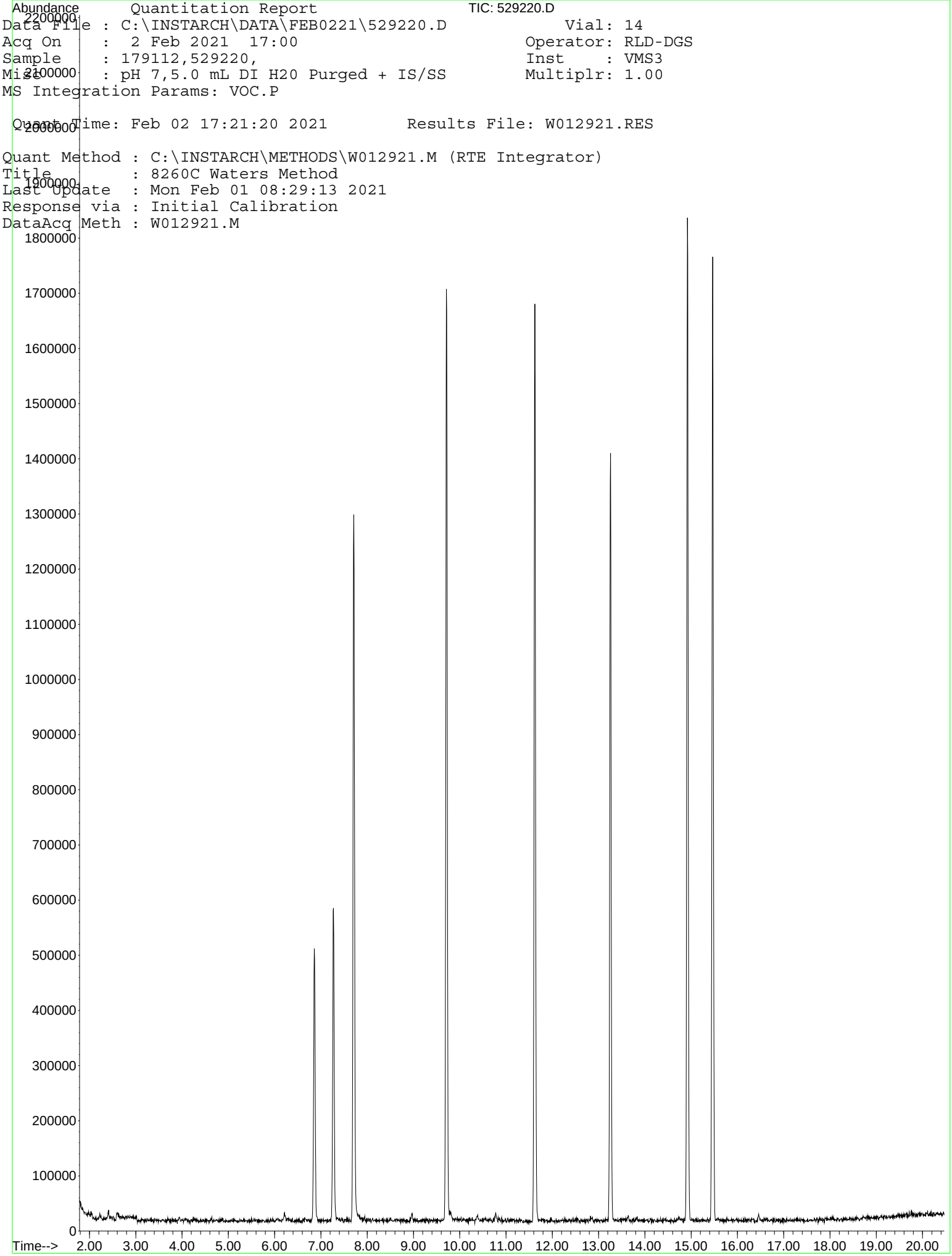
Data File : C:\INSTARCH\DATA\FEB0221\529220.D Vial: 14
Acq On : 2 Feb 2021 17:00 Operator: RLD-DGS
Sample : 179112,529220, Inst : VMS3
Misc : pH 7,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 17:21:20 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: 529220.D
Data File : C:\INSTARCH\DATA\FEB0221\529220.D
Vial: 14
Acq On : 2 Feb 2021 17:00
Operator: RLD-DGS
Sample : 179112,529220,
Inst : VMS3
Misc : pH 7,5.0 mL DI H20 Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Feb 02 17:21:20 2021
Results File: W012921.RES
Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
2200000
2100000
2000000
1900000
1800000
1700000
1600000
1500000
1400000
1300000
1200000
1100000
1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
Time-->
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
13.00
14.00
15.00
16.00
17.00
18.00
19.00
20.00

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529221.D Vial: 15
Acq On : 2 Feb 2021 17:31 Operator: RLD-DGS
Sample : 179112,529221, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 17:51:49 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1294632	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1097548	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	613654	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	345695	20.817	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 104 %			
45) SURR12DCAd4	7.27	102	95249	20.722	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 104 %			
61) SURRd8Tolule	9.71	98	1341344	20.384	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.26	95	566091	20.345	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.08	43	3212	Below Cal # 45	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	2620	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.65	42	4293	Below Cal # 19	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529221.D Vial: 15
Acq On : 2 Feb 2021 17:31 Operator: RLD-DGS
Sample : 179112,529221, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 17:51:49 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	519691	16.2920 ug/L	99
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.13	119	1873757	102.6841 ug/L	94
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	7.36	62	29763	1.1884 ug/L	94
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.17	95	382980	21.1767 ug/L	94
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.80	92	17219	0.3774 ug/L	97
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3121	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	11.99	106	4576	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.44	105	2743	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529221.D Vial: 15
Acq On : 2 Feb 2021 17:31 Operator: RLD-DGS
Sample : 179112,529221, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 17:51:49 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

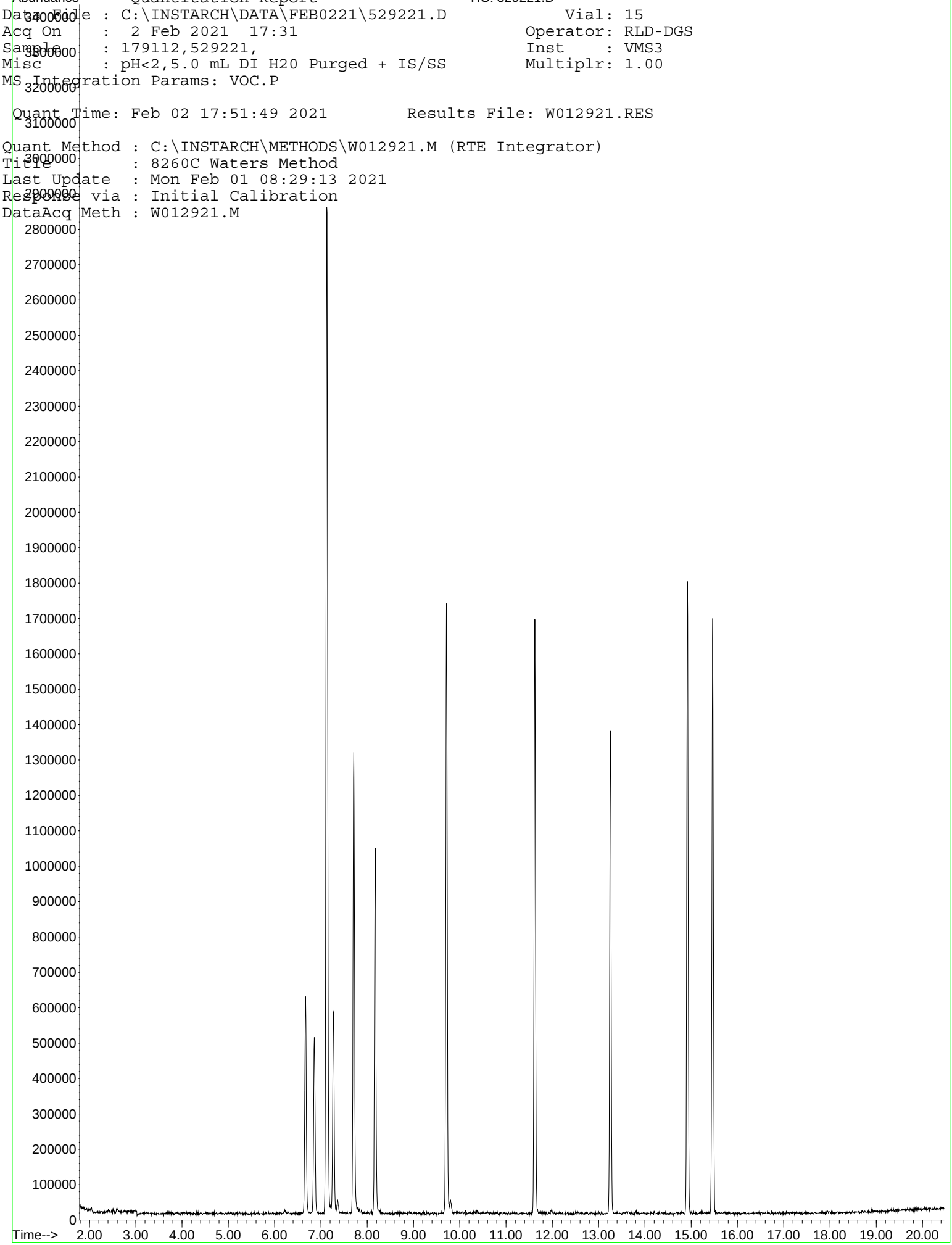
(#) = qualifier out of range (m) = manual integration

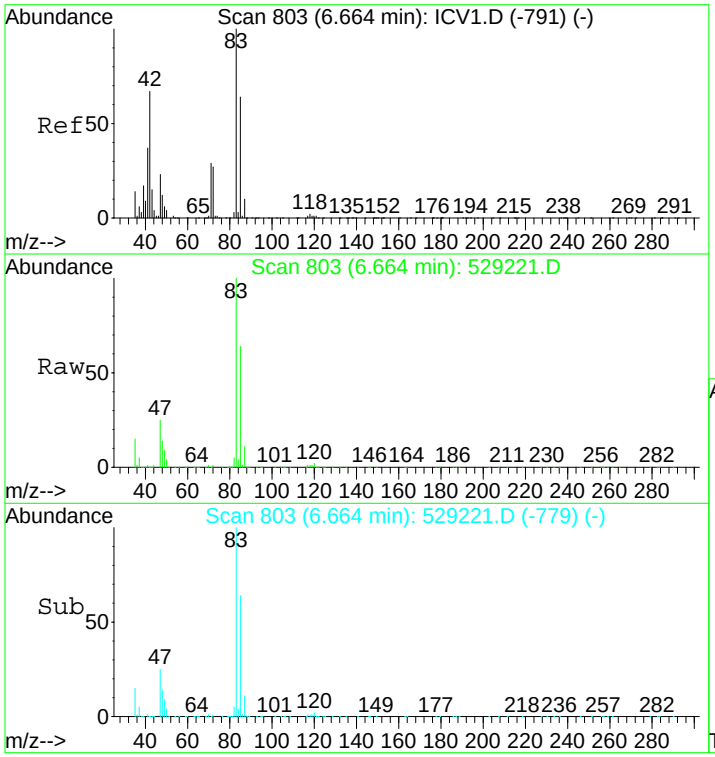
Quantitation Report (TIC: 529221.D)

Data File : C:\INSTARCH\DATA\FEB0221\529221.D Vial: 15
Acq On : 2 Feb 2021 17:31 Operator: RLD-DGS
Sample : 179112,529221, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 17:51:49 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

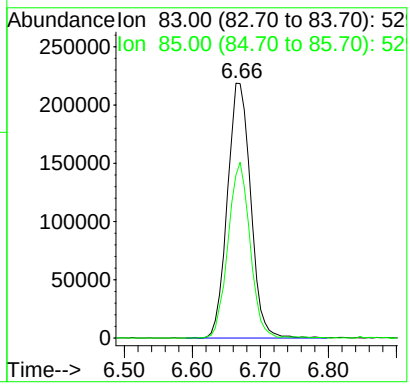


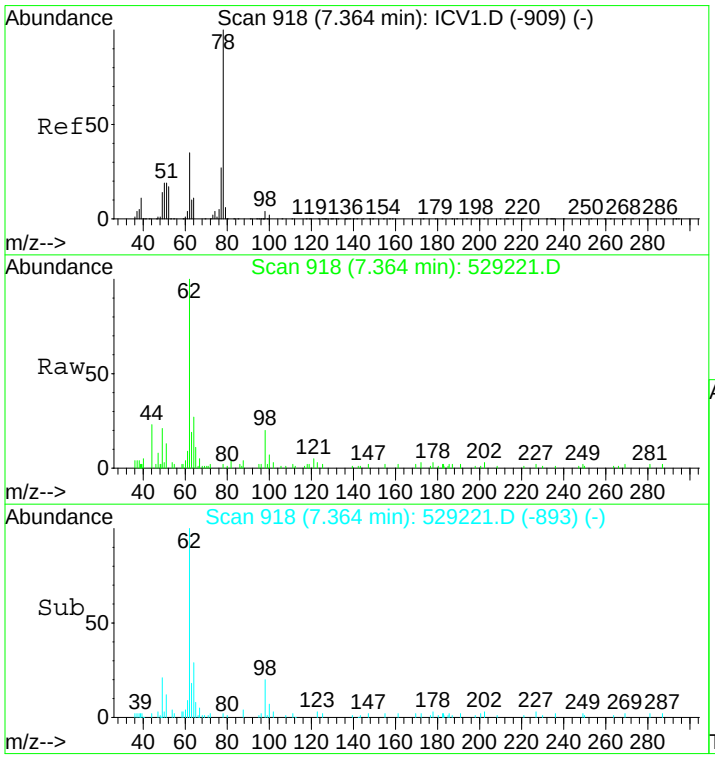


#39
Chloroform
Concen: 16.29 ug/L
RT: 6.66 min Scan# 803
Delta R.T. -0.01 min
Lab File: 529221.D
Acq: 2 Feb 2021 17:31

Tgt Ion: 83 Resp: 519691

Ion	Ratio	Lower	Upper
83	100		
85	65.4	45.8	85.8

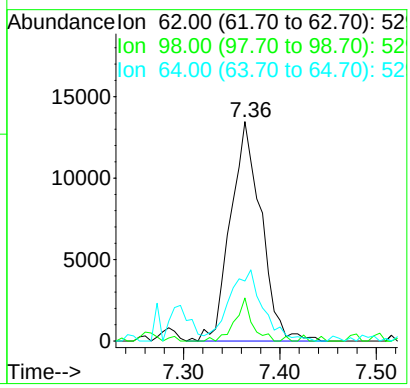


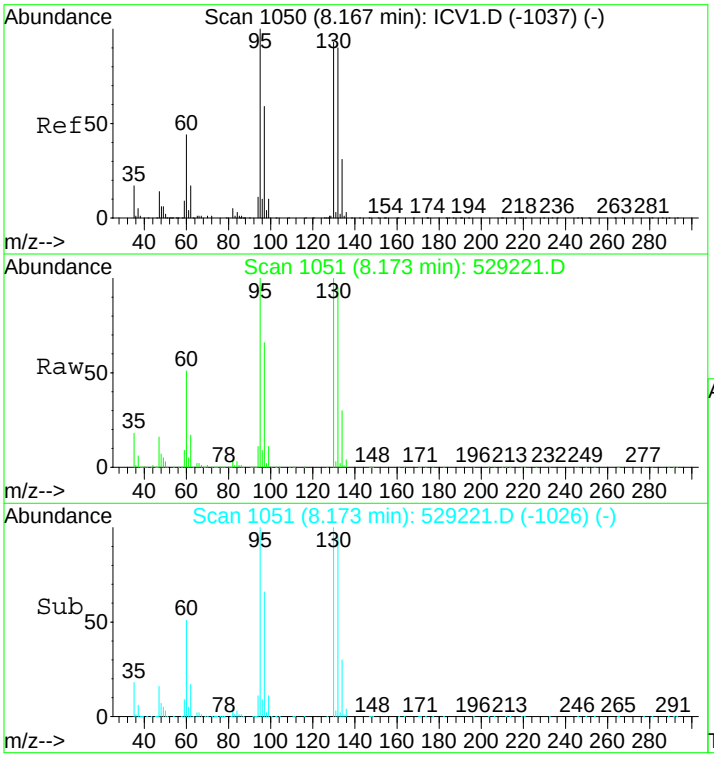


#47
12dichlorota
Concen: 1.19 ug/L
RT: 7.36 min Scan# 918
Delta R.T. -0.00 min
Lab File: 529221.D
Acq: 2 Feb 2021 17:31

Tgt Ion: 62 Resp: 29763

Ion	Ratio	Lower	Upper
62	100		
98	10.9	0.0	29.3
64	35.7	12.0	52.0

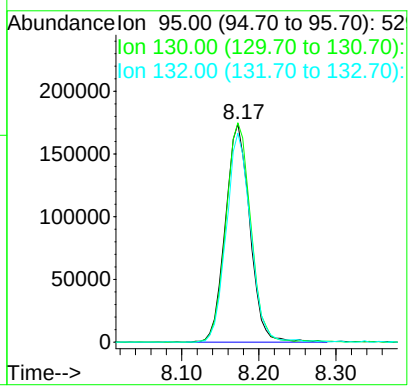


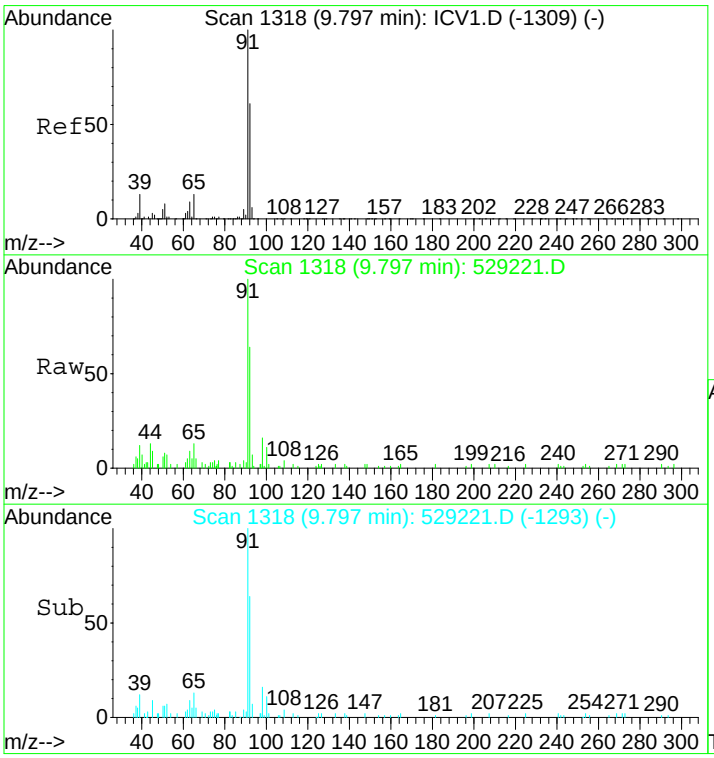


#49
trichloroete
Concen: 21.18 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. -0.00 min
Lab File: 529221.D
Acq: 2 Feb 2021 17:31

Tgt Ion: 95 Resp: 382980

Ion	Ratio	Lower	Upper
95	100		
130	102.6	86.7	126.7
132	95.7	83.1	123.1

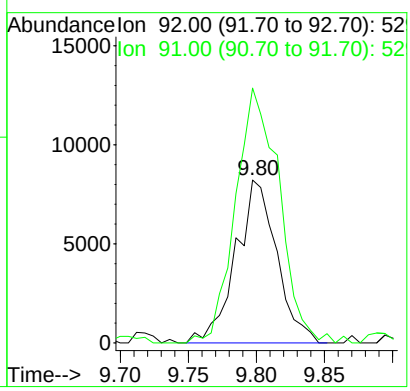




#62
Toluene
Concen: 0.38 ug/L
RT: 9.80 min Scan# 1318
Delta R.T. -0.00 min
Lab File: 529221.D
Acq: 2 Feb 2021 17:31

Tgt Ion: 92 Resp: 17219

Ion	Ratio	Lower	Upper
92	100		
91	167.3	143.0	183.0



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529222.D Vial: 16
Acq On : 2 Feb 2021 18:01 Operator: RLD-DGS
Sample : 179112,529222, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 18:22:09 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1282088	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1089275	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	607274	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	336242	20.446	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	91514	20.104	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1313553	20.157	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%		
83) SURR4BrFBenz	13.25	95	554072	20.122	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101	%		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	4122	Below Cal # 45	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.27	76	2872	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.85	59	2961	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.66	42	4229	Below Cal # 13	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529222.D Vial: 16
Acq On : 2 Feb 2021 18:01 Operator: RLD-DGS
Sample : 179112,529222, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 18:22:09 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.67	83	516506	16.3506	ug/L		99
40)	111trichlota	0.00	97	0	N.D.			
42)	Cyclohexane	0.00	56	0	N.D.			
43)	Carbtetraclo	7.13	119	1953671	108.1110	ug/L		93
44)	11dicloprope	0.00	110	0	N.D.			
46)	Benzene	0.00	78	0	N.D.			
47)	12dichlorota	7.37	62	30243	1.2193	ug/L	#	90
48)	TAME	0.00	73	0	N.D.			
49)	trichloroete	8.17	95	389423	21.7436	ug/L		96
50)	methylcyclohexane	0.00	83	0	N.D.			
51)	12dicloropra	0.00	63	0	N.D.			
52)	23Dicl1propene	0.00	75	0	N.D.			
53)	Dibromometha	0.00	93	0	N.D.			
54)	methylmethacrylate	0.00	69	0	N.D.			
55)	14dioxane	0.00	88	0	N.D.			
56)	Bromodiclrma	0.00	83	0	N.D.			
57)	2Nitropropane	0.00	43	0	N.D.			
58)	2CLEVE	0.00	63	0	N.D.			
59)	c13dicloproe	0.00	75	0	N.D.			
60)	4Meth2Pentan	0.00	43	0	N.D.			
62)	Toluene	9.80	92	17920	0.3966	ug/L		96
63)	t13Dicloprop	0.00	75	0	N.D.			
64)	ethylmethacrylate	0.00	69	0	N.D.			
65)	112Triclotha	0.00	83	0	N.D.			
66)	Tetrachlorte	0.00	166	0	N.D.			
67)	13Diclorpropa	0.00	76	0	N.D.			
69)	2Hexanone	0.00	43	0	N.D.			
70)	Clorodibrmta	0.00	129	0	N.D.			
71)	12Dibrometha	0.00	107	0	N.D.			
72)	Chlorobenzen	0.00	112	0	N.D.			
73)	1Clhexane	11.62	91	2840	N.D.			
74)	1112Tetclota	0.00	131	0	N.D.			
75)	Ethylbenzene	11.82	91	2601	N.D.			
76)	m p-Xylene	11.99	106	4713	N.D.			
77)	o-Xylene	0.00	106	0	N.D.			
78)	Styrene	0.00	104	0	N.D.			
79)	Bromoform	0.00	173	0	N.D.			
80)	Isopropylben	0.00	105	0	N.D.			
81)	cyclohexanone	0.00	55	0	N.D.			
84)	Bromobenzene	0.00	156	0	N.D.			
85)	1122Tetrclta	0.00	83	0	N.D.			
86)	123Triclproa	0.00	75	0	N.D.			
87)	14dichloro2butene	0.00	53	0	N.D.			
88)	n-Propylbenz	0.00	91	0	N.D.			
89)	2chlorotolue	0.00	91	0	N.D.			
90)	4chlorotolue	0.00	91	0	N.D.			
91)	135Trimebenz	0.00	105	0	N.D.			
92)	tbutylbenzen	0.00	119	0	N.D.			
93)	124Trimetben	0.00	105	0	N.D.			
94)	sbutylbenzen	0.00	105	0	N.D.			
95)	13Diclorbenz	0.00	146	0	N.D.			
96)	pIsopropylto	0.00	119	0	N.D.			
97)	14dichlorobe	0.00	146	0	N.D.			
98)	12dichlorobe	0.00	146	0	N.D.			
99)	nButylbenzen	15.46	91	3159	N.D.			
100)	12dibromo3cl	0.00	157	0	N.D.			
101)	135Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529222.D Vial: 16
Acq On : 2 Feb 2021 18:01 Operator: RLD-DGS
Sample : 179112,529222, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 18:22:09 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

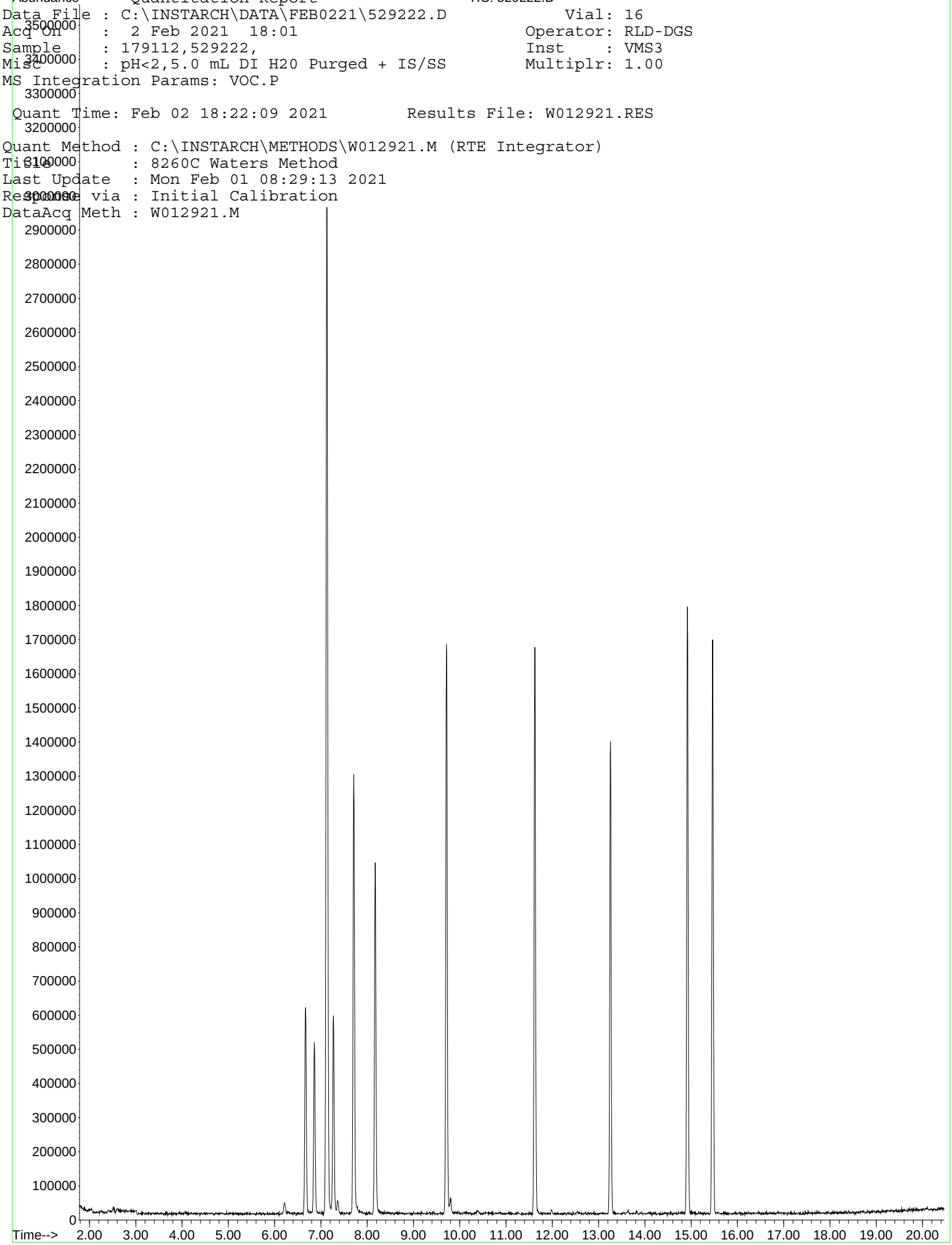
(#) = qualifier out of range (m) = manual integration

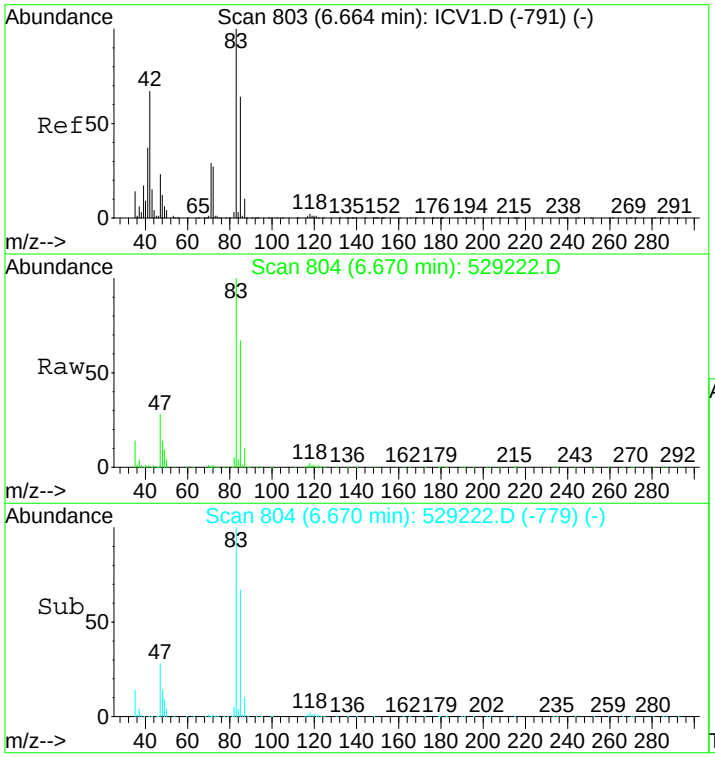
Abundance Quantitation Report TIC: 529222.D

Data File : C:\INSTARCH\DATA\FEB0221\529222.D Vial: 16
Acq On : 2 Feb 2021 18:01 Operator: RLD-DGS
Sample : 179112,529222, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 18:22:09 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

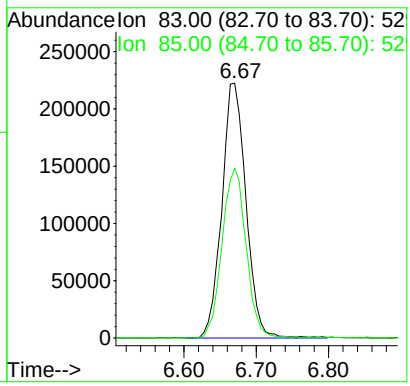


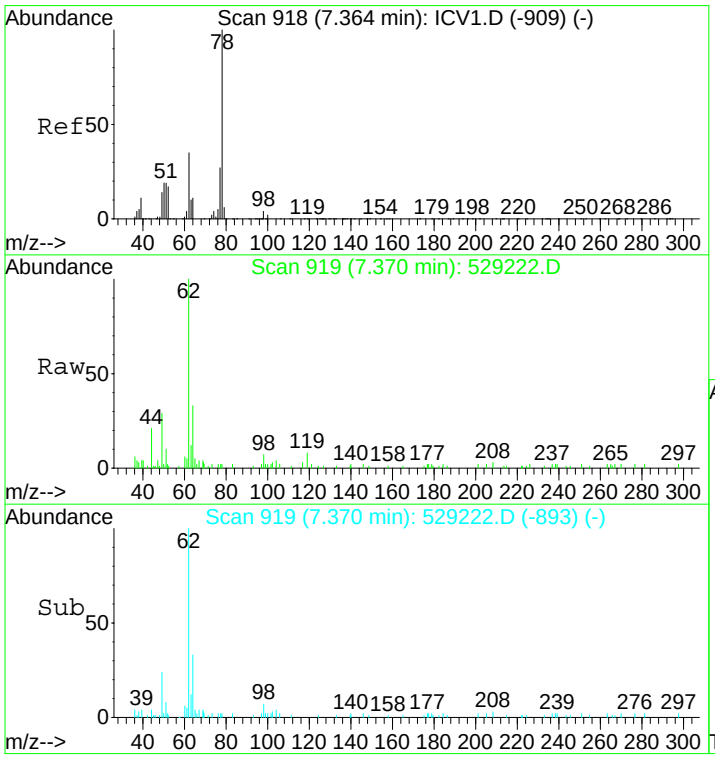


#39
Chloroform
Concen: 16.35 ug/L
RT: 6.67 min Scan# 804
Delta R.T. -0.00 min
Lab File: 529222.D
Acq: 2 Feb 2021 18:01

Tgt Ion: 83 Resp: 516506

Ion	Ratio	Lower	Upper
83	100		
85	66.6	45.8	85.8

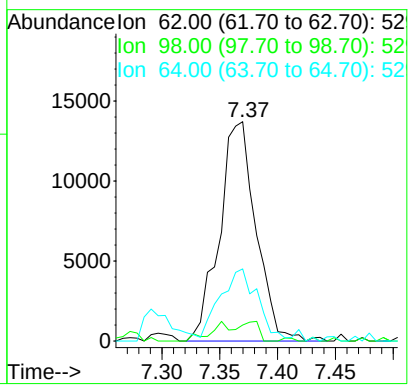


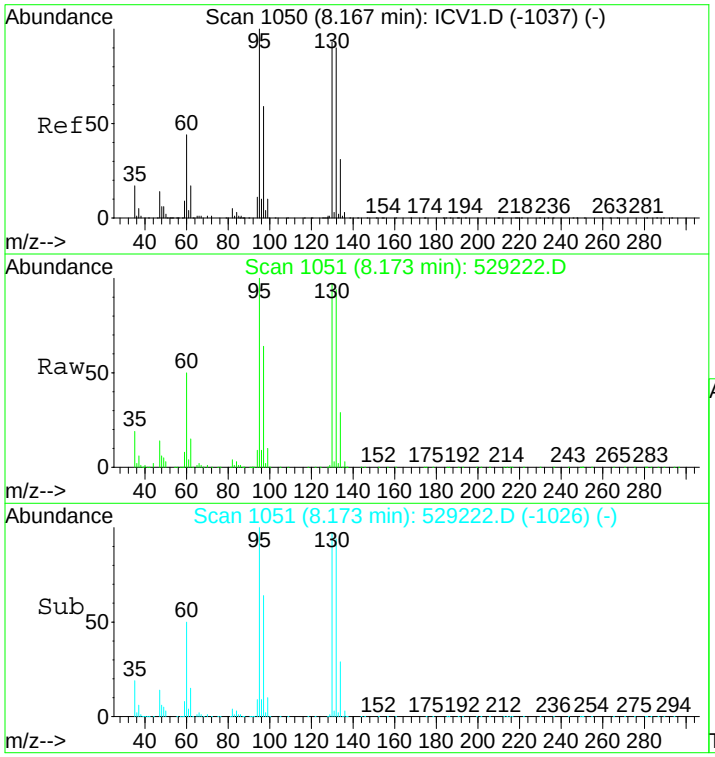


#47
12dichlorota
Concen: 1.22 ug/L
RT: 7.37 min Scan# 919
Delta R.T. 0.01 min
Lab File: 529222.D
Acq: 2 Feb 2021 18:01

Tgt Ion: 62 Resp: 30243

Ion	Ratio	Lower	Upper
62	100		
98	0.0	0.0	29.3
64	34.9	12.0	52.0

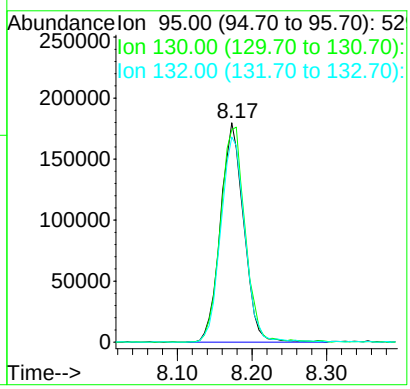


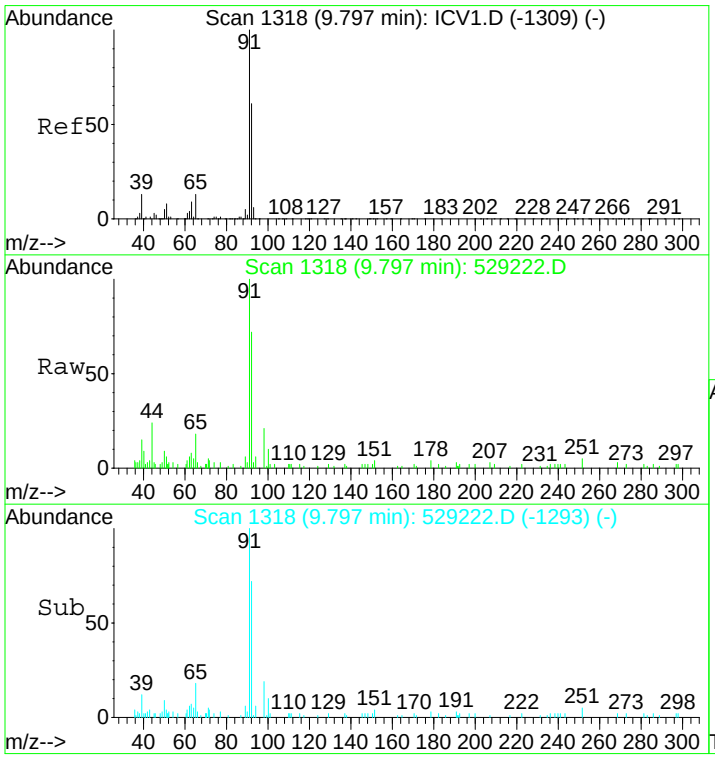


#49
trichloroete
Concen: 21.74 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. -0.00 min
Lab File: 529222.D
Acq: 2 Feb 2021 18:01

Tgt Ion: 95 Resp: 389423

Ion	Ratio	Lower	Upper
95	100		
130	103.8	86.7	126.7
132	97.0	83.1	123.1

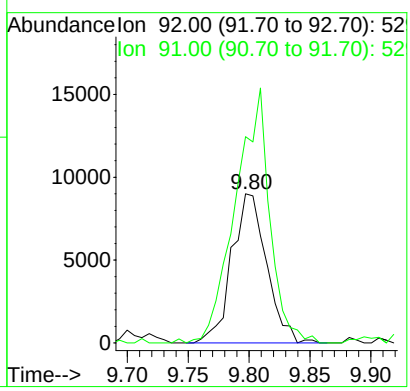




#62
Toluene
Concen: 0.40 ug/L
RT: 9.80 min Scan# 1318
Delta R.T. -0.00 min
Lab File: 529222.D
Acq: 2 Feb 2021 18:01

Tgt Ion: 92 Resp: 17920

Ion	Ratio	Lower	Upper
92	100		
91	168.9	143.0	183.0



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529223.D Vial: 17
Acq On : 2 Feb 2021 18:31 Operator: RLD-DGS
Sample : 179112,529223, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

NOT USED

Quant Time: Feb 02 18:52:10 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1280363	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1077860	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	605495	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.86	113	334375	20.360 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %		
45) SURR12DCAd4	7.27	102	89089	19.597 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98 %		
61) SURRd8Tolule	9.71	98	1310562	20.139 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.25	95	562680	20.495 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %		
Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	3.28	101	2618	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	3677	Below Cal #	45
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	5.54	63	9862	0.3225 ug/L #	86
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	6.27	96	7175	0.3698 ug/L	95
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529223.D Vial: 17
Acq On : 2 Feb 2021 18:31 Operator: RLD-DGS
Sample : 179112,529223, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 18:52:10 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.68	83	6884	N.D.		
40)	111trichlota	6.92	97	4807	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	15500	0.8589	ug/L	98
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	26625	1.4886	ug/L	96
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.80	92	17060	0.3780	ug/L	98
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	10.55	166	3114	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	3073	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	11.82	91	4030	N.D.		
76)	m p-Xylene	11.99	106	6538	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	13.78	105	3126	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	14.44	105	7243	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529223.D Vial: 17
Acq On : 2 Feb 2021 18:31 Operator: RLD-DGS
Sample : 179112,529223, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 18:52:10 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

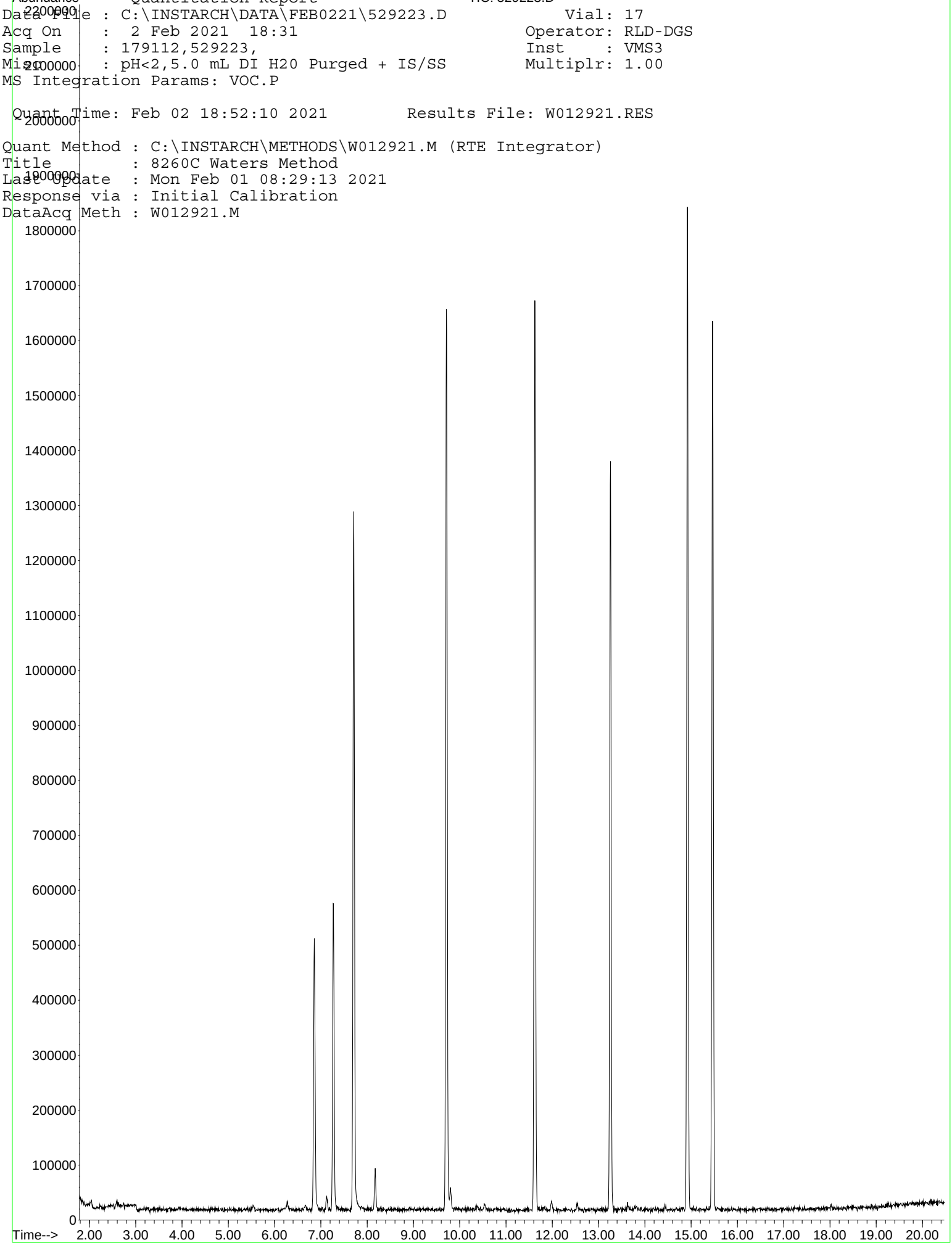
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	18.03	128	4106	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\FEB0221\529223.D Vial: 17
Acq On : 2 Feb 2021 18:31 Operator: RLD-DGS
Sample : 179112,529223, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 18:52:10 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529224.D Vial: 18
Acq On : 2 Feb 2021 19:01 Operator: RLD-DGS
Sample : 179112,529224, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 19:22:06 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1295518	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1085640	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	610439	20.00	ug/L	0.00 NA%

System Monitoring Compounds							
41) SURRDibrflma	6.86	113	336734	20.264	ug/L	0.00	
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %				
45) SURR12DCAd4	7.27	102	91387	19.868	ug/L	0.00	
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %				
61) SURRd8Tolule	9.71	98	1328812	20.180	ug/L	0.00	
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %				
83) SURR4BrFBenz	13.25	95	564516	20.395	ug/L	0.00	
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %				

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	8077	Below	Cal # 45	
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	2903	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.67	42	3328	Below	Cal # 35	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529224.D Vial: 18
Acq On : 2 Feb 2021 19:01 Operator: RLD-DGS
Sample : 179112,529224, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 19:22:06 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	193765	6.0703	ug/L	98
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	7.35	78	2577	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	8.77	83	51283	2.2131	ug/L	97
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.80	92	4651	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	10.83	129	12665	0.7373	ug/L	96
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	3547	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529224.D Vial: 18
Acq On : 2 Feb 2021 19:01 Operator: RLD-DGS
Sample : 179112,529224, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 19:22:06 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

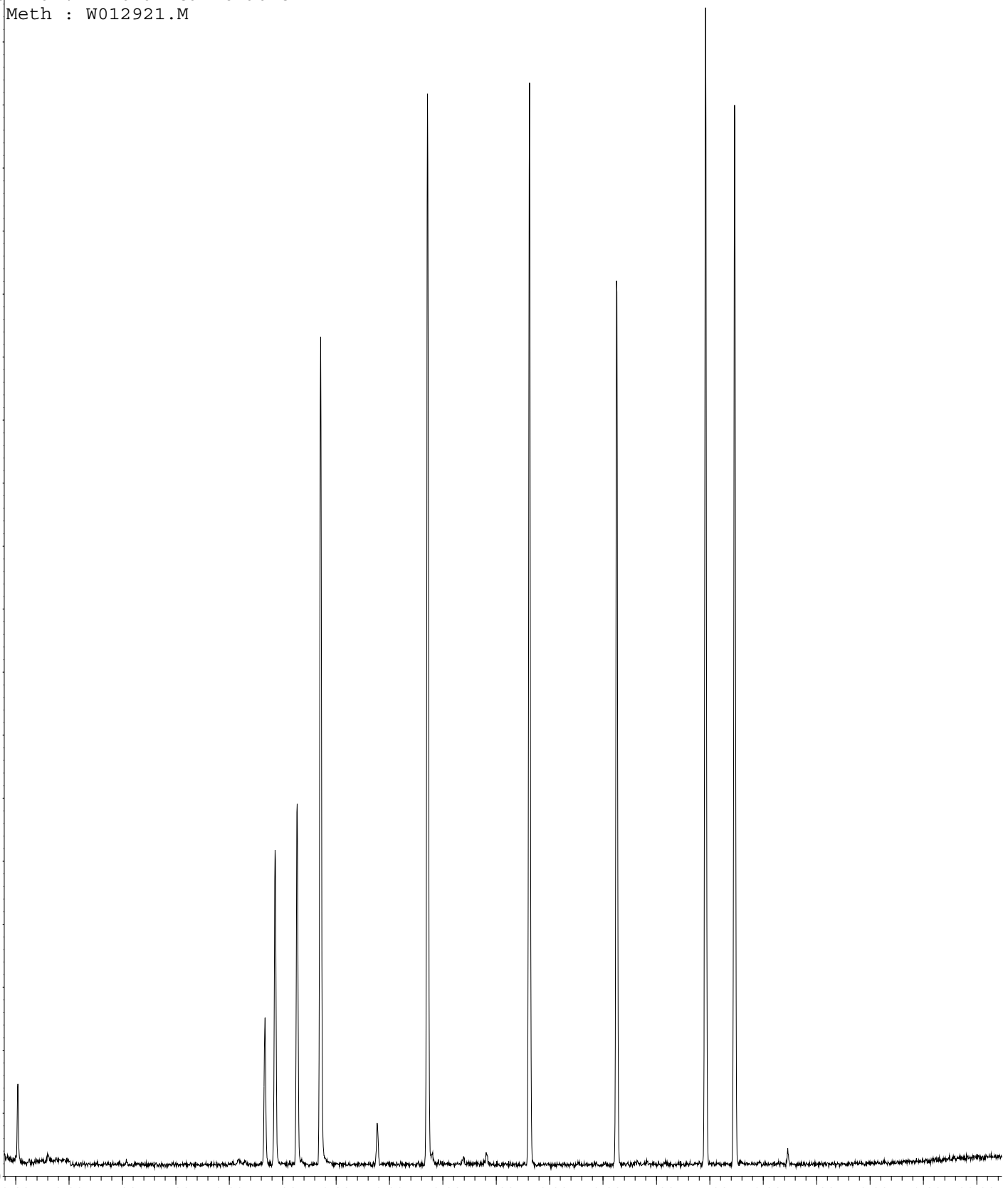
(#) = qualifier out of range (m) = manual integration

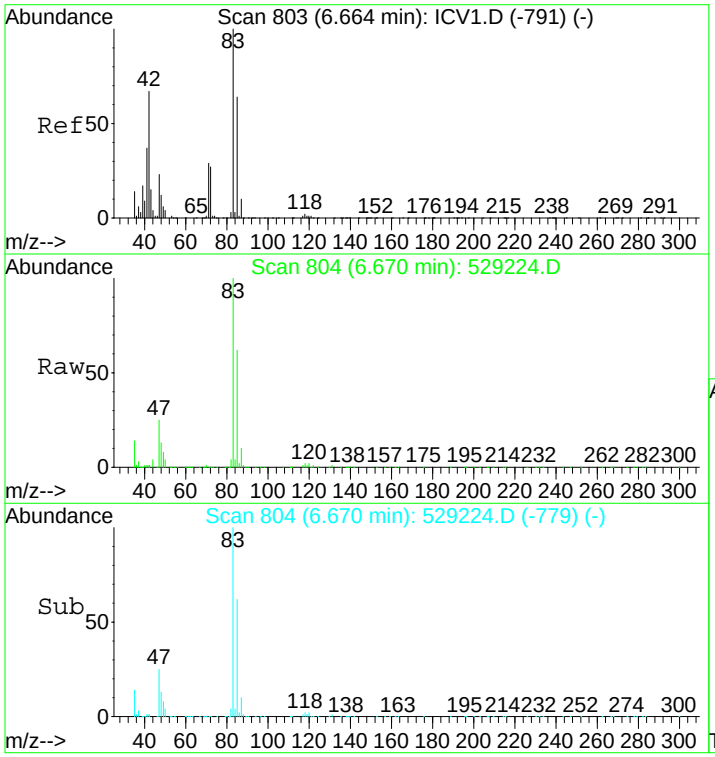
Abundance Quantitation Report TIC: 529224.D

Data File : C:\INSTARCH\DATA\FEB0221\529224.D Vial: 18
Acq On : 2 Feb 2021 19:01 Operator: RLD-DGS
Sample : 179112,529224, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 19:22:06 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

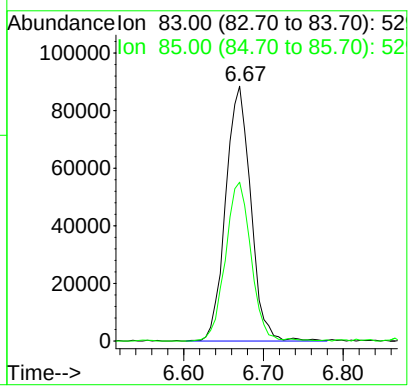


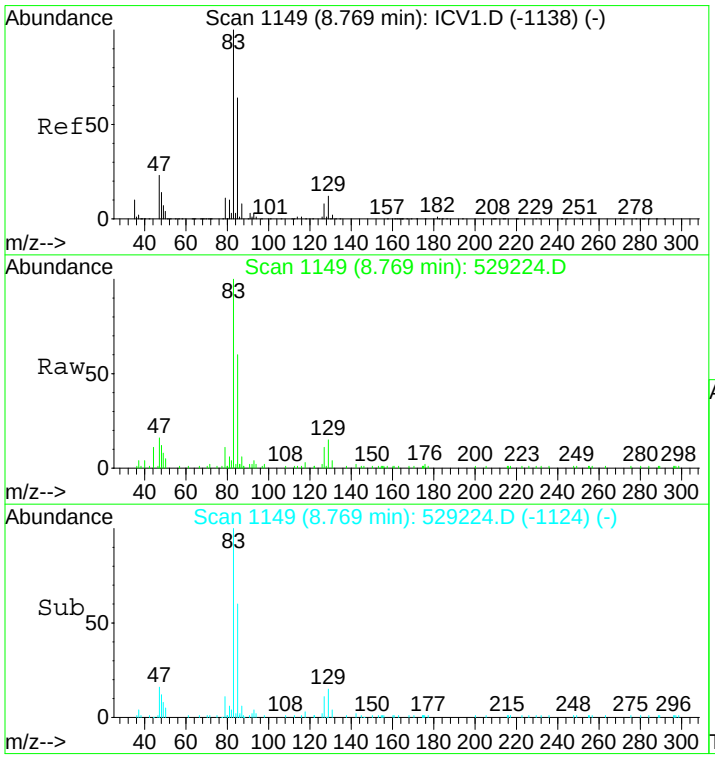


#39
Chloroform
Concen: 6.07 ug/L
RT: 6.67 min Scan# 804
Delta R.T. -0.00 min
Lab File: 529224.D
Acq: 2 Feb 2021 19:01

Tgt Ion: 83 Resp: 193765

Ion	Ratio	Lower	Upper
83	100		
85	63.9	45.8	85.8

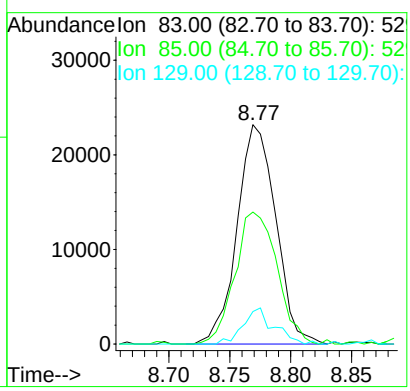


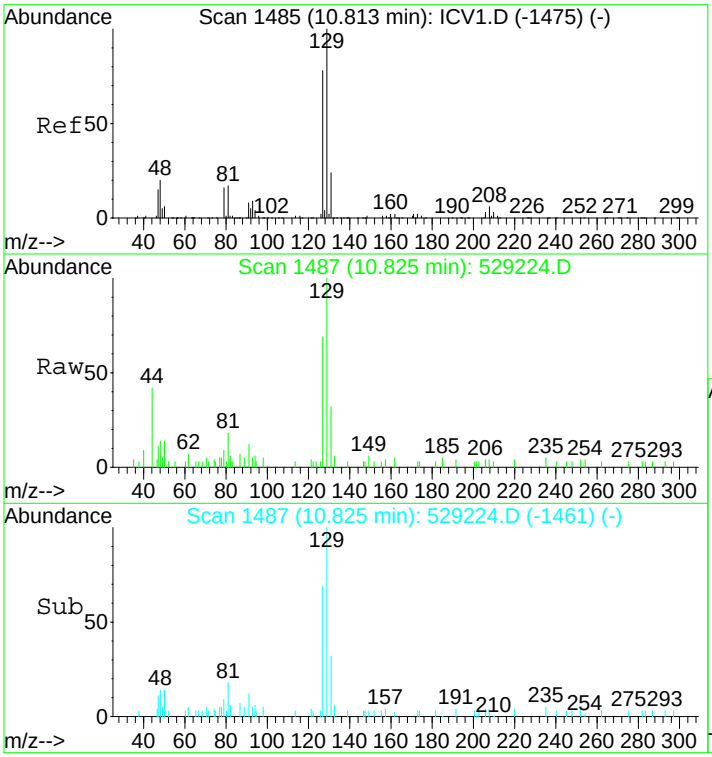


#56
Bromodiclrma
Concen: 2.21 ug/L
RT: 8.77 min Scan# 1149
Delta R.T. -0.00 min
Lab File: 529224.D
Acq: 2 Feb 2021 19:01

Tgt Ion: 83 Resp: 51283

Ion	Ratio	Lower	Upper
83	100		
85	65.3	43.0	83.0
129	13.1	0.0	31.1

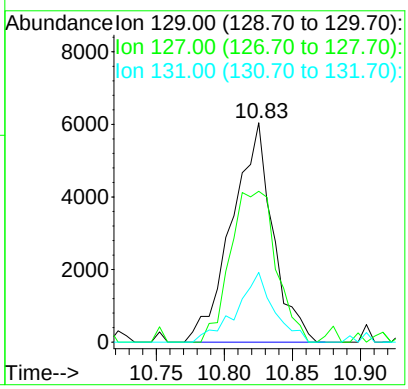




#70
Clorodibrmta
Concen: 0.74 ug/L
RT: 10.83 min Scan# 1487
Delta R.T. 0.01 min
Lab File: 529224.D
Acq: 2 Feb 2021 19:01

Tgt Ion:129 Resp: 12665

Ion	Ratio	Lower	Upper
129	100		
127	77.2	58.7	98.7
131	28.9	3.0	43.0



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529226.D Vial: 19
Acq On : 2 Feb 2021 19:31 Operator: RLD-DGS
Sample : 179112,529226, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 19:51:46 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1274941	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1090961	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	611925	20.00	ug/L	0.00 NA%

System Monitoring Compounds						
41) SURRDibrflma	6.86	113	334015	20.424	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	91597	20.235	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1313146	20.264	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%		
83) SURR4BrFBenz	13.25	95	555723	20.028	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	4586	Below	Cal # 45	
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.27	76	2705	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529226.D Vial: 19
Acq On : 2 Feb 2021 19:31 Operator: RLD-DGS
Sample : 179112,529226, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 19:51:46 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	79114	2.5185	ug/L	94
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	259293	14.4290	ug/L	99
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	37112	2.0838	ug/L	85
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.79	92	20401	0.4540	ug/L	85
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	2625	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	11.82	91	5215	N.D.		
76)	m p-Xylene	11.98	106	6431	N.D.		
77)	o-Xylene	12.54	106	3291	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	13.77	105	3884	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	14.43	105	5022	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529226.D Vial: 19
Acq On : 2 Feb 2021 19:31 Operator: RLD-DGS
Sample : 179112,529226, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 19:51:46 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

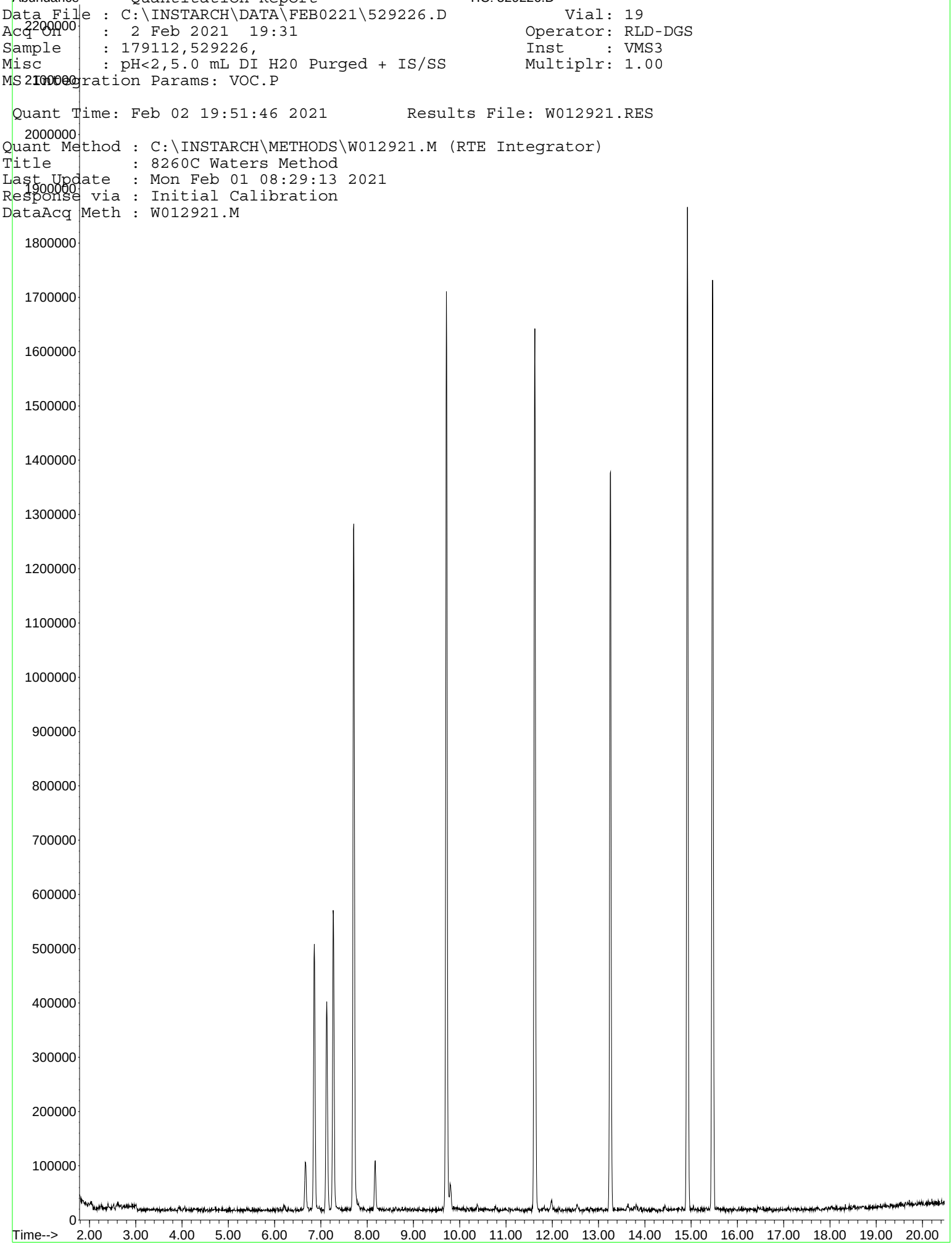
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

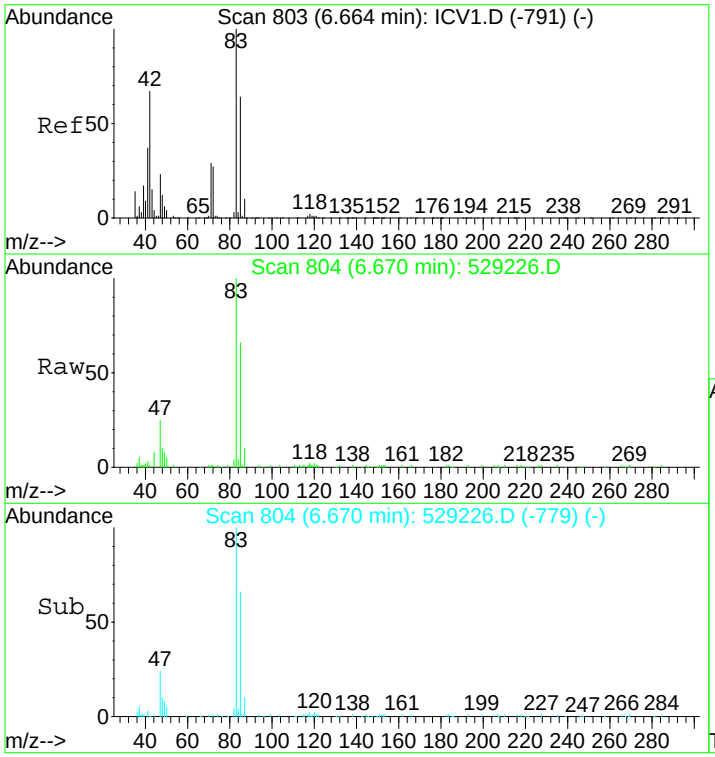
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\FEB0221\529226.D Vial: 19
Acq On : 2 Feb 2021 19:31 Operator: RLD-DGS
Sample : 179112,529226, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS 2100.m Integration Params: VOC.P

Quant Time: Feb 02 19:51:46 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

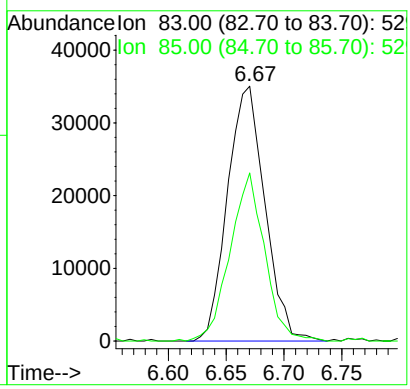


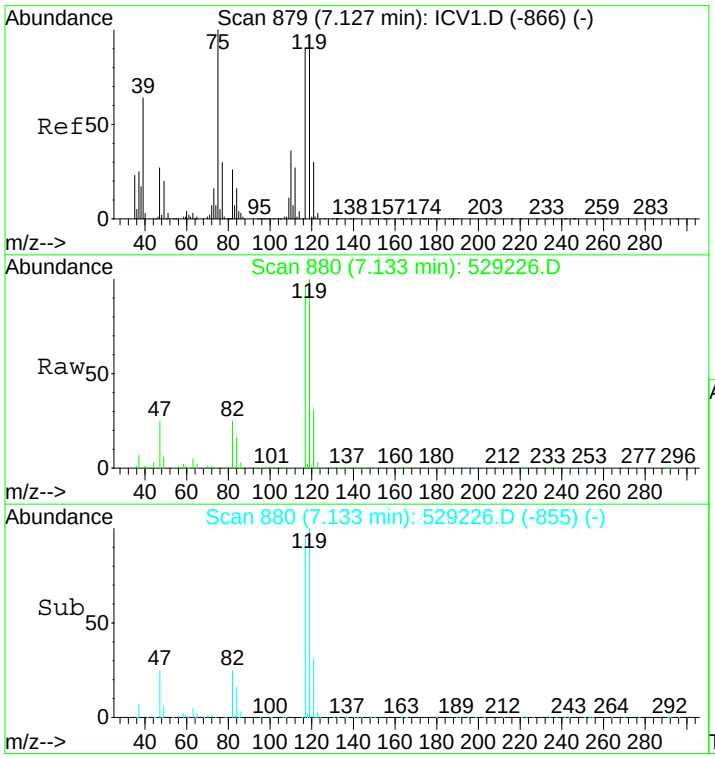


#39
Chloroform
Concen: 2.52 ug/L
RT: 6.67 min Scan# 804
Delta R.T. -0.00 min
Lab File: 529226.D
Acq: 2 Feb 2021 19:31

Tgt Ion: 83 Resp: 79114

Ion	Ratio	Lower	Upper
83	100		
85	60.8	45.8	85.8

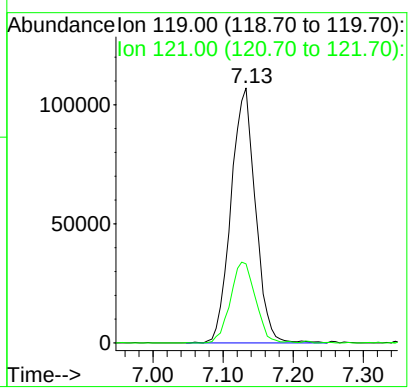


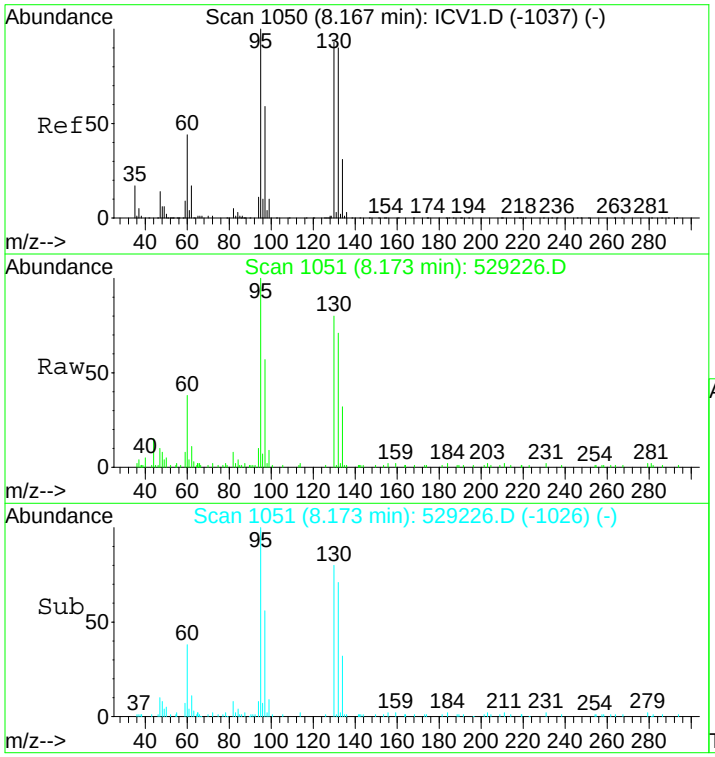


#43
Carbtetraclo
Concen: 14.43 ug/L
RT: 7.13 min Scan# 880
Delta R.T. -0.00 min
Lab File: 529226.D
Acq: 2 Feb 2021 19:31

Tgt Ion:119 Resp: 259293

Ion	Ratio	Lower	Upper
119	100		
121	32.5	12.2	52.2

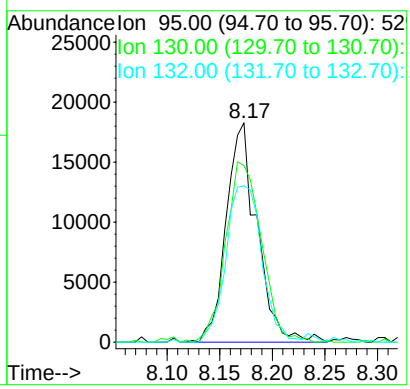


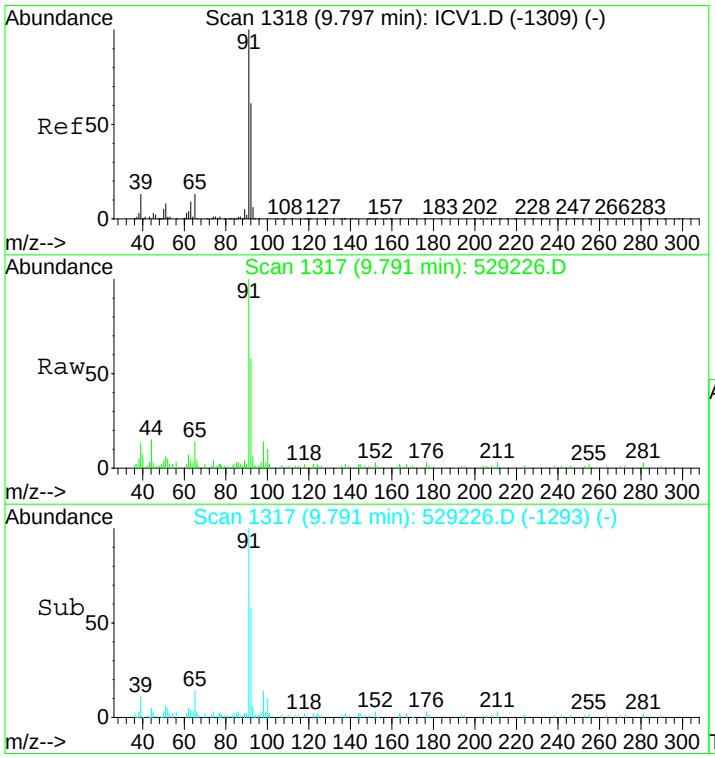


#49
trichloroete
Concen: 2.08 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. -0.00 min
Lab File: 529226.D
Acq: 2 Feb 2021 19:31

Tgt Ion: 95 Resp: 37112

Ion	Ratio	Lower	Upper
95	100		
130	95.3	86.7	126.7
132	83.5	83.1	123.1

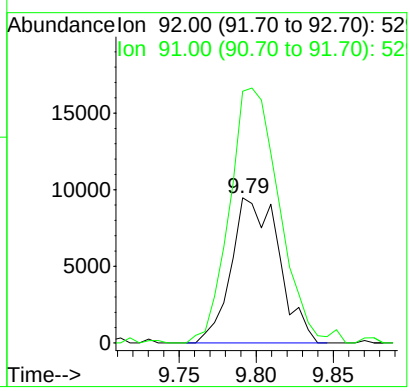




#62
Toluene
Concen: 0.45 ug/L
RT: 9.79 min Scan# 1317
Delta R.T. -0.01 min
Lab File: 529226.D
Acq: 2 Feb 2021 19:31

Tgt Ion: 92 Resp: 20401

Ion	Ratio	Lower	Upper
92	100		
91	183.0	143.0	183.0



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529227.D Vial: 20
Acq On : 2 Feb 2021 20:00 Operator: RLD-DGS
Sample : 179112,529227, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 20:21:33 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1272683	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1074663	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	612784	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	326456	19.998	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
45) SURR12DCAd4	7.27	102	89434	19.792	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %			
61) SURRd8Tolule	9.71	98	1306478	20.197	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.25	95	551070	19.833	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	3.73	67	13040	0.7014	ug/L	91
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	4.04	101	5450	N.D.		
15) Acetone	4.07	43	4805	Below Cal #		45
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	0.00	76	0	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529227.D Vial: 20
Acq On : 2 Feb 2021 20:00 Operator: RLD-DGS
Sample : 179112,529227, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 20:21:33 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.67	83	10508	0.3351 ug/L	91
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.13	119	25711	1.4333 ug/L	87
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.80	92	19067	0.4251 ug/L	90
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	11.82	91	5401	N.D.	
76)	m p-Xylene	11.98	106	7290	N.D.	
77)	o-Xylene	12.53	106	4319	N.D.	
78)	Styrene	12.55	104	3827	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	13.77	105	3716	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.44	105	5477	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.46	91	3332	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529227.D Vial: 20
Acq On : 2 Feb 2021 20:00 Operator: RLD-DGS
Sample : 179112,529227, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 20:21:33 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

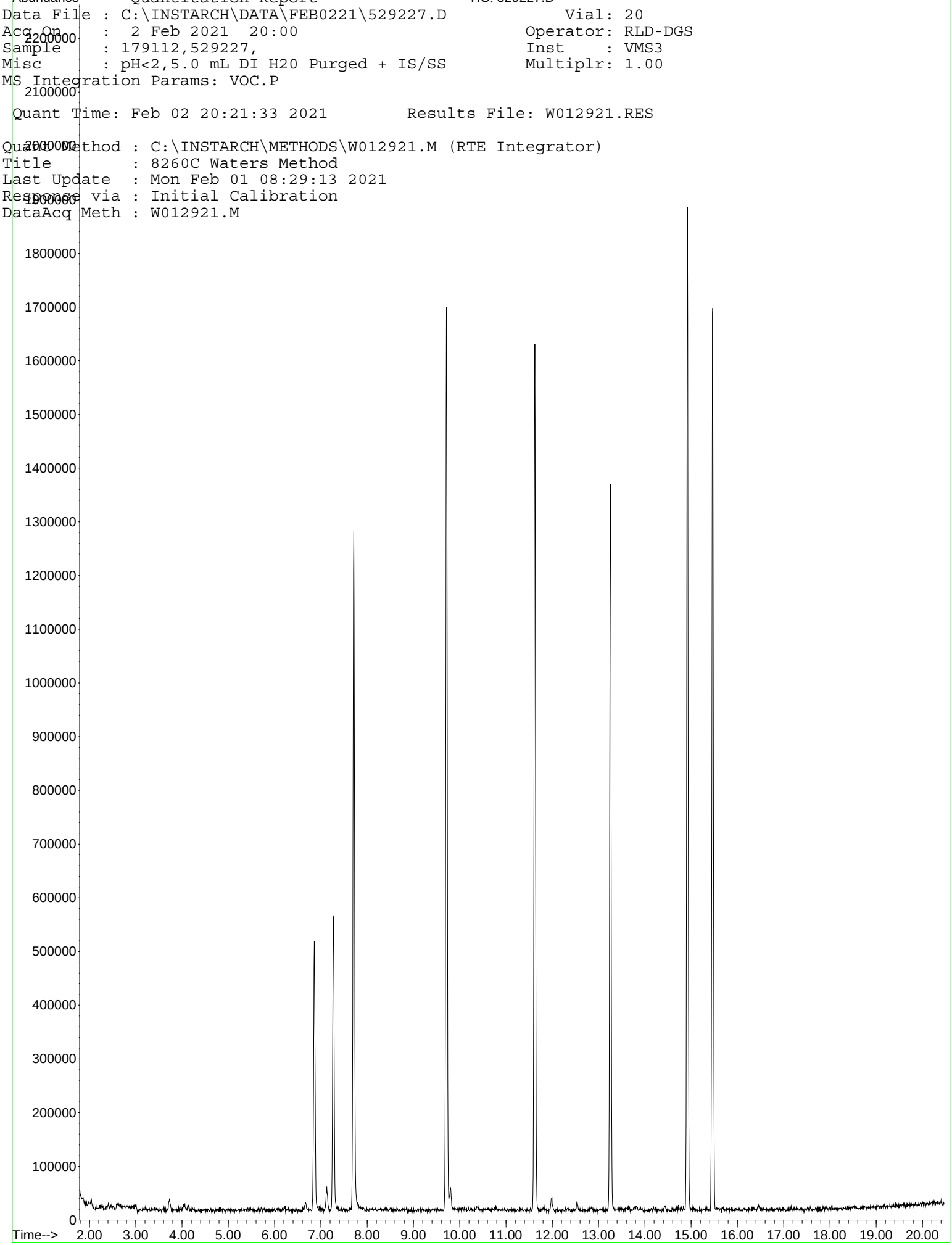
(#) = qualifier out of range (m) = manual integration

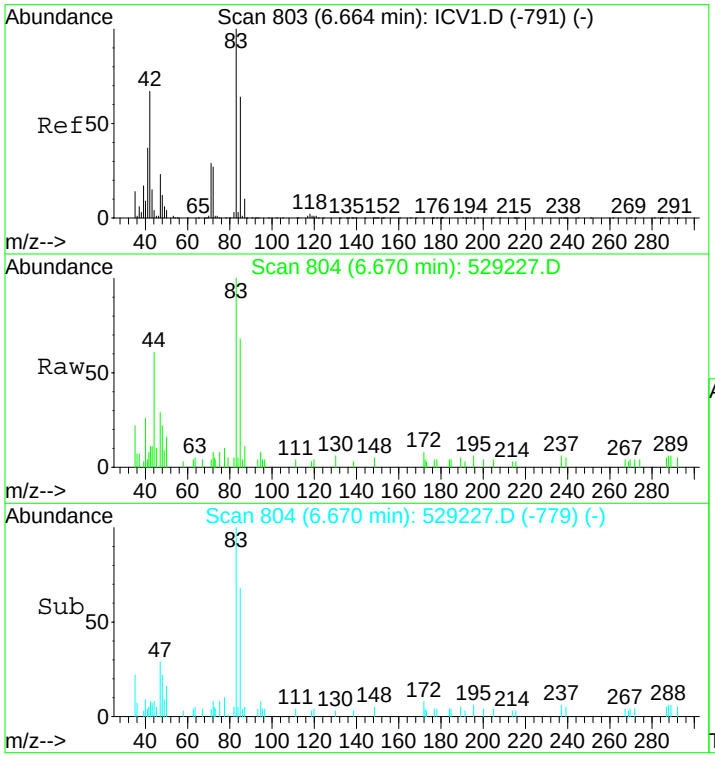
Abundance Quantitation Report TIC: 529227.D

Data File : C:\INSTARCH\DATA\FEB0221\529227.D Vial: 20
Acq On : 2 Feb 2021 20:00 Operator: RLD-DGS
Sample : 179112,529227, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 20:21:33 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

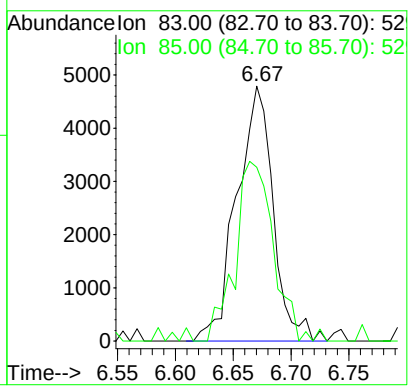


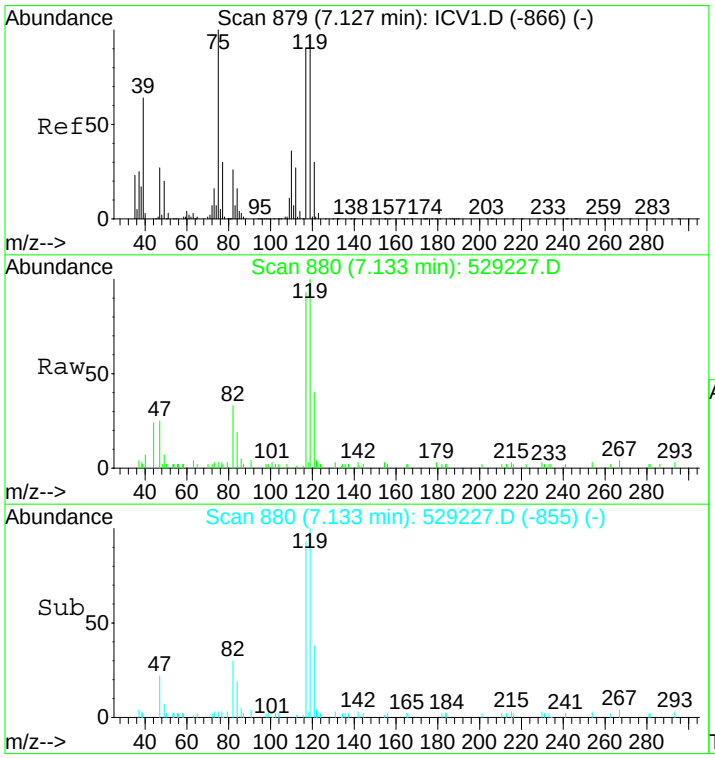


#39
Chloroform
Concen: 0.34 ug/L
RT: 6.67 min Scan# 804
Delta R.T. -0.00 min
Lab File: 529227.D
Acq: 2 Feb 2021 20:00

Tgt Ion: 83 Resp: 10508

Ion	Ratio	Lower	Upper
83	100		
85	73.2	45.8	85.8

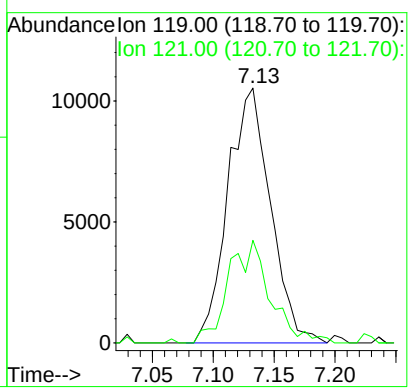


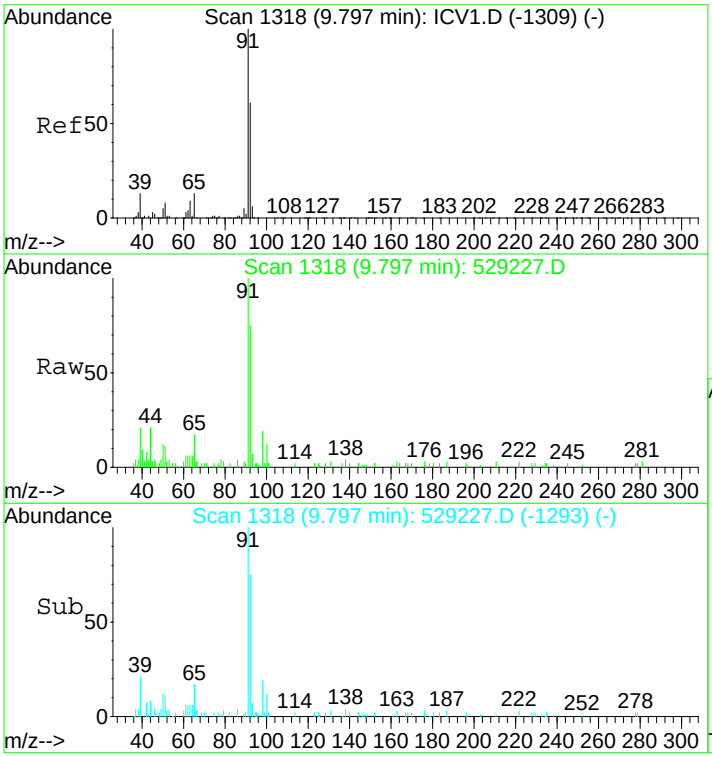


#43
Carbtetraclo
Concen: 1.43 ug/L
RT: 7.13 min Scan# 880
Delta R.T. -0.00 min
Lab File: 529227.D
Acq: 2 Feb 2021 20:00

Tgt Ion:119 Resp: 25711

Ion	Ratio	Lower	Upper
119	100		
121	39.4	12.2	52.2

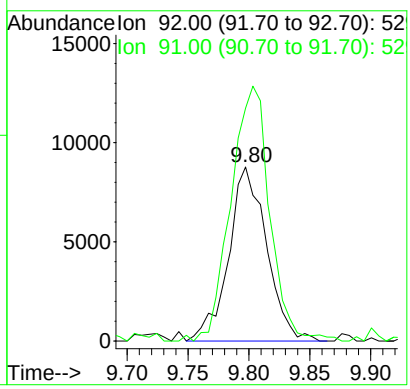




#62
Toluene
Concen: 0.43 ug/L
RT: 9.80 min Scan# 1318
Delta R.T. -0.00 min
Lab File: 529227.D
Acq: 2 Feb 2021 20:00

Tgt Ion: 92 Resp: 19067

Ion	Ratio	Lower	Upper
92	100		
91	149.8	143.0	183.0



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529228.D Vial: 21
Acq On : 2 Feb 2021 20:30 Operator: RLD-DGS
Sample : 179112,529228, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 20:51:35 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1262960	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1099052	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	608203	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	331492	20.462	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	86767	19.350	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97	%		
61) SURRd8Tolule	9.71	98	1317205	20.520	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103	%		
83) SURR4BrFBenz	13.25	95	557229	20.206	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	3.73	67	4650	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.08	43	3336	Below Cal #		45
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	0.00	76	0	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.54	63	23692	0.7854	ug/L	95
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	6.27	96	17020	0.8893	ug/L	89
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529228.D Vial: 21
Acq On : 2 Feb 2021 20:30 Operator: RLD-DGS
Sample : 179112,529228, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 20:51:35 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	6.91	97	7751	0.3497 ug/L	98
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.17	95	38234	2.1671 ug/L	92
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.80	92	11332	0.2546 ug/L	98
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	10.54	166	5030	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	11.83	91	3611	N.D.	
76)	m p-Xylene	11.98	106	5259	N.D.	
77)	o-Xylene	12.54	106	3180	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	13.78	105	3051	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.43	105	6182	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.47	91	2779	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529228.D Vial: 21
Acq On : 2 Feb 2021 20:30 Operator: RLD-DGS
Sample : 179112,529228, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 20:51:35 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

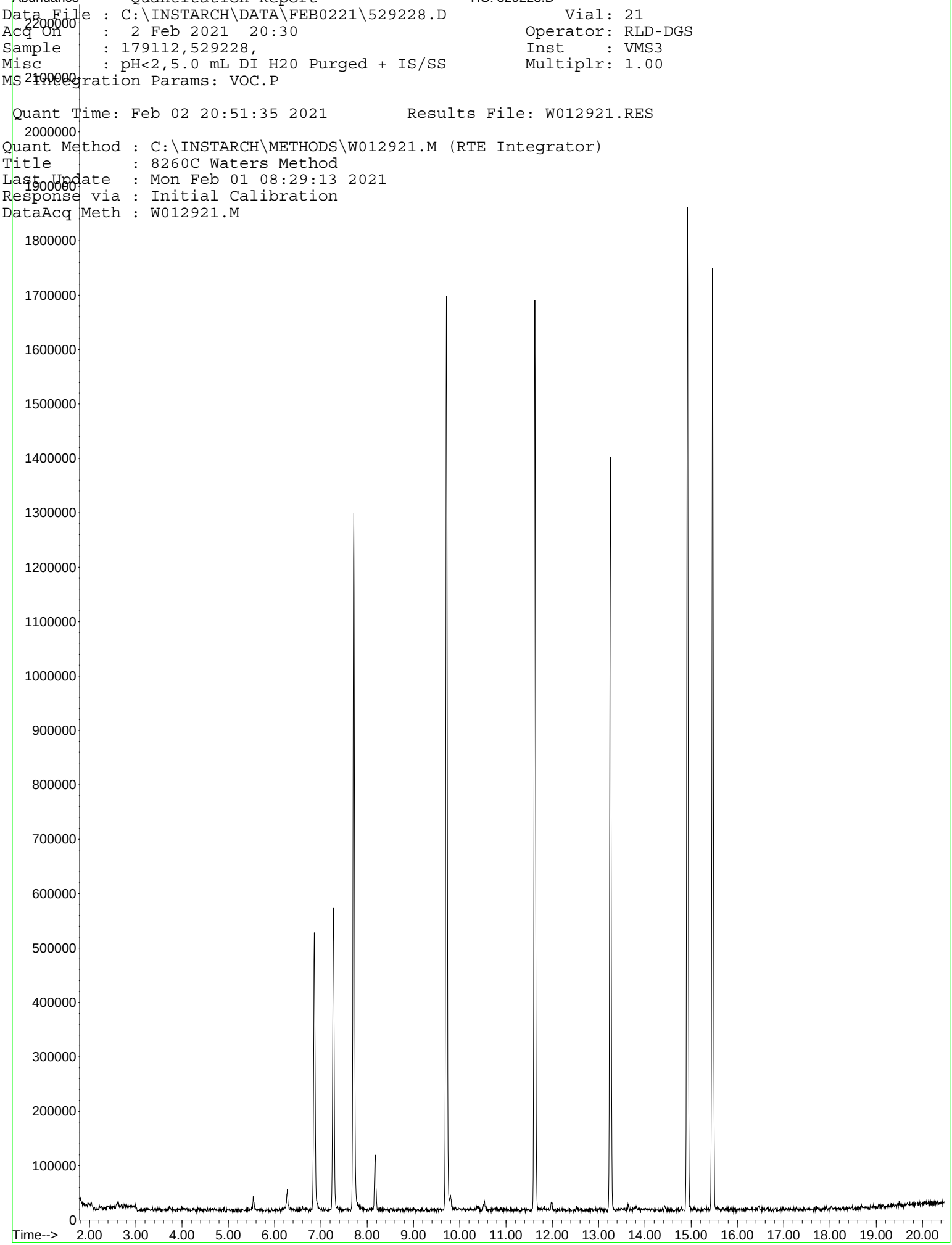
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	18.03	128	4318	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

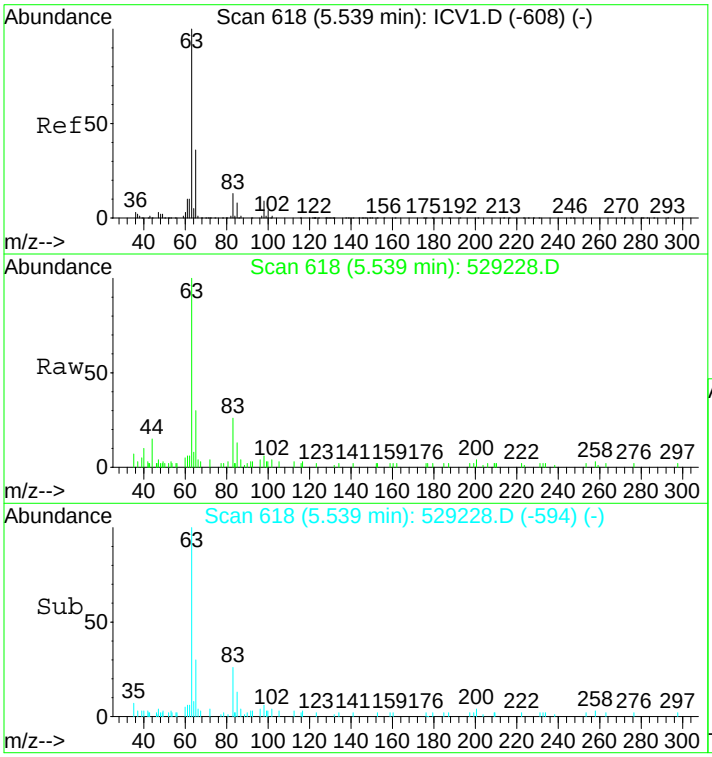
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\FEB0221\529228.D Vial: 21
Acq On : 2 Feb 2021 20:30 Operator: RLD-DGS
Sample : 179112,529228, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 20:51:35 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

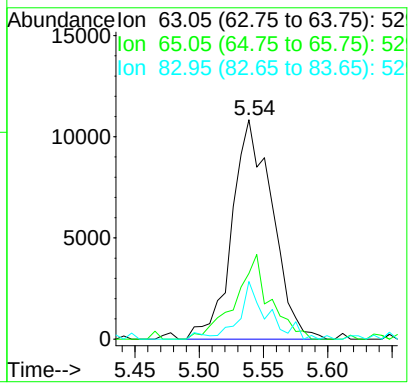


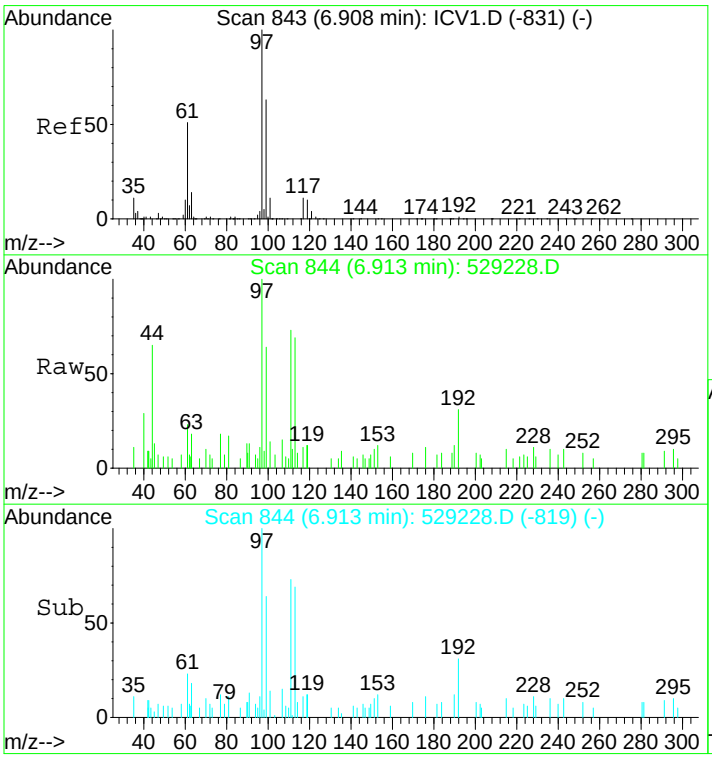


#26
11dichlorota
Concen: 0.79 ug/L
RT: 5.54 min Scan# 618
Delta R.T. -0.01 min
Lab File: 529228.D
Acq: 2 Feb 2021 20:30

Tgt Ion: 63 Resp: 23692

Ion	Ratio	Lower	Upper
63	100		
65	33.2	12.9	52.9
83	18.9	0.0	32.9

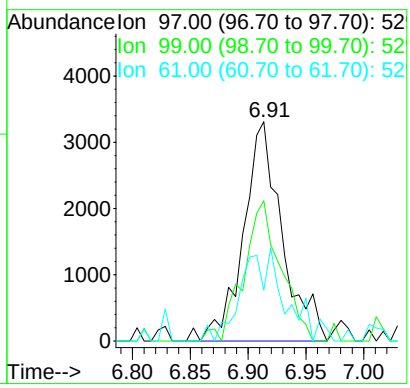


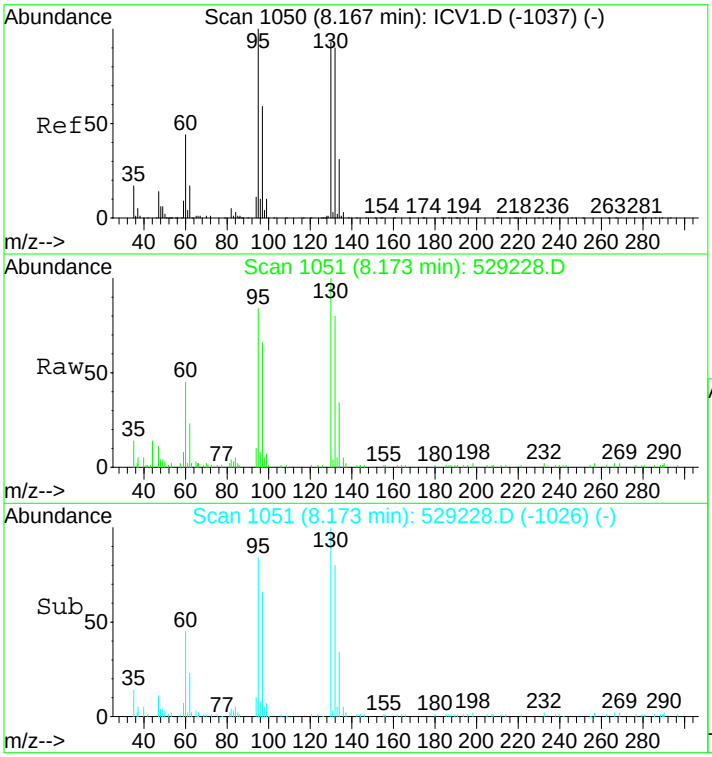


#40
111trichlota
Concen: 0.35 ug/L
RT: 6.91 min Scan# 844
Delta R.T. -0.00 min
Lab File: 529228.D
Acq: 2 Feb 2021 20:30

Tgt Ion: 97 Resp: 7751

Ion	Ratio	Lower	Upper
97	100		
99	61.3	43.2	83.2
61	47.7	29.4	69.4

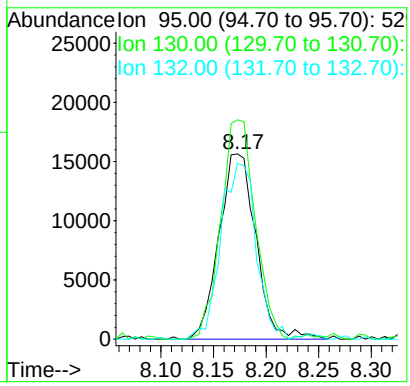


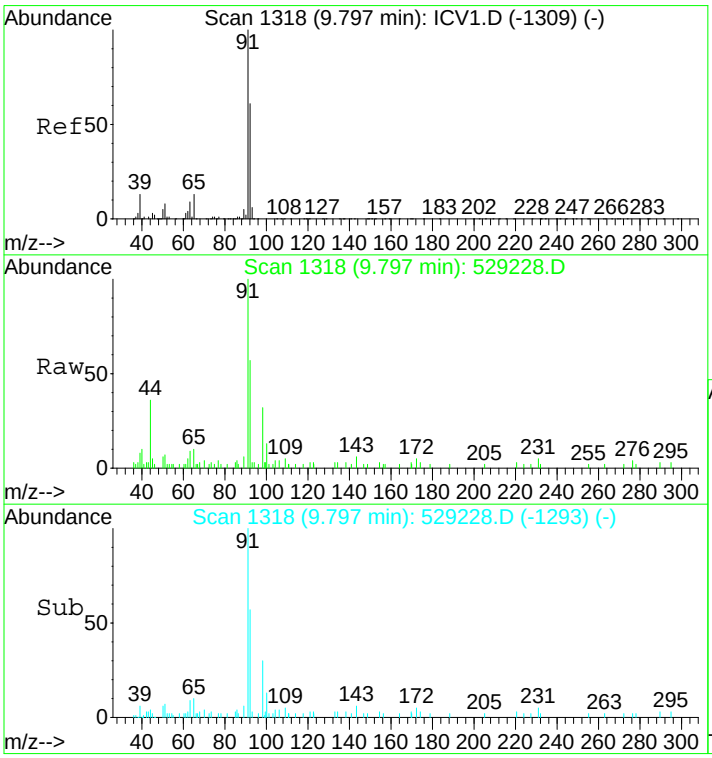


#49
trichloroete
Concen: 2.17 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. -0.00 min
Lab File: 529228.D
Acq: 2 Feb 2021 20:30

Tgt Ion: 95 Resp: 38234

Ion	Ratio	Lower	Upper
95	100		
130	110.3	86.7	126.7
132	90.9	83.1	123.1

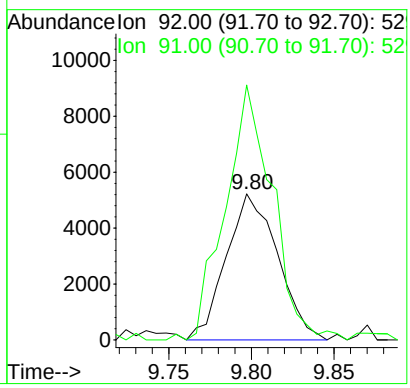




#62
Toluene
Concen: 0.25 ug/L
RT: 9.80 min Scan# 1318
Delta R.T. -0.00 min
Lab File: 529228.D
Acq: 2 Feb 2021 20:30

Tgt Ion: 92 Resp: 11332

Ion	Ratio	Lower	Upper
92	100		
91	159.9	143.0	183.0



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529223R.D Vial: 29
Acq On : 3 Feb 2021 9:37 Operator: RLD-DGS
Sample : 179112,529223, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 09:58:12 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Report

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1289432	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1099210	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	633454	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.86	113	332625	20.111 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %		
45) SURR12DCAd4	7.27	102	93168	20.351 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102 %		
61) SURRd8Tolule	9.71	98	1306393	19.933 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %		
83) SURR4BrFBenz	13.26	95	562161	19.572 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %		
Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	3.27	101	2756	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	4292	Below Cal #	45
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.27	76	3960	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.85	59	3002	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	5.54	63	10252	0.3329 ug/L #	88
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	6.27	96	7293	0.3733 ug/L	96
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.66	42	2837	Below Cal #	35

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529223R.D Vial: 29
Acq On : 3 Feb 2021 9:37 Operator: RLD-DGS
Sample : 179112,529223, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 09:58:12 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.68	83	5472	N.D.		
40)	111trichlota	6.91	97	4996	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	16087	0.8851	ug/L	99
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	25145	1.3960	ug/L	98
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.80	92	15668	0.3448	ug/L	95
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	10.53	166	3521	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	3139	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	11.82	91	4369	N.D.		
76)	m p-Xylene	11.98	106	6257	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	14.44	105	5982	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.47	91	3309	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529223R.D Vial: 29
Acq On : 3 Feb 2021 9:37 Operator: RLD-DGS
Sample : 179112,529223, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 09:58:12 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

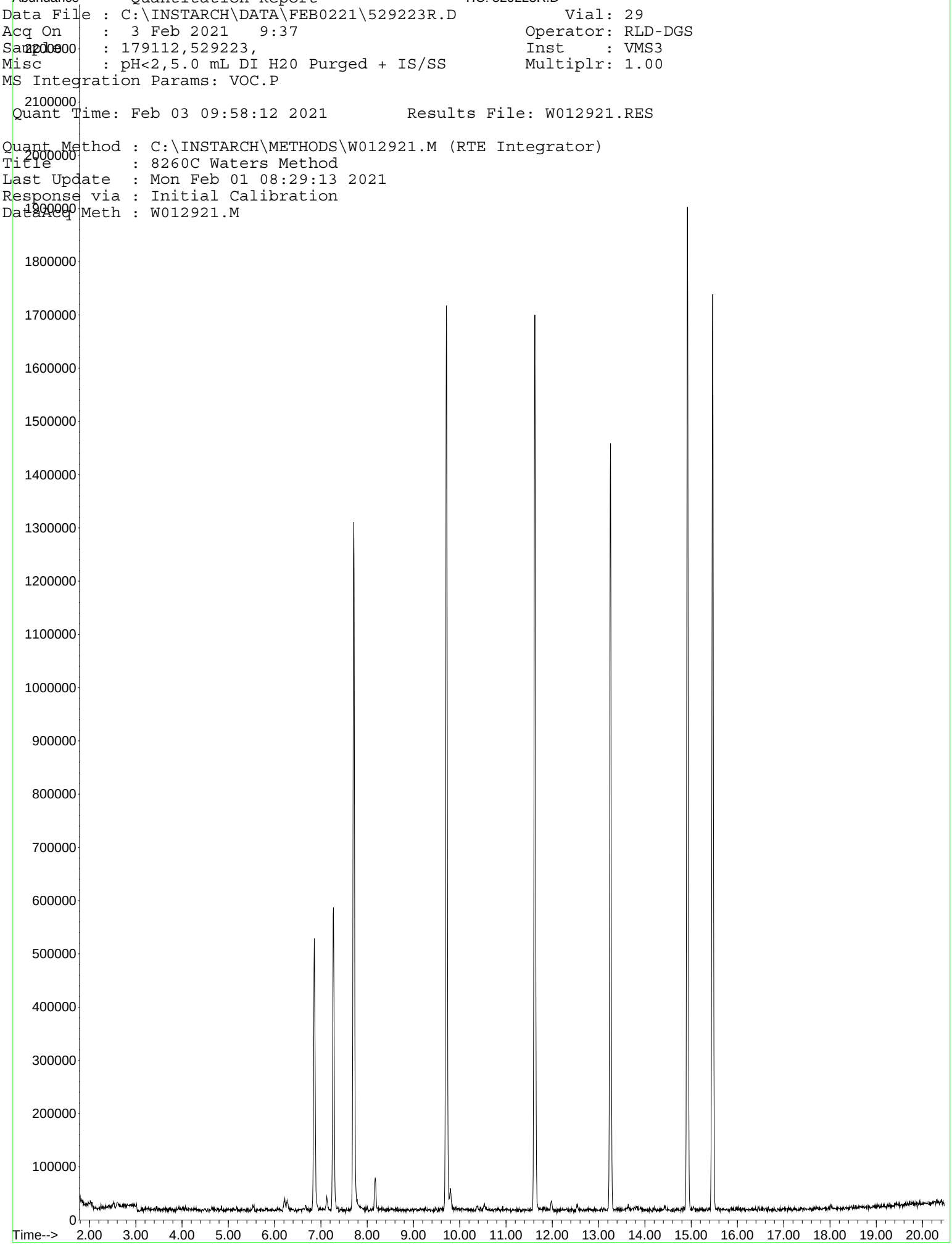
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	18.03	128	5556	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

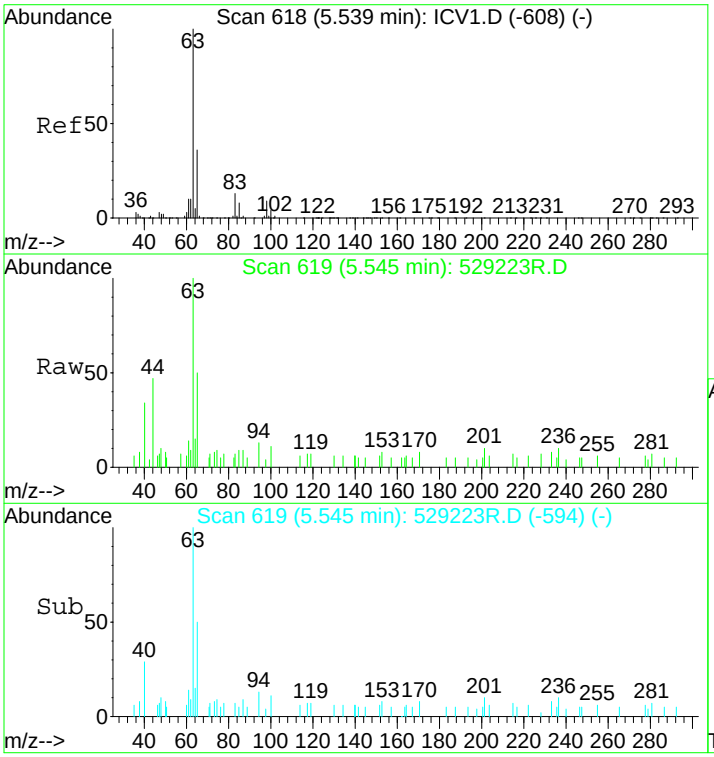
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\FEB0221\529223R.D Vial: 29
Acq On : 3 Feb 2021 9:37 Operator: RLD-DGS
Sample : 179112,529223, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 09:58:12 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

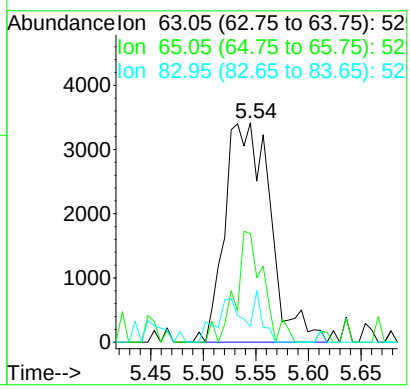


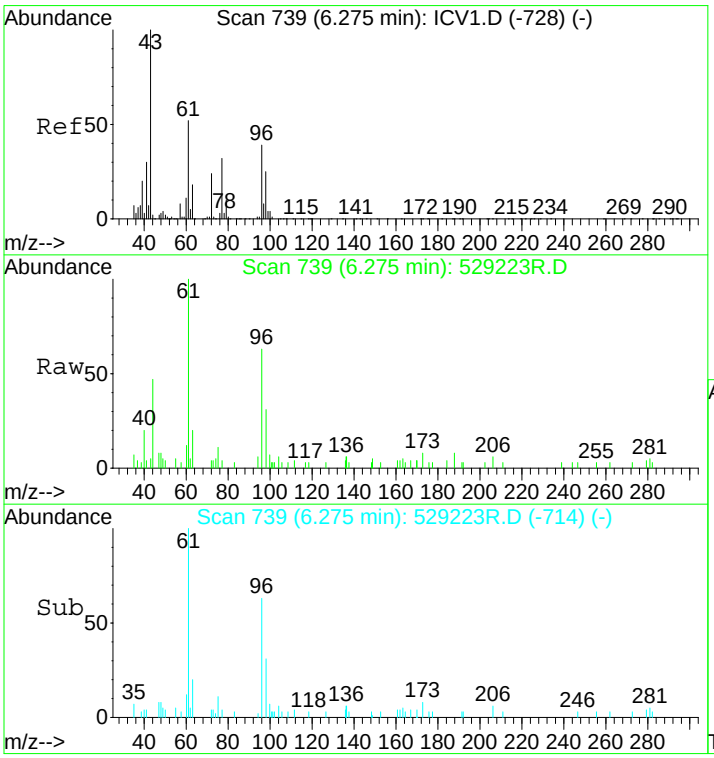


#26
11dichlorota
Concen: 0.33 ug/L
RT: 5.54 min Scan# 619
Delta R.T. -0.00 min
Lab File: 529223R.D
Acq: 3 Feb 2021 9:37

Tgt Ion: 63 Resp: 10252

Ion	Ratio	Lower	Upper
63	100		
65	30.7	12.9	52.9
83	0.0	0.0	32.9

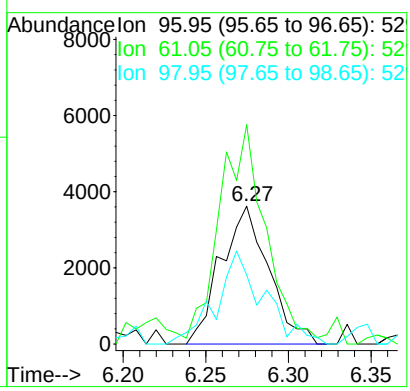


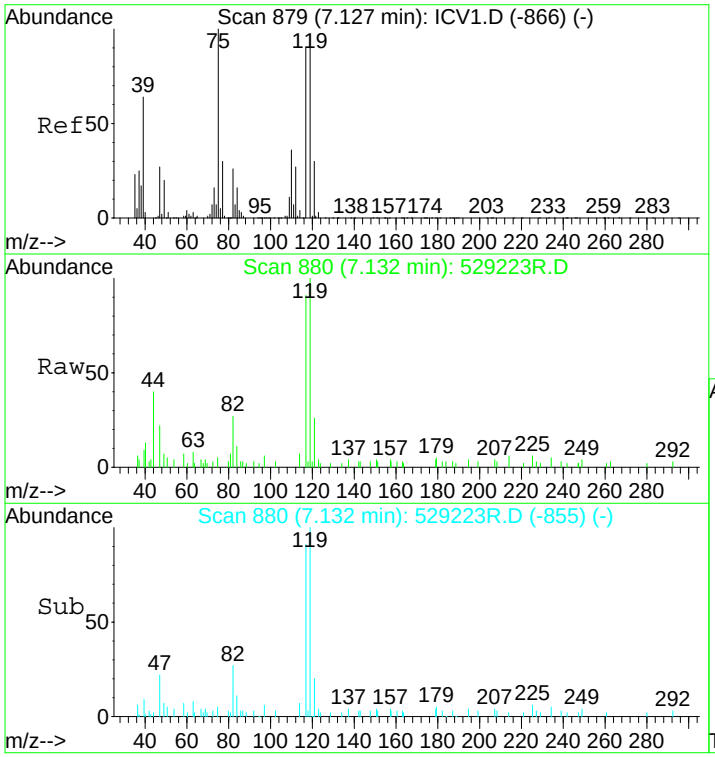


#32
c12dichlorte
Concen: 0.37 ug/L
RT: 6.27 min Scan# 739
Delta R.T. -0.00 min
Lab File: 529223R.D
Acq: 3 Feb 2021 9:37

Tgt Ion: 96 Resp: 7293

Ion	Ratio	Lower	Upper
96	100		
61	142.8	129.4	169.4
98	66.9	45.0	85.0

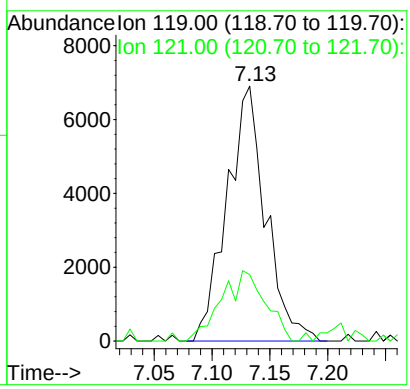


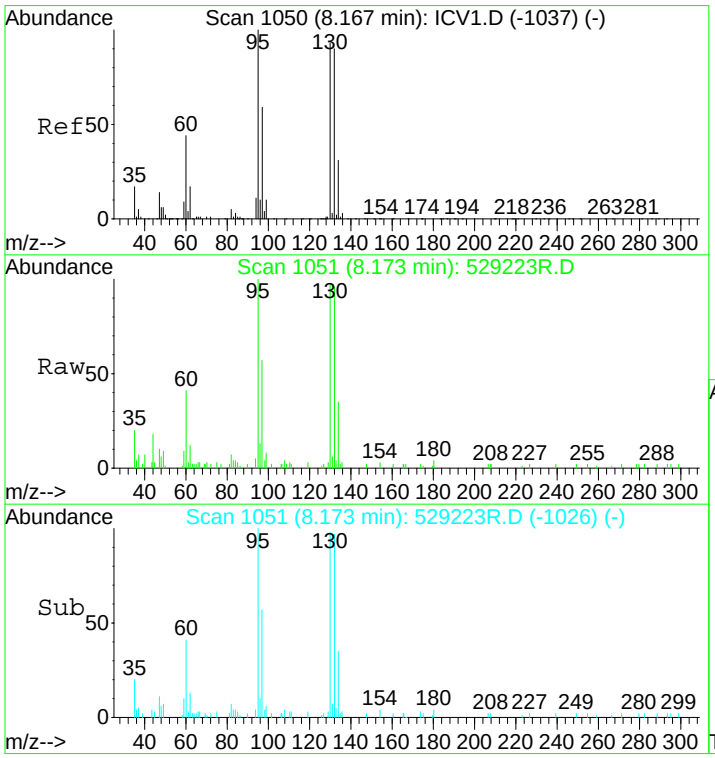


#43
Carbtetraclo
Concen: 0.89 ug/L
RT: 7.13 min Scan# 880
Delta R.T. -0.00 min
Lab File: 529223R.D
Acq: 3 Feb 2021 9:37

Tgt Ion:119 Resp: 16087

Ion	Ratio	Lower	Upper
119	100		
121	31.4	12.2	52.2

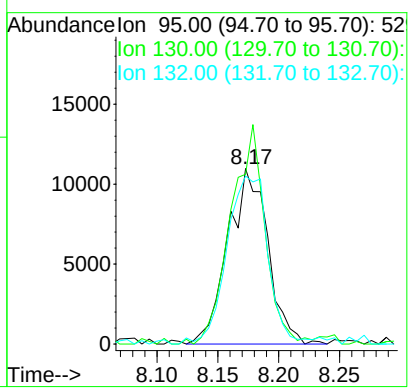


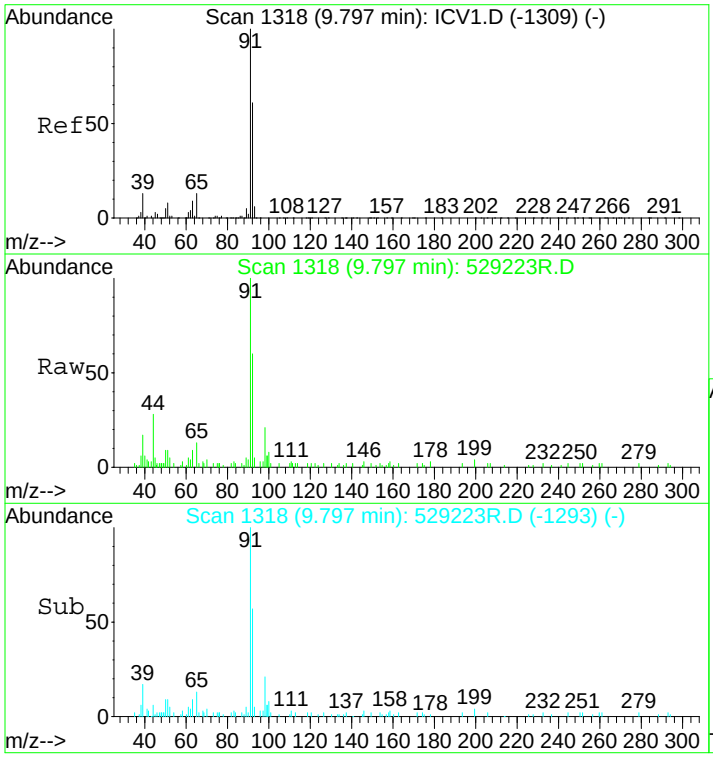


#49
trichloroete
Concen: 1.40 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. -0.00 min
Lab File: 529223R.D
Acq: 3 Feb 2021 9:37

Tgt Ion: 95 Resp: 25145

Ion	Ratio	Lower	Upper
95	100		
130	107.1	86.7	126.7
132	99.8	83.1	123.1

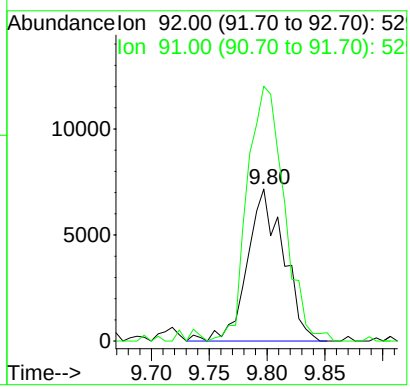




#62
Toluene
Concen: 0.34 ug/L
RT: 9.80 min Scan# 1318
Delta R.T. -0.00 min
Lab File: 529223R.D
Acq: 3 Feb 2021 9:37

Tgt Ion: 92 Resp: 15668

Ion	Ratio	Lower	Upper
92	100		
91	170.0	143.0	183.0



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529221R.D Vial: 30
Acq On : 3 Feb 2021 10:10 Operator: RLD-DGS
Sample : 179112,529221,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 10:31:09 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1266853	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1079449	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	616803	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	333125	20.500	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4	7.27	102	90136	20.039	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100 %			
61) SURRd8Tolule	9.71	98	1323612	20.556	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103 %			
83) SURR4BrFBenz	13.26	95	551758	19.728	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.06	43	8669	Below	Cal	74
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	2973	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.63	84	9154	Below	Cal	96
21) tbutylalcohol	4.84	59	2800	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.65	42	4981	Below	Cal #	32

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529221R.D Vial: 30
Acq On : 3 Feb 2021 10:10 Operator: RLD-DGS
Sample : 179112,529221,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 10:31:09 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	99473	3.1868 ug/L	97
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.12	119	335048	18.7636 ug/L	99
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	7.36	62	6157	0.2512 ug/L #	51
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.17	95	70080	3.9600 ug/L	92
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.79	92	3753	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.63	91	2790	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529221R.D Vial: 30
Acq On : 3 Feb 2021 10:10 Operator: RLD-DGS
Sample : 179112,529221,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 10:31:09 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

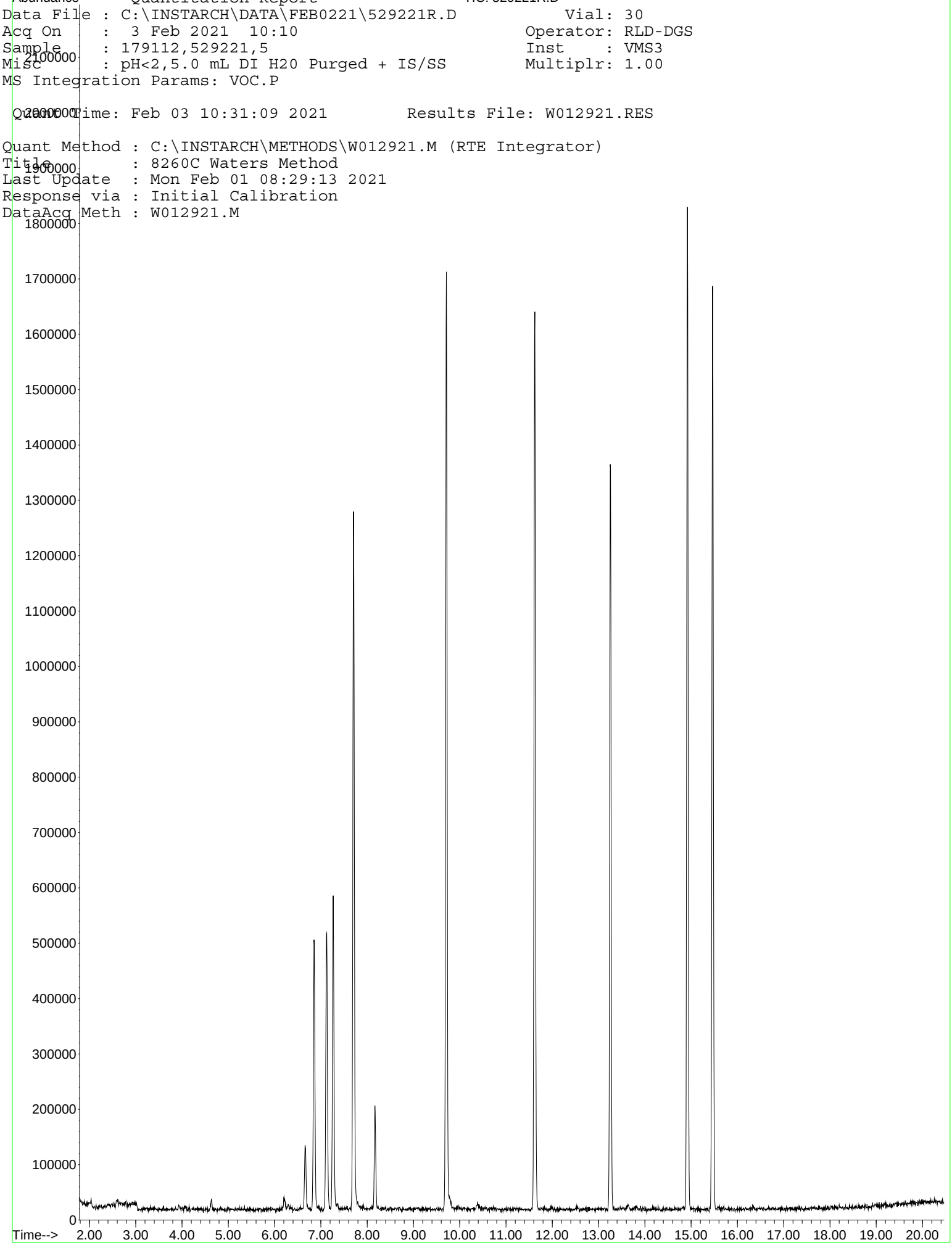
(#) = qualifier out of range (m) = manual integration

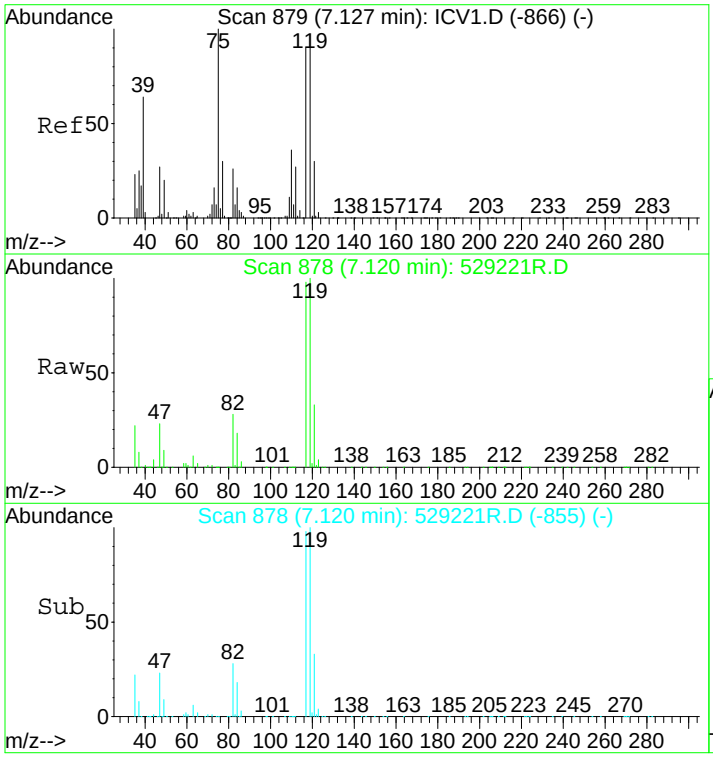
Abundance Quantitation Report TIC: 529221R.D

Data File : C:\INSTARCH\DATA\FEB0221\529221R.D Vial: 30
Acq On : 3 Feb 2021 10:10 Operator: RLD-DGS
Sample : 179112,529221,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 10:31:09 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

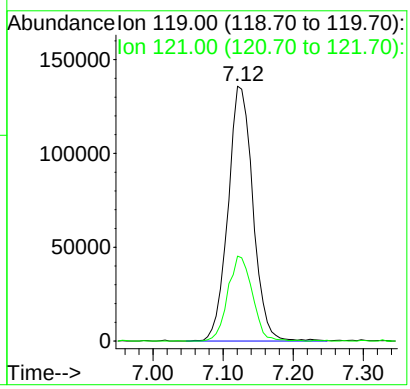




#43
Carbtetraclo
Concen: 18.76 ug/L
RT: 7.12 min Scan# 878
Delta R.T. -0.01 min
Lab File: 529221R.D
Acq: 3 Feb 2021 10:10

Tgt Ion:119 Resp: 335048

Ion	Ratio	Lower	Upper
119	100		
121	32.8	12.2	52.2



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529222R.D Vial: 31
Acq On : 3 Feb 2021 10:45 Operator: RLD-DGS
Sample : 179112,529222,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 11:06:14 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1283089	20.00 ug/L	-0.01 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1077596	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	612971	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.84	113	334599	20.330 ug/L	-0.02
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %		
45) SURR12DCAd4	7.26	102	94185	20.674 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103 %		
61) SURRd8Tolule	9.71	98	1306903	20.040 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %		
83) SURR4BrFBenz	13.25	95	557936	20.074 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %		
Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.05	43	7595	Below Cal #	45
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.25	76	4101	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.61	84	7758	Below Cal	97
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	6.29	72	2638	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.66	42	2870	Below Cal #	35

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529222R.D Vial: 31
Acq On : 3 Feb 2021 10:45 Operator: RLD-DGS
Sample : 179112,529222,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 11:06:14 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	95181	3.0107 ug/L	98
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.11	119	344711	19.0605 ug/L	100
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	7.35	62	5937	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.16	95	69950	3.9026 ug/L	96
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.79	92	5061	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	11.66	112	2707	N.D.	
73)	1Clhexane	11.62	91	3232	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

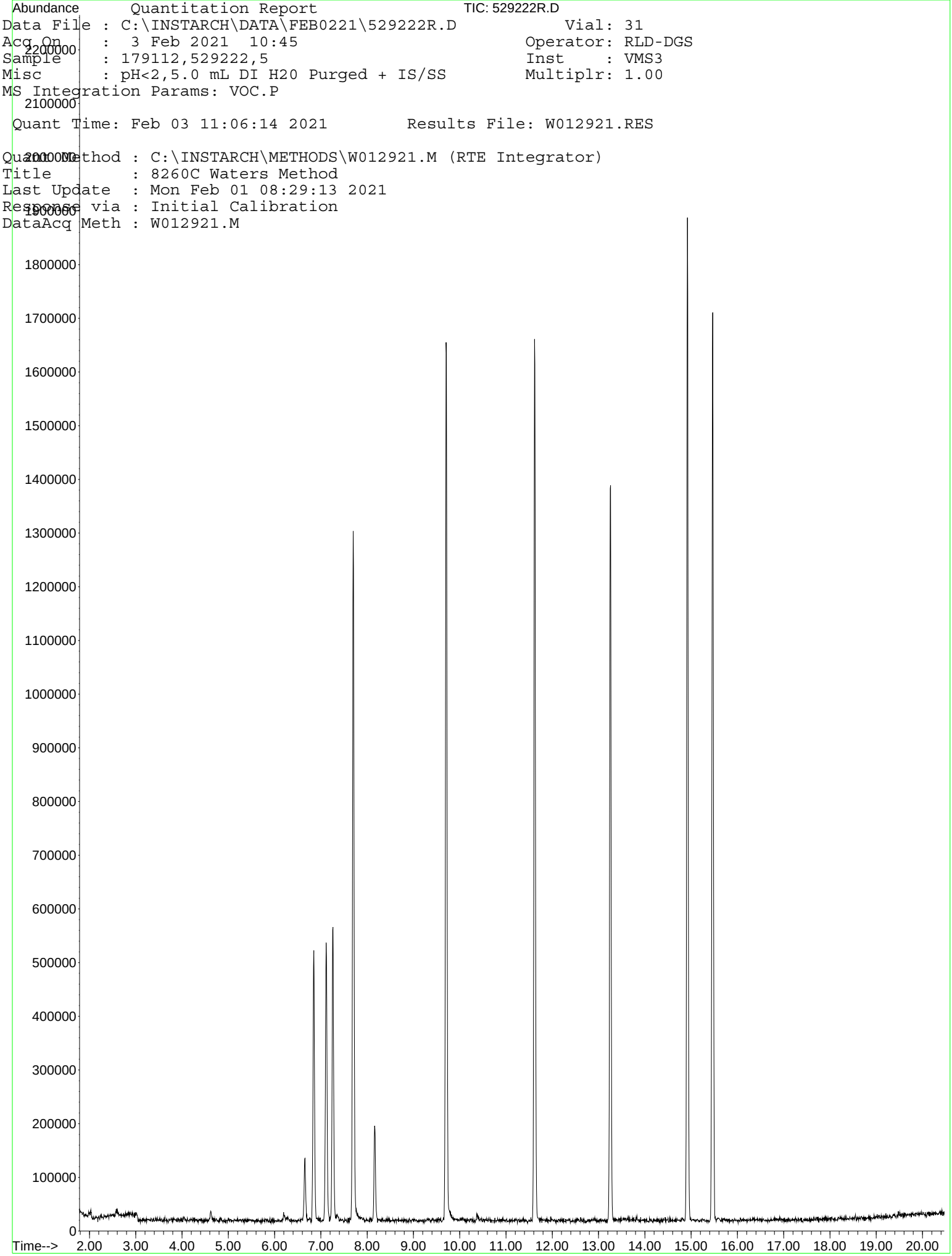
Data File : C:\INSTARCH\DATA\FEB0221\529222R.D Vial: 31
Acq On : 3 Feb 2021 10:45 Operator: RLD-DGS
Sample : 179112,529222,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 11:06:14 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: 529222R.D
Data File : C:\INSTARCH\DATA\FEB0221\529222R.D
Vial: 31
Acq On : 3 Feb 2021 10:45
Operator: RLD-DGS
Sample : 179112,529222,5
Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Feb 03 11:06:14 2021
Results File: W012921.RES
Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
2200000
2100000
2000000
1900000
1800000
1700000
1600000
1500000
1400000
1300000
1200000
1100000
1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
Time-->
2.00
3.00
4.00
5.00
6.00
7.00
8.00
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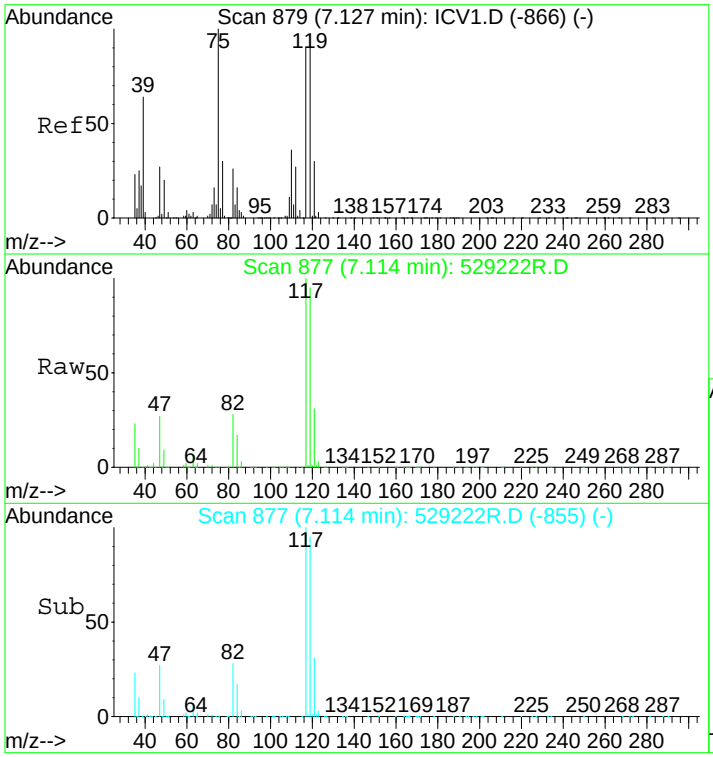
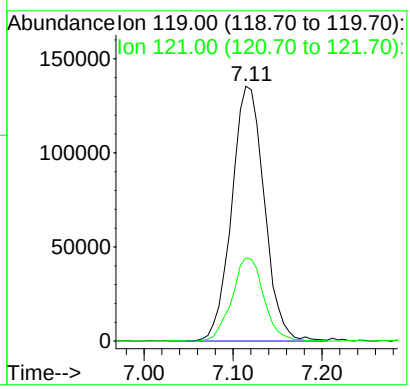


#43
Carbtetraclo
Concen: 19.06 ug/L
RT: 7.11 min Scan# 877
Delta R.T. -0.02 min
Lab File: 529222R.D
Acq: 3 Feb 2021 10:45

Tgt Ion:119 Resp: 344711

Ion	Ratio	Lower	Upper
119	100		
121	31.9	12.2	52.2



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527969.D Vial: 6
Acq On : 3 Feb 2021 15:36 Operator: RLD-DGS
Sample : 178983,527969, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 15:56:36 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1170338	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1085831	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	613831	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	300438	20.013	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	82616	19.882	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.71	98	1281578	21.545	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 108	%#		
83) SURR4BrFBenz	13.25	95	549166	19.731	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	5523	Below	Cal #	45
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.25	76	6080	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.64	84	12196	N.D.		
21) tbutylalcohol	4.85	59	3235	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	5.62	43	3498	Below	Cal #	72
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.66	42	3415	Below	Cal #	35

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527969.D Vial: 6
Acq On : 3 Feb 2021 15:36 Operator: RLD-DGS
Sample : 178983,527969, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 15:56:36 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.65	43	2790	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3008	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	14.93	146	2585	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527969.D Vial: 6
Acq On : 3 Feb 2021 15:36 Operator: RLD-DGS
Sample : 178983,527969, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 15:56:36 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	18.03	128	3167	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

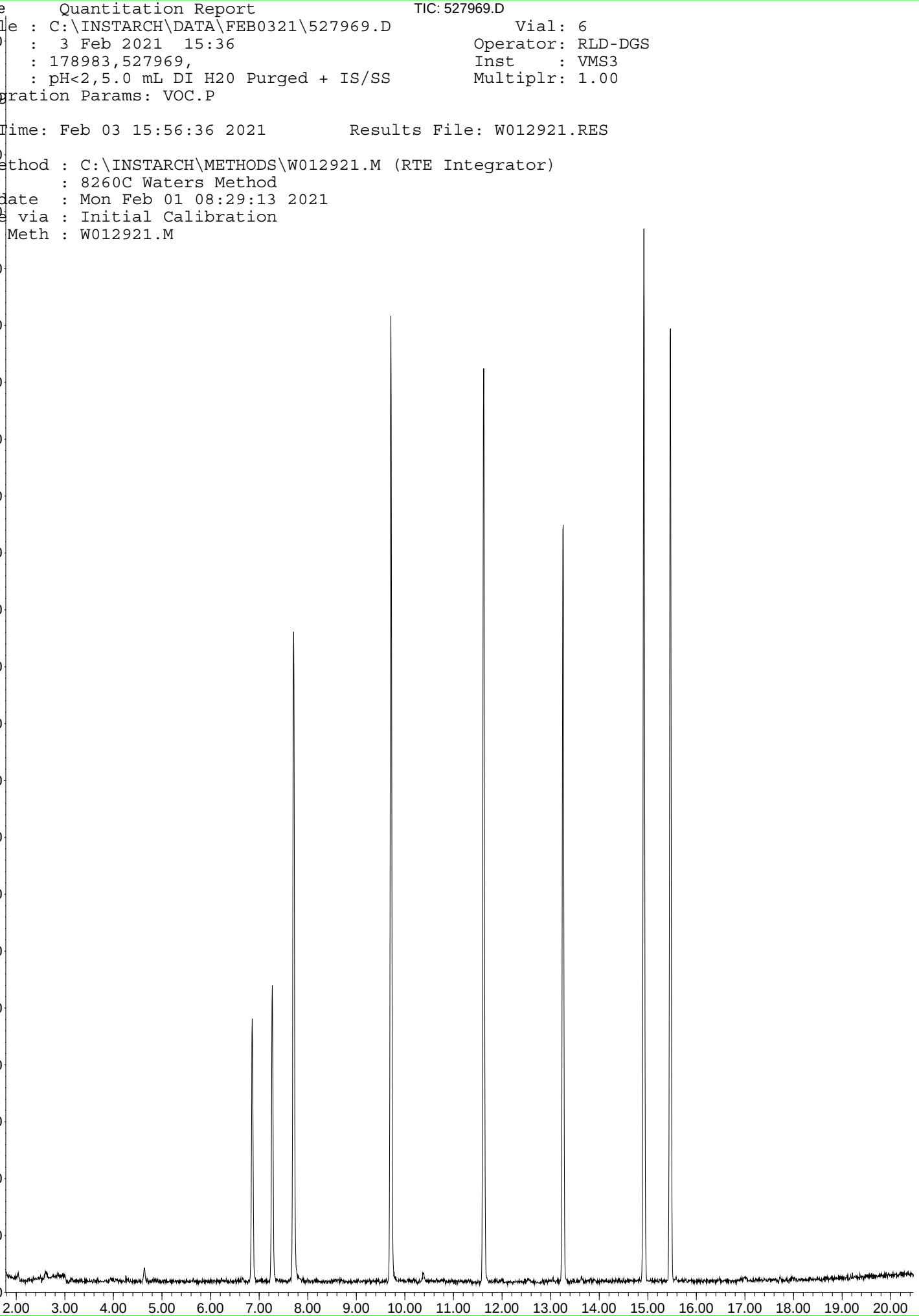
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 527969.D

Data File : C:\INSTARCH\DATA\FEB0321\527969.D Vial: 6
Acq On : 3 Feb 2021 15:36 Operator: RLD-DGS
Sample : 178983,527969, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 15:56:36 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527961.D Vial: 12
Acq On : 3 Feb 2021 18:41 Operator: RLD-DGS
Sample : 178983,527961, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 19:01:50 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1243949	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1073579	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	603481	20.00 ug/L	0.00 NA%

System Monitoring Compounds							
41) SURRDibrflma		6.86	113	325146	20.377 ug/L		0.00
Spiked Amount	20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4		7.27	102	89354	20.231 ug/L		0.00
Spiked Amount	20.000	Range 89 - 111		Recovery = 101 %			
61) SURRd8Tolule		9.71	98	1278133	20.215 ug/L		0.00
Spiked Amount	20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz		13.26	95	548080	20.029 ug/L		0.00
Spiked Amount	20.000	Range 83 - 111		Recovery = 100 %			

Target Compounds				Qvalue
2) Dichlorodi	0.00	85	0	N.D.
3) Chloromethan	0.00	50	0	N.D.
4) VinylChlorid	0.00	62	0	N.D.
5) Bromomethane	0.00	94	0	N.D.
6) Chloroethane	0.00	64	0	N.D.
7) Dichloroflmethane	0.00	67	0	N.D.
8) Trichlorofma	0.00	101	0	N.D.
9) Ethylether	0.00	59	0	N.D.
10) dichlorotfluoroethan	0.00	67	0	N.D.
11) propyleneoxide	0.00	58	0	N.D.
12) Acrolein	0.00	56	0	N.D.
13) 11dichlorthe	0.00	96	0	N.D.
14) Trichlorotfluoroeth	0.00	101	0	N.D.
15) Acetone	4.08	43	3116	Below Cal # 45
16) Iodomethane	0.00	142	0	N.D.
17) Carbon Dislf	4.25	76	3266	N.D.
18) allylchloride	0.00	41	0	N.D.
19) methylacetate	0.00	74	0	N.D.
20) Methylchlorid	0.00	84	0	N.D.
21) tbutylalcohol	0.00	59	0	N.D.
22) Acrylonitrile	0.00	53	0	N.D.
23) t12dichlorte	0.00	96	0	N.D.
24) MtBE	0.00	73	0	N.D.
25) Hexane	0.00	57	0	N.D.
26) 11dichlorota	0.00	63	0	N.D.
27) Vinylacetate	0.00	43	0	N.D.
28) chloroprene	0.00	53	0	N.D.
29) Diisopether	0.00	45	0	N.D.
30) ETBE	0.00	59	0	N.D.
31) 22dichloropr	0.00	77	0	N.D.
32) c12dichlorte	0.00	96	0	N.D.
33) 2Butanone	0.00	72	0	N.D.
34) propionitrile	0.00	54	0	N.D.
35) Ethylacetate	0.00	88	0	N.D.
36) methacrylonitrile	0.00	67	0	N.D.
37) Bromochlorma	0.00	128	0	N.D.
38) Tetrahydofur	0.00	42	0	N.D.

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527961.D Vial: 12
Acq On : 3 Feb 2021 18:41 Operator: RLD-DGS
Sample : 178983,527961, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 19:01:50 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.18	95	3407	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3331	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.46	91	3439	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

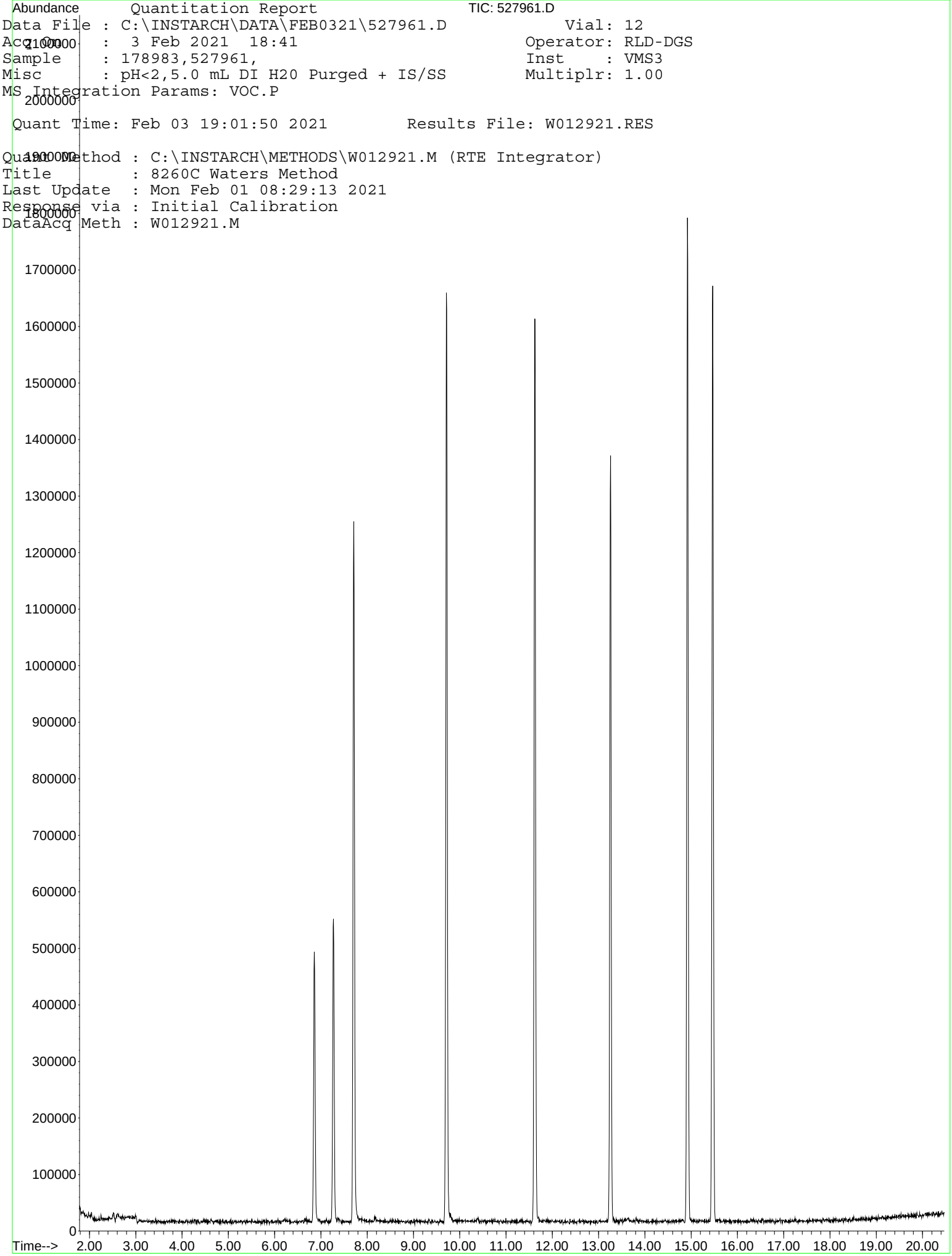
Data File : C:\INSTARCH\DATA\FEB0321\527961.D Vial: 12
Acq On : 3 Feb 2021 18:41 Operator: RLD-DGS
Sample : 178983,527961, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 19:01:50 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: 527961.D
Data File : C:\INSTARCH\DATA\FEB0321\527961.D
Vial: 12
Acq On : 3 Feb 2021 18:41
Operator: RLD-DGS
Sample : 178983,527961,
Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Feb 03 19:01:50 2021
Results File: W012921.RES
Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
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16.00
17.00
18.00
19.00
20.00

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527962.D Vial: 13
Acq On : 3 Feb 2021 19:11 Operator: RLD-DGS
Sample : 178983,527962, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 19:32:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1233657	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1067167	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	602069	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	317488	20.064	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
45) SURR12DCAd4	7.27	102	89121	20.347	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102 %			
61) SURRd8Tolule	9.72	98	1266229	20.194	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	547561	20.057	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	3512	Below	Cal #	45
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.25	76	2558	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.66	42	2845	Below	Cal #	35

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527962.D Vial: 13
Acq On : 3 Feb 2021 19:11 Operator: RLD-DGS
Sample : 178983,527962, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 19:32:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	13770	0.7990	ug/L	93
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.61	91	2514	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.46	91	3275	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

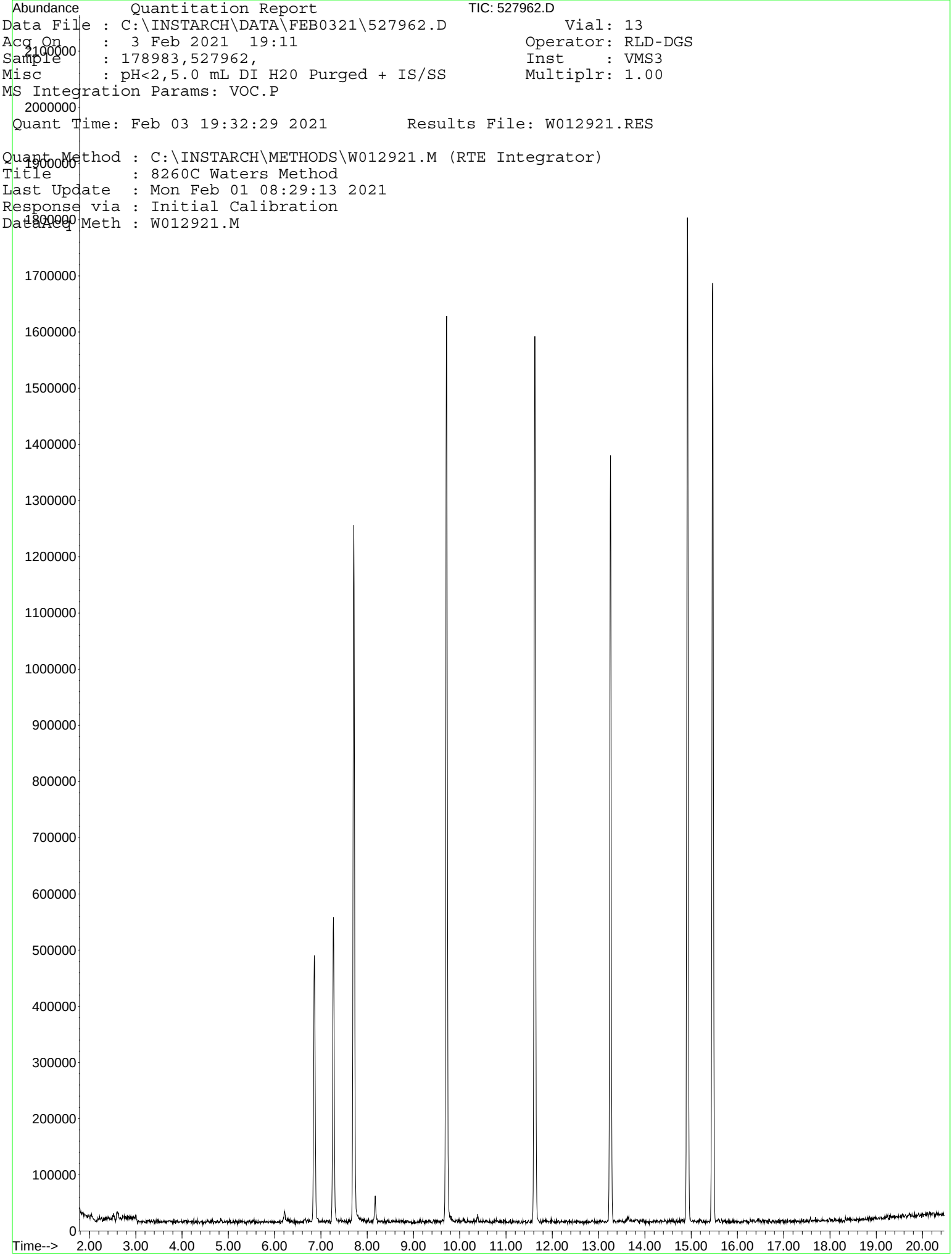
Data File : C:\INSTARCH\DATA\FEB0321\527962.D Vial: 13
Acq On : 3 Feb 2021 19:11 Operator: RLD-DGS
Sample : 178983,527962, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

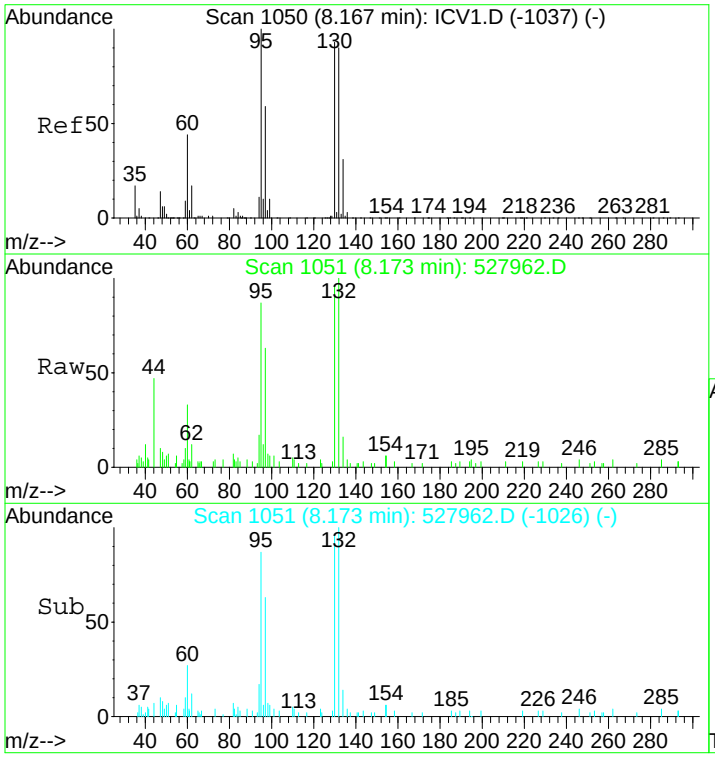
Quant Time: Feb 03 19:32:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

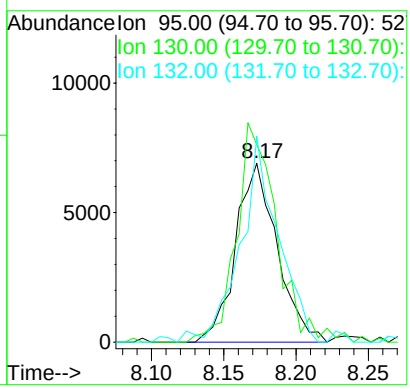

Abundance
Quantitation Report
TIC: 527962.D
Data File : C:\INSTARCH\DATA\FEB0321\527962.D
Vial: 13
Acq On : 3 Feb 2021 19:11
Operator: RLD-DGS
Sample : 178983,527962,
Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Feb 03 19:32:29 2021
Results File: W012921.RES
Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
2100000
2000000
1900000
1800000
1700000
1600000
1500000
1400000
1300000
1200000
1100000
1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
Time-->
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
13.00
14.00
15.00
16.00
17.00
18.00
19.00
20.00



#49
trichloroete
Concen: 0.80 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. -0.00 min
Lab File: 527962.D
Acq: 3 Feb 2021 19:11

Tgt Ion: 95 Resp: 13770

Ion	Ratio	Lower	Upper
95	100		
130	119.4	86.7	126.7
132	105.6	83.1	123.1



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527963.D Vial: 14
Acq On : 3 Feb 2021 19:42 Operator: RLD-DGS
Sample : 178983,527963, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 20:03:15 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1243946	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1058891	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	596069	20.00	ug/L	0.00 NA%

System Monitoring Compounds						
41) SURRDibrflma	6.86	113	313707	19.661	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
45) SURR12DCAd4	7.27	102	87425	19.794	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %			
61) SURRd8Tolule	9.72	98	1263825	19.989	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %			
83) SURR4BrFBenz	13.26	95	557408	20.624	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	3.28	101	8136	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.08	43	4043	Below Cal # 45	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	3548	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	5.54	63	2588	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.67	42	2832	Below Cal # 35	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527963.D Vial: 14
Acq On : 3 Feb 2021 19:42 Operator: RLD-DGS
Sample : 178983,527963, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 20:03:15 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.68	83	18510	0.6039	ug/L	99
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	119393	6.8095	ug/L	100
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	19825	1.1409	ug/L	97
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	2931	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.45	91	2877	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527963.D Vial: 14
Acq On : 3 Feb 2021 19:42 Operator: RLD-DGS
Sample : 178983,527963, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 20:03:15 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

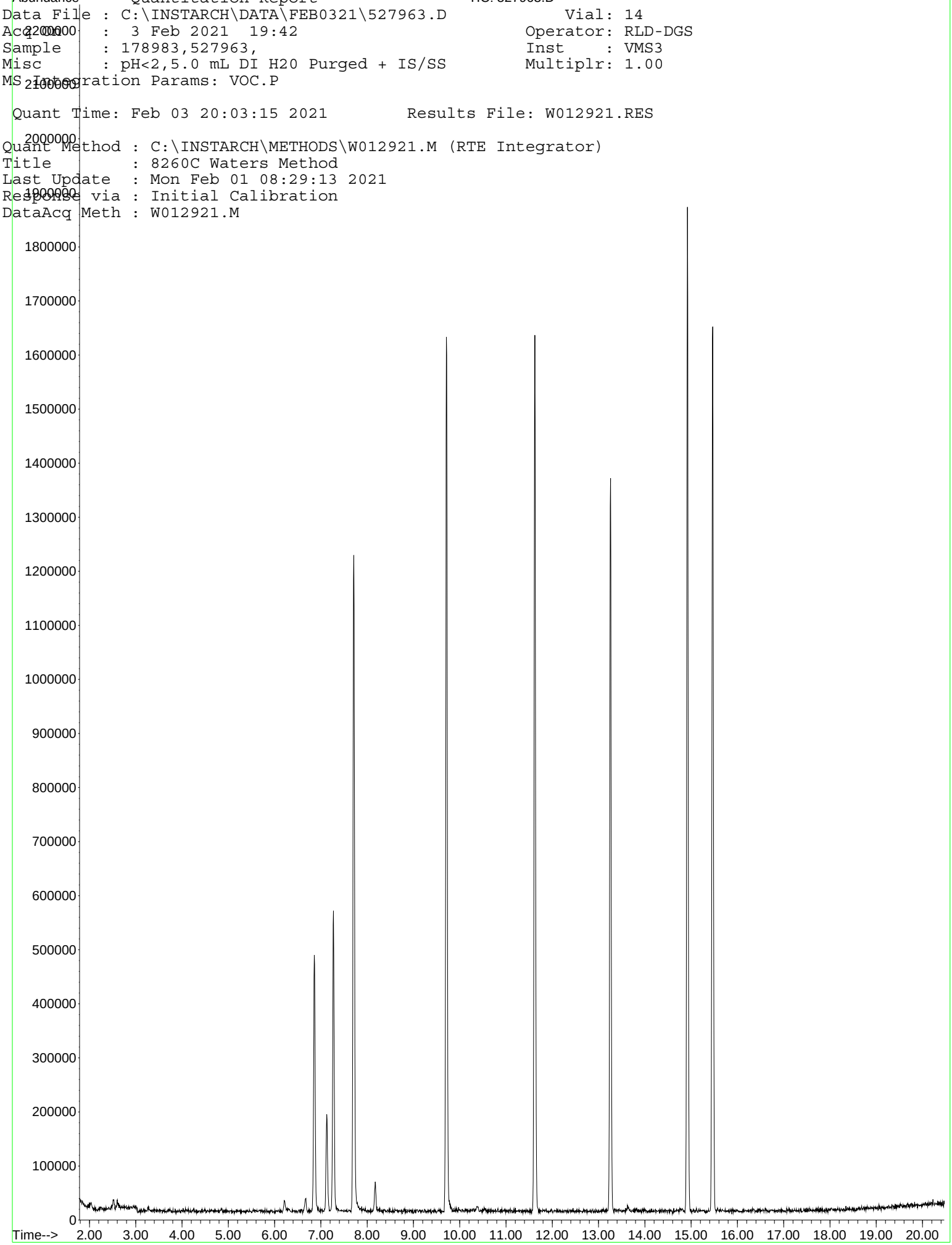
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

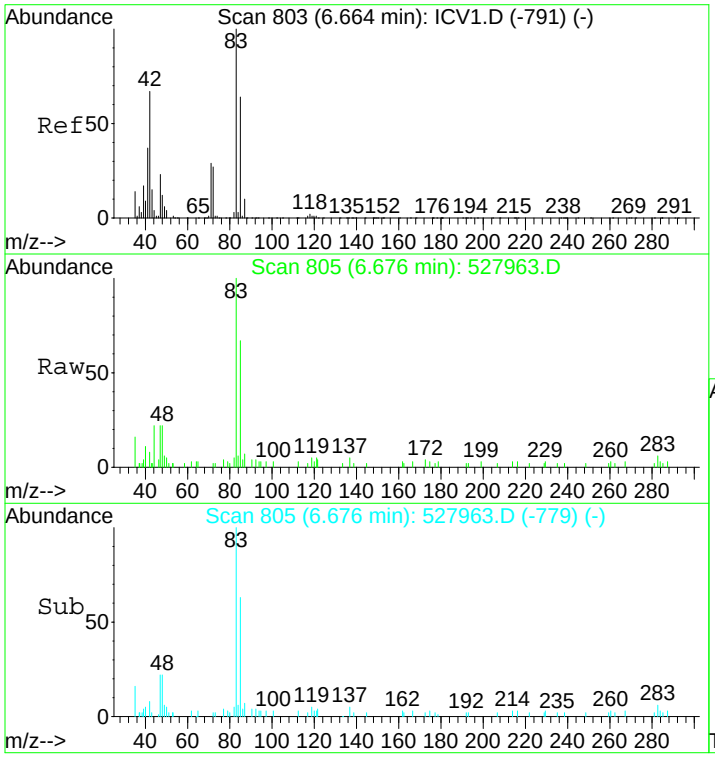
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\FEB0321\527963.D Vial: 14
Acq On : 3 Feb 2021 19:42 Operator: RLD-DGS
Sample : 178983,527963, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 20:03:15 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

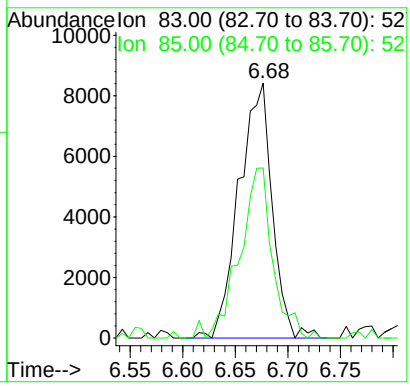


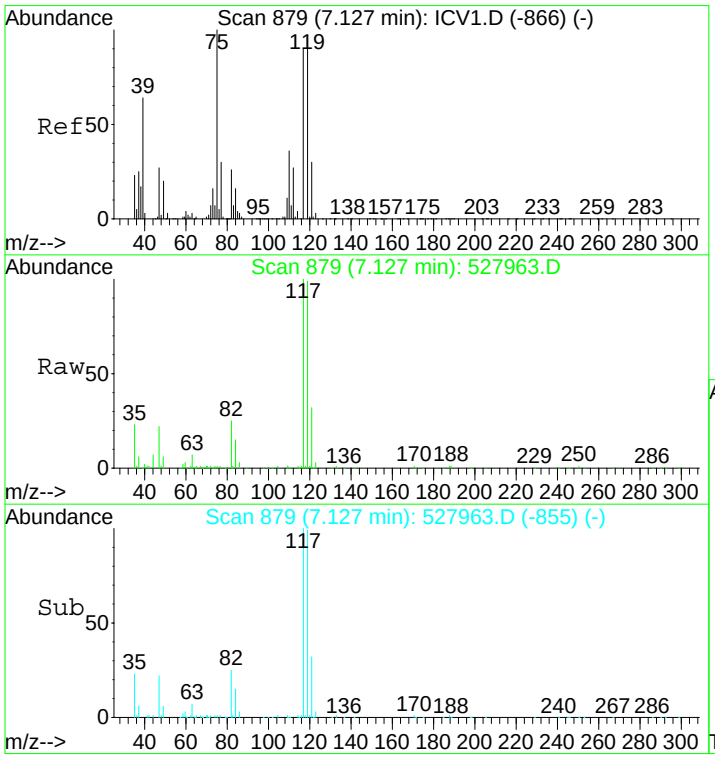


#39
Chloroform
Concen: 0.60 ug/L
RT: 6.68 min Scan# 805
Delta R.T. 0.01 min
Lab File: 527963.D
Acq: 3 Feb 2021 19:42

Tgt Ion: 83 Resp: 18510

Ion	Ratio	Lower	Upper
83	100		
85	65.4	45.8	85.8

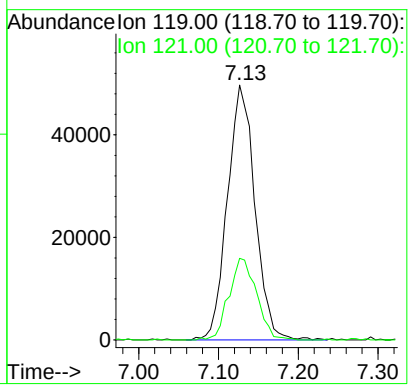


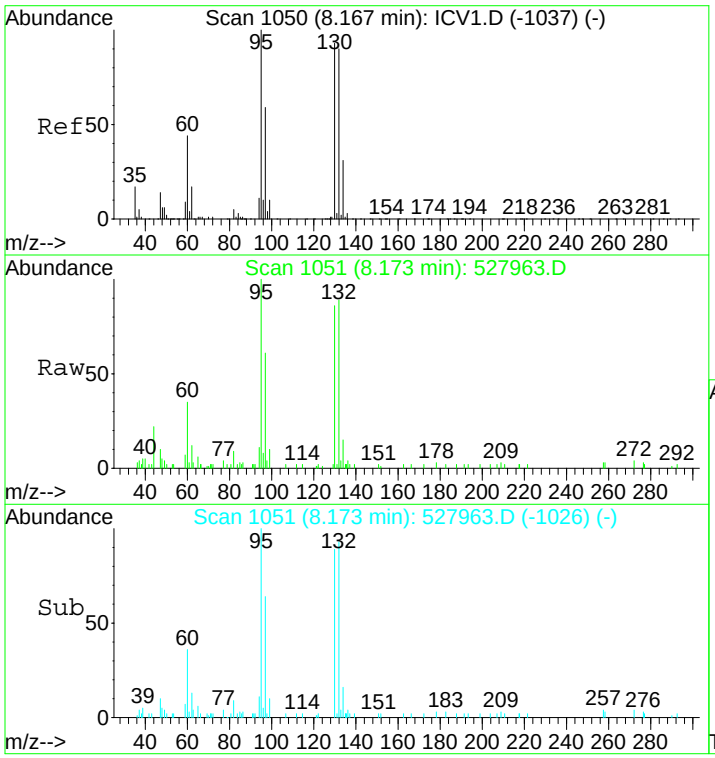


#43
Carbtetraclo
Concen: 6.81 ug/L
RT: 7.13 min Scan# 879
Delta R.T. -0.01 min
Lab File: 527963.D
Acq: 3 Feb 2021 19:42

Tgt Ion:119 Resp: 119393

Ion	Ratio	Lower	Upper
119	100		
121	32.1	12.2	52.2

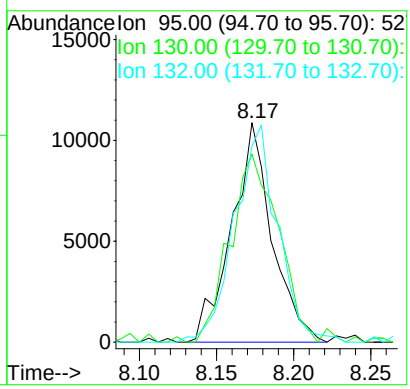




#49
trichloroete
Concen: 1.14 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. -0.00 min
Lab File: 527963.D
Acq: 3 Feb 2021 19:42

Tgt Ion: 95 Resp: 19825

Ion	Ratio	Lower	Upper
95	100		
130	102.7	86.7	126.7
132	105.6	83.1	123.1



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527964.D Vial: 15
Acq On : 3 Feb 2021 20:13 Operator: RLD-DGS
Sample : 178983,527964, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 20:33:49 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1223288	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1070156	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	605688	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.86	113	326691	20.820 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 104 %		
45) SURR12DCAd4	7.27	102	89833	20.683 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103 %		
61) SURRd8Tolule	9.71	98	1260094	20.267 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.26	95	538159	19.595 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	3.28	101	8147	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.06	43	3102	Below Cal # 45	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	5.54	63	2984	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527964.D Vial: 15
Acq On : 3 Feb 2021 20:13 Operator: RLD-DGS
Sample : 178983,527964, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 20:33:49 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.67	83	19647	0.6518 ug/L	93
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.13	119	117813	6.8328 ug/L	99
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.18	95	20152	1.1793 ug/L	90
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.61	91	2985	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.47	91	2716	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

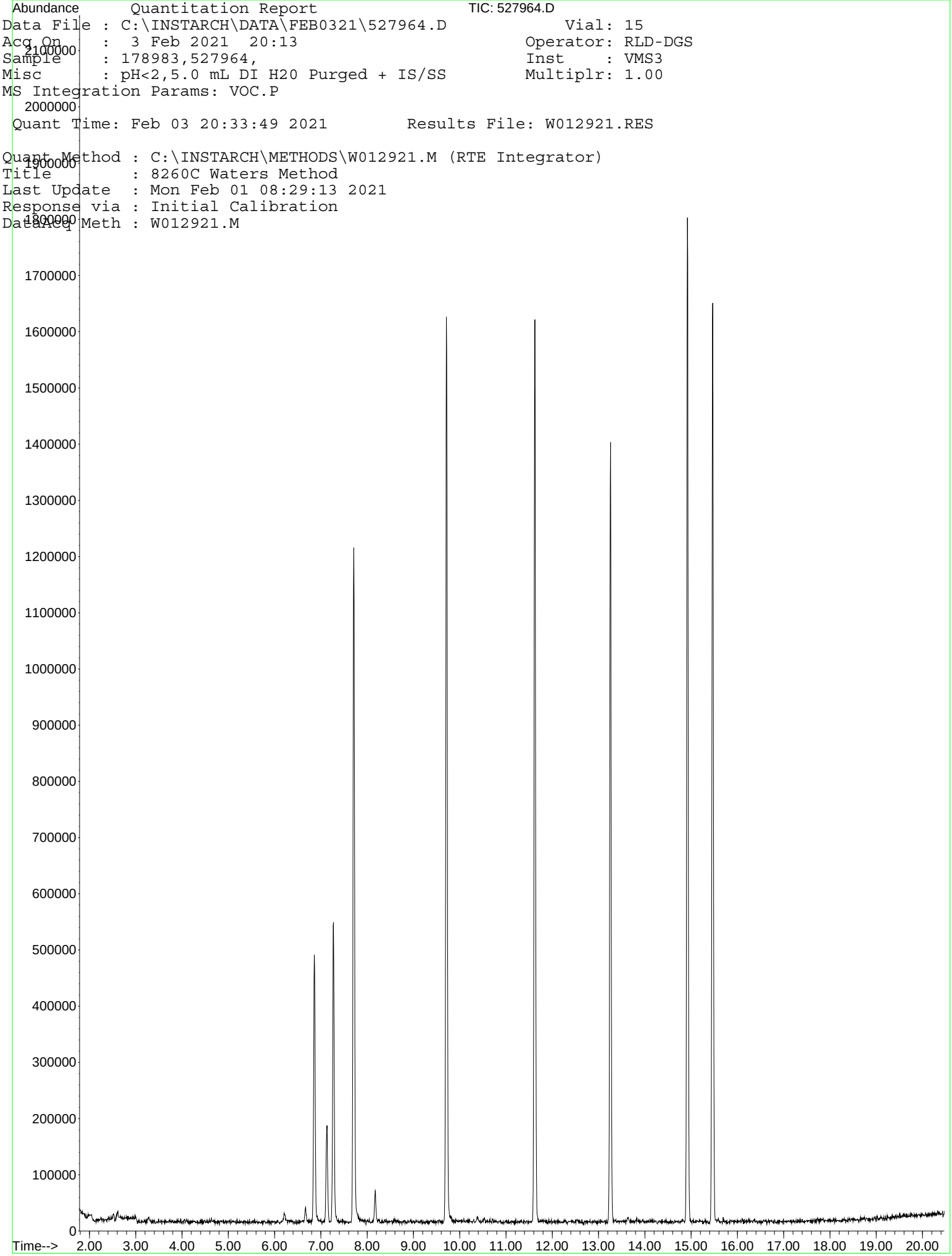
Data File : C:\INSTARCH\DATA\FEB0321\527964.D Vial: 15
Acq On : 3 Feb 2021 20:13 Operator: RLD-DGS
Sample : 178983,527964, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 20:33:49 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: 527964.D
Data File : C:\INSTARCH\DATA\FEB0321\527964.D
Vial: 15
Acq On : 3 Feb 2021 20:13
Operator: RLD-DGS
Sample : 178983,527964,
Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Feb 03 20:33:49 2021
Results File: W012921.RES
Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
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600000
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200000
100000
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4.00
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6.00
7.00
8.00
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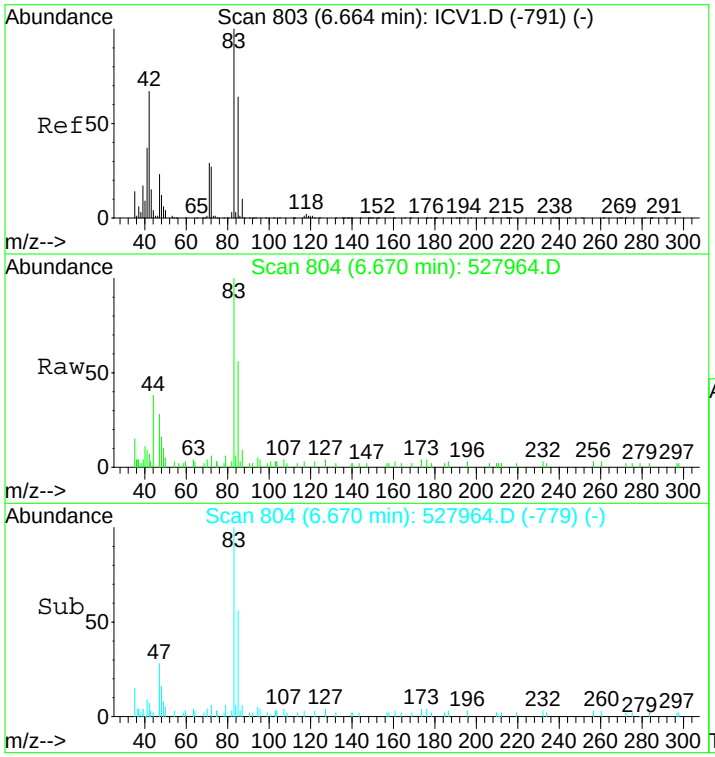
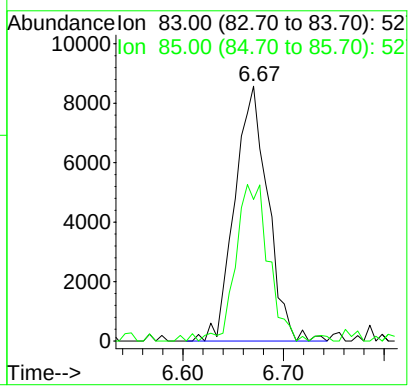
20.00

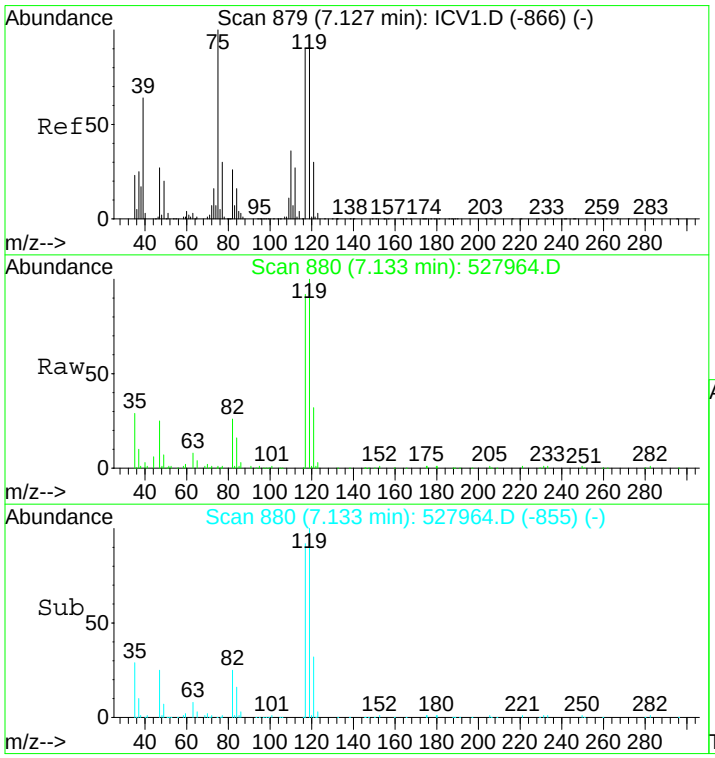


#39
Chloroform
Concen: 0.65 ug/L
RT: 6.67 min Scan# 804
Delta R.T. -0.00 min
Lab File: 527964.D
Acq: 3 Feb 2021 20:13

Tgt Ion: 83 Resp: 19647

Ion	Ratio	Lower	Upper
83	100		
85	60.0	45.8	85.8

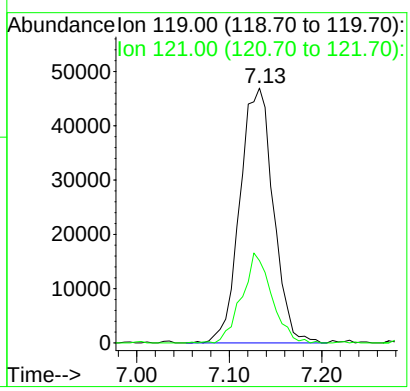


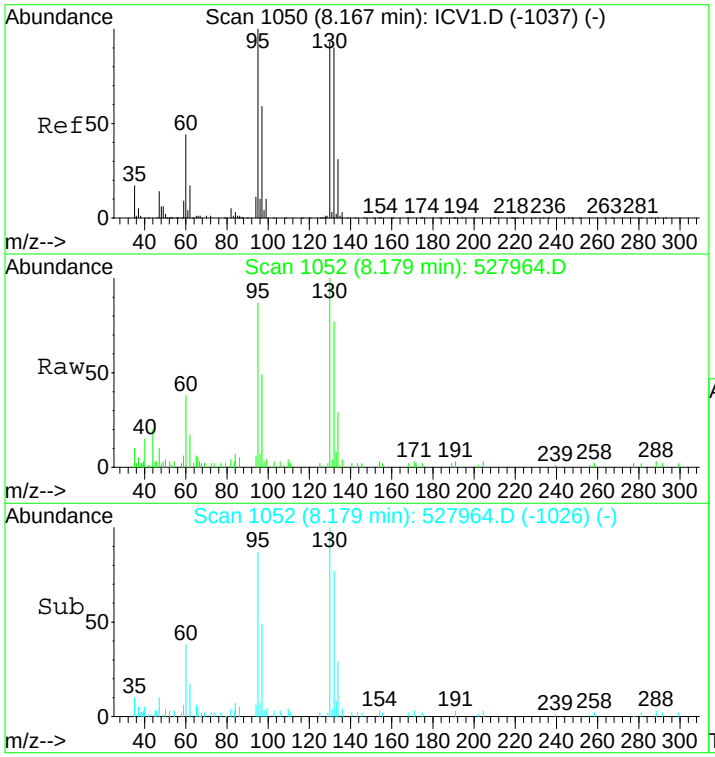


#43
Carbtetraclo
Concen: 6.83 ug/L
RT: 7.13 min Scan# 880
Delta R.T. -0.00 min
Lab File: 527964.D
Acq: 3 Feb 2021 20:13

Tgt Ion:119 Resp: 117813

Ion	Ratio	Lower	Upper
119	100		
121	31.6	12.2	52.2

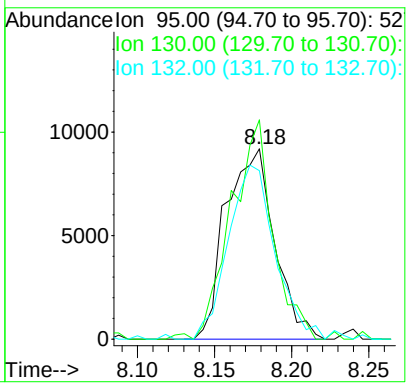




#49
trichloroete
Concen: 1.18 ug/L
RT: 8.18 min Scan# 1052
Delta R.T. 0.01 min
Lab File: 527964.D
Acq: 3 Feb 2021 20:13

Tgt Ion: 95 Resp: 20152

Ion	Ratio	Lower	Upper
95	100		
130	99.4	86.7	126.7
132	88.8	83.1	123.1



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527965.D Vial: 16
Acq On : 3 Feb 2021 20:43 Operator: RLD-DGS
Sample : 178983,527965, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 21:04:36 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1239863	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1055550	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	586001	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	316775	19.918	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	88846	20.182	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1250732	19.847	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99	%		
83) SURR4BrFBenz	13.26	95	545214	20.519	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	3089	Below	Cal #	45
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	2866	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527965.D Vial: 16
Acq On : 3 Feb 2021 20:43 Operator: RLD-DGS
Sample : 178983,527965, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 21:04:36 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.14	119	10687	0.6115	ug/L	82
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	0.00	91	0	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.45	91	2654	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527965.D Vial: 16
Acq On : 3 Feb 2021 20:43 Operator: RLD-DGS
Sample : 178983,527965, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 21:04:36 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

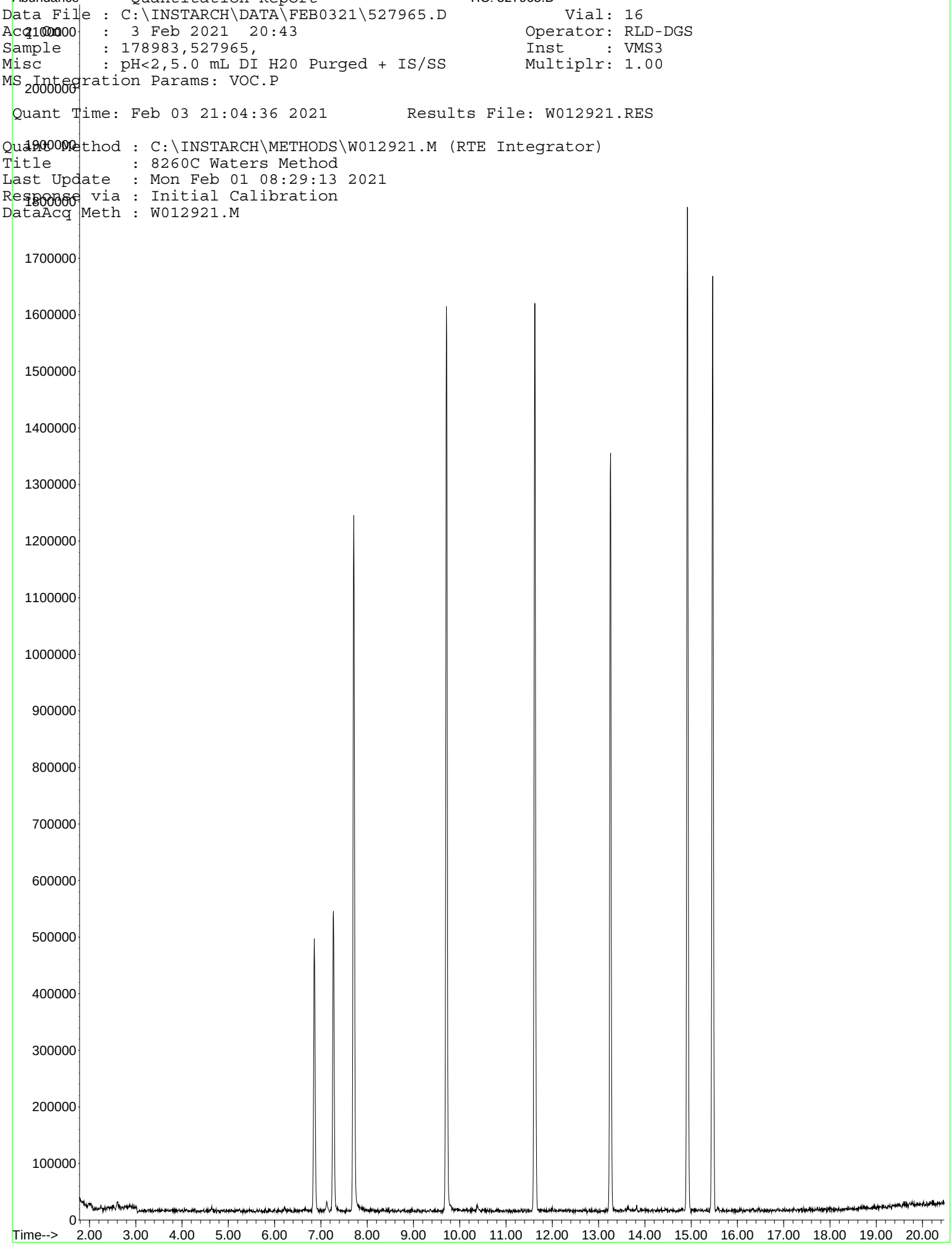
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

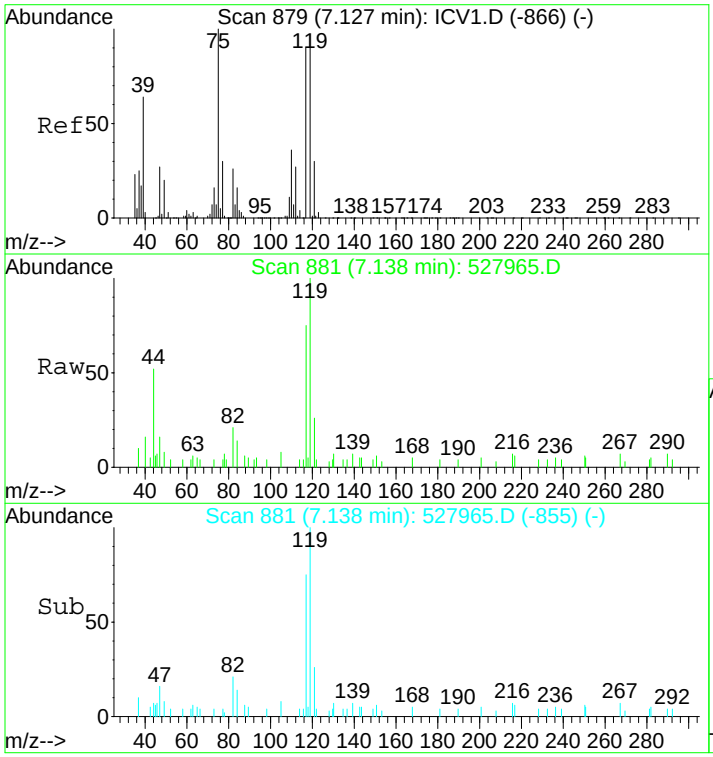
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\FEB0321\527965.D Vial: 16
Acq On : 3 Feb 2021 20:43 Operator: RLD-DGS
Sample : 178983,527965, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 21:04:36 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

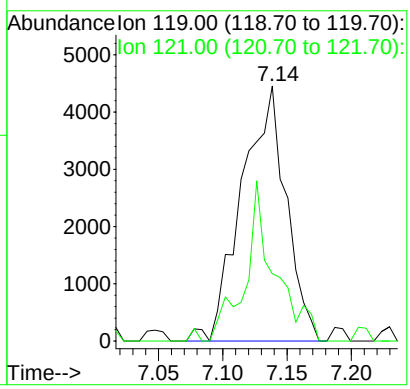




#43
Carbtetraclo
Concen: 0.61 ug/L
RT: 7.14 min Scan# 881
Delta R.T. 0.01 min
Lab File: 527965.D
Acq: 3 Feb 2021 20:43

Tgt Ion:119 Resp: 10687

Ion	Ratio	Lower	Upper
119	100		
121	42.1	12.2	52.2



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527966.D Vial: 17
Acq On : 3 Feb 2021 21:14 Operator: RLD-DGS
Sample : 178983,527966, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 21:34:41 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1219388	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1037935	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	592421	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.86	113	311662	19.926 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %		
45) SURR12DCAd4	7.27	102	85518	19.753 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %		
61) SURRd8Tolule	9.71	98	1239727	20.003 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %		
83) SURR4BrFBenz	13.26	95	548408	20.416 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	4064	Below Cal # 45	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	2550	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527966.D Vial: 17
Acq On : 3 Feb 2021 21:14 Operator: RLD-DGS
Sample : 178983,527966, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 21:34:41 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.67	83	3127	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3030	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527966.D Vial: 17
Acq On : 3 Feb 2021 21:14 Operator: RLD-DGS
Sample : 178983,527966, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 21:34:41 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

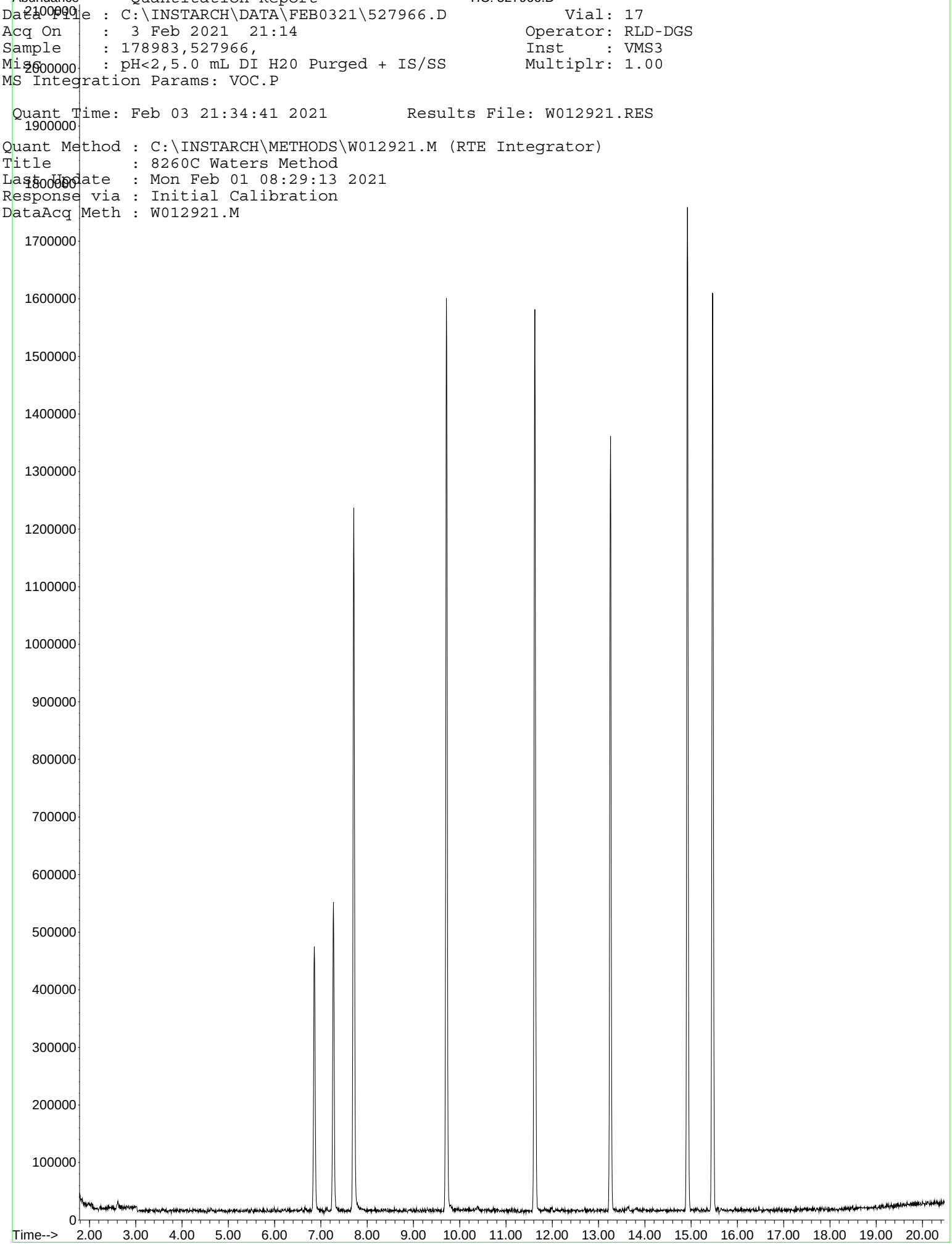
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\FEB0321\527966.D Vial: 17
Acq On : 3 Feb 2021 21:14 Operator: RLD-DGS
Sample : 178983,527966, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 21:34:41 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527967.D Vial: 18
Acq On : 3 Feb 2021 21:44 Operator: RLD-DGS
Sample : 178983,527967, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 22:04:41 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1217502	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1059500	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	590137	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.86	113	311563	19.950 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %		
45) SURR12DCAd4	7.27	102	83014	19.204 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 96 %		
61) SURRd8Tolule	9.71	98	1243742	20.099 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %		
83) SURR4BrFBenz	13.26	95	540304	20.192 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	3468	Below Cal # 45	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	0.00	76	0	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.64	84	2522	Below Cal # 55	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	6.21	77	3471	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527967.D Vial: 18
Acq On : 3 Feb 2021 21:44 Operator: RLD-DGS
Sample : 178983,527967, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 22:04:41 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3230	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527967.D Vial: 18
Acq On : 3 Feb 2021 21:44 Operator: RLD-DGS
Sample : 178983,527967, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 22:04:41 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

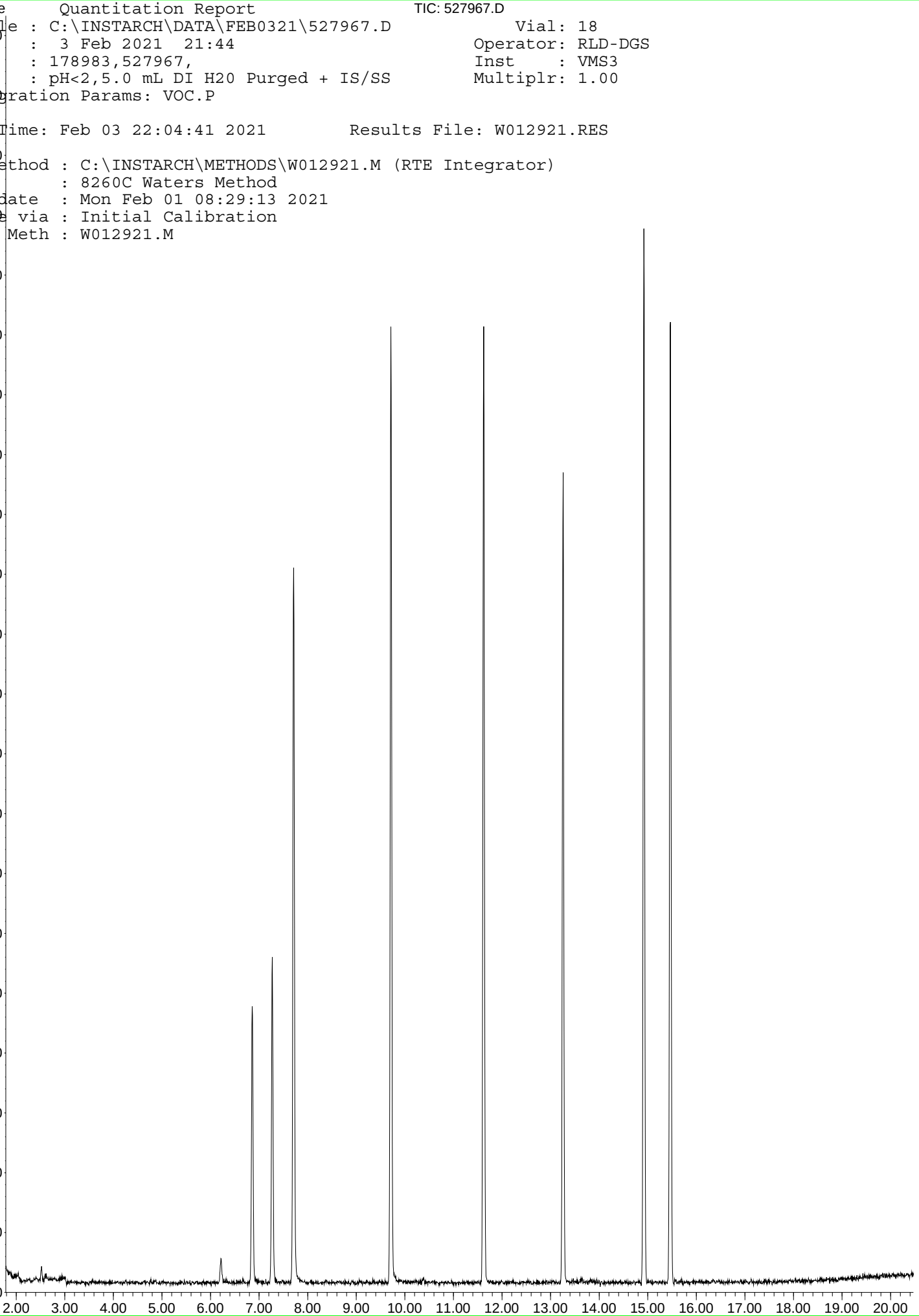
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 527967.D

Data File : C:\INSTARCH\DATA\FEB0321\527967.D Vial: 18
Acq On : 3 Feb 2021 21:44 Operator: RLD-DGS
Sample : 178983,527967, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS 2000.m Integration Params: VOC.P

Quant Time: Feb 03 22:04:41 2021 Results File: W012921.RES

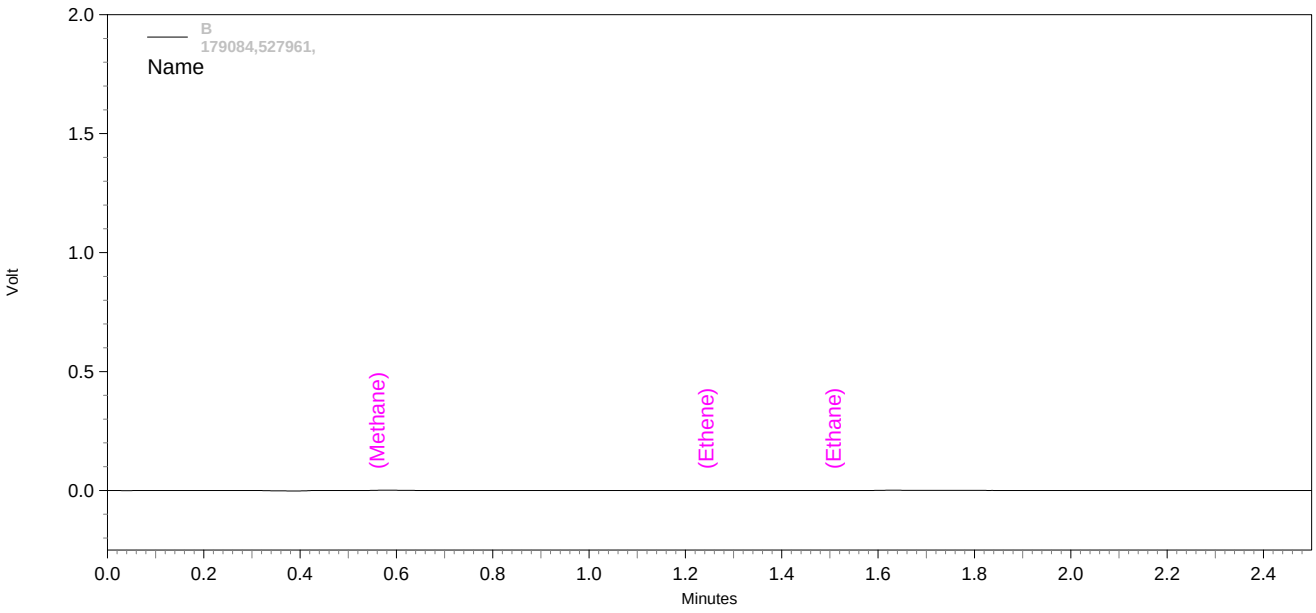
Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\005.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,527961,
Acquired: Feb 03, 2021 11:33:40
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



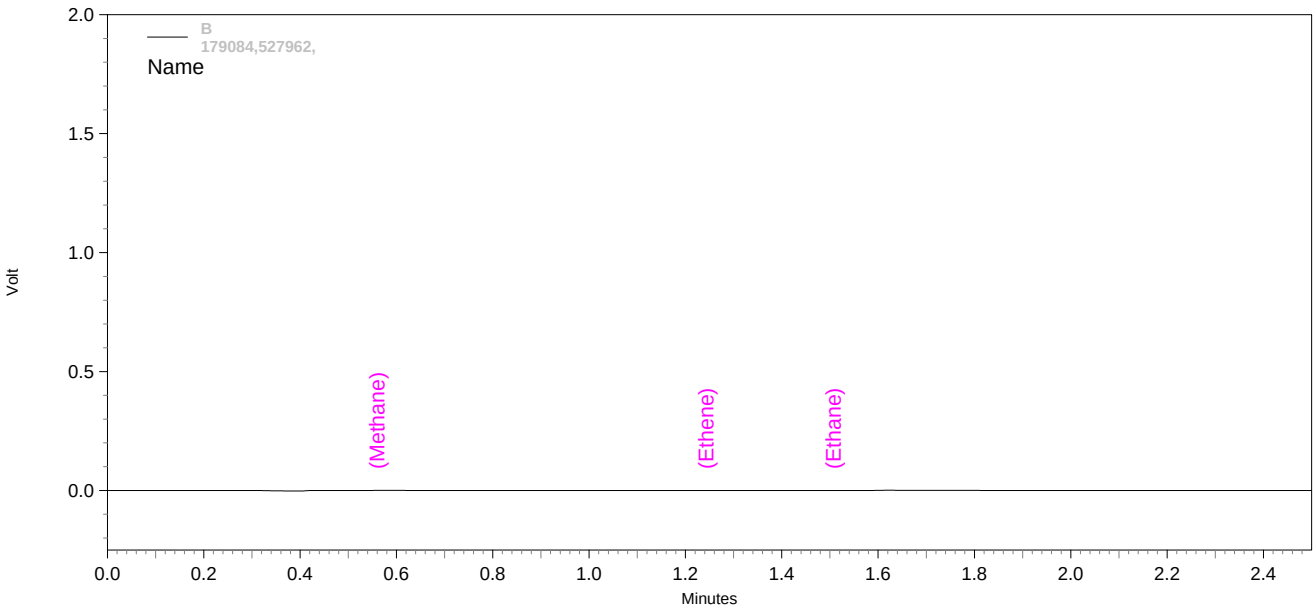
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.560**		**0.000 BDL**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\006.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,527962,
Acquired: Feb 03, 2021 11:38:45
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



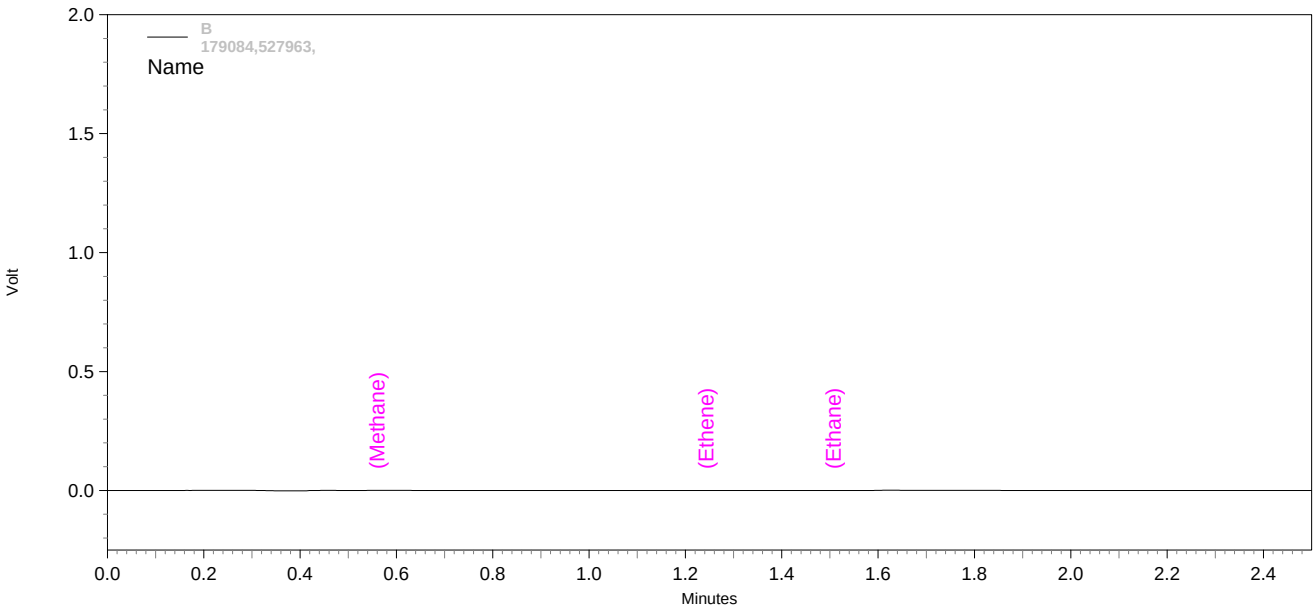
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.560**		**0.000 BDL**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\007.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,527963,
Acquired: Feb 03, 2021 11:43:06
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



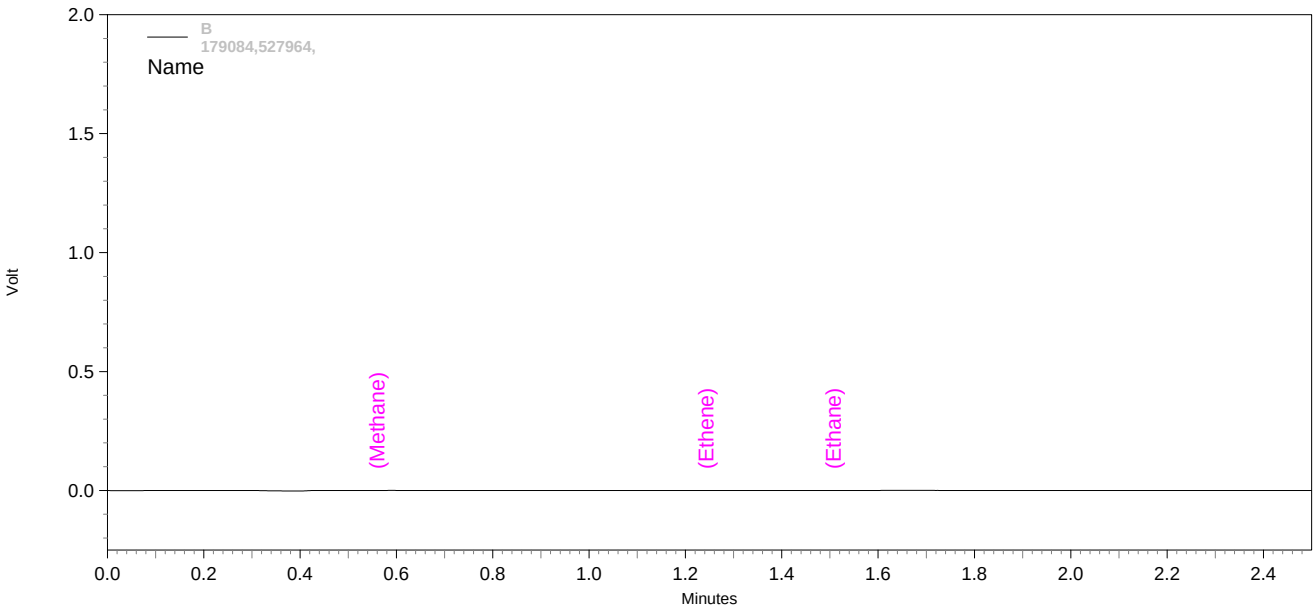
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.560**		**0.000 BDL**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\008.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,527964,
Acquired: Feb 03, 2021 11:48:05
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



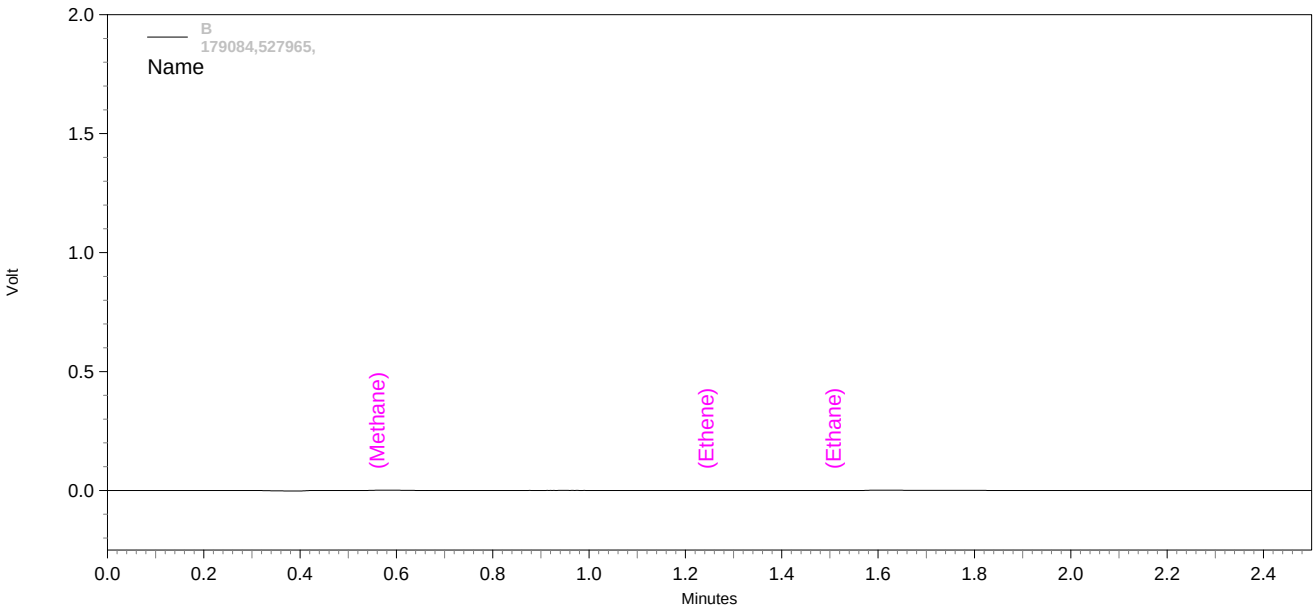
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.560**		**0.000 BDL**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\009.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,527965,
Acquired: Feb 03, 2021 11:51:45
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



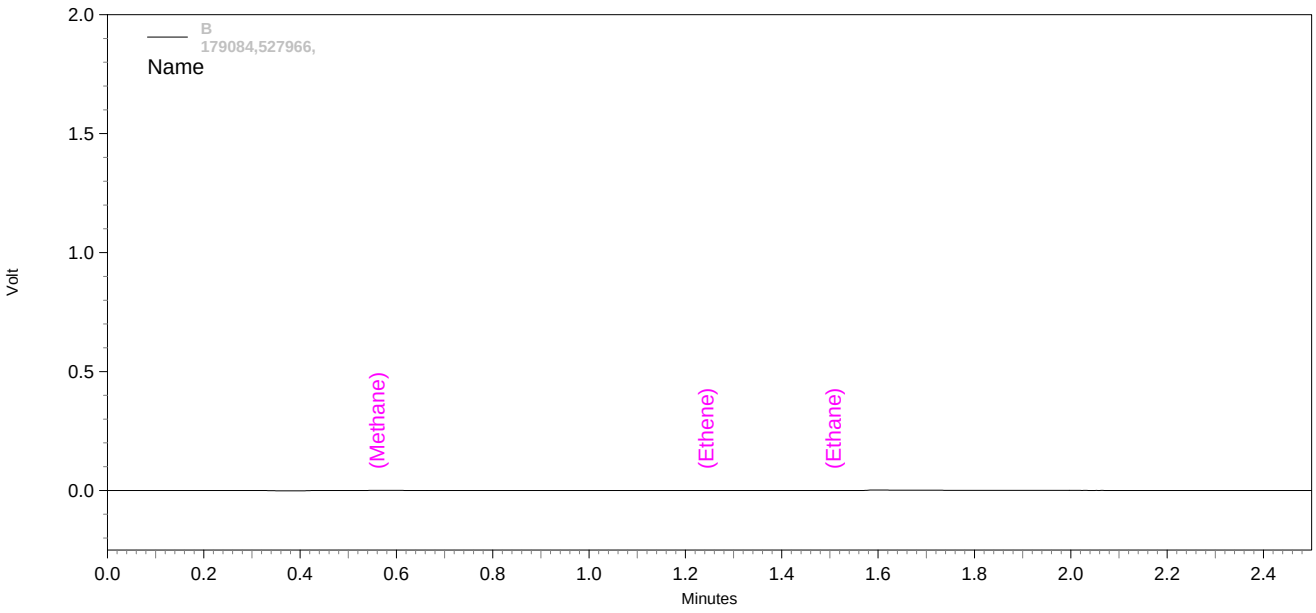
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.560**		**0.000 BDL**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\010.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,527966,
Acquired: Feb 03, 2021 12:10:15
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



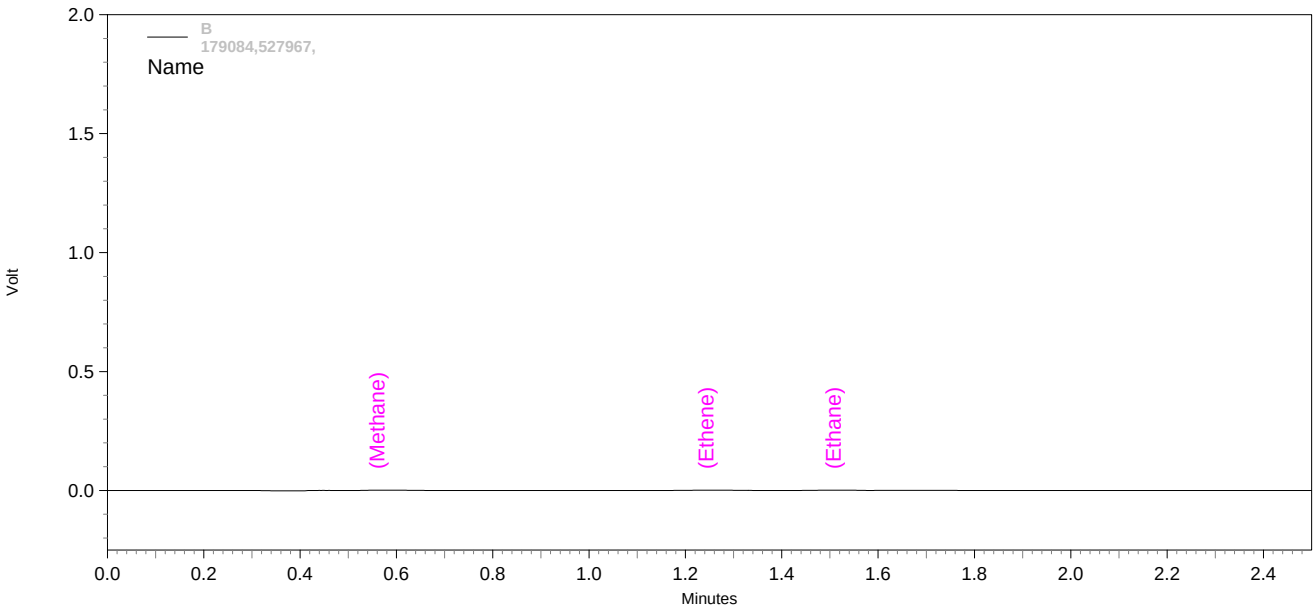
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.560**		**0.000 BDL**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\013.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,527967,
Acquired: Feb 03, 2021 12:30:55
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



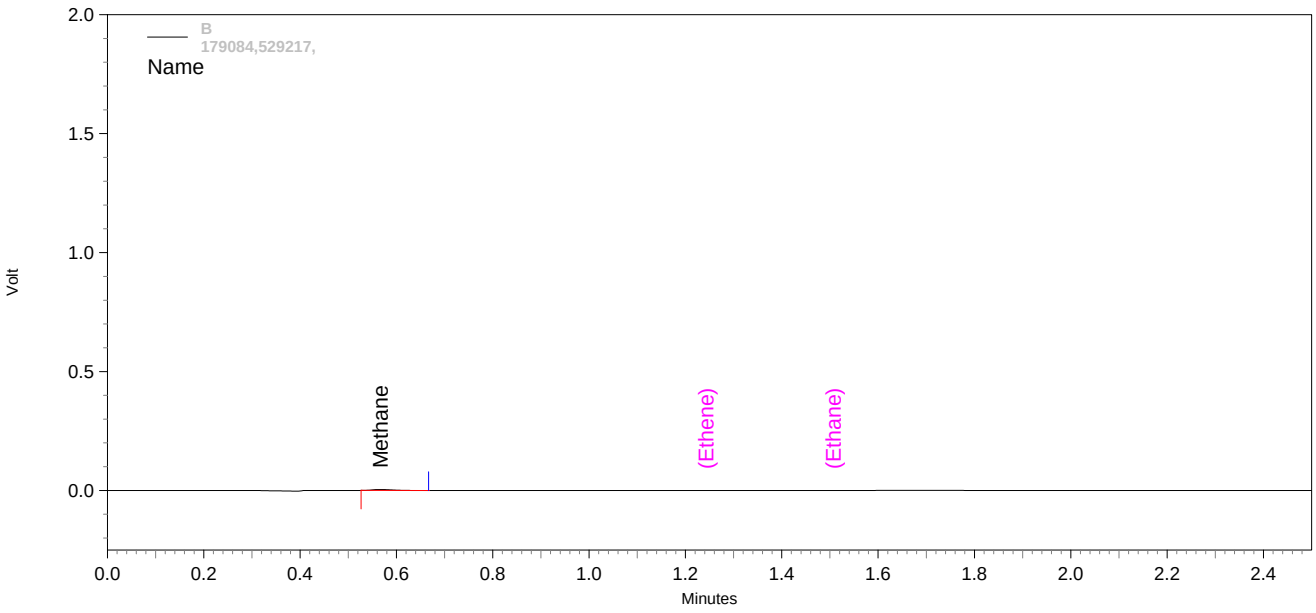
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.560**		**0.000 BDL**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\014.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,529217,
Acquired: Feb 03, 2021 12:36:25
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



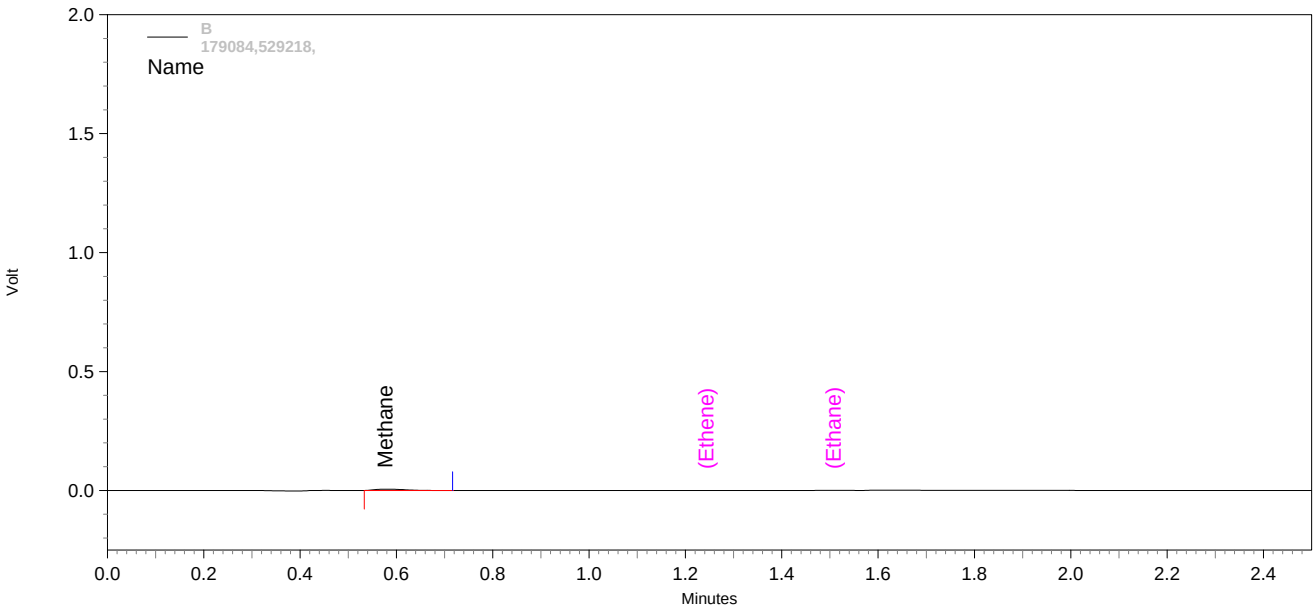
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.567**	**0.560**	**10959**	**0.533**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\015.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,529218,
Acquired: Feb 03, 2021 12:44:22
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



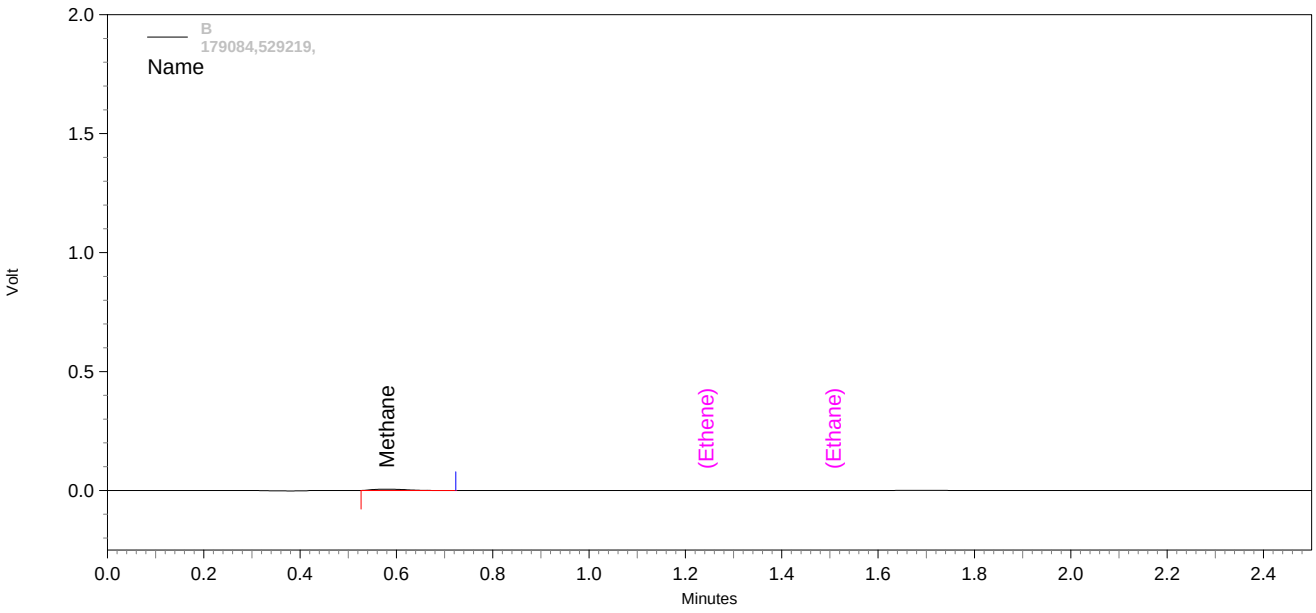
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.577**	**0.560**	**22885**	**4.006**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\016.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,529219,
Acquired: Feb 03, 2021 12:49:49
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



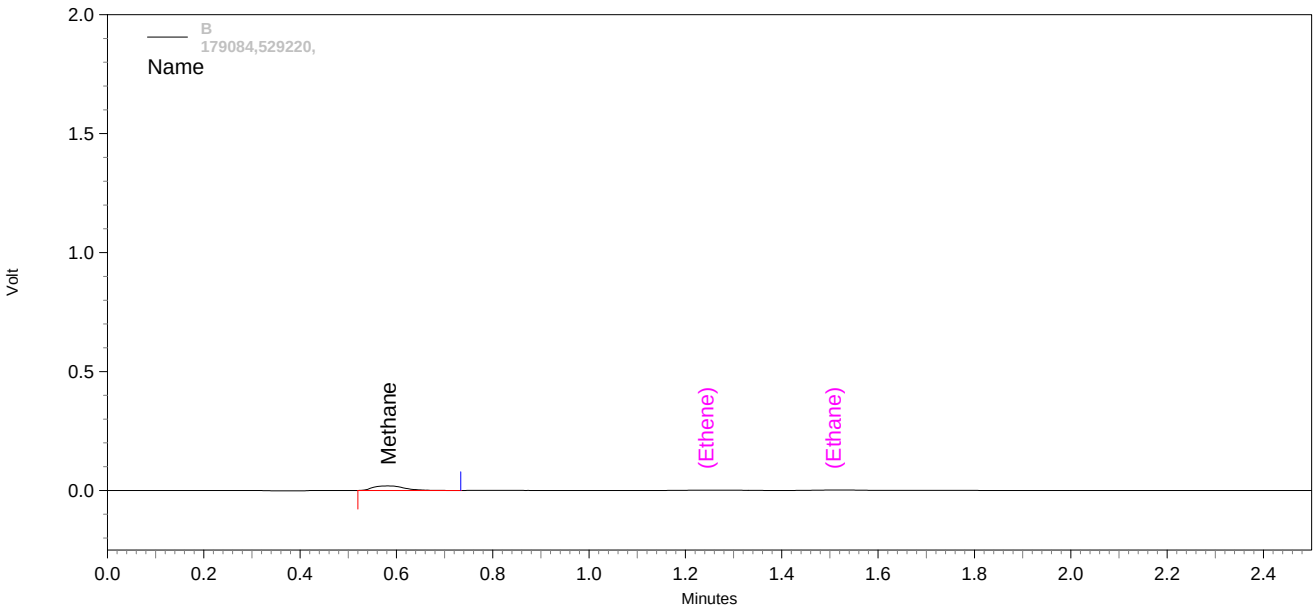
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.580**	**0.560**	**25634**	**4.806**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\019.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,529220,
Acquired: Feb 03, 2021 13:01:59
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



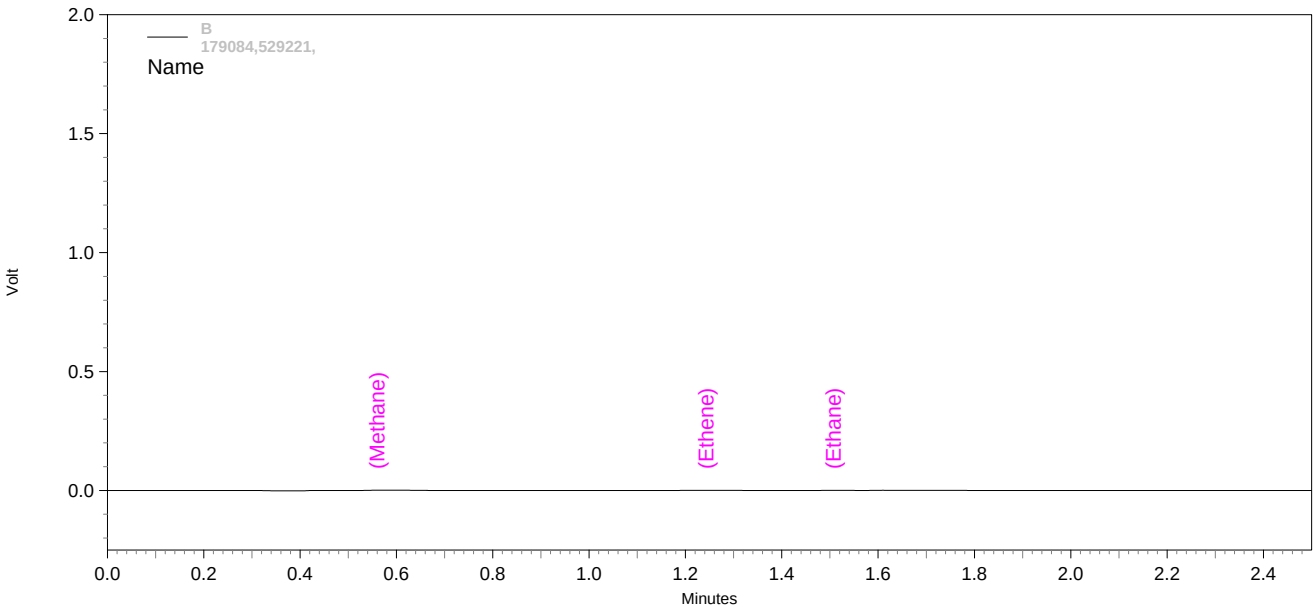
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.583**	**0.560**	**85045**	**22.109**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\020.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,529221,
Acquired: Feb 03, 2021 13:05:20
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



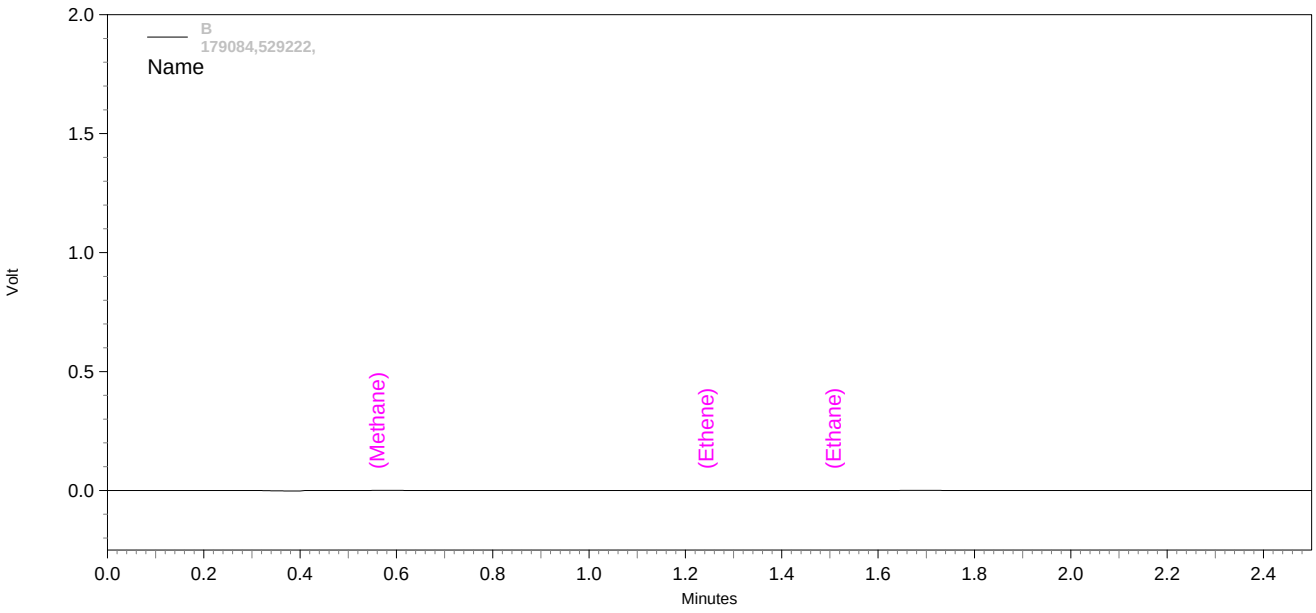
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.560**		**0.000 BDL**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\021.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,529222,
Acquired: Feb 03, 2021 13:10:51
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



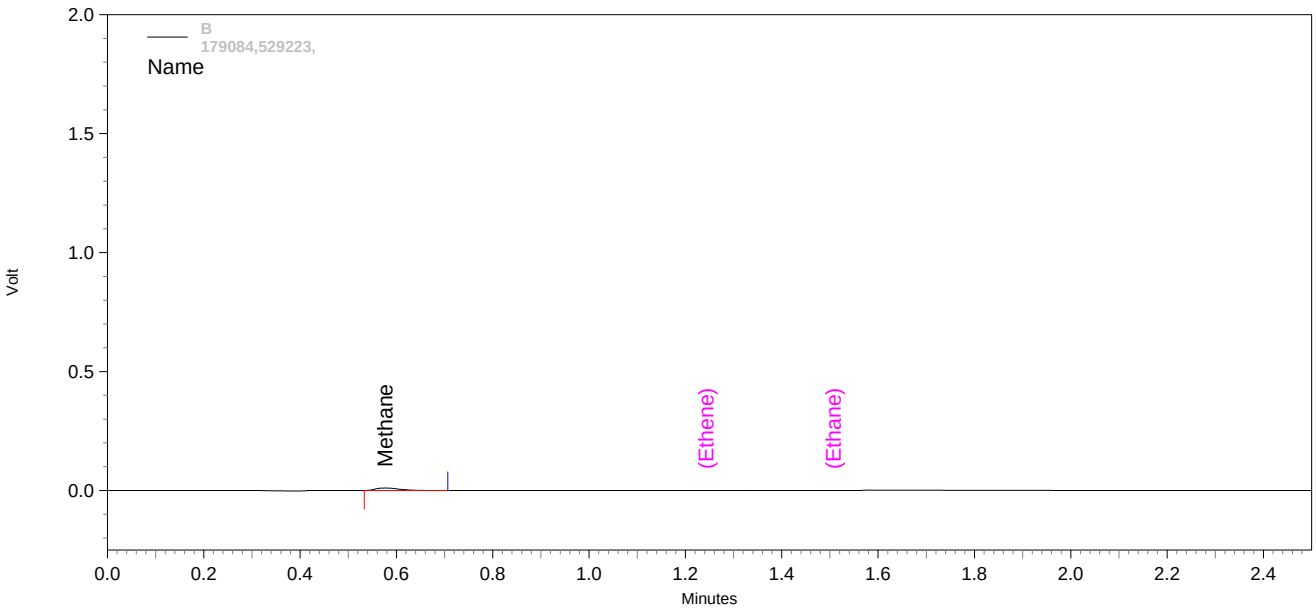
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.560**		**0.000 BDL**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\022.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,529223,
Acquired: Feb 03, 2021 13:16:01
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



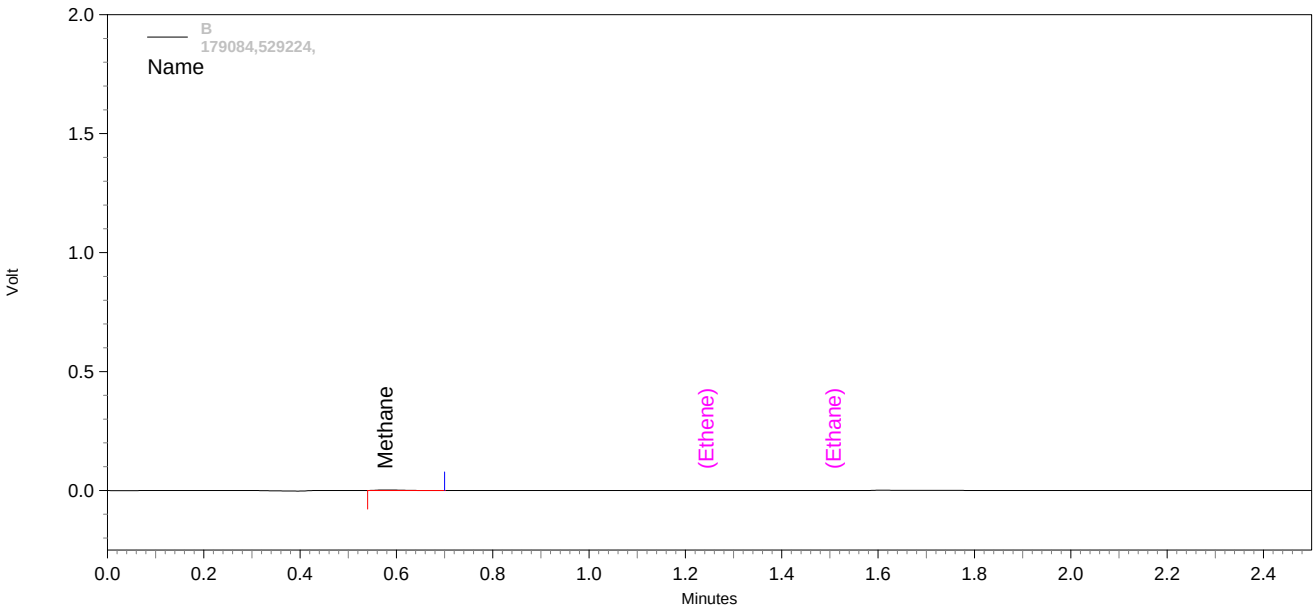
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.577**	**0.560**	**35714**	**7.742**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\023.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,529224,
Acquired: Feb 03, 2021 13:21:55
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



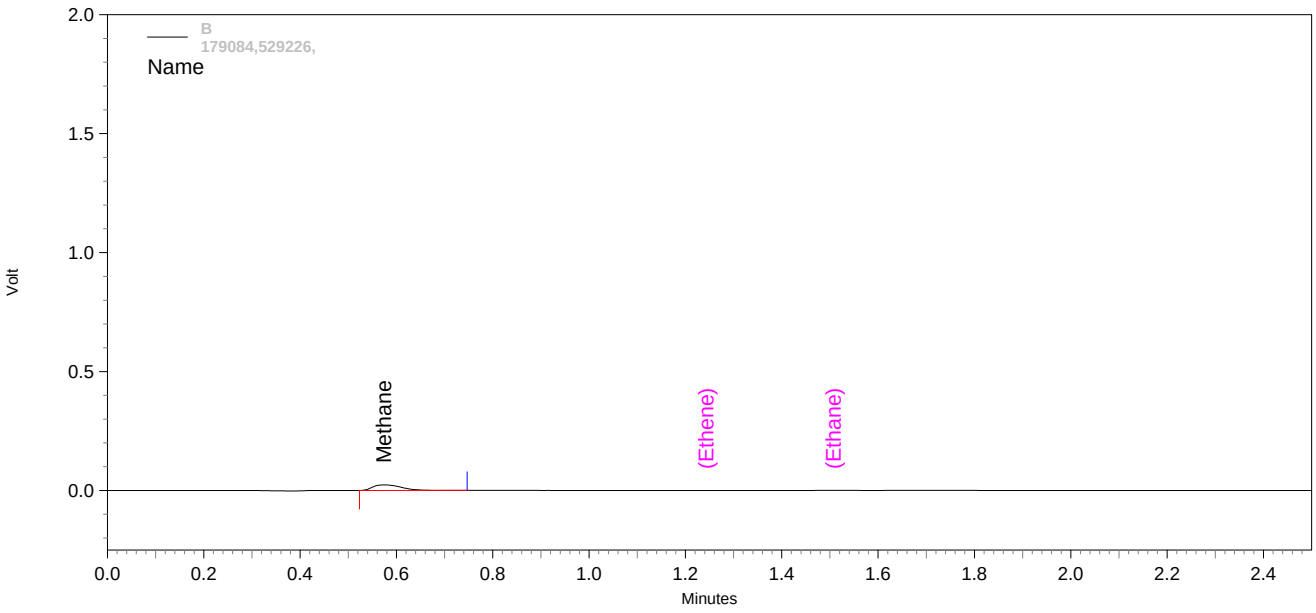
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.577**	**0.560**	**8335**	**0.000**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\024.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,529226,
Acquired: Feb 03, 2021 13:25:49
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



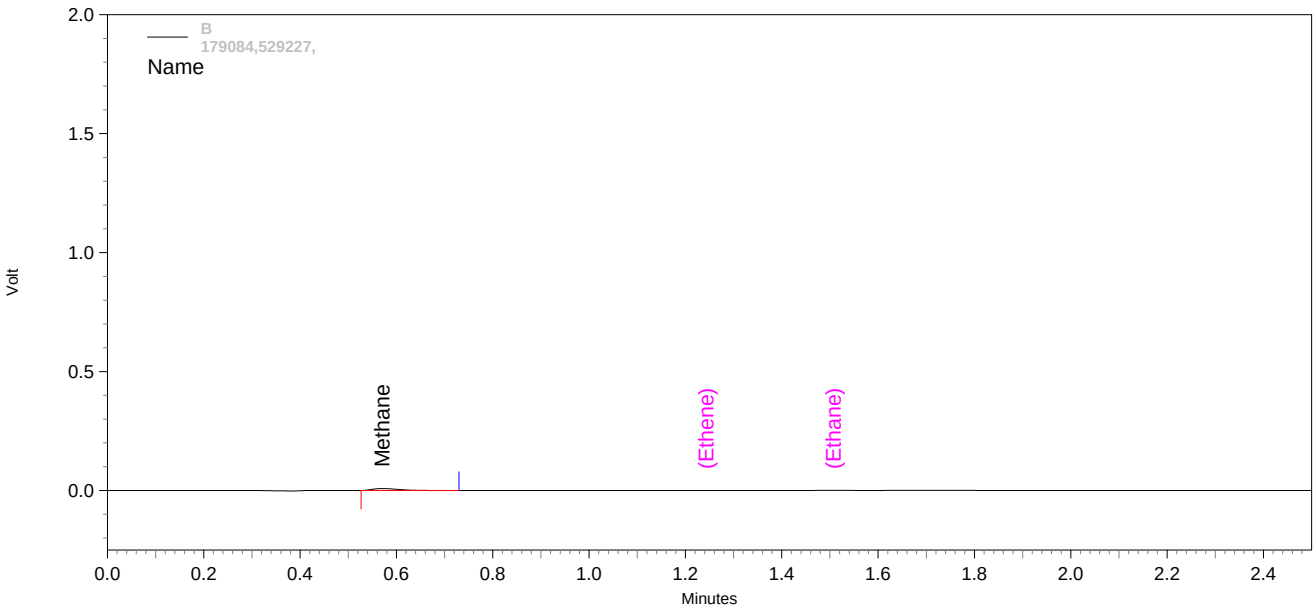
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.573**	**0.560**	**96001**	**25.299**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\025.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,529227,
Acquired: Feb 03, 2021 13:30:04
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



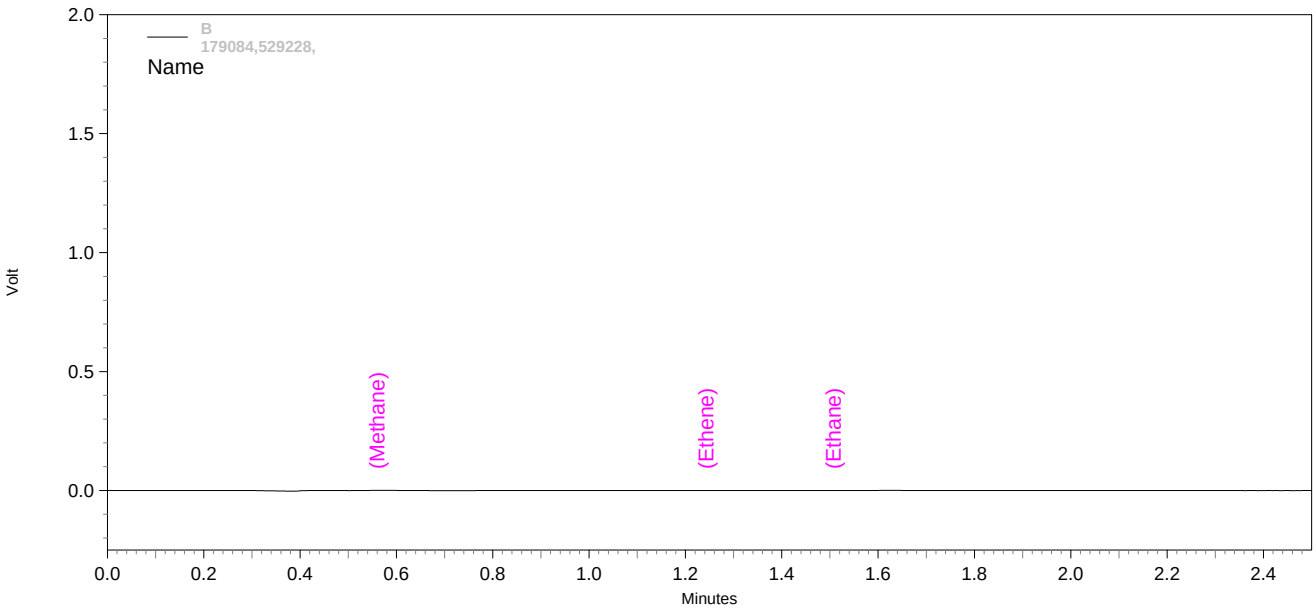
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.570**	**0.560**	**29352**	**5.889**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\026.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,529228,
Acquired: Feb 03, 2021 13:33:21
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.560**		**0.000 BDL**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

VOLATILE ORGANIC ANALYSIS
INITIAL CALIBRATION
DOCUMENTS

Method Path : C:\INSTARCH\METHODS\
Method File : W012921.M
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response Via : Initial Calibration

RJ 02/03/2021

Calibration Files ug/L
1 0.5/5.0 =WCAL1.D 2 1.0/10.0 =WCAL2.D 3 2.0/20.0 =WCAL3.D
4 5.0/50.0 =WCAL4.D 5 10.0/100.0 =WCAL5.D 6 20.0/200.0 =WCAL6.D
7 30.0/300.0 =WCAL7.D 8 40.0/400.0 =WCAL8.D 9 80.0/800.0 =WCAL9.D

		Compound	1	2	3	4	5	6	7	Avg	%RSD
			8	9							
1)	I	FLUOROBENZENE**ISTD**	----------ISTD----------								
2)	PT	Dichlorodi	0.206	0.199	0.205	0.219	0.239	0.234	0.230	0.218	6.93
			0.229	0.204							
3)	PT	Chloromethan	0.360	0.301	0.305	0.293	0.302	0.292	0.267	0.292	11.13
			0.264	0.246							
4)	PT	VinylChlorid	0.289	0.268	0.289	0.302	0.304	0.304	0.294	0.287	5.82
			0.278	0.256							
5)	PT	Bromomethane		0.151	0.143	0.136	0.141	0.137	0.144	0.142	3.43
			0.147	0.141							
6)	PT	Chloroethane		0.220	0.218	0.206	0.204	0.204	0.203	0.205	5.88
			0.200	0.181							
7)	T	Dichloroflmetha	0.547	0.550	0.534	0.549	0.548	0.525	0.493	0.518	7.74
			0.487	0.432							
8)	PT	Trichlorofma	0.311	0.341	0.337	0.372	0.396	0.382	0.370	0.357	7.44
			0.365	0.340							
9)	T	Ethylether	0.245	0.294	0.248	0.243	0.239	0.238	0.225	0.242	8.99
			0.226	0.219							
10)	T	dichlorotfluoro	0.302	0.279	0.285	0.304	0.310	0.298	0.291	0.292	4.19
			0.286	0.274							
11)	T	propyleneoxide		0.050	0.049	0.048	0.049	0.048	0.045	0.047	5.70
			0.044	0.043							
12)	T	Acrolein		0.057	0.053	0.050	0.048	0.049	0.045	0.049	9.56
			0.044	0.043							
13)	PT	11dichlorthe	0.237	0.211	0.224	0.239	0.250	0.235	0.234	0.232	4.69
			0.232	0.226							
14)	PT	Trichlorotfluor	0.183	0.195	0.215	0.241	0.256	0.249	0.241	0.227	10.94
			0.239	0.223							
15)	PT	Acetone	0.106	0.078	0.076	0.070	0.071	0.064	0.062	-----	#
			0.059	0.055							
								Q	A= -0.000 R=1.000		
									B= 0.064		
									C= 0.018		
16)	T	Iodomethane		0.121	0.143	0.166	0.202	0.240	0.252	-----	
			0.261	0.248							
								Q	A= -0.002 R=0.999		
									B= 0.274		
									C= -0.040		
17)	PT	Carbon Dislf	0.864	0.776	0.746	0.762	0.747	0.707	0.657	0.733	10.59
			0.608								
18)	T	allylchloride	0.490	0.486	0.481	0.480	0.461	0.464	0.440	0.453	9.57
			0.415	0.357							
19)	PT	methylacetate		0.058	0.048	0.061	0.050	0.058	0.059	0.057#	9.03
			0.058	0.062							
20)	PT	Methylchlorid	0.544	0.439	0.391	0.318	0.302	0.297	0.278	-----	
			0.270	0.262							
								Q	A= -0.005 R=1.000		
									B= 0.280		
									C= 0.010		
21)	T	tbutylalcohol	0.014	0.011	0.010	0.011	0.011	0.011	0.012	0.011#	9.48
			0.011	0.011							
22)	T	Acrylonitrile		0.118	0.105	0.104	0.099	0.099	0.095	0.099	10.14
			0.090	0.085							

```
23) PT  t12dichlorte    0.290 0.286 0.256 0.268 0.270 0.276 0.269 0.269   5.02
                        0.260 0.248
24) PT  MtBE            0.777 0.752 0.711 0.716 0.695 0.707 0.681 0.701   6.98
                        0.665 0.608
25) T   Hexane          0.314 0.318 0.389 0.421 0.458 0.429 0.433 0.390  13.37
                        0.403 0.349
26) PT  11dichlorota    0.479 0.536 0.509 0.478 0.478 0.480 0.468 0.478   6.81
                        0.451 0.420
27) T   Vinylacetate    0.629 0.595 0.569 0.563 0.504 0.446 0.379 -----
                        0.329
                                                    Q  A= -0.011 R=1.000
                                                       B=  0.551
                                                       C=  0.043
28) T   chloroprene     0.421 0.421 0.441 0.458 0.465 0.458 0.452 0.433   7.48
                        0.423 0.360
29) T   Diisopether     1.006 1.045 0.974 0.988 0.962 0.901 0.923 0.939   8.59
                        0.882 0.774
30) T   ETBE            0.707 0.673 0.658 0.654 0.637 0.673 0.654 0.657   4.46
                        0.658 0.599
31) T   22dichloropr    0.290 0.277 0.269 0.280 0.279 0.299 0.316 0.294   6.36
                        0.312 0.319
32) PT  c12dichlorte    0.343 0.333 0.316 0.304 0.285 0.297 0.293 0.303   7.64
                        0.286 0.272
33) PT  2Butanone             0.039 0.031 0.032 0.031 0.030 0.030 0.031# 10.31
                        0.028 0.028
34) T   propionitrile         0.036 0.035 0.034 0.033 0.032 0.031 0.032   7.56
                        0.029 0.030
35) T   Ethylacetate          0.012 0.011 0.012 0.012 0.012 0.012 0.012#  4.13
                        0.012 0.012
36) T   methacrylonitri       0.137 0.132 0.130 0.128 0.131 0.130 0.130   3.14
                        0.126 0.124
37) T   Bromochlorma    0.170 0.146 0.143 0.138 0.138 0.141 0.136 0.142   8.17
                        0.134 0.129
38) T   Tetrahydofur    0.143 0.102 0.093 0.091 0.084 0.082 0.079 -----
                        0.073 0.064
                                                    Q  A= -0.000 R=1.000
                                                       B=  0.084
                                                       C=  0.016
39) PT  Chloroform      0.628 0.519 0.504 0.492 0.473 0.478 0.467 0.493  11.91
                        0.456 0.417
40) PT  111trichlota    0.322 0.297 0.330 0.346 0.366 0.383 0.382 0.351   8.48
                        0.377 0.356
41) S   SURRDibrflma    0.255 0.258 0.253 0.256 0.259 0.263 0.254 0.257   1.33
                        0.258 0.252
42) PT  Cyclohexane     0.385 0.375 0.433 0.459 0.512 0.519 0.501 0.457  11.45
                        0.481 0.452
43) PT  Carbtetraclo    0.232 0.228 0.264 0.273 0.288 0.316 0.310 0.282  12.44
                        0.317 0.310
44) T   11dicloprope          0.122 0.134 0.129 0.133 0.144 0.143 0.135   5.30
                        0.140 0.138
45) S   SURR12DCAd4     0.071 0.072 0.071 0.069 0.068 0.074 0.071 0.071   2.67
                        0.070 0.074
46) PT  Benzene         1.294 1.242 1.199 1.135 1.076 1.104 1.009 1.093  13.84
                        0.975 0.800
47) PT  12dichlorota    0.436 0.441 0.385 0.404 0.378 0.378 0.364 0.387   9.04
                        0.365 0.332
48) T   TAME            0.725 0.665 0.598 0.625 0.610 0.682 0.651 0.646   6.61
                        0.661 0.597
49) PT  trichloroete    0.295 0.295 0.275 0.269 0.270 0.274 0.290 0.279   4.23
                        0.284 0.263
50) PT  methylcyclohexa 0.419 0.407 0.481 0.523 0.548 0.552 0.572 0.505  11.82
                        0.551 0.497
51) PT  12dicloropra    0.364 0.316 0.293 0.310 0.307 0.311 0.306 0.312   6.77
                        0.305 0.292
52) T   23Dicl1propene       0.454 0.438 0.445 0.413 0.427 0.422 0.428   4.43
                        0.432 0.393
53) T   Dibromometha         0.203 0.176 0.171 0.163 0.171 0.162 0.172   7.79
                        0.170 0.161
54) T   methylmethacryl       0.208 0.200 0.181 0.194 0.206 0.205 0.202   5.01
                        0.212 0.206
```

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55) T   14dioxane            0.001 0.001 0.001 0.001 0.000 0.001 ----- #
                    0.001 0.000
                                                    Q  A= -0.000 R=0.991
                                                       B=  0.001
                                                       C= -0.001
56) PT  Bromodiclrma    0.412 0.367 0.343 0.345 0.345 0.364 0.346 0.358   6.85
                    0.370 0.328
57) T   2Nitropropane   0.071 0.065 0.063 0.066 0.070 0.072 0.074 0.069   6.56
                    0.074 0.063
58) T   2CLEVE               0.170 0.160 0.163 0.157 0.158 0.155 0.157   6.91
                    0.162 0.133
59) PT  c13dicloproe    0.441 0.402 0.426 0.408 0.400 0.415 0.414 0.416   4.36
                    0.445 0.393
60) PT  4Meth2Pentan    0.339 0.307 0.291 0.280 0.261 0.236 0.218 -----
                    0.200
                                                    Q  A= -0.004 R=1.000
                                                       B=  0.271
                                                       C=  0.027
61) S   SURRd8Tolule    0.998 1.023 1.009 1.017 1.014 1.022 0.989 1.017   2.27
                    1.071 1.006
62) PT  Toluene         0.815 0.791 0.725 0.705 0.702 0.696 0.659 0.705  10.21
                    0.685 0.567
63) PT  t13Dicloprop    0.340 0.303 0.310 0.308 0.312 0.341 0.339 0.329   6.33
                    0.363 0.342
64) T   ethylmethacryla      0.316 0.333 0.350 0.351 0.372 0.374 0.345   7.19
                    0.360 0.306
65) PT  112Triclotha          0.222 0.218 0.225 0.204 0.211 0.215 0.214   3.70
                    0.212 0.203
66) PT  Tetrachlorte    0.306 0.297 0.292 0.297 0.311 0.311 0.314 0.302   3.09
                    0.298 0.288
67) T   13Diclorpropa   0.484 0.468 0.488 0.444 0.445 0.454 0.438 0.446   7.66
                    0.405 0.384

68) I   d5-CHLOROBENZENE**IST ----------------ISTD--------------------
69) PT  2Hexanone             0.249 0.248 0.240 0.237 0.223 0.214 0.228   9.93
                    0.186
70) PT  Clorodibrmta    0.358 0.307 0.295 0.299 0.293 0.322 0.337 0.316   6.76
                    0.323 0.315
71) PT  12Dibrometha    0.320 0.268 0.270 0.273 0.276 0.297 0.299 0.286   5.91
                    0.288 0.284
72) PT  Chlorobenzen    1.141 1.012 0.982 0.920 0.930 0.888 0.868 0.922  12.83
                    0.829 0.723
73) T   1Clhexane       0.436 0.417 0.436 0.425 0.462 0.470 0.482 0.448   4.87
                    0.462 0.442
74) T   1112Tetclota           0.269 0.263 0.261 0.265 0.286 0.295 0.279   5.83
                    0.299 0.295
75) PT  Ethylbenzene    1.744 1.597 1.598 1.564 1.538 1.490 1.474 1.493  12.68
                    1.352 1.075
76) PT  m p-Xylene      0.676 0.641 0.628 0.606 0.611 0.590 0.586 0.596   9.94
                    0.560 0.466
77) PT  o-Xylene        0.703 0.552 0.579 0.570 0.620 0.603 0.605 0.594   8.31
                    0.580 0.532
78) PT  Styrene         1.045 0.982 1.000 0.960 1.027 0.988 0.977 0.966   7.50
                    0.917 0.800
79) PT  Bromoform             0.198 0.195 0.171 0.188 0.195 0.204 0.197   6.68
                    0.210 0.213
80) PT  Isopropylben    1.476 1.467 1.411 1.432 1.513 1.422 1.465 1.400   9.82
                    1.357 1.053
81) T   cyclohexanone        0.005 0.004 0.004 0.005 0.004 0.005 0.005#  9.24
                    0.005 0.005

82) I   d4-1,4-DICHLOROBENZEN ----------------ISTD--------------------
83) S   SURR4BrFBenz    0.920 0.898 0.910 0.907 0.921 0.895 0.939 0.907   1.96
                    0.882 0.889
84) T   Bromobenzene    0.807 0.711 0.663 0.670 0.652 0.634 0.639 0.666   9.46
                    0.643 0.580
85) PT  1122Tetrclta    0.986 0.779 0.773 0.744 0.724 0.721 0.725 0.752  13.14
                    0.690 0.626
86) T   123Triclproa          0.928 0.860 0.810 0.844 0.806 0.832 0.835   5.40
                    0.825 0.777
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 87) T   14dichloro2bute       0.194 0.196 0.172 0.181 0.185 0.188 0.186   4.08
                         0.187 0.187
 88) T   n-Propylbenz    3.391 3.071 3.107 3.057 3.134 2.915 2.847 3.008   8.24
                         2.543
 89) T   2chlorotolue    2.037 1.894 1.890 1.801 1.806 1.761 1.740 1.766  11.11
                         1.621 1.343
 90) T   4chlorotolue    2.442 2.124 2.204 2.133 2.088 2.068 1.923 2.039  12.67
                         1.852 1.513
 91) T   135Trimebenz    2.451 2.085 2.104 2.101 2.155 2.111 1.985 2.046  12.02
                         1.893 1.528
 92) T   tbutylbenzen    1.900 1.802 1.823 1.783 1.879 1.796 1.769 1.767   8.18
                         1.746 1.405
 93) T   124Trimetben    2.387 1.975 2.105 2.075 2.098 2.000 1.942 2.004  11.36
                         1.930 1.521
 94) T   sbutylbenzen    2.334 2.302 2.531 2.566 2.664 2.496 2.417 2.373  10.89
                         2.266 1.780
 95) PT  13Diclorbenz    1.455 1.216 1.246 1.170 1.167 1.152 1.133 1.183  10.63
                         1.122 0.984
 96) T   pIsopropylto    2.311 2.075 2.185 2.212 2.316 2.163 2.113 2.108  10.26
                         1.996 1.602
 97) PT  14dichlorobe    1.625 1.268 1.316 1.250 1.209 1.175 1.181 1.240  13.75
                         1.141 0.997
 98) PT  12dichlorobe    1.315 1.250 1.174 1.118 1.133 1.144 1.098 1.130  10.24
                         1.007 0.930
 99) T   nButylbenzen    2.145 1.869 2.003 1.996 2.065 2.060 1.951 1.927  10.25
                         1.752 1.500
100) PT  12dibromo3cl          0.116 0.112 0.108 0.106 0.121 0.127 0.118   7.15
                         0.125 0.127
101) T   135Trichloroben 0.891 0.845 0.823 0.788 0.834 0.821 0.802 0.804   7.28
                         0.741 0.693
102) PT  124Trichlobe    0.715 0.721 0.678 0.652 0.647 0.671 0.652 0.661   6.20
                         0.620 0.594
103) T   Hexachlorobu    0.285 0.289 0.324 0.320 0.350 0.331 0.330 0.318   6.36
                         0.317 0.315
104) T   Naphthalene     1.686 1.610 1.529 1.515 1.578 1.523 1.513 1.508   8.83
                         1.393 1.224
105) T   123Trichlben    0.706 0.619 0.595 0.565 0.586 0.608 0.580 0.593   8.57
                         0.545 0.532
 ------------------------------------------------------------------------------
                                                 Total Average %RSD   7.87
 ------------------------------------------------------------------------------
 L = Linear LO = Linear+Origin Q = Quad QO = Quad+Origin R = Corr. Coef
 (#) = Out of Range

           W012921.M         Wed Feb 03 14:20:42 2021
```

BFB

Data File : C:\INSTARCH\DATA\JAN2921\BFB1.D Vial: 1
Acq On : 29 Jan 2021 11:59 Operator: RLD-DGS
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W012921.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.675 to 4.687 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.2	21155	PASS
75	95	30	60	52.6	52588	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.9	6926	PASS
173	174	0.00	2	0.5	401	PASS
174	95	50	100	87.5	87477	PASS
175	174	5	9	7.9	6875	PASS
176	174	95	101	95.8	83820	PASS
177	176	5	9	8.0	6742	PASS

W012921.M Wed Feb 03 14:37:40 2021

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL1.D Vial: 5
Acq On : 29 Jan 2021 13:44 Operator: RLD-DGS
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:23:21 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 07:19:19 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1362863	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1117459	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	612947	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	347396	19.870	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	96512	19.945	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100 %			
61) SURRd8Tolule	9.71	98	1360807	19.645	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 98 %			
83) SURR4BrFBenz	13.25	95	563721	20.283	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	7009	0.4710	ug/L #	40
3) Chloromethan	2.10	50	12252	0.6158	ug/L	85
4) VinylChlorid	2.25	62	9854	0.5037	ug/L	71
5) Bromomethane	2.72	94	4965	0.5115	ug/L	84
6) Chloroethane	2.89	64	9799	0.7028	ug/L	93
7) Dichloroflmethane	3.19	67	18627	0.5273	ug/L	86
8) Trichlorofma	3.28	101	10612	0.4360	ug/L #	90
9) Ethylether	3.71	59	8362	0.5070	ug/L	83
10) dichlorotfluoroethan	3.74	67	10296	0.5172	ug/L #	86
11) propyleneoxide	3.77	58	18944	5.8961	ug/L	85
12) Acrolein	3.85	56	11007	3.3202	ug/L	80
13) 11dichlorthe	3.99	96	8082	0.5116	ug/L	91
14) Trichlorotfluoroeth	4.03	101	12493	0.8075	ug/L	94
15) Acetone	4.06	43	36138m	7.1539	ug/L	99
16) Iodomethane	4.18	142	9014	0.6481	ug/L #	90
17) Carbon Dislf	4.26	76	58849	1.2244	ug/L	100
18) allylchloride	4.49	41	33399	1.0827	ug/L	93
19) methylacetate	4.53	74	2572	0.6667	ug/L #	32
20) Methylchlorid	4.64	84	18519m	0.7690	ug/L	92
21) tbutylalcohol	4.84	59	23513	30.6115	ug/L	83
22) Acrylonitrile	4.94	53	20168	2.9748	ug/L	93
23) t12dichlorte	5.02	96	9890	0.5393	ug/L	90
24) MtBE	5.05	73	26463	0.5538	ug/L	95
25) Hexane	5.41	57	21421	0.8051	ug/L	96
26) 11dichlorota	5.54	63	16316	0.5012	ug/L	89
27) Vinylacetate	5.64	43	214197	6.6962	ug/L	94
28) chloroprene	5.67	53	28689	0.9716	ug/L	98
29) Diisopether	5.70	45	34280	0.5355	ug/L	100
30) ETBE	6.14	59	24098	0.5382	ug/L	97
31) 22dichloropr	6.29	77	9879	0.4939	ug/L #	70
32) c12dichlorte	6.27	96	11671	0.5651	ug/L	99
33) 2Butanone	6.29	72	38015	17.9526	ug/L	99
34) propionitrile	6.33	54	14530	6.5732	ug/L	69
35) Ethylacetate	6.40	88	2568	3.1723	ug/L	92
36) methacrylonitrile	6.54	67	10848	1.2274	ug/L	97
37) Bromochlorma	6.55	128	5779	0.5986	ug/L	92
38) Tetrahydofur	6.65	42	48833m	7.8356	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL1.D Vial: 5
Acq On : 29 Jan 2021 13:44 Operator: RLD-DGS
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:23:21 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 07:19:19 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.67	83	21411	0.6376 ug/L		98
40)	111trichlota	6.91	97	10979	0.4590 ug/L		92
42)	Cyclohexane	6.99	56	13109	0.4206 ug/L		96
43)	Carbtetraclo	7.13	119	7892	0.4108 ug/L		93
44)	11dicloprope	7.12	110	4342	0.4708 ug/L	#	91
46)	Benzene	7.37	78	44104	0.5923 ug/L		94
47)	12dichlorota	7.36	62	14872	0.5641 ug/L	#	91
48)	TAME	7.53	73	24693	0.5611 ug/L		96
49)	trichloroete	8.17	95	10035	0.5271 ug/L		96
50)	methylcyclohexane	8.45	83	14266	0.4142 ug/L		88
51)	12dicloropra	8.43	63	12390	0.5836 ug/L		92
52)	23Dicl1propene	8.50	75	17538	0.6015 ug/L		95
53)	Dibromometha	8.57	93	6397	0.5458 ug/L		92
54)	methylmethacrylate	8.60	69	6476	0.4715 ug/L	#	68
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	8.77	83	14048	0.5763 ug/L	#	95
57)	2Nitropropane	9.04	43	24357	5.2033 ug/L		88
58)	2CLEVE	9.16	63	29251	2.7286 ug/L		93
59)	c13dicloproe	9.35	75	15037	0.5302 ug/L		99
60)	4Meth2Pentan	9.55	43	115399	6.7370 ug/L		96
62)	Toluene	9.80	92	27752	0.5777 ug/L		86
63)	t13Dicloprop	10.06	75	11595	0.5178 ug/L	#	76
64)	ethylmethacrylate	10.21	69	24368	1.0359 ug/L		98
65)	112Triclotha	10.29	83	9956	0.6840 ug/L	#	87
66)	Tetrachlorte	10.54	166	10421	0.5070 ug/L		97
67)	13Diclorpropa	10.53	76	16497	0.5432 ug/L		84
69)	2Hexanone	10.64	43	82749	6.8393 ug/L		96
70)	Clorodibrmta	10.83	129	10013	0.5663 ug/L	#	83
71)	12Dibrometha	10.98	107	8937	0.5590 ug/L		87
72)	Chlorobenzen	11.66	112	31865	0.6188 ug/L	#	73
73)	1Clhexane	11.65	91	12177	0.4864 ug/L	#	16
74)	1112Tetclota	11.77	131	9189	0.5897 ug/L	#	86
75)	Ethylbenzene	11.82	91	48727	0.5843 ug/L		97
76)	m p-Xylene	11.99	106	37775	1.1344 ug/L		95
77)	o-Xylene	12.53	106	19653	0.5923 ug/L		99
78)	Styrene	12.55	104	29197	0.5408 ug/L		98
79)	Bromoform	12.78	173	6215	0.5649 ug/L		91
80)	Isopropylben	13.06	105	41229	0.5273 ug/L		97
81)	cyclohexanone	13.15	55	5696	21.1909 ug/L	#	38
84)	Bromobenzene	13.47	156	12363	0.6053 ug/L		93
85)	1122Tetrclta	13.44	83	15108	0.6554 ug/L		98
86)	123Triclproa	13.49	75	15082	0.5891 ug/L		94
87)	14dichloro2butene	13.52	53	3733	0.6537 ug/L	#	31
88)	n-Propylbenz	13.64	91	51962	0.5877 ug/L		99
89)	2chlorotolue	13.76	91	31208	0.5767 ug/L		95
90)	4chlorotolue	13.90	91	37415	0.5988 ug/L		97
91)	135Trimebenz	13.90	105	37552	0.5990 ug/L		93
92)	tbutylbenzen	14.37	119	29120	0.5377 ug/L		96
93)	124Trimetben	14.43	105	36579	0.5957 ug/L		97
94)	sbutylbenzen	14.69	105	35761	0.4917 ug/L		92
95)	13Diclorbenz	14.82	146	22298	0.6151 ug/L		100
96)	pIsopropylto	14.91	119	35412	0.5481 ug/L	#	96
97)	14dichlorobe	14.95	146	24906	0.6552 ug/L		90
98)	12dichlorobe	15.49	146	20154	0.5820 ug/L	#	64
99)	nButylbenzen	15.50	91	32870	0.5567 ug/L		92
100)	12dibromo3cl	16.57	157	2527	0.7005 ug/L	#	9
101)	135Trichlorobenzene	16.91	180	13652	0.5539 ug/L		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL1.D Vial: 5
Acq On : 29 Jan 2021 13:44 Operator: RLD-DGS
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:23:21 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 07:19:19 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
102)	124Trichlobe	17.72	180	10955	0.5408	ug/L		90
103)	Hexachlorobu	17.97	225	4370	0.4484	ug/L	#	49
104)	Naphthalene	18.03	128	25834	0.5590	ug/L	#	73
105)	123Trichlben	18.33	180	10822	0.5954	ug/L	#	82

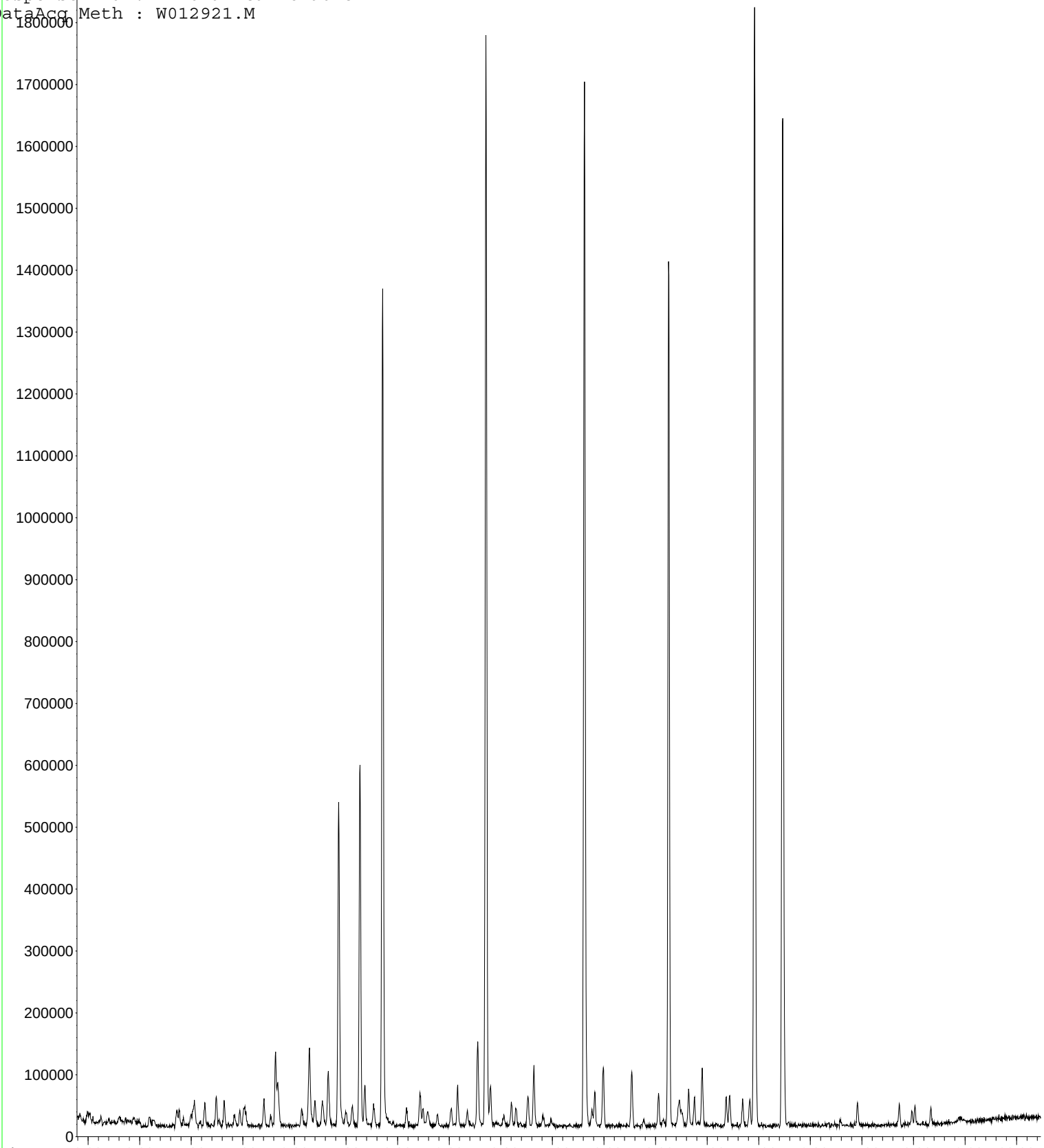
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL1.D

Data File : C:\INSTARCH\DATA\JAN2921\WCAL1.D Vial: 5
Acq On : 29 Jan 2021 13:44 Operator: RLD-DGS
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

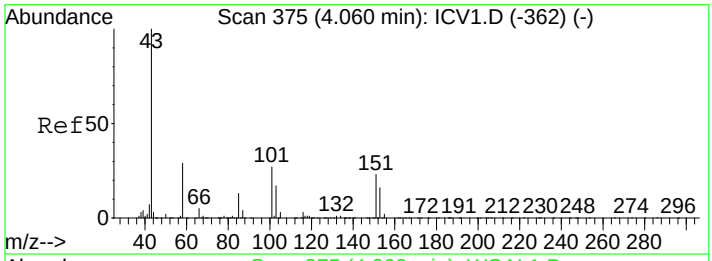
Quant Time: Feb 01 08:23:21 2021 Results File: W012921.RES

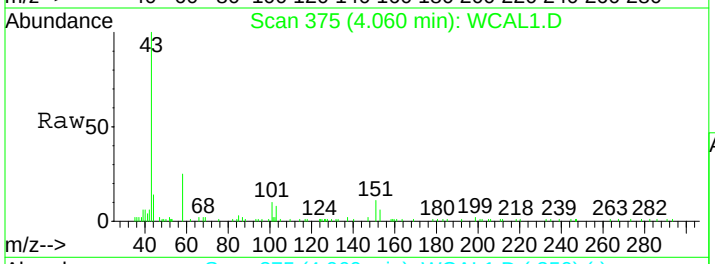
Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 07:19:19 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

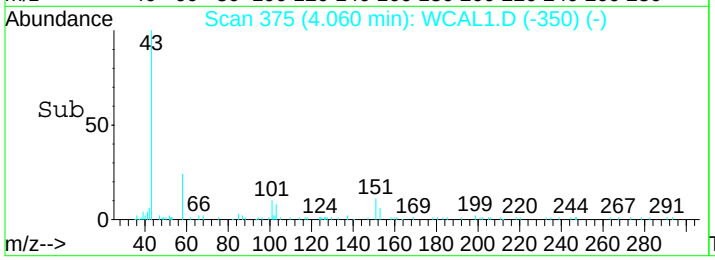


After Manual Integration

DGS 02/03/2021



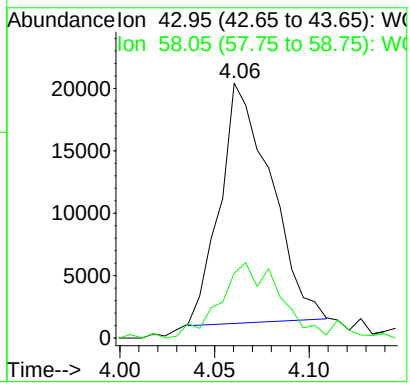


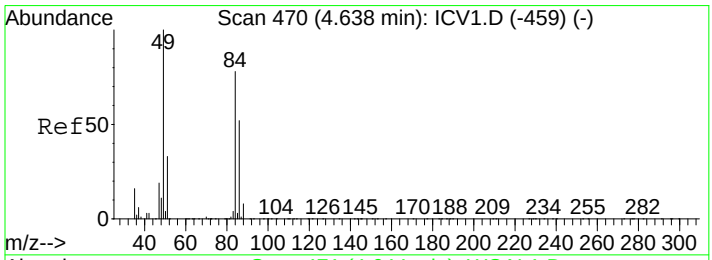


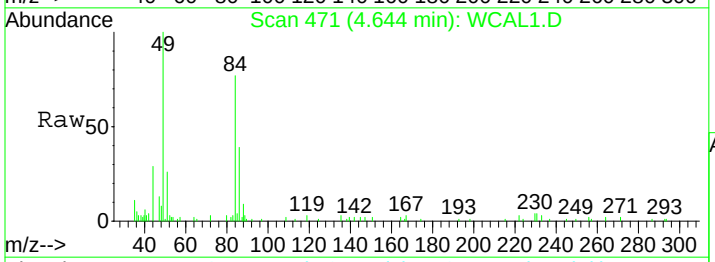
#15
Acetone
Concen: 7.15 ug/L m
RT: 4.06 min Scan# 375
Delta R.T. -0.00 min
Lab File: WCAL1.D
Acq: 29 Jan 2021 13:44

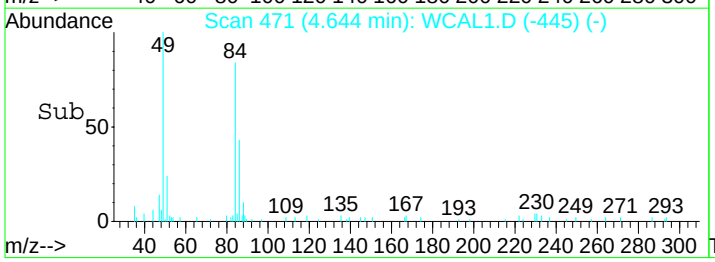
Tgt Ion: 43 Resp: 36138

Ion	Ratio	Lower	Upper
43	100		
58	36.8	10.1	50.1





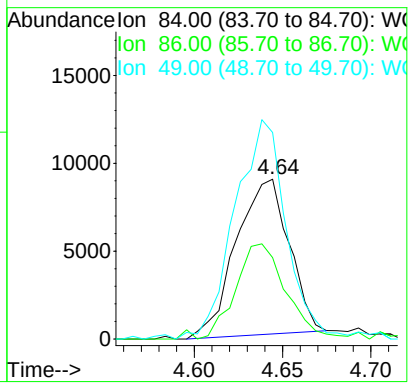




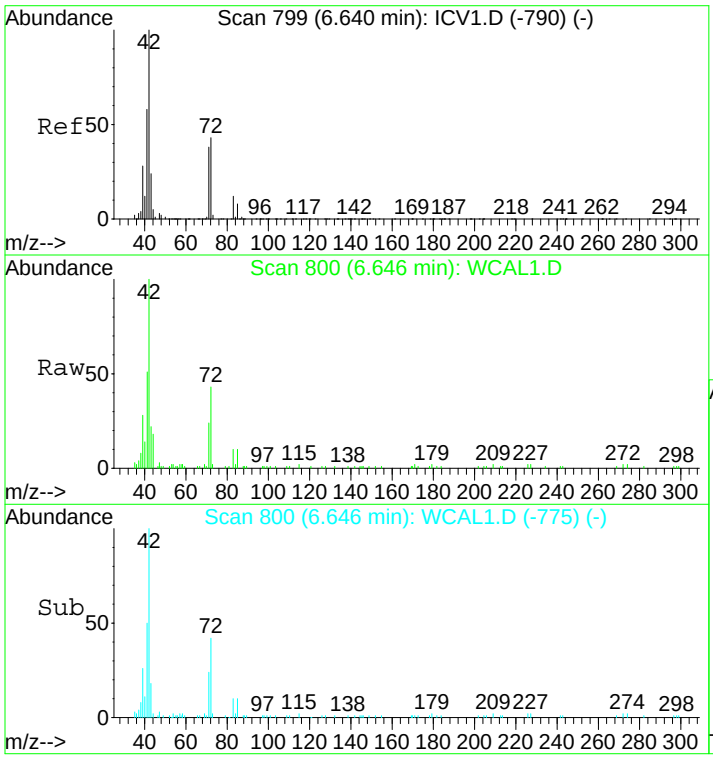
#20
Methylchlorid
Concen: 0.77 ug/L m
RT: 4.64 min Scan# 471
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 29 Jan 2021 13:44

Tgt Ion: 84 Resp: 18519

Ion	Ratio	Lower	Upper
84	100		
86	59.5	44.9	84.9
49	138.9	111.6	151.6



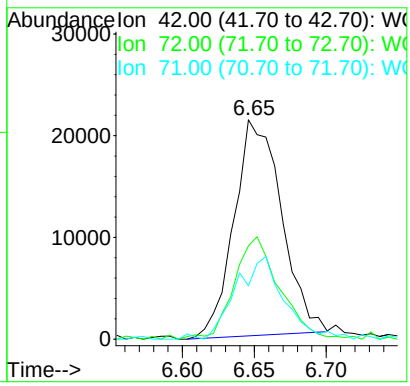
RJ 02/03/2021



#38
Tetrahydofur
Concen: 7.84 ug/L m
RT: 6.65 min Scan# 800
Delta R.T. -0.00 min
Lab File: WCAL1.D
Acq: 29 Jan 2021 13:44

Tgt Ion: 42 Resp: 48833

Ion	Ratio	Lower	Upper
42	100		
72	45.4	21.5	61.5
71	39.0	19.3	59.3

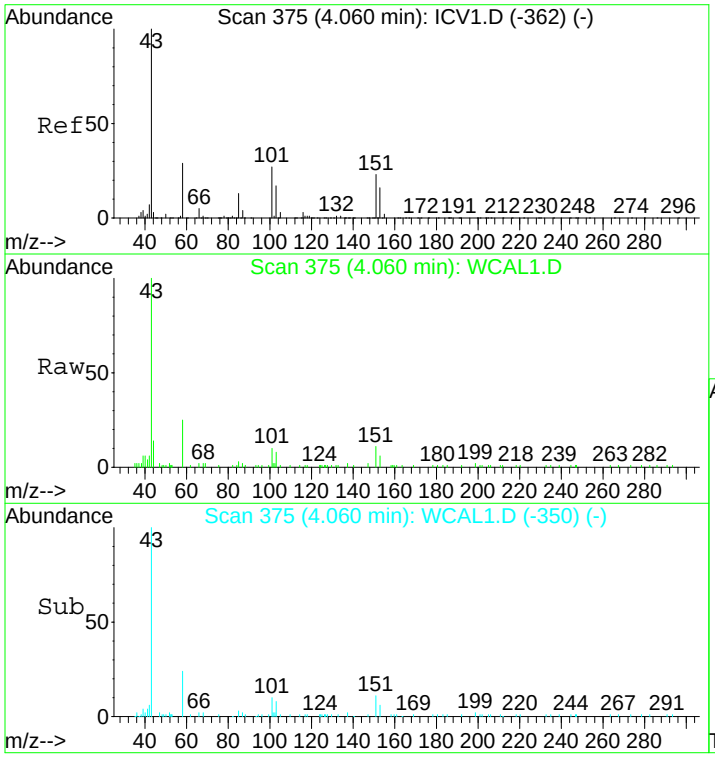


After Manual Integration

DGS 02/03/2021

RJ 02/03/2021

Before Manual Integration

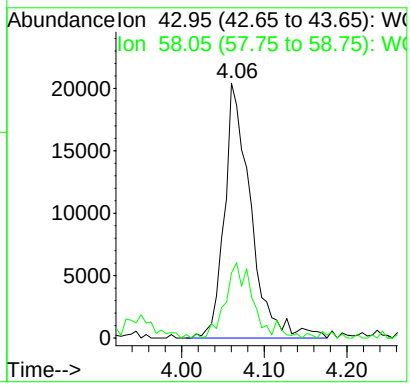


#15
Acetone
Concen: 4.86 ug/L
RT: 4.06 min Scan# 375
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 29 Jan 2021 13:44

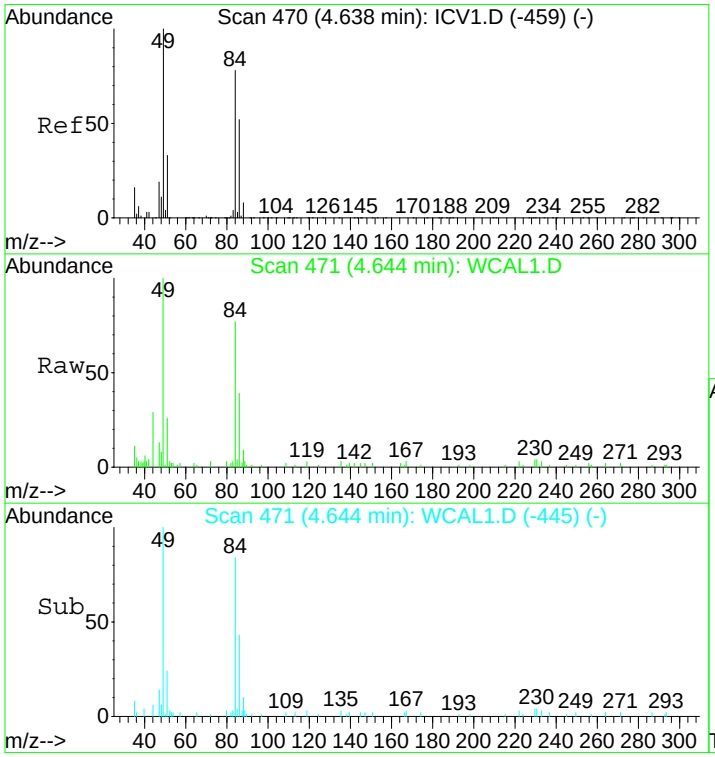
Tgt Ion: 43 Resp: 45236

Ion	Ratio	Lower	Upper
43	100		
58	29.4	10.1	50.1

DGS 02/03/2021



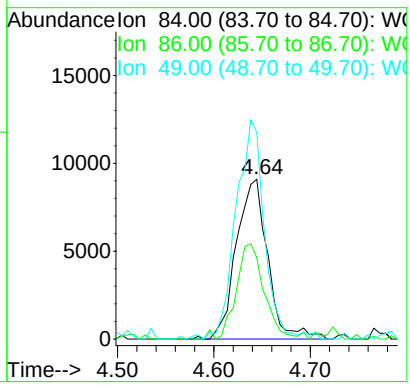
REASON # 2



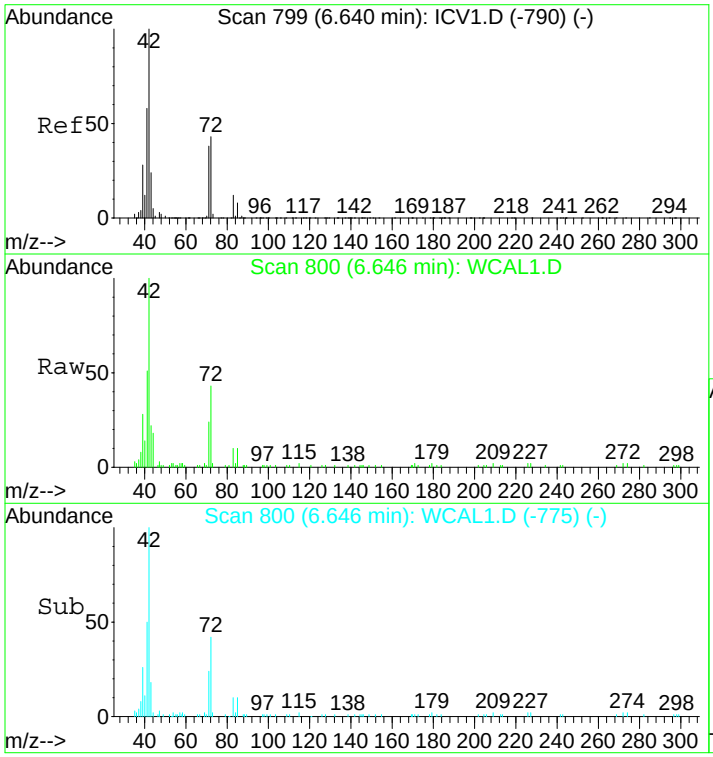
#20
Methylchlorid
Concen: 0.34 ug/L
RT: 4.64 min Scan# 471
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 29 Jan 2021 13:44

Tgt Ion: 84 Resp: 20563

Ion	Ratio	Lower	Upper
84	100		
86	53.6	44.9	84.9
49	125.1	111.6	151.6



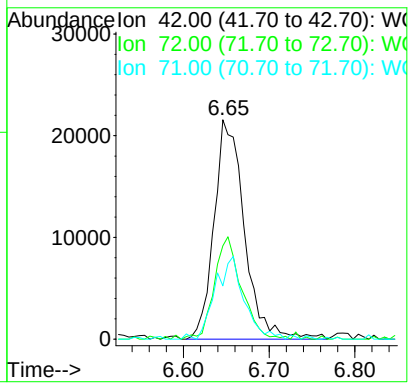
REASON # 2



#38
Tetrahydofur
Concen: 5.41 ug/L
RT: 6.65 min Scan# 800
Delta R.T. -0.00 min
Lab File: WCAL1.D
Acq: 29 Jan 2021 13:44

Tgt Ion: 42 Resp: 52956

Ion	Ratio	Lower	Upper
42	100		
72	41.9	21.5	61.5
71	36.0	19.3	59.3



Before Manual Integration

REASON # 2

DGS 02/03/2021

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL2.D Vial: 6
Acq On : 29 Jan 2021 14:14 Operator: RLD-DGS
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:24:06 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1316065	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1089144	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	612908	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.86	113	339948	20.712 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 104 %		
45) SURR12DCAd4	7.27	102	95116	20.417 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102 %		
61) SURRd8Tolule	9.72	98	1346843	21.069 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 105 %		
83) SURR4BrFBenz	13.26	95	550475	19.810 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		
Target Compounds					Qvalue
2) Dichlorodi	1.85	85	13094	0.7463 ug/L	95
3) Chloromethan	2.08	50	19793	1.0417 ug/L	97
4) VinylChlorid	2.25	62	17639	0.9533 ug/L	98
5) Bromomethane	2.72	94	9926	1.0587 ug/L	95
6) Chloroethane	2.88	64	14455	1.1395 ug/L	91
7) Dichloroflmethane	3.19	67	36210	1.1295 ug/L	98
8) Trichlorofma	3.28	101	22446	0.9681 ug/L	93
9) Ethylether	3.71	59	19317	1.3689 ug/L	92
10) dichlorotfluoroethan	3.73	67	18371	1.0267 ug/L	97
11) propyleneoxide	3.76	58	33077	11.2289 ug/L	98
12) Acrolein	3.84	56	18635	6.2474 ug/L	91
13) 11dichlorthe	4.00	96	13878	0.9547 ug/L	95
14) Trichlorotfluoroeth	4.04	101	25726	1.7331 ug/L	97
15) Acetone	4.07	43	51305m	10.8456 ug/L	93
16) Iodomethane	4.17	142	15931	0.8322 ug/L	94
17) Carbon Dislf	4.26	76	102121	2.3234 ug/L	98
18) allylchloride	4.49	41	63917	2.3449 ug/L	98
19) methylacetate	4.53	74	3807	1.0747 ug/L #	36
20) Methylchlorid	4.64	84	28893m	1.5479 ug/L	95
21) tbutylalcohol	4.85	59	36781	48.8497 ug/L	91
22) Acrylonitrile	4.94	53	38770	6.1650 ug/L	97
23) t12dichlorte	5.01	96	18787	1.1688 ug/L	94
24) MtBE	5.05	73	49505	1.1900 ug/L	96
25) Hexane	5.42	57	41827	1.6680 ug/L	95
26) 11dichlorota	5.54	63	35275	1.2291 ug/L	95
27) Vinylacetate	5.63	43	391705	11.1716 ug/L	95
28) chloroprene	5.68	53	55472	2.0879 ug/L	97
29) Diisopether	5.69	45	68734	1.2434 ug/L	96
30) ETBE	6.13	59	44311	1.2275 ug/L	95
31) 22dichloropr	6.27	77	18252	1.2143 ug/L	93
32) c12dichlorte	6.27	96	21884	1.2256 ug/L	92
33) 2Butanone	6.29	72	25338	12.7073 ug/L	98
34) propionitrile	6.33	54	23944	10.8811 ug/L	91
35) Ethylacetate	6.40	88	3899	5.3662 ug/L	99
36) methacrylonitrile	6.54	67	18026	2.2025 ug/L	92
37) Bromochlorma	6.57	128	9624	1.1004 ug/L	93
38) Tetrahydofur	6.65	42	67120	12.2257 ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL2.D Vial: 6
Acq On : 29 Jan 2021 14:14 Operator: RLD-DGS
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:24:06 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.67	83	34162	0.9137	ug/L		88
40)	111trichlota	6.91	97	19538	0.9443	ug/L		86
42)	Cyclohexane	7.00	56	24669	0.8794	ug/L		97
43)	Carbtetraclo	7.13	119	14974	0.9283	ug/L		95
44)	11dicloprope	7.11	110	8040	1.0041	ug/L		95
46)	Benzene	7.36	78	81741	1.2424	ug/L		97
47)	12dichlorota	7.36	62	28990	1.2451	ug/L		97
48)	TAME	7.53	73	43734	1.2038	ug/L		97
49)	trichloroete	8.17	95	19411	1.1551	ug/L		97
50)	methylcyclohexane	8.44	83	26773	0.8465	ug/L		97
51)	12dicloropra	8.43	63	20771	1.1490	ug/L	#	85
52)	23Dicl1propene	8.50	75	29865	1.1646	ug/L		96
53)	Dibromometha	8.57	93	13336	1.3281	ug/L		91
54)	methylmethacrylate	8.59	69	13709	1.1680	ug/L	#	76
55)	14dioxane	8.64	88	2535	66.6722	ug/L	#	20
56)	Bromodiclrma	8.78	83	24117	1.1586	ug/L	#	95
57)	2Nitropropane	9.04	43	42538	10.8323	ug/L		98
58)	2CLEVE	9.16	63	55910	6.1650	ug/L		98
59)	c13dicloproe	9.35	75	26423	1.1017	ug/L		98
60)	4Meth2Pentan	9.55	43	202158	11.8915	ug/L		96
62)	Toluene	9.80	92	52065	1.2420	ug/L		96
63)	t13Dicloprop	10.06	75	19952	1.0799	ug/L		87
64)	ethylmethacrylate	10.20	69	41600	2.0457	ug/L		96
65)	112Triclotha	10.30	83	14622	1.1624	ug/L		96
66)	Tetrachlorte	10.53	166	19539	1.0713	ug/L		91
67)	13Diclorpropa	10.51	76	30812	1.1731	ug/L		98
69)	2Hexanone	10.64	43	135607	9.8761	ug/L		96
70)	Clorodibrmta	10.83	129	16694	1.0205	ug/L		96
71)	12Dibrometha	10.97	107	14588	0.9373	ug/L		95
72)	Chlorobenzen	11.66	112	55128	1.0930	ug/L	#	80
73)	1Clhexane	11.64	91	22730	0.8957	ug/L	#	66
74)	1112Tetclota	11.77	131	14623	0.9983	ug/L		92
75)	Ethylbenzene	11.82	91	86949	1.0405	ug/L		98
76)	m p-Xylene	11.98	106	69760	2.0865	ug/L		96
77)	o-Xylene	12.53	106	30078	0.9361	ug/L		89
78)	Styrene	12.54	104	53502	1.0093	ug/L		99
79)	Bromoform	12.77	173	10788	1.0214	ug/L		94
80)	Isopropylben	13.06	105	79867	1.0028	ug/L		97
81)	cyclohexanone	13.14	55	5321	17.6073	ug/L	#	40
84)	Bromobenzene	13.47	156	21782	1.0240	ug/L		97
85)	1122Tetrclta	13.44	83	23877	0.9900	ug/L		88
86)	123Triclproa	13.50	75	28432	1.0377	ug/L		96
87)	14dichloro2butene	13.53	53	5960	0.9081	ug/L		81
88)	n-Propylbenz	13.64	91	94125	1.0040	ug/L		98
89)	2chlorotolue	13.75	91	58033	1.0139	ug/L		97
90)	4chlorotolue	13.91	91	65104	0.9826	ug/L		99
91)	135Trimebenz	13.90	105	63907	0.9501	ug/L		99
92)	tbutylbenzen	14.37	119	55209	0.9497	ug/L		97
93)	124Trimetben	14.44	105	60520	0.9175	ug/L		99
94)	sbutylbenzen	14.69	105	70542	0.8862	ug/L		100
95)	13Diclorbenz	14.83	146	37255	0.9765	ug/L		99
96)	pIsopropylto	14.90	119	63591	0.9126	ug/L	#	97
97)	14dichlorobe	14.96	146	38869	0.9949	ug/L		84
98)	12dichlorobe	15.49	146	38306	1.0474	ug/L		85
99)	nButylbenzen	15.50	91	57283	0.9155	ug/L		99
100)	12dibromo3cl	16.60	157	3568	0.9397	ug/L		84
101)	135Trichlorobenzene	16.91	180	25893	0.9978	ug/L		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL2.D Vial: 6
Acq On : 29 Jan 2021 14:14 Operator: RLD-DGS
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:24:06 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	22096	1.0293	ug/L	96
103)	Hexachlorobu	17.97	225	8860	0.8468	ug/L	91
104)	Naphthalene	18.03	128	49352	0.9501	ug/L	98
105)	123Trichlben	18.34	180	18984	1.0079	ug/L	94

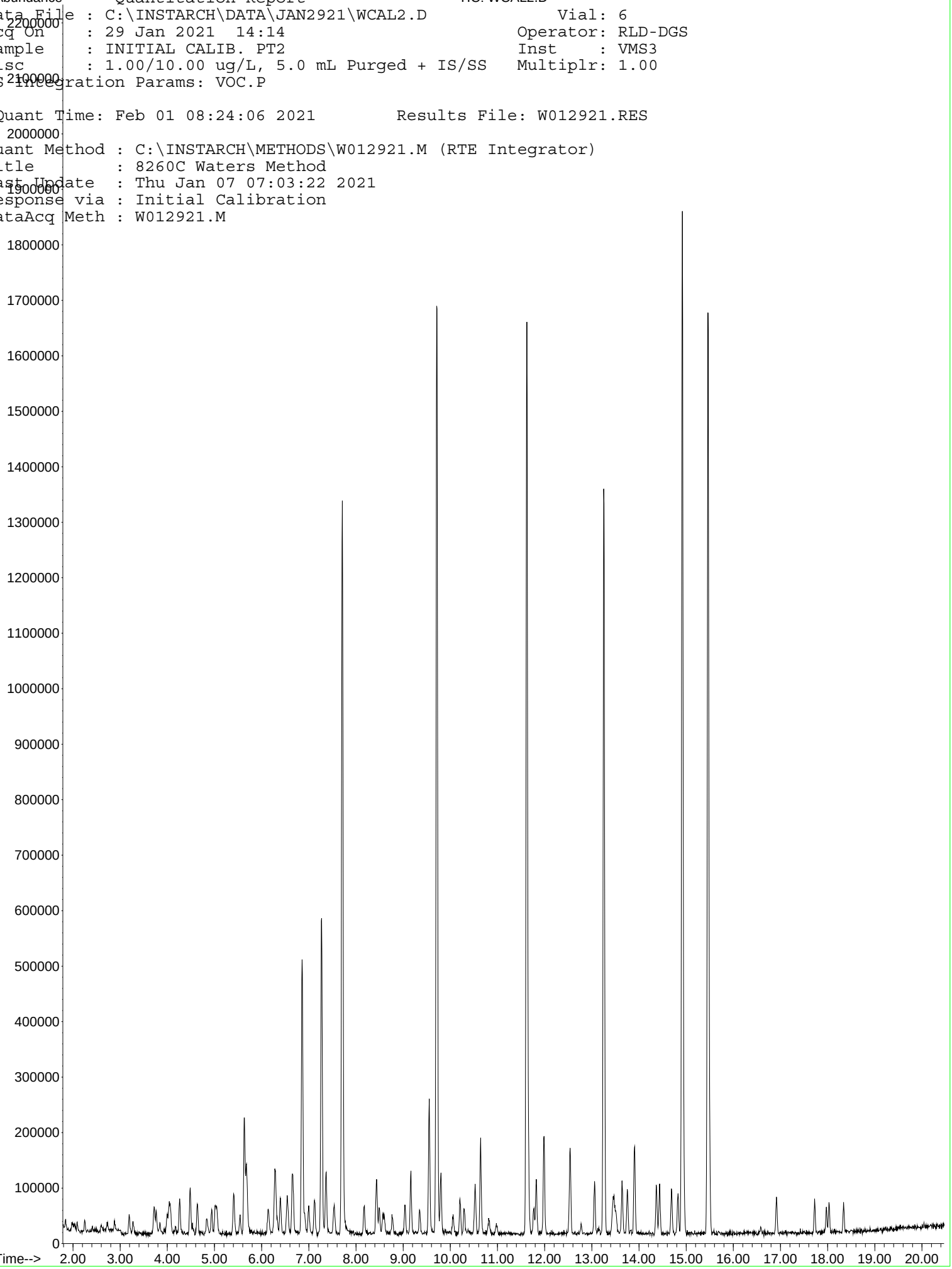
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL2.D

Data File : C:\INSTARCH\DATA\JAN2921\WCAL2.D Vial: 6
Acq On : 29 Jan 2021 14:14 Operator: RLD-DGS
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

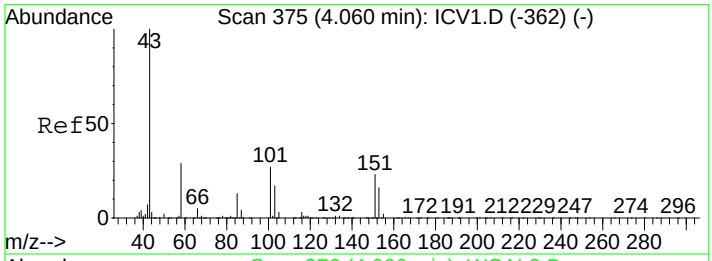
Quant Time: Feb 01 08:24:06 2021 Results File: W012921.RES

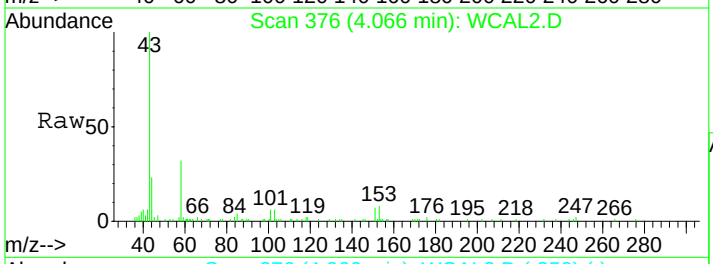
Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

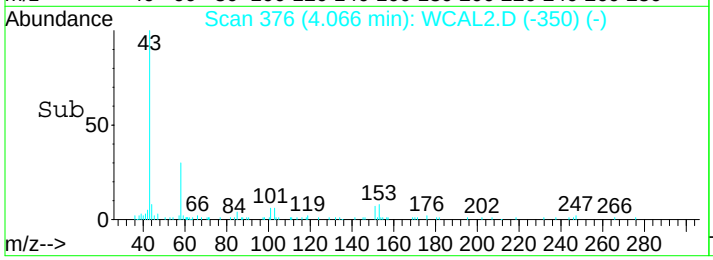


After Manual Integration

DGS 02/03/2021



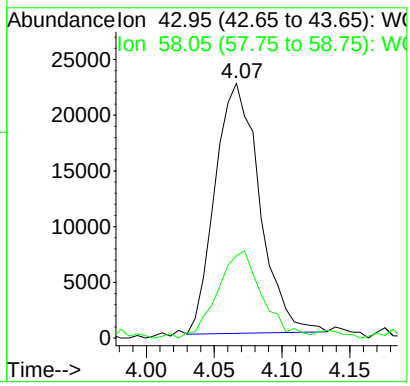


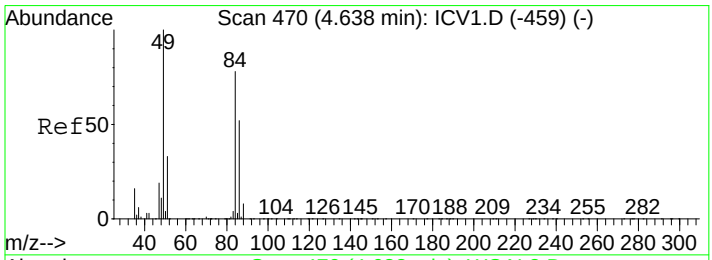


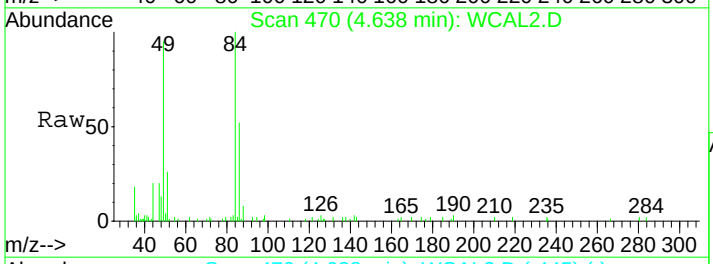
#15
Acetone
Concen: 10.85 ug/L m
RT: 4.07 min Scan# 376
Delta R.T. 0.01 min
Lab File: WCAL2.D
Acq: 29 Jan 2021 14:14

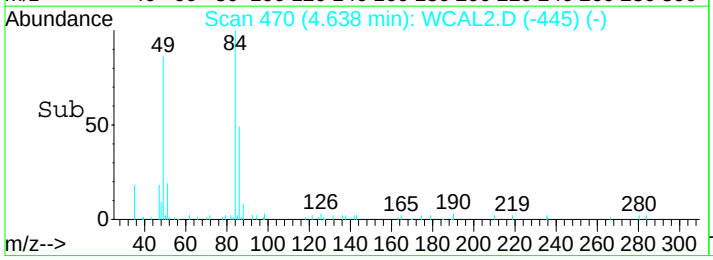
Tgt Ion: 43 Resp: 51305

Ion	Ratio	Lower	Upper
43	100		
58	35.1	8.6	48.6





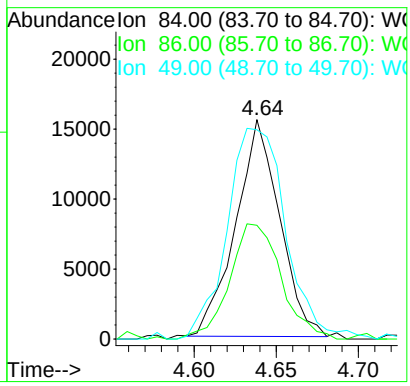




#20
Methylchlorid
Concen: 1.55 ug/L m
RT: 4.64 min Scan# 470
Delta R.T. 0.00 min
Lab File: WCAL2.D
Acq: 29 Jan 2021 14:14

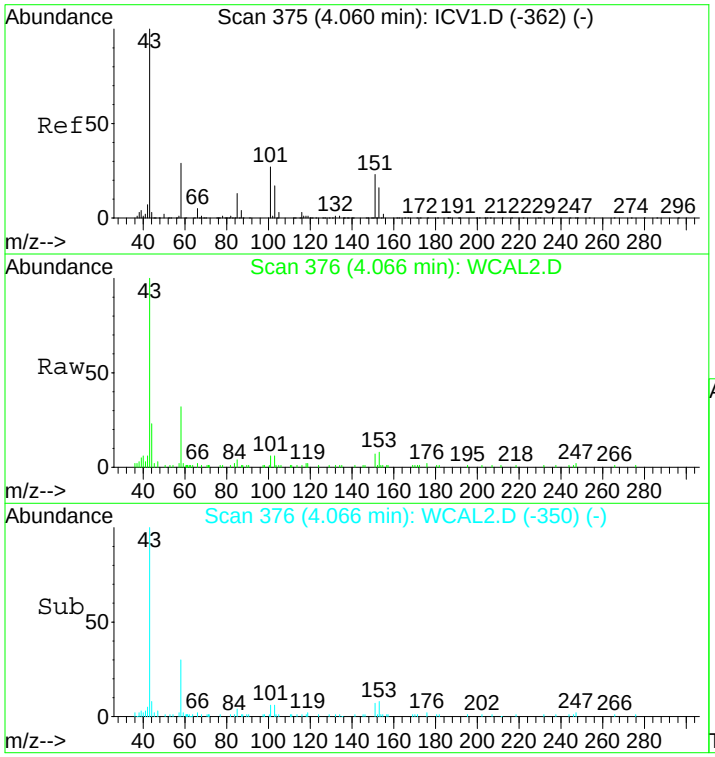
Tgt Ion: 84 Resp: 28893

Ion	Ratio	Lower	Upper
84	100		
86	62.0	44.7	84.7
49	129.7	108.5	148.5



RJ 02/03/2021

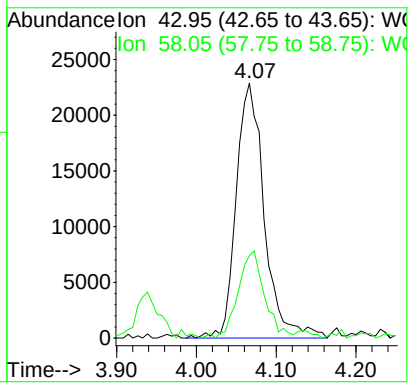
Before Manual Integration



#15
Acetone
Concen: 7.80 ug/L
RT: 4.07 min Scan# 376
Delta R.T. 0.01 min
Lab File: WCAL2.D
Acq: 29 Jan 2021 14:14

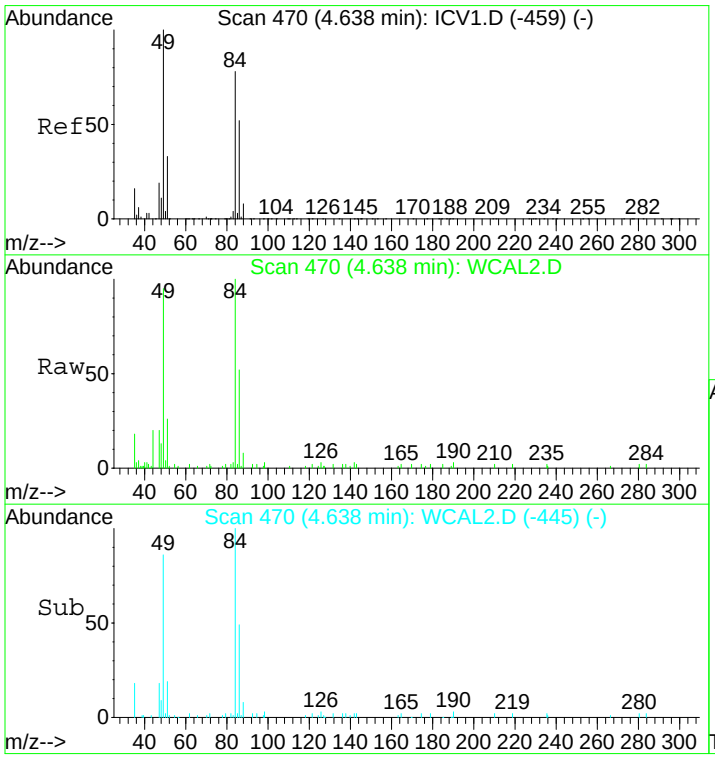
Tgt Ion: 43 Resp: 55930

Ion	Ratio	Lower	Upper
43	100		
58	32.2	10.1	50.1



DGS 02/03/2021

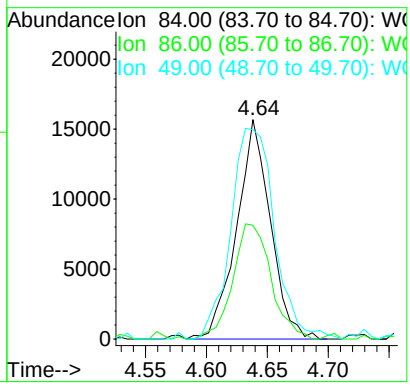
REASON # 2



#20
Methylchlorid
Concen: 0.90 ug/L
RT: 4.64 min Scan# 470
Delta R.T. 0.00 min
Lab File: WCAL2.D
Acq: 29 Jan 2021 14:14

Tgt Ion: 84 Resp: 30192

Ion	Ratio	Lower	Upper
84	100		
86	59.3	44.9	84.9
49	124.2	111.6	151.6



REASON # 2

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL3.D Vial: 7
Acq On : 29 Jan 2021 14:44 Operator: RLD-DGS
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 15:04:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1311634	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1079851	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	606737	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	332076	20.301	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	93164	20.066	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100	%		
61) SURRd8Tolule	9.71	98	1322849	20.764	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 104	%		
83) SURR4BrFBenz	13.25	95	552173	20.073	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	26952	1.5414	ug/L	99
3) Chloromethan	2.09	50	39942	2.1092	ug/L	95
4) VinylChlorid	2.25	62	37929	2.0569	ug/L	96
5) Bromomethane	2.72	94	18808	2.0128	ug/L	98
6) Chloroethane	2.89	64	28640	2.2654	ug/L	98
7) Dichloroflmethane	3.19	67	70044	2.1922	ug/L	100
8) Trichlorofma	3.28	101	44156	1.9109	ug/L	99
9) Ethylether	3.72	59	32550	2.3144	ug/L	99
10) dichlorotfluoroethan	3.73	67	37339	2.0938	ug/L	96
11) propyleneoxide	3.77	58	64600	22.0044	ug/L	98
12) Acrolein	3.85	56	34930	11.7498	ug/L	100
13) 11dichlorthe	4.00	96	29366	2.0269	ug/L	99
14) Trichlorotfluoroeth	4.04	101	56367	3.8101	ug/L	94
15) Acetone	4.06	43	100271	21.2683	ug/L	99
16) Iodomethane	4.16	142	37481	1.9646	ug/L	95
17) Carbon Dislf	4.26	76	195794	4.4696	ug/L	99
18) allylchloride	4.48	41	126115	4.6423	ug/L	98
19) methylacetate	4.52	74	6248	1.7697	ug/L	88
20) Methylchlorid	4.64	84	51250	2.7550	ug/L	97
21) tbutylalcohol	4.83	59	65133	86.7969	ug/L	98
22) Acrylonitrile	4.94	53	69168	11.0358	ug/L	98
23) t12dichlorte	5.02	96	33561	2.0950	ug/L	93
24) MtBE	5.05	73	93296	2.2502	ug/L	98
25) Hexane	5.41	57	101977	4.0803	ug/L	96
26) 11dichlorota	5.54	63	66765	2.3342	ug/L	98
27) Vinylacetate	5.63	43	746959	21.6677	ug/L	97
28) chloroprene	5.67	53	115568	4.3644	ug/L	99
29) Diisopether	5.69	45	127731	2.3185	ug/L	97
30) ETBE	6.15	59	86295	2.3986	ug/L	97
31) 22dichloropr	6.28	77	35316	2.3575	ug/L	98
32) c12dichlorte	6.27	96	41384	2.3256	ug/L	92
33) 2Butanone	6.29	72	40176	20.2168	ug/L	96
34) propionitrile	6.33	54	45718	20.8462	ug/L	99
35) Ethylacetate	6.40	88	7186	9.9235	ug/L #	91
36) methacrylonitrile	6.54	67	34668	4.2503	ug/L	100
37) Bromochlorma	6.55	128	18727	2.1485	ug/L	97
38) Tetrahydofur	6.65	42	121597	22.2233	ug/L	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL3.D Vial: 7
Acq On : 29 Jan 2021 14:44 Operator: RLD-DGS
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 15:04:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	66142	2.0349	ug/L		98
40)	111trichlota	6.90	97	43330	2.1012	ug/L		98
42)	Cyclohexane	7.00	56	56777	2.0308	ug/L		97
43)	Carbtetraclo	7.13	119	34657	2.1559	ug/L		98
44)	11dicloprope	7.11	110	17625	2.2087	ug/L		95
46)	Benzene	7.37	78	157270	2.3985	ug/L		99
47)	12dichlorota	7.36	62	50435	2.1735	ug/L		99
48)	TAME	7.53	73	78436	2.1663	ug/L		96
49)	trichloroete	8.17	95	36027	2.1510	ug/L		97
50)	methylcyclohexane	8.44	83	63138	2.0030	ug/L		98
51)	12dicloropra	8.43	63	38465	2.1349	ug/L	#	80
52)	23Dicl1propene	8.50	75	57399	2.2459	ug/L		99
53)	Dibromometha	8.57	93	23062	2.3045	ug/L		97
54)	methylmethacrylate	8.60	69	26226	2.2420	ug/L		95
55)	14dioxane	8.61	88	4702	124.0835	ug/L	#	75
56)	Bromodiclrma	8.77	83	44979	2.1680	ug/L		96
57)	2Nitropropane	9.04	43	82871	21.1744	ug/L		95
58)	2CLEVE	9.16	63	105182	11.6373	ug/L		99
59)	c13dicloproe	9.35	75	55935	2.3401	ug/L		97
60)	4Meth2Pentan	9.55	43	381771	22.5327	ug/L		95
62)	Toluene	9.80	92	95058	2.2753	ug/L		98
63)	t13Dicloprop	10.06	75	40668	2.2085	ug/L		96
64)	ethylmethacrylate	10.20	69	87347	4.3097	ug/L		98
65)	112Triclotha	10.30	83	28536	2.2762	ug/L		94
66)	Tetrachlorte	10.53	166	38354	2.1099	ug/L		96
67)	13Diclorpropa	10.51	76	63998	2.4449	ug/L		97
69)	2Hexanone	10.64	43	267635	19.6593	ug/L		98
70)	Clorodibrmta	10.83	129	31878	1.9654	ug/L		94
71)	12Dibrometha	10.97	107	29204	1.8925	ug/L		98
72)	Chlorobenzen	11.66	112	106088	2.1215	ug/L		93
73)	1Clhexane	11.64	91	47112	1.8724	ug/L		86
74)	1112Tetclota	11.77	131	28358	1.9527	ug/L		97
75)	Ethylbenzene	11.82	91	172513	2.0821	ug/L		99
76)	m p-Xylene	11.99	106	135657	4.0923	ug/L		96
77)	o-Xylene	12.53	106	62568	1.9641	ug/L		100
78)	Styrene	12.54	104	107957	2.0540	ug/L		96
79)	Bromoform	12.78	173	21069	2.0119	ug/L		91
80)	Isopropylben	13.06	105	152400	1.9300	ug/L		98
81)	cyclohexanone	13.15	55	9593	32.0166	ug/L	#	90
84)	Bromobenzene	13.47	156	40224	1.9103	ug/L		94
85)	1122Tetrclta	13.44	83	46903	1.9645	ug/L		97
86)	123Triclproa	13.50	75	52194	1.9244	ug/L		99
87)	14dichloro2butene	13.53	53	11917	1.8341	ug/L		97
88)	n-Propylbenz	13.64	91	188487	2.0309	ug/L		98
89)	2chlorotolue	13.76	91	114654	2.0235	ug/L		98
90)	4chlorotolue	13.90	91	133738	2.0391	ug/L		96
91)	135Trimebenz	13.90	105	127665	1.9173	ug/L		99
92)	tbutylbenzen	14.37	119	110638	1.9226	ug/L		96
93)	124Trimetben	14.44	105	127725	1.9560	ug/L		98
94)	sbutylbenzen	14.69	105	153593	1.9493	ug/L		100
95)	13Diclorbenz	14.83	146	75589	2.0014	ug/L		99
96)	pIsopropylto	14.91	119	132569	1.9219	ug/L		100
97)	14dichlorobe	14.96	146	79852	2.0647	ug/L		94
98)	12dichlorobe	15.49	146	71219	1.9672	ug/L		91
99)	nButylbenzen	15.50	91	121516	1.9619	ug/L		96
100)	12dibromo3cl	16.59	157	6805	1.8105	ug/L		92
101)	135Trichlorobenzene	16.91	180	49914	1.9429	ug/L		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL3.D Vial: 7
Acq On : 29 Jan 2021 14:44 Operator: RLD-DGS
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 15:04:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	41114	1.9347	ug/L	97
103) Hexachlorobu	17.97	225	19686	1.9006	ug/L	97
104) Naphthalene	18.03	128	92791	1.8045	ug/L	96
105) 123Trichlben	18.34	180	36097	1.9359	ug/L	94

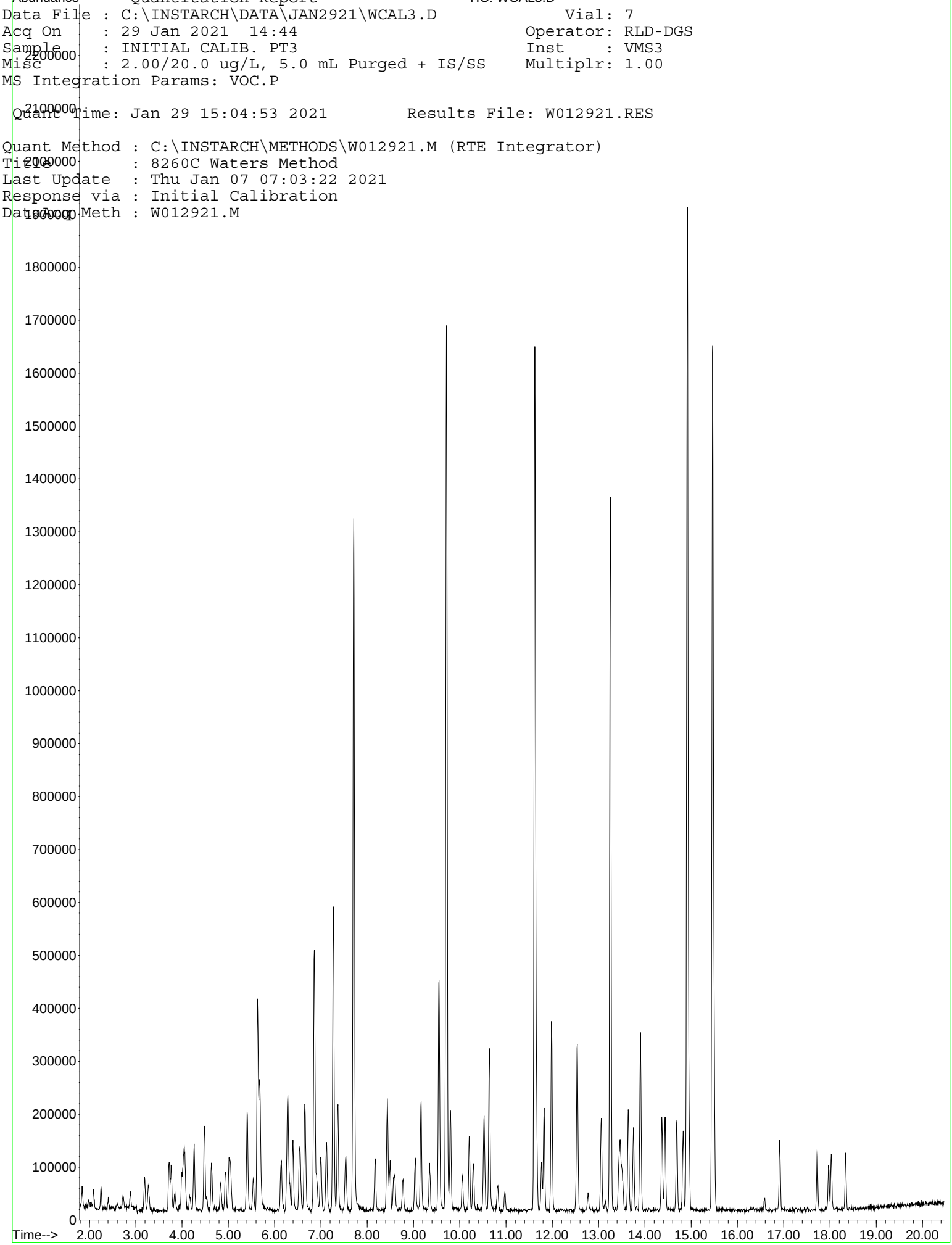
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL3.D

Data File : C:\INSTARCH\DATA\JAN2921\WCAL3.D Vial: 7
Acq On : 29 Jan 2021 14:44 Operator: RLD-DGS
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 15:04:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
Data Acq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL4.D Vial: 8
Acq On : 29 Jan 2021 15:14 Operator: RLD-DGS
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 15:34:48 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1338018	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1112711	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	626052	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	343117	20.562	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103	%		
45) SURR12DCAd4	7.27	102	92209	19.469	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97	%		
61) SURRd8Tolule	9.71	98	1360317	20.931	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 105	%		
83) SURR4BrFBenz	13.26	95	567953	20.010	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	73210	4.1044	ug/L	100
3) Chloromethan	2.09	50	97881	5.0668	ug/L	100
4) VinylChlorid	2.25	62	101138	5.3765	ug/L	88
5) Bromomethane	2.73	94	45453	4.7683	ug/L	97
6) Chloroethane	2.89	64	68935	5.3452	ug/L	98
7) Dichloroflmethane	3.19	67	183620	5.6335	ug/L	99
8) Trichlorofma	3.28	101	124486	5.2811	ug/L	99
9) Ethylether	3.71	59	81384	5.6725	ug/L	99
10) dichlorotfluoroethan	3.73	67	101609	5.5854	ug/L	99
11) propyleneoxide	3.76	58	161213	53.8304	ug/L	97
12) Acrolein	3.84	56	84080	27.7253	ug/L	97
13) 11dichlorthe	3.99	96	79863	5.4036	ug/L	99
14) Trichlorotfluoroeth	4.04	101	161498	10.7010	ug/L	99
15) Acetone	4.06	43	234327	48.7227	ug/L	95
16) Iodomethane	4.17	142	110948	5.7007	ug/L	99
17) Carbon Dislf	4.26	76	510116	11.4153	ug/L	98
18) allylchloride	4.49	41	320959	11.5815	ug/L	98
19) methylacetate	4.54	74	20296	5.6354	ug/L	94
20) Methylchlorid	4.64	84	106359	5.6047	ug/L	94
21) tbutylalcohol	4.83	59	182757	238.7415	ug/L	98
22) Acrylonitrile	4.94	53	173812	27.1850	ug/L	96
23) t12dichlorte	5.02	96	89558	5.4803	ug/L	99
24) MtBE	5.05	73	239587	5.6648	ug/L	97
25) Hexane	5.41	57	281501	11.0414	ug/L	99
26) 11dichlorota	5.54	63	159803	5.4769	ug/L	95
27) Vinylacetate	5.63	43	1883543	55.6998	ug/L	98
28) chloroprene	5.67	53	306526	11.3477	ug/L	99
29) Diisopether	5.69	45	330628	5.8829	ug/L	100
30) ETBE	6.14	59	218826	5.9624	ug/L	98
31) 22dichloropr	6.29	77	93593	6.1246	ug/L	98
32) c12dichlorte	6.27	96	101529	5.5930	ug/L	99
33) 2Butanone	6.29	72	105849	52.2136	ug/L	99
34) propionitrile	6.33	54	112632	50.3445	ug/L	99
35) Ethylacetate	6.40	88	20790	28.1437	ug/L	98
36) methacrylonitrile	6.54	67	86893	10.4430	ug/L	97
37) Bromochlorma	6.56	128	46188	5.1944	ug/L	94
38) Tetrahydofur	6.65	42	305766	54.7803	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL4.D Vial: 8
Acq On : 29 Jan 2021 15:14 Operator: RLD-DGS
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 15:34:48 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	164517	5.3805 ug/L	98
40)	111trichlota	6.91	97	115670	5.4985 ug/L	99
42)	Cyclohexane	7.00	56	153506	5.3823 ug/L	100
43)	Carbtetraclo	7.13	119	91323	5.5689 ug/L	100
44)	11dicloprope	7.13	110	43209	5.3079 ug/L	97
46)	Benzene	7.36	78	379645	5.6758 ug/L	99
47)	12dichlorota	7.36	62	135029	5.7042 ug/L	98
48)	TAME	7.53	73	208921	5.6565 ug/L	96
49)	trichloroete	8.17	95	90140	5.2758 ug/L	98
50)	methylcyclohexane	8.43	83	174800	5.4360 ug/L	97
51)	12dicloropra	8.43	63	103754	5.6450 ug/L	99
52)	23Dicl1propene	8.50	75	148757	5.7058 ug/L	98
53)	Dibromometha	8.57	93	57100	5.5933 ug/L	97
54)	methylmethacrylate	8.59	69	60431	5.0642 ug/L	97
55)	14dioxane	8.60	88	9621	248.8871 ug/L	93
56)	Bromodiclrma	8.77	83	115371	5.4514 ug/L	97
57)	2Nitropropane	9.04	43	220700	55.2793 ug/L	97
58)	2CLEVE	9.16	63	272151	29.5168 ug/L	98
59)	c13dicloproe	9.35	75	136593	5.6018 ug/L	99
60)	4Meth2Pentan	9.55	43	938275	54.2865 ug/L	99
62)	Toluene	9.80	92	235856	5.5342 ug/L	95
63)	t13Dicloprop	10.06	75	103026	5.4846 ug/L	98
64)	ethylmethacrylate	10.20	69	234417	11.3382 ug/L	98
65)	112Triclotha	10.30	83	75151	5.8764 ug/L	95
66)	Tetrachlorte	10.53	166	99400	5.3604 ug/L	97
67)	13Diclorpropa	10.52	76	148605	5.5651 ug/L	100
69)	2Hexanone	10.64	43	668084	47.6253 ug/L	98
70)	Clorodibrmta	10.82	129	83108	4.9726 ug/L	94
71)	12Dibrometha	10.97	107	75814	4.7679 ug/L	98
72)	Chlorobenzen	11.66	112	255862	4.9655 ug/L	96
73)	1Clhexane	11.64	91	118271	4.5617 ug/L	93
74)	1112Tetclota	11.77	131	72617	4.8527 ug/L	98
75)	Ethylbenzene	11.82	91	435191	5.0973 ug/L	98
76)	m p-Xylene	11.99	106	336916	9.8636 ug/L	95
77)	o-Xylene	12.53	106	158641	4.8329 ug/L	97
78)	Styrene	12.54	104	267163	4.9330 ug/L	99
79)	Bromoform	12.77	173	47682	4.4187 ug/L	95
80)	Isopropylben	13.06	105	398252	4.8946 ug/L	100
81)	cyclohexanone	13.15	55	24965	80.8599 ug/L	96
84)	Bromobenzene	13.46	156	104837	4.8252 ug/L	100
85)	1122Tetrclta	13.44	83	116496	4.7288 ug/L	97
86)	123Triclproa	13.50	75	126747	4.5290 ug/L	100
87)	14dichloro2butene	13.53	53	26915	4.0146 ug/L	93
88)	n-Propylbenz	13.64	91	478472	4.9964 ug/L	97
89)	2chlorotolue	13.76	91	281929	4.8221 ug/L	99
90)	4chlorotolue	13.90	91	333870	4.9333 ug/L	96
91)	135Trimebenz	13.90	105	328776	4.7853 ug/L	100
92)	tbutylbenzen	14.37	119	279075	4.6999 ug/L	98
93)	124Trimetben	14.44	105	324800	4.8207 ug/L	100
94)	sbutylbenzen	14.69	105	401601	4.9395 ug/L	98
95)	13Diclorbenz	14.82	146	183164	4.7000 ug/L	97
96)	pIsopropylto	14.90	119	346178	4.8639 ug/L	99
97)	14dichlorobe	14.96	146	195593	4.9014 ug/L	99
98)	12dichlorobe	15.49	146	174990	4.6843 ug/L	97
99)	nButylbenzen	15.50	91	312341	4.8873 ug/L	99
100)	12dibromo3cl	16.59	157	16830	4.3397 ug/L	99
101)	135Trichlorobenzene	16.91	180	123274	4.6505 ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL4.D Vial: 8
Acq On : 29 Jan 2021 15:14 Operator: RLD-DGS
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 15:34:48 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	102006	4.6519	ug/L	96
103) Hexachlorobu	17.97	225	50053	4.6833	ug/L	98
104) Naphthalene	18.03	128	237157	4.4696	ug/L	99
105) 123Trichlben	18.34	180	88424	4.5959	ug/L	99

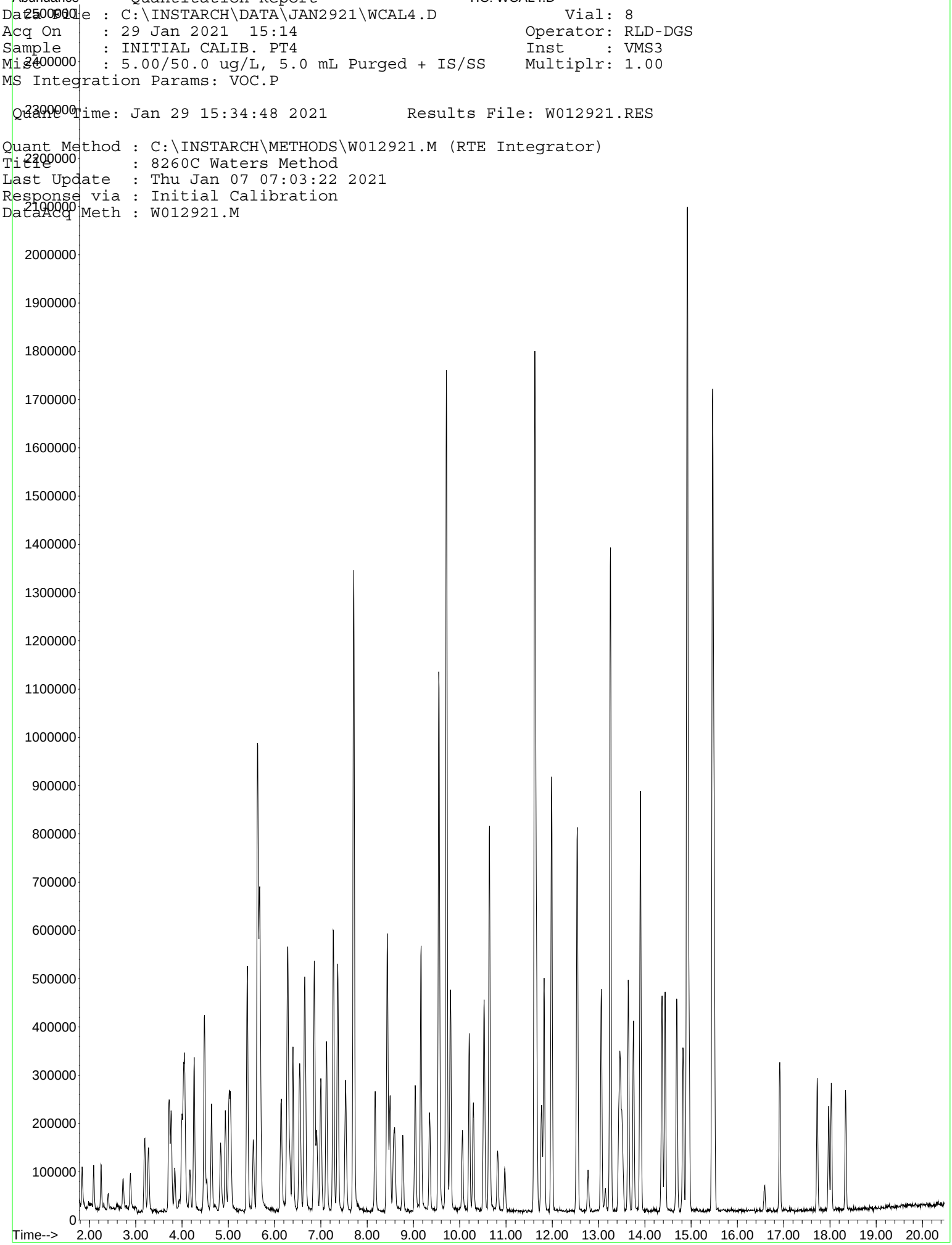
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL4.D Vial: 8
Acq On : 29 Jan 2021 15:14 Operator: RLD-DGS
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 15:34:48 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL5.D Vial: 9
Acq On : 29 Jan 2021 15:43 Operator: RLD-DGS
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 16:04:34 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1307244	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1055238	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	603676	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	339089	20.799	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 104 %			
45) SURR12DCAd4	7.27	102	89141	19.264	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 96 %			
61) SURRd8Tolule	9.71	98	1325952	20.882	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 104 %			
83) SURR4BrFBenz	13.25	95	555768	20.306	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	156011	8.9524	ug/L	97
3) Chloromethan	2.09	50	197181	10.4474	ug/L	98
4) VinylChlorid	2.25	62	198470	10.7991	ug/L	95
5) Bromomethane	2.72	94	91998	9.8783	ug/L	97
6) Chloroethane	2.89	64	133293	10.5787	ug/L	99
7) Dichloroflmethane	3.19	67	358086	11.2447	ug/L	98
8) Trichlorofma	3.28	101	258958	11.2445	ug/L	99
9) Ethylether	3.71	59	156388	11.1569	ug/L	98
10) dichlorotfluoroethan	3.73	67	202773	11.4087	ug/L	99
11) propyleneoxide	3.76	58	320913	109.6782	ug/L	99
12) Acrolein	3.84	56	157118	53.0291	ug/L	96
13) 11dichlorthe	3.99	96	163155	11.2991	ug/L	97
14) Trichlorotfluoroeth	4.04	101	335161	22.7309	ug/L	98
15) Acetone	4.06	43	467255	99.4416	ug/L	97
16) Iodomethane	4.18	142	263546	13.8602	ug/L	98
17) Carbon Dislf	4.26	76	975969	22.3542	ug/L	100
18) allylchloride	4.49	41	603280	22.2813	ug/L	99
19) methylacetate	4.54	74	32700	9.2932	ug/L	91
20) Methylchlorid	4.64	84	197376	10.6458	ug/L	98
21) tbutylalcohol	4.83	59	373474	499.3666	ug/L	99
22) Acrylonitrile	4.94	53	324898	52.0118	ug/L	99
23) t12dichlorte	5.01	96	176338	11.0445	ug/L	97
24) MtBE	5.05	73	454329	10.9950	ug/L	99
25) Hexane	5.41	57	599327	24.0610	ug/L	98
26) 11dichlorota	5.54	63	312204	10.9520	ug/L	99
27) Vinylacetate	5.63	43	3293855	105.7157	ug/L	99
28) chloroprene	5.67	53	608388	23.0530	ug/L	99
29) Diisopether	5.68	45	628763	11.4510	ug/L	95
30) ETBE	6.14	59	416066	11.6036	ug/L	99
31) 22dichloropr	6.28	77	182369	12.2148	ug/L	97
32) c12dichlorte	6.27	96	186386	10.5092	ug/L	99
33) 2Butanone	6.29	72	200470	101.2165	ug/L	100
34) propionitrile	6.32	54	213249	97.5625	ug/L	98
35) Ethylacetate	6.40	88	37663	52.1852	ug/L	98
36) methacrylonitrile	6.54	67	166916	20.5326	ug/L	99
37) Bromochlorma	6.55	128	90505	10.4180	ug/L	98
38) Tetrahydofur	6.65	42	550824	101.0075	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL5.D Vial: 9
Acq On : 29 Jan 2021 15:43 Operator: RLD-DGS
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 16:04:34 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.67	83	309426	10.6965 ug/L	97
40)	111trichlota	6.91	97	239239	11.6403 ug/L	98
42)	Cyclohexane	7.00	56	334589	12.0076 ug/L	96
43)	Carbtetraclo	7.13	119	188446	11.7620 ug/L	99
44)	11dicloprope	7.11	110	87114	10.9533 ug/L	97
46)	Benzene	7.36	78	703521	10.7655 ug/L	99
47)	12dichlorota	7.36	62	247058	10.6825 ug/L	99
48)	TAME	7.53	73	398544	11.0445 ug/L	95
49)	trichloroete	8.17	95	176627	10.5811 ug/L	98
50)	methylcyclohexane	8.43	83	358014	11.3957 ug/L	98
51)	12dicloropra	8.43	63	200677	11.1754 ug/L	95
52)	23Dicl1propene	8.50	75	270107	10.6043 ug/L	100
53)	Dibromometha	8.57	93	106830	10.7109 ug/L	98
54)	methylmethacrylate	8.60	69	126608	10.8597 ug/L	96
55)	14dioxane	8.61	88	16632	440.3843 ug/L	88
56)	Bromodiclrma	8.77	83	225604	10.9109 ug/L	96
57)	2Nitropropane	9.04	43	455099	116.6733 ug/L	99
58)	2CLEVE	9.16	63	514523	57.1176 ug/L	99
59)	c13dicloproe	9.35	75	261520	10.9776 ug/L	99
60)	4Meth2Pentan	9.55	43	1705863	101.0208 ug/L	99
62)	Toluene	9.80	92	458661	11.0155 ug/L	99
63)	t13Dicloprop	10.06	75	203613	11.0945 ug/L	100
64)	ethylmethacrylate	10.20	69	458902	22.7185 ug/L	99
65)	112Triclotha	10.29	83	133047	10.6485 ug/L	98
66)	Tetrachlorte	10.53	166	203242	11.2183 ug/L	98
67)	13Diclorpropa	10.52	76	290746	11.1444 ug/L	98
69)	2Hexanone	10.64	43	1251608	94.0821 ug/L	100
70)	Clorodibrmta	10.82	129	154473	9.7460 ug/L	98
71)	12Dibrometha	10.98	107	145761	9.6661 ug/L	99
72)	Chlorobenzen	11.66	112	490875	10.0452 ug/L	99
73)	1Clhexane	11.64	91	243877	9.9187 ug/L	99
74)	1112Tetclota	11.77	131	139622	9.8386 ug/L	96
75)	Ethylbenzene	11.82	91	811569	10.0234 ug/L	99
76)	m p-Xylene	11.99	106	644797	19.9052 ug/L	99
77)	o-Xylene	12.53	106	327290	10.5138 ug/L	96
78)	Styrene	12.55	104	541818	10.5492 ug/L	99
79)	Bromoform	12.77	173	99297	9.7030 ug/L	98
80)	Isopropylben	13.06	105	798463	10.3478 ug/L	99
81)	cyclohexanone	13.14	55	51570	176.1290 ug/L	95
84)	Bromobenzene	13.47	156	196786	9.3929 ug/L	98
85)	1122Tetrclta	13.44	83	218592	9.2020 ug/L	95
86)	123Triclproa	13.50	75	254666	9.4372 ug/L	95
87)	14dichloro2butene	13.52	53	54781	8.4740 ug/L	95
88)	n-Propylbenz	13.64	91	946015	10.2448 ug/L	99
89)	2chlorotolue	13.75	91	545243	9.6715 ug/L	98
90)	4chlorotolue	13.90	91	630386	9.6600 ug/L	98
91)	135Trimebenz	13.90	105	650531	9.8193 ug/L	100
92)	tbutylbenzen	14.37	119	567015	9.9030 ug/L	100
93)	124Trimetben	14.44	105	633205	9.7463 ug/L	98
94)	sbutylbenzen	14.69	105	804193	10.2578 ug/L	100
95)	13Diclorbenz	14.82	146	352301	9.3751 ug/L	98
96)	pIsopropylto	14.90	119	699103	10.1866 ug/L	99
97)	14dichlorobe	14.96	146	365004	9.4858 ug/L	99
98)	12dichlorobe	15.49	146	341878	9.4910 ug/L	99
99)	nButylbenzen	15.50	91	623195	10.1127 ug/L	100
100)	12dibromo3cl	16.59	157	32065	8.5745 ug/L	97
101)	135Trichlorobenzene	16.92	180	251815	9.8518 ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL5.D Vial: 9
Acq On : 29 Jan 2021 15:43 Operator: RLD-DGS
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 16:04:34 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

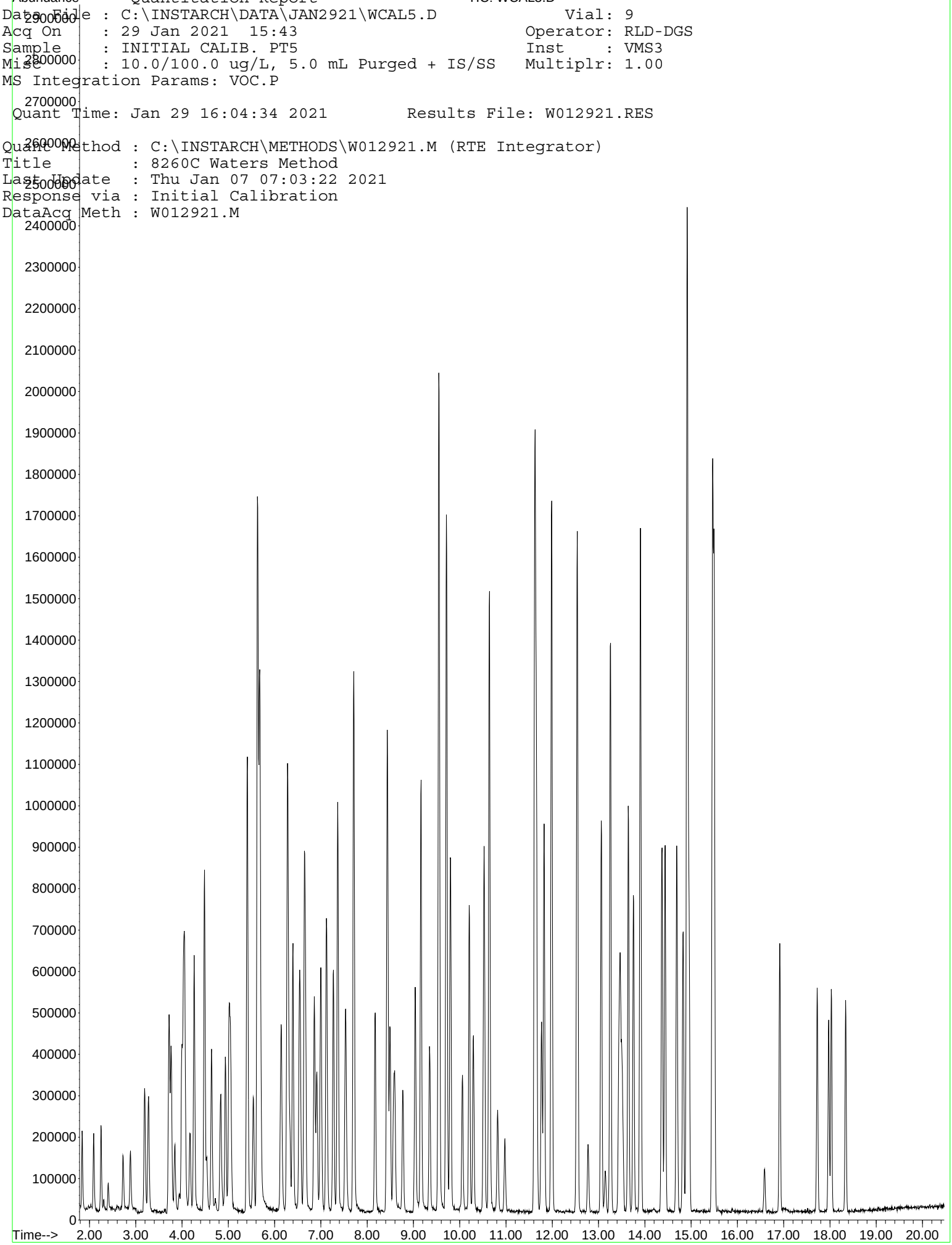
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	195214	9.2326	ug/L	98
103)	Hexachlorobu	17.97	225	105509	10.2381	ug/L	96
104)	Naphthalene	18.03	128	476165	9.3068	ug/L	99
105)	123Trichlben	18.34	180	177019	9.5418	ug/L	93

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\JAN2921\WCAL5.D Vial: 9
Acq On : 29 Jan 2021 15:43 Operator: RLD-DGS
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 16:04:34 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL6.D Vial: 10
Acq On : 29 Jan 2021 16:13 Operator: RLD-DGS
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 16:34:10 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1317425	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1068675	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	621572	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	346362	21.081	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 105 %			
45) SURR12DCAd4	7.27	102	97001	20.800	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 104 %			
61) SURRd8Tolule	9.71	98	1345986	21.034	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 105 %			
83) SURR4BrFBenz	13.25	95	556415	19.745	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	308904	17.5888	ug/L	99
3) Chloromethan	2.09	50	384585	20.2193	ug/L	100
4) VinylChlorid	2.25	62	400417	21.6190	ug/L	94
5) Bromomethane	2.73	94	180564	19.2383	ug/L	98
6) Chloroethane	2.89	64	269265	21.2049	ug/L	98
7) Dichloroflmethane	3.19	67	691848	21.5577	ug/L	98
8) Trichlorofma	3.27	101	503290	21.6850	ug/L	99
9) Ethylether	3.71	59	313893	22.2204	ug/L	98
10) dichlorotfluoroethan	3.73	67	393229	21.9535	ug/L	98
11) propyleneoxide	3.76	58	632833	214.6115	ug/L	99
12) Acrolein	3.84	56	319792	107.0993	ug/L	96
13) 11dichlorthe	3.99	96	309162	21.2452	ug/L	96
14) Trichlorotfluoroeth	4.04	101	655051	44.0829	ug/L	98
15) Acetone	4.06	43	837758	176.9145	ug/L	98
16) Iodomethane	4.17	142	631617	32.9607	ug/L	98
17) Carbon Dislf	4.26	76	1862775	42.3365	ug/L	97
18) allylchloride	4.48	41	1223469	44.8380	ug/L	99
19) methylacetate	4.53	74	75836	21.3857	ug/L	93
20) Methylchlorid	4.64	84	390876	20.9196	ug/L	97
21) tbutylalcohol	4.83	59	719005	953.9416	ug/L	99
22) Acrylonitrile	4.94	53	654643	103.9896	ug/L	99
23) t12dichlorte	5.02	96	363842	22.6123	ug/L	97
24) MtBE	5.05	73	931146	22.3600	ug/L	99
25) Hexane	5.41	57	1130415	45.0318	ug/L	99
26) 11dichlorota	5.54	63	632592	22.0195	ug/L	98
27) Vinylacetate	5.63	43	5875812	215.5050	ug/L	93
28) chloroprene	5.67	53	1207586	45.4042	ug/L	98
29) Diisopether	5.69	45	1187142	21.4532	ug/L	98
30) ETBE	6.14	59	886401	24.5297	ug/L	96
31) 22dichloropr	6.28	77	394546	26.2219	ug/L	96
32) c12dichlorte	6.27	96	391179	21.8859	ug/L	98
33) 2Butanone	6.29	72	396254	198.5210	ug/L	99
34) propionitrile	6.33	54	417487	189.5263	ug/L	99
35) Ethylacetate	6.40	88	78355	107.7284	ug/L	95
36) methacrylonitrile	6.54	67	345930	42.2246	ug/L	96
37) Bromochlorma	6.55	128	185351	21.1709	ug/L	98
38) Tetrahydofur	6.64	42	1075479	195.6922	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL6.D Vial: 10
Acq On : 29 Jan 2021 16:13 Operator: RLD-DGS
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 16:34:10 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	629286	22.2546 ug/L	97
40)	111trichlota	6.91	97	503957	24.3308 ug/L	99
42)	Cyclohexane	7.00	56	683830	24.3514 ug/L	98
43)	Carbtetraclo	7.13	119	415996	25.7640 ug/L	99
44)	11dicloprope	7.12	110	189090	23.5915 ug/L	97
46)	Benzene	7.37	78	1454280	22.0819 ug/L	98
47)	12dichlorota	7.36	62	497786	21.3574 ug/L	97
48)	TAME	7.53	73	898021	24.6937 ug/L	91
49)	trichloroete	8.17	95	360675	21.4398 ug/L	98
50)	methylcyclohexane	8.44	83	727483	22.9771 ug/L	96
51)	12dicloropra	8.43	63	410257	22.6700 ug/L	92
52)	23Dicl1propene	8.50	75	562089	21.8969 ug/L	97
53)	Dibromometha	8.57	93	224723	22.3569 ug/L	98
54)	methylmethacrylate	8.60	69	271764	23.1303 ug/L	98
55)	14dioxane	8.61	88	29441	773.5185 ug/L	93
56)	Bromodiclrma	8.78	83	478996	22.9866 ug/L	97
57)	2Nitropropane	9.04	43	947452	241.0202 ug/L	99
58)	2CLEVE	9.16	63	1040034	114.5628 ug/L	98
59)	c13dicloproe	9.35	75	546984	22.7828 ug/L	97
60)	4Meth2Pentan	9.55	43	3109104	182.6975 ug/L	95
62)	Toluene	9.80	92	916430	21.8395 ug/L	98
63)	t13Dicloprop	10.06	75	448995	24.2759 ug/L	98
64)	ethylmethacrylate	10.20	69	979393	48.1113 ug/L	99
65)	112Triclotha	10.30	83	278341	22.1050 ug/L	98
66)	Tetrachlorte	10.53	166	410325	22.4737 ug/L	99
67)	13Diclorpropa	10.51	76	598080	22.7475 ug/L	99
69)	2Hexanone	10.64	43	2381951	176.7976 ug/L	95
70)	Clorodibrmta	10.82	129	343808	21.4187 ug/L	97
71)	12Dibrometha	10.97	107	316951	20.7543 ug/L	98
72)	Chlorobenzen	11.66	112	949483	19.1858 ug/L	98
73)	1Clhexane	11.64	91	501946	20.1578 ug/L	97
74)	1112Tetclota	11.77	131	305673	21.2688 ug/L	99
75)	Ethylbenzene	11.82	91	1592636	19.4228 ug/L	96
76)	m p-Xylene	11.99	106	1261066	38.4403 ug/L	96
77)	o-Xylene	12.53	106	644167	20.4329 ug/L	94
78)	Styrene	12.55	104	1055503	20.2922 ug/L	98
79)	Bromoform	12.77	173	208814	20.1481 ug/L	99
80)	Isopropylben	13.06	105	1519283	19.4419 ug/L	96
81)	cyclohexanone	13.14	55	87368	294.6394 ug/L	98
84)	Bromobenzene	13.47	156	393830	18.2568 ug/L	100
85)	1122Tetrclta	13.44	83	448089	18.3200 ug/L	96
86)	123Triclproa	13.50	75	501118	18.0353 ug/L	99
87)	14dichloro2butene	13.53	53	114795	17.2462 ug/L	91
88)	n-Propylbenz	13.64	91	1811731	19.0552 ug/L	97
89)	2chlorotolue	13.75	91	1094295	18.8517 ug/L	98
90)	4chlorotolue	13.91	91	1285719	19.1350 ug/L	97
91)	135Trimebenz	13.90	105	1311922	19.2323 ug/L	97
92)	tbutylbenzen	14.37	119	1116104	18.9318 ug/L	97
93)	124Trimetben	14.44	105	1243049	18.5822 ug/L	97
94)	sbutylbenzen	14.69	105	1551177	19.2162 ug/L	97
95)	13Diclorbenz	14.83	146	716063	18.5066 ug/L	98
96)	pIsopropylto	14.91	119	1344435	19.0257 ug/L	97
97)	14dichlorobe	14.96	146	730460	18.4368 ug/L	98
98)	12dichlorobe	15.49	146	711285	19.1777 ug/L	99
99)	nButylbenzen	15.50	91	1280507	20.1808 ug/L	98
100)	12dibromo3cl	16.59	157	75154	19.5183 ug/L	98
101)	135Trichlorobenzene	16.91	180	510497	19.3972 ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL6.D Vial: 10
Acq On : 29 Jan 2021 16:13 Operator: RLD-DGS
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 16:34:10 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	416930	19.1508	ug/L	96
103)	Hexachlorobu	17.97	225	205633	19.3791	ug/L	98
104)	Naphthalene	18.03	128	946802	17.9727	ug/L	99
105)	123Trichlben	18.34	180	377784	19.7773	ug/L	99

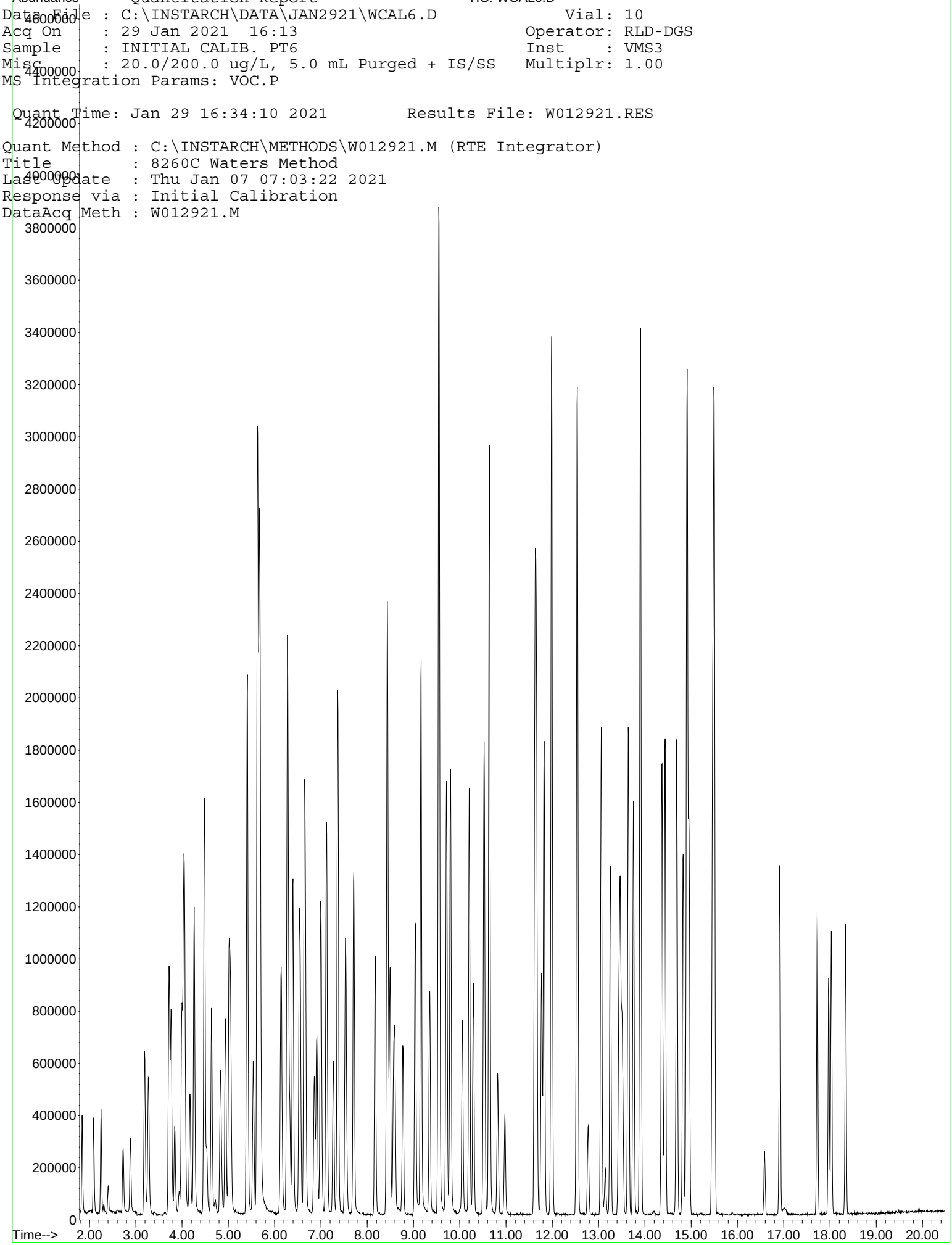
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL6.D

Data File : C:\INSTARCH\DATA\JAN2921\WCAL6.D Vial: 10
Acq On : 29 Jan 2021 16:13 Operator: RLD-DGS
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 16:34:10 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL7.D Vial: 11
Acq On : 29 Jan 2021 16:43 Operator: RLD-DGS
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 17:03:52 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1363485	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1074057	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	637504	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	345684	20.329	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	96220	19.936	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100	%		
61) SURRd8Tolule	9.71	98	1348122	20.356	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.25	95	598746	20.716	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 104	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	470941	25.9093	ug/L	99
3) Chloromethan	2.09	50	545715	27.7214	ug/L	98
4) VinylChlorid	2.25	62	600334	31.3179	ug/L	94
5) Bromomethane	2.73	94	293790	30.2446	ug/L	100
6) Chloroethane	2.89	64	415914	31.6472	ug/L	100
7) Dichloroflmethane	3.19	67	1008978	30.3773	ug/L	99
8) Trichlorofma	3.28	101	756393	31.4894	ug/L	98
9) Ethylether	3.71	59	459442	31.4251	ug/L	99
10) dichlorotfluoroethan	3.73	67	595615	32.1291	ug/L	99
11) propyleneoxide	3.76	58	924980	303.0901	ug/L	94
12) Acrolein	3.84	56	460732	149.0881	ug/L	97
13) 11dichlorthe	3.99	96	478232	31.7533	ug/L	96
14) Trichlorotfluoroeth	4.04	101	984534	64.0178	ug/L	97
15) Acetone	4.06	43	1277747	260.7146	ug/L	95
16) Iodomethane	4.17	142	1032039	52.0372	ug/L	98
17) Carbon Dislf	4.26	76	2686683	58.9993	ug/L	96
18) allylchloride	4.49	41	1801660	63.7972	ug/L	97
19) methylacetate	4.53	74	121340	33.0619	ug/L	96
20) Methylchlorid	4.64	84	569086	29.4285	ug/L	96
21) tbutylalcohol	4.83	59	1195932	1533.1050	ug/L	98
22) Acrylonitrile	4.94	53	968572	148.6595	ug/L	98
23) t12dichlorte	5.02	96	549838	33.0174	ug/L	99
24) MtBE	5.04	73	1392379	32.3063	ug/L	97
25) Hexane	5.41	57	1772088	68.2090	ug/L	97
26) 11dichlorota	5.54	63	956808	32.1799	ug/L	99
27) Vinylacetate	5.63	43	7749675	321.8333	ug/L	87
28) chloroprene	5.67	53	1848441	67.1520	ug/L	97
29) Diisopether	5.68	45	1888339	32.9719	ug/L	100
30) ETBE	6.14	59	1338491	35.7892	ug/L	96
31) 22dichloropr	6.28	77	646132	41.4920	ug/L	97
32) c12dichlorte	6.27	96	599870	32.4281	ug/L	99
33) 2Butanone	6.29	72	619360	299.8137	ug/L	99
34) propionitrile	6.33	54	639685	280.5875	ug/L	98
35) Ethylacetate	6.40	88	125496	166.7128	ug/L	96
36) methacrylonitrile	6.54	67	531914	62.7327	ug/L	95
37) Bromochlorma	6.56	128	278274	30.7109	ug/L	99
38) Tetrahydofur	6.65	42	1610248	283.1000	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL7.D Vial: 11
Acq On : 29 Jan 2021 16:43 Operator: RLD-DGS
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 17:03:52 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	956101	33.3712 ug/L	96
40)	111trichlota	6.91	97	780763	36.4215 ug/L	99
42)	Cyclohexane	7.00	56	1024424	35.2477 ug/L	99
43)	Carbtetraclo	7.13	119	633411	37.9040 ug/L	99
44)	11dicloprope	7.12	110	291610	35.1532 ug/L	96
46)	Benzene	7.36	78	2064181	30.2839 ug/L	95
47)	12dichlorota	7.36	62	744314	30.8559 ug/L	100
48)	TAME	7.53	73	1332110	35.3928 ug/L	90
49)	trichloroete	8.17	95	593407	34.0827 ug/L	94
50)	methylcyclohexane	8.44	83	1168943	35.6731 ug/L	100
51)	12dicloropra	8.43	63	626274	33.4376 ug/L	93
52)	23Dicl1propene	8.50	75	862976	32.4827 ug/L	96
53)	Dibromometha	8.57	93	332096	31.9230 ug/L	97
54)	methylmethacrylate	8.60	69	420084	34.5462 ug/L	99
55)	14dioxane	8.61	88	55689	1413.7190 ug/L	96
56)	Bromodiclrma	8.77	83	706787	32.7724 ug/L	99
57)	2Nitropropane	9.04	43	1514105	372.1584 ug/L	99
58)	2CLEVE	9.16	63	1584574	168.6491 ug/L	96
59)	c13dicloproe	9.35	75	847538	34.1089 ug/L	97
60)	4Meth2Pentan	9.55	43	4450411	252.6813 ug/L	89
62)	Toluene	9.80	92	1348118	31.0418 ug/L	97
63)	t13Dicloprop	10.06	75	692916	36.1985 ug/L	98
64)	ethylmethacrylate	10.20	69	1528507	72.5493 ug/L	98
65)	112Triclotha	10.30	83	439033	33.6888 ug/L	98
66)	Tetrachlorte	10.53	166	642818	34.0180 ug/L	99
67)	13Diclorpropa	10.52	76	896419	32.9428 ug/L	98
69)	2Hexanone	10.64	43	3455554	255.1994 ug/L	92
70)	Clorodibrmta	10.82	129	542173	33.6073 ug/L	97
71)	12Dibrometha	10.98	107	481849	31.3939 ug/L	100
72)	Chlorobenzen	11.66	112	1398903	28.1254 ug/L	98
73)	1Clhexane	11.64	91	776393	31.0232 ug/L	97
74)	1112Tetclota	11.77	131	474538	32.8530 ug/L	99
75)	Ethylbenzene	11.82	91	2374598	28.8141 ug/L	94
76)	m p-Xylene	11.99	106	1888671	57.2826 ug/L	91
77)	o-Xylene	12.53	106	974505	30.7563 ug/L	90
78)	Styrene	12.55	104	1573915	30.1071 ug/L	97
79)	Bromoform	12.77	173	329117	31.5968 ug/L	97
80)	Isopropylben	13.06	105	2360623	30.0569 ug/L	93
81)	cyclohexanone	13.14	55	175464	588.7688 ug/L	95
84)	Bromobenzene	13.47	156	611167	27.6239 ug/L	98
85)	1122Tetrclta	13.44	83	693642	27.6506 ug/L	96
86)	123Triclproa	13.50	75	795843	27.9267 ug/L	98
87)	14dichloro2butene	13.52	53	180031	26.3710 ug/L	88
88)	n-Propylbenz	13.64	91	2722232	27.9160 ug/L	94
89)	2chlorotolue	13.75	91	1663815	27.9466 ug/L	97
90)	4chlorotolue	13.90	91	1838923	26.6843 ug/L	96
91)	135Trimebenz	13.90	105	1897797	27.1258 ug/L	94
92)	tbutylbenzen	14.37	119	1691399	27.9731 ug/L	96
93)	124Trimetben	14.44	105	1857097	27.0677 ug/L	96
94)	sbutylbenzen	14.69	105	2311559	27.9203 ug/L	95
95)	13Diclorbenz	14.83	146	1083462	27.3022 ug/L	96
96)	pIsopropylto	14.91	119	2020311	27.8758 ug/L	94
97)	14dichlorobe	14.96	146	1129341	27.7922 ug/L	98
98)	12dichlorobe	15.49	146	1049971	27.6019 ug/L	98
99)	nButylbenzen	15.50	91	1866003	28.6733 ug/L	96
100)	12dibromo3cl	16.59	157	121212	30.6934 ug/L	98
101)	135Trichlorobenzene	16.91	180	767321	28.4270 ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

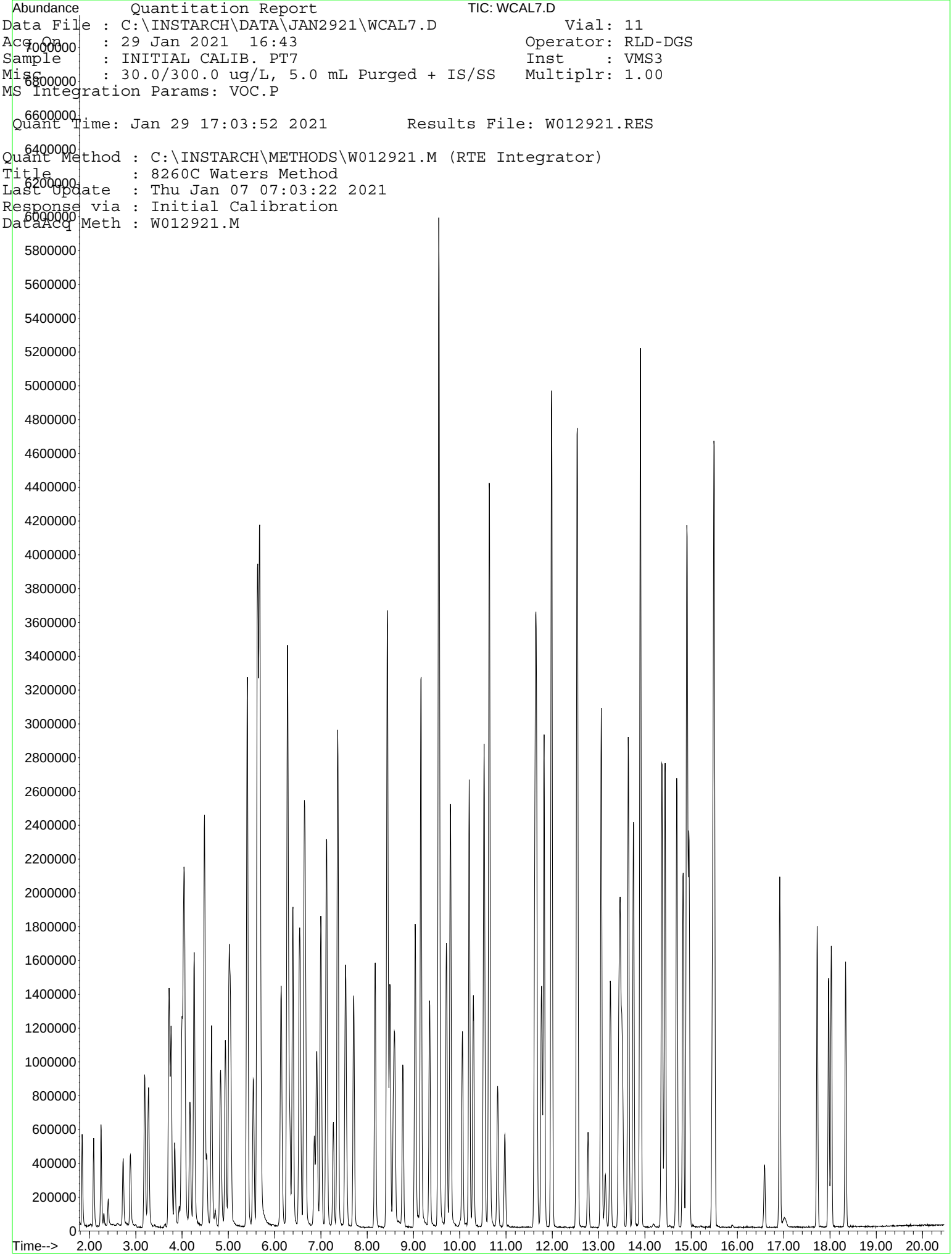
Data File : C:\INSTARCH\DATA\JAN2921\WCAL7.D Vial: 11
Acq On : 29 Jan 2021 16:43 Operator: RLD-DGS
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 17:03:52 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	623260	27.9127	ug/L	96
103) Hexachlorobu	17.97	225	315554	28.9951	ug/L	98
104) Naphthalene	18.03	128	1447000	26.7813	ug/L	98
105) 123Trichlben	18.34	180	554242	28.2899	ug/L	99

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: WCAL7.D
Data File : C:\INSTARCH\DATA\JAN2921\WCAL7.D
Vial: 11
Acq On : 29 Jan 2021 16:43
Operator: RLD-DGS
Sample : INITIAL CALIB. PT7
Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Jan 29 17:03:52 2021
Results File: W012921.RES
Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
Time-->

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL8.D Vial: 12
Acq On : 29 Jan 2021 17:12 Operator: RLD-DGS
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 17:33:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1349816	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1070899	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	657666	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	347986	20.672	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103	%		
45) SURR12DCAd4	7.27	102	94550	19.788	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.71	98	1445201	22.043	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 110	%#		
83) SURR4BrFBenz	13.25	95	580222	19.460	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 97	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	618250	34.3580	ug/L	99
3) Chloromethan	2.09	50	713729	36.6234	ug/L	98
4) VinylChlorid	2.25	62	749381	39.4892	ug/L	97
5) Bromomethane	2.73	94	395880	41.1671	ug/L	99
6) Chloroethane	2.89	64	541182	41.5959	ug/L	100
7) Dichloroflmethane	3.19	67	1315367	40.0027	ug/L	97
8) Trichlorofma	3.28	101	986139	41.4698	ug/L	96
9) Ethylether	3.71	59	611217	42.2297	ug/L	98
10) dichlorotfluoroethan	3.73	67	771450	42.0356	ug/L	97
11) propyleneoxide	3.76	58	1197873	396.4843	ug/L	93
12) Acrolein	3.84	56	598821	195.7345	ug/L	99
13) 11dichlorthe	3.99	96	626320	42.0070	ug/L	98
14) Trichlorotfluoroeth	4.04	101	1290686	84.7748	ug/L	97
15) Acetone	4.06	43	1587369	327.1705	ug/L	95
16) Iodomethane	4.17	142	1410315	71.8307	ug/L	96
17) Carbon Dislf	4.26	76	3284017	72.8470	ug/L	94
18) allylchloride	4.49	41	2241189	80.1646	ug/L	94
19) methylacetate	4.53	74	155379	42.7654	ug/L	92
20) Methylchlorid	4.64	84	729967	38.1302	ug/L	97
21) tbutylalcohol	4.83	59	1446066	1872.5323	ug/L	100
22) Acrylonitrile	4.94	53	1218224	188.8703	ug/L	98
23) t12dichlorte	5.02	96	700708	42.5031	ug/L	99
24) MtBE	5.04	73	1794338	42.0542	ug/L	96
25) Hexane	5.41	57	2174303	84.5381	ug/L	95
26) 11dichlorota	5.54	63	1218798	41.4064	ug/L	97
27) Vinylacetate	5.63	43	8873621	Below	Cal	82
28) chloroprene	5.67	53	2282224	83.7505	ug/L	95
29) Diisopether	5.68	45	2380453	41.9856	ug/L	99
30) ETBE	6.14	59	1777545	48.0102	ug/L	94
31) 22dichloropr	6.28	77	843013	54.6831	ug/L	96
32) c12dichlorte	6.27	96	771569	42.1323	ug/L	99
33) 2Butanone	6.29	72	767900	375.4817	ug/L	100
34) propionitrile	6.33	54	795700	352.5553	ug/L	98
35) Ethylacetate	6.40	88	158514	212.7073	ug/L	98
36) methacrylonitrile	6.54	67	680169	81.0299	ug/L	95
37) Bromochlorma	6.56	128	361468	40.2963	ug/L	98
38) Tetrahydofur	6.64	42	1964320	348.8471	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL8.D Vial: 12
Acq On : 29 Jan 2021 17:12 Operator: RLD-DGS
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 17:33:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	1230124	44.2038	ug/L		95
40)	111trichlota	6.91	97	1018701	48.0022	ug/L		100
42)	Cyclohexane	7.00	56	1298823	45.1416	ug/L		99
43)	Carbtetraclo	7.13	119	855183	51.6933	ug/L		99
44)	11dicloprope	7.11	110	376616	45.8603	ug/L		93
46)	Benzene	7.36	78	2632045	39.0061	ug/L		94
47)	12dichlorota	7.36	62	985233	41.2569	ug/L		98
48)	TAME	7.53	73	1785394	47.9165	ug/L		88
49)	trichloroete	8.17	95	766150	44.4499	ug/L		94
50)	methylcyclohexane	8.44	83	1486711	45.8300	ug/L		98
51)	12dicloropra	8.43	63	822291	44.3478	ug/L		91
52)	23Dicl1propene	8.50	75	1165923	44.3301	ug/L		96
53)	Dibromometha	8.57	93	457621	44.4347	ug/L		99
54)	methylmethacrylate	8.59	69	572262	47.5374	ug/L		97
55)	14dioxane	8.62	88	79244	2032.0569	ug/L		92
56)	Bromodiclrma	8.77	83	999720	46.8245	ug/L		99
57)	2Nitropropane	9.04	43	2003457	497.4250	ug/L		98
58)	2CLEVE	9.16	63	2192132	235.6752	ug/L		94
59)	c13dicloproe	9.35	75	1201458	48.8419	ug/L		96
60)	4Meth2Pentan	9.55	43	5394865	309.4064	ug/L		84
62)	Toluene	9.80	92	1849888	43.0269	ug/L		93
63)	t13Dicloprop	10.06	75	980277	51.7291	ug/L		97
64)	ethylmethacrylate	10.20	69	1942429	93.1294	ug/L		96
65)	112Triclotha	10.30	83	572219	44.3533	ug/L		98
66)	Tetrachlorte	10.53	166	804361	42.9980	ug/L		99
67)	13Diclorpropa	10.52	76	1094407	40.6260	ug/L		96
69)	2Hexanone	10.64	43	3974592	294.3969	ug/L		90
70)	Clorodibrmta	10.82	129	692178	43.0321	ug/L		97
71)	12Dibrometha	10.97	107	617532	40.3527	ug/L		99
72)	Chlorobenzen	11.66	112	1776240	35.8171	ug/L		95
73)	1Clhexane	11.64	91	990252	39.6853	ug/L		98
74)	1112Tetclota	11.77	131	639608	44.4116	ug/L		98
75)	Ethylbenzene	11.82	91	2896106	35.2458	ug/L		91
76)	m p-Xylene	11.99	106	2400644	73.0253	ug/L		86
77)	o-Xylene	12.53	106	1241840	39.3092	ug/L	#	87
78)	Styrene	12.55	104	1964919	37.6974	ug/L		94
79)	Bromoform	12.77	173	450122	43.3413	ug/L		98
80)	Isopropylben	13.06	105	2906188	37.1125	ug/L		90
81)	cyclohexanone	13.14	55	217107	730.6500	ug/L		98
84)	Bromobenzene	13.47	156	845435	37.0410	ug/L		98
85)	1122Tetrclta	13.44	83	907895	35.0819	ug/L		95
86)	123Triclproa	13.50	75	1085519	36.9239	ug/L		99
87)	14dichloro2butene	13.53	53	245460	34.8528	ug/L		85
88)	n-Propylbenz	13.64	91	3344734	33.2481	ug/L		91
89)	2chlorotolue	13.75	91	2132493	34.7207	ug/L		94
90)	4chlorotolue	13.90	91	2435826	34.2622	ug/L		94
91)	135Trimebenz	13.90	105	2489531	34.4927	ug/L		93
92)	tbutylbenzen	14.37	119	2296815	36.8212	ug/L		95
93)	124Trimetben	14.44	105	2538398	35.8637	ug/L		94
94)	sbutylbenzen	14.69	105	2980302	34.8942	ug/L		92
95)	13Diclorbenz	14.83	146	1476152	36.0573	ug/L		96
96)	pIsopropylto	14.90	119	2625182	35.1112	ug/L		92
97)	14dichlorobe	14.96	146	1501182	35.8104	ug/L		98
98)	12dichlorobe	15.49	146	1324074	33.7405	ug/L		99
99)	nButylbenzen	15.50	91	2303922	34.3171	ug/L		94
100)	12dibromo3cl	16.59	157	163843	40.2165	ug/L		98
101)	135Trichlorobenzene	16.92	180	974010	34.9780	ug/L		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL8.D Vial: 12
Acq On : 29 Jan 2021 17:12 Operator: RLD-DGS
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 17:33:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	814995	35.3806	ug/L	97
103) Hexachlorobu	17.97	225	417553	37.1911	ug/L	97
104) Naphthalene	18.03	128	1832451	32.8755	ug/L	96
105) 123Trichlben	18.34	180	717304	35.4906	ug/L	97

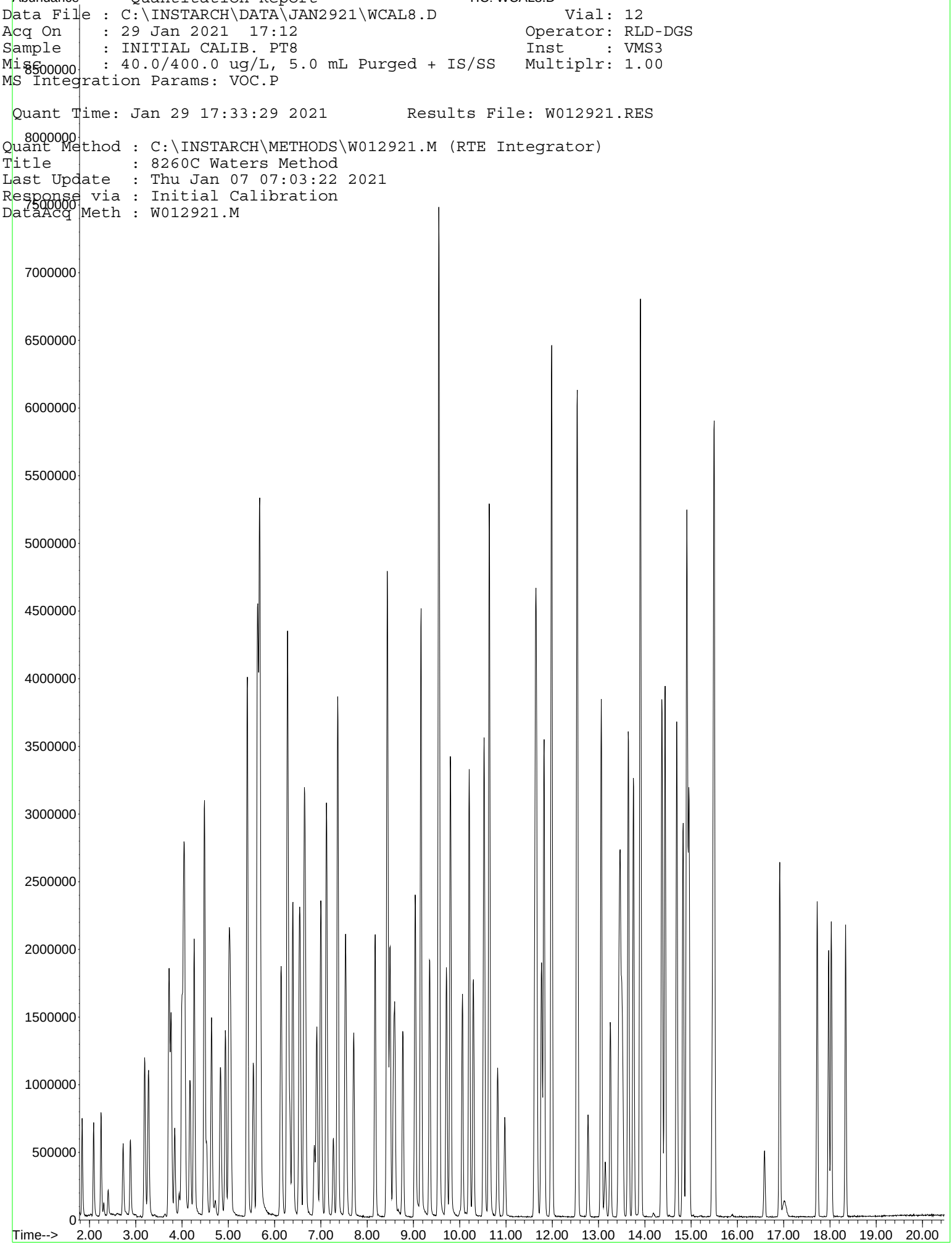
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL8.D

Data File : C:\INSTARCH\DATA\JAN2921\WCAL8.D Vial: 12
Acq On : 29 Jan 2021 17:12 Operator: RLD-DGS
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 17:33:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL9.D Vial: 13
Acq On : 29 Jan 2021 17:42 Operator: RLD-DGS
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 18:03:03 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1515911	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1219448	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	745815	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	382623	20.239	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.27	102	111612	20.800	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 104	%		
61) SURRd8Tolule	9.71	98	1525585	20.719	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 104	%		
83) SURR4BrFBenz	13.25	95	663353	19.618	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	1237523	61.2376	ug/L	96
3) Chloromethan	2.09	50	1488669	68.0181	ug/L	95
4) VinylChlorid	2.25	62	1555124	72.9695	ug/L	98
5) Bromomethane	2.73	94	856495	79.3072	ug/L	99
6) Chloroethane	2.89	64	1095041	74.9444	ug/L	98
7) Dichloroflmethane	3.19	67	2622266	71.0101	ug/L	93
8) Trichlorofma	3.28	101	2062455	77.2287	ug/L	96
9) Ethylether	3.71	59	1330568	81.8578	ug/L	98
10) dichlorotfluoroethan	3.73	67	1661140	80.5965	ug/L	96
11) propyleneoxide	3.76	58	2592612	764.1059	ug/L	95
12) Acrolein	3.84	56	1303198	379.2989	ug/L	100
13) 11dichlorthe	3.99	96	1367769	81.6844	ug/L	93
14) Trichlorotfluoroeth	4.04	101	2709402	158.4602	ug/L	95
15) Acetone	4.06	43	3365198	617.6007	ug/L	87
16) Iodomethane	4.17	142	3011976	136.5986	ug/L	92
17) Carbon Dislf	4.26	76	5833102	115.2143	ug/L	86
18) allylchloride	4.49	41	4325668	137.7712	ug/L	92
19) methylacetate	4.53	74	377456	92.5055	ug/L	95
20) Methylchlorid	4.64	84	1590265	73.9668	ug/L	97
21) tbutylalcohol	4.83	59	3291717	3795.4613	ug/L	100
22) Acrylonitrile	4.94	53	2575110	355.4947	ug/L	97
23) t12dichlorte	5.02	96	1506674	81.3774	ug/L	96
24) MtBE	5.04	73	3685430	76.9121	ug/L	91
25) Hexane	5.41	57	4230864	146.4746	ug/L #	89
26) 11dichlorota	5.54	63	2549624	77.1282	ug/L	93
27) Vinylacetate	5.64	43	12636696	Below	Cal	67
28) chloroprene	5.67	53	4369288	142.7712	ug/L	88
29) Diisopether	5.68	45	4692023	73.6888	ug/L	86
30) ETBE	6.14	59	3631259	87.3314	ug/L	89
31) 22dichloropr	6.28	77	1932605	111.6253	ug/L	94
32) c12dichlorte	6.27	96	1650838	80.2686	ug/L	95
33) 2Butanone	6.29	72	1718454	748.2090	ug/L	98
34) propionitrile	6.33	54	1790713	706.4879	ug/L	96
35) Ethylacetate	6.40	88	374781	447.8094	ug/L	95
36) methacrylonitrile	6.54	67	1499323	159.0466	ug/L	90
37) Bromochlorma	6.56	128	783863	77.8103	ug/L	98
38) Tetrahydofur	6.64	42	3890967	615.2921	ug/L	88

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL9.D Vial: 13
Acq On : 29 Jan 2021 17:42 Operator: RLD-DGS
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 18:03:03 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.67	83	2529484	87.1171	ug/L		93
40)	111trichlota	6.91	97	2159009	90.5879	ug/L		97
42)	Cyclohexane	7.00	56	2743592	84.9077	ug/L		98
43)	Carbtetraclo	7.13	119	1880419	101.2118	ug/L		95
44)	11dicloprope	7.12	110	837062	90.7604	ug/L	#	91
46)	Benzene	7.36	78	4850289	64.0041	ug/L		86
47)	12dichlorota	7.36	62	2014754	75.1244	ug/L		95
48)	TAME	7.53	73	3619116	86.4877	ug/L		87
49)	trichloroete	8.17	95	1593883	82.3406	ug/L		95
50)	methylcyclohexane	8.44	83	3015845	82.7815	ug/L		95
51)	12dicloropra	8.43	63	1769444	84.9736	ug/L		89
52)	23Dicl1propene	8.50	75	2384785	80.7381	ug/L		92
53)	Dibromometha	8.57	93	975127	84.3098	ug/L		97
54)	methylmethacrylate	8.60	69	1249247	92.4037	ug/L		97
55)	14dioxane	8.61	88	140614	3210.6939	ug/L		92
56)	Bromodiclrma	8.78	83	1990517	83.0160	ug/L		98
57)	2Nitropropane	9.04	43	3830325	846.8063	ug/L		95
58)	2CLEVE	9.16	63	4027694	385.5712	ug/L		87
59)	c13dicloproe	9.35	75	2385355	86.3452	ug/L		91
60)	4Meth2Pentan	9.55	43	7908673	403.8808	ug/L		68
62)	Toluene	9.80	92	3437934	71.2021	ug/L		85
63)	t13Dicloprop	10.06	75	2073253	97.4179	ug/L		94
64)	ethylmethacrylate	10.20	69	3712628	158.4981	ug/L		93
65)	112Triclotha	10.30	83	1230382	84.9190	ug/L		98
66)	Tetrachlorte	10.53	166	1745146	83.0672	ug/L		98
67)	13Diclorpropa	10.52	76	2328495	76.9665	ug/L		94
69)	2Hexanone	10.64	43	6593977	428.9171	ug/L		76
70)	Clorodibrmta	10.82	129	1535287	83.8204	ug/L		98
71)	12Dibrometha	10.98	107	1385377	79.4999	ug/L		98
72)	Chlorobenzen	11.66	112	3525983	62.4388	ug/L		90
73)	1Clhexane	11.64	91	2154724	75.8335	ug/L		96
74)	1112Tetclota	11.77	131	1440392	87.8311	ug/L		97
75)	Ethylbenzene	11.82	91	5245270	56.0591	ug/L		80
76)	m p-Xylene	11.99	106	4545458	121.4251	ug/L	#	73
77)	o-Xylene	12.53	106	2593621	72.0975	ug/L	#	77
78)	Styrene	12.55	104	3901500	65.7331	ug/L		87
79)	Bromoform	12.77	173	1037355	87.7171	ug/L		97
80)	Isopropylben	13.06	105	5137542	57.6153	ug/L		80
81)	cyclohexanone	13.14	55	505676	1494.4905	ug/L		98
84)	Bromobenzene	13.47	156	1729540	66.8202	ug/L		95
85)	1122Tetrclta	13.44	83	1867332	63.6272	ug/L		92
86)	123Triclproa	13.50	75	2318310	69.5370	ug/L		98
87)	14dichloro2butene	13.53	53	557120	69.7556	ug/L		78
88)	n-Propylbenz	13.64	91	5672275	49.7206	ug/L		79
89)	2chlorotolue	13.76	91	4007217	57.5332	ug/L		88
90)	4chlorotolue	13.91	91	4513302	55.9807	ug/L		86
91)	135Trimebenz	13.90	105	4557079	55.6763	ug/L		85
92)	tbutylbenzen	14.37	119	4191870	59.2590	ug/L		89
93)	124Trimetben	14.44	105	4537257	56.5279	ug/L		87
94)	sbutylbenzen	14.69	105	5310169	54.8245	ug/L		82
95)	13Diclorbenz	14.83	146	2934227	63.2019	ug/L		91
96)	pIsopropylto	14.91	119	4779397	56.3681	ug/L		83
97)	14dichlorobe	14.96	146	2974202	62.5634	ug/L		94
98)	12dichlorobe	15.49	146	2775443	62.3657	ug/L		96
99)	nButylbenzen	15.50	91	4473657	58.7598	ug/L		86
100)	12dibromo3cl	16.59	157	379304	82.0991	ug/L		98
101)	135Trichlorobenzene	16.91	180	2067179	65.4612	ug/L		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\WCAL9.D Vial: 13
Acq On : 29 Jan 2021 17:42 Operator: RLD-DGS
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 18:03:03 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

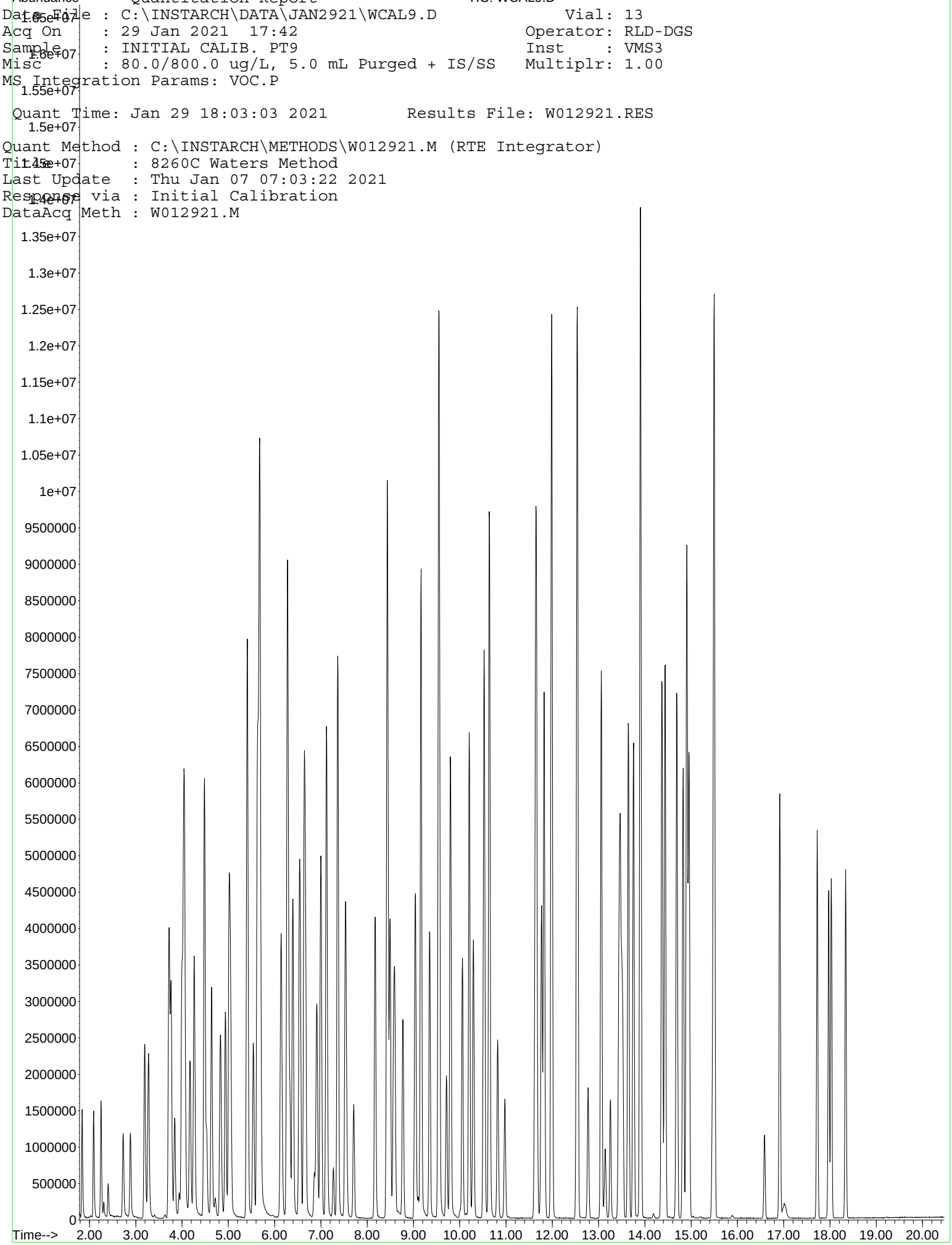
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	1772833	67.8660	ug/L	97
103) Hexachlorobu	17.97	225	940816	73.8936	ug/L	96
104) Naphthalene	18.03	128	3650250	57.7480	ug/L	90
105) 123Trichlben	18.34	180	1588564	69.3089	ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\JAN2921\WCAL9.D Vial: 13
Acq On : 29 Jan 2021 17:42 Operator: RLD-DGS
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jan 29 18:03:03 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jan 07 07:03:22 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\Instarch\Data\JAN2921\ICV1.D Vial: 15
Acq On : 29 Jan 2021 18:41 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:28:03 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:27:16 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1415107	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1068475	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	675519	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	355791	19.601	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98	%		
45) SURR12DCAd4	7.27	102	93653	18.640	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 93	%		
61) SURRd8Tolule	9.71	98	1298005	18.046	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 90	%#		
83) SURR4BrFBenz	13.25	95	624345	20.383	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	167909	10.8660	ug/L	97
3) Chloromethan	2.09	50	204700	9.9084	ug/L	97
4) VinylChlorid	2.25	62	215930	10.6294	ug/L	96
5) Bromomethane	2.73	94	116771	11.5868	ug/L	97
6) Chloroethane	2.89	64	144132	9.9560	ug/L	97
7) Dichloroflmethane	3.20	67	358831	9.7821	ug/L	99
8) Trichlorofma	3.28	101	275096	10.8845	ug/L	98
9) Ethylether	3.71	59	157670	9.2063	ug/L	96
10) dichlorotfluoroethan	3.73	67	203386	9.8387	ug/L	97
11) propyleneoxide	3.77	58	307868	92.2833	ug/L	95
12) Acrolein	3.84	56	152693	44.3588	ug/L	98
13) 11dichlorthe	3.99	96	160642	9.7935	ug/L	92
14) Trichlorotfluoroeth	4.04	101	334247	20.8081	ug/L	100
15) Acetone	4.06	43	439080	93.5103	ug/L	98
16) Iodomethane	4.18	142	294480	18.2885	ug/L	98
17) Carbon Dislf	4.26	76	992987	19.1362	ug/L	99
18) allylchloride	4.48	41	620669	19.3768	ug/L	97
19) methylacetate	4.53	74	38449	9.5989	ug/L	88
20) Methylchlorid	4.64	84	211383	10.0334	ug/L	98
21) tbutylalcohol	4.83	59	376668	472.2784	ug/L	97
22) Acrylonitrile	4.94	53	310157	44.0595	ug/L	100
23) t12dichlorte	5.02	96	181307	9.5211	ug/L	95
24) MtBE	5.05	73	485332	9.7809	ug/L	99
25) Hexane	5.41	57	583165	21.1094	ug/L	100
26) 11dichlorota	5.54	63	325246	9.6227	ug/L	99
27) Vinylacetate	5.63	43	3553258	99.7826	ug/L	99
28) chloroprene	5.67	53	630843	20.5760	ug/L	99
29) Diisopether	5.68	45	650389	9.7848	ug/L	98
30) ETBE	6.14	59	486999	10.4746	ug/L	98
31) 22dichloropr	6.28	77	208500	10.0391	ug/L	99
32) c12dichlorte	6.27	96	200186	9.3355	ug/L	97
33) 2Butanone	6.29	72	197985	90.0468	ug/L	99
34) propionitrile	6.32	54	205390	89.4851	ug/L	98
35) Ethylacetate	6.39	88	42132	50.1257	ug/L	97
36) methacrylonitrile	6.54	67	185434	20.2059	ug/L	99
37) Bromochlorma	6.56	128	102414	10.2163	ug/L	97
38) Tetrahydofur	6.64	42	559429	93.3280	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JAN2921\ICV1.D Vial: 15
Acq On : 29 Jan 2021 18:41 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:28:03 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:27:16 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	345414	9.9067	ug/L	99
40)	111trichlota	6.91	97	274426	11.0499	ug/L	100
42)	Cyclohexane	7.00	56	348656	10.7725	ug/L	94
43)	Carbtetraclo	7.13	119	220283	11.0440	ug/L	100
44)	11dicloprope	7.11	110	101305	10.5795	ug/L	99
46)	Benzene	7.36	78	782910	10.1256	ug/L	99
47)	12dichlorota	7.36	62	268510	9.8082	ug/L	99
48)	TAME	7.53	73	477528	10.4494	ug/L	95
49)	trichloroete	8.17	95	211676	10.7081	ug/L	96
50)	methylcyclohexane	8.43	83	406302	11.3608	ug/L	97
51)	12dicloropra	8.43	63	218297	9.9035	ug/L	94
52)	23Dicl1propene	8.49	75	310541	10.2569	ug/L	99
53)	Dibromometha	8.57	93	119048	9.7827	ug/L	97
54)	methylmethacrylate	8.59	69	142900	10.0210	ug/L	99
55)	14dioxane	8.62	88	27826	695.1095	ug/L	91
56)	Bromodiclrma	8.77	83	247863	9.7927	ug/L	98
57)	2Nitropropane	9.04	43	476700	98.0767	ug/L	98
58)	2CLEVE	9.16	63	564006	50.6687	ug/L	99
59)	c13dicloproe	9.35	75	285050	9.6796	ug/L	98
60)	4Meth2Pentan	9.55	43	1733397	94.4525	ug/L	99
62)	Toluene	9.80	92	472910	9.4816	ug/L	99
63)	t13Dicloprop	10.06	75	224147	9.6396	ug/L	98
64)	ethylmethacrylate	10.20	69	474907	19.4424	ug/L	97
65)	112Triclotha	10.30	83	142440	9.4248	ug/L	97
66)	Tetrachlorte	10.53	166	202882	9.5057	ug/L	99
67)	13Diclorpropa	10.52	76	295376	9.3669	ug/L	98
69)	2Hexanone	10.64	43	1229557	100.8686	ug/L	99
70)	Clorodibrmta	10.81	129	171770	10.1609	ug/L	99
71)	12Dibrometha	10.98	107	155938	10.2018	ug/L	98
72)	Chlorobenzen	11.66	112	508321	10.3242	ug/L	100
73)	1Clhexane	11.64	91	269563	11.2611	ug/L	98
74)	1112Tetclota	11.77	131	164856	11.0637	ug/L	97
75)	Ethylbenzene	11.82	91	910682	11.4212	ug/L	99
76)	m p-Xylene	11.99	106	710283	22.3081	ug/L	99
77)	o-Xylene	12.53	106	365068	11.5062	ug/L	99
78)	Styrene	12.55	104	608653	11.7905	ug/L	98
79)	Bromoform	12.77	173	118504	11.2647	ug/L	99
80)	Isopropylben	13.06	105	913607	12.2192	ug/L	99
81)	cyclohexanone	13.14	55	58730	228.5106	ug/L	95
84)	Bromobenzene	13.47	156	225036	9.9980	ug/L	96
85)	1122Tetrclta	13.44	83	259199	10.2033	ug/L	100
86)	123Triclproa	13.50	75	286256	10.1462	ug/L	95
87)	14dichloro2butene	13.53	53	58738	9.3330	ug/L	93
88)	n-Propylbenz	13.64	91	1072813	10.5591	ug/L	98
89)	2chlorotolue	13.75	91	638729	10.7092	ug/L	99
90)	4chlorotolue	13.90	91	728155	10.5746	ug/L	99
91)	135Trimebenz	13.90	105	759291	10.9889	ug/L	99
92)	tbutylbenzen	14.37	119	646095	10.8258	ug/L	98
93)	124Trimetben	14.44	105	749965	11.0819	ug/L	100
94)	sbutylbenzen	14.69	105	924571	11.5360	ug/L	100
95)	13Diclorbenz	14.83	146	413180	10.3426	ug/L	100
96)	pIsopropylto	14.90	119	802913	11.2766	ug/L	100
97)	14dichlorobe	14.96	146	433340	10.3437	ug/L	98
98)	12dichlorobe	15.49	146	399303	10.4630	ug/L	100
99)	nButylbenzen	15.50	91	730220	11.2212	ug/L	99
100)	12dibromo3cl	16.58	157	42003	10.5643	ug/L	97
101)	135Trichlorobenzene	16.92	180	283569	10.4400	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JAN2921\ICV1.D Vial: 15
Acq On : 29 Jan 2021 18:41 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:28:03 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:27:16 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	227730	10.2012	ug/L	99
103) Hexachlorobu	17.97	225	120527	11.2225	ug/L	97
104) Naphthalene	18.03	128	538848	10.5796	ug/L	99
105) 123Trichlben	18.34	180	202499	10.1097	ug/L	94

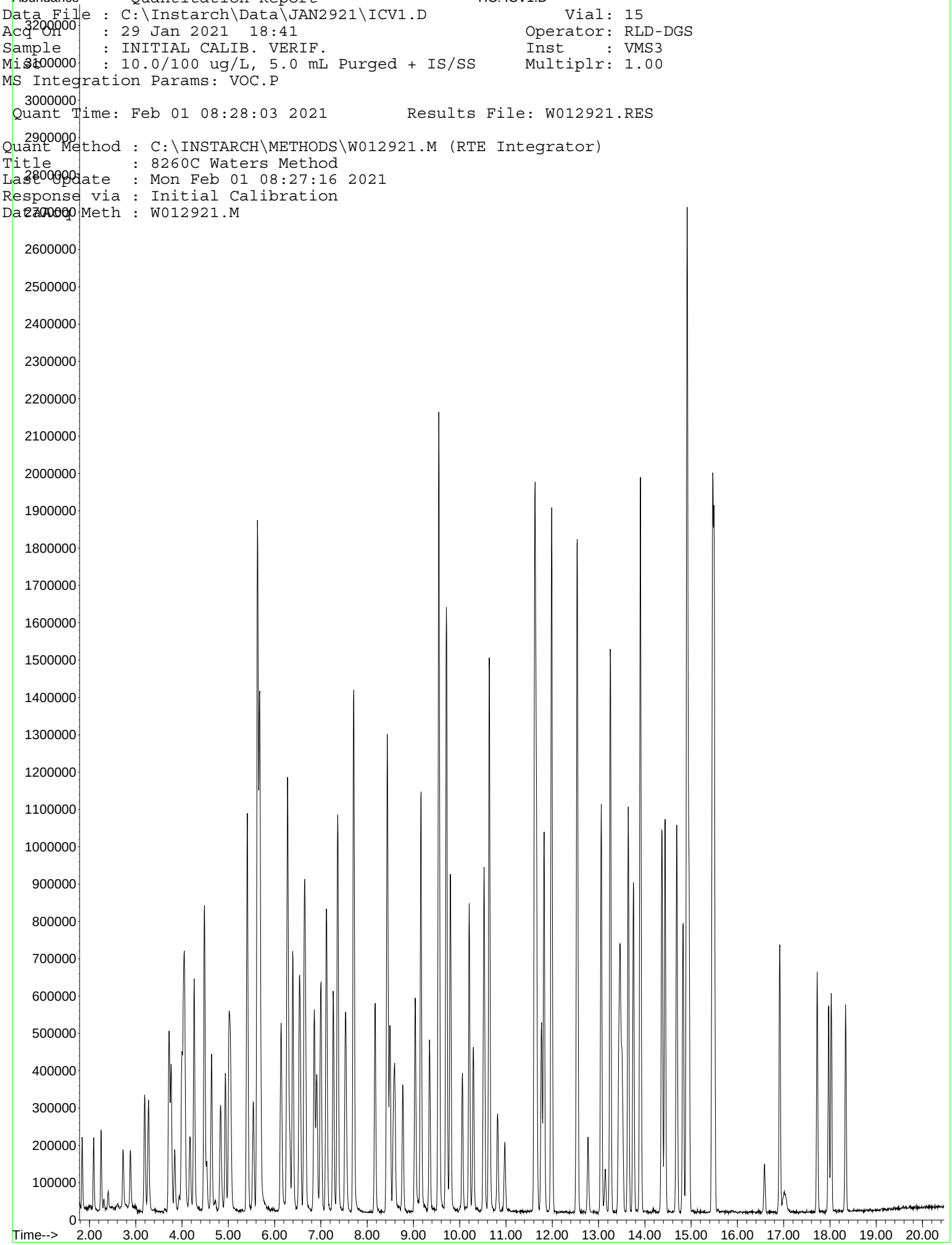
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: ICV1.D

Data File : C:\Instarch\Data\JAN2921\ICV1.D Vial: 15
Acq On : 29 Jan 2021 18:41 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:28:03 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:27:16 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\JAN2921\ICV1.D Vial: 15
Acq On : 29 Jan 2021 18:41 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 01 08:28:03 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	108	0.00
2	PT	Dichlorodi	10.0000	10.8660	-8.66	108	0.00
3	PT	Chloromethan	10.0000	9.9084	0.92	104	0.00
4	PT	VinylChlorid	10.0000	10.6294	-6.29	109	0.00
5	PT	Bromomethane	10.0000	11.5868	-15.87	127	0.00
6	PT	Chloroethane	10.0000	9.9560	0.44	108	0.00
7	T	Dichloroflmethane	10.0000	9.7821	2.18	100	0.00
8	PT	Trichlorofma	10.0000	10.8845	-8.84	106	0.00
9	T	Ethylether	10.0000	9.2063	7.94	101	0.00
10	T	dichlorotfluoroethan	10.0000	9.8387	1.61	100	0.00
11	T	propyleneoxide	100.0000	92.2833	7.72	96	0.00
12	T	Acrolein	50.0000	44.3588	11.28	97	0.00
13	PT	11dichlorthe	10.0000	9.7935	2.07	98	0.00
14	PT	Trichlorotfluoroeth	20.0000	20.8081	-4.04	100	0.00
15	PT	Acetone	100.0000	93.5103	6.49	94	0.00
16	T	Iodomethane	20.0000	18.2885	8.56	112	0.00
17	PT	Carbon Dislf	20.0000	19.1362	4.32	102	0.00
18	T	allylchloride	20.0000	19.3768	3.12	103	0.00
19	PT	methylacetate	10.0000	9.5989	4.01	118	0.00
20	PT	Methylchlorid	10.0000	10.0334	-0.33	107	0.00
21	T	tbutylalcohol	500.0000	472.2784	5.54	101	0.00
22	T	Acrylonitrile	50.0000	44.0595	11.88	95	0.00
23	PT	t12dichlorte	10.0000	9.5211	4.79	103	0.00
24	PT	MtBE	10.0000	9.7809	2.19	107	0.00
25	T	Hexane	20.0000	21.1094	-5.55	97	0.00
26	PT	11dichlorota	10.0000	9.6227	3.77	104	0.00
27	T	Vinylacetate	100.0000	99.7826	0.22	108	0.00
28	T	chloroprene	20.0000	20.5760	-2.88	104	0.00
29	T	Diisopether	10.0000	9.7848	2.15	103	0.00
30	T	ETBE	10.0000	10.4746	-4.75	117	0.00
31	T	22dichloropr	10.0000	10.0391	-0.39	114	0.00
32	PT	c12dichlorte	10.0000	9.3355	6.65	107	0.00
33	PT	2Butanone	100.0000	90.0468	9.95	99	0.00
34	T	propionitrile	100.0000	89.4851	10.51	96	0.00
35	T	Ethylacetate	50.0000	50.1257	-0.25	112	0.00
36	T	methacrylonitrile	20.0000	20.2059	-1.03	111	0.00
37	T	Bromochlorma	10.0000	10.2163	-2.16	113	0.00
38	T	Tetrahydofur	100.0000	93.3280	6.67	102	0.00
39	PT	Chloroform	10.0000	9.9067	0.93	112	0.00
40	PT	111trichlota	10.0000	11.0499	-10.50	115	0.00
41	S	SURRDibrflma	20.0000	19.6011	1.99	105	0.00
42	PT	Cyclohexane	10.0000	10.7725	-7.73	104	0.00
43	PT	Carbtetraclo	10.0000	11.0440	-10.44	117	0.00
44	T	11dicloprope	10.0000	10.5795	-5.79	116	0.00
45	S	SURR12DCAd4	20.0000	18.6397	6.80	105	0.00
46	PT	Benzene	10.0000	10.1256	-1.26	111	0.00
47	PT	12dichlorota	10.0000	9.8082	1.92	109	0.00
48	T	TAME	10.0000	10.4494	-4.49	120	0.00

49	PT	trichloroete	10.0000	10.7081	-7.08	120	0.00
50	PT	methylcyclohexane	10.0000	11.3608	-13.61	113	0.00
51	PT	12dicloropra	10.0000	9.9035	0.97	109	0.00
52	T	23Dicl1propene	10.0000	10.2569	-2.57	115	0.00
53	T	Dibromometha	10.0000	9.7827	2.17	111	0.00
54	T	methylmethacrylate	10.0000	10.0210	-0.21	113	0.00
55	T	14dioxane	500.0000	695.1095	-39.02#	167	0.00
56	PT	Bromodiclrma	10.0000	9.7927	2.07	110	0.00
57	T	2Nitropropane	100.0000	98.0767	1.92	105	0.00
58	T	2CLEVE	50.0000	50.6687	-1.34	110	0.00
59	PT	c13dicloproe	10.0000	9.6796	3.20	109	0.00
60	PT	4Meth2Pentan	100.0000	94.4525	5.55	102	0.00
61	S	SURRd8Tolule	20.0000	18.0465	9.77	98	0.00
62	PT	Toluene	10.0000	9.4816	5.18	103	0.00
63	PT	t13Dicloprop	10.0000	9.6396	3.60	110	0.00
64	T	ethylmethacrylate	20.0000	19.4424	2.79	103	0.00
65	PT	112Triclotha	10.0000	9.4248	5.75	107	0.00
66	PT	Tetrachlorte	10.0000	9.5057	4.94	100	0.00
67	T	13Diclorpropa	10.0000	9.3669	6.33	102	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	101	0.00
69	PT	2Hexanone	100.0000	100.8686	-0.87	98	0.00
70	PT	Clorodibrmta	10.0000	10.1609	-1.61	111	0.00
71	PT	12Dibrometha	10.0000	10.2018	-2.02	107	0.00
72	PT	Chlorobenzen	10.0000	10.3242	-3.24	104	0.00
73	T	1Clhexane	10.0000	11.2611	-12.61	111	0.00
74	T	1112Tetclota	10.0000	11.0637	-10.64	118	0.00
75	PT	Ethylbenzene	10.0000	11.4212	-14.21	112	0.00
76	PT	m p-Xylene	20.0000	22.3081	-11.54	110	0.00
77	PT	o-Xylene	10.0000	11.5062	-15.06	112	0.00
78	PT	Styrene	10.0000	11.7905	-17.90	112	0.00
79	PT	Bromoform	10.0000	11.2647	-12.65	119	0.00
80	PT	Isopropylben	10.0000	12.2192	-22.19#	114	0.00
81	T	cyclohexanone	200.0000	228.5106	-14.26	114	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	112	0.00
83	S	SURR4BrFBenz	20.0000	20.3833	-1.92	112	0.00
84	T	Bromobenzene	10.0000	9.9980	0.02	114	0.00
85	PT	1122Tetrclta	10.0000	10.2033	-2.03	119	0.00
86	T	123Triclproa	10.0000	10.1462	-1.46	112	0.00
87	T	14dichloro2butene	10.0000	9.3330	6.67	107	0.00
88	T	n-Propylbenz	10.0000	10.5591	-5.59	113	0.00
89	T	2chlorotolue	10.0000	10.7092	-7.09	117	0.00
90	T	4chlorotolue	10.0000	10.5746	-5.75	116	0.00
91	T	135Trimebenz	10.0000	10.9889	-9.89	117	0.00
92	T	tbutylbenzen	10.0000	10.8258	-8.26	114	0.00
93	T	124Trimetben	10.0000	11.0819	-10.82	118	0.00
94	T	sbutylbenzen	10.0000	11.5360	-15.36	115	0.00
95	PT	13Diclorbenz	10.0000	10.3426	-3.43	117	0.00
96	T	pIsopropylto	10.0000	11.2766	-12.77	115	0.00
97	PT	14dichlorobe	10.0000	10.3437	-3.44	119	0.00
98	PT	12dichlorobe	10.0000	10.4630	-4.63	117	0.00
99	T	nButylbenzen	10.0000	11.2212	-12.21	117	0.00
100	PT	12dibromo3cl	10.0000	10.5643	-5.64	131	-0.01
101	T	135Trichlorobenzene	10.0000	10.4400	-4.40	113	0.00
102	PT	124Trichlobe	10.0000	10.2012	-2.01	117	0.00
103	T	Hexachlorobu	10.0000	11.2225	-12.23	114	0.00
104	T	Naphthalene	10.0000	10.5796	-5.80	113	0.00
105	T	123Trichlben	10.0000	10.1097	-1.10	114	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W012921.M Wed Feb 03 13:30:26 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\JAN2921\ICV1.D Vial: 15
Acq On : 29 Jan 2021 18:41 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 01 08:28:03 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	108	0.00
2	PT	Dichlorodi	0.2184	0.2373	-8.65	108	0.00
3	PT	Chloromethan	0.2920	0.2893	0.92	104	0.00
4	PT	VinylChlorid	0.2871	0.3052	-6.30	109	0.00
5	PT	Bromomethane	0.1424	0.1650	-15.87	127	0.00
6	PT	Chloroethane	0.2046	0.2037	0.44	108	0.00
7	T	Dichloroflmethane	0.5184	0.5071	2.18	100	0.00
8	PT	Trichlorofma	0.3572	0.3888	-8.85	106	0.00
9	T	Ethylether	0.2421	0.2228	7.97	101	0.00
10	T	dichlorotfluoroethan	0.2922	0.2874	1.64	100	0.00
11	T	propyleneoxide	0.0472	0.0435	7.84	96	0.00
12	T	Acrolein	0.0486	0.0432	11.11	97	0.00
13	PT	11dichlorthe	0.2318	0.2270	2.07	98	0.00
14	PT	Trichlorotfluoroeth	0.2270	0.2362	-4.05	100	0.00
15	PT	Acetone	0.0714	0.0621#	13.03	94	0.00
16	T	Iodomethane	0.2041	0.2081	-1.96	112	0.00
17	PT	Carbon Dislf	0.7334	0.7017	4.32	102	0.00
18	T	allylchloride	0.4527	0.4386	3.11	103	0.00
19	PT	methylacetate	0.0566	0.0543#	4.06	118	0.00
20	PT	Methylchlorid	0.3445	0.2988	13.27	107	0.00
21	T	tbutylalcohol	0.0113	0.0106#	6.19	101	0.00
22	T	Acrylonitrile	0.0995	0.0877	11.86	95	0.00
23	PT	t12dichlorte	0.2691	0.2562	4.79	103	0.00
24	PT	MtBE	0.7013	0.6859	2.20	107	0.00
25	T	Hexane	0.3904	0.4121	-5.56	97	0.00
26	PT	11dichlorota	0.4777	0.4597	3.77	104	0.00
27	T	Vinylacetate	0.5018	0.5022	-0.08	108	0.00
28	T	chloroprene	0.4333	0.4458	-2.88	104	0.00
29	T	Diisopether	0.9394	0.9192	2.15	103	0.00
30	T	ETBE	0.6571	0.6883	-4.75	117	0.00
31	T	22dichloropr	0.2935	0.2947	-0.41	114	0.00
32	PT	c12dichlorte	0.3031	0.2829	6.66	107	0.00
33	PT	2Butanone	0.0311	0.0280#	9.97	99	0.00
34	T	propionitrile	0.0324	0.0290#	10.49	96	0.00
35	T	Ethylacetate	0.0119	0.0119#	0.00	112	0.00
36	T	methacrylonitrile	0.1297	0.1310	-1.00	111	0.00
37	T	Bromochlorma	0.1417	0.1447	-2.12	113	0.00
38	T	Tetrahydofur	0.0901	0.0791	12.21	102	0.00
39	PT	Chloroform	0.4928	0.4882	0.93	112	0.00
40	PT	111trichlota	0.3510	0.3879	-10.51	115	0.00
41	S	SURRDibrflma	0.2565	0.2514	1.99	105	0.00
42	PT	Cyclohexane	0.4574	0.4928	-7.74	104	0.00
43	PT	Carbtetraclo	0.2819	0.3113	-10.43	117	0.00
44	T	11dicloprope	0.1353	0.1432	-5.84	116	0.00
45	S	SURR12DCAd4	0.0710	0.0662	6.76	105	0.00
46	PT	Benzene	1.0928	1.1065	-1.25	111	0.00
47	PT	12dichlorota	0.3869	0.3795	1.91	109	0.00
48	T	TAME	0.6459	0.6749	-4.49	120	0.00

49	PT	trichloroete	0.2794	0.2992	-7.09	120	0.00
50	PT	methylcyclohexane	0.5055	0.5742	-13.59	113	0.00
51	PT	12dicloropra	0.3115	0.3085	0.96	109	0.00
52	T	23Dicl1propene	0.4279	0.4389	-2.57	115	0.00
53	T	Dibromometha	0.1720	0.1683	2.15	111	0.00
54	T	methylmethacrylate	0.2015	0.2020	-0.25	113	0.00
55	T	14dioxane	0.0006	0.0008#	-33.33#	167	0.00
56	PT	Bromodiclrma	0.3577	0.3503	2.07	110	0.00
57	T	2Nitropropane	0.0687	0.0674	1.89	105	0.00
58	T	2CLEVE	0.1573	0.1594	-1.34	110	0.00
59	PT	c13dicloproe	0.4162	0.4029	3.20	109	0.00
60	PT	4Meth2Pentan	0.2665	0.2450	8.07	102	0.00
61	S	SURRd8Tolule	1.0165	0.9172	9.77	98	0.00
62	PT	Toluene	0.7049	0.6684	5.18	103	0.00
63	PT	t13Dicloprop	0.3286	0.3168	3.59	110	0.00
64	T	ethylmethacrylate	0.3452	0.3356	2.78	103	0.00
65	PT	112Triclotha	0.2136	0.2013	5.76	107	0.00
66	PT	Tetrachlorte	0.3016	0.2867	4.94	100	0.00
67	T	13Diclorpropa	0.4457	0.4175	6.33	102	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	101	0.00
69	PT	2Hexanone	0.2282	0.2302	-0.88	98	0.00
70	PT	Clorodibrmta	0.3164	0.3215	-1.61	111	0.00
71	PT	12Dibrometha	0.2861	0.2919	-2.03	107	0.00
72	PT	Chlorobenzen	0.9216	0.9515	-3.24	104	0.00
73	T	1Clhexane	0.4481	0.5046	-12.61	111	0.00
74	T	1112Tetclota	0.2789	0.3086	-10.65	118	0.00
75	PT	Ethylbenzene	1.4925	1.7046	-14.21	112	0.00
76	PT	m p-Xylene	0.5960	0.6648	-11.54	110	0.00
77	PT	o-Xylene	0.5939	0.6833	-15.05	112	0.00
78	PT	Styrene	0.9663	1.1393	-17.90	112	0.00
79	PT	Bromoform	0.1969	0.2218	-12.65	119	0.00
80	PT	Isopropylben	1.3995	1.7101	-22.19#	114	0.00
81	T	cyclohexanone	0.0048	0.0055#	-14.58	114	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	112	0.00
83	S	SURR4BrFBenz	0.9069	0.9242	-1.91	112	0.00
84	T	Bromobenzene	0.6664	0.6663	0.02	114	0.00
85	PT	1122Tetrclta	0.7521	0.7674	-2.03	119	0.00
86	T	123Triclproa	0.8353	0.8475	-1.46	112	0.00
87	T	14dichloro2butene	0.1863	0.1739	6.66	107	0.00
88	T	n-Propylbenz	3.0081	3.1763	-5.59	113	0.00
89	T	2chlorotolue	1.7658	1.8911	-7.10	117	0.00
90	T	4chlorotolue	2.0387	2.1558	-5.74	116	0.00
91	T	135Trimebenz	2.0457	2.2480	-9.89	117	0.00
92	T	tbutylbenzen	1.7670	1.9129	-8.26	114	0.00
93	T	124Trimetben	2.0036	2.2204	-10.82	118	0.00
94	T	sbutylbenzen	2.3729	2.7374	-15.36	115	0.00
95	PT	13Diclorbenz	1.1828	1.2233	-3.42	117	0.00
96	T	pIsopropylto	2.1081	2.3772	-12.77	115	0.00
97	PT	14dichlorobe	1.2404	1.2830	-3.43	119	0.00
98	PT	12dichlorobe	1.1299	1.1822	-4.63	117	0.00
99	T	nButylbenzen	1.9267	2.1620	-12.21	117	0.00
100	PT	12dibromo3cl	0.1177	0.1244	-5.69	131	-0.01
101	T	135Trichlorobenzene	0.8042	0.8396	-4.40	113	0.00
102	PT	124Trichlobe	0.6609	0.6742	-2.01	117	0.00
103	T	Hexachlorobu	0.3180	0.3568	-12.20	114	0.00
104	T	Naphthalene	1.5080	1.5954	-5.80	113	0.00
105	T	123Trichlben	0.5930	0.5995	-1.10	114	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W012921.M Wed Feb 03 13:30:00 2021

Quantitation Report

Data File : C:\Instarch\Data\JAN2921\ICV2.D Vial: 16
Acq On : 29 Jan 2021 19:10 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:29:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1385235	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1147009	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	667104	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	361902	20.368	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4	7.27	102	95512	19.420	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.71	98	1460583	20.745	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 104 %			
83) SURR4BrFBenz	13.25	95	620562	20.515	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	558217	36.9031	ug/L	97
3) Chloromethan	2.09	50	653289	32.3041	ug/L	97
4) VinylChlorid	2.25	62	677872	34.0887	ug/L	99
5) Bromomethane	2.73	94	346998	35.1740	ug/L	98
6) Chloroethane	2.89	64	451352	31.8498	ug/L	100
7) Dichloroflmethane	3.19	67	1111848	30.9637	ug/L	97
8) Trichlorofma	3.28	101	882240	35.6596	ug/L	97
9) Ethylether	3.71	59	533401	31.8167	ug/L	100
10) dichlorotfluoroethan	3.73	67	669611	33.0908	ug/L	98
11) propyleneoxide	3.76	58	1046112	320.3336	ug/L	98
12) Acrolein	3.84	56	509675	151.2586	ug/L	99
13) 11dichlorthe	3.99	96	559578	34.8502	ug/L	99
14) Trichlorotfluoroeth	4.04	101	1118429	71.1278	ug/L	99
15) Acetone	4.06	43	1370459	323.3789	ug/L	97
16) Iodomethane	4.17	142	1192841	67.9020	ug/L	97
17) Carbon Dislf	4.26	76	2954834	58.1715	ug/L	95
18) allylchloride	4.49	41	1970600	62.8473	ug/L	97
19) methylacetate	4.53	74	129516	33.0314	ug/L	89
20) Methylchlorid	4.64	84	666863	34.7885	ug/L	98
21) tbutylalcohol	4.83	59	1174684	1504.6179	ug/L	99
22) Acrylonitrile	4.94	53	1024201	148.6309	ug/L	99
23) t12dichlorte	5.02	96	605217	32.4674	ug/L	97
24) MtBE	5.04	73	1543149	31.7696	ug/L	97
25) Hexane	5.41	57	1892755	69.9914	ug/L	99
26) 11dichlorota	5.54	63	1066270	32.2270	ug/L	99
27) Vinylacetate	5.63	43	7982394	299.8585	ug/L	88
28) chloroprene	5.67	53	1967757	65.5656	ug/L	96
29) Diisopether	5.69	45	2045647	31.4394	ug/L	95
30) ETBE	6.14	59	1514648	33.2803	ug/L	98
31) 22dichloropr	6.27	77	685112	33.6988	ug/L	99
32) c12dichlorte	6.27	96	636106	30.3040	ug/L	97
33) 2Butanone	6.29	72	620795	288.4363	ug/L	99
34) propionitrile	6.32	54	643887	286.5808	ug/L	98
35) Ethylacetate	6.40	88	126680	153.9651	ug/L	99
36) methacrylonitrile	6.54	67	543861	60.5401	ug/L	97
37) Bromochlorma	6.55	128	297786	30.3463	ug/L	99
38) Tetrahydofur	6.64	42	1624541	304.4260	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JAN2921\ICV2.D Vial: 16
Acq On : 29 Jan 2021 19:10 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:29:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	1015198	29.7443	ug/L	99
40)	111trichlota	6.91	97	862378	35.4729	ug/L	98
42)	Cyclohexane	7.00	56	1115264	35.2016	ug/L	97
43)	Carbtetraclo	7.13	119	715731	36.6575	ug/L	99
44)	11dicloprope	7.12	110	319513	34.0870	ug/L	92
46)	Benzene	7.36	78	2192163	28.9633	ug/L	97
47)	12dichlorota	7.36	62	794310	29.6404	ug/L	98
48)	TAME	7.53	73	1464637	32.7408	ug/L	93
49)	trichloroete	8.17	95	620078	32.0443	ug/L	94
50)	methylcyclohexane	8.44	83	1216484	34.7483	ug/L	99
51)	12dicloropra	8.43	63	655650	30.3862	ug/L	96
52)	23Dicl1propene	8.49	75	912174	30.7781	ug/L	95
53)	Dibromometha	8.56	93	361816	30.3733	ug/L	99
54)	methylmethacrylate	8.59	69	445656	31.9260	ug/L	98
55)	14dioxane	8.62	88	43560	1121.3828	ug/L	85
56)	Bromodiclrma	8.77	83	783902	31.6385	ug/L	96
57)	2Nitropropane	9.04	43	1498760	315.0058	ug/L	97
58)	2CLEVE	9.16	63	1690908	155.1822	ug/L	96
59)	c13dicloproe	9.35	75	948803	32.9139	ug/L	95
60)	4Meth2Pentan	9.55	43	4522515	299.1162	ug/L	89
62)	Toluene	9.80	92	1468653	30.0806	ug/L	95
63)	t13Dicloprop	10.05	75	746877	32.8126	ug/L	99
64)	ethylmethacrylate	10.20	69	1543763	64.5636	ug/L	96
65)	112Triclotha	10.29	83	456807	30.8773	ug/L	97
66)	Tetrachlorte	10.53	166	660450	31.6117	ug/L	98
67)	13Diclorpropa	10.52	76	911645	29.5332	ug/L	95
69)	2Hexanone	10.64	43	3419624	261.3263	ug/L	92
70)	Clorodibrmta	10.82	129	571349	31.4837	ug/L	98
71)	12Dibrometha	10.97	107	511174	31.1524	ug/L	98
72)	Chlorobenzen	11.66	112	1494323	28.2723	ug/L	97
73)	1Clhexane	11.64	91	838890	32.6455	ug/L	96
74)	1112Tetclota	11.77	131	512133	32.0167	ug/L	97
75)	Ethylbenzene	11.82	91	2475452	28.9198	ug/L	94
76)	m p-Xylene	11.99	106	2020316	59.1081	ug/L	90
77)	o-Xylene	12.53	106	1048682	30.7894	ug/L	93
78)	Styrene	12.55	104	1676589	30.2543	ug/L	96
79)	Bromoform	12.77	173	351444	31.1200	ug/L	100
80)	Isopropylben	13.06	105	2380299	29.6561	ug/L	94
81)	cyclohexanone	13.14	55	158486	574.4269	ug/L	93
84)	Bromobenzene	13.47	156	658695	29.6340	ug/L	99
85)	1122Tetrclta	13.44	83	712067	28.3838	ug/L	99
86)	123Triclproa	13.50	75	835264	29.9791	ug/L	97
87)	14dichloro2butene	13.53	53	189066	30.4200	ug/L	96
88)	n-Propylbenz	13.64	91	2757901	27.4869	ug/L	93
89)	2chlorotolue	13.75	91	1733148	29.4252	ug/L	95
90)	4chlorotolue	13.90	91	1968985	28.9552	ug/L	98
91)	135Trimebenz	13.90	105	2011437	29.4779	ug/L	94
92)	tbutylbenzen	14.37	119	1849949	31.3883	ug/L	95
93)	124Trimetben	14.44	105	2054006	30.7339	ug/L	93
94)	sbutylbenzen	14.69	105	2528040	31.9406	ug/L	95
95)	13Diclorbenz	14.83	146	1182935	29.9844	ug/L	99
96)	pIsopropylto	14.90	119	2134552	30.3572	ug/L	94
97)	14dichlorobe	14.96	146	1187896	28.7124	ug/L	98
98)	12dichlorobe	15.49	146	1075311	28.5321	ug/L	99
99)	nButylbenzen	15.50	91	1958411	30.4743	ug/L	95
100)	12dibromo3cl	16.59	157	133299	33.9492	ug/L	94
101)	135Trichlorobenzene	16.92	180	842231	31.3992	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JAN2921\ICV2.D Vial: 16
Acq On : 29 Jan 2021 19:10 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:29:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	688369	31.2245	ug/L	99
103) Hexachlorobu	17.97	225	372051	35.0794	ug/L	95
104) Naphthalene	18.03	128	1581383	31.4401	ug/L	97
105) 123Trichlben	18.34	180	623544	31.5229	ug/L	94

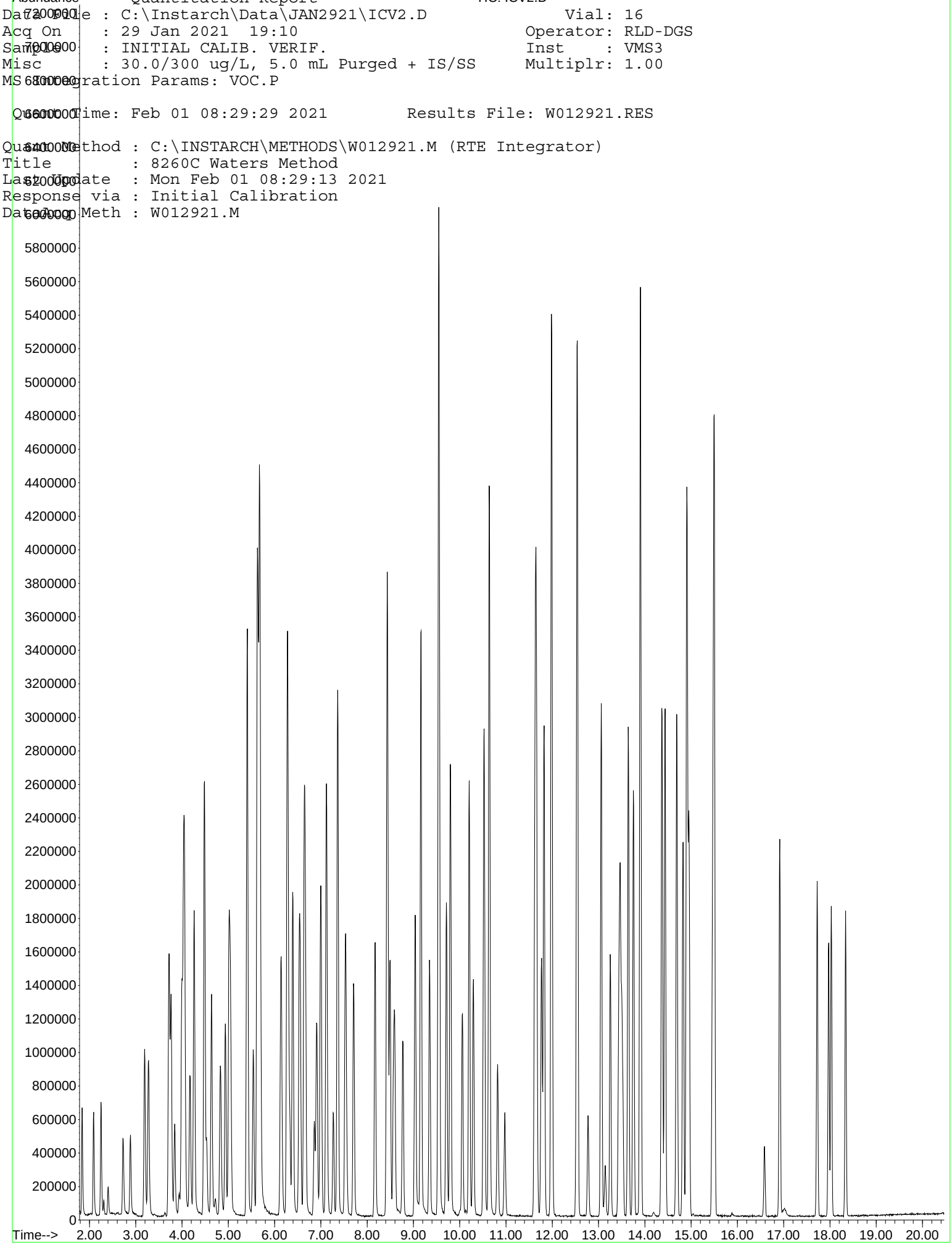
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: ICV2.D

Data File : C:\Instarch\Data\JAN2921\ICV2.D Vial: 16
Acq On : 29 Jan 2021 19:10 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:29:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
Data Acq Meth : W012921.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\JAN2921\ICV2.D Vial: 16
Acq On : 29 Jan 2021 19:10 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 01 08:29:29 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	102	0.00
2	PT	Dichlorodi	30.0000	36.9031	-23.01#	119	0.00
3	PT	Chloromethan	30.0000	32.3041	-7.68	120	0.00
4	PT	VinylChlorid	30.0000	34.0887	-13.63	113	0.00
5	PT	Bromomethane	30.0000	35.1740	-17.25	118	0.00
6	PT	Chloroethane	30.0000	31.8498	-6.17	109	0.00
7	T	Dichloroflmethane	30.0000	30.9637	-3.21	110	0.00
8	PT	Trichlorofma	30.0000	35.6596	-18.87	117	0.00
9	T	Ethylether	30.0000	31.8167	-6.06	116	0.00
10	T	dichlorotfluoroethan	30.0000	33.0908	-10.30	112	0.00
11	T	propyleneoxide	300.0000	320.3336	-6.78	113	0.00
12	T	Acrolein	150.0000	151.2586	-0.84	111	0.00
13	PT	11dichlorthe	30.0000	34.8502	-16.17	117	0.00
14	PT	Trichlorotfluoroeth	60.0000	71.1278	-18.55	114	0.00
15	PT	Acetone	300.0000	323.3789	-7.79	107	0.00
16	T	Iodomethane	60.0000	67.9020	-13.17	116	0.00
17	PT	Carbon Dislf	60.0000	58.1715	3.05	110	0.00
18	T	allylchloride	60.0000	62.8473	-4.75	109	0.00
19	PT	methylacetate	30.0000	33.0314	-10.10	107	0.00
20	PT	Methylchlorid	30.0000	34.7885	-15.96	117	0.00
21	T	tbutylalcohol	1500.0000	1504.6179	-0.31	98	0.00
22	T	Acrylonitrile	150.0000	148.6309	0.91	106	0.00
23	PT	t12dichlorte	30.0000	32.4674	-8.22	110	0.00
24	PT	MtBE	30.0000	31.7696	-5.90	111	0.00
25	T	Hexane	60.0000	69.9914	-16.65	107	0.00
26	PT	11dichlorota	30.0000	32.2270	-7.42	111	0.00
27	T	Vinylacetate	300.0000	299.8585	0.05	103	0.00
28	T	chloroprene	60.0000	65.5656	-9.28	106	0.00
29	T	Diisopether	30.0000	31.4394	-4.80	108	0.00
30	T	ETBE	30.0000	33.2803	-10.93	113	0.00
31	T	22dichloropr	30.0000	33.6988	-12.33	106	0.00
32	PT	c12dichlorte	30.0000	30.3040	-1.01	106	0.00
33	PT	2Butanone	300.0000	288.4363	3.85	100	0.00
34	T	propionitrile	300.0000	286.5808	4.47	101	0.00
35	T	Ethylacetate	150.0000	153.9651	-2.64	101	0.00
36	T	methacrylonitrile	60.0000	60.5401	-0.90	102	0.00
37	T	Bromochlorma	30.0000	30.3463	-1.15	107	0.00
38	T	Tetrahydofur	300.0000	304.4260	-1.48	101	0.00
39	PT	Chloroform	30.0000	29.7443	0.85	106	0.00
40	PT	111trichlota	30.0000	35.4729	-18.24	110	0.00
41	S	SURRDibrflma	20.0000	20.3677	-1.84	105	0.00
42	PT	Cyclohexane	30.0000	35.2016	-17.34	109	0.00
43	PT	Carbtetraclo	30.0000	36.6575	-22.19#	113	0.00
44	T	11dicloprope	30.0000	34.0870	-13.62	110	0.00
45	S	SURR12DCAd4	20.0000	19.4197	2.90	99	0.00
46	PT	Benzene	30.0000	28.9633	3.46	106	0.00
47	PT	12dichlorota	30.0000	29.6404	1.20	107	0.00
48	T	TAME	30.0000	32.7408	-9.14	110	0.00

49	PT	trichloroete	30.0000	32.0443	-6.81	104	0.00
50	PT	methylcyclohexane	30.0000	34.7483	-15.83	104	0.00
51	PT	12dicloropra	30.0000	30.3862	-1.29	105	0.00
52	T	23Dicl1propene	30.0000	30.7781	-2.59	106	0.00
53	T	Dibromometha	30.0000	30.3733	-1.24	109	0.00
54	T	methylmethacrylate	30.0000	31.9260	-6.42	106	0.00
55	T	14dioxane	1500.0000	1121.3828	25.24#	78	0.00
56	PT	Bromodiclrma	30.0000	31.6385	-5.46	111	0.00
57	T	2Nitropropane	300.0000	315.0058	-5.00	99	0.00
58	T	2CLEVE	150.0000	155.1822	-3.45	107	0.00
59	PT	c13dicloproe	30.0000	32.9139	-9.71	112	0.00
60	PT	4Meth2Pentan	300.0000	299.1162	0.29	102	0.00
61	S	SURRd8Tolule	20.0000	20.7447	-3.72	108	0.00
62	PT	Toluene	30.0000	30.0806	-0.27	109	0.00
63	PT	t13Dicloprop	30.0000	32.8126	-9.38	108	0.00
64	T	ethylmethacrylate	60.0000	64.5636	-7.61	101	0.00
65	PT	112Triclotha	30.0000	30.8773	-2.92	104	0.00
66	PT	Tetrachlorte	30.0000	31.6117	-5.37	103	0.00
67	T	13Diclorpropa	30.0000	29.5332	1.56	102	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	107	0.00
69	PT	2Hexanone	300.0000	261.3263	12.89	99	0.00
70	PT	Clorodibrmta	30.0000	31.4837	-4.95	105	0.00
71	PT	12Dibrometha	30.0000	31.1524	-3.84	106	0.00
72	PT	Chlorobenzen	30.0000	28.2723	5.76	107	0.00
73	T	1Clhexane	30.0000	32.6455	-8.82	108	0.00
74	T	1112Tetclota	30.0000	32.0167	-6.72	108	0.00
75	PT	Ethylbenzene	30.0000	28.9198	3.60	104	0.00
76	PT	m p-Xylene	60.0000	59.1081	1.49	107	0.00
77	PT	o-Xylene	30.0000	30.7894	-2.63	108	0.00
78	PT	Styrene	30.0000	30.2543	-0.85	107	0.00
79	PT	Bromoform	30.0000	31.1200	-3.73	107	0.00
80	PT	Isopropylben	30.0000	29.6561	1.15	101	0.00
81	T	cyclohexanone	600.0000	574.4269	4.26	90	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	105	0.00
83	S	SURR4BrFBenz	20.0000	20.5153	-2.58	104	0.00
84	T	Bromobenzene	30.0000	29.6340	1.22	108	0.00
85	PT	1122Tetrclta	30.0000	28.3838	5.39	103	0.00
86	T	123Triclproa	30.0000	29.9791	0.07	105	0.00
87	T	14dichloro2butene	30.0000	30.4200	-1.40	105	0.00
88	T	n-Propylbenz	30.0000	27.4869	8.38	101	0.00
89	T	2chlorotolue	30.0000	29.4252	1.92	104	0.00
90	T	4chlorotolue	30.0000	28.9552	3.48	107	0.00
91	T	135Trimebenz	30.0000	29.4779	1.74	106	0.00
92	T	tbutylbenzen	30.0000	31.3883	-4.63	109	0.00
93	T	124Trimetben	30.0000	30.7339	-2.45	111	0.00
94	T	sbutylbenzen	30.0000	31.9406	-6.47	109	0.00
95	PT	13Diclorbenz	30.0000	29.9844	0.05	109	0.00
96	T	pIsopropylto	30.0000	30.3572	-1.19	106	0.00
97	PT	14dichlorobe	30.0000	28.7124	4.29	105	0.00
98	PT	12dichlorobe	30.0000	28.5321	4.89	102	0.00
99	T	nButylbenzen	30.0000	30.4743	-1.58	105	0.00
100	PT	12dibromo3cl	30.0000	33.9492	-13.16	110	0.00
101	T	135Trichlorobenzene	30.0000	31.3992	-4.66	110	0.00
102	PT	124Trichlobe	30.0000	31.2245	-4.08	110	0.00
103	T	Hexachlorobu	30.0000	35.0794	-16.93	118	0.00
104	T	Naphthalene	30.0000	31.4401	-4.80	109	0.00
105	T	123Trichlben	30.0000	31.5229	-5.08	113	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W012921.M Wed Feb 03 13:31:11 2021

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\ICB1.D Vial: 18
Acq On : 29 Jan 2021 20:08 Operator: RLD-DGS
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:29:50 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1362367	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1118113	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	617597	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	347892	19.908	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
45) SURR12DCAd4	7.27	102	93116	19.250	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 96 %			
61) SURRd8Tolule	9.71	98	1365228	19.716	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99 %			
83) SURR4BrFBenz	13.25	95	574884	20.529	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	10546	Below	Cal #	45
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	13330	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.63	84	2987	Below	Cal #	65
21) tbutylalcohol	4.83	59	14463	18.8362	ug/L	86
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	5.64	43	8672	Below	Cal #	72
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	6.31	72	2954	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.65	42	5166	Below	Cal #	35

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\ICB1.D Vial: 18
Acq On : 29 Jan 2021 20:08 Operator: RLD-DGS
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:29:50 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	2973	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	8.61	88	8388	233.6229 ug/L #	79
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.55	43	4438	Below Cal #	41
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.64	43	6360	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	11.66	112	5460	N.D.	
73)	1Clhexane	11.62	91	2929	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	12.54	104	2621	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	13.14	55	6472	24.0638 ug/L #	38
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.65	91	2725	N.D.	
89)	2chlorotolue	13.65	91	2725	N.D.	
90)	4chlorotolue	13.91	91	3475	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.43	105	2540	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	14.83	146	3515	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	14.96	146	3760	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.50	91	3339	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JAN2921\ICB1.D Vial: 18
Acq On : 29 Jan 2021 20:08 Operator: RLD-DGS
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:29:50 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	2815	N.D.		
103)	Hexachlorobu	0.00	225	0	N.D.		
104)	Naphthalene	18.03	128	4843	N.D.		
105)	123Trichlben	18.33	180	2777	N.D.		

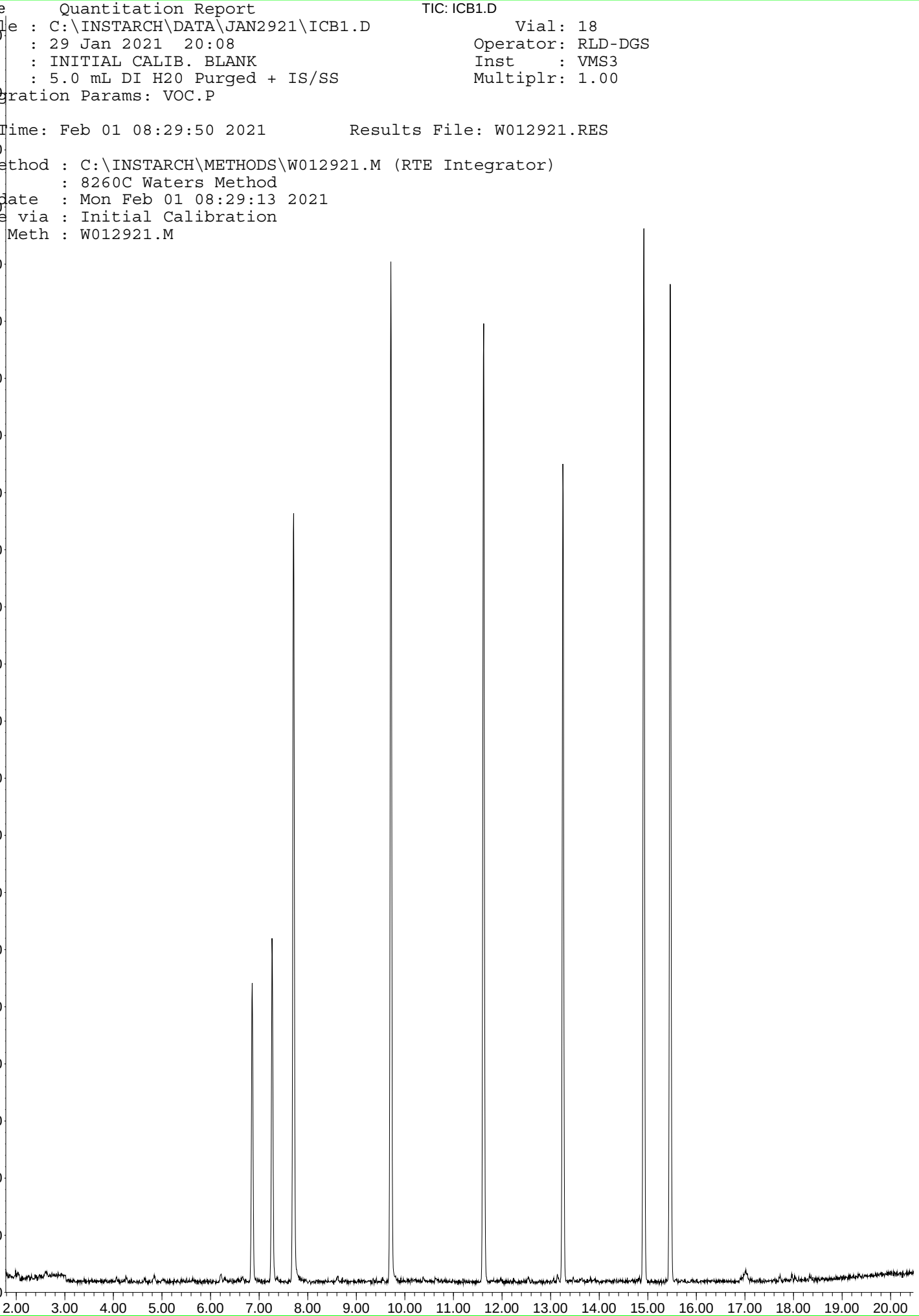
(#) = qualifier out of range (m) = manual integration

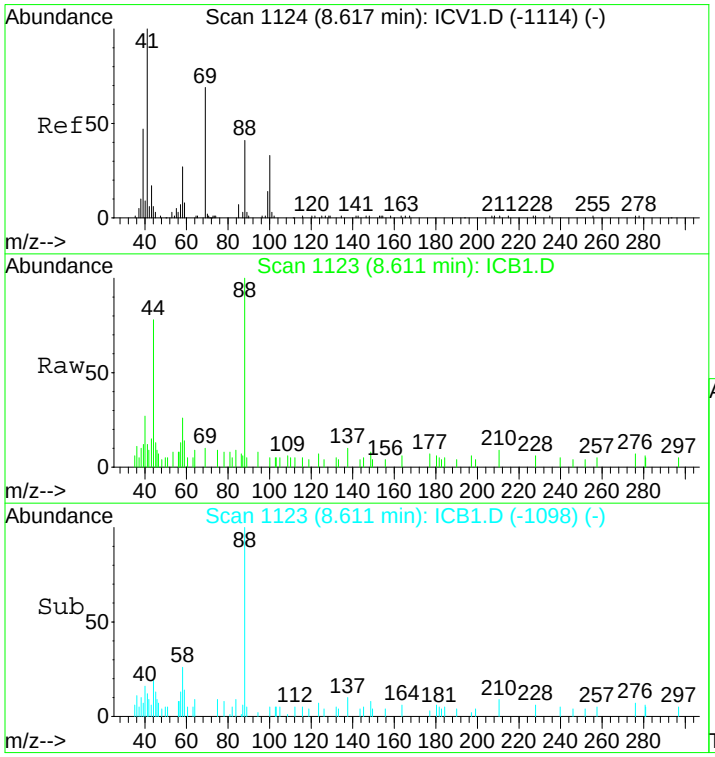
Abundance Quantitation Report TIC: ICB1.D

Data File : C:\INSTARCH\DATA\JAN2921\ICB1.D Vial: 18
Acq On : 29 Jan 2021 20:08 Operator: RLD-DGS
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 01 08:29:50 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

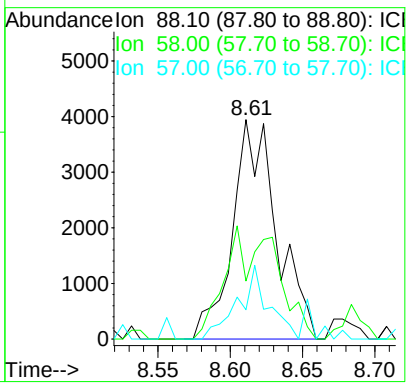




#55
14dioxane
Concen: 233.62 ug/L
RT: 8.61 min Scan# 1123
Delta R.T. -0.00 min
Lab File: ICB1.D
Acq: 29 Jan 2021 20:08

Tgt Ion: 88 Resp: 8388

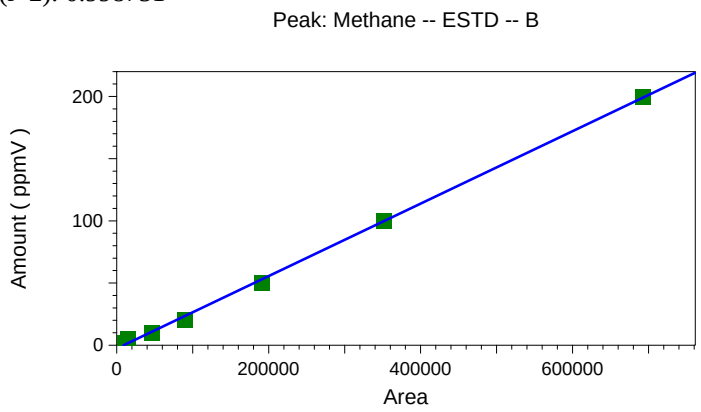
Ion	Ratio	Lower	Upper
88	100		
58	59.1	49.9	89.9
57	0.0	1.2	41.2#



Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121720.met
Print Time: Dec 17, 2020 12:51:30
User: KMT
Instrument: PVOC4

Methane (B)
Average RF: 0.000271249 RF StDev: 3.98267e-005 RF %RSD: 14.6827
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 0.000291229x - 2.65898
Goodness of fit (r^2): 0.998751



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	6598	15554	46371	89657	190739
RF	0.000303122	0.00032146071	0.000215652023	0.000223072375	0.0002621383
	158229767	7500321	894244	832339	14660347
Last Area					
Residual	2.73746	3.12921	-0.845592	-3.45173	-2.88973
Rep StDev					
Rep %RSD					
Rep 1 Area	6598	15554	46371	89657	190739
Rep 1 User	KMT	KMT	KMT	KMT	KMT
Rep 1 Data File	C:\Instarch\PVOC4\Data\121720icdg\001.dat	C:\Instarch\PVOC4\Data\121720icdg\002.dat	C:\Instarch\PVOC4\Data\121720icdg\003.dat	C:\Instarch\PVOC4\Data\121720icdg\004.dat	C:\Instarch\PVOC4\Data\121720icdg\005.dat
Rep 1 Sample ID	MEE PT1 - 2 ppmV	MEE PT2 - 5 ppmV	MEE PT3 - 10 ppmV	MEE PT4 - 20 ppmV	MEE PT5 - 50 ppmV
Rep 1 Calib. Time	Dec 17, 2020 11:19:45	Dec 17, 2020 11:20:05	Dec 17, 2020 11:20:21	Dec 17, 2020 11:20:37	Dec 17, 2020 11:20:59

	Level 6	Level 7
Amount	100	200
Area	351688	692156

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121720.met
Print Time: Dec 17, 2020 12:51:30
User: KMT
Instrument: PVOC4

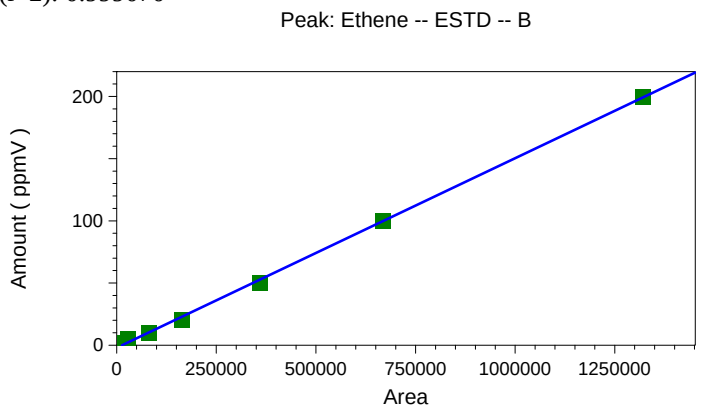
RF	0.000284342940333477	0.00028895220 1526823
Last Area Residual	0.237261	1.08313
Rep StDev		
Rep %RSD		
Rep 1 Area	351688	692156
Rep 1 User	KMT	KMT
Rep 1 Data File	C:\Instarch\PVOC4\Data\121720icdg\006.dat	C:\Instarch\PVOC4\Data\121720icdg\007.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Dec 17, 2020 11:26:34	Dec 17, 2020 11:31:40

RJ 01/04/2021

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121720.met
Print Time: Dec 17, 2020 12:51:46
User: KMT
Instrument: PVOC4

Ethene (B)
Average RF: 0.000146882 RF StDev: 2.06707e-005 RF %RSD: 14.0730
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 0.000152404x - 2.04051
Goodness of fit (r^2): 0.999070



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	11784	28782	81599	164558	358899
RF	0.000169721	0.00017371968	0.000122550521	0.000121537694	0.0001393149
	656483367	5914808	452469	916078	60476346
Last Area					
Residual	2.24458	2.65401	-0.395534	-3.03885	-2.65728
Rep StDev					
Rep %RSD					
Rep 1 Area	11784	28782	81599	164558	358899
Rep 1 User	KMT	KMT	KMT	KMT	KMT
Rep 1 Data File	C:\Instarch\P	C:\Instarch\PV	C:\Instarch\PVO	C:\Instarch\PVO	C:\Instarch\PV
	VOC4\Data\1	OC4\Data\1217	C4\Data\121720	C4\Data\121720	OC4\Data\121
	21720icdg\00	20icdg\002.dat	icdg\003.dat	icdg\004.dat	720icdg\005.d
	1.dat				at
Rep 1 Sample ID	MEE PT1 - 2	MEE PT2 - 5	MEE PT3 - 10	MEE PT4 - 20	MEE PT5 - 50
	ppmV	ppmV	ppmV	ppmV	ppmV
Rep 1 Calib. Time	Dec 17, 2020	Dec 17, 2020	Dec 17, 2020	Dec 17, 2020	Dec 17, 2020
	11:19:45	11:20:05	11:20:21	11:20:37	11:20:59

	Level 6	Level 7
Amount	100	200
Area	667612	1319784

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121720.met
Print Time: Dec 17, 2020 12:51:46
User: KMT
Instrument: PVOC4

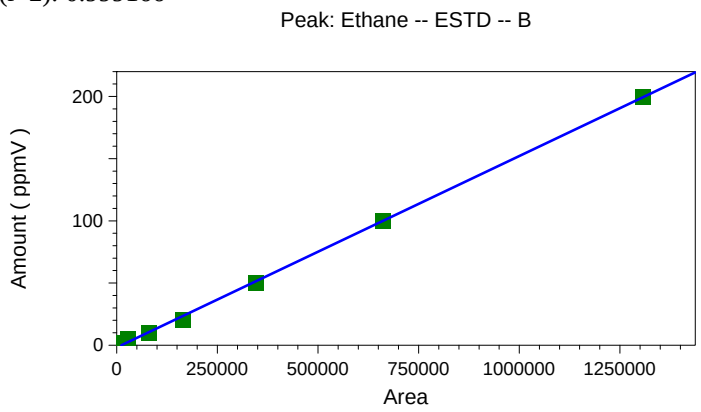
RF	0.000149787601181525	0.000151539948961345
Last Area Residual	0.29349	0.899589
Rep StDev		
Rep %RSD		
Rep 1 Area	667612	1319784
Rep 1 User	KMT	KMT
Rep 1 Data File	C:\Instarch\PVOC4\Data\121720icdg\006.dat	C:\Instarch\PVOC4\Data\121720icdg\007.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Dec 17, 2020 11:26:34	Dec 17, 2020 11:31:40

RJ 01/04/2021

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121720.met
Print Time: Dec 17, 2020 12:52:01
User: KMT
Instrument: PVOC4

Ethane (B)
Average RF: 0.000151663 RF StDev: 2.42326e-005 RF %RSD: 15.9779
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 0.000153899x - 1.77416
Goodness of fit (r^2): 0.999166



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	10854	27657	79302	164453	346450
RF	0.000184263	0.00018078605	0.000126100224	0.000121615294	0.0001443209
	865855906	7779224	4584	339416	69836917
Last Area					
Residual	2.10374	2.51777	-0.430372	-3.53507	-1.54431
Rep StDev					
Rep %RSD					
Rep 1 Area	10854	27657	79302	164453	346450
Rep 1 User	KMT	KMT	KMT	KMT	KMT
Rep 1 Data File	C:\Instarch\PVOC4\Data\121720icdg\001.dat	C:\Instarch\PVOC4\Data\121720icdg\002.dat	C:\Instarch\PVOC4\Data\121720icdg\003.dat	C:\Instarch\PVOC4\Data\121720icdg\004.dat	C:\Instarch\PVOC4\Data\121720icdg\005.dat
Rep 1 Sample ID	MEE PT1 - 2 ppmV	MEE PT2 - 5 ppmV	MEE PT3 - 10 ppmV	MEE PT4 - 20 ppmV	MEE PT5 - 50 ppmV
Rep 1 Calib. Time	Dec 17, 2020 11:19:45	Dec 17, 2020 11:20:05	Dec 17, 2020 11:20:21	Dec 17, 2020 11:20:37	Dec 17, 2020 11:20:59

	Level 6	Level 7
Amount	100	200
Area	660274	1306335

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121720.met
Print Time: Dec 17, 2020 12:52:01
User: KMT
Instrument: PVOC4

RF	0.000151452 27587335	0.00015310008 5353298
Last Area Residual	0.158344	0.729896
Rep StDev		
Rep %RSD		
Rep 1 Area	660274	1306335
Rep 1 User	KMT	KMT
Rep 1 Data File	C:\Instarch\PVOC4\Data\121720icdg\006.dat	C:\Instarch\PVOC4\Data\121720icdg\007.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Dec 17, 2020 11:26:34	Dec 17, 2020 11:31:40

RJ 01/04/2021

Sequence Summary Report

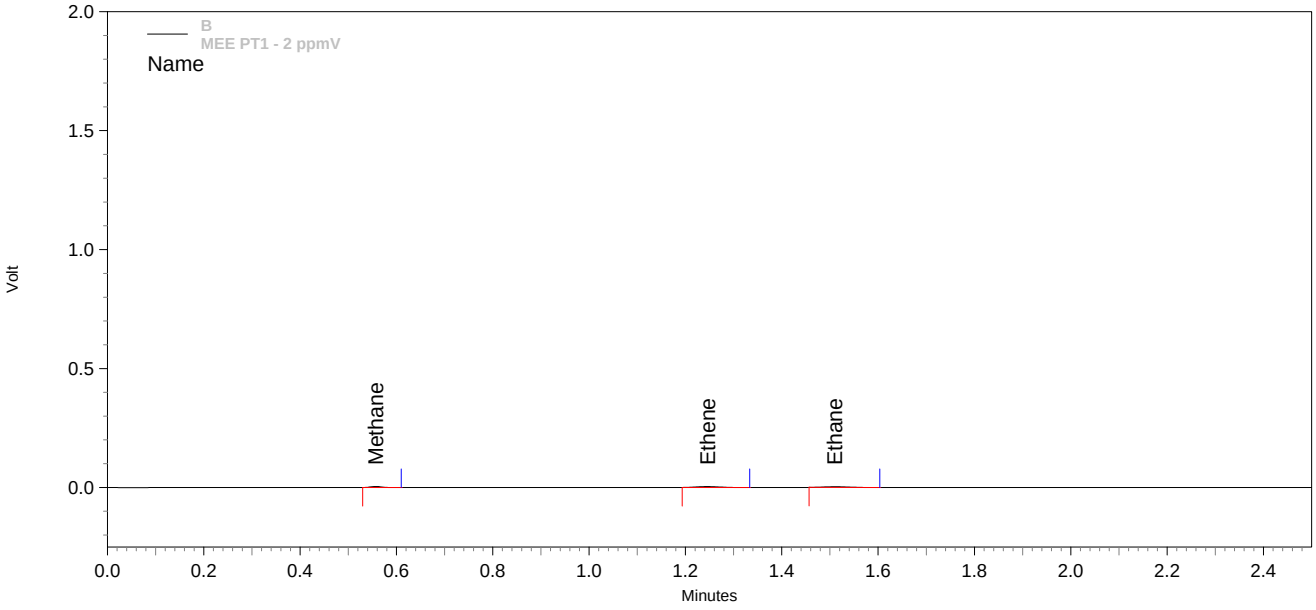
Sequence Filename: C:\InStarch\PVOC4\Sequence\121720 - MEE ICAL.seq
Instrument: PVOC4
Processing Date: Dec 17, 2020 12:14:07

'Run Number	Sample ID	Data Filename	Method Filename	Run Time
1	MEE PT1 - 2 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 10:17:50
2	MEE PT2 - 5 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 10:50:22
3	MEE PT3 - 10 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:04:41
4	MEE PT4 - 20 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:08:50
5	MEE PT5 - 50 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:16:03
6	MEE PT6 - 100 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:23:11
7	MEE PT7 - 200 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:27:57
8	ICV - 50 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 12:04:44
9	ICB	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 12:14:07

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\001.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT1 - 2 ppmV
Acquired: Dec 17, 2020 10:17:50
File Desc. 0.01 mL injection (Methane, Ethene, Ethane)



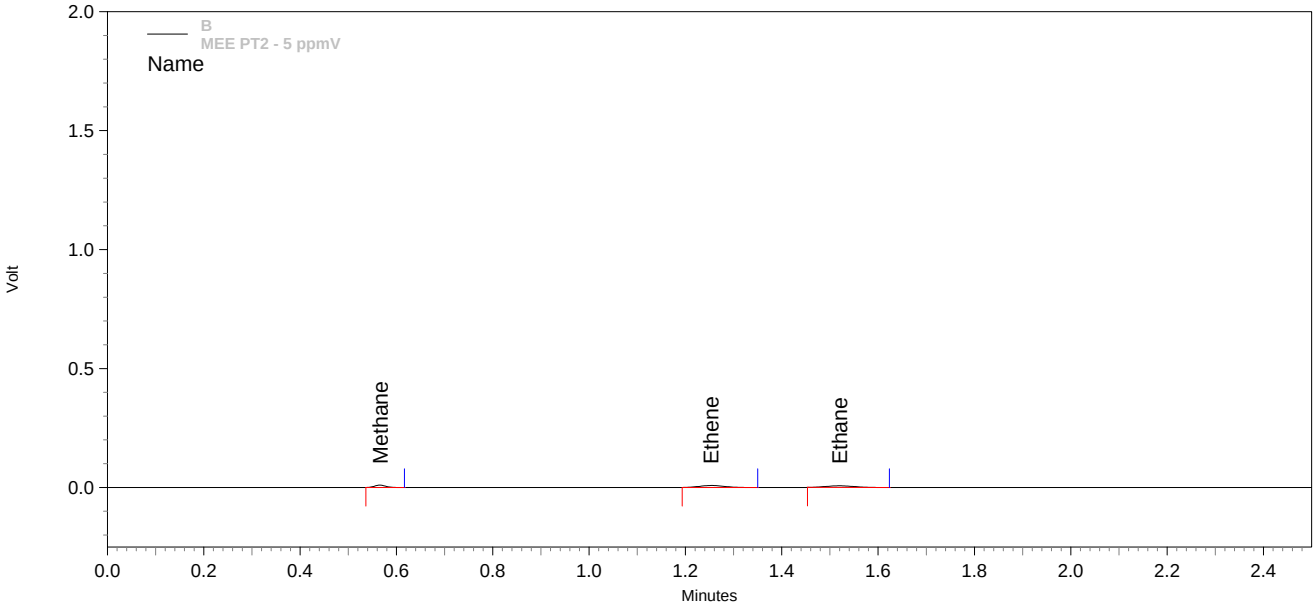
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.557**	**0.583**	**6598**	**2.000 CAL**	**ppmV**
2	**Ethene**	**1.247**	**1.273**	**11784**	**2.000 CAL**	**ppmV**
3	**Ethane**	**1.510**	**1.533**	**10854**	**2.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\002.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT2 - 5 ppmV
Acquired: Dec 17, 2020 10:50:22
File Desc. 0.025 mL injection (Methane, Ethene, Ethane)



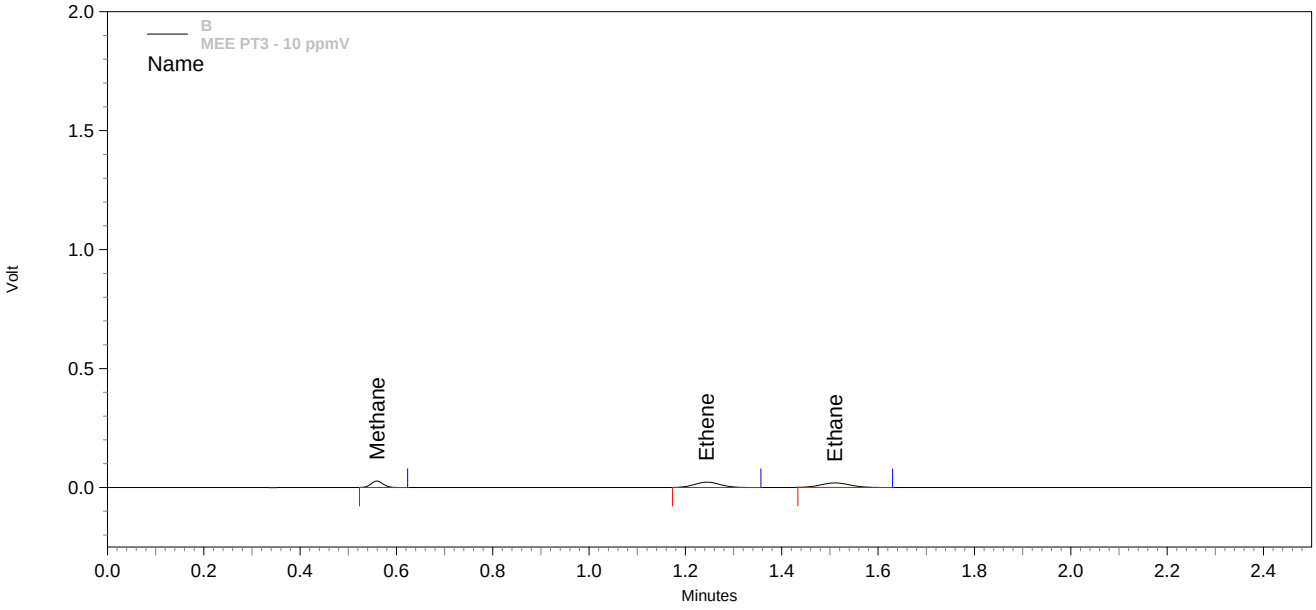
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.567**	**0.557**	**15554**	**5.000 CAL**	**ppmV**
2	**Ethene**	**1.253**	**1.247**	**28782**	**5.000 CAL**	**ppmV**
3	**Ethane**	**1.520**	**1.510**	**27657**	**5.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\003.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT3 - 10 ppmV
Acquired: Dec 17, 2020 11:04:41
File Desc. 0.05 mL injection (Methane, Ethene, Ethane)



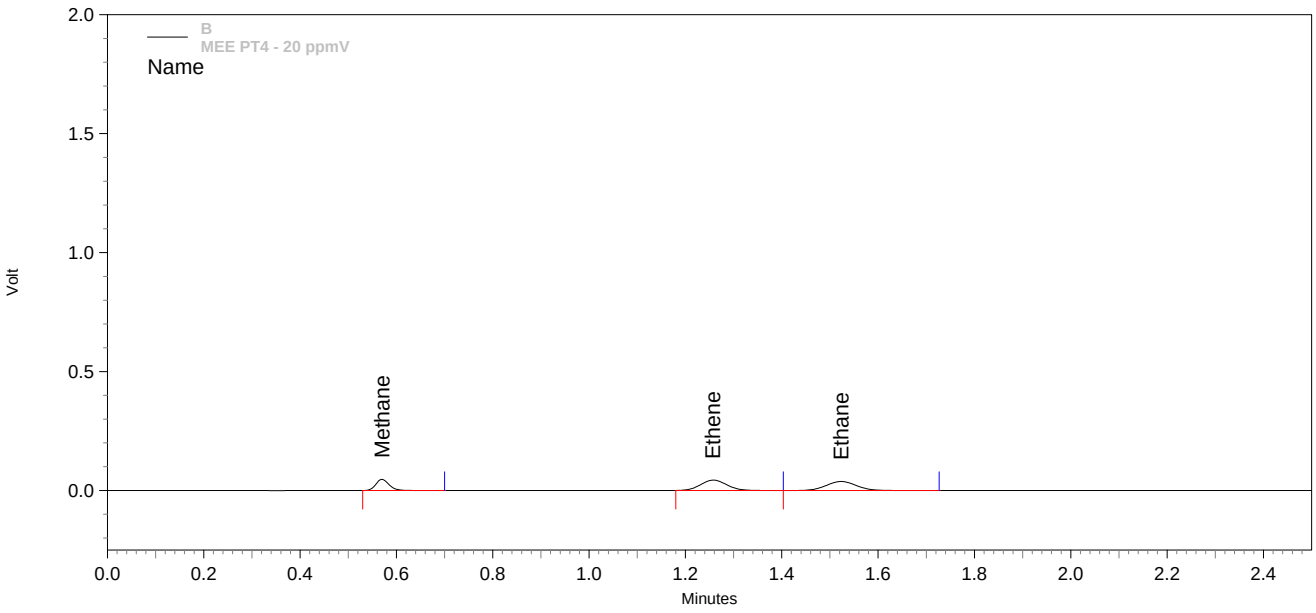
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.560**	**0.567**	**46371**	**10.000 CAL**	**ppmV**
2	**Ethene**	**1.243**	**1.253**	**81599**	**10.000 CAL**	**ppmV**
3	**Ethane**	**1.510**	**1.520**	**79302**	**10.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\004.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT4 - 20 ppmV
Acquired: Dec 17, 2020 11:08:50
File Desc. 0.1 mL injection (Methane, Ethene, Ethane)



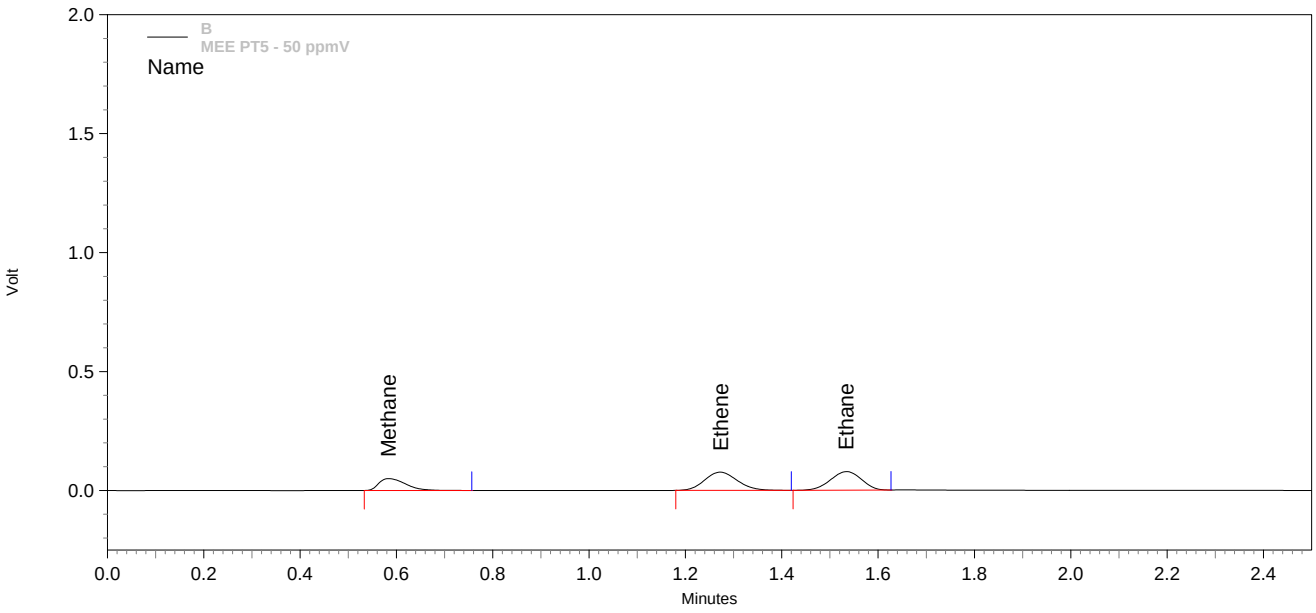
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.570**	**0.560**	**89657**	**20.000 CAL**	**ppmV**
2	**Ethene**	**1.257**	**1.243**	**164558**	**20.000 CAL**	**ppmV**
3	**Ethane**	**1.523**	**1.510**	**164453**	**20.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\005.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT5 - 50 ppmV
Acquired: Dec 17, 2020 11:16:03
File Desc. 0.25 mL injection (Methane, Ethene, Ethane)



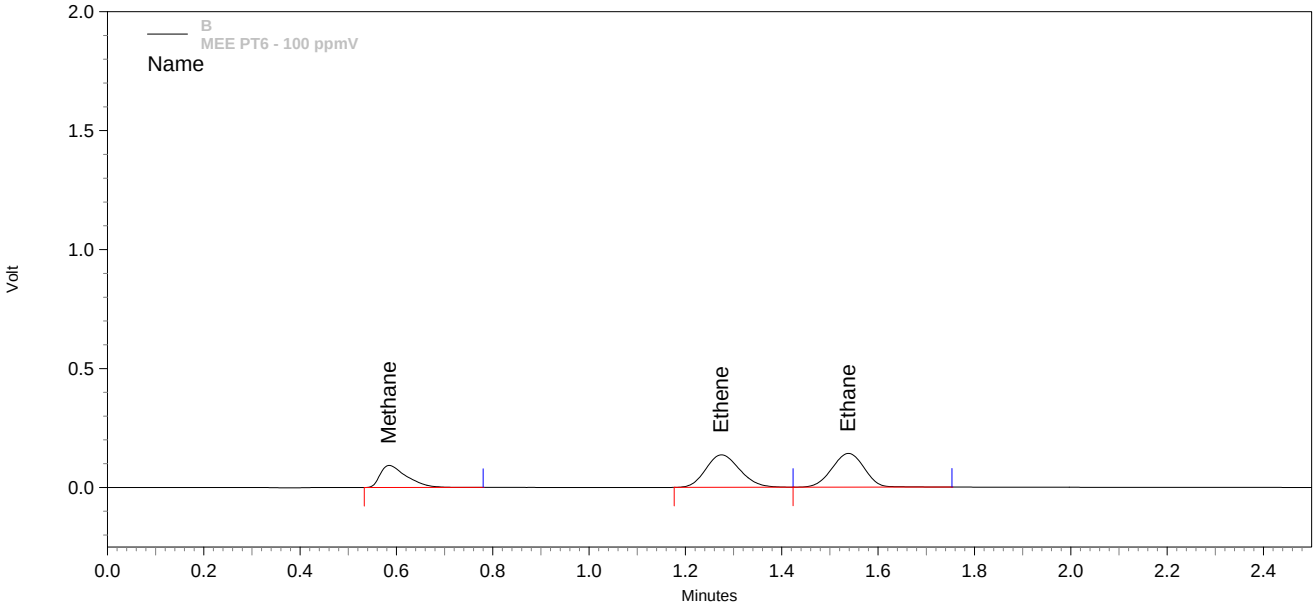
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.583**	**0.570**	**190739**	**50.000 CAL**	**ppmV**
2	**Ethene**	**1.273**	**1.257**	**358899**	**50.000 CAL**	**ppmV**
3	**Ethane**	**1.533**	**1.523**	**346450**	**50.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\006.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT6 - 100 ppmV
Acquired: Dec 17, 2020 11:23:11
File Desc. 0.5 mL injection (Methane, Ethene, Ethane)



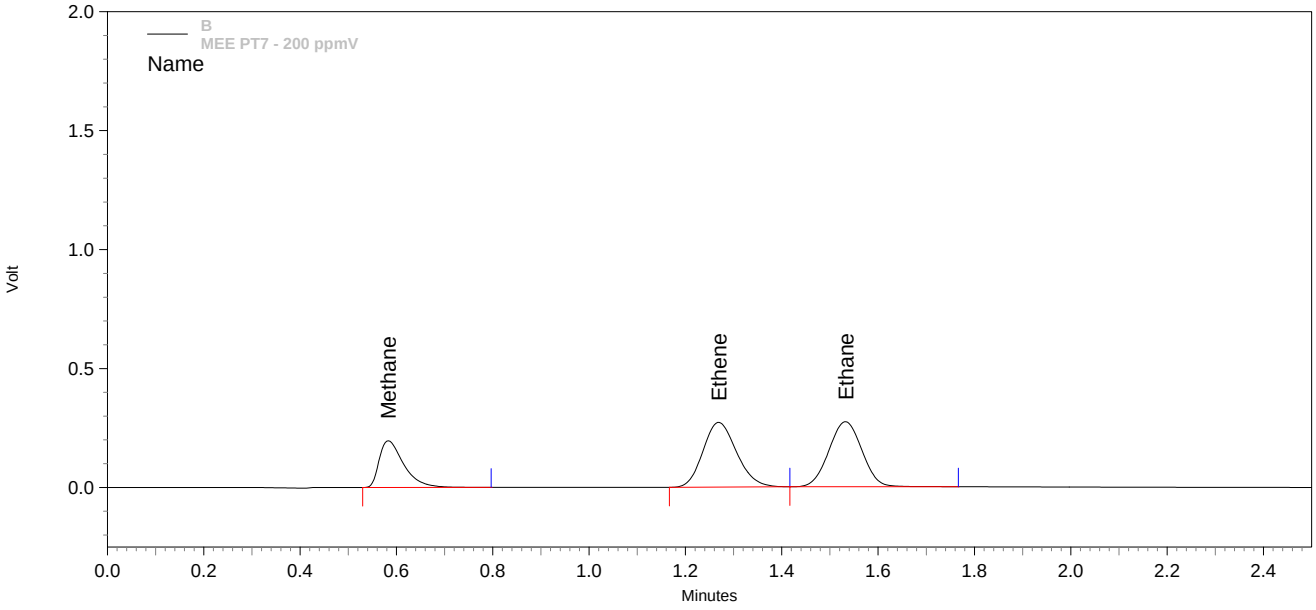
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.583**	**0.583**	**351688**	**100.000 CAL**	**ppmV**
2	**Ethene**	**1.273**	**1.273**	**667612**	**100.000 CAL**	**ppmV**
3	**Ethane**	**1.537**	**1.533**	**660274**	**100.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\007.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT7 - 200 ppmV
Acquired: Dec 17, 2020 11:27:57
File Desc. 1.0 mL injection (Methane, Ethene, Ethane)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.583**	**0.583**	**692156**	**200.000 CAL**	**ppmV**
2	**Ethene**	**1.270**	**1.273**	**1319784**	**200.000 CAL**	**ppmV**
3	**Ethane**	**1.533**	**1.537**	**1306335**	**200.000 CAL**	**ppmV**

QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\121720 - MEE ICAL.seq
User : KMT
Printed : Dec 17, 2020 12:37:01

File	Sample ID	Acquired
C:\Instarch\PVOC4\Data\121720icdg\008.dat	ICV - 50 ppmV	Dec 17, 2020 12:37:01

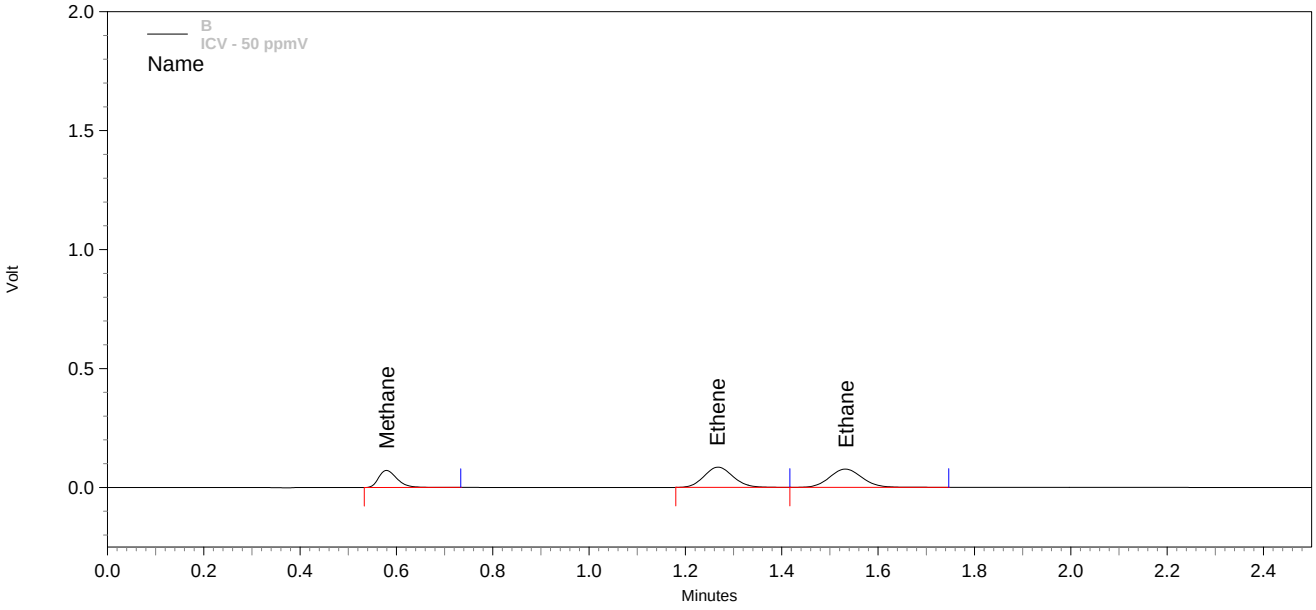
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	52.315	4.630	15.000	**Passed**
Ethene	50.000	51.903	3.806	15.000	**Passed**
Ethane	50.000	53.057	6.113	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\008.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: ICV - 50 ppmV
Acquired: Dec 17, 2020 12:04:44
File Desc. INITIAL CALIB. VERIF. - 0.25 mL injection (Methane, Ethene, Ethane)



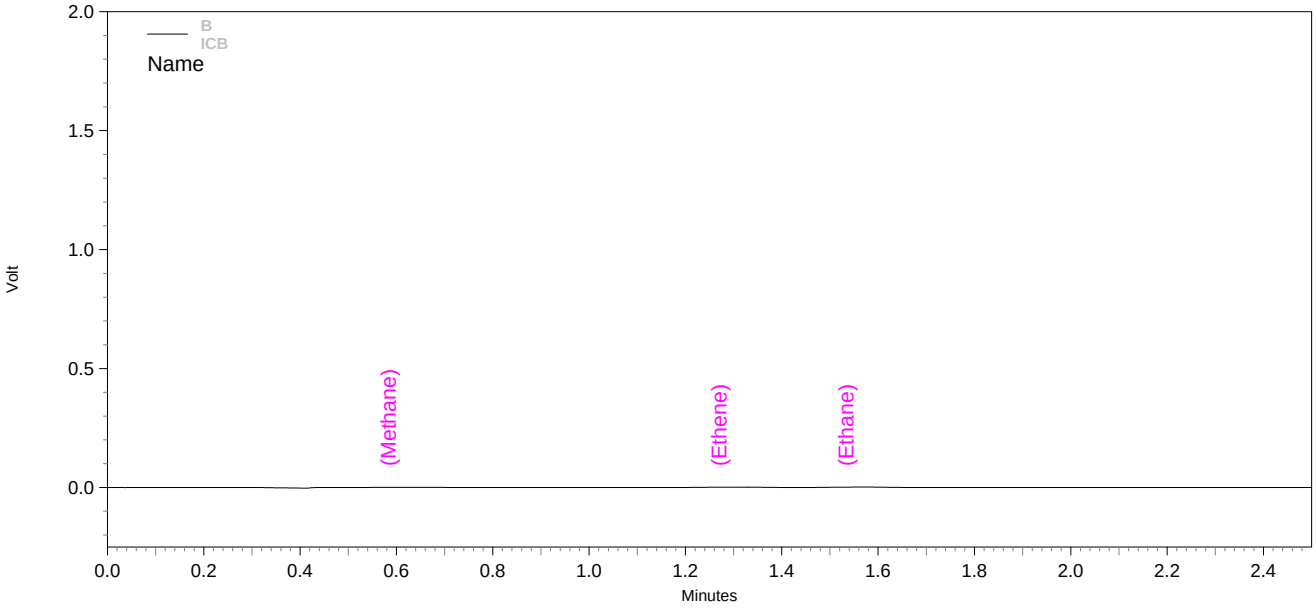
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.580**	**0.583**	**188766**	**52.315**	**ppmV**
2	**Ethene**	**1.267**	**1.270**	**353950**	**51.903**	**ppmV**
3	**Ethane**	**1.533**	**1.533**	**356277**	**53.057**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\009.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: ICB
Acquired: Dec 17, 2020 12:14:07
File Desc. INITIAL CALIB. BLANK. - 1.0 mL



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.583**		**0.000 BDL**	**ppmV**
	Ethene		**1.270**		**0.000 BDL**	**ppmV**
	Ethane		**1.533**		**0.000 BDL**	**ppmV**

VOLATILE ORGANIC ANALYSIS
CONTINUING CALIBRATION
DOCUMENTS

Data File : C:\Instarch\Data\FEB0221\BFB1.D Vial: 1
Acq On : 2 Feb 2021 10:39 Operator: RLD-DGS
Sample : 179112,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W012921.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.657 to 4.681 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.1	24070	PASS
75	95	30	60	54.1	54108	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	7.6	7600	PASS
173	174	0.00	2	0.6	529	PASS
174	95	50	100	83.2	83234	PASS
175	174	5	9	7.9	6536	PASS
176	174	95	101	98.2	81769	PASS
177	176	5	9	6.6	5360	PASS

W012921.M Thu Feb 04 08:17:12 2021

Evaluate Continuing Calibration Report

Data File : c:\instarch\data\feb0221\CCV-LCS1.D Vial: 2
Acq On : 2 Feb 2021 10:54 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 02 11:15:29 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	104	0.00
2	PT	Dichlorodi	0.2184	0.2398	-9.80	104	0.00
3	PT	Chloromethan	0.2920	0.2968	-1.64	102	0.00
4	PT	VinylChlorid	0.2871	0.3053	-6.34	104	0.00
5	PT	Bromomethane	0.1424	0.1636	-14.89	121	0.00
6	PT	Chloroethane	0.2046	0.2077	-1.52	106	0.00
7	T	Dichloroflmethane	0.5184	0.5353	-3.26	101	0.00
8	PT	Trichlorofma	0.3572	0.4068	-13.89	107	0.00
9	T	Ethylether	0.2421	0.2387	1.40	104	0.00
10	T	dichlorotfluoroethan	0.2922	0.3137	-7.36	105	0.00
11	T	propyleneoxide	0.0472	0.0521	-10.38	110	0.00
12	T	Acrolein	0.0486	0.0493	-1.44	106	0.00
13	PT	11dichlorthe	0.2318	0.2479	-6.95	103	0.00
14	PT	Trichlorotfluoroeth	0.2270	0.2612	-15.07	106	0.00
15	PT	Acetone	0.0714	0.0663#	7.14	96	0.00
16	T	Iodomethane	0.2041	0.2215	-8.53	114	0.00
17	PT	Carbon Dislf	0.7334	0.7646	-4.25	106	0.00
18	T	allylchloride	0.4527	0.4741	-4.73	107	0.00
19	PT	methylacetate	0.0566	0.0536#	5.30	111	0.00
20	PT	Methylchlorid	0.3445	0.2875	16.55	99	0.00
21	T	tbutylalcohol	0.0113	0.0076#	32.74#	69	0.00
22	T	Acrylonitrile	0.0995	0.1017	-2.21	106	0.00
23	PT	t12dichlorte	0.2691	0.2728	-1.37	105	0.00
24	PT	MtBE	0.7013	0.6846	2.38	102	0.00
25	T	Hexane	0.3904	0.4715	-20.77#	107	0.00
26	PT	11dichlorota	0.4777	0.4762	0.31	103	0.00
27	T	Vinylacetate	0.5018	0.5195	-3.53	107	0.00
28	T	chloroprene	0.4333	0.4671	-7.80	104	0.00
29	T	Diisopether	0.9394	0.9674	-2.98	104	0.00
30	T	ETBE	0.6571	0.6677	-1.61	109	0.00
31	T	22dichloropr	0.2935	0.3283	-11.86	122	0.00
32	PT	c12dichlorte	0.3031	0.2927	3.43	106	0.00
33	PT	2Butanone	0.0311	0.0299#	3.86	101	0.00
34	T	propionitrile	0.0324	0.0316	2.47	100	0.00
35	T	Ethylacetate	0.0119	0.0118#	0.84	106	0.00
36	T	methacrylonitrile	0.1297	0.1343	-3.55	109	0.00
37	T	Bromochlorma	0.1417	0.1340	5.43	100	0.00
38	T	Tetrahydofur	0.0901	0.0798	11.43	98	0.00
39	PT	Chloroform	0.4928	0.4766	3.29	104	0.00
40	PT	111trichlota	0.3510	0.3721	-6.01	105	0.00
41	S	SURRDibrflma	0.2565	0.2628	-2.46	105	0.00
42	PT	Cyclohexane	0.4574	0.4990	-9.09	101	0.00
43	PT	Carbtetraclo	0.2819	0.3081	-9.29	111	0.00
44	T	11dicloprope	0.1353	0.1407	-3.99	110	0.01
45	S	SURR12DCAd4	0.0710	0.0725	-2.11	110	0.00
46	PT	Benzene	1.0928	1.1123	-1.78	107	0.00
47	PT	12dichlorota	0.3869	0.3806	1.63	104	0.00
48	T	TAME	0.6459	0.6370	1.38	108	0.00

49	PT	trichloroete	0.2794	0.2756	1.36	106	0.00
50	PT	methylcyclohexane	0.5055	0.5513	-9.06	104	0.00
51	PT	12dicloropra	0.3115	0.3077	1.22	104	0.00
52	T	23Dicl1propene	0.4279	0.4154	2.92	104	0.00
53	T	Dibromometha	0.1720	0.1681	2.27	107	0.00
54	T	methylmethacrylate	0.2015	0.1955	2.98	105	0.00
55	T	14dioxane	0.0006	0.0004#	33.33#	79	0.00
56	PT	Bromodiclrma	0.3577	0.3426	4.22	103	0.00
57	T	2Nitropropane	0.0687	0.0688	-0.15	102	0.00
58	T	2CLEVE	0.1573	0.1560	0.83	103	0.00
59	PT	c13dicloproe	0.4162	0.4211	-1.18	109	0.00
60	PT	4Meth2Pentan	0.2665	0.2519	5.48	100	0.00
61	S	SURRd8Tolule	1.0165	1.0426	-2.57	107	0.00
62	PT	Toluene	0.7049	0.7123	-1.05	105	0.00
63	PT	t13Dicloprop	0.3286	0.3331	-1.37	111	0.00
64	T	ethylmethacrylate	0.3452	0.3446	0.17	102	0.00
65	PT	112Triclotha	0.2136	0.2151	-0.70	110	0.00
66	PT	Tetrachlorte	0.3016	0.3103	-2.88	104	0.00
67	T	13Diclorpropa	0.4457	0.4434	0.52	103	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	107	0.00
69	PT	2Hexanone	0.2282	0.2155	5.57	97	0.00
70	PT	Clorodibrmta	0.3164	0.2988	5.56	109	0.00
71	PT	12Dibrometha	0.2861	0.2840	0.73	110	0.00
72	PT	Chlorobenzen	0.9216	0.8930	3.10	102	0.00
73	T	1Clhexane	0.4481	0.4631	-3.35	107	0.00
74	T	1112Tetclota	0.2789	0.2691	3.51	108	0.00
75	PT	Ethylbenzene	1.4925	1.5165	-1.61	105	0.00
76	PT	m p-Xylene	0.5960	0.5954	0.10	104	0.00
77	PT	o-Xylene	0.5939	0.5700	4.02	98	0.00
78	PT	Styrene	0.9663	0.9483	1.86	99	0.00
79	PT	Bromoform	0.1969	0.1731	12.09	98	0.00
80	PT	Isopropylben	1.3995	1.4247	-1.80	100	0.00
81	T	cyclohexanone	0.0048	0.0030#	37.50#	64	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	108	0.00
83	S	SURR4BrFBenz	0.9069	0.8876	2.13	104	0.00
84	T	Bromobenzene	0.6664	0.6175	7.34	102	0.00
85	PT	1122Tetrclta	0.7521	0.6976	7.25	104	0.00
86	T	123Triclproa	0.8353	0.7951	4.81	102	0.00
87	T	14dichloro2butene	0.1863	0.1792	3.81	107	0.00
88	T	n-Propylbenz	3.0081	2.8987	3.64	100	0.00
89	T	2chlorotolue	1.7658	1.6727	5.27	100	0.00
90	T	4chlorotolue	2.0387	1.9979	2.00	103	0.00
91	T	135Trimebenz	2.0457	1.9983	2.32	100	0.00
92	T	tbutylbenzen	1.7670	1.7434	1.34	100	0.00
93	T	124Trimetben	2.0036	2.0009	0.13	103	0.00
94	T	sbutylbenzen	2.3729	2.4782	-4.44	101	0.00
95	PT	13Diclorbenz	1.1828	1.1351	4.03	105	0.00
96	T	pIsopropylto	2.1081	2.1761	-3.23	102	0.00
97	PT	14dichlorobe	1.2404	1.1738	5.37	105	0.00
98	PT	12dichlorobe	1.1299	1.0554	6.59	101	0.00
99	T	nButylbenzen	1.9267	1.9168	0.51	100	0.00
100	PT	12dibromo3cl	0.1177	0.1017	13.59	103	0.00
101	T	135Trichlorobenzene	0.8042	0.7698	4.28	100	0.00
102	PT	124Trichlobe	0.6609	0.6666	-0.86	111	0.00
103	T	Hexachlorobu	0.3180	0.3293	-3.55	102	0.00
104	T	Naphthalene	1.5080	1.4773	2.04	101	0.00
105	T	123Trichlben	0.5930	0.5606	5.46	103	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W012921.M Thu Feb 04 08:31:24 2021

Evaluate Continuing Calibration Report

Data File : c:\instarch\data\feb0221\CCV-LCS1.D Vial: 2
Acq On : 2 Feb 2021 10:54 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 02 11:15:29 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	104	0.00
2	PT	Dichlorodi	10.0000	10.9786	-9.79	104	0.00
3	PT	Chloromethan	10.0000	10.1639	-1.64	102	0.00
4	PT	VinylChlorid	10.0000	10.6335	-6.33	104	0.00
5	PT	Bromomethane	10.0000	11.4875	-14.88	121	0.00
6	PT	Chloroethane	10.0000	10.1528	-1.53	106	0.00
7	T	Dichloroflmethane	10.0000	10.3255	-3.25	101	0.00
8	PT	Trichlorofma	10.0000	11.3894	-13.89	107	0.00
9	T	Ethylether	10.0000	9.8634	1.37	104	0.00
10	T	dichlorotfluoroethan	10.0000	10.7363	-7.36	105	0.00
11	T	propyleneoxide	100.0000	110.5204	-10.52	110	0.00
12	T	Acrolein	50.0000	50.6688	-1.34	106	0.00
13	PT	11dichlorthe	10.0000	10.6950	-6.95	103	0.00
14	PT	Trichlorotfluoroeth	20.0000	23.0080	-15.04	106	0.00
15	PT	Acetone	100.0000	100.3372	-0.34	96	0.00
16	T	Iodomethane	20.0000	19.2843	3.58	114	0.00
17	PT	Carbon Dislf	20.0000	20.8507	-4.25	106	0.00
18	T	allylchloride	20.0000	20.9444	-4.72	107	0.00
19	PT	methylacetate	10.0000	9.4678	5.32	111	0.00
20	PT	Methylchlorid	10.0000	9.6241	3.76	99	0.00
21	T	tbutylalcohol	500.0000	336.5528	32.69#	69	0.00
22	T	Acrylonitrile	50.0000	51.1317	-2.26	106	0.00
23	PT	t12dichlorte	10.0000	10.1362	-1.36	105	0.00
24	PT	MtBE	10.0000	9.7626	2.37	102	0.00
25	T	Hexane	20.0000	24.1535	-20.77#	107	0.00
26	PT	11dichlorota	10.0000	9.9681	0.32	103	0.00
27	T	Vinylacetate	100.0000	103.7415	-3.74	107	0.00
28	T	chloroprene	20.0000	21.5611	-7.81	104	0.00
29	T	Diisopether	10.0000	10.2982	-2.98	104	0.00
30	T	ETBE	10.0000	10.1606	-1.61	109	0.00
31	T	22dichloropr	10.0000	11.1860	-11.86	122	0.00
32	PT	c12dichlorte	10.0000	9.6564	3.44	106	0.00
33	PT	2Butanone	100.0000	96.2004	3.80	101	0.00
34	T	propionitrile	100.0000	97.3298	2.67	100	0.00
35	T	Ethylacetate	50.0000	49.6989	0.60	106	0.00
36	T	methacrylonitrile	20.0000	20.7059	-3.53	109	0.00
37	T	Bromochlorma	10.0000	9.4581	5.42	100	0.00
38	T	Tetrahydofur	100.0000	94.2620	5.74	98	0.00
39	PT	Chloroform	10.0000	9.6726	3.27	104	0.00
40	PT	111trichlota	10.0000	10.6016	-6.02	105	0.00
41	S	SURRDibrflma	20.0000	20.4895	-2.45	105	0.00
42	PT	Cyclohexane	10.0000	10.9094	-9.09	101	0.00
43	PT	Carbtetraclo	10.0000	10.9303	-9.30	111	0.00
44	T	11dicloprope	10.0000	10.3971	-3.97	110	0.01
45	S	SURR12DCAd4	20.0000	20.4284	-2.14	110	0.00
46	PT	Benzene	10.0000	10.1785	-1.78	107	0.00
47	PT	12dichlorota	10.0000	9.8378	1.62	104	0.00
48	T	TAME	10.0000	9.8621	1.38	108	0.00

49	PT	trichloroete	10.0000	9.8636	1.36	106	0.00
50	PT	methylcyclohexane	10.0000	10.9064	-9.06	104	0.00
51	PT	12dicloropra	10.0000	9.8770	1.23	104	0.00
52	T	23Dicl1propene	10.0000	9.7070	2.93	104	0.00
53	T	Dibromometha	10.0000	9.7715	2.29	107	0.00
54	T	methylmethacrylate	10.0000	9.6994	3.01	105	0.00
55	T	14dioxane	500.0000	349.9733	30.01#	79	0.00
56	PT	Bromodiclrma	10.0000	9.5767	4.23	103	0.00
57	T	2Nitropropane	100.0000	100.1376	-0.14	102	0.00
58	T	2CLEVE	50.0000	49.5697	0.86	103	0.00
59	PT	c13dicloproe	10.0000	10.1176	-1.18	109	0.00
60	PT	4Meth2Pentan	100.0000	97.3805	2.62	100	0.00
61	S	SURRd8Tolule	20.0000	20.5129	-2.56	107	0.00
62	PT	Toluene	10.0000	10.1046	-1.05	105	0.00
63	PT	t13Dicloprop	10.0000	10.1361	-1.36	111	0.00
64	T	ethylmethacrylate	20.0000	19.9643	0.18	102	0.00
65	PT	112Triclotha	10.0000	10.0685	-0.69	110	0.00
66	PT	Tetrachlorte	10.0000	10.2869	-2.87	104	0.00
67	T	13Diclorpropa	10.0000	9.9479	0.52	103	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	107	0.00
69	PT	2Hexanone	100.0000	94.4661	5.53	97	0.00
70	PT	Clorodibrmta	10.0000	9.4417	5.58	109	0.00
71	PT	12Dibrometha	10.0000	9.9275	0.72	110	0.00
72	PT	Chlorobenzen	10.0000	9.6898	3.10	102	0.00
73	T	1Clhexane	10.0000	10.3357	-3.36	107	0.00
74	T	1112Tetclota	10.0000	9.6483	3.52	108	0.00
75	PT	Ethylbenzene	10.0000	10.1603	-1.60	105	0.00
76	PT	m p-Xylene	20.0000	19.9812	0.09	104	0.00
77	PT	o-Xylene	10.0000	9.5979	4.02	98	0.00
78	PT	Styrene	10.0000	9.8140	1.86	99	0.00
79	PT	Bromoform	10.0000	8.7912	12.09	98	0.00
80	PT	Isopropylben	10.0000	10.1800	-1.80	100	0.00
81	T	cyclohexanone	200.0000	122.7626	38.62#	64	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	108	0.00
83	S	SURR4BrFBenz	20.0000	19.5754	2.12	104	0.00
84	T	Bromobenzene	10.0000	9.2660	7.34	102	0.00
85	PT	1122Tetrclta	10.0000	9.2750	7.25	104	0.00
86	T	123Triclproa	10.0000	9.5187	4.81	102	0.00
87	T	14dichloro2butene	10.0000	9.6184	3.82	107	0.00
88	T	n-Propylbenz	10.0000	9.6365	3.64	100	0.00
89	T	2chlorotolue	10.0000	9.4727	5.27	100	0.00
90	T	4chlorotolue	10.0000	9.7999	2.00	103	0.00
91	T	135Trimebenz	10.0000	9.7681	2.32	100	0.00
92	T	tbutylbenzen	10.0000	9.8667	1.33	100	0.00
93	T	124Trimetben	10.0000	9.9864	0.14	103	0.00
94	T	sbutylbenzen	10.0000	10.4440	-4.44	101	0.00
95	PT	13Diclorbenz	10.0000	9.5970	4.03	105	0.00
96	T	pIsopropylto	10.0000	10.3228	-3.23	102	0.00
97	PT	14dichlorobe	10.0000	9.4631	5.37	105	0.00
98	PT	12dichlorobe	10.0000	9.3404	6.60	101	0.00
99	T	nButylbenzen	10.0000	9.9486	0.51	100	0.00
100	PT	12dibromo3cl	10.0000	8.6413	13.59	103	0.00
101	T	135Trichlorobenzene	10.0000	9.5731	4.27	100	0.00
102	PT	124Trichlobe	10.0000	10.0851	-0.85	111	0.00
103	T	Hexachlorobu	10.0000	10.3568	-3.57	102	0.00
104	T	Naphthalene	10.0000	9.7969	2.03	101	0.00
105	T	123Trichlben	10.0000	9.4538	5.46	103	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W012921.M Thu Feb 04 08:32:00 2021

Quantitation Report

Data File : c:\instarch\data\feb0221\CCV-LCS1.D Vial: 2
Acq On : 2 Feb 2021 10:54 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 11:15:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1356085	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1125791	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	652349	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	356404	20.489	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	98359	20.428	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102	%		
61) SURRd8Tolule	9.71	98	1413867	20.513	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103	%		
83) SURR4BrFBenz	13.25	95	579032	19.575	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98	%		
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	162574	10.9786	ug/L	99
3) Chloromethan	2.10	50	201221	10.1639	ug/L	99
4) VinylChlorid	2.25	62	207003	10.6335	ug/L	97
5) Bromomethane	2.73	94	110942	11.4875	ug/L	94
6) Chloroethane	2.89	64	140851	10.1528	ug/L	99
7) Dichloroflmethane	3.20	67	362968	10.3255	ug/L	100
8) Trichlorofma	3.28	101	275852	11.3894	ug/L	99
9) Ethylether	3.71	59	161878	9.8634	ug/L	97
10) dichlorotfluoroethan	3.73	67	212684	10.7363	ug/L	96
11) propyleneoxide	3.77	58	353331	110.5204	ug/L	97
12) Acrolein	3.84	56	167139	50.6688	ug/L	97
13) 11dichlorthe	4.00	96	168112	10.6950	ug/L	99
14) Trichlorotfluoroeth	4.04	101	354169	23.0080	ug/L	96
15) Acetone	4.07	43	449228	100.3372	ug/L	100
16) Iodomethane	4.17	142	300379	19.2843	ug/L	99
17) Carbon Dislf	4.26	76	1036828	20.8507	ug/L	99
18) allylchloride	4.48	41	642899	20.9444	ug/L	98
19) methylacetate	4.53	74	36342	9.4678	ug/L	87
20) Methylchlorid	4.64	84	194943	9.6241	ug/L	99
21) tbutylalcohol	4.84	59	257224	336.5528	ug/L	100
22) Acrylonitrile	4.94	53	344929	51.1317	ug/L	99
23) t12dichlorte	5.01	96	184970	10.1362	ug/L	97
24) MtBE	5.05	73	464219	9.7626	ug/L	98
25) Hexane	5.41	57	639430	24.1535	ug/L	99
26) 11dichlorota	5.54	63	322868	9.9681	ug/L	98
27) Vinylacetate	5.63	43	3522099	103.7415	ug/L	100
28) chloroprene	5.67	53	633476	21.5611	ug/L	98
29) Diisopether	5.69	45	655966	10.2982	ug/L	92
30) ETBE	6.14	59	452696	10.1606	ug/L	100
31) 22dichloropr	6.28	77	222631	11.1860	ug/L	98
32) c12dichlorte	6.27	96	198431	9.6564	ug/L	98
33) 2Butanone	6.29	72	202693	96.2004	ug/L	99
34) propionitrile	6.33	54	214078	97.3298	ug/L	99
35) Ethylacetate	6.39	88	40031	49.6989	ug/L	98
36) methacrylonitrile	6.54	67	182097	20.7059	ug/L	96
37) Bromochlorma	6.55	128	90859	9.4581	ug/L	94
38) Tetrahydofur	6.65	42	541091	94.2620	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : c:\instarch\data\feb0221\CCV-LCS1.D Vial: 2
Acq On : 2 Feb 2021 10:54 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 11:15:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	323187	9.6726	ug/L	99
40)	111trichlota	6.91	97	252310	10.6016	ug/L	97
42)	Cyclohexane	7.00	56	338360	10.9094	ug/L	95
43)	Carbtetraclo	7.13	119	208921	10.9303	ug/L	99
44)	11dicloprope	7.13	110	95406	10.3971	ug/L	98
46)	Benzene	7.36	78	754174	10.1785	ug/L	100
47)	12dichlorota	7.36	62	258088	9.8378	ug/L	99
48)	TAME	7.54	73	431888	9.8621	ug/L	99
49)	trichloroete	8.17	95	186850	9.8636	ug/L	97
50)	methylcyclohexane	8.44	83	373780	10.9064	ug/L	99
51)	12dicloropra	8.43	63	208634	9.8770	ug/L	99
52)	23Dicl1propene	8.49	75	281634	9.7070	ug/L	96
53)	Dibromometha	8.57	93	113952	9.7715	ug/L	98
54)	methylmethacrylate	8.60	69	132545	9.6994	ug/L	99
55)	14dioxane	8.61	88	13067	349.9733	ug/L	89
56)	Bromodiclrma	8.78	83	232288	9.5767	ug/L	98
57)	2Nitropropane	9.04	43	466417	100.1376	ug/L	97
58)	2CLEVE	9.16	63	528759	49.5697	ug/L	100
59)	c13dicloproe	9.35	75	285522	10.1176	ug/L	98
60)	4Meth2Pentan	9.55	43	1707945	97.3805	ug/L	99
62)	Toluene	9.80	92	482965	10.1046	ug/L	99
63)	t13Dicloprop	10.06	75	225862	10.1361	ug/L	97
64)	ethylmethacrylate	10.20	69	467316	19.9643	ug/L	96
65)	112Triclotha	10.30	83	145822	10.0685	ug/L	98
66)	Tetrachlorte	10.53	166	210398	10.2869	ug/L	98
67)	13Diclorpropa	10.52	76	300614	9.9479	ug/L	99
69)	2Hexanone	10.64	43	1213283	94.4661	ug/L	99
70)	Clorodibrmta	10.82	129	168174	9.4417	ug/L	97
71)	12Dibrometha	10.98	107	159886	9.9275	ug/L	96
72)	Chlorobenzen	11.66	112	502674	9.6898	ug/L	98
73)	1Clhexane	11.64	91	260682	10.3357	ug/L	99
74)	1112Tetclota	11.77	131	151477	9.6483	ug/L	95
75)	Ethylbenzene	11.82	91	853605	10.1603	ug/L	100
76)	m p-Xylene	11.99	106	670324	19.9812	ug/L	99
77)	o-Xylene	12.53	106	320854	9.5979	ug/L	97
78)	Styrene	12.55	104	533796	9.8140	ug/L	100
79)	Bromoform	12.78	173	97444	8.7912	ug/L	99
80)	Isopropylben	13.06	105	801969	10.1800	ug/L	99
81)	cyclohexanone	13.14	55	33244	122.7626	ug/L	94
84)	Bromobenzene	13.47	156	201406	9.2660	ug/L	98
85)	1122Tetrclta	13.44	83	227537	9.2750	ug/L	100
86)	123Triclproa	13.50	75	259340	9.5187	ug/L	95
87)	14dichloro2butene	13.52	53	58458	9.6184	ug/L	99
88)	n-Propylbenz	13.65	91	945488	9.6365	ug/L	100
89)	2chlorotolue	13.76	91	545604	9.4727	ug/L	97
90)	4chlorotolue	13.91	91	651666	9.7999	ug/L	99
91)	135Trimebenz	13.90	105	651784	9.7681	ug/L	99
92)	tbutylbenzen	14.37	119	568658	9.8667	ug/L	99
93)	124Trimetben	14.44	105	652645	9.9864	ug/L	98
94)	sbutylbenzen	14.69	105	808341	10.4440	ug/L	100
95)	13Diclorbenz	14.83	146	370243	9.5970	ug/L	99
96)	pIsopropylto	14.90	119	709788	10.3228	ug/L	98
97)	14dichlorobe	14.96	146	382848	9.4631	ug/L	99
98)	12dichlorobe	15.49	146	344234	9.3404	ug/L	98
99)	nButylbenzen	15.50	91	625196	9.9486	ug/L	99
100)	12dibromo3cl	16.59	157	33179	8.6413	ug/L	96
101)	135Trichlorobenzene	16.91	180	251103	9.5731	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : c:\instarch\data\feb0221\CCV-LCS1.D Vial: 2
Acq On : 2 Feb 2021 10:54 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 11:15:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	217416	10.0851	ug/L	95
103)	Hexachlorobu	17.97	225	107414	10.3568	ug/L	95
104)	Naphthalene	18.03	128	481868	9.7969	ug/L	99
105)	123Trichlben	18.34	180	182866	9.4538	ug/L	92

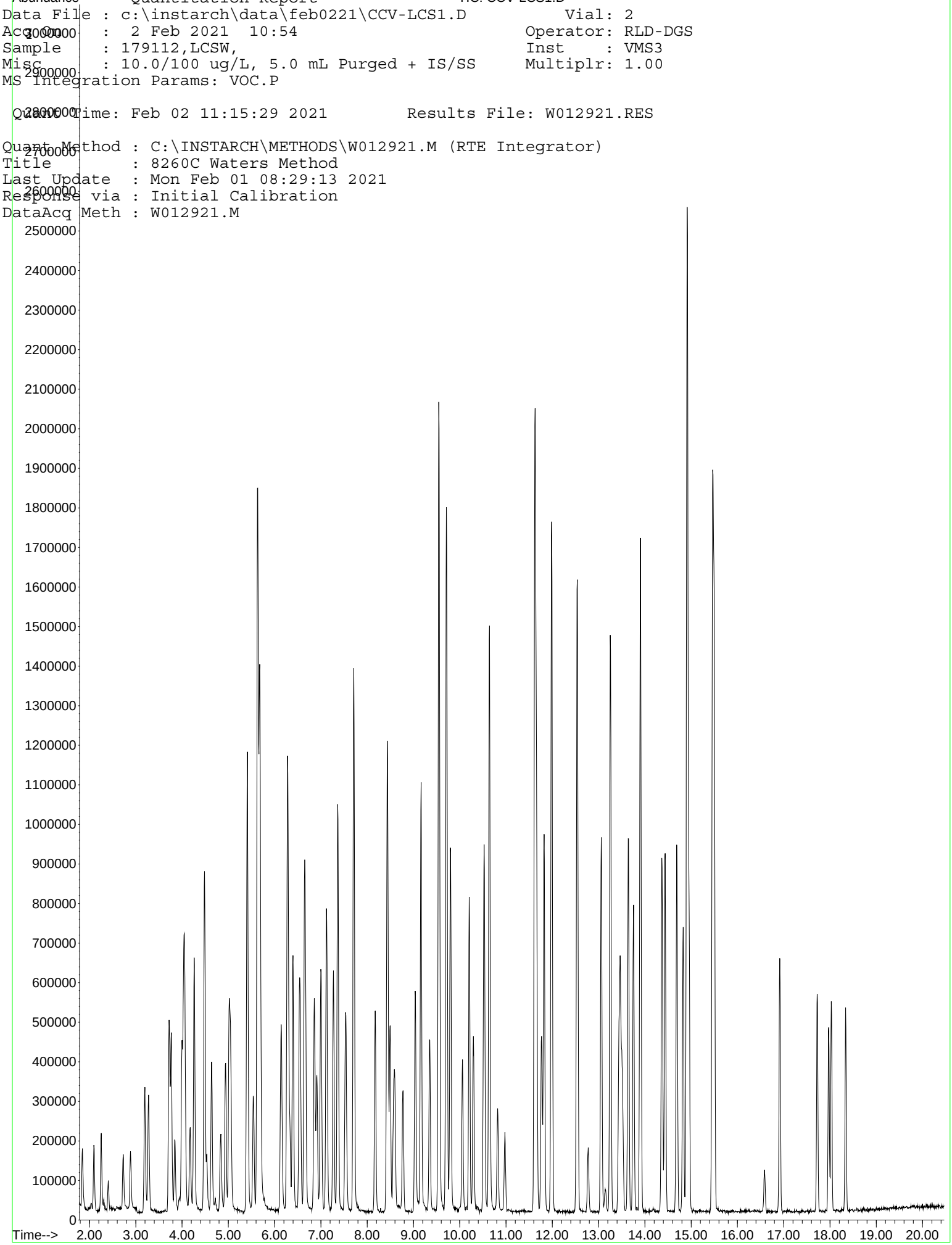
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCV-LCS1.D

Data File : c:\instarch\data\feb0221\CCV-LCS1.D Vial: 2
Acq On : 2 Feb 2021 10:54 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 11:15:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Evaluate Continuing Calibration Report

Data File : c:\instarch\data\feb0221\CCVF-LCSD1.D Vial: 24
Acq On : 2 Feb 2021 22:00 Operator: RLD-DGS
Sample : 179112,LCSDW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 02 22:21:31 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	102	0.00
2	PT	Dichlorodi	0.2184	0.2589	-18.54	111	0.00
3	PT	Chloromethan	0.2920	0.3266	-11.85	111	0.00
4	PT	VinylChlorid	0.2871	0.3312	-15.36	111	0.00
5	PT	Bromomethane	0.1424	0.1796	-26.12	130	0.00
6	PT	Chloroethane	0.2046	0.2170	-6.06	109	0.00
7	T	Dichloroflmethane	0.5184	0.5831	-12.48	109	0.00
8	PT	Trichlorofma	0.3572	0.4112	-15.12	106	0.00
9	T	Ethylether	0.2421	0.2532	-4.58	108	0.00
10	T	dichlorotfluoroethan	0.2922	0.3250	-11.23	107	0.00
11	T	propyleneoxide	0.0472	0.0544	-15.25	113	0.00
12	T	Acrolein	0.0486	0.0456	6.17	97	0.00
13	PT	11dichlorthe	0.2318	0.2525	-8.93	103	0.00
14	PT	Trichlorotfluoroeth	0.2270	0.2644	-16.48	105	0.00
15	PT	Acetone	0.0714	0.0729#	-2.10	104	0.00
16	T	Iodomethane	0.2041	0.2536	-24.25	128	0.00
17	PT	Carbon Dislf	0.7334	0.7882	-7.47	108	0.00
18	T	allylchloride	0.4527	0.4876	-7.71	108	0.00
19	PT	methylacetate	0.0566	0.0558#	1.41	114	0.00
20	PT	Methylchlorid	0.3445	0.3114	9.61	105	0.00
21	T	tbutylalcohol	0.0113	0.0131#	-15.93	117	0.00
22	T	Acrylonitrile	0.0995	0.1085	-9.05	111	0.00
23	PT	t12dichlorte	0.2691	0.2813	-4.53	106	0.00
24	PT	MtBE	0.7013	0.7585	-8.16	111	0.00
25	T	Hexane	0.3904	0.4463	-14.32	99	0.00
26	PT	11dichlorota	0.4777	0.5205	-8.96	111	0.00
27	T	Vinylacetate	0.5018	0.2201	56.14#	45#	0.00
28	T	chloroprene	0.4333	0.4920	-13.55	108	0.00
29	T	Diisopether	0.9394	0.9765	-3.95	104	0.00
30	T	ETBE	0.6571	0.7181	-9.28	115	0.00
31	T	22dichloropr	0.2935	0.2762	5.89	101	0.00
32	PT	c12dichlorte	0.3031	0.3174	-4.72	114	0.00
33	PT	2Butanone	0.0311	0.0324#	-4.18	108	0.00
34	T	propionitrile	0.0324	0.0361	-11.42	113	0.00
35	T	Ethylacetate	0.0119	0.0117#	1.68	104	0.00
36	T	methacrylonitrile	0.1297	0.1391	-7.25	111	0.00
37	T	Bromochlorma	0.1417	0.1410	0.49	104	0.00
38	T	Tetrahydofur	0.0901	0.0917	-1.78	111	0.00
39	PT	Chloroform	0.4928	0.5088	-3.25	110	0.00
40	PT	111trichlota	0.3510	0.4040	-15.10	113	0.00
41	S	SURRDibrflma	0.2565	0.2605	-1.56	103	0.00
42	PT	Cyclohexane	0.4574	0.5412	-18.32	108	0.00
43	PT	Carbtetraclo	0.2819	0.3140	-11.39	111	0.00
44	T	11dicloprope	0.1353	0.1411	-4.29	108	0.00
45	S	SURR12DCAd4	0.0710	0.0692	2.54	104	0.00
46	PT	Benzene	1.0928	1.1824	-8.20	112	0.00
47	PT	12dichlorota	0.3869	0.4068	-5.14	110	0.00
48	T	TAME	0.6459	0.7032	-8.87	118	0.00

49	PT	trichloroete	0.2794	0.3415	-22.23	129	0.00
50	PT	methylcyclohexane	0.5055	0.5800	-14.74	108	0.00
51	PT	12dicloropra	0.3115	0.3234	-3.82	108	0.00
52	T	23Dicl1propene	0.4279	0.4520	-5.63	112	0.00
53	T	Dibromometha	0.1720	0.1774	-3.14	111	0.00
54	T	methylmethacrylate	0.2015	0.2067	-2.58	109	0.00
55	T	14dioxane	0.0006	0.0007#	-16.67	148	0.00
56	PT	Bromodiclrma	0.3577	0.3624	-1.31	107	0.00
57	T	2Nitropropane	0.0687	0.0653	4.95	96	0.00
58	T	2CLEVE	0.1573	0.1690	-7.44	110	0.00
59	PT	c13dicloproe	0.4162	0.4253	-2.19	109	0.00
60	PT	4Meth2Pentan	0.2665	0.2789	-4.65	109	0.00
61	S	SURRd8Tolule	1.0165	1.0394	-2.25	105	0.00
62	PT	Toluene	0.7049	0.7609	-7.94	111	0.00
63	PT	t13Dicloprop	0.3286	0.3344	-1.77	110	0.00
64	T	ethylmethacrylate	0.3452	0.3721	-7.79	108	0.00
65	PT	112Triclotha	0.2136	0.2236	-4.68	112	0.00
66	PT	Tetrachlorte	0.3016	0.3186	-5.64	105	0.00
67	T	13Diclorpropa	0.4457	0.4682	-5.05	107	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	107	0.00
69	PT	2Hexanone	0.2282	0.2444	-7.10	110	0.00
70	PT	Clorodibrmta	0.3164	0.2891	8.63	106	0.00
71	PT	12Dibrometha	0.2861	0.2902	-1.43	112	0.00
72	PT	Chlorobenzen	0.9216	0.9364	-1.61	108	0.00
73	T	1Clhexane	0.4481	0.4803	-7.19	111	0.00
74	T	1112Tetclota	0.2789	0.2871	-2.94	116	0.00
75	PT	Ethylbenzene	1.4925	1.5808	-5.92	110	0.00
76	PT	m p-Xylene	0.5960	0.6152	-3.22	108	0.00
77	PT	o-Xylene	0.5939	0.6030	-1.53	104	0.00
78	PT	Styrene	0.9663	0.9934	-2.80	103	0.00
79	PT	Bromoform	0.1969	0.1580	19.76	90	0.00
80	PT	Isopropylben	1.3995	1.4845	-6.07	105	0.00
81	T	cyclohexanone	0.0048	0.0045#	6.25	99	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	109	0.00
83	S	SURR4BrFBenz	0.9069	0.9099	-0.33	108	0.00
84	T	Bromobenzene	0.6664	0.6552	1.68	110	0.00
85	PT	1122Tetrclta	0.7521	0.5819	22.63	88	0.00
86	T	123Triclproa	0.8353	0.8105	2.97	105	0.00
87	T	14dichloro2butene	0.1863	0.1703	8.59	102	0.00
88	T	n-Propylbenz	3.0081	3.0218	-0.46	105	0.00
89	T	2chlorotolue	1.7658	1.8023	-2.07	109	0.00
90	T	4chlorotolue	2.0387	2.0750	-1.78	108	0.00
91	T	135Trimebenz	2.0457	2.1417	-4.69	109	0.00
92	T	tbutylbenzen	1.7670	1.8712	-5.90	109	0.00
93	T	124Trimetben	2.0036	2.0915	-4.39	109	0.00
94	T	sbutylbenzen	2.3729	2.6639	-12.26	109	0.00
95	PT	13Diclorbenz	1.1828	1.1865	-0.31	111	0.00
96	T	pIsopropylto	2.1081	2.2728	-7.81	107	0.00
97	PT	14dichlorobe	1.2404	1.2177	1.83	110	0.00
98	PT	12dichlorobe	1.1299	1.1173	1.12	108	0.00
99	T	nButylbenzen	1.9267	2.0433	-6.05	108	0.00
100	PT	12dibromo3cl	0.1177	0.1110	5.69	114	0.00
101	T	135Trichlorobenzene	0.8042	0.8165	-1.53	107	0.00
102	PT	124Trichlobe	0.6609	0.6704	-1.44	113	0.00
103	T	Hexachlorobu	0.3180	0.3372	-6.04	105	0.00
104	T	Naphthalene	1.5080	1.6109	-6.82	112	0.00
105	T	123Trichlben	0.5930	0.6080	-2.53	113	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W012921.M Thu Feb 04 08:57:59 2021

Evaluate Continuing Calibration Report

Data File : c:\instarch\data\feb0221\CCVF-LCSD1.D Vial: 24
Acq On : 2 Feb 2021 22:00 Operator: RLD-DGS
Sample : 179112,LCSDW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 02 22:21:31 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	102	0.00
2	PT	Dichlorodi	10.0000	11.8553	-18.55	111	0.00
3	PT	Chloromethan	10.0000	11.1851	-11.85	111	0.00
4	PT	VinylChlorid	10.0000	11.5340	-15.34	111	0.00
5	PT	Bromomethane	10.0000	12.6102	-26.10	130	0.00
6	PT	Chloroethane	10.0000	10.6075	-6.07	109	0.00
7	T	Dichloroflmethane	10.0000	11.2466	-12.47	109	0.00
8	PT	Trichlorofma	10.0000	11.5103	-15.10	106	0.00
9	T	Ethylether	10.0000	10.4627	-4.63	108	0.00
10	T	dichlorotfluoroethan	10.0000	11.1229	-11.23	107	0.00
11	T	propyleneoxide	100.0000	115.3696	-15.37	113	0.00
12	T	Acrolein	50.0000	46.9169	6.17	97	0.00
13	PT	11dichlorthe	10.0000	10.8935	-8.93	103	0.00
14	PT	Trichlorotfluoroeth	20.0000	23.2948	-16.47	105	0.00
15	PT	Acetone	100.0000	111.2594	-11.26	104	0.00
16	T	Iodomethane	20.0000	21.6713	-8.36	128	0.00
17	PT	Carbon Dislf	20.0000	21.4950	-7.48	108	0.00
18	T	allylchloride	20.0000	21.5431	-7.72	108	0.00
19	PT	methylacetate	10.0000	9.8634	1.37	114	0.00
20	PT	Methylchlorid	10.0000	10.4954	-4.95	105	0.00
21	T	tbutylalcohol	500.0000	582.0515	-16.41	117	0.00
22	T	Acrylonitrile	50.0000	54.5427	-9.09	111	0.00
23	PT	t12dichlorte	10.0000	10.4510	-4.51	106	0.00
24	PT	MtBE	10.0000	10.8150	-8.15	111	0.00
25	T	Hexane	20.0000	22.8622	-14.31	99	0.00
26	PT	11dichlorota	10.0000	10.8955	-8.96	111	0.00
27	T	Vinylacetate	100.0000	40.0289	59.97#	45	0.00
28	T	chloroprene	20.0000	22.7072	-13.54	108	0.00
29	T	Diisopether	10.0000	10.3944	-3.94	104	0.00
30	T	ETBE	10.0000	10.9282	-9.28	115	0.00
31	T	22dichloropr	10.0000	9.4084	5.92	101	0.00
32	PT	c12dichlorte	10.0000	10.4740	-4.74	114	0.00
33	PT	2Butanone	100.0000	104.2318	-4.23	108	0.00
34	T	propionitrile	100.0000	111.3005	-11.30	113	0.00
35	T	Ethylacetate	50.0000	49.3885	1.22	104	0.00
36	T	methacrylonitrile	20.0000	21.4501	-7.25	111	0.00
37	T	Bromochlorma	10.0000	9.9548	0.45	104	0.00
38	T	Tetrahydofur	100.0000	109.4344	-9.43	111	0.00
39	PT	Chloroform	10.0000	10.3255	-3.25	110	0.00
40	PT	111trichlota	10.0000	11.5088	-15.09	113	0.00
41	S	SURRDibrflma	20.0000	20.3082	-1.54	103	0.00
42	PT	Cyclohexane	10.0000	11.8306	-18.31	108	0.00
43	PT	Carbtetraclo	10.0000	11.1387	-11.39	111	0.00
44	T	11dicloprope	10.0000	10.4241	-4.24	108	0.00
45	S	SURR12DCAd4	20.0000	19.4821	2.59	104	0.00
46	PT	Benzene	10.0000	10.8203	-8.20	112	0.00
47	PT	12dichlorota	10.0000	10.5149	-5.15	110	0.00
48	T	TAME	10.0000	10.8877	-8.88	118	0.00

49	PT	trichloroete	10.0000	12.2237	-22.24	129	0.00
50	PT	methylcyclohexane	10.0000	11.4745	-14.75	108	0.00
51	PT	12dicloropra	10.0000	10.3815	-3.82	108	0.00
52	T	23Dicl1propene	10.0000	10.5621	-5.62	112	0.00
53	T	Dibromometha	10.0000	10.3134	-3.13	111	0.00
54	T	methylmethacrylate	10.0000	10.2551	-2.55	109	0.00
55	T	14dioxane	500.0000	653.3430	-30.67	148	0.00
56	PT	Bromodiclrma	10.0000	10.1298	-1.30	107	0.00
57	T	2Nitropropane	100.0000	95.0230	4.98	96	0.00
58	T	2CLEVE	50.0000	53.7171	-7.43	110	0.00
59	PT	c13dicloproe	10.0000	10.2198	-2.20	109	0.00
60	PT	4Meth2Pentan	100.0000	108.9520	-8.95	109	0.00
61	S	SURRd8Tolule	20.0000	20.4496	-2.25	105	0.00
62	PT	Toluene	10.0000	10.7939	-7.94	111	0.00
63	PT	t13Dicloprop	10.0000	10.1739	-1.74	110	0.00
64	T	ethylmethacrylate	20.0000	21.5598	-7.80	108	0.00
65	PT	112Triclotha	10.0000	10.4661	-4.66	112	0.00
66	PT	Tetrachlorte	10.0000	10.5606	-5.61	105	0.00
67	T	13Diclorpropa	10.0000	10.5053	-5.05	107	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	107	0.00
69	PT	2Hexanone	100.0000	107.1237	-7.12	110	0.00
70	PT	Clorodibrmta	10.0000	9.1373	8.63	106	0.00
71	PT	12Dibrometha	10.0000	10.1416	-1.42	112	0.00
72	PT	Chlorobenzen	10.0000	10.1606	-1.61	108	0.00
73	T	1Clhexane	10.0000	10.7186	-7.19	111	0.00
74	T	1112Tetclota	10.0000	10.2929	-2.93	116	0.00
75	PT	Ethylbenzene	10.0000	10.5916	-5.92	110	0.00
76	PT	m p-Xylene	20.0000	20.6454	-3.23	108	0.00
77	PT	o-Xylene	10.0000	10.1526	-1.53	104	0.00
78	PT	Styrene	10.0000	10.2810	-2.81	103	0.00
79	PT	Bromoform	10.0000	8.0260	19.74	90	0.00
80	PT	Isopropylben	10.0000	10.6072	-6.07	105	0.00
81	T	cyclohexanone	200.0000	188.1491	5.93	99	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	109	0.00
83	S	SURR4BrFBenz	20.0000	20.0664	-0.33	108	0.00
84	T	Bromobenzene	10.0000	9.8322	1.68	110	0.00
85	PT	1122Tetrclta	10.0000	7.7370	22.63	88	0.00
86	T	123Triclproa	10.0000	9.7028	2.97	105	0.00
87	T	14dichloro2butene	10.0000	9.1373	8.63	102	0.00
88	T	n-Propylbenz	10.0000	10.0457	-0.46	105	0.00
89	T	2chlorotolue	10.0000	10.2063	-2.06	109	0.00
90	T	4chlorotolue	10.0000	10.1781	-1.78	108	0.00
91	T	135Trimebenz	10.0000	10.4690	-4.69	109	0.00
92	T	tbutylbenzen	10.0000	10.5900	-5.90	109	0.00
93	T	124Trimetben	10.0000	10.4386	-4.39	109	0.00
94	T	sbutylbenzen	10.0000	11.2265	-12.26	109	0.00
95	PT	13Diclorbenz	10.0000	10.0312	-0.31	111	0.00
96	T	pIsopropylto	10.0000	10.7817	-7.82	107	0.00
97	PT	14dichlorobe	10.0000	9.8170	1.83	110	0.00
98	PT	12dichlorobe	10.0000	9.8889	1.11	108	0.00
99	T	nButylbenzen	10.0000	10.6054	-6.05	108	0.00
100	PT	12dibromo3cl	10.0000	9.4294	5.71	114	0.00
101	T	135Trichlorobenzene	10.0000	10.1529	-1.53	107	0.00
102	PT	124Trichlobe	10.0000	10.1428	-1.43	113	0.00
103	T	Hexachlorobu	10.0000	10.6036	-6.04	105	0.00
104	T	Naphthalene	10.0000	10.6824	-6.82	112	0.00
105	T	123Trichlben	10.0000	10.2530	-2.53	113	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W012921.M Thu Feb 04 09:00:31 2021

Quantitation Report

Data File : c:\instarch\data\feb0221\CCVF-LCSD1.D Vial: 24
Acq On : 2 Feb 2021 22:00 Operator: RLD-DGS
Sample : 179112,LCSDW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 22:21:31 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1334578	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1127833	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	659199	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	347648	20.308	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	92315	19.482	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97	%		
61) SURRd8Tolule	9.72	98	1387149	20.450	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.25	95	599788	20.066	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	172772	11.8553	ug/L	96
3) Chloromethan	2.09	50	217925	11.1851	ug/L	97
4) VinylChlorid	2.25	62	220973	11.5340	ug/L	97
5) Bromomethane	2.73	94	119853	12.6102	ug/L	98
6) Chloroethane	2.89	64	144824	10.6075	ug/L	97
7) Dichloroflmethane	3.19	67	389075	11.2466	ug/L	99
8) Trichlorofma	3.28	101	274357	11.5103	ug/L	100
9) Ethylether	3.71	59	168990	10.4627	ug/L	99
10) dichlorotfluoroethan	3.73	67	216847	11.1229	ug/L	98
11) propyleneoxide	3.77	58	362984	115.3696	ug/L	98
12) Acrolein	3.84	56	152308	46.9169	ug/L	94
13) 11dichlorthe	4.00	96	168517	10.8935	ug/L	92
14) Trichlorotfluoroeth	4.04	101	352897	23.2948	ug/L	99
15) Acetone	4.07	43	486777	111.2594	ug/L	98
16) Iodomethane	4.17	142	338441	21.6713	ug/L	99
17) Carbon Dislf	4.26	76	1051914	21.4950	ug/L	99
18) allylchloride	4.48	41	650789	21.5431	ug/L	98
19) methylacetate	4.54	74	37260	9.8634	ug/L	90
20) Methylchlorid	4.64	84	207813	10.4954	ug/L	98
21) tbutylalcohol	4.83	59	437801	582.0515	ug/L	97
22) Acrylonitrile	4.94	53	362104	54.5427	ug/L	97
23) t12dichlorte	5.02	96	187691	10.4510	ug/L	95
24) MtBE	5.05	73	506106	10.8150	ug/L	97
25) Hexane	5.41	57	595645	22.8622	ug/L	100
26) 11dichlorota	5.54	63	347307	10.8955	ug/L	98
27) Vinylacetate	5.63	43	1468747	40.0289	ug/L	93
28) chloroprene	5.67	53	656568	22.7072	ug/L	99
29) Diisopether	5.69	45	651595	10.3944	ug/L	93
30) ETBE	6.14	59	479173	10.9282	ug/L	99
31) 22dichloropr	6.27	77	184283	9.4084	ug/L	97
32) c12dichlorte	6.27	96	211818	10.4740	ug/L	95
33) 2Butanone	6.29	72	216132	104.2318	ug/L	98
34) propionitrile	6.33	54	240924	111.3005	ug/L	97
35) Ethylacetate	6.40	88	39150	49.3885	ug/L	93
36) methacrylonitrile	6.54	67	185650	21.4501	ug/L	97
37) Bromochlorma	6.55	128	94113	9.9548	ug/L	93
38) Tetrahydofur	6.65	42	611964	109.4344	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : c:\instarch\data\feb0221\CCVF-LCSD1.D Vial: 24
Acq On : 2 Feb 2021 22:00 Operator: RLD-DGS
Sample : 179112,LCSDW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 22:21:31 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	339532	10.3255	ug/L	99
40)	111trichlota	6.91	97	269557	11.5088	ug/L	99
42)	Cyclohexane	7.00	56	361112	11.8306	ug/L	98
43)	Carbtetraclo	7.13	119	209529	11.1387	ug/L	96
44)	11dicloprope	7.12	110	94137	10.4241	ug/L	98
46)	Benzene	7.36	78	789013	10.8203	ug/L	99
47)	12dichlorota	7.36	62	271476	10.5149	ug/L	99
48)	TAME	7.53	73	469240	10.8877	ug/L	96
49)	trichloroete	8.18	95	227887	12.2237	ug/L	97
50)	methylcyclohexane	8.44	83	387013	11.4745	ug/L	99
51)	12dicloropra	8.43	63	215811	10.3815	ug/L	97
52)	23Dicl1propene	8.50	75	301584	10.5621	ug/L	99
53)	Dibromometha	8.57	93	118364	10.3134	ug/L	98
54)	methylmethacrylate	8.60	69	137916	10.2551	ug/L	96
55)	14dioxane	8.62	88	24654	653.3430	ug/L	90
56)	Bromodiclrma	8.77	83	241806	10.1298	ug/L	98
57)	2Nitropropane	9.04	43	435575	95.0230	ug/L	97
58)	2CLEVE	9.16	63	563912	53.7171	ug/L	99
59)	c13dicloproe	9.35	75	283831	10.2198	ug/L	96
60)	4Meth2Pentan	9.55	43	1861026	108.9520	ug/L	99
62)	Toluene	9.80	92	507727	10.7939	ug/L	100
63)	t13Dicloprop	10.06	75	223109	10.1739	ug/L	99
64)	ethylmethacrylate	10.20	69	496660	21.5598	ug/L	97
65)	112Triclotha	10.30	83	149176	10.4661	ug/L	98
66)	Tetrachlorte	10.53	166	212569	10.5606	ug/L	99
67)	13Diclorpropa	10.52	76	312425	10.5053	ug/L	100
69)	2Hexanone	10.64	43	1378348	107.1237	ug/L	99
70)	Clorodibrmta	10.81	129	163047	9.1373	ug/L	99
71)	12Dibrometha	10.97	107	163630	10.1416	ug/L	96
72)	Chlorobenzen	11.66	112	528056	10.1606	ug/L	98
73)	1Clhexane	11.64	91	270831	10.7186	ug/L	99
74)	1112Tetclota	11.77	131	161891	10.2929	ug/L	97
75)	Ethylbenzene	11.82	91	891457	10.5916	ug/L	100
76)	m p-Xylene	11.99	106	693861	20.6454	ug/L	98
77)	o-Xylene	12.53	106	340015	10.1526	ug/L	100
78)	Styrene	12.55	104	560214	10.2810	ug/L	99
79)	Bromoform	12.78	173	89124	8.0260	ug/L	99
80)	Isopropylben	13.06	105	837133	10.6072	ug/L	100
81)	cyclohexanone	13.15	55	51043	188.1491	ug/L	91
84)	Bromobenzene	13.47	156	215958	9.8322	ug/L	96
85)	1122Tetrclta	13.44	83	191799	7.7370	ug/L	99
86)	123Triclproa	13.50	75	267131	9.7028	ug/L	96
87)	14dichloro2butene	13.52	53	56117	9.1373	ug/L	95
88)	n-Propylbenz	13.64	91	995987	10.0457	ug/L	98
89)	2chlorotolue	13.76	91	594027	10.2063	ug/L	99
90)	4chlorotolue	13.91	91	683921	10.1781	ug/L	99
91)	135Trimebenz	13.90	105	705892	10.4690	ug/L	100
92)	tbutylbenzen	14.37	119	616754	10.5900	ug/L	100
93)	124Trimetben	14.44	105	689366	10.4386	ug/L	99
94)	sbutylbenzen	14.69	105	878023	11.2265	ug/L	99
95)	13Diclorbenz	14.83	146	391058	10.0312	ug/L	98
96)	pIsopropylto	14.91	119	749129	10.7817	ug/L	100
97)	14dichlorobe	14.96	146	401340	9.8170	ug/L	98
98)	12dichlorobe	15.49	146	368276	9.8889	ug/L	99
99)	nButylbenzen	15.50	91	673473	10.6054	ug/L	98
100)	12dibromo3cl	16.59	157	36585	9.4294	ug/L	98
101)	135Trichlorobenzene	16.91	180	269108	10.1529	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : c:\instarch\data\feb0221\CCVF-LCSD1.D Vial: 24
Acq On : 2 Feb 2021 22:00 Operator: RLD-DGS
Sample : 179112,LCSDW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 22:21:31 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	220956	10.1428	ug/L	98
103) Hexachlorobu	17.97	225	111129	10.6036	ug/L	97
104) Naphthalene	18.03	128	530941	10.6824	ug/L	99
105) 123Trichlben	18.34	180	200409	10.2530	ug/L	94

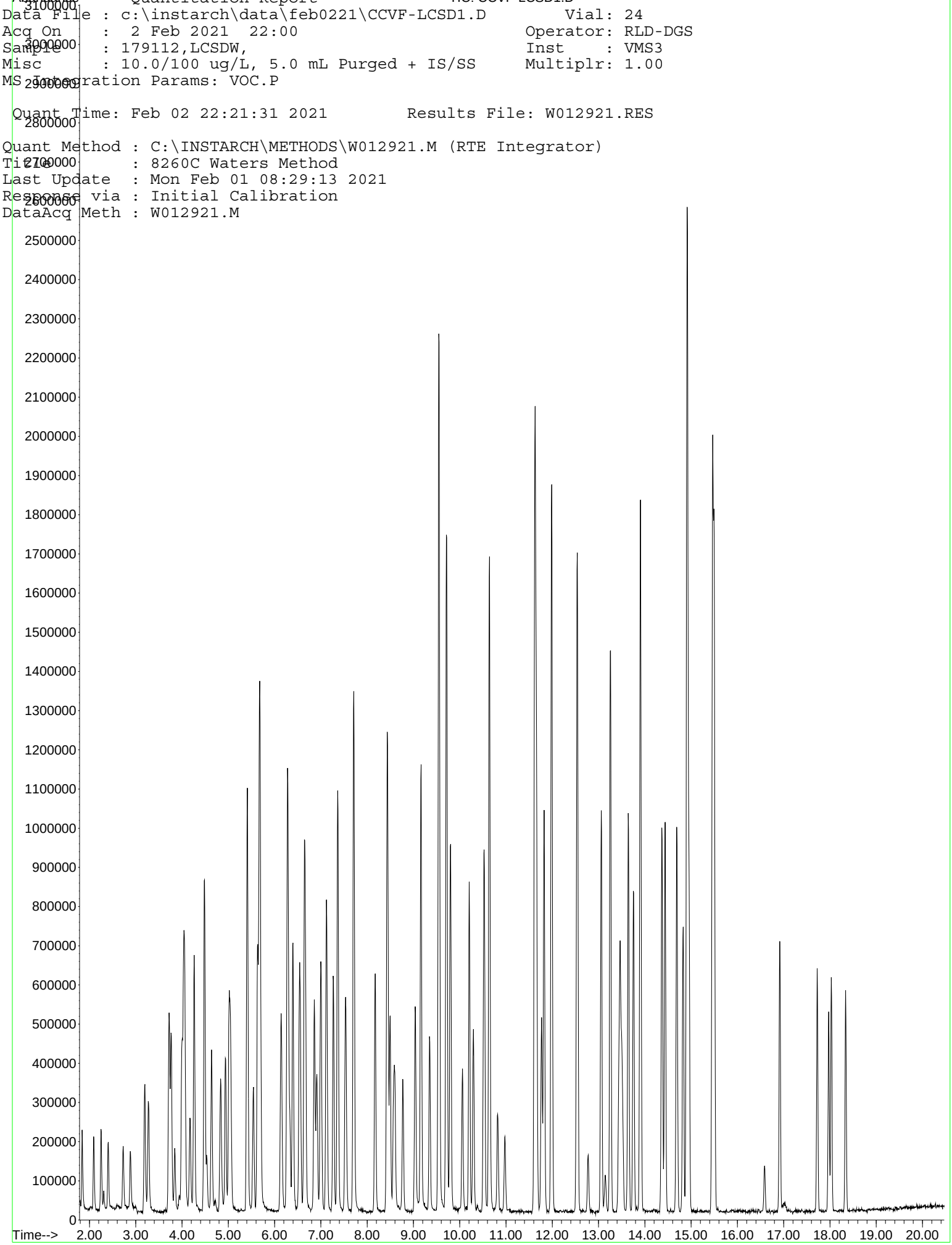
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCVF-LCSD1.D

Data File : c:\instarch\data\feb0221\CCVF-LCSD1.D Vial: 24
Acq On : 2 Feb 2021 22:00 Operator: RLD-DGS
Sample : 179112,LCSDW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 22:21:31 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



BFB

Data File : C:\Instarch\Data\FEB0221\BFB2.D Vial: 25
Acq On : 3 Feb 2021 7:50 Operator: RLD-DGS
Sample : 179112,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W012921.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.663 to 4.681 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.2	23245	PASS
75	95	30	60	54.5	54540	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	7.2	7246	PASS
173	174	0.00	2	0.8	671	PASS
174	95	50	100	84.2	84203	PASS
175	174	5	9	8.2	6904	PASS
176	174	95	101	98.6	82986	PASS
177	176	5	9	7.2	5998	PASS

W012921.M Thu Feb 04 08:18:46 2021

Evaluate Continuing Calibration Report

Data File : c:\instarch\data\feb0221\CCV2.D Vial: 26
Acq On : 3 Feb 2021 8:06 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 03 08:26:37 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	100	0.00
2	PT	Dichlorodi	10.0000	11.4023	-14.02	104	0.00
3	PT	Chloromethan	10.0000	10.8282	-8.28	105	0.00
4	PT	VinylChlorid	10.0000	11.0112	-10.11	104	0.00
5	PT	Bromomethane	10.0000	11.8028	-18.03	119	0.00
6	PT	Chloroethane	10.0000	10.6703	-6.70	107	0.00
7	T	Dichloroflmethane	10.0000	10.8523	-8.52	102	0.00
8	PT	Trichlorofma	10.0000	11.3742	-13.74	102	0.00
9	T	Ethylether	10.0000	10.2676	-2.68	104	0.00
10	T	dichlorotfluoroethan	10.0000	11.1368	-11.37	105	0.00
11	T	propyleneoxide	100.0000	122.8404	-22.84#	118	0.00
12	T	Acrolein	50.0000	61.4401	-22.88#	124	0.00
13	PT	11dichlorthe	10.0000	11.1295	-11.30	103	0.00
14	PT	Trichlorotfluoroeth	20.0000	23.0978	-15.49	102	0.00
15	PT	Acetone	100.0000	118.6251	-18.63	108	0.00
16	T	Iodomethane	20.0000	19.8692	0.65	113	0.00
17	PT	Carbon Dislf	20.0000	21.3312	-6.66	104	0.00
18	T	allylchloride	20.0000	21.7030	-8.51	106	0.00
19	PT	methylacetate	10.0000	10.8657	-8.66	123	0.00
20	PT	Methylchlorid	10.0000	10.5652	-5.65	103	0.00
21	T	tbutylalcohol	500.0000	521.5603	-4.31	103	0.00
22	T	Acrylonitrile	50.0000	57.1345	-14.27	114	0.00
23	PT	t12dichlorte	10.0000	10.2040	-2.04	102	0.00
24	PT	MtBE	10.0000	10.6609	-6.61	107	0.00
25	T	Hexane	20.0000	26.4643	-32.32#	112	0.00
26	PT	11dichlorota	10.0000	10.4647	-4.65	104	0.00
27	T	Vinylacetate	100.0000	111.3890	-11.39	109	0.00
28	T	chloroprene	20.0000	22.6785	-13.39	105	0.00
29	T	Diisopether	10.0000	10.6805	-6.81	104	0.00
30	T	ETBE	10.0000	10.9154	-9.15	112	0.00
31	T	22dichloropr	10.0000	11.5131	-15.13	121	0.00
32	PT	c12dichlorte	10.0000	9.7857	2.14	104	0.00
33	PT	2Butanone	100.0000	113.0399	-13.04	114	0.00
34	T	propionitrile	100.0000	120.4479	-20.45#	119	0.00
35	T	Ethylacetate	50.0000	53.4909	-6.98	110	0.00
36	T	methacrylonitrile	20.0000	22.3251	-11.63	113	0.00
37	T	Bromochlorma	10.0000	9.6929	3.07	99	0.00
38	T	Tetrahydofur	100.0000	114.2088	-14.21	113	0.00
39	PT	Chloroform	10.0000	10.1306	-1.31	105	0.00
40	PT	111trichlota	10.0000	11.3162	-13.16	108	0.00
41	S	SURRDibrflma	20.0000	20.3195	-1.60	100	0.00
42	PT	Cyclohexane	10.0000	11.7173	-17.17	104	0.00
43	PT	Carbtetraclo	10.0000	11.1339	-11.34	109	0.00
44	T	11dicloprope	10.0000	10.6547	-6.55	108	0.00
45	S	SURR12DCAd4	20.0000	20.1481	-0.74	105	0.00
46	PT	Benzene	10.0000	10.5411	-5.41	107	0.00
47	PT	12dichlorota	10.0000	10.2237	-2.24	104	0.00
48	T	TAME	10.0000	11.0522	-10.52	117	0.00

49	PT	trichloroete	10.0000	10.6742	-6.74	110	0.00
50	PT	methylcyclohexane	10.0000	11.8523	-18.52	109	0.00
51	PT	12dicloropra	10.0000	10.2079	-2.08	103	0.00
52	T	23Dicl1propene	10.0000	10.4406	-4.41	108	0.00
53	T	Dibromometha	10.0000	10.5381	-5.38	111	0.00
54	T	methylmethacrylate	10.0000	10.5274	-5.27	109	0.00
55	T	14dioxane	500.0000	409.9898	18.00	89	0.02
56	PT	Bromodiclrma	10.0000	10.3270	-3.27	107	0.00
57	T	2Nitropropane	100.0000	117.7747	-17.77	116	0.00
58	T	2CLEVE	50.0000	55.3980	-10.80	110	0.00
59	PT	c13dicloproe	10.0000	10.8431	-8.43	112	0.00
60	PT	4Meth2Pentan	100.0000	115.2122	-15.21	112	0.00
61	S	SURRd8Tolule	20.0000	20.3980	-1.99	102	0.00
62	PT	Toluene	10.0000	10.5415	-5.41	106	0.00
63	PT	t13Dicloprop	10.0000	10.6971	-6.97	113	0.00
64	T	ethylmethacrylate	20.0000	22.3494	-11.75	110	0.00
65	PT	112Triclotha	10.0000	10.8669	-8.67	114	0.00
66	PT	Tetrachlorte	10.0000	10.5802	-5.80	102	0.00
67	T	13Diclorpropa	10.0000	10.5333	-5.33	105	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	105	0.00
69	PT	2Hexanone	100.0000	109.3164	-9.32	111	0.00
70	PT	Clorodibrmta	10.0000	9.5066	4.93	108	0.00
71	PT	12Dibrometha	10.0000	10.4594	-4.59	114	0.00
72	PT	Chlorobenzen	10.0000	9.7177	2.82	101	0.00
73	T	1Clhexane	10.0000	10.9003	-9.00	111	0.00
74	T	1112Tetclota	10.0000	9.9728	0.27	110	0.00
75	PT	Ethylbenzene	10.0000	10.4741	-4.74	107	0.00
76	PT	m p-Xylene	20.0000	20.5844	-2.92	105	0.00
77	PT	o-Xylene	10.0000	9.8668	1.33	99	0.00
78	PT	Styrene	10.0000	10.1165	-1.17	100	0.00
79	PT	Bromoform	10.0000	9.9946	0.05	110	0.00
80	PT	Isopropylben	10.0000	10.4865	-4.86	102	0.00
81	T	cyclohexanone	200.0000	155.7313	22.13#	81	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	106	0.00
83	S	SURR4BrFBenz	20.0000	20.2128	-1.06	105	0.00
84	T	Bromobenzene	10.0000	9.5951	4.05	104	0.00
85	PT	1122Tetrclta	10.0000	10.1825	-1.82	112	0.00
86	T	123Triclproa	10.0000	10.5515	-5.52	111	0.00
87	T	14dichloro2butene	10.0000	12.0915	-20.91#	132	0.00
88	T	n-Propylbenz	10.0000	10.1006	-1.01	103	0.00
89	T	2chlorotolue	10.0000	10.1619	-1.62	105	0.00
90	T	4chlorotolue	10.0000	10.1252	-1.25	105	0.00
91	T	135Trimebenz	10.0000	10.3728	-3.73	104	0.00
92	T	tbutylbenzen	10.0000	10.2547	-2.55	102	0.00
93	T	124Trimetben	10.0000	10.3228	-3.23	104	0.00
94	T	sbutylbenzen	10.0000	11.2087	-12.09	106	0.00
95	PT	13Diclorbenz	10.0000	10.0875	-0.88	108	0.00
96	T	pIsopropylto	10.0000	10.7625	-7.62	104	0.00
97	PT	14dichlorobe	10.0000	9.8786	1.21	107	0.00
98	PT	12dichlorobe	10.0000	9.8660	1.34	104	0.00
99	T	nButylbenzen	10.0000	10.6516	-6.52	105	0.00
100	PT	12dibromo3cl	10.0000	10.7426	-7.43	126	0.00
101	T	135Trichlorobenzene	10.0000	10.1456	-1.46	104	0.00
102	PT	124Trichlobe	10.0000	10.3235	-3.23	112	0.00
103	T	Hexachlorobu	10.0000	11.2529	-12.53	108	0.00
104	T	Naphthalene	10.0000	11.1638	-11.64	113	0.00
105	T	123Trichlben	10.0000	10.4232	-4.23	112	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W012921.M Thu Feb 04 08:56:30 2021

Evaluate Continuing Calibration Report

Data File : c:\instarch\data\feb0221\CCV2.D Vial: 26
Acq On : 3 Feb 2021 8:06 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 03 08:26:37 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	100	0.00
2	PT	Dichlorodi	0.2184	0.2490	-14.01	104	0.00
3	PT	Chloromethan	0.2920	0.3162	-8.29	105	0.00
4	PT	VinylChlorid	0.2871	0.3161	-10.10	104	0.00
5	PT	Bromomethane	0.1424	0.1681	-18.05	119	0.00
6	PT	Chloroethane	0.2046	0.2183	-6.70	107	0.00
7	T	Dichloroflmethane	0.5184	0.5626	-8.53	102	0.00
8	PT	Trichlorofma	0.3572	0.4063	-13.75	102	0.00
9	T	Ethylether	0.2421	0.2485	-2.64	104	0.00
10	T	dichlorotfluoroethan	0.2922	0.3254	-11.36	105	0.00
11	T	propyleneoxide	0.0472	0.0579	-22.67#	118	0.00
12	T	Acrolein	0.0486	0.0598	-23.05#	124	0.00
13	PT	11dichlorthe	0.2318	0.2580	-11.30	103	0.00
14	PT	Trichlorotfluoroeth	0.2270	0.2622	-15.51	102	0.00
15	PT	Acetone	0.0714	0.0774#	-8.40	108	0.00
16	T	Iodomethane	0.2041	0.2294	-12.40	113	0.00
17	PT	Carbon Dislf	0.7334	0.7822	-6.65	104	0.00
18	T	allylchloride	0.4527	0.4913	-8.53	106	0.00
19	PT	methylacetate	0.0566	0.0615#	-8.66	123	0.00
20	PT	Methylchlorid	0.3445	0.3133	9.06	103	0.00
21	T	tbutylalcohol	0.0113	0.0118#	-4.42	103	0.00
22	T	Acrylonitrile	0.0995	0.1137	-14.27	114	0.00
23	PT	t12dichlorte	0.2691	0.2746	-2.04	102	0.00
24	PT	MtBE	0.7013	0.7476	-6.60	107	0.00
25	T	Hexane	0.3904	0.5166	-32.33#	112	0.00
26	PT	11dichlorota	0.4777	0.4999	-4.65	104	0.00
27	T	Vinylacetate	0.5018	0.5523	-10.06	109	0.00
28	T	chloroprene	0.4333	0.4913	-13.39	105	0.00
29	T	Diisopether	0.9394	1.0034	-6.81	104	0.00
30	T	ETBE	0.6571	0.7173	-9.16	112	0.00
31	T	22dichloropr	0.2935	0.3379	-15.13	121	0.00
32	PT	c12dichlorte	0.3031	0.2966	2.14	104	0.00
33	PT	2Butanone	0.0311	0.0351#	-12.86	114	0.00
34	T	propionitrile	0.0324	0.0391	-20.68#	119	0.00
35	T	Ethylacetate	0.0119	0.0127#	-6.72	110	0.00
36	T	methacrylonitrile	0.1297	0.1448	-11.64	113	0.00
37	T	Bromochlorma	0.1417	0.1373	3.11	99	0.00
38	T	Tetrahydofur	0.0901	0.0954	-5.88	113	0.00
39	PT	Chloroform	0.4928	0.4992	-1.30	105	0.00
40	PT	111trichlota	0.3510	0.3972	-13.16	108	0.00
41	S	SURRDibrflma	0.2565	0.2606	-1.60	100	0.00
42	PT	Cyclohexane	0.4574	0.5360	-17.18	104	0.00
43	PT	Carbtetraclo	0.2819	0.3139	-11.35	109	0.00
44	T	11dicloprope	0.1353	0.1442	-6.58	108	0.00
45	S	SURR12DCAd4	0.0710	0.0715	-0.70	105	0.00
46	PT	Benzene	1.0928	1.1519	-5.41	107	0.00
47	PT	12dichlorota	0.3869	0.3956	-2.25	104	0.00
48	T	TAME	0.6459	0.7138	-10.51	117	0.00

49	PT	trichloroete	0.2794	0.2982	-6.73	110	0.00
50	PT	methylcyclohexane	0.5055	0.5991	-18.52	109	0.00
51	PT	12dicloropra	0.3115	0.3180	-2.09	103	0.00
52	T	23Dicl1propene	0.4279	0.4468	-4.42	108	0.00
53	T	Dibromometha	0.1720	0.1812	-5.35	111	0.00
54	T	methylmethacrylate	0.2015	0.2122	-5.31	109	0.00
55	T	14dioxane	0.0006	0.0005#	16.67	89	0.02
56	PT	Bromodiclrma	0.3577	0.3694	-3.27	107	0.00
57	T	2Nitropropane	0.0687	0.0809	-17.76	116	0.00
58	T	2CLEVE	0.1573	0.1743	-10.81	110	0.00
59	PT	c13dicloproe	0.4162	0.4513	-8.43	112	0.00
60	PT	4Meth2Pentan	0.2665	0.2933	-10.06	112	0.00
61	S	SURRd8Tolule	1.0165	1.0368	-2.00	102	0.00
62	PT	Toluene	0.7049	0.7431	-5.42	106	0.00
63	PT	t13Dicloprop	0.3286	0.3515	-6.97	113	0.00
64	T	ethylmethacrylate	0.3452	0.3858	-11.76	110	0.00
65	PT	112Triclotha	0.2136	0.2321	-8.66	114	0.00
66	PT	Tetrachlorte	0.3016	0.3191	-5.80	102	0.00
67	T	13Diclorpropa	0.4457	0.4694	-5.32	105	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	105	0.00
69	PT	2Hexanone	0.2282	0.2494	-9.29	111	0.00
70	PT	Clorodibrmta	0.3164	0.3008	4.93	108	0.00
71	PT	12Dibrometha	0.2861	0.2993	-4.61	114	0.00
72	PT	Chlorobenzen	0.9216	0.8956	2.82	101	0.00
73	T	1Clhexane	0.4481	0.4884	-8.99	111	0.00
74	T	1112Tetclota	0.2789	0.2782	0.25	110	0.00
75	PT	Ethylbenzene	1.4925	1.5633	-4.74	107	0.00
76	PT	m p-Xylene	0.5960	0.6134	-2.92	105	0.00
77	PT	o-Xylene	0.5939	0.5860	1.33	99	0.00
78	PT	Styrene	0.9663	0.9775	-1.16	100	0.00
79	PT	Bromoform	0.1969	0.1968	0.05	110	0.00
80	PT	Isopropylben	1.3995	1.4676	-4.87	102	0.00
81	T	cyclohexanone	0.0048	0.0037#	22.92#	81	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	106	0.00
83	S	SURR4BrFBenz	0.9069	0.9165	-1.06	105	0.00
84	T	Bromobenzene	0.6664	0.6394	4.05	104	0.00
85	PT	1122Tetrclta	0.7521	0.7658	-1.82	112	0.00
86	T	123Triclproa	0.8353	0.8814	-5.52	111	0.00
87	T	14dichloro2butene	0.1863	0.2253	-20.93#	132	0.00
88	T	n-Propylbenz	3.0081	3.0383	-1.00	103	0.00
89	T	2chlorotolue	1.7658	1.7944	-1.62	105	0.00
90	T	4chlorotolue	2.0387	2.0642	-1.25	105	0.00
91	T	135Trimebenz	2.0457	2.1220	-3.73	104	0.00
92	T	tbutylbenzen	1.7670	1.8120	-2.55	102	0.00
93	T	124Trimetben	2.0036	2.0683	-3.23	104	0.00
94	T	sbutylbenzen	2.3729	2.6597	-12.09	106	0.00
95	PT	13Diclorbenz	1.1828	1.1931	-0.87	108	0.00
96	T	pIsopropylto	2.1081	2.2688	-7.62	104	0.00
97	PT	14dichlorobe	1.2404	1.2253	1.22	107	0.00
98	PT	12dichlorobe	1.1299	1.1147	1.35	104	0.00
99	T	nButylbenzen	1.9267	2.0522	-6.51	105	0.00
100	PT	12dibromo3cl	0.1177	0.1265	-7.48	126	0.00
101	T	135Trichlorobenzene	0.8042	0.8159	-1.45	104	0.00
102	PT	124Trichlobe	0.6609	0.6823	-3.24	112	0.00
103	T	Hexachlorobu	0.3180	0.3578	-12.52	108	0.00
104	T	Naphthalene	1.5080	1.6834	-11.63	113	0.00
105	T	123Trichlben	0.5930	0.6181	-4.23	112	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W012921.M Thu Feb 04 08:55:56 2021

Quantitation Report

Data File : c:\instarch\data\feb0221\CCV2.D Vial: 26
Acq On : 3 Feb 2021 8:06 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 08:26:37 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1303575	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1108976	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	639507	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	339762	20.320	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4	7.27	102	93253	20.148	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %			
61) SURRd8Tolule	9.71	98	1351510	20.398	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.25	95	586118	20.213	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	162310	11.4023	ug/L	97
3) Chloromethan	2.10	50	206071	10.8282	ug/L	98
4) VinylChlorid	2.25	62	206055	11.0112	ug/L	97
5) Bromomethane	2.73	94	109573	11.8028	ug/L	97
6) Chloroethane	2.89	64	142298	10.6703	ug/L	99
7) Dichloroflmethane	3.19	67	366713	10.8523	ug/L	99
8) Trichlorofma	3.28	101	264815	11.3742	ug/L	98
9) Ethylether	3.71	59	161987	10.2676	ug/L	100
10) dichlorotfluoroethan	3.73	67	212074	11.1368	ug/L	99
11) propyleneoxide	3.77	58	377511	122.8404	ug/L	96
12) Acrolein	3.84	56	194822	61.4401	ug/L	97
13) 11dichlorthe	4.00	96	168168	11.1295	ug/L	98
14) Trichlorotfluoroeth	4.04	101	341784	23.0978	ug/L	99
15) Acetone	4.06	43	504801	118.6251	ug/L	99
16) Iodomethane	4.17	142	299006	19.8692	ug/L	98
17) Carbon Dislf	4.26	76	1019650	21.3312	ug/L	100
18) allylchloride	4.49	41	640389	21.7030	ug/L	99
19) methylacetate	4.54	74	40093	10.8657	ug/L	91
20) Methylchlorid	4.64	84	204235	10.5652	ug/L	99
21) tbutylalcohol	4.83	59	383188	521.5603	ug/L	100
22) Acrylonitrile	4.94	53	370499	57.1345	ug/L	99
23) t12dichlorte	5.02	96	178997	10.2040	ug/L	95
24) MtBE	5.05	73	487305	10.6609	ug/L	99
25) Hexane	5.41	57	673476	26.4643	ug/L	97
26) 11dichlorota	5.54	63	325827	10.4647	ug/L	99
27) Vinylacetate	5.63	43	3599777	111.3890	ug/L	99
28) chloroprene	5.67	53	640504	22.6785	ug/L	99
29) Diisopether	5.69	45	653971	10.6805	ug/L	98
30) ETBE	6.14	59	467495	10.9154	ug/L	99
31) 22dichloropr	6.28	77	220268	11.5131	ug/L	99
32) c12dichlorte	6.27	96	193301	9.7857	ug/L	93
33) 2Butanone	6.29	72	228951	113.0399	ug/L	99
34) propionitrile	6.33	54	254668	120.4479	ug/L	98
35) Ethylacetate	6.40	88	41417	53.4909	ug/L	96
36) methacrylonitrile	6.54	67	188734	22.3251	ug/L	97
37) Bromochlorma	6.56	128	89509	9.6929	ug/L	93
38) Tetrahydofur	6.65	42	622015	114.2088	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : c:\instarch\data\feb0221\CCV2.D Vial: 26
Acq On : 3 Feb 2021 8:06 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 08:26:37 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	325384	10.1306 ug/L	100
40)	111trichlota	6.91	97	258890	11.3162 ug/L	100
42)	Cyclohexane	7.00	56	349345	11.7173 ug/L	97
43)	Carbtetraclo	7.13	119	204572	11.1339 ug/L	98
44)	11dicloprope	7.11	110	93984	10.6547 ug/L	98
46)	Benzene	7.37	78	750801	10.5411 ug/L	99
47)	12dichlorota	7.36	62	257825	10.2237 ug/L	99
48)	TAME	7.53	73	465267	11.0522 ug/L	95
49)	trichloroete	8.17	95	194376	10.6742 ug/L	94
50)	methylcyclohexane	8.44	83	390471	11.8523 ug/L	98
51)	12dicloropra	8.43	63	207273	10.2079 ug/L	99
52)	23Dicl1propene	8.50	75	291187	10.4406 ug/L	98
53)	Dibromometha	8.57	93	118133	10.5381 ug/L	97
54)	methylmethacrylate	8.60	69	138290	10.5274 ug/L	98
55)	14dioxane	8.63	88	14875	409.9898 ug/L	100
56)	Bromodiclrma	8.77	83	240786	10.3270 ug/L	98
57)	2Nitropropane	9.04	43	527325	117.7747 ug/L	97
58)	2CLEVE	9.16	63	568048	55.3980 ug/L	99
59)	c13dicloproe	9.35	75	294147	10.8431 ug/L	98
60)	4Meth2Pentan	9.55	43	1911678	115.2122 ug/L	100
62)	Toluene	9.80	92	484338	10.5415 ug/L	98
63)	t13Dicloprop	10.06	75	229132	10.6971 ug/L	99
64)	ethylmethacrylate	10.20	69	502889	22.3494 ug/L	99
65)	112Triclotha	10.30	83	151291	10.8669 ug/L	96
66)	Tetrachlorte	10.53	166	208017	10.5802 ug/L	98
67)	13Diclorpropa	10.51	76	305980	10.5333 ug/L	99
69)	2Hexanone	10.64	43	1383044	109.3164 ug/L	97
70)	Clorodibrmta	10.82	129	166801	9.5066 ug/L	96
71)	12Dibrometha	10.97	107	165936	10.4594 ug/L	98
72)	Chlorobenzen	11.66	112	496596	9.7177 ug/L	97
73)	1Clhexane	11.64	91	270818	10.9003 ug/L	98
74)	1112Tetclota	11.77	131	154234	9.9728 ug/L	99
75)	Ethylbenzene	11.82	91	866827	10.4741 ug/L	99
76)	m p-Xylene	11.98	106	680244	20.5844 ug/L	99
77)	o-Xylene	12.53	106	324918	9.8668 ug/L	99
78)	Styrene	12.55	104	542030	10.1165 ug/L	99
79)	Bromoform	12.77	173	109128	9.9946 ug/L	97
80)	Isopropylben	13.06	105	813770	10.4865 ug/L	100
81)	cyclohexanone	13.15	55	41542	155.7313 ug/L	93
84)	Bromobenzene	13.47	156	204454	9.5951 ug/L	95
85)	1122Tetrclta	13.44	83	244881	10.1825 ug/L	99
86)	123Triclproa	13.50	75	281820	10.5515 ug/L	98
87)	14dichloro2butene	13.53	53	72042	12.0915 ug/L	98
88)	n-Propylbenz	13.64	91	971515	10.1006 ug/L	100
89)	2chlorotolue	13.76	91	573779	10.1619 ug/L	99
90)	4chlorotolue	13.91	91	660044	10.1252 ug/L	98
91)	135Trimebenz	13.90	105	678510	10.3728 ug/L	99
92)	tbutylbenzen	14.37	119	579383	10.2547 ug/L	98
93)	124Trimetben	14.44	105	661351	10.3228 ug/L	98
94)	sbutylbenzen	14.69	105	850446	11.2087 ug/L	99
95)	13Diclorbenz	14.83	146	381507	10.0875 ug/L	98
96)	pIsopropylto	14.90	119	725454	10.7625 ug/L	98
97)	14dichlorobe	14.95	146	391792	9.8786 ug/L	97
98)	12dichlorobe	15.49	146	356444	9.8660 ug/L	100
99)	nButylbenzen	15.50	91	656203	10.6516 ug/L	100
100)	12dibromo3cl	16.59	157	40435	10.7426 ug/L	94
101)	135Trichlorobenzene	16.91	180	260881	10.1456 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : c:\instarch\data\feb0221\CCV2.D Vial: 26
Acq On : 3 Feb 2021 8:06 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 08:26:37 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

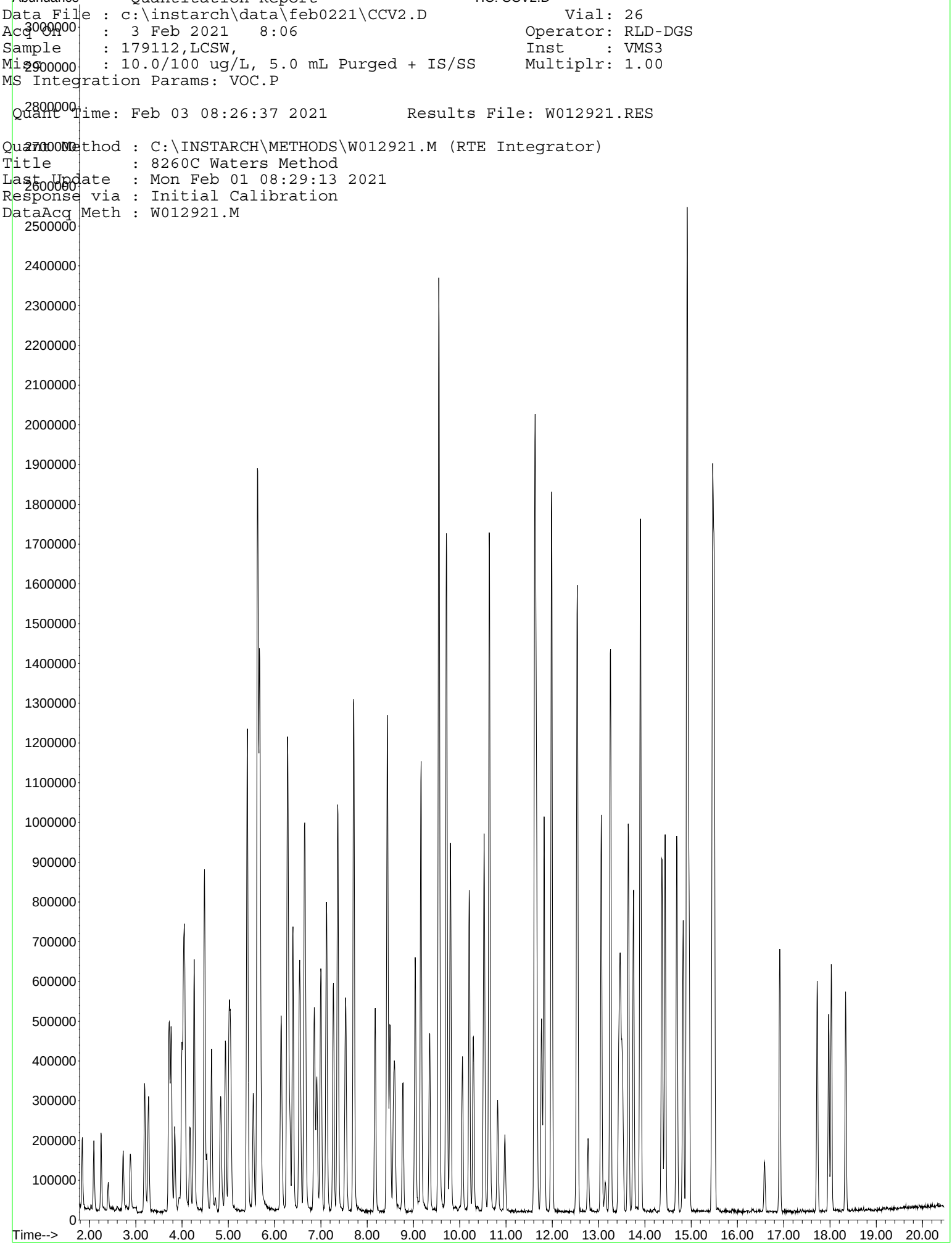
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	218174	10.3235	ug/L	96
103) Hexachlorobu	17.97	225	114411	11.2529	ug/L	95
104) Naphthalene	18.03	128	538288	11.1638	ug/L	100
105) 123Trichlben	18.34	180	197649	10.4232	ug/L	91

(#) = qualifier out of range (m) = manual integration

Data File : c:\instarch\data\feb0221\CCV2.D Vial: 26
Acq On : 3 Feb 2021 8:06 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 08:26:37 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\CCB1.D Vial: 28
Acq On : 3 Feb 2021 9:07 Operator: RLD-DGS
Sample : 179112,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 09:27:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1309664	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1096059	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	618716	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	339332	20.199	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.27	102	90540	19.471	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.71	98	1322131	19.862	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99 %			
83) SURR4BrFBenz	13.26	95	568601	20.268	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	5921	Below	Cal #	45
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.28	76	5259	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.84	59	3742	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.66	42	3687	Below	Cal #	35

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\CCB1.D Vial: 28
Acq On : 3 Feb 2021 9:07 Operator: RLD-DGS
Sample : 179112,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 09:27:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	0.00	83	0	N.D.			
40)	111trichlota	0.00	97	0	N.D.			
42)	Cyclohexane	0.00	56	0	N.D.			
43)	Carbtetraclo	0.00	119	0	N.D.			
44)	11dicloprope	0.00	110	0	N.D.			
46)	Benzene	0.00	78	0	N.D.			
47)	12dichlorota	0.00	62	0	N.D.			
48)	TAME	0.00	73	0	N.D.			
49)	trichloroete	0.00	95	0	N.D.			
50)	methylcyclohexane	0.00	83	0	N.D.			
51)	12dicloropra	0.00	63	0	N.D.			
52)	23Dicl1propene	0.00	75	0	N.D.			
53)	Dibromometha	0.00	93	0	N.D.			
54)	methylmethacrylate	0.00	69	0	N.D.			
55)	14dioxane	8.62	88	2634	97.0870	ug/L	#	24
56)	Bromodiclrma	0.00	83	0	N.D.			
57)	2Nitropropane	0.00	43	0	N.D.			
58)	2CLEVE	0.00	63	0	N.D.			
59)	c13dicloproe	0.00	75	0	N.D.			
60)	4Meth2Pentan	0.00	43	0	N.D.			
62)	Toluene	0.00	92	0	N.D.			
63)	t13Dicloprop	0.00	75	0	N.D.			
64)	ethylmethacrylate	0.00	69	0	N.D.			
65)	112Triclotha	0.00	83	0	N.D.			
66)	Tetrachlorte	0.00	166	0	N.D.			
67)	13Diclorpropa	0.00	76	0	N.D.			
69)	2Hexanone	0.00	43	0	N.D.			
70)	Clorodibrmta	0.00	129	0	N.D.			
71)	12Dibrometha	0.00	107	0	N.D.			
72)	Chlorobenzen	0.00	112	0	N.D.			
73)	1Clhexane	0.00	91	0	N.D.			
74)	1112Tetclota	0.00	131	0	N.D.			
75)	Ethylbenzene	0.00	91	0	N.D.			
76)	m p-Xylene	0.00	106	0	N.D.			
77)	o-Xylene	0.00	106	0	N.D.			
78)	Styrene	0.00	104	0	N.D.			
79)	Bromoform	0.00	173	0	N.D.			
80)	Isopropylben	0.00	105	0	N.D.			
81)	cyclohexanone	0.00	55	0	N.D.			
84)	Bromobenzene	0.00	156	0	N.D.			
85)	1122Tetrclta	0.00	83	0	N.D.			
86)	123Triclproa	0.00	75	0	N.D.			
87)	14dichloro2butene	0.00	53	0	N.D.			
88)	n-Propylbenz	0.00	91	0	N.D.			
89)	2chlorotolue	0.00	91	0	N.D.			
90)	4chlorotolue	0.00	91	0	N.D.			
91)	135Trimebenz	0.00	105	0	N.D.			
92)	tbutylbenzen	0.00	119	0	N.D.			
93)	124Trimetben	0.00	105	0	N.D.			
94)	sbutylbenzen	0.00	105	0	N.D.			
95)	13Diclorbenz	0.00	146	0	N.D.			
96)	pIsopropylto	0.00	119	0	N.D.			
97)	14dichlorobe	0.00	146	0	N.D.			
98)	12dichlorobe	0.00	146	0	N.D.			
99)	nButylbenzen	15.50	91	3621	N.D.			
100)	12dibromo3cl	0.00	157	0	N.D.			
101)	135Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\FEB0221\CCB1.D Vial: 28
Acq On : 3 Feb 2021 9:07 Operator: RLD-DGS
Sample : 179112,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 09:27:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

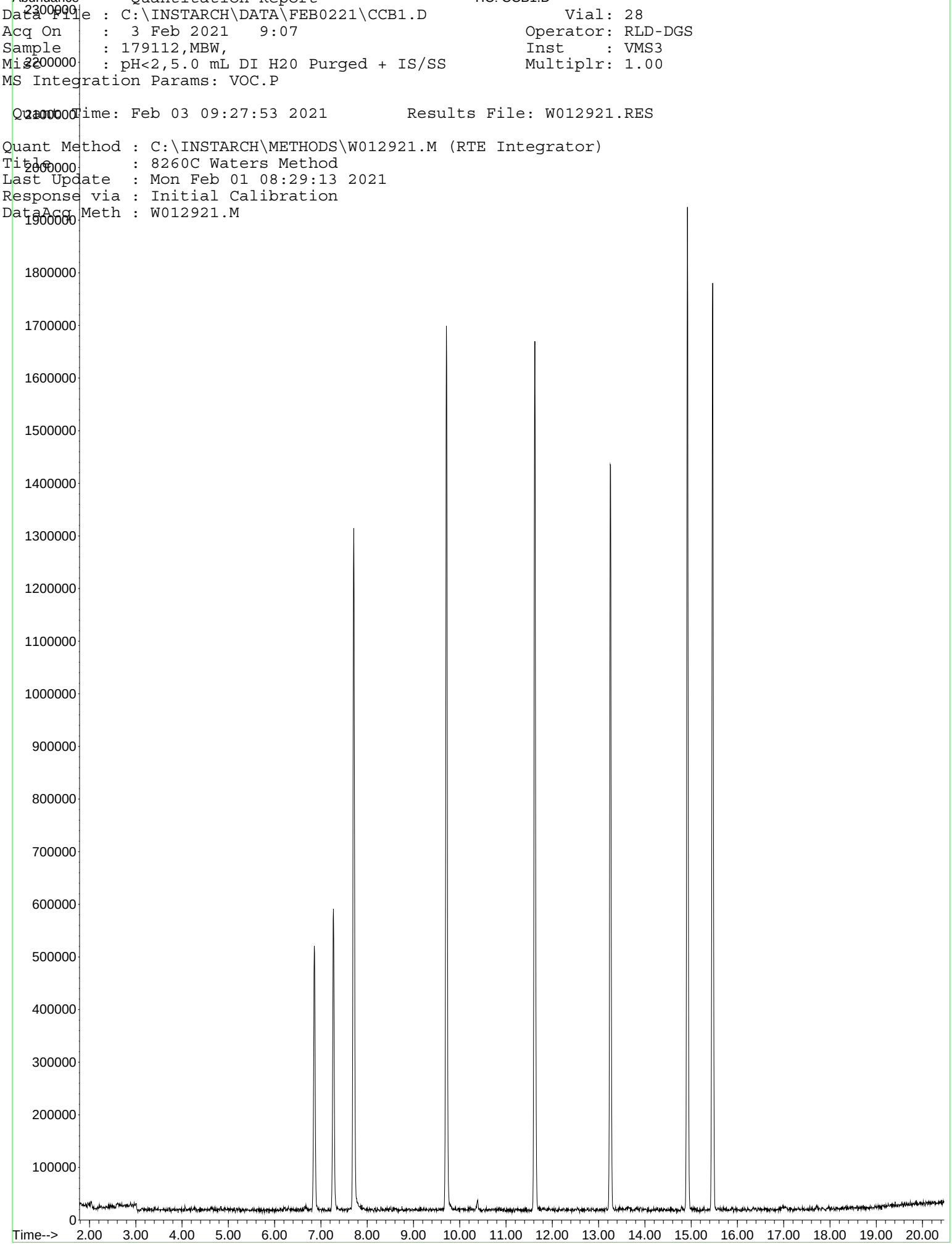
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCB1.D

Data File : C:\INSTARCH\DATA\FEB0221\CCB1.D Vial: 28
Acq On : 3 Feb 2021 9:07 Operator: RLD-DGS
Sample : 179112,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 09:27:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Evaluate Continuing Calibration Report

Data File : c:\instarch\data\feb0221\CCVF2.D Vial: 32
Acq On : 3 Feb 2021 11:22 Operator: RLD-DGS
Sample : 179112,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 03 11:43:32 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	101	-0.02
2	PT	Dichlorodi	0.2184	0.2592	-18.68	110	0.00
3	PT	Chloromethan	0.2920	0.3053	-4.55	102	0.00
4	PT	VinylChlorid	0.2871	0.3159	-10.03	105	-0.01
5	PT	Bromomethane	0.1424	0.1678	-17.84	121	-0.02
6	PT	Chloroethane	0.2046	0.2180	-6.55	108	-0.03
7	T	Dichloroflmethane	0.5184	0.5571	-7.47	103	-0.02
8	PT	Trichlorofma	0.3572	0.4039	-13.07	103	-0.03
9	T	Ethylether	0.2421	0.2513	-3.80	106	-0.02
10	T	dichlorotfluoroethan	0.2922	0.3277	-12.15	107	-0.03
11	T	propyleneoxide	0.0472	0.0603	-27.75	124	-0.02
12	T	Acrolein	0.0486	0.0574	-18.11	121	-0.02
13	PT	11dichlorthe	0.2318	0.2522	-8.80	102	-0.02
14	PT	Trichlorotfluoroeth	0.2270	0.2646	-16.56	104	-0.04
15	PT	Acetone	0.0714	0.0862#	-20.73	122	-0.02
16	T	Iodomethane	0.2041	0.1888	7.50	95	-0.03
17	PT	Carbon Dislf	0.7334	0.7582	-3.38	103	-0.02
18	T	allylchloride	0.4527	0.4831	-6.72	106	-0.03
19	PT	methylacetate	0.0566	0.0639#	-12.90	129	-0.02
20	PT	Methylchlorid	0.3445	0.2999	12.95	100	-0.02
21	T	tbutylalcohol	0.0113	0.0182#	-61.06#	161	-0.02
22	T	Acrylonitrile	0.0995	0.1174	-17.99	119	-0.02
23	PT	t12dichlorte	0.2691	0.2818	-4.72	106	-0.02
24	PT	MtBE	0.7013	0.7446	-6.17	108	-0.02
25	T	Hexane	0.3904	0.4965	-27.18	110	-0.02
26	PT	11dichlorota	0.4777	0.4936	-3.33	105	-0.03
27	T	Vinylacetate	0.5018	0.5550	-10.60	111	-0.02
28	T	chloroprene	0.4333	0.4827	-11.40	105	-0.02
29	T	Diisopether	0.9394	0.9732	-3.60	102	-0.02
30	T	ETBE	0.6571	0.6873	-4.60	109	-0.02
31	T	22dichloropr	0.2935	0.2956	-0.72	107	-0.02
32	PT	c12dichlorte	0.3031	0.2982	1.62	106	-0.02
33	PT	2Butanone	0.0311	0.0395#	-27.01	130	-0.02
34	T	propionitrile	0.0324	0.0426	-31.48	132	-0.01
35	T	Ethylacetate	0.0119	0.0141#	-18.49	124	-0.02
36	T	methacrylonitrile	0.1297	0.1552	-19.66	123	-0.02
37	T	Bromochlorma	0.1417	0.1320	6.85	96	-0.02
38	T	Tetrahydofur	0.0901	0.1077	-19.53	129	-0.02
39	PT	Chloroform	0.4928	0.4977	-0.99	106	-0.02
40	PT	111trichlota	0.3510	0.3773	-7.49	104	-0.02
41	S	SURRDibrflma	0.2565	0.2610	-1.75	102	-0.02
42	PT	Cyclohexane	0.4574	0.5194	-13.55	103	-0.02
43	PT	Carbtetraclo	0.2819	0.3023	-7.24	106	-0.02
44	T	11dicloprope	0.1353	0.1462	-8.06	111	-0.01
45	S	SURR12DCAd4	0.0710	0.0744	-4.79	110	-0.01
46	PT	Benzene	1.0928	1.1438	-4.67	107	-0.01
47	PT	12dichlorota	0.3869	0.3902	-0.85	104	-0.02
48	T	TAME	0.6459	0.6807	-5.39	113	-0.01

49	PT	trichloroete	0.2794	0.2833	-1.40	106	-0.01
50	PT	methylcyclohexane	0.5055	0.6044	-19.56	112	-0.01
51	PT	12dicloropra	0.3115	0.3183	-2.18	105	0.00
52	T	23Dicl1propene	0.4279	0.4445	-3.88	109	-0.02
53	T	Dibromometha	0.1720	0.1789	-4.01	111	-0.01
54	T	methylmethacrylate	0.2015	0.2276	-12.95	119	-0.01
55	T	14dioxane	0.0006	0.0007#	-16.67	133	0.00
56	PT	Bromodiclrma	0.3577	0.3568	0.25	105	0.00
57	T	2Nitropropane	0.0687	0.0855	-24.45	124	0.00
58	T	2CLEVE	0.1573	0.1786	-13.54	115	-0.01
59	PT	c13dicloproe	0.4162	0.4347	-4.44	110	0.00
60	PT	4Meth2Pentan	0.2665	0.3178	-19.25	123	0.00
61	S	SURRd8Tolule	1.0165	1.0531	-3.60	105	0.00
62	PT	Toluene	0.7049	0.7395	-4.91	107	0.00
63	PT	t13Dicloprop	0.3286	0.3305	-0.58	107	0.00
64	T	ethylmethacrylate	0.3452	0.3964	-14.83	114	0.00
65	PT	112Triclotha	0.2136	0.2280	-6.74	113	0.00
66	PT	Tetrachlorte	0.3016	0.3196	-5.97	104	0.00
67	T	13Diclorpropa	0.4457	0.4621	-3.68	105	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	106	0.00
69	PT	2Hexanone	0.2282	0.2824	-23.75	127	0.00
70	PT	Clorodibrmta	0.3164	0.2842	10.18	103	0.00
71	PT	12Dibrometha	0.2861	0.2843	0.63	110	0.00
72	PT	Chlorobenzen	0.9216	0.8932	3.08	102	0.00
73	T	1Clhexane	0.4481	0.4799	-7.10	111	0.00
74	T	1112Tetclota	0.2789	0.2697	3.30	108	0.00
75	PT	Ethylbenzene	1.4925	1.5470	-3.65	107	0.00
76	PT	m p-Xylene	0.5960	0.5963	-0.05	104	0.00
77	PT	o-Xylene	0.5939	0.5823	1.95	100	0.00
78	PT	Styrene	0.9663	0.9692	-0.30	100	0.00
79	PT	Bromoform	0.1969	0.1722	12.54	97	0.00
80	PT	Isopropylben	1.3995	1.4359	-2.60	101	0.00
81	T	cyclohexanone	0.0048	0.0058#	-20.83	127	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	111	0.00
83	S	SURR4BrFBenz	0.9069	0.8927	1.57	107	0.00
84	T	Bromobenzene	0.6664	0.6055	9.14	103	0.00
85	PT	1122Tetrclta	0.7521	0.7648	-1.69	117	0.00
86	T	123Triclproa	0.8353	0.8354	-0.01	110	0.00
87	T	14dichloro2butene	0.1863	0.1931	-3.65	118	0.00
88	T	n-Propylbenz	3.0081	2.8728	4.50	101	0.00
89	T	2chlorotolue	1.7658	1.7158	2.83	105	0.00
90	T	4chlorotolue	2.0387	1.9774	3.01	105	0.00
91	T	135Trimebenz	2.0457	2.0364	0.45	105	0.00
92	T	tbutylbenzen	1.7670	1.7435	1.33	103	0.00
93	T	124Trimetben	2.0036	2.0056	-0.10	106	0.00
94	T	sbutylbenzen	2.3729	2.5382	-6.97	105	0.00
95	PT	13Diclorbenz	1.1828	1.1191	5.39	106	0.00
96	T	pIsopropylto	2.1081	2.1847	-3.63	104	0.00
97	PT	14dichlorobe	1.2404	1.1261	9.21	103	0.00
98	PT	12dichlorobe	1.1299	1.0457	7.45	102	0.00
99	T	nButylbenzen	1.9267	1.9552	-1.48	105	0.00
100	PT	12dibromo3cl	0.1177	0.1243	-5.61	130	0.00
101	T	135Trichlorobenzene	0.8042	0.7896	1.82	105	0.00
102	PT	124Trichlobe	0.6609	0.6709	-1.51	115	0.00
103	T	Hexachlorobu	0.3180	0.3344	-5.16	106	0.00
104	T	Naphthalene	1.5080	1.7069	-13.19	120	0.00
105	T	123Trichlben	0.5930	0.6153	-3.76	116	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W012921.M Thu Feb 04 09:01:53 2021

Evaluate Continuing Calibration Report

Data File : c:\instarch\data\feb0221\CCVF2.D Vial: 32
Acq On : 3 Feb 2021 11:22 Operator: RLD-DGS
Sample : 179112,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 03 11:43:32 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	101	-0.02
2	PT	Dichlorodi	10.0000	11.8705	-18.70	110	0.00
3	PT	Chloromethan	10.0000	10.4546	-4.55	102	0.00
4	PT	VinylChlorid	10.0000	11.0022	-10.02	105	-0.01
5	PT	Bromomethane	10.0000	11.7820	-17.82	121	-0.02
6	PT	Chloroethane	10.0000	10.6544	-6.54	108	-0.03
7	T	Dichloroflmethane	10.0000	10.7453	-7.45	103	-0.02
8	PT	Trichlorofma	10.0000	11.3079	-13.08	103	-0.03
9	T	Ethylether	10.0000	10.3829	-3.83	106	-0.02
10	T	dichlorotfluoroethan	10.0000	11.2164	-12.16	107	-0.03
11	T	propyleneoxide	100.0000	127.8933	-27.89	124	-0.02
12	T	Acrolein	50.0000	59.0017	-18.00	121	-0.02
13	PT	11dichlorthe	10.0000	10.8809	-8.81	102	-0.02
14	PT	Trichlorotfluoroeth	20.0000	23.3121	-16.56	104	-0.04
15	PT	Acetone	100.0000	132.9608	-32.96	122	-0.02
16	T	Iodomethane	20.0000	16.8533	15.73	95	-0.03
17	PT	Carbon Dislf	20.0000	20.6772	-3.39	103	-0.02
18	T	allylchloride	20.0000	21.3438	-6.72	106	-0.03
19	PT	methylacetate	10.0000	11.2813	-12.81	129	-0.02
20	PT	Methylchlorid	10.0000	10.0763	-0.76	100	-0.02
21	T	tbutylalcohol	500.0000	805.8070	-61.16#	161	-0.02
22	T	Acrylonitrile	50.0000	58.9925	-17.98	119	-0.02
23	PT	t12dichlorte	10.0000	10.4707	-4.71	106	-0.02
24	PT	MtBE	10.0000	10.6170	-6.17	108	-0.02
25	T	Hexane	20.0000	25.4318	-27.16	110	-0.02
26	PT	11dichlorota	10.0000	10.3327	-3.33	105	-0.03
27	T	Vinylacetate	100.0000	112.0308	-12.03	111	-0.02
28	T	chloroprene	20.0000	22.2802	-11.40	105	-0.02
29	T	Diisopether	10.0000	10.3599	-3.60	102	-0.02
30	T	ETBE	10.0000	10.4591	-4.59	109	-0.02
31	T	22dichloropr	10.0000	10.0721	-0.72	107	-0.02
32	PT	c12dichlorte	10.0000	9.8402	1.60	106	-0.02
33	PT	2Butanone	100.0000	127.1269	-27.13	130	-0.02
34	T	propionitrile	100.0000	131.2711	-31.27	132	-0.01
35	T	Ethylacetate	50.0000	59.3190	-18.64	124	-0.02
36	T	methacrylonitrile	20.0000	23.9372	-19.69	123	-0.02
37	T	Bromochlorma	10.0000	9.3136	6.86	96	-0.02
38	T	Tetrahydofur	100.0000	130.0013	-30.00	129	-0.02
39	PT	Chloroform	10.0000	10.1007	-1.01	106	-0.02
40	PT	111trichlota	10.0000	10.7483	-7.48	104	-0.02
41	S	SURRDibrflma	20.0000	20.3474	-1.74	102	-0.02
42	PT	Cyclohexane	10.0000	11.3539	-13.54	103	-0.02
43	PT	Carbtetraclo	10.0000	10.7223	-7.22	106	-0.02
44	T	11dicloprope	10.0000	10.8062	-8.06	111	-0.01
45	S	SURR12DCAd4	20.0000	20.9661	-4.83	110	-0.01
46	PT	Benzene	10.0000	10.4671	-4.67	107	-0.01
47	PT	12dichlorota	10.0000	10.0837	-0.84	104	-0.02
48	T	TAME	10.0000	10.5399	-5.40	113	-0.01

49	PT	trichloroete	10.0000	10.1407	-1.41	106	-0.01
50	PT	methylcyclohexane	10.0000	11.9578	-19.58	112	-0.01
51	PT	12dicloropra	10.0000	10.2161	-2.16	105	0.00
52	T	23Dicl1propene	10.0000	10.3876	-3.88	109	-0.02
53	T	Dibromometha	10.0000	10.4034	-4.03	111	-0.01
54	T	methylmethacrylate	10.0000	11.2942	-12.94	119	-0.01
55	T	14dioxane	500.0000	592.4036	-18.48	133	0.00
56	PT	Bromodiclrma	10.0000	9.9737	0.26	105	0.00
57	T	2Nitropropane	100.0000	124.4093	-24.41	124	0.00
58	T	2CLEVE	50.0000	56.7633	-13.53	115	-0.01
59	PT	c13dicloproe	10.0000	10.4442	-4.44	110	0.00
60	PT	4Meth2Pentan	100.0000	126.0244	-26.02	123	0.00
61	S	SURRd8Tolule	20.0000	20.7202	-3.60	105	0.00
62	PT	Toluene	10.0000	10.4912	-4.91	107	0.00
63	PT	t13Dicloprop	10.0000	10.0564	-0.56	107	0.00
64	T	ethylmethacrylate	20.0000	22.9625	-14.81	114	0.00
65	PT	112Triclotha	10.0000	10.6733	-6.73	113	0.00
66	PT	Tetrachlorte	10.0000	10.5947	-5.95	104	0.00
67	T	13Diclorpropa	10.0000	10.3690	-3.69	105	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	106	0.00
69	PT	2Hexanone	100.0000	123.7536	-23.75	127	0.00
70	PT	Clorodibrmta	10.0000	8.9814	10.19	103	0.00
71	PT	12Dibrometha	10.0000	9.9380	0.62	110	0.00
72	PT	Chlorobenzen	10.0000	9.6920	3.08	102	0.00
73	T	1Clhexane	10.0000	10.7100	-7.10	111	0.00
74	T	1112Tetclota	10.0000	9.6683	3.32	108	0.00
75	PT	Ethylbenzene	10.0000	10.3653	-3.65	107	0.00
76	PT	m p-Xylene	20.0000	20.0091	-0.05	104	0.00
77	PT	o-Xylene	10.0000	9.8045	1.95	100	0.00
78	PT	Styrene	10.0000	10.0297	-0.30	100	0.00
79	PT	Bromoform	10.0000	8.7467	12.53	97	0.00
80	PT	Isopropylben	10.0000	10.2599	-2.60	101	0.00
81	T	cyclohexanone	200.0000	243.1471	-21.57	127	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	111	0.00
83	S	SURR4BrFBenz	20.0000	19.6869	1.57	107	0.00
84	T	Bromobenzene	10.0000	9.0858	9.14	103	0.00
85	PT	1122Tetrclta	10.0000	10.1685	-1.68	117	0.00
86	T	123Triclproa	10.0000	10.0008	-0.01	110	0.00
87	T	14dichloro2butene	10.0000	10.3618	-3.62	118	0.00
88	T	n-Propylbenz	10.0000	9.5502	4.50	101	0.00
89	T	2chlorotolue	10.0000	9.7167	2.83	105	0.00
90	T	4chlorotolue	10.0000	9.6993	3.01	105	0.00
91	T	135Trimebenz	10.0000	9.9542	0.46	105	0.00
92	T	tbutylbenzen	10.0000	9.8669	1.33	103	0.00
93	T	124Trimetben	10.0000	10.0100	-0.10	106	0.00
94	T	sbutylbenzen	10.0000	10.6967	-6.97	105	0.00
95	PT	13Diclorbenz	10.0000	9.4620	5.38	106	0.00
96	T	pIsopropylto	10.0000	10.3636	-3.64	104	0.00
97	PT	14dichlorobe	10.0000	9.0788	9.21	103	0.00
98	PT	12dichlorobe	10.0000	9.2552	7.45	102	0.00
99	T	nButylbenzen	10.0000	10.1483	-1.48	105	0.00
100	PT	12dibromo3cl	10.0000	10.5599	-5.60	130	0.00
101	T	135Trichlorobenzene	10.0000	9.8184	1.82	105	0.00
102	PT	124Trichlobe	10.0000	10.1513	-1.51	115	0.00
103	T	Hexachlorobu	10.0000	10.5176	-5.18	106	0.00
104	T	Naphthalene	10.0000	11.3191	-13.19	120	0.00
105	T	123Trichlben	10.0000	10.3754	-3.75	116	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W012921.M Thu Feb 04 09:03:07 2021

Quantitation Report

Data File : c:\instarch\data\feb0221\CCVF2.D Vial: 32
Acq On : 3 Feb 2021 11:22 Operator: RLD-DGS
Sample : 179112,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 11:43:32 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.69	96	1322263	20.00	ug/L	-0.02 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1123483	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	668287	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.84	113	345105	20.347	ug/L	-0.02
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4	7.25	102	98430	20.966	ug/L	-0.01
Spiked Amount 20.000	Range 89 - 111		Recovery = 105 %			
61) SURRd8Tolule	9.71	98	1392535	20.720	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 104 %			
83) SURR4BrFBenz	13.26	95	596559	19.687	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	171397	11.8705	ug/L	94
3) Chloromethan	2.09	50	201813	10.4546	ug/L	100
4) VinylChlorid	2.24	62	208838	11.0022	ug/L	98
5) Bromomethane	2.70	94	110948	11.7820	ug/L	97
6) Chloroethane	2.86	64	144123	10.6544	ug/L	97
7) Dichloroflmethane	3.17	67	368303	10.7453	ug/L	99
8) Trichlorofma	3.25	101	267046	11.3079	ug/L	99
9) Ethylether	3.69	59	166155	10.3829	ug/L	97
10) dichlorotfluoroethan	3.70	67	216653	11.2164	ug/L	98
11) propyleneoxide	3.74	58	398674	127.8933	ug/L	98
12) Acrolein	3.82	56	189772	59.0017	ug/L	93
13) 11dichlorthe	3.97	96	166769	10.8809	ug/L	93
14) Trichlorotfluoroeth	4.01	101	349901	23.3121	ug/L	98
15) Acetone	4.04	43	569723	132.9608	ug/L	98
16) Iodomethane	4.15	142	249580	16.8533	ug/L	99
17) Carbon Dislf	4.24	76	1002558	20.6772	ug/L	100
18) allylchloride	4.46	41	638819	21.3438	ug/L	99
19) methylacetate	4.51	74	42223	11.2813	ug/L	89
20) Methylchlorid	4.61	84	198293	10.0763	ug/L	98
21) tbutylalcohol	4.81	59	600510	805.8070	ug/L	98
22) Acrylonitrile	4.91	53	388032	58.9925	ug/L	97
23) t12dichlorte	4.99	96	186309	10.4707	ug/L	97
24) MtBE	5.02	73	492255	10.6170	ug/L	98
25) Hexane	5.39	57	656480	25.4318	ug/L	99
26) 11dichlorota	5.51	63	326329	10.3327	ug/L	98
27) Vinylacetate	5.61	43	3669407	112.0308	ug/L	99
28) chloroprene	5.65	53	638277	22.2802	ug/L	99
29) Diisopether	5.67	45	643436	10.3599	ug/L	97
30) ETBE	6.12	59	454375	10.4591	ug/L	98
31) 22dichloropr	6.26	77	195462	10.0721	ug/L	98
32) c12dichlorte	6.25	96	197165	9.8402	ug/L	99
33) 2Butanone	6.27	72	261174	127.1269	ug/L	96
34) propionitrile	6.31	54	281531	131.2711	ug/L	99
35) Ethylacetate	6.38	88	46588	59.3190	ug/L	94
36) methacrylonitrile	6.52	67	205264	23.9372	ug/L	95
37) Bromochlorma	6.54	128	87239	9.3136	ug/L	93
38) Tetrahydofur	6.63	42	711820	130.0013	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : c:\instarch\data\feb0221\CCVF2.D Vial: 32
Acq On : 3 Feb 2021 11:22 Operator: RLD-DGS
Sample : 179112,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 11:43:32 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.65	83	329073	10.1007 ug/L	99
40)	111trichlota	6.90	97	249422	10.7483 ug/L	97
42)	Cyclohexane	6.98	56	343363	11.3539 ug/L	97
43)	Carbtetraclo	7.11	119	199834	10.7223 ug/L	99
44)	11dicloprope	7.10	110	96687	10.8062 ug/L	97
46)	Benzene	7.35	78	756216	10.4671 ug/L	99
47)	12dichlorota	7.35	62	257941	10.0837 ug/L	98
48)	TAME	7.52	73	450060	10.5399 ug/L	97
49)	trichloroete	8.16	95	187308	10.1407 ug/L	97
50)	methylcyclohexane	8.42	83	399595	11.9578 ug/L	99
51)	12dicloropra	8.42	63	210413	10.2161 ug/L	97
52)	23Dicl1propene	8.48	75	293864	10.3876 ug/L	99
53)	Dibromometha	8.56	93	118295	10.4034 ug/L	97
54)	methylmethacrylate	8.59	69	150490	11.2942 ug/L	97
55)	14dioxane	8.60	88	22115	592.4036 ug/L	89
56)	Bromodiclrma	8.76	83	235883	9.9737 ug/L	97
57)	2Nitropropane	9.03	43	565016	124.4093 ug/L	98
58)	2CLEVE	9.15	63	590392	56.7633 ug/L	98
59)	c13dicloproe	9.34	75	287385	10.4442 ug/L	99
60)	4Meth2Pentan	9.54	43	2101346	126.0244 ug/L	99
62)	Toluene	9.79	92	488937	10.4912 ug/L	99
63)	t13Dicloprop	10.05	75	218497	10.0564 ug/L	98
64)	ethylmethacrylate	10.20	69	524091	22.9625 ug/L	99
65)	112Triclotha	10.29	83	150726	10.6733 ug/L	99
66)	Tetrachlorte	10.53	166	211289	10.5947 ug/L	98
67)	13Diclorpropa	10.52	76	305525	10.3690 ug/L	95
69)	2Hexanone	10.64	43	1586181	123.7536 ug/L	98
70)	Clorodibrmta	10.81	129	159647	8.9814 ug/L	98
71)	12Dibrometha	10.97	107	159727	9.9380 ug/L	97
72)	Chlorobenzen	11.66	112	501762	9.6920 ug/L	98
73)	1Clhexane	11.64	91	269570	10.7100 ug/L	98
74)	1112Tetclota	11.77	131	151481	9.6683 ug/L	96
75)	Ethylbenzene	11.82	91	869041	10.3653 ug/L	99
76)	m p-Xylene	11.99	106	669884	20.0091 ug/L	98
77)	o-Xylene	12.53	106	327091	9.8045 ug/L	100
78)	Styrene	12.54	104	544413	10.0297 ug/L	100
79)	Bromoform	12.77	173	96752	8.7467 ug/L	98
80)	Isopropylben	13.06	105	806604	10.2599 ug/L	100
81)	cyclohexanone	13.14	55	65709	243.1471 ug/L	95
84)	Bromobenzene	13.47	156	202314	9.0858 ug/L	95
85)	1122Tetrclta	13.44	83	255551	10.1685 ug/L	99
86)	123Triclproa	13.50	75	279132	10.0008 ug/L	96
87)	14dichloro2butene	13.53	53	64515	10.3618 ug/L	96
88)	n-Propylbenz	13.64	91	959914	9.5502 ug/L	98
89)	2chlorotolue	13.76	91	573333	9.7167 ug/L	97
90)	4chlorotolue	13.91	91	660730	9.6993 ug/L	99
91)	135Trimebenz	13.90	105	680435	9.9542 ug/L	100
92)	tbutylbenzen	14.37	119	582564	9.8669 ug/L	99
93)	124Trimetben	14.44	105	670174	10.0100 ug/L	97
94)	sbutylbenzen	14.69	105	848124	10.6967 ug/L	98
95)	13Diclorbenz	14.83	146	373953	9.4620 ug/L	99
96)	pIsopropylto	14.91	119	730007	10.3636 ug/L	99
97)	14dichlorobe	14.96	146	376276	9.0788 ug/L	96
98)	12dichlorobe	15.50	146	349426	9.2552 ug/L	98
99)	nButylbenzen	15.50	91	653327	10.1483 ug/L	99
100)	12dibromo3cl	16.59	157	41536	10.5599 ug/L	100
101)	135Trichlorobenzene	16.92	180	263829	9.8184 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : c:\instarch\data\feb0221\CCVF2.D Vial: 32
Acq On : 3 Feb 2021 11:22 Operator: RLD-DGS
Sample : 179112,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 11:43:32 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	224191	10.1513	ug/L	96
103) Hexachlorobu	17.97	225	111747	10.5176	ug/L	98
104) Naphthalene	18.03	128	570340	11.3191	ug/L	99
105) 123Trichlben	18.34	180	205596	10.3754	ug/L	95

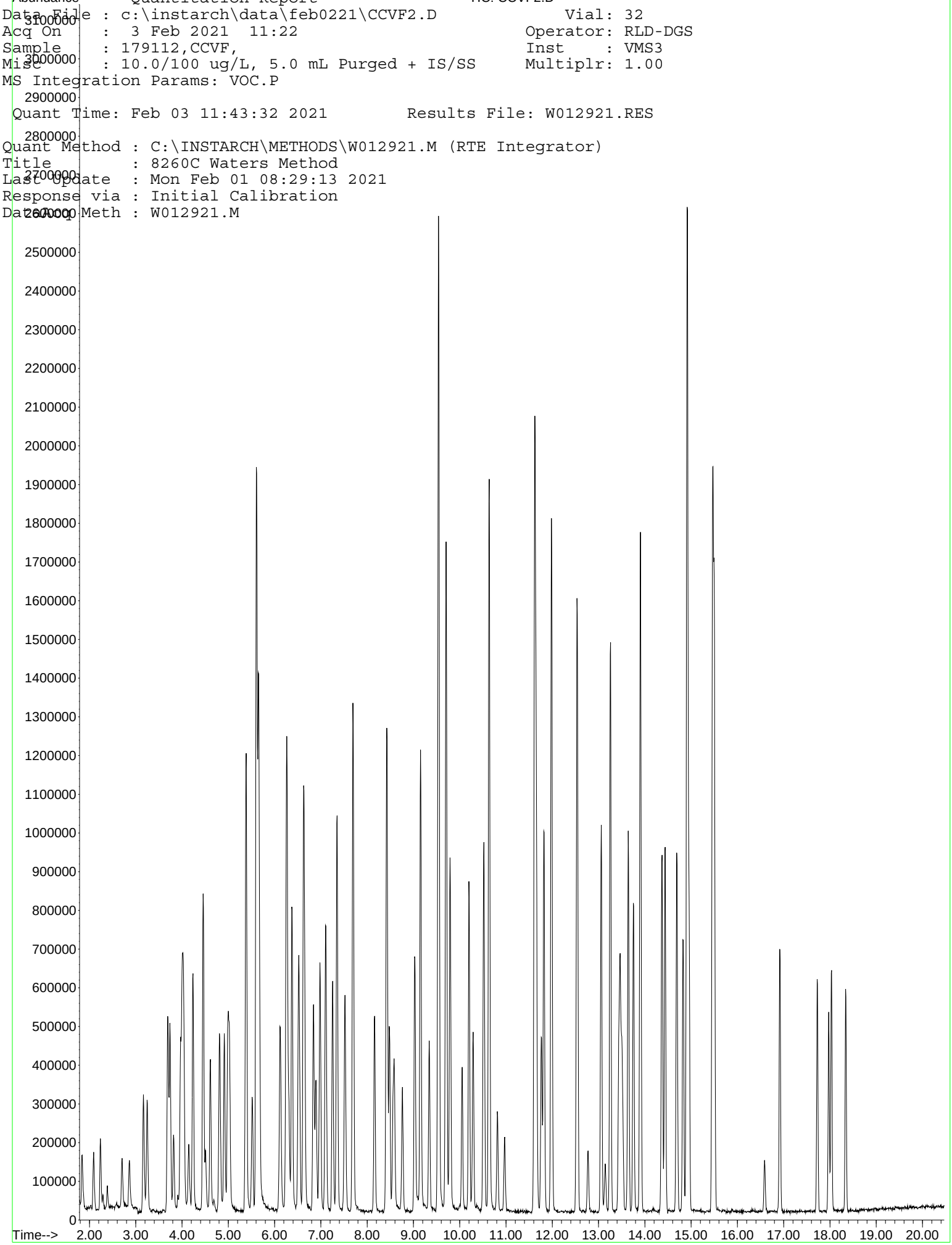
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCVF2.D

Data File : c:\instarch\data\feb0221\CCVF2.D Vial: 32
Acq On : 3 Feb 2021 11:22 Operator: RLD-DGS
Sample : 179112,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 11:43:32 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
Data Meth : W012921.M



Data File : C:\Instarch\Data\FEB0321\BFB1.D Vial: 1
Acq On : 3 Feb 2021 13:16 Operator: RLD-DGS
Sample : 178983,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W012921.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.657 to 4.663 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.9	22859	PASS
75	95	30	60	51.1	51104	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	7.8	7774	PASS
173	174	0.00	2	1.3	949	PASS
174	95	50	100	74.0	74020	PASS
175	174	5	9	7.2	5318	PASS
176	174	95	101	97.5	72149	PASS
177	176	5	9	6.9	4989	PASS

W012921.M Fri Feb 05 07:57:47 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\FEB0321\CCV-LCS1.D Vial: 2
Acq On : 3 Feb 2021 13:32 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 03 13:52:53 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	104	0.00
2	PT	Dichlorodi	0.2184	0.2537	-16.16	111	0.00
3	PT	Chloromethan	0.2920	0.3154	-8.01	109	0.00
4	PT	VinylChlorid	0.2871	0.3264	-13.69	112	0.00
5	PT	Bromomethane	0.1424	0.1535	-7.79	113	0.00
6	PT	Chloroethane	0.2046	0.2155	-5.33	110	0.00
7	T	Dichloroflmethane	0.5184	0.5403	-4.22	103	0.00
8	PT	Trichlorofma	0.3572	0.3946	-10.47	104	0.00
9	T	Ethylether	0.2421	0.2411	0.41	105	0.00
10	T	dichlorotfluoroethan	0.2922	0.3074	-5.20	103	0.00
11	T	propyleneoxide	0.0472	0.0551	-16.74	117	0.00
12	T	Acrolein	0.0486	0.0507	-4.32	110	0.00
13	PT	11dichlorthe	0.2318	0.2442	-5.35	102	0.00
14	PT	Trichlorotfluoroeth	0.2270	0.2601	-14.58	105	0.00
15	PT	Acetone	0.0714	0.0744#	-4.20	108	0.00
16	T	Iodomethane	0.2041	0.2547	-24.79#	131	0.00
17	PT	Carbon Dislf	0.7334	0.7536	-2.75	105	0.00
18	T	allylchloride	0.4527	0.4893	-8.08	110	0.00
19	PT	methylacetate	0.0566	0.0566#	0.00	118	0.00
20	PT	Methylchlorid	0.3445	0.2910	15.53	100	0.00
21	T	tbutylalcohol	0.0113	0.0146#	-29.20#	133	0.00
22	T	Acrylonitrile	0.0995	0.1093	-9.85	114	0.00
23	PT	t12dichlorte	0.2691	0.2791	-3.72	108	0.00
24	PT	MtBE	0.7013	0.7149	-1.94	107	0.00
25	T	Hexane	0.3904	0.4805	-23.08#	109	0.00
26	PT	11dichlorota	0.4777	0.4811	-0.71	105	0.00
27	T	Vinylacetate	0.5018	0.5308	-5.78	109	0.00
28	T	chloroprene	0.4333	0.4791	-10.57	107	0.00
29	T	Diisopether	0.9394	0.9750	-3.79	105	0.00
30	T	ETBE	0.6571	0.6780	-3.18	111	0.00
31	T	22dichloropr	0.2935	0.3397	-15.74	127	0.00
32	PT	c12dichlorte	0.3031	0.2984	1.55	109	0.00
33	PT	2Butanone	0.0311	0.0328#	-5.47	111	0.00
34	T	propionitrile	0.0324	0.0361	-11.42	115	0.00
35	T	Ethylacetate	0.0119	0.0118#	0.84	107	0.00
36	T	methacrylonitrile	0.1297	0.1383	-6.63	113	0.00
37	T	Bromochlorma	0.1417	0.1406	0.78	106	0.00
38	T	Tetrahydofur	0.0901	0.0890	1.22	110	0.00
39	PT	Chloroform	0.4928	0.4845	1.68	106	0.00
40	PT	111trichlota	0.3510	0.3932	-12.02	112	0.00
41	S	SURRDibrflma	0.2565	0.2628	-2.46	105	0.00
42	PT	Cyclohexane	0.4574	0.5257	-14.93	107	0.00
43	PT	Carbtetraclo	0.2819	0.3146	-11.60	113	-0.01
44	T	11dicloprope	0.1353	0.1421	-5.03	111	0.00
45	S	SURR12DCAd4	0.0710	0.0714	-0.56	109	0.00
46	PT	Benzene	1.0928	1.1360	-3.95	110	0.00
47	PT	12dichlorota	0.3869	0.3765	2.69	104	0.00
48	T	TAME	0.6459	0.6869	-6.35	117	0.00

49	PT	trichloroete	0.2794	0.2947	-5.48	113	0.00	
50	PT	methylcyclohexane	0.5055	0.5973	-18.16	113	0.00	
51	PT	12dicloropra	0.3115	0.3122	-0.22	106	0.00	
52	T	23Dicl1propene	0.4279	0.4481	-4.72	113	0.00	
53	T	Dibromometha	0.1720	0.1747	-1.57	111	0.00	
54	T	methylmethacrylate	0.2015	0.2125	-5.46	114	0.00	
55	T	14dioxane	0.0006	0.0019#	-216.67#	387#	0.00	
56	PT	Bromodiclrma	0.3577	0.3643	-1.85	110	0.00	
57	T	2Nitropropane	0.0687	0.0745	-8.44	111	0.00	
58	T	2CLEVE	0.1573	0.1682	-6.93	111	0.00	
59	PT	c13dicloproe	0.4162	0.4172	-0.24	108	0.00	
60	PT	4Meth2Pentan	0.2665	0.2722	-2.14	108	0.00	
61	S	SURRd8Tolule	1.0165	1.0051	1.12	103	0.00	
62	PT	Toluene	0.7049	0.7018	0.44	104	0.00	
63	PT	t13Dicloprop	0.3286	0.3322	-1.10	111	0.00	
64	T	ethylmethacrylate	0.3452	0.3562	-3.19	105	0.00	
65	PT	112Triclotha	0.2136	0.2058	3.65	105	0.00	
66	PT	Tetrachlorte	0.3016	0.2997	0.63	100	0.00	
67	T	13Diclorpropa	0.4457	0.4211	5.52	98	0.00	
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	97	0.00	
69	PT	2Hexanone	0.2282	0.2606	-14.20	106	0.00	
70	PT	Clorodibrmta	0.3164	0.3217	-1.68	106	0.00	
71	PT	12Dibrometha	0.2861	0.3051	-6.64	107	0.00	
72	PT	Chlorobenzen	0.9216	0.9129	0.94	95	0.00	
73	T	1Clhexane	0.4481	0.4699	-4.86	98	0.00	
74	T	1112Tetclota	0.2789	0.2703	3.08	99	0.00	
75	PT	Ethylbenzene	1.4925	1.5520	-3.99	98	0.00	
76	PT	m p-Xylene	0.5960	0.6169	-3.51	98	0.00	
77	PT	o-Xylene	0.5939	0.5838	1.70	91	0.00	
78	PT	Styrene	0.9663	0.9678	-0.16	91	0.00	
79	PT	Bromoform	0.1969	0.1903	3.35	98	0.00	
80	PT	Isopropylben	1.3995	1.6162	-15.48	103	0.00	
81	T	cyclohexanone	0.0048	0.0085#	-77.08#	168	0.00	
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	107	0.00	
83	S	SURR4BrFBenz	0.9069	0.9176	-1.18	106	0.00	
84	T	Bromobenzene	0.6664	0.6259	6.08	102	0.00	
85	PT	1122Tetrclta	0.7521	0.7214	4.08	106	0.00	
86	T	123Triclproa	0.8353	0.8424	-0.85	106	0.00	
87	T	14dichloro2butene	0.1863	0.1872	-0.48	110	0.00	
88	T	n-Propylbenz	3.0081	3.0389	-1.02	103	0.00	
89	T	2chlorotolue	1.7658	1.7832	-0.99	105	0.00	
90	T	4chlorotolue	2.0387	2.0481	-0.46	105	0.00	
91	T	135Trimebenz	2.0457	2.1284	-4.04	105	0.00	
92	T	tbutylbenzen	1.7670	1.7950	-1.58	102	0.00	
93	T	124Trimetben	2.0036	2.0539	-2.51	104	0.00	
94	T	sbutylbenzen	2.3729	2.5827	-8.84	103	0.00	
95	PT	13Diclorbenz	1.1828	1.1757	0.60	107	0.00	
96	T	pIsopropylto	2.1081	2.2508	-6.77	104	0.00	
97	PT	14dichlorobe	1.2404	1.1873	4.28	105	0.00	
98	PT	12dichlorobe	1.1299	1.0898	3.55	103	0.00	
99	T	nButylbenzen	1.9267	2.0399	-5.88	105	0.00	
100	PT	12dibromo3cl	0.1177	0.1220	-3.65	122	0.00	
101	T	135Trichlorobenzene	0.8042	0.8118	-0.95	104	0.00	
102	PT	124Trichlobe	0.6609	0.6869	-3.93	113	0.00	
103	T	Hexachlorobu	0.3180	0.3582	-12.64	109	0.00	
104	T	Naphthalene	1.5080	1.6312	-8.17	110	0.00	
105	T	123Trichlben	0.5930	0.5973	-0.73	109	0.00	

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W012921.M Fri Feb 05 09:35:54 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\FEB0321\CCV-LCS1.D Vial: 2
Acq On : 3 Feb 2021 13:32 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 03 13:52:53 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	104	0.00
2	PT	Dichlorodi	10.0000	11.6183	-16.18	111	0.00
3	PT	Chloromethan	10.0000	10.8008	-8.01	109	0.00
4	PT	VinylChlorid	10.0000	11.3703	-13.70	112	0.00
5	PT	Bromomethane	10.0000	10.7763	-7.76	113	0.00
6	PT	Chloroethane	10.0000	10.5319	-5.32	110	0.00
7	T	Dichloroflmethane	10.0000	10.4209	-4.21	103	0.00
8	PT	Trichlorofma	10.0000	11.0470	-10.47	104	0.00
9	T	Ethylether	10.0000	9.9627	0.37	105	0.00
10	T	dichlorotfluoroethan	10.0000	10.5202	-5.20	103	0.00
11	T	propyleneoxide	100.0000	116.7560	-16.76	117	0.00
12	T	Acrolein	50.0000	52.1478	-4.30	110	0.00
13	PT	11dichlorthe	10.0000	10.5320	-5.32	102	0.00
14	PT	Trichlorotfluoroeth	20.0000	22.9156	-14.58	105	0.00
15	PT	Acetone	100.0000	113.6246	-13.62	108	0.00
16	T	Iodomethane	20.0000	21.7523	-8.76	131	0.00
17	PT	Carbon Dislf	20.0000	20.5517	-2.76	105	0.00
18	T	allylchloride	20.0000	21.6185	-8.09	110	0.00
19	PT	methylacetate	10.0000	9.9963	0.04	118	0.00
20	PT	Methylchlorid	10.0000	9.7514	2.49	100	0.00
21	T	tbutylalcohol	500.0000	646.2724	-29.25#	133	0.00
22	T	Acrylonitrile	50.0000	54.9448	-9.89	114	0.00
23	PT	t12dichlorte	10.0000	10.3714	-3.71	108	0.00
24	PT	MtBE	10.0000	10.1942	-1.94	107	0.00
25	T	Hexane	20.0000	24.6119	-23.06#	109	0.00
26	PT	11dichlorota	10.0000	10.0721	-0.72	105	0.00
27	T	Vinylacetate	100.0000	106.3655	-6.37	109	0.00
28	T	chloroprene	20.0000	22.1111	-10.56	107	0.00
29	T	Diisopether	10.0000	10.3790	-3.79	105	0.00
30	T	ETBE	10.0000	10.3174	-3.17	111	0.00
31	T	22dichloropr	10.0000	11.5722	-15.72	127	0.00
32	PT	c12dichlorte	10.0000	9.8463	1.54	109	0.00
33	PT	2Butanone	100.0000	105.5141	-5.51	111	0.00
34	T	propionitrile	100.0000	111.1800	-11.18	115	0.00
35	T	Ethylacetate	50.0000	49.7199	0.56	107	0.00
36	T	methacrylonitrile	20.0000	21.3300	-6.65	113	0.00
37	T	Bromochlorma	10.0000	9.9227	0.77	106	0.00
38	T	Tetrahydofur	100.0000	105.9520	-5.95	110	0.00
39	PT	Chloroform	10.0000	9.8322	1.68	106	0.00
40	PT	111trichlota	10.0000	11.2024	-12.02	112	0.00
41	S	SURRDibrflma	20.0000	20.4908	-2.45	105	0.00
42	PT	Cyclohexane	10.0000	11.4920	-14.92	107	0.00
43	PT	Carbtetraclo	10.0000	11.1604	-11.60	113	-0.01
44	T	11dicloprope	10.0000	10.5030	-5.03	111	0.00
45	S	SURR12DCAd4	20.0000	20.1205	-0.60	109	0.00
46	PT	Benzene	10.0000	10.3958	-3.96	110	0.00
47	PT	12dichlorota	10.0000	9.7312	2.69	104	0.00
48	T	TAME	10.0000	10.6350	-6.35	117	0.00

49	PT	trichloroete	10.0000	10.5493	-5.49	113	0.00	
50	PT	methylcyclohexane	10.0000	11.8177	-18.18	113	0.00	
51	PT	12dicloropra	10.0000	10.0205	-0.21	106	0.00	
52	T	23Dicl1propene	10.0000	10.4730	-4.73	113	0.00	
53	T	Dibromometha	10.0000	10.1559	-1.56	111	0.00	
54	T	methylmethacrylate	10.0000	10.5462	-5.46	114	0.00	
55	T	14dioxane	500.0000	1741.2939	-248.26#	387	0.00	
56	PT	Bromodiclrma	10.0000	10.1845	-1.84	110	0.00	
57	T	2Nitropropane	100.0000	108.4416	-8.44	111	0.00	
58	T	2CLEVE	50.0000	53.4423	-6.88	111	0.00	
59	PT	c13dicloproe	10.0000	10.0235	-0.24	108	0.00	
60	PT	4Meth2Pentan	100.0000	106.0718	-6.07	108	0.00	
61	S	SURRd8Tolule	20.0000	19.7747	1.13	103	0.00	
62	PT	Toluene	10.0000	9.9551	0.45	104	0.00	
63	PT	t13Dicloprop	10.0000	10.1080	-1.08	111	0.00	
64	T	ethylmethacrylate	20.0000	20.6376	-3.19	105	0.00	
65	PT	112Triclotha	10.0000	9.6366	3.63	105	0.00	
66	PT	Tetrachlorte	10.0000	9.9355	0.65	100	0.00	
67	T	13Diclorpropa	10.0000	9.4489	5.51	98	0.00	
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	97	0.00	
69	PT	2Hexanone	100.0000	114.2282	-14.23	106	0.00	
70	PT	Clorodibrmta	10.0000	10.1651	-1.65	106	0.00	
71	PT	12Dibrometha	10.0000	10.6633	-6.63	107	0.00	
72	PT	Chlorobenzen	10.0000	9.9057	0.94	95	0.00	
73	T	1Clhexane	10.0000	10.4864	-4.86	98	0.00	
74	T	1112Tetclota	10.0000	9.6915	3.09	99	0.00	
75	PT	Ethylbenzene	10.0000	10.3984	-3.98	98	0.00	
76	PT	m p-Xylene	20.0000	20.7020	-3.51	98	0.00	
77	PT	o-Xylene	10.0000	9.8294	1.71	91	0.00	
78	PT	Styrene	10.0000	10.0155	-0.15	91	0.00	
79	PT	Bromoform	10.0000	9.6632	3.37	98	0.00	
80	PT	Isopropylben	10.0000	11.5482	-15.48	103	0.00	
81	T	cyclohexanone	200.0000	352.5467	-76.27#	168	0.00	
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	107	0.00	
83	S	SURR4BrFBenz	20.0000	20.2361	-1.18	106	0.00	
84	T	Bromobenzene	10.0000	9.3928	6.07	102	0.00	
85	PT	1122Tetrclta	10.0000	9.5911	4.09	106	0.00	
86	T	123Triclproa	10.0000	10.0851	-0.85	106	0.00	
87	T	14dichloro2butene	10.0000	10.0442	-0.44	110	0.00	
88	T	n-Propylbenz	10.0000	10.1024	-1.02	103	0.00	
89	T	2chlorotolue	10.0000	10.0983	-0.98	105	0.00	
90	T	4chlorotolue	10.0000	10.0463	-0.46	105	0.00	
91	T	135Trimebenz	10.0000	10.4043	-4.04	105	0.00	
92	T	tbutylbenzen	10.0000	10.1589	-1.59	102	0.00	
93	T	124Trimetben	10.0000	10.2509	-2.51	104	0.00	
94	T	sbutylbenzen	10.0000	10.8844	-8.84	103	0.00	
95	PT	13Diclorbenz	10.0000	9.9400	0.60	107	0.00	
96	T	pIsopropylto	10.0000	10.6770	-6.77	104	0.00	
97	PT	14dichlorobe	10.0000	9.5725	4.28	105	0.00	
98	PT	12dichlorobe	10.0000	9.6452	3.55	103	0.00	
99	T	nButylbenzen	10.0000	10.5877	-5.88	105	0.00	
100	PT	12dibromo3cl	10.0000	10.3622	-3.62	122	0.00	
101	T	135Trichlorobenzene	10.0000	10.0953	-0.95	104	0.00	
102	PT	124Trichlobe	10.0000	10.3933	-3.93	113	0.00	
103	T	Hexachlorobu	10.0000	11.2639	-12.64	109	0.00	
104	T	Naphthalene	10.0000	10.8174	-8.17	110	0.00	
105	T	123Trichlben	10.0000	10.0711	-0.71	109	0.00	

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W012921.M Fri Feb 05 09:36:46 2021

Quantitation Report

Data File : C:\Instarch\Data\FEB0321\CCV-LCS1.D Vial: 2
Acq On : 3 Feb 2021 13:32 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 13:52:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1358966	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1020436	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	643452	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	357184	20.491	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	97082	20.120	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1365885	19.775	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99	%		
83) SURR4BrFBenz	13.26	95	590413	20.236	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	172412	11.6183	ug/L	95
3) Chloromethan	2.09	50	214283	10.8008	ug/L	99
4) VinylChlorid	2.25	62	221817	11.3703	ug/L	96
5) Bromomethane	2.72	94	104294	10.7763	ug/L	100
6) Chloroethane	2.88	64	146420	10.5319	ug/L	99
7) Dichloroflmethane	3.19	67	367100	10.4209	ug/L	99
8) Trichlorofma	3.28	101	268126	11.0470	ug/L	96
9) Ethylether	3.71	59	163856	9.9627	ug/L	97
10) dichlorotfluoroethan	3.73	67	208845	10.5202	ug/L	98
11) propyleneoxide	3.76	58	374059	116.7560	ug/L	97
12) Acrolein	3.85	56	172383	52.1478	ug/L	100
13) 11dichlorthe	4.00	96	165902	10.5320	ug/L	94
14) Trichlorotfluoroeth	4.04	101	353497	22.9156	ug/L	99
15) Acetone	4.06	43	505500	113.6246	ug/L	98
16) Iodomethane	4.18	142	346103	21.7523	ug/L	99
17) Carbon Dislf	4.26	76	1024134	20.5517	ug/L	99
18) allylchloride	4.48	41	665002	21.6185	ug/L	99
19) methylacetate	4.53	74	38452	9.9963	ug/L	93
20) Methylchlorid	4.64	84	197734	9.7514	ug/L	95
21) tbutylalcohol	4.83	59	494989	646.2724	ug/L	98
22) Acrylonitrile	4.94	53	371439	54.9448	ug/L	97
23) t12dichlorte	5.02	96	189664	10.3714	ug/L	98
24) MtBE	5.04	73	485776	10.1942	ug/L	99
25) Hexane	5.40	57	652949	24.6119	ug/L	97
26) 11dichlorota	5.54	63	326927	10.0721	ug/L	99
27) Vinylacetate	5.63	43	3606656	106.3655	ug/L	99
28) chloroprene	5.67	53	651016	22.1111	ug/L	100
29) Diisopether	5.69	45	662515	10.3790	ug/L	100
30) ETBE	6.14	59	460661	10.3174	ug/L	98
31) 22dichloropr	6.28	77	230807	11.5722	ug/L	97
32) c12dichlorte	6.27	96	202762	9.8463	ug/L	99
33) 2Butanone	6.29	72	222789	105.5141	ug/L	100
34) propionitrile	6.33	54	245061	111.1800	ug/L	97
35) Ethylacetate	6.40	88	40133	49.7199	ug/L #	90
36) methacrylonitrile	6.54	67	187984	21.3300	ug/L	96
37) Bromochlorma	6.55	128	95524	9.9227	ug/L	98
38) Tetrahydofur	6.65	42	604646	105.9520	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\FEB0321\CCV-LCS1.D Vial: 2
Acq On : 3 Feb 2021 13:32 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 13:52:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	329217	9.8322	ug/L	99
40)	111trichlota	6.91	97	267175	11.2024	ug/L	97
42)	Cyclohexane	7.00	56	357186	11.4920	ug/L	97
43)	Carbtetraclo	7.12	119	213773	11.1604	ug/L	96
44)	11dicloprope	7.12	110	96583	10.5030	ug/L	97
46)	Benzene	7.36	78	771913	10.3958	ug/L	99
47)	12dichlorota	7.36	62	255835	9.7312	ug/L	99
48)	TAME	7.53	73	466726	10.6350	ug/L	95
49)	trichloroete	8.17	95	200264	10.5493	ug/L	93
50)	methylcyclohexane	8.43	83	405873	11.8177	ug/L	99
51)	12dicloropra	8.43	63	212114	10.0205	ug/L	99
52)	23Dicl1propene	8.50	75	304503	10.4730	ug/L	99
53)	Dibromometha	8.57	93	118686	10.1559	ug/L	97
54)	methylmethacrylate	8.59	69	144423	10.5462	ug/L	96
55)	14dioxane	8.60	88	64404	1741.2939	ug/L	91
56)	Bromodiclrma	8.78	83	247554	10.1845	ug/L	99
57)	2Nitropropane	9.04	43	506168	108.4416	ug/L	96
58)	2CLEVE	9.16	63	571279	53.4423	ug/L	99
59)	c13dicloproe	9.35	75	283466	10.0235	ug/L	98
60)	4Meth2Pentan	9.55	43	1849678	106.0718	ug/L	100
62)	Toluene	9.80	92	476828	9.9551	ug/L	100
63)	t13Dicloprop	10.05	75	225715	10.1080	ug/L	98
64)	ethylmethacrylate	10.20	69	484102	20.6376	ug/L	98
65)	112Triclotha	10.30	83	139863	9.6366	ug/L	97
66)	Tetrachlorte	10.53	166	203642	9.9355	ug/L	97
67)	13Diclorpropa	10.52	76	286141	9.4489	ug/L	96
69)	2Hexanone	10.64	43	1329804	114.2282	ug/L	99
70)	Clorodibrmta	10.82	129	164115	10.1651	ug/L	99
71)	12Dibrometha	10.98	107	155664	10.6633	ug/L	96
72)	Chlorobenzen	11.66	112	465787	9.9057	ug/L	99
73)	1Clhexane	11.64	91	239732	10.4864	ug/L	99
74)	1112Tetclota	11.77	131	137917	9.6915	ug/L	98
75)	Ethylbenzene	11.82	91	791851	10.3984	ug/L	99
76)	m p-Xylene	11.99	106	629510	20.7020	ug/L	99
77)	o-Xylene	12.53	106	297845	9.8294	ug/L	99
78)	Styrene	12.55	104	493775	10.0155	ug/L	100
79)	Bromoform	12.77	173	97086	9.6632	ug/L	98
80)	Isopropylben	13.06	105	824617	11.5482	ug/L	100
81)	cyclohexanone	13.15	55	86535	352.5467	ug/L	92
84)	Bromobenzene	13.47	156	201379	9.3928	ug/L	98
85)	1122Tetrclta	13.44	83	232081	9.5911	ug/L	99
86)	123Triclproa	13.50	75	271025	10.0851	ug/L	98
87)	14dichloro2butene	13.53	53	60213	10.0442	ug/L	99
88)	n-Propylbenz	13.64	91	977687	10.1024	ug/L	99
89)	2chlorotolue	13.75	91	573705	10.0983	ug/L	99
90)	4chlorotolue	13.91	91	658937	10.0463	ug/L	100
91)	135Trimebenz	13.90	105	684772	10.4043	ug/L	99
92)	tbutylbenzen	14.37	119	577510	10.1589	ug/L	97
93)	124Trimetben	14.44	105	660798	10.2509	ug/L	97
94)	sbutylbenzen	14.69	105	830934	10.8844	ug/L	100
95)	13Diclorbenz	14.83	146	378247	9.9400	ug/L	99
96)	pIsopropylto	14.91	119	724130	10.6770	ug/L	100
97)	14dichlorobe	14.96	146	381996	9.5725	ug/L	98
98)	12dichlorobe	15.49	146	350619	9.6452	ug/L	100
99)	nButylbenzen	15.50	91	656288	10.5877	ug/L	99
100)	12dibromo3cl	16.59	157	39244	10.3622	ug/L	93
101)	135Trichlorobenzene	16.91	180	261188	10.0953	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\FEB0321\CCV-LCS1.D Vial: 2
Acq On : 3 Feb 2021 13:32 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 13:52:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	221005	10.3933	ug/L	96
103) Hexachlorobu	17.97	225	115229	11.2639	ug/L	96
104) Naphthalene	18.03	128	524806	10.8174	ug/L	99
105) 123Trichlben	18.34	180	192151	10.0711	ug/L	93

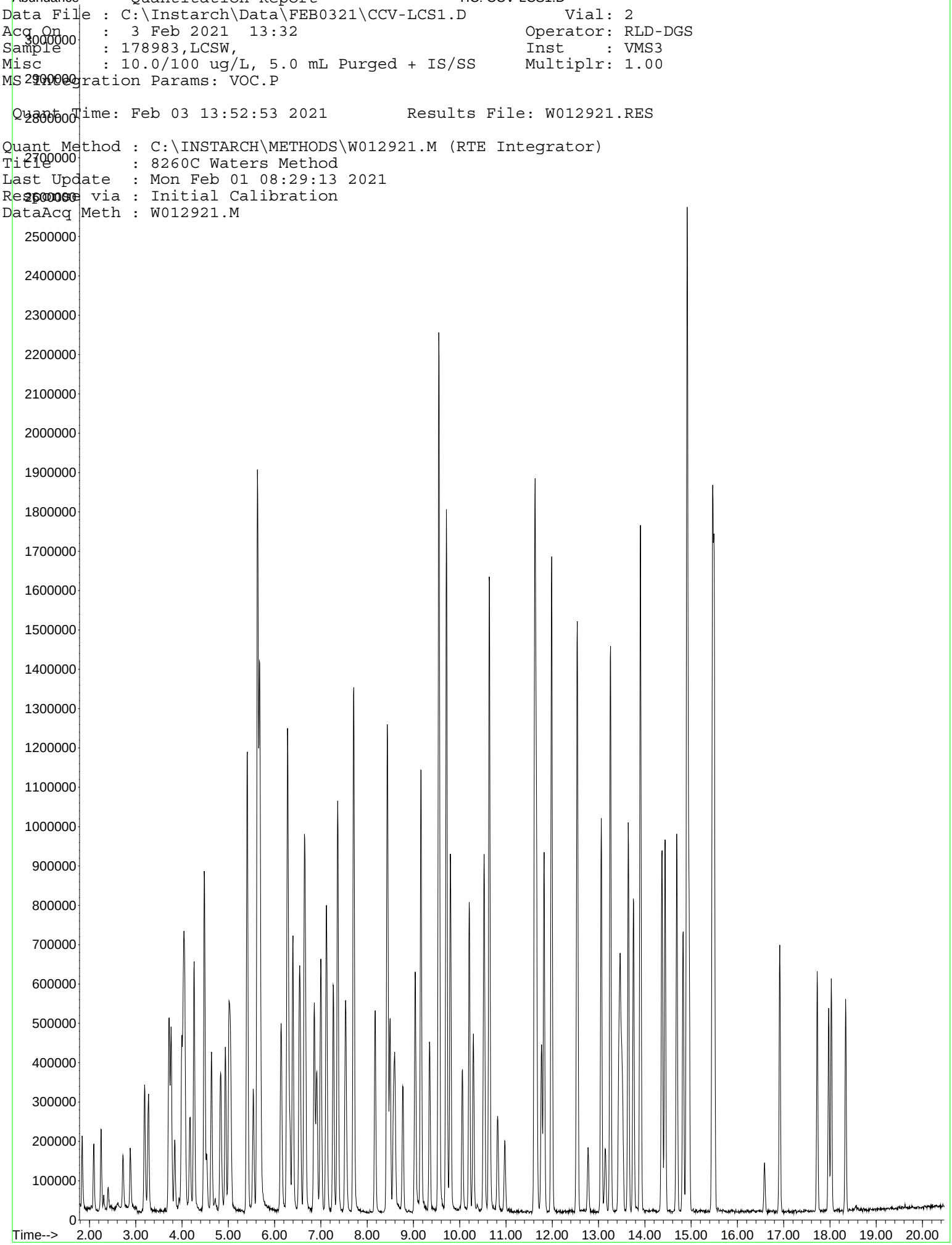
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCV-LCS1.D

Data File : C:\Instarch\Data\FEB0321\CCV-LCS1.D Vial: 2
Acq On : 3 Feb 2021 13:32 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 13:52:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Data File : C:\Instarch\Data\FEB0321\BFB2.D Vial: 19
Acq On : 4 Feb 2021 7:38 Operator: RLD-DGS
Sample : 178983,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W012921.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.656 to 4.675 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.5	20498	PASS
75	95	30	60	52.4	52371	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	5.7	5675	PASS
173	174	0.00	2	1.1	921	PASS
174	95	50	100	80.2	80212	PASS
175	174	5	9	7.2	5786	PASS
176	174	95	101	99.6	79875	PASS
177	176	5	9	7.1	5635	PASS

W012921.M Fri Feb 05 07:59:33 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\FEB0321\CCV2-CCVF1.D Vial: 21
Acq On : 4 Feb 2021 8:25 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 04 08:46:17 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	98	0.00
2	PT	Dichlorodi	0.2184	0.2629	-20.38#	108	0.00
3	PT	Chloromethan	0.2920	0.3159	-8.18	103	0.00
4	PT	VinylChlorid	0.2871	0.3158	-10.00	102	0.00
5	PT	Bromomethane	0.1424	0.2080	-46.07#	145	0.00
6	PT	Chloroethane	0.2046	0.2102	-2.74	101	0.00
7	T	Dichloroflmethane	0.5184	0.5567	-7.39	100	0.00
8	PT	Trichlorofma	0.3572	0.4085	-14.36	101	0.00
9	T	Ethylether	0.2421	0.2496	-3.10	102	0.00
10	T	dichlorotfluoroethan	0.2922	0.3282	-12.32	104	0.00
11	T	propyleneoxide	0.0472	0.0549	-16.31	109	0.00
12	T	Acrolein	0.0486	0.0454	6.58	92	0.00
13	PT	11dichlorthe	0.2318	0.2604	-12.34	102	0.00
14	PT	Trichlorotfluoroeth	0.2270	0.2765	-21.81#	106	-0.01
15	PT	Acetone	0.0714	0.0742#	-3.92	102	0.00
16	T	Iodomethane	0.2041	0.1832	10.24	89	0.00
17	PT	Carbon Dislf	0.7334	0.7945	-8.33	104	0.00
18	T	allylchloride	0.4527	0.4688	-3.56	99	0.00
19	PT	methylacetate	0.0566	0.0649#	-14.66	127	0.00
20	PT	Methylchlorid	0.3445	0.3168	8.04	103	0.00
21	T	tbutylalcohol	0.0113	0.0119#	-5.31	102	0.00
22	T	Acrylonitrile	0.0995	0.1121	-12.66	110	0.00
23	PT	t12dichlorte	0.2691	0.2816	-4.65	102	0.00
24	PT	MtBE	0.7013	0.7240	-3.24	102	0.00
25	T	Hexane	0.3904	0.4540	-16.29	97	0.00
26	PT	11dichlorota	0.4777	0.5107	-6.91	105	0.00
27	T	Vinylacetate	0.5018	0.3016	39.90#	59	0.00
28	T	chloroprene	0.4333	0.4884	-12.72	103	0.00
29	T	Diisopether	0.9394	0.9714	-3.41	99	0.00
30	T	ETBE	0.6571	0.7145	-8.74	110	0.00
31	T	22dichloropr	0.2935	0.2280	22.32#	80	0.00
32	PT	c12dichlorte	0.3031	0.3033	-0.07	104	0.00
33	PT	2Butanone	0.0311	0.0329#	-5.79	105	0.00
34	T	propionitrile	0.0324	0.0357	-10.19	107	0.00
35	T	Ethylacetate	0.0119	0.0117#	1.68	99	0.00
36	T	methacrylonitrile	0.1297	0.1433	-10.49	110	0.00
37	T	Bromochlorma	0.1417	0.1447	-2.12	102	0.00
38	T	Tetrahydofur	0.0901	0.0938	-4.11	109	0.00
39	PT	Chloroform	0.4928	0.5089	-3.27	105	0.00
40	PT	111trichlota	0.3510	0.3905	-11.25	104	0.00
41	S	SURRDibrflma	0.2565	0.2515	1.95	95	0.00
42	PT	Cyclohexane	0.4574	0.5464	-19.46	105	0.00
43	PT	Carbtetraclo	0.2819	0.3124	-10.82	106	0.00
44	T	11dicloprope	0.1353	0.1438	-6.28	106	0.01
45	S	SURR12DCAd4	0.0710	0.0716	-0.85	103	0.00
46	PT	Benzene	1.0928	1.1673	-6.82	106	0.00
47	PT	12dichlorota	0.3869	0.3929	-1.55	102	0.00
48	T	TAME	0.6459	0.6799	-5.26	109	0.00

49	PT	trichloroete	0.2794	0.3165	-13.28	115	0.00
50	PT	methylcyclohexane	0.5055	0.5915	-17.01	106	0.00
51	PT	12dicloropra	0.3115	0.3214	-3.18	103	0.00
52	T	23Dicl1propene	0.4279	0.4463	-4.30	106	0.00
53	T	Dibromometha	0.1720	0.1687	1.92	101	0.00
54	T	methylmethacrylate	0.2015	0.2083	-3.37	105	0.00
55	T	14dioxane	0.0006	0.0008#	-33.33#	145	0.00
56	PT	Bromodiclrma	0.3577	0.3604	-0.75	102	0.00
57	T	2Nitropropane	0.0687	0.0724	-5.39	102	0.00
58	T	2CLEVE	0.1573	0.1779	-13.10	111	0.00
59	PT	c13dicloproe	0.4162	0.4096	1.59	100	0.00
60	PT	4Meth2Pentan	0.2665	0.2890	-8.44	108	0.00
61	S	SURRd8Tolule	1.0165	1.0332	-1.64	100	0.00
62	PT	Toluene	0.7049	0.7566	-7.33	106	0.00
63	PT	t13Dicloprop	0.3286	0.3310	-0.73	104	0.00
64	T	ethylmethacrylate	0.3452	0.3770	-9.21	105	0.00
65	PT	112Triclotha	0.2136	0.2324	-8.80	112	0.00
66	PT	Tetrachlorte	0.3016	0.3217	-6.66	101	0.00
67	T	13Diclorpropa	0.4457	0.4623	-3.72	102	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	101	0.00
69	PT	2Hexanone	0.2282	0.2549	-11.70	109	0.00
70	PT	Clorodibrmta	0.3164	0.3101	1.99	107	0.00
71	PT	12Dibrometha	0.2861	0.2946	-2.97	108	0.00
72	PT	Chlorobenzen	0.9216	0.9096	1.30	99	0.00
73	T	1Clhexane	0.4481	0.4845	-8.12	106	0.00
74	T	1112Tetclota	0.2789	0.2834	-1.61	109	0.00
75	PT	Ethylbenzene	1.4925	1.6101	-7.88	106	0.00
76	PT	m p-Xylene	0.5960	0.6304	-5.77	105	0.00
77	PT	o-Xylene	0.5939	0.5810	2.17	95	0.00
78	PT	Styrene	0.9663	0.9875	-2.19	97	0.00
79	PT	Bromoform	0.1969	0.1974	-0.25	106	0.00
80	PT	Isopropylben	1.3995	1.4912	-6.55	100	0.00
81	T	cyclohexanone	0.0048	0.0047#	2.08	98	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	105	0.00
83	S	SURR4BrFBenz	0.9069	0.9227	-1.74	105	0.00
84	T	Bromobenzene	0.6664	0.6203	6.92	100	0.00
85	PT	1122Tetrclta	0.7521	0.6540	13.04	95	0.00
86	T	123Triclproa	0.8353	0.8574	-2.65	106	0.00
87	T	14dichloro2butene	0.1863	0.1738	6.71	100	0.00
88	T	n-Propylbenz	3.0081	3.0025	0.19	100	0.00
89	T	2chlorotolue	1.7658	1.7752	-0.53	103	0.00
90	T	4chlorotolue	2.0387	2.0194	0.95	101	0.00
91	T	135Trimebenz	2.0457	2.1306	-4.15	104	0.00
92	T	tbutylbenzen	1.7670	1.8555	-5.01	103	0.00
93	T	124Trimetben	2.0036	2.0748	-3.55	104	0.00
94	T	sbutylbenzen	2.3729	2.6116	-10.06	103	0.00
95	PT	13Diclorbenz	1.1828	1.1453	3.17	103	0.00
96	T	pIsopropylto	2.1081	2.2420	-6.35	101	0.00
97	PT	14dichlorobe	1.2404	1.1895	4.10	103	0.00
98	PT	12dichlorobe	1.1299	1.1219	0.71	104	0.00
99	T	nButylbenzen	1.9267	2.0416	-5.96	104	0.00
100	PT	12dibromo3cl	0.1177	0.1167	0.85	115	0.00
101	T	135Trichlorobenzene	0.8042	0.8040	0.02	101	0.00
102	PT	124Trichlobe	0.6609	0.6658	-0.74	108	0.00
103	T	Hexachlorobu	0.3180	0.3267	-2.74	98	0.00
104	T	Naphthalene	1.5080	1.6577	-9.93	110	0.00
105	T	123Trichlben	0.5930	0.6021	-1.53	108	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W012921.M Fri Feb 05 09:39:10 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\FEB0321\CCV2-CCVF1.D Vial: 21
Acq On : 4 Feb 2021 8:25 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 04 08:46:17 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	98	0.00
2	PT	Dichlorodi	10.0000	12.0373	-20.37#	108	0.00
3	PT	Chloromethan	10.0000	10.8176	-8.18	103	0.00
4	PT	VinylChlorid	10.0000	10.9981	-9.98	102	0.00
5	PT	Bromomethane	10.0000	14.6040	-46.04#	145	0.00
6	PT	Chloroethane	10.0000	10.2750	-2.75	101	0.00
7	T	Dichloroflmethane	10.0000	10.7374	-7.37	100	0.00
8	PT	Trichlorofma	10.0000	11.4358	-14.36	101	0.00
9	T	Ethylether	10.0000	10.3132	-3.13	102	0.00
10	T	dichlorotfluoroethan	10.0000	11.2341	-12.34	104	0.00
11	T	propyleneoxide	100.0000	116.4080	-16.41	109	0.00
12	T	Acrolein	50.0000	46.6225	6.75	92	0.00
13	PT	11dichlorthe	10.0000	11.2344	-12.34	102	0.00
14	PT	Trichlorotfluoroeth	20.0000	24.3600	-21.80#	106	-0.01
15	PT	Acetone	100.0000	113.2283	-13.23	102	0.00
16	T	Iodomethane	20.0000	16.4432	17.78	89	0.00
17	PT	Carbon Dislf	20.0000	21.6679	-8.34	104	0.00
18	T	allylchloride	20.0000	20.7124	-3.56	99	0.00
19	PT	methylacetate	10.0000	11.4566	-14.57	127	0.00
20	PT	Methylchlorid	10.0000	10.6929	-6.93	103	0.00
21	T	tbutylalcohol	500.0000	529.0858	-5.82	102	0.00
22	T	Acrylonitrile	50.0000	56.3593	-12.72	110	0.00
23	PT	t12dichlorte	10.0000	10.4648	-4.65	102	0.00
24	PT	MtBE	10.0000	10.3230	-3.23	102	0.00
25	T	Hexane	20.0000	23.2574	-16.29	97	0.00
26	PT	11dichlorota	10.0000	10.6919	-6.92	105	0.00
27	T	Vinylacetate	100.0000	56.4435	43.56#	59	0.00
28	T	chloroprene	20.0000	22.5408	-12.70	103	0.00
29	T	Diisopether	10.0000	10.3405	-3.41	99	0.00
30	T	ETBE	10.0000	10.8739	-8.74	110	0.00
31	T	22dichloropr	10.0000	7.7678	22.32#	80	0.00
32	PT	c12dichlorte	10.0000	10.0074	-0.07	104	0.00
33	PT	2Butanone	100.0000	106.0273	-6.03	105	0.00
34	T	propionitrile	100.0000	110.0490	-10.05	107	0.00
35	T	Ethylacetate	50.0000	49.1098	1.78	99	0.00
36	T	methacrylonitrile	20.0000	22.0981	-10.49	110	0.00
37	T	Bromochlorma	10.0000	10.2138	-2.14	102	0.00
38	T	Tetrahydofur	100.0000	112.0599	-12.06	109	0.00
39	PT	Chloroform	10.0000	10.3281	-3.28	105	0.00
40	PT	111trichlota	10.0000	11.1255	-11.26	104	0.00
41	S	SURRDibrflma	20.0000	19.6108	1.95	95	0.00
42	PT	Cyclohexane	10.0000	11.9445	-19.44	105	0.00
43	PT	Carbtetraclo	10.0000	11.0837	-10.84	106	0.00
44	T	11dicloprope	10.0000	10.6238	-6.24	106	0.01
45	S	SURR12DCAd4	20.0000	20.1531	-0.77	103	0.00
46	PT	Benzene	10.0000	10.6816	-6.82	106	0.00
47	PT	12dichlorota	10.0000	10.1557	-1.56	102	0.00
48	T	TAME	10.0000	10.5263	-5.26	109	0.00

49	PT	trichloroete	10.0000	11.3298	-13.30	115	0.00
50	PT	methylcyclohexane	10.0000	11.7033	-17.03	106	0.00
51	PT	12dicloropra	10.0000	10.3159	-3.16	103	0.00
52	T	23Dicl1propene	10.0000	10.4311	-4.31	106	0.00
53	T	Dibromometha	10.0000	9.8076	1.92	101	0.00
54	T	methylmethacrylate	10.0000	10.3344	-3.34	105	0.00
55	T	14dioxane	500.0000	666.9076	-33.38#	145	0.00
56	PT	Bromodiclrma	10.0000	10.0749	-0.75	102	0.00
57	T	2Nitropropane	100.0000	105.4136	-5.41	102	0.00
58	T	2CLEVE	50.0000	56.5299	-13.06	111	0.00
59	PT	c13dicloproe	10.0000	9.8409	1.59	100	0.00
60	PT	4Meth2Pentan	100.0000	113.3471	-13.35	108	0.00
61	S	SURRd8Tolule	20.0000	20.3281	-1.64	100	0.00
62	PT	Toluene	10.0000	10.7335	-7.33	106	0.00
63	PT	t13Dicloprop	10.0000	10.0706	-0.71	104	0.00
64	T	ethylmethacrylate	20.0000	21.8393	-9.20	105	0.00
65	PT	112Triclotha	10.0000	10.8822	-8.82	112	0.00
66	PT	Tetrachlorte	10.0000	10.6658	-6.66	101	0.00
67	T	13Diclorpropa	10.0000	10.3740	-3.74	102	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	101	0.00
69	PT	2Hexanone	100.0000	111.7284	-11.73	109	0.00
70	PT	Clorodibrmta	10.0000	9.7986	2.01	107	0.00
71	PT	12Dibrometha	10.0000	10.2975	-2.97	108	0.00
72	PT	Chlorobenzen	10.0000	9.8695	1.30	99	0.00
73	T	1Clhexane	10.0000	10.8141	-8.14	106	0.00
74	T	1112Tetclota	10.0000	10.1611	-1.61	109	0.00
75	PT	Ethylbenzene	10.0000	10.7877	-7.88	106	0.00
76	PT	m p-Xylene	20.0000	21.1558	-5.78	105	0.00
77	PT	o-Xylene	10.0000	9.7826	2.17	95	0.00
78	PT	Styrene	10.0000	10.2192	-2.19	97	0.00
79	PT	Bromoform	10.0000	10.0245	-0.24	106	0.00
80	PT	Isopropylben	10.0000	10.6548	-6.55	100	0.00
81	T	cyclohexanone	200.0000	196.8605	1.57	98	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	105	0.00
83	S	SURR4BrFBenz	20.0000	20.3487	-1.74	105	0.00
84	T	Bromobenzene	10.0000	9.3088	6.91	100	0.00
85	PT	1122Tetrclta	10.0000	8.6960	13.04	95	0.00
86	T	123Triclproa	10.0000	10.2649	-2.65	106	0.00
87	T	14dichloro2butene	10.0000	9.3254	6.75	100	0.00
88	T	n-Propylbenz	10.0000	9.9816	0.18	100	0.00
89	T	2chlorotolue	10.0000	10.0531	-0.53	103	0.00
90	T	4chlorotolue	10.0000	9.9053	0.95	101	0.00
91	T	135Trimebenz	10.0000	10.4151	-4.15	104	0.00
92	T	tbutylbenzen	10.0000	10.5013	-5.01	103	0.00
93	T	124Trimetben	10.0000	10.3550	-3.55	104	0.00
94	T	sbutylbenzen	10.0000	11.0061	-10.06	103	0.00
95	PT	13Diclorbenz	10.0000	9.6829	3.17	103	0.00
96	T	pIsopropylto	10.0000	10.6354	-6.35	101	0.00
97	PT	14dichlorobe	10.0000	9.5903	4.10	103	0.00
98	PT	12dichlorobe	10.0000	9.9292	0.71	104	0.00
99	T	nButylbenzen	10.0000	10.5967	-5.97	104	0.00
100	PT	12dibromo3cl	10.0000	9.9158	0.84	115	0.00
101	T	135Trichlorobenzene	10.0000	9.9980	0.02	101	0.00
102	PT	124Trichlobe	10.0000	10.0728	-0.73	108	0.00
103	T	Hexachlorobu	10.0000	10.2746	-2.75	98	0.00
104	T	Naphthalene	10.0000	10.9932	-9.93	110	0.00
105	T	123Trichlben	10.0000	10.1530	-1.53	108	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W012921.M Fri Feb 05 09:39:52 2021

Quantitation Report

Data File : C:\Instarch\Data\FEB0321\CCV2-CCVF1.D Vial: 21
Acq On : 4 Feb 2021 8:25 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 08:46:17 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1280134	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1069139	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	632450	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	322014	19.611	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
45) SURR12DCAd4	7.27	102	91599	20.153	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %			
61) SURRd8Tolule	9.71	98	1322653	20.328	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.25	95	583548	20.349	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %			
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	168268	12.0373	ug/L	95
3) Chloromethan	2.09	50	202168	10.8176	ug/L	100
4) VinylChlorid	2.25	62	202109	10.9981	ug/L	98
5) Bromomethane	2.72	94	133140	14.6040	ug/L	97
6) Chloroethane	2.89	64	134562	10.2750	ug/L	98
7) Dichloroflmethane	3.19	67	356305	10.7374	ug/L	98
8) Trichlorofma	3.28	101	261462	11.4358	ug/L	97
9) Ethylether	3.71	59	159781	10.3132	ug/L	97
10) dichlorotfluoroethan	3.73	67	210081	11.2341	ug/L	98
11) propyleneoxide	3.77	58	351310	116.4080	ug/L	97
12) Acrolein	3.85	56	145178	46.6225	ug/L	97
13) 11dichlorthe	3.99	96	166701	11.2344	ug/L	97
14) Trichlorotfluoroeth	4.03	101	353980	24.3600	ug/L	97
15) Acetone	4.06	43	474626	113.2283	ug/L	100
16) Iodomethane	4.17	142	234546	16.4432	ug/L	98
17) Carbon Dislf	4.26	76	1017119	21.6679	ug/L	99
18) allylchloride	4.49	41	600170	20.7124	ug/L	99
19) methylacetate	4.53	74	41513	11.4566	ug/L	82
20) Methylchlorid	4.64	84	202803	10.6929	ug/L	96
21) tbutylalcohol	4.83	59	381727	529.0858	ug/L	100
22) Acrylonitrile	4.94	53	358900	56.3593	ug/L	97
23) t12dichlorte	5.02	96	180272	10.4648	ug/L	96
24) MtBE	5.05	73	463377	10.3230	ug/L	98
25) Hexane	5.41	57	581223	23.2574	ug/L	99
26) 11dichlorota	5.54	63	326914	10.6919	ug/L	99
27) Vinylacetate	5.63	43	1930584	56.4435	ug/L	95
28) chloroprene	5.67	53	625169	22.5408	ug/L	99
29) Diisopether	5.69	45	621769	10.3405	ug/L	93
30) ETBE	6.14	59	457342	10.8739	ug/L	99
31) 22dichloropr	6.28	77	145941	7.7678	ug/L	98
32) c12dichlorte	6.27	96	194126	10.0074	ug/L	97
33) 2Butanone	6.29	72	210886	106.0273	ug/L	98
34) propionitrile	6.33	54	228497	110.0490	ug/L	98
35) Ethylacetate	6.40	88	37341	49.1098	ug/L #	87
36) methacrylonitrile	6.54	67	183456	22.0981	ug/L	96
37) Bromochlorma	6.56	128	92623	10.2138	ug/L	98
38) Tetrahydofur	6.65	42	600113	112.0599	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\FEB0321\CCV2-CCVF1.D Vial: 21
Acq On : 4 Feb 2021 8:25 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 08:46:17 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	325760	10.3281 ug/L	98
40)	111trichlota	6.91	97	249949	11.1255 ug/L	97
42)	Cyclohexane	7.00	56	349716	11.9445 ug/L	98
43)	Carbtetraclo	7.13	119	199988	11.0837 ug/L	97
44)	11dicloprope	7.13	110	92026	10.6238 ug/L	99
46)	Benzene	7.36	78	747123	10.6816 ug/L	99
47)	12dichlorota	7.36	62	251506	10.1557 ug/L	96
48)	TAME	7.53	73	435157	10.5263 ug/L	97
49)	trichloroete	8.17	95	202605	11.3298 ug/L	95
50)	methylcyclohexane	8.43	83	378628	11.7033 ug/L	100
51)	12dicloropra	8.43	63	205699	10.3159 ug/L	91
52)	23Dicl1propene	8.50	75	285691	10.4311 ug/L	98
53)	Dibromometha	8.57	93	107967	9.8076 ug/L	97
54)	methylmethacrylate	8.60	69	133313	10.3344 ug/L	97
55)	14dioxane	8.62	88	24144	666.9076 ug/L	91
56)	Bromodiclrma	8.77	83	230685	10.0749 ug/L	95
57)	2Nitropropane	9.04	43	463492	105.4136 ug/L	98
58)	2CLEVE	9.16	63	569231	56.5299 ug/L	99
59)	c13dicloproe	9.35	75	262157	9.8409 ug/L	94
60)	4Meth2Pentan	9.55	43	1849930	113.3471 ug/L	100
62)	Toluene	9.80	92	484290	10.7335 ug/L	99
63)	t13Dicloprop	10.06	75	211834	10.0706 ug/L	96
64)	ethylmethacrylate	10.20	69	482575	21.8393 ug/L	98
65)	112Triclotha	10.30	83	148780	10.8822 ug/L	97
66)	Tetrachlorte	10.53	166	205930	10.6658 ug/L	99
67)	13Diclorpropa	10.52	76	295934	10.3740 ug/L	95
69)	2Hexanone	10.64	43	1362782	111.7284 ug/L	97
70)	Clorodibrmta	10.82	129	165748	9.7986 ug/L	99
71)	12Dibrometha	10.98	107	157499	10.2975 ug/L	97
72)	Chlorobenzen	11.66	112	486233	9.8695 ug/L	95
73)	1Clhexane	11.64	91	259023	10.8141 ug/L	97
74)	1112Tetclota	11.77	131	151500	10.1611 ug/L	96
75)	Ethylbenzene	11.82	91	860705	10.7877 ug/L	98
76)	m p-Xylene	11.99	106	674015	21.1558 ug/L	99
77)	o-Xylene	12.53	106	310572	9.7826 ug/L	96
78)	Styrene	12.55	104	527863	10.2192 ug/L	100
79)	Bromoform	12.78	173	105523	10.0245 ug/L	97
80)	Isopropylben	13.06	105	797130	10.6548 ug/L	100
81)	cyclohexanone	13.14	55	50627	196.8605 ug/L	88
84)	Bromobenzene	13.47	156	196165	9.3088 ug/L	95
85)	1122Tetrclta	13.44	83	206825	8.6960 ug/L	98
86)	123Triclproa	13.50	75	271139	10.2649 ug/L	98
87)	14dichloro2butene	13.53	53	54948	9.3254 ug/L	91
88)	n-Propylbenz	13.64	91	949474	9.9816 ug/L	100
89)	2chlorotolue	13.76	91	561372	10.0531 ug/L	98
90)	4chlorotolue	13.91	91	638578	9.9053 ug/L	98
91)	135Trimebenz	13.90	105	673760	10.4151 ug/L	99
92)	tbutylbenzen	14.37	119	586767	10.5013 ug/L	100
93)	124Trimetben	14.44	105	656094	10.3550 ug/L	99
94)	sbutylbenzen	14.69	105	825860	11.0061 ug/L	100
95)	13Diclorbenz	14.83	146	362163	9.6829 ug/L	99
96)	pIsopropylto	14.91	119	708980	10.6354 ug/L	99
97)	14dichlorobe	14.96	146	376162	9.5903 ug/L	99
98)	12dichlorobe	15.49	146	354769	9.9292 ug/L	99
99)	nButylbenzen	15.50	91	645616	10.5967 ug/L	99
100)	12dibromo3cl	16.59	157	36911	9.9158 ug/L	97
101)	135Trichlorobenzene	16.91	180	254248	9.9980 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\Instarch\Data\FEB0321\CCV2-CCVF1.D Vial: 21
Acq On : 4 Feb 2021 8:25 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 08:46:17 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	210527	10.0728	ug/L	97
103)	Hexachlorobu	17.97	225	103311	10.2746	ug/L	94
104)	Naphthalene	18.03	128	524217	10.9932	ug/L	99
105)	123Trichlben	18.34	180	190401	10.1530	ug/L	91

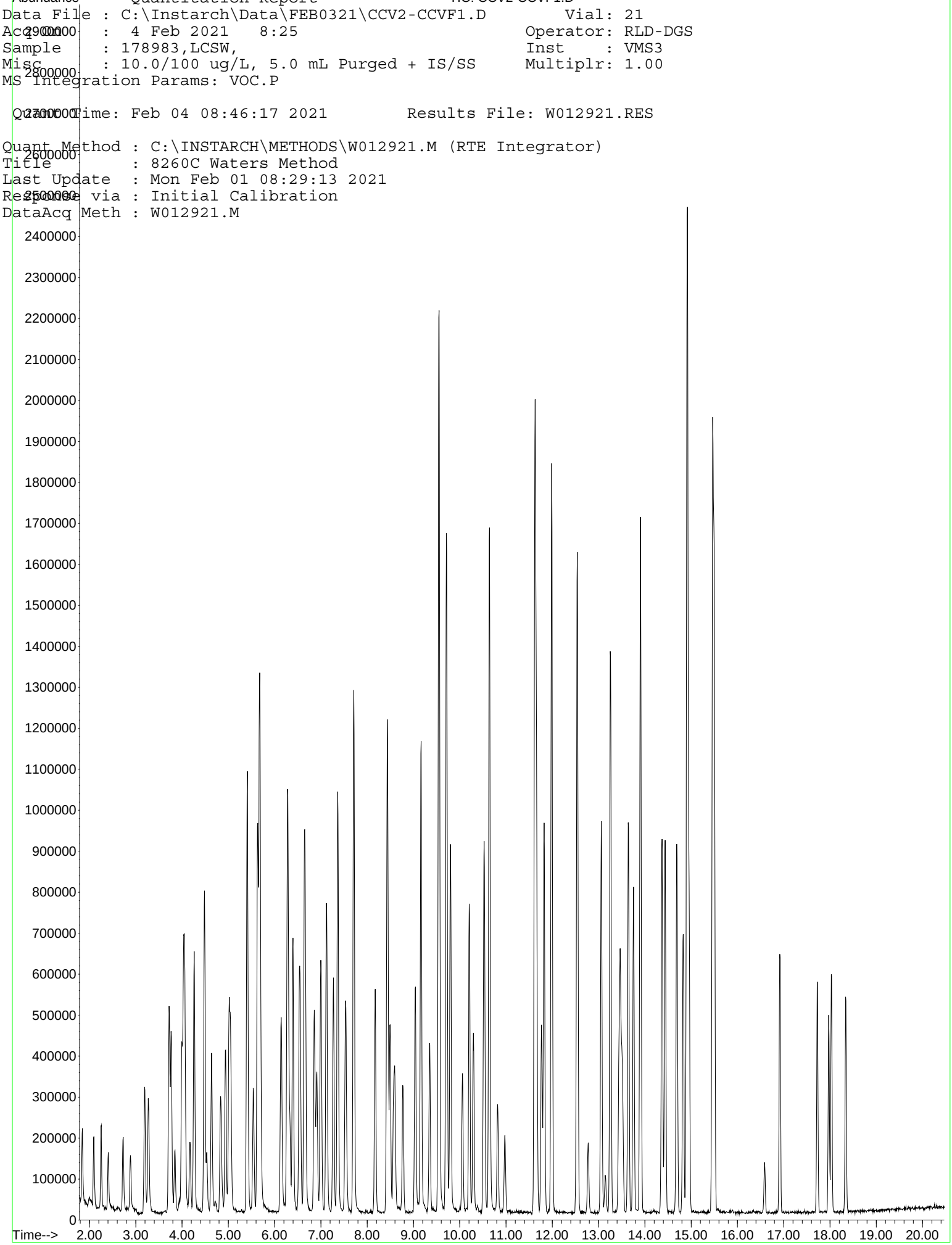
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCV2-CCVF1.D

Data File : C:\Instarch\Data\FEB0321\CCV2-CCVF1.D Vial: 21
Acq On : 4 Feb 2021 8:25 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 08:46:17 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\CCB1.D Vial: 23
Acq On : 4 Feb 2021 9:27 Operator: RLD-DGS
Sample : 178983,CCB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 09:47:56 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1238552	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1072775	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	606201	20.00 ug/L	0.00 NA%

System Monitoring Compounds						
41) SURRDibrflma	6.86	113	325214	20.471 ug/L	0.00	
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4	7.27	102	85953	19.546 ug/L	0.00	
Spiked Amount 20.000	Range 89 - 111		Recovery = 98 %			
61) SURRd8Tolule	9.71	98	1270128	20.176 ug/L	0.00	
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	549883	20.005 ug/L	0.00	
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	2.09	50	3170	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	2.83	64	3104	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	5450	Below Cal #	45
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.25	76	3774	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.64	84	12141	Below Cal	94
21) tbutylalcohol	4.84	59	7057	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.66	42	3611	Below Cal #	35

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\CCB1.D Vial: 23
Acq On : 4 Feb 2021 9:27 Operator: RLD-DGS
Sample : 178983,CCB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 09:47:56 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	8.62	88	3569	125.5667 ug/L #	69
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.64	43	2510	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	2824	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.46	91	2774	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\CCB1.D Vial: 23
Acq On : 4 Feb 2021 9:27 Operator: RLD-DGS
Sample : 178983,CCB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 09:47:56 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

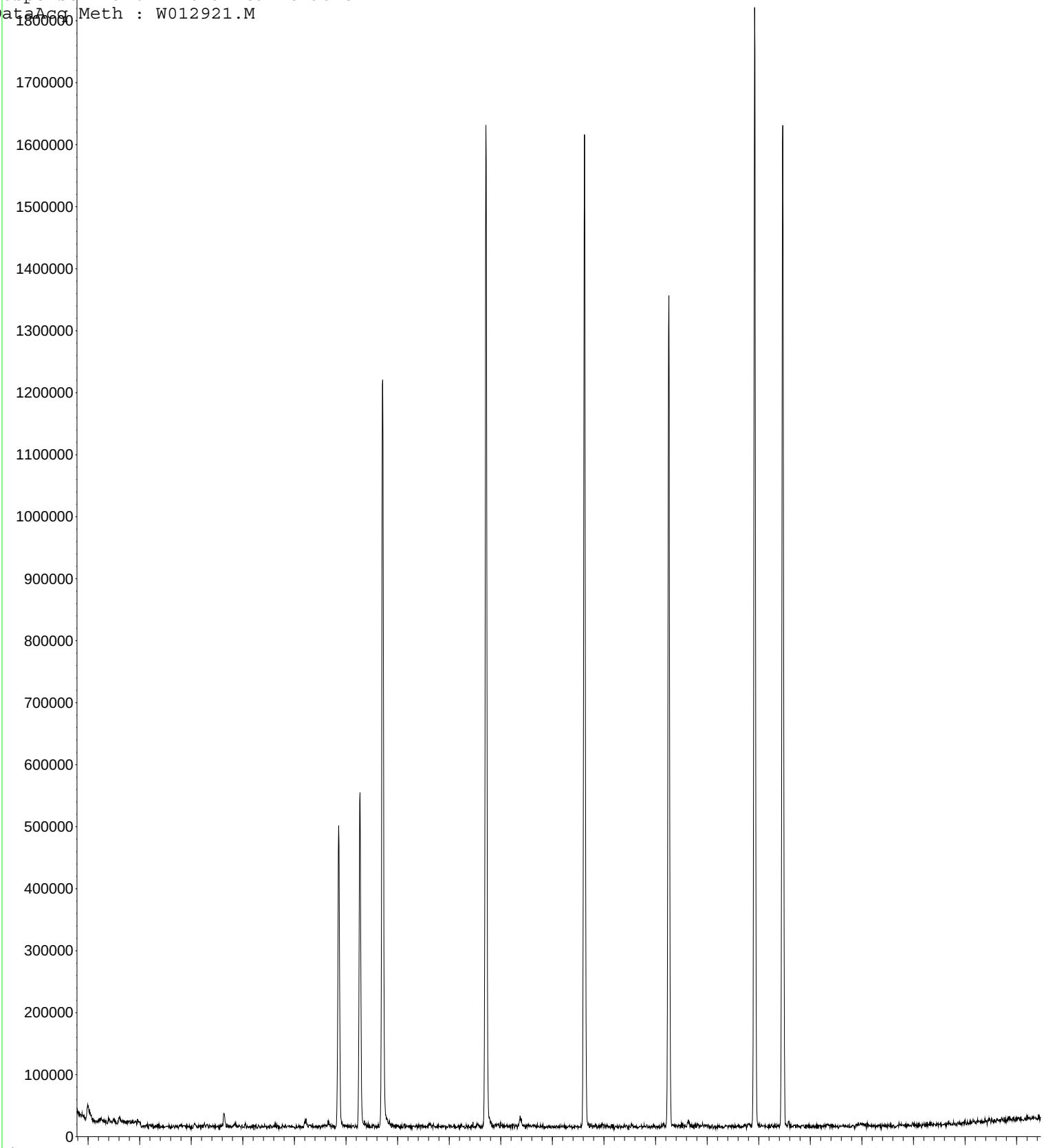
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCB1.D

Data File : C:\INSTARCH\DATA\FEB0321\CCB1.D Vial: 23
Acq On : 4 Feb 2021 9:27 Operator: RLD-DGS
Sample : 178983,CCB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 09:47:56 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\FEB0321\CCVF2.D Vial: 28
Acq On : 4 Feb 2021 12:02 Operator: RLD-DGS
Sample : 178983,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 04 12:23:05 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	99	0.00
2	PT	Dichlorodi	0.2184	0.2708	-23.99	112	0.00
3	PT	Chloromethan	0.2920	0.3286	-12.53	107	0.00
4	PT	VinylChlorid	0.2871	0.3300	-14.94	107	0.00
5	PT	Bromomethane	0.1424	0.1695	-19.03	119	0.00
6	PT	Chloroethane	0.2046	0.2176	-6.35	105	0.00
7	T	Dichloroflmethane	0.5184	0.5765	-11.21	104	0.00
8	PT	Trichlorofma	0.3572	0.4210	-17.86	105	0.00
9	T	Ethylether	0.2421	0.2567	-6.03	106	0.00
10	T	dichlorotfluoroethan	0.2922	0.3341	-14.34	106	0.00
11	T	propyleneoxide	0.0472	0.0570	-20.76	114	0.00
12	T	Acrolein	0.0486	0.0545	-12.14	112	0.00
13	PT	11dichlorthe	0.2318	0.2614	-12.77	103	0.00
14	PT	Trichlorotfluoroeth	0.2270	0.2790	-22.91	107	0.00
15	PT	Acetone	0.0714	0.0822#	-15.13	113	0.00
16	T	Iodomethane	0.2041	0.2702	-32.39	132	0.00
17	PT	Carbon Dislf	0.7334	0.7851	-7.05	104	0.00
18	T	allylchloride	0.4527	0.5035	-11.22	108	0.00
19	PT	methylacetate	0.0566	0.0666#	-17.67	131	0.00
20	PT	Methylchlorid	0.3445	0.3219	6.56	105	0.00
21	T	tbutylalcohol	0.0113	0.0177#	-56.64#	152	0.00
22	T	Acrylonitrile	0.0995	0.1121	-12.66	111	0.00
23	PT	t12dichlorte	0.2691	0.2959	-9.96	108	0.00
24	PT	MtBE	0.7013	0.7711	-9.95	109	0.00
25	T	Hexane	0.3904	0.4996	-27.97	107	0.00
26	PT	11dichlorota	0.4777	0.5222	-9.32	108	0.00
27	T	Vinylacetate	0.5018	0.5389	-7.39	105	0.00
28	T	chloroprene	0.4333	0.5004	-15.49	106	0.00
29	T	Diisopether	0.9394	1.0240	-9.01	105	0.00
30	T	ETBE	0.6571	0.7477	-13.79	116	0.00
31	T	22dichloropr	0.2935	0.3370	-14.82	119	0.00
32	PT	c12dichlorte	0.3031	0.3107	-2.51	107	0.00
33	PT	2Butanone	0.0311	0.0361#	-16.08	116	0.00
34	T	propionitrile	0.0324	0.0406	-25.31	123	0.00
35	T	Ethylacetate	0.0119	0.0138#	-15.97	118	0.00
36	T	methacrylonitrile	0.1297	0.1481	-14.19	114	0.00
37	T	Bromochlorma	0.1417	0.1458	-2.89	104	0.00
38	T	Tetrahydofur	0.0901	0.1010	-12.10	118	0.00
39	PT	Chloroform	0.4928	0.5192	-5.36	108	0.00
40	PT	111trichlota	0.3510	0.4074	-16.07	110	0.00
41	S	SURRDibrflma	0.2565	0.2612	-1.83	99	0.00
42	PT	Cyclohexane	0.4574	0.5661	-23.76	109	0.00
43	PT	Carbtetraclo	0.2819	0.3283	-16.46	112	0.00
44	T	11dicloprope	0.1353	0.1482	-9.53	110	0.00
45	S	SURR12DCAd4	0.0710	0.0737	-3.80	107	0.00
46	PT	Benzene	1.0928	1.1958	-9.43	110	0.00
47	PT	12dichlorota	0.3869	0.4055	-4.81	106	0.00
48	T	TAME	0.6459	0.7406	-14.66	120	0.00

49	PT	trichloroete	0.2794	0.3031	-8.48	111	0.00
50	PT	methylcyclohexane	0.5055	0.6147	-21.60	111	0.00
51	PT	12dicloropra	0.3115	0.3335	-7.06	107	0.00
52	T	23Dicl1propene	0.4279	0.4691	-9.63	112	0.00
53	T	Dibromometha	0.1720	0.1773	-3.08	107	0.00
54	T	methylmethacrylate	0.2015	0.2265	-12.41	115	0.00
55	T	14dioxane	0.0006	0.0011#	-83.33#	217#	0.00
56	PT	Bromodiclrma	0.3577	0.3676	-2.77	105	0.00
57	T	2Nitropropane	0.0687	0.0793	-15.43	112	0.00
58	T	2CLEVE	0.1573	0.1759	-11.82	110	0.00
59	PT	c13dicloproe	0.4162	0.4469	-7.38	110	0.00
60	PT	4Meth2Pentan	0.2665	0.2978	-11.74	113	0.00
61	S	SURRd8Tolule	1.0165	1.0394	-2.25	101	0.00
62	PT	Toluene	0.7049	0.7406	-5.06	104	0.00
63	PT	t13Dicloprop	0.3286	0.3585	-9.10	114	0.00
64	T	ethylmethacrylate	0.3452	0.4069	-17.87	114	0.00
65	PT	112Triclotha	0.2136	0.2299	-7.63	111	0.00
66	PT	Tetrachlorte	0.3016	0.3233	-7.19	103	0.00
67	T	13Diclorpropa	0.4457	0.4766	-6.93	106	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	106	0.00
69	PT	2Hexanone	0.2282	0.2553	-11.88	114	0.00
70	PT	Clorodibrmta	0.3164	0.3022	4.49	109	0.00
71	PT	12Dibrometha	0.2861	0.3025	-5.73	116	0.00
72	PT	Chlorobenzen	0.9216	0.9110	1.15	104	0.00
73	T	1Clhexane	0.4481	0.4867	-8.61	111	0.00
74	T	1112Tetclota	0.2789	0.2777	0.43	111	0.00
75	PT	Ethylbenzene	1.4925	1.5489	-3.78	107	0.00
76	PT	m p-Xylene	0.5960	0.6131	-2.87	106	0.00
77	PT	o-Xylene	0.5939	0.5786	2.58	99	0.00
78	PT	Styrene	0.9663	0.9552	1.15	98	0.00
79	PT	Bromoform	0.1969	0.1649	16.25	93	0.00
80	PT	Isopropylben	1.3995	1.4957	-6.87	105	0.00
81	T	cyclohexanone	0.0048	0.0061#	-27.08	131	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	108	0.00
83	S	SURR4BrFBenz	0.9069	0.9098	-0.32	106	0.00
84	T	Bromobenzene	0.6664	0.6390	4.11	105	0.00
85	PT	1122Tetrclta	0.7521	0.7393	1.70	110	0.00
86	T	123Triclproa	0.8353	0.8613	-3.11	110	0.00
87	T	14dichloro2butene	0.1863	0.1821	2.25	108	0.00
88	T	n-Propylbenz	3.0081	3.0028	0.18	103	0.00
89	T	2chlorotolue	1.7658	1.7782	-0.70	106	0.00
90	T	4chlorotolue	2.0387	2.0546	-0.78	106	0.00
91	T	135Trimebenz	2.0457	2.0956	-2.44	105	0.00
92	T	tbutylbenzen	1.7670	1.8322	-3.69	105	0.00
93	T	124Trimetben	2.0036	2.0828	-3.95	107	0.00
94	T	sbutylbenzen	2.3729	2.6200	-10.41	106	0.00
95	PT	13Diclorbenz	1.1828	1.1786	0.36	109	0.00
96	T	pIsopropylto	2.1081	2.2187	-5.25	103	0.00
97	PT	14dichlorobe	1.2404	1.1824	4.68	105	0.00
98	PT	12dichlorobe	1.1299	1.1363	-0.57	108	0.00
99	T	nButylbenzen	1.9267	2.0804	-7.98	108	0.00
100	PT	12dibromo3cl	0.1177	0.1223	-3.91	124	0.00
101	T	135Trichlorobenzene	0.8042	0.8127	-1.06	105	0.00
102	PT	124Trichlobe	0.6609	0.6852	-3.68	114	0.00
103	T	Hexachlorobu	0.3180	0.3412	-7.30	105	0.00
104	T	Naphthalene	1.5080	1.7070	-13.20	116	0.00
105	T	123Trichlben	0.5930	0.6075	-2.45	111	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W012921.M Fri Feb 05 09:41:57 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\FEB0321\CCVF2.D Vial: 28
Acq On : 4 Feb 2021 12:02 Operator: RLD-DGS
Sample : 178983,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Feb 04 12:23:05 2021

Quant Method : C:\INSTARCH\METHODS\W012921.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W012921.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	99	0.00
2	PT	Dichlorodi	10.0000	12.3975	-23.98	112	0.00
3	PT	Chloromethan	10.0000	11.2541	-12.54	107	0.00
4	PT	VinylChlorid	10.0000	11.4934	-14.93	107	0.00
5	PT	Bromomethane	10.0000	11.9012	-19.01	119	0.00
6	PT	Chloroethane	10.0000	10.6338	-6.34	105	0.00
7	T	Dichloroflmethane	10.0000	11.1191	-11.19	104	0.00
8	PT	Trichlorofma	10.0000	11.7852	-17.85	105	0.00
9	T	Ethylether	10.0000	10.6056	-6.06	106	0.00
10	T	dichlorotfluoroethan	10.0000	11.4366	-14.37	106	0.00
11	T	propyleneoxide	100.0000	120.7949	-20.79	114	0.00
12	T	Acrolein	50.0000	55.9936	-11.99	112	0.00
13	PT	11dichlorthe	10.0000	11.2763	-12.76	103	0.00
14	PT	Trichlorotfluoroeth	20.0000	24.5811	-22.91	107	0.00
15	PT	Acetone	100.0000	126.4560	-26.46	113	0.00
16	T	Iodomethane	20.0000	22.9092	-14.55	132	0.00
17	PT	Carbon Dislf	20.0000	21.4115	-7.06	104	0.00
18	T	allylchloride	20.0000	22.2425	-11.21	108	0.00
19	PT	methylacetate	10.0000	11.7622	-17.62	131	0.00
20	PT	Methylchlorid	10.0000	10.8765	-8.77	105	0.00
21	T	tbutylalcohol	500.0000	783.6815	-56.74#	152	0.00
22	T	Acrylonitrile	50.0000	56.3334	-12.67	111	0.00
23	PT	t12dichlorte	10.0000	10.9950	-9.95	108	0.00
24	PT	MtBE	10.0000	10.9958	-9.96	109	0.00
25	T	Hexane	20.0000	25.5896	-27.95	107	0.00
26	PT	11dichlorota	10.0000	10.9318	-9.32	108	0.00
27	T	Vinylacetate	100.0000	108.2617	-8.26	105	0.00
28	T	chloroprene	20.0000	23.0972	-15.49	106	0.00
29	T	Diisopether	10.0000	10.9006	-9.01	105	0.00
30	T	ETBE	10.0000	11.3783	-13.78	116	0.00
31	T	22dichloropr	10.0000	11.4821	-14.82	119	0.00
32	PT	c12dichlorte	10.0000	10.2529	-2.53	107	0.00
33	PT	2Butanone	100.0000	116.1744	-16.17	116	0.00
34	T	propionitrile	100.0000	125.0849	-25.08	123	0.00
35	T	Ethylacetate	50.0000	58.1864	-16.37	118	0.00
36	T	methacrylonitrile	20.0000	22.8335	-14.17	114	0.00
37	T	Bromochlorma	10.0000	10.2885	-2.89	104	0.00
38	T	Tetrahydofur	100.0000	121.3267	-21.33	118	0.00
39	PT	Chloroform	10.0000	10.5363	-5.36	108	0.00
40	PT	111trichlota	10.0000	11.6057	-16.06	110	0.00
41	S	SURRDibrflma	20.0000	20.3667	-1.83	99	0.00
42	PT	Cyclohexane	10.0000	12.3751	-23.75	109	0.00
43	PT	Carbtetraclo	10.0000	11.6453	-16.45	112	0.00
44	T	11dicloprope	10.0000	10.9479	-9.48	110	0.00
45	S	SURR12DCAd4	20.0000	20.7556	-3.78	107	0.00
46	PT	Benzene	10.0000	10.9424	-9.42	110	0.00
47	PT	12dichlorota	10.0000	10.4795	-4.79	106	0.00
48	T	TAME	10.0000	11.4666	-14.67	120	0.00

49	PT	trichloroete	10.0000	10.8505	-8.51	111	0.00
50	PT	methylcyclohexane	10.0000	12.1610	-21.61	111	0.00
51	PT	12dicloropra	10.0000	10.7039	-7.04	107	0.00
52	T	23Dicl1propene	10.0000	10.9618	-9.62	112	0.00
53	T	Dibromometha	10.0000	10.3079	-3.08	107	0.00
54	T	methylmethacrylate	10.0000	11.2370	-12.37	115	0.00
55	T	14dioxane	500.0000	991.4645	-98.29#	217	0.00
56	PT	Bromodiclrma	10.0000	10.2767	-2.77	105	0.00
57	T	2Nitropropane	100.0000	115.4753	-15.48	112	0.00
58	T	2CLEVE	50.0000	55.9126	-11.83	110	0.00
59	PT	c13dicloproe	10.0000	10.7385	-7.39	110	0.00
60	PT	4Meth2Pentan	100.0000	117.2011	-17.20	113	0.00
61	S	SURRd8Tolule	20.0000	20.4489	-2.24	101	0.00
62	PT	Toluene	10.0000	10.5066	-5.07	104	0.00
63	PT	t13Dicloprop	10.0000	10.9078	-9.08	114	0.00
64	T	ethylmethacrylate	20.0000	23.5710	-17.86	114	0.00
65	PT	112Triclotha	10.0000	10.7633	-7.63	111	0.00
66	PT	Tetrachlorte	10.0000	10.7165	-7.16	103	0.00
67	T	13Diclorpropa	10.0000	10.6943	-6.94	106	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	106	0.00
69	PT	2Hexanone	100.0000	111.8818	-11.88	114	0.00
70	PT	Clorodibrmta	10.0000	9.5516	4.48	109	0.00
71	PT	12Dibrometha	10.0000	10.5728	-5.73	116	0.00
72	PT	Chlorobenzen	10.0000	9.8854	1.15	104	0.00
73	T	1Clhexane	10.0000	10.8632	-8.63	111	0.00
74	T	1112Tetclota	10.0000	9.9582	0.42	111	0.00
75	PT	Ethylbenzene	10.0000	10.3779	-3.78	107	0.00
76	PT	m p-Xylene	20.0000	20.5757	-2.88	106	0.00
77	PT	o-Xylene	10.0000	9.7418	2.58	99	0.00
78	PT	Styrene	10.0000	9.8849	1.15	98	0.00
79	PT	Bromoform	10.0000	8.3745	16.26	93	0.00
80	PT	Isopropylben	10.0000	10.6869	-6.87	105	0.00
81	T	cyclohexanone	200.0000	251.6832	-25.84	131	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	108	0.00
83	S	SURR4BrFBenz	20.0000	20.0654	-0.33	106	0.00
84	T	Bromobenzene	10.0000	9.5885	4.12	105	0.00
85	PT	1122Tetrclta	10.0000	9.8302	1.70	110	0.00
86	T	123Triclproa	10.0000	10.3107	-3.11	110	0.00
87	T	14dichloro2butene	10.0000	9.7724	2.28	108	0.00
88	T	n-Propylbenz	10.0000	9.9826	0.17	103	0.00
89	T	2chlorotolue	10.0000	10.0699	-0.70	106	0.00
90	T	4chlorotolue	10.0000	10.0779	-0.78	106	0.00
91	T	135Trimebenz	10.0000	10.2440	-2.44	105	0.00
92	T	tbutylbenzen	10.0000	10.3694	-3.69	105	0.00
93	T	124Trimetben	10.0000	10.3950	-3.95	107	0.00
94	T	sbutylbenzen	10.0000	11.0412	-10.41	106	0.00
95	PT	13Diclorbenz	10.0000	9.9649	0.35	109	0.00
96	T	pIsopropylto	10.0000	10.5248	-5.25	103	0.00
97	PT	14dichlorobe	10.0000	9.5331	4.67	105	0.00
98	PT	12dichlorobe	10.0000	10.0563	-0.56	108	0.00
99	T	nButylbenzen	10.0000	10.7980	-7.98	108	0.00
100	PT	12dibromo3cl	10.0000	10.3876	-3.88	124	0.00
101	T	135Trichlorobenzene	10.0000	10.1056	-1.06	105	0.00
102	PT	124Trichlobe	10.0000	10.3673	-3.67	114	0.00
103	T	Hexachlorobu	10.0000	10.7292	-7.29	105	0.00
104	T	Naphthalene	10.0000	11.3201	-13.20	116	0.00
105	T	123Trichlben	10.0000	10.2445	-2.45	111	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W012921.M Fri Feb 05 09:48:42 2021

Quantitation Report

Data File : C:\Instarch\Data\FEB0321\CCVF2.D Vial: 28
Acq On : 4 Feb 2021 12:02 Operator: RLD-DGS
Sample : 178983,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 12:23:05 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1289467	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1116548	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	649210	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	336865	20.367	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4	7.27	102	95025	20.756	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 104 %			
61) SURRd8Tolule	9.71	98	1340216	20.449	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.26	95	590670	20.065	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	174566	12.3975	ug/L	96
3) Chloromethan	2.09	50	211858	11.2541	ug/L	100
4) VinylChlorid	2.25	62	212751	11.4934	ug/L	97
5) Bromomethane	2.72	94	109291	11.9012	ug/L	100
6) Chloroethane	2.88	64	140276	10.6338	ug/L	96
7) Dichloroflmethane	3.19	67	371662	11.1191	ug/L	100
8) Trichlorofma	3.28	101	271414	11.7852	ug/L	99
9) Ethylether	3.71	59	165508	10.6056	ug/L	100
10) dichlorotfluoroethan	3.73	67	215426	11.4366	ug/L	97
11) propyleneoxide	3.77	58	367207	120.7949	ug/L	97
12) Acrolein	3.85	56	175630	55.9936	ug/L	97
13) 11dichlorthe	3.99	96	168542	11.2763	ug/L	95
14) Trichlorotfluoroeth	4.04	101	359796	24.5811	ug/L	97
15) Acetone	4.06	43	530102	126.4560	ug/L	100
16) Iodomethane	4.17	142	348423	22.9092	ug/L	98
17) Carbon Dislf	4.26	76	1012410	21.4115	ug/L	99
18) allylchloride	4.49	41	649205	22.2425	ug/L	99
19) methylacetate	4.53	74	42931	11.7622	ug/L	86
20) Methylchlorid	4.64	84	207528	10.8765	ug/L	96
21) tbutylalcohol	4.83	59	569536	783.6815	ug/L	99
22) Acrylonitrile	4.94	53	361351	56.3334	ug/L	98
23) t12dichlorte	5.02	96	190786	10.9950	ug/L	99
24) MtBE	5.05	73	497175	10.9958	ug/L	97
25) Hexane	5.41	57	644168	25.5896	ug/L	97
26) 11dichlorota	5.54	63	336687	10.9318	ug/L	99
27) Vinylacetate	5.63	43	3474746	108.2617	ug/L	99
28) chloroprene	5.67	53	645270	23.0972	ug/L	99
29) Diisopether	5.69	45	660224	10.9006	ug/L	97
30) ETBE	6.14	59	482046	11.3783	ug/L	98
31) 22dichloropr	6.28	77	217297	11.4821	ug/L	99
32) c12dichlorte	6.27	96	200339	10.2529	ug/L	99
33) 2Butanone	6.29	72	232753	116.1744	ug/L	98
34) propionitrile	6.33	54	261610	125.0849	ug/L	99
35) Ethylacetate	6.40	88	44565	58.1864	ug/L	98
36) methacrylonitrile	6.54	67	190943	22.8335	ug/L	98
37) Bromochlorma	6.56	128	93980	10.2885	ug/L	98
38) Tetrahydofur	6.65	42	650935	121.3267	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\FEB0321\CCVF2.D Vial: 28
Acq On : 4 Feb 2021 12:02 Operator: RLD-DGS
Sample : 178983,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 12:23:05 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.67	83	334750	10.5363 ug/L	97
40)	111trichlota	6.91	97	262639	11.6057 ug/L	99
42)	Cyclohexane	7.00	56	364964	12.3751 ug/L	99
43)	Carbtetraclo	7.13	119	211654	11.6453 ug/L	100
44)	11dicloprope	7.12	110	95525	10.9479 ug/L	97
46)	Benzene	7.36	78	770945	10.9424 ug/L	99
47)	12dichlorota	7.36	62	261417	10.4795 ug/L	98
48)	TAME	7.53	73	477487	11.4666 ug/L	94
49)	trichloroete	8.17	95	195448	10.8505 ug/L	96
50)	methylcyclohexane	8.44	83	396306	12.1610 ug/L	99
51)	12dicloropra	8.43	63	214993	10.7039 ug/L	98
52)	23Dicl1propene	8.50	75	302415	10.9618 ug/L	98
53)	Dibromometha	8.57	93	114302	10.3079 ug/L	96
54)	methylmethacrylate	8.60	69	146014	11.2370 ug/L	98
55)	14dioxane	8.62	88	36009	991.4645 ug/L	89
56)	Bromodiclrma	8.78	83	237020	10.2767 ug/L	98
57)	2Nitropropane	9.04	43	511434	115.4753 ug/L	98
58)	2CLEVE	9.16	63	567120	55.9126 ug/L	99
59)	c13dicloproe	9.35	75	288155	10.7385 ug/L	99
60)	4Meth2Pentan	9.55	43	1920302	117.2011 ug/L	99
62)	Toluene	9.80	92	477508	10.5066 ug/L	97
63)	t13Dicloprop	10.06	75	231118	10.9078 ug/L	99
64)	ethylmethacrylate	10.20	69	524636	23.5710 ug/L	100
65)	112Triclotha	10.30	83	148227	10.7633 ug/L	97
66)	Tetrachlorte	10.53	166	208416	10.7165 ug/L	97
67)	13Diclorpropa	10.52	76	307294	10.6943 ug/L	100
69)	2Hexanone	10.64	43	1425166	111.8818 ug/L	99
70)	Clorodibrmta	10.83	129	168734	9.5516 ug/L	98
71)	12Dibrometha	10.98	107	168880	10.5728 ug/L	98
72)	Chlorobenzen	11.66	112	508615	9.8854 ug/L	98
73)	1Clhexane	11.64	91	271737	10.8632 ug/L	97
74)	1112Tetclota	11.77	131	155059	9.9582 ug/L	96
75)	Ethylbenzene	11.82	91	864724	10.3779 ug/L	100
76)	m p-Xylene	11.99	106	684602	20.5757 ug/L	99
77)	o-Xylene	12.53	106	322991	9.7418 ug/L	97
78)	Styrene	12.55	104	533238	9.8849 ug/L	99
79)	Bromoform	12.78	173	92063	8.3745 ug/L	99
80)	Isopropylben	13.06	105	834991	10.6869 ug/L	100
81)	cyclohexanone	13.15	55	67596	251.6832 ug/L	95
84)	Bromobenzene	13.47	156	207413	9.5885 ug/L	96
85)	1122Tetrclta	13.44	83	239995	9.8302 ug/L	97
86)	123Triclproa	13.50	75	279568	10.3107 ug/L	99
87)	14dichloro2butene	13.52	53	59108	9.7724 ug/L	98
88)	n-Propylbenz	13.65	91	974738	9.9826 ug/L	99
89)	2chlorotolue	13.76	91	577211	10.0699 ug/L	98
90)	4chlorotolue	13.91	91	666927	10.0779 ug/L	96
91)	135Trimebenz	13.90	105	680255	10.2440 ug/L	98
92)	tbutylbenzen	14.37	119	594753	10.3694 ug/L	98
93)	124Trimetben	14.44	105	676084	10.3950 ug/L	99
94)	sbutylbenzen	14.69	105	850450	11.0412 ug/L	99
95)	13Diclorbenz	14.83	146	382588	9.9649 ug/L	98
96)	pIsopropylto	14.91	119	720197	10.5248 ug/L	99
97)	14dichlorobe	14.96	146	383828	9.5331 ug/L	99
98)	12dichlorobe	15.49	146	368834	10.0563 ug/L	99
99)	nButylbenzen	15.50	91	675314	10.7980 ug/L	100
100)	12dibromo3cl	16.59	157	39692	10.3876 ug/L	97
101)	135Trichlorobenzene	16.91	180	263794	10.1056 ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\FEB0321\CCVF2.D Vial: 28
Acq On : 4 Feb 2021 12:02 Operator: RLD-DGS
Sample : 178983,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 12:23:05 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	222424	10.3673	ug/L	97
103) Hexachlorobu	17.97	225	110741	10.7292	ug/L	97
104) Naphthalene	18.03	128	554107	11.3201	ug/L	99
105) 123Trichlben	18.34	180	197207	10.2445	ug/L	94

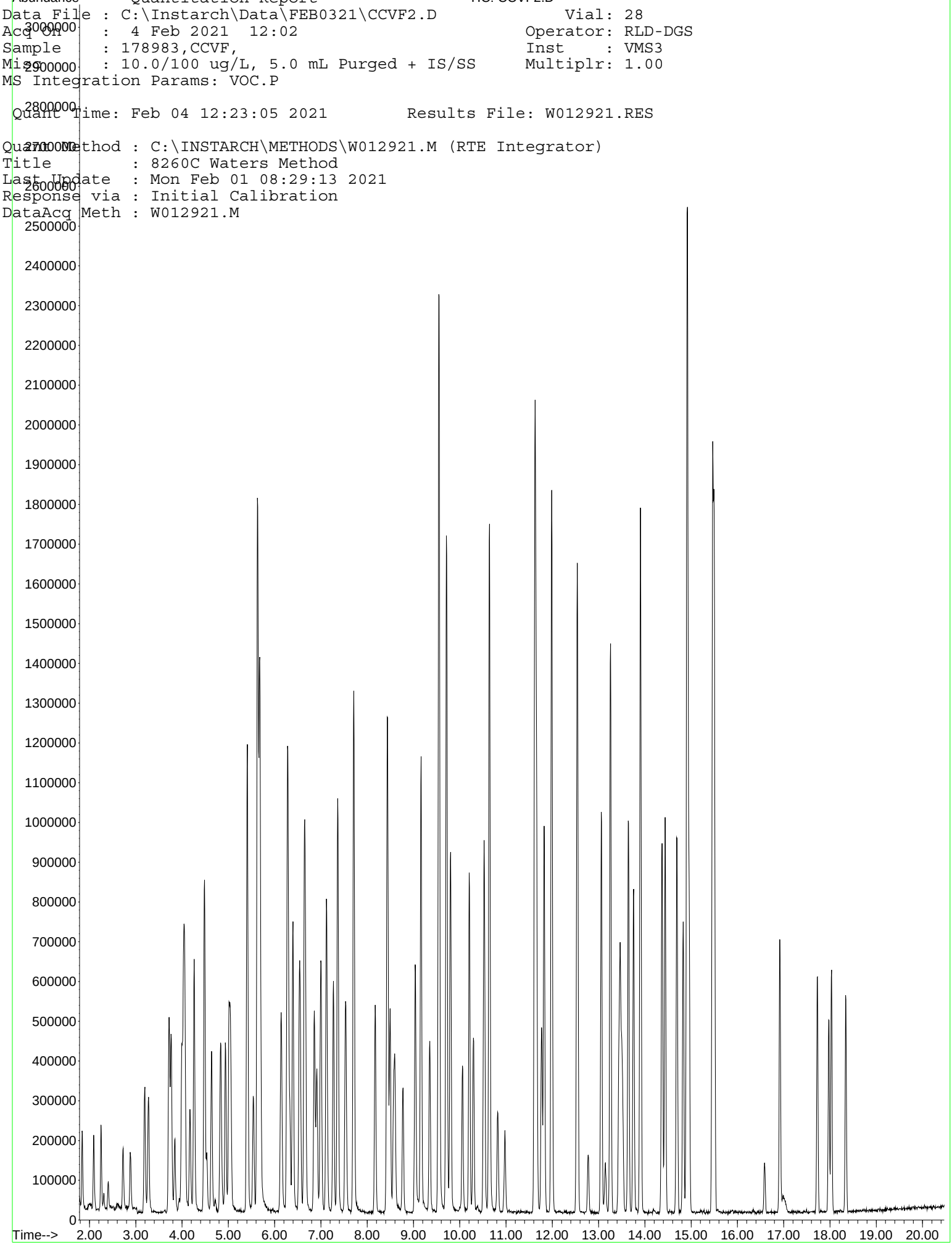
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCVF2.D

Data File : C:\Instarch\Data\FEB0321\CCVF2.D Vial: 28
Acq On : 4 Feb 2021 12:02 Operator: RLD-DGS
Sample : 178983,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 12:23:05 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\020321 - 179084.seq
User : KMT
Printed : Feb 03, 2021 15:23:44

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\020321 -\002.dat	179084,CCV,	Feb 03, 2021 15:23:44

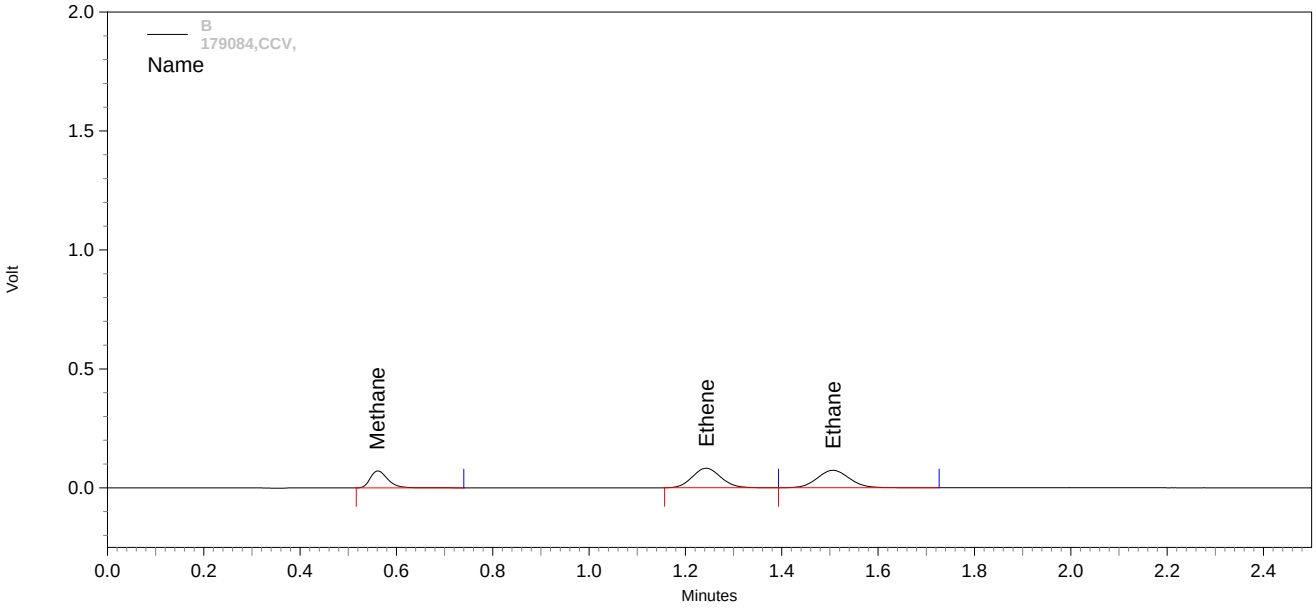
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	49.319	1.361	15.000	**Passed**
Ethene	50.000	49.260	1.481	15.000	**Passed**
Ethane	50.000	50.059	0.117	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\002.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,CCV,
Acquired: Feb 03, 2021 11:12:50
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.560**	**0.560**	**178479**	**49.319**	**ppmV**
2	**Ethene**	**1.243**	**1.243**	**336605**	**49.260**	**ppmV**
3	**Ethane**	**1.507**	**1.507**	**336797**	**50.059**	**ppmV**

QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\020321 - 179084.seq
User : KMT
Printed : Feb 03, 2021 15:25:55

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\020321 -\017.dat	179084,CCV,	Feb 03, 2021 15:25:54

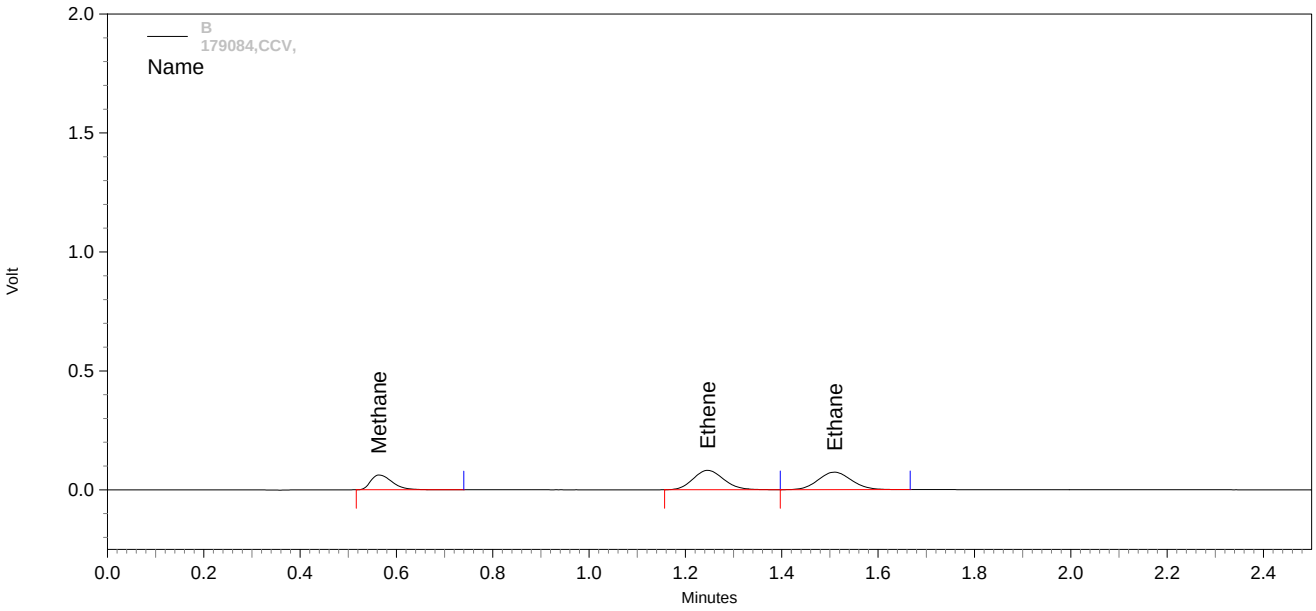
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	53.290	6.580	15.000	**Passed**
Ethene	50.000	52.535	5.069	15.000	**Passed**
Ethane	50.000	52.490	4.979	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\017.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,CCV,
Acquired: Feb 03, 2021 12:53:59
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



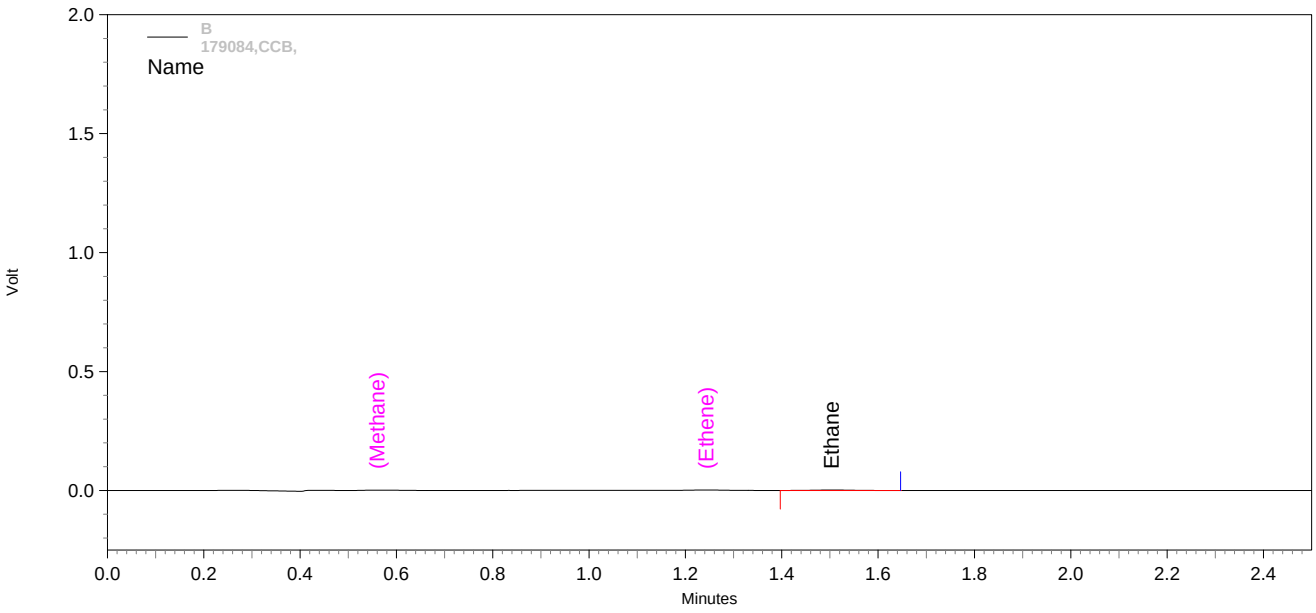
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	Methane	0.563	0.560	192114	53.290	ppmV
2	Ethene	1.247	1.243	358094	52.535	ppmV
3	Ethane	1.510	1.507	352593	52.490	ppmV

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\018.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,CCB,
Acquired: Feb 03, 2021 12:57:50
File Desc. MEE Continuing Calibration BLANK - 1ML HELIUM



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.560**		**0.000 BDL**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
1	**Ethane**	**1.503**	**1.507**	**9380**	**0.000**	**ppmV**

QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\020321 - 179084.seq
User : KMT
Printed : Feb 03, 2021 15:27:07

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\020321 -\027.dat	179084,CCV,	Feb 03, 2021 15:27:06

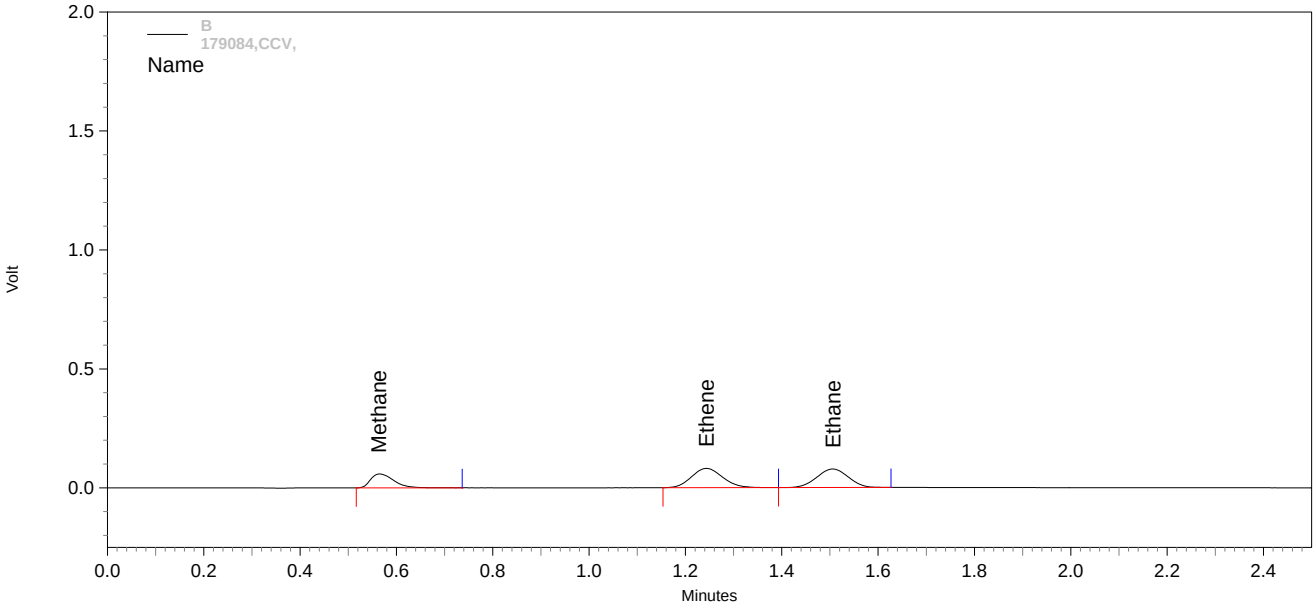
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	53.450	6.900	15.000	**Passed**
Ethene	50.000	53.367	6.735	15.000	**Passed**
Ethane	50.000	52.351	4.702	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\027.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,CCV,
Acquired: Feb 03, 2021 13:36:43
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.563**	**0.560**	**192663**	**53.450**	**ppmV**
2	**Ethene**	**1.243**	**1.243**	**363558**	**53.367**	**ppmV**
3	**Ethane**	**1.507**	**1.507**	**351691**	**52.351**	**ppmV**

VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL
DOCUMENTS

Quantitation Report

Data File : c:\instarch\data\feb0221\CCV-LCS1.D Vial: 2
Acq On : 2 Feb 2021 10:54 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 11:15:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1356085	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1125791	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	652349	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	356404	20.489	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	98359	20.428	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102	%		
61) SURRd8Tolule	9.71	98	1413867	20.513	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103	%		
83) SURR4BrFBenz	13.25	95	579032	19.575	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98	%		
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	162574	10.9786	ug/L	99
3) Chloromethan	2.10	50	201221	10.1639	ug/L	99
4) VinylChlorid	2.25	62	207003	10.6335	ug/L	97
5) Bromomethane	2.73	94	110942	11.4875	ug/L	94
6) Chloroethane	2.89	64	140851	10.1528	ug/L	99
7) Dichloroflmethane	3.20	67	362968	10.3255	ug/L	100
8) Trichlorofma	3.28	101	275852	11.3894	ug/L	99
9) Ethylether	3.71	59	161878	9.8634	ug/L	97
10) dichlorotfluoroethan	3.73	67	212684	10.7363	ug/L	96
11) propyleneoxide	3.77	58	353331	110.5204	ug/L	97
12) Acrolein	3.84	56	167139	50.6688	ug/L	97
13) 11dichlorthe	4.00	96	168112	10.6950	ug/L	99
14) Trichlorotfluoroeth	4.04	101	354169	23.0080	ug/L	96
15) Acetone	4.07	43	449228	100.3372	ug/L	100
16) Iodomethane	4.17	142	300379	19.2843	ug/L	99
17) Carbon Dislf	4.26	76	1036828	20.8507	ug/L	99
18) allylchloride	4.48	41	642899	20.9444	ug/L	98
19) methylacetate	4.53	74	36342	9.4678	ug/L	87
20) Methylchlorid	4.64	84	194943	9.6241	ug/L	99
21) tbutylalcohol	4.84	59	257224	336.5528	ug/L	100
22) Acrylonitrile	4.94	53	344929	51.1317	ug/L	99
23) t12dichlorte	5.01	96	184970	10.1362	ug/L	97
24) MtBE	5.05	73	464219	9.7626	ug/L	98
25) Hexane	5.41	57	639430	24.1535	ug/L	99
26) 11dichlorota	5.54	63	322868	9.9681	ug/L	98
27) Vinylacetate	5.63	43	3522099	103.7415	ug/L	100
28) chloroprene	5.67	53	633476	21.5611	ug/L	98
29) Diisopether	5.69	45	655966	10.2982	ug/L	92
30) ETBE	6.14	59	452696	10.1606	ug/L	100
31) 22dichloropr	6.28	77	222631	11.1860	ug/L	98
32) c12dichlorte	6.27	96	198431	9.6564	ug/L	98
33) 2Butanone	6.29	72	202693	96.2004	ug/L	99
34) propionitrile	6.33	54	214078	97.3298	ug/L	99
35) Ethylacetate	6.39	88	40031	49.6989	ug/L	98
36) methacrylonitrile	6.54	67	182097	20.7059	ug/L	96
37) Bromochlorma	6.55	128	90859	9.4581	ug/L	94
38) Tetrahydofur	6.65	42	541091	94.2620	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : c:\instarch\data\feb0221\CCV-LCS1.D Vial: 2
Acq On : 2 Feb 2021 10:54 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 11:15:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	323187	9.6726	ug/L	99
40)	111trichlota	6.91	97	252310	10.6016	ug/L	97
42)	Cyclohexane	7.00	56	338360	10.9094	ug/L	95
43)	Carbtetraclo	7.13	119	208921	10.9303	ug/L	99
44)	11dicloprope	7.13	110	95406	10.3971	ug/L	98
46)	Benzene	7.36	78	754174	10.1785	ug/L	100
47)	12dichlorota	7.36	62	258088	9.8378	ug/L	99
48)	TAME	7.54	73	431888	9.8621	ug/L	99
49)	trichloroete	8.17	95	186850	9.8636	ug/L	97
50)	methylcyclohexane	8.44	83	373780	10.9064	ug/L	99
51)	12dicloropra	8.43	63	208634	9.8770	ug/L	99
52)	23Dicl1propene	8.49	75	281634	9.7070	ug/L	96
53)	Dibromometha	8.57	93	113952	9.7715	ug/L	98
54)	methylmethacrylate	8.60	69	132545	9.6994	ug/L	99
55)	14dioxane	8.61	88	13067	349.9733	ug/L	89
56)	Bromodiclrma	8.78	83	232288	9.5767	ug/L	98
57)	2Nitropropane	9.04	43	466417	100.1376	ug/L	97
58)	2CLEVE	9.16	63	528759	49.5697	ug/L	100
59)	c13dicloproe	9.35	75	285522	10.1176	ug/L	98
60)	4Meth2Pentan	9.55	43	1707945	97.3805	ug/L	99
62)	Toluene	9.80	92	482965	10.1046	ug/L	99
63)	t13Dicloprop	10.06	75	225862	10.1361	ug/L	97
64)	ethylmethacrylate	10.20	69	467316	19.9643	ug/L	96
65)	112Triclotha	10.30	83	145822	10.0685	ug/L	98
66)	Tetrachlorte	10.53	166	210398	10.2869	ug/L	98
67)	13Diclorpropa	10.52	76	300614	9.9479	ug/L	99
69)	2Hexanone	10.64	43	1213283	94.4661	ug/L	99
70)	Clorodibrmta	10.82	129	168174	9.4417	ug/L	97
71)	12Dibrometha	10.98	107	159886	9.9275	ug/L	96
72)	Chlorobenzen	11.66	112	502674	9.6898	ug/L	98
73)	1Clhexane	11.64	91	260682	10.3357	ug/L	99
74)	1112Tetclota	11.77	131	151477	9.6483	ug/L	95
75)	Ethylbenzene	11.82	91	853605	10.1603	ug/L	100
76)	m p-Xylene	11.99	106	670324	19.9812	ug/L	99
77)	o-Xylene	12.53	106	320854	9.5979	ug/L	97
78)	Styrene	12.55	104	533796	9.8140	ug/L	100
79)	Bromoform	12.78	173	97444	8.7912	ug/L	99
80)	Isopropylben	13.06	105	801969	10.1800	ug/L	99
81)	cyclohexanone	13.14	55	33244	122.7626	ug/L	94
84)	Bromobenzene	13.47	156	201406	9.2660	ug/L	98
85)	1122Tetrclta	13.44	83	227537	9.2750	ug/L	100
86)	123Triclproa	13.50	75	259340	9.5187	ug/L	95
87)	14dichloro2butene	13.52	53	58458	9.6184	ug/L	99
88)	n-Propylbenz	13.65	91	945488	9.6365	ug/L	100
89)	2chlorotolue	13.76	91	545604	9.4727	ug/L	97
90)	4chlorotolue	13.91	91	651666	9.7999	ug/L	99
91)	135Trimebenz	13.90	105	651784	9.7681	ug/L	99
92)	tbutylbenzen	14.37	119	568658	9.8667	ug/L	99
93)	124Trimetben	14.44	105	652645	9.9864	ug/L	98
94)	sbutylbenzen	14.69	105	808341	10.4440	ug/L	100
95)	13Diclorbenz	14.83	146	370243	9.5970	ug/L	99
96)	pIsopropylto	14.90	119	709788	10.3228	ug/L	98
97)	14dichlorobe	14.96	146	382848	9.4631	ug/L	99
98)	12dichlorobe	15.49	146	344234	9.3404	ug/L	98
99)	nButylbenzen	15.50	91	625196	9.9486	ug/L	99
100)	12dibromo3cl	16.59	157	33179	8.6413	ug/L	96
101)	135Trichlorobenzene	16.91	180	251103	9.5731	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : c:\instarch\data\feb0221\CCV-LCS1.D Vial: 2
Acq On : 2 Feb 2021 10:54 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 11:15:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	217416	10.0851	ug/L	95
103)	Hexachlorobu	17.97	225	107414	10.3568	ug/L	95
104)	Naphthalene	18.03	128	481868	9.7969	ug/L	99
105)	123Trichlben	18.34	180	182866	9.4538	ug/L	92

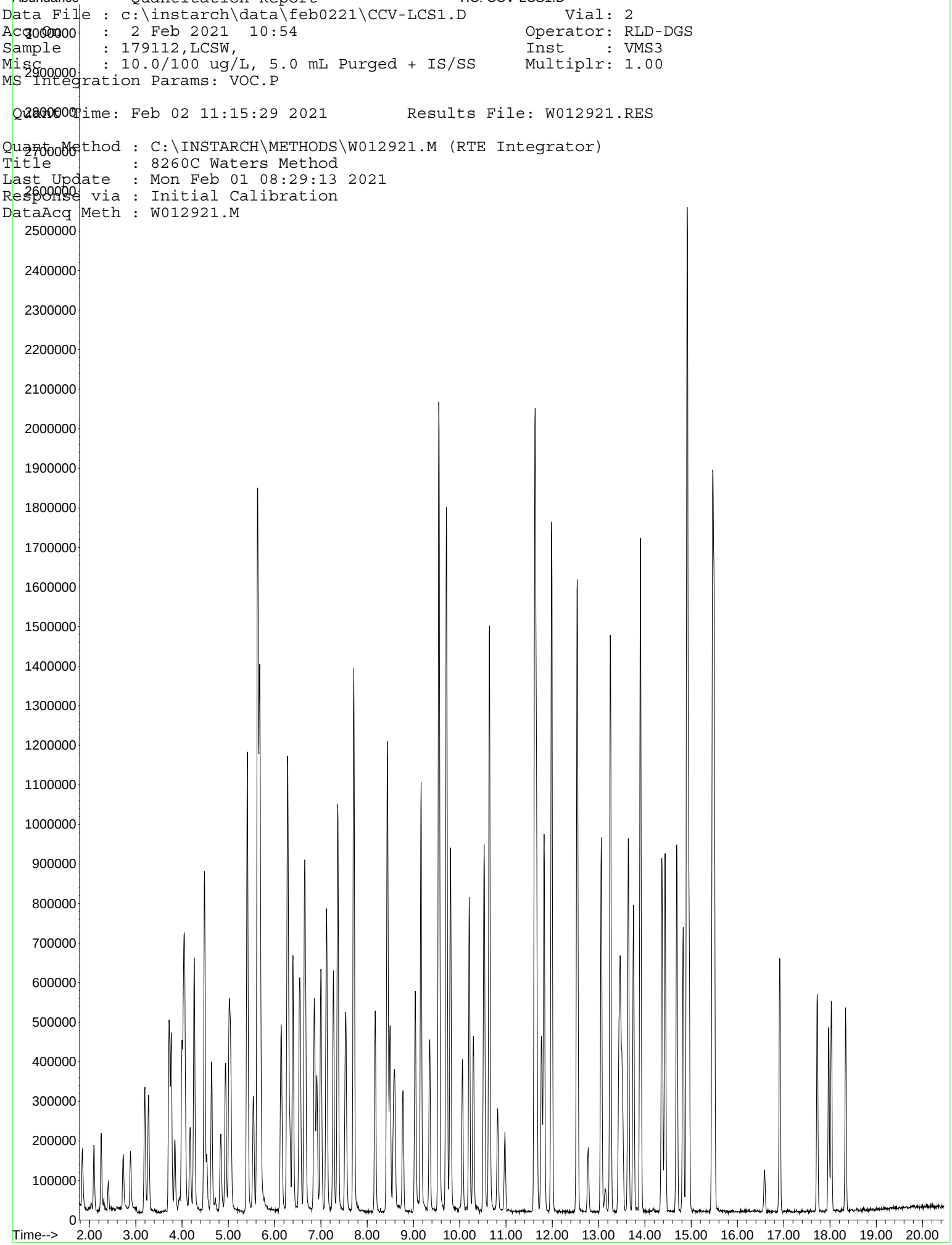
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCV-LCS1.D

Data File : c:\instarch\data\feb0221\CCV-LCS1.D Vial: 2
Acq On : 2 Feb 2021 10:54 Operator: RLD-DGS
Sample : 179112,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 11:15:29 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\MB1.D Vial: 4
Acq On : 2 Feb 2021 11:55 Operator: RLD-DGS
Sample : 179112,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 12:16:12 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1323006	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1097378	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	606148	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	348129	20.514	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103 %			
45) SURR12DCAd4	7.27	102	92076	19.602	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98 %			
61) SURRd8Tolule	9.71	98	1355439	20.157	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.25	95	563921	20.518	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	0.00	64	0	N.D.	
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	5723	Below Cal # 45	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	5984	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.85	59	3724	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	5.63	43	2696	Below Cal # 72	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	6.29	72	2689	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.67	42	4425	Below Cal # 35	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\MB1.D Vial: 4
Acq On : 2 Feb 2021 11:55 Operator: RLD-DGS
Sample : 179112,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 12:16:12 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	11.66	112	3150	N.D.	
73)	1Clhexane	11.62	91	3347	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.47	91	4465	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\MB1.D Vial: 4
Acq On : 2 Feb 2021 11:55 Operator: RLD-DGS
Sample : 179112,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 12:16:12 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

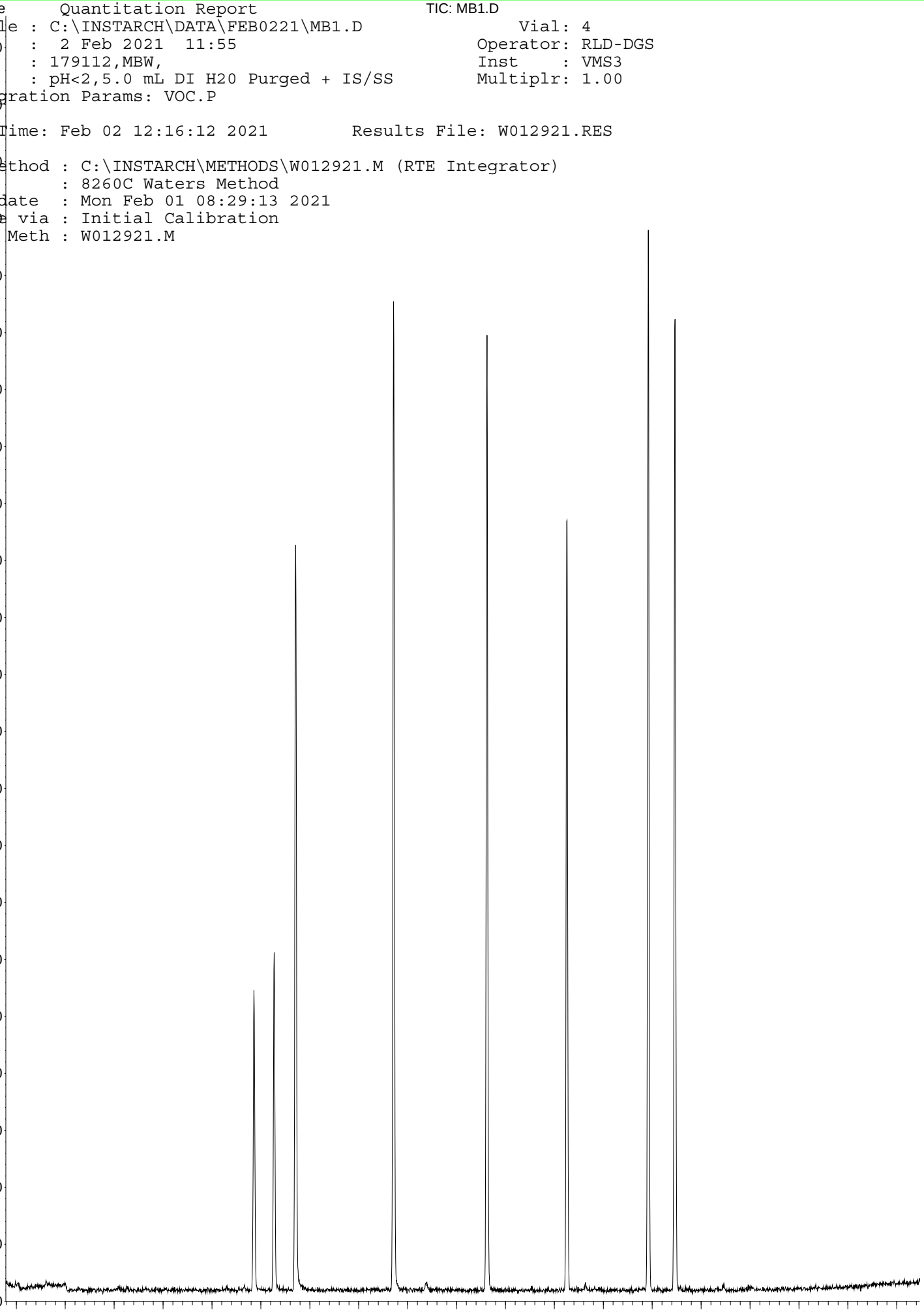
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: MB1.D

Data File : C:\INSTARCH\DATA\FEB0221\MB1.D Vial: 4
Acq On : 2 Feb 2021 11:55 Operator: RLD-DGS
Sample : 179112,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 12:16:12 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529217MS.D Vial: 22
Acq On : 2 Feb 2021 21:00 Operator: RLD-DGS
Sample : 179112,MSW529217, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 21:21:18 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1292336	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1105876	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	659977	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	344595	20.788	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 104 %			
45) SURR12DCAd4	7.27	102	92922	20.251	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %			
61) SURRd8Tolule	9.71	98	1345557	20.485	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.26	95	588562	19.668	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	160336	11.3616	ug/L	98
3) Chloromethan	2.09	50	212557	11.2661	ug/L	97
4) VinylChlorid	2.25	62	216278	11.6580	ug/L	98
5) Bromomethane	2.73	94	115329	12.5309	ug/L	98
6) Chloroethane	2.89	64	137315	10.3862	ug/L	96
7) Dichloroflmethane	3.19	67	356519	10.6424	ug/L	99
8) Trichlorofma	3.28	101	268749	11.6435	ug/L	97
9) Ethylether	3.72	59	132641	8.4806	ug/L	93
10) dichlorotfluoroethan	3.73	67	210236	11.1363	ug/L	98
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.84	56	136432	43.4001	ug/L	98
13) 11dichlorthe	4.00	96	168545	11.2514	ug/L	97
14) Trichlorotfluoroeth	4.04	101	326487	22.2559	ug/L	99
15) Acetone	4.06	43	350796	80.9203	ug/L	98
16) Iodomethane	4.18	142	260826	17.8230	ug/L	98
17) Carbon Dislf	4.26	76	993882	20.9730	ug/L	100
18) allylchloride	4.49	41	573737	19.6132	ug/L	98
19) methylacetate	4.53	74	32674	8.9321	ug/L	81
20) Methylchlorid	4.64	84	190504	9.8903	ug/L	100
21) tbutylalcohol	4.84	59	252763	347.0297	ug/L	96
22) Acrylonitrile	4.94	53	285274	44.3746	ug/L	98
23) t12dichlorte	5.02	96	176952	10.1751	ug/L	95
24) MtBE	5.05	73	422366	9.3205	ug/L	99
25) Hexane	5.41	57	558428	22.1343	ug/L	99
26) 11dichlorota	5.54	63	442983	14.3512	ug/L	99
27) Vinylacetate	5.63	43	2996729	91.1132	ug/L	100
28) chloroprene	5.67	53	613565	21.9136	ug/L	99
29) Diisopether	5.69	45	605294	9.9715	ug/L	92
30) ETBE	6.14	59	404449	9.5255	ug/L	98
31) 22dichloropr	6.28	77	177740	9.3710	ug/L	96
32) c12dichlorte	6.27	96	351698	17.9592	ug/L	94
33) 2Butanone	6.29	72	170324	84.8253	ug/L	100
34) propionitrile	6.32	54	174065	83.0418	ug/L	99
35) Ethylacetate	6.39	88	30466	39.6897	ug/L #	89
36) methacrylonitrile	6.54	67	151440	18.0694	ug/L	98
37) Bromochlorma	6.55	128	89459	9.7718	ug/L	95
38) Tetrahydofur	6.65	42	474300	86.1665	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529217MS.D Vial: 22
Acq On : 2 Feb 2021 21:00 Operator: RLD-DGS
Sample : 179112,MSW529217, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 21:21:18 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.66	83	306487	9.6253 ug/L		99
40)	111trichlota	6.91	97	262420	11.5703 ug/L		98
42)	Cyclohexane	7.00	56	332976	11.2654 ug/L		98
43)	Carbtetraclo	7.13	119	197218	10.8270 ug/L		100
44)	11dicloprope	7.12	110	90033	10.2955 ug/L		97
46)	Benzene	7.36	78	744262	10.5402 ug/L		99
47)	12dichlorota	7.36	62	238322	9.5325 ug/L		100
48)	TAME	7.53	73	390442	9.3554 ug/L		98
49)	trichloroete	8.17	95	284538	15.7613 ug/L		96
50)	methylcyclohexane	8.44	83	358182	10.9668 ug/L		99
51)	12dicloropra	8.43	63	195593	9.7164 ug/L		98
52)	23Dicl1propene	8.49	75	280424	10.1421 ug/L		99
53)	Dibromometha	8.57	93	103184	9.2846 ug/L		99
54)	methylmethacrylate	8.59	69	115471	8.8668 ug/L		94
55)	14dioxane	8.63	88	9737	279.4943 ug/L	#	66
56)	Bromodiclrma	8.77	83	219808	9.5092 ug/L		99
57)	2Nitropropane	9.04	43	365555	82.3545 ug/L		97
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.35	75	252133	9.3752 ug/L		96
60)	4Meth2Pentan	9.55	43	1552843	92.4813 ug/L		99
62)	Toluene	9.80	92	480733	10.5541 ug/L		98
63)	t13Dicloprop	10.06	75	191239	9.0057 ug/L		98
64)	ethylmethacrylate	10.20	69	414450	18.5792 ug/L		97
65)	112Triclotha	10.30	83	131238	9.5085 ug/L		98
66)	Tetrachlorte	10.53	166	225274	11.5576 ug/L		98
67)	13Diclorpropa	10.51	76	272616	9.4664 ug/L		98
69)	2Hexanone	10.64	43	1115853	88.4448 ug/L		99
70)	Clorodibrmta	10.82	129	148285	8.4750 ug/L		97
71)	12Dibrometha	10.97	107	142643	9.0164 ug/L		99
72)	Chlorobenzen	11.66	112	485372	9.5247 ug/L		99
73)	1Clhexane	11.64	91	258168	10.4203 ug/L		100
74)	1112Tetclota	11.77	131	142555	9.2435 ug/L		93
75)	Ethylbenzene	11.82	91	836450	10.1354 ug/L		100
76)	m p-Xylene	11.99	106	667198	20.2462 ug/L		99
77)	o-Xylene	12.53	106	310538	9.4565 ug/L		96
78)	Styrene	12.55	104	506385	9.4777 ug/L		100
79)	Bromoform	12.78	173	81505	7.4856 ug/L		98
80)	Isopropylben	13.06	105	794949	10.2726 ug/L		99
81)	cyclohexanone	13.15	55	27051	101.6922 ug/L	#	88
84)	Bromobenzene	13.47	156	189801	8.6312 ug/L		96
85)	1122Tetrclta	13.44	83	204857	8.2540 ug/L		98
86)	123Triclproa	13.50	75	225586	8.1841 ug/L		95
87)	14dichloro2butene	13.53	53	46125	7.5015 ug/L		98
88)	n-Propylbenz	13.64	91	931152	9.3807 ug/L		100
89)	2chlorotolue	13.75	91	542652	9.3126 ug/L		97
90)	4chlorotolue	13.91	91	639109	9.5000 ug/L		97
91)	135Trimebenz	13.90	105	660021	9.7772 ug/L		99
92)	tbutylbenzen	14.37	119	580943	9.9634 ug/L		99
93)	124Trimetben	14.44	105	637953	9.6487 ug/L		97
94)	sbutylbenzen	14.69	105	806688	10.3022 ug/L		99
95)	13Diclorbenz	14.83	146	347204	8.8958 ug/L		98
96)	pIsopropylto	14.91	119	686997	9.8758 ug/L		98
97)	14dichlorobe	14.96	146	362712	8.8617 ug/L		96
98)	12dichlorobe	15.49	146	336571	9.0269 ug/L		100
99)	nButylbenzen	15.50	91	634362	9.9777 ug/L		99
100)	12dibromo3cl	16.59	157	30458	7.8410 ug/L		99
101)	135Trichlorobenzene	16.92	180	235929	8.8907 ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529217MS.D Vial: 22
Acq On : 2 Feb 2021 21:00 Operator: RLD-DGS
Sample : 179112,MSW529217, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 21:21:18 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

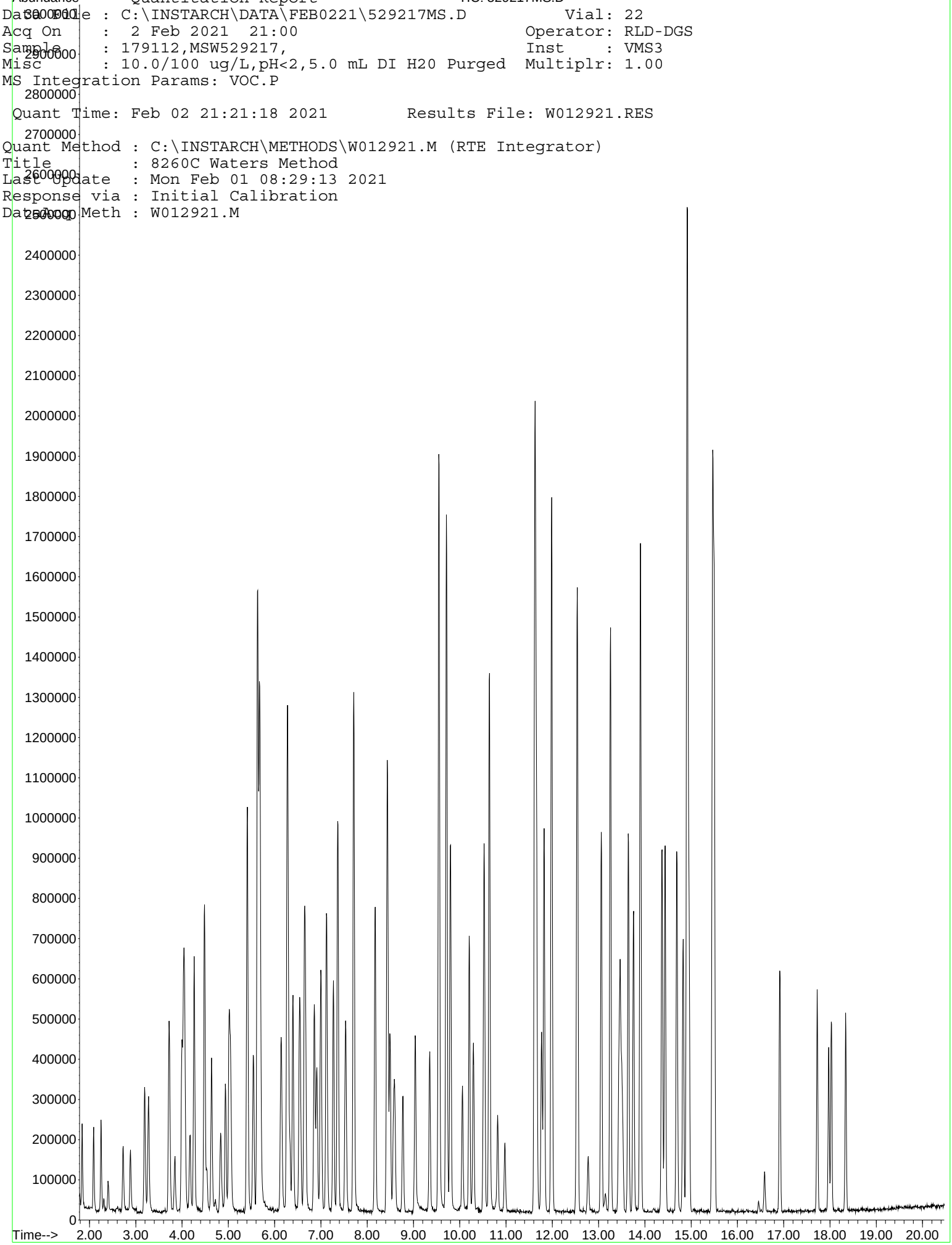
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	193881	8.8894	ug/L	99
103) Hexachlorobu	17.98	225	87351	8.3250	ug/L	96
104) Naphthalene	18.03	128	441056	8.8635	ug/L	98
105) 123Trichlben	18.34	180	173395	8.8605	ug/L	92

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\FEB0221\529217MS.D Vial: 22
Acq On : 2 Feb 2021 21:00 Operator: RLD-DGS
Sample : 179112,MSW529217, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 21:21:18 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
Data Acq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529217SD.D Vial: 23
Acq On : 2 Feb 2021 21:30 Operator: RLD-DGS
Sample : 179112,MSDW529217, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 21:51:10 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1334019	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1121095	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	665183	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	347883	20.330	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4	7.28	102	92990	19.633	ug/L	0.01
Spiked Amount 20.000	Range 89 - 111		Recovery = 98 %			
61) SURRd8Tolule	9.71	98	1364951	20.131	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	598875	19.856	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %			
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	185275	12.7186	ug/L	96
3) Chloromethan	2.09	50	234098	12.0202	ug/L	99
4) VinylChlorid	2.25	62	232564	12.1441	ug/L	97
5) Bromomethane	2.73	94	125812	13.2427	ug/L	97
6) Chloroethane	2.89	64	154721	11.3371	ug/L	99
7) Dichloroflmethane	3.20	67	387468	11.2048	ug/L	99
8) Trichlorofma	3.28	101	293036	12.2991	ug/L	98
9) Ethylether	3.71	59	145587	9.0175	ug/L	91
10) dichlorotfluoroethan	3.73	67	235157	12.0671	ug/L	99
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.84	56	145394	44.8058	ug/L	97
13) 11dichlorthe	3.99	96	182795	11.8214	ug/L	97
14) Trichlorotfluoroeth	4.04	101	365069	24.1083	ug/L	99
15) Acetone	4.06	43	383845	86.1952	ug/L	99
16) Iodomethane	4.17	142	332700	21.3588	ug/L	98
17) Carbon Dislf	4.26	76	1078430	22.0460	ug/L	99
18) allylchloride	4.49	41	649893	21.5224	ug/L	99
19) methylacetate	4.53	74	32773	8.6792	ug/L	81
20) Methylchlorid	4.64	84	210771	10.6618	ug/L	100
21) tbutylalcohol	4.84	59	315519	419.6547	ug/L	95
22) Acrylonitrile	4.94	53	305226	45.9946	ug/L	98
23) t12dichlorte	5.02	96	195599	10.8959	ug/L	94
24) MtBE	5.05	73	463842	9.9160	ug/L	99
25) Hexane	5.41	57	626114	24.0417	ug/L	99
26) 11dichlorota	5.54	63	465041	14.5950	ug/L	98
27) Vinylacetate	5.64	43	3241494	96.1002	ug/L	100
28) chloroprene	5.67	53	678989	23.4925	ug/L	99
29) Diisopether	5.69	45	654729	10.4488	ug/L	97
30) ETBE	6.15	59	470611	10.7374	ug/L	98
31) 22dichloropr	6.28	77	198689	10.1482	ug/L	98
32) c12dichlorte	6.27	96	369649	18.2861	ug/L	94
33) 2Butanone	6.29	72	183076	88.3272	ug/L	96
34) propionitrile	6.33	54	194130	89.7205	ug/L	98
35) Ethylacetate	6.40	88	35500	44.8027	ug/L	97
36) methacrylonitrile	6.54	67	161557	18.6742	ug/L	98
37) Bromochlorma	6.55	128	95488	10.1044	ug/L	99
38) Tetrahydofur	6.65	42	517298	91.4149	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529217SD.D Vial: 23
Acq On : 2 Feb 2021 21:30 Operator: RLD-DGS
Sample : 179112,MSDW529217, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 21:51:10 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	339950	10.3426	ug/L	99
40)	111trichlota	6.91	97	295066	12.6032	ug/L	99
42)	Cyclohexane	7.00	56	367190	12.0347	ug/L	97
43)	Carbtetraclo	7.13	119	217033	11.5425	ug/L	98
44)	11dicloprope	7.12	110	101498	11.2439	ug/L	98
46)	Benzene	7.37	78	799770	10.9724	ug/L	99
47)	12dichlorota	7.36	62	260430	10.0913	ug/L	99
48)	TAME	7.53	73	437798	10.1624	ug/L	96
49)	trichloroete	8.17	95	308991	16.5810	ug/L	96
50)	methylcyclohexane	8.44	83	409319	12.1409	ug/L	95
51)	12dicloropra	8.43	63	216484	10.4182	ug/L	100
52)	23Dicl1propene	8.50	75	300231	10.5192	ug/L	98
53)	Dibromometha	8.57	93	109731	9.5652	ug/L	97
54)	methylmethacrylate	8.60	69	128416	9.5527	ug/L	98
55)	14dioxane	8.61	88	19694	524.5603	ug/L	91
56)	Bromodiclrma	8.78	83	243416	10.2015	ug/L	99
57)	2Nitropropane	9.04	43	409534	89.3795	ug/L	96
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.35	75	277631	10.0008	ug/L	98
60)	4Meth2Pentan	9.55	43	1669245	96.6862	ug/L	99
62)	Toluene	9.80	92	528656	11.2435	ug/L	100
63)	t13Dicloprop	10.06	75	212508	9.6946	ug/L	99
64)	ethylmethacrylate	10.20	69	469395	20.3848	ug/L	99
65)	112Triclotha	10.29	83	141773	9.9509	ug/L	99
66)	Tetrachlorte	10.53	166	238726	11.8650	ug/L	99
67)	13Diclorpropa	10.52	76	293029	9.8573	ug/L	97
69)	2Hexanone	10.64	43	1205554	94.2575	ug/L	100
70)	Clorodibrmta	10.82	129	164820	9.2922	ug/L	97
71)	12Dibrometha	10.98	107	148560	9.2629	ug/L	94
72)	Chlorobenzen	11.66	112	523488	10.1332	ug/L	99
73)	1Clhexane	11.64	91	272322	10.8424	ug/L	98
74)	1112Tetclota	11.77	131	158974	10.1682	ug/L	96
75)	Ethylbenzene	11.82	91	912881	10.9114	ug/L	99
76)	m p-Xylene	11.99	106	722915	21.6391	ug/L	99
77)	o-Xylene	12.53	106	345047	10.3648	ug/L	98
78)	Styrene	12.55	104	555023	10.2470	ug/L	99
79)	Bromoform	12.77	173	92890	8.4154	ug/L	97
80)	Isopropylben	13.06	105	847516	10.8033	ug/L	99
81)	cyclohexanone	13.14	55	39373	146.0047	ug/L	85
84)	Bromobenzene	13.47	156	216804	9.7819	ug/L	98
85)	1122Tetrclta	13.44	83	222493	8.8944	ug/L	97
86)	123Triclproa	13.50	75	244046	8.7845	ug/L	96
87)	14dichloro2butene	13.53	53	50711	8.1828	ug/L	97
88)	n-Propylbenz	13.64	91	1019703	10.1923	ug/L	99
89)	2chlorotolue	13.76	91	593129	10.0991	ug/L	99
90)	4chlorotolue	13.91	91	692350	10.2109	ug/L	98
91)	135Trimebenz	13.90	105	701806	10.3148	ug/L	97
92)	tbutylbenzen	14.37	119	624882	10.6331	ug/L	100
93)	124Trimetben	14.44	105	691222	10.3726	ug/L	96
94)	sbutylbenzen	14.69	105	891938	11.3018	ug/L	100
95)	13Diclorbenz	14.83	146	392941	9.9888	ug/L	99
96)	pIsopropylto	14.90	119	756288	10.7868	ug/L	99
97)	14dichlorobe	14.96	146	400526	9.7090	ug/L	99
98)	12dichlorobe	15.49	146	377056	10.0336	ug/L	99
99)	nButylbenzen	15.50	91	681550	10.6360	ug/L	99
100)	12dibromo3cl	16.59	157	34359	8.7760	ug/L	99
101)	135Trichlorobenzene	16.91	180	262405	9.8110	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0221\529217SD.D Vial: 23
Acq On : 2 Feb 2021 21:30 Operator: RLD-DGS
Sample : 179112,MSDW529217, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 21:51:10 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	207335	9.4319	ug/L	98
103)	Hexachlorobu	17.97	225	100797	9.5312	ug/L	96
104)	Naphthalene	18.03	128	480464	9.5799	ug/L	99
105)	123Trichlben	18.34	180	190960	9.6817	ug/L	91

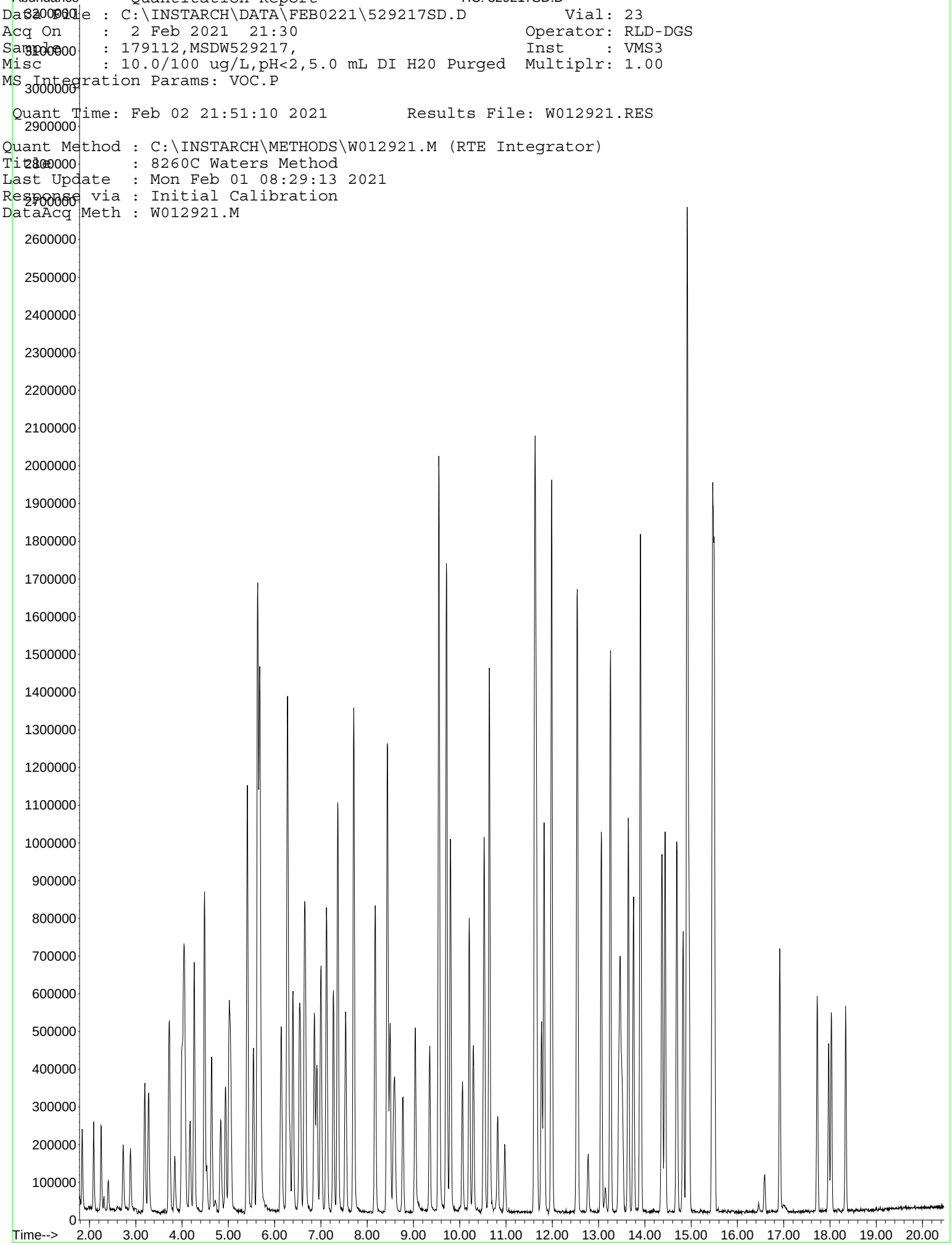
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 529217SD.D

Data File : C:\INSTARCH\DATA\FEB0221\529217SD.D Vial: 23
Acq On : 2 Feb 2021 21:30 Operator: RLD-DGS
Sample : 179112,MSDW529217, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 02 21:51:10 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\Instarch\Data\FEB0321\CCV-LCS1.D Vial: 2
Acq On : 3 Feb 2021 13:32 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 13:52:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1358966	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1020436	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	643452	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	357184	20.491	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	97082	20.120	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1365885	19.775	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99	%		
83) SURR4BrFBenz	13.26	95	590413	20.236	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	172412	11.6183	ug/L	95
3) Chloromethan	2.09	50	214283	10.8008	ug/L	99
4) VinylChlorid	2.25	62	221817	11.3703	ug/L	96
5) Bromomethane	2.72	94	104294	10.7763	ug/L	100
6) Chloroethane	2.88	64	146420	10.5319	ug/L	99
7) Dichloroflmethane	3.19	67	367100	10.4209	ug/L	99
8) Trichlorofma	3.28	101	268126	11.0470	ug/L	96
9) Ethylether	3.71	59	163856	9.9627	ug/L	97
10) dichlorotfluoroethan	3.73	67	208845	10.5202	ug/L	98
11) propyleneoxide	3.76	58	374059	116.7560	ug/L	97
12) Acrolein	3.85	56	172383	52.1478	ug/L	100
13) 11dichlorthe	4.00	96	165902	10.5320	ug/L	94
14) Trichlorotfluoroeth	4.04	101	353497	22.9156	ug/L	99
15) Acetone	4.06	43	505500	113.6246	ug/L	98
16) Iodomethane	4.18	142	346103	21.7523	ug/L	99
17) Carbon Dislf	4.26	76	1024134	20.5517	ug/L	99
18) allylchloride	4.48	41	665002	21.6185	ug/L	99
19) methylacetate	4.53	74	38452	9.9963	ug/L	93
20) Methylchlorid	4.64	84	197734	9.7514	ug/L	95
21) tbutylalcohol	4.83	59	494989	646.2724	ug/L	98
22) Acrylonitrile	4.94	53	371439	54.9448	ug/L	97
23) t12dichlorte	5.02	96	189664	10.3714	ug/L	98
24) MtBE	5.04	73	485776	10.1942	ug/L	99
25) Hexane	5.40	57	652949	24.6119	ug/L	97
26) 11dichlorota	5.54	63	326927	10.0721	ug/L	99
27) Vinylacetate	5.63	43	3606656	106.3655	ug/L	99
28) chloroprene	5.67	53	651016	22.1111	ug/L	100
29) Diisopether	5.69	45	662515	10.3790	ug/L	100
30) ETBE	6.14	59	460661	10.3174	ug/L	98
31) 22dichloropr	6.28	77	230807	11.5722	ug/L	97
32) c12dichlorte	6.27	96	202762	9.8463	ug/L	99
33) 2Butanone	6.29	72	222789	105.5141	ug/L	100
34) propionitrile	6.33	54	245061	111.1800	ug/L	97
35) Ethylacetate	6.40	88	40133	49.7199	ug/L #	90
36) methacrylonitrile	6.54	67	187984	21.3300	ug/L	96
37) Bromochlorma	6.55	128	95524	9.9227	ug/L	98
38) Tetrahydofur	6.65	42	604646	105.9520	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\FEB0321\CCV-LCS1.D Vial: 2
Acq On : 3 Feb 2021 13:32 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 13:52:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	329217	9.8322	ug/L	99
40)	111trichlota	6.91	97	267175	11.2024	ug/L	97
42)	Cyclohexane	7.00	56	357186	11.4920	ug/L	97
43)	Carbtetraclo	7.12	119	213773	11.1604	ug/L	96
44)	11dicloprope	7.12	110	96583	10.5030	ug/L	97
46)	Benzene	7.36	78	771913	10.3958	ug/L	99
47)	12dichlorota	7.36	62	255835	9.7312	ug/L	99
48)	TAME	7.53	73	466726	10.6350	ug/L	95
49)	trichloroete	8.17	95	200264	10.5493	ug/L	93
50)	methylcyclohexane	8.43	83	405873	11.8177	ug/L	99
51)	12dicloropra	8.43	63	212114	10.0205	ug/L	99
52)	23Dicl1propene	8.50	75	304503	10.4730	ug/L	99
53)	Dibromometha	8.57	93	118686	10.1559	ug/L	97
54)	methylmethacrylate	8.59	69	144423	10.5462	ug/L	96
55)	14dioxane	8.60	88	64404	1741.2939	ug/L	91
56)	Bromodiclrma	8.78	83	247554	10.1845	ug/L	99
57)	2Nitropropane	9.04	43	506168	108.4416	ug/L	96
58)	2CLEVE	9.16	63	571279	53.4423	ug/L	99
59)	c13dicloproe	9.35	75	283466	10.0235	ug/L	98
60)	4Meth2Pentan	9.55	43	1849678	106.0718	ug/L	100
62)	Toluene	9.80	92	476828	9.9551	ug/L	100
63)	t13Dicloprop	10.05	75	225715	10.1080	ug/L	98
64)	ethylmethacrylate	10.20	69	484102	20.6376	ug/L	98
65)	112Triclotha	10.30	83	139863	9.6366	ug/L	97
66)	Tetrachlorte	10.53	166	203642	9.9355	ug/L	97
67)	13Diclorpropa	10.52	76	286141	9.4489	ug/L	96
69)	2Hexanone	10.64	43	1329804	114.2282	ug/L	99
70)	Clorodibrmta	10.82	129	164115	10.1651	ug/L	99
71)	12Dibrometha	10.98	107	155664	10.6633	ug/L	96
72)	Chlorobenzen	11.66	112	465787	9.9057	ug/L	99
73)	1Clhexane	11.64	91	239732	10.4864	ug/L	99
74)	1112Tetclota	11.77	131	137917	9.6915	ug/L	98
75)	Ethylbenzene	11.82	91	791851	10.3984	ug/L	99
76)	m p-Xylene	11.99	106	629510	20.7020	ug/L	99
77)	o-Xylene	12.53	106	297845	9.8294	ug/L	99
78)	Styrene	12.55	104	493775	10.0155	ug/L	100
79)	Bromoform	12.77	173	97086	9.6632	ug/L	98
80)	Isopropylben	13.06	105	824617	11.5482	ug/L	100
81)	cyclohexanone	13.15	55	86535	352.5467	ug/L	92
84)	Bromobenzene	13.47	156	201379	9.3928	ug/L	98
85)	1122Tetrclta	13.44	83	232081	9.5911	ug/L	99
86)	123Triclproa	13.50	75	271025	10.0851	ug/L	98
87)	14dichloro2butene	13.53	53	60213	10.0442	ug/L	99
88)	n-Propylbenz	13.64	91	977687	10.1024	ug/L	99
89)	2chlorotolue	13.75	91	573705	10.0983	ug/L	99
90)	4chlorotolue	13.91	91	658937	10.0463	ug/L	100
91)	135Trimebenz	13.90	105	684772	10.4043	ug/L	99
92)	tbutylbenzen	14.37	119	577510	10.1589	ug/L	97
93)	124Trimetben	14.44	105	660798	10.2509	ug/L	97
94)	sbutylbenzen	14.69	105	830934	10.8844	ug/L	100
95)	13Diclorbenz	14.83	146	378247	9.9400	ug/L	99
96)	pIsopropylto	14.91	119	724130	10.6770	ug/L	100
97)	14dichlorobe	14.96	146	381996	9.5725	ug/L	98
98)	12dichlorobe	15.49	146	350619	9.6452	ug/L	100
99)	nButylbenzen	15.50	91	656288	10.5877	ug/L	99
100)	12dibromo3cl	16.59	157	39244	10.3622	ug/L	93
101)	135Trichlorobenzene	16.91	180	261188	10.0953	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\Instarch\Data\FEB0321\CCV-LCS1.D Vial: 2
Acq On : 3 Feb 2021 13:32 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 13:52:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	221005	10.3933	ug/L	96
103) Hexachlorobu	17.97	225	115229	11.2639	ug/L	96
104) Naphthalene	18.03	128	524806	10.8174	ug/L	99
105) 123Trichlben	18.34	180	192151	10.0711	ug/L	93

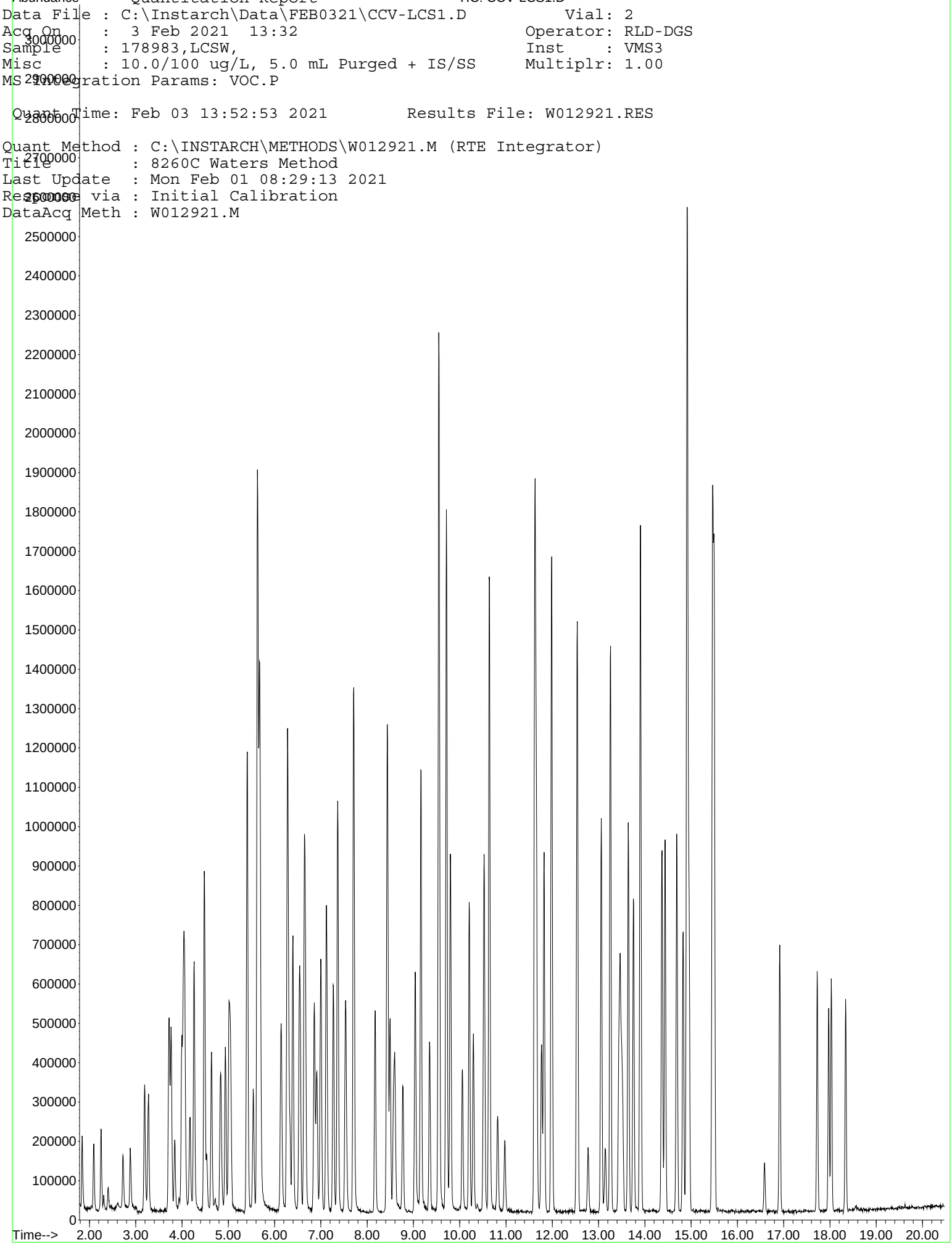
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCV-LCS1.D

Data File : C:\Instarch\Data\FEB0321\CCV-LCS1.D Vial: 2
Acq On : 3 Feb 2021 13:32 Operator: RLD-DGS
Sample : 178983,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 13:52:53 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\MB1.D Vial: 5
Acq On : 3 Feb 2021 15:05 Operator: RLD-DGS
Sample : 178983,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 15:25:48 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1289356	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1047554	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	557255	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	302406	18.285	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 91 %			
45) SURR12DCAd4	7.27	102	89448	19.539	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98 %			
61) SURRd8Tolule	9.71	98	1345601	20.533	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103 %			
83) SURR4BrFBenz	13.26	95	510825	20.216	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.08	43	9142	Below	Cal #	45
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	6979	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.64	84	12253	Below	Cal	94
21) tbutylalcohol	4.85	59	11929	16.4157	ug/L #	44
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	5.64	43	5724	Below	Cal #	72
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.66	42	4867	Below	Cal #	35

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\MB1.D Vial: 5
Acq On : 3 Feb 2021 15:05 Operator: RLD-DGS
Sample : 178983,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 15:25:48 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	8.62	88	8464	247.1691 ug/L	91
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.55	43	3148	Below Cal #	41
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.64	43	5319	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3194	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	13.15	55	5138	20.3905 ug/L #	91
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	13.92	91	3207	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	14.83	146	2815	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	14.93	146	4474	N.D.	
98)	12dichlorobe	15.48	146	2780	N.D.	
99)	nButylbenzen	15.48	91	4121	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\MB1.D Vial: 5
Acq On : 3 Feb 2021 15:05 Operator: RLD-DGS
Sample : 178983,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 15:25:48 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	18.03	128	4619	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

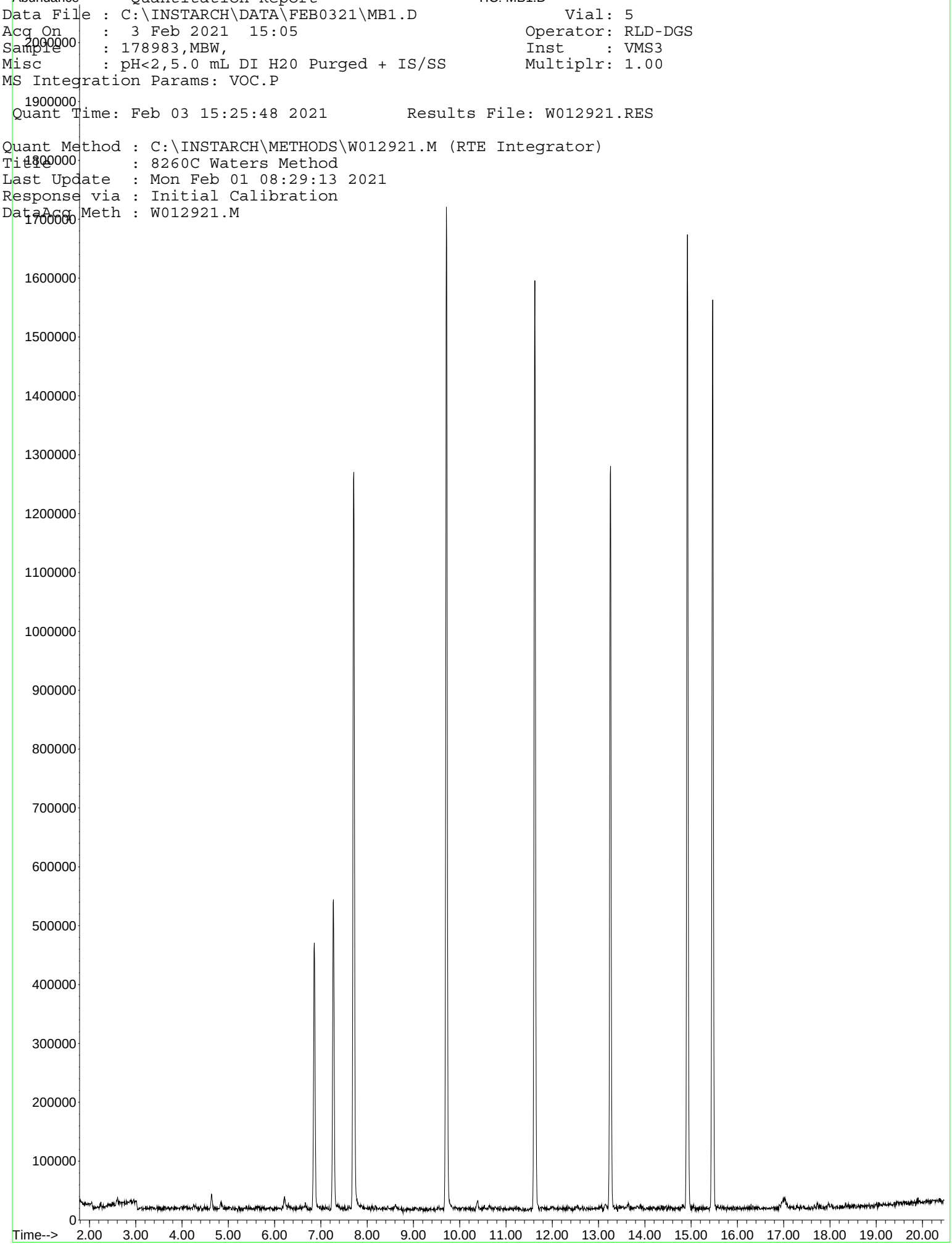
(#) = qualifier out of range (m) = manual integration

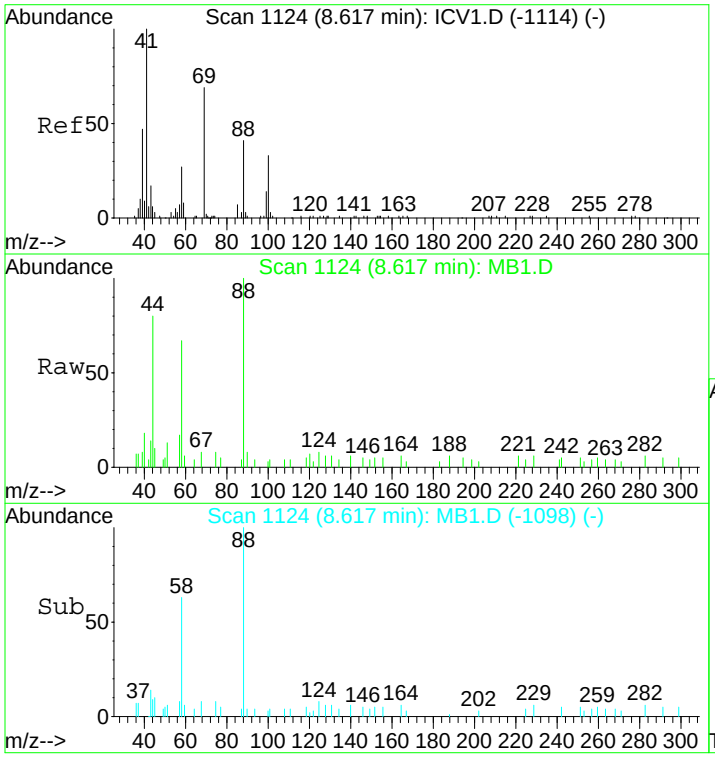
Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\MB1.D Vial: 5
Acq On : 3 Feb 2021 15:05 Operator: RLD-DGS
Sample : 178983,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 03 15:25:48 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

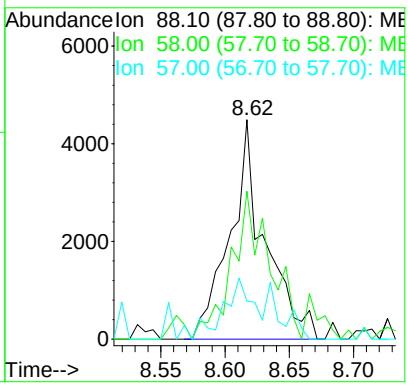




#55
14dioxane
Concen: 247.17 ug/L
RT: 8.62 min Scan# 1124
Delta R.T. 0.01 min
Lab File: MB1.D
Acq: 3 Feb 2021 15:05

Tgt Ion: 88 Resp: 8464

Ion	Ratio	Lower	Upper
88	100		
58	72.8	49.9	89.9
57	34.8	1.2	41.2



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527966MS.D Vial: 26
Acq On : 4 Feb 2021 11:00 Operator: RLD-DGS
Sample : 178983,MSW527966, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 11:20:48 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1303637	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1119613	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	660844	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	337537	20.186	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.27	102	94959	20.516	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103 %			
61) SURRd8Tolule	9.72	98	1352269	20.409	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.26	95	598706	19.980	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	168746	11.8539	ug/L	96
3) Chloromethan	2.09	50	220860	11.6047	ug/L	99
4) VinylChlorid	2.25	62	220135	11.7630	ug/L	98
5) Bromomethane	2.72	94	108740	11.7125	ug/L	99
6) Chloroethane	2.89	64	139675	10.4731	ug/L	94
7) Dichloroflmethane	3.19	67	356329	10.5445	ug/L	98
8) Trichlorofma	3.28	101	275008	11.8114	ug/L	96
9) Ethylether	3.71	59	144824	9.1793	ug/L	96
10) dichlorotfluoroethan	3.73	67	210228	11.0393	ug/L	97
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.84	56	143126	45.1348	ug/L	98
13) 11dichlorthe	3.99	96	170020	11.2515	ug/L	94
14) Trichlorotfluoroeth	4.03	101	339830	22.9646	ug/L	99
15) Acetone	4.06	43	433479	100.7432	ug/L	99
16) Iodomethane	4.17	142	332789	21.7967	ug/L	97
17) Carbon Dislf	4.26	76	1035478	21.6613	ug/L	99
18) allylchloride	4.49	41	596192	20.2042	ug/L	99
19) methylacetate	4.53	74	33400	9.0514	ug/L	91
20) Methylchlorid	4.64	84	198929	10.2680	ug/L	98
21) tbutylalcohol	4.83	59	444307	604.7211	ug/L	97
22) Acrylonitrile	4.94	53	321488	49.5742	ug/L	96
23) t12dichlorte	5.01	96	185956	10.6002	ug/L	96
24) MtBE	5.05	73	459277	10.0472	ug/L	98
25) Hexane	5.41	57	550206	21.6193	ug/L	99
26) 11dichlorota	5.54	63	325083	10.4403	ug/L	98
27) Vinylacetate	5.63	43	2857335	85.4832	ug/L	99
28) chloroprene	5.67	53	639552	22.6437	ug/L	98
29) Diisopether	5.69	45	627523	10.2480	ug/L	93
30) ETBE	6.15	59	454605	10.6139	ug/L	98
31) 22dichloropr	6.28	77	141371	7.3889	ug/L	98
32) c12dichlorte	6.27	96	200573	10.1533	ug/L	95
33) 2Butanone	6.29	72	199288	98.3897	ug/L	97
34) propionitrile	6.33	54	213715	101.0739	ug/L	99
35) Ethylacetate	6.39	88	29048	37.5143	ug/L #	85
36) methacrylonitrile	6.54	67	168929	19.9814	ug/L	94
37) Bromochlorma	6.56	128	86532	9.3701	ug/L	90
38) Tetrahydofur	6.65	42	536851	97.5119	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527966MS.D Vial: 26
Acq On : 4 Feb 2021 11:00 Operator: RLD-DGS
Sample : 178983,MSW527966, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 11:20:48 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	318331	9.9106	ug/L	98
40)	111trichlota	6.91	97	268870	11.7519	ug/L	99
42)	Cyclohexane	7.00	56	359345	12.0521	ug/L	99
43)	Carbtetraclo	7.13	119	215581	11.7325	ug/L	99
44)	11dicloprope	7.13	110	97445	11.0465	ug/L	96
46)	Benzene	7.36	78	748246	10.5048	ug/L	98
47)	12dichlorota	7.36	62	248272	9.8444	ug/L	96
48)	TAME	7.54	73	429684	10.2065	ug/L	94
49)	trichloroete	8.17	95	194849	10.6997	ug/L	92
50)	methylcyclohexane	8.44	83	376008	11.4128	ug/L	98
51)	12dicloropra	8.43	63	208076	10.2469	ug/L	98
52)	23Dicl1propene	8.50	75	290182	10.4040	ug/L	99
53)	Dibromometha	8.57	93	107593	9.5974	ug/L	98
54)	methylmethacrylate	8.59	69	128589	9.7885	ug/L	95
55)	14dioxane	8.61	88	27782	753.2981	ug/L	85
56)	Bromodiclrma	8.78	83	231910	9.9458	ug/L	99
57)	2Nitropropane	9.04	43	424912	94.8969	ug/L	96
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.35	75	257936	9.5078	ug/L	99
60)	4Meth2Pentan	9.55	43	1676988	99.6717	ug/L	99
62)	Toluene	9.80	92	475927	10.3580	ug/L	98
63)	t13Dicloprop	10.06	75	208150	9.7170	ug/L	98
64)	ethylmethacrylate	10.20	69	462184	20.5394	ug/L	98
65)	112Triclotha	10.29	83	134684	9.6736	ug/L	99
66)	Tetrachlorte	10.53	166	200067	10.1754	ug/L	96
67)	13Diclorpropa	10.52	76	297483	10.2403	ug/L	99
69)	2Hexanone	10.64	43	1232183	96.4670	ug/L	99
70)	Clorodibrmta	10.82	129	160565	9.0643	ug/L	98
71)	12Dibrometha	10.98	107	151218	9.4411	ug/L	98
72)	Chlorobenzen	11.66	112	492985	9.5554	ug/L	98
73)	1Clhexane	11.64	91	261073	10.4083	ug/L	99
74)	1112Tetclota	11.77	131	148293	9.4976	ug/L	97
75)	Ethylbenzene	11.82	91	857895	10.2677	ug/L	99
76)	m p-Xylene	11.99	106	671943	20.1400	ug/L	98
77)	o-Xylene	12.53	106	332173	9.9913	ug/L	99
78)	Styrene	12.55	104	539609	9.9756	ug/L	100
79)	Bromoform	12.77	173	100609	9.1268	ug/L	97
80)	Isopropylben	13.06	105	834893	10.6564	ug/L	100
81)	cyclohexanone	13.15	55	55483	206.0168	ug/L	88
84)	Bromobenzene	13.47	156	202478	9.1956	ug/L	97
85)	1122Tetrclta	13.44	83	221708	8.9213	ug/L	98
86)	123Triclproa	13.50	75	244074	8.8432	ug/L	94
87)	14dichloro2butene	13.53	53	47266	7.6770	ug/L	93
88)	n-Propylbenz	13.64	91	952184	9.5799	ug/L	99
89)	2chlorotolue	13.76	91	567196	9.7210	ug/L	97
90)	4chlorotolue	13.91	91	656458	9.7451	ug/L	96
91)	135Trimebenz	13.90	105	669078	9.8983	ug/L	99
92)	tbutylbenzen	14.37	119	579166	9.9199	ug/L	97
93)	124Trimetben	14.44	105	665862	10.0576	ug/L	100
94)	sbutylbenzen	14.69	105	829867	10.5843	ug/L	99
95)	13Diclorbenz	14.83	146	364613	9.3296	ug/L	99
96)	pIsopropylto	14.91	119	709302	10.1831	ug/L	99
97)	14dichlorobe	14.96	146	369321	9.0114	ug/L	96
98)	12dichlorobe	15.50	146	335212	8.9787	ug/L	98
99)	nButylbenzen	15.50	91	646233	10.1511	ug/L	98
100)	12dibromo3cl	16.59	157	34883	8.9683	ug/L	99
101)	135Trichlorobenzene	16.92	180	252118	9.4882	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527966MS.D Vial: 26
Acq On : 4 Feb 2021 11:00 Operator: RLD-DGS
Sample : 178983,MSW527966, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 11:20:48 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

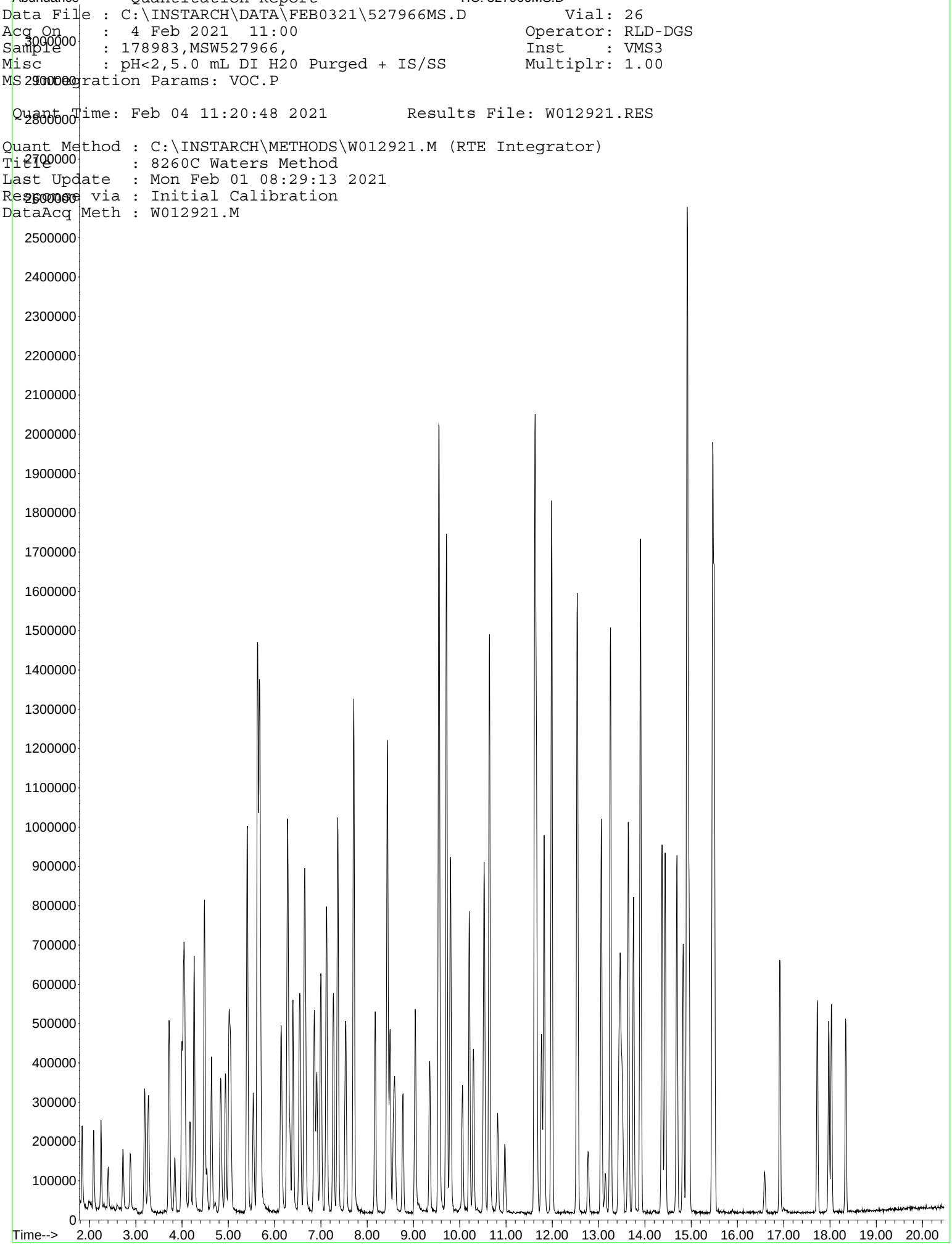
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	198939	9.1094	ug/L	99
103)	Hexachlorobu	17.97	225	106130	10.1014	ug/L	96
104)	Naphthalene	18.03	128	473433	9.5017	ug/L	99
105)	123Trichlben	18.34	180	180053	9.1887	ug/L	94

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\FEB0321\527966MS.D Vial: 26
Acq On : 4 Feb 2021 11:00 Operator: RLD-DGS
Sample : 178983,MSW527966, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 11:20:48 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M



Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527966SD.D Vial: 27
Acq On : 4 Feb 2021 11:31 Operator: RLD-DGS
Sample : 178983,MSDW527966, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 11:51:56 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1310157	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1116729	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	662421	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	333000	19.815	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	92752	19.939	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100 %			
61) SURRd8Tolule	9.72	98	1339854	20.121	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	594394	19.789	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %			
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	177370	12.3977	ug/L	97
3) Chloromethan	2.09	50	220679	11.5375	ug/L	98
4) VinylChlorid	2.25	62	231548	12.3113	ug/L	97
5) Bromomethane	2.72	94	109411	11.7262	ug/L	98
6) Chloroethane	2.89	64	144156	10.7553	ug/L	92
7) Dichloroflmethane	3.20	67	377416	11.1129	ug/L	99
8) Trichlorofma	3.28	101	293088	12.5253	ug/L	99
9) Ethylether	3.71	59	157384	9.9257	ug/L	96
10) dichlorotfluoroethan	3.73	67	225615	11.7883	ug/L	97
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.84	56	153260	48.0901	ug/L	97
13) 11dichlorthe	4.00	96	175830	11.5781	ug/L	95
14) Trichlorotfluoroeth	4.04	101	351682	23.6473	ug/L	99
15) Acetone	4.07	43	451596	104.7110	ug/L	99
16) Iodomethane	4.17	142	364607	23.5122	ug/L	98
17) Carbon Dislf	4.26	76	1075327	22.3830	ug/L	100
18) allylchloride	4.49	41	632092	21.3142	ug/L	100
19) methylacetate	4.53	74	33956	9.1563	ug/L	87
20) Methylchlorid	4.64	84	208956	10.7706	ug/L	99
21) tbutylalcohol	4.83	59	484162	655.6861	ug/L	99
22) Acrylonitrile	4.94	53	345352	52.9890	ug/L	98
23) t12dichlorte	5.02	96	191861	10.8824	ug/L	95
24) MtBE	5.05	73	483941	10.5341	ug/L	99
25) Hexane	5.41	57	541305	21.1637	ug/L	97
26) 11dichlorota	5.54	63	350162	11.1898	ug/L	100
27) Vinylacetate	5.64	43	3025182	90.6749	ug/L	100
28) chloroprene	5.67	53	662474	23.3385	ug/L	99
29) Diisopether	5.69	45	653910	10.6258	ug/L	95
30) ETBE	6.14	59	483962	11.2431	ug/L	99
31) 22dichloropr	6.28	77	149434	7.7715	ug/L	99
32) c12dichlorte	6.27	96	213346	10.7462	ug/L	94
33) 2Butanone	6.29	72	210529	103.4222	ug/L	95
34) propionitrile	6.33	54	231316	108.8537	ug/L	100
35) Ethylacetate	6.40	88	35544	45.6752	ug/L	99
36) methacrylonitrile	6.53	67	179560	21.1332	ug/L	94
37) Bromochlorma	6.56	128	93729	10.0989	ug/L	98
38) Tetrahydofur	6.64	42	583966	106.1542	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527966SD.D Vial: 27
Acq On : 4 Feb 2021 11:31 Operator: RLD-DGS
Sample : 178983,MSDW527966, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 11:51:56 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	334507	10.3624	ug/L	100
40)	111trichlota	6.91	97	277029	12.0483	ug/L	98
42)	Cyclohexane	7.00	56	366809	12.2412	ug/L	97
43)	Carbtetraclo	7.13	119	218819	11.8494	ug/L	98
44)	11dicloprope	7.12	110	96363	10.8695	ug/L	98
46)	Benzene	7.36	78	781279	10.9139	ug/L	98
47)	12dichlorota	7.36	62	252710	9.9705	ug/L	97
48)	TAME	7.53	73	458283	10.8316	ug/L	94
49)	trichloroete	8.17	95	201818	11.0272	ug/L	95
50)	methylcyclohexane	8.44	83	387319	11.6976	ug/L	99
51)	12dicloropra	8.43	63	219879	10.7743	ug/L	94
52)	23Dicl1propene	8.50	75	297213	10.6031	ug/L	97
53)	Dibromometha	8.57	93	112318	9.9691	ug/L	98
54)	methylmethacrylate	8.60	69	138018	10.4539	ug/L	97
55)	14dioxane	8.62	88	30310	818.2151	ug/L	88
56)	Bromodiclrma	8.78	83	236484	10.0915	ug/L	98
57)	2Nitropropane	9.04	43	463800	103.0664	ug/L	98
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.35	75	269203	9.8738	ug/L	96
60)	4Meth2Pentan	9.55	43	1776128	105.6042	ug/L	100
62)	Toluene	9.80	92	497495	10.7735	ug/L	99
63)	t13Dicloprop	10.06	75	213029	9.8953	ug/L	99
64)	ethylmethacrylate	10.20	69	500286	22.1220	ug/L	99
65)	112Triclotha	10.30	83	149428	10.6792	ug/L	96
66)	Tetrachlorte	10.53	166	211591	10.7079	ug/L	98
67)	13Diclorpropa	10.52	76	305447	10.4621	ug/L	99
69)	2Hexanone	10.64	43	1305063	102.4366	ug/L	99
70)	Clorodibrmta	10.82	129	168046	9.5111	ug/L	99
71)	12Dibrometha	10.98	107	162899	10.1967	ug/L	100
72)	Chlorobenzen	11.66	112	513734	9.9833	ug/L	99
73)	1Clhexane	11.65	91	269926	10.7890	ug/L	99
74)	1112Tetclota	11.77	131	157862	10.1366	ug/L	97
75)	Ethylbenzene	11.82	91	888412	10.6604	ug/L	99
76)	m p-Xylene	11.99	106	699333	21.0151	ug/L	100
77)	o-Xylene	12.53	106	328721	9.9130	ug/L	96
78)	Styrene	12.55	104	546112	10.1219	ug/L	98
79)	Bromoform	12.78	173	101461	9.2279	ug/L	96
80)	Isopropylben	13.06	105	835002	10.6854	ug/L	99
81)	cyclohexanone	13.15	55	57626	214.5267	ug/L	94
84)	Bromobenzene	13.47	156	209740	9.5027	ug/L	97
85)	1122Tetrclta	13.44	83	233565	9.3760	ug/L	98
86)	123Triclproa	13.50	75	254004	9.1811	ug/L	94
87)	14dichloro2butene	13.52	53	51708	8.3784	ug/L	98
88)	n-Propylbenz	13.64	91	981738	9.8538	ug/L	99
89)	2chlorotolue	13.76	91	584631	9.9960	ug/L	98
90)	4chlorotolue	13.91	91	677513	10.0337	ug/L	96
91)	135Trimebenz	13.90	105	686043	10.1252	ug/L	98
92)	tbutylbenzen	14.37	119	598915	10.2337	ug/L	97
93)	124Trimetben	14.44	105	697302	10.5074	ug/L	99
94)	sbutylbenzen	14.69	105	851779	10.8379	ug/L	100
95)	13Diclorbenz	14.83	146	378775	9.6688	ug/L	99
96)	pIsopropylto	14.91	119	726407	10.4038	ug/L	100
97)	14dichlorobe	14.96	146	392686	9.5586	ug/L	99
98)	12dichlorobe	15.49	146	358553	9.5810	ug/L	100
99)	nButylbenzen	15.50	91	644183	10.0948	ug/L	99
100)	12dibromo3cl	16.58	157	38208	9.7998	ug/L	93
101)	135Trichlorobenzene	16.91	180	248828	9.3421	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\FEB0321\527966SD.D Vial: 27
Acq On : 4 Feb 2021 11:31 Operator: RLD-DGS
Sample : 178983,MSDW527966, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 11:51:56 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

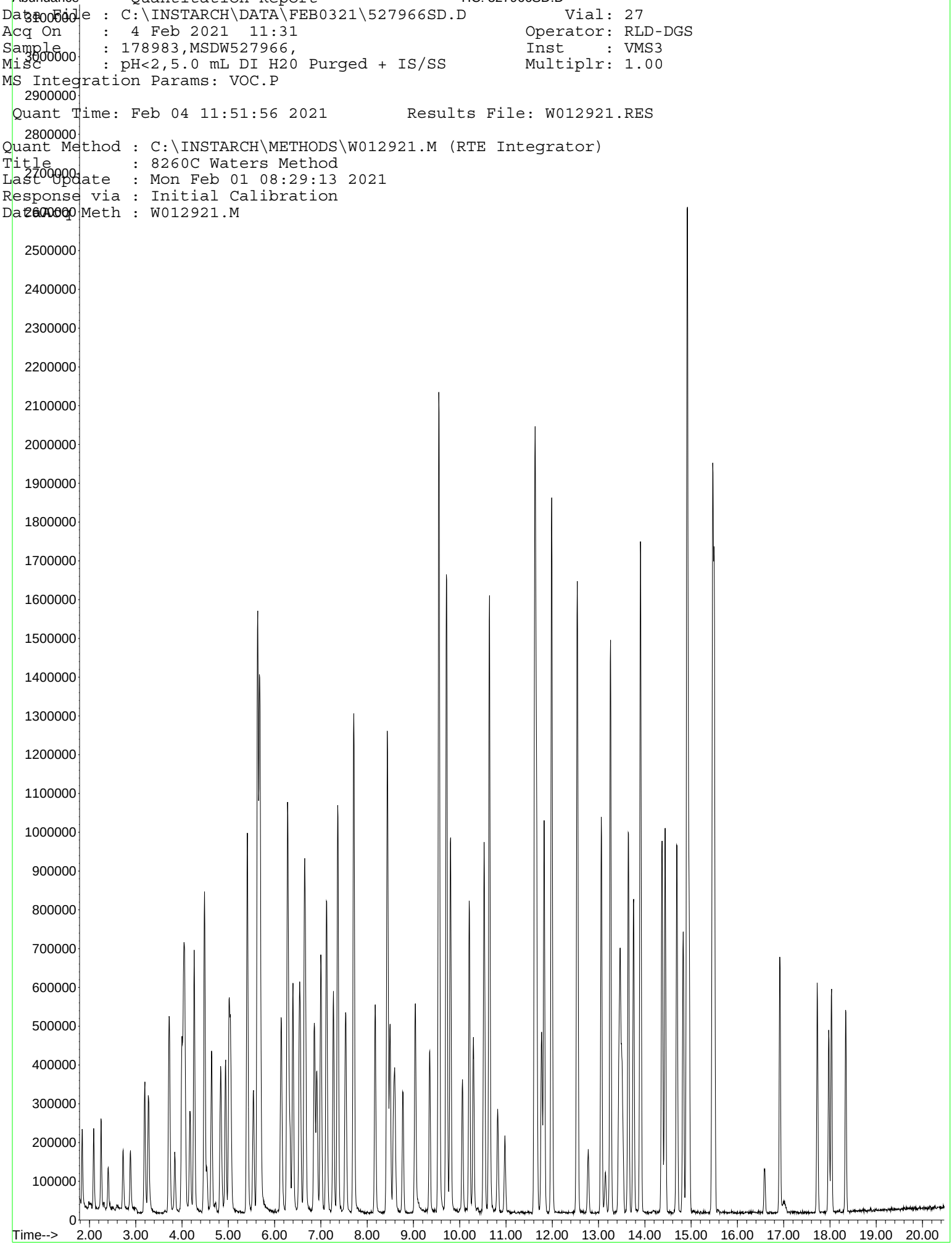
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	211990	9.6839	ug/L	98
103)	Hexachlorobu	17.97	225	112658	10.6972	ug/L	92
104)	Naphthalene	18.03	128	513835	10.2880	ug/L	99
105)	123Trichlben	18.34	180	187399	9.5408	ug/L	95

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\FEB0321\527966SD.D Vial: 27
Acq On : 4 Feb 2021 11:31 Operator: RLD-DGS
Sample : 178983,MSDW527966, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Feb 04 11:51:56 2021 Results File: W012921.RES

Quant Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Mon Feb 01 08:29:13 2021
Response via : Initial Calibration
DataAcq Meth : W012921.M

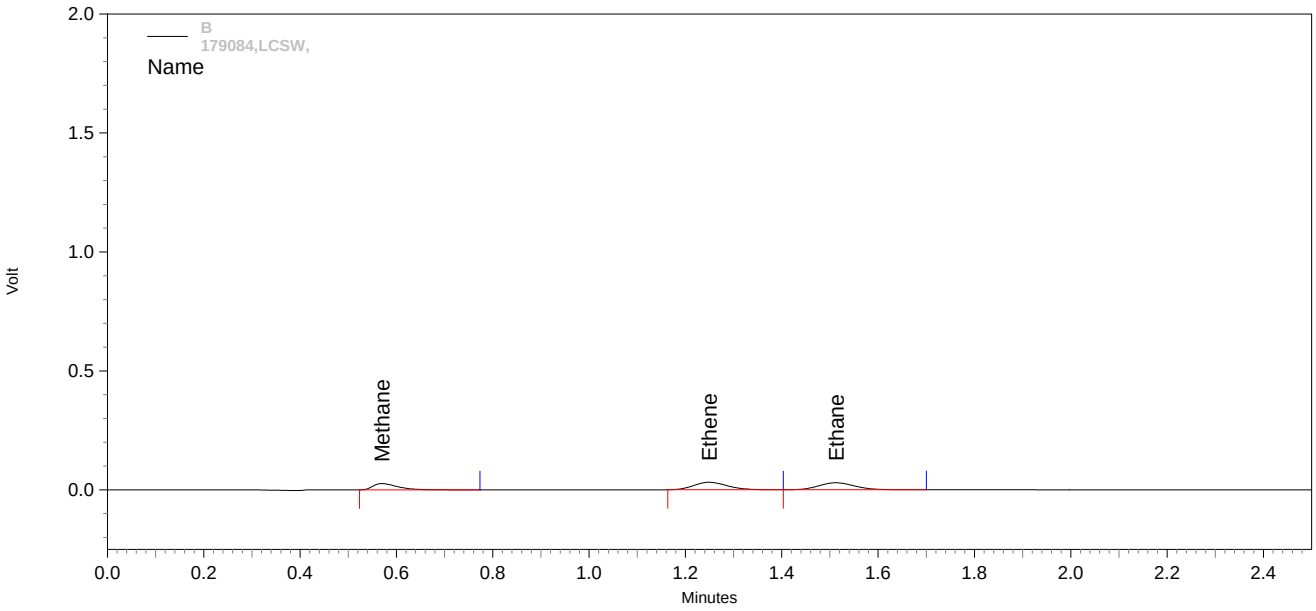


Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\003.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,LCSW,
Acquired: Feb 03, 2021 11:20:31
File Desc. Laboratory Control Sample - 25 ppmV -

500 uL of the 200 ppmV MEE Std. into 4 mL of headspace. 1.0 mL injection (Methane, Ethene, Ethane,)



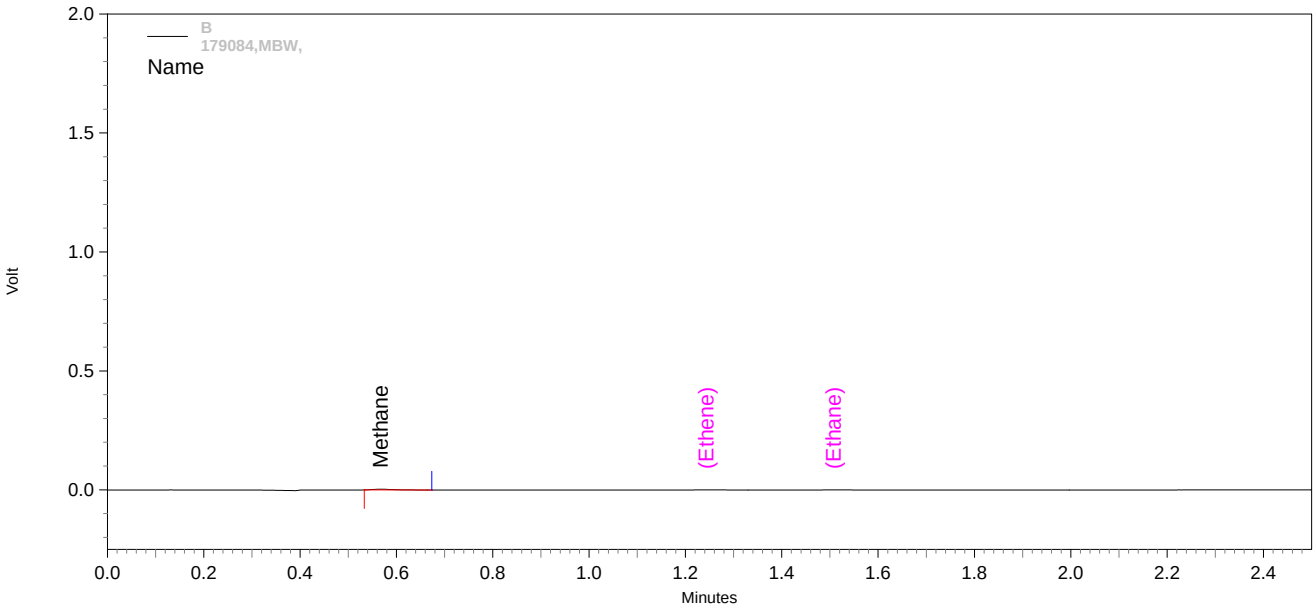
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.570**	**0.560**	**92162**	**24.181**	**ppmV**
2	**Ethene**	**1.250**	**1.243**	**151628**	**21.068**	**ppmV**
3	**Ethane**	**1.513**	**1.507**	**152021**	**21.622**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\004.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,MBW,
Acquired: Feb 03, 2021 11:27:19
File Desc. Method Blank
1.0 mL injection (Methane, Ethene, Ethane)



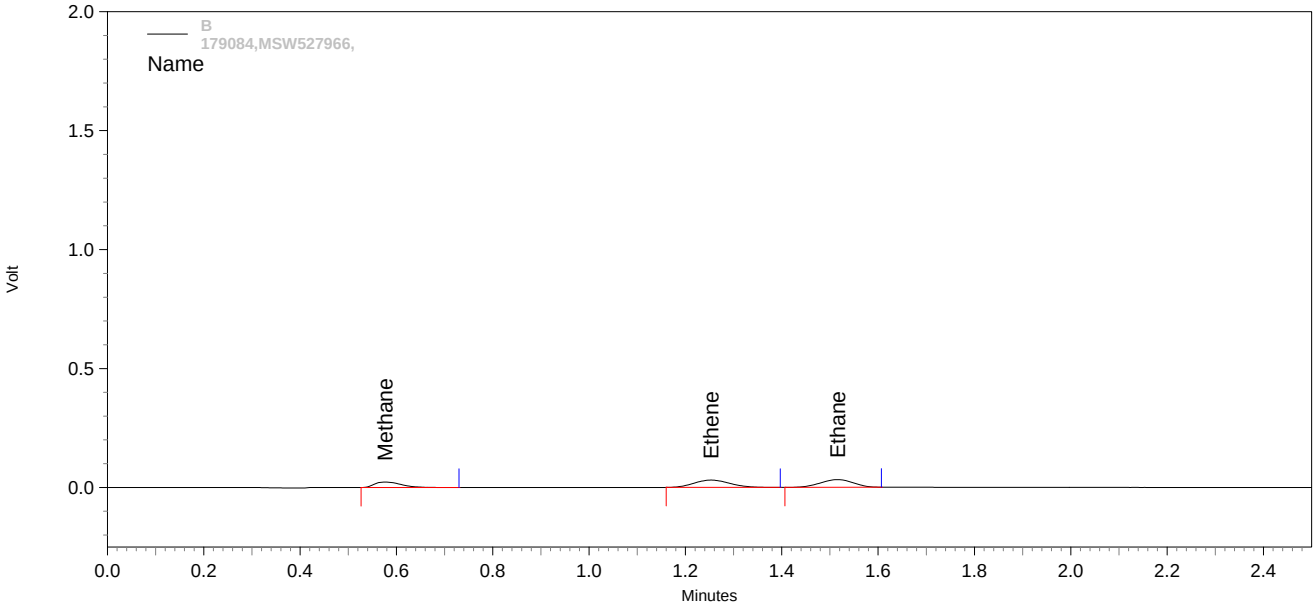
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.567**	**0.560**	**8341**	**0.000**	**ppmV**
	Ethene		**1.243**		**0.000 BDL**	**ppmV**
	Ethane		**1.507**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\011.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,MSW527966,
Acquired: Feb 03, 2021 12:22:17
File Desc. MATRIX SPIKE 1mL injection (Methane, Ethene, Ethane)



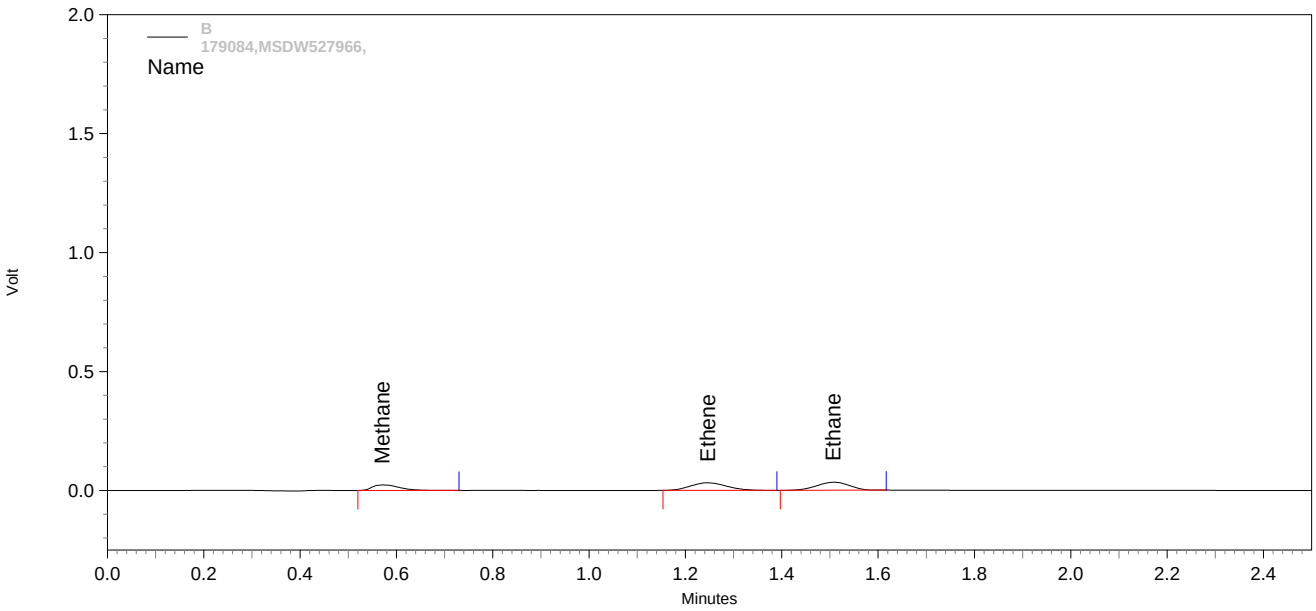
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.577**	**0.560**	**87136**	**22.718**	**ppmV**
2	**Ethene**	**1.253**	**1.243**	**159454**	**22.261**	**ppmV**
3	**Ethane**	**1.517**	**1.507**	**151927**	**21.607**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\020321 -\012.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 179084,MSDW527966,
Acquired: Feb 03, 2021 12:26:40
File Desc. MATRIX SPIKE DUPLICATE 1mL injection (Methane, Ethene, Ethane)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.570**	**0.560**	**89626**	**23.443**	**ppmV**
2	**Ethene**	**1.247**	**1.243**	**165283**	**23.149**	**ppmV**
3	**Ethane**	**1.507**	**1.507**	**157962**	**22.536**	**ppmV**

VOLATILE ORGANIC ANALYSIS
LOGBOOK
DOCUMENTS

VOC 8260 QSM WATER 5.0 Analytical Run
179112 on 02/04/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	530894						VOC 8260 QSM WATER 5.0				
				BFB				0			
	530209						VOC 8260 QSM WATER 5.0				
				LCSW				0			
	530262						VOC 8260 QSM WATER 5.0				
				CCV				0			
	530279						VOC 8260 QSM WATER 5.0				
				MBW				0			
159482	529225		01/27/2021 1600		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	4	
		TB-2									
159483	529229		01/28/2021 1500		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	4	
		TB-3									
159482	529217		01/27/2021 1035		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		48MW06									
159482	529218		01/27/2021 0940		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		48MW07									
159482	529219		01/27/2021 1130		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		49MW03									
159482	529220		01/27/2021 1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		49MW02									
159482	529221		01/27/2021 1345		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		48MW3									
159482	529222		01/27/2021 1345		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		48TW3									
159482	529224		01/27/2021 1600		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		EQB-50MW02									
159483	529226		01/28/2021 1115		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		48MW2									
159483	529227		01/28/2021 1250		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		49MW01									
159483	529228		01/28/2021 1405		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		48MW1									

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

VOC 8260 QSM WATER 5.0 Analytical Run
179112 on 02/04/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	530575		01/27/2021	1035					VOC 8260 QSM 5.0				
		48MW06			MSW	529217				0			
	530576		01/27/2021	1035					VOC 8260 QSM 5.0				
		48MW06			MSDW	530575				0			
	530577								VOC 8260 QSM WATER 5.0				
					CCVF					0			
	530895								VOC 8260 QSM WATER 5.0				
					BFB					0			
	530621								VOC 8260 QSM WATER 5.0				
					CCV					0			
	530639								VOC 8260 QSM WATER 5.0				
					CCB					0			
159482	529223		01/27/2021	1455			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		50MW02											
159482	529221		01/27/2021	1345			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
RERUN		48MW3											
159482	529222		01/27/2021	1345			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
RERUN		48TW3											
	530698								VOC 8260 QSM WATER 5.0				
					CCVF					0			

26 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\FEB0221\BFB1.D
Injection Date : 2 Feb 2021 Log Time Period (hrs) : ALL
Injection Time : 10:39 Total files within period : 31
Sample Directory : C:\INSTARCH\DATA\FEB0221\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	179112,LCSW, 10.0/100 ug/L, 5.0 mL Pur	2 Feb 2021	10:54
MB1	1.00	1.00	1.00	179112,MBW, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	11:55
529225	1.00	1.00	1.00	179112,529225, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	14:27
529229	1.00	1.00	1.00	179112,529229, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	14:58
529217	1.00	1.00	1.00	179112,529217, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	15:29
529218	1.00	1.00	1.00	179112,529218, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	15:59
529219	1.00	1.00	1.00	179112,529219, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	16:30
529220	1.00	1.00	1.00	179112,529220, pH 7,5.0 mL DI H20 Purged	2 Feb 2021	17:00
529221	1.00	1.00	1.00	179112,529221, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	17:31
529222	1.00	1.00	1.00	179112,529222, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	18:01
529223	1.00	1.00	1.00	179112,529223, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	18:31
529224	1.00	1.00	1.00	179112,529224, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	19:01
529226	1.00	1.00	1.00	179112,529226, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	19:31
529227	1.00	1.00	1.00	179112,529227, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	20:00
529228	1.00	1.00	1.00	179112,529228, pH<2,5.0 mL DI H20 Purged	2 Feb 2021	20:30
529217MS	1.00	1.00	1.00	179112,MSW529217, 10.0/100 ug/L,pH<2,5.0 mL	2 Feb 2021	21:00
529217SD	1.00	1.00	1.00	179112,MSDW529217, 10.0/100 ug/L,pH<2,5.0 mL	2 Feb 2021	21:30

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\FEB0221\BFB1.D
Injection Date : 2 Feb 2021 Log Time Period (hrs) : ALL
Injection Time : 10:39 Total files within period : 31
Sample Directory : C:\INSTARCH\DATA\FEB0221\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
CCVF-L~1	1.00	1.00	1.00	179112,LCSDW, 10.0/100 ug/L, 5.0 mL Pur	2 Feb 2021	22:00
BFB2	1.00	1.00	1.00	179112,BFB, 50 ng Inj.	3 Feb 2021	07:50
CCV2	1.00	1.00	1.00	179112,LCSW, 10.0/100 ug/L, 5.0 mL Pur	3 Feb 2021	08:06
IB4	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged + IS	3 Feb 2021	08:36
CCB1	1.00	1.00	1.00	179112,MBW, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	09:07
529223R	1.00	1.00	1.00	179112,529223, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	09:37
529221R	1.00	1.00	1.00	179112,529221,5 pH<2,5.0 mL DI H20 Purged	3 Feb 2021	10:10
529222R	1.00	1.00	1.00	179112,529222,5 pH<2,5.0 mL DI H20 Purged	3 Feb 2021	10:45
CCVF2	1.00	1.00	1.00	179112,CCVF, 10.0/100 ug/L, 5.0 mL Pur	3 Feb 2021	11:22

Over-range

Report

8260 ISTD/SSTD 20ug/ml VOC0792
8260 BFB STD. 50ug/ml VOC0791
8260 ICV STD. 100ug/ml VOC0801
8260 CCV/CALIB. 100ug/ml VOC0802

VOC 8260 QSM WATER 5.0 Analytical Run
178983 on 02/05/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	531507							VOC 8260 QSM WATER 5.0				
					BFB				0			
	530865							VOC 8260 QSM WATER 5.0				
					LCSW				0			
	530866							VOC 8260 QSM WATER 5.0				
					CCV				0			
	530870							VOC 8260 QSM WATER 5.0				
					MBW				0			
159400	527969		01/25/2021	1600		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	**4**	
		TB-01										
159400	527961		01/25/2021	1050		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		13MW5										
159400	527962		01/25/2021	1150		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		13MW4										
159400	527963		01/25/2021	1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		13MW3										
159400	527964		01/25/2021	1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		13TW3										
159400	527965		01/25/2021	1330		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		49MW04										
159400	527966		01/25/2021	1425		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		13MW2			Designated MS/MSD							
159400	527967		01/25/2021	1530		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		49MW05										
	531506							VOC 8260 QSM WATER 5.0				
					BFB				0			
	530916							VOC 8260 QSM WATER 5.0				
					CCV				0			
	530917							VOC 8260 QSM WATER 5.0				
					CCVF				0			
	531749							VOC 8260 QSM WATER 5.0				
					CCB				0			
	531063		01/25/2021	1425				VOC 8260 QSM 5.0				
		13MW2			MSW 527966				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

VOC 8260 QSM WATER 5.0 Analytical Run
178983 on 02/05/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	531125		01/25/2021 1425				VOC 8260 QSM 5.0				
		13MW2		MSDW 531063				0			
	531205						VOC 8260 QSM WATER 5.0				
				CCVF				0			

19 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W012921.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\FEB0321\BFB1.D
Injection Date : 3 Feb 2021 Log Time Period (hrs) : ALL
Injection Time : 13:16 Total files within period : 27
Sample Directory : C:\INSTARCH\DATA\FEB0321\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	178983,LCSW, 10.0/100 ug/L, 5.0 mL Pur	3 Feb 2021	13:32
IB1	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged + IS	3 Feb 2021	14:34
MB1	1.00	1.00	1.00	178983,MBW, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	15:05
527969	1.00	1.00	1.00	178983,527969, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	15:36
527961	1.00	1.00	1.00	178983,527961, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	18:41
527962	1.00	1.00	1.00	178983,527962, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	19:11
527963	1.00	1.00	1.00	178983,527963, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	19:42
527964	1.00	1.00	1.00	178983,527964, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	20:13
527965	1.00	1.00	1.00	178983,527965, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	20:43
527966	1.00	1.00	1.00	178983,527966, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	21:14
527967	1.00	1.00	1.00	178983,527967, pH<2,5.0 mL DI H20 Purged	3 Feb 2021	21:44
BFB2	1.00	1.00	1.00	178983,BFB, 50 ng Inj.	4 Feb 2021	07:38
IB2	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged + IS	4 Feb 2021	07:54
CCV2-C~1	1.00	1.00	1.00	178983,LCSW, 10.0/100 ug/L, 5.0 mL Pur	4 Feb 2021	08:25
IB3	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged + IS	4 Feb 2021	08:56
CCB1	1.00	1.00	1.00	178983,CCB, pH<2,5.0 mL DI H20 Purged	4 Feb 2021	09:27
527966MS	1.00	1.00	1.00	178983,MSW527966, pH<2,5.0 mL DI H20 Purged	4 Feb 2021	11:00
527966SD	1.00	1.00	1.00	178983,MSDW527966, pH<2,5.0 mL DI H20 Purged	4 Feb 2021	11:31
CCVF2	1.00	1.00	1.00	178983,CCVF, 10.0/100 ug/L, 5.0 mL Pur	4 Feb 2021	12:02

8260 ISTD/SSTD 20ug/ml VOC0792
8260 BFB STD. 50ug/ml VOC0791
8260 ICV STD. 100ug/ml VOC0801
8260 CCV/CALIB. 100ug/ml VOC0802

pl_ilog
Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W012921.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\JAN2921\BFB1.D
Injection Date : 29 Jan 2021 Log Time Period (hrs) : ALL
Injection Time : 11:59 Total files within period : 17
Sample Directory : C:\INSTARCH\DATA\JAN2921\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT1 0.5/5.0 ug/L, 5.0 mL	29 Jan 2021	13:44
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT2 1.00/10.00 ug/L, 5.0	29 Jan 2021	14:14
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT3 2.00/20.0 ug/L, 5.0	29 Jan 2021	14:44
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT4 5.00/50.0 ug/L, 5.0	29 Jan 2021	15:14
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT5 10.0/100.0 ug/L, 5.0	29 Jan 2021	15:43
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT6 20.0/200.0 ug/L, 5.0	29 Jan 2021	16:13
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT7 30.0/300.0 ug/L, 5.0	29 Jan 2021	16:43
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT8 40.0/400.0 ug/L, 5.0	29 Jan 2021	17:12
WCAL9	1.00	1.00	1.00	INITIAL CALIB. PT9 80.0/800.0 ug/L, 5.0	29 Jan 2021	17:42
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	29 Jan 2021	18:41
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF 30.0/300 ug/L, 5.0 m	29 Jan 2021	19:10
ICB1	1.00	1.00	1.00	INITIAL CALIB. BLANK 5.0 mL DI H20 Purged	29 Jan 2021	20:08

8260 ISTD/SSTD 20ug/ml VOC0792
8260 BFB STD. 50ug/ml VOC0791
8260 ICV STD. 100ug/ml VOC0801
8260 CCV/CALIB. 100ug/ml VOC0802

FVO4-01 Data Review Checklist

INDEPENDENT DATA REVIEW CHECKLIST			Method: GCMS (EPA SW-846 8260C)					
Analysis Date	**LIMS Run #(s):**	**Analyst/Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved?**			**Instrument**
					Yes	No		
02/02/2021	179112 179113	DGS	RLD	02/04/2021	Yes			VMS3

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	
I. BFB Tune Check						
Was a BFB tune check analyzed with acceptable results?	Relative abundance criteria met?	Yes		Yes		
II. Initial Calibration Verification (ICV)						
Was initial calibration performed using a minimum of five standard concentration levels (minimum of 6 levels for quadratic curves)?	Lowest standard at or below RL?	Yes		Yes		
Were the Average Relative Response Factors (ARRF) acceptable?	ARRF<or= specified limits (<15%D.)see SOP)	Yes		Yes		
Was a second-source ICV(s) analyzed (for Quadratic Curve)?	Required before sample analyses.	Yes		Yes		
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		
Was Initial Calibration Blank (ICB) analyzed?	Required before sample analyses.	Yes		Yes		
Were the ICB results for all target analytes less than the limit of detection (LOD).	<LOD or < project/program specific limits	Yes		Yes		
III. Continuing Calibration Verification (CCV)						
Was an acceptable BFB tune check run at the beginning of every twelve hour shift?	Relative abundance criteria met?	Yes		Yes		
Was a CCV analyzed after every 12 hour tune check?	Required before sample analyses.	Yes		Yes		
Was a second CCV (CCV2) for compounds calibrated using quadratic curves analyzed after every 12 hour tune check?	Required before analyses of WI samples (above the inflection point of the curve).					
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific		No		No	
If necessary, were the results for outlying compounds qualified?		Yes		Yes		Affected sample results were "Z" flagged

IV. Blanks						
Was a Method Blank (MB) analyzed prior to analysis of samples?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MB results for all target analytes less than the limit of detection (LOD)?	*All target analytes <LOD or < project/program specific limits (<1/2 RL for DoD-QSM)	Yes		Yes		
If analytes were detected in the MB with no associated positives in the samples, no further action is needed. If the analyte detects in the MB were greater than the acceptance criteria and there were detects in the samples, was the data qualified.?						
V. Laboratory Control Spike (LCS)						
Was a LCS (and LCSD if needed) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the LCS (LCSD) recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.		No		No	
If applicable, were associated sample detects (and non-detects for low recoveries) qualified?		Yes		Yes		Affected results "Q" flagged.
Is the relative percent difference (RPD) for each analyte between the LCS and LSCD (if applicable) acceptable?	Default 20%, or see internally generated limits, or client specific limits.		No			Affected results "Y" flagged.
VI. Matrix Spike/Matrix Spike Duplicate (MS/MSD)						
Was a Martrix Spike (MS) and a Matrix Spike Duplicate (MSD) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MS/MSD recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.		No		No	Affected sample results were "M" flagged
Is the relative percent difference (RPD) for each analyte between the MS and MSD acceptable?	Default 20%, or see internally generated limits, or client specific limits.		No		No	Affected sample results were "Y" flagged
VII. Sample Analyses						
Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
Were surrogate recoveries for all samples and QC within acceptance criteria?	Default 70-130%, or see internally generated program limits, or client specified limits.	Yes		Yes		
If possible, were the affected samples reanalyzed?						
**Were reported sample results with failing surrogate recoveries qualified?						
Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed? If not qualify (X).	Target upper middle range of calibration curve.	Yes		Yes		
Did all samples meet hold time and preservation criteria as defined by method/program?	H2O sample: pH < 2 = 14 days, pH >2 = 7 days. Soil samples: 14 days (other criteria may apply)	Yes		Yes		
Were all samples and QC injected within 12 hours of BFB tune check?		Yes		Yes		
Were internal standard recoveries acceptable relevant to associated ICAL?	Response = -50 to +200%; Ret. time = +/- 30 sec.	Yes		Yes		

VIII. Records and Reporting						
Is sequence file / injection log present in the data package?		Yes		Yes		
Were all data, calculations, and values verified in LIMS (including removal of non-detections) upon completion of data capture?		Yes		Yes		
Were manual integrations performed correctly?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms.	Yes		Yes		
Was the rational for the manual integration verified?		Yes		Yes		
Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

ᵏNon-Applicable Yes/No Cells Are Left Blank*

Comments:

FVO4-01 Data Review Checklist

INDEPENDENT DATA REVIEW CHECKLIST			Method: GCMS (EPA SW-846 8260C)					
Analysis Date	**LIMS Run #(s):**	**Analyst/Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved?**			**Instrument**
					Yes	No		
02/03/2021	178983 178982	DGS	RLD	02/08/2021	Yes			VMS3

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	
I. BFB Tune Check						
Was a BFB tune check analyzed with acceptable results?	Relative abundance criteria met?	Yes		Yes		
II. Initial Calibration Verification (ICV)						
Was initial calibration performed using a minimum of five standard concentration levels (minimum of 6 levels for quadratic curves)?	Lowest standard at or below RL?	Yes		Yes		
Were the Average Relative Response Factors (ARRF) acceptable?	ARRF<or= specified limits (<15%D.)see SOP)	Yes		Yes		
Was a second-source ICV(s) analyzed (for Quadratic Curve)?	Required before sample analyses.	Yes		Yes		
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		
Was Initial Calibration Blank (ICB) analyzed?	Required before sample analyses.	Yes		Yes		
Were the ICB results for all target analytes less than the limit of detection (LOD).	<LOD or < project/program specific limits		No		No	
III. Continuing Calibration Verification (CCV)						
Was an acceptable BFB tune check run at the beginning of every twelve hour shift?	Relative abundance criteria met?	Yes		Yes		
Was a CCV analyzed after every 12 hour tune check?	Required before sample analyses.	Yes		Yes		
Was a second CCV (CCV2) for compounds calibrated using quadratic curves analyzed after every 12 hour tune check?	Required before analyses of WI samples (above the inflection point of the curve).	Yes		Yes		
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific		No		No	Affected compounds were Z flagged
If necessary, were the results for outlying compounds qualified?		Yes		Yes		

IV. Blanks						
Was a Method Blank (MB) analyzed prior to analysis of samples?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MB results for all target analytes less than the limit of detection (LOD)?	*All target analytes <LOD or < project/program specific limits (<1/2 RL for DoD-QSM)		No		No	Affected compounds were B flagged
If analytes were detected in the MB with no associated positives in the samples, no further action is needed. If the analyte detects in the MB were greater than the acceptance criteria and there were detects in the samples, was the data qualified.?		Yes		Yes		
V. Laboratory Control Spike (LCS)						
Was a LCS (and LCSD if needed) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the LCS (LCSD) recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.		No		No	Affected compounds were Q flagged
If applicable, were associated sample detects (and non-detects for low recoveries) qualified?		Yes		Yes		
Is the relative percent difference (RPD) for each analyte between the LCS and LSCD (if applicable) acceptable?	Default 20%, or see internally generated limits, or client specific limits.					
VI. Matrix Spike/Matrix Spike Duplicate (MS/MSD)						
Was a Martrix Spike (MS) and a Matrix Spike Duplicate (MSD) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MS/MSD recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.		No		No	Affected compounds were M flagged
Is the relative percent difference (RPD) for each analyte between the MS and MSD acceptable?	Default 20%, or see internally generated limits, or client specific limits.	Yes		Yes		
VII. Sample Analyses						
Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
Were surrogate recoveries for all samples and QC within acceptance criteria?	Default 70-130%, or see internally generated program limits, or client specified limits.	Yes		Yes		
If possible, were the affected samples reanalyzed?						
**Were reported sample results with failing surrogate recoveries qualified?						
Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed? If not qualify (X).	Target upper middle range of calibration curve.	Yes		Yes		
Did all samples meet hold time and preservation criteria as defined by method/program?	H2O sample: pH < 2 = 14 days, pH >2 = 7 days. Soil samples: 14 days (other criteria may apply)	Yes		Yes		
Were all samples and QC injected within 12 hours of BFB tune check?		Yes		Yes		
Were internal standard recoveries acceptable relevant to associated ICAL?	Response = -50 to +200%; Ret. time = +/- 30 sec.	Yes		Yes		

VIII. Records and Reporting						
Is sequence file / injection log present in the data package?		Yes		Yes		
Were all data, calculations, and values verified in LIMS (including removal of non-detections) upon completion of data capture?		Yes		Yes		
Were manual integrations performed correctly?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms.	Yes		Yes		
Was the rational for the manual integration verified?		Yes		Yes		
Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

ᵏNon-Applicable Yes/No Cells Are Left Blank*

Comments:

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0801	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0969, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0971, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0973 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	01/27/2021	02/03/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0802	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0970, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0972, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0974 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	01/27/2021	02/03/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0798	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0969, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0971, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0973 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	01/15/2021	01/22/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0799	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0970, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0972, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0974 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	01/15/2021	01/22/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0791	8260 BFB Std.	75uL of 2,000 ug/mL 4-Bromofluorobenzene Std. V0964 into 2925uL of MeOH.	MeOH / B&J / DX932-U	50 ug/mL	01/06/2021	02/06/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0792	8260 ISTD/SSTD	200uL of 2,500 ug/mL 8260 Istd./Sstd. Mix V0944 and 250uL of 2000 ug/mL 1,2-Dichlorobenzene-$_{d4}$ Std. V0945 into 25mL of MeOH.	MeOH / B&J / DX932-U	20 ug/mL	01/06/2021	02/06/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0793	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0969, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0971, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0973 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	01/06/2021	01/13/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0794	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0970, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0972, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0974 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	01/06/2021	01/13/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0789	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0969, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0971, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0973 into 2250uL of MeOH.	MeOH / B&J / DH379	100 ug/mL	12/29/2020	01/05/2021	DGS

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0790	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0970, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0972, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0974 into 2250uL of MeOH.	MeOH / B&J / DH379	100 ug/mL	12/29/2020	01/05/2021	DGS

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0786	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0969, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0965, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0967 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	12/21/2020	12/28/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0787	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0949, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0966, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0968 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	12/21/2020	12/28/2020	RLD

Standard Log #:	VOC0788	Standard/Reagent:	8015 Surrugate Spiking Std.
Analyst:	TMG	Final Concentration:	80.0ug/mL
Prep Date:	12/21/2020	Expiration Date:	06/21/2021
Prep:	0.4mL of 2000ug/mL 1,2 - Dichlorobenzene d-4(VO945) into a 10mL volumetric flask and brought to volume with methanol(B&J/ DX932-US)		

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0782	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0969, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0965, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0967 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	12/08/2020	12/15/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0783	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0949, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0966, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0968 into 2250uL of MeOH.	MeOH / B&J / DX932-U	100 ug/mL	12/08/2020	12/15/2020	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0784	8260 BFB Std.	75uL of 2,000 ug/mL 4-Bromofluorobenzene Std. V0964 into 2925uL of MeOH.	MeOH / B&J / DX932-U	50 ug/mL	12/08/2020	01/08/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0785	8260 ISTD/SSTD	200uL of 2,500 ug/mL 8260 Istd./Sstd. Mix V0944 and 250uL of 2000 ug/mL 1,2-Dichlorobenzene-$_{d4}$ Std. V0945 into 25mL of MeOH.	MeOH / B&J / DX932-U	20 ug/mL	12/08/2020	01/08/2021	RLD

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0978	1,2-Dichlorobenzene-$_{d4}$	Agilent	STS-210-1	0006552847
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	09/30/2024	01/14/2021	RLD
# of Ampules/Units:	4	Comments:	Used for 8015/8260 SSTD preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0973	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA201211006
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	06/09/2021	12/15/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0974	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA201210008
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	06/08/2020	12/15/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0971	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	CP201210001
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	03/10/2021	12/14/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0972	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	AA20120002
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	03/10/2021	12/14/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0970	8260 VOC Mix	Agilent	DWM-588-1	0006518400
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	04/30/2023	11/10/2020	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 CCV/Calib. standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0969	8260 VOC Mix	AccuStandard	M-502-10X-PAK	220091206
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	09/21/2023	11/25/2020	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 ICV/Spiking standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0949	8260 VOC Mix	Agilent	DWM-588-1	0006518399
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,000 ug/mL	MeOH	04/30/2023	04/23/2020	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 CCV/Calib. Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0950	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	EN200424002
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	07/23/2020	04/27/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0951	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	AA200424003
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	07/23/2020	04/27/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0948	8260 VOC Mix	AccuStandard	M-502-10X-PAK	219111249
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	11/21/2022	04/01/2020	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 ICV/Spiking standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0944	8260 ISTD/SSTD Mix	Agilent	STM-540	CT-0055
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,500 ug/mL	MeOH	2/28/2022	01/31/2020	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 ISTD/SSTD preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0945	1,2-Dichlorobenzene-$_{d4}$	Agilent	STS-210-1	CM-4301A
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	07/31/2021	01/31/2020	RLD
# of Ampules/Units:	4	Comments:	Used for 524.2 & 8021 IS/SS and SS preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0929	4-Bromofluorobenzene	Agilent	STS-110N	0006476760
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	7/31/2022	09/10/2019	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 BFB Std. and 8015 SSTD.	

V METH, ETH, ETHENE QSM 5.0 Analytical Run # 179084 on Feb 04, 2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	530860						V METH, ETH, ETHENE QSM 5.				
				CCV				0			
	529957						METH,ETH,ETHE QSM 5.0				
				LCSW				79881			
	529956						METH,ETH,ETHE QSM 5.0				
				MBW				79881			
159400	527961		Jan 25, 2021 1050		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13MW5						79881			
159400	527962		Jan 25, 2021 1150		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13MW4						79881			
159400	527963		Jan 25, 2021 1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13MW3						79881			
159400	527964		Jan 25, 2021 1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13TW3						79881			
159400	527965		Jan 25, 2021 1330		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49MW04						79881			
159400	527966		Jan 25, 2021 1425		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13MW2		Designated MS/MSD				79881			
	529954		Jan 25, 2021 1425				METH,ETH,ETHE QSM 5.0				
		49MW02		MSW 527966				79881			
	529955		Jan 25, 2021 1425				METH,ETH,ETHE QSM 5.0				
		49MW02		MSDW 529954				79881			
159400	527967		Jan 25, 2021 1530		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49MW05						79881			
159482	529217		Jan 27, 2021 1035		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW06						79881			
159482	529218		Jan 27, 2021 0940		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW07						79881			
159482	529219		Jan 27, 2021 1130		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49MW03						79881			
	530861						V METH, ETH, ETHENE QSM 5.				
				CCV				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

V METH, ETH, ETHENE QSM 5.0 Analytical Run
179084 on Feb 04, 2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
159482	529220		Jan 27, 2021 1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49MW02						79881			
159482	529221		Jan 27, 2021 1345		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW3						79881			
159482	529222		Jan 27, 2021 1345		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48TW3						79881			
159482	529223		Jan 27, 2021 1455		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		50MW02						79881			
159482	529224		Jan 27, 2021 1600		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		EQB-50MW02						79881			
159483	529226		Jan 28, 2021 1115		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW2						79881			
159483	529227		Jan 28, 2021 1250		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49MW01						79881			
159483	529228		Jan 28, 2021 1405		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW1						79881			
	530862						V METH, ETH, ETHENE QSM 5.				
				CCV				0			

25 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

PREP WORKSHEET
on Feb 04, 2021

Prep Batch **79,881** Date Prepped: Feb 01, 2021 Prepped By KMT

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	529956	MBW		METH,ETH,ETHE QSM	LIQUID	21.0				
	529957	LCSW		METH,ETH,ETHE QSM	LIQUID	21.0				
159400	527961			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	527962			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	527963			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	527964			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	527965			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	527966	sample designated for QC		METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	527967			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
159482	529217			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	529218			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	529219			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	529220			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	529221			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	529222			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	529223			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	529224			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	

PREP WORKSHEET
on Feb 04, 2021

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
159483	529226			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	529227			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	529228			METH,ETH,ETHE QSM	GROUND WATER	21.0			4	
	529954	MSW	527966	METH,ETH,ETHE QSM	GROUND WATER	21.0				
	529955	MSDW	529954	METH,ETH,ETHE QSM	GROUND WATER	21.0				

Notes:_____

FVO1-01 Data Review Checklist

	FVO1-01 Method: Dissolved Gases (EPA SW-846 8015 / RSK 175 Modified)					
LIMS Run #(s)	**Analysis Date (s)**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**	**Instrument**
179084	02/03/2021	KMT	RLD	02/04/2021	Yes	PVOC4

Instructions: Complete one checklist per *analytical sequence*. Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
1. INITIAL CALIBRATION (ICAL)		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
a. Was the initial calibration performed using a minimum of five concentration levels?	Lowest standard at or below RL	Yes		Yes		
b. For each analyte/component is the variation between calibration response factors for all concentration levels <20% RSD or is $r^2 \geq .99$ or $r \geq .995$ for the regression line?	RSD <20% or $r^2 \geq .99$ or $r \geq .995$ or program/project specific	Yes		Yes		
c. Are the identification and date of the ICAL listed on the printout (or PDF) of the analytical run and in the method file?	ID# and date of ICAL listed	Yes		Yes		
d. Was an Initial Calibration Verification (ICV) analyzed after the ICAL?	Analyzed prior to sample analyses	Yes		Yes		
e. Were the recoveries for each analyte in the ICV within required limits?	Recoveries 85 - 115% or within program/project specific limits	Yes		Yes		
f. Was an Initial Calibration Blank (ICB) analyzed?		Yes		Yes		
g. Were the ICB results for all target analytes/components less than the reporting limit (RL)?	<RL or < program/project specific	Yes		Yes		
2. CONTINUING CALIBRATION VERIFICATION (CCV)						
a . Was a CCV analyzed at the beginning and end of a sequential analysis run, as well as after ever 10 samples?		Yes		Yes		
b. Were the recoveries for each analyte/component in the CCV within acceptance criteria?	Recoveries 85 - 115% or within program/project specific limits	Yes		Yes		
3. METHOD BLANKS (MB)						
a. Was a method blank (MB) analyzed?	1 / 20 or program/project specific	Yes		Yes		
b. Were the MB results for all analytes/components less than reporting limit?	All target analytes/components <RL or within program/project specific limits (DoD-QSM: <1/2 the RL)	Yes		Yes		
4. LABORATORY CONTROL SAMPLE (LCS)						
a. Was a LCS analyzed at the required frequency?	1 / 20 or program/project specific	Yes		Yes		
b. Were LCS recoveries for all analytes within the acceptance criteria?	Default = 70-130%, or within In-house generated or program/project specific limits	Yes		Yes		
c. If LCS recoveries exceed acceptance criteria, was the LCS reanalyzed in an effort to eliminate the possibility of a preparation error?		Yes		Yes		

5. MATRIX SPIKE (MS)/ MATRIX SPIKE DUPLICATES (MSD) and DUPLICATE						
a. Was a MS, MSD, and/or Duplicate (if valid) Vial analyzed with each batch of 20 samples (or program-specified frequency)?	1 / 20 or program/project specific frequency (QSM samples, duplicate only valid if sample result ≥ 5x the LOQ)	Yes		Yes		
b. Were MS/MSD recoveries for all analytes within acceptance criteria?	Default =70-130%, or within In-house generated or program/project specific limits	Yes		Yes		
6. PRECISION						
a. Is the relative percent difference (RPD) for each analyte between duplicate QC samples (i.e. parent sample / Duplicate vial), or for each MS/MSD within the acceptance criteria?	Default = 20 % RPD, or within In-house generated or program/project specific limits	Yes		Yes		
7. SAMPLES (INCLUDING BLANKS, STANDARDS, AND QC SAMPLES)						
a. Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
b. Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed or reanalyzed using a smaller sample aliquot? Affected analyte detects should remain above the limit of quantitation (LOQ) after reanalysis.		Yes		Yes		
c. Was the correct ambient temperature recorded on sample spreadsheets?		Yes		Yes		
d. Were all samples adequately preserved and analyzed within holding time?	CO_2 samples received unpreserved (analyze within 7 days or program/project specific) Methane, Ethene, Ethane samples received preserved to <2 (analyze within 14 days or program/project specific)		No		No	Affected analytes T flagged
8. RECORDS AND REPORTING						
a. Is a sequence run file present in the raw data file?		Yes		Yes		
b. Is the data initialed and dated by analyst?	Analysis Run sheet is initialed & dated by the analyst processing the raw data.	Yes		Yes		
c. Do all values, units, etc. listed match the raw data and associated calculations and records?		Yes		Yes		
e. Has the data been electronically transferred to the LIMS and were the applicable qualifiers assigned?		Yes		Yes		
f. Were manual integrations addressed properly and were the audit trails turned on (where applicable)?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms. Audit trail must be on (if available).	Yes		Yes		
g. Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier in LIMS and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

* Non-Applicable Yes/No Cells Are Left Blank*

Comments:

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 2/3/2021 **Instrument:** PVOC4

Calibration Date: 12/17/2020 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
1	PS	0.25	43	①	
2	CCV	0.25	43	~~①21.0~~	
3	LCSW	1	43	21.0	①
4	MBW	1	43	21.0	
5	S27961	1	43	21.0	≤2
6	S27962	1	43	21.0	≤2
7	S27963	1	43	21.0	≤2
8	S27964	1	43	21.0	≤2
9	S27965	1	43	21.0	≤2
10	S27966	1	43	21.0	≤2
11	MSWS27966	1	43	21.0	≤2
12	MSDWS27966	1	43	21.0	≤2
13	S27967	1	43	21.0	≤2
14	S29217	1	43	21.0	≤2
15	S29218	1	43	21.0	≤2
16	S29219	1	43	21.0	≤2
17	CCV	0.25	43	①	
18	CCB	1	43		
19	S29220	1	43	21.0	6
20	S29221	1	43	21.0	≤2
21	S29222	1	43	21.0	≤2
22	S29223	1	43	21.0	≤2
23	S29224	1	43	21.0	≤2
24	S29226	1	43	21.0	≤2
25	S29227	1	43	21.0	6

Calibration Standard Ref. #: VO986

①N/A KMT 2/3/2021

Second Source Ref. #: VOC0726

Page 1

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 2/3/2021 **Instrument:** PVOC4

Calibration Date: 12/17/2020 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
26	529228	1	43	21.0	≤2
27	CCV	0.25	43	①	
28			43		
29			43		
30			43		
31			43		
32			43		
33			43		
34		①	43		
35			43		
36			43		
37			43		
38			43		
39			43		
40			43		
41			43		
42			43		
43			43		
44			43		
45			43		
46			43		
47			43		
48			43		
49			43		
50			43		

Calibration Standard Ref. #: VD886

Second Source Ref. #: VDC0726

① N/A KMT 2/3/2021

Page 1

Sequence Summary Report

Sequence Filename: C:\InStarch\PVOC4\Sequence\020321 - 179084.seq
Instrument: PVOC4
Processing Date: Feb 03, 2021 13:36:43

'Run Number	Sample ID	Data Filename	Method Filename	Run Time
2	179084,CCV,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 11:12:50
3	178888,LCSW,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 11:20:31
4	179084,MBW,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 11:27:19
5	179084,527961,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 11:33:40
6	179084,527962,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 11:38:45
7	179084,527963,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 11:43:06
8	179084,527964,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 11:48:05
9	179084,527965,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 11:51:45
10	179084,527966,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 12:10:15
11	179084,MSW527966,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 12:22:17
12	179084,MSDW527966,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 12:26:40
13	179084,527967,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 12:30:55
14	179084,529217,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 12:36:25
15	179084,529218,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 12:44:22
16	179084,529219,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 12:49:49
17	179084,CCV,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 12:53:59
18	179084,CCB,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 12:57:50
19	179084,529220,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 13:01:59
20	179084,529221,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 13:05:20
21	179084,529222,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 13:10:51
22	179084,529223,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 13:16:01
23	179084,529224,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 13:21:55
24	179084,529226,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 13:25:49
25	179084,529227,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 13:30:04
26	179084,529228,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 13:33:21
27	179084,CCV,	C:\InStarch\PVOC4\Data\020321 ...	C:\Instarch\PVOC4\Methods\P4...	Feb 03, 2021 13:36:43

Sequence Summary Report

Sequence Filename: C:\InStarch\PVOC4\Sequence\121720 - MEE ICAL.seq

Instrument: PVOC4

Processing Date: Dec 17, 2020 12:14:07

'Run Number	Sample ID	Data Filename	Method Filename	Run Time
1	MEE PT1 - 2 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 10:17:50
2	MEE PT2 - 5 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 10:50:22
3	MEE PT3 - 10 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:04:41
4	MEE PT4 - 20 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:08:50
5	MEE PT5 - 50 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:16:03
6	MEE PT6 - 100 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:23:11
7	MEE PT7 - 200 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:27:57
8	ICV - 50 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 12:04:44
9	ICB	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 12:14:07

FORM #: FVO1-02
Rev. #: 1.0
Effective Date: 05/07/14

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 12/17/2020 **Instrument:** PVOC4

Calibration Date: 12/17/2020 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
1	PT 1	0.01	43		
2	PT 2	0.025	43		
3	PT 3	0.05	43	①	
4	PT 4	0.1	43		
5	PT 5	0.25	43		
6	PT 6	0.5	43		
7	PT 7	1	43		
8	ICV	0.25	43		
9	ICB	1	43		
10			43		
11			43		
12			43		
13			43		
14			43		
15			43		
16		①	43		
17			43		
18			43		
19			43		
20			43		
21			43		
22			43		
23			43		
24			43		
25			43		

Calibration Standard Ref. #: VD886

Second Source Ref. #: VOC0726

①N/A KMT 12/17/2020

Page 1

LSVO1-01
Volatiles Standards Logbook
Logbook Created: 12/08/2015

NOTEBOOK VIEW: LTN_LSVO1_01_VOC_Default, NOTEBOOK: LSVO1_01_VOC, PAGE: 64
Page is Locked
Author: rdigmann on: 5/25/2018 7:47:52 AM
Witness: akurth on: 7/31/2018 9:54:19 AM
Project: Unassigned
Page Title: 05/24/18

Standard Log #:	VO886	Standard/Reagent:	Methane Ethene Ethane STI
Analyst:	AGK	Final Concentration:	200.0 PPM
Prep Date:	05/24/18	Expiration Date:	05/17/21
Prep:	Airgas Methane, Ethene, Ethane Standard Received 05/24/18 LOT# 54-401204472-1 REF# 54-401204472-1 Cylinder # P180959		

Standard Log #:	VOC0726	Standard/Reagent:	MEE RECERTIFICATION O
Analyst:	KMT	Final Concentration:	N/A
Prep Date:	07/1/2020	Expiration Date:	7/1/2021
Prep:	Recertification of methane, ethane, ethane tank (V681). Ran 4 consecutive CCV's with acceptable recoveries.		

LPVO1-02 VOC
Volatiles Standards Prep Logbook
Logbook Created: 10/10/16
Balance used in reagent prep: VOB01
NOTEBOOK VIEW: LTN_LPVO1_02_VOC_Default, NOTEBOOK: LPVO1_02_VOC, PAGE: 27
Page is Locked
Author: AKURTH on: 22.03.2017 10:57:51
Page is not Witnessed
Project: Unassigned
Page Title: N/A

Standard Log #:	VOC0299	Standard/Reagent:	MEE RECERTIFICATION O
Analyst:	AGK	Final Concentration:	N/A
Prep Date:	03/17/17	Expiration Date:	03/17/20
Prep:	Recertification of methane, ethane, ethane tank (V681). Ran 4 consecutive CCV's with acceptable recoveries.		

1

CT Laboratories, LLC

Airgas
an Air Liquide company

Expires 5/17/21 V0886 AGK 5/24/18

Airgas Specialty Gases
Airgas USA, LLC
12722 S. Wentworth Ave.
Chicago, IL 60628
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04HE99C353Q80	Reference Number:	54-401204472-1
Cylinder Number:	P180959	Cylinder Volume:	31.6 CF
Laboratory:	124 - Chicago (SAP) - IL	Cylinder Pressure:	2013 PSIG
Analysis Date:	May 17, 2018	Valve Outlet:	350
Lot Number:	54-401204472-1		

Expiration Date: May 17, 2021

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
ETHANE	200.0 PPM	198.9 PPM	+/- 2%
ETHYLENE	200.0 PPM	198.3 PPM	+/- 2%
METHANE	200.0 PPM	198.3 PPM	+/- 2%
HELIUM	Balance		

Approved for Release

Airgas

Recert VOC0726
~~6/30/2020~~ Ex: 7/1/2021
7/1/2020

Recert VOC0299
3/17/17 Ex · 3/17/20

Airgas Specialty Gases
12722 South Wentworth Avenue
Chicago, IL 60628
(773) 785-3000 Fax: (773) 785-1928
www.airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04HE99C353Q80	Reference Number:	54-124397530-1
Cylinder Number:	4774182	Cylinder Volume:	31.6 CF
Laboratory:	ASG - Chicago - IL	Cylinder Pressure:	2013 PSIG
Analysis Date:	Oct 07, 2013	Valve Outlet:	350
Lot Number:	54-124397530-1		

V681 Exp: 10/21/16
10/21/13
BMS

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration (Mole %)	Analytical Uncertainty
ETHANE	200.0 PPM	202.9 PPM	+/- 2%
ETHYLENE	200.0 PPM	200.3 PPM	+/- 2%
METHANE	200.0 PPM	204.3 PPM	+/- 2%
HELIUM	Balance		

Notes:

Approved for Release

METALS
CLP FORMS
DOCUMENTS

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529230
Analytical Method:	EPA 7470A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179138	Analysis Date/Time	02/03/2021 09:06
Analytical Prep Batch #:	79874	Prep. Date/Time:	02/02/2021 13:40
ICAL Calibration #:	02032021	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	0.020	0.080	0.12	0.12

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529230
Analytical Method:	EPA 6010C	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179107	Analysis Date/Time	02/02/2021 16:15
Analytical Prep Batch #:	79854	Prep. Date/Time:	02/01/2021 10:41
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	6570			10	20	40	40
7440-36-0	Total Antimony	10	U		4.7	10	20	20
7440-38-2	Total Arsenic	25	U		12	25	50	50
7440-39-3	Total Barium	82.6			0.82	2.0	4.0	4.0
7440-41-7	Total Beryllium	0.27	J		0.10	0.30	0.60	0.60
7440-43-9	Total Cadmium	1.0	U		0.42	1.0	2.0	2.0
7440-70-2	Total Calcium	83300			19	50	100	100
7440-47-3	Total Chromium	16.4			1.6	3.5	5.0	5.0
7440-48-4	Total Cobalt	4.4			0.60	2.5	4.0	4.0
7440-50-8	Total Copper	20.1	J		11	25	50	50
7439-89-6	Total Iron	8580		M	33	70	100	100
7439-92-1	Total Lead	6.7		M	1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	43800			10	25	40	40
7439-96-5	Total Manganese	358			1.5	3.0	5.0	5.0
7440-02-0	Total Nickel	10.7		M	1.4	3.0	5.0	5.0
7440-09-7	Total Potassium	7470			120	250	500	500
7782-49-2	Total Selenium	20	U		9.9	20	40	40
7440-22-4	Total Silver	2.0	U		0.70	2.0	4.0	4.0
7440-23-5	Total Sodium	17600			180	500	500	500
7440-28-0	Total Thallium	12	U	M	5.9	12	20	20
7440-62-2	Total Vanadium	7.2			1.1	2.5	5.0	5.0
7440-66-6	Total Zinc	33.8			5.0	10	20	20

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179138

Lab Sample ID: 530753

ICAL Calibration #: 02032021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	2/3/21	08:06	3.00	2.73	91	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107

Lab Sample ID: 531312

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	2/2/21	09:01	12000	11300	94	90	110
Antimony	2/2/21	09:01	500.0	492.0	98	90	110
Arsenic	2/2/21	09:01	2000	1990	100	90	110
Barium	2/2/21	09:01	2000	2020	101	90	110
Beryllium	2/2/21	09:01	50.00	46.90	94	90	110
Cadmium	2/2/21	09:01	50.00	46.90	94	90	110
Calcium	2/2/21	09:01	10000	9820	98	90	110
Chromium	2/2/21	09:01	200.0	189.0	94	90	110
Cobalt	2/2/21	09:01	500.0	496.0	99	90	110
Copper	2/2/21	09:01	250.0	234.0	94	90	110
Iron	2/2/21	09:01	5000	5260	105	90	110
Lead	2/2/21	09:01	500.0	465.0	93	90	110
Magnesium	2/2/21	09:01	10000	9640	96	90	110
Manganese	2/2/21	09:01	500.0	504.0	101	90	110
Nickel	2/2/21	09:01	500.0	498.0	100	90	110
Selenium	2/2/21	09:01	2000	1890	94	90	110
Silver	2/2/21	09:01	50.00	53.00	106	90	110
Thallium	2/2/21	09:01	2000	1910	96	90	110
Vanadium	2/2/21	09:01	500.0	488.0	98	90	110
Zinc	2/2/21	09:01	500.0	488.0	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 531313

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	2/2/21	09:14	1200	1150	96	80	120
Antimony	2/2/21	09:14	60.00	62.10	104	80	120
Arsenic	2/2/21	09:14	60.00	58.90	98	80	120
Barium	2/2/21	09:14	30.00	27.00	90	80	120
Beryllium	2/2/21	09:14	12.00	11.80	98	80	120
Cadmium	2/2/21	09:14	15.00	14.40	96	80	120
Calcium	2/2/21	09:14	1500	1460	97	80	120
Chromium	2/2/21	09:14	30.00	27.90	93	80	120
Cobalt	2/2/21	09:14	30.00	28.00	93	80	120
Copper	2/2/21	09:14	30.00	34.10	114	80	120
Iron	2/2/21	09:14	900.0	958.0	106	80	120
Lead	2/2/21	09:14	30.00	29.40	98	80	120
Magnesium	2/2/21	09:14	1500	1490	99	80	120
Manganese	2/2/21	09:14	30.00	35.50	118	80	120
Nickel	2/2/21	09:14	30.00	28.50	95	80	120
Selenium	2/2/21	09:14	60.00	55.60	93	80	120
Silver	2/2/21	09:14	60.00	53.80	90	80	120
Thallium	2/2/21	09:14	60.00	56.00	93	80	120
Vanadium	2/2/21	09:14	30.00	29.80	99	80	120
Zinc	2/2/21	09:14	30.00	27.80	93	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 531317

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Silver	2/2/21	10:13	10.00	9.09	91	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108 Lab Sample ID: 531609

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	2/2/21	09:01	5000	5140	103	90	110
Sodium	2/2/21	09:01	5000	4560	91	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108

Lab Sample ID: 531610

ICAL Calibration #:

Concentration Units:

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	2/2/21	09:14	15000	15160	101	80	120
Sodium	2/2/21	09:14	3000	2770	92	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179138 Lab Sample ID: 530755

ICAL Calibration #: 02032021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	2/3/21	08:50	3.00	2.92	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179138

Lab Sample ID: 530757

ICAL Calibration #: 02032021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	2/3/21	09:31	3.00	2.78	93	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 531318

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	2/2/21	15:05	5000	5290	106	90	110
Antimony	2/2/21	15:05	5000	5160	103	90	110
Arsenic	2/2/21	15:05	5000	5020	100	90	110
Barium	2/2/21	15:05	5000	5500	110	90	110
Beryllium	2/2/21	15:05	500.0	474.0	95	90	110
Cadmium	2/2/21	15:05	500.0	470.0	94	90	110
Calcium	2/2/21	15:05	5000	5030	101	90	110
Chromium	2/2/21	15:05	5000	4750	95	90	110
Cobalt	2/2/21	15:05	5000	5090	102	90	110
Copper	2/2/21	15:05	5000	4900	98	90	110
Iron	2/2/21	15:05	5000	5200	104	90	110
Lead	2/2/21	15:05	5000	4970	99	90	110
Magnesium	2/2/21	15:05	5000	4960	99	90	110
Manganese	2/2/21	15:05	5000	4730	95	90	110
Nickel	2/2/21	15:05	5000	4900	98	90	110
Selenium	2/2/21	15:05	5000	4740	95	90	110
Thallium	2/2/21	15:05	5000	4760	95	90	110
Vanadium	2/2/21	15:05	5000	5080	102	90	110
Zinc	2/2/21	15:05	5000	4990	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 531319

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	2/2/21	15:10	500.0	500.0	100	90	110
Antimony	2/2/21	15:10	500.0	508.0	102	90	110
Arsenic	2/2/21	15:10	500.0	466.0	93	90	110
Barium	2/2/21	15:10	500.0	490.0	98	90	110
Beryllium	2/2/21	15:10	50.00	53.20	106	90	110
Cadmium	2/2/21	15:10	50.00	51.80	104	90	110
Calcium	2/2/21	15:10	500.0	500.0	100	90	110
Chromium	2/2/21	15:10	500.0	507.0	101	90	110
Cobalt	2/2/21	15:10	500.0	509.0	102	90	110
Copper	2/2/21	15:10	500.0	499.0	100	90	110
Iron	2/2/21	15:10	500.0	528.0	106	90	110
Lead	2/2/21	15:10	500.0	456.0	91	90	110
Magnesium	2/2/21	15:10	500.0	532.0	106	90	110
Manganese	2/2/21	15:10	500.0	551.0	110	90	110
Nickel	2/2/21	15:10	500.0	501.0	100	90	110
Selenium	2/2/21	15:10	500.0	486.0	97	90	110
Silver	2/2/21	15:10	50.00	51.50	103	90	110
Thallium	2/2/21	15:10	500.0	485.0	97	90	110
Vanadium	2/2/21	15:10	500.0	534.0	107	90	110
Zinc	2/2/21	15:10	500.0	481.0	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 531322

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	2/2/21	16:28	5000	5310	106	90	110
Antimony	2/2/21	16:28	5000	5190	104	90	110
Arsenic	2/2/21	16:28	5000	5030	101	90	110
Barium	2/2/21	16:28	5000	5490	110	90	110
Beryllium	2/2/21	16:28	500.0	472.0	94	90	110
Cadmium	2/2/21	16:28	500.0	472.0	94	90	110
Calcium	2/2/21	16:28	5000	5000	100	90	110
Chromium	2/2/21	16:28	5000	4780	96	90	110
Cobalt	2/2/21	16:28	5000	5110	102	90	110
Copper	2/2/21	16:28	5000	4840	97	90	110
Iron	2/2/21	16:28	5000	5130	103	90	110
Lead	2/2/21	16:28	5000	4990	100	90	110
Magnesium	2/2/21	16:28	5000	4960	99	90	110
Manganese	2/2/21	16:28	5000	4600	92	90	110
Nickel	2/2/21	16:28	5000	4930	99	90	110
Selenium	2/2/21	16:28	5000	4720	94	90	110
Thallium	2/2/21	16:28	5000	4790	96	90	110
Vanadium	2/2/21	16:28	5000	5040	101	90	110
Zinc	2/2/21	16:28	5000	5030	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 531323

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	2/2/21	16:33	500.0	502.0	100	90	110
Antimony	2/2/21	16:33	500.0	511.0	102	90	110
Arsenic	2/2/21	16:33	500.0	461.0	92	90	110
Barium	2/2/21	16:33	500.0	488.0	98	90	110
Beryllium	2/2/21	16:33	50.00	52.70	105	90	110
Cadmium	2/2/21	16:33	50.00	51.50	103	90	110
Calcium	2/2/21	16:33	500.0	503.0	101	90	110
Chromium	2/2/21	16:33	500.0	501.0	100	90	110
Cobalt	2/2/21	16:33	500.0	508.0	102	90	110
Copper	2/2/21	16:33	500.0	492.0	98	90	110
Iron	2/2/21	16:33	500.0	522.0	104	90	110
Lead	2/2/21	16:33	500.0	452.0	90	90	110
Magnesium	2/2/21	16:33	500.0	533.0	107	90	110
Manganese	2/2/21	16:33	500.0	548.0	110	90	110
Nickel	2/2/21	16:33	500.0	497.0	99	90	110
Selenium	2/2/21	16:33	500.0	487.0	97	90	110
Silver	2/2/21	16:33	50.00	50.90	102	90	110
Thallium	2/2/21	16:33	500.0	483.0	97	90	110
Vanadium	2/2/21	16:33	500.0	538.0	108	90	110
Zinc	2/2/21	16:33	500.0	480.0	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 531326

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	2/2/21	17:46	5000	5260	105	90	110
Antimony	2/2/21	17:46	5000	5180	104	90	110
Arsenic	2/2/21	17:46	5000	5100	102	90	110
Barium	2/2/21	17:46	5000	5450	109	90	110
Beryllium	2/2/21	17:46	500.0	466.0	93	90	110
Cadmium	2/2/21	17:46	500.0	474.0	95	90	110
Calcium	2/2/21	17:46	5000	5030	101	90	110
Chromium	2/2/21	17:46	5000	4810	96	90	110
Cobalt	2/2/21	17:46	5000	5020	100	90	110
Copper	2/2/21	17:46	5000	4930	99	90	110
Iron	2/2/21	17:46	5000	5150	103	90	110
Lead	2/2/21	17:46	5000	5000	100	90	110
Magnesium	2/2/21	17:46	5000	4840	97	90	110
Manganese	2/2/21	17:46	5000	4720	94	90	110
Nickel	2/2/21	17:46	5000	5000	100	90	110
Selenium	2/2/21	17:46	5000	4780	96	90	110
Thallium	2/2/21	17:46	5000	4810	96	90	110
Vanadium	2/2/21	17:46	5000	5020	100	90	110
Zinc	2/2/21	17:46	5000	5060	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 531327

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	2/2/21	17:52	500.0	510.0	102	90	110
Antimony	2/2/21	17:52	500.0	512.0	102	90	110
Arsenic	2/2/21	17:52	500.0	472.0	94	90	110
Barium	2/2/21	17:52	500.0	493.0	99	90	110
Beryllium	2/2/21	17:52	50.00	51.80	104	90	110
Cadmium	2/2/21	17:52	50.00	50.90	102	90	110
Calcium	2/2/21	17:52	500.0	501.0	100	90	110
Chromium	2/2/21	17:52	500.0	499.0	100	90	110
Cobalt	2/2/21	17:52	500.0	511.0	102	90	110
Copper	2/2/21	17:52	500.0	493.0	99	90	110
Iron	2/2/21	17:52	500.0	524.0	105	90	110
Lead	2/2/21	17:52	500.0	465.0	93	90	110
Magnesium	2/2/21	17:52	500.0	526.0	105	90	110
Manganese	2/2/21	17:52	500.0	541.0	108	90	110
Nickel	2/2/21	17:52	500.0	506.0	101	90	110
Selenium	2/2/21	17:52	500.0	488.0	98	90	110
Silver	2/2/21	17:52	50.00	51.40	103	90	110
Thallium	2/2/21	17:52	500.0	488.0	98	90	110
Vanadium	2/2/21	17:52	500.0	524.0	105	90	110
Zinc	2/2/21	17:52	500.0	485.0	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108 Lab Sample ID: 531615

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	2/2/21	15:05	50000	49000	98	90	110
Sodium	2/2/21	15:05	50000	46100	92	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108 Lab Sample ID: 531616

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	2/2/21	15:10	5000	5090	102	90	110
Sodium	2/2/21	15:10	5000	5100	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108 Lab Sample ID: 531619

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	2/2/21	16:28	50000	48060	96	90	110
Sodium	2/2/21	16:28	50000	46300	93	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108 Lab Sample ID: 531620

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	2/2/21	16:33	5000	4990	100	90	110
Sodium	2/2/21	16:33	5000	5100	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108 Lab Sample ID: 531623

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	2/2/21	17:46	50000	48460	97	90	110
Sodium	2/2/21	17:46	50000	45800	92	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108 Lab Sample ID: 531624

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	2/2/21	17:52	5000	5050	101	90	110
Sodium	2/2/21	17:52	5000	5030	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179138 Lab Sample ID: 530754

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 02032021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	02/03/2021 08:15	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 531314

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	02/02/2021 09:26	-1.61	U	10	20
Antimony	02/02/2021 09:26	1.89	U	4.7	10
Arsenic	02/02/2021 09:26	-0.148	U	12	25
Barium	02/02/2021 09:26	-1.83	U	0.82	2.0
Beryllium	02/02/2021 09:26	-0.156	U	0.10	0.30
Cadmium	02/02/2021 09:26	-0.199	U	0.42	1.0
Calcium	02/02/2021 09:26	-1.99	U	19	50
Chromium	02/02/2021 09:26	-1.09	U	1.6	2.5
Cobalt	02/02/2021 09:26	-1.96	U	0.6	2.0
Copper	02/02/2021 09:26	-1.08	U	11	25
Iron	02/02/2021 09:26	-4.49	U	33	50
Lead	02/02/2021 09:26	0.450	U	1.4	2.0
Magnesium	02/02/2021 09:26	-3.24	U	10	20
Manganese	02/02/2021 09:26	-2.29	U	1.5	2.5
Nickel	02/02/2021 09:26	-1.43	U	1.4	2.5
Selenium	02/02/2021 09:26	2.12	U	9.9	20
Silver	02/02/2021 09:26	-1.05	U	0.7	2.0
Thallium	02/02/2021 09:26	1.15	U	5.9	10
Vanadium	02/02/2021 09:26	-1.24	U	1.1	2.5
Zinc	02/02/2021 09:26	-2.19	U	5.0	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108 Lab Sample ID: 531611

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	02/02/2021 09:26	17.00	U	120	250
Sodium	02/02/2021 09:26	-111	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179138

Lab Sample ID: 530756

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: 02032021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	02/03/2021 08:56	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179138

Lab Sample ID: 530758

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: 02032021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	02/03/2021 09:37	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 531320

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	02/02/2021 15:16	-2.11	U	10	20
Antimony	02/02/2021 15:16	0.753	U	4.7	10
Arsenic	02/02/2021 15:16	0.00300	U	12	25
Barium	02/02/2021 15:16	-1.80	U	0.82	2.0
Beryllium	02/02/2021 15:16	-0.190	U	0.10	0.30
Cadmium	02/02/2021 15:16	-0.210	U	0.42	1.0
Calcium	02/02/2021 15:16	-2.39	U	19	50
Chromium	02/02/2021 15:16	-1.27	U	1.6	2.5
Cobalt	02/02/2021 15:16	-1.83	U	0.6	2.0
Copper	02/02/2021 15:16	0.741	U	11	25
Iron	02/02/2021 15:16	-9.73	U	33	50
Lead	02/02/2021 15:16	-0.172	U	1.4	2.0
Magnesium	02/02/2021 15:16	-2.83	U	10	20
Manganese	02/02/2021 15:16	-2.35	U	1.5	2.5
Nickel	02/02/2021 15:16	-1.77	U	1.4	2.5
Selenium	02/02/2021 15:16	-0.700	U	9.9	20
Silver	02/02/2021 15:16	0.568	U	0.7	2.0
Thallium	02/02/2021 15:16	-1.15	U	5.9	10
Vanadium	02/02/2021 15:16	-0.833	U	1.1	2.5
Zinc	02/02/2021 15:16	-2.15	U	5.0	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 531324

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	02/02/2021 16:39	-1.69	U	10	20
Antimony	02/02/2021 16:39	-1.33	U	4.7	10
Arsenic	02/02/2021 16:39	-1.02	U	12	25
Barium	02/02/2021 16:39	-1.97	U	0.82	2.0
Beryllium	02/02/2021 16:39	-0.169	U	0.10	0.30
Cadmium	02/02/2021 16:39	-0.270	U	0.42	1.0
Calcium	02/02/2021 16:39	-2.22	U	19	50
Chromium	02/02/2021 16:39	-0.863	U	1.6	2.5
Cobalt	02/02/2021 16:39	-1.81	U	0.6	2.0
Copper	02/02/2021 16:39	0.616	U	11	25
Iron	02/02/2021 16:39	-9.10	U	33	50
Lead	02/02/2021 16:39	0.949	U	1.4	2.0
Magnesium	02/02/2021 16:39	-2.76	U	10	20
Manganese	02/02/2021 16:39	-2.29	U	1.5	2.5
Nickel	02/02/2021 16:39	-1.55	U	1.4	2.5
Selenium	02/02/2021 16:39	-0.147	U	9.9	20
Silver	02/02/2021 16:39	0.262	U	0.7	2.0
Thallium	02/02/2021 16:39	-0.0660	U	5.9	10
Vanadium	02/02/2021 16:39	-0.590	U	1.1	2.5
Zinc	02/02/2021 16:39	-2.20	U	5.0	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 531328

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	02/02/2021 17:57	-1.99	U	10	20
Antimony	02/02/2021 17:57	1.09	U	4.7	10
Arsenic	02/02/2021 17:57	-1.40	U	12	25
Barium	02/02/2021 17:57	-1.87	U	0.82	2.0
Beryllium	02/02/2021 17:57	-0.185	U	0.10	0.30
Cadmium	02/02/2021 17:57	-0.285	U	0.42	1.0
Calcium	02/02/2021 17:57	-2.12	U	19	50
Chromium	02/02/2021 17:57	-1.11	U	1.6	2.5
Cobalt	02/02/2021 17:57	-1.95	U	0.6	2.0
Copper	02/02/2021 17:57	-0.164	U	11	25
Iron	02/02/2021 17:57	-8.61	U	33	50
Lead	02/02/2021 17:57	0.310	U	1.4	2.0
Magnesium	02/02/2021 17:57	-2.97	U	10	20
Manganese	02/02/2021 17:57	-2.23	U	1.5	2.5
Nickel	02/02/2021 17:57	-1.72	U	1.4	2.5
Selenium	02/02/2021 17:57	-1.51	U	9.9	20
Silver	02/02/2021 17:57	0.157	U	0.7	2.0
Thallium	02/02/2021 17:57	-0.798	U	5.9	10
Vanadium	02/02/2021 17:57	-1.21	U	1.1	2.5
Zinc	02/02/2021 17:57	-2.23	U	5.0	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108

Lab Sample ID: 531617

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	02/02/2021 15:16	-56.1	U	120	250
Sodium	02/02/2021 15:16	-151	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108 Lab Sample ID: 531621

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	02/02/2021 16:39	-46.7	U	120	250
Sodium	02/02/2021 16:39	-148	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108 Lab Sample ID: 531625

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	02/02/2021 17:57	-49.5	U	120	250
Sodium	02/02/2021 17:57	-142	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179138 Lab Sample ID: 529847

Analytical Prep Batch # 79874 Preparation Date/Time: 02/02/2021 13:40

ICAL Calibration #: 02032021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Mercury	02/03/2021 08:25	-0.00300	U	0.020	0.06

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 529750

Analytical Prep Batch # 79854 Preparation Date/Time: 02/01/2021 10:41

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: ReRun Re-Analysis #1

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Silver	02/02/2021 16:09	-0.135	U	0.7	2.0
Total Vanadium	02/02/2021 16:09	-0.803	U	1.1	2.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179107 Lab Sample ID: 529750

Analytical Prep Batch # 79854 Preparation Date/Time: 02/01/2021 10:41

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Aluminum	02/02/2021 16:09	1.29	U	10	20
Total Antimony	02/02/2021 16:09	0.200	U	4.7	10
Total Arsenic	02/02/2021 16:09	-3.04	U	12	25
Total Barium	02/02/2021 16:09	-1.87	U	0.82	2.0
Total Beryllium	02/02/2021 16:09	-0.208	U	0.10	0.30
Total Cadmium	02/02/2021 16:09	-0.148	U	0.42	1.0
Total Calcium	02/02/2021 16:09	4.02	U	19	50
Total Chromium	02/02/2021 16:09	-1.65	U	1.6	2.5
Total Cobalt	02/02/2021 16:09	-1.98	U	0.6	2.0
Total Copper	02/02/2021 16:09	0.724	U	11	25
Total Iron	02/02/2021 16:09	-1.79	U	33	50
Total Lead	02/02/2021 16:09	-1.11	U	1.4	2.0
Total Magnesium	02/02/2021 16:09	-1.29	U	10	20
Total Manganese	02/02/2021 16:09	-2.36	U	1.5	2.5
Total Nickel	02/02/2021 16:09	-2.03	U	1.4	2.5
Total Selenium	02/02/2021 16:09	3.35	U	9.9	20
Total Thallium	02/02/2021 16:09	-0.284	U	5.9	10
Total Zinc	02/02/2021 16:09	-2.09	U	5.0	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108 Lab Sample ID: 529750

Analytical Prep Batch # 79854 Preparation Date/Time: 02/01/2021 10:41

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Potassium	02/02/2021 16:09	28.00	U	123	250
Total Sodium	02/02/2021 16:09	7.77	U	183	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179108 Lab Sample ID: 529750

Analytical Prep Batch # 79854 Preparation Date/Time: 02/01/2021 10:41

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Potassium	02/02/2021 16:09	28.00	U	123	250
Total Sodium	02/02/2021 16:09	7.77	U	183	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 159400
ICS Source: SPEX

Analytical Run #: 179107
Lab Sample ID: 531315
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	02/02/2021 09:39	500000	486000	97	80	120
Antimony	02/02/2021 09:39	0	5.76		-10	10
Arsenic	02/02/2021 09:39	0	-0.165		-20	20
Barium	02/02/2021 09:39	0	0		-1.7	1.7
Beryllium	02/02/2021 09:39	0	-0.140		-.7	.7
Cadmium	02/02/2021 09:39	0	-0.00100		-1.3	1.3
Calcium	02/02/2021 09:39	500000	468000	94	80	120
Chromium	02/02/2021 09:39	0	-1.98		-13	13
Cobalt	02/02/2021 09:39	0	-1.02		-2	2
Copper	02/02/2021 09:39	0	1.00		-7	7
Iron	02/02/2021 09:39	500000	476000	95	80	120
Lead	02/02/2021 09:39	0	0.178		-4.7	4.7
Magnesium	02/02/2021 09:39	500000	492000	98	80	120
Manganese	02/02/2021 09:39	0	3.86		-7.3	7.3
Nickel	02/02/2021 09:39	0	-2.73		-7	7
Selenium	02/02/2021 09:39	0	-9.10		-13	13
Silver	02/02/2021 09:39	0	-0.412		-7.3	7.3
Thallium	02/02/2021 09:39	0	-6.18		-7.3	7.3
Vanadium	02/02/2021 09:39	10000	9880		8000	12000
Zinc	02/02/2021 09:39	0	-3.69		-20	20

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 159400
ICS Source: SPEX

Analytical Run #: 179108
Lab Sample ID: 531612
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	02/02/2021 09:39	500000	486000	97	80	120
Calcium	02/02/2021 09:39	500000	468000	94	80	120
Iron	02/02/2021 09:39	500000	476000	95	80	120
Magnesium	02/02/2021 09:39	500000	492000	98	80	120
Potassium	02/02/2021 09:39	0	142.0		-170	170
Sodium	02/02/2021 09:39	0	0.0300		-140	140

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 159400
ICS Source: SPEX, Ultra

Analytical Run #: 179107
Lab Sample ID: 531316
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	02/02/2021 09:45	500000	488000	98	80	120
Antimony	02/02/2021 09:45	500.0	531.0	106	80	120
Arsenic	02/02/2021 09:45	500.0	501.0	100	80	120
Barium	02/02/2021 09:45	500.0	502.0	100	80	120
Beryllium	02/02/2021 09:45	500.0	480.0	96	80	120
Cadmium	02/02/2021 09:45	500.0	510.0	102	80	120
Calcium	02/02/2021 09:45	500000	470000	94	80	120
Chromium	02/02/2021 09:45	500.0	486.0	97	80	120
Cobalt	02/02/2021 09:45	500.0	511.0	102	80	120
Copper	02/02/2021 09:45	500.0	524.0	105	80	120
Iron	02/02/2021 09:45	500000	483000	97	80	120
Lead	02/02/2021 09:45	500.0	459.0	92	80	120
Magnesium	02/02/2021 09:45	500000	493000	99	80	120
Manganese	02/02/2021 09:45	500.0	529.0	106	80	120
Nickel	02/02/2021 09:45	500.0	498.0	100	80	120
Selenium	02/02/2021 09:45	500.0	475.0	95	80	120
Silver	02/02/2021 09:45	500.0	461.0	92	80	120
Thallium	02/02/2021 09:45	500.0	541.0	108	80	120
Vanadium	02/02/2021 09:45	500.0	510.0	102	80	120
Zinc	02/02/2021 09:45	500.0	500.0	100	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 159400
ICS Source: SPEX, Ultra

Analytical Run #: 179108
Lab Sample ID: 531613
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	02/02/2021 09:45	500000	488000	98	80	120
Calcium	02/02/2021 09:45	500000	470000	94	80	120
Iron	02/02/2021 09:45	500000	483000	97	80	120
Magnesium	02/02/2021 09:45	500000	493000	99	80	120
Potassium	02/02/2021 09:45	100000	102900	103	80	120
Sodium	02/02/2021 09:45	100000	95200	95	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description: **IDW-48/49**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	ug/L
Sample No	529753	Parent Sample No.:	529230
Analytical Prep Batch #	79854	Analytical Preparation Date/Time:	02/01/2021 10:41
Analytical Run #:	179107	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 02/02/2021 Analysis Time: -------- 16:52

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Aluminum	86-115	10700		6570		800	516		P	*FAIL*
Total Antimony	88-113	163		BDL	U	200	82		P	*FAIL*
Total Arsenic	87-113	672		BDL	U	800	84		P	*FAIL*
Total Barium	88-113	526		82.6		800	55		P	*FAIL*
Total Beryllium	89-112	18.8		0.27	J	20.0	93		P	
Total Cadmium	88-113	17.2		BDL	U	20.0	86		P	*FAIL*
Total Calcium	87-113	249000		83300		200000	83		P	*FAIL*
Total Chromium	90-113	88.8		16.4		80.0	90		P	
Total Cobalt	89-114	184		4.4		200	90		P	
Total Copper	86-114	111		20.1	J	100	91		P	
Total Iron	87-115	10200		8580		400	405		P	*FAIL*
Total Lead	86-113	117		6.7		200	55		P	*FAIL*
Total Magnesium	85-113	130000		43800		100000	86		P	
Total Manganese	90-114	541		358		200	92		P	
Total Nickel	88-113	185		10.7		200	87		P	*FAIL*
Total Selenium	83-114	680		BDL	U	800	85		P	
Total Silver	84-115	18.9		BDL	U	20.0	94		P	
Total Thallium	85-114	625		BDL	U	800	78		P	*FAIL*
Total Vanadium	90-111	202		7.2		200	97		P	
Total Zinc	87-115	212		33.8		200	89		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	ug/L
Sample No	529753	Parent Sample No.:	529230
Analytical Prep Batch #	79854	Analytical Preparation Date/Time:	02/01/2021 10:41
Analytical Run #:	179108	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 02/02/2021 Analysis Time: -------- 16:52

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Potassium	86-114	103000		7470		100000	96		P
Total Sodium	87-115	105000		17600		100000	87		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **IDW-48/49**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 159400
% Solids for Sample:
Concentration Units: ug/L
Sample No: 531325
Parent Sample No.: 529230
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 179107
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 02/02/2021 Analysis Time: -------- 17:04

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Aluminum	80-120	10400		6570		4000	96		P	
Antimony	80-120	844		BDL	U	1000	84		P	
Arsenic	80-120	3320		BDL	U	4000	83		P	
Barium	80-120	4040		82.6		4000	99		P	
Cadmium	80-120	100		BDL	U	100	100		P	
Calcium	80-120	413000		83300		400000	82		P	
Iron	80-120	10000		8580		2000	71		P	*FAIL*
Lead	80-120	710		6.7		1000	70		P	*FAIL*
Nickel	80-120	785		10.7		1000	77		P	*FAIL*
Thallium	80-120	3050		BDL	U	4000	76		P	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **IDW-48/49**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	ug/L
Sample No	531622	Parent Sample No.:	529230
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	179108	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 02/02/2021 Analysis Time: -------- 17:04

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Potassium	80-120.	100000		7470		100000	93		P
Sodium	80-120.	196000		17600		200000	89		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **IDW-48/49**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	ug/L
Sample No	529754	Parent Sample No.:	529753
Analytical Prep Batch #	79854	Analytical Preparation Date/Time:	02/01/2021 10:41
Analytical Run #:	179107	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 02/02/2021 Analysis Time: -------- 16:58

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Aluminum	86-115	10900		6570		800	541		P	*FAIL*
Total Antimony	88-113	178		BDL	U	200	89		P	
Total Arsenic	87-113	720		BDL	U	800	90		P	
Total Barium	88-113	615		82.6		800	67		P	*FAIL*
Total Beryllium	89-112	20.0		0.27	J	20.0	99		P	
Total Cadmium	88-113	18.1		BDL	U	20.0	90		P	
Total Calcium	87-113	258000		83300		200000	87		P	
Total Chromium	90-113	94.3		16.4		80.0	97		P	
Total Cobalt	89-114	196		4.4		200	96		P	
Total Copper	86-114	111		20.1	J	100	91		P	
Total Iron	87-115	9880		8580		400	325		P	*FAIL*
Total Lead	86-113	136		6.7		200	65		P	*FAIL*
Total Magnesium	85-113	135000		43800		100000	91		P	
Total Manganese	90-114	554		358		200	98		P	
Total Nickel	88-113	196		10.7		200	93		P	
Total Selenium	83-114	733		BDL	U	800	92		P	
Total Silver	84-115	19.9		BDL	U	20.0	100		P	
Total Thallium	85-114	682		BDL	U	800	85		P	
Total Vanadium	90-111	215		7.2		200	104		P	
Total Zinc	87-115	223		33.8		200	95		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	ug/L
Sample No	529754	Parent Sample No.:	529753
Analytical Prep Batch #	79854	Analytical Preparation Date/Time:	02/01/2021 10:41
Analytical Run #:	179108	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 02/02/2021 Analysis Time: -------- 16:58

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Potassium	86-114	109000		7470		100000	102		P
Total Sodium	87-115	111000		17600		100000	93		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

IDW-48/49

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 159400

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 79854

Analytical Run #: 179107

ICAL Calibration #:

Sample #: 529752

Parent Sample #: 529230

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Aluminum	02/02/2021	16:45	20	6570		6930		5		P
Total Antimony	02/02/2021	16:45	20	4.7	U	4.7	U	0		P
Total Arsenic	02/02/2021	16:45	20	12	U	12	U	0		P
Total Barium	02/02/2021	16:45	20	82.6		85.5		3		P
Total Beryllium	02/02/2021	16:45	20	0.27	J	0.28	J	4		P
Total Cadmium	02/02/2021	16:45	20	0.42	U	0.42	U	0		P
Total Calcium	02/02/2021	16:45	20	83300		82900		0		P
Total Chromium	02/02/2021	16:45	20	16.4		17.8		8		P
Total Cobalt	02/02/2021	16:45	20	4.4		4.3		2		P
Total Copper	02/02/2021	16:45	20	20.1	J	19.1	J	5		P
Total Iron	02/02/2021	16:45	20	8580		8990		5		P
Total Lead	02/02/2021	16:45	20	6.7		7.5		11		P
Total Magnesium	02/02/2021	16:45	20	43800		43700		0		P
Total Manganese	02/02/2021	16:45	20	358		362		1		P
Total Nickel	02/02/2021	16:45	20	10.7		11.1		4		P
Total Selenium	02/02/2021	16:45	20	9.9	U	9.9	U	0		P
Total Silver	02/02/2021	16:45	20	0.70	U	0.70	U	0		P
Total Thallium	02/02/2021	16:45	20	5.9	U	5.9	U	0		P
Total Vanadium	02/02/2021	16:45	20	7.2		7.8		8		P
Total Zinc	02/02/2021	16:45	20	33.8		35.1		4		P

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

IDW-48/49

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 159400
% Solid for Sample:
Concentration Units: ug/L
Analytical Prep Batch # 1
Analytical Preparation Date/Time 79854
Analytical Run #: 179108
ICAL Calibration #:
Sample #: 529752
Parent Sample #: 529230

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	02/02/2021	16:45	20	7470		7510		1		P
Total Sodium	02/02/2021	16:45	20	17600		17600		0		P

CT LABORATORIES
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6A

MATRIX SPIKE DUPLICATES

Sample Description: **IDW-48/49**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 159400
% Solid for Sample:
Concentration Units: ug/L
Analytical Prep Batch #: 79854
Analytical Preparation Date/Time: 02/01/2021 10:41
Analytical Run #: 179107
ICAL Calibration #:
Sample #: 529754
Parent Sample #: 529753

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Aluminum	02/02/2021	16:58	20	10700		10900		2		P
Total Antimony	02/02/2021	16:58	20	163		178		9		P
Total Arsenic	02/02/2021	16:58	20	672		720		7		P
Total Barium	02/02/2021	16:58	20	526		615		16		P
Total Beryllium	02/02/2021	16:58	20	18.8		20.0		6		P
Total Cadmium	02/02/2021	16:58	20	17.2		18.1		5		P
Total Calcium	02/02/2021	16:58	20	249000		258000		4		P
Total Chromium	02/02/2021	16:58	20	88.8		94.3		6		P
Total Cobalt	02/02/2021	16:58	20	184		196		6		P
Total Copper	02/02/2021	16:58	20	111		111		0		P
Total Iron	02/02/2021	16:58	20	10200		9880		3		P
Total Lead	02/02/2021	16:58	20	117		136		15		P
Total Magnesium	02/02/2021	16:58	20	130000		135000		4		P
Total Manganese	02/02/2021	16:58	20	541		554		2		P
Total Nickel	02/02/2021	16:58	20	185		196		6		P
Total Selenium	02/02/2021	16:58	20	680		733		8		P
Total Silver	02/02/2021	16:58	20	18.9		19.9		5		P
Total Thallium	02/02/2021	16:58	20	625		682		9		P
Total Vanadium	02/02/2021	16:58	20	202		215		6		P
Total Zinc	02/02/2021	16:58	20	212		223		5		P

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **IDW-48/49**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 159400
% Solid for Sample:
Concentration Units: ug/L
Analytical Prep Batch #: 79854
Analytical Preparation Date/Time: 02/01/2021 10:41
Analytical Run #: 179108
ICAL Calibration #:
Sample #: 529754
Parent Sample #: 529753

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	02/02/2021	16:58	20	103000		109000		6		P
Total Sodium	02/02/2021	16:58	20	105000		111000		6		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 159400

Concentration Units: ug/L

Analytical Run #: 179138 Sample No.:#: 529848

Analytical Prep Batch #: 79874 Preparation Date/Time: 02/02/2021 13:40

ICAL Calibration #: 02032021

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Mercury	02/03/2021 08:18	82-119	1.83		2.00	92		CV

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 159400

Concentration Units: ug/L

Analytical Run #: 179107 Sample No.:#: 529751

Analytical Prep Batch #: 79854 Preparation Date/Time: 02/01/2021 10:41

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Aluminum	02/02/2021 16:03	86-115	743.0		800.0	93		P
Total Antimony	02/02/2021 16:03	88-113	198.0		200.0	99		P
Total Arsenic	02/02/2021 16:03	87-113	716.0		800.0	90		P
Total Barium	02/02/2021 16:03	88-113	741.0		800.0	93		P
Total Beryllium	02/02/2021 16:03	89-112	19.30		20.00	96		P
Total Cadmium	02/02/2021 16:03	88-113	18.60		20.00	93		P
Total Calcium	02/02/2021 16:03	87-113	182000		200000	91		P
Total Chromium	02/02/2021 16:03	90-113	76.40		80.00	96		P
Total Cobalt	02/02/2021 16:03	89-114	190.0		200.0	95		P
Total Copper	02/02/2021 16:03	86-114	99.60		100.0	100		P
Total Iron	02/02/2021 16:03	87-115	393.0		400.0	98		P
Total Lead	02/02/2021 16:03	86-113	176.0		200.0	88		P
Total Magnesium	02/02/2021 16:03	85-113	92400		100000	92		P
Total Manganese	02/02/2021 16:03	90-114	204.0		200.0	102		P
Total Nickel	02/02/2021 16:03	88-113	185.0		200.0	92		P
Total Selenium	02/02/2021 16:03	83-114	747.0		800.0	93		P
Total Thallium	02/02/2021 16:03	85-114	739.0		800.0	92		P
Total Zinc	02/02/2021 16:03	87-115	190.0		200.0	95		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 159400

Concentration Units: ug/L

Analytical Run #: 179107 Sample No.:#: 529751

Analytical Prep Batch #: 79854 Preparation Date/Time: 02/01/2021 10:41

ICAL Calibration #:

ReRun Re-Analysis #1

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Silver	02/02/2021 16:03	84-115	21.20		20.00	106		P
Total Vanadium	02/02/2021 16:03	90-111	203.0		200.0	102		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 159400

Concentration Units: ug/L

Analytical Run #: 179108 Sample No.:#: 529751

Analytical Prep Batch #: 79854 Preparation Date/Time: 02/01/2021 10:41

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Potassium	02/02/2021 16:03	86-114	101400		100000	101		P
Total Sodium	02/02/2021 16:03	87-115	93400		100000	93		P

CT LABORATORIES
delivering more than data from your environmental analyses

9

ICP SERIAL DILUTION

Sample Description

IDW-48/49

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID SDG No.: 159400

Concentration Units: ug/L

Sample No.: 531321 Parent Sample No.: 529230

LIMS Run #: 179107 ICAL Calibration #:.:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Aluminum	02/02/2021 16:21	6570.		9500		45		P	*FAIL*
Antimony	02/02/2021 16:21	BDL	U	23.5	U	0		P	*INVALID*
Arsenic	02/02/2021 16:21	BDL	U	60	U	0		P	*INVALID*
Barium	02/02/2021 16:21	82.6		71.5		13		P	*INVALID*
Cadmium	02/02/2021 16:21	BDL	U	2.1	U	0		P	*INVALID*
Calcium	02/02/2021 16:21	83300.		122500		47		P	*FAIL*
Iron	02/02/2021 16:21	8580.		13600		59		P	*FAIL*
Lead	02/02/2021 16:21	6.66	U	7	U	100		P	*INVALID*
Nickel	02/02/2021 16:21	10.7	J	7	U	100		P	*INVALID*
Thallium	02/02/2021 16:21	BDL	U	29.5	U	0		P	*INVALID*

CT LABORATORIES
delivering more than data from your environmental analyses

9

ICP SERIAL DILUTION

Sample Description

IDW-48/49

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID SDG No.: 159400

Concentration Units: mg/L

Sample No.: 531618 Parent Sample No.: 529230

LIMS Run #: 179108 ICAL Calibration #:.:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Potassium	02/02/2021 16:21	7.47	U	615	U	100		P	*INVALID*
Sodium	02/02/2021 16:21	17.6	U	915	U	100		P	*INVALID*

CT LABORATORIES
delivering more than data from your environmental analyses

10

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Matrix: LIQUID

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	MDL (ug/L)	M
Total Mercury	253.7			0.020	CV

CT LABORATORIES
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10

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

ICP ID Number: TJA SDG No.: 159400

Matrix: LIQUID

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	MDL (ug/L)	M
Total Aluminum	167.0			10	P
Total Antimony	217.5			4.7	P
Total Arsenic	193.7			12	P
Total Barium	455.4			0.82	P
Total Beryllium	313.041			0.10	P
Total Cadmium	226.502			0.42	P
Total Calcium	393.3			19	P
Total Chromium	267.716			1.6	P
Total Cobalt	228.616			0.6	P
Total Copper	327.3			11	P
Total Iron	259.9			33	P
Total Lead	220.35			1.4	P
Total Magnesium	279.5			10	P
Total Manganese	257.61			1.5	P
Total Nickel	231.604			1.4	P
Total Potassium	766.491			123	P
Total Selenium	196.02			9.9	P
Total Silver	328.068			0.7	P
Total Sodium	589.5			183	P
Total Thallium	190.864			5.9	P
Total Vanadium	292.402			1.1	P
Total Zinc	213.856			5.0	P

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	Fe	0.000006	0.000000	No
			Ce	0.000000	0.000000	No
Ag 338.289 {100}	☒	1	Fe	0.000906	0.000000	No
Al 167.079 {501}	☒	None				
Al 308.215 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	1	Al	0.001713	0.000000	No
As 197.262 {471}	☒	1	Al	-0.000113	0.000000	No
Ba 233.527 {445}	☒	3	Fe	-0.000038	0.000000	No
			V	0.000180	0.000000	No
			Al	0.000000	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000002	0.000000	No
Ba 493.409 { 68}	☒	1	Fe	0.000029	0.000000	No
Be 313.042 {108}	☒	1	Fe	0.000000	0.000000	No
Be 234.861 {144}	☒	1	Fe	-0.000016	0.000000	No
Ca 315.887 {107}	☒	None				
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	1	Cu	0.000000	0.000000	No
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	2	Fe	0.000090	0.000000	No
			Al	0.000000	0.000000	No
Cd 228.802 {147}	☒	None				
Co 228.616 {447}	☒	5	Fe	0.000009	0.000000	No
			Ti	0.003000	0.000000	No
			Ba	-0.001300	0.000000	No
			Ni	0.000040	0.000000	No
			Al	0.000001	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000188	0.000000	No
Cr 205.560 {464}	☒	1	Fe	-0.000004	0.000000	No
Cr 267.716 {126}	☒	1	Fe	-0.000014	0.000000	No
Cu 224.700 {450}	☒	5	Fe	0.000274	0.000000	No
			Mo	0.001320	0.000000	No
			Ni	-0.006000	0.000000	No
			Pb	0.003030	0.000000	No
			Al	0.000000	0.000000	No
Cu 324.754 {104}	☒	1	Fe	-0.000136	0.000000	No
Cu 327.396 {103}	☒	1	Fe	0.000069	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	-0.000086	0.000000	No

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mn 259.373 {130}	☒	1	Mg	0.001339	0.000000	No
Mo 202.030 {466}	☒	1	Fe	-0.000011	0.000000	No
Mo 203.844 {465}	☒	1	Fe	-0.000020	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000036	0.000000	No
Ni 221.647 {452}	☒	1	Ca	0.000021	0.000000	No
Ni 231.604 {445}	☒	3	Fe	0.000012	0.000000	No
			Co	0.000000	0.000000	No
			Mo	0.000000	0.000000	No
Pb 216.999 {455}	☒	2	Al	0.001241	0.000000	No
			Na	0.000000	0.000000	No
Pb 220.353 {453}	☒	3	Si	0.000000	0.000000	No
			Al	0.000001	0.000000	No
			Fe	0.000018	0.000000	No
Pb 220.353 {153}	☒	1	Al	-0.000040	0.000000	No
Sb 206.833 {463}	☒	1	Fe	0.000009	0.000000	No
Sb 217.581 {455}	☒	3	Fe	-0.000069	0.000000	No
			V	0.002070	0.000000	No
			Pb	-0.001040	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000360	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.001308	0.000000	No
Tl 190.856 {476}	☒	5	Fe	0.000024	0.000000	No
			Be	-0.000013	0.000000	No
			Ti	0.000050	0.000000	No
			Cr	0.000251	0.000000	No
			V	-0.003800	0.000000	No
Tl 190.856 {477}	☒	1	Fe	-0.000048	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000073	0.000000	No
V 292.402 {115}	☒	3	Fe	0.000020	0.000000	No
			Cr	-0.000400	0.000000	No
			Al	0.000000	0.000000	No
Zn 202.548 {466}	☒	1	Fe	-0.000239	0.000000	No
Zn 206.200 {463}	☒	1	Fe	-0.000003	0.000000	No
Zn 213.856 {457}	☒	2	Fe	0.000167	0.000000	No
			Cu	0.007413	0.000000	No
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Y 224.306 {451}*	☒	None				
Na 588.995 { 57}	☒	1	Fe	0.000106	0.000000	No
Si 251.611 {134}	☒	2	Fe	-0.000105	0.000000	No
			Mo	0.005400	0.000000	No
Ti 323.452 {104}	☒	1	Fe	0.000036	0.000000	No
Ti 334.941 {101}	☒	1	Fe	0.000052	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000014	0.000000	No
Sr 421.552 { 80}	☒	1	Fe	0.000014	0.000000	No

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Sn 189.989 {477}	☒	1	Fe	0.000013	0.000000	No
B 249.678 {135}	☒	2	Fe	0.000001	0.000000	No
			Co	0.003970	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000357	0.000000	No
Li 670.784 { 50}	☒	1	Fe	0.000011	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000216	0.000000	No
P 213.618 {457}	☒	1	Fe	-0.000079	0.000000	No
S 182.034 {485}	☒	1	Mg	0.000100	0.000000	No
Hg 184.950 {482}	☒	1	Fe	0.000001	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

ICP LINEAR RANGES (QUARTERLY)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

ICP ID Number: TA SDG No.: 159400

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	15.00	1000000	P
Antimony	15.00	10000	P
Arsenic	15.00	10000	P
Barium	15.00	10000	P
Beryllium	15.00	1000	P
Boron	15.00	1000	P
Cadmium	15.00	1000	P
Calcium	15.00	1000000	P
Chromium	15.00	100000	P
Cobalt	15.00	10000	P
Copper	15.00	100000	P
Iron	15.00	1000000	P
Lead	15.00	100000	P
Lithium	15.00	10000	P
Magnesium	15.00	1000000	P
Manganese	15.00	100000	P
Molybdenum	15.00	10000	P
Nickel	15.00	10000	P
Potassium	15.00	200000	P
Selenium	15.00	10000	P
Silicon	15.00	1000	P
Silver	15.00	100	P
Sodium	15.00	200000	P
Strontium	15.00	10000	P
Thallium	15.00	10000	P
Tin	15.00	10000	P
Titanium	15.00	1000	P
Tungsten	15.00	10000	P
Vanadium	15.00	10000	P
Zinc	15.00	100000	P

CT LABORATORIES
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PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Method: EPA 3010A

SDG No.: 159400

Preparation Batch #: 79854

Preparation Date/Time: 02/01/2021 / 10:41

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
529230	Normal Sample	IDW-48/49	GROUND WATER	50.0
529750	Method Blank		LIQUID	50.0
529751	Lab Control Spike		LIQUID	50.0
529752	Lab Duplicate	IDW-48/49	GROUND WATER	50.0
529753	Matrix Spike	IDW-48/49	GROUND WATER	50.0
529754	Matrix Spike Duplicate	IDW-48/49	GROUND WATER	50.0

CT LABORATORIES
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PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Method: EPA 7470A

SDG No.: 159400

Preparation Batch #: 79874

Preparation Date/Time: 02/02/2021 / 13:40

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
528807	Normal Sample	IDW-54	GROUND WATER	25.0
529230	Normal Sample	IDW-48/49	GROUND WATER	25.0
529847	Method Blank		LIQUID	25.0
529848	Lab Control Spike		LIQUID	25.0
529849	Lab Duplicate	IDW-54	GROUND WATER	25.0
529850	Matrix Spike	IDW-54	GROUND WATER	25.0
529851	Matrix Spike Duplicate	IDW-54	GROUND WATER	25.0

CT LABORATORIES
delivering more than data from your environmental analyses

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ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Lab Code: CTL

SDG No.: 159400

Instrument ID Number: CETAC

Method Number: CV

Start & End Date: 02/03/2021 to 02/03/2021

Analytical Run #: 179138

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
530753	ICV	1.00	2/03 08:06																X													
530754	ICB	1.00	2/03 08:15																X													
529848	LCSW	1.00	2/03 08:18																X													
529847	MBW	1.00	2/03 08:25																X													
530755	CCV	1.00	2/03 08:50																X													
530756	CCB	1.00	2/03 08:56																X													
528807	Initial	1.00	2/03 08:59																X													
529849	DUP	1.00	2/03 09:02																X													
529230	Initial	1.00	2/03 09:06																X													
529850	MSW	1.00	2/03 09:21																X													
529851	MSDW	1.00	2/03 09:25																X													
530757	CCV	1.00	2/03 09:31																X													
530758	CCB	1.00	2/03 09:37																X													

CT LABORATORIES
delivering more than data from your environmental analyses

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ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Lab Code: CTL

SDG No.: 159400

Instrument ID Number: TJA

Method Number: P

Start & End Date: 02/02/2021 to 02/02/2021

Analytical Run #: 179107

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
531312	ICV	1.00	2/02 09:01	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
531313	ICVLL	1.00	2/02 09:14	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
531314	ICB	1.00	2/02 09:26	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
531315	ICSA	1.00	2/02 09:39	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
531316	ICSAB	1.00	2/02 09:45	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
531317	ICVLL	1.00	2/02 10:13																							X							
531318	CCV1	1.00	2/02 15:05	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X			X	X
531319	CCV2	1.00	2/02 15:10	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
531320	CCB	1.00	2/02 15:16	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
529751	LCSW	1.00	2/02 16:03	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X				X
529751	LCSW	1.00	2/02 16:03																							X						X	
529750	MBW	1.00	2/02 16:09	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X				X
529750	MBW	1.00	2/02 16:09																							X						X	
529230	Initial	1.00	2/02 16:15	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X				X
529230	Re-Analysis	1.00	2/02 16:15																							X						X	
531321	L	5	2/02 16:21	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
531322	CCV1	1.00	2/02 16:28	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X			X	X
531323	CCV2	1.00	2/02 16:33	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
531324	CCB	1.00	2/02 16:39	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
529752	DUP	1.00	2/02 16:45	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
529753	MSW	1.00	2/02 16:52	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
529754	MSDW	1.00	2/02 16:58	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
531325	PDSW	1.00	2/02 17:04	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
531326	CCV1	1.00	2/02 17:46	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X			X	X
531327	CCV2	1.00	2/02 17:52	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
531328	CCB	1.00	2/02 17:57	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X

CT LABORATORIES
delivering more than data from your environmental analyses

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ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Lab Code: CTL

SDG No.: 159400

Instrument ID Number: TJA

Method Number: P

Start & End Date: 02/02/2021 to 02/02/2021

Analytical Run #: 179108

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
531609	ICV	1.00	2/02 09:01																				X				X					
531610	ICVLL	1.00	2/02 09:14																				X				X					
531611	ICB	1.00	2/02 09:26																				X				X					
531612	ICSA	1.00	2/02 09:39	X							X				X		X						X				X					
531613	ICSAB	1.00	2/02 09:45	X							X				X		X						X				X					
531615	CCV1	1.00	2/02 15:05																				X				X					
531616	CCV2	1.00	2/02 15:10																				X				X					
531617	CCB	1.00	2/02 15:16																				X				X					
529751	LCSW	1.00	2/02 16:03																				X				X					
529750	MBW	1.00	2/02 16:09																				X				X					
529230	Initial	1.00	2/02 16:15																				X				X					
531618	L	5	2/02 16:21																				X				X					
531619	CCV1	1.00	2/02 16:28																				X				X					
531620	CCV2	1.00	2/02 16:33																				X				X					
531621	CCB	1.00	2/02 16:39																				X				X					
529752	DUP	1.00	2/02 16:45																				X				X					
529753	MSW	1.00	2/02 16:52																				X				X					
529754	MSDW	1.00	2/02 16:58																				X				X					
531622	PDSW	1.00	2/02 17:04																				X				X					
531623	CCV1	1.00	2/02 17:46																				X				X					
531624	CCV2	1.00	2/02 17:52																				X				X					
531625	CCB	1.00	2/02 17:57																				X				X					

METALS
RAW DATA
DOCUMENTS

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
Ag 328.068 {103}	02/09/2021 14:36:22	02/02/2021 08:09:59	Linear	1/Conc	13.072794	4.090565	0.000000	1.000000	0.998518	0.122659	0.992874	3.309579
Ag 338.289 {100}	02/09/2021 14:36:22	02/02/2021 08:55:11	Linear	None	0.000009	0.000000	0.000000	1.000000	0.999942	0.000004	10.557109	35.190363
Al 167.079 {501}	02/09/2021 14:36:22	02/02/2021 08:15:36	Linear	1/Var	0.000010	0.000003	0.000000	1.000000	0.999879	0.000007	0.603202	2.010675
Al 308.215 {109}	02/09/2021 14:36:22	02/02/2021 08:35:05	Linear	1/Conc	0.000049	0.000000	0.000000	1.000000	0.999980	0.000001	34.732877	115.77625
Al 396.152 { 85}	02/09/2021 14:36:22	02/02/2021 08:48:34	Linear	1/Var	-0.000014	0.000001	0.000000	1.000000	0.999944	0.000043	9.562253	31.874175
As 193.759 {474}	02/09/2021 14:36:22	02/02/2021 08:15:37	Linear	None	0.000007	0.000001	0.000000	1.000000	0.999969	0.000005	3.679171	12.263903
As 197.262 {471}	02/09/2021 14:36:22	02/02/2021 08:21:38	Linear	None	0.000004	0.000000	0.000000	1.000000	0.999979	0.000014	6.746151	22.487169
Ba 233.527 {445}	02/09/2021 14:36:22	02/02/2021 08:15:37	Linear	1/Conc	0.000011	0.000006	0.000000	1.000000	0.998809	0.000000	0.467927	1.559756
Ba 455.403 { 74}	02/09/2021 14:36:22	02/02/2021 08:21:38	Linear	1/Conc	0.000150	0.000020	0.000000	1.000000	0.999136	0.000003	0.422016	1.406719
Ba 493.409 { 68}	02/09/2021 14:36:22	02/02/2021 08:55:11	Linear	1/Var	0.005851	0.000029	0.000000	1.000000	0.998647	0.000777	0.933915	3.113050
Be 313.042 {108}	02/09/2021 14:36:22	02/02/2021 08:15:37	Linear	1/Conc	-0.000041	0.000071	0.000000	1.000000	0.999839	0.000001	0.027109	0.090365
Be 234.861 {144}	02/09/2021 14:36:22	02/02/2021 08:15:38	Linear	1/Var	-0.000008	0.000002	0.000000	1.000000	0.999363	0.000007	0.904133	3.013777
Ca 315.887 {107}	02/09/2021 14:36:22	02/02/2021 08:48:34	Linear	1/Var	0.000046	0.000000	0.000000	1.000000	0.999371	0.000049	9.390499	31.301664
Ca 317.933 {106}	02/09/2021 14:36:22	02/02/2021 08:48:34	Linear	1/Var	0.004091	0.000000	0.000000	1.000000	0.999121	0.000385	13.801734	46.005780
Ca 393.366 { 86}	02/09/2021 14:36:22	02/02/2021 08:15:38	Linear	1/Var	0.000346	0.000105	0.000000	1.000000	0.999542	0.000289	0.071996	0.239986
Ca 396.847 { 85}	02/09/2021 14:36:22	02/02/2021 08:21:39	Linear	1/Conc	0.000339	0.000070	0.000000	1.000000	0.999852	0.000057	0.114112	0.380374
Cd 226.502 {449}	02/09/2021 14:36:22	02/02/2021 08:15:38	Linear	1/Conc	0.000004	0.000024	0.000000	1.000000	0.999838	0.000000	0.208634	0.695445
Cd 228.802 {447}	02/09/2021 14:36:22	02/02/2021 08:15:38	Linear	1/Conc	0.000027	0.000038	0.000000	1.000000	0.999830	0.000001	0.175473	0.584909
Co 228.616 {447}	02/09/2021 14:36:22	02/02/2021 08:21:39	Linear	1/Conc	0.000035	0.000019	0.000000	1.000000	0.999653	0.000002	0.317770	1.059233
Co 238.892 {141}	02/09/2021 14:36:22	02/02/2021 08:21:39	Linear	1/Var	0.000003	0.000001	0.000000	1.000000	0.999950	0.000008	0.897514	2.991714
Cr 205.560 {464}	02/09/2021 14:36:22	02/02/2021 08:28:39	Linear	1/Var	-0.000000	0.000011	0.000000	1.000000	0.998791	0.000063	0.345236	1.150787
Cr 267.716 {126}	02/09/2021 14:36:22	02/02/2021 08:21:39	Linear	1/Var	0.000003	0.000003	0.000000	1.000000	0.999353	0.000008	0.664891	2.216305
Cu 223.008 {451}	02/09/2021 14:36:22	02/02/2021 08:15:39	Linear	1/Var	-0.000006	0.000006	0.000000	1.000000	0.999760	0.000014	1.180568	3.935225
Cu 224.700 {450}	02/09/2021 14:36:22	02/02/2021 08:28:39	Linear	None	0.000065	0.000006	0.000000	1.000000	0.999999	0.000384	0.548944	1.829812
Cu 324.754 {104}	02/09/2021 14:36:22	02/02/2021 08:28:39	Linear	1/Var	0.000203	0.000001	0.000000	1.000000	0.999890	0.000008	3.692358	12.307861
Cu 327.396 {103}	02/09/2021 14:36:22	02/02/2021 08:21:40	Linear	1/Var	0.000012	0.000001	0.000000	1.000000	0.999944	0.000009	8.223579	27.411928
Fe 234.349 {144}	02/09/2021 14:36:22	02/02/2021 08:35:06	Curvili	1/Var	0.000016	0.000000	0.000000	1.000000	0.999621	0.000006	1.792760	5.975868
Fe 239.562 {140}	02/09/2021 14:36:22	02/02/2021 08:48:34	Linear	1/Var	0.000008	0.000000	0.000000	1.000000	0.998893	0.000057	5.783640	19.278799
Fe 259.940 {129}	02/09/2021 14:36:22	02/02/2021 08:41:40	Linear	1/Conc	0.000005	0.000001	0.000000	1.000000	0.999373	0.000021	4.757090	15.856966
Mg 202.582 {466}	02/09/2021 14:36:22	02/02/2021 08:48:34	Curvili	1/Var	-0.000001	0.000000	0.000000	1.000000	0.999916	0.000002	3.535278	11.784260
Mg 279.079 {121}	02/09/2021 14:36:22	02/02/2021 08:48:35	Linear	1/Var	0.000001	0.000000	0.000000	1.000000	0.999918	0.000010	35.889822	119.63273
Mg 280.270 {120}	02/09/2021 14:36:22	02/02/2021 08:21:41	Linear	1/Var	0.000233	0.000031	0.000000	1.000000	0.998289	0.000421	0.029688	0.098961
Mn 257.610 {131}	02/09/2021 14:36:22	02/02/2021 08:21:41	Linear	1/Conc	0.000019	0.000009	0.000000	1.000000	0.999629	0.000002	0.094758	0.315860
Mn 259.373 {130}	02/09/2021 14:36:22	02/02/2021 08:28:39	Linear	1/Var	0.000020	0.000004	0.000000	1.000000	0.999880	0.000034	0.900019	3.000062
Mo 202.030 {466}	02/09/2021 14:36:22	02/02/2021 08:15:41	Linear	None	-0.000001	0.000007	0.000000	1.000000	0.999978	0.000019	0.538983	1.796611
Mo 202.030 {467}	02/09/2021 14:36:22	02/02/2021 08:15:41	Linear	None	-0.000001	0.000005	0.000000	1.000000	0.999974	0.000014	0.655472	2.184907
Mo 204.598 {464}	02/09/2021 14:36:22	02/02/2021 08:21:41	Linear	1/Conc	0.000008	0.000003	0.000000	1.000000	0.999686	0.000001	1.084230	3.614099
Ni 221.647 {452}	02/09/2021 14:36:22	02/02/2021 08:21:42	Linear	1/Conc	0.000014	0.000013	0.000000	1.000000	0.999724	0.000014	0.523858	1.746193
Ni 231.604 {445}	02/09/2021 14:36:22	02/02/2021 08:21:42	Linear	1/Conc	-0.000003	0.000013	0.000000	1.000000	0.999643	0.000001	0.534446	1.781487
Pb 216.999 {455}	02/09/2021 14:36:22	02/02/2021 08:28:40	Curvili	1/Var	0.000007	0.000001	0.000000	1.000000	0.999671	0.000021	5.873984	19.579947
Pb 216.999 {456}	02/09/2021 14:36:22	02/02/2021 08:28:40	Curvili	1/Var	-0.000001	0.000000	0.000000	1.000000	0.999962	0.000001	43.439863	144.79954
Pb 220.353 {153}	02/09/2021 14:36:22	02/02/2021 08:28:40	Linear	1/Conc	0.000003	0.000001	0.000000	1.000000	0.999815	0.000001	5.168342	17.227807
Pb 220.353 {453}	02/09/2021 14:36:22	02/02/2021 08:15:43	Linear	None	0.000011	0.000002	0.000000	1.000000	0.999973	0.000008	2.970978	9.903261
Sb 206.833 {463}	02/09/2021 14:36:22	02/02/2021 08:21:43	Linear	1/Conc	-0.000006	0.000001	0.000000	1.000000	0.999776	0.000000	3.309126	11.030420

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	OK.	1.000000	0.000000	1	0
	Ag 338.289 {100}	OK.	1.000000	0.000000	1	0
	Al 167.079 {501}	OK.	1.000000	0.000000	1	0
	Al 308.215 {109}	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	OK.	1.000000	0.000000	1	0
	As 193.759 {474}	OK.	1.000000	0.000000	1	0
	As 197.262 {471}	OK.	1.000000	0.000000	1	0
	Ba 233.527 {445}	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	OK.	1.000000	0.000000	1	0
	Ba 493.409 { 68}	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	OK.	1.000000	0.000000	1	0
	Be 234.861 {144}	OK.	1.000000	0.000000	1	0
	Ca 315.887 {107}	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	OK.	1.000000	0.000000	1	0
	Ca 393.366 { 86}	OK.	1.000000	0.000000	1	0
	Ca 396.847 { 85}	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	OK.	1.000000	0.000000	1	0
	Cd 228.802 {447}	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	OK.	1.000000	0.000000	1	0
	Co 238.892 {141}	OK.	1.000000	0.000000	1	0
	Cr 205.560 {464}	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	OK.	1.000000	0.000000	1	0
	Cu 223.008 {451}	OK.	1.000000	0.000000	1	0
	Cu 224.700 {450}	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	OK.	1.000000	0.000000	1	0
	Cu 327.396 {103}	OK.	1.000000	0.000000	1	0
	Fe 234.349 {144}	OK.	1.000000	0.000000	1	0
	Fe 239.562 {140}	OK.	1.000000	0.000000	1	0
	Fe 259.940 {129}	OK.	1.000000	0.000000	1	0
	Mg 202.582 {466}	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	OK.	1.000000	0.000000	1	0
	Mg 280.270 {120}	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	OK.	1.000000	0.000000	1	0
	Mn 259.373 {130}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {466}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	OK.	1.000000	0.000000	1	0
	Mo 204.598 {464}	OK.	1.000000	0.000000	1	0
	Ni 221.647 {452}	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {455}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {456}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {153}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	OK.	1.000000	0.000000	1	0

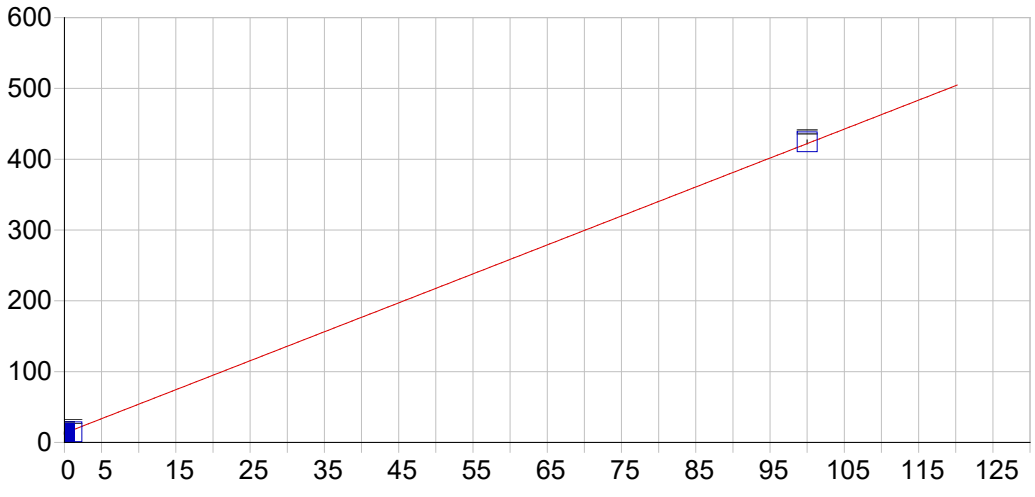
	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
	Sb 217.581 {455}	02/09/2021 14:36:22	02/02/2021 08:21:43	Linear	1/Conc	0.000005	0.000002	0.000000	1.000000	0.999763	0.000000	3.091774	10.305914
	Se 196.090 {472}	02/09/2021 14:36:22	02/02/2021 08:15:43	Linear	1/Var	0.000000	0.000001	0.000000	1.000000	0.999954	0.000001	5.300744	17.669148
	Se 203.985 {465}	02/09/2021 14:36:22	02/02/2021 08:15:43	Linear	1/Var	-0.000004	0.000001	0.000000	1.000000	0.999966	0.000003	8.122701	27.075669
	Se 206.279 {463}	02/09/2021 14:36:22	02/02/2021 08:21:43	Curvili	1/Conc	-0.000006	0.000000	-0.000000	1.000000	0.999999	0.000000	24.524675	81.748915
	Tl 190.856 {476}	02/09/2021 14:36:22	02/02/2021 08:15:44	Linear	1/Conc	0.000007	0.000002	0.000000	1.000000	0.999734	0.000000	2.391432	7.971441
	Tl 190.856 {477}	02/09/2021 14:36:22	02/02/2021 08:21:43	Linear	1/Conc	0.000001	0.000000	0.000000	1.000000	0.999822	0.000000	9.683380	32.277933
	V 290.882 {116}	02/09/2021 14:36:22	02/02/2021 08:21:43	Linear	1/Conc	0.000011	0.000001	0.000000	1.000000	0.999884	0.000001	4.326578	14.421927
	V 292.402 {115}	02/09/2021 14:36:22	02/02/2021 08:21:44	Linear	1/Conc	-0.000003	0.000005	0.000000	1.000000	0.999935	0.000001	0.604029	2.013429
	Zn 206.200 {463}	02/09/2021 14:36:22	02/02/2021 08:28:40	Curvili	1/Conc	0.000045	0.000020	-0.000000	1.000000	0.999974	0.000006	0.230876	0.769586
	Zn 213.856 {457}	02/09/2021 14:36:22	02/02/2021 08:15:44	Linear	1/Conc	0.000102	0.000040	0.000000	1.000000	0.999732	0.000004	0.125984	0.419946
	Y 224.306 {450}*	02/09/2021 14:36:22	02/02/2021 07:25:58	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 324.228 {104}*	02/09/2021 14:36:22	02/02/2021 07:25:59	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 371.030 { 91}*	02/09/2021 14:36:22	02/02/2021 07:25:59	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Na 588.995 { 57}	02/09/2021 14:36:22	02/02/2021 08:35:07	Linear	1/Var	0.005853	0.000005	0.000000	1.000000	0.999936	0.000833	6.158897	20.529657
	Na 589.592 { 57}	02/09/2021 14:36:22	02/02/2021 08:48:35	Linear	1/Var	-0.000056	0.000003	0.000000	1.000000	0.999948	0.000278	8.854713	29.515709
	Si 251.611 {134}	02/09/2021 14:36:22	02/02/2021 08:21:44	Linear	1/Conc	0.000005	0.000000	0.000000	1.000000	0.999996	0.000000	11.053610	36.845365
	Ti 323.452 {104}	02/09/2021 14:36:22	02/02/2021 08:21:44	Linear	1/Conc	0.000178	0.000005	0.000000	1.000000	0.999793	0.000001	1.418910	4.729701
	Ti 334.941 {101}	02/09/2021 14:36:22	02/02/2021 08:21:44	Linear	1/Conc	0.000011	0.000003	0.000000	1.000000	0.999747	0.000001	1.440933	4.803110
	Sr 407.771 { 83}	02/09/2021 14:36:22	02/02/2021 08:21:45	Linear	1/Conc	0.000316	0.000071	0.000000	1.000000	0.998959	0.000013	0.147251	0.490838
	Sr 421.552 { 80}	02/09/2021 14:36:22	02/02/2021 08:21:45	Linear	1/Conc	0.000275	0.000067	0.000000	1.000000	0.999028	0.000012	0.145956	0.486521
	Sn 189.989 {477}	02/09/2021 14:36:22	02/02/2021 08:21:45	Linear	1/Conc	0.000006	0.000003	0.000000	1.000000	0.999775	0.000001	0.962281	3.207603
	B 249.678 {135}	02/09/2021 14:36:22	02/02/2021 08:21:45	Linear	1/Var	0.000014	0.000002	0.000000	1.000000	0.999472	0.000008	1.030759	3.435864
	B 249.773 {135}	02/09/2021 14:36:22	02/02/2021 08:21:45	Linear	1/Var	0.000020	0.000004	0.000000	1.000000	0.998976	0.000023	0.536267	1.787557
	Li 670.784 { 50}	02/09/2021 14:36:22	02/02/2021 08:21:45	Linear	1/Conc	0.000008	0.000017	0.000000	1.000000	0.999833	0.000004	1.411234	4.704113
	K 766.490 { 44}	02/09/2021 14:36:22	02/02/2021 08:48:35	Curvili	1/Var	0.000036	0.000001	0.000000	1.000000	0.999998	0.000012	38.163116	127.21038
	K 769.896 { 44}	02/09/2021 14:36:22	02/02/2021 08:48:35	Linear	1/Conc	0.000052	0.000000	0.000000	1.000000	0.999968	0.000002	91.068935	303.56311
	P 213.618 {457}	02/09/2021 14:36:22	02/02/2021 08:48:35	Linear	1/Conc	-0.000015	0.000001	0.000000	1.000000	0.994661	0.000152	4.562415	15.208050
	S 182.034 {485}	02/09/2021 14:36:22	02/02/2021 08:48:36	Linear	1/Var	0.000020	0.000001	0.000000	1.000000	0.999766	0.000023	4.787186	15.957285
	Hg 184.950 {482}	02/09/2021 14:36:22	02/02/2021 08:15:47	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.999878	0.000000	0.928089	3.093631
	Ce 404.076 { 83}	02/09/2021 14:36:22	02/02/2021 08:15:47	Linear	1/Conc	0.000026	0.000000	0.000000	1.000000	1.000000	0.000000	23.643861	78.812871

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Sb 217.581 {455}	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	OK.	1.000000	0.000000	1	0
	Se 203.985 {465}	OK.	1.000000	0.000000	1	0
	Se 206.279 {463}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {476}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	OK.	1.000000	0.000000	1	0
	V 290.882 {116}	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	OK.	1.000000	0.000000	1	0
	Zn 206.200 {463}	OK.	1.000000	0.000000	1	0
	Zn 213.856 {457}	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	Warnin	1.000000	0.000000	1	0
	Y 324.228 {104}*	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	Warnin	1.000000	0.000000	1	0
	Na 588.995 { 57}	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	OK.	1.000000	0.000000	1	0
	Si 251.611 {134}	OK.	1.000000	0.000000	1	0
	Ti 323.452 {104}	OK.	1.000000	0.000000	1	0
	Ti 334.941 {101}	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	OK.	1.000000	0.000000	1	0
	Sr 421.552 { 80}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	OK.	1.000000	0.000000	1	0
	B 249.678 {135}	OK.	1.000000	0.000000	1	0
	B 249.773 {135}	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	OK.	1.000000	0.000000	1	0
	K 769.896 { 44}	OK.	1.000000	0.000000	1	0
	P 213.618 {457}	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	OK.	1.000000	0.000000	1	0
	Hg 184.950 {482}	OK.	1.000000	0.000000	1	0
	Ce 404.076 { 83}	OK.	1.000000	0.000000	1	0

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	1	Ce	-0.003937	0.000000	No
Ag 338.289 {100}	☒	2	Fe	0.000306	0.000000	No
			Ti	0.002000	0.000000	No
Al 167.079 {501}	☒	None				
Al 308.215 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	4	Al	0.000844	0.000000	No
			Mn	-0.000003	0.000000	No
			Ni	-0.000722	0.000000	No
			Cr	0.000734	0.000000	No
As 197.262 {471}	☒	1	Al	0.000112	0.000000	No
Ba 233.527 {445}	☒	1	Fe	0.000002	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000002	0.000000	No
Ba 493.409 { 68}	☒	1	Fe	0.000009	0.000000	No
Be 313.042 {108}	☒	2	Fe	0.000001	0.000000	No
			Ni	0.000000	0.000000	No
Be 234.861 {144}	☒	1	Fe	-0.000013	0.000000	No
Ca 315.887 {107}	☒	1	Fe	0.000000	0.000000	No
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	None				
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	1	Fe	0.000061	0.000000	No
Cd 228.802 {447}	☒	1	Fe	-0.000005	0.000000	No
Co 228.616 {447}	☒	3	Fe	-0.000025	0.000000	No
			Ba	-0.001175	0.000000	No
			Ti	0.001700	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000226	0.000000	No
Cr 205.560 {464}	☒	1	Fe	0.000000	0.000000	No
Cr 267.716 {126}	☒	4	Fe	0.000005	0.000000	No
			Mn	0.000157	0.000000	No
			Ti	0.000100	0.000000	No
			V	-0.000002	0.000000	No
Cu 223.008 {451}	☒	2	Fe	-0.000019	0.000000	No
			Mo	0.001000	0.000000	No
Cu 224.700 {450}	☒	2	Fe	0.003134	0.000000	No
			Ni	-0.007040	0.000000	No
Cu 324.754 {104}	☒	1	Fe	-0.000081	0.000000	No
Cu 327.396 {103}	☒	2	Fe	-0.000009	0.000000	No
			Mo	-0.000319	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	-0.000013	0.000000	No
Mn 259.373 {130}	☒	1	Mg	0.001207	0.000000	No
Mo 202.030 {466}	☒	1	Fe	-0.000015	0.000000	No
Mo 202.030 {467}	☒	1	Fe	-0.000009	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000052	0.000000	No
Ni 221.647 {452}	☒	2	Ca	-0.000003	0.000000	No
			Mg	-0.000003	0.000000	No
Ni 231.604 {445}	☒	6	Fe	-0.000056	0.000000	No
			Co	-0.000134	0.000000	No
			Mo	0.000840	0.000000	No
			Al	0.000003	0.000000	No
			Mn	0.000019	0.000000	No
			Be	-0.000294	0.000000	No
Pb 216.999 {455}	☒	2	Al	0.001866	0.000000	No
			Na	0.000000	0.000000	No
Pb 216.999 {456}	☒	1	Al	0.003022	0.000000	No
Pb 220.353 {153}	☒	1	Fe	-0.000011	0.000000	No
Pb 220.353 {453}	☒	6	Si	0.000000	0.000000	No
			Al	-0.000023	0.000000	No
			Ni	0.000106	0.000000	No
			Mo	-0.001644	0.000000	No
			V	-0.000018	0.000000	No
			Mn	0.000094	0.000000	No
Sb 206.833 {463}	☒	2	Fe	-0.000097	0.000000	No
			Cr	0.000000	0.000000	No
Sb 217.581 {455}	☒	2	Fe	-0.000077	0.000000	No
			Ni	0.000133	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000231	0.000000	No
Se 203.985 {465}	☒	1	Fe	-0.000160	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.000965	0.000000	No
Tl 190.856 {476}	☒	7	Fe	-0.000134	0.000000	No
			Be	-0.000013	0.000000	No
			Ti	0.000000	0.000000	No
			Mn	0.000000	0.000000	No
			Ni	0.000000	0.000000	No
			Co	0.002495	0.000000	No
			Cr	0.000220	0.000000	No
Tl 190.856 {477}	☒	2	Fe	-0.000126	0.000000	No
			Cr	0.000000	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000207	0.000000	No
V 292.402 {115}	☒	5	Fe	0.000045	0.000000	No
			Cr	-0.000051	0.000000	No
			Al	0.000000	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Ti	0.000420	0.000000	No
			Mo	-0.000481	0.000000	No
Zn 206.200 {463}	☒	1	Fe	0.000032	0.000000	No
Zn 213.856 {457}	☒	5	Fe	0.000125	0.000000	No
			Mn	0.000094	0.000000	No
			Ni	0.004500	0.000000	No
			Ti	-0.000307	0.000000	No
			Mo	0.000034	0.000000	No
Y 224.306 {450}*	☒	None				
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Na 588.995 { 57}	☒	1	Fe	-0.000218	0.000000	No
Na 589.592 { 57}	☒	1	Fe	0.000106	0.000000	No
Si 251.611 {134}	☒	1	Fe	-0.000024	0.000000	No
Ti 323.452 {104}	☒	1	Fe	-0.000018	0.000000	No
Ti 334.941 {101}	☒	1	Fe	0.000014	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000015	0.000000	No
Sr 421.552 { 80}	☒	1	Ca	0.000013	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000016	0.000000	No
B 249.678 {135}	☒	1	Fe	0.000002	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000464	0.000000	No
Li 670.784 { 50}	☒	1	Fe	0.000016	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000204	0.000000	No
K 769.896 { 44}	☒	1	Fe	0.000463	0.000000	No
P 213.618 {457}	☒	1	Fe	-0.000011	0.000000	No
S 182.034 {485}	☒	2	Mn	0.002145	0.000000	No
			Fe	0.001405	0.000000	No
Hg 184.950 {482}	☒	1	Fe	0.000009	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

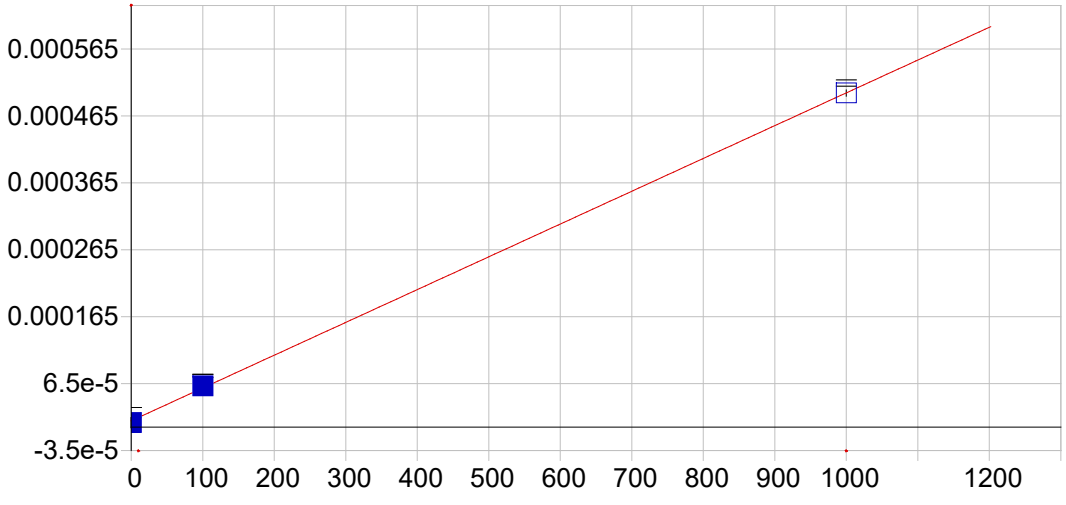


Ag 328.068 {103}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	13.072794	Re-Slope:	1.000000
A1 (Gain):	4.090565	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998518	Status:	OK.
Std Error of Est:	0.122659		
Predicted MDL:	0.992874		
Predicted MQL:	3.309579		

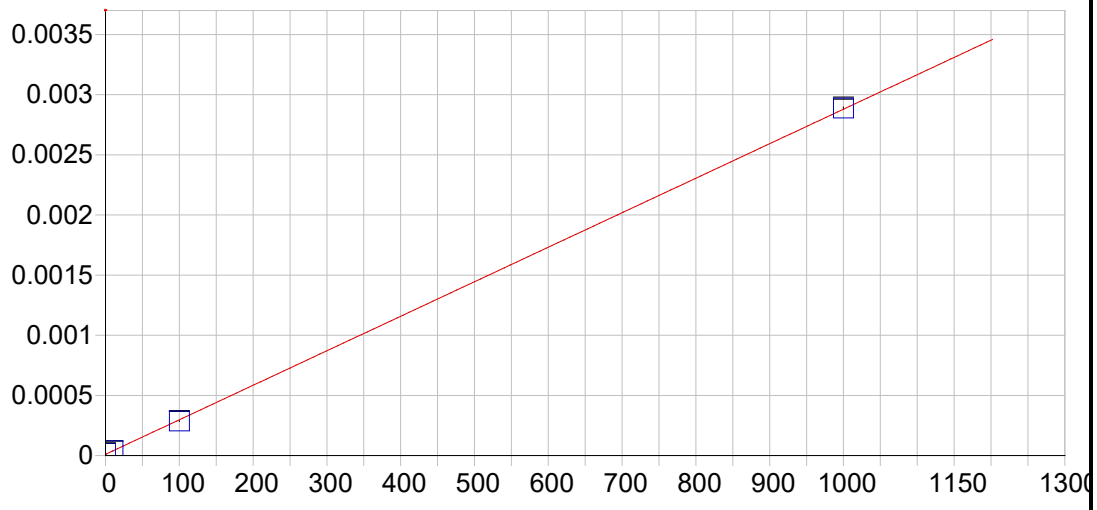
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00054	.001	.000	13.075	1.81	1
CalStd8=100	100.00	100.54	.545	.545	424.36	2.80	1
CalStd3=1	1.0000	.45524	-.545	-54.5	14.935	2.79	1



Ag 338.289 {100}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	None
A0 (Offset):	0.000009		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999942		Status:	OK.	
Std Error of Est:	0.000004				
Predicted MDL:	10.557109				
Predicted MQL:	35.190363				

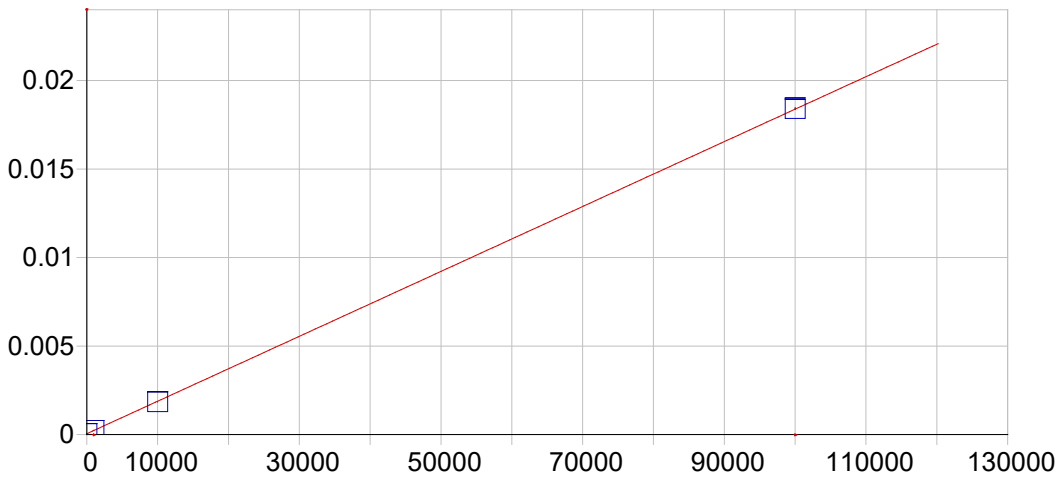
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-5.5775	-5.58	.000	.00001	.000	1
CalStd8=100	100.00	106.20	6.20	6.20	.00006	.000	1
Ag Ba 1000,	1000.0	999.38	-.621	-.062	.00050	.000	1



Al 167.079 {501}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000010		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999879		Status:	OK.	
Std Error of Est:	0.000007				
Predicted MDL:	0.603202				
Predicted MQL:	2.010675				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	3.2582	3.26	.000	.00002	.000	1
CalStd9=100	1000.0	1003.1	3.09	.309	.00289	.000	1
CalStd5=10	10.000	9.8264	-.174	-1.74	.00004	.000	1
CalStd8=100	100.00	96.337	-3.66	-3.66	.00029	.000	1

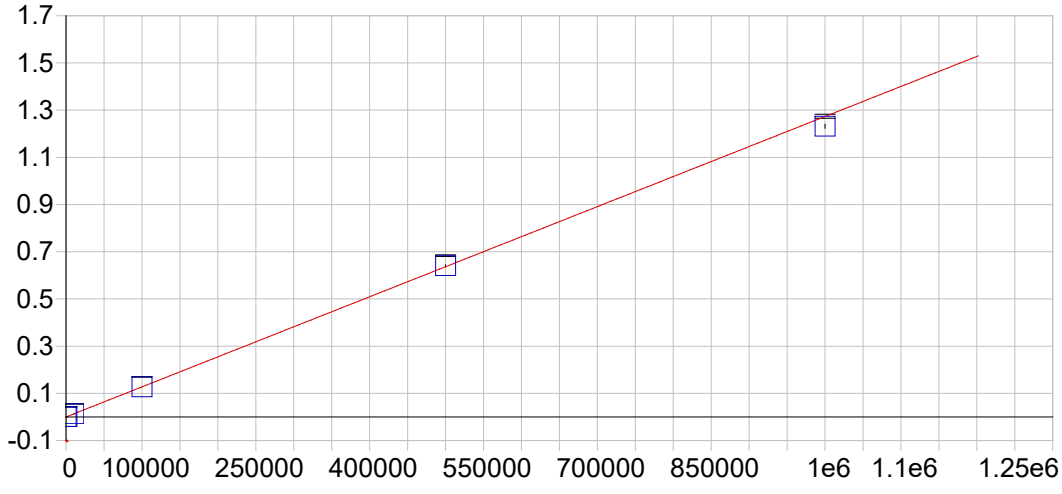


Al 308.215 {109}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000049	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999980	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	34.732877		
Predicted MQL:	115.776257		

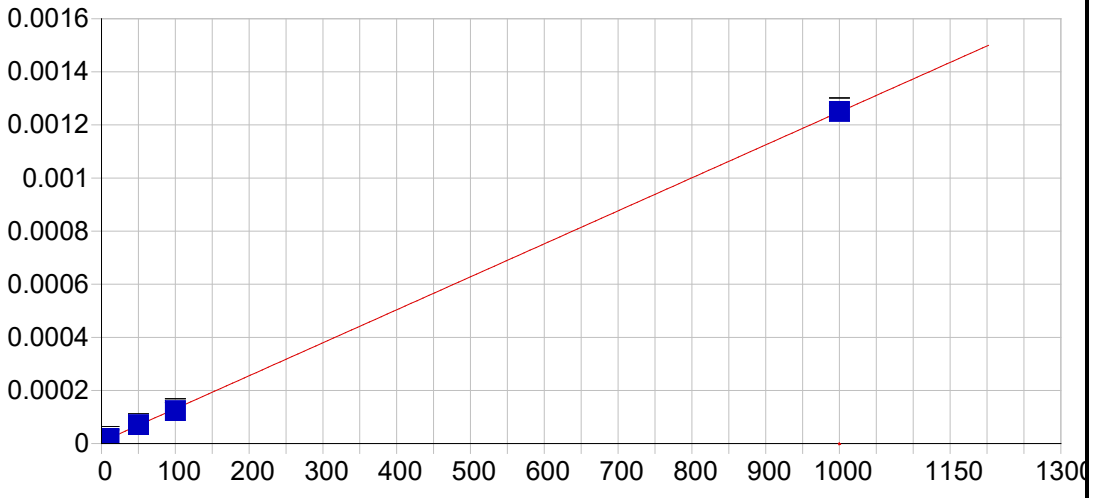
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01325	-.013	.000	.00005	.000	1
CalStd10=10	10000.	9818.9	-181.	-1.81	.00185	.000	1
CalStd9=100	1000.0	1029.8	29.8	2.98	.00024	.000	1
CalStd13=10	100000.	100150.	151.	.151	.01841	.000	1



Al 396.152 { 85}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	-0.000014		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999944		Status:	OK.	
Std Error of Est:	0.000043				
Predicted MDL:	9.562253				
Predicted MQL:	31.874175				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-4.2130	-4.21	.000	-.00002	.000	1
CalStd14=50	500000.	503080.	3080.	.617	.64045	.003	1
CalStd13=10	100000.	99833.	-167.	-.167	.12708	.000	1
CalStd10=10	10000.	10069.	69.0	.690	.01280	.000	1
CalStd9=100	1000.0	1064.6	64.6	6.46	.00134	.000	1
CalibStd15=	1000000.	967560.	-32400.	-3.24	1.2318	.008	1

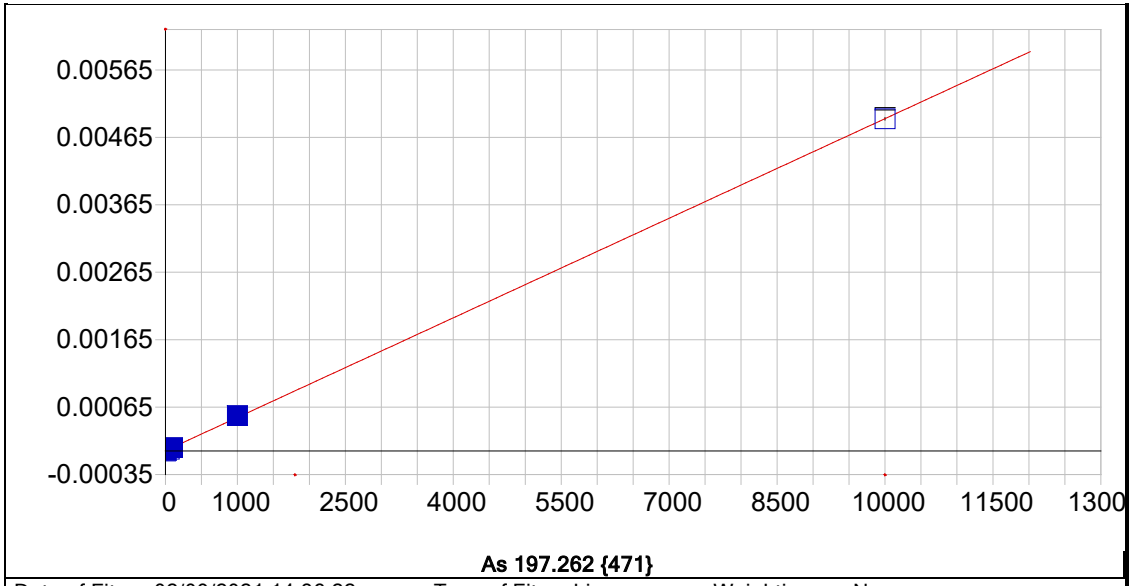


As 193.759 {474}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999969	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	3.679171		
Predicted MQL:	12.263903		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	3.0059	3.01	.000	.00001	.000	1
CalStd9=100	1000.0	1000.5	.511	.051	.00125	.000	1
CalStd7=50	50.000	51.348	1.35	2.70	.00007	.000	1
CalStd5=10	10.000	11.022	1.02	10.2	.00002	.000	1
CalStd8=100	100.00	94.113	-5.89	-5.89	.00012	.000	1

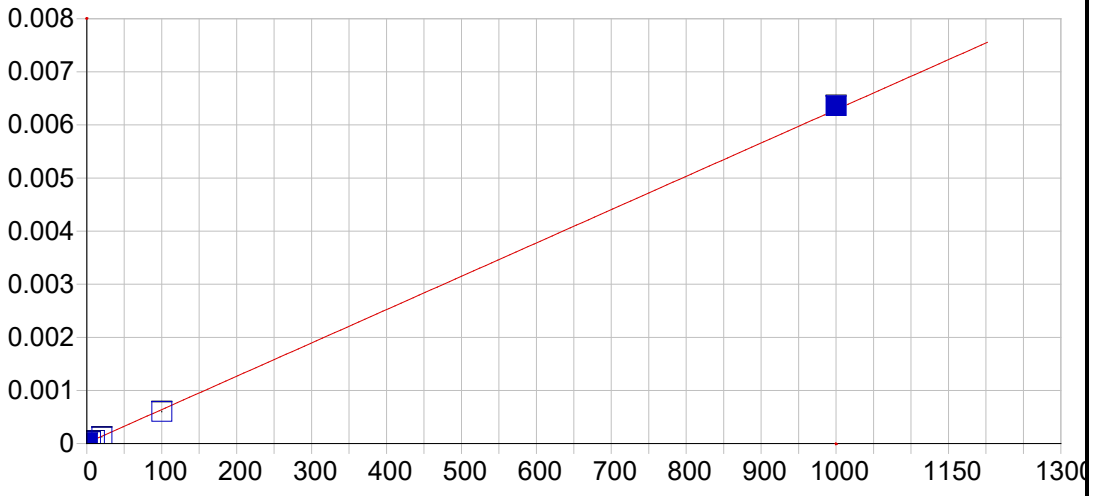


As 197.262 {471}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999979	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	6.746151		
Predicted MQL:	22.487169		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-13.617	-13.6	.000	-.00000	.000	1
CalStd9=100	1000.0	1053.1	53.1	5.31	.00052	.000	1
CalStd7=50	50.000	38.928	-11.1	-22.1	.00002	.000	1
CalStd5=10	10.000	-1.7578	-11.8	-118.	.00000	.000	1
CalStd8=100	100.00	88.473	-11.5	-11.5	.00005	.000	1
CalStd10=10	10000.	9994.9	-5.13	-.051	.00493	.000	1

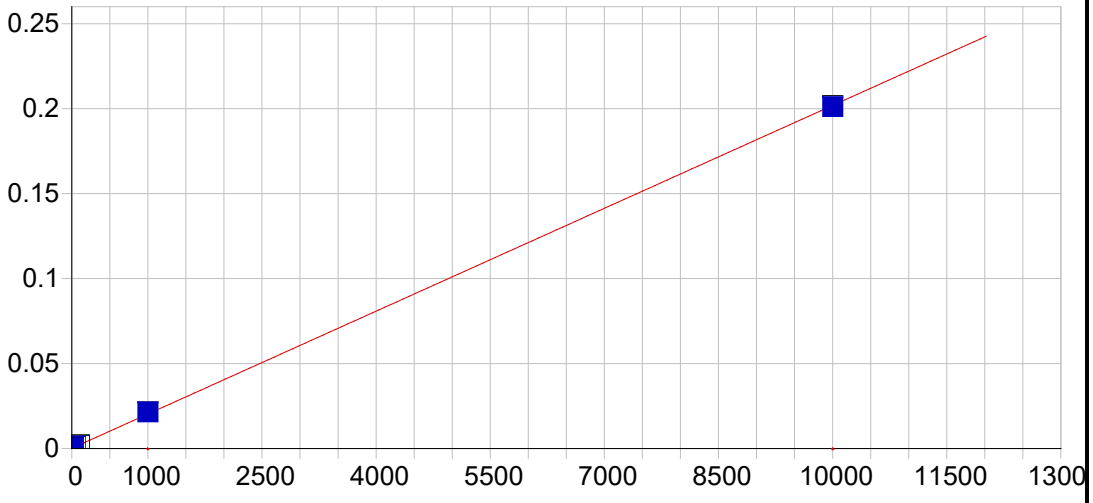


Ba 233.527 {445}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000011	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998809	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.467927		
Predicted MQL:	1.559756		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00177	.002	.000	.00001	.000	1
CalStd5=10	10.000	8.5087	-1.49	-14.9	.00006	.000	1
CalStd6=20	20.000	18.013	-1.99	-9.93	.00012	.000	1
CalStd8=100	100.00	94.391	-5.61	-5.61	.00060	.000	1
CalStd4=5	5.0000	3.5385	-1.46	-29.2	.00003	.000	1
CalStd9=100	1000.0	1011.7	11.7	1.17	.00636	.000	1
CalStd3=1	1.0000	-.18668	-1.19	-119.	.00001	.000	1

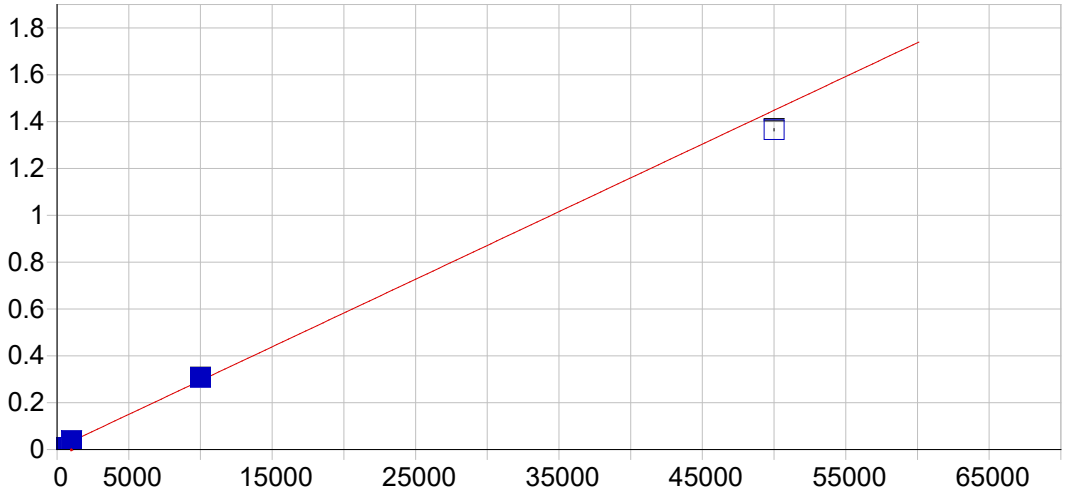


Ba 455.403 { 74}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000150	Re-Slope:	1.000000
A1 (Gain):	0.000020	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999136	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.422016		
Predicted MQL:	1.406719		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00460	.005	.000	.00015	.000	1
CalStd7=50	50.000	51.569	1.57	3.14	.00119	.000	1
CalStd5=10	10.000	6.8793	-3.12	-31.2	.00029	.000	1
CalStd6=20	20.000	16.439	-3.56	-17.8	.00048	.000	1
CalStd8=100	100.00	96.932	-3.07	-3.07	.00211	.000	1
CalStd4=5	5.0000	1.5546	-3.45	-68.9	.00018	.000	1
CalStd9=100	1000.0	1054.9	54.9	5.49	.02143	.000	1
CalStd3=1	1.0000	-2.4683	-3.47	-347.	.00010	.000	1
CalStd10=10	10000.	9960.2	-39.8	-.398	.20109	.000	1

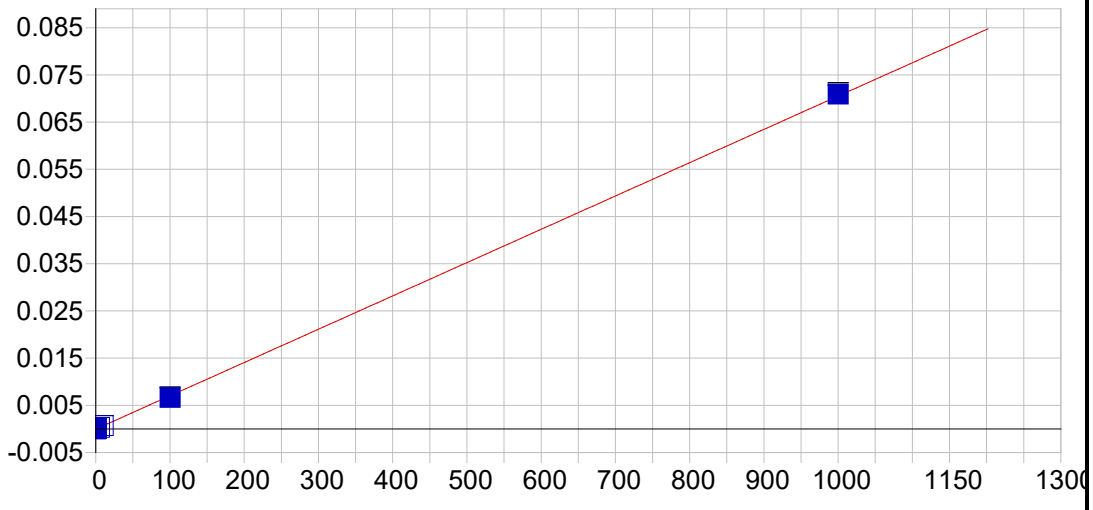


Ba 493.409 { 68}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.005851	Re-Slope:	1.000000
A1 (Gain):	0.000029	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998647	Status:	OK.
Std Error of Est:	0.000777		
Predicted MDL:	0.933915		
Predicted MQL:	3.113050		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	2.5512	2.55	.000	.00592	.000	1
CalStd9=100	1000.0	1100.0	100.0	10.00	.03758	.001	1
CalStd8=100	100.00	96.119	-3.88	-3.88	.00862	.000	1
Ag Ba 1000,	50000.	47132.	-2870.	-5.74	1.3656	.005	1
CalStd10=10	10000.	10449.	449.	4.49	.30728	.001	1

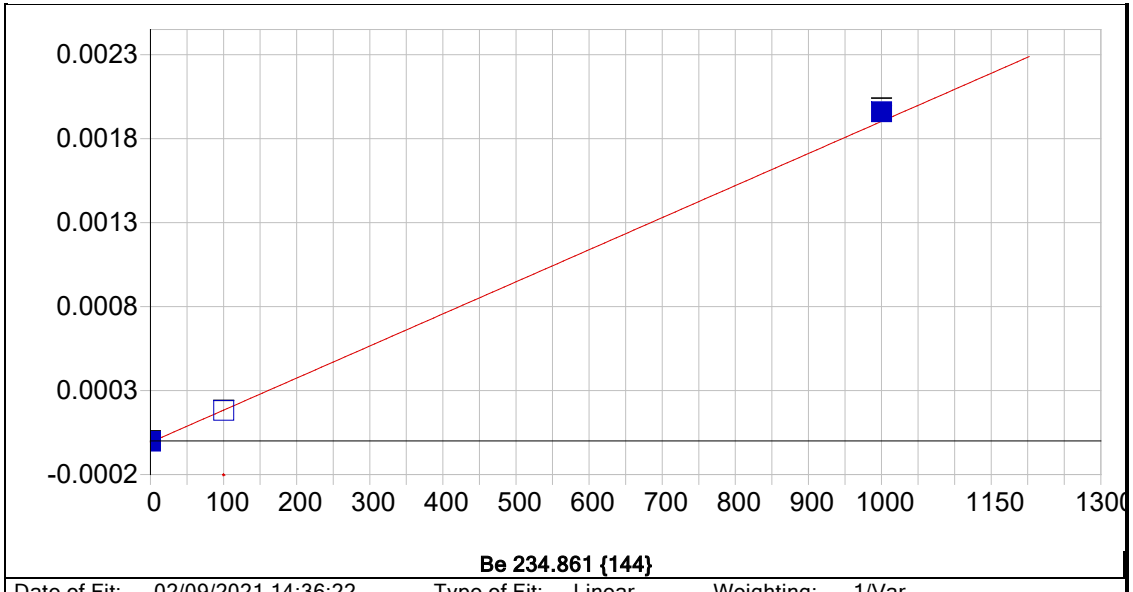


Be 313.042 {108}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000041	Re-Slope:	1.000000
A1 (Gain):	0.000071	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999839	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.027109		
Predicted MQL:	0.090365		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00024	.000	.000	-.00004	.000	1
CalStd5=10	10.000	10.012	.012	.124	.00067	.000	1
CalStd8=100	100.00	94.838	-5.16	-5.16	.00665	.000	1
CalStd2=0.5	.50000	.35188	-.148	-29.6	-.00002	.000	1
CalStd4=5	5.0000	4.7871	-.213	-4.26	.00030	.000	1
CalStd9=100	1000.0	1005.6	5.60	.560	.07091	.000	1
CalStd3=1	1.0000	.90875	-.091	-9.13	.00002	.000	1

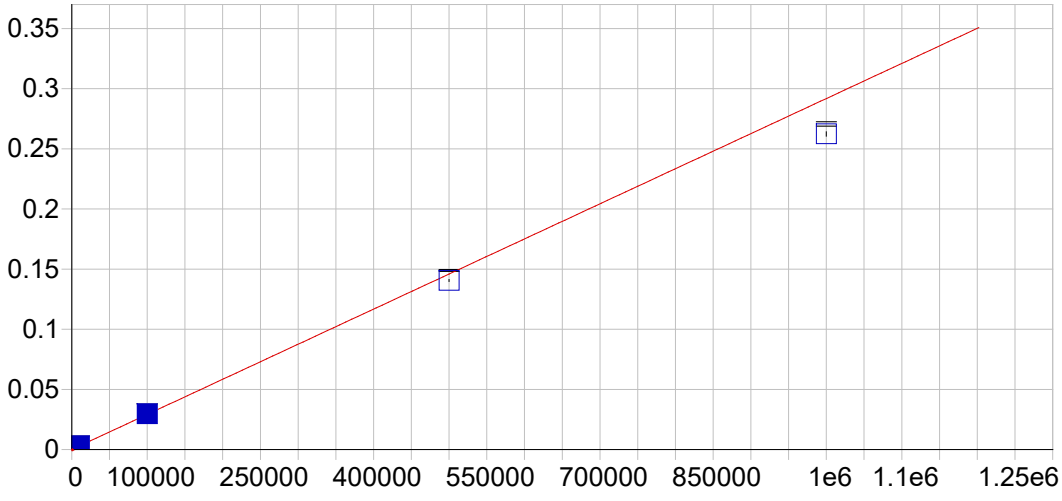


Be 234.861 {144}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999363	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.904133		
Predicted MQL:	3.013777		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	3.0522	3.05	.000	-.00000	.000	1
CalStd9=100	1000.0	1029.6	29.6	2.96	.00196	.000	1
CalStd8=100	100.00	99.094	-.906	-.906	.00018	.000	1

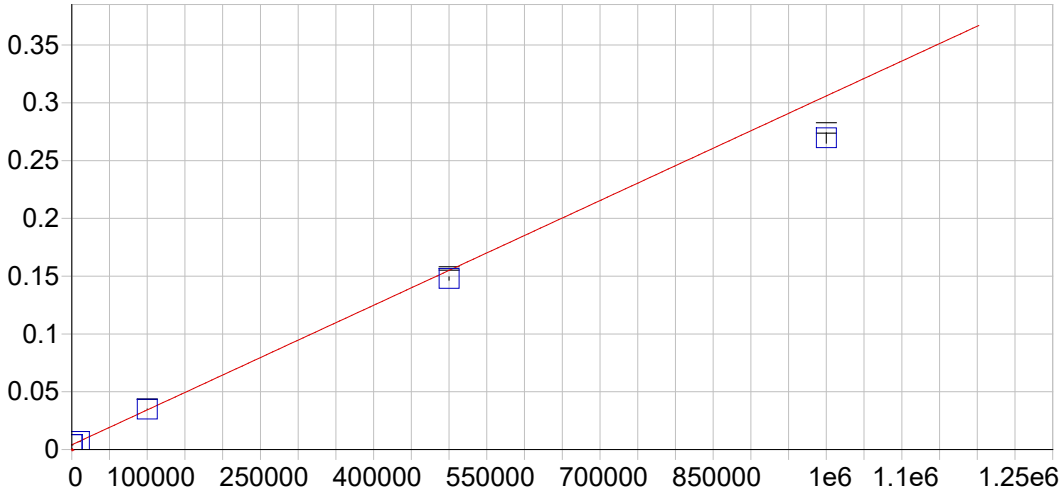


Ca 315.887 {107}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000046	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999371	Status:	OK.
Std Error of Est:	0.000049		
Predicted MDL:	9.390499		
Predicted MQL:	31.301664		

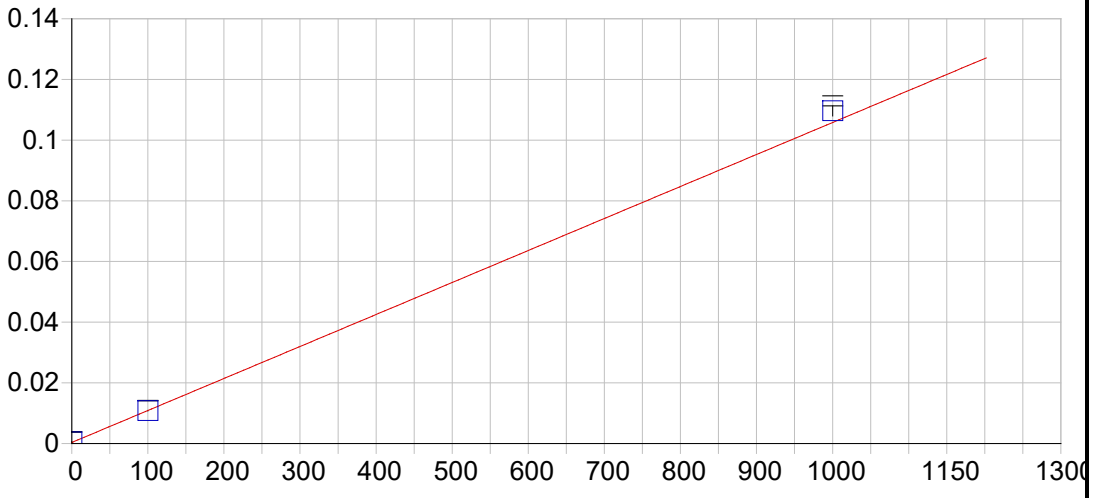
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-11.519	-11.5	.000	.00004	.000	1
CalStd10=10	10000.	10089.	89.3	.893	.00299	.000	1
CalStd13=10	100000.	101750.	1750.	1.75	.02973	.000	1
CalStd14=50	500000.	481450.	-18600.	-3.71	.14052	.001	1
CalStd9=100	1000.0	1062.6	62.6	6.26	.00036	.000	1
CalibStd15=	1000000.	899100.	-101000.	-10.1	.26238	.002	1



Ca 317.933 {106}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.004091		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999121		Status:	OK.	
Std Error of Est:	0.000385				
Predicted MDL:	13.801734				
Predicted MQL:	46.005780				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	245.68	246.	.000	.00417	.000	1
CalStd10=10	10000.	9228.6	-771.	-7.71	.00688	.000	1
CalStd13=10	100000.	101900.	1900.	1.90	.03485	.000	1
CalStd14=50	500000.	476680.	-23300.	-4.66	.14798	.001	1
CalStd9=100	1000.0	894.50	-105.	-10.5	.00436	.000	1
CalibStd15=	1000000.	879560.	-120000.	-12.0	.26959	.004	1

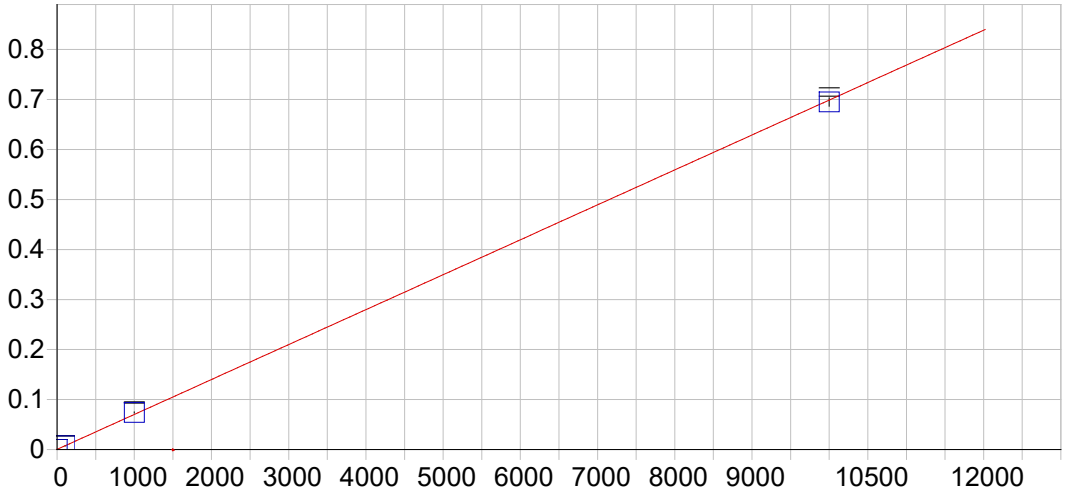


Ca 393.366 { 86}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000346	Re-Slope:	1.000000
A1 (Gain):	0.000105	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999542	Status:	OK.
Std Error of Est:	0.000289		
Predicted MDL:	0.071996		
Predicted MQL:	0.239986		

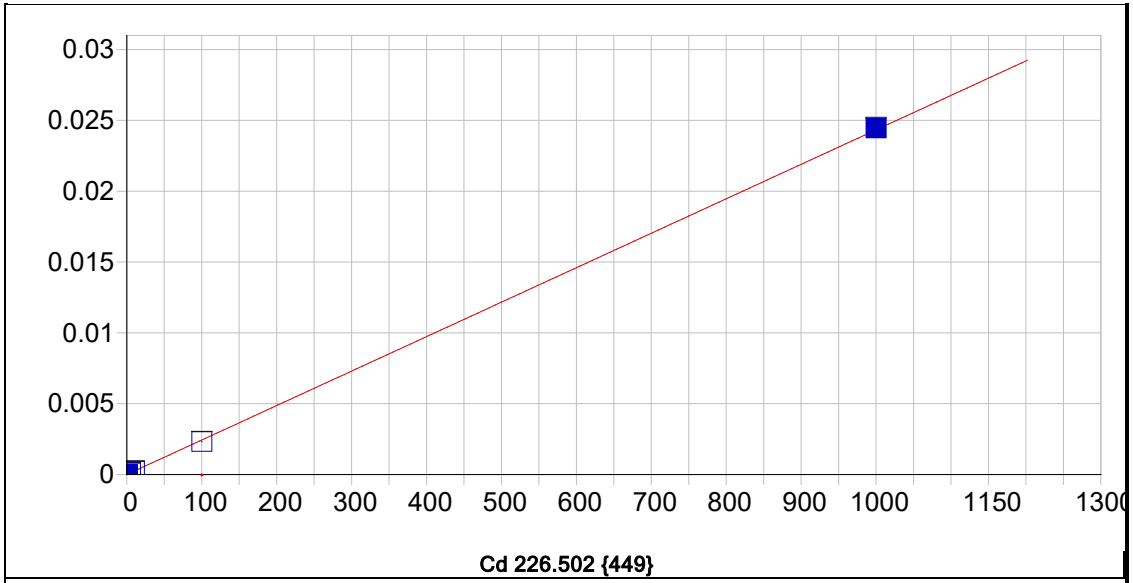
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	1.7781	1.78	.000	.00053	.000	1
CalStd9=100	1000.0	1036.2	36.2	3.62	.10962	.002	1
CalStd8=100	100.00	99.445	-.555	-.555	.01083	.000	1



Ca 396.847 { 85}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000339		Re-Slope:	1.000000	
A1 (Gain):	0.000070		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999852		Status:	OK.	
Std Error of Est:	0.000057				
Predicted MDL:	0.114112				
Predicted MQL:	0.380374				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00478	-.005	.000	.00034	.000	1
CalStd10=10	10000.	9945.4	-54.6	-.546	.69514	.008	1
CalStd8=100	100.00	99.849	-.151	-.151	.00731	.000	1
CalStd9=100	1000.0	1054.7	54.7	5.47	.07402	.001	1

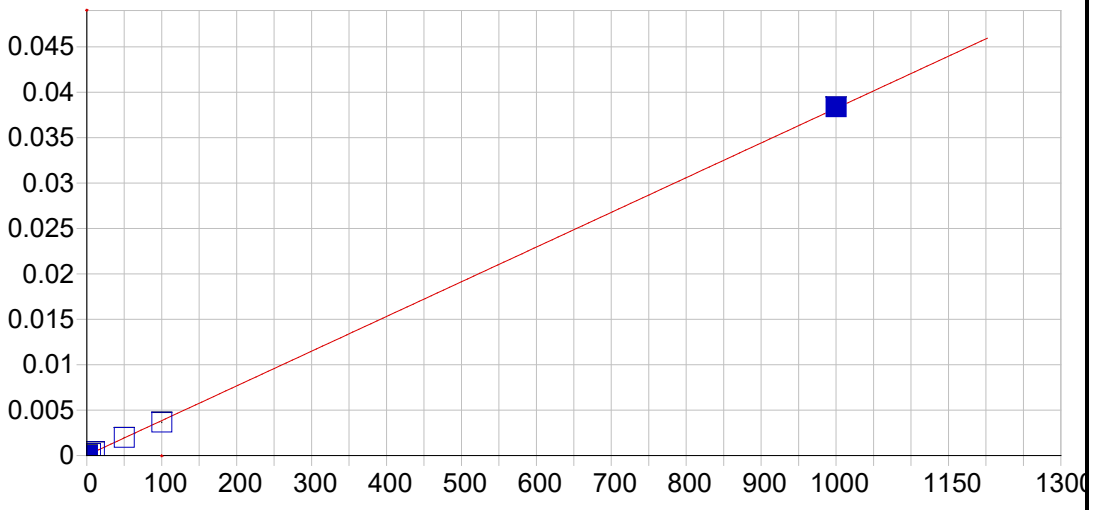


Cd 226.502 {449}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000024	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999838	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.208634		
Predicted MQL:	0.695445		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00032	.000	.000	.00000	.000	1
CalStd3=1	1.0000	.82154	-.178	-17.8	.00002	.000	1
CalStd2=0.5	.50000	.32919	-.171	-34.2	.00001	.000	1
CalStd4=5	5.0000	4.6266	-.373	-7.47	.00012	.000	1
CalStd8=100	100.00	95.366	-4.63	-4.63	.00232	.000	1
CalStd5=10	10.000	10.001	.001	.014	.00025	.000	1
CalStd9=100	1000.0	1005.4	5.35	.535	.02446	.000	1

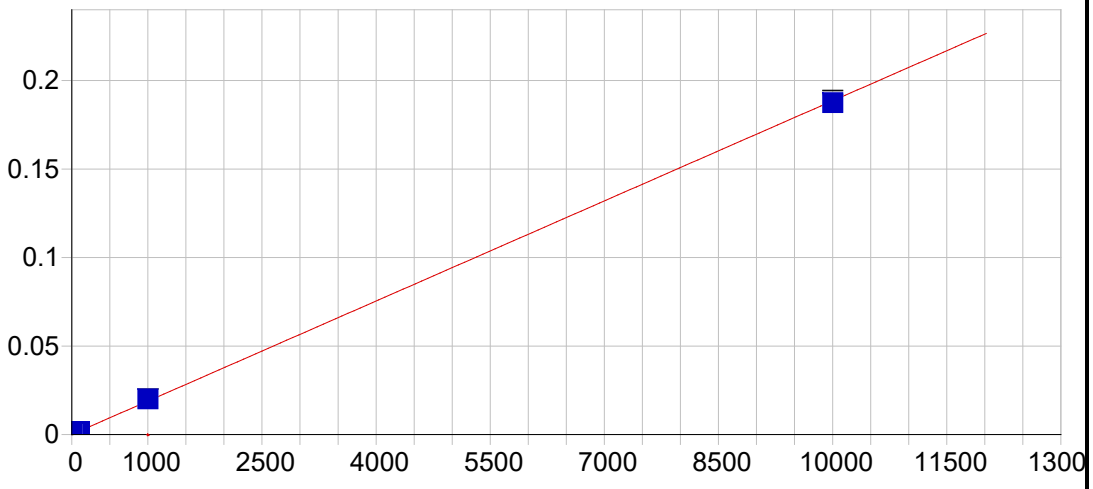


Cd 228.802 {447}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000027	Re-Slope:	1.000000
A1 (Gain):	0.000038	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999830	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.175473		
Predicted MQL:	0.584909		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00028	.000	.000	.00003	.000	1
CalStd7=50	50.000	51.380	1.38	2.76	.00199	.000	1
CalStd3=1	1.0000	.85000	-.150	-15.0	.00006	.000	1
CalStd2=0.5	.50000	.31999	-.180	-36.0	.00004	.000	1
CalStd4=5	5.0000	4.7389	-.261	-5.22	.00021	.000	1
CalStd8=100	100.00	95.108	-4.89	-4.89	.00366	.000	1
CalStd5=10	10.000	10.185	.185	1.85	.00042	.000	1
CalStd9=100	1000.0	1003.9	3.92	.392	.03839	.000	1

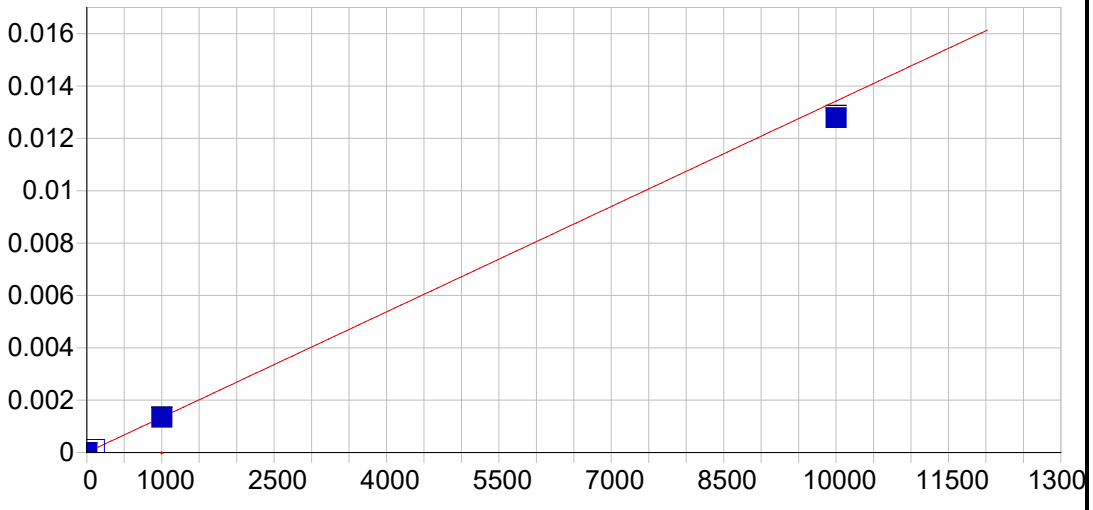


Co 228.616 {447}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000035	Re-Slope:	1.000000
A1 (Gain):	0.000019	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999653	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.317770		
Predicted MQL:	1.059233		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00195	.002	.000	.00004	.000	1
CalStd7=50	50.000	53.197	3.20	6.39	.00104	.000	1
CalStd5=10	10.000	8.9383	-1.06	-10.6	.00020	.000	1
CalStd4=5	5.0000	3.5929	-1.41	-28.1	.00010	.000	1
CalStd8=100	100.00	98.971	-1.03	-1.03	.00190	.000	1
CalStd9=100	1000.0	1062.4	62.4	6.24	.02007	.000	1
CalStd3=1	1.0000	-.67155	-1.67	-167.	.00002	.000	1
CalStd10=10	10000.	9939.6	-60.4	-.604	.18773	.001	1

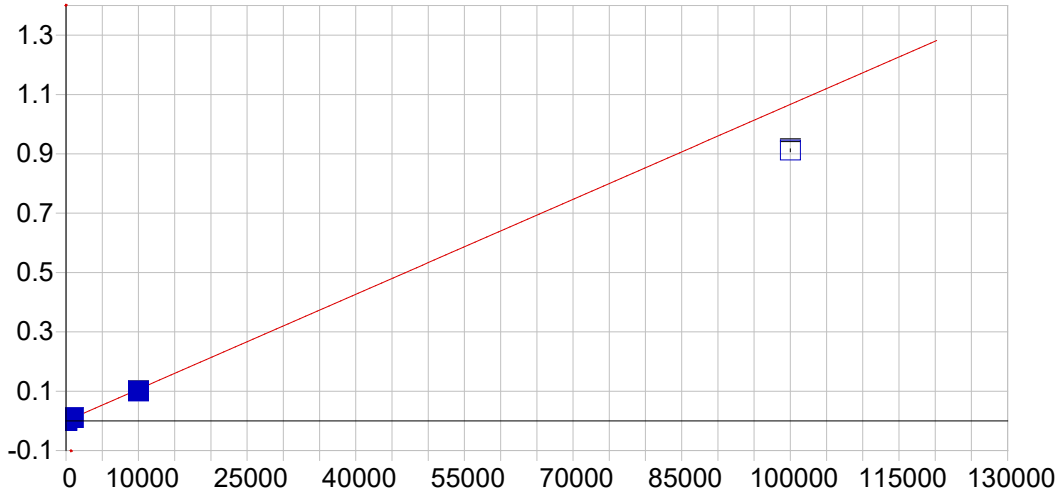


Co 238.892 {141}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999950	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.897514		
Predicted MQL:	2.991714		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	1.2247	1.22	.000	.00000	.000	1
CalStd9=100	1000.0	1001.4	1.39	.139	.00135	.000	1
CalStd10=10	10000.	9523.4	-477.	-4.77	.01279	.000	1
CalStd8=100	100.00	94.349	-5.65	-5.65	.00013	.000	1

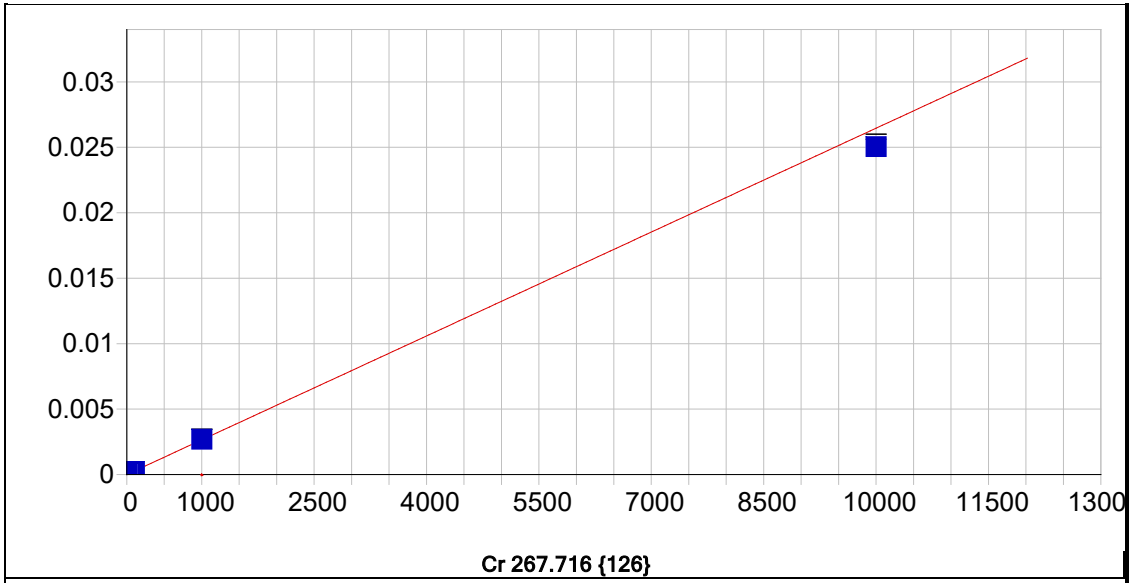


Cr 205.560 {464}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000011	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998791	Status:	OK.
Std Error of Est:	0.000063		
Predicted MDL:	0.345236		
Predicted MQL:	1.150787		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	1.2070	1.21	.000	.00001	.000	1
CalStd5=10	10.000	9.5588	-.441	-4.41	.00010	.000	1
CalStd7=50	50.000	51.755	1.76	3.51	.00055	.000	1
CalStd9=100	1000.0	1021.3	21.3	2.13	.01089	.000	1
CalStd8=100	100.00	95.584	-4.42	-4.42	.00102	.000	1
CalStd4=5	5.0000	4.7425	-.257	-5.15	.00005	.000	1
CalStd3=1	1.0000	.89833	-.102	-10.2	.00001	.000	1
CalStd10=10	10000.	9425.5	-575.	-5.75	.10054	.001	1
CalStd12=10	100000.	85511.	-14500.	-14.5	.91210	.005	1

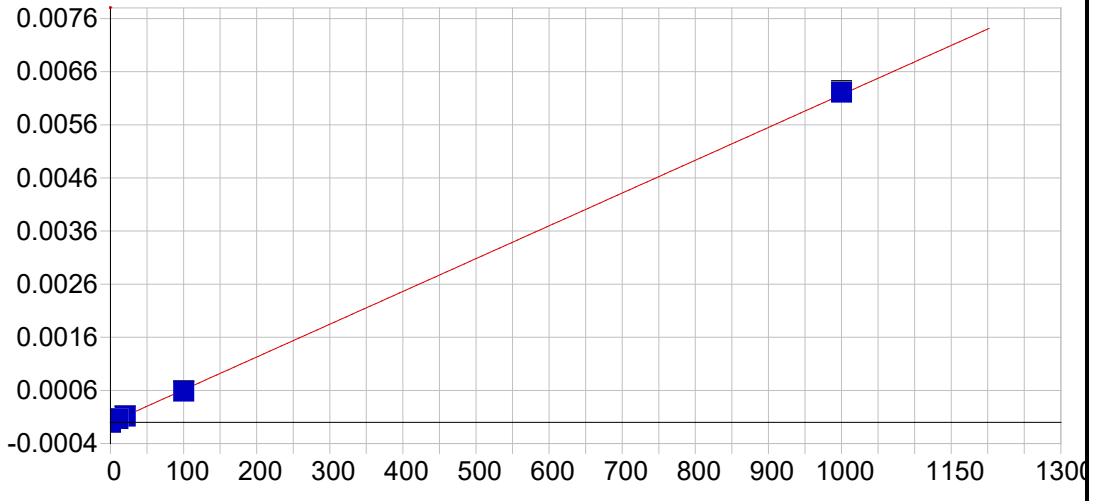


Cr 267.716 {126}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999353	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.664891		
Predicted MQL:	2.216305		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.79132	.791	.000	.00001	.000	1
CalStd5=10	10.000	9.3076	-.692	-6.92	.00003	.000	1
CalStd7=50	50.000	51.478	1.48	2.96	.00014	.000	1
CalStd9=100	1000.0	1014.3	14.3	1.43	.00269	.000	1
CalStd8=100	100.00	94.506	-5.49	-5.49	.00025	.000	1
CalStd4=5	5.0000	3.4519	-1.55	-31.0	.00001	.000	1
CalStd10=10	10000.	9463.9	-536.	-5.36	.02505	.000	1

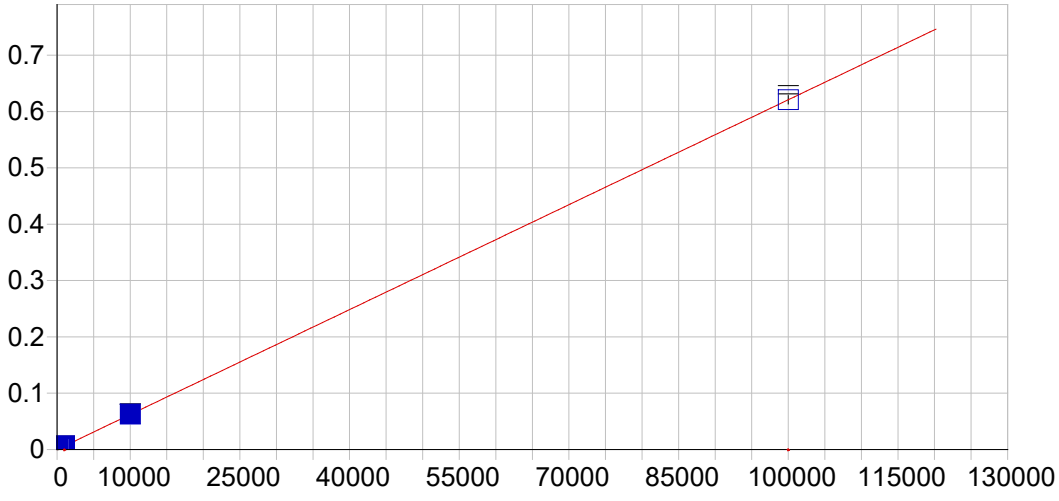


Cu 223.008 {451}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999760	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	1.180568		
Predicted MQL:	3.935225		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.55934	.559	.000	-.00000	.000	1
CalStd9=100	1000.0	1007.2	7.20	.720	.00622	.000	1
CalStd8=100	100.00	95.576	-4.42	-4.42	.00058	.000	1
CalStd6=20	20.000	19.497	-.503	-2.52	.00011	.000	1
CalStd5=10	10.000	11.299	1.30	13.0	.00006	.000	1

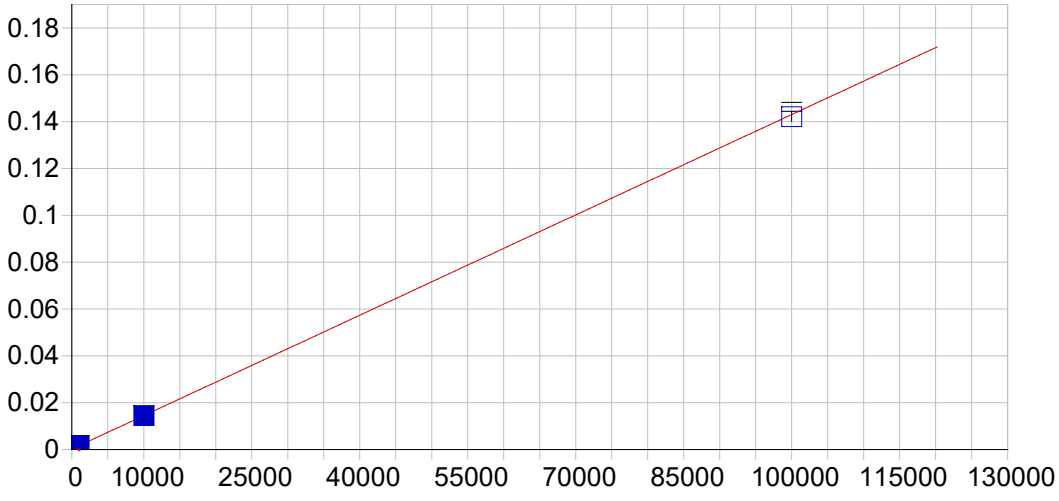


Cu 224.700 {450}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000065	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000384		
Predicted MDL:	0.548944		
Predicted MQL:	1.829812		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-8.7727	-8.77	.000	.00001	.000	1
CalStd9=100	1000.0	1045.5	45.5	4.55	.00653	.000	1
CalStd7=50	50.000	3.6119	-46.4	-92.8	.00009	.000	1
CalStd8=100	100.00	42.810	-57.2	-57.2	.00033	.000	1
CalStd6=20	20.000	-6.2354	-26.2	-131.	.00003	.000	1
CalStd12=10	100000.	99989.	-10.7	-.011	.62083	.007	1
CalStd10=10	10000.	10104.	104.	1.04	.06255	.000	1

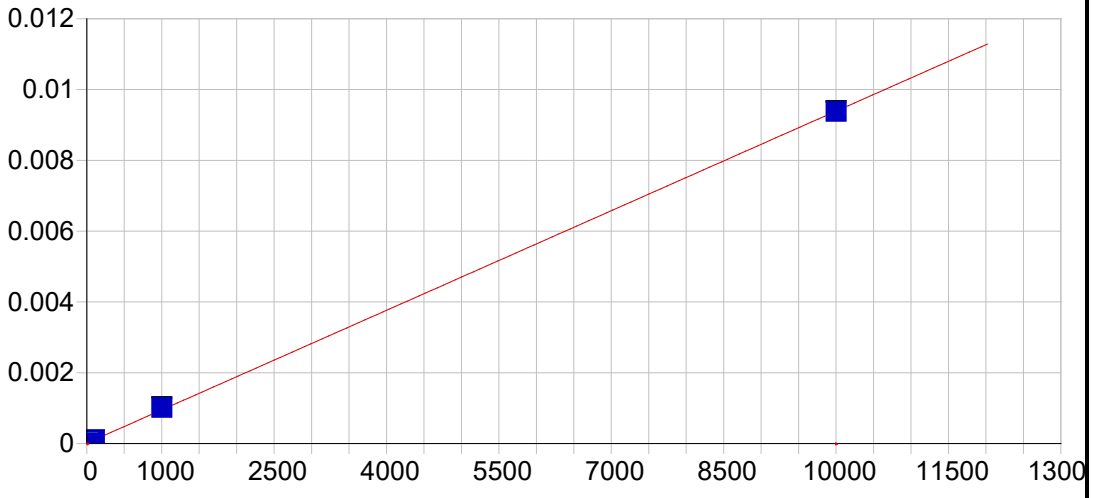


Cu 324.754 {104}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000203	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999890	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	3.692358		
Predicted MQL:	12.307861		

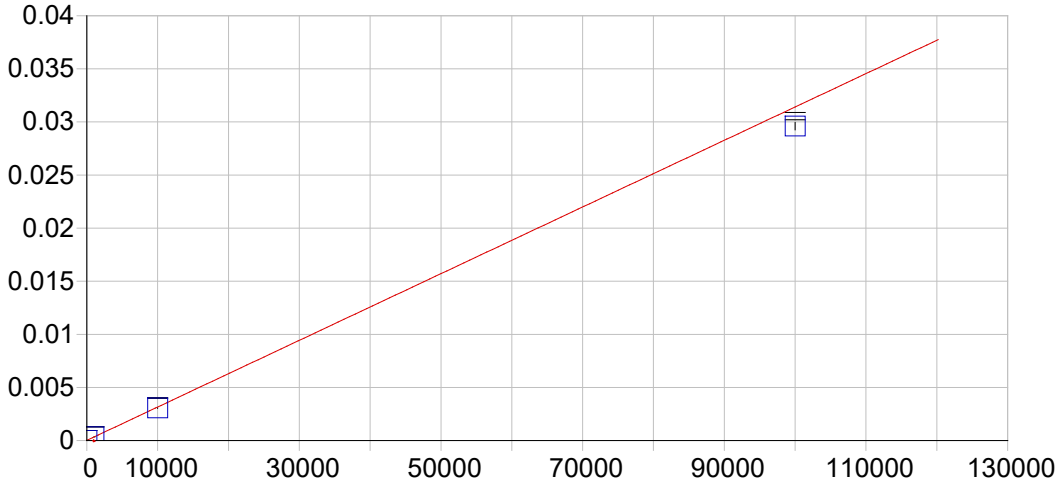
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-5.2367	-5.24	.000	.00020	.000	1
CalStd9=100	1000.0	1062.2	62.2	6.22	.00172	.000	1
CalStd8=100	100.00	101.24	1.24	1.24	.00035	.000	1
CalStd10=10	10000.	9974.7	-25.3	-.253	.01445	.000	1
CalStd12=10	100000.	99306.	-694.	-.694	.14203	.002	1
CalStd5=10	10.000	7.5274	-2.47	-24.7	.00021	.000	1
CalStd6=20	20.000	19.698	-.302	-1.51	.00023	.000	1
CalStd7=50	50.000	53.376	3.38	6.75	.00028	.000	1



Cu 327.396 {103}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000012		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999944		Status:	OK.	
Std Error of Est:	0.000009				
Predicted MDL:	8.223579				
Predicted MQL:	27.411928				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	5.6628	5.66	.000	.00002	.000	1
CalStd6=20	20.000	21.672	1.67	8.36	.00003	.000	1
CalStd7=50	50.000	54.351	4.35	8.70	.00006	.000	1
CalStd8=100	100.00	99.831	-.169	-.169	.00011	.000	1
CalStd9=100	1000.0	1073.5	73.5	7.35	.00102	.000	1
CalStd10=10	10000.	9987.7	-12.3	-.123	.00938	.000	1
CalStd4=5	5.0000	4.2600	-.740	-14.8	.00002	.000	1
CalStd5=10	10.000	4.4988	-5.50	-55.0	.00002	.000	1

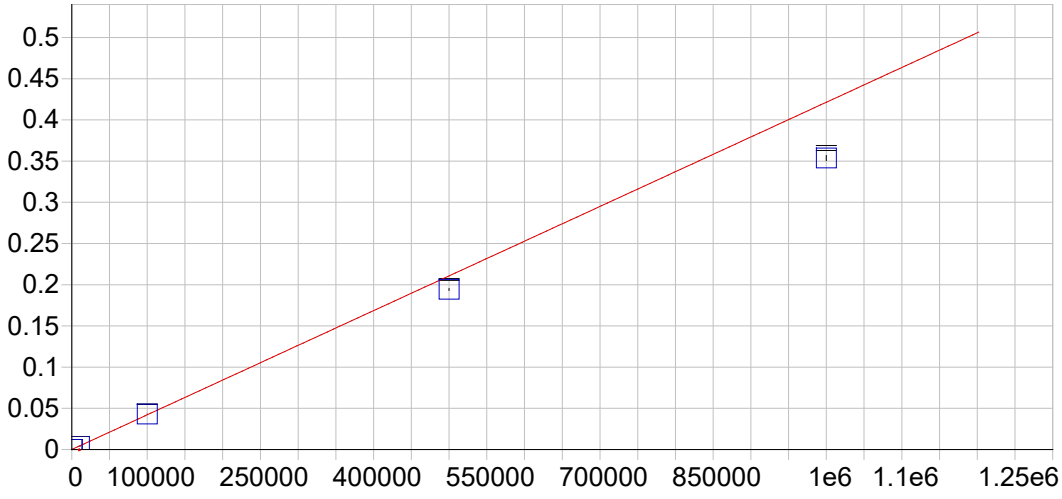


Fe 234.349 {144}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000016	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999621	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	1.792760		
Predicted MQL:	5.975868		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.0710	-1.07	.000	.00002	.000	1
CalStd10=10	10000.	9701.5	-298.	-2.98	.00306	.000	1
CalStd13=10	100000.	94240.	-5760.	-5.76	.02960	.000	1
CalStd9=100	1000.0	1040.1	40.1	4.01	.00034	.000	1

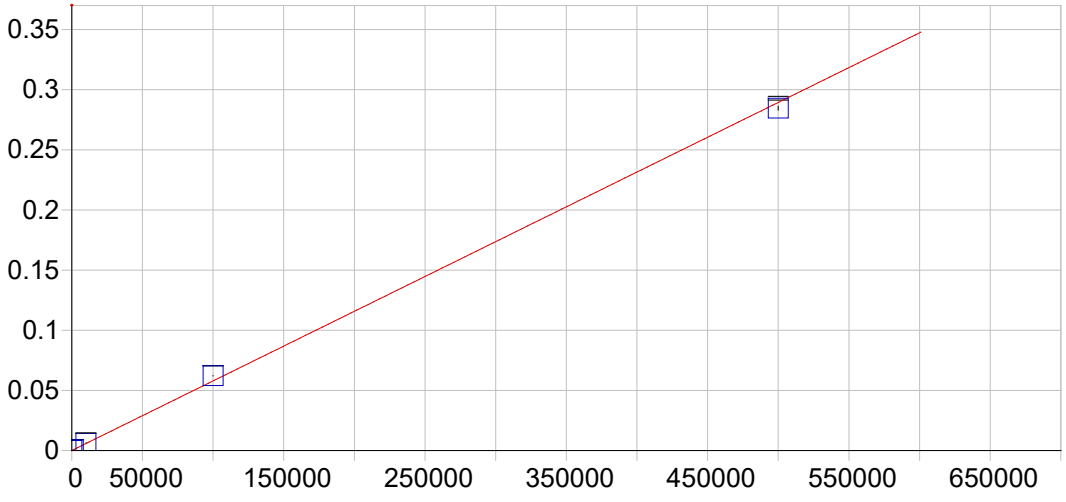


Fe 239.562 {140}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998893	Status:	OK.
Std Error of Est:	0.000057		
Predicted MDL:	5.783640		
Predicted MQL:	19.278799		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-6.6626	-6.66	.000	.00001	.000	1
CalStd10=10	10000.	10222.	222.	2.22	.00432	.000	1
CalStd13=10	100000.	101710.	1710.	1.71	.04287	.000	1
CalStd14=50	500000.	460940.	-39100.	-7.81	.19425	.001	1
CalStd9=100	1000.0	1080.0	80.0	8.00	.00046	.000	1
CalibStd15=	1000000.	839310.	-161000.	-16.1	.35369	.003	1

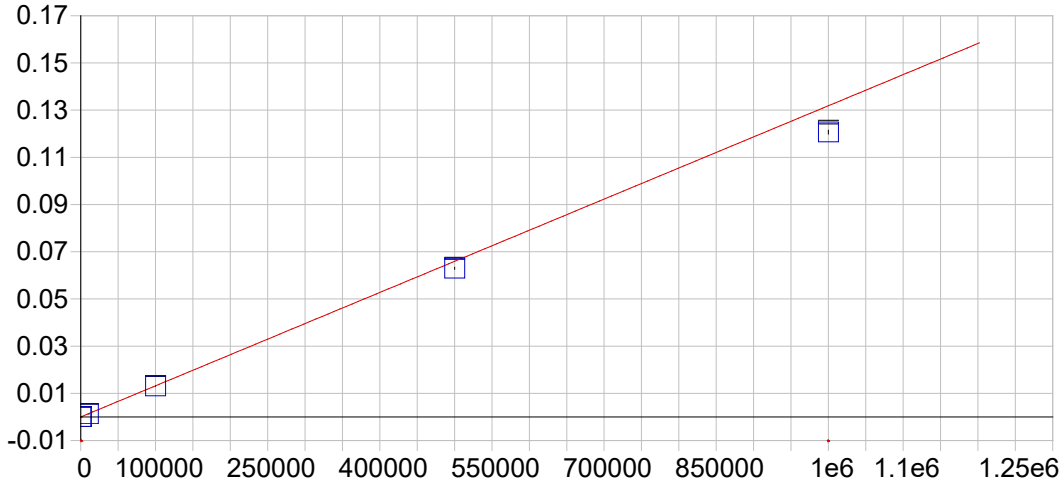


Fe 259.940 {129}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999373	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	4.757090		
Predicted MQL:	15.856966		

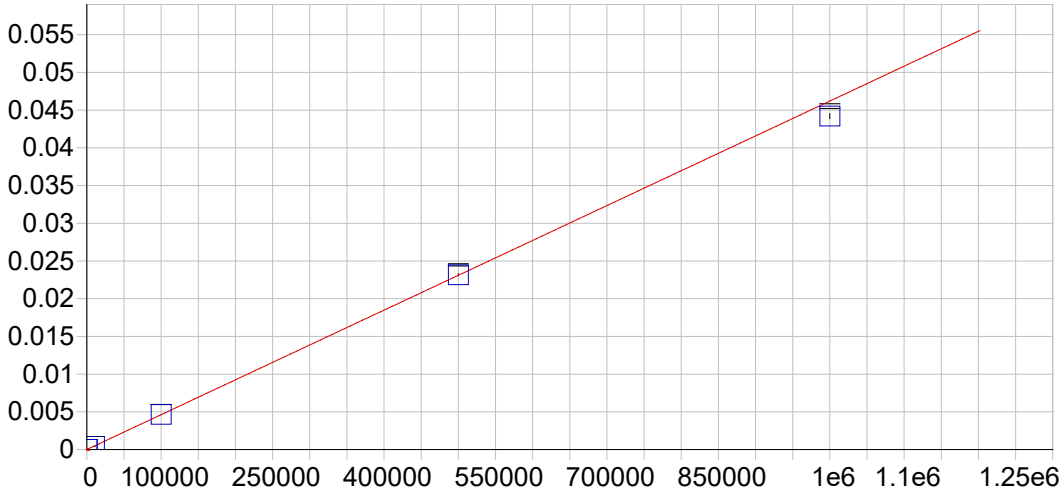
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.27600	-.276	.000	.00000	.000	1
CalStd10=10	10000.	10753.	753.	7.53	.00623	.000	1
CalStd13=10	100000.	107420.	7420.	7.42	.06218	.000	1
CalStd14=50	500000.	491680.	-8320.	-1.66	.28461	.001	1
CalStd9=100	1000.0	1143.1	143.	14.3	.00067	.000	1



Mg 202.582 {466}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Curvilinear	Weighting:	1/Var
A0 (Offset):	-0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999916		Status:	OK.	
Std Error of Est:	0.000002				
Predicted MDL:	3.535278				
Predicted MQL:	11.784260				

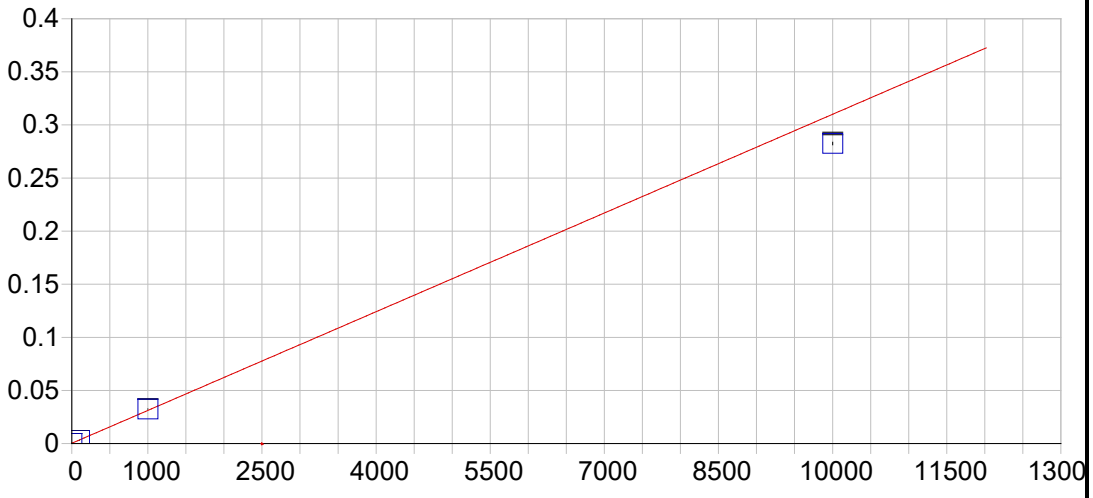
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.6305	-1.63	.000	-.00000	.000	1
CalStd13=10	100000.	99268.	-732.	-.732	.01309	.000	1
CalStd10=10	10000.	9642.6	-357.	-3.57	.00127	.000	1
CalStd14=50	500000.	477590.	-22400.	-4.48	.06298	.000	1
CalStd9=100	1000.0	1012.1	12.1	1.21	.00013	.000	1
CalibStd15=	1000000.	915210.	-84800.	-8.48	.12068	.001	1



Mg 279.079 {121}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999918		Status:	OK.	
Std Error of Est:	0.000010				
Predicted MDL:	35.889822				
Predicted MQL:	119.632739				

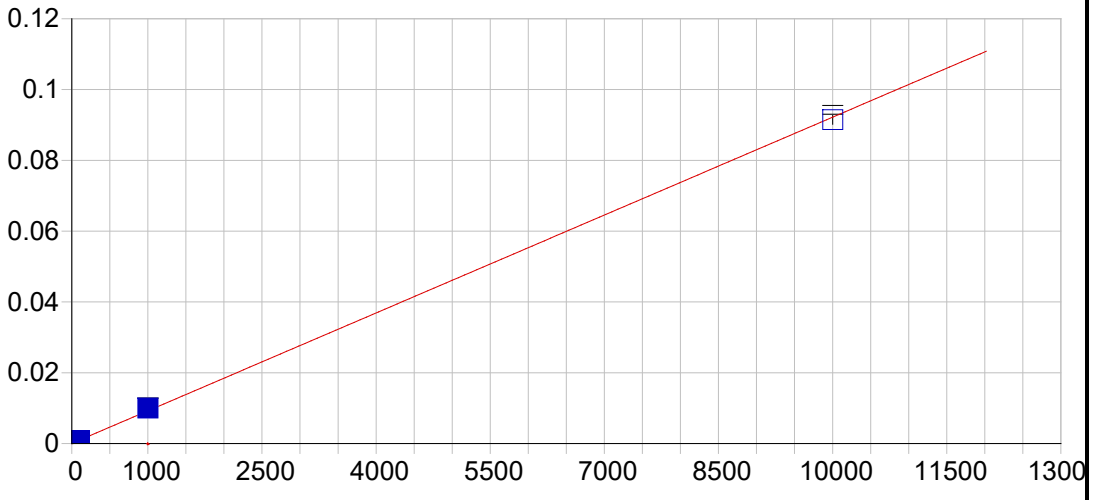
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	29.546	29.5	.000	.00000	.000	1
CalStd13=10	100000.	100410.	414.	.414	.00464	.000	1
CalStd10=10	10000.	9729.5	-271.	-2.71	.00045	.000	1
CalStd14=50	500000.	501240.	1240.	.249	.02316	.000	1
CalStd9=100	1000.0	1016.3	16.3	1.63	.00005	.000	1
CalibStd15=	1000000.	956430.	-43600.	-4.36	.04419	.000	1



Mg 280.270 {120}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000233		Re-Slope:	1.000000	
A1 (Gain):	0.000031		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998289		Status:	OK.	
Std Error of Est:	0.000421				
Predicted MDL:	0.029688				
Predicted MQL:	0.098961				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.49528	-.495	.000	.00022	.000	1
CalStd9=100	1000.0	1038.7	38.7	3.87	.03241	.000	1
CalStd10=10	10000.	9112.2	-888.	-8.88	.28253	.001	1
CalStd8=100	100.00	96.894	-3.11	-3.11	.00323	.000	1

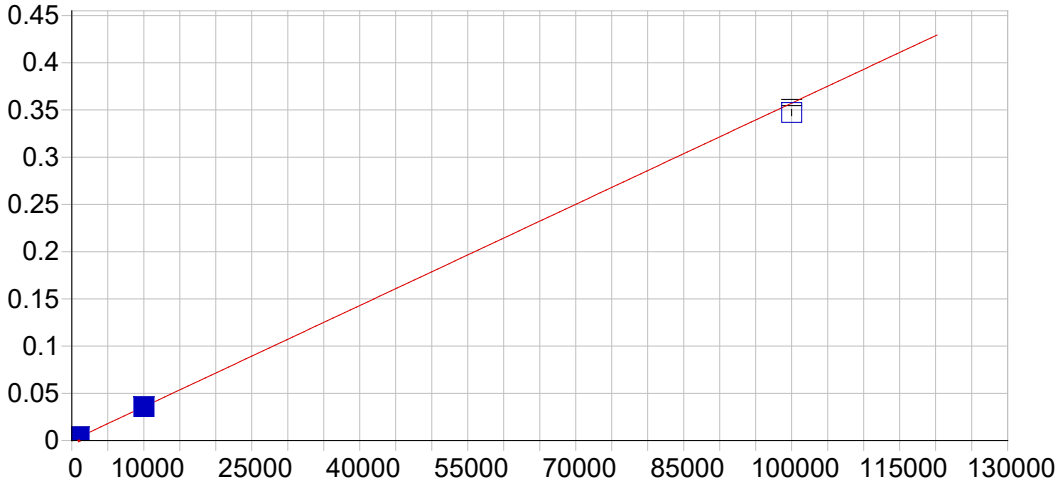


Mn 257.610 {131}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000019	Re-Slope:	1.000000
A1 (Gain):	0.000009	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999629	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.094758		
Predicted MQL:	0.315860		

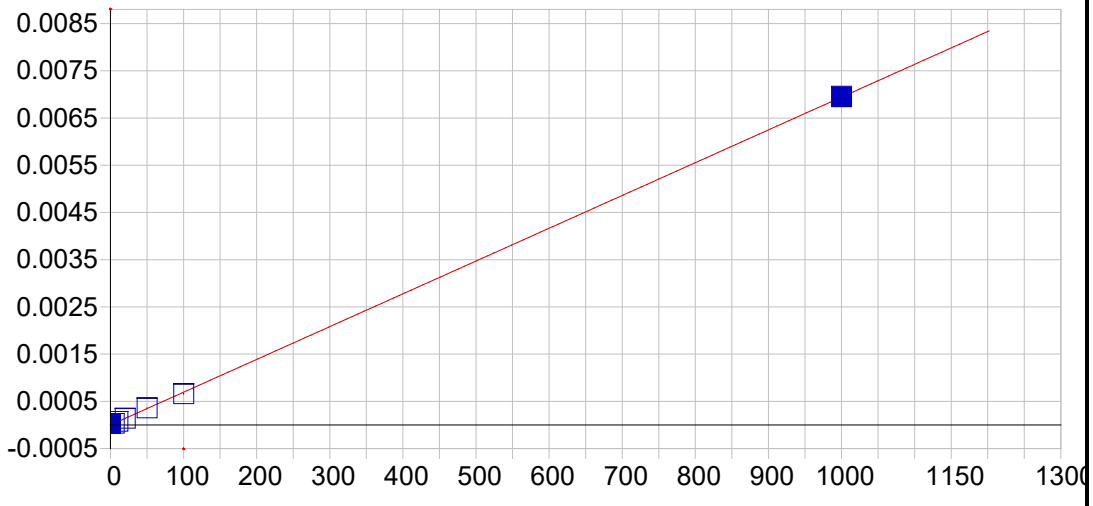
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00159	.002	.000	.00002	.000	1
CalStd5=10	10.000	8.8565	-1.14	-11.4	.00010	.000	1
CalStd7=50	50.000	54.714	4.71	9.43	.00052	.000	1
CalStd6=20	20.000	18.781	-1.22	-6.09	.00019	.000	1
CalStd8=100	100.00	101.44	1.44	1.44	.00095	.000	1
CalStd4=5	5.0000	3.3810	-1.62	-32.4	.00005	.000	1
CalStd9=100	1000.0	1080.1	80.1	8.01	.00998	.000	1
CalStd10=10	10000.	9917.7	-82.3	-.823	.09144	.001	1



Mn 259.373 {130}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000020		Re-Slope:	1.000000	
A1 (Gain):	0.000004		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999880		Status:	OK.	
Std Error of Est:	0.000034				
Predicted MDL:	0.900019				
Predicted MQL:	3.000062				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.40139	-.401	.000	.00002	.000	1
CalStd10=10	10000.	10010.	9.82	.098	.03582	.000	1
CalStd9=100	1000.0	1074.8	74.8	7.48	.00386	.000	1
CalStd12=10	100000.	97190.	-2810.	-2.81	.34725	.003	1

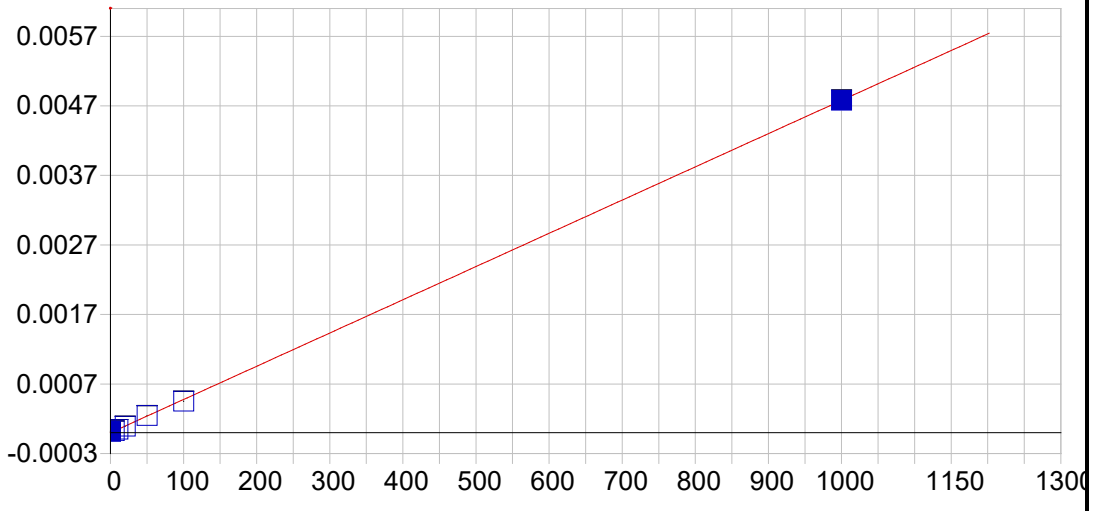


Mo 202.030 {466}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999978	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.538983		
Predicted MQL:	1.796611		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	2.7663	2.77	.000	.00002	.000	1
CalStd7=50	50.000	51.510	1.51	3.02	.00036	.000	1
CalStd6=20	20.000	19.854	-.146	-.731	.00014	.000	1
CalStd5=10	10.000	10.595	.595	5.95	.00007	.000	1
CalStd8=100	100.00	94.907	-5.09	-5.09	.00066	.000	1
CalStd4=5	5.0000	4.9372	-.063	-1.26	.00003	.000	1
CalStd9=100	1000.0	1000.4	.431	.043	.00695	.000	1

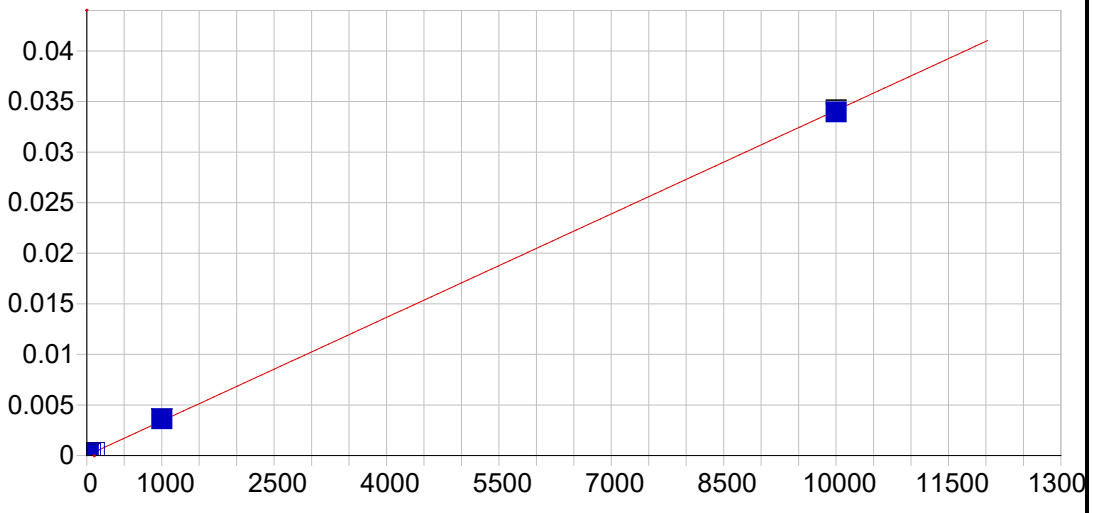


Mo 202.030 {467}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999974	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	0.655472		
Predicted MQL:	2.184907		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	3.4627	3.46	.000	.00002	.000	1
CalStd7=50	50.000	51.522	1.52	3.04	.00025	.000	1
CalStd6=20	20.000	19.486	-.514	-2.57	.00009	.000	1
CalStd5=10	10.000	10.081	.081	.812	.00005	.000	1
CalStd8=100	100.00	94.742	-5.26	-5.26	.00045	.000	1
CalStd4=5	5.0000	5.2481	.248	4.96	.00002	.000	1
CalStd9=100	1000.0	1000.5	.458	.046	.00478	.000	1

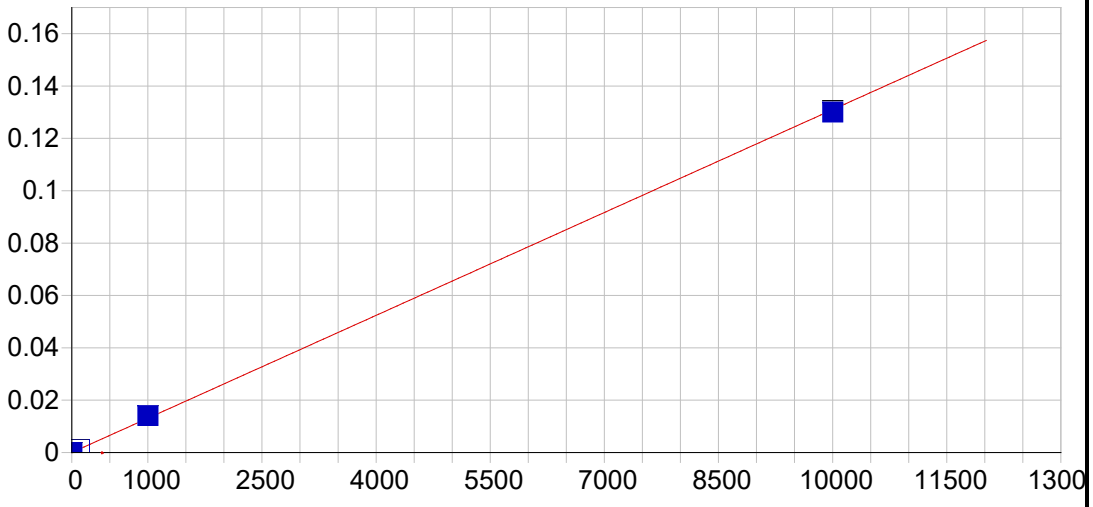


Mo 204.598 {464}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999686	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.084230		
Predicted MQL:	3.614099		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00497	.005	.000	.00001	.000	1
CalStd7=50	50.000	50.951	.951	1.90	.00018	.000	1
CalStd6=20	20.000	16.548	-3.45	-17.3	.00006	.000	1
CalStd5=10	10.000	7.5162	-2.48	-24.8	.00003	.000	1
CalStd8=100	100.00	96.577	-3.42	-3.42	.00034	.000	1
CalStd4=5	5.0000	1.9401	-3.06	-61.2	.00001	.000	1
CalStd9=100	1000.0	1059.8	59.8	5.98	.00362	.000	1
CalStd10=10	10000.	9951.7	-48.3	-.483	.03396	.000	1

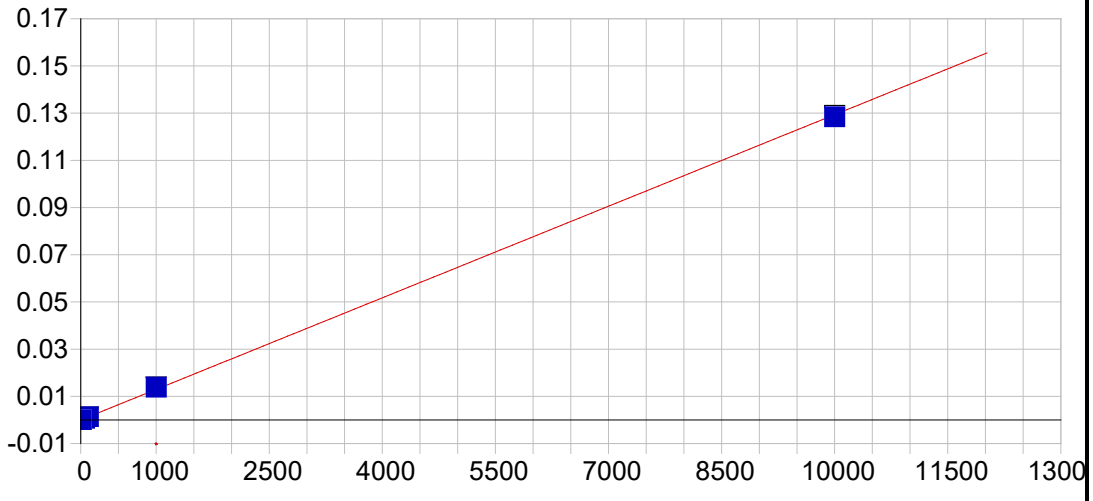


Ni 221.647 {452}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000014	Re-Slope:	1.000000
A1 (Gain):	0.000013	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999724	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	0.523858		
Predicted MQL:	1.746193		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00691	-.007	.000	.00001	.000	1
CalStd10=10	10000.	9925.2	-74.8	-.748	.13000	.001	1
CalStd8=100	100.00	100.19	.189	.189	.00133	.000	1
CalStd9=100	1000.0	1074.7	74.7	7.47	.01409	.000	1

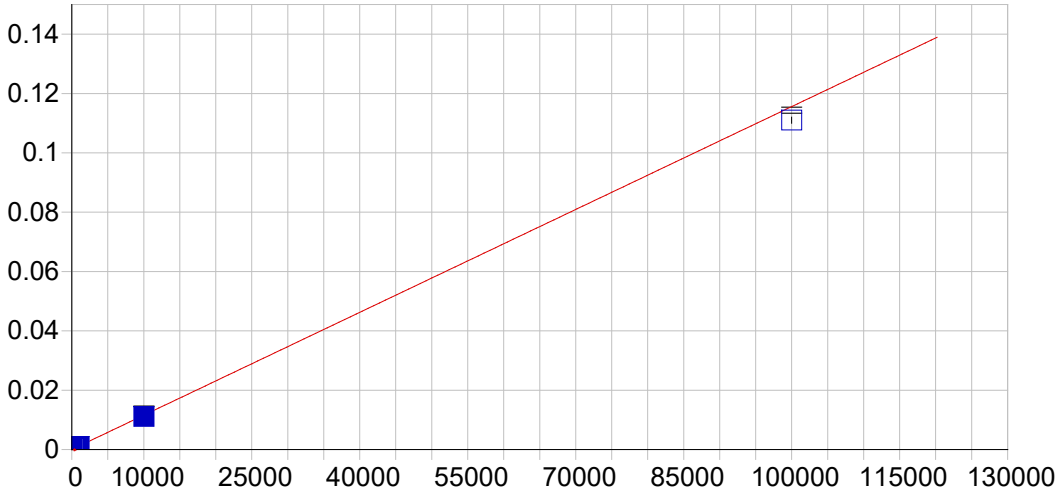


Ni 231.604 {445}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000013	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999643	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.534446		
Predicted MQL:	1.781487		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00149	.001	.000	-.00000	.000	1
CalStd7=50	50.000	53.246	3.25	6.49	.00069	.000	1
CalStd5=10	10.000	9.3748	-.625	-6.25	.00012	.000	1
CalStd8=100	100.00	99.844	-.156	-.156	.00129	.000	1
CalStd4=5	5.0000	3.5788	-1.42	-28.4	.00004	.000	1
CalStd9=100	1000.0	1072.1	72.1	7.21	.01387	.000	1
CalStd3=1	1.0000	-.27128	-1.27	-127.	-.00001	.000	1
CalStd10=10	10000.	9928.1	-71.9	-.719	.12841	.001	1

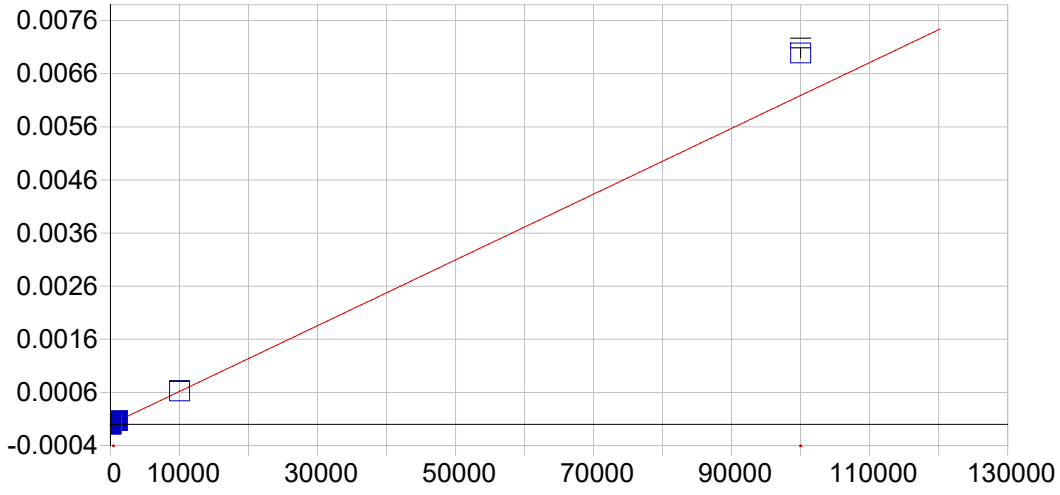


Pb 216.999 {455}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999671	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	5.873984		
Predicted MQL:	19.579947		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	2.0209	2.02	.000	.00001	.000	1
CalStd9=100	1000.0	1016.3	16.3	1.63	.00118	.000	1
CalStd10=10	10000.	9621.4	-379.	-3.79	.01113	.000	1
CalStd8=100	100.00	94.129	-5.87	-5.87	.00012	.000	1
CalStd5=10	10.000	6.3029	-3.70	-37.0	.00001	.000	1
CalStd12=10	100000.	96038.	-3960.	-3.96	.11101	.001	1

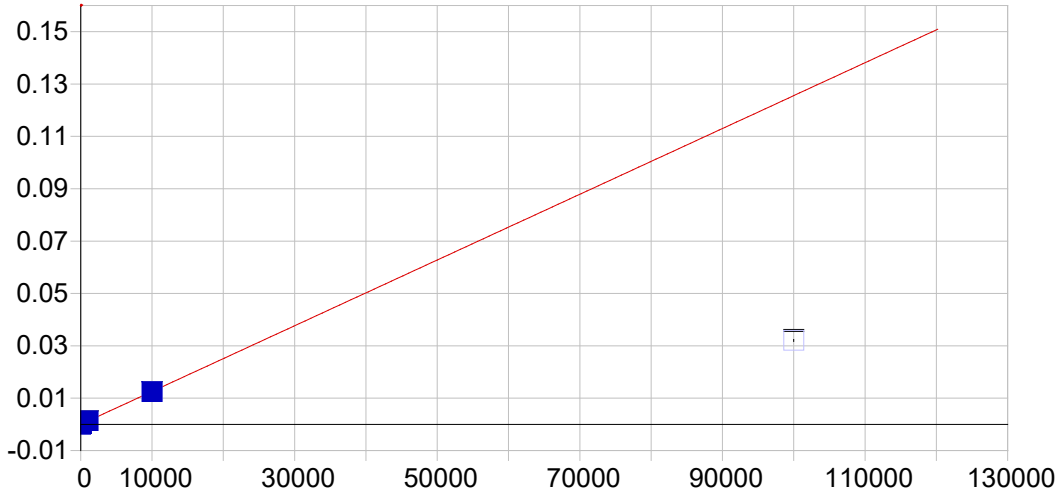


Pb 216.999 {456}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999962	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	43.439863		
Predicted MQL:	144.799544		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-7.7653	-7.77	.000	-.00000	.000	1
CalStd9=100	1000.0	1070.6	70.6	7.06	.00007	.000	1
CalStd10=10	10000.	10115.	115.	1.15	.00062	.000	1
CalStd8=100	100.00	106.25	6.25	6.25	.00001	.000	1
CalStd5=10	10.000	11.004	1.00	10.0	-.00000	.000	1
CalStd12=10	100000.	112900.	12900.	12.9	.00699	.000	1

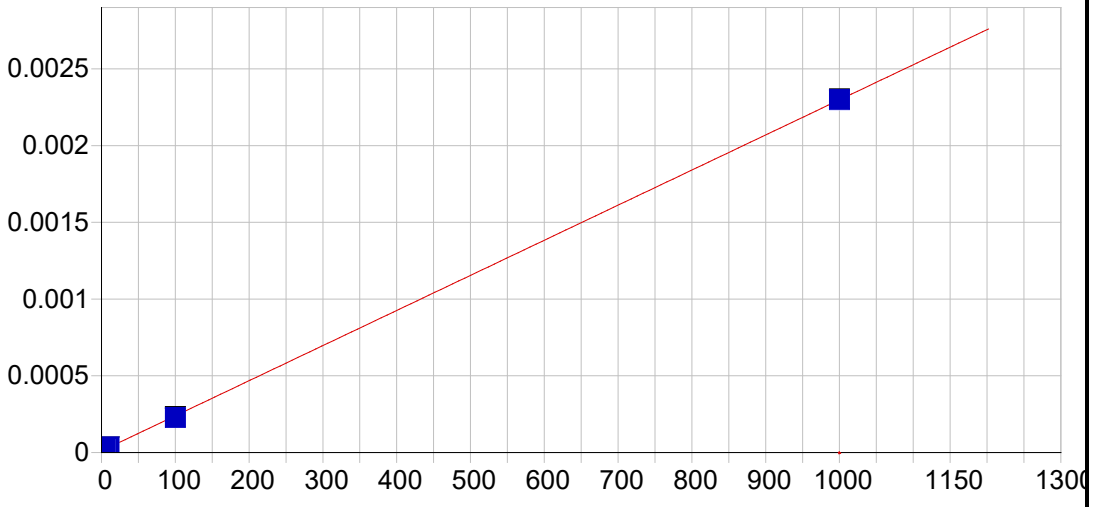


Pb 220.353 {153}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999815	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	5.168342		
Predicted MQL:	17.227807		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00838	-.008	.000	.00000	.000	1
CalStd9=100	1000.0	1060.1	60.1	6.01	.00133	.000	1
CalStd10=10	10000.	9936.9	-63.1	-.631	.01248	.000	1
CalStd8=100	100.00	103.00	3.00	3.00	.00013	.000	1
CalStd12=10	100000.	25527.	-74500.	-74.5	.03206	.000	0

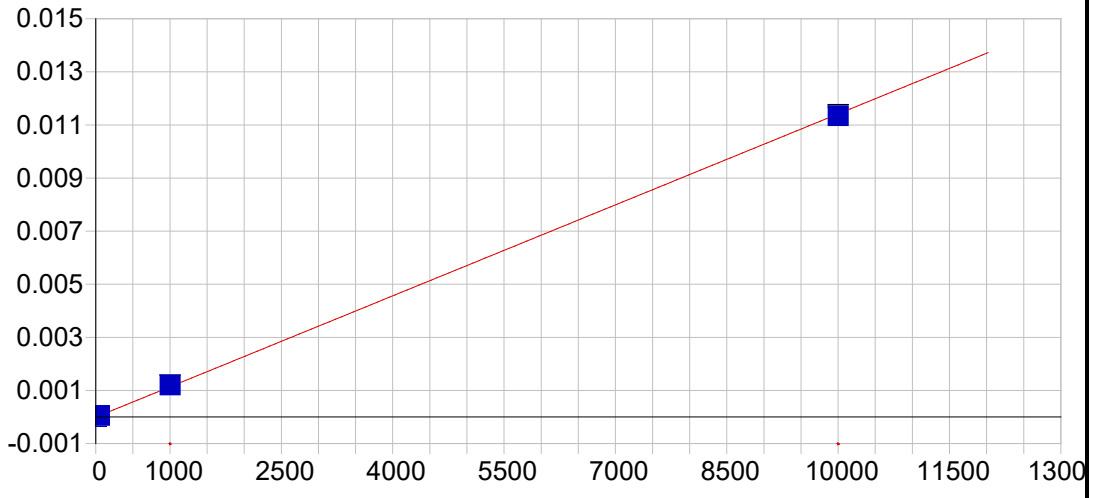


Pb 220.353 {453}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000011	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999973	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	2.970978		
Predicted MQL:	9.903261		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	3.6493	3.65	.000	.00002	.000	1
CalStd5=10	10.000	11.190	1.19	11.9	.00004	.000	1
CalStd8=100	100.00	94.914	-5.09	-5.09	.00023	.000	1
CalStd4=5	5.0000	4.7487	-.251	-5.03	.00002	.000	1
CalStd9=100	1000.0	1000.5	.498	.050	.00230	.000	1

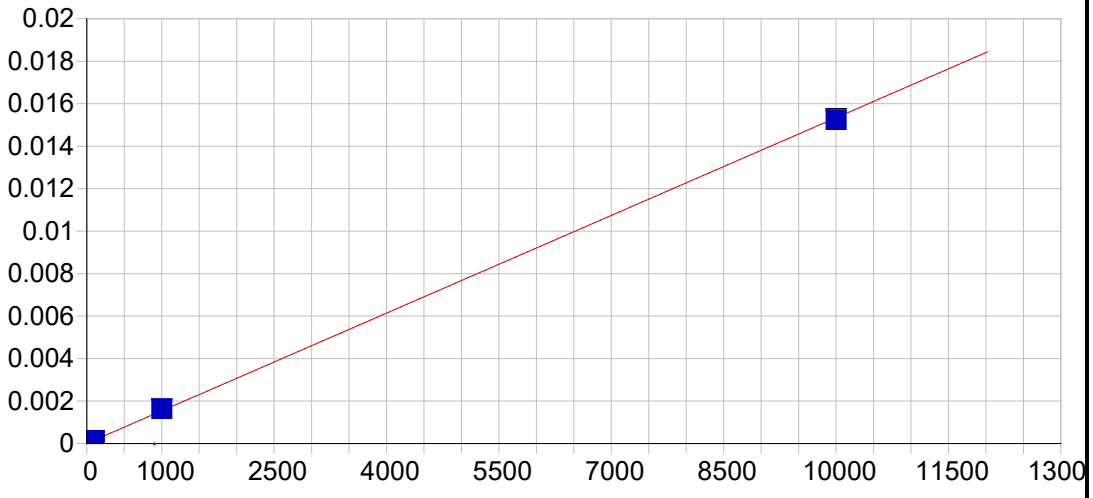


Sb 206.833 {463}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999776	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	3.309126		
Predicted MQL:	11.030420		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00436	-.004	.000	-.00001	.000	1
CalStd9=100	1000.0	1056.5	56.5	5.65	.00120	.000	1
CalStd5=10	10.000	12.779	2.78	27.8	.00001	.000	1
CalStd7=50	50.000	55.395	5.39	10.8	.00006	.000	1
CalStd10=10	10000.	9935.4	-64.6	-.646	.01134	.000	1

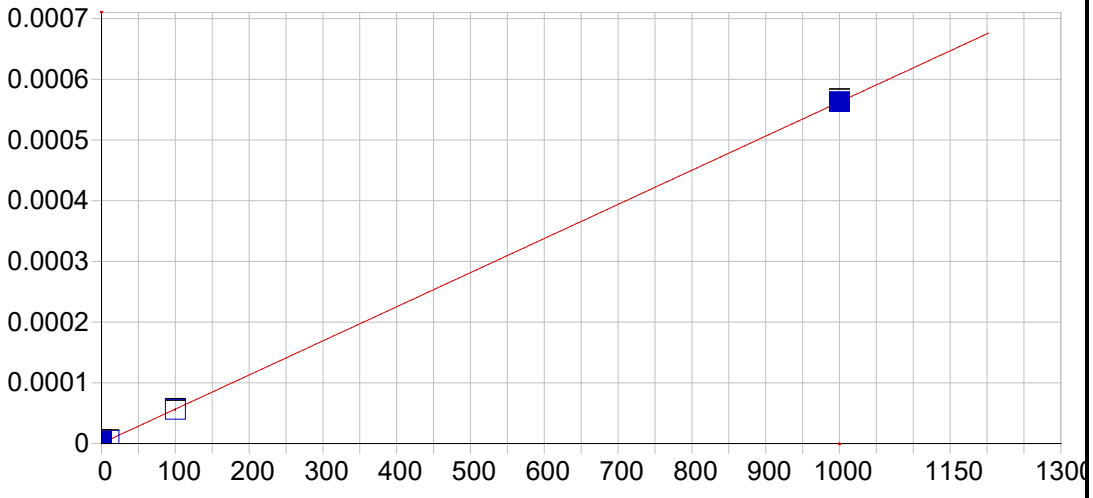


Sb 217.581 {455}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999763	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	3.091774		
Predicted MQL:	10.305914		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00124	.001	.000	.00001	.000	1
CalStd9=100	1000.0	1064.0	64.0	6.40	.00164	.000	1
CalStd6=20	20.000	20.641	.641	3.20	.00004	.000	1
CalStd5=10	10.000	10.552	.552	5.52	.00002	.000	1
CalStd8=100	100.00	99.138	-.862	-.862	.00016	.000	1
CalStd4=5	5.0000	3.0806	-1.92	-38.4	.00001	.000	1
CalStd10=10	10000.	9937.6	-62.4	-.624	.01525	.000	1

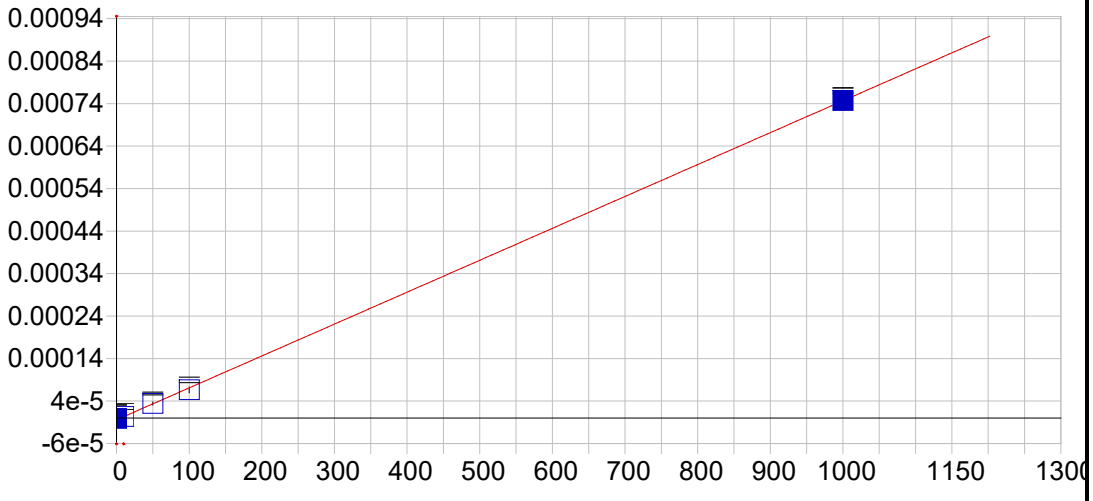


Se 196.090 {472}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999954	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	5.300744		
Predicted MQL:	17.669148		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	5.3359	5.34	.000	.00000	.000	1
CalStd9=100	1000.0	1000.7	.727	.073	.00056	.000	1
CalStd5=10	10.000	9.3786	-.621	-6.21	.00001	.000	1
CalStd8=100	100.00	99.252	-.748	-.748	.00006	.000	1

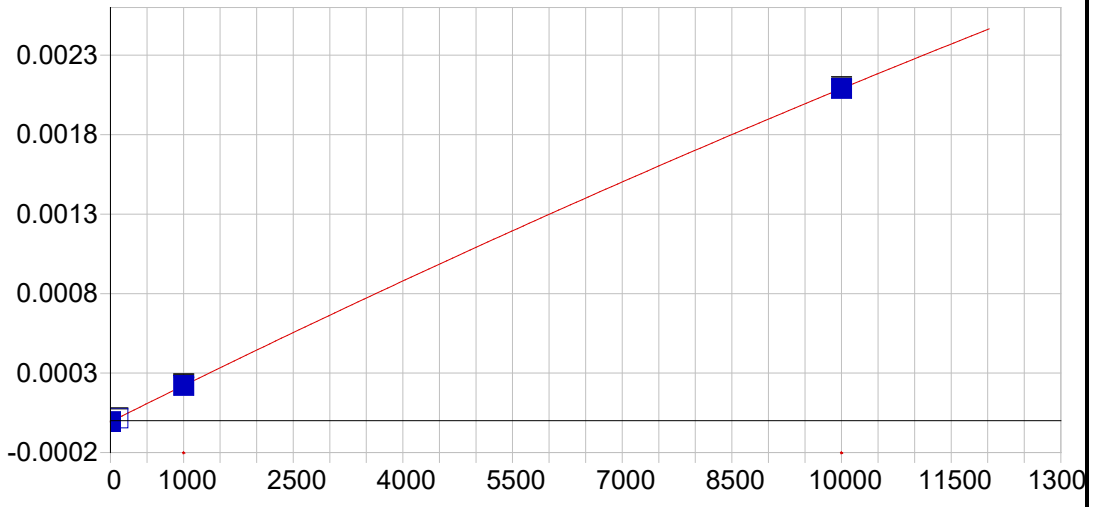


Se 203.985 {465}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999966	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	8.122701		
Predicted MQL:	27.075669		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	3.9431	3.94	.000	-.00000	.000	1
CalStd7=50	50.000	51.068	1.07	2.14	.00003	.000	1
CalStd9=100	1000.0	1000.4	.449	.045	.00075	.000	1
CalStd5=10	10.000	9.8438	-.156	-1.56	.00000	.000	1
CalStd8=100	100.00	93.698	-6.30	-6.30	.00007	.000	1

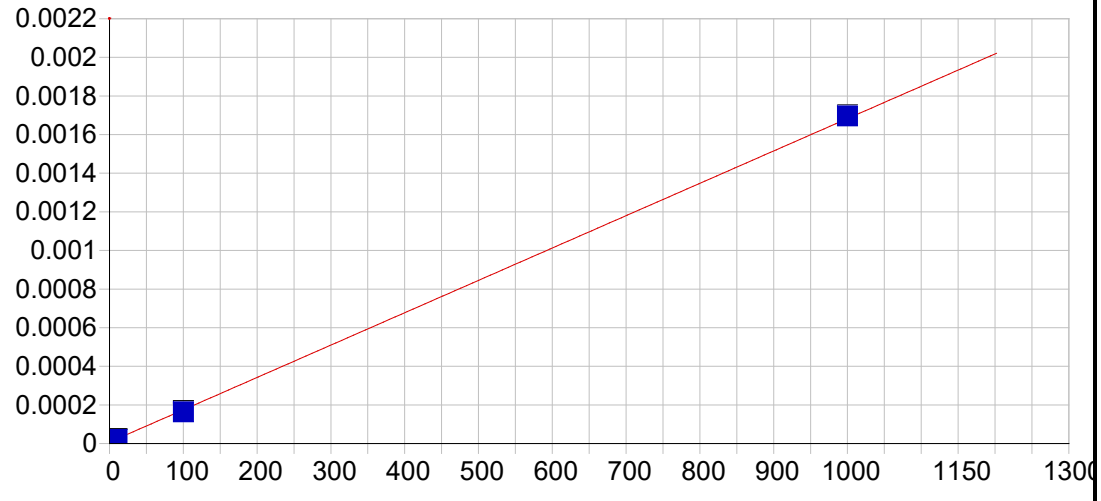


Se 206.279 {463}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	-0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	24.524675		
Predicted MQL:	81.748915		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00094	-.001	.000	-.00001	.000	1
CalStd9=100	1000.0	998.82	-1.18	-.118	.00022	.000	1
CalStd10=10	10000.	10000.	.127	.001	.00209	.000	1
CalStd8=100	100.00	101.06	1.06	1.06	.00002	.000	1

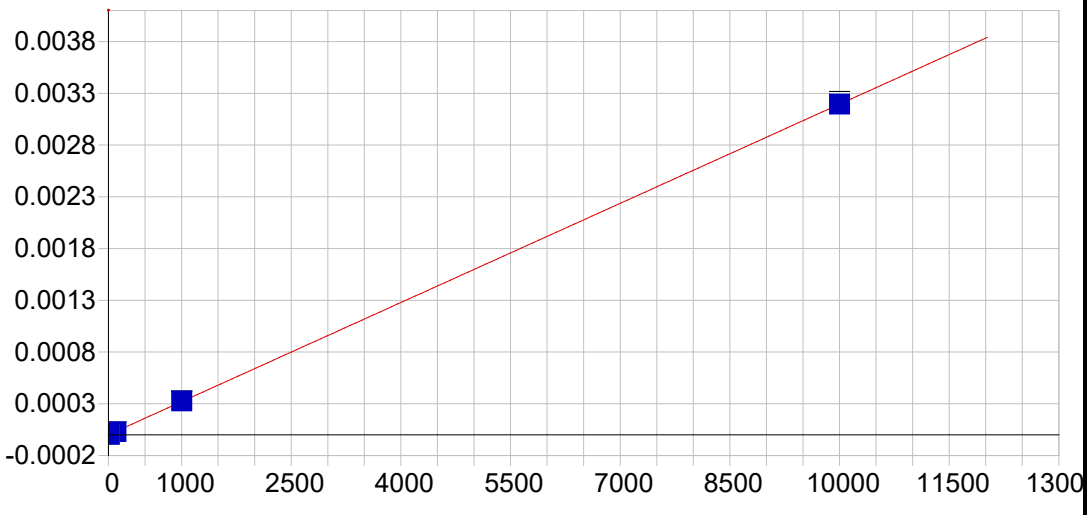


Tl 190.856 {476}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999734	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.391432		
Predicted MQL:	7.971441		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00142	.001	.000	.00001	.000	1
CalStd9=100	1000.0	1007.7	7.67	.767	.00170	.000	1
CalStd8=100	100.00	93.140	-6.86	-6.86	.00016	.000	1
CalStd5=10	10.000	9.1938	-.806	-8.06	.00002	.000	1

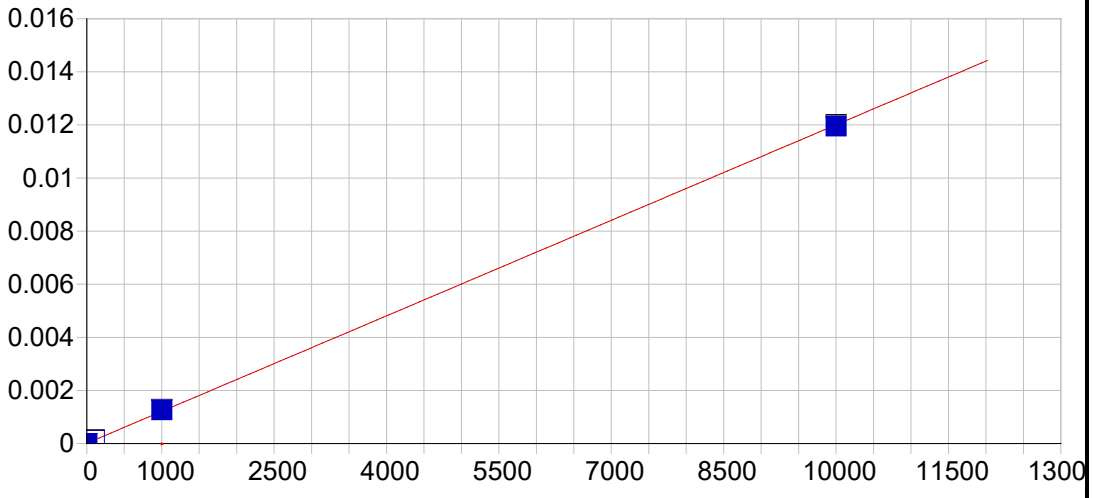


Tl 190.856 {477}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999822	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	9.683380		
Predicted MQL:	32.277933		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00529	.005	.000	.00000	.000	1
CalStd9=100	1000.0	1017.6	17.6	1.76	.00033	.000	1
CalStd8=100	100.00	85.870	-14.1	-14.1	.00003	.000	1
CalStd5=10	10.000	5.9424	-4.06	-40.6	.00000	.000	1
CalStd10=10	10000.	10001.	.611	.006	.00319	.000	1

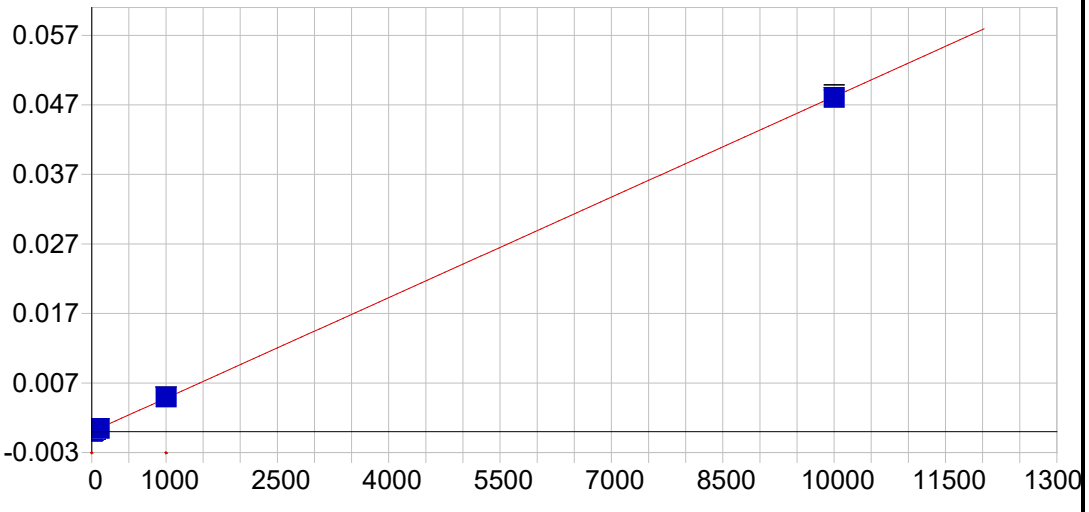


V 290.882 {116}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000011	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999884	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	4.326578		
Predicted MQL:	14.421927		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00101	-.001	.000	.00001	.000	1
CalStd9=100	1000.0	1047.7	47.7	4.77	.00127	.000	1
CalStd10=10	10000.	9955.6	-44.4	-.444	.01195	.000	1
CalStd8=100	100.00	96.691	-3.31	-3.31	.00013	.000	1

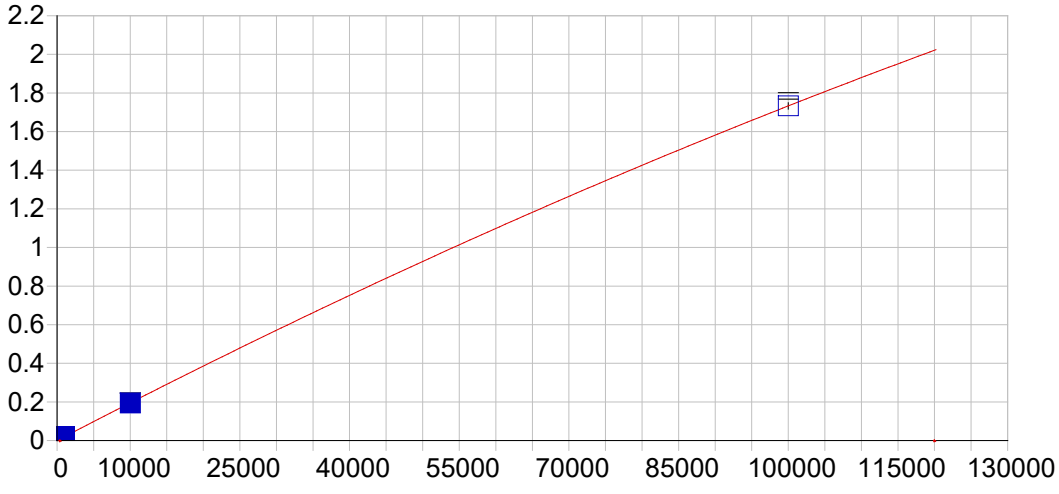


V 292.402 {115}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999935	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.604029		
Predicted MQL:	2.013429		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00087	.001	.000	-.00000	.000	1
CalStd7=50	50.000	52.688	2.69	5.38	.00025	.000	1
CalStd9=100	1000.0	1031.2	31.2	3.12	.00497	.000	1
CalStd6=20	20.000	18.575	-1.42	-7.12	.00009	.000	1
CalStd5=10	10.000	9.3665	-.634	-6.34	.00004	.000	1
CalStd8=100	100.00	96.523	-3.48	-3.48	.00046	.000	1
CalStd10=10	10000.	9971.7	-28.3	-.283	.04807	.000	1

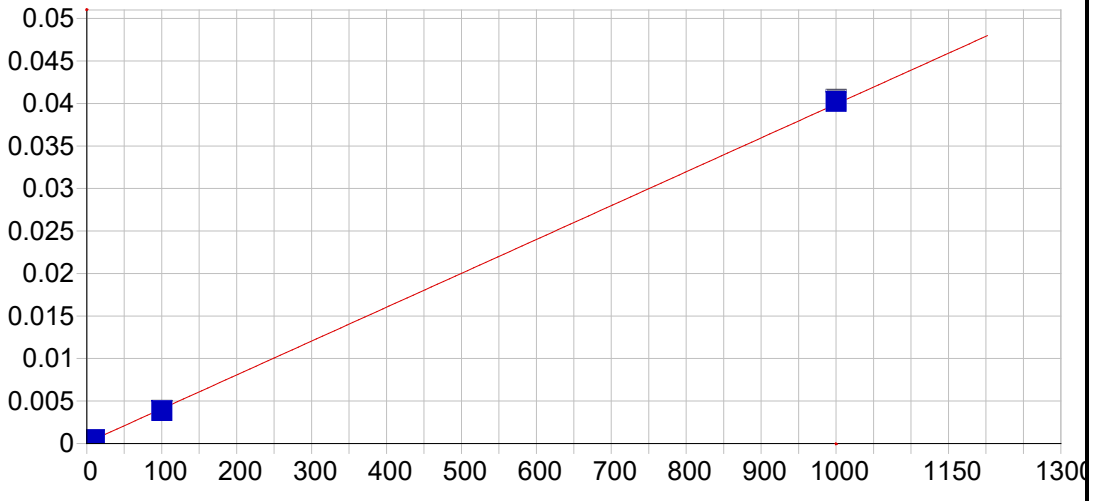


Zn 206.200 {463}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000045	Re-Slope:	1.000000
A1 (Gain):	0.000020	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999974	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.230876		
Predicted MQL:	0.769586		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CalStd10=10	10000.	9929.8	-70.2	-.702	.19395	.001	1
Blank	.00000	.00043	.000	.000	.00005	.000	1
CalStd9=100	1000.0	1063.9	63.9	6.39	.02105	.000	1
CalStd12=10	100000.	100010.	8.25	.008	1.7332	.017	1
CalStd5=10	10.000	9.0494	-.951	-9.51	.00022	.000	1
CalStd8=100	100.00	99.494	-.506	-.506	.00201	.000	1

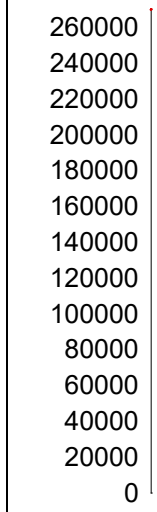


Zn 213.856 {457}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000102	Re-Slope:	1.000000
A1 (Gain):	0.000040	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999732	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.125984		
Predicted MQL:	0.419946		

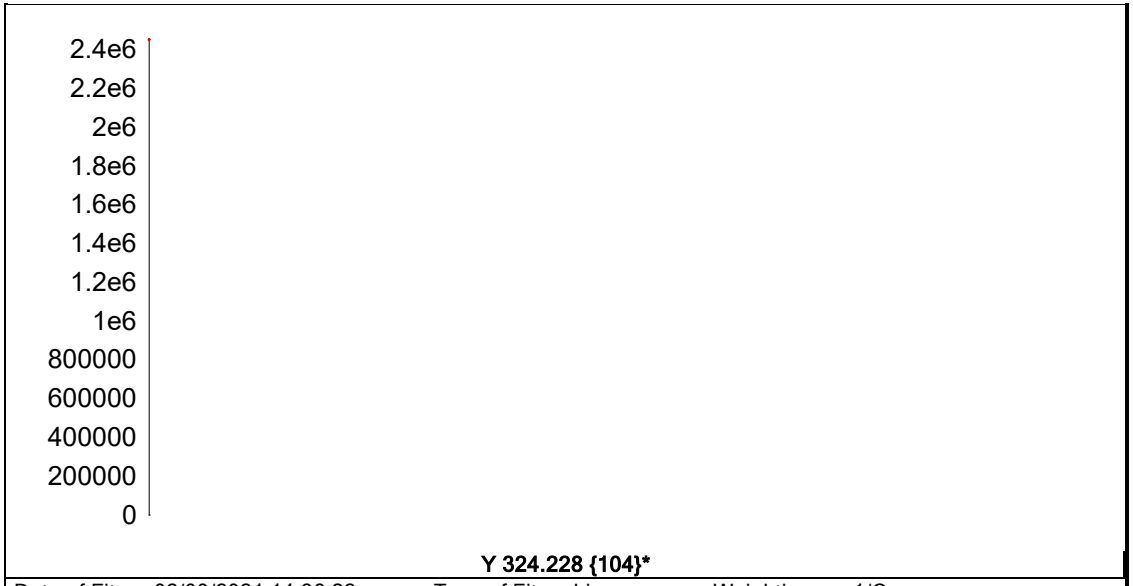
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00197	.002	.000	.00010	.000	1
CalStd9=100	1000.0	1007.2	7.22	.722	.04040	.000	1
CalStd5=10	10.000	8.5307	-1.47	-14.7	.00044	.000	1
CalStd8=100	100.00	94.242	-5.76	-5.76	.00387	.000	1



Y 224.306 {450}*

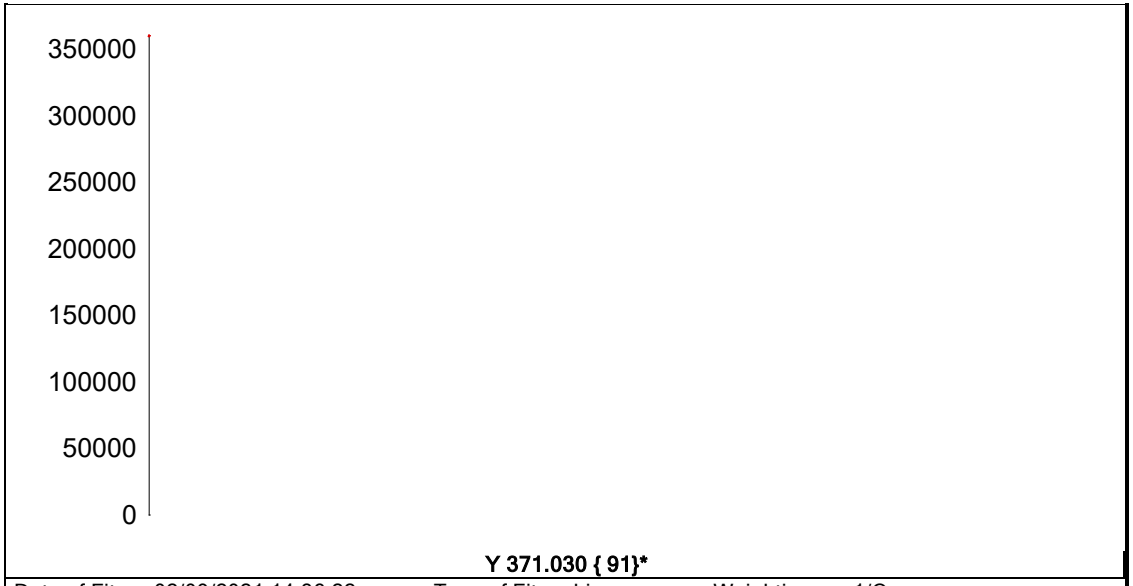
Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	249620.	785.	1



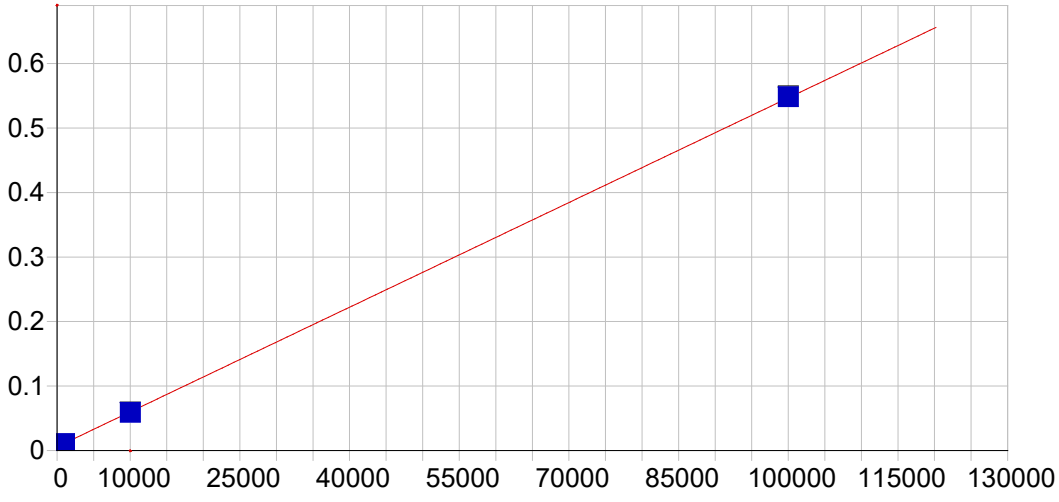
Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	2307400.	7400.	1



Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	340140.	2040.	1

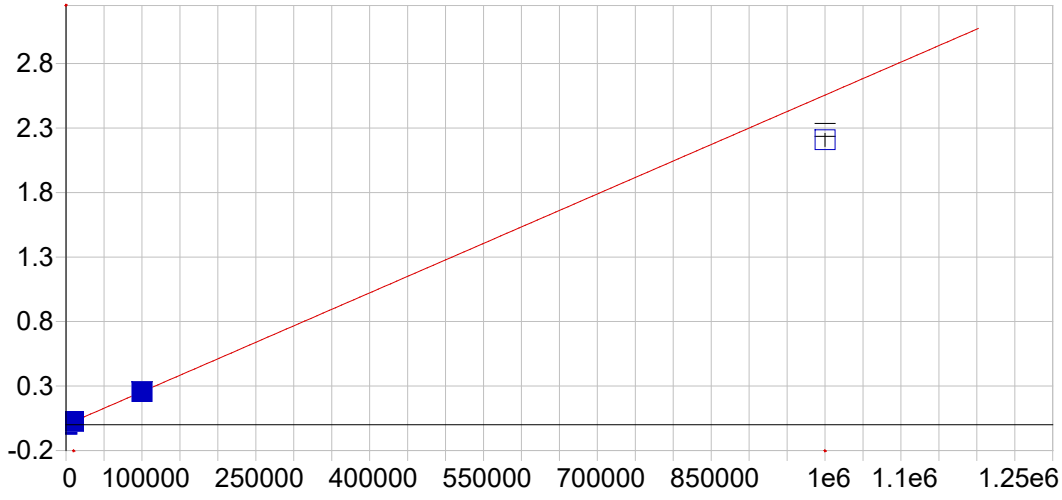


Na 588.995 { 57}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.005853	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999936	Status:	OK.
Std Error of Est:	0.000833		
Predicted MDL:	6.158897		
Predicted MQL:	20.529657		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	70.927	70.9	.000	.00624	.000	1
CalStd9=100	1000.0	870.02	-130.	-13.0	.01056	.000	1
CalStd10=10	10000.	9814.1	-186.	-1.86	.05893	.000	1
CalStd13=10	100000.	100300.	302.	.302	.54830	.001	1

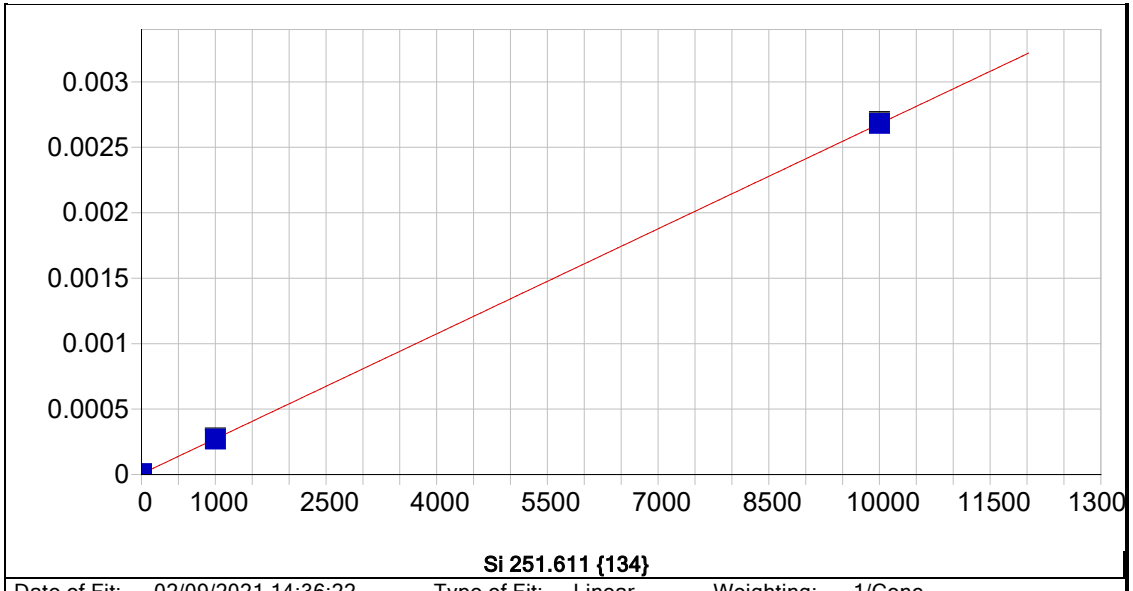


Na 589.592 { 57}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000056	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999948	Status:	OK.
Std Error of Est:	0.000278		
Predicted MDL:	8.854713		
Predicted MQL:	29.515709		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	37.547	37.5	.000	.00004	.000	1
CalStd9=100	1000.0	980.38	-19.6	-1.96	.00245	.000	1
CalStd10=10	10000.	9826.4	-174.	-1.74	.02506	.000	1
CalibStd15=	1000000.	864110.	-136000.	-13.6	2.2084	.050	1
CalStd13=10	100000.	100210.	213.	.213	.25609	.000	1

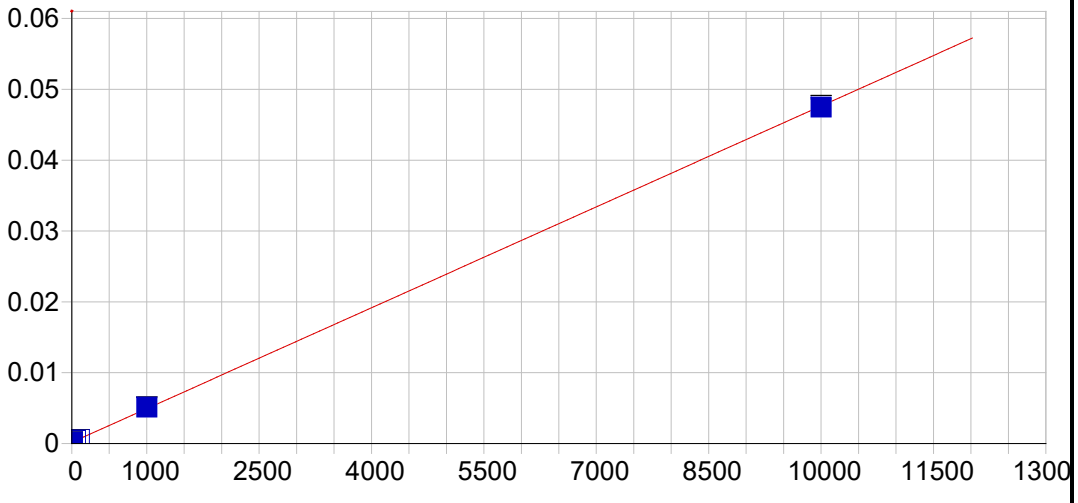


Si 251.611 {134}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999996	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	11.053610		
Predicted MQL:	36.845365		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00774	.008	.000	.00001	.000	1
CalStd9=100	1000.0	991.40	-8.60	-.860	.00027	.000	1
CalStd10=10	10000.	10009.	8.60	.086	.00268	.000	1

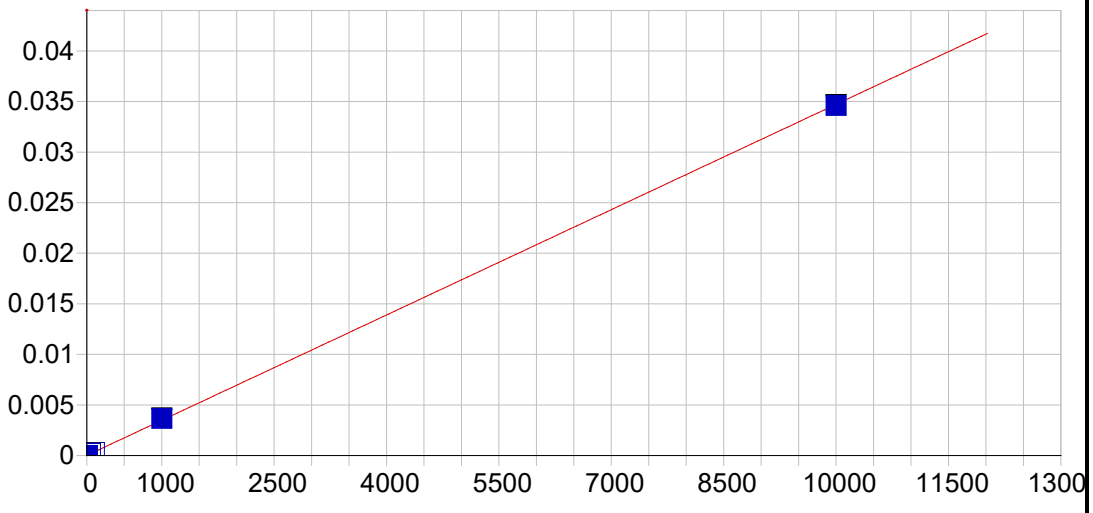


Ti 323.452 {104}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000178	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999793	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.418910		
Predicted MQL:	4.729701		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00396	.004	.000	.00018	.000	1
CalStd5=10	10.000	7.5900	-2.41	-24.1	.00021	.000	1
CalStd8=100	100.00	95.180	-4.82	-4.82	.00063	.000	1
CalStd9=100	1000.0	1045.0	45.0	4.50	.00514	.000	1
CalStd10=10	10000.	9963.8	-36.2	-.362	.04748	.000	1
CalStd7=50	50.000	51.265	1.26	2.53	.00042	.000	1
CalStd4=5	5.0000	2.1560	-2.84	-56.9	.00019	.000	1

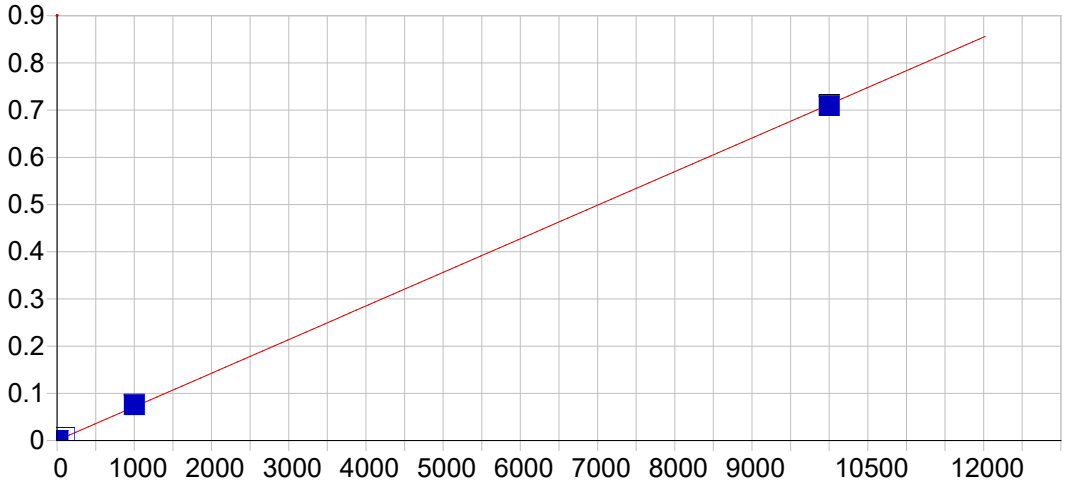


Ti 334.941 {101}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000011	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999747	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.440933		
Predicted MQL:	4.803110		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00455	.005	.000	.00001	.000	1
CalStd5=10	10.000	6.6454	-3.35	-33.5	.00003	.000	1
CalStd8=100	100.00	94.772	-5.23	-5.23	.00034	.000	1
CalStd9=100	1000.0	1048.3	48.3	4.83	.00365	.000	1
CalStd10=10	10000.	9962.1	-37.9	-.379	.03459	.000	1
CalStd7=50	50.000	51.197	1.20	2.39	.00019	.000	1
CalStd4=5	5.0000	2.0436	-2.96	-59.1	.00002	.000	1

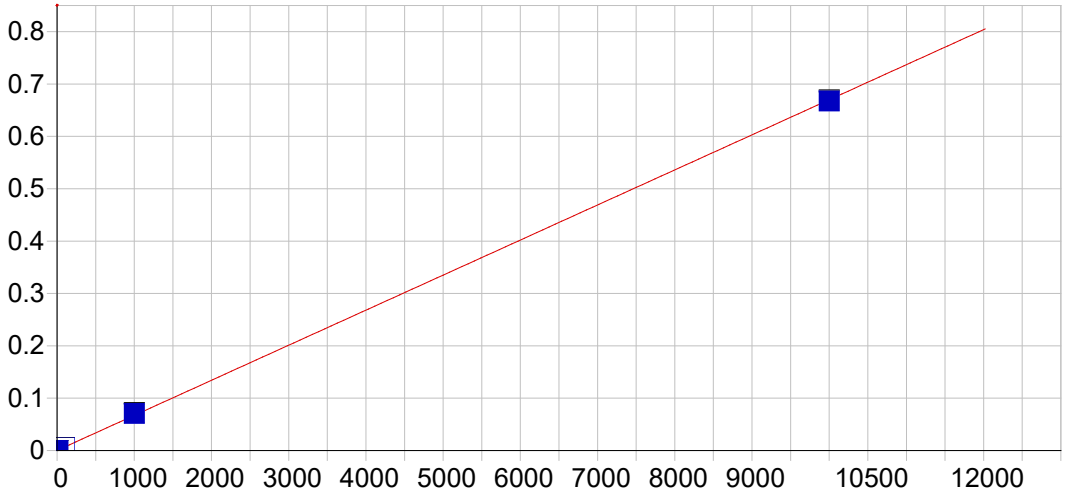


Sr 407.771 { 83}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000316	Re-Slope:	1.000000
A1 (Gain):	0.000071	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998959	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	0.147251		
Predicted MQL:	0.490838		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00503	.005	.000	.00032	.000	1
CalStd3=1	1.0000	-2.9568	-3.96	-396.	.00011	.000	1
CalStd4=5	5.0000	1.1923	-3.81	-76.2	.00040	.000	1
CalStd5=10	10.000	6.6505	-3.35	-33.5	.00079	.000	1
CalStd8=100	100.00	96.811	-3.19	-3.19	.00721	.000	1
CalStd9=100	1000.0	1056.5	56.5	5.65	.07553	.001	1
CalStd10=10	10000.	9957.8	-42.2	-.422	.70929	.002	1

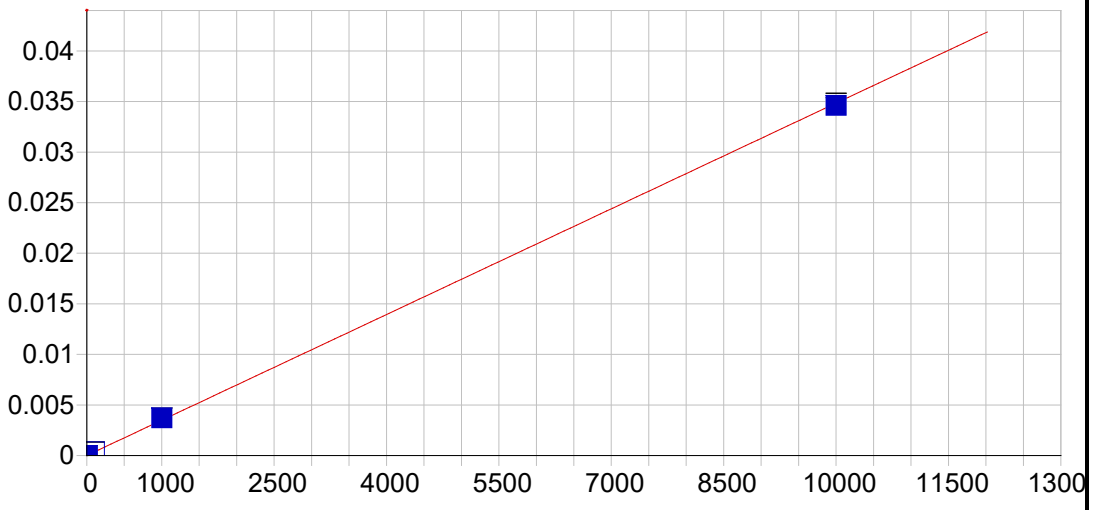


Sr 421.552 { 80}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000275	Re-Slope:	1.000000
A1 (Gain):	0.000067	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999028	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.145956		
Predicted MQL:	0.486521		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00491	.005	.000	.00028	.000	1
CalStd3=1	1.0000	-2.8486	-3.85	-385.	.00008	.000	1
CalStd4=5	5.0000	1.3541	-3.65	-72.9	.00037	.000	1
CalStd5=10	10.000	6.5914	-3.41	-34.1	.00072	.000	1
CalStd8=100	100.00	96.234	-3.77	-3.77	.00672	.000	1
CalStd9=100	1000.0	1052.0	52.0	5.20	.07073	.001	1
CalStd10=10	10000.	9962.7	-37.3	-.373	.66747	.002	1

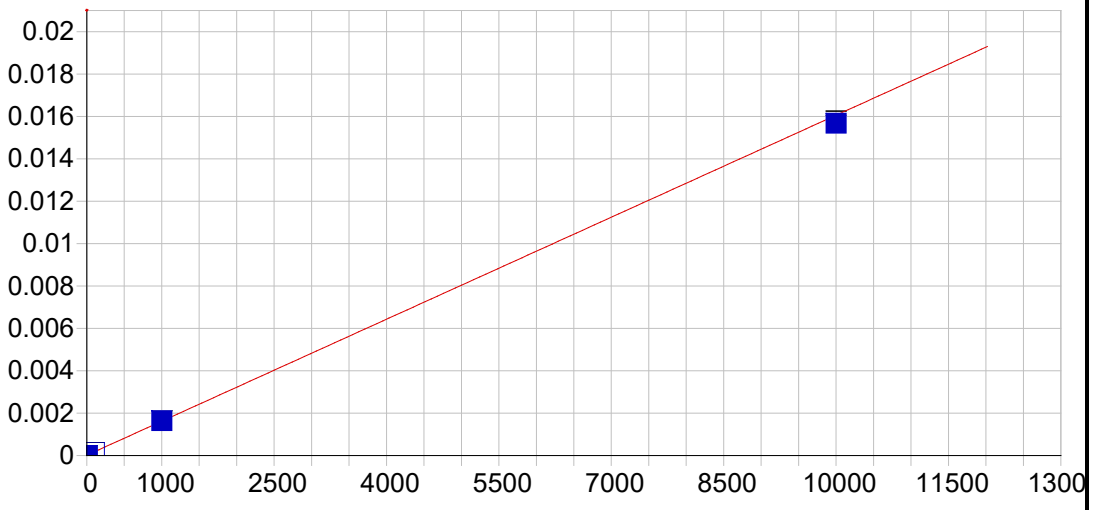


Sn 189.989 {477}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999775	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.962281		
Predicted MQL:	3.207603		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00297	-.003	.000	.00001	.000	1
CalStd10=10	10000.	9933.8	-66.2	-.662	.03461	.000	1
CalStd9=100	1000.0	1063.3	63.3	6.33	.00371	.000	1
CalStd8=100	100.00	100.60	.596	.596	.00036	.000	1
CalStd5=10	10.000	12.339	2.34	23.4	.00005	.000	1

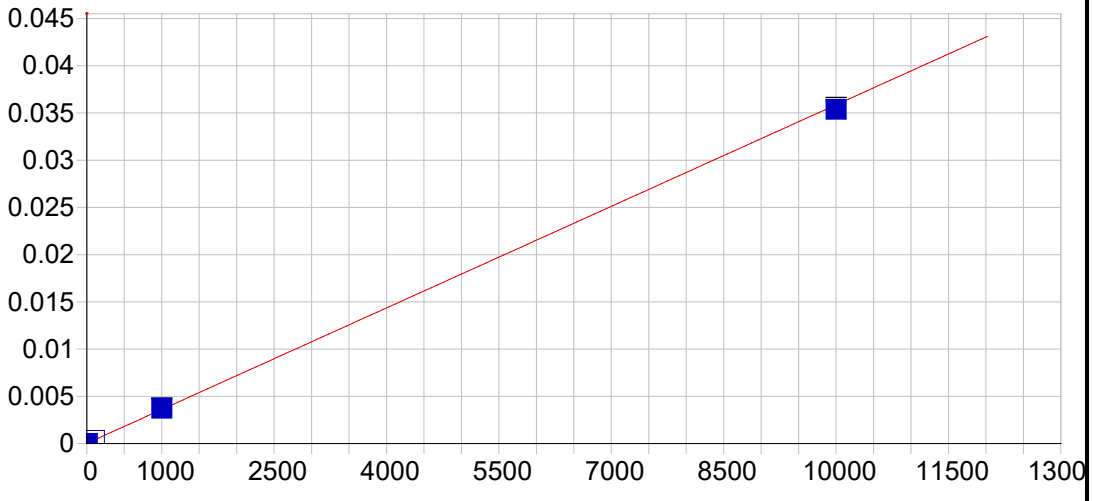


B 249.678 {135}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000014	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999472	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	1.030759		
Predicted MQL:	3.435864		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	2.7184	2.72	.000	.00002	.000	1
CalStd8=100	100.00	90.500	-9.50	-9.50	.00016	.000	1
CalStd5=10	10.000	6.2666	-3.73	-37.3	.00002	.000	1
CalStd9=100	1000.0	1013.1	13.1	1.31	.00164	.000	1
CalStd10=10	10000.	9763.8	-236.	-2.36	.01568	.000	1

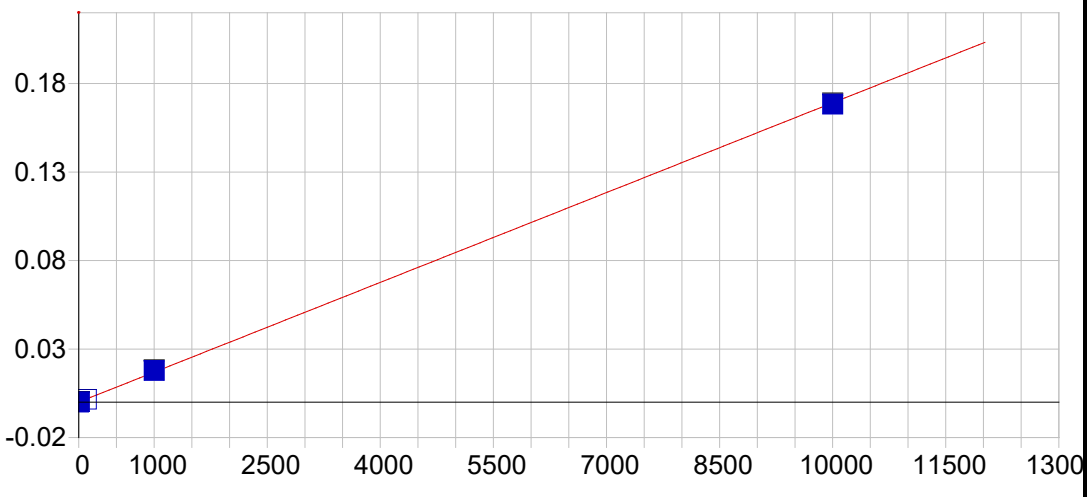


B 249.773 {135}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000020	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998976	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	0.536267		
Predicted MQL:	1.787557		

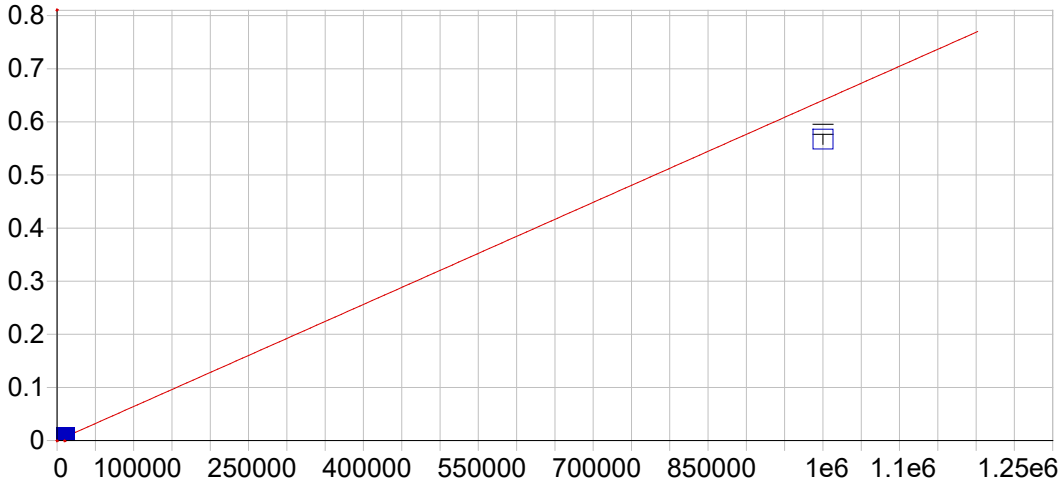
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	7.4517	7.45	.000	.00005	.000	1
CalStd8=100	100.00	95.359	-4.64	-4.64	.00036	.000	1
CalStd5=10	10.000	9.6315	-.369	-3.69	.00005	.000	1
CalStd9=100	1000.0	1036.6	36.6	3.66	.00374	.000	1
CalStd10=10	10000.	9864.7	-135.	-1.35	.03540	.000	1



Li 670.784 { 50}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000008		Re-Slope:	1.000000	
A1 (Gain):	0.000017		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999833		Status:	OK.	
Std Error of Est:	0.000004				
Predicted MDL:	1.411234				
Predicted MQL:	4.704113				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00232	.002	.000	.00001	.000	1
CalStd5=10	10.000	7.6263	-2.37	-23.7	.00014	.000	1
CalStd8=100	100.00	95.789	-4.21	-4.21	.00163	.000	1
CalStd9=100	1000.0	1052.5	52.5	5.25	.01781	.000	1
CalStd10=10	10000.	9954.0	-46.0	-.460	.16835	.001	1

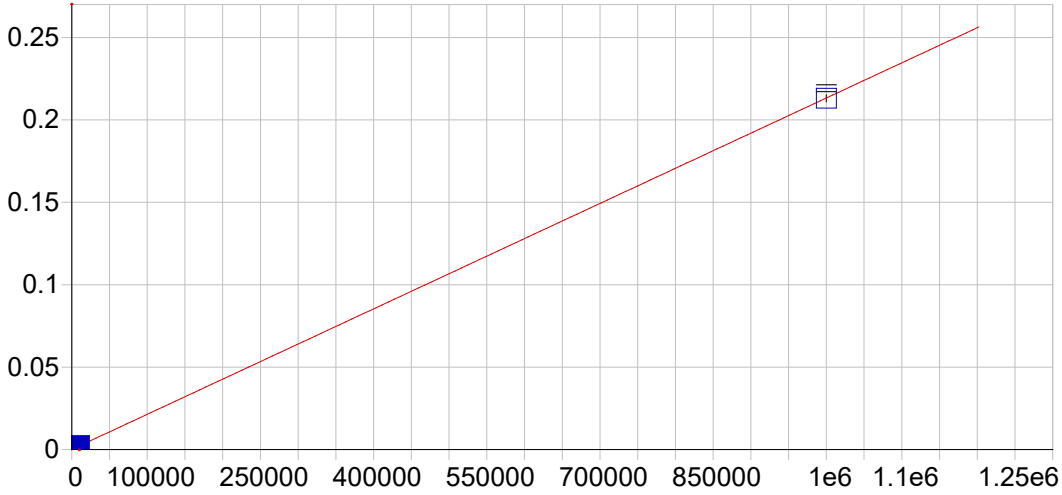


K 766.490 { 44}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000036	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999998	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	38.163116		
Predicted MQL:	127.210386		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	11.920	11.9	.000	.00004	.000	1
CalStd9=100	1000.0	988.06	-11.9	-1.19	.00067	.000	1
CalStd10=10	10000.	9989.6	-10.4	-.104	.00644	.000	1
CalibStd15=	1000000.	885370.	-115000.	-11.5	.56719	.010	1

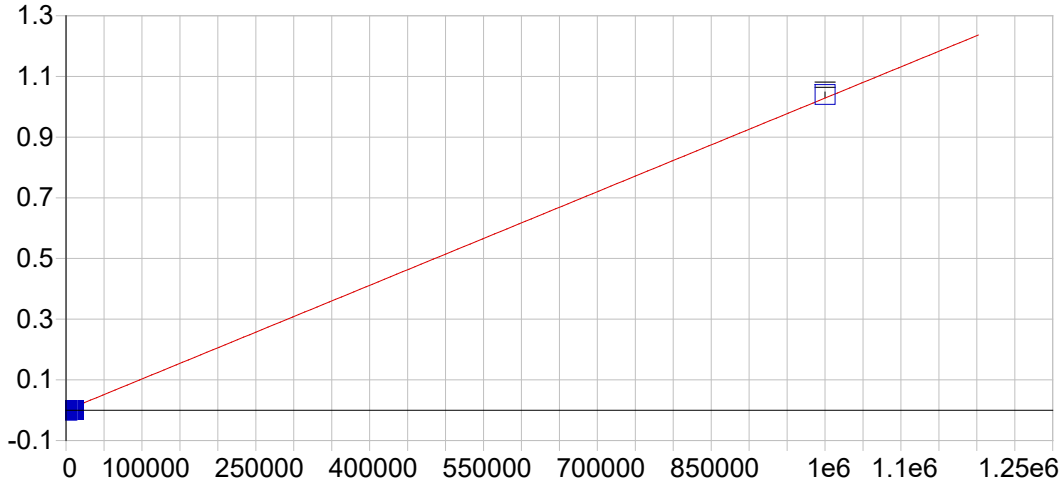


K 769.896 { 44}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000052	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999968	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	91.068935		
Predicted MQL:	303.563116		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.14775	-.148	.000	.00005	.000	1
CalStd9=100	1000.0	1072.5	72.5	7.25	.00028	.000	1
CalStd10=10	10000.	10761.	761.	7.61	.00235	.000	1
CalibStd15=	1000000.	999170.	-834.	-.083	.21310	.002	1

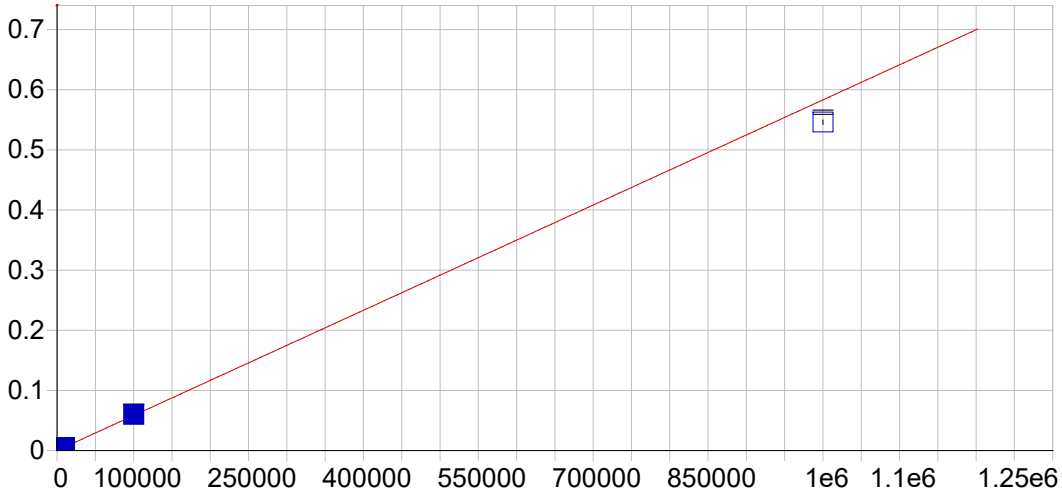


P 213.618 {457}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000015	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.994661	Status:	OK.
Std Error of Est:	0.000152		
Predicted MDL:	4.562415		
Predicted MQL:	15.208050		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	1.9669	1.97	.000	-.00001	.000	1
CalStd10=10	10000.	108.88	-9890.	-98.9	.00010	.000	1
CalStd9=100	1000.0	11.321	-989.	-98.9	-.00000	.000	1
CalibStd15=	1000000.	1010900.	10900.	1.09	1.0399	.009	1

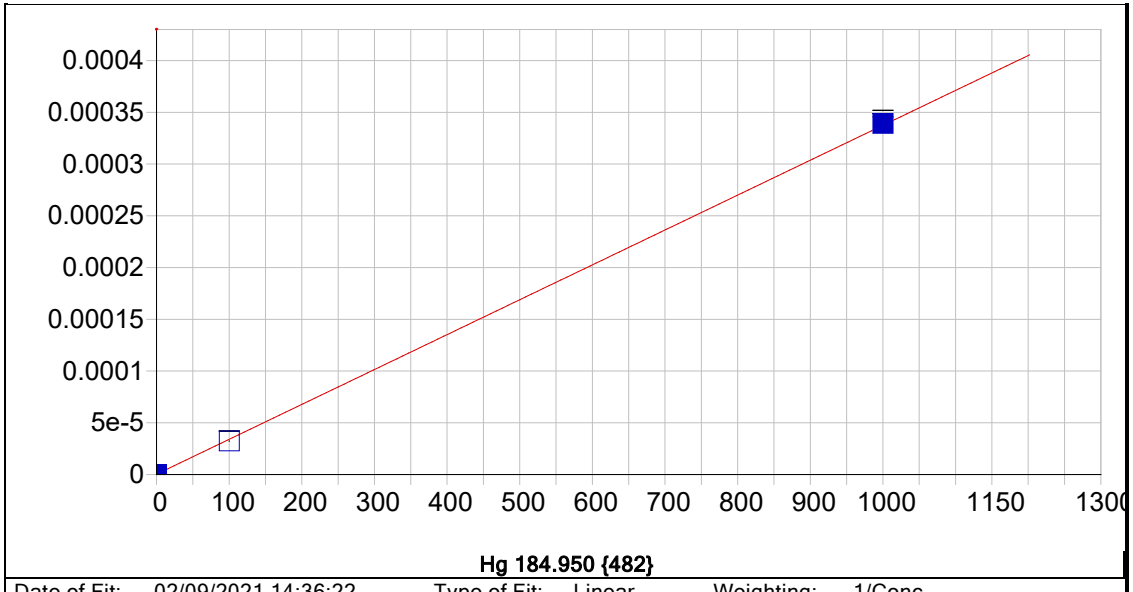


S 182.034 {485}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000020	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999766	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	4.787186		
Predicted MQL:	15.957285		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.6318	-1.63	.000	.00002	.000	1
CalStd9=100	1000.0	1002.5	2.46	.246	.00061	.000	1
CalStd10=10	10000.	10019.	19.2	.192	.00588	.000	1
CalibStd15=	1000000.	936390.	-63600.	-6.36	.54600	.004	1
CalStd13=10	100000.	102850.	2850.	2.85	.06007	.000	1

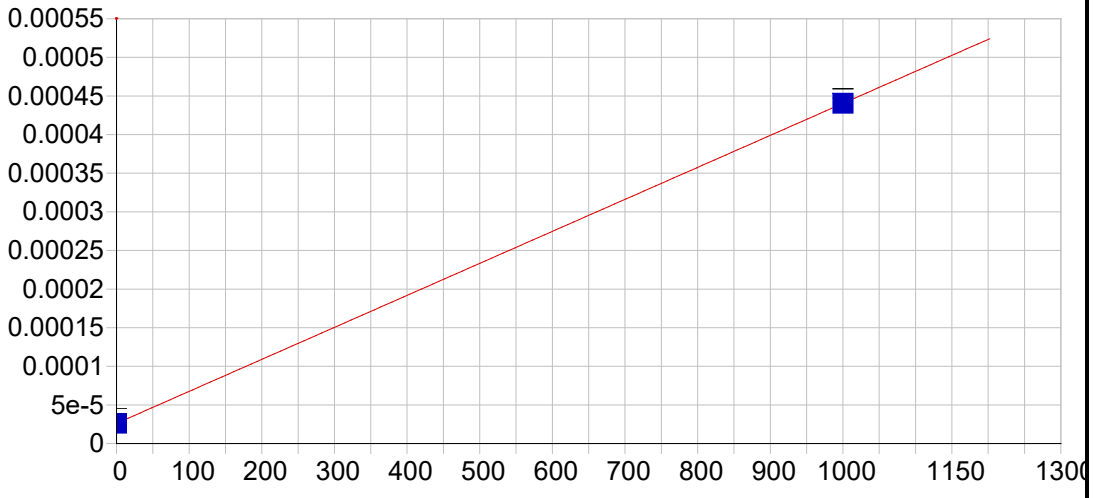


Hg 184.950 {482}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999878	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.928089		
Predicted MQL:	3.093631		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00444	.004	.000	.00000	.000	1
CalStd8=100	100.00	95.066	-4.93	-4.93	.00003	.000	1
CalStd9=100	1000.0	1004.9	4.93	.493	.00034	.000	1



Ce 404.076 { 83}

Date of Fit:	02/09/2021 14:36:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000026	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	23.643861		
Predicted MQL:	78.812871		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00003	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00044	.000	1

Sample Name: Blank Acquired: 02/02/2021 07:19:39 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	As1972	Ba2335	Ba4934	Be3130	Ca3158	Ca3933	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**13.1**	**.000**	**-.000**	**.000**	**-.000**	**.000**	**.006**	**-.000**	**.000**	**.001**	**.000**	**.000**
Stddev	1.8	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	13.8	13.4	29.6	51.2	148.	21.5	.594	5.91	5.21	22.8	57.3	16.8

Elem	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Cu3247	Cu3273	Fe2395	Fe2599	Mg2790	Mg2802	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	6.67	17.3	34.3	30.2	164.	3.82	31.5	29.6	71.6	84.5	5.08	13.8

Elem	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**-.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	25.4	35.9	37.1	19.3	97.5	44.7	32.0	36.2	90.5	82.4	54.2	44.4

Elem	V_2908	V_2924	Zn2062	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**-.000**	**.000**	**.000**	**.006**	**.000**	**.000**	**.0001**
Stddev	.000	.000	.000	.000	.000	.000	.000	.0000
%RSD	46.1	71.8	13.6	11.7	1.95	88.8	48.4	17.95

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**249620.**	**2307400.**	**340140.**
Stddev	785.	7403.	2044.
%RSD	.31466	.32084	.60090

Sample Name: CalStd2=0.5 Acquired: 02/02/2021 07:26:03 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Be3130	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**
Stddev	.000	.000	.000
%RSD	5.35	17.3	10.0

Int. Std.	Y_2243	Y_3242
Units	Cts/S	Cts/S
Avg	**242680.**	**2231900.**
Stddev	1466.	23567.
%RSD	.60402	1.0559

Sample Name: CalStd3=1 Acquired: 02/02/2021 07:32:29 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Ba2335	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**14.9**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**-.000**
Stddev	2.8	.000	.000	.000	.000	.000	.000	.000
%RSD	18.7	7.82	6.37	17.7	4.32	15.0	30.6	122.

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**241650.**	**2206200.**	**334080.**
Stddev	595.	11004.	3484.
%RSD	.24606	.49875	1.0429

Sample Name: CalStd4=5 Acquired: 02/02/2021 07:38:42 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba2335	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Cu3273	Mn2576	Mo2020	Mo2045	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	4.96	1.55	1.61	2.62	3.11	5.24	9.13	26.7	2.18	5.65	27.9	14.5

Elem	Pb2203	Sb2175
Units	Cts/S	Cts/S
Avg	**.000**	**.000**
Stddev	.000	.000
%RSD	15.9	9.72

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**241630.**	**2205600.**	**337800.**
Stddev	879.	22364.	1945.
%RSD	.36390	1.0139	.57580

Sample Name: CalStd5=10 Acquired: 02/02/2021 07:45:05 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al1670	As1937	As1972	Ba2335	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Cu2230	Cu3247
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.001**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.84	31.4	95.8	3.64	1.02	2.46	1.05	2.85	4.05	6.93	4.21	1.54

Elem	Cu3273	Mn2576	Mo2020	Mo2045	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	20.9	.894	2.22	2.18	3.00	36.9	5.76	38.7	8.08	21.9	6.65	1.71

Elem	Zn2062	Zn2138
Units	Cts/S	Cts/S
Avg	**.000**	**.000**
Stddev	.000	.000
%RSD	.542	2.10

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**243030.**	**2216100.**	**343000.**
Stddev	650.	8522.	3699.
%RSD	.26727	.38454	1.0785

Sample Name: CalStd6=20 Acquired: 02/02/2021 07:51:27 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba2335	Cu2230	Cu3247	Cu3273	Mn2576	Mo2020	Mo2045	Sb2175	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.78	2.37	1.78	17.0	.881	2.52	3.57	7.52	.739

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**242980.**	**2198000.**	**340200.**
Stddev	999.	12126.	1145.
%RSD	.41131	.55170	.33646

Sample Name: CalStd7=50 Acquired: 02/02/2021 07:57:44 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	As1937	As1972	Cd2288	Co2286	Cr2055	Cr2677	Cu3247	Cu3273	Mn2576	Mo2020	Mo2045	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.002**	**.001**	**.001**	**.000**	**.000**	**.000**	**.001**	**.000**	**.000**	**.001**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	4.84	11.9	.452	.491	.672	.765	1.43	12.5	.726	.949	.837	1.10

Elem	Sb2068	V_2924
Units	Cts/S	Cts/S
Avg	**.000**	**.000**
Stddev	.000	.000
%RSD	4.93	1.08

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**243550.**	**2170000.**	**339010.**
Stddev	916.	6723.	1885.
%RSD	.37596	.30983	.55598

Sample Name: CalStd8=100 Acquired: 02/02/2021 08:04:00 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	As1972	Ba2335	Ba4934	Be3130	Ca3933	Cd2265	Cd2288	Co2286	Co2388
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**424.**	**.000**	**.000**	**.000**	**.001**	**.009**	**.007**	**.011**	**.002**	**.004**	**.002**	**.000**
Stddev	3.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.660	1.11	5.72	5.03	.902	.428	1.31	.595	.439	.655	.102	1.12

Elem	Cr2055	Cr2677	Cu2230	Cu3247	Cu3273	Mg2802	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.001**	**.000**	**.001**	**.000**	**.000**	**.003**	**.001**	**.001**	**.000**	**.001**	**.001**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.446	1.74	.918	1.27	3.12	1.26	1.46	.723	1.16	.877	.839	2.71

Elem	Pb2203	Sb2175	Se1960	Se2062	Tl1908	V_2908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.002**	**.004**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.40	2.27	2.81	34.1	3.55	7.28	1.47	.556	.669

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**242850.**	**2179900.**	**342120.**
Stddev	1235.	10511.	1945.
%RSD	.50862	.48219	.56862

Sample Name: CalStd9=1000 Acquired: 02/02/2021 08:10:11 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al1670	Al3961	As1937	As1972	Ba2335	Ba4934	Be3130	Ca3158	Ca3933	Cd2265	Cd2288	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.003**	**.001**	**.001**	**.001**	**.006**	**.038**	**.071**	**.000**	**.110**	**.024**	**.038**	**.020**
Stddev	.000	.000	.000	.000	.000	.001	.000	.000	.002	.000	.000	.000
%RSD	.313	2.02	1.10	.444	.126	1.53	.418	1.90	1.50	.167	.049	.111

Elem	Co2388	Cr2055	Cr2677	Cu2230	Cu3247	Cu3273	Fe2395	Fe2599	Mg2790	Mg2802	Mn2576	Mn2593
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.001**	**.011**	**.003**	**.006**	**.002**	**.001**	**.000**	**.001**	**.000**	**.032**	**.010**	**.004**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.096	.134	.421	.353	1.72	1.68	1.38	1.32	2.88	.237	.294	1.67

Elem	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.007**	**.004**	**.014**	**.014**	**.001**	**.002**	**.001**	**.002**	**.001**	**.000**	**.002**	**.001**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.166	.151	.154	.150	.420	.189	.175	.258	.822	4.39	.134	1.22

Elem	V_2924	Zn2062	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.005**	**.021**	**.040**	**.011**	**.002**	**.001**	**.0003**
Stddev	.000	.000	.000	.000	.000	.000	.0000
%RSD	.418	.318	.219	2.07	1.44	3.00	4.466

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**242690.**	**2194500.**	**345220.**
Stddev	595.	11801.	5898.
%RSD	.24512	.53776	1.7086

Sample Name: CalStd10=10000 Acquired: 02/02/2021 08:15:50 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	As1972	Ba4934	Ca3158	Co2286	Co2388	Cr2055	Cr2677	Cu3247	Cu3273	Fe2395	Fe2599
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.013**	**.005**	**.307**	**.003**	**.188**	**.013**	**.101**	**.025**	**.014**	**.009**	**.004**	**.006**
Stddev	.000	.000	.001	.000	.001	.000	.001	.000	.000	.000	.000	.000
%RSD	.304	.378	.279	.378	.602	.715	.539	.781	.428	.236	.625	.571

Elem	Mg2790	Mg2802	Mn2576	Mn2593	Mo2045	Ni2216	Ni2316	Pb2169	Sb2068	Sb2175	Se2062	V_2908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.283**	**.091**	**.036**	**.034**	**.130**	**.128**	**.011**	**.011**	**.015**	**.002**	**.012**
Stddev	.000	.001	.001	.000	.000	.001	.001	.000	.000	.000	.000	.000
%RSD	.772	.418	1.38	.322	.566	.438	.447	.629	.436	.334	.428	.413

Elem	V_2924	Zn2062	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.048**	**.194**	**.059**	**.025**	**.006**	**.0023**
Stddev	.000	.001	.000	.000	.000	.0000
%RSD	.748	.649	.476	.409	.290	.7695

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**241560.**	**2156900.**	**341230.**
Stddev	440.	18229.	1728.
%RSD	.18197	.84515	.50641

Sample Name: CalStd12=100K Acquired: 02/02/2021 08:21:50 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Cr2055	Cu3247	Mn2593	Pb2169	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.912**	**.142**	**.347**	**.111**	**1.73**
Stddev	.005	.002	.003	.001	.02
%RSD	.521	1.32	.956	.912	.954

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**243090.**	**343530.**
Stddev	1207.	2957.
%RSD	.49660	.86065

Sample Name: CalStd13=100000 Acquired: 02/02/2021 08:28:44 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2395	Fe2599	Mg2790	Na5889	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.127**	**.030**	**.043**	**.062**	**.005**	**.548**	**.256**
Stddev	.000	.000	.000	.000	.000	.001	.000
%RSD	.219	.233	.178	.120	.177	.195	.118

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**235660.**	**2106100.**	**339390.**
Stddev	788.	18866.	732.
%RSD	.33430	.89578	.21570

Sample Name: CalStd14=500000 Acquired: 02/02/2021 08:35:11 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2395	Fe2599	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.640**	**.141**	**.194**	**.285**	**.023**
Stddev	.003	.001	.001	.001	.000
%RSD	.521	.576	.551	.522	.627

Int. Std.	Y_3242	Y_3710
Units	Cts/S	Cts/S
Avg	**2006900.**	**330370.**
Stddev	11986.	1939.
%RSD	.59726	.58699

Sample Name: CalibStd15=1000k Acquired: 02/02/2021 08:41:45 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2395	Mg2790	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.23**	**.262**	**.354**	**.044**	**2.21**	**.567**	**.2131**
Stddev	.01	.002	.003	.000	.05	.010	.0021
%RSD	.678	.693	.857	.721	2.27	1.68	.9676

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**197990.**	**1833400.**	**326060.**
Stddev	832.	2971.	2504.
%RSD	.42003	.16205	.76794

Sample Name: Ag Ba 1000, 50000 Acquired: 02/02/2021 08:48:40 Type: Cal
Method: DOD Calibration Updated 060614(v4237) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba4934
Units	Cts/S
Avg	**1.37**
Stddev	.01
%RSD	.354

Int. Std.	Y_3710
Units	Cts/S
Avg	**352310.**
Stddev	3086.
%RSD	.87592

Sample Name: icv Acquired: 02/02/2021 09:01:38 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Cu3273	Fe2599
Avg	**53.0**	**11300.**	**1990.**	**2020.**	**46.9**	**9820.**	**46.9**	**496.**	**189.**	**238.**	**234.**	**5260.**
Stddev	.5	69.	7.	16.	1.2	87.	.1	.	5.	3.	2.	25.
%RSD	.984	.604	.368	.801	2.61	.882	.183	.038	2.41	1.25	.755	.468
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mg2790	Mn2576	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se2062	Tl1908	V_2924	Zn2062
Avg	**9640.**	**504.**	**511.**	**499.**	**498.**	**479.**	**465.**	**492.**	**1890.**	**1910.**	**488.**	**511.**
Stddev	137.	11.	1.	1.	1.	5.	4.	4.	18.	2.	12.	1.
%RSD	1.43	2.21	.184	.172	.137	.981	.861	.827	.925	.087	2.35	.133
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Zn2138	Na5889	K_7664
Avg	**488.**	**4560.**	**5140.**
Stddev	1.	49.	55.
%RSD	.207	1.07	1.07
Check ?	None	None	None
Value			
Range			

Sample Name: icv Acquired: 02/02/2021 09:01:38 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**240640.**	**2171600.**	**343670.**
Stddev	757.	59963.	3207.
%RSD	.31457	2.7613	.93304

Sample Name: ICVLL Acquired: 02/02/2021 09:14:11 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3158	Ca3933	Cd2265	Co2286	Cr2677	Cu2230
Avg	**53.8**	**1140.**	**1150.**	**58.9**	**27.0**	**11.8**	**1490.**	**1460.**	**14.4**	**28.0**	**27.9**	**29.1**
Stddev	.4	9.	16.	2.9	.3	.1	14.	20.	.2	.2	.5	.7
%RSD	.674	.780	1.41	4.93	.997	.561	.954	1.33	1.04	.652	1.82	2.50
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Cu3273	Fe2599	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Avg	**34.1**	**958.**	**1490.**	**35.5**	**30.5**	**28.5**	**29.4**	**62.1**	**55.6**	**56.0**	**29.8**	**27.8**
Stddev	6.6	12.	5.	.1	.4	.6	1.6	2.4	4.1	2.5	.2	.2
%RSD	19.4	1.21	.363	.150	1.41	2.22	5.57	3.89	7.33	4.39	.678	.652
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Na5889	K_7698
Avg	**2770.**	**15160.**
Stddev	52.	168.
%RSD	1.86	1.110
Check ?	Chk Pass	Chk Pass
Value		
Range		

Sample Name: ICVLL Acquired: 02/02/2021 09:14:11 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**243670.**	**2143200.**	**342670.**
Stddev	773.	8158.	3897.
%RSD	.31712	.38063	1.1374

Sample Name: icb Acquired: 02/02/2021 09:26:32 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2599	Mg2802
Avg	**-1.05**	**-1.61**	**-.148**	**-1.83**	**-.156**	**-1.99**	**-.199**	**-1.96**	**-1.09**	**-1.08**	**-4.49**	**-3.24**
Stddev	1.06	1.03	.755	.57	.027	.07	.169	.34	.28	.79	4.41	.06
%RSD	101.	64.2	510.	31.3	17.5	3.50	84.8	17.2	26.0	73.5	98.1	1.77
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	K_7664
Avg	**-2.29**	**.179**	**-1.43**	**.450**	**1.89**	**2.12**	**1.15**	**-1.24**	**-2.19**	**-111.**	**17.0**
Stddev	.08	.355	.72	2.06	1.70	2.59	1.06	.45	.13	11.	15.4
%RSD	3.60	198.	50.3	458.	90.1	122.	92.1	36.5	5.99	9.86	90.3
Check ?	None	None	None	None	None	None	None	None	None	None	None
Value											
Range											

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**253510.**	**2200600.**	**346890.**
Stddev	1012.	29053.	3825.
%RSD	.39919	1.3202	1.1027

Sample Name: MRL/LLOQ Acquired: 02/02/2021 09:32:52 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Cu3273	Fe2599
Avg	F **31.8**	**377.**	**14.0**	**7.96**	**3.68**	**473.**	**4.69**	**7.72**	**8.03**	**10.3**	**11.2**	**316.**
Stddev	.5	2.	3.3	.22	.01	6.	.20	.17	.64	1.3	3.1	8.
%RSD	1.59	.540	23.3	2.70	.356	1.26	4.19	2.22	7.93	12.2	27.7	2.49
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	20.0											
Range	30.0%											

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	K_7664
Avg	**480.**	**8.02**	**11.5**	**8.21**	**8.89**	**19.0**	**19.6**	**17.6**	**9.42**	**7.83**	**853.**	**4750.**
Stddev	4.	.09	.2	.76	3.51	.9	2.2	1.7	.17	.17	24.	50.
%RSD	.875	1.16	2.08	9.20	39.4	4.61	11.1	9.52	1.77	2.22	2.79	1.05
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**243380.**	**2151400.**	**343340.**
Stddev	1173.	15679.	4604.
%RSD	.48191	.72881	1.3408

Sample Name: ICSA Acquired: 02/02/2021 09:39:09 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2395
Avg	**-.412**	**486000.**	**-.165**	**-.000**	**-.140**	**468000.**	**-.001**	**-1.02**	**-1.98**	**1.00**	**444000.**
Stddev	.728	522.	8.90	.648	.045	358.	.203	.41	.96	1.18	508.
%RSD	177.	.107	5410.	17e6	32.4	.076	14800.	40.8	48.7	118.	.114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Fe2599	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2908	Zn2138
Avg	**476000.**	**492000.**	**3.86**	**.845**	**-2.73**	**.178**	**5.76**	**-9.10**	**-6.18**	**9880.**	**-3.69**
Stddev	758.	950.	.14	.333	.87	5.48	3.95	4.01	2.24	23.	.11
%RSD	.159	.193	3.63	39.4	31.8	3070.	68.6	44.1	36.3	.237	2.95
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit											
Low Limit											

Elem	Na5889	K_7664
Avg	**.030**	**142.**
Stddev	12.7	31.
%RSD	41700.	22.0
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Sample Name: ICSA Acquired: 02/02/2021 09:39:09 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**218930.**	**1986000.**	**331420.**
Stddev	734.	14147.	516.
%RSD	.33529	.71232	.15583

Sample Name: ICSAB Acquired: 02/02/2021 09:45:31 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2288	Co2286	Cr2677	Cu2230	Cu3273
Avg	**461.**	**488000.**	**501.**	**502.**	**480.**	**470000.**	**510.**	**511.**	**486.**	**513.**	**524.**
Stddev	2.	1000.	16.	2.	5.	1290.	1.	1.	6.	1.	10.
%RSD	.427	.205	3.18	.322	1.07	.275	.270	.195	1.31	.282	1.83
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Fe2395	Fe2599	Mg2790	Mn2576	Mo2045	Ni2216	Ni2316	Pb2203	Sb2175	Se1960	Tl1908
Avg	**450000.**	**483000.**	**493000.**	**529.**	**528.**	**509.**	**498.**	**459.**	**531.**	**475.**	**541.**
Stddev	1830.	1410.	1230.	6.	2.	1.	2.	3.	5.	10.	4.
%RSD	.407	.291	.250	1.13	.383	.225	.457	.552	.984	2.18	.824
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	V_2924	Zn2062	Zn2138	Na5895	K_7698
Avg	**510.**	**474.**	**500.**	**95200.**	**102900.**
Stddev	6.	1.	2.	184.	545.
%RSD	1.17	.307	.308	.193	.5301
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Sample Name: ICSAB Acquired: 02/02/2021 09:45:31 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**218760.**	**1983000.**	**331180.**
Stddev	663.	17538.	1014.
%RSD	.30295	.88442	.30608

Sample Name: ICVLL ag1 Acquired: 02/02/2021 10:13:42 Type: Unk
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2599	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**9.09**	**1.78**	**-.528**	**-1.62**	**-.158**	**1.31**	**-.202**	**-1.69**	**-.876**	**1.60**	**119.**	**-.404**
Stddev	1.28	.81	3.08	.43	.028	.08	.116	.21	.227	.94	6.	.098
%RSD	14.1	45.6	584.	26.2	17.8	5.89	57.6	12.2	25.9	58.6	5.25	24.3

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**7.02**	**.732**	**-1.94**	**.651**	**.845**	**1.92**	**-.659**	**-.325**	**-1.94**	**-100.**	**118.**
Stddev	.11	.744	.33	2.55	1.97	1.26	.698	.632	.07	9.	14.
%RSD	1.56	102.	17.0	392.	233.	65.6	106.	194.	3.40	9.32	11.5

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**245260.**	**2138300.**	**341040.**
Stddev	1042.	20674.	2000.
%RSD	.42492	.96685	.58634

Sample Name: ccv1 Acquired: 02/02/2021 15:05:16 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2288	Co2388	Cr2055	Cu3247	Cu3273	Fe2599
Avg	**412.**	**5290.**	**5020.**	**5500.**	**474.**	**5030.**	**470.**	**5090.**	**4750.**	**4940.**	**4900.**	**5200.**
Stddev	1.	6.	40.	9.	1.	11.	2.	20.	24.	20.	14.	16.
%RSD	.279	.106	.788	.161	.250	.222	.438	.394	.497	.402	.287	.303
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2790	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2908	Zn2062	Na5895	K_7698
Avg	**4960.**	**4730.**	**5110.**	**4900.**	**4970.**	**5160.**	**4740.**	**4760.**	**5080.**	**4990.**	**46100.**	**49000.**
Stddev	33.	.	21.	30.	36.	12.	38.	14.	10.	34.	54.	231.
%RSD	.665	.009	.406	.617	.730	.228	.799	.283	.192	.687	.117	.4710
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**241140.**	**1980700.**	**324540.**
Stddev	703.	8617.	1387.
%RSD	.29138	.43504	.42746

Sample Name: ccv2 Acquired: 02/02/2021 15:10:29 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Cu3273	Fe2599
Avg	**51.5**	**500.**	**466.**	**490.**	**53.2**	**500.**	**51.8**	**509.**	**507.**	**510.**	**499.**	**528.**
Stddev	.4	3.	4.	2.	.4	8.	.3	2.	1.	2.	12.	7.
%RSD	.790	.623	.924	.305	.697	1.60	.532	.327	.277	.315	2.32	1.37
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2802	Mn2576	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Avg	**532.**	**551.**	**517.**	**503.**	**501.**	**499.**	**456.**	**508.**	**486.**	**485.**	**534.**	**509.**
Stddev	4.	5.	1.	4.	5.	.	4.	3.	1.	4.	6.	1.
%RSD	.724	.982	.275	.839	.916	.072	.940	.561	.115	.762	1.06	.243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Zn2138	Na5889	K_7664
Avg	**481.**	**5100.**	**5090.**
Stddev	3.	97.	133.
%RSD	.630	1.90	2.61
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv2 Acquired: 02/02/2021 15:10:29 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**243190.**	**1981800.**	**328130.**
Stddev	253.	24377.	4135.
%RSD	.10407	1.2301	1.2601

Sample Name: ccb Acquired: 02/02/2021 15:16:16 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2599	Mg2802
Avg	**.568**	**-2.11**	**.003**	**-1.80**	**-.190**	**-2.39**	**-.210**	**-1.83**	**-1.27**	**.741**	**-9.73**	**-2.83**
Stddev	.747	.47	.380	.36	.023	.03	.205	.17	.41	.906	1.14	.04
%RSD	131.	22.3	13100.	20.1	12.1	1.30	97.4	9.39	32.3	122.	11.7	1.27
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	K_7664
Avg	**-2.35**	**.412**	**-1.77**	**-.172**	**.753**	**-.700**	**-1.15**	**-.833**	**-2.15**	**-151.**	**-56.1**
Stddev	.11	.139	.14	2.53	3.04	2.56	1.72	.284	.06	12.	19.3
%RSD	4.68	33.8	7.93	1470.	404.	366.	150.	34.1	2.86	7.91	34.3
Check ?	None	None	None	None	None	None	None	None	None	None	None
Value											
Range											

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**249990.**	**2049400.**	**334870.**
Stddev	602.	11386.	4739.
%RSD	.24072	.55558	1.4152

Sample Name: lcsw79854 Acquired: 02/02/2021 16:03:04 Type: Unk
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Cu3273
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**21.2**	**743.**	**716.**	**741.**	**19.3**	**182000.**	**18.6**	**190.**	**76.4**	**116.**	**99.6**
Stddev	.9	2.	3.	1.	.1	488.	.3	.	.6	2.	6.3
%RSD	4.27	.269	.450	.096	.724	.268	1.85	.043	.767	1.79	6.29

Elem	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**393.**	**92400.**	**204.**	**1990.**	**185.**	**176.**	**198.**	**747.**	**739.**	**203.**	**190.**
Stddev	2.	377.	2.	3.	1.	4.	2.	5.	4.	2.	.
%RSD	.585	.408	.949	.150	.379	2.16	1.04	.690	.524	1.08	.176

Elem	Na5895	K_7698
Units	ug/L	ug/L
Avg	**93400.**	**101400.**
Stddev	188.	219.
%RSD	.201	.2158

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**232540.**	**1919700.**	**322370.**
Stddev	633.	12719.	1471.
%RSD	.27200	.66252	.45641

Sample Name: mbw79854 Acquired: 02/02/2021 16:09:10 Type: Unk
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2599	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.135**	**1.29**	**-3.04**	**-1.87**	**-.208**	**4.02**	**-.148**	**-1.98**	**-1.65**	**.724**	**-1.79**	**-1.29**
Stddev	.283	.74	.66	.27	.012	.78	.044	.24	.62	.581	5.47	.06
%RSD	210.	57.3	21.5	14.5	5.98	19.5	30.1	12.1	37.8	80.2	305.	4.88

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-2.36**	**.600**	**-2.03**	**-1.11**	**.200**	**3.35**	**-.284**	**-.803**	**-2.09**	**7.77**	**28.0**
Stddev	.17	.239	.07	1.22	2.59	2.88	1.33	.177	.07	3.18	24.9
%RSD	7.43	39.8	3.49	110.	1290.	86.1	468.	22.0	3.55	40.9	89.2

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**244110.**	**1976400.**	**328560.**
Stddev	770.	23614.	1168.
%RSD	.31545	1.1948	.35547

Sample Name: 529230 Acquired: 02/02/2021 16:15:24 Type: Unk
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Cu3273	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.991**	**6570.**	**1.86**	**82.6**	**.274**	**83300.**	**-.346**	**4.39**	**16.4**	**20.1**	**15.2**	**8580.**
Stddev	.490	71.	2.19	.6	.008	886.	.188	.19	.4	.5	4.4	116.
%RSD	49.5	1.08	118.	.717	2.95	1.06	54.4	4.28	2.23	2.69	28.8	1.35

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**43800.**	**358.**	**1.63**	**10.7**	**6.66**	**-.907**	**1.23**	**2.07**	**7.18**	**33.8**	**17600.**	**7470.**
Stddev	521.	5.	.22	.3	1.23	4.96	7.29	1.73	.34	.3	189.	99.
%RSD	1.19	1.48	13.4	3.21	18.5	547.	593.	83.5	4.66	.911	1.07	1.33

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**234250.**	**1946500.**	**331500.**
Stddev	676.	20467.	2514.
%RSD	.28874	1.0515	.75833

Sample Name: I529230 Acquired: 02/02/2021 16:21:50 Type: Unk
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.164**	**1180.**	**1900.**	**-2.11**	**14.3**	**-.078**	**24500.**	**-.287**	**-.494**	**3.46**	**4.27**	**2720.**
Stddev	.565	132.	109.	1.37	2.0	.025	1330.	.112	.190	.37	.86	144.
%RSD	345.	11.3	5.71	64.9	14.1	31.8	5.44	39.2	38.5	10.8	20.2	5.30

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**12800.**	**88.8**	**.520**	**.734**	**.642**	**.840**	**-1.80**	**-.615**	**1.16**	**10.5**	**4930.**	**2070.**
Stddev	718.	5.1	.273	.499	3.45	3.58	1.77	3.38	.44	1.5	272.	115.
%RSD	5.59	5.71	52.4	68.0	537.	426.	98.2	549.	37.8	13.9	5.53	5.56

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**243840.**	**1990600.**	**330930.**
Stddev	663.	14572.	1861.
%RSD	.27208	.73206	.56232

Sample Name: ccv1 Acquired: 02/02/2021 16:28:28 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2288	Co2388	Cr2055	Cu3247	Cu3273	Fe2599
Avg	**410.**	**5310.**	**5030.**	**5490.**	**472.**	**5000.**	**472.**	**5110.**	**4780.**	**4930.**	**4840.**	**5130.**
Stddev	.	37.	37.	45.	3.	58.	4.	33.	30.	34.	49.	38.
%RSD	.115	.695	.729	.812	.592	1.17	.810	.635	.636	.683	1.01	.736
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2790	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2908	Zn2062	Na5895	K_7698
Avg	**4960.**	**4600.**	**5140.**	**4930.**	**4990.**	**5190.**	**4720.**	**4790.**	**5040.**	**5030.**	**46300.**	**48060.**
Stddev	66.	57.	38.	33.	41.	38.	46.	35.	61.	34.	312.	479.
%RSD	1.32	1.24	.745	.671	.818	.725	.979	.730	1.20	.684	.673	.9969
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**239650.**	**1960200.**	**322290.**
Stddev	1257.	10491.	3591.
%RSD	.52430	.53522	1.1142

Sample Name: ccv2 Acquired: 02/02/2021 16:33:42 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Cu3273	Fe2599
Avg	**50.9**	**502.**	**461.**	**488.**	**52.7**	**503.**	**51.5**	**508.**	**501.**	**509.**	**492.**	**522.**
Stddev	.7	1.	2.	1.	.1	3.	.4	1.	3.	1.	8.	10.
%RSD	1.46	.168	.453	.246	.202	.664	.810	.192	.569	.271	1.73	1.85
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2802	Mn2576	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Avg	**533.**	**548.**	**515.**	**501.**	**497.**	**503.**	**452.**	**511.**	**487.**	**483.**	**538.**	**507.**
Stddev	2.	1.	2.	1.	2.	2.	2.	3.	4.	1.	2.	2.
%RSD	.452	.265	.311	.159	.441	.383	.441	.625	.838	.160	.291	.420
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Zn2138	Na5889	K_7664
Avg	**480.**	**5100.**	**4990.**
Stddev	1.	37.	46.
%RSD	.264	.720	.915
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv2 Acquired: 02/02/2021 16:33:42 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**241760.**	**1980100.**	**326560.**
Stddev	403.	3322.	1219.
%RSD	.16673	.16776	.37334

Sample Name: ccb Acquired: 02/02/2021 16:39:27 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2599	Mg2802
Avg	**.262**	**-1.69**	**-1.02**	**-1.97**	**-.169**	**-2.22**	**-.270**	**-1.81**	**-.863**	**.616**	**-9.10**	**-2.76**
Stddev	.462	.56	4.18	.53	.012	.04	.102	.26	.565	.784	1.89	.04
%RSD	176.	33.0	411.	26.7	7.05	1.64	37.7	14.3	65.4	127.	20.7	1.35
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	K_7664
Avg	**-2.29**	**.642**	**-1.55**	**.949**	**-1.33**	**-.147**	**-.066**	**-.590**	**-2.20**	**-148.**	**-46.7**
Stddev	.06	.195	.34	1.62	3.80	2.46	2.72	.149	.03	18.	25.4
%RSD	2.57	30.4	22.2	170.	286.	1670.	4120.	25.3	1.16	11.8	54.5
Check ?	None	None	None	None	None	None	None	None	None	None	None
Value											
Range											

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**250780.**	**2039900.**	**333300.**
Stddev	878.	13166.	4634.
%RSD	.35018	.64540	1.3904

Sample Name: dup529230 Acquired: 02/02/2021 16:45:48 Type: Unk
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Cu3273	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.560**	**6930.**	**2.57**	**85.5**	**.277**	**82900.**	**-.514**	**4.33**	**17.8**	**20.6**	**19.1**	**8990.**
Stddev	1.00	65.	2.07	.2	.020	424.	.100	.62	.3	1.3	6.3	56.
%RSD	179.	.930	80.4	.278	7.12	.512	19.4	14.3	1.94	6.21	32.8	.623

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5895	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**43700.**	**362.**	**1.69**	**11.1**	**7.53**	**-.663**	**.799**	**.353**	**7.78**	**35.1**	**17600.**	**7510.**
Stddev	291.	3.	.27	.4	2.74	2.12	4.97	1.83	.56	.3	175.	93.
%RSD	.667	.761	16.2	4.04	36.4	319.	623.	517.	7.13	.848	.993	1.24

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**234250.**	**1935800.**	**331420.**
Stddev	570.	19335.	2362.
%RSD	.24324	.99880	.71276

Sample Name: msw529230 Acquired: 02/02/2021 16:52:17 Type: Unk
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Cu3273
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**18.9**	**10700.**	**672.**	**526.**	**18.8**	**249000.**	**17.2**	**184.**	**88.8**	**129.**	**111.**
Stddev	.6	40.	7.	1.	.2	1080.	.2	1.	.7	.	7.
%RSD	3.05	.378	.982	.198	.888	.435	.936	.413	.784	.218	6.25

Elem	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**10200.**	**130000.**	**541.**	**1840.**	**185.**	**117.**	**163.**	**680.**	**625.**	**202.**	**212.**
Stddev	39.	706.	3.	.	1.	1.	3.	1.	2.	1.	.
%RSD	.378	.545	.599	.023	.429	.471	1.85	.181	.351	.274	.121

Elem	Na5895	K_7698
Units	ug/L	ug/L
Avg	**105000.**	**102900.**
Stddev	348.	855.
%RSD	.331	.8316

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**226990.**	**1884600.**	**319040.**
Stddev	236.	9095.	1872.
%RSD	.10418	.48260	.58666

Sample Name: msdw529230 Acquired: 02/02/2021 16:58:08 Type: Unk
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Cu3273
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**19.9**	**10900.**	**720.**	**615.**	**20.0**	**258000.**	**18.1**	**196.**	**94.3**	**138.**	**111.**
Stddev	.9	169.	7.	1.	.1	3270.	.3	.	.8	1.	6.
%RSD	4.58	1.55	.930	.161	.442	1.26	1.65	.201	.840	.562	5.81

Elem	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**9880.**	**135000.**	**554.**	**1970.**	**196.**	**136.**	**178.**	**733.**	**682.**	**215.**	**223.**
Stddev	133.	1730.	4.	3.	1.	5.	1.	3.	3.	1.	.
%RSD	1.34	1.29	.682	.129	.686	3.69	.712	.382	.422	.672	.173

Elem	Na5895	K_7698
Units	ug/L	ug/L
Avg	**111000.**	**108800.**
Stddev	1590.	1397.
%RSD	1.44	1.284

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**226500.**	**1885300.**	**325660.**
Stddev	299.	14013.	4513.
%RSD	.13185	.74324	1.3857

Sample Name: pdsw529230 Acquired: 02/02/2021 17:04:07 Type: Unk
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2265	Cd2288	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**80.0**	**10400.**	**3320.**	**4040.**	**82.5**	**413000.**	**78.1**	**100.**	**809.**	**334.**	**436.**
Stddev	1.2	174.	18.	182.	1.2	16500.	.4	.	3.	3.	2.
%RSD	1.55	1.68	.549	4.50	1.42	4.00	.470	.336	.387	.988	.376

Elem	Cu3273	Fe2599	Mg2790	Mn2593	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**452.**	**10000.**	**215000.**	**846.**	**1580.**	**796.**	**785.**	**838.**	**710.**	**844.**	**3070.**
Stddev	22.	30.	8600.	35.	6.	3.	3.	3.	2.	4.	43.
%RSD	4.96	.304	4.00	4.08	.354	.425	.375	.394	.295	.444	1.41

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na5895	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**3050.**	**888.**	**813.**	**830.**	**196000.**	**100400.**
Stddev	5.	19.	3.	3.	8220.	3403.
%RSD	.162	2.14	.402	.371	4.19	3.389

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**223710.**	**1883600.**	**321970.**
Stddev	821.	11746.	2642.
%RSD	.36700	.62360	.82050

Sample Name: ccv1 Acquired: 02/02/2021 17:46:56 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2288	Co2388	Cr2055	Cu3247	Cu3273	Fe2599
Avg	**415.**	**5260.**	**5100.**	**5450.**	**466.**	**5030.**	**474.**	**5020.**	**4810.**	**4950.**	**4930.**	**5150.**
Stddev	1.	24.	7.	36.	3.	29.	1.	42.	7.	14.	51.	41.
%RSD	.159	.447	.144	.664	.635	.568	.215	.826	.147	.288	1.04	.803
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2790	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2908	Zn2062	Na5895	K_7698
Avg	**4840.**	**4720.**	**5150.**	**5000.**	**5000.**	**5180.**	**4780.**	**4810.**	**5020.**	**5060.**	**45800.**	**48460.**
Stddev	99.	33.	6.	10.	11.	15.	39.	11.	40.	10.	248.	406.
%RSD	2.05	.704	.121	.195	.218	.290	.808	.229	.787	.194	.540	.8376
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**239110.**	**2023600.**	**328620.**
Stddev	617.	10420.	1676.
%RSD	.25805	.51492	.50987

Sample Name: ccv2 Acquired: 02/02/2021 17:52:09 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Cu3273	Fe2599
Avg	**51.4**	**510.**	**472.**	**493.**	**51.8**	**501.**	**50.9**	**511.**	**499.**	**504.**	**493.**	**524.**
Stddev	.9	1.	4.	1.	.2	9.	.2	1.	3.	2.	9.	9.
%RSD	1.76	.214	.940	.206	.415	1.70	.368	.213	.544	.352	1.81	1.81
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2802	Mn2576	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Avg	**526.**	**541.**	**517.**	**510.**	**506.**	**505.**	**465.**	**512.**	**488.**	**488.**	**524.**	**514.**
Stddev	3.	3.	2.	1.	.	4.	4.	3.	5.	3.	4.	1.
%RSD	.656	.632	.448	.144	.047	.724	.780	.606	.956	.609	.844	.140
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Zn2138	Na5889	K_7664
Avg	**485.**	**5030.**	**5050.**
Stddev	.	94.	98.
%RSD	.091	1.86	1.94
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv2 Acquired: 02/02/2021 17:52:09 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**241420.**	**2041000.**	**332350.**
Stddev	594.	14392.	5513.
%RSD	.24593	.70515	1.6588

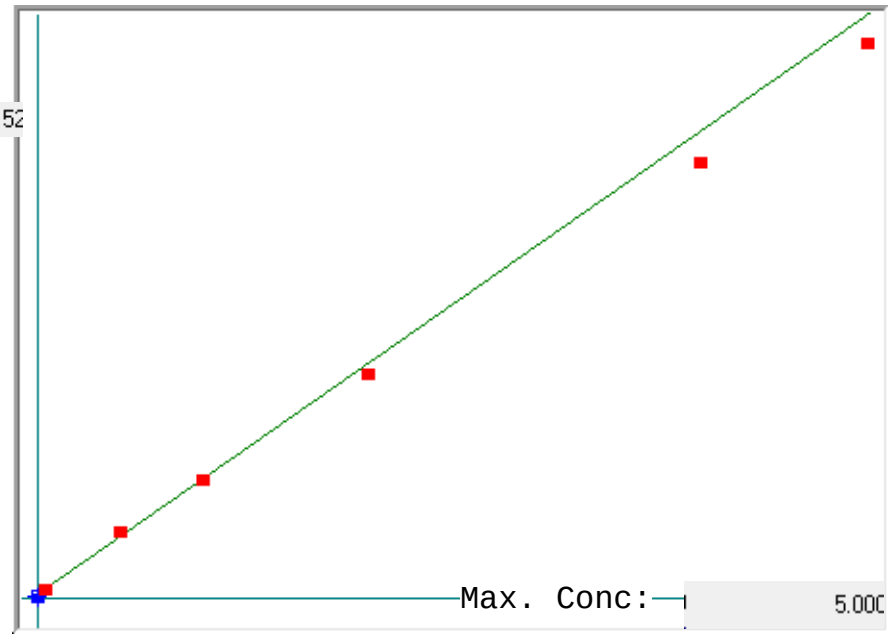
Sample Name: ccb Acquired: 02/02/2021 17:57:57 Type: QC
Method: DOD Calibration Updated 060614(v4237) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2599	Mg2802
Avg	**.157**	**-1.99**	**-1.40**	**-1.87**	**-.185**	**-2.12**	**-.285**	**-1.95**	**-1.11**	**-.164**	**-8.61**	**-2.97**
Stddev	.625	.49	3.25	.37	.019	.08	.094	.28	.49	1.19	4.25	.12
%RSD	398.	24.5	232.	19.8	10.3	3.56	33.1	14.5	44.3	726.	49.4	3.89
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	K_7664
Avg	**-2.23**	**.519**	**-1.72**	**.310**	**1.09**	**-1.51**	**-.798**	**-1.21**	**-2.23**	**-142.**	**-49.5**
Stddev	.04	.261	.68	1.62	1.37	2.26	.717	.50	.04	16.	24.4
%RSD	1.91	50.4	39.5	524.	126.	150.	89.9	41.0	1.87	11.3	49.3
Check ?	None	None	None	None	None	None	None	None	None	None	None
Value											
Range											

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**248040.**	**2098900.**	**339690.**
Stddev	480.	22147.	3619.
%RSD	.19350	1.0551	1.0652

Hg WATERS



A= 0.0000e+000

B= 1.7663e-004

C= -2.9190e-002

Rho= 0.9972844

Accept= Accepted

Accepted Date=

02/03/21 08:06

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
CALIBRATION BLANK	0.000	-0.003	-0.003	150	10.497	141	141	155	166	
0.05	0.050	0.054	0.004	472	3.1 %	453	465	480	492	
0.5	0.500	0.565	0.065	3365	3.6 %	3193	3326	3424	3519	
1.0	1.000	1.016	0.016	5916	3.5 %	5625	5839	6022	6179	
2.0	2.000	1.913	-0.087	10998	3.5 %	10479	10839	11175	11500	
4.0	4.000	3.746	-0.254	21373	3.9 %	20420	20859	21615	22599	
5.0	5.000	4.767	-0.233	27151	4.2 %	25512	26768	27787	28540	

020321w

Method: Hg WATERS Operator: Admin Date of Analysis: 03 Feb 2021 07:37:38

Sample ID	Date	Element	Units	Extended ID	Mean
CALIBRATION BLANK	03 Feb 2021 07:44:12	Hg			[ ] 150.750
0.05	03 Feb 2021 07:47:21	Hg			[ ] 472.500
0.5	03 Feb 2021 07:50:33	Hg			[ ] 3365.500
1.0	03 Feb 2021 07:53:44	Hg			[ ] 5916.250
2.0	03 Feb 2021 07:56:55	Hg			[ ] 10998.250
4.0	03 Feb 2021 08:00:07	Hg			[ ] 21373.250
5.0	03 Feb 2021 08:03:17	Hg			[ ] 27151.750
ICV	03 Feb 2021 08:06:26	Hg			(L)91.1% 2.734
ICB	03 Feb 2021 08:15:32	Hg			-0.007
lcsw	03 Feb 2021 08:18:42	Hg			1.826
mbw	03 Feb 2021 08:25:00	Hg			-0.003 [ ]
526738	03 Feb 2021 08:28:09	Hg			0.055
lqckw	03 Feb 2021 08:31:19	Hg			0.112
526720	03 Feb 2021 08:34:28	Hg			0.192
526721 SAMPLE NOT LOADED	03 Feb 2021 08:37:38	Hg			0.195
~~529308~~	~~03 Feb 2021 08:40:47~~	~~Hg~~			~~0.030 [ ]~~
529309	03 Feb 2021 08:43:57	Hg			-0.010 [ ]
529854dup 529309	03 Feb 2021 08:47:08	Hg			-0.007 [ ]
CCV	03 Feb 2021 08:50:18	Hg			97.3% 2.919
CCB	03 Feb 2021 08:56:37	Hg			-0.005
528807	03 Feb 2021 08:59:47	Hg			-0.001 [ ]
529849dup 528807	03 Feb 2021 09:02:58	Hg			-0.002 [ ]
529230	03 Feb 2021 09:06:09	Hg			0.006
529807	03 Feb 2021 09:09:18	Hg			-0.010 [ ]
529308	03 Feb 2021 09:12:28	Hg			-0.011 [ ]
529855msw 529309	03 Feb 2021 09:15:37	Hg			1.668
529856msdw 529309	03 Feb 2021 09:18:46	Hg			1.634
529850msw 528807	03 Feb 2021 09:21:55	Hg			1.708
529851msdw 528807	03 Feb 2021 09:25:05	Hg			1.685
529863msw 529807	03 Feb 2021 09:28:15	Hg			1.291
CCV	03 Feb 2021 09:31:25	Hg			92.8% 2.783
CCB	03 Feb 2021 09:37:44	Hg			-0.004
CCV	03 Feb 2021 09:40:53	Hg			(L)-1.0% -0.029

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Method: Hg WATERS Operator: Admin Date of Analysis: 03 Feb 2021 07:37:38

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CALIBRATION BLANK - 1	03 Feb 2021 07:44:12	Hg			141	-
CALIBRATION BLANK - 2	03 Feb 2021 07:44:12	Hg			141	-
CALIBRATION BLANK - 3	03 Feb 2021 07:44:12	Hg			155	-
CALIBRATION BLANK - 4	03 Feb 2021 07:44:12	Hg			166	-
0.05 - 1	03 Feb 2021 07:47:21	Hg			453	-
0.05 - 2	03 Feb 2021 07:47:21	Hg			465	-
0.05 - 3	03 Feb 2021 07:47:21	Hg			480	-
0.05 - 4	03 Feb 2021 07:47:21	Hg			492	-
0.5 - 1	03 Feb 2021 07:50:33	Hg			3193	-
0.5 - 2	03 Feb 2021 07:50:33	Hg			3326	-
0.5 - 3	03 Feb 2021 07:50:33	Hg			3424	-
0.5 - 4	03 Feb 2021 07:50:33	Hg			3519	-
1.0 - 1	03 Feb 2021 07:53:44	Hg			5625	-
1.0 - 2	03 Feb 2021 07:53:44	Hg			5839	-
1.0 - 3	03 Feb 2021 07:53:44	Hg			6022	-
1.0 - 4	03 Feb 2021 07:53:44	Hg			6179	-
2.0 - 1	03 Feb 2021 07:56:55	Hg			10479	-
2.0 - 2	03 Feb 2021 07:56:55	Hg			10839	-
2.0 - 3	03 Feb 2021 07:56:55	Hg			11175	-
2.0 - 4	03 Feb 2021 07:56:55	Hg			11500	-
4.0 - 1	03 Feb 2021 08:00:07	Hg			20420	-
4.0 - 2	03 Feb 2021 08:00:07	Hg			20859	-
4.0 - 3	03 Feb 2021 08:00:07	Hg			21615	-
4.0 - 4	03 Feb 2021 08:00:07	Hg			22599	-
5.0 - 1	03 Feb 2021 08:03:17	Hg			25512	-
5.0 - 2	03 Feb 2021 08:03:17	Hg			26768	-
5.0 - 3	03 Feb 2021 08:03:17	Hg			27787	-
5.0 - 4	03 Feb 2021 08:03:17	Hg			28540	-
ICV - 1	03 Feb 2021 08:06:26	Hg			14855	(L)86.5% 2.595
ICV - 2	03 Feb 2021 08:06:26	Hg			15381	(L)89.6% 2.688
ICV - 3	03 Feb 2021 08:06:26	Hg			15953	(L)93.0% 2.789
ICV - 4	03 Feb 2021 08:06:26	Hg			16386	95.5% 2.865
ICB - 1	03 Feb 2021 08:15:32	Hg			120	-0.008
ICB - 2	03 Feb 2021 08:15:32	Hg			124	-0.007
ICB - 3	03 Feb 2021 08:15:32	Hg			130	-0.006
ICB - 4	03 Feb 2021 08:15:32	Hg			132	-0.006
lcsw - 1	03 Feb 2021 08:18:42	Hg			9916	1.722
lcsw - 2	03 Feb 2021 08:18:42	Hg			10289	1.788
lcsw - 3	03 Feb 2021 08:18:42	Hg			10711	1.863
lcsw - 4	03 Feb 2021 08:18:42	Hg			11093	1.930
mbw - 1	03 Feb 2021 08:25:00	Hg			137	-0.005 [ ]
mbw - 2	03 Feb 2021 08:25:00	Hg			149	-0.003 [ ]
mbw - 3	03 Feb 2021 08:25:00	Hg			151	-0.003 [ ]
mbw - 4	03 Feb 2021 08:25:00	Hg			154	-0.002 [ ]
526738 - 1	03 Feb 2021 08:28:09	Hg			455	0.051
526738 - 2	03 Feb 2021 08:28:09	Hg			470	0.054
526738 - 3	03 Feb 2021 08:28:09	Hg			490	0.057
526738 - 4	03 Feb 2021 08:28:09	Hg			500	0.059
lqckw - 1	03 Feb 2021 08:31:19	Hg			767	0.106
lqckw - 2	03 Feb 2021 08:31:19	Hg			791	0.111
lqckw - 3	03 Feb 2021 08:31:19	Hg			811	0.114
lqckw - 4	03 Feb 2021 08:31:19	Hg			827	0.117
526720 - 1	03 Feb 2021 08:34:28	Hg			1198	0.182
526720 - 2	03 Feb 2021 08:34:28	Hg			1240	0.190
526720 - 3	03 Feb 2021 08:34:28	Hg			1280	0.197
526720 - 4	03 Feb 2021 08:34:28	Hg			1299	0.200
526721 - 1	03 Feb 2021 08:37:38	Hg			1209	0.184
526721 - 2	03 Feb 2021 08:37:38	Hg			1256	0.193
526721 - 3	03 Feb 2021 08:37:38	Hg			1288	0.198
526721 - 4	03 Feb 2021 08:37:38	Hg			1319	0.204
529308 - 1	03 Feb 2021 08:40:47	Hg			0	-0.029 [ ]
529308 - 2	03 Feb 2021 08:40:47	Hg			-2	-0.030 [ ]
529308 - 3	03 Feb 2021 08:40:47	Hg			-1	-0.029 [ ]
529308 - 4	03 Feb 2021 08:40:47	Hg			-5	-0.030 [ ]
529309 - 1	03 Feb 2021 08:43:57	Hg			103	-0.011 [ ]
529309 - 2	03 Feb 2021 08:43:57	Hg			111	-0.010 [ ]
529309 - 3	03 Feb 2021 08:43:57	Hg			114	-0.009 [ ]
529309 - 4	03 Feb 2021 08:43:57	Hg			117	-0.009 [ ]
529854dup 529309 - 1	03 Feb 2021 08:47:08	Hg			115	-0.009 [ ]
529854dup 529309 - 2	03 Feb 2021 08:47:08	Hg			124	-0.007 [ ]
529854dup 529309 - 3	03 Feb 2021 08:47:08	Hg			124	-0.007 [ ]
529854dup 529309 - 4	03 Feb 2021 08:47:08	Hg			132	-0.006 [ ]
CCV - 1	03 Feb 2021 08:50:18	Hg			15937	92.9% 2.786
CCV - 2	03 Feb 2021 08:50:18	Hg			16419	95.7% 2.871
CCV - 3	03 Feb 2021 08:50:18	Hg			16972	99.0% 2.969
CCV - 4	03 Feb 2021 08:50:18	Hg			17445	101.7% 3.052
CCB - 1	03 Feb 2021 08:56:37	Hg			131	-0.006
CCB - 2	03 Feb 2021 08:56:37	Hg			136	-0.005
CCB - 3	03 Feb 2021 08:56:37	Hg			138	-0.005

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Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CCB - 4	03 Feb 2021 08:56:37	Hg			147	-0.003
528807 - 1	03 Feb 2021 08:59:47	Hg			144	-0.004 [ ]
528807 - 2	03 Feb 2021 08:59:47	Hg			155	-0.002 [ ]
528807 - 3	03 Feb 2021 08:59:47	Hg			162	-0.001 [ ]
528807 - 4	03 Feb 2021 08:59:47	Hg			167	0.000
529849dup 528807 - 1	03 Feb 2021 09:02:58	Hg			149	-0.003 [ ]
529849dup 528807 - 2	03 Feb 2021 09:02:58	Hg			150	-0.003 [ ]
529849dup 528807 - 3	03 Feb 2021 09:02:58	Hg			156	-0.002 [ ]
529849dup 528807 - 4	03 Feb 2021 09:02:58	Hg			159	-0.001 [ ]
529230 - 1	03 Feb 2021 09:06:09	Hg			189	0.004
529230 - 2	03 Feb 2021 09:06:09	Hg			197	0.006
529230 - 3	03 Feb 2021 09:06:09	Hg			197	0.006
529230 - 4	03 Feb 2021 09:06:09	Hg			203	0.007
529807 - 1	03 Feb 2021 09:09:18	Hg			104	-0.011 [ ]
529807 - 2	03 Feb 2021 09:09:18	Hg			103	-0.011 [ ]
529807 - 3	03 Feb 2021 09:09:18	Hg			108	-0.010 [ ]
529807 - 4	03 Feb 2021 09:09:18	Hg			117	-0.009 [ ]
529308 - 1	03 Feb 2021 09:12:28	Hg			101	-0.011 [ ]
529308 - 2	03 Feb 2021 09:12:28	Hg			99	-0.012 [ ]
529308 - 3	03 Feb 2021 09:12:28	Hg			104	-0.011 [ ]
529308 - 4	03 Feb 2021 09:12:28	Hg			108	-0.010 [ ]
529855msw 529309 - 1	03 Feb 2021 09:15:37	Hg			9275	1.609
529855msw 529309 - 2	03 Feb 2021 09:15:37	Hg			9531	1.654
529855msw 529309 - 3	03 Feb 2021 09:15:37	Hg			9714	1.687
529855msw 529309 - 4	03 Feb 2021 09:15:37	Hg			9923	1.724
529856msdw 529309 - 1	03 Feb 2021 09:18:46	Hg			9043	1.568
529856msdw 529309 - 2	03 Feb 2021 09:18:46	Hg			9298	1.613
529856msdw 529309 - 3	03 Feb 2021 09:18:46	Hg			9539	1.656
529856msdw 529309 - 4	03 Feb 2021 09:18:46	Hg			9776	1.698
529850msw 528807 - 1	03 Feb 2021 09:21:55	Hg			9431	1.637
529850msw 528807 - 2	03 Feb 2021 09:21:55	Hg			9720	1.688
529850msw 528807 - 3	03 Feb 2021 09:21:55	Hg			9963	1.731
529850msw 528807 - 4	03 Feb 2021 09:21:55	Hg			10232	1.778
529851msdw 528807 - 1	03 Feb 2021 09:25:05	Hg			9324	1.618
529851msdw 528807 - 2	03 Feb 2021 09:25:05	Hg			9577	1.662
529851msdw 528807 - 3	03 Feb 2021 09:25:05	Hg			9846	1.710
529851msdw 528807 - 4	03 Feb 2021 09:25:05	Hg			10078	1.751
529863msw 529807 - 1	03 Feb 2021 09:28:15	Hg			7049	1.216
529863msw 529807 - 2	03 Feb 2021 09:28:15	Hg			7334	1.266
529863msw 529807 - 3	03 Feb 2021 09:28:15	Hg			7630	1.319
529863msw 529807 - 4	03 Feb 2021 09:28:15	Hg			7885	1.364
CCV - 1	03 Feb 2021 09:31:25	Hg			15185	(L)88.4% 2.653
CCV - 2	03 Feb 2021 09:31:25	Hg			15746	91.7% 2.752
CCV - 3	03 Feb 2021 09:31:25	Hg			16190	94.4% 2.831
CCV - 4	03 Feb 2021 09:31:25	Hg			16570	96.6% 2.898
CCB - 1	03 Feb 2021 09:37:44	Hg			144	-0.004
CCB - 2	03 Feb 2021 09:37:44	Hg			145	-0.004
CCB - 3	03 Feb 2021 09:37:44	Hg			144	-0.004
CCB - 4	03 Feb 2021 09:37:44	Hg			140	-0.004
CCV - 1	03 Feb 2021 09:40:53	Hg			0	(L)-1.0% -0.029

METALS
LOGBOOK
DOCUMENTS

MICP WATER QSM Analytical Run
179107 on 02/10/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	531312								MICP WATER QSM				
					ICV					0			
	531313								MICP WATER QSM				
					ICVLL					0			
	531314								MICP WATER QSM				
					ICB					0			
	531315								MICP WATER QSM				
					ICSA					0			
	531316								MICP WATER QSM				
					ICSAB					0			
	531317								MICP WATER QSM				
					ICVLL					0			
	531318								MICP WATER QSM				
					CCV1					0			
	531319								MICP WATER QSM				
					CCV2					0			
	531320								MICP WATER QSM				
					CCB					0			
	529751								ICP TOTAL QSM 5.0				
RERUN					LCSW					79854			
					LCSW					79854			
	529750								ICP TOTAL QSM 5.0				
					MBW					79854			
RERUN					MBW					79854			
159483	529230		01/28/2021	1530			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ICP TOTAL QSM 5.0		GW	**4**	
RERUN		IDW-48/49								79854			
		IDW-48/49								79854			
	531321								ICP TOTAL QSM 5.0				
					L	529230				0			
	531322								MICP WATER QSM				
					CCV1					0			
	531323								MICP WATER QSM				
					CCV2					0			
	531324								MICP WATER QSM				
					CCB					0			
	529752		01/28/2021	1530					ICP TOTAL QSM 5.0				
		IDW-48/49			DUP	529230				79854			
	529753		01/28/2021	1530					ICP TOTAL QSM 5.0				
		IDW-48/49			MSW	529230				79854			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MICP WATER QSM Analytical Run
179107 on 02/10/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	529754		01/28/2021 1530					ICP TOTAL QSM 5.0				
		IDW-48/49		MSDW	529753				79854			
	531325							ICP TOTAL QSM 5.0				
				PDSW	529230				0			
	531326							MICP WATER QSM				
				CCV1					0			
	531327							MICP WATER QSM				
				CCV2					0			
	531328							MICP WATER QSM				
				CCB					0			
	532568							MICP WATER QSM				
				CCV1					0			
	532569							MICP WATER QSM				
				CCV2					0			
	532570							MICP WATER QSM				
				CCB					0			

29 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MICP WATER QSM K&Na Analytical Run
179108 on 02/10/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	531609								MICP WATER QSM K&Na				
					ICV					0			
	531610								MICP WATER QSM K&Na				
					ICVLL					0			
	531611								MICP WATER QSM K&Na				
					ICB					0			
	531612								MICP WATER QSM K&Na				
					ICSA					0			
	531613								MICP WATER QSM K&Na				
					ICSAB					0			
	531615								MICP WATER QSM K&Na				
					CCV1					0			
	531616								MICP WATER QSM K&Na				
					CCV2					0			
	531617								MICP WATER QSM K&Na				
					CCB					0			
	529751								ICP K TOTAL QSM 5.0				
					LCSW					79854			
	529751								ICP NA TOTAL QSM 5.0				
					LCSW					79854			
	529750								ICP K TOTAL QSM 5.0				
					MBW					79854			
	529750								ICP NA TOTAL QSM 5.0				
					MBW					79854			
159483	529230		01/28/2021	1530			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ICP K TOTAL QSM 5.0		GW	**4**	
		IDW-48/49								79854			
159483	529230		01/28/2021	1530			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ICP NA TOTAL QSM 5.0		GW	**4**	
		IDW-48/49								79854			
	531618								ICP K TOTAL QSM 5.0				
					L	529230				0			
	531618								ICP NA TOTAL QSM 5.0				
					L	529230				0			
	531619								MICP WATER QSM K&Na				
					CCV1					0			
	531620								MICP WATER QSM K&Na				
					CCV2					0			
	531621								MICP WATER QSM K&Na				
					CCB					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\LIMSREPS\ANALYTICALRUN.RPT

MICP WATER QSM K&Na Analytical Run
179108 on 02/10/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	529752		01/28/2021 1530				ICP K TOTAL QSM 5.0				
		IDW-48/49		DUP 529230				79854			
	529752		01/28/2021 1530				ICP NA TOTAL QSM 5.0				
		IDW-48/49		DUP 529230				79854			
	529753		01/28/2021 1530				ICP K TOTAL QSM 5.0				
		IDW-48/49		MSW 529230				79854			
	529753		01/28/2021 1530				ICP NA TOTAL QSM 5.0				
		IDW-48/49		MSW 529230				79854			
	529754		01/28/2021 1530				ICP K TOTAL QSM 5.0				
		IDW-48/49		MSDW 529753				79854			
	529754		01/28/2021 1530				ICP NA TOTAL QSM 5.0				
		IDW-48/49		MSDW 529753				79854			
	531622						ICP K TOTAL QSM 5.0				
				PDSW 529230				0			
	531622						ICP NA TOTAL QSM 5.0				
				PDSW 529230				0			
	531623						MICP WATER QSM K&Na				
				CCV1				0			
	531624						MICP WATER QSM K&Na				
				CCV2				0			
	531625						MICP WATER QSM K&Na				
				CCB				0			

30 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MERCURY QSM 5.0 Analytical Run
179138 on 02/03/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	530753								MERCURY QSM 5.0				
					ICV					0			
	530754								MERCURY QSM 5.0				
					ICB					0			
	529848								MERCURY TOTAL QSM 5.0				
					LCSW					79874			
	529847								MERCURY TOTAL QSM 5.0				
					MBW					79874			
	530755								MERCURY QSM 5.0				
					CCV					0			
	530756								MERCURY QSM 5.0				
					CCB					0			
159442	528807		01/26/2021	1600			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-54	MERCURY TOTAL QSM 5.0		GW	**4**	
		IDW-54								79874			
	529849		01/26/2021	1600					MERCURY TOTAL QSM 5.0				
		IDW-54			DUP	528807				79874			
159483	529230		01/28/2021	1530			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	MERCURY TOTAL QSM 5.0		GW	**4**	
		IDW-48/49								79874			
	529850		01/26/2021	1600					MERCURY TOTAL QSM 5.0				
		IDW-54			MSW	528807				79874			
	529851		01/26/2021	1600					MERCURY TOTAL QSM 5.0				
		IDW-54			MSDW	529850				79874			
	530757								MERCURY QSM 5.0				
					CCV					0			
	530758								MERCURY QSM 5.0				
					CCB					0			

13 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

PREP WORKSHEET
on 02/10/2021

Prep Batch **79,854** Date Prepped: 02/01/2021 Prepped By NAH

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	529750	MBW		ICP K TOTAL QSM 5.0	LIQUID	50		50.0		
	529750	MBW		ICP NA TOTAL QSM 5.0	LIQUID	50		50.0		
	529750	MBW		ICP TOTAL QSM 5.0	LIQUID	50		50.0		
	529750	MBW		ICP TOTAL QSM 5.0	LIQUID	50		50.0		
	529751	LCSW		ICP TOTAL QSM 5.0	LIQUID	50		50.0		
	529751	LCSW		ICP K TOTAL QSM 5.0	LIQUID	50		50.0		
	529751	LCSW		ICP NA TOTAL QSM 5.0	LIQUID	50		50.0		
	529751	LCSW		ICP TOTAL QSM 5.0	LIQUID	50		50.0		
159483	529230			ICP TOTAL QSM 5.0	GROUND WATER	50		50.0	4	
	529230			ICP K TOTAL QSM 5.0	GROUND WATER	50		50.0	4	
	529230			ICP NA TOTAL QSM 5.0	GROUND WATER	50		50.0	4	
	529230			ICP TOTAL QSM 5.0	GROUND WATER	50		50.0	4	
	529752	DUP	529230	ICP K TOTAL QSM 5.0	GROUND WATER	50		50.0		
	529752	DUP	529230	ICP NA TOTAL QSM 5.0	GROUND WATER	50		50.0		
	529752	DUP	529230	ICP TOTAL QSM 5.0	GROUND WATER	50		50.0		
	529753	MSW	529230	ICP K TOTAL QSM 5.0	GROUND WATER	50		50.0		
	529753	MSW	529230	ICP NA TOTAL QSM 5.0	GROUND WATER	50		50.0		

PREP WORKSHEET
on 02/10/2021

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	529753	MSW	529230	ICP TOTAL QSM 5.0	GROUND WATER	50		50.0		
	529754	MSDW	529753	ICP K TOTAL QSM 5.0	GROUND WATER	50		50.0		
	529754	MSDW	529753	ICP NA TOTAL QSM 5.0	GROUND WATER	50		50.0		
	529754	MSDW	529753	ICP TOTAL QSM 5.0	GROUND WATER	50		50.0		

Notes:_____

PREP WORKSHEET
on 02/15/2021

Prep Batch **79,874** Date Prepped: 02/02/2021 Prepped By MDS

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	529847	MBW		MERCURY TOTAL QSM	LIQUID	25		25.0		
	529848	LCSW		MERCURY TOTAL QSM	LIQUID	25		25.0		
159442	528807			MERCURY TOTAL QSM	GROUND WATER	25		25.0	4	
159483	529230			MERCURY TOTAL QSM	GROUND WATER	25		25.0	4	
	529849	DUP	528807	MERCURY TOTAL QSM	GROUND WATER	25		25.0		
	529850	MSW	528807	MERCURY TOTAL QSM	GROUND WATER	25		25.0		
	529851	MSDW	529850	MERCURY TOTAL QSM	GROUND WATER	25		25.0		

Notes:_____

Metals Digestion Bench Sheet

Program: QSM
*Matrix: liquid

Prep Methods:
200.2= ICP/GFAA Liquids
3010= ICP Liquids
3020= GFAA Liquids
3005= Sb Liquids
3050= ICP/GFAA Solids
7060/7740= GFAA, As & Se Liquids

Prep Batch #:	79854
Prep Method:	200.2
Analyst:	NAH
Date:	02/01/2021
Start Time:	10:41

Prep Analyst: NAH
Balance ID:

End Date: 02/02/2021
End Time: 21:29

Reagent:	Ref. #
Nitric Acid:	AB.702
Hydrochloric Acid:	AB.700
Hydrogen Peroxide:	

Digestion Tube Lot #: 3375
Block Used: D2
Cell Position for Temp. Check: 60
Initial-DigestionTemp (ºC,corrected): 94
Final-Digestion Temp (ºC,corrected): 94

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
529750	(MB)			50.0	50
529751	(LCS)			50.0	50
529230				50.0	50
	Comments:				50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
529752	(DUP)			50.0	50
529753	(MS)	Parent Sample		50.0	50
529754	(MSD)	529230		50.0	50
	(DUP)				50
	(MS)	Parent Sample			50
	(MSD)				50
Leave >>	(DUP) if applicable				50
blank	(MS)	Parent Sample			50
if N/A	(MSD)				50

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

MS/MSD Spike Amount (ml)	Spike Ref. #
0.2	M14581
0.5	M14436
0.5	M14627
0.1	M14569

LCS Spike Amount (ml)	Spike Ref. #
0.2	M14581
0.5	M14436
0.5	M14627
0.1	M14569

Reviewed x

02/10/202113:19

FMT12-03

Mercury Digestion Bench Sheet

(Prep Methods 7470A & 7471A)

CCV ID: M14706
ICV/LCSW ID: M14707

*Matrix: GW
Balance ID:

Prep Batch #:	79874
Prep Method:	7470A
Analyst:	MDS
Date:	02/02/2021
Start Time:	13:40

7470A= Hg Liquids
7471A= Hg Solids

End Date: 02/02/2021
End Time: 15:40

Digestion Tube Lot #: 28920015
Block Used: A
Cell Position for Temp. Check: B-5
Initial-DigestionTemp (ºC,corrected): 93
Final-Digestion Temp (ºC,corrected): 92.9
Additional KMnO4 added (ml):
Aqua Regia added (ml)
Calibration Stds: M14705

Reagent:	Ref. #
HNO3:	AB.700
H2SO4:	AB.696
NaCl/Hydrox.SO4:	M14711
KMnO4:	M14708
K2S2O8:	M14709
Aqua-Regia:	

	Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
	529847	(MB)			25.0	25
	529848	(LCS)			25.0	25
	528807				25.0	25
	529230	**Comments:**			25.0	25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
	529849	(DUP) if applicable			25.0	25
	529850	(MS)	Parent Sample		25.0	25
	529851	(MSD)	528807		25.0	25
Leave >>		(DUP) if applicable				25
blank		(MS)	Parent Sample			25
		(MSD)				25
		(DUP) if applicable				25
		(MS)	Parent Sample			25
if N/A		(MSD)				25

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

A: Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #
0.5	100	M14707

B: Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #

Reviewed By/Date: X

iCAP 6000 / 6500 Data Review Checklist	Analysis Date: 2/2/21	Data File: UD Results	Date of review: 2/10/21
Cal Std ID: 114655 LIMS # 179107, 108	Analyst: JH	Reviewer: MOS	Approved? Yes No

Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)

Prep Batch Check: ——

QC Parameters : 6010 / 200.7 / QSM / Other	YES	NO	YES	NO	Comments:
1) Calibration linearity: ≤ 0.995 / r > 0.998	✓		✓		
2) ICV: 90-110% / 95-105%	✓		✓		
2) ICVLL: 70-130% / 80-120%	✓		✓		
3) ICB: < 3X IDL / <LOD / <LOQ	✓		✓		
4) ICSA: < ABS LOD	✓		✓		
5) ICSAB: 80-120%	✓		✓		
6) MRL: 70-130% / 80-120%	✓		✓		
7) MDL Check: >LOD					
8) CCV1/CCB1 (CCV: 90-110%)	✓		✓		
9) CCV2/CCB2 (CCB: < 3X IDL / <LOD / <LOQ)					
10) CCV3/CCB3					
11) CCV4/CCB4					
12) CCV5/CCB5					
Preparation Batch Parameters	**YES**	**NO**	**YES**	**NO**	
Prep Batch ID#: 79859 Dig. Meth. 200.2	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD or ≤ ½ RL	✓		✓		
Spiked samples in batch:					
a) 529230 matrix = DW	✓		✓	✓	MS, MSD ~~Al, Sb, As, Ba, Be, Cd, Co~~ Pb, Fe, Ni, Tl
b)_____ matrix = _____					
c)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#:_____					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#:_____					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#:_____					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#:_____					

GFAA / FLAA / CVAA Data Review checklist		Method: 200.9	7000 series AA	245.1 & 245.2	245.7	7470a / 7471a
Instrumentation:	THERMO M SERIES AA			Hydra II Hg ANALYZER		
Analysis Date: 2/3/21	Data File: 020321W		Date Review: 2/3/21	Analyte: Hg		
Cal Std ID: M14705	LIMS # : 179138	Analyst: MOS	Reviewer:	Approved?	Yes	No
Prep Batch Check ✓						

Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)

Calibration Parameters -	YES	NO	YES	NO	Comments:
1) Calibration linearity - r > 0.995	✓		✓		
2) ICV: 90-110% 95-105%	✓		✓		
2) ICVLL: 70-130% 80-120%					
3) ICB: <IDL / <LOD / <LOQ / <½ RL	✓		✓		
6) MRL: 70-130%					
7) CCV1/CCB1- (CCV: 90-110% / 80-120%)	✓		✓		
8) CCV2/CCB2 (CCB: <IDL / <LOD / <LOQ / <½ RL)					
9) CCV3/CCB3					
10) CCV4/CCB4					
11) CCV5/CCB5					

Preparation Batch Parameters	YES	NO	YES	NO	Comments:
Prep Batch ID#: 79874 Dig. Meth. 7470a	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD / <2.2X LOD / ≤ ½RL	✓		✓		
Spiked samples in batch:					
a) 528807 matrix = low	✓	✓	✓	✓	Dup invalid
b)_____ matrix = _____					
c)_____ matrix = _____					
d)_____ matrix = _____					
e)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#_____					
MSA Performed? Yes No					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
d)_____ matrix = _____					
e)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#_____					
MSA Performed? Yes No					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
d)_____ matrix = _____					
e)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#_____					

CT Laboratories, LLC

ICP-6500 Instrument Run Logbook

Date	Time: Start / End	Analyst	Analytes / Sequence I.D.	Method	LIMS # or Sample Description	Nebulizer Pressure (kpa)	Calib. Std ID	Version	Comments
					178806, 05 178805 178816			V4214	
1/21/21	1229 / 1444	[signature]	012121	DOOCal u	178822 178740 178762 178709 178823 178722 178761 178759 179678 178763 178760 178788, 82	270	m14655 m14341 m14656	V4214 V4213	m14657 m14623 m14658 m14659
1/29/21	1250/0654	[signature]	012721	DOOCal u	178956 57 178949 48 178947 46 178950 178955 178806, 05 178953 178804	270	m14655 m14341 m14656	V4221 V4215	m14657 m14623 m14658 m14659
1/28/21	1219 / 2118	[signature]	012821	DOOCal u	178997 95 179000 178981 178416 178951 179025 179048	270	m14655 m14341 m14656	V4216	m14657 m14623 m14658 m14659
1/29/21	1038 / 0630	[signature]	01/29/21	DOOCal u	178949 178998 179997,95 178947 179046 179043 179048 179044,45	270	m14655 m14341 m14656	V4223 V4222	m14657 m14623 m14658 m14659
2/1/21	~~0707 1800~~ 11:20	[signature]	02/01/21	DOOCal u	178283 178997 178949 178998	270	m14655 m14341 m14656	V4230 V4227	m14657 m14623 m14658 m14659
2/2/21	0719 1858	[signature]	02/02/21	DOOCal u	179111 179106 179109 179107 179107 179108 179121	270	m14655 m14341 m14656	V4231 V4230	m14657 m14623 m14658 m14659
2/3/21	1239 / 2014	[signature]	020321	DOOCal u	179145 179146 179103 179 179104	270	m14655 m14341 m14656	V4232 V4228	m14657 m14623 m14658 m14659
2/8/21	/	[signature]	020821	DOOCal u		270	m14655 m14341 m14656		m14657 m14623 m14658 m14659
2/9/21	/	[signature]	02/09/21	DOOCal u		270	m14655 m14341 m14656		m14657 m14623 m14658 m14659
	/								
	/								
	/								

Comments: _____

Checked By / Date: _____

CT Laboratories

Mercury Analyzer Instrument Run Log

Instrument ID: Cetac M-6000A

Analysis Date	Start Time	End Time	Analyst	LIMS Run # (s)	Method File ID #	Cal. Std. ID #	Lamp Current (mA)	Analysis Tube Lot #	Comments
12/10/2020	0943	1218	MDS	177793, 177797, 177795, 177794, 177796	121020W	M14612	10.121	380450-4851	$SnCl_2$: M14620
12/16/2020	0851	1455	MDS	177984, 177985, 177986, 177987	121620S	M14629	10.110	380450-4851	$SnCl_2$: M14636
12/17/2020	0953	1432	MDS	178032, 178033, 178034 178027, 178028, 178029, 178030, 178031	121720W	M14629	10.139	380450-4851	$SnCl_2$: M14636
12/23/2020	0903	1013	MDS	178217, 178218	122320S	M14640	—	380450-4851	$SnCl_2$: M14647
12/23/2020	1103	1228	MDS	178217, 178218	122320DS	M14640	10.099	380450-4851	$SnCl_2$: M14647
12/23/2020	1239	12/24/2020 0844	MDS	178228, 178229, 178230 178223, 178224, 178225, 178226, 178227	122320W	M14640	—	380450-4851	$SnCl_2$: M14647
12/24/2020	0919	1022	MDS	178228, 178229	122420W	M14640	—	380450-4851	$SnCl_2$: M14647
12/31/2020	0853	1103	MDS	178362, 178363, 178364, 178365	123120W	M14648	10.143	380450-4851	$SnCl_2$: M14654
1/12/21	1024	1309	MDS	178564, 178565 178568, 178569, 178567, 178566	011221W	M14664	10.103	380450-4851	$SnCl_2$: M14671
1/13/21	0947	1113	MDS	178550	011321S	M14664	10.073	380450-4851	$SnCl_2$: M14671
1/20/21	0811	1018	MDS	178774, 178775, 178776, 178777	012021W	M14686	10.161	380450-4851	$SnCl_2$: M14693
1/20/21 - 1/21/21	1046	0743	MDS	178781, 178779, 178780, 178778	012021S	M14686	—	380450-4851	$SnCl_2$: M14693
1/28/21	0732	0915	MDS	178985, 178986	012821W	M14696	10.161	380450-4851	$SnCl_2$: M14704
1/28/21	1001	1553	MDS	178 179014 179010, 179011, 179012, 179013	012821S	M14696	—	380450-4851	$SnCl_2$: M14704
2/3/21	0744	0937	MDS	179135, 179136, 179137, 179138, 179139	020321W	M14705	10.419	380450-4851	$SnCl_2$ M14712
2/3/21	1057	1616	MDS	179153, 179154, 179155, 179156, 179157	020321S	M14705	—	380450-4851	$SnCl_2$: M14712

Reviewed By/Date:_____

Type	Date/Time	Message	User name	Application	Sequence Name
	02/01/2021 18:06:34	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	02/01/2021 18:12:55	Plasma extinguished successfully	NAH	Analyst	
	02/01/2021 18:12:56	Plasma off	NAH	iTEVA Control Center	
	02/01/2021 18:12:57	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	02/02/2021 06:51:20	Plasma On	NAH	iTEVA Control Center	
	02/02/2021 06:51:25	Plasma ignition successful	NAH	Analyst	
	02/02/2021 06:52:11	D33534 - Debug:Wavelength check : x = 0.722, y =-0.848	NAH	Analyst	
	02/02/2021 07:19:19	Autosampler Run Started	NAH	Analyst	
	02/02/2021 07:19:19	Sequence Started	NAH	Analyst	S_DOD Calibration
	02/02/2021 07:19:39	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	02/02/2021 07:26:03	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	02/02/2021 07:32:29	Running CalStd3=1 (3)	NAH	Analyst	S_DOD Calibration
	02/02/2021 07:35:54	Closing will close the method and all associated samples.	NAH	Analyst	
	02/02/2021 07:35:58	Closing will close the method and all associated samples.	NAH	Analyst	
	02/02/2021 07:38:42	Running CalStd4=5 (4)	NAH	Analyst	S_DOD Calibration
	02/02/2021 07:45:05	Running CalStd5=10 (5)	NAH	Analyst	S_DOD Calibration
	02/02/2021 07:51:27	Running CalStd6=20 (6)	NAH	Analyst	S_DOD Calibration
	02/02/2021 07:57:44	Running CalStd7=50 (7)	NAH	Analyst	S_DOD Calibration
	02/02/2021 08:04:00	Running CalStd8=100 (8)	NAH	Analyst	S_DOD Calibration
	02/02/2021 08:10:11	Running CalStd9=1000 (9)	NAH	Analyst	S_DOD Calibration
	02/02/2021 08:15:50	Running CalStd10=10000 (10)	NAH	Analyst	S_DOD Calibration
	02/02/2021 08:21:50	Running CalStd12=100K (11)	NAH	Analyst	S_DOD Calibration
	02/02/2021 08:28:44	Running CalStd13=100000 (12)	NAH	Analyst	S_DOD Calibration
	02/02/2021 08:35:11	Running CalStd14=500000 (13)	NAH	Analyst	S_DOD Calibration
	02/02/2021 08:41:45	Running CalibStd15=1000k (14)	NAH	Analyst	S_DOD Calibration
	02/02/2021 08:48:39	Running Ag Ba 1000, 50000 (15)	NAH	Analyst	S_DOD Calibration
	02/02/2021 08:55:19	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	02/02/2021 09:01:38	Running icv (16)	NAH	Analyst	S_DOD Calibration
	02/02/2021 09:07:56	Running icv (16)	NAH	Analyst	S_DOD Calibration
	02/02/2021 09:14:11	Running ICVLL (24)	NAH	Analyst	S_DOD Calibration
	02/02/2021 09:20:12	Running icb (17)	NAH	Analyst	S_DOD Calibration
	02/02/2021 09:26:32	Running icb (17)	NAH	Analyst	S_DOD Calibration
	02/02/2021 09:32:52	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	02/02/2021 09:39:09	Running ICSA (20)	NAH	Analyst	S_DOD Calibration
	02/02/2021 09:45:31	Running ICSAB (21)	NAH	Analyst	S_DOD Calibration
	02/02/2021 09:51:14	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	02/02/2021 09:57:42	Running ccv1 (1)	NAH	Analyst	S_DOD Calibration
	02/02/2021 10:03:02	Running ccv1 (2)	NAH	Analyst	S_DOD Calibration
	02/02/2021 10:08:20	Running ccv1 (3)	NAH	Analyst	S_DOD Calibration
	02/02/2021 10:13:42	Running ICVLL ag1 (4)	NAH	Analyst	S_DOD Calibration
	02/02/2021 10:20:03	Running 526776 (5)	NAH	Analyst	S_DOD Calibration
	02/02/2021 10:26:31	Running 525181 (6)	NAH	Analyst	S_DOD Calibration
	02/02/2021 10:33:11	Running 528014 (7)	NAH	Analyst	S_DOD Calibration
	02/02/2021 10:39:14	Running 528025 (8)	NAH	Analyst	S_DOD Calibration
	02/02/2021 10:45:19	Running 528027 (9)	NAH	Analyst	S_DOD Calibration
	02/02/2021 10:51:36	Running 528028 (10)	NAH	Analyst	S_DOD Calibration
	02/02/2021 10:53:38	Closing will close the method and all associated samples.	NAH	Analyst	
	02/02/2021 10:57:53	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	02/02/2021 11:03:12	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	02/02/2021 11:08:59	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	02/02/2021 11:15:24	Running 528029 (11)	NAH	Analyst	S_DOD Calibration
	02/02/2021 11:17:33	Closing will close the method and all associated samples.	NAH	Analyst	

Type	Date/Time	Message	User name	Application	Sequence Name
	02/02/2021 11:21:30	Running lcss79820 (12)	NAH	Analyst	S_DOD Calibration
	02/02/2021 11:27:15	Running mbs79820 (13)	NAH	Analyst	S_DOD Calibration
	02/02/2021 11:33:33	Running 527844 (14)	NAH	Analyst	S_DOD Calibration
	02/02/2021 11:40:13	Running 527845 (15)	NAH	Analyst	S_DOD Calibration
	02/02/2021 11:46:55	Running 527846 (16)	NAH	Analyst	S_DOD Calibration
	02/02/2021 11:53:20	Running 527847 (17)	NAH	Analyst	S_DOD Calibration
	02/02/2021 12:00:01	Running 527848 (18)	NAH	Analyst	S_DOD Calibration
	02/02/2021 12:06:30	Running 527849 (19)	NAH	Analyst	S_DOD Calibration
	02/02/2021 12:12:55	Running 527850 (20)	NAH	Analyst	S_DOD Calibration
	02/02/2021 12:19:26	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	02/02/2021 12:24:42	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	02/02/2021 12:30:26	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	02/02/2021 12:30:35	Closing will close the method and all associated samples.	NAH	Analyst	
	02/02/2021 12:36:48	Running 527851 (21)	NAH	Analyst	S_DOD Calibration
	02/02/2021 12:43:22	Running 527852 (22)	NAH	Analyst	S_DOD Calibration
	02/02/2021 12:50:02	Running 527853 (23)	NAH	Analyst	S_DOD Calibration
	02/02/2021 12:56:57	Running 527854 (24)	NAH	Analyst	S_DOD Calibration
	02/02/2021 13:00:33	Closing will close the method and all associated samples.	NAH	Analyst	
	02/02/2021 13:03:29	Running 527855 (25)	NAH	Analyst	S_DOD Calibration
	02/02/2021 13:08:07	Closing will close the method and all associated samples.	NAH	Analyst	
	02/02/2021 13:10:05	Running 527856 (26)	NAH	Analyst	S_DOD Calibration
	02/02/2021 13:16:12	Running 527857 (27)	NAH	Analyst	S_DOD Calibration
	02/02/2021 13:22:36	Running 527858 (28)	NAH	Analyst	S_DOD Calibration
	02/02/2021 13:25:57	Closing will close the method and all associated samples.	NAH	Analyst	
	02/02/2021 13:28:55	Running 527859 (29)	NAH	Analyst	S_DOD Calibration
	02/02/2021 13:35:19	Running 527860 (30)	NAH	Analyst	S_DOD Calibration
	02/02/2021 13:41:57	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	02/02/2021 13:47:08	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	02/02/2021 13:52:54	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	02/02/2021 13:59:14	Running 527861 (31)	NAH	Analyst	S_DOD Calibration
	02/02/2021 14:05:57	Running lcsw79856 (32)	NAH	Analyst	S_DOD Calibration
	02/02/2021 14:11:58	Running mbw79856 (33)	NAH	Analyst	S_DOD Calibration
	02/02/2021 14:18:14	Running 529234 (34)	NAH	Analyst	S_DOD Calibration
	02/02/2021 14:24:54	Running msw529234 (35)	NAH	Analyst	S_DOD Calibration
	02/02/2021 14:31:06	Running msdw529234 (36)	NAH	Analyst	S_DOD Calibration
	02/02/2021 14:38:02	Running pdsw529234 (37)	NAH	Analyst	S_DOD Calibration
	02/02/2021 14:44:37	Running 529353 (38)	NAH	Analyst	S_DOD Calibration
	02/02/2021 14:51:48	Running 529354 (39)	NAH	Analyst	S_DOD Calibration
	02/02/2021 14:58:34	Running 529355 (40)	NAH	Analyst	S_DOD Calibration
	02/02/2021 15:05:16	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	02/02/2021 15:10:29	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	02/02/2021 15:16:16	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	02/02/2021 15:22:38	Running 529356 (41)	NAH	Analyst	S_DOD Calibration
	02/02/2021 15:29:22	Running 529357 (42)	NAH	Analyst	S_DOD Calibration
	02/02/2021 15:36:03	Running 529358 (43)	NAH	Analyst	S_DOD Calibration
	02/02/2021 15:42:46	Running 529359 (44)	NAH	Analyst	S_DOD Calibration
	02/02/2021 15:49:35	Running 529360 (45)	NAH	Analyst	S_DOD Calibration
	02/02/2021 15:56:18	Running 529361 (46)	NAH	Analyst	S_DOD Calibration
	02/02/2021 16:03:04	Running lcsw79854 (47)	NAH	Analyst	S_DOD Calibration
	02/02/2021 16:09:10	Running mbw79854 (48)	NAH	Analyst	S_DOD Calibration
	02/02/2021 16:15:24	Running 529230 (49)	NAH	Analyst	S_DOD Calibration
	02/02/2021 16:21:50	Running l529230 (50)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	02/02/2021 16:28:28	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	02/02/2021 16:33:42	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	02/02/2021 16:39:27	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	02/02/2021 16:45:48	Running dup529230 (51)	NAH	Analyst	S_DOD Calibration
	02/02/2021 16:52:17	Running msw529230 (52)	NAH	Analyst	S_DOD Calibration
	02/02/2021 16:58:08	Running msdw529230 (53)	NAH	Analyst	S_DOD Calibration
	02/02/2021 17:04:07	Running pdsw529230 (54)	NAH	Analyst	S_DOD Calibration
	02/02/2021 17:09:55	Running lcsw79855 (55)	NAH	Analyst	S_DOD Calibration
	02/02/2021 17:15:53	Running mbw79855 (56)	NAH	Analyst	S_DOD Calibration
	02/02/2021 17:22:12	Running 529308 (57)	NAH	Analyst	S_DOD Calibration
	02/02/2021 17:28:26	Running l529308 (58)	NAH	Analyst	S_DOD Calibration
	02/02/2021 17:34:44	Running dup529308 (59)	NAH	Analyst	S_DOD Calibration
	02/02/2021 17:41:00	Running msw529308 (60)	NAH	Analyst	S_DOD Calibration
	02/02/2021 17:46:56	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	02/02/2021 17:52:09	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	02/02/2021 17:57:57	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	02/02/2021 18:04:19	Running msdw529308 (61)	NAH	Analyst	S_DOD Calibration
	02/02/2021 18:10:21	Running pdsw529308 (62)	NAH	Analyst	S_DOD Calibration
	02/02/2021 18:16:05	Running 529309 (63)	NAH	Analyst	S_DOD Calibration
	02/02/2021 18:22:24	Running 530133 (64)	NAH	Analyst	S_DOD Calibration
	02/02/2021 18:29:06	Running msw530133 (65)	NAH	Analyst	S_DOD Calibration
	02/02/2021 18:35:04	Running msdw530133 (66)	NAH	Analyst	S_DOD Calibration
	02/02/2021 18:40:41	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	02/02/2021 18:46:59	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	02/02/2021 18:52:18	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	02/02/2021 18:58:08	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	02/02/2021 19:04:28	Plasma extinguished successfully	NAH	Analyst	
	02/02/2021 19:04:29	Plasma off	NAH	iTEVA Control Center	
	02/02/2021 19:04:30	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	02/03/2021 06:48:48	Plasma On	NAH	iTEVA Control Center	
	02/03/2021 06:48:55	Plasma ignition successful	NAH	Analyst	
	02/03/2021 06:49:41	D33534 - Debug:Wavelength check : x = 1.183, y =-0.745	NAH	Analyst	
	02/03/2021 12:39:15	Sequence Started	NAH	Analyst	S_DOD Calibration
	02/03/2021 12:39:15	Autosampler Run Started	NAH	Analyst	
	02/03/2021 12:39:35	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	02/03/2021 12:45:55	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	02/03/2021 12:52:11	Running CalStd3=1 (3)	NAH	Analyst	S_DOD Calibration
	02/03/2021 12:58:58	Running CalStd4=5 (4)	NAH	Analyst	S_DOD Calibration
	02/03/2021 13:05:15	Running CalStd5=10 (5)	NAH	Analyst	S_DOD Calibration
	02/03/2021 13:11:31	Running CalStd6=20 (6)	NAH	Analyst	S_DOD Calibration
	02/03/2021 13:17:42	Running CalStd7=50 (7)	NAH	Analyst	S_DOD Calibration
	02/03/2021 13:23:52	Running CalStd8=100 (8)	NAH	Analyst	S_DOD Calibration
	02/03/2021 13:29:59	Running CalStd9=1000 (9)	NAH	Analyst	S_DOD Calibration
	02/03/2021 13:35:37	Running CalStd10=10000 (10)	NAH	Analyst	S_DOD Calibration
	02/03/2021 13:41:58	Running CalStd12=100K (11)	NAH	Analyst	S_DOD Calibration
	02/03/2021 13:48:35	Running CalStd13=100000 (12)	NAH	Analyst	S_DOD Calibration
	02/03/2021 13:54:59	Running CalStd14=500000 (13)	NAH	Analyst	S_DOD Calibration
	02/03/2021 14:01:09	Running CalibStd15=1000k (14)	NAH	Analyst	S_DOD Calibration
	02/03/2021 14:07:42	Running Ag Ba 1000, 50000 (15)	NAH	Analyst	S_DOD Calibration
	02/03/2021 14:14:22	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	02/03/2021 14:20:42	Running icv (16)	NAH	Analyst	S_DOD Calibration
	02/03/2021 14:26:59	Running icv (16)	NAH	Analyst	S_DOD Calibration

Standard ID#:	M14713	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	02/05/2021	Lot #:	L022-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14714	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	02/05/2021	Lot #:	L022-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14715 (1) & (2)	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	02/3/2021	Lot #:	2023715-500
Expiration Date (if any):	08/31/2022	Catalog #:	10M67-1-500

Standard ID#:	M14716	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Phosphorus 10000 mg/L
Date Received:	02/08/2021	Lot #:	AR18-111PY
Expiration Date (if any):	02/28/2022	Catalog #:	PLP9--3Y

Standard Log #:	M14708	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	03/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14709	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	03/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14710	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	02/03/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14711	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/03/2021	Expiration Date:	03/03/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14712	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/03/2021	Expiration Date:	03/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14705	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/02/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14706	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/02/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14707	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/02/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14702	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	01/27/2022
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14703	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/28/2021	Expiration Date:	02/28/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14704	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/28/2021	Expiration Date:	02/28/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard Log #:	M14699	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	02/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14700	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	02/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14701	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	01/28/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14696	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14697	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14698	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/27/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14694	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	01/26/2021	Expiration Date:	09/2021
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) N/A **3.2 mL** of As (1000 mg/L) M14621 **3.2 mL** of Se (1000 mg/L) M14624 **0.08 mL** of Pb (10,000 mg/L) M14202 **1.0 mL** of Tl (1000 mg/L) M14626 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M14695	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	01/26/2021	Expiration Date:	09/2021
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M14622 **1.0 mL** of As (1000 mg/L) M14621 **2.0 mL** of Se (1000 mg/L) M14624 **0.045 mL** of Pb (10,000 mg/L) M14202 **0.4 mL** of Tl (1000 mg/L) M14626 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M14689	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	02/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14690	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	02/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14691	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	01/20/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14692	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/20/2021	Expiration Date:	02/20/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14693	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/20/2021	Expiration Date:	02/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14686	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14687	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14688	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/19/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14680	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	01/15/2021	Lot #:	1047870-29
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14681	Vendor:	CPI
Analyst:	NAH	Chemical:	Li 1000 mg/L
Date Received:	01/15/2021	Lot #:	104768-6
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000291

Standard ID#:	M14682	Vendor:	CPI
Analyst:	NAH	Chemical:	Ce 1000 mg/L
Date Received:	01/15/2021	Lot #:	S4400-1000101
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000101

Standard ID#:	M14683	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	01/15/2021	Lot #:	1096004-1
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000531

Standard ID#:	M14684	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	01/15/2021	Lot #:	1075718-2
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000343

Standard ID#:	M14685	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance standard
Date Received:	01/18/2021	Lot #:	XCTWI-4-500
Expiration Date (if any):	01/30/2022	Catalog #:	14-242AB

Standard ID#:	M14674	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	01/15/2021	Lot #:	1038255-27
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000623

Standard ID#:	M14675	Vendor:	CPI
Analyst:	NAH	Chemical:	B 1000 mg/L
Date Received:	01/15/2021	Lot #:	1024903-65
Expiration Date (if any):	07/2022	Catalog #:	S4400-100074

Standard ID#:	M14676	Vendor:	CPI
Analyst:	NAH	Chemical:	M 10000 mg/L
Date Received:	01/15/2021	Lot #:	1013353
Expiration Date (if any):	07/2022	Catalog #:	4400-10M311

Standard ID#:	M14677	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	01/15/2021	Lot #:	1050965-25
Expiration Date (if any):	07/2022	Catalog #:	4400-10M544

Standard ID#:	M14678	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10000 mg/L
Date Received:	01/15/2021	Lot #:	1079898-6
Expiration Date (if any):	07/2022	Catalog #:	S4400-10M391

Standard ID#:	M14679	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	01/15/2021	Lot #:	1034527-40
Expiration Date (if any):	07/2022	Catalog #:	4400-10M261

Standard Log #:	M14673	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	01/13/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M14623	1000	0.01
As	2	M14621	1000	0.1
Pb	2	M14202	10000	0.01
Sb	2	M14622	1000	0.1
Se	2	M14624	1000	0.1
Tl	2	M14626	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14670	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/12/2021	Expiration Date:	02/12/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14671	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/12/2021	Expiration Date:	02/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

Standard Log #:	M14672	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	01/12/2021	Expiration Date:	01/12/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14667	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	02/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14668	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	02/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14669	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	01/12/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14664	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14665	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14666	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/11/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14663	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	8 µg/L As 10 µg/L Pb 8 µg/L Sb 16 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	01/06/2021	Expiration Date:	09/2021

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M14621	10,000
Pb	0.1	10,000	M14202	10,000
Tl	1	1000	M14626	10,000
Se	1	1000	M14624	10,000
Sb	1	1000	M14622	10,000
Ag	0.1	1000	M14623	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	0.8	10,000	8
Pb	1.0	10,000	10
Tl	1.0	10,000	10
Se	1.6	10,000	16
Sb	0.8	10,000	8
Ag	0.6	1000	0.6

		Instrument:	GFAA
Standard Log #:	M14660	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14661	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14662	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

MRL BASE STD M14659 Analyst NAH

Prep Date 01/04/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	02/22
Al	400	M14478	10000	2	02/22
Ba	10	M14568	1000	0.5	05/22
Be	4	M14203	1000	0.2	09/21
Cd	5	M14201	1000	0.25	09/21
Co	10	M14204	1000	0.5	09/21
Cr	10	M14205	10000	0.05	09/21
Cu	10	M14199	10000	0.05	09/21
Mg	500	M14472	10000	2.5	02/22
Mn	10	M14200	10000	0.05	09/21
Mo	10	M14569	1000	0.5	05/22
Ni	10	M14196	1000	0.5	09/21
Pb	10	M14202	10000	0.05	09/21
Sb	20	M14622	1000	1	02/22
V	10	M14198	1000	0.5	09/21
Zn	10	M14197	10000	0.05	09/21
K	1000	M14436	10000	5	02/22
Na	1000	M14559	10000	5	02/22
As	20	M14621	1000	1	02/22
Ca	500	M14476	10000	2.5	02/22
Fe	300	M14470	10000	1.5	02/22
Se	20	M14624	1000	1	02/22
Tl	20	M14626	1000	1	02/22
Si	100	M14435	1000	5	02/22
B	20	M14131	1000	1	07/21
Li	20	M14127	1000	1	07/21
W	50	xxxxxxxx	1000	2.5	xxxxxx
Ti	10	M14009	1000	0.5	04/21
Sr	10	M14007	1000	0.5	04/21
Sn	50	M14008	1000	2.5	04/21
S	300	M14570	10000	1.5	05/22

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	ICP 6500
Standard Log #:	M14658	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	1/04/2021	Expiration Date:	03/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14359, **15 mL** Fe (10,000 mg/L) M14470, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14628, **2.5 mLs Na 10,000 ug/mL** M14473 ,**2.5 mLs k 10,000 ug/mL** M14436 **2.5 mLs S 10,000 ug/mL** M14570, **0.5 mls Si 1000 ug/mL** M14477 and brought up to volume with milli-Q .	

		Instrument:	ICP 6500
Standard Log #:	M14656	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	01/04/2021	Expiration Date:	06/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14639, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14359, **0.5 mL** Mo (1000 mg/L) M14569, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008, **0.5 mL** Ti (1000 mg/L) M14009, **0.5 mL** W (1000 mg/L) xxxxxxx, **0.5 mL** Si (1000 mg/L) M14567, **0.5 mL** S (10000 mg/L) M14372, **0.5 mL** K (10000 mg/L) M14436, and **0.5 mL** Na (10000 mg/L) M14559		

		Instrument:	ICP 6500
Standard Log #:	M14657	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	01/04/2021	Expiration Date:	06/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14359 and 15 **mL** 10000 mg/L Fe M14470 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M1359 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14655	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	01/04/2021	Expiration Date:	03/30/2021

Prep:

Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O.
(5% HNO_3, 5% HCl)
1000 ug/L Std. - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14628, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **1 mL** of Si (1000 mg/L) M14435 and 1 mL M13859 Ce
0.25 ug/L Std. - **0.25 mL** of the 1000 ug/L Std.
0.5 ug/L Std. - **0.5 mL** of the 1000 ug/L Std.
1 ug/L Std. - **1 mL** of the 1000 ug/L Std.
5 ug/L Std. - **5 mL** of the 1000 ug/L Std.
10 ug/L Std. - **10 mL** of the 1000 ug/L Std.
20 ug/L Std. - **20 mL** of the 1000 ug/L Std.
50 ug/L Std. - **50 mL** of the 1000 ug/L Std.
100 ug/L Std. - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3
10,000 ug/L Std. - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14625.
100k ug/L Std. - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14559.
100,000 ug/L Std. - **10 mL** of Mg (10,000 mg/L) M14472, **10 mL** of Fe (10,000 mg/L) M14470, **10 mL** of Ca (10,000 mg/L) M14476 and **10 mL** Al (10,000 mg/L) M14478.
500,000 ug/L Std. - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L)
1000k ug/L Std. - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)

Standard Log #:	M14653	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/31/2020	Expiration Date:	01/31/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14654	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/31/2020	Expiration Date:	01/31/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

Standard Log #:	M14651	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/30/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14652	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/30/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14648	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/30/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14649	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/30/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14650	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/30/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14643	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/22/2020	Expiration Date:	01/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14644	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/22/2020	Expiration Date:	01/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14645	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/22/2020	Expiration Date:	12/23/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14646	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/23/2020	Expiration Date:	01/23/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14647	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/23/2020	Expiration Date:	01/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14640	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/22/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14641	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/22/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14642	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/22/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14637	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	ACID WASHED TCLP FILTERS
Date Received:	11/25/2020	Lot #:	400182-0316-D
Expiration Date (if any):		Catalog #:	FG77150MM

Standard Log #:	M14638	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/16/2020	Expiration Date:	12/16/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard ID#:	M14639	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/16/2020	Lot #:	55-139CR
Expiration Date (if any):	12/30/2021	Catalog #:	XSPIKE-1-250

Standard Log #:	M14632	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/15/2020	Expiration Date:	01/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14633	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/15/2020	Expiration Date:	12/16/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14634	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/16/2020	Expiration Date:	01/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14635	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/16/2020	Expiration Date:	01/16/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14636	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/16/2020	Expiration Date:	01/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14629	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/15/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14630	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/15/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14631	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/15/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14627	Vendor:	CPI
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/15/2020	Lot #:	55-113CR
Expiration Date (if any):	12/30/2021	Catalog #:	XCTWI-1-500

Standard ID#:	M14628	Vendor:	CPI
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/15/2020	Lot #:	55-112CR
Expiration Date (if any):	12/30/2021	Catalog #:	CTWI-5-500

Standard ID#:	M14623	Vendor:	CPI
Analyst:	NAH	Chemical:	Ag 1000 mg/L
Date Received:	12/09/2020	Lot #:	1026960-37
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000511

Standard ID#:	M14624	Vendor:	CPI
Analyst:	NAH	Chemical:	Se 1000 mg/L
Date Received:	12/09/2020	Lot #:	1063158-14
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000491

Standard ID#:	M14625	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	12/09/2020	Lot #:	1053109-46
Expiration Date (if any):	02/2022	Catalog #:	4400-10M411

Standard ID#:	M14626	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	12/09/2020	Lot #:	1025512-33
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000581

Standard Log #:	M14619	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/09/2020	Expiration Date:	01/09/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14620	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/09/2020	Expiration Date:	01/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

Standard ID#:	M14621	Vendor:	CPI
Analyst:	NAH	Chemical:	As 1000 mg/L
Date Received:	12/09/2020	Lot #:	1034904-74
Expiration Date (if any):	02/2022	Catalog #:	S4400-100031

Standard ID#:	M14622	Vendor:	CPI
Analyst:	NAH	Chemical:	Sb 1000 mg/L
Date Received:	12/09/2020	Lot #:	1045232-19
Expiration Date (if any):	02/2022	Catalog #:	S4400-100023

Standard Log #:	M14615	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/08/2020	Expiration Date:	01/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14616	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/08/2020	Expiration Date:	01/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14617	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/08/2020	Expiration Date:	12/09/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14618	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/08/2020	Expiration Date:	12/08/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard ID#:	M14611	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Hydroxlyamine Sulfate
Date Received:	12/07/2020	Lot #:	189407A
Expiration Date (if any):		Catalog #:	H331-500

		Instrument:	HydraII
Standard Log #:	M14612	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/08/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14613	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/08/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14614	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/08/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14610	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	12/03/2020	Expiration Date:	12/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M13951	1000	0.01
As	2	M13863	1000	0.1
Pb	2	M14202	10000	0.01
Sb	2	M13950	1000	0.1
Se	2	M13948	1000	0.1
Tl	2	M14207	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14605	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/01/2020	Expiration Date:	01/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14606	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/01/2020	Expiration Date:	01/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14607	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/01/2020	Expiration Date:	12/02/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14608	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/02/2020	Expiration Date:	01/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14609	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/02/2020	Expiration Date:	01/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14602	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/01/2020	Expiration Date:	05/02/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14603	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/01/2020	Expiration Date:	05/02/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14604	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/01/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14600	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate ACS
Date Received:	11/30/2020	Lot #:	A0412553
Expiration Date (if any):		Catalog #:	424185000

Standard Log #:	M14601	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/30/2020	Expiration Date:	11/30/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard ID#:	M14597	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	11/19/2020	Lot #:	K309-14
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14598	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	11/19/2020	Lot #:	K309-14
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14599	Vendor:	ThermoFisher
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	11/19/2020	Lot #:	225022
Expiration Date (if any):	03/31/2022	Catalog #:	39043

Standard Log #:	M14592	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/17/2020	Expiration Date:	12/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14593	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/17/2020	Expiration Date:	12/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14479 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14594	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/17/2020	Expiration Date:	11/18/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14595	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/18/2020	Expiration Date:	12/18/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14596	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/18/2020	Expiration Date:	12/18/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14589	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/17/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14590	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/17/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14591	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/17/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14586	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	11/17/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14587	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	11/17/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14588	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	11/17/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14582	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	11/13/2020	Expiration Date:	07/20/2021
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M14126 and Na (10,000 mg/L) M14473 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14583	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	11/13/2020	Expiration Date:	07/20/2021
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M14473 and **0.15 mL** K (10,000 µg/mL) M14126 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14584	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	11/13/2020	Expiration Date:	07/20/2021
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M14359, **2.5 mL** of K (10,000 mg/L) M14126, **2.5 mL** of Na (10,000 mg/L) M14473 and **7.5 mL** of Fe (10,000 mg/L) M14101 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M14585	Vendor:	Environmental Epress
Analyst:	BMM	Chemical:	Acid washed TCLP Filters
Date Received:	10/29/2020	Lot #:	400157-0277-D
Expiration Date (if any):	xxxxx	Catalog #:	FG77150MM

Standard Log #:	M14579	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/12/2020	Expiration Date:	12/12/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14580	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/12/2020	Expiration Date:	12/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

Standard ID#:	M14581	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	11/12/2020	Lot #:	55-080CR
Expiration Date (if any):	11/30/2021	Catalog #:	XSPIKE-1-250

Standard Log #:	M14576	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/11/2020	Expiration Date:	12/11/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14577	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/11/2020	Expiration Date:	12/11/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14578	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/11/2020	Expiration Date:	11/12/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14573	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/11/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14574	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/11/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14575	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/11/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14571	Vendor:	CPI International
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	11/05/2020	Lot #:	1084154-12
Expiration Date (if any):	05/02/2022	Catalog #:	S4400-1000331

Standard ID#:	M14572	Vendor:	SPEX Certiprep
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	11/05/2020	Lot #:	CL12-01HGY
Expiration Date (if any):	11/30/2021	Catalog #:	CLHG4-2Y

Standard ID#:	M14567	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	11/05/2020	Lot #:	1047570-22
Expiration Date (if any):	05/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14568	Vendor:	CPI
Analyst:	NAH	Chemical:	Ba 1000 mg/L
Date Received:	11/05/2020	Lot #:	994634-121
Expiration Date (if any):	05/2022	Catalog #:	S4400-100041

Standard ID#:	M14569	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	11/05/2020	Lot #:	1075718-2
Expiration Date (if any):	05/2022	Catalog #:	S4400-1000343

Standard ID#:	M14570	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	11/05/2020	Lot #:	1050965-25
Expiration Date (if any):	05/2022	Catalog #:	4400-10M544

Standard Log #:	M14563	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14564	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

Standard Log #:	M14565	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14566	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14560	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14561	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14562	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6000
Standard Log #:	M14556	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	11/03/2020	Expiration Date:	02/2022
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M14471 and K (1000 µg/mL) M14475 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14557	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	11/03/2020	Expiration Date:	02/2022
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M14471 and **0.5 mL** K (1000 µg/mL) M14475 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M14558	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	11/04/2020	Lot #:	997484-34
Expiration Date (if any):	02/2022	Catalog #:	4400-10M671

Standard ID#:	M14559	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 mg/L
Date Received:	11/04/20020	Lot #:	1055526-11
Expiration Date (if any):	02/2022	Catalog #:	4400-10M521

Standard Log #:	M14554	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/29/2020	Expiration Date:	11/29/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14555	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/29/2020	Expiration Date:	11/29/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

Standard Log #:	M14551	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/28/2020	Expiration Date:	11/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14552	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/28/2020	Expiration Date:	11/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14553	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/28/2020	Expiration Date:	10/29/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14548	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14549	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14550	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/28/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14545	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	10/26/2020	Expiration Date:	03/26/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC44 and brought up to volume.		

Standard Log #:	M14546	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/26/2020	Expiration Date:	10/26/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14547	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/26/2020	Expiration Date:	10/26/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M14543	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/21/2020	Expiration Date:	11/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

Standard ID#:	M14544	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	10/19/2020	Lot #:	202332
Expiration Date (if any):		Catalog #:	S271-3

Standard Log #:	M14539	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/20/2020	Expiration Date:	11/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14540	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/20/2020	Expiration Date:	11/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14541	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/20/2020	Expiration Date:	10/21/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14542	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/21/2020	Expiration Date:	11/21/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14536	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/20/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14537	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/20/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14538	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/20/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14533	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/19/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14534	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/19/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14535	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/19/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M14530	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/14/2020	Expiration Date:	10/15/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14531	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/14/2020	Expiration Date:	11/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14532	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/14/2020	Expiration Date:	11/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

Standard Log #:	M14526	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	11/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14527	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	10/14/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14528	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	11/13/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14529	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	11/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14523	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14524	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14525	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/13/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14521	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/08/2020	Expiration Date:	10/09/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14522	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/09/2020	Expiration Date:	04/2021
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M14508 and **10 mL** Mg (10,000 mg/L) M13984 and brought up to volume.		

Standard Log #:	M14519	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/07/2020	Expiration Date:	11/07/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14520	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/08/2020	Expiration Date:	11/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14461 and brought up to volume.		

Standard Log #:	M14514	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/05/2020	Expiration Date:	11/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14515	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/05/2020	Expiration Date:	10/06/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14516	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/05/2020	Expiration Date:	11/05/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14517	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/06/2020	Expiration Date:	11/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14461 and brought up to volume.		

Standard ID#:	M14518	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	10/05/2020	Lot #:	55-031CR
Expiration Date (if any):	09/30/2021	Catalog #:	XSPIKE-1-250

		Instrument:	HydraII
Standard Log #:	M14511	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14512	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14513	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14508	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	Palladium (Matrix Modifier)
Date Received:	10/02/2020	Lot #:	2003608-100
Expiration Date (if any):	09/30/2021	Catalog #:	HP1900-100

Standard ID#:	M14509	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/05/2020	Lot #:	K269-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14510	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/05/2020	Lot #:	K269-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14507	Vendor:	Fisher
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	09/29/2020	Lot #:	189407A
Expiration Date (if any):	05/2024	Catalog #:	H331

Standard Log #:	M14502	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/21/2020	Expiration Date:	10/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14503	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/21/2020	Expiration Date:	10/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14504	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/21/2020	Expiration Date:	09/22/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14505	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/23/2020	Expiration Date:	10/23/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14506	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/23/2020	Expiration Date:	10/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14461 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14499	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14500	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14501	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/21/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14497	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/16/2020	Expiration Date:	09/16/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14498	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/16/2020	Expiration Date:	09/16/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14492	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/15/2020	Expiration Date:	10/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14493	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/15/2020	Expiration Date:	10/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14494	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/15/2020	Expiration Date:	09/16/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14495	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/16/2020	Expiration Date:	10/16/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14496	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/16/2020	Expiration Date:	10/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14460 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14489	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/15/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14490	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/15/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14491	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/15/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14487	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/09/2020	Expiration Date:	10/09/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14488	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/09/2020	Expiration Date:	10/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14460 and brought up to volume.		

Standard Log #:	M14483	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/08/2020	Expiration Date:	10/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14484	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/08/2020	Expiration Date:	10/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14485	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/08/2020	Expiration Date:	09/09/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard ID#:	M14486	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	09/04/2020	Lot #:	1933801-500
Expiration Date (if any):	03/31/2022	Catalog #:	HP10M67-1-500

Standard ID#:	M14479	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	09/03/2020	Lot #:	A0410243
Expiration Date (if any):		Catalog #:	202015000

		Instrument:	HydraII
Standard Log #:	M14480	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/08/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14481	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/08/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14482	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/08/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14478	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	09/01/2020	Lot #:	992536-34
Expiration Date (if any):	02/2022	Catalog #:	4400-10M11

Standard ID#:	M14471	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 1000 mg/L
Date Received:	09/01/2020	Lot #:	1038021-64
Expiration Date (if any):	02/2022	Catalog #:	4400-1000521-500

Standard ID#:	M14472	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	09/01/2020	Lot #:	1013353-76
Expiration Date (if any):	02/2022	Catalog #:	4400-10m311

Standard ID#:	M14473	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 mg/L
Date Received:	09/01/2020	Lot #:	1055526-11
Expiration Date (if any):	02/2022	Catalog #:	4400-10M521

Standard ID#:	M14474	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10000 mg/L
Date Received:	09/01/2020	Lot #:	1079898-2
Expiration Date (if any):	02/2022	Catalog #:	S4400-10M391

Standard ID#:	M14475	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	09/01/2020	Lot #:	1023166-47
Expiration Date (if any):	02/2022	Catalog #:	4400-1000411-500

Standard ID#:	M14476	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	09/01/2020	Lot #:	1072921-5
Expiration Date (if any):	02/2022	Catalog #:	4400-10M91

Standard ID#:	M14477	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	09/01/2020	Lot #:	1047570-22
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000504F

Standard Log #:	M14466	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/01/2020	Expiration Date:	10/01/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14467	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/01/2020	Expiration Date:	10/01/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14468	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/02/2020	Expiration Date:	10/02/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14469	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/02/2020	Expiration Date:	10/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14460 and brought up to volume.		

Standard ID#:	M14470	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	09/01/2020	Lot #:	1034257-21
Expiration Date (if any):	02/2022	Catalog #:	4400-10m261

		Instrument:	HydraII
Standard Log #:	M14463	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/01/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14464	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/01/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14465	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/01/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14460	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	08/26/2020	Lot #:	K196-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14461	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	08/26/2020	Lot #:	K196-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14462	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/31/2020	Lot #:	2-155mf
Expiration Date (if any):	08/31/2021	Catalog #:	XCTWI-1-500

Standard Log #:	M14457	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/26/2020	Expiration Date:	09/26/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14458	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/26/2020	Expiration Date:	09/26/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14355 and brought up to volume.		

Standard Log #:	M14459	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/26/2020	Expiration Date:	09/26/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14453	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/25/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14454	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/25/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14455	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/25/2020	Expiration Date:	09/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14456	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/25/2020	Expiration Date:	08/26/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.694 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M14450	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	08/24/2020	Expiration Date:	06/30/2021
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M14359, **2.5 mL** of K (10,000 mg/L) M14126, **2.5 mL** of Na (10,000 mg/L) M14103 and **7.5 mL** of Fe (10,000 mg/L) M14101 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14451	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	08/24/2020	Expiration Date:	10/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13808 and **0.5 mL** K (1000 µg/mL) M13809 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M14452	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/25/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

Standard ID#:	M14446	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	08/24/2020	Lot #:	197591
Expiration Date (if any):		Catalog #:	S271-500

		Instrument:	ICP 6000
Standard Log #:	M14447	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	08/24/2020	Expiration Date:	10/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13808 and K (1000 µg/mL) M13809 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14448	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	08/24/2020	Expiration Date:	07/2021
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M14126 and Na (10,000 mg/L) M14103 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14449	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	08/24/2020	Expiration Date:	07/2021
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M14103 and **0.15 mL** K (10,000 µg/mL) M14126 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M14445	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/21/2020	Lot #:	2-140MF
Expiration Date (if any):	08/30/2021	Catalog #:	XCTWI-5-500

Standard Log #:	M14440	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/19/2020	Expiration Date:	09/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14441	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/19/2020	Expiration Date:	09/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14442	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/19/2020	Expiration Date:	08/20/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14443	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/20/2020	Expiration Date:	09/20/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14444	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/20/2020	Expiration Date:	09/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14355 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14437	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14438	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14439	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/19/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14434	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	08/17/2020	Lot #:	997484-34
Expiration Date (if any):	02/2022	Catalog #:	4400-10M671

Standard ID#:	M14435	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 mg/L
Date Received:	08/17/2020	Lot #:	1047570-22
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14436	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	08/17/2020	Lot #:	1053109-27
Expiration Date (if any):	02/2022	Catalog #:	4400-10M411-500

Standard Log #:	M14429	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/12/2020	Expiration Date:	09/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14430	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/12/2020	Expiration Date:	09/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

Standard Log #:	M14431	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/13/2020	Expiration Date:	09/13/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14432	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/13/2020	Expiration Date:	08/14/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14433	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/13/2020	Expiration Date:	09/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14355 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14426	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14427	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14428	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/12/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14425	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	08/10/2020	Expiration Date:	08/10/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14420	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/05/2020	Expiration Date:	09/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14421	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/05/2020	Expiration Date:	09/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14422	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/06/2020	Expiration Date:	08/07/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14423	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/06/2020	Expiration Date:	09/06/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14424	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/06/2020	Expiration Date:	09/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14417	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14418	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14419	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14416	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	08/03/2020	Lot #:	189407A
Expiration Date (if any):		Catalog #:	H331

		Instrument:	GFAA
Standard Log #:	M14413	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	07/30/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14414	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	07/30/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14415	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	07/30/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14408	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/28/2020	Expiration Date:	08/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14409	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/28/2020	Expiration Date:	08/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14410	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/28/2020	Expiration Date:	07/29/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14411	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/29/2020	Expiration Date:	08/29/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14412	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/29/2020	Expiration Date:	08/29/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14405	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14406	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14407	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/28/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14404	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	07/24/2020	Lot #:	54-207CR
Expiration Date (if any):	07/30/2020	Catalog #:	XSPIKE-1-250

Standard Log #:	M14399	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/21/2020	Expiration Date:	08/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14400	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/21/2020	Expiration Date:	08/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

Standard Log #:	M14401	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/22/2020	Expiration Date:	08/22/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14402	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/22/2020	Expiration Date:	07/23/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14403	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/22/2020	Expiration Date:	08/22/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14396	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/21/2020	Expiration Date:	07/21/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14397	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/21/2020	Expiration Date:	07/21/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14398	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/21/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14395	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	07/20/2020	Expiration Date:	09/30/2020
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13954 and **10 mL** Mg (10,000 mg/L) M13984 and brought up to volume.		

Standard Log #:	M14394	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	07/17/2020	Expiration Date:	07/17/2021
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14389	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/13/2020	Expiration Date:	08/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14390	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/13/2020	Expiration Date:	08/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14391	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/13/2020	Expiration Date:	07/14/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14392	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/14/2020	Expiration Date:	08/14/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14393	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/14/2020	Expiration Date:	08/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14386	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14387	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14388	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/13/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14384	Vendor:	Environmantal Express
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	07/08/2020	Lot #:	1933801-500
Expiration Date (if any):	01/31/2022	Catalog #:	HP10M67-1-500

Standard Log #:	M14385	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	12 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	07/08/2020	Expiration Date:	12/2020

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13863	10,000
Pb	0.1	10,000	M14202	10,000
Tl	1	1000	M14207	10,000
Se	1	1000	M13948	10,000
Sb	1	1000	M13950	10,000
Ag	0.1	1000	M13951	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.2	10,000	12
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

Standard Log #:	M14383	Reagent:	TCLP 1 N HCL
Analyst:	BMM		
Prep Date:	07/07/2020	Expiration Date:	07/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, added 83 mL HCL AB.685 and brought up to volume.		

Standard Log #:	M14381	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/03/2020	Expiration Date:	08/03/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14382	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/03/2020	Expiration Date:	08/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

Standard Log #:	M14378	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/02/2020	Expiration Date:	08/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14379	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/02/2020	Expiration Date:	08/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14380	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/02/2020	Expiration Date:	07/03/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14375	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/02/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14376	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/02/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14377	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/02/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14373	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/01/2020	Expiration Date:	07/01/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard ID#:	M14374	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	ACID WASHED TCLP FILTERS
Date Received:	06/18/2020	Lot #:	400169-0154-AG
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

Standard ID#:	M14368	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	06/30/2020	Lot #:	987189-75
Expiration Date (if any):	12/2021	Catalog #:	S4400-1000343

Standard ID#:	M14369	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	06/30/2020	Lot #:	1053109-22
Expiration Date (if any):	12/2021	Catalog #:	S4400-10M411-500

Standard ID#:	M14370	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	06/30/2020	Lot #:	1053109-8
Expiration Date (if any):	12/2021	Catalog #:	4400-10M411

Standard ID#:	M14371	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	06/30/2020	Lot #:	1047570-9
Expiration Date (if any):	12/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14372	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	06/30/2020	Lot #:	1050965-10
Expiration Date (if any):	12/2021	Catalog #:	4400-10M544

Standard Log #:	M14363	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/24/2020	Expiration Date:	07/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14364	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/24/2020	Expiration Date:	07/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14365	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/24/2020	Expiration Date:	06/25/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14366	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/25/2020	Expiration Date:	07/25/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14367	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/25/2020	Expiration Date:	07/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14360	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14361	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14362	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/24/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14358	Vendor:	Spex Certprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/22/2020	Lot #:	54-161CR
Expiration Date (if any):	06/30/2021	Catalog #:	XSOIKE-1-250

Standard ID#:	M14359	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/23/2020	Lot #:	52-213CRX
Expiration Date (if any):	06/30/2021	Catalog #:	INT-A1

Standard ID#:	M14355	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	06/17/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14356	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	06/17/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14357	Vendor:	Mettler toledo
Analyst:	NAH	Chemical:	Electrolyte Friscolyt-b
Date Received:	06/17/2020	Lot #:	1F091L
Expiration Date (if any):	03/31/2023	Catalog #:	51340053

Standard Log #:	M14350	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/16/2020	Expiration Date:	07/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14351	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/16/2020	Expiration Date:	07/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14352	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/16/2020	Expiration Date:	06/17/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14353	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/17/2020	Expiration Date:	07/17/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14354	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/17/2020	Expiration Date:	07/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14347	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/16/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14348	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/16/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14349	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/16/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14346	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	06/16/2020	Lot #:	196616
Expiration Date (if any):		Catalog #:	S271-500

Standard Log #:	M14344	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/12/2020	Expiration Date:	06/12/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14345	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/12/2020	Expiration Date:	06/12/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

		Instrument:	ICP 6500
Standard Log #:	M14342	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	06/11/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14214, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14120, **0.5 mL** Mo (1000 mg/L) M14121, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008 and **0.5 mL** Ti (1000 mg/L) M14009.		

		Instrument:	ICP 6500
Standard Log #:	M14343	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	06/11/2020	Expiration Date:	01/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14120, **15 mL** Fe (10,000 mg/L) M14101, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14340	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	06/11/2020	Expiration Date:	03/20/2021
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14195 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14341	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	06/11/2020	Expiration Date:	03/20/2021
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14195 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14337	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	06/11/2020	Expiration Date:	04/21
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M14196 5.0 **mL** 10000 mg/L Ti M14009 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14338	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ba, Be, and Sn
Prep Date:	06/11/2020	Expiration Date:	04/21
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M14130 5.0 **mL** 10000 mg/L Be M14203 5.0 **mL** 10000 mg/L Sn M14008 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14339	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	06/11/2020	Expiration Date:	07/21
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M14205 0.5 **mL** 10000 mg/L Cu M14199 5.0 **mL** 1000 mg/L Co M14204 5.0 **mL** 1000 mg/L Mo M14129 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14335	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/11/2020	Expiration Date:	12/2020
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **1 mL** of Si (1000 mg/L) M14006 and 1 mL M13859 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14104. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14103. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M13984, **10 mL** of Fe (10,000 mg/L) M14004, **10 mL** of Ca (10,000 mg/L) M13985 and **10 mL** Al (10,000 mg/L) M14105. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	ICP 6500
Standard Log #:	M14336	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	06/11/2020	Expiration Date:	04/21
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M14200 brought up to volume with milli-Q H_2O.		

		Instrument:	GFAA
Standard Log #:	M14332	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/11/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14333	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/11/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14334	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/11/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14327	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/09/2020	Expiration Date:	07/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14328	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/09/2020	Expiration Date:	07/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14329	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/10/2020	Expiration Date:	07/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

Standard Log #:	M14330	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/10/2020	Expiration Date:	07/10/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14331	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/10/2020	Expiration Date:	06/11/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14324	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/09/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14325	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/09/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14326	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/09/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14323	Vendor:	ThermoFisher
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	06/08/2020	Lot #:	216646
Expiration Date (if any):	11/30/2021	Catalog #:	39043

Standard Log #:	M14318	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/03/2020	Expiration Date:	07/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14319	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/03/2020	Expiration Date:	07/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14320	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/03/2020	Expiration Date:	06/04/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14321	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/04/2020	Expiration Date:	07/04/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14277 and brought up to volume.		

Standard Log #:	M14322	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/04/2020	Expiration Date:	07/04/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14315	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/03/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14316	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/03/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14317	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/03/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14310	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/27/2020	Expiration Date:	06/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14311	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/27/2020	Expiration Date:	06/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14312	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/28/2020	Expiration Date:	06/28/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14313	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	05/28/2020	Expiration Date:	05/29/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14314	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/28/2020	Expiration Date:	06/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14277 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14307	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14308	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14309	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/27/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14304	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/27/2020	Expiration Date:	05/27/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14305	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/27/2020	Expiration Date:	05/27/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard ID#:	M14306	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	05/27/2020	Lot #:	189407A
Expiration Date (if any):		Catalog #:	H331-500

Standard Log #:	M14299	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/19/2020	Expiration Date:	06/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14300	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/19/2020	Expiration Date:	06/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14301	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/20/2020	Expiration Date:	06/20/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14302	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/19/2020	Expiration Date:	05/20/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14303	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/20/2020	Expiration Date:	06/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14277 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14296	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14297	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14298	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/19/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14291	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14292	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14293	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14294	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	05/13/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14295	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14288	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14289	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14290	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/12/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14287	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	05/08/2020	Expiration Date:	05/08/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC07 and brought up to volume.		

Standard Log #:	M14282	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/05/2020	Expiration Date:	06/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14283	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/05/2020	Expiration Date:	06/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14284	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/06/2020	Expiration Date:	06/06/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14285	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/05/2020	Expiration Date:	05/06/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14286	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/06/2020	Expiration Date:	06/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14279	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14280	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14281	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14277	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	05/05/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14278	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	05/05/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14276	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	05/01/2020	Lot #:	195918
Expiration Date (if any):		Catalog #:	S271-500

		Instrument:	CETAC
Standard Log #:	M14275	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/29/2020	Expiration Date:	04/30/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14271	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/27/2020	Expiration Date:	05/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14272	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/27/2020	Expiration Date:	05/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14273	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/28/2020	Expiration Date:	05/28/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14274	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/28/2020	Expiration Date:	05/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14268	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14269	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14270	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/27/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14266	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/22/2020	Expiration Date:	05/22/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13463 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14267	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/22/2020	Expiration Date:	05/22/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14262	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/21/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14263	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/21/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14264	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/21/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14265	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/21/2020	Expiration Date:	04/22/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14259	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/21/2020	Expiration Date:	04/21/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

		Instrument:	HydraII
Standard Log #:	M14260	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14261	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M14254	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/14/2020	Expiration Date:	05/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14255	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/14/2020	Expiration Date:	05/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14256	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/15/2020	Expiration Date:	05/15/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14257	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/15/2020	Expiration Date:	05/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14258	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/14/2020	Expiration Date:	04/15/20220
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14251	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/14/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14252	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/14/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14253	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/14/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14250	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	04/14/2020	Expiration Date:	12/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M13951	1000	2
Al	800	M13982	**10000**	4
As	40	M13863	1000	2
Ba	20	M14130	1000	1
Be	8	M14203	1000	0.4
Ca	1000	M13985	**10000**	5
Cd	10	M14201	1000	0.5
Co	20	M14204	1000	1
Cr	20	M14205	**10000**	0.1
Cu	20	M14199	**10000**	0.1
Fe	600	M14101	**10000**	3
Mg	1000	M14108	**10000**	5
Mn	20	M14200	**10000**	0.1
Mo	20	M14129	1000	1
Ni	20	M14196	1000	1
Pb	20	M14202	**10000**	0.1
Sb	40	M13950	1000	2
Se	40	M13948	1000	2
Tl	40	M14207	1000	2
V	20	M14198	1000	1
Zn	20	M14197	**10000**	0.1
Na	10000	M14103	**10000**	50
K	10000	M14104	**10000**	50
B	40	M13947	1000	2
Si	200	M14106	1000	10
S	2000	M14102	**10000**	10
Li	40	M14127	1000	2
Sr	20	M14007	1000	1
Sn	100	M14008	1000	5
Ti	20	M14009	1000	10

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M14247	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/10/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14248	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/10/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14249	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/10/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M14246	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	04/08/2020	Lot #:	A0412553
Expiration Date (if any):		Catalog #:	424185000

Standard Log #:	M14242	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/06/2020	Expiration Date:	05/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14243	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/06/2020	Expiration Date:	05/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14244	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/07/2020	Expiration Date:	05/07/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14245	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/07/2020	Expiration Date:	05/07/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14239	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/06/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14240	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/06/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14241	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/06/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14234	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/31/2020	Expiration Date:	04/30/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14235	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/31/2020	Expiration Date:	04/30/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14236	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/01/2020	Expiration Date:	05/01/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14237	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/01/2020	Expiration Date:	05/01/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14158 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14238	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/01/2020	Expiration Date:	04/02/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14231	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/31/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14232	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/31/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14233	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/31/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

MRL BASE STD M14230 Analyst NAH

Prep Date 03/27/2020

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13951	1000	1	02/2021
Al	400	M14105	10000	2	07/2021
Ba	10	M14130	1000	0.5	07/2021
Be	4	M14203	1000	0.2	09/2021
Cd	5	M14201	1000	0.25	09/2021
Co	10	M14204	1000	0.5	09/2021
Cr	10	M14205	10000	0.05	09/2021
Cu	10	M14199	10000	0.05	09/2021
Mg	500	M14108	10000	2.5	07/2021
Mn	10	M14200	10000	0.05	09/2021
Mo	10	M14129	1000	0.5	07/2021
Ni	10	M14196	1000	0.5	09/2021
Pb	10	M14202	10000	0.05	09/2021
Sb	20	M13950	1000	1	02/2021
V	10	M14198	1000	0.5	09/2021
Zn	10	M14197	10000	0.05	09/2021
K	1000	M14104	10000	5	07/2021
Na	1000	M14103	10000	5	07/2021
As	20	M13863	1000	1	12/2020
Ca	500	M14107	10000	2.5	07/2021
Fe	300	M14101	10000	1.5	07/2021
Se	20	M13948	1000	1	02/2021
Tl	20	M14207	1000	1	09/2021
Si	100	M14106	1000	5	07/2021
B	20	M14131	1000	1	07/2021
Li	20	M14127	1000	1	07/2021
W	50	xxxxxxxd	1000	2.5	xxxxxxx
Ti	10	M14009	1000	0.5	04/2021
Sr	10	M14007	1000	0.5	04/2021
Sn	50	M14008	1000	2.5	04/2021
S	300	M14102	10000	1.5	07/2021

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M14224	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/25/2020	Expiration Date:	04/25/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14225	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/25/2020	Expiration Date:	04/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14158 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14226	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/25/2020	Expiration Date:	03/26/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

Standard ID#:	M14227	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV
Date Received:	03/25/2020	Lot #:	R2-MEB691217
Expiration Date (if any):		Catalog #:	CTI-SPK-1

Standard ID#:	M14228	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE
Date Received:	03/25/2020	Lot #:	R2-MEB691216
Expiration Date (if any):		Catalog #:	CTI-GFCAL-1

Standard ID#:	M14229	Vendor:	HACH
Analyst:	NAH	Chemical:	StablCal Standard 200 NTU
Date Received:	03/25/2020	Lot #:	A0038
Expiration Date (if any):	02/2022	Catalog #:	2660449

Standard Log #:	M14222	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/24/2020	Expiration Date:	04/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14223	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/24/2020	Expiration Date:	04/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14219	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14220	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14221	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/24/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14218	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	03/19/2020	Lot #:	54-035CR
Expiration Date (if any):	03/30/2021	Catalog #:	XCTWI-1-500

		Instrument:	CETAC
Standard Log #:	M14216	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	03/18/2020	Expiration Date:	03/19/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14217	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/18/2020	Expiration Date:	04/18/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14158 and brought up to volume.		

Standard Log #:	M14211	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/17/2020	Expiration Date:	04/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14212	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/17/2020	Expiration Date:	04/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14213	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/17/2020	Expiration Date:	04/17/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

Standard ID#:	M14214	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	03/17/2020	Lot #:	54-027CR
Expiration Date (if any):	03/30/2021	Catalog #:	XSPIKE-1-250

Standard ID#:	M14215	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	03/17/2020	Lot #:	54-028CR
Expiration Date (if any):	03/30/2021	Catalog #:	XCTWI-5-500

		Instrument:	HydraII
Standard Log #:	M14208	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14209	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14210	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/17/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14201	Vendor:	CPI
Analyst:	NAH	Chemical:	Cd 1000 mg/L
Date Received:	03/11/2020	Lot #:	996631-64
Expiration Date (if any):	09/2021	Catalog #:	S4400-100081

Standard ID#:	M14202	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 10000
Date Received:	03/11/2020	Lot #:	168223-44
Expiration Date (if any):	09/2021	Catalog #:	4400-10M281

Standard ID#:	M14203	Vendor:	CPI
Analyst:	NAH	Chemical:	Be 1000 mg/L
Date Received:	03/11/2020	Lot #:	998969-61
Expiration Date (if any):	09/2021	Catalog #:	S4400-100051

Standard ID#:	M14204	Vendor:	CPI
Analyst:	NAH	Chemical:	Co 1000 mg/L
Date Received:	03/11/2020	Lot #:	1024904-44
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000131

Standard ID#:	M14205	Vendor:	CPI
Analyst:	NAH	Chemical:	Cr 10000 mg/L
Date Received:	03/11/2020	Lot #:	880115-56
Expiration Date (if any):	09/2021	Catalog #:	S4400-10M121

Standard ID#:	M14206	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	03/11/2020	Lot #:	997484-19
Expiration Date (if any):	09/2021	Catalog #:	4400-10M671

Standard ID#:	M14207	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	03/11/2020	Lot #:	991734-85
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000581

Standard ID#:	M14195	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	03/09/2020	Lot #:	54-005CR
Expiration Date (if any):	3/30/2021	Catalog #:	XCTWI-4-500

Standard ID#:	M14196	Vendor:	CPI
Analyst:	NAH	Chemical:	Ni 1000 mg/L
Date Received:	03/11/2020	Lot #:	984273-111
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000361

Standard ID#:	M14197	Vendor:	CPI
Analyst:	NAH	Chemical:	Zn 10000 mg/L
Date Received:	03/11/2020	Lot #:	1025267-1
Expiration Date (if any):	09/2021	Catalog #:	4400-10M681

Standard ID#:	M14198	Vendor:	CPI
Analyst:	NAH	Chemical:	V 1000 mg/L
Date Received:	03/11/2020	Lot #:	990117-98
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000651

Standard ID#:	M14199	Vendor:	CPI
Analyst:	NAH	Chemical:	Cu 10000 mg/L
Date Received:	03/11/2020	Lot #:	982824-45
Expiration Date (if any):	09/2021	Catalog #:	S4400-10M141

Standard ID#:	M14200	Vendor:	CPI
Analyst:	NAH	Chemical:	Mn 10000 mg/L
Date Received:	03/11/2020	Lot #:	985851-17
Expiration Date (if any):	09/2021	Catalog #:	S4400-10M321

Standard ID#:	M14193	Vendor:	Fisher
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	03/09/2020	Lot #:	189407
Expiration Date (if any):		Catalog #:	H331-500

Standard ID#:	M14194	Vendor:	Fisher
Analyst:	NAH	Chemical:	Sodium Chloride
Date Received:	03/09/2020	Lot #:	193465
Expiration Date (if any):		Catalog #:	S271-500

		Instrument:	CETAC
Standard Log #:	M14189	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/10/2020	Expiration Date:	04/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M14190	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/09/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M14191	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/09/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M14192	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/09/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	HydraII
Standard Log #:	M14186	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14187	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14188	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14182	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/06/2020	Expiration Date:	04/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

Standard Log #:	M14183	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/06/2020	Expiration Date:	04/06/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

Standard Log #:	M14184	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14185	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14180	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/04/2020	Expiration Date:	04/04/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14181	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/04/2020	Expiration Date:	03/05/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14177	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/04/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14178	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/04/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14179	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/04/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14175	Vendor:	COLE-PARMER
Analyst:	BMM	Chemical:	Acid Washed TCLP Filters
Date Received:	03/02/2020	Lot #:	400168
Expiration Date (if any):		Catalog #:	FG77150MM

Standard Log #:	M14176	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/03/2020	Expiration Date:	03/03/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

		Instrument:	ICP 6500
Standard Log #:	M14172	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14121 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14173	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	02/25/2020	Expiration Date:	01/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14137 and 15 **mL** 10000 mg/L Fe M14004 5.0 **mL** 1000 mg/L V M13578 5.0 **mL** 1000 mg/L Ce M13859 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14174	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14137, **15 mL** Fe (10,000 mg/L) M14004, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14121, **2.5 mLs Na 10,000 ug/mL** M14103 ,**2.5 mLs k 10,000 ug/mL** M14126 **2.5 mLs S 10,000 ug/mL** M14102, **0.5 mls Si 1000 ug/mL** M13981 and brought up to volume with milli-Q .		

		Instrument:	ICP 6500
Standard Log #:	M14170	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	02/25/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14138, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14137, **0.5 mL** Mo (1000 mg/L) M14129, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008, **0.5 mL** Ti (1000 mg/L) M141009, **0.5 mL** W (1000 mg/L) Mxxxx, **0.5 mL** Si (1000 mg/L) M14106, **0.5 mL** S (10000 mg/L) M14102, **0.5 mL** K (10000 mg/L) M14126, and **0.5 mL** Na (10000 mg/L) M14103		

		Instrument:	ICP 6500
Standard Log #:	M14171	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14121 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M14168	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/24/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M14169	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14121, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827 and **1 mL** of Si (1000 mg/L) M14106 and 1 mL M13859 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14104. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M13618, **10 mL** of Mn (10,000 mg/L) M13616, **10 mL** of Cr (10,000 mg/L) M13617, **10 mL** Pb (10,000 mg/L) M13615, **10 mL** of Zn (10,000 mg/L) M13610 and **10 mL** of Na (10,000 mg/L) M14103. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14108, **10 mL** of Fe (10,000 mg/L) M14004, **10 mL** of Ca (10,000 mg/L) M14107 and **10 mL** Al (10,000 mg/L) M14105. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	HydraII
Standard Log #:	M14165	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14166	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14167	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/24/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6000
Standard Log #:	M14163	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	02/21/2020	Expiration Date:	07/2021
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M14103 and **0.15 mL** K (10,000 µg/mL) M14109 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14164	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	02/21/2020	Expiration Date:	01/30/2021
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M14120, **2.5 mL** of K (10,000 mg/L) M14109, **2.5 mL** of Na (10,000 mg/L) M14103 and **7.5 mL** of Fe (10,000 mg/L) M14101 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M14159	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/20/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	ICP 6000
Standard Log #:	M14160	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	02/21/2020	Expiration Date:	10/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13808 and K (1000 µg/mL) M13809 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14161	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	02/21/2020	Expiration Date:	10/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13808 and **0.5 mL** K (1000 µg/mL) M13809 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14162	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	02/21/2020	Expiration Date:	07/2021
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M14109 and Na (10,000 mg/L) M14103 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6500
Standard Log #:	M14156	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	02/19/2020	Expiration Date:	01/30/21
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14138, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14120, **0.5 mL** Mo (1000 mg/L) M14129, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M141008, **0.5 mL** Ti (1000 mg/L) M14009, **0.5 mL** W (1000 mg/L) Mxxxxxxx, **0.5 mL** Si (1000 mg/L) M13981, **0.5 mL** S (10000 mg/L) M14102, **0.5 mL** K (10000 mg/L) M14109, and **0.5 mL** Na (10000 mg/L) M14103		

Standard ID#:	M14157	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	02/19/2020	Lot #:	J347-07
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14158	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	02/19/2020	Lot #:	J347-07
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	CETAC
Standard Log #:	M14148	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/13/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

Standard Log #:	M14152	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14153	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14154	Reagent:	Potassium Persulfate Solution
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14155	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14149	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14150	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14151	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/17/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	HydraII
Standard Log #:	M14145	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/11/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14146	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/11/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14147	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/11/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14144	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/06/2020	Expiration Date:	03/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

Standard Log #:	M14142	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	02/05/2020	Expiration Date:	07/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14143	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	02/05/2020	Expiration Date:	02/06/2020
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14139	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14140	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14141	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14137	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/04/2020	Lot #:	53-196CR
Expiration Date (if any):	01/30/2021	Catalog #:	XCTIWI-1-500

Standard ID#:	M14138	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/04/2020	Lot #:	XSPIKE-1-250
Expiration Date (if any):	01/30/2021	Catalog #:	53-197CR

		Instrument:	CETAC
Standard Log #:	M14136	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/30/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14132	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/29/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14133	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/29/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14134	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/29/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14135	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	01/29/2020	Expiration Date:	01/30/2020
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

Standard ID#:	M14125	Vendor:	CPI International
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	01/24/2020	Lot #:	1009904-41
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-1000331

Standard ID#:	M14126	Vendor:	CPI International
Analyst:	MDS	Chemical:	Potassium 10,000 µg/mL
Date Received:	01/24/2020	Lot #:	980507-31
Expiration Date (if any):	07/20/2021	Catalog #:	4400-10M411

Standard ID#:	M14127	Vendor:	CPI International
Analyst:	MDS	Chemical:	Lithium 1000 µg/mL
Date Received:	01/24/2020	Lot #:	1017511-7
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-1000291

Standard ID#:	M14128	Vendor:	CPI International
Analyst:	MDS	Chemical:	Phosphorus 10,000 µg/mL
Date Received:	01/24/2020	Lot #:	979480-24
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-10M391

Standard ID#:	M14129	Vendor:	CPI International
Analyst:	MDS	Chemical:	Molybdenum 1000 µg/mL
Date Received:	01/24/2020	Lot #:	987189-55
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-1000343

Standard ID#:	M14130	Vendor:	CPI International
Analyst:	MDS	Chemical:	Barium 1000 µg/mL
Date Received:	01/24/2020	Lot #:	994634-53
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-100041

Standard ID#:	M14131	Vendor:	CPI International
Analyst:	MDS	Chemical:	Boron 1000 µg/mL
Date Received:	01/24/2020	Lot #:	1024903-6
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-100074

		Instrument:	HydraII
Standard Log #:	M14122	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/23/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14123	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/23/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14124	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/23/2020	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14119	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Hg 1000 ug/mL
Date Received:	01/21/2020	Lot #:	CL11-96HGY
Expiration Date (if any):	01/30/2021	Catalog #:	CLHG4-2Y

Standard ID#:	M14120	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	01/21/2020	Lot #:	2-96JX
Expiration Date (if any):	01/30/2021	Catalog #:	INT-A1

Standard ID#:	M14121	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	01/21/2020	Lot #:	1-008DMP
Expiration Date (if any):	01/21/2021	Catalog #:	XCTWI-5-500

		Instrument:	CETAC
Standard Log #:	M14117	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/17/2020	Expiration Date:	02/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

Standard Log #:	M14118	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	01/17/2020	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M13951	1000	0.01
As	2	M13863	1000	0.1
Pb	2	M13615	10000	0.01
Sb	2	M13950	1000	0.1
Se	2	M13948	1000	0.1
Tl	2	M13583	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	HydraII
Standard Log #:	M14114	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/16/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14115	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/16/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14116	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/16/2020	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14111	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/13/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14112	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/13/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14113	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/13/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M14106	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	01/13/2020	Lot #:	175213-60
Expiration Date (if any):	07/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14107	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 ug/mL
Date Received:	01/13/2020	Lot #:	855297-68
Expiration Date (if any):	07/2021	Catalog #:	4400-10M91

Standard ID#:	M14108	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 ug/mL
Date Received:	01/13/2020	Lot #:	1013353-36
Expiration Date (if any):	07/2021	Catalog #:	4400-10M311

Standard ID#:	M14109	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000ug/mL
Date Received:	01/13/2020	Lot #:	980507-79
Expiration Date (if any):	07/2021	Catalog #:	4400-10M411

Standard Log #:	M14110	Reagent:	TCLP EXTRACTION FLUID #2
Analyst:	BMM	pH:	2.88 ± 0.05
Prep Date:	01/14/2020	Expiration Date:	01/14/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 . Dilute to 20 L and mix.		

Standard ID#:	M14100	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 ug/mL
Date Received:	01/10/2020	Lot #:	1905324-500
Expiration Date (if any):	07/31/2021	Catalog #:	HP10M67-1-500

Standard ID#:	M14101	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 ug/mL
Date Received:	01/13/2020	Lot #:	998527-45
Expiration Date (if any):	07/2021	Catalog #:	4400-10M261

Standard ID#:	M14102	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10000 ug/mL
Date Received:	01/13/2020	Lot #:	9987745-28
Expiration Date (if any):	07/2021	Catalog #:	4400-10M544

Standard ID#:	M14103	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 10000 ug/mL
Date Received:	01/13/2020	Lot #:	752887-79
Expiration Date (if any):	01/2021	Catalog #:	4400-40M521

Standard ID#:	M14104	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10000 ug/mL
Date Received:	01/13/2020	Lot #:	980507-31
Expiration Date (if any):	07/2021	Catalog #:	4400-10M411

Standard ID#:	M14105	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 ug/mL
Date Received:	01/13/2020	Lot #:	992536-34
Expiration Date (if any):	07/2021	Catalog #:	4400-10M11

Standard Log #:	M14099revised below	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	01/09/2020	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M13951	1000	0.25
Al	10	M13962	**10000**	0.05
As	20	M13863	1000	1
Ba	2	M13949	1000	0.1
Be	0.5	M13579	1000	0.025
Ca	50	M13841	**10000**	0.25
Cd	0.5	M13570	1000	0.025
Co	2.5	M13575	1000	0.125
Cr	5.0	M13617	**10000**	0.025
Cu	10	M13618	**10000**	0.05
Fe	40	M13963	**10000**	0.2
Mg	25	M13752	**10000**	0.125
Mn	5	M13616	**10000**	0.025
Mo	2.5	M13860	1000	0.125
Ni	5	M13569	1000	0.25
Pb	10	M13615	**10000**	0.05
Sb	20	M13950	1000	1
Se	20	M13948	1000	1
Tl	20	M13583	1000	1
V	5	M13578	1000	0.25
Zn	5	M13610	**10000**	0.025

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14099	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	01/09/2020	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M13951	1000	0.25
Al	10	M13962	**10000**	0.05
As	20	M13863	1000	1
Ba	2	M13949	1000	0.1
Be	0.5	M13579	1000	0.025
Ca	50	M13841	**10000**	0.25
Cd	0.5	M13570	1000	0.025
Co	2.5	M13575	1000	0.125
Cr	5.0	M13617	**10000**	0.025
Cu	10	M13618	**10000**	0.05
Fe	40	M13963	**10000**	0.2
Mg	25	M13752	**10000**	0.125
Mn	5	M13616	**10000**	0.025
Mo	2.5	M13860	1000	0.125
Ni	5	M13569	1000	0.25
Pb	10	M13615	**10000**	0.05
Sb	20	M13950	1000	1
Se	20	M13948	1000	1
Tl	20	M13583	1000	1
V	5	M13578	1000	0.25
Zn	5	M13610	**10000**	0.025
Na	500	M13862	**10000**	2.5
K	500	M14003	**10000**	2.5
B	20	M13947	1000	1
Si	100	M13981	1000	5
S	200	M13696	**10000**	1
Li	20	M13577	1000	1
Sr	20	M14007	1000	1
Sn	20	M14008	1000	1
Ti	20	M14009	1000	1

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M14097	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/09/2020	Expiration Date:	02/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

Standard Log #:	M14098	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 S Spiking Solution
Prep Date:	01/09/2020	Expiration Date:	06/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	240	M13696	10000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M14096	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	01/08/2020	Expiration Date:	01/09/2020
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14093	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/08/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14094	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/08/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14095	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/08/2020	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14092	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/26/2019	Expiration Date:	01/26/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14088	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/20/2019	Expiration Date:	01/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14089	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/24/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14090	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/24/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14091	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/24/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14086	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/19/2019	Expiration Date:	12/20/2019
Prep:	Carefully mixed **3** parts HCl AB.862 with **1** part HNO_3 AB.861 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14087	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/24/2019	Expiration Date:	12/25/2019
Prep:	Carefully mixed **3** parts HCl AB.862 with **1** part HNO_3 AB.861 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14083	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/18/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14084	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/18/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14085	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/18/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14082	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	Acid Washed TCLP Filters
Date Received:	12/11/2019	Lot #:	400168-9329-CM
Expiration Date (if any):		Catalog #:	FG77150MM

Standard ID#:	M14079	Vendor:	Thermofisher Scientific
Analyst:	MDS	Chemical:	GFAA Nickel Nitrate Modifier
Date Received:	12/12/2019	Lot #:	9192422
Expiration Date (if any):	04/30/2021	Catalog #:	39043

Standard ID#:	M14080	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	12/12/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14081	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	12/12/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M14078A	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	12/11/2019	Expiration Date:	02/21

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13947	1000	0.8
Si	200	M13810	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14078b Combined with	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	12/11/2019	Expiration Date:	03/201

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M13604	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14077	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	12/11/2019	Expiration Date:	02/20

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13851	1000	0.2
Al	36	M13982	**10000**	0.18
As	24	M13863	1000	1.2
Ba	1.8	M13949	1000	0.09
Be	0.6	M13579	1000	0.03
Ca	100	M13841	**10000**	0.5
Cd	2.0	M13570	1000	0.1
Co	4	M13575	1000	0.2
Cr	4	M13617	**10000**	0.02
Cu	7	M13618	**10000**	0.035
Fe	100	M13983	**10000**	0.5
Mg	40	M13752	**10000**	0.2
Mn	4	M13616	**10000**	0.02
Mo	7	M13860	1000	0.35
Ni	6	M13569	1000	0.2
Pb	4	M13615	**10000**	0.02
Sb	12	M13950	1000	0.6
Se	13	M13948	1000	0.65
Tl	20	M13583	1000	0.75
V	5	M13578	1000	0.25
Zn	10	M13610	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14076	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	12/10/2019	Expiration Date:	02/20

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13951	1000	0.2
Al	9.6	M13982	**10000**	0.048
As	32	M13863	1000	1.6
Ba	2	M13949	1000	0.1
Be	1.6	M13579	1000	0.08
Ca	56	M13841	**10000**	0.28
Cd	1.6	M13570	1000	0.08
Co	9.6	M13575	1000	0.48
Cr	5.6	M13617	**10000**	0.028
Cu	16	M13618	**10000**	0.08
Fe	72	M13983	**10000**	0.36
Mg	32	M13752	**10000**	0.16
Mn	6	M13616	**10000**	0.03
Mo	9.6	M13860	1000	0.48
Ni	4.8	M13569	1000	0.24
Pb	10	M13615	**10000**	0.05
Sb	32	M13950	1000	1.6
Se	16	M13948	1000	0.8
Tl	19	M13583	1000	0.95
V	3.2	M13578	1000	0.16
Zn	12	M13610	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M14074	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	12/10/2019	Expiration Date:	02/2021
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13951 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M14075	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/10/2019	Expiration Date:	12/11/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	GFAA
Standard Log #:	M14072	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	12/10/2019	Expiration Date:	02/2020
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13950 **3.2 mL** of As (1000 mg/L) M13863 **3.2 mL** of Se (1000 mg/L) M13948 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M14073	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	12/10/2019	Expiration Date:	02/2020
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13950 **1.0 mL** of As (1000 mg/L) M13863 **2.0 mL** of Se (1000 mg/L) M13948 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M14071	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	12 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	12/10/2019	Expiration Date:	02/2020

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13863	10,000
Pb	0.1	10,000	M13615	10,000
Tl	1	1000	M13583	10,000
Se	1	1000	M13948	10,000
Sb	1	1000	M13950	10,000
Ag	0.1	1000	M13951	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.2	10,000	12
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

		Instrument:	HydraII
Standard Log #:	M14068	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/10/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14069	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	12/10/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13734 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M14070	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/10/2019	Expiration Date:	01/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14065	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/05/2019	Expiration Date:	01/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14066	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/06/2019	Expiration Date:	01/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14067	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/10/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M14063	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/03/2019	Expiration Date:	01/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14064	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/04/2019	Expiration Date:	12/05/2019
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14061	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/02/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14062	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	Acid Washed TCLP Filters
Date Received:	12/02/2019	Lot #:	400168-9305-CM
Expiration Date (if any):		Catalog #:	

		Instrument:	CETAC
Standard Log #:	M14058	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/20/2019	Expiration Date:	12/20/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M14017 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14059	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/02/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14060	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/02/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M14056	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/26/2019	Expiration Date:	11/26/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

Standard Log #:	M14057	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/26/2019	Expiration Date:	11/26/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

Standard ID#:	M14054	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	11/20/2019	Lot #:	53-042CR
Expiration Date (if any):	11/30/2020	Catalog #:	XCTWI-5-500

Standard ID#:	M14055	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	11/20/2019	Lot #:	53-041CR
Expiration Date (if any):	11/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	GFAA
Standard Log #:	M14051	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	11/20/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14052	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	11/20/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14053	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	11/20/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M14048	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/19/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14049	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/19/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14050	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	11/19/2019	Expiration Date:	11/20/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14045	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/11/2019	Expiration Date:	05/11/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.681 and dissolved **100 g** Stannous chloride M14017 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14046	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/13/19	Expiration Date:	05/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.681 and dissolved **100 g** Stannous chloride M14017 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14047	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/19/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

Standard Log #:	M14044	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/13/2019	Expiration Date:	11/13/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M14041	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	11/09/2019	Expiration Date:	11/10/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14042	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	11/12/2019	Expiration Date:	11/13/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M14043	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	11/12/2019	Expiration Date:	04/12/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13993 and **60 g** hydroxylamine sulfate M13874 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14038	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14039	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14040	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/07/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6000
Standard Log #:	M14035	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/04/2019	Expiration Date:	02/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M14008 Sr (1000 µg/mL) M14007 Ti (1000 µg/mL) M14009 W (1000 µg/mL) MXXXXX		

		Instrument:	ICP 6000
Standard Log #:	M14036	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	11/04/2019	Expiration Date:	02/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	MXXXX	1000	5	XX/XXXX
Ti	10/30	M14009	1000	0.5	04/2021
Sr	10/30	M14007	1000	0.5	04/2021
Sn	20/60	M14008	1000	1	04/2021

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	CETAC
Standard Log #:	M14037	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/04/2019	Expiration Date:	05/04/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13922 and brought up to volume.		

		Instrument:	ICP
Standard Log #:	M14033	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	11/04/2019	Expiration Date:	05/30/2020
Prep:	Standard Conc. (ug/L)	Pipette the following:	
	1	**0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.001 mL** W (1000 µg/mL) MXXXXX into 1L = *1 µg/L*	
	10	**0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.01 mL** W (1000 µg/mL) MXXXXX into 1L = *10 µg/L*	
	100	**1 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.1 mL** W (1000 µg/mL) MXXXXX into 1L = *100 µg/L*	
	1000 (CCV)	**2 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.2 mL** W (1000 µg/mL) MXXXXX into 200mL = *1000 µg/L*	
	10000	**20 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **2 mL** W (1000 µg/mL) MXXXXX into 200mL = *10000 µg/L*	

		Instrument:	ICP 6000
Standard Log #:	M14034	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/04/2019	Expiration Date:	02/28/2020
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **6 mL** of Fe (10,000 mg/L) M13751, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M14008, **0.1 mL** of Sr (1000 µg/mL) M14007, **0.1 mL** of Ti (1000 µg/mL) M14009, and **0.1 mL** of W (1000 µg/mL) MXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	CETAC
Standard Log #:	M14032	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/31/2019	Expiration Date:	10/31/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M14028	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	10/30/2019	Expiration Date:	10/2020
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13947 and Si (1000 mg/L) M13810 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14029	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/30/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **0.05 mL** of B (1000 µg/mL) M13947, **0.05 mL** of Si (1000 µg/mL) M13810 and **3 mL** of Fe (10,000 mg/L) M13751 and brought up to volume using Milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M14030	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	10/30/2019	Expiration Date:	05/30/2020
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13839 and **1.0 mL** Si (1000 mg/L) M13981 and brought up to volume using milli-Q H_2O.		

Standard ID#:	M14031	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Acid Washed TCLP filters
Date Received:	10/31/2019	Lot #:	400165
Expiration Date (if any):		Catalog #:	FG77150MM

		Instrument:	HydraII
Standard Log #:	M14024	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/29/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14025	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/29/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14026	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/29/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14027	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/30/2019	Expiration Date:	04/30/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13922 and brought up to volume.		

MRL BASE STD M14024 Analyst NAH

Prep Date 10/30/2019

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13951	1000	1	02/2021
Al	400	M13690	10000	2	06/2020
Ba	10	M13949	1000	0.5	02/2021
Be	4	M13579	1000	0.2	02/2020
Cd	5	M13570	1000	0.25	01/2020
Co	10	M13575	1000	0.5	01/2020
Cr	10	M13617	10000	0.05	03/2020
Cu	10	M13618	10000	0.05	03/2020
Mg	500	M13752	10000	2.5	09/2020
Mn	10	M13616	10000	0.05	03/2020
Mo	10	M13860	1000	0.5	12/2020
Ni	10	M13569	1000	0.5	01/2020
Pb	10	M13615	10000	0.05	03/2020
Sb	20	M13950	1000	1	02/2021
V	10	M13578	1000	0.5	02/2020
Zn	10	M13610	10000	0.05	03/2020
K	1000	M14003	10000	5	04/2021
Na	1000	M13862	10000	5	12/2020
As	20	M13763	1000	1	12/2020
Ca	500	M13985	10000	2.5	04/2021
Fe	300	M13751	10000	1.5	09/2020
Se	20	M13948	1000	1	02/2021
Tl	20	M13583	1000	1	02/2020
Si	100	M13810	1000	5	10/2020
B	20	M13947	1000	1	02/2021
Li	20	M13577	1000	1	02/2020
W	50	Mxxxxxx	1000	2.5	xxxxxxxx
Ti	10	M14009	1000	0.5	04/2021
Sr	10	M14007	1000	0.5	03/2020
Sn	50	M14008	1000	2.5	04/2021
S	300	M13604	10000	1.5	03/2020

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M14022	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13922 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M14023	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	10/30/2019	Expiration Date:	02/2020
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M13738 and 15 **mL** 10000 mg/L Fe M14004 5.0 **mL** 1000 mg/L V M13578 5.0 **mL** 1000 mg/L Ce M13859 and brought up to volume with milli-Q H_2O.		

Standard Log #:	M14020	Reagent:	Potassium Persulfate Solution
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14021	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13993 and **60 g** hydroxylamine sulfate M13874 and brought up to volume.		

Standard ID#:	M14016	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/23/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14017	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/23/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	CETAC
Standard Log #:	M14018	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	10/24/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M14019	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14012	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/21/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14013	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/21/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14014	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/21/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14015	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/22/2019	Expiration Date:	09/30/2020
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13954 and **10 mL** Mg (10,000 mg/L) M13752 and brought up to volume.		

Standard Log #:	M14010	Reagent:	SPLP ACID MIX
Analyst:	BMM		60/40 H_2SO_4 - HNO_3
Prep Date:	10/21/2019	Expiration Date:	10/21/2020
Prep:	Into a 200 mL volumetric flask, partially filled with DI H_2O, add **12 g** H_2SO_4 AB.674 and **8 g** HNO_3 AB.677 and bring up to volume using DI H_2O.		

Standard Log #:	M14011	Reagent:	SPLP EXTRACTION FLUID EAST #
Analyst:	BMM	pH:	4.20 ± 0.05
Prep Date:	10/21/2019	Expiration Date:	10/21/2020
Prep:	Into a 20 L carboy filled with DI H_2O, adjust pH to 4.20 ± 0.05 using 60/40 HNO_3 - H_2SO_4 M14010.		

Standard ID#:	M14005	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	10/17/2019	Lot #:	168189-30
Expiration Date (if any):	04/2021	Catalog #:	4400-110M671

Standard ID#:	M14006	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	10/17/2019	Lot #:	1004985-62
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14007	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	10/17/2019	Lot #:	168227-95
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000531

Standard ID#:	M14008	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/L
Date Received:	10/17/2019	Lot #:	977645-2
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000613

Standard ID#:	M14009	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	10/17/2019	Lot #:	987438-36
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000623

		Instrument:	CETAC
Standard Log #:	M14000	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/16/2019	Expiration Date:	04/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

Standard ID#:	M14001	Vendor:	ThermoFisher
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	10/17/2019	Lot #:	9192422
Expiration Date (if any):	04/30/2021	Catalog #:	39043

Standard Log #:	M14002	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	10/17/2019	Expiration Date:	10/17/2020
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W47366 and brought up to volume.		

Standard ID#:	M14003	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	10/17/2019	Lot #:	980507-31
Expiration Date (if any):	04/2021	Catalog #:	4400-10M411

Standard ID#:	M14004	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	10/17/2019	Lot #:	998527-45
Expiration Date (if any):	04/2021	Catalog #:	4400-10M261

		Instrument:	GFAA
Standard Log #:	M13997	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/16/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13998	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/16/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13999	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/16/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M13993	Vendor:	Thermo fisher Scientific
Analyst:	NAH	Chemical:	Sodium Chloride
Date Received:	10/15/2019	Lot #:	193463
Expiration Date (if any):	06/2024	Catalog #:	S271-500

Standard ID#:	M13994	Vendor:	Thermo Fisher Scientific
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	10/15/2019	Lot #:	189407
Expiration Date (if any):	05/2024	Catalog #:	H331-500

		Instrument:	CETAC
Standard Log #:	M13995	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/15/2019	Expiration Date:	10/16/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13996	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/16/2019	Expiration Date:	10/16/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

		Instrument:	ICP 6000
Standard Log #:	M13992	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	10/15/2019	Expiration Date:	01/2020
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **6 mL** of Fe (10,000 mg/L) M13751, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) MXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	ICP 6000
Standard Log #:	M13989	Standard:	Sulfur ICAL
Analyst:	MDS	Concentrations:	1000 10,000 100,000 1000K µg/L (S)
Prep Date:	10/14/2019	Expiration Date:	06/2020
Prep:	Into four, 100 mL volumetric flasks, pipetted the following from stock standard S (10,000 µg/mL) M13696 and brought up to volume using milli-Q H_2O. *1000 ug/L std.* - **0.01 mL** *10,000 ug/L std.* - **0.1 mL** *100,000 ug/L std.* -**1.0 mL**, also used as the CCV *1000K ug/L std.* - **10 mL**		

		Instrument:	ICP 6000
Standard Log #:	M13990	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	10/14/2019	Expiration Date:	03/2020
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M13604 and brought up to volume using Milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13991	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/14/2019	Expiration Date:	12/2019
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **0.05 mL** of B (1000 µg/mL) M13531, **0.05 mL** of Si (1000 µg/mL) M13861 and **3 mL** of Fe (10,000 mg/L) M13751 and brought up to volume using Milli-Q H_2O.		

		Instrument:	HydraII
Standard Log #:	M13986	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/15/2019	Expiration Date:	04/15/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13987	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/15/2019	Expiration Date:	04/15/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13988	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/15/2019	Expiration Date:	04/15/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M13982	Vendor:	CPI
Analyst:	NAH	Chemical:	Aluminum 10000 mg/L
Date Received:	10/09/2019	Lot #:	992536-16
Expiration Date (if any):	04/2021	Catalog #:	4400-10M11

Standard ID#:	M13983	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	10/09/2019	Lot #:	998527-45
Expiration Date (if any):	04/2021	Catalog #:	4400-10M261

Standard ID#:	M13984	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	10/09/2019	Lot #:	1013353-4
Expiration Date (if any):	04/2021	Catalog #:	4400-10M311

Standard ID#:	M13985	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	10/09/2019	Lot #:	855297-68
Expiration Date (if any):	04/2021	Catalog #:	4400-10M91

		Instrument:	CETAC
Standard Log #:	M13978	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/08/2019	Expiration Date:	04/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13979	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/09/2019	Expiration Date:	04/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

Standard ID#:	M13980	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	10/08/2019	Lot #:	52-248CR
Expiration Date (if any):	10/30/2020	Catalog #:	XSPIKE-1-250

Standard ID#:	M13981	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 mg/l
Date Received:	10/09/2019	Lot #:	1004985-62
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000504F

		Instrument:	HydraII
Standard Log #:	M13976	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	10/07/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13975 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13977	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/07/2019	Expiration Date:	10/07/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13973	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13974	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13975	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/07/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M13970	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/07/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13971	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/07/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13972	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/07/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13969	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	10/02/2019	Expiration Date:	10/02/2020
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13967	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	10/01/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13966 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13968	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/01/2019	Expiration Date:	10/01/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13964	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/01/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13965	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/01/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13966	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/01/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M13963	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/30/2019	Expiration Date:	09/30/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard ID#:	M13961	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	09/24/2019	Lot #:	7-093AB
Expiration Date (if any):	09/30/2020	Catalog #:	XCTWI-1-500

		Instrument:	CETAC
Standard Log #:	M13962	Reagent:	Stannous Chloride Solution
Analyst:	NAH		
Prep Date:	09/25/2019	Expiration Date:	09/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13960	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/19/2019	Expiration Date:	03/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.678 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M13958	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/17/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	HydraII
Standard Log #:	M13959	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	09/17/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13958 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13955	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	09/17/2019	Expiration Date:	09/17/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13956	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/17/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13957	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/17/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M13952	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/13/2019	Expiration Date:	09/13/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard Log #:	M13953	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/13/2019	Expiration Date:	09/13/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard ID#:	M13954	Vendor:	Environmental Expresss
Analyst:	MDS	Chemical:	1% Pd Matrix Modifier
Date Received:	09/13/2019	Lot #:	1925215
Expiration Date (if any):	09/30/2020	Catalog #:	HP1900-100

		Instrument:	CETAC
Standard Log #:	M13946	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/10/2019	Expiration Date:	03/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

Standard ID#:	M13947	Vendor:	CPI
Analyst:	NAH	Chemical:	Boron 1000 mg/lL
Date Received:	09/10/2019	Lot #:	982524-80
Expiration Date (if any):	02/2021	Catalog #:	S4400-100074

Standard ID#:	M13948	Vendor:	CPI
Analyst:	NAH	Chemical:	Selenium 1000 mg/L
Date Received:	09/10/2019	Lot #:	982461-61
Expiration Date (if any):	02/2021	Catalog #:	S4400-1000491

Standard ID#:	M13949	Vendor:	CPI
Analyst:	NAH	Chemical:	Barium 1000 mg/L
Date Received:	09/10/2019	Lot #:	994634-28
Expiration Date (if any):	02/2021	Catalog #:	S4400-100041

Standard ID#:	M13950	Vendor:	CPI
Analyst:	NAH	Chemical:	Antimony 1000 mg/L
Date Received:	09/10/2019	Lot #:	1013797-3
Expiration Date (if any):	02/2019	Catalog #:	S4400-100023

Standard ID#:	M13951	Vendor:	CPI
Analyst:	NAH	Chemical:	Silver 1000 mg/L
Date Received:	09/10/2019	Lot #:	975475-71
Expiration Date (if any):	02/2021	Catalog #:	S4400-1000511

		Instrument:	HydraII
Standard Log #:	M13944	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	09/09/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13943 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13945	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	09/09/2019	Expiration Date:	09/09/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13941	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/09/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13942	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/09/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13943	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/09/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M13938	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	09/09/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13939	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	09/09/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13940	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	09/09/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13937	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	09/06/2019	Expiration Date:	02/28/2020
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **2.5 mL** of K (10,000 mg/L) M13755, **2.5 mL** of Na (10,000 mg/L) M13691 and **7.5 mL** of Fe (10,000 mg/L) M13695 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13933	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	09/06/2019	Expiration Date:	03/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13607 and K (1000 µg/mL) M13606 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13934	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	09/06/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13607 and **0.5 mL** K (1000 µg/mL) M13606 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13935	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	09/06/2019	Expiration Date:	06/2020
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13755 and Na (10,000 mg/L) M13691 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13936	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	09/06/2019	Expiration Date:	06/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M13691 and **0.15 mL** K (10,000 µg/mL) M13755 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M13929	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13928 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13930	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/03/2019	Expiration Date:	10/03/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

Standard Log #:	M13931	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/03/2019	Expiration Date:	09/03/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard Log #:	M13932	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/03/2019	Expiration Date:	09/03/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

		Instrument:	HydraII
Standard Log #:	M13926	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13927	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13928	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M13924	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	08/29/2019	Lot #:	1833905
Expiration Date (if any):	02/28/2021	Catalog #:	HP10M67-1

		Instrument:	HydraII
Standard Log #:	M13920	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/27/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13919 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13921	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/28/2019	Expiration Date:	09/28/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

Standard ID#:	M13922	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	08/28/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M13923	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	08/28/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	HydraII
Standard Log #:	M13917	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/27/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13918	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/27/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13919	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/27/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M13916	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	08/26/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	GFAA
Standard Log #:	M13914	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	08/26/2019	Expiration Date:	10/2019
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13459 **3.2 mL** of As (1000 mg/L) M13863 **3.2 mL** of Se (1000 mg/L) M13460 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M13915	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	08/26/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13459 **1.0 mL** of As (1000 mg/L) M13863 **2.0 mL** of Se (1000 mg/L) M13460 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M13913 (A)	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	08/26/2019	Expiration Date:	12/19/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13531	1000	0.8
Si	200	M13861	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13913 combined with A	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	08/26/2019	Expiration Date:	06/20/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M13696	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M13911	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/21/2019	Expiration Date:	02/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13912	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	08/21/2019	Expiration Date:	08/21/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13909	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/20/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13908 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13910	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	08/20/2019	Expiration Date:	08/20/2020
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.655 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13906	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/20/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13907	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/20/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13908	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/20/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M13904	Reagent:	Potassium Persulfate Solution
Analyst:	BMM		
Prep Date:	08/19/2019	Expiration Date:	08/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

Standard Log #:	M13905	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	08/19/2019	Expiration Date:	08/19/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13728 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13902	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/15/2019	Expiration Date:	02/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

Standard ID#:	M13903	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/15/2019	Lot #:	52-161Cr
Expiration Date (if any):	8/30/2020	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13898	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	08/13/2019	Expiration Date:	08/13/2020
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13899	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/13/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13900	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/13/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13901	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/13/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13734 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13897	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	12 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	08/12/2019	Expiration Date:	10/2019

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13863	10,000
Pb	0.1	10,000	M13615	10,000
Tl	1	1000	M13583	10,000
Se	1	1000	M13460	10,000
Sb	1	1000	M13459	10,000
Ag	0.1	1000	M13458	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.2	10,000	12
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

Standard Log #:	M13896	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	08/09/2019	Expiration Date:	08/09/2020
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13895	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/06/2019	Expiration Date:	02/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13894	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/05/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13893 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13891	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/05/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13892	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/05/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13893	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/05/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13890	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/29/2019	Expiration Date:	01/29/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

Standard ID#:	M13888	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	07/25/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M13889	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	07/25/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	CETAC
Standard Log #:	M13884	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	07/22/2019	Expiration Date:	
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13885	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	07/22/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13886	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	07/22/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13887	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	07/22/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M13883	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/18/2019	Expiration Date:	01/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13879	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13880	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/18/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13881	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/18/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13882	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	07/18/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13881 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13876	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13877	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W45383 and brought up to volume.		

Standard Log #:	M13878	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M45383. Dilute to 20 L and mix.		

Standard Log #:	M13873	Reagent:	Potassium Permanganate Solution
Analyst:	NAH		
Prep Date:	07/17/2019	Expiration Date:	07/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard ID#:	M13874	Vendor:	Fisher
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	07/17/2019	Lot #:	175511
Expiration Date (if any):		Catalog #:	H331-500

Standard Log #:	M13875	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	NAH		
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13728 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13872	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/12/2019	Expiration Date:	07/12/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13871	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/11/2019	Expiration Date:	07/11/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13870	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/10/2019	Expiration Date:	07/10/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13869	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/08/2019	Expiration Date:	07/08/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13868	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	07/03/2019	Expiration Date:	01/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13864	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	07/02/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13865	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	01/02/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13728 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

Standard Log #:	M13866	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	01/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M13867	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	01/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13858	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/26/2019	Expiration Date:	06/26/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13859	Vendor:	CPI
Analyst:	NAH	Chemical:	Ce 1000 mg/L
Date Received:	06-26-2019	Lot #:	171633-12
Expiration Date (if any):	12/2020	Catalog #:	S4400-1000101

Standard ID#:	M13860	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	06-26-2019	Lot #:	987189-17
Expiration Date (if any):	12/2020	Catalog #:	S4400-1000343

Standard ID#:	M13861	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	06-26-2019	Lot #:	175213-60
Expiration Date (if any):	12/2020	Catalog #:	S4400-1000504F

Standard ID#:	M13862	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 mg/L
Date Received:	06-26-2019	Lot #:	752887-32
Expiration Date (if any):	12/2020	Catalog #:	4400-10M521

Standard ID#:	M13863	Vendor:	CPI
Analyst:	NAH	Chemical:	As 1000 mg/L
Date Received:	06-26-2019	Lot #:	175385-105
Expiration Date (if any):	12/2020	Catalog #:	S4400-100031

Standard Log #:	M13856	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/21/2019	Expiration Date:	06/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13857	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/21/2019	Expiration Date:	06/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M13855	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/19/2019	Expiration Date:	06/19/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13851	Vendor:	CPI
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06-19-2019	Lot #:	52-082CR
Expiration Date (if any):	06/30/2020	Catalog #:	XSPIKE-1-250

		Instrument:	GFAA
Standard Log #:	M13852	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13853	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13854	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	CETAC
Standard Log #:	M13850	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/14/2019	Expiration Date:	06/14/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13849	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	06/13/2019	Expiration Date:	07/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M13458	1000	0.01
As	2	M13392	1000	0.1
Pb	2	M13615	10000	0.01
Sb	2	M13459	1000	0.1
Se	2	M13460	1000	0.1
Tl	2	M13583	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13848	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	06/11/2019	Expiration Date:	10/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	36	M13611	**10000**	0.18
As	24	M13753	1000	1.2
Ba	1.8	M13457	1000	0.09
Be	0.6	M13579	1000	0.03
Ca	100	M13692	**10000**	0.5
Cd	2.0	M13570	1000	0.1
Co	4	M13575	1000	0.2
Cr	4	M13697	**10000**	0.02
Cu	7	M13618	**10000**	0.035
Fe	100	M13609	**10000**	0.5
Mg	40	M13694	**10000**	0.2
Mn	4	M13616	**10000**	0.02
Mo	7	M13697	1000	0.35
Ni	6	M13569	1000	0.2
Pb	4	M13615	**10000**	0.02
Sb	12	M13459	1000	0.6
Se	13	M13460	1000	0.65
Tl	20	M13583	1000	0.75
V	5	M13578	1000	0.25
Zn	10	M13610	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13847	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	06/11/2019	Expiration Date:	10/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	9.6	M13611	**10000**	0.048
As	32	M13753	1000	1.6
Ba	2	M13457	1000	0.1
Be	1.6	M13579	1000	0.08
Ca	56	M13692	**10000**	0.28
Cd	1.6	M13570	1000	0.08
Co	9.6	M13575	1000	0.48
Cr	5.6	M13697	**10000**	0.028
Cu	16	M13618	**10000**	0.08
Fe	72	M13609	**10000**	0.36
Mg	32	M13694	**10000**	0.16
Mn	6	M13616	**10000**	0.03
Mo	9.6	M13697	1000	0.48
Ni	4.8	M13569	1000	0.24
Pb	10	M13615	**10000**	0.05
Sb	32	M13459	1000	1.6
Se	16	M13460	1000	0.8
Tl	19	M13583	1000	0.95
V	3.2	M13578	1000	0.16
Zn	12	M13610	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13845	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 k&na Spiking Solution
Prep Date:	06/11/2019	Expiration Date:	06/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
K	500	M13811	10000	2.5
Na	600	M13691	10000	3

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13846	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 k&na Spiking Solution
Prep Date:	06/11/2019	Expiration Date:	06/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
K	2640	M13811	10000	13.2
Na	960	M13691	10000	4.8

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard ID#:	M13839	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/11/2019	Lot #:	52-038CR
Expiration Date (if any):	05/30/2020	Catalog #:	XCTWI-5-500

Standard ID#:	M13840	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/11/2019	Lot #:	5-244AB
Expiration Date (if any):	06/30/2020	Catalog #:	XCTWWI-1-500

Standard ID#:	M13841	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 mg/L
Date Received:	06/11/2019	Lot #:	855297-41
Expiration Date (if any):	11/2020	Catalog #:	4400-10M91

Standard ID#:	M13842	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 mg/L
Date Received:	06/11/2019	Lot #:	169484-36
Expiration Date (if any):	11/2020	Catalog #:	4400-10M11

Standard ID#:	M13843	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	06/11/2019	Lot #:	168189-30
Expiration Date (if any):	11/20	Catalog #:	4400-10M671

Standard ID#:	M13844	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	06/11/2019	Lot #:	175213-60
Expiration Date (if any):	11/2020	Catalog #:	S4400-1000504F

		Instrument:	GFAA
Standard Log #:	M13838	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	06/07/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	GFAA
Standard Log #:	M13836	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	06/07/2019	Expiration Date:	07/2019
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13459 **3.2 mL** of As (1000 mg/L) M13392 **3.2 mL** of Se (1000 mg/L) M13460 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M13837	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	06/07/2019	Expiration Date:	07/2019
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13459 **1.0 mL** of As (1000 mg/L) M13392 **2.0 mL** of Se (1000 mg/L) M13460 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

		Instrument:	CETAC
Standard Log #:	M13835	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/06/2019	Expiration Date:	06/06/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	ICP 6500
Standard Log #:	M13832	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13833	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13834	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M13738, **15 mL** Fe (10,000 mg/L) M13751, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and brought up to volume with milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M13830	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	06/03/2019	Expiration Date:	12/03/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M13831	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827 and **1 mL** of Si (1000 mg/L) M13810 and 1 mL M13703 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M13811. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M13618, **10 mL** of Mn (10,000 mg/L) M13616, **10 mL** of Cr (10,000 mg/L) M13617, **10 mL** Pb (10,000 mg/L) M13610, **10 mL** of Zn (10,000 mg/L) M13615 and **10 mL** of Na (10,000 mg/L) M13691. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M13752, **10 mL** of Fe (10,000 mg/L) M13751, **10 mL** of Ca (10,000 mg/L) M13690 and **10 mL** Al (10,000 mg/L) M13693. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	CETAC
Standard Log #:	M13829	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/31/2019	Expiration Date:	05/31/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13828	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/30/2019	Expiration Date:	05/30/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13827	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05-29-2019	Lot #:	XCTWI-4-500
Expiration Date (if any):	5/30/2020	Catalog #:	5-116AB

		Instrument:	CETAC
Standard Log #:	M13823	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	05/24/2019	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13824	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	05/24/2019	Expiration Date:	11/24/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

Standard Log #:	M13825	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	05/24/2019	Expiration Date:	11/24/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

Standard Log #:	M13826	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/24/2019	Expiration Date:	11/24/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13820	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/24/2019	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13821	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/24/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13822	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	05/24/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13734 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13818	Reagent:	TCLP 1 N HCL
Analyst:	BMM		
Prep Date:	05/22/2019	Expiration Date:	05/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, added 83 mL HCL AB.676 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13819	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/22/2019	Expiration Date:	05/22/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13817	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/16/2019	Expiration Date:	05/16/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13813	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	05/14/2019	Expiration Date:	09/30/2019
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13600 and **10 mL** Mg (10,000 mg/L) M13694 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M13814	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	05/14/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13815	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	05/14/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13816	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	05/14/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13812	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/13/2019	Expiration Date:	11/13/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard ID#:	M13808	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 ug/mL
Date Received:	05-09-2019	Lot #:	158237-121
Expiration Date (if any):	10/20	Catalog #:	4400-1000521-500

Standard ID#:	M13809	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 ug/mL
Date Received:	05-09-2019	Lot #:	832313-110
Expiration Date (if any):	10/20	Catalog #:	4400-1000411-500

Standard ID#:	M13810	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	05-09-2019	Lot #:	175213-60
Expiration Date (if any):	10/20	Catalog #:	S400-1000504F

Standard ID#:	M13811	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 ug/mL
Date Received:	05-09-2019	Lot #:	980507-14
Expiration Date (if any):	10/20	Catalog #:	4400-10M411-500

		Instrument:	CETAC
Standard Log #:	M13805	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/07/2019	Expiration Date:	05/07/2019
Prep:	Carefully mixed **3** parts HCl AB.677 with **1** part HNO_3 AB.676 in a hood.		

Standard Log #:	M13806	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/07/2019	Expiration Date:	05/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13807	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/07/2019	Expiration Date:	05/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

MRL BASE STD M13804

Analyst NAH

Prep Date 05/07/2019

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13458	1000	1	10/19
Al	400	M13611	10000	2	3/20
Ba	10	M13457	1000	0.5	10/19
Be	4	M13579	1000	0.2	2/20
Cd	5	M13570	1000	0.25	1/20
Co	10	M13575	1000	0.5	1/20
Cr	10	M13617	10000	0.05	3/20
Cu	10	M13618	10000	0.05	3/20
Mg	500	M13694	10000	2.5	6/20
Mn	10	M13616	10000	0.05	3/20
Mo	10	M13697	1000	0.5	6/20
Ni	10	M13569	1000	0.5	1/20
Pb	10	M13615	10000	0.05	3/20
Sb	20	M13579	1000	1	10/19
V	10	M13578	1000	0.5	2/20
Zn	10	M13610	10000	0.05	3/20
K	1000	M13755	10000	5	9/20
Na	1000	M13691	10000	5	6/20
As	20	M13753	1000	1	10000 std 0.1, 9/20
Ca	500	M13692	10000	2.5	6/20
Fe	300	M13695	10000	1.5	6/20
Se	20	M13460	1000	1	10/19
Tl	20	M13583	1000	1	2/20
Si	100	M13754	1000	5	9/20
B	20	M13531	1000	1	12/19
Li	20	M13577	1000	1	2/20
W	50	xxxx	1000	2.5	xxxx
Ti	10	M13573	1000	0.5	1/20
Sr	10	M13580	1000	0.5	2/20
Sn	50	M13572	1000	2.5	1/20
S	300	M13604	10000	1.5	3/20

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Expiration Date: 10/19

		Instrument:	CETAC
Standard Log #:	M13800	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	05/06/2019	Expiration Date:	11/06/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	ICP 6000
Standard Log #:	M13801	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	05/06/2019	Expiration Date:	12/2019
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13531 and Si (1000 mg/L) M13731 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13802	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	05/06/2019	Expiration Date:	02/28/2020
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and **1.0 mL** Si (1000 mg/L) M13754 and brought up to volume using milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13803	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	05/06/2019	Expiration Date:	09/30/2019
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **0.05 mL** of B (1000 µg/mL) M13531, **0.05 mL** of Si (1000 µg/mL) M13731 and **3 mL** of Fe (10,000 mg/L) M13609 and brought up to volume using Milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13798	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	05/03/2019	Expiration Date:	01/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M13572 Sr (1000 µg/mL) M13580 Ti (1000 µg/mL) M13573 W (1000 µg/mL) MXXXXX		

		Instrument:	ICP 6000
Standard Log #:	M13799	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	05/03/2019	Expiration Date:	01/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	MXXXXX	1000	5	XX/XXXX
Ti	10/30	M13573	1000	0.5	01/2020
Sr	10/30	M13580	1000	0.5	02/2020
Sn	20/60	M13572	1000	1	01/2020

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	CETAC
Standard Log #:	M13795	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/03/2019	Expiration Date:	05/03/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	ICP
Standard Log #:	M13796	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	05/03/2019	Expiration Date:	02/28/2020
Prep:	Standard Conc. (ug/L) — Pipette the following: 1 — **0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.001 mL** W (1000 µg/mL) MXXXXX into 1L = *1 µg/L* 10 — **0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.01 mL** W (1000 µg/mL) MXXXXX into 1L = *10 µg/L* 100 — **1 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.1 mL** W (1000 µg/mL) MXXXXX into 1L = *100 µg/L* 1000 (CCV) — **2 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.2 mL** W (1000 µg/mL) MXXXXX into 200mL = *1000 µg/L* 10000 — **20 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **2 mL** W (1000 µg/mL) MXXXXX into 200mL = *10000 µg/L*		

		Instrument:	ICP 6000
Standard Log #:	M13797	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	05/03/2019	Expiration Date:	09/30/2019
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **6 mL** of Fe (10,000 mg/L) M13609, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) MXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

Standard Log #:	M13793	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/02/2019	Expiration Date:	11/02/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13793 and brought up to volume.		

Standard Log #:	M13794	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	05/02/2019	Expiration Date:	11/02/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13511 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

Standard ID#:	M13790	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	04/29/2019	Lot #:	1833905
Expiration Date (if any):	10/31/2020	Catalog #:	HP10M67-1

Standard ID#:	M13791	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	04/29/2019	Lot #:	51-239CR
Expiration Date (if any):	02/28/2020	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13792	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/29/2019	Expiration Date:	04/29/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13785	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV BASE STD
Date Received:	04/19/2019	Lot #:	P2-MEB678822
Expiration Date (if any):	04/19/2020	Catalog #:	CTI-SPK-1

Standard ID#:	M13786	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE BASE STD
Date Received:	04/19/2019	Lot #:	P2-MEB678821
Expiration Date (if any):	04/19/2020	Catalog #:	CTI-GFCAL-1

		Instrument:	GFAA
Standard Log #:	M13787	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13788	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13789	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

Standard Log #:	M13782	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/18/2019	Expiration Date:	04/18/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard ID#:	M13783	Vendor:	Alfa Aesar
Analyst:	MDS	Chemical:	GFAA 1% Nickel Nitrate Matrix Mod.
Date Received:	04/18/2019	Lot #:	9166009
Expiration Date (if any):	09/30/2020	Catalog #:	39043

Standard Log #:	M13784	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	04/18/2019	Expiration Date:	10/18/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M13780	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	04/17/2019	Expiration Date:	10/17/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13781	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/17/2019	Expiration Date:	04/17/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M13779	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	04/12/2019	Expiration Date:	09/30/2019
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **2.5 mL** of K (10,000 mg/L) M13693, **2.5 mL** of Na (10,000 mg/L) M13605 and **7.5 mL** of Fe (10,000 mg/L) M13609 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M13778	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	04/11/2019	Expiration Date:	04/11/2020
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.672 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13777	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/09/2019	Expiration Date:	04/09/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

Standard Log #:	M13775	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	04/02/2019	Expiration Date:	09/30/2019
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13600 and **10 mL** Mg (10,000 mg/L) M13614 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13776	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/03/2019	Expiration Date:	04/03/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13771	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/26/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13772	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/26/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13773	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/26/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13774	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	03/26/2019	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M13770	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	03/25/2019	Expiration Date:	03/25/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13768	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	03/21/2019	Expiration Date:	01/01/2019
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13769	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	03/21/2019	Expiration Date:	09/21/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13765	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/21/2019	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13766	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/21/2019	Expiration Date:	04/30/2019
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13444 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13767	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	03/21/2019	Expiration Date:	04/30/2019
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13444 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13763	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/20/2019	Expiration Date:	03/20/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13764	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/20/2019	Expiration Date:	03/20/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M13761	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	03/19/2019	Expiration Date:	03/19/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard Log #:	M13762	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	03/19/2019	Expiration Date:	09/19/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13511 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M13758	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	03/13/2019	Expiration Date:	01/2020
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M13569 5.0 **mL** 10000 mg/L Ti M13573 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13759	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ba, Be, and Sn
Prep Date:	03/13/2019	Expiration Date:	10/2019
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M13457 5.0 **mL** 10000 mg/L Be M13579 5.0 **mL** 10000 mg/L Sn M13572 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13760	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	03/13/2019	Expiration Date:	09/2019
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M13635 and 15 **mL** 10000 mg/L Fe M13609 5.0 **mL** 1000 mg/L V M13578 5.0 **mL** 1000 mg/L Ce M13203 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13756	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	03/13/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M13616 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13757	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	03/13/2019	Expiration Date:	01/20
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M13617 0.5 **mL** 10000 mg/L Cu M13618 5.0 **mL** 1000 mg/L Co M13575 5.0 **mL** 1000 mg/L Mo M13697 brought up to volume with milli-Q H_2O.		

Standard ID#:	M13751	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	03/12/2019	Lot #:	998527-19
Expiration Date (if any):	09/2020	Catalog #:	4400-10M261

Standard ID#:	M13752	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	03/12/2019	Lot #:	982185-12
Expiration Date (if any):	09/2020	Catalog #:	4400-10M311

Standard ID#:	M13753	Vendor:	CPI
Analyst:	NAH	Chemical:	As 10000 mg/L
Date Received:	03/12/2019	Lot #:	166531-32
Expiration Date (if any):	09/2020	Catalog #:	S4400--10M31

Standard ID#:	M13754	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	03/12/2019	Lot #:	175213-60
Expiration Date (if any):	09/2020	Catalog #:	S4400-1000504F

Standard ID#:	M13755	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	03/12/2019	Lot #:	172053-77
Expiration Date (if any):	09/2020	Catalog #:	4400-10M411

		Instrument:	CETAC
Standard Log #:	M13749	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	03/08/2019	Expiration Date:	03/08/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard Log #:	M13750	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	03/08/2019	Expiration Date:	03/08/2020
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W45383 and brought up to volume.		

Standard ID#:	M13748	Vendor:	Potters Ind. LLC (Gainger)
Analyst:	NAH	Chemical:	Glass beads Extra Fine
Date Received:	03/07/2019	Lot #:	
Expiration Date (if any):	XXXXXX	Catalog #:	6ZC13

		Instrument:	ICP
Standard Log #:	M13746	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	03/04/2019	Expiration Date:	09/30/2019
Prep:	Standard Conc. (ug/L) — Pipette the following: 1 — **0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.001 mL** W (1000 µg/mL) XXXXXX into 1L = *1 µg/L* 10 — **0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.01 mL** W (1000 µg/mL) XXXXXX into 1L = *10 µg/L* 100 — **1 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.1 mL** W (1000 µg/mL) XXXXXX into 1L = *100 µg/L* 1000 (CCV) — **2 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.2 mL** W (1000 µg/mL) XXXXXX into 200mL = *1000 µg/L* 10000 — **20 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **2 mL** W (1000 µg/mL) XXXXXX into 200mL = *10000 µg/L*		

		Instrument:	ICP 6000
Standard Log #:	M13747	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	03/04/2019	Expiration Date:	09/30/2019
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **6 mL** of Fe (10,000 mg/L) M13609, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) XXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

Standard Log #:	M13743	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	02/26/2019	Expiration Date:	10/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M13458	1000	0.25
Al	10	M13611	**10000**	0.05
As	20	M13392	1000	1
Ba	2	M13457	1000	0.1
Be	0.5	M13579	1000	0.025
Ca	50	M13692	**10000**	0.25
Cd	0.5	M13570	1000	0.025
Co	2.5	M13575	1000	0.125
Cr	5.0	M13617	**10000**	0.025
Cu	10	M13618	**10000**	0.05
Fe	40	M13609	**10000**	0.2
Mg	25	M13694	**10000**	0.125
Mn	5	M13616	**10000**	0.025
Mo	2.5	M13697	1000	0.125
Ni	5	M13569	1000	0.25
Pb	10	M13615	**10000**	0.05
Sb	20	M13459	1000	1
Se	20	M13460	1000	1
Tl	20	M13583	1000	1
V	5	M13578	1000	0.25
Zn	5	M13610	**10000**	0.025
Na	500	M13605	**10000**	2.5
K	500	M13733	**10000**	2.5
B	20	M13531	1000	1
Si	100	M13731	1000	5
S	200	M13604	**10000**	1
Li	20	M13537	1000	1
Sr	20	M13572	1000	1
Sn	20	M13580	1000	1
Ti	20	M13573	1000	1

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	ICP 6000
Standard Log #:	M13740	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	02/26/2019	Expiration Date:	03/2020
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M13604 and brought up to volume using Milli-Q H_2O.		

Standard ID#:	M13741	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02-26-2019	Lot #:	3-153AB
Expiration Date (if any):	02/28/2020	Catalog #:	XCTWI-5-500

Standard ID#:	M13742	Vendor:	IKOHE Blasting Media
Analyst:	NAH	Chemical:	Glass Neads X-fine-20u
Date Received:	02/26/2019	Lot #:	52-144
Expiration Date (if any):	*********	Catalog #:	UL-49/52-1544

		Instrument:	CETAC
Standard Log #:	M13739	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/22/2019	Expiration Date:	02/22/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard ID#:	M13734	Vendor:	SPEX CERTIPREP
Analyst:	LJF	Chemical:	HG 1000 ug/mL
Date Received:	02/21/2019	Lot #:	CL10-136HGY
Expiration Date (if any):	02/28/2020	Catalog #:	CLHG4-2Y

Standard Log #:	M13735	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/21/2019	Expiration Date:	02/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13736	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/21/2019	Expiration Date:	02/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13737	Vendor:	SPEX CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	02/21/2019	Lot #:	51-117CR
Expiration Date (if any):	02/28/2020	Catalog #:	XSPIKE-1-250

Standard ID#:	M13738	Vendor:	SPEX CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	02/21/2019	Lot #:	2-230SGX
Expiration Date (if any):	02/28/2020	Catalog #:	INT-A1

		Instrument:	CETAC
Standard Log #:	M13730	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/14/2019	Expiration Date:	02/14/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard ID#:	M13731	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 ug/mL
Date Received:	02/14/2019	Lot #:	175213-60
Expiration Date (if any):	08/20	Catalog #:	S4400-1000504F

Standard ID#:	M13732	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10000 ug/mL
Date Received:	02/14/2019	Lot #:	139448-54
Expiration Date (if any):	08/20	Catalog #:	4400-10M671

Standard ID#:	M13733	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10000 ug/mL
Date Received:	02/14/2019	Lot #:	172053-36
Expiration Date (if any):	08/20	Catalog #:	4400-10M411

Standard ID#:	M13727	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	02/08/2019	Lot #:	175511
Expiration Date (if any):		Catalog #:	H331-500

Standard ID#:	M13728	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	02/08/2019	Lot #:	186819
Expiration Date (if any):		Catalog #:	S271-500

Standard Log #:	M13729	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	02/11/2019	Expiration Date:	08/11/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

Standard Log #:	M13724	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/07/2019	Expiration Date:	02/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13725	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/07/2019	Expiration Date:	02/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13726	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	02/07/2019	Expiration Date:	08/07/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13721	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/05/2019	Expiration Date:	02/05/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard Log #:	M13722	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	02/05/2019	Expiration Date:	08/05/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13723	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	02/05/2019	Expiration Date:	08/05/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.671 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13720	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	01/31/2019	Expiration Date:	01/31/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13716	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/30/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13717	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/30/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13718	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/30/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13719	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	01/30/2019	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13713	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	01/29/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

Standard ID#:	M13714	Vendor:	ACROS ORGANICS
Analyst:	LJF	Chemical:	POTASSIUM PERSULFATE
Date Received:	01/29/2019	Lot #:	A0391673
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M13715	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	1/29/2019	Lot #:	51-013CR
Expiration Date (if any):	01/30/2020	Catalog #:	XCTWI-1-500

		Instrument:	GFAA
Standard Log #:	M13711	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	01/29/2019	Expiration Date:	07/2019
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13459 **3.2 mL** of As (1000 mg/L) M13392 **3.2 mL** of Se (1000 mg/L) M13460 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M13712	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	01/29/2019	Expiration Date:	07/2019
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13459 **1.0 mL** of As (1000 mg/L) M13392 **2.0 mL** of Se (1000 mg/L) M13460 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

		Instrument:	CETAC
Standard Log #:	M13710	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	01/22/2019	Expiration Date:	01/22/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M13709	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	01/10/2019	Expiration Date:	09/30/2019
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **2.5 mL** of K (10,000 mg/L) M13689, **2.5 mL** of Na (10,000 mg/L) M13605 and **7.5 mL** of Fe (10,000 mg/L) M13609 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13705	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13607 and K (1000 µg/mL) M13606 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13706	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13607 and **0.5 mL** K (1000 µg/mL) M13606 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13707	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13689 and Na (10,000 mg/L) M13605 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13708	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M13605 and **0.15 mL** K (10,000 µg/mL) M13689 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M13703	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/20/2018	Expiration Date:	12/20/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13704	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/20/2018	Expiration Date:	12/20/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13701	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	12/13/2018	Expiration Date:	06/13/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

Standard ID#:	M13696	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10,000 mg/L
Date Received:	12/11/2018	Lot #:	167967-42
Expiration Date (if any):	06/20	Catalog #:	4400-10M544

Standard ID#:	M13697	Vendor:	CPI
Analyst:	NAH	Chemical:	Moybdenum 1000 mg/L
Date Received:	12/11/2018	Lot #:	169424-59
Expiration Date (if any):	06/20	Catalog #:	4400-1000343

Standard ID#:	M13698	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 mg/L
Date Received:	12/11/2018	Lot #:	175213-60
Expiration Date (if any):	06/20	Catalog #:	S4400-10005044F

Standard ID#:	M13699	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/11/2018	Lot #:	50-120CR
Expiration Date (if any):	12/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13700	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	12/12/2018	Expiration Date:	12/12/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

Standard ID#:	M13689	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	169484-36
Expiration Date (if any):	06/20	Catalog #:	4400-10M11

Standard ID#:	M13690	Vendor:	CPI
Analyst:	NAH	Chemical:	Aluminum 10,000 mg/L
Date Received:	12/11/2018	Lot #:	169484-36
Expiration Date (if any):	06/20	Catalog #:	4400-10M11

Standard ID#:	M13691	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	752887-32
Expiration Date (if any):	06/20	Catalog #:	4400-10M521

Standard ID#:	M13692	Vendor:	CPI
Analyst:	NAH	Chemical:	Calcium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	855297-1
Expiration Date (if any):	06/20	Catalog #:	4400-10M91

Standard ID#:	M13693	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	156651-78
Expiration Date (if any):	06/20	Catalog #:	4400-10M261

Standard ID#:	M13694	Vendor:	CPI
Analyst:	NAH	Chemical:	Magnesium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	148250-72
Expiration Date (if any):	06/20	Catalog #:	4400-10M311

Standard ID#:	M13695	Vendor:	CPI
Analyst:	NAH	Chemical:	Iron 10,000 mg/L
Date Received:	12/11/2018	Lot #:	156651-78
Expiration Date (if any):	06/20	Catalog #:	4400-10M261

		Instrument:	GFAA
Standard Log #:	M13686	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	12/07/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13687	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	12/07/2018	Expiration Date:	05/17/2018
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13688	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	12/07/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13684	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	12/04/2018	Expiration Date:	06/04/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard ID#:	M13683	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	10000 mg/L
Date Received:	11/30/2018	Lot #:	1805105
Expiration Date (if any):	5/31/2020	Catalog #:	HP10M67-1

Standard Log #:	M13681	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 B&Si Spiking Solution
Prep Date:	11/29/2018	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	52	M13531	1000	2.6
Si	192	M13394	1000	9.6

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M13682	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/29/2018	Expiration Date:	11/29/2018

Prep: Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.

Standard Log #:	M13679	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 L2 Spiking Solution
Prep Date:	11/29/2018	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Li	14.4	M13517	1000	0.72
Sn	20	M13572	1000	1
Sr	3.2	M13586	1000	0.16
Ti	9.6	M13573	1000	0.48
W	24	xxxxxxxx	1000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13680	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	11/29/2018	Expiration Date:	07/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13531	1000	0.8
Si	200	M13394	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13677	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	11/29/2018	Expiration Date:	04/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	9.6	M13562	**10000**	0.048
As	32	M13392	1000	1.6
Ba	2	M13457	1000	0.1
Be	1.6	M13579	1000	0.08
Ca	56	M13324	**10000**	0.28
Cd	1.6	M13570	1000	0.08
Co	9.6	M13575	1000	0.48
Cr	5.6	M13617	**10000**	0.028
Cu	16	M13618	**10000**	0.08
Fe	72	M13463	**10000**	0.36
Mg	32	M13319	**10000**	0.16
Mn	6	M13616	**10000**	0.03
Mo	9.6	M13608	1000	0.48
Ni	4.8	M13569	1000	0.24
Pb	10	M13610	**10000**	0.05
Sb	32	M13459	1000	1.6
Se	16	M13460	1000	0.8
Tl	19	M13583	1000	0.95
V	3.2	M13578	1000	0.16
Zn	12	M13610	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13676	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	11/29/2018	Expiration Date:	04/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	36	M13462	**10000**	0.18
As	24	M13392	1000	1.2
Ba	1.8	M13457	1000	0.09
Be	0.6	M13579	1000	0.03
Ca	100	M13324	**10000**	0.5
Cd	2.0	M13570	1000	0.1
Co	4	M13575	1000	0.2
Cr	4	M13617	**10000**	0.02
Cu	7	M13618	**10000**	0.035
Fe	100	M13463	**10000**	0.5
Mg	40	M13319	**10000**	0.2
Mn	4	M13616	**10000**	0.02
Mo	7	M13608	1000	0.35
Ni	6	M13569	1000	0.2
Pb	4	M13610	**10000**	0.02
Sb	12	M13459	1000	0.6
Se	13	M13460	1000	0.65
Tl	20	M13583	1000	0.75
V	5	M13578	1000	0.25
Zn	10	M13610	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M13675	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/26/2018	Expiration Date:	11/26/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13671	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	11/21/2018	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13672	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	11/21/2018	Expiration Date:	05/21/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.668 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

Standard Log #:	M13673	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	11/21/2018	Expiration Date:	05/21/2018
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M13674	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	11/21/2018	Expiration Date:	05/21/2018
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13668	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/21/2018	Expiration Date:	01/01/2019
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13669	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/21/2018	Expiration Date:	04/30/2019
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13444 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13670	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	11/21/2018	Expiration Date:	04/30/2019
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13444 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	ICP
Standard Log #:	M13666	Standard:	As Pb ICV1
Analyst:	MDS	Concentrations:	5000 ug/L (As,Pb)
Prep Date:	11/19/2018	Expiration Date:	07/2019
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** of As (1000 mg/L) M13392 and **0.5 mL** Pb (10,000 mg/L) M13615 and brought to volume with Milli-Q H_2O. (2% HNO_3, 2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13667	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/19/2018	Expiration Date:	11/19/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

Standard Log #:	M13664	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/16/2018	Expiration Date:	11/16/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13665	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/16/2018	Expiration Date:	11/16/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M13659	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/01/2018	Expiration Date:	11/01/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

		Instrument:	ICP 6500
Standard Log #:	M13660	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg
Prep Date:	11/01/2018	Expiration Date:	09/19
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M13635 and **15 mL** Fe (10000 mg/L) M13609 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13661	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	11/06/2018	Expiration Date:	10/19
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M13637, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M13635, **0.5 mL** Mo (1000 mg/L) M13608, **0.5 mL** B (1000 mg/L) M13531, **0.5 mL** Sr (1000 mg/L) M13580, **0.5 mL** Li (1000 mg/L) M13577, **0.5 mL** Sn (1000 mg/L) M13572, **0.5 mL** Ti (1000 mg/L) M13573, **0.5 mL** W (1000 mg/L) Mxxxxx, **0.5 mL** Si (1000 mg/L) M13571, **0.5 mL** S (10000 mg/L) M13530, **0.5 mL** K (10000 mg/L) M13612, and **0.5 mL** K (10000 mg/L)		

		Instrument:	ICP 6000
Standard Log #:	M13657	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/2/2018	Expiration Date:	01/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M13572 Sr (1000 µg/mL) M13580 Ti (1000 µg/mL) M13573 W (1000 µg/mL) XXX		

		Instrument:	ICP 6000
Standard Log #:	M13658	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	11/2/2018	Expiration Date:	01/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	XXX	1000	5	XXX
Ti	10/30	M13573	1000	0.5	01/2020
Sr	10/30	M13580	1000	0.5	02/2020
Sn	20/60	M13572	1000	1	01/2020

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	ICP
Standard Log #:	M13655	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	11/2/2018	Expiration Date:	02/28/2019
Prep:	Standard Conc. (ug/L) — Pipette the following: 1 — **0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.001 mL** W (1000 µg/mL) xxx into 1L = *1 µg/L* 10 — **0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.01 mL** W (1000 µg/mL) xxx into 1L = *10 µg/L* 100 — **1 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.1 mL** W (1000 µg/mL) xxx into 1L = *100 µg/L* 1000 (CCV) — **2 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.2 mL** W (1000 µg/mL) xxx into 200mL = *1000 µg/L* 10000 — **20 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **2 mL** W (1000 µg/mL) xxx into 200mL = *10000 µg/L*		

		Instrument:	ICP 6000
Standard Log #:	M13656	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/2/2018	Expiration Date:	02/28/2019
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13410, **6 mL** of Fe (10,000 mg/L) M13529, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) XXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	GFAA
Standard Log #:	M13651	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	10/29/2018	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13652	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	10/29/2018	Expiration Date:	10/2019
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13612 and Na (10,000 mg/L) M13461 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M13653	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance std
Date Received:	10/29/2018	Lot #:	2-036AB
Expiration Date (if any):	10/30/2019	Catalog #:	XCTWI-1-500

		Instrument:	ICP 6000
Standard Log #:	M13648	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	10/26/2018	Expiration Date:	07/2019
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13390 and Si (1000 mg/L) M13528 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13649	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	10/26/2018	Expiration Date:	07/30/2019
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13576 and **1.0 mL** Si (1000 mg/L) M13571 and brought up to volume using milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13650	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/27/2018	Expiration Date:	02/28/2019
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13410 , **0.05 mL** of B (1000 µg/mL) M13390 , **0.05 mL** of Si (1000 µg/mL) M13528 and **3 mL** of Fe (10,000 mg/L) M13529 and brought up to volume using Milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M13645	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/24/2018	Expiration Date:	10/24/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

Standard ID#:	M13646	Vendor:	Alfa Aesar
Analyst:	MDS	Chemical:	1% Nickel Nitrate Matrix Modifier
Date Received:	10/25/2018	Lot #:	8137324
Expiration Date (if any):	12/31/2019	Catalog #:	39043

Standard ID#:	M13647	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	10/24/2018	Lot #:	H226-02
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M13643	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/24/2018	Expiration Date:	10/24/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13644	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/24/2018	Expiration Date:	10/24/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

		Instrument:	GFAA
Standard Log #:	M13639	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/24/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13640	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/24/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13641	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/24/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13642	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/24/2018	Expiration Date:	10/24/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13638	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	10 µg/L As 6 µg/L Pb 12 µg/L Sb 20 µg/L Se 14 µg/L Tl 0.6 µg/L Ag
Prep Date:	10/23/2018	Expiration Date:	07/2019

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13392	10,000
Pb	0.1	10,000	M13615	10,000
Tl	1	1000	M13583	10,000
Se	1	1000	M13460	10,000
Sb	1	1000	M13459	10,000
Ag	0.1	1000	M13458	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.0	10,000	10
Pb	0.6	10,000	6
Tl	1.4	10,000	14
Se	2.0	10,000	20
Sb	1.2	10,000	12
Ag	0.6	1000	0.6

Standard ID#:	M13634	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,0000 mg/L
Date Received:	10/18/2018	Lot #:	139448-54
Expiration Date (if any):	04/20	Catalog #:	4400-10m671

Standard ID#:	M13635	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	10/18/2018	Lot #:	2-230sgx
Expiration Date (if any):	09/30/2019	Catalog #:	INT-A1

		Instrument:	CETAC
Standard Log #:	M13636	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/18/2018	Expiration Date:	10/18/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.665 in a hood.		

Standard ID#:	M13637	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance standard
Date Received:	10/18/2018	Lot #:	50-0007CR
Expiration Date (if any):	10/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13633	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/16/2018	Expiration Date:	10/16/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.665 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13632	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	10/16/2018	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

Standard Log #:	M13627	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/03/2018	Expiration Date:	10/03/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13628	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/03/2018	Expiration Date:	10/03/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

MRL BASE STD M13626 Analyst NAH

Prep Date 10/01/2018

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13458	1000	1	10/2019
Al	400	M13462	10000	2	10/2019
Ba	10	M13457	1000	0.5	10/2019
Be	4	M13579	1000	0.2	02/20
Cd	5	M13570	1000	0.25	01/20
Co	10	M13575	1000	0.5	01/20
Cr	10	M13617	10000	0.05	03/20
Cu	10	M13618	10000	0.05	03/20
Mg	500	M13319	10000	2.5	04/19
Mn	10	M13616	10000	0.05	03/20
Mo	10	M13608	1000	0.5	03/20
Ni	10	M13569	1000	0.5	03/20
Pb	10	M13610	10000	0.05	03/20
Sb	20	M13459	1000	1	03/20
V	10	M13578	1000	0.5	02/20
Zn	10	M13610	10000	0.05	02/20
K	1000	M13341	10000	5	05/19
Na	1000	M13402	10000	5	08/19
As	20	M13392	1000	1	07/19
Ca	500	M13324	10000	2.5	04/19
Fe	300	M13463	10000	1.5	10/19
Se	20	M13460	1000	1	10/19
Tl	20	M13583	1000	1	02/20
Si	100	M13394	1000	5	07/19
B	20	M13531	1000	1	07/19
Li	20	M13517	1000	1	02/20
W	50	xxxxxxx	1000	2.5	xxxxxxx
Ti	10	M13573	1000	0.5	02/20
Sr	10	M13586	1000	0.5	02/20
Sn	50	M13572	1000	2.5	02/20
S	300	M13391	10000	1.5	07/19

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M13625	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/03/2018	Expiration Date:	09/30/2019
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13600 and **10 mL** Mg (10,000 mg/L) M13464 and brought up to volume.		

Standard ID#:	M13618	Vendor:	CPI
Analyst:	NAH	Chemical:	Cu 10000 mg/L
Date Received:	09/20/2018	Lot #:	148796-39
Expiration Date (if any):	03/2020	Catalog #:	S4400-10M141

		Instrument:	CETAC
Standard Log #:	M13619	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	09/19/2018	Expiration Date:	09/19/2018
Prep:	Carefully mixed **3** parts HCl AB.664 with **1** part HNO_3 AB.665 in a hood.		

Standard ID#:	M13620	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	09/04/2018	Lot #:	177409
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13611	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	09/20/2018	Lot #:	169484-18
Expiration Date (if any):	03/2020	Catalog #:	4400-10M11

Standard ID#:	M13612	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	09/20/2018	Lot #:	172053-36
Expiration Date (if any):	03/2020	Catalog #:	440010M411

Standard ID#:	M13613	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	09/20/2018	Lot #:	855297-1
Expiration Date (if any):	03/2020	Catalog #:	4400-10M91

Standard ID#:	M13614	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	09/20/2018	Lot #:	148250-72
Expiration Date (if any):	03/2020	Catalog #:	4400-10M311

Standard ID#:	M13615	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 10000 mg/L
Date Received:	09/20/2018	Lot #:	168223-17
Expiration Date (if any):	03/2020	Catalog #:	4400-10M281

Standard ID#:	M13616	Vendor:	CPI
Analyst:	NAH	Chemical:	Mn 10000 mg/L
Date Received:	09/20/2018	Lot #:	167540-6
Expiration Date (if any):	03/2020	Catalog #:	S4400-10M321

Standard ID#:	M13617	Vendor:	CPI
Analyst:	NAH	Chemical:	Cr 10000 mg/L
Date Received:	09/20/2018	Lot #:	158236-7
Expiration Date (if any):	03/2020	Catalog #:	s4400-10M121

Standard ID#:	M13604	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10000 mg/L
Date Received:	09/20/2018	Lot #:	167967-37
Expiration Date (if any):	03/2020	Catalog #:	4400-10M544

Standard ID#:	M13605	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 10000 mg/L
Date Received:	09/20/2018	Lot #:	752887-3
Expiration Date (if any):	03/2020	Catalog #:	4400-10M521

Standard ID#:	M13606	Vendor:	CPI
Analyst:	NAH	Chemical:	K 1000 mg/L
Date Received:	09/20/2018	Lot #:	144467-179
Expiration Date (if any):	03/2020	Catalog #:	4400-1000411-500

Standard ID#:	M13607	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 1000 mg/L
Date Received:	09/20/2018	Lot #:	158237-113
Expiration Date (if any):	03/2020	Catalog #:	4400-1000521-500

Standard ID#:	M13608	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	09/20/2018	Lot #:	169424-37
Expiration Date (if any):	03/2020	Catalog #:	S4400-1000343

Standard ID#:	M13609	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	09/20/2018	Lot #:	156651-53
Expiration Date (if any):	03/2020	Catalog #:	4400-10M261

Standard ID#:	M13610	Vendor:	CPI
Analyst:	NAH	Chemical:	Zn 10000 mg/L
Date Received:	09/20/2018	Lot #:	979871-2
Expiration Date (if any):	03/2020	Catalog #:	4400-10M681

Standard Log #:	M13601	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/12/2018	Expiration Date:	09/12/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13602	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	09-12-2018	Lot #:	1-124AB
Expiration Date (if any):	09-30-2019	Catalog #:	XCTWI-5-500

Standard ID#:	M13600	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	1% Pd Matrix Modifier
Date Received:	09/11/2018	Lot #:	1808015
Expiration Date (if any):	09/30/2019	Catalog #:	HP1900-100

Standard Log #:	M13599	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/08/2018	Expiration Date:	09/08/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13595	Vendor:	SPEX CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	08/29/2018	Lot #:	49-151CR
Expiration Date (if any):	08/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13596	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	08/30/2018	Expiration Date:	08/30/2018
Prep:	Carefully mixed **3** parts HCl AB.664 with **1** part HNO_3 AB.665 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M13597	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	08/30/2018	Expiration Date:	05/2019
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13339 and K (1000 µg/mL) M13340 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13598	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	08/30/2018	Expiration Date:	05/2019
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13339 and **0.5 mL** K (1000 µg/mL) M13340 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M13588	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	08/21/2018	Expiration Date:	08/21/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13589	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	08/21/2018	Expiration Date:	08/21/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13590	Vendor:	AMCO Clear
Analyst:	NAH	Chemical:	turbidity std 2.0 ntu
Date Received:	08/21/2018	Lot #:	18272791
Expiration Date (if any):	08/2019	Catalog #:	8008

		Instrument:	ICP 6000
Standard Log #:	M13586	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	08/20/2018	Expiration Date:	01/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M13572 Sr (1000 µg/mL) M13580 Ti (1000 µg/mL) M13573 W (1000 µg/mL) MXXX		

		Instrument:	ICP 6000
Standard Log #:	M13587	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	08/20/2018	Expiration Date:	01/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	XXX	1000	5	XXX
Ti	10/30	M13573	1000	0.5	01/2020
Sr	10/30	M13580	1000	0.5	02/2020
Sn	20/60	M13572	1000	1	01/2020

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	ICP
Standard Log #:	M13584	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	08/20/2018	Expiration Date:	07/30/2019
Prep:	Standard Conc. (ug/L)	Pipette the following:	
	1	**0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.001 mL** W (1000 µg/mL) MXXX into 1L = *1 µg/L*	
	10	**0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.01 mL** W (1000 µg/mL) MXXX into 1L = *10 µg/L*	
	100	**1 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.1 mL** W (1000 µg/mL) MXXX into 1L = *100 µg/L*	
	1000 (CCV)	**2 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.2 mL** W (1000 µg/mL) MXXX into 200mL = *1000 µg/L*	
	10000	**20 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **2 mL** W (1000 µg/mL) MXXX into 200mL = *10000 µg/L*	

		Instrument:	ICP 6000
Standard Log #:	M13585	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	08/20/2018	Expiration Date:	
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13410, **6 mL** of Fe (10,000 mg/L) M13463, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) MXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

Standard ID#:	M13577	Vendor:	CPI
Analyst:	NAH	Chemical:	Li 1000 mg/L
Date Received:	08/17/2018	Lot #:	751942-25
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000291

Standard ID#:	M13578	Vendor:	CPI
Analyst:	NAH	Chemical:	V 1000 mg/L
Date Received:	08/17/2018	Lot #:	152207-68
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000651

Standard ID#:	M13579	Vendor:	CPI
Analyst:	NAH	Chemical:	Be 1000 mg/L
Date Received:	08/17/2018	Lot #:	660981-5
Expiration Date (if any):	02/2020	Catalog #:	S4400-100051

Standard ID#:	M13580	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	08/17/2018	Lot #:	168227-29
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000531

Standard ID#:	M13581	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	08/17/2018	Lot #:	172053-36
Expiration Date (if any):	02/2020	Catalog #:	4400-10411

Standard ID#:	M13582	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	08/17/2018	Lot #:	1805105
Expiration Date (if any):	02/2020	Catalog #:	HP10M67-1

Standard ID#:	M13583	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	08/17/2018	Lot #:	148983-70
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000581

Standard ID#:	M13576	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/04/2018	Lot #:	49-045CR
Expiration Date (if any):	07/30/2019	Catalog #:	XCTWI-5-500

Standard ID#:	M13569	Vendor:	CPI
Analyst:	NAH	Chemical:	Ni 1000 mg/L
Date Received:	07/27/2018	Lot #:	166665-86
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000361

Standard ID#:	M13570	Vendor:	CPI
Analyst:	NAH	Chemical:	Cd 1000 mg/L
Date Received:	07/27/2018	Lot #:	160499-32
Expiration Date (if any):	01/2020	Catalog #:	s4400-100081

Standard ID#:	M13571	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	07/27/2018	Lot #:	175213-28
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000504F

Standard ID#:	M13572	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/L
Date Received:	07/27/2018	Lot #:	144466-74
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000613

Standard ID#:	M13573	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	07/27/2018	Lot #:	152616-55
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000623

Standard ID#:	M13574	Vendor:	CPI
Analyst:	NAH	Chemical:	Hg 1000 mg/L
Date Received:	07/27/2018	Lot #:	175191-22
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000331

Standard ID#:	M13575	Vendor:	CPI
Analyst:	NAH	Chemical:	Co 1000 mg/L
Date Received:	07/27/2018	Lot #:	161693-10
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000131

Standard Log #:	M13563	Instrument:	ICP
Analyst:	LJF	Standard:	LOQ 3050 S Spiking Solution
Prep Date:	07/19/2018	Expiration Date:	10/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	240	M13466	10000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard ID#:	M13557	Vendor:	Alfa Aesar Specpure
Analyst:	MDS	Chemical:	1% Nickel Nitrate Matrix Modifier
Date Received:	07/17/2018	Lot #:	8137324
Expiration Date (if any):	12/31/2019	Catalog #:	39043

		Instrument:	ICP 6000
Standard Log #:	M13558	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	07/17/2018	Expiration Date:	05/2019
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13518 and **1.0 mL** Si (1000 mg/L) M13338 and brought up to volume using milli-Q H_2O.		

Standard Log #:	M13559	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	07/17/2018	Expiration Date:	01/17/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13559 and brought up to volume.		

Standard Log #:	M13554	Instrument:	ICP
Analyst:	LJF	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	07/13/2018	Expiration Date:	05/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13390	1000	0.8
Si	200	M13338	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13555	Instrument:	ICP
Analyst:	LJF	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	07/13/2018	Expiration Date:	10/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M13466	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M13553	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	07/12/2018	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13547	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	07/09/2018	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

Standard Log #:	M13548	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	07/10/2018	Expiration Date:	01/10/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13226 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M13549	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	07/10/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

Standard Log #:	M13534	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	10 µg/L As 6 µg/L Pb 12 µg/L Sb 20 µg/L Se 14 µg/L Tl 0.6 µg/L Ag
Prep Date:	07/02/2018	Expiration Date:	09/16/2018

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13392	10,000
Pb	0.1	10,000	M13169	10,000
Tl	1	1000	M13124	10,000
Se	1	1000	M13460	10,000
Sb	1	1000	M13459	10,000
Ag	0.1	1000	M13458	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.0	10,000	10
Pb	0.6	10,000	6
Tl	1.4	10,000	14
Se	2.0	10,000	20
Sb	1.2	10,000	12
Ag	0.6	1000	0.6

Standard ID#:	M13535	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	07/02/2018	Lot #:	48-179CR
Expiration Date (if any):	06/30/2019	Catalog #:	XSPIKE-1-250

Standard ID#:	M13526	Vendor:	CPI
Analyst:	NAH	Chemical:	YTTRIUM 10,000 ug/mL
Date Received:	06/22/2018	Lot #:	138448-54
Expiration Date (if any):	12/2019	Catalog #:	4400-10M671

Standard ID#:	M13527	Vendor:	CPI
Analyst:	NAH	Chemical:	POTASSIUM 10,000
Date Received:	06/22/2018	Lot #:	172053-32
Expiration Date (if any):	12/2019	Catalog #:	4400-104411

Standard ID#:	M13528	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	06/22/2018	Lot #:	142610-115
Expiration Date (if any):	12/2019	Catalog #:	S4400-1000504F

Standard ID#:	M13529	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10,000 ug/mL
Date Received:	06/22/2018	Lot #:	156651-42
Expiration Date (if any):	12/2019	Catalog #:	4400-10M261

Standard ID#:	M13530	Vendor:	CPI
Analyst:	NAH	Chemical:	SULFUR 10,000ug/mL
Date Received:	06/22/2018	Lot #:	129880-46
Expiration Date (if any):	12/2019	Catalog #:	4400-10M544

Standard ID#:	M13531	Vendor:	CPI
Analyst:	NAH	Chemical:	BORON 1000 ug/mL
Date Received:	06/22/2018	Lot #:	158372-91
Expiration Date (if any):	12/2019	Catalog #:	S4400-100074

Standard ID#:	M13532	Vendor:	CPI
Analyst:	NAH	Chemical:	CUSTOM ASSURANCE STANDARD
Date Received:	06/22/2018	Lot #:	48-146CR
Expiration Date (if any):	06/30/2019	Catalog #:	XCTWI-1-500

Standard ID#:	M13520	Vendor:	FRISCOLYT
Analyst:	NAH	Chemical:	Electrolyte Solution
Date Received:	06/13/2018	Lot #:	1DO71H
Expiration Date (if any):	12/03/2021	Catalog #:	51 340 053

		Instrument:	ICP
Standard Log #:	M13521	Standard:	As Pb ICV1
Analyst:	MDS	Concentrations:	5000 ug/L (As,Pb)
Prep Date:	06/13/2018	Expiration Date:	10/20/2018
Prep:	Into a 1 L volumetric flask, pipetted **0.5 mL** of As (10,000 mg/L) M13392 and **0.5 mL** Pb (10,000 mg/L) M13169 and brought to volume with Milli-Q H_2O. (2% HNO_3, 2% HCl)		

Standard ID#:	M13518	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/11/2018	Lot #:	48-060CR
Expiration Date (if any):	06/30/2019	Catalog #:	XCTWI-5-500

		Instrument:	ICP 6500
Standard Log #:	M13519	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/11/2018	Expiration Date:	06/30/2019

Prep:

Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O.
(5% HNO_3, 5% HCl)
1000 ug/L Std. - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13518, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13506 and **1 mL** of Si (1000 mg/L) M13394 and 1 mL M13203 Ce
0.25 ug/L Std. - **0.25 mL** of the 1000 ug/L Std.
0.5 ug/L Std. - **0.5 mL** of the 1000 ug/L Std.
1 ug/L Std. - **1 mL** of the 1000 ug/L Std.
5 ug/L Std. - **5 mL** of the 1000 ug/L Std.
10 ug/L Std. - **10 mL** of the 1000 ug/L Std.
20 ug/L Std. - **20 mL** of the 1000 ug/L Std.
50 ug/L Std. - **50 mL** of the 1000 ug/L Std.
100 ug/L Std. - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3
10,000 ug/L Std. - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M13465.
100k ug/L Std. - **10 mL** of Cu (10,000 mg/L) M13166, **10 mL** of Mn (10,000 mg/L) M13167, **10 mL** of Cr (10,000 mg/L) M13165, **10 mL** Pb (10,000 mg/L) M13169, **10 mL** of Zn (10,000 mg/L) M13168 and **10 mL** of Na (10,000 mg/L) M13461.
100,000 ug/L Std. - **10 mL** of Mg (10,000 mg/L) M13319, **10 mL** of Fe (10,000 mg/L) M13463, **10 mL** of Ca (10,000 mg/L) M13467 and **10 mL** Al (10,000 mg/L) M13462.
500,000 ug/L Std. - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L)
1000k ug/L Std. - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)

		Instrument:	CETAC
Standard Log #:	M13510	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/01/2018	Expiration Date:	06/01/2018
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.655 in a hood.		

Standard ID#:	M13511	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	06/04/2018	Lot #:	176877
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13506	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05/22/2018	Lot #:	48-042CR
Expiration Date (if any):	05/30/2019	Catalog #:	XCTWI-4-500

Standard ID#:	M13507	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05/22/2018	Lot #:	48-041CR
Expiration Date (if any):	05/30/2019	Catalog #:	XSPIKE-1-250

Standard ID#:	M13508	Vendor:	RESTEK
Analyst:	NAH	Chemical:	Diatomaceous earth (Celite 566)
Date Received:	05/22/2018	Lot #:	811030-BG
Expiration Date (if any):	N/A	Catalog #:	26033

Standard ID#:	M13495	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	05/15/2018	Lot #:	H052-17
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	ICP 6000
Standard Log #:	M13485	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	05/07/2018	Expiration Date:	05/2019
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13339 and K (1000 µg/mL) M13340 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13486	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	05/07/2018	Expiration Date:	08/2019
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13400 and Na (10,000 mg/L) M13402 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13487	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	05/07/2018	Expiration Date:	08/2019
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M13402 and **0.15 mL** K (10,000 µg/mL) M13400 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13488	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	05/07/2018	Expiration Date:	05/2019
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13339 and **0.5 mL** K (1000 µg/mL) M13340 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M13484	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	05/03/2018	Lot #:	1805105
Expiration Date (if any):	10/31/2019	Catalog #:	HP10M67-1

		Instrument:	ICP 6000
Standard Log #:	M13471	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	04/26/2018	Expiration Date:	07/2019
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13390 and Si (1000 mg/L) M13394 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13472	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	04/26/2018	Expiration Date:	07/02/2018
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13364 and **1.0 mL** Si (1000 mg/L) M13085 and brought up to volume using milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13473	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	04/26/2018	Expiration Date:	10/30/2018
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13305 , **0.05 mL** of B (1000 µg/mL) M13390 , **0.05 mL** of Si (1000 µg/mL) M13394 and **3 mL** of Fe (10,000 mg/L) M13321 and brought up to volume using Milli-Q H_2O.		

Standard ID#:	M13467	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	04/20/2018	Lot #:	147497-47
Expiration Date (if any):	10/2019	Catalog #:	4400-10M91

Standard ID#:	M13468	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	04/24/2018	Lot #:	174236
Expiration Date (if any):		Catalog #:	H331-500

		Instrument:	CETAC
Standard Log #:	M13469	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/24/2018	Expiration Date:	04/24/2018
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.655 in a hood.		

Standard ID#:	M13462	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	04/20/2018	Lot #:	158058-23
Expiration Date (if any):	10/2019	Catalog #:	4400-10M11

Standard ID#:	M13463	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	04/20/2018	Lot #:	156651-18
Expiration Date (if any):	10/2019	Catalog #:	4400-10M261

Standard ID#:	M13464	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	04/20/2018	Lot #:	148250-67
Expiration Date (if any):	10/2019	Catalog #:	4400-10M311

Standard ID#:	M13465	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	04/20/2018	Lot #:	172053-2
Expiration Date (if any):	10/2019	Catalog #:	4400-10M411

Standard ID#:	M13466	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	04/20/2018	Lot #:	129880-37
Expiration Date (if any):	10/2019	Catalog #:	4400-10M544

Standard ID#:	M13457	Vendor:	CPI
Analyst:	NAH	Chemical:	Barium 1000 mg/L
Date Received:	04/20/2018	Lot #:	158364-3
Expiration Date (if any):	10/2019	Catalog #:	S4400-100041

Standard ID#:	M13458	Vendor:	CPI
Analyst:	NAH	Chemical:	Ag 1000 mg/L
Date Received:	04/20/2018	Lot #:	162712-9
Expiration Date (if any):	10/2019	Catalog #:	S4400-1000511

Standard ID#:	M13459	Vendor:	CPI
Analyst:	NAH	Chemical:	Sb 1000 mg/L
Date Received:	04/20/2018	Lot #:	153992-1
Expiration Date (if any):	10/2019	Catalog #:	S4400-100023

Standard ID#:	M13460	Vendor:	CPI
Analyst:	NAH	Chemical:	Se 1000 mg/L
Date Received:	04/20/2018	Lot #:	154366-16
Expiration Date (if any):	10/2019	Catalog #:	S4400-1000491

Standard ID#:	M13461	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 mg/L
Date Received:	04/20/2018	Lot #:	107139-108
Expiration Date (if any):	10/2019	Catalog #:	4400-10M521

Standard Log #:	M13445	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	04/19/2018	Expiration Date:	10/19/2018
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M12652 and brought up to volume.		

		Instrument:	Hach 2100 turbidity meter
Standard Log #:	M13446	Standard:	Turbity ICAL
Analyst:	NAH	Concentrations:	20, 100, 200 ntu
Prep Date:	04/19/2018	Expiration Date:	12/2019
Prep:	Using the hach vials , pipet the following: *20 ntu Std.* = **1 ml** M13436 and 9 mls DI H20. *100 ntu Std.* = **5 mls** M13436 and 5 mls DI H20. *200 ntu Std.* = ***10 mls*** M13436 *and* 0 mls DI H20.		

LPMT1-04
Metals Reagents and Standards
Prep Logbook
Created: 12/19/17

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Author: nhenn on: 4/19/2018 11:15:48 AM
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		Instrument:	ICP 6000
Standard Log #:	M13438	Standard:	Sulfur ICAL
Analyst:	MDS	Concentrations:	1000 10,000 100,000 1000K µg/L (S)
Prep Date:	04/11/2018	Expiration Date:	07/2019
Prep:	Into four, 100 mL volumetric flasks, pipetted the following from stock standard S (10,000 µg/mL) M13391 and brought up to volume using milli-Q H_2O. *1000 ug/L std.* - **0.01 mL** *10,000 ug/L std.* - **0.1 mL** *100,000 ug/L std.* -**1.0 mL**, also used as the CCV *1000K ug/L std.* - **10 mL**		

		Instrument:	ICP 6000
Standard Log #:	M13439	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	04/11/2018	Expiration Date:	01/19/2019
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M13280 and brought up to volume using Milli-Q H_2O.		

Standard Log #:	M13437	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 B&Si Spiking Solution
Prep Date:	04/10/2018	Expiration Date:	07/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	52	M13390	1000	2.6
Si	192	M13394	1000	9.6

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Content below was appended to locked page by mszymanski on 4/19/2018 12:20:57 PM

Standard ID#:	M13436a	Vendor:	HACH
Analyst:	NAH	Chemical:	StablCal 200 NTU
Date Received:	04/10/2018	Lot #:	A7354
Expiration Date (if any):	12/2019	Catalog #:	2660449

Standard ID#:	M13400	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 ug/mL
Date Received:	02/15/2018	Lot #:	106958-116
Expiration Date (if any):	08/2019	Catalog #:	4400-10M411

Standard ID#:	M13401	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 ug/mL
Date Received:	02/15/2018	Lot #:	139448-54
Expiration Date (if any):	08/2019	Catalog #:	4400-10M671

Standard ID#:	M13402	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 ug/mL
Date Received:	02/15/2018	Lot #:	107139-126
Expiration Date (if any):	08/2019	Catalog #:	4400-10M521

Standard Log #:	M13388	Reagent:	SPLP EXTRACTION FLUID EAST #
Analyst:	BMM	pH:	4.20 ± 0.05
Prep Date:	01/23/2018	Expiration Date:	01/23/2019
Prep:	Into a 20 L carboy filled with DI H_2O, adjust pH to 4.20 ± 0.05 using 60/40 SPLP extraction fluid acid mixture M12457 .		

Standard Log #:	M13389	Reagent:	SPLP EXTRACTION FLUID WEST #
Analyst:	BMM	pH:	5.00 ± 0.05
Prep Date:	01/23/2018	Expiration Date:	01/23/2019
Prep:	Into a 20 L carboy filled with DI H_2O, adjust pH to 5.00 ± 0.05 using 60/40 SPLP extraction fluid acid mixture M12457 .		

Standard ID#:	M13390	Vendor:	CPI
Analyst:	NAH	Chemical:	Boron 1000 ug/mL
Date Received:	01/23/2018	Lot #:	158372-29
Expiration Date (if any):	07/2019	Catalog #:	S4400-100074

Standard ID#:	M13391	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10000 ug/mL
Date Received:	01/23/2018	Lot #:	129880-28
Expiration Date (if any):	07/2019	Catalog #:	4400-10M544

Standard ID#:	M13392	Vendor:	CPI
Analyst:	NAH	Chemical:	Arsenic 1000 ug/mL
Date Received:	01/23/2018	Lot #:	143356-61
Expiration Date (if any):	07/2019	Catalog #:	S4400-100031

Standard ID#:	M13393	Vendor:	CPI
Analyst:	NAH	Chemical:	Molybdenum 1000 ug/mL
Date Received:	01/23/2018	Lot #:	134169R-102
Expiration Date (if any):	07/2019	Catalog #:	S4400-1000343

Standard ID#:	M13394	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 ug/mL
Date Received:	01/23/2018	Lot #:	142610-58
Expiration Date (if any):	07/2019	Catalog #:	S4400-1000504F

Standard ID#:	M13350	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	12/12/2017	Lot #:	1729606
Expiration Date (if any):	06//2019	Catalog #:	10M67-1

Standard ID#:	M13226	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	07/21/2017	Lot #:	170229
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13199	Vendor:	National Institute of Standards and Te
Analyst:	NAH	Chemical:	SRM Montana I soil
Date Received:	05/15/2017	Lot #:	2710a
Expiration Date (if any):		Catalog #:	

Standard ID#:	M13200	Vendor:	National Institute of Standards and Te
Analyst:	NAH	Chemical:	SRM Montana II soil
Date Received:	05/15/2017	Lot #:	2711a
Expiration Date (if any):		Catalog #:	

Standard ID#:	M13186	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	05/22/2017	Lot #:	166161
Expiration Date (if any):		Catalog #:	H331-500

Standard ID#:	M13187	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10,000 ug/mL
Date Received:	05/22/2017	Lot #:	1705408
Expiration Date (if any):	11/16/2018	Catalog #:	HP10M67-1

Standard ID#:	M13080	Vendor:	FISHER
Analyst:	LJF	Chemical:	POTASSIUM PERMANGANATE
Date Received:	01/30/2017	Lot #:	164080
Expiration Date (if any):		Catalog #:	P279-212

Standard ID#:	M13059	Vendor:	ACROS ORGANICS
Analyst:	LJF	Chemical:	POTASSIUM PERSULFATE
Date Received:	12/19/2016	Lot #:	A0375670
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M13024	Vendor:	METTLER TOLEDO
Analyst:	LJF	Chemical:	FRISCOLYT
Date Received:	11/01/2016	Lot #:	1B167D
Expiration Date (if any):		Catalog #:	51340053

INORGANIC
CLP FORMS
DOCUMENTS

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527966
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 16:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.36	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	38		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527966
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 16:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527963
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 15:16
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.8		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527963
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 16:16
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527963
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 18:17
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	95		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527962
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 14:58
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.27	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	54		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527962
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 16:01
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527961
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/27/2021 08:07
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	220		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527961
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 14:40
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.29	J	0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527961
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 15:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527964
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 16:10
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.8		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527964
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 16:31
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527964
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 18:35
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	95		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529217
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 09:50
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.8	J	Y	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529217
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 13:33
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	11		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.7	H	0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529217
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 14:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	120		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW07

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529218
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 10:37
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW07

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529218
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 13:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.5	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.82	H	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	4.1		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529228
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 13:34
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529228
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179053	Analysis Date/Time	01/29/2021 18:04
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.6		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	52		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529226
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 13:03
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529226
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179053	Analysis Date/Time	01/29/2021 17:28
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.9	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.85		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	3.9		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529221
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 11:22
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529221
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 12:21
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.4	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	5.2		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	24		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529222
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 11:36
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529222
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 12:39
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.4	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	5.3		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	25		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529227
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 13:18
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529227
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179053	Analysis Date/Time	01/29/2021 17:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.38	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	0.85	J	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529220
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 11:11
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	2.7	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529220
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 12:03
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.7	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.32	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	14		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529219
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 10:53
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529219
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 11:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.3	H	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	2.8	J	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527965
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 16:28
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.29	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	57		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527965
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 16:44
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527967
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 17:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527967
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 17:59
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.6		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.19	J	0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527967
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 18:53
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	91		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529223
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 11:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529223
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 12:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	63		0.80	1.5	3.0	3.0

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1

INORGANIC ANALYSIS DATA SHEET

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529224
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 12:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529224
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 13:15
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
16887-00-6	Chloride	1.1	J	M	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	1.5	U		0.80	1.5	3.0	3.0

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1

INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529230
Analytical Method:	EPA 410.4	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179079	Analysis Date/Time	02/01/2021 13:20
Analytical Prep Batch #:	79869	Prep. Date/Time:	02/01/2021 09:19
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	210		18	50	75	75

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1

INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529230
Analytical Method:	EPA 9040C	Date Received:	01/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179066	Analysis Date/Time	01/29/2021 14:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	6.96					

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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178954 Lab Sample ID: 528498

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	1/18/21	22:04	15.00	13.94	93	90	110
Nitrate Nitrogen	1/18/21	22:04	3.500	3.321	95	90	110
Sulfate	1/18/21	22:04	25.00	23.35	93	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178964 Lab Sample ID: 530128

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	10/30/20 14:49	50.00	47.83	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074 Lab Sample ID: 532023

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	2/2/21	14:17	50.00	46.93	94	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178954

Lab Sample ID: 528452

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	1/26/21	11:40	15.00	14.15	94	90	110
Nitrate Nitrogen	1/26/21	11:40	3.500	3.551	101	90	110
Sulfate	1/26/21	11:40	25.00	24.14	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178954

Lab Sample ID: 528470

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	1/26/21	15:34	15.00	14.24	95	90	110
Nitrate Nitrogen	1/26/21	15:34	3.500	3.583	102	90	110
Sulfate	1/26/21	15:34	25.00	24.27	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178954

Lab Sample ID: 528490

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	1/26/21	19:11	15.00	14.11	94	90	110
Nitrate Nitrogen	1/26/21	19:11	3.500	3.552	101	90	110
Sulfate	1/26/21	19:11	25.00	24.10	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178954

Lab Sample ID: 528492

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Sulfate	1/27/21	07:31	25.00	24.10	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178954 Lab Sample ID: 528494

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Sulfate	1/27/21 08:25	25.00	23.93	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178964

Lab Sample ID: 529131

ICAL Calibration #: ICAL 0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	1/28/21 15:00	50.00	47.55	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178964

Lab Sample ID: 529137

ICAL Calibration #: ICAL 0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	1/28/21	18:02	50.00	46.86	94	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179049

Lab Sample ID: 529898

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	1/29/21	11:08	15.00	14.04	94	90	110
Nitrate Nitrogen	1/29/21	11:08	3.500	3.505	100	90	110
Sulfate	1/29/21	11:08	25.00	23.86	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179049

Lab Sample ID: 529900

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	1/29/21	18:40	15.00	14.27	95	90	110
Nitrate Nitrogen	1/29/21	18:40	3.500	3.549	101	90	110
Sulfate	1/29/21	18:40	25.00	24.09	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179049

Lab Sample ID: 529904

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	1/29/21	14:45	15.00	14.24	95	90	110
Nitrate Nitrogen	1/29/21	14:45	3.500	3.535	101	90	110
Sulfate	1/29/21	14:45	25.00	24.01	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179053

Lab Sample ID: 529929

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	1/29/21	20:10	15.00	14.06	94	90	110
Nitrate Nitrogen	1/29/21	20:10	3.500	3.497	100	90	110
Sulfate	1/29/21	20:10	25.00	23.71	95	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179053

Lab Sample ID: 529934

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	1/29/21	14:45	15.00	14.24	95	90	110
Nitrate Nitrogen	1/29/21	14:45	3.500	3.535	101	90	110
Sulfate	1/29/21	14:45	25.00	24.01	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179053

Lab Sample ID: 529936

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	1/29/21	18:40	15.00	14.27	95	90	110
Nitrate Nitrogen	1/29/21	18:40	3.500	3.549	101	90	110
Sulfate	1/29/21	18:40	25.00	24.09	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179079

Lab Sample ID: 530110

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	2/1/21	13:20	400.0	408.8	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179079

Lab Sample ID: 530112

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	2/1/21	13:20	400.0	406.4	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074

Lab Sample ID: 530884

ICAL Calibration #: ICAL 0469 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	2/3/21	12:38	50.00	50.71	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074

Lab Sample ID: 531245

ICAL Calibration #: ICAL 0469 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	2/4/21	09:21	50.00	51.42	103	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074

Lab Sample ID: 531250

ICAL Calibration #: ICAL 0469 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	2/4/21	12:16	50.00	50.85	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074

Lab Sample ID: 531254

ICAL Calibration #: ICAL 0469 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	2/4/21	14:18	50.00	51.12	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074

Lab Sample ID: 531738

ICAL Calibration #: ICAL 0469 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Dissolved Organic Carbo	2/5/21	09:47	50.00	52.69	105	90	110
Total Organic Carbon	2/5/21	09:47	50.00	52.69	105	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074

Lab Sample ID: 531743

ICAL Calibration #: ICAL 0469 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	2/5/21	12:26	50.00	52.57	105	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178964

Lab Sample ID: 530129

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	10/30/2020 15:05	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074

Lab Sample ID: 532022

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	02/02/2021 14:28	0.05000	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178954

Lab Sample ID: 528499

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	01/19/2021 12:11	0.6123	U	1.0	1.5
Nitrate Nitrogen	01/19/2021 12:11	0	U	0.12	0.20
Sulfate	01/19/2021 12:11	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178954 Lab Sample ID: 528484

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	01/26/2021 15:52	0.6309	U	1.0	1.5
Nitrate Nitrogen	01/26/2021 15:52	0.09460	U	0.12	0.20
Sulfate	01/26/2021 15:52	0.7165	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178954 Lab Sample ID: 528491

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	01/26/2021 19:29	0.6323	U	1.0	1.5
Nitrate Nitrogen	01/26/2021 19:29	0.09360	U	0.12	0.20
Sulfate	01/26/2021 19:29	0.7178	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178954

Lab Sample ID: 528493

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Sulfate	01/27/2021 07:49	0.7263	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178954

Lab Sample ID: 528495

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Sulfate	01/27/2021 08:43	0.7185	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178964

Lab Sample ID: 529138

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0436 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	01/28/2021 18:17	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179049 Lab Sample ID: 529897

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	01/29/2021 11:27	0.6378	U	1.0	1.5
Nitrate Nitrogen	01/29/2021 11:27	0.09600	U	0.12	0.20
Sulfate	01/29/2021 11:27	0.7275	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179049

Lab Sample ID: 529899

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	01/29/2021 18:58	0.6449	U	1.0	1.5
Nitrate Nitrogen	01/29/2021 18:58	0.09790	U	0.12	0.20
Sulfate	01/29/2021 18:58	0.7305	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179053 Lab Sample ID: 529928

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	01/29/2021 20:28	0.6404	U	1.0	1.5
Nitrate Nitrogen	01/29/2021 20:28	0.09710	U	0.12	0.20
Sulfate	01/29/2021 20:28	0.8499		0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179053 Lab Sample ID: 529935

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	01/29/2021 18:58	0.6449	U	1.0	1.5
Nitrate Nitrogen	01/29/2021 18:58	0.09790	U	0.12	0.20
Sulfate	01/29/2021 18:58	0.7305	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179079

Lab Sample ID: 530111

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	02/01/2021 13:20	5.700			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179079

Lab Sample ID: 530113

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	02/01/2021 13:20	3.300			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074

Lab Sample ID: 531246

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0469 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	02/04/2021 09:32	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074

Lab Sample ID: 531251

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0469 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	02/04/2021 12:27	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074

Lab Sample ID: 531255

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0469 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	02/04/2021 14:30	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074

Lab Sample ID: 531744

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0469 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	02/05/2021 12:38	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074

Lab Sample ID: 532026

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	02/05/2021 10:12	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178954 Lab Sample ID: 528463

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	01/26/2021 12:16	0.6484	U	1.0	1.5
Nitrate Nitrogen	01/26/2021 12:16	0.09890	U	0.12	0.20
Sulfate	01/26/2021 12:16	0.7373	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 178964 Lab Sample ID: 529133

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0436 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	01/28/2021 15:30	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179079 Lab Sample ID: 529809

Analytical Prep Batch # 79869 Preparation Date/Time: 02/01/2021 09:19

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total COD	02/01/2021 13:20	5.700	U	18	37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179049 Lab Sample ID: 529902

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	01/29/2021 15:21	0.6392	U	1.0	1.5
Nitrate Nitrogen	01/29/2021 15:21	0.09610	U	0.12	0.20
Sulfate	01/29/2021 15:21	0.7453	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179053 Lab Sample ID: 529932

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	01/29/2021 15:21	0.6392	U	1.0	1.5
Nitrate Nitrogen	01/29/2021 15:21	0.09610	U	0.12	0.20
Sulfate	01/29/2021 15:21	0.7453	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 159400

Analytical Run #: 179074 Lab Sample ID: 530886

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0469 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	02/03/2021 13:01	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description: **13MW2**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	mg/L
Sample No	528488	Parent Sample No.:	527966
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	178954	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	01/26/2021	Analysis Time: --------	17:23

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	11.1		4.0		8.00	89			
Nitrate Nitrogen	88-111	2.28		0.36	J	2.00	96			
Sulfate	87-112	44.3		38		8.00	79			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5A

SPIKE SAMPLE RECOVERY

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	mg/L
Sample No	529135	Parent Sample No.:	527966
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	178964	ICAL Calibration #:	ICAL 0436 I

Analysis Type	*Initial Analysis*	Analysis Date: -----	01/28/2021	Analysis Time: --------	17:21

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	50.9		BDL	U	50.0	102		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5A

SPIKE SAMPLE RECOVERY

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	mg/L
Sample No	529901	Parent Sample No.:	529224
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	179049	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	01/29/2021	Analysis Time: --------	15:39

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	8.02		1.1	J	8.00	86			*FAIL*
Nitrate Nitrogen	88-111	2.06		BDL	U	2.00	103			
Sulfate	87-112	7.85		BDL	U	8.00	98			

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	mg/L
Sample No	529930	Parent Sample No.:	529226
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	179053	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	01/29/2021	Analysis Time: --------	19:34

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	8.99		1.9	J	8.00	89		
Nitrate Nitrogen	88-111	2.79		0.85		2.00	97		
Sulfate	87-112	11.0		3.9		8.00	89		

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	mg/L
Sample No	531253	Parent Sample No.:	529217
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	179074	ICAL Calibration #:	ICAL 0469 I

Analysis Type	*Initial Analysis*	Analysis Date: -----	02/04/2021	Analysis Time: --------	14:07

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	52.4		1.8	J	50.0	101		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **13MW2**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	mg/L
Sample No	528489	Parent Sample No.:	528488
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	178954	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 01/26/2021 Analysis Time: -------- 17:41

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	11.3		4.0		8.00	91			
Nitrate Nitrogen	88-111	2.35		0.36	J	2.00	100			
Sulfate	87-112	44.5		38		8.00	81			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **13MW2**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	mg/L
Sample No	529136	Parent Sample No.:	529135
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	178964	ICAL Calibration #:	ICAL 0436 I

Analysis Type: *Initial Analysis* Analysis Date: ----- 01/28/2021 Analysis Time: -------- 17:35

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	48.7		BDL	U	50.0	97		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **48MW06**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	mg/L
Sample No	531249	Parent Sample No.:	531253
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	179074	ICAL Calibration #:	ICAL 0469 I

Analysis Type: *Initial Analysis* Analysis Date: ----- 02/04/2021 Analysis Time: -------- 10:25

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	54.2		1.8	J	50.0	105		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	mg/L
Sample No	530269	Parent Sample No.:	529930
Analytical Prep Batch #		Analytical Preparation Date/Time:	
Analytical Run #:	179053	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	01/29/2021	Analysis Time: --------	19:52

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	9.13		1.9	J	8.00	90		IC
Nitrate Nitrogen	88-111	2.84		0.85		2.00	100		IC
Sulfate	87-112	11.2		3.9		8.00	91		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	159400
% Solids for Sample:		Concentration Units:	mg/L
Sample No	530273	Parent Sample No.:	529901
Analytical Prep Batch #		Analytical Preparation Date/Time:	
Analytical Run #:	179049	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 01/29/2021 Analysis Time: -------- 15:57

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	8.18		1.1	J	8.00	88		IC
Nitrate Nitrogen	88-111	2.10		BDL	U	2.00	105		IC
Sulfate	87-112	8.00		BDL	U	8.00	100		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

13MW2

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID
SDG No.: 159400

% Solid for Sample:
Concentration Units: mg/L

Analytical Prep Batch # 1
Analytical Preparation Date/Time 0

Analytical Run #: 178954
ICAL Calibration #:

Sample #: 528486
Parent Sample #: 527966

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	01/26/2021	17:05	10	4.0		3.97		1		
Nitrate Nitrogen	01/26/2021	17:05	10	0.36	J	0.360	J	0		
Sulfate	01/26/2021	17:05	10	38		38.1		0		

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

13MW2

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 159400
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch # 1
Analytical Preparation Date/Time 0
Analytical Run #: 178964
ICAL Calibration #: ICAL 0436 I
Sample #: 529134
Parent Sample #: 527966

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	01/28/2021	17:06	20	0.50	U	0.50	U	0		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

IDW-48/49

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 159400

% Solid for Sample:

Concentration Units: S.U.

Analytical Prep Batch # 1

Analytical Preparation Date/Time

Analytical Run #: 179066

ICAL Calibration #:

Sample #: 529610

Parent Sample #: 529230

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
pH	01/29/2021	14:00	1	6.96		6.95		0		ELEC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

EQB-50MW02

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 159400

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 179049

ICAL Calibration #:

Sample #: 529905

Parent Sample #: 529224

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	01/29/2021	14:27	10	1.1	J	1.03	J	7		
Nitrate Nitrogen	01/29/2021	14:27	10	0.12	U	0.12	U	0		
Sulfate	01/29/2021	14:27	10	0.80	U	0.80	U	0		

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

48MW2

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 159400

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 179053

ICAL Calibration #:

Sample #: 529931

Parent Sample #: 529226

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	01/29/2021	19:16	10	1.9	J	1.92	J	1		
Nitrate Nitrogen	01/29/2021	19:16	10	0.85		0.829		3		
Sulfate	01/29/2021	19:16	10	3.9		3.93		1		

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

48MW06

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 159400

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 179074

ICAL Calibration #: ICAL 0469 I

Sample #: 531741

Parent Sample #: 529217

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M	
Total Organic Carbon	02/05/2021	10:29	20	1.8	J	1.23	J	38		TOC	*FAIL*

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 159400
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 178954
ICAL Calibration #:
Sample #: 528489
Parent Sample #: 528488

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	01/26/2021	17:41	15	11.1		11.3		2		
Nitrate Nitrogen	01/26/2021	17:41	15	2.28		2.35		3		
Sulfate	01/26/2021	17:41	15	44.3		44.5		0		

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 159400
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 178964
ICAL Calibration #: ICAL 0436 I
Sample #: 529136
Parent Sample #: 529135

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	01/28/2021	17:35	20	50.9		48.7		4		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **48MW06**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 159400
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 179074
ICAL Calibration #: ICAL 0469 I
Sample #: 531249
Parent Sample #: 531253

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	02/04/2021	10:25	20	52.4		54.2		3		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **48MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 159400
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 179053
ICAL Calibration #:
Sample #: 530269
Parent Sample #: 529930

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	01/29/2021	19:52	15	8.99		9.13		2		IC
Nitrate Nitrogen	01/29/2021	19:52	15	2.79		2.84		2		IC
Sulfate	01/29/2021	19:52	15	11.0		11.2		1		IC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **EQB-50MW02**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 159400
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 179049
ICAL Calibration #:
Sample #: 530273
Parent Sample #: 529901

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	01/29/2021	15:57	15	8.02		8.18		2		IC
Nitrate Nitrogen	01/29/2021	15:57	15	2.06		2.10		2		IC
Sulfate	01/29/2021	15:57	15	7.85		8.00		2		IC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 159400

Concentration Units: mg/L

Analytical Run #: 178954

Sample No.:#: 528460

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	01/26/2021 11:58	87-111	14.38		15.00	96		
Nitrate Nitrogen	01/26/2021 11:58	88-111	3.455		3.500	99		
Sulfate	01/26/2021 11:58	87-112	24.33		25.00	97		

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 159400

Concentration Units: mg/L

Analytical Run #: 178964

Sample No.:#: 529132

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0436 I

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Organic Carbon	01/28/2021 15:15	85-111	49.63		50.00	99		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 159400

Concentration Units: mg/L

Analytical Run #: 179079 Sample No.:#: 529810

Analytical Prep Batch #: 79869 Preparation Date/Time: 02/01/2021 09:19

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
COD	02/01/2021 13:20	90-110	413.7		400.0	103		SP

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 159400

Concentration Units: mg/L

Analytical Run #: 179049

Sample No.:#: 529903

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	01/29/2021 15:03	87-111	14.64		15.00	98		
Nitrate Nitrogen	01/29/2021 15:03	88-111	3.510		3.500	100		
Sulfate	01/29/2021 15:03	87-112	24.70		25.00	99		

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 159400

Concentration Units: mg/L

Analytical Run #: 179053

Sample No.:#: 529933

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	01/29/2021 15:03	87-111	14.64		15.00	98		
Nitrate Nitrogen	01/29/2021 15:03	88-111	3.510		3.500	100		
Sulfate	01/29/2021 15:03	87-112	24.70		25.00	99		

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 159400

Concentration Units: mg/L

Analytical Run #: 179074

Sample No.:#: 530885

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0469 I

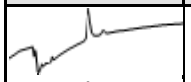
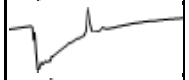
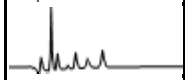
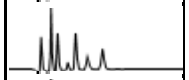
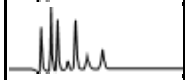
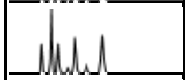
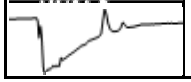
Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Organic Carbon	02/03/2021 12:49	85-111	49.84		50.00	100		TOC

INORGANICS
RAW DATA
DOCUMENTS

Sequence: 011621 - 178692 IC3449A
Last Update Operator: AQUION

RJ 01/26/2021

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	IB	1.0000	Unknown		27	5000	Anions 1.0	IC3352A	Finished
	STD1	1.0000	Calibration Standard	1	28	5000	Anions 1.0	IC3449A	Finished
	STD2	1.0000	Calibration Standard	2	29	5000	Anions 1.0	IC3449A	Finished
	STD3	1.0000	Calibration Standard	3	30	5000	Anions 1.0	IC3449A	Finished
	STD4	1.0000	Calibration Standard	4	31	5000	Anions 1.0	IC3449A	Finished
	STD5	1.0000	Calibration Standard	5	32	5000	Anions 1.0	IC3449A	Finished
	STD6	1.0000	Calibration Standard	6	33	5000	Anions 1.0	IC3449A	Finished
	STD7	1.0000	Calibration Standard	7	34	5000	Anions 1.0	IC3449A	Finished
	STD8	1.0000	Calibration Standard	8	35	5000	Anions 1.0	IC3449A	Finished
	STD9	1.0000	Calibration Standard	9	36	5000	Anions 1.0	IC3449A	Finished
	ICV	1.0000	Unknown		37	5000	Anions 1.0	IC3449A	Finished
	ICB	1.0000	Unknown		2	5000	Anions	IC3449A	Finished

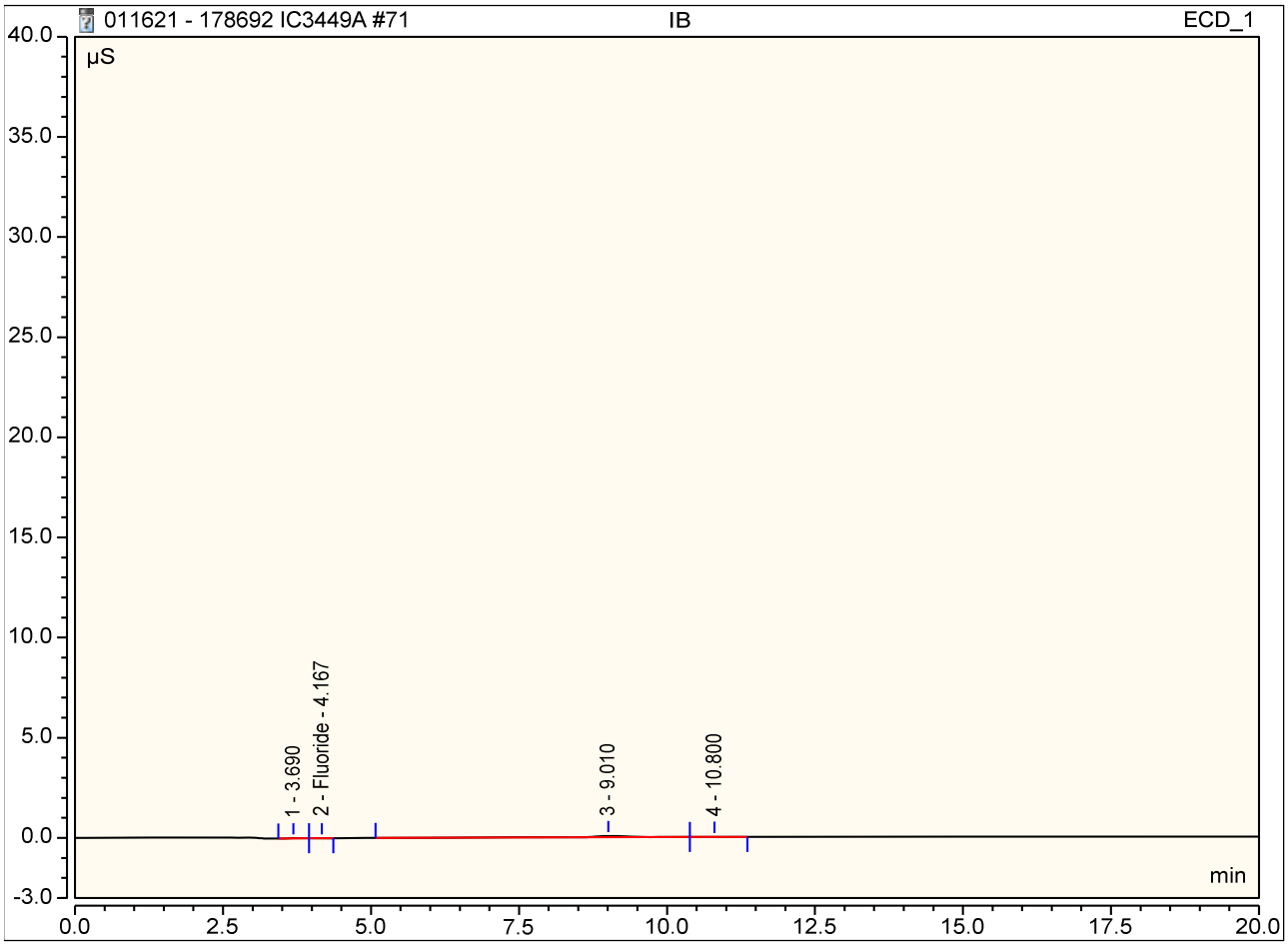
Calibration Concentrations

Instrument:AQUION 4	Cal. File:	IC3449A			ICV	IC3442 IC3450		Analyst/Date: TMG 01/18/2021		
Analyte	Cal Level 1 (mg/L)	Cal Level 2 (mg/L)	Cal Level 3 (mg/L)	Cal Level 4 (mg/L)	Cal Level 5 (mg/L)	Cal Level 6 (mg/L)	Cal Level 7 (mg/L)	Cal Level 8 (mg/L)	Cal Level 9 (mg/L)	ICV (mg/L)
Fluoride	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Chloride	0.0	0.5	0.75	1.0	5.0	10.0	20.0	30.0	40.0	15.0
Bromide	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrite	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrate	0.0	0.1	0.30	0.5	1.0	2.0	5.0	7.0		3.5
O-Phosphorous	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Sulfate	0.0	0.5	0.75	1.0	5.0	10.0	30.0	50.0	70.0	25.0

Peak Integration Report

Sample Name:	**IB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3352A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 18:43**	*Run Time:*	**20.00**

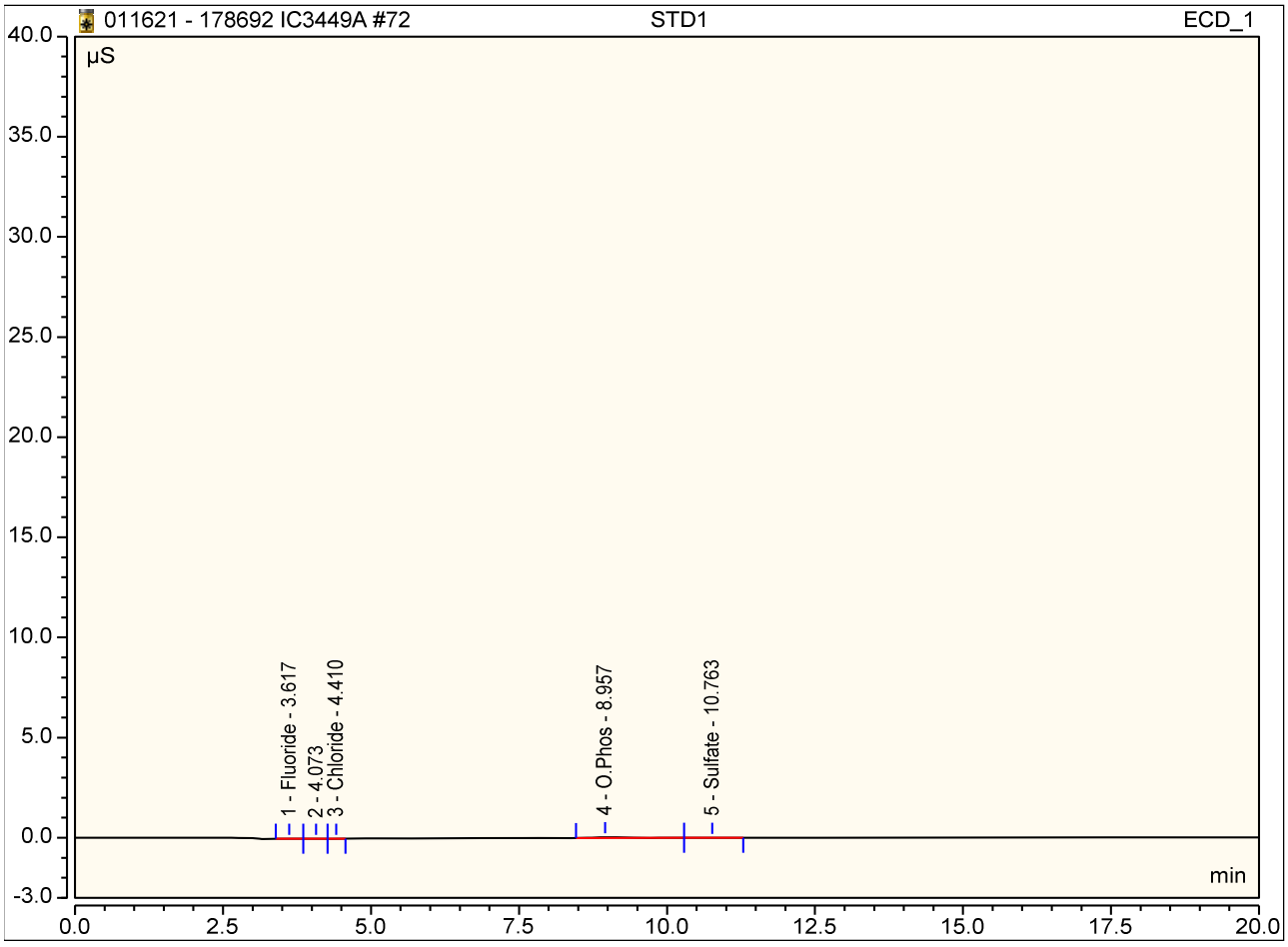
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	4.17	Fluoride	0.001	0.003	0.0109



Peak Integration Report

Sample Name:	**STD1**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 19:03**	*Run Time:*	**20.00**

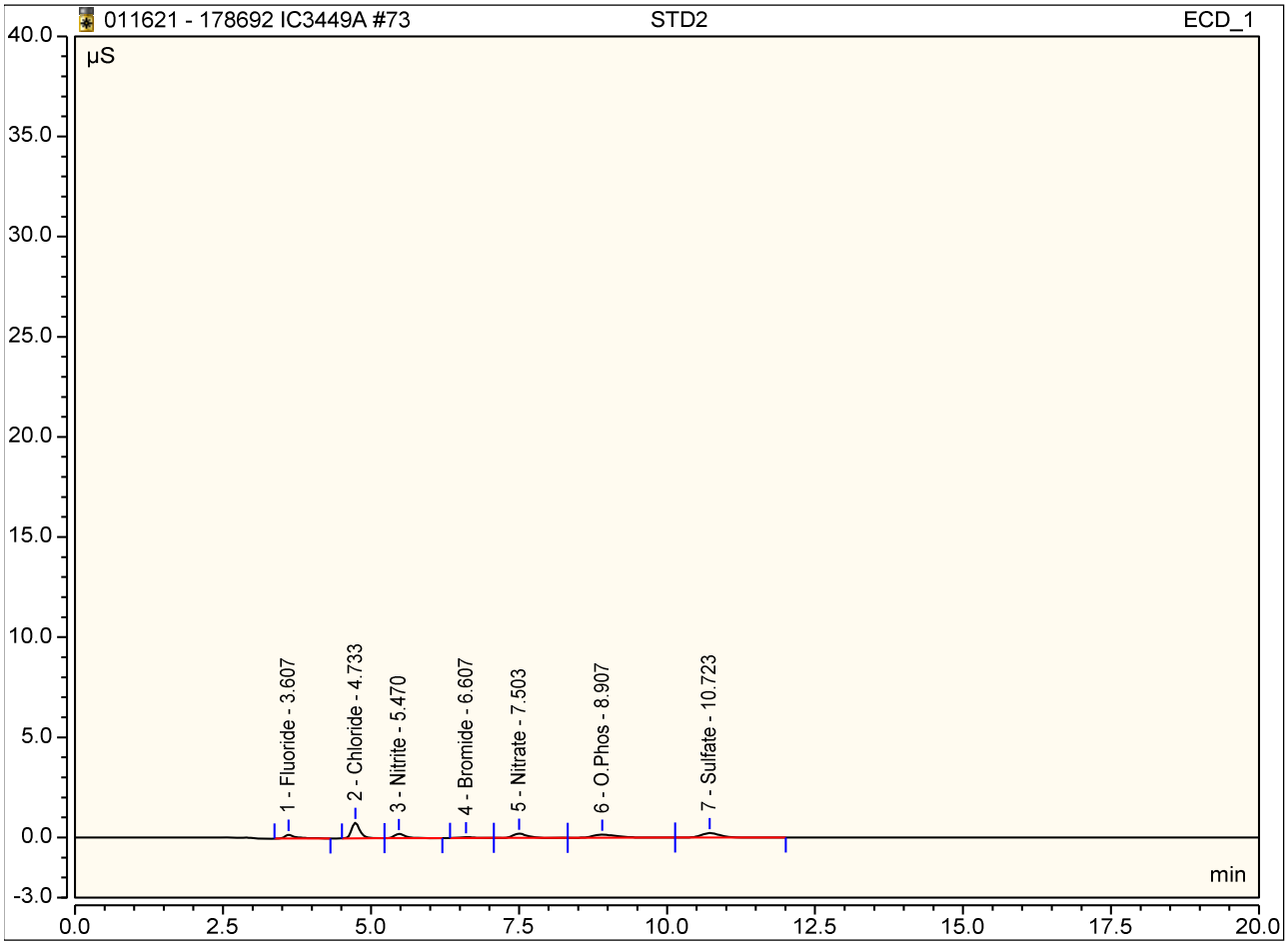
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.62	Fluoride	0.001	0.005	0.0550
3	4.41	Chloride	0.000	0.002	0.6119
4	8.96	O.Phos	0.020	0.038	n.a.
5	10.76	Sulfate	0.002	0.004	0.6978



Peak Integration Report

Sample Name:	**STD2**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 19:23**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	0.041	0.192	0.1648
2	4.73	Chloride	0.129	0.771	1.0448
3	5.47	Nitrite	0.044	0.211	0.1253
4	6.61	Bromide	0.010	0.045	0.1116
5	7.50	Nitrate	0.056	0.210	0.1772
6	8.91	O.Phos	0.073	0.154	0.0981
7	10.72	Sulfate	0.084	0.224	1.1035



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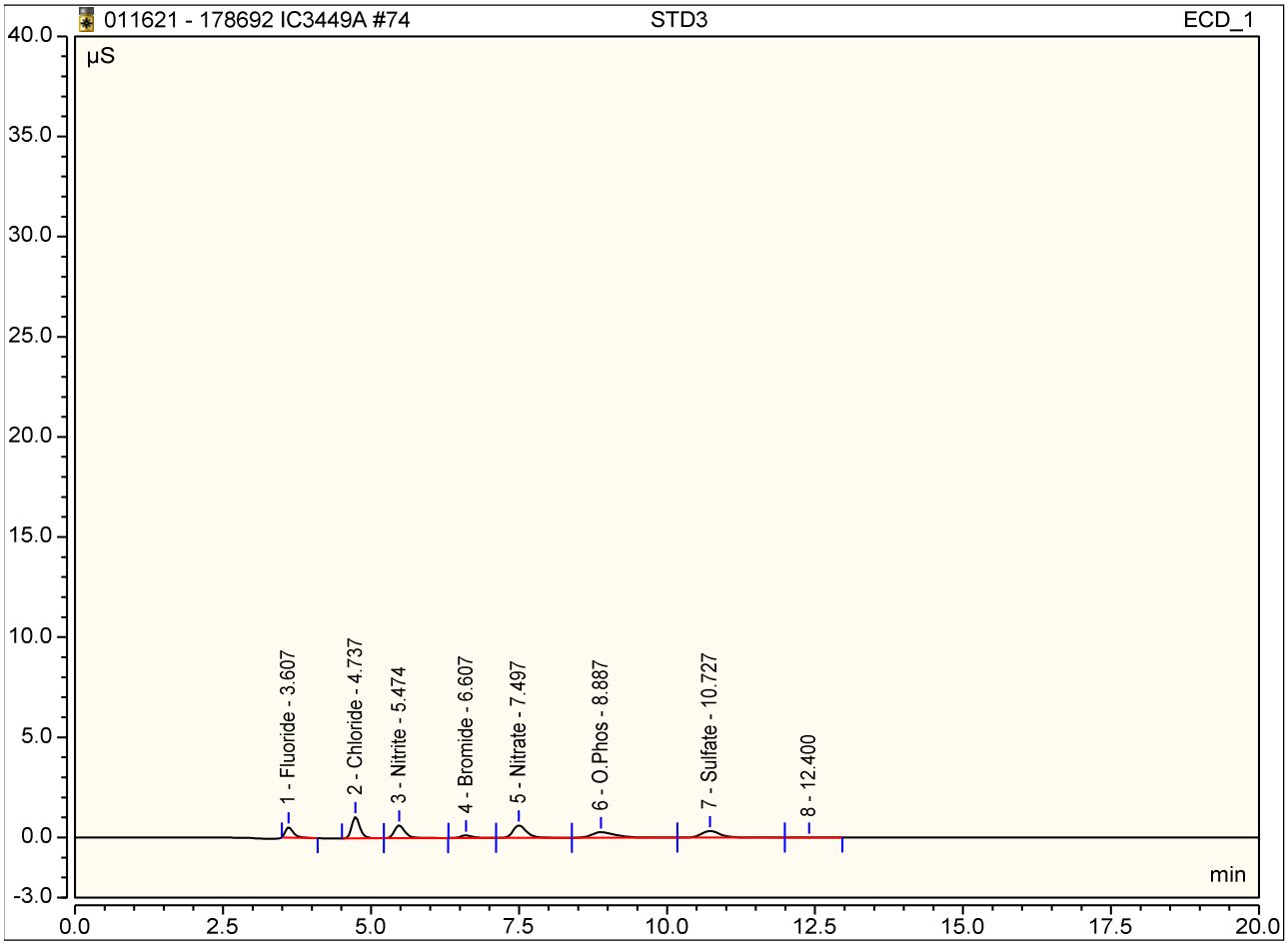
Version 7.2.9.11323

Peak Integration Report

Sample Name:	**STD3**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 19:44**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	0.083	0.520	0.2786
2	4.74	Chloride	0.175	1.065	1.1996
3	5.47	Nitrite	0.132	0.635	0.3094
4	6.61	Bromide	0.029	0.129	0.3005
5	7.50	Nitrate	0.164	0.620	0.3443
6	8.89	O.Phos	0.126	0.276	0.3353
7	10.73	Sulfate	0.123	0.329	1.2947



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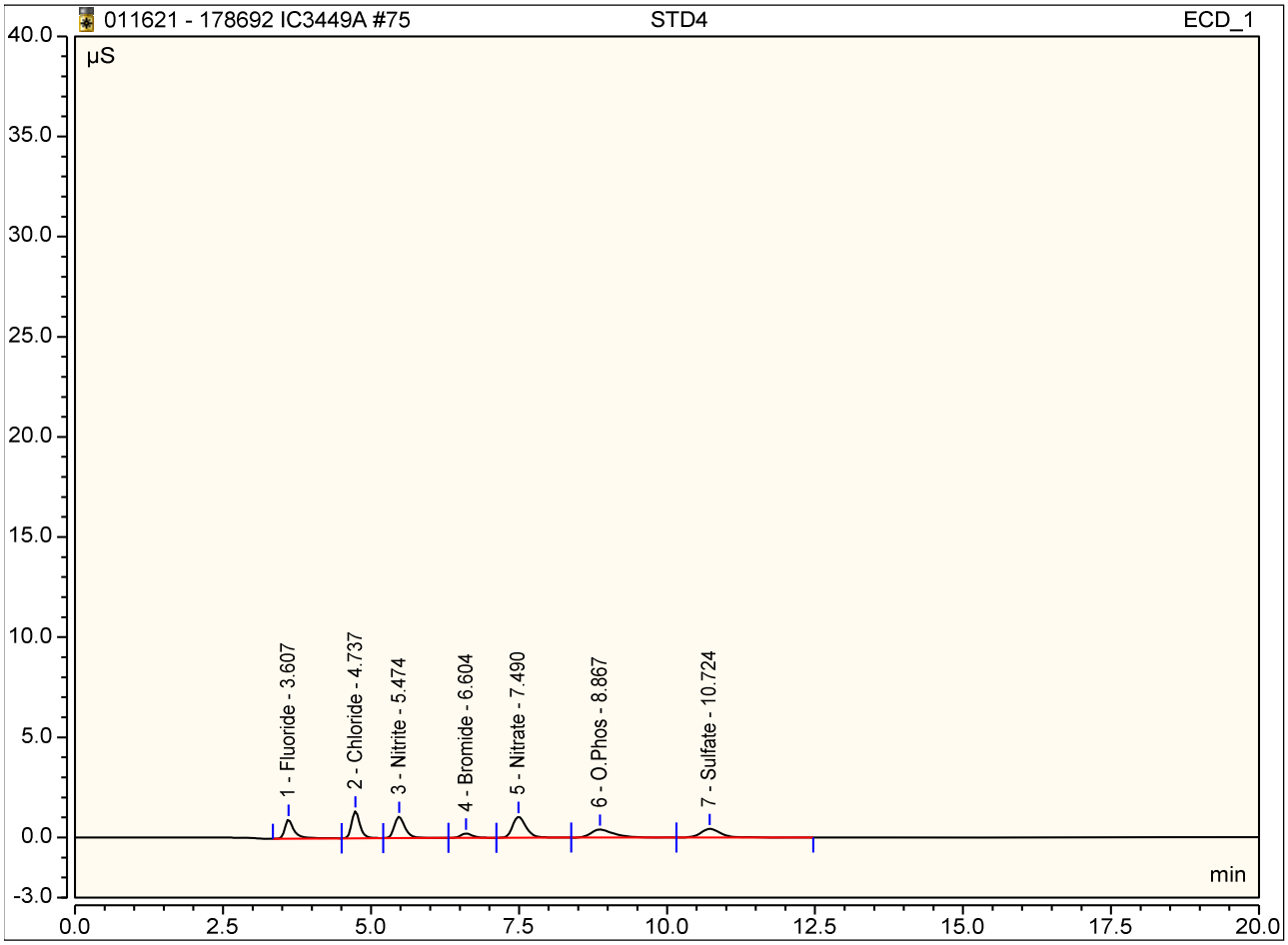
Version 7.2.9.11323

Peak Integration Report

Sample Name:	**STD4**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 20:04**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	0.173	0.942	0.5257
2	4.74	Chloride	0.222	1.342	1.3565
3	5.47	Nitrite	0.223	1.066	0.5008
4	6.60	Bromide	0.048	0.214	0.4956
5	7.49	Nitrate	0.276	1.041	0.5188
6	8.87	O.Phos	0.178	0.401	0.5696
7	10.72	Sulfate	0.163	0.433	1.4902



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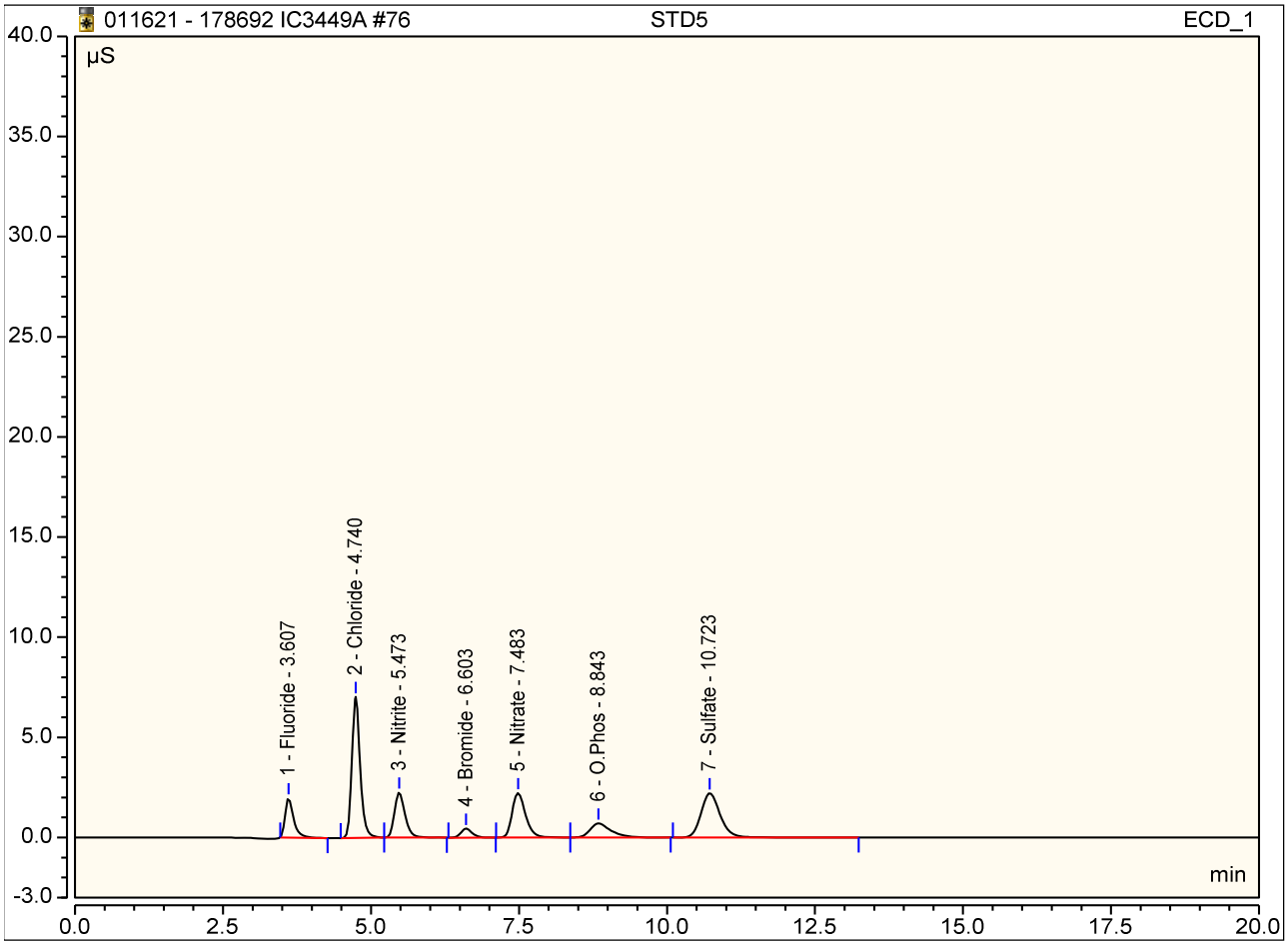
Peak Integration Report

Sample Name:	**STD5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 20:24**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	0.332	1.963	0.9580
2	4.74	Chloride	1.149	7.040	4.4741
3	5.47	Nitrite	0.470	2.257	1.0188
4	6.60	Bromide	0.100	0.448	1.0333
5	7.48	Nitrate	0.589	2.223	1.0064
6	8.84	O.Phos	0.291	0.706	1.0771
7	10.72	Sulfate	0.837	2.217	4.7914



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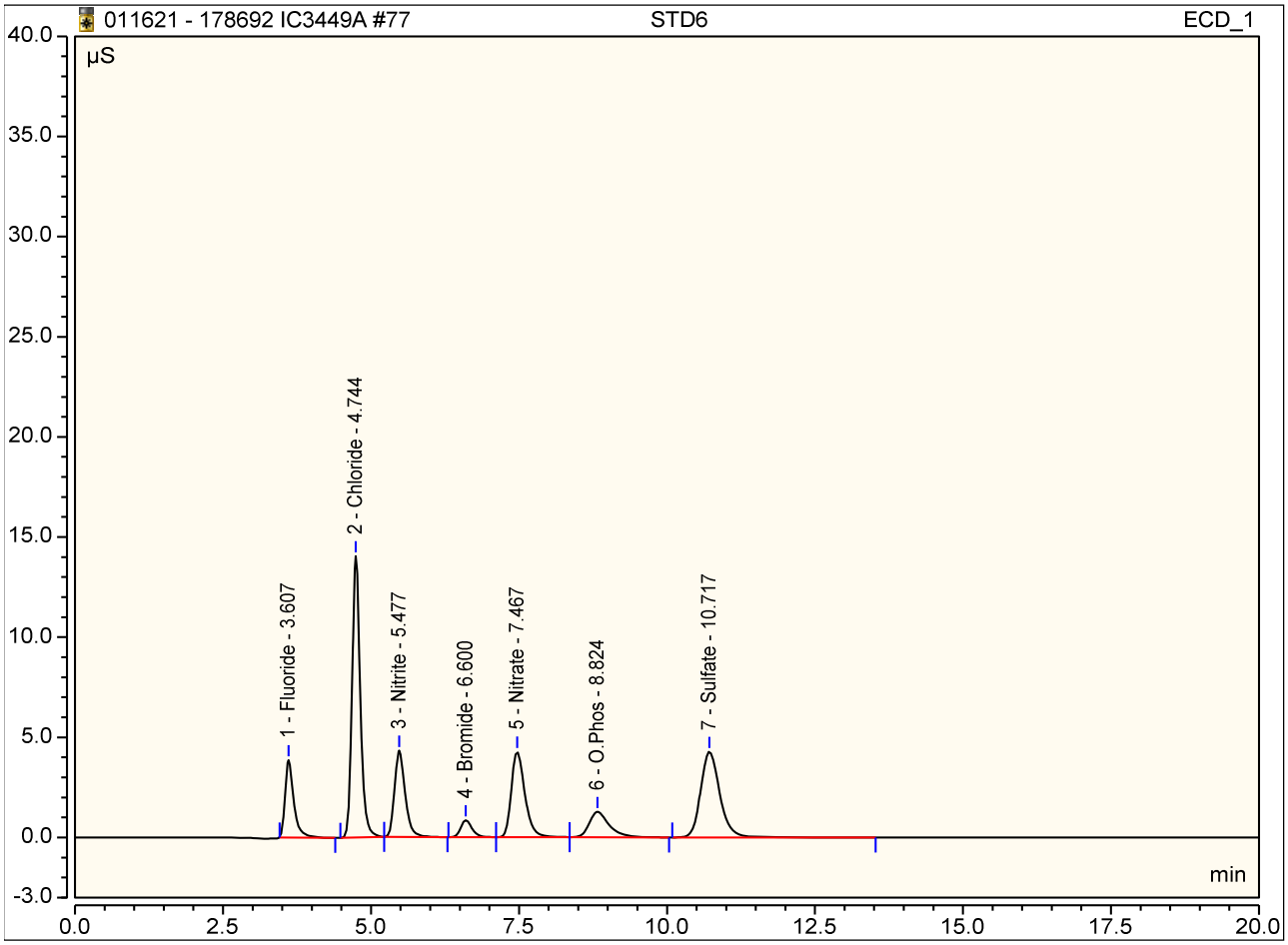
Peak Integration Report

Sample Name:	**STD6**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 20:44**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	0.659	3.859	1.8535
2	4.74	Chloride	2.266	14.044	8.2280
3	5.48	Nitrite	0.898	4.303	1.9176
4	6.60	Bromide	0.189	0.843	1.9426
5	7.47	Nitrate	1.129	4.265	1.8478
6	8.82	O.Phos	0.491	1.261	1.9761
7	10.72	Sulfate	1.611	4.279	8.5848



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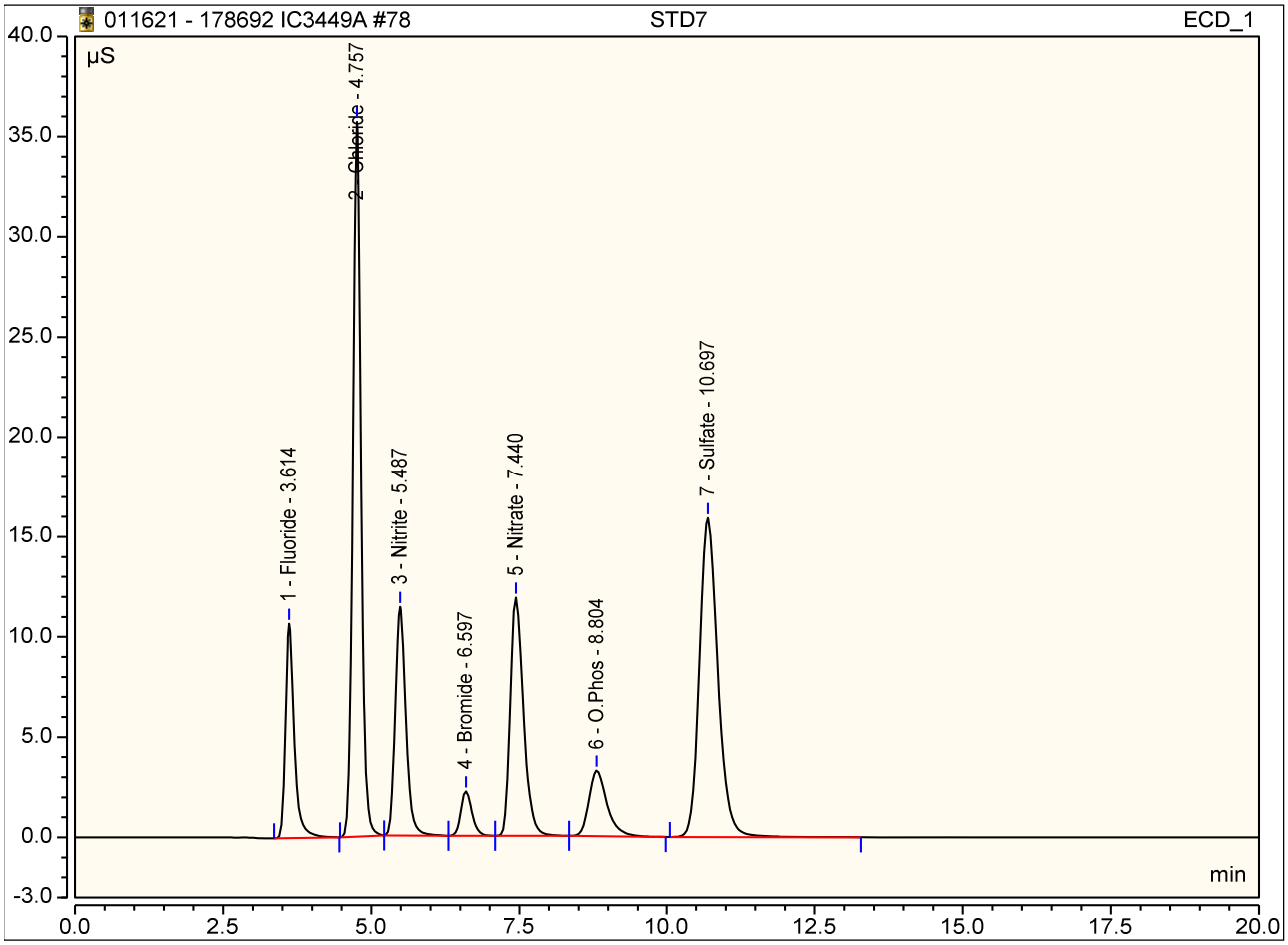
Version 7.2.9.11323

Peak Integration Report

Sample Name:	**STD7**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 21:04**	*Run Time:*	**20.00**

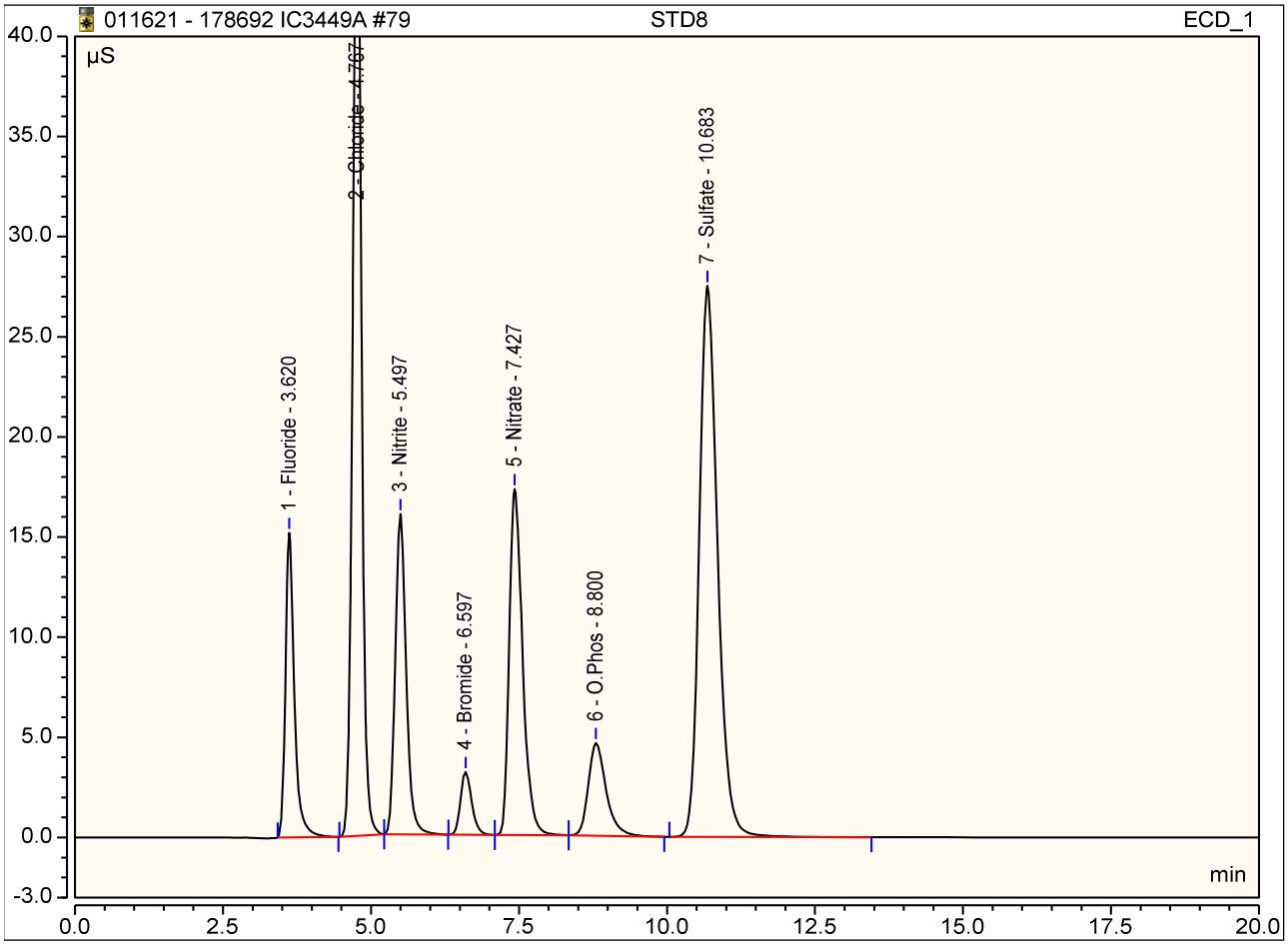
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	1.835	10.694	5.0644
2	4.76	Chloride	5.692	35.687	19.7470
3	5.49	Nitrite	2.379	11.407	5.0280
4	6.60	Bromide	0.490	2.222	5.0165
5	7.44	Nitrate	3.079	11.894	4.8854
6	8.80	O.Phos	1.161	3.274	4.9851
7	10.70	Sulfate	5.745	15.922	28.8499



Peak Integration Report

Sample Name:	**STD8**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 21:24**	*Run Time:*	**20.00**

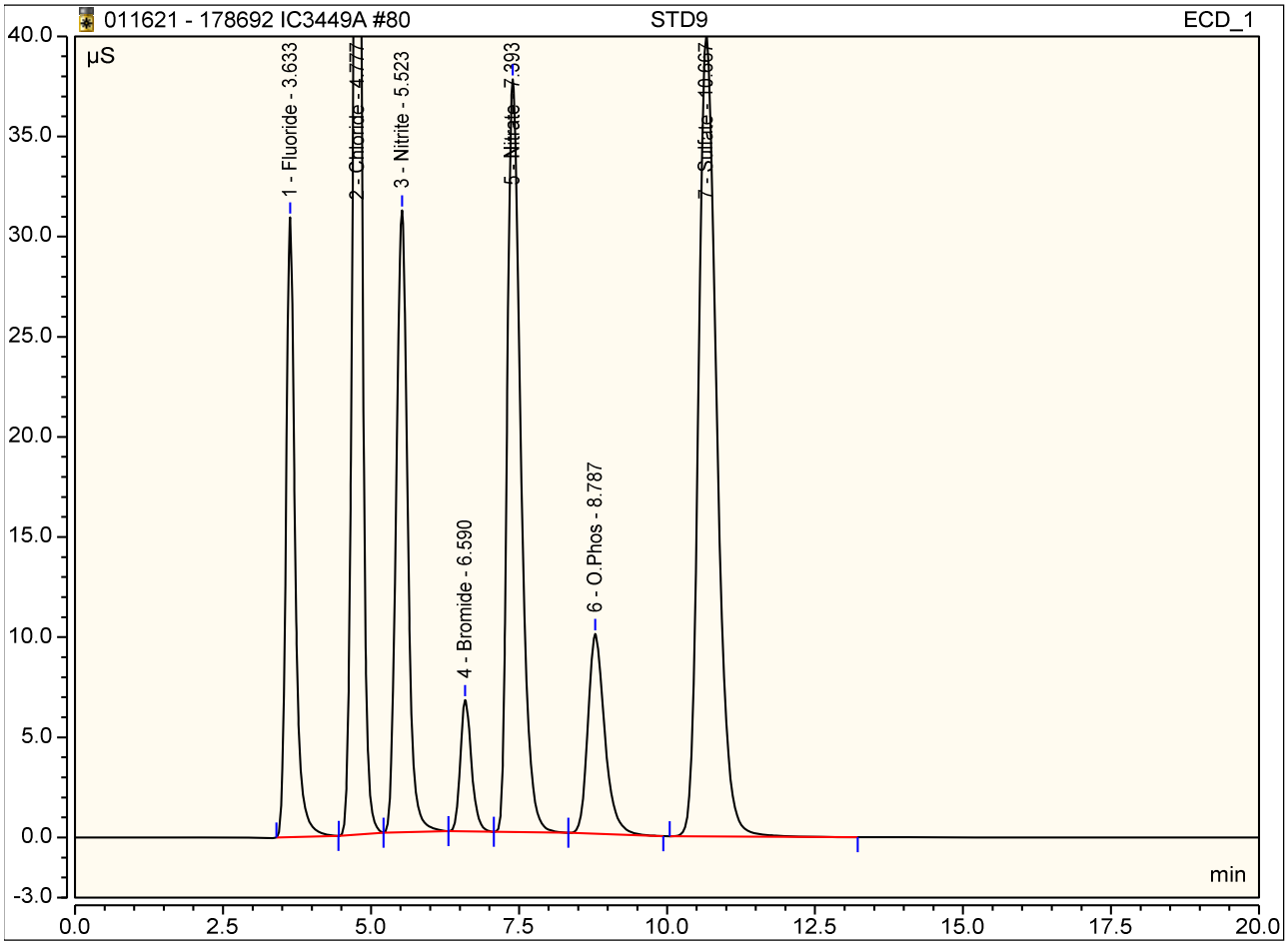
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.62	Fluoride	2.634	15.196	7.2486
2	4.77	Chloride	8.714	52.950	29.9077
3	5.50	Nitrite	3.415	16.001	7.2026
4	6.60	Bromide	0.699	3.139	7.1564
5	7.43	Nitrate	4.513	17.279	7.1201
6	8.80	O.Phos	1.612	4.634	7.0060
7	10.68	Sulfate	9.877	27.511	49.1072



Peak Integration Report

Sample Name:	**STD9**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 21:44**	*Run Time:*	**20.00**

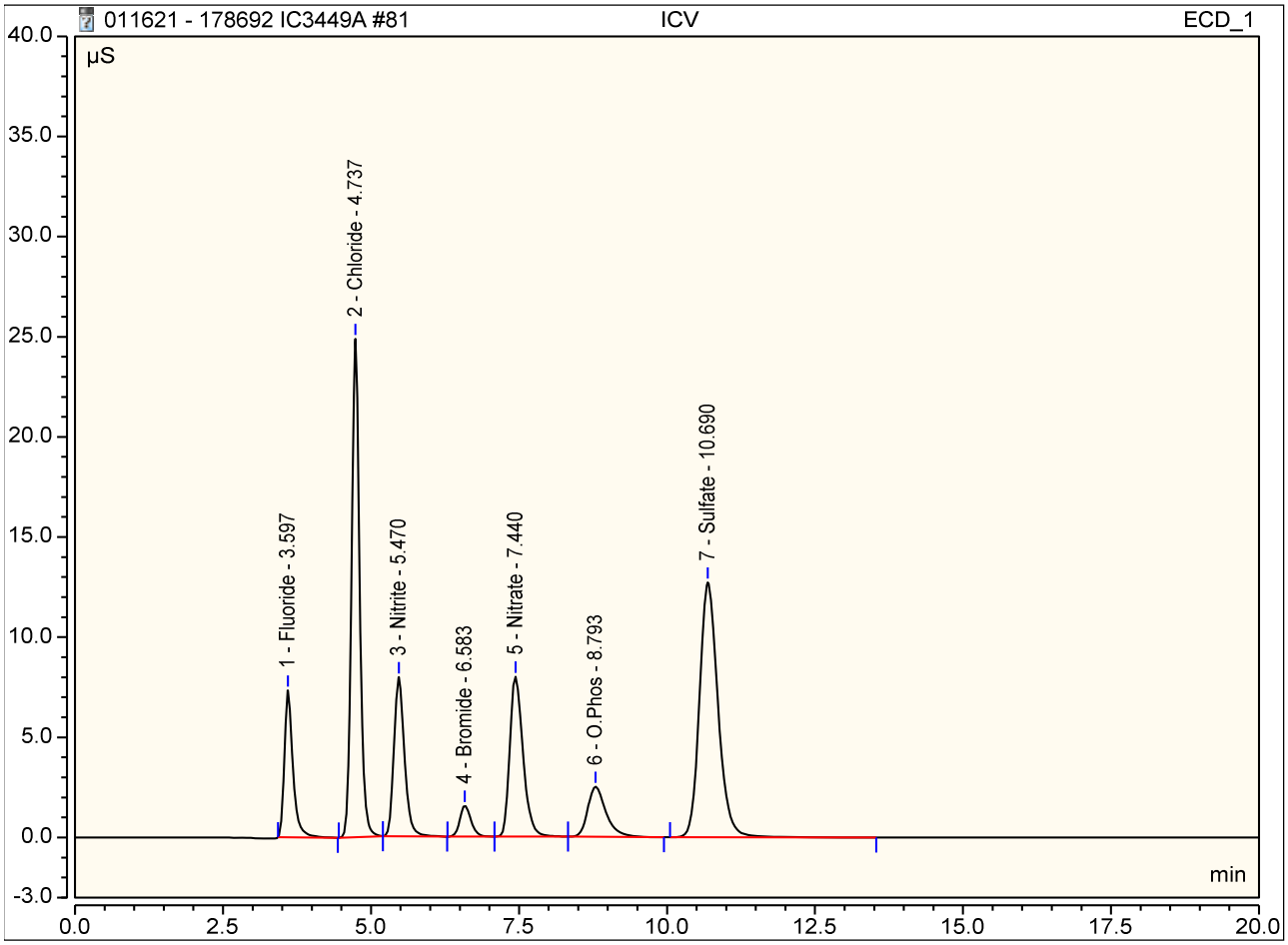
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.63	Fluoride	5.501	30.945	15.0785
2	4.78	Chloride	11.919	69.546	40.6804
3	5.52	Nitrite	6.974	31.055	14.6765
4	6.59	Bromide	1.443	6.557	14.7619
5	7.39	Nitrate	9.915	37.586	15.5362
6	8.79	O.Phos	3.298	9.971	14.5799
7	10.67	Sulfate	14.411	40.034	71.3306



Peak Integration Report

Sample Name:	**ICV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 22:04**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.60	Fluoride	1.236	7.341	3.4299
2	4.74	Chloride	3.965	24.873	13.9410
3	5.47	Nitrite	1.650	7.943	3.4962
4	6.58	Bromide	0.342	1.544	3.5049
5	7.44	Nitrate	2.074	7.990	3.3211
6	8.79	O.Phos	0.895	2.503	3.7902
7	10.69	Sulfate	4.623	12.732	23.3497



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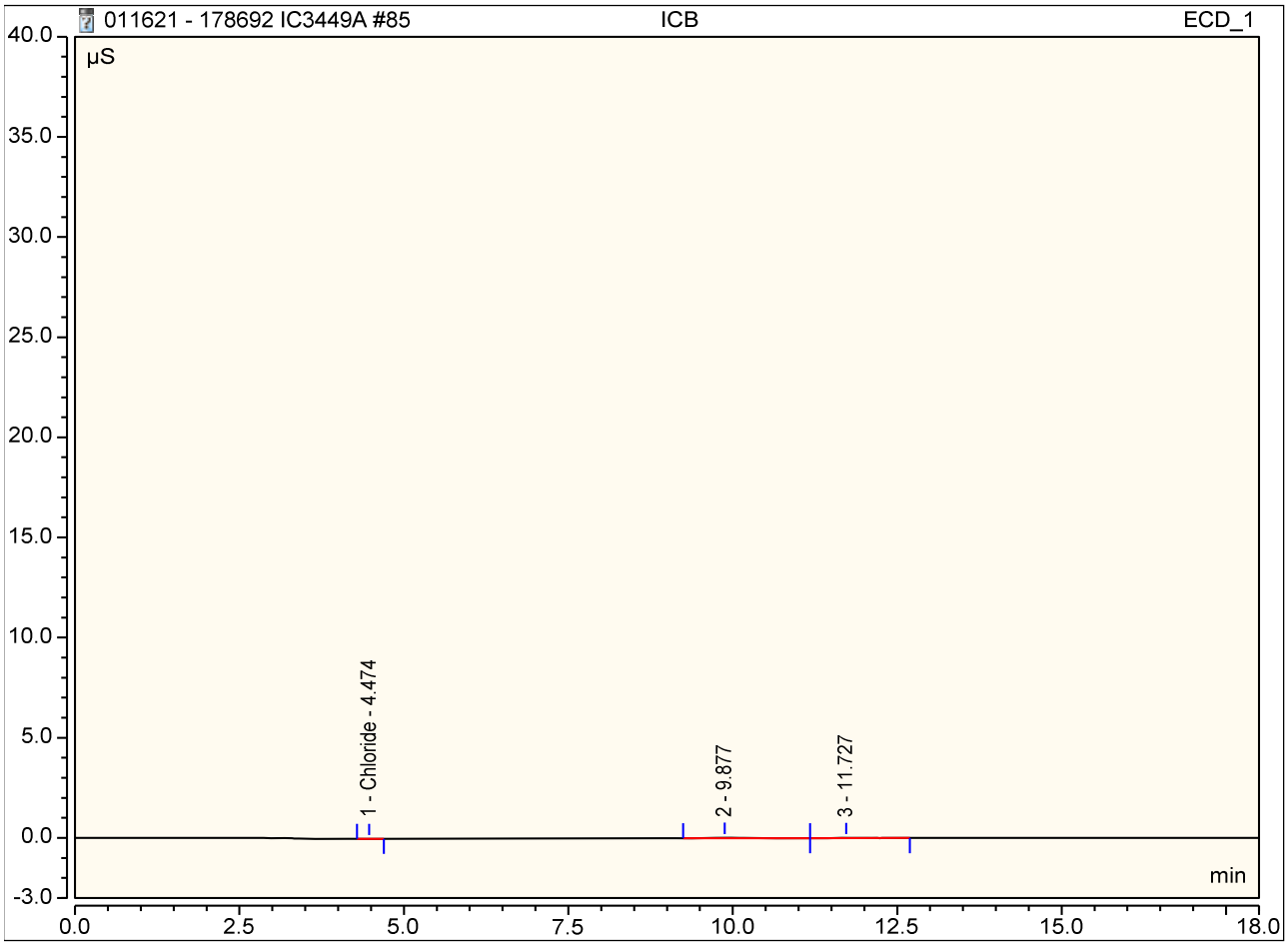
Peak Integration Report

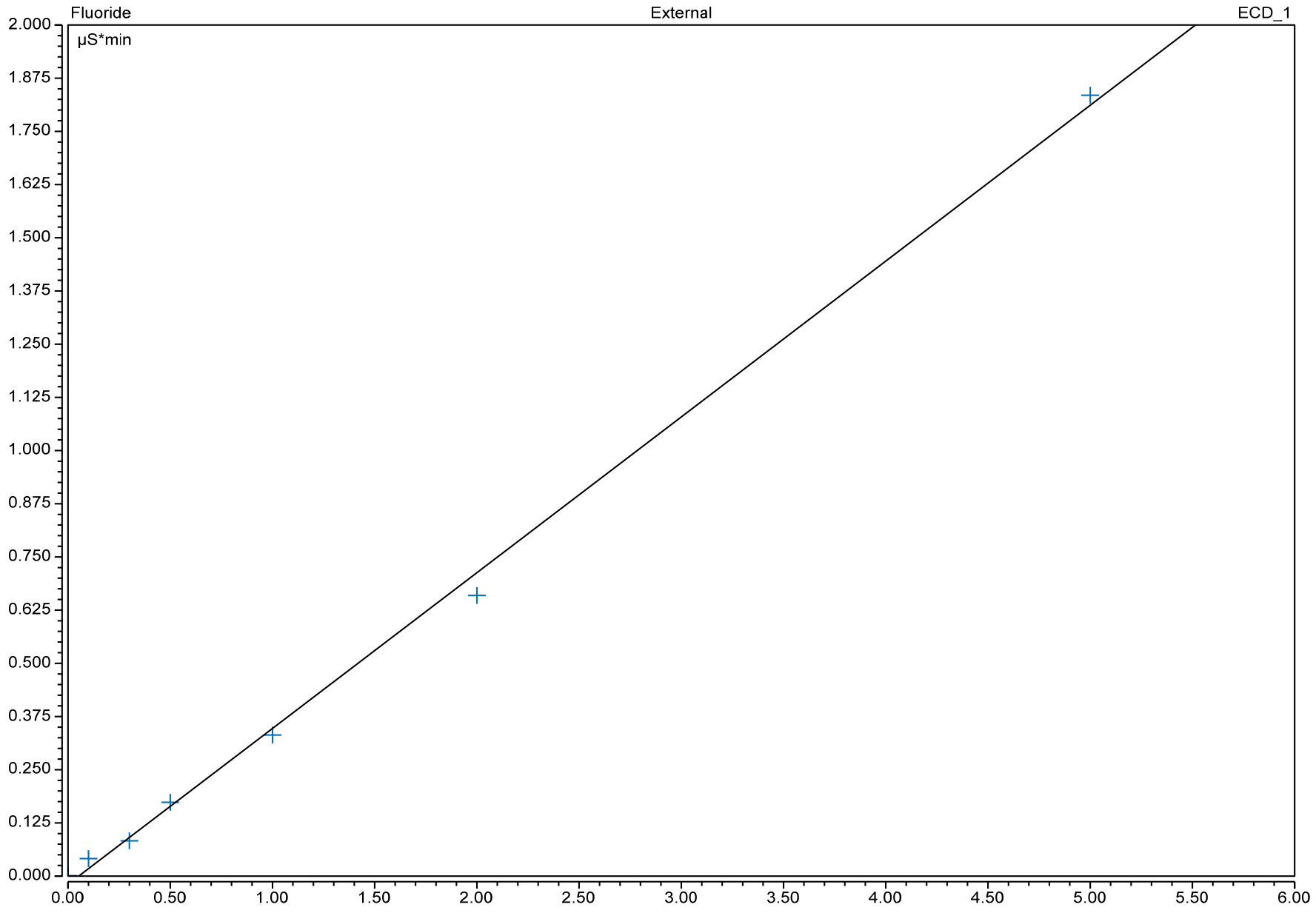
Sample Name:	**ICB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**19-Jan-2021 / 12:11**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.47	Chloride	0.000	0.002	0.6123



Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	Fluoride	Lin, WithOffset	Area	7	6.9323	0.99813	-0.0191	0.3661	0.0000
2	Chloride	Lin, WithOffset	Area	9	7.4399	0.99718	-0.1817	0.2975	0.0000
3	Nitrite	Lin, WithOffset	Area	6	3.2041	0.99950	-0.0152	0.4762	0.0000
4	Bromide	Lin, WithOffset	Area	6	2.3528	0.99972	-0.0006	0.0978	0.0000
5	Nitrate	Lin, WithOffset	Area	7	4.9791	0.99864	-0.0574	0.6419	0.0000
6	O.Phos	Lin, WithOffset	Area	7	5.3966	0.99828	0.0512	0.2227	0.0000
7	*Sulfate*	*Lin, WithOffset*	*Area*	*9*	*5.7167*	*0.99862*	*-0.1407*	*0.2040*	*0.0000*
Maximum					**7.4399**	0.99972			
Minimum					2.3528	**0.99718**			

RJ 01/26/2021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External
ECD_1
µS*min
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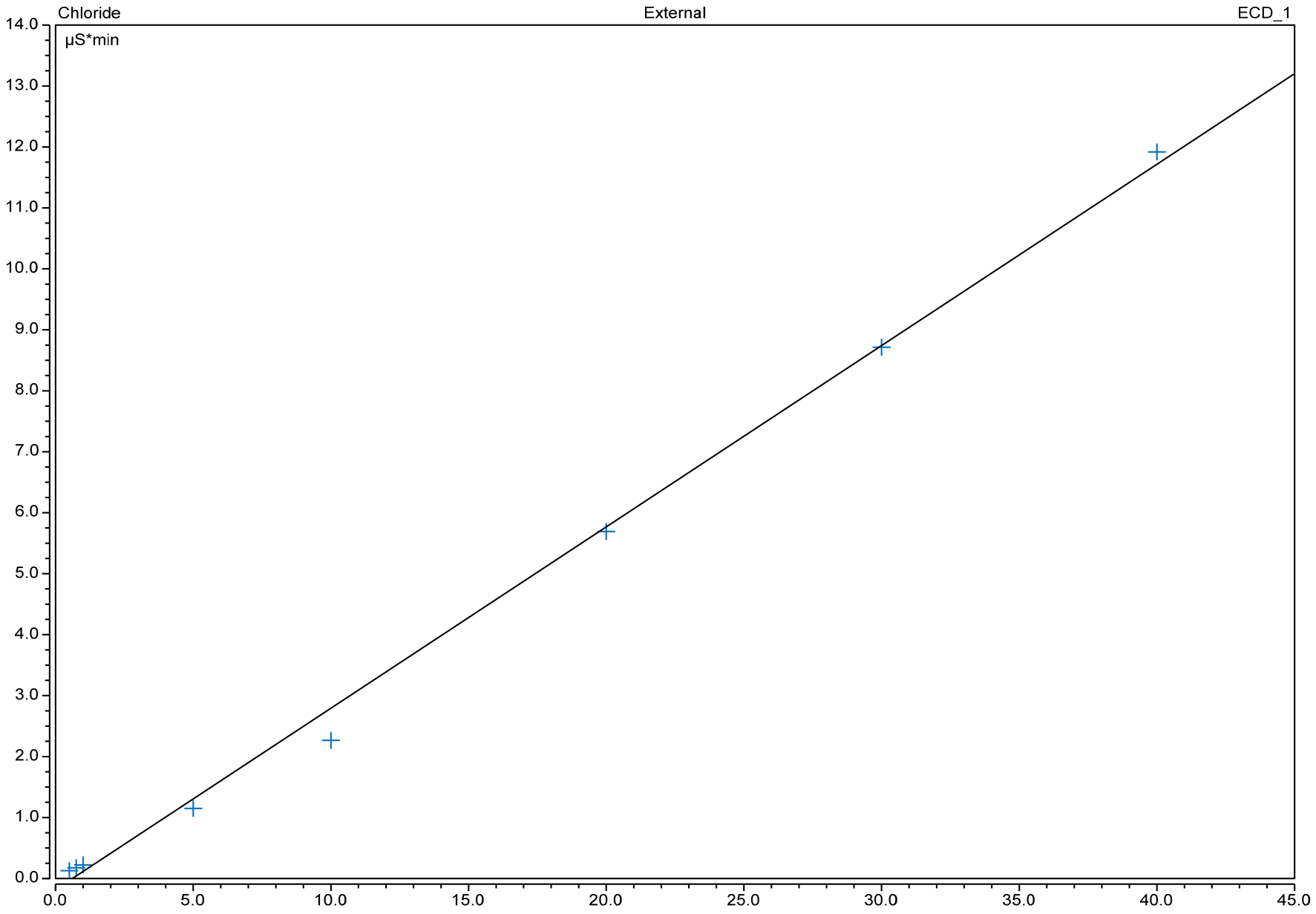
1.875
1.750
1.625
1.500
1.375
1.250
1.125
1.000
0.875
0.750
0.625
0.500
0.375
0.250
0.125
0.000
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00


Chloride
External
ECD_1
µS*min
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
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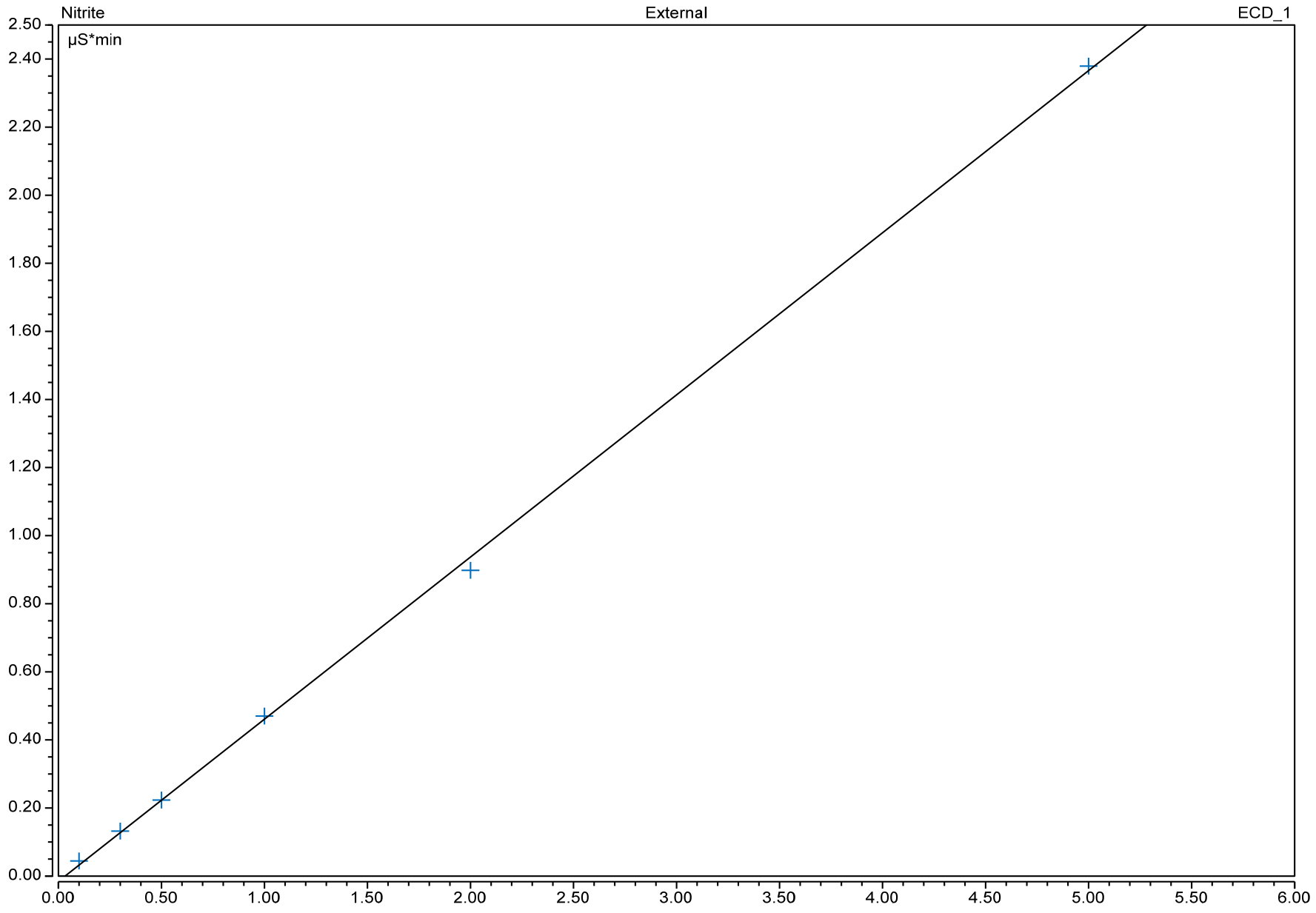
25.0
30.0
35.0
40.0
45.0


Nitrite
External
ECD_1
µS*min
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2.40
2.20
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1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.00
0.50
1.00
1.50
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2.50
3.00
3.50
4.00
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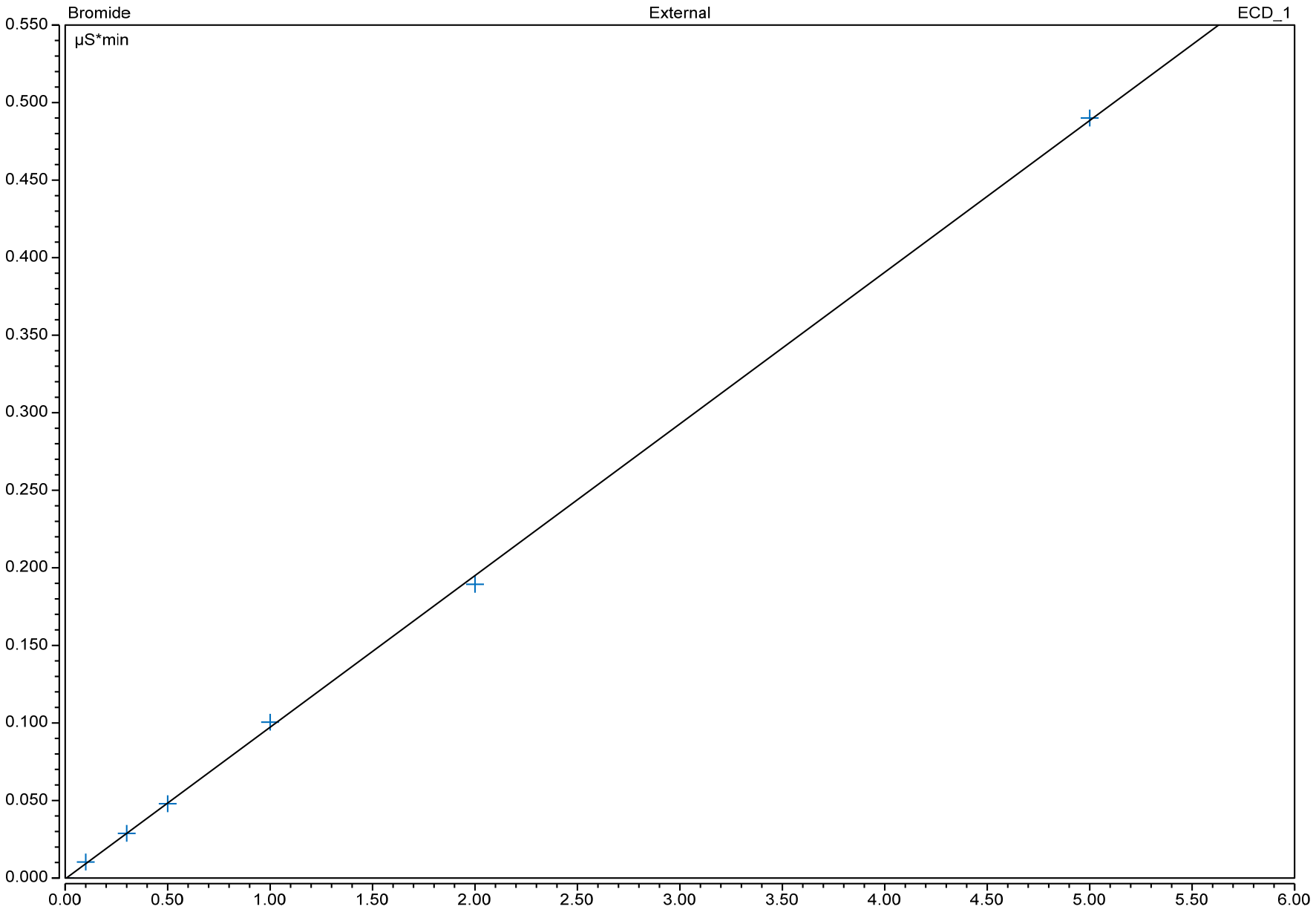
5.00
5.50
6.00

RJ 01/26/2021


Bromide
External
ECD_1
µS*min
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0.300
0.250
0.200
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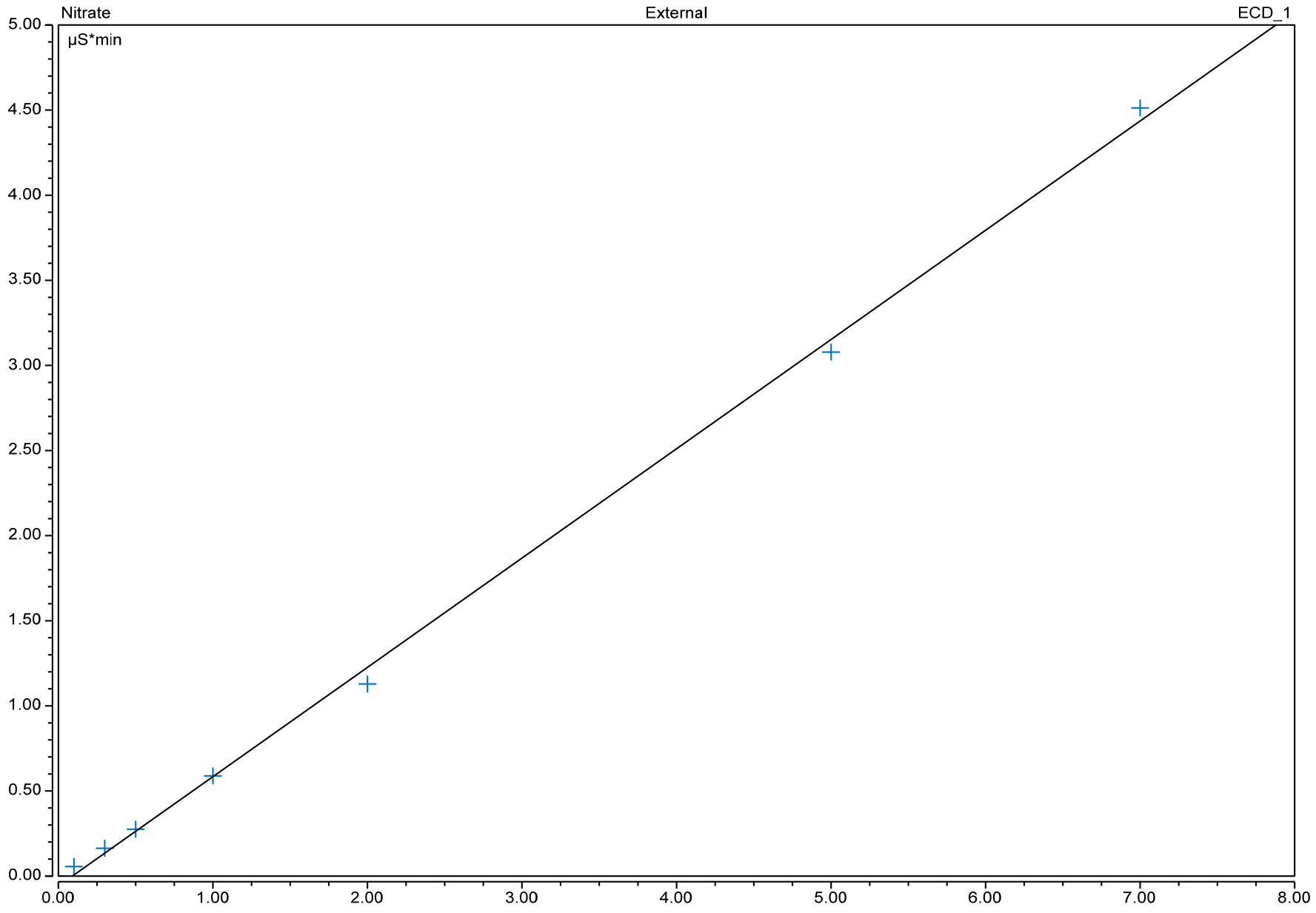
RJ 01/26/2021


Nitrate
External
ECD_1
µS*min
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4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.00
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2.00
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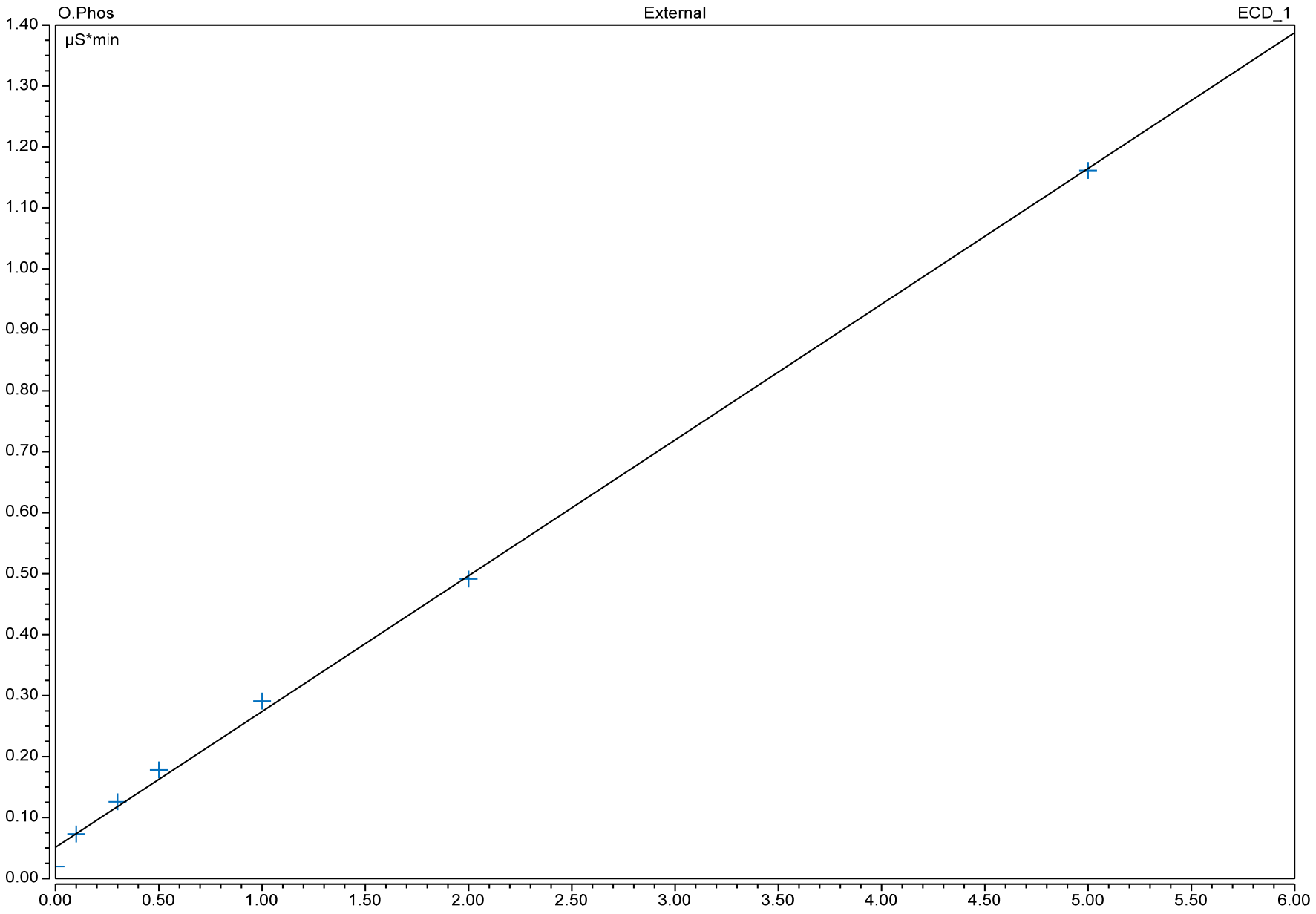
6.00
7.00
8.00

RJ 01/26/2021


O.Phos
External
ECD_1
µS*min
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0.50
0.40
0.30
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0.10
0.00
0.00
0.50
1.00
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3.00
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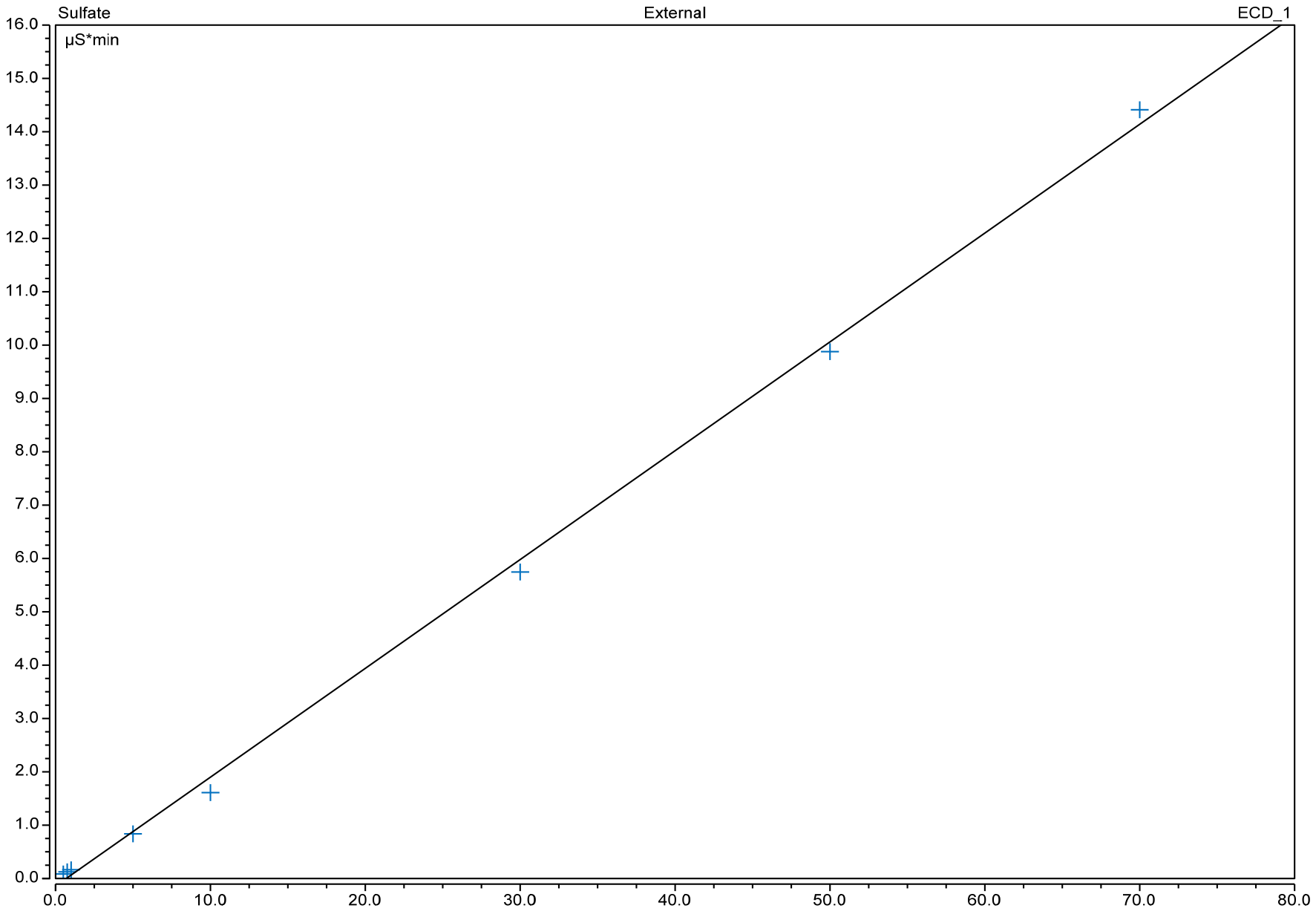
6.00

RJ 01/26/2021


Sulfate
External
ECD_1
µS*min
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13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0

Sequence: 012921 - 179049 179050 179053
Last Update Operator: AQUION

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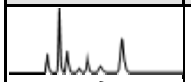
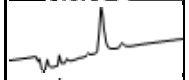
	CCV	1.0000	Unknown		2	5000	Anions	IC3449A	Finished
	CCB	1.0000	Unknown		3	5000	Anions	IC3449A	Finished
	529219	1.0000	Unknown		4	5000	Anions	IC3449A	Finished
	521220	1.0000	Unknown		5	5000	Anions	IC3449A	Finished
	529221	1.0000	Unknown		6	5000	Anions	IC3449A	Finished
	529222	1.0000	Unknown		7	5000	Anions	IC3449A	Finished
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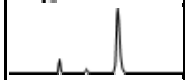
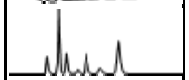
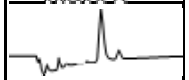
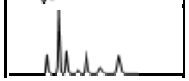
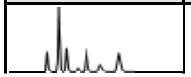
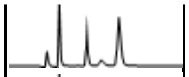
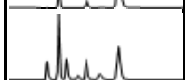
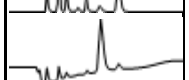
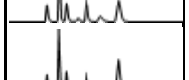
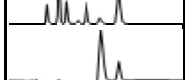
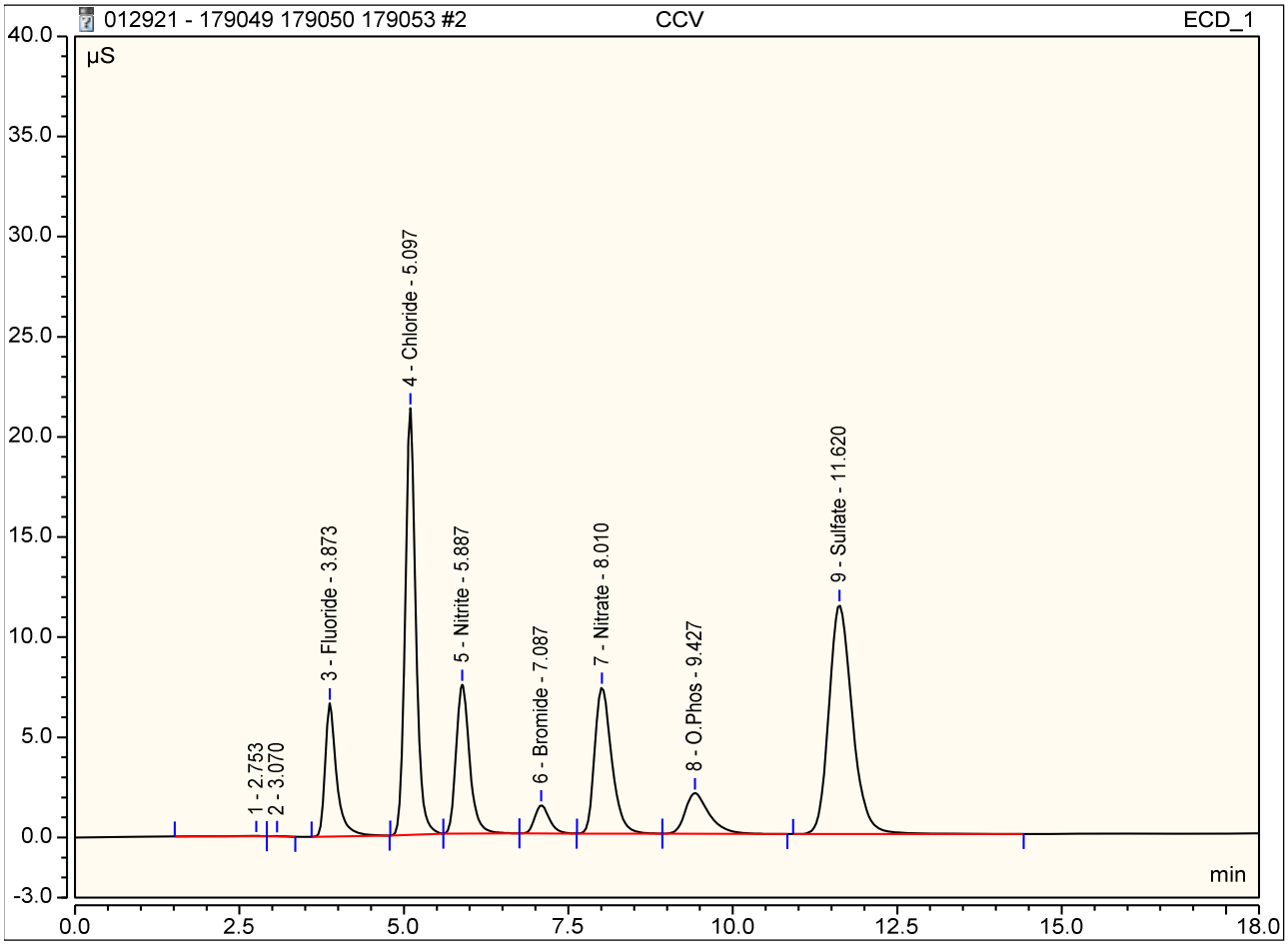
	529217	1.0000	Unknown		10	5000	Anions	IC3449A	Finished
	529218	1.0000	Unknown		11	5000	Anions	IC3449A	Finished
	529217X5	1.0000	Unknown		12	5000	Anions	IC3449A	Finished
	DUP529224	1.0000	Unknown		13	5000	Anions	IC3449A	Finished
	CCV	1.0000	Unknown		14	5000	Anions	IC3449A	Finished
	LCSW	1.0000	Unknown		15	5000	Anions	IC3449A	Finished
	MBW-CCB	1.0000	Unknown		16	5000	Anions	IC3449A	Finished
	MSW529224	1.0000	Unknown		17	5000	Anions	IC3449A	Finished

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	MSDW529224	1.0000	Unknown		18	5000	Anions	IC3449A	Finished
	529226	1.0000	Unknown		23	5000	Anions	IC3449A	Finished
	529227	1.0000	Unknown		24	5000	Anions	IC3449A	Finished
	529228	1.0000	Unknown		25	5000	Anions	IC3449A	Finished
	529228X5	1.0000	Unknown		26	5000	Anions	IC3449A	Finished
	CCV	1.0000	Unknown		27	5000	Anions	IC3449A	Finished
	CCB	1.0000	Unknown		28	5000	Anions	IC3449A	Finished
	DUP529226	1.0000	Unknown		29	5000	Anions	IC3449A	Finished
	MSW529226	1.0000	Unknown		30	5000	Anions	IC3449A	Finished
	MSDW529226	1.0000	Unknown		31	5000	Anions	IC3449A	Finished
	CCV	1.0000	Unknown		32	5000	Anions	IC3449A	Finished
	CCB	1.0000	Unknown		33	5000	Anions	IC3449A	Finished

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 11:08**	*Run Time:*	**18.00**

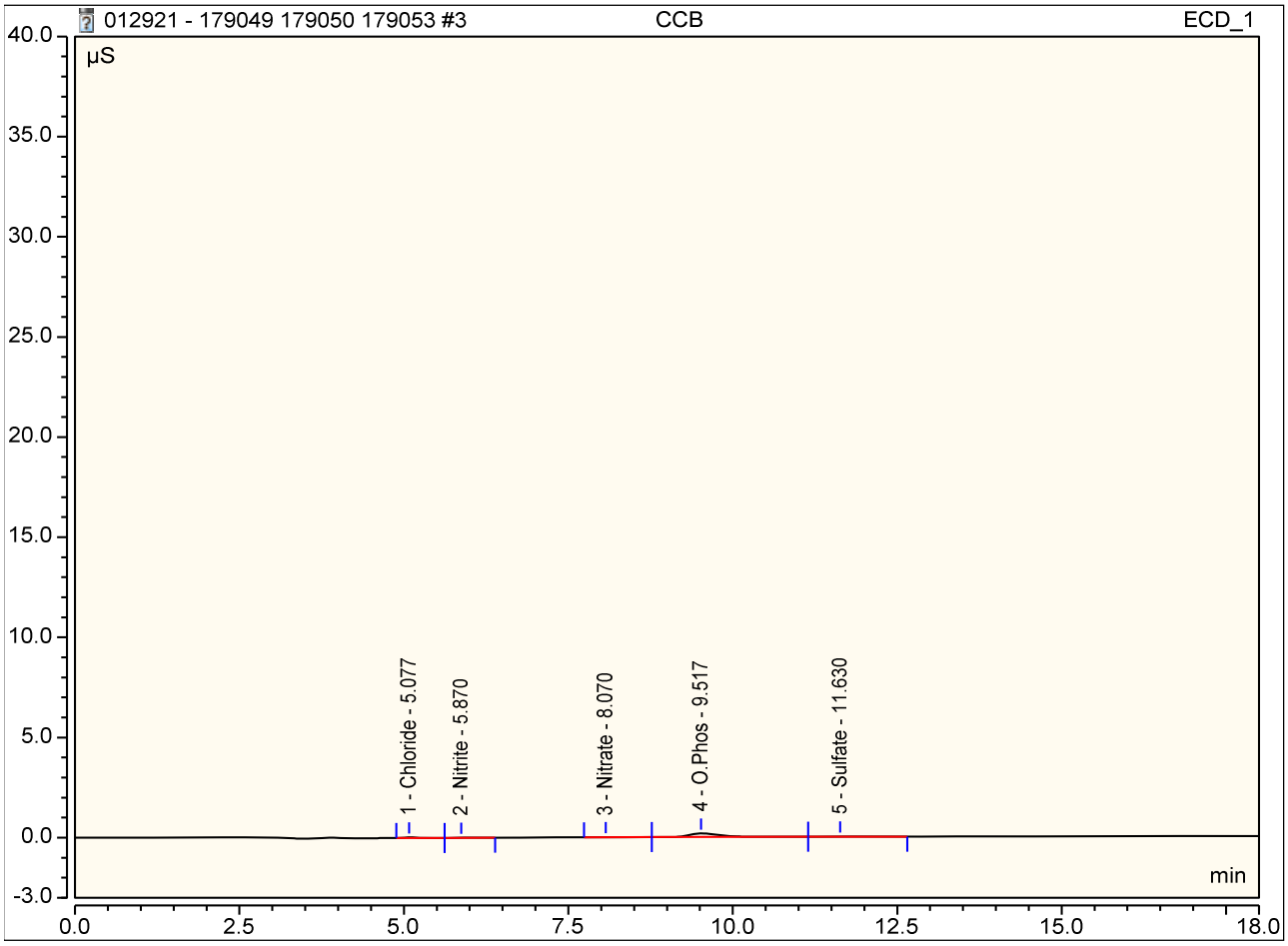
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
3	3.87	Fluoride	1.351	6.644	3.7417
4	5.10	Chloride	3.994	21.292	14.0379
5	5.89	Nitrite	1.763	7.431	3.7351
6	7.09	Bromide	0.363	1.409	3.7188
7	8.01	Nitrate	2.193	7.293	3.5053
8	9.43	O.Phos	0.858	2.025	3.6220
9	11.62	Sulfate	4.727	11.440	23.8605



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 11:27**	*Run Time:*	**18.00**

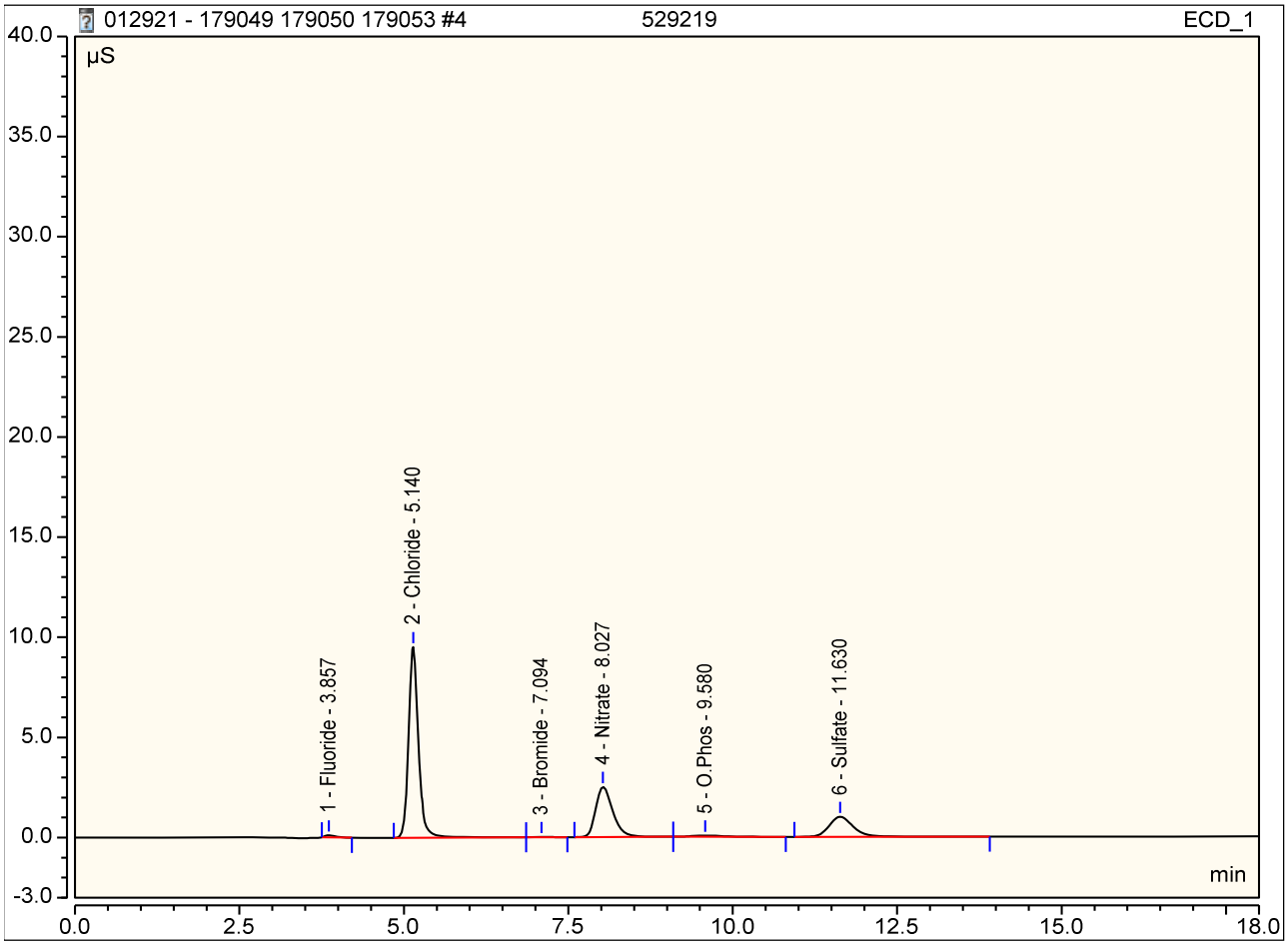
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	5.08	Chloride	0.008	0.039	0.6378
2	5.87	Nitrite	0.004	0.014	0.0394
3	8.07	Nitrate	0.004	0.012	0.0960
4	9.52	O.Phos	0.098	0.180	0.2120
5	11.63	Sulfate	0.008	0.018	0.7275



Peak Integration Report

Sample Name:	**529219**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 11:45**	*Run Time:*	**18.00**

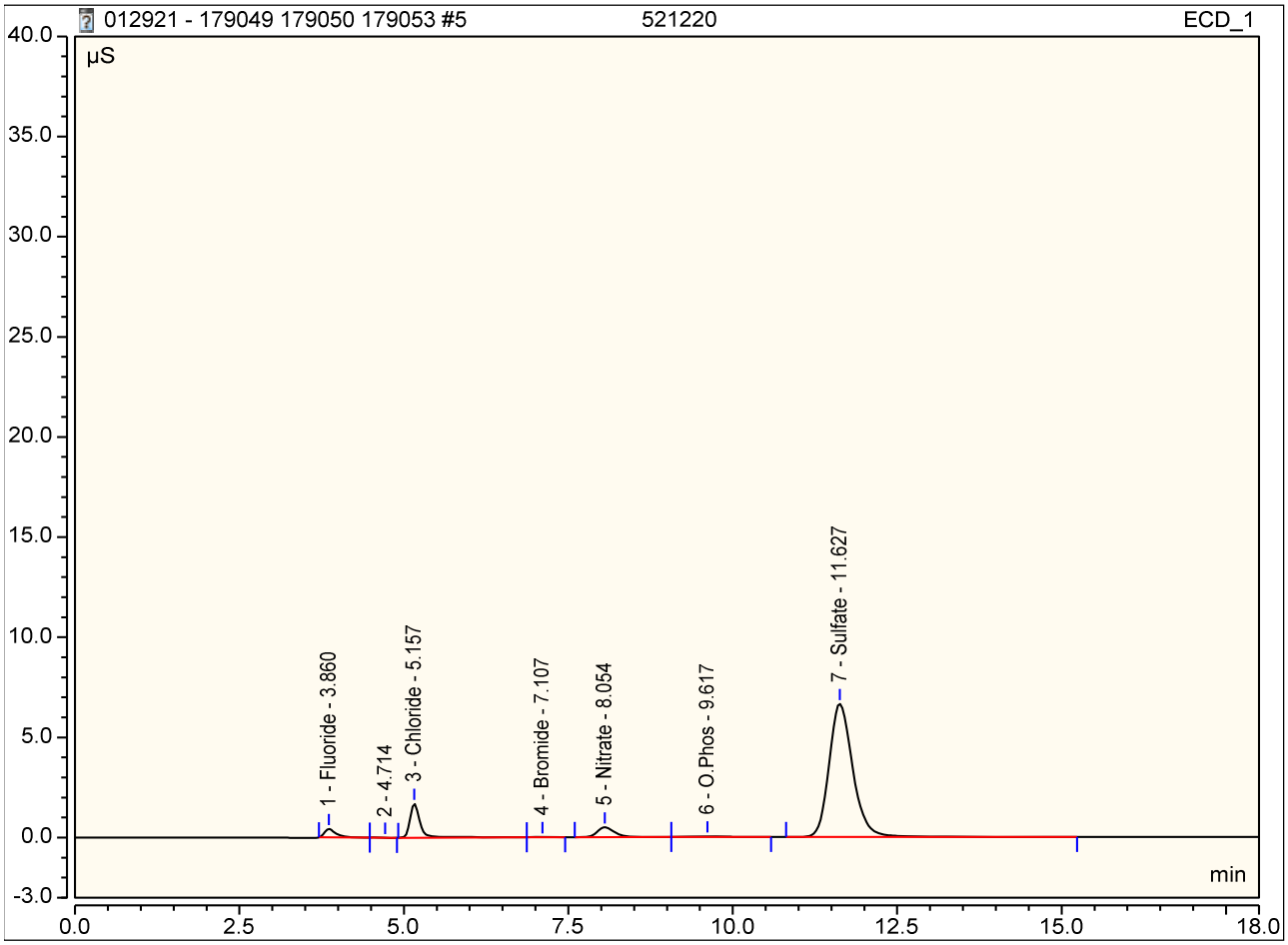
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.019	0.109	0.1039
2	5.14	Chloride	1.656	9.531	6.1795
3	7.09	Bromide	0.002	0.007	0.0225
4	8.03	Nitrate	0.756	2.503	1.2673
5	9.58	O.Phos	0.034	0.064	n.a.
6	11.63	Sulfate	0.429	0.999	2.7921



Peak Integration Report

Sample Name:	**529220**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 12:03**	*Run Time:*	**18.00**

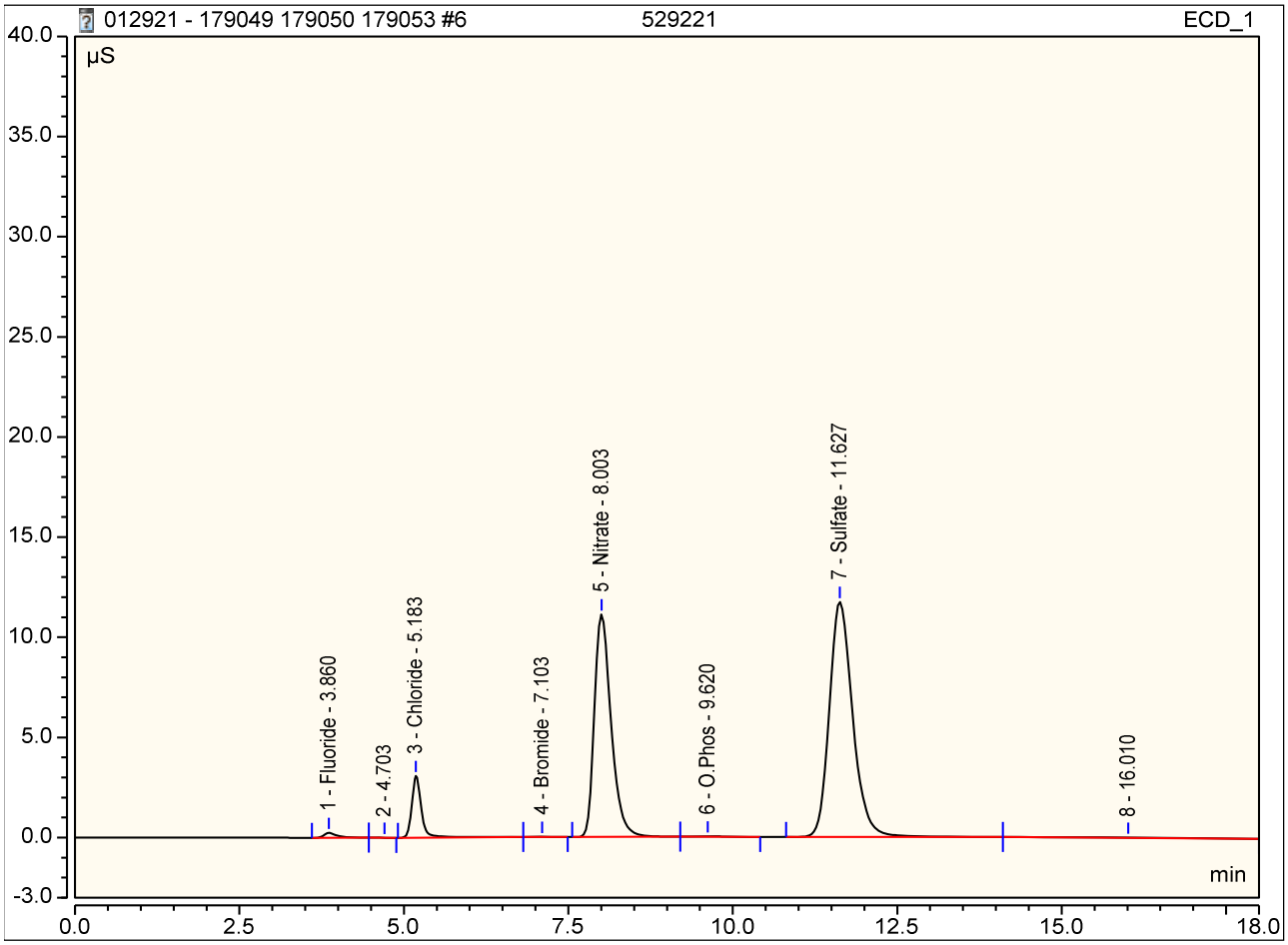
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.087	0.420	0.2905
3	5.16	Chloride	0.314	1.706	1.6650
4	7.11	Bromide	0.001	0.004	0.0172
5	8.05	Nitrate	0.148	0.490	0.3207
6	9.62	O.Phos	0.020	0.036	n.a.
7	11.63	Sulfate	2.793	6.648	14.3782



Peak Integration Report

Sample Name:	**529221**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 12:21**	*Run Time:*	**18.00**

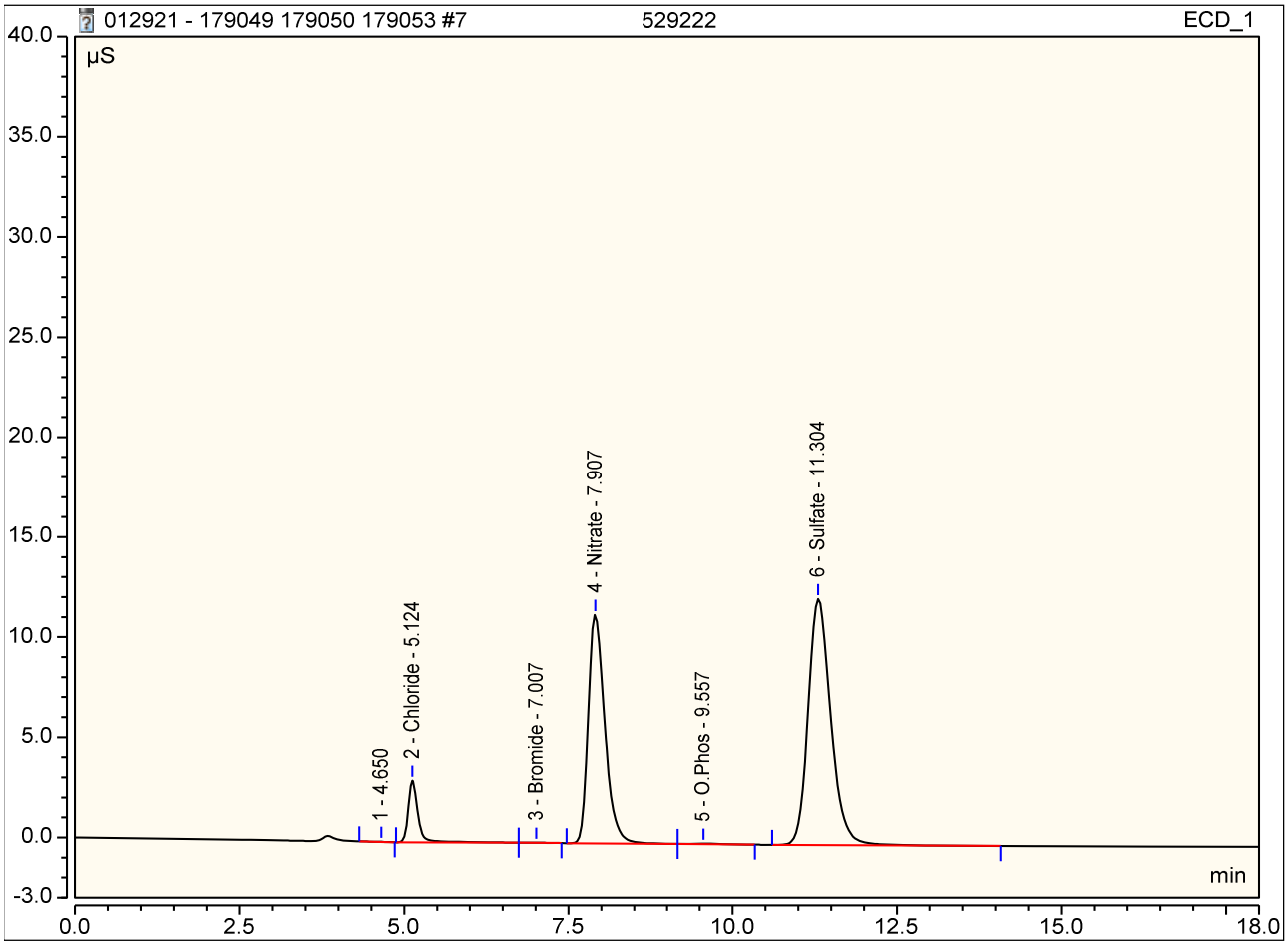
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.058	0.253	0.2110
3	5.18	Chloride	0.532	3.093	2.3997
4	7.10	Bromide	0.004	0.018	0.0496
5	8.00	Nitrate	3.287	11.117	5.2097
6	9.62	O.Phos	0.014	0.028	n.a.
7	11.63	Sulfate	4.845	11.744	24.4399



Peak Integration Report

Sample Name:	**529222**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 12:39**	*Run Time:*	**18.00**

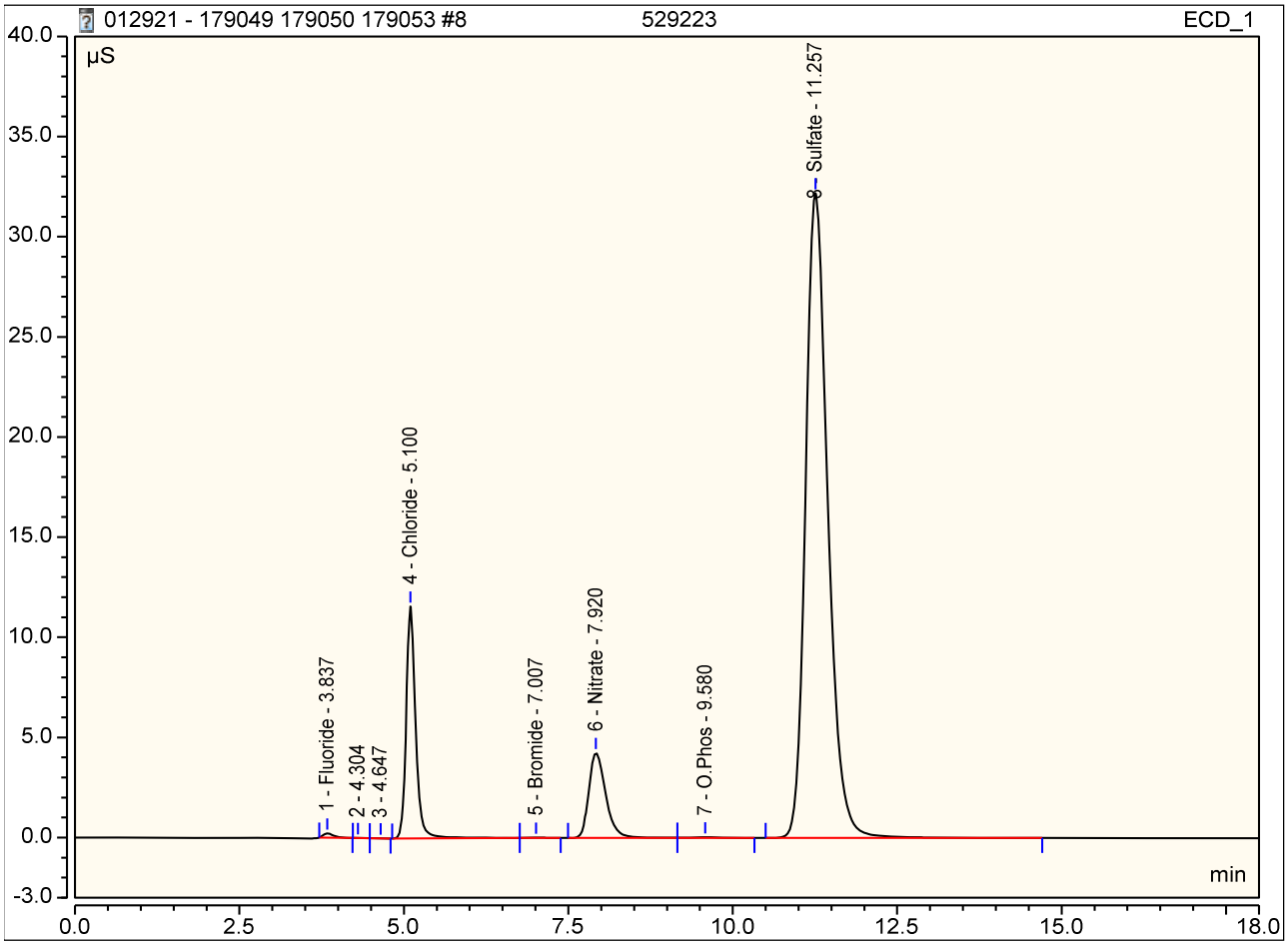
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	5.12	Chloride	0.534	3.078	2.4069
3	7.01	Bromide	0.004	0.017	0.0487
4	7.91	Nitrate	3.339	11.406	5.2916
5	9.56	O.Phos	0.014	0.026	n.a.
6	11.30	Sulfate	4.913	12.288	24.7709



Peak Integration Report

Sample Name:	**529223**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 12:57**	*Run Time:*	**18.00**

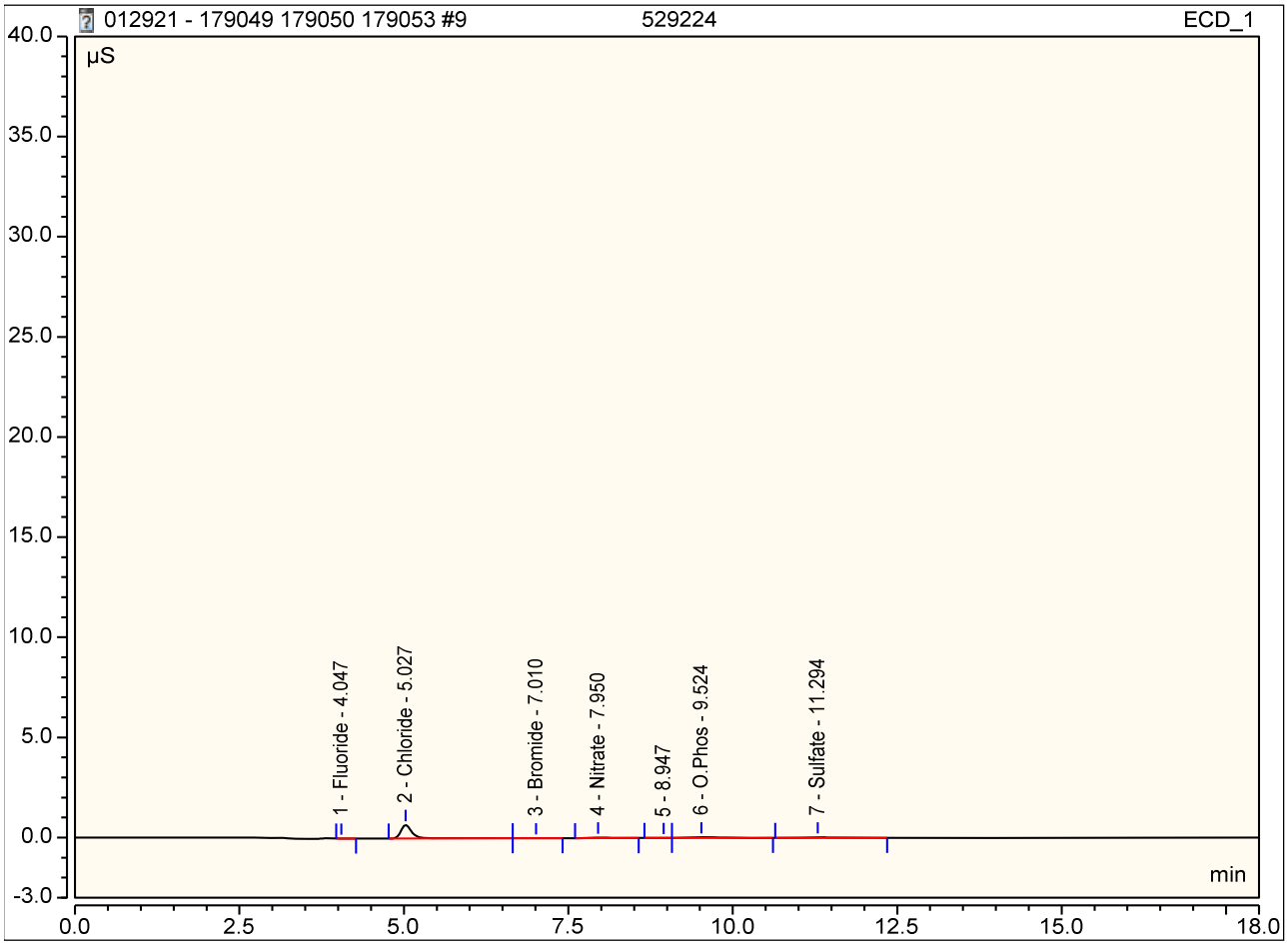
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.040	0.212	0.1602
4	5.10	Chloride	1.931	11.586	7.1037
5	7.01	Bromide	0.004	0.015	0.0429
6	7.92	Nitrate	1.260	4.241	2.0524
7	9.58	O.Phos	0.013	0.025	n.a.
8	11.26	Sulfate	12.612	32.193	62.5097



Peak Integration Report

Sample Name:	**529224**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 13:15**	*Run Time:*	**18.00**

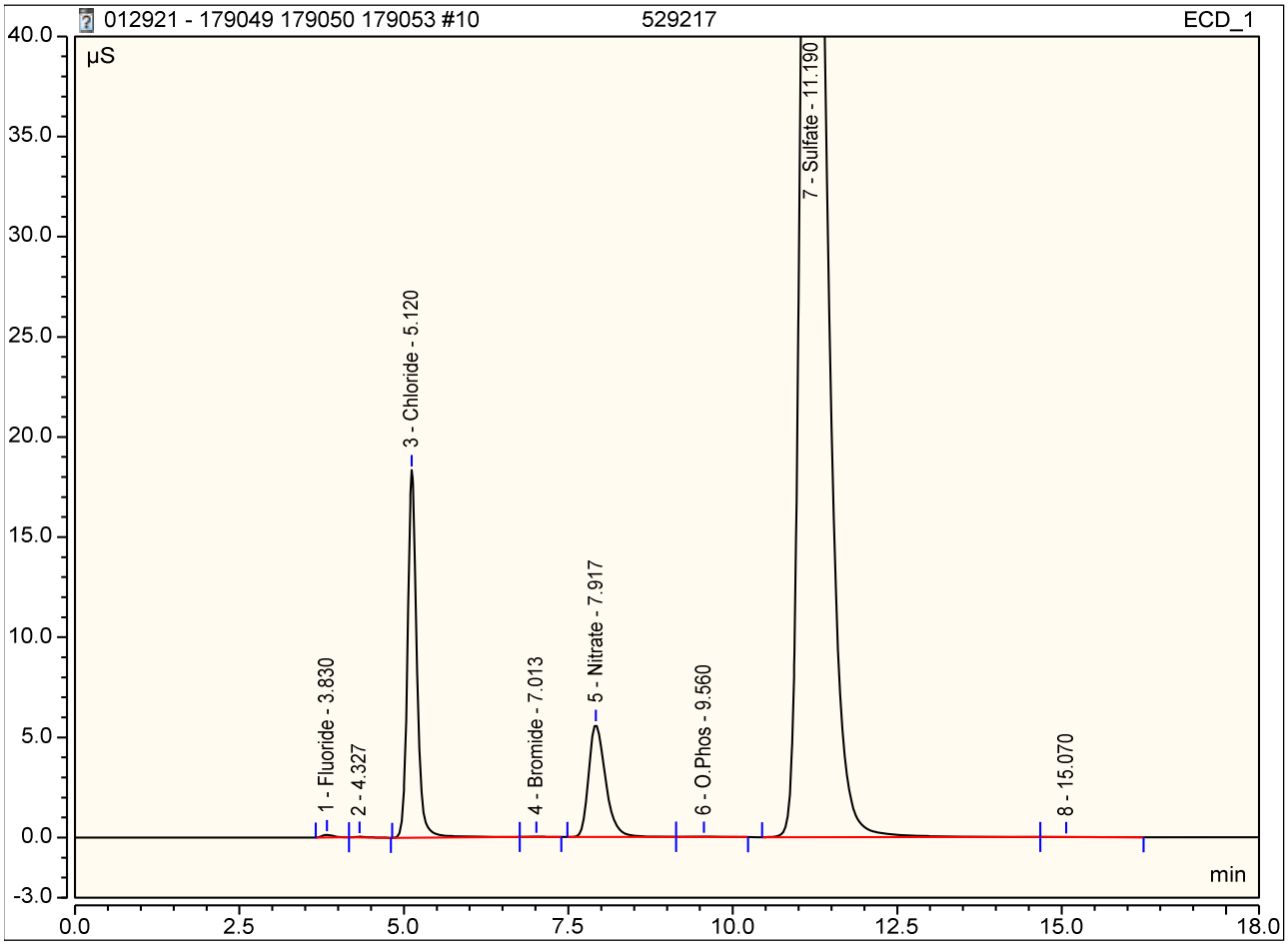
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.05	Fluoride	0.000	0.003	0.0534
2	5.03	Chloride	0.136	0.683	1.0689
3	7.01	Bromide	0.001	0.002	0.0117
4	7.95	Nitrate	0.011	0.034	0.1061
6	9.52	O.Phos	0.022	0.041	n.a.
7	11.29	Sulfate	0.013	0.030	0.7518



Peak Integration Report

Sample Name:	**529217**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 13:33**	*Run Time:*	**18.00**

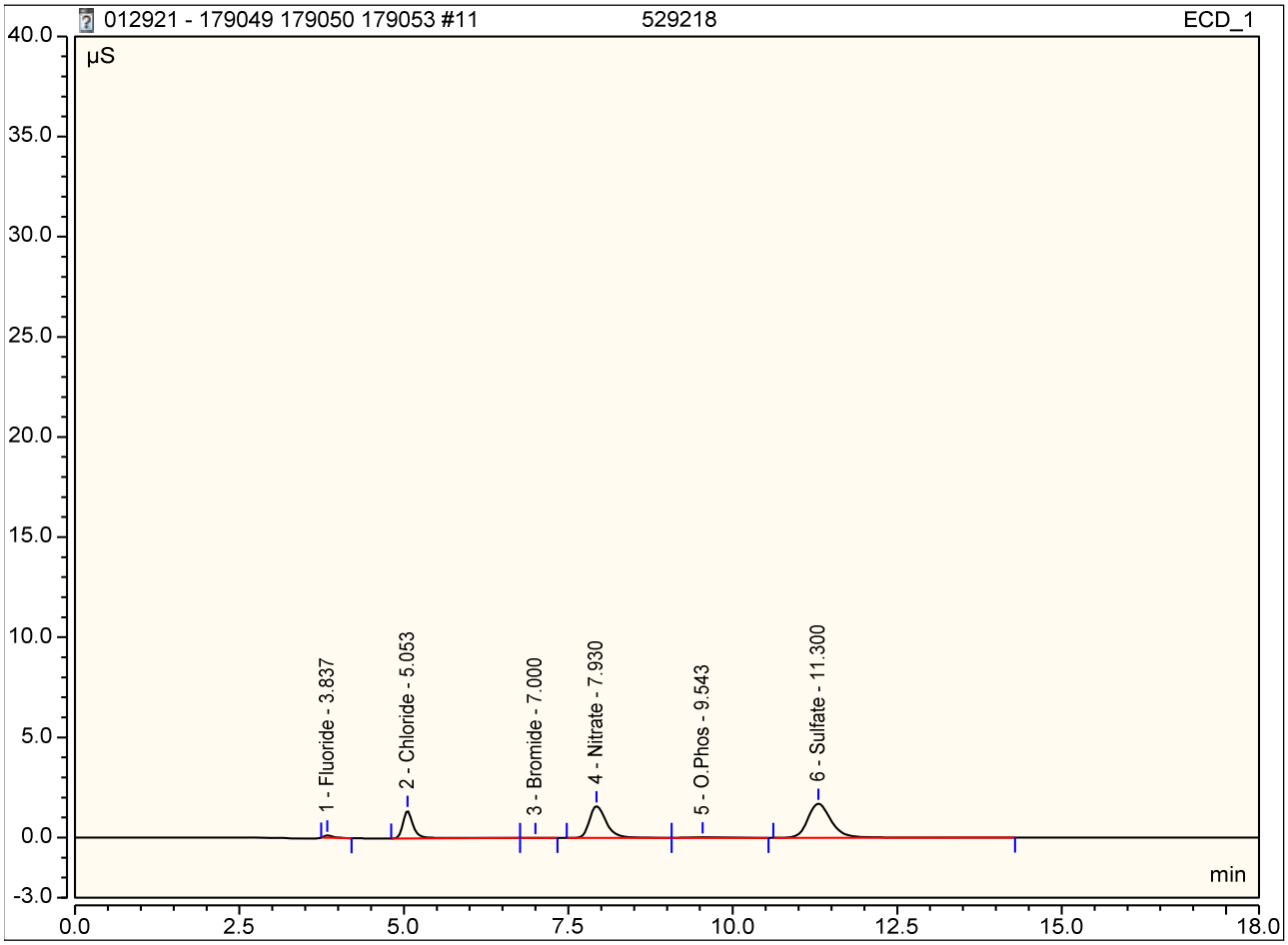
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.026	0.126	0.1223
3	5.12	Chloride	2.984	18.353	10.6430
4	7.01	Bromide	0.004	0.015	0.0432
5	7.92	Nitrate	1.672	5.596	2.6937
6	9.56	O.Phos	0.009	0.018	n.a.
7	11.19	Sulfate	31.707	78.325	156.1093



Peak Integration Report

Sample Name:	**529218**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 13:51**	*Run Time:*	**18.00**

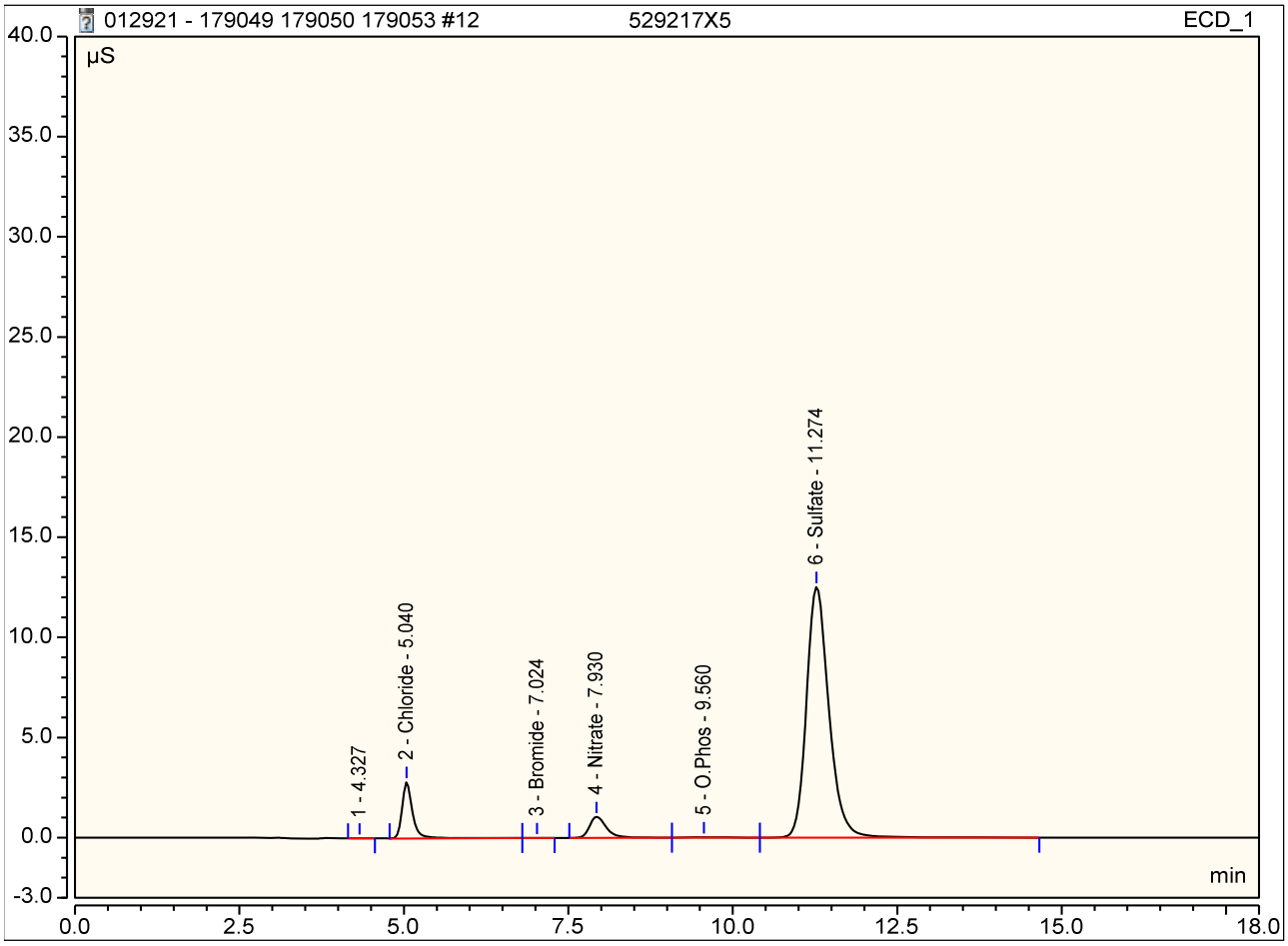
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.018	0.110	0.1010
2	5.05	Chloride	0.264	1.382	1.4969
3	7.00	Bromide	0.001	0.004	0.0162
4	7.93	Nitrate	0.472	1.585	0.8247
5	9.54	O.Phos	0.014	0.025	n.a.
6	11.30	Sulfate	0.706	1.700	4.1480



Peak Integration Report

Sample Name:	**529217X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 14:09**	*Run Time:*	**18.00**

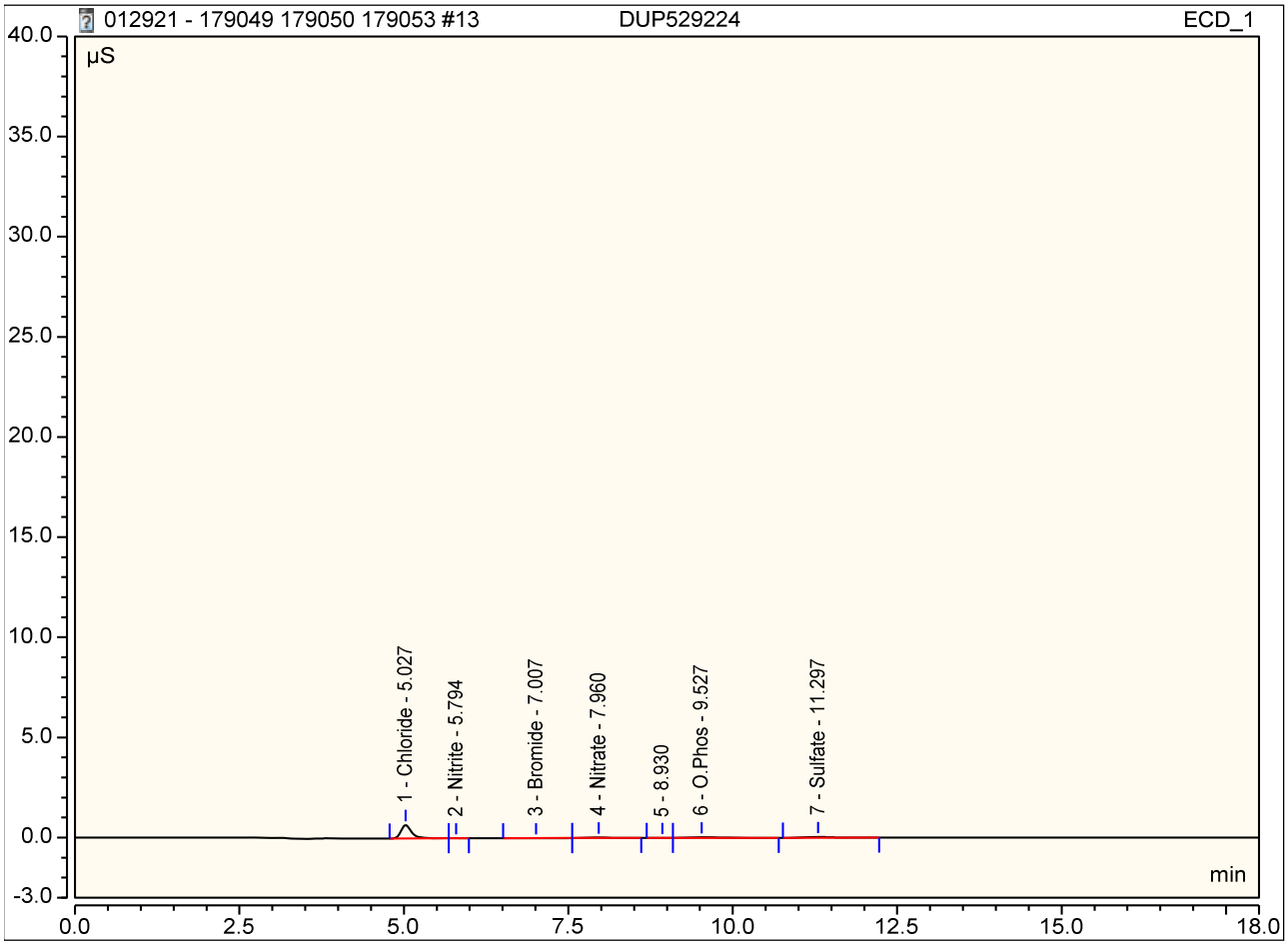
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	5.04	Chloride	0.521	2.822	2.3615
3	7.02	Bromide	0.001	0.003	0.0123
4	7.93	Nitrate	0.310	1.047	0.5719
5	9.56	O.Phos	0.010	0.019	n.a.
6	11.27	Sulfate	4.958	12.518	24.9910



Peak Integration Report

Sample Name:	**DUP529224**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 14:27**	*Run Time:*	**18.00**

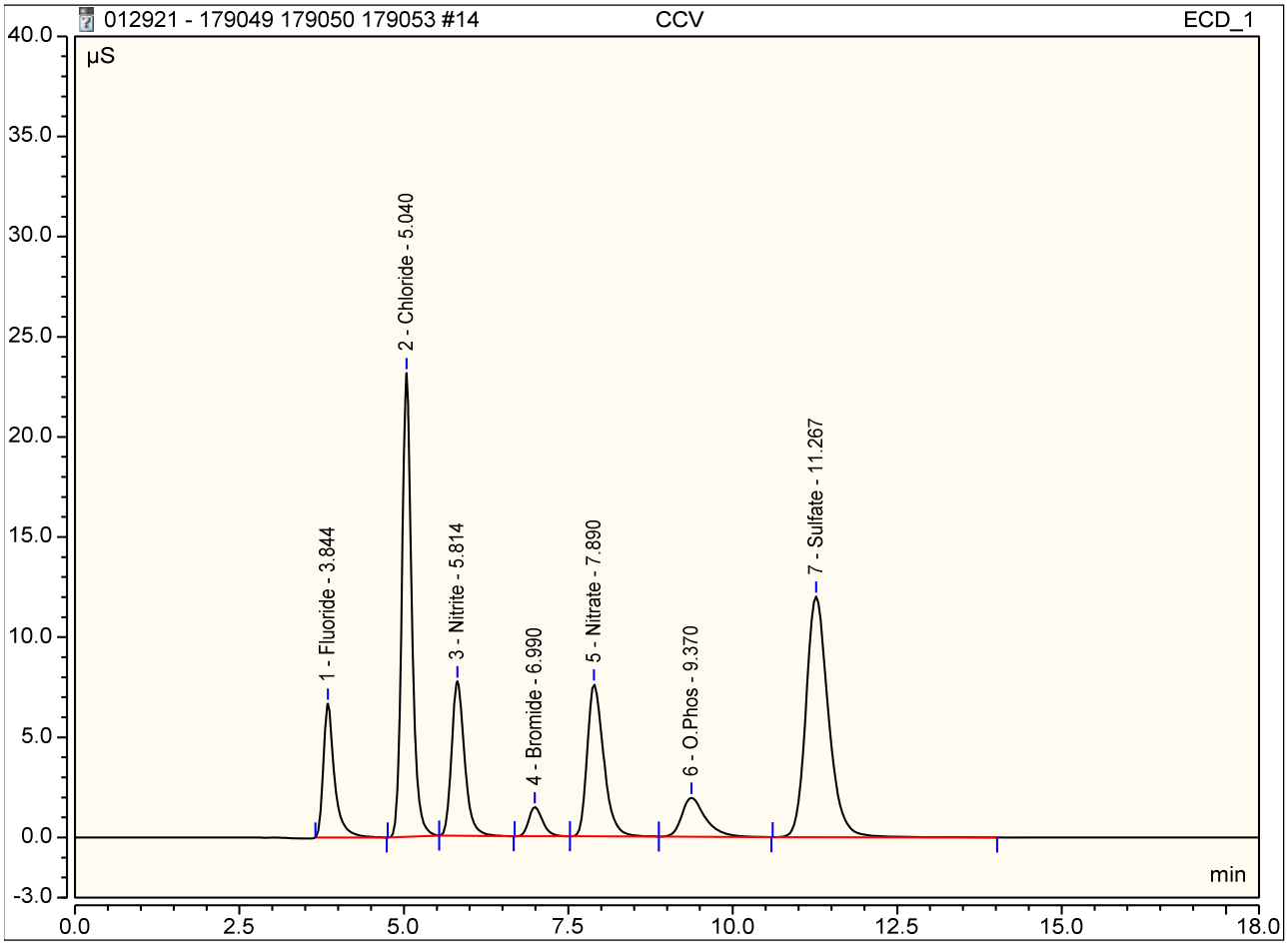
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	5.03	Chloride	0.125	0.675	1.0317
2	5.79	Nitrite	0.000	0.001	0.0324
3	7.01	Bromide	0.000	0.001	0.0102
4	7.96	Nitrate	0.010	0.032	0.1045
6	9.53	O.Phos	0.014	0.026	n.a.
7	11.30	Sulfate	0.016	0.041	0.7698



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 14:45**	*Run Time:*	**18.00**

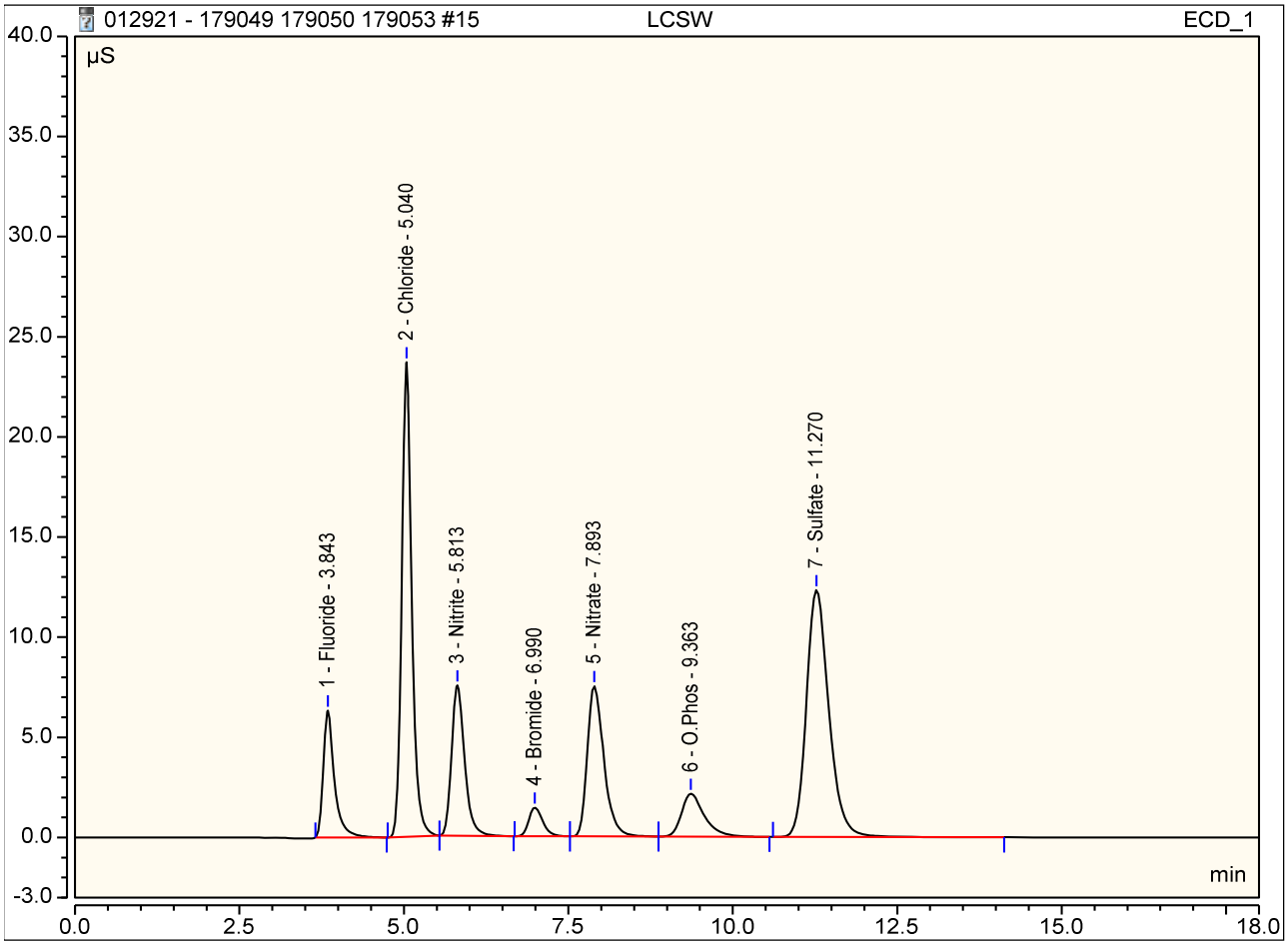
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	1.317	6.680	3.6503
2	5.04	Chloride	4.053	23.152	14.2358
3	5.81	Nitrite	1.773	7.712	3.7555
4	6.99	Bromide	0.361	1.460	3.7013
5	7.89	Nitrate	2.212	7.589	3.5351
6	9.37	O.Phos	0.807	1.944	3.3930
7	11.27	Sulfate	4.757	12.013	24.0066



Peak Integration Report

Sample Name:	**LCSW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 15:03**	*Run Time:*	**18.00**

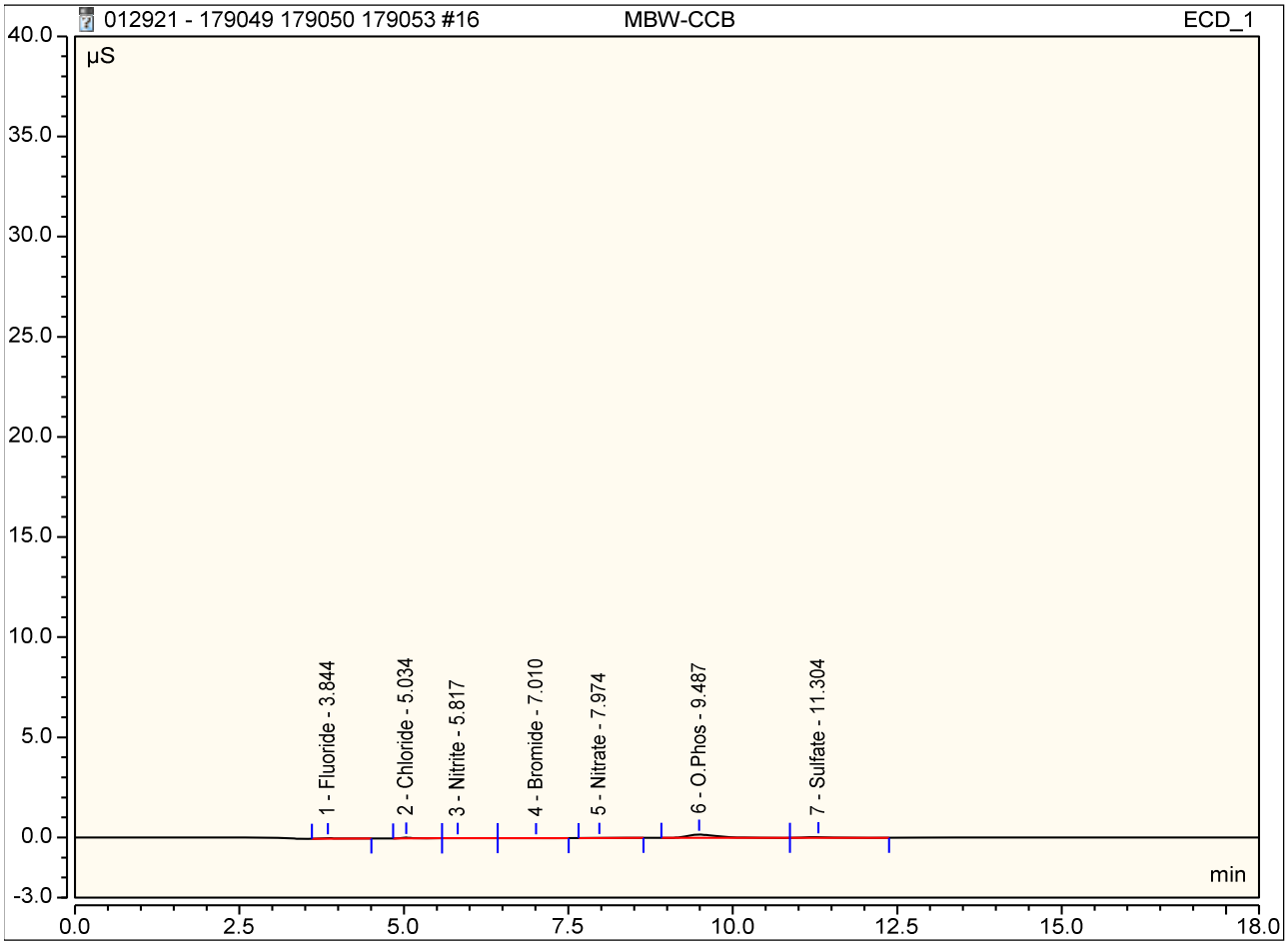
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	1.248	6.340	3.4607
2	5.04	Chloride	4.173	23.698	14.6406
3	5.81	Nitrite	1.735	7.514	3.6761
4	6.99	Bromide	0.357	1.440	3.6593
5	7.89	Nitrate	2.196	7.508	3.5100
6	9.36	O.Phos	0.865	2.144	3.6523
7	11.27	Sulfate	4.899	12.337	24.7022



Peak Integration Report

Sample Name:	**MBW-CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 15:21**	*Run Time:*	**18.00**

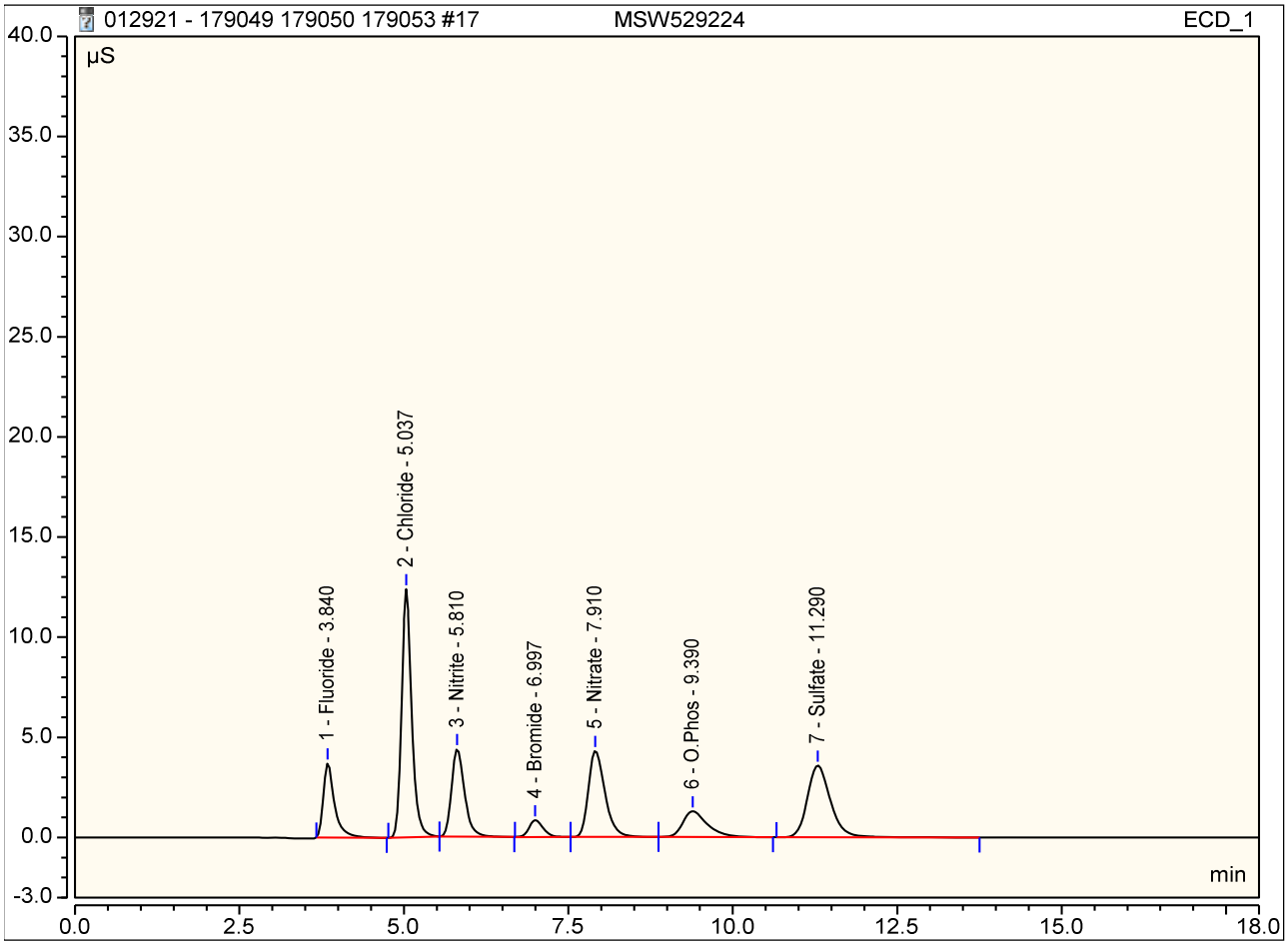
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.006	0.024	0.0686
2	5.03	Chloride	0.008	0.041	0.6392
3	5.82	Nitrite	0.004	0.014	0.0395
4	7.01	Bromide	0.001	0.003	0.0160
5	7.97	Nitrate	0.004	0.013	0.0961
6	9.49	O.Phos	0.086	0.161	0.1554
7	11.30	Sulfate	0.011	0.028	0.7453



Peak Integration Report

Sample Name:	**MSW529224**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 15:39**	*Run Time:*	**18.00**

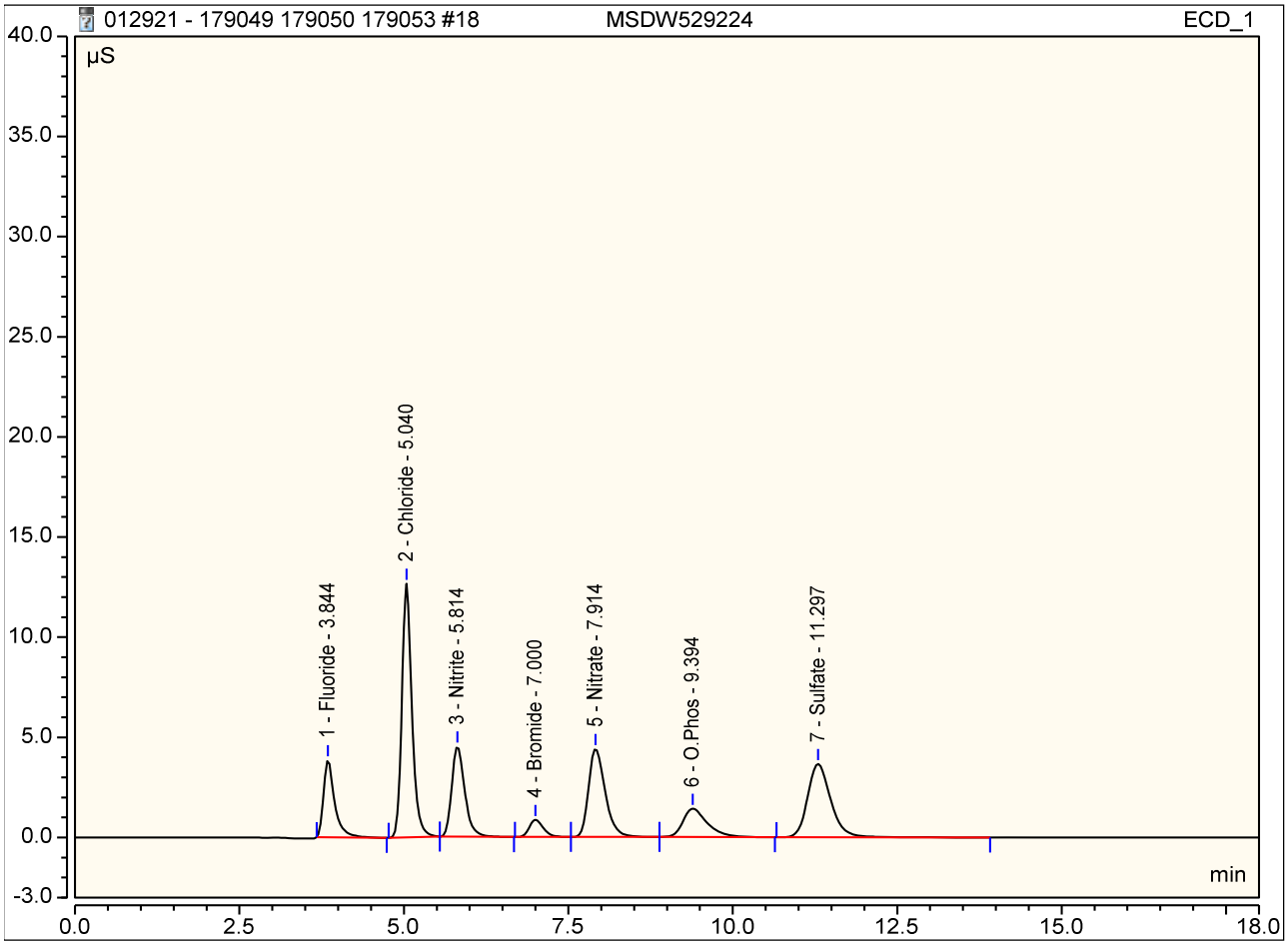
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.736	3.707	2.0638
2	5.04	Chloride	2.205	12.399	8.0237
3	5.81	Nitrite	1.008	4.378	2.1488
4	7.00	Bromide	0.209	0.840	2.1424
5	7.91	Nitrate	1.262	4.299	2.0560
6	9.39	O.Phos	0.561	1.287	2.2910
7	11.29	Sulfate	1.461	3.585	7.8517



Peak Integration Report

Sample Name:	**MSDW529224**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 15:57**	*Run Time:*	**18.00**

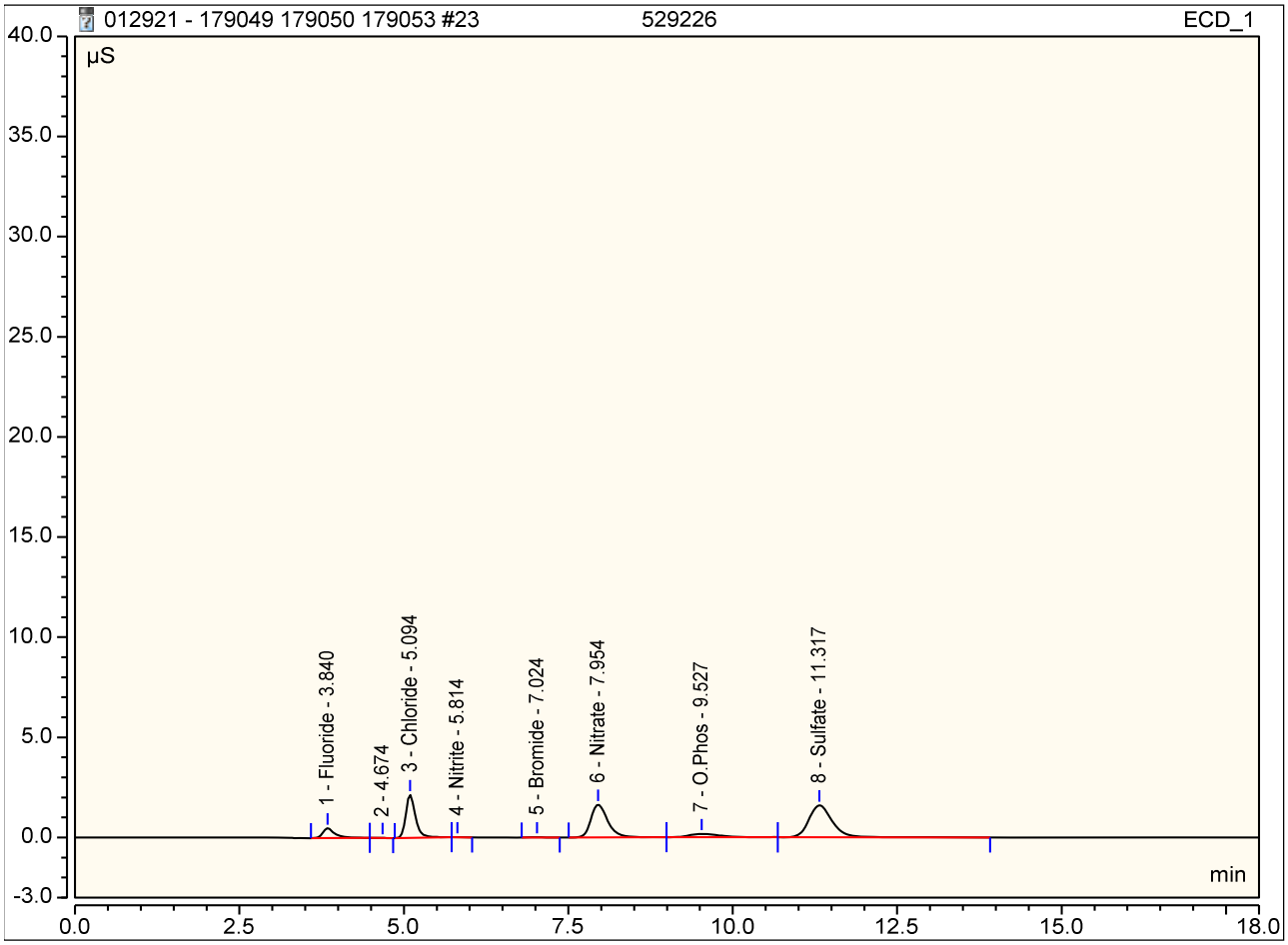
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.764	3.856	2.1392
2	5.04	Chloride	2.253	12.665	8.1838
3	5.81	Nitrite	1.038	4.512	2.2115
4	7.00	Bromide	0.213	0.857	2.1865
5	7.91	Nitrate	1.291	4.394	2.1007
6	9.39	O.Phos	0.610	1.416	2.5068
7	11.30	Sulfate	1.492	3.663	8.0040



Peak Integration Report

Sample Name:	**529226**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 17:28**	*Run Time:*	**18.00**

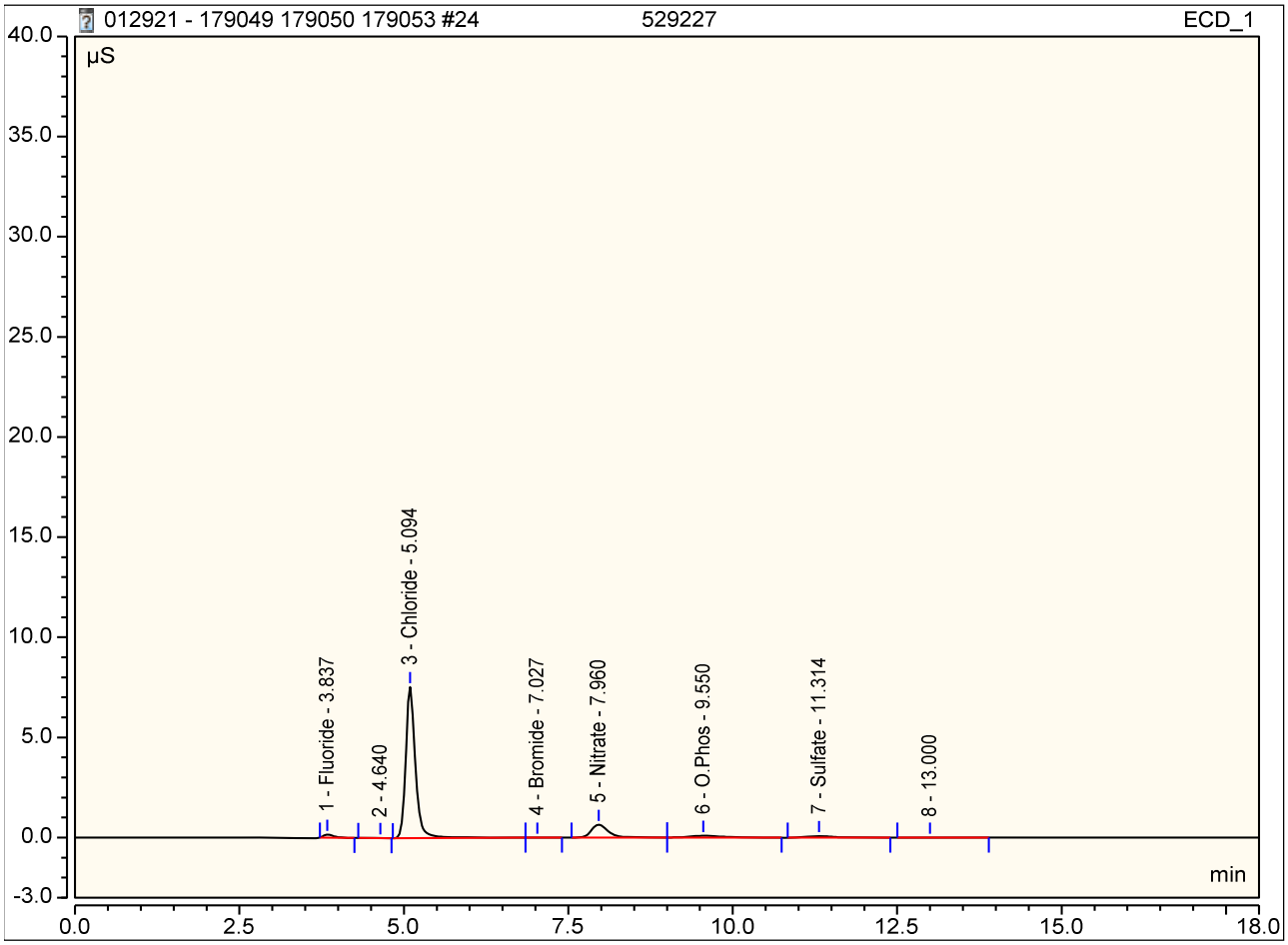
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.103	0.482	0.3345
3	5.09	Chloride	0.372	2.151	1.8629
4	5.81	Nitrite	0.001	0.003	0.0330
5	7.02	Bromide	0.002	0.007	0.0225
6	7.95	Nitrate	0.487	1.630	0.8486
7	9.53	O.Phos	0.093	0.171	0.1895
8	11.32	Sulfate	0.660	1.599	3.9260



Peak Integration Report

Sample Name:	**529227**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 17:46**	*Run Time:*	**18.00**

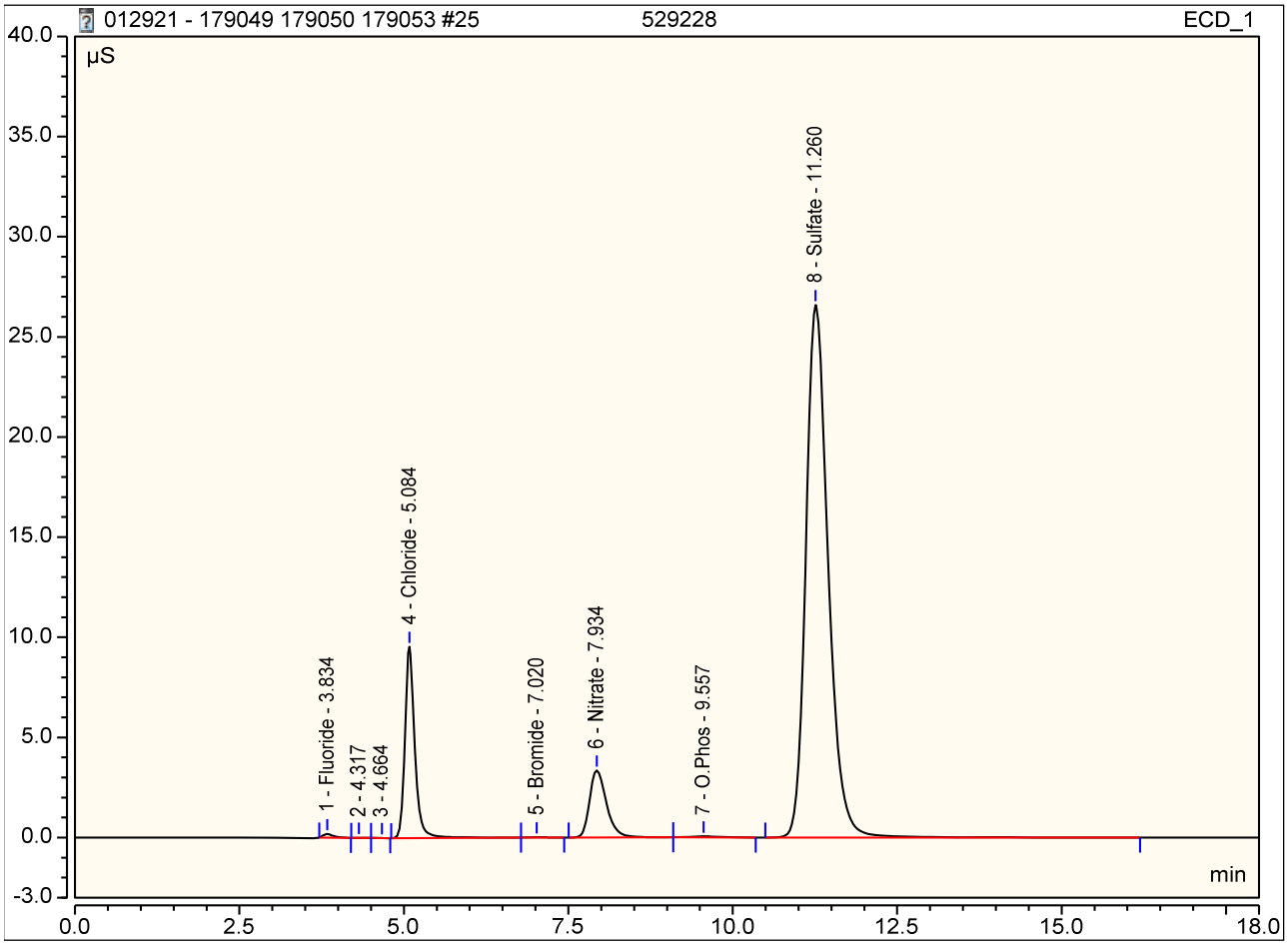
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.026	0.150	0.1243
3	5.09	Chloride	1.296	7.544	4.9669
4	7.03	Bromide	0.001	0.004	0.0143
5	7.96	Nitrate	0.188	0.633	0.3826
6	9.55	O.Phos	0.046	0.084	n.a.
7	11.31	Sulfate	0.032	0.079	0.8464



Peak Integration Report

Sample Name:	**529228**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 18:04**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.031	0.176	0.1380
4	5.08	Chloride	1.658	9.559	6.1853
5	7.02	Bromide	0.004	0.015	0.0419
6	7.93	Nitrate	1.000	3.352	1.6478
7	9.56	O.Phos	0.025	0.048	n.a.
8	11.26	Sulfate	10.444	26.580	51.8858

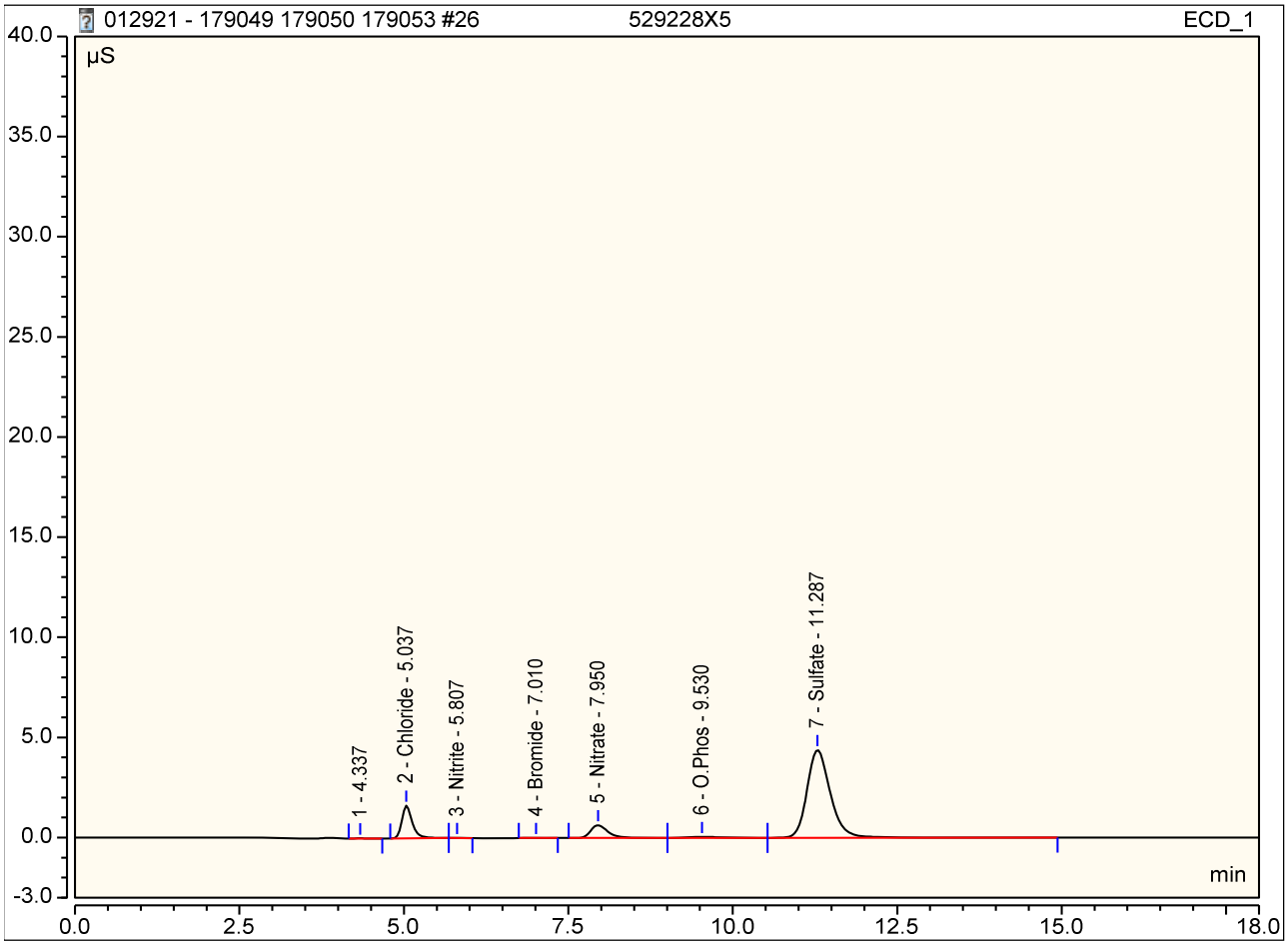


NOT USED

Peak Integration Report

Sample Name:	**529228X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 18:22**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	5.04	Chloride	0.302	1.632	1.6255
3	5.81	Nitrite	0.001	0.004	0.0335
4	7.01	Bromide	0.001	0.004	0.0158
5	7.95	Nitrate	0.194	0.638	0.3915
6	9.53	O.Phos	0.026	0.047	n.a.
7	11.29	Sulfate	1.806	4.383	9.5442



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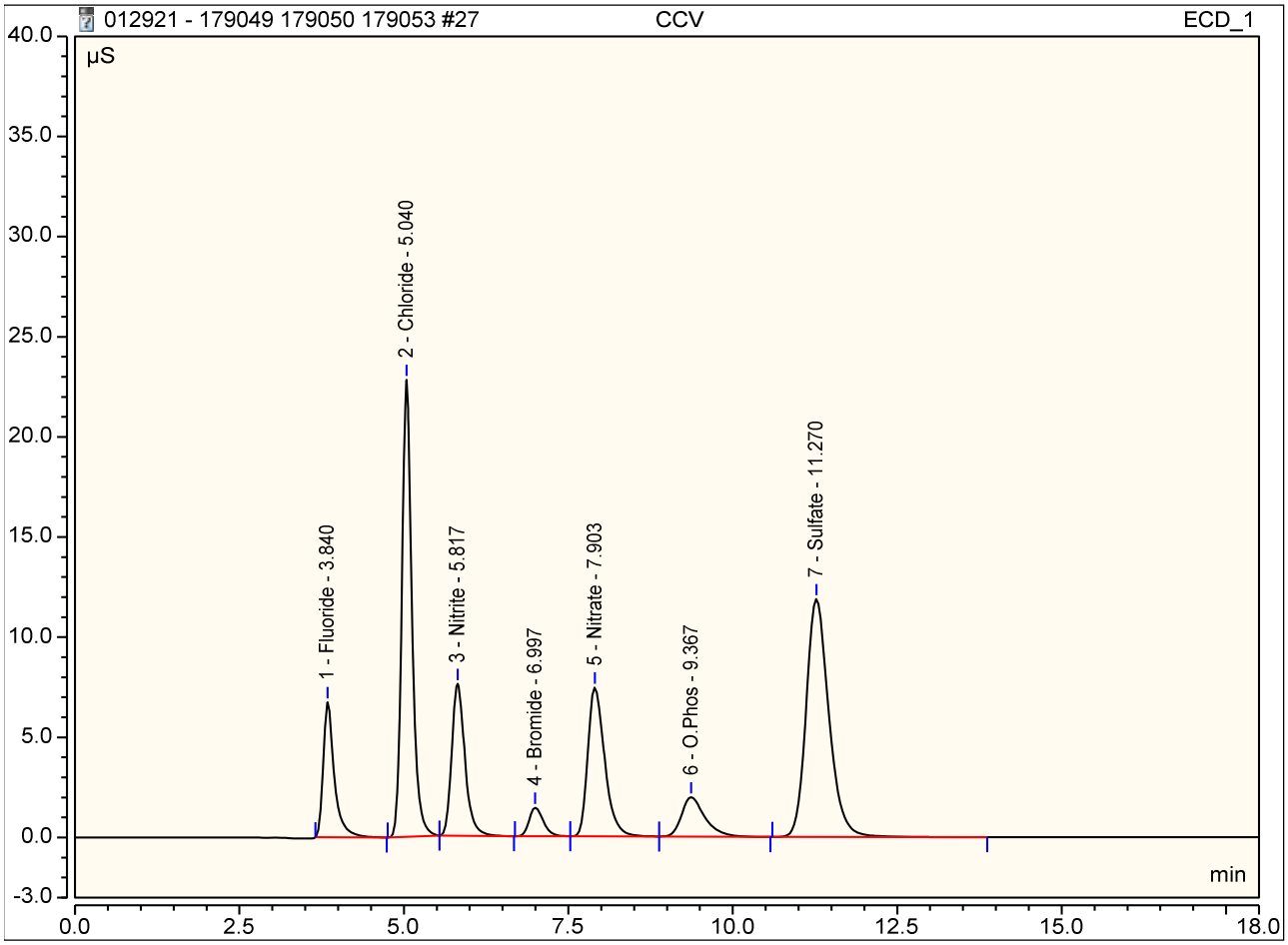
Version 7.2.9.11323

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 18:40**	*Run Time:*	**18.00**

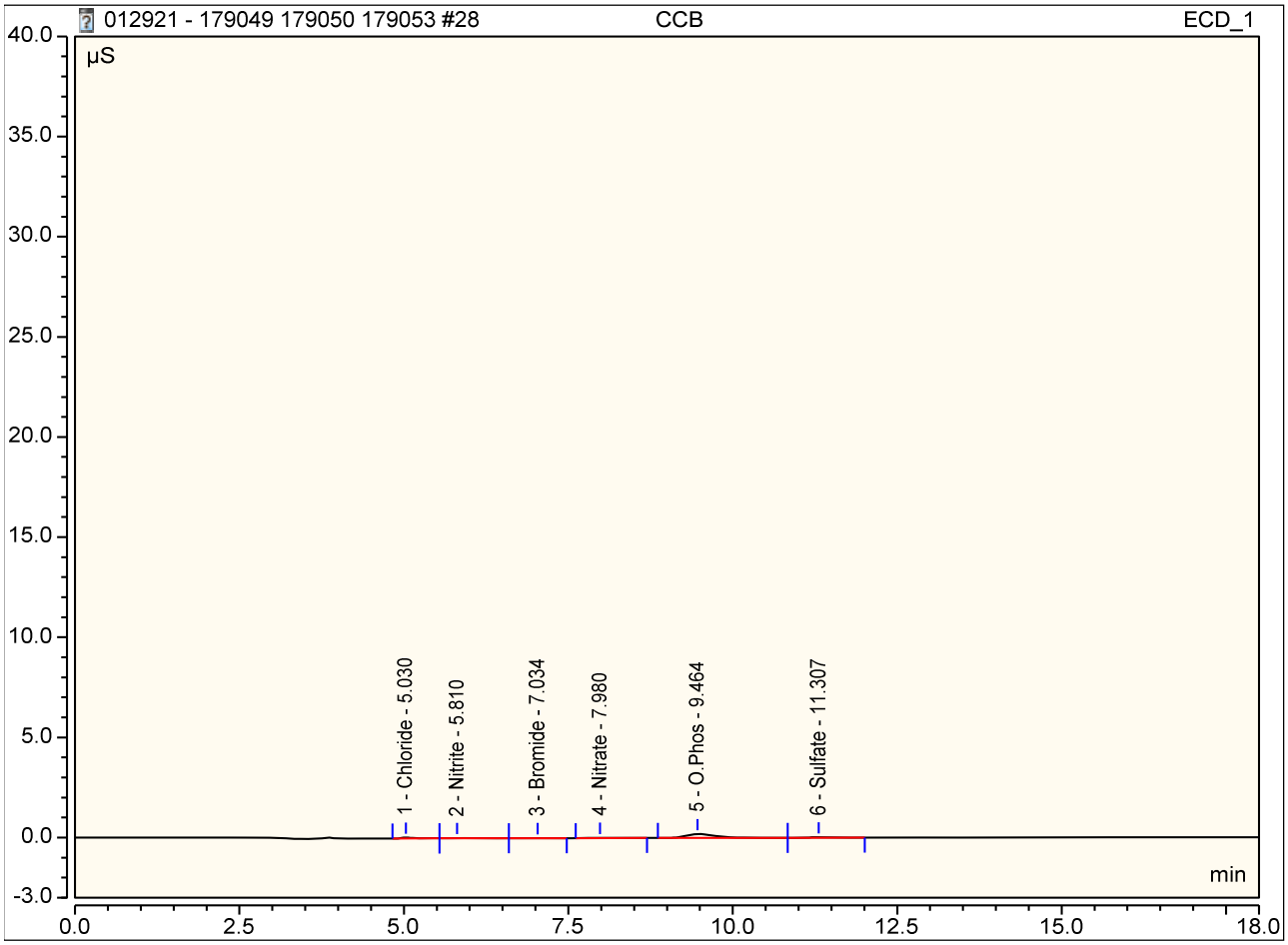
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	1.325	6.750	3.6713
2	5.04	Chloride	4.063	22.819	14.2698
3	5.82	Nitrite	1.774	7.583	3.7579
4	7.00	Bromide	0.362	1.433	3.7109
5	7.90	Nitrate	2.220	7.434	3.5485
6	9.37	O.Phos	0.814	1.968	3.4240
7	11.27	Sulfate	4.774	11.881	24.0898



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 18:58**	*Run Time:*	**18.00**

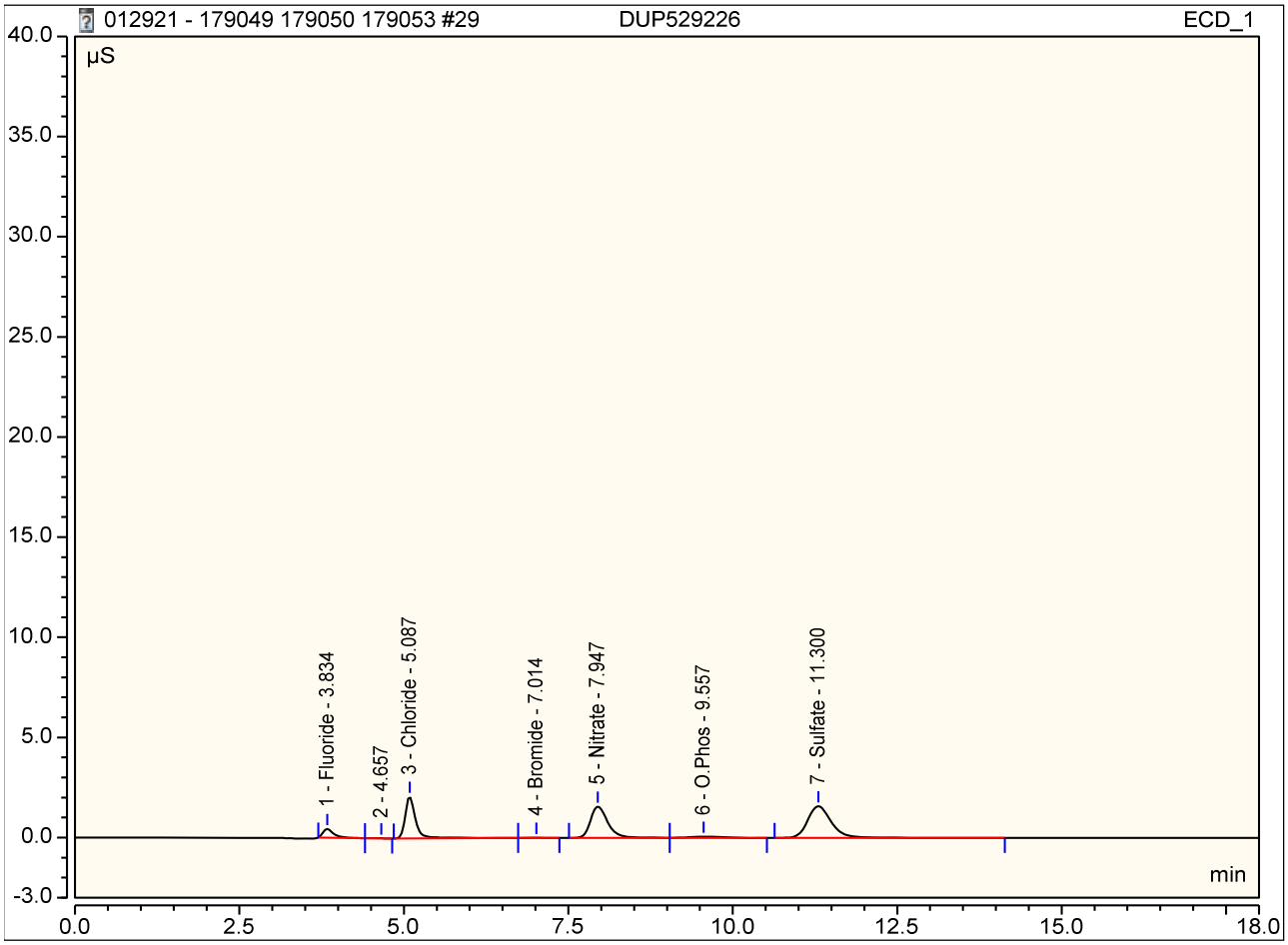
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	5.03	Chloride	0.010	0.049	0.6449
2	5.81	Nitrite	0.005	0.018	0.0420
3	7.03	Bromide	0.001	0.004	0.0180
4	7.98	Nitrate	0.005	0.017	0.0979
5	9.46	O.Phos	0.101	0.192	0.2223
6	11.31	Sulfate	0.008	0.021	0.7305



Peak Integration Report

Sample Name:	**DUP529226**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 19:16**	*Run Time:*	**18.00**

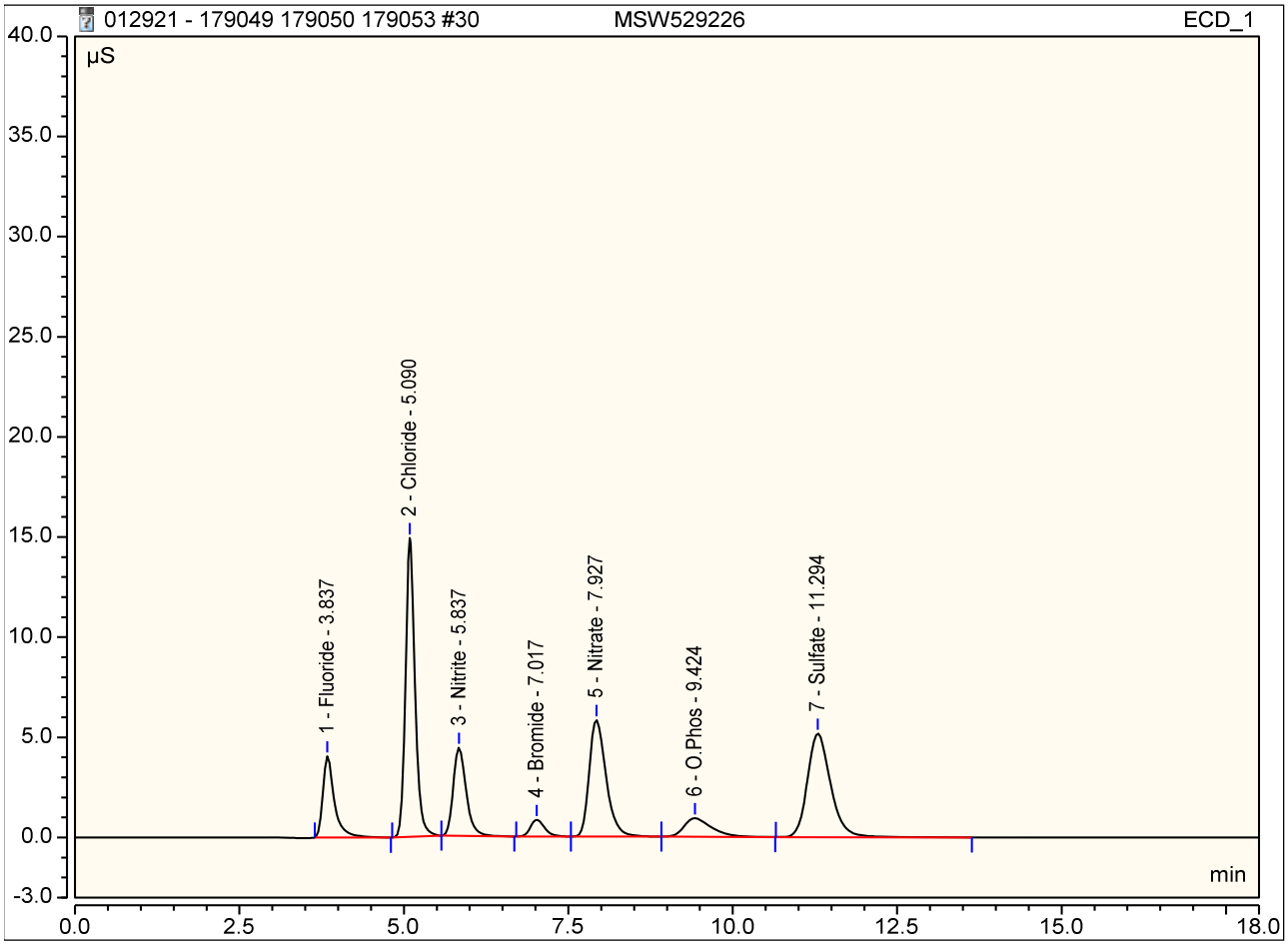
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.082	0.436	0.2771
3	5.09	Chloride	0.391	2.094	1.9249
4	7.01	Bromide	0.002	0.006	0.0215
5	7.95	Nitrate	0.475	1.563	0.8289
6	9.56	O.Phos	0.031	0.057	n.a.
7	11.30	Sulfate	0.660	1.584	3.9256



Peak Integration Report

Sample Name:	**MSW529226**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 19:34**	*Run Time:*	**18.00**

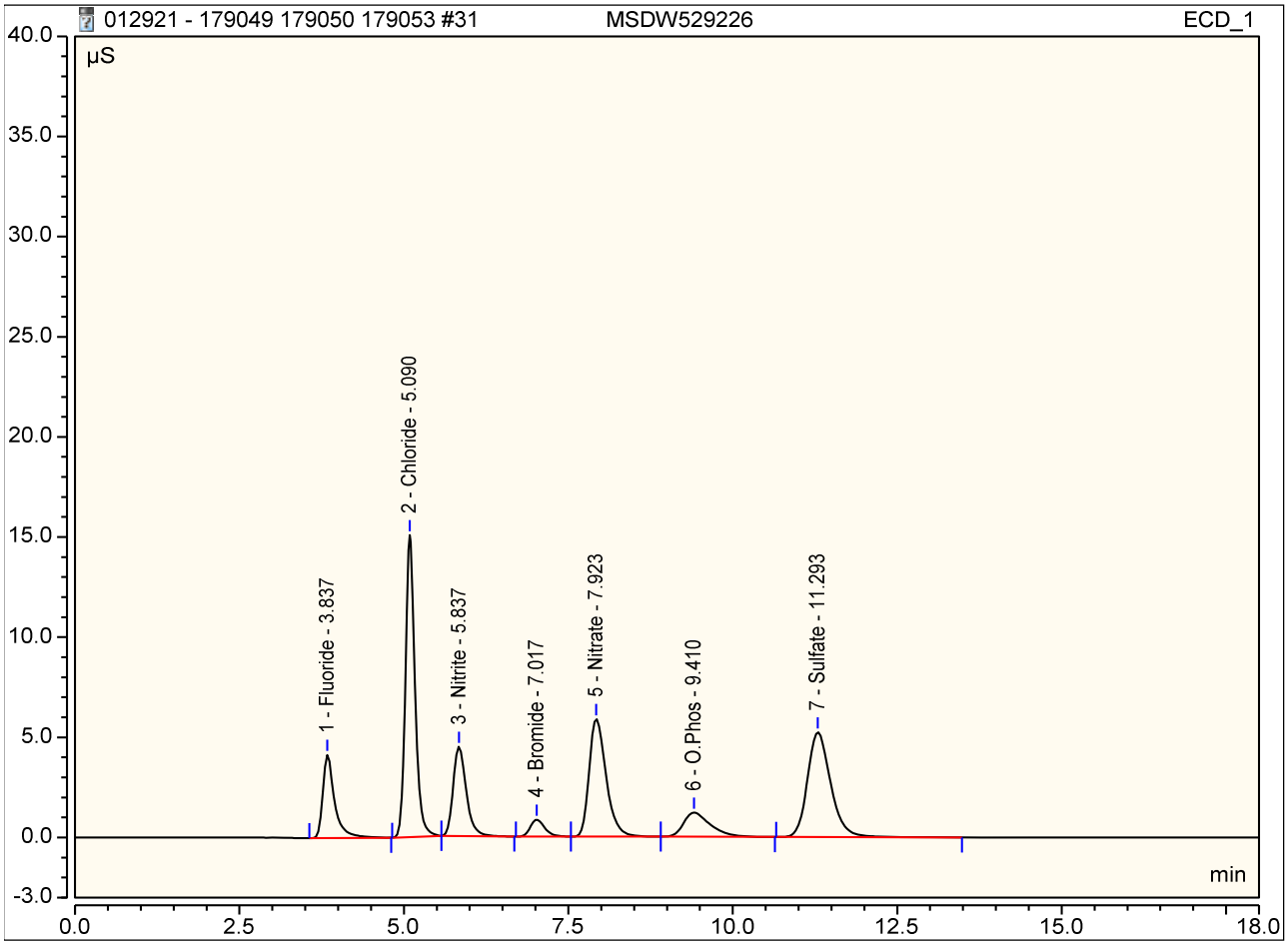
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.832	4.058	2.3242
2	5.09	Chloride	2.492	14.920	8.9889
3	5.84	Nitrite	1.008	4.405	2.1476
4	7.02	Bromide	0.209	0.832	2.1427
5	7.93	Nitrate	1.735	5.818	2.7923
6	9.42	O.Phos	0.447	0.927	1.7777
7	11.29	Sulfate	2.112	5.173	11.0429



Peak Integration Report

Sample Name:	**MSDW529226**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 19:52**	*Run Time:*	**18.00**

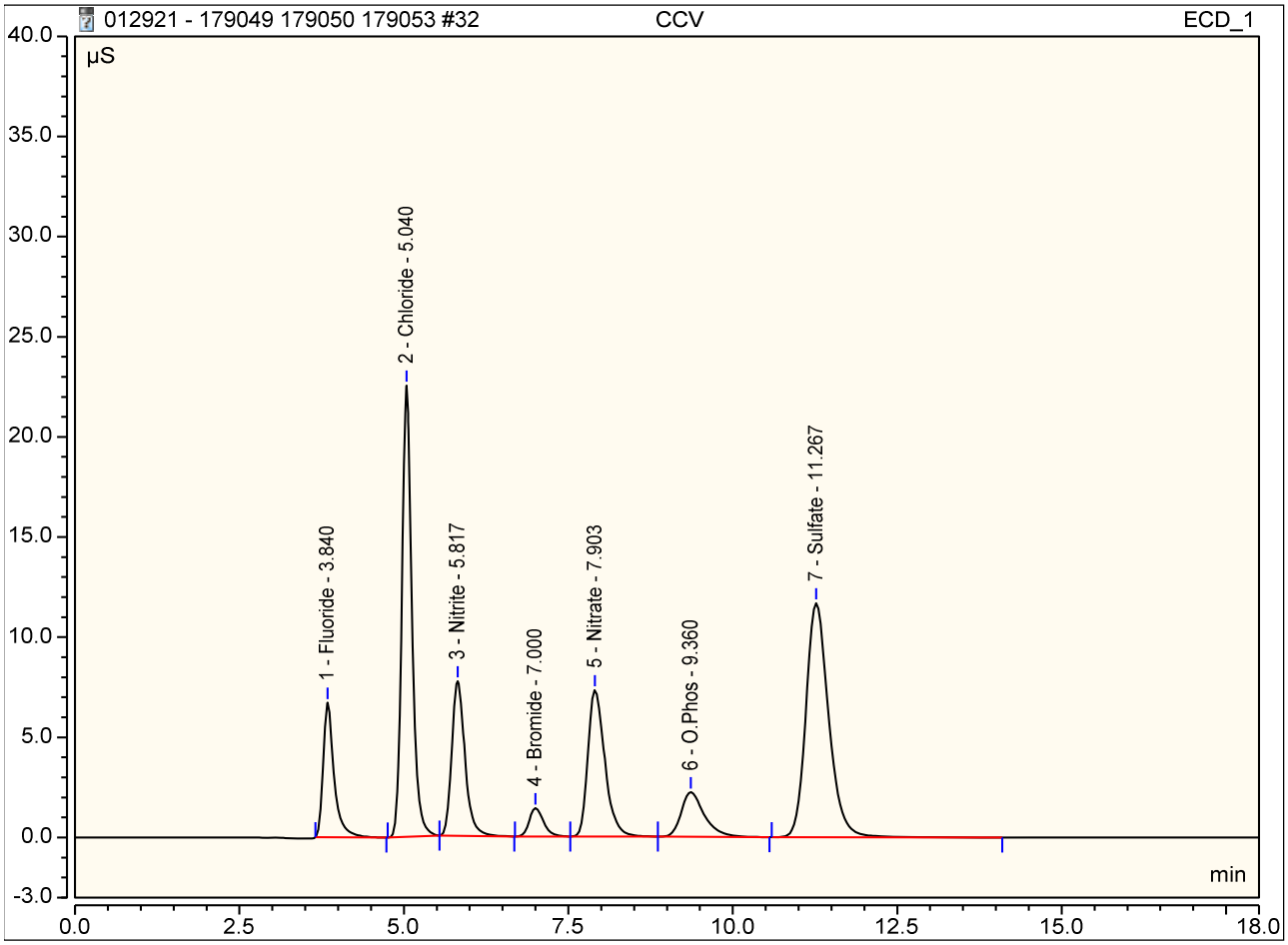
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.868	4.156	2.4237
2	5.09	Chloride	2.534	15.077	9.1303
3	5.84	Nitrite	1.028	4.459	2.1908
4	7.02	Bromide	0.214	0.845	2.1959
5	7.92	Nitrate	1.764	5.872	2.8371
6	9.41	O.Phos	0.571	1.207	2.3337
7	11.29	Sulfate	2.144	5.232	11.1991



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 20:10**	*Run Time:*	**18.00**

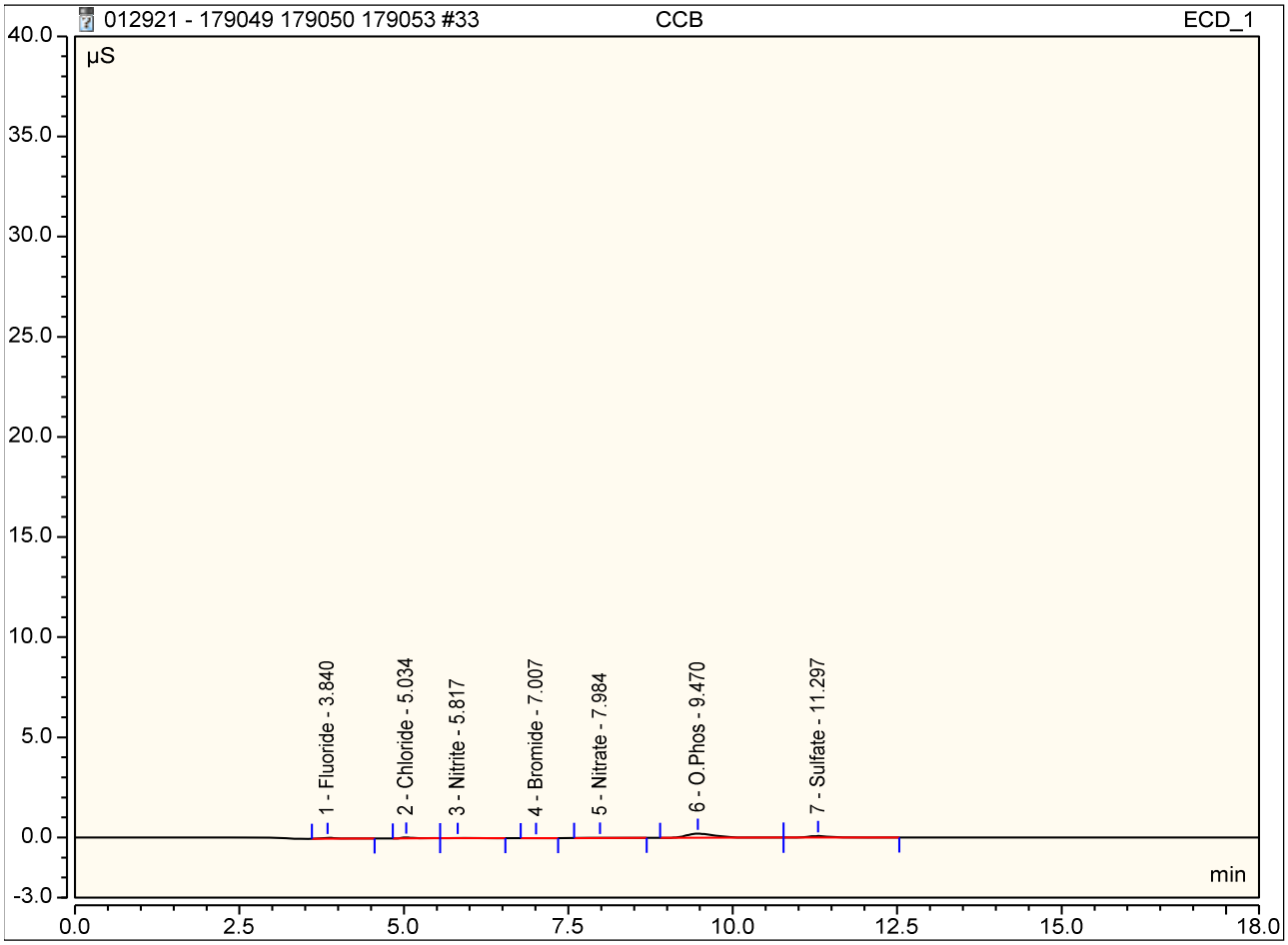
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	1.302	6.720	3.6080
2	5.04	Chloride	4.001	22.538	14.0630
3	5.82	Nitrite	1.803	7.722	3.8180
4	7.00	Bromide	0.357	1.411	3.6575
5	7.90	Nitrate	2.188	7.311	3.4974
6	9.36	O.Phos	0.910	2.221	3.8550
7	11.27	Sulfate	4.697	11.691	23.7113



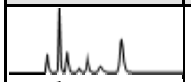
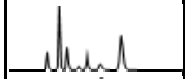
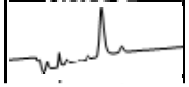
Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**29-Jan-2021 / 20:28**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.011	0.044	0.0811
2	5.03	Chloride	0.009	0.045	0.6404
3	5.82	Nitrite	0.004	0.017	0.0412
4	7.01	Bromide	0.001	0.003	0.0150
5	7.98	Nitrate	0.005	0.015	0.0971
6	9.47	O.Phos	0.107	0.205	0.2525
7	11.30	Sulfate	0.033	0.080	0.8499



Sequence: 012621 - 178910 178911 178954
Last Update Operator: AQUION

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	CCV	1.0000	Unknown		2	5000	Anions	IC3449A	Finished
	LCSW	1.0000	Unknown		3	5000	Anions	IC3449A	Finished
	MBW	1.0000	Unknown		4	5000	Anions	IC3449A	Finished
	527961	1.0000	Unknown		12	5000	Anions	IC3449A	Finished
	527962	1.0000	Unknown		13	5000	Anions	IC3449A	Finished
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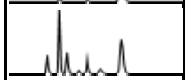
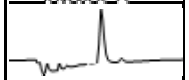
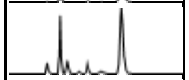
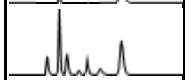
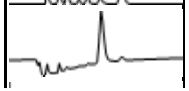
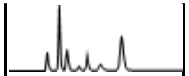
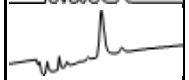
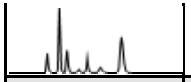
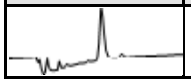
	CCV	1.0000	Unknown		15	5000	Anions	IC3449A	Finished
	CCB	1.0000	Unknown		16	5000	Anions	IC3449A	Finished
	527964	1.0000	Unknown		17	5000	Anions	IC3449A	Finished

Sequence: 012621 - 178910 178911 178954
Last Update Operator: AQUION

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	527965	1.0000	Unknown		18	5000	Anions	IC3449A	Finished
	527966	1.0000	Unknown		19	5000	Anions	IC3449A	Finished
	DUP527966	1.0000	Unknown		20	5000	Anions	IC3449A	Finished
	MSW527966	1.0000	Unknown		21	5000	Anions	IC3449A	Finished
	MSDW527966	1.0000	Unknown		22	5000	Anions	IC3449A	Finished
	527967	1.0000	Unknown		23	5000	Anions	IC3449A	Finished
	527963X5	1.0000	Unknown		24	5000	Anions	IC3449A	Finished
	527964X5	1.0000	Unknown		25	5000	Anions	IC3449A	Finished
	527967X5	1.0000	Unknown		26	5000	Anions	IC3449A	Finished
	CCV	1.0000	Unknown		27	5000	Anions	IC3449A	Finished
	CCB	1.0000	Unknown		28	5000	Anions	IC3449A	Finished
	CCV	1.0000	Unknown		31	5000	Anions	IC3449A	Finished
	CCB	1.0000	Unknown		32	5000	Anions	IC3449A	Finished
	527961X5	1.0000	Unknown		33	5000	Anions	IC3449A	Finished

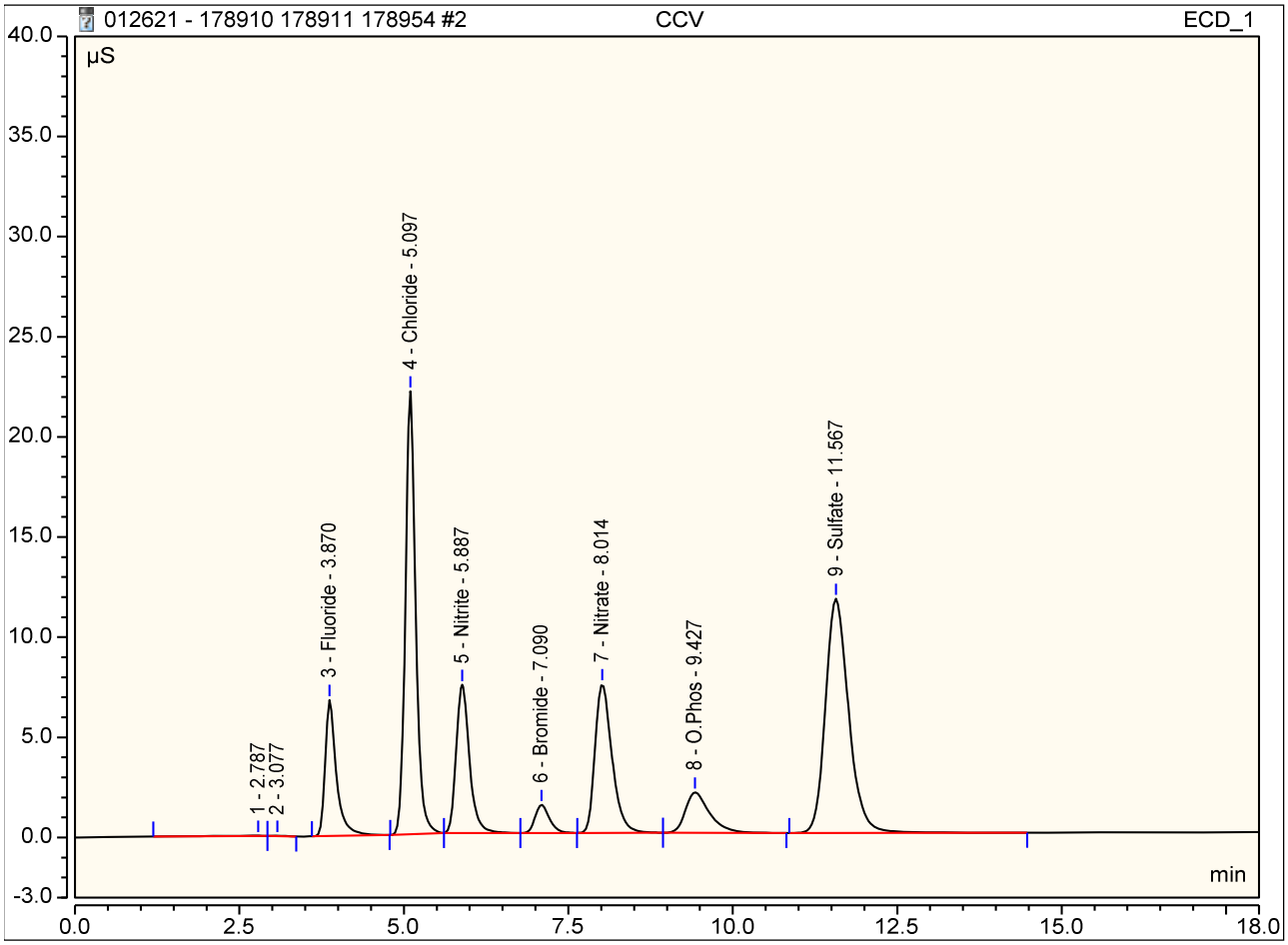
Page 1366

	CCV	1.0000	Unknown		34	5000	Anions	IC3449A	Finished
ECD_1	**Name**	**Dilution**	**Type**	**Level**	**Position**	**Volume**	**Instrument Method**	**Processing Method**	**Status**
	CCB	1.0000	Unknown		35	5000	Anions	IC3449A	Finished

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 11:40**	*Run Time:*	**18.00**

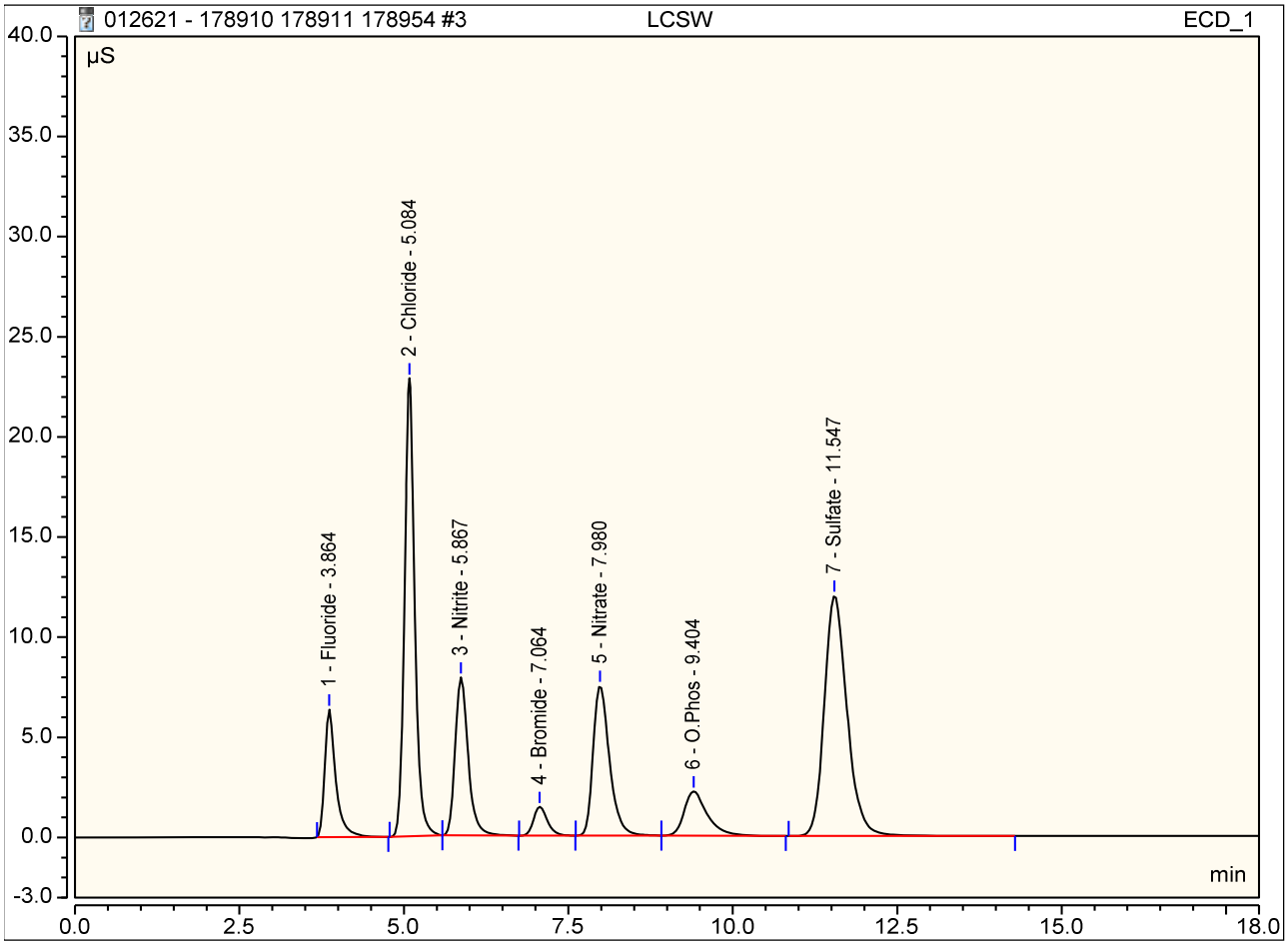
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
3	3.87	Fluoride	1.351	6.800	3.7440
4	5.10	Chloride	4.027	22.114	14.1492
5	5.89	Nitrite	1.729	7.395	3.6633
6	7.09	Bromide	0.355	1.401	3.6386
7	8.01	Nitrate	2.222	7.425	3.5511
8	9.43	O.Phos	0.859	2.012	3.6249
9	11.57	Sulfate	4.784	11.691	24.1396



Peak Integration Report

Sample Name:	**LCSW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 11:58**	*Run Time:*	**18.00**

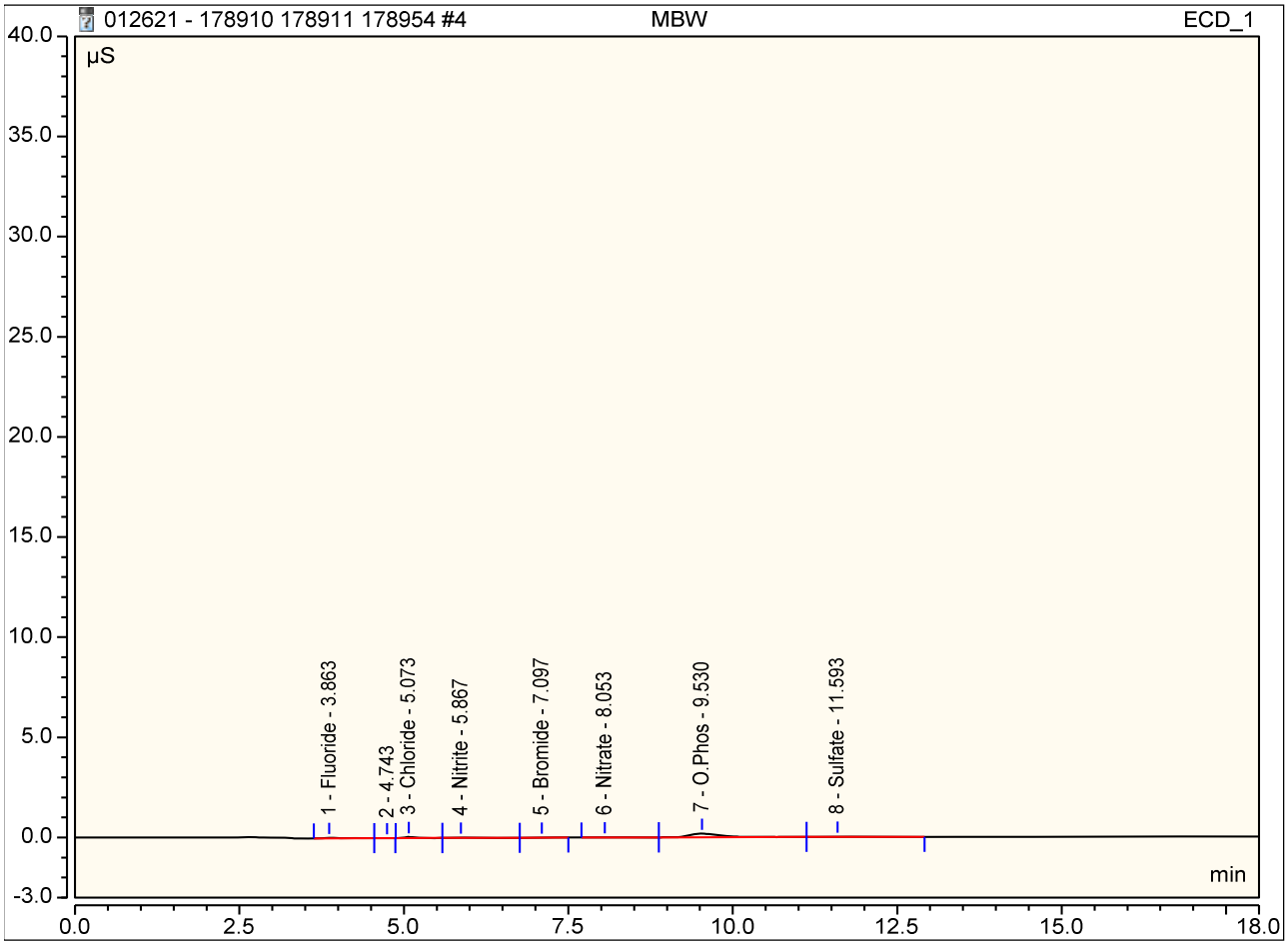
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	1.245	6.371	3.4531
2	5.08	Chloride	4.095	22.868	14.3786
3	5.87	Nitrite	1.810	7.883	3.8319
4	7.06	Bromide	0.354	1.441	3.6271
5	7.98	Nitrate	2.160	7.486	3.4547
6	9.40	O.Phos	0.899	2.212	3.8087
7	11.55	Sulfate	4.824	12.009	24.3346



Peak Integration Report

Sample Name:	**MBW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 12:16**	*Run Time:*	**18.00**

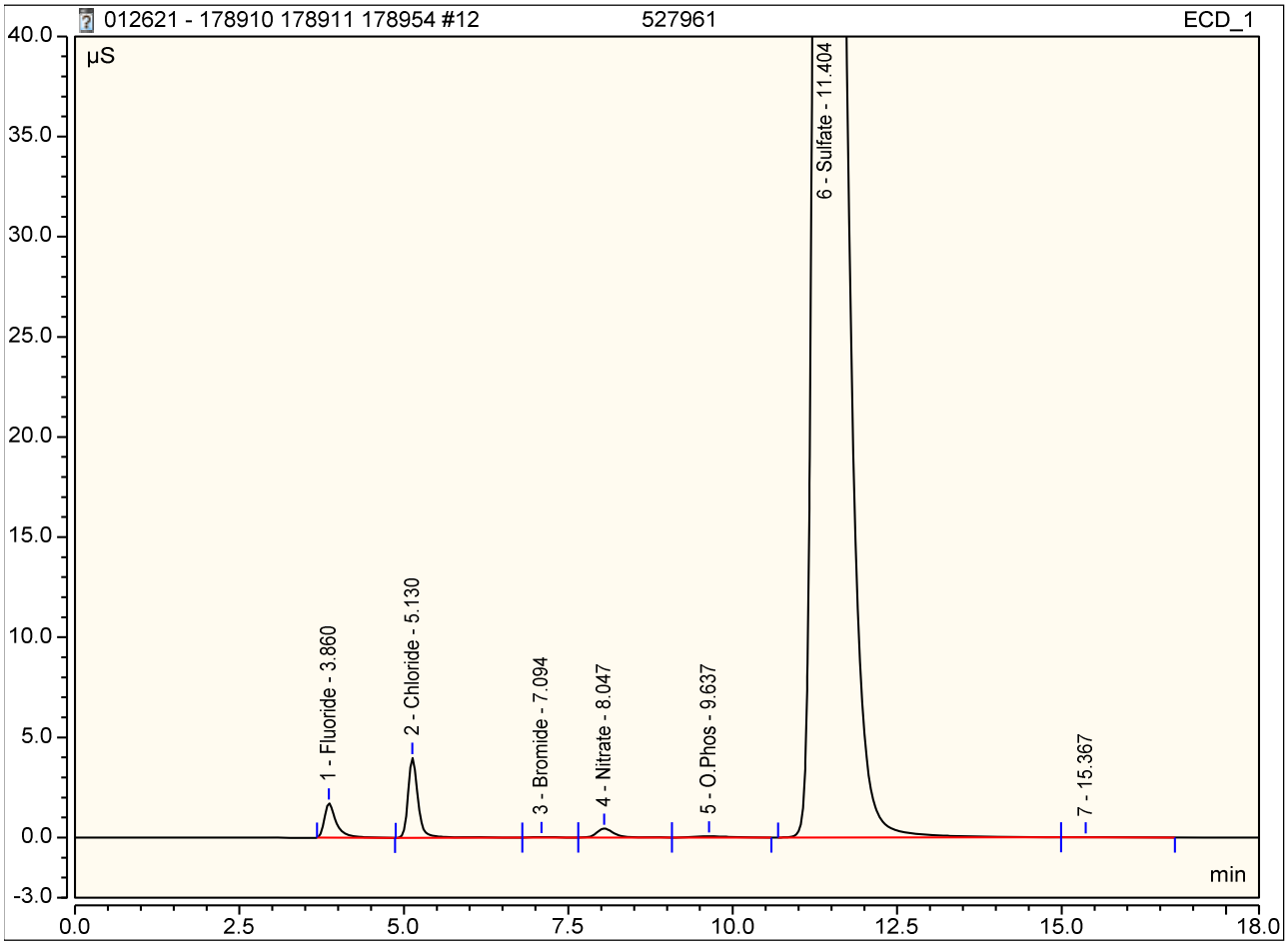
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.008	0.035	0.0752
3	5.07	Chloride	0.011	0.057	0.6484
4	5.87	Nitrite	0.006	0.022	0.0435
5	7.10	Bromide	0.001	0.005	0.0194
6	8.05	Nitrate	0.006	0.018	0.0989
7	9.53	O.Phos	0.097	0.181	0.2056
8	11.59	Sulfate	0.010	0.023	0.7373



Peak Integration Report

Sample Name:	**527961**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 14:40**	*Run Time:*	**18.00**

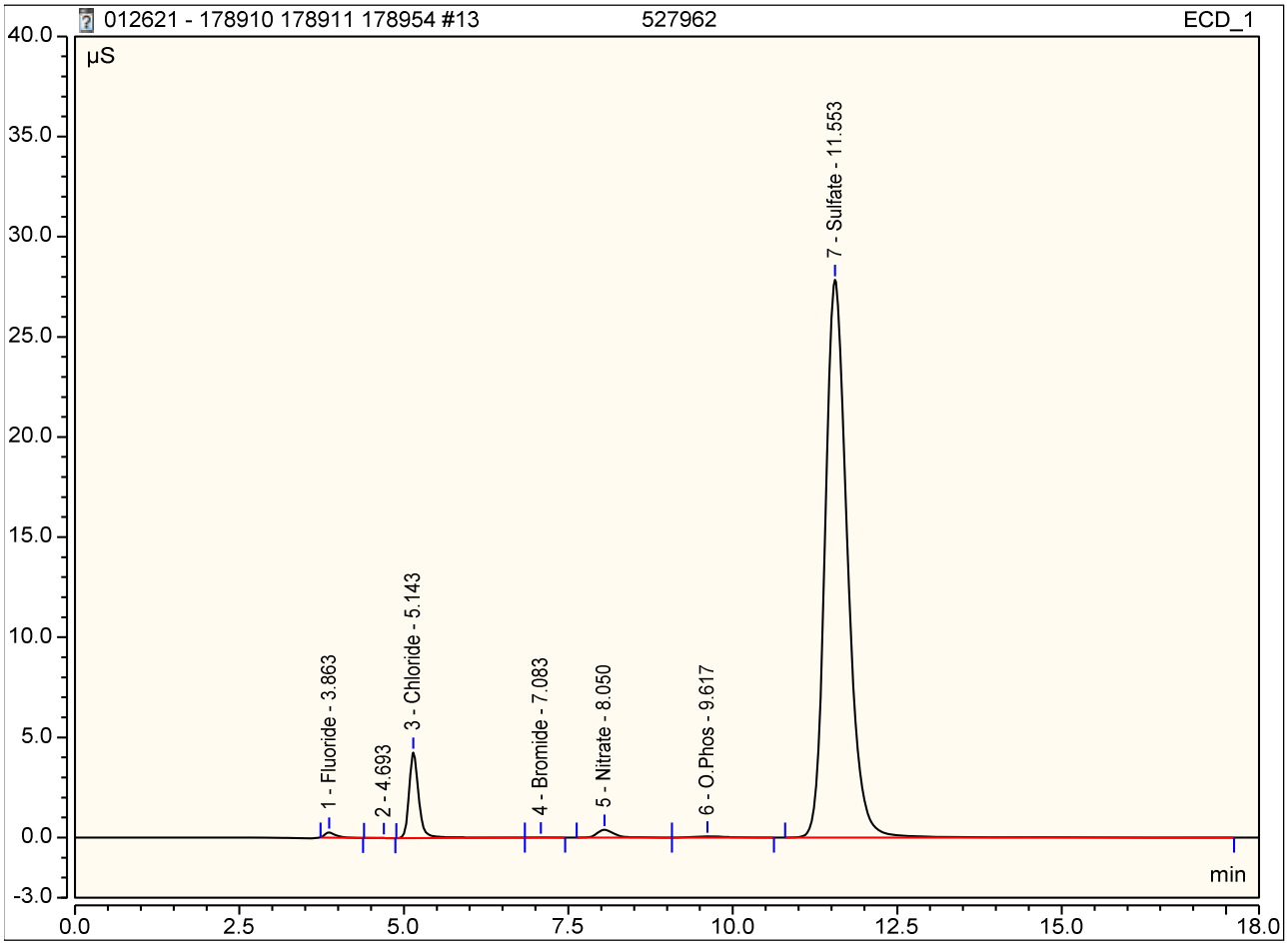
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.365	1.713	1.0507
2	5.13	Chloride	0.703	3.997	2.9727
3	7.09	Bromide	0.006	0.025	0.0707
4	8.05	Nitrate	0.131	0.446	0.2935
5	9.64	O.Phos	0.034	0.063	n.a.
6	11.40	Sulfate	56.007	130.457	275.2274



Peak Integration Report

Sample Name:	**527962**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 14:58**	*Run Time:*	**18.00**

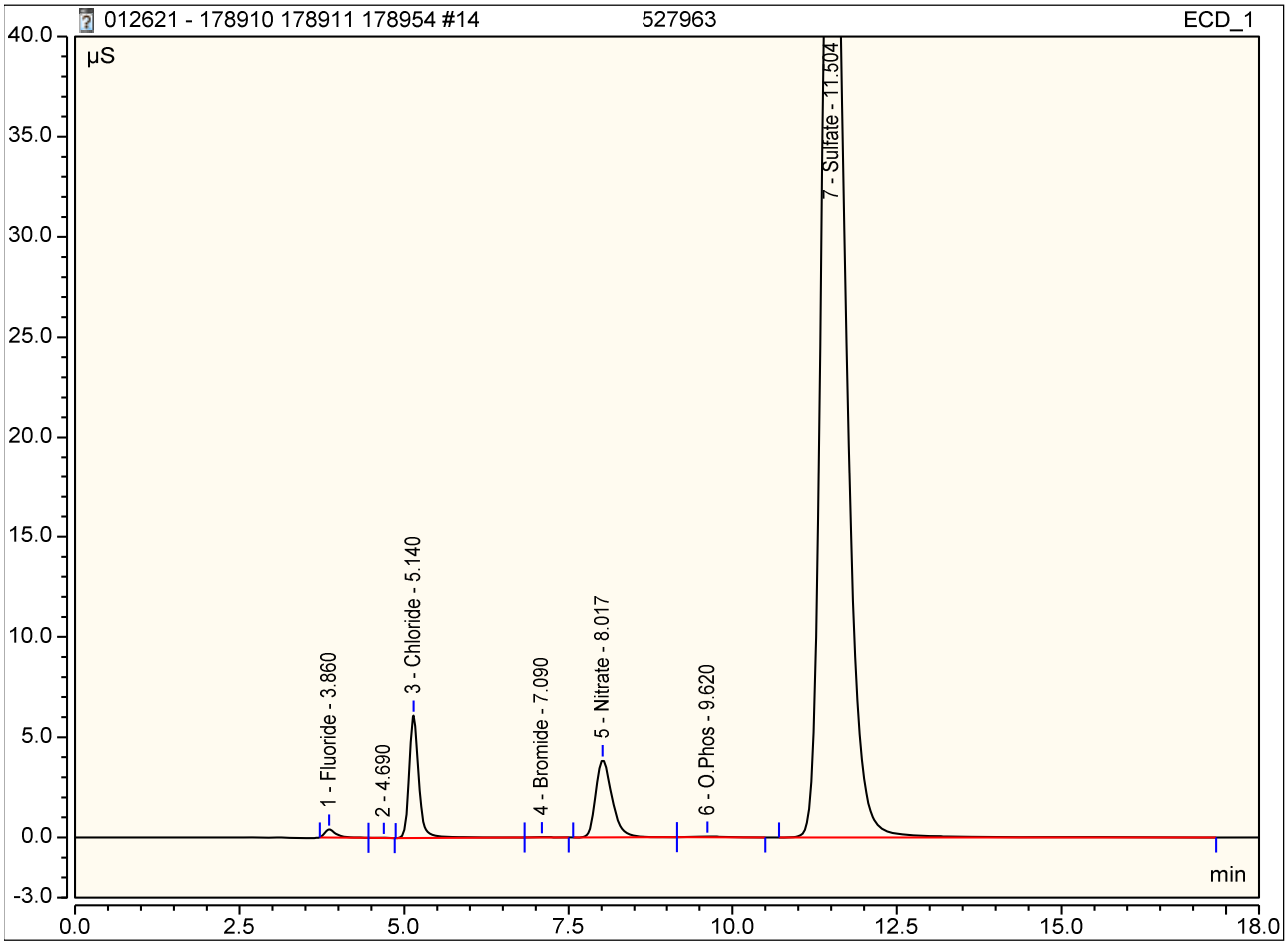
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.049	0.261	0.1867
3	5.14	Chloride	0.735	4.279	3.0814
4	7.08	Bromide	0.001	0.006	0.0208
5	8.05	Nitrate	0.114	0.391	0.2674
6	9.62	O.Phos	0.029	0.054	n.a.
7	11.55	Sulfate	10.934	27.841	54.2864



Peak Integration Report

Sample Name:	**527963**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 15:16**	*Run Time:*	**18.00**

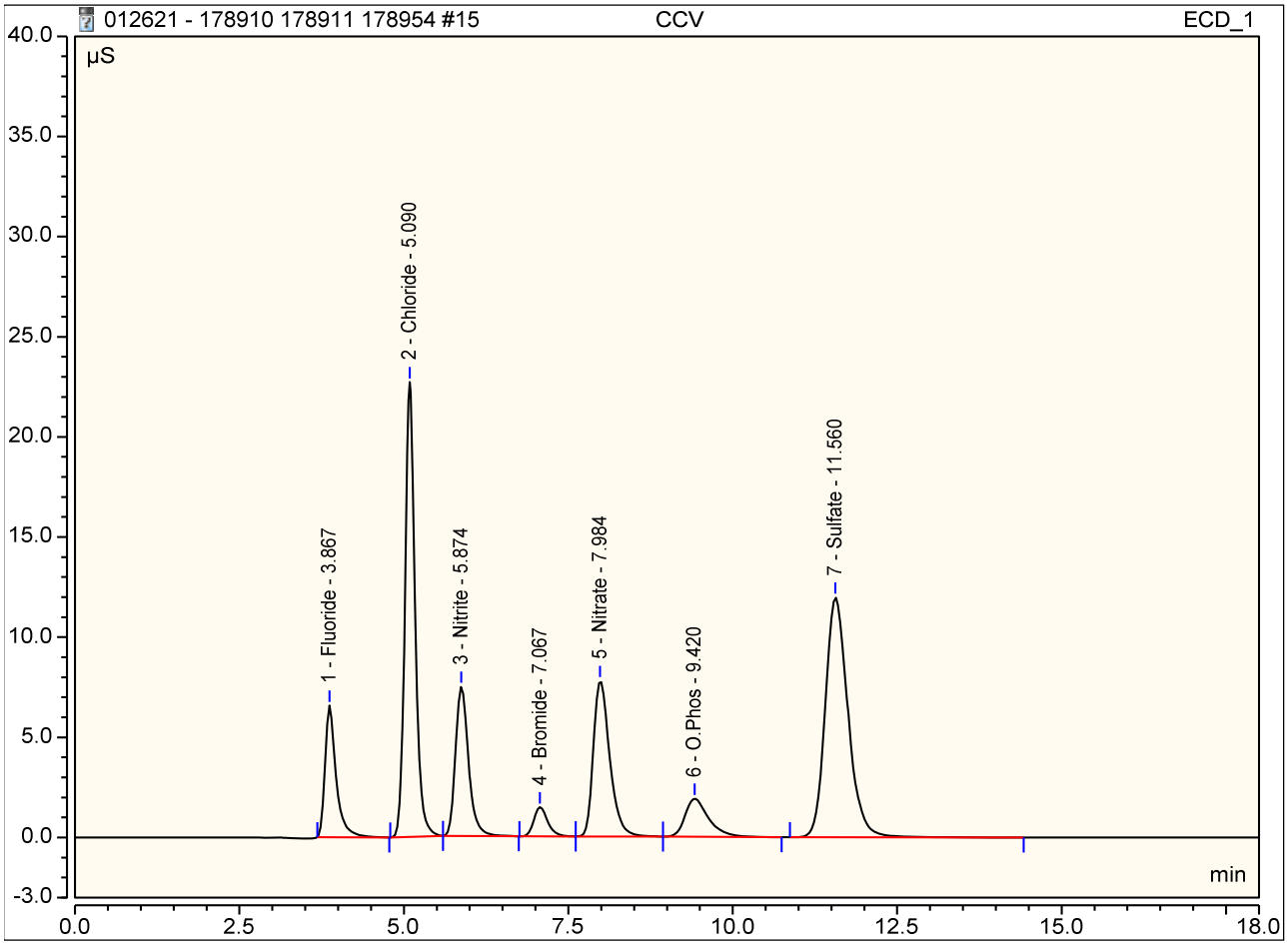
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.079	0.399	0.2675
3	5.14	Chloride	1.040	6.102	4.1057
4	7.09	Bromide	0.003	0.012	0.0363
5	8.02	Nitrate	1.116	3.852	1.8283
6	9.62	O.Phos	0.020	0.039	n.a.
7	11.50	Sulfate	22.849	57.687	112.6914



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 15:34**	*Run Time:*	**18.00**

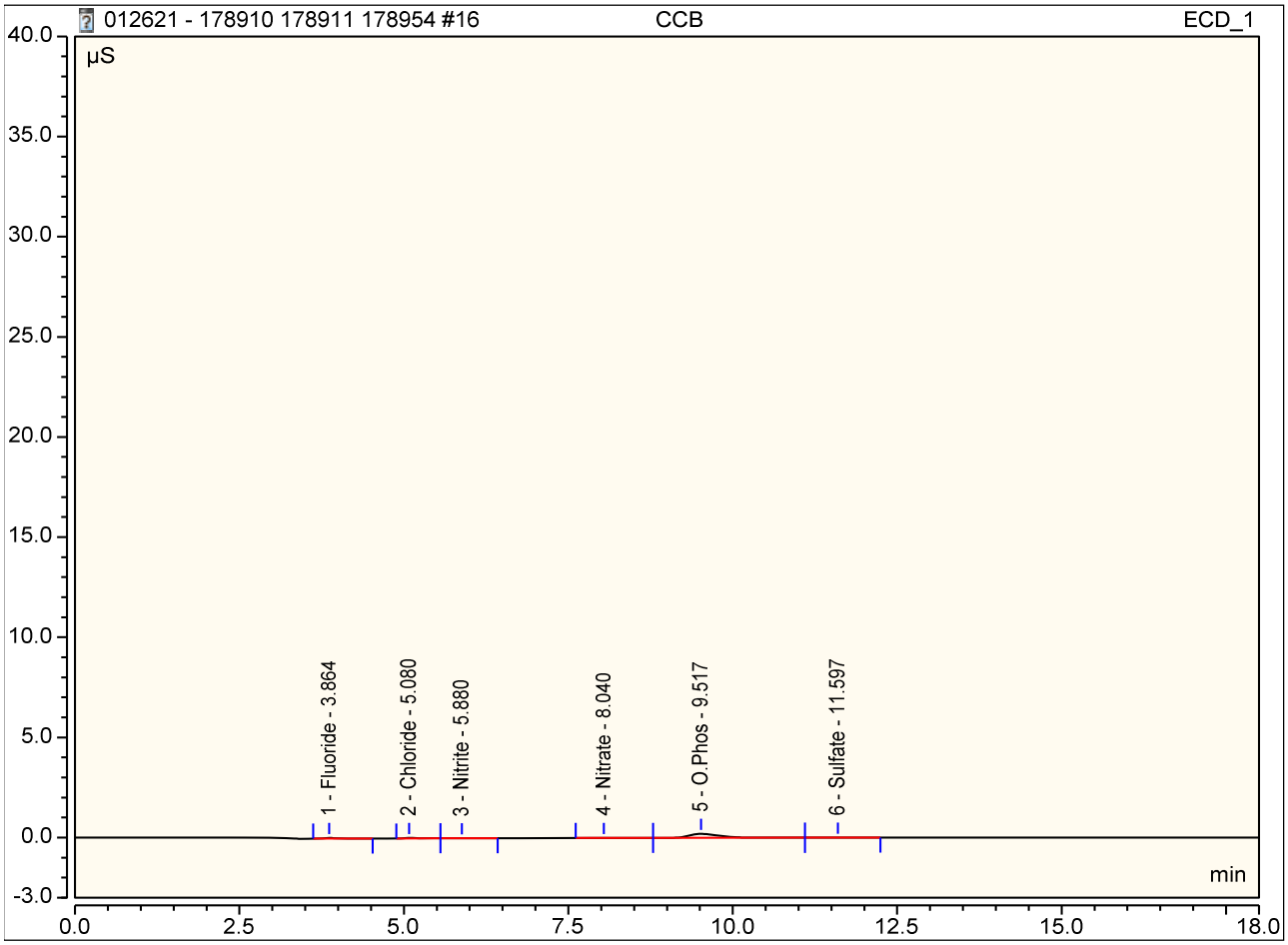
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.87	Fluoride	1.297	6.575	3.5942
2	5.09	Chloride	4.055	22.702	14.2447
3	5.87	Nitrite	1.716	7.458	3.6353
4	7.07	Bromide	0.358	1.453	3.6660
5	7.98	Nitrate	2.242	7.768	3.5825
6	9.42	O.Phos	0.788	1.900	3.3092
7	11.56	Sulfate	4.811	11.974	24.2699



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 15:52**	*Run Time:*	**18.00**

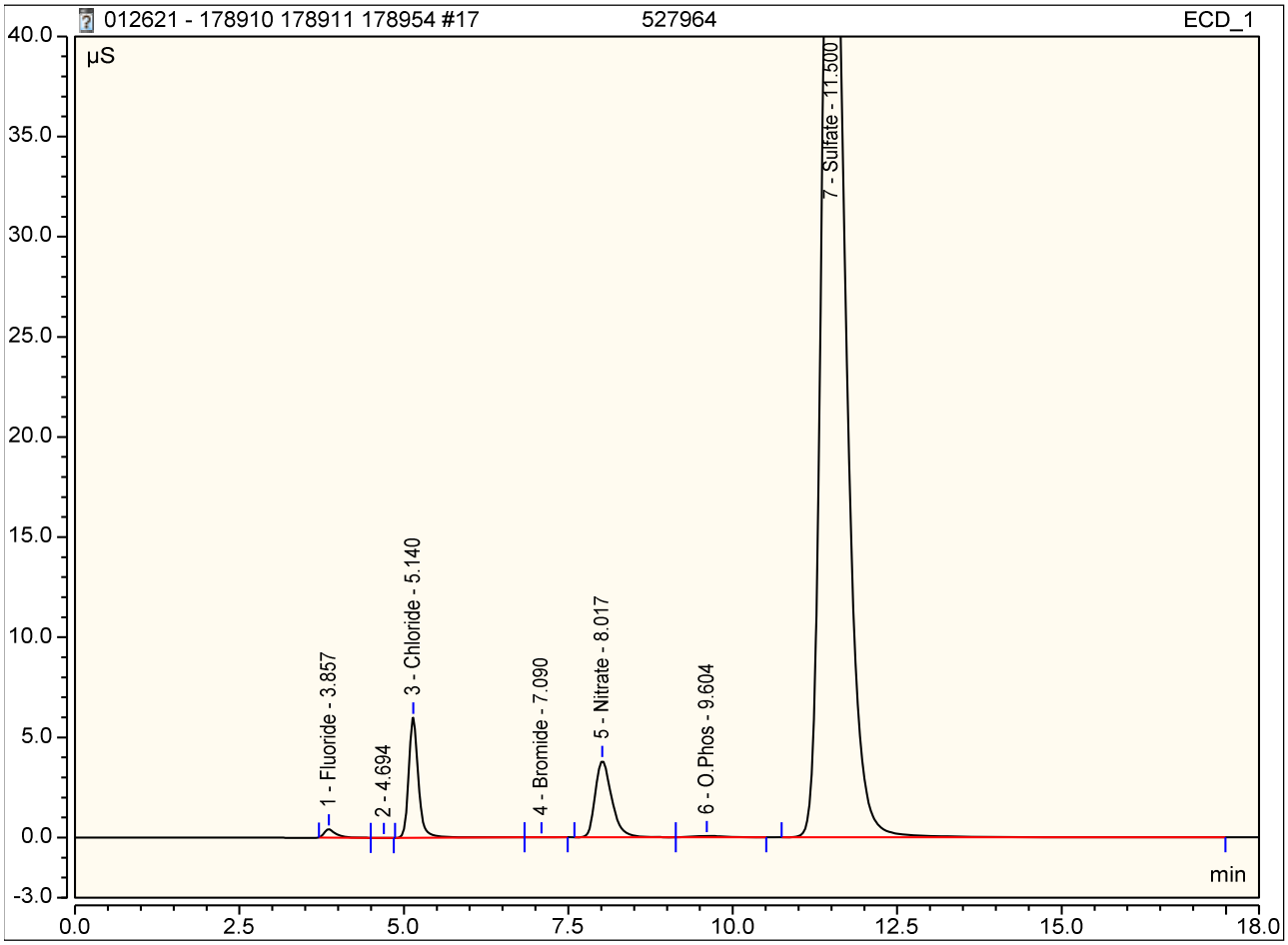
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.009	0.039	0.0782
2	5.08	Chloride	0.006	0.029	0.6309
3	5.88	Nitrite	0.002	0.009	0.0370
4	8.04	Nitrate	0.003	0.009	0.0946
5	9.52	O.Phos	0.108	0.203	0.2543
6	11.60	Sulfate	0.005	0.013	0.7165



Peak Integration Report

Sample Name:	**527964**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 16:10**	*Run Time:*	**18.00**

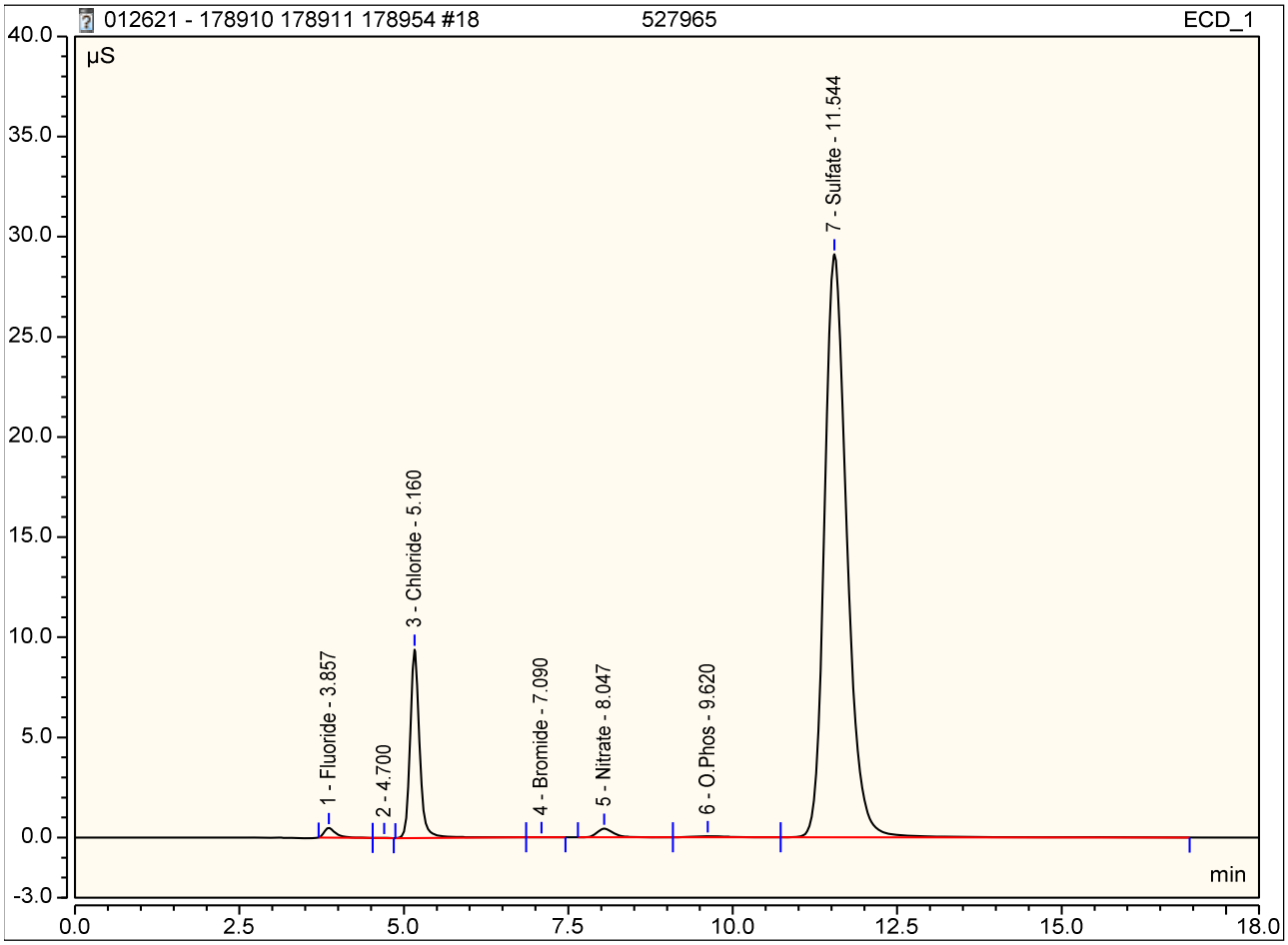
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.084	0.417	0.2819
3	5.14	Chloride	1.038	6.011	4.1003
4	7.09	Bromide	0.003	0.012	0.0350
5	8.02	Nitrate	1.114	3.814	1.8249
6	9.60	O.Phos	0.034	0.065	n.a.
7	11.50	Sulfate	22.827	57.371	112.5811



Peak Integration Report

Sample Name:	**527965**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 16:28**	*Run Time:*	**18.00**

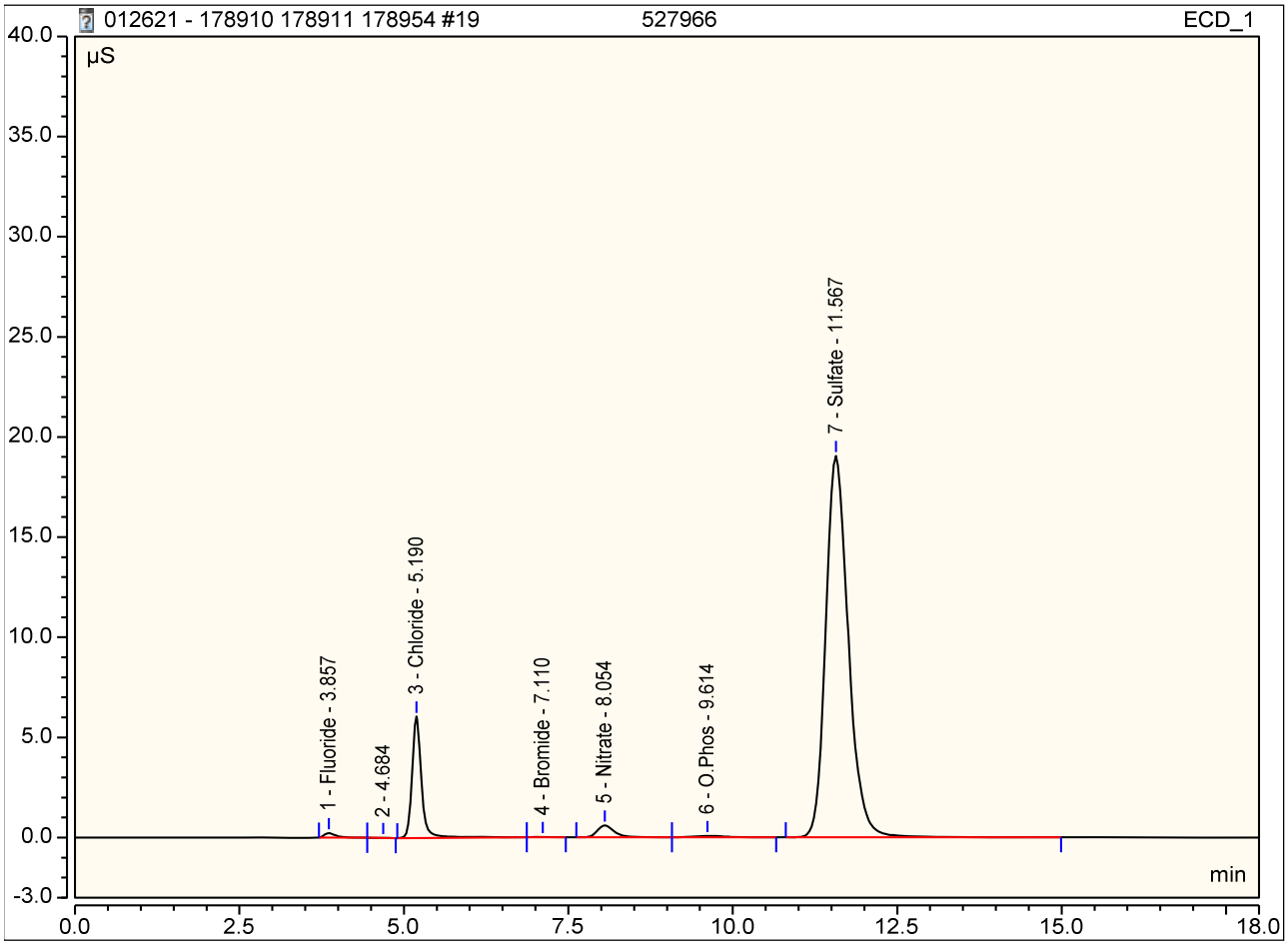
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.099	0.487	0.3241
3	5.16	Chloride	1.551	9.402	5.8266
4	7.09	Bromide	0.003	0.012	0.0341
5	8.05	Nitrate	0.126	0.431	0.2856
6	9.62	O.Phos	0.029	0.053	n.a.
7	11.54	Sulfate	11.495	29.105	57.0374



Peak Integration Report

Sample Name:	**527966**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 16:46**	*Run Time:*	**18.00**

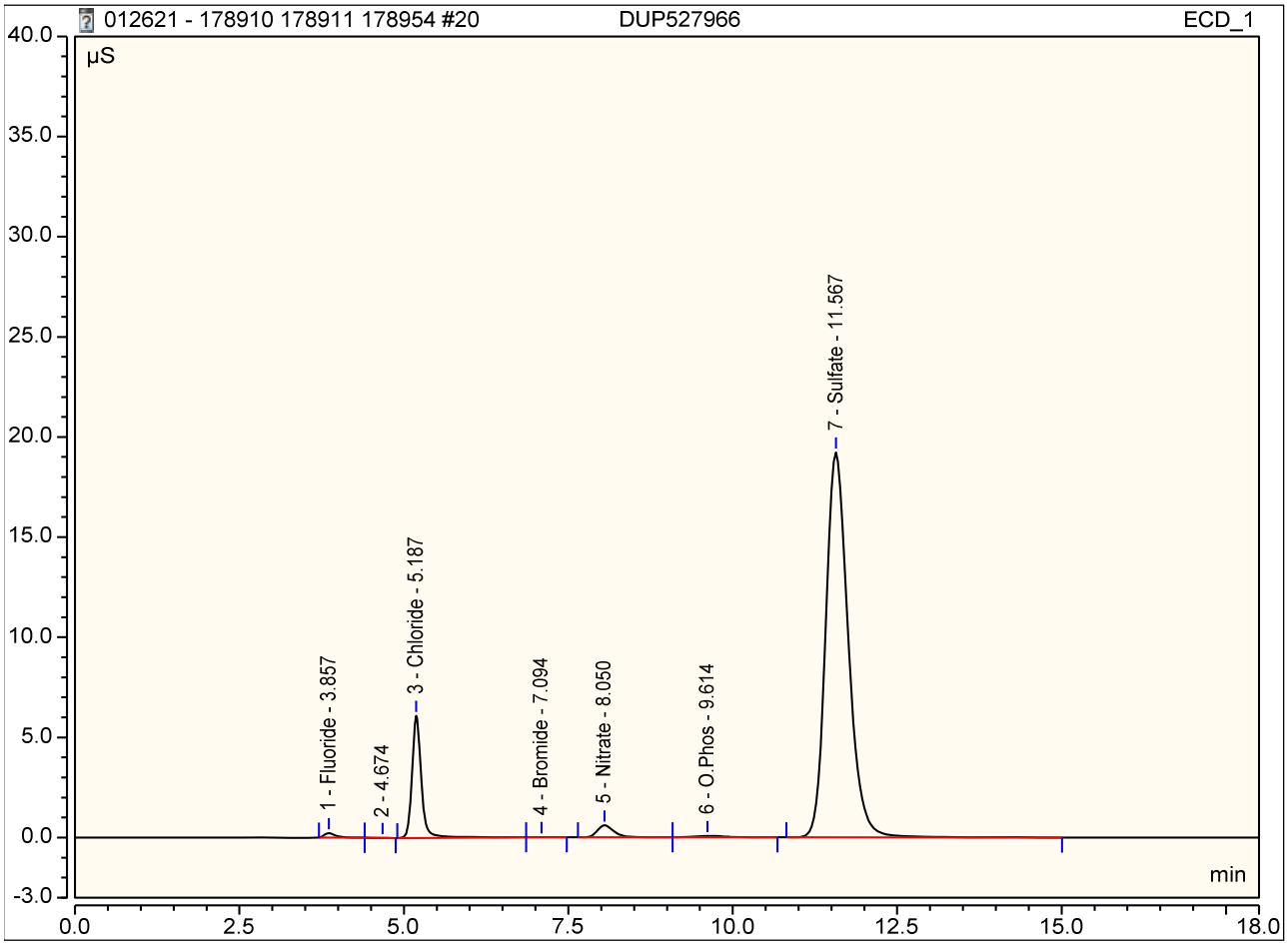
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.046	0.224	0.1787
3	5.19	Chloride	0.999	6.061	3.9707
4	7.11	Bromide	0.002	0.008	0.0266
5	8.05	Nitrate	0.173	0.588	0.3593
6	9.61	O.Phos	0.035	0.066	n.a.
7	11.57	Sulfate	7.605	19.042	37.9664



Peak Integration Report

Sample Name:	**DUP527966**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 17:05**	*Run Time:*	**18.00**

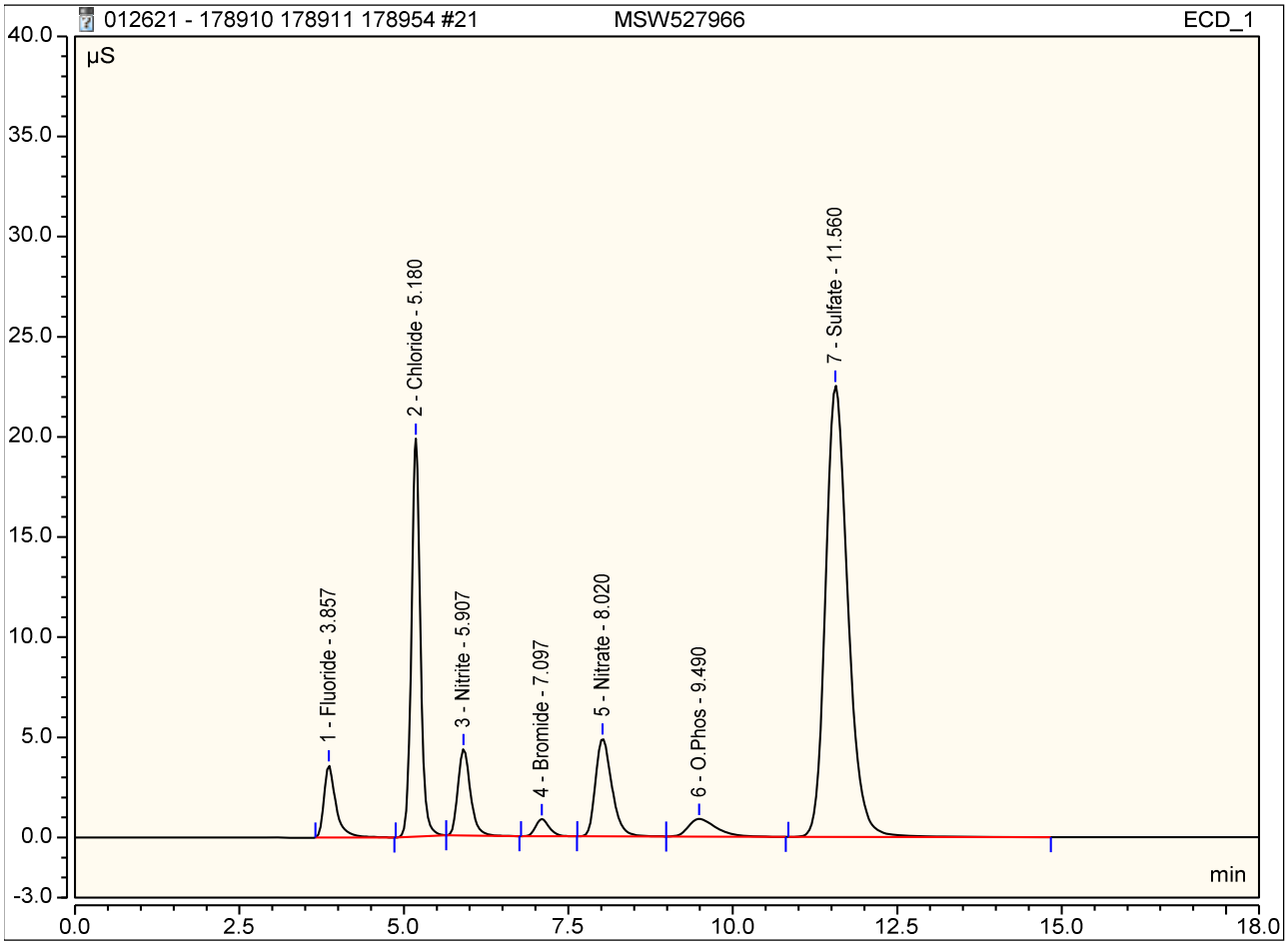
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.045	0.223	0.1762
3	5.19	Chloride	1.000	6.100	3.9743
4	7.09	Bromide	0.002	0.007	0.0229
5	8.05	Nitrate	0.173	0.592	0.3597
6	9.61	O.Phos	0.037	0.069	n.a.
7	11.57	Sulfate	7.638	19.227	38.1272



Peak Integration Report

Sample Name:	**MSW527966**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 17:23**	*Run Time:*	**18.00**

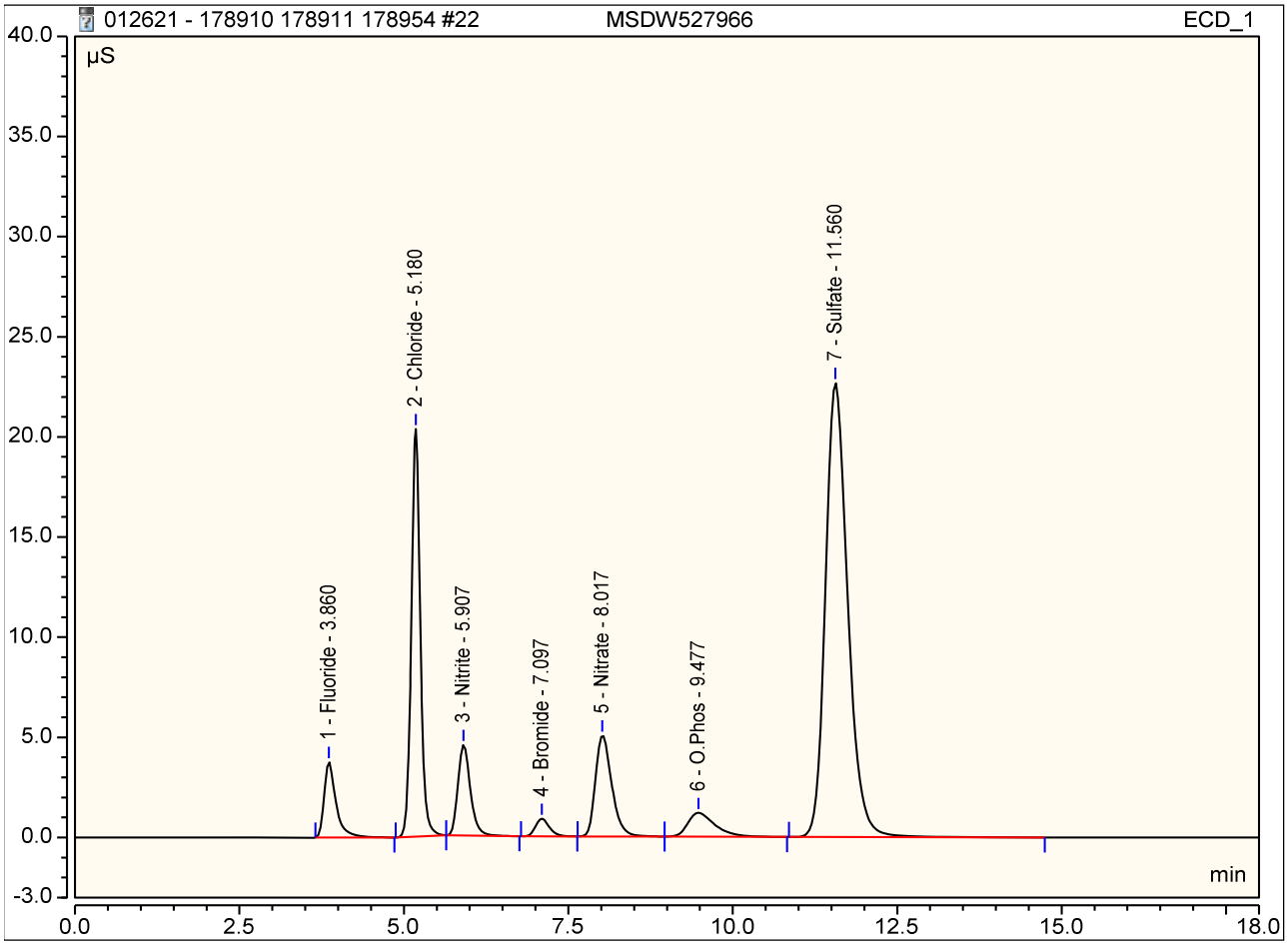
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.768	3.613	2.1491
2	5.18	Chloride	3.117	19.877	11.0898
3	5.91	Nitrite	0.953	4.322	2.0341
4	7.10	Bromide	0.208	0.856	2.1356
5	8.02	Nitrate	1.407	4.887	2.2819
6	9.49	O.Phos	0.434	0.886	1.7190
7	11.56	Sulfate	8.898	22.530	44.3082



Peak Integration Report

Sample Name:	**MSDW527966**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 17:41**	*Run Time:*	**18.00**

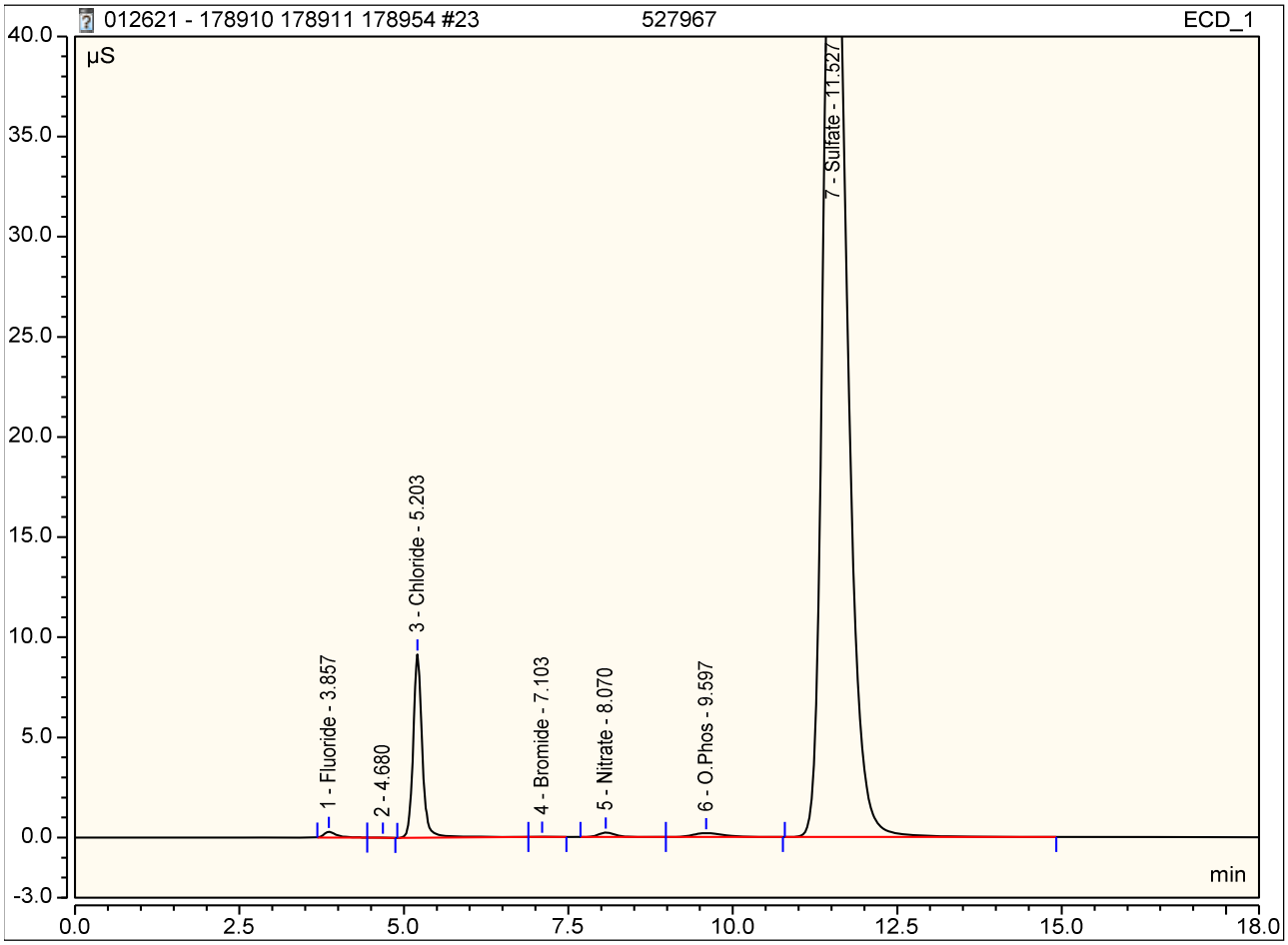
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.798	3.774	2.2311
2	5.18	Chloride	3.192	20.360	11.3406
3	5.91	Nitrite	0.999	4.528	2.1304
4	7.10	Bromide	0.215	0.884	2.2057
5	8.02	Nitrate	1.450	5.045	2.3485
6	9.48	O.Phos	0.571	1.192	2.3321
7	11.56	Sulfate	8.930	22.683	44.4641



Peak Integration Report

Sample Name:	**527967**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 17:59**	*Run Time:*	**18.00**

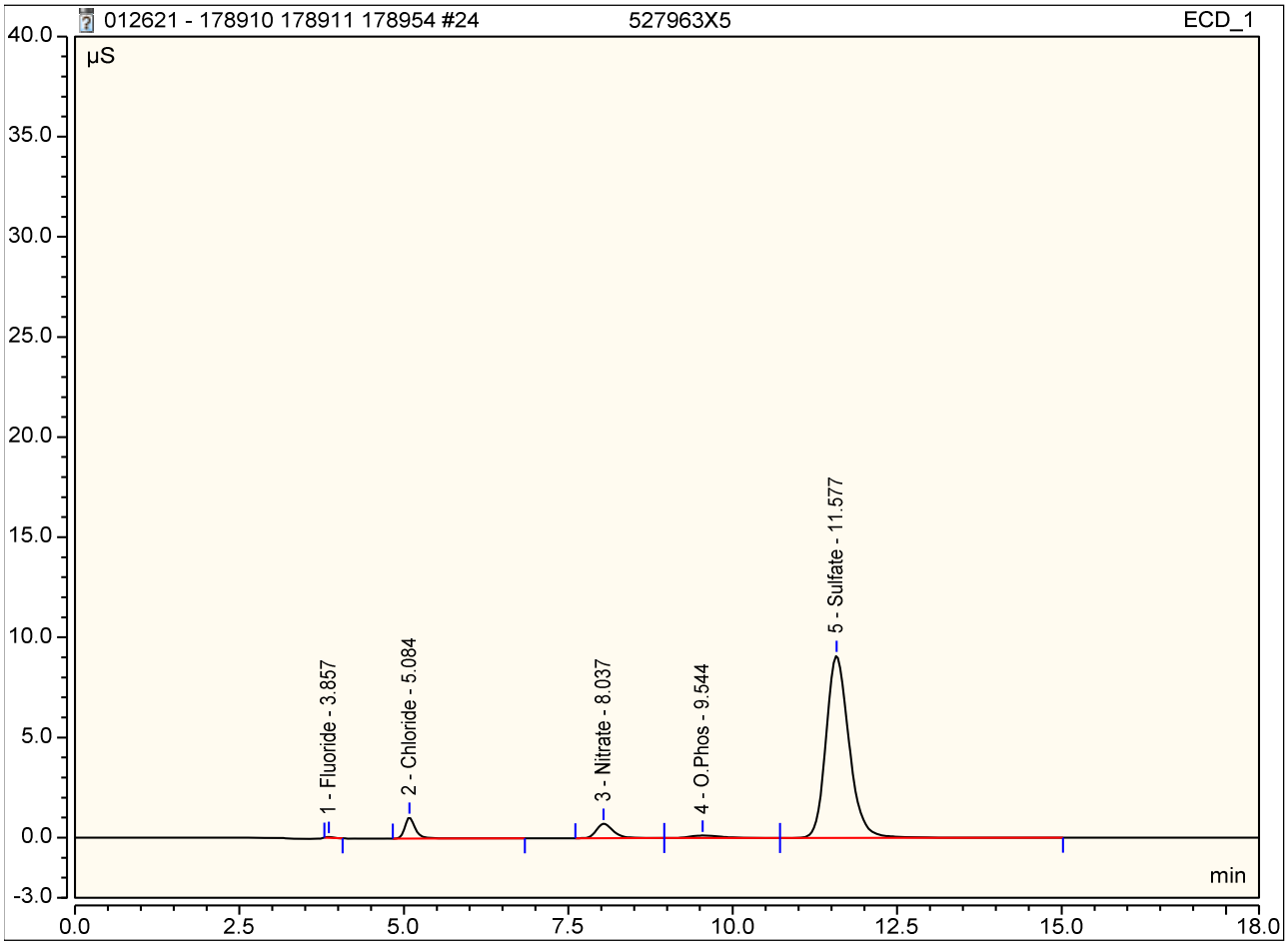
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.063	0.290	0.2245
3	5.20	Chloride	1.469	9.157	5.5508
4	7.10	Bromide	0.002	0.010	0.0283
5	8.07	Nitrate	0.065	0.223	0.1908
6	9.60	O.Phos	0.106	0.193	0.2441
7	11.53	Sulfate	21.912	55.051	108.0966



Peak Integration Report

Sample Name:	**527963X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 18:17**	*Run Time:*	**18.00**

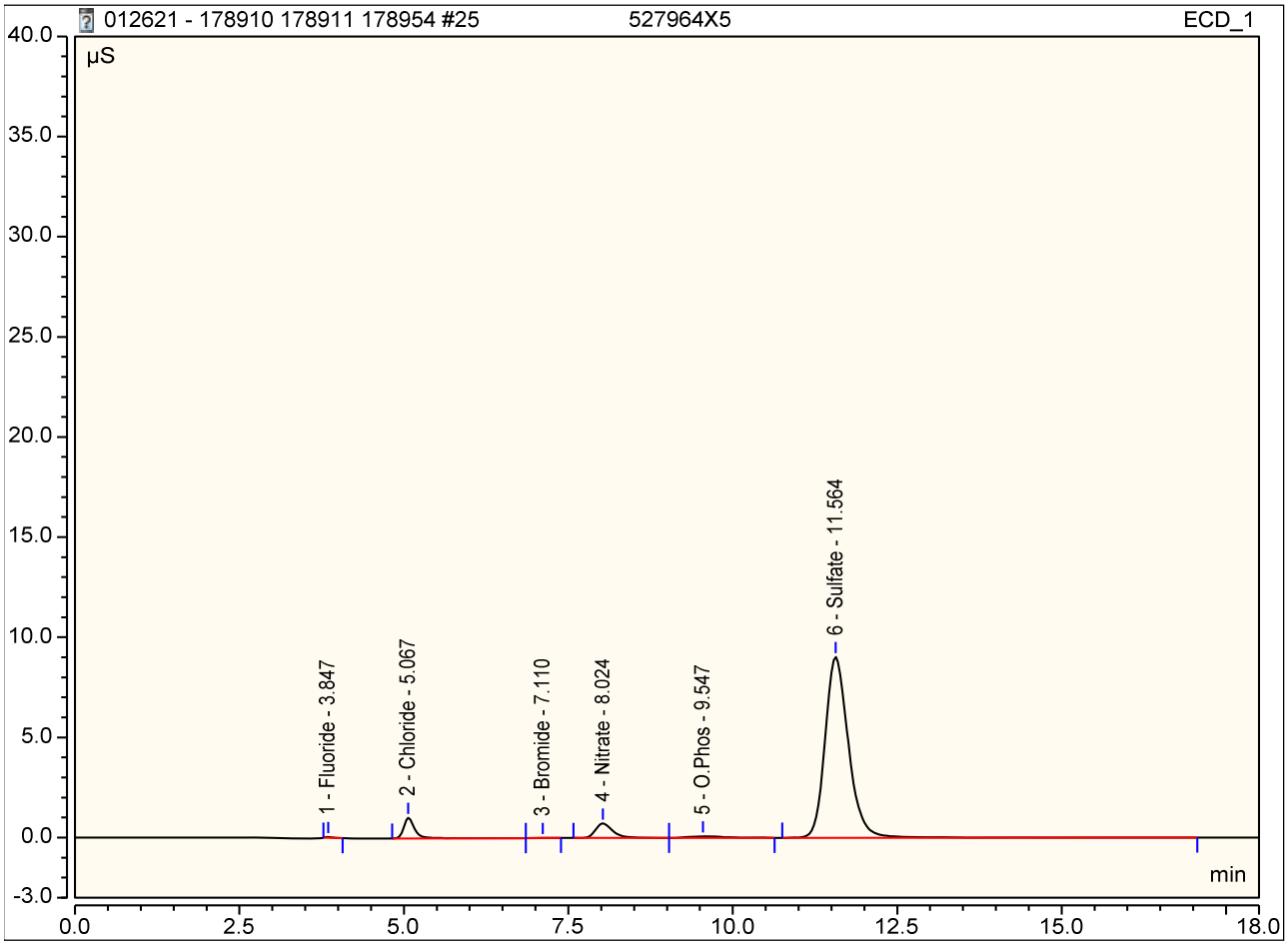
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.006	0.048	0.0691
2	5.08	Chloride	0.202	1.049	1.2890
3	8.04	Nitrate	0.213	0.717	0.4214
4	9.54	O.Phos	0.064	0.121	0.0568
5	11.58	Sulfate	3.717	9.099	18.9117



Peak Integration Report

Sample Name:	**527964X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 18:35**	*Run Time:*	**18.00**

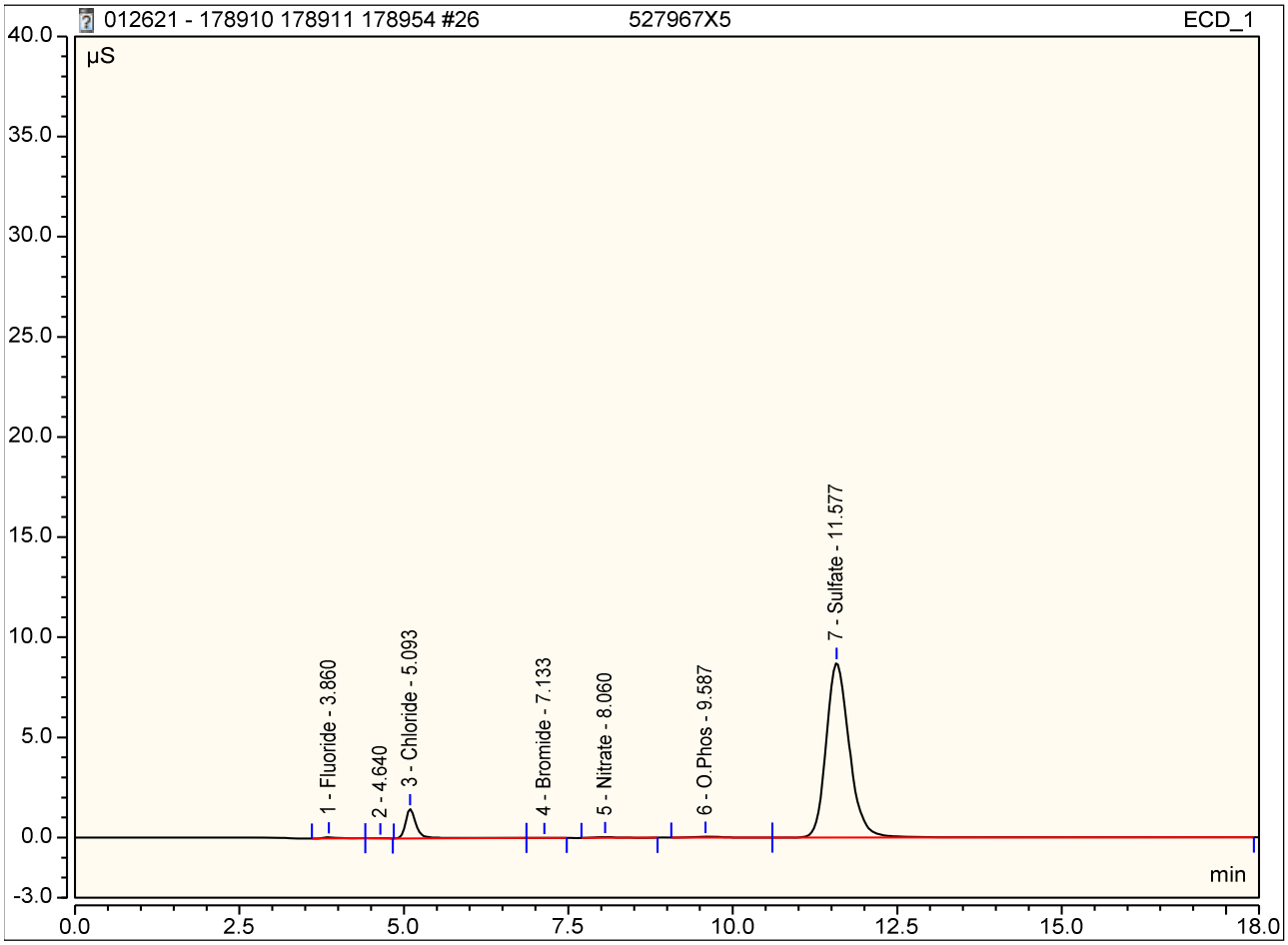
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.85	Fluoride	0.006	0.047	0.0689
2	5.07	Chloride	0.201	1.035	1.2881
3	7.11	Bromide	0.001	0.003	0.0129
4	8.02	Nitrate	0.216	0.717	0.4267
5	9.55	O.Phos	0.039	0.073	n.a.
6	11.56	Sulfate	3.727	9.028	18.9611



Peak Integration Report

Sample Name:	**527967X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 18:53**	*Run Time:*	**18.00**

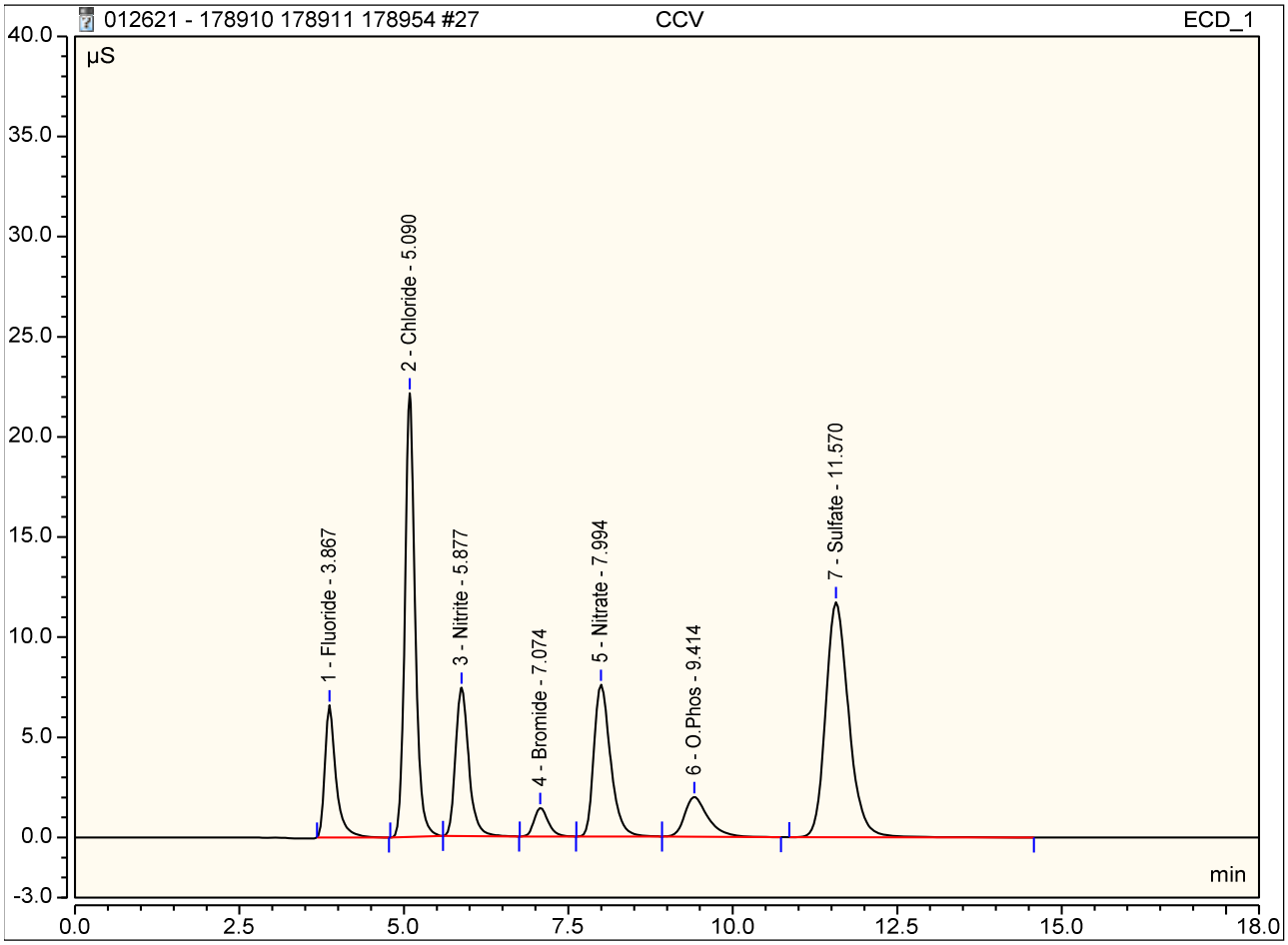
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.013	0.058	0.0871
3	5.09	Chloride	0.279	1.465	1.5491
4	7.13	Bromide	0.000	0.002	0.0107
5	8.06	Nitrate	0.012	0.040	0.1088
6	9.59	O.Phos	0.026	0.049	n.a.
7	11.58	Sulfate	3.590	8.724	18.2872



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 19:11**	*Run Time:*	**18.00**

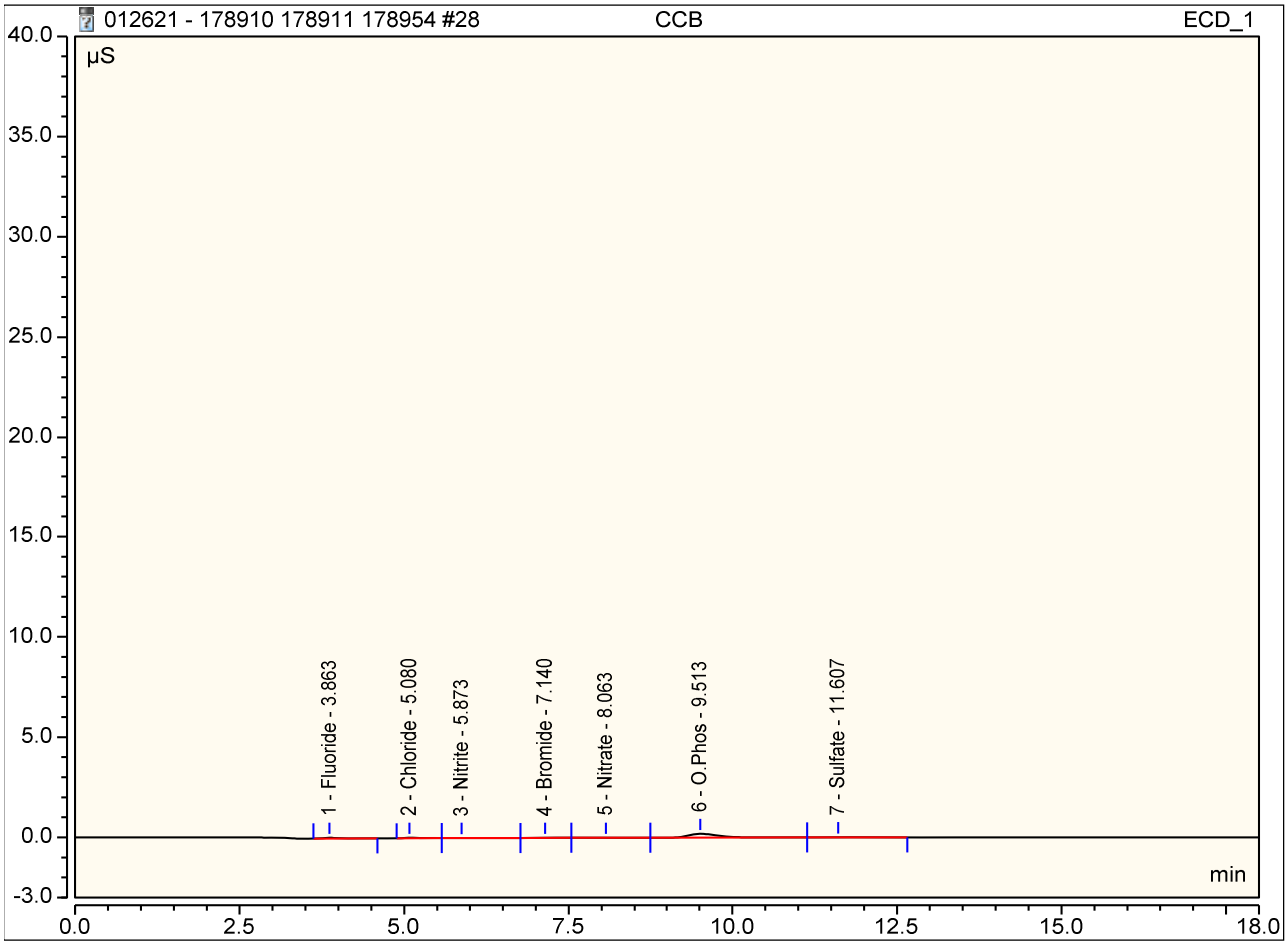
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.87	Fluoride	1.296	6.599	3.5934
2	5.09	Chloride	4.015	22.158	14.1100
3	5.88	Nitrite	1.727	7.417	3.6591
4	7.07	Bromide	0.356	1.423	3.6435
5	7.99	Nitrate	2.223	7.578	3.5522
6	9.41	O.Phos	0.814	1.976	3.4271
7	11.57	Sulfate	4.775	11.742	24.0963



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Jan-2021 / 19:29**	*Run Time:*	**18.00**

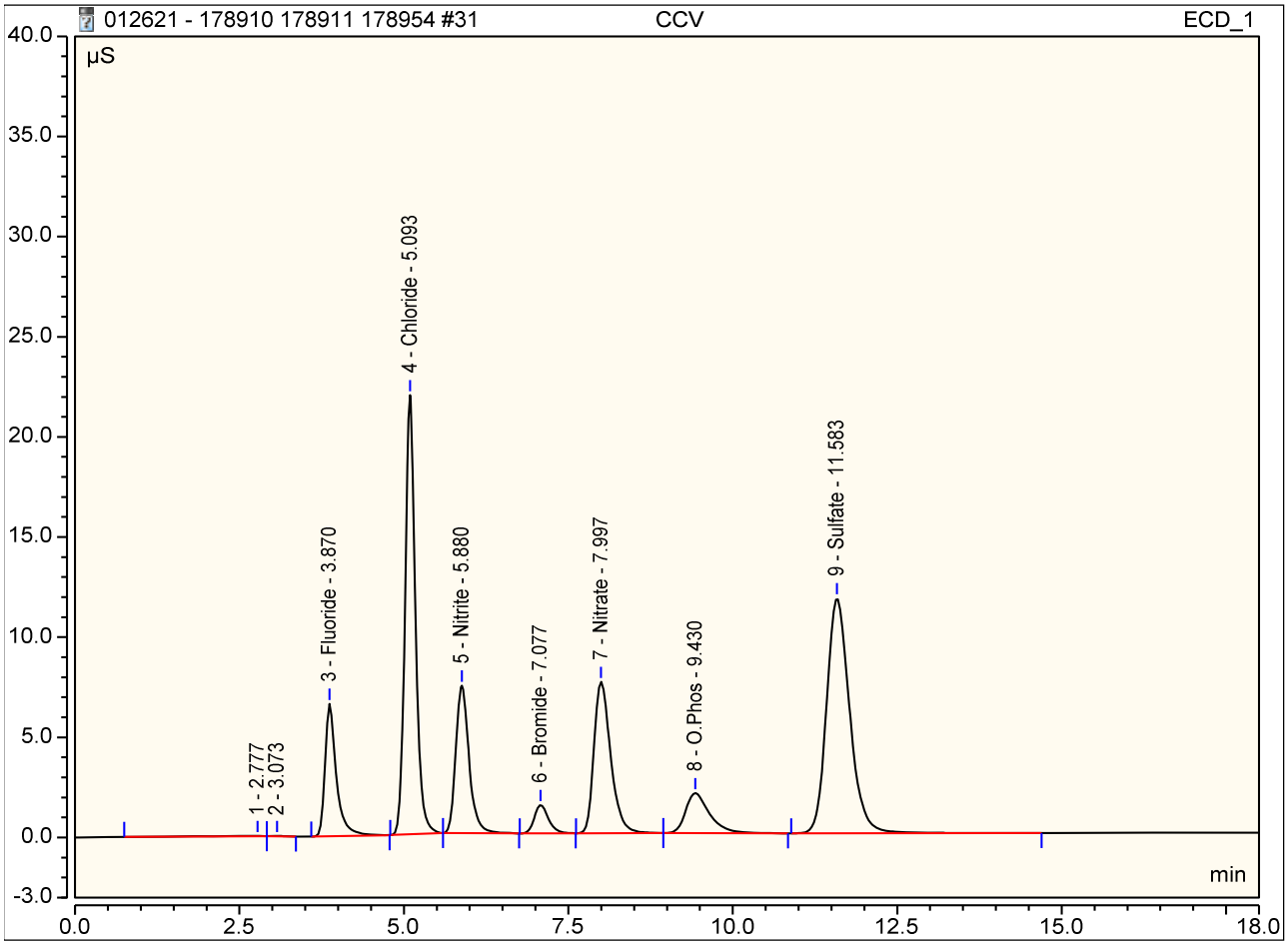
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.009	0.040	0.0781
2	5.08	Chloride	0.006	0.031	0.6323
3	5.87	Nitrite	0.003	0.010	0.0375
4	7.14	Bromide	0.001	0.004	0.0192
5	8.06	Nitrate	0.003	0.007	0.0936
6	9.51	O.Phos	0.101	0.192	0.2246
7	11.61	Sulfate	0.006	0.013	0.7178



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jan-2021 / 07:31**	*Run Time:*	**18.00**

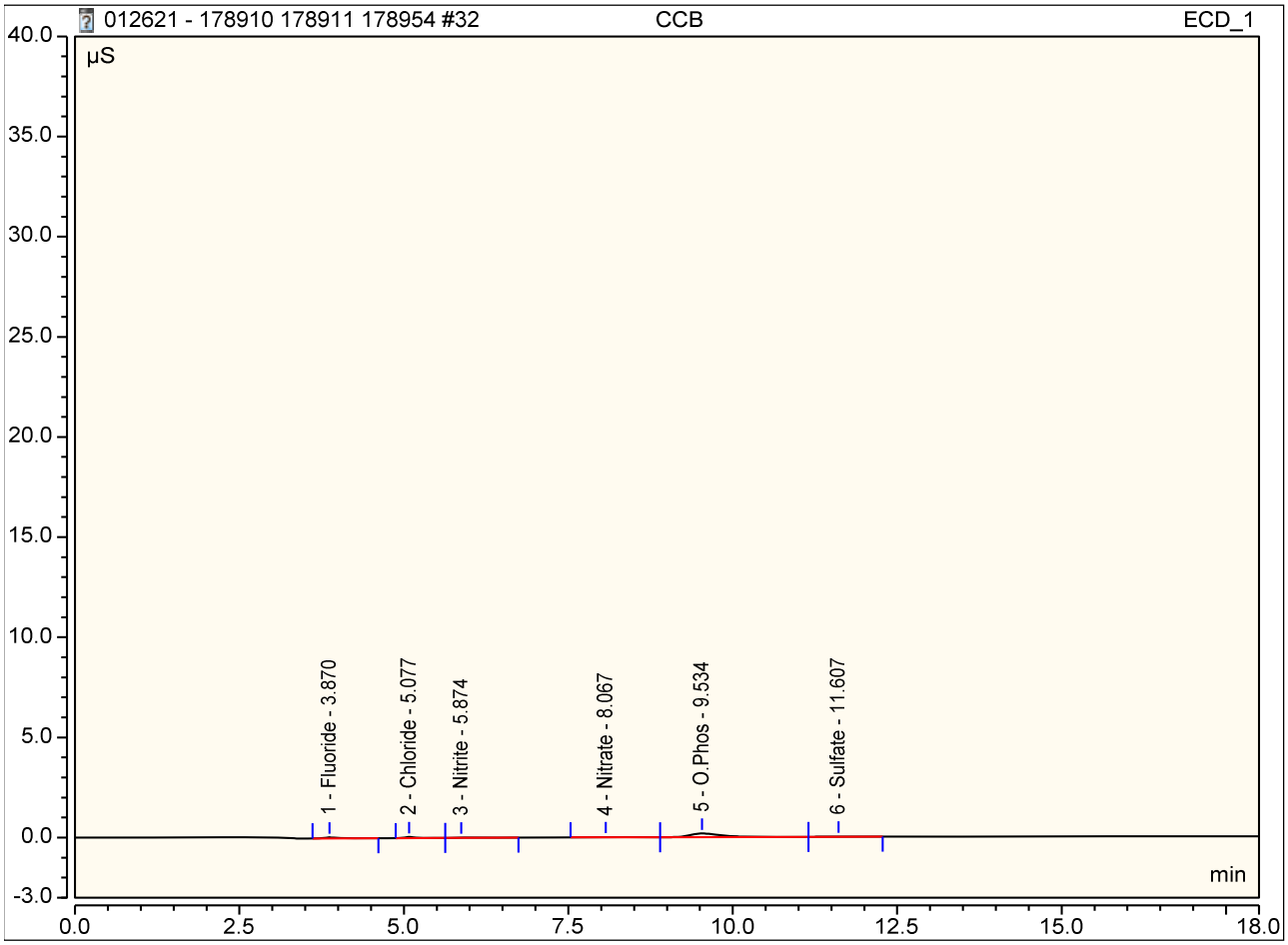
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
3	3.87	Fluoride	1.326	6.614	3.6748
4	5.09	Chloride	4.014	21.929	14.1067
5	5.88	Nitrite	1.726	7.372	3.6555
6	7.08	Bromide	0.355	1.416	3.6340
7	8.00	Nitrate	2.224	7.553	3.5545
8	9.43	O.Phos	0.838	1.994	3.5312
9	11.58	Sulfate	4.776	11.740	24.1027



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jan-2021 / 07:49**	*Run Time:*	**18.00**

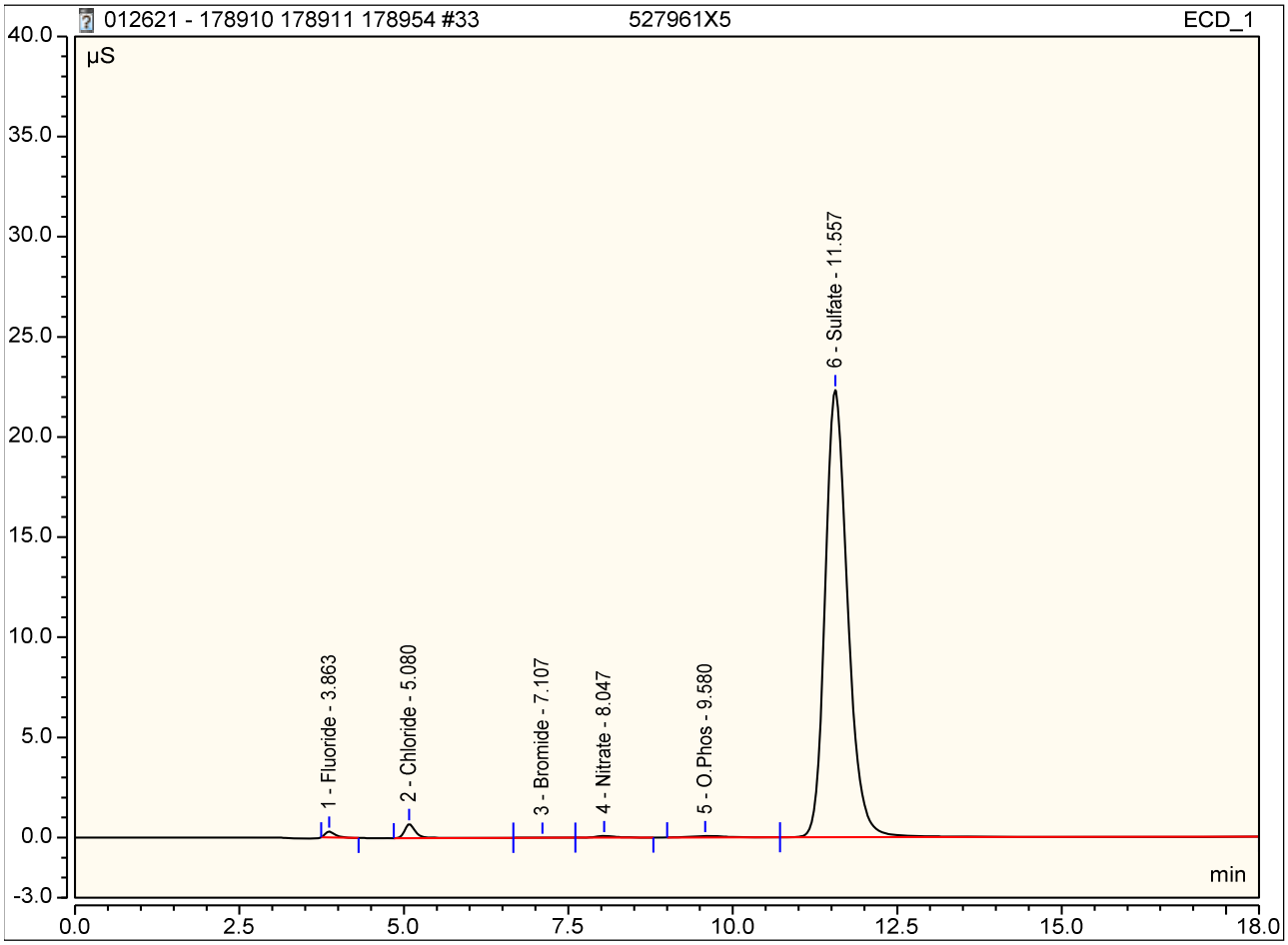
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.87	Fluoride	0.011	0.045	0.0830
2	5.08	Chloride	0.010	0.048	0.6429
3	5.87	Nitrite	0.004	0.017	0.0411
4	8.07	Nitrate	0.005	0.014	0.0976
5	9.53	O.Phos	0.097	0.176	0.2067
6	11.61	Sulfate	0.007	0.018	0.7263



Peak Integration Report

Sample Name:	**527961X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jan-2021 / 08:07**	*Run Time:*	**18.00**

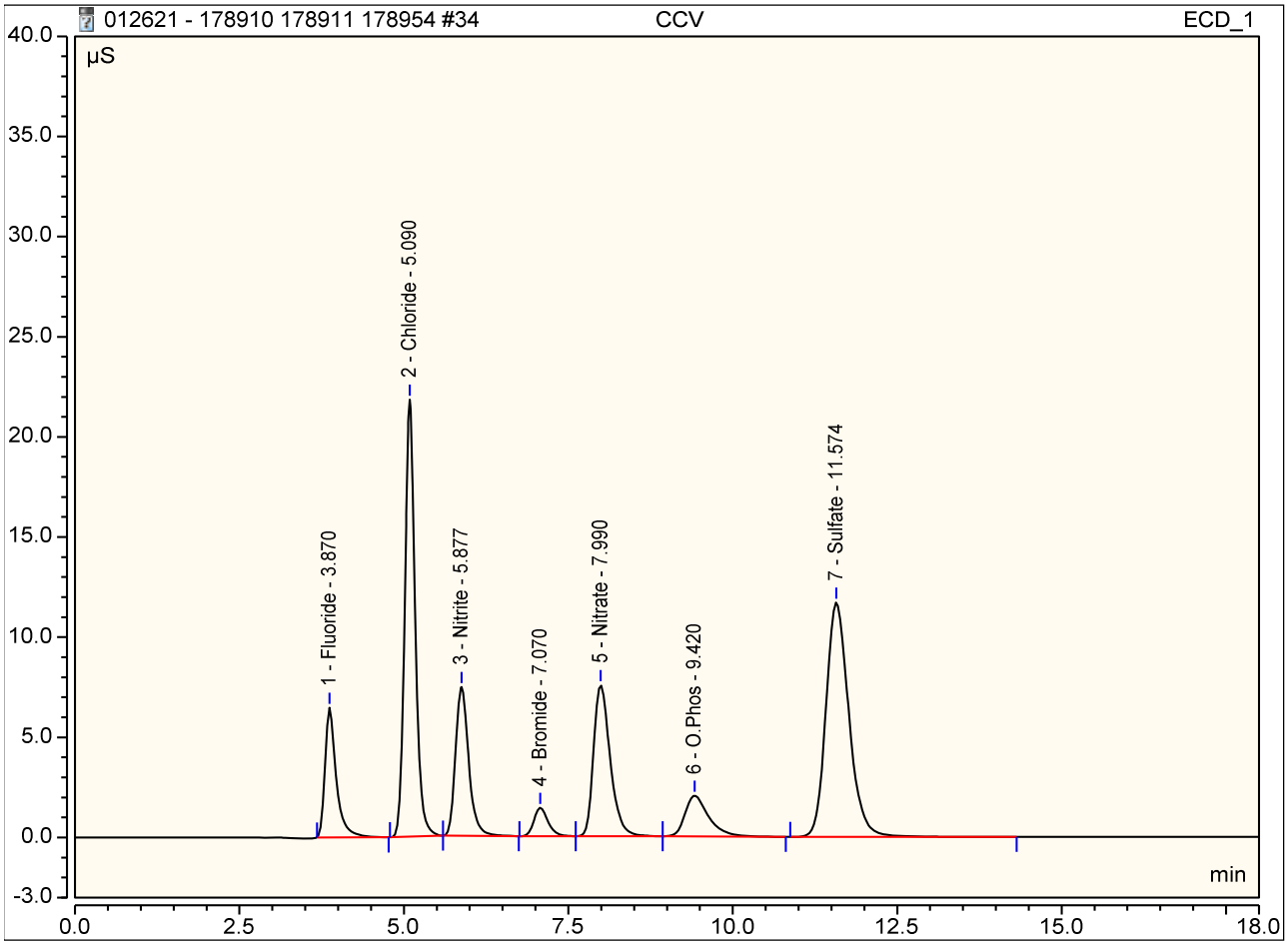
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.86	Fluoride	0.052	0.294	0.1955
2	5.08	Chloride	0.136	0.704	1.0693
3	7.11	Bromide	0.002	0.006	0.0246
4	8.05	Nitrate	0.025	0.082	0.1278
5	9.58	O.Phos	0.037	0.068	n.a.
6	11.56	Sulfate	8.937	22.325	44.4993



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jan-2021 / 08:25**	*Run Time:*	**18.00**

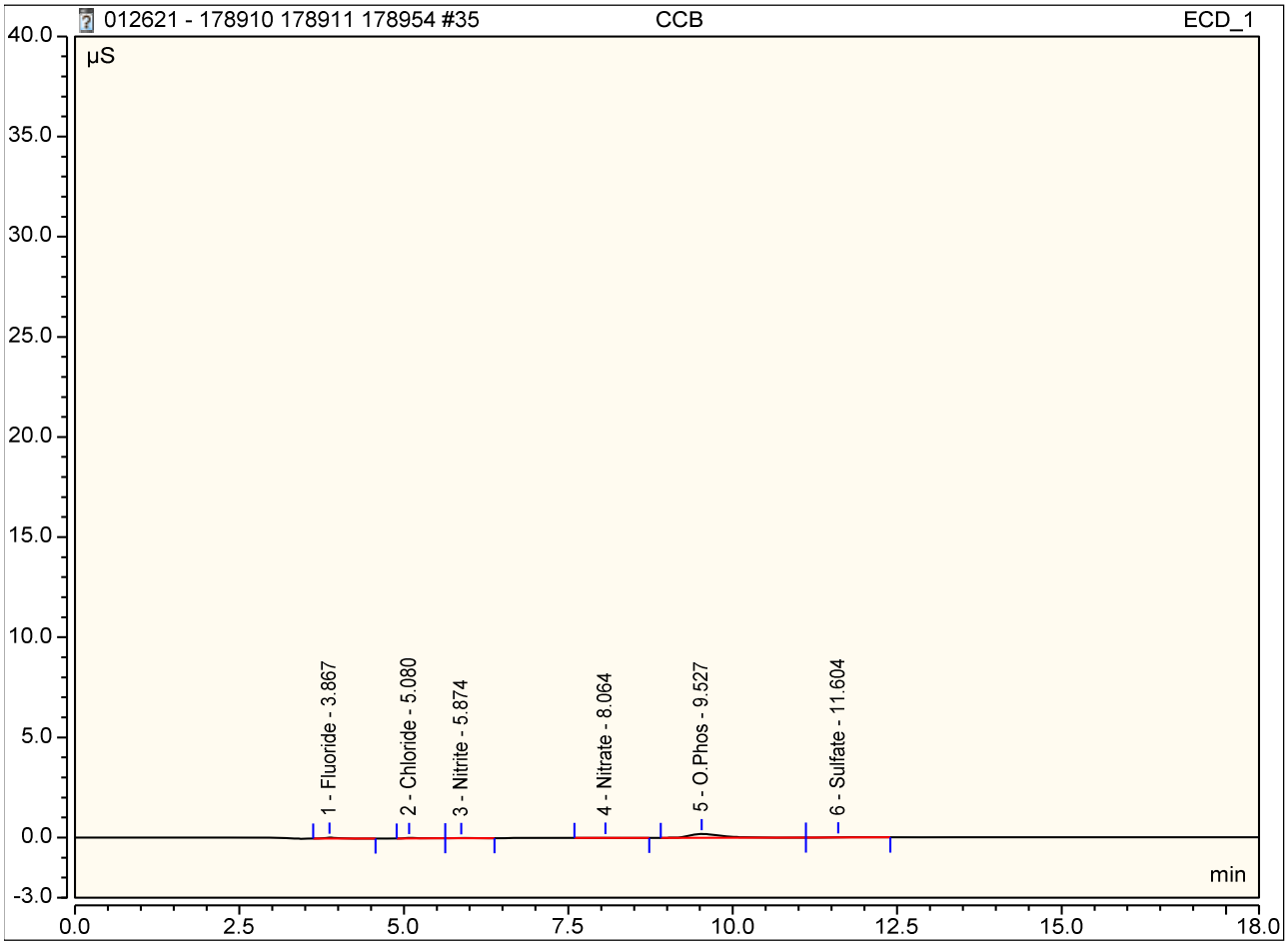
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.87	Fluoride	1.292	6.469	3.5806
2	5.09	Chloride	3.988	21.825	14.0198
3	5.88	Nitrite	1.731	7.436	3.6667
4	7.07	Bromide	0.353	1.415	3.6182
5	7.99	Nitrate	2.211	7.549	3.5342
6	9.42	O.Phos	0.847	2.032	3.5741
7	11.57	Sulfate	4.741	11.707	23.9309



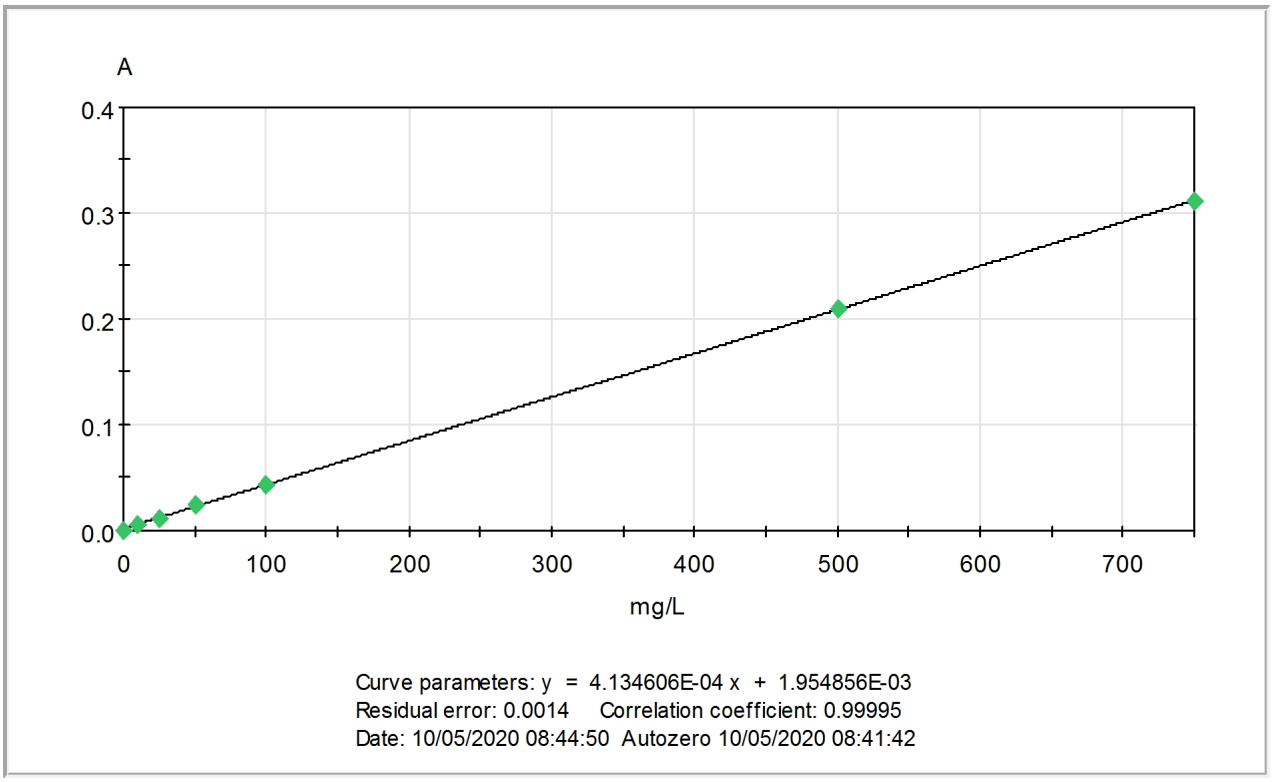
Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jan-2021 / 08:43**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.87	Fluoride	0.012	0.050	0.0847
2	5.08	Chloride	0.006	0.029	0.6306
3	5.87	Nitrite	0.002	0.010	0.0370
4	8.06	Nitrate	0.002	0.007	0.0934
5	9.53	O.Phos	0.102	0.187	0.2273
6	11.60	Sulfate	0.006	0.014	0.7185



Method: COD W49500.mqa (600 nm)
Last modified: 10/05/2020 08:44:50 by CTLABORATORIES\Wetchem (WETCHEM)
Spectrophotometer: GENESYS 30
Serial number: 9A1W117104
Firmware: 104
Autozero: 10/05/2020 08:41:42
Autozero: 10/05/2020 08:55:30
Measured: 10/05/2020 08:59:51 by CTLABORATORIES\Wetchem (WETCHEM)
Result filename: 175595 DATA.rqa



Curve parameters: y = 4.134606E-04 x + 1.954856E-03
Residual error: 0.0014 Correlation coefficient: 0.99995
Date: 10/05/2020 08:44:50 Autozero 10/05/2020 08:41:42

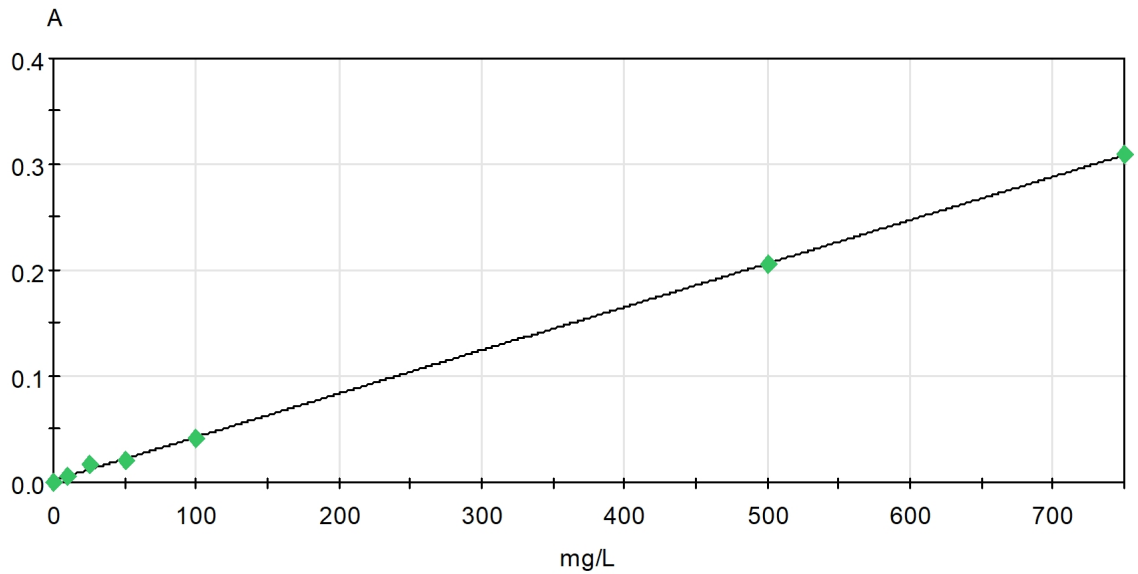
Standards

No.	Concentration [mg/L]	Ordinate [A]	Error [A]	Used
1	0.0	0.000	-0.002	Yes
2	10.0	0.006	0.000	Yes
3	25.0	0.012	0.000	Yes
4	50.0	0.024	0.001	Yes
5	100.0	0.044	0.001	Yes
6	500.0	0.210	0.001	Yes
7	750.0	0.311	-0.001	Yes

Sample	Dilution Factor	Ordinate [A]	Concentration [mg/L]

ICV	1	0.168	401.6
ICB	1	0.002	0.1

Method:	COD W50046.mqa (600 nm)
Last modified:	01/04/2021 14:53:34 by CTLABORATORIES\Administrator
Spectrophotometer:	GENESYS 30
Serial number:	9A1W117104
Firmware:	104
Autozero:	02/01/2021 13:20:41
Measured:	02/01/2021 13:24:21 by CTLABORATORIES\Administrator
Result filename:	179078 079 DATA.rqa



Curve parameters: y = 4.093312E-04 x + 1.658532E-03
Residual error: 0.0026 Correlation coefficient: 0.99981
Date: 01/04/2021 14:52:23 Autozero 01/04/2021 14:51:19

Sample	Dilution Factor	Ordinate [A]	Concentration [mg/L]

CCV	1	0.168	406.4
CCB	1	0.003	3.3
529768	1	0.166	401.5
529767	1	0.004	5.7
528435	1	0.029	66.8
MSW528435	1	0.090	215.8
MSDW528435	1	0.092	220.7
529157 (X50)	1	0.118	284.2
CCV	1	0.169	408.8
CCB		0.007	discarded
CCB	1	0.004	5.7
529810		0.175	discarded
529810	1	0.171	413.7
529809	1	0.004	5.7
528807	1	0.009	17.9
MSW528807	1	0.075	179.2
MSDW528807	1	0.072	171.8
529230	1	0.086	206.0
CCV	1	0.168	406.4
CCB	1	0.003	3.3

pH - Mettler Toledo Seven Easy

Date:	01/29/2021	Analyst:	ATJ	Lims #:	179066	Slope (%)	98%

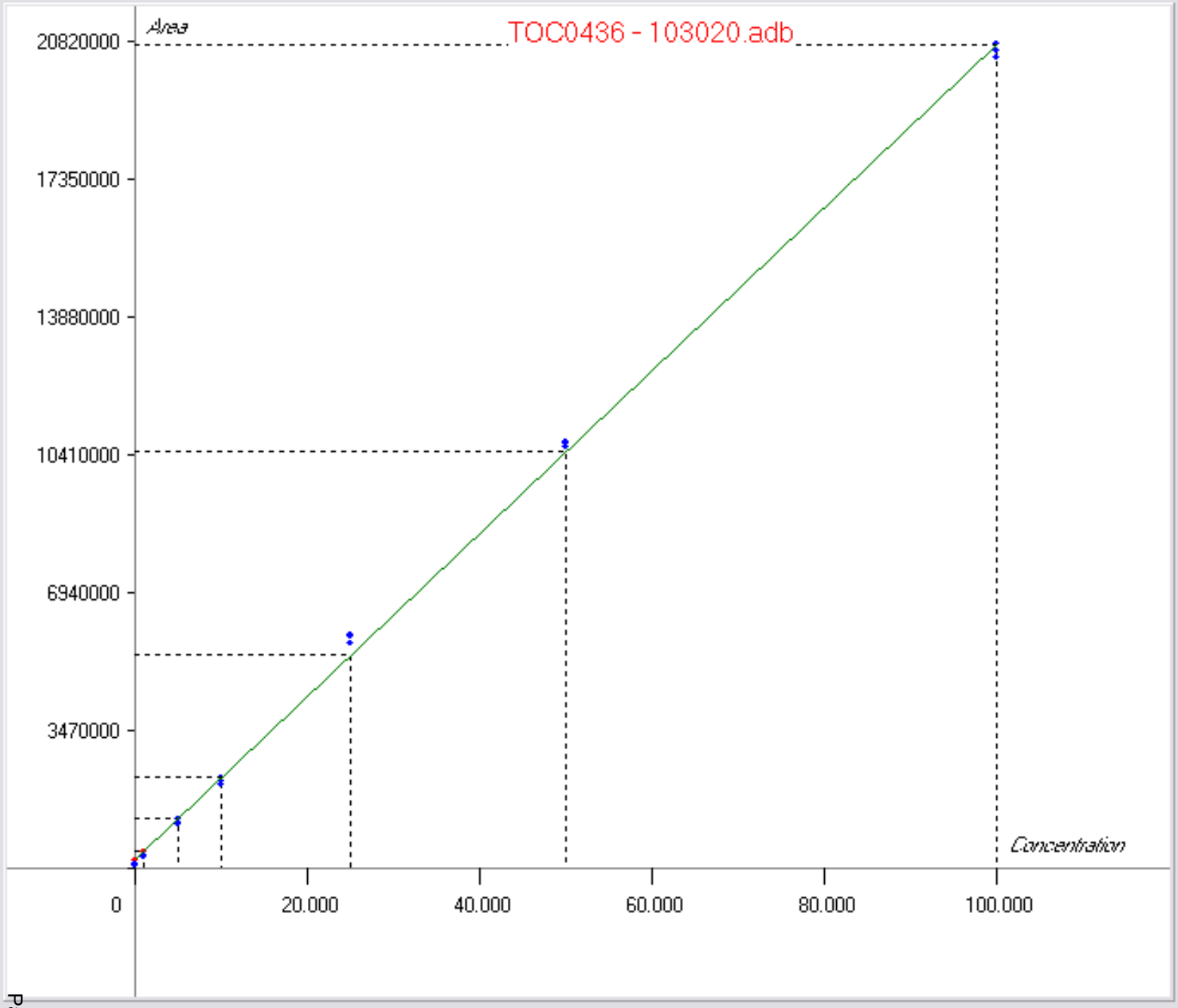
GRP	Sample ID#	Matrix	Corrected Temp (°C)*	Result	
1	BUFFER 7	QC	17.2	7.00	
2	529157	WW	17.7	6.14	
3	529242	WW	17.6	7.40	
4	529243	WW	17.8	7.07	
5	529244	WW	18.6	7.49	
6	529253	WW	19.3	7.90	
7					
8					
9					
10					
11	529266	WW	19.9	8.11	
dup 11	529266	WW	19.9	8.10	
12	BUFFER 7	QC	18.5	7.02	
13					
14					
15					
16					
17					
18					
19					
20					
21					
23	529230	GW	19.5	6.96	
dup 23	529230	GW	19.5	6.95	
24	BUFFER 7				
25					
dup 25					
26					
dup 26					

To datacapture: Save CSV file under the TSS datacapture folder.

*Temperature of samples should be room temperature around 25°C

Buffer Standard IDs:

pH 4: WC205 pH 7: WC70 pH 10: WC105



Cursor Position

Concentration	Area
118.200 mg/l	3296500

A2	0
A1	205104
A0	265065
Correlation	0.99946
Order	1
Volume	100 µl
Conc.	100.00
Area	20780031

☐ Confidence Intervals 95%

☐ Detection/Determination 95%

Conc.	Area	Sel.
0	223522	☐
0	121156	☑
0	137139	☑
0	91454	☑
0	132703	☑
1	435934	☐
1	329899	☑
1	353518	☑

• Used Value
• Ignored Value

CurveNo:1 CurveType:TC

<-- --> Print... Exit

RJ 11/11/2020

Analysis Name TOC0436 - 103020.adb

Template Name CURVE TEMP.tdb
Method Name N / A
Operator TMG

Date Friday, October 30, 2020
Time 11:40

Start Oven Temp. 750 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL0436 INSTRUMENT:TOCW

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	This Analysis	Oct 30 2020, 11:40	20780031	100	1	0.99946	100 µl	Yes
	A2: 0		*A1: 205103.50438464*		*A0: 265064.880361966*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**75682**	**131.55**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	10 30 2020 11:51:34	5.32	1356430	1	755	2	-	-
2	10 30 2020 11:56:04	ZERO !	209792	1	755	2	-	Yes
3	10 30 2020 11:58:45	ZERO !	92937	1	755	2	-	Yes
4	10 30 2020 12:01:15	0.00	0	0	755	2	-	Yes
5	10 30 2020 12:05:17	0.00	0	0	757	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	2	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**171959**	**8.48**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	10 30 2020 12:10:08	ZERO !	180387	1	758	2	-	Yes
2	10 30 2020 12:13:21	ZERO !	120698	1	758	2	-	-
3	10 30 2020 12:15:54	ZERO !	150228	1	757	2	-	Yes
4	10 30 2020 12:18:30	ZERO !	176836	1	758	2	-	Yes
5	10 30 2020 12:21:07	ZERO !	180387	1	758	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	3	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**156300**	**18.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	10 30 2020 12:24:42	ZERO !	193626	1	759	2	-	Yes
2	10 30 2020 12:27:55	ZERO !	161852	1	758	2	-	Yes
3	10 30 2020 12:30:33	ZERO !	130951	1	758	2	-	Yes
4	10 30 2020 12:33:04	ZERO !	138771	1	758	2	-	Yes
5	10 30 2020 12:35:38	ZERO !	229087	1	757	2	-	-

Inj. Order	Position	Type	Identification	Dilution Factor
4	4	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**201124**	**33.05**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	10 30 2020 12:39:08	0.01	267168	1	758	2	-	Yes
2	10 30 2020 12:42:29	ZERO !	152990	1	758	2	-	Yes
3	10 30 2020 12:44:59	ZERO !	127959	1	757	2	-	-
4	10 30 2020 12:47:30	ZERO !	135515	1	757	2	-	Yes
5	10 30 2020 12:50:01	ZERO !	248826	1	756	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
5	5	Unknown	BLANK	1 x

		TC	**ZERO !**	**146794**	**18.25**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 12:54:02	ZERO !	253328	1	757	2	-	-
2		10 30 2020 12:57:23	ZERO !	152226	1	757	2	-	Yes
3		10 30 2020 12:59:55	ZERO !	108902	1	757	2	-	Yes
4		10 30 2020 13:02:22	ZERO !	154028	1	756	2	-	Yes
5		10 30 2020 13:04:52	ZERO !	172023	1	756	2	-	Yes

---

6 S1 Standard TC Std 0.00 mg/l 1 x

		TC	**ZERO !**	**120613**	**17.06**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 13:08:13	ZERO !	223522	1	758	2	-	-
2		10 30 2020 13:11:31	ZERO !	121156	1	757	2	-	Yes
3		10 30 2020 13:14:03	ZERO !	137139	1	756	2	-	Yes
4		10 30 2020 13:16:39	ZERO !	91454	1	756	2	-	Yes
5		10 30 2020 13:19:10	ZERO !	132703	1	756	2	-	Yes

---

7 S2 Standard TC Std 1.00 mg/l 1 x

		TC	**0.38**	**343200**	**3.20**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 13:22:33	0.83	435934	1	756	2	-	-
2		10 30 2020 13:25:54	0.32	329899	1	755	2	-	Yes
3		10 30 2020 13:28:31	0.43	353518	1	755	2	-	Yes
4		10 30 2020 13:31:10	0.36	338580	1	755	2	-	Yes
5		10 30 2020 13:33:51	0.42	350803	1	755	2	-	Yes

---

8 S3 Standard TC Std. 5.00 mg/l 1 x

		TC	**4.57**	**1202349**	**4.13**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 13:37:24	4.91	1272898	1	755	2	-	Yes
2		10 30 2020 13:40:58	4.38	1163298	1	755	2	-	Yes
3		10 30 2020 13:43:53	4.42	1172482	1	754	2	-	Yes
4		10 30 2020 13:46:45	4.56	1200718	1	754	2	-	Yes

---

9 S4 Standard TC Std. 10.00 mg/l 1 x

		TC	**9.56**	**2226027**	**3.18**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 13:50:26	10.03	2322958	1	754	2	-	Yes
2		10 30 2020 13:54:20	9.20	2152977	1	754	2	-	Yes
3		10 30 2020 13:57:26	9.50	2212552	1	754	2	-	Yes
4		10 30 2020 14:00:25	9.51	2215624	1	754	2	-	Yes

---

10 S5 Standard TC Std. 25.00 mg/l 1 x

		TC	**27.22**	**5848729**	**1.58**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 14:04:24	27.62	5930537	1	754	2	-	Yes
2		10 30 2020 14:08:14	26.58	5716380	1	753	2	-	Yes
3		10 30 2020 14:11:25	27.35	5875124	1	753	2	-	Yes
4		10 30 2020 14:14:39	27.34	5872876	1	753	2	-	Yes

---

11 S6 Standard TC Std. 50.00 mg/l 1 x

		TC	**50.91**	**10706199**	**0.56**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 14:18:36	51.07	10740506	1	753	2	-	Yes
2		10 30 2020 14:22:37	50.71	10666748	1	753	2	-	Yes
3		10 30 2020 14:26:02	51.23	10771823	1	753	2	-	Yes
4		10 30 2020 14:29:24	50.61	10645721	1	753	2	-	Yes

---

12 S7 Standard TC Std. 100.00 mg/l 1 x

		TC	**99.06**	**20583105**	**0.77**		**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		10 30 2020 14:33:36	100.02	20780031	1	753	2	-	Yes
2		10 30 2020 14:37:51	98.40	20446420	1	753	2	-	Yes
3		10 30 2020 14:41:27	99.34	20639986	1	753	2	-	Yes
4		10 30 2020 14:45:15	98.49	20465983	1	752	2	-	Yes

13	S8	Unknown	ICV - 50.00 mg/L				1 x		
		TC	**47.83**	**10075246**		**0.60**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	10 30 2020 14:49:40	47.90	10088692	1	753	2	-	Yes
	2	10 30 2020 14:53:36	48.17	10144712	1	752	2	-	Yes
	3	10 30 2020 14:57:16	47.80	10068983	1	753	2	-	Yes
	4	10 30 2020 15:00:36	47.46	9998600	1	752	2	-	Yes

14	S9	Unknown	ICB				1 x		
		TC	**ZERO !**	**197714**		**13.43**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	10 30 2020 15:05:03	0.41	348588	1	753	2	-	-
	2	10 30 2020 15:08:29	ZERO !	171682	1	752	2	-	Yes
	3	10 30 2020 15:10:57	ZERO !	234740	1	751	2	-	Yes
	4	10 30 2020 15:13:31	ZERO !	193881	1	752	2	-	Yes
	5	10 30 2020 15:16:09	ZERO !	190555	1	752	2	-	Yes

Analysis Name 012821 - 178964 178967.adb

Template Name 012721 - 178964 178967.tdb
Method Name N / A
Operator KMT

Date Thursday, January 28, 2021
Time 14:36

Start Oven Temp. 782 °C
Start Cooler Temp. 3 °C

Version 2.55 Release
Info ICAL 0436 INST:TOCW
CCV 0461 LCS 0462 SPIKE 0359

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %

SampleTime 240 s

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0436 - 103020	Oct 30 2020, 11:40	20780031	100	1	0.99946	100 µl	Yes
	A2: 0		*A1: 205103.50438464*		*A0: 265064.880361966*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**221951**	**6.56**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	1 28 2021 14:46:40	4.75	1238735	1	786	2	-	-
2	1 28 2021 14:50:26	ZERO !	204283	1	785	2	-	Yes
3	1 28 2021 14:52:49	ZERO !	239755	1	783	2	-	Yes
4	1 28 2021 14:55:11	ZERO !	223775	1	782	2	-	Yes
5	1 28 2021 14:57:37	ZERO !	219993	1	781	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**47.55**	**10017055**	**0.72**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	1 28 2021 15:00:51	47.47	10002108	1	780	2	-	Yes
2	1 28 2021 15:04:45	47.20	9945282	1	779	2	-	Yes
3	1 28 2021 15:08:01	47.48	10003773	1	778	2	-	Yes
4	1 28 2021 15:11:21	48.03	10117060	1	777	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	S5	Unknown	LCSW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**49.63**	**10445932**	**0.47**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	1 28 2021 15:15:30	49.96	10512882	1	775	2	-	Yes
2	1 28 2021 15:19:42	49.42	10401642	1	774	2	-	Yes
3	1 28 2021 15:23:08	49.67	10453018	1	772	2	-	Yes
4	1 28 2021 15:26:34	49.49	10416187	1	772	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	2	Unknown	MBW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**179980**	**33.30**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	1 28 2021 15:30:52	1.00	469973	1	771	2	-	-
2	1 28 2021 15:34:37	ZERO !	253841	1	769	2	-	Yes
3	1 28 2021 15:37:26	ZERO !	140798	1	768	2	-	Yes
4	1 28 2021 15:40:11	ZERO !	122737	1	767	2	-	Yes
5	1 28 2021 15:42:56	ZERO !	202546	1	766	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
5	3	Unknown	527961	1 x

		TC	**ZERO !**	**230091**		**26.23**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	1 28 2021 15:46:30	0.19	305002	1	766	2	-	Yes
	2	1 28 2021 15:50:00	ZERO !	230930	1	764	2	-	Yes
	3	1 28 2021 15:52:51	ZERO !	227203	1	764	2	-	Yes
	4	1 28 2021 15:55:41	ZERO !	132152	1	763	2	-	-
	5	1 28 2021 15:58:19	ZERO !	157229	1	762	2	-	Yes

6	4	Unknown	527962	1 x

		TC	**ZERO !**	**252150**		**20.55**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	1 28 2021 16:01:52	0.18	302492	1	762	2	-	Yes
	2	1 28 2021 16:05:14	ZERO !	205763	1	761	2	-	Yes
	3	1 28 2021 16:07:56	0.13	291179	1	760	2	-	Yes
	4	1 28 2021 16:10:42	ZERO !	209169	1	760	2	-	Yes
	5	1 28 2021 16:13:20	ZERO !	187220	1	759	2	-	-

7	5	Unknown	527963	1 x

		TC	**ZERO !**	**200797**		**13.10**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	1 28 2021 16:16:47	0.05	275433	1	759	2	-	-
	2	1 28 2021 16:20:02	ZERO !	238985	1	758	2	-	Yes
	3	1 28 2021 16:22:38	ZERO !	193889	1	758	2	-	Yes
	4	1 28 2021 16:25:11	ZERO !	178849	1	757	2	-	Yes
	5	1 28 2021 16:27:39	ZERO !	191468	1	757	2	-	Yes

8	6	Unknown	527964	1 x

		TC	**ZERO !**	**170397**		**15.71**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	1 28 2021 16:31:00	ZERO !	236881	1	757	2	-	-
	2	1 28 2021 16:34:10	ZERO !	210171	1	756	2	-	Yes
	3	1 28 2021 16:36:38	ZERO !	159244	1	756	2	-	Yes
	4	1 28 2021 16:39:02	ZERO !	160237	1	756	2	-	Yes
	5	1 28 2021 16:41:23	ZERO !	151939	1	756	2	-	Yes

9	7	Unknown	527965	1 x

		TC	**ZERO !**	**220345**		**7.90**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	1 28 2021 16:44:36	ZERO !	237177	1	756	2	-	Yes
	2	1 28 2021 16:47:44	ZERO !	232793	1	755	2	-	Yes
	3	1 28 2021 16:50:11	ZERO !	210231	1	755	2	-	Yes
	4	1 28 2021 16:52:34	ZERO !	201179	1	755	2	-	Yes

10	8	Unknown	527966	1 x

		TC	**0.17**	**300322**		**8.48**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	1 28 2021 16:55:47	0.30	326460	1	755	2	-	Yes
	2	1 28 2021 16:58:54	0.25	317014	1	754	2	-	Yes
	3	1 28 2021 17:01:20	0.10	284708	1	754	2	-	Yes
	4	1 28 2021 17:03:44	0.04	273108	1	754	2	-	Yes

11	9	Unknown	DUP527966	1 x

		TC	**ZERO !**	**261439**		**12.60**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	1 28 2021 17:06:57	0.03	272190	1	754	2	-	Yes
	2	1 28 2021 17:09:58	ZERO !	63596	1	754	2	-	-
	3	1 28 2021 17:13:37	ZERO !	233449	1	754	2	-	Yes
	4	1 28 2021 17:16:00	ZERO !	236845	1	753	2	-	Yes
	5	1 28 2021 17:18:21	0.19	303274	1	753	2	-	Yes

12	10	Unknown	MSW527966	1 x

		TC	**50.92**	**10708337**		**0.24**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	1 28 2021 17:21:35	50.76	10675604	1	753	2	-	Yes
	2	1 28 2021 17:25:26	50.97	10718333	1	753	2	-	Yes

3	1 28 2021 17:28:31	50.89	10702541	1	753	2	-	Yes
4	1 28 2021 17:31:36	51.06	10736871	1	753	2	-	Yes

13 11 Unknown MSDW527966 1 x

TC		**48.73**	**10261080**		**0.30**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	1 28 2021 17:35:31	48.82	10278540	1	753	2	-	Yes
2	1 28 2021 17:39:15	48.87	10289311	1	753	2	-	Yes
3	1 28 2021 17:42:21	48.53	10219596	1	753	2	-	Yes
4	1 28 2021 17:45:27	48.72	10256873	1	753	2	-	Yes

14 12 Unknown 527967 1 x

TC		**ZERO !**	**274529**		**7.87**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	1 28 2021 17:49:24	0.13	292016	1	753	2	-	Yes
2	1 28 2021 17:52:27	0.04	273179	1	752	2	-	Yes
3	1 28 2021 17:54:47	ZERO !	211707	1	752	2	-	-
4	1 28 2021 17:57:05	ZERO !	244539	1	752	2	-	Yes
5	1 28 2021 17:59:25	0.11	288383	1	752	2	-	Yes

15 S1 Unknown CCV 1 x

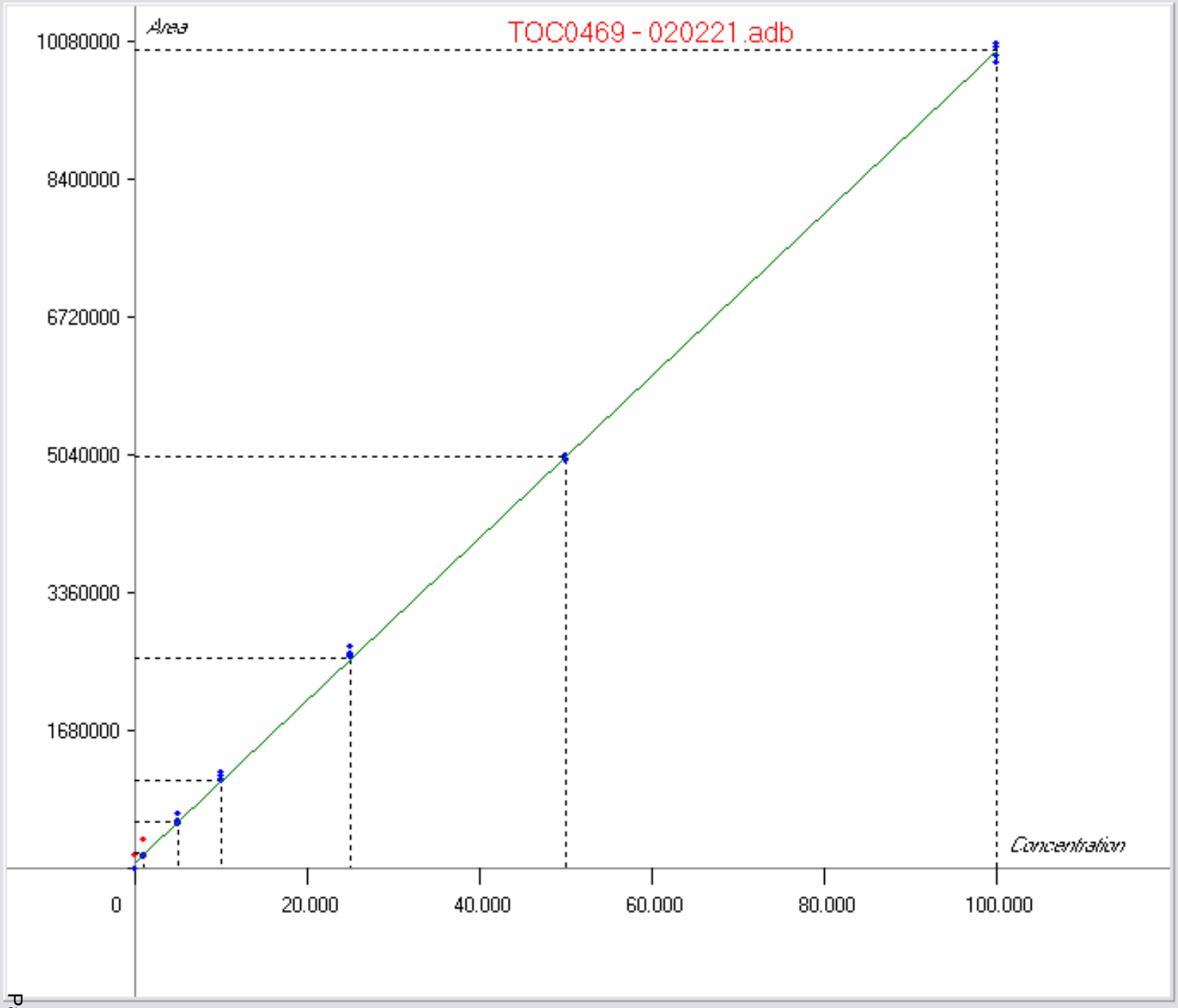
TC		**46.86**	**9876434**		**0.41**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	1 28 2021 18:02:41	46.64	9830533	1	752	2	-	Yes
2	1 28 2021 18:06:39	47.08	9921840	1	752	2	-	Yes
3	1 28 2021 18:10:02	46.95	9894918	1	752	2	-	Yes
4	1 28 2021 18:13:18	46.77	9858447	1	752	2	-	Yes

16 13 Unknown CCB 1 x

TC		**ZERO !**	**132713**		**31.79**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	1 28 2021 18:17:29	ZERO !	192706	1	752	2	-	Yes
2	1 28 2021 18:20:42	ZERO !	111767	1	752	2	-	Yes
3	1 28 2021 18:23:09	ZERO !	129634	1	752	2	-	Yes
4	1 28 2021 18:25:37	ZERO !	96748	1	752	2	-	Yes
5	1 28 2021 18:27:57	0	0	0	752	2	-	-

21	S1	Unknown	CCV				1 x		
		TC	**47.33**	**9972988**	**0.48**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	1 28 2021 19:37:48	47.16	9937462	1	752	2	-	Yes
	2	1 28 2021 19:41:41	47.20	9946305	1	752	2	-	Yes
	3	1 28 2021 19:44:59	47.68	10043393	1	752	2	-	Yes
	4	1 28 2021 19:48:16	47.29	9964793	1	752	2	-	Yes

22	18	Unknown	CCB				1 x		
		TC	**ZERO !**	**129550**	**9.43**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	1 28 2021 19:52:29	ZERO !	115408	1	752	2	-	Yes
	2	1 28 2021 19:55:37	ZERO !	132487	1	751	2	-	Yes
	3	1 28 2021 19:58:10	ZERO !	125752	1	752	2	-	Yes
	4	1 28 2021 20:00:39	ZERO !	144555	1	752	2	-	Yes



Cursor Position

Concentration	Area
113.600 mg/l	-1386000

A2	0
A1	98898
A0	92649
Correlation	0.99980
Order	1
Volume	100 µl
Conc.	100.00
Area	10065027

☐ Confidence Intervals 95%

☐ Detection/Determination 95%

Conc.	Area	Sel.
0	175110	☐
0	0	☑
0	0	☑
0	0	☑
0	0	☑
1	359233	☐
1	172418	☑
1	177922	☑

• Used Value
• Ignored Value

CurveNo:1 CurveType:TC

<-- --> Print... Exit

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RJ 02/03/2021

Analysis Name TOC0469 - 020221.adb

Template Name CURVE TEMP.tdb
Method Name N / A
Operator KMT

Date Tuesday, February 2, 2021
Time 11:09

Start Oven Temp. 780 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0469
STOCK 0476

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	This Analysis	Feb 2 2021, 11:09	10065027	100	1	0.99980	100 µl	Yes
	A2: 0		*A1: 98897.6073592651*		*A0: 92649.3920543394*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**3.03**	**369383**	**141.55**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 11:20:26	68.74	6890593	1	775	2	-	-
2	2 2 2021 11:25:04	10.62	1143064	1	773	2	-	Yes
3	2 2 2021 11:28:13	1.17	208273	1	771	2	-	Yes
4	2 2 2021 11:30:50	0.34	126195	1	771	2	-	Yes
5	2 2 2021 11:32:51	0.00	0	0	769	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	2	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**165098**	**57.03**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 11:37:42	2.12	302035	1	770	2	-	Yes
2	2 2 2021 11:40:46	0.52	143970	1	767	2	-	Yes
3	2 2 2021 11:43:02	0.33	125743	1	766	2	-	Yes
4	2 2 2021 11:45:20	ZERO !	88647	1	765	2	-	Yes
5	2 2 2021 11:47:28	0.00	0	0	764	2	-	-

Inj. Order	Position	Type	Identification	Dilution Factor
3	3	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**89811**	**89.36**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 11:52:20	1.03	194894	1	766	2	-	Yes
2	2 2 2021 11:55:22	ZERO !	89185	1	764	2	-	Yes
3	2 2 2021 11:57:20	ZERO !	75165	1	763	2	-	Yes
4	2 2 2021 11:59:26	0.00	0	0	762	2	-	Yes
5	2 2 2021 12:03:27	0.00	0	0	763	2	-	-

Inj. Order	Position	Type	Identification	Dilution Factor
4	4	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**82229**	**138.69**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 12:08:18	1.51	241821	1	762	2	-	Yes
2	2 2 2021 12:11:13	ZERO !	87096	1	760	2	-	Yes
3	2 2 2021 12:13:20	0.00	0	0	759	2	-	Yes
4	2 2 2021 12:17:22	0.00	0	0	760	2	-	Yes
5	2 2 2021 12:21:24	0.00	0	0	759	2	-	-

5 5 Unknown BLANK 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 12:26:17	0.84	175474	1	759	2	-	-
2	2 2 2021 12:29:18	0.00	0	0	757	2	-	Yes
3	2 2 2021 12:33:19	0.00	0	0	757	2	-	Yes
4	2 2 2021 12:37:21	0.00	0	0	756	2	-	Yes
5	2 2 2021 12:41:22	0.00	0	0	756	2	-	Yes

---

6 S1 Standard TC Std 0.00 mg/l 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 12:46:15	0.83	175110	1	756	2	-	-
2	2 2 2021 12:49:15	0.00	0	1	754	2	-	Yes
3	2 2 2021 12:53:16	0.00	0	1	755	2	-	Yes
4	2 2 2021 12:57:18	0.00	0	1	755	2	-	Yes
5	2 2 2021 13:01:20	0.00	0	1	754	2	-	Yes

---

7 S2 Standard TC Std 1.00 mg/l 1 x

TC **0.78** **169987** **4.03** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 13:06:12	2.70	359233	1	754	2	-	-
2	2 2 2021 13:09:09	0.81	172418	1	753	2	-	Yes
3	2 2 2021 13:11:18	0.86	177922	1	752	2	-	Yes
4	2 2 2021 13:13:24	0.76	167814	1	752	2	-	Yes
5	2 2 2021 13:15:29	0.70	161797	1	752	2	-	Yes

---

8 S3 Standard TC Std. 5.00 mg/l 1 x

TC **5.22** **608668** **8.42** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 13:18:32	5.93	679358	1	753	2	-	Yes
2	2 2 2021 13:21:39	4.72	559714	1	753	2	-	Yes
3	2 2 2021 13:23:55	5.22	608769	1	753	2	-	Yes
4	2 2 2021 13:26:12	5.00	586831	1	752	2	-	Yes

---

9 S4 Standard TC Std. 10.00 mg/l 1 x

TC **10.45** **1126290** **3.76** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 13:29:41	10.97	1177792	1	754	2	-	Yes
2	2 2 2021 13:32:45	10.01	1082287	1	753	2	-	Yes
3	2 2 2021 13:35:04	10.21	1102839	1	752	2	-	Yes
4	2 2 2021 13:37:24	10.61	1142245	1	752	2	-	Yes

---

10 S5 Standard TC Std. 25.00 mg/l 1 x

TC **25.78** **2642585** **1.86** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 13:40:50	26.49	2712305	1	753	2	-	Yes
2	2 2 2021 13:44:11	25.39	2603795	1	753	2	-	Yes
3	2 2 2021 13:46:52	25.48	2612617	1	753	2	-	Yes
4	2 2 2021 13:49:33	25.77	2641624	1	752	2	-	Yes

---

11 S6 Standard TC Std. 50.00 mg/l 1 x

TC **49.90** **5027966** **0.59** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 13:52:56	50.15	5052717	1	753	2	-	Yes
2	2 2 2021 13:56:12	49.54	4992064	1	753	2	-	Yes
3	2 2 2021 13:58:48	49.78	5015752	1	753	2	-	Yes
4	2 2 2021 14:01:21	50.14	5051334	1	752	2	-	Yes

---

12 S7 Standard TC Std. 100.00 mg/l 1 x

TC **99.80** **9962490** **1.02** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 14:04:46	100.45	10027362	1	753	2	-	Yes
2	2 2 2021 14:08:18	100.84	10065027	1	753	2	-	Yes
3	2 2 2021 14:11:00	99.30	9913097	1	753	2	-	Yes

	4	2 2 2021 14:13:39	98.61	9844475	1	752	2	-	Yes

13	S8	Unknown	ICV - 50.00 mg/L				1 x		
		TC	**46.93**	**4733749**	**1.17**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	2 2 2021 14:17:14	47.45	4785229	1	753	2	-	Yes
	2	2 2 2021 14:20:29	46.34	4675527	1	752	2	-	Yes
	3	2 2 2021 14:22:59	47.36	4776666	1	752	2	-	Yes
	4	2 2 2021 14:25:35	46.56	4697574	1	752	2	-	Yes

14	S9	Unknown	ICB				1 x		
		TC	**0.05**	**51391**	**115.67**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	2 2 2021 14:28:56	0.15	107035	1	753	2	-	Yes
	2	2 2 2021 14:31:46	0.06	98529	1	752	2	-	Yes
	3	2 2 2021 14:33:53	0	0	0	751	2	-	Yes
	4	2 2 2021 14:37:54	0	0	0	753	2	-	Yes
	5	2 2 2021 14:41:56	0	0	0	753	2	-	-

RJ 02/03/2021

Analysis Name 020321 - 179073 179074.adb

Template Name 020321 - 179073 179074.tdb
Method Name N / A
Operator KMT

Date Wednesday, February 3, 2021
Time 12:08

Start Oven Temp. 782 °C
Start Cooler Temp. 4 °C

Version 2.55 Release
Info ICAL 0469 INST: TOCW
CCV 0468 LCS 0470 SPIKE 0359

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0469 - 020221	Feb 2 2021, 11:09	10065027	100	1	0.99980	100 µl	Yes
	A2: 0		*A1: 98897.6073592651*		*A0: 92649.3920543394*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**3.38**	**380099**	**183.23**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 12:18:59	13.45	1422492	1	788	2	-	Yes
2	2 3 2021 12:23:04	0.05	97904	1	786	2	-	Yes
3	2 3 2021 12:25:06	0	0	0	784	2	-	Yes
4	2 3 2021 12:29:08	0	0	0	785	2	-	Yes
5	2 3 2021 12:33:10	0	0	0	783	2	-	-

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**50.71**	**5108222**	**0.43**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 12:38:02	50.56	5092477	1	782	2	-	Yes
2	2 3 2021 12:41:20	50.99	5135930	1	779	2	-	Yes
3	2 3 2021 12:43:57	50.79	5116069	1	778	2	-	Yes
4	2 3 2021 12:46:27	50.51	5088412	1	777	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	S5	Unknown	LCSW	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**49.84**	**5021056**	**1.67**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 12:49:48	50.96	5132164	1	776	2	-	Yes
2	2 3 2021 12:53:21	48.93	4931906	1	775	2	-	Yes
3	2 3 2021 12:55:51	49.90	5027431	1	773	2	-	Yes
4	2 3 2021 12:58:28	49.55	4992723	1	772	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	2	Unknown	MBW	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**ZERO !**	**91713**	**76.93**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 13:01:59	0.79	170526	1	771	2	-	Yes
2	2 3 2021 13:04:55	0.16	108886	1	770	2	-	Yes
3	2 3 2021 13:07:01	0	0	0	769	2	-	Yes
4	2 3 2021 13:11:02	0	0	0	769	2	-	-
5	2 3 2021 13:15:02	ZERO !	87441	1	768	2	-	Yes

13 S1 Unknown CCV 1 x

TC **51.37** **5172814** **0.90** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 14:53:07	51.36	5172023	1	754	2	-	Yes
2	2 3 2021 14:56:30	51.70	5205309	1	753	2	-	Yes
3	2 3 2021 14:59:10	50.71	5107603	1	753	2	-	Yes
4	2 3 2021 15:01:45	51.71	5206323	1	753	2	-	Yes

14 11 Unknown CCB 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 15:05:15	ZERO !	73963	1	754	2	-	-
2	2 3 2021 15:07:49	0	0	0	752	2	-	Yes
3	2 3 2021 15:11:50	0	0	0	753	2	-	Yes
4	2 3 2021 15:15:53	0	0	0	753	2	-	Yes
5	2 3 2021 15:19:54	0	0	0	753	2	-	Yes

15 12 Unknown 529217 1 x

NOT USED

TC **2.26** **316010** **8.77** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 15:24:45	2.67	356946	1	753	2	-	Yes
2	2 3 2021 15:28:11	2.18	308527	1	752	2	-	Yes
3	2 3 2021 15:30:10	2.12	302041	1	751	2	-	Yes
4	2 3 2021 15:32:06	2.06	296526	1	751	2	-	Yes

16 13 Unknown DUP529217 1 x

NOT USED

TC **4.50** **537332** **8.70** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 15:35:53	5.18	604932	1	752	2	-	Yes
2	2 3 2021 15:38:36	4.44	531388	1	752	2	-	Yes
3	2 3 2021 15:40:36	4.23	511338	1	751	2	-	Yes
4	2 3 2021 15:42:33	4.14	501673	1	751	2	-	Yes

17 14 Unknown MSW529217 1 x

NOT USED

TC **53.87** **5420805** **2.04** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 15:47:01	55.18	5550241	1	753	2	-	Yes
2	2 3 2021 15:50:12	54.04	5437329	1	752	2	-	Yes
3	2 3 2021 15:52:39	53.81	5414805	1	752	2	-	Yes
4	2 3 2021 15:55:06	52.46	5280848	1	752	2	-	Yes

18 15 Unknown MSDW529217 1 x

NOT USED

TC **53.89** **5421995** **1.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 15:58:24	54.54	5486936	1	753	2	-	Yes
2	2 3 2021 16:01:29	53.83	5416546	1	752	2	-	Yes
3	2 3 2021 16:03:54	53.21	5354562	1	752	2	-	Yes
4	2 3 2021 16:06:20	53.97	5429936	1	752	2	-	Yes

19 16 Unknown 529218 1 x

NOT USED

TC **ZERO !** **165234** **40.17** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 16:09:35	1.28	219658	1	753	2	-	Yes
2	2 3 2021 16:12:05	1.01	192922	1	751	2	-	Yes
3	2 3 2021 16:13:50	ZERO !	68884	1	750	2	-	Yes
4	2 3 2021 16:17:16	0.88	179474	1	752	2	-	Yes
5	2 3 2021 16:19:02	ZERO !	67463	1	751	2	-	-

20 17 Unknown 529219 1 x

NOT USED

TC **ZERO !** **150862** **56.23** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 16:23:26	1.50	240627	1	753	2	-	Yes
2	2 3 2021 16:25:56	ZERO !	72069	1	751	2	-	Yes
3	2 3 2021 16:28:51	1.14	205622	1	753	2	-	Yes
4	2 3 2021 16:30:36	ZERO !	85132	1	752	2	-	Yes
5	2 3 2021 16:33:25	ZERO !	23799	1	753	2	-	-

21 18 Unknown 529220 1 x

NOT USED

TC **13.65** **1442784** **2.08** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 16:38:06	13.84	1461884	1	755	2	-	Yes
2	2 3 2021 16:40:54	13.61	1438702	1	753	2	-	Yes
3	2 3 2021 16:43:00	13.24	1402011	1	752	2	-	Yes
4	2 3 2021 16:45:05	13.91	1468541	1	752	2	-	Yes

22 19 Unknown 529221 1 x

NOT USED

TC **3.04** **393647** **5.07** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 16:49:14	3.27	416165	1	753	2	-	Yes
2	2 3 2021 16:51:48	3.04	393520	1	752	2	-	Yes
3	2 3 2021 16:53:40	3.08	397278	1	751	2	-	Yes
4	2 3 2021 16:55:35	2.78	367627	1	751	2	-	Yes

23 20 Unknown 529222 1 x

NOT USED

TC **2.73** **362962** **6.41** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 17:00:22	3.05	393859	1	753	2	-	Yes
2	2 3 2021 17:03:00	2.78	367899	1	752	2	-	Yes
3	2 3 2021 17:04:52	2.57	346454	1	751	2	-	Yes
4	2 3 2021 17:06:42	2.54	343637	1	750	2	-	Yes

24 21 Unknown 529223 1 x

NOT USED

TC **1.38** **228566** **6.16** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 17:11:30	1.59	249415	1	753	2	-	Yes
2	2 3 2021 17:13:59	1.29	219767	1	752	2	-	Yes
3	2 3 2021 17:15:45	1.34	224716	1	751	2	-	Yes
4	2 3 2021 17:17:31	1.29	220367	1	750	2	-	Yes

25 S1 Unknown CCV 1 x

NOT USED

TC **50.89** **5125917** **1.11** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 17:22:39	50.16	5052893	1	754	2	-	Yes
2	2 3 2021 17:26:00	50.98	5134494	1	753	2	-	Yes
3	2 3 2021 17:28:37	50.88	5125042	1	753	2	-	Yes
4	2 3 2021 17:31:16	51.55	5191242	1	753	2	-	Yes

26 22 Unknown CCB 1 x

NOT USED

TC **0.62** **154069** **2.51** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 17:34:51	0.62	154365	1	753	2	-	Yes
2	2 3 2021 17:37:25	0.61	153460	1	752	2	-	Yes
3	2 3 2021 17:39:12	0.58	149521	1	751	2	-	Yes
4	2 3 2021 17:40:59	0.67	158932	1	751	2	-	Yes

27 23 Unknown 529224 1 x

NOT USED

TC **ZERO !** **123639** **32.56** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 17:46:05	0.63	155377	1	754	2	-	Yes
2	2 3 2021 17:48:32	0.46	138411	1	752	2	-	Yes
3	2 3 2021 17:50:18	ZERO !	64654	1	751	2	-	Yes
4	2 3 2021 17:53:00	0.44	136116	1	752	2	-	Yes
5	2 3 2021 17:54:47	ZERO !	37022	1	751	2	-	-

28 24 Unknown 529226 1 x

NOT USED

TC **2.86** **375895** **6.35** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 17:59:07	3.21	410301	1	754	2	-	Yes
2	2 3 2021 18:01:41	2.77	366239	1	753	2	-	Yes
3	2 3 2021 18:03:33	2.66	355595	1	752	2	-	Yes
4	2 3 2021 18:05:22	2.82	371448	1	751	2	-	Yes

---

29 25 Unknown 529227 1 x

NOT USED

TC **3.35** **424102** **3.40** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 18:10:15	3.55	444063	1	754	2	-	Yes
2	2 3 2021 18:12:49	3.23	412054	1	752	2	-	Yes
3	2 3 2021 18:14:40	3.26	415127	1	751	2	-	Yes
4	2 3 2021 18:16:31	3.36	425165	1	751	2	-	Yes

---

30 26 Unknown 529228 1 x

NOT USED

TC **2.45** **335239** **6.11** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 18:21:23	2.76	365936	1	753	2	-	Yes
2	2 3 2021 18:23:57	2.37	326692	1	752	2	-	Yes
3	2 3 2021 18:25:46	2.34	324134	1	751	2	-	Yes
4	2 3 2021 18:27:35	2.34	324196	1	750	2	-	Yes

---

31 27 Unknown DUP529217 1 x

NOT USED

TC **4.33** **520101** **5.86** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 18:32:33	4.78	564932	1	754	2	-	Yes
2	2 3 2021 18:35:07	4.21	509178	1	752	2	-	Yes
3	2 3 2021 18:37:03	4.09	496671	1	751	2	-	Yes
4	2 3 2021 18:38:56	4.22	509625	1	751	2	-	Yes

---

32 S2 Unknown CCV 1 x

NOT USED

TC **51.20** **5156202** **1.37** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 18:43:41	50.74	5110320	1	754	2	-	Yes
2	2 3 2021 18:47:05	50.45	5081838	1	753	2	-	Yes
3	2 3 2021 18:49:42	51.71	5206720	1	752	2	-	Yes
4	2 3 2021 18:52:23	51.91	5225930	1	752	2	-	Yes

---

33 28 Unknown CCB 1 x

NOT USED

TC **0.71** **162839** **1.01** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 3 2021 18:55:59	0.71	162416	1	753	2	-	Yes
2	2 3 2021 18:58:33	0.69	160697	1	752	2	-	Yes
3	2 3 2021 19:00:19	0.72	164201	1	751	2	-	Yes
4	2 3 2021 19:02:08	0.72	164042	1	751	2	-	Yes

Analysis Name 020421 - 179074.adb

Template Name 020321 - 179073 179074.tdb
Method Name N / A
Operator KMT

Date Thursday, February 4, 2021
Time 8:52

Start Oven Temp. 770 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0469 INST: TOCW
CCV 0468 LCS 0470 SPIKE 0359

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0469 - 020221	Feb 2 2021, 11:09	10065027	100	1	0.99980	100 µl	Yes
	A2: 0		*A1: 98897.6073592651*		*A0: 92649.3920543394*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 9:03:31	0	0	0	774	2	-	Yes
2	2 4 2021 9:08:09	0	0	0	772	2	-	Yes
3	2 4 2021 9:12:10	0	0	0	772	2	-	Yes
4	2 4 2021 9:16:12	0	0	0	772	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**51.42**	**5177621**	**1.92**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 9:21:04	52.07	5242437	1	772	2	-	Yes
2	2 4 2021 9:24:22	52.12	5247220	1	771	2	-	Yes
3	2 4 2021 9:26:51	51.51	5186446	1	770	2	-	Yes
4	2 4 2021 9:29:27	49.97	5034384	1	769	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	2	Unknown	CCB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 9:32:49	0	0	0	770	2	-	Yes
2	2 4 2021 9:37:27	0	0	0	769	2	-	Yes
3	2 4 2021 9:41:28	0	0	0	768	2	-	Yes
4	2 4 2021 9:45:31	0	0	0	768	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	3	Unknown	529217	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**1.78**	**268919**	**4.93**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 9:50:23	1.92	282965	1	768	2	-	Yes
2	2 4 2021 9:53:02	1.85	275945	1	765	2	-	Yes
3	2 4 2021 9:55:00	1.62	253013	1	764	2	-	Yes
4	2 4 2021 9:56:57	1.73	263753	1	764	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
5	4	Unknown	DUP529217	1 x

NOT USED

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**1.04**	**196223**	**7.22**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.

1	2 4 2021 10:01:30	1.48	238877	1	765	2	-	-
2	2 4 2021 10:04:10	1.23	214591	1	762	2	-	Yes
3	2 4 2021 10:06:04	0.98	189912	1	761	2	-	Yes
4	2 4 2021 10:07:55	1.07	198912	1	761	2	-	Yes
5	2 4 2021 10:09:49	0.90	181478	1	760	2	-	Yes

6 5 Unknown MSW529217 1 x

NOT USED

TC **0.86** **178165** **13.58** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 10:12:37	1.13	204537	1	762	2	-	Yes
2	2 4 2021 10:15:15	0.88	180079	1	761	2	-	Yes
3	2 4 2021 10:17:07	0.90	182146	1	760	2	-	Yes
4	2 4 2021 10:19:03	0.54	145899	1	759	2	-	Yes
5	2 4 2021 10:20:54	0	0	0	760	2	-	-

7 6 Unknown MSDW529217 1 x

TC **54.20** **5452655** **2.18** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 10:25:46	55.93	5623686	1	762	2	-	Yes
2	2 4 2021 10:28:52	53.26	5359464	1	760	2	-	Yes
3	2 4 2021 10:31:20	54.08	5441092	1	759	2	-	Yes
4	2 4 2021 10:33:50	53.53	5386381	1	758	2	-	Yes

8 7 Unknown 529218 1 x

TC **ZERO !** **-52931** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 10:37:04	ZERO !	-16689	1	758	2	-	-
2	2 4 2021 10:40:56	ZERO !	-47643	1	758	2	-	Yes
3	2 4 2021 10:43:42	ZERO !	-61785	1	757	2	-	Yes
4	2 4 2021 10:47:17	ZERO !	-20780	1	758	2	-	Yes
5	2 4 2021 10:50:01	ZERO !	-81516	1	756	2	-	Yes

9 8 Unknown 529219 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 10:53:59	0	0	0	757	2	-	Yes
2	2 4 2021 10:58:37	0	0	0	756	2	-	Yes
3	2 4 2021 11:02:38	0	0	0	756	2	-	Yes
4	2 4 2021 11:06:39	0	0	0	756	2	-	Yes

10 9 Unknown 529220 1 x

TC **2.73** **363141** **4.26** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 11:11:33	2.77	366337	1	756	2	-	Yes
2	2 4 2021 11:14:07	2.61	350638	1	755	2	-	Yes
3	2 4 2021 11:15:58	2.62	351869	1	754	2	-	Yes
4	2 4 2021 11:17:53	2.94	383720	1	753	2	-	Yes

11 10 Unknown 529221 1 x

TC **ZERO !** **62026** **112.94** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 11:22:41	0.18	110223	1	755	2	-	Yes
2	2 4 2021 11:25:10	ZERO !	13424	1	753	2	-	Yes
3	2 4 2021 11:27:49	ZERO !	-24152	1	754	2	-	-
4	2 4 2021 11:31:10	ZERO !	-8614	1	754	2	-	Yes
5	2 4 2021 11:33:53	0.41	133071	1	753	2	-	Yes

12 11 Unknown 529222 1 x

TC **ZERO !** **-63914** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 11:36:30	ZERO !	-20077	1	753	2	-	Yes
2	2 4 2021 11:39:51	0	0	0	753	2	-	-
3	2 4 2021 11:43:53	ZERO !	-133036	1	754	2	-	Yes
4	2 4 2021 11:47:28	ZERO !	-102545	1	753	2	-	Yes
5	2 4 2021 11:50:16	0	0	0	753	2	-	-

13 12 Unknown 529223 1 x

	TC	ZERO !	-28444	0.00		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 11:55:09	ZERO !	-113777	1	755	2	-	Yes
2	2 4 2021 11:59:09	0	0	0	754	2	-	-
3	2 4 2021 12:03:11	0	0	0	754	2	-	Yes
4	2 4 2021 12:07:12	0	0	0	754	2	-	Yes
5	2 4 2021 12:11:13	0	0	0	754	2	-	Yes

14 S1 Unknown CCV 1 x

	TC	50.85	5121602	0.76		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 12:16:06	50.33	5069918	1	754	2	-	Yes
2	2 4 2021 12:19:19	50.79	5115438	1	753	2	-	Yes
3	2 4 2021 12:21:51	51.22	5158062	1	752	2	-	Yes
4	2 4 2021 12:24:25	51.07	5142990	1	752	2	-	Yes

15 13 Unknown CCB 1 x

	TC	0.00	0	0.00		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 12:27:56	0.00	0	0	752	2	-	Yes
2	2 4 2021 12:32:34	0	0	0	752	2	-	Yes
3	2 4 2021 12:36:35	0	0	0	753	2	-	Yes
4	2 4 2021 12:40:37	0	0	0	753	2	-	Yes

16 14 Unknown 529224 1 x

	TC	0.00	0	0.00		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 12:45:30	0	0	0	753	2	-	Yes
2	2 4 2021 12:50:07	0	0	0	753	2	-	Yes
3	2 4 2021 12:54:09	0	0	0	753	2	-	Yes
4	2 4 2021 12:58:11	0	0	0	753	2	-	Yes

17 15 Unknown 529226 1 x

	TC	ZERO !	-12357	0.00		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 13:03:03	0.19	111355	1	753	2	-	-
2	2 4 2021 13:05:32	ZERO !	-2512	1	751	2	-	Yes
3	2 4 2021 13:08:46	ZERO !	-4761	1	752	2	-	Yes
4	2 4 2021 13:11:40	ZERO !	2729	1	752	2	-	Yes
5	2 4 2021 13:14:30	ZERO !	-44886	1	752	2	-	Yes

18 16 Unknown 529227 1 x

	TC	ZERO !	42222	132.94		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 13:18:48	ZERO !	7808	1	752	2	-	Yes
2	2 4 2021 13:22:52	0.32	124730	1	752	2	-	Yes
3	2 4 2021 13:24:38	ZERO !	5846	1	750	2	-	Yes
4	2 4 2021 13:28:08	ZERO !	-9554	1	752	2	-	-
5	2 4 2021 13:30:53	ZERO !	30507	1	752	2	-	Yes

19 17 Unknown 529228 1 x

	TC	ZERO !	-91788	0.00		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 13:34:36	ZERO !	3625	1	752	2	-	-
2	2 4 2021 13:37:38	ZERO !	-83356	1	751	2	-	Yes
3	2 4 2021 13:40:45	ZERO !	-105547	1	752	2	-	Yes
4	2 4 2021 13:43:57	ZERO !	-100373	1	752	2	-	Yes
5	2 4 2021 13:46:49	ZERO !	-77879	1	752	2	-	Yes

20 18 Unknown DUP529217 1 x

NOT USED

	TC	ZERO !	-13791	0.00		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.

1	2 4 2021 13:51:03	0.49	141218	1	753	2	-	-
2	2 4 2021 13:53:29	ZERO !	23676	1	751	2	-	Yes
3	2 4 2021 13:56:16	ZERO !	8748	1	752	2	-	Yes
4	2 4 2021 13:59:09	ZERO !	-40137	1	752	2	-	Yes
5	2 4 2021 14:02:47	ZERO !	-47451	1	752	2	-	Yes

---

21 19 Unknown MSW529217 1 x

TC **52.40** **5275065** **0.48** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 14:07:07	52.07	5241823	1	753	2	-	Yes
2	2 4 2021 14:10:11	52.61	5295924	1	752	2	-	Yes
3	2 4 2021 14:12:37	52.35	5269480	1	752	2	-	Yes
4	2 4 2021 14:14:58	52.58	5293035	1	751	2	-	Yes

---

22 S1 Unknown CCV 1 x

TC **51.12** **5147946** **0.48** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 14:18:16	50.79	5116120	1	752	2	-	Yes
2	2 4 2021 14:21:37	51.24	5159678	1	752	2	-	Yes
3	2 4 2021 14:24:14	51.06	5142706	1	752	2	-	Yes
4	2 4 2021 14:26:51	51.37	5173282	1	752	2	-	Yes

---

23 20 Unknown CCB 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 4 2021 14:30:23	0	0	0	753	2	-	Yes
2	2 4 2021 14:35:01	0	0	0	753	2	-	Yes
3	2 4 2021 14:39:02	0	0	0	754	2	-	Yes
4	2 4 2021 14:43:03	0	0	0	754	2	-	Yes

Analysis Name 020521 - 179071.adb

Template Name 020521 - 179071.tdb
Method Name N / A
Operator KMT

Date Friday, February 5, 2021
Time 9:19

Start Oven Temp. 744 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0469 INST: TOCW
CCV 0468 LCS 0470 SPIKE 0359

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0469 - 020221	Feb 2 2021, 11:09	10065027	100	1	0.99980	100 µl	Yes
	A2: 0		*A1: 98897.6073592651*		*A0: 92649.3920543394*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 5 2021 9:30:18	0	0	0	752	2	-	Yes
2	2 5 2021 9:34:56	0	0	0	753	2	-	Yes
3	2 5 2021 9:38:58	0	0	0	754	2	-	Yes
4	2 5 2021 9:43:00	0	0	0	755	2	-	Yes

2	S1	Unknown	CCV	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**52.69**	**5303343**	**0.98**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 5 2021 9:47:49	53.22	5355784	1	757	2	-	Yes
2	2 5 2021 9:51:13	53.04	5338589	1	757	2	-	Yes
3	2 5 2021 9:53:52	52.14	5248824	1	756	2	-	Yes
4	2 5 2021 9:56:32	52.35	5270177	1	757	2	-	Yes

3	S5	Unknown	LCSW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**51.08**	**5144062**	**0.38**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 5 2021 9:59:57	51.32	5168391	1	758	2	-	Yes
2	2 5 2021 10:03:23	50.85	5121529	1	758	2	-	Yes
3	2 5 2021 10:06:05	51.13	5148979	1	758	2	-	Yes
4	2 5 2021 10:08:36	51.01	5137352	1	758	2	-	Yes

4	2	Unknown	MBW-CCB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 5 2021 10:12:05	0.00	0	0	759	2	-	Yes
2	2 5 2021 10:16:43	0	0	0	759	2	-	Yes
3	2 5 2021 10:20:44	0	0	0	760	2	-	Yes
4	2 5 2021 10:24:46	0	0	0	760	2	-	Yes

5	3	Unknown	DUP529217	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**1.23**	**214238**	**6.42**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.

1	2 5 2021 10:29:38	1.44	234806	1	759	2	-	Yes
2	2 5 2021 10:32:19	1.17	208182	1	758	2	-	Yes
3	2 5 2021 10:34:16	1.17	208025	1	757	2	-	Yes
4	2 5 2021 10:36:14	1.15	205941	1	757	2	-	Yes

6 4 Unknown MSW529220 USED TO VERIFY RESULTS

NOT USED

TC **56.52** **5682551** **0.94** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 5 2021 10:40:44	56.53	5682945	1	758	2	-	Yes
2	2 5 2021 10:44:08	56.09	5639820	1	757	2	-	Yes
3	2 5 2021 10:46:52	57.29	5758025	1	757	2	-	Yes
4	2 5 2021 10:49:33	56.19	5649414	1	757	2	-	Yes

7 5 Unknown 529066 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 5 2021 10:53:14	0	0	0	757	2	-	Yes
2	2 5 2021 10:57:52	0	0	0	757	2	-	Yes
3	2 5 2021 11:01:54	0	0	0	757	2	-	Yes
4	2 5 2021 11:05:56	0	0	0	757	2	-	Yes

8 6 Unknown DUP529066 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 5 2021 11:10:48	0	0	0	757	2	-	Yes
2	2 5 2021 11:15:25	0	0	0	757	2	-	Yes
3	2 5 2021 11:19:27	0	0	0	757	2	-	Yes
4	2 5 2021 11:23:29	0	0	0	756	2	-	Yes

9 7 Unknown MSW529066 1 x

TC **51.76** **5211759** **1.47** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 5 2021 11:28:21	52.73	5307906	1	757	2	-	Yes
2	2 5 2021 11:31:31	51.84	5219670	1	755	2	-	Yes
3	2 5 2021 11:33:57	50.85	5121747	1	754	2	-	Yes
4	2 5 2021 11:36:21	51.62	5197714	1	753	2	-	Yes

10 8 Unknown MSDW529066 1 x

TC **52.19** **5254551** **0.27** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 5 2021 11:39:38	52.15	5250159	1	754	2	-	Yes
2	2 5 2021 11:42:46	52.18	5252729	1	754	2	-	Yes
3	2 5 2021 11:45:15	52.06	5241022	1	753	2	-	Yes
4	2 5 2021 11:47:43	52.39	5274297	1	753	2	-	Yes

11 9 Unknown 530135 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 5 2021 11:51:00	0	0	0	753	2	-	Yes
2	2 5 2021 11:55:38	0	0	0	755	2	-	Yes
3	2 5 2021 11:59:39	0	0	0	755	2	-	Yes
4	2 5 2021 12:03:41	0	0	0	755	2	-	Yes

12 10 Unknown 531256 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 5 2021 12:08:32	0	0	0	754	2	-	Yes
2	2 5 2021 12:13:10	0	0	0	753	2	-	Yes
3	2 5 2021 12:17:11	0	0	0	753	2	-	Yes
4	2 5 2021 12:21:13	0	0	0	753	2	-	Yes

13 S1 Unknown CCV 1 x

TC **52.57** **5291962** **1.01** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.

1		2 5 2021 12:26:04	52.30	5264671	1	753	2	-	Yes
2		2 5 2021 12:29:22	52.01	5235857	1	752	2	-	Yes
3		2 5 2021 12:31:58	53.23	5357353	1	752	2	-	Yes
4		2 5 2021 12:34:37	52.75	5309967	1	751	2	-	Yes

14	11	Unknown	CCB				1 x		
		TC	**0.00**	**0**		**0.00**	**100 µl**		
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		2 5 2021 12:38:10	0	0	0	752	2	-	Yes
2		2 5 2021 12:42:47	0	0	0	753	2	-	Yes
3		2 5 2021 12:46:50	0	0	0	753	2	-	Yes
4		2 5 2021 12:50:50	0	0	0	753	2	-	Yes

INORGANICS
LOGBOOK
DOCUMENTS

WANIONS IC QSM 5.0 Analytical Run
178954 on 01/27/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	528498						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICV							
		Chloride		ICV							
		Sulfate		ICV							
	528499						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICB							
		Chloride		ICB							
		Sulfate		ICB							
	528452						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	528460						WANIONS IC QSM 5.0				
		Chloride		LCSW				0			
		Nitrate Nitrogen		LCSW				0			
		Sulfate		LCSW				0			
	528463						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		MBW				0			
		Chloride		MBW				0			
		Sulfate		MBW				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
178954 on 01/27/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
159400	527961		01/25/2021 1050		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
159400	527962		01/25/2021 1150		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
159400	527963		01/25/2021 1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
	528470						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	528484						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
178954 on 01/27/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
159400	527964		01/25/2021	1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
159400	527965		01/25/2021	1330		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
159400	527966		01/25/2021	1425		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride			*							
		Nitrate Nitrogen			*							
		Sulfate			*							
	528486		01/25/2021	1425				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			DUP	527966			0			
		Chloride			DUP	527966			0			
		Sulfate			DUP	527966			0			
	528488		01/25/2021	1425				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSW	527966			0			
		Chloride			MSW	527966			0			
		Sulfate			MSW	527966			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
178954 on 01/27/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	528489		01/25/2021 1425				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSDW 528488				0			
		Chloride		MSDW 528488				0			
		Sulfate		MSDW 528488				0			
159400	527967		01/25/2021 1530		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
159400	527963		01/25/2021 1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Sulfate	***RERUN***								
159400	527964		01/25/2021 1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Sulfate	***RERUN***								
159400	527967		01/25/2021 1530		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Sulfate	***RERUN***								

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
178954 on 01/27/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	528490						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	528491						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			
	528492						WANIONS IC QSM 5.0				
		Sulfate		CCV				0			
	528493						WANIONS IC QSM 5.0				
		Sulfate		CCB				0			
159400	527961		01/25/2021 1050		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Sulfate	***RERUN***								
	528494						WANIONS IC QSM 5.0				
		Sulfate		CCV				0			
	528495						WANIONS IC QSM 5.0				
		Sulfate		CCB				0			

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Data Review Checklist

	Method: Anions by Ion Chromatography 300.0/9056	Independent Data Review Checklist	Instrument: Aquion - System 4

LIMS Run #(s)	Analysis Date	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes/No)
178910 178911 178954	01/26/2021	TMG	RLD	01/27/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3	Yes		Yes		
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits	Yes		Yes		
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits	Yes		Yes		
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

WANIONS IC QSM 5.0 Analytical Run
179049 on 02/11/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	529898							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	529897							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB				0			
		Chloride			CCB				0			
		Sulfate			CCB				0			
159482	529219		01/27/2021	1130		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
159482	529220		01/27/2021	1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
159482	529221		01/27/2021	1345		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
179049 on 02/11/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
159482	529222		01/27/2021	1345		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
159482	529223		01/27/2021	1455		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
159482	529224		01/27/2021	1600		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
159482	529217		01/27/2021	1035		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
159482	529218		01/27/2021	0940		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
179049 on 02/11/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
159482	529217		01/27/2021 1035		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Sulfate	***RERUN***								
	529905		01/27/2021 1600				ANIONS IC QSM 5.0				
		Sulfate		DUP	529224			0			
		Chloride		DUP	529224			0			
		Nitrate Nitrogen		DUP	529224			0			
	529904						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	529903						WANIONS IC QSM 5.0				
		Chloride		LCSW				0			
		Nitrate Nitrogen		LCSW				0			
		Sulfate		LCSW				0			
	529902						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		MBW				0			
		Chloride		MBW				0			
		Sulfate		MBW				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
179049 on 02/11/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	529901		01/27/2021 1600				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSW 529224				0			
		Chloride		MSW 529224				0			
		Sulfate		MSW 529224				0			
	530273		01/27/2021 1600				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSDW 529901							
		Chloride		MSDW 529901							
		Sulfate		MSDW 529901							
	529900						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	529899						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
179053 on 02/11/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	529934							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	529933							WANIONS IC QSM 5.0				
		Chloride			LCSW				0			
		Nitrate Nitrogen			LCSW				0			
		Sulfate			LCSW				0			
	529932							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			MBW				0			
		Chloride			MBW				0			
		Sulfate			MBW				0			
159483	529226		01/28/2021	1115		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
159483	529227		01/28/2021	1250		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
179053 on 02/11/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
159483	529228		01/28/2021	1405		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
	529936							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	529935							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB				0			
		Chloride			CCB				0			
		Sulfate			CCB				0			
	529931		01/28/2021	1115				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			DUP	529226			0			
		Chloride			DUP	529226			0			
		Sulfate			DUP	529226			0			
	529930		01/28/2021	1115				ANIONS IC QSM 5.0				
		Chloride			MSW	529226			0			
		Sulfate			MSW	529226			0			
		Nitrate Nitrogen			MSW	529226			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
179053 on 02/11/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	530269		01/28/2021 1115				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSDW 529930							
		Chloride		MSDW 529930							
		Sulfate		MSDW 529930							
	529929						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	529928						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Data Review Checklist

	Method: Anions by Ion Chromatography 300.0/9056	Independent Data Review Checklist	Instrument: Aquion - System 4

LIMS Run #(s)	Analysis Date	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes/No)
179049 179050 179053	01/29/2021	TMG	RLD	02/03/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3		No		No	Affected sample results were "H" flagged
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits	Yes		Yes		
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits	Yes		Yes		
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

Aquion Run Log - System 4

Start Date	Start Time	End Date	End Time	Analyst	Lims Run #(s)	Calibration ID#	Data File	CCV ID's	LCS ID's	Spike ID's	Total Cond.	Pressure (Mpa)	Flow (mL/min)	Comments	Reviewed/Date
11/04/20	13:30	11/05/20	12:21	TMG	176759 176790	IC3271A	110420 -	IC3331 IC3338	IC3332 IC3339	IC3333 IC3340	21.75	1119	0.97		RLD 11/17/2020
11/05/20	14:55	11/06/20	09:45	TMG	176852 176853	IC3271A	110520 -	IC3341 IC3344	IC3342 IC3345	IC3343 IC3346	21.69	1120	0.97		RLD 11/17/2020
11/06/20	12:38	11/07/20	14:26	TMG	176906 ML IC3347 ML	IC3347 ML	110620 -	IC3348	IC3349	IC3343 IC3346	21.72	1152	1		RLD 11/17/2020
11/09/20	10:14	11/09/20	13:34	TMG	IC3352A	IC3352A	110920 -	IC3341 IC3353	IC3342 IC3354	IC3343 IC3355	21.51	1160	1		RLD 11/17/2020
11/10/20	10:33	11/10/20	21:59	TMG	176965 176966 PT	IC3352A	111020 -	IC3341 IC3353	IC3342 IC3354	IC3343 IC3355	21.33	1125	0.97		RLD 11/17/2020
11/12/20	8:47	11/13/20	12:41	TMG	177068 177069 177070 177071 177110	IC3352A	111220 -	IC3360 IC3363	IC3361 IC3364	IC3362 IC3365	21.41	1122	0.97		RLD 12/14/2020
11/13/20	14:26	11/13/20	18:03	TMG	177134	IC3352A	111320 -	IC3360 IC3363	IC3361 IC3364	IC3362 IC3365	21.87	1126	0.97		RLD 12/14/2020
11/17/20	14:32	11/17/20	17:32	TMG	177236	IC3352A	111720 -	IC3360 IC3366	IC3362 IC3367	IC3363 IC3368	21.79	1125	0.97		RLD 12/14/2020
11/19/20	15:01	11/20/20	09:31	TMG	177304	IC3352A	111920 -	IC3370 IC3373	IC3371 IC3374	IC3372 IC3375	21.51	1117	0.97		RLD 12/14/2020
11/23/20	12:54	11/23/20	19:13	TMG	177387	IC3352A	112320 -	IC3370 IC3373	IC3371 IC3374	IC3372 IC3375	21.73	1116	0.97		RLD 12/14/2020
11/24/20	12:32	11/24/20	20:03	TMG	177412	IC3352A	112420 -	IC3370 IC3373	IC3371 IC3374	IC3372 IC3375	21.55	1124	0.97		RLD 12/14/2020
11/25/20	8:30	11/25/20	10:55	TMG	177442	IC3352A	112520 -	IC3370 IC3373	IC3371 IC3374	IC3372 IC3375	21.79	1132	0.97		RLD 12/14/2020
11/30/20	15:20	12/01/20	09:02	TMG	177497	IC3352A	113020 -	IC3376 IC3379	IC3377 IC3380	IC3378 IC3381	22.23	1142	0.97		RLD 12/14/2020
12/02/20	8:03	12/02/20	14:22	TMG	177525 177534	IC3352A	120220 -	IC3376 IC3379	IC3377 IC3380	IC3378 IC3381	21.98	1120	0.97		RLD 12/14/2020
12/03/20	14:19	12/04/20	11:11	TMG	177604 177605	IC3352A	120420 -	IC3376 IC3391	IC3377 IC3392	IC3378 IC3393	21.9	1118	0.97		RLD 12/14/2020
12/04/20	14:10	12/07/20	13:09	TMG	177649 177650	IC3352A	120420 -	IC3376 IC3391	IC3377 IC3392	IC3378 IC3393	22.41	1120	0.97		RLD 12/14/2020
12/08/20	15:37	12/09/20	13:24	TMG	177730	IC3352A	120820 -	IC3394 IC3397	IC3395 IC3398	IC3396 IC3399	22.62	1130	0.97		
12/10/20	10:56	12/10/20	21:10	TMG	177792 177801	IC3352A	121020 -	IC3394 IC3401	IC3395 IC3402	IC3396 IC3403	22.1	1095	0.97		
12/11/20	8:40	12/11/20	15:35	TMG	177839	IC3352A	121120 -	IC3394 IC3401	IC3395 IC3402	IC3396 IC3403	22.32	1092	0.97		
12/15/20	14:22	12/15/20	19:47	TMG	177953 177954	IC3352A	121520 -	IC3404 IC3407	IC3405 IC3408	IC3406 IC3409	22.62	1092	0.94		
12/16/20	8:04	12/16/20	18:36	TMG	177976 178006	IC3352A	121620 -	IC3404 IC3407	IC3405 IC3408	IC3406 IC3409	22.35	1088	0.94		
12/17/20	14:26	12/17/20	17:44	TMG	178048	IC3352A	121720 -	IC3404 IC3411	IC3405 IC3412	IC3406 IC3413	22.31	1091	0.94		
12/18/20	12:50	12/18/20	15:51	TMG	178074	IC3352A	121820 -	IC3404 IC3411	IC3405 IC3412	IC3406 IC3413	22.58	1092	0.94		
12/23/20	9:24	12/23/20	17:03	TMG	178208 178209	IC3352A	122320 -	IC3414 IC3417	IC3415 IC3418	IC3416 IC3419	23.05	1102	0.94		
12/29/20	12:52	12/29/20	18:17	TMG	178313 178314	IC3352A	122920 -	IC3414 IC3417	IC3415 IC3418	IC3416 IC3419	23.33	1075	0.94		
12/30/20	11:28	12/30/20	16:55	TMG	178328 178331	IC3352A	123020 -	IC3421 IC3424	IC3422 IC3425	IC3423 IC3426	23.35	1081	0.94		
12/31/20	12:53	12/31/20	15:38	KMT	178366	IC3352A	123120 -	IC3421 IC3424	IC3422 IC3425	IC3423 IC3426	23.43	1114	0.94		
01/05/21	14:33	01/06/21	10:03	KMT	178406 178407	IC3352A	010521 -	IC3421 IC3424	IC3422 IC3425	IC3423 IC3426	24.36	1119	0.94		
01/06/21	11:23	01/06/21	15:17	TMG	178430	IC3352A	010621 -	IC3421 IC3424	IC3422 IC3425	IC3423 IC3426	24.51	1120	0.94		
01/07/21	14:57	01/12/21	09:31	TMG	178469	IC3352A	010721 -	IC3427 IC3430	IC3428 IC3431	IC3429 IC3432	25.84	1352	0.94		
01/12/21	12:30	01/12/21	19:26	TMG	178525 178572 178580	IC3352A	011221 -	IC3427 IC3430	IC3428 IC3431	IC3429 IC3432	23.02	1120	0.94		
01/13/21	13:19	01/14/21	11:12	TMG	178600 178601 178602	IC3352A	011321 -	IC3427 IC3430	IC3428 IC3431	IC3429 IC3432	23.03	1105	0.94		
01/14/21	13:31	01/14/21	22:15	TMG	178629 178631	IC3352A	011421 -	IC3441 IC3444	IC3442 IC3445	IC3443 IC3446	22.05	1102	0.94		
01/15/21	10:29	01/19/21	10:35	TMG	178665 178666 178667	IC3352A	011521 -	IC3441 IC3444	IC3442 IC3445	IC3443 IC3446	21.66	1105	0.94		
01/16/21	14:44	01/19/21	12:11	TMG	178692 IC3449A	IC3352A	011621 -	IC3441 IC3444	IC3442 IC3445	IC3443 IC3446	21.04	1123	0.94		
01/19/21	15:34	01/20/21	09:41	TMG	178745 178746 178747	IC3449A	011921 -	IC3441 IC3444	IC3442 IC3450	IC3443 IC3446	21.4	1102	0.94		
01/20/21	12:58	01/21/21	09:11	TMG	178792	IC3449A	012021 -	IC3441 IC3444	IC3442 IC3450	IC3443 IC3446	21.22	1103	0.94		
01/22/21	12:43	01/25/21	10:12	TMG	178851 178863 178869	IC3449A	012221 -	IC3451 IC3454	IC3452 IC3455	IC3453 IC3456	21.31	1084	0.94		
01/26/21	11:40	01/27/21	08:43	TMG	178910 178911	IC3449A	012621 -	IC3451 IC3454	IC3452 IC3455	IC3453 IC3456	21.4	1112	0.94		
01/27/21	14:20	01/27/21	20:57	TMG	178975 178979	IC3449A	012721 -	IC3451 IC3454	IC3452 IC3455	IC3453 IC3456	21.64	1105	0.94		
01/29/21	11:08	02/01/21	08:58	TMG	179049 179050 179053	IC3449A	012921 -	IC3463 IC3466	IC3464 IC3467	IC3465 IC3468	21.6	1110	0.94		
02/02/21	11:43	02/01/21	16:32	TMG	179117 179118	IC3449A	020221 -	IC3463 IC3466	IC3464 IC3467	IC3465 IC3468	20.9	1115	0.94		

WCOD QSM Analytical Run
179079 on 02/02/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
159483	529230		01/28/2021 1530		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	COD QSM		GW	4	
		IDW-48/49						79869			
	529809						COD QSM				
				MBW				79869			
	529810						COD QSM				
				LCSW				79869			
	530110						WCOD QSM				
				CCV							
	530111						WCOD QSM				
				CCB							
	530112						WCOD QSM				
				CCV							
	530113						WCOD QSM				
				CCB							

10 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

COD Data Validation Checklist

		Method: Chemical Oxygen Demand EPA 410.4			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
179078 079	02/01/2021	ATJ	HLB	02/01/2021	Yes

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Does a digestion sheet accompany the data package?	---	Yes		Yes		
2. Does the digestion sheet include all reagent and standard prep log numbers?	---	Yes		Yes		
3. Was a passing calibration test applied to sample analysis?	≥0.995	Yes		Yes		
4. Was a passing ICV analyzed immediately after the calibration?	90-110%	Yes		Yes		
5. Was a passing ICB analyzed immediately after the ICV?	< |LOD|or client/project specific	Yes		Yes		
6. Were CCVs and CCB analyzed at the required frequency?	1 per 10 samples	Yes		Yes		
7. Did analyzed CCVs meet the required acceptance criteria?	90-110%	Yes		Yes		
8. Did analyzed CCBs meet the acceptance criteria?	< |LOD|or client/project specific	Yes		Yes		
9. Was a Method Blank prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes		Yes		
10. Was the method blank within acceptance criteria?	< |LOD|or client/project specific	Yes		Yes		
11. Was an LCS prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes		Yes		
12. Did the LCS meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits	Yes		Yes		
13. Was an MS and MSD prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes		Yes		
14. Did the MS/ MSD's meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits	Yes		Yes		

15. Did the MS/MSD's meet the RPD criteria?	Within in-house or contract/program specific limits	Yes		Yes		
16. Was a Duplicate prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes		Yes		
17. Did the Duplicate meet the RPD criteria?	Within in-house or contract/program specific limits	Yes		Yes		
18. Were the samples digested within hold time?	28 days	Yes		Yes		
19. Was the max temperature(s) for reactor(s) documented?	---	Yes		Yes		
20. Was the method specifed temperature reached?		Yes		Yes		
21. Were reagents/standards used before expiration date?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		

CHEMICAL OXYGEN DEMAND REAGENT LOG

Prep Batch(es): 79869 79857
Date/Time/Analyst: 02-01-2021 09:45 ATJ
Run(s): 179078 079
Date/Time/Analyst: 02/01/2021 13:10:00 ATJ

Reagents:	W #	Exp Date
ICAL Preparation.....	50046	04/04/2021
CCV Preparation.....	50048	04/04/2021
LCS/ICV Preparation.....	50049	04/04/2021
Silver Sulfate Acid.....	49897	12/07/2021
Potassium Dichromate Dig Solution...	49362	09/04/2021

Spiked Samples:	W #	Exp Date
Spiking Solution.....	50047	04/04/2021
Concentration..... 2000 mg/L		
Volume of Spike Used... 0.2 mL		
Final Sample Volume..... 2.5 mL		
Final Spike Concentration... 148.2 mg/L		

Date: 02/01/2021
Time: 09:45

COD DIGESTION BLOCK TEMPS

	A	B
Temperature (Max) 150°C ± 2°C:		

	E	D
Temperature (Max) 150°C ± 2°C:	149.5	

GENESYS 30 Instrument Run Logbook

Date	Start Time	End Time	Analyst	Test/Analyte	Calibration Test #	Run #/ Comments
02/01/21	13:05	13:30	ATJ	COD	CODW50046	179078 079

PREP WORKSHEET 2
on 02/01/2021

Prep Batch: 79857
Date Prepped: 2-1-21

CCV 1

Prepped By: HS
Date Entered:

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	529767 3	MBW	0	COD TOTAL			LIQUID			
	529768 2	LCSW	0	COD TOTAL			LIQUID			
159416	528435 4,5,6			COD TOTAL	SAPUTO CHEESE, INC.	POLISHED WATER	WASTE WATER	1/26/21	2/8/21	1
159479	529157 7 X50			COD TOTAL	ANDERSON CUSTOM PROC	WW	WASTE WATER	1/28/21 1400	2/10/21	

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

PREP WORKSHEET 2
on 02/01/2021

Prep Batch: 79869
Date Prepped: 2-1-21

Prepped By: AK
Date Entered:

CCV 8

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	529809 10	MBW	0	COD QSM			LIQUID				
	529810 9	LCSW	0	COD QSM			LIQUID				
159442	528807 11,12,13			COD QSM	WESTON SOLUTIONS, INC.	IDW-54	GROUND WATER	1/26/21	1600	2/8/21	4
159483	529230 14			COD QSM	WESTON SOLUTIONS, INC.	IDW-48/49	GROUND WATER	1/28/21	1530	2/10/21	4

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

WPH Analytical Run
179066 on 02/02/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
159483	529230	IDW-48/49	01/28/2021 1530		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	PH		GW	4	
	529610	IDW-48/49	01/28/2021 1530	DUP 529230			PH				

9 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

pH Data Validation Checklist

		Method: pH EPA 150.1, SM 4500-H+B, EPA 9040C, EPA 9045D			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
179066	01/29/2021	ATJ	HLB	01/29/2021	Yes

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Was the calibration slope recorded on the bench sheet?	95-110%	Yes		Yes		
2. Were reagents/standards used before expiration date?	---	Yes		Yes		
3. Were duplicates analyzed at the appropriate frequency?	1 every 20 samples of the same matrix	Yes		Yes		
4. Were the duplicates within acceptable limits?	Differ by $\leq$ 0.10 pH units	Yes		Yes		
5. Are all samples on the job lists accounted for?	---	Yes		Yes		
6. Were SM 4500-H+B samples bracketed by calibration buffer 7?	Every 10 samples, Differ by $\leq$ 0.10 pH units	Yes		Yes		

Mettler Toledo (Easy Seven) Instrument Run Logbook

Date	Start Time	End Time	Analyst	Analyte	Lims Run #(s)
01/29/21	14:00	14:20	ATJ	PH	179066
02/01/21	14:05	14:15	RLB	PH	179089
02/02/21	14:04	14:11	LAY	PH	179122

Mettler Toledo (Easy Seven) pH Calibration & Maintenance Run Logb

		pH Buffer Reference ID #			3 Point Calibration				
Date	Analyst	pH 7	pH 4	pH 10	1st Buffer	2nd Buffer	3rd Buffer	Slope (95-110%)	Temp ° C
01/28/21	LAY	WC70 EX: 02/13/22	WC205 EX: 10-31-2023	WC105 EX:05/04/22	7.02	4	10.07	98%	19.1
01/29/21	LAY	WC70 EX: 02/13/22	WC205 EX: 10-31-2023	WC105 EX:05/04/22	7.02	4	10.07	98%	19.6
02/01/21	LAY	WC70 EX: 02/13/22	WC205 EX: 10-31-2023	WC105 EX:05/04/22	7.02	4	10.06	96%	20.3
02/02/21	LAY	WC70 EX: 02/13/22	WC205 EX: 10-31-2023	WC105 EX:05/04/22	7.02	4	10.06	98%	20

WORGANIC CARBON QSM 5.0 Analytical Run
178964 on 02/01/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	530128						WORGANIC CARBON QSM 5.0				
				ICV							
	530129						WORGANIC CARBON QSM 5.0				
				ICB							
	529131						WORGANIC CARBON QSM 5.0				
				CCV				0			
	529132						WORGANIC CARBON QSM 5.0				
				LCSW				0			
	529133						WORGANIC CARBON QSM 5.0				
				MBW				0			
159400	527961		01/25/2021 1050		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		13MW5									
159400	527962		01/25/2021 1150		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		13MW4									
159400	527963		01/25/2021 1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		13MW3									
159400	527964		01/25/2021 1240		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		13TW3									
159400	527965		01/25/2021 1330		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		49MW04									
159400	527966		01/25/2021 1425		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		49MW02		Designated MS/MSD							
	529134		01/25/2021 1425				ORGAN CARBON T QSM 5.0				
		49MW02		DUP 527966				0			
	529135		01/25/2021 1425				ORGAN CARBON T QSM 5.0				
		49MW02		MSW 527966				0			
	529136		01/25/2021 1425				ORGAN CARBON T QSM 5.0				
		49MW02		MSDW 529135				0			
159400	527967		01/25/2021 1530		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		49MW05									
	529137						WORGANIC CARBON QSM 5.0				
				CCV				0			
	529138						WORGANIC CARBON QSM 5.0				
				CCB				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

FWC39-01 Data Review Checklist

	Method: Total Organic Carbon Method 415.1/9060	Independent Data Review Checklist	Instrument: TOCW

LIMS Run #(s)	Analysis Date	Analyst / Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes or No)
178964, 178967	01/28/2021	KMT	RLD	02/01/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples preserved prior to analysis and analyzed within hold time?	pH <2, 28 days or program/project specific	Yes		Yes		
2. Was the calibration curve performed using the required number of standards?	3 standards and a blank	Yes		Yes		
3. Was the correlation coefficient acceptable?	r ≥ .995	Yes		Yes		
4. Were the ICV and ICB analyzed?	---	Yes		Yes		
5. Was the ICV result acceptable?	90 – 110 % Rec. or contract/program specific	Yes		Yes		
6. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
7. Was an LCS & MB run with each batch of samples?	One each per analytical batch or contract/program specific frequency.	Yes		Yes		
8. Was the LCS recovery acceptable?	In-house derived or contract/program specific limits.	Yes		Yes		
9. Were the MB results acceptable?	< LOD or project/ program specific (<1/2 RL for DOD-QSM).	Yes		Yes		
10. Were the CCV's analyzed at the required frequency?	Beginning, after every 10 sample, & at the end of a sequence.	Yes		Yes		
11. Were the CCB's analyzed at the required frequency?	After each CCV (unless MB analyzed after CCV)	Yes		Yes		
12. Were the CCV recoveries acceptable?	90 – 110 % Rec. or project/ program specific	Yes		Yes		
13. Were the CCB results acceptable?	< LOD or project/ program specific	Yes		Yes		

14. Were all positive results that were reported within the calibration curve?	---	Yes		Yes		
15. Was an MS and MSD analyzed at the required frequency?	1 / 20 of the same matrix or project/ program specific	Yes		Yes		
16. Were the MS and MSD recoveries acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
17. Was the RPD between the MS and MSD acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
18. Was a Duplicate analyzed at the required frequency?	1 per 20 of the same matrix or contract/program specific	Yes		Yes		
19. Was the RPD between the Duplicate (if valid) and the sample acceptable?	In-house derived or project/ program specific limits (QSM samples, duplicate only valid when sample result ≥5x the LOQ)	Yes		Yes		
20. Are all samples on the job lists accounted for?	---	Yes		Yes		
21. Is the standards prep log numbers noted on the analytical report?	---	Yes		Yes		
22. Were post analysis corrections addressed and/or the Audit Trail function turned on (if available)?	Correction should be initialed, dated, and reason given. Audit trail must be on (if available)	Yes		Yes		
23. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

TOC Instrument Run Logbook

Start Date	Start Time	End Date	End Time	Analyst	LIMs Run #	Matrix (S or W)	Calibration ID #	COMMENTS
01/04/2021	09:21	01/04/2021	13:14	KMT	178385	W	0436	
01/08/2021	10:07	01/08/2021	15:24	KMT	178487, 178488	W	0436	
01/13/2021	12:56	01/13/2021	19:46	KMT	178597	W	0436	
01/14/2021	10:51	01/14/2021	20:02	KMT	178597RR, 178612, 178615	W	0436	
01/15/2021	10:15	01/15/2021	15:04	KMT	178615 RR	W	0436	
01/18/2021	10:20	01/18/2021	15:43	KMT	178698, 178701	W	0436	
01/19/2021	09:25	01/19/2021	12:20	KMT	178701 RR	W	0436	CCB end fail
01/19/2021	15:19	01/19/2021	21:46	KMT	178699	W	0436	CCVs failed low
01/20/2021	08:56	01/20/2021	15:22	KMT	178699 RR	W	0436	~~CCVs failed low~~ KMT 1/20/2021
01/21/2021	10:07	01/21/2021	18:29	KMT	178700, 178807, 178808	W	0436	
01/22/2021	09:07	01/22/2021	15:22	KMT	178810	W	0436	
01/25/2021	13:43	01/25/2021	17:17	KMT	178810 RR	W	0436	CCV end fail
01/26/2021	11:04	01/26/2021	16:57	KMT	178809, 178927	W	0436	
01/28/2021	14:46	01/28/2021	19:52	KMT	178694, 178967	W	0436	
01/29/2021	09:39	01/29/2021	10:37	KMT	ICAL 0467	S	0467	ICAL 0467
01/29/2021	11:43	01/29/2021	12:41	KMT	178965, ICB	S	0467	
~~02/01/2021~~		~~02/01/2021~~		~~KMT~~	KMT 2/1/2021 ~~178179075~~	W	0436	
02/02/2021	11:20	02/02/2021	14:41	KMT	ICAL 0469	W	0469	ICAL 0469

Reviewed By: _____

WORGANIC CARBON QSM 5.0 Analytical Run
179074 on Feb 08, 2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	532023							WORGANIC CARBON QSM 5.0				
				ICV								
	532022							WORGANIC CARBON QSM 5.0				
				ICB								
	530884							WORGANIC CARBON QSM 5.0				
				CCV					0			
	530885							WORGANIC CARBON QSM 5.0				
				LCSW					0			
	530886							WORGANIC CARBON QSM 5.0				
				MBW					0			
	531245							WORGANIC CARBON QSM 5.0				
				CCV					0			
	531246							WORGANIC CARBON QSM 5.0				
				CCB					0			
159482	529217		Jan 27, 2021 1035			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		48MW06										
	531249		Jan 27, 2021 1035					ORGAN CARBON T QSM 5.0				
		48MW06		MSDW	531253				0			
159482	529218		Jan 27, 2021 0940			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		48MW07										
159482	529219		Jan 27, 2021 1130			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		49MW03										
159482	529220		Jan 27, 2021 1240			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		49MW02										
159482	529221		Jan 27, 2021 1345			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		48MW3										
159482	529222		Jan 27, 2021 1345			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		48TW3										
159482	529223		Jan 27, 2021 1455			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		50MW02										
	531250							WORGANIC CARBON QSM 5.0				
				CCV					0			
	531251							WORGANIC CARBON QSM 5.0				
				CCB					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WORGANIC CARBON QSM 5.0 Analytical Run
179074 on Feb 08, 2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
159482	529224		Jan 27, 2021 1600			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		EQB-50MW02										
159483	529226		Jan 28, 2021 1115			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		48MW2										
159483	529227		Jan 28, 2021 1250			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		49MW01										
159483	529228		Jan 28, 2021 1405			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	**4**	
		48MW1										
	531253		Jan 27, 2021 1035					ORGAN CARBON T QSM 5.0				
		48MW06		MSW	529217				0			
	531254							WORGANIC CARBON QSM 5.0				
				CCV					0			
	531255							WORGANIC CARBON QSM 5.0				
				CCB					0			
	531738							WORGANIC CARBON QSM 5.0				
				CCV					0			
	532026							WORGANIC CARBON QSM 5.0				
				CCB								
	531741		Jan 27, 2021 1035					ORGAN CARBON T QSM 5.0				
		48MW06		DUP	529217				0			
	531743							WORGANIC CARBON QSM 5.0				
				CCV					0			
	531744							WORGANIC CARBON QSM 5.0				
				CCB					0			

29 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

FWC39-01 Data Review Checklist

	Method: Total Organic Carbon Method 415.1/9060	Independent Data Review Checklist	Instrument: TOCW

LIMS Run #(s)	Analysis Date	Analyst / Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes or No)
179073, 179074	02/03/20251, 02/04/2021, 02/05/20251	KMT	RLD	02/08/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples preserved prior to analysis and analyzed within hold time?	pH <2, 28 days or program/project specific	Yes		Yes		
2. Was the calibration curve performed using the required number of standards?	3 standards and a blank	Yes		Yes		
3. Was the correlation coefficient acceptable?	r ≥ .995	Yes		Yes		
4. Were the ICV and ICB analyzed?	---	Yes		Yes		
5. Was the ICV result acceptable?	90 – 110 % Rec. or contract/program specific	Yes		Yes		
6. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
7. Was an LCS & MB run with each batch of samples?	One each per analytical batch or contract/program specific frequency.	Yes		Yes		
8. Was the LCS recovery acceptable?	In-house derived or contract/program specific limits.	Yes		Yes		
9. Were the MB results acceptable?	< LOD or project/ program specific (<1/2 RL for DOD-QSM).	Yes		Yes		
10. Were the CCV's analyzed at the required frequency?	Beginning, after every 10 sample, & at the end of a sequence.	Yes		Yes		
11. Were the CCB's analyzed at the required frequency?	After each CCV (unless MB analyzed after CCV)	Yes		Yes		
12. Were the CCV recoveries acceptable?	90 – 110 % Rec. or project/ program specific	Yes		Yes		
13. Were the CCB results acceptable?	< LOD or project/ program specific	Yes		Yes		

14. Were all positive results that were reported within the calibration curve?	---	Yes		Yes		
15. Was an MS and MSD analyzed at the required frequency?	1 / 20 of the same matrix or project/ program specific	Yes		Yes		
16. Were the MS and MSD recoveries acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
17. Was the RPD between the MS and MSD acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
18. Was a Duplicate analyzed at the required frequency?	1 per 20 of the same matrix or contract/program specific	Yes		Yes		
19. Was the RPD between the Duplicate (if valid) and the sample acceptable?	In-house derived or project/ program specific limits (QSM samples, duplicate only valid when sample result ≥5x the LOQ)	Yes		Yes		
20. Are all samples on the job lists accounted for?	---	Yes		Yes		
21. Is the standards prep log numbers noted on the analytical report?	---	Yes		Yes		
22. Were post analysis corrections addressed and/or the Audit Trail function turned on (if available)?	Correction should be initialed, dated, and reason given. Audit trail must be on (if available)	Yes		Yes		
23. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

TOC Instrument Run Logbook

Start Date	Start Time	End Date	End Time	Analyst	LIMs Run #	Matrix (S or W)	Calibration ID #	COMMENTS
2/2/2021	15:03	2/2/2021	17:22	KMT	179075	W	0469	
2/3/2021	12:18	2/3/2021	19:02	KMT	179073, 179074	W	0469	
2/4/2021	09:03	2/4/2021	14:43	KMT	179074 RR	W	0469	
2/5/2021	09:30	2/5/2021	12:50	KMT	179071	W	0469	
~~2/8/2021~~	~~14:08~~			~~KMT~~	~~ICAL 0474~~	~~S~~	~~0474~~	~~ICAL 0474~~ Calibration NOT USED KMT 2/10/20
2/10/2021	10:27	2/10/2021	11:24	KMT	ICAL 0476	S	0476	ICAL 0476
2/10/2021	11:38	2/10/2021	12:36	KMT	179233	S	0476	
2/10/2021	13:52	2/10/2021	16:17	KMT	179320	W	0469	

Reviewed By:_____

CHAIN OF CUSTODY,
PM CONFIRMATION
AND
SAMPLE CONDITION FORMS
DOCUMENTS

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: WESTON SOLUTIONS
Project Contact: TONY PLCE
Telephone: 757 619 5310
Project Name: RADFORD AAP
Project #:
Location: RADFORD VA
Sampled By: BOUNDS/TAYLOR

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 159400
Company: WESTON SOLUTIONS,
Project: RADFORD AAP
Logged By: ERC PM: BM

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To:
EMAIL: TONY.PLCE@WESTONSOLUTIONS.COM
Company: WESTON SOLUTIONS
Address: 2 EATON ST SUITE 603
HAMPTON VA 23669

Invoice To:*
EMAIL:
Company: SAME
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	TOC	ANIONS	VOC	MEE	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test						
1/25/21	1050	GW	G		13MW05	N	X	X	X	X	7		527961
1/25/21	1150	GW	G		13MW04	N	X	X	X	X	7		527962
1/25/21	1240	GW	G		13MW03	N	X	X	X	X	7		527963
1/25/21	1240	GW	G		13TW03	N	X	X	X	X	7		527964
1/25/21	1330	GW	G		49MW04	N	X	X	X	X	7		527965
1/25/21	1425	GW	G		49MW02	N	X	X	X	X	21	X	527966
1/25/21	1530	GW	G		49MW05	N	X	X	X	X	7		527967
1/25/21	1000	GW	G		TB-01	N	X	X	X	X	3		527969

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Relinquished By:	Date/Time	Received By:	Date/Time
	1/25/21 1800		1/26/21 1118
Received by:	Date/Time	Received for Laboratory by:	Date/Time
			1/26/21 1142

Lab Use Only
Ice Present Yes No
Temp 1.4/1.9 IR Gun 27
Cooler # 6215

Szymanski, Brett M

From: Pace, Anthony <pacea@WestonSolutions.com>
Sent: 02/03/2021 09:28
To: Szymanski, Brett M
Subject: FW: COC error Radford

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

See below

Tony Pace
Principal Project Manager
Weston Solutions, Inc
2 Eaton Street, Suite 603
Hampton, VA 23669
(757) 819-5310 (office)
(757) 362-2461 (cell)
Anthony.Pace@westonsolutions.com

From: Bounds, William <Bill.Bounds@WestonSolutions.com>
Sent: Wednesday, February 03, 2021 10:21 AM
To: Pace, Anthony <pacea@WestonSolutions.com>
Subject: COC error Radford

Tony

The copy of the COC for Radford Date (1/25/21) has one of the samples mislabeled; Sample says 49MW02 but is actually 13MW2.

William Bounds
2 Eaton Street, Suite 603
Hampton, VA 23669
757 819-5307 Office
757 416-2449 Cell
Bill.bounds@westonsolutions.com

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Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 1.4

Actual Temperature 1.4

IR Gun # 27

Initials EM

Date 1/26/21 Time 1118

Cooler #: 6215

Folder #: 159400

PM LOGIN CONFIRMATION

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 160069

Project Manager: *BMS* **Date Received:** 01/26/21 **Log Date:** 01/26/2021

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 1.9 oC

SAMPLE #: 527961 DESCR: 13MW5 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED: 01/25/2021 Time: 1050**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		02/07/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					02/07/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					02/07/2021		Validated
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					02/07/2021		Validated

Folder #: 159400 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 527962 **DESCR:** 13MW4 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/25/2021 **Time:** 1150

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		02/07/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					02/07/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					02/07/2021		Validated
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	EPA 9060A)					02/07/2021		Validated

SAMPLE #: 527963 **DESCR:** 13MW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/25/2021 **Time:** 1240

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		02/07/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					02/07/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					02/07/2021		Validated
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	EPA 9060A)					02/07/2021		Validated

Folder #: 159400 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 527964 **DESCR:** 13TW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/25/2021 **Time:** 1240

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		02/07/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					02/07/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					02/07/2021		Validated
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					02/07/2021		Validated

SAMPLE #: 527965 **DESCR:** 49MW04 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/25/2021 **Time:** 1330

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		02/07/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					02/07/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					02/07/2021		Validated
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					02/07/2021		Validated

Folder #: 159400 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 527966 **DESCR:** 13MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/25/2021 **Time:** 1425

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y* ***DESIGNATED MATRIX SPIKE***		02/07/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)			***DESIGNATED MATRIX SPIKE***		02/07/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)			***DESIGNATED MATRIX SPIKE***		02/07/2021		Validated
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)			***DESIGNATED MATRIX SPIKE***		02/07/2021		Validated

SAMPLE #: 527967 **DESCR:** 49MW05 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/25/2021 **Time:** 1530

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		02/07/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					02/07/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					02/07/2021		Validated
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					02/07/2021		Validated

Folder #: 159400 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 527969 **DESCR:** TB-01 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED:** 01/25/2021 **Time:** 1600

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/08/2021	02/07/2021		Logged

Invoice Number: 160069 **Preliminary Invoice Estimate:** $ 1,608.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	9	$ 12.00	0.00	$ 108.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	9	$ 12.00	0.00	$ 108.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	9	$ 12.00	0.00	$ 108.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	9	$ 16.00	0.00	$ 144.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	9	$ 16.00	0.00	$ 144.00
METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	9	$ 16.00	0.00	$ 144.00
ORGAN CARBON T QSM 5.0	GROUND WATER	9	$ 28.00	0.00	$ 252.00
VOC 8260 QSM 5.0	GROUND WATER	9	$ 60.00	0.00	$ 540.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$ 60.00	0.00	$ 60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$ 0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**9**	TOC
UNPRES PL	**9**	Anions
VOA HCL	**47**	VOC

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #: 159400
Client: WESTON SOLUTIONS, INC.

Print Date / Time: 01/26/2021 11:59
Received Date / Time / By: 01/26/2021 11:18 ERC

Project Name: RADFORD AAP SWMU-49
Project Phase: RADFORD, VA

Log-In Date / Time / By: 01/26/2021 11:42 ERC
Project #: PM: BMS

Coolers: 6215
Custody Seals Present : **Y**

Temperature: 1.9 C On Ice: **Y**
COC Present:? **Y** Complete? **Y**

Seal Intact? **Y**
Ship Method: FEDEX EXPRESS
Adequate Packaging: **Y**

Numbers: DATED AND SIGNED
Tracking Number: 7830 0401 9227
Temp Blank Enclosed? **Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

ONE CUSTODY SEAL (DATED 1/25/21 AND SIGNED) WAS PRESENT AND INTACT UPON RECEIPT.

PER THE CLIENT'S REQUEST, THE SAMPLE DESCRIPTION FOR THE SAMPLE COLLECTED 01/25/2021 @ 14:25 WAS CHANGED FROM 49MW02 TO 13MW2.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
527961 13MW5				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
527961 13MW5				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
527961 13MW5				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
527962 13MW4				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
527962 13MW4				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
527962 13MW4				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

527963	13MW3				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**		
527963	13MW3				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	(***VOA HCL***) = **5**		
527963	13MW3				
		H2SO4 PL	1	Y /	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
527964 13TW3				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
527964 13TW3				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
527964 13TW3				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
527965 49MW04				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
527965 49MW04				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
527965 49MW04				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
527966 13MW2				
	UNPRES PL	1	/	ANIONS
	UNPRES PL	1	/	ANIONS
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **3**		
527966 13MW2				
	VOA HCL	1	/	GAS,VOC

	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	Total # of Containers of Type	**(*VOA HCL*) =**	**15**		

527966 13MW2

	H2SO4 PL	1	Y	/	TOC
	H2SO4 PL	1	Y	/	TOC
	H2SO4 PL	1	Y	/	TOC
	Total # of Containers of Type	**(*H2SO4 PL*) =**	**3**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

527967 49MW05

	UNPRES PL	1		/	Anions
	Total # of Containers of Type	**(*UNPRES PL*) =**	**1**		

527967 49MW05

	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	VOA HCL	1		/	GAS,VOC
	Total # of Containers of Type	**(*VOA HCL*) =**	**5**		

527967 49MW05

	H2SO4 PL	1	Y	/	TOC
	Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

527969 TB-01

	VOA HCL	1		/	VOC
	VOA HCL	1		/	VOC
	Total # of Containers of Type	**(*VOA HCL*) =**	**2**		

Condition Code	*Condition Description*
1	Sample Received OK

159400

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: WESTON SOLUTIONS
Project Contact: TONY PACE
Telephone: 757 819 5310
Project Name: RADFORD AAP
Project #:
Location: RADFORD VA
Sampled By: BOWMS

CT LABORATORIES
1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 159482
Company: WESTON SOLUTIONS
Project: RADFORD AAP
Logged By: ERC PM: BM

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To:
EMAIL: TONY.PACE@WESTONSOLUTIONS.COM
Company: WESTON SOLUTIONS
Address: 2 EATON ST SUITE 603
HAMPTON VA 23669

Invoice To:*
EMAIL:
Company: SAME
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	VOC	MEE	TOC	ANIONS	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test						
1/27/21	1035	GW	G		48MW06	N	3	2	1	1	7		529217
1/27/21	940	GW	G		48MW07	N	3	2	1	1	7		529218
1/27/21	1130	GW	G		49MW03	N	3	2	1	1	7		529219
1/27/21	1240	GW	G		49MW02	N	3	2	1	1	7		529220
1/27/21	1345	GW	G		48MW3	N	3	2	1	1	7		529221
1/27/21	1345	GW	G		48TW3	N	3	2	1	1	7		529222
1/27/21	1455	GW	G		50MW02	N	3	2	1	1	7		529223
1/27/21	1600	GW	G		EQB-050MW02	N	3	2	1	1	7		529224
1/27/21	1600	GW	G		FIELD2 TB-2	N	2				2		529225

Relinquished By:	Date/Time	Received By:	Date/Time
	1/27/21 1800	ERC	1/28/21 1004
Received by:	Date/Time	Received for Laboratory by:	Date/Time
		ERC	1/28/21 1025

Lab Use Only
Ice Present (Yes) No
Temp 1.2/1.7 IR Gun 27
Cooler # XXX

Szymanski, Brett M

From: Pace, Anthony <pacea@WestonSolutions.com>
Sent: 01/29/2021 10:51
To: Szymanski, Brett M
Subject: RE: Delayed Radford AAP Cooler

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Yes, proceed.

Tony Pace
Principal Project Manager
Weston Solutions, Inc
2 Eaton Street, Suite 603
Hampton, VA 23669
(757) 819-5310 (office)
(757) 362-2461 (cell)
Anthony.Pace@westonsolutions.com

From: Szymanski, Brett M <BSzymanski@ctlaboratories.com>
Sent: Friday, January 29, 2021 11:50 AM
To: Pace, Anthony <pacea@WestonSolutions.com>
Cc: Bounds, William <Bill.Bounds@WestonSolutions.com>
Subject: RE: Delayed Radford AAP Cooler

**** External Email ****
Hello Tony,

The delayed Radford AAP cooler arrived at our facility in a little while ago. The sample temperature is fine. It looks like samples 48MW06 (collected 01/27/2021 @ 10:35) and 48MW07 (collected 01/27/2021 @ 09:40) are the only two samples that will miss the 48-hour hold time for Nitrate. Please let me know whether you want us to proceed with the Nitrate analysis on these samples.

The cooler from yesterday's samples made it here on-time and without any issues.

Thanks,

Brett Szymanski
Project Manager
CT Laboratories, LLC
1230 Lange Court
Baraboo, WI 53913
Phone: 608-356-2760
Fax: 608-356-2766
www.ctlaboratories.com

NOTE: CT Laboratories has been designated an Essential Services provider under Wisconsin Emergency Order #12, Section 10, Essential Infrastructure, and will remain open through the current coronavirus Public Health Emergency, unless otherwise restricted through future revisions or changes in regulation.

Let us know how we're doing. Click Here to take our Customer Survey.

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From: Szymanski, Brett M
Sent: 01/28/2021 10:32
To: Pace, Anthony (pacea@WestonSolutions.com) <pacea@WestonSolutions.com>
Cc: Bounds, William <Bill.Bounds@WestonSolutions.com>
Subject: Delayed Radford AAP Cooler

Hello Tony,

Our bad luck with getting coolers delivered on-time for this project continues. The Radford AAP cooler from yesterday is stuck in Memphis (I have included the FedEx tracking information below).

783094268056	**CT LAB** **CT LAB** **BARABOO, WI, 53913, US** **6083562760**	**Bill Bounds** **HAMPTON, VA, 23669, US** **7574162449**

I don't think that sample temperature will be an issue this time of year; however, the Nitrate analyses might miss the 48-hour hold time by a few hours due to this delay. I will follow up with you tomorrow once this cooler arrives at our facility to discuss how you would like us to proceed.

Thanks,

Brett Szymanski
Project Manager
CT Laboratories, LLC
1230 Lange Court
Baraboo, WI 53913
Phone: 608-356-2760
Fax: 608-356-2766
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Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 1.2

Actual Temperature 1.7

IR Gun # 27

Initials BRC

Date 1/29/21 Time 1004

Cooler #: XXX

CUSTODY SEAL
DATE 1/27/2021
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • www.qecusa.com

CUSTODY SEAL
DATE 1/27/2021
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • www.qecusa.com

ORIGIN ID:WALA (757) 416-2449
BILL BOUNDS
2 EATON ST STE 603
HAMPTON, VA 23669
UNITED STATES US

SHIP DATE: 27JAN21
ACTWGT: 42.35 LB
CAD: 6995155/SSFE2121
DIMS: 24x13x13 IN
BILL THIRD PARTY

TO CT LAB
CT LAB
1230 LANGE CT

BARABOO WI 53913
(608) 356-2760
INV:
PO:
REF: 03886.522.500
DEPT:

FedEx Express

TRK# 0201 7830 9426 8056

THU - 28 JAN 10:30A
PRIORITY OVERNIGHT
AHS
53913
WI-US MSN

XH LNRA

Folder #: 159482

PM LOGIN CONFIRMATION

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 160151

Project Manager: *BMS* **Date Received:** 01/29/21 **Log Date:** 01/29/2021

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 1.7 oC

SAMPLE #: 529217 DESCR: 48MW06 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED: 01/27/2021 Time: 1035**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/10/2021	02/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				02/10/2021	02/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				01/29/2021	02/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				02/24/2021	02/10/2021		Logged

Folder #: 159482 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 529218 **DESCR:** 48MW07 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/27/2021 **Time:** 0940

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/10/2021	02/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				02/10/2021	02/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				01/29/2021	02/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	EPA 9060A)				02/24/2021	02/10/2021		Logged

SAMPLE #: 529219 **DESCR:** 49MW03 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/27/2021 **Time:** 1130

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/10/2021	02/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				02/10/2021	02/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				01/29/2021	02/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	EPA 9060A)				02/24/2021	02/10/2021		Logged

Folder #: 159482 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 529220 **DESCR:** 49MW02 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/27/2021 **Time:** 1240

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/10/2021	02/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				02/10/2021	02/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				01/29/2021	02/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	EPA 9060A)				02/24/2021	02/10/2021		Logged

SAMPLE #: 529221 **DESCR:** 48MW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/27/2021 **Time:** 1345

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/10/2021	02/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				02/10/2021	02/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				01/29/2021	02/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	EPA 9060A)				02/24/2021	02/10/2021		Logged

Folder #: 159482 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 529222 **DESCR:** 48TW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/27/2021 **Time:** 1345

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/10/2021	02/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				02/10/2021	02/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				01/29/2021	02/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				02/24/2021	02/10/2021		Logged

SAMPLE #: 529223 **DESCR:** 50MW02 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/27/2021 **Time:** 1455

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/10/2021	02/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				02/10/2021	02/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				01/29/2021	02/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				02/24/2021	02/10/2021		Logged

Folder #: 159482 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 529224 **DESCR:** EQB-50MW02 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/27/2021 **Time:** 1600

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/10/2021	02/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				02/10/2021	02/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				01/29/2021	02/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				02/24/2021	02/10/2021		Logged

SAMPLE #: 529225 **DESCR:** TB-2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED:** 01/27/2021 **Time:** 1600

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/10/2021	02/10/2021		Logged

Folder #: 159482 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

Invoice Number: 160151 **Preliminary Invoice Estimate:** $ 1,436.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	8	$ 12.00	0.00	$ 96.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	8	$ 12.00	0.00	$ 96.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	8	$ 12.00	0.00	$ 96.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	8	$ 16.00	0.00	$ 128.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	8	$ 16.00	0.00	$ 128.00
METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	8	$ 16.00	0.00	$ 128.00
ORGAN CARBON T QSM 5.0	GROUND WATER	8	$ 28.00	0.00	$ 224.00
VOC 8260 QSM 5.0	GROUND WATER	8	$ 60.00	0.00	$ 480.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$ 60.00	0.00	$ 60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$ 0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**8**	TOC
UNPRES PL	**8**	Anions
VOA HCL	**42**	GAS,VOC

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #: 159482
Client: WESTON SOLUTIONS, INC.

Print Date / Time: 01/29/2021 11:42
Received Date / Time / By: 01/29/2021 10:04 ERC

Project Name: RADFORD AAP SWMU-49
Project Phase: RADFORD, VA

Log-In Date / Time / By: 01/29/2021 10:25 ERC
Project #: PM: BMS

Coolers: UNMARKED
Custody Seals Present : **Y**

Temperature: 1.7 C On Ice: **Y**
COC Present:? **Y** Complete? **Y**

Seal Intact? **Y**
Ship Method: FEDEX EXPRESS
Adequate Packaging: **Y**

Numbers: DATED AND SIGNED
Tracking Number: 7830 9426 8056
Temp Blank Enclosed? **Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 1/27/2021 AND SIGNED.

THIS COOLER ARRIVED 1-DAY LATE DUE TO A FEDEX SHIPPING DELAY. AS SUCH, SEVERAL OF THE SAMPLES WERE PAST (OR NEAR) THE 48-HOUR HOLD TIME FOR NITRATE ANALYSIS UPON RECEIPT. THE CLIENT INSTRUCTED THE LAB TO PROCEED WITH THE ANALYSIS OF THE SAMPLES AND TO QUALIFY THE NITRATE RESULTS ACCORDINGLY.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
529217 48MW06				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
529217 48MW06				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
529217 48MW06				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
529218 48MW07				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
529218 48MW07				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
529218 48MW07				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
529219 49MW03				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
529219 49MW03				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
529219 49MW03				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
529220 49MW02				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
529220 49MW02				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
529220 49MW02				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
529221 48MW3				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
529221 48MW3				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
529221 48MW3				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
529222 48TW3				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
529222 48TW3				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC

159482

		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**5**	
529222	48TW3				
		H2SO4 PL	1 Y	/	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
529223 50MW02				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	**(*UNPRES PL*) =**	**1**	
529223 50MW02				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	**(*VOA HCL*) =**	**5**	
529223 50MW02				
	H2SO4 PL	1 Y	/	TOC
	Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
529224 EQB-50MW02				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	**(*UNPRES PL*) =**	**1**	
529224 EQB-50MW02				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	**(*VOA HCL*) =**	**5**	
529224 EQB-50MW02				
	H2SO4 PL	1 Y	/	TOC
	Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
529225 TB-2				
	VOA HCL	1	/	VOC
	VOA HCL	1	/	VOC
	Total # of Containers of Type	**(*VOA HCL*) =**	**2**	

Condition Code	*Condition Description*
1	Sample Received OK

159482

Rev. 02/2017

CHAIN OF CUSTODY

Company: WESTON SOLUTIONS
Project Contact: TONY PACE
Telephone: 757 419 5310
Project Name: RADFORD AAP
Project #:
Location: RADFORD VA
Sampled By: BOUNDS

CT LABORATORIES
1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 159483
Company: WESTON SOLUTIONS,
Project: RADFORD AAP
Logged By: ERC PM: BM

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To:
EMAIL: TONY.PACE@WESTONSOLUTIONS.COM
Company: WESTON SOLUTIONS
Address: 2 EATON ST SUITE 603
HAMPTON VA 23669

Invoice To:*
EMAIL:
Company: SAME
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	TOC	ANIONS	VOC	MEE	COD	pH	TOTAL METALS	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test									
1/28/21	1115	GW	G		48MW2	N	1	1	3	2				7		529226
1/28/21	1250	GW	G		49MW01	N	1	1	3	2				7		529227
1/28/21	1405	GW	G		48MW1	N	1	1	3	2				7		529228
1/28/21	1500	GW	G		TB-3	N			2					2		529229
1/28/21	1530	GW	G		IDW-48/49	N					1	1	1	3		529230

Relinquished By:	Date/Time	Received By:	Date/Time	Lab Use Only
	1/28/21 1800		1-29-2021 (0.7°)	Ice Present Yes No
Received by:	Date/Time	Received for Laboratory by:	Date/Time	Temp 1.3 -1.6 IR Gun 33
		ERC	1/29/2021 1040	Cooler # ~~6~~ 6538

Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 1.3

Actual Temperature 1.6

IR Gun # 28

Initials elh

Date 1-29-2021 Time 10:15

Cooler #: 6538

23395

Customer 1/28/2021
DATE SIGNATURE

SGS

23396

Customer 1/28/2021
DATE SIGNATURE

SGS

ORIGIN ID:WALA (757) 416-2449
BILL BOUNDS
WESTON SOLUTIONS
2 EATON ST STE 603

HAMPTON, VA 23669
UNITED STATES US

SHIP DATE: 28JAN21
ACTWGT: 33.45 LB
CAD: 6995155/SSFE2121
DIMS: 24x13x13 IN

BILL THIRD PARTY

TO CT LAB
CT LAB
1230 LANGE CT

BARABOO WI 53913
(608) 356-2760 REF: 03886.552.500
INV:
PO: DEPT:

FedEx Express

FRI - 29 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7831 3612 7178

AHS
53913
WI-US MSN

XH LNRA

Folder #: 159483

PM LOGIN CONFIRMATION

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 160152

Project Manager: *BMS* **Date Received:** 01/29/21 **Log Date:** 01/29/2021

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 1.6 oC

SAMPLE #: 529226 DESCR: 48MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED: 01/28/2021 Time: 1115**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/11/2021	02/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				02/11/2021	02/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				01/30/2021	02/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				02/25/2021	02/10/2021		Logged

Folder #: 159483 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 529227 **DESCR:** 49MW01 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/28/2021 **Time:** 1250

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/11/2021	02/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				02/11/2021	02/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				01/30/2021	02/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				02/25/2021	02/10/2021		Logged

SAMPLE #: 529228 **DESCR:** 48MW1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/28/2021 **Time:** 1405

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/11/2021	02/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				02/11/2021	02/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				01/30/2021	02/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)				02/25/2021	02/10/2021		Logged

Folder #: 159483 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 529229 **DESCR:** TB-3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED:** 01/28/2021 **Time:** 1500

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	02/11/2021	02/10/2021		Logged

SAMPLE #: 529230 **DESCR:** IDW-48/49 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/28/2021 **Time:** 1530

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
203	PH	(EPA 9040C)					02/10/2021		Validated
989	COD QSM	(EPA 410.4)					02/10/2021		Logged
1183	ICP K TOTAL QSM 5.0	(EPA 6010C)					02/10/2021		NeedPrep
1190	ICP NA TOTAL QSM 5.0	(EPA 6010C)					02/10/2021		NeedPrep
1200	ICP TOTAL QSM 5.0	(EPA 6010C)					02/10/2021		NeedPrep
			Total Aluminum						
			Total Antimony						
			Total Arsenic						
			Total Barium						
			Total Beryllium						
			Total Cadmium						
			Total Calcium						
			Total Chromium						
			Total Cobalt						
			Total Copper						
			Total Iron						
			Total Lead						
			Total Magnesium						
			Total Manganese						
			Total Nickel						
			Total Selenium						
			Total Silver						

Folder #: 159483 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 529230 **DESCR:** IDW-48/49 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 01/28/2021 **Time:** 1530

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Total Thallium						
			Total Vanadium						
			Total Zinc						
1208	MERCURY TOTAL QSM 5.0(EPA 7470A)						02/10/2021		NeedPrep

Folder #: 159483 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

Invoice Number: 160152 **Preliminary Invoice Estimate:** $ 704.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	3	$ 12.00	0.00	$ 36.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	3	$ 12.00	0.00	$ 36.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	3	$ 12.00	0.00	$ 36.00
COD QSM	GROUND WATER	1	$ 18.00	0.00	$ 18.00
ICP K TOTAL QSM 5.0	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP NA TOTAL QSM 5.0	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Aluminum	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Antimony	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Arsenic	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Barium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Beryllium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Cadmium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Calcium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Chromium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Cobalt	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Copper	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Iron	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Lead	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Magnesium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Manganese	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Nickel	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Selenium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Silver	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Thallium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Vanadium	GROUND WATER	1	$ 3.50	0.00	$ 3.50
ICP TOTAL QSM 5.0 Total Zinc	GROUND WATER	1	$ 3.50	0.00	$ 3.50
MERCURY TOTAL QSM 5.0	GROUND WATER	1	$ 23.00	0.00	$ 23.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	3	$ 16.00	0.00	$ 48.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	3	$ 16.00	0.00	$ 48.00

METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	3	$ 16.00	0.00	$ 48.00
ORGAN CARBON T QSM 5.0	GROUND WATER	3	$ 28.00	0.00	$ 84.00
PH	GROUND WATER	1	$ 10.00	0.00	$ 10.00
VOC 8260 QSM 5.0	GROUND WATER	3	$ 60.00	0.00	$ 180.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$ 60.00	0.00	$ 60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$ 0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**4**	COD
HNO3	**1**	HG,ICP,K,NA
UNPRES PL	**4**	Anions
VOA HCL	**17**	VOC

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #: 159483
Client: WESTON SOLUTIONS, INC.

Print Date / Time: 01/29/2021 11:40
Received Date / Time / By: 01/29/2021 10:15 EKB

Project Name: RADFORD AAP SWMU-49
Project Phase: RADFORD, VA

Log-In Date / Time / By: 01/29/2021 10:40 ERC
Project #: PM: BMS

Coolers: 6538
Custody Seals Present : **Y**

Temperature: 1.6 C On Ice: **Y**
COC Present:? **Y** Complete? **Y**

Seal Intact? **Y**
Ship Method: FEDEX EXPRESS
Adequate Packaging: **Y**

Numbers: DATED AND SIGNED
Tracking Number: 7831 3612 7178
Temp Blank Enclosed? **Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 1/28/2021 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
529226 48MW2				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
529226 48MW2				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
529226 48MW2				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
529227 49MW01				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
529227 49MW01				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
529227 49MW01				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
529228 48MW1				

		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		

529228	48MW1				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		

529228	48MW1				
		H2SO4 PL	1	Y /	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**

529229	TB-3				
		VOA HCL	1	/	VOC
		VOA HCL	1	/	VOC
		Total # of Containers of Type	**(*VOA HCL*) = 2**		

Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**

529230	IDW-48/49				
		H2SO4 PL	1	Y /	COD
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

529230	IDW-48/49				
		HNO3	1	Y /	HG,ICP,K,NA
		Total # of Containers of Type	**(*HNO3*) = 1**		

529230	IDW-48/49				
		UNPRES PL	1	/	pH
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		

Condition Code	*Condition Description*
1	Sample Received OK

159483

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Weston Solutions, Inc

Radford AAP; VA

SGS Job Number: FA82653

Sampling Date: 01/26/21

Report to:

Weston Solutions, Inc
2 Eaton St Suite 603
Hampton, VA 23669
pacea@westonsolutions.com

ATTN: Tony Pace

Total number of pages in report: **541**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

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EHS.US.CustomerCare@sgs.com

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Sections:

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SGS North America Inc.

Sample Summary

Weston Solutions, Inc

Radford AAP; VA

Job No: FA82653

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA82653-1	01/26/21	10:05	B	01/27/21	AQ	Ground Water	54MW13
FA82653-2	01/26/21	10:05	B	01/27/21	AQ	Ground Water	54TW13
FA82653-3	01/26/21	11:50	B	01/27/21	AQ	Ground Water	54MW10
FA82653-4	01/26/21	13:00	B	01/27/21	AQ	Ground Water	54MW12
FA82653-4D	01/26/21	13:00	B	01/27/21	AQ	Water Dup/MSD	54MW12
FA82653-4S	01/26/21	13:00	B	01/27/21	AQ	Water Matrix Spike	54MW12
FA82653-5	01/26/21	15:25	B	01/27/21	AQ	Ground Water	54MW1

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Weston Solutions, Inc **Job No:** FA82653

Site: Radford AAP; VA **Report Date** 2/10/2021 6:29:06 PM

5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 01/26/2021 and were received at SGS North America Inc - Orlando on 01/27/2021 properly preserved, at 2.2 Deg. C and intact. These Samples received an SGS Orlando job number of FA82653. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Semi-volatiles By Method SW846 6850

Matrix: AQ **Batch ID:** OP83937

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA82653-4MS, FA82653-4MSD were used as the QC samples indicated.

GC/LC Semi-volatiles By Method SW846 8330B

Matrix: AQ **Batch ID:** OP83930

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) FA82653-4MS, FA82653-4MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Blank Spike Recovery(s) for TNX are outside control limits.

Matrix Spike Recovery(s) for 2,6-Dinitrotoluene are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 2,6-Dinitrotoluene are outside control limits. Probable cause is due to matrix interference.

FA82653-1 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA82653-1: All hits confirmed by reanalysis on a dissimilar column.

FA82653-1: Confirmation run.

FA82653-2 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA82653-2: All hits confirmed by reanalysis on a dissimilar column.

FA82653-2: Confirmation run.

FA82653-3: All hits confirmed by reanalysis on a dissimilar column.

FA82653-3: Confirmation run.

FA82653-4 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA82653-4: All hits confirmed by reanalysis on a dissimilar column.

FA82653-4: Confirmation run.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Ariel Hartney, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA82653
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 01/26/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA82653-1	**54MW13**					
Perchlorate		0.29	0.20	0.10	ug/l	SW846 6850
HMX [a]		3.5	0.19	0.095	ug/l	SW846 8330B
RDX [a]		0.83	0.19	0.095	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.38	0.19	0.095	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		1.5	0.19	0.095	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		1.4	0.19	0.095	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		8.4	0.19	0.095	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		10.7	0.19	0.095	ug/l	SW846 8330B
FA82653-2	**54TW13**					
Perchlorate		0.28	0.20	0.10	ug/l	SW846 6850
HMX [a]		3.7	0.19	0.094	ug/l	SW846 8330B
RDX [a]		0.76	0.19	0.094	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.45	0.19	0.094	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		1.5	0.19	0.094	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		1.6	0.19	0.094	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		8.8	0.19	0.094	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		11.1	0.19	0.094	ug/l	SW846 8330B
FA82653-3	**54MW10**					
Perchlorate		0.62	0.20	0.10	ug/l	SW846 6850
HMX [a]		7.0	0.19	0.094	ug/l	SW846 8330B
RDX [a]		5.8	0.19	0.094	ug/l	SW846 8330B
3,5-Dinitroaniline [a]		0.98	0.19	0.094	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		3.5	0.19	0.094	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		4.2	0.19	0.094	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		13.5	0.19	0.094	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		39.4	0.19	0.094	ug/l	SW846 8330B
FA82653-4	**54MW12**					
Perchlorate		0.46	0.20	0.10	ug/l	SW846 6850
HMX [a]		17.2	0.19	0.095	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.33	0.19	0.095	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		3.6	0.19	0.095	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [b]		2.0	0.19	0.095	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		10.4	0.19	0.095	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [a]		8.6	0.19	0.095	ug/l	SW846 8330B

Summary of Hits

Job Number: FA82653
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 01/26/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA82653-5	**54MW1**					

No hits reported in this sample.

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) All hits confirmed by reanalysis on a dissimilar column. Primary and confirmation results differ by more than 40%.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW13		
Lab Sample ID:	FA82653-1	**Date Sampled:**	01/26/21
Matrix:	AQ - Ground Water	**Date Received:**	01/27/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q78739.D	1	02/02/21 14:36	NAF	02/02/21 08:00	OP83937	SQ1724
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.29	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA82653-1
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 01/26/21
Date Received: 01/27/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP389800.D	1	02/05/21 19:29	JB	02/01/21 09:00	OP83930	GPP2402
Run #2 [b]	GG620656.D	1	02/05/21 16:17	JB	02/01/21 09:00	OP83930	GGG2934

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	3.5	0.19	0.095	0.076	ug/l	
121-82-4	RDX	0.83	0.19	0.095	0.076	ug/l	
	DNX	0.095 U	0.19	0.095	0.076	ug/l	
	MNX	0.095 U	0.19	0.095	0.076	ug/l	
	TNX	0.095 U	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.38	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.5	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.4	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	8.4	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	10.7	0.19	0.095	0.076	ug/l	
55-63-0	Nitroglycerine	0.95 U	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	94%	105%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54TW13
Lab Sample ID: FA82653-2
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 01/26/21
Date Received: 01/27/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q78740.D	1	02/02/21 14:45	NAF	02/02/21 08:00	OP83937	SQ1724
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.28	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54TW13
Lab Sample ID: FA82653-2
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 01/26/21
Date Received: 01/27/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP389801.D	1	02/05/21 20:00	JB	02/01/21 09:00	OP83930	GPP2402
Run #2 [b]	GG620657.D	1	02/05/21 16:48	JB	02/01/21 09:00	OP83930	GGG2934

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2	1060 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	3.7	0.19	0.094	0.075	ug/l	
121-82-4	RDX	0.76	0.19	0.094	0.075	ug/l	
	DNX	0.094 U	0.19	0.094	0.075	ug/l	
	MNX	0.094 U	0.19	0.094	0.075	ug/l	
	TNX	0.094 U	0.19	0.094	0.075	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.45	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.5	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.6	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	8.8	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	11.1	0.19	0.094	0.075	ug/l	
55-63-0	Nitroglycerine	0.94 U	1.9	0.94	0.47	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	132%	104%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA82653-3	**Date Sampled:**	01/26/21
Matrix:	AQ - Ground Water	**Date Received:**	01/27/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q78741.D	1	02/02/21 14:54	NAF	02/02/21 08:00	OP83937	SQ1724
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.62	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW10
Lab Sample ID: FA82653-3
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 01/26/21
Date Received: 01/27/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP389802.D	1	02/05/21 20:31	JB	02/01/21 09:00	OP83930	GPP2402
Run #2 [b]	GG620660.D	1	02/05/21 18:23	JB	02/01/21 09:00	OP83930	GGG2934

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2	1060 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	7.0	0.19	0.094	0.075	ug/l	
121-82-4	RDX	5.8	0.19	0.094	0.075	ug/l	
	DNX	0.094 U	0.19	0.094	0.075	ug/l	
	MNX	0.094 U	0.19	0.094	0.075	ug/l	
	TNX	0.094 U	0.19	0.094	0.075	ug/l	
618-87-1	3,5-Dinitroaniline	0.98	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	3.5	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	4.2	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	13.5	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	39.4	0.19	0.094	0.075	ug/l	
55-63-0	Nitroglycerine	0.94 U	1.9	0.94	0.47	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	101%	101%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW12
Lab Sample ID: FA82653-4
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 01/26/21
Date Received: 01/27/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q78742.D	1	02/02/21 15:03	NAF	02/02/21 08:00	OP83937	SQ1724
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.46	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW12
Lab Sample ID: FA82653-4
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 01/26/21
Date Received: 01/27/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP389803.D	1	02/05/21 21:02	JB	02/01/21 09:00	OP83930	GPP2402
Run #2 [b]	GG620661.D	1	02/05/21 18:54	JB	02/01/21 09:00	OP83930	GGG2934

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	17.2	0.19	0.095	0.076	ug/l	
121-82-4	RDX	0.095 U	0.19	0.095	0.076	ug/l	
	DNX	0.095 U	0.19	0.095	0.076	ug/l	
	MNX	0.095 U	0.19	0.095	0.076	ug/l	
	TNX	0.095 U	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.33	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	3.6	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	2.0	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	10.4	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	8.6	0.19	0.095	0.076	ug/l	
55-63-0	Nitroglycerine	0.95 U	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	77%	103%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW1		
Lab Sample ID:	FA82653-5	**Date Sampled:**	01/26/21
Matrix:	AQ - Ground Water	**Date Received:**	01/27/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q78745.D	1	02/02/21 15:30	NAF	02/02/21 08:00	OP83937	SQ1724
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.10 U	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW1
Lab Sample ID: FA82653-5
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 01/26/21
Date Received: 01/27/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP389806.D	1	02/05/21 22:35	JB	02/01/21 09:00	OP83930	GPP2402
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U	0.19	0.096	0.077	ug/l	
121-82-4	RDX	0.096 U	0.19	0.096	0.077	ug/l	
	DNX	0.096 U	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX	0.096 U	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline	0.096 U	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.096 U	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
55-63-0	Nitroglycerine	0.96 U	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	85%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

SGS North America Inc - Orlando

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

FA82653

SGS - ORLANDO JOB # :

PAGE 1 OF 1

SGS - ORLANDO Quote #

SKIFF #

Client / Reporting Information

Company Name: WESTON SOLUTIONS
Address: 2 EATON ST SUITE 603
City: HAMPTON State: VA Zip: 23669
Project Contact: TONY PACE Email: TONY.PACE@WESTONSOLUTIONS.COM
Phone #: 757 825 5310
Sampler(s) Name(s) (Printed)
Sampler 1: BOUNDS Sampler 2:

Project Information

Project Name: RADFORD AAP
Street
City RADFORD State VA
Project #
Fax #
Client Purchase Order #

Analytical Information

EXPLOSIVES; PERCHLORATE

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	EXPLOSIVES	PERCHLORATE									LAB USE ONLY
1	54 MW 13	1/26/21	1005	Bounds	GW	3		1								X	X									
2	54 MW 13	1/26/21	1005	Bounds	GW	3		1								X	X									
3	54 MW 10	1/26/21	1150	Bounds	GW	3		1								X	X									
4	54 MW 12	1/26/21	1300	Bounds	GW	9		1								X	X	MS/MSD								
5	54 MW 1	1/26/21	1525	Bounds	GW	3		1								X	X									

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other 14 DAY

Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

INITIAL ASSESSMENT
LABEL VERIFICATION

INITIAL ASSESSMENT
LABEL VERIFICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	1/26/21 1500	2 Fedex	3 Fedex	1/27/21	4 1000
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 2.2

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (1) Rev 031318

5.1.5

FA82653: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA82653 **Client:** WESTON SOLUTIONS **Project:** RADFORD AAP

Date / Time Received: 1/27/2021 10:00:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 783052588553

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.2);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: BRYANG Date: 1/27/2021 10:00:00 A Reviewer: _____ Date: _____

FA82653: Chain of Custody
Page 2 of 2

QC Evaluation: DOD QSM5.x Limits

Job Number: FA82653
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 01/26/21

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP83937	SW846 6850						
OP83937-BS	14797-73-0	Perchlorate	BSP	REC	90	%	84-119
OP83937-MS	14797-73-0	Perchlorate	MS	REC	90	%	84-119
OP83937-MSD	14797-73-0	Perchlorate	MSD	REC	80	%	84-119
OP83937-MSD	14797-73-0	Perchlorate	MSD	RPD	3	%	15
OP83930	SW846 8330B						
OP83930-BS	2691-41-0	HMX	BSP	REC	96	%	65-135
OP83930-BS	121-82-4	RDX	BSP	REC	96	%	68-130
OP83930-BS		DNX	BSP	REC	66	%	66-119
OP83930-BS		MNX	BSP	REC	78	%	57-132
OP83930-BS	618-87-1	3,5-Dinitroaniline	BSP	REC	102	%	71-117
OP83930-BS	99-65-0	1,3-Dinitrobenzene	BSP	REC	104	%	78-120
OP83930-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	108	%	77-127
OP83930-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	104	%	78-120
OP83930-BS	35572-78-2	2-amino-4,6-Dinitrotoluene	BSP	REC	102	%	79-120
OP83930-BS	19406-51-0	4-amino-2,6-Dinitrotoluene	BSP	REC	104	%	76-125
OP83930-BS	98-95-3	Nitrobenzene	BSP	REC	100	%	65-134
OP83930-BS	88-72-2	o-Nitrotoluene	BSP	REC	98	%	70-127
OP83930-BS	99-08-1	m-Nitrotoluene	BSP	REC	102	%	73-125
OP83930-BS	99-99-0	p-Nitrotoluene	BSP	REC	102	%	71-127
OP83930-BS	479-45-8	Tetryl	BSP	REC	92	%	64-128
OP83930-BS	99-35-4	1,3,5-Trinitrobenzene	BSP	REC	94	%	73-125
OP83930-BS	118-96-7	2,4,6-Trinitrotoluene	BSP	REC	102	%	71-123
OP83930-BS	55-63-0	Nitroglycerine	BSP	REC	96	%	74-127
OP83930-BS	78-11-5	PETN	BSP	REC	114	%	73-127
OP83930-MS	2691-41-0	HMX	MS	REC	113	%	65-135
OP83930-MS	121-82-4	RDX	MS	REC	107	%	68-130
OP83930-MS		DNX	MS	REC	84	%	66-119
OP83930-MS		MNX	MS	REC	86	%	57-132
OP83930-MS	618-87-1	3,5-Dinitroaniline	MS	REC	113	%	71-117
OP83930-MS	99-65-0	1,3-Dinitrobenzene	MS	REC	114	%	78-120
OP83930-MS	606-20-2	2,6-Dinitrotoluene	MS	REC	161	%	77-127
OP83930-MS	121-14-2	2,4-Dinitrotoluene	MS	REC	119	%	78-120
OP83930-MS	35572-78-2	2-amino-4,6-Dinitrotoluene	MS	REC	113	%	79-120
OP83930-MS	19406-51-0	4-amino-2,6-Dinitrotoluene	MS	REC	119	%	76-125
OP83930-MS	98-95-3	Nitrobenzene	MS	REC	106	%	65-134
OP83930-MS	88-72-2	o-Nitrotoluene	MS	REC	124	%	70-127
OP83930-MS	99-08-1	m-Nitrotoluene	MS	REC	115	%	73-125
OP83930-MS	99-99-0	p-Nitrotoluene	MS	REC	115	%	71-127
OP83930-MS	479-45-8	Tetryl	MS	REC	88	%	64-128
OP83930-MS	99-35-4	1,3,5-Trinitrobenzene	MS	REC	105	%	73-125

* Sample used for QC is not from job FA82653

QC Evaluation: DOD QSM5.x Limits

Job Number: FA82653
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 01/26/21

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP83930-MS	118-96-7	2,4,6-Trinitrotoluene	MS	REC	109	%	71-123
OP83930-MS	55-63-0	Nitroglycerine	MS	REC	107	%	74-127
OP83930-MS	78-11-5	PETN	MS	REC	128	%	73-127
OP83930-MSD	2691-41-0	HMX	MSD	REC	113	%	65-135
OP83930-MSD	2691-41-0	HMX	MSD	RPD	0	%	20
OP83930-MSD	121-82-4	RDX	MSD	REC	107	%	68-130
OP83930-MSD	121-82-4	RDX	MSD	RPD	0	%	20
OP83930-MSD		DNX	MSD	REC	83	%	66-119
OP83930-MSD		DNX	MSD	RPD	1	%	20
OP83930-MSD		MNX	MSD	REC	85	%	57-132
OP83930-MSD		MNX	MSD	RPD	1	%	20
OP83930-MSD	618-87-1	3,5-Dinitroaniline	MSD	REC	108	%	71-117
OP83930-MSD	618-87-1	3,5-Dinitroaniline	MSD	RPD	5	%	20
OP83930-MSD	99-65-0	1,3-Dinitrobenzene	MSD	REC	110	%	78-120
OP83930-MSD	99-65-0	1,3-Dinitrobenzene	MSD	RPD	4	%	20
OP83930-MSD	606-20-2	2,6-Dinitrotoluene	MSD	REC	154	%	77-127
OP83930-MSD	606-20-2	2,6-Dinitrotoluene	MSD	RPD	5	%	20
OP83930-MSD	121-14-2	2,4-Dinitrotoluene	MSD	REC	118	%	78-120
OP83930-MSD	121-14-2	2,4-Dinitrotoluene	MSD	RPD	1	%	20
OP83930-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	REC	112	%	79-120
OP83930-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	RPD	1	%	20
OP83930-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	REC	119	%	76-125
OP83930-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	RPD	0	%	20
OP83930-MSD	98-95-3	Nitrobenzene	MSD	REC	105	%	65-134
OP83930-MSD	98-95-3	Nitrobenzene	MSD	RPD	1	%	20
OP83930-MSD	88-72-2	o-Nitrotoluene	MSD	REC	109	%	70-127
OP83930-MSD	88-72-2	o-Nitrotoluene	MSD	RPD	13	%	20
OP83930-MSD	99-08-1	m-Nitrotoluene	MSD	REC	108	%	73-125
OP83930-MSD	99-08-1	m-Nitrotoluene	MSD	RPD	7	%	20
OP83930-MSD	99-99-0	p-Nitrotoluene	MSD	REC	109	%	71-127
OP83930-MSD	99-99-0	p-Nitrotoluene	MSD	RPD	6	%	20
OP83930-MSD	479-45-8	Tetryl	MSD	REC	88	%	64-128
OP83930-MSD	479-45-8	Tetryl	MSD	RPD	0	%	20
OP83930-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	REC	104	%	73-125
OP83930-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	RPD	0	%	20
OP83930-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	REC	109	%	71-123
OP83930-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	RPD	0	%	20
OP83930-MSD	55-63-0	Nitroglycerine	MSD	REC	106	%	74-127
OP83930-MSD	55-63-0	Nitroglycerine	MSD	RPD	1	%	20
OP83930-MSD	78-11-5	PETN	MSD	REC	126	%	73-127
OP83930-MSD	78-11-5	PETN	MSD	RPD	2	%	20

* Sample used for QC is not from job FA82653

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Instrument Blank

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
SQ1724-IBLK	Q78766.D	1	02/02/21	NAF	n/a	n/a	SQ1724

The QC reported here applies to the following samples: **Method:** SW846 6850

FA82653-1, FA82653-2, FA82653-3, FA82653-4, FA82653-5

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Method Blank Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP83937-MB	Q78738.D	1	02/02/21	NAF	02/02/21	OP83937	SQ1724

The QC reported here applies to the following samples: **Method:** SW846 6850

FA82653-1, FA82653-2, FA82653-3, FA82653-4, FA82653-5

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Blank Spike Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP83937-BS	Q78737.D	1	02/02/21	NAF	02/02/21	OP83937	SQ1724

The QC reported here applies to the following samples: **Method:** SW846 6850

FA82653-1, FA82653-2, FA82653-3, FA82653-4, FA82653-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
14797-73-0	Perchlorate	0.2	0.18	90	80-120

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP83937-MS	Q78743.D	1	02/02/21	NAF	02/02/21	OP83937	SQ1724
OP83937-MSD	Q78744.D	1	02/02/21	NAF	02/02/21	OP83937	SQ1724
FA82653-4	Q78742.D	1	02/02/21	NAF	02/02/21	OP83937	SQ1724

The QC reported here applies to the following samples: **Method:** SW846 6850

FA82653-1, FA82653-2, FA82653-3, FA82653-4, FA82653-5

CAS No.	Compound	FA82653-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
14797-73-0	Perchlorate	0.46		0.2	0.64	90	0.2	0.62	80	3	80-120/15

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1724-ICC1724	**Injection Date:**	02/02/21
Lab File ID:	Q78730.D	**Injection Time:**	13:16
Instrument ID:	GCMSQ	**Method:**	SW846 6850

	IS 1 AREA	RT
Initial Cal [a]	80896	5.95
Check Std [b]	81575	5.95
Upper Limit [c]	121344	7.95
Lower Limit [d]	40448	3.95

Lab Sample ID	IS 1 AREA	RT
OP83937-BS	80080	5.93
OP83937-MB	75221	5.93
FA82653-1	56807	5.68
FA82653-2	59785	5.67
FA82653-3	63988	5.55
FA82653-4	68095	5.61
OP83937-MS	70922	5.61
OP83937-MSD	72981	5.61
FA82653-5	68236	5.62

IS 1 = Cl18O4 (ISTD)

(a) Initial Cal is: SQ1724-ICC1724 Q78730.D 02/02/21 13:16. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to + 50% of initial cal area.
(c) Upper Limit = + 50% of initial standard area; Retention time + 2 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -2 minutes of check standard.

Initial Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1724-ICC1724
Lab FileID: Q78730.D

Initial Calibration Report

Method Path	D:\MassHunter\Methods
Method File	6850_0020221_SQ1724.quantmethod.xml
Batch Name	D:\MassHunter\Data\0202_6850_SQ1724\QuantResults\sq1724.batch.bin
Last Calib Update	2/2/2021 2:42:46 PM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\0202_6850_SQ1724\Q78727.d	2/2/2021 12:48:45 PM	2/2/2021 2:42:46 PM
2	D:\MassHunter\Data\0202_6850_SQ1724\Q78728.d	2/2/2021 12:58:07 PM	2/2/2021 2:42:46 PM
3	D:\MassHunter\Data\0202_6850_SQ1724\Q78729.d	2/2/2021 1:07:04 PM	2/2/2021 2:42:46 PM
4	D:\MassHunter\Data\0202_6850_SQ1724\Q78730.d	2/2/2021 1:16:01 PM	2/2/2021 2:42:46 PM
5	D:\MassHunter\Data\0202_6850_SQ1724\Q78731.d	2/2/2021 1:24:58 PM	2/2/2021 2:42:46 PM
6	D:\MassHunter\Data\0202_6850_SQ1724\Q78732.d	2/2/2021 1:33:57 PM	2/2/2021 2:42:46 PM
7	D:\MassHunter\Data\0202_6850_SQ1724\Q78733.d	2/2/2021 1:43:10 PM	2/2/2021 2:42:46 PM
8	D:\MassHunter\Data\0202_6850_SQ1724\Q78734.d	2/2/2021 1:52:08 PM	2/2/2021 2:42:46 PM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I Cl18O4	---------- ISTD ----------										
T Perchlorate	Avg RF	1.3435	1.3129	1.3068	1.3482	1.4034	1.4528	1.5668	1.5951	1.4162	7.950

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Generated at 2:43 PM on 2/2/2021

Initial Calibration Verification

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1724-ICV1724
Lab FileID: Q78735.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0202_6850_SQ1724\sq1724.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0202_6850_SQ1724\Q78727.d
2:D:\MassHunter\Data\0202_6850_SQ1724\Q78728.d
3:D:\MassHunter\Data\0202_6850_SQ1724\Q78729.d
4:D:\MassHunter\Data\0202_6850_SQ1724\Q78730.d
5:D:\MassHunter\Data\0202_6850_SQ1724\Q78731.d
6:D:\MassHunter\Data\0202_6850_SQ1724\Q78732.d
7:D:\MassHunter\Data\0202_6850_SQ1724\Q78733.d
8:D:\MassHunter\Data\0202_6850_SQ1724\Q78734.d

Data File: Q78735
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	2.104	5.2	105.2

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1724-CC1724
Lab FileID: Q78746.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0202_6850_SQ1724\sq1724.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0202_6850_SQ1724\Q78727.d
2:D:\MassHunter\Data\0202_6850_SQ1724\Q78728.d
3:D:\MassHunter\Data\0202_6850_SQ1724\Q78729.d
4:D:\MassHunter\Data\0202_6850_SQ1724\Q78730.d
5:D:\MassHunter\Data\0202_6850_SQ1724\Q78731.d
6:D:\MassHunter\Data\0202_6850_SQ1724\Q78732.d
7:D:\MassHunter\Data\0202_6850_SQ1724\Q78733.d
8:D:\MassHunter\Data\0202_6850_SQ1724\Q78734.d

Data File: Q78746
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.881	-6.0	94.0

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1724-CC1724
Lab FileID: Q78747.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0202_6850_SQ1724\sq1724.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0202_6850_SQ1724\Q78727.d
2:D:\MassHunter\Data\0202_6850_SQ1724\Q78728.d
3:D:\MassHunter\Data\0202_6850_SQ1724\Q78729.d
4:D:\MassHunter\Data\0202_6850_SQ1724\Q78730.d
5:D:\MassHunter\Data\0202_6850_SQ1724\Q78731.d
6:D:\MassHunter\Data\0202_6850_SQ1724\Q78732.d
7:D:\MassHunter\Data\0202_6850_SQ1724\Q78733.d
8:D:\MassHunter\Data\0202_6850_SQ1724\Q78734.d

Data File: Q78747
Type : QC
Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	0.200	0.186	-7.2	92.8

CC Criteria: +/- 15%

Run Sequence Report

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: SQ1724	**Method:** SW846 6850	**Instrument ID:** GCMSQ

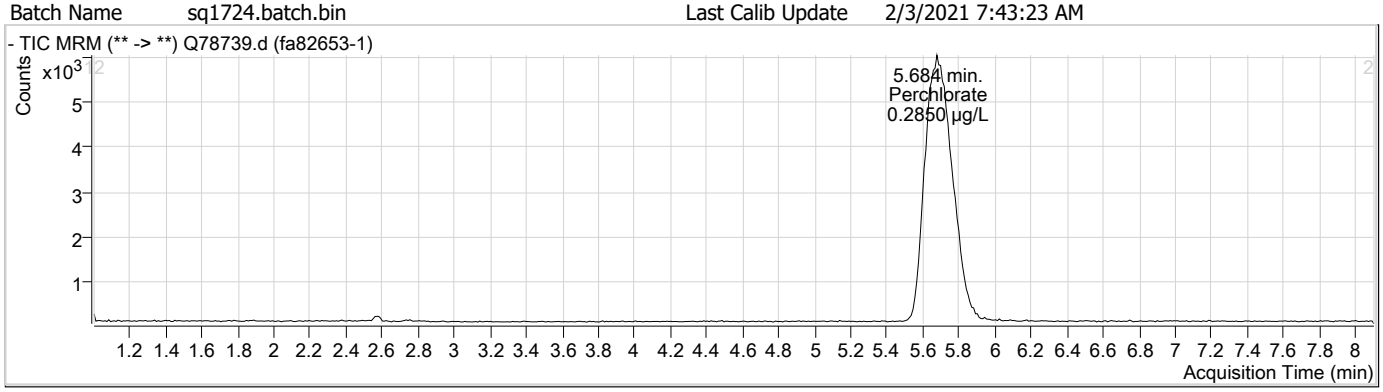
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ1724-IC1724	Q78727.D	02/02/21 12:48	n/a	Initial cal 0.2
SQ1724-IC1724	Q78728.D	02/02/21 12:58	n/a	Initial cal 0.5
SQ1724-IC1724	Q78729.D	02/02/21 13:07	n/a	Initial cal 1.0
SQ1724-ICC1724	Q78730.D	02/02/21 13:16	n/a	Initial cal 2.0
SQ1724-IC1724	Q78731.D	02/02/21 13:24	n/a	Initial cal 5.0
SQ1724-IC1724	Q78732.D	02/02/21 13:33	n/a	Initial cal 10
SQ1724-IC1724	Q78733.D	02/02/21 13:43	n/a	Initial cal 25
SQ1724-IC1724	Q78734.D	02/02/21 13:52	n/a	Initial cal 50
SQ1724-ICV1724	Q78735.D	02/02/21 14:01	n/a	Initial cal verification 2.0
OP83937-BS	Q78737.D	02/02/21 14:18	OP83937	Blank Spike
OP83937-MB	Q78738.D	02/02/21 14:27	OP83937	Method Blank
FA82653-1	Q78739.D	02/02/21 14:36	OP83937	54MW13
FA82653-2	Q78740.D	02/02/21 14:45	OP83937	54TW13
FA82653-3	Q78741.D	02/02/21 14:54	OP83937	54MW10
FA82653-4	Q78742.D	02/02/21 15:03	OP83937	54MW12
OP83937-MS	Q78743.D	02/02/21 15:12	OP83937	Matrix Spike
OP83937-MSD	Q78744.D	02/02/21 15:21	OP83937	Matrix Spike Duplicate
FA82653-5	Q78745.D	02/02/21 15:30	OP83937	54MW1
SQ1724-CC1724	Q78746.D	02/02/21 15:39	n/a	Continuing cal 2.0
SQ1724-CC1724	Q78747.D	02/02/21 15:48	n/a	Continuing cal 0.2
ZZZZZZ	Q78749.D	02/02/21 16:06	OP83937	(unrelated sample)
ZZZZZZ	Q78750.D	02/02/21 16:15	OP83937	(unrelated sample)
ZZZZZZ	Q78752.D	02/02/21 16:33	OP83937	(unrelated sample)
ZZZZZZ	Q78753.D	02/02/21 16:42	OP83937	(unrelated sample)
ZZZZZZ	Q78754.D	02/02/21 16:51	OP83937	(unrelated sample)
SQ1724-CC1724	Q78755.D	02/02/21 17:00	n/a	Continuing cal 2.0
SQ1724-CC1724	Q78756.D	02/02/21 17:09	n/a	Continuing cal 0.2
ZZZZZZ	Q78758.D	02/02/21 17:27	OP83937	(unrelated sample)
ZZZZZZ	Q78759.D	02/02/21 17:35	OP83937	(unrelated sample)
ZZZZZZ	Q78760.D	02/02/21 17:44	OP83937	(unrelated sample)
ZZZZZZ	Q78761.D	02/02/21 17:53	OP83937	(unrelated sample)
ZZZZZZ	Q78762.D	02/02/21 18:02	OP83937	(unrelated sample)
ZZZZZZ	Q78763.D	02/02/21 18:11	OP83937	(unrelated sample)
SQ1724-CC1724	Q78764.D	02/02/21 18:20	n/a	Continuing cal 2.0
SQ1724-ECC1724	Q78765.D	02/02/21 18:29	n/a	Ending cal 0.2
SQ1724-IBLK	Q78766.D	02/02/21 18:38	n/a	Method Blank

MS Semi-volatiles

Raw Data

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78739.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 2:36:53 PM
Sample Name	fa82653-1	Instrument	Instrument 1
Vial	Vial 20	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

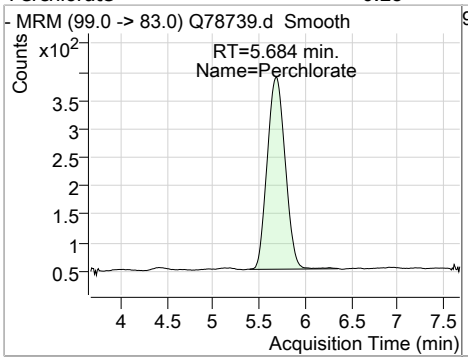


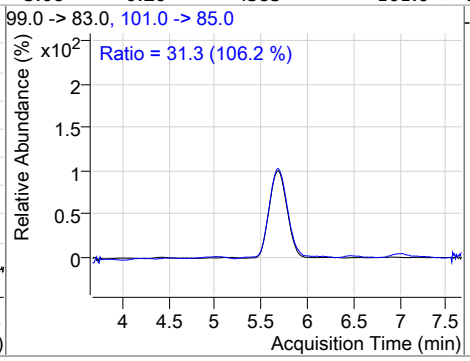
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.677	107.0 -> 89.0	56807	NoQ	5.00 µg/L	-0.275
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.684	99.0 -> 83.0	4585	3.2	0.28 µg/L	97

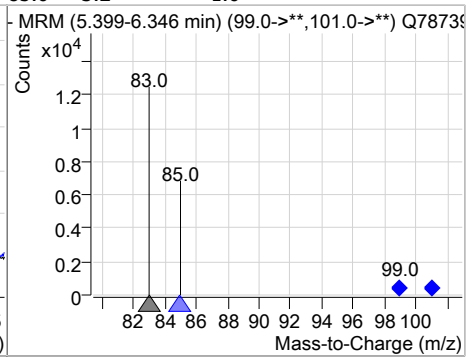
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.28	5.68	-0.26	4585	101.0 -> 85.0	3.2	1.6	

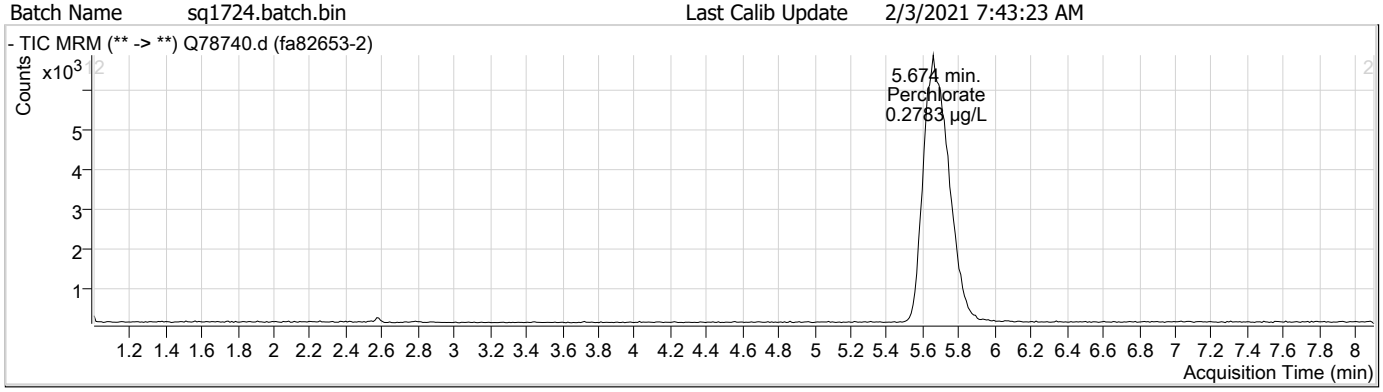






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78740.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 2:45:49 PM
Sample Name	fa82653-2	Instrument	Instrument 1
Vial	Vial 21	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

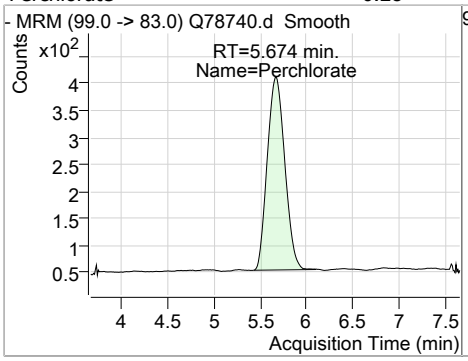


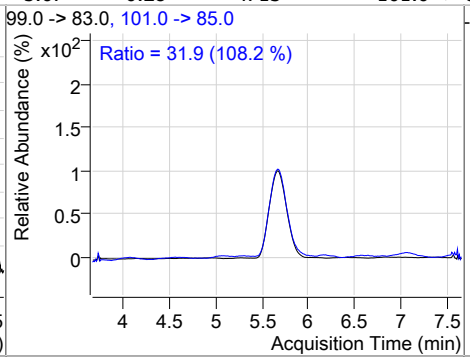
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.667	107.0 -> 89.0	59785	NoQ	5.00	µg/L	-0.285
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.674	99.0 -> 83.0	4713	3.1	0.28	µg/L	96

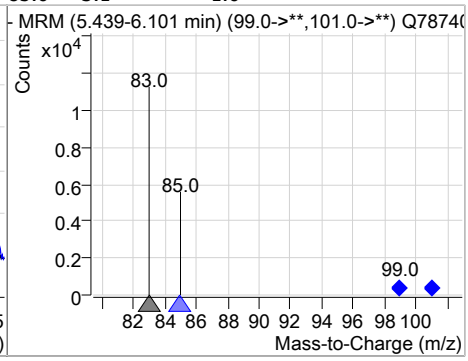
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.28	5.67	-0.28	4713	101.0 -> 85.0	3.1	1.6	

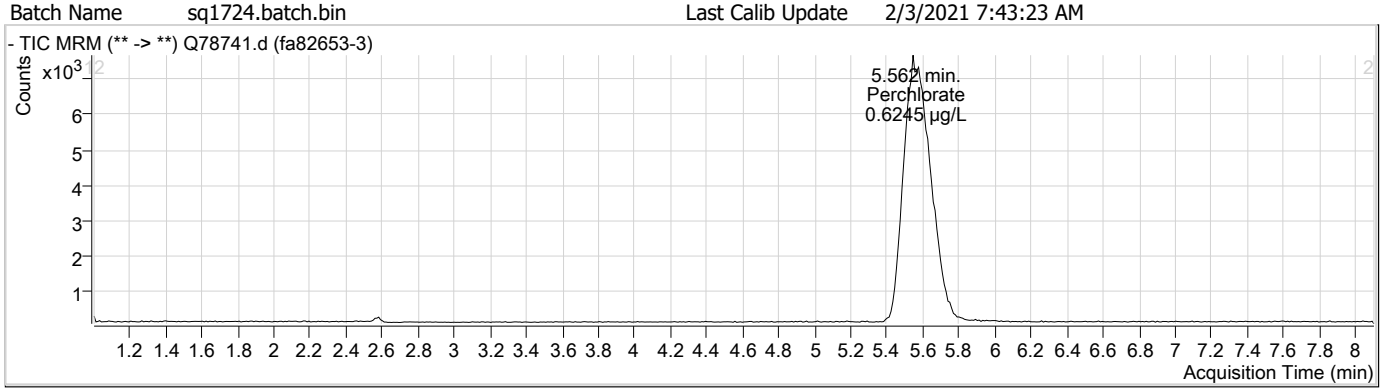






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78741.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 2:54:46 PM
Sample Name	fa82653-3	Instrument	Instrument 1
Vial	Vial 22	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

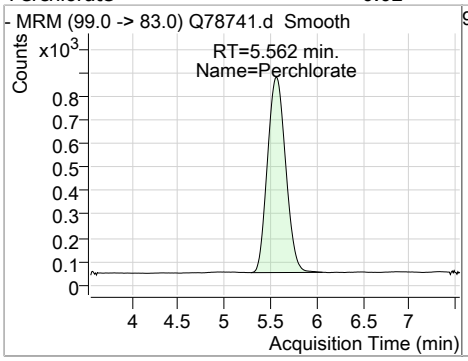


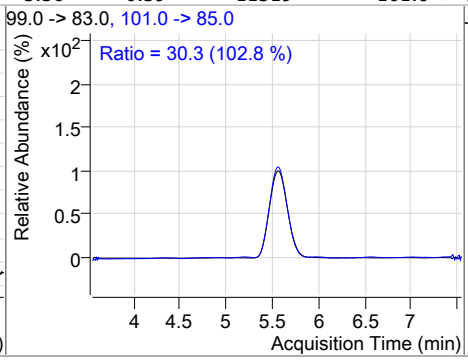
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.555	107.0 -> 89.0	63988	NoQ	5.00	µg/L	-0.397
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.562	99.0 -> 83.0	11319	3.3	0.62	µg/L	98

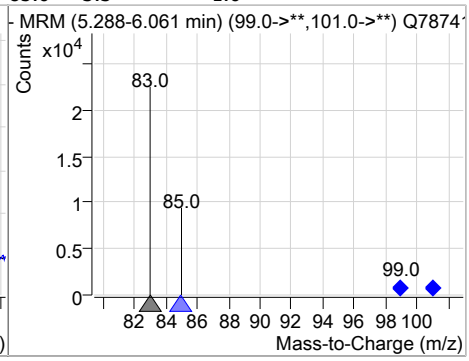
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.62	5.56	-0.39	11319	101.0 -> 85.0	3.3	1.6	

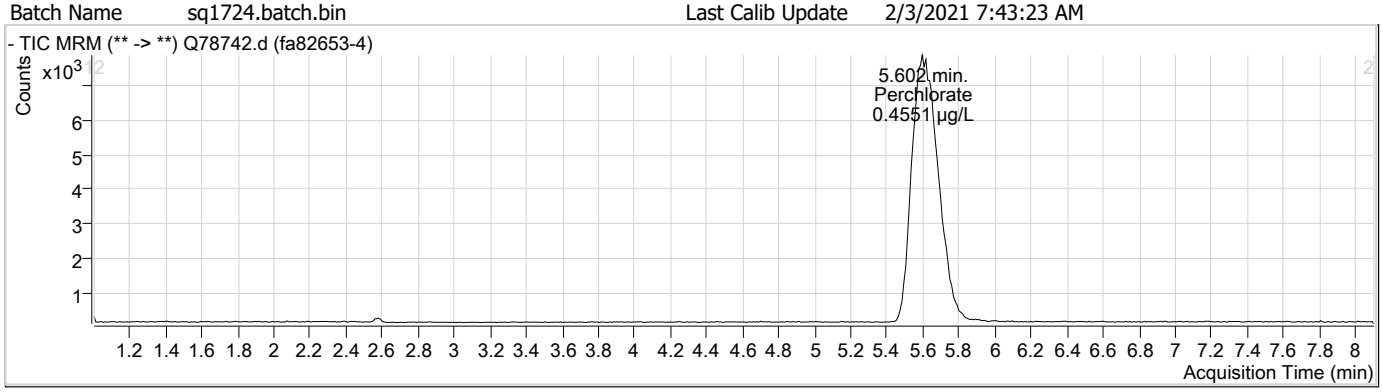






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78742.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 3:03:43 PM
Sample Name	fa82653-4	Instrument	Instrument 1
Vial	Vial 23	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

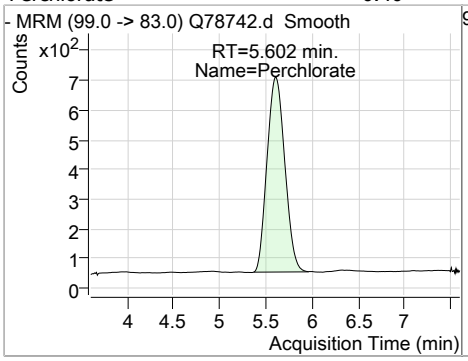


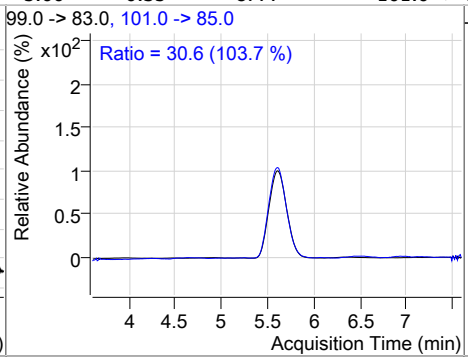
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.606	107.0 -> 89.0	68095	NoQ	5.00	µg/L	-0.346
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.602	99.0 -> 83.0	8777	3.3	0.46	µg/L	98

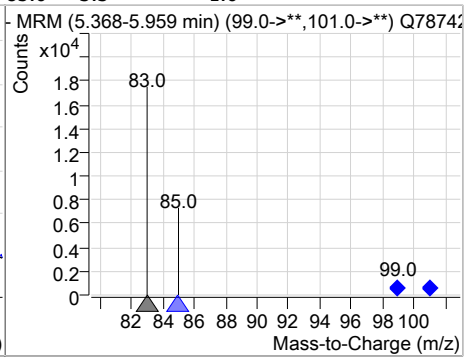
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.46	5.60	-0.35	8777	101.0 -> 85.0	3.3	1.6	

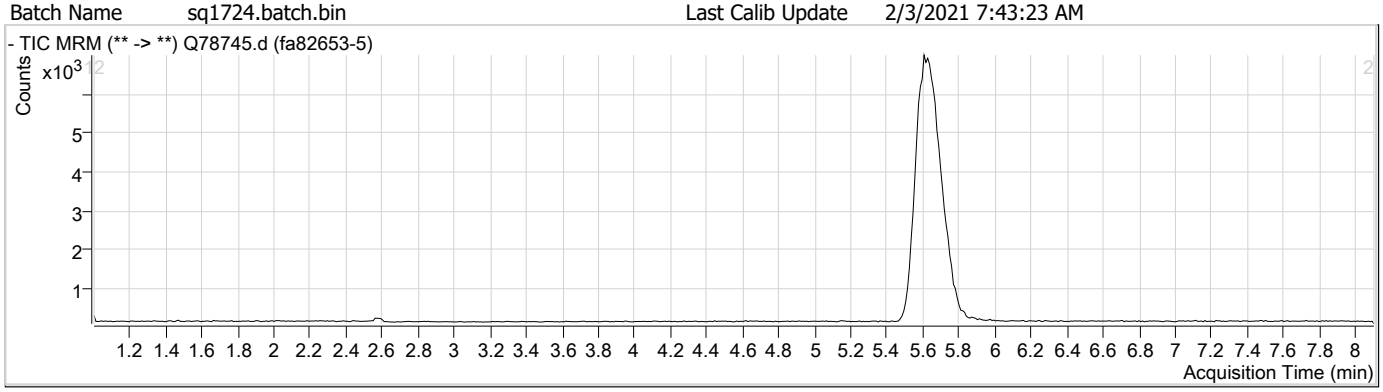






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78745.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 3:30:35 PM
Sample Name	fa82653-5	Instrument	Instrument 1
Vial	Vial 26	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

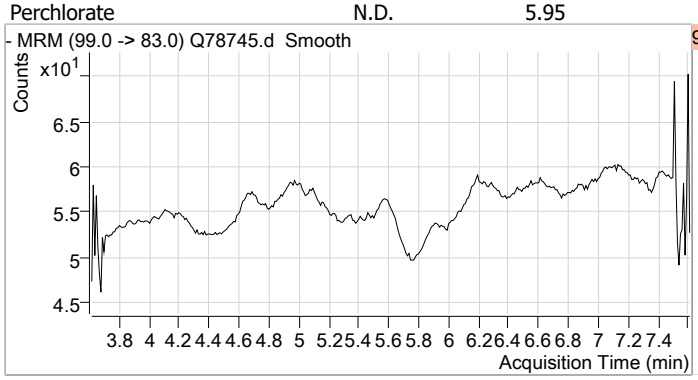


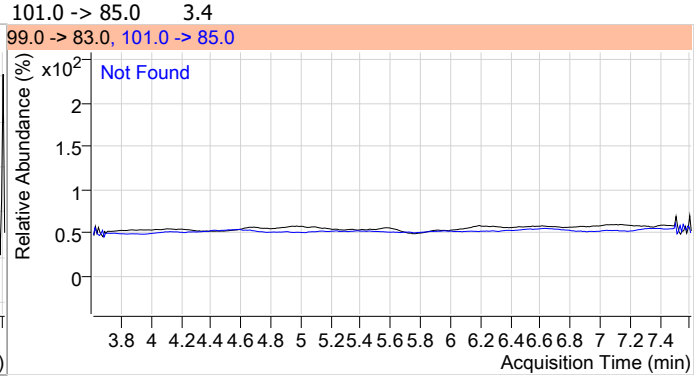
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.616	107.0 -> 89.0	68236	NoQ	5.00 µg/L	-0.336
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	-	99.0 -> 83.0		-	N.D.	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

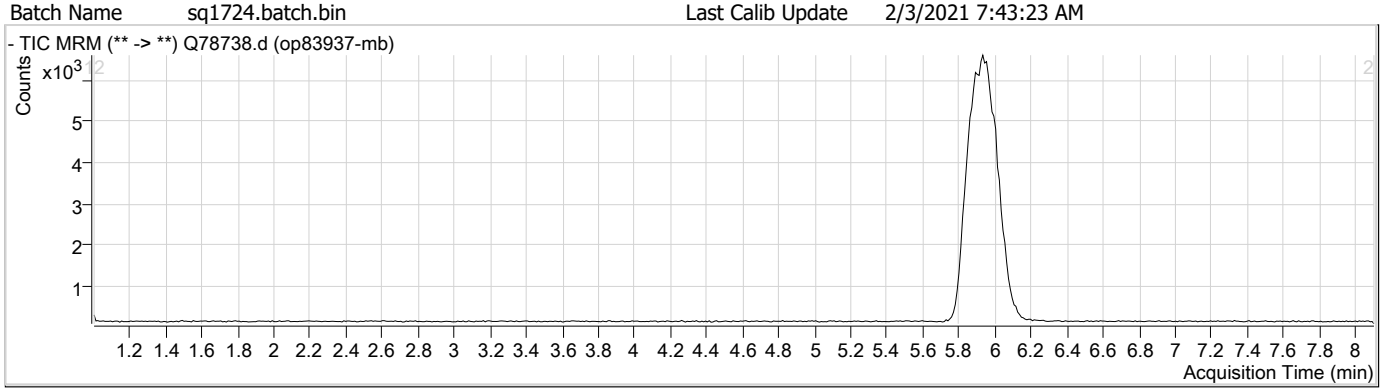
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	5.95	101.0 -> 85.0	3.4





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78738.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 2:27:55 PM
Sample Name	op83937-mb	Instrument	Instrument 1
Vial	Vial 13	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

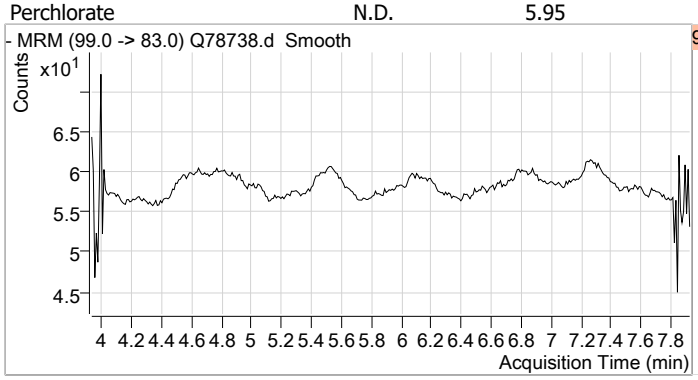


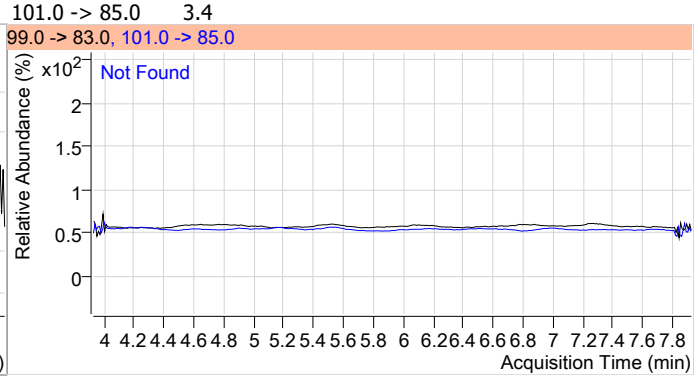
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.932	107.0 -> 89.0	75221	NoQ	5.00 µg/L	-0.020
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	-	99.0 -> 83.0		-	N.D.	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

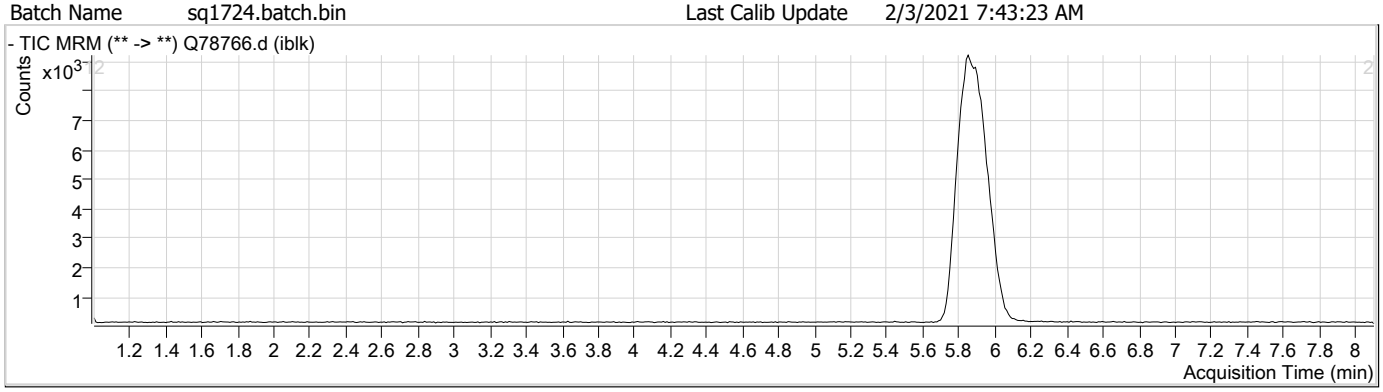
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	5.95	101.0 -> 85.0	3.4





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78766.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 6:38:38 PM
Sample Name	iblk	Instrument	Instrument 1
Vial	Vial 1	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

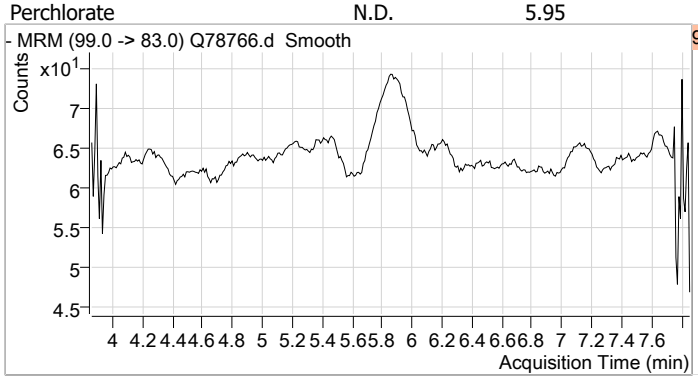


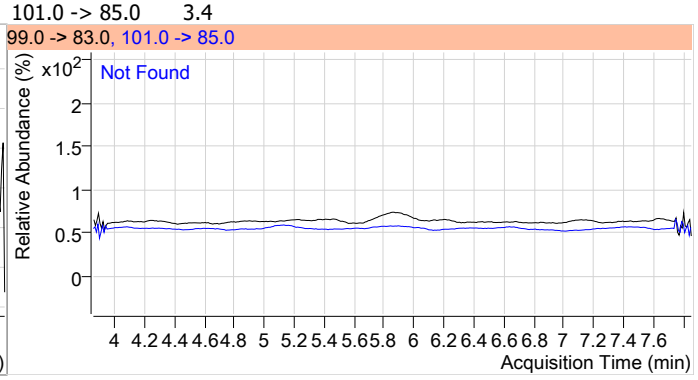
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.860	107.0 -> 89.0	104136	NoQ	5.00 µg/L	-0.092
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	-	99.0 -> 83.0		-	N.D.	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

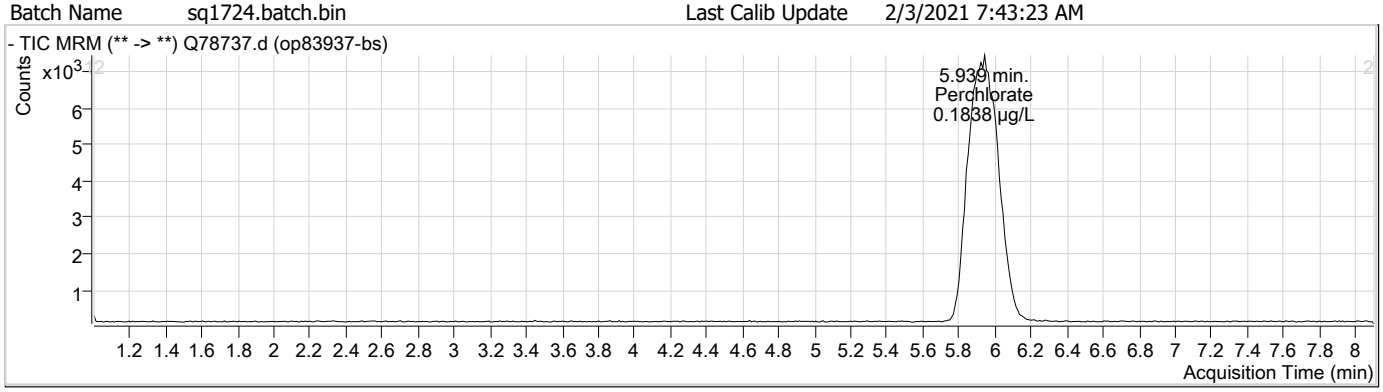
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	5.95	101.0 -> 85.0	3.4





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78737.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 2:18:58 PM
Sample Name	op83937-bs	Instrument	Instrument 1
Vial	Vial 12	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

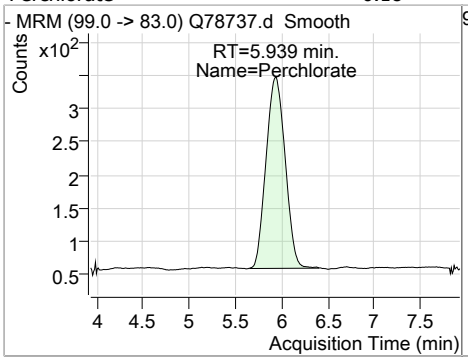


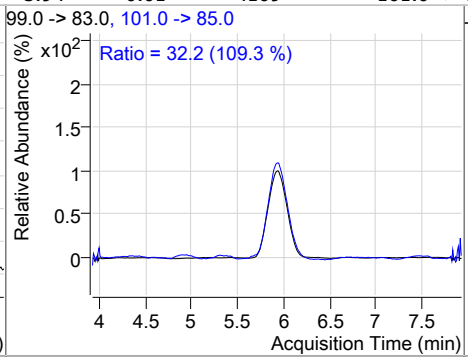
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.932	107.0 -> 89.0	80080	NoQ	5.00 µg/L	-0.020
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.939	99.0 -> 83.0	4169	3.1	0.18 µg/L	95

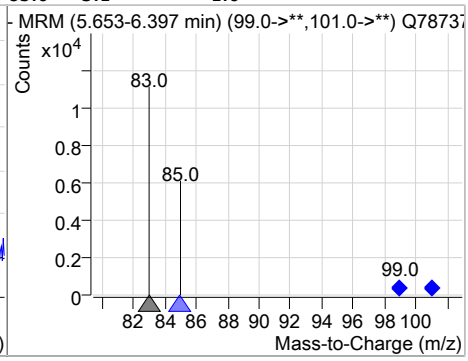
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.18	5.94	-0.01	4169	101.0 -> 85.0	3.1	1.6	

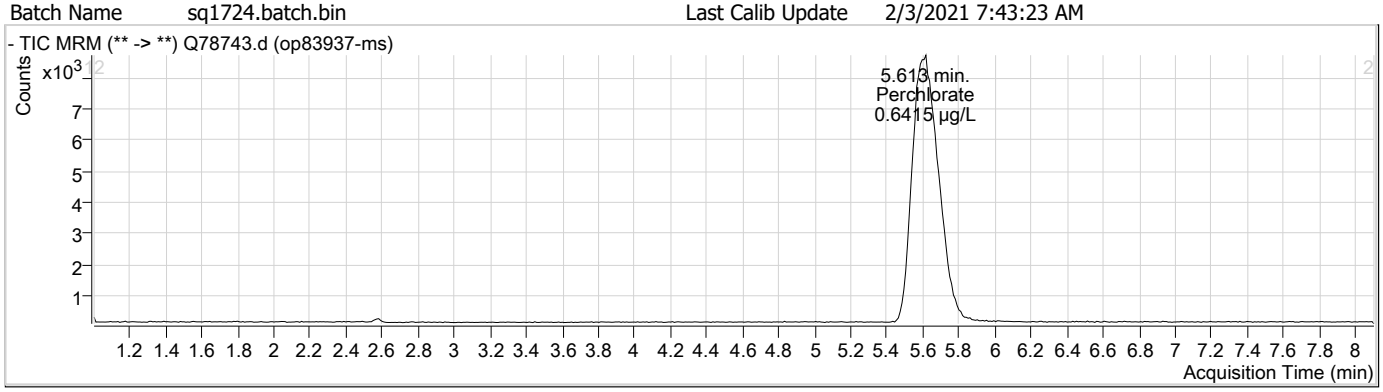






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78743.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 3:12:41 PM
Sample Name	op83937-ms	Instrument	Instrument 1
Vial	Vial 24	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

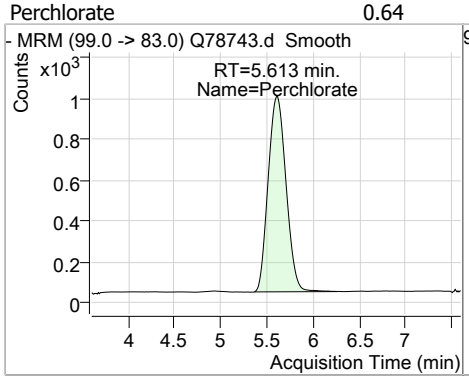


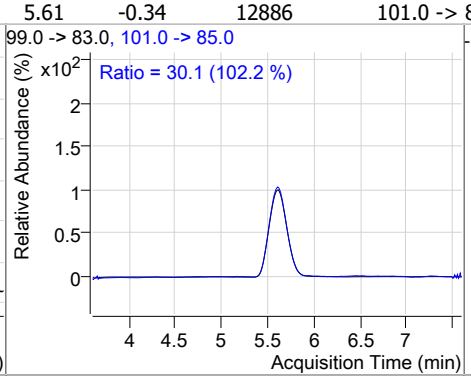
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.606	107.0 -> 89.0	70922	NoQ	5.00 µg/L	-0.346
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.613	99.0 -> 83.0	12886	3.3	0.64 µg/L	99

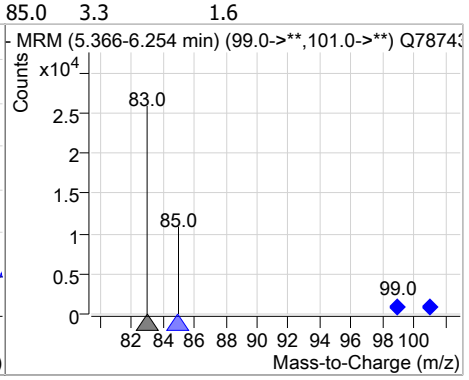
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.64	5.61	-0.34	12886	101.0 -> 85.0	3.3	1.6	

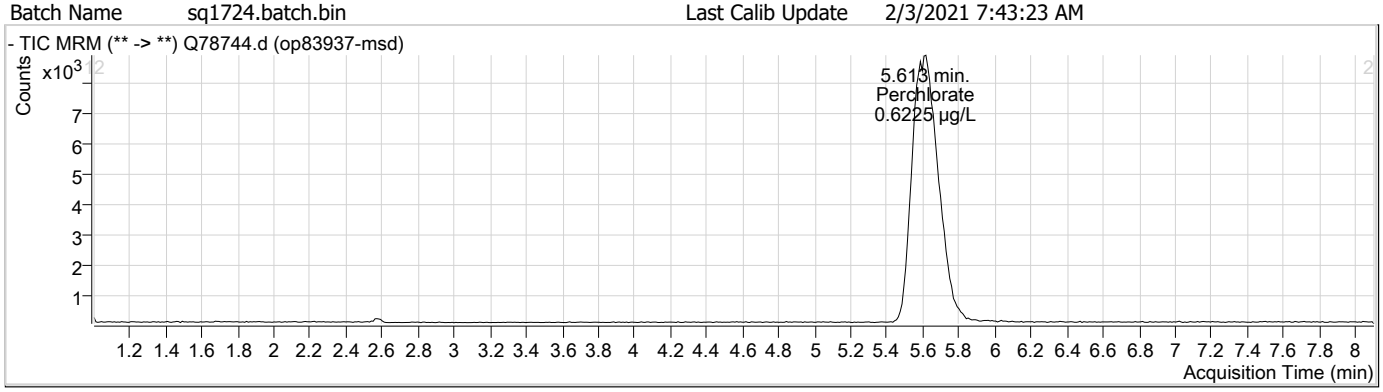






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78744.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 3:21:38 PM
Sample Name	op83937-msd	Instrument	Instrument 1
Vial	Vial 25	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

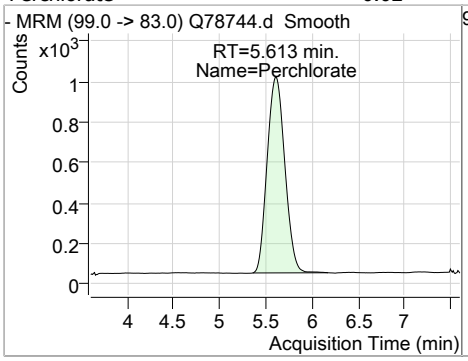


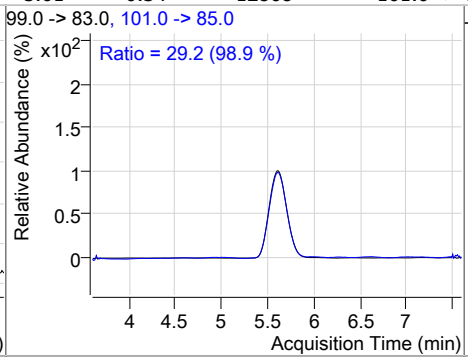
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.606	107.0 -> 89.0	72981	NoQ	5.00	µg/L	-0.346
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	5.613	99.0 -> 83.0	12868	3.4	0.62	µg/L	99

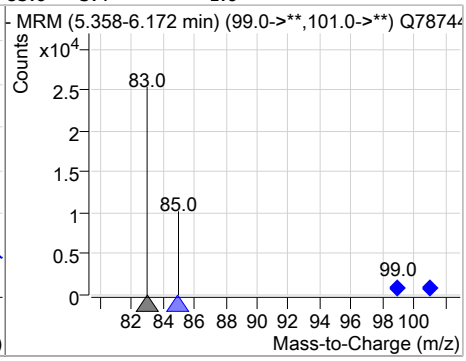
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.62	5.61	-0.34	12868	101.0 -> 85.0	3.4	1.6	

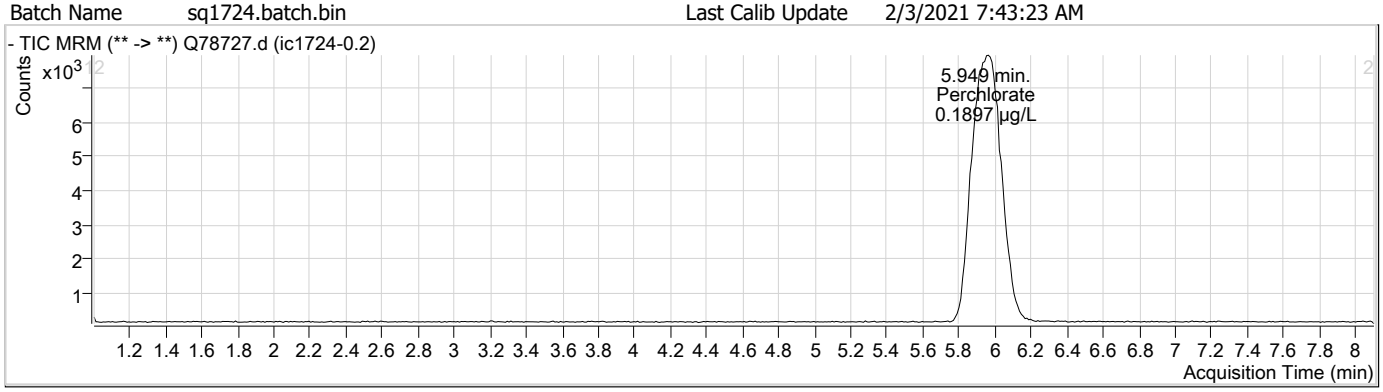






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78727.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 12:48:45 PM
Sample Name	ic1724-0.2	Instrument	Instrument 1
Vial	Vial 2	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

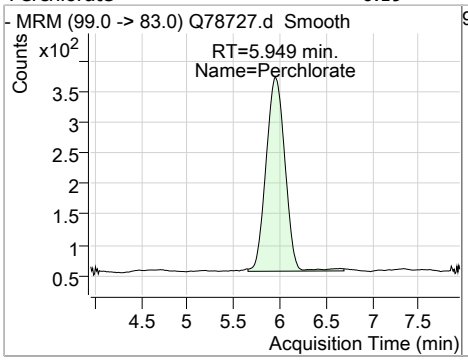


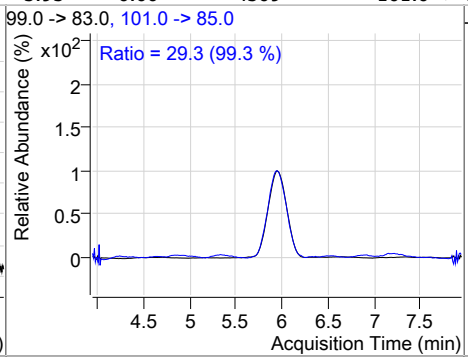
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.952	107.0 -> 89.0	83899	NoQ	5.00 µg/L	0.000
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.949	99.0 -> 83.0	4509	3.4	0.19 µg/L	100

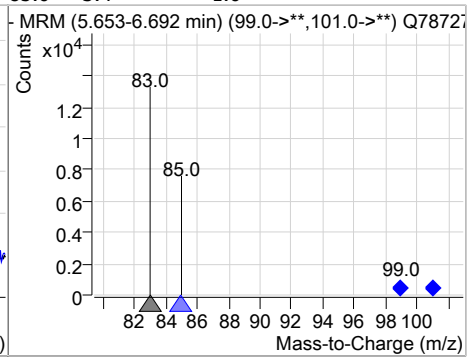
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.19	5.95	0.00	4509	101.0 -> 85.0	3.4	1.6	

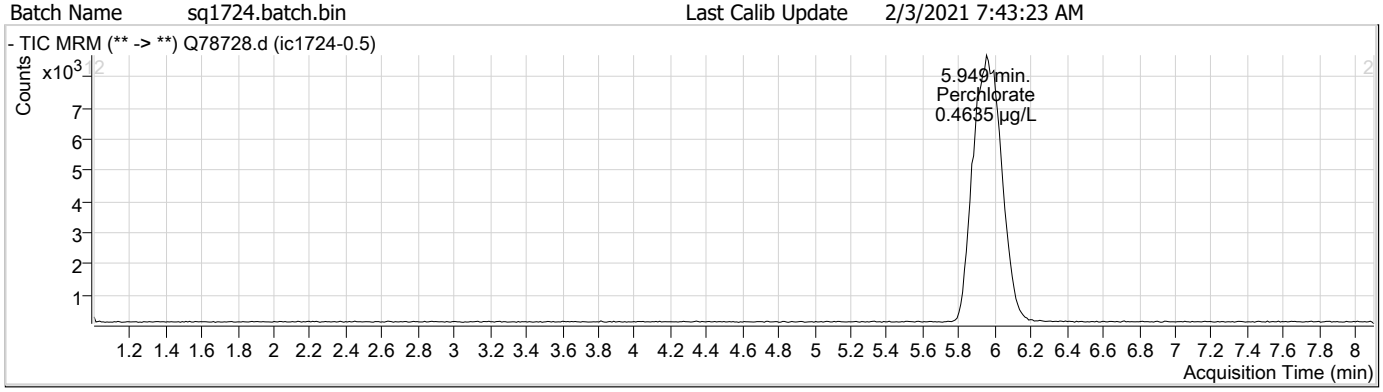






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78728.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 12:58:07 PM
Sample Name	ic1724-0.5	Instrument	Instrument 1
Vial	Vial 3	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

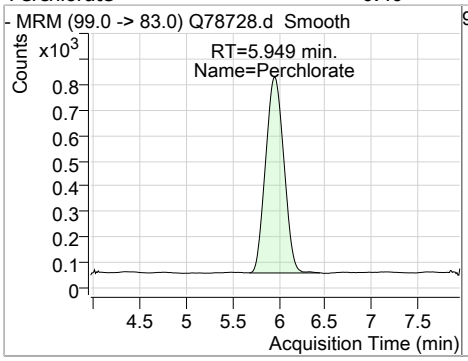


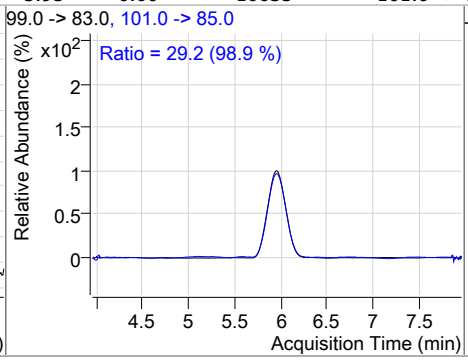
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.962	107.0 -> 89.0	81002	NoQ	5.00	µg/L	0.010
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.949	99.0 -> 83.0	10635	3.4	0.46	µg/L	99

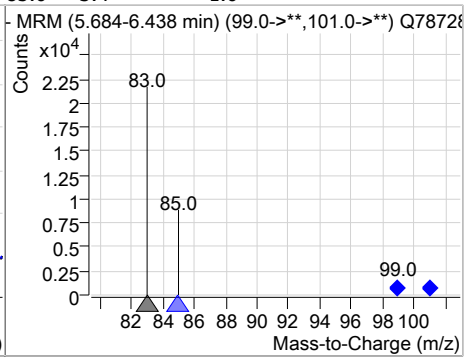
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.46	5.95	0.00	10635	101.0 -> 85.0	3.4	1.6	

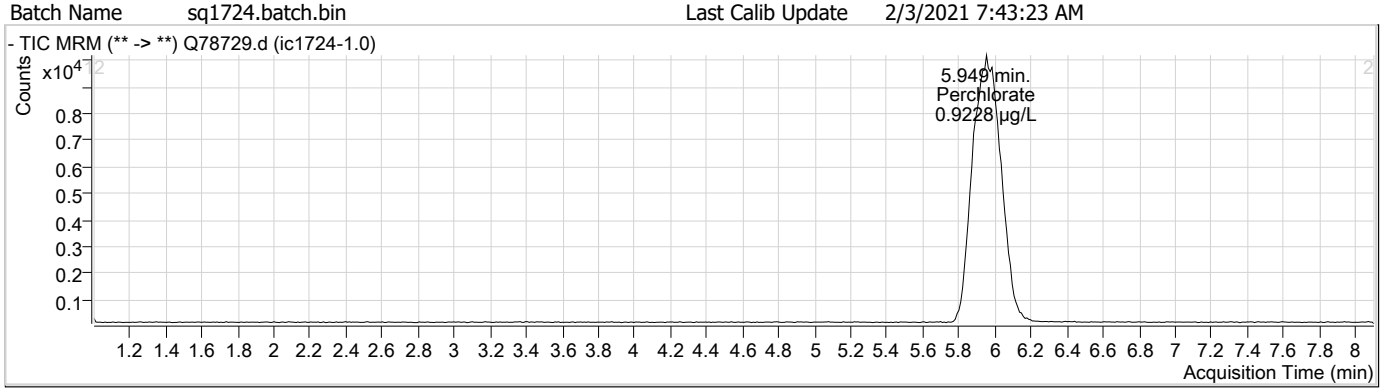






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78729.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 1:07:04 PM
Sample Name	ic1724-1.0	Instrument	Instrument 1
Vial	Vial 4	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

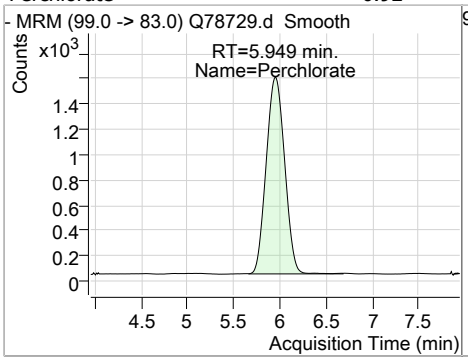


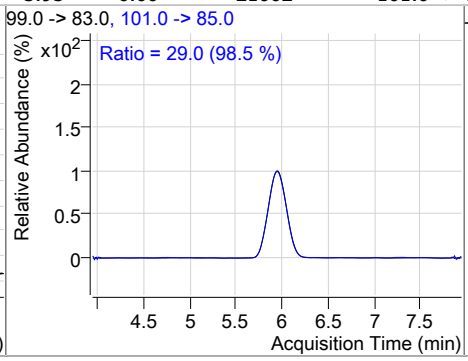
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.952	107.0 -> 89.0	82649	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.949	99.0 -> 83.0	21602	3.4	0.92	µg/L	99

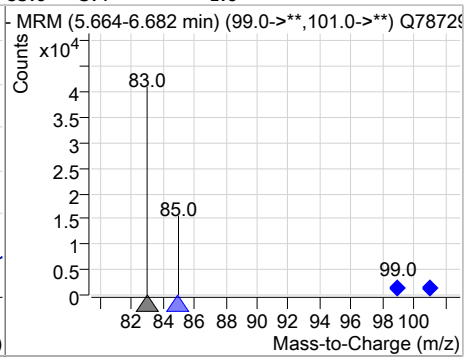
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.92	5.95	0.00	21602	101.0 -> 85.0	3.4	1.6	

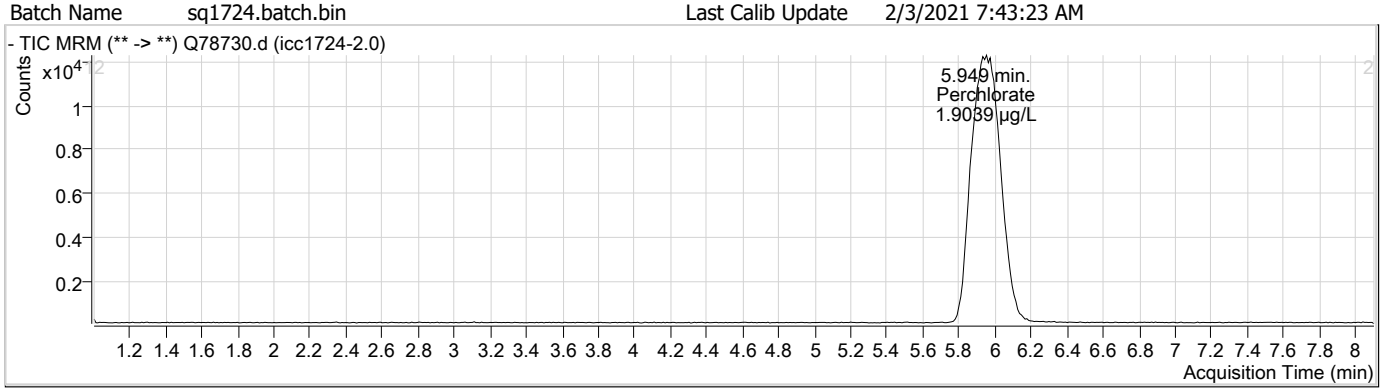






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78730.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 1:16:01 PM
Sample Name	icc1724-2.0	Instrument	Instrument 1
Vial	Vial 5	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

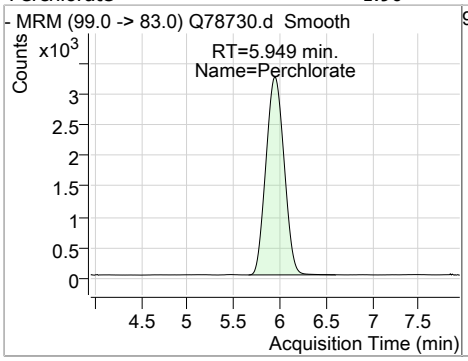


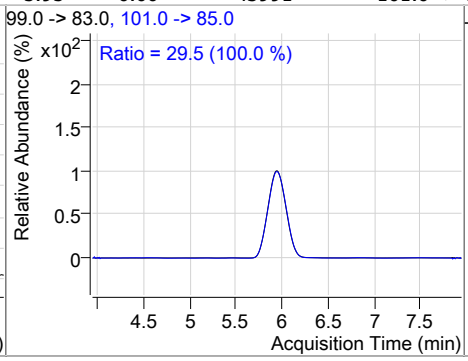
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.952	107.0 -> 89.0	81575	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.949	99.0 -> 83.0	43991	3.4	1.90	µg/L	100

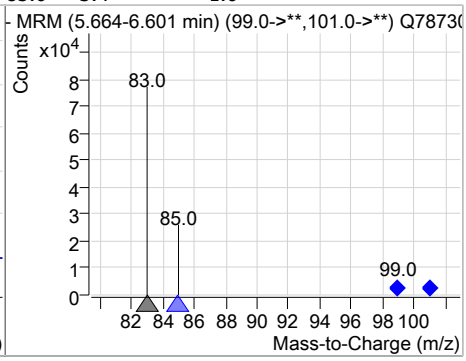
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.90	5.95	0.00	43991	101.0 -> 85.0	3.4	1.6	

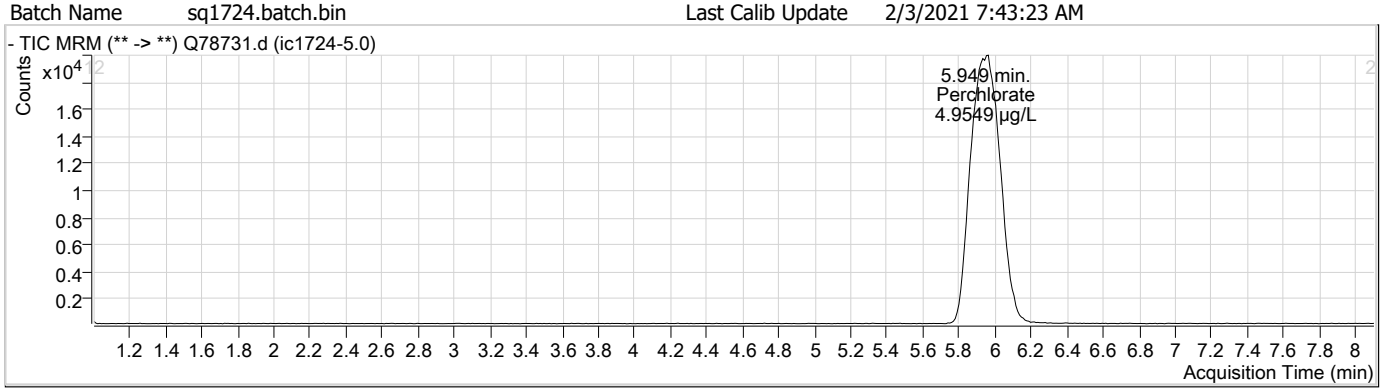






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78731.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 1:24:58 PM
Sample Name	ic1724-5.0	Instrument	Instrument 1
Vial	Vial 6	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

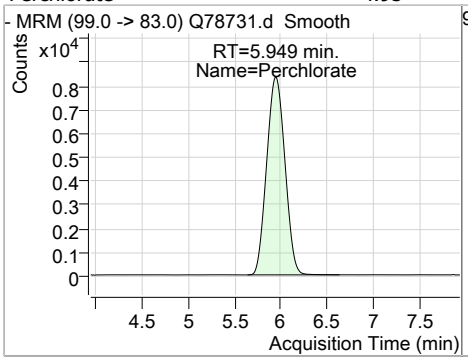


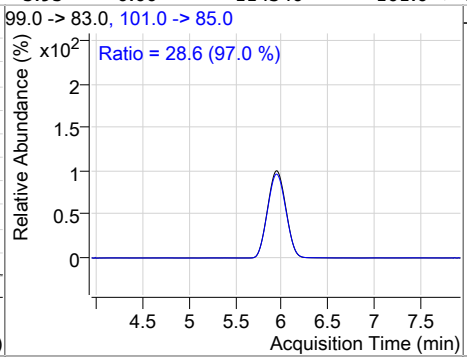
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.942	107.0 -> 89.0	81471	NoQ	5.00 µg/L	-0.010
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.949	99.0 -> 83.0	114340	3.5	4.95 µg/L	98

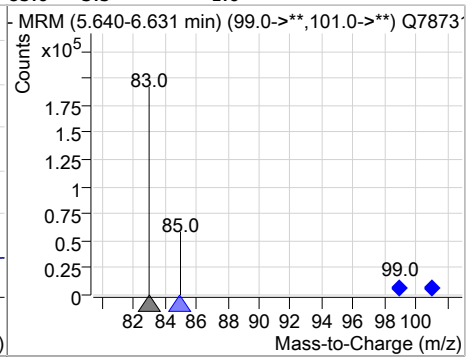
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	4.95	5.95	0.00	114340	101.0 -> 85.0	3.5	1.6	

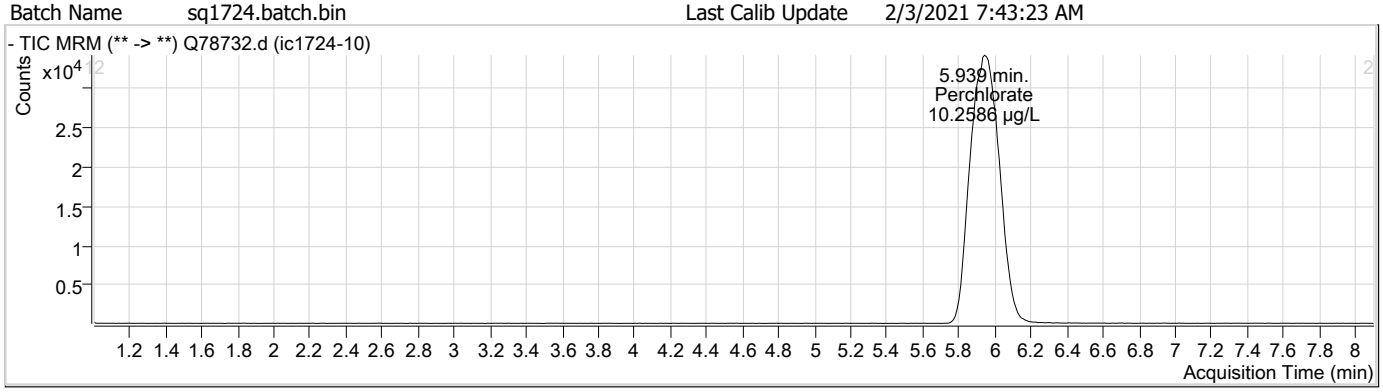






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78732.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 1:33:57 PM
Sample Name	ic1724-10	Instrument	Instrument 1
Vial	Vial 7	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

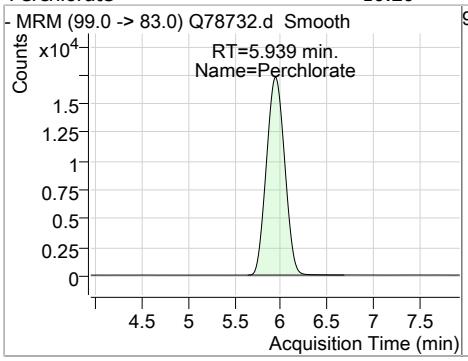


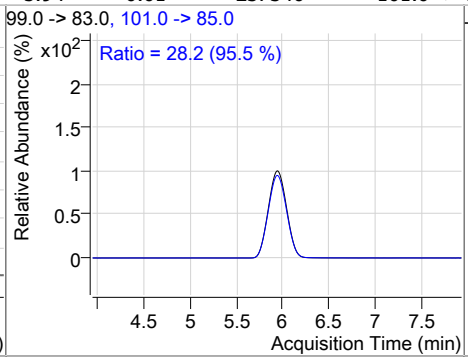
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.942	107.0 -> 89.0	81683	NoQ	5.00	µg/L	-0.010
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.939	99.0 -> 83.0	237346	3.6	10.26	µg/L	97

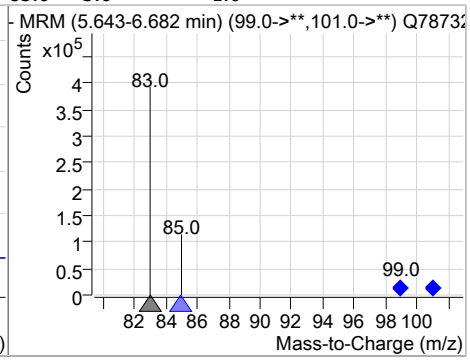
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	10.26	5.94	-0.01	237346	101.0 -> 85.0	3.6	1.6	

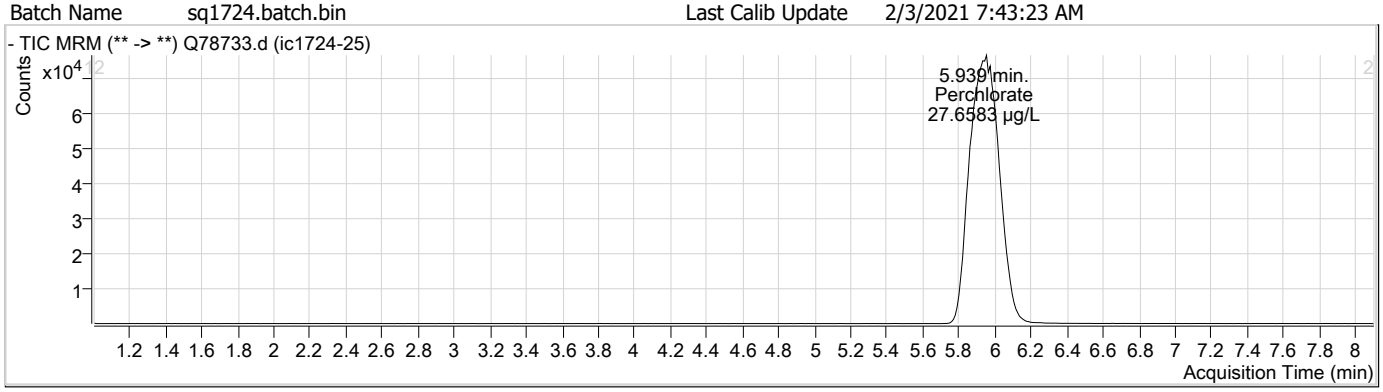






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78733.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 1:43:10 PM
Sample Name	ic1724-25	Instrument	Instrument 1
Vial	Vial 8	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

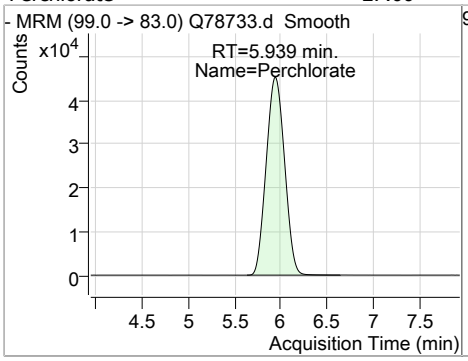


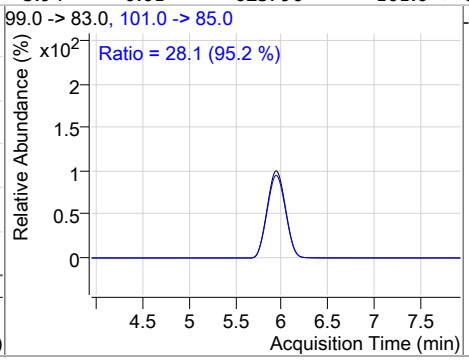
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.942	107.0 -> 89.0	79882	NoQ	5.00	µg/L	-0.010
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.939	99.0 -> 83.0	625796	3.6	27.66	µg/L	97

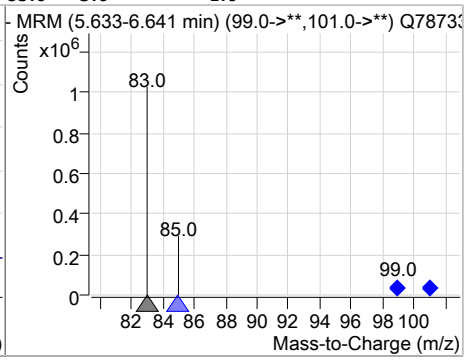
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	27.66	5.94	-0.01	625796	101.0 -> 85.0	3.6	1.6	

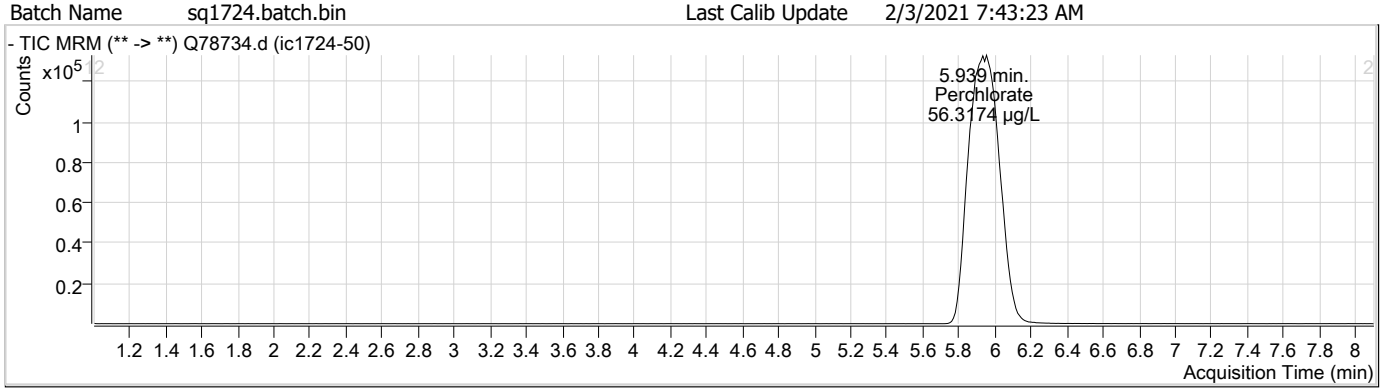






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78734.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 1:52:08 PM
Sample Name	ic1724-50	Instrument	Instrument 1
Vial	Vial 9	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

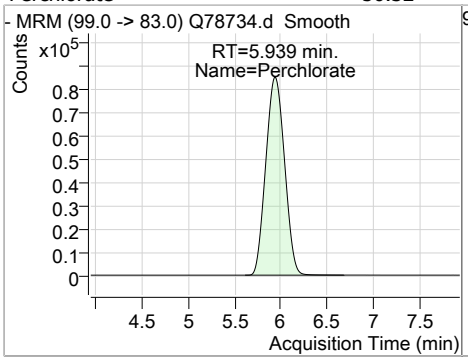


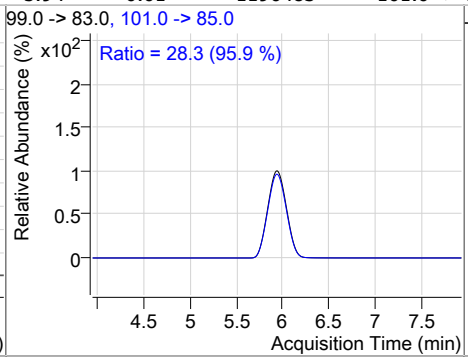
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.942	107.0 -> 89.0	75008	NoQ	5.00	µg/L	-0.010
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.939	99.0 -> 83.0	1196483	3.5	56.32	µg/L	98

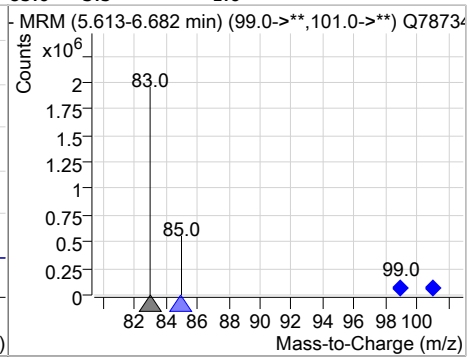
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	56.32	5.94	-0.01	1196483	101.0 -> 85.0	3.5	1.6	

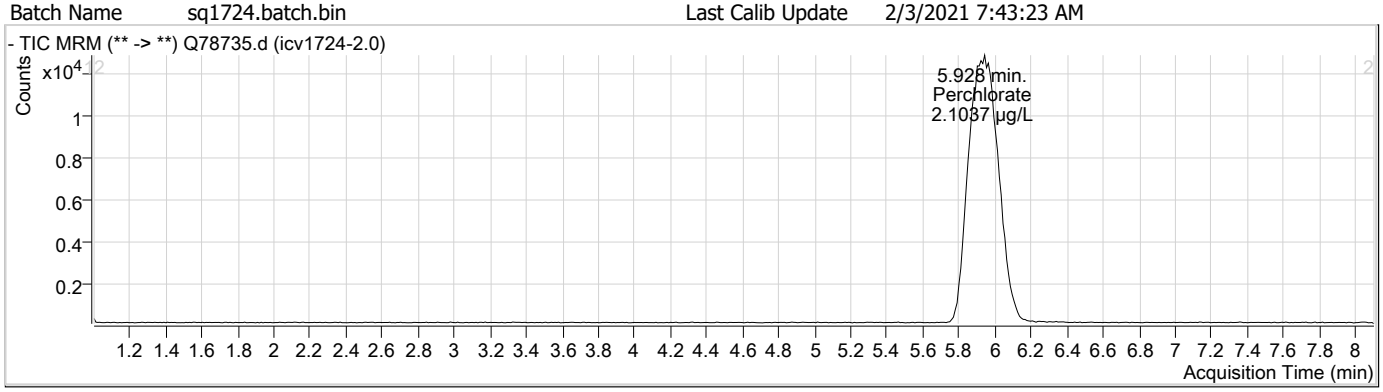






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78735.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 2:01:05 PM
Sample Name	icv1724-2.0	Instrument	Instrument 1
Vial	Vial 10	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

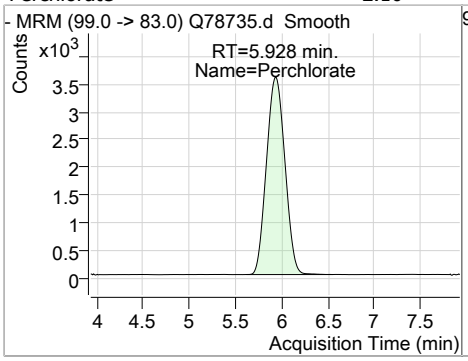


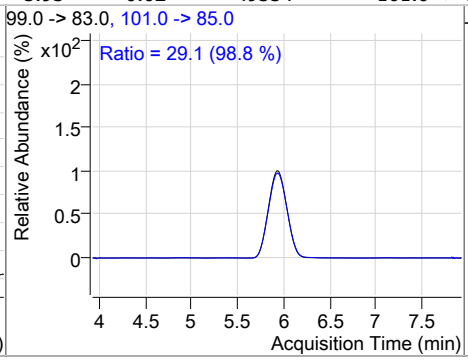
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.932	107.0 -> 89.0	83166	NoQ	5.00	µg/L	-0.020
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.928	99.0 -> 83.0	49554	3.4	2.10	µg/L	99

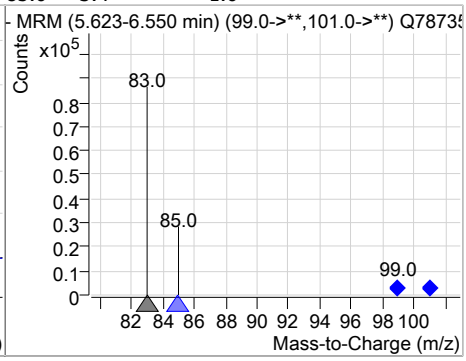
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	2.10	5.93	-0.02	49554	101.0 -> 85.0	3.4	1.6	

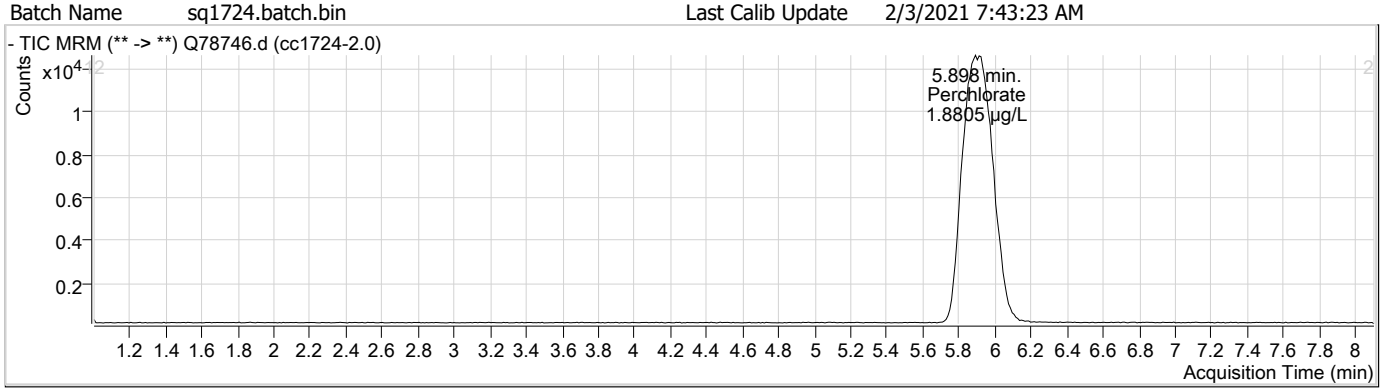






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78746.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 3:39:32 PM
Sample Name	cc1724-2.0	Instrument	Instrument 1
Vial	Vial 5	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

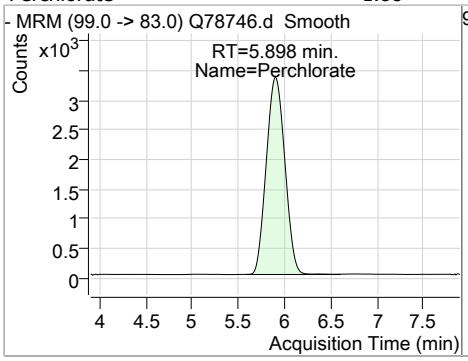


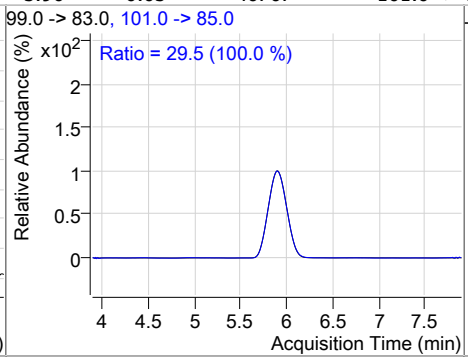
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	5.901	107.0 -> 89.0	87690	NoQ	5.00	µg/L	-0.051
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	5.898	99.0 -> 83.0	46707	3.4	1.88	µg/L	100

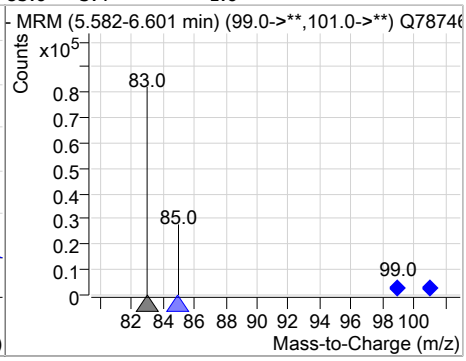
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.88	5.90	-0.05	46707	101.0 -> 85.0	3.4	1.6	

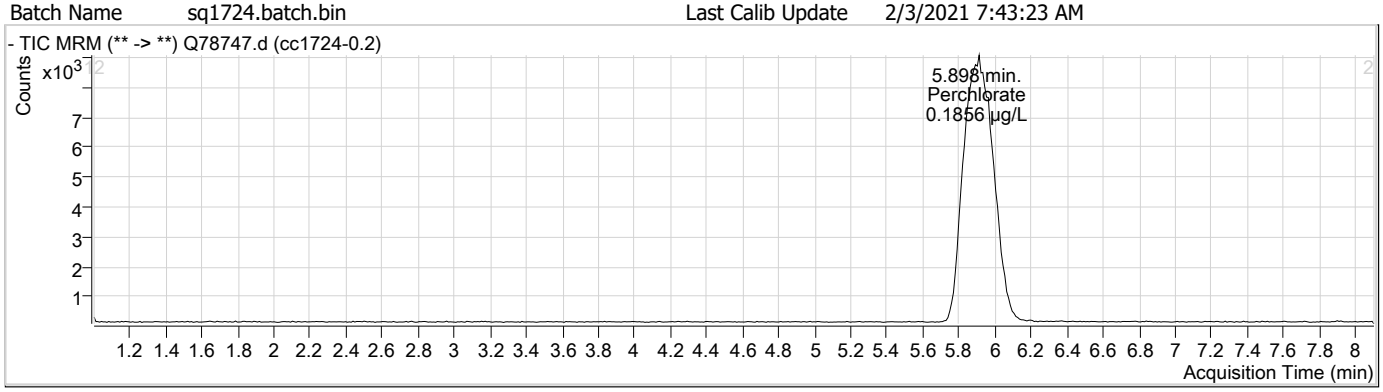






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q78747.d	Operator	nancyf
Acq. Method	Perchlorate2.m	Acq. Date-Time	2/2/2021 3:48:28 PM
Sample Name	cc1724-0.2	Instrument	Instrument 1
Vial	Vial 2	Sample Information	OP83937,SQ1724,10,,,10,1,water
DA Method File	6850_0020221_SQ1724.quantmethod.xml	Comment	
Batch Name	sq1724.batch.bin	Last Calib Update	2/3/2021 7:43:23 AM

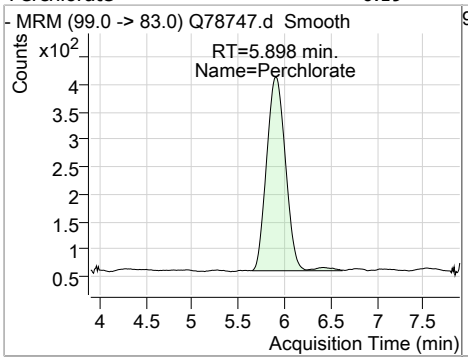


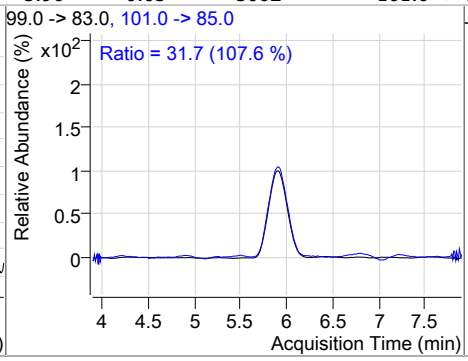
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	5.901	107.0 -> 89.0	96266	NoQ	5.00 µg/L	-0.051
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	5.898	99.0 -> 83.0	5062	3.2	0.19 µg/L	96

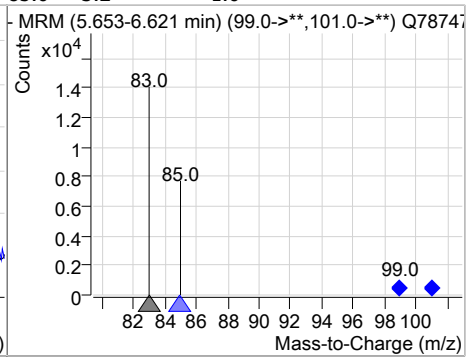
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.19	5.90	-0.05	5062	101.0 -> 85.0	3.2	1.6	







SGS ORLANDO

LCMS1-Q ANALYSIS LOG

DATE:	02/02/21
COLUMN TYPE:	K PRIME
AMOUNT INJ:	7.5 ul
INSTRUMENT:	LCMS1-Q

METHODS:	SW846 6850
PROC. METH:	6850_020221_SQ1724
CAL DATE:	02/02/21
ANALYST:	NAS
RUN BATCH:	SQ1724

ELUENT A LOT #:	206570 W/0.1% AA
ELUENT B LOT #:	195961 W/0.1% AA
IC/CC STD LOT #:	LCMS1604
ICV STD LOT #:	LCMS1522
ISTD/ID STD LOT #:	10142

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	Q78701.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
2	Q78702.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
3	Q78703.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
4	Q78704.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
5	Q78705.d	Vial 11	ics	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
6	Q78706.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
7	Q78707.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
8	Q78708.d	Vial 5	cc1717-2.0	Perchlorate2.m	QC	50x	OP83937,SQ1724,10,,,10,1,water	not used
9	Q78709.d	Vial 2	cc1717-0.2	Perchlorate2.m	QC	500x	OP83937,SQ1724,10,,,10,1,water	not used
10	Q78710.d	Vial 11	ics1717-0.2	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	not used
11	Q78711.d	Vial 12	op83937-bs	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	rr needs curve
12	Q78712.d	Vial 13	op83937-mb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	rr needs curve
13	Q78713.d	Vial 14	fa82649-1	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	rr needs curve
14	Q78714.d	Vial 15	fa82649-2	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	rr needs curve
15	Q78715.d	Vial 16	fa82649-3	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	rr needs curve
16	Q78716.d	Vial 17	fa82649-4	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	rr needs curve
17	Q78717.d	Vial 18	fa82649-5	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	rr 5x
18	Q78718.d	Vial 19	fa82649-6	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	istd high
19	Q78719.d	Vial 20	fa82653-1	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,20,water	istd high
20	Q78720.d	Vial 21	fa82653-2	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,20,water	istd high
21	Q78721.d	Vial 5	cc1717-2.0	Perchlorate2.m	QC	50x	OP83937,SQ1724,10,,,10,1,water	istd high
22	Q78722.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	istd high
23	Q78723.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	istd high run curve
24	Q78724.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
25	Q78725.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
26	Q78726.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
27	Q78727.d	Vial 2	ic1724-0.2	Perchlorate2.m	Calibration	500x	OP83937,SQ1724,10,,,10,1,water	✓
28	Q78728.d	Vial 3	ic1724-0.5	Perchlorate2.m	Calibration	200x	OP83937,SQ1724,10,,,10,1,water	✓
29	Q78729.d	Vial 4	ic1724-1.0	Perchlorate2.m	Calibration	100x	OP83937,SQ1724,10,,,10,1,water	✓
30	Q78730.d	Vial 5	icc1724-2.0	Perchlorate2.m	Calibration	50x	OP83937,SQ1724,10,,,10,1,water	✓
31	Q78731.d	Vial 6	ic1724-5.0	Perchlorate2.m	Calibration	20x	OP83937,SQ1724,10,,,10,1,water	✓
32	Q78732.d	Vial 7	ic1724-10	Perchlorate2.m	Calibration	10x	OP83937,SQ1724,10,,,10,1,water	✓
33	Q78733.d	Vial 8	ic1724-25	Perchlorate2.m	Calibration	4x	OP83937,SQ1724,10,,,10,1,water	✓
34	Q78734.d	Vial 9	ic1724-50	Perchlorate2.m	Calibration	2x	OP83937,SQ1724,10,,,10,1,water	✓
35	Q78735.d	Vial 10	icv1724-2.0	Perchlorate2.m	QC	50x	OP83937,SQ1724,10,,,10,1,water	pass

SGS ORLANDO LCMS1-Q ANALYSIS LOG

36	Q78736.d	Vial 11	ics1724-0.2	Perchlorate2.m	Sample	500x	OP83937,SQ1724,10,,,10,1,water	✓
37	Q78737.d	Vial 12	op83937-bs	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
38	Q78738.d	Vial 13	op83937-mb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	bdl
39	Q78739.d	Vial 20	fa82653-1	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
40	Q78740.d	Vial 21	fa82653-2	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
41	Q78741.d	Vial 22	fa82653-3	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
42	Q78742.d	Vial 23	fa82653-4	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
43	Q78743.d	Vial 24	op83937-ms	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
44	Q78744.d	Vial 25	op83937-msd	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
45	Q78745.d	Vial 26	fa82653-5	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
46	Q78746.d	Vial 5	cc1724-2.0	Perchlorate2.m	QC	50x	OP83937,SQ1724,10,,,10,1,water	pass
47	Q78747.d	Vial 2	cc1724-0.2	Perchlorate2.m	QC	500x	OP83937,SQ1724,10,,,10,1,water	pass
48	Q78748.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	bdl
49	Q78749.d	Vial 32	fa82715-5	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓ eb hit rr
50	Q78750.d	Vial 27	fa82714-1	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
51	Q78751.d	Vial 28	fa82715-1	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	run 5x
52	Q78752.d	Vial 29	fa82715-2	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
53	Q78753.d	Vial 30	fa82715-3	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
54	Q78754.d	Vial 31	fa82715-4	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
55	Q78755.d	Vial 5	cc1724-2.0	Perchlorate2.m	QC	50x	OP83937,SQ1724,10,,,10,1,water	pass
56	Q78756.d	Vial 2	cc1724-0.2	Perchlorate2.m	QC	500x	OP83937,SQ1724,10,,,10,1,water	pass
57	Q78757.d	Vial 1	ccb	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	bdl
58	Q78758.d	Vial 19	fa82649-6	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓ eb hit rr
59	Q78759.d	Vial 14	fa82649-1	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
60	Q78760.d	Vial 15	fa82649-2	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
61	Q78761.d	Vial 16	fa82649-3	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
62	Q78762.d	Vial 17	fa82649-4	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	✓
63	Q78763.d	Vial 18	fa82649-5	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,5,water	✓
64	Q78764.d	Vial 5	cc1724-2.0	Perchlorate2.m	QC	50x	OP83937,SQ1724,10,,,10,1,water	pass
65	Q78765.d	Vial 2	ecc1724-0.2	Perchlorate2.m	QC	500x	OP83937,SQ1724,10,,,10,1,water	pass
66	Q78766.d	Vial 1	iblk	Perchlorate2.m	Sample		OP83937,SQ1724,10,,,10,1,water	bdl

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LIQUID SAMPLE PREP REPORT

Date/Time: 02-02-21 0800
Started {mm/dd/yy 24:00}

Date/Time: 02-02-21 1000
Finished {mm/dd/yy 24:00}

Prep Method: 3510C 3580A or Method (circle)

Analytical Method: 6850

Batch#: OP83937 Ext. By: NAS Conc. By: — Vialed By: NAS

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 83937 – MB	/	10			NAS 020221		10	
OP – BS	/	↓			20uL	20uL	↓	
FA82649-1	1	↓					↓	
-2	↓	↓					↓	
-3	↓	↓					↓	
-4	↓	↓					↓	
-5	↓	↓					↓	
FA82653-1	↓	↓					↓	
-2	↓	↓					↓	
-3	↓	↓					↓	
-4	↓	↓					↓	
-5	↓	↓					↓	MS/MSD
FA82714-1	2	↓					↓	
FA82715-1	2	↓					↓	
-2	6	↓					↓	
-3	2	↓					↓	
-4	↓	↓					↓	
-5	↓	↓					↓	
OP83937 – MS	1	10			20uL	20uL	10	FA82653-4
– MSD	1	↓			↓	↓	↓	-4
DUP					NAS 020221			

Comments:

Surr. ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

Spk. ID: LCMS1122 Conc: 100/1.0 Exp. Date: 02/02/21 Inj. By: NAS Ver. By NAS

Initial Bath Temp (Therm ID): _____
Observed Temp °C: _____ Corr. Temp °C: _____

Exchange Bath/N-Evap Temp (Therm ID): _____
Observed Temp °C: _____ Corr. Temp °C: _____

CH2CL2 Lot # —
Hexane Lot # —
Na2SO4 Lot# —
Acetonitrile Lot # —
Methanol Lot # —
Acetone Lot# —
Syringe Filter Lot# P1668T (vial)
pH Paper # —
Reagent # —

Copper Lot # _____ If Sulfur Cleaning is performed in Extractions (3660B)

Relinquished By: _____ Date: 02-02-21

Accepted By: _____ Date: 02-02-21

ORLD-EXT-0001-1-06-FORM-extwater.xls 032718

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- GC Identification Summaries (Explosives)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP83930-MB	GG620655.D	1	02/05/21	JB	02/01/21	OP83930	GGG2934

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA82653-1, FA82653-2, FA82653-3, FA82653-4, FA82653-5

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	93%	70-136%

Method Blank Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP83930-MB	PP389796.D	1	02/05/21	JB	02/01/21	OP83930	GPP2402

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA82653-1, FA82653-2, FA82653-3, FA82653-4, FA82653-5

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	82%	70-136%

Blank Spike Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP83930-BS	PP389797.D	1	02/05/21	JB	02/01/21	OP83930	GPP2402

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA82653-1, FA82653-2, FA82653-3, FA82653-4, FA82653-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
2691-41-0	HMX	5	4.8	96	77-144
121-82-4	RDX	5	4.8	96	77-125
	DNX	5	3.3	66	66-127
	MNX	5	3.9	78	71-137
	TNX	5	2.4	48*	60-126
618-87-1	3,5-Dinitroaniline	5	5.1	102	77-115
99-65-0	1,3-Dinitrobenzene	5	5.2	104	79-122
606-20-2	2,6-Dinitrotoluene	5	5.4	108	81-131
121-14-2	2,4-Dinitrotoluene	5	5.2	104	80-123
35572-78-2	2-amino-4,6-Dinitrotoluene	5	5.1	102	81-120
19406-51-0	4-amino-2,6-Dinitrotoluene	5	5.2	104	79-119
98-95-3	Nitrobenzene	5	5.0	100	78-130
88-72-2	o-Nitrotoluene	5	4.9	98	76-131
99-08-1	m-Nitrotoluene	5	5.1	102	78-122
99-99-0	p-Nitrotoluene	5	5.1	102	79-124
479-45-8	Tetryl	5	4.6	92	65-124
99-35-4	1,3,5-Trinitrobenzene	5	4.7	94	79-128
118-96-7	2,4,6-Trinitrotoluene	5	5.1	102	72-112
55-63-0	Nitroglycerine	5	4.8	96	69-123
78-11-5	PETN	5	5.7	114	73-145

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	90%	70-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP83930-MS	PP389798.D	1	02/05/21	JB	02/01/21	OP83930	GPP2402
OP83930-MSD	PP389799.D	1	02/05/21	JB	02/01/21	OP83930	GPP2402
FA82653-4 [a]	GG620661.D	1	02/05/21	JB	02/01/21	OP83930	GGG2934
FA82653-4 [b]	PP389803.D	1	02/05/21	JB	02/01/21	OP83930	GPP2402

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA82653-1, FA82653-2, FA82653-3, FA82653-4, FA82653-5

CAS No.	Compound	FA82653-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	17.2 [c]		9.62	28.1	113	9.62	28.1	113	0	77-144/21
121-82-4	RDX	0.19 U [c]		9.62	10.3	107	9.62	10.3	107	0	77-125/19
	DNX	0.19 U [c]		9.62	8.1	84	9.62	8.0	83	1	66-127/25
	MNX	0.19 U [c]		9.62	8.3	86	9.62	8.2	85	1	71-137/20
	TNX	0.19 U [c]		9.62	7.8	81	9.62	7.8	81	0	60-126/18
618-87-1	3,5-Dinitroaniline	0.33 [c]		9.62	11.2	113	9.62	10.7	108	5	77-115/19
99-65-0	1,3-Dinitrobenzene	0.19 U [c]		9.62	11.0	114	9.62	10.6	110	4	79-122/17
606-20-2	2,6-Dinitrotoluene	0.19 U [c]		9.62	15.5	161*	9.62	14.8	154*	5	81-131/17
121-14-2	2,4-Dinitrotoluene	0.19 U [c]		9.62	11.4	119	9.62	11.3	118	1	80-123/19
35572-78-2	2-amino-4,6-Dinitrotoluene	3.6 [c]		9.62	14.5	113	9.62	14.4	112	1	81-120/19
19406-51-0	4-amino-2,6-Dinitrotoluene	2.0 [c]		9.62	13.4	119	9.62	13.4	119	0	79-119/20
98-95-3	Nitrobenzene	0.19 U [c]		9.62	10.2	106	9.62	10.1	105	1	78-130/19
88-72-2	o-Nitrotoluene	0.19 U [c]		9.62	11.9	124	9.62	10.5	109	13	76-131/20
99-08-1	m-Nitrotoluene	0.19 U [c]		9.62	11.1	115	9.62	10.4	108	7	78-122/18
99-99-0	p-Nitrotoluene	0.19 U [c]		9.62	11.1	115	9.62	10.5	109	6	79-124/18
479-45-8	Tetryl	0.19 U [c]		9.62	8.5	88	9.62	8.5	88	0	65-124/20
99-35-4	1,3,5-Trinitrobenzene	10.4 [c]		9.62	20.5	105	9.62	20.4	104	0	79-128/16
118-96-7	2,4,6-Trinitrotoluene	8.6 [c]		9.62	19.1	109	9.62	19.1	109	0	72-112/16
55-63-0	Nitroglycerine	1.9 U [c]		9.62	10.3	107	9.62	10.2	106	1	69-123/18
78-11-5	PETN	1.9 U [c]		9.62	12.3	128	9.62	12.1	126	2	73-145/18

CAS No.	Surrogate Recoveries	MS	MSD	FA82653-4	FA82653-4	Limits
610-39-9	3,4-Dinitrotoluene	97%	94%	103%	77%	70-136%

(a) Confirmation run.
(b) All hits confirmed by reanalysis on a dissimilar column.
(c) Result is from Run #2.

* = Outside of Control Limits.

GC Identification Summary (Explosives)

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA82653-1	**Method:**	SW846 8330B
Client ID:	54MW13		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP389800.D	1	OP83930	GPP2402	02/05/21 19:29	GCPP
Confirmation	GG620656.D	1	OP83930	GGG2934	02/05/21 16:17	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	PP389800.D	1	1	3.5		ug/l	8.2
HMX	GG620656.D	1	1	3.8		ug/l	
RDX	PP389800.D	1	1	.83		ug/l	9.2
RDX	GG620656.D	1	1	.91		ug/l	
3,5-Dinitroaniline [a]	PP389800.D	1	1	.38		ug/l	109.5
3,5-Dinitroaniline	GG620656.D	1	1	1.3		ug/l	
2-amino-4,6-Dinitrotoluene	PP389800.D	1	1	1.5		ug/l	22.2
2-amino-4,6-Dinitrotoluene	GG620656.D	1	1	1.2		ug/l	
4-amino-2,6-Dinitrotoluene	PP389800.D	1	1	1.4		ug/l	7.4
4-amino-2,6-Dinitrotoluene	GG620656.D	1	1	1.3		ug/l	
1,3,5-Trinitrobenzene	PP389800.D	1	1	8.4		ug/l	5.8
1,3,5-Trinitrobenzene	GG620656.D	1	1	8.9		ug/l	
2,4,6-Trinitrotoluene	PP389800.D	1	1	10.7		ug/l	1.9
2,4,6-Trinitrotoluene	GG620656.D	1	1	10.9		ug/l	

(a) Primary and confirmation results differ by more than 40%.

GC Identification Summary (Explosives)

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA82653-2	**Method:**	SW846 8330B
Client ID:	54TW13		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP389801.D	1	OP83930	GPP2402	02/05/21 20:00	GCPP
Confirmation	GG620657.D	1	OP83930	GGG2934	02/05/21 16:48	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	PP389801.D	1	1	3.7		ug/l	12.7
HMX	GG620657.D	1	1	4.2		ug/l	
RDX	PP389801.D	1	1	.76		ug/l	36.6
RDX	GG620657.D	1	1	1.1		ug/l	
3,5-Dinitroaniline [a]	PP389801.D	1	1	.45		ug/l	102.7
3,5-Dinitroaniline	GG620657.D	1	1	1.4		ug/l	
2-amino-4,6-Dinitrotoluene	PP389801.D	1	1	1.5		ug/l	14.3
2-amino-4,6-Dinitrotoluene	GG620657.D	1	1	1.3		ug/l	
4-amino-2,6-Dinitrotoluene	PP389801.D	1	1	1.6		ug/l	13.3
4-amino-2,6-Dinitrotoluene	GG620657.D	1	1	1.4		ug/l	
1,3,5-Trinitrobenzene	PP389801.D	1	1	8.8		ug/l	4.4
1,3,5-Trinitrobenzene	GG620657.D	1	1	9.2		ug/l	
2,4,6-Trinitrotoluene	PP389801.D	1	1	11.1		ug/l	2.7
2,4,6-Trinitrotoluene	GG620657.D	1	1	11.4		ug/l	

(a) Primary and confirmation results differ by more than 40%.

GC Identification Summary (Explosives)

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA82653-3	**Method:**	SW846 8330B
Client ID:	54MW10		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP389802.D	1	OP83930	GPP2402	02/05/21 20:31	GCPP
Confirmation	GG620660.D	1	OP83930	GGG2934	02/05/21 18:23	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	PP389802.D	1	1	7		ug/l	13.3
HMX	GG620660.D	1	1	8		ug/l	
RDX	PP389802.D	1	1	5.8		ug/l	0.0
RDX	GG620660.D	1	1	5.8		ug/l	
3,5-Dinitroaniline	PP389802.D	1	1	.98		ug/l	0.0
3,5-Dinitroaniline	GG620660.D	1	1	.98		ug/l	
2-amino-4,6-Dinitrotoluene	PP389802.D	1	1	3.5		ug/l	22.2
2-amino-4,6-Dinitrotoluene	GG620660.D	1	1	2.8		ug/l	
4-amino-2,6-Dinitrotoluene	PP389802.D	1	1	4.2		ug/l	40.0
4-amino-2,6-Dinitrotoluene	GG620660.D	1	1	2.8		ug/l	
1,3,5-Trinitrobenzene	PP389802.D	1	1	13.5		ug/l	5.1
1,3,5-Trinitrobenzene	GG620660.D	1	1	14.2		ug/l	
2,4,6-Trinitrotoluene	PP389802.D	1	1	39.4		ug/l	1.0
2,4,6-Trinitrotoluene	GG620660.D	1	1	39.8		ug/l	

GC Identification Summary (Explosives)

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA82653-4	**Method:**	SW846 8330B
Client ID:	54MW12		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP389803.D	1	OP83930	GPP2402	02/05/21 21:02	GCPP
Confirmation	GG620661.D	1	OP83930	GGG2934	02/05/21 18:54	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	PP389803.D	1	1	17.2		ug/l	11.0
HMX	GG620661.D	1	1	19.2		ug/l	
3,5-Dinitroaniline [a]	PP389803.D	1	1	.33		ug/l	123.7
3,5-Dinitroaniline	GG620661.D	1	1	1.4		ug/l	
2-amino-4,6-Dinitrotoluene	PP389803.D	1	1	3.6		ug/l	10.5
2-amino-4,6-Dinitrotoluene	GG620661.D	1	1	4		ug/l	
4-amino-2,6-Dinitrotoluene [a]	PP389803.D	1	1	2		ug/l	57.1
4-amino-2,6-Dinitrotoluene	GG620661.D	1	1	3.6		ug/l	
1,3,5-Trinitrobenzene	PP389803.D	1	1	10.4		ug/l	4.7
1,3,5-Trinitrobenzene	GG620661.D	1	1	10.9		ug/l	
2,4,6-Trinitrotoluene	PP389803.D	1	1	8.6		ug/l	6.7
2,4,6-Trinitrotoluene	GG620661.D	1	1	9.2		ug/l	

(a) Primary and confirmation results differ by more than 40%.

Surrogate Recovery Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Method: SW846 8330B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
FA82653-1	GG620656.D	105
FA82653-1	PP389800.D	94
FA82653-2	GG620657.D	104
FA82653-2	PP389801.D	132
FA82653-3	GG620660.D	101
FA82653-3	PP389802.D	101
FA82653-4	GG620661.D	103
FA82653-4	PP389803.D	77
FA82653-5	PP389806.D	85
OP83930-BS	PP389797.D	90
OP83930-MB	PP389796.D	82
OP83930-MB	GG620655.D	93
OP83930-MS	PP389798.D	97
OP83930-MSD	PP389799.D	94

Surrogate Compounds	Recovery Limits
S1 = 3,4-Dinitrotoluene	70-136%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GGG2934-CC2921	**Injection Date:**	02/05/21
Lab File ID:	GG620646.D	**Injection Time:**	11:03
Instrument ID:	GCGG	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	14.17

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP83940-MB	GG620648.D	02/05/21	12:05	14.09
ZZZZZZ	GG620651.D	02/05/21	13:40	14.11
ZZZZZZ	GG620652.D	02/05/21	14:11	14.10
ZZZZZZ	GG620653.D	02/05/21	14:43	14.12
ZZZZZZ	GG620654.D	02/05/21	15:14	14.13
OP83930-MB	GG620655.D	02/05/21	15:45	14.18
FA82653-1	GG620656.D	02/05/21	16:17	14.20
FA82653-2	GG620657.D	02/05/21	16:48	14.21

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GGG2934-CC2921	**Injection Date:**	02/05/21
Lab File ID:	GG620658.D	**Injection Time:**	17:20
Instrument ID:	GCGG	**Method:**	SW846 8330B

	S1 [a] **RT**	**S1** [b] **RT**
Check Std	14.23	14.23

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S1** [b] **RT**
FA82653-3	GG620660.D	02/05/21	18:23		14.21
FA82653-4	GG620661.D	02/05/21	18:54		14.21
GGG2934-ECC2921	GG620662.D	02/05/21	19:25	14.26	14.26

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.6.2

8

GC Surrogate Retention Time Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GPP2402-CC2401	**Injection Date:**	02/05/21
Lab File ID:	PP389792.D	**Injection Time:**	15:21
Instrument ID:	GCPP	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	11.51

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
ZZZZZZ	PP389794.D	02/05/21	16:23	11.51
ZZZZZZ	PP389795.D	02/05/21	16:54	11.52
OP83930-MB	PP389796.D	02/05/21	17:25	11.51
OP83930-BS	PP389797.D	02/05/21	17:56	11.51
OP83930-MS	PP389798.D	02/05/21	18:27	11.51
OP83930-MSD	PP389799.D	02/05/21	18:58	11.51
FA82653-1	PP389800.D	02/05/21	19:29	11.52
FA82653-2	PP389801.D	02/05/21	20:00	11.51
FA82653-3	PP389802.D	02/05/21	20:31	11.50
FA82653-4	PP389803.D	02/05/21	21:02	11.50

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GPP2402-CC2401	**Injection Date:**	02/05/21
Lab File ID:	PP389804.D	**Injection Time:**	21:33
Instrument ID:	GCPP	**Method:**	SW846 8330B

	S1 [a] RT	S1 [b] RT
Check Std	11.51	11.51

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
FA82653-5	PP389806.D	02/05/21	22:35		11.49
OP83975-MB	PP389807.D	02/05/21	23:06		11.49
OP83975-BS	PP389808.D	02/05/21	23:37		11.48
OP83975-MS	PP389809.D	02/06/21	00:08		11.48
OP83975-MSD	PP389810.D	02/06/21	00:39		11.48
FA82841-1	PP389811.D	02/06/21	01:10		11.48
ZZZZZZ	PP389812.D	02/06/21	01:40		11.45
ZZZZZZ	PP389813.D	02/06/21	02:11		11.46
ZZZZZZ	PP389814.D	02/06/21	02:43		11.46
ZZZZZZ	PP389815.D	02/06/21	03:13		11.46
GPP2402-ECC240	PP389816.D	02/06/21	03:44	11.45	11.45

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2921-ICC2921
Lab FileID: GG620472.D

Response Factor Report G1315B

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 11:11:45 2021
Response via : Initial Calibration

Calibration Files
20 =GG620467.D 50 =GG620468.D 100 =GG620469.D 200 =GG620470.D
500 =GG620471.D 1000=GG620472.D 2500=GG620473.D 5000=GG620474.D

Compound	20	50	100	200	500	1000	2500	5000	Avg	%RSD
1) TNX	8.333	7.554	7.898	8.298	7.878	7.979	7.838	7.301	7.885 E3	4.38
2) HMX	3.125	3.013	3.127	3.363	3.265	3.296	3.253	3.030	3.184 E3	4.03
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 3425.31556 *A + -0.07856 *A^2										
3) DNX	7.644	6.644	6.835	7.143	6.917	6.883	6.774	6.333	6.897 E3	5.54
4) MNX	7.423	6.629	6.975	7.290	7.123	7.065	6.928	6.419	6.982 E3	4.72
5) 1,3,5-Trinit	1.016	0.932	0.986	1.033	0.991	0.997	0.979	0.915	0.981 E4	4.06
6) RDX	4.116	3.825	4.241	4.446	4.500	4.408	4.343	4.090	4.246 E3	5.33
7) 1,3-Dinitrob	1.313	1.234	1.299	1.369	1.323	1.321	1.303	1.225	1.298 E4	3.66
8) Nitrobenzene	8.119	7.175	7.096	7.626	7.412	7.380	7.446	7.860	7.514 E3	4.56
9) 2,4,6-Trinit	9.425	8.543	9.096	9.478	9.195	9.269	9.102	8.517	9.078 E3	4.02
10) Nitroglyceri									0.000	-1.00
11) Tetryl	6.739	6.761	7.061	7.367	7.258	7.238	7.111	6.566	7.013 E3	4.13
12) 3,4-Dinitrot	5.261	5.097	5.315	5.604	5.388	5.460	5.406	5.080	5.326 E3	3.35
13) 2,6-Dinitrot	6.533	5.873	6.155	6.541	6.391	6.404	6.352	6.006	6.282 E3	3.90
14) 2,4-Dinitrot	1.174	1.109	1.158	1.224	1.187	1.194	1.181	1.113	1.167 E4	3.38
15) 3,5-Dinitroa	1.002	0.946	0.974	1.041	1.007	1.013	1.001	0.942	0.991 E4	3.45
16) o-Nitrotolue	4.863	4.419	4.323	4.704	4.540	4.567	4.664	4.969	4.631 E3	4.67
17) p-Nitrotolue	5.224	4.994	5.259	5.524	5.351	5.345	5.321	5.160	5.272 E3	2.95
18) 4-Amino-2,6-	5.224	4.994	5.259	5.524	5.351	5.345	5.321	5.160	5.272 E3	2.95
19) m-Nitrotolue	5.729	4.920	5.057	5.447	5.206	5.190	5.228	5.432	5.276 E3	4.79
20) 2-Amino-4,6-	9.552	8.626	9.060	9.530	9.155	9.141	8.999	8.476	9.067 E3	4.19
21) PETN									0.000	-1.00

Signal #2

1) TNX	8.371	7.471	7.898	8.298	7.878	7.979	7.838	7.301	7.879 E3	4.63
2) HMX	3.125	3.013	3.127	3.363	3.265	3.296	3.253	3.030	3.184 E3	4.03
3) DNX	7.644	6.644	6.835	7.143	6.917	6.883	6.774	6.333	6.897 E3	5.54
4) MNX	7.423	6.629	6.975	7.290	7.123	7.065	6.928	6.419	6.982 E3	4.72
5) 1,3,5-Trinit	1.016	0.931	0.986	1.033	0.991	0.997	0.979	0.915	0.981 E4	4.07
6) RDX	4.116	3.825	4.241	4.446	4.500	4.408	4.343	4.090	4.246 E3	5.33
7) 1,3-Dinitrob	1.305	0.985	1.062	1.042	1.062	1.013	0.986	0.927	1.048 E4	10.83
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 10457.73901 *A + -0.23825 *A^2										
8) Nitrobenzene	1.816	1.012	0.684	0.737	0.754	0.701	0.690	0.733	0.891 E4	43.62
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998										
Response Ratio = 0.00000 + 6704.51857 *A + 0.12238 *A^2										
9) 2,4,6-Trinit	1.182	1.151	1.263	1.336	1.262	1.239	1.199	1.114	1.218 E4	5.83
10) Nitroglyceri	4.952	9.076	3.784	3.207	3.183	3.085	2.997	2.727	4.126 E3	51.29
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996										
Response Ratio = 0.00000 + 3246.83379 *A + -0.10380 *A^2										
11) Tetryl	1.374	2.040	1.296	1.232	1.261	1.246	1.223	1.117	1.349 E4	21.38

Initial Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2921-ICC2921
Lab FileID: GG620472.D

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             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 13094.77685 *A + -0.38268 *A^2

12) 3,4-Dinitrot 1.158 1.065 1.225 1.119 1.050 1.061 1.053 0.986 1.090 E4   6.83
13) 2,6-Dinitrot 8.689 8.499 8.588 9.025 9.135 9.177 9.114 8.564 8.849 E3   3.27
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  1.0000
               Response Ratio = 0.00000 + 9518.81994 *A + -0.18964 *A^2

14) 2,4-Dinitrot 8.501 7.072 7.487 8.041 8.177 8.345 8.318 7.828 7.971 E3   6.09
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 8648.70746 *A + -0.16262 *A^2

15) 3,5-Dinitroa 2.346 1.653 1.504 1.673 1.642 1.677 1.647 1.544 1.711 E4  15.44
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9989
               Response Ratio = 0.00000 + 15689.50839 *A

16) o-Nitrotolue 7.810 6.087 6.097 7.537 6.704 6.745 6.880 7.240 6.887 E3   9.05
17) p-Nitrotolue 0.888 0.904 0.954 0.996 1.004 0.983 0.979 0.942 0.956 E4   4.45
18) 4-Amino-2,6- 0.888 0.904 0.954 0.995 1.004 0.983 0.979 0.942 0.956 E4   4.43
19) m-Nitrotolue 9.431 7.201 8.192 9.164 8.810 8.889 8.991 9.324 8.750 E3   8.37
20) 2-Amino-4,6- 1.125 1.055 1.222 1.319 1.302 1.307 1.294 1.215 1.230 E4   7.85
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
               Response Ratio = 0.00000 + 12336.49679 *A

21) PETN         5.102 3.575 4.248 3.628 3.643 3.592 3.418 3.223 3.804 E3  15.79
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  1.0000
               Response Ratio = 0.00000 + 3642.29171 *A + -0.08418 *A^2

--------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          8330RPB.M_010821.M        Mon Jan 11 14:11:56 2021
```

8.7.1

8

Initial Calibration Verification

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2921-ICV2921
Lab FileID: GG620475.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620475.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620475.D\dad1A.ch
Acq On : 08-Jan-2021, 15:05:23 Operator: jamesb
Sample : icv2921-1000 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 11:11:45 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1086.764	-8.7	107	0.00	4.36- 5.36
2	HMX	1000.000	798.538	20.1#	81	0.00	4.81- 5.81
3	DNX	1000.000	976.478	2.4	98	0.00	5.01- 6.01
4	MNX	1000.000	1002.488	-0.2	99	0.01	6.18- 7.18
5	1,3,5-Trinitrobenzene	1000.000	801.553	19.8	79	0.01	7.24- 8.24
6	RDX	1000.000	848.806	15.1	82	0.02	7.46- 8.46
7	1,3-Dinitrobenzene	1000.000	820.598	17.9	81	0.03	9.47-10.47
8	Nitrobenzene	1000.000	868.258	13.2	88	0.03	10.43-11.43
9	2,4,6-Trinitrotoluene	1000.000	799.932	20.0#	78	0.03	11.55-12.55
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	846.648	15.3	82	0.05	12.92-13.92
12 S	3,4-Dinitrotoluene		----------NA----------				
13	2,6-Dinitrotoluene	1000.000	811.683	18.8	80	0.07	14.25-15.25
14	2,4-Dinitrotoluene	1000.000	856.671	14.3	84	0.07	14.94-15.94
15	3,5-Dinitroaniline	1000.000	893.111	10.7	87	0.08	15.65-16.65
16	o-Nitrotoluene	1000.000	880.398	12.0	89	0.10	16.57-17.57
17	p-Nitrotoluene	2000.000	1672.446	16.4	82	0.10	17.61-18.61
18	4-Amino-2,6-Dinitrotol	2000.000	1672.446	16.4	82	0.10	17.61-18.61
19	m-Nitrotoluene	1000.000	862.594	13.7	88	0.09	18.92-19.92
20	2-Amino-4,6-Dinitrotol	1000.000	794.916	20.5#	79	0.10	19.42-20.42
21	PETN		----------NA----------				

***** Signal #2 *****

1	TNX	1000.000	1087.551	-8.8	107	0.00	4.36- 5.36
2	HMX	1000.000	843.370	15.7	81	0.00	4.81- 5.81
3	DNX	1000.000	976.478	2.4	98	0.00	5.01- 6.01
4	MNX	1000.000	1002.488	-0.2	99	0.01	6.18- 7.18
5	1,3,5-Trinitrobenzene	1000.000	801.622	19.8	79	0.01	7.24- 8.24
6	RDX	1000.000	848.806	15.1	82	0.02	7.46- 8.46
7	1,3-Dinitrobenzene	1000.000	867.166	13.3	88	0.03	9.47-10.47
8	Nitrobenzene	1000.000	973.843	2.6	95	0.03	10.43-11.43
9	2,4,6-Trinitrotoluene	1000.000	810.327	19.0	80	0.03	11.55-12.55
	----------	Amount	Calc.	%Drift	----------		
10	Nitroglycerin	1000.000	1008.729	-0.9	103	0.04	12.39-13.39
11	Tetryl	1000.000	838.232	16.2	86	0.05	12.92-13.92
	----------	Amount	Calc.	%Drift	----------		
12 S	3,4-Dinitrotoluene		----------NA----------				

Initial Calibration Verification

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2921-ICV2921
Lab FileID: GG620475.D

		Amount	Calc.	%Drift			
13	2,6-Dinitrotoluene	1000.000	827.708	17.2	84	0.07	14.25-15.25
14	2,4-Dinitrotoluene	1000.000	830.055	17.0	85	0.07	14.94-15.94
15	3,5-Dinitroaniline	1000.000	924.950	7.5	87	0.08	15.65-16.65
		Amount	Calc.	%Drift			
16	o-Nitrotoluene	1000.000	854.687	14.5	87	0.10	16.57-17.57
17	p-Nitrotoluene	2000.000	1702.042	14.9	83	0.10	17.60-18.60
18	4-Amino-2,6-Dinitrotol	2000.000	1702.249	14.9	83	0.10	17.60-18.60
19	m-Nitrotoluene	1000.000	880.807	11.9	87	0.09	18.91-19.91
		Amount	Calc.	%Drift			
20	2-Amino-4,6-Dinitrotol	1000.000	845.661	15.4	80	0.10	19.42-20.42
21	PETN	1000.000	1007.332	-0.7	100	0.09	22.01-23.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG620472.D 8330RPB.M_010821.M Mon Jan 11 16:31:13 2021

8.7.2

8

Initial Calibration Verification

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2921-ICV2921
Lab FileID: GG620521.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG2923\GG620521.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG2923\GG620521.D\dad1A.ch
Acq On : 12-Jan-2021, 15:29:24 Operator: jamesb
Sample : icv2921-1000 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue Jan 12 16:35:16 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1077.297	-7.7	106	-0.01	4.36- 5.36
2	HMX	1000.000	875.688	12.4	85	-0.02	4.82- 5.82
3	DNX	1000.000	953.352	4.7	96	-0.02	5.00- 6.00
4	MNX	1000.000	975.872	2.4	96	-0.04	6.18- 7.18
5	1,3,5-Trinitrobenzene	1000.000	830.041	17.0	82	-0.04	7.23- 8.23
6	RDX	1000.000	883.831	11.6	85	-0.05	7.47- 8.47
7	1,3-Dinitrobenzene	1000.000	852.274	14.8	84	-0.05	9.46-10.46
8	Nitrobenzene	1000.000	968.172	3.2	99	-0.06	10.39-11.39
9	2,4,6-Trinitrotoluene	1000.000	831.259	16.9	81	-0.07	11.47-12.47
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	883.555	11.6	86	-0.10	12.80-13.80
12 S	3,4-Dinitrotoluene		----------NA----------				
13	2,6-Dinitrotoluene	1000.000	846.036	15.4	83	-0.07	14.08-15.08
14	2,4-Dinitrotoluene	1000.000	892.058	10.8	87	-0.07	14.73-15.73
15	3,5-Dinitroaniline	1000.000	1081.618	-8.2	106	-0.06	15.43-16.43
16	o-Nitrotoluene	1000.000	986.356	1.4	100	-0.06	16.24-17.24
17	p-Nitrotoluene	2000.000	1761.217	11.9	87	-0.06	17.23-18.23
18	4-Amino-2,6-Dinitrotol	2000.000	1761.217	11.9	87	-0.06	17.23-18.23
19	m-Nitrotoluene	1000.000	952.489	4.8	97	-0.06	18.48-19.48
20	2-Amino-4,6-Dinitrotol	1000.000	830.184	17.0	82	-0.07	19.01-20.01
21	PETN		----------NA----------				

***** Signal #2 *****

1	TNX	1000.000	1078.077	-7.8	106	-0.01	4.36- 5.36
2	HMX	1000.000	875.688	12.4	85	-0.02	4.82- 5.82
3	DNX	1000.000	953.352	4.7	96	-0.02	5.00- 6.00
4	MNX	1000.000	975.872	2.4	96	-0.04	6.18- 7.18
5	1,3,5-Trinitrobenzene	1000.000	830.113	17.0	82	-0.04	7.23- 8.23
6	RDX	1000.000	883.831	11.6	85	-0.05	7.47- 8.47
7	1,3-Dinitrobenzene	1000.000	860.609	13.9	89	-0.05	9.46-10.46
8	Nitrobenzene	1000.000	837.261	16.3	106	-0.06	10.39-11.39
9	2,4,6-Trinitrotoluene	1000.000	863.963	13.6	85	-0.07	11.47-12.47

	----------	Amount	Calc.	%Drift			----------
10	Nitroglycerin	1000.000	859.919	14.0	88	-0.08	12.29-13.29
11	Tetryl	1000.000	856.577	14.3	88	-0.10	12.80-13.80

	----------	Amount	Calc.	%Drift	----------
12 S	3,4-Dinitrotoluene		----------NA----------		

Initial Calibration Verification

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2921-ICV2921
Lab FileID: GG620521.D

		Amount	Calc.	%Drift			
13	2,6-Dinitrotoluene	1000.000	825.058	17.5	84	-0.07	14.08-15.08
14	2,4-Dinitrotoluene	1000.000	868.168	13.2	89	-0.07	14.73-15.73
15	3,5-Dinitroaniline	1000.000	1131.122	-13.1	106	-0.06	15.43-16.43

		Amount	Calc.	%Drift			
16	o-Nitrotoluene	1000.000	974.361	2.6	99	-0.06	16.24-17.24
17	p-Nitrotoluene	2000.000	1765.570	11.7	86	-0.06	17.22-18.22
18	4-Amino-2,6-Dinitrotol	2000.000	1765.785	11.7	86	-0.06	17.22-18.22
19	m-Nitrotoluene	1000.000	978.830	2.1	96	-0.07	18.49-19.49

		Amount	Calc.	%Drift			
20	2-Amino-4,6-Dinitrotol	1000.000	889.052	11.1	84	-0.07	19.01-20.01
21	PETN	1000.000	995.248	0.5	99	0.00	21.45-22.45

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG620472.D 8330RPB.M_010821.M Tue Jan 12 17:36:01 2021

8.7.3

8

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2934-CC2921
Lab FileID: GG620646.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1A.ch
Acq On    : 05-Feb-2021, 11:03:10                    Operator: jamesb
Sample    : cc2921-1000                              Inst    : G1315B
Misc      : op83940,GGG2934,1000,,,10,1,water        Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: events2.e

Method       : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title        : Explosives by 8330A,8330B,8332
Last Update  : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  15%     Max. Rel. Area : 200%
```

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1013.297	-1.3	100	0.00	4.33- 5.33
2	HMX	1000.000	944.393	5.6	91	0.00	4.79- 5.79
3	DNX	1000.000	1035.552	-3.6	104	0.00	4.96- 5.96
4	MNX	1000.000	1046.875	-4.7	103	0.00	6.12- 7.12
5	1,3,5-Trinitrobenzene	1000.000	995.431	0.5	98	0.00	7.14- 8.14
6	RDX	1000.000	1082.841	-8.3	104	0.00	7.42- 8.42
7	1,3-Dinitrobenzene	1000.000	1018.135	-1.8	100	0.00	9.37-10.37
8	Nitrobenzene	1000.000	1147.173	-14.7	117	0.00	10.29-11.29
9	2,4,6-Trinitrotoluene	1000.000	1009.477	-0.9	99	0.00	11.35-12.35
10	Nitroglycerin	----------	NA	----------			
11	Tetryl	1000.000	1028.222	-2.8	100	0.00	12.70-13.70
12 S	3,4-Dinitrotoluene	1000.000	1011.562	-1.2	99	0.00	13.66-14.66
13	2,6-Dinitrotoluene	1000.000	1028.053	-2.8	101	0.00	13.99-14.99
14	2,4-Dinitrotoluene	1000.000	1032.814	-3.3	101	0.00	14.64-15.64
15	3,5-Dinitroaniline	1000.000	1025.729	-2.6	100	0.00	15.40-16.40
16	o-Nitrotoluene	1000.000	1168.452	-16.8#	118	0.00	16.14-17.14
17	p-Nitrotoluene	2000.000	2120.094	-6.0	105	0.00	17.17-18.17
18	4-Amino-2,6-Dinitrotol	2000.000	2120.094	-6.0	105	0.00	17.17-18.17
19	m-Nitrotoluene	1000.000	1102.256	-10.2	112	0.00	18.37-19.37
20	2-Amino-4,6-Dinitrotol	1000.000	992.828	0.7	98	0.00	19.00-20.00
21	PETN	----------	NA	----------			

***** Signal #2 *****

1	TNX	1000.000	1014.031	-1.4	100	0.00	4.33- 5.33
2	HMX	1000.000	944.393	5.6	91	0.00	4.79- 5.79
3	DNX	1000.000	1035.552	-3.6	104	0.00	4.96- 5.96
4	MNX	1000.000	1046.875	-4.7	103	0.00	6.12- 7.12
5	1,3,5-Trinitrobenzene	1000.000	996.001	0.4	98	0.00	7.14- 8.14
6	RDX	1000.000	1087.028	-8.7	105	0.00	7.42- 8.42
7	1,3-Dinitrobenzene	1000.000	996.838	0.3	103	0.00	9.37-10.37
8	Nitrobenzene	1000.000	962.726	3.7	122	0.00	10.29-11.29
9	2,4,6-Trinitrotoluene	1000.000	1016.406	-1.6	100	0.00	11.35-12.35
	----------	Amount	Calc.	%Drift	----------		
10	Nitroglycerin	1000.000	1058.894	-5.9	108	0.00	12.17-13.17
11	Tetryl	1000.000	983.901	1.6	100	0.00	12.70-13.70
	----------	Amount	Calc.	%Drift	----------		
12 S	3,4-Dinitrotoluene	1000.000	972.317	2.8	100	0.00	13.66-14.66

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2934-CC2921
Lab FileID: GG620646.D

		Amount	Calc.	%Drift			
13	2,6-Dinitrotoluene	1000.000	993.061	0.7	101	0.00	13.98-14.98
14	2,4-Dinitrotoluene	1000.000	1004.809	-0.5	102	0.00	14.64-15.64
15	3,5-Dinitroaniline	1000.000	1066.033	-6.6	100	0.00	15.40-16.40
		Amount	Calc.	%Drift			
16	o-Nitrotoluene	1000.000	1169.640	-17.0#	119	0.00	16.14-17.14
17	p-Nitrotoluene	2000.000	2135.599	-6.8	104	0.00	17.17-18.17
18	4-Amino-2,6-Dinitrotol	2000.000	2135.859	-6.8	104	0.00	17.17-18.17
19	m-Nitrotoluene	1000.000	1130.020	-13.0	111	0.00	18.38-19.38
		Amount	Calc.	%Drift			
20	2-Amino-4,6-Dinitrotol	1000.000	1037.867	-3.8	98	0.00	19.00-20.00
21	PETN	1000.000	949.762	5.0	94	0.00	21.40-22.40

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG620472.D 8330RPB.M_010821.M Mon Feb 08 11:35:58 2021

8.7.4

8

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2934-CC2921
Lab FileID: GG620658.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620658.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620658.D\dad1A.ch
Acq On : 05-Feb-2021, 17:20:14 Operator: jamesb
Sample : cc2921-1000 Inst : G1315B
Misc : op83940,GGG2934,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	1000.000	1011.368	-1.1	100	0.02	4.33- 5.33
2		HMX	1000.000	949.932	5.0	92	0.02	4.79- 5.79
3		DNX	1000.000	1031.952	-3.2	103	0.02	4.96- 5.96
4		MNX	1000.000	1043.884	-4.4	103	0.03	6.12- 7.12
5		1,3,5-Trinitrobenzene	1000.000	993.381	0.7	98	0.03	7.14- 8.14
6		RDX	1000.000	1080.161	-8.0	104	0.04	7.42- 8.42
7		1,3-Dinitrobenzene	1000.000	1014.737	-1.5	100	0.05	9.37-10.37
8		Nitrobenzene	1000.000	1136.992	-13.7	116	0.06	10.29-11.29
9		2,4,6-Trinitrotoluene	1000.000	1008.781	-0.9	99	0.05	11.35-12.35
10		Nitroglycerin	----------NA----------					
11		Tetryl	1000.000	1035.556	-3.6	100	0.06	12.70-13.70
12	S	3,4-Dinitrotoluene	1000.000	1014.321	-1.4	99	0.07	13.66-14.66
13		2,6-Dinitrotoluene	1000.000	1019.780	-2.0	100	0.07	13.99-14.99
14		2,4-Dinitrotoluene	1000.000	1028.944	-2.9	101	0.08	14.64-15.64
15		3,5-Dinitroaniline	1000.000	1021.824	-2.2	100	0.08	15.40-16.40
16		o-Nitrotoluene	1000.000	1148.554	-14.9	116	0.09	16.14-17.14
17		p-Nitrotoluene	2000.000	2107.618	-5.4	104	0.10	17.17-18.17
18		4-Amino-2,6-Dinitrotol	2000.000	2107.618	-5.4	104	0.10	17.17-18.17
19		m-Nitrotoluene	1000.000	1094.376	-9.4	111	0.10	18.37-19.37
20		2-Amino-4,6-Dinitrotol	1000.000	991.227	0.9	98	0.10	19.00-20.00
21		PETN	----------NA----------					

***** Signal #2 *****

1		TNX	1000.000	1012.100	-1.2	100	0.02	4.33- 5.33
2		HMX	1000.000	949.932	5.0	92	0.02	4.79- 5.79
3		DNX	1000.000	1031.952	-3.2	103	0.02	4.96- 5.96
4		MNX	1000.000	1043.884	-4.4	103	0.03	6.12- 7.12
5		1,3,5-Trinitrobenzene	1000.000	993.466	0.7	98	0.03	7.14- 8.14
6		RDX	1000.000	1080.161	-8.0	104	0.04	7.42- 8.42
7		1,3-Dinitrobenzene	1000.000	1006.684	-0.7	104	0.05	9.37-10.37
8		Nitrobenzene	1000.000	981.158	1.9	125	0.06	10.29-11.29
9		2,4,6-Trinitrotoluene	1000.000	1030.003	-3.0	101	0.05	11.35-12.35
		----------	Amount	Calc.	%Drift		----------	
10		Nitroglycerin	1000.000	1084.751	-8.5	110	0.05	12.17-13.17
11		Tetryl	1000.000	1003.043	-0.3	102	0.06	12.70-13.70
		----------	Amount	Calc.	%Drift		----------	
12	S	3,4-Dinitrotoluene	1000.000	978.813	2.1	100	0.07	13.66-14.66

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2934-CC2921
Lab FileID: GG620658.D

		Amount	Calc.	%Drift			
13	2,6-Dinitrotoluene	1000.000	990.037	1.0	101	0.07	13.98-14.98
14	2,4-Dinitrotoluene	1000.000	999.569	0.0	102	0.08	14.64-15.64
15	3,5-Dinitroaniline	1000.000	1061.458	-6.1	99	0.08	15.40-16.40

		Amount	Calc.	%Drift			
16	o-Nitrotoluene	1000.000	1143.479	-14.3	117	0.09	16.14-17.14
17	p-Nitrotoluene	2000.000	2122.328	-6.1	103	0.10	17.17-18.17
18	4-Amino-2,6-Dinitrotol	2000.000	2122.586	-6.1	103	0.10	17.17-18.17
19	m-Nitrotoluene	1000.000	1114.922	-11.5	110	0.10	18.38-19.38

		Amount	Calc.	%Drift			
20	2-Amino-4,6-Dinitrotol	1000.000	1036.276	-3.6	98	0.10	19.00-20.00
21	PETN	1000.000	906.414	9.4	90	0.07	21.40-22.40

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG620472.D 8330RPB.M_010821.M Mon Feb 08 11:34:20 2021

8.7.5

8

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2934-ECC2921
Lab FileID: GG620662.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620662.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620662.D\dad1A.ch
Acq On : 05-Feb-2021, 19:25:56 Operator: jamesb
Sample : ecc2921-1000 Inst : G1315B
Misc : op83940,GGG2934,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1009.754	-1.0	100	0.02	4.33- 5.33
2	HMX	1000.000	945.987	5.4	91	0.02	4.79- 5.79
3	DNX	1000.000	1026.398	-2.6	103	0.02	4.96- 5.96
4	MNX	1000.000	1043.870	-4.4	103	0.03	6.12- 7.12
5	1,3,5-Trinitrobenzene	1000.000	991.281	0.9	98	0.03	7.14- 8.14
6	RDX	1000.000	1079.716	-8.0	104	0.04	7.42- 8.42
7	1,3-Dinitrobenzene	1000.000	1014.939	-1.5	100	0.06	9.37-10.37
8	Nitrobenzene	1000.000	1127.737	-12.8	115	0.07	10.29-11.29
9	2,4,6-Trinitrotoluene	1000.000	1007.008	-0.7	99	0.07	11.35-12.35
10	Nitroglycerin	----------	NA	----------			
11	Tetryl	1000.000	1039.418	-3.9	101	0.07	12.70-13.70
12 S	3,4-Dinitrotoluene	1000.000	1008.952	-0.9	98	0.09	13.66-14.66
13	2,6-Dinitrotoluene	1000.000	1020.183	-2.0	100	0.10	13.99-14.99
14	2,4-Dinitrotoluene	1000.000	1028.048	-2.8	101	0.10	14.64-15.64
15	3,5-Dinitroaniline	1000.000	1018.980	-1.9	100	0.10	15.40-16.40
16	o-Nitrotoluene	1000.000	1137.144	-13.7	115	0.12	16.14-17.14
17	p-Nitrotoluene	2000.000	2103.895	-5.2	104	0.13	17.17-18.17
18	4-Amino-2,6-Dinitrotol	2000.000	2103.895	-5.2	104	0.13	17.17-18.17
19	m-Nitrotoluene	1000.000	1099.767	-10.0	112	0.13	18.37-19.37
20	2-Amino-4,6-Dinitrotol	1000.000	992.821	0.7	98	0.14	19.00-20.00
21	PETN	----------	NA	----------			

***** Signal #2 *****

1	TNX	1000.000	1010.485	-1.0	100	0.02	4.33- 5.33
2	HMX	1000.000	945.987	5.4	91	0.02	4.79- 5.79
3	DNX	1000.000	1026.398	-2.6	103	0.02	4.96- 5.96
4	MNX	1000.000	1043.870	-4.4	103	0.03	6.12- 7.12
5	1,3,5-Trinitrobenzene	1000.000	991.366	0.9	98	0.03	7.14- 8.14
6	RDX	1000.000	1079.716	-8.0	104	0.04	7.42- 8.42
7	1,3-Dinitrobenzene	1000.000	1009.880	-1.0	104	0.06	9.37-10.37
8	Nitrobenzene	1000.000	969.899	3.0	123	0.07	10.29-11.29
9	2,4,6-Trinitrotoluene	1000.000	1047.275	-4.7	103	0.06	11.35-12.35

	----------	Amount	Calc.	%Drift	----------		
10	Nitroglycerin	1000.000	1134.933	-13.5	115	0.06	12.17-13.17
11	Tetryl	1000.000	985.946	1.4	101	0.07	12.70-13.70

	----------	Amount	Calc.	%Drift	----------		
12 S	3,4-Dinitrotoluene	1000.000	968.407	3.2	99	0.09	13.66-14.66

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2934-ECC2921
Lab FileID: GG620662.D

		Amount	Calc.	%Drift			
13	2,6-Dinitrotoluene	1000.000	986.917	1.3	100	0.10	13.98-14.98
14	2,4-Dinitrotoluene	1000.000	1009.683	-1.0	103	0.10	14.64-15.64
15	3,5-Dinitroaniline	1000.000	1069.594	-7.0	100	0.10	15.40-16.40
		Amount	Calc.	%Drift			
16	o-Nitrotoluene	1000.000	1153.763	-15.4#	118	0.12	16.14-17.14
17	p-Nitrotoluene	2000.000	2116.317	-5.8	103	0.13	17.17-18.17
18	4-Amino-2,6-Dinitrotol	2000.000	2116.575	-5.8	103	0.13	17.17-18.17
19	m-Nitrotoluene	1000.000	1111.911	-11.2	109	0.13	18.38-19.38
		Amount	Calc.	%Drift			
20	2-Amino-4,6-Dinitrotol	1000.000	1048.363	-4.8	99	0.14	19.00-20.00
21	PETN	1000.000	985.891	1.4	98	0.09	21.40-22.40

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG620472.D 8330RPB.M_010821.M Mon Feb 08 11:34:21 2021

8.7.6

8

Initial Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2401-ICC2401
Lab FileID: PP389750.D

Response Factor Report G1315B

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration

Calibration Files
20 =PP389745.D 50 =PP389746.D 100 =PP389747.D 200 =PP389748.D
500 =PP389749.D 1000=PP389750.D 2500=PP389751.D 5000=PP389752.D

Compound	20	50	100	200	500	1000	2500	5000	Avg	%RSD
1) TNX	4.192	3.435	3.390	3.224	3.319	3.306	3.304	3.182	3.419 E3	9.43
2) HMX	2.553	2.240	1.904	1.618	1.585	1.554	1.538	1.479	1.809 E3	21.74
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 1592.69605 *A + -0.02273 *A^2										
3) DNX	3.551	3.241	3.122	2.906	2.927	2.909	2.875	2.789	3.040 E3	8.31
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 2953.50864 *A + -0.03280 *A^2										
4) MNX	4.158	3.332	3.226	3.233	3.198	3.165	3.137	3.035	3.311 E3	10.66
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 3226.28526 *A + -0.03811 *A^2										
5) RDX	2.154	2.070	2.204	2.111	2.015	2.026	1.997	1.926	2.063 E3	4.39
6) 1,3,5-Trinit	5.517	4.394	4.260	4.341	4.306	4.342	4.316	4.149	4.453 E3	9.79
7) 1,3-Dinitrob	6.000	5.665	5.506	5.621	5.663	5.667	5.659	5.460	5.655 E3	2.85
8) 3,5-Dinitroa	4.654	4.078	4.270	4.317	4.274	4.281	4.275	4.102	4.281 E3	4.09
9) Nitrobenzene	4.269	3.330	3.208	3.482	3.416	3.353	3.370	3.223	3.456 E3	9.86
10) Nitroglyceri								2.806	2.806 E1	0.00
11) Tetryl	3.133	3.499	3.325	3.194	3.106	3.147	3.154	3.022	3.198 E3	4.65
12) 2,4,6-Trinit	3.340	4.308	4.040	4.070	4.009	4.027	4.030	3.865	3.961 E3	7.04
13) 2-Amino-4,6-	3.885	3.644	3.829	3.681	3.571	3.646	3.624	3.486	3.671 E3	3.55
14) 4-Amino-2,6-	2.599	2.668	2.632	2.629	2.553	2.567	2.557	2.458	2.583 E3	2.51
15) 3,4-Dinitrot	3.002	2.276	2.415	2.378	2.357	2.423	2.418	2.329	2.450 E3	9.34
16) 2,4-Dinitrot	6.079	5.148	4.910	5.070	5.020	5.086	5.052	4.878	5.155 E3	7.44
17) 2,6-Dinitrot	3.761	2.958	2.895	2.964	2.848	2.995	2.949	2.859	3.029 E3	9.93
18) o-Nitrotolue	3.471	2.569	2.397	2.399	2.433	2.412	2.411	2.292	2.548 E3	14.94
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 2496.81255 *A + -0.04074 *A^2										
19) p-Nitrotolue	3.777	3.953	3.891	3.711	3.792	3.769	3.797	3.623	3.789 E3	2.67
20) m-Nitrotolue	3.457	3.789	3.499	3.375	3.501	3.451	3.490	3.316	3.485 E3	3.99
21) PETN									0.000	-1.00

Signal #2

1) TNX	5.134	5.204	5.021	5.057	5.144	5.125	5.116	4.925	5.091 E3	1.71
2) HMX	7.488	7.585	5.733	4.980	4.628	4.435	4.335	4.161	5.418 E3	25.74
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999										
Response Ratio = 0.00000 + 4539.39098 *A + -0.07611 *A^2										
3) DNX	6.206	6.126	4.932	4.810	4.727	4.658	4.587	4.411	5.057 E3	13.88
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 4754.59009 *A + -0.06868 *A^2										
4) MNX	5.914	5.224	4.988	4.833	5.010	4.929	4.900	4.715	5.064 E3	7.38
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000										

Initial Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2401-ICC2401
Lab FileID: PP389750.D

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                Response Ratio = 0.00000 + 5049.71304 *A + -0.06654 *A^2

 5) RDX           3.074 3.214 3.215 3.213 3.237 3.225 3.214 3.093 3.186 E3   2.00
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  1.0000
                Response Ratio = 0.00000 + 3304.69348 *A + -0.04204 *A^2

 6) 1,3,5-Trinit 8.793 8.659 8.429 8.390 8.421 8.393 8.441 8.126 8.457 E3   2.34
 7) 1,3-Dinitrob 4.198 4.718 4.223 4.570 4.251 4.097 3.982 3.797 4.230 E3   7.04
 8) 3,5-Dinitroa 7.310 8.061 7.657 8.078 7.738 7.540 7.433 7.060 7.610 E3   4.64
 9) Nitrobenzene 3.795 3.499 3.037 3.195 3.323 3.410 3.377 3.116 3.344 E3   7.16
10) Nitroglyceri 1.677 1.441 1.493 1.319 1.352 1.322 1.336 1.290 1.404 E3   9.25
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  1.0000
                Response Ratio = 0.00000 + 1366.61318 *A + -0.01526 *A^2

11) Tetryl        5.681 5.036 5.248 4.926 5.110 5.086 5.130 4.960 5.147 E3   4.63
12) 2,4,6-Trinit 4.890 4.719 4.727 4.494 4.796 4.830 4.918 4.756 4.766 E3   2.76
13) 2-Amino-4,6- 5.401 5.114 4.919 4.836 5.256 5.346 5.490 5.341 5.213 E3   4.51
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
                Response Ratio = 0.00000 + 5328.80576 *A + 0.00911 *A^2

14) 4-Amino-2,6- 3.416 4.328 4.465 4.520 4.987 5.082 5.231 5.083 4.639 E3  12.89
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
                Response Ratio = 0.00000 + 5245.29276 *A + -0.03108 *A^2

15) 3,4-Dinitrot 2.703 3.403 3.957 3.925 4.162 4.198 4.344 4.262 3.869 E3  14.36
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
                Response Ratio = 0.00000 + 4325.25522 *A + -0.01167 *A^2

16) 2,4-Dinitrot 3.583 2.800 3.272 3.322 3.280 3.247 3.338 3.266 3.264 E3   6.61
17) 2,6-Dinitrot 3.951 2.761 3.765 3.889 3.891 3.802 3.867 3.752 3.710 E3  10.49
18) o-Nitrotolue 4.674 2.984 3.004 3.087 3.118 3.174 3.299 3.169 3.314 E3  16.87
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
                Response Ratio = 0.00000 + 3193.31354 *A

19) p-Nitrotolue 1.767 2.579 2.396 2.487 2.869 2.916 3.120 3.058 2.649 E3  16.78
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
                Response Ratio = 0.00000 + 3063.15388 *A

20) m-Nitrotolue 3.177 3.644 3.829 3.970 4.150 4.047 4.155 4.022 3.874 E3   8.49
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
                Response Ratio = 0.00000 + 4048.97489 *A

21) PETN          1.161 1.408 1.225 1.363 1.472 1.490 1.495 1.429 1.380 E3   9.05
-------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          GPP2401_020521PRI.M        Mon Feb 08 12:36:13 2021
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8.7.7

8

Initial Calibration Verification

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2401-ICV2401
Lab FileID: PP389753.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1B.ch Vial: 59
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1A.ch
Acq On : 04-Feb-2021, 18:13:27 Operator: jamesb
Sample : icv2401-1000 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	1000.000	922.498	7.8	95	0.00	1.05- 1.65
		Amount	Calc.	%Drift				
2		HMX	1000.000	994.540	0.5	101	0.00	1.19- 1.79
3		DNX	1000.000	870.604	12.9	88	0.00	1.45- 2.04
4		MNX	1000.000	864.542	13.5	87	0.00	2.06- 2.66
		Amount	Calc.	%Drift				
5		RDX	1000.000	878.904	12.1	90	0.00	2.60- 3.40
6		1,3,5-Trinitrobenzene	1000.000	873.704	12.6	90	0.00	4.39- 5.19
7		1,3-Dinitrobenzene	1000.000	914.275	8.6	91	0.00	5.60- 6.40
8		3,5-Dinitroaniline	1000.000	862.874	13.7	86	0.00	6.02- 6.82
9		Nitrobenzene	1000.000	881.060	11.9	91	0.00	7.18- 7.98
10		Nitroglycerin			NA			
11		Tetryl	1000.000	896.460	10.4	91	0.00	9.35-10.15
12		2,4,6-Trinitrotoluene	1000.000	914.953	8.5	90	0.00	9.74-10.54
13		2-Amino-4,6-Dinitrotol	1000.000	895.537	10.4	90	0.00	10.19-10.99
14		4-Amino-2,6-Dinitrotol	1000.000	934.781	6.5	94	0.00	10.71-11.51
15	S	3,4-Dinitrotoluene			NA			
16		2,4-Dinitrotoluene	1000.000	917.820	8.2	93	0.00	11.73-12.53
17		2,6-Dinitrotoluene	1000.000	884.847	11.5	89	0.00	12.10-13.00
		Amount	Calc.	%Drift				
18		o-Nitrotoluene	1000.000	894.565	10.5	91	0.00	15.11-16.11
		Amount	Calc.	%Drift				
19		p-Nitrotoluene	1000.000	897.296	10.3	90	0.00	15.69-16.69
20		m-Nitrotoluene	1000.000	923.564	7.6	93	0.00	16.48-17.48
21		PETN			NA			
*****		Signal #2 *****						
1		TNX	1000.000	961.606	3.8	96	0.00	1.05- 1.65
		Amount	Calc.	%Drift				
2		HMX	1000.000	988.429	1.2	99	0.00	1.19- 1.79
3		DNX	1000.000	858.889	14.1	87	0.00	1.45- 2.05
4		MNX	1000.000	856.185	14.4	87	0.00	2.06- 2.66
5		RDX	1000.000	896.016	10.4	91	0.00	2.60- 3.40
		Amount	Calc.	%Drift				

Initial Calibration Verification

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2401-ICV2401
Lab FileID: PP389753.D

6		1,3,5-Trinitrobenzene	1000.000	892.472	10.8	90	0.00	4.39- 5.19
7		1,3-Dinitrobenzene	1000.000	907.167	9.3	94	0.00	5.60- 6.40
8		3,5-Dinitroaniline	1000.000	872.119	12.8	88	0.00	6.02- 6.82
9		Nitrobenzene	1000.000	974.394	2.6	96	0.00	7.18- 7.98
		----------	Amount	Calc.	%Drift	----------		
10		Nitroglycerin	1000.000	1031.068	-3.1	105	0.00	8.73- 9.73
		----------	Amount	Calc.	%Drift	----------		
11		Tetryl	1000.000	930.796	6.9	94	0.00	9.35-10.15
12		2,4,6-Trinitrotoluene	1000.000	941.875	5.8	93	0.00	9.73-10.53
		----------	Amount	Calc.	%Drift	----------		
13		2-Amino-4,6-Dinitrotol	1000.000	935.111	6.5	93	0.00	10.19-10.99
14		4-Amino-2,6-Dinitrotol	1000.000	944.384	5.6	97	0.00	10.71-11.51
15	S	3,4-Dinitrotoluene	----------NA----------					
		----------	Amount	Calc.	%Drift	----------		
16		2,4-Dinitrotoluene	1000.000	986.190	1.4	99	0.00	10.93-12.53
17		2,6-Dinitrotoluene	1000.000	974.295	2.6	95	0.00	11.28-13.00
		----------	Amount	Calc.	%Drift	----------		
18		o-Nitrotoluene	1000.000	892.363	10.8	90	0.00	13.30-16.11
19		p-Nitrotoluene	1000.000	877.624	12.2	92	0.00	13.65-16.69
20		m-Nitrotoluene	1000.000	953.428	4.7	95	0.00	16.48-17.48
		----------	Amount	Calc.	%Drift	----------		
21		PETN	1000.000	1002.116	-0.2	93	0.00	15.05-19.18

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP389750.D GPP2401_020521PRI.M Mon Feb 08 12:37:00 2021

8.7.8

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Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2402-CC2401
Lab FileID: PP389792.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1A.ch
Acq On : 05-Feb-2021, 15:21:17 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	951.233	4.9	98	0.00	1.05- 1.65
	Amount Calc. %Drift						
2	HMX	1000.000	973.410	2.7	98	0.00	1.19- 1.79
3	DNX	1000.000	971.031	2.9	98	0.00	1.45- 2.04
4	MNX	1000.000	971.748	2.8	98	0.00	2.06- 2.66
	Amount Calc. %Drift						
5	RDX	1000.000	949.550	5.0	97	0.00	2.60- 3.40
6	1,3,5-Trinitrobenzene	1000.000	945.658	5.4	97	0.00	4.39- 5.19
7	1,3-Dinitrobenzene	1000.000	980.874	1.9	98	0.01	5.60- 6.40
8	3,5-Dinitroaniline	1000.000	972.701	2.7	97	0.01	6.02- 6.82
9	Nitrobenzene	1000.000	960.565	3.9	99	0.02	7.18- 7.98
10	Nitroglycerin			NA			
11	Tetryl	1000.000	960.128	4.0	98	0.03	9.35-10.15
12	2,4,6-Trinitrotoluene	1000.000	992.861	0.7	98	0.03	9.74-10.54
13	2-Amino-4,6-Dinitrotol	1000.000	973.027	2.7	98	0.03	10.19-10.99
14	4-Amino-2,6-Dinitrotol	1000.000	982.575	1.7	99	0.03	10.71-11.51
15 S	3,4-Dinitrotoluene	1000.000	963.743	3.6	97	0.04	11.08-11.88
16	2,4-Dinitrotoluene	1000.000	963.626	3.6	98	0.04	11.73-12.53
17	2,6-Dinitrotoluene	1000.000	963.077	3.7	97	0.04	12.10-13.00
	Amount Calc. %Drift						
18	o-Nitrotoluene	1000.000	962.909	3.7	98	0.04	15.11-16.11
	Amount Calc. %Drift						
19	p-Nitrotoluene	1000.000	979.839	2.0	99	0.04	15.69-16.69
20	m-Nitrotoluene	1000.000	975.435	2.5	99	0.03	16.48-17.48
21	PETN			NA			
*****	Signal #2 *****						
1	TNX	1000.000	986.765	1.3	98	0.00	1.05- 1.65
	Amount Calc. %Drift						
2	HMX	1000.000	972.906	2.7	98	0.00	1.19- 1.79
3	DNX	1000.000	972.029	2.8	98	0.00	1.45- 2.05
4	MNX	1000.000	969.888	3.0	98	0.00	2.06- 2.66
5	RDX	1000.000	966.796	3.3	98	0.00	2.60- 3.40
	Amount Calc. %Drift						

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2402-CC2401
Lab FileID: PP389792.D

			Amount	Calc.	%Drift			
6		1,3,5-Trinitrobenzene	1000.000	972.237	2.8	98	0.00	4.39- 5.19
7		1,3-Dinitrobenzene	1000.000	946.787	5.3	98	0.01	5.60- 6.40
8		3,5-Dinitroaniline	1000.000	957.693	4.2	97	0.01	6.02- 6.82
9		Nitrobenzene	1000.000	955.517	4.4	94	0.02	7.18- 7.98
			Amount	Calc.	%Drift			
10		Nitroglycerin	1000.000	968.601	3.1	99	0.03	8.73- 9.73
			Amount	Calc.	%Drift			
11		Tetryl	1000.000	955.904	4.4	97	0.03	9.35-10.15
12		2,4,6-Trinitrotoluene	1000.000	990.916	0.9	98	0.03	9.73-10.53
			Amount	Calc.	%Drift			
13		2-Amino-4,6-Dinitrotol	1000.000	980.330	2.0	98	0.03	10.19-10.99
14		4-Amino-2,6-Dinitrotol	1000.000	959.037	4.1	98	0.03	10.71-11.51
15	S	3,4-Dinitrotoluene	1000.000	951.955	4.8	98	0.04	11.08-11.88
			Amount	Calc.	%Drift			
16		2,4-Dinitrotoluene	1000.000	989.788	1.0	99	0.04	10.93-12.53
17		2,6-Dinitrotoluene	1000.000	1011.257	-1.1	99	0.04	11.28-13.00
			Amount	Calc.	%Drift			
18		o-Nitrotoluene	1000.000	987.517	1.2	99	0.04	13.30-16.11
19		p-Nitrotoluene	1000.000	966.372	3.4	102	0.04	13.65-16.69
20		m-Nitrotoluene	1000.000	988.245	1.2	99	0.03	16.48-17.48
			Amount	Calc.	%Drift			
21		PETN	1000.000	1027.528	-2.8	95	0.03	15.05-19.18

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP389750.D GPP2401_020521PRI.M Mon Feb 08 10:10:46 2021

8.7.9

8

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA
Sample: GPP2402-CC2401
Lab FileID: PP389804.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1A.ch
Acq On : 05-Feb-2021, 21:33:14 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	1000.000	941.173	5.9	97	0.00	1.05- 1.65
		Amount	Calc.	%Drift				
2		HMX	1000.000	962.409	3.8	97	0.00	1.19- 1.79
3		DNX	1000.000	964.156	3.6	97	0.00	1.45- 2.04
4		MNX	1000.000	960.418	4.0	97	0.00	2.06- 2.66
		Amount	Calc.	%Drift				
5		RDX	1000.000	948.112	5.2	97	0.00	2.60- 3.40
6		1,3,5-Trinitrobenzene	1000.000	941.234	5.9	97	0.00	4.39- 5.19
7		1,3-Dinitrobenzene	1000.000	972.412	2.8	97	0.00	5.60- 6.40
8		3,5-Dinitroaniline	1000.000	971.369	2.9	97	0.00	6.02- 6.82
9		Nitrobenzene	1000.000	937.488	6.3	97	0.01	7.18- 7.98
10		Nitroglycerin	----------	----------	NA	----------		
11		Tetryl	1000.000	959.034	4.1	97	0.03	9.35-10.15
12		2,4,6-Trinitrotoluene	1000.000	988.976	1.1	97	0.03	9.74-10.54
13		2-Amino-4,6-Dinitrotol	1000.000	965.919	3.4	97	0.03	10.19-10.99
14		4-Amino-2,6-Dinitrotol	1000.000	976.237	2.4	98	0.03	10.71-11.51
15	S	3,4-Dinitrotoluene	1000.000	955.023	4.5	97	0.03	11.08-11.88
16		2,4-Dinitrotoluene	1000.000	957.443	4.3	97	0.03	11.73-12.53
17		2,6-Dinitrotoluene	1000.000	957.611	4.2	97	0.03	12.10-13.00
		Amount	Calc.	%Drift				
18		o-Nitrotoluene	1000.000	941.073	5.9	96	0.03	15.11-16.11
		Amount	Calc.	%Drift				
19		p-Nitrotoluene	1000.000	963.868	3.6	97	0.03	15.69-16.69
20		m-Nitrotoluene	1000.000	955.614	4.4	97	0.03	16.48-17.48
21		PETN	----------	----------	NA	----------		
*****		Signal #2 *****						
1		TNX	1000.000	980.368	2.0	97	0.00	1.05- 1.65
		Amount	Calc.	%Drift				
2		HMX	1000.000	967.760	3.2	97	0.00	1.19- 1.79
3		DNX	1000.000	958.726	4.1	97	0.00	1.45- 2.05
4		MNX	1000.000	954.859	4.5	97	0.00	2.06- 2.66
5		RDX	1000.000	961.264	3.9	97	0.00	2.60- 3.40
		Amount	Calc.	%Drift				

8.7.10

8

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2402-CC2401
Lab FileID: PP389804.D

6	1,3,5-Trinitrobenzene	1000.000	967.739	3.2	98	0.00	4.39- 5.19
7	1,3-Dinitrobenzene	1000.000	944.256	5.6	97	0.00	5.60- 6.40
8	3,5-Dinitroaniline	1000.000	963.337	3.7	97	0.00	6.02- 6.82
9	Nitrobenzene	1000.000	985.488	1.5	97	0.01	7.18- 7.98
		Amount	Calc.	%Drift			
10	Nitroglycerin	1000.000	948.880	5.1	97	0.03	8.73- 9.73
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	950.868	4.9	96	0.03	9.35-10.15
12	2,4,6-Trinitrotoluene	1000.000	977.199	2.3	96	0.03	9.73-10.53
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	972.991	2.7	97	0.03	10.19-10.99
14	4-Amino-2,6-Dinitrotol	1000.000	953.429	4.7	98	0.03	10.71-11.51
15 S	3,4-Dinitrotoluene	1000.000	947.088	5.3	97	0.04	11.08-11.88
		Amount	Calc.	%Drift			
16	2,4-Dinitrotoluene	1000.000	982.942	1.7	99	0.03	10.93-12.53
17	2,6-Dinitrotoluene	1000.000	1013.208	-1.3	99	0.03	11.28-13.00
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	953.637	4.6	96	0.04	13.30-16.11
19	p-Nitrotoluene	1000.000	951.686	4.8	100	0.03	13.65-16.69
20	m-Nitrotoluene	1000.000	986.561	1.3	99	0.03	16.48-17.48
		Amount	Calc.	%Drift			
21	PETN	1000.000	1039.956	-4.0	96	0.03	15.05-19.18

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP389750.D GPP2401_020521PRI.M Mon Feb 08 10:10:47 2021

8.7.10

8

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2402-ECC2401
Lab FileID: PP389816.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1A.ch
Acq On : 06-Feb-2021, 03:44:57 Operator: jamesb
Sample : ecc2401-1000 Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	932.732	6.7	96	0.00	1.05- 1.65
	Amount Calc. %Drift						
2	HMX	1000.000	954.305	4.6	96	0.00	1.19- 1.79
3	DNX	1000.000	961.442	3.9	97	0.00	1.45- 2.04
4	MNX	1000.000	954.604	4.5	96	0.00	2.06- 2.66
	Amount Calc. %Drift						
5	RDX	1000.000	945.161	5.5	96	0.00	2.60- 3.40
6	1,3,5-Trinitrobenzene	1000.000	925.433	7.5	95	0.00	4.39- 5.19
7	1,3-Dinitrobenzene	1000.000	968.559	3.1	97	0.00	5.60- 6.40
8	3,5-Dinitroaniline	1000.000	963.339	3.7	96	-0.01	6.02- 6.82
9	Nitrobenzene	1000.000	909.047	9.1	94	-0.01	7.18- 7.98
10	Nitroglycerin			NA			
11	Tetryl	1000.000	933.951	6.6	95	-0.02	9.35-10.15
12	2,4,6-Trinitrotoluene	1000.000	968.658	3.1	95	-0.02	9.74-10.54
13	2-Amino-4,6-Dinitrotol	1000.000	949.237	5.1	96	-0.02	10.19-10.99
14	4-Amino-2,6-Dinitrotol	1000.000	958.586	4.1	96	-0.03	10.71-11.51
15 S	3,4-Dinitrotoluene	1000.000	940.787	5.9	95	-0.02	11.08-11.88
16	2,4-Dinitrotoluene	1000.000	949.383	5.1	96	-0.02	11.73-12.53
17	2,6-Dinitrotoluene	1000.000	954.297	4.6	97	-0.02	12.10-13.00
	Amount Calc. %Drift						
18	o-Nitrotoluene	1000.000	915.434	8.5	93	-0.02	15.11-16.11
	Amount Calc. %Drift						
19	p-Nitrotoluene	1000.000	945.133	5.5	95	-0.02	15.69-16.69
20	m-Nitrotoluene	1000.000	931.921	6.8	94	-0.02	16.48-17.48
21	PETN			NA			
*****	Signal #2 *****						
1	TNX	1000.000	970.116	3.0	96	0.00	1.05- 1.65
	Amount Calc. %Drift						
2	HMX	1000.000	960.096	4.0	97	0.00	1.19- 1.79
3	DNX	1000.000	962.540	3.7	97	0.00	1.45- 2.05
4	MNX	1000.000	952.530	4.7	96	0.00	2.06- 2.66
5	RDX	1000.000	960.533	3.9	97	0.00	2.60- 3.40
	Amount Calc. %Drift						

Continuing Calibration Summary

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2402-ECC2401
Lab FileID: PP389816.D

			Amount	Calc.	%Drift			
6		1,3,5-Trinitrobenzene	1000.000	952.555	4.7	96	0.00	4.39- 5.19
7		1,3-Dinitrobenzene	1000.000	918.148	8.2	95	0.00	5.60- 6.40
8		3,5-Dinitroaniline	1000.000	933.209	6.7	94	-0.01	6.02- 6.82
9		Nitrobenzene	1000.000	904.443	9.6	89	-0.01	7.18- 7.98
			Amount	Calc.	%Drift			
10		Nitroglycerin	1000.000	933.304	6.7	95	0.00	8.73- 9.73
			Amount	Calc.	%Drift			
11		Tetryl	1000.000	938.907	6.1	95	-0.02	9.35-10.15
12		2,4,6-Trinitrotoluene	1000.000	968.120	3.2	96	-0.02	9.73-10.53
			Amount	Calc.	%Drift			
13		2-Amino-4,6-Dinitrotol	1000.000	962.616	3.7	96	-0.02	10.19-10.99
14		4-Amino-2,6-Dinitrotol	1000.000	946.123	5.4	97	-0.03	10.71-11.51
15	S	3,4-Dinitrotoluene	1000.000	932.096	6.8	96	-0.02	11.08-11.88
			Amount	Calc.	%Drift			
16		2,4-Dinitrotoluene	1000.000	972.198	2.8	98	-0.02	10.93-12.53
17		2,6-Dinitrotoluene	1000.000	1005.732	-0.6	98	-0.02	11.28-13.00
			Amount	Calc.	%Drift			
18		o-Nitrotoluene	1000.000	930.870	6.9	94	-0.02	13.30-16.11
19		p-Nitrotoluene	1000.000	920.826	7.9	97	-0.02	13.65-16.69
20		m-Nitrotoluene	1000.000	949.059	5.1	95	-0.02	16.48-17.48
			Amount	Calc.	%Drift			
21		PETN	1000.000	1020.106	-2.0	94	0.00	15.05-19.18

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP389750.D GPP2401_020521PRI.M Mon Feb 08 10:53:10 2021

8.7.11

8

Run Sequence Report

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG2921 **Method:** SW846 8330A **Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG2921-IC2921	GG620467.D	01/08/21 10:53	n/a	Initial cal 20
GGG2921-IC2921	GG620468.D	01/08/21 11:25	n/a	Initial cal 50
GGG2921-IC2921	GG620469.D	01/08/21 11:56	n/a	Initial cal 100
GGG2921-IC2921	GG620470.D	01/08/21 12:28	n/a	Initial cal 200
GGG2921-IC2921	GG620471.D	01/08/21 12:59	n/a	Initial cal 500
GGG2921-ICC2921	GG620472.D	01/08/21 13:31	n/a	Initial cal 1000
GGG2921-IC2921	GG620473.D	01/08/21 14:02	n/a	Initial cal 2500
GGG2921-IC2921	GG620474.D	01/08/21 14:33	n/a	Initial cal 5000
GGG2921-ICV2921	GG620475.D	01/08/21 15:05	n/a	Initial cal verification 1000
OP83582-MB	GG620477.D	01/08/21 16:08	OP83582	Method Blank
OP83582A-MB	GG620477.D	01/08/21 16:08	OP83582A	Method Blank
ZZZZZZ	GG620479.D	01/08/21 17:11	OP83582A	(unrelated sample)
ZZZZZZ	GG620480.D	01/08/21 17:42	OP83582	(unrelated sample)
ZZZZZZ	GG620481.D	01/08/21 18:13	OP83582	(unrelated sample)
ZZZZZZ	GG620482.D	01/08/21 18:45	OP83582	(unrelated sample)
FA82089-1	GG620483.D	01/08/21 19:16	OP83582	(used for QC only; not part of job FA82653)
ZZZZZZ	GG620484.D	01/08/21 19:48	OP83582	(unrelated sample)
OP83606-MB	GG620485.D	01/08/21 20:19	OP83606	Method Blank
ZZZZZZ	GG620486.D	01/08/21 20:51	OP83606	(unrelated sample)
GGG2921-CC2921	GG620487.D	01/08/21 21:22	n/a	Continuing cal 1000
ZZZZZZ	GG620489.D	01/08/21 22:25	OP83606	(unrelated sample)
OP83588-MB	GG620490.D	01/08/21 22:56	OP83588	Method Blank
ZZZZZZ	GG620491.D	01/08/21 23:28	OP83588	(unrelated sample)
FA82029-2	GG620492.D	01/08/21 23:59	OP83588	(used for QC only; not part of job FA82653)
ZZZZZZ	GG620493.D	01/09/21 00:31	OP83588	(unrelated sample)
OP83632-MB	GG620494.D	01/09/21 01:02	OP83632	Method Blank
FA82171-1	GG620495.D	01/09/21 01:33	OP83632	(used for QC only; not part of job FA82653)
ZZZZZZ	GG620496.D	01/09/21 02:05	OP83632	(unrelated sample)
ZZZZZZ	GG620497.D	01/09/21 02:36	OP83632	(unrelated sample)
ZZZZZZ	GG620498.D	01/09/21 03:08	OP83632	(unrelated sample)
GGG2921-CC2921	GG620499.D	01/09/21 03:39	n/a	Continuing cal 1000
ZZZZZZ	GG620501.D	01/09/21 04:42	OP83632	(unrelated sample)
ZZZZZZ	GG620502.D	01/09/21 05:13	OP83632	(unrelated sample)
ZZZZZZ	GG620503.D	01/09/21 05:45	OP83632	(unrelated sample)
ZZZZZZ	GG620504.D	01/09/21 06:16	OP83632	(unrelated sample)
ZZZZZZ	GG620505.D	01/09/21 06:48	OP83632	(unrelated sample)
GGG2921-ECC2921	GG620506.D	01/09/21 07:19	n/a	Ending cal 1000
GGG2921-ICV2921	GG620521.D	01/12/21 15:29	n/a	Initial cal verification 1000

Run Sequence Report

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG2934 **Method:** SW846 8330A **Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG2934-CC2921	GG620646.D	02/05/21 11:03	n/a	Continuing cal 1000
OP83940-MB	GG620648.D	02/05/21 12:05	OP83940	Method Blank
ZZZZZZ	GG620651.D	02/05/21 13:40	OP83940	(unrelated sample)
ZZZZZZ	GG620652.D	02/05/21 14:11	OP83940	(unrelated sample)
ZZZZZZ	GG620653.D	02/05/21 14:43	OP83940	(unrelated sample)
ZZZZZZ	GG620654.D	02/05/21 15:14	OP83940	(unrelated sample)
OP83930-MB	GG620655.D	02/05/21 15:45	OP83930	Method Blank
FA82653-1	GG620656.D	02/05/21 16:17	OP83930	54MW13
FA82653-2	GG620657.D	02/05/21 16:48	OP83930	54TW13
GGG2934-CC2921	GG620658.D	02/05/21 17:20	n/a	Continuing cal 1000
FA82653-3	GG620660.D	02/05/21 18:23	OP83930	54MW10
FA82653-4	GG620661.D	02/05/21 18:54	OP83930	54MW12
GGG2934-ECC2921	GG620662.D	02/05/21 19:25	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GPP2401	**Method:** SW846 8330B	**Instrument ID:** GCPP

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GPP2401-IC2401	PP389745.D	02/04/21 14:05	n/a	Initial cal 20
GPP2401-IC2401	PP389746.D	02/04/21 14:36	n/a	Initial cal 50
GPP2401-IC2401	PP389747.D	02/04/21 15:07	n/a	Initial cal 100
GPP2401-IC2401	PP389748.D	02/04/21 15:38	n/a	Initial cal 200
GPP2401-IC2401	PP389749.D	02/04/21 16:09	n/a	Initial cal 500
GPP2401-ICC2401	PP389750.D	02/04/21 16:40	n/a	Initial cal 1000
GPP2401-IC2401	PP389751.D	02/04/21 17:11	n/a	Initial cal 2500
GPP2401-IC2401	PP389752.D	02/04/21 17:42	n/a	Initial cal 5000
GPP2401-ICV2401	PP389753.D	02/04/21 18:13	n/a	Initial cal verification 1000

Run Sequence Report

Job Number: FA82653
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GPP2402 **Method:** SW846 8330A **Instrument ID:** GCPP

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GPP2402-CC2401	PP389780.D	02/05/21 09:09	n/a	Continuing cal 1000
OP83940-MB	PP389782.D	02/05/21 10:11	OP83940	Method Blank
OP83940-BS	PP389783.D	02/05/21 10:42	OP83940	Blank Spike
OP83940-MS	PP389784.D	02/05/21 11:13	OP83940	Matrix Spike
OP83940-MSD	PP389785.D	02/05/21 11:44	OP83940	Matrix Spike Duplicate
FA82696-1	PP389786.D	02/05/21 12:15	OP83940	(used for QC only; not part of job FA82653)
ZZZZZZ	PP389787.D	02/05/21 12:46	OP83940	(unrelated sample)
ZZZZZZ	PP389788.D	02/05/21 13:17	OP83940	(unrelated sample)
ZZZZZZ	PP389789.D	02/05/21 13:48	OP83940	(unrelated sample)
ZZZZZZ	PP389790.D	02/05/21 14:19	OP83940	(unrelated sample)
ZZZZZZ	PP389791.D	02/05/21 14:50	OP83940	(unrelated sample)
GPP2402-CC2401	PP389792.D	02/05/21 15:21	n/a	Continuing cal 1000
ZZZZZZ	PP389794.D	02/05/21 16:23	OP83940	(unrelated sample)
ZZZZZZ	PP389795.D	02/05/21 16:54	OP83940	(unrelated sample)
OP83930-MB	PP389796.D	02/05/21 17:25	OP83930	Method Blank
OP83930-BS	PP389797.D	02/05/21 17:56	OP83930	Blank Spike
OP83930-MS	PP389798.D	02/05/21 18:27	OP83930	Matrix Spike
OP83930-MSD	PP389799.D	02/05/21 18:58	OP83930	Matrix Spike Duplicate
FA82653-1	PP389800.D	02/05/21 19:29	OP83930	54MW13
FA82653-2	PP389801.D	02/05/21 20:00	OP83930	54TW13
FA82653-3	PP389802.D	02/05/21 20:31	OP83930	54MW10
FA82653-4	PP389803.D	02/05/21 21:02	OP83930	54MW12
GPP2402-CC2401	PP389804.D	02/05/21 21:33	n/a	Continuing cal 1000
FA82653-5	PP389806.D	02/05/21 22:35	OP83930	54MW1
OP83975-MB	PP389807.D	02/05/21 23:06	OP83975	Method Blank
OP83975-BS	PP389808.D	02/05/21 23:37	OP83975	Blank Spike
OP83975-MS	PP389809.D	02/06/21 00:08	OP83975	Matrix Spike
OP83975-MSD	PP389810.D	02/06/21 00:39	OP83975	Matrix Spike Duplicate
FA82841-1	PP389811.D	02/06/21 01:10	OP83975	(used for QC only; not part of job FA82653)
ZZZZZZ	PP389812.D	02/06/21 01:40	OP83975	(unrelated sample)
ZZZZZZ	PP389813.D	02/06/21 02:11	OP83975	(unrelated sample)
ZZZZZZ	PP389814.D	02/06/21 02:43	OP83975	(unrelated sample)
ZZZZZZ	PP389815.D	02/06/21 03:13	OP83975	(unrelated sample)
GPP2402-ECC2401	PP389816.D	02/06/21 03:44	n/a	Ending cal 1000

GC/LC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 02/08/21 13:09

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1A.ch
Acq On : 05-Feb-2021, 19:29:21 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : op83930,GPP2402,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 08 08:01:02 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.52	11.52	1149739	1950758	469.357m	451.566
	Spiked Amount 500.000	Range 70 - 136		Recovery =		93.87%	90.31%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.49	1.49	589982	1667316	372.409	369.590
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.98	2.99	179179	277432	86.860m	84.041m
6)	1,3,5-Trinitrobe	4.80	4.80	3917211	7883466	879.646	932.220
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.42	6.43	172087	311435	40.195m	40.926m
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	10.17	10.17	4439699	5360104	1120.786	1124.556
13)	2-Amino-4,6-Dini	10.61	10.61	565903	655024	154.167	122.896
14)	4-Amino-2,6-Dini	11.17	11.14	371357	361115	143.773	68.874 #
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	18.73	0.00	35460	0	NoCal	N.D.

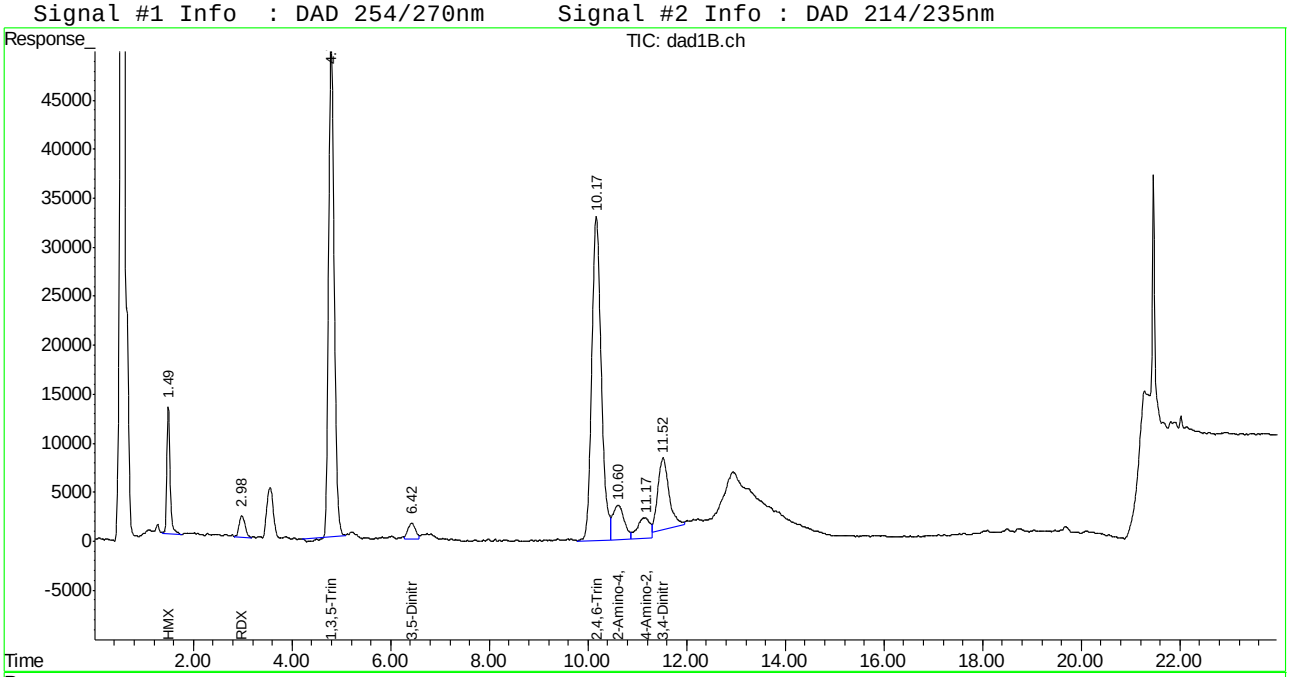
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389800.D GPP2401_020521PRI.M Mon Feb 08 10:09:53 2021 Page 1

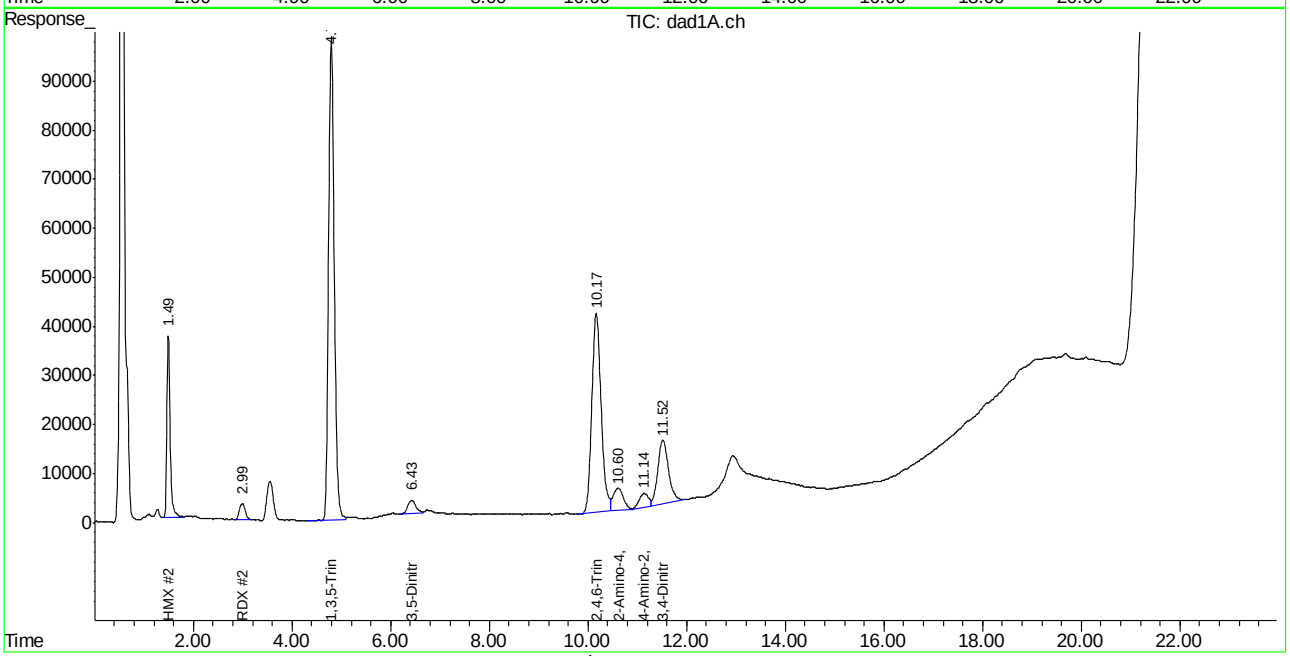
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1A.ch
Acq On : 05-Feb-2021, 19:29:21 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : op83930,GPP2402,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 9:02 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

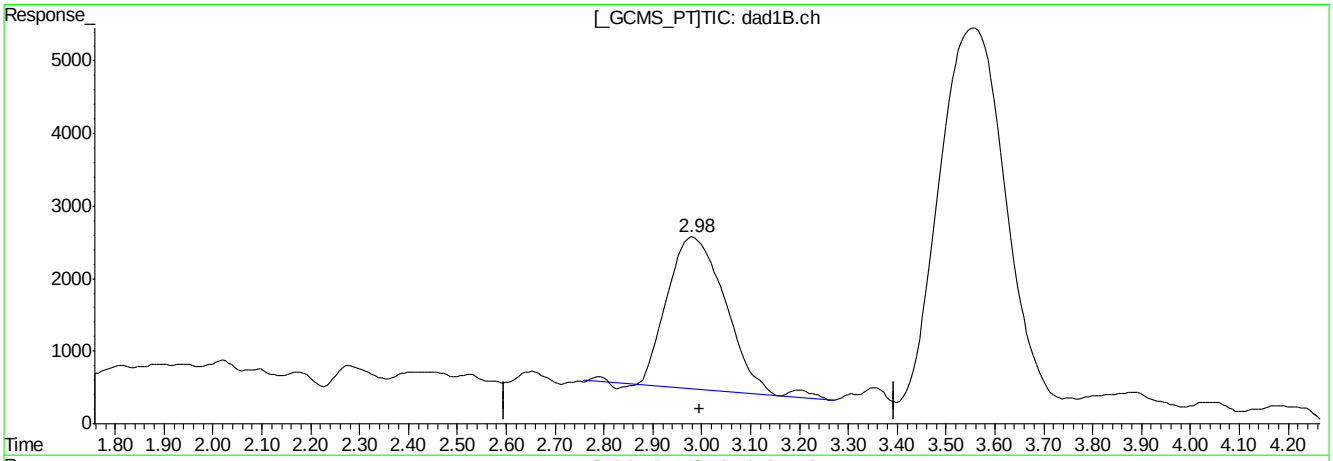
Sample Number: FA82653-1
Lab FileID: PP389800.D
Injection Time: 02/05/21 19:29
Method: SW846 8330B
Analyst approved: 02/08/21 12:09 James Boone
Supervisor approved: 02/08/21 13:09 Naresh Jiawan

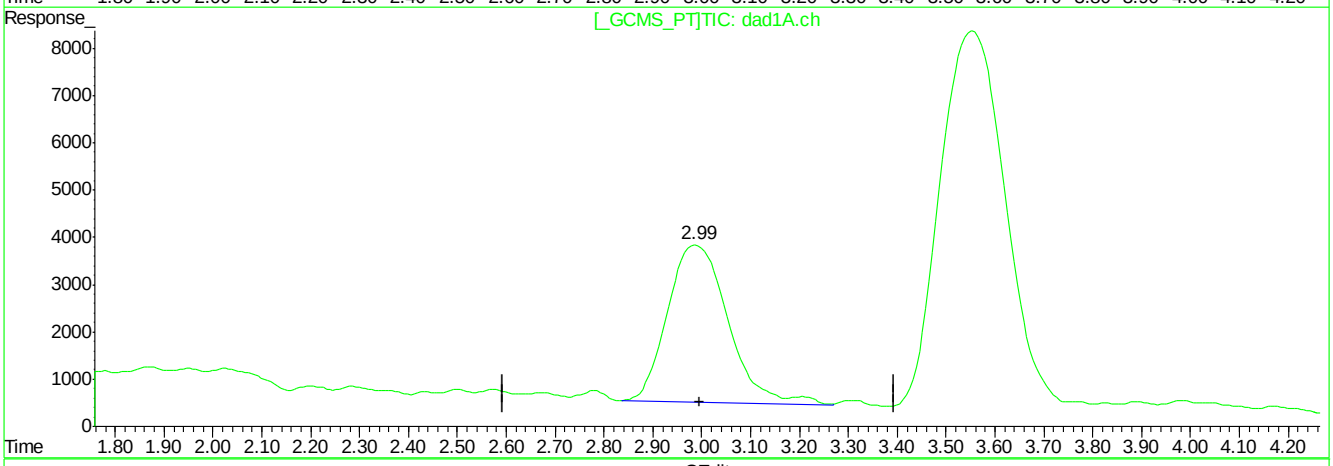
Parameter	CAS	Sig#	R.T. (min.)	Reason
RDX	121-82-4	1	2.98	Poor instrument integration
RDX	121-82-4	2	2.99	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.42	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.43	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.52	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1A.ch
Acq On : 05-Feb-2021, 19:29:21 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.98min 85.394ppb

response 176155

(5) RDX #2

2.99min 86.578ppb

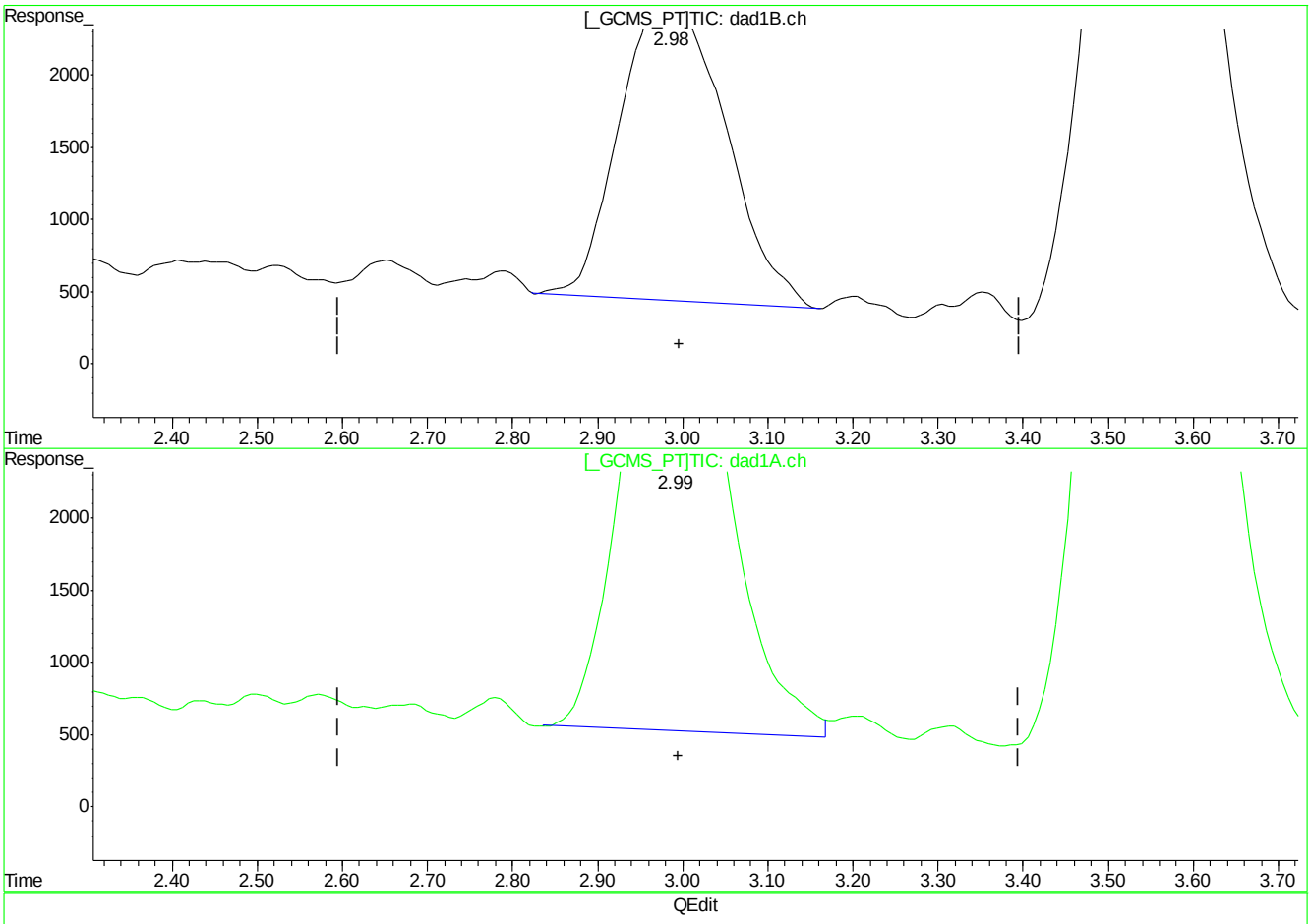
response 285800

(+) = Expected Retention Time
PP389800.D GPP2401_020521PRI.M Mon Feb 08 09:01:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1A.ch
Acq On : 05-Feb-2021, 19:29:21 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(5) RDX

2.98min 86.860ppb m

response 179179

(5) RDX #2

2.99min 84.041ppb m

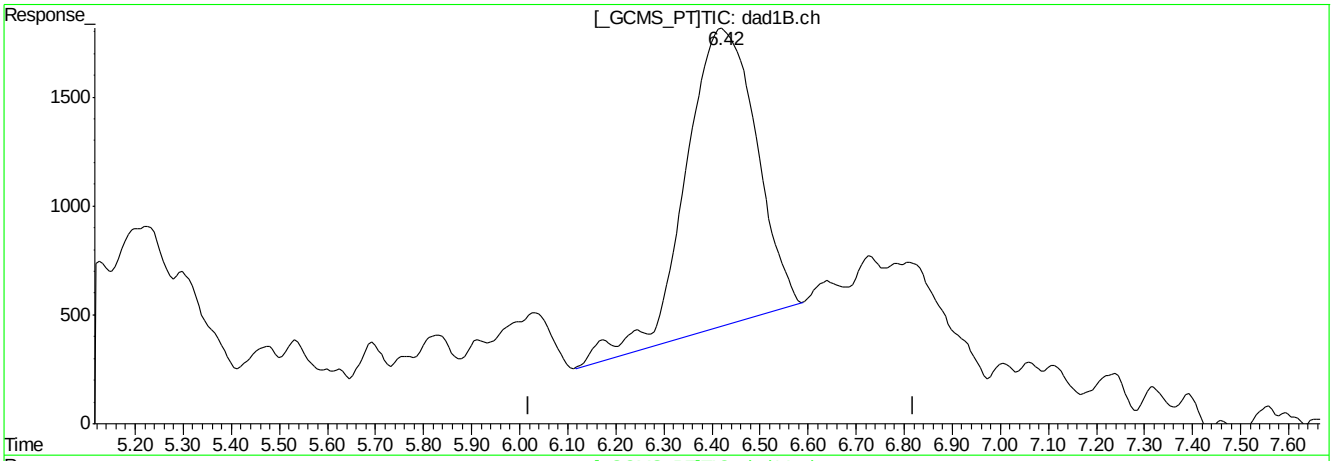
response 277432

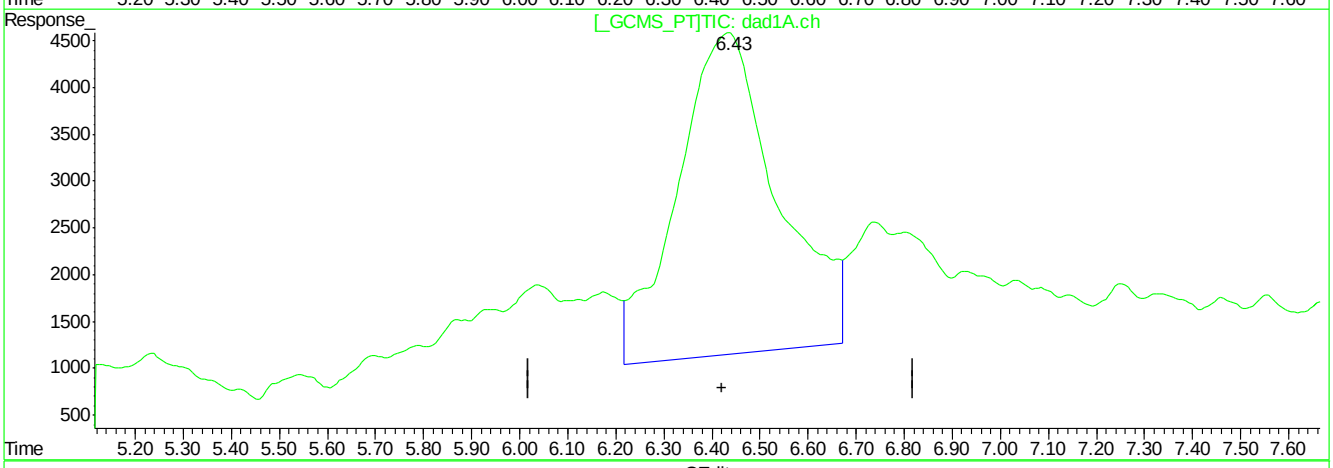
(+) = Expected Retention Time
PP389800.D GPP2401_020521PRI.M Mon Feb 08 09:01:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1A.ch
Acq On : 05-Feb-2021, 19:29:21 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.42min 32.502ppb

response 139147

(8) 3,5-Dinitroaniline #2

6.43min 65.135ppb

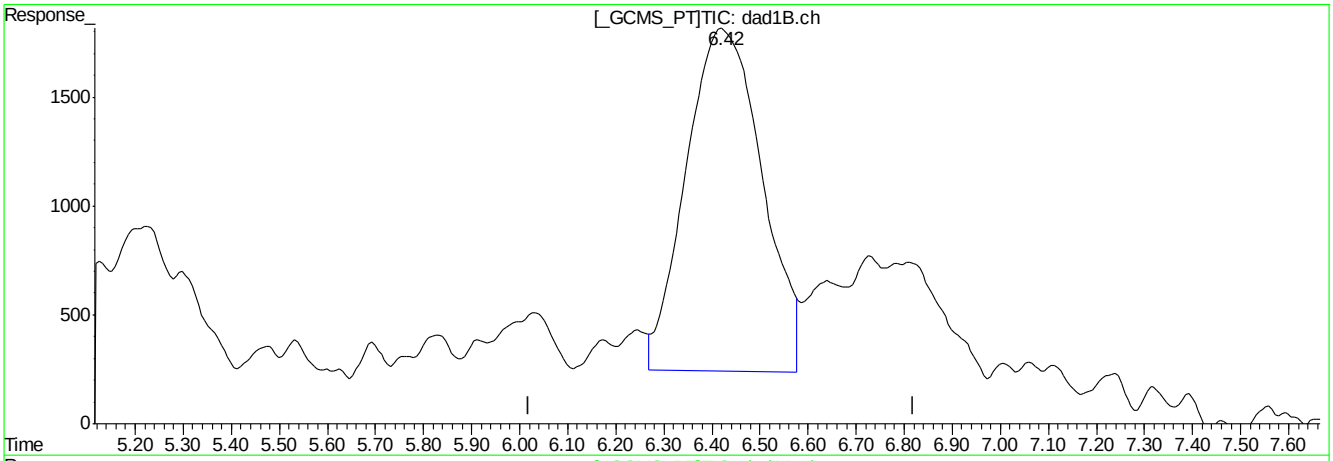
response 495659

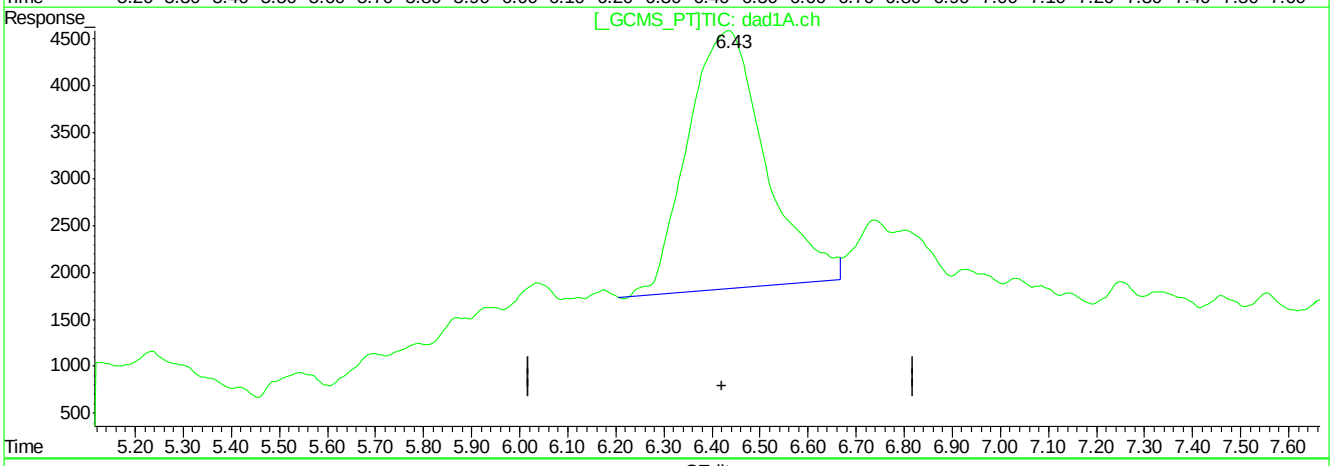
(+) = Expected Retention Time
PP389800.D GPP2401_020521PRI.M Mon Feb 08 09:02:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1A.ch
Acq On : 05-Feb-2021, 19:29:21 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.42min 40.195ppb m

response 172087

(8) 3,5-Dinitroaniline #2

6.43min 40.926ppb m

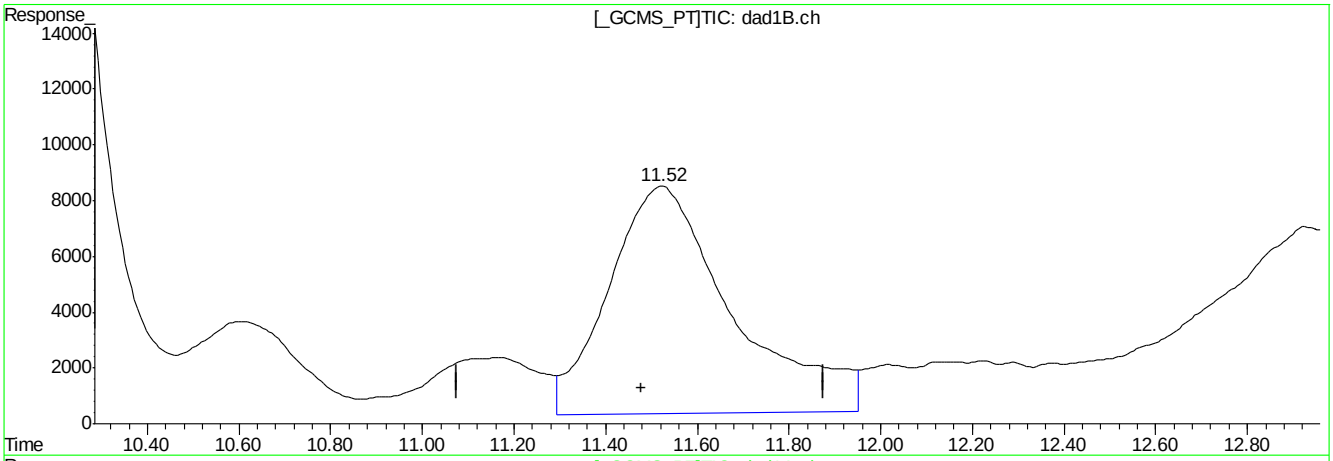
response 311435

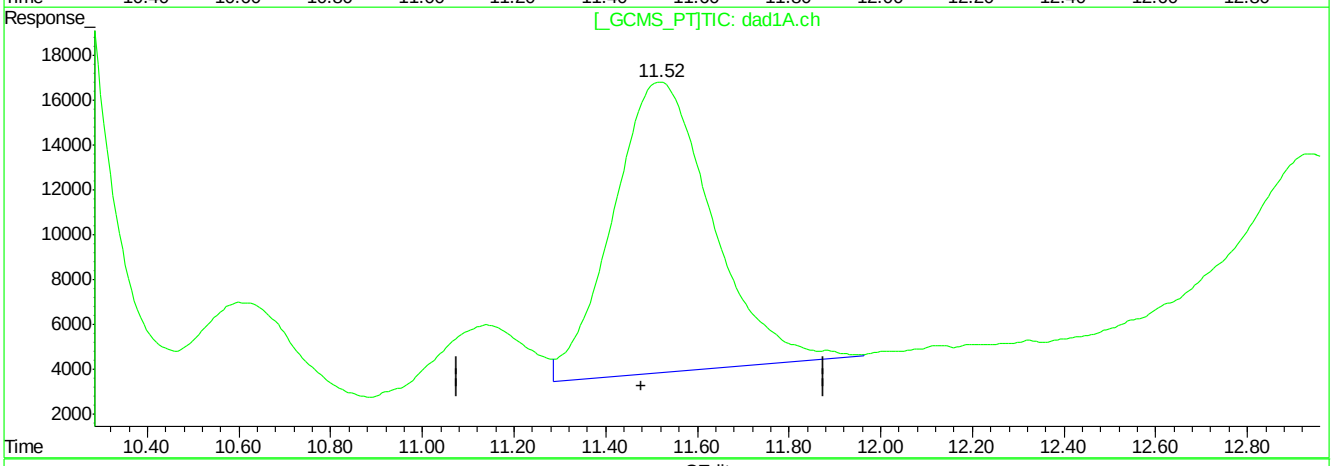
(+) = Expected Retention Time
PP389800.D GPP2401_020521PRI.M Mon Feb 08 09:02:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1A.ch
Acq On : 05-Feb-2021, 19:29:21 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.52min 623.315ppb

response 1526876

(15) 3,4-Dinitrotoluene #2 (S)

11.52min 451.566ppb

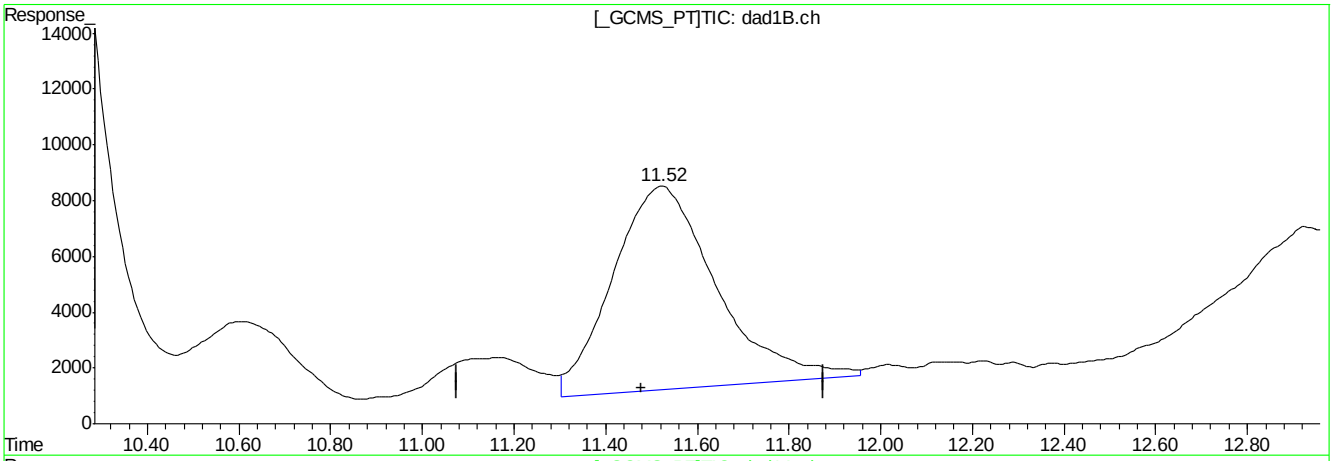
response 1950758

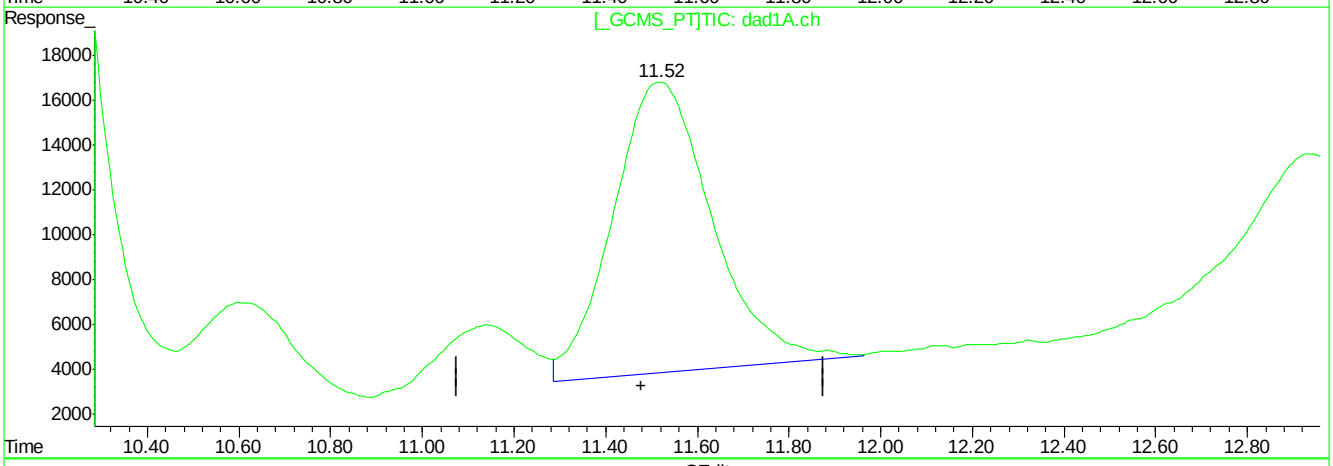
(+) = Expected Retention Time
PP389800.D GPP2401_020521PRI.M Mon Feb 08 09:02:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389800.D\dad1A.ch
Acq On : 05-Feb-2021, 19:29:21 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.52min 469.357ppb m

response 1149739

(15) 3,4-Dinitrotoluene #2 (S)

11.52min 451.566ppb

response 1950758

(+) = Expected Retention Time
PP389800.D GPP2401_020521PRI.M Mon Feb 08 09:02:44 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:09

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1A.ch
Acq On : 05-Feb-2021, 16:17:25 Operator: jamesb
Sample : FA82653-1cf Inst : G1315B
Misc : op83930,GGG2934,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 08 11:30:19 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.20	14.20	2784959	5288515	522.875	485.358
	Spiked Amount 500.000	Range 70 - 136		Recovery =		104.57%	97.07%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.29	5.29	1282735	1282735	402.890	402.890
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.64	7.64	9169274	9169274	934.674m	934.755m
6)	RDX	7.87	7.86	403586	489812	95.049m	115.356m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.88	11.88	10385110	13819010	1143.969	1134.355
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.92	15.91	1358331	2271874	137.124m	144.802m
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.74	17.74	704758	1128041	133.675m	117.993m
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.57	19.57	1162869	1680185	128.249	136.196m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

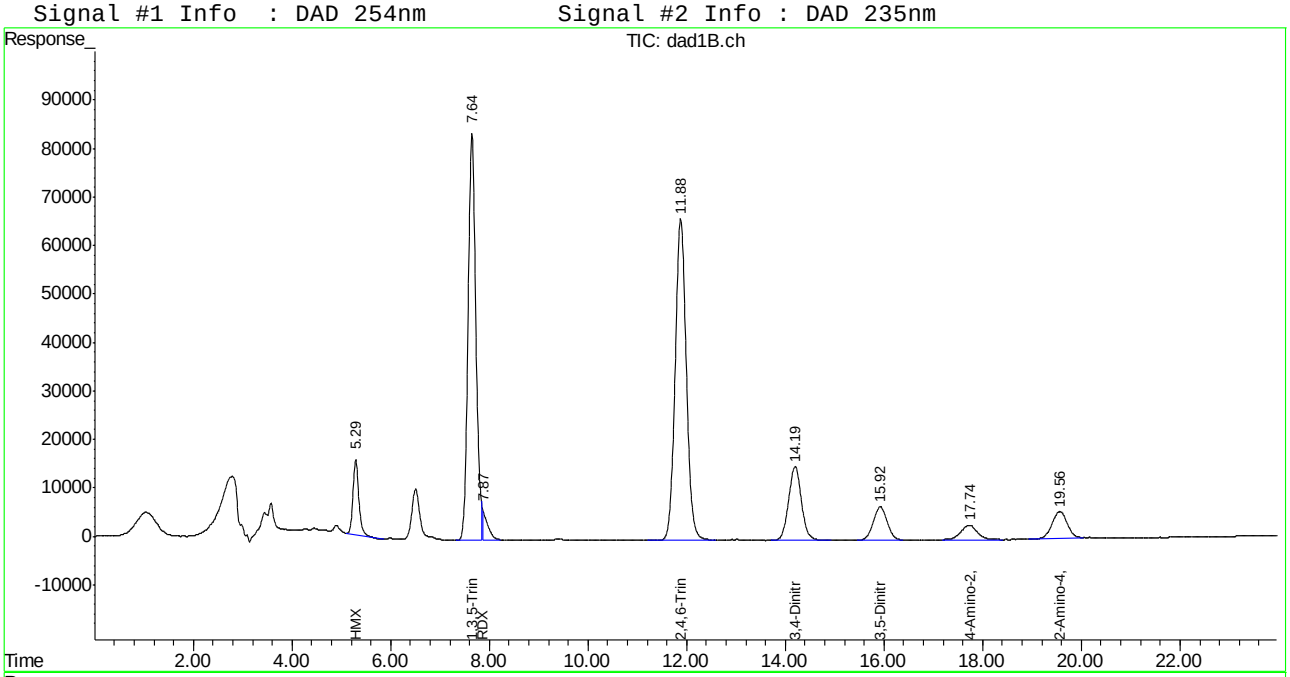
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620656.D 8330RPB.M_010821.M Mon Feb 08 12:07:13 2021 Page 1

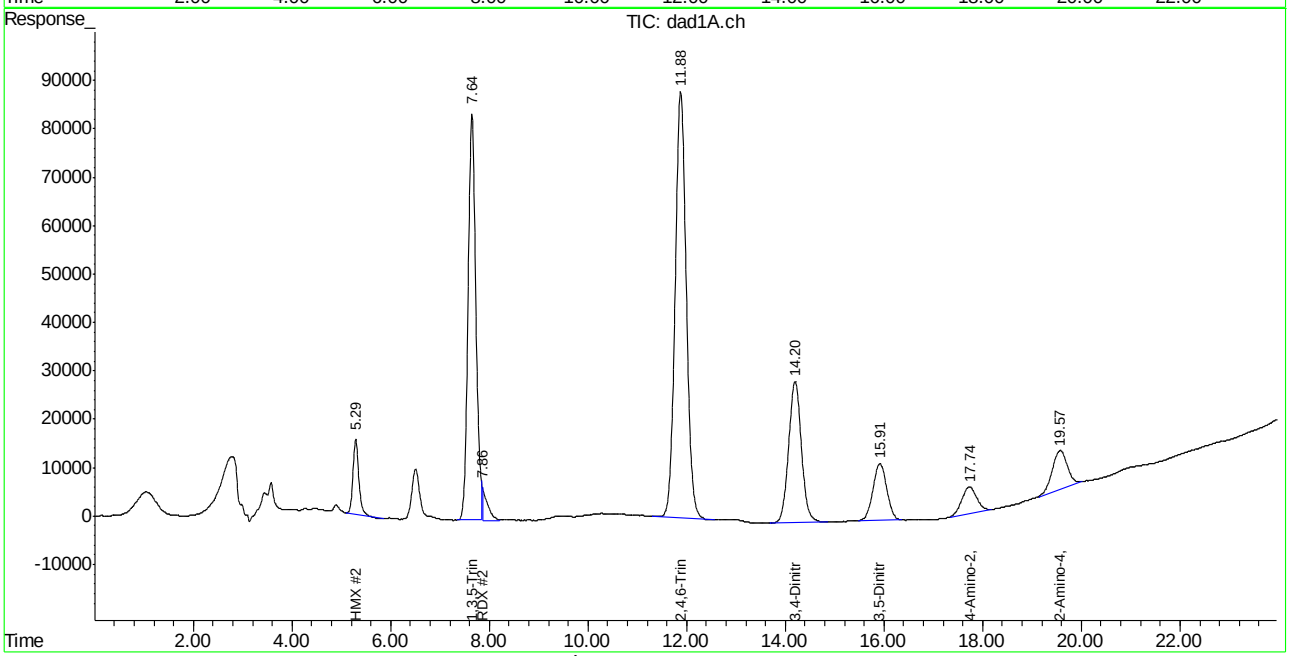
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1A.ch
Acq On : 05-Feb-2021, 16:17:25 Operator: jamesb
Sample : FA82653-1cf Inst : G1315B
Misc : op83930,GGG2934,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 12:06 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

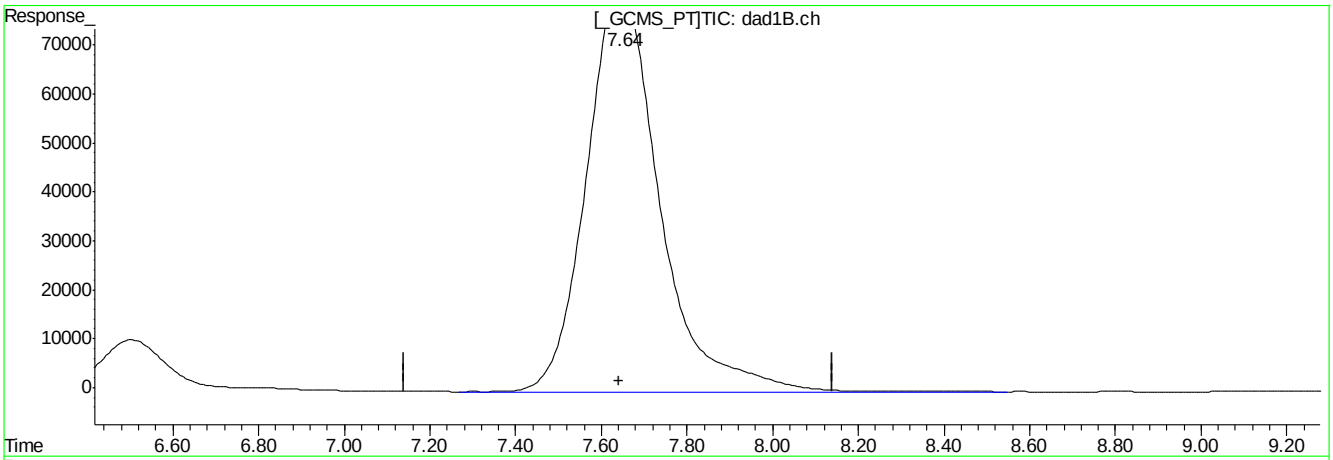
Sample Number: FA82653-1
Lab FileID: GG620656.D
Injection Time: 02/05/21 16:17
Method: SW846 8330B
Analyst approved: 02/08/21 12:09 James Boone
Supervisor approved: 02/08/21 13:09 Naresh Jiawan

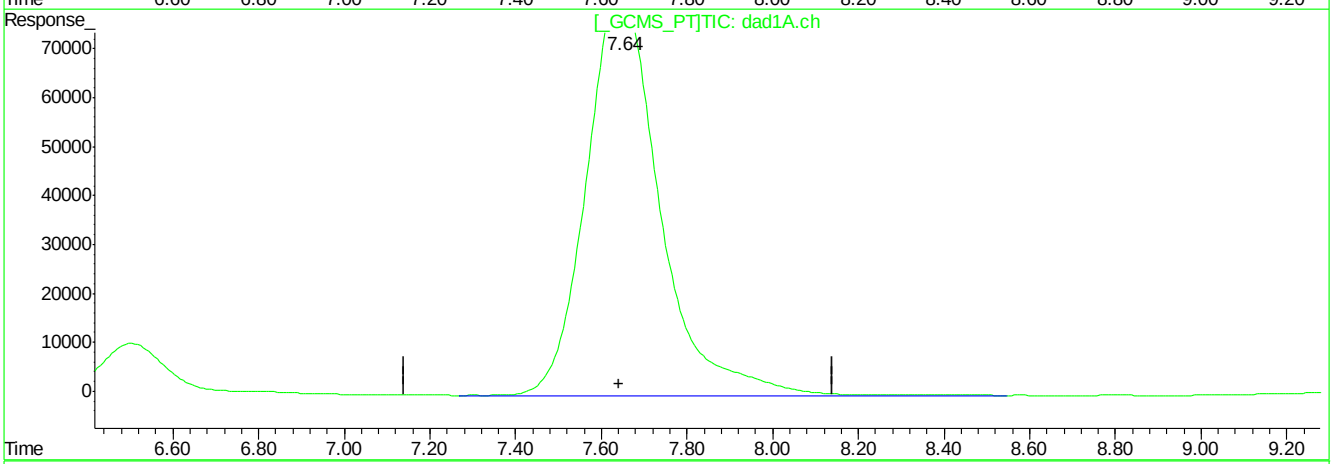
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	1	7.64	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.64	Poor instrument integration
RDX	121-82-4	2	7.86	Poor instrument integration
RDX	121-82-4	1	7.87	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	15.91	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	15.92	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	17.74	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.74	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.57	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1A.ch
Acq On : 05-Feb-2021, 16:17:25 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.65min 997.239ppb

response 9783045

(5) 1,3,5-Trinitrobenzene #2

7.65min 997.325ppb

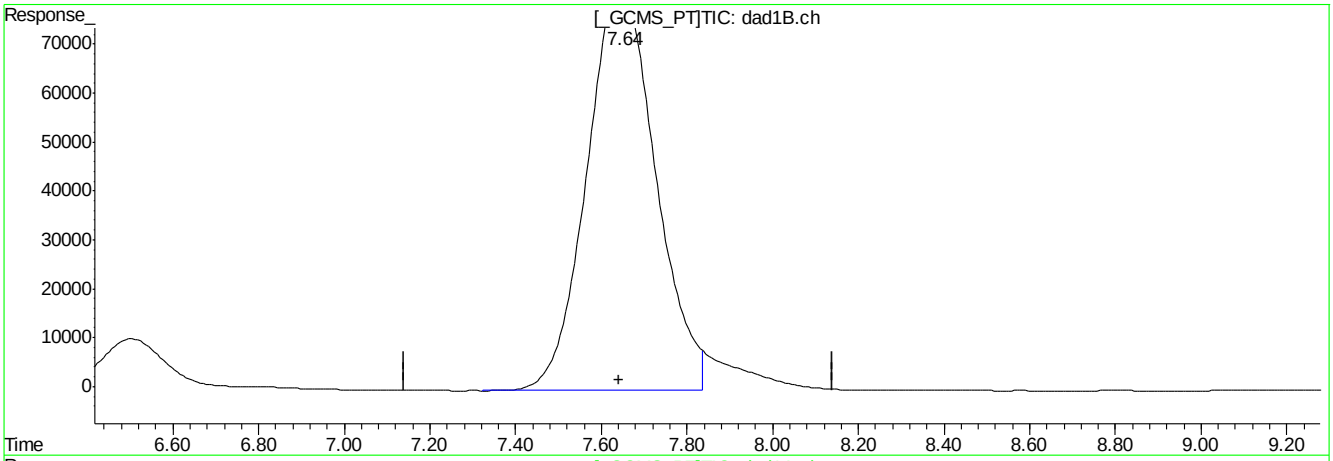
response 9783045

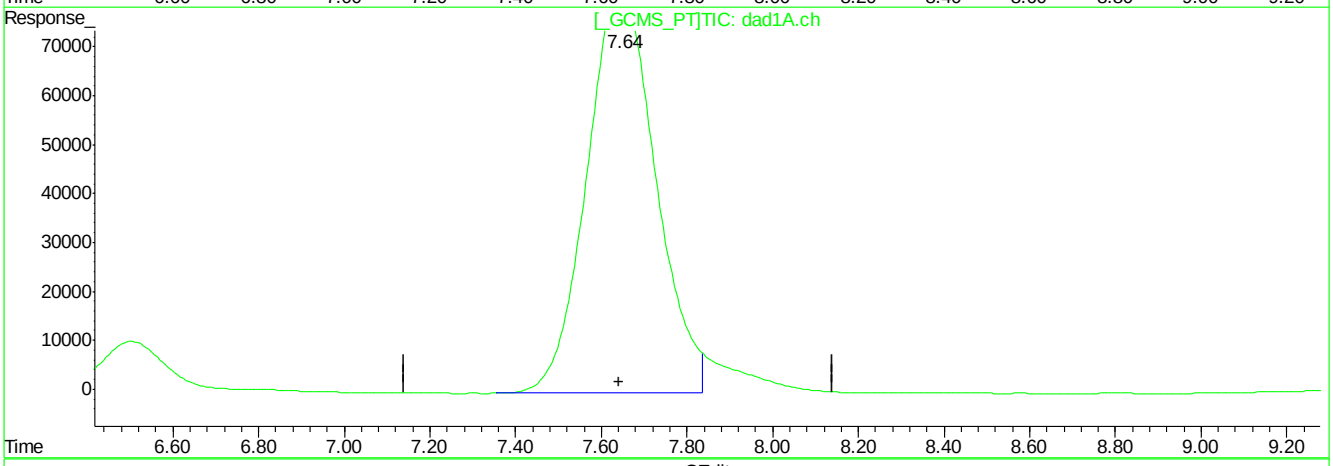
(+) = Expected Retention Time
GG620656.D 8330RPB.M_010821.M Mon Feb 08 11:51:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1A.ch
Acq On : 05-Feb-2021, 16:17:25 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.64min 934.674ppb m

response 9169274

(5) 1,3,5-Trinitrobenzene #2

7.64min 934.755ppb m

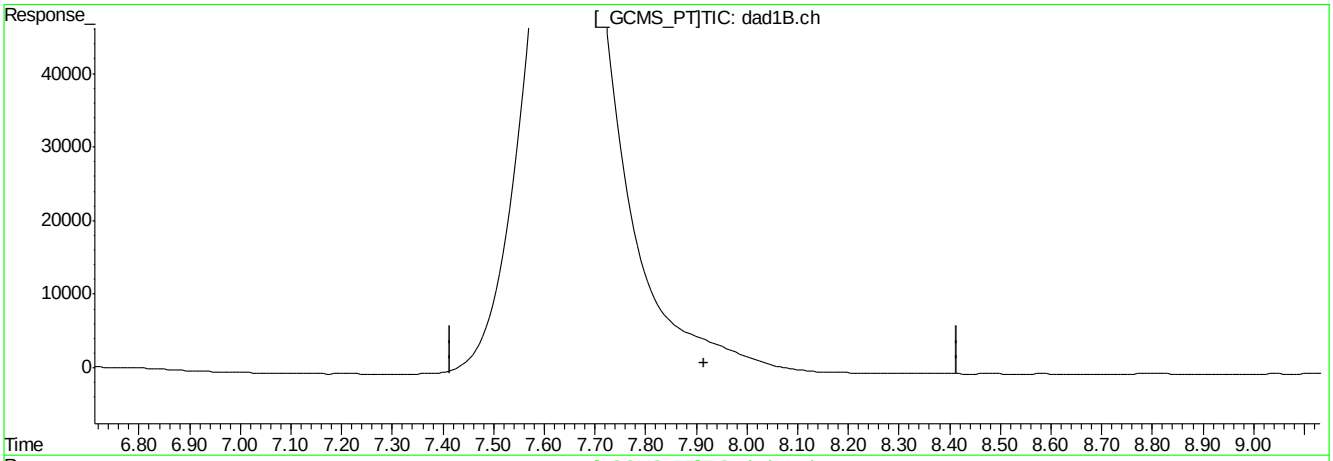
response 9169274

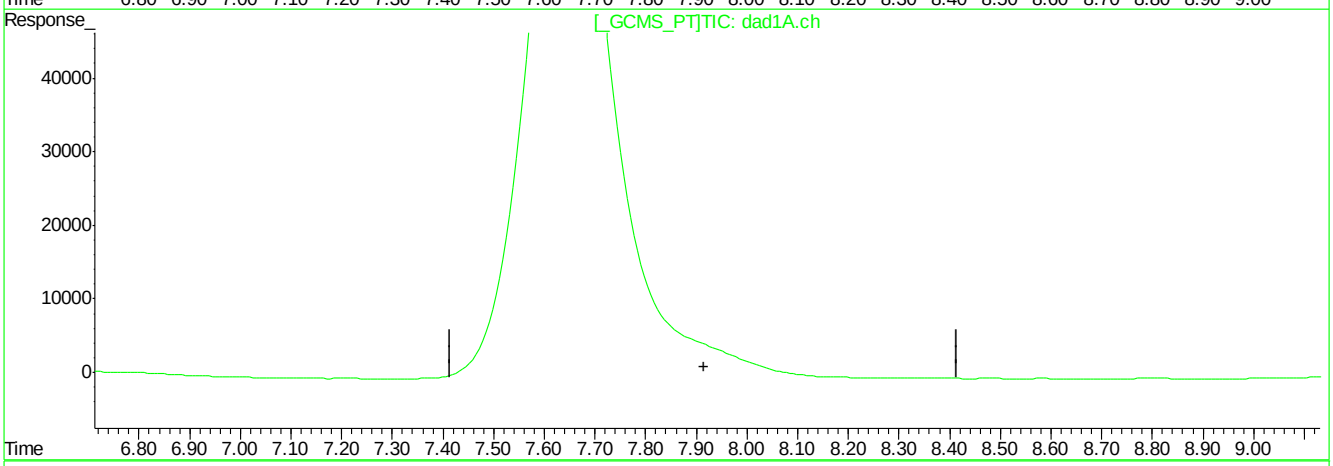
(+) = Expected Retention Time
GG620656.D 8330RPB.M_010821.M Mon Feb 08 11:51:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1A.ch
Acq On : 05-Feb-2021, 16:17:25 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

0.00min 0.000ppb

response 0

(6) RDX #2

0.00min 0.000ppb

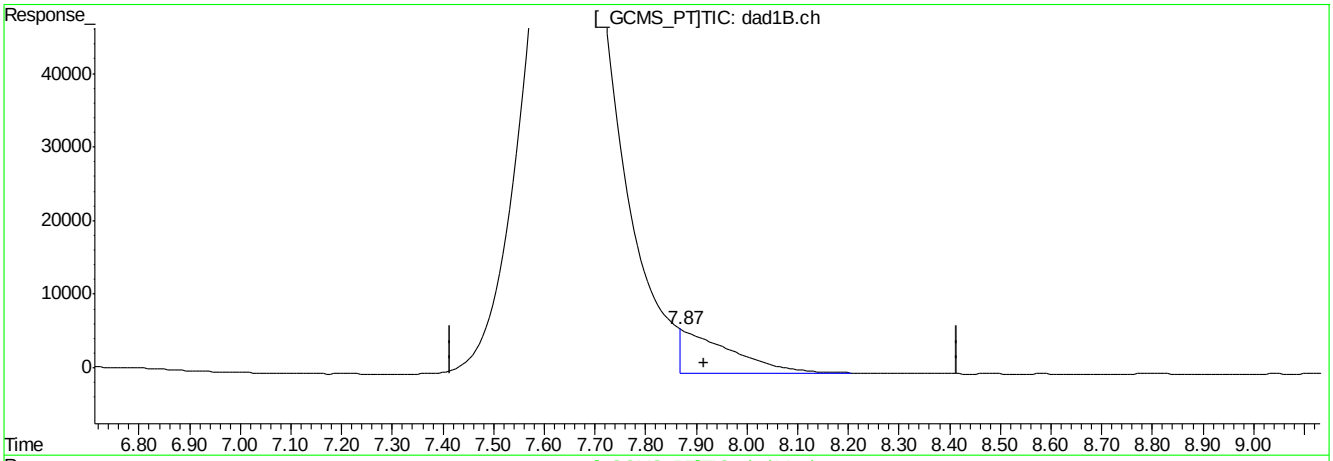
response 0

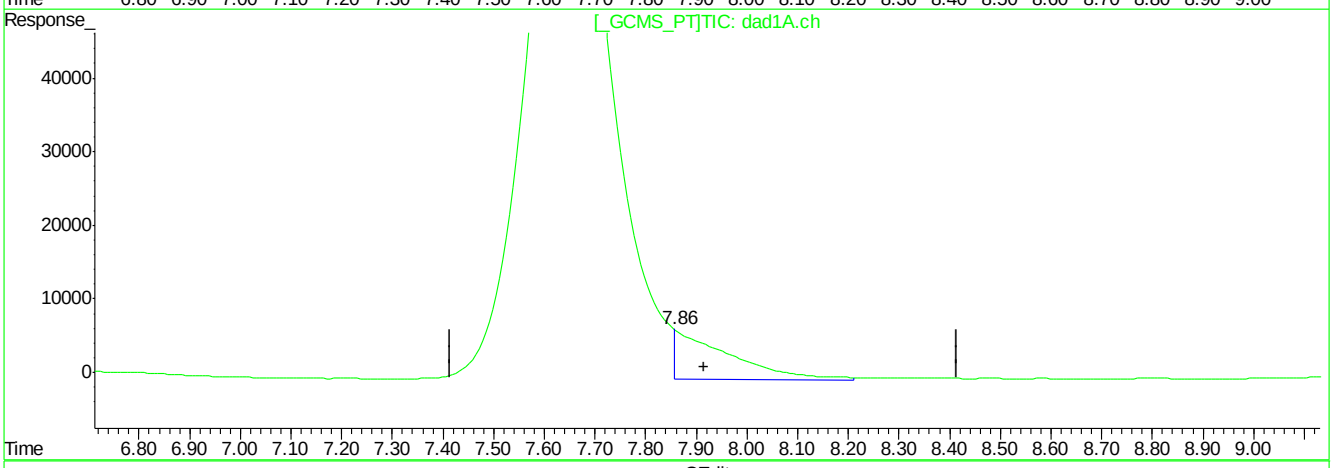
(+) = Expected Retention Time
GG620656.D 8330RPB.M_010821.M Mon Feb 08 11:51:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1A.ch
Acq On : 05-Feb-2021, 16:17:25 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.87min 95.049ppb m

response 403586

(6) RDX #2

7.86min 115.356ppb m

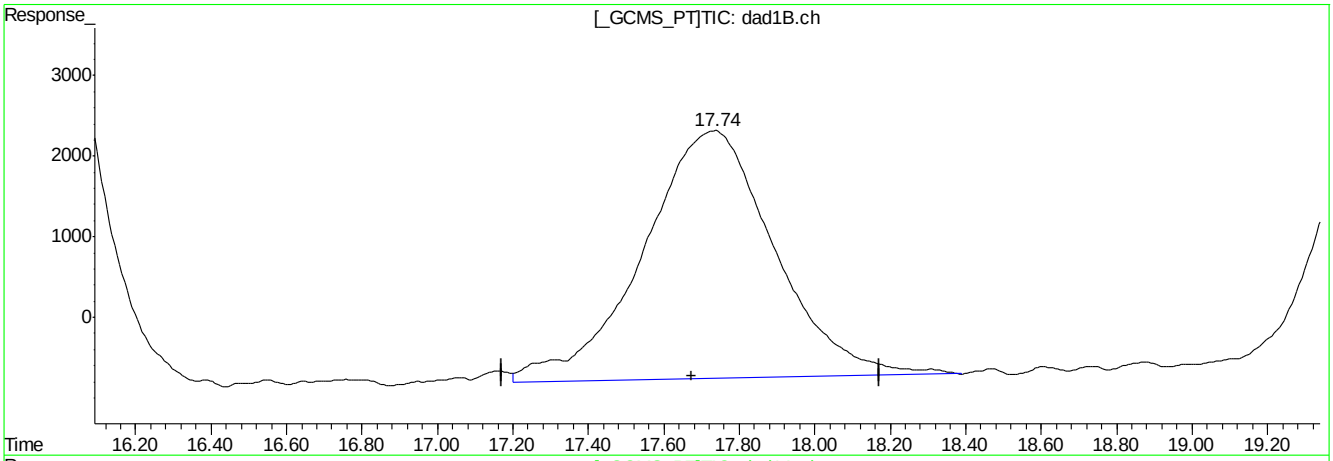
response 489812

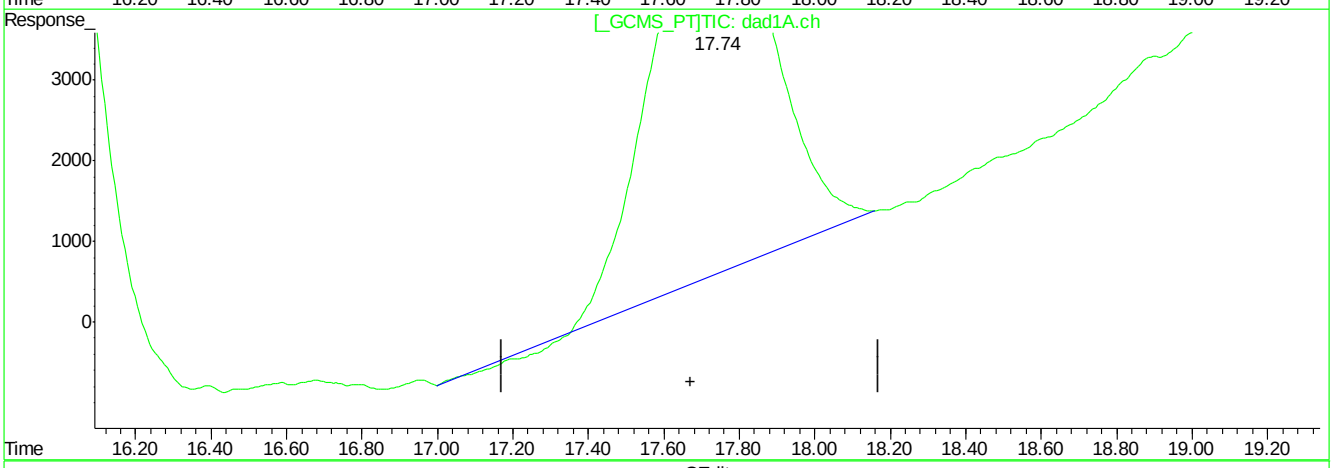
(+) = Expected Retention Time
GG620656.D 8330RPB.M_010821.M Mon Feb 08 11:51:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1A.ch
Acq On : 05-Feb-2021, 16:17:25 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.74min 141.250ppb

response 744692

(18) 4-Amino-2,6-Dinitrotoluene #2

17.74min 116.519ppb

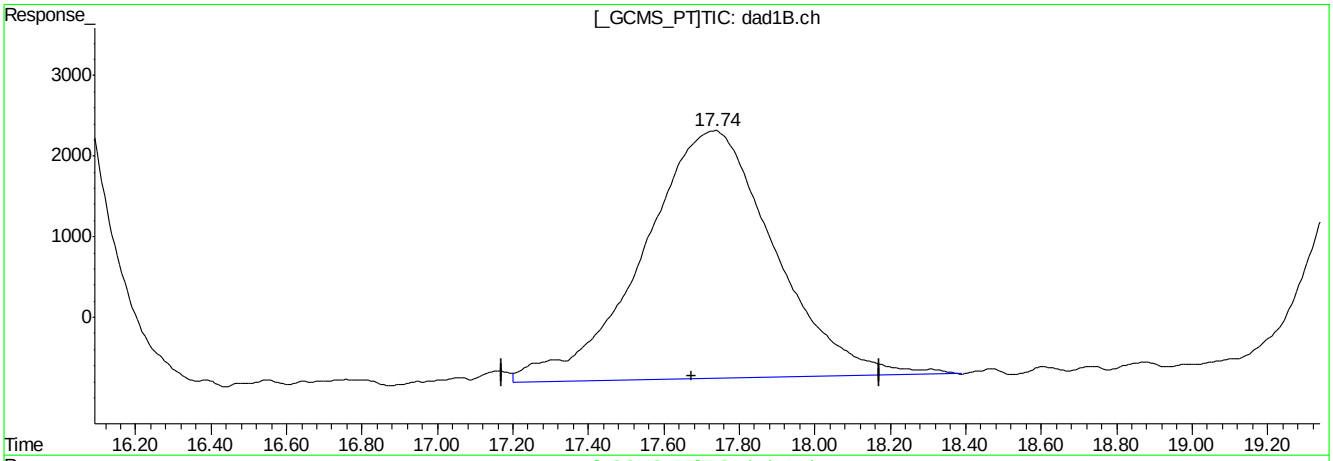
response 1113947

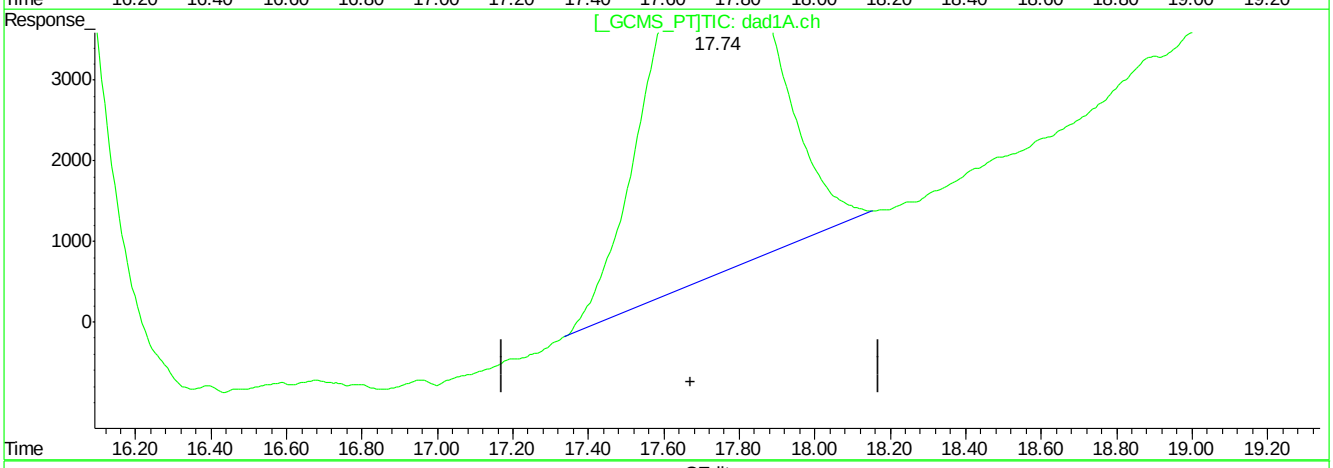
(+) = Expected Retention Time
GG620656.D 8330RPB.M_010821.M Mon Feb 08 11:52:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1A.ch
Acq On : 05-Feb-2021, 16:17:25 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.74min 141.250ppb

response 744692

(18) 4-Amino-2,6-Dinitrotoluene #2

17.74min 117.993ppb m

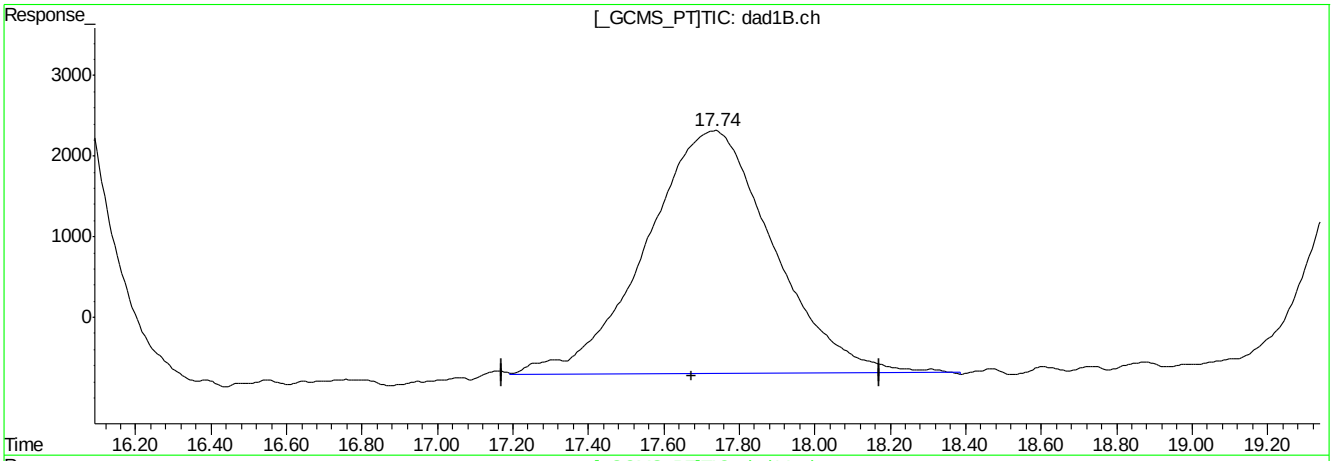
response 1128041

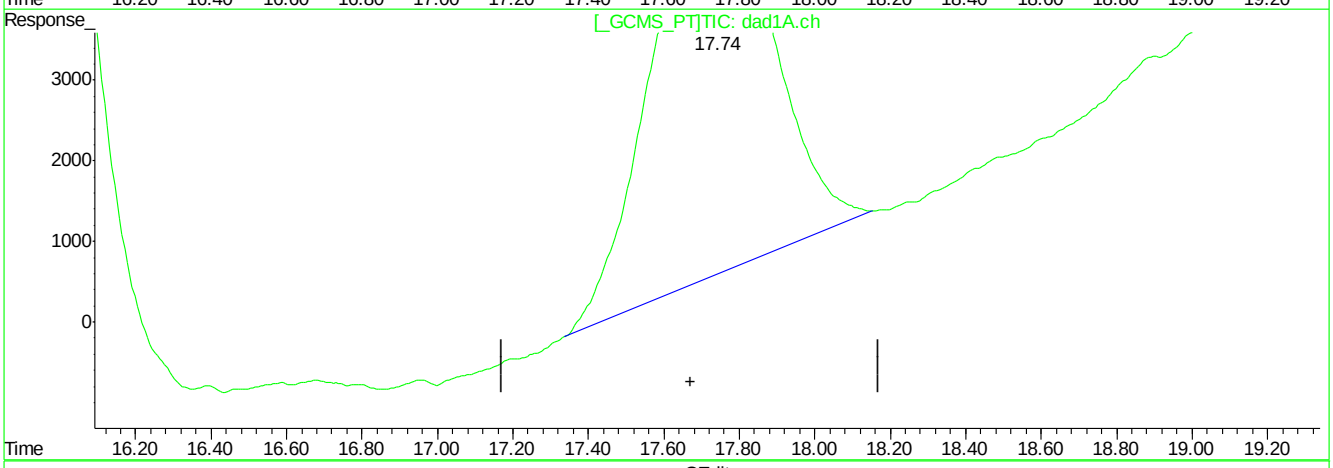
(+) = Expected Retention Time
GG620656.D 8330RPB.M_010821.M Mon Feb 08 11:52:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1A.ch
Acq On : 05-Feb-2021, 16:17:25 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.74min 133.675ppb m

response 704758

(18) 4-Amino-2,6-Dinitrotoluene #2

17.74min 117.993ppb m

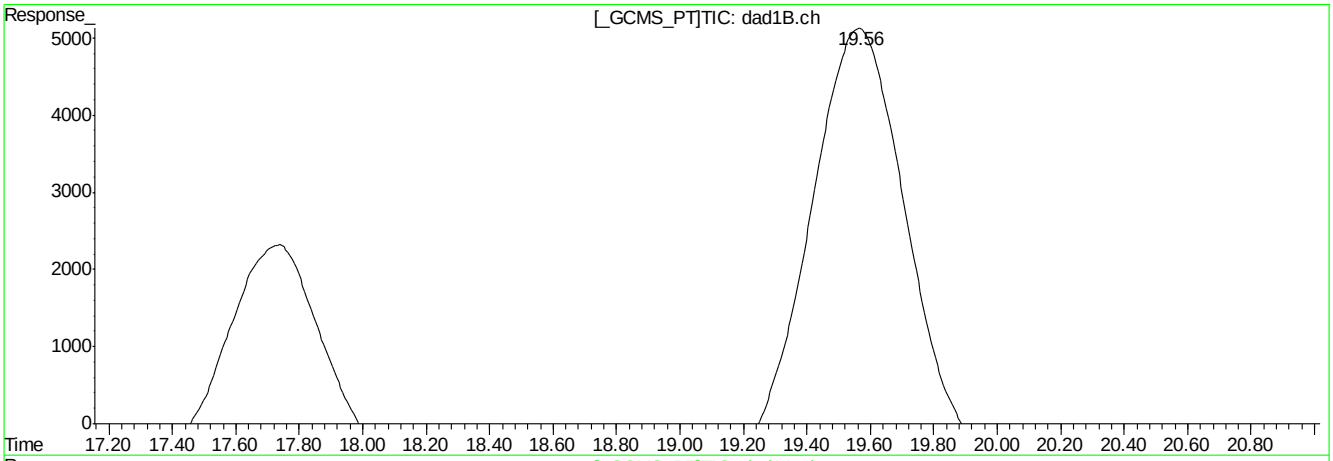
response 1128041

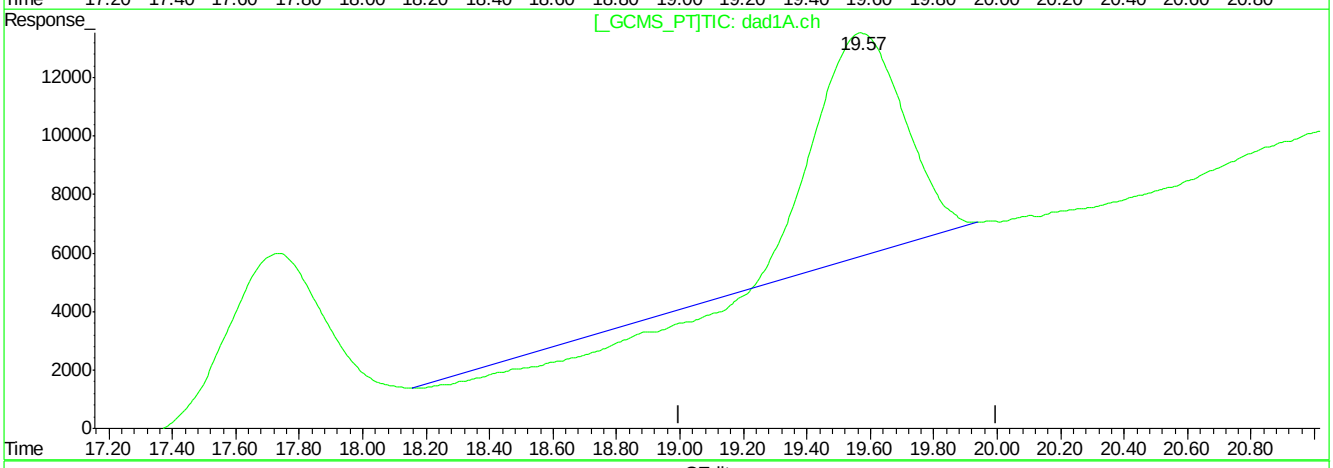
(+) = Expected Retention Time
GG620656.D 8330RPB.M_010821.M Mon Feb 08 11:52:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1A.ch
Acq On : 05-Feb-2021, 16:17:25 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.57min 128.249ppb

response 1162869

(20) 2-Amino-4,6-Dinitrotoluene #2

19.57min 101.532ppb

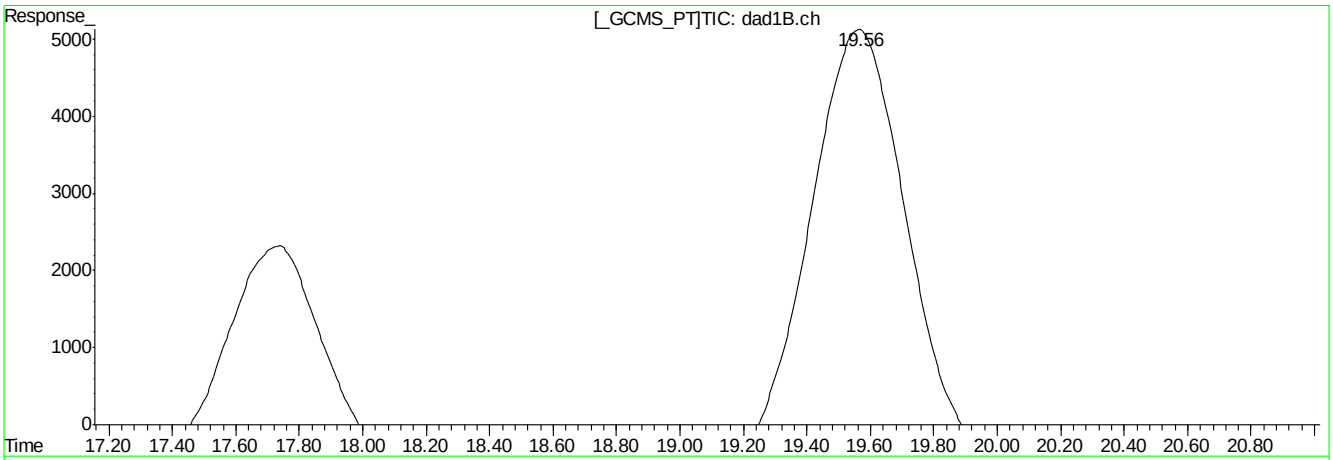
response 1252547

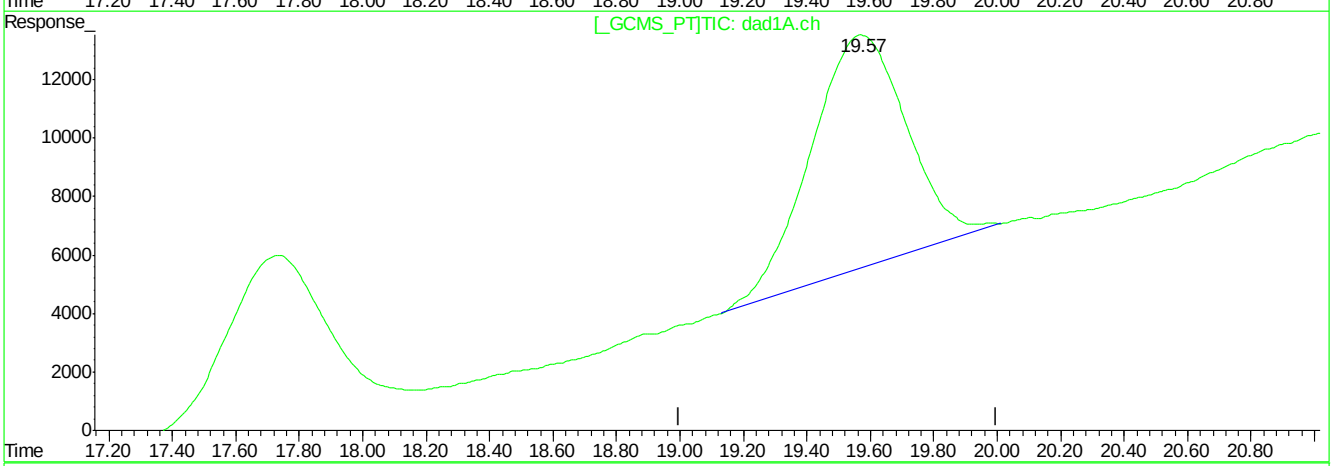
(+) = Expected Retention Time
GG620656.D 8330RPB.M_010821.M Mon Feb 08 11:52:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1A.ch
Acq On : 05-Feb-2021, 16:17:25 Operator: jamesb
Sample : FA82653-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.57min 128.249ppb

response 1162869

(20) 2-Amino-4,6-Dinitrotoluene #2

19.57min 136.196ppb m

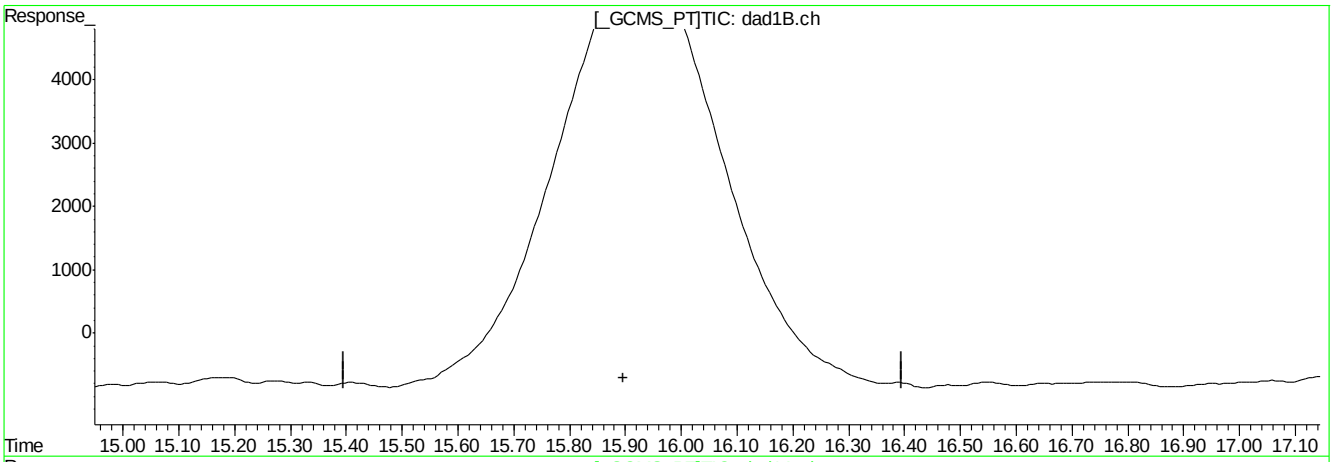
response 1680185

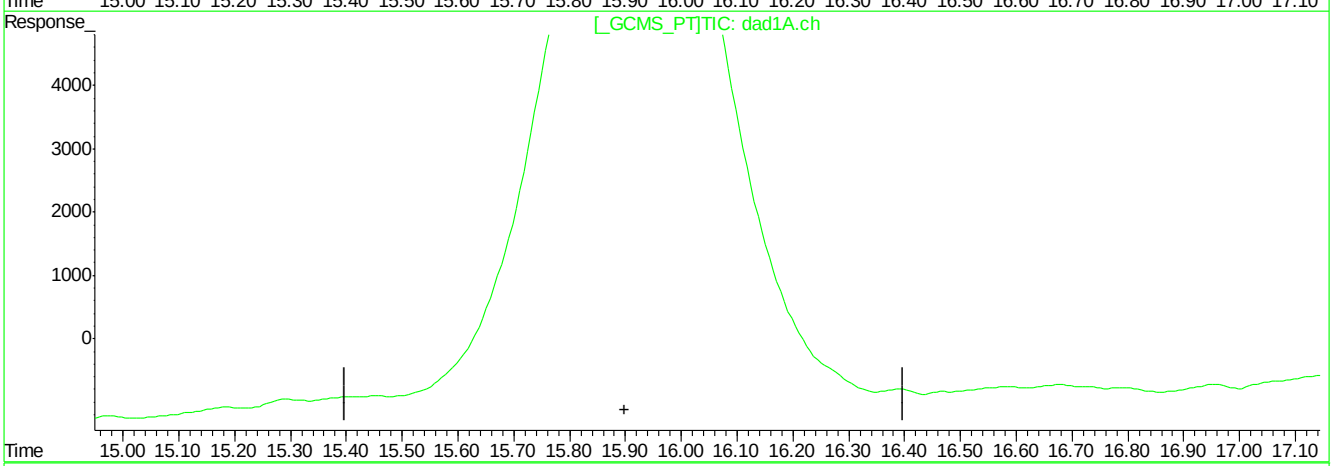
(+) = Expected Retention Time
GG620656.D 8330RPB.M_010821.M Mon Feb 08 11:52:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620656.D\dad1A.ch
Acq On : 05-Feb-2021, 16:17:25 Operator: jamesb
Sample : FA82653-1cf Inst : G1315B
Misc : op83930,GGG2934,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:52 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,5-Dinitroaniline

0.00min 0.000ppb d

response 0

(15) 3,5-Dinitroaniline #2

0.00min 0.000ppb d

response 0

(+) = Expected Retention Time
GG620656.D 8330RPB.M_010821.M Mon Feb 08 12:06:47 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:09

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389801.D\dad1B.ch Vial: 20
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389801.D\dad1A.ch
Acq On : 05-Feb-2021, 20:00:19 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : op83930,GPP2402,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 08 08:01:03 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.51	11.51	1614646	1913885	659.145	443.020
	Spiked Amount 500.000	Range 70 - 136		Recovery =		131.83%	88.60%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.49	1.49	617249	1751484	389.717	388.370
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.99	2.99	166859	285912	80.887	86.612
6)	1,3,5-Trinitrobe	4.79	4.79	4141559	8210362	930.026	970.876
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.42	6.41	206225	263133	48.169m	34.579m
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	10.16	10.16	4661167	5630043	1176.694	1181.190
13)	2-Amino-4,6-Dini	10.61	10.61	598278	678323	162.986	127.266
14)	4-Amino-2,6-Dini	11.15	11.12	448730	350099	173.729	66.772 #
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D. d	N.D.

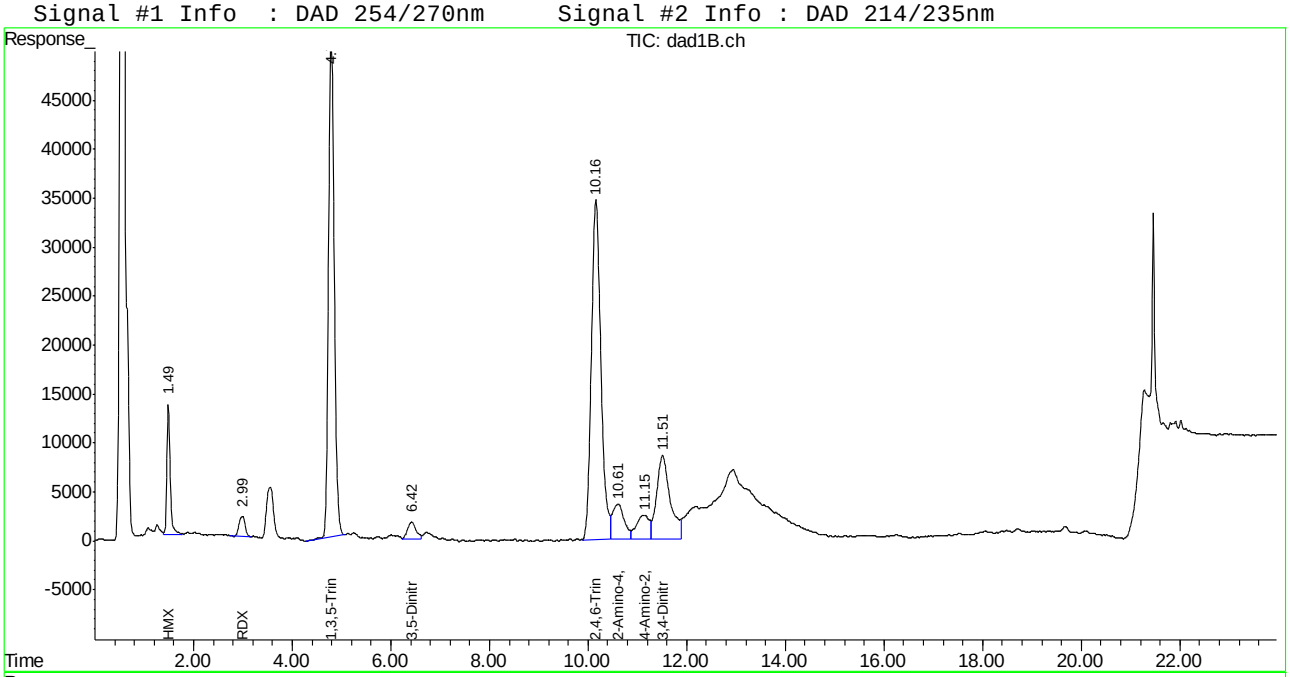
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389801.D GPP2401_020521PRI.M Mon Feb 08 10:09:54 2021 Page 1

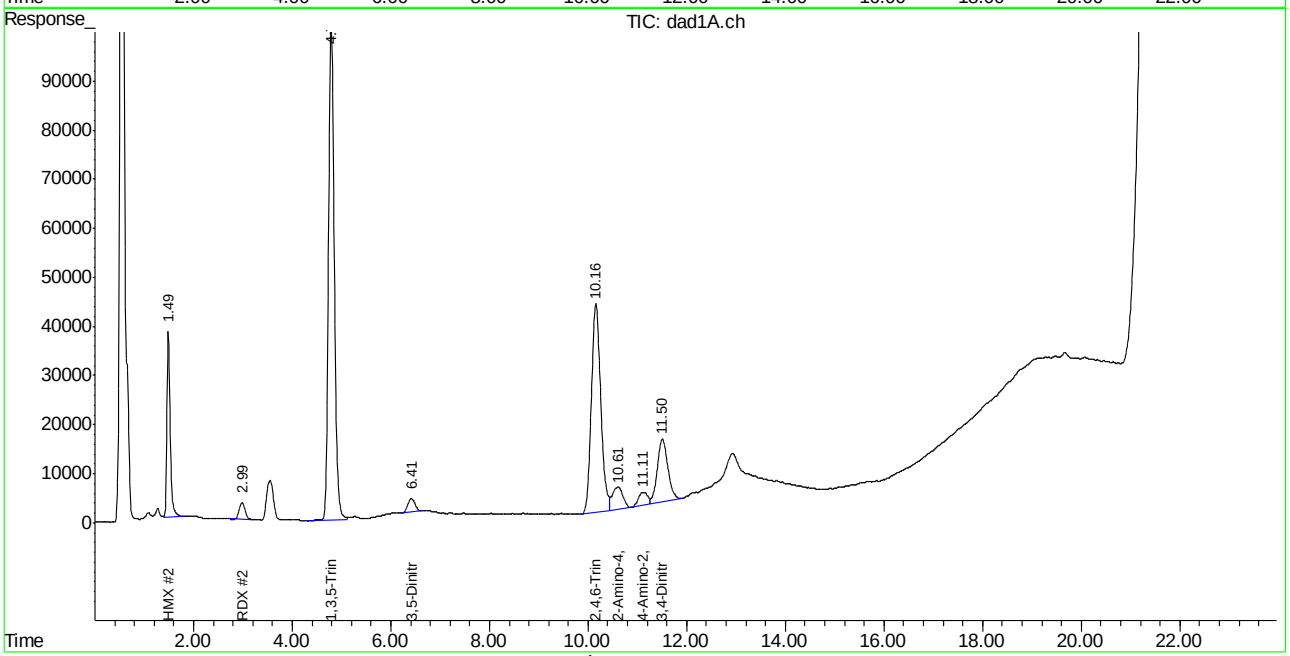
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389801.D\dad1B.ch Vial: 20
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389801.D\dad1A.ch
Acq On : 05-Feb-2021, 20:00:19 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : op83930,GPP2402,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 9:04 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

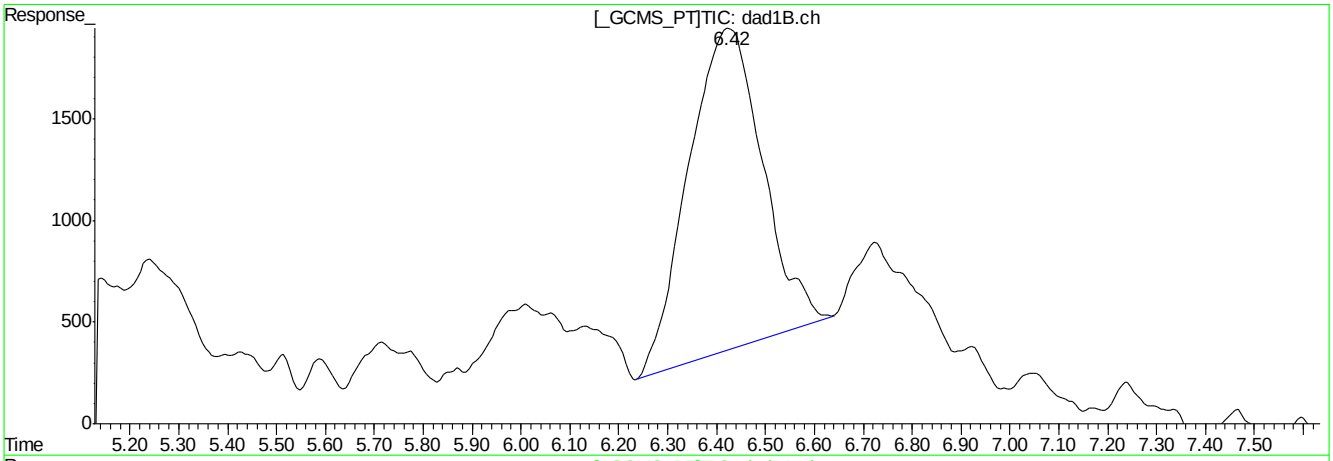
Sample Number: FA82653-2
Lab FileID: PP389801.D
Injection Time: 02/05/21 20:00
Method: SW846 8330B
Analyst approved: 02/08/21 12:10 James Boone
Supervisor approved: 02/08/21 13:09 Naresh Jiawan

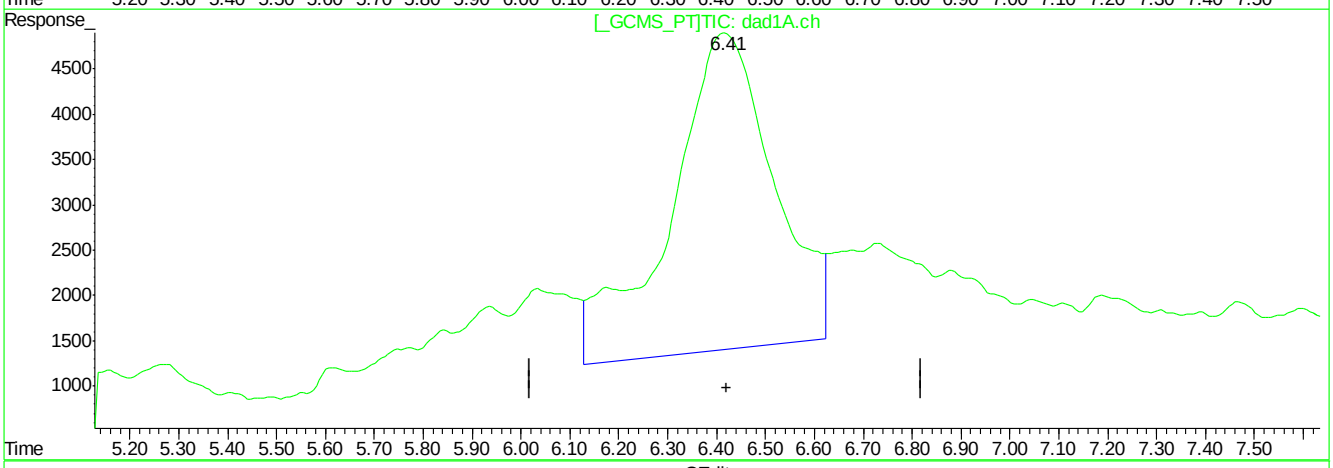
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,5-Dinitroaniline	618-87-1	2	6.41	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.42	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389801.D\dad1B.ch Vial: 20
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389801.D\dad1A.ch
Acq On : 05-Feb-2021, 20:00:19 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.43min 38.956ppb

response 166783

(8) 3,5-Dinitroaniline #2

6.42min 67.345ppb

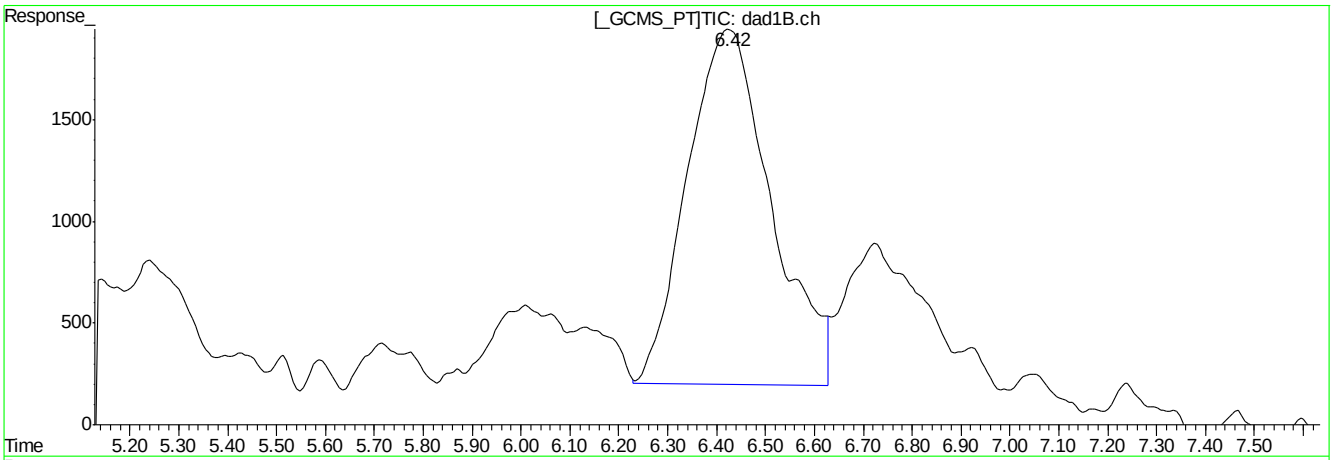
response 512473

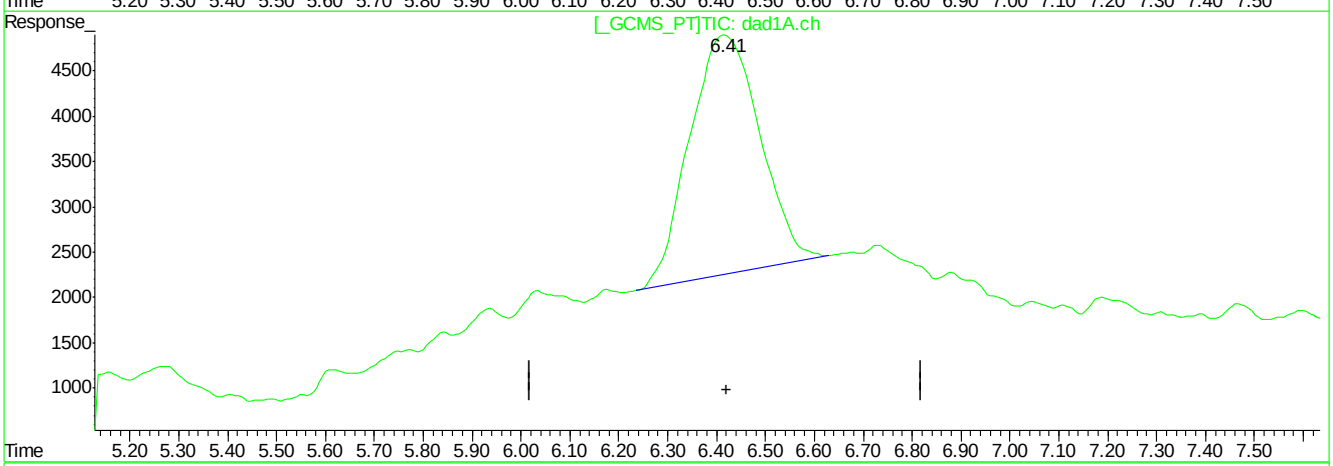
(+) = Expected Retention Time
PP389801.D GPP2401_020521PRI.M Mon Feb 08 09:03:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389801.D\dad1B.ch Vial: 20
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389801.D\dad1A.ch
Acq On : 05-Feb-2021, 20:00:19 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.42min 48.169ppb m

response 206225

(8) 3,5-Dinitroaniline #2

6.41min 34.579ppb m

response 263133

(+) = Expected Retention Time
PP389801.D GPP2401_020521PRI.M Mon Feb 08 09:03:58 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:09

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1A.ch
Acq On : 05-Feb-2021, 16:48:49 Operator: jamesb
Sample : FA82653-2cf Inst : G1315B
Misc : op83930,GGG2934,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 08 11:30:20 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.21	14.22	2775963	5283455	521.186	484.893
	Spiked Amount 500.000	Range 70 - 136		Recovery =		104.24%	96.98%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.29	5.29	1406889	1406889	441.885	441.885
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.65	7.65	9564727	9512830	974.985m	969.778m
6)	RDX	7.86	7.85	509825	525998	120.070m	123.878m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.89	11.89	10980290	14504631	1209.531	1190.635
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.95	15.94	1431959	2434116	144.557	155.143
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.75	17.76	793851	1317229	150.574	137.782m
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.59	19.61	1291133	1769505	142.395m	143.437m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

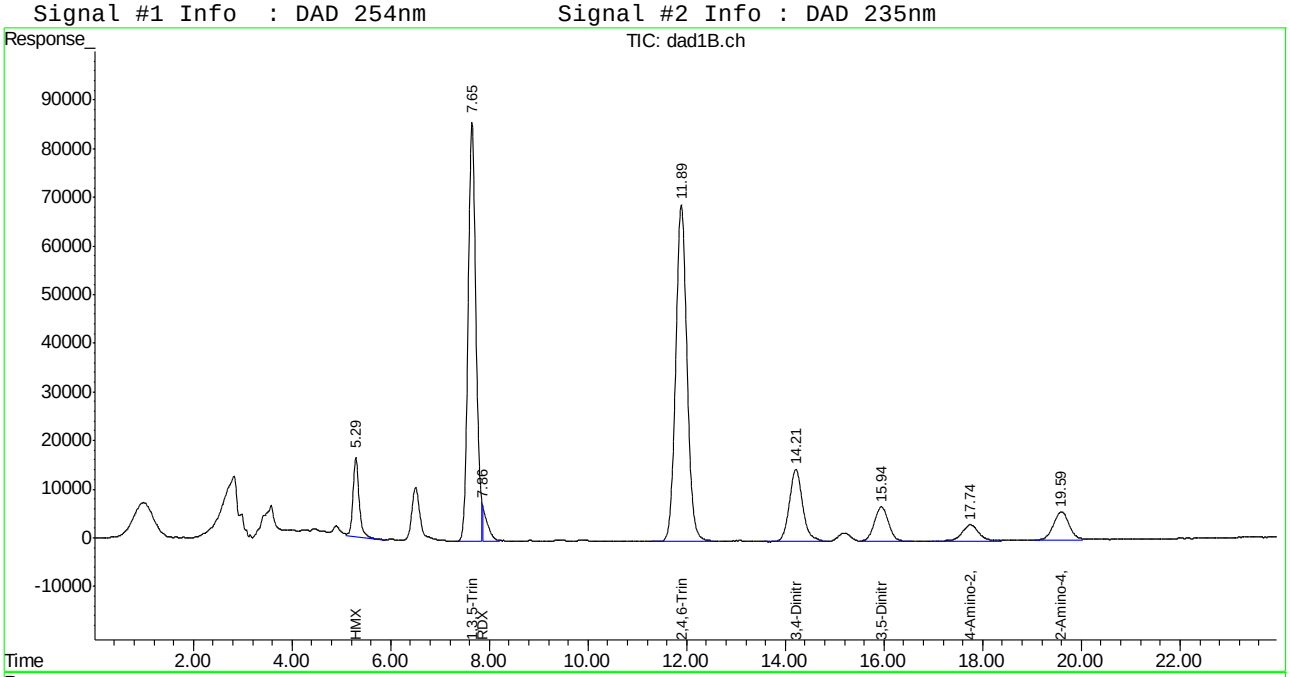
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620657.D 8330RPB.M_010821.M Mon Feb 08 12:03:05 2021 Page 1

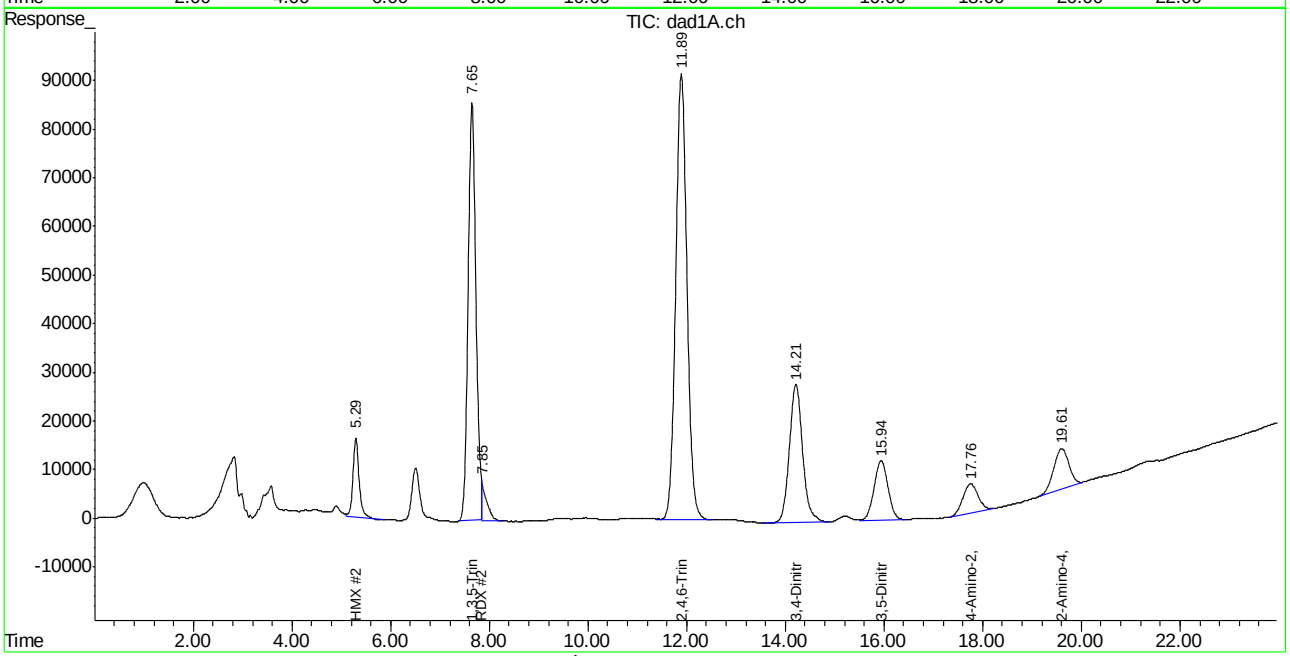
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1A.ch
Acq On : 05-Feb-2021, 16:48:49 Operator: jamesb
Sample : FA82653-2cf Inst : G1315B
Misc : op83930,GGG2934,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:55 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

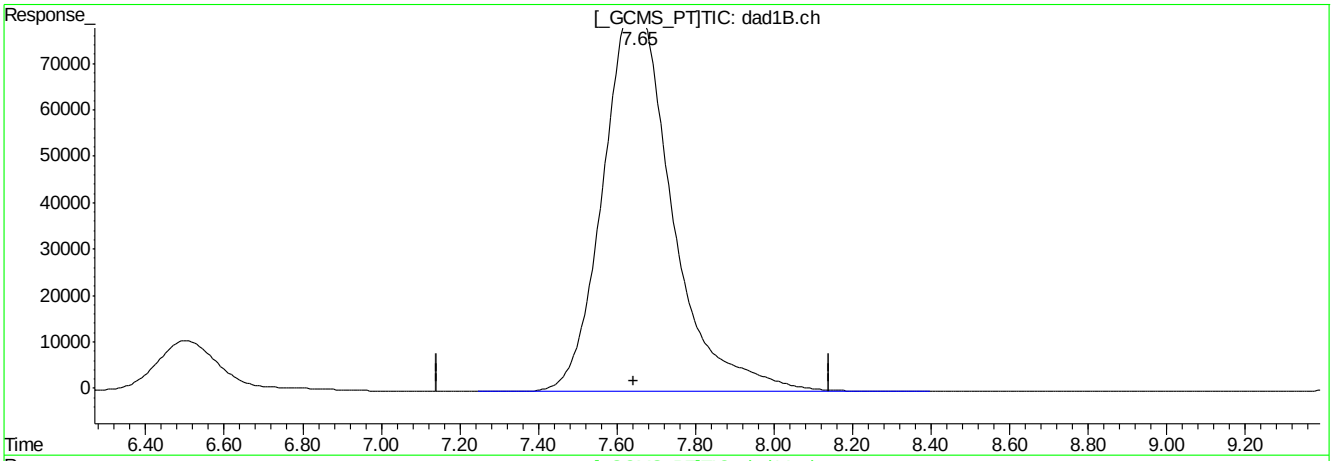
Sample Number: FA82653-2
Lab FileID: GG620657.D
Injection Time: 02/05/21 16:48
Method: SW846 8330B
Analyst approved: 02/08/21 12:10 James Boone
Supervisor approved: 02/08/21 13:09 Naresh Jiawan

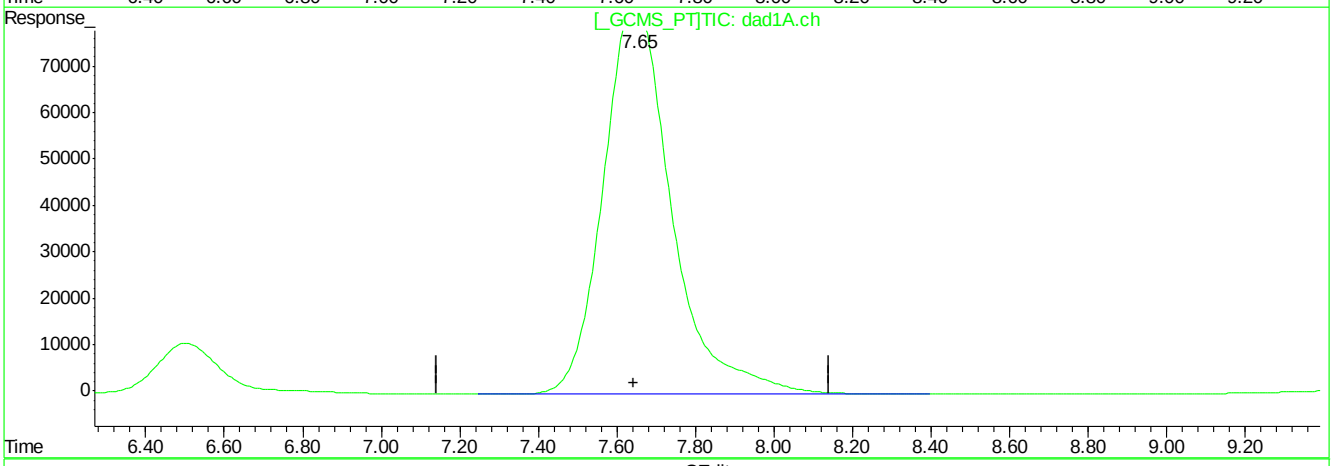
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	1	7.65	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.65	Poor instrument integration
RDX	121-82-4	2	7.85	Poor instrument integration
RDX	121-82-4	1	7.86	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.76	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	19.59	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.61	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1A.ch
Acq On : 05-Feb-2021, 16:48:49 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.65min 1036.117ppb

response 10164437

(5) 1,3,5-Trinitrobenzene #2

7.65min 1036.206ppb

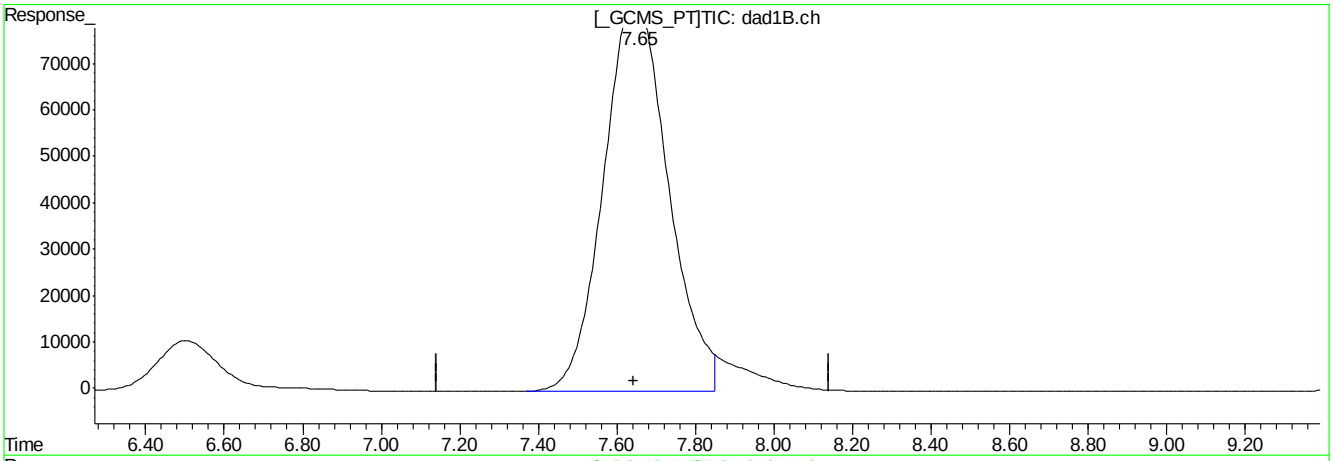
response 10164437

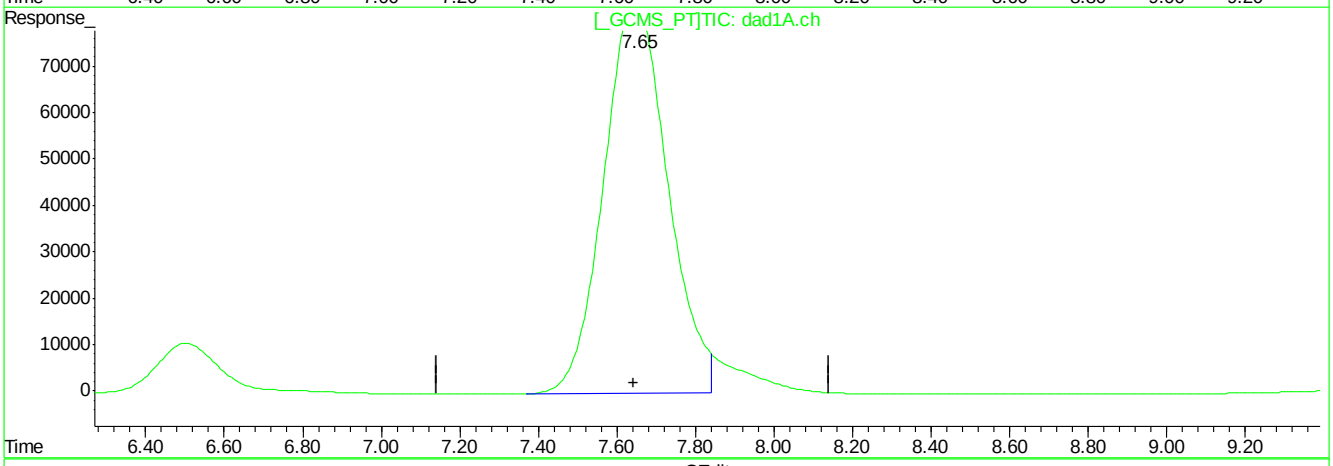
(+) = Expected Retention Time
GG620657.D 8330RPB.M_010821.M Mon Feb 08 11:54:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1A.ch
Acq On : 05-Feb-2021, 16:48:49 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.65min 974.985ppb m

response 9564727

(5) 1,3,5-Trinitrobenzene #2

7.65min 969.778ppb m

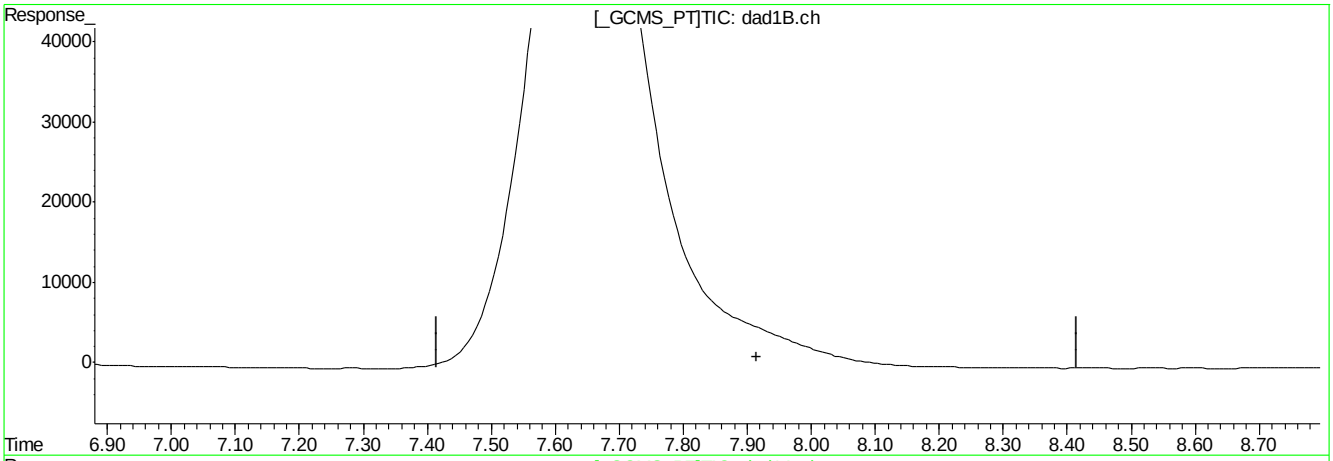
response 9512830

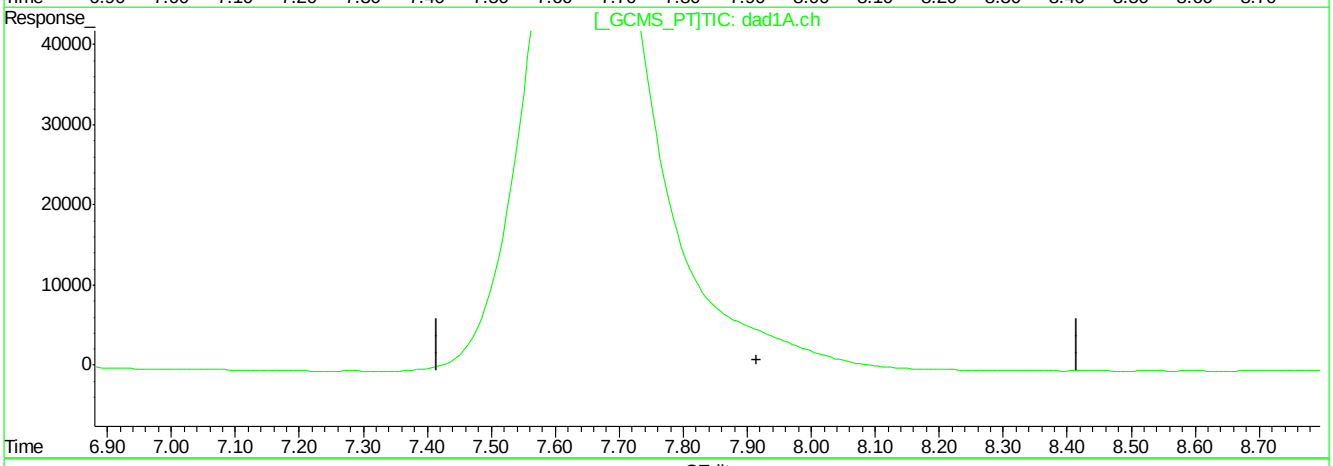
(+) = Expected Retention Time
GG620657.D 8330RPB.M_010821.M Mon Feb 08 11:54:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1A.ch
Acq On : 05-Feb-2021, 16:48:49 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

0.00min 0.000ppb

response 0

(6) RDX #2

0.00min 0.000ppb

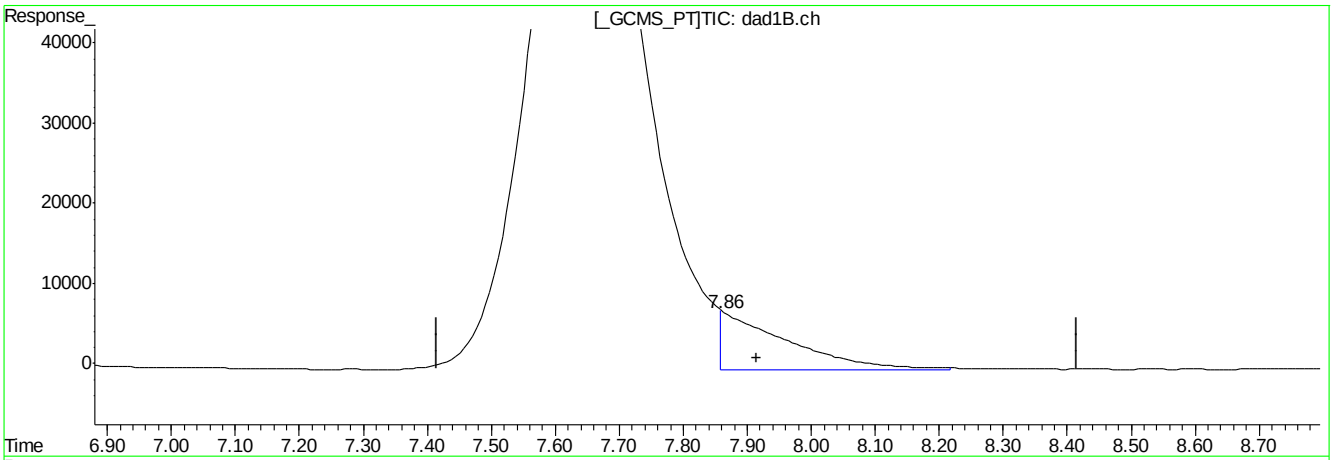
response 0

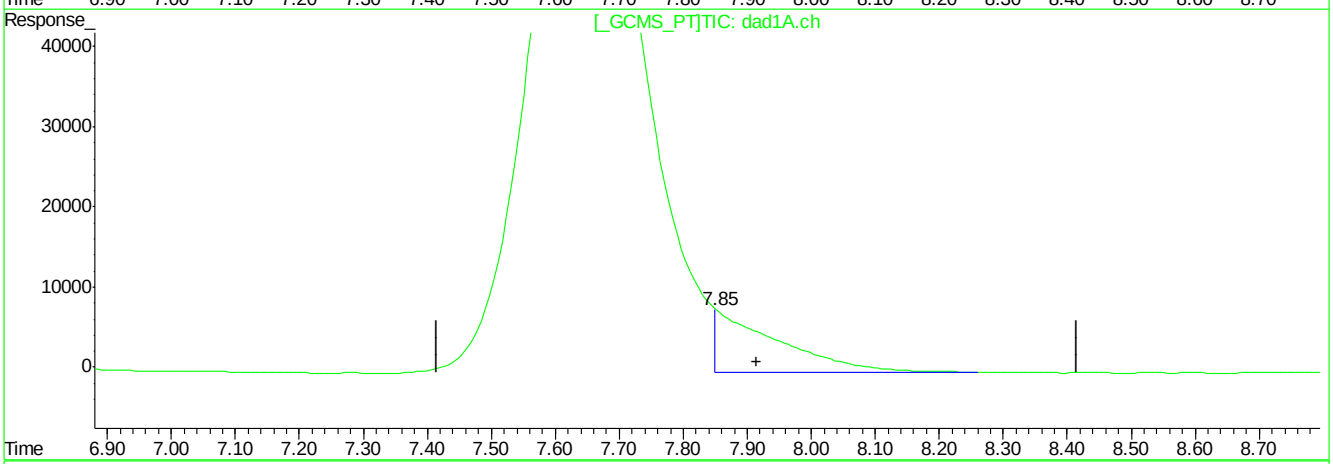
(+) = Expected Retention Time
GG620657.D 8330RPB.M_010821.M Mon Feb 08 11:54:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1A.ch
Acq On : 05-Feb-2021, 16:48:49 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.86min 120.070ppb m

response 509825

(6) RDX #2

7.85min 123.878ppb m

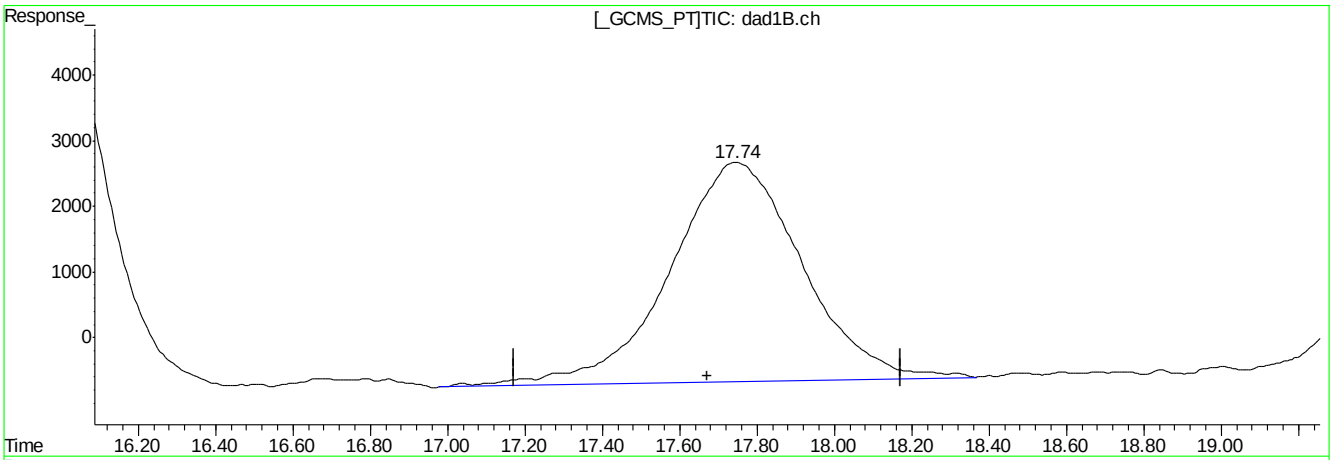
response 525998

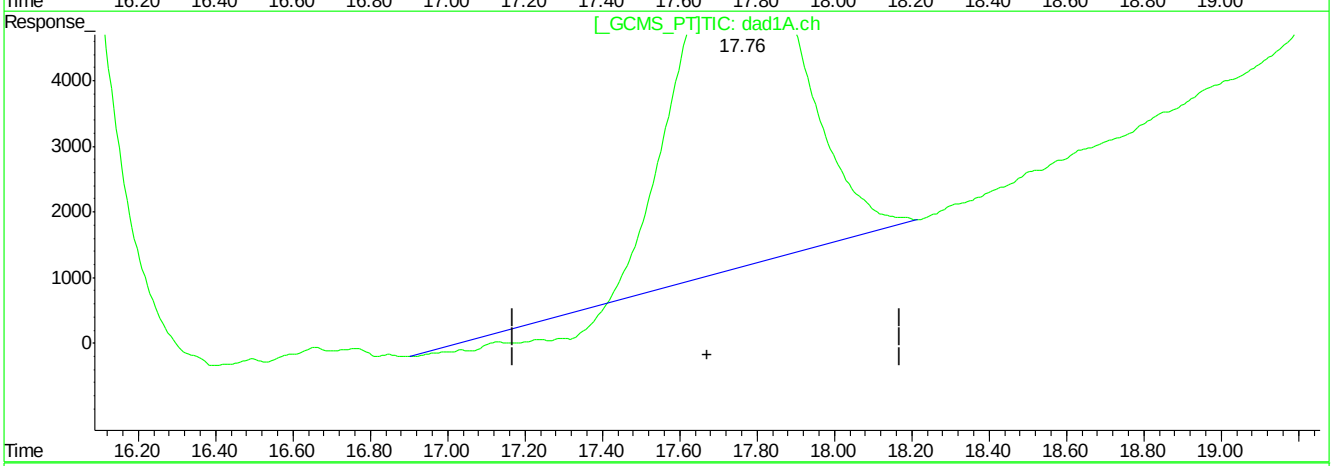
(+) = Expected Retention Time
GG620657.D 8330RPB.M_010821.M Mon Feb 08 11:55:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1A.ch
Acq On : 05-Feb-2021, 16:48:49 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.75min 150.574ppb

response 793851

(18) 4-Amino-2,6-Dinitrotoluene #2

17.76min 122.236ppb

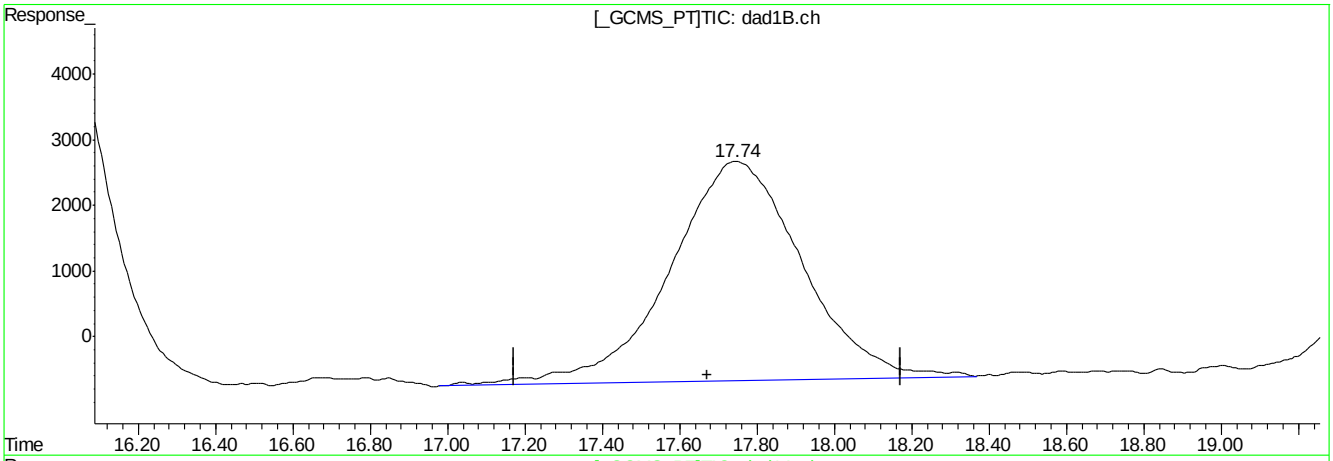
response 1168606

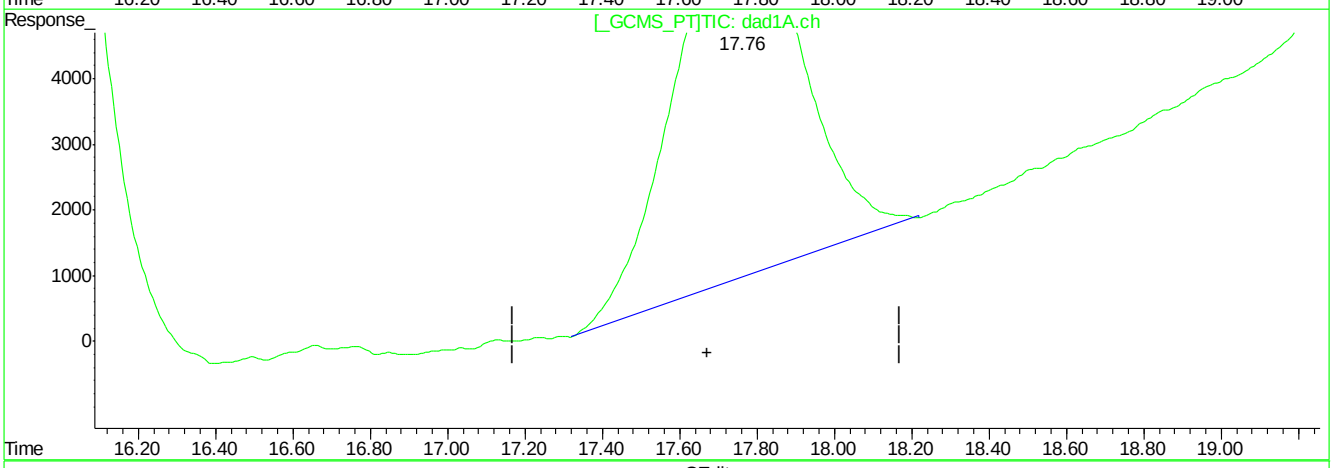
(+) = Expected Retention Time
GG620657.D 8330RPB.M_010821.M Mon Feb 08 11:55:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1A.ch
Acq On : 05-Feb-2021, 16:48:49 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.75min 150.574ppb

response 793851

(18) 4-Amino-2,6-Dinitrotoluene #2

17.76min 137.782ppb m

response 1317229

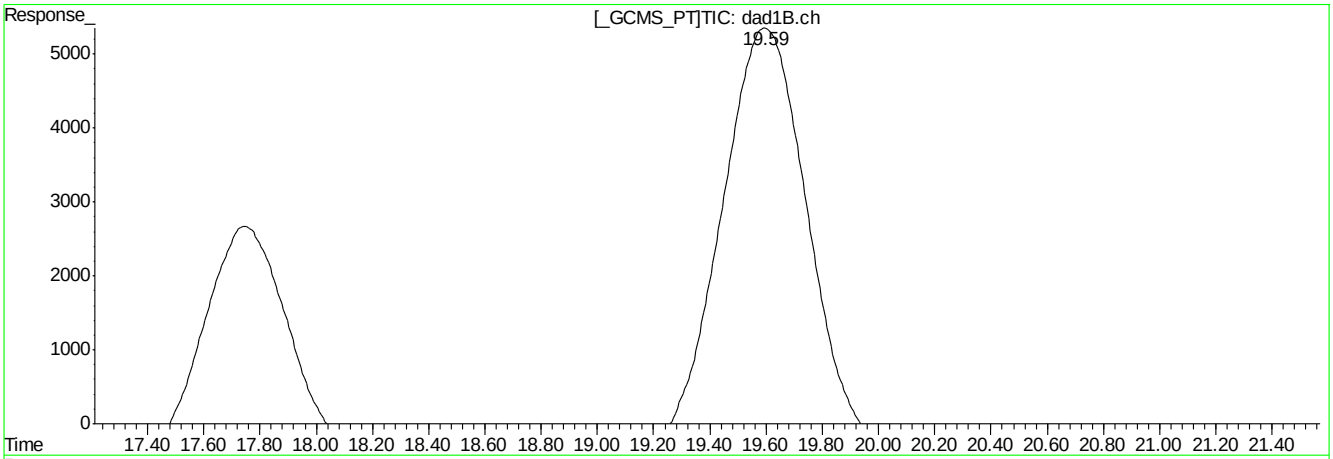
(+) = Expected Retention Time
GG620657.D 8330RPB.M_010821.M Mon Feb 08 11:55:33 2021

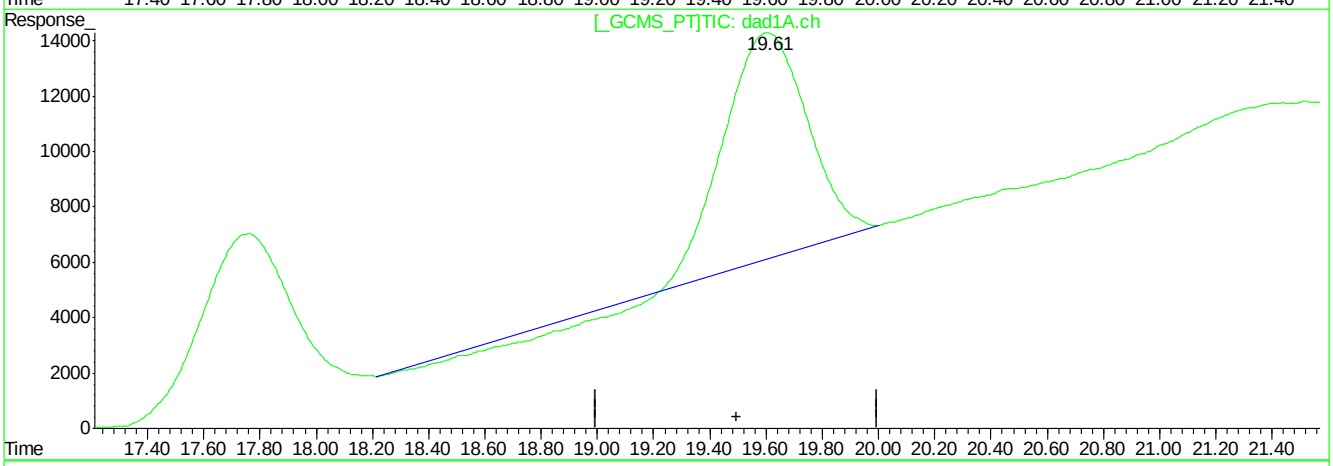
GG620657.D edits: 4-Amino-2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1A.ch
Acq On : 05-Feb-2021, 16:48:49 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.60min 149.710ppb

response 1357456

(20) 2-Amino-4,6-Dinitrotoluene #2

19.61min 125.452ppb

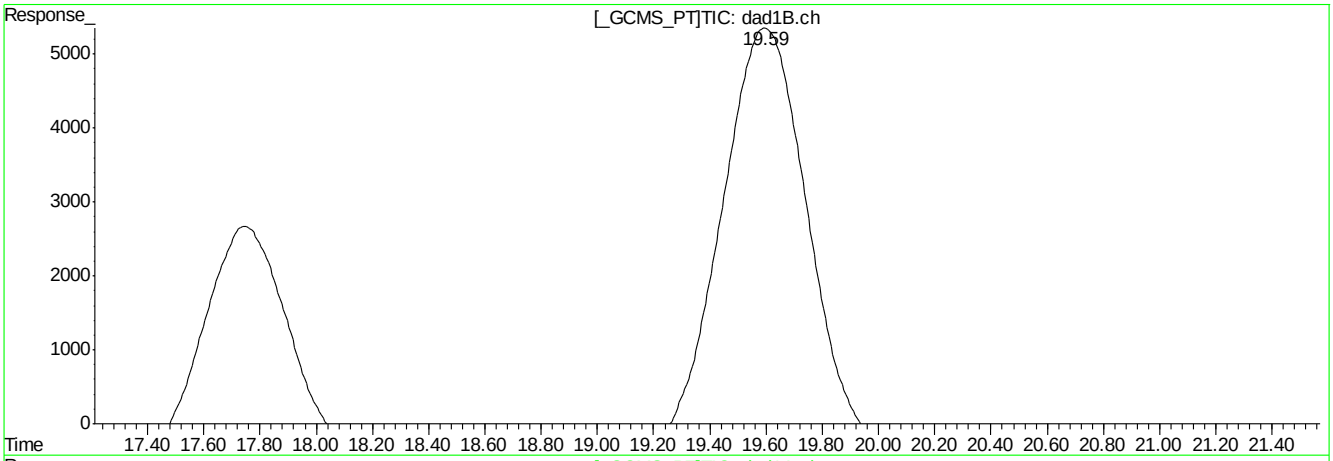
response 1547639

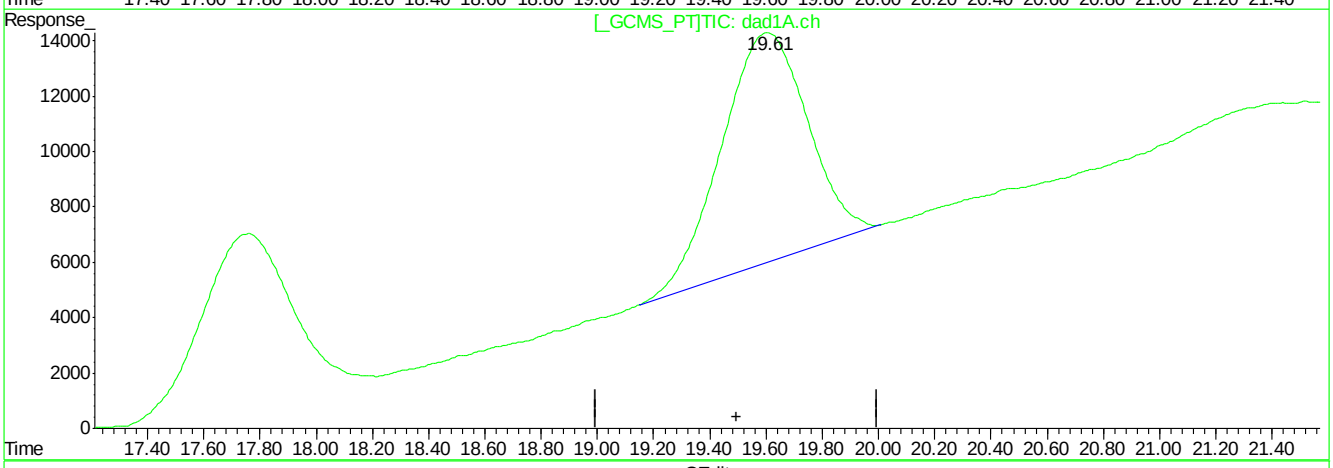
(+) = Expected Retention Time
GG620657.D 8330RPB.M_010821.M Mon Feb 08 11:55:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1A.ch
Acq On : 05-Feb-2021, 16:48:49 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.60min 149.710ppb

response 1357456

(20) 2-Amino-4,6-Dinitrotoluene #2

19.61min 143.437ppb m

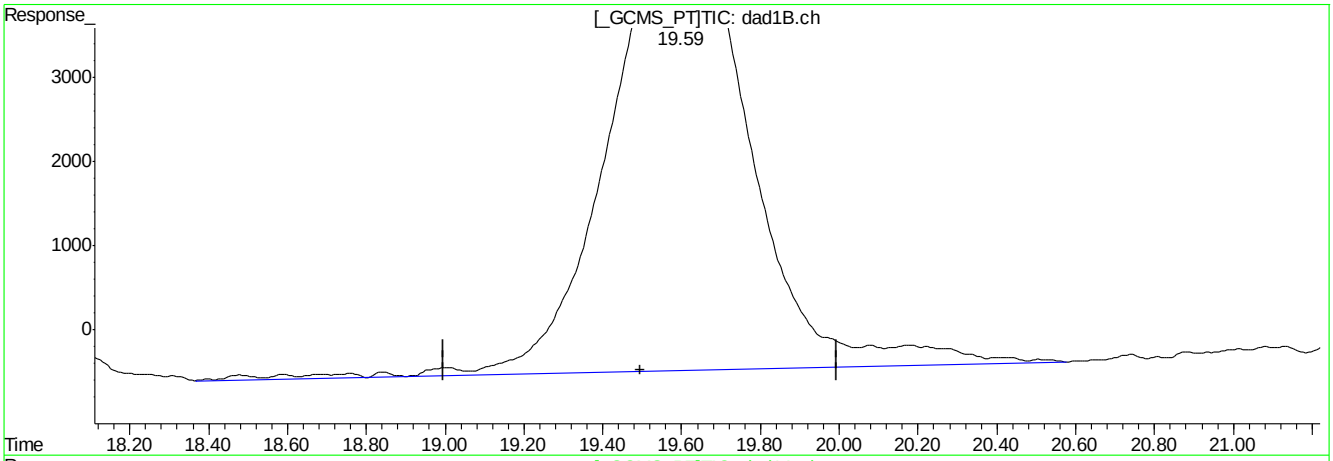
response 1769505

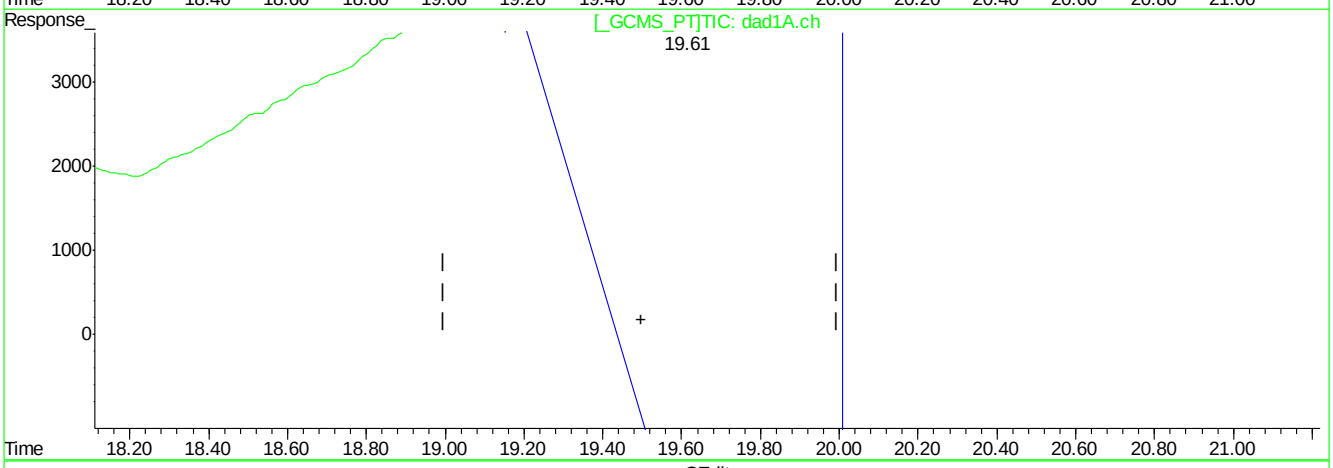
(+) = Expected Retention Time
GG620657.D 8330RPB.M_010821.M Mon Feb 08 11:55:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1A.ch
Acq On : 05-Feb-2021, 16:48:49 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.60min 149.710ppb

response 1357456

(20) 2-Amino-4,6-Dinitrotoluene #2

19.61min 143.437ppb m

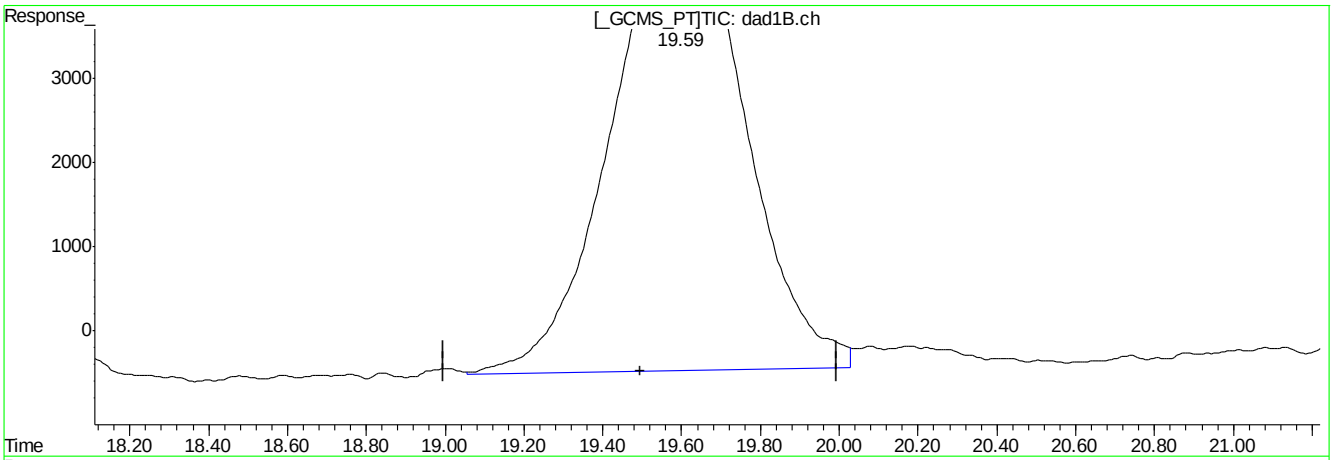
response 1769505

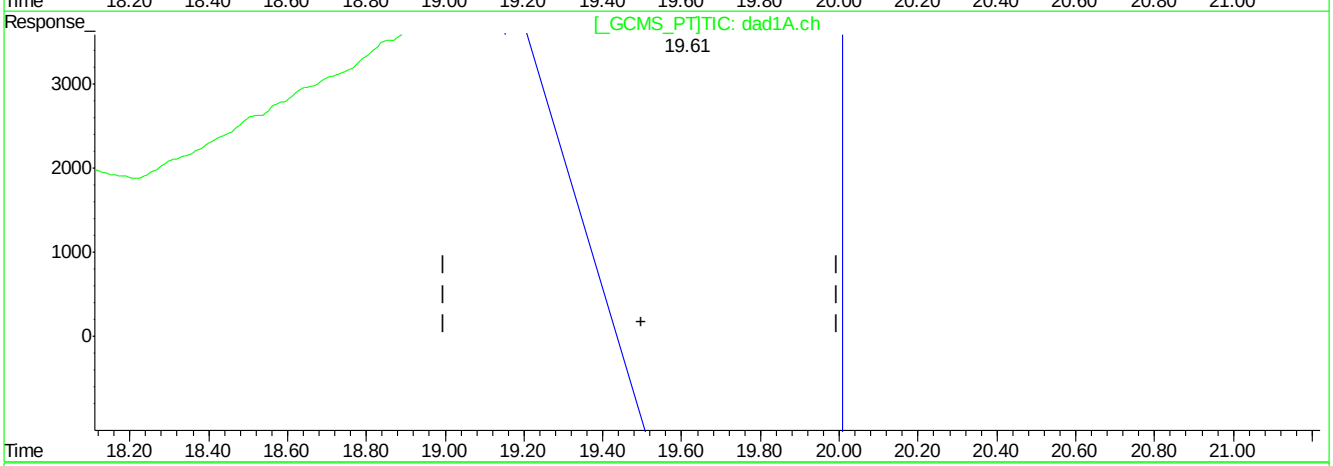
(+) = Expected Retention Time
GG620657.D 8330RPB.M_010821.M Mon Feb 08 11:55:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620657.D\dad1A.ch
Acq On : 05-Feb-2021, 16:48:49 Operator: jamesb
Sample : FA82653-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.59min 142.395ppb m

response 1291133

(20) 2-Amino-4,6-Dinitrotoluene #2

19.61min 143.437ppb m

response 1769505

(+) = Expected Retention Time
GG620657.D 8330RPB.M_010821.M Mon Feb 08 11:55:55 2021

GG620657.D edits: 2-Amino-4,6-Dinitrotoluene

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:13

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389802.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389802.D\dad1A.ch
Acq On : 05-Feb-2021, 20:31:20 Operator: jamesb
Sample : FA82653-3 Inst : G1315B
Misc : op83930,GPP2402,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 08 08:01:04 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.50	11.50	1243055	2170510	507.451m	502.504
	Spiked Amount 500.000	Range 70 - 136		Recovery =		101.49%	100.50%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.49	1.49	1162926	3307339	737.933	737.712
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.99	2.99	1259700	2027097	610.660	618.262
6)	1,3,5-Trinitrobe	4.79	4.79	6374388	12258852	1431.428	1449.610
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.43	6.41	443957	597202	103.698m	78.480m
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	10.16	10.16	16547151	20009002	4177.267	4197.913
13)	2-Amino-4,6-Dini	10.58	10.60	1365589	1619428	372.021	303.743
14)	4-Amino-2,6-Dini	11.12	11.12	1158424	1296004	448.492	247.442 #
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	18.69	0.00	196671	0	NoCal	N.D.

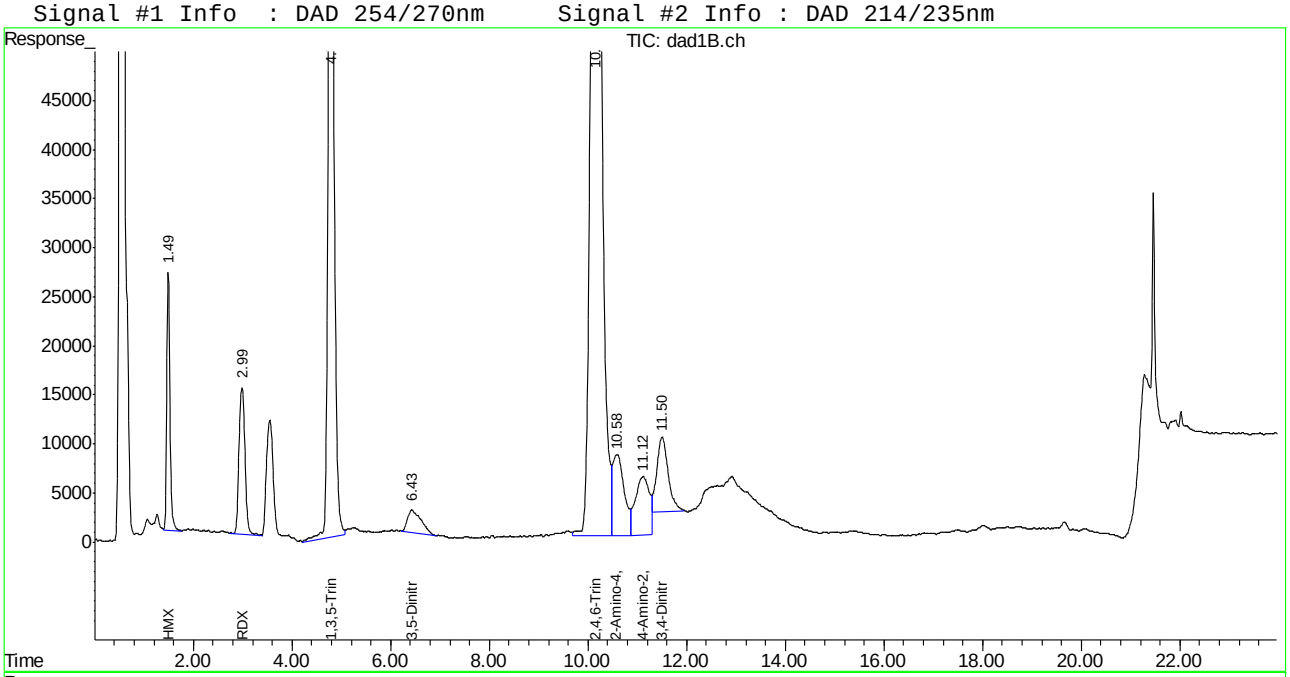
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389802.D GPP2401_020521PRI.M Mon Feb 08 13:11:19 2021 Page 1

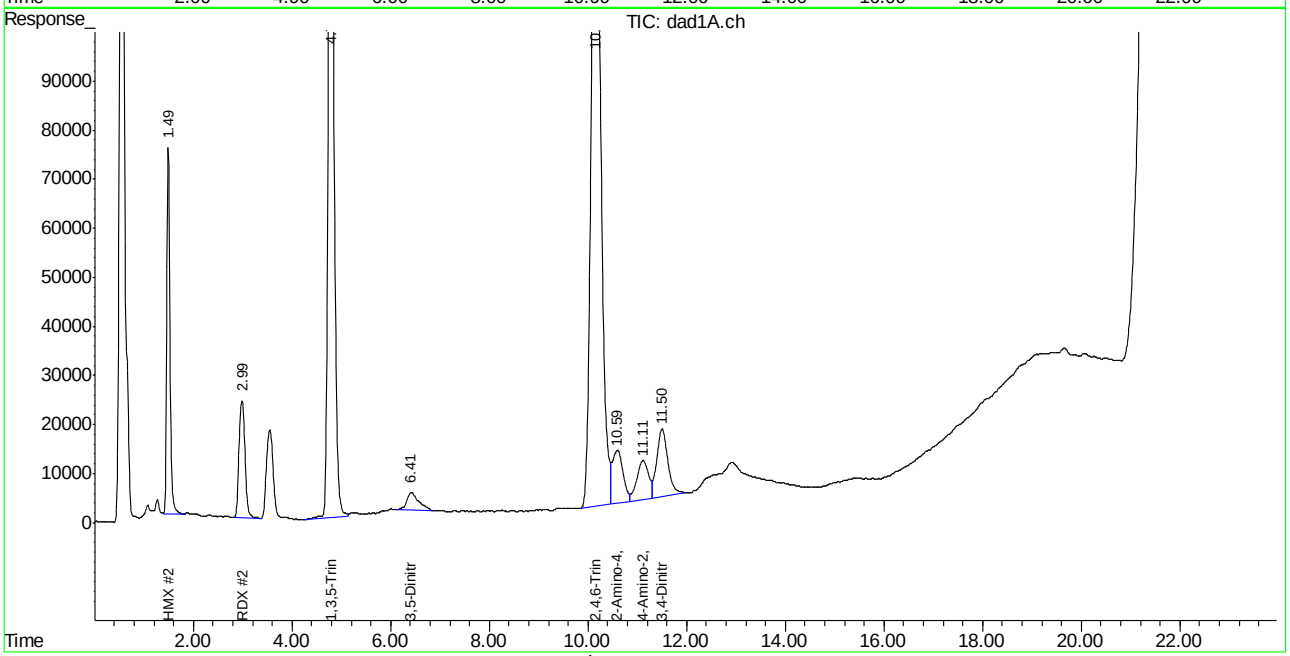
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389802.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389802.D\dad1A.ch
Acq On : 05-Feb-2021, 20:31:20 Operator: jamesb
Sample : FA82653-3 Inst : G1315B
Misc : op83930,GPP2402,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 13:11 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





PP389802.D GPP2401_020521PRI.M Mon Feb 08 13:11:20 2021 Page 2

Manual Integration Approval Summary

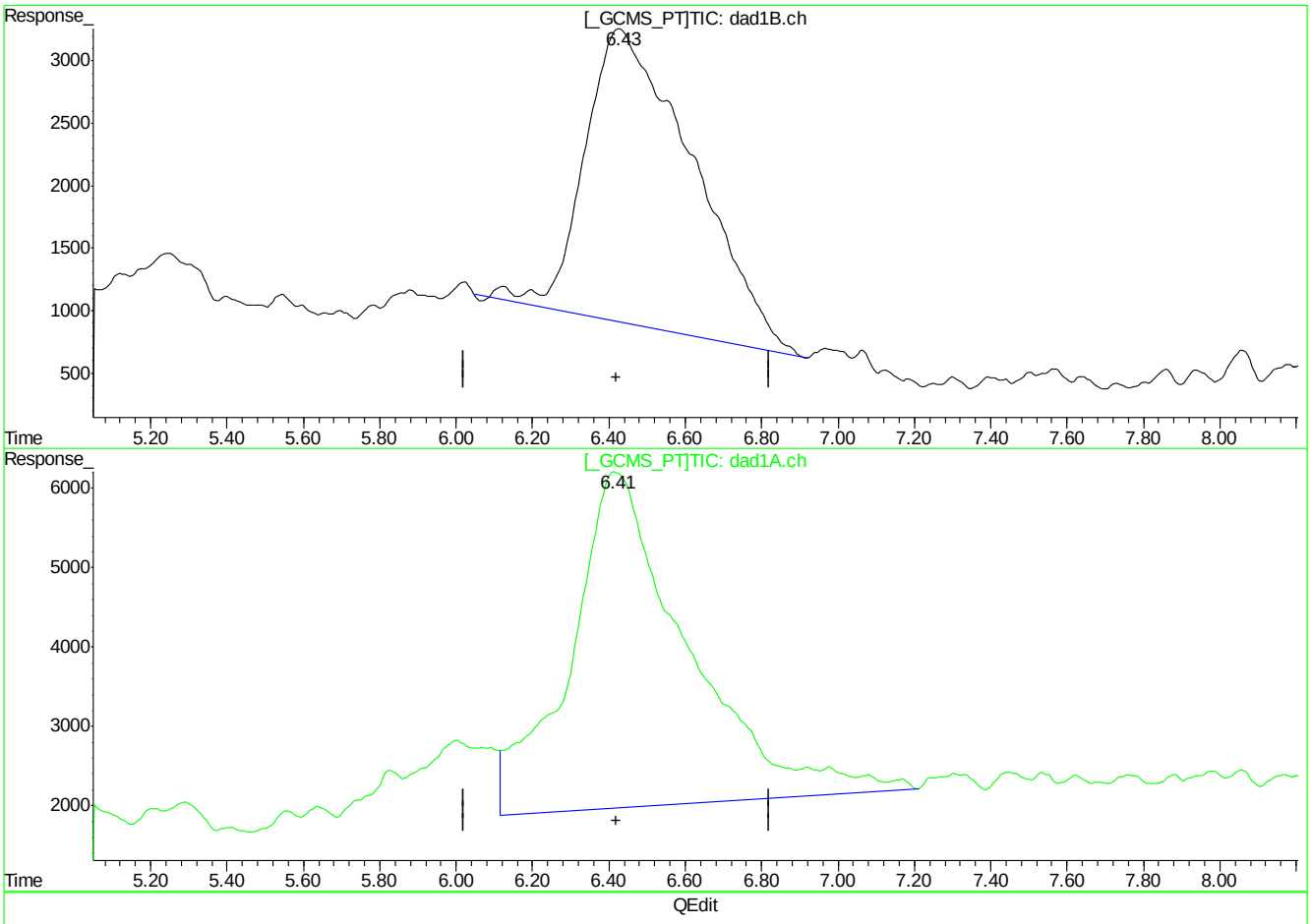
Sample Number: FA82653-3
Lab FileID: PP389802.D
Injection Time: 02/05/21 20:31
Method: SW846 8330B
Analyst approved: 02/08/21 12:10 James Boone
Supervisor approved: 02/08/21 13:13 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
3,5-Dinitroaniline	618-87-1	2	6.41	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.43	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.50	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389802.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389802.D\dad1A.ch
Acq On : 05-Feb-2021, 20:31:20 Operator: jamesb
Sample : FA82653-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.43min 108.922ppb

response 466325

(8) 3,5-Dinitroaniline #2

6.42min 119.791ppb

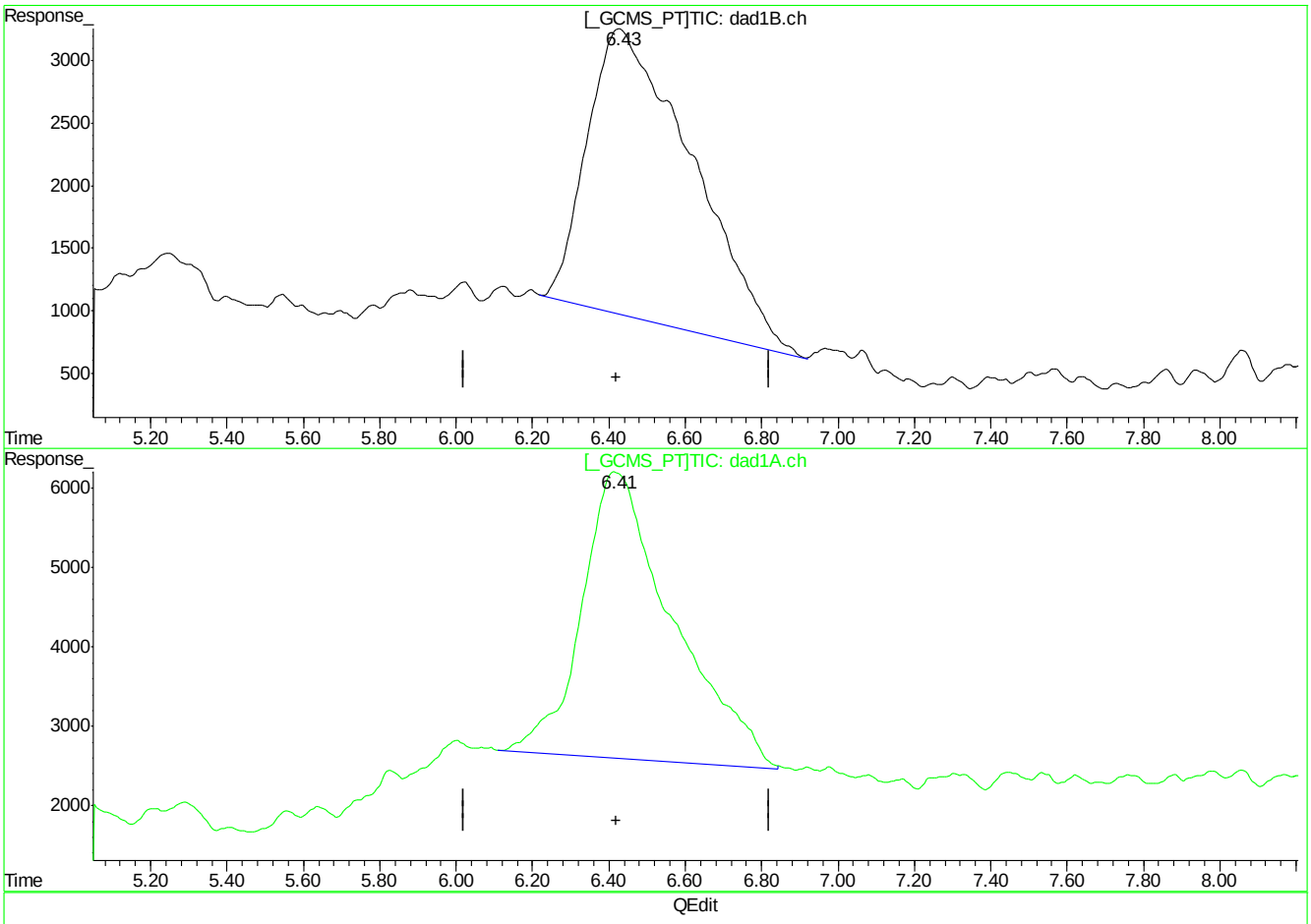
response 911570

(+) = Expected Retention Time
PP389802.D GPP2401_020521PRI.M Mon Feb 08 09:05:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389802.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389802.D\dad1A.ch
Acq On : 05-Feb-2021, 20:31:20 Operator: jamesb
Sample : FA82653-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.43min 103.698ppb m

response 443957

(8) 3,5-Dinitroaniline #2

6.41min 78.480ppb m

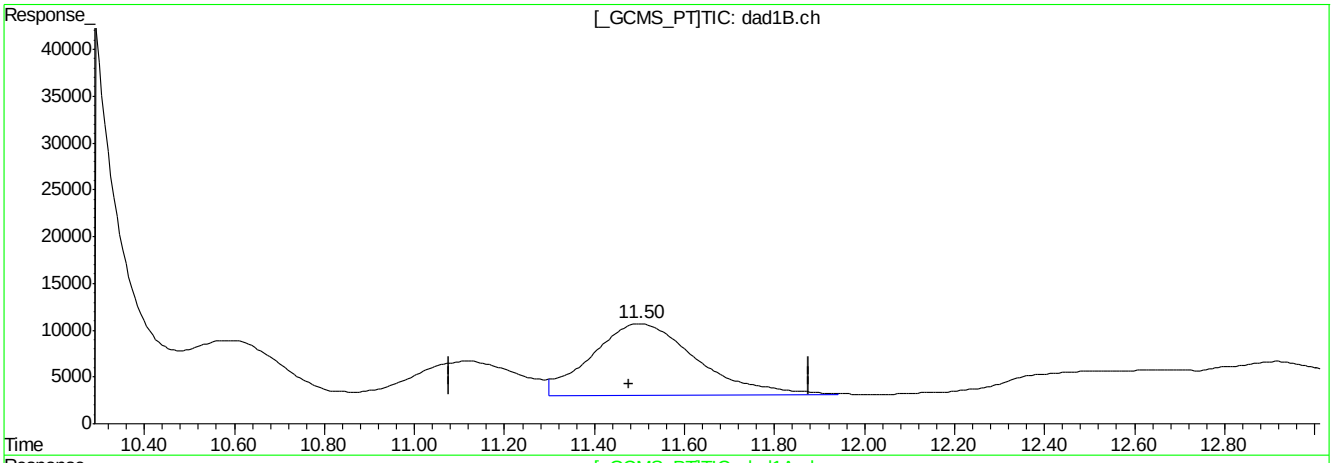
response 597202

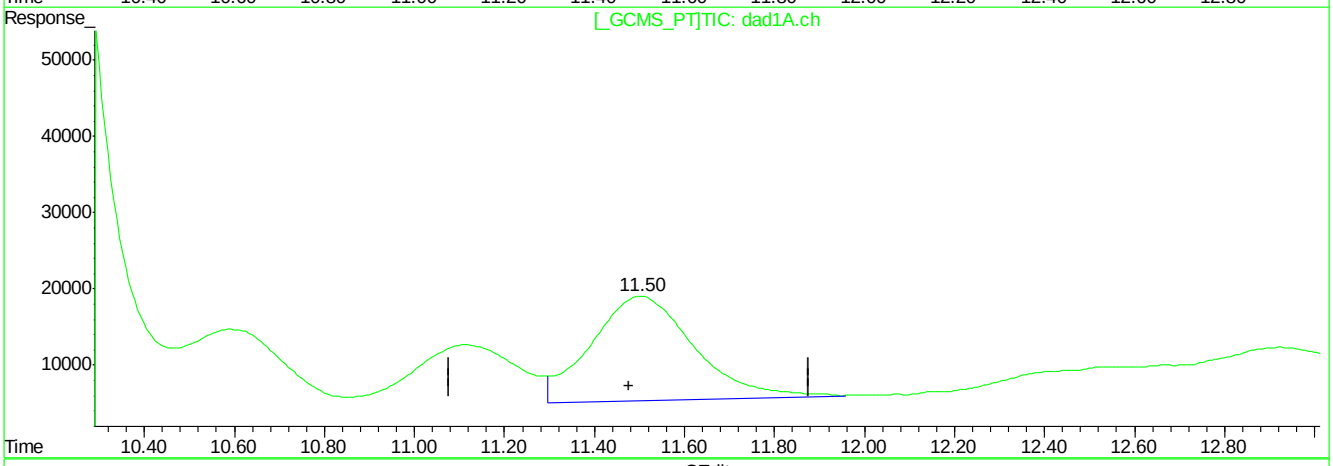
(+) = Expected Retention Time
PP389802.D GPP2401_020521PRI.M Mon Feb 08 09:05:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389802.D\dad1B.ch Vial: 21
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389802.D\dad1A.ch
Acq On : 05-Feb-2021, 20:31:20 Operator: jamesb
Sample : FA82653-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.50min 507.451ppb m

response 1243055

(15) 3,4-Dinitrotoluene #2 (S)

11.50min 502.504ppb

response 2170510

(+) = Expected Retention Time
PP389802.D GPP2401_020521PRI.M Mon Feb 08 09:05:37 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:13

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1A.ch
Acq On : 05-Feb-2021, 18:23:04 Operator: jamesb
Sample : FA82653-3cf Inst : G1315B
Misc : op83930,GGG2934,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 08 11:30:23 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.21	14.20	2681981	5181932	503.541	475.576
	Spiked Amount 500.000	Range 70 - 136		Recovery =		100.71%	95.12%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.30	5.30	2712779	2712779	852.048	852.048
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.65	7.65	14744345	14744345	1502.972	1503.101
6)	RDX	7.89	7.89	2615884	2615884	616.070	616.070
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.89	11.89	38252832	51031590	4213.732	4189.007
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.94	15.93	1027800	1918103	103.757	122.254
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.73	17.72	1564213	2705158	296.692	282.959m
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.57	19.57	2701726	3762658	297.965m	305.002m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

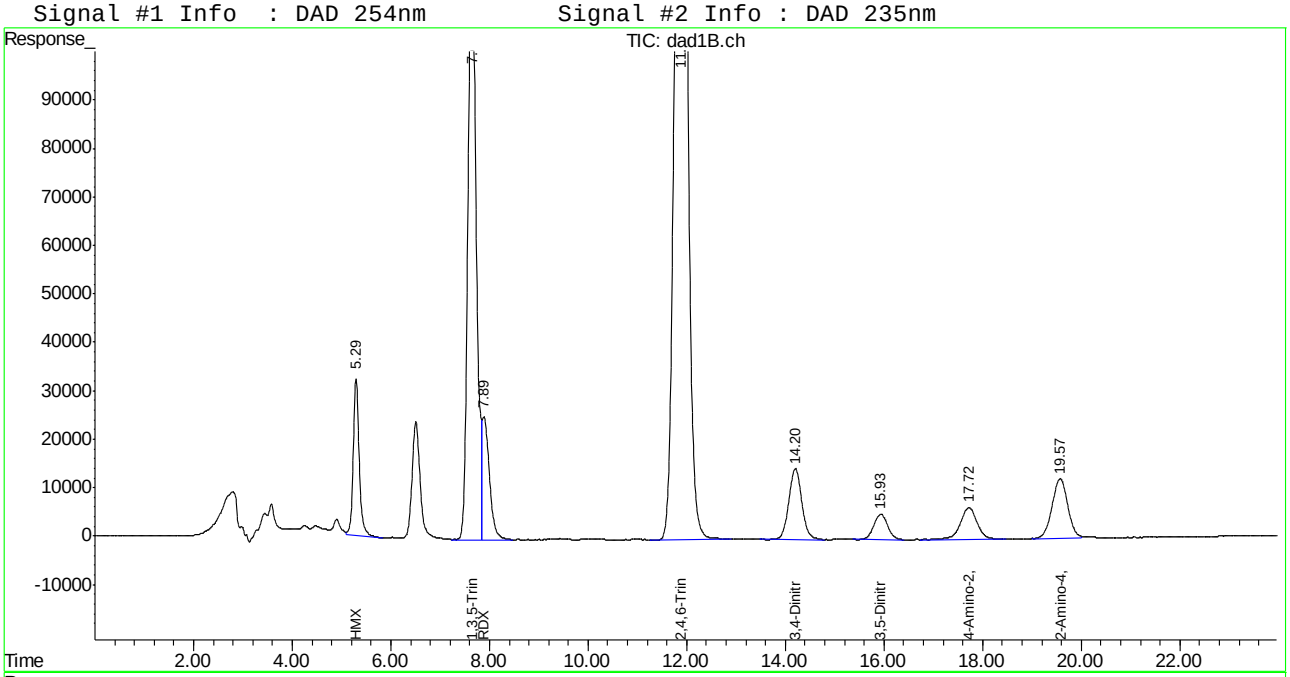
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620660.D 8330RPB.M_010821.M Mon Feb 08 12:03:06 2021 Page 1

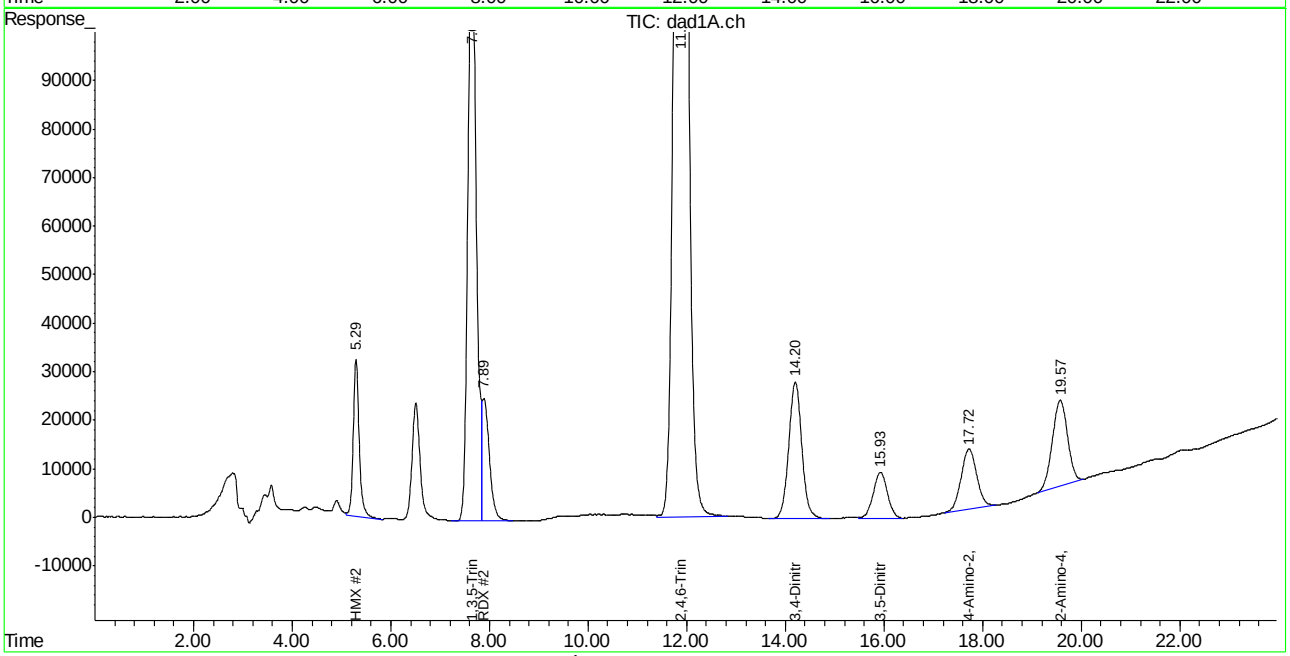
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1A.ch
Acq On : 05-Feb-2021, 18:23:04 Operator: jamesb
Sample : FA82653-3cf Inst : G1315B
Misc : op83930,GGG2934,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:58 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

Sample Number: FA82653-3
Lab FileID: GG620660.D
Injection Time: 02/05/21 18:23

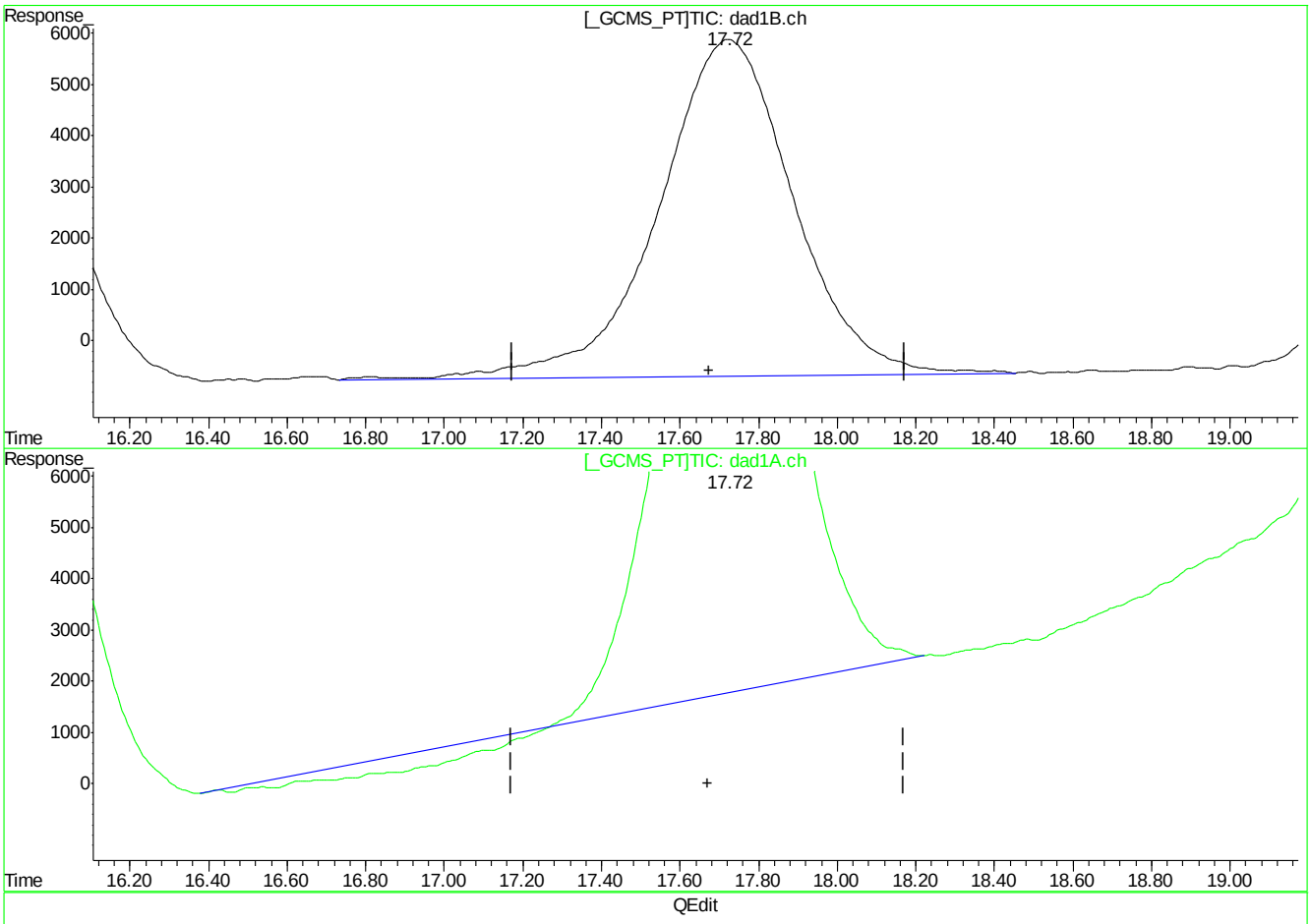
Method: SW846 8330B
Analyst approved: 02/08/21 12:10 James Boone
Supervisor approved: 02/08/21 13:13 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.72	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	19.57	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.57	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1A.ch
Acq On : 05-Feb-2021, 18:23:04 Operator: jamesb
Sample : FA82653-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration



(18) 4-Amino-2,6-Dinitrotoluene

17.73min 296.692ppb

response 1564213

(18) 4-Amino-2,6-Dinitrotoluene #2

17.73min 267.669ppb

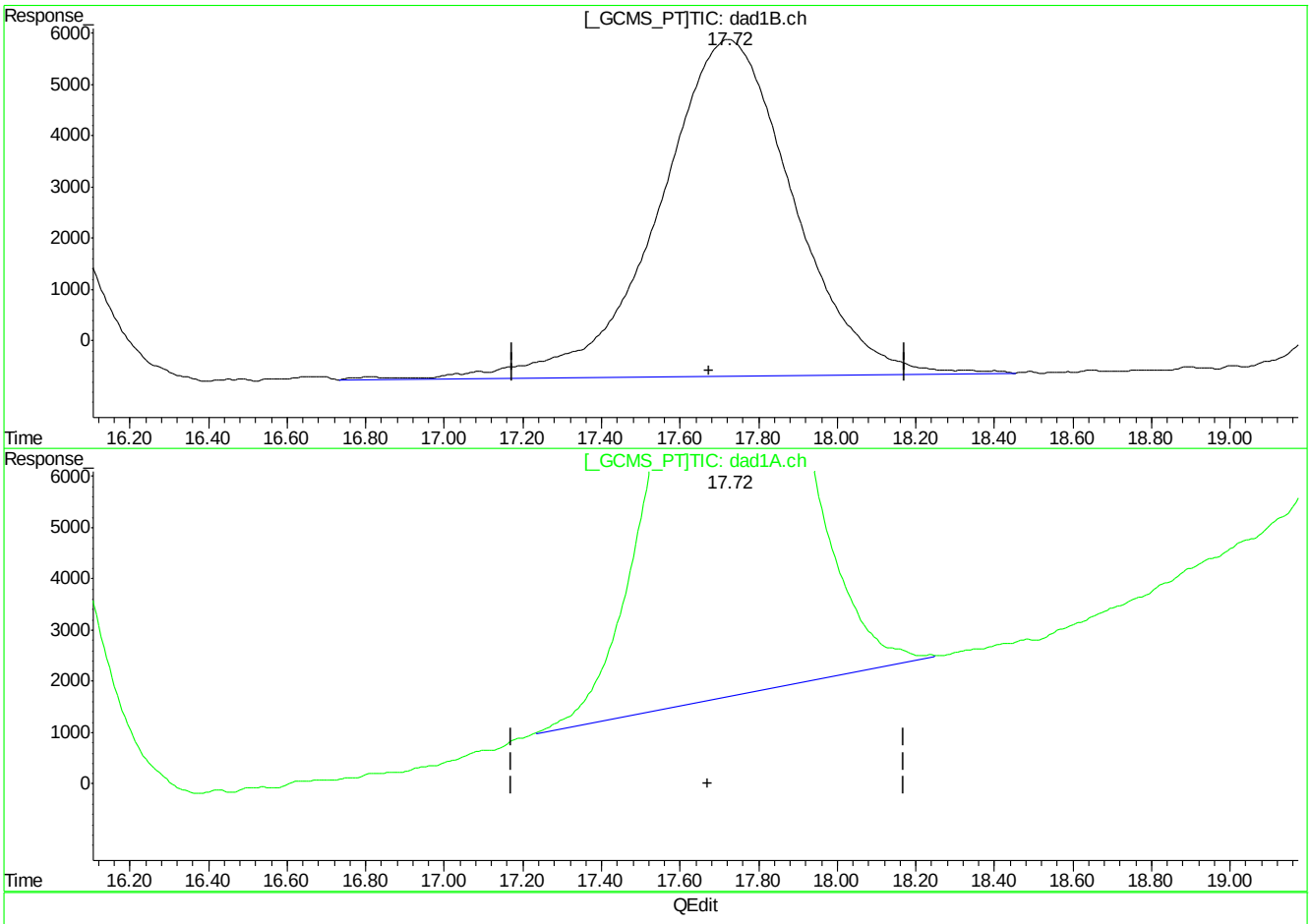
response 2558983

(+) = Expected Retention Time
GG620660.D 8330RPB.M_010821.M Mon Feb 08 11:58:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1A.ch
Acq On : 05-Feb-2021, 18:23:04 Operator: jamesb
Sample : FA82653-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration



(18) 4-Amino-2,6-Dinitrotoluene

17.73min 296.692ppb

response 1564213

(18) 4-Amino-2,6-Dinitrotoluene #2

17.72min 282.959ppb m

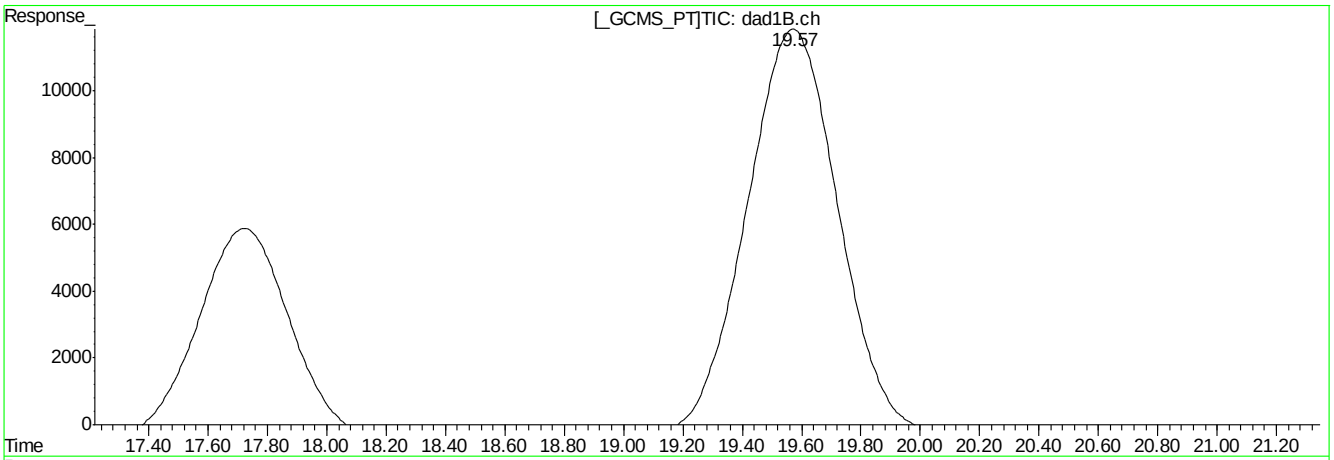
response 2705158

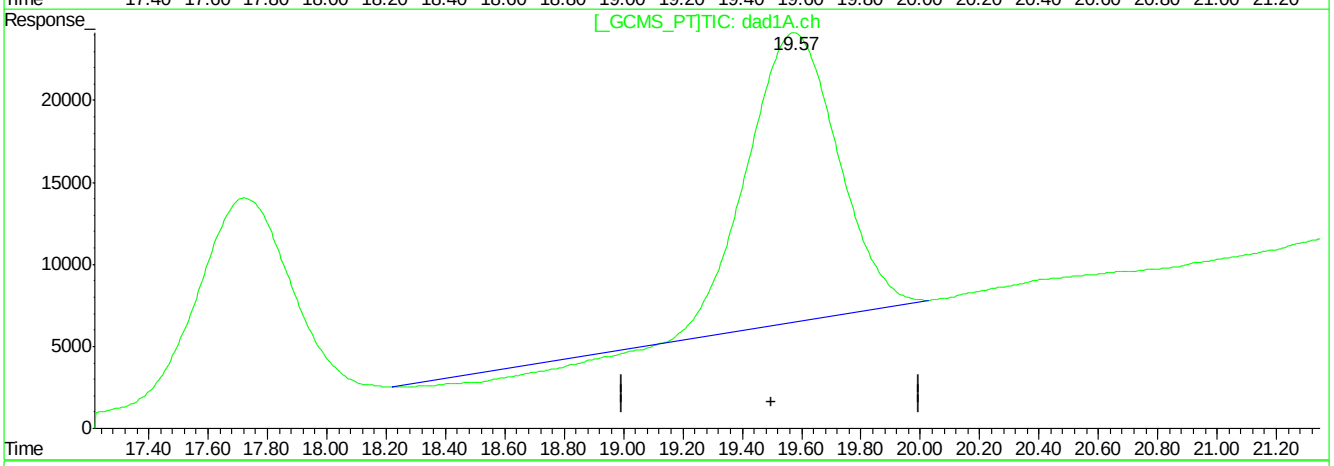
(+) = Expected Retention Time
GG620660.D 8330RPB.M_010821.M Mon Feb 08 11:58:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1A.ch
Acq On : 05-Feb-2021, 18:23:04 Operator: jamesb
Sample : FA82653-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.57min 301.542ppb

response 2734160

(20) 2-Amino-4,6-Dinitrotoluene #2

19.58min 289.750ppb

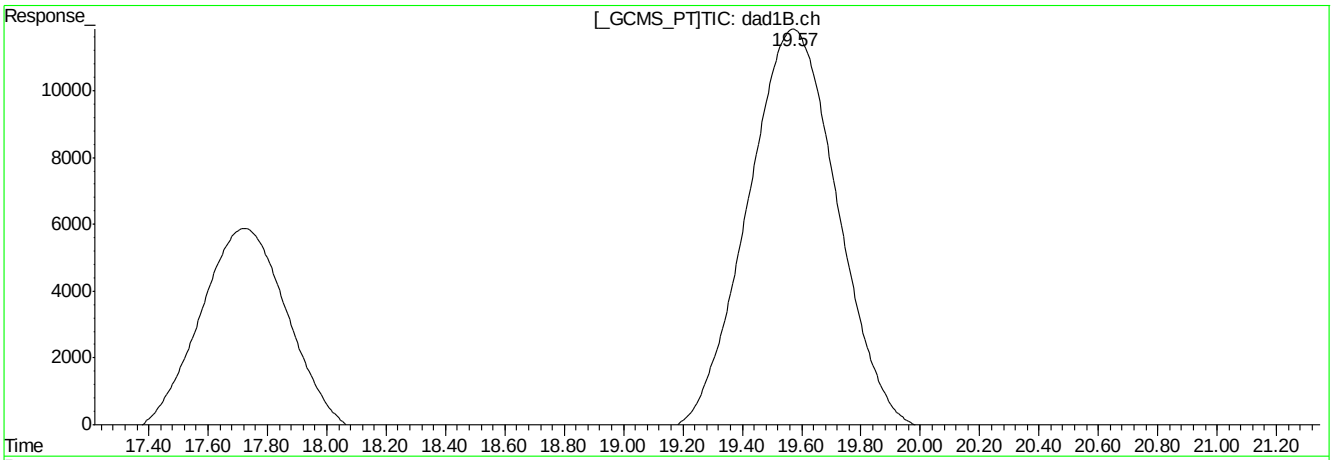
response 3574497

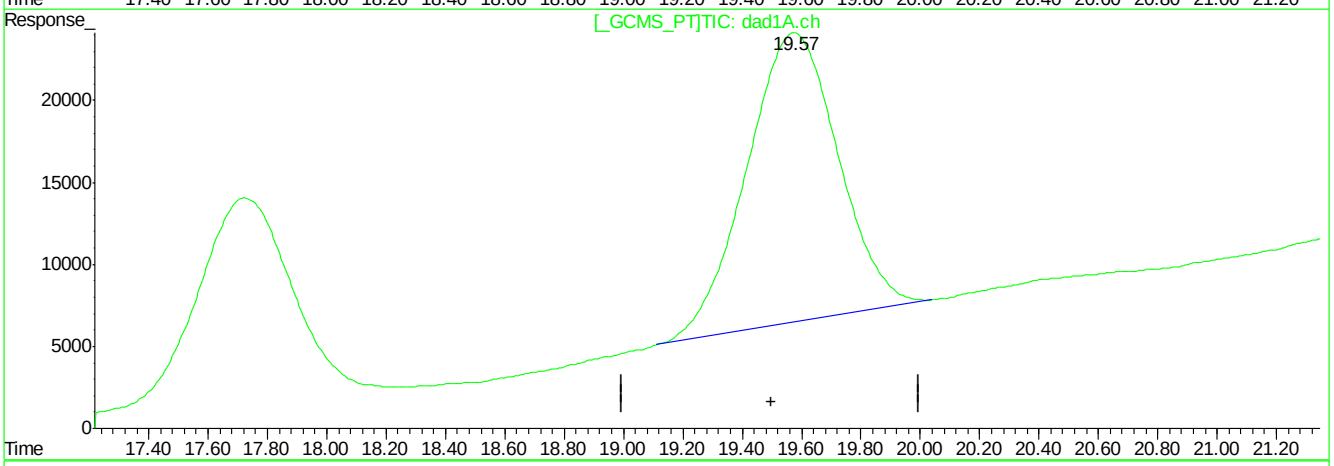
(+) = Expected Retention Time
GG620660.D 8330RPB.M_010821.M Mon Feb 08 11:58:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1A.ch
Acq On : 05-Feb-2021, 18:23:04 Operator: jamesb
Sample : FA82653-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.57min 301.542ppb

response 2734160

(20) 2-Amino-4,6-Dinitrotoluene #2

19.57min 305.002ppb m

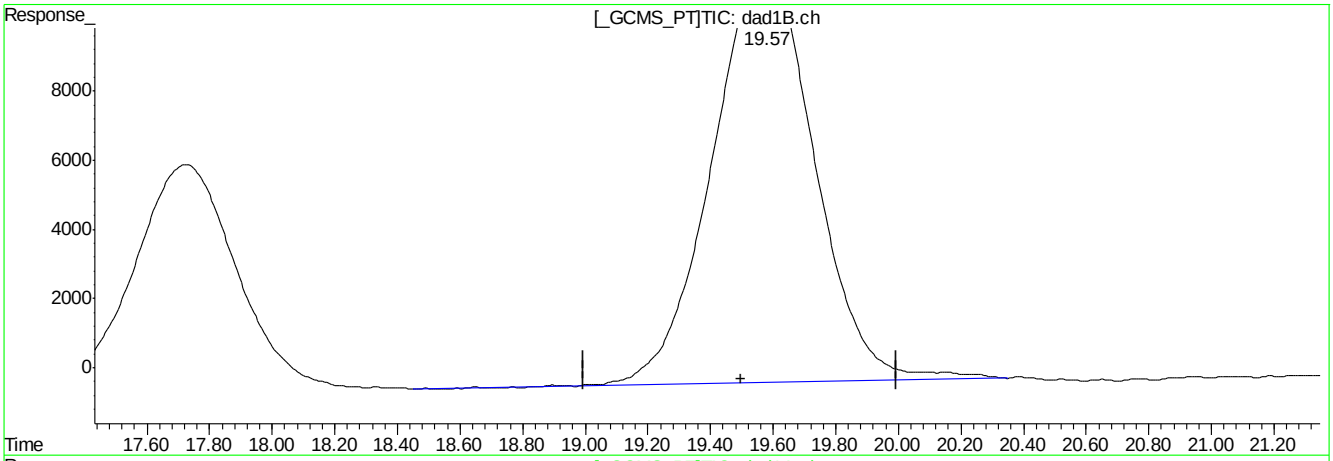
response 3762658

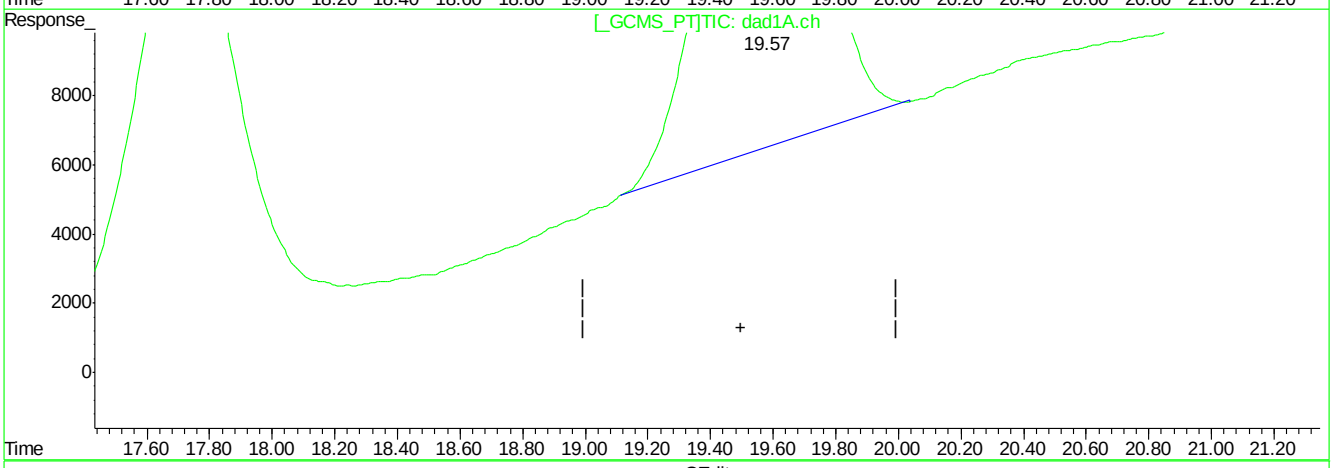
(+) = Expected Retention Time
GG620660.D 8330RPB.M_010821.M Mon Feb 08 11:58:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1A.ch
Acq On : 05-Feb-2021, 18:23:04 Operator: jamesb
Sample : FA82653-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.57min 301.542ppb

response 2734160

(20) 2-Amino-4,6-Dinitrotoluene #2

19.57min 305.002ppb m

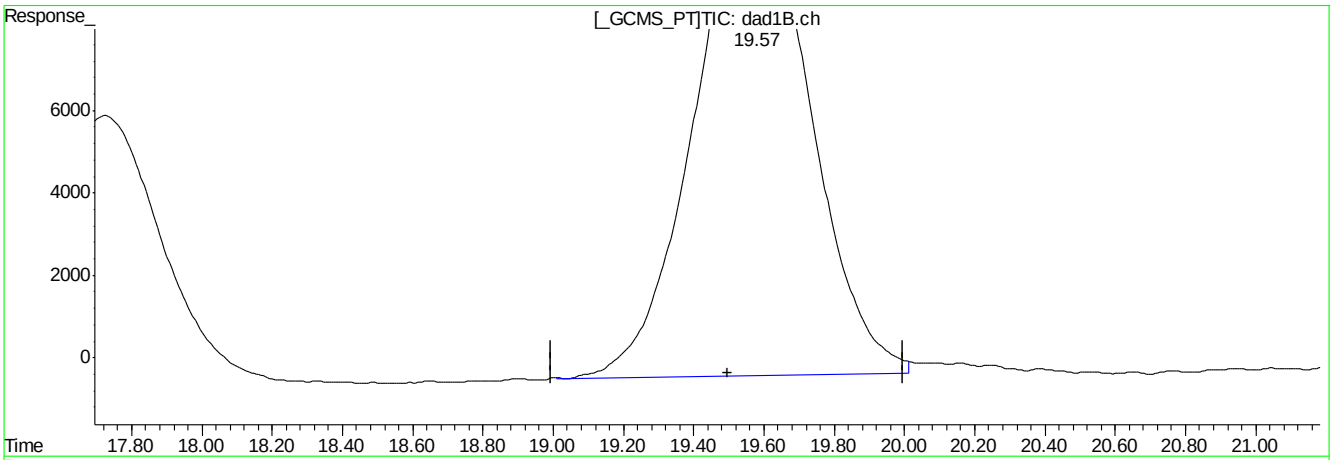
response 3762658

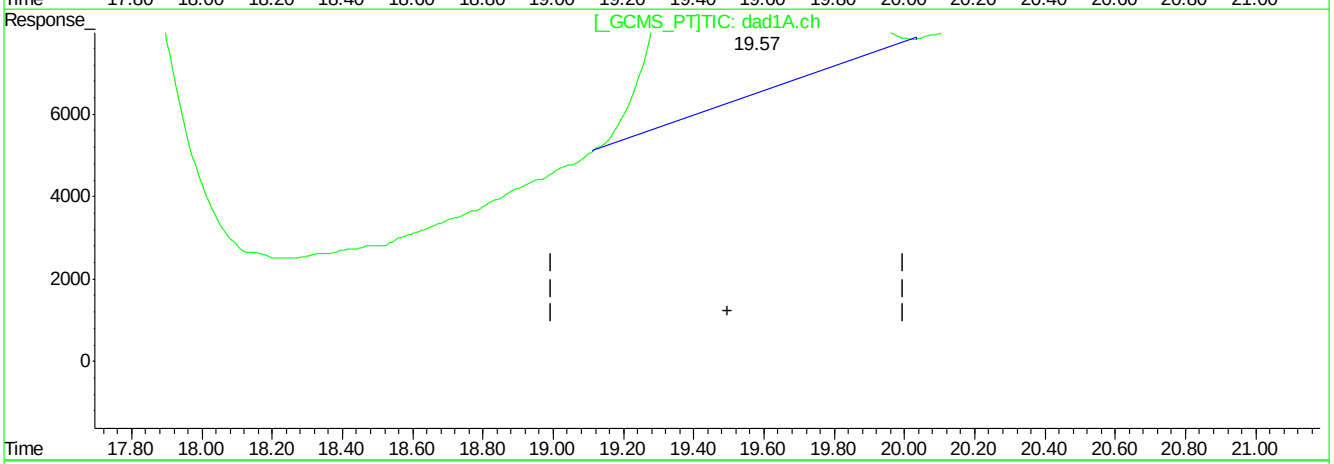
(+) = Expected Retention Time
GG620660.D 8330RPB.M_010821.M Mon Feb 08 11:58:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620660.D\dad1A.ch
Acq On : 05-Feb-2021, 18:23:04 Operator: jamesb
Sample : FA82653-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.57min 297.965ppb m

response 2701726

(20) 2-Amino-4,6-Dinitrotoluene #2

19.57min 305.002ppb m

response 3762658

(+) = Expected Retention Time
GG620660.D 8330RPB.M_010821.M Mon Feb 08 11:58:58 2021

GG620660.D edits: 2-Amino-4,6-Dinitrotoluene

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 02/08/21 13:16

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389803.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389803.D\dad1A.ch
Acq On : 05-Feb-2021, 21:02:17 Operator: jamesb
Sample : FA82653-4 Inst : G1315B
Misc : op83930,GPP2402,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 08 08:01:05 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.50	11.50	942204	2006067	384.635	464.385
	Spiked Amount 500.000	Range 70 - 136		Recovery =		76.93%	92.88%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.49	1.49	2795168	7960577	1801.294	1808.507
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D.	N.D.
6)	1,3,5-Trinitrobe	4.79	4.79	4850494	9465186	1089.224	1119.259
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.42	6.43	146209	300189	34.151m	39.448m
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	10.15	10.15	3590591	4438128	906.431	931.125
13)	2-Amino-4,6-Dini	10.59	10.59	1391999	2263565	379.216	424.471
14)	4-Amino-2,6-Dini	11.11	11.12	551454	1313690	213.499	250.824
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	18.70	0.00	72219	0	NoCal	N.D.

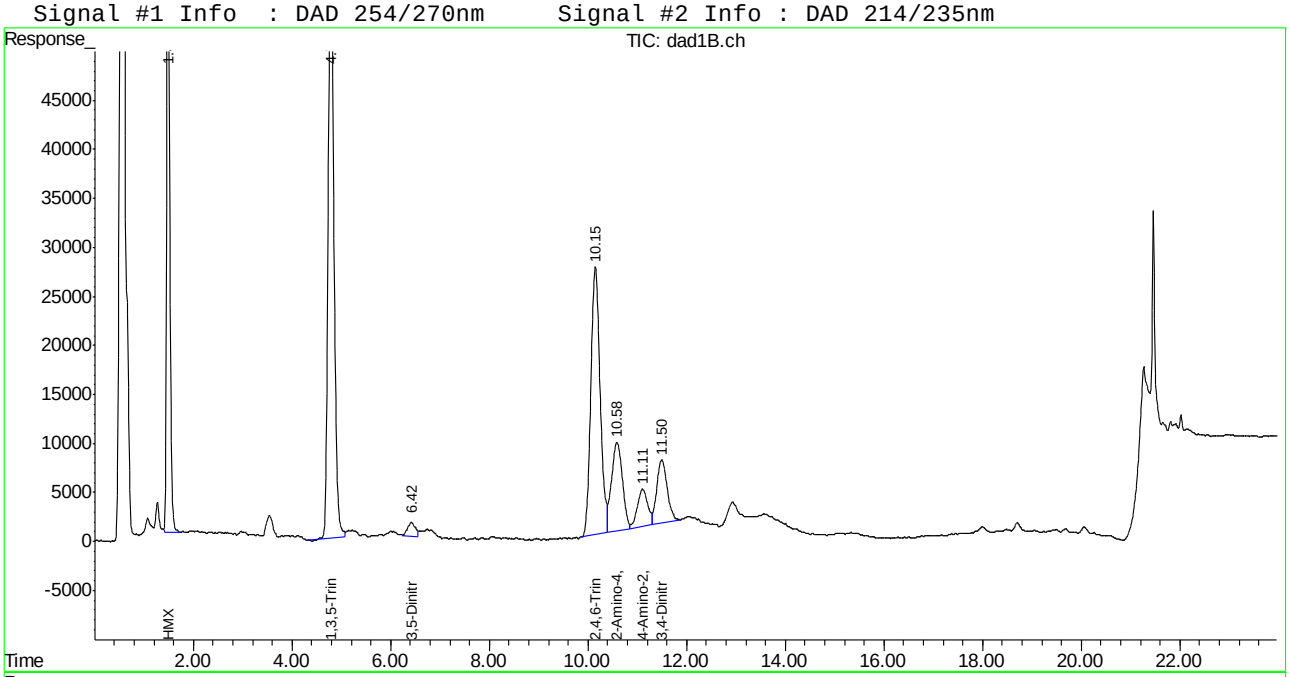
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

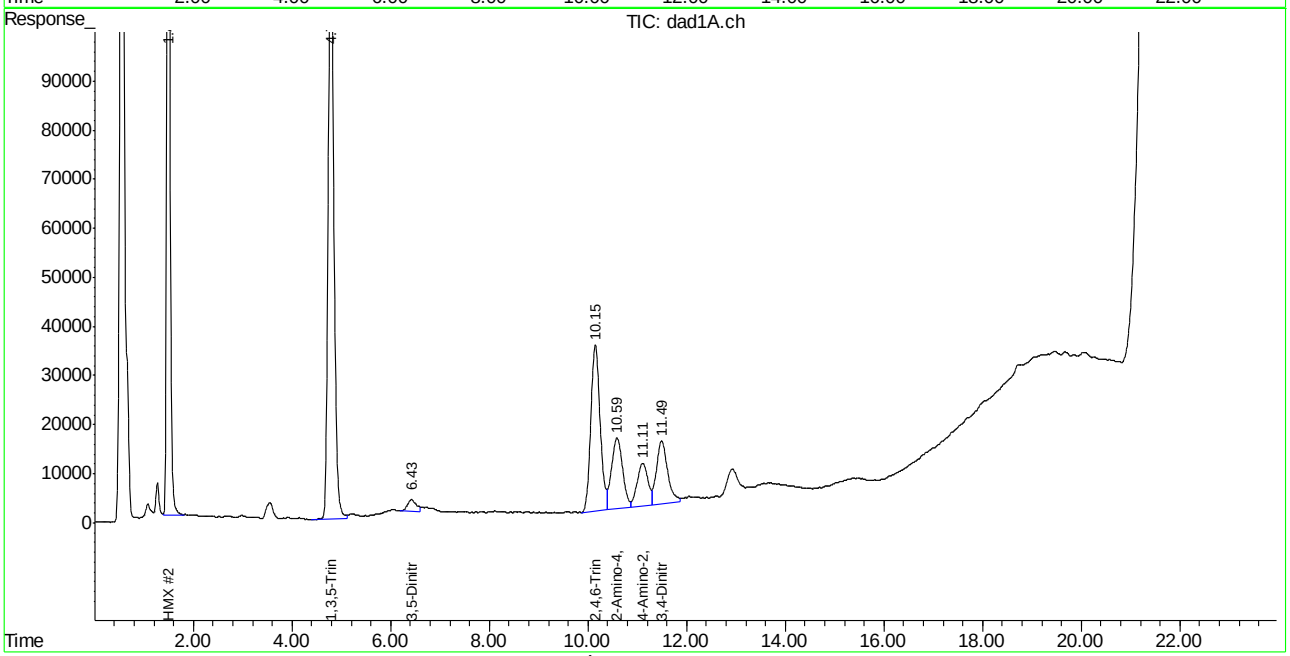
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389803.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389803.D\dad1A.ch
Acq On : 05-Feb-2021, 21:02:17 Operator: jamesb
Sample : FA82653-4 Inst : G1315B
Misc : op83930,GPP2402,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 13:11 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

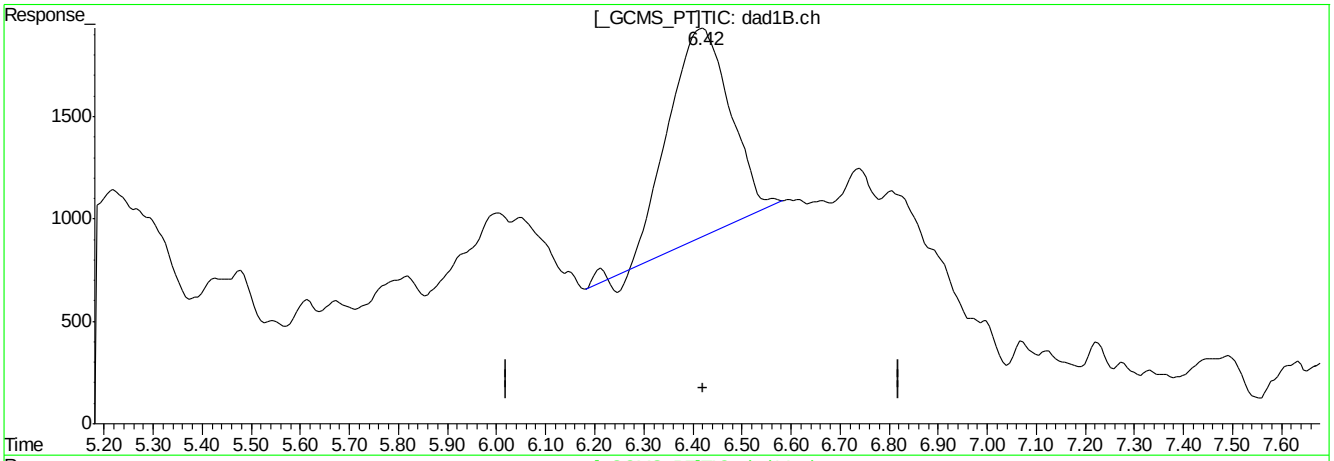
Sample Number: FA82653-4
Lab FileID: PP389803.D
Injection Time: 02/05/21 21:02
Method: SW846 8330B
Analyst approved: 02/08/21 12:12 James Boone
Supervisor approved: 02/08/21 13:16 Naresh Jiawan

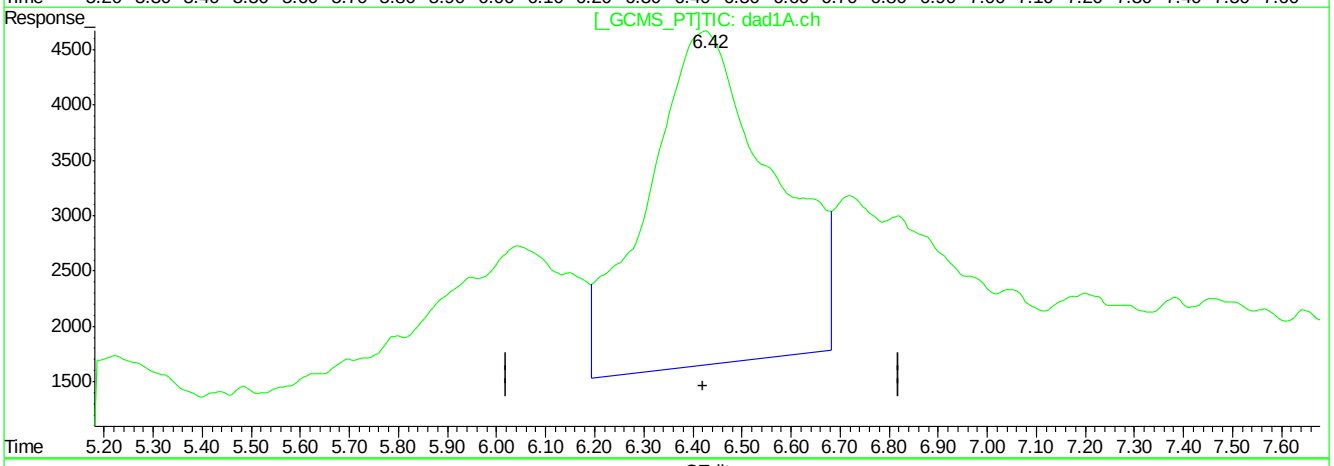
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,5-Dinitroaniline	618-87-1	1	6.42	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.43	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389803.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389803.D\dad1A.ch
Acq On : 05-Feb-2021, 21:02:17 Operator: jamesb
Sample : FA82653-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.42min 20.829ppb

response 89176

(8) 3,5-Dinitroaniline #2

6.43min 70.319ppb

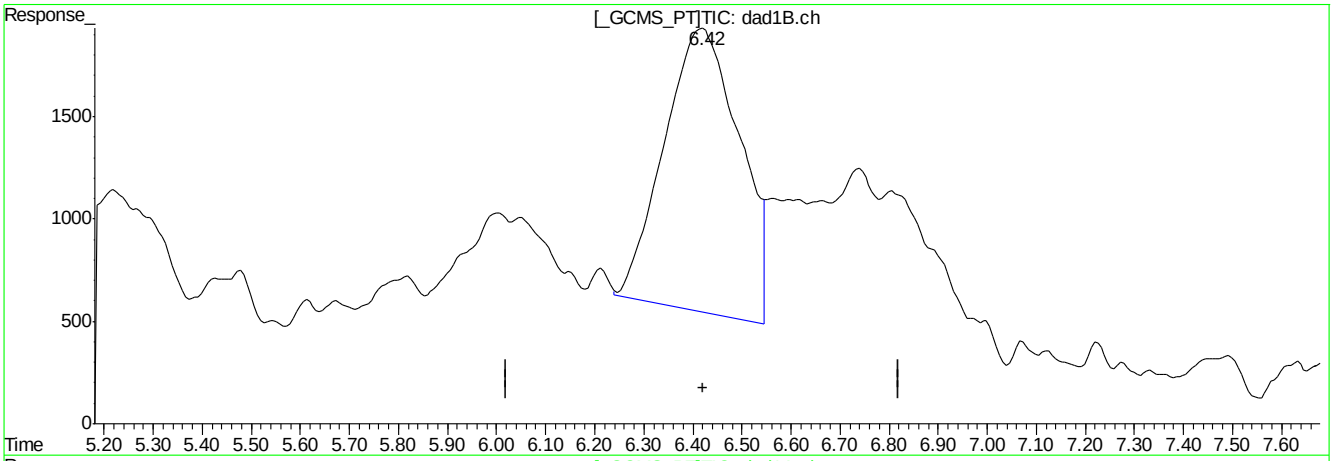
response 535102

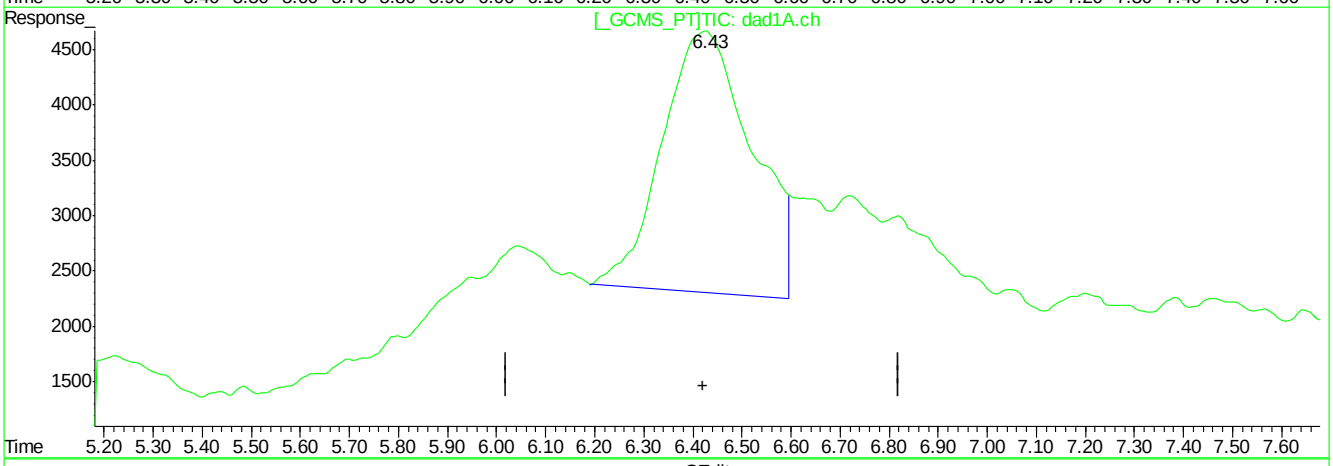
(+) = Expected Retention Time
PP389803.D GPP2401_020521PRI.M Mon Feb 08 09:06:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389803.D\dad1B.ch Vial: 22
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389803.D\dad1A.ch
Acq On : 05-Feb-2021, 21:02:17 Operator: jamesb
Sample : FA82653-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.42min 34.151ppb m

response 146209

(8) 3,5-Dinitroaniline #2

6.43min 39.448ppb m

response 300189

(+) = Expected Retention Time
PP389803.D GPP2401_020521PRI.M Mon Feb 08 09:06:49 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 02/08/21 13:16

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620661.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620661.D\dad1A.ch
Acq On : 05-Feb-2021, 18:54:30 Operator: jamesb
Sample : FA82653-4cf Inst : G1315B
Misc : op83930,GGG2934,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 08 11:30:24 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.21	14.21	2743137	5211728	515.023	478.310
	Spiked Amount 500.000	Range 70 - 136		Recovery =		103.00%	95.66%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.29	5.29	6430505	6430505	2019.736	2019.736
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.65	7.65	11230286	11230286	1144.765	1144.863
6)	RDX	0.00	0.00	0	0	N.D.	N.D.
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.89	11.89	8749494	11685702	963.799	959.239
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.93	15.93	1416064	2653485	142.952	169.125
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.73	17.73	1973470	3500658	374.318	366.168m
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.58	19.58	3845077	5432968	424.062	440.398m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

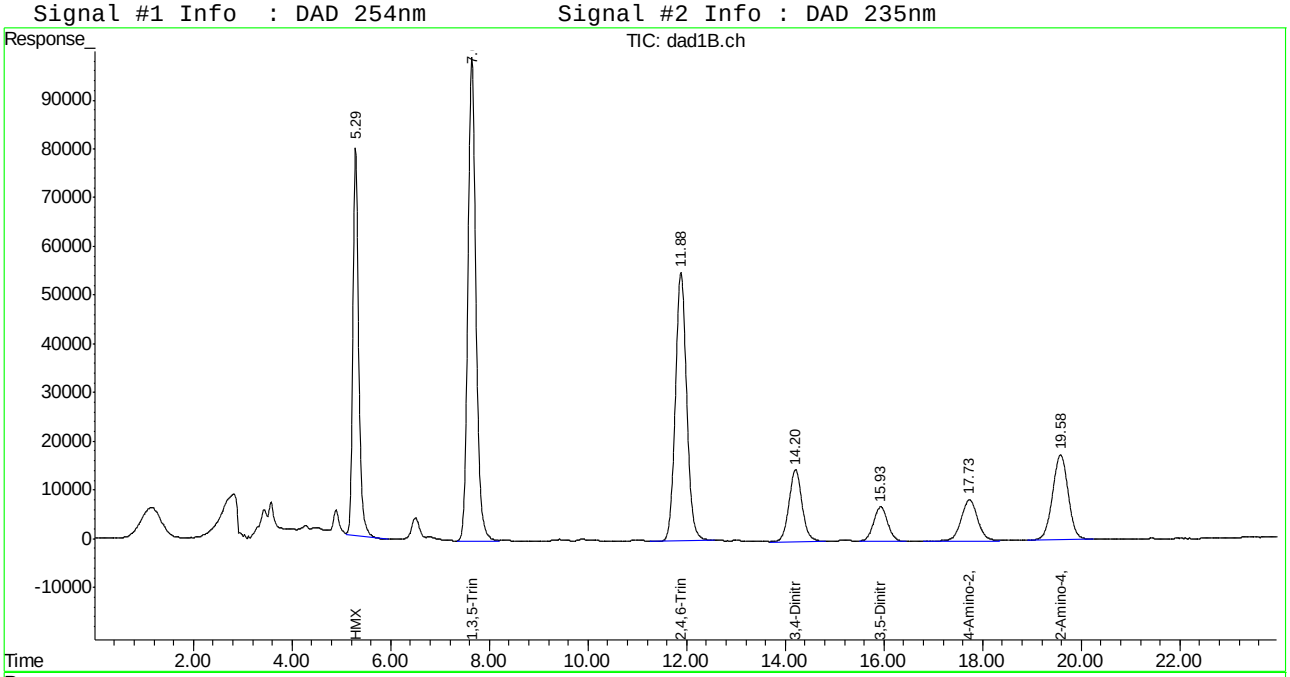
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620661.D 8330RPB.M_010821.M Mon Feb 08 12:03:07 2021 Page 1

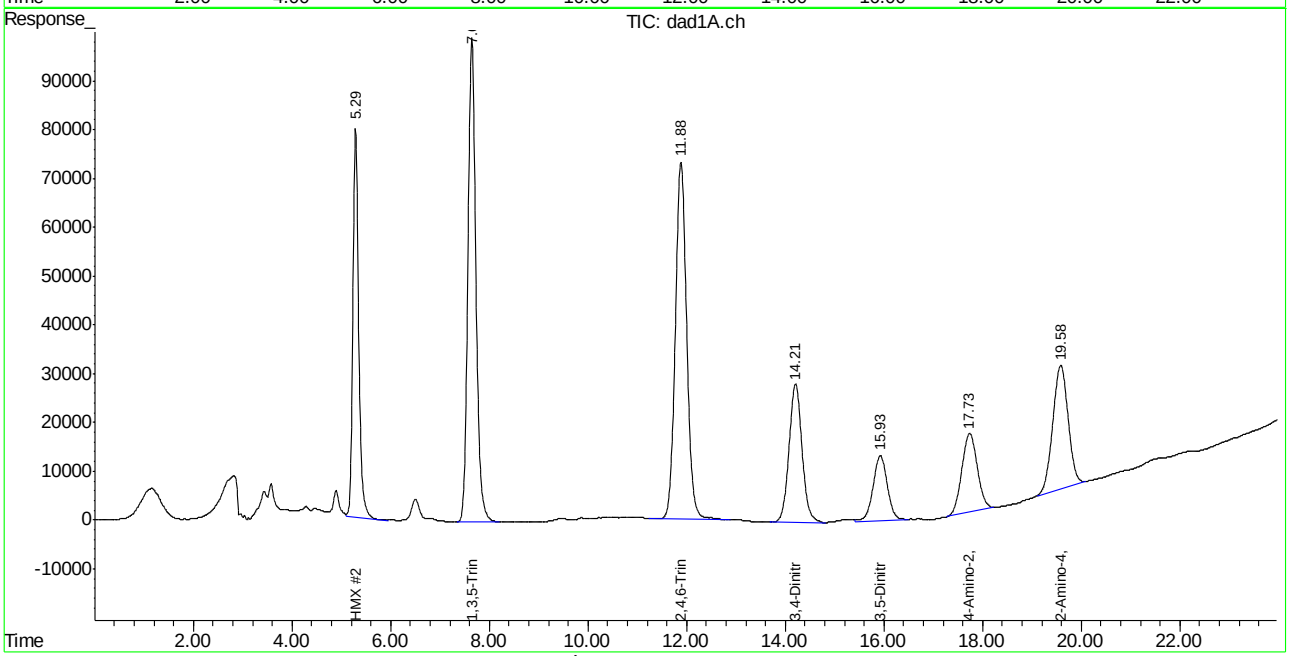
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620661.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620661.D\dad1A.ch
Acq On : 05-Feb-2021, 18:54:30 Operator: jamesb
Sample : FA82653-4cf Inst : G1315B
Misc : op83930,GGG2934,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 12:00 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

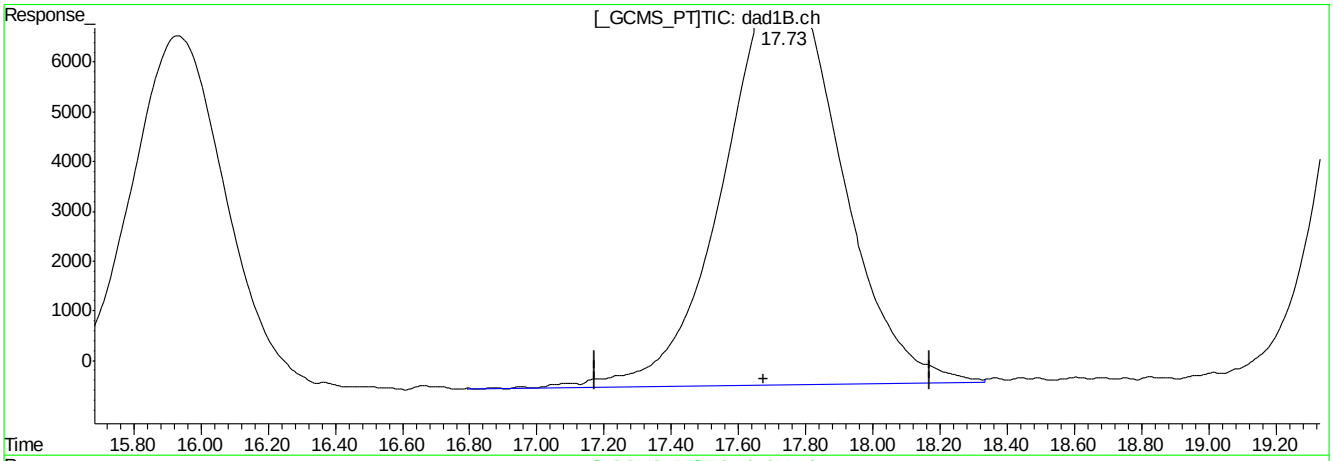
Sample Number: FA82653-4
Lab FileID: GG620661.D
Injection Time: 02/05/21 18:54
Method: SW846 8330B
Analyst approved: 02/08/21 12:12 James Boone
Supervisor approved: 02/08/21 13:16 Naresh Jiawan

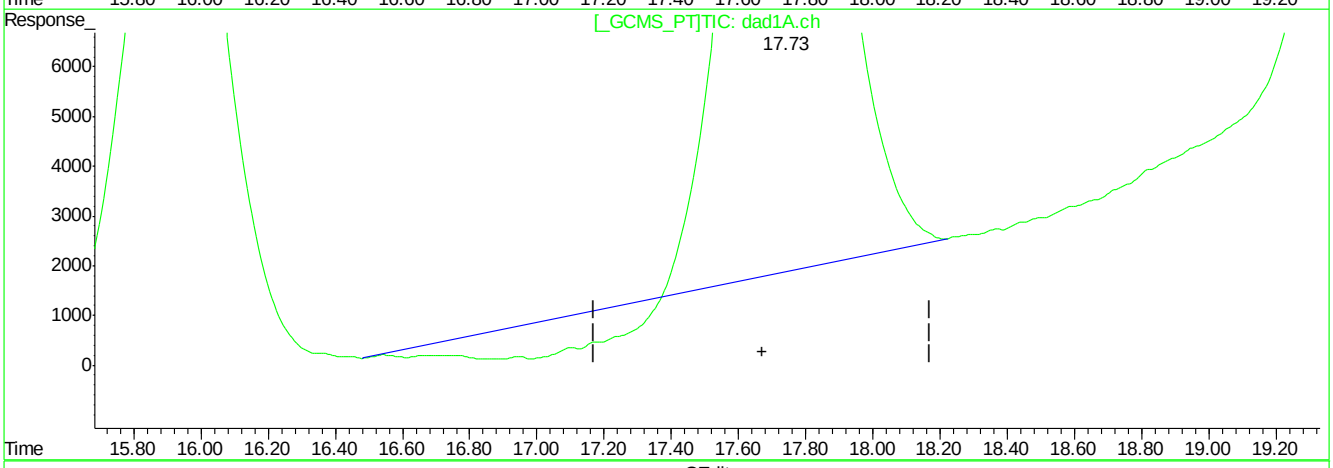
Parameter	CAS	Sig#	R.T. (min.)	Reason
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.73	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.58	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620661.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620661.D\dad1A.ch
Acq On : 05-Feb-2021, 18:54:30 Operator: jamesb
Sample : FA82653-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.73min 374.318ppb

response 1973470

(18) 4-Amino-2,6-Dinitrotoluene #2

17.74min 328.691ppb

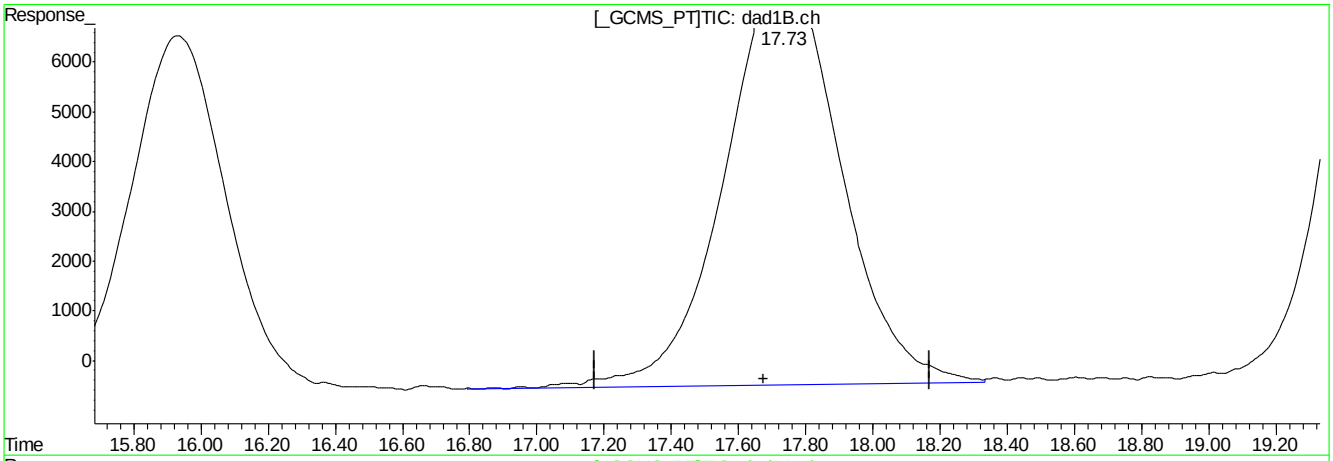
response 3142366

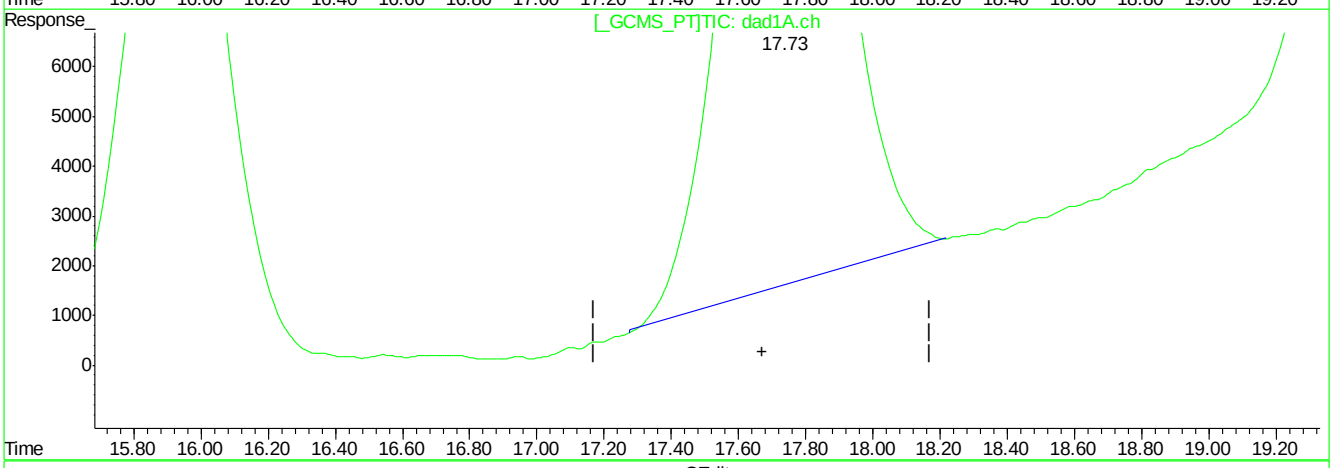
(+) = Expected Retention Time
GG620661.D 8330RPB.M_010821.M Mon Feb 08 11:59:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620661.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620661.D\dad1A.ch
Acq On : 05-Feb-2021, 18:54:30 Operator: jamesb
Sample : FA82653-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.73min 374.318ppb

response 1973470

(18) 4-Amino-2,6-Dinitrotoluene #2

17.73min 366.168ppb m

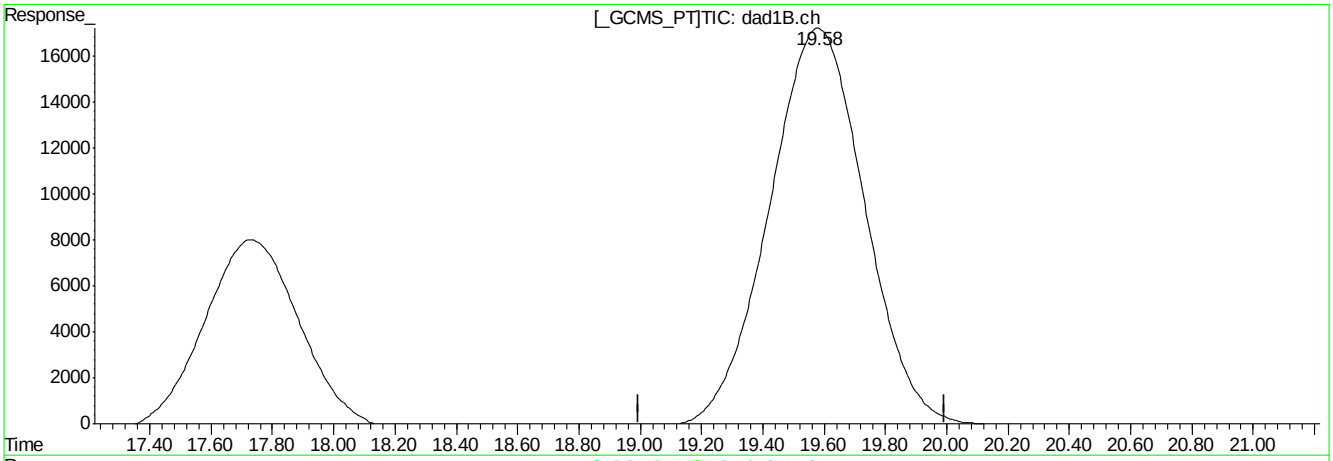
response 3500658

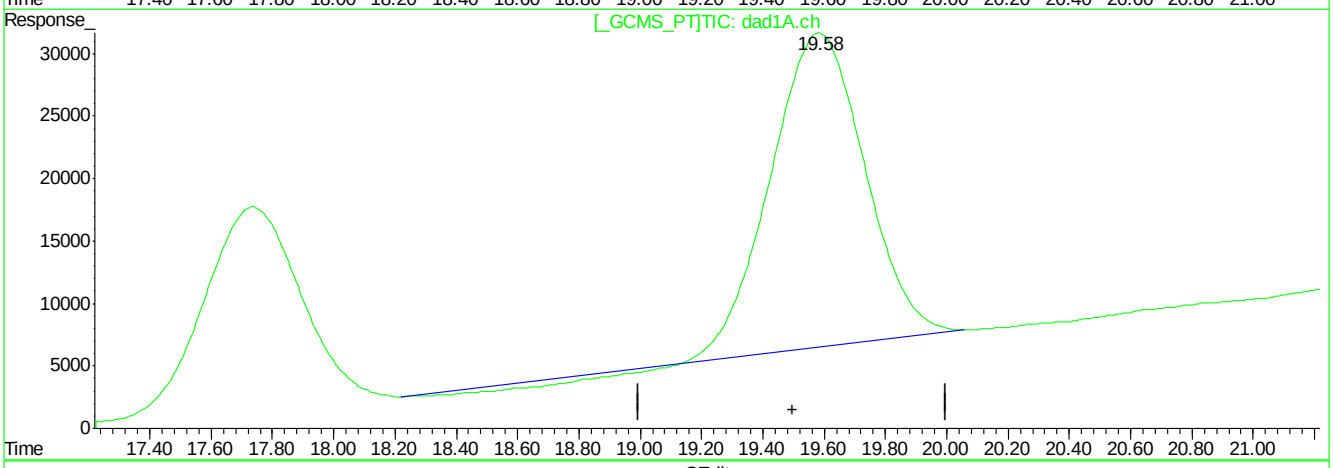
(+) = Expected Retention Time
GG620661.D 8330RPB.M_010821.M Mon Feb 08 12:00:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620661.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620661.D\dad1A.ch
Acq On : 05-Feb-2021, 18:54:30 Operator: jamesb
Sample : FA82653-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.58min 424.062ppb

response 3845077

(20) 2-Amino-4,6-Dinitrotoluene #2

19.58min 422.734ppb

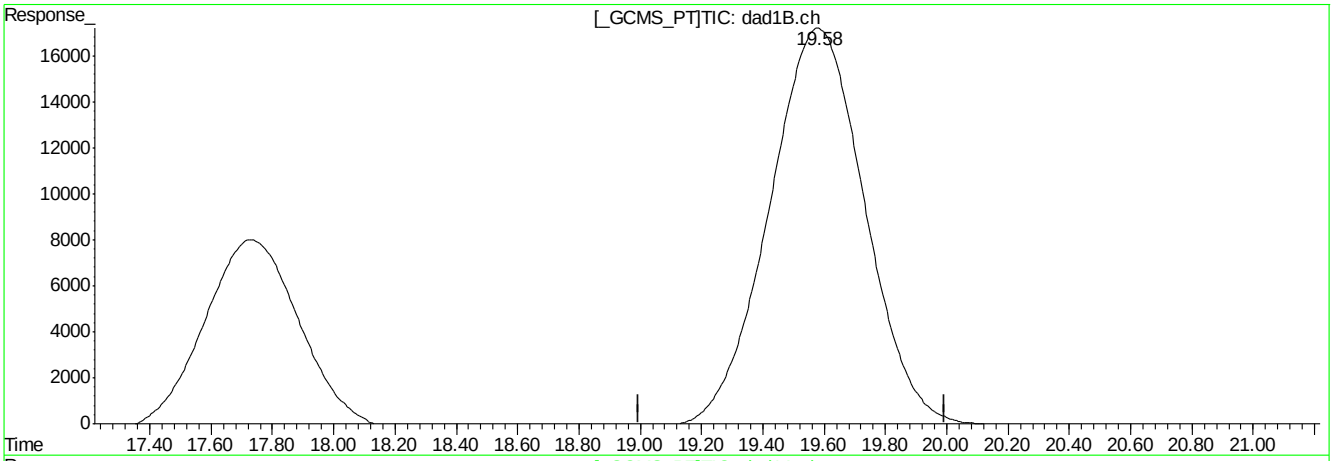
response 5215061

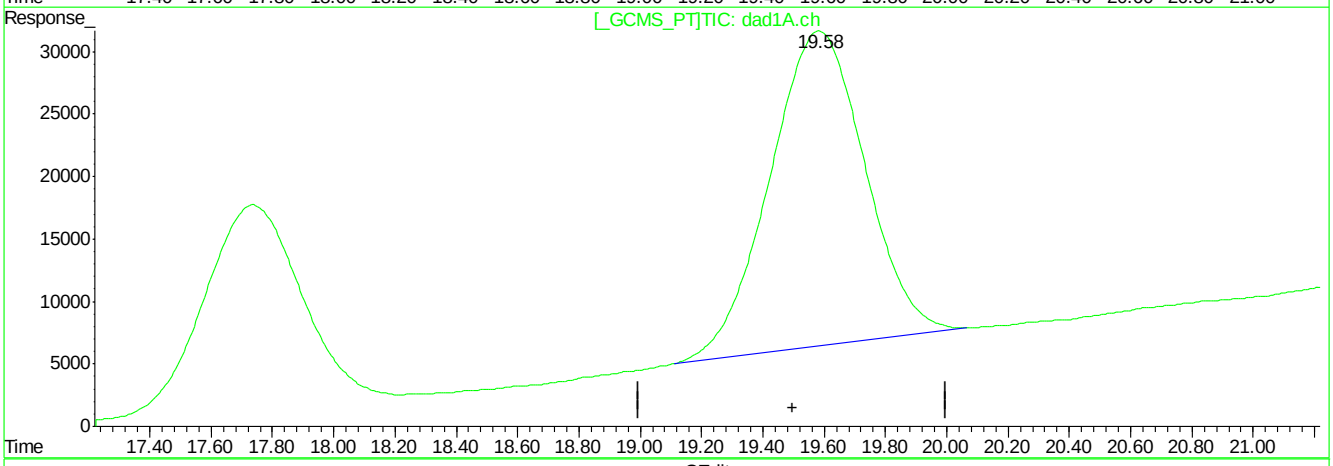
(+) = Expected Retention Time
GG620661.D 8330RPB.M_010821.M Mon Feb 08 12:00:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620661.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620661.D\dad1A.ch
Acq On : 05-Feb-2021, 18:54:30 Operator: jamesb
Sample : FA82653-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.58min 424.062ppb

response 3845077

(20) 2-Amino-4,6-Dinitrotoluene #2

19.58min 440.398ppb m

response 5432968

(+) = Expected Retention Time
GG620661.D 8330RPB.M_010821.M Mon Feb 08 12:00:16 2021

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389806.D\dad1B.ch Vial: 23
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389806.D\dad1A.ch
Acq On : 05-Feb-2021, 22:35:09 Operator: jamesb
Sample : FA82653-5 Inst : G1315B
Misc : op83930,GPP2402,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 08 08:01:08 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.49	11.48	1045569	1945556	426.831	450.360
	Spiked Amount 500.000	Range 70 - 136		Recovery =		85.37%	90.07%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

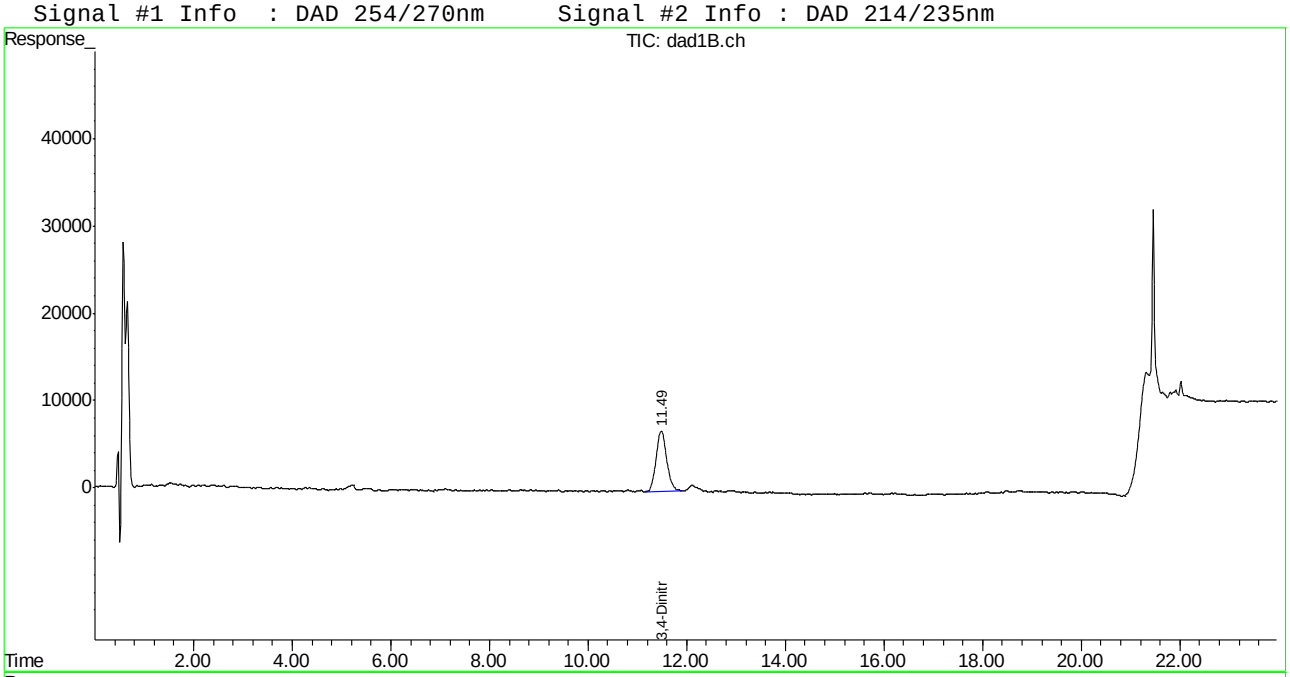
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389806.D GPP2401_020521PRI.M Mon Feb 08 10:09:58 2021 Page 1

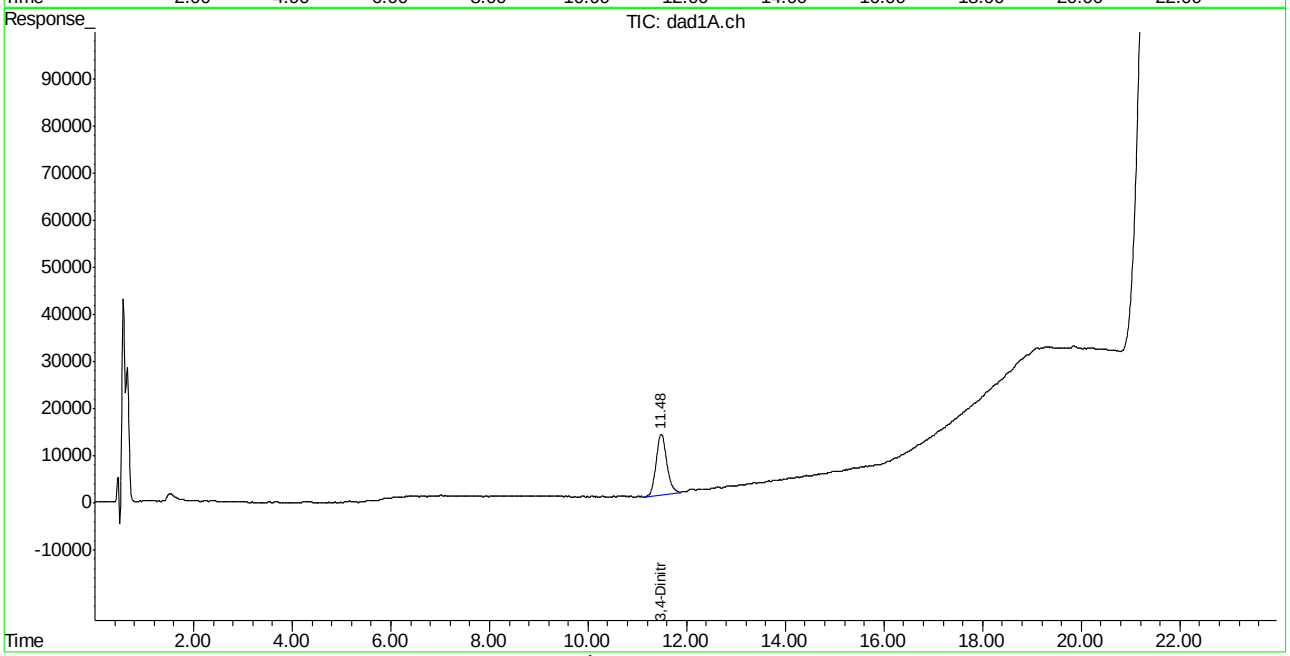
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389806.D\dad1B.ch Vial: 23
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389806.D\dad1A.ch
Acq On : 05-Feb-2021, 22:35:09 Operator: jamesb
Sample : FA82653-5 Inst : G1315B
Misc : op83930,GPP2402,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 9:08 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620655.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620655.D\dad1A.ch
Acq On : 05-Feb-2021, 15:45:58 Operator: jamesb
Sample : op83930-MB Inst : G1315B
Misc : op83930,GGG2934,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 08 11:30:18 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.18	14.18	2468541	4854627	463.467	445.537
	Spiked Amount 500.000	Range 70 - 136		Recovery =		92.69%	89.11%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
6)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

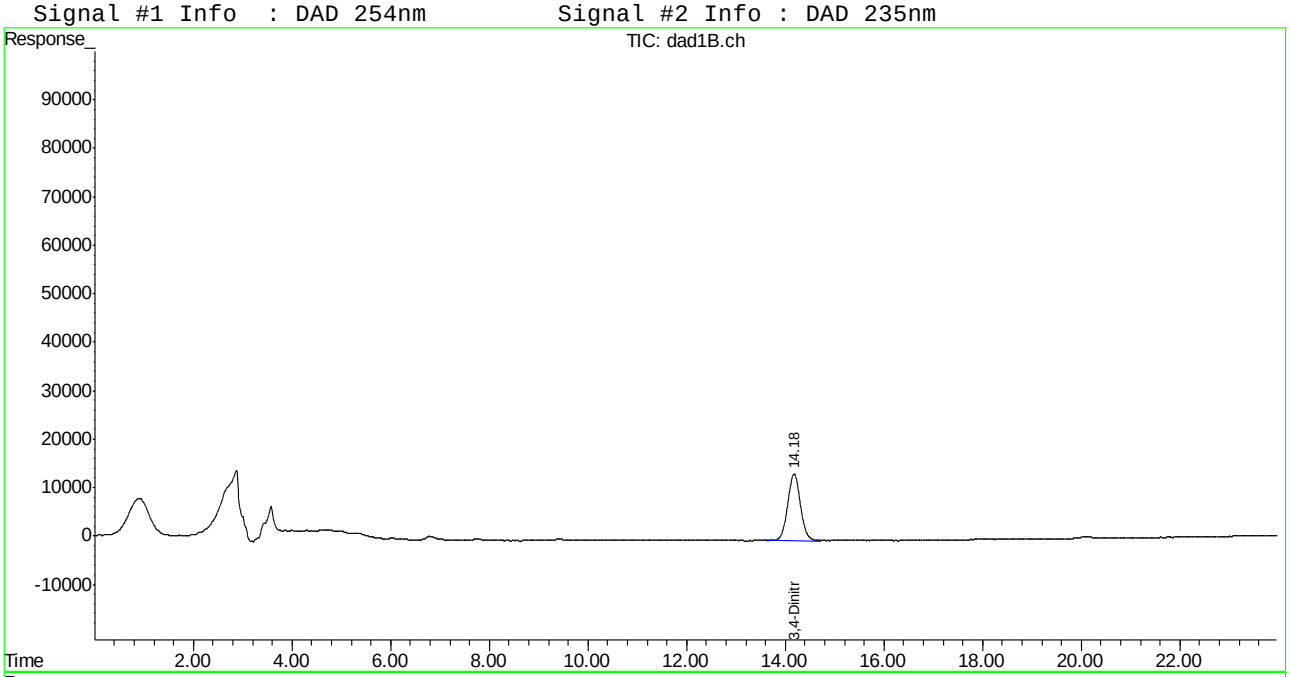
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620655.D 8330RPB.M_010821.M Mon Feb 08 12:03:03 2021 Page 1

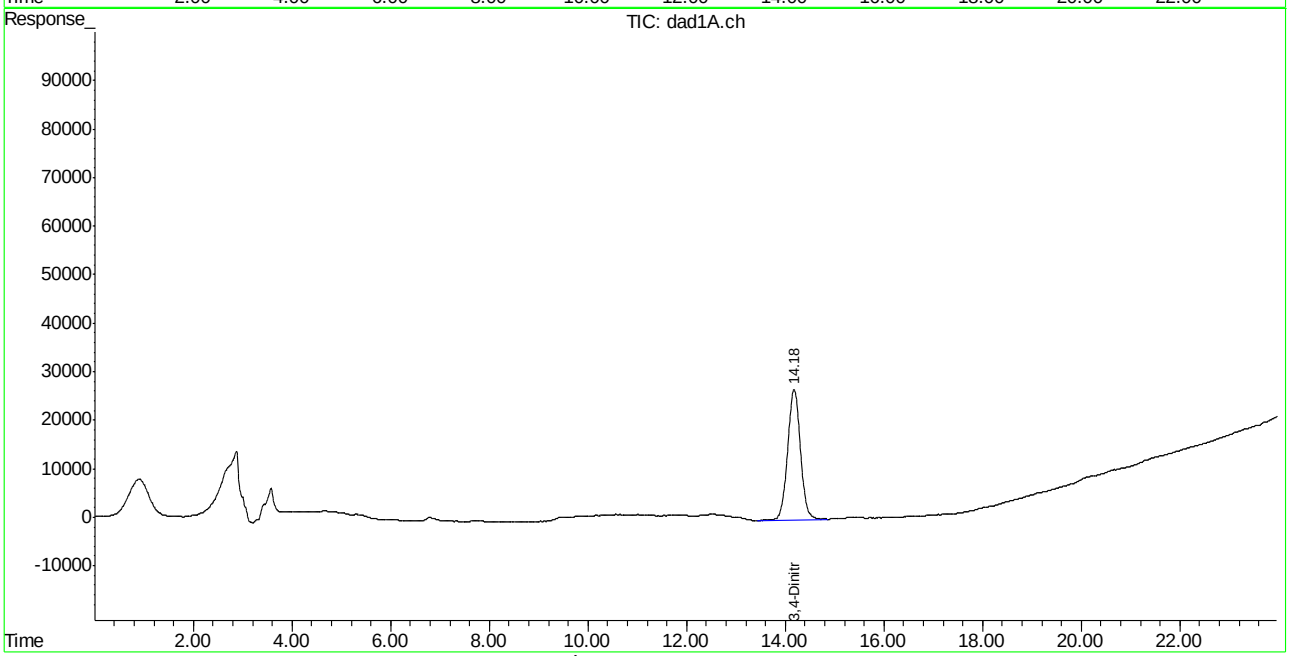
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620655.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620655.D\dad1A.ch
Acq On : 05-Feb-2021, 15:45:58 Operator: jamesb
Sample : op83930-MB Inst : G1315B
Misc : op83930,GGG2934,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:50 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389796.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389796.D\dad1A.ch
Acq On : 05-Feb-2021, 17:25:21 Operator: jamesb
Sample : op83930-MB Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 08 08:00:58 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.51	11.51	1010232	1823109	412.406	421.984
	Spiked Amount 500.000	Range 70 - 136		Recovery =		82.48%	84.40%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

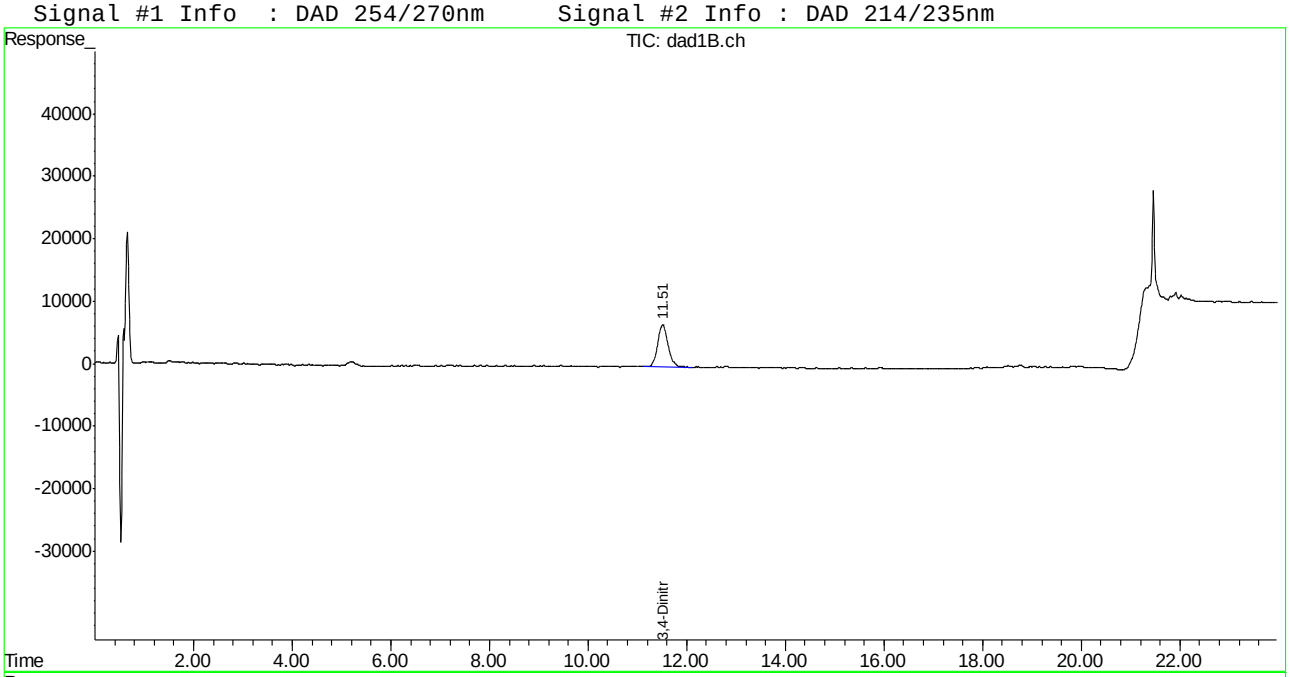
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389796.D GPP2401_020521PRI.M Mon Feb 08 10:09:49 2021 Page 1

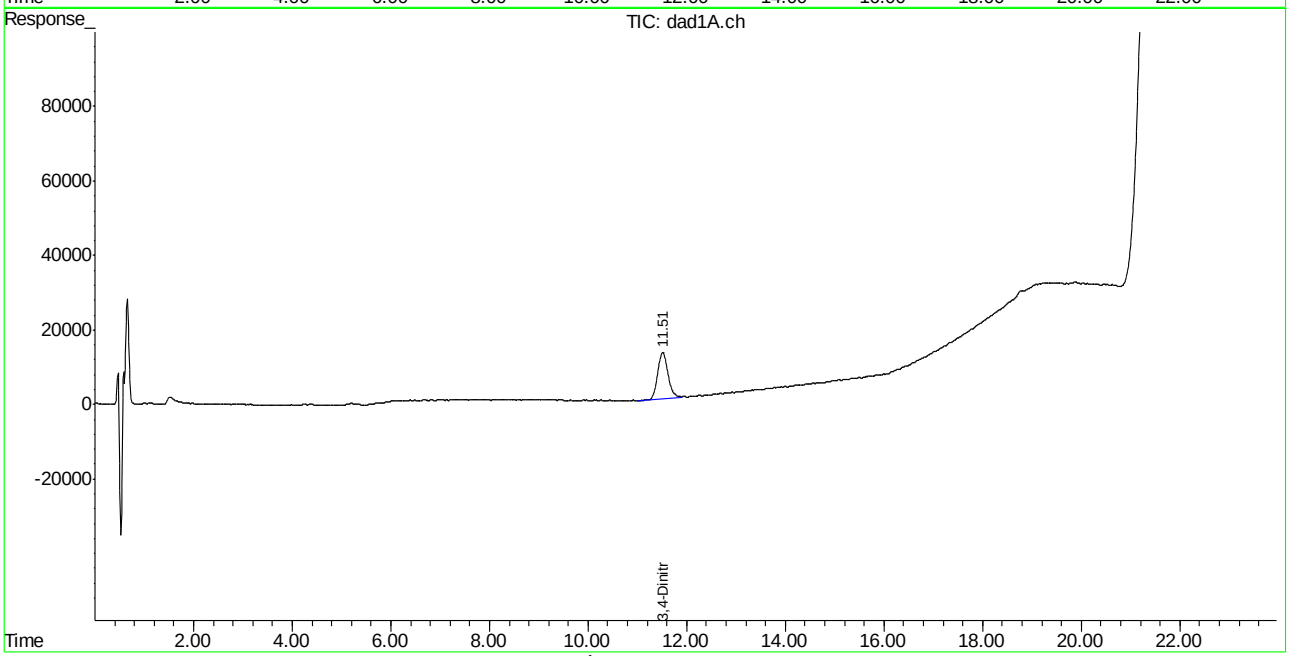
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389796.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389796.D\dad1A.ch
Acq On : 05-Feb-2021, 17:25:21 Operator: jamesb
Sample : op83930-MB Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:27 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:07

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389797.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389797.D\dad1A.ch
Acq On : 05-Feb-2021, 17:56:19 Operator: jamesb
Sample : op83930-BS Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 08 08:00:59 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.51	11.51	1098420	1810395	448.407	419.038
	Spiked Amount 500.000	Range 70 - 136		Recovery =		89.68%	83.81%
	Target Compounds						
1)	TNX	1.34	1.34	830288	1279877	242.847	251.415
2)	HMX	1.49	1.49	758226	2172797	479.344	482.558
3)	DNX	1.74	1.74	973312	1574353	330.759	332.722
4)	MNX	2.35	2.35	1253076	1938862	390.194	385.918
5)	RDX	2.99	2.99	995013	1560414	482.349	475.052
6)	1,3,5-Trinitrobe	4.80	4.80	2097273	4156558	470.962	491.513
7)	1,3-Dinitrobenze	6.01	6.01	2935621	2194573	519.109	518.867
8)	3,5-Dinitroanili	6.42	6.42	2196289	3977348	513.001	522.671
9)	Nitrobenzene	7.59	7.59	1721282	1779756	497.994	532.255
10)	Nitroglycerin	0.00	9.26	0	658544	N.D.	484.501 #
11)	Tetryl	9.78	9.78	1473256	2258949	460.738	438.871
12)	2,4,6-Trinitroto	10.17	10.17	2004544	2350501	506.040	493.138
13)	2-Amino-4,6-Dini	10.61	10.61	1889653	2652708	514.790	497.383
14)	4-Amino-2,6-Dini	11.13	11.13	1349446	2520675	522.447	481.936
16)	2,4-Dinitrotolue	12.16	12.17	2660865	1692111	516.145	518.492
17)	2,6-Dinitrotolue	12.63	12.63	1640394	2011797	541.629	542.295
18)	o-Nitrotoluene	15.65	15.65	1216131	1545793	491.007	484.072
19)	p-Nitrotoluene	16.23	16.23	1938532	1436595	511.576	468.992
20)	m-Nitrotoluene	17.01	17.01	1766060	2017322	506.798	498.230m
21)	PETN	0.00	18.72	0	786214	N.D.	569.528m#

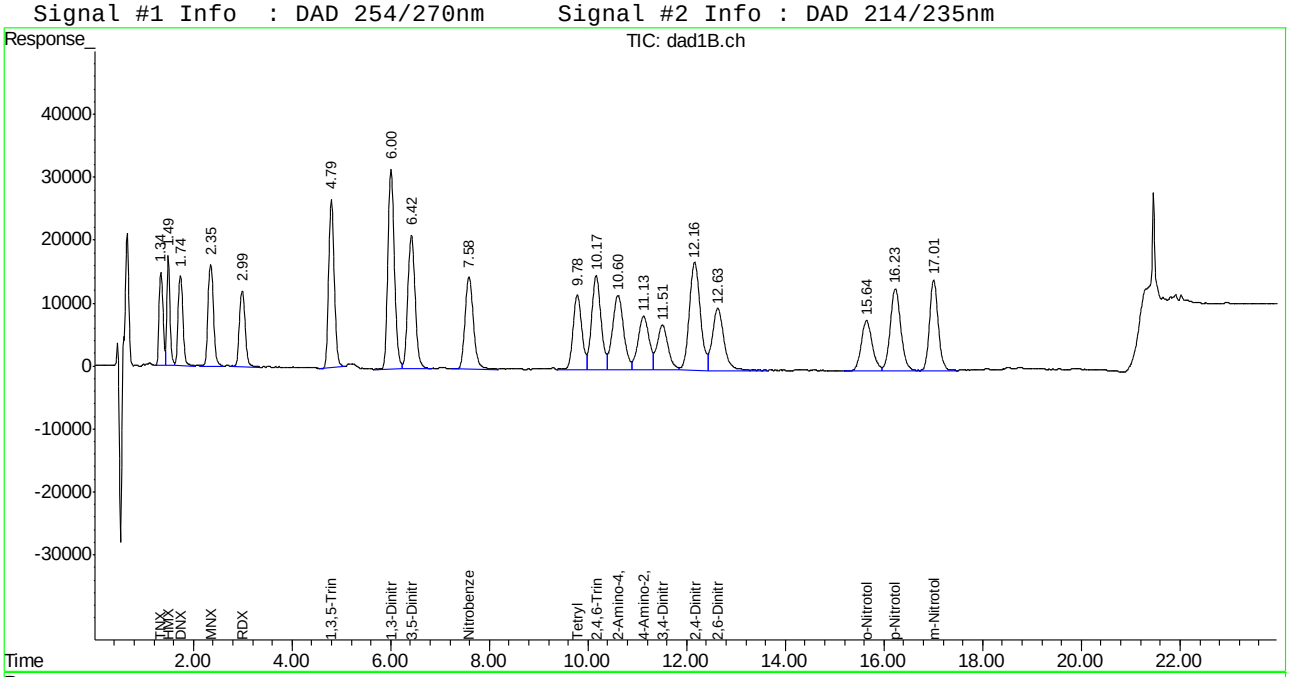
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

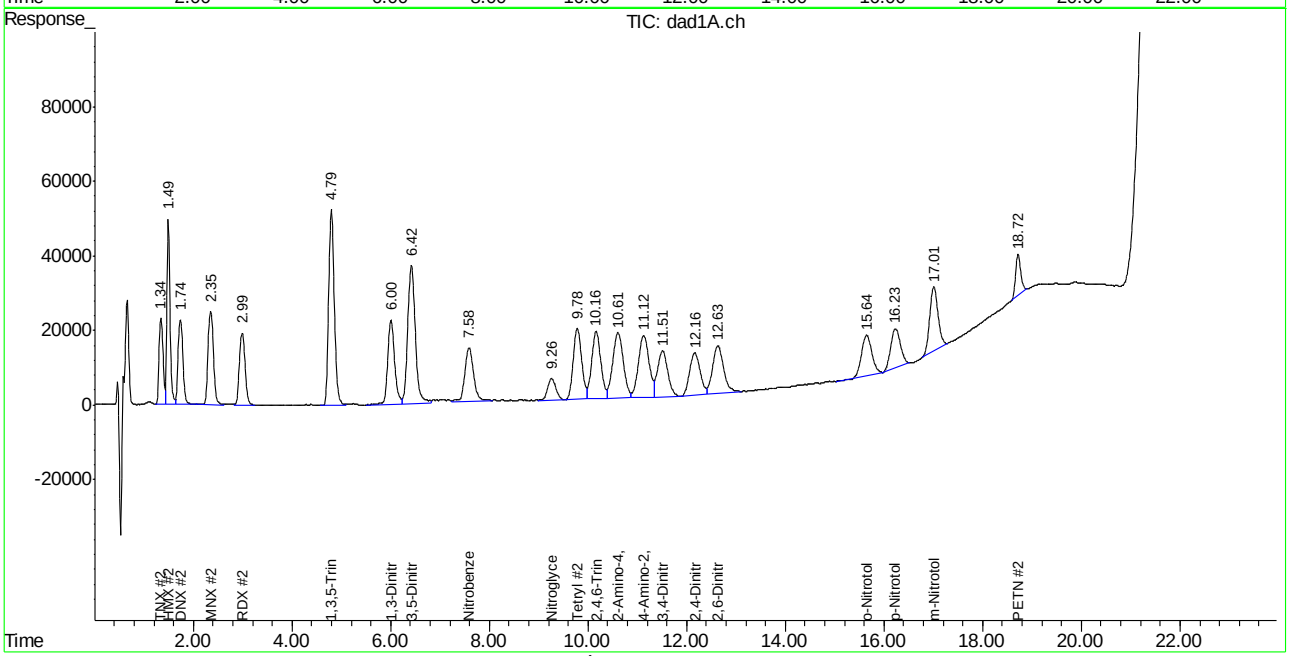
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389797.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389797.D\dad1A.ch
Acq On : 05-Feb-2021, 17:56:19 Operator: jamesb
Sample : op83930-BS Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 10:57 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

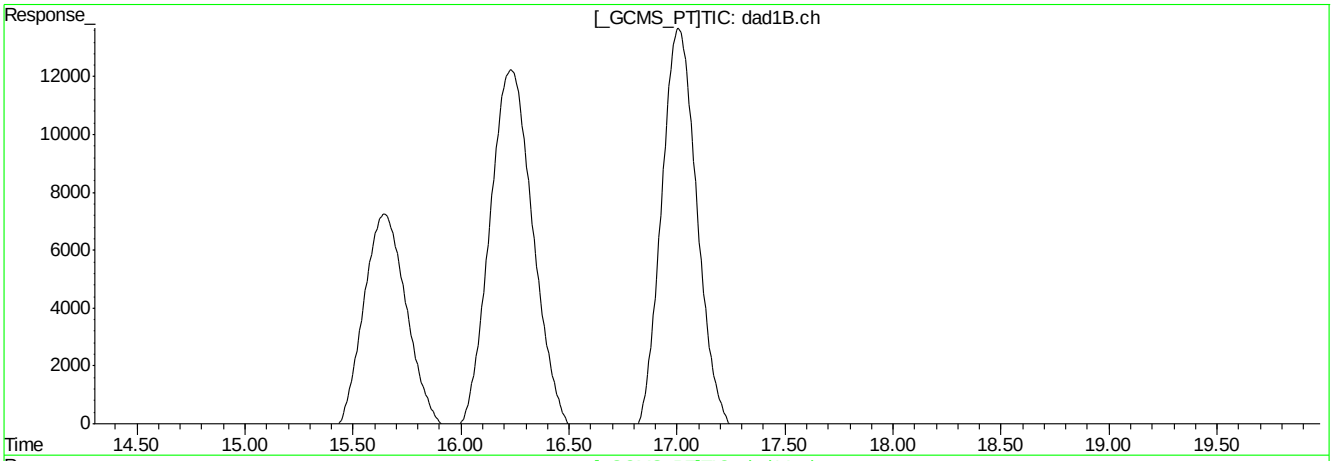
Sample Number: OP83930-BS
Lab FileID: PP389797.D
Injection Time: 02/05/21 17:56
Method: SW846 8330B
Analyst approved: 02/08/21 10:59 James Boone
Supervisor approved: 02/08/21 13:07 Naresh Jiawan

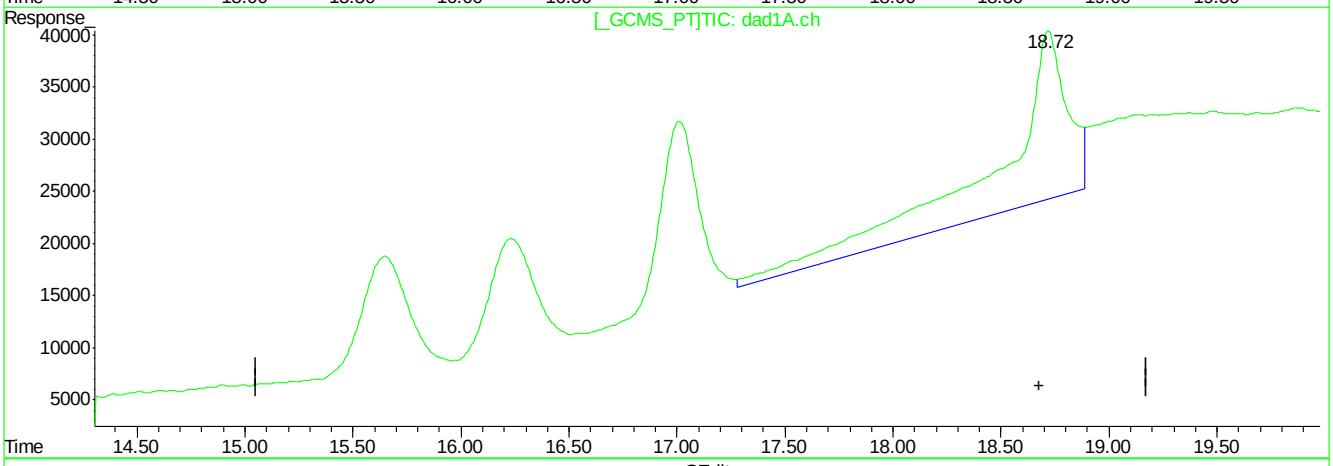
Parameter	CAS	Sig#	R.T. (min.)	Reason
m-Nitrotoluene	99-08-1	2	17.01	Poor instrument integration
PETN	78-11-5	2	18.72	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389797.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389797.D\dad1A.ch
Acq On : 05-Feb-2021, 17:56:19 Operator: jamesb
Sample : op83930-BS Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:00 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.72min 2506.262ppb

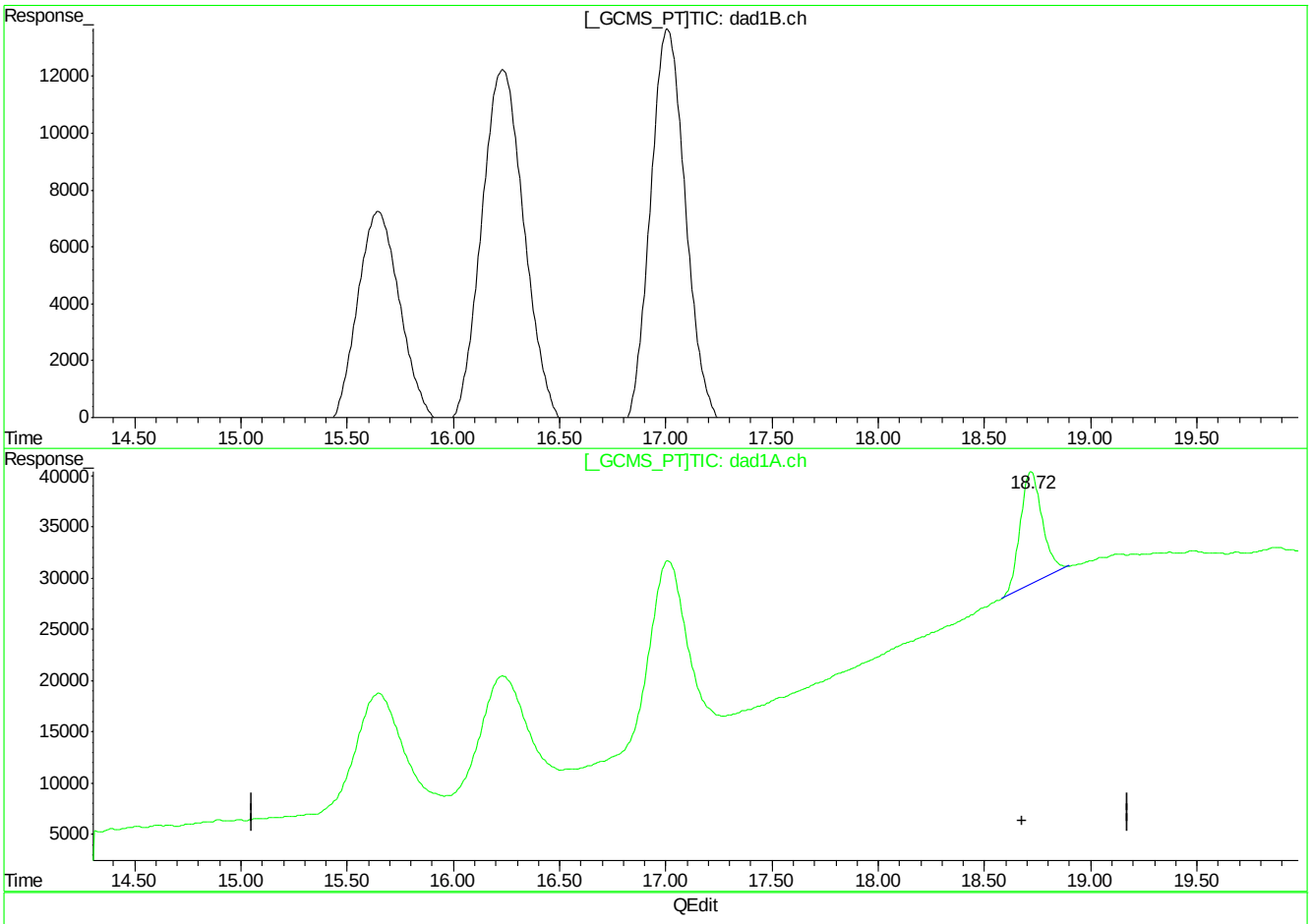
response 3459810

(+) = Expected Retention Time
PP389797.D GPP2401_020521PRI.M Mon Feb 08 10:57:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389797.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389797.D\dad1A.ch
Acq On : 05-Feb-2021, 17:56:19 Operator: jamesb
Sample : op83930-BS Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:00 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.72min 569.528ppb m

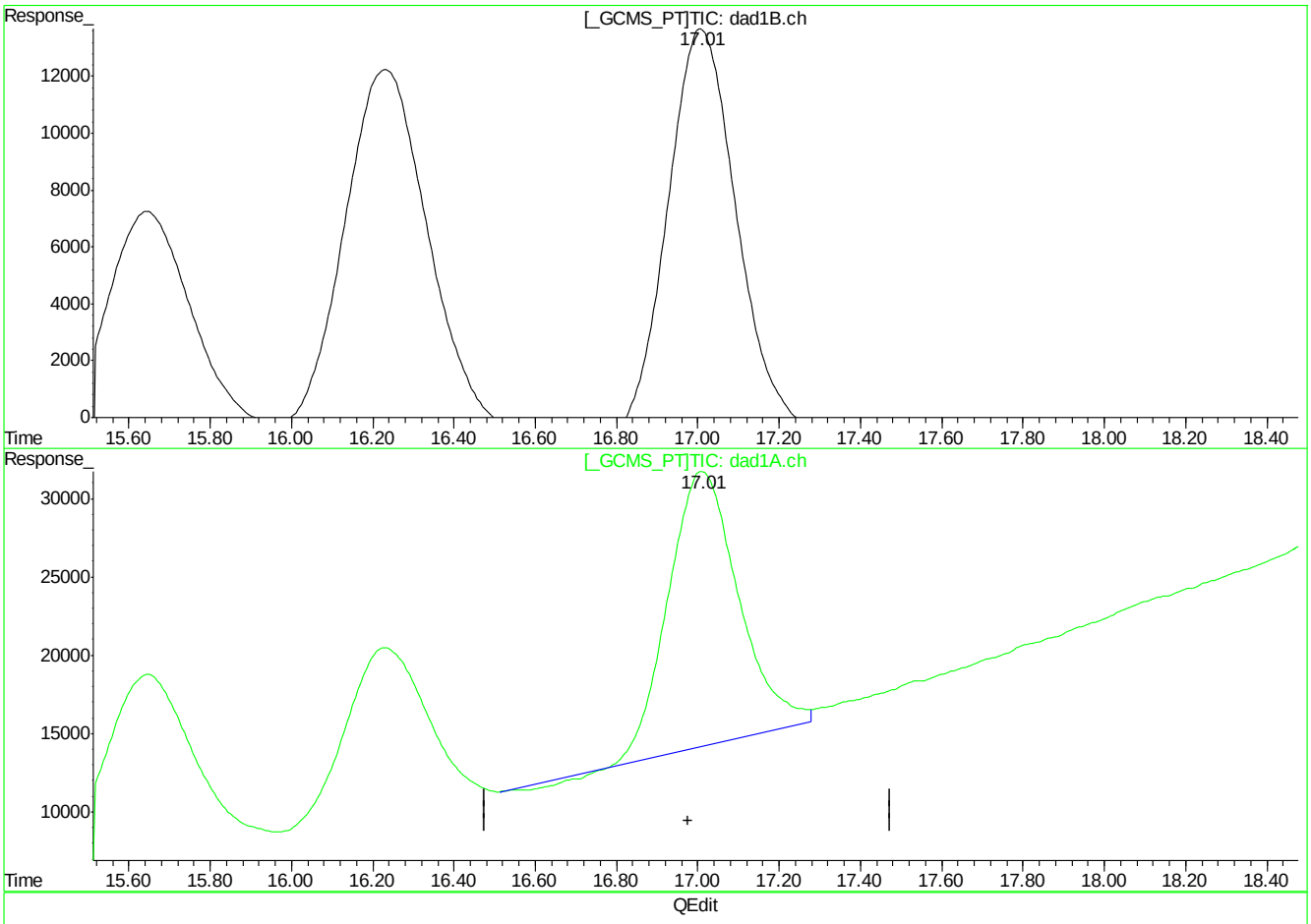
response 786214

(+) = Expected Retention Time
PP389797.D GPP2401_020521PRI.M Mon Feb 08 10:57:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389797.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389797.D\dad1A.ch
Acq On : 05-Feb-2021, 17:56:19 Operator: jamesb
Sample : op83930-BS Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:00 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.01min 506.798ppb

response 1766060

(20) m-Nitrotoluene #2

17.01min 510.785ppb

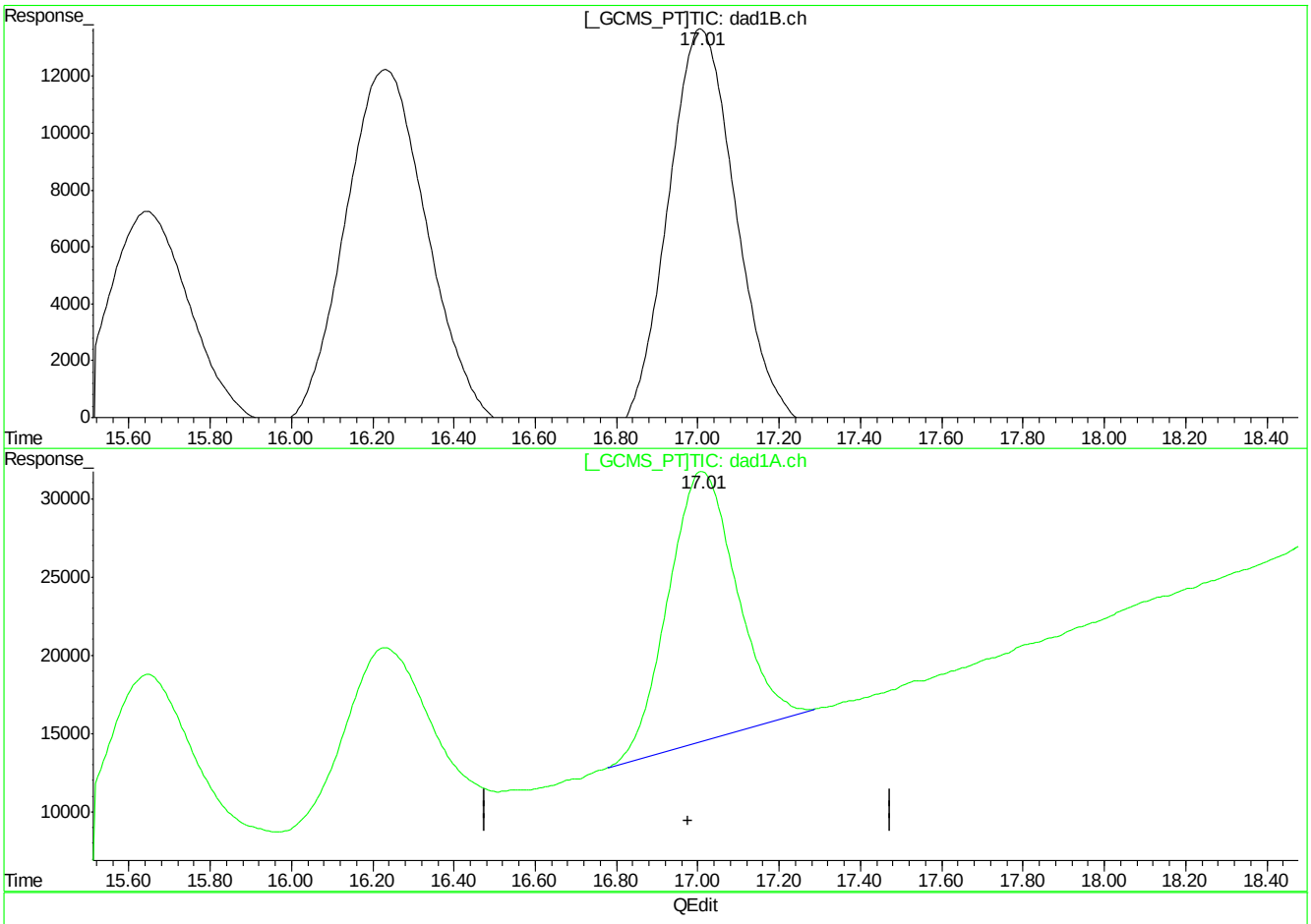
response 2068154

(+) = Expected Retention Time
PP389797.D GPP2401_020521PRI.M Mon Feb 08 10:57:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389797.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389797.D\dad1A.ch
Acq On : 05-Feb-2021, 17:56:19 Operator: jamesb
Sample : op83930-BS Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:00 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.01min 506.798ppb

response 1766060

(20) m-Nitrotoluene #2

17.01min 498.230ppb m

response 2017322

(+) = Expected Retention Time
PP389797.D GPP2401_020521PRI.M Mon Feb 08 10:57:22 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:16

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1B.ch Vial: 17
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1A.ch
Acq On : 05-Feb-2021, 18:27:17 Operator: jamesb
Sample : op83930-MS Inst : G1315B
Misc : op83930,GPP2402,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 08 08:01:00 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.51	11.51	1187671	1850877	484.842	428.418
	Spiked Amount 500.000	Range 70 - 136		Recovery =		96.97%	85.68%
	Target Compounds						
1)	TNX	1.34	1.34	1388051	2180325	405.985	428.296
2)	HMX	1.49	1.49	2278942	6435518	1461.345	1453.110
3)	DNX	1.74	1.74	1232558	2008830	419.272	425.114
4)	MNX	2.35	2.35	1386917	2152014	432.086	428.586
5)	RDX	2.99	2.99	1110128	1778203	538.152	541.819
6)	1,3,5-Trinitrobe	4.79	4.79	4755602	9134314	1067.915	1080.133
7)	1,3-Dinitrobenze	6.00	6.00	3241232	2327821	573.151	550.371
8)	3,5-Dinitroanili	6.42	6.42	2491590	4226040	581.976	555.352
9)	Nitrobenzene	7.58	7.58	1825574	1715856	528.167	513.145
10)	Nitroglycerin	0.00	9.26	0	730498	N.D.	537.760 #
11)	Tetryl	9.78	9.78	1412819	2230835	441.838	433.409
12)	2,4,6-Trinitroto	10.16	10.16	3935749	4760710	993.565	998.803
13)	2-Amino-4,6-Dini	10.60	10.61	2759052	4013880	751.636	752.274
14)	4-Amino-2,6-Dini	11.12	11.12	1803699	3455822	698.314	661.435
16)	2,4-Dinitrotolue	12.16	12.16	3063418	1880946	594.231	576.354
17)	2,6-Dinitrotolue	12.63	12.63	2434393	2700195	803.793	727.858
18)	o-Nitrotoluene	15.64	15.63	1534078	1712908	620.701	536.405m
19)	p-Nitrotoluene	16.23	16.23	2192090	1559079	578.489	508.978
20)	m-Nitrotoluene	17.01	17.00	2017774	2220215	579.031	548.340m
21)	PETN	18.71	18.71	218801	881707	NoCal	638.703m#

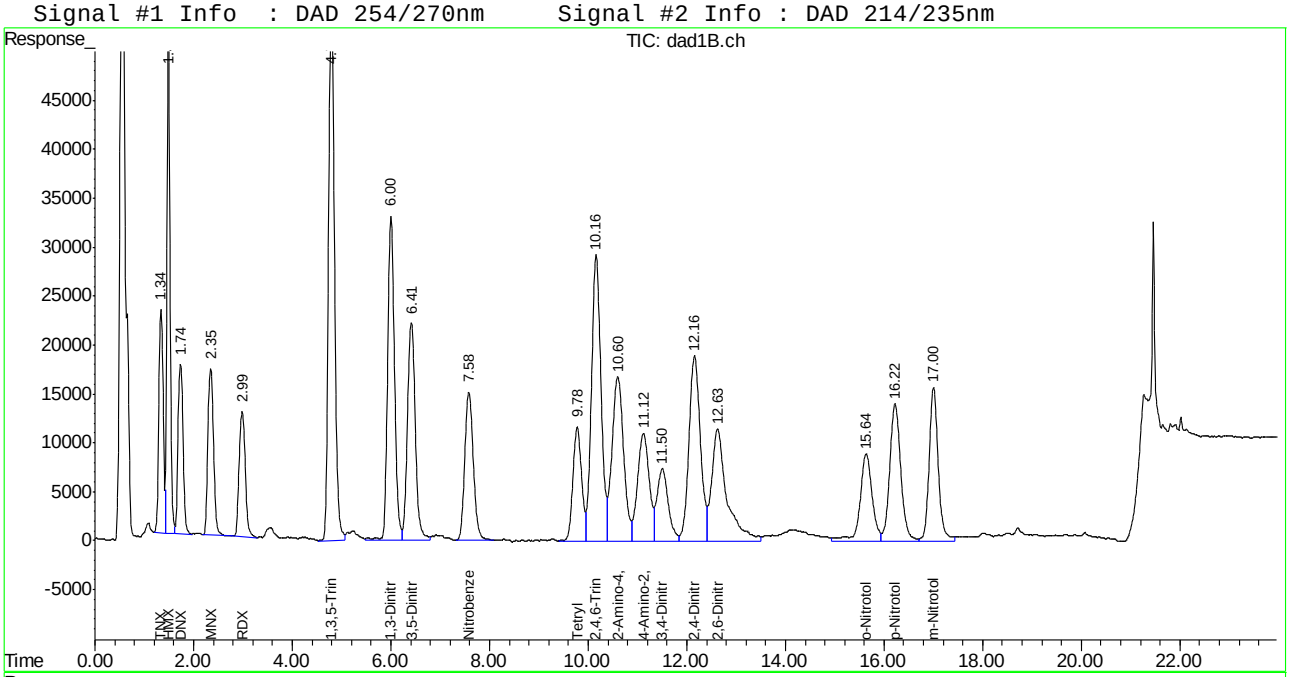
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

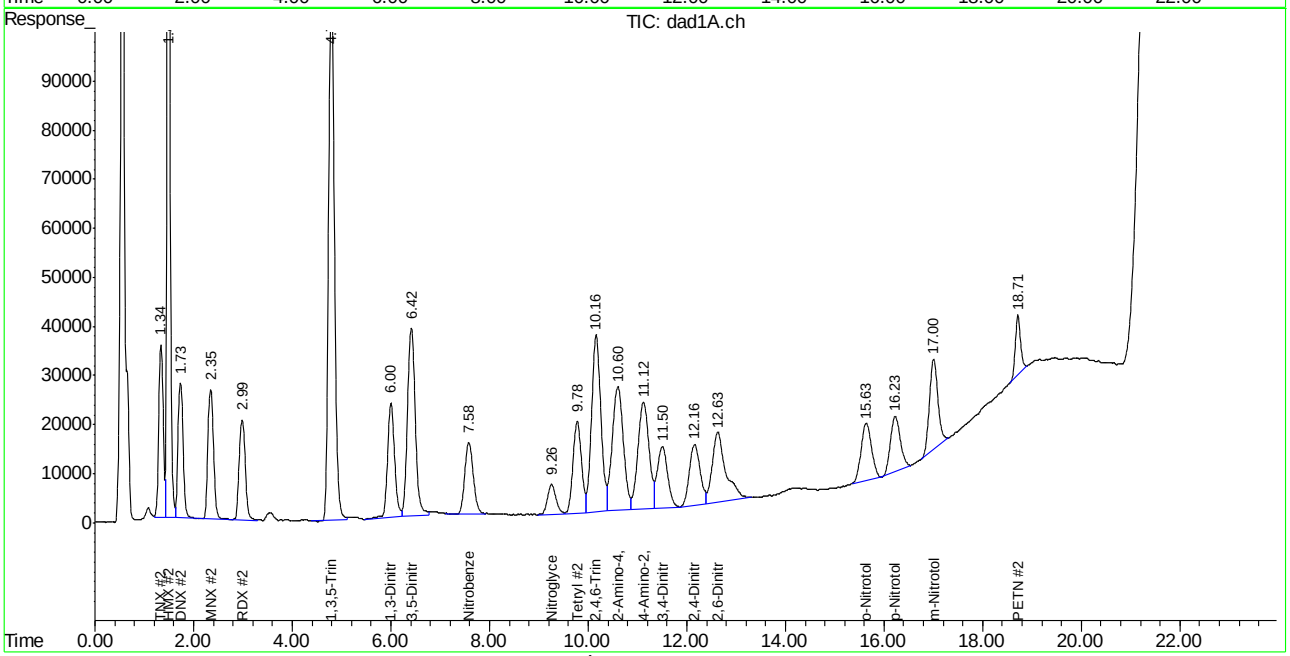
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1B.ch Vial: 17
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1A.ch
Acq On : 05-Feb-2021, 18:27:17 Operator: jamesb
Sample : op83930-MS Inst : G1315B
Misc : op83930,GPP2402,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:59 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

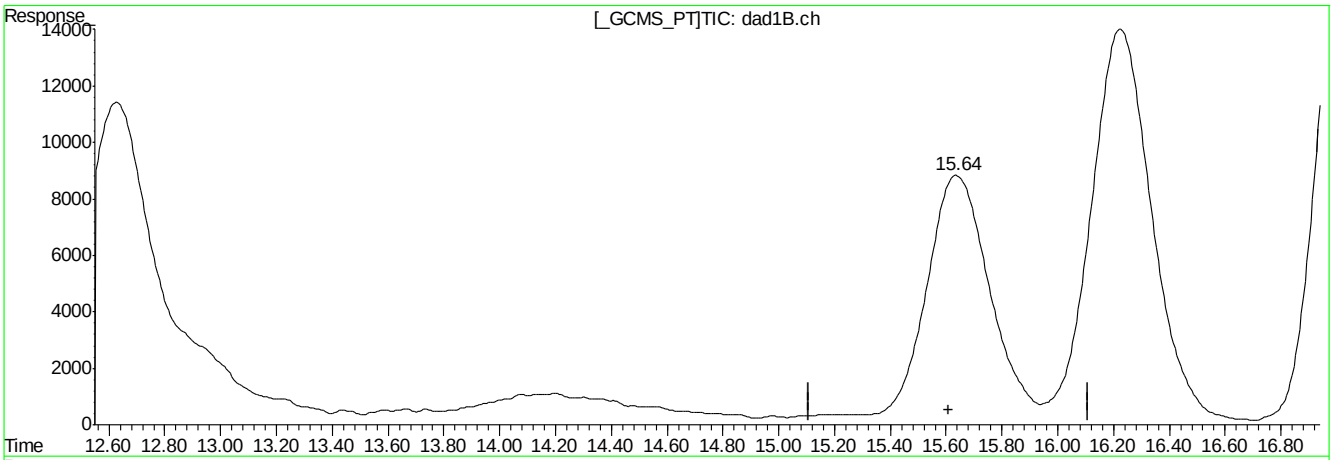
Sample Number: OP83930-MS
Lab FileID: PP389798.D
Injection Time: 02/05/21 18:27
Method: SW846 8330B
Analyst approved: 02/08/21 10:55 James Boone
Supervisor approved: 02/08/21 13:16 Naresh Jiawan

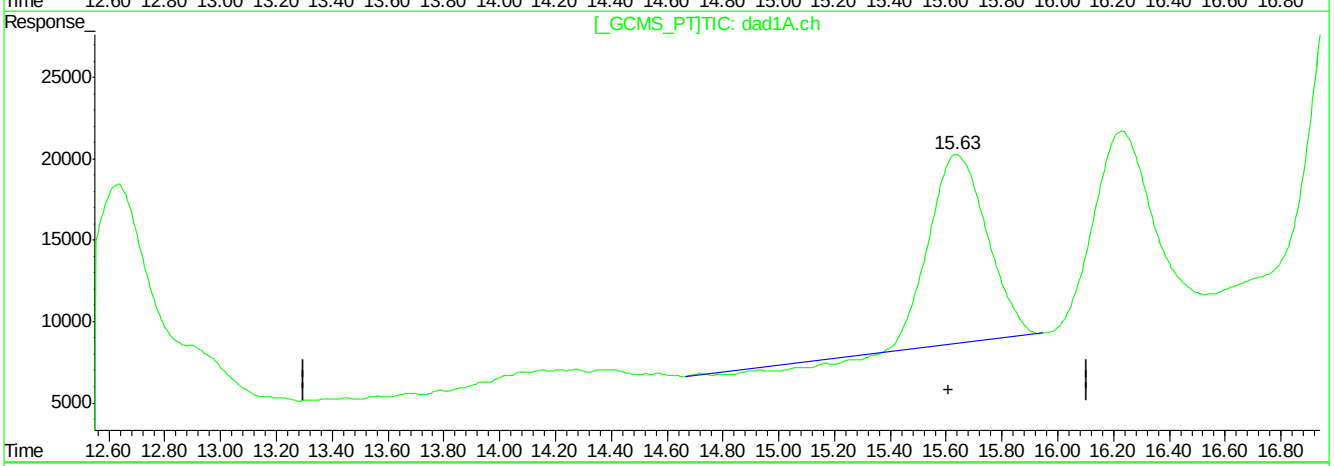
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.63	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.00	Poor instrument integration
PETN	78-11-5	2	18.71	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1B.ch Vial: 17
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1A.ch
Acq On : 05-Feb-2021, 18:27:17 Operator: jamesb
Sample : op83930-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.64min 620.701ppb

response 1534078

(18) o-Nitrotoluene #2

15.64min 504.648ppb

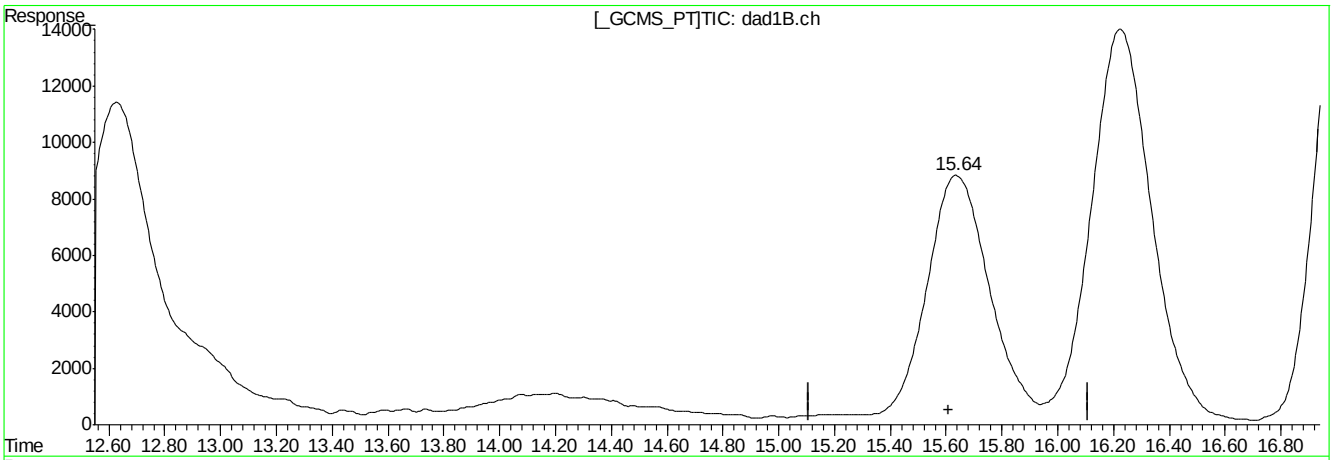
response 1611500

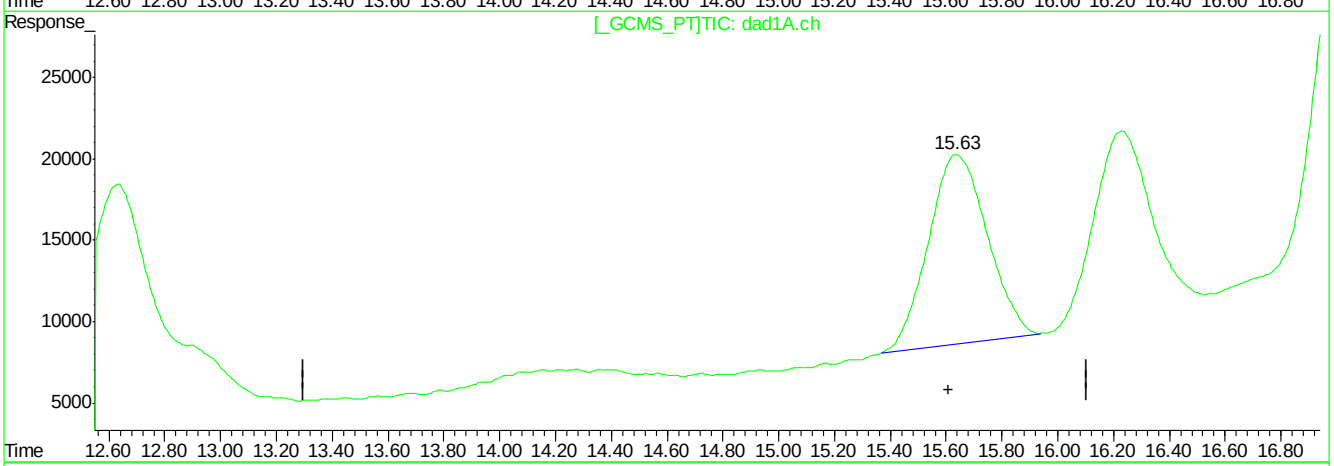
(+) = Expected Retention Time
PP389798.D GPP2401_020521PRI.M Mon Feb 08 08:59:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1B.ch Vial: 17
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1A.ch
Acq On : 05-Feb-2021, 18:27:17 Operator: jamesb
Sample : op83930-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.64min 620.701ppb

response 1534078

(18) o-Nitrotoluene #2

15.63min 536.405ppb m

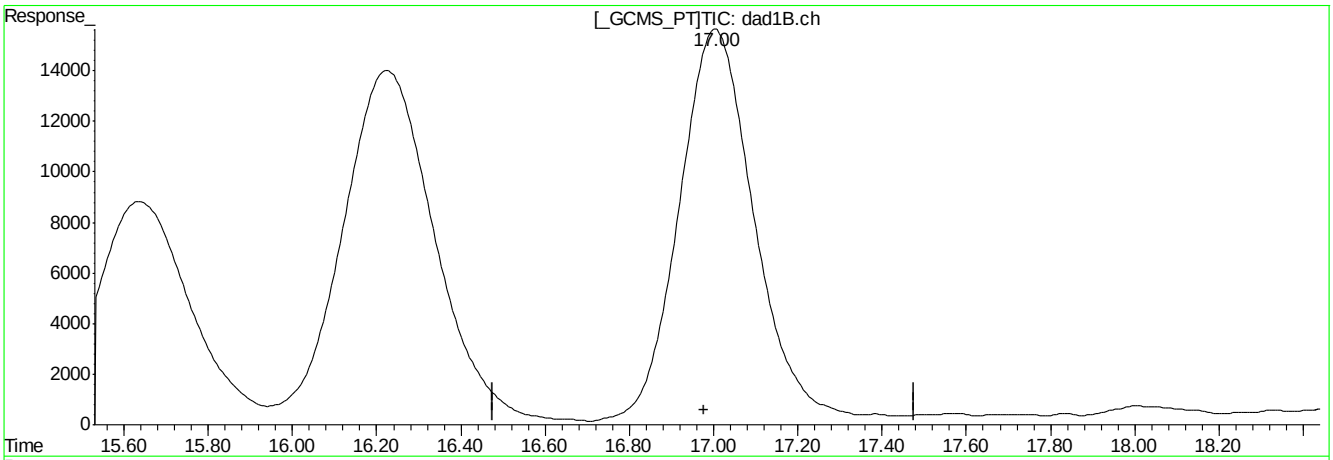
response 1712908

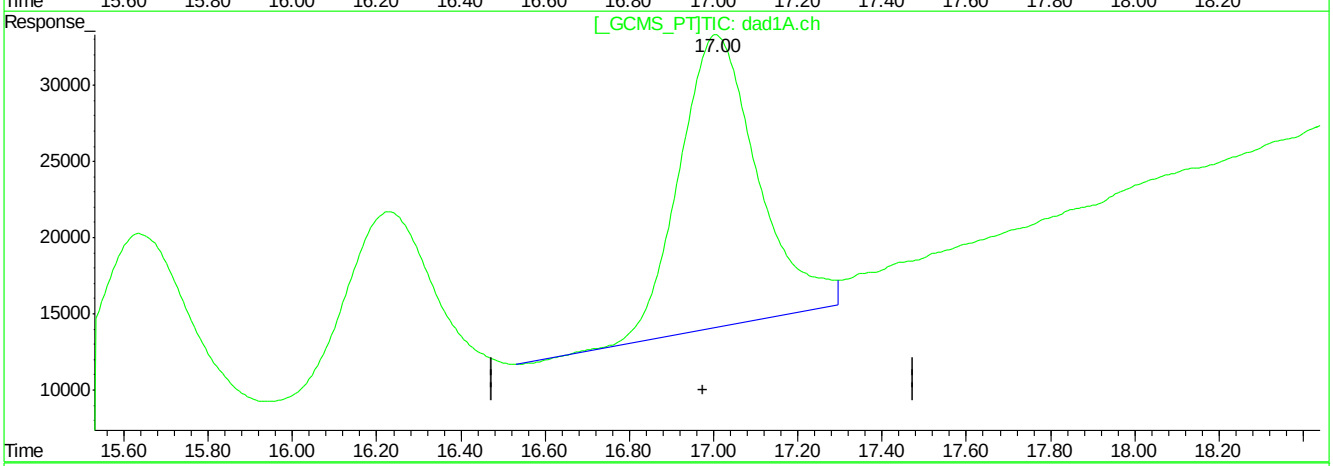
(+) = Expected Retention Time
PP389798.D GPP2401_020521PRI.M Mon Feb 08 08:59:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1B.ch Vial: 17
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1A.ch
Acq On : 05-Feb-2021, 18:27:17 Operator: jamesb
Sample : op83930-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.01min 579.031ppb

response 2017774

(20) m-Nitrotoluene #2

17.01min 613.920ppb

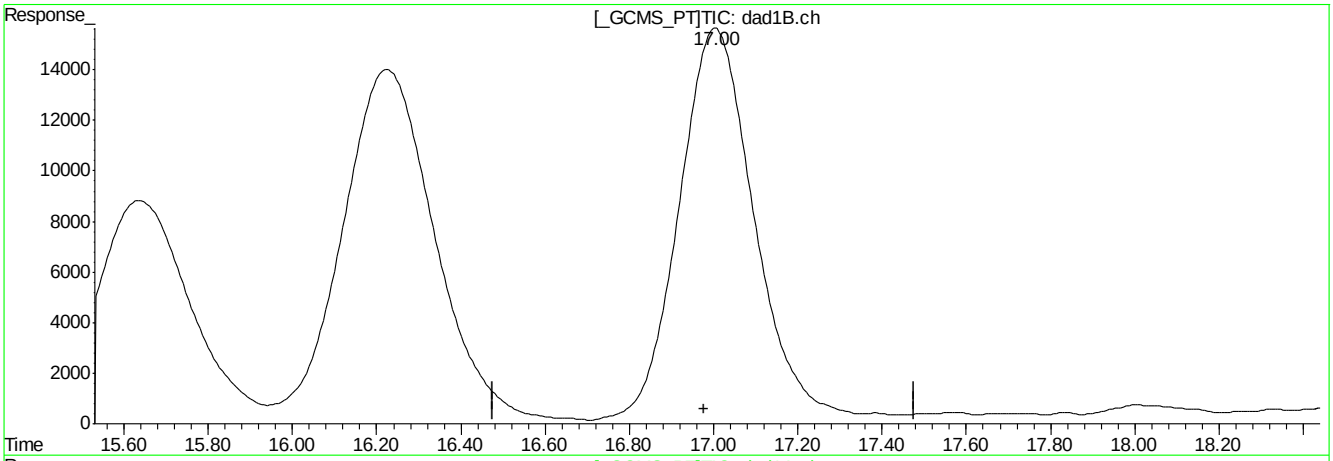
response 2485747

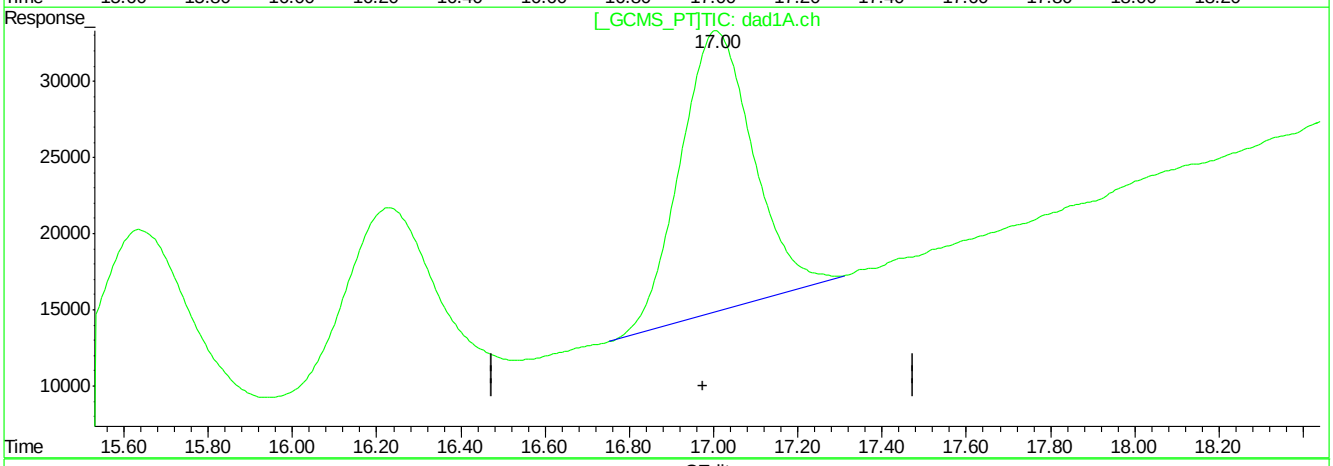
(+) = Expected Retention Time
PP389798.D GPP2401_020521PRI.M Mon Feb 08 08:59:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1B.ch Vial: 17
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1A.ch
Acq On : 05-Feb-2021, 18:27:17 Operator: jamesb
Sample : op83930-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.01min 579.031ppb

response 2017774

(20) m-Nitrotoluene #2

17.00min 548.340ppb m

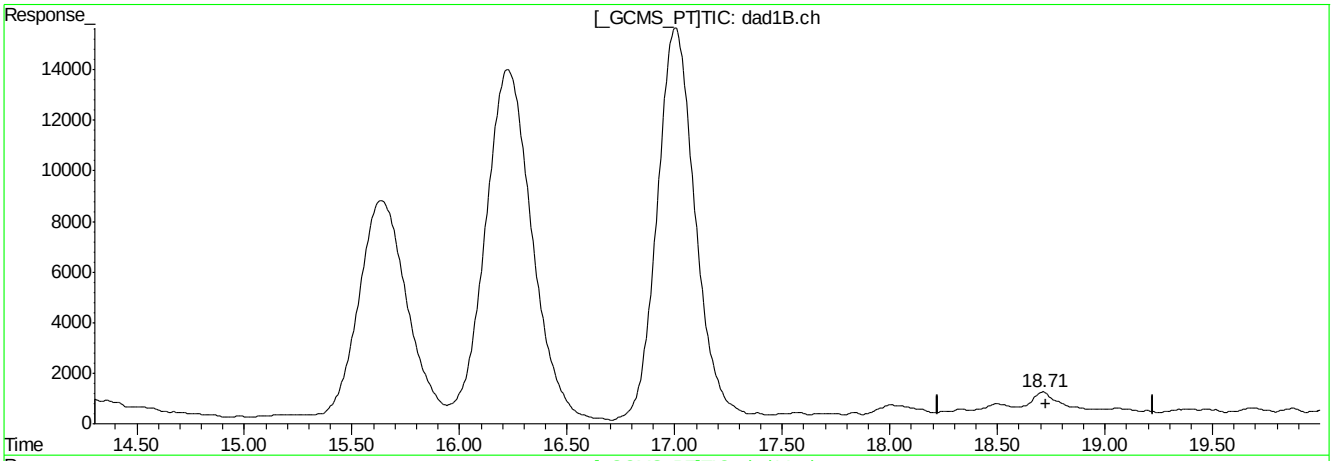
response 2220215

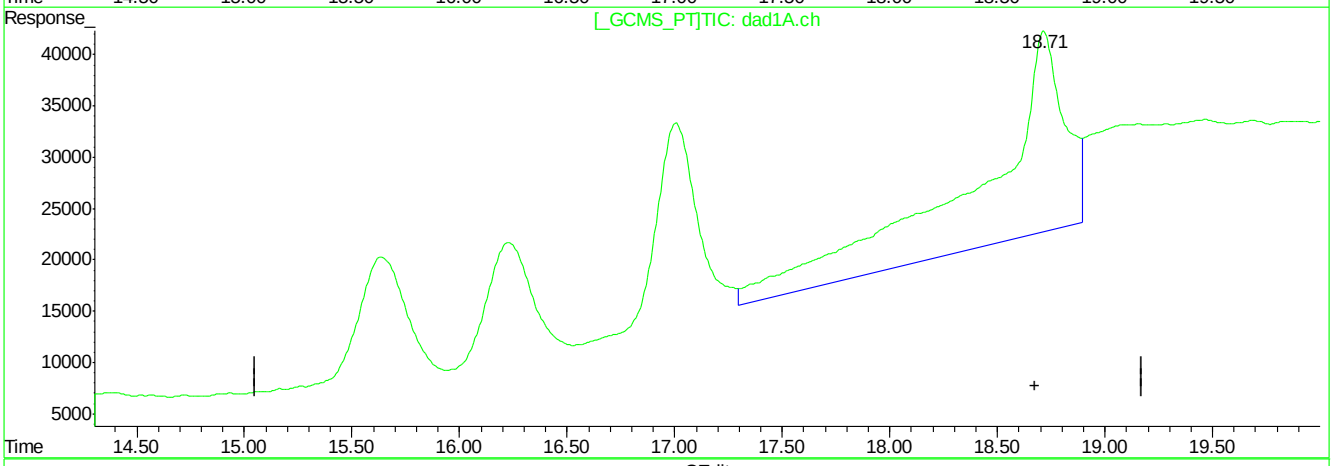
(+) = Expected Retention Time
PP389798.D GPP2401_020521PRI.M Mon Feb 08 08:59:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1B.ch Vial: 17
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1A.ch
Acq On : 05-Feb-2021, 18:27:17 Operator: jamesb
Sample : op83930-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.71min 0.000ppb

response 218801

(21) PETN #2

18.72min 3826.703ppb

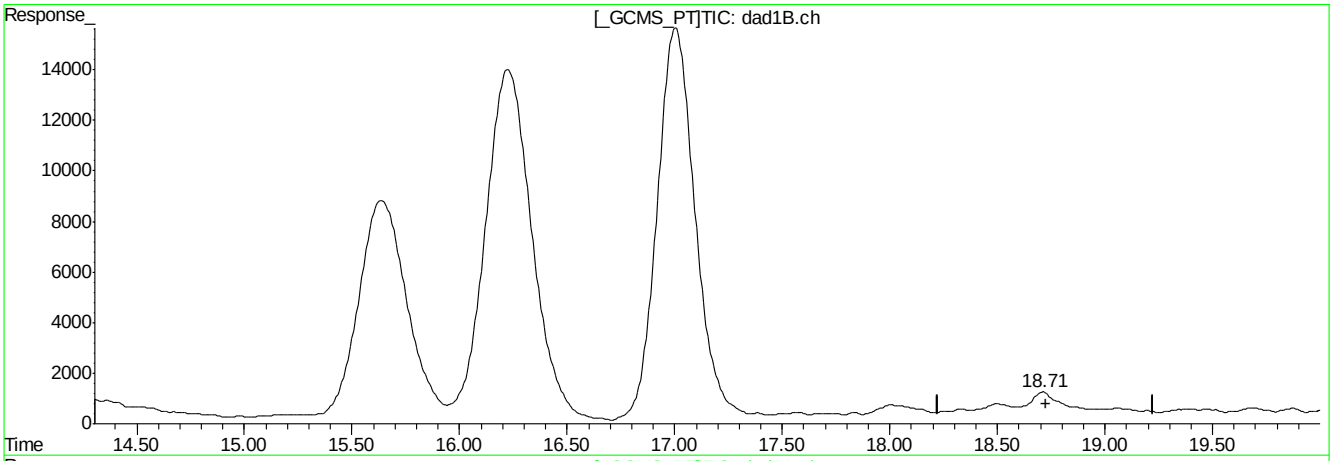
response 5282634

(+) = Expected Retention Time
PP389798.D GPP2401_020521PRI.M Mon Feb 08 08:59:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1B.ch Vial: 17
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389798.D\dad1A.ch
Acq On : 05-Feb-2021, 18:27:17 Operator: jamesb
Sample : op83930-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(21) PETN

18.71min 0.000ppb

response 218801

(21) PETN #2

18.71min 638.703ppb m

response 881707

(+) = Expected Retention Time
PP389798.D GPP2401_020521PRI.M Mon Feb 08 08:59:53 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:16

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1A.ch
Acq On : 05-Feb-2021, 18:58:18 Operator: jamesb
Sample : op83930-MSD Inst : G1315B
Misc : op83930,GPP2402,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 08 08:01:01 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.51	11.51	1147959	1863531	468.630	431.351
	Spiked Amount 500.000	Range 70 - 136		Recovery =		93.73%	86.27%
	Target Compounds						
1)	TNX	1.34	1.34	1380397	2172469	403.747	426.752
2)	HMX	1.49	1.49	2282354	6462542	1463.581	1459.369
3)	DNX	1.74	1.74	1230192	2031493	418.463	429.940
4)	MNX	2.35	2.35	1371524	2152168	427.266	428.617
5)	RDX	2.99	2.99	1100223	1755795	533.351	534.944
6)	1,3,5-Trinitrobe	4.80	4.80	4729739	9177420	1062.107	1085.230
7)	1,3-Dinitrobenze	6.01	6.01	3119996	2360199	551.712	558.027
8)	3,5-Dinitroanili	6.42	6.42	2377000	4348546	555.211	571.451
9)	Nitrobenzene	7.59	7.59	1810970	1816505	523.942	543.245
10)	Nitroglycerin	0.00	9.26	0	719375	N.D.	529.523 #
11)	Tetryl	9.78	9.79	1410309	2246848	441.053	436.520
12)	2,4,6-Trinitroto	10.17	10.17	3934030	4752823	993.131	997.148
13)	2-Amino-4,6-Dini	10.61	10.61	2741519	4019451	746.860	753.317
14)	4-Amino-2,6-Dini	11.13	11.13	1799785	3434830	696.799	657.401
16)	2,4-Dinitrotolue	12.16	12.16	3017889	1865598	585.399	571.652
17)	2,6-Dinitrotolue	12.63	12.63	2337409	2695212	771.770	726.515
18)	o-Nitrotoluene	15.64	15.64	1347123	1736211	544.373	543.702m
19)	p-Nitrotoluene	16.23	16.23	2066153	1550674	545.255	506.235
20)	m-Nitrotoluene	17.01	17.00	1888673	2211742	541.983	546.247m
21)	PETN	18.72	18.71	69796	868961	NoCal	629.469m#

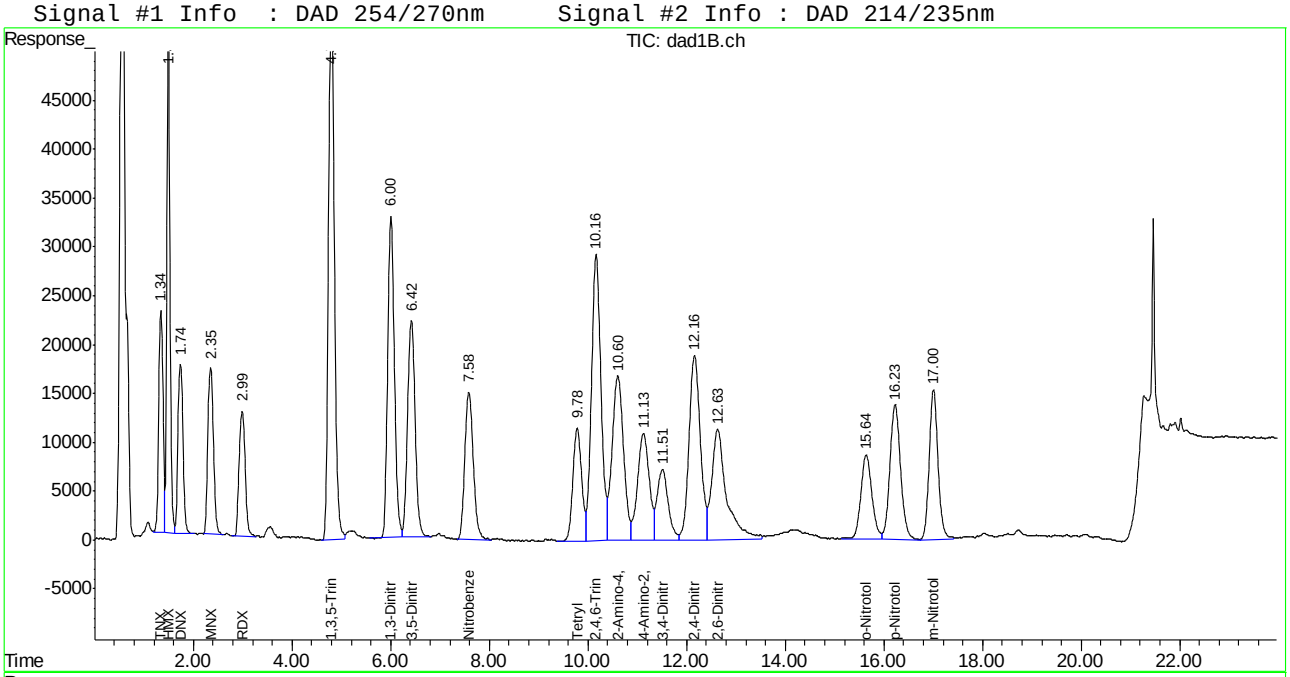
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

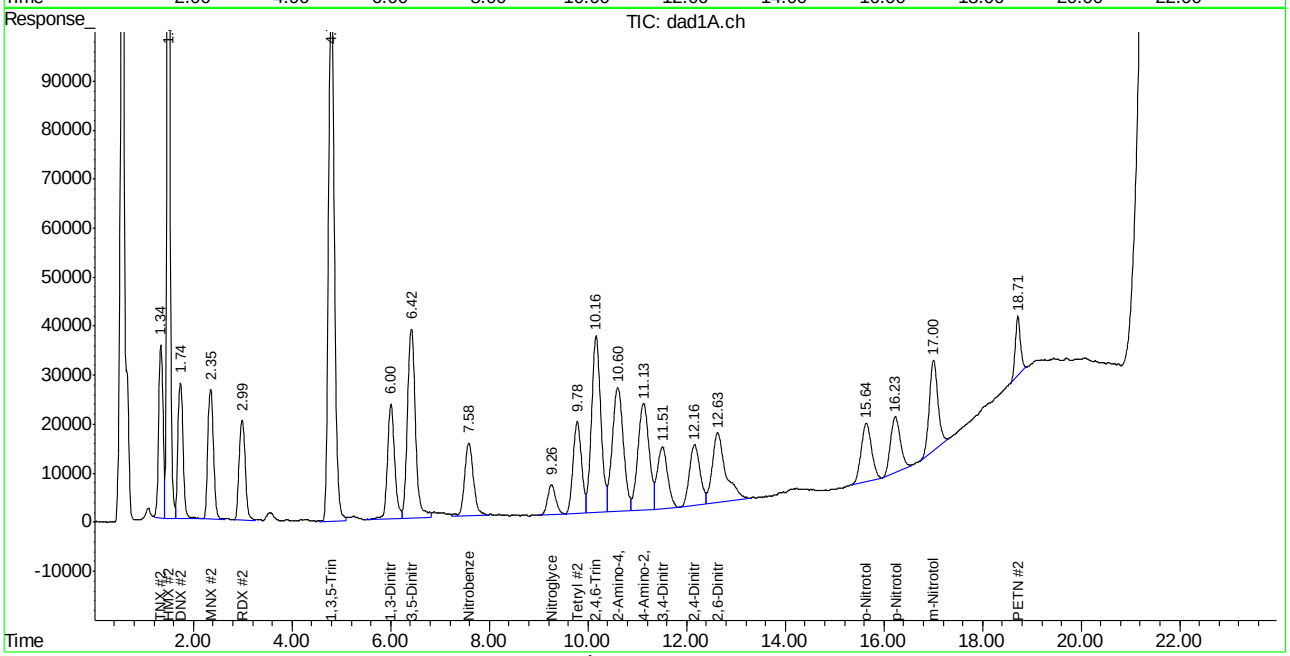
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1A.ch
Acq On : 05-Feb-2021, 18:58:18 Operator: jamesb
Sample : op83930-MSD Inst : G1315B
Misc : op83930,GPP2402,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 9:01 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

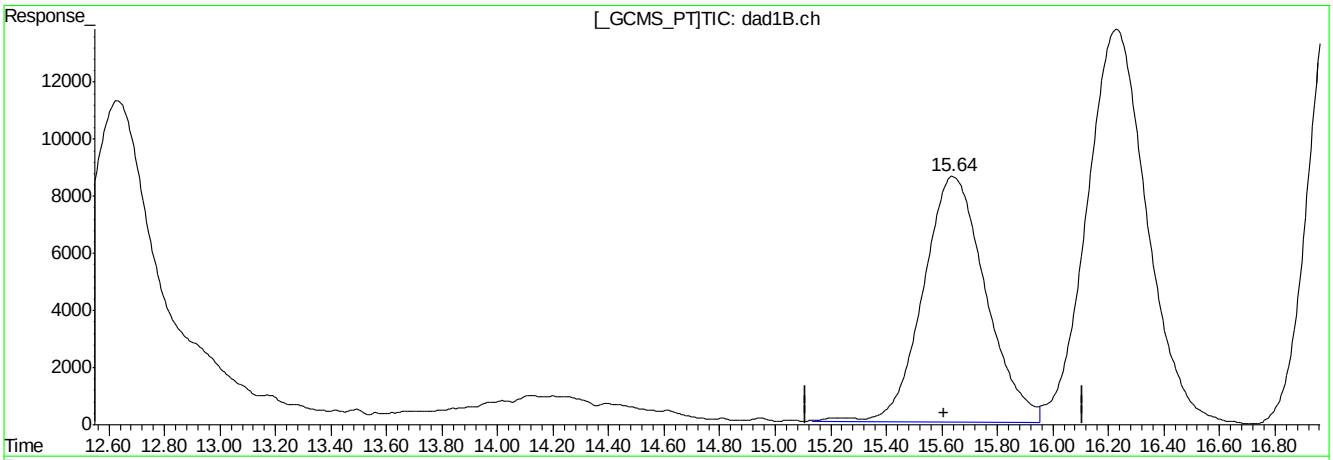
Sample Number: OP83930-MSD
Lab FileID: PP389799.D
Injection Time: 02/05/21 18:58
Method: SW846 8330B
Analyst approved: 02/08/21 10:55 James Boone
Supervisor approved: 02/08/21 13:16 Naresh Jiawan

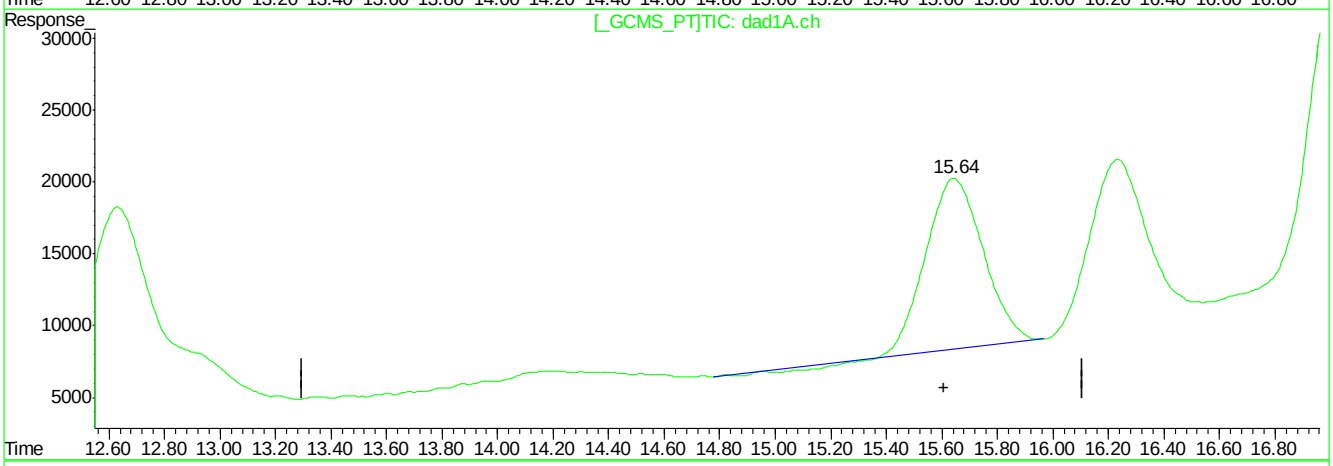
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.64	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.00	Poor instrument integration
PETN	78-11-5	2	18.71	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1A.ch
Acq On : 05-Feb-2021, 18:58:18 Operator: jamesb
Sample : op83930-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.64min 544.373ppb

response 1347123

(18) o-Nitrotoluene #2

15.65min 528.397ppb

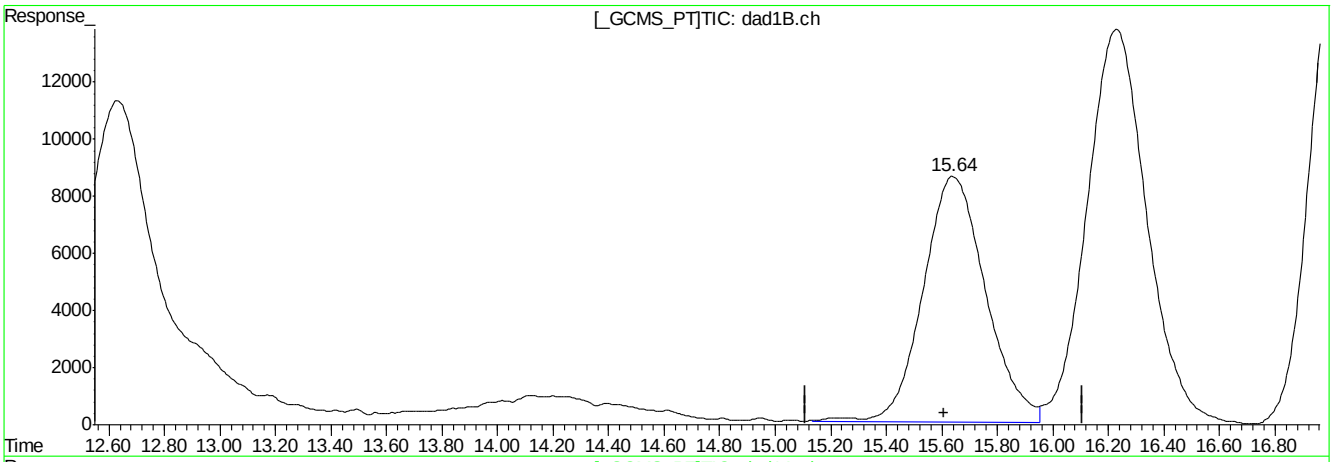
response 1687338

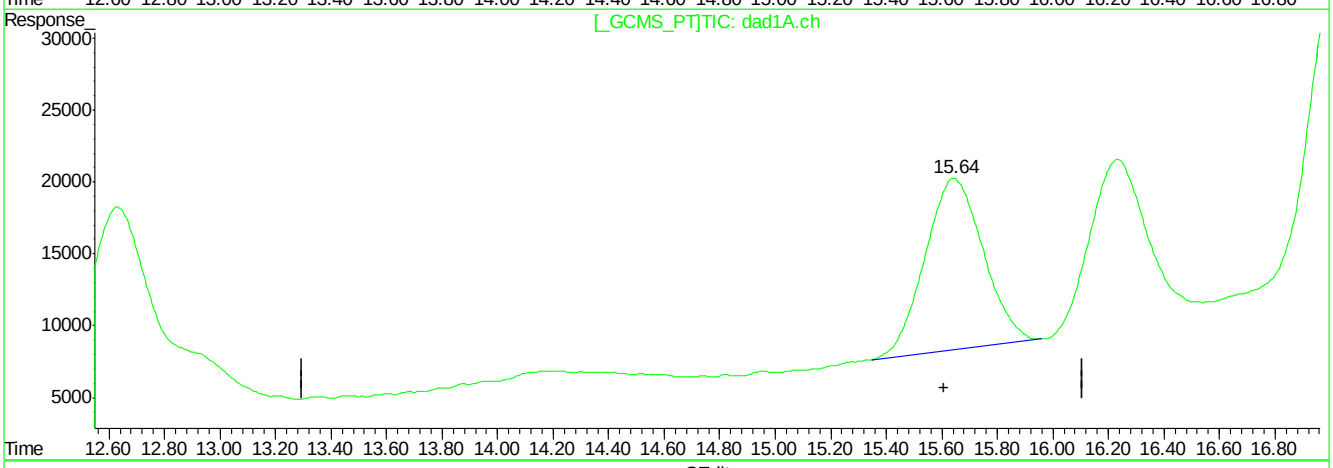
(+) = Expected Retention Time
PP389799.D GPP2401_020521PRI.M Mon Feb 08 09:00:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1A.ch
Acq On : 05-Feb-2021, 18:58:18 Operator: jamesb
Sample : op83930-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.64min 544.373ppb

response 1347123

(18) o-Nitrotoluene #2

15.64min 543.702ppb m

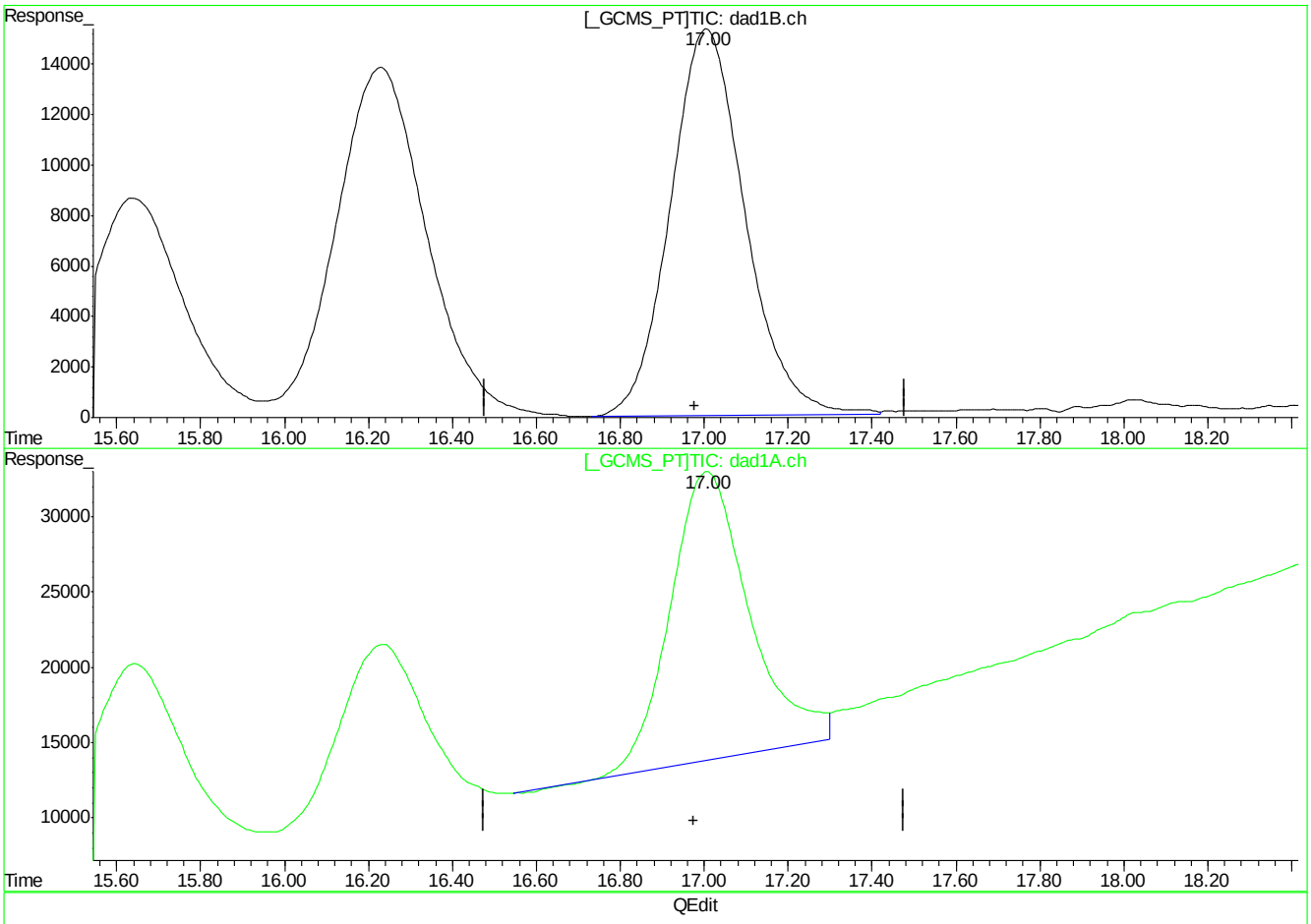
response 1736211

(+) = Expected Retention Time
PP389799.D GPP2401_020521PRI.M Mon Feb 08 09:00:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1A.ch
Acq On : 05-Feb-2021, 18:58:18 Operator: jamesb
Sample : op83930-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.01min 541.983ppb

response 1888673

(20) m-Nitrotoluene #2

17.01min 617.229ppb

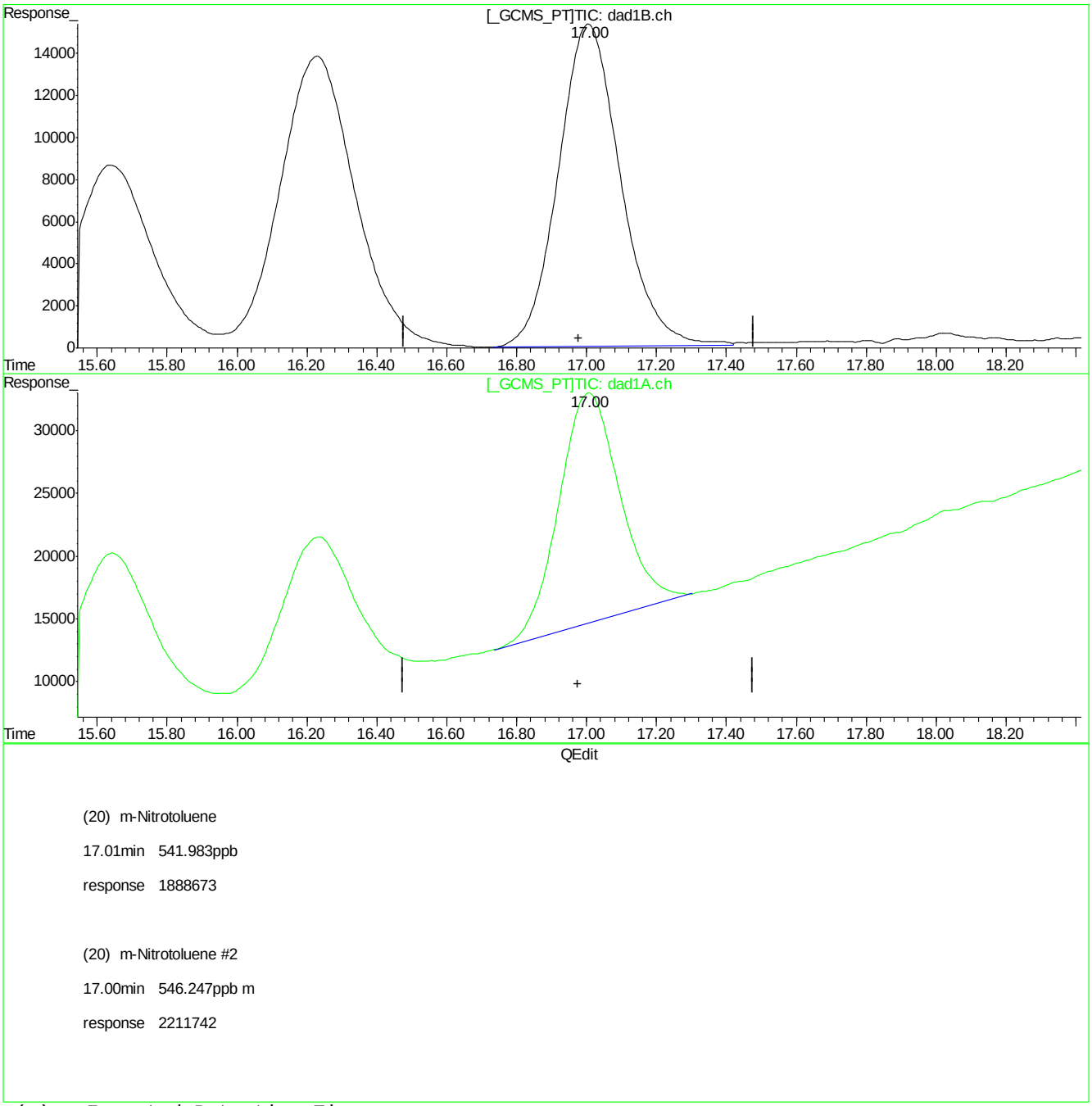
response 2499144

(+) = Expected Retention Time
PP389799.D GPP2401_020521PRI.M Mon Feb 08 09:01:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1A.ch
Acq On : 05-Feb-2021, 18:58:18 Operator: jamesb
Sample : op83930-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.01min 541.983ppb

response 1888673

(20) m-Nitrotoluene #2

17.00min 546.247ppb m

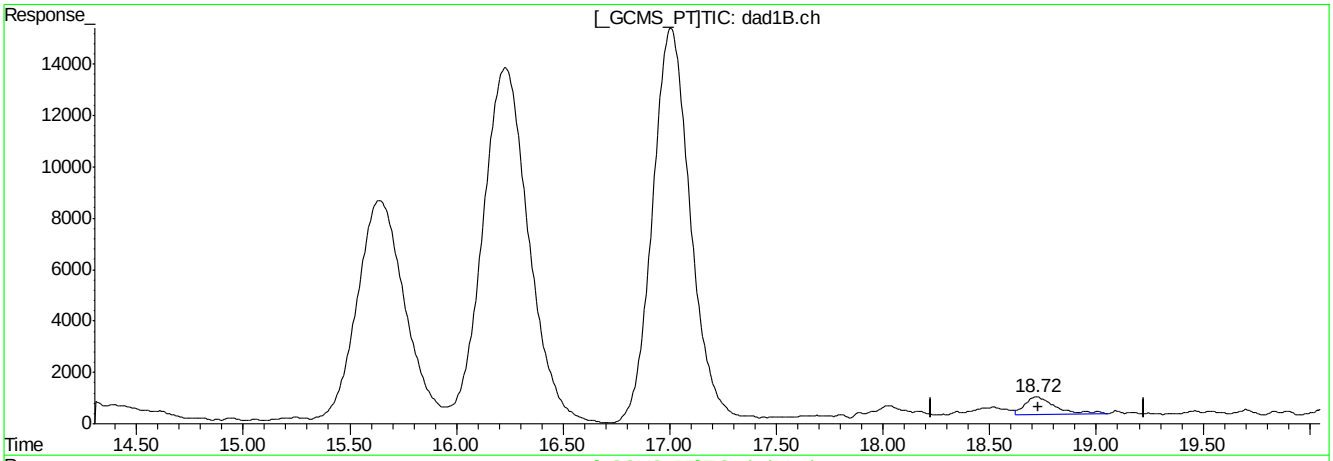
response 2211742

(+) = Expected Retention Time
PP389799.D GPP2401_020521PRI.M Mon Feb 08 09:01:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1A.ch
Acq On : 05-Feb-2021, 18:58:18 Operator: jamesb
Sample : op83930-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(21) PETN

18.72min 0.000ppb

response 69796

(21) PETN #2

18.72min 4103.310ppb

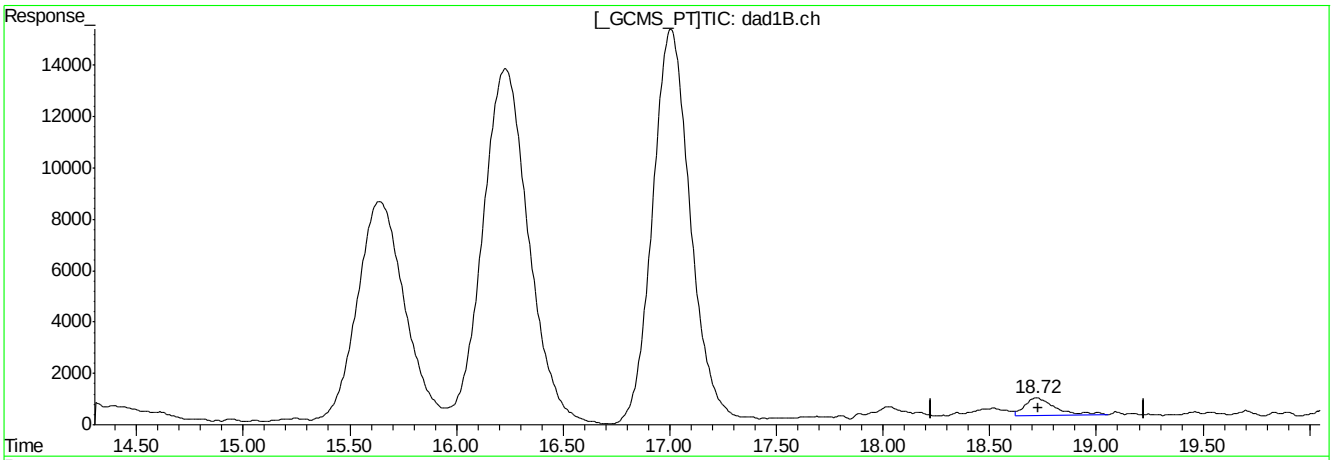
response 5664481

(+) = Expected Retention Time
PP389799.D GPP2401_020521PRI.M Mon Feb 08 09:01:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389799.D\dad1A.ch
Acq On : 05-Feb-2021, 18:58:18 Operator: jamesb
Sample : op83930-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(21) PETN

18.72min 0.000ppb

response 69796

(21) PETN #2

18.71min 629.469ppb m

response 868961

(+) = Expected Retention Time
PP389799.D GPP2401_020521PRI.M Mon Feb 08 09:01:13 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
01/11/21 16:38

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35:02 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.37	14.34	105211	231566	19.483	21.260
	Spiked Amount 500.000	Range 70 - 136		Recovery =		3.90%#	4.25%#
	Target Compounds						
1)	TNX	4.85	4.85	166658	167413	19.640m	19.687m
2)	HMX	5.31	5.31	62501	62501	19.161	19.199
3)	DNX	5.50	5.50	152889	152889	22.326	22.353
4)	MNX	6.68	6.68	148467	148467	21.895	21.872
5)	1,3,5-Trinitrobe	7.75	7.75	203177	203177	21.484	21.499
6)	RDX	7.96	7.96	82314	82314	18.770	18.770
7)	1,3-Dinitrobenze	9.97	9.98	262583	260953	20.453	27.158m
8)	Nitrobenzene	10.89	10.87	162389	363190	19.469	44.972m#
9)	2,4,6-Trinitroto	12.02	12.01	188507	236382	20.381	17.799
10)	Nitroglycerin	0.00	12.86	0	99033	N.D.	24.799m#
11)	Tetryl	13.37	13.36	134780	274797	19.154	18.312
13)	2,6-Dinitrotolue	14.72	14.68	130662	173785	21.520	17.186
14)	2,4-Dinitrotolue	15.40	15.40	234752	170010	20.146	17.730
15)	3,5-Dinitroanili	16.09	16.10	200377	469157	38.899	58.340 #
16)	o-Nitrotoluene	17.00	17.03	97266	156199	9.946	9.406
17)	p-Nitrotoluene	18.06	18.07	208955	355020	38.168	34.779
18)	4-Amino-2,6-Dini	18.06	18.07	208955	355020	38.168	34.823
19)	m-Nitrotoluene	19.33	19.40	114580	188617	19.733	18.731m
20)	2-Amino-4,6-Dini	19.86	19.88	191039	224966	21.857	17.663m
21)	PETN	0.00	22.38	0	102048	N.D.	29.735m#

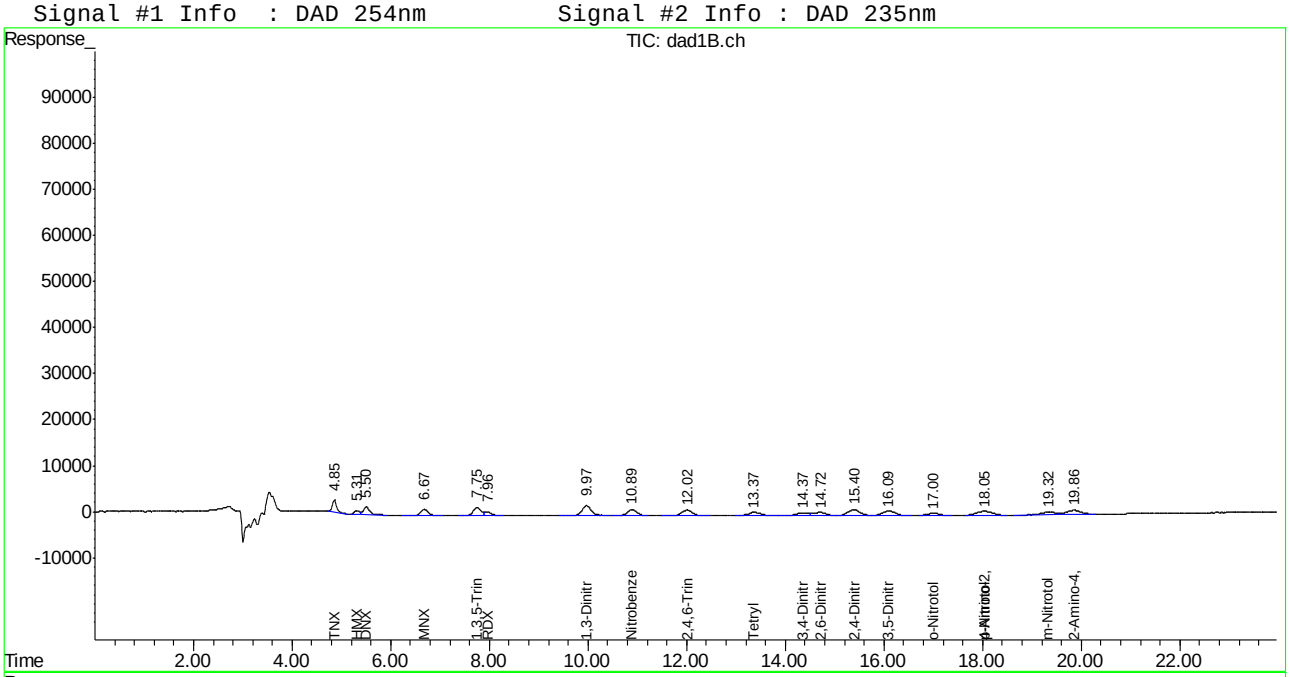
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

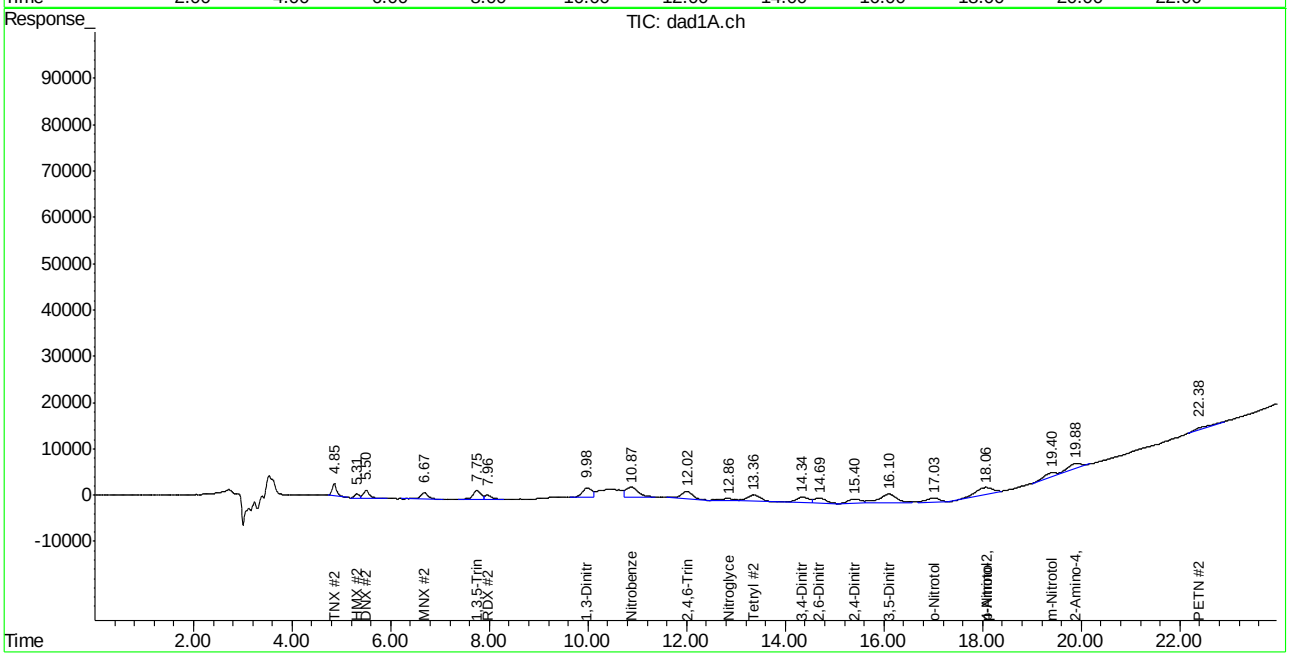
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 11:10 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

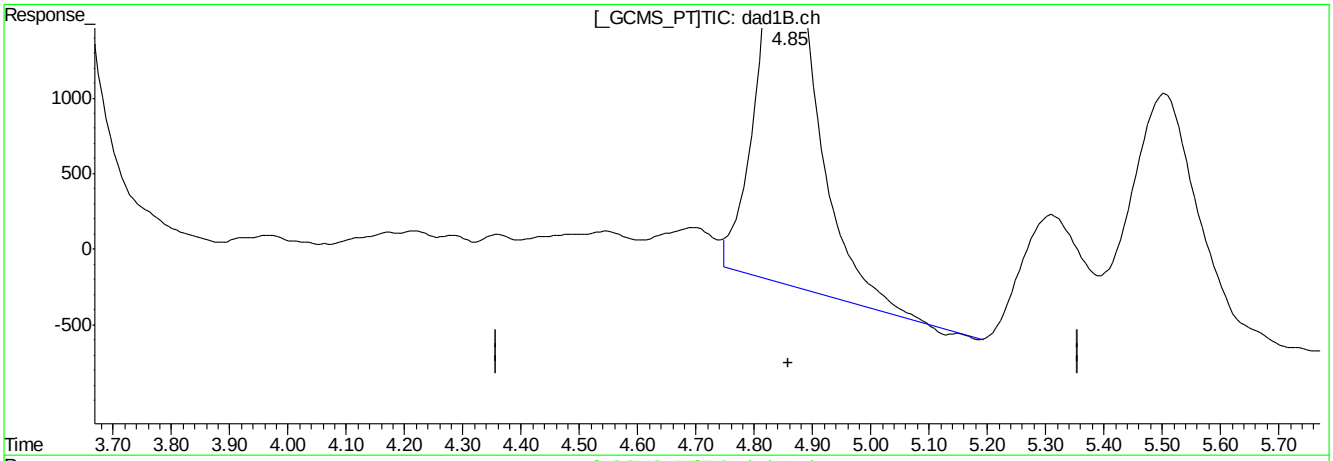
Sample Number: GGG2921-IC2921
Lab FileID: GG620467.D
Injection Time: 01/08/21 10:53
Method: SW846 8330A
Analyst approved: 01/11/21 14:37 James Boone
Supervisor approved: 01/11/21 16:38 Naresh Jiawan

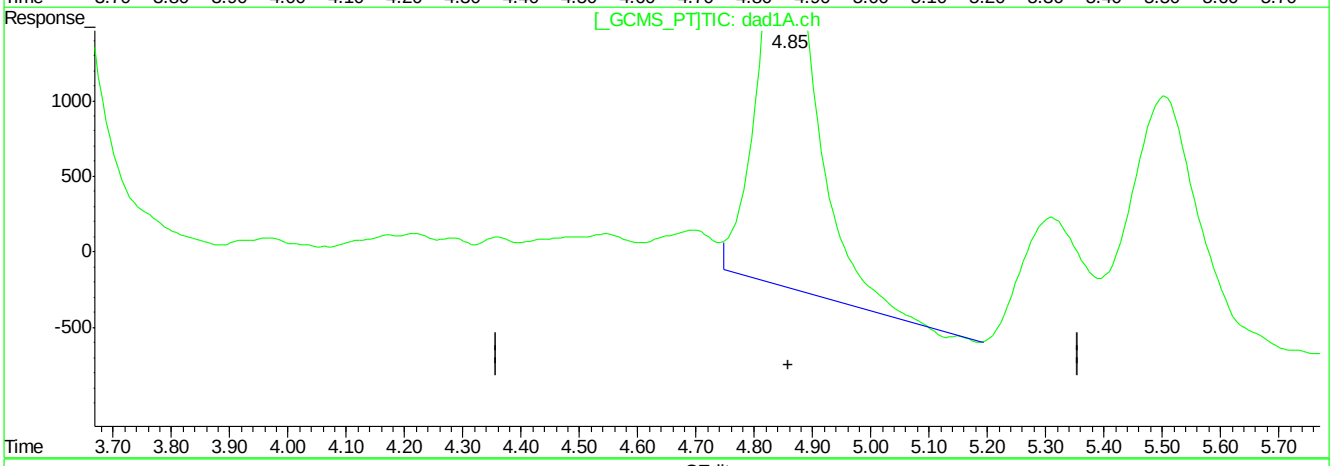
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	4.85	Poor instrument integration
TNX		2	4.85	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.98	Poor instrument integration
Nitrobenzene	98-95-3	2	10.87	Poor instrument integration
Nitroglycerine	55-63-0	2	12.86	Poor instrument integration
m-Nitrotoluene	99-08-1	2	19.40	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.88	Poor instrument integration
PETN	78-11-5	2	22.38	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

4.85min 21.330ppb

response 180999

(1) TNX #2

4.85min 21.284ppb

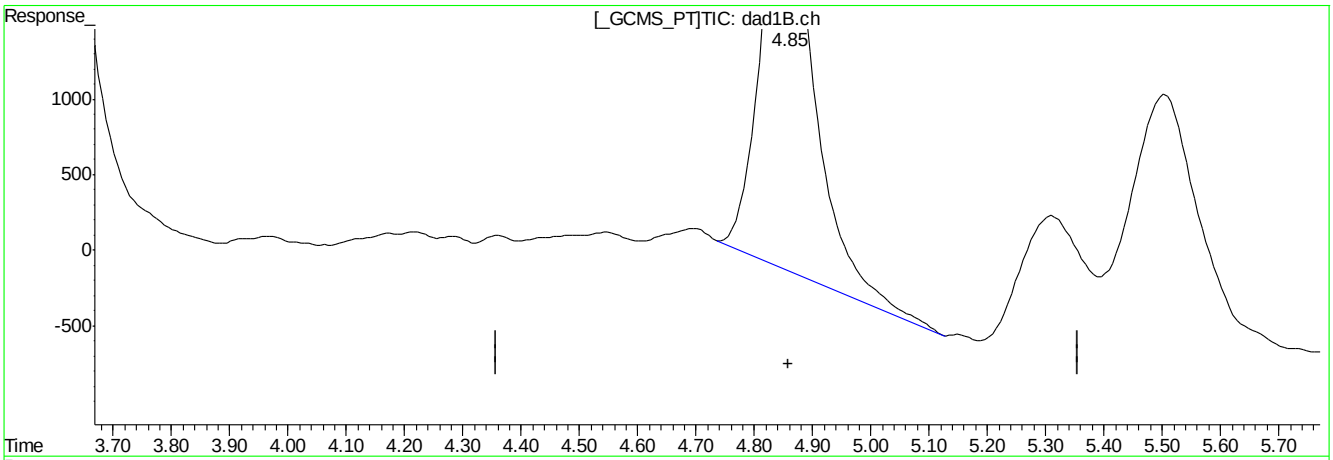
response 180999

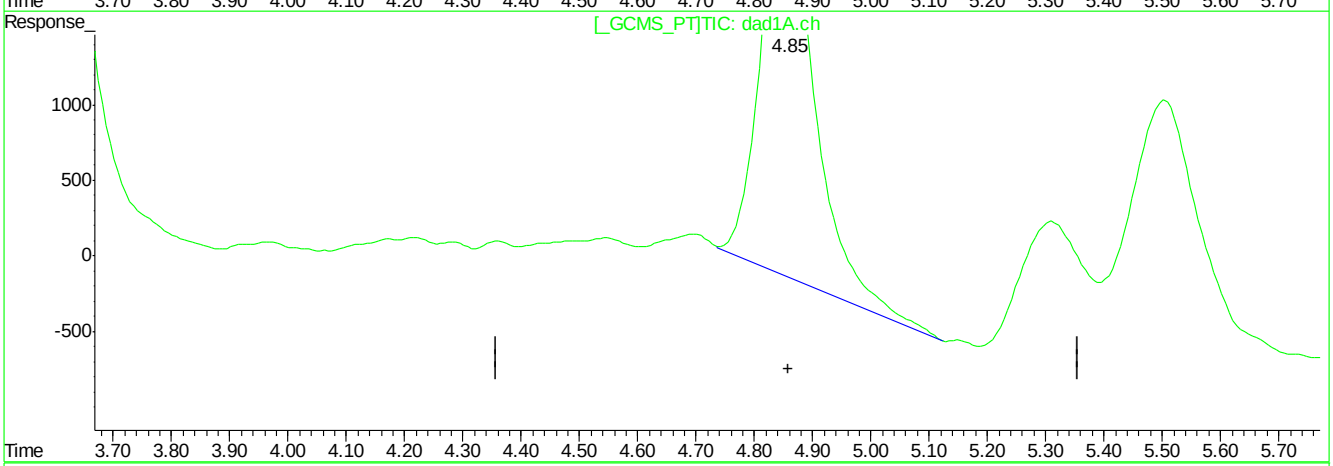
(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:07:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

4.85min 19.640ppb m

response 166658

(1) TNX #2

4.85min 19.687ppb m

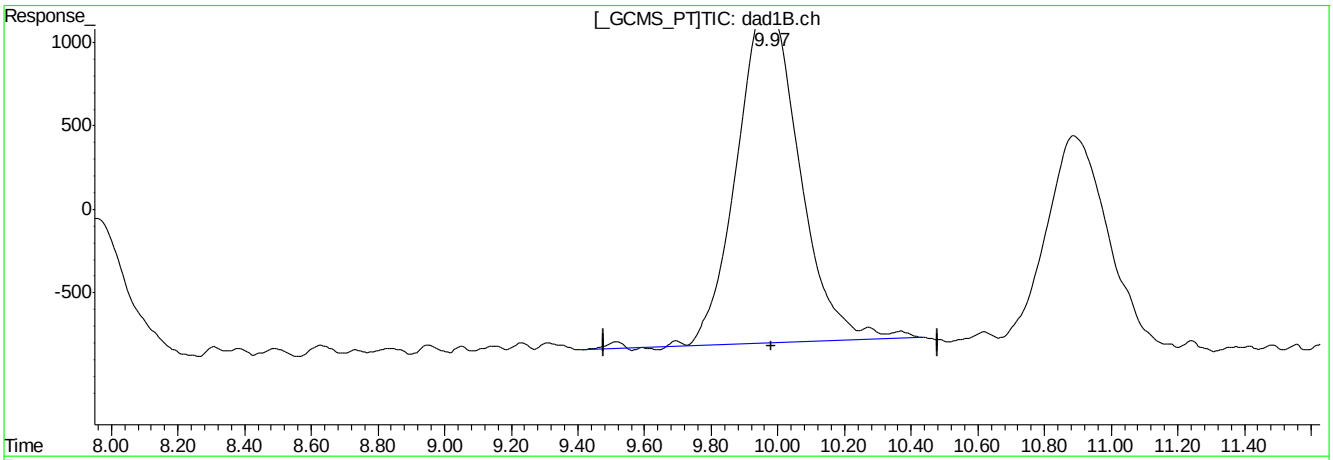
response 167413

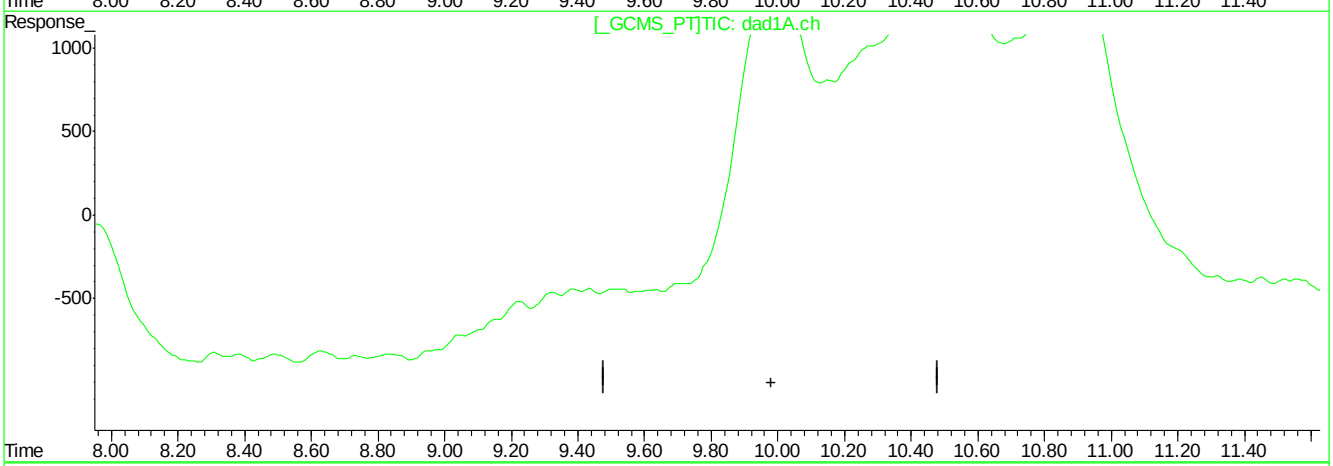
(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:07:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.97min 20.453ppb

response 262583

(7) 1,3-Dinitrobenzene #2

0.00min 0.000ppb

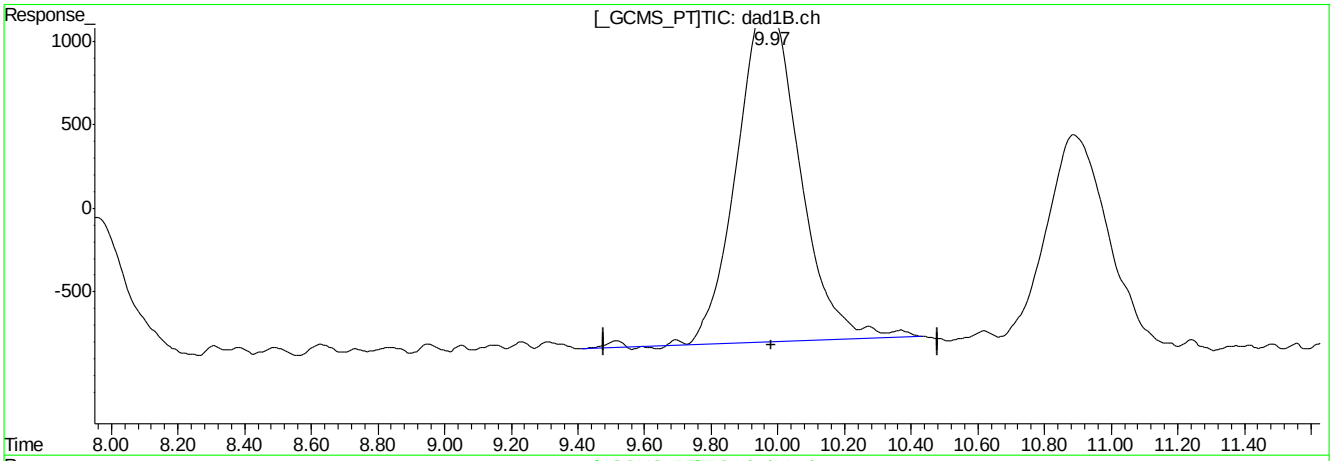
response 0

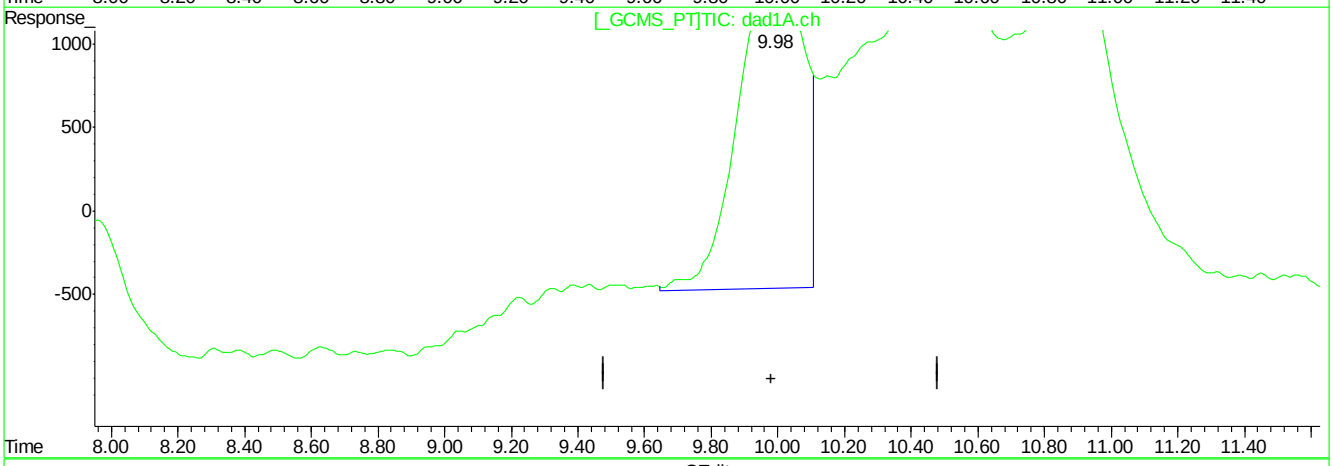
(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:07:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.97min 20.453ppb

response 262583

(7) 1,3-Dinitrobenzene #2

9.98min 27.158ppb m

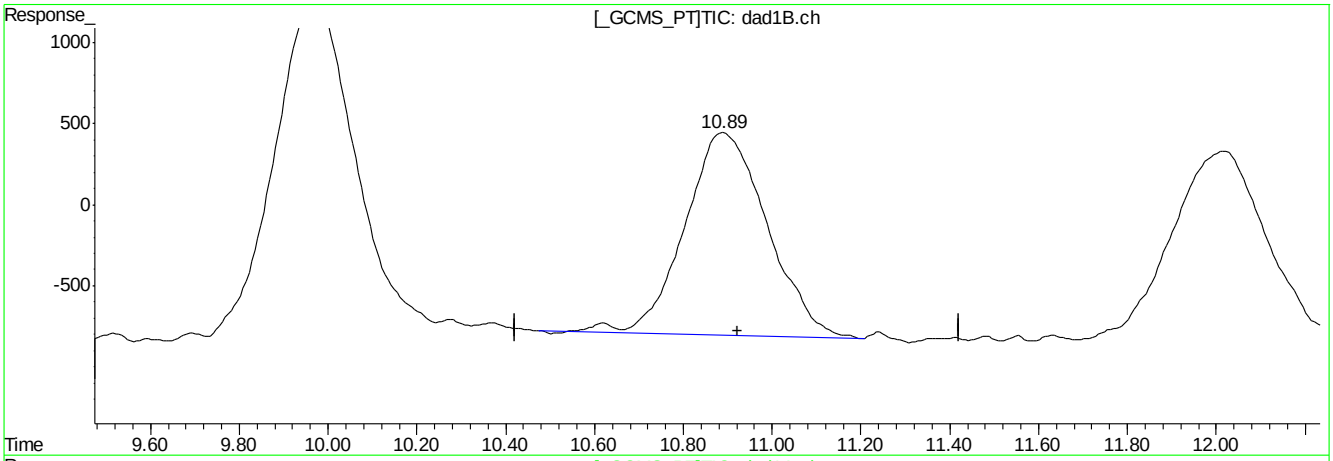
response 260953

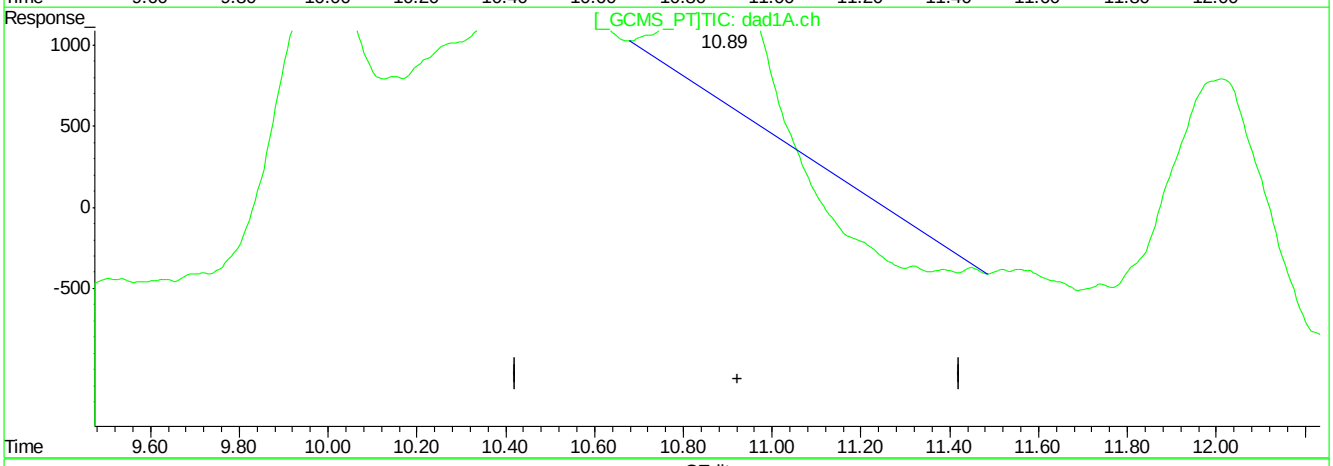
(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:08:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.89min 19.469ppb

response 162389

(8) Nitrobenzene #2

10.88min 8.341ppb

response 67363

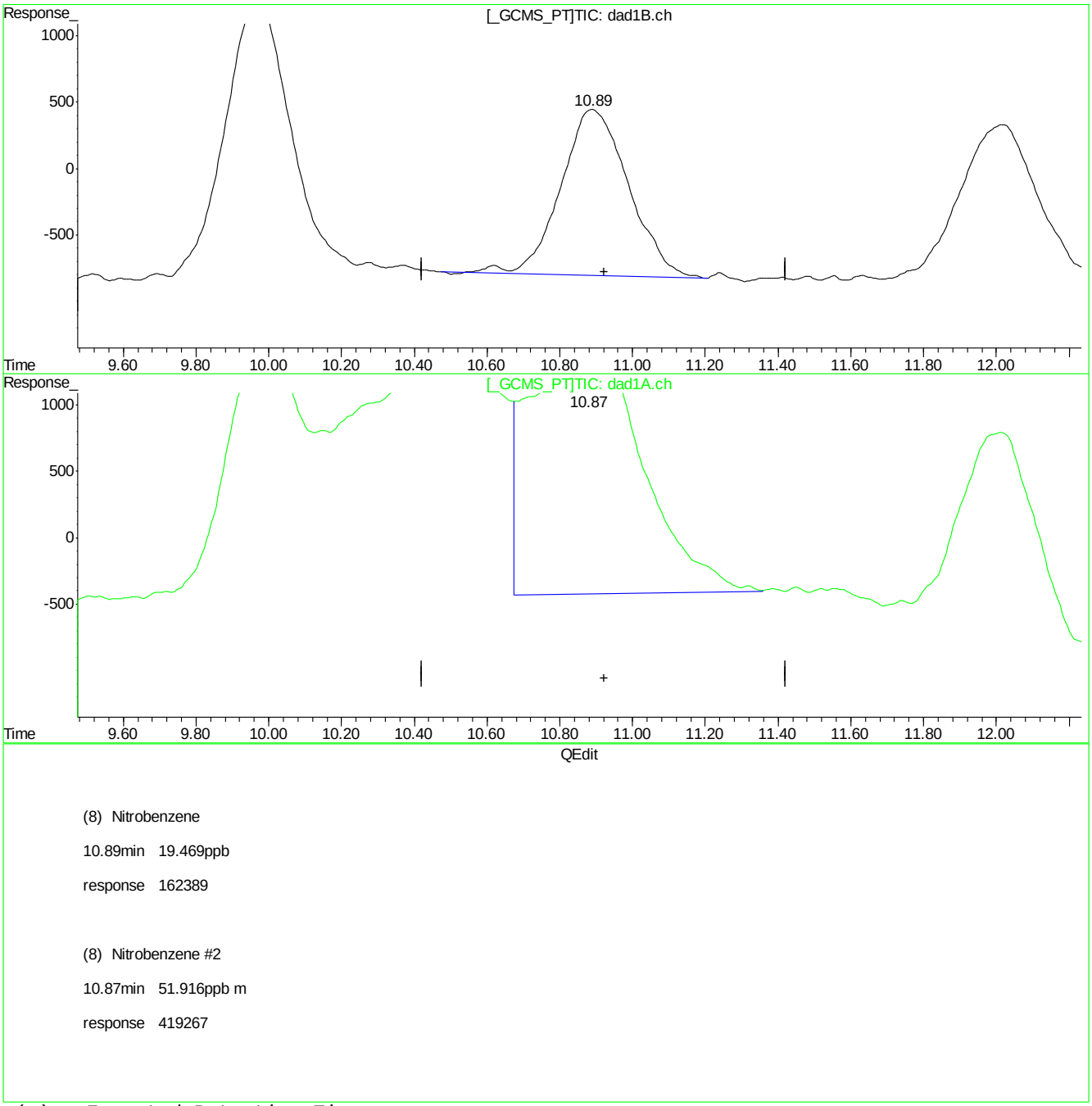
(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:08:22 2021

GG620467.D edits: Nitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration



(8) Nitrobenzene

10.89min 19.469ppb

response 162389

(8) Nitrobenzene #2

10.87min 51.916ppb m

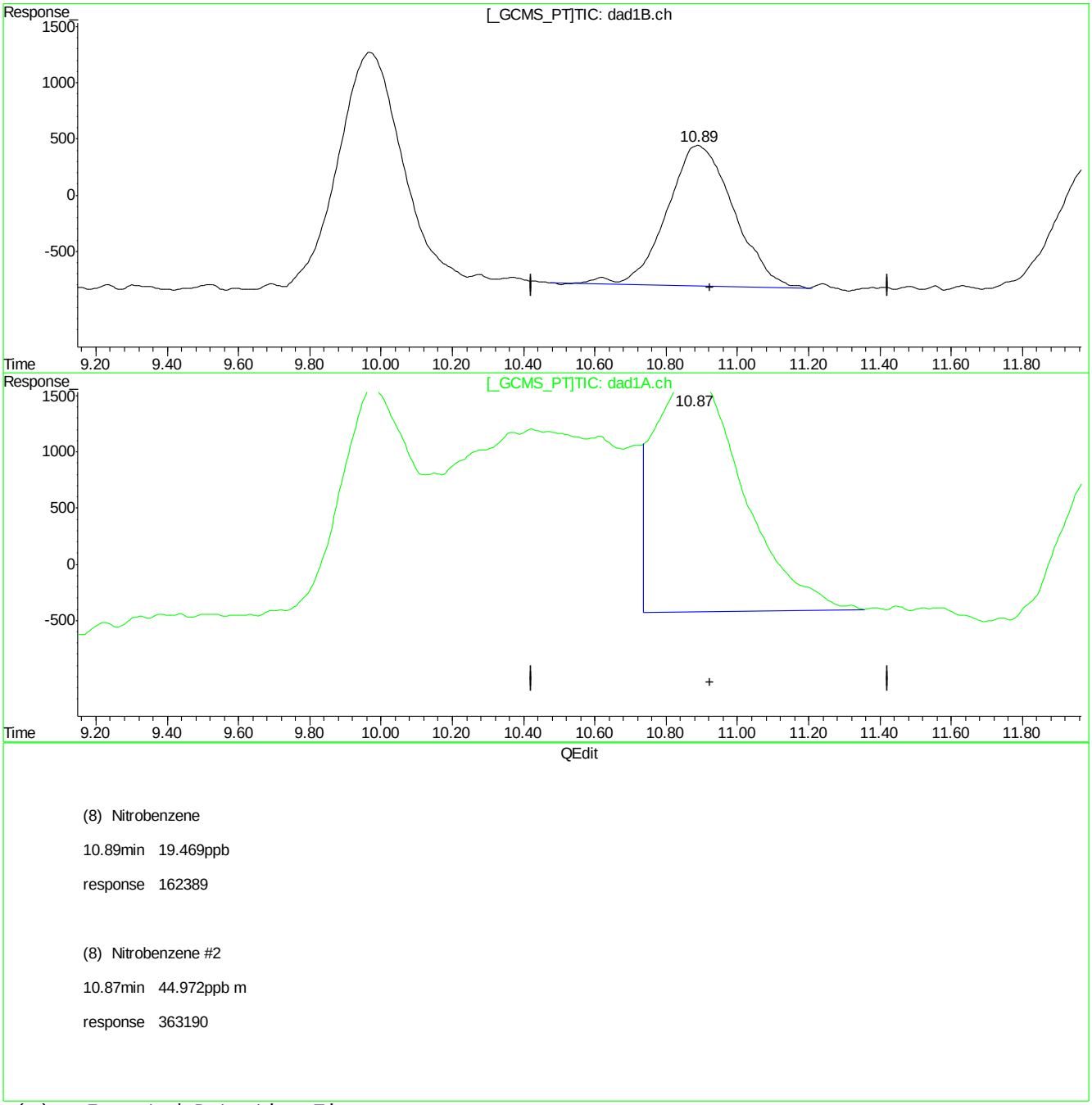
response 419267

(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:08:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration



(8) Nitrobenzene

10.89min 19.469ppb

response 162389

(8) Nitrobenzene #2

10.87min 44.972ppb m

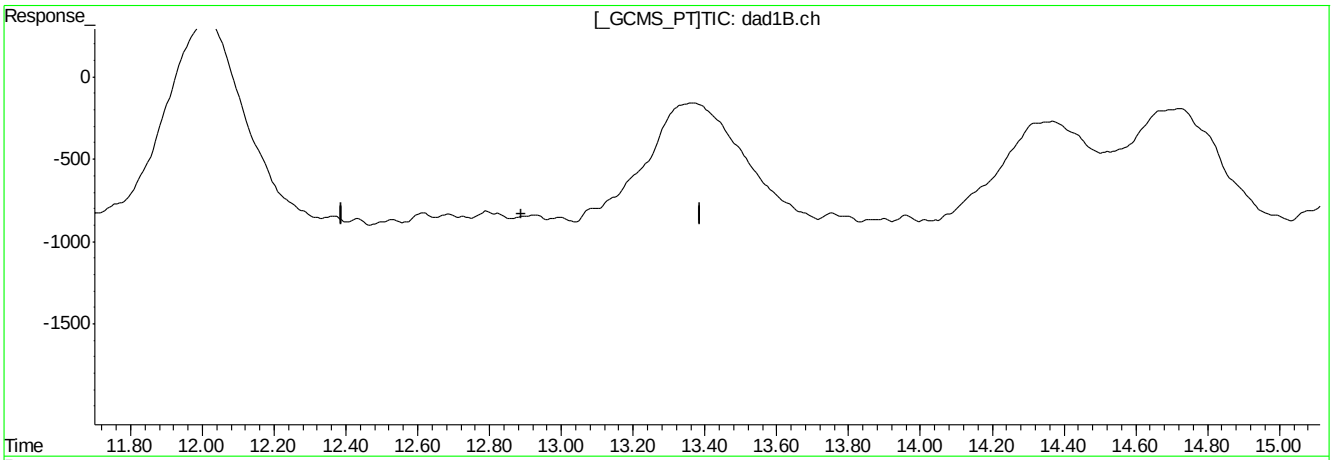
response 363190

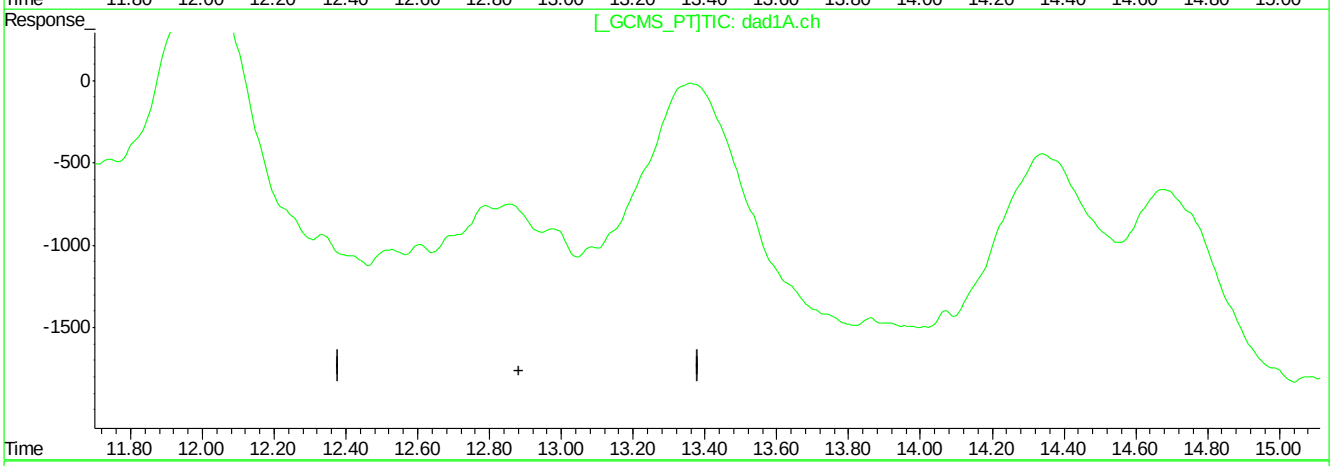
(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:08:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

0.00min 0.000ppb

response 0

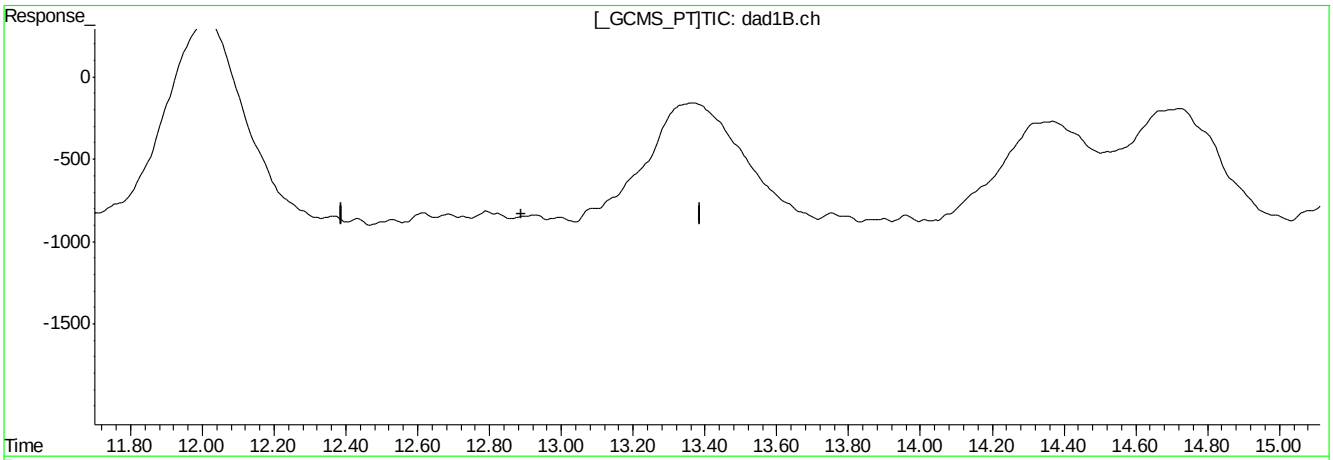
(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:09:15 2021

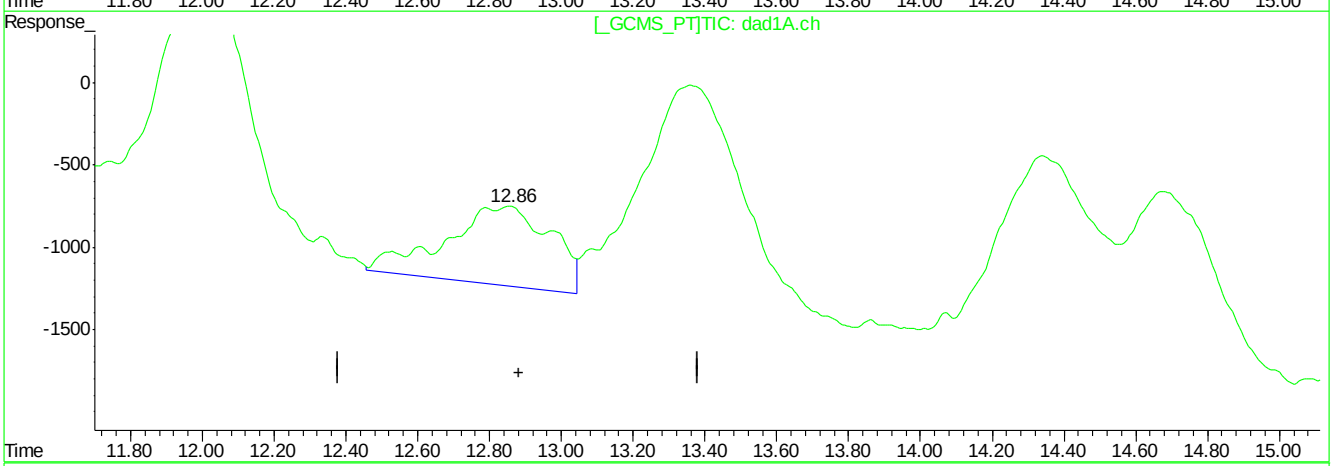
GG620467.D edits: Nitroglycerin

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.86min 24.799ppb m

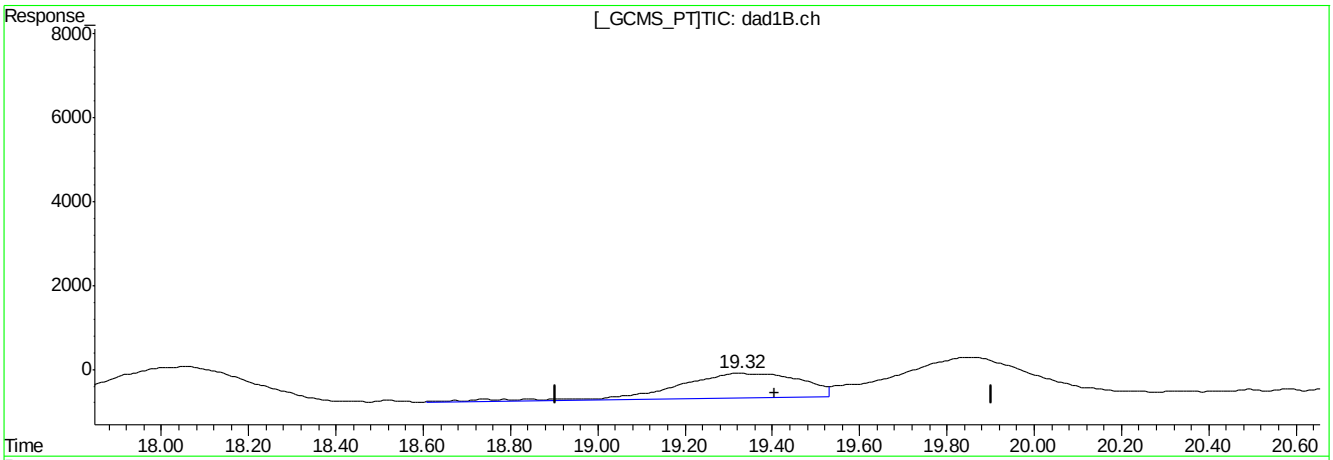
response 99033

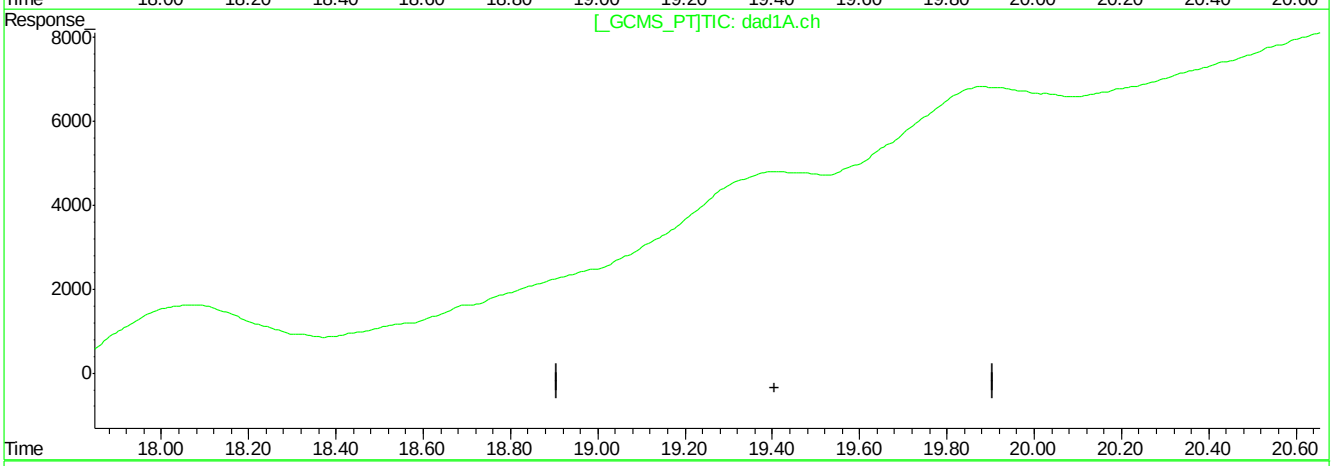
(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:09:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.33min 19.733ppb

response 114580

(19) m-Nitrotoluene #2

0.00min 0.000ppb

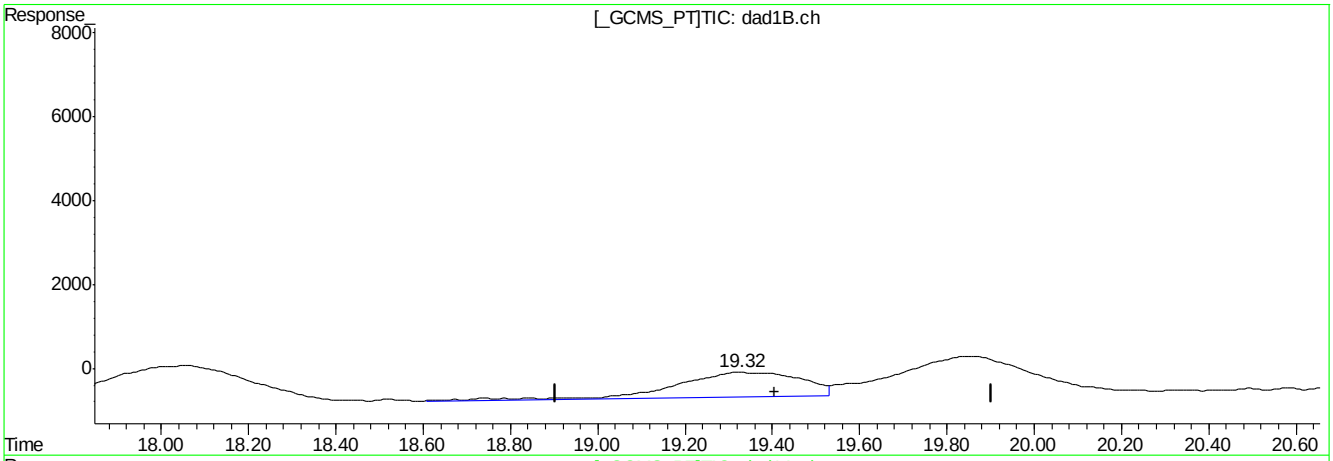
response 0

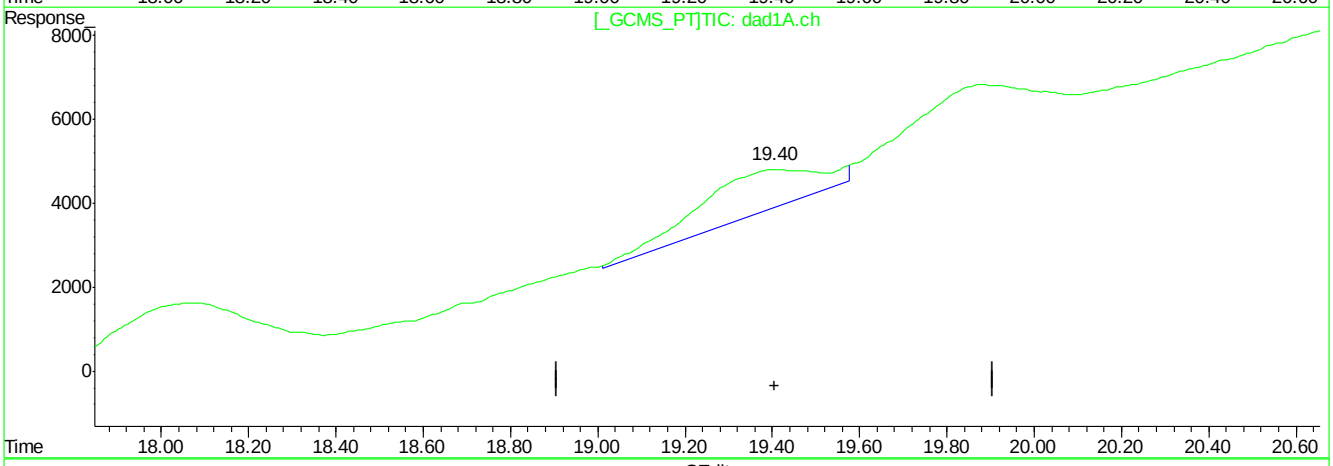
(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:10:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.33min 19.733ppb

response 114580

(19) m-Nitrotoluene #2

19.40min 18.731ppb m

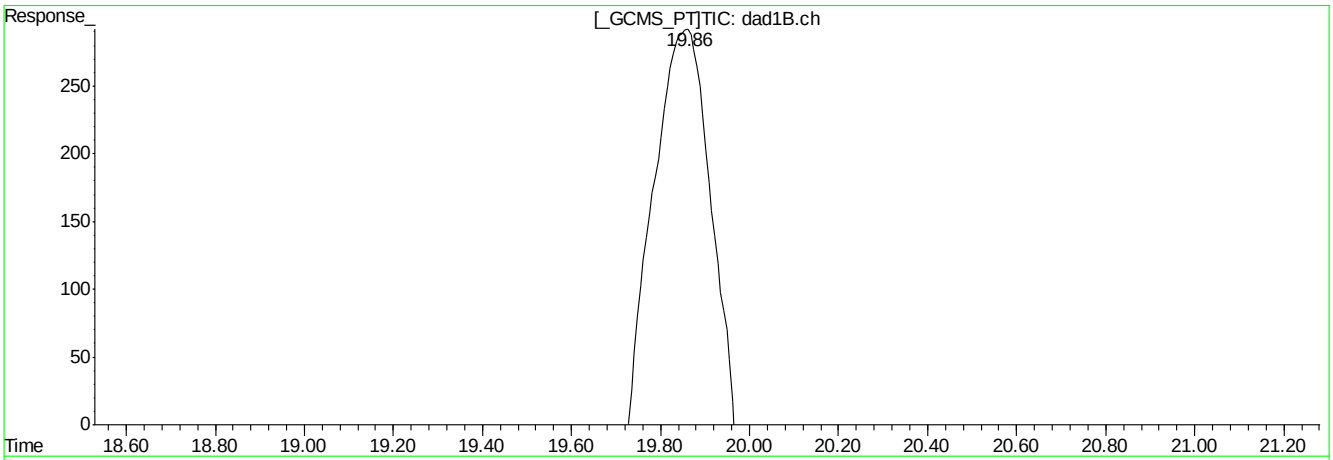
response 188617

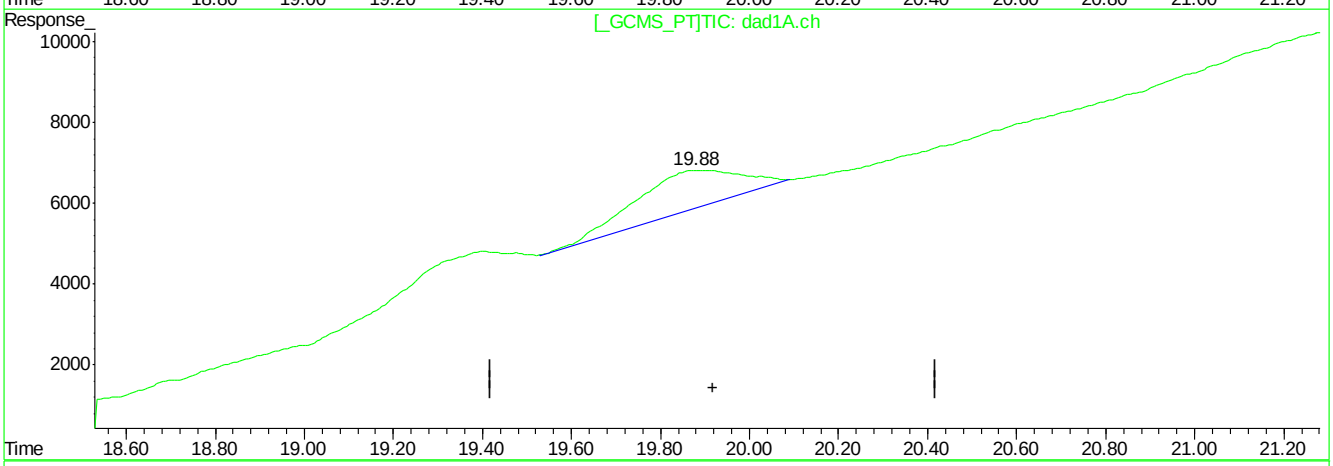
(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:10:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.86min 21.857ppb

response 191039

(20) 2-Amino-4,6-Dinitrotoluene #2

19.88min 12.159ppb

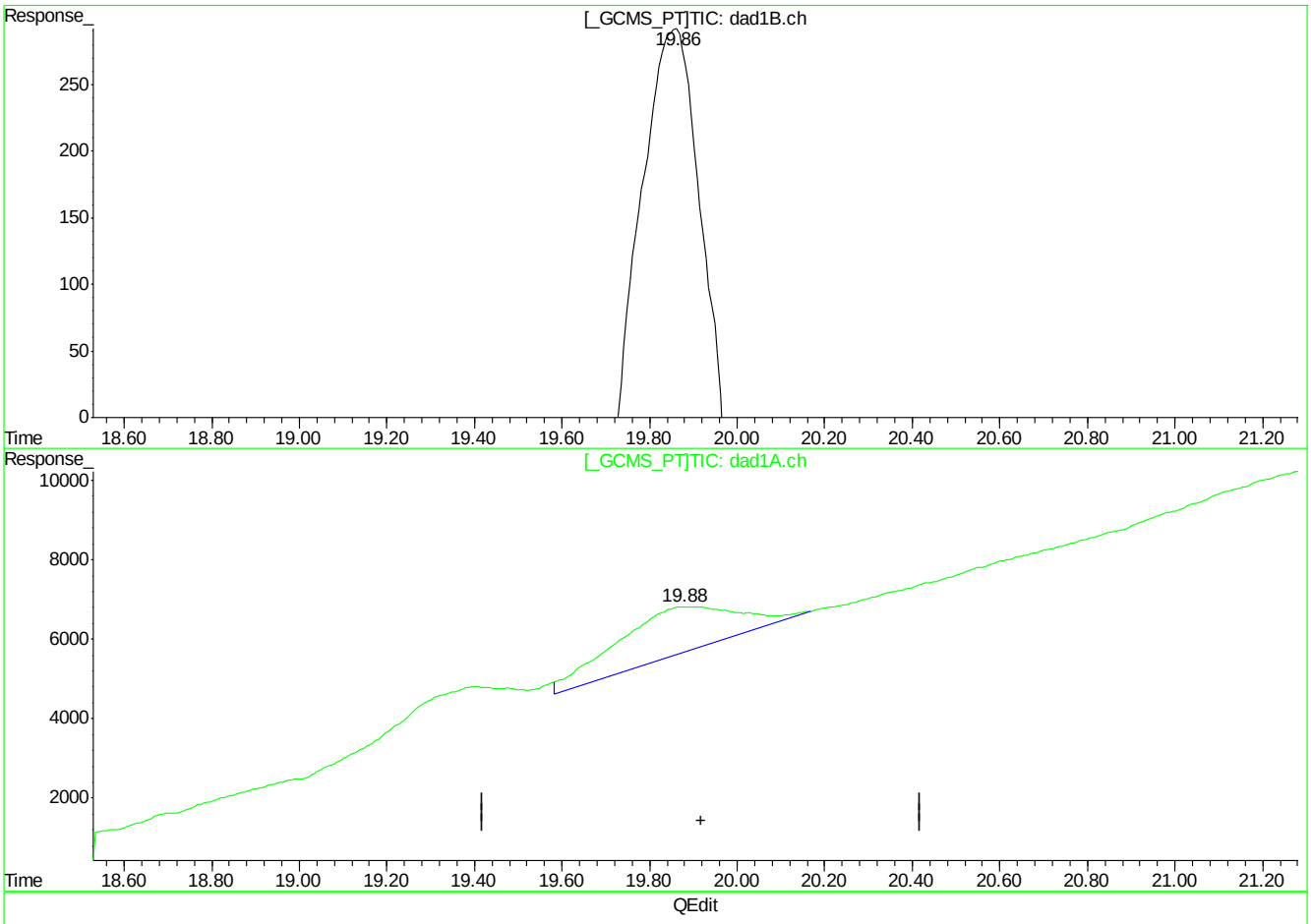
response 154863

(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:10:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration



(20) 2-Amino-4,6-Dinitrotoluene

19.86min 21.857ppb

response 191039

(20) 2-Amino-4,6-Dinitrotoluene #2

19.88min 17.663ppb m

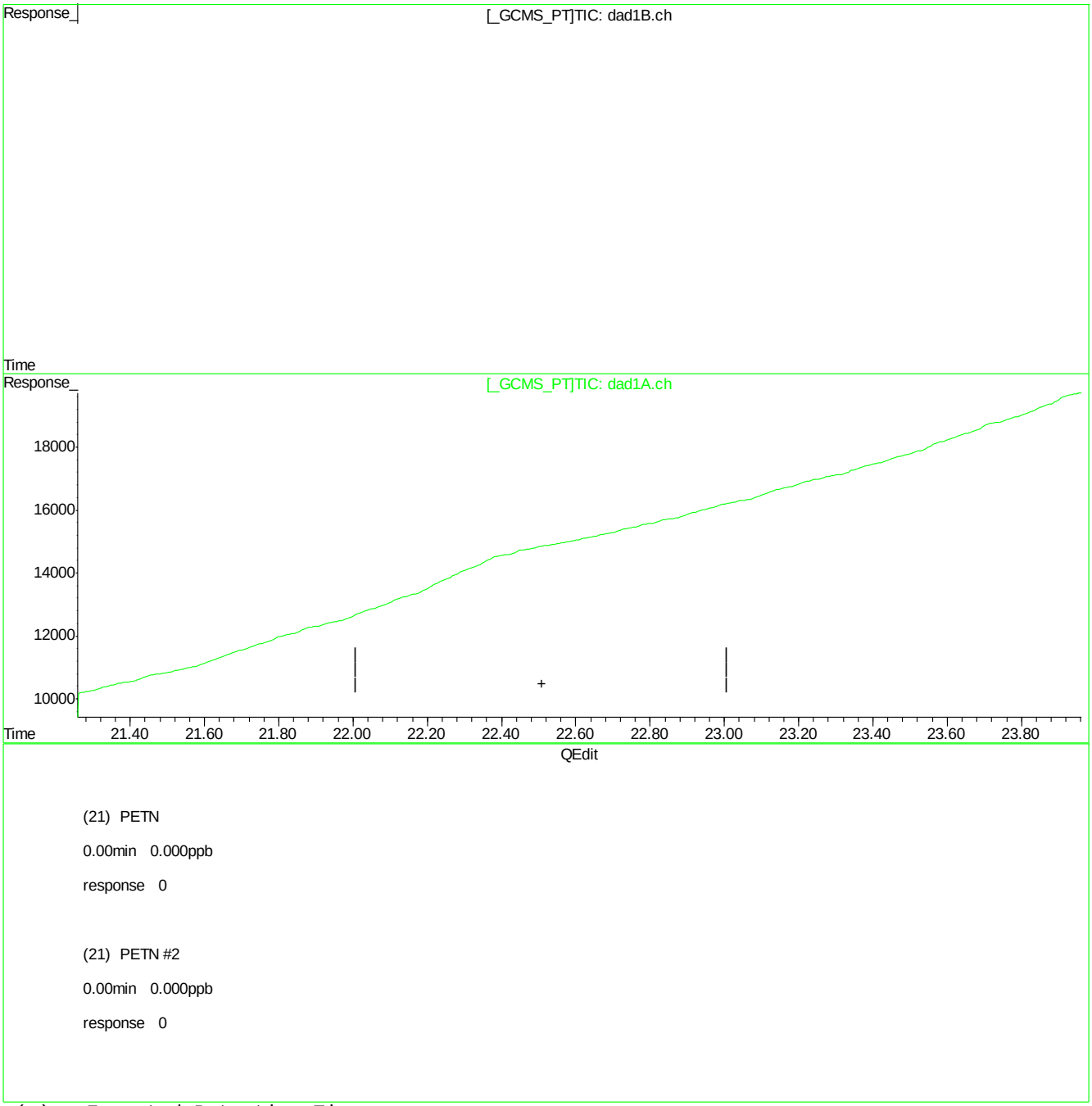
response 224966

(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:10:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration

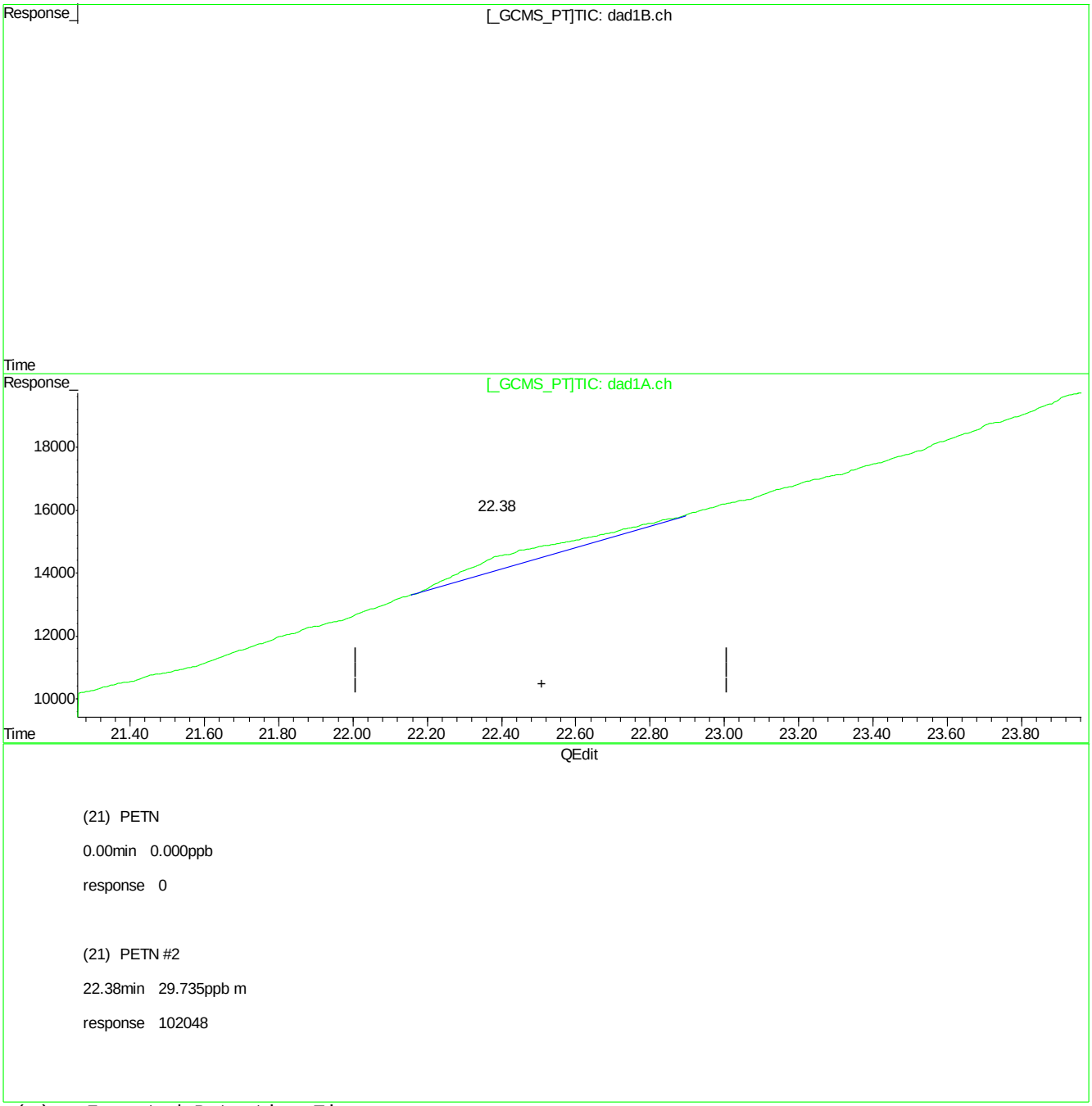


(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:10:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620467.D\dad1A.ch
Acq On : 08-Jan-2021, 10:53:55 Operator: jamesb
Sample : ic2921-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.38min 29.735ppb m

response 102048

(+) = Expected Retention Time
GG620467.D 8330RPB.M_010821.M Mon Jan 11 11:10:59 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
01/11/21 16:38

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35:03 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.30	14.29	254855	532608	47.193	48.900
	Spiked Amount 500.000	Range 70 - 136		Recovery =		9.44%#	9.78%#
	Target Compounds						
1)	TNX	4.85	4.85	377722	373553	44.512m	43.927m
2)	HMX	5.30	5.30	150640	150640	46.181	46.274
3)	DNX	5.49	5.49	332179	332179	48.507	48.565
4)	MNX	6.66	6.66	331475	331475	48.884	48.832
5)	1,3,5-Trinitrobe	7.73	7.73	465887	465549	49.264m	49.262m
6)	RDX	7.93	7.93	191274	191274	43.617	43.617
7)	1,3-Dinitrobenze	9.95	9.95	617167	492494	48.073	51.255m
8)	Nitrobenzene	10.89	10.87	358738	505774	43.010	62.627m#
9)	2,4,6-Trinitroto	12.00	11.99	427150	575445	46.181	43.330m
10)	Nitroglycerin	0.00	12.85	0	453783	N.D.	114.041m#
11)	Tetryl	13.34	13.32	338065	1019751	48.044	68.066m#
13)	2,6-Dinitrotolue	14.65	14.64	293673	424964	48.367	42.050
14)	2,4-Dinitrotolue	15.33	15.33	554719	353591	47.604	36.892
15)	3,5-Dinitroanili	16.04	16.04	472902	826313	91.804	102.752
16)	o-Nitrotoluene	16.95	16.95	220942	304329	22.593	18.327
17)	p-Nitrotoluene	17.98	17.98	499385	904163	91.217	88.574m
18)	4-Amino-2,6-Dini	17.98	17.98	499385	904406	91.217	88.711m
19)	m-Nitrotoluene	19.27	19.30	245997	360057	42.366m	35.756m
20)	2-Amino-4,6-Dini	19.79	19.81	431283	527516	49.343	41.417
21)	PETN	0.00	22.44	0	178748	N.D.	52.093m#

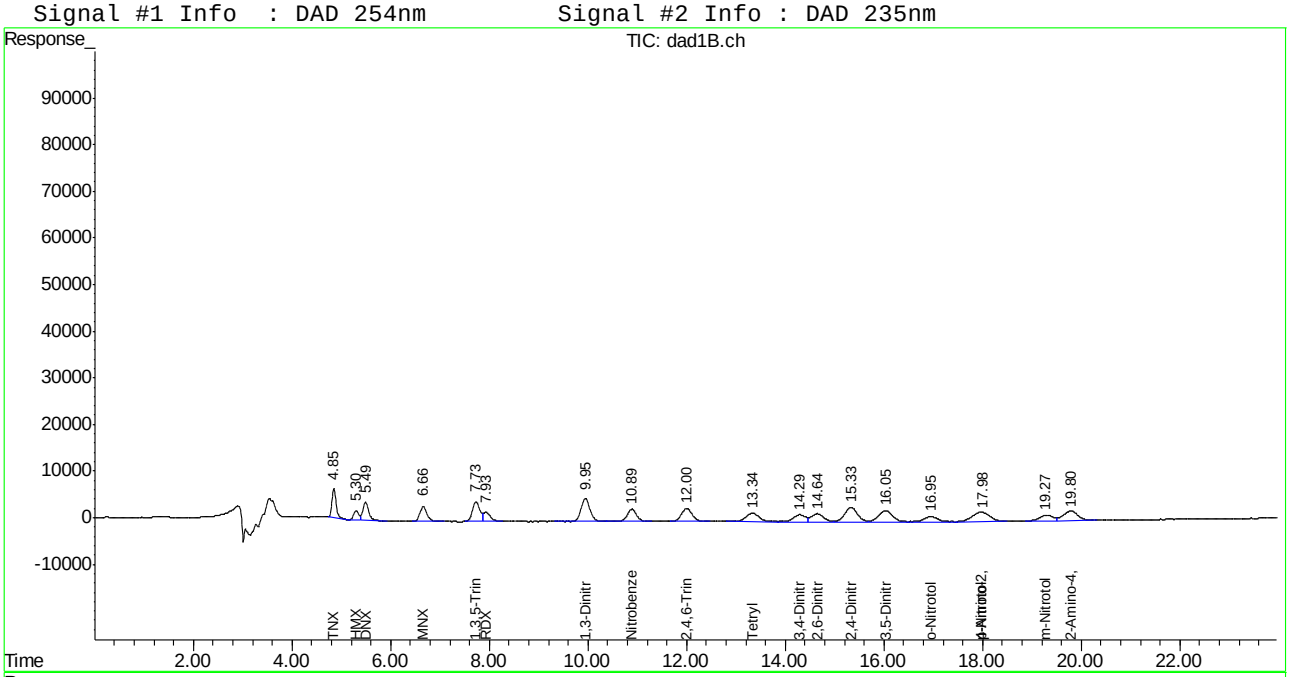
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

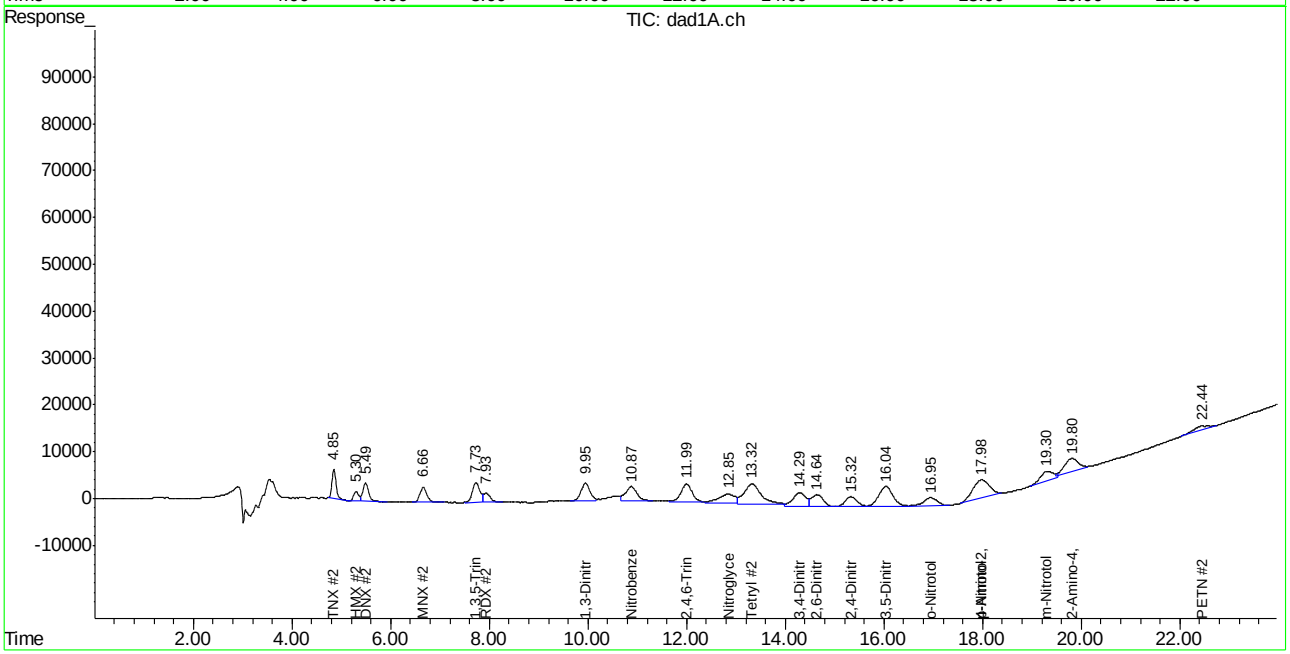
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 11:06 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

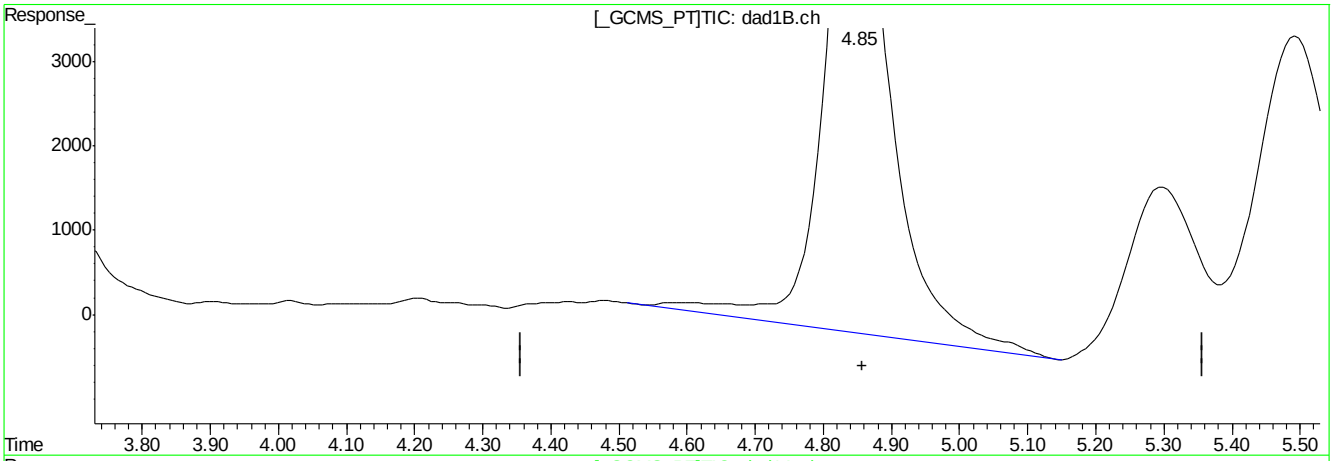
Sample Number: GGG2921-IC2921
Lab FileID: GG620468.D
Injection Time: 01/08/21 11:25
Method: SW846 8330A
Analyst approved: 01/11/21 14:37 James Boone
Supervisor approved: 01/11/21 16:38 Naresh Jiawan

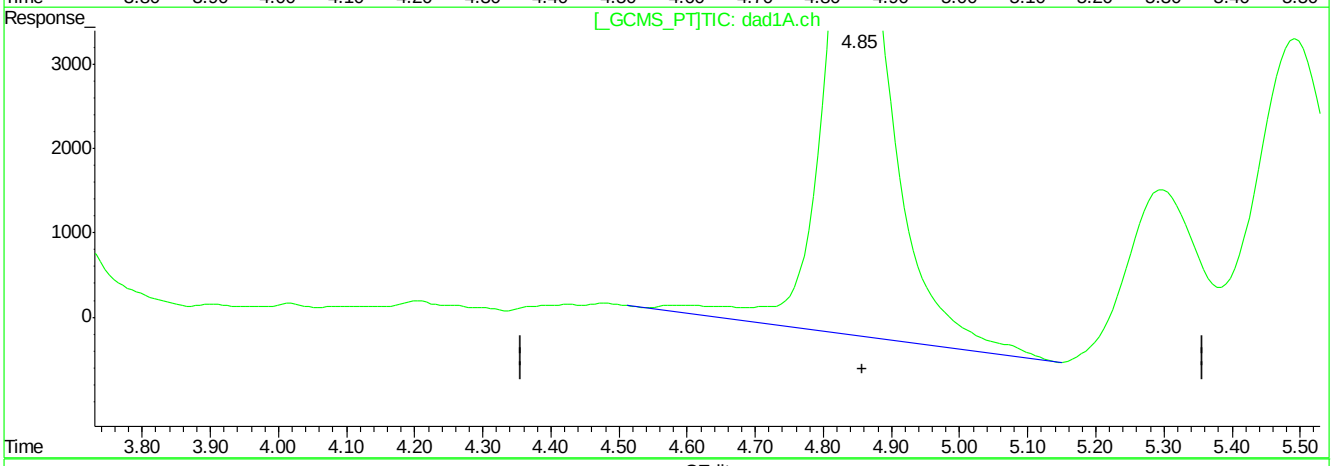
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	4.85	Poor instrument integration
TNX		2	4.85	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	7.73	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.73	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.95	Poor instrument integration
Nitrobenzene	98-95-3	2	10.87	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.99	Poor instrument integration
Nitroglycerine	55-63-0	2	12.85	Poor instrument integration
Tetryl	479-45-8	2	13.32	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.98	Poor instrument integration
p-Nitrotoluene	99-99-0	2	17.98	Poor instrument integration
m-Nitrotoluene	99-08-1	1	19.27	Poor instrument integration
m-Nitrotoluene	99-08-1	2	19.30	Poor instrument integration
PETN	78-11-5	2	22.44	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

4.85min 49.120ppb

response 416828

(1) TNX #2

4.85min 49.016ppb

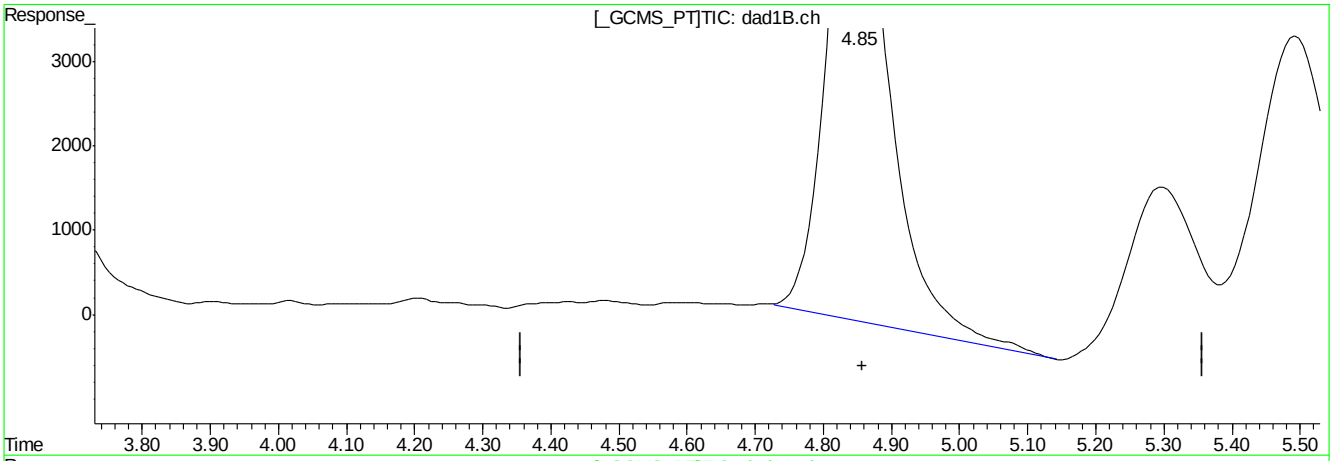
response 416828

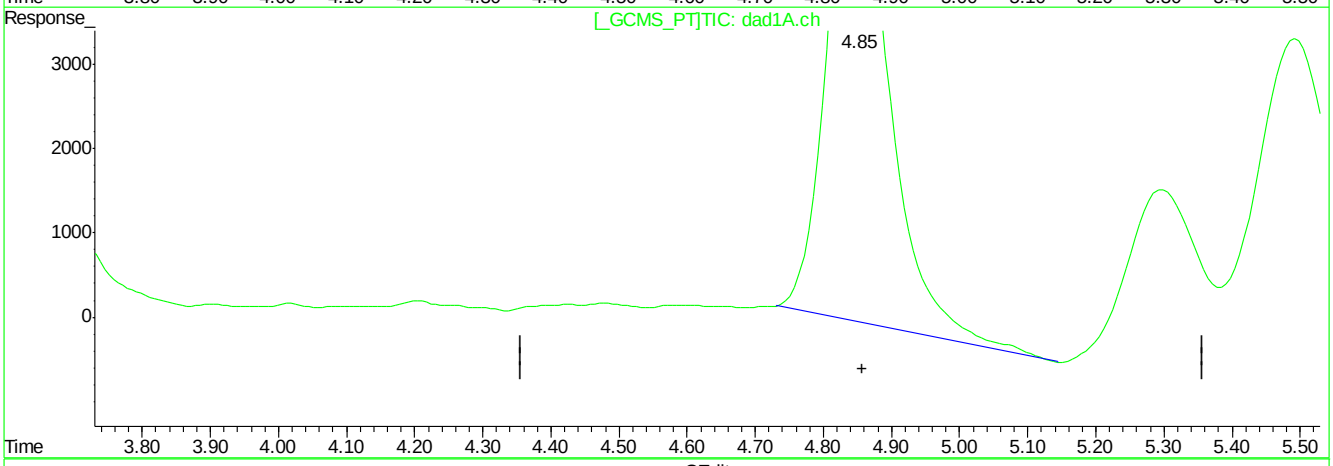
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:00:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

4.85min 44.512ppb m

response 377722

(1) TNX #2

4.85min 43.927ppb m

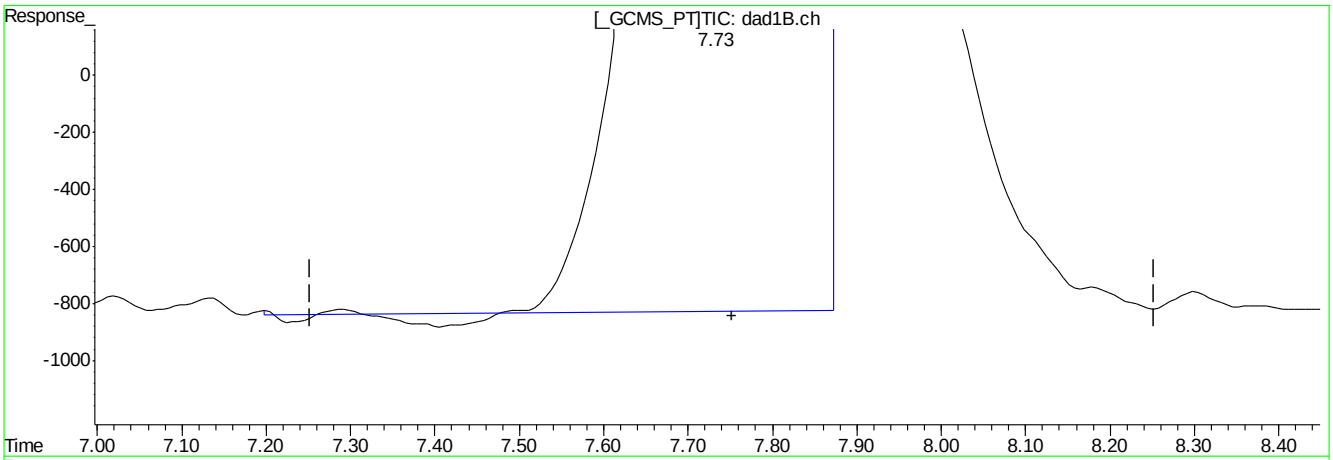
response 373553

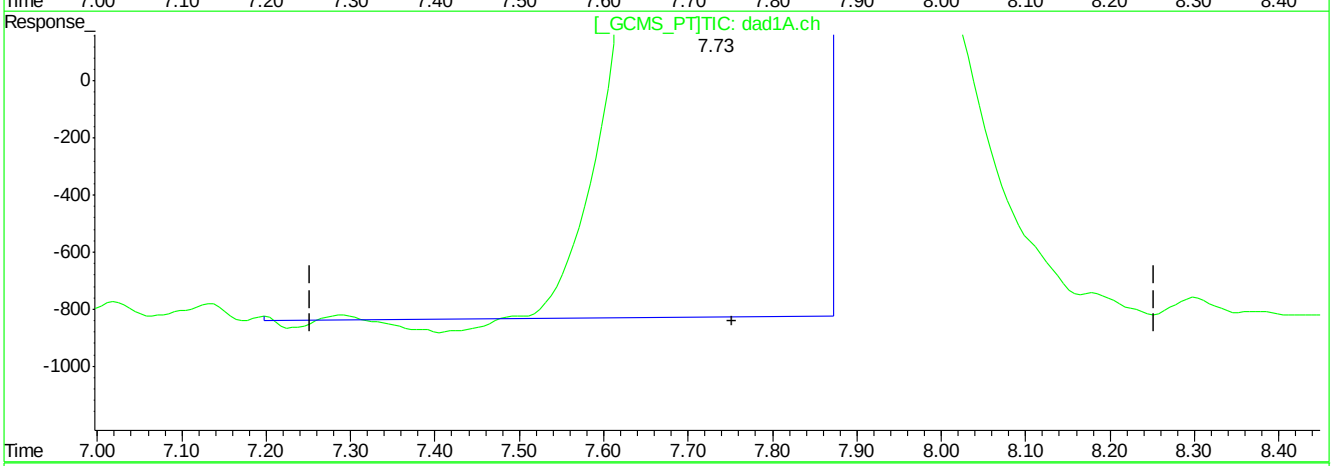
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:00:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.73min 48.174ppb

response 455582

(5) 1,3,5-Trinitrobenzene #2

7.73min 48.207ppb

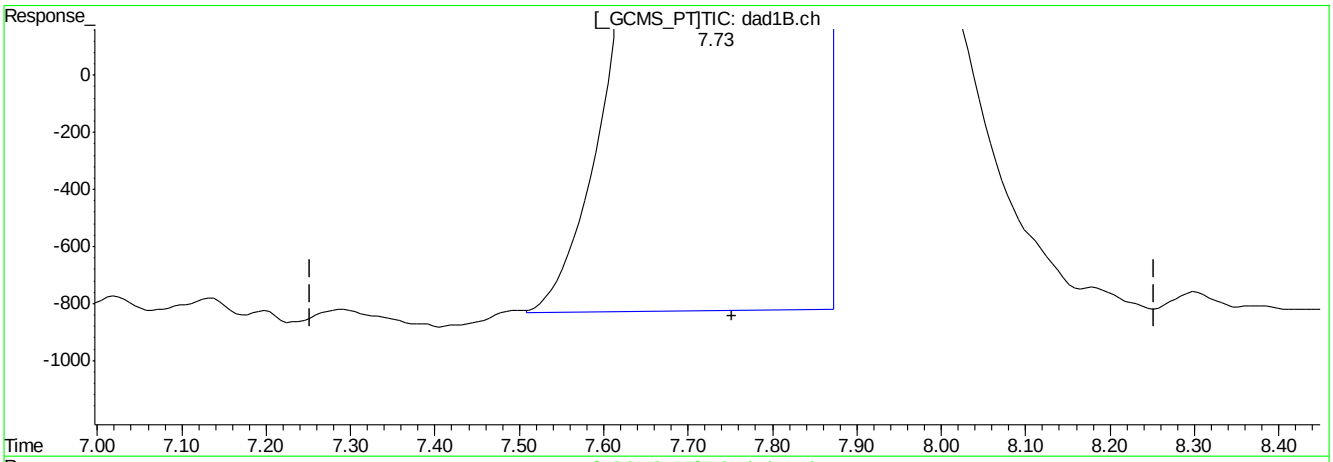
response 455582

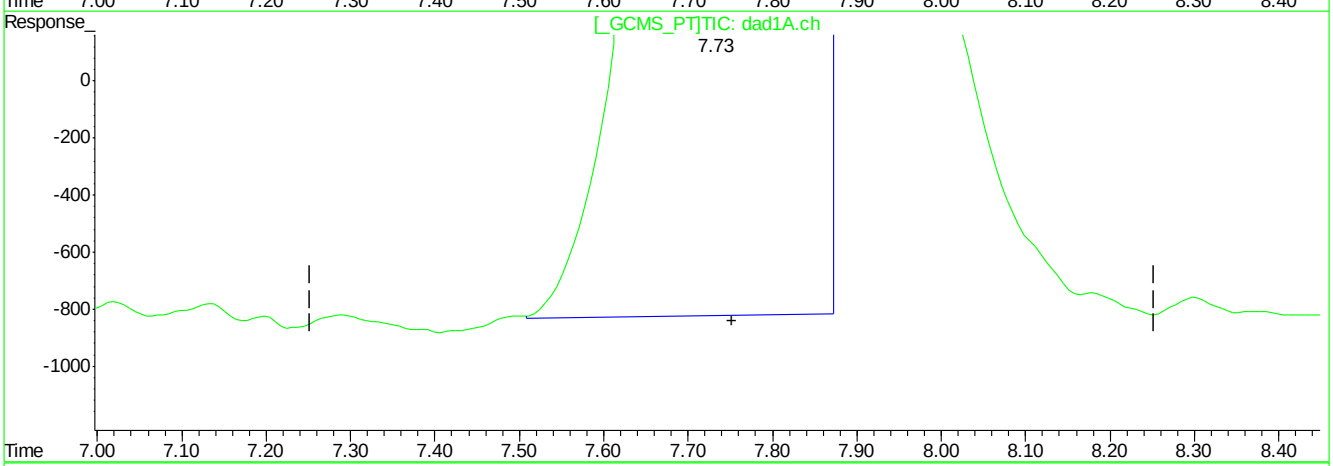
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:00:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.73min 49.264ppb m

response 465887

(5) 1,3,5-Trinitrobenzene #2

7.73min 49.262ppb m

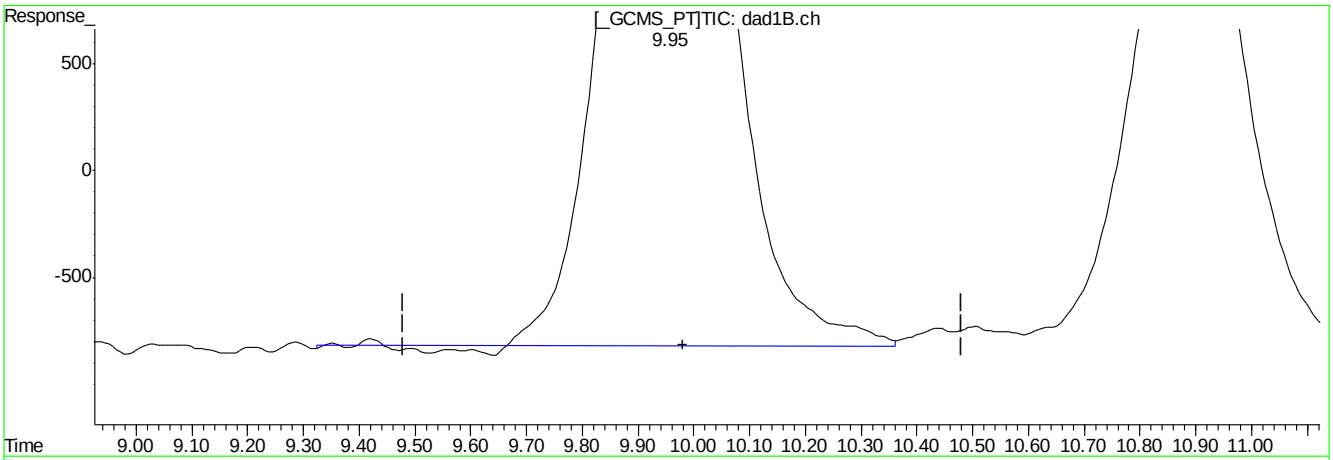
response 465549

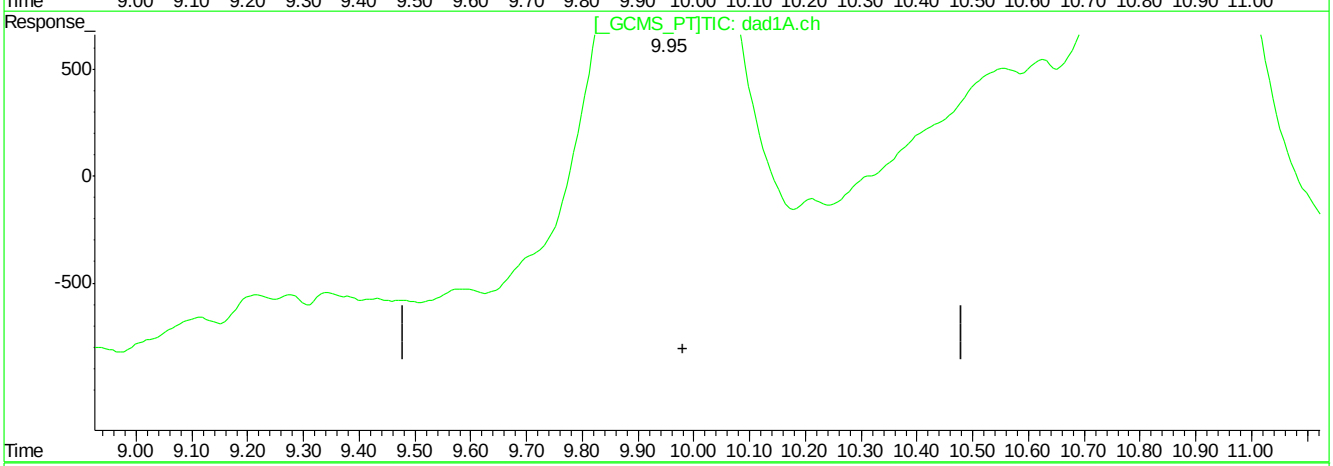
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:01:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.95min 48.073ppb

response 617167

(7) 1,3-Dinitrobenzene #2

9.95min 81.325ppb

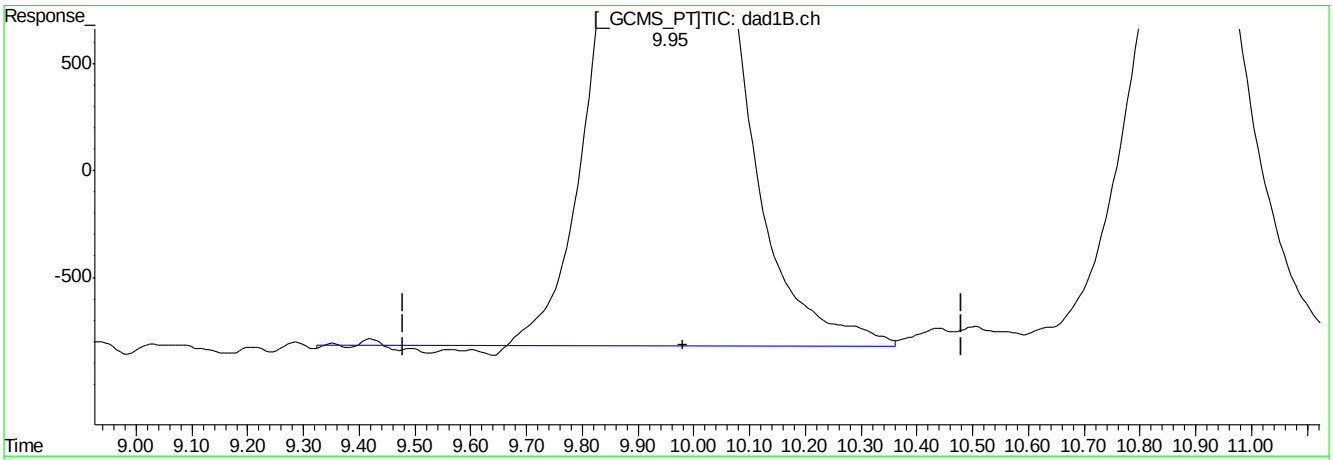
response 781431

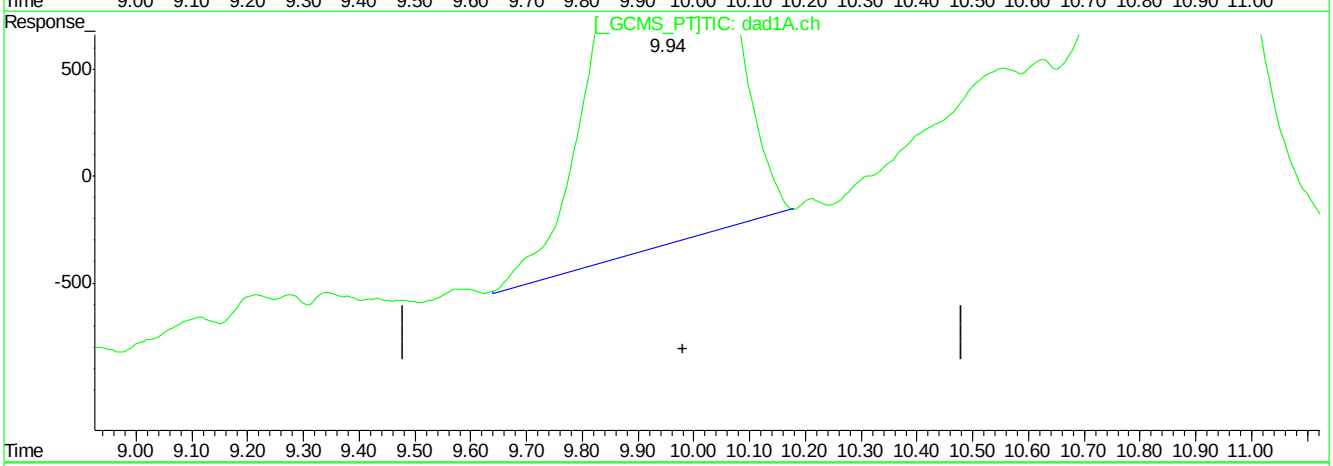
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:01:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.95min 48.073ppb

response 617167

(7) 1,3-Dinitrobenzene #2

9.94min 45.882ppb m

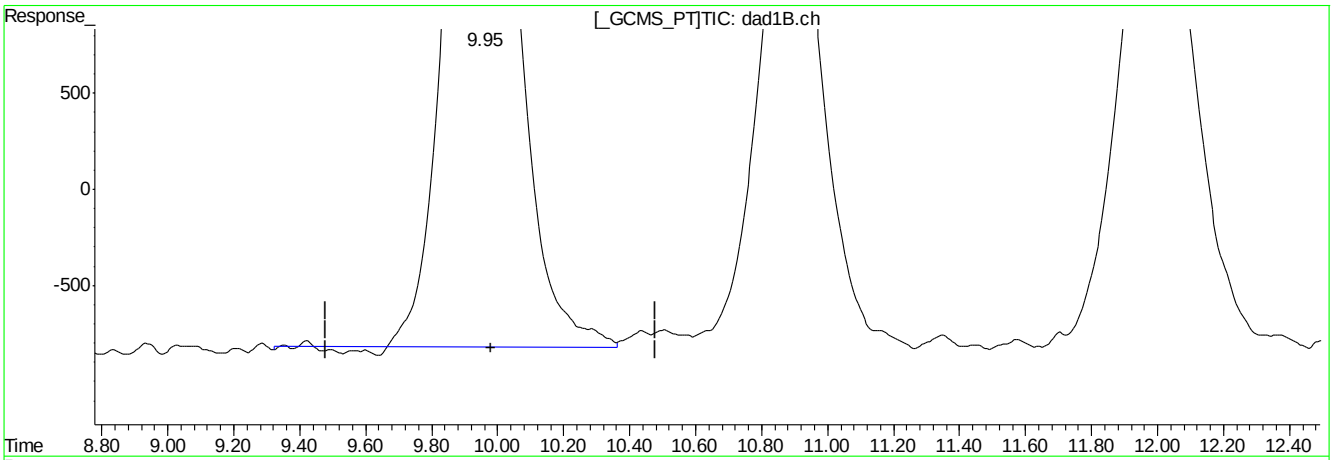
response 440865

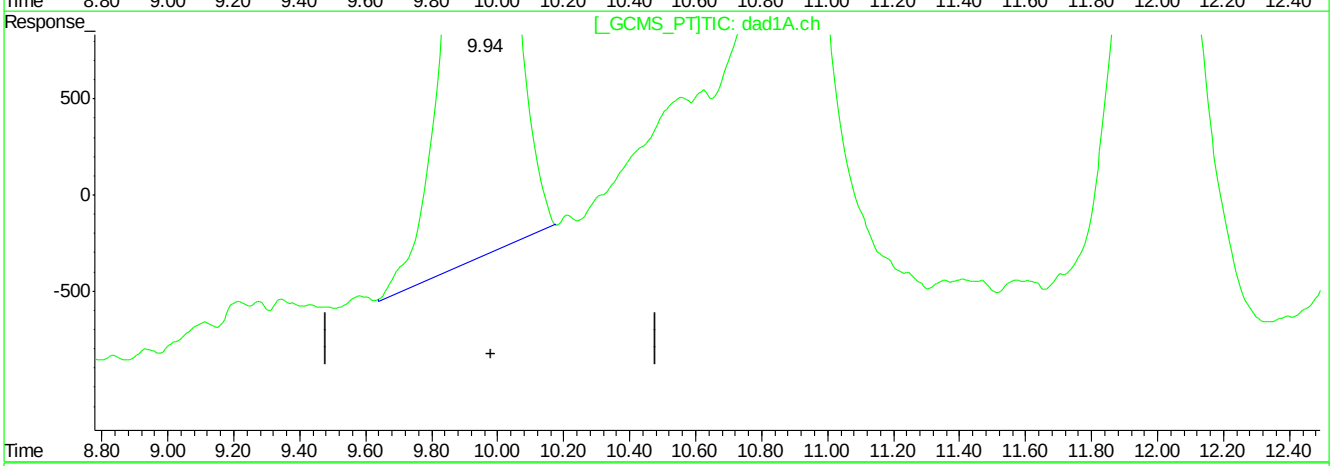
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:01:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.95min 48.073ppb

response 617167

(7) 1,3-Dinitrobenzene #2

9.94min 45.882ppb m

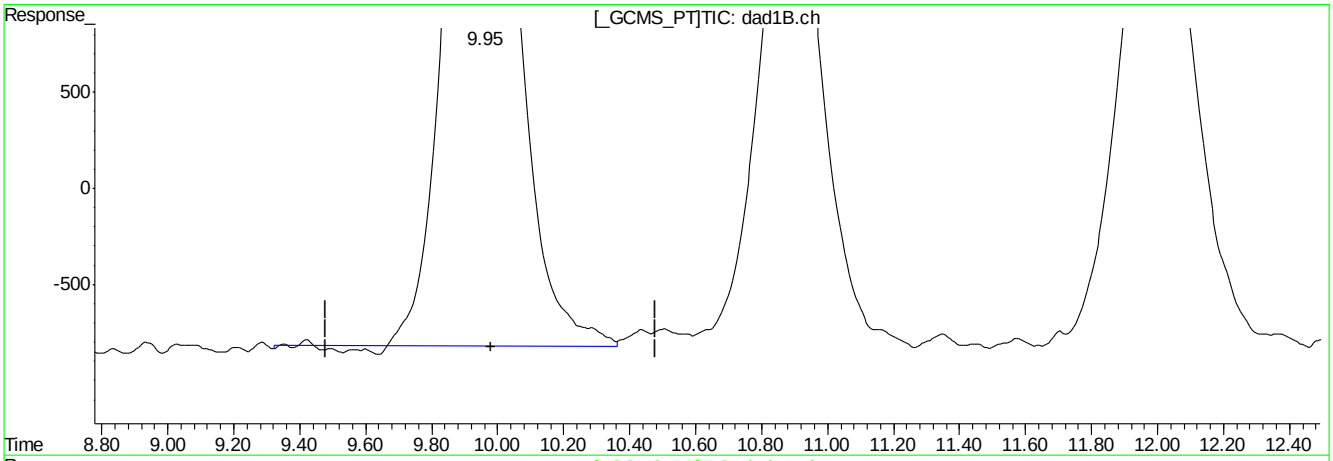
response 440865

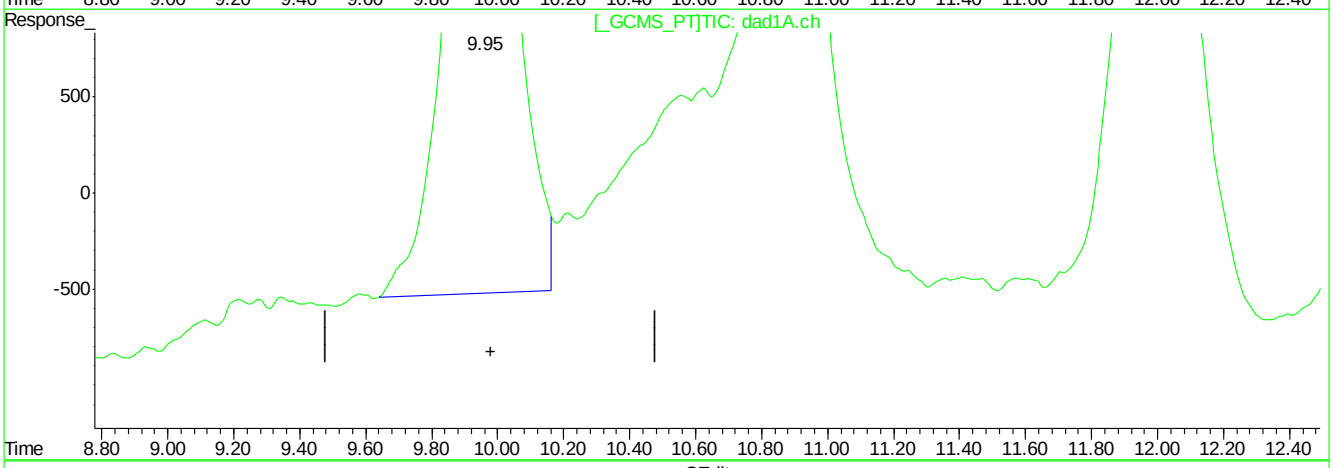
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:01:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.95min 48.073ppb

response 617167

(7) 1,3-Dinitrobenzene #2

9.95min 51.255ppb m

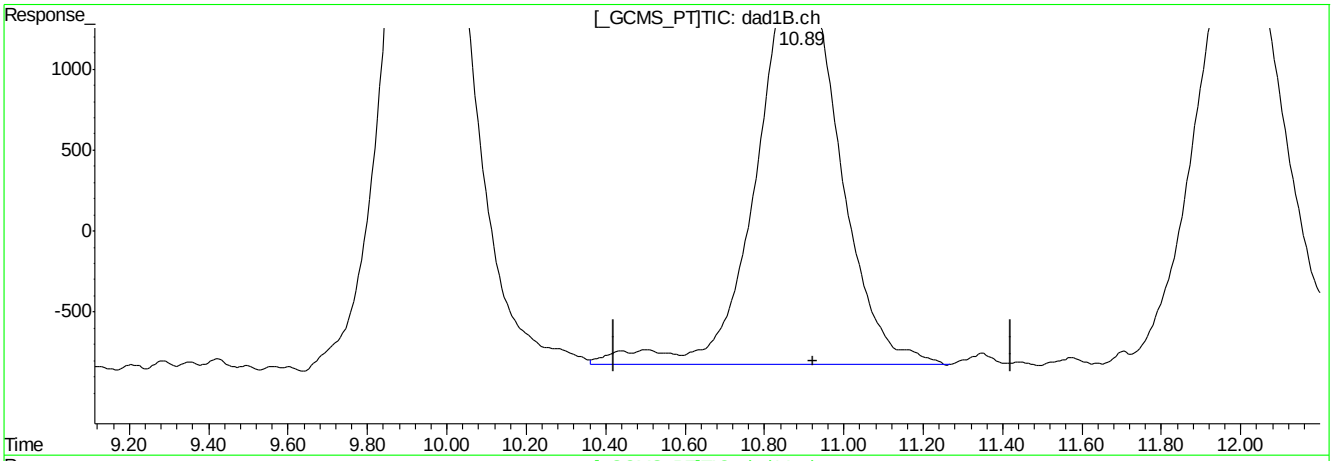
response 492494

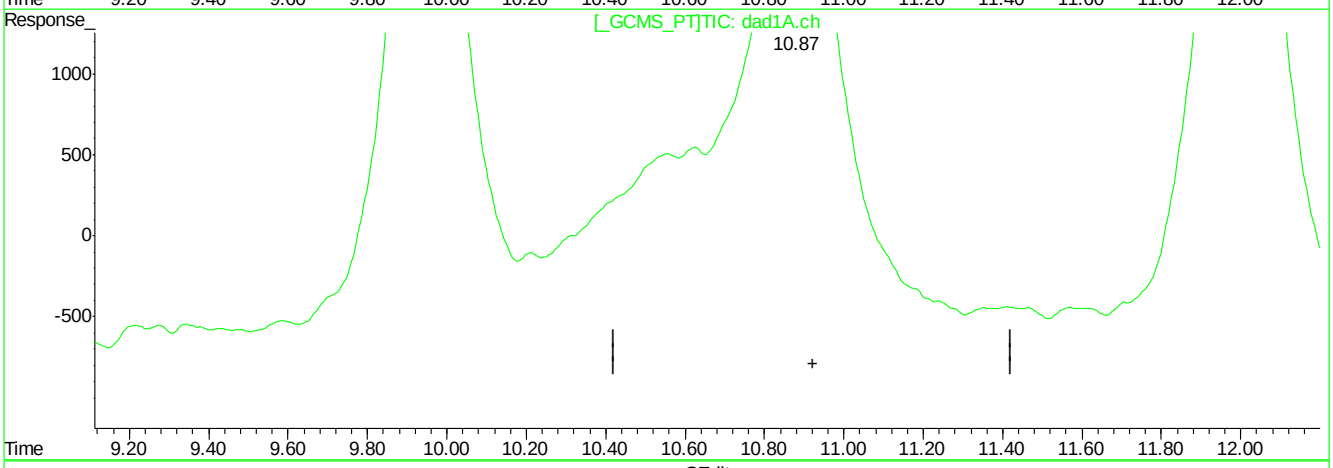
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:01:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.89min 43.010ppb

response 358738

(8) Nitrobenzene #2

10.88min 140.014ppb

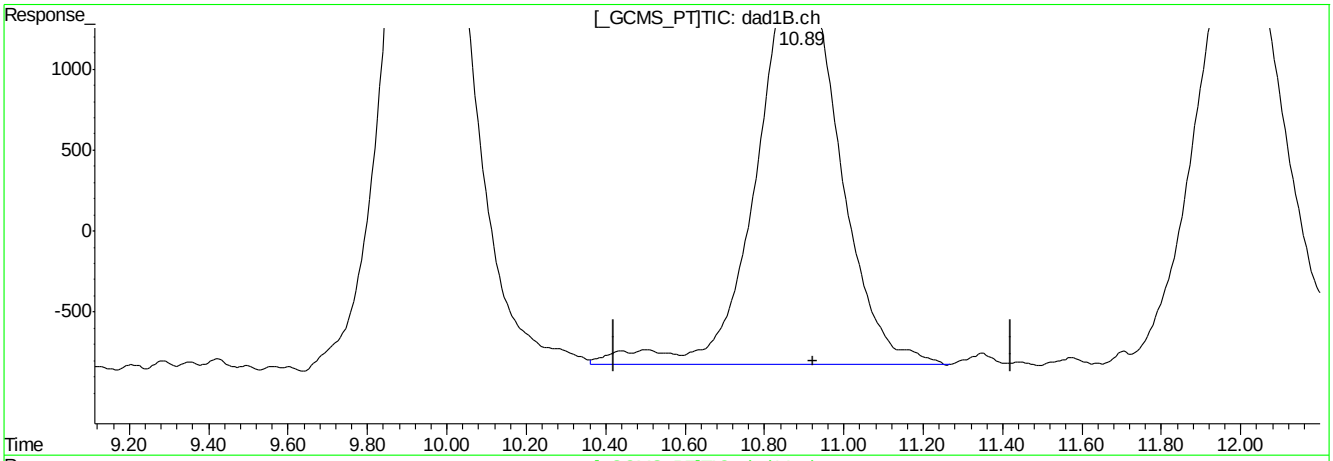
response 1130747

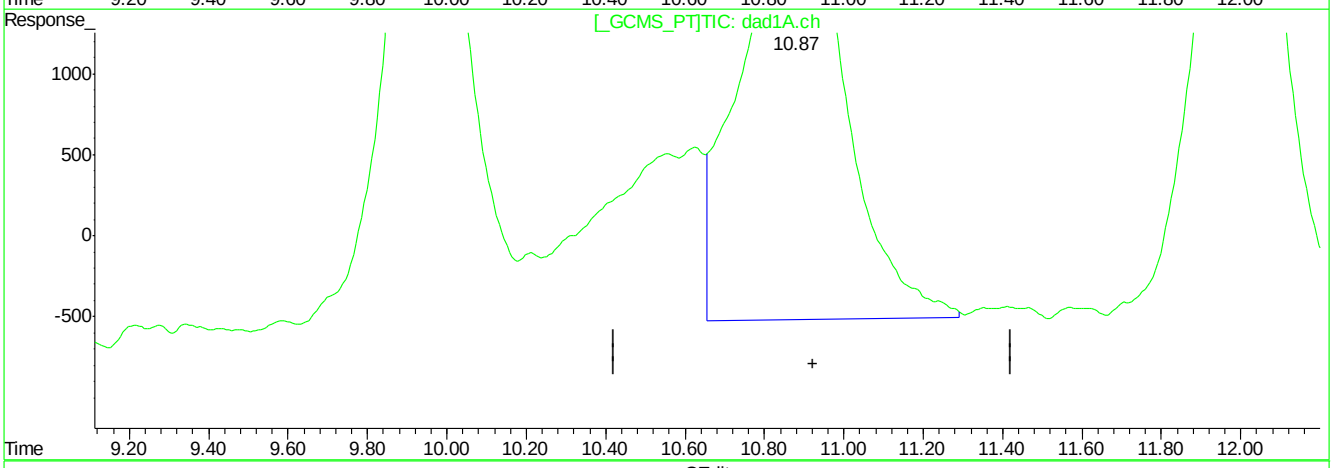
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:02:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.89min 43.010ppb

response 358738

(8) Nitrobenzene #2

10.87min 62.627ppb m

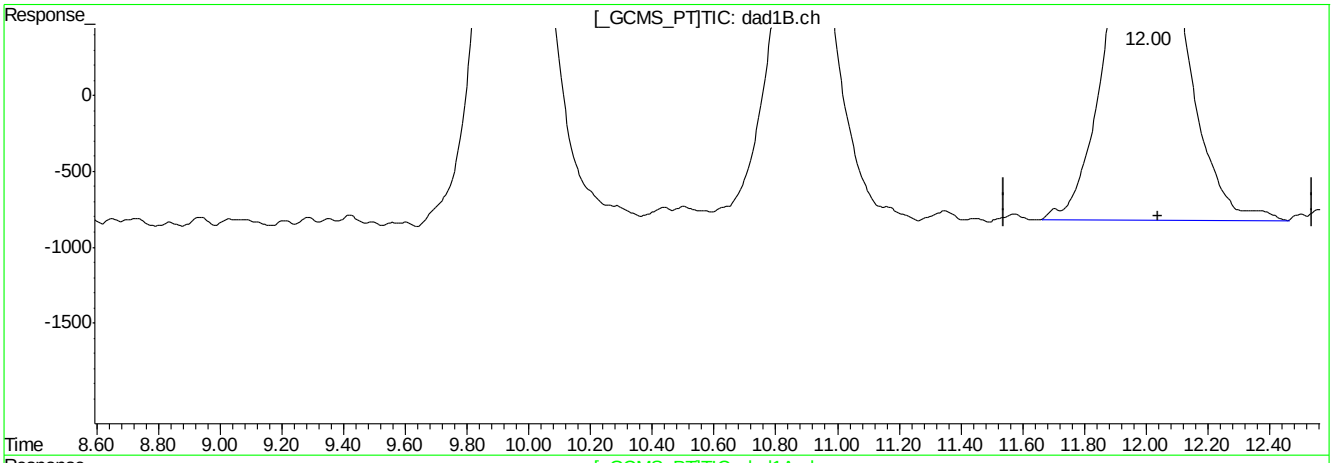
response 505774

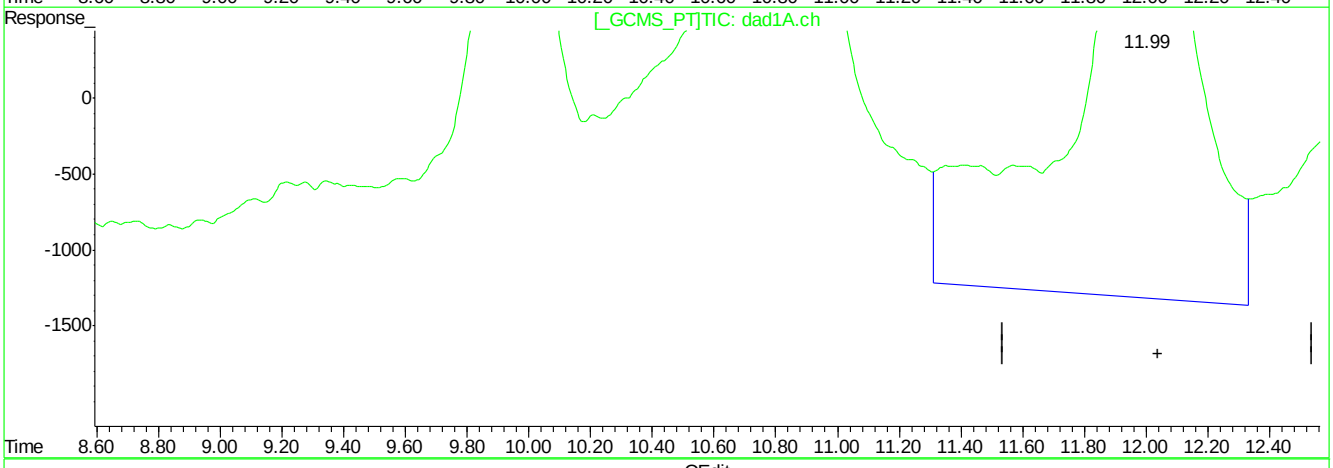
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:02:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

12.00min 46.181ppb

response 427150

(9) 2,4,6-Trinitrotoluene #2

12.00min 76.005ppb

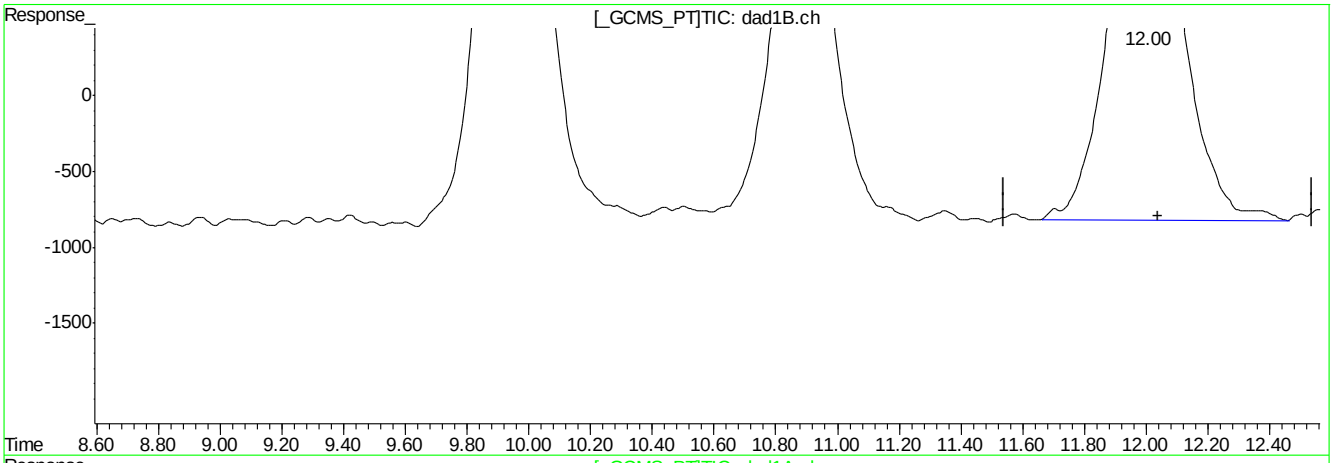
response 1009378

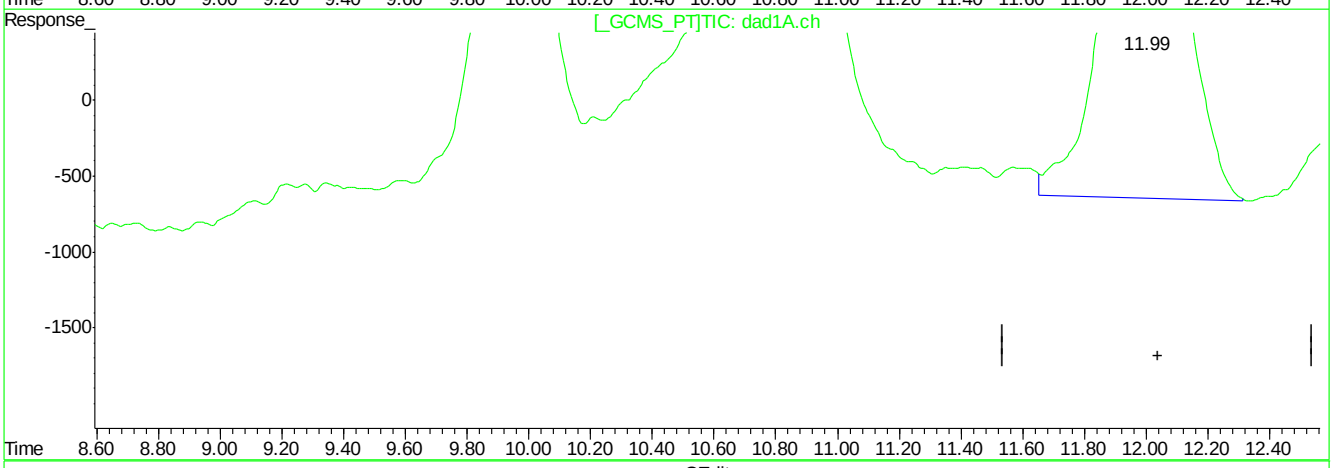
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:02:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

12.00min 46.181ppb

response 427150

(9) 2,4,6-Trinitrotoluene #2

11.99min 43.330ppb m

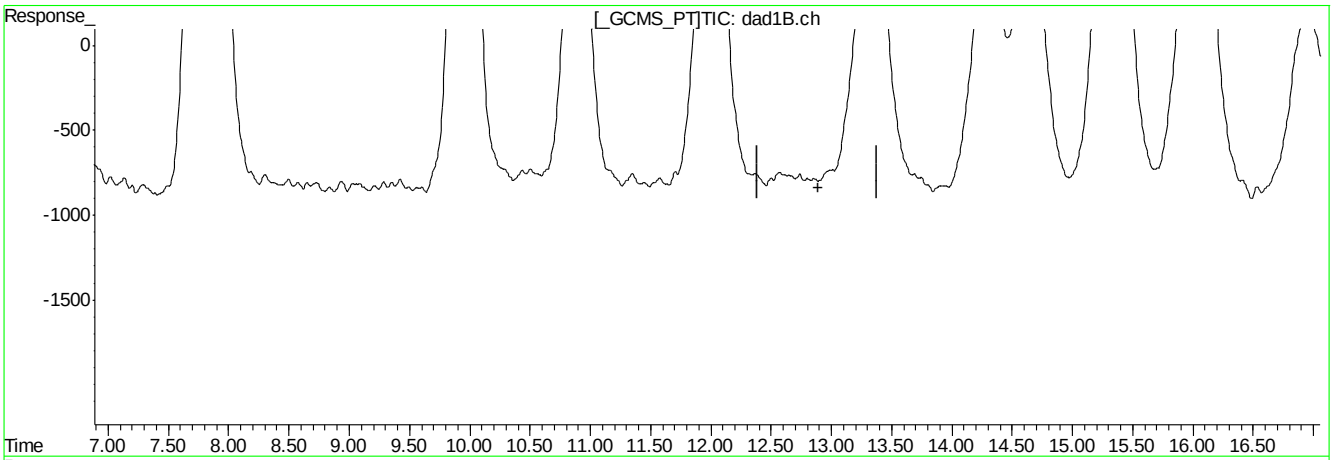
response 575445

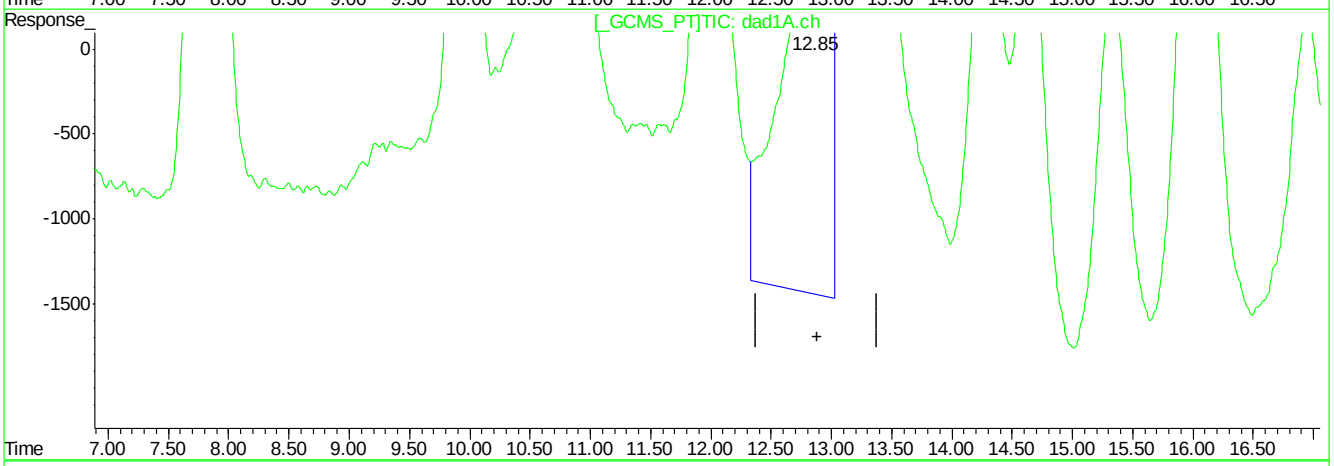
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:02:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.85min 164.425ppb

response 652938

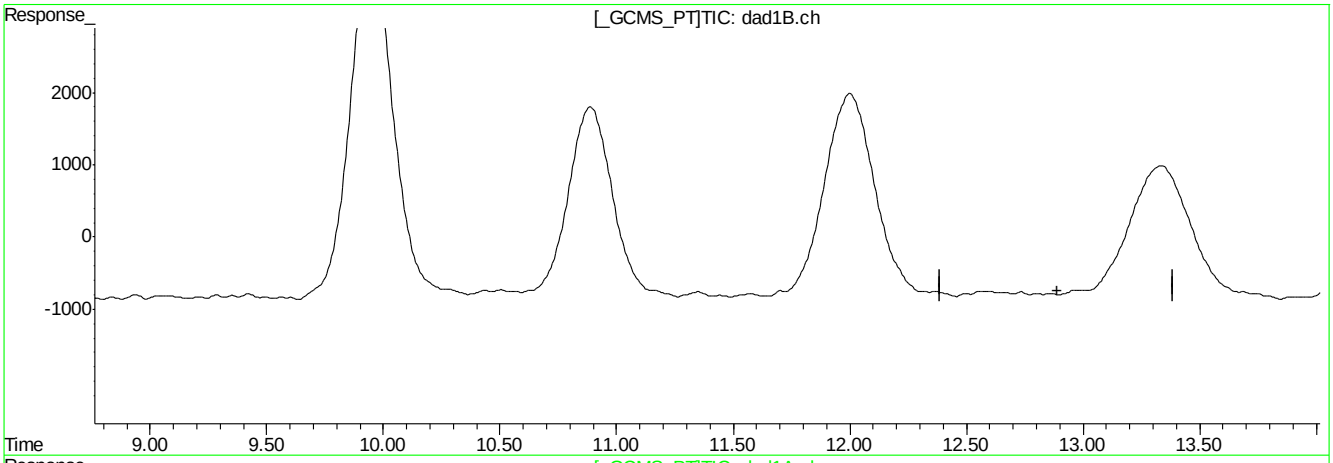
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:02:57 2021

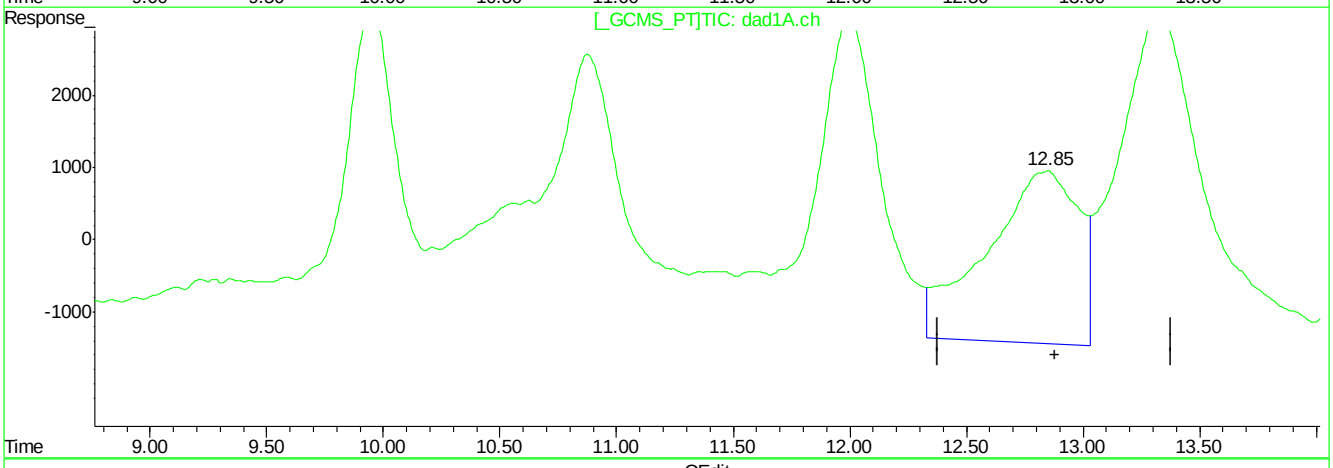
GG620468.D edits: Nitroglycerin

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.85min 164.425ppb

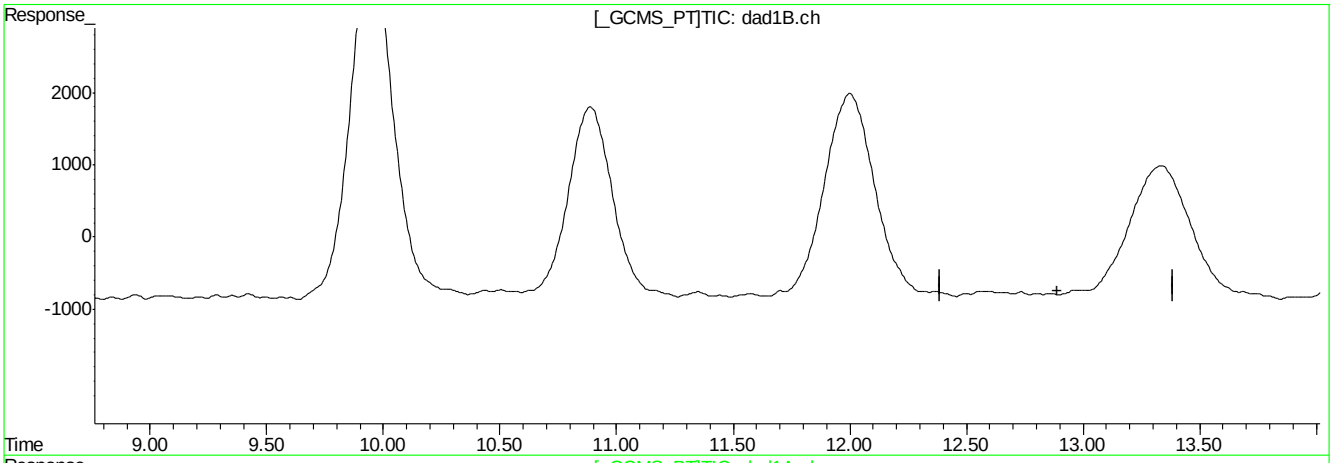
response 652938

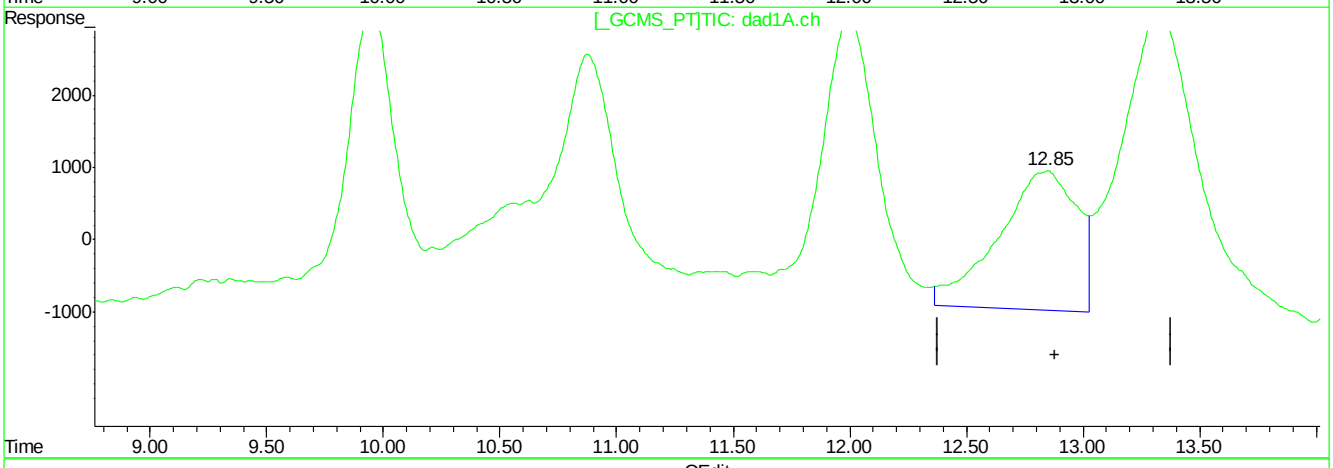
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:03:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.85min 114.041ppb m

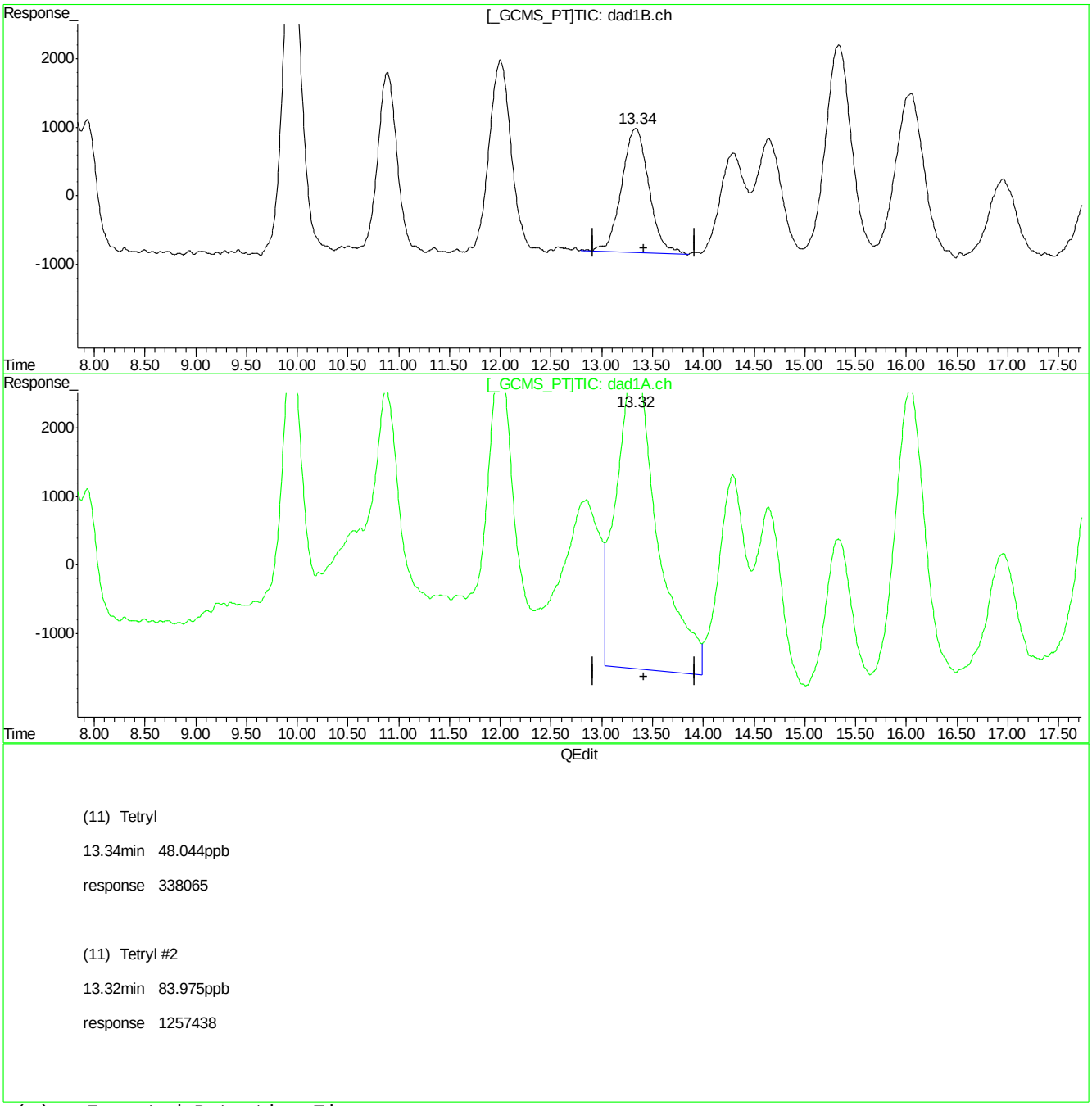
response 453783

(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:03:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration



(11) Tetryl

13.34min 48.044ppb

response 338065

(11) Tetryl #2

13.32min 83.975ppb

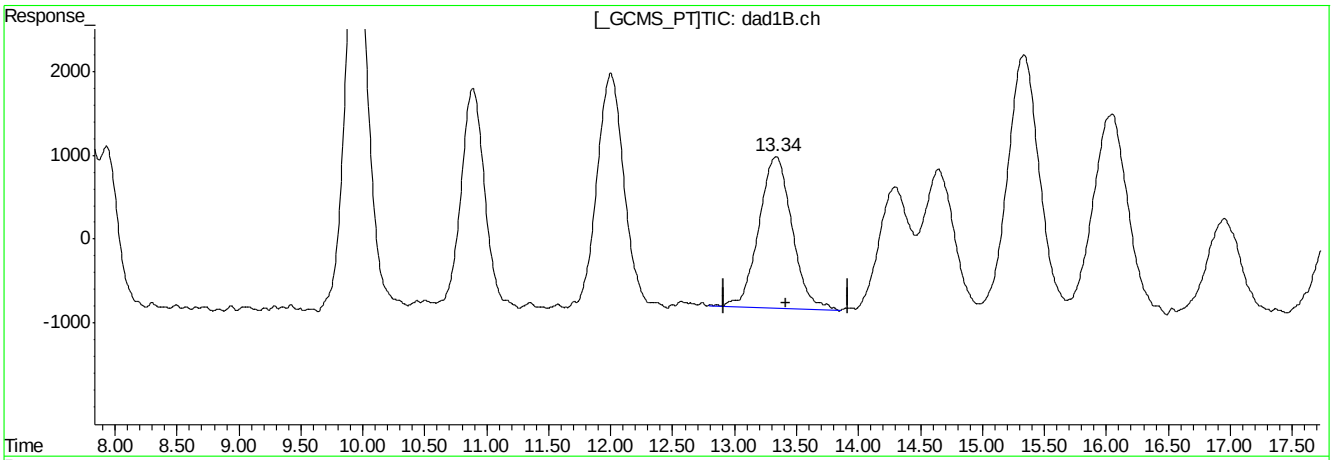
response 1257438

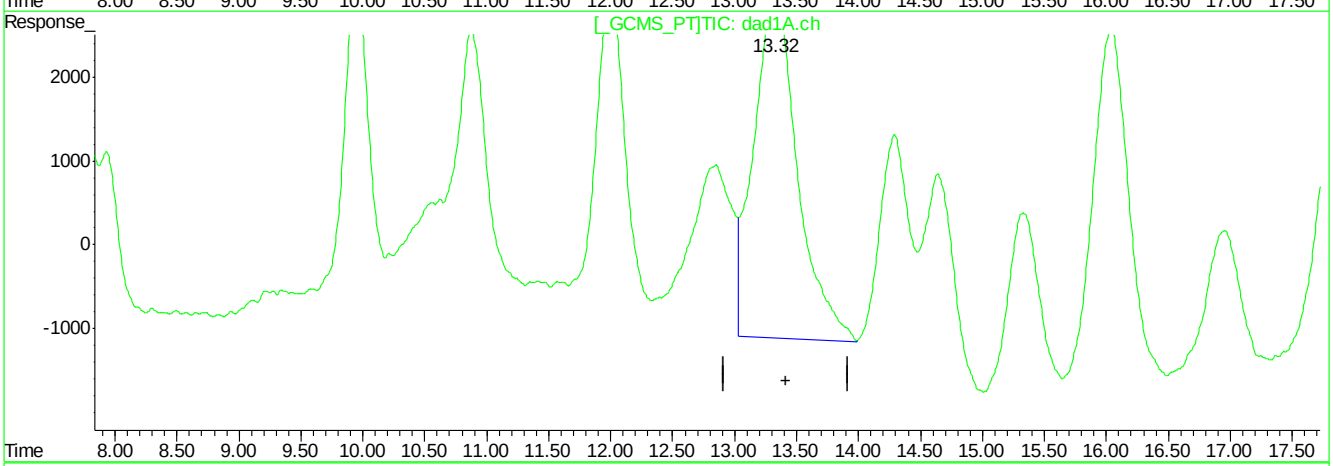
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:04:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

13.34min 48.044ppb

response 338065

(11) Tetryl #2

13.32min 68.066ppb m

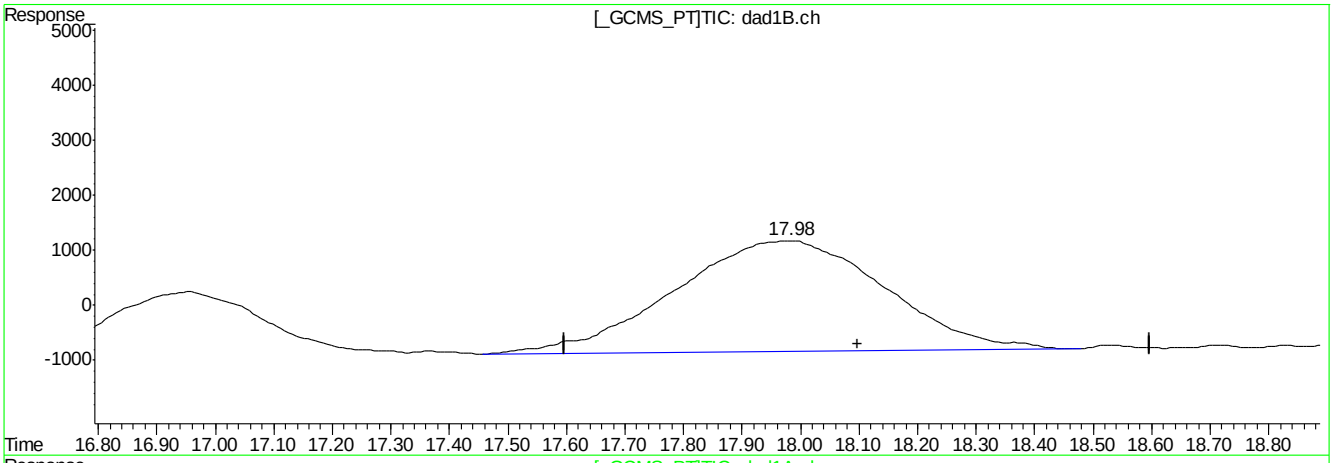
response 1019751

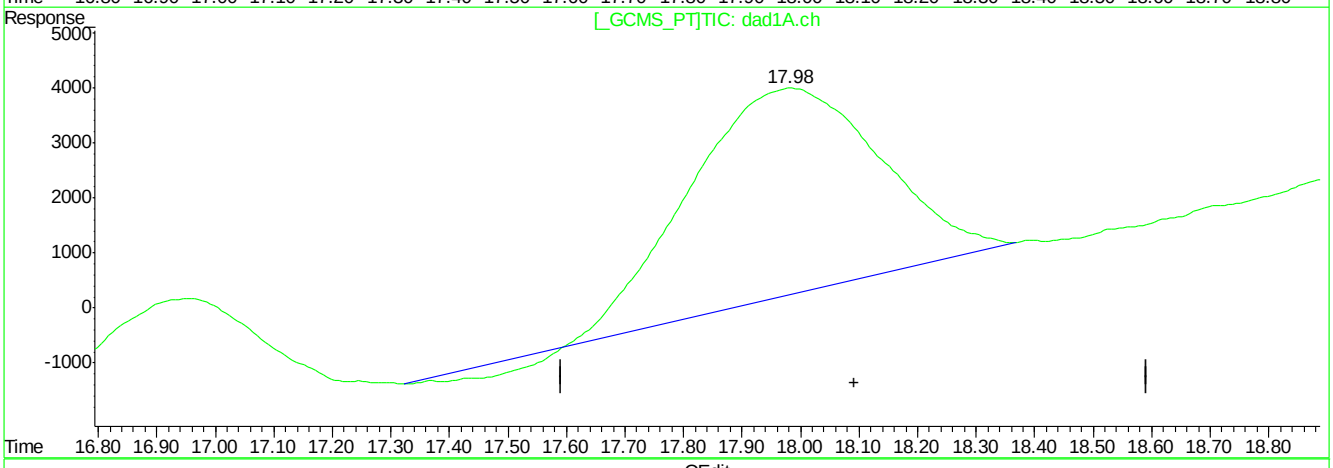
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:05:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.98min 91.217ppb

response 499385

(17) p-Nitrotoluene #2

17.98min 81.881ppb

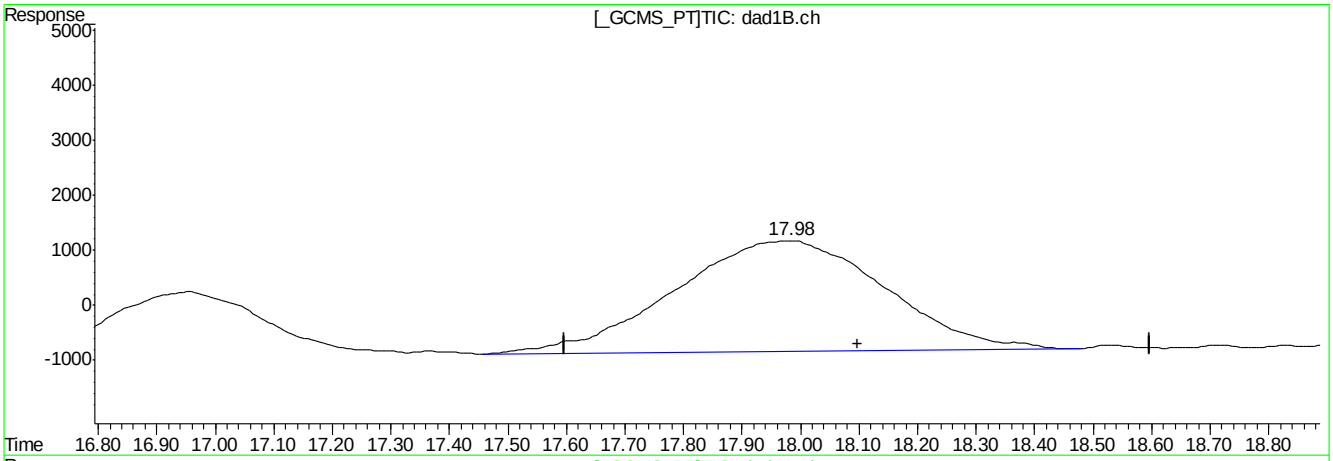
response 835844

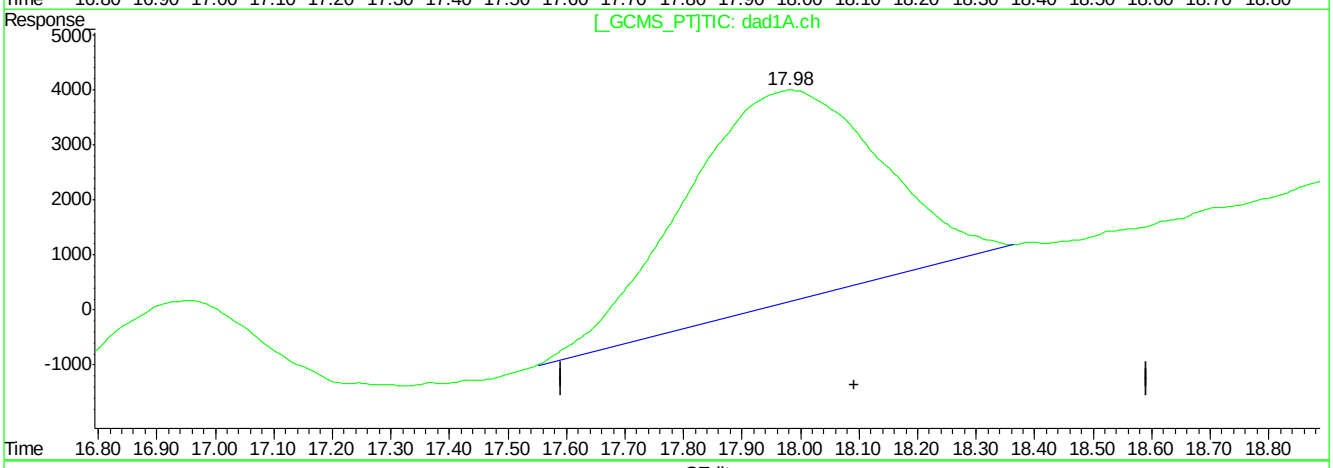
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:05:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.98min 91.217ppb

response 499385

(17) p-Nitrotoluene #2

17.98min 88.574ppb m

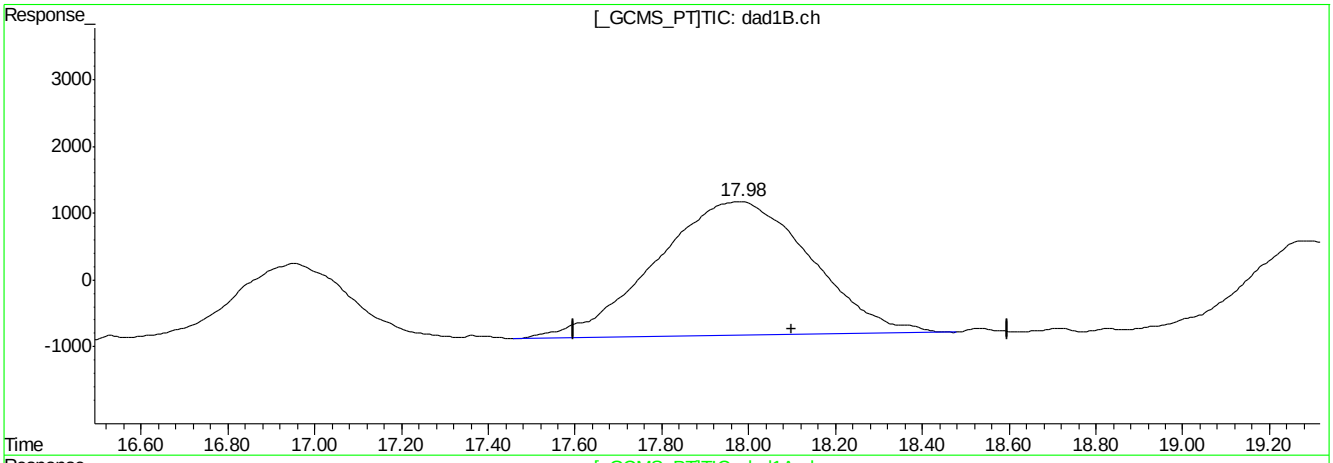
response 904163

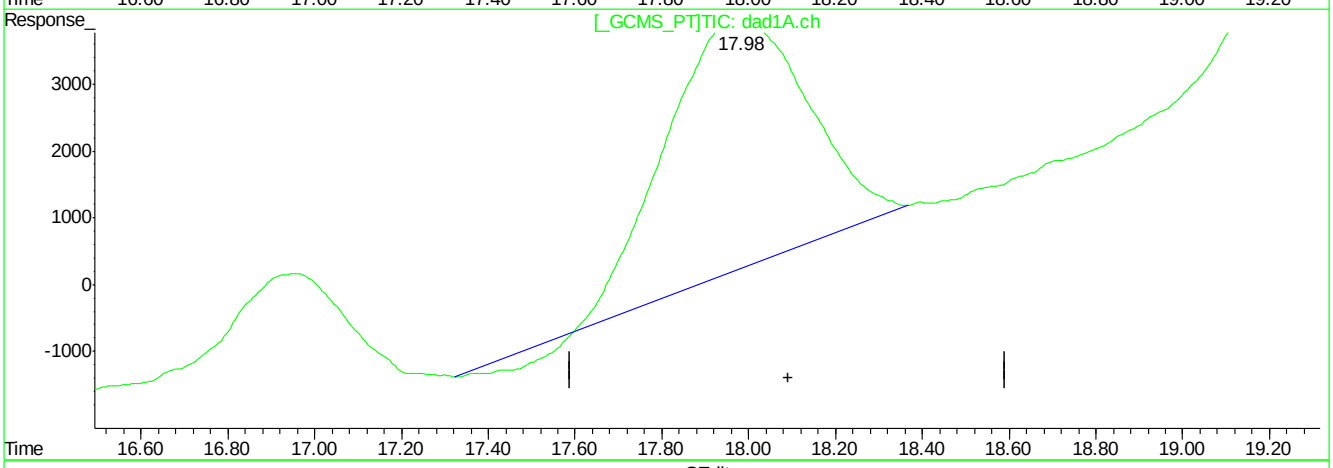
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:05:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.98min 91.217ppb

response 499385

(18) 4-Amino-2,6-Dinitrotoluene #2

17.98min 81.986ppb

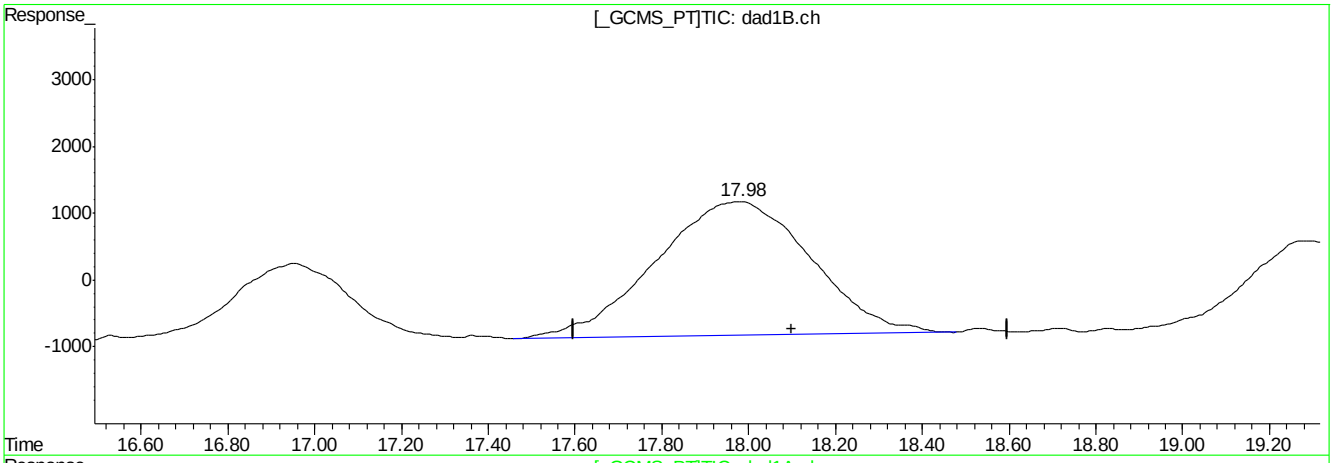
response 835844

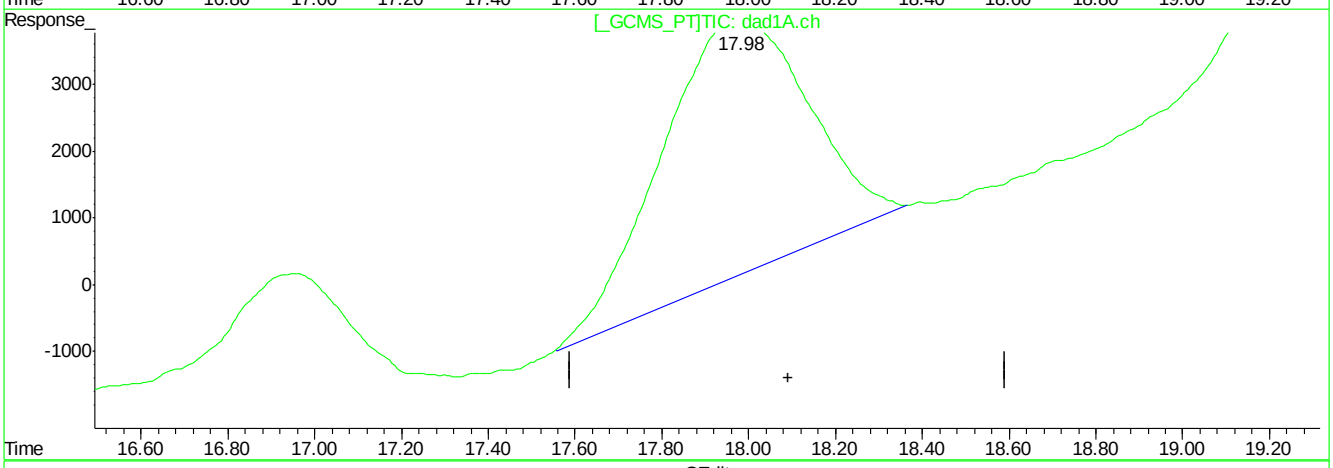
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:05:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.98min 91.217ppb

response 499385

(18) 4-Amino-2,6-Dinitrotoluene #2

17.98min 88.711ppb m

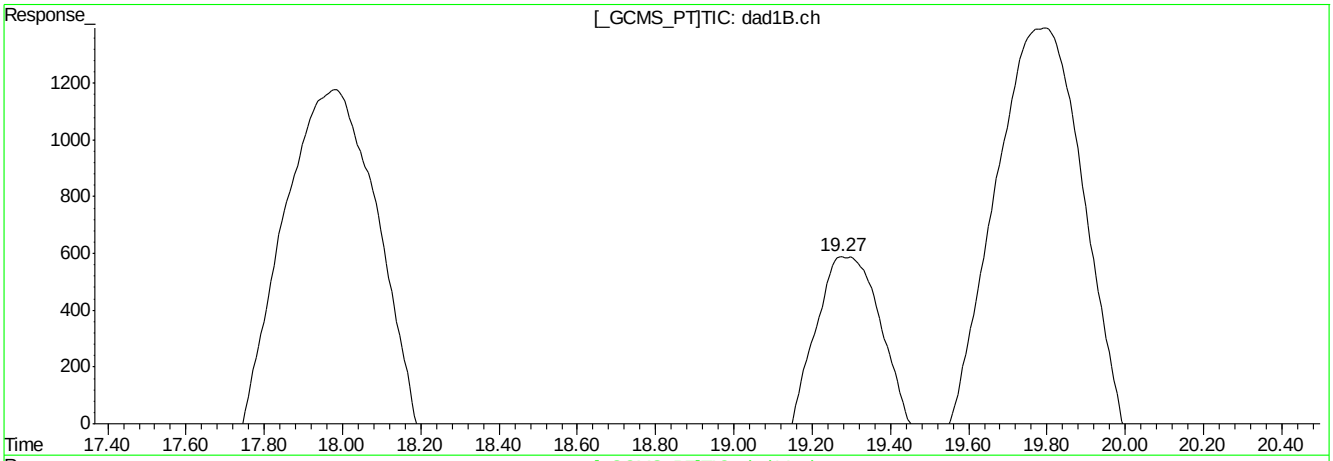
response 904406

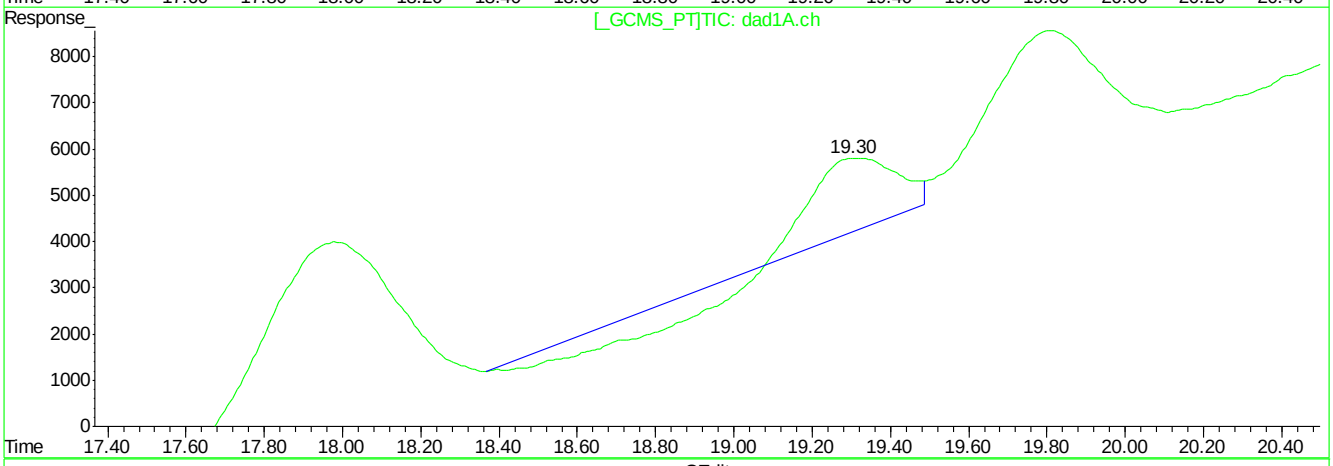
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:06:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.29min 42.614ppb

response 247439

(19) m-Nitrotoluene #2

19.32min 8.514ppb

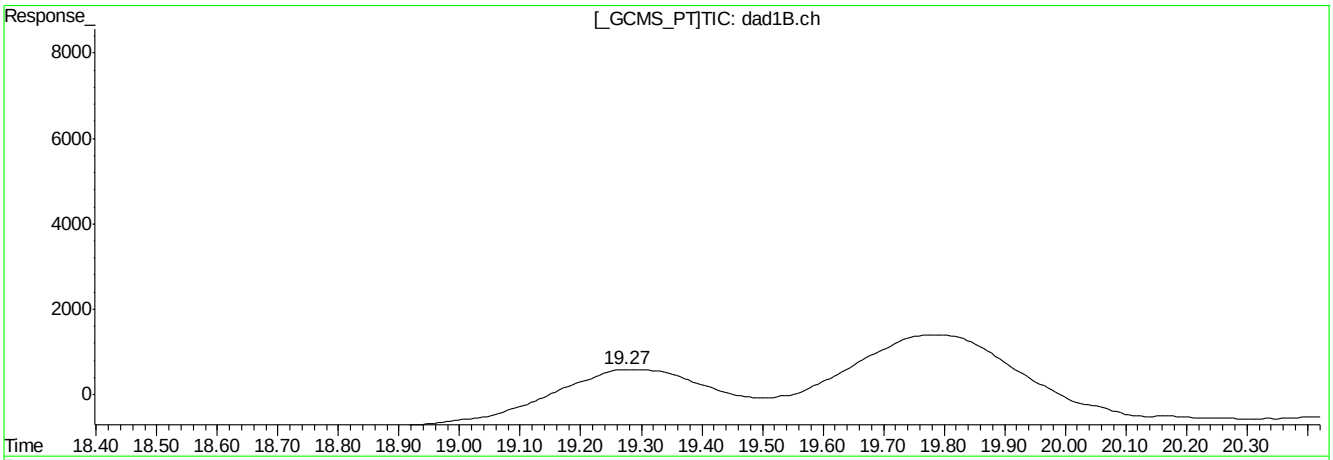
response 85739

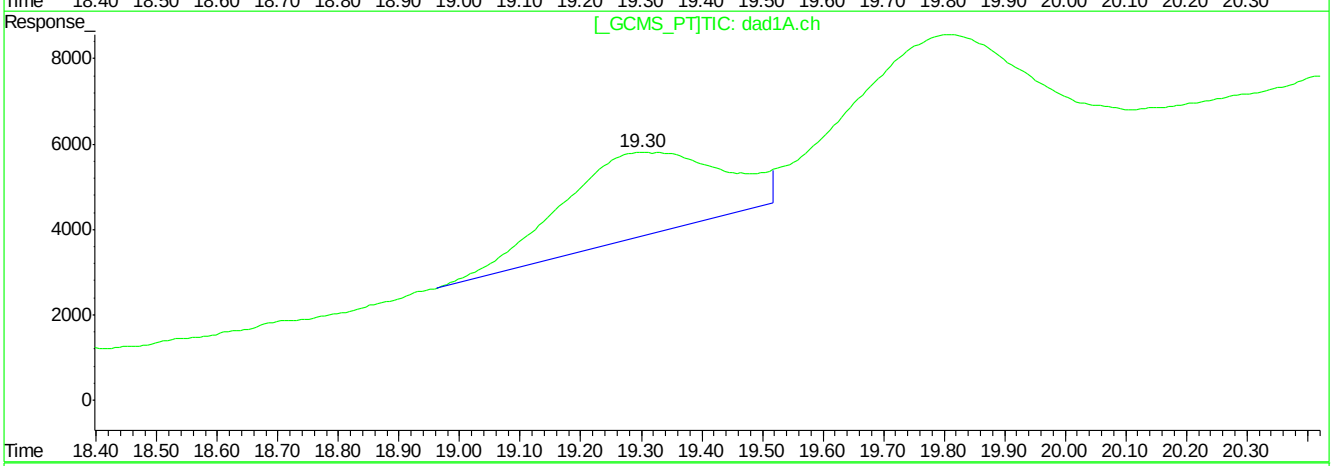
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:06:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.29min 42.614ppb

response 247439

(19) m-Nitrotoluene #2

19.30min 35.756ppb m

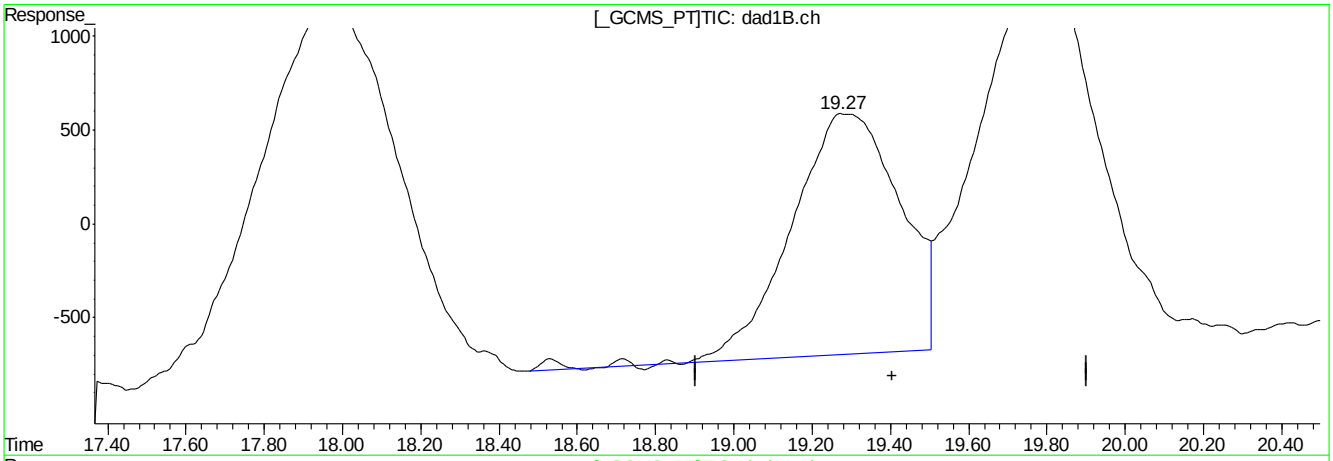
response 360057

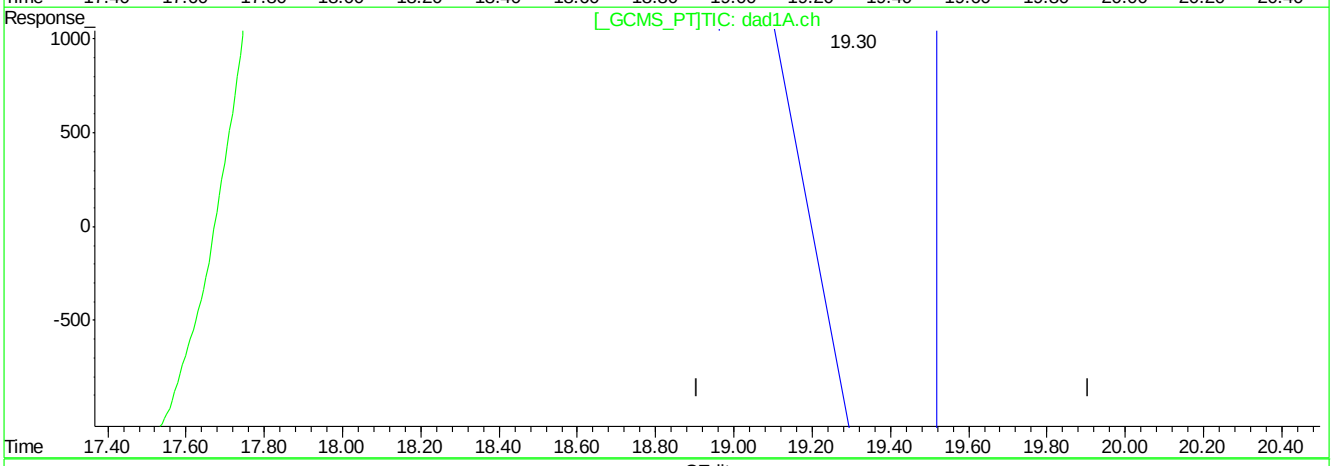
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:06:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.29min 42.614ppb

response 247439

(19) m-Nitrotoluene #2

19.30min 35.756ppb m

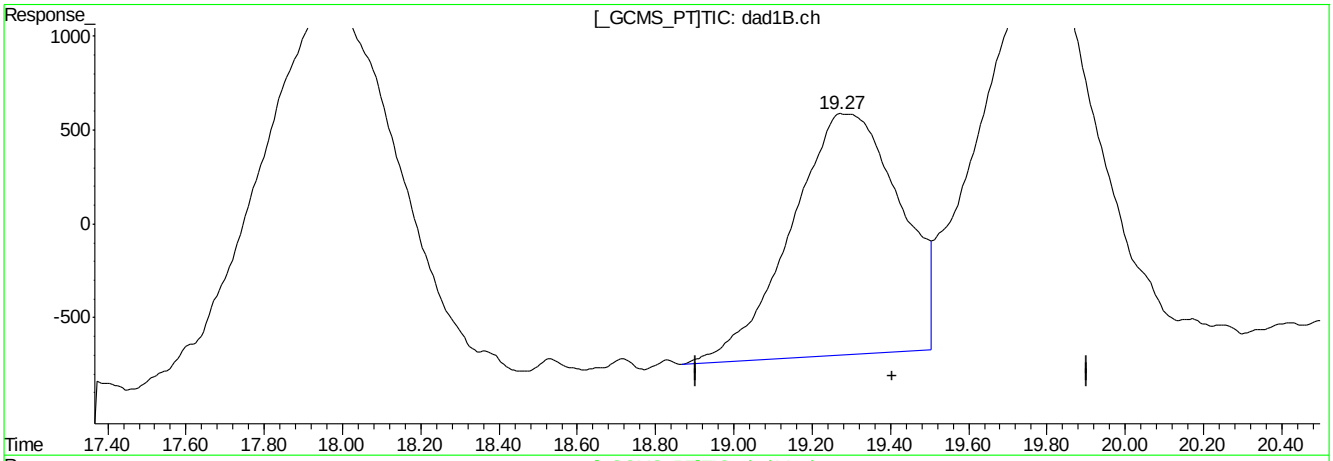
response 360057

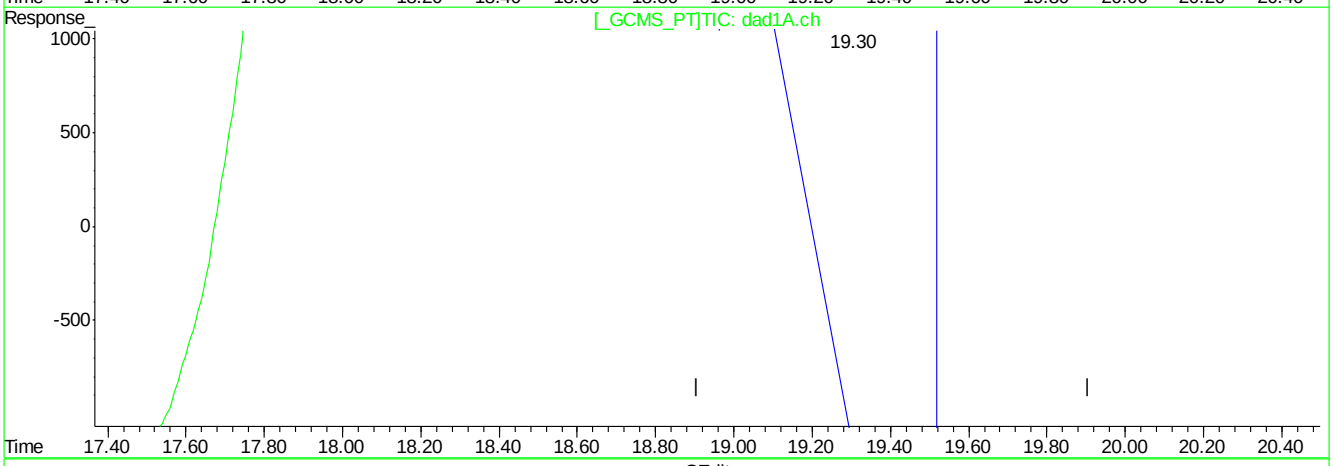
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:06:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.27min 42.366ppb m

response 245997

(19) m-Nitrotoluene #2

19.30min 35.756ppb m

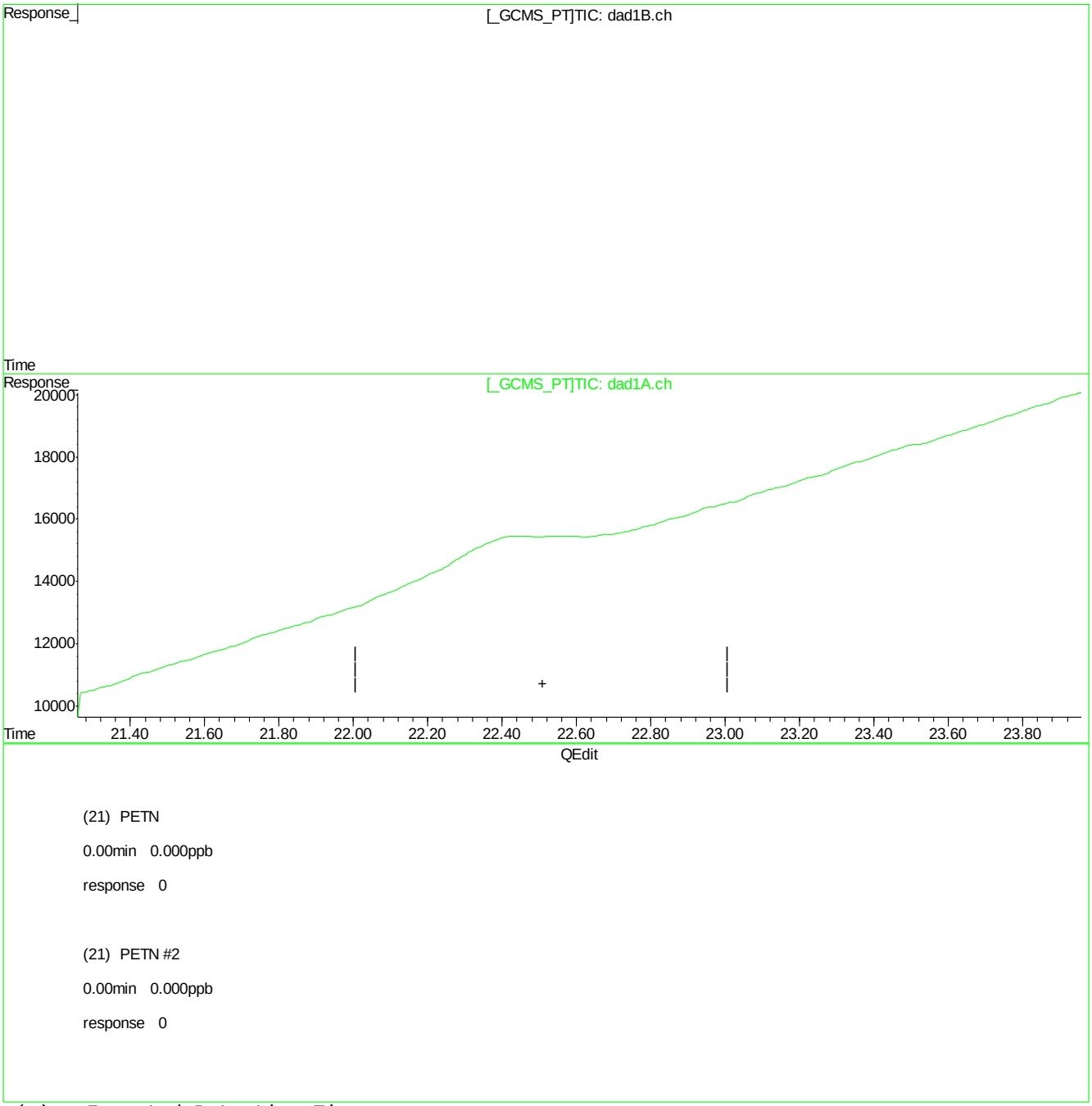
response 360057

(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:06:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration



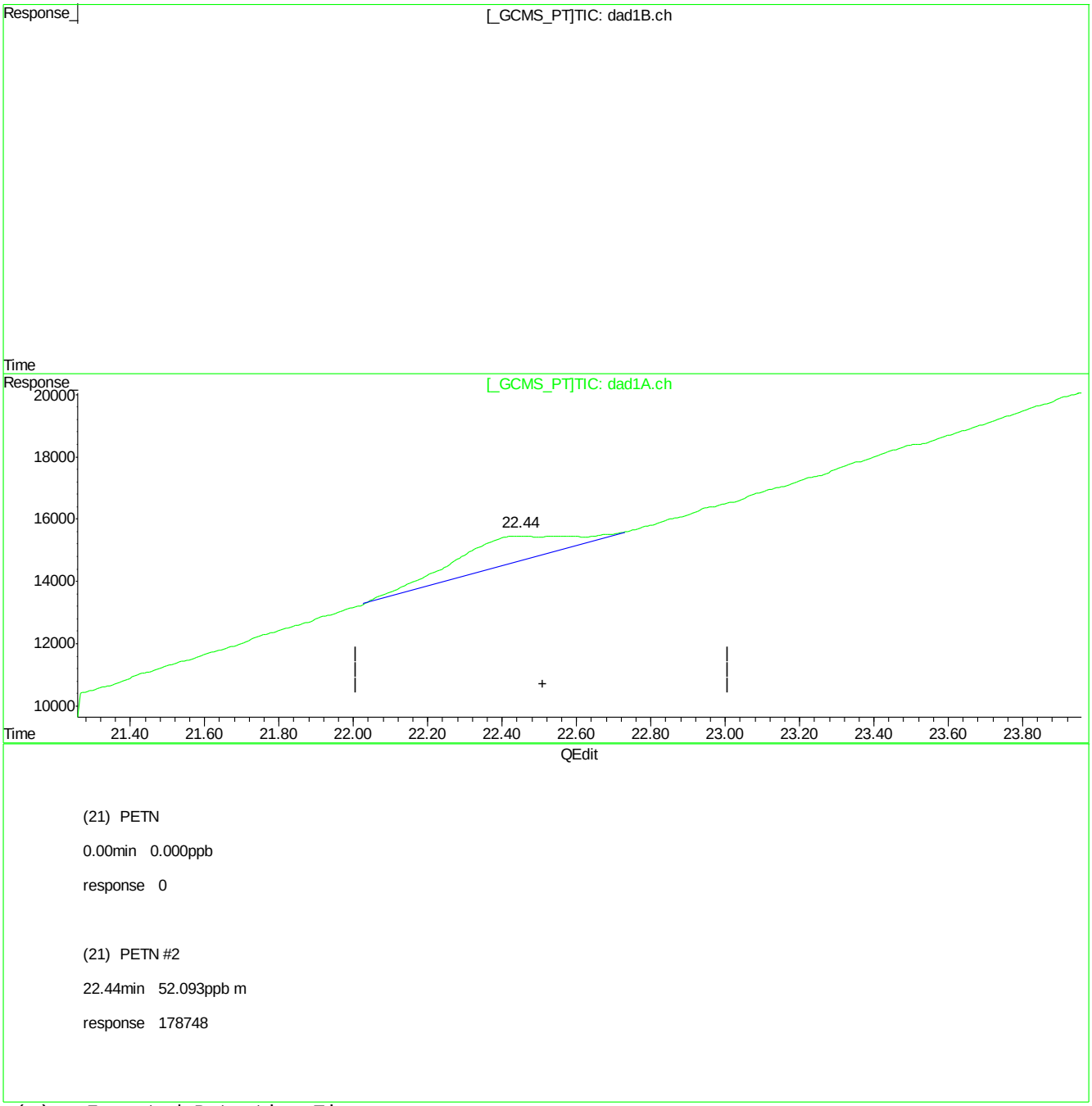
(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:06:47 2021

GG620468.D edits: PETN

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620468.D\dad1A.ch
Acq On : 08-Jan-2021, 11:25:20 Operator: jamesb
Sample : ic2921-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.44min 52.093ppb m

response 178748

(+) = Expected Retention Time
GG620468.D 8330RPB.M_010821.M Mon Jan 11 11:06:53 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
01/11/21 16:38

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35:04 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.33	14.33	531543	1224544	98.430	112.427
	Spiked Amount 500.000	Range 70 - 136		Recovery =		19.69%#	22.49%#
	Target Compounds						
1)	TNX	4.85	4.85	789829	789829	93.076	92.878
2)	HMX	5.30	5.30	312654	312654	95.849	96.042
3)	DNX	5.50	5.50	683523	683523	99.813	99.933
4)	MNX	6.66	6.66	697496	697496	102.863	102.754
5)	1,3,5-Trinitrobe	7.73	7.73	985632	985632	104.223	104.293
6)	RDX	7.93	7.93	424130	424130	96.717	96.717
7)	1,3-Dinitrobenze	9.94	9.93	1299335	1061681	101.209	110.492m
8)	Nitrobenzene	10.89	10.88	709560	684406	85.072	84.746m
9)	2,4,6-Trinitroto	12.00	12.00	909631	1262595	98.345	95.071m
10)	Nitroglycerin	0.00	12.84	0	378399	N.D.	95.023 #
11)	Tetryl	13.36	13.36	706088	1296417	100.346	86.586
13)	2,6-Dinitrotolue	14.68	14.67	615535	858833	101.377	85.064
14)	2,4-Dinitrotolue	15.36	15.36	1157768	748704	99.356	78.190
15)	3,5-Dinitroanili	16.07	16.07	974179	1503934	189.116	187.014m
16)	o-Nitrotoluene	16.99	16.99	432274	609720	44.203	36.717
17)	p-Nitrotoluene	18.01	18.00	1051852	1908869	192.130	186.998
18)	4-Amino-2,6-Dini	18.01	18.00	1051852	1908869	192.130	187.237
19)	m-Nitrotoluene	19.34	19.34	505730	819197	87.097	81.351m
20)	2-Amino-4,6-Dini	19.83	19.84	905952	1221757	103.649	95.923
21)	PETN	0.00	22.45	0	424768	N.D.	123.867m#

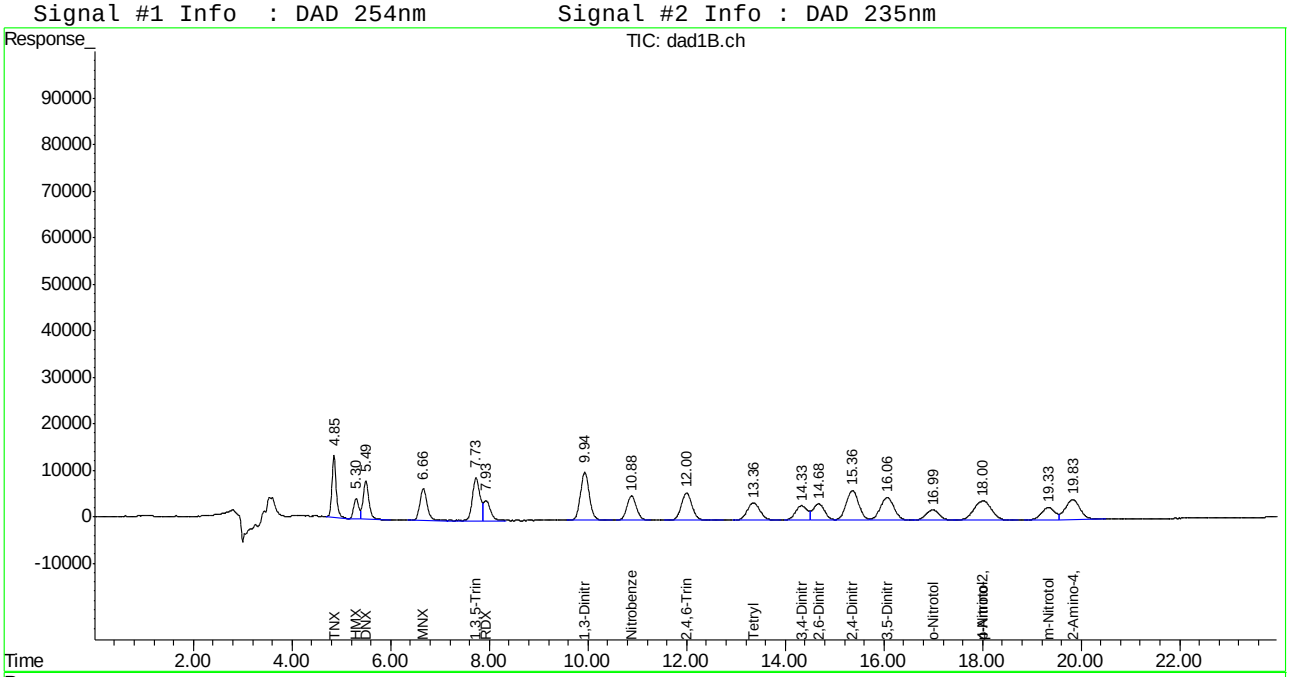
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620469.D 8330RPB.M_010821.M Mon Jan 11 14:11:21 2021 Page 1

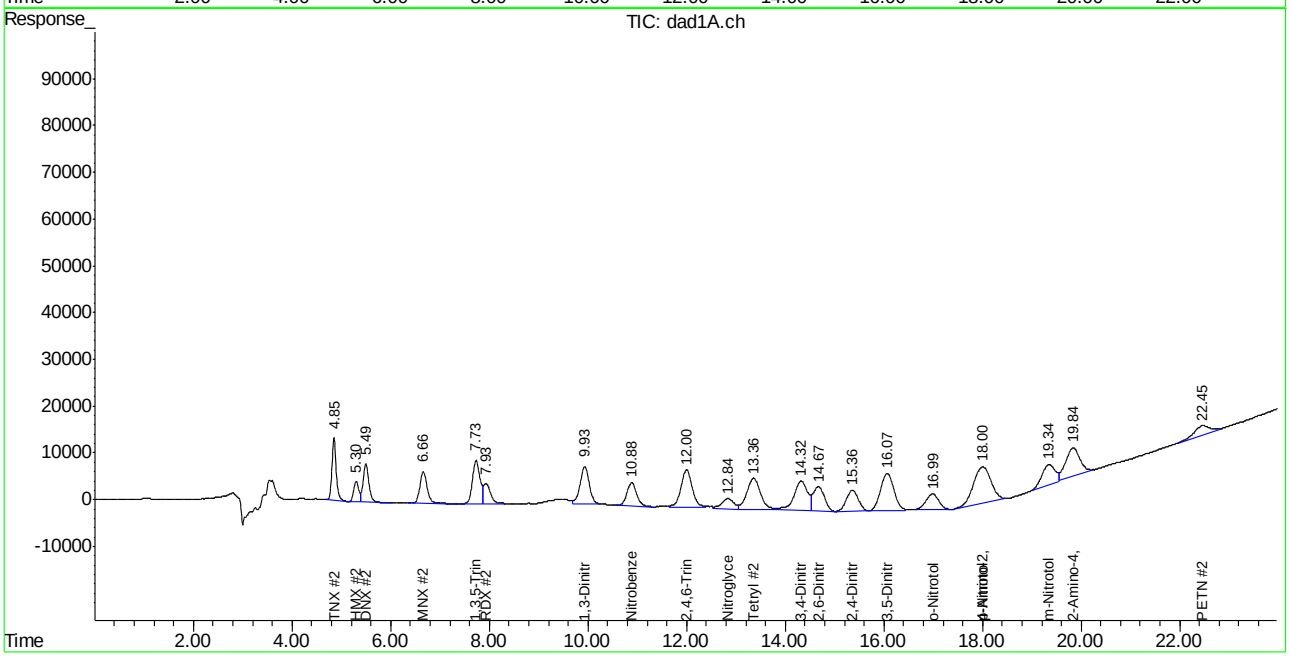
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:53 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

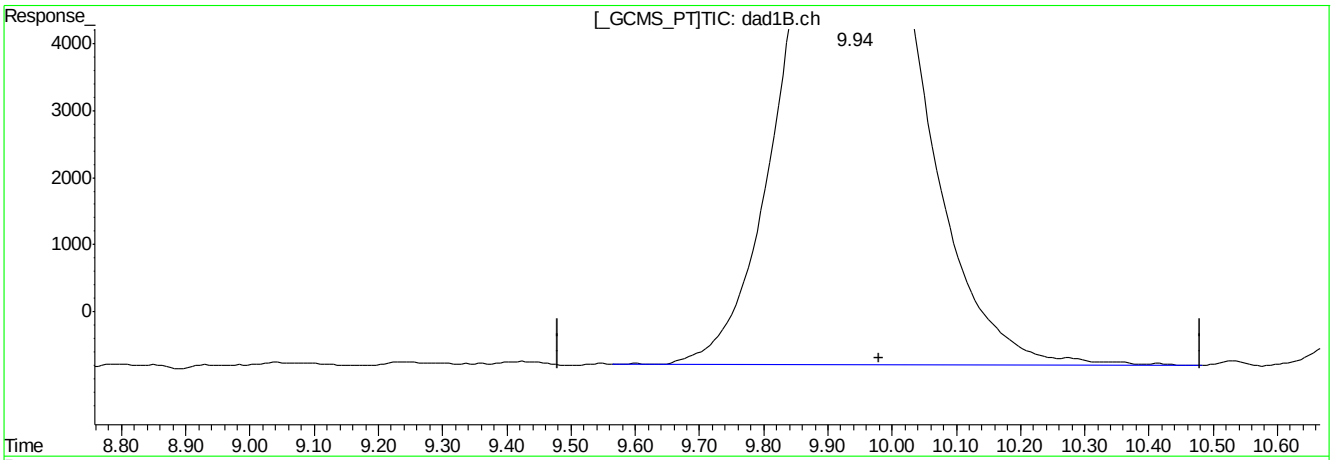
Sample Number: GGG2921-IC2921
Lab FileID: GG620469.D
Injection Time: 01/08/21 11:56
Method: SW846 8330A
Analyst approved: 01/11/21 14:37 James Boone
Supervisor approved: 01/11/21 16:38 Naresh Jiawan

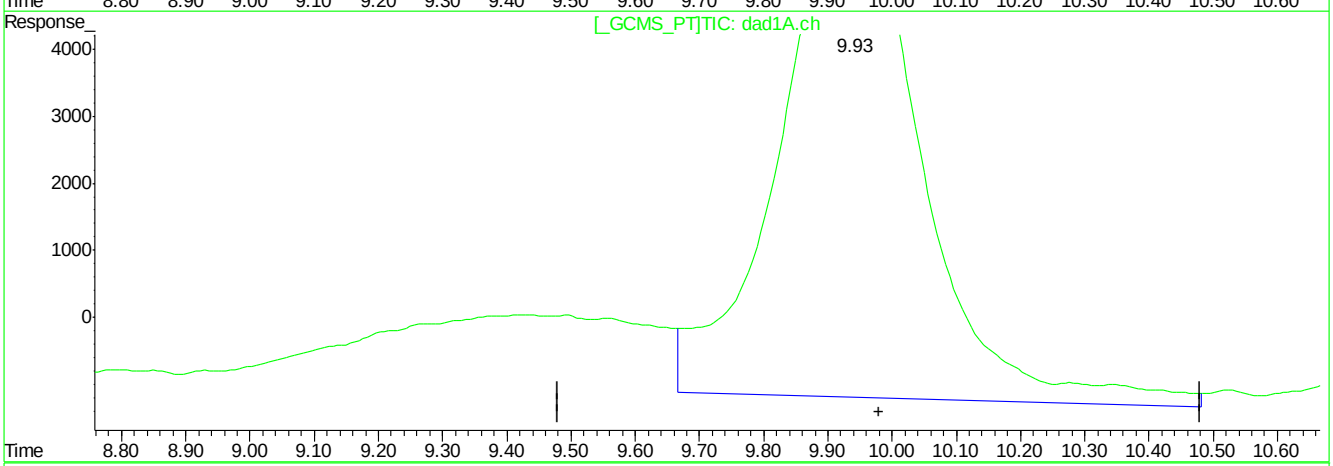
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	9.93	Poor instrument integration
Nitrobenzene	98-95-3	2	10.88	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	12.00	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	16.07	Poor instrument integration
m-Nitrotoluene	99-08-1	2	19.34	Poor instrument integration
PETN	78-11-5	2	22.45	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.94min 101.209ppb

response 1299335

(7) 1,3-Dinitrobenzene #2

9.94min 123.270ppb

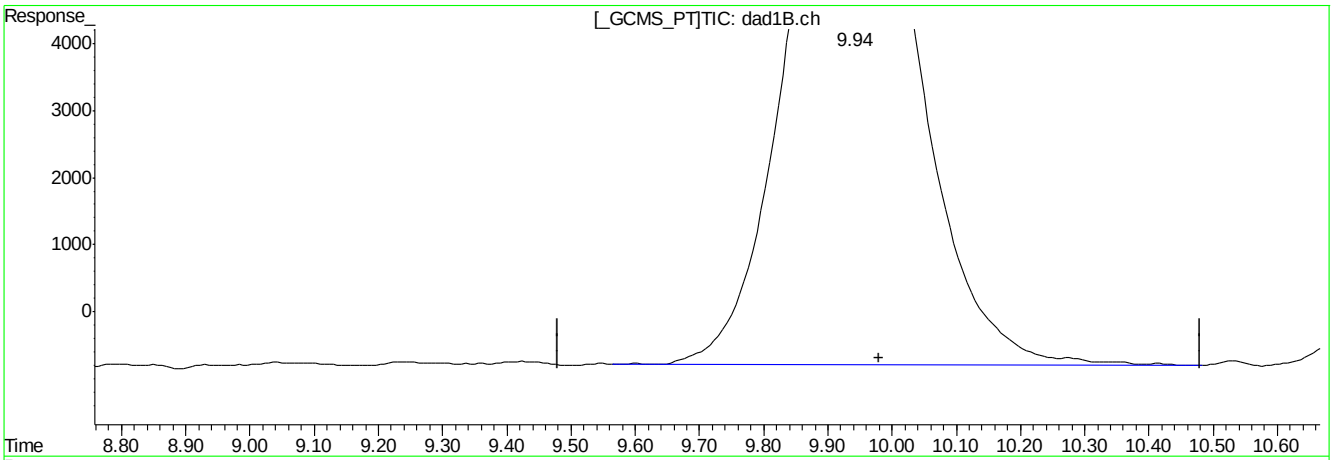
response 1184469

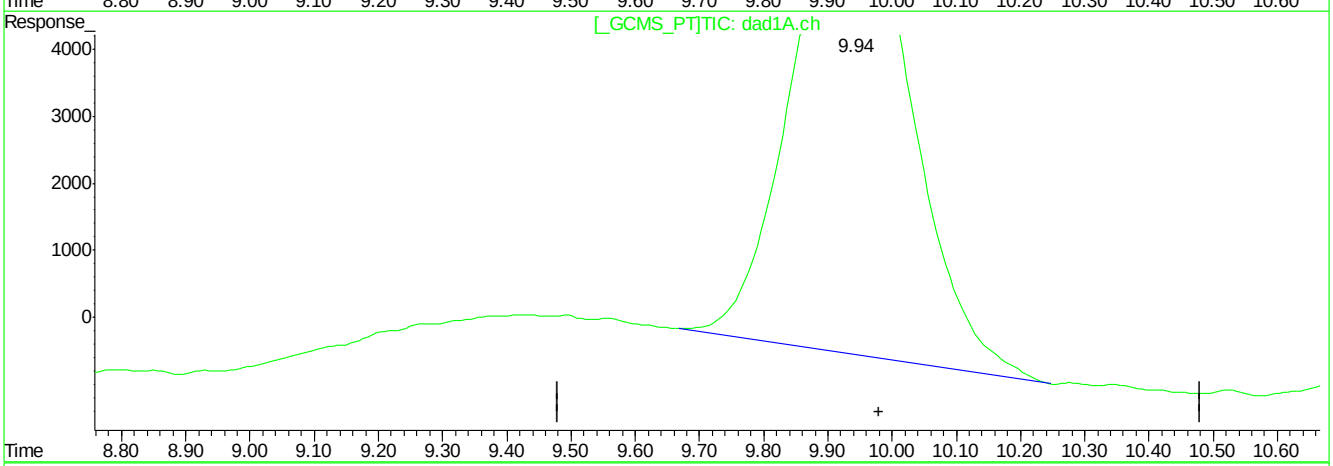
(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:49:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.94min 101.209ppb

response 1299335

(7) 1,3-Dinitrobenzene #2

9.94min 96.676ppb m

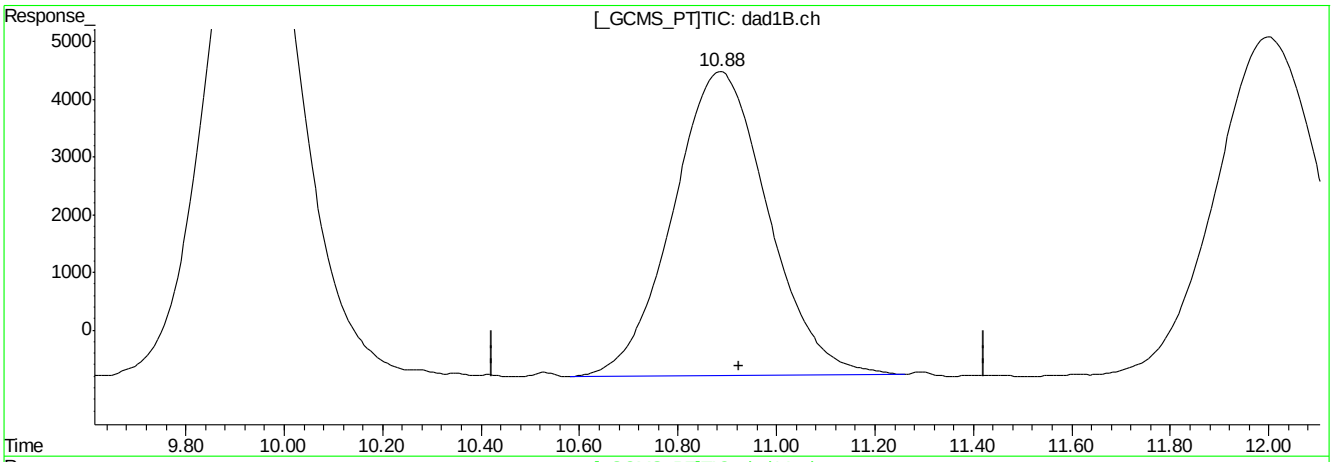
response 928936

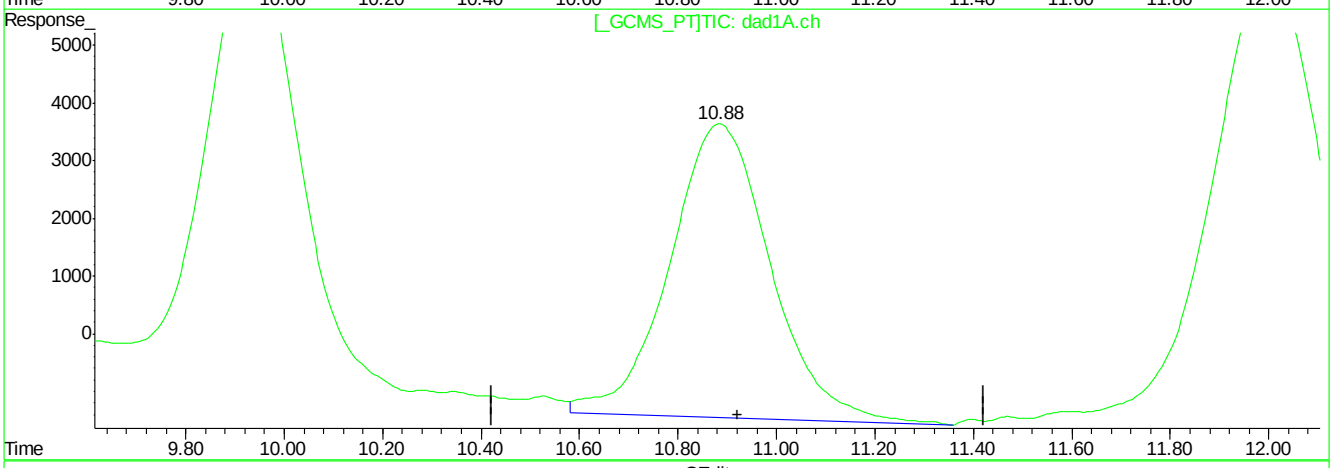
(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:49:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.89min 85.072ppb

response 709560

(8) Nitrobenzene #2

10.89min 90.070ppb

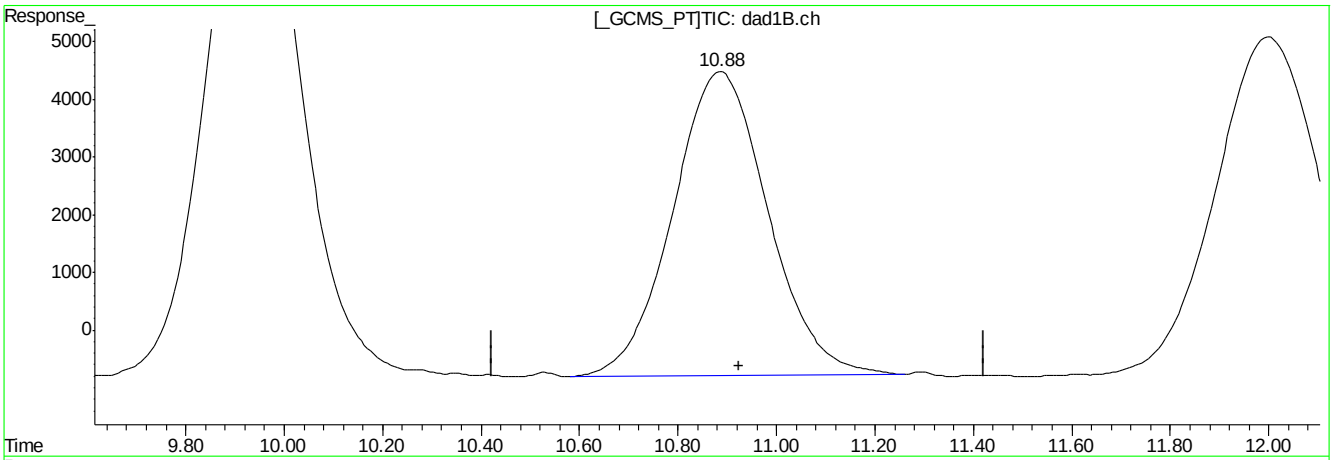
response 727395

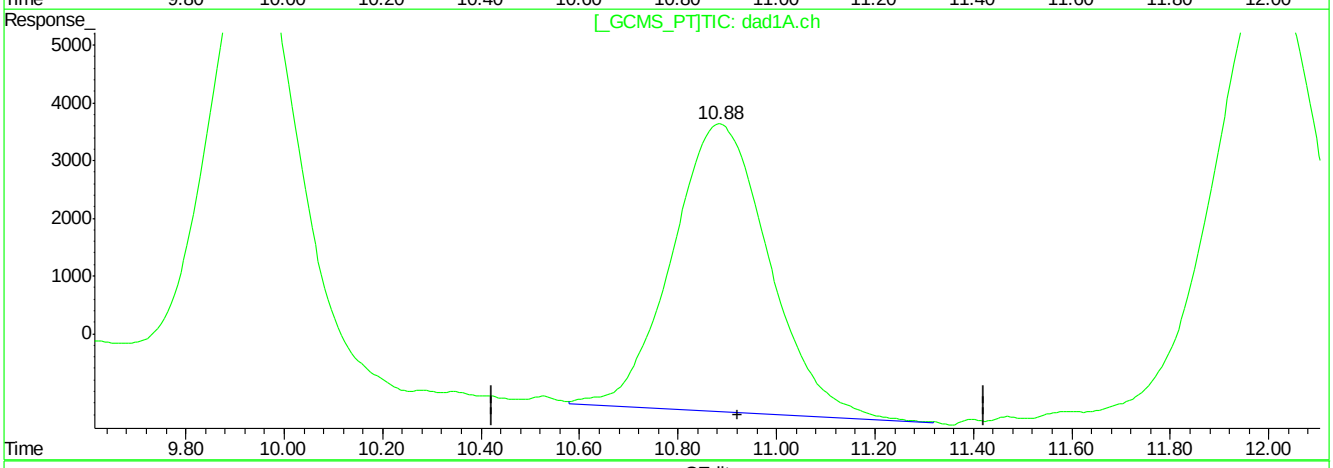
(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:49:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.89min 85.072ppb

response 709560

(8) Nitrobenzene #2

10.88min 84.746ppb m

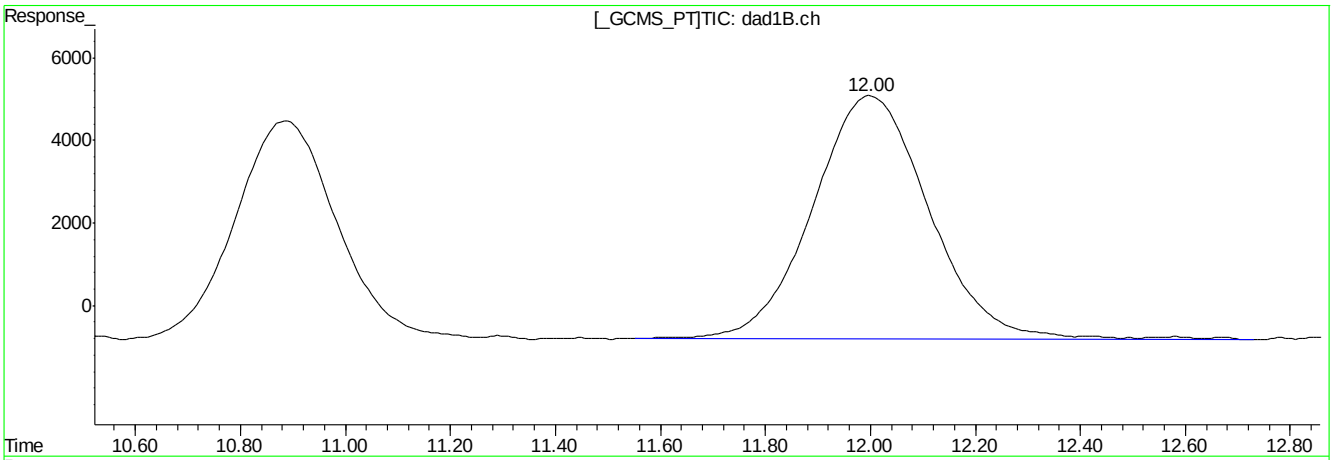
response 684406

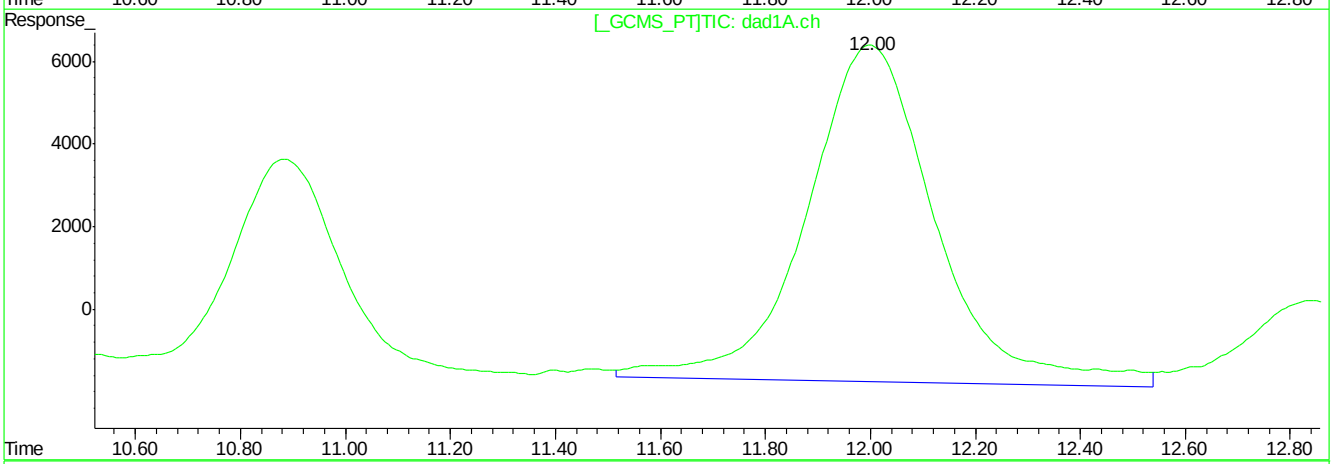
(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:50:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

12.00min 98.345ppb

response 909631

(9) 2,4,6-Trinitrotoluene #2

12.00min 104.981ppb

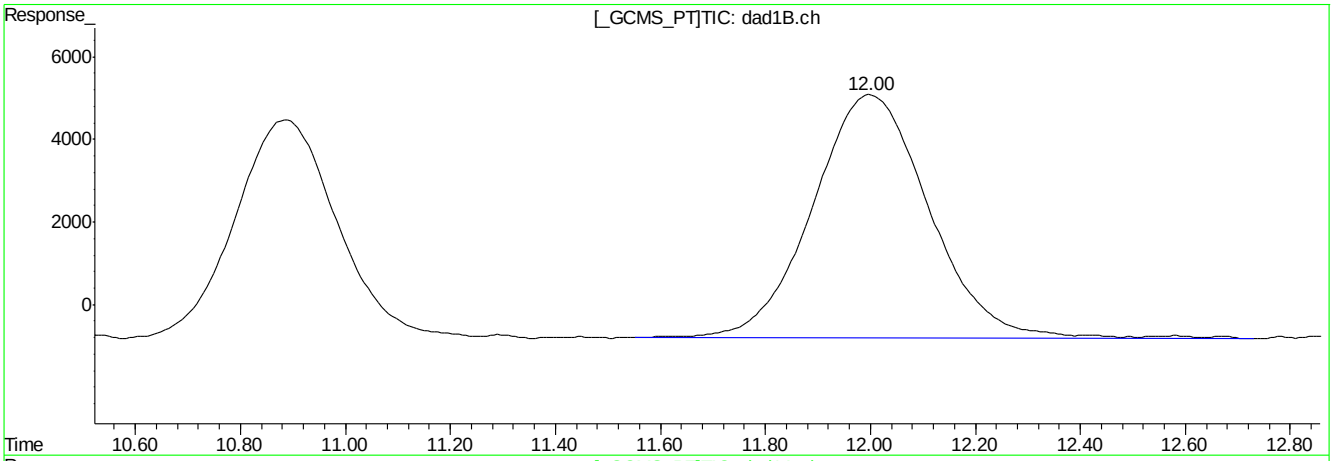
response 1394195

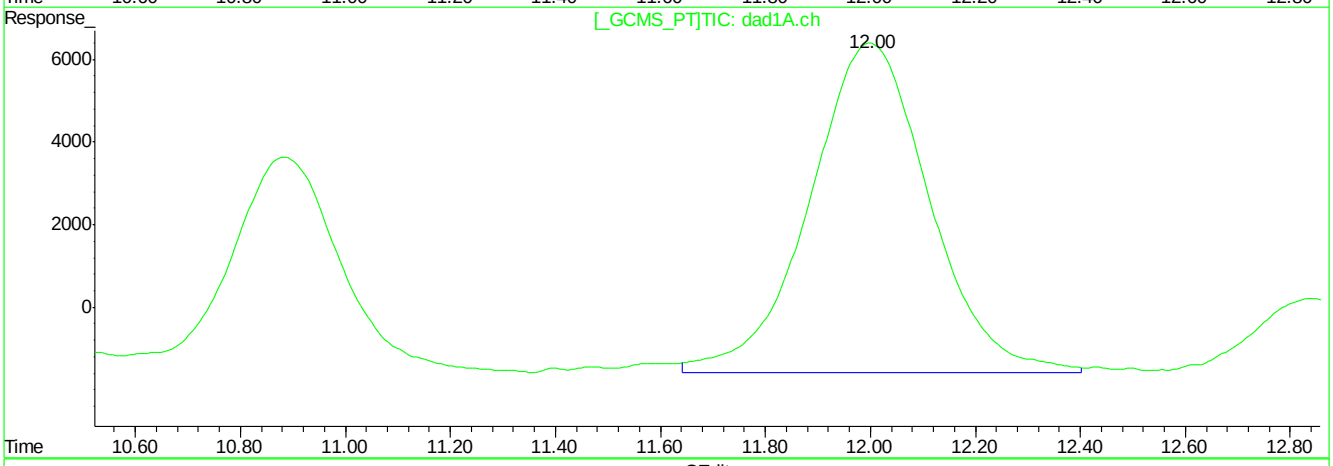
(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:51:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

12.00min 98.345ppb

response 909631

(9) 2,4,6-Trinitrotoluene #2

12.00min 95.071ppb m

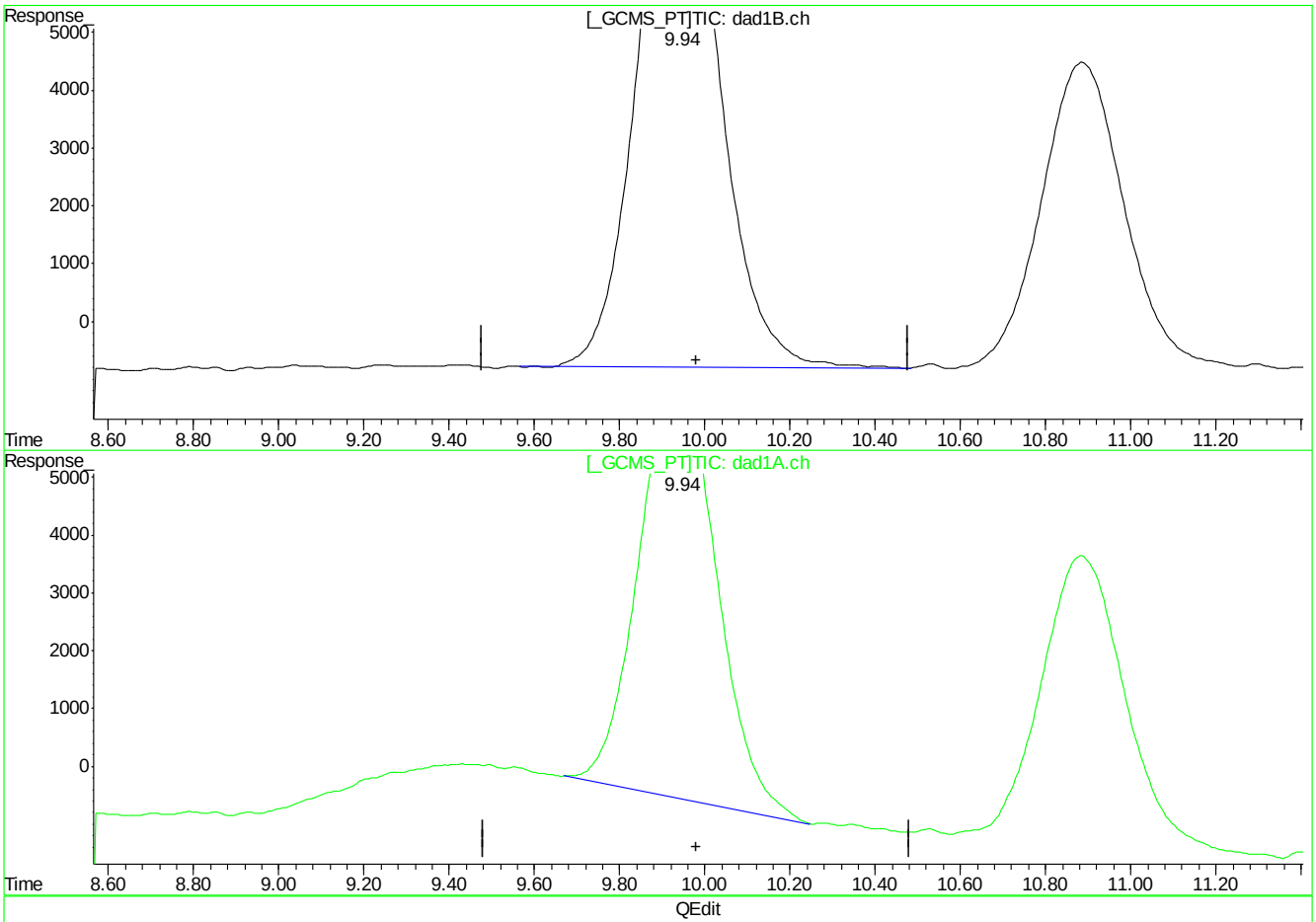
response 1262595

(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:51:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.94min 101.209ppb

response 1299335

(7) 1,3-Dinitrobenzene #2

9.94min 96.676ppb m

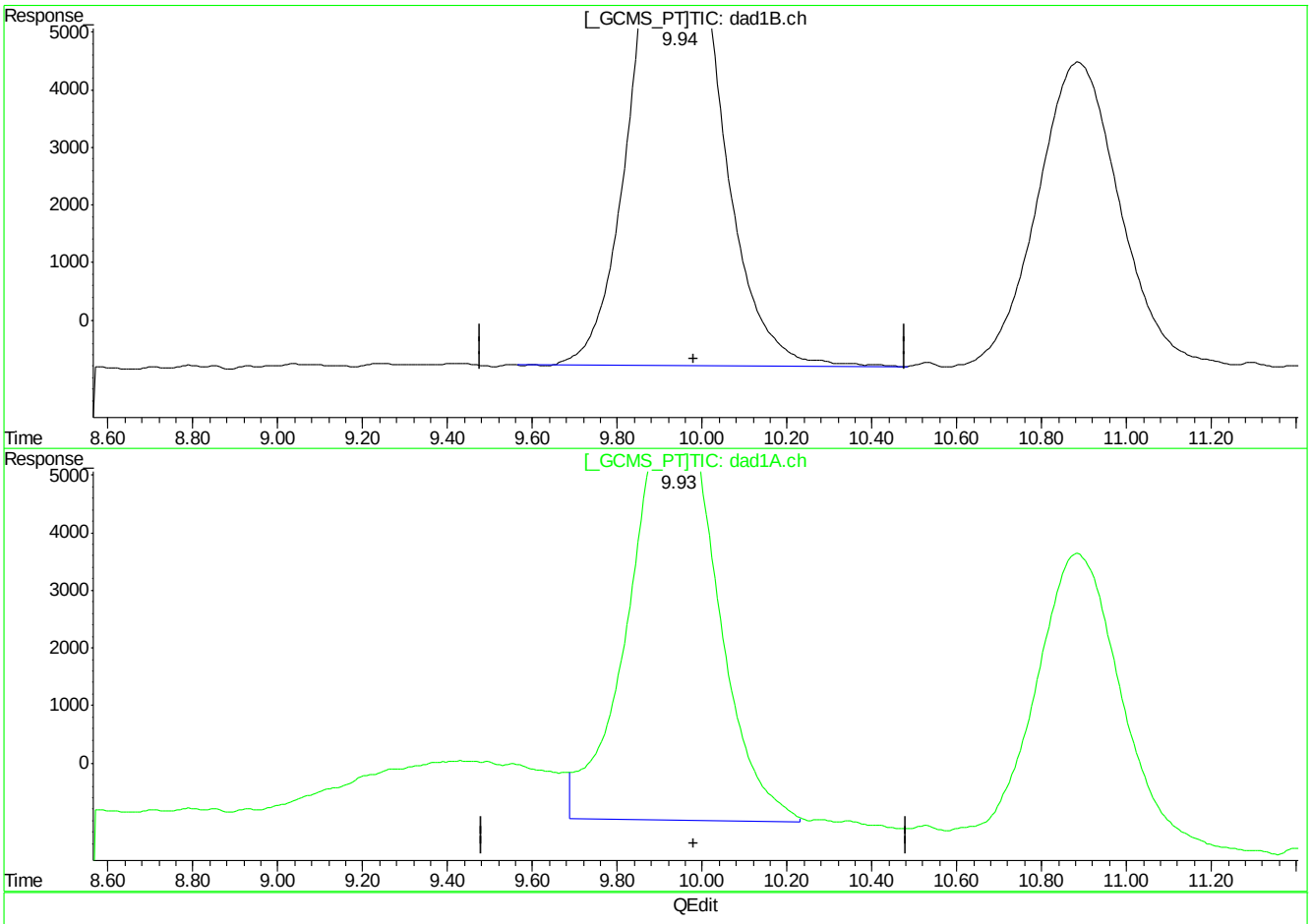
response 928936

(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:51:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.94min 101.209ppb

response 1299335

(7) 1,3-Dinitrobenzene #2

9.93min 110.492ppb m

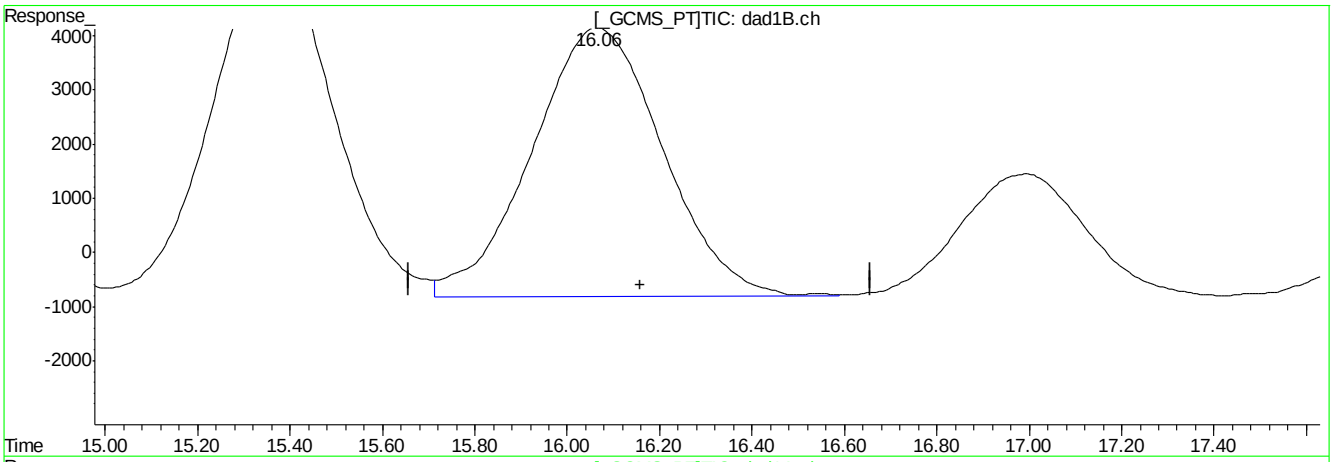
response 1061681

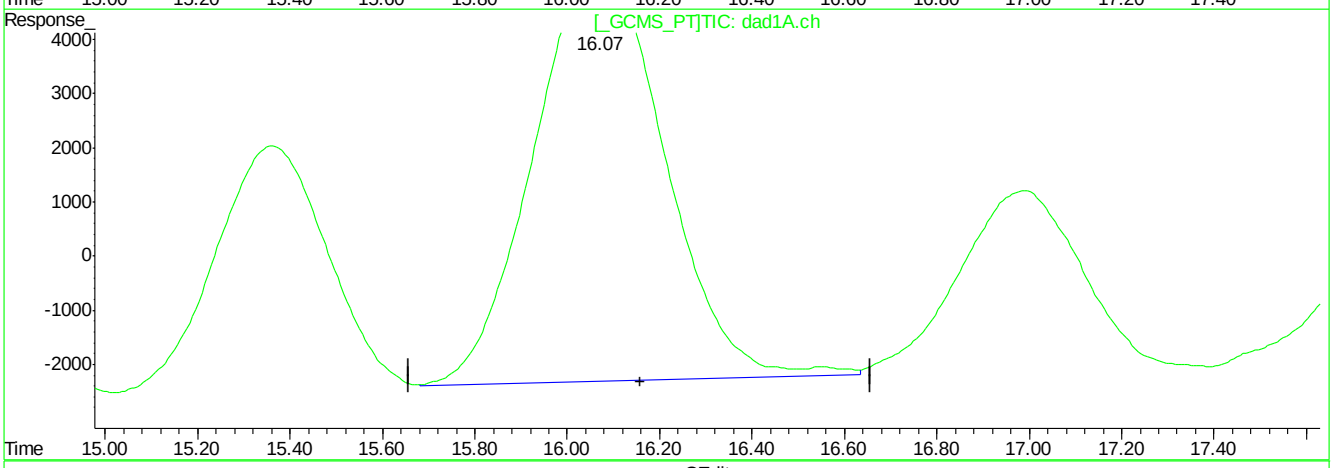
(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:51:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,5-Dinitroaniline

16.07min 189.116ppb

response 974179

(15) 3,5-Dinitroaniline #2

16.07min 188.046ppb

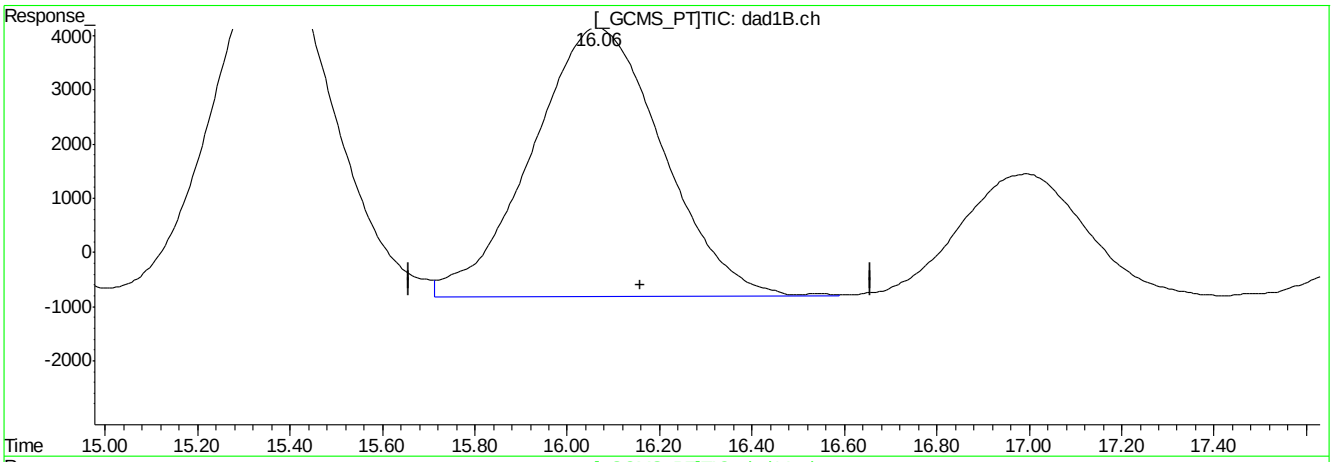
response 1512230

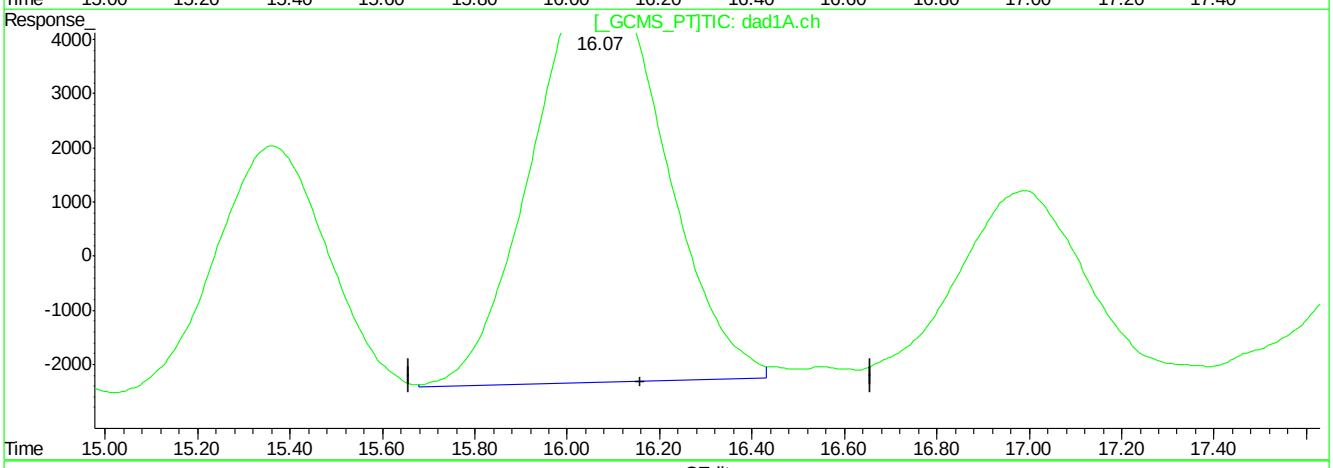
(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:52:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,5-Dinitroaniline

16.07min 189.116ppb

response 974179

(15) 3,5-Dinitroaniline #2

16.07min 187.014ppb m

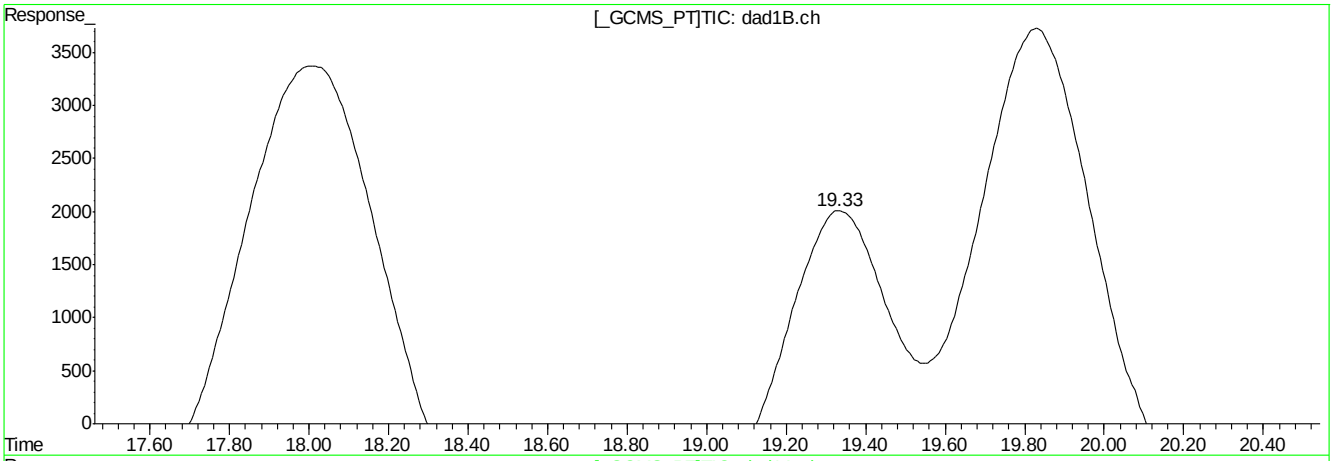
response 1503934

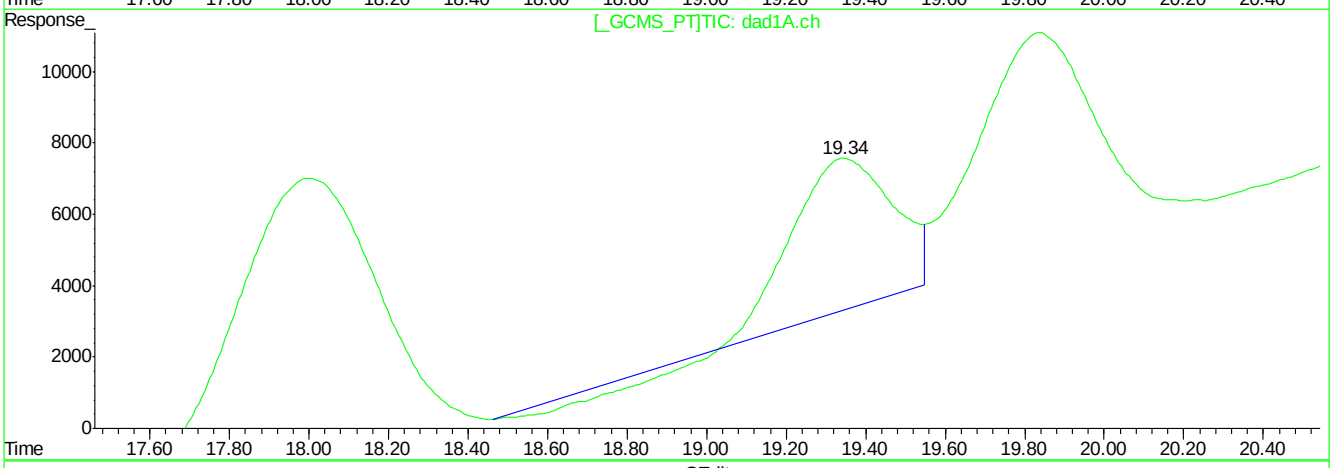
(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:52:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.34min 87.097ppb

response 505730

(19) m-Nitrotoluene #2

19.35min 66.320ppb

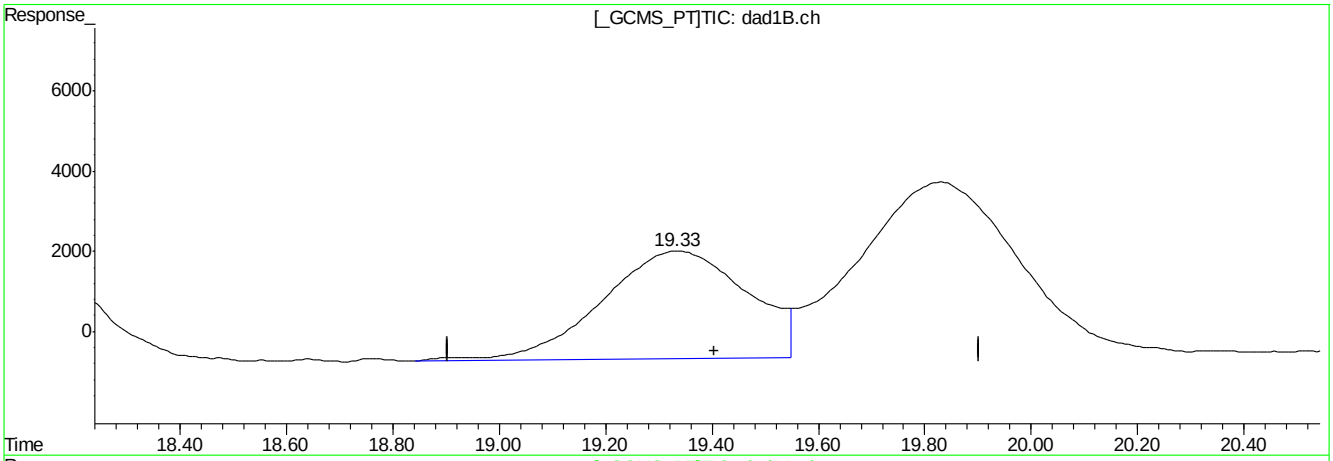
response 667838

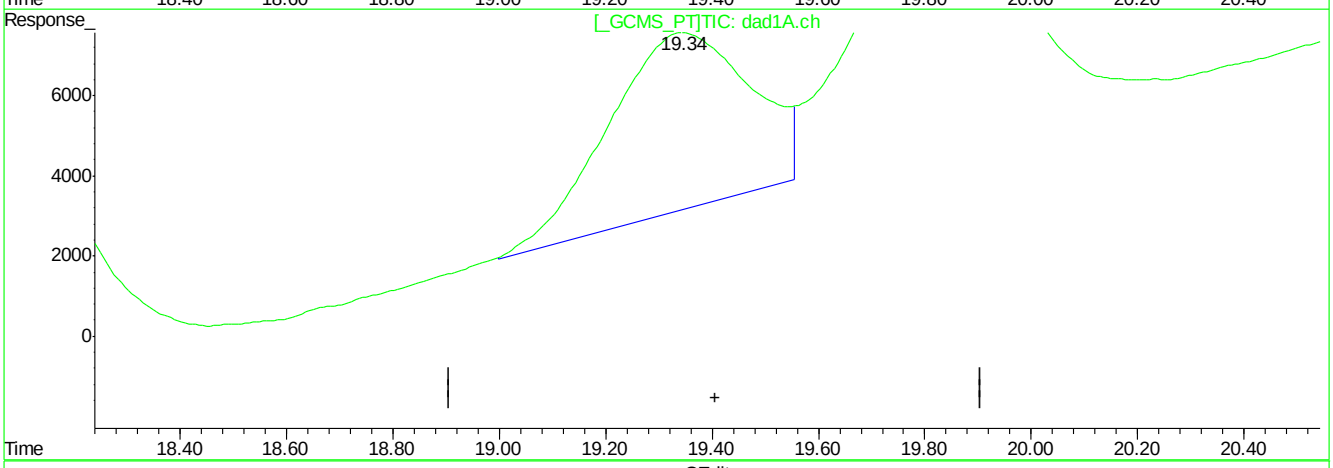
(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:53:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.34min 87.097ppb

response 505730

(19) m-Nitrotoluene #2

19.34min 81.351ppb m

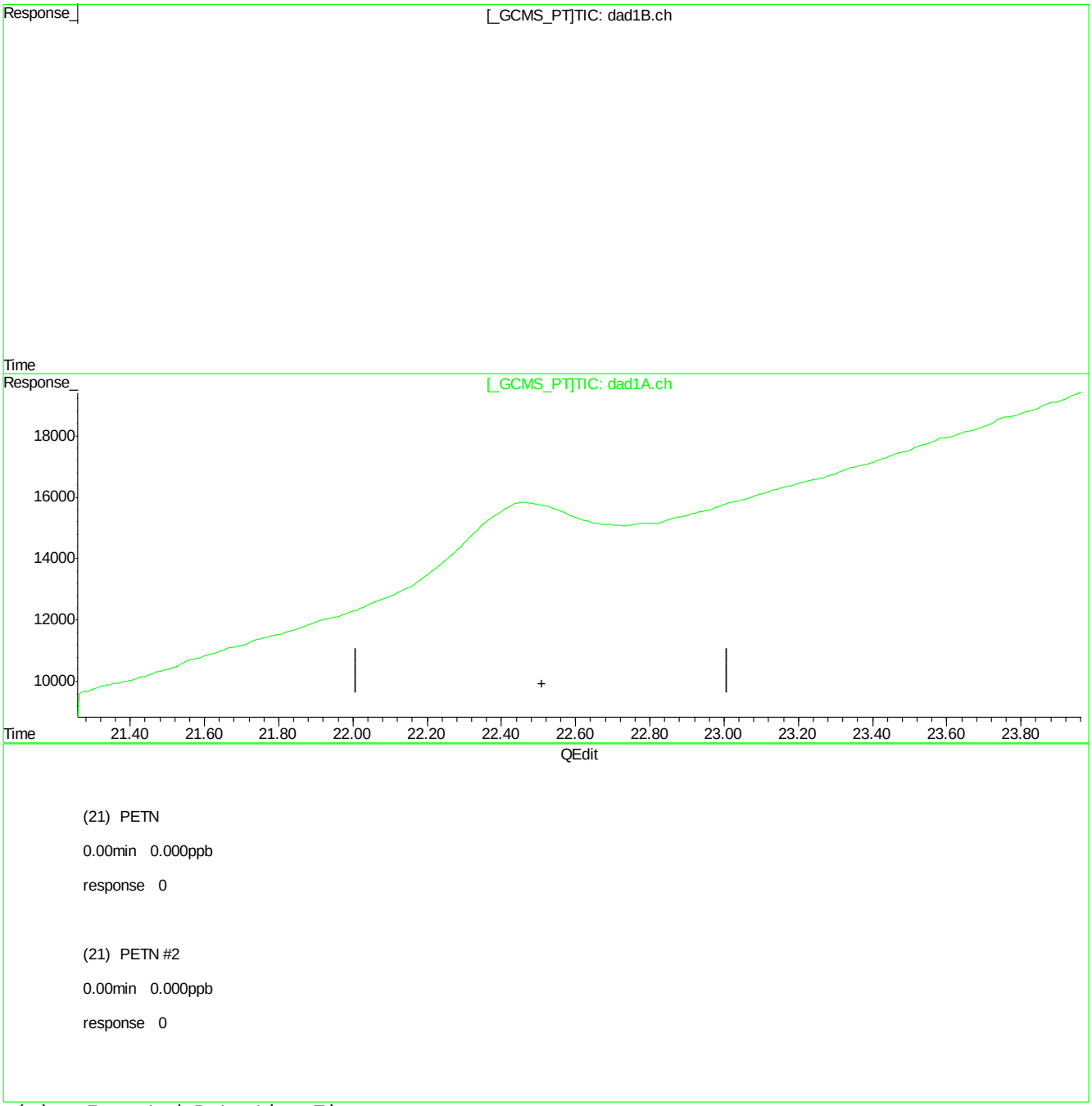
response 819197

(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:53:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration

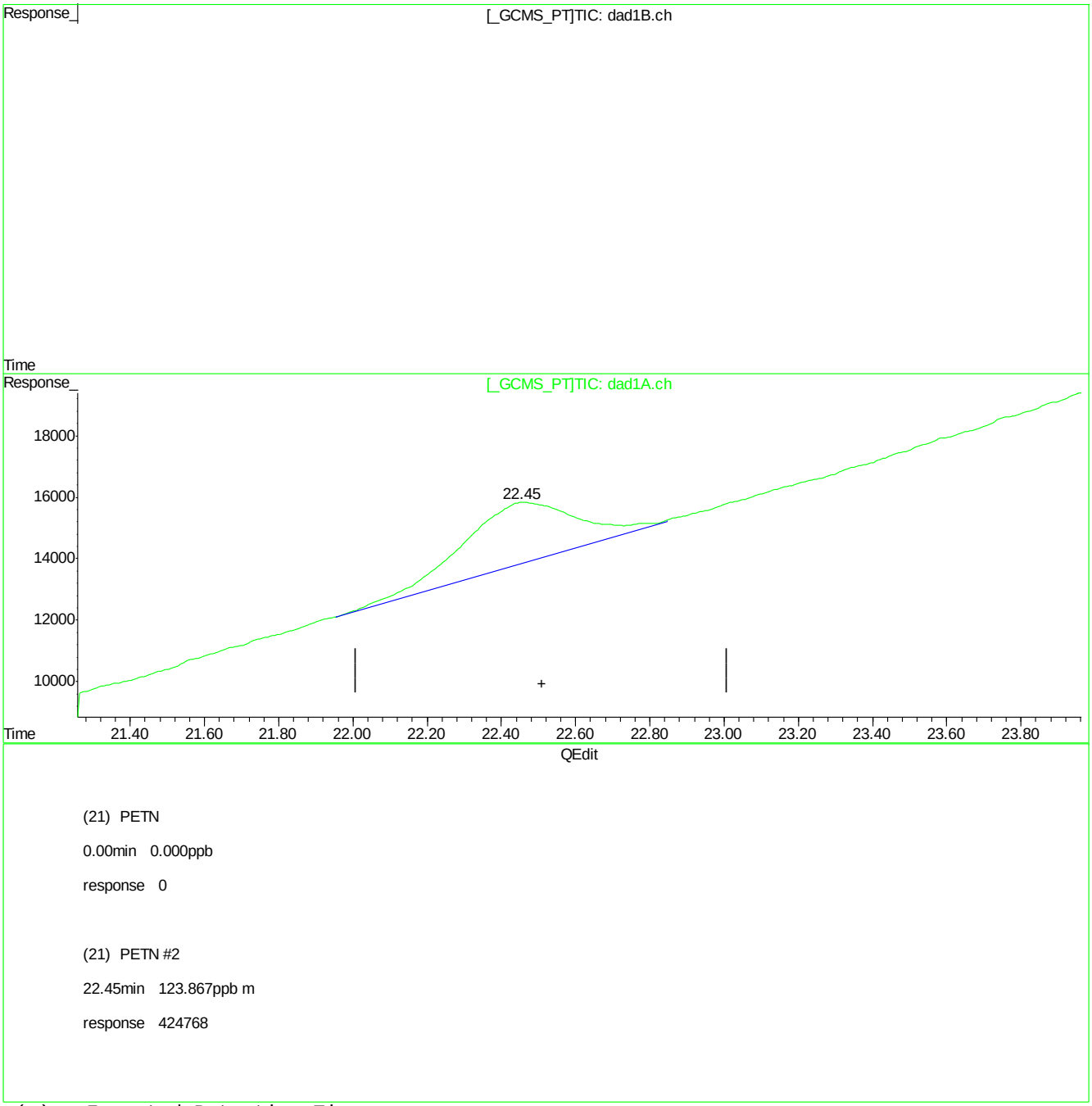


(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:53:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620469.D\dad1A.ch
Acq On : 08-Jan-2021, 11:56:45 Operator: jamesb
Sample : ic2921-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.45min 123.867ppb m

response 424768

(+) = Expected Retention Time
GG620469.D 8330RPB.M_010821.M Mon Jan 11 10:53:42 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 01/11/21 16:38

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1A.ch
Acq On : 08-Jan-2021, 12:28:11 Operator: jamesb
Sample : ic2921-200 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35:05 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.36	14.37	1120725	2237359	207.533	205.416
	Spiked Amount 500.000	Range 70 - 136		Recovery =		41.51%#	41.08%#
	Target Compounds						
1)	TNX	4.86	4.86	1659647	1659647	195.579	195.163
2)	HMX	5.31	5.31	672532	672532	206.176	206.590
3)	DNX	5.50	5.50	1428513	1428513	208.601	208.852
4)	MNX	6.67	6.67	1458079	1458079	215.029	214.802
5)	1,3,5-Trinitrobe	7.74	7.74	2065959	2065959	218.459	218.607
6)	RDX	7.95	7.95	889177	889177	202.764	202.764
7)	1,3-Dinitrobenze	9.96	9.96	2737262	2084368	213.213	216.925
8)	Nitrobenzene	10.91	10.91	1525105	1473645	182.851	182.474
9)	2,4,6-Trinitroto	12.02	12.02	1895584	2672205	204.942	201.213
10)	Nitroglycerin	0.00	12.87	0	641388	N.D.	161.497 #
11)	Tetryl	13.39	13.39	1473326	2463292	209.382	164.949
13)	2,6-Dinitrotolue	14.72	14.71	1308173	1804914	215.453	179.155
14)	2,4-Dinitrotolue	15.40	15.40	2447794	1608263	210.061	168.306
15)	3,5-Dinitroanili	16.11	16.12	2081824	3346194	404.141	416.100
16)	o-Nitrotoluene	17.03	17.03	940780	1507387	96.202	90.774
17)	p-Nitrotoluene	18.06	18.06	2209440	3983221	403.574	390.207m
18)	4-Amino-2,6-Dini	18.06	18.06	2209440	3978522	403.574	390.244m
19)	m-Nitrotoluene	19.38	19.38	1089438	1832894	187.624	182.017m
20)	2-Amino-4,6-Dini	19.88	19.89	1905947	2638189	218.057	207.131
21)	PETN	0.00	22.50	0	725685	N.D.	211.776m#

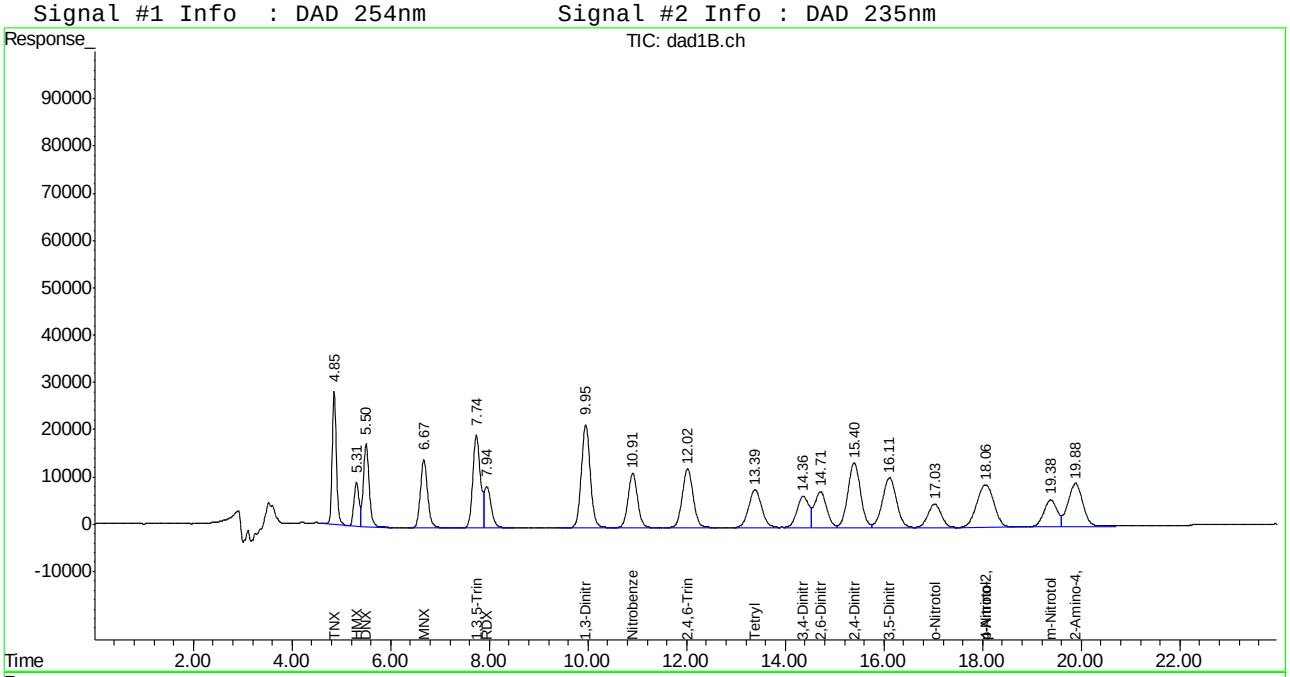
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

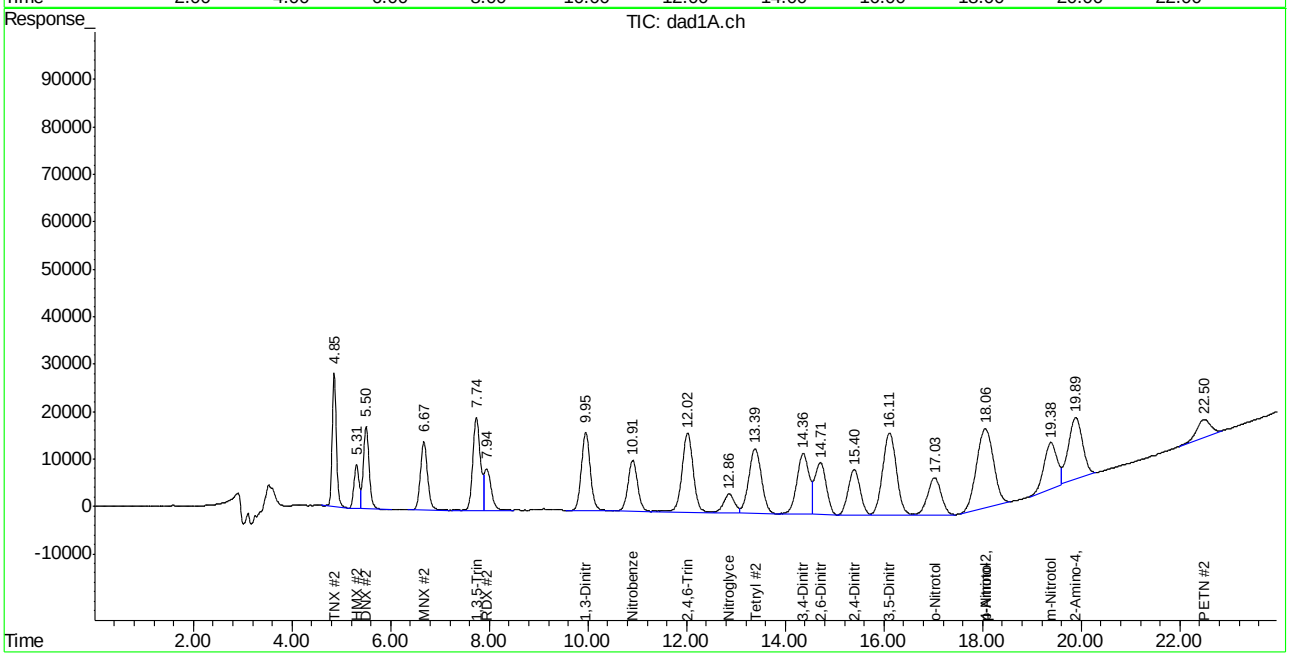
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1A.ch
Acq On : 08-Jan-2021, 12:28:11 Operator: jamesb
Sample : ic2921-200 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:48 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

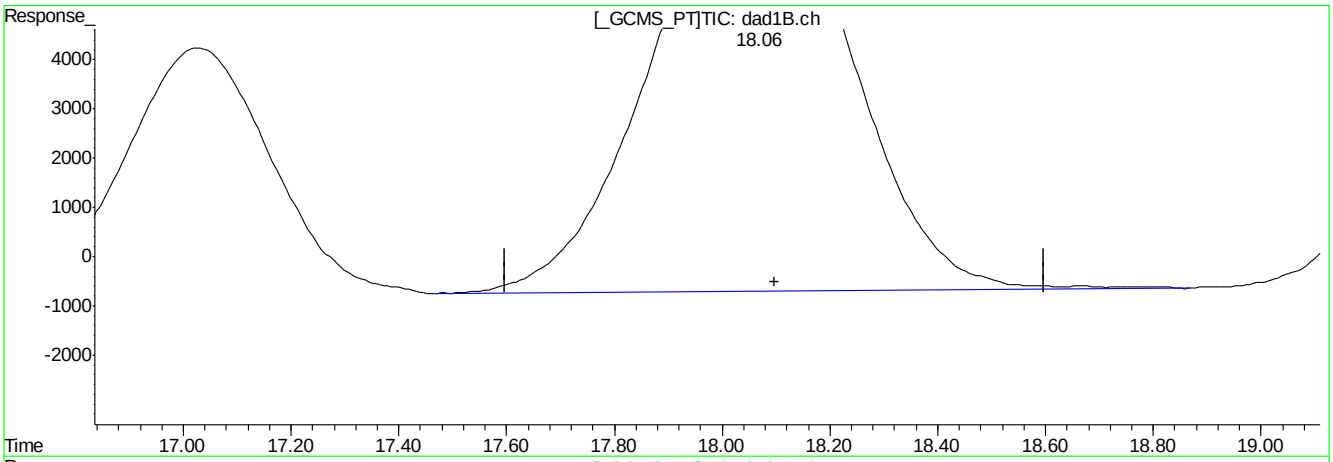
Sample Number: GGG2921-IC2921
Lab FileID: GG620470.D
Injection Time: 01/08/21 12:28
Method: SW846 8330A
Analyst approved: 01/11/21 14:37 James Boone
Supervisor approved: 01/11/21 16:38 Naresh Jiawan

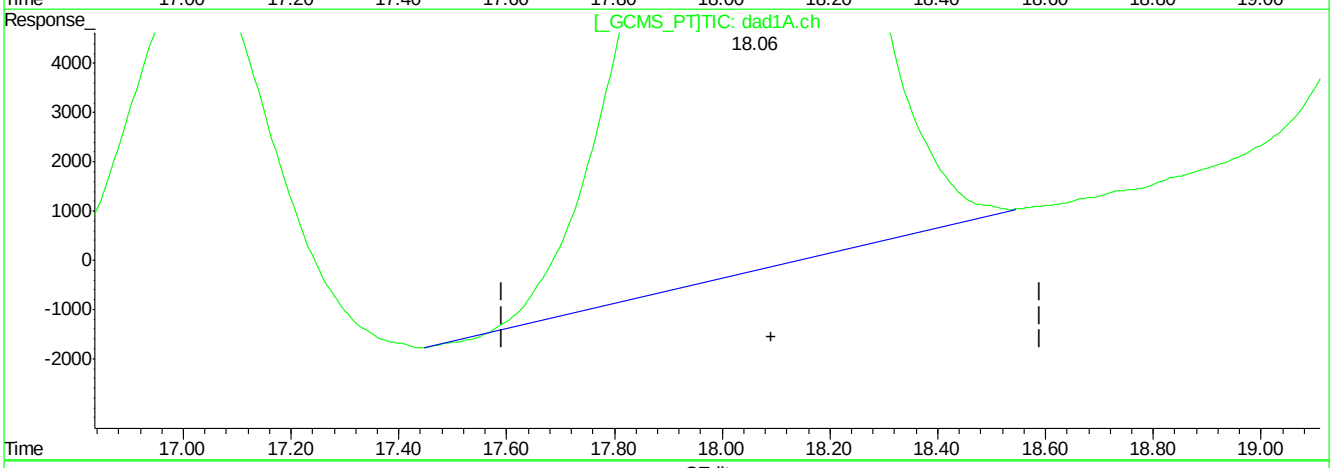
Parameter	CAS	Sig#	R.T. (min.)	Reason
4-amino-2,6-Dinitrotoluene	19406-51-0	2	18.06	Poor instrument integration
p-Nitrotoluene	99-99-0	2	18.06	Poor instrument integration
m-Nitrotoluene	99-08-1	2	19.38	Poor instrument integration
PETN	78-11-5	2	22.50	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1A.ch
Acq On : 08-Jan-2021, 12:28:11 Operator: jamesb
Sample : ic2921-200 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

18.06min 403.574ppb

response 2209440

(17) p-Nitrotoluene #2

18.06min 388.365ppb

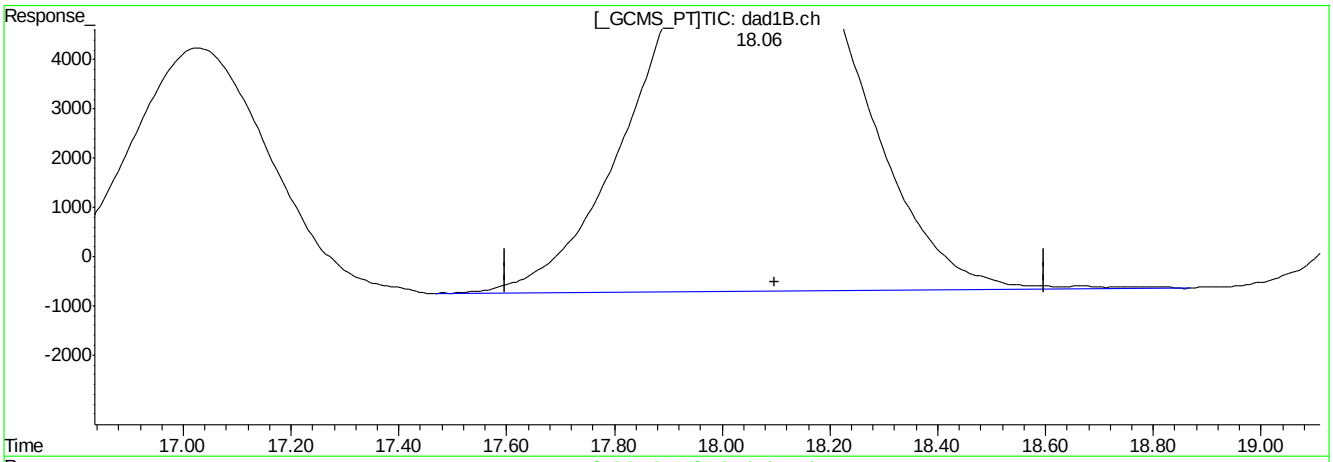
response 3964421

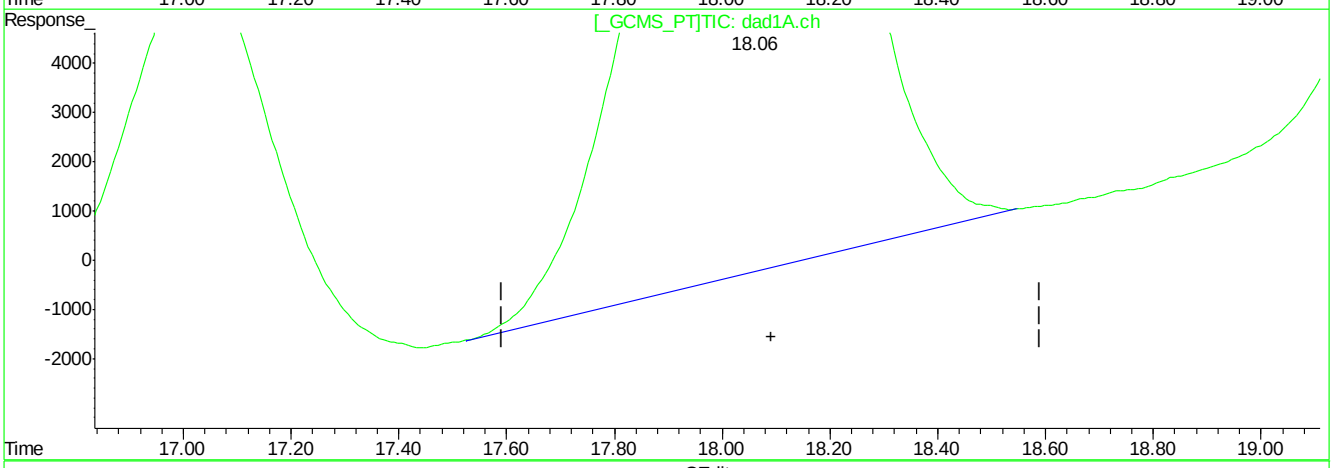
(+) = Expected Retention Time
GG620470.D 8330RPB.M_010821.M Mon Jan 11 10:46:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1A.ch
Acq On : 08-Jan-2021, 12:28:11 Operator: jamesb
Sample : ic2921-200 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

18.06min 403.574ppb

response 2209440

(17) p-Nitrotoluene #2

18.06min 390.207ppb m

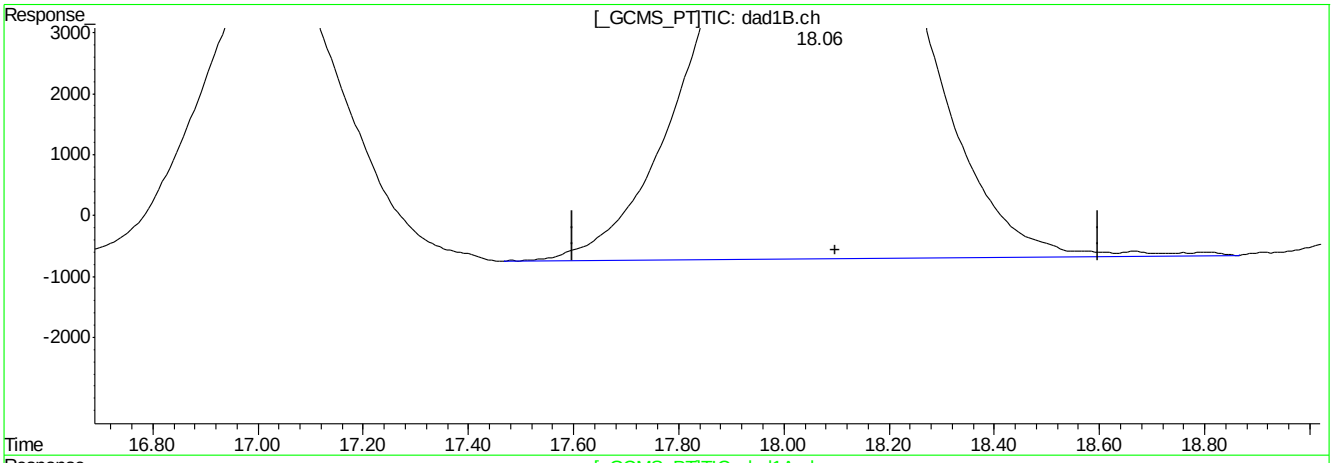
response 3983221

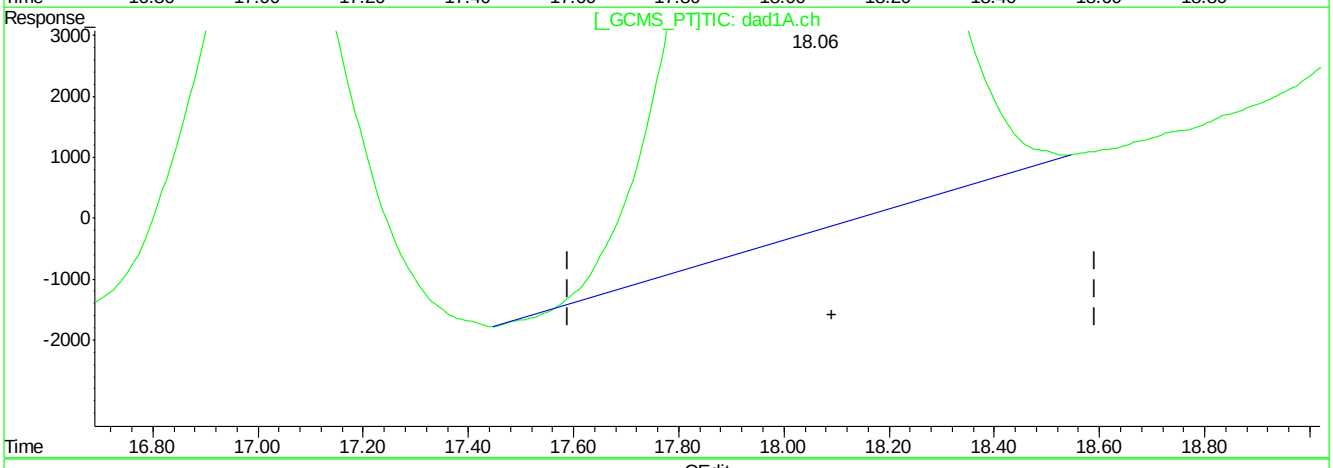
(+) = Expected Retention Time
GG620470.D 8330RPB.M_010821.M Mon Jan 11 10:46:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1A.ch
Acq On : 08-Jan-2021, 12:28:11 Operator: jamesb
Sample : ic2921-200 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

18.06min 403.574ppb

response 2209440

(18) 4-Amino-2,6-Dinitrotoluene #2

18.06min 388.861ppb

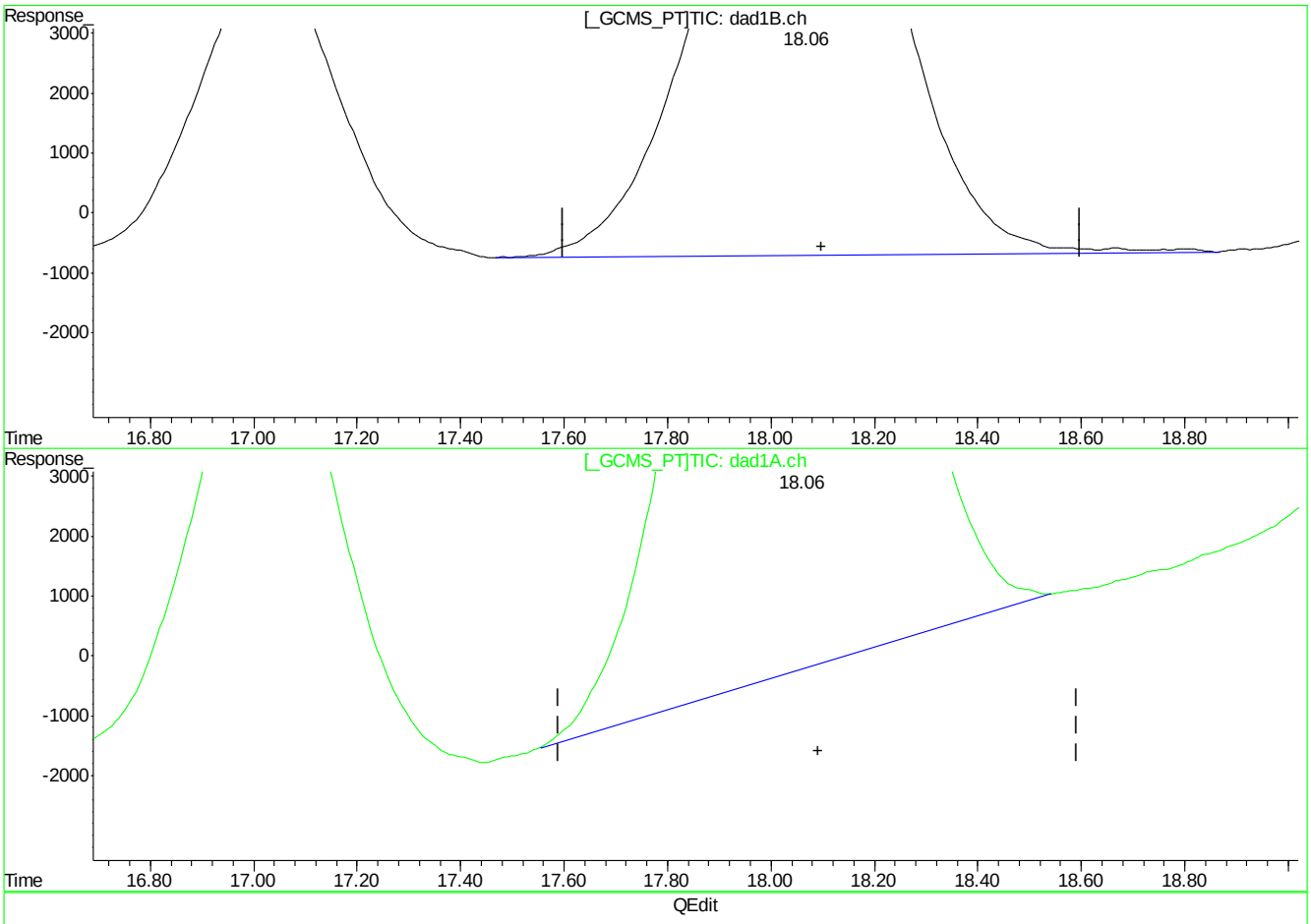
response 3964421

(+) = Expected Retention Time
GG620470.D 8330RPB.M_010821.M Mon Jan 11 10:47:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1A.ch
Acq On : 08-Jan-2021, 12:28:11 Operator: jamesb
Sample : ic2921-200 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration



(18) 4-Amino-2,6-Dinitrotoluene

18.06min 403.574ppb

response 2209440

(18) 4-Amino-2,6-Dinitrotoluene #2

18.06min 390.244ppb m

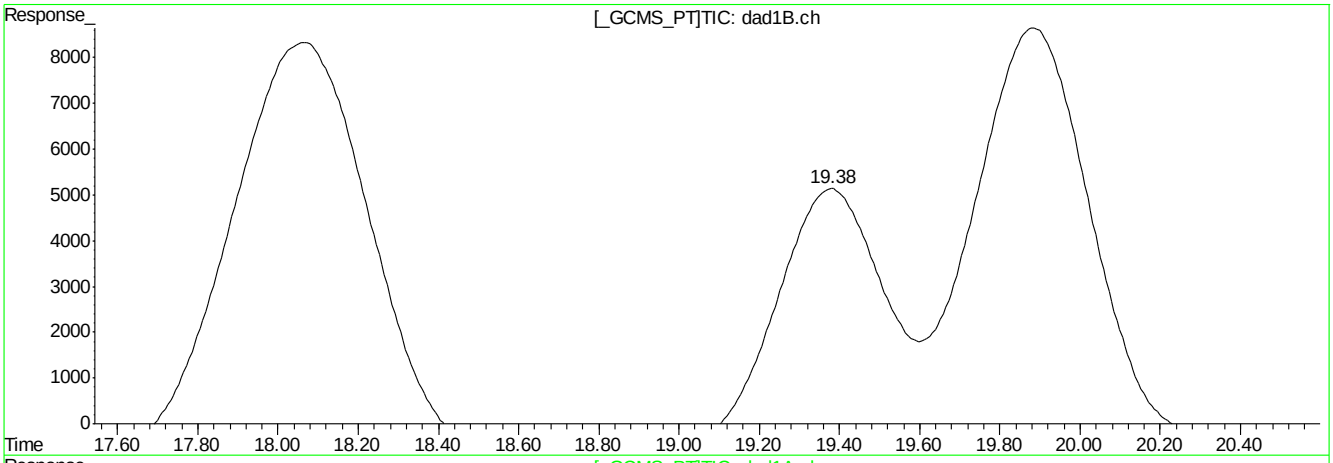
response 3978522

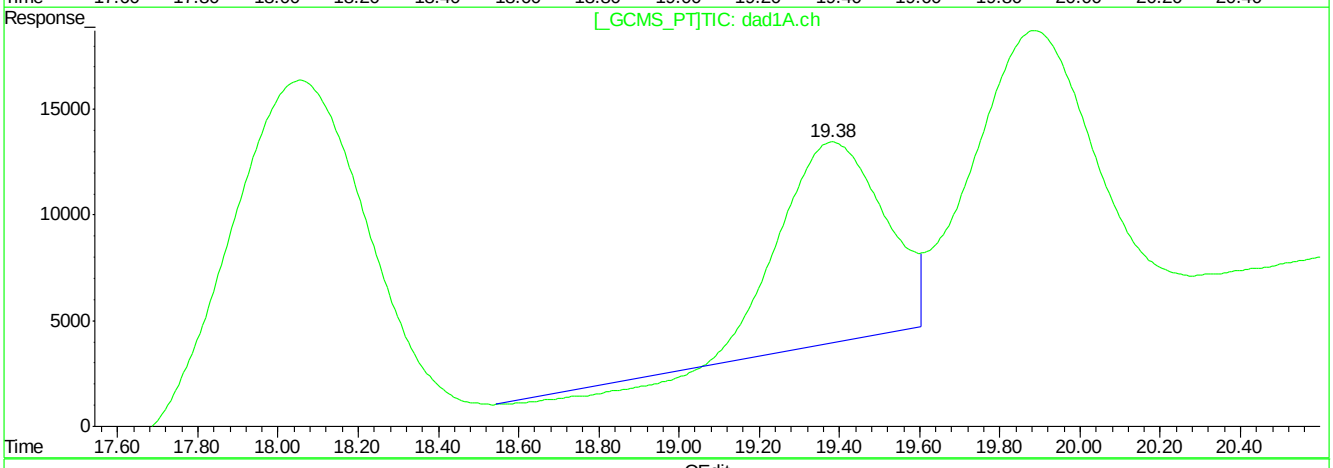
(+) = Expected Retention Time
GG620470.D 8330RPB.M_010821.M Mon Jan 11 10:47:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1A.ch
Acq On : 08-Jan-2021, 12:28:11 Operator: jamesb
Sample : ic2921-200 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.38min 187.624ppb

response 1089438

(19) m-Nitrotoluene #2

19.38min 162.382ppb

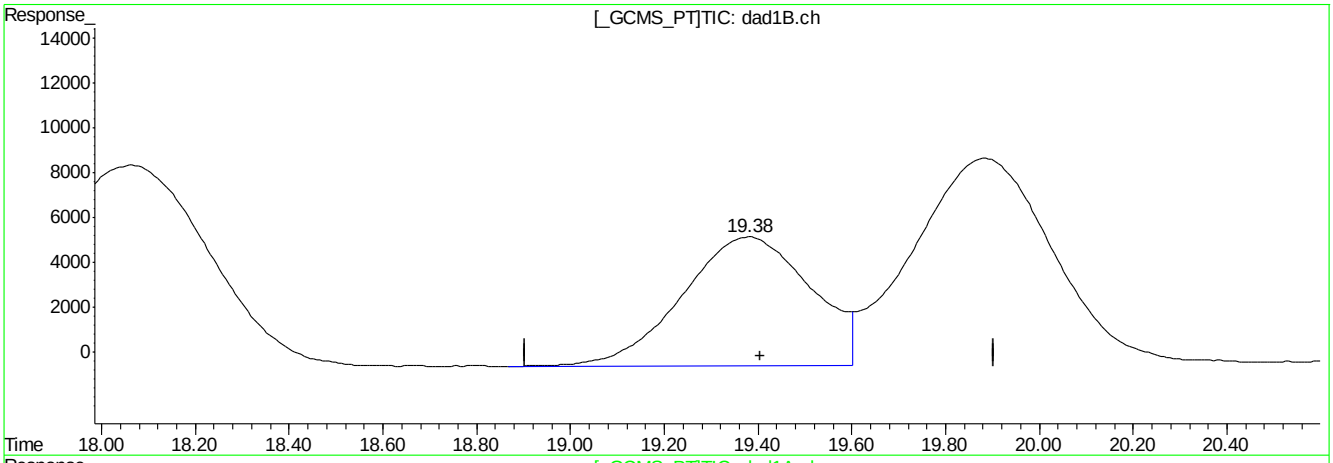
response 1635172

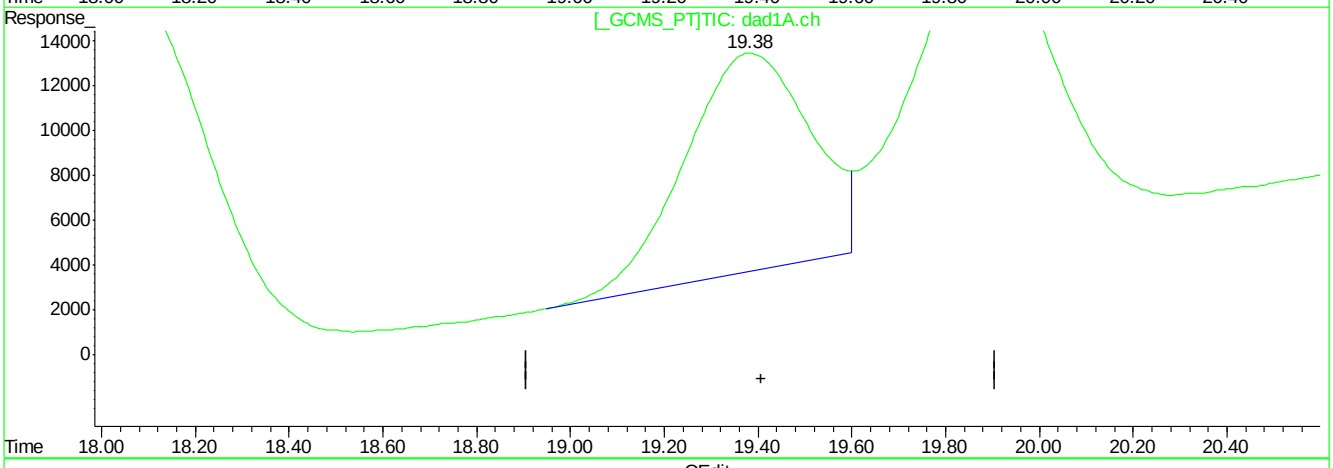
(+) = Expected Retention Time
GG620470.D 8330RPB.M_010821.M Mon Jan 11 10:47:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1A.ch
Acq On : 08-Jan-2021, 12:28:11 Operator: jamesb
Sample : ic2921-200 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.38min 187.624ppb

response 1089438

(19) m-Nitrotoluene #2

19.38min 182.017ppb m

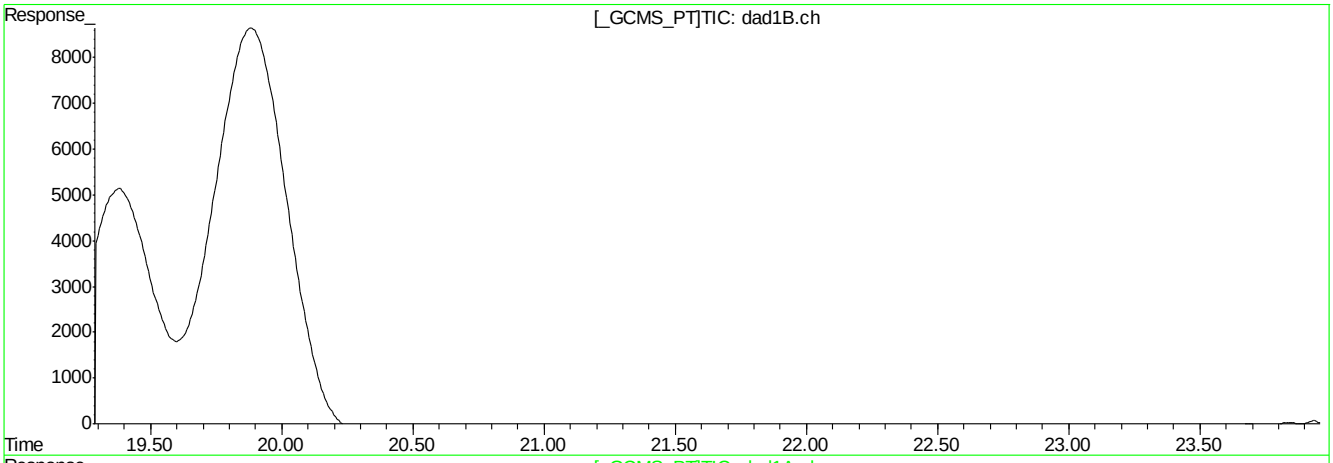
response 1832894

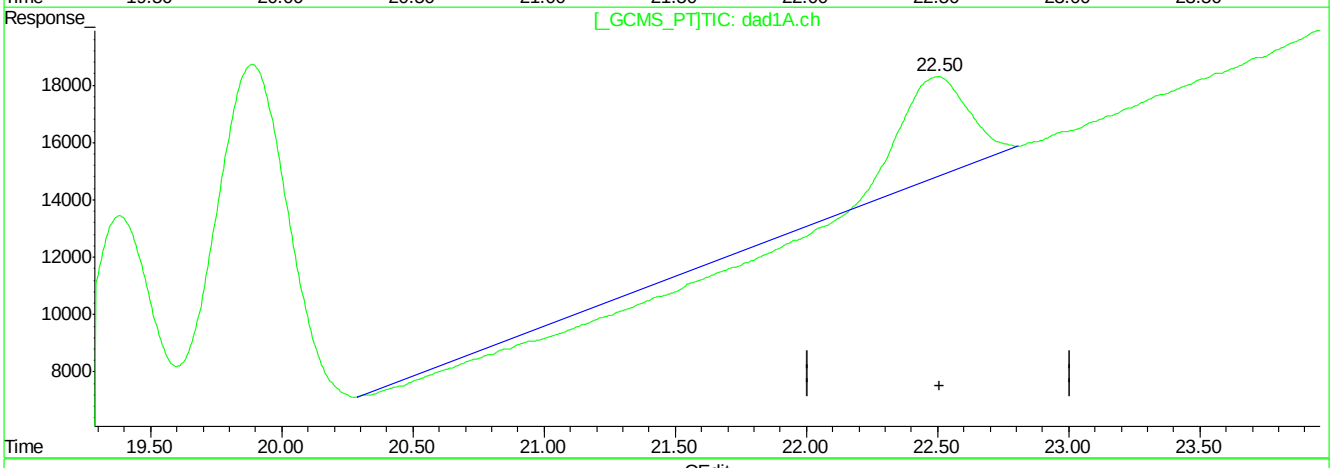
(+) = Expected Retention Time
GG620470.D 8330RPB.M_010821.M Mon Jan 11 10:47:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1A.ch
Acq On : 08-Jan-2021, 12:28:11 Operator: jamesb
Sample : ic2921-200 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.50min 71.569ppb

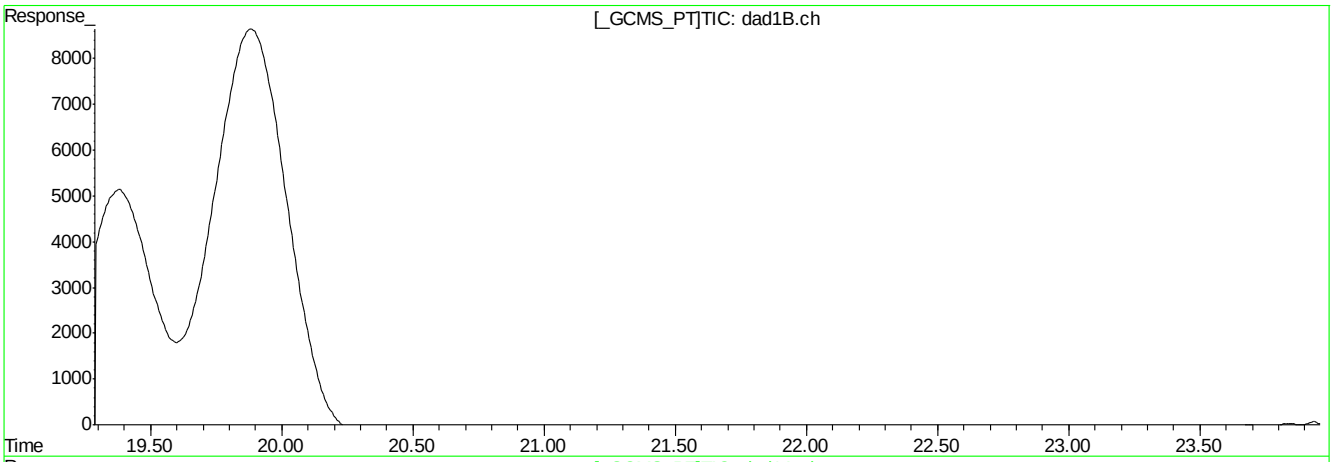
response 245534

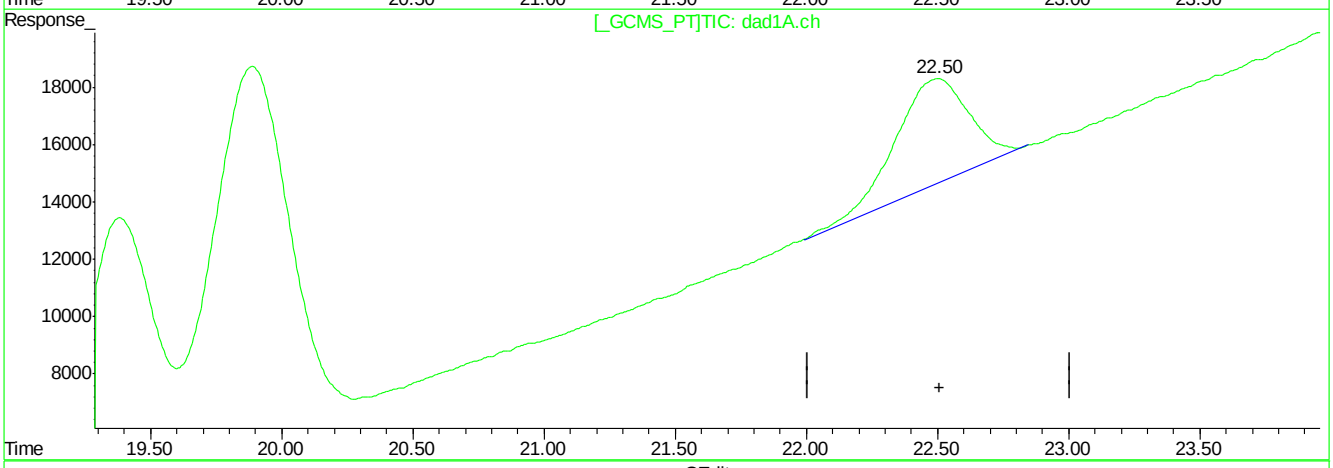
(+) = Expected Retention Time
GG620470.D 8330RPB.M_010821.M Mon Jan 11 10:47:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620470.D\dad1A.ch
Acq On : 08-Jan-2021, 12:28:11 Operator: jamesb
Sample : ic2921-200 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.50min 211.776ppb m

response 725685

(+) = Expected Retention Time
GG620470.D 8330RPB.M_010821.M Mon Jan 11 10:48:04 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
01/11/21 16:38

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1A.ch
Acq On : 08-Jan-2021, 12:59:37 Operator: jamesb
Sample : ic2921-500 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35:06 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.41	14.41	2693780	5248689	498.826	481.891
	Spiked Amount 500.000	Range 70 - 136		Recovery =		99.77%	96.38%
	Target Compounds						
1)	TNX	4.86	4.86	3939135	3939135	464.202	463.214
2)	HMX	5.32	5.32	1632586	1632586	500.497	501.502
3)	DNX	5.51	5.51	3458492	3458492	505.033	505.640
4)	MNX	6.69	6.69	3561725	3561725	525.262	524.707
5)	1,3,5-Trinitrobe	7.76	7.76	4952855	4952855	523.725	524.080
6)	RDX	7.97	7.97	2249882	2249882	513.054	513.054
7)	1,3-Dinitrobenze	9.98	9.98	6615081	5310193	515.266m	552.644m
8)	Nitrobenzene	10.93	10.93	3706240	3771052	444.355	466.950
9)	2,4,6-Trinitroto	12.04	12.04	4597460	6311194	497.056	475.223
10)	Nitroglycerin	0.00	12.88	0	1591425	N.D.	404.685 #
11)	Tetryl	13.42	13.42	3629008	6304383	515.737	425.861
13)	2,6-Dinitrotolue	14.75	14.75	3195292	4567488	526.258	456.259
14)	2,4-Dinitrotolue	15.44	15.44	5932967	4088315	509.147	430.447
15)	3,5-Dinitroanili	16.16	16.16	5033086	8207567	977.065	1020.611
16)	o-Nitrotoluene	17.07	17.07	2269988	3351815	232.124	201.845
17)	p-Nitrotoluene	18.10	18.09	5350977	10036966	977.404	983.247
18)	4-Amino-2,6-Dini	18.10	18.09	5350977	10036966	977.404	984.503
19)	m-Nitrotoluene	19.41	19.41	2603218	4405047	448.329	437.446m
20)	2-Amino-4,6-Dini	19.92	19.92	4577729	6509910	523.733	511.109
21)	PETN	0.00	22.51	0	1821331	N.D.	532.973m#

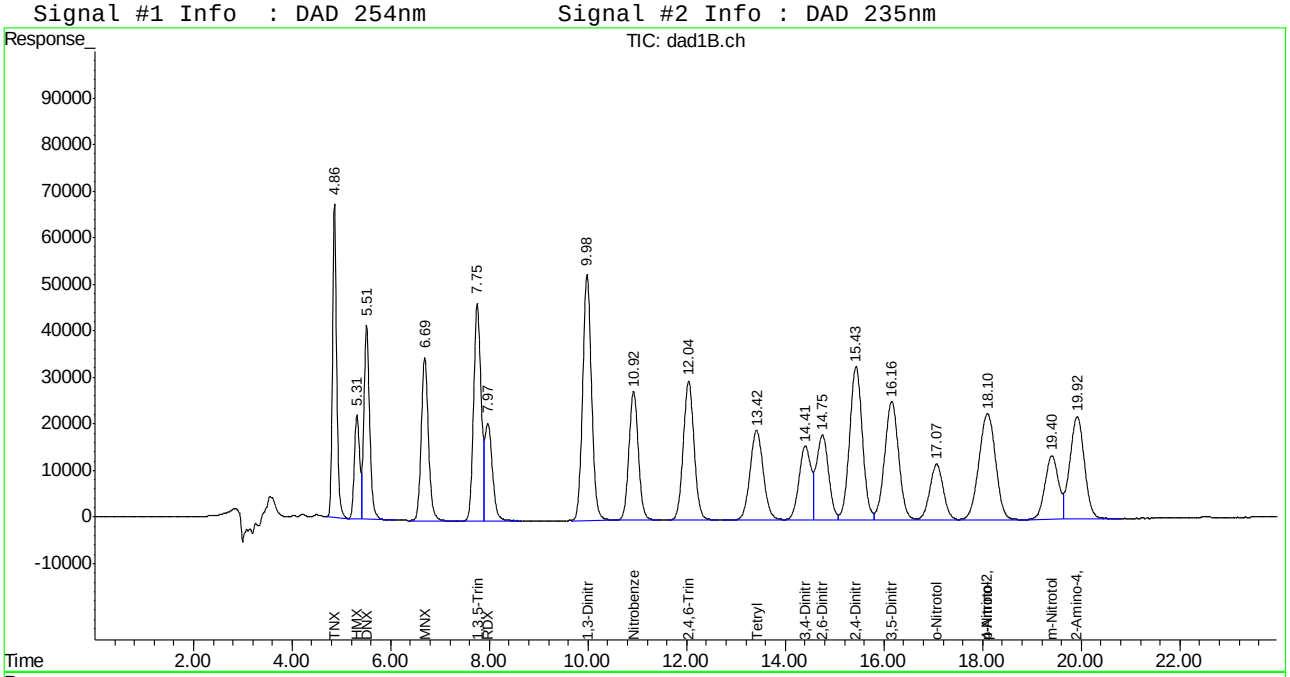
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

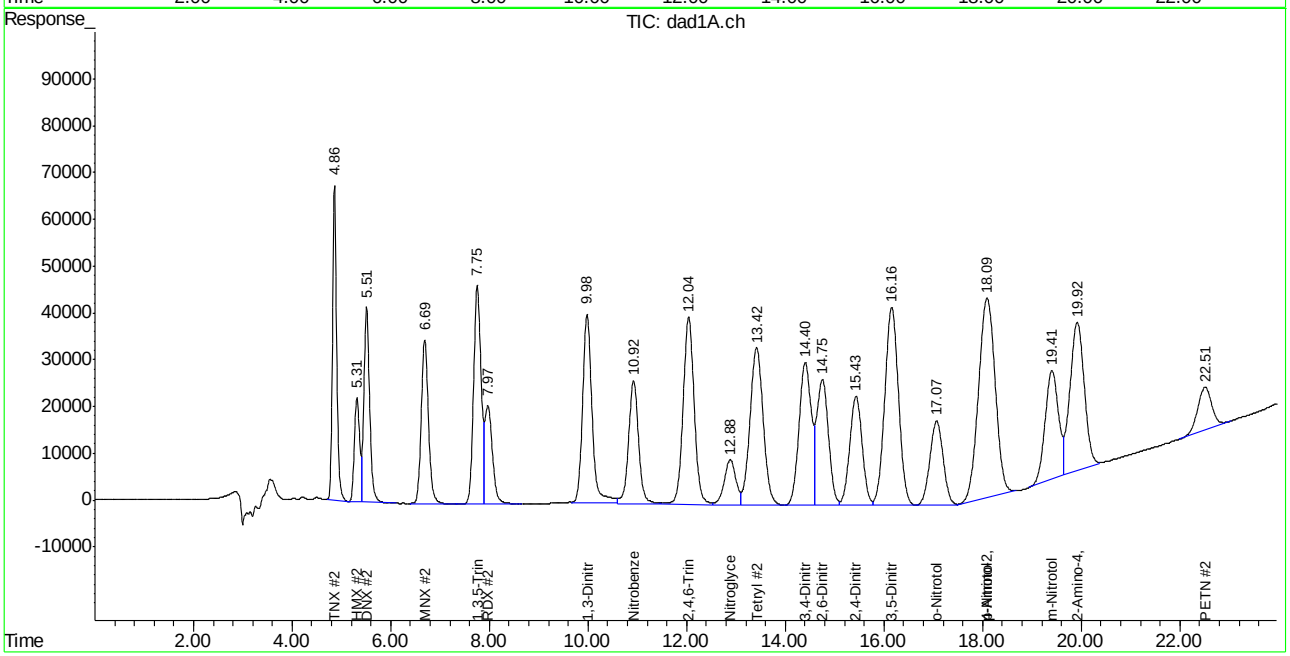
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1A.ch
Acq On : 08-Jan-2021, 12:59:37 Operator: jamesb
Sample : ic2921-500 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:44 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

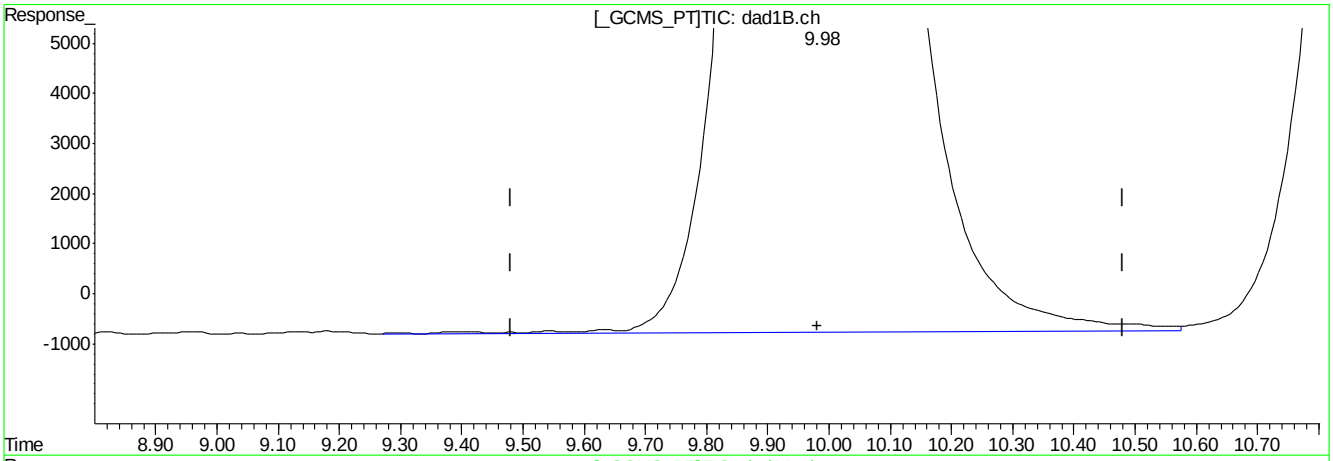
Sample Number: GGG2921-IC2921
Lab FileID: GG620471.D
Injection Time: 01/08/21 12:59
Method: SW846 8330A
Analyst approved: 01/11/21 14:37 James Boone
Supervisor approved: 01/11/21 16:38 Naresh Jiawan

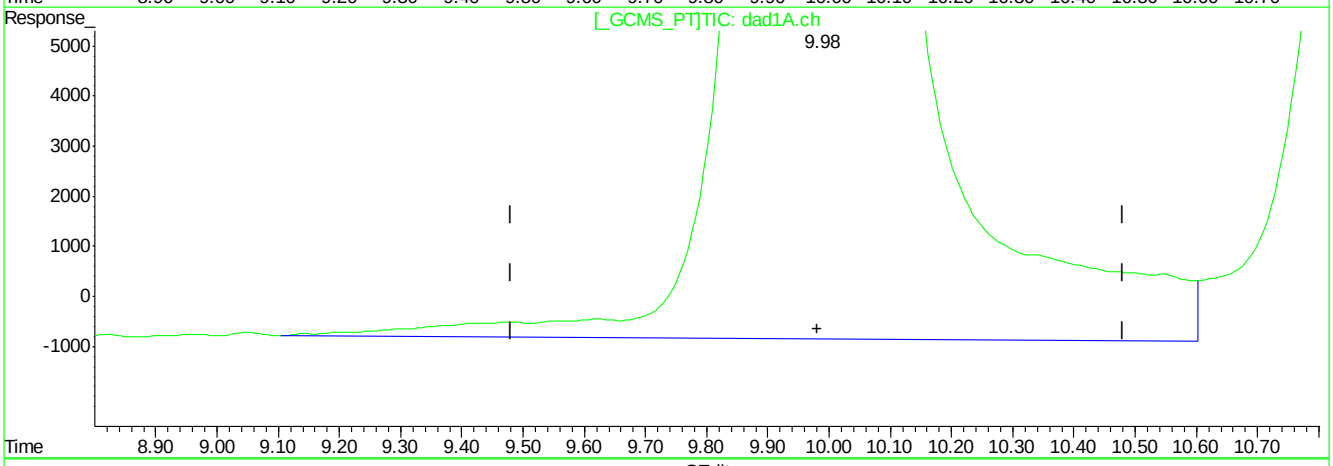
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	1	9.98	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.98	Poor instrument integration
m-Nitrotoluene	99-08-1	2	19.41	Poor instrument integration
PETN	78-11-5	2	22.51	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1A.ch
Acq On : 08-Jan-2021, 12:59:37 Operator: jamesb
Sample : ic2921-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.98min 515.994ppb

response 6624418

(7) 1,3-Dinitrobenzene #2

9.98min 581.455ppb

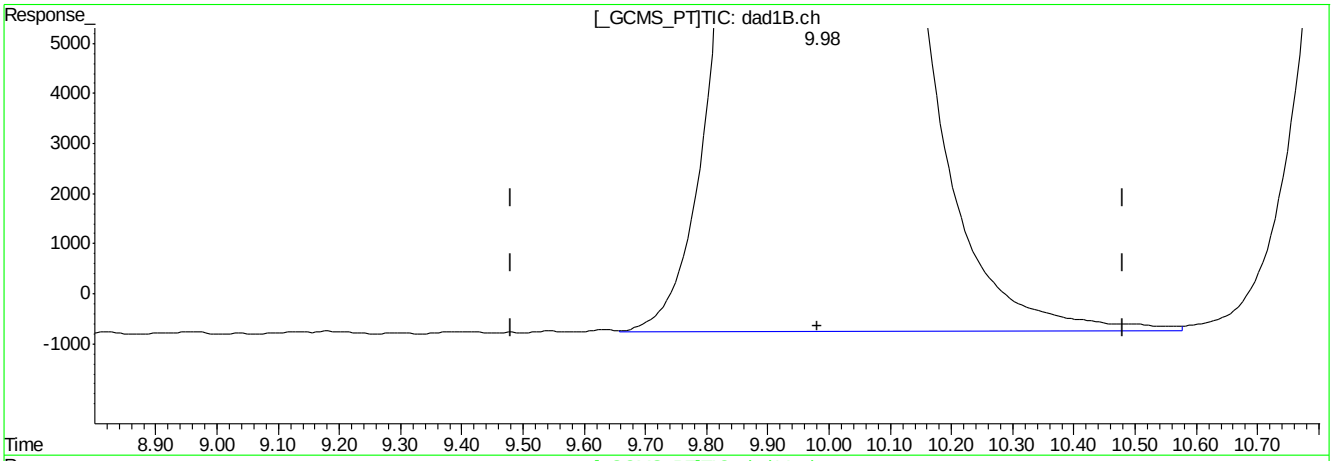
response 5587024

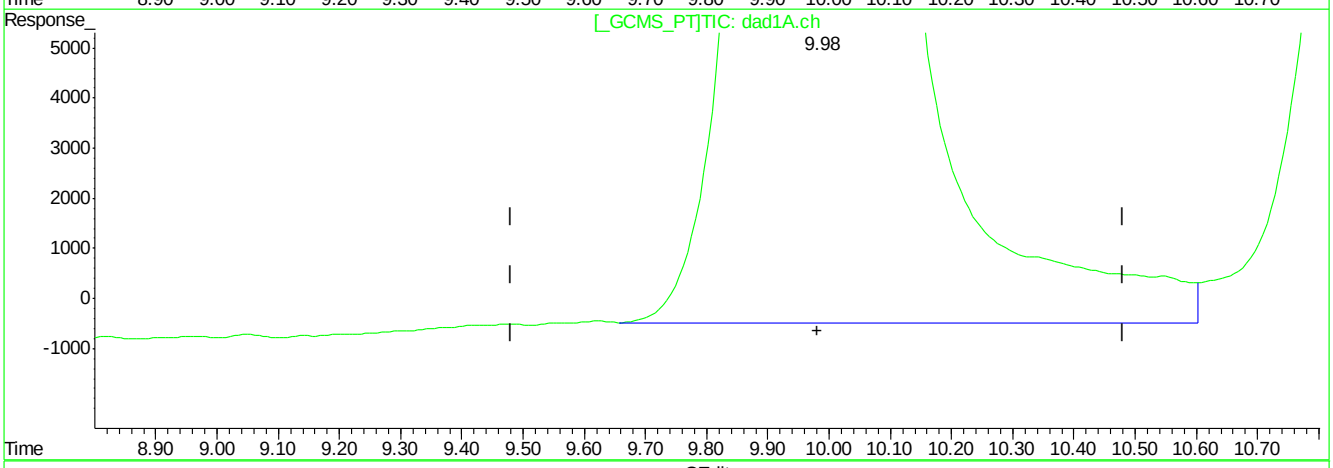
(+) = Expected Retention Time
GG620471.D 8330RPB.M_010821.M Mon Jan 11 10:42:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1A.ch
Acq On : 08-Jan-2021, 12:59:37 Operator: jamesb
Sample : ic2921-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.98min 515.266ppb m

response 6615081

(7) 1,3-Dinitrobenzene #2

9.98min 552.644ppb m

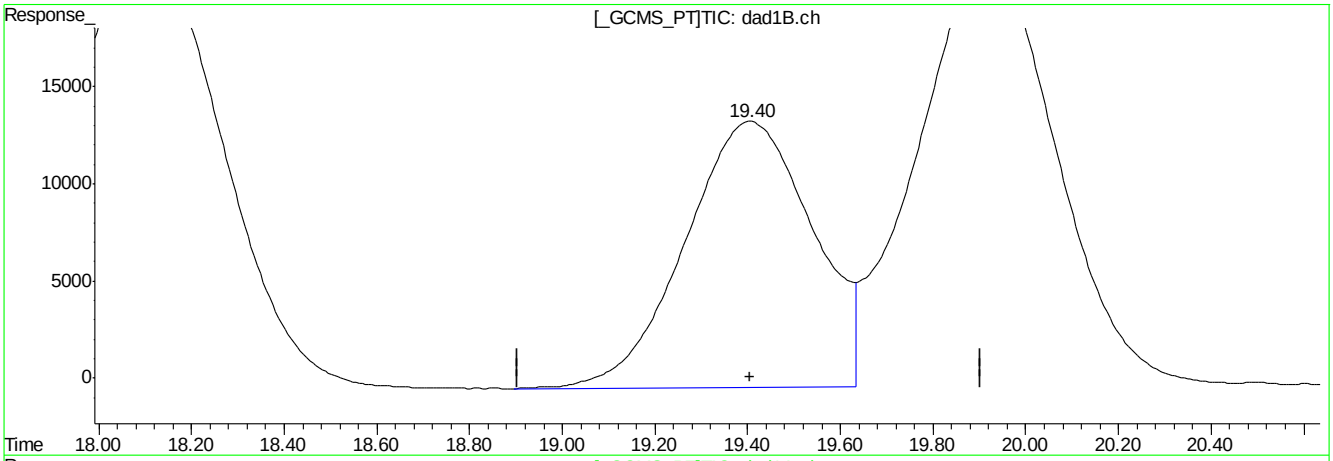
response 5310193

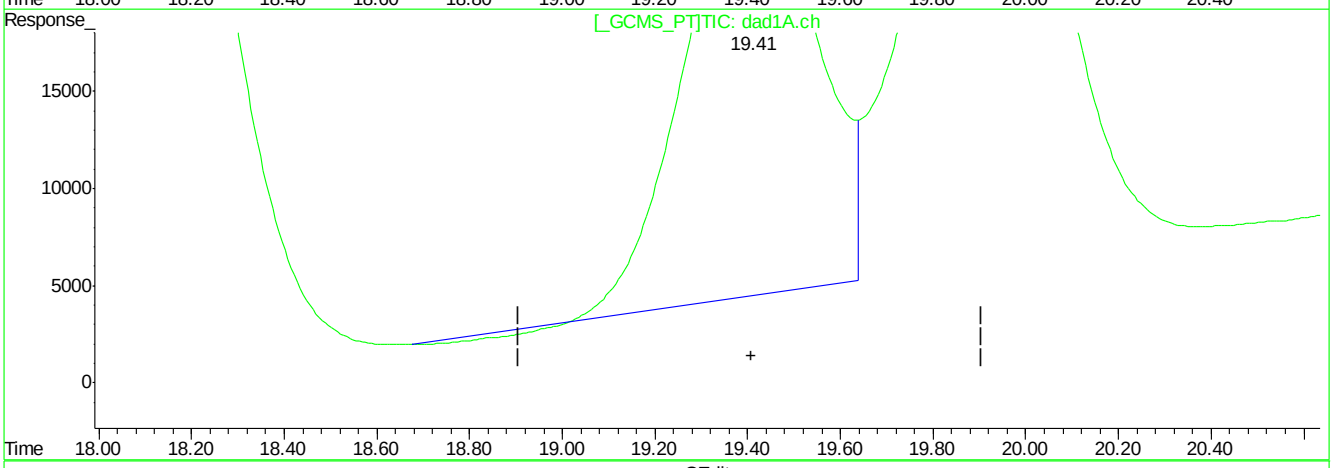
(+) = Expected Retention Time
GG620471.D 8330RPB.M_010821.M Mon Jan 11 10:43:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1A.ch
Acq On : 08-Jan-2021, 12:59:37 Operator: jamesb
Sample : ic2921-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.41min 448.329ppb

response 2603218

(19) m-Nitrotoluene #2

19.41min 428.792ppb

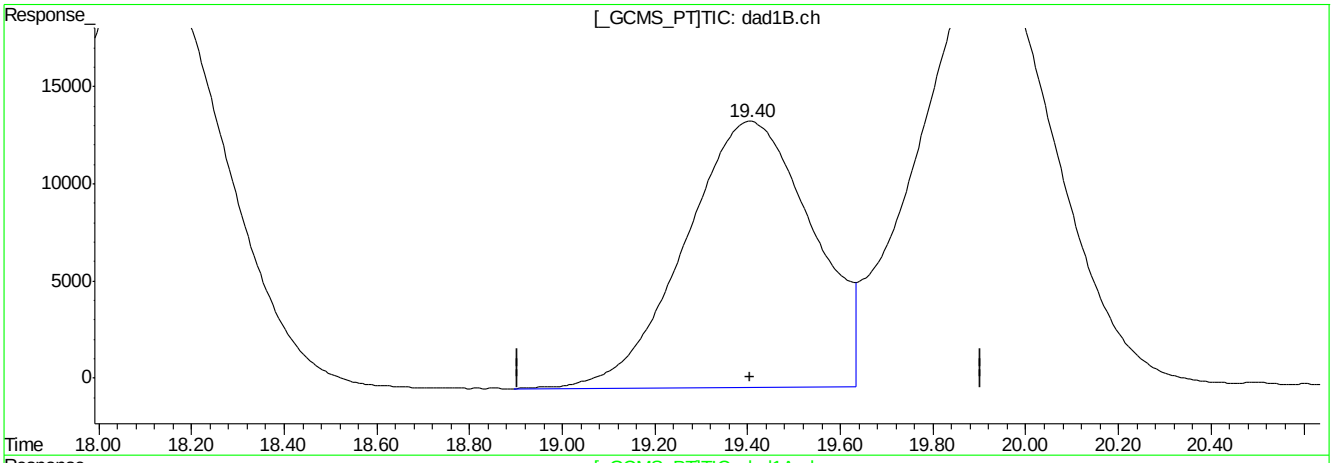
response 4317893

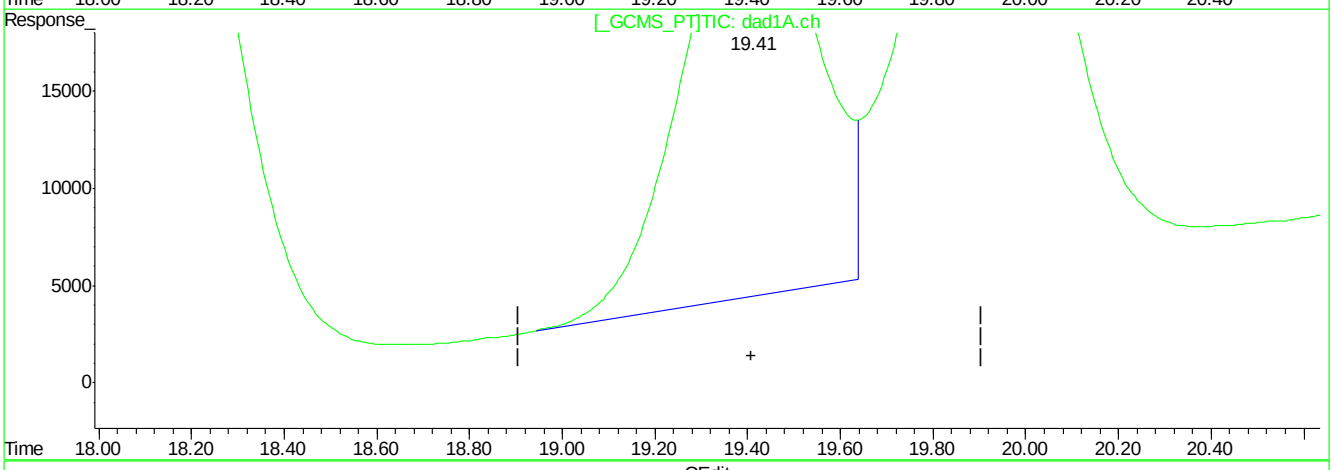
(+) = Expected Retention Time
GG620471.D 8330RPB.M_010821.M Mon Jan 11 10:43:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1A.ch
Acq On : 08-Jan-2021, 12:59:37 Operator: jamesb
Sample : ic2921-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.41min 448.329ppb

response 2603218

(19) m-Nitrotoluene #2

19.41min 437.446ppb m

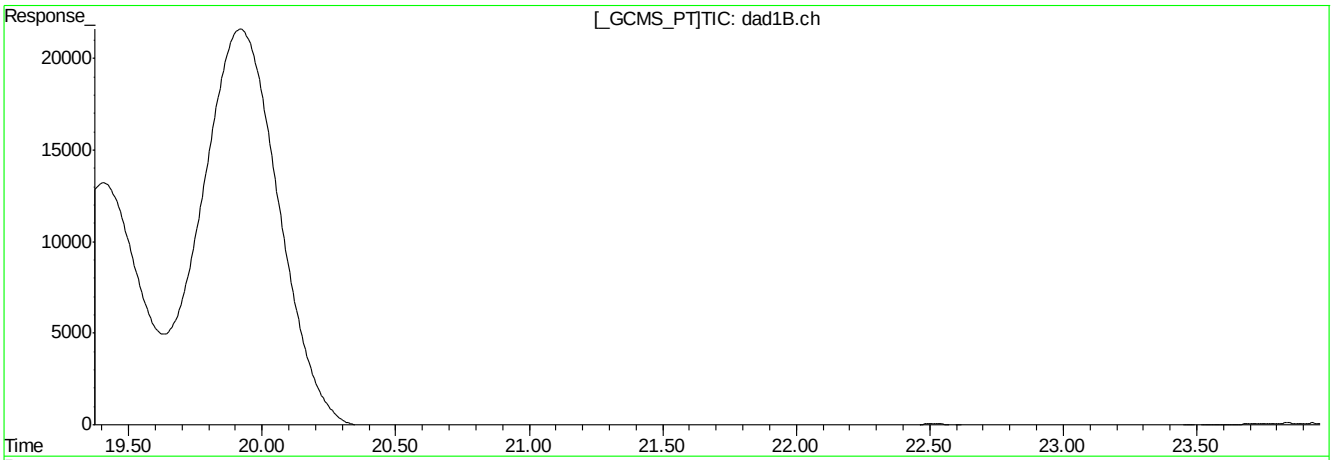
response 4405047

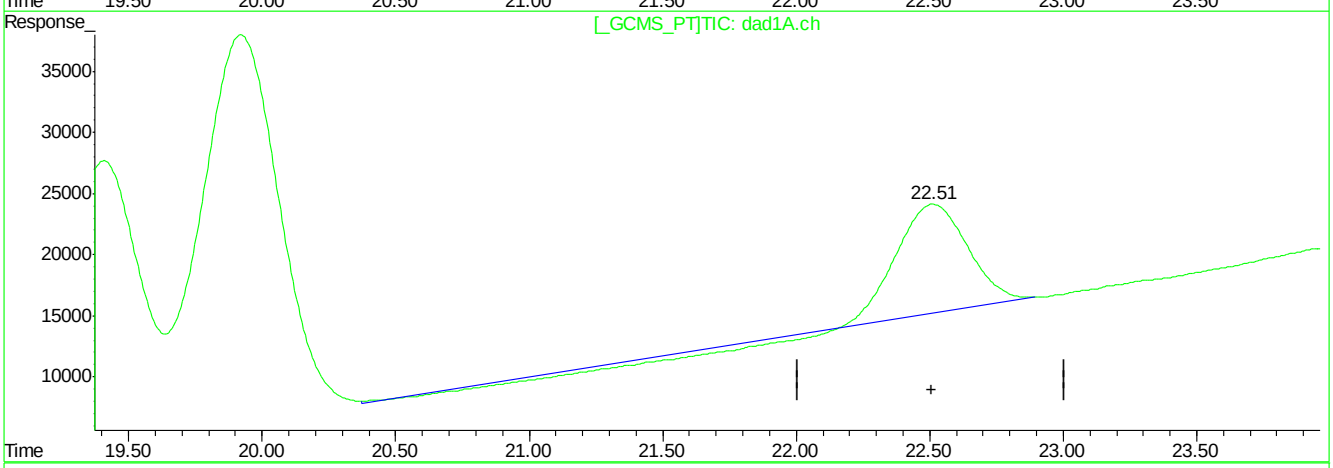
(+) = Expected Retention Time
GG620471.D 8330RPB.M_010821.M Mon Jan 11 10:43:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1A.ch
Acq On : 08-Jan-2021, 12:59:37 Operator: jamesb
Sample : ic2921-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.51min 410.022ppb

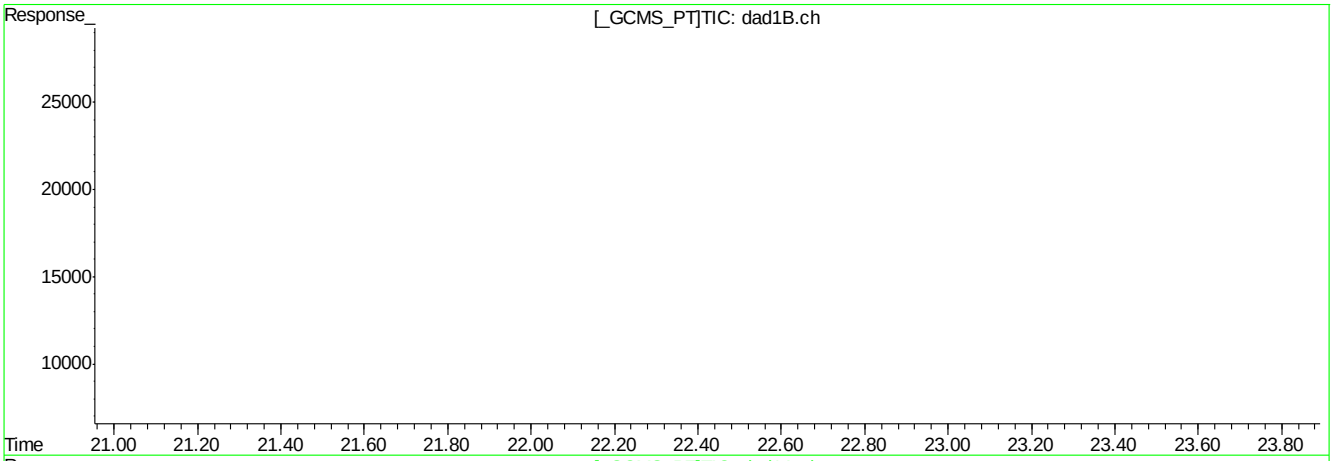
response 1402639

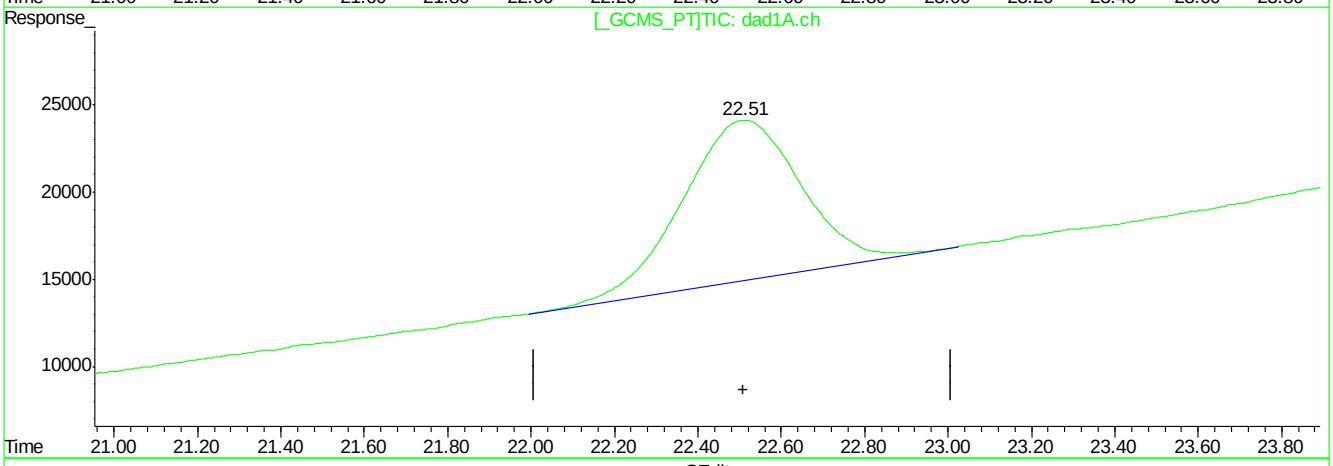
(+) = Expected Retention Time
GG620471.D 8330RPB.M_010821.M Mon Jan 11 10:44:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620471.D\dad1A.ch
Acq On : 08-Jan-2021, 12:59:37 Operator: jamesb
Sample : ic2921-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.51min 532.973ppb m

response 1821331

(+) = Expected Retention Time
GG620471.D 8330RPB.M_010821.M Mon Jan 11 10:44:13 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 01/11/21 16:38

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620472.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620472.D\dad1A.ch
Acq On : 08-Jan-2021, 13:31:04 Operator: jamesb
Sample : icc2921-1000 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35:07 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.41	14.40	5459563	10614726	1010.986	974.556
	Spiked Amount 500.000	Range 70 - 136		Recovery =		202.20%#	194.91%#
	Target Compounds						
1)	TNX	4.86	4.86	7979487	7979487	940.332	938.331
2)	HMX	5.31	5.31	3295849	3295849	1010.399	1012.428
3)	DNX	5.51	5.51	6882686	6882686	1005.057	1006.265
4)	MNX	6.68	6.68	7065393	7065393	1041.963	1040.861
5)	1,3,5-Trinitrobe	7.74	7.74	9973655	9973655	1054.634	1055.350
6)	RDX	7.96	7.96	4408105	4408105	1005.206	1005.206
7)	1,3-Dinitrobenze	9.97	9.97	13209442	10132089	1028.919	1054.470
8)	Nitrobenzene	10.93	10.93	7380450	7011120	884.870	868.150
9)	2,4,6-Trinitroto	12.05	12.05	9269077	12389692	1002.130	932.924
10)	Nitroglycerin	0.00	12.89	0	3085196	N.D.	797.306 #
11)	Tetryl	13.42	13.42	7238133	12456474	1028.648	853.713
13)	2,6-Dinitrotolue	14.75	14.75	6403921	9176689	1054.712	926.721
14)	2,4-Dinitrotolue	15.44	15.44	11936339	8344838	1024.336	888.030
15)	3,5-Dinitroanili	16.15	16.15	10127358	16768363	1966.007	2085.147
16)	o-Nitrotoluene	17.07	17.07	4567180	6745183	467.029	406.193
17)	p-Nitrotoluene	18.11	18.10	10690230	19652528	1952.667	1925.212
18)	4-Amino-2,6-Dini	18.11	18.10	10690230	19652528	1952.667	1927.672
19)	m-Nitrotoluene	19.42	19.41	5189762	8888672	893.787	882.696m
20)	2-Amino-4,6-Dini	19.92	19.92	9140924	13072087	1045.803	1026.322
21)	PETN	0.00	22.51	0	3591583	N.D.	1055.700m#

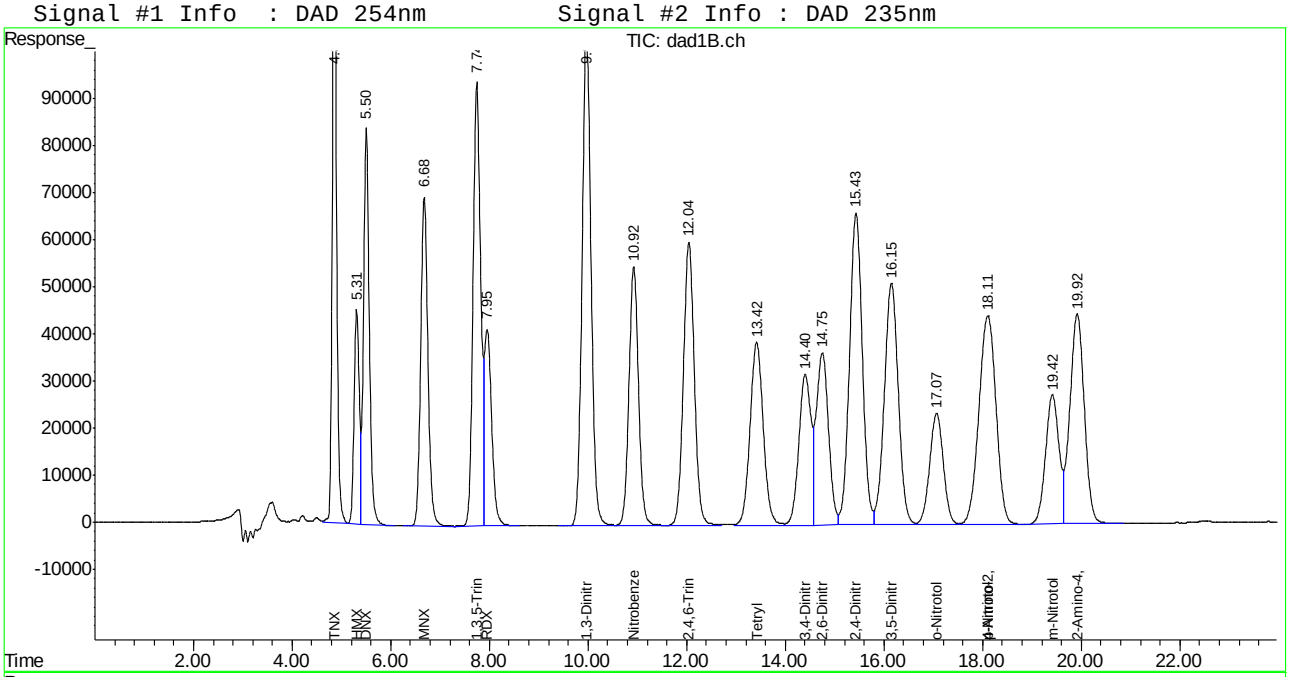
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620472.D 8330RPB.M_010821.M Mon Jan 11 14:11:24 2021 Page 1

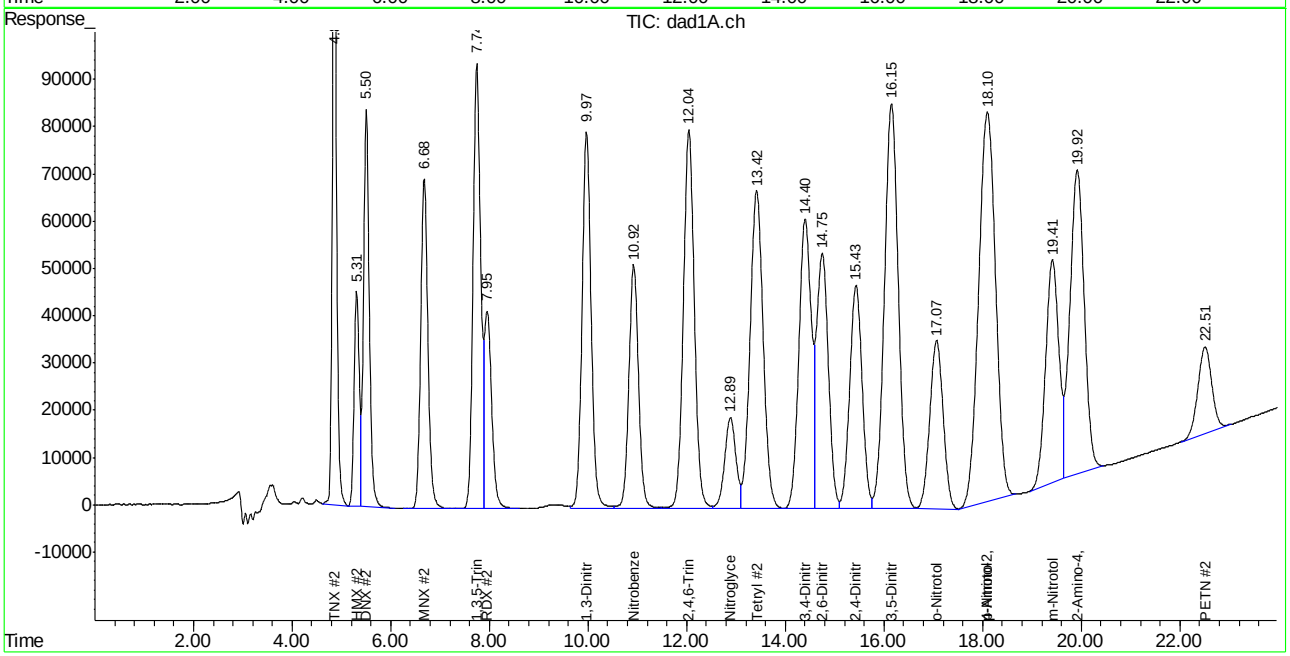
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620472.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620472.D\dad1A.ch
Acq On : 08-Jan-2021, 13:31:04 Operator: jamesb
Sample : icc2921-1000 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:41 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

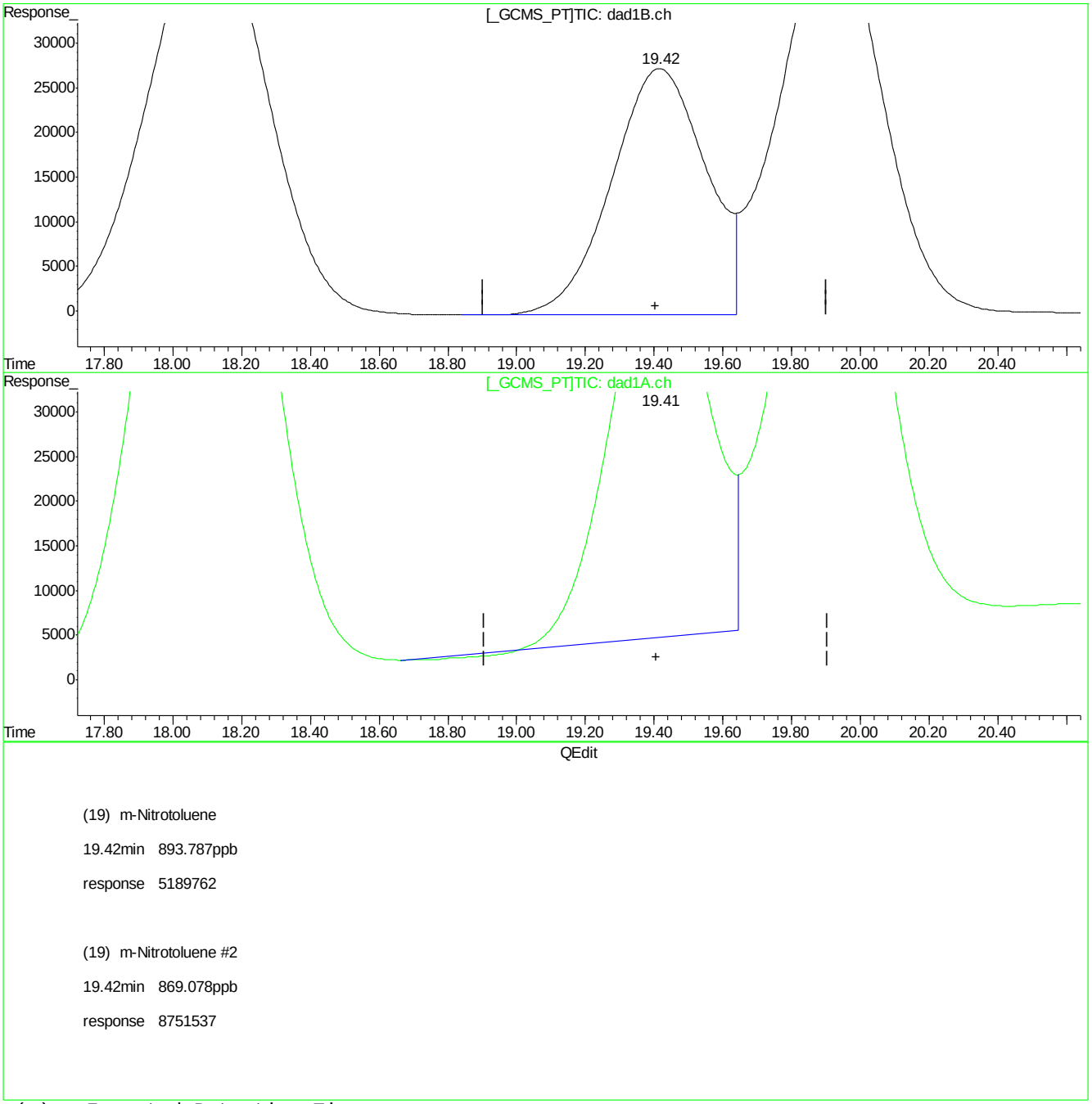
Sample Number: GGG2921-ICC2921
Lab FileID: GG620472.D
Injection Time: 01/08/21 13:31
Method: SW846 8330A
Analyst approved: 01/11/21 14:37 James Boone
Supervisor approved: 01/11/21 16:38 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
m-Nitrotoluene	99-08-1	2	19.41	Poor instrument integration
PETN	78-11-5	2	22.51	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620472.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620472.D\dad1A.ch
Acq On : 08-Jan-2021, 13:31:04 Operator: jamesb
Sample : icc2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration



(19) m-Nitrotoluene

19.42min 893.787ppb

response 5189762

(19) m-Nitrotoluene #2

19.42min 869.078ppb

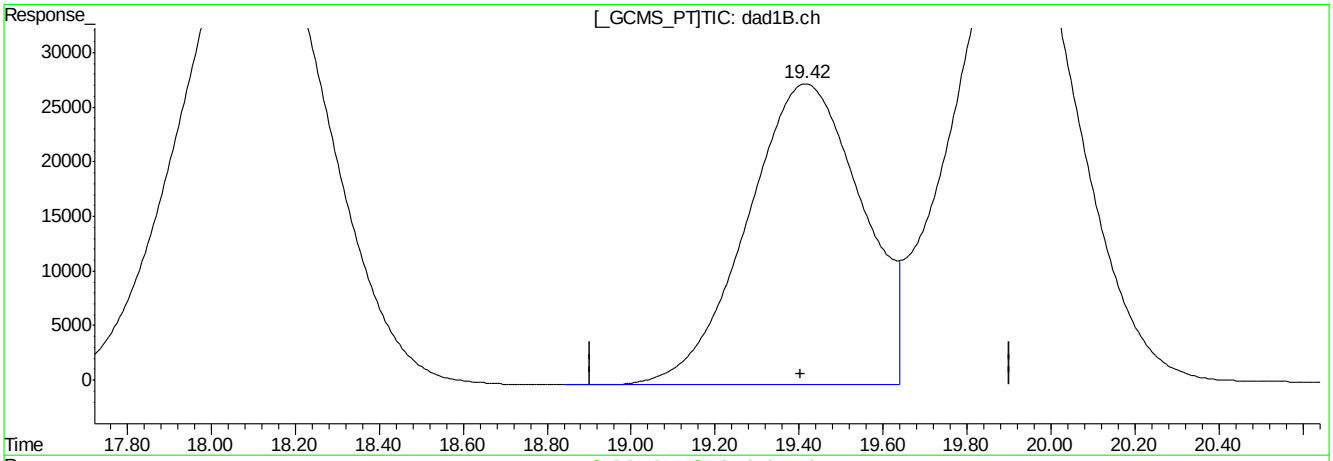
response 8751537

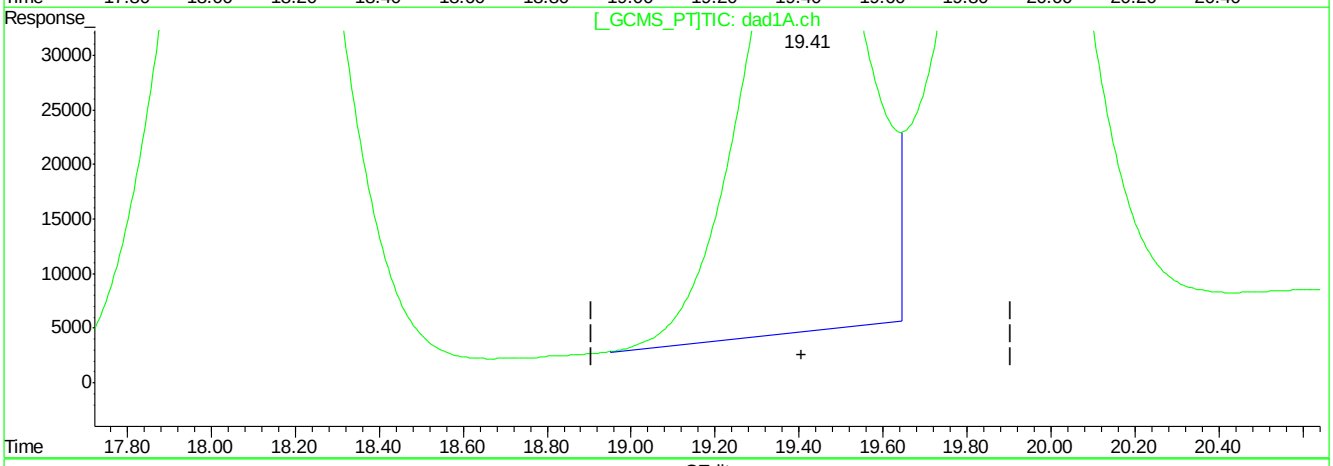
(+) = Expected Retention Time
GG620472.D 8330RPB.M_010821.M Mon Jan 11 10:40:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620472.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620472.D\dad1A.ch
Acq On : 08-Jan-2021, 13:31:04 Operator: jamesb
Sample : icc2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

19.42min 893.787ppb

response 5189762

(19) m-Nitrotoluene #2

19.41min 882.696ppb m

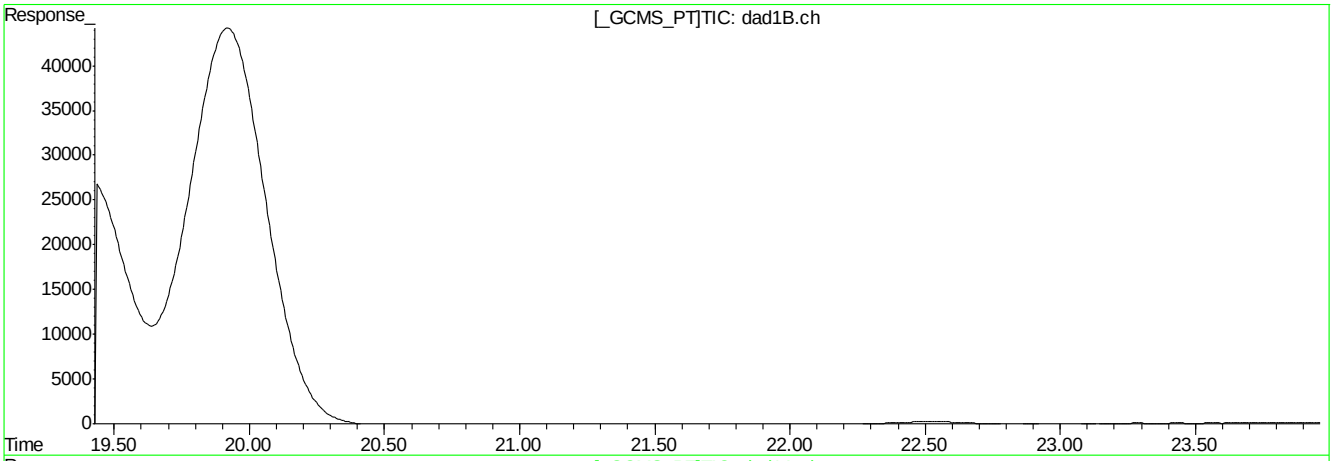
response 8888672

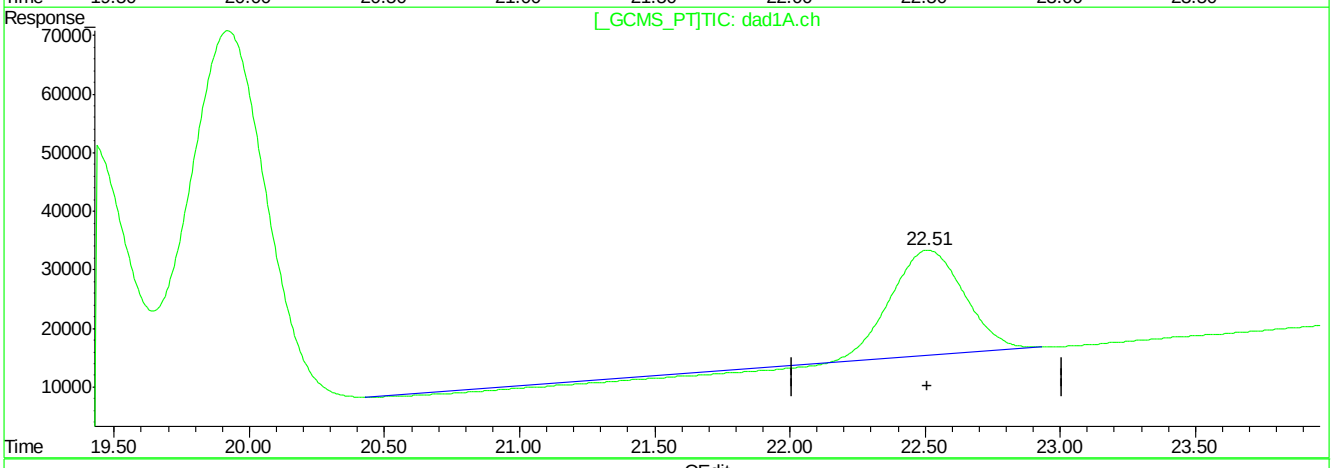
(+) = Expected Retention Time
GG620472.D 8330RPB.M_010821.M Mon Jan 11 10:40:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620472.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620472.D\dad1A.ch
Acq On : 08-Jan-2021, 13:31:04 Operator: jamesb
Sample : icc2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.51min 896.687ppb

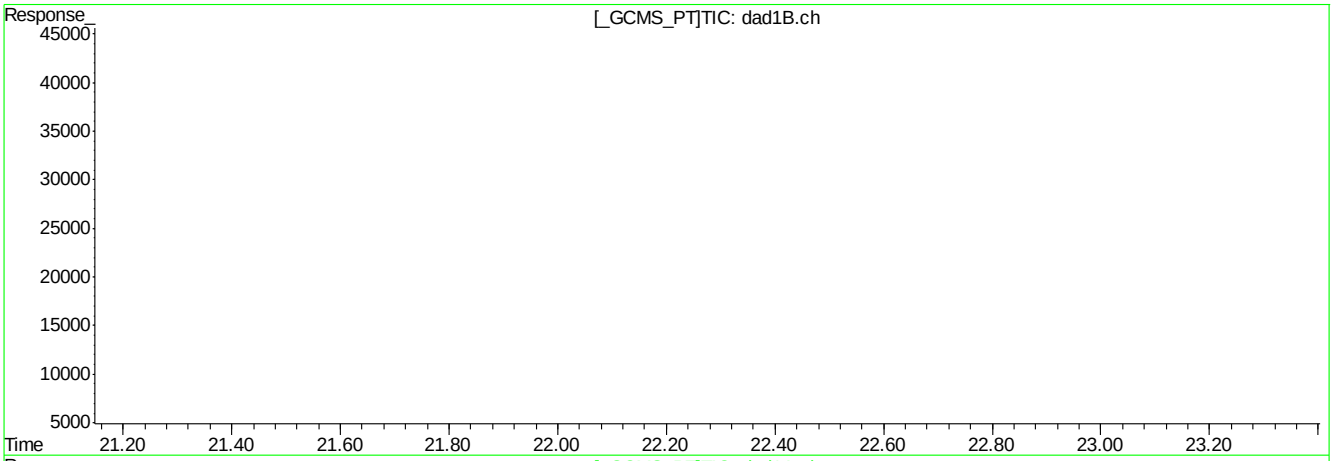
response 3054757

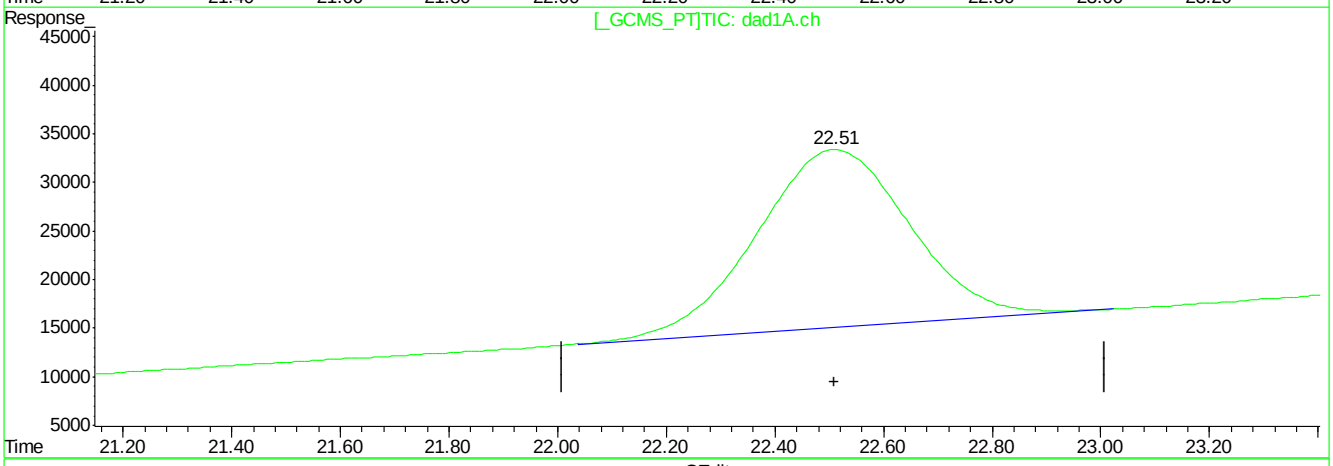
(+) = Expected Retention Time
GG620472.D 8330RPB.M_010821.M Mon Jan 11 10:41:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620472.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620472.D\dad1A.ch
Acq On : 08-Jan-2021, 13:31:04 Operator: jamesb
Sample : icc2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.51min 1055.700ppb m

response 3591583

(+) = Expected Retention Time
GG620472.D 8330RPB.M_010821.M Mon Jan 11 10:41:17 2021

GG620473.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 01/11/21 16:38

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620473.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620473.D\dad1A.ch
Acq On : 08-Jan-2021, 14:02:31 Operator: jamesb
Sample : ic2921-2500 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35:08 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.43	14.42	13515138	26334192	2502.694	2417.787
	Spiked Amount 500.000	Range 70 - 136		Recovery =		500.54%#	483.56%#
	Target Compounds						
1)	TNX	4.85	4.85	19596097	19596097	2309.275	2304.361
2)	HMX	5.31	5.31	8131273	8131273	2492.781	2497.787
3)	DNX	5.51	5.51	16935070	16935070	2472.975	2475.947
4)	MNX	6.68	6.68	17319526	17319526	2554.182	2551.482
5)	1,3,5-Trinitrobe	7.75	7.75	24476376	24476376	2588.180	2589.938
6)	RDX	7.97	7.97	10857240	10857240	2475.840	2475.840
7)	1,3-Dinitrobenze	9.98	9.98	32563506	24659029	2536.459	2566.323
8)	Nitrobenzene	10.94	10.94	18613892	17237506	2231.689	2134.430
9)	2,4,6-Trinitroto	12.05	12.05	22753776	29983073	2460.033	2257.678
10)	Nitroglycerin	0.00	12.90	0	7491759	N.D. d	2041.370
11)	Tetryl	13.43	13.43	17777462	30569430	2526.447	2195.575
13)	2,6-Dinitrotolue	14.77	14.77	15879172	22784841	2615.265	2381.594
14)	2,4-Dinitrotolue	15.45	15.45	29513067	20795926	2532.712	2288.151
15)	3,5-Dinitroanili	16.17	16.17	25020219	41177472	4857.134	5120.421
16)	o-Nitrotoluene	17.09	17.09	11659096	17199494	1192.233	1035.749
17)	p-Nitrotoluene	18.13	18.12	26602860	48953525	4859.252	4795.614
18)	4-Amino-2,6-Dini	18.13	18.12	26602860	48953525	4859.252	4801.740
19)	m-Nitrotoluene	19.44	19.44	13071091	22477174	2251.119	2232.112
20)	2-Amino-4,6-Dini	19.94	19.93	22496746	32353118	2573.829	2540.125
21)	PETN	0.00	22.53	0	8545273	N.D. d	2544.188m

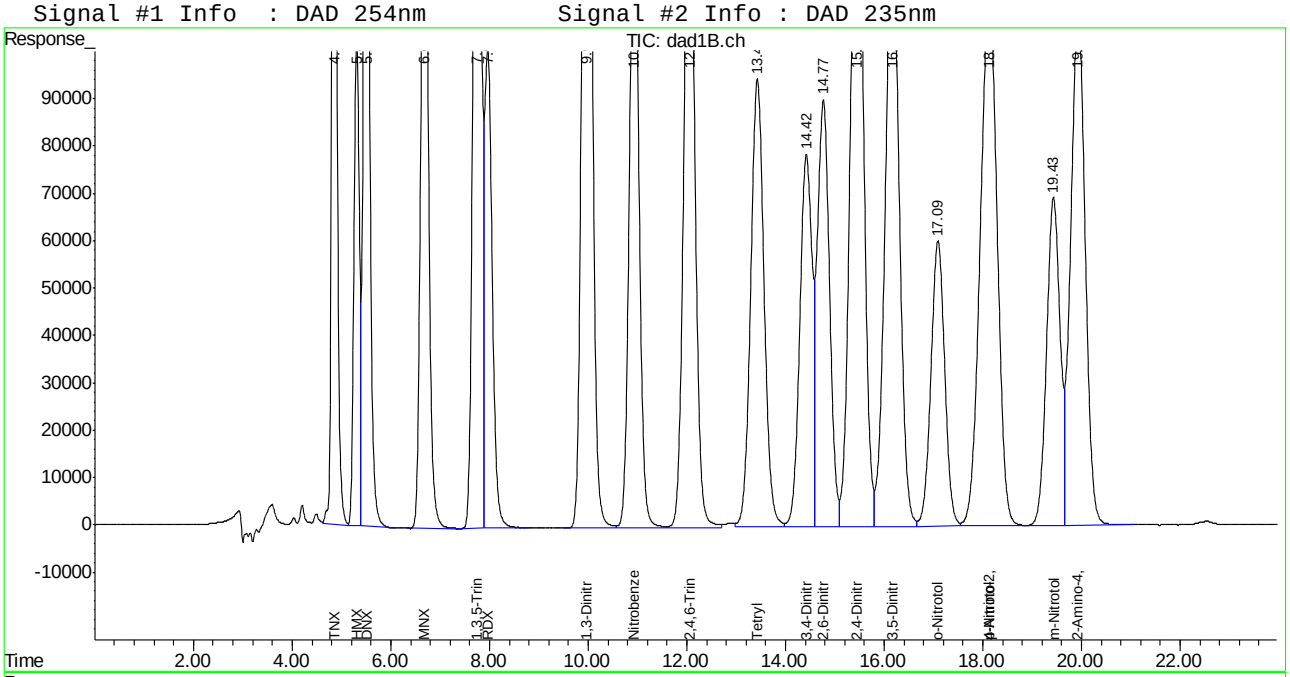
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

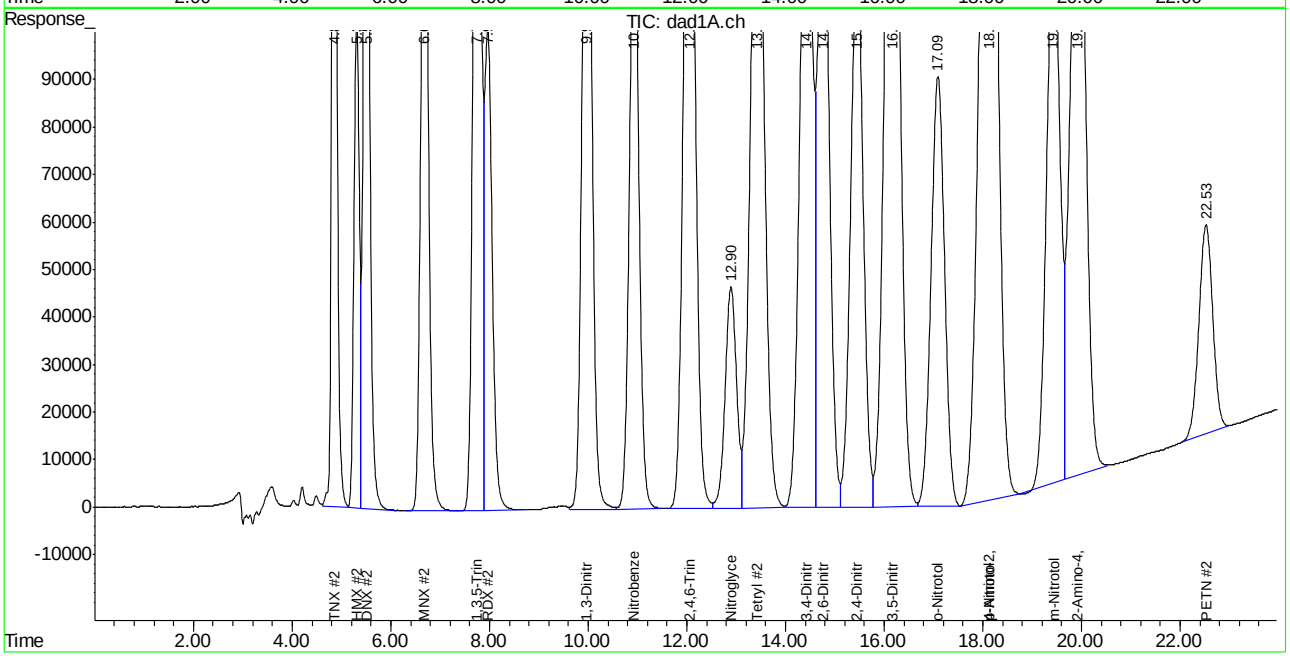
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620473.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620473.D\dad1A.ch
Acq On : 08-Jan-2021, 14:02:31 Operator: jamesb
Sample : ic2921-2500 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:38 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

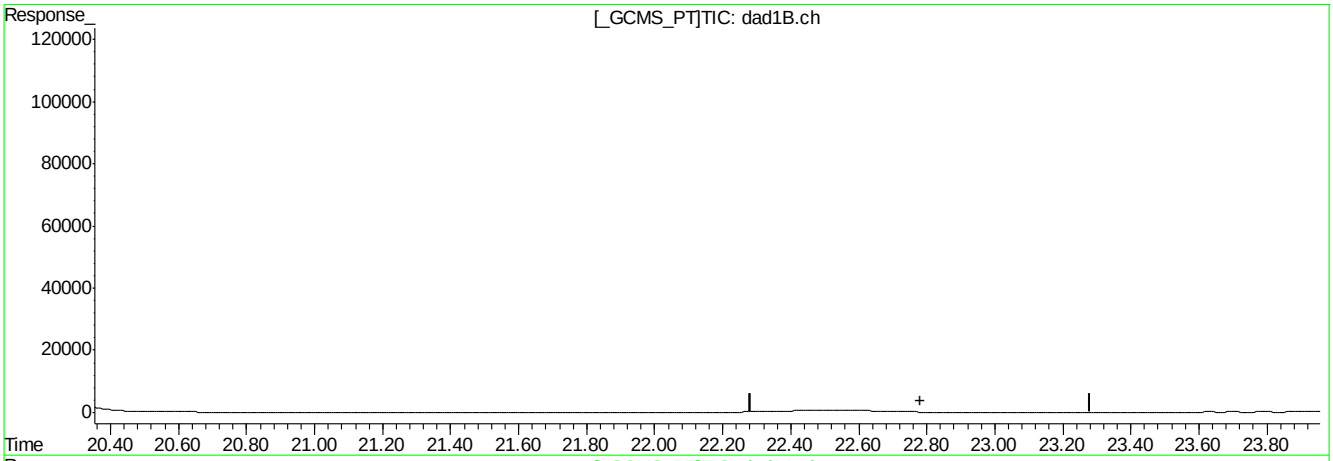
Sample Number:	GGG2921-IC2921	**Method:**	SW846 8330A
Lab FileID:	GG620473.D	**Analyst approved:**	01/11/21 14:37 James Boone
Injection Time:	01/08/21 14:02	**Supervisor approved:**	01/11/21 16:38 Naresh Jiawan

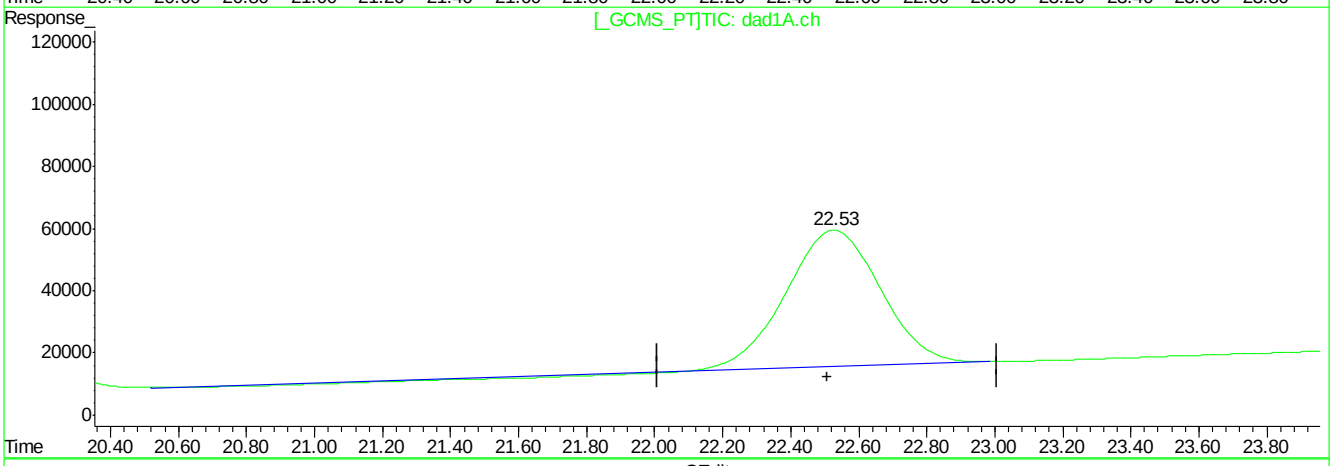
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	22.53	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620473.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620473.D\dad1A.ch
Acq On : 08-Jan-2021, 14:02:31 Operator: jamesb
Sample : ic2921-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

22.53min 2435.391ppb

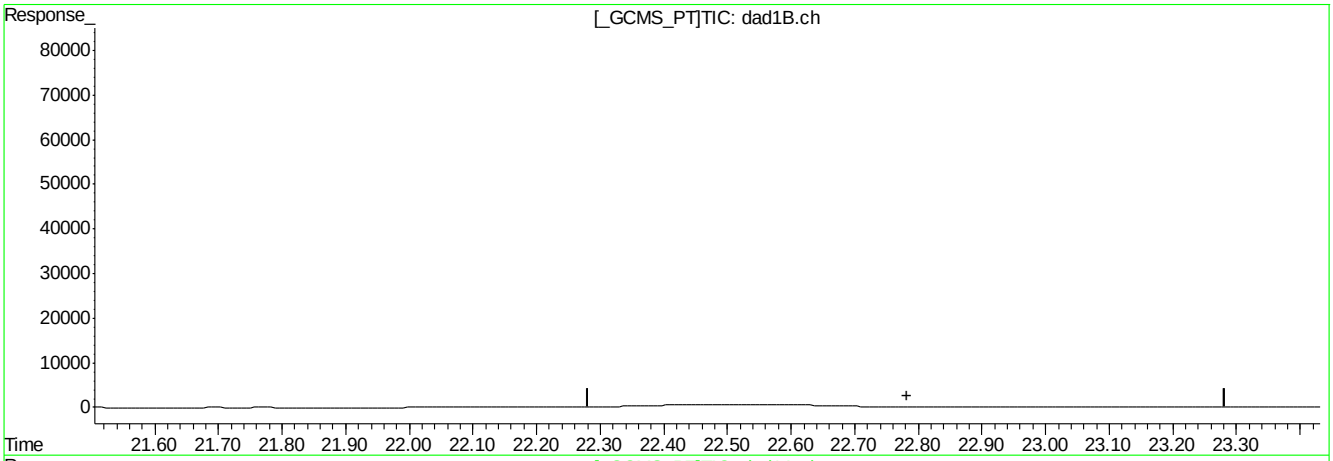
response 8187570

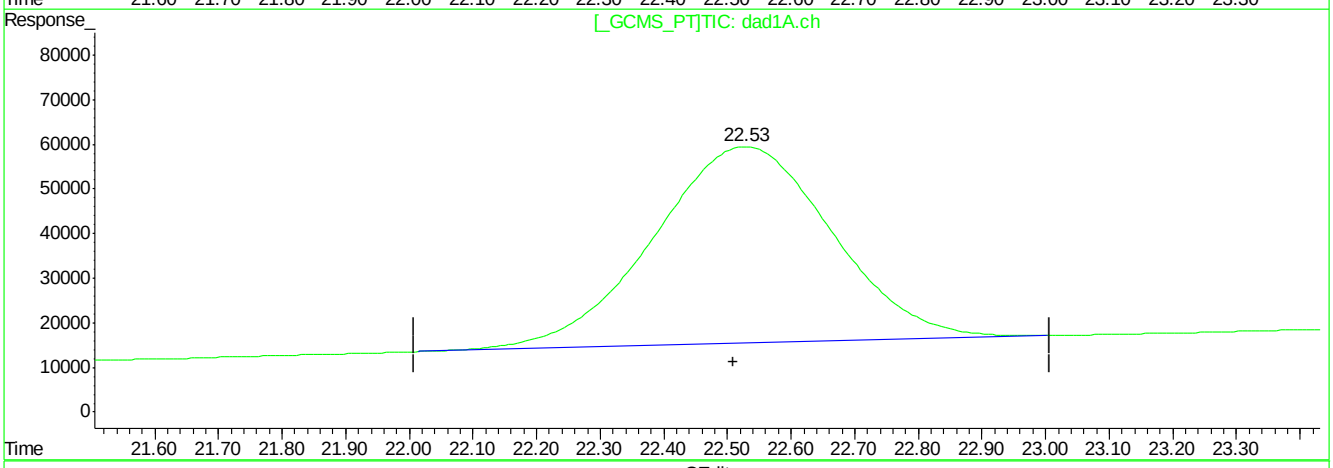
(+) = Expected Retention Time
GG620473.D 8330RPB.M_010821.M Mon Jan 11 10:38:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620473.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620473.D\dad1A.ch
Acq On : 08-Jan-2021, 14:02:31 Operator: jamesb
Sample : ic2921-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

22.53min 2544.188ppb m

response 8545273

(+) = Expected Retention Time
GG620473.D 8330RPB.M_010821.M Mon Jan 11 10:38:55 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 01/11/21 16:38

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620474.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620474.D\dad1A.ch
Acq On : 08-Jan-2021, 14:33:59 Operator: jamesb
Sample : ic2921-5000 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35:09 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.47	14.47	25400403	49302595	4703.573	4526.555
	Spiked Amount 500.000	Range 70 - 136		Recovery =		940.71%#	905.31%#
	Target Compounds						
1)	TNX	4.86	4.86	36504719	36504719	4301.849	4292.695
2)	HMX	5.32	5.32	15150582	15150582	4644.670	4653.999
3)	DNX	5.51	5.51	31667407	31667407	4624.292	4629.850
4)	MNX	6.69	6.69	32092915	32092915	4732.875	4727.871
5)	1,3,5-Trinitrobe	7.76	7.76	45742091	45742091	4836.858	4840.143
6)	RDX	7.98	7.98	20447718	20447718	4662.813	4662.813
7)	1,3-Dinitrobenze	10.00	10.00	61232854	46333469	4769.591	4822.032
8)	Nitrobenzene	10.96	10.96	39301987	36642831	4712.061	4537.290
9)	2,4,6-Trinitroto	12.08	12.08	42584946	55689128	4604.087	4193.303
10)	Nitroglycerin	0.00	12.93	0	13635769	N.D. d	4078.709
11)	Tetryl	13.47	13.47	32828915	55862775	4665.487	4346.300
13)	2,6-Dinitrotolue	14.81	14.81	30028435	42817551	4945.619	4745.778
14)	2,4-Dinitrotolue	15.49	15.49	55631736	39138256	4774.128	4556.981
15)	3,5-Dinitroanili	16.21	16.21	47086347	77210568	9140.795	9601.139
16)	o-Nitrotoluene	17.15	17.15	24843851	36201292	2540.475	2180.032
17)	p-Nitrotoluene	18.20	18.19	51601334	94178510	9425.449	9225.970
18)	4-Amino-2,6-Dini	18.20	18.19	51601334	94178510	9425.449	9237.757
19)	m-Nitrotoluene	19.50	19.50	27158862	46619018	4677.332	4629.536
20)	2-Amino-4,6-Dini	20.00	20.00	42380639	60739644	4848.724	4768.822
21)	PETN	0.00	22.58	0	16113878	N.D. d	4897.511m

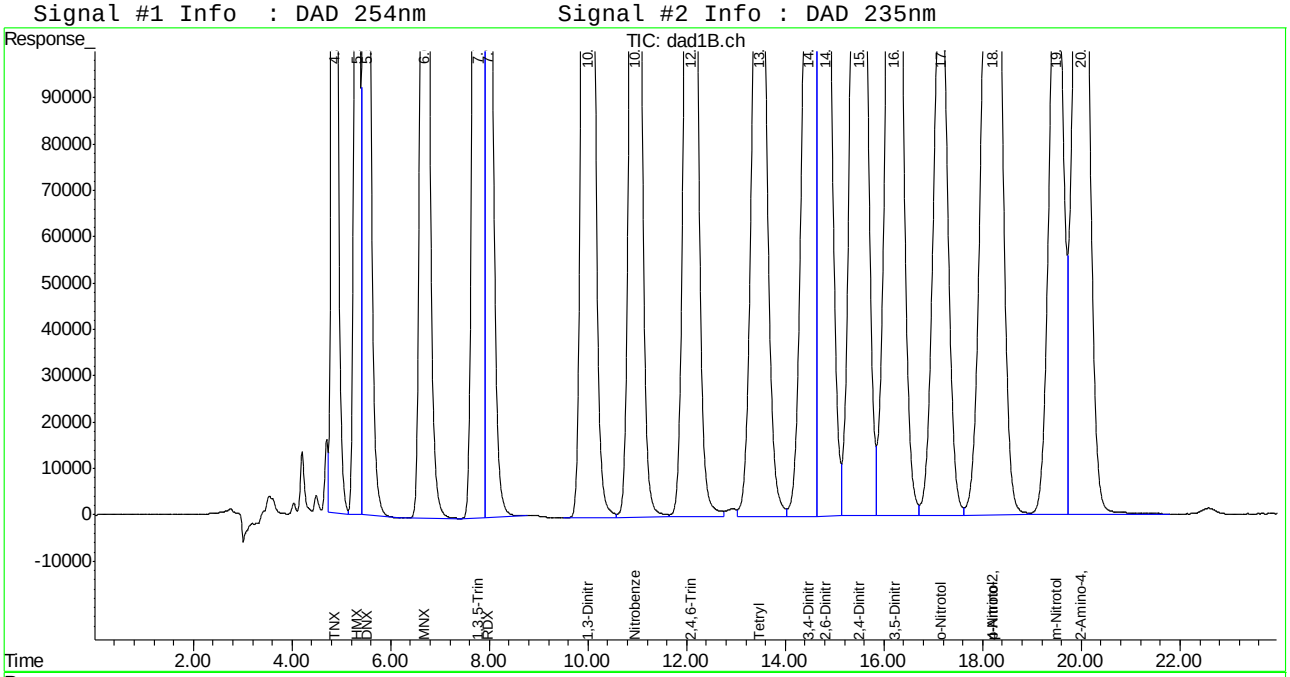
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

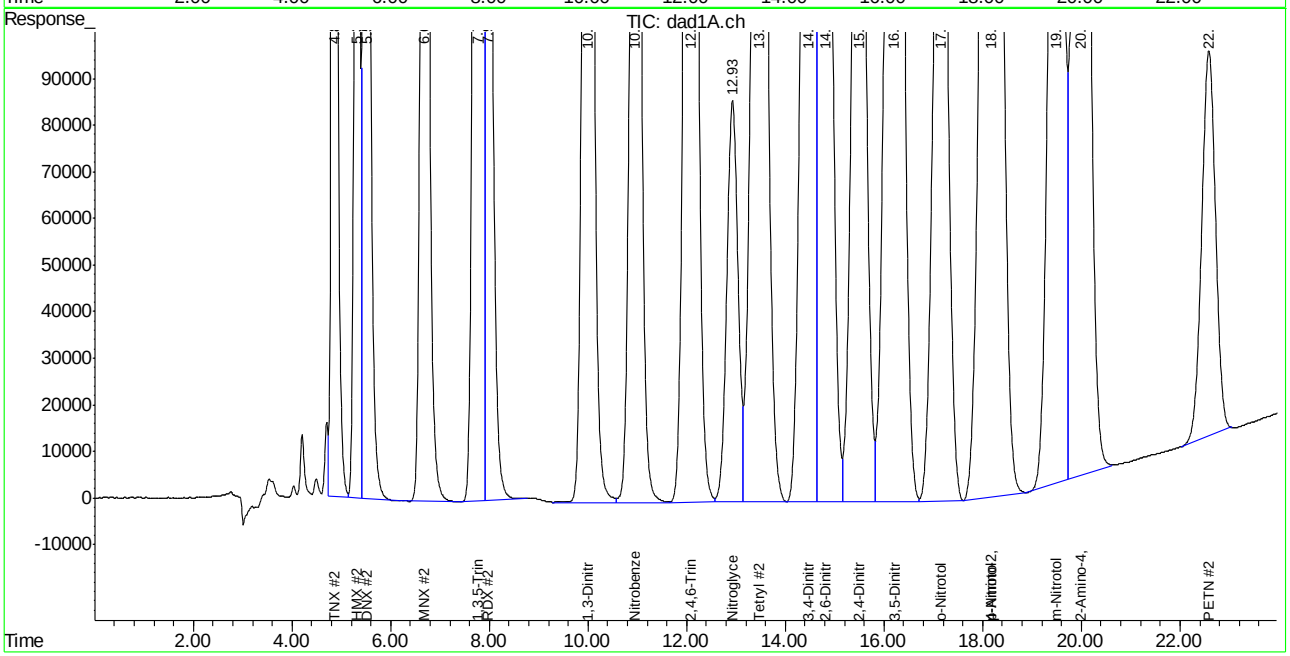
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620474.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620474.D\dad1A.ch
Acq On : 08-Jan-2021, 14:33:59 Operator: jamesb
Sample : ic2921-5000 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:37 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

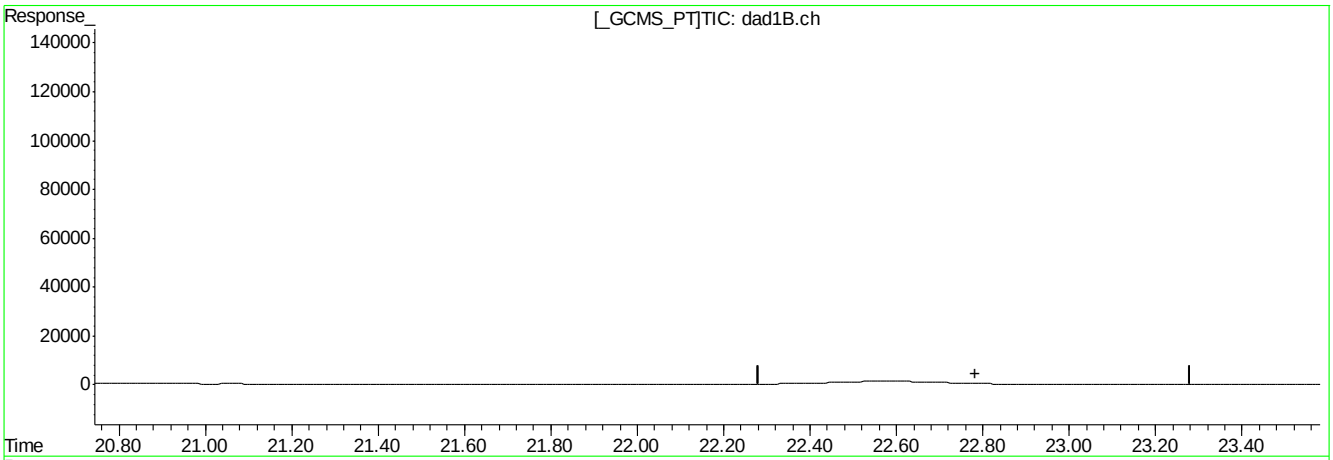
Sample Number: GGG2921-IC2921
Lab FileID: GG620474.D
Injection Time: 01/08/21 14:33
Method: SW846 8330A
Analyst approved: 01/11/21 14:37 James Boone
Supervisor approved: 01/11/21 16:38 Naresh Jiawan

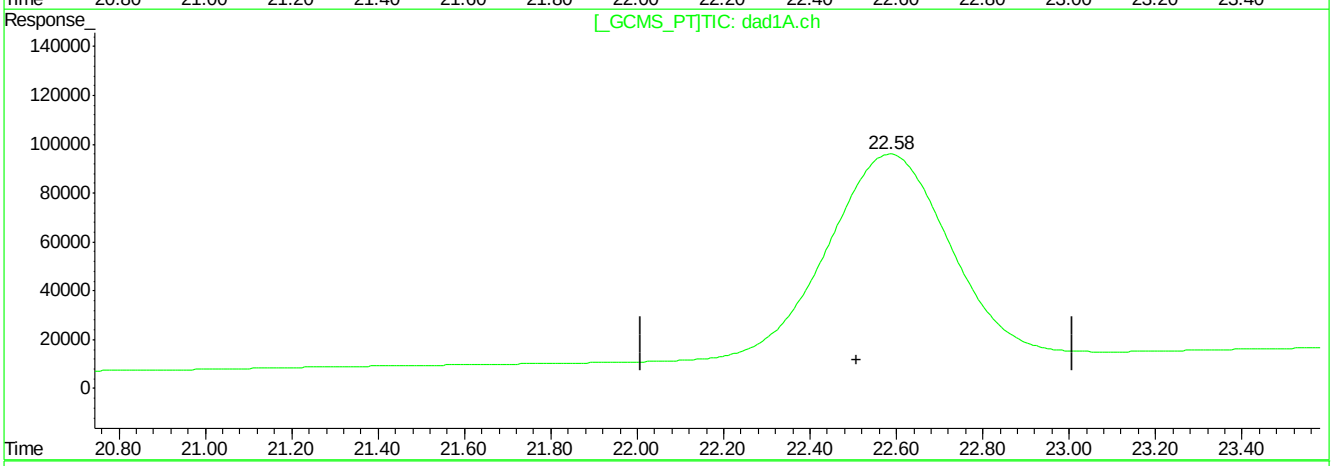
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	22.58	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620474.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620474.D\dad1A.ch
Acq On : 08-Jan-2021, 14:33:59 Operator: jamesb
Sample : ic2921-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

22.59min 4772.056ppb

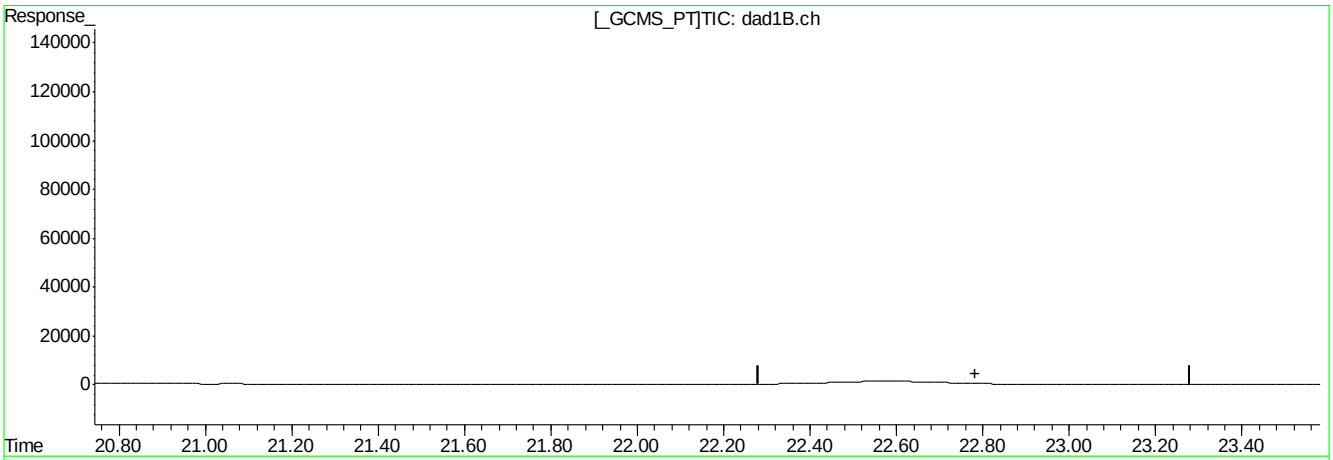
response 15718539

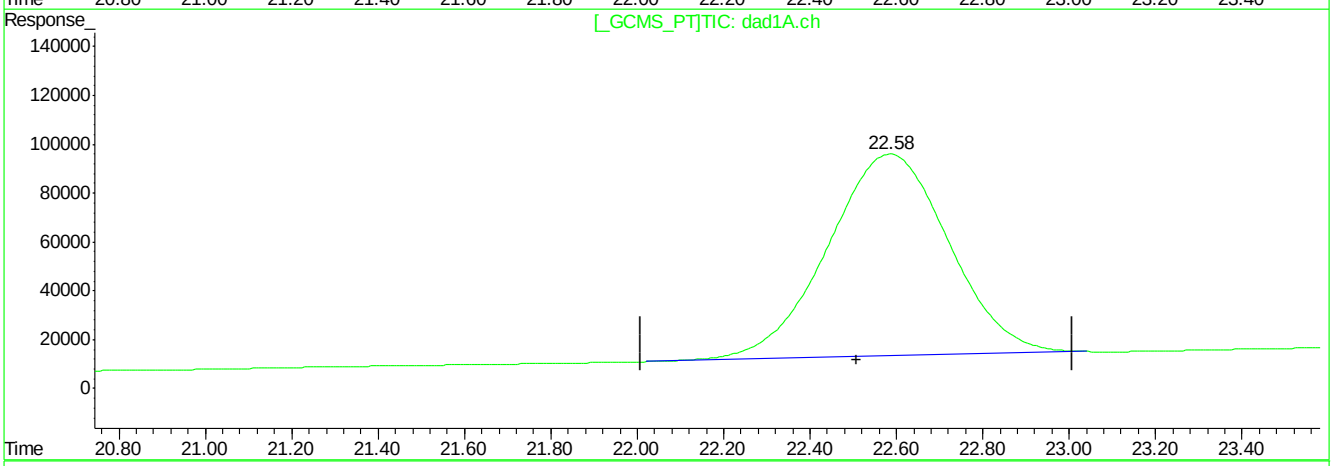
(+) = Expected Retention Time
GG620474.D 8330RPB.M_010821.M Mon Jan 11 10:36:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620474.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620474.D\dad1A.ch
Acq On : 08-Jan-2021, 14:33:59 Operator: jamesb
Sample : ic2921-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 10:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 10:34:39 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

22.58min 4897.511ppb m

response 16113878

(+) = Expected Retention Time
GG620474.D 8330RPB.M_010821.M Mon Jan 11 10:37:04 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
01/11/21 16:38

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620475.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620475.D\dad1A.ch
Acq On : 08-Jan-2021, 15:05:23 Operator: jamesb
Sample : icv2921-1000 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 12:22:22 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 12:22:15 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	4.86	4.86	8569272	8569272	1086.764	1087.551
2)	HMX	5.32	5.32	2685152	2685152	798.538	843.370
3)	DNX	5.51	5.51	6734403	6734403	976.478	976.478
4)	MNX	6.69	6.69	6999052	6999052	1002.488	1002.488
5)	1,3,5-Trinitrobe	7.76	7.76	7863337	7863337	801.553	801.622
6)	RDX	7.98	7.98	3604098	3604098	848.806	848.806
7)	1,3-Dinitrobenze	10.00	10.00	10653795	8889437	820.598	867.166
8)	Nitrobenzene	10.95	10.95	6524336	6645212	868.258	973.843
9)	2,4,6-Trinitroto	12.08	12.08	7261896	9871617	799.932	810.327
10)	Nitroglycerin	0.00	12.93	0	3169559	N.D.	1008.729 #
11)	Tetryl	13.47	13.47	5937199	10707574	846.648	838.232
13)	2,6-Dinitrotolue	14.82	14.82	5098852	7748879	811.683	827.708
14)	2,4-Dinitrotolue	15.50	15.50	9999761	7066864	856.671	830.055
15)	3,5-Dinitroanili	16.24	16.24	8847010	14512004	893.111	924.950
16)	o-Nitrotoluene	17.16	17.16	4077162	5886604	880.398	854.687
17)	p-Nitrotoluene	18.21	18.20	8817424	16273930	1672.446	1702.042
18)	4-Amino-2,6-Dini	18.21	18.20	8817424	16273930	1672.446	1702.249
19)	m-Nitrotoluene	19.51	19.51	4551246	7707267	862.594	880.807
20)	2-Amino-4,6-Dini	20.02	20.02	7207707	10432491	794.916	845.661
21)	PETN	0.00	22.60	0	3583576	N.D.	1007.332m#

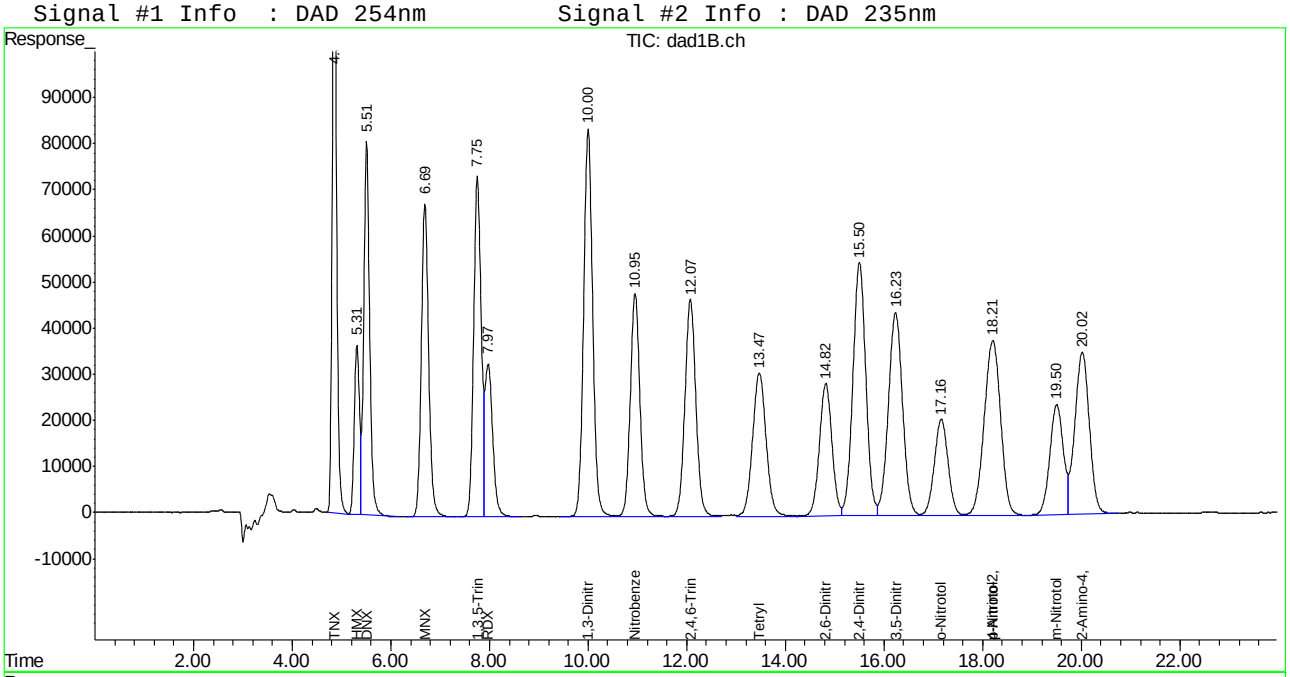
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

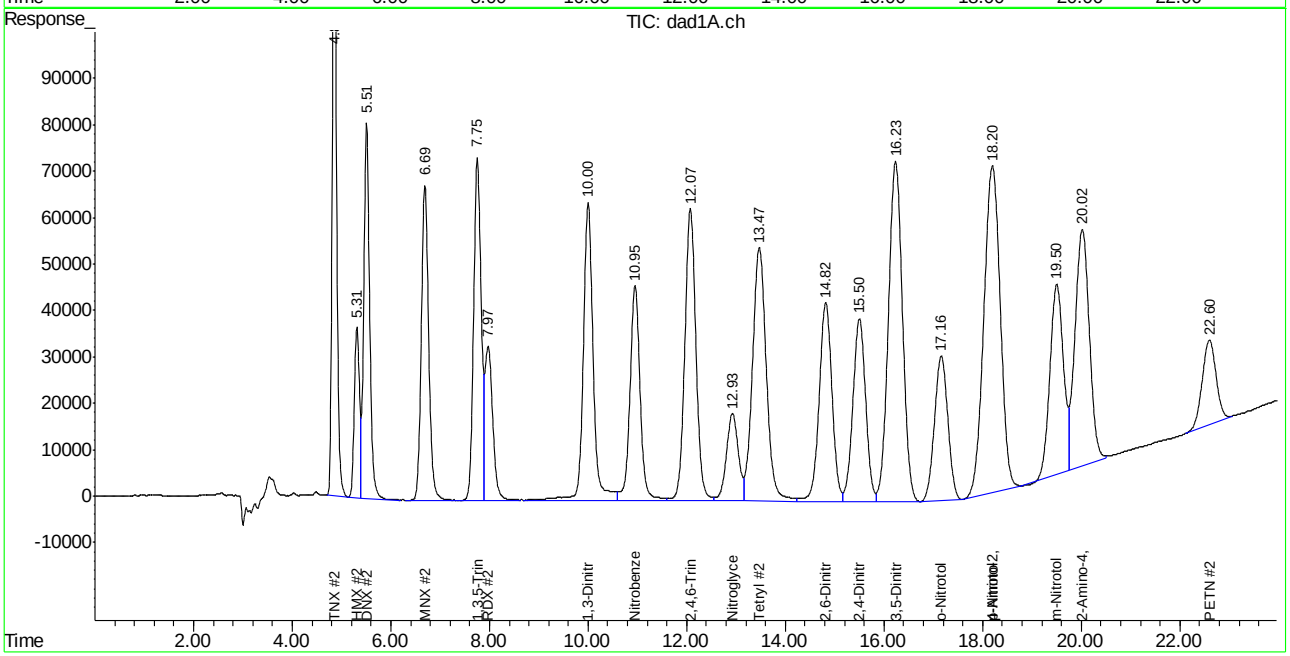
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620475.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620475.D\dad1A.ch
Acq On : 08-Jan-2021, 15:05:23 Operator: jamesb
Sample : icv2921-1000 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 14:09 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 12:22:15 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

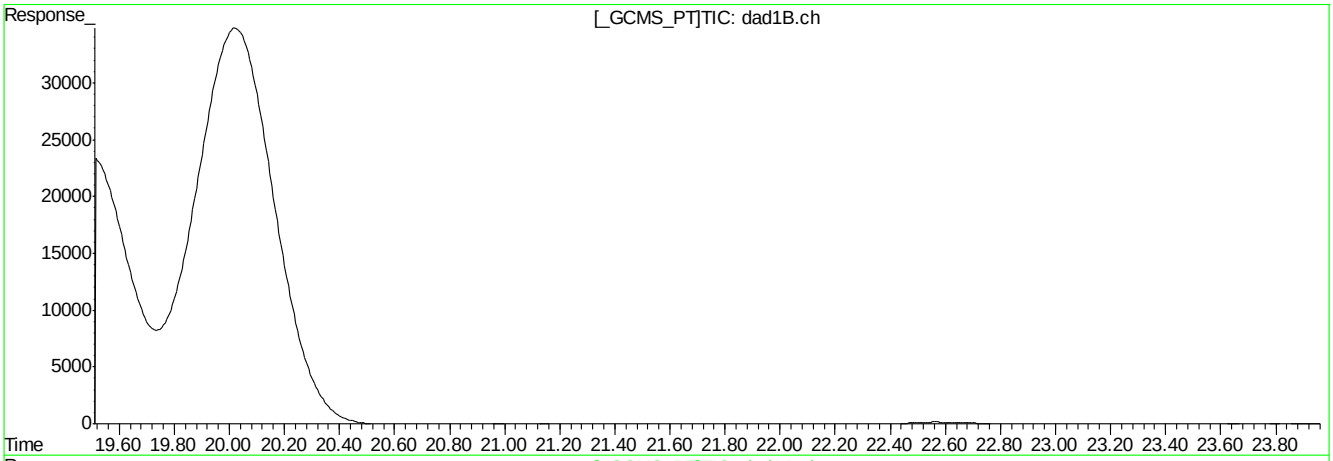
Sample Number: GGG2921-ICV2921
Lab FileID: GG620475.D
Injection Time: 01/08/21 15:05
Method: SW846 8330A
Analyst approved: 01/11/21 14:37 James Boone
Supervisor approved: 01/11/21 16:38 Naresh Jiawan

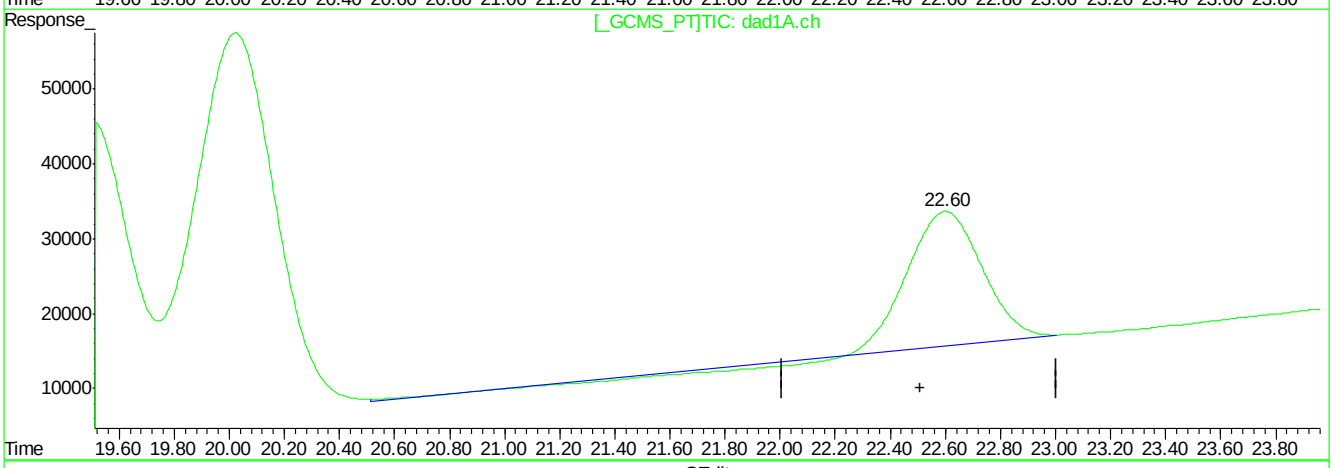
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	22.60	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620475.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620475.D\dad1A.ch
Acq On : 08-Jan-2021, 15:05:23 Operator: jamesb
Sample : icv2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 12:22 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 11:11:45 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.60min 877.239ppb

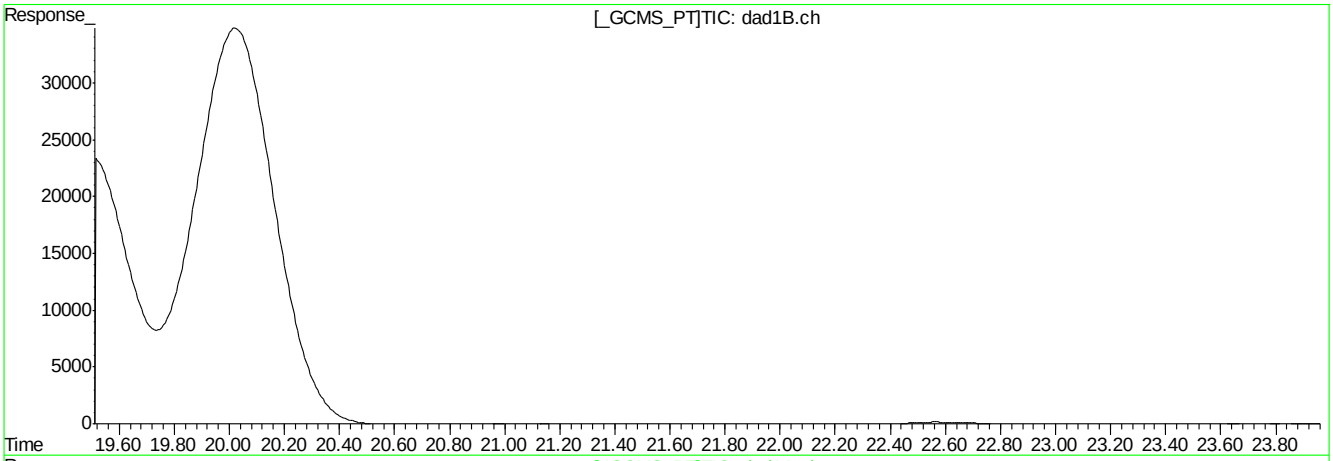
response 3130376

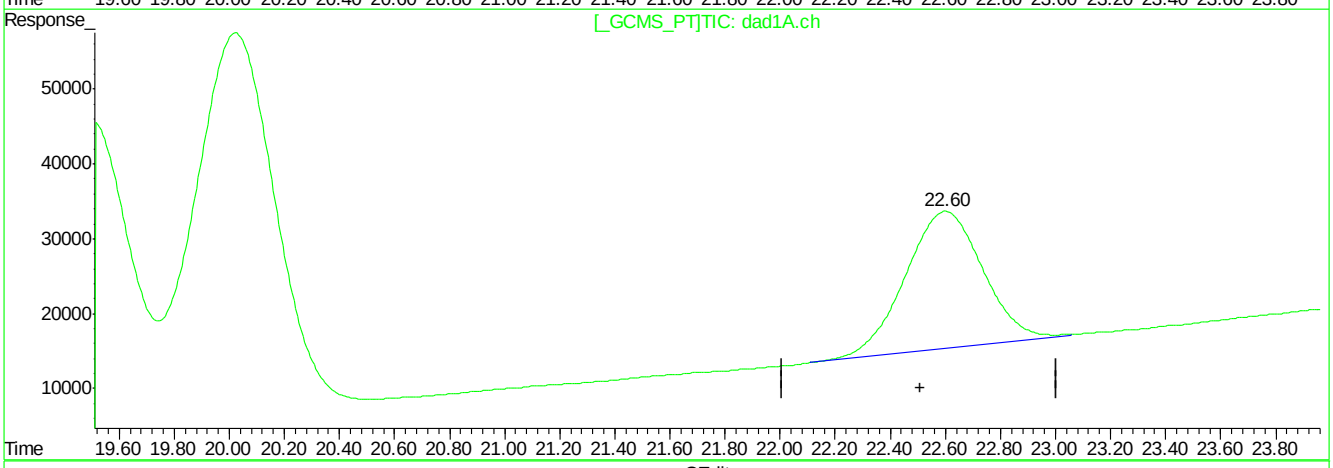
(+) = Expected Retention Time
GG620475.D 8330RPB.M_010821.M Mon Jan 11 14:09:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2921\GG620475.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG2921\GG620475.D\dad1A.ch
Acq On : 08-Jan-2021, 15:05:23 Operator: jamesb
Sample : icv2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 11 12:22 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jan 11 11:11:45 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.60min 1007.332ppb m

response 3583576

(+) = Expected Retention Time
GG620475.D 8330RPB.M_010821.M Mon Jan 11 14:10:02 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
01/12/21 17:36

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2923\GG620521.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG2923\GG620521.D\dad1A.ch
Acq On : 12-Jan-2021, 15:29:24 Operator: jamesb
Sample : icv2921-1000 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 12 16:35:24 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue Jan 12 16:35:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
	Spiked Amount 500.000	Range 70 - 136		Recovery =		0.00%#	0.00%#
	Target Compounds						
1)	TNX	4.84	4.84	8494625	8494625	1077.297	1078.077
2)	HMX	5.29	5.29	2788046	2788046	875.688	875.688
3)	DNX	5.48	5.48	6574911	6574911	953.352	953.352
4)	MNX	6.64	6.64	6813230	6813230	975.872	975.872
5)	1,3,5-Trinitrobe	7.70	7.70	8142811	8142811	830.041	830.113
6)	RDX	7.92	7.92	3752819	3752819	883.831	883.831
7)	1,3-Dinitrobenze	9.91	9.91	11065041	9016917	852.274	860.609
8)	Nitrobenzene	10.83	10.83	7275117	7458326	968.172	837.261
9)	2,4,6-Trinitroto	11.91	11.91	7546277	10525031	831.259	863.963
10)	Nitroglycerin	0.00	12.71	0	2715263	N.D.	859.919 #
11)	Tetryl	13.21	13.21	6196007	10935907	883.555	856.577
13)	2,6-Dinitrotolue	14.51	14.51	5314653	7724482	846.036	825.058
14)	2,4-Dinitrotolue	15.16	15.16	10412820	7385965	892.058	868.168
15)	3,5-Dinitroanili	15.87	15.87	10714335	17746747	1081.618	1131.122
16)	o-Nitrotoluene	16.68	16.68	4567861	6710852	986.356	974.361
17)	p-Nitrotoluene	17.67	17.66	9285440	16881350	1761.217	1765.570
18)	4-Amino-2,6-Dini	17.67	17.66	9285440	16881350	1761.217	1765.785
19)	m-Nitrotoluene	18.92	18.92	5025552	8564991	952.489	978.830
20)	2-Amino-4,6-Dini	19.44	19.44	7527497	10967787	830.184	889.052
21)	PETN	0.00	21.95	0	3541600	N.D.	995.248m#

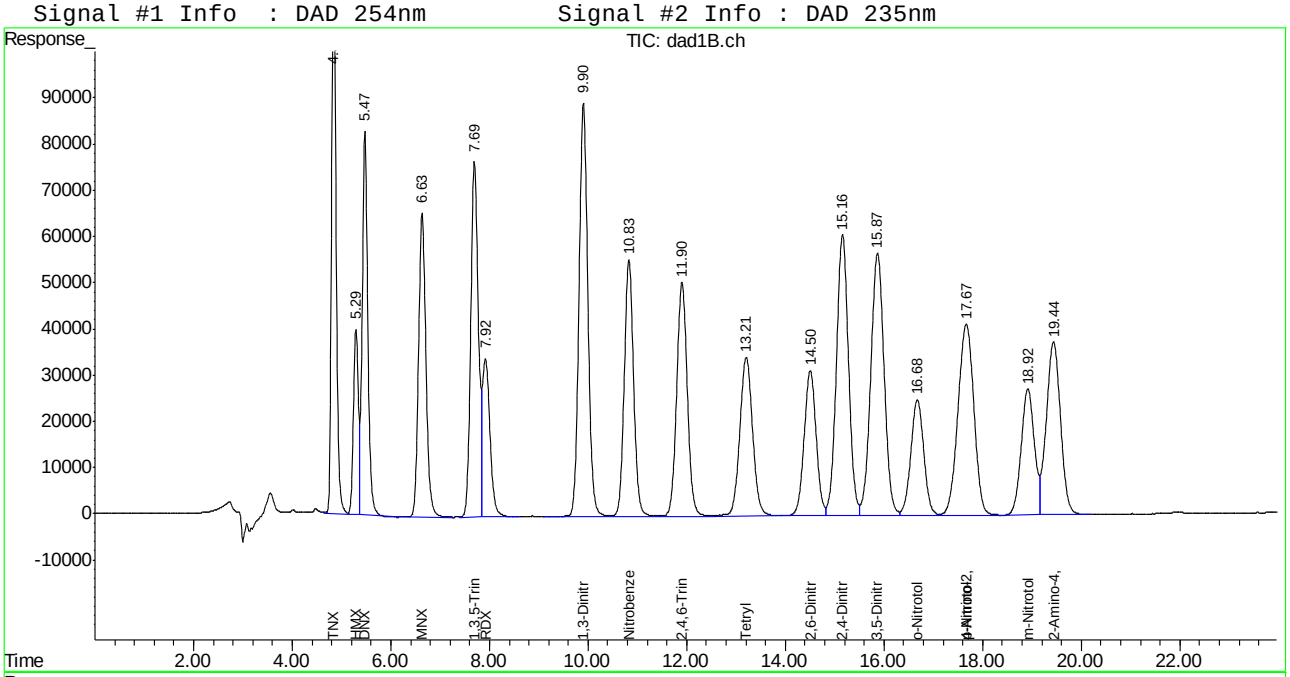
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

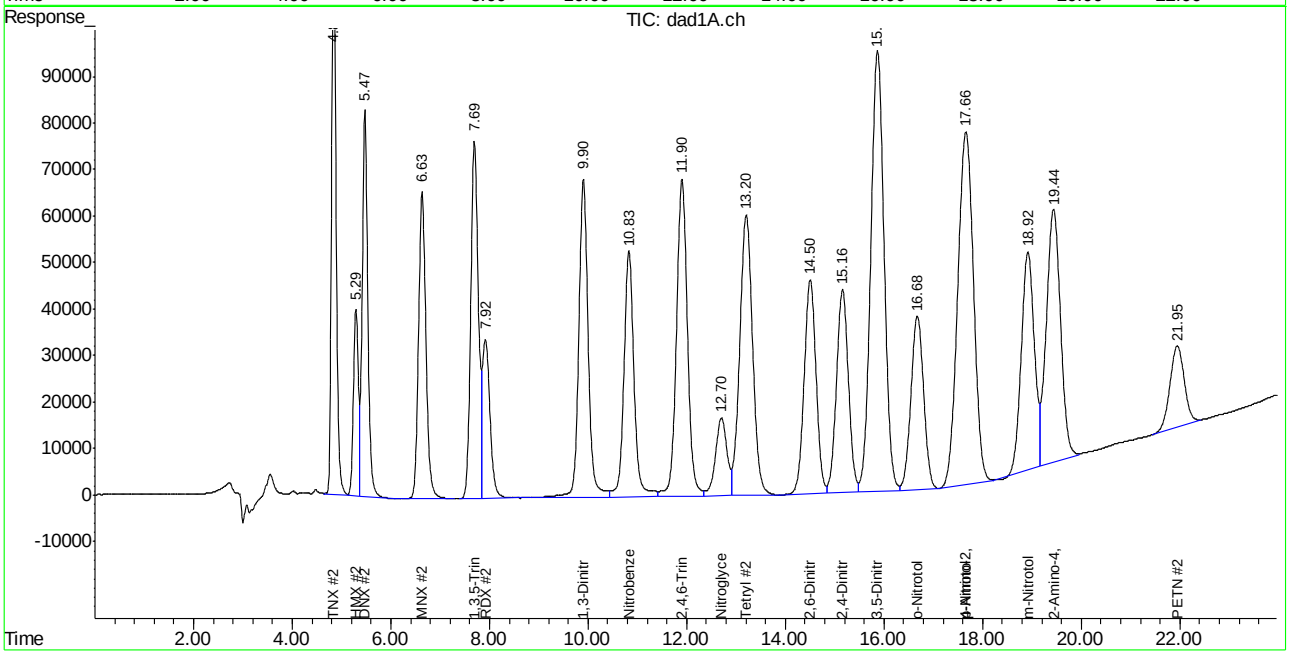
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2923\GG620521.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG2923\GG620521.D\dad1A.ch
Acq On : 12-Jan-2021, 15:29:24 Operator: jamesb
Sample : icv2921-1000 Inst : G1315B
Misc : op83582,GGG2921,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 12 16:36 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue Jan 12 16:35:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

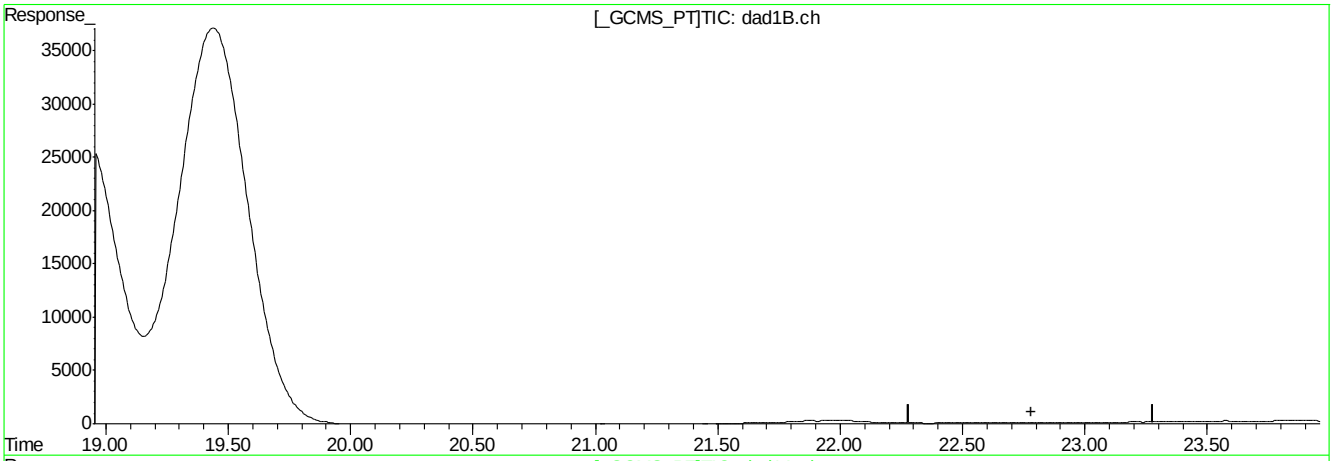
Sample Number:	GGG2921-ICV2921	**Method:**	SW846 8330A
Lab FileID:	GG620521.D	**Analyst approved:**	01/12/21 17:19 James Boone
Injection Time:	01/12/21 15:29	**Supervisor approved:**	01/12/21 17:36 Naresh Jiawan

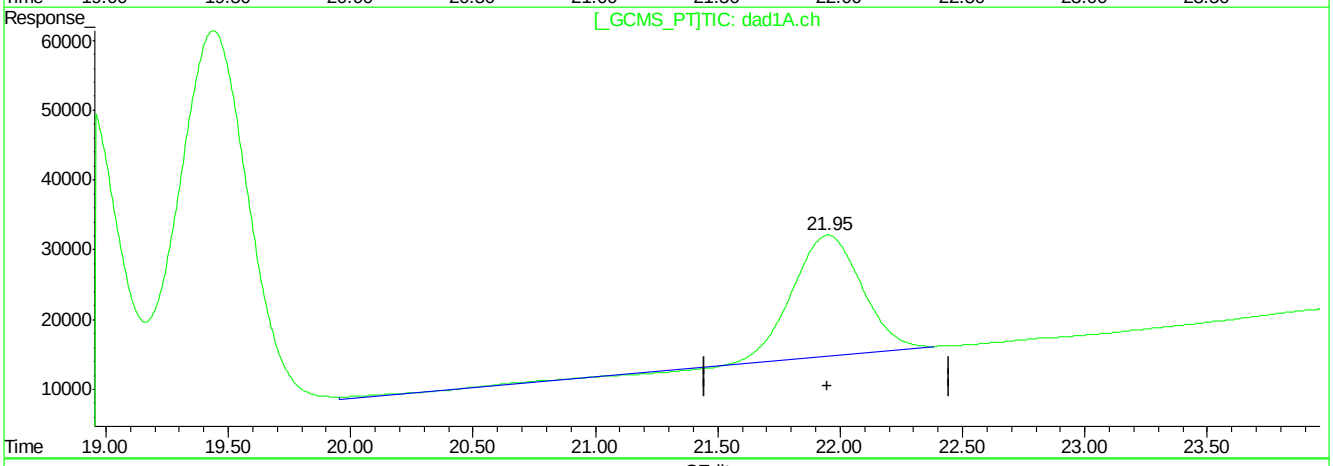
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.95	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2923\GG620521.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GGG2923\GG620521.D\dad1A.ch
Acq On : 12-Jan-2021, 15:29:24 Operator: jamesb
Sample : icv2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jan 12 16:35 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue Jan 12 16:35:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.95min 941.224ppb

response 3353634

(+) = Expected Retention Time
GG620521.D 8330RPB.M_010821.M Tue Jan 12 16:36:03 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:07

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1A.ch
Acq On : 05-Feb-2021, 11:03:10 Operator: jamesb
Sample : cc2921-1000 Inst : G1315B
Misc : op83940,GGG2934,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 08 11:30:09 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
12)	S 3,4-Dinitrotolue	14.17	14.17	5387825	10594488	1011.562	972.317	
	Spiked Amount 500.000	Range 70 - 136		Recovery =		202.31%#	194.46%#	
	Target Compounds							
1)	TNX	4.83	4.83	7989977	7989977	1013.297	1014.031	
2)	HMX	5.30	5.30	3006790	3006790	944.393	944.393	
3)	DNX	5.47	5.47	7141808	7141808	1035.552	1035.552	
4)	MNX	6.62	6.62	7308947	7308947	1046.875	1046.875	
5)	1,3,5-Trinitrobe	7.64	7.64	9765308	9770060	995.431	996.001	
6)	RDX	7.92	7.92	4597833	4615610	1082.841	1087.028	
7)	1,3-Dinitrobenze	9.88	9.88	13218409	10444242	1018.135	996.838	
8)	Nitrobenzene	10.79	10.79	8620182	8575974	1147.173	962.726	
9)	2,4,6-Trinitroto	11.85	11.85	9164168	12382131	1009.477	1016.406	
10)	Nitroglycerin	0.00	12.67	0	3321671	N.D.	1058.894	#
11)	Tetryl	13.20	13.20	7210497	12513508	1028.222	983.901	
13)	2,6-Dinitrotolue	14.49	14.49	6458054	9265750	1028.053	993.061	
14)	2,4-Dinitrotolue	15.14	15.14	12055844	8526110	1032.814	1004.809	
15)	3,5-Dinitroanili	15.90	15.90	10160700	16725540	1025.729	1066.033	
16)	o-Nitrotoluene	16.64	16.64	5411155	8055829	1168.452	1169.640	
17)	p-Nitrotoluene	17.68	17.67	11177502	20419347	2120.094	2135.599	
18)	4-Amino-2,6-Dini	17.68	17.67	11177502	20419347	2120.094	2135.859	
19)	m-Nitrotoluene	18.88	18.88	5815758	9887941	1102.256	1130.020	
20)	2-Amino-4,6-Dini	19.50	19.50	9002224	12803644	992.828	1037.867	
21)	PETN	0.00	21.90	0	3383372	N.D. d	949.762	m

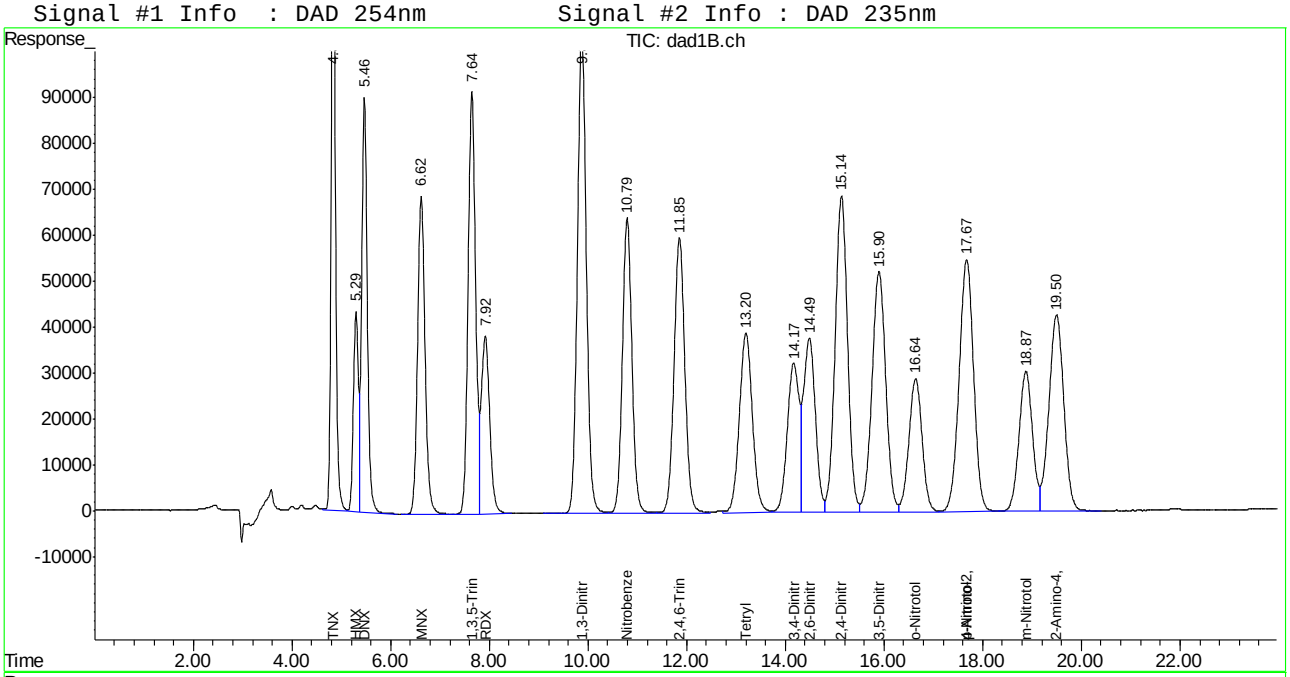
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

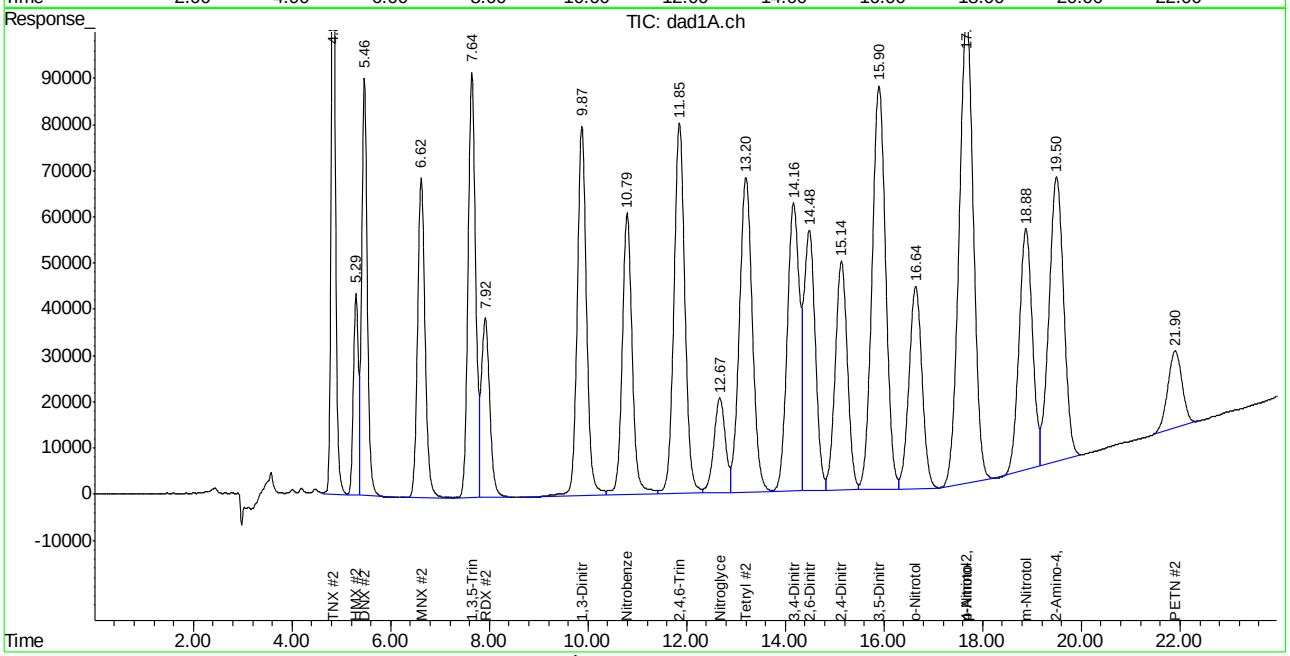
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1A.ch
Acq On : 05-Feb-2021, 11:03:10 Operator: jamesb
Sample : cc2921-1000 Inst : G1315B
Misc : op83940,GGG2934,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:35 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

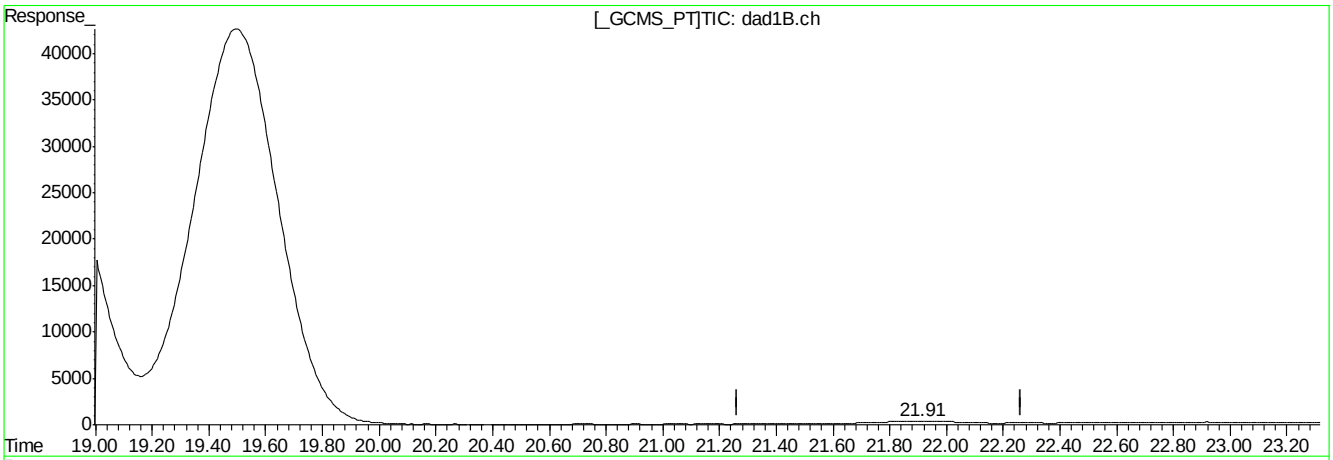
Sample Number: GGG2934-CC2921
Lab FileID: GG620646.D
Injection Time: 02/05/21 11:03
Method: SW846 8330A
Analyst approved: 02/08/21 11:38 James Boone
Supervisor approved: 02/08/21 13:07 Naresh Jiawan

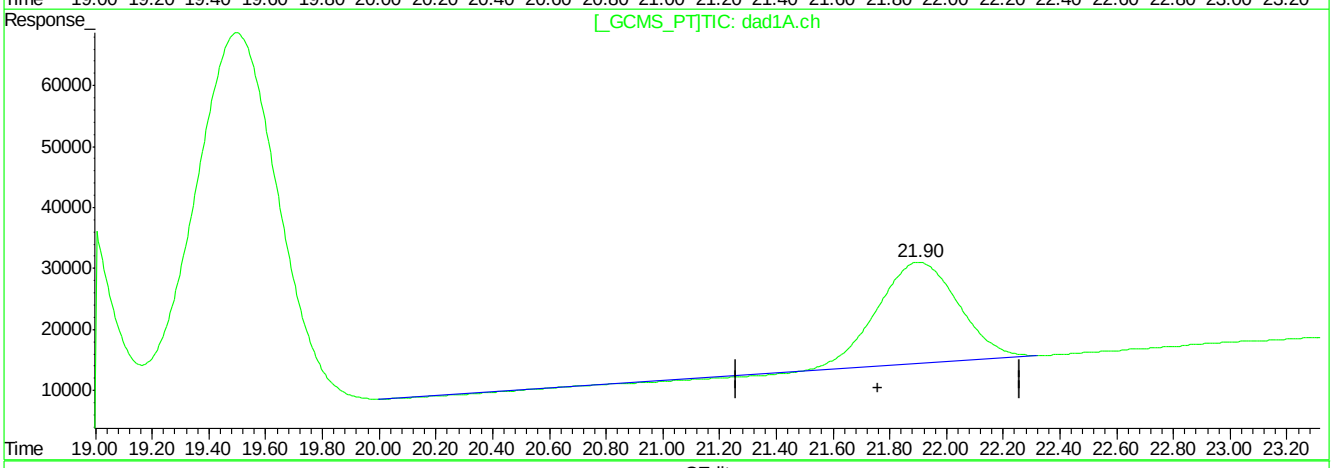
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.90	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1A.ch
Acq On : 05-Feb-2021, 11:03:10 Operator: jamesb
Sample : cc2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 5 11:54 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Feb 04 09:21:51 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.92min 0.000ppb

response 71230

(21) PETN #2

21.90min 893.094ppb

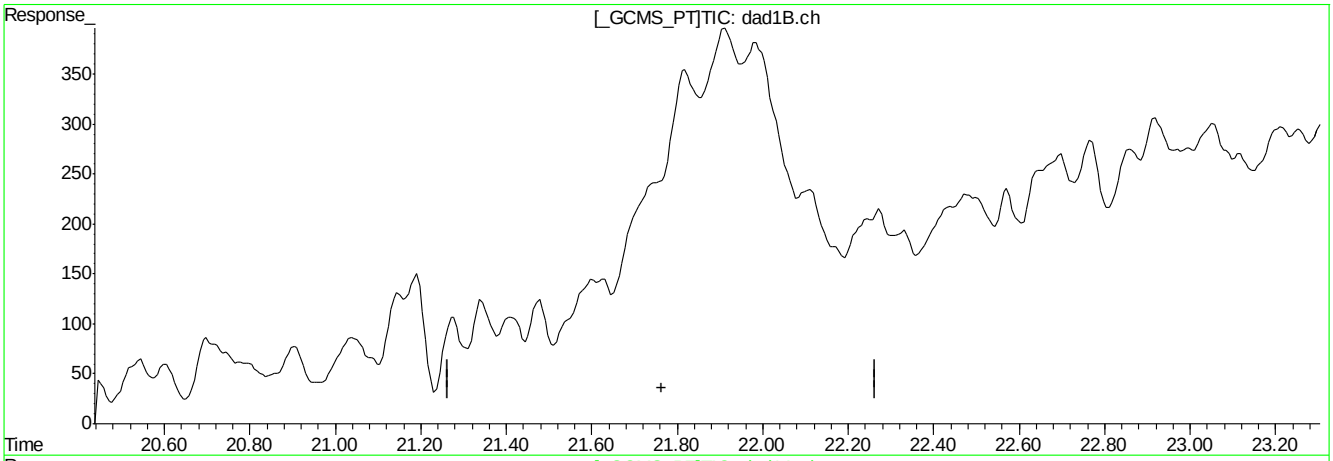
response 3185763

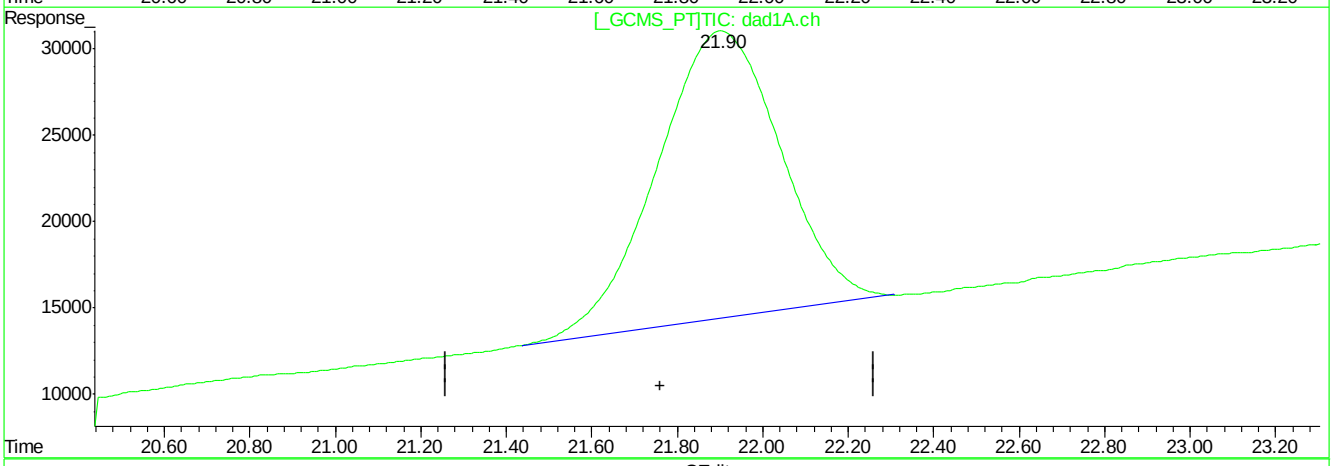
(+) = Expected Retention Time
GG620646.D 8330RPB.M_010821.M Fri Feb 05 11:55:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1A.ch
Acq On : 05-Feb-2021, 11:03:10 Operator: jamesb
Sample : cc2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 5 11:54 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Thu Feb 04 09:21:51 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.90min 935.760ppb m

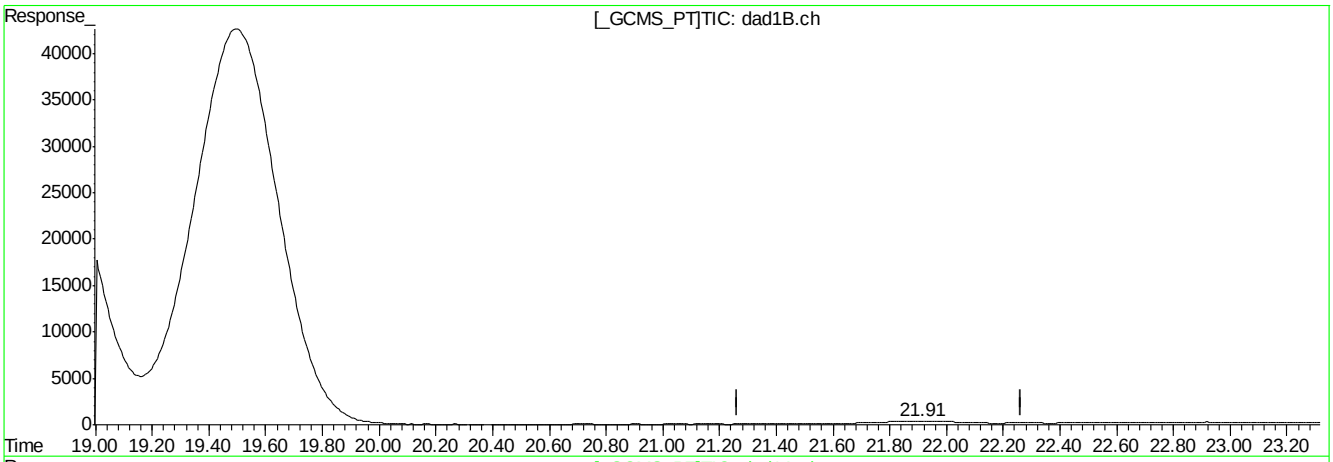
response 3334596

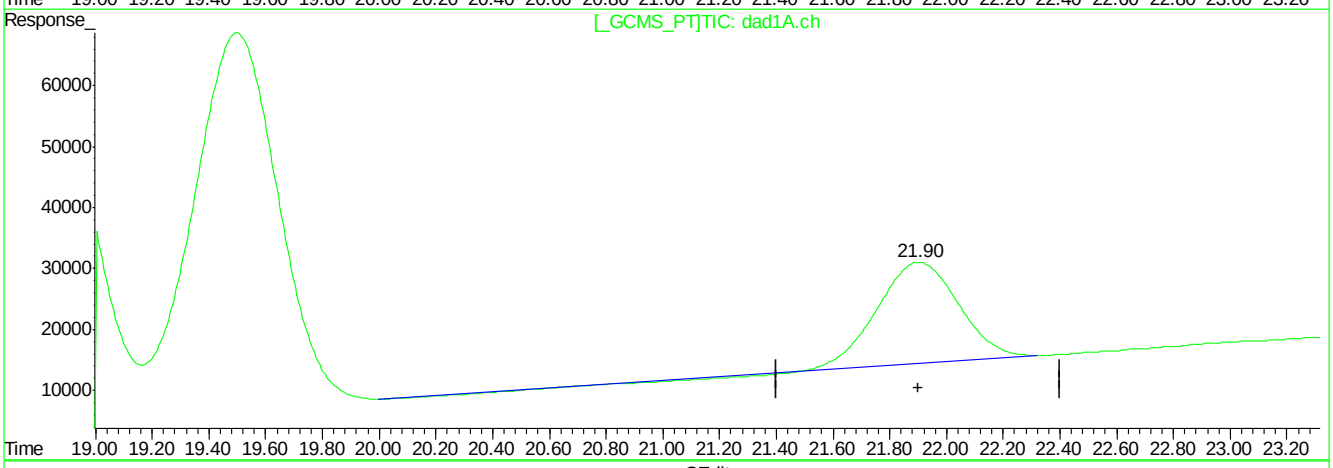
(+) = Expected Retention Time
GG620646.D 8330RPB.M_010821.M Fri Feb 05 11:55:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1A.ch
Acq On : 05-Feb-2021, 11:03:10 Operator: jamesb
Sample : cc2921-1000 Inst : G1315B
Misc : op83940,GGG2934,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.92min 0.000ppb

response 71230

(21) PETN #2

21.90min 893.094ppb

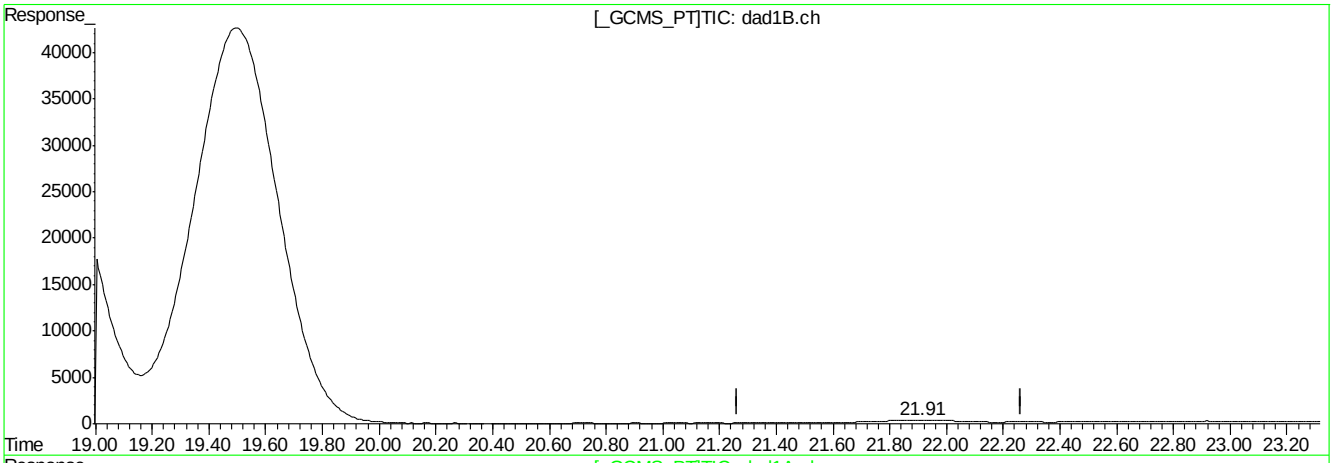
response 3185763

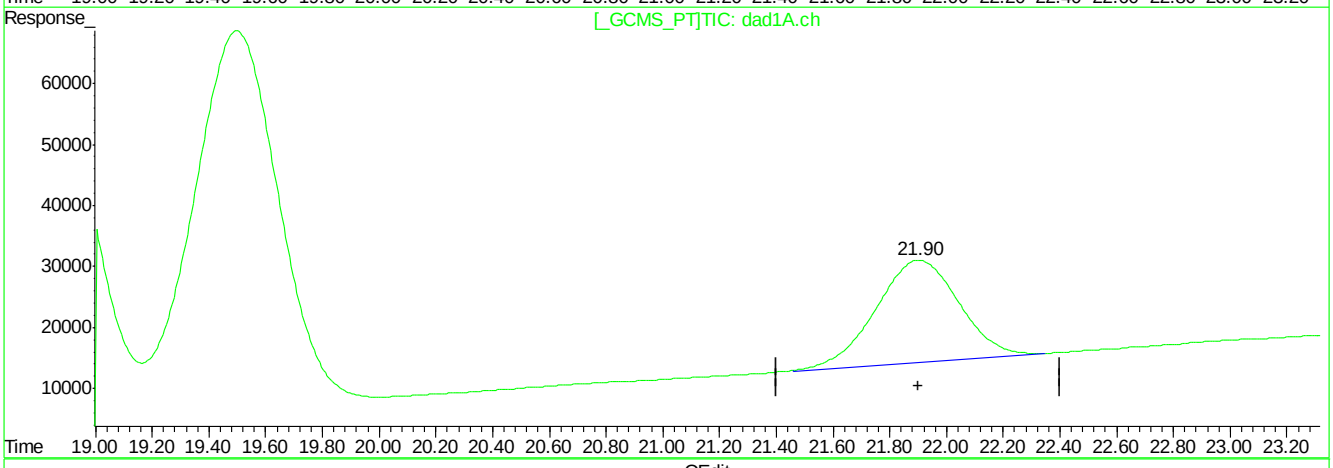
(+) = Expected Retention Time
GG620646.D 8330RPB.M_010821.M Mon Feb 08 11:31:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620646.D\dad1A.ch
Acq On : 05-Feb-2021, 11:03:10 Operator: jamesb
Sample : cc2921-1000 Inst : G1315B
Misc : op83940,GGG2934,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.92min 0.000ppb

response 71230

(21) PETN #2

21.90min 949.762ppb m

response 3383372

(+) = Expected Retention Time
GG620646.D 8330RPB.M_010821.M Mon Feb 08 11:31:31 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:07

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620658.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620658.D\dad1A.ch
Acq On : 05-Feb-2021, 17:20:14 Operator: jamesb
Sample : cc2921-1000 Inst : G1315B
Misc : op83940,GGG2934,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 08 11:30:21 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.23	14.23	5402524	10665270	1014.321	978.813
	Spiked Amount 500.000	Range 70 - 136		Recovery =		202.86%#	195.76%#
	Target Compounds						
1)	TNX	4.85	4.85	7974764	7974764	1011.368	1012.100
2)	HMX	5.31	5.31	3024426	3024426	949.932	949.932
3)	DNX	5.48	5.48	7116980	7116980	1031.952	1031.952
4)	MNX	6.65	6.65	7288066	7288066	1043.884	1043.884
5)	1,3,5-Trinitrobe	7.67	7.67	9745192	9745192	993.381	993.466
6)	RDX	7.96	7.96	4586452	4586452	1080.161	1080.161
7)	1,3-Dinitrobenze	9.93	9.93	13174291	10547403	1014.737	1006.684
8)	Nitrobenzene	10.85	10.85	8543680	8740165	1136.992	981.158
9)	2,4,6-Trinitroto	11.90	11.90	9157853	12547773	1008.781	1030.003
10)	Nitroglycerin	0.00	12.72	0	3399871	N.D.	1084.751 #
11)	Tetryl	13.26	13.26	7261931	12749609	1035.556	1003.043
13)	2,6-Dinitrotolue	14.56	14.56	6406081	9238101	1019.780	990.037
14)	2,4-Dinitrotolue	15.21	15.21	12010668	8482503	1028.944	999.569
15)	3,5-Dinitroanili	15.98	15.98	10122020	16653757	1021.824	1061.458
16)	o-Nitrotoluene	16.73	16.73	5319008	7875645	1148.554	1143.479
17)	p-Nitrotoluene	17.77	17.77	11111727	20292458	2107.618	2122.328
18)	4-Amino-2,6-Dini	17.77	17.77	11111727	20292458	2107.618	2122.586
19)	m-Nitrotoluene	18.98	18.98	5774181	9755829	1094.376	1114.922
20)	2-Amino-4,6-Dini	19.60	19.60	8987714	12784013	991.227	1036.276
21)	PETN	0.00	21.97	0	3232261	N.D.	906.414m#

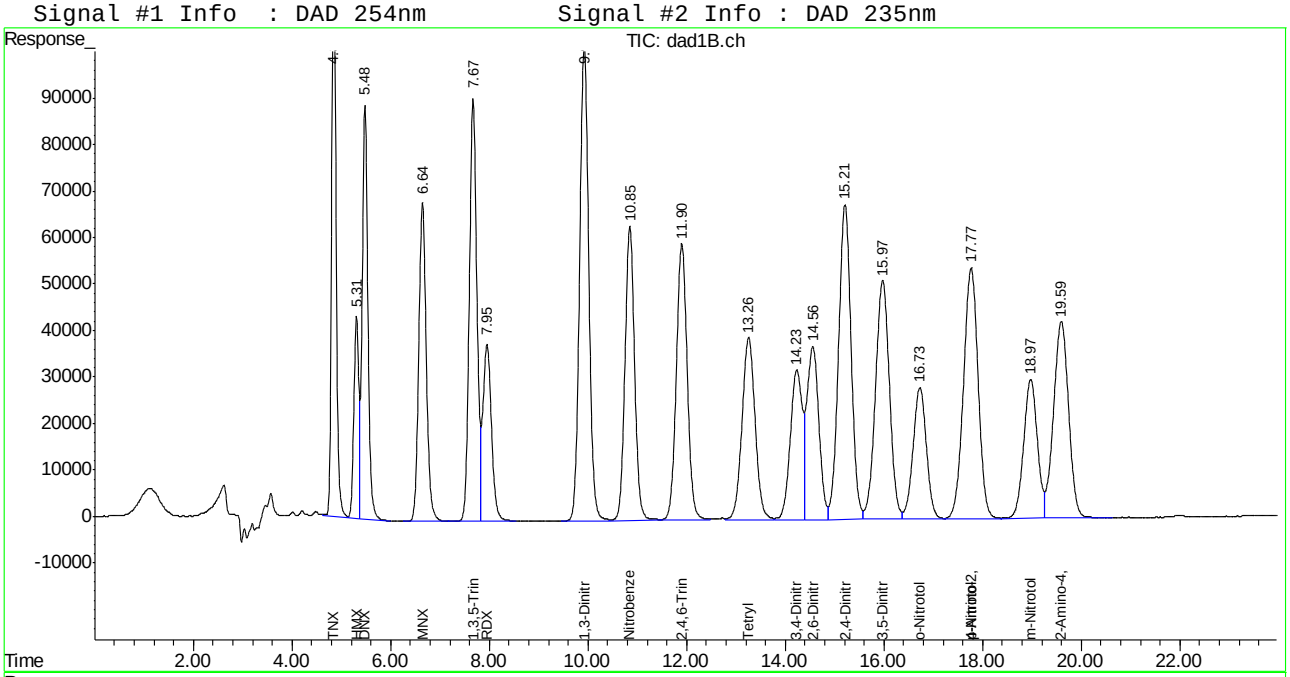
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

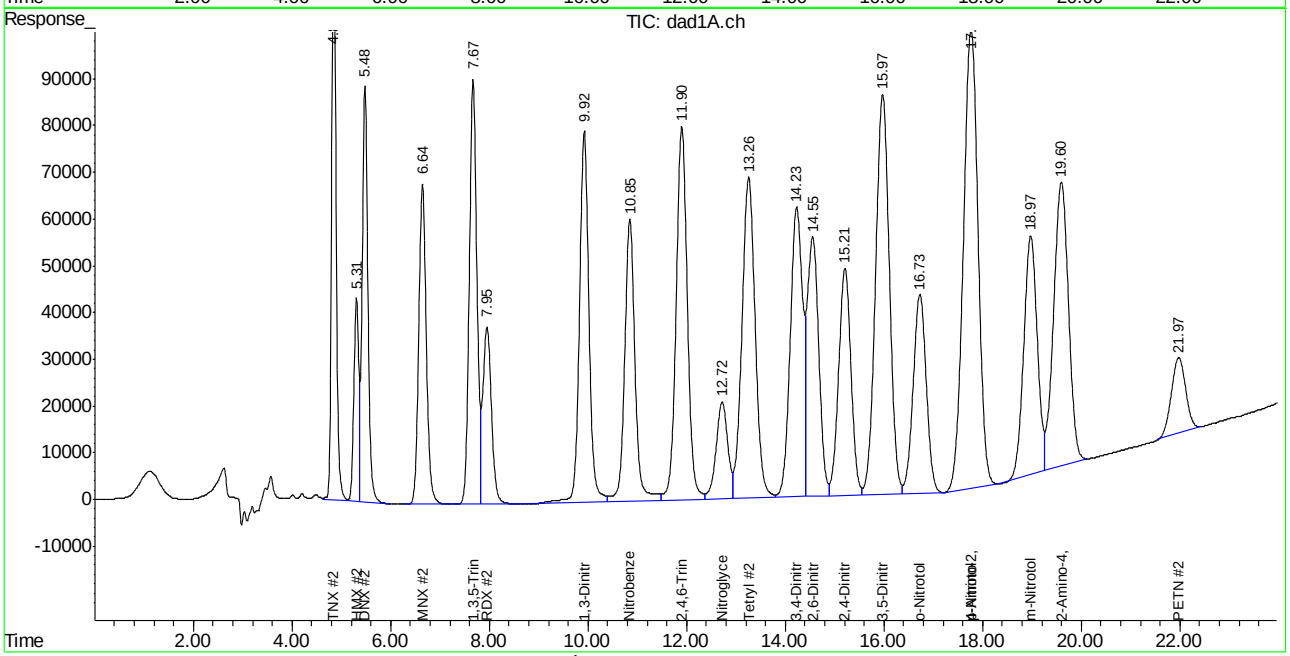
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620658.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620658.D\dad1A.ch
Acq On : 05-Feb-2021, 17:20:14 Operator: jamesb
Sample : cc2921-1000 Inst : G1315B
Misc : op83940,GGG2934,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:32 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

Sample Number: GGG2934-CC2921
Lab FileID: GG620658.D
Injection Time: 02/05/21 17:20

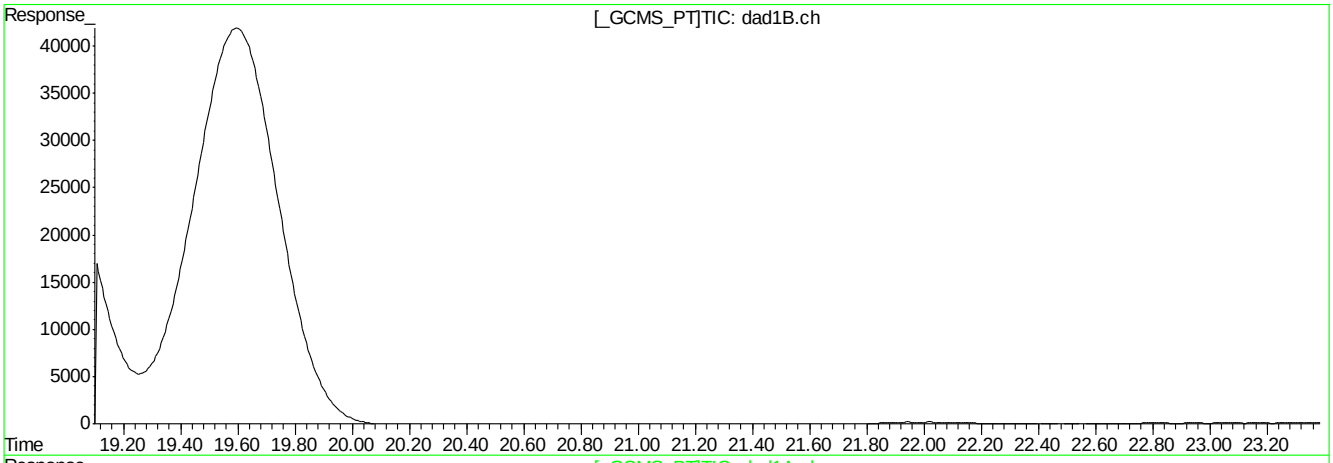
Method: SW846 8330A
Analyst approved: 02/08/21 11:38 James Boone
Supervisor approved: 02/08/21 13:07 Naresh Jiawan

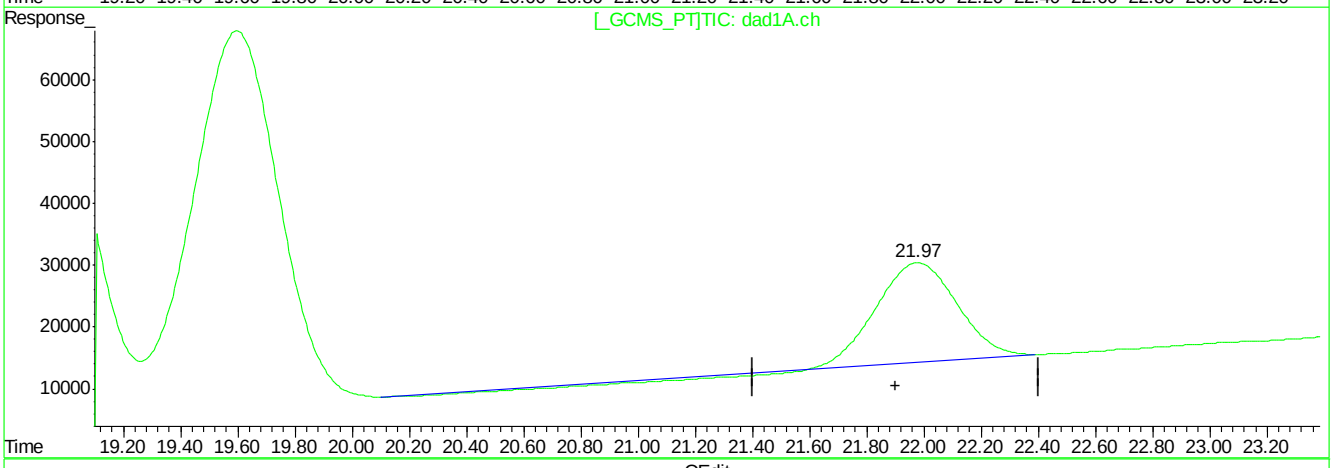
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.97	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620658.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620658.D\dad1A.ch
Acq On : 05-Feb-2021, 17:20:14 Operator: jamesb
Sample : cc2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.98min 807.704ppb

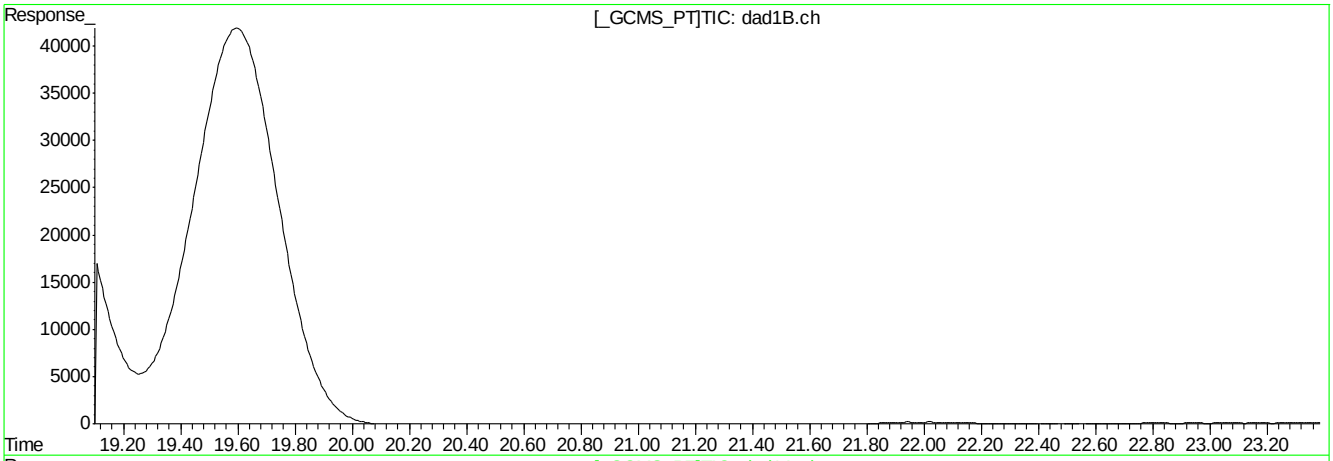
response 2886973

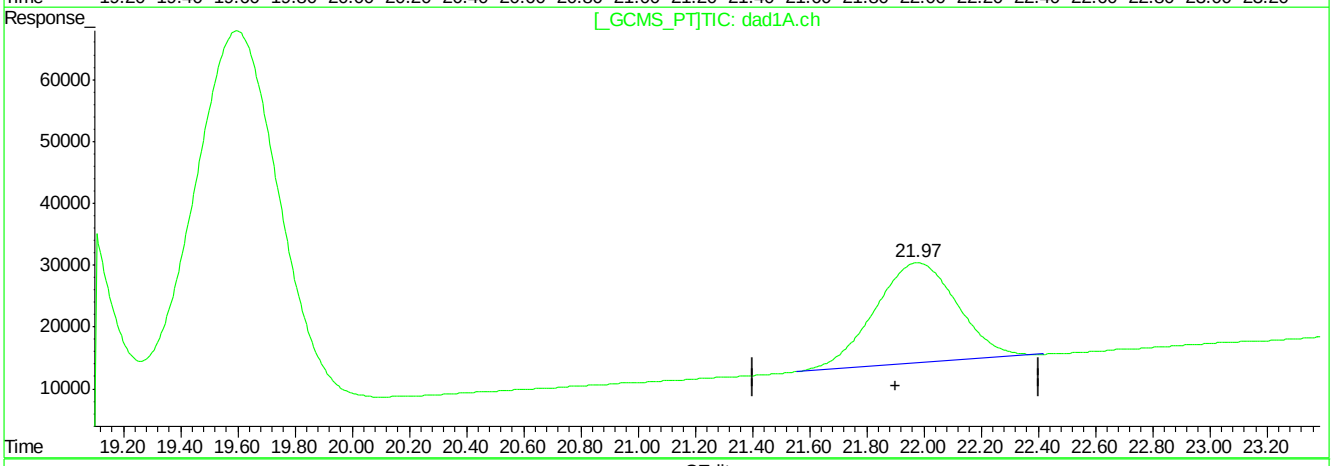
(+) = Expected Retention Time
GG620658.D 8330RPB.M_010821.M Mon Feb 08 11:32:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620658.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620658.D\dad1A.ch
Acq On : 05-Feb-2021, 17:20:14 Operator: jamesb
Sample : cc2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.97min 906.414ppb m

response 3232261

(+) = Expected Retention Time
GG620658.D 8330RPB.M_010821.M Mon Feb 08 11:32:17 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:07

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620662.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620662.D\dad1A.ch
Acq On : 05-Feb-2021, 19:25:56 Operator: jamesb
Sample : ecc2921-1000 Inst : G1315B
Misc : op83940,GGG2934,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 08 11:30:25 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
12)	S 3,4-Dinitrotolue	14.26	14.26	5373925	10551876	1008.952	968.407	
	Spiked Amount 500.000	Range 70 - 136		Recovery =		201.79%#	193.68%#	
	Target Compounds							
1)	TNX	4.85	4.85	7962035	7962035	1009.754	1010.485	
2)	HMX	5.31	5.31	3011868	3011868	945.987	945.987	
3)	DNX	5.49	5.49	7078677	7078677	1026.398	1026.398	
4)	MNX	6.65	6.65	7287968	7287968	1043.870	1043.870	
5)	1,3,5-Trinitrobe	7.67	7.67	9724594	9724594	991.281	991.366	
6)	RDX	7.96	7.96	4584561	4584561	1079.716	1079.716	
7)	1,3-Dinitrobenze	9.93	9.93	13176912	10580890	1014.939	1009.880	
8)	Nitrobenzene	10.86	10.86	8474135	8639868	1127.737	969.899	
9)	2,4,6-Trinitroto	11.92	11.92	9141755	12758183	1007.008	1047.275	
10)	Nitroglycerin	0.00	12.73	0	3551243	N.D.	1134.933	#
11)	Tetryl	13.27	13.27	7289012	12538747	1039.418	985.946	
13)	2,6-Dinitrotolue	14.58	14.58	6408615	9209579	1020.183	986.917	
14)	2,4-Dinitrotolue	15.23	15.23	12000205	8566669	1028.048	1009.683	
15)	3,5-Dinitroanili	16.00	16.00	10093850	16781397	1018.980	1069.594	
16)	o-Nitrotoluene	16.76	16.76	5266164	7946475	1137.144	1153.763	
17)	p-Nitrotoluene	17.81	17.80	11092101	20234989	2103.895	2116.317	
18)	4-Amino-2,6-Dini	17.81	17.80	11092101	20234989	2103.895	2116.575	
19)	m-Nitrotoluene	19.01	19.01	5802623	9729482	1099.767	1111.911	
20)	2-Amino-4,6-Dini	19.63	19.63	9002165	12933123	992.821	1048.363	
21)	PETN	0.00	21.99	0	3509077	N.D.	985.891	m#

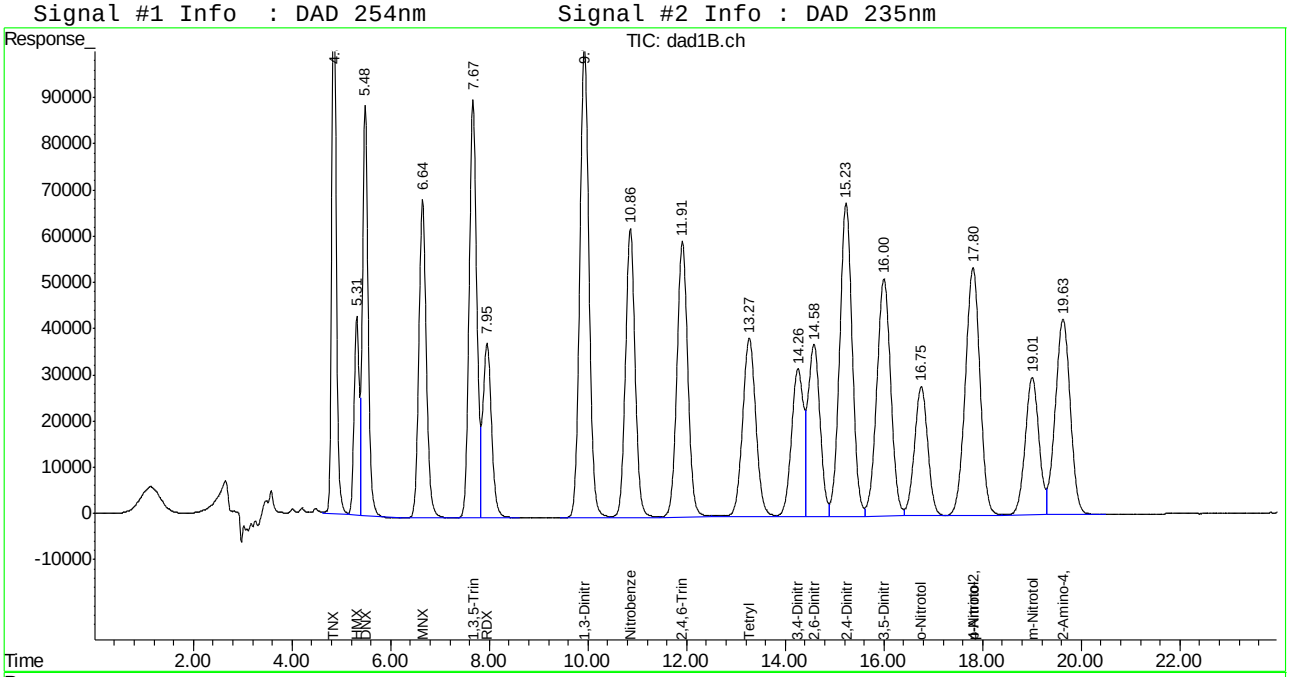
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620662.D 8330RPB.M_010821.M Mon Feb 08 11:34:05 2021 Page 1

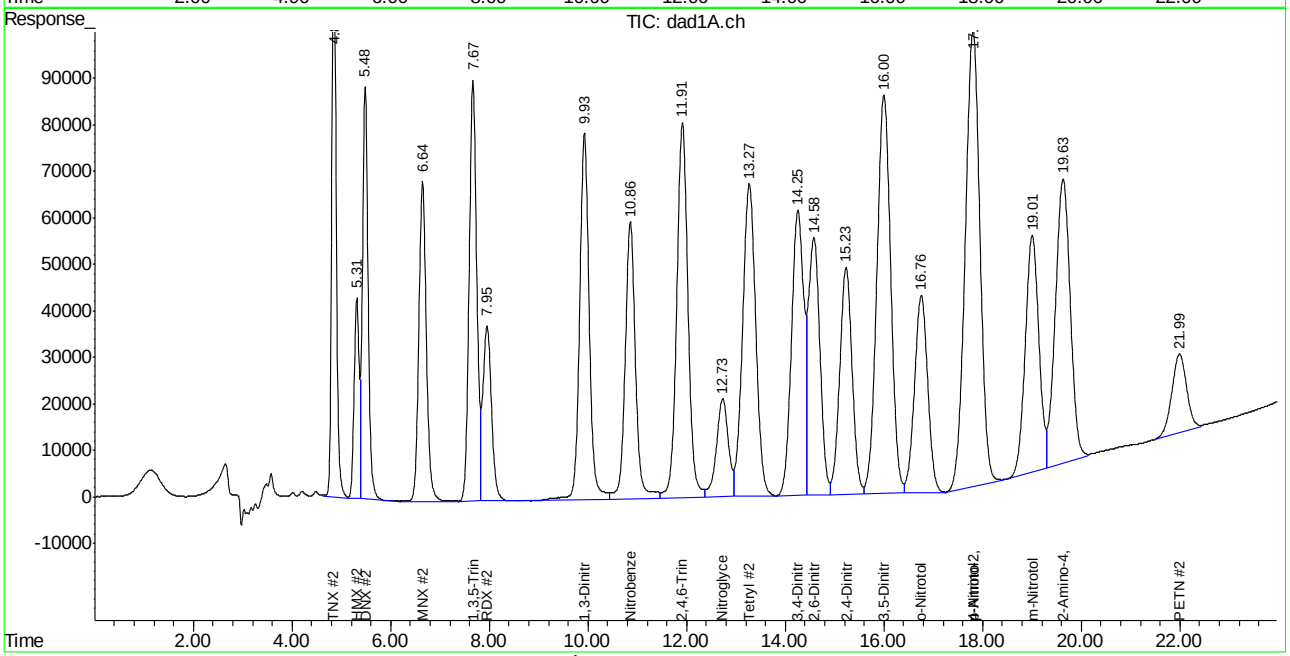
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620662.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620662.D\dad1A.ch
Acq On : 05-Feb-2021, 19:25:56 Operator: jamesb
Sample : ecc2921-1000 Inst : G1315B
Misc : op83940,GGG2934,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:33 2021 Quant Results File: 8330RPB.M_010821.RES

Quant Method : C:\MSDCHEM\1...\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

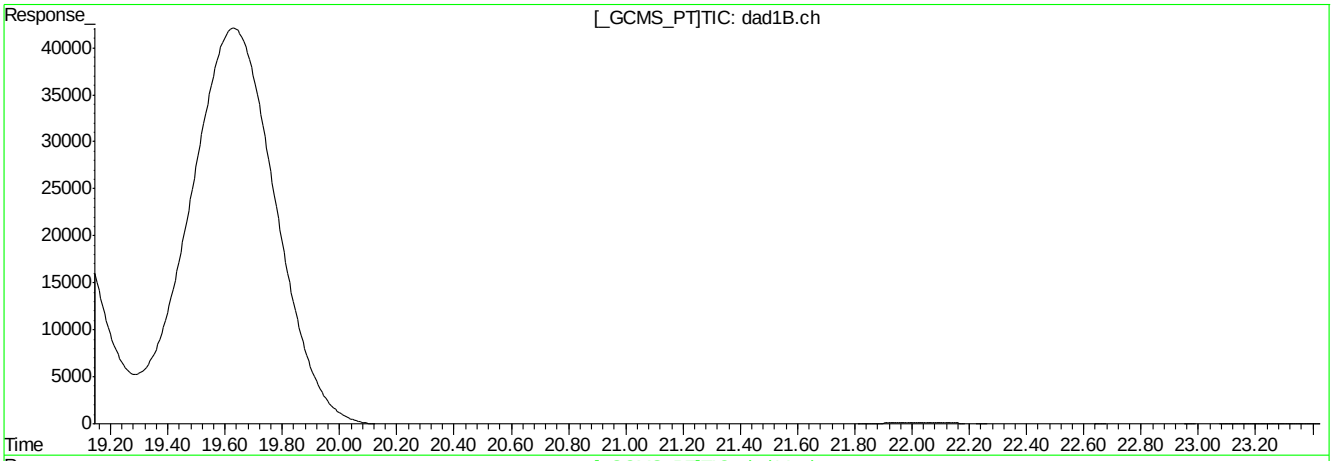
Sample Number:	GGG2934-ECC2921	**Method:**	SW846 8330A
Lab FileID:	GG620662.D	**Analyst approved:**	02/08/21 11:38 James Boone
Injection Time:	02/05/21 19:25	**Supervisor approved:**	02/08/21 13:07 Naresh Jiawan

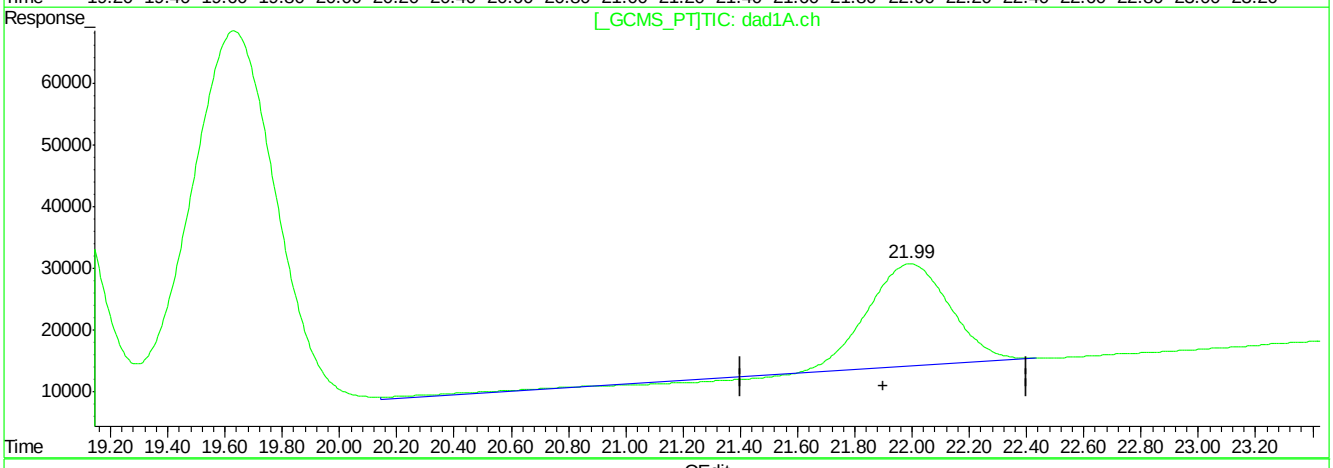
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.99	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620662.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620662.D\dad1A.ch
Acq On : 05-Feb-2021, 19:25:56 Operator: jamesb
Sample : ecc2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.99min 941.823ppb

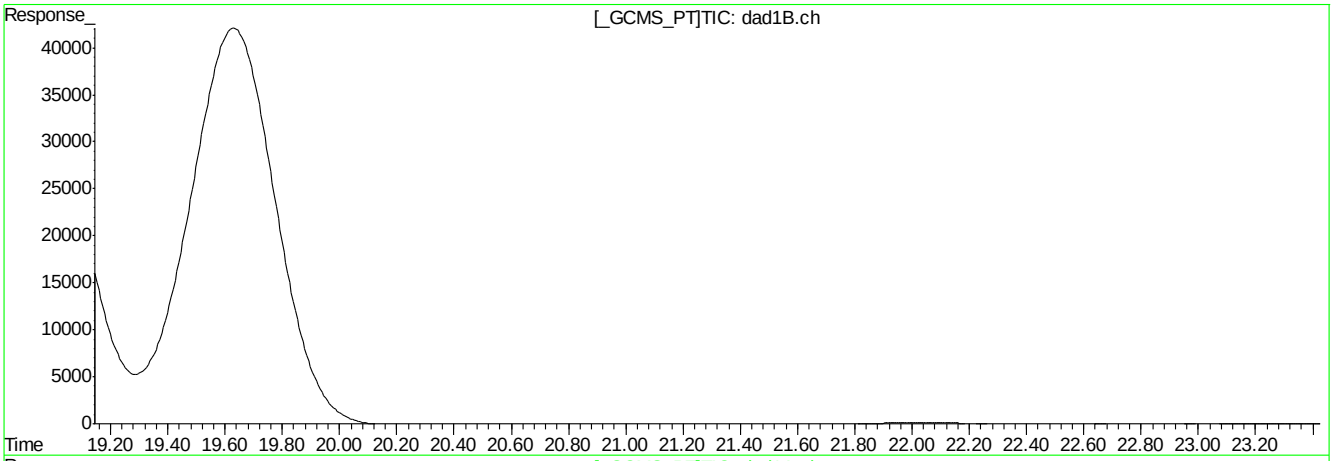
response 3355721

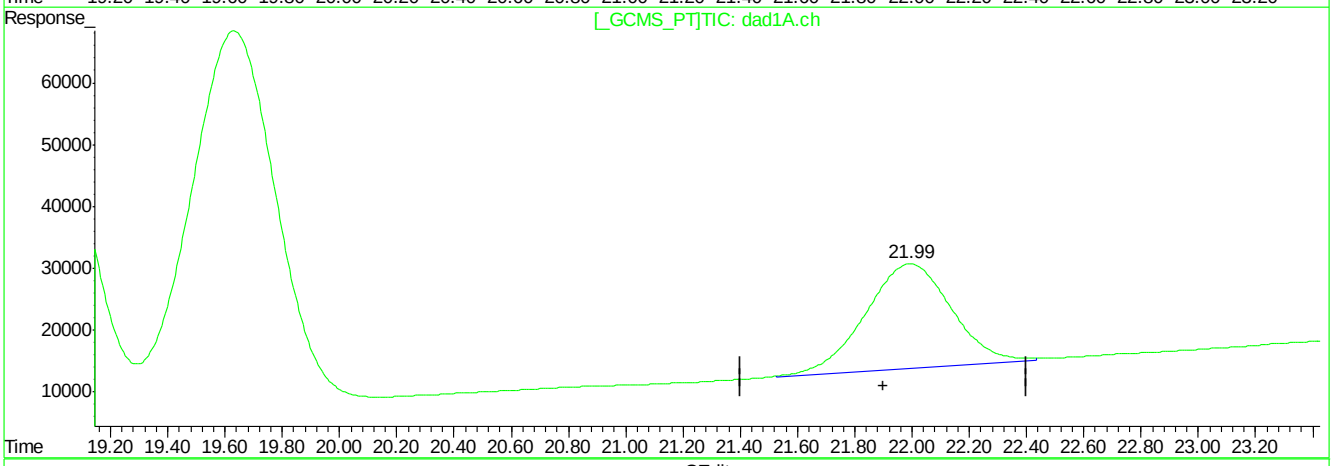
(+) = Expected Retention Time
GG620662.D 8330RPB.M_010821.M Mon Feb 08 11:33:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2934\GG620662.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2934\GG620662.D\dad1A.ch
Acq On : 05-Feb-2021, 19:25:56 Operator: jamesb
Sample : ecc2921-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Feb 8 11:30 2021 Quant Results File: 8330RPB.M_010821.RES

Method : C:\MSDCHEM\1\METHODS\8330RPB.M_010821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Feb 08 11:29:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.99min 985.891ppb m

response 3509077

(+) = Expected Retention Time
GG620662.D 8330RPB.M_010821.M Mon Feb 08 11:33:29 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 05 07:48:29 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.53	11.57	60035	54067	27.176m	13.725 #
Spiked Amount	500.000	Range	70 - 136	Recovery	=	5.44%#	2.74%#
	Target Compounds						
1)	TNX	1.35	1.35	83836	102682	26.693	21.757
2)	HMX	1.50	1.50	51060	149764	31.669m	32.677m
3)	DNX	1.74	1.75	71020	124129	25.543m	28.326m
4)	MNX	2.36	2.36	83159	118282	28.331m	25.988m
5)	RDX	2.99	3.00	43073	61490	22.307m	20.261m
6)	1,3,5-Trinitrobe	4.80	4.80	110345	175857	26.261m	21.975
7)	1,3-Dinitrobenze	6.01	6.00	120009	83970	22.284	21.589m
8)	3,5-Dinitroanili	6.43	6.43	93085	146191	22.596	20.544m
9)	Nitrobenzene	7.56	7.60	85387	75893	26.374m	22.846m
10)	Nitroglycerin	0.00	9.21	0	33533	N.D.	27.424m#
11)	Tetryl	9.78	9.78	62668	113617	19.768m	22.934
12)	2,4,6-Trinitroto	10.17	10.15	66804	97807	17.352m	20.877
13)	2-Amino-4,6-Dini	10.64	10.64	77700	108028	22.223m	20.679
14)	4-Amino-2,6-Dini	11.12	11.14	51972	68316	20.740m	13.572
16)	2,4-Dinitrotolue	12.12	12.19	121571	71651	24.811m	21.672m
17)	2,6-Dinitrotolue	12.63	12.63	75230	79028	26.243m	21.965m
18)	o-Nitrotoluene	15.62	15.66	69429	93488	29.899m	29.201m
19)	p-Nitrotoluene	16.21	16.23	75541	35334	20.776	11.602m#
20)	m-Nitrotoluene	16.99	17.04	69137	63530	20.392m	15.572m
21)	PETN	0.00	18.68	0	23221	N.D.	17.391m#

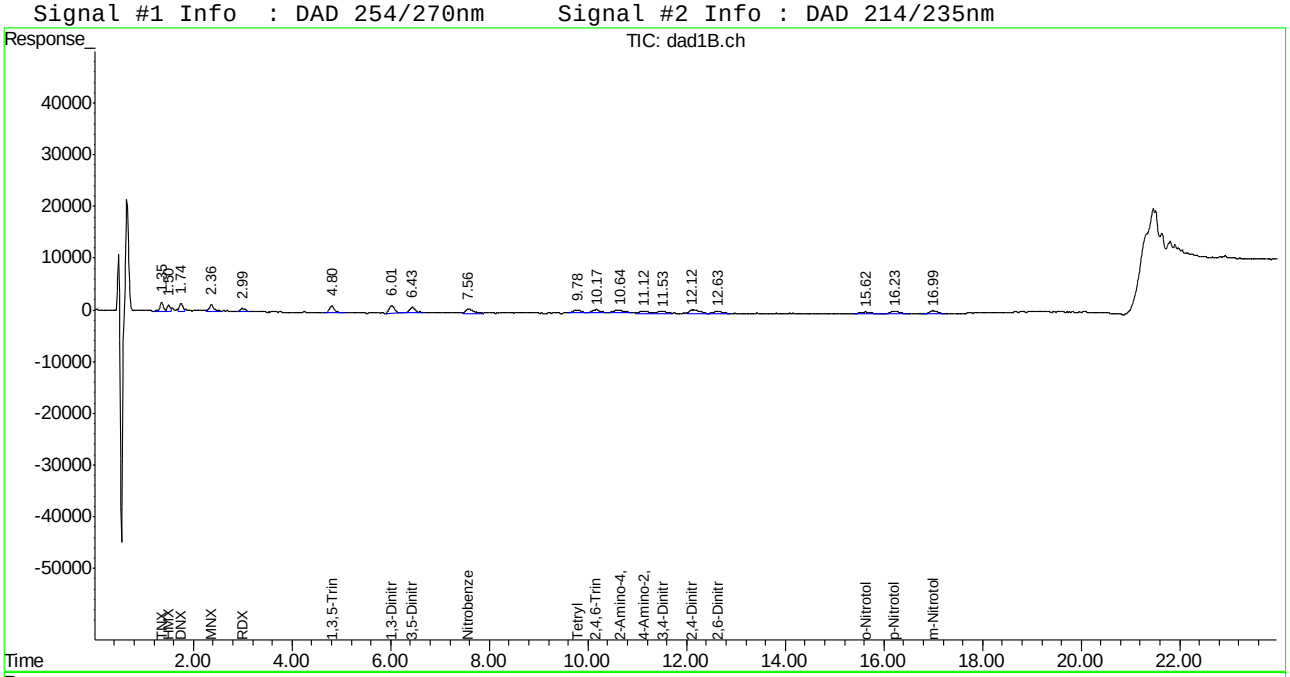
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389745.D GPP2401_020521PRI.M Fri Feb 05 09:13:52 2021 Page 1

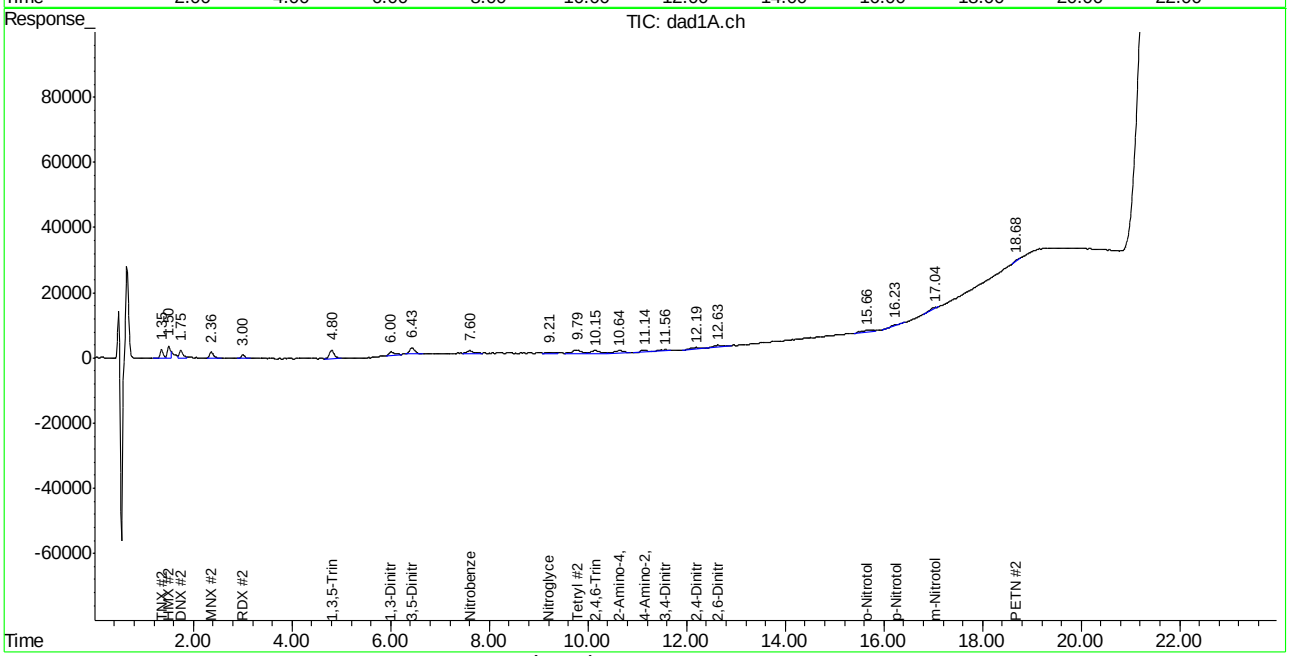
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 8:24 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

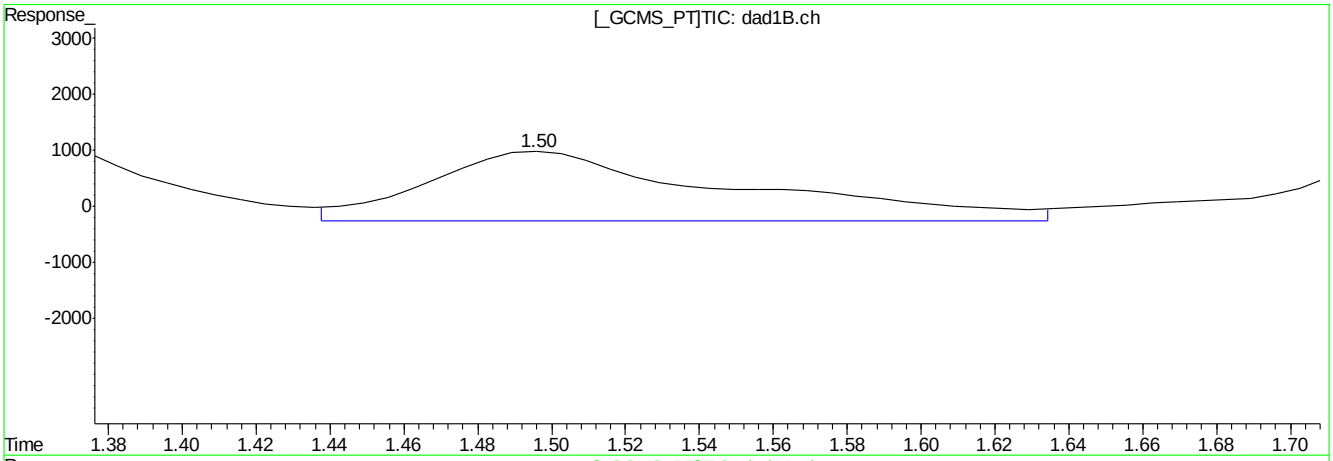
Sample Number: GPP2401-IC2401 **Method:** SW846 8330B
Lab FileID: PP389745.D **Analyst approved:** 02/05/21 09:14 James Boone
Injection Time: 02/04/21 14:05 **Supervisor approved:** 02/08/21 13:01 Naresh Jiawan

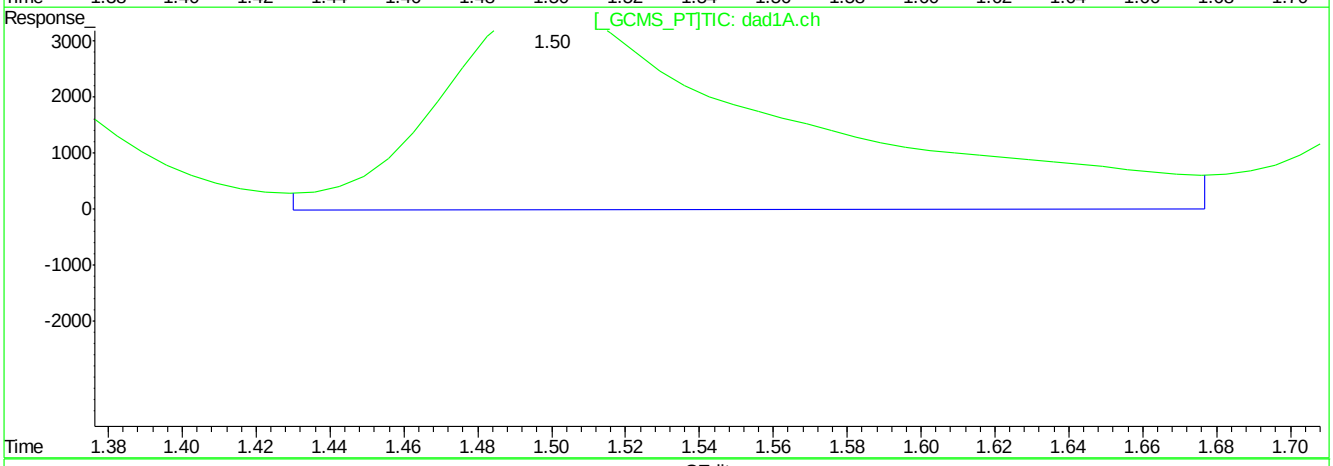
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.50	Poor instrument integration
HMX	2691-41-0	2	1.50	Poor instrument integration
DNX		1	1.74	Poor instrument integration
DNX		2	1.75	Poor instrument integration
MNX		1	2.36	Poor instrument integration
MNX		2	2.36	Poor instrument integration
RDX	121-82-4	1	2.99	Poor instrument integration
RDX	121-82-4	2	3.00	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.80	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.00	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.43	Poor instrument integration
Nitrobenzene	98-95-3	1	7.56	Poor instrument integration
Nitrobenzene	98-95-3	2	7.60	Poor instrument integration
Nitroglycerine	55-63-0	2	9.21	Poor instrument integration
Tetryl	479-45-8	1	9.78	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.17	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.64	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	11.12	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.53	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	12.12	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	12.19	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.63	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.63	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.62	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.66	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.23	Poor instrument integration
m-Nitrotoluene	99-08-1	1	16.99	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.04	Poor instrument integration
PETN	78-11-5	2	18.68	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.50min 45.151ppb

response 72787

(2) HMX #2

1.50min 52.000ppb

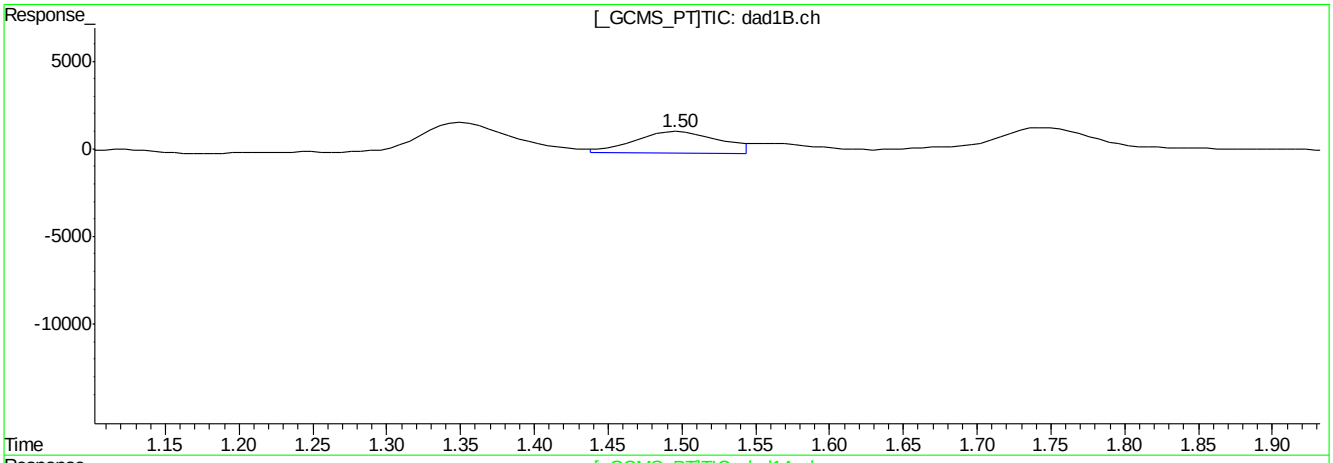
response 238274

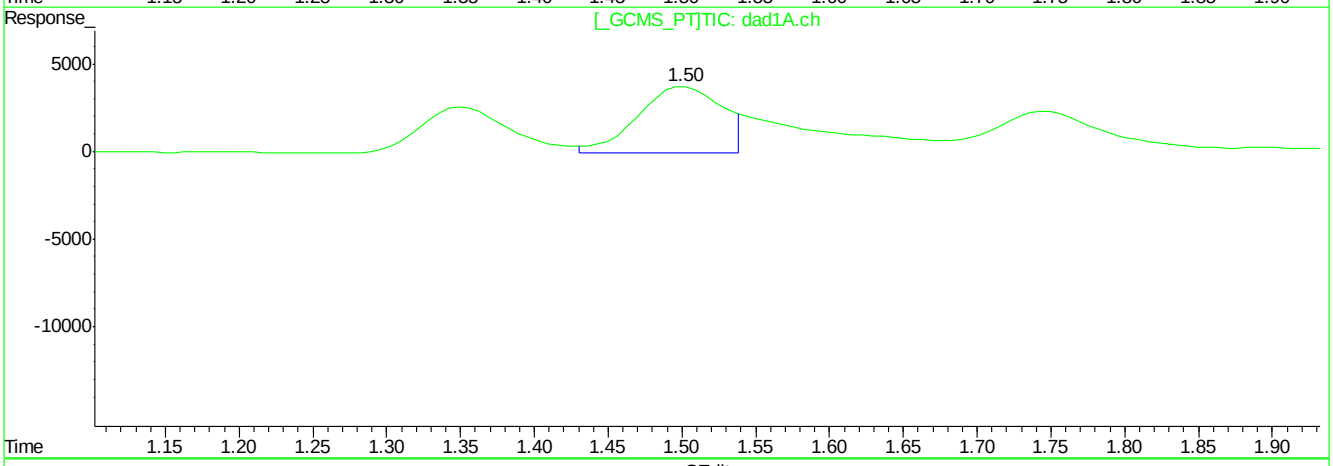
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:17:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.50min 31.669ppb m

response 51060

(2) HMX #2

1.50min 32.677ppb m

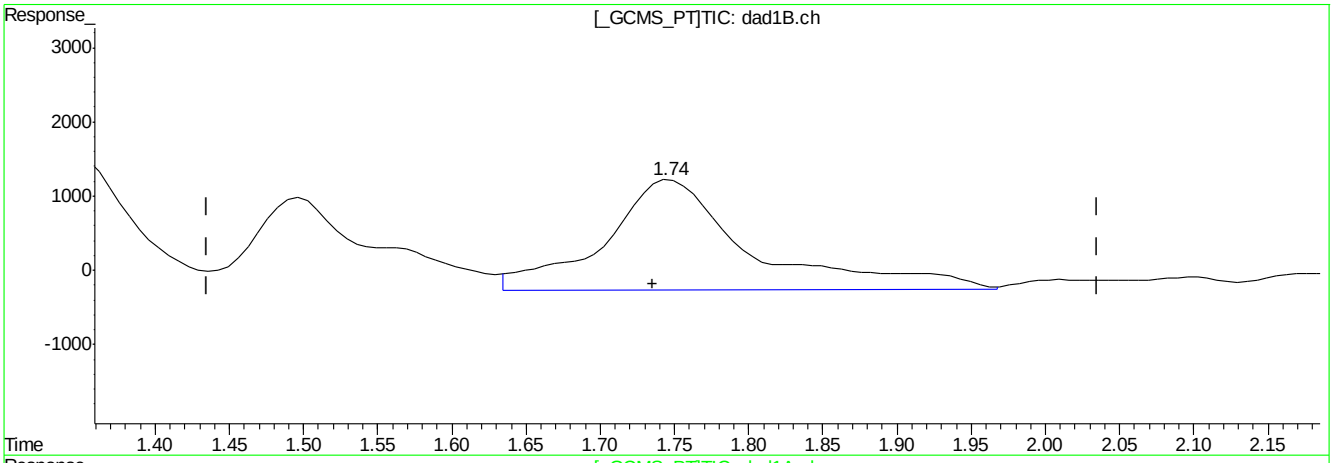
response 149764

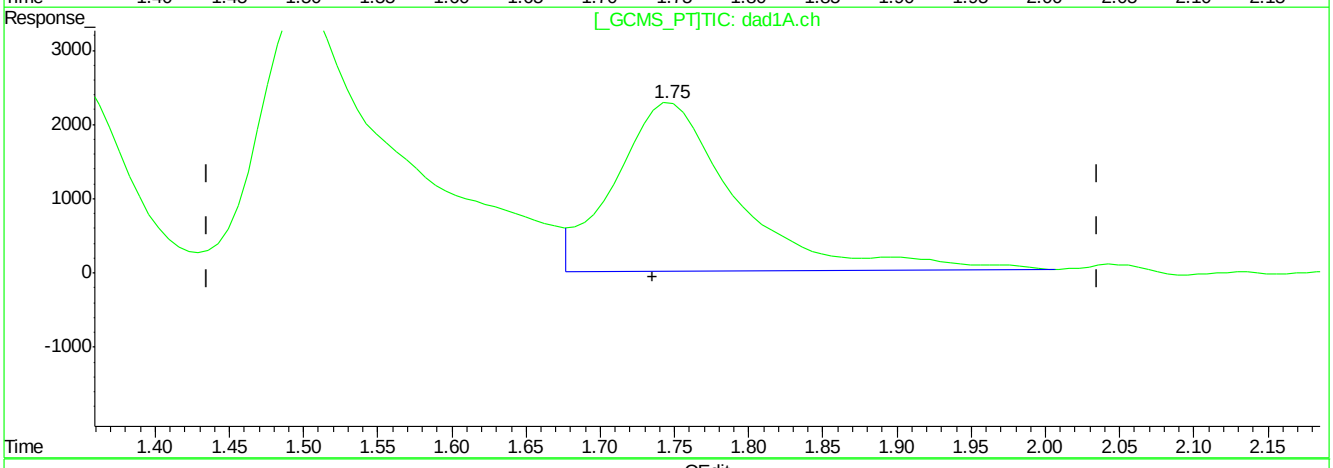
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:17:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.75min 36.328ppb

response 101008

(3) DNX #2

1.75min 30.056ppb

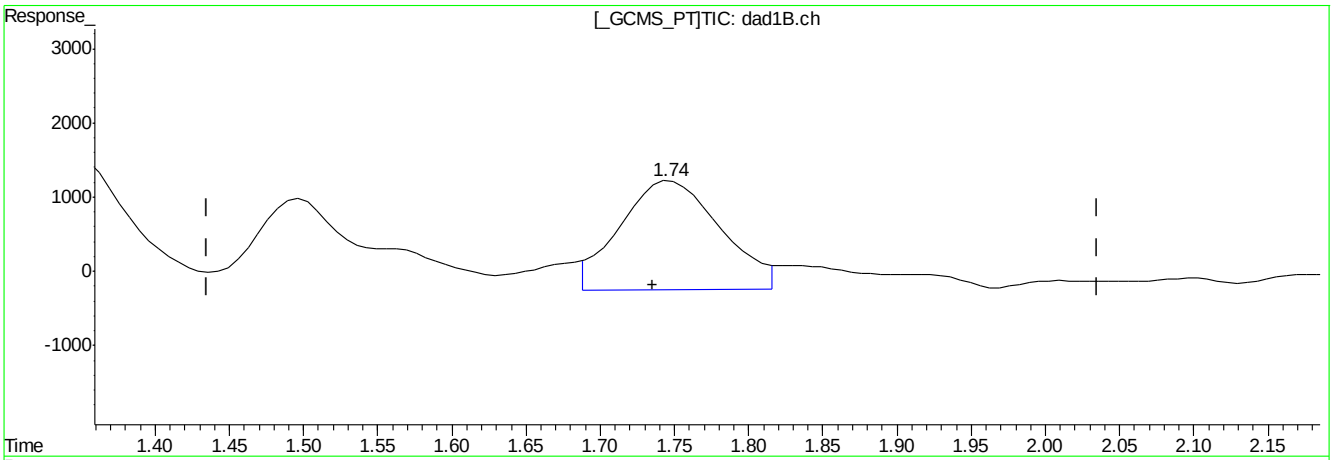
response 131705

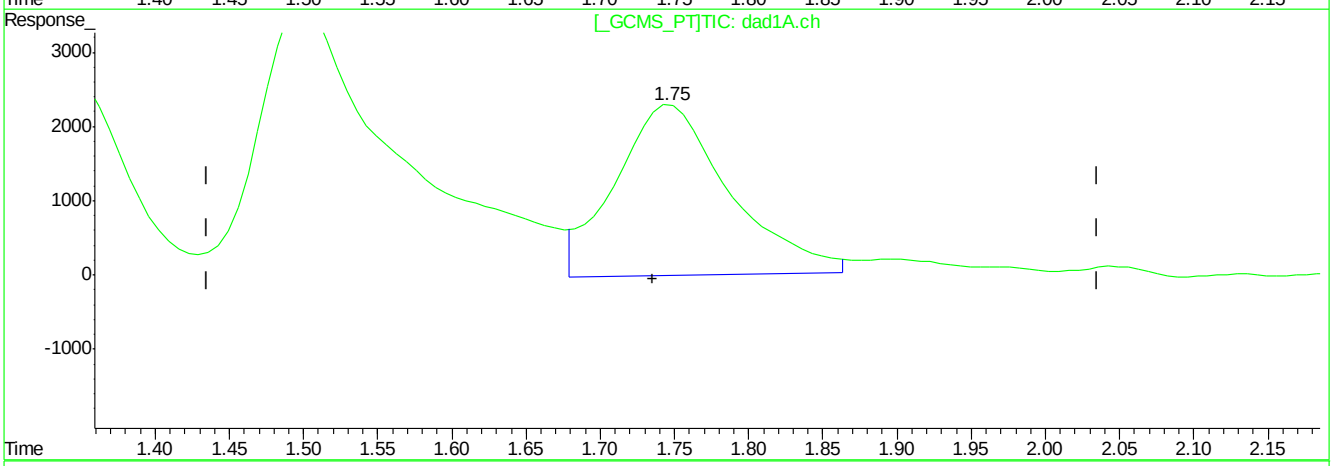
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:17:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.74min 25.543ppb m

response 71020

(3) DNX #2

1.75min 28.326ppb m

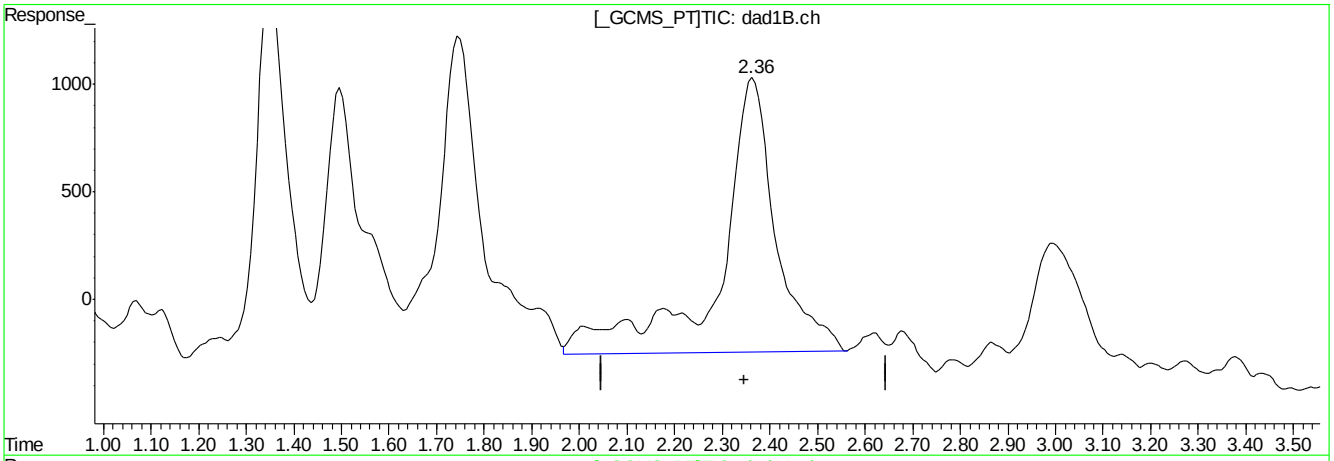
response 124129

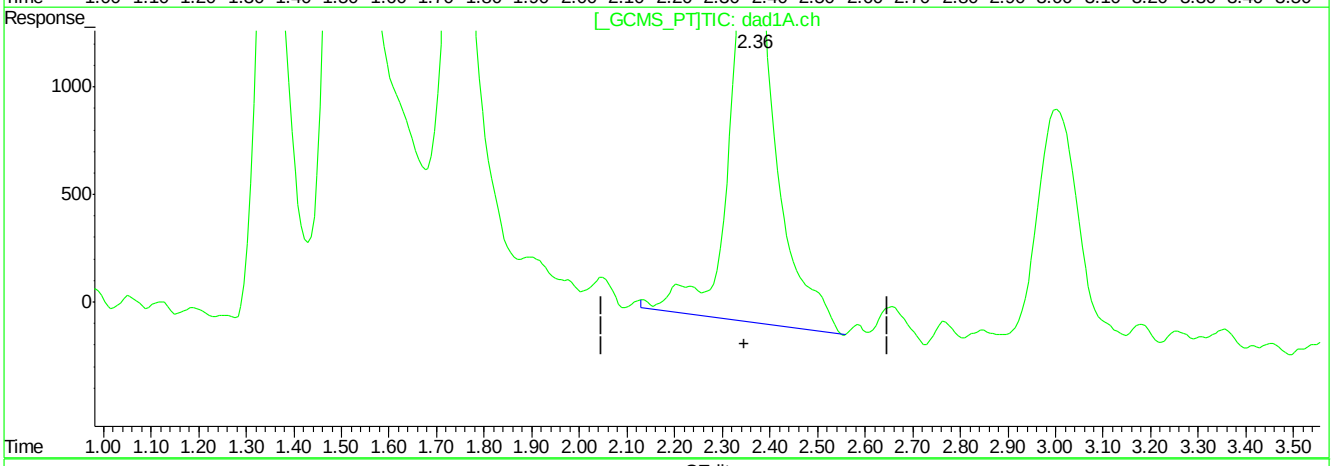
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:18:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.36min 36.139ppb

response 106076

(4) MNX #2

2.36min 27.200ppb

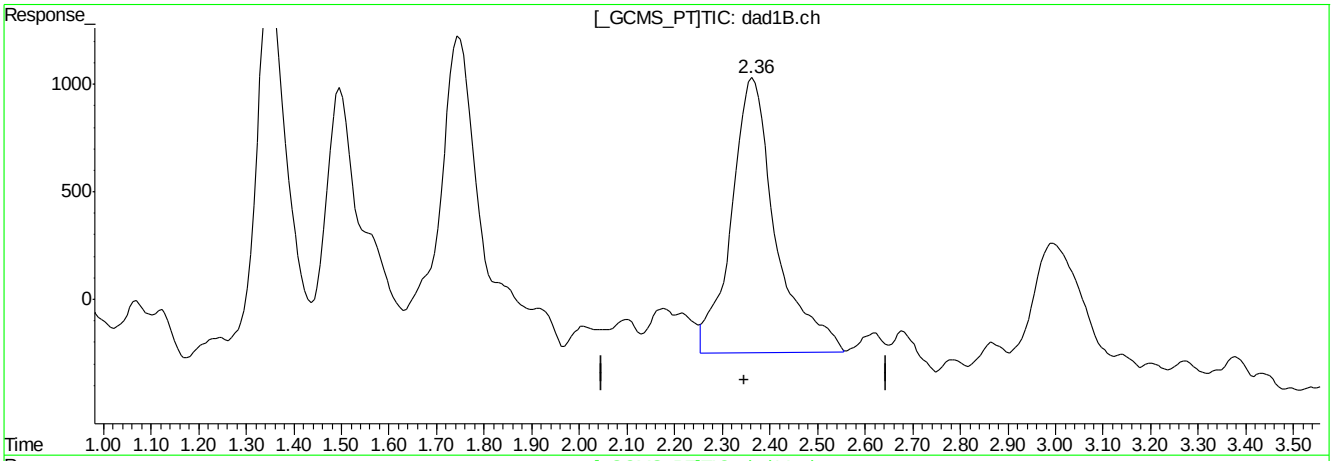
response 123798

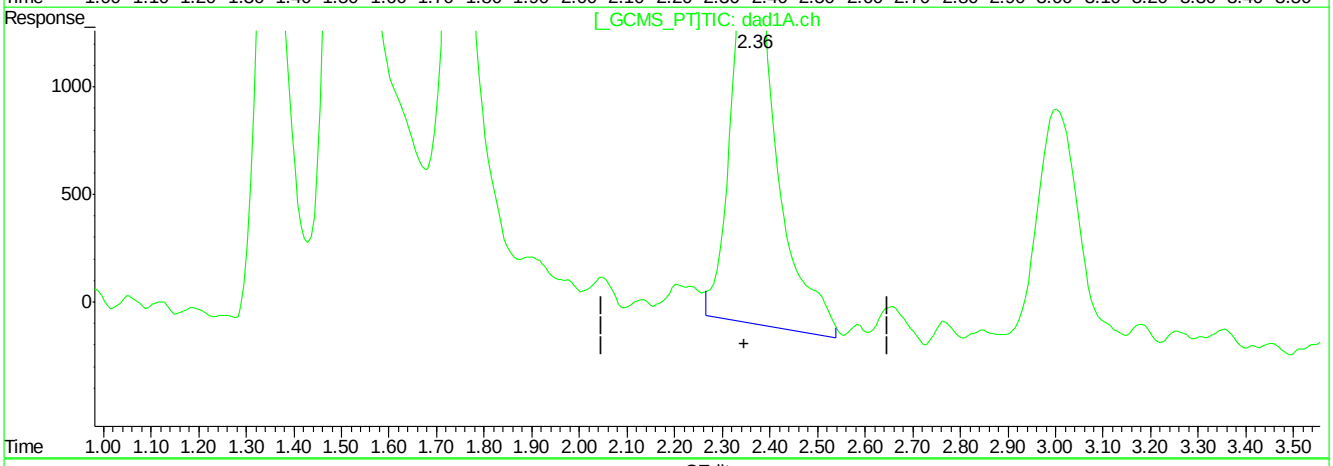
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:18:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.36min 28.331ppb m

response 83159

(4) MNX #2

2.36min 25.988ppb m

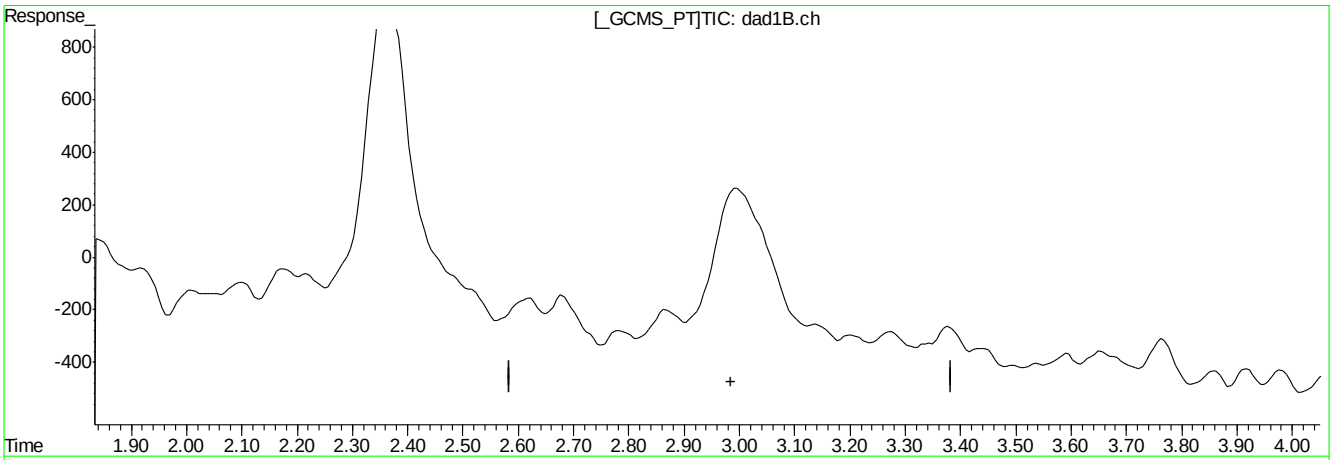
response 118282

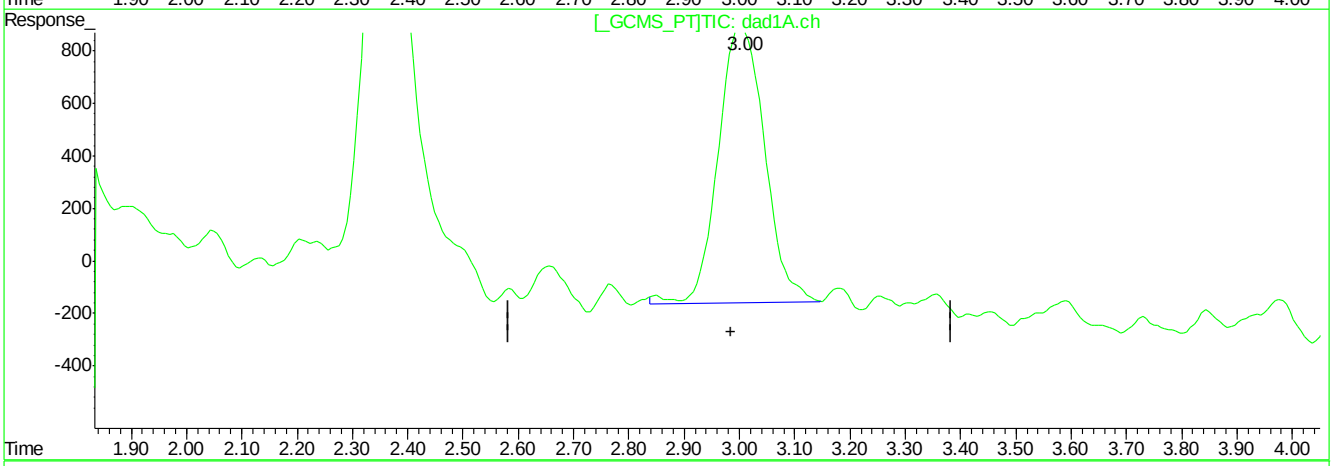
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:18:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

0.00min 0.000ppb

response 0

(5) RDX #2

3.00min 20.280ppb

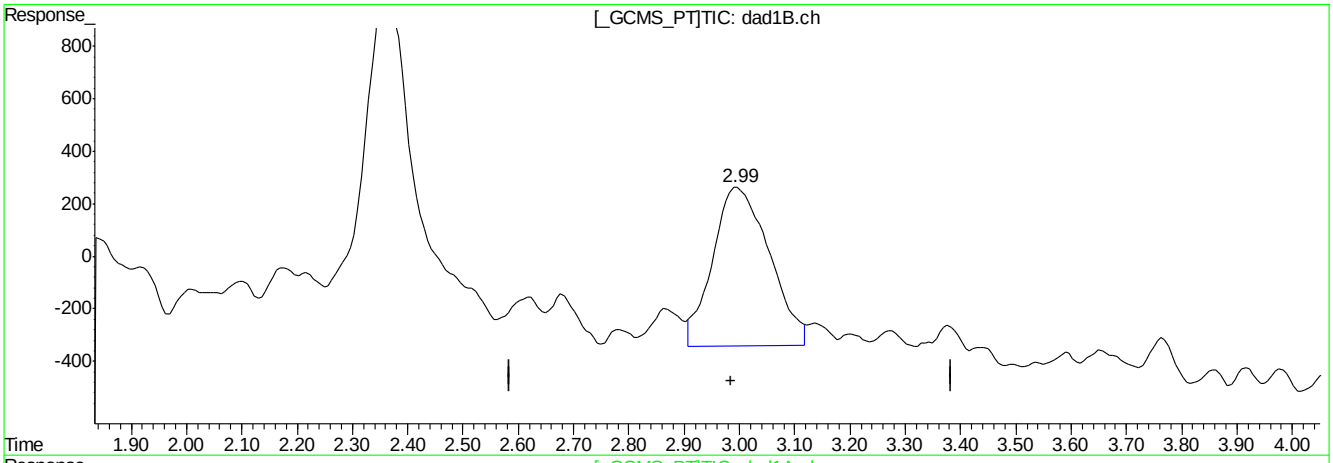
response 61546

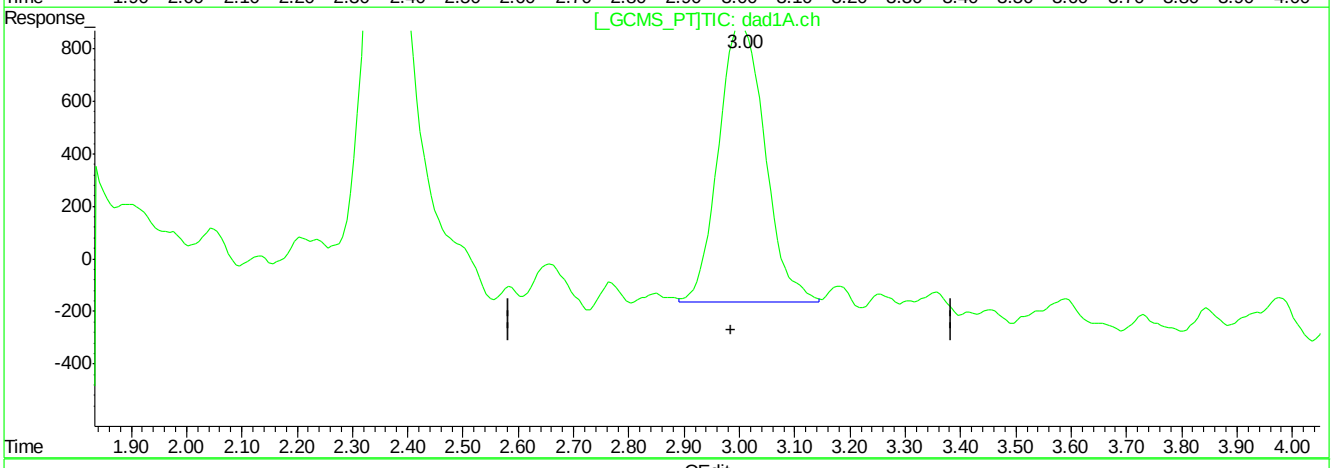
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:18:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.99min 22.307ppb m

response 43073

(5) RDX #2

3.00min 20.261ppb m

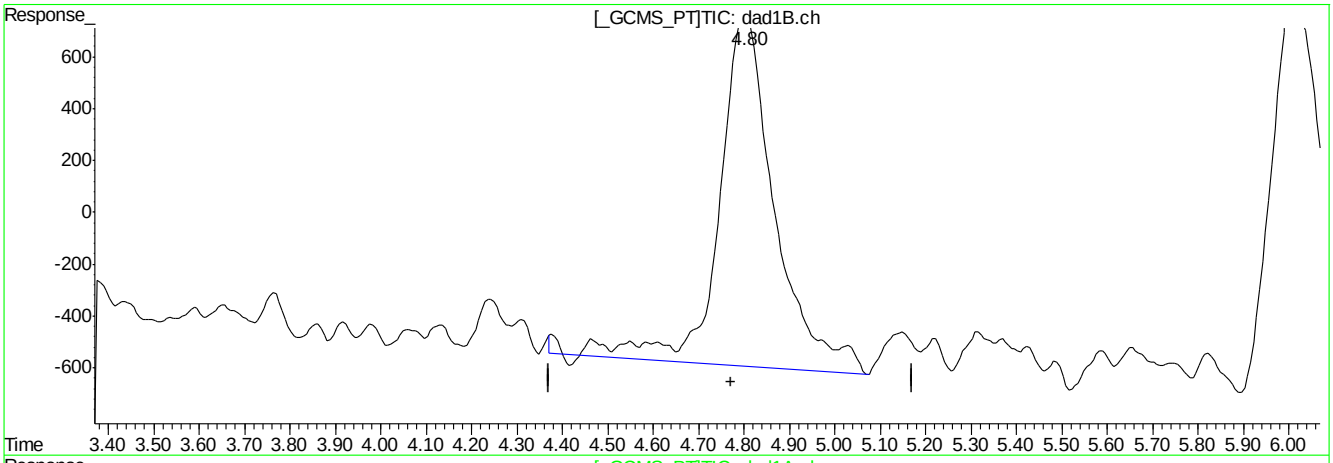
response 61490

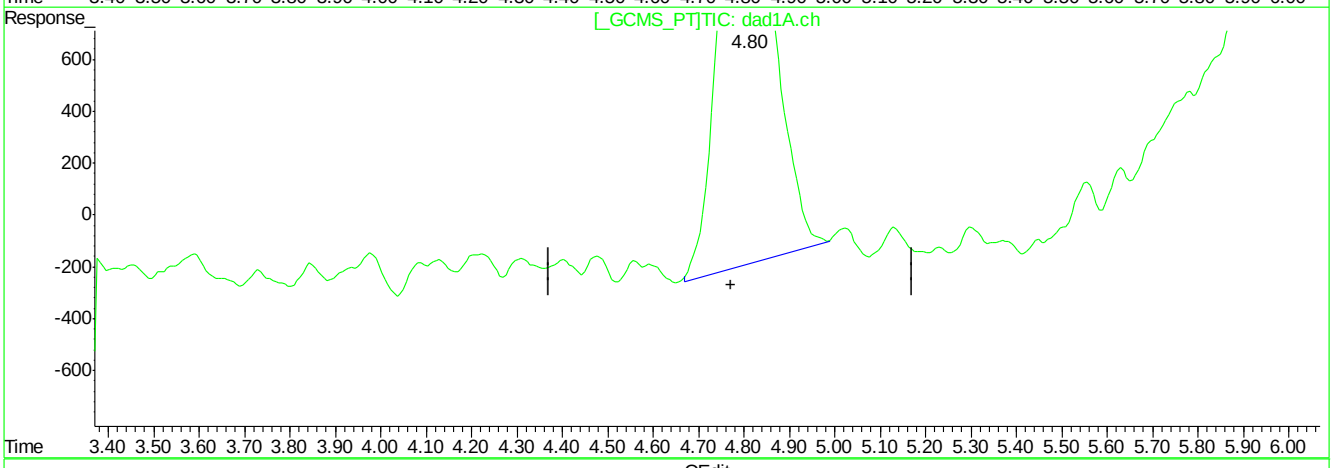
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:18:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.80min 28.013ppb

response 117707

(6) 1,3,5-Trinitrobenzene #2

4.80min 21.975ppb

response 175857

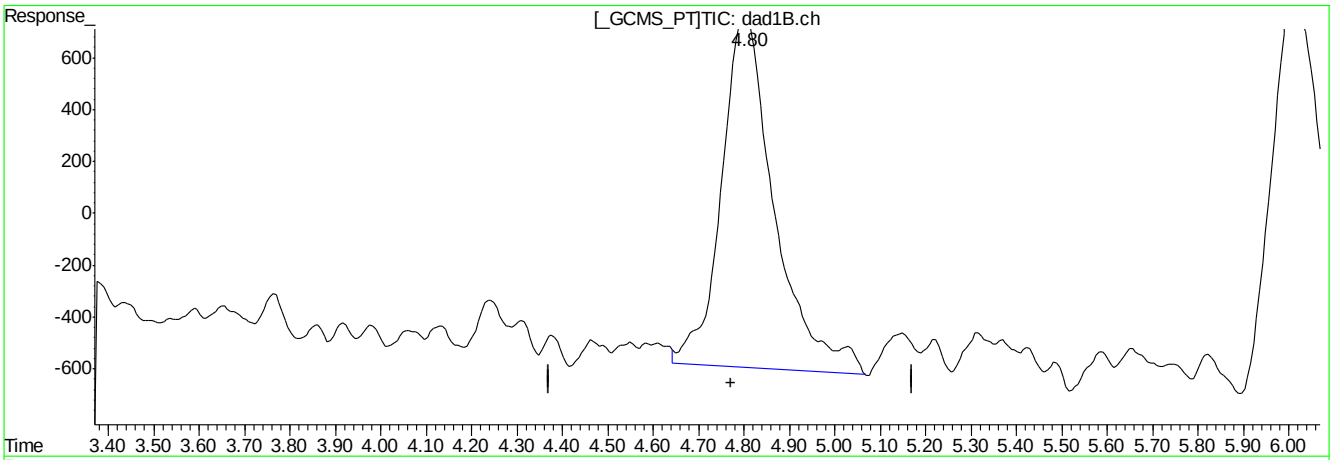
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:19:56 2021

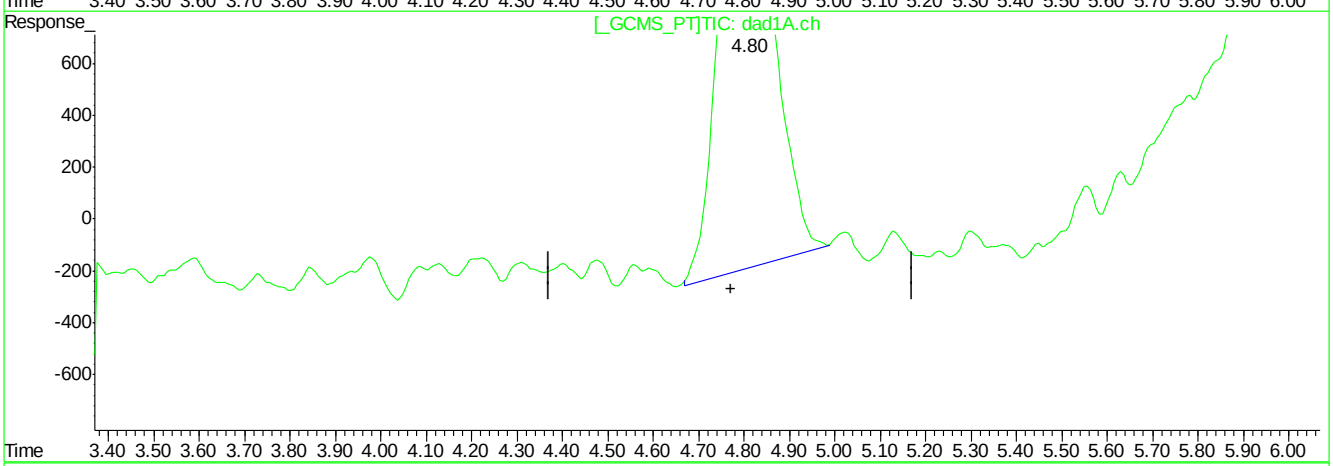
PP389745.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.80min 26.261ppb m

response 110345

(6) 1,3,5-Trinitrobenzene #2

4.80min 21.975ppb

response 175857

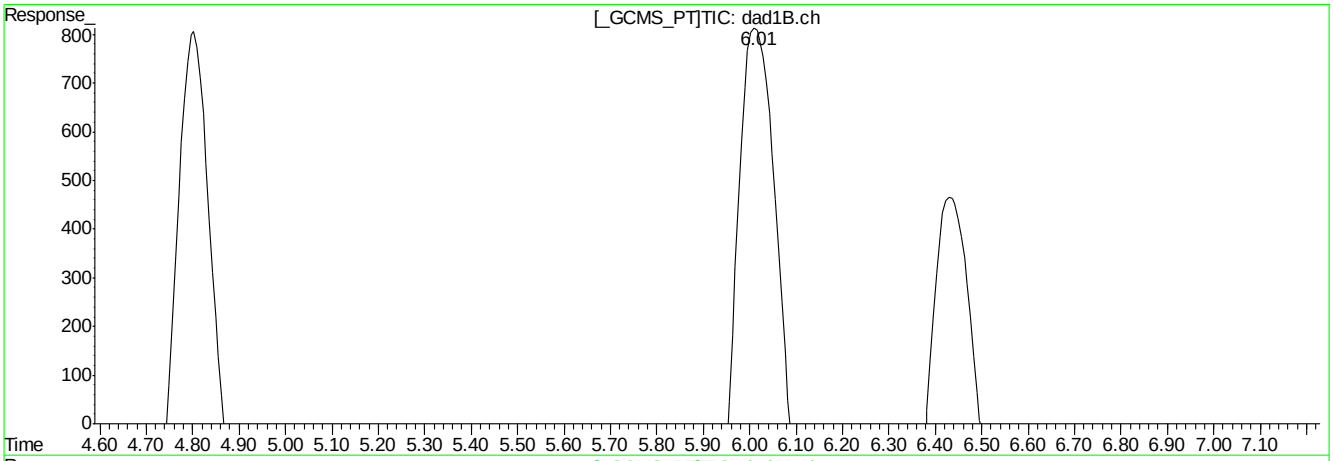
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:20:02 2021

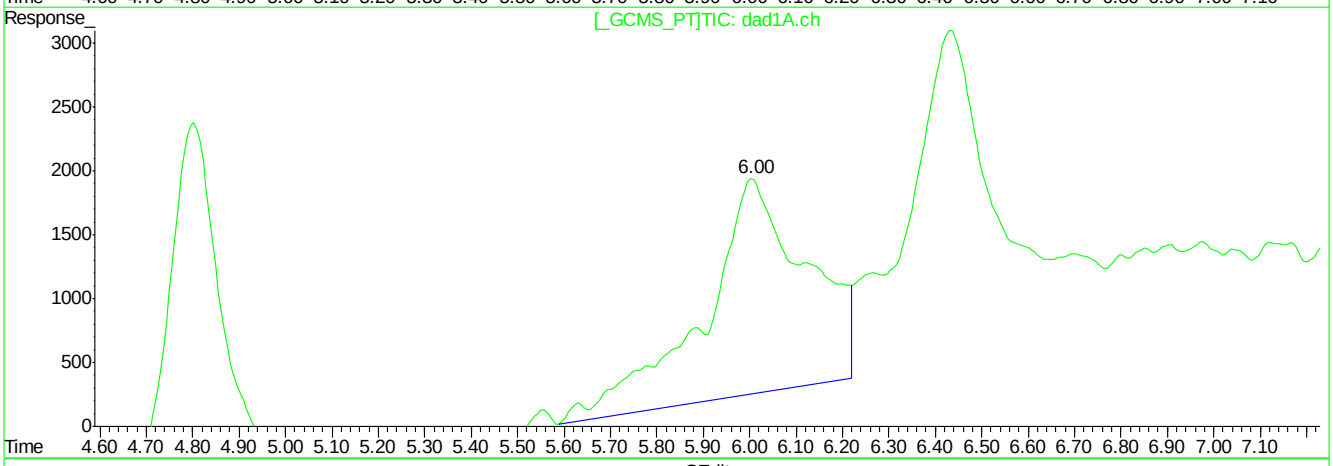
PP389745.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.01min 22.284ppb

response 120009

(7) 1,3-Dinitrobenzene #2

6.01min 65.257ppb

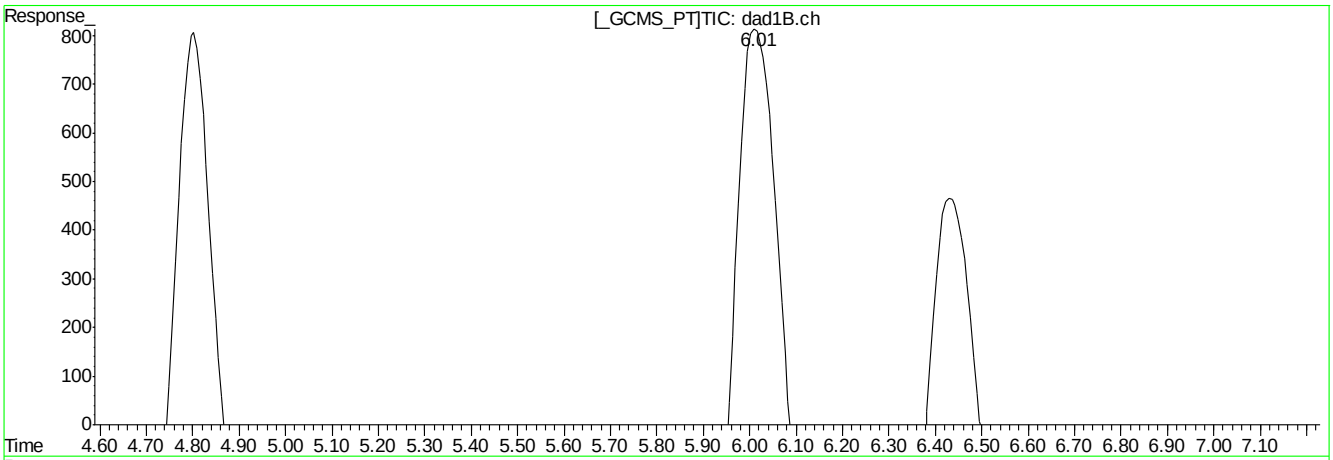
response 253819

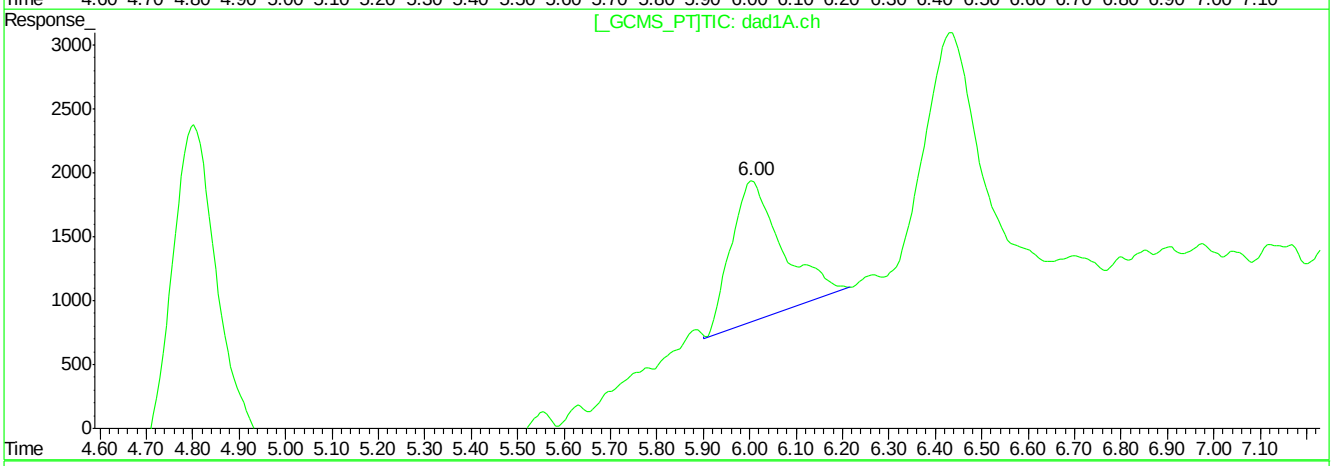
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:20:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.01min 22.284ppb

response 120009

(7) 1,3-Dinitrobenzene #2

6.00min 21.589ppb m

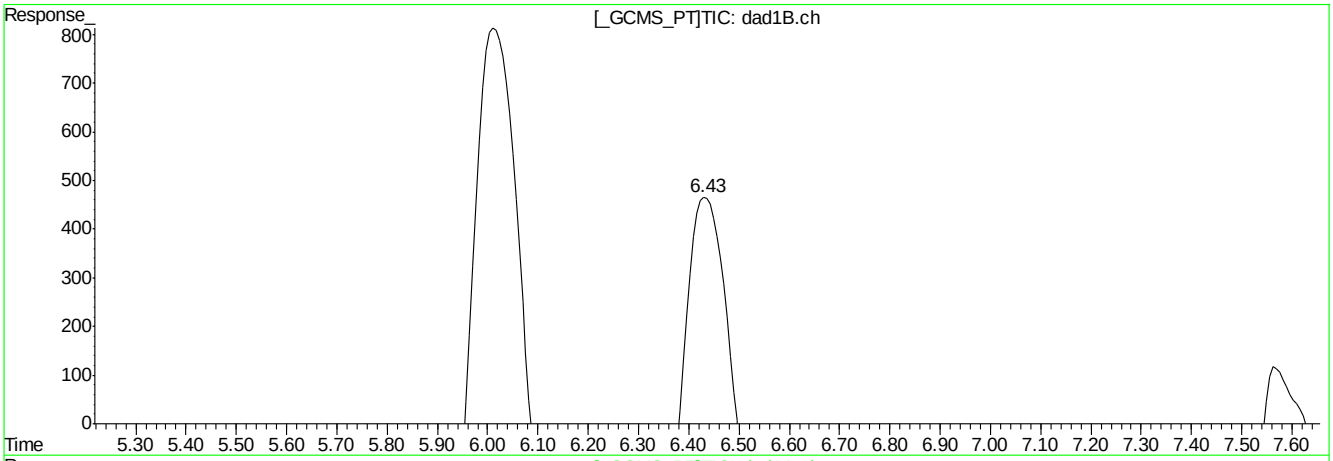
response 83970

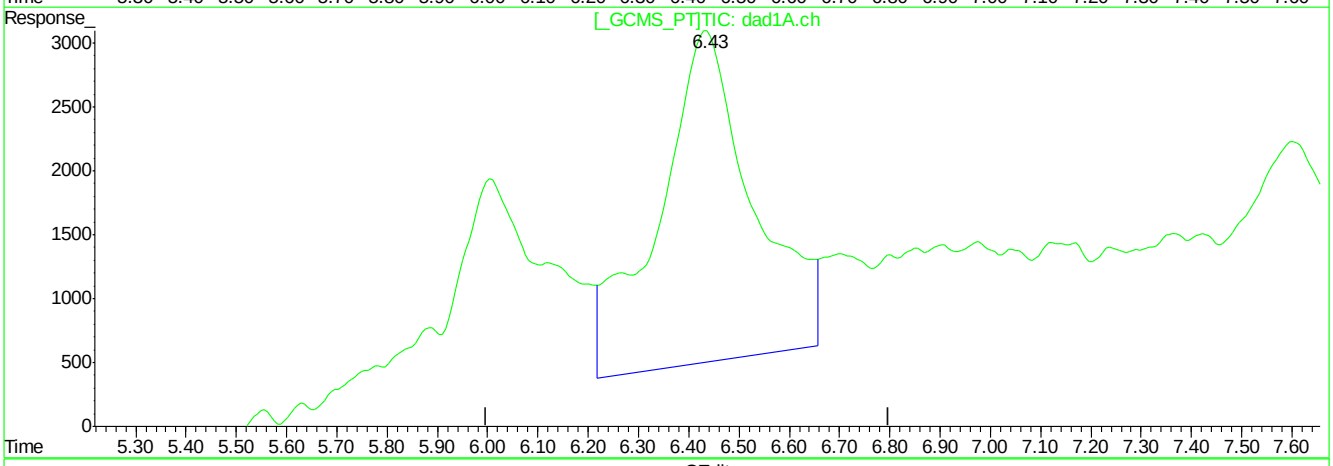
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:20:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.43min 22.596ppb

response 93085

(8) 3,5-Dinitroaniline #2

6.43min 47.332ppb

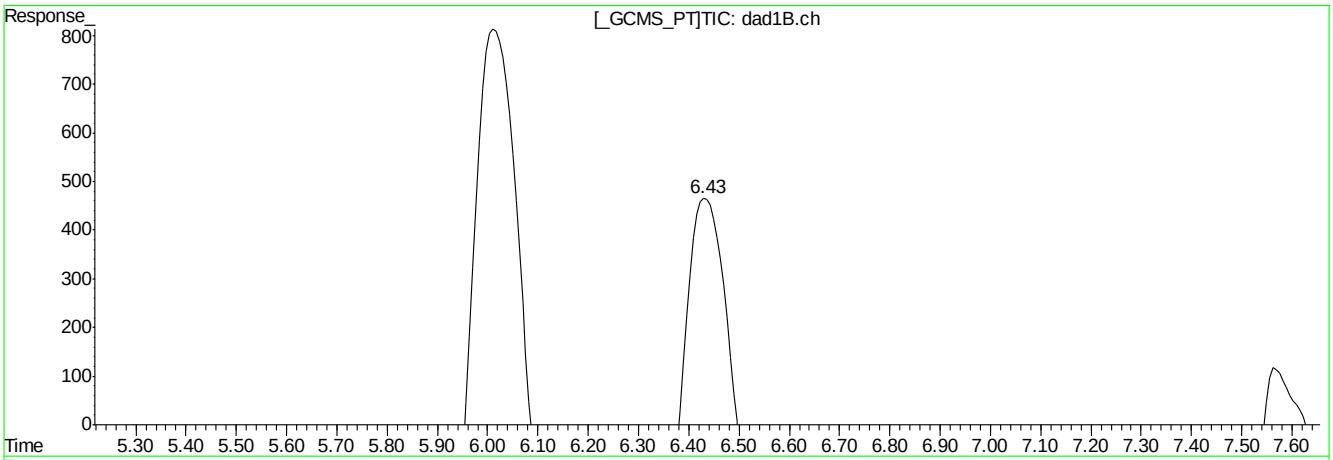
response 336810

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:20:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.43min 22.596ppb

response 93085

(8) 3,5-Dinitroaniline #2

6.43min 20.544ppb m

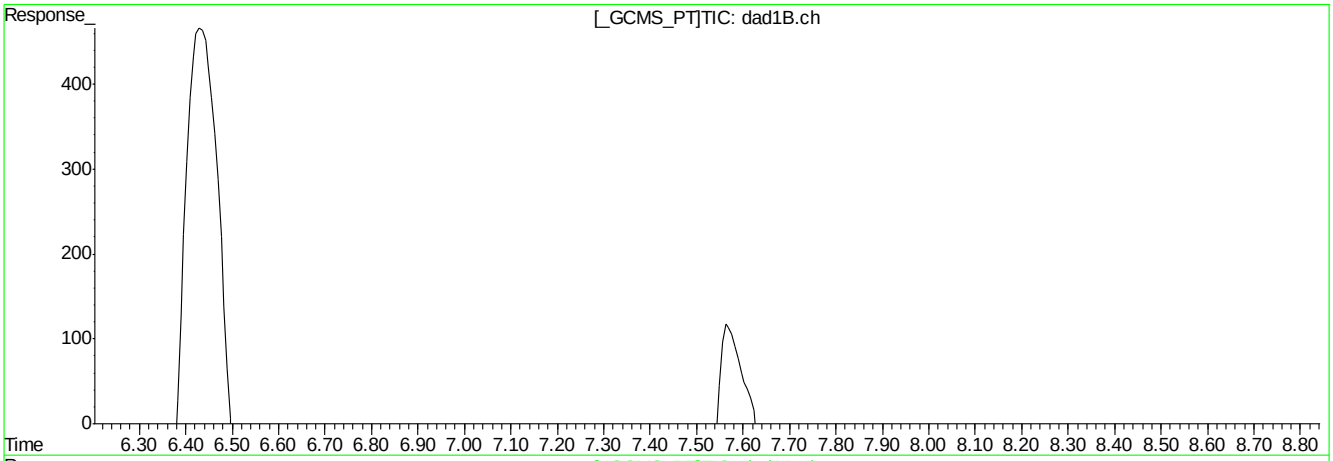
response 146191

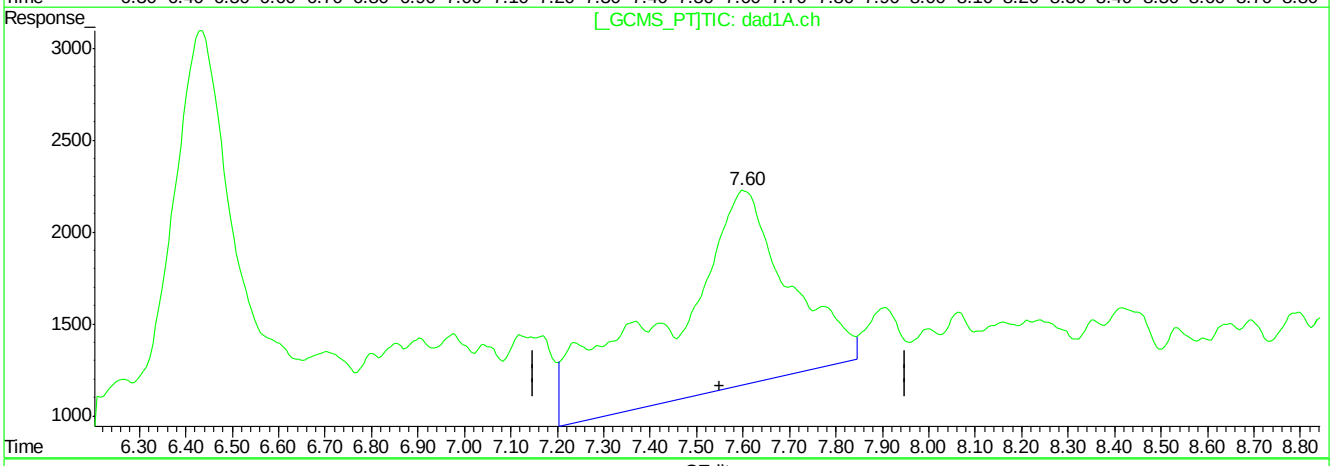
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:20:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

0.00min 0.000ppb

response 0

(9) Nitrobenzene #2

7.60min 57.709ppb

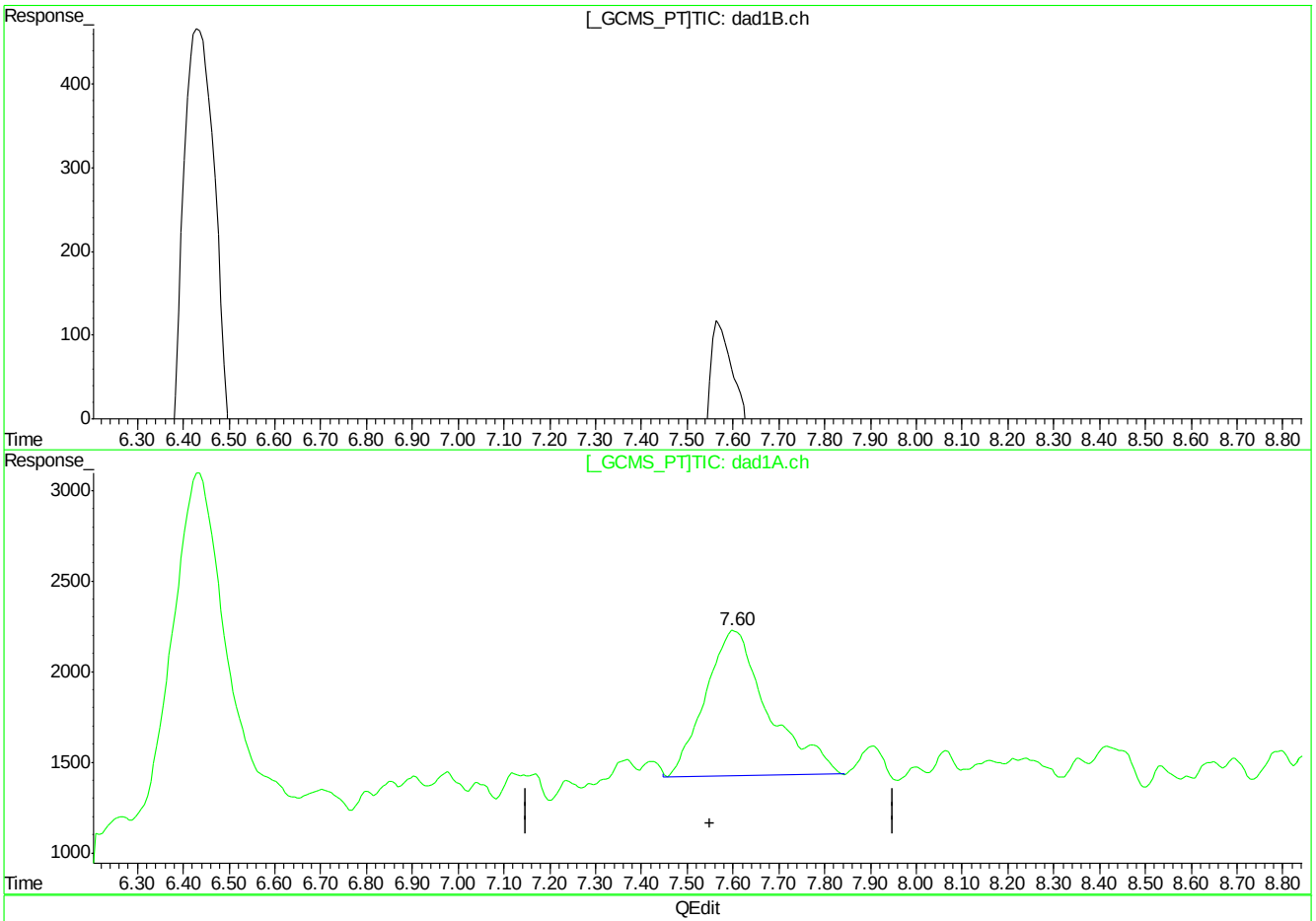
response 191710

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:20:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(9) Nitrobenzene

0.00min 0.000ppb

response 0

(9) Nitrobenzene #2

7.60min 22.846ppb m

response 75893

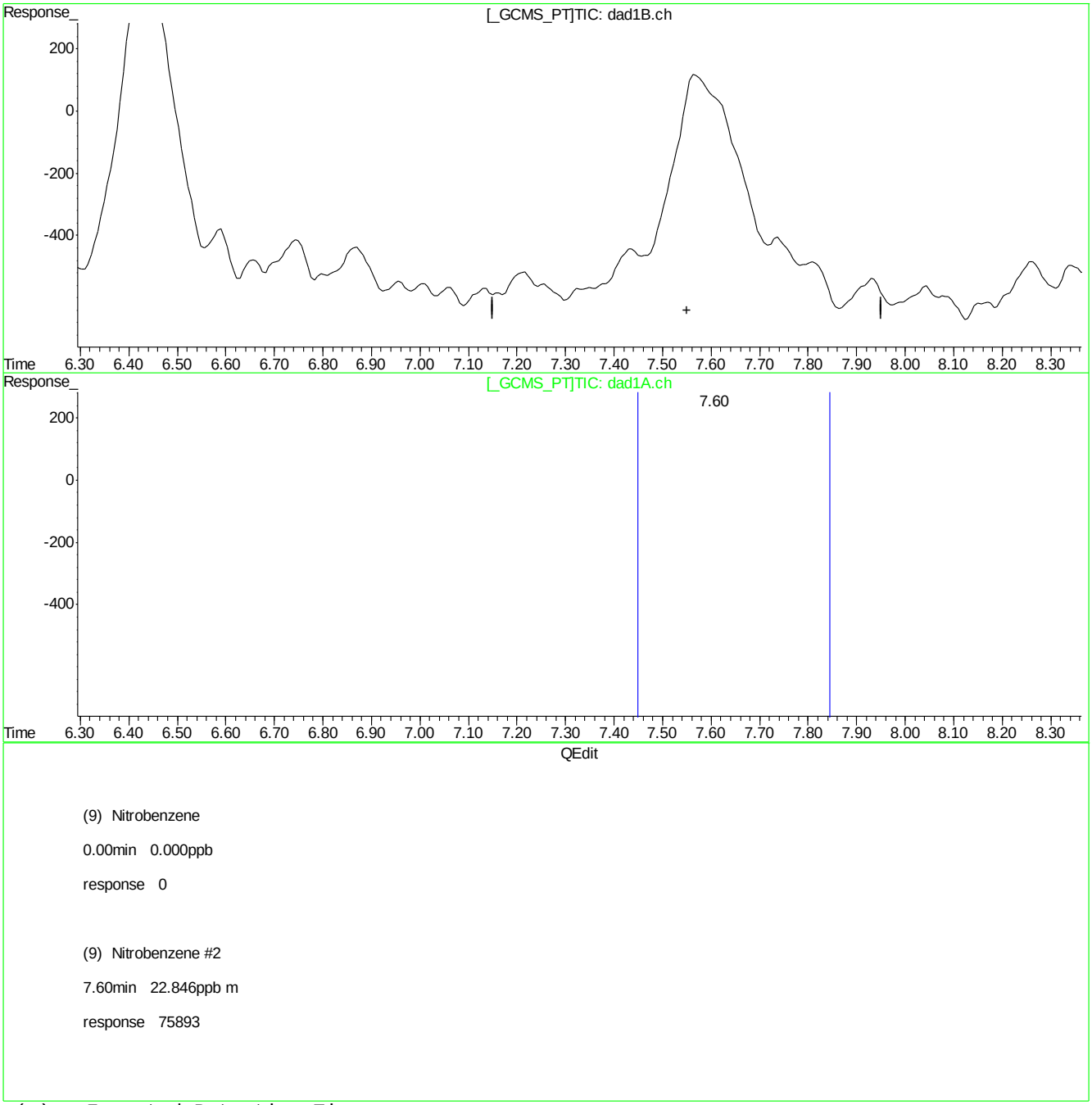
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:20:40 2021

PP389745.D edits: Nitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(9) Nitrobenzene

0.00min 0.000ppb

response 0

(9) Nitrobenzene #2

7.60min 22.846ppb m

response 75893

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:20:43 2021

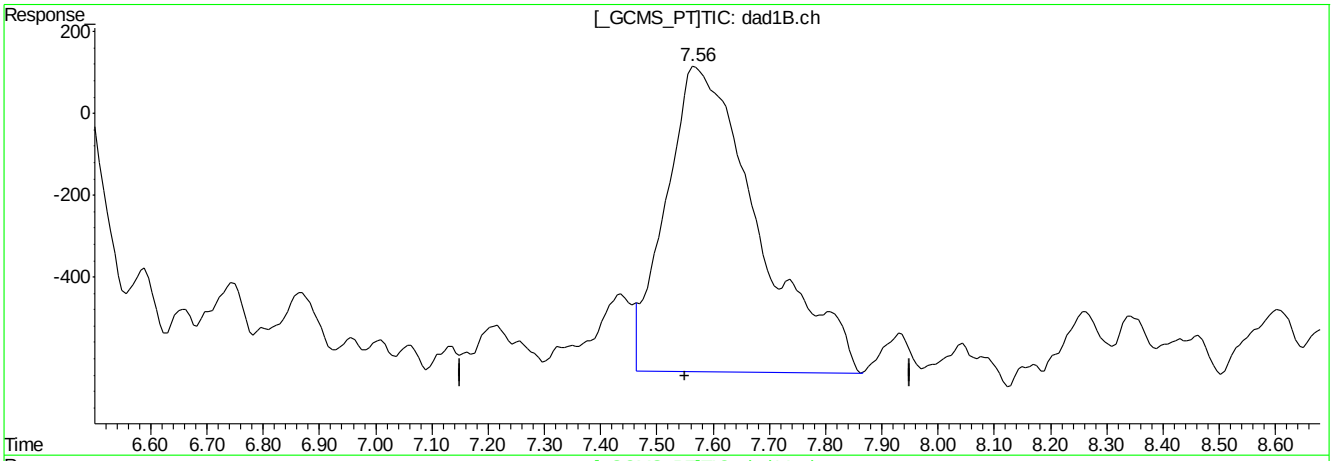
9.5.14.18

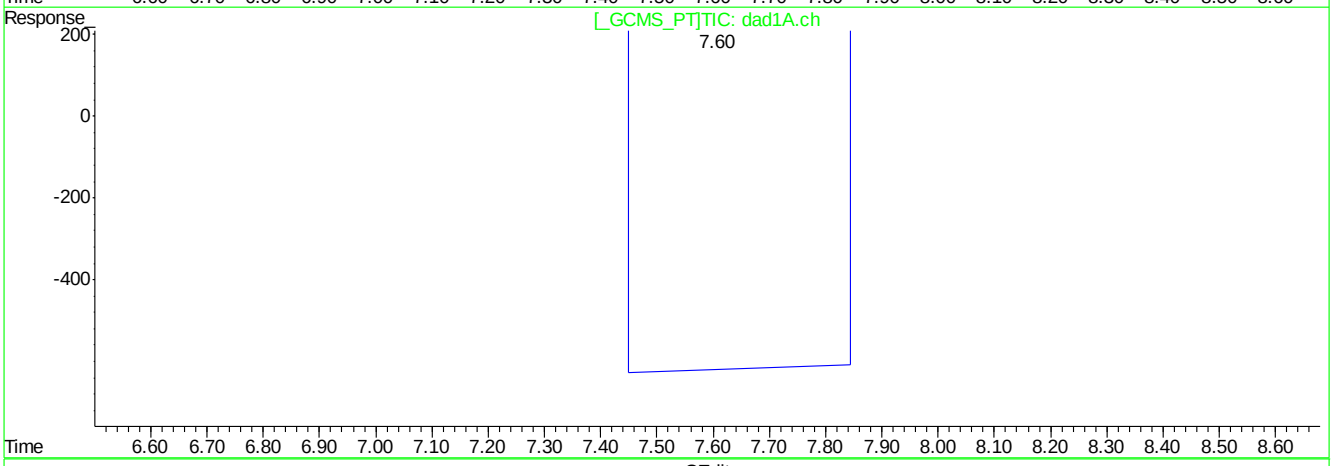
9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.56min 26.374ppb m

response 85387

(9) Nitrobenzene #2

7.60min 22.846ppb m

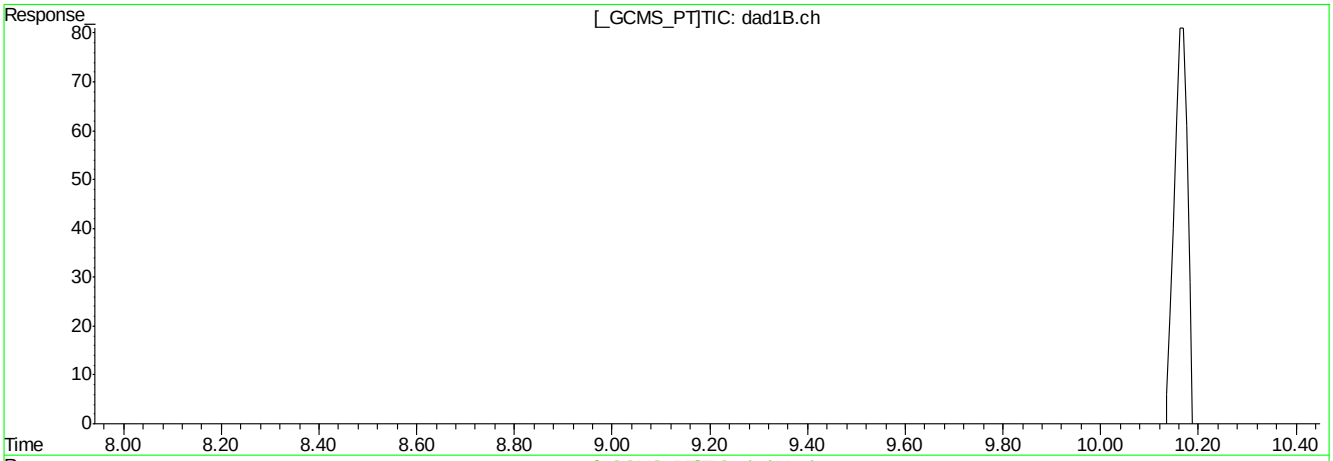
response 75893

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:21:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

0.00min 0.000ppb

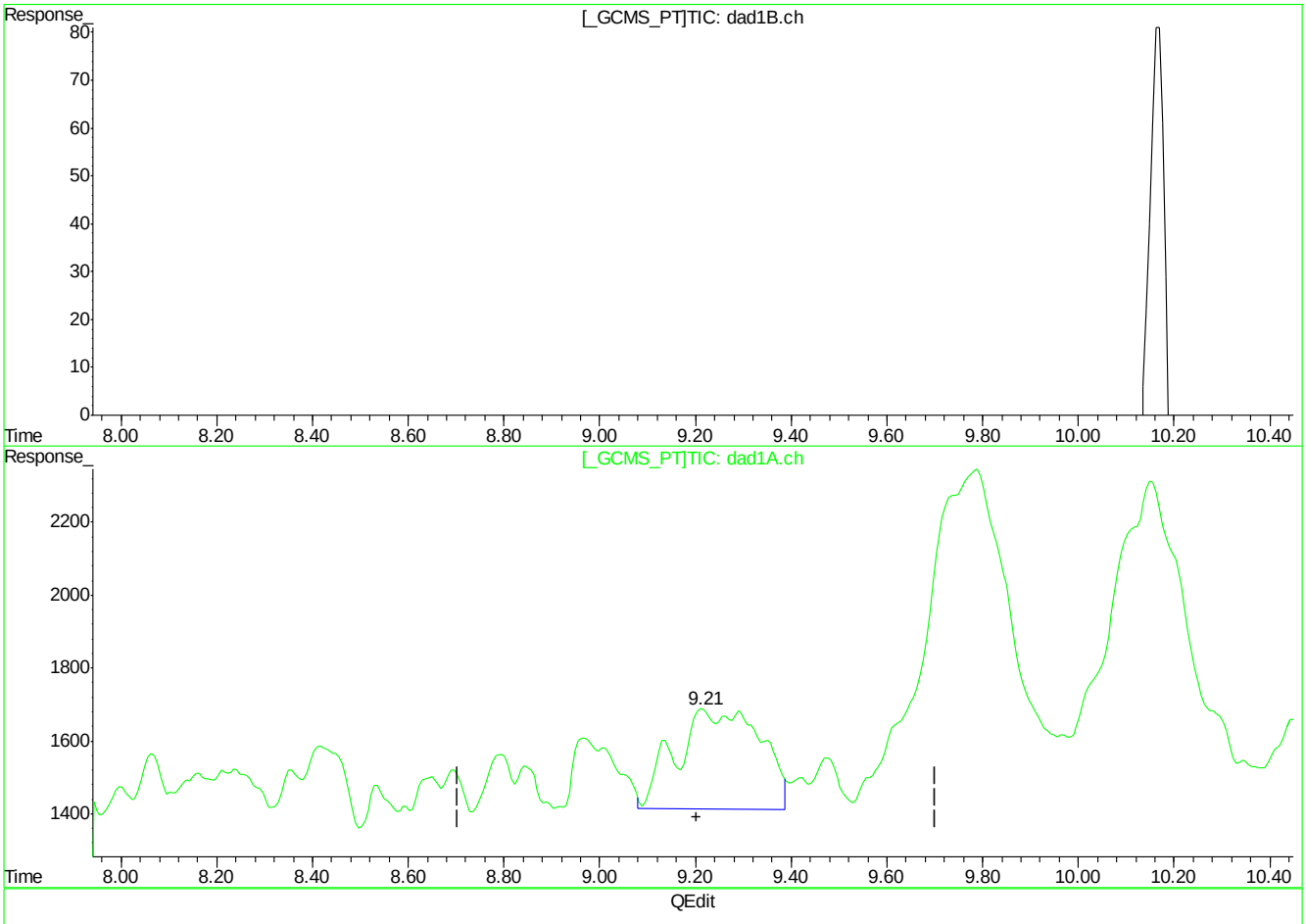
response 0

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:21:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.21min 27.424ppb m

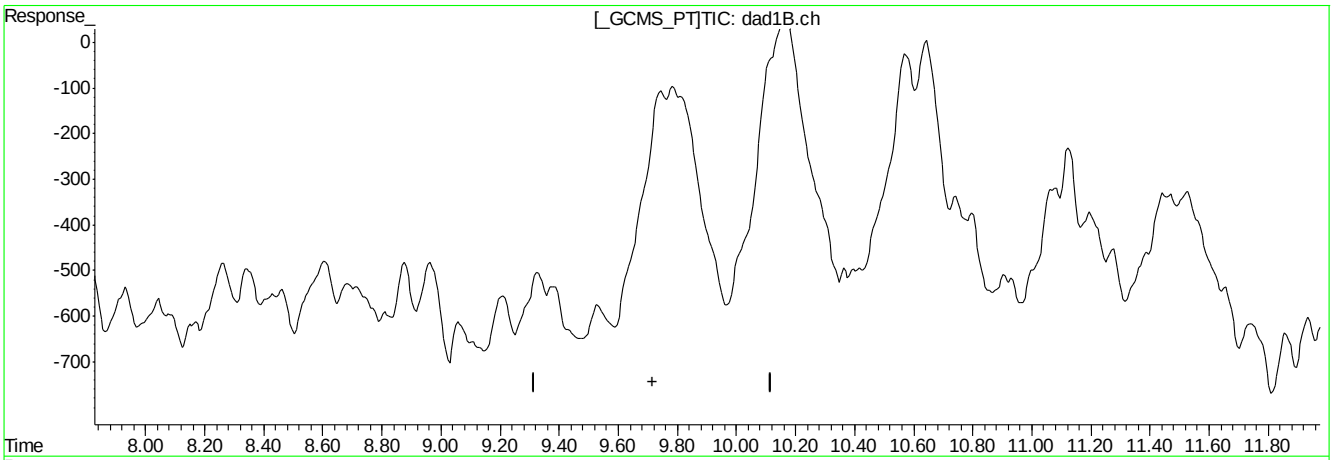
response 33533

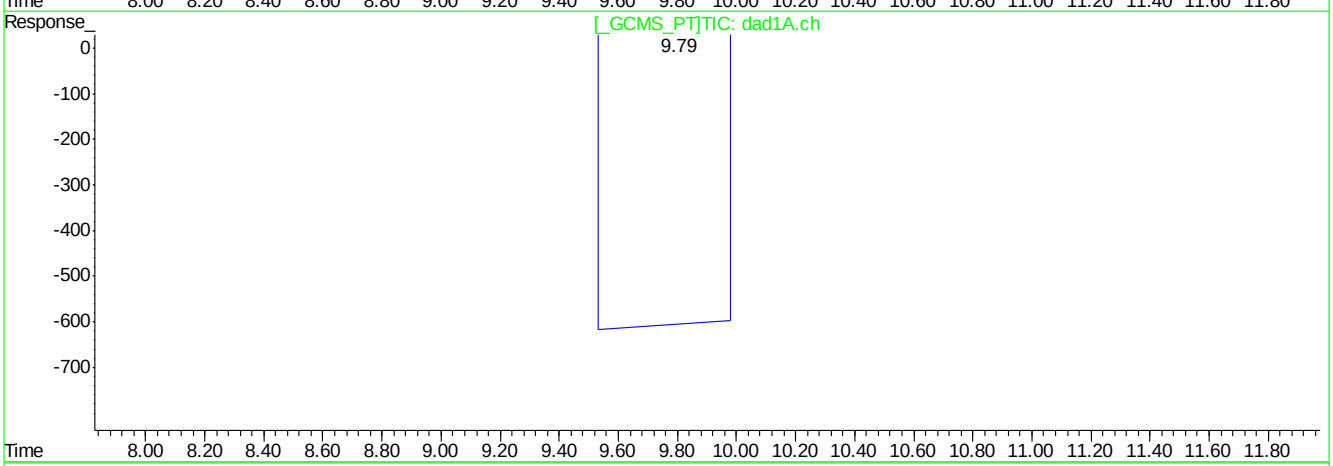
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:21:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

0.00min 0.000ppb

response 0

(11) Tetryl #2

9.78min 22.934ppb

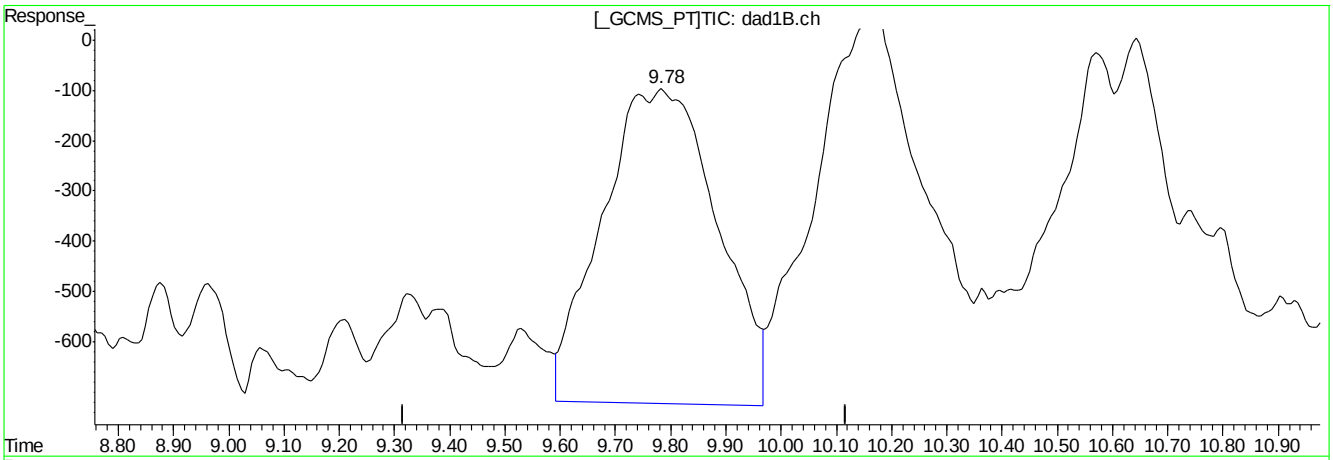
response 113617

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:21:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(11) Tetryl

9.78min 28.532ppb m

response 90453

(11) Tetryl #2

9.78min 22.934ppb

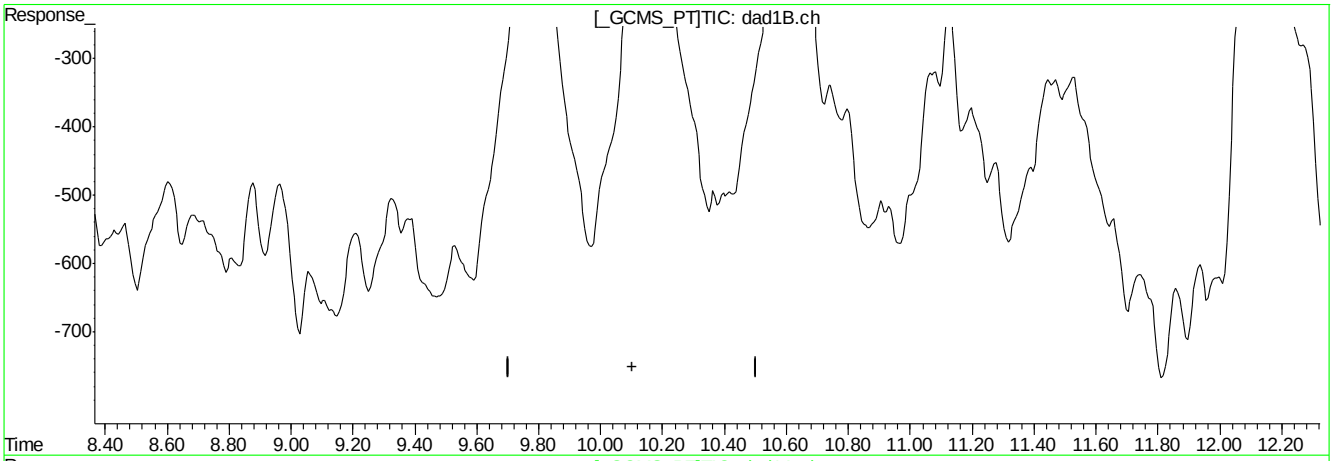
response 113617

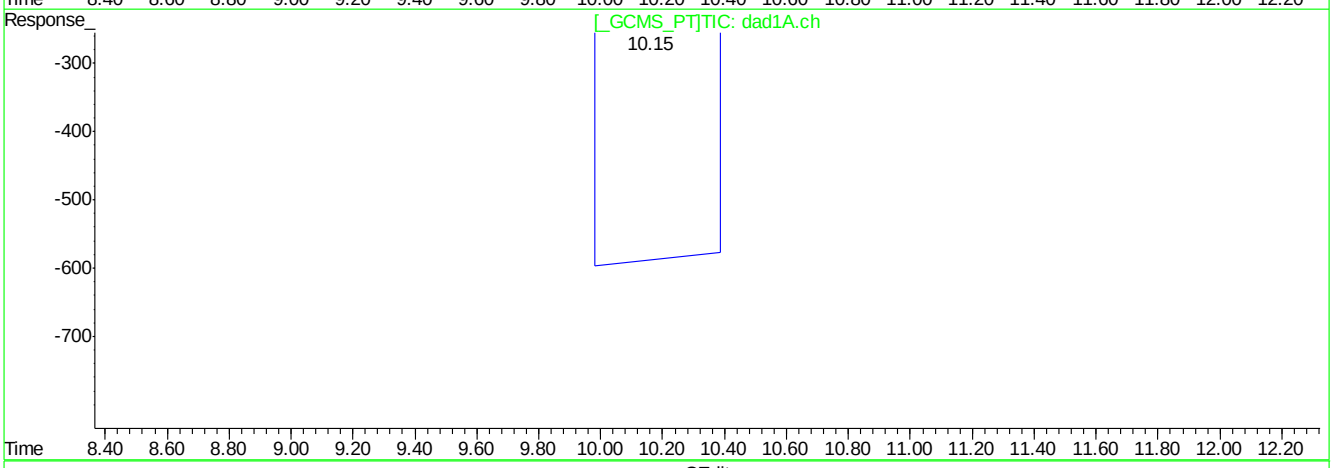
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:21:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

0.00min 0.000ppb

response 0

(12) 2,4,6-Trinitrotoluene #2

10.15min 20.877ppb

response 97807

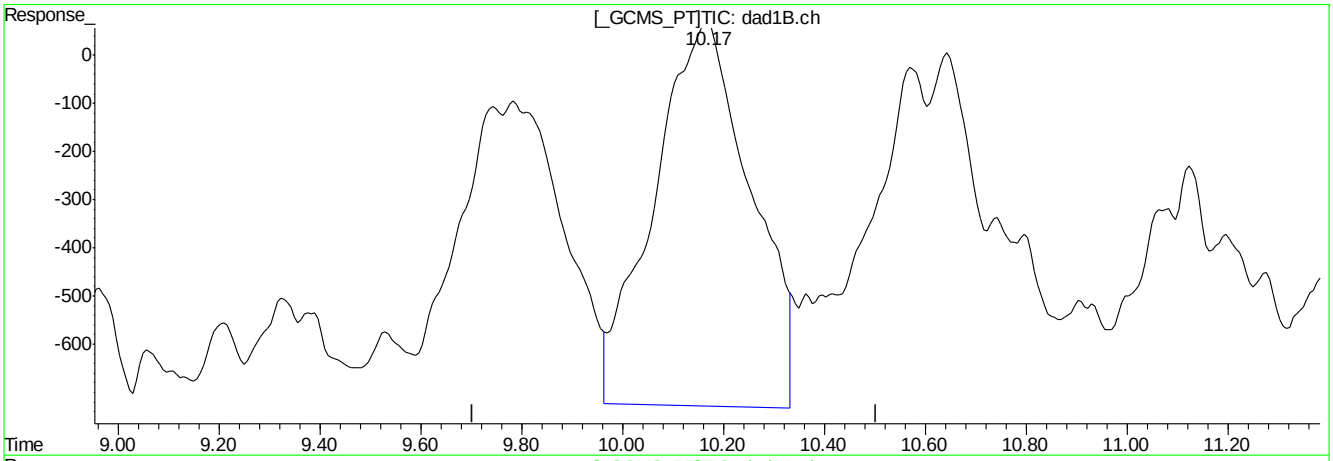
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:21:48 2021

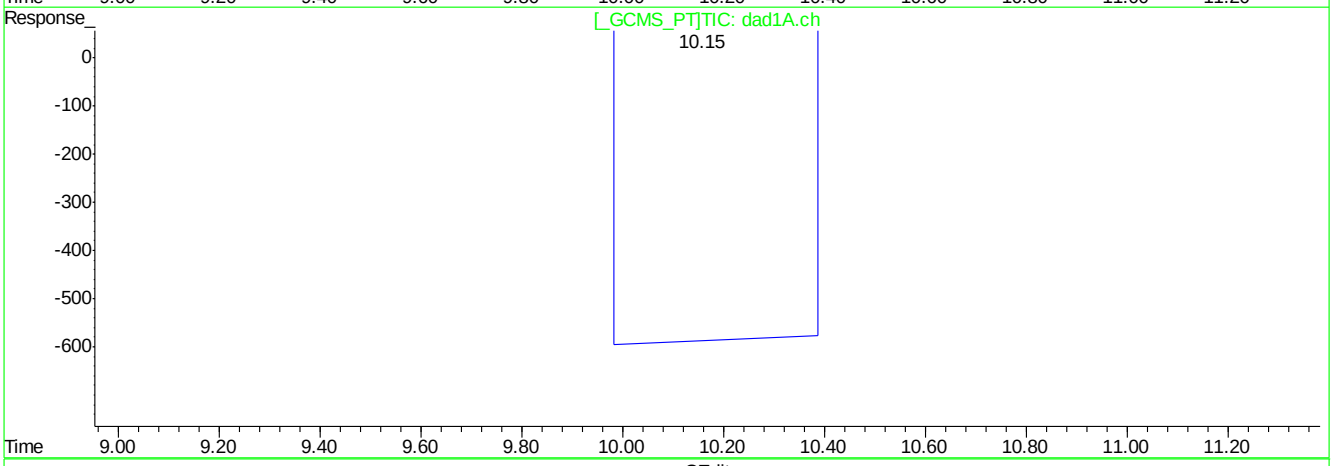
PP389745.D edits: 2,4,6-Trinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.17min 27.647ppb m

response 106440

(12) 2,4,6-Trinitrotoluene #2

10.15min 20.877ppb

response 97807

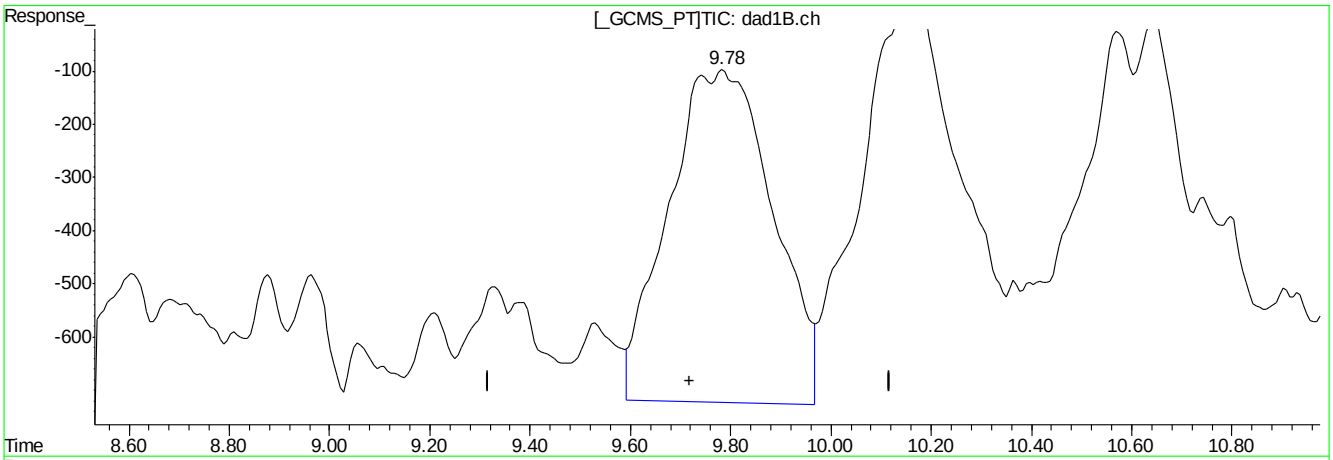
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:21:59 2021

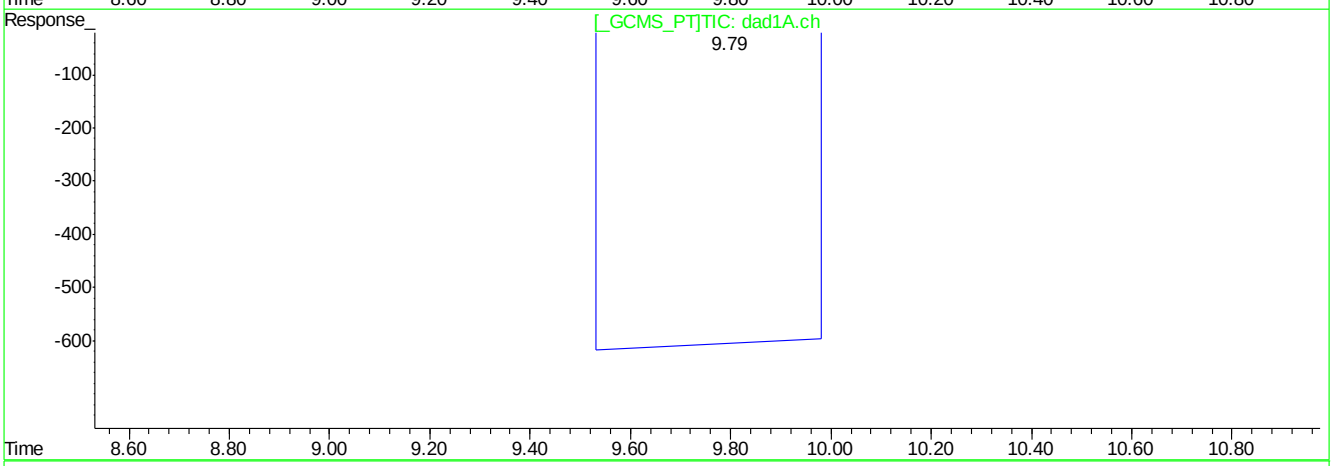
PP389745.D edits: 2,4,6-Trinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.78min 28.532ppb m

response 90453

(11) Tetryl #2

9.78min 22.934ppb

response 113617

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:22:14 2021

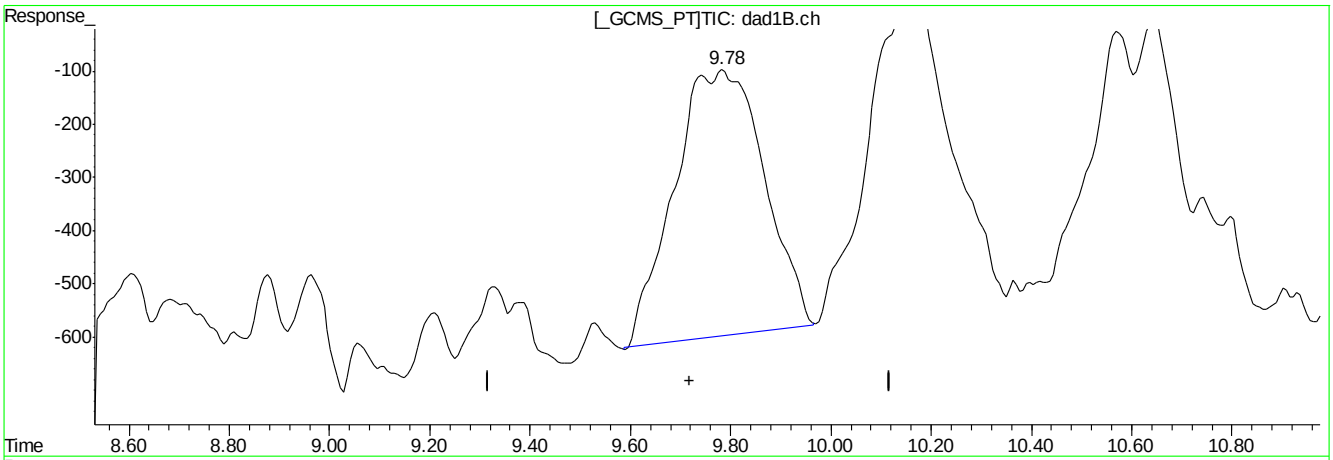
9.5.14.26

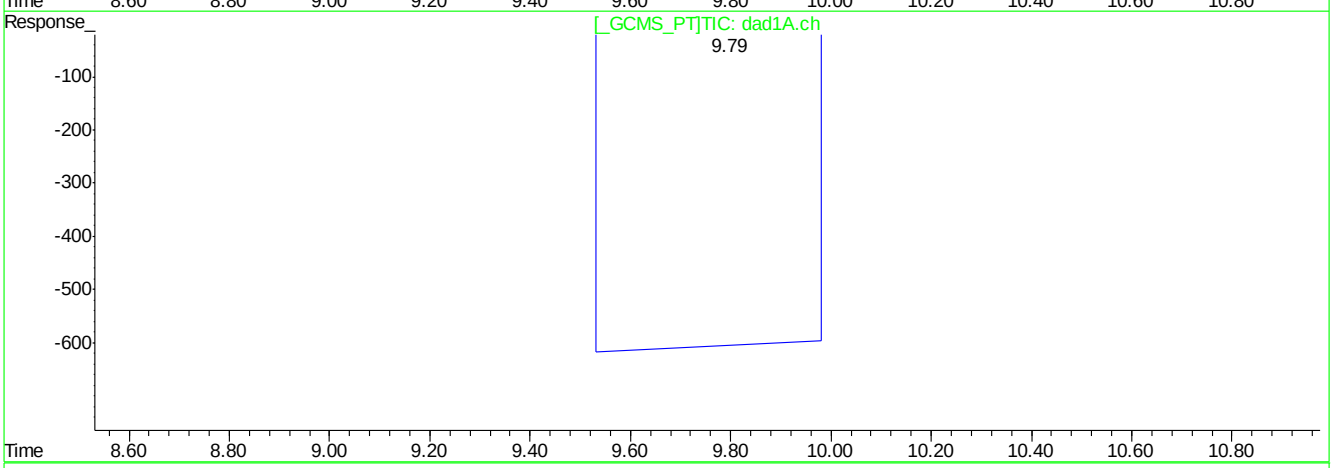
9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.78min 19.768ppb m

response 62668

(11) Tetryl #2

9.78min 22.934ppb

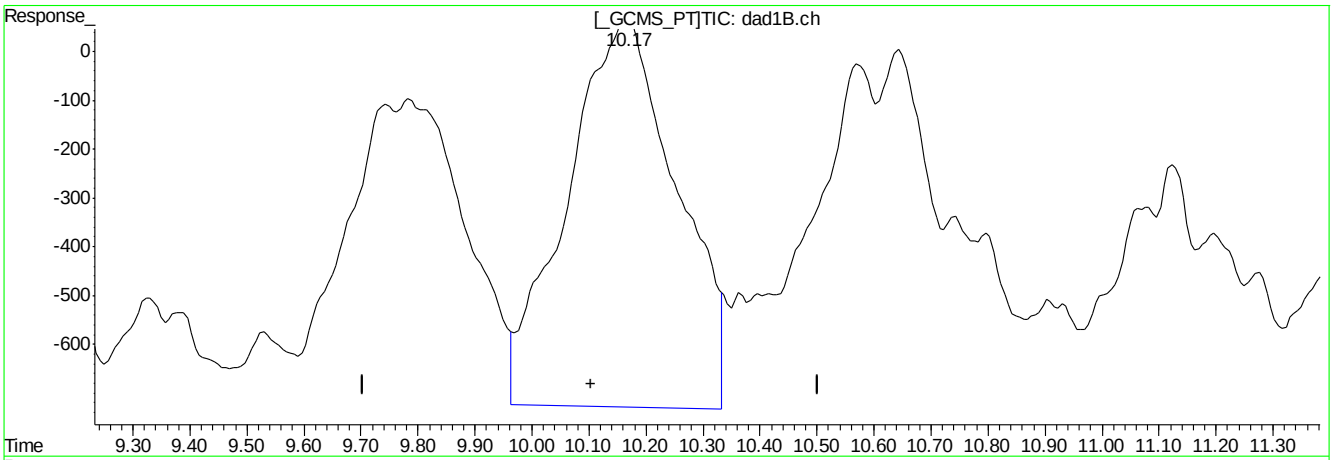
response 113617

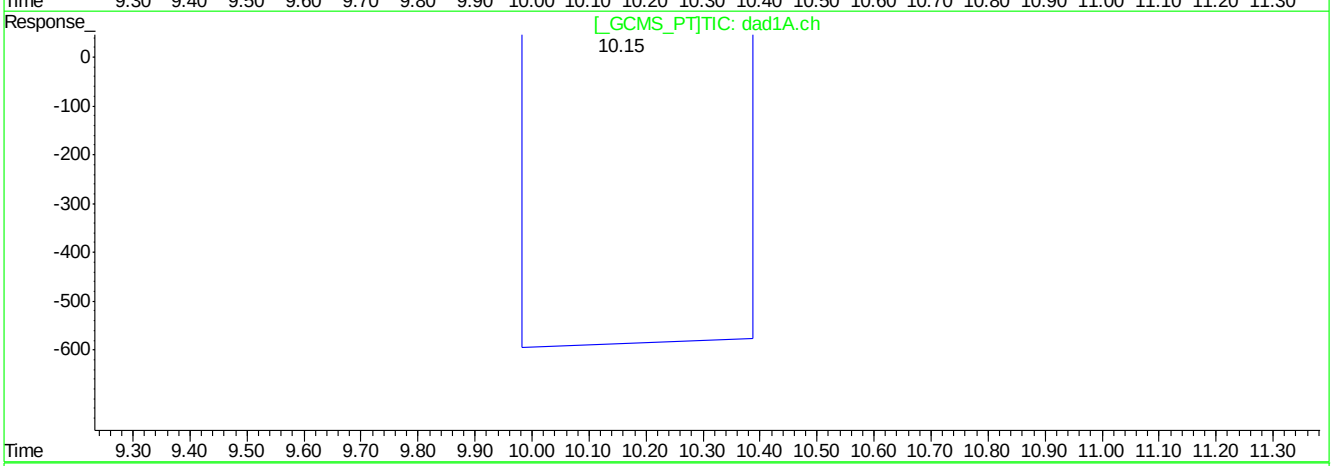
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:22:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.17min 27.647ppb m

response 106440

(12) 2,4,6-Trinitrotoluene #2

10.15min 20.877ppb

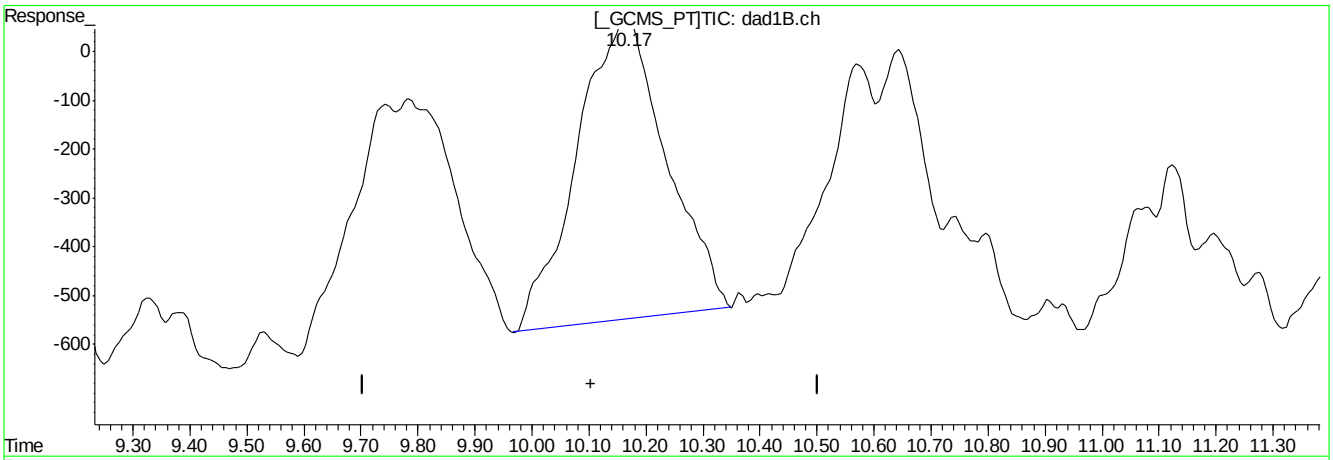
response 97807

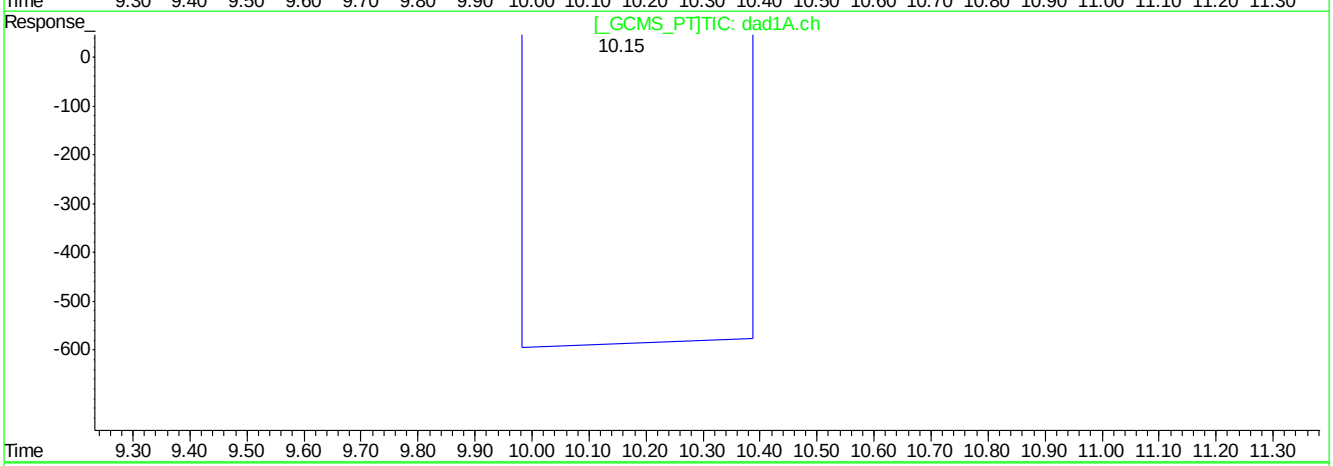
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:22:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.17min 17.352ppb m

response 66804

(12) 2,4,6-Trinitrotoluene #2

10.15min 20.877ppb

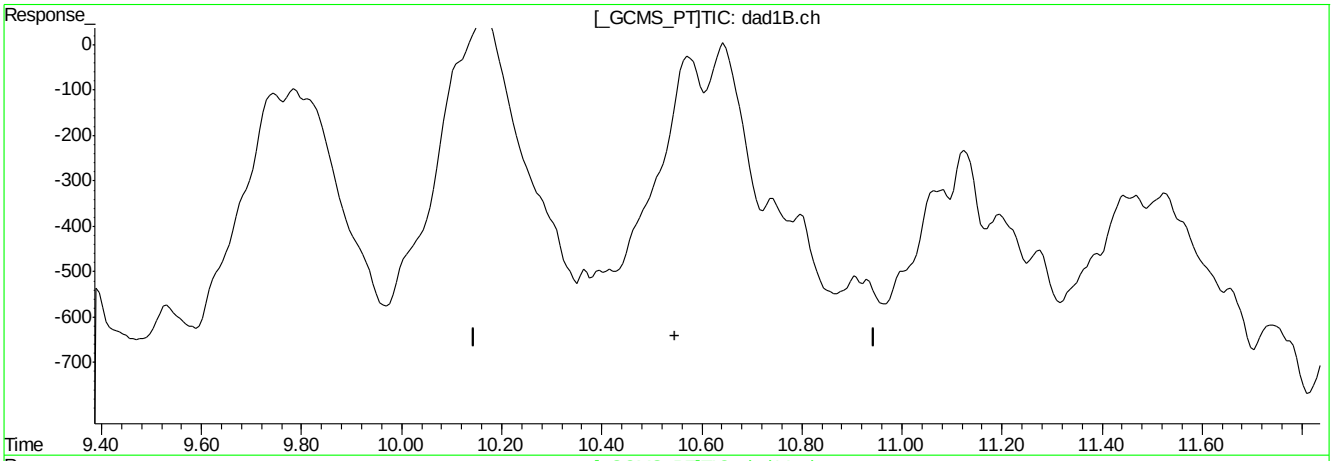
response 97807

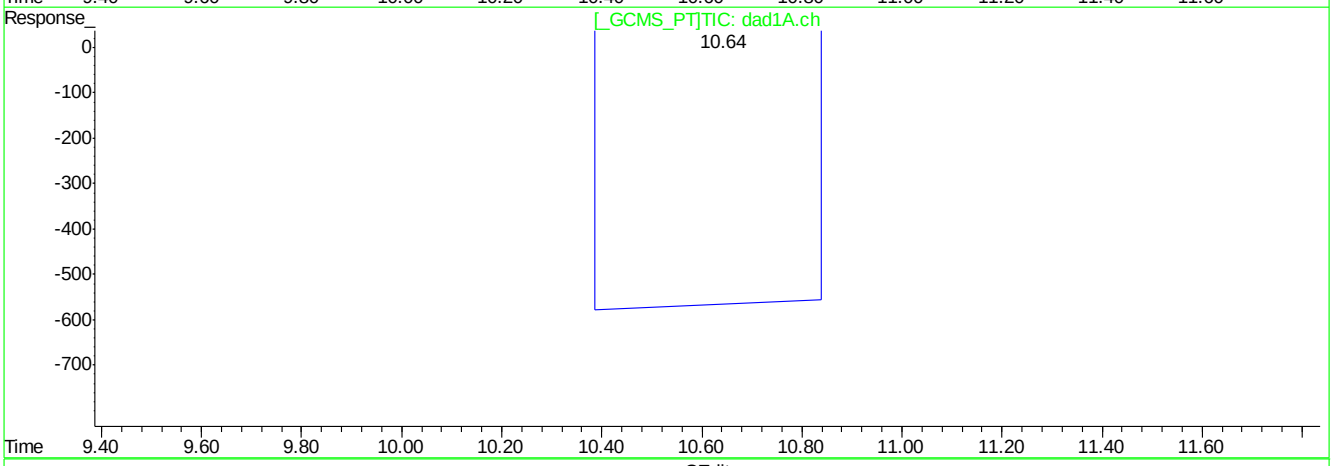
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:22:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(13) 2-Amino-4,6-Dinitrotoluene #2

10.64min 20.679ppb

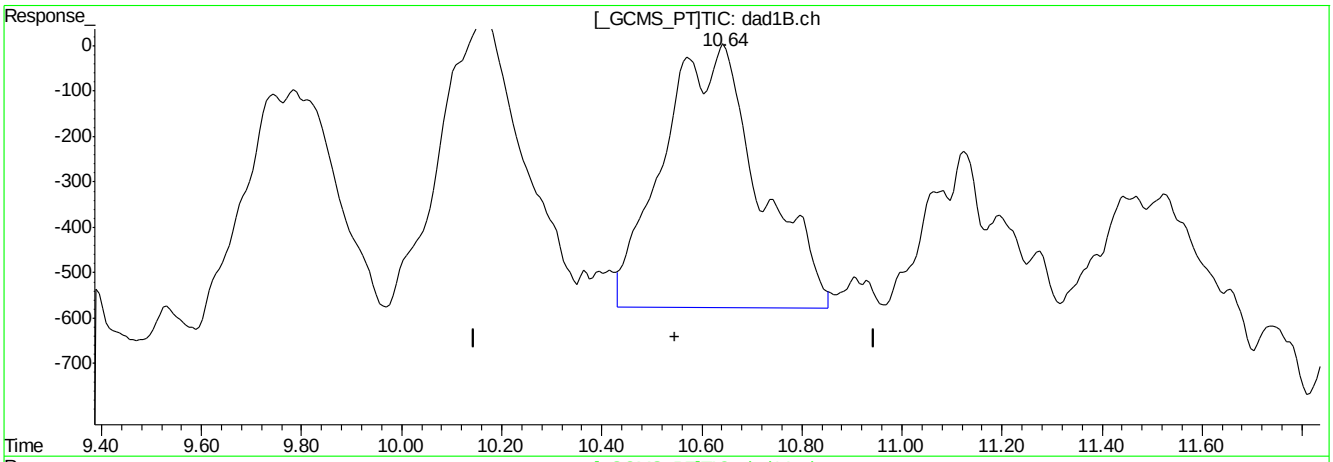
response 108028

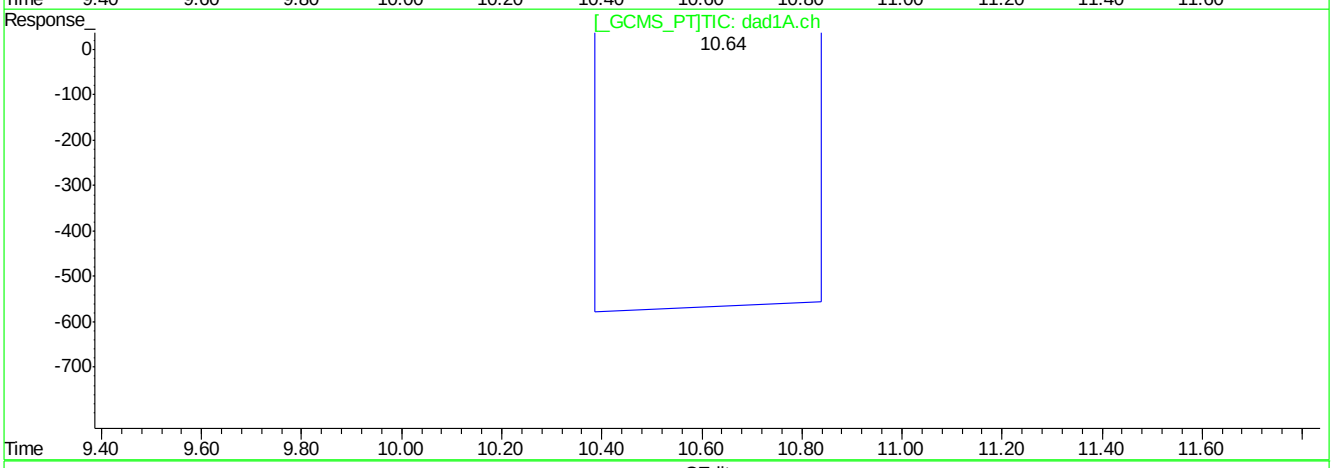
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:22:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.64min 22.223ppb m

response 77700

(13) 2-Amino-4,6-Dinitrotoluene #2

10.64min 20.679ppb

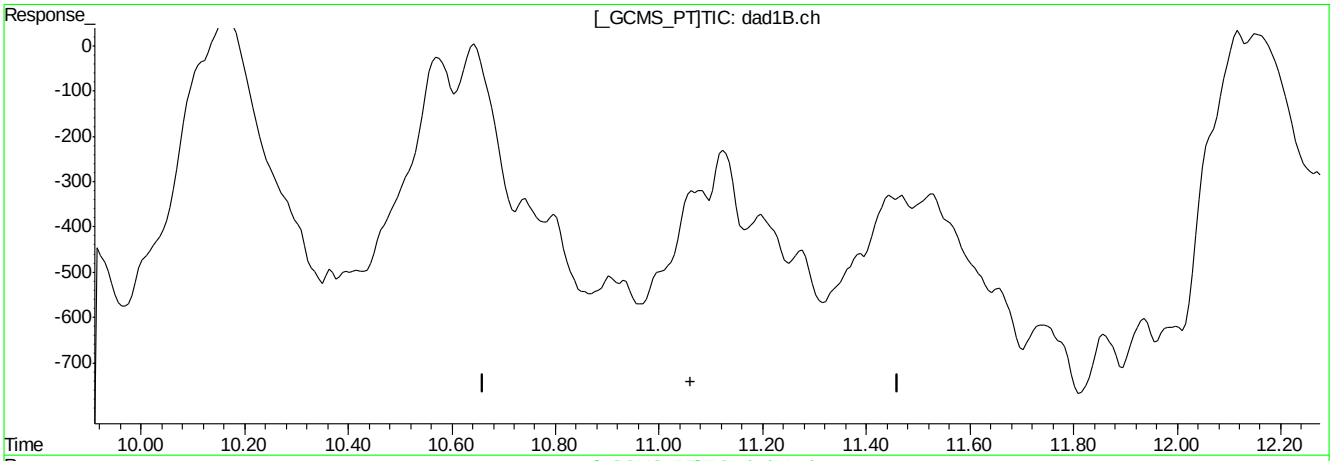
response 108028

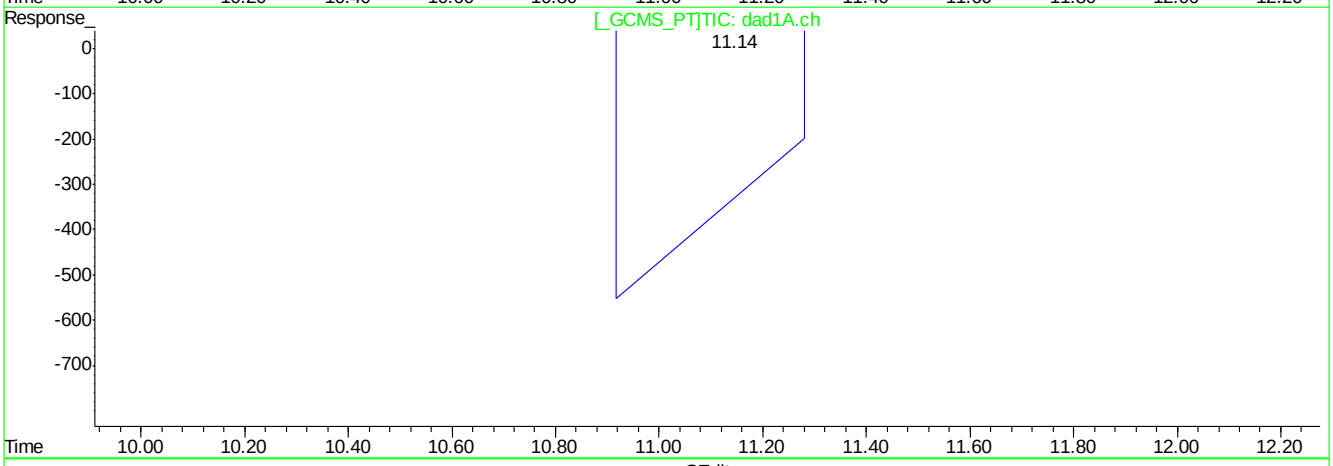
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:22:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(14) 4-Amino-2,6-Dinitrotoluene #2

11.14min 13.572ppb

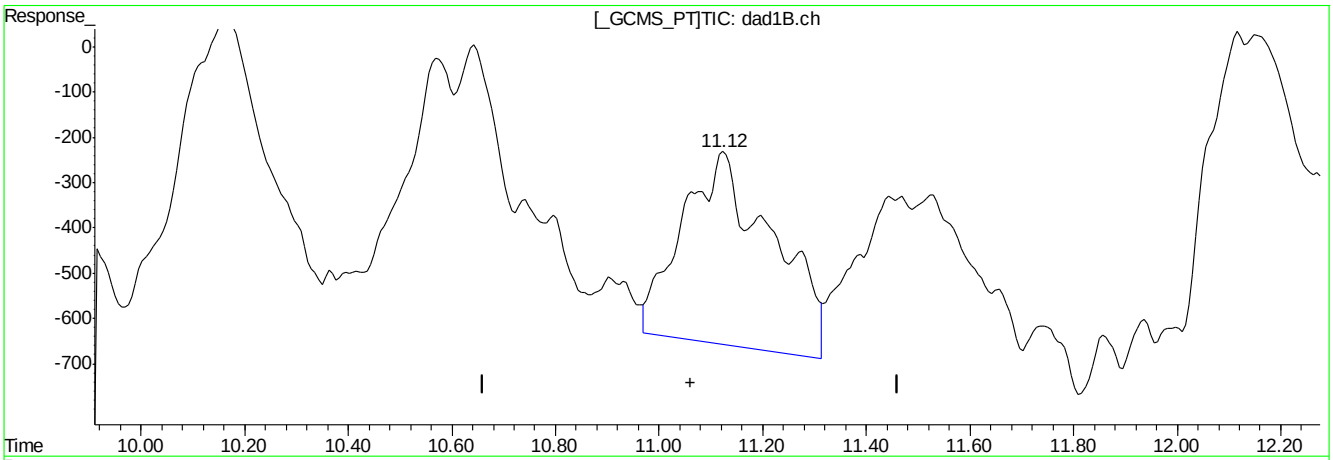
response 68316

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:22:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(14) 4-Amino-2,6-Dinitrotoluene

11.12min 20.740ppb m

response 51972

(14) 4-Amino-2,6-Dinitrotoluene #2

11.14min 13.572ppb

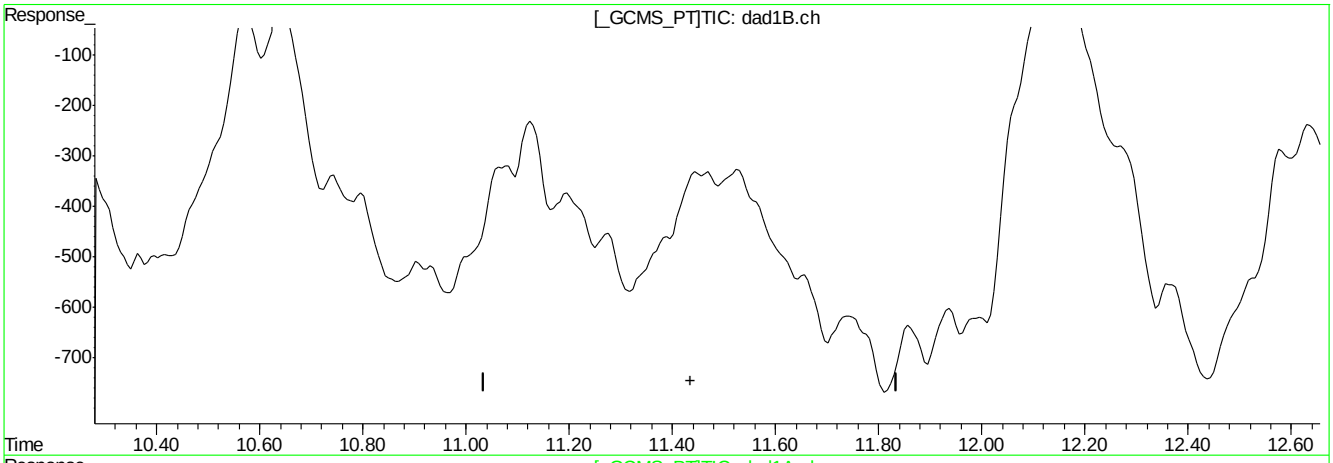
response 68316

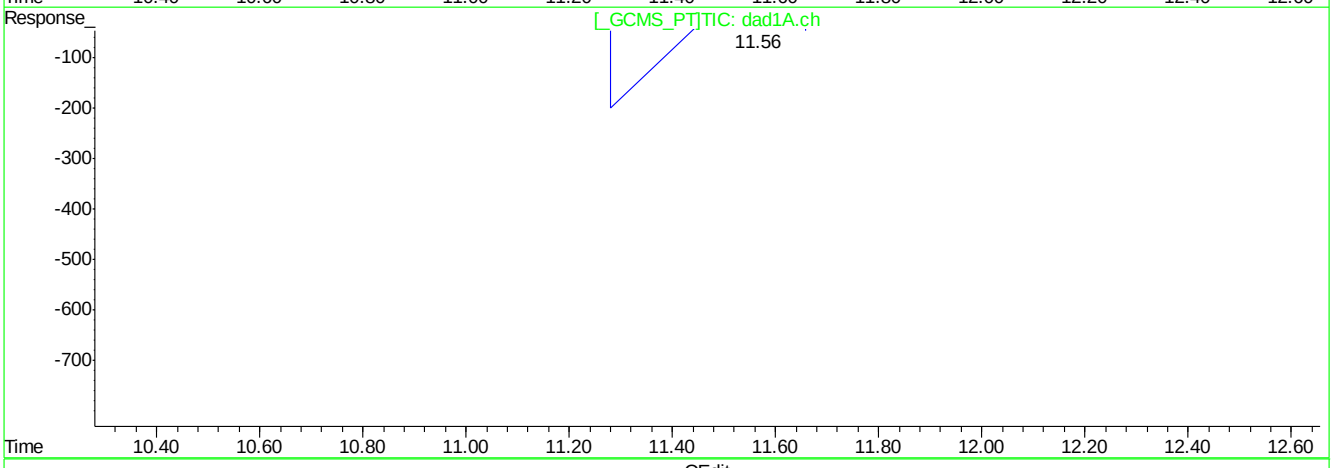
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:22:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

0.00min 0.000ppb

response 0

(15) 3,4-Dinitrotoluene #2 (S)

11.57min 13.725ppb

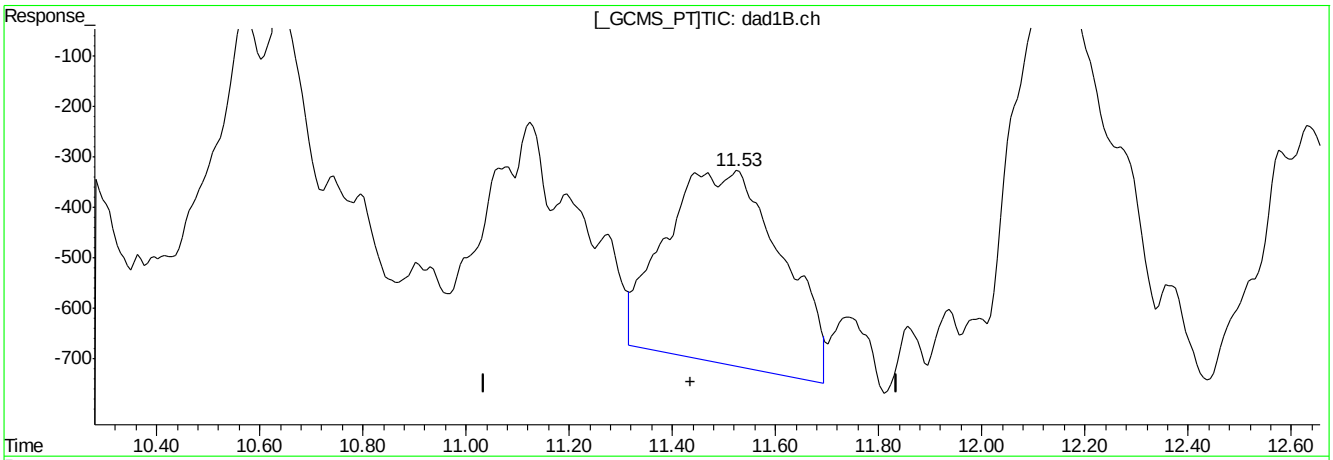
response 54067

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:22:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(15) 3,4-Dinitrotoluene (S)

11.53min 27.176ppb m

response 60035

(15) 3,4-Dinitrotoluene #2 (S)

11.57min 13.725ppb

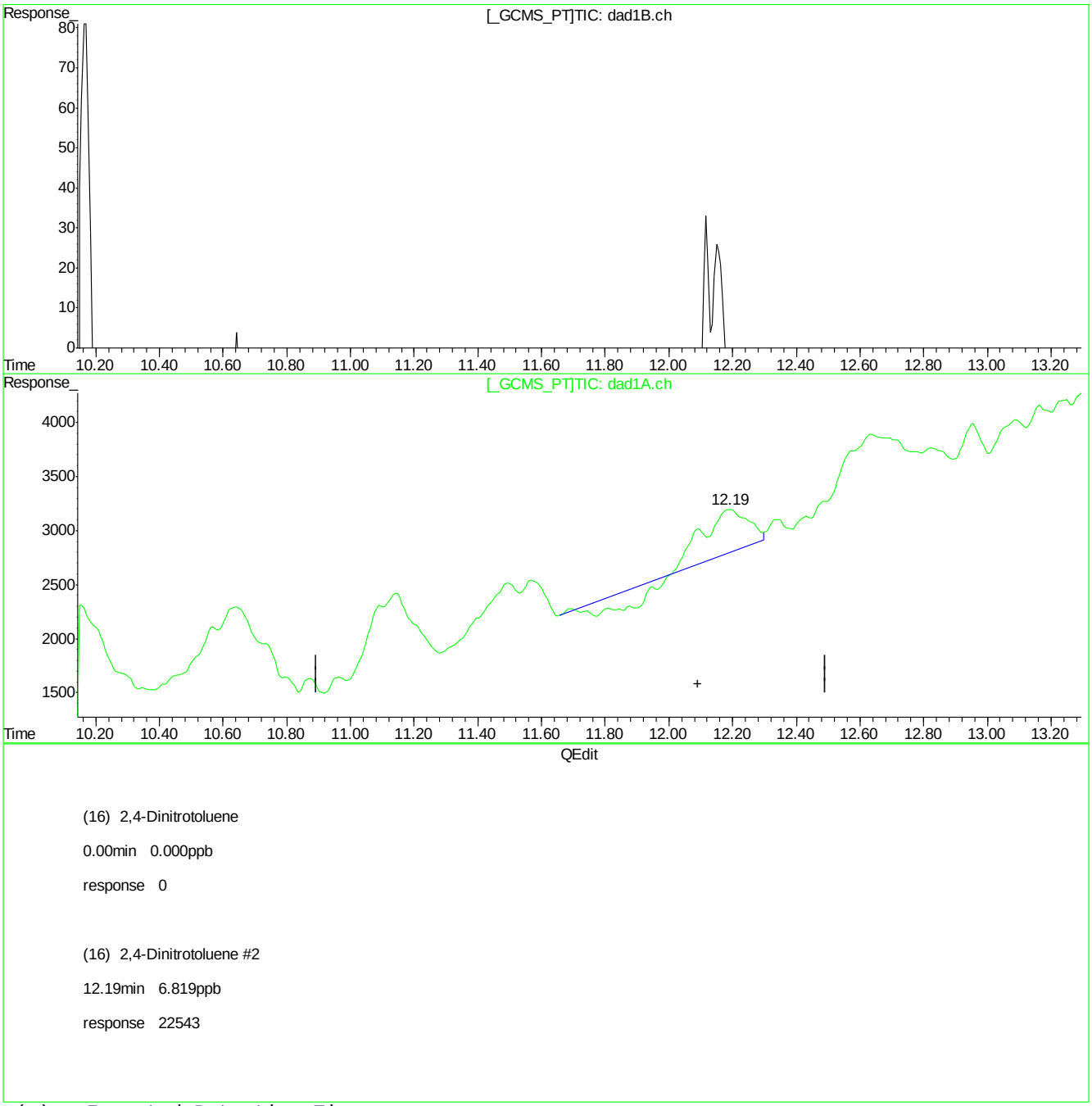
response 54067

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:23:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(16) 2,4-Dinitrotoluene

0.00min 0.000ppb

response 0

(16) 2,4-Dinitrotoluene #2

12.19min 6.819ppb

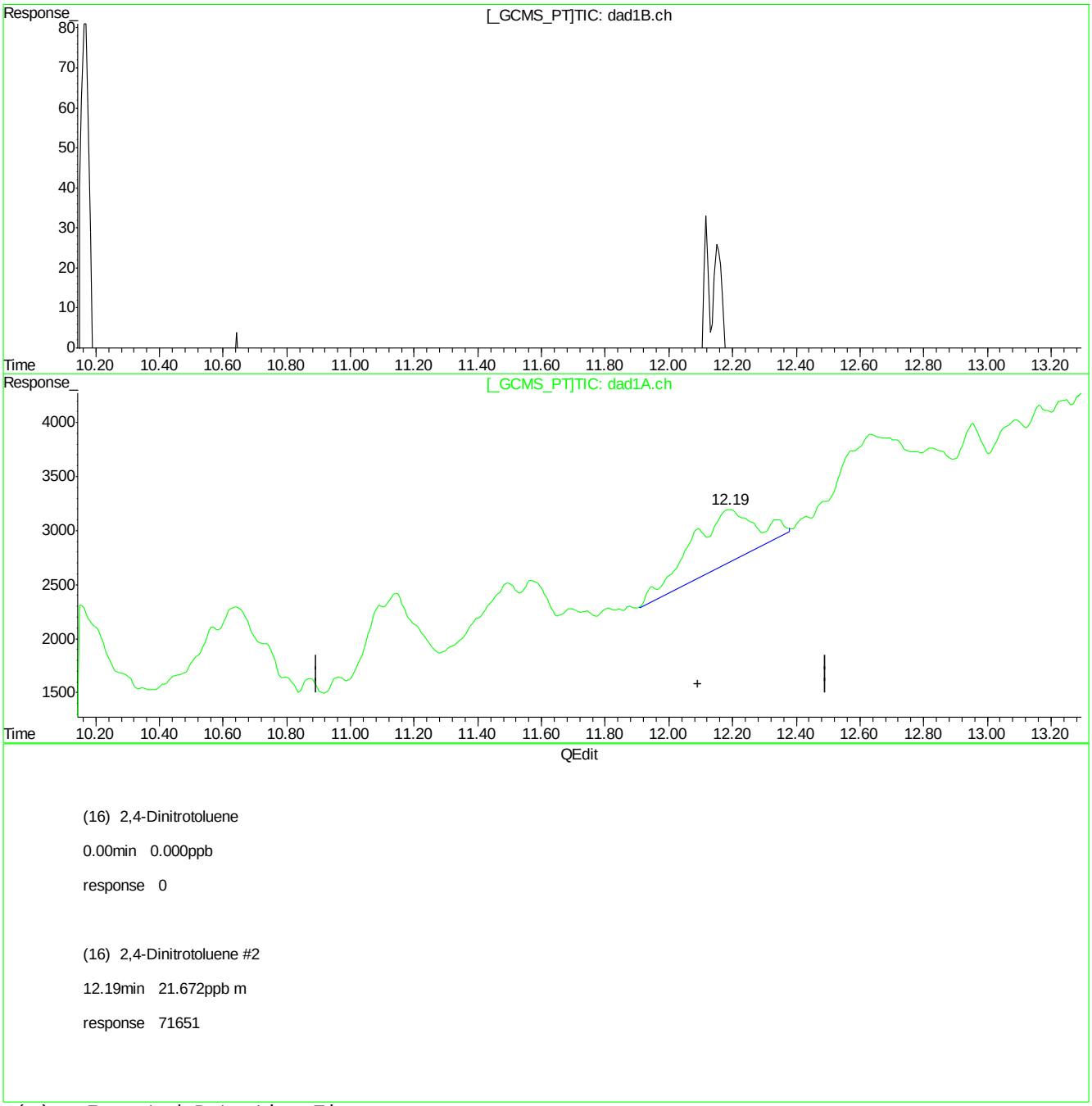
response 22543

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:23:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration

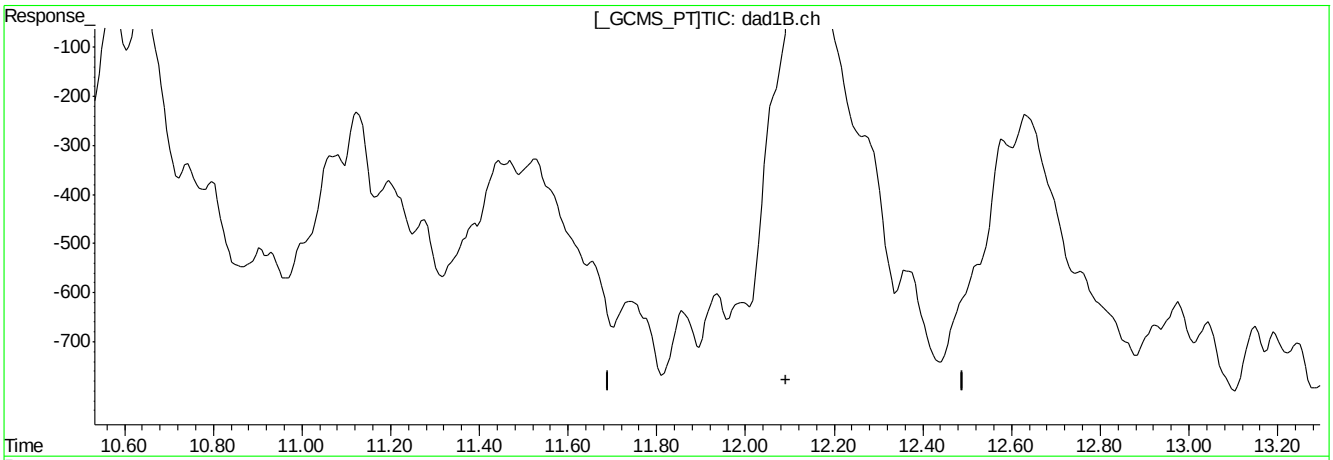


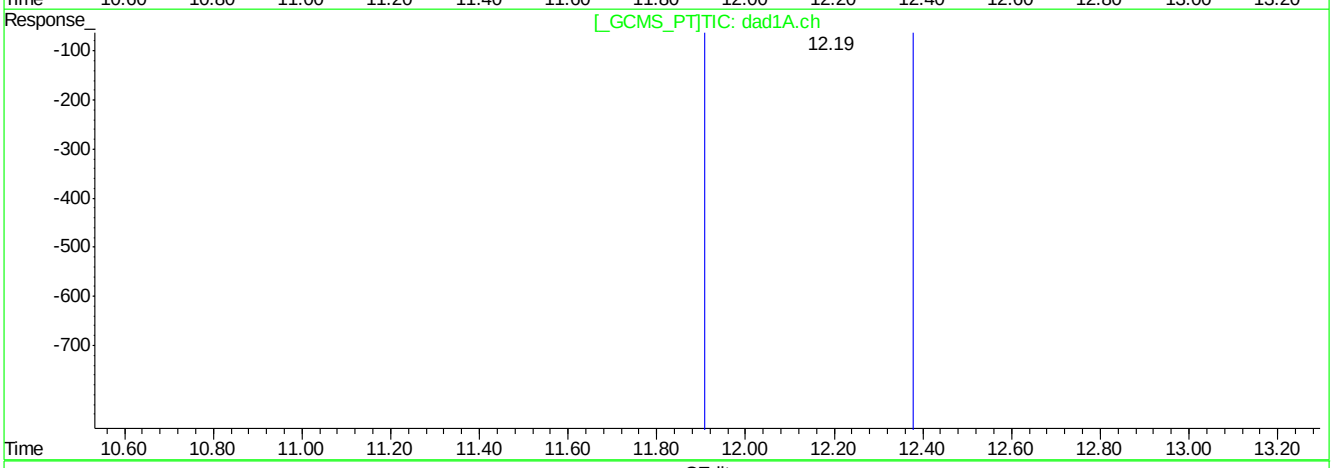
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:23:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

0.00min 0.000ppb

response 0

(16) 2,4-Dinitrotoluene #2

12.19min 21.672ppb m

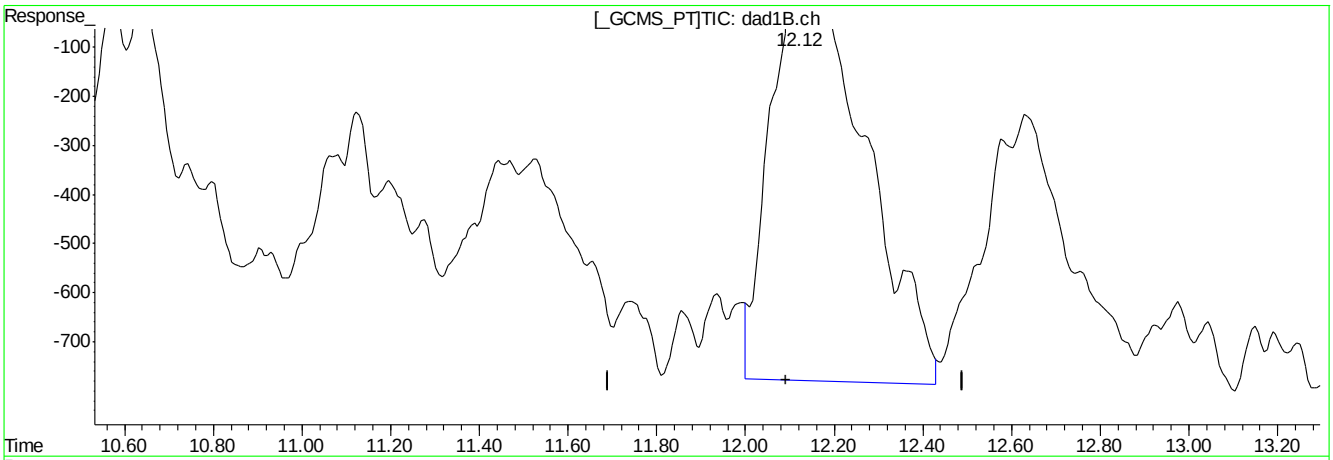
response 71651

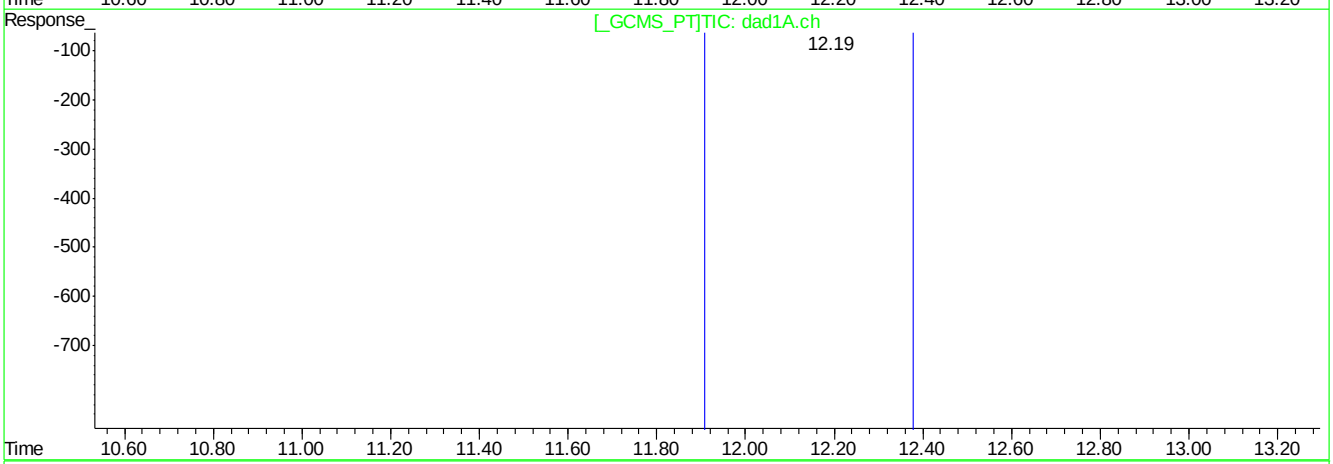
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:23:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.12min 24.811ppb m

response 121571

(16) 2,4-Dinitrotoluene #2

12.19min 21.672ppb m

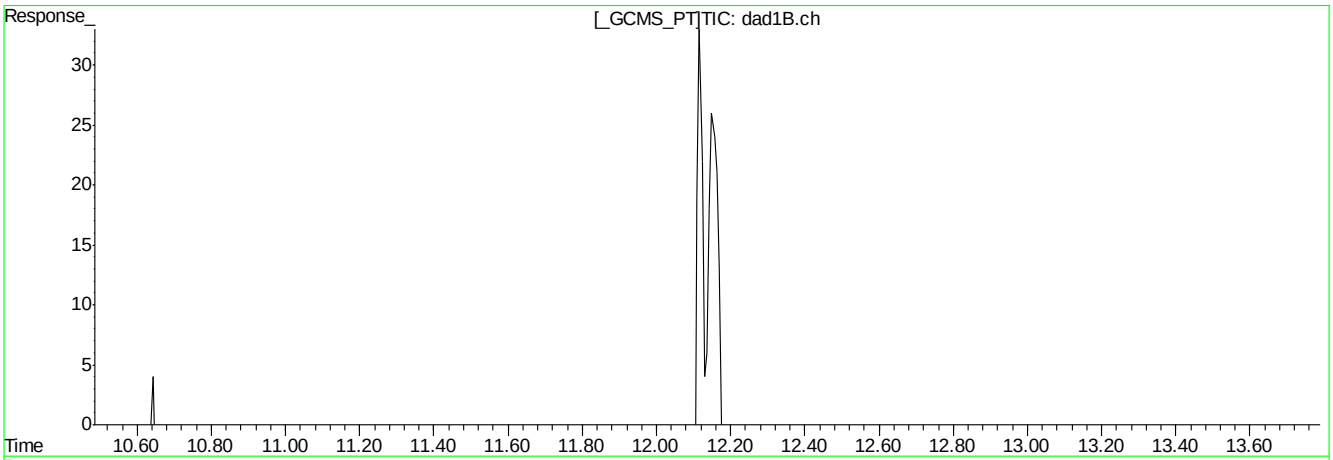
response 71651

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:23:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(17) 2,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(17) 2,6-Dinitrotoluene #2

12.64min 22.231ppb

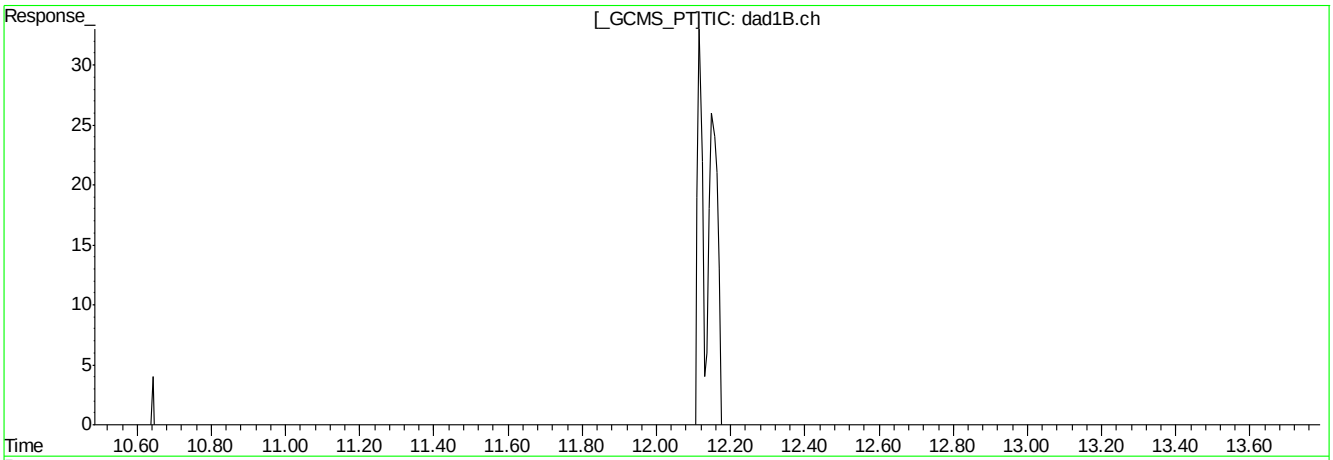
response 79987

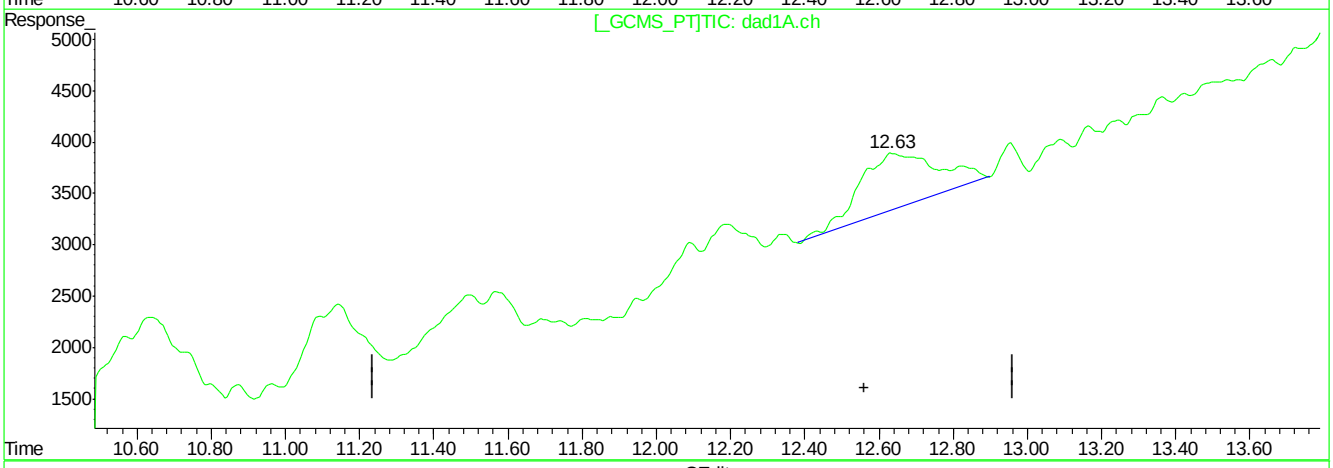
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:23:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(17) 2,6-Dinitrotoluene #2

12.63min 21.965ppb m

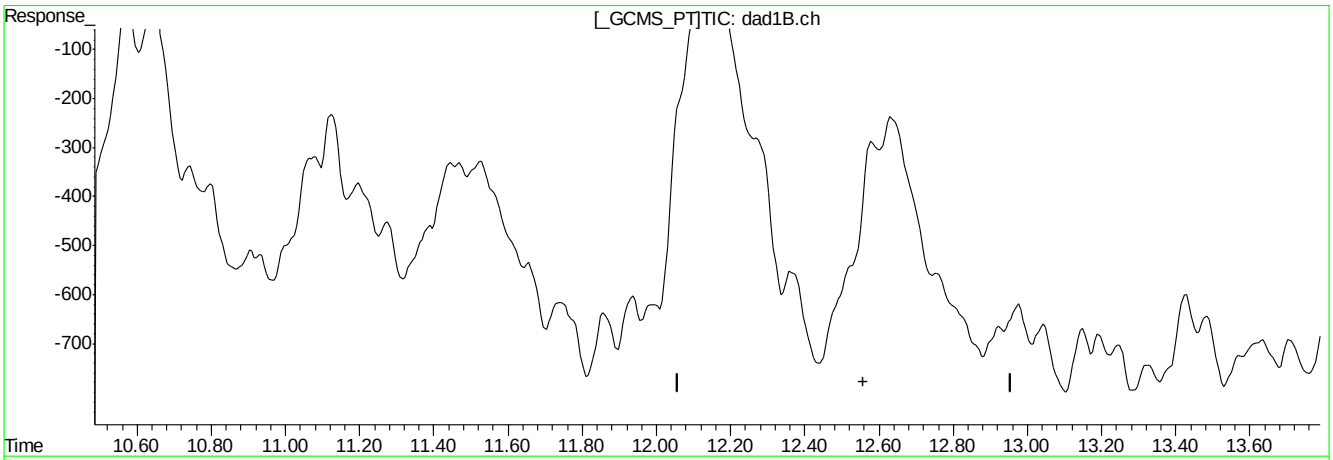
response 79028

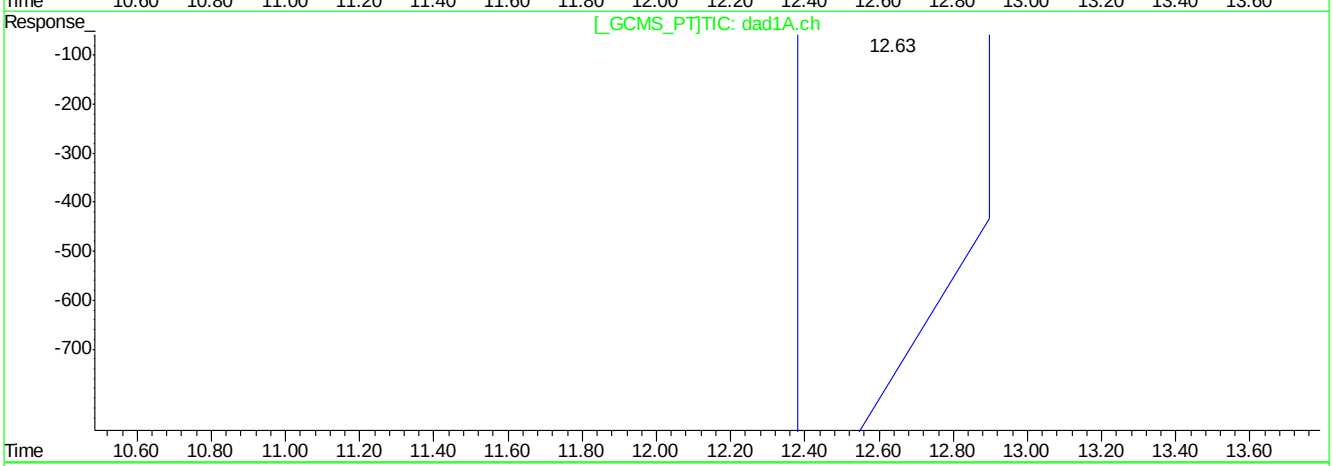
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:23:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(17) 2,6-Dinitrotoluene #2

12.63min 21.965ppb m

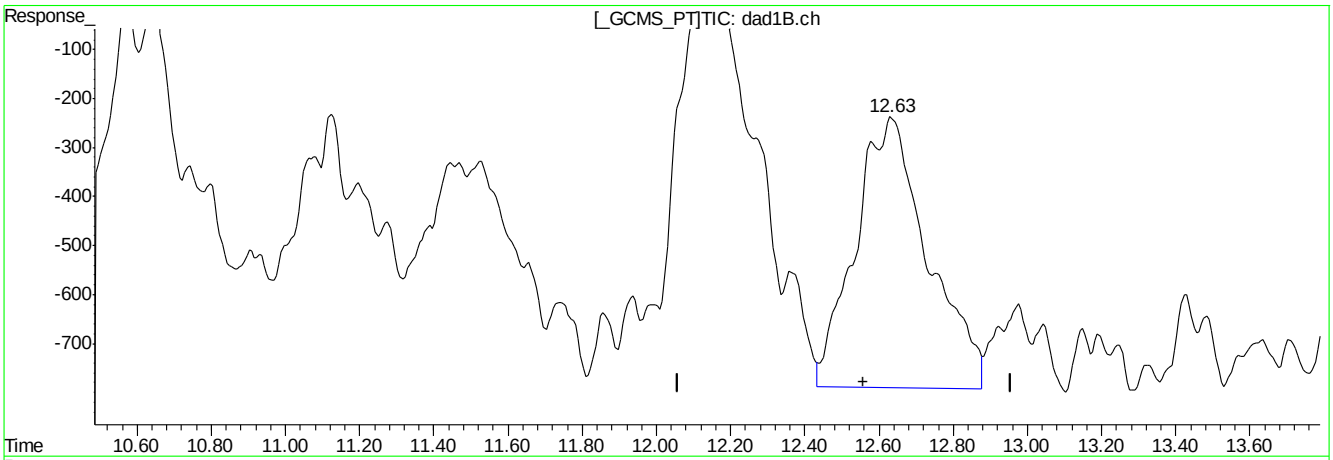
response 79028

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:23:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(17) 2,6-Dinitrotoluene

12.63min 26.243ppb m

response 75230

(17) 2,6-Dinitrotoluene #2

12.63min 21.965ppb m

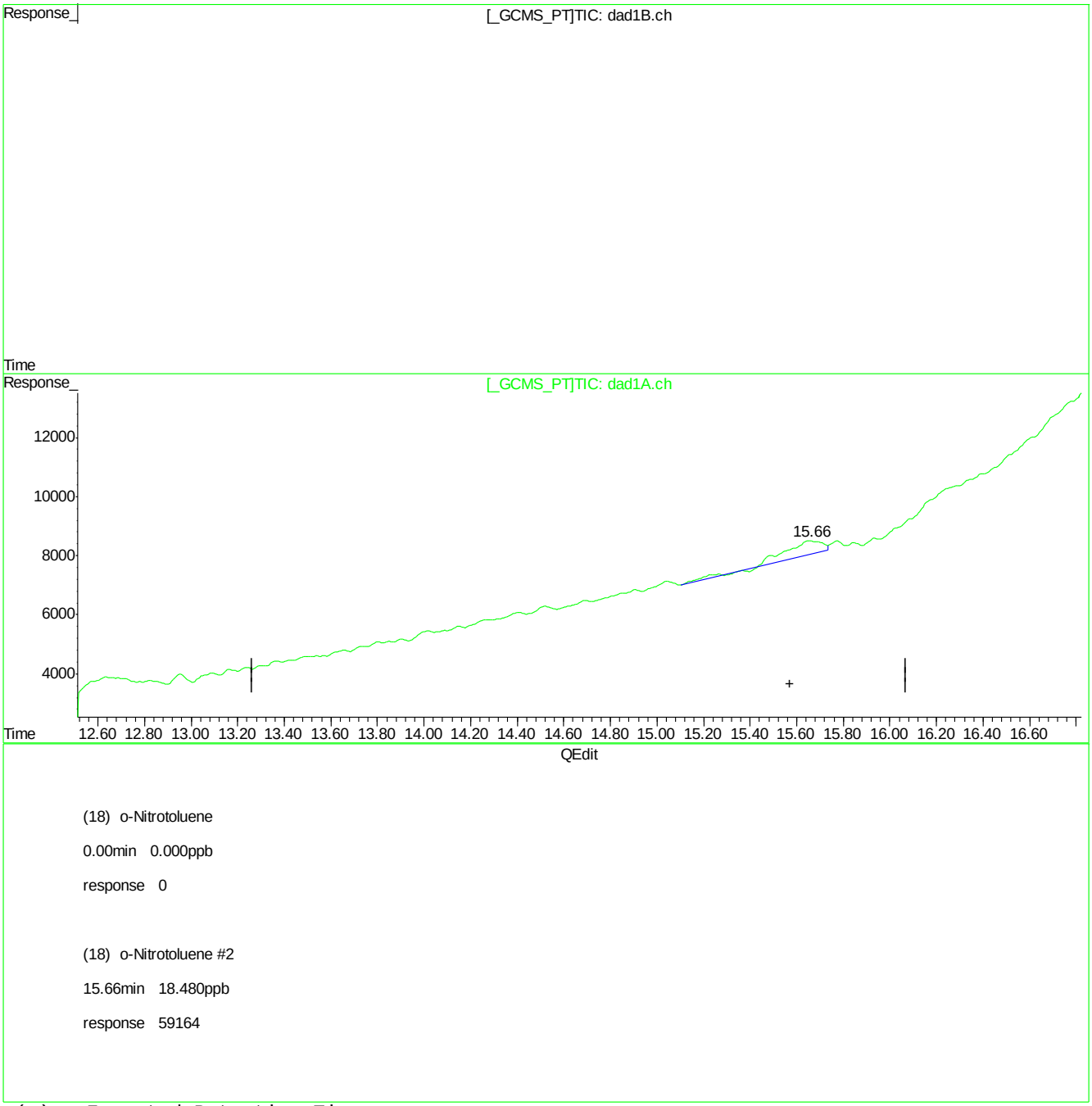
response 79028

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:23:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

0.00min 0.000ppb

response 0

(18) o-Nitrotoluene #2

15.66min 18.480ppb

response 59164

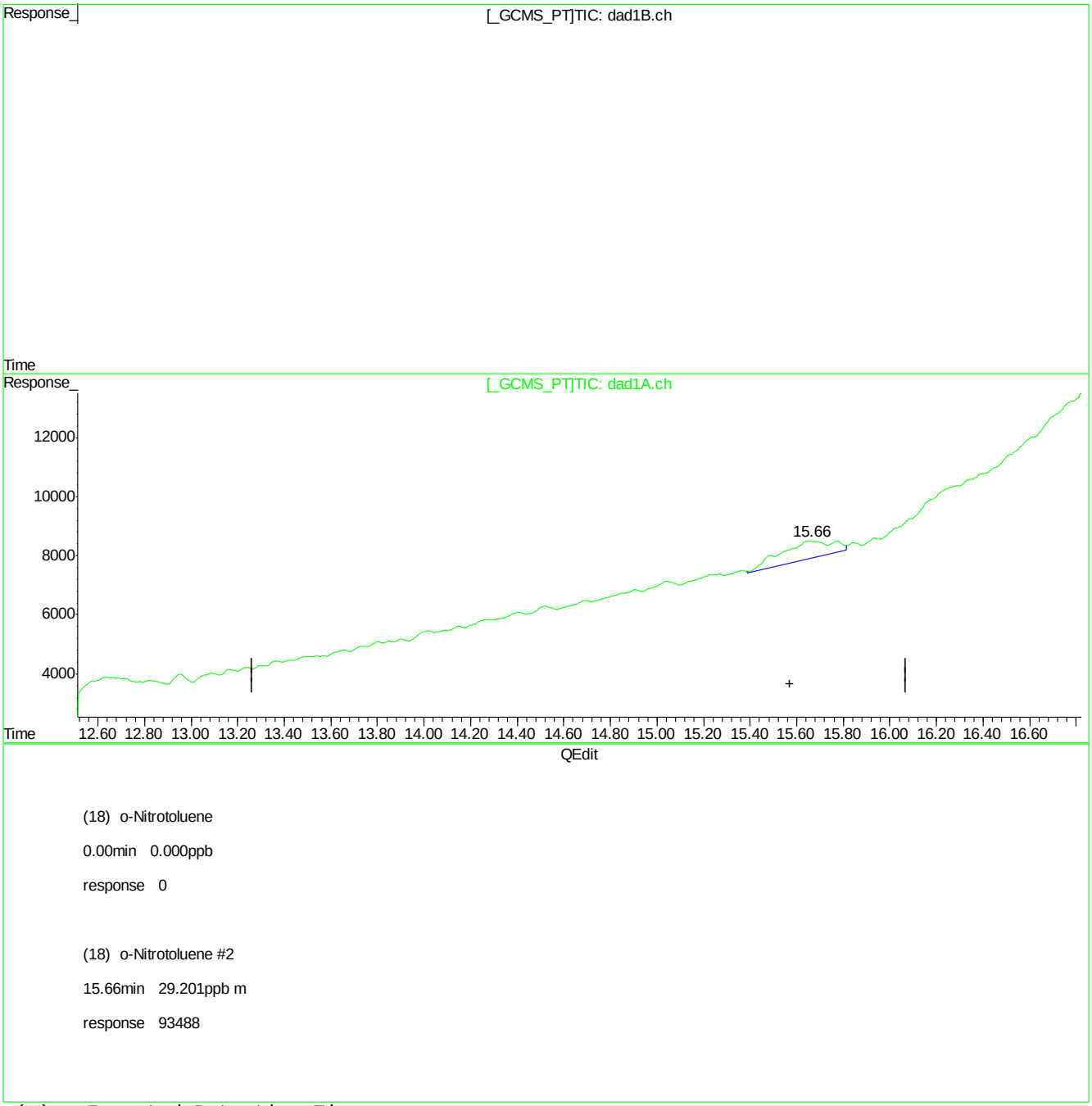
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:23:53 2021

PP389745.D edits: o-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

0.00min 0.000ppb

response 0

(18) o-Nitrotoluene #2

15.66min 29.201ppb m

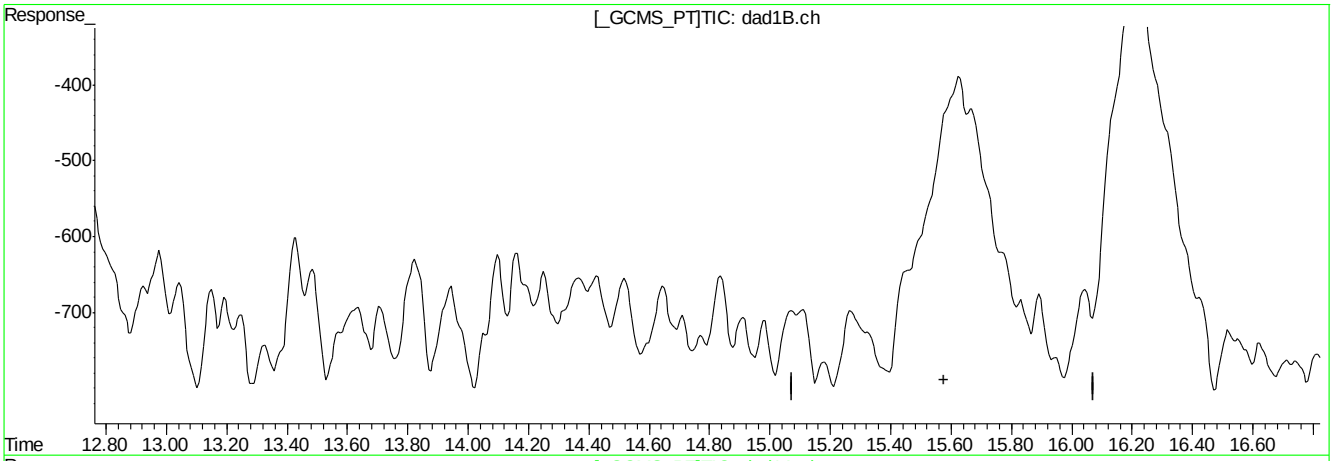
response 93488

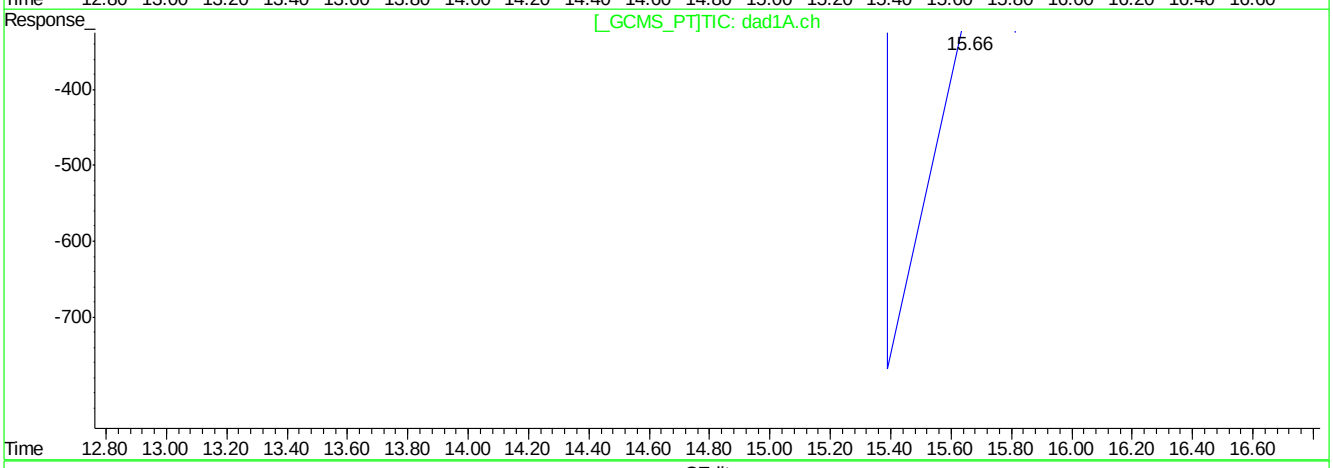
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:24:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

0.00min 0.000ppb

response 0

(18) o-Nitrotoluene #2

15.66min 29.201ppb m

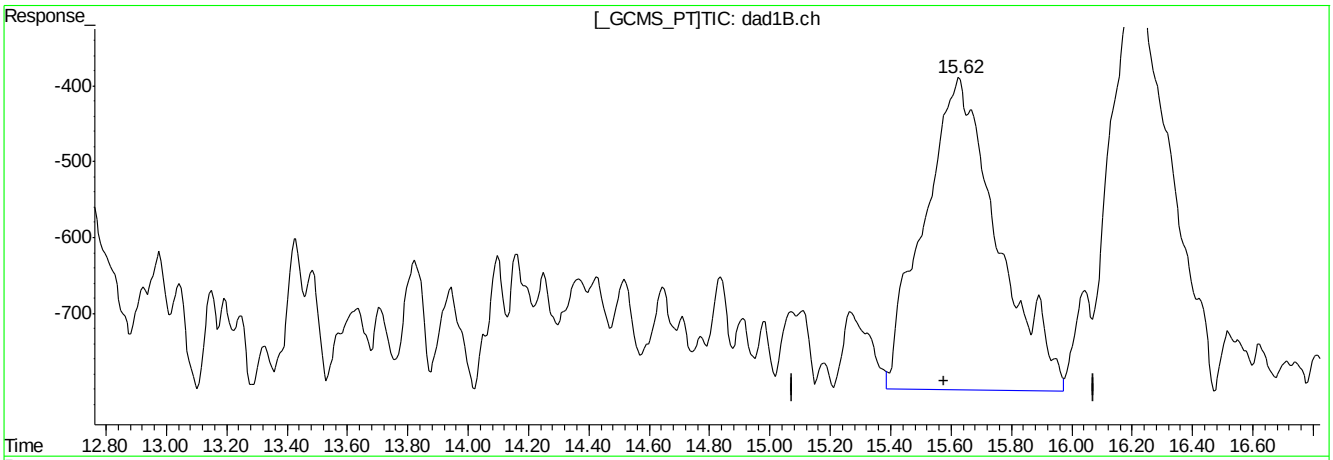
response 93488

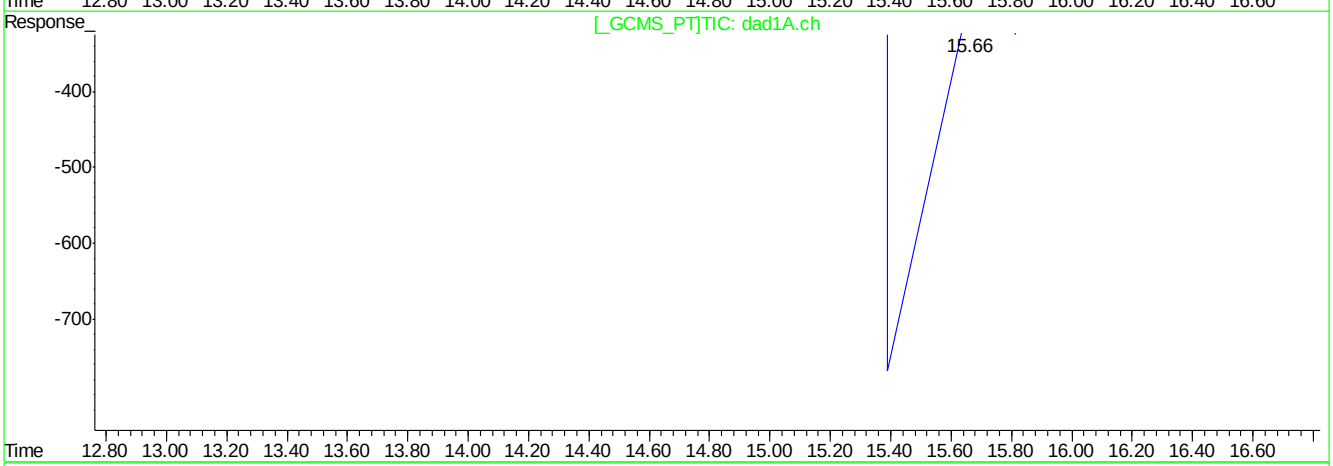
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:24:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.62min 29.899ppb m

response 69429

(18) o-Nitrotoluene #2

15.66min 29.201ppb m

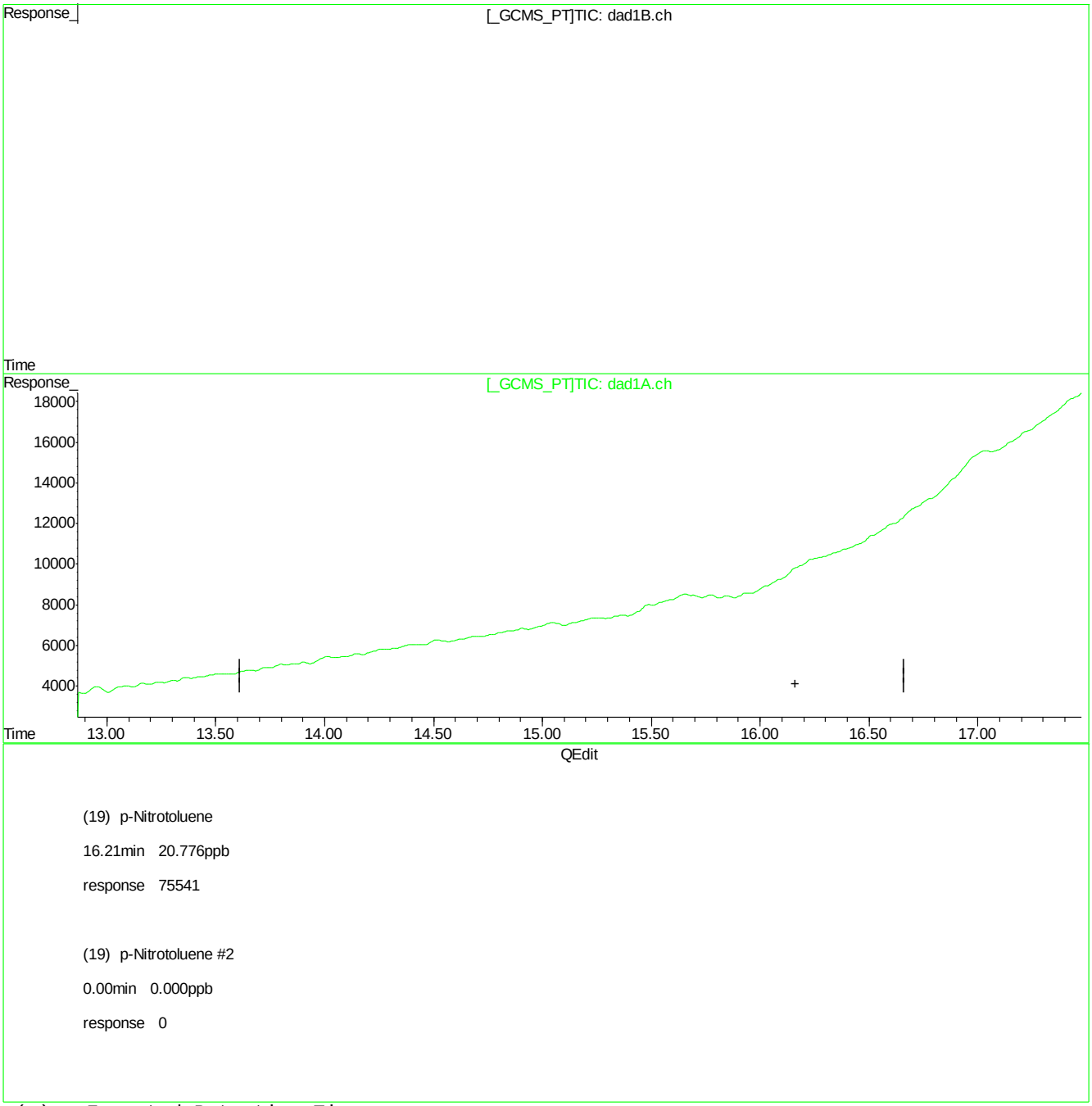
response 93488

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:24:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.21min 20.776ppb

response 75541

(19) p-Nitrotoluene #2

0.00min 0.000ppb

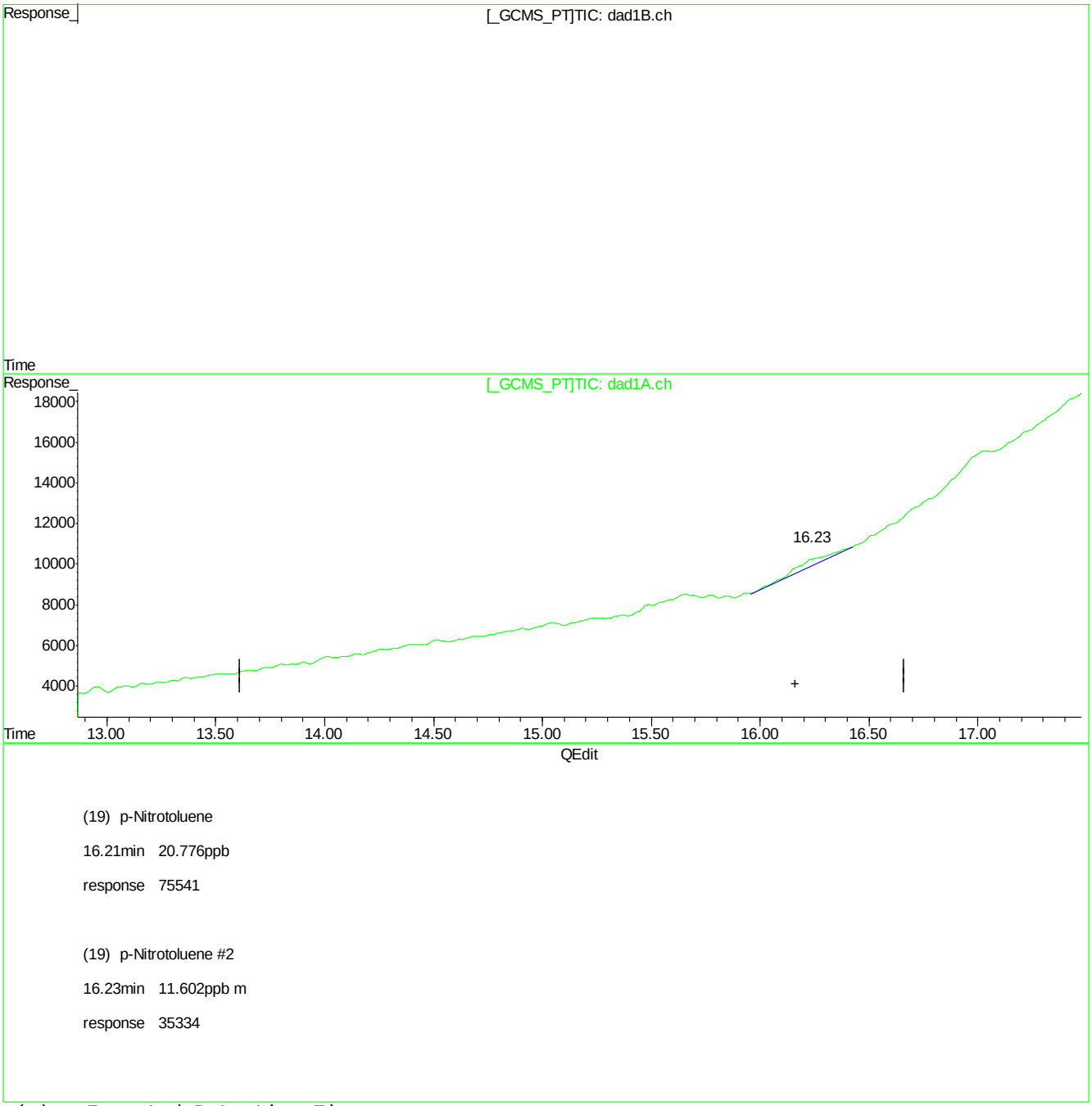
response 0

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:24:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.21min 20.776ppb

response 75541

(19) p-Nitrotoluene #2

16.23min 11.602ppb m

response 35334

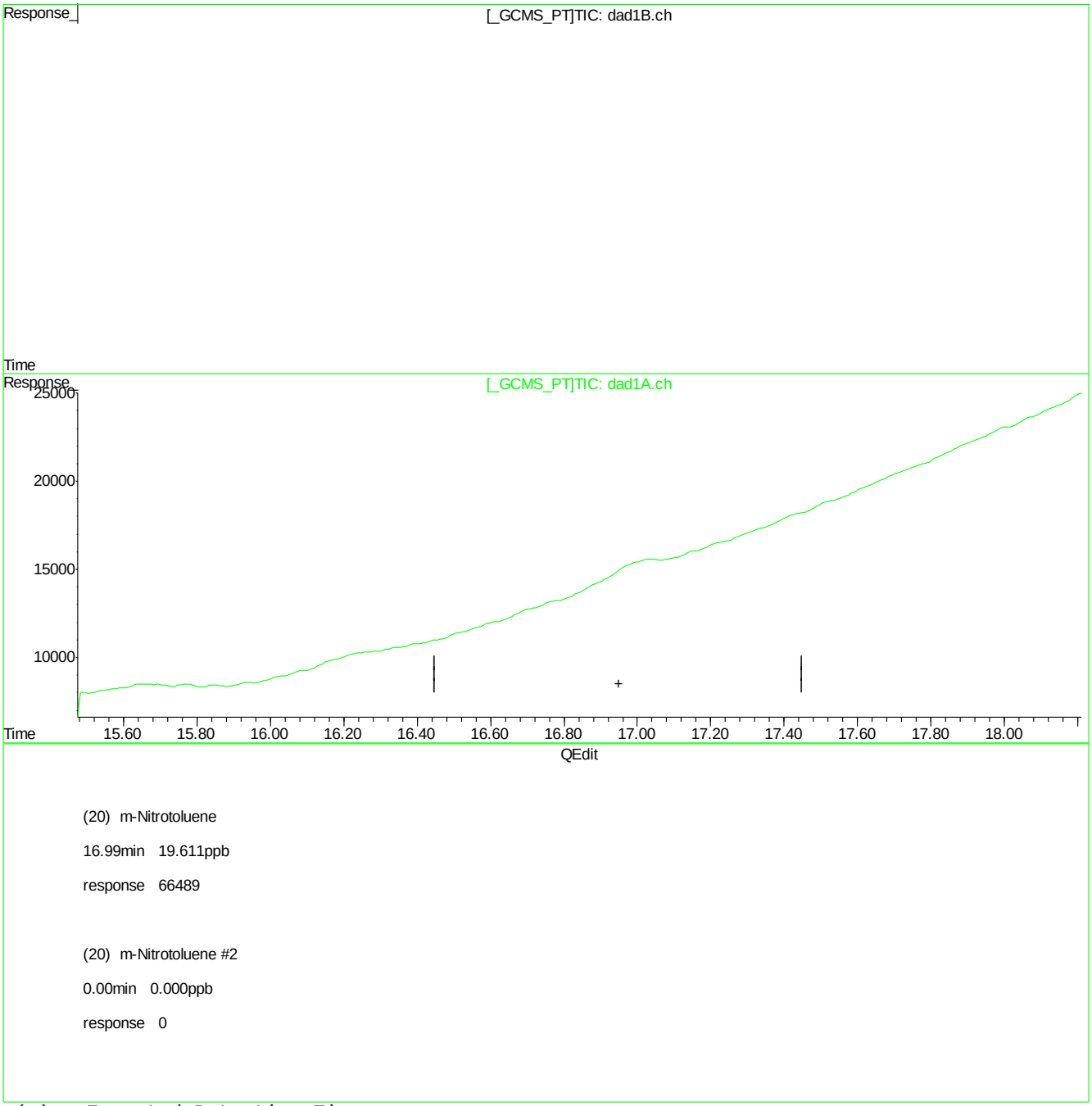
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:24:28 2021

PP389745.D edits: p-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration

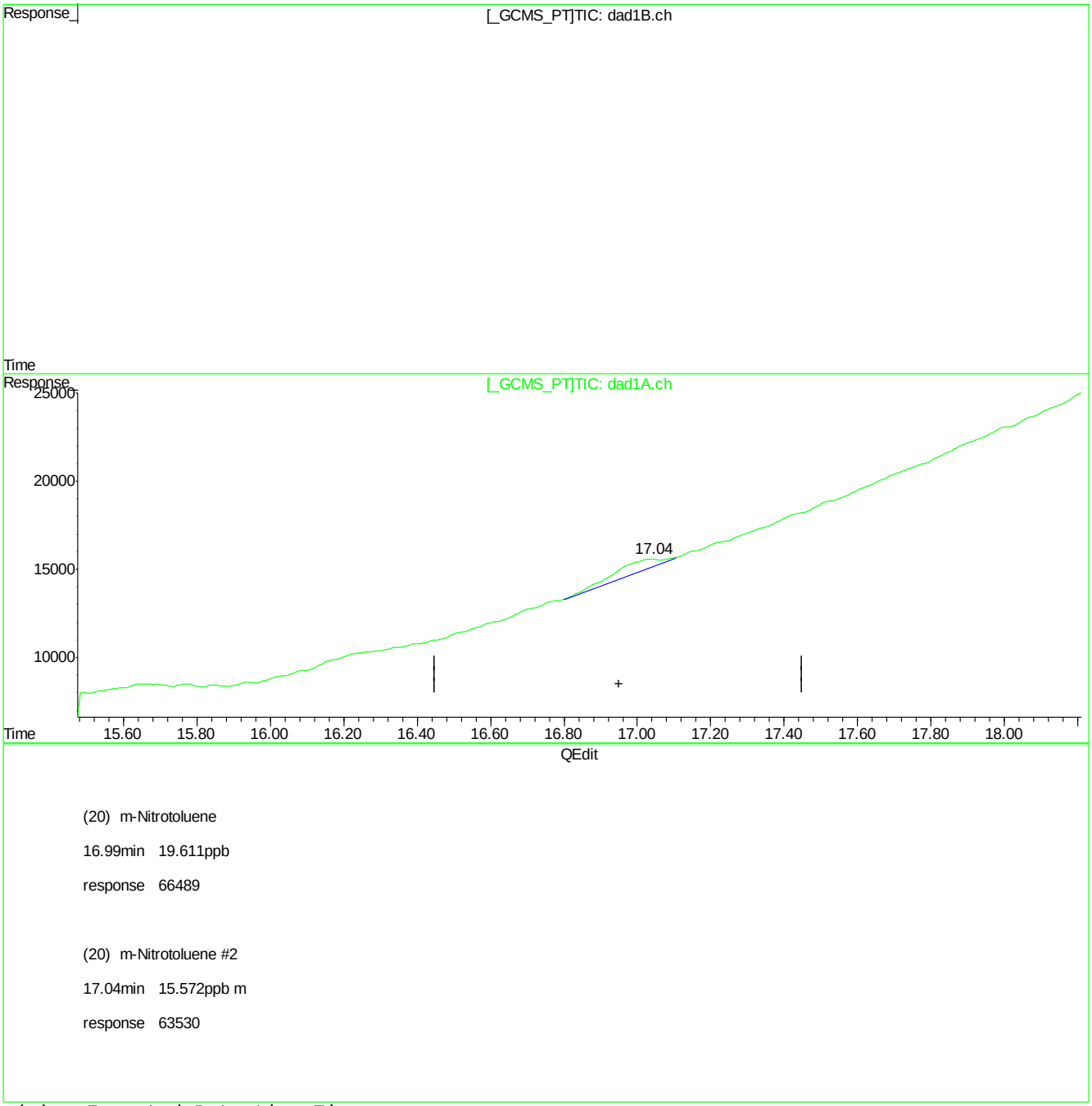


(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:24:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration

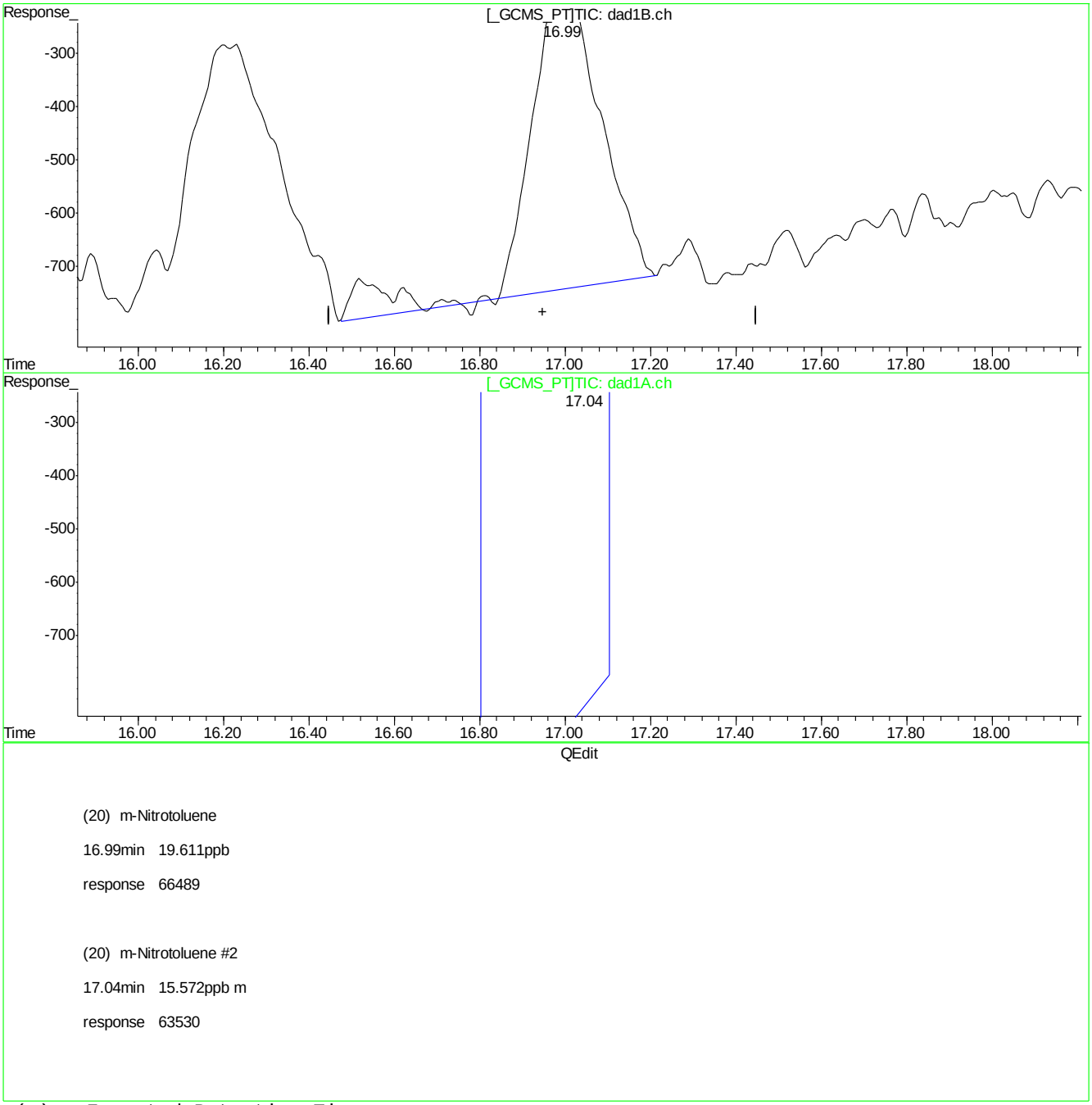


(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:24:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration

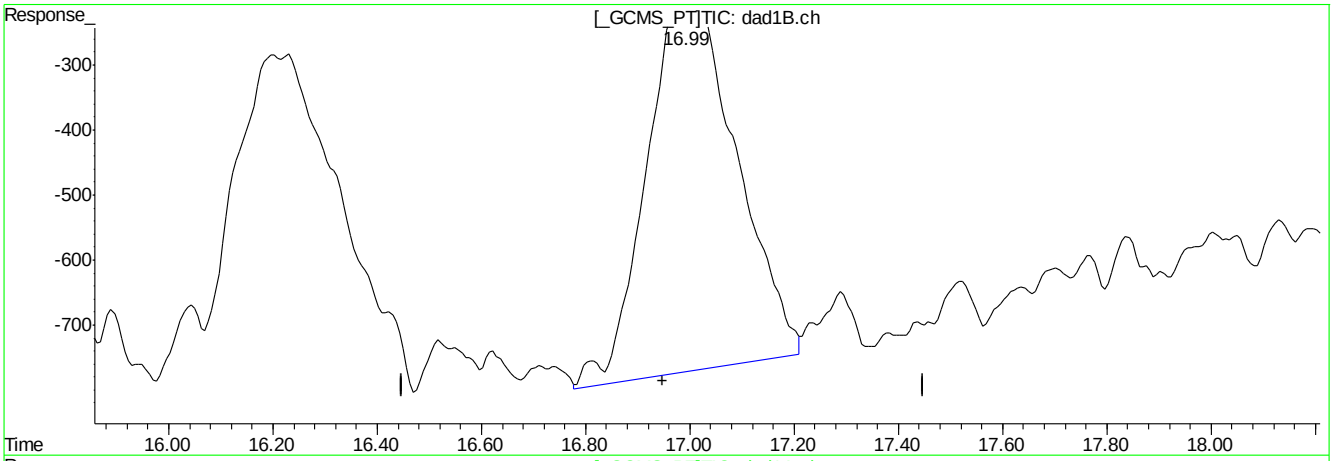


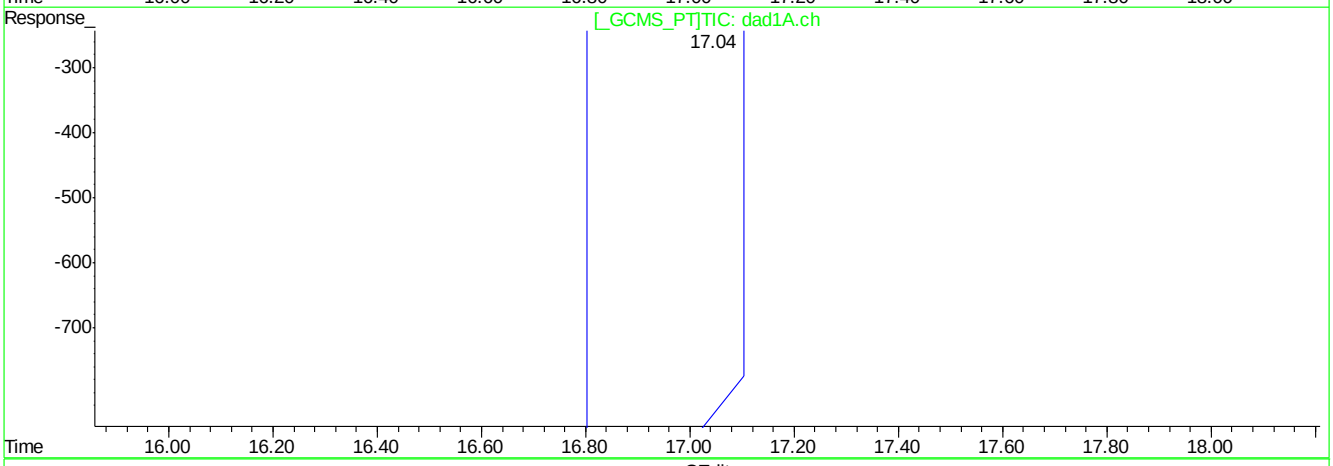
(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:24:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.99min 20.392ppb m

response 69137

(20) m-Nitrotoluene #2

17.04min 15.572ppb m

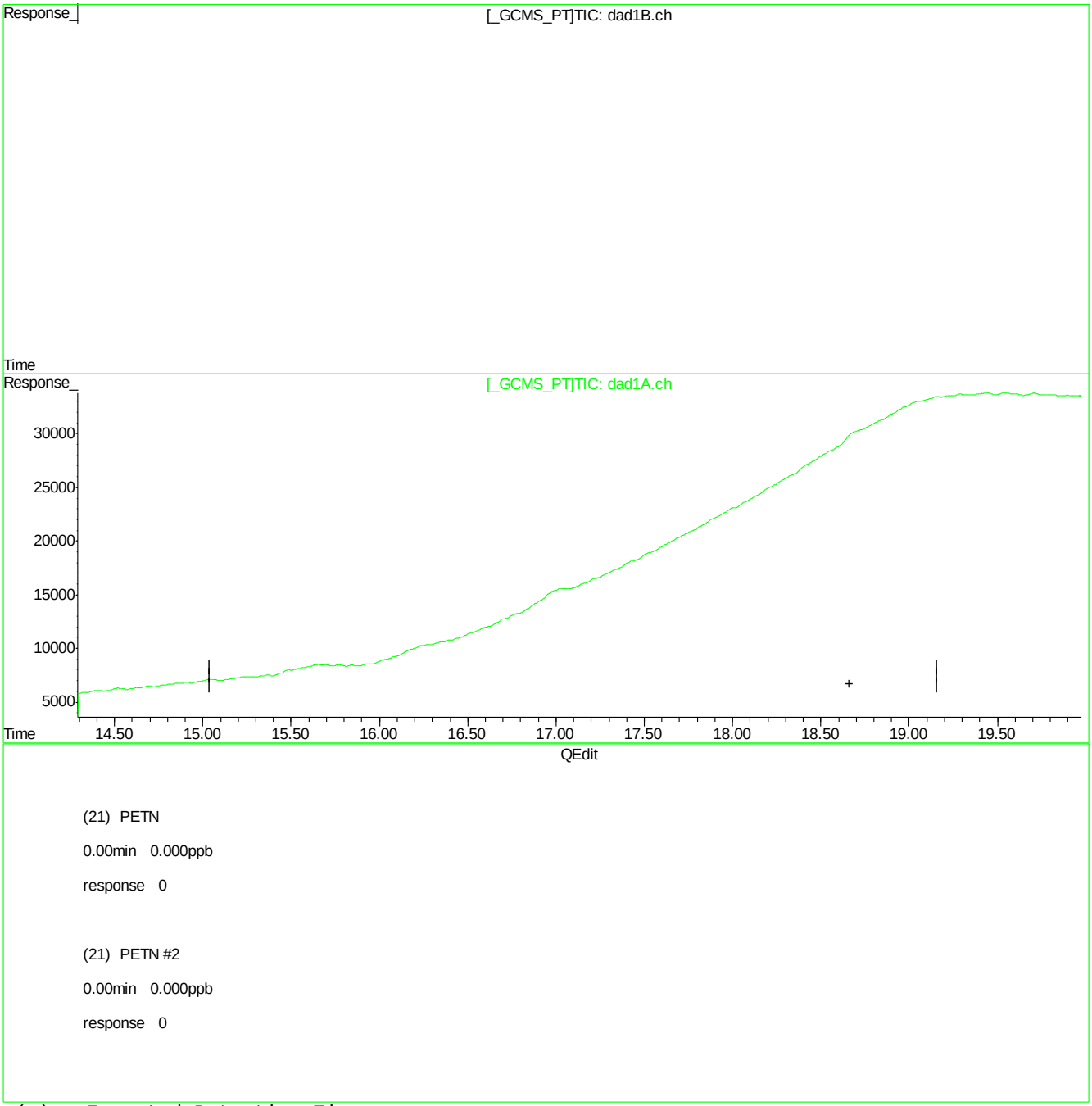
response 63530

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:24:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration

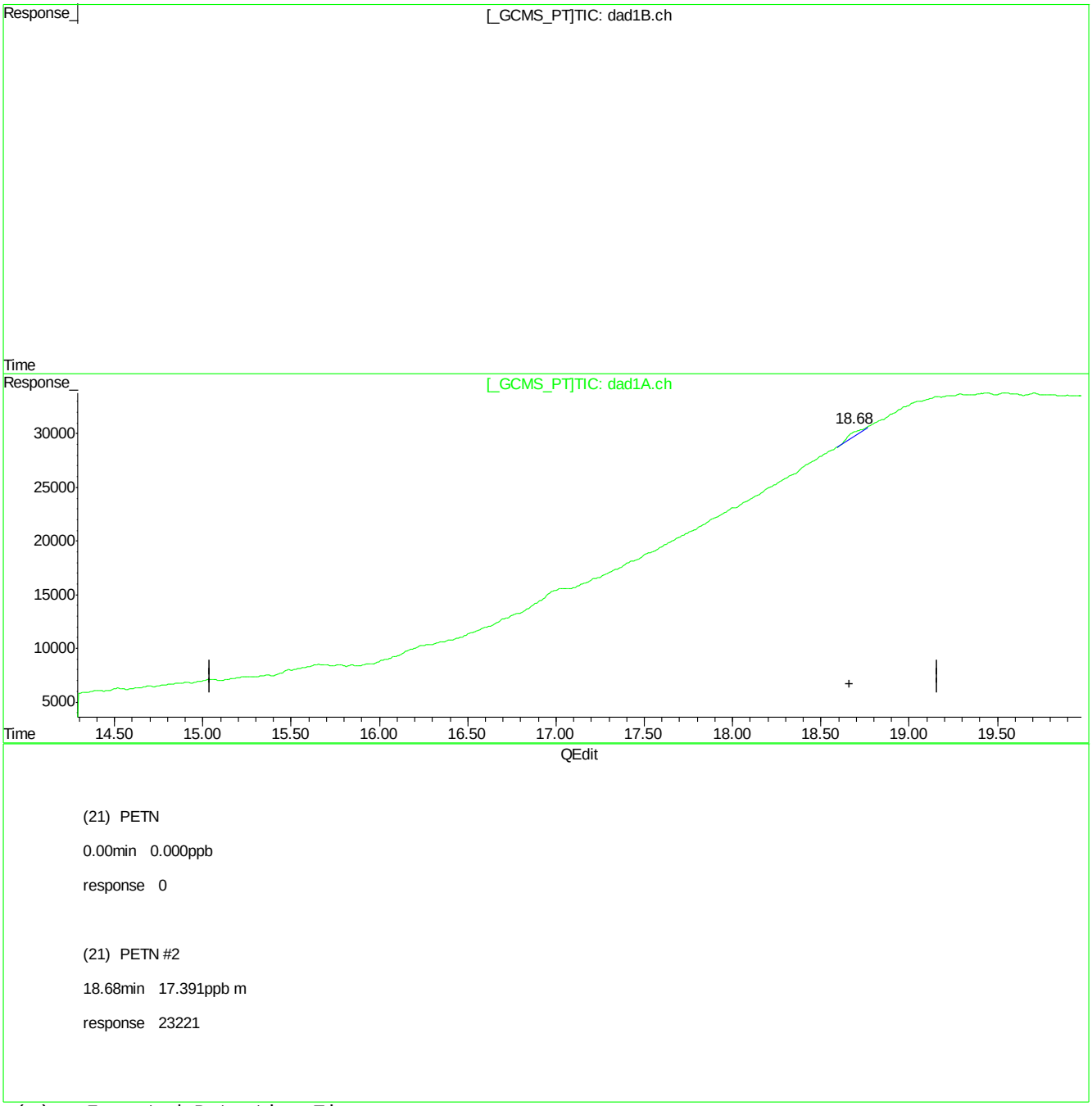


(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:24:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1B.ch Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389745.D\dad1A.ch
Acq On : 04-Feb-2021, 14:05:09 Operator: jamesb
Sample : ic2401-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.68min 17.391ppb m

response 23221

(+) = Expected Retention Time
PP389745.D GPP2401_020521PRI.M Fri Feb 05 08:24:58 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 02/08/21 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 05 07:48:30 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.49	11.49	113787	170148	51.506m	43.188
Spiked Amount	500.000	Range	70 - 136	Recovery	=	10.30%#	8.64%#
	Target Compounds						
1)	TNX	1.35	1.35	171733	260208	54.691	55.135
2)	HMX	1.50	1.50	112017	379258	69.502	82.799
3)	DNX	1.75	1.75	162036	306310	58.278	69.926
4)	MNX	2.36	2.36	166596	261186	56.757m	57.385m
5)	RDX	3.00	3.00	103500	160709	53.602m	52.955m
6)	1,3,5-Trinitrobe	4.80	4.80	219689	432960	52.284m	54.102
7)	1,3-Dinitrobenze	6.01	6.01	283250	235895	52.595m	60.649m
8)	3,5-Dinitroanili	6.43	6.43	203887	403073	49.493	56.644m
9)	Nitrobenzene	7.59	7.60	166495	174936	51.427	52.659m
10)	Nitroglycerin	0.00	9.25	0	72075	N.D.	58.945 #
11)	Tetryl	9.76	9.76	174957	251776	55.187	50.822
12)	2,4,6-Trinitroto	10.15	10.15	215397	235955	55.947	50.364
13)	2-Amino-4,6-Dini	10.62	10.62	182187	255686	52.108	48.938
14)	4-Amino-2,6-Dini	11.12	11.13	133405	216419	53.249m	42.995
16)	2,4-Dinitrotolue	12.16	12.17	257394	139999	52.530	42.346
17)	2,6-Dinitrotolue	12.63	12.64	147917	138061	51.599	38.372
18)	o-Nitrotoluene	15.63	15.64	128439	149210	55.312	46.606m
19)	p-Nitrotoluene	16.21	16.39	197662	128928	54.363	42.335m
20)	m-Nitrotoluene	16.99	17.01	189454	182182	55.881	44.655m
21)	PETN	0.00	18.71	0	70410	N.D.	52.733m#

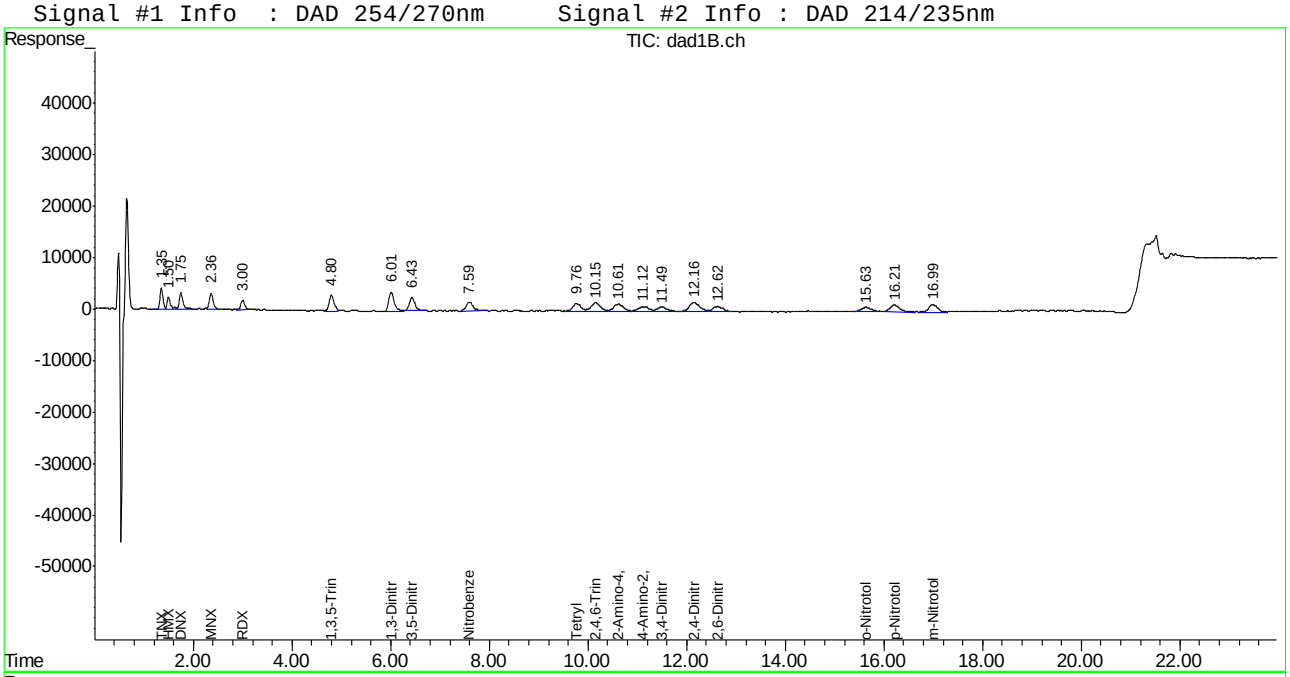
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:39:45 2021 Page 1

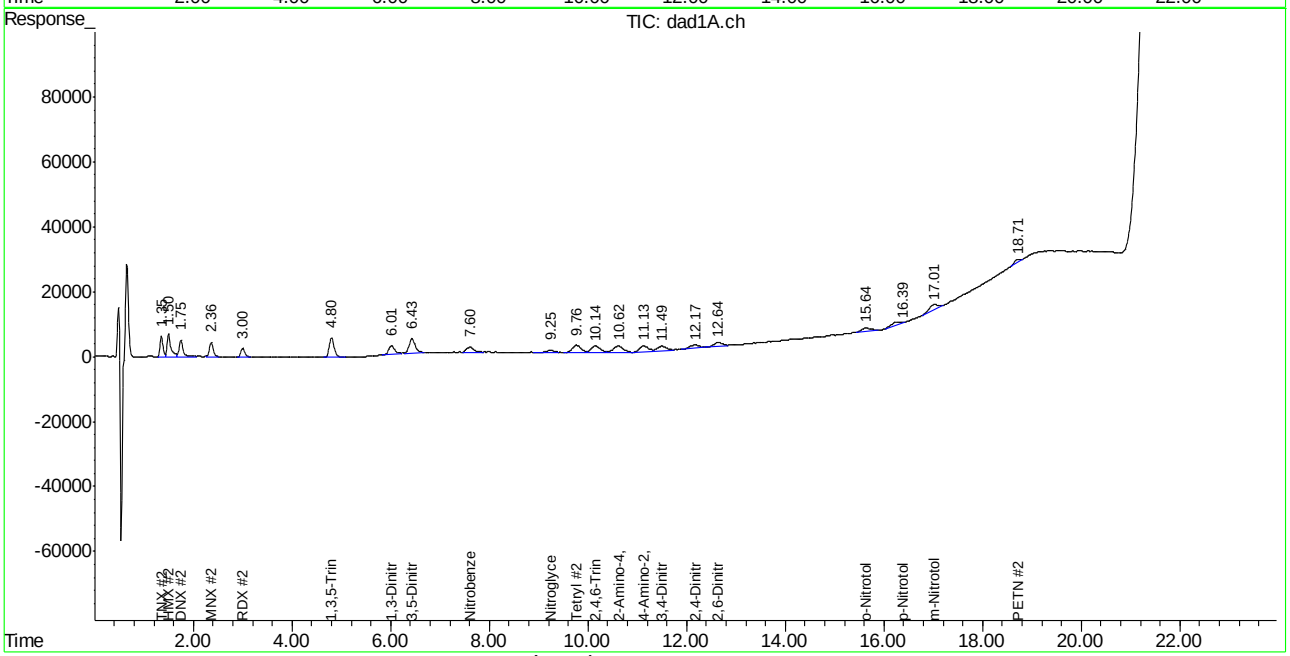
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 8:02 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

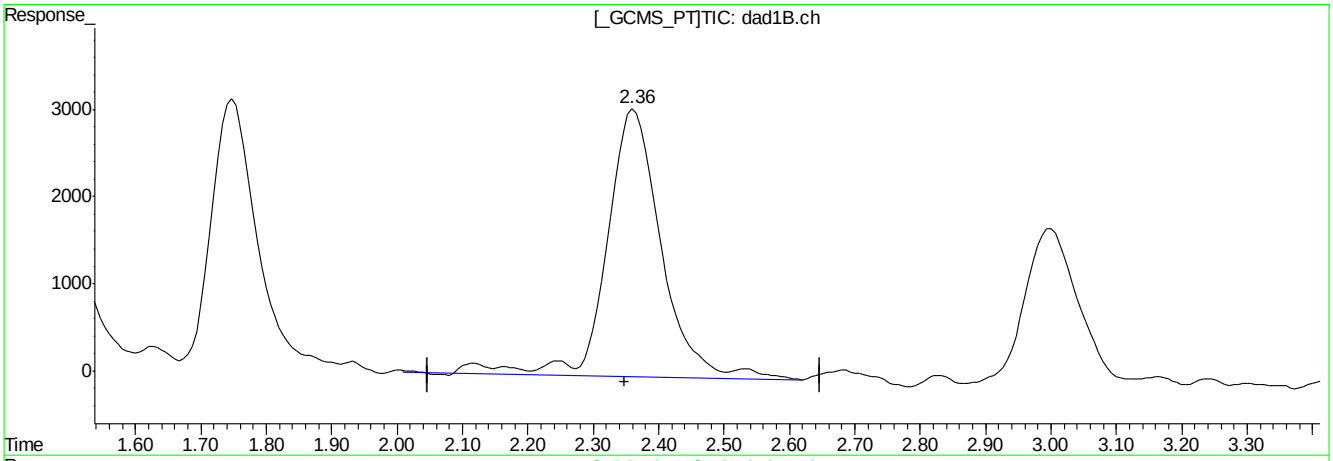
Sample Number: GPP2401-IC2401
Lab FileID: PP389746.D
Injection Time: 02/04/21 14:36
Method: SW846 8330B
Analyst approved: 02/05/21 09:14 James Boone
Supervisor approved: 02/08/21 13:01 Naresh Jiawan

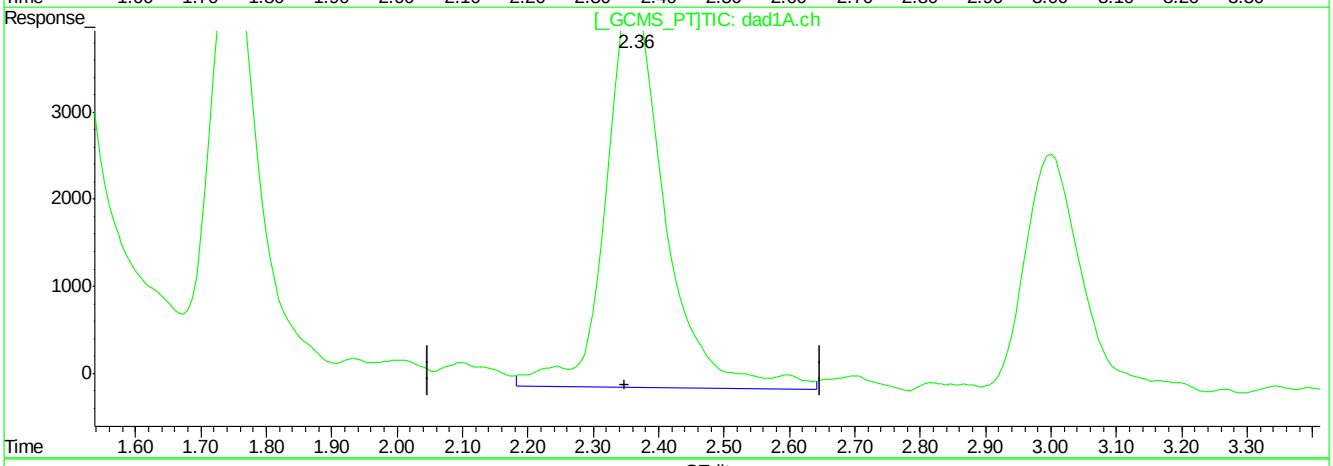
Parameter	CAS	Sig#	R.T. (min.)	Reason
MNX		1	2.36	Poor instrument integration
MNX		2	2.36	Poor instrument integration
RDX	121-82-4	1	3.00	Poor instrument integration
RDX	121-82-4	2	3.00	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.80	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.01	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.01	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.43	Poor instrument integration
Nitrobenzene	98-95-3	2	7.60	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	11.12	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.49	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.64	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.39	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.01	Poor instrument integration
PETN	78-11-5	2	18.71	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.36min 61.215ppb

response 179679

(4) MNX #2

2.36min 61.957ppb

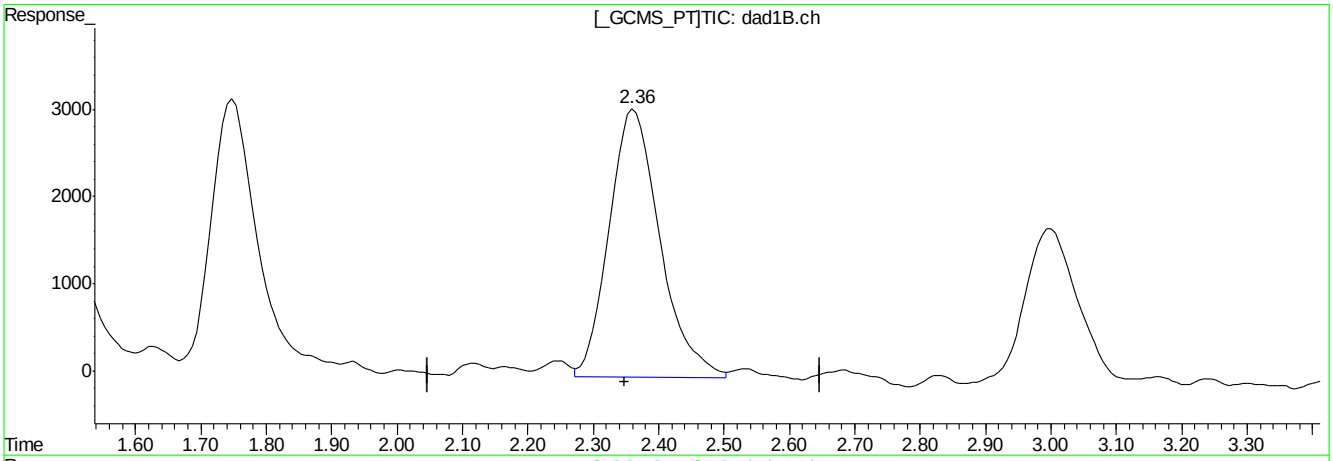
response 281995

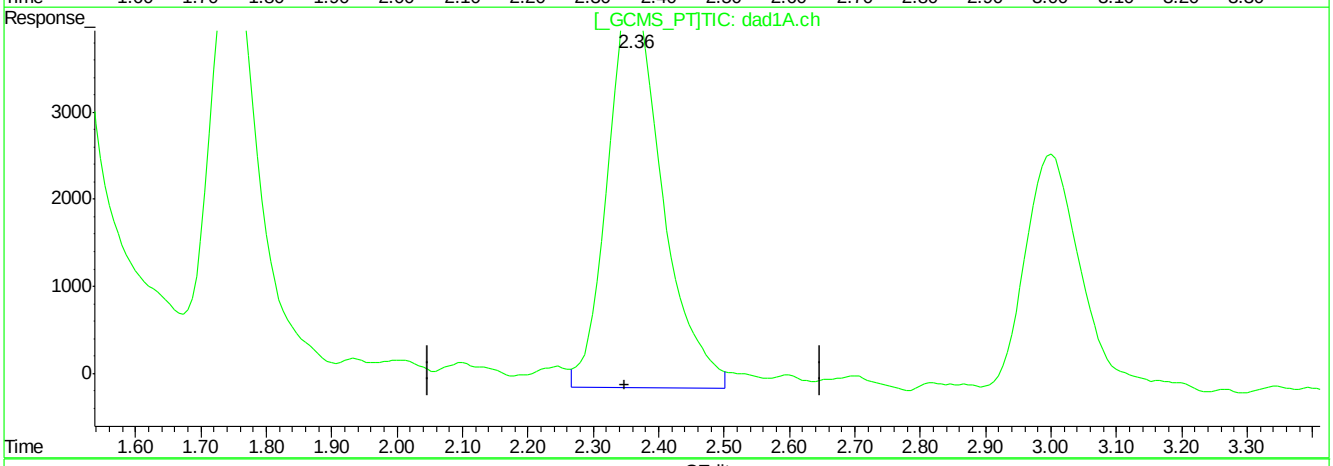
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:00:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.36min 56.757ppb m

response 166596

(4) MNX #2

2.36min 57.385ppb m

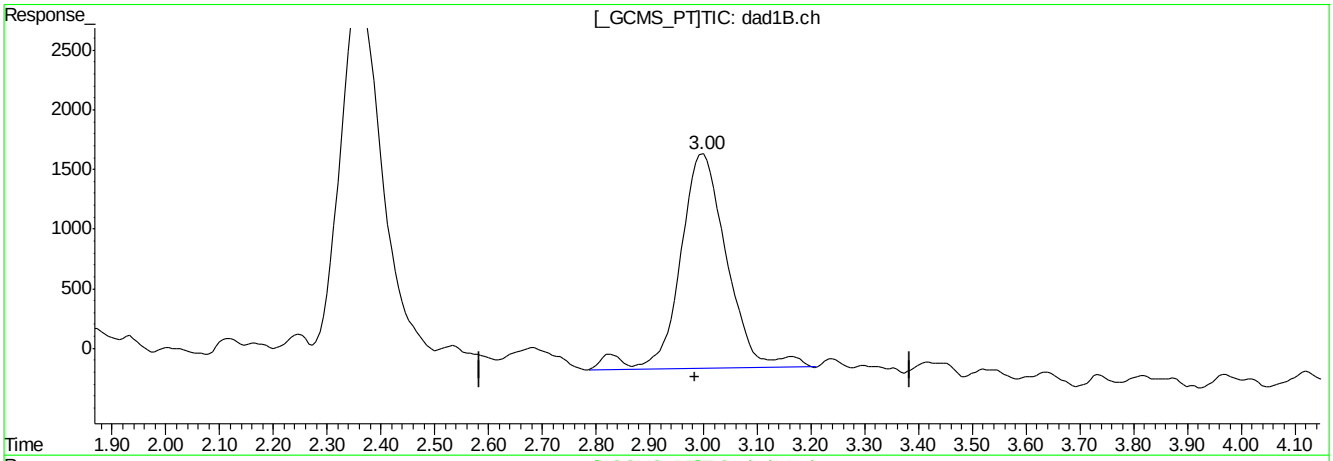
response 261186

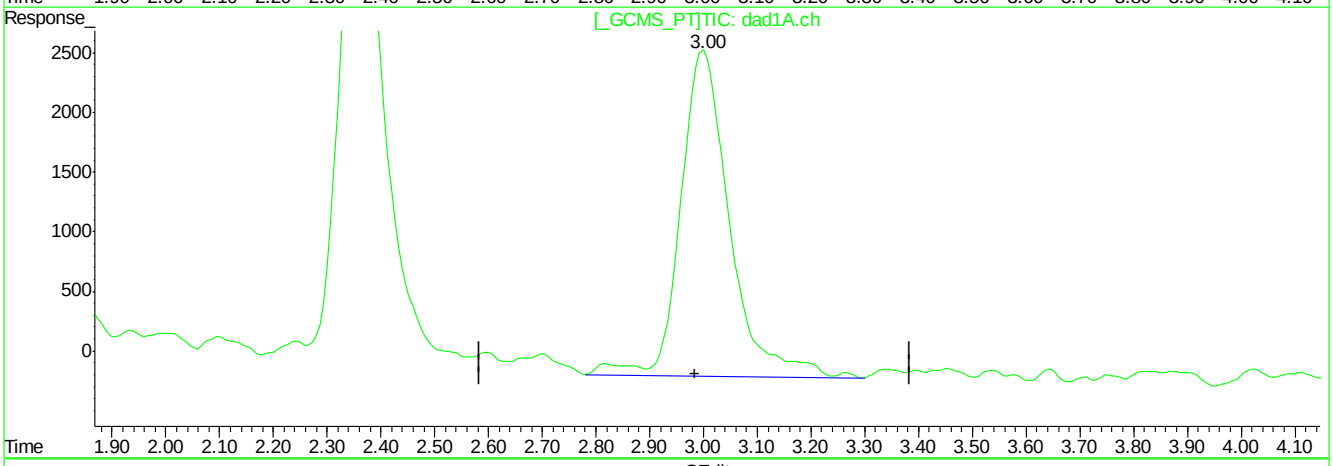
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:00:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.00min 57.172ppb

response 110394

(5) RDX #2

3.00min 56.992ppb

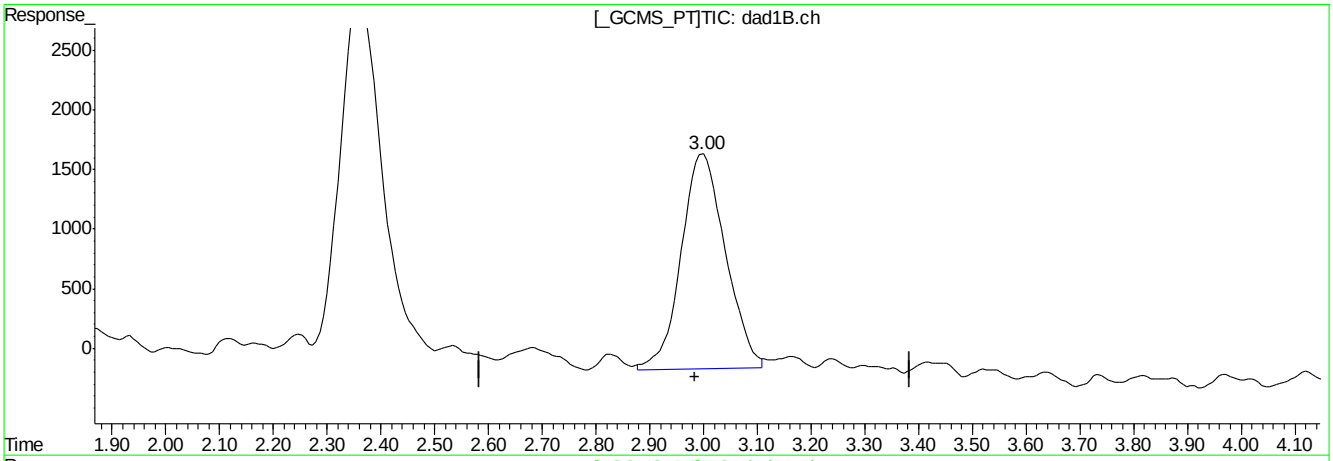
response 172963

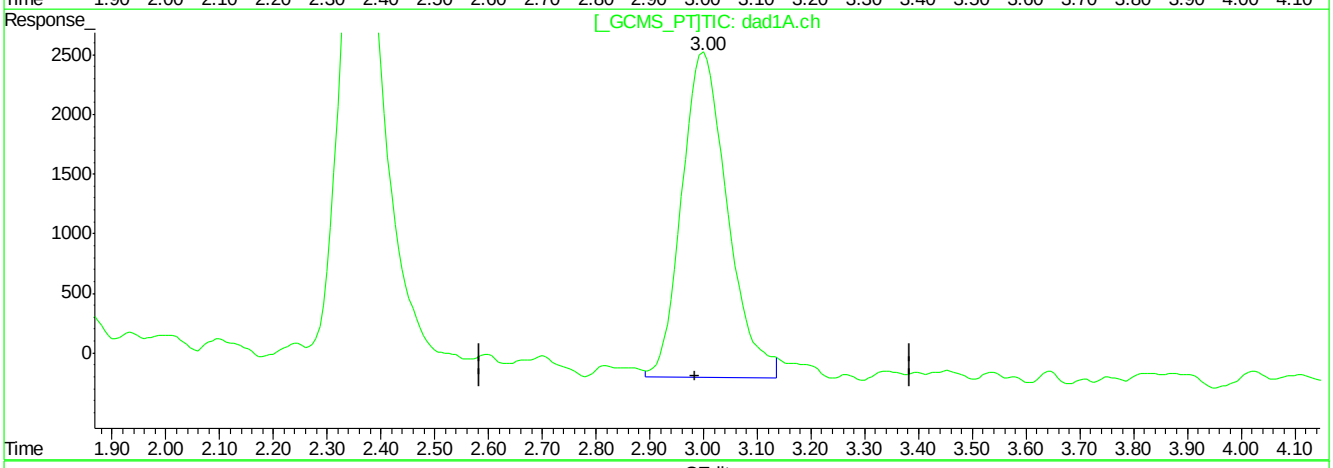
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:00:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.00min 53.602ppb m

response 103500

(5) RDX #2

3.00min 52.955ppb m

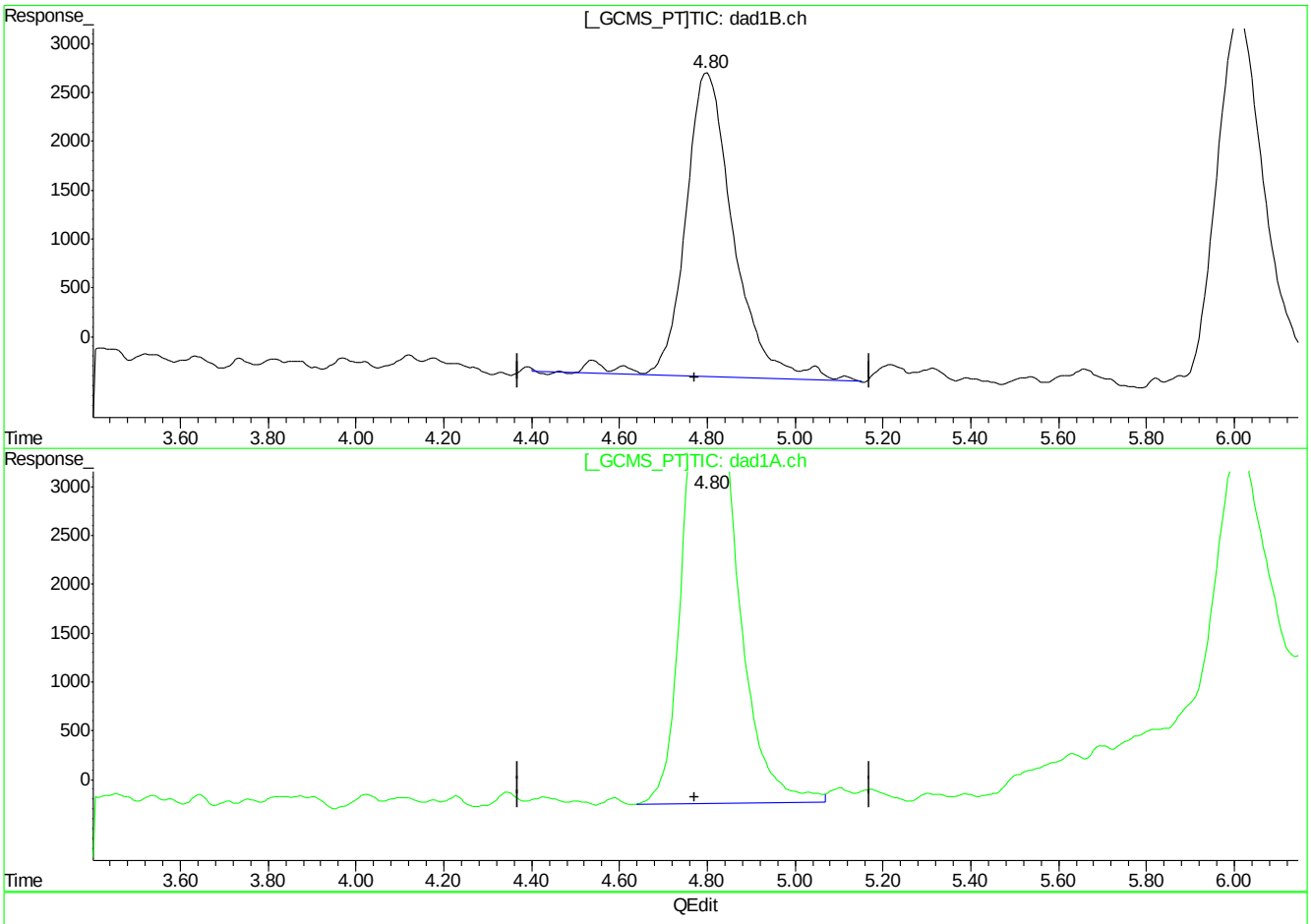
response 160709

(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:00:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(6) 1,3,5-Trinitrobenzene

4.80min 56.803ppb

response 238678

(6) 1,3,5-Trinitrobenzene #2

4.80min 54.102ppb

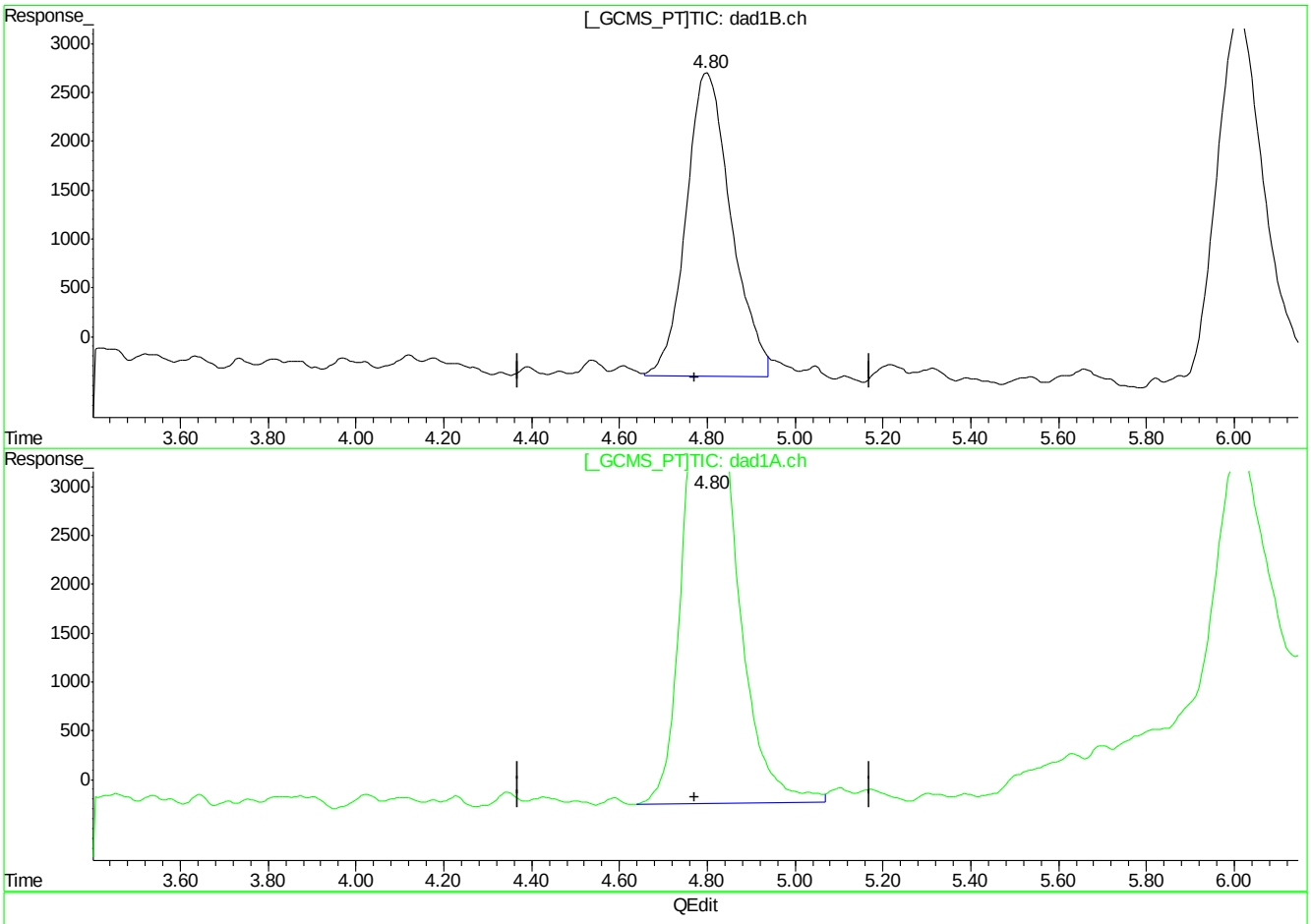
response 432960

(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:00:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(6) 1,3,5-Trinitrobenzene

4.80min 52.284ppb m

response 219689

(6) 1,3,5-Trinitrobenzene #2

4.80min 54.102ppb

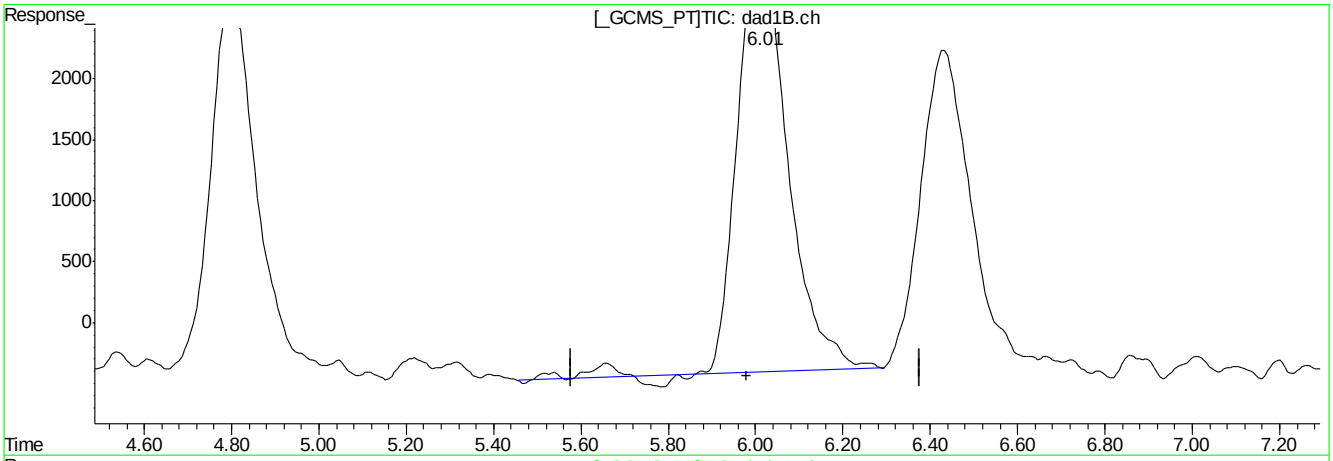
response 432960

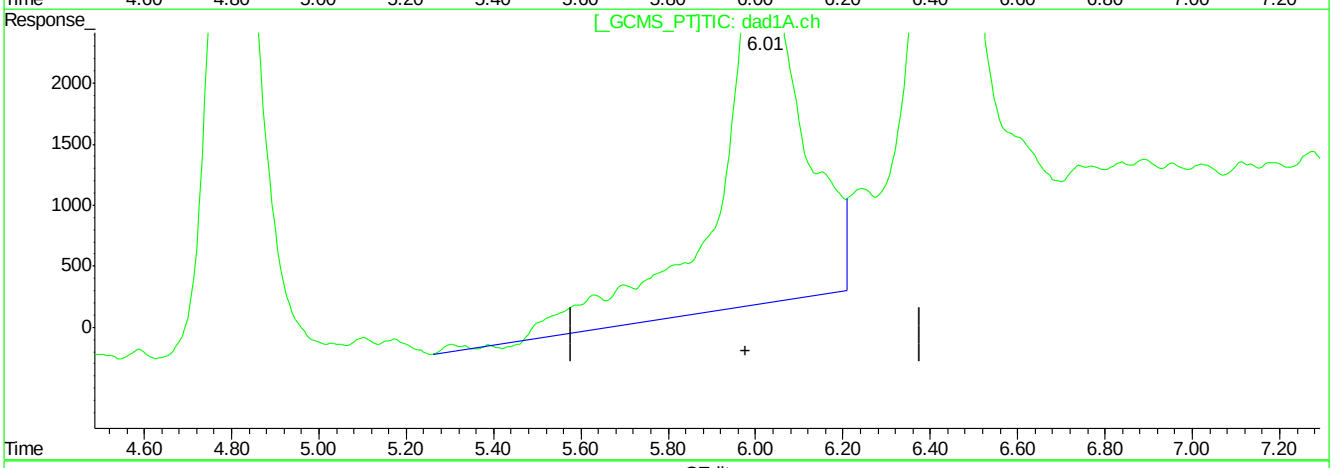
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:00:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.01min 52.535ppb

response 282927

(7) 1,3-Dinitrobenzene #2

6.01min 101.137ppb

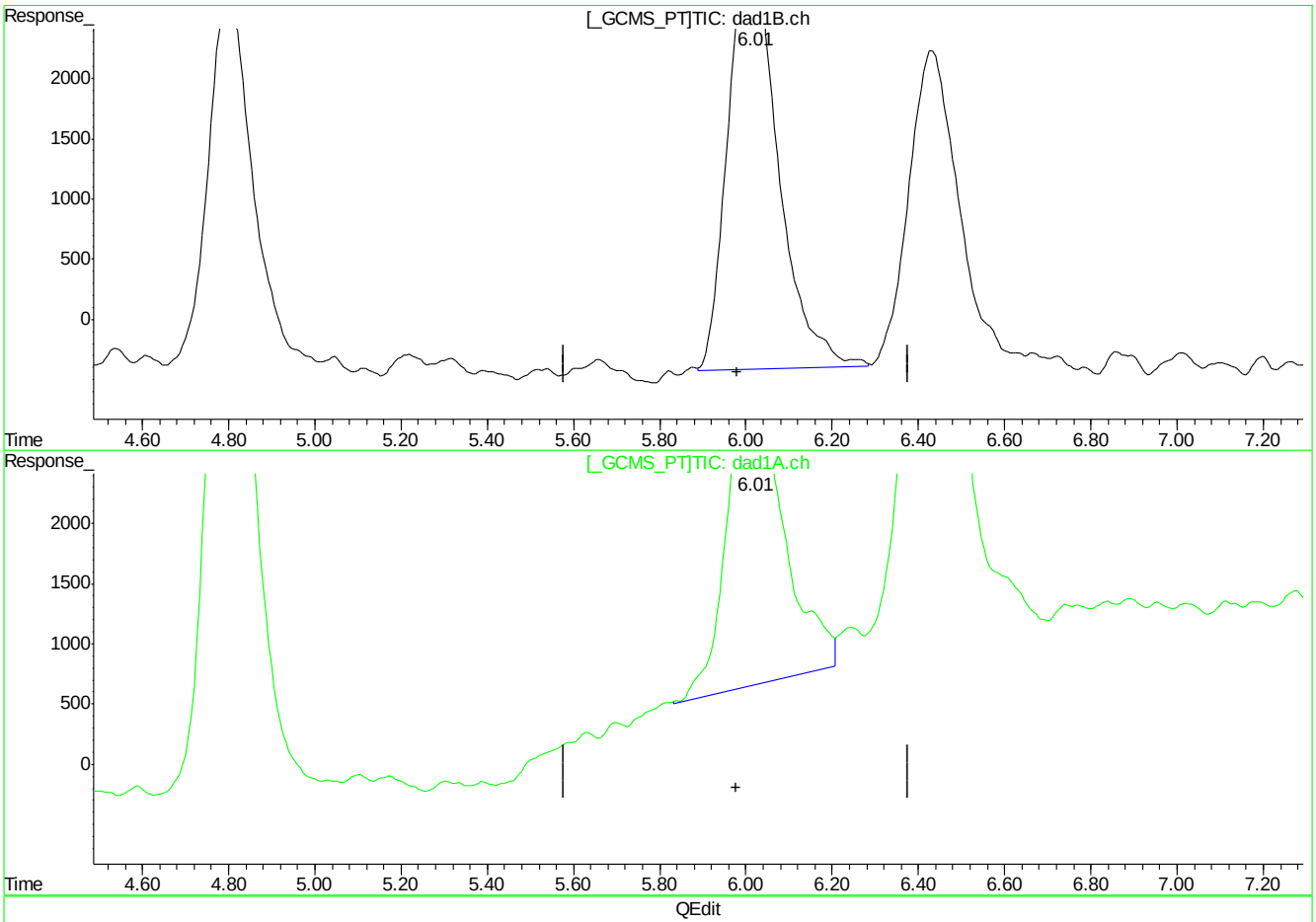
response 393372

(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:00:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



QEdit

(7) 1,3-Dinitrobenzene

6.01min 52.595ppb m

response 283250

(7) 1,3-Dinitrobenzene #2

6.01min 60.649ppb m

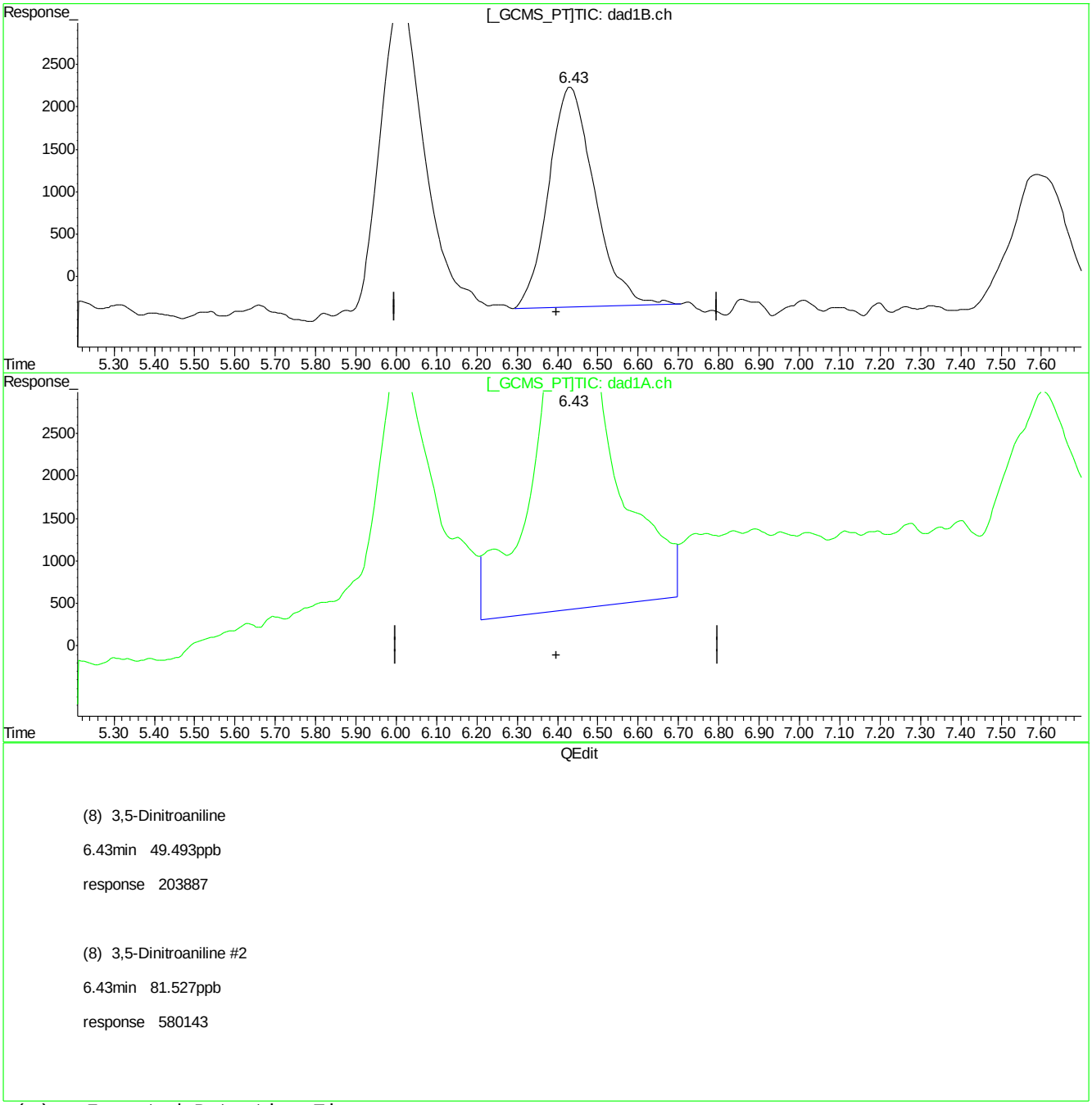
response 235895

(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:01:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.43min 49.493ppb

response 203887

(8) 3,5-Dinitroaniline #2

6.43min 81.527ppb

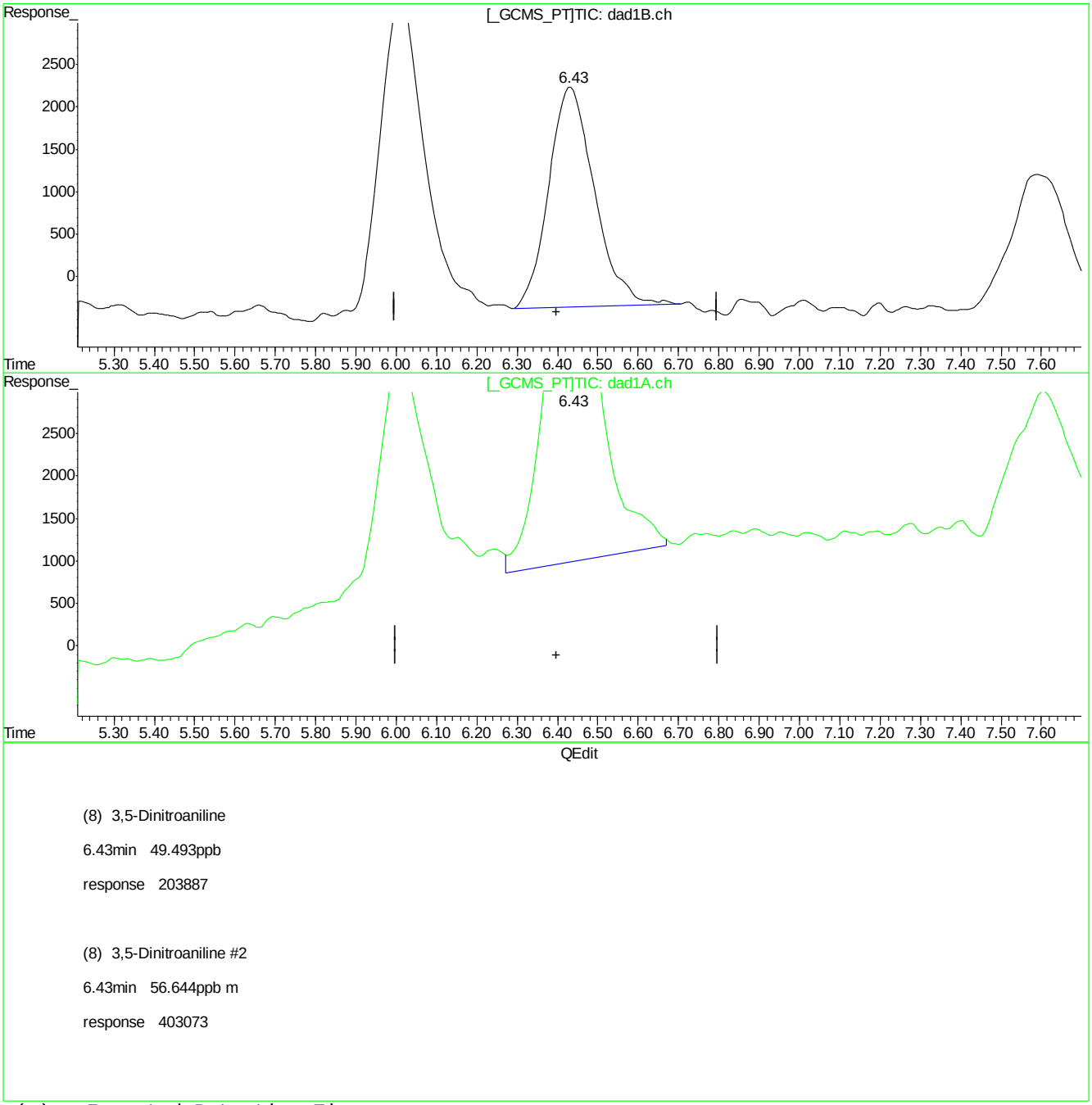
response 580143

(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:01:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.43min 49.493ppb

response 203887

(8) 3,5-Dinitroaniline #2

6.43min 56.644ppb m

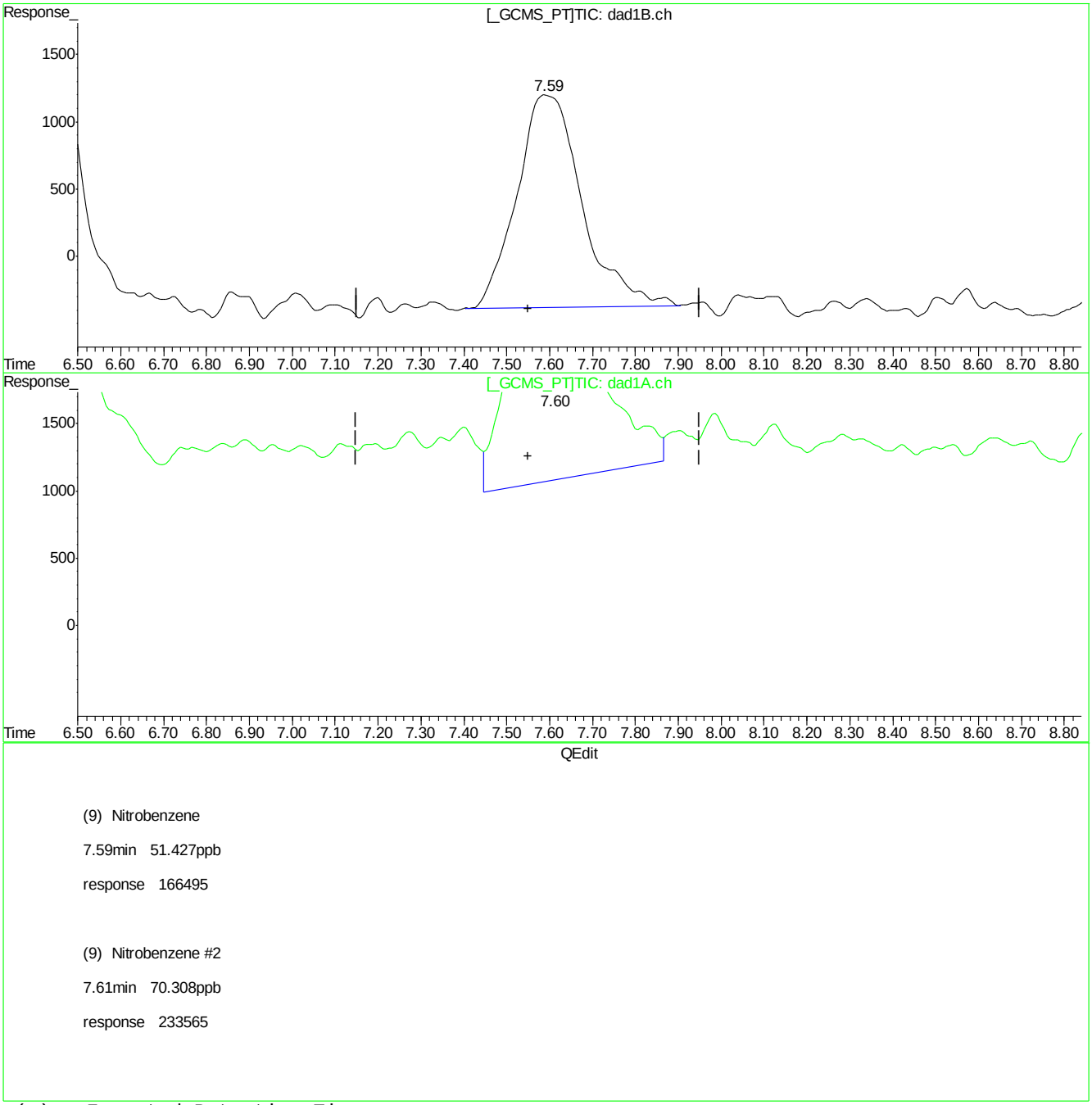
response 403073

(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:01:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.59min 51.427ppb

response 166495

(9) Nitrobenzene #2

7.61min 70.308ppb

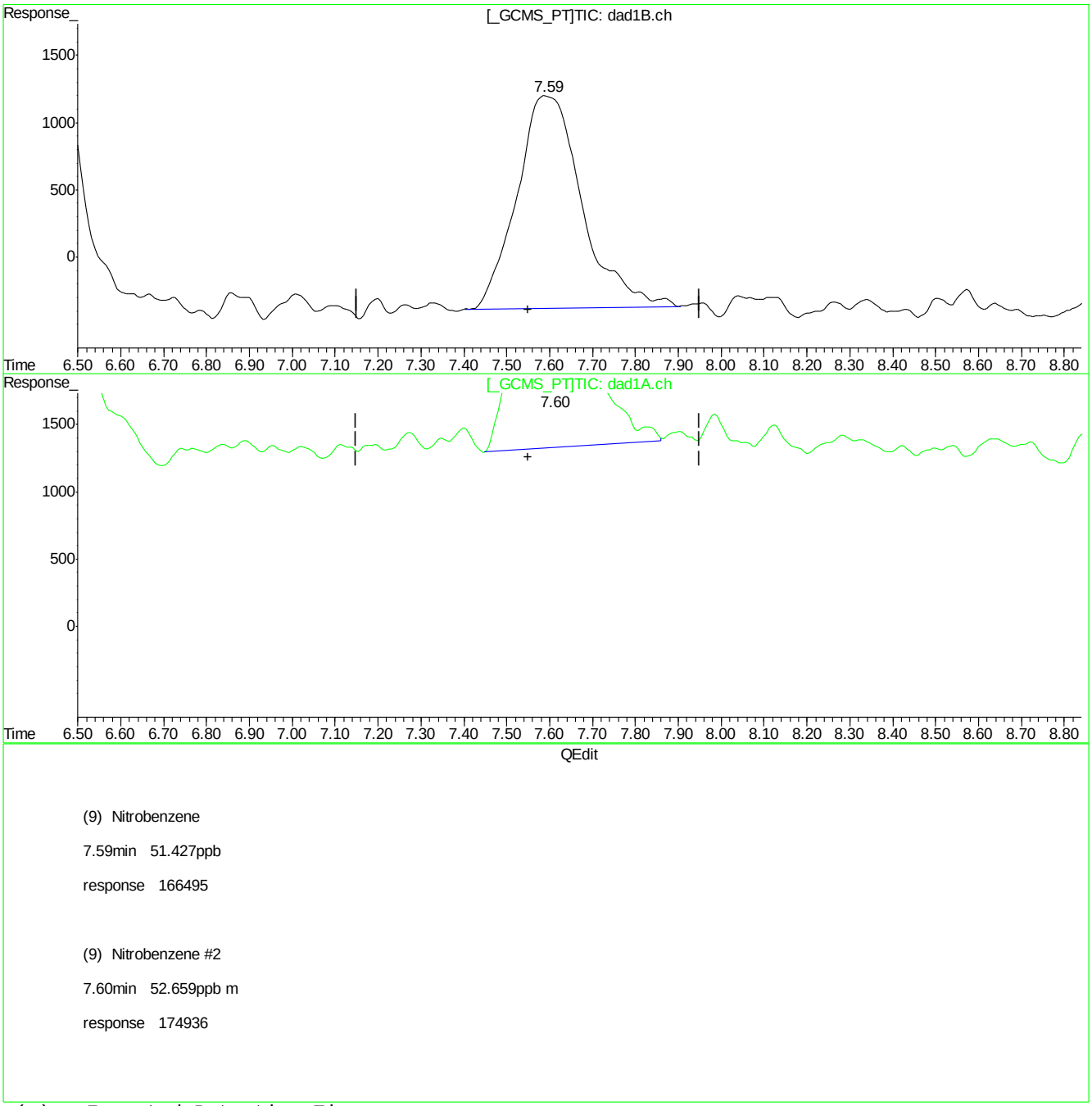
response 233565

(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:01:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.59min 51.427ppb

response 166495

(9) Nitrobenzene #2

7.60min 52.659ppb m

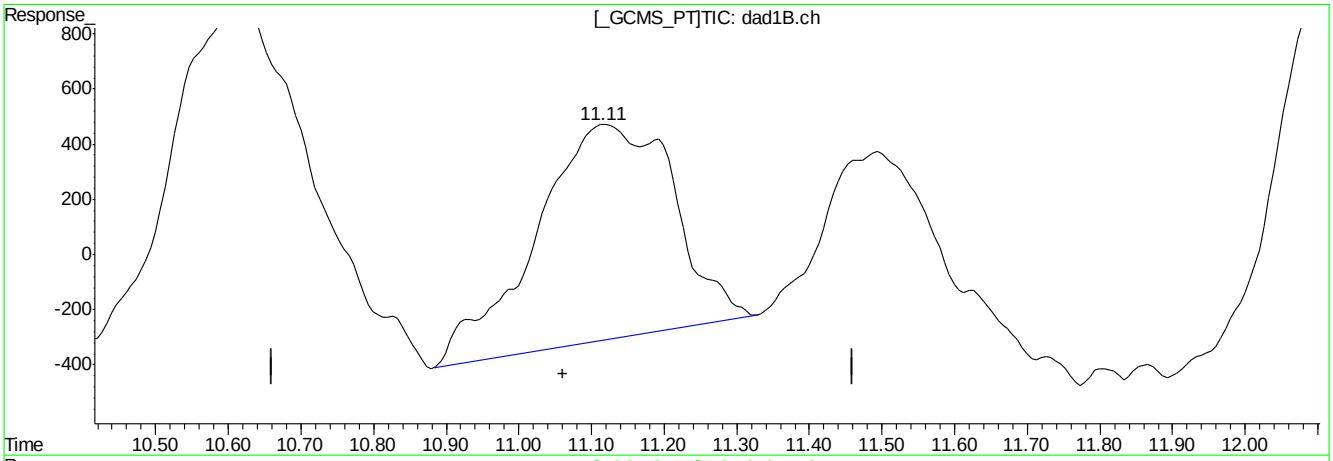
response 174936

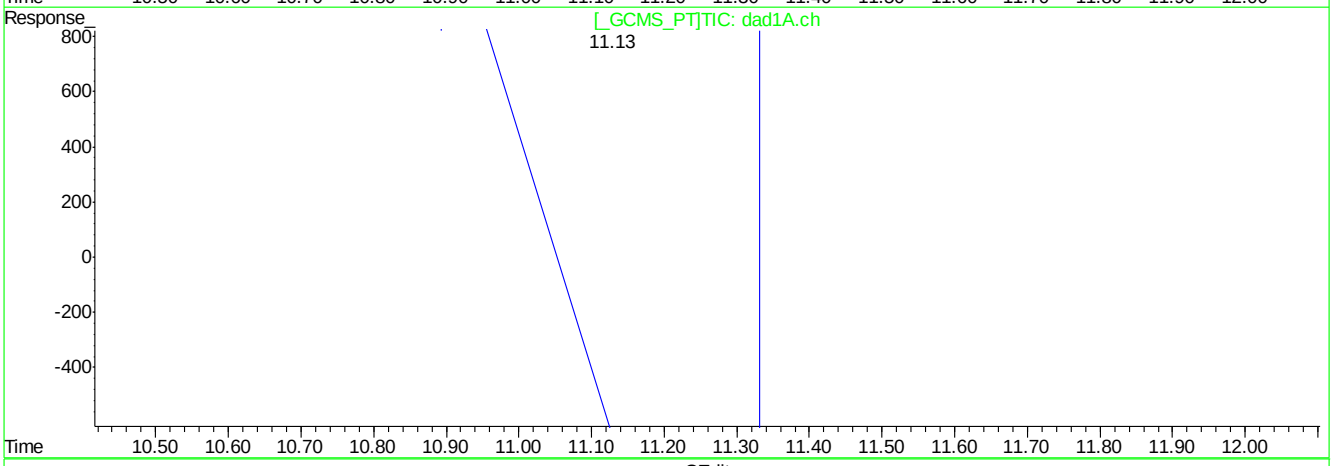
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:01:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.12min 41.106ppb

response 102991

(14) 4-Amino-2,6-Dinitrotoluene #2

11.13min 42.995ppb

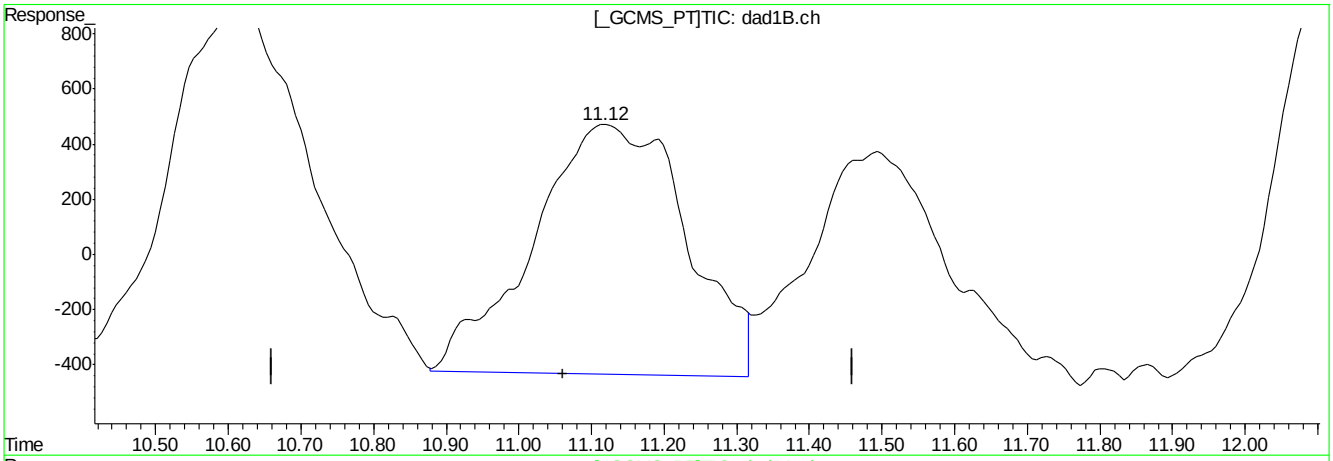
response 216419

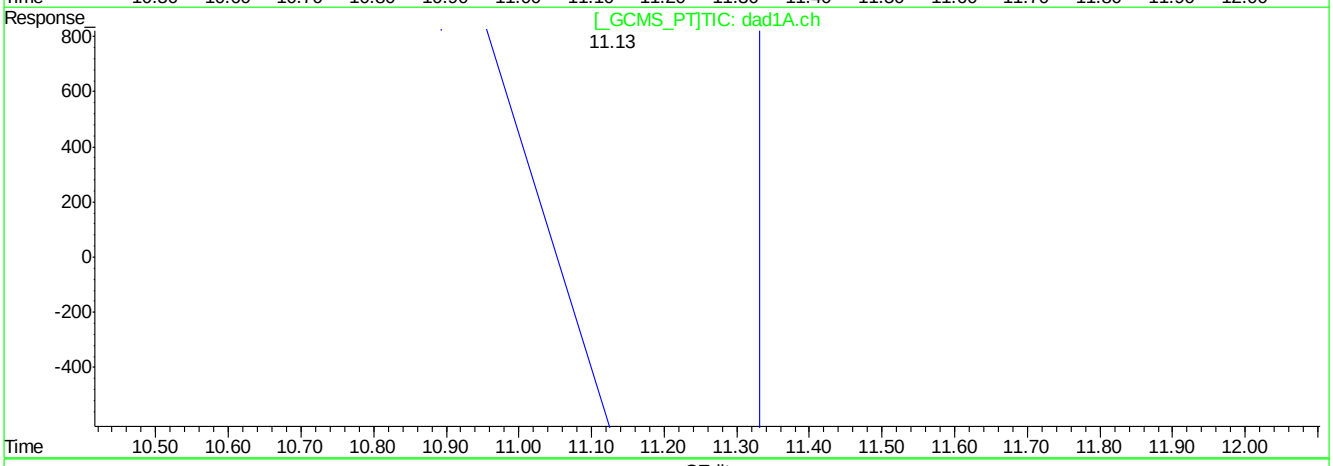
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:01:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.12min 53.249ppb m

response 133405

(14) 4-Amino-2,6-Dinitrotoluene #2

11.13min 42.995ppb

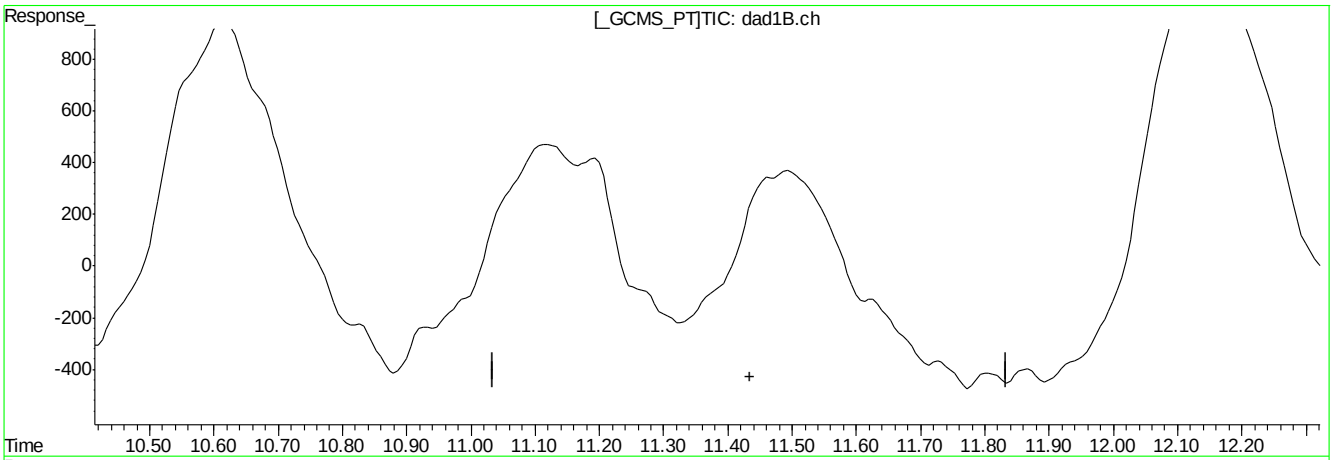
response 216419

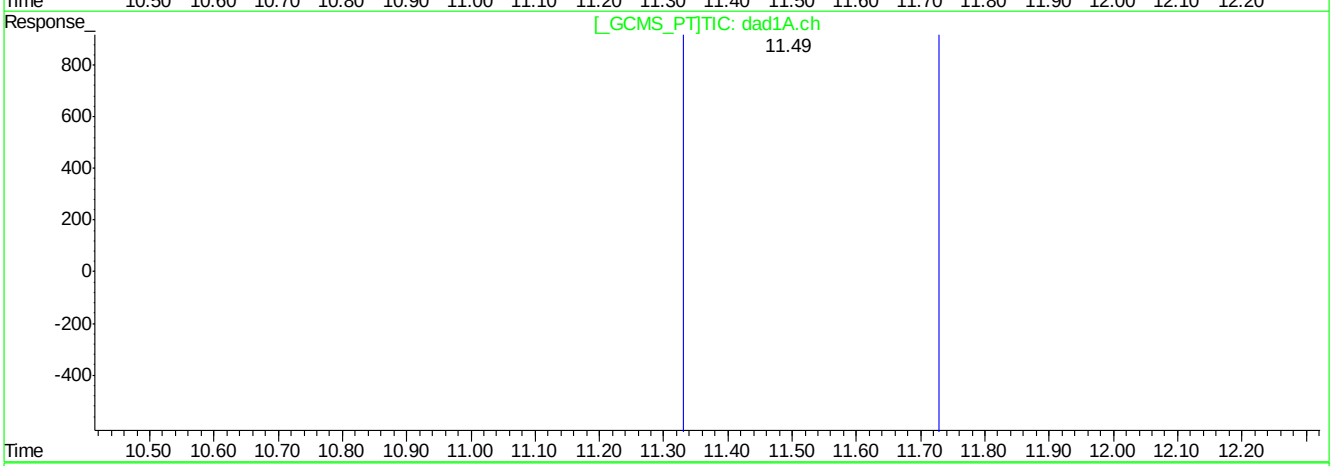
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:01:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

0.00min 0.000ppb

response 0

(15) 3,4-Dinitrotoluene #2 (S)

11.49min 43.188ppb

response 170148

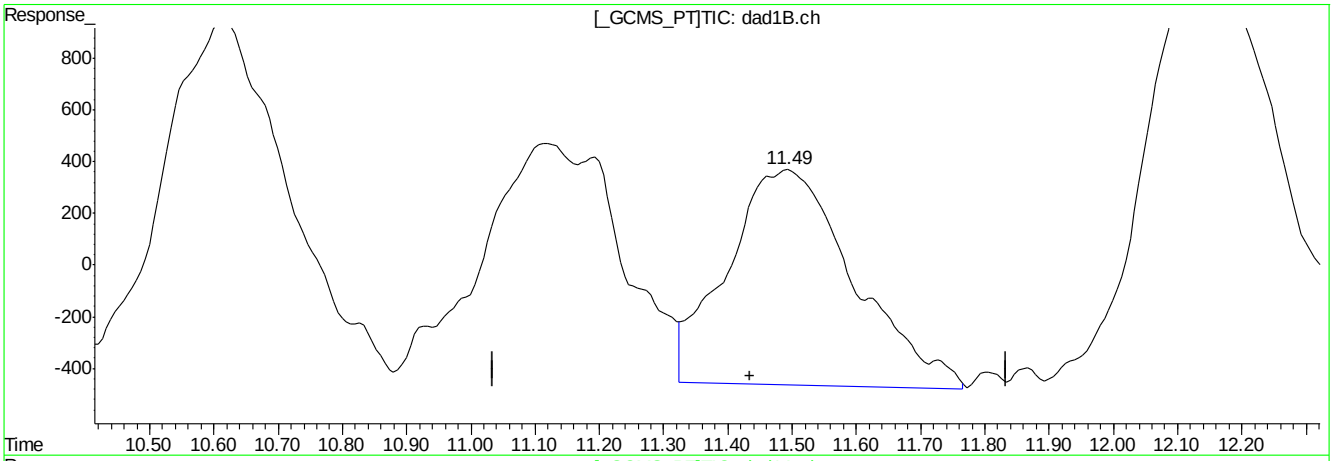
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:01:49 2021

PP389746.D edits: 3,4-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(15) 3,4-Dinitrotoluene (S)

11.49min 51.506ppb m

response 113787

(15) 3,4-Dinitrotoluene #2 (S)

11.49min 43.188ppb

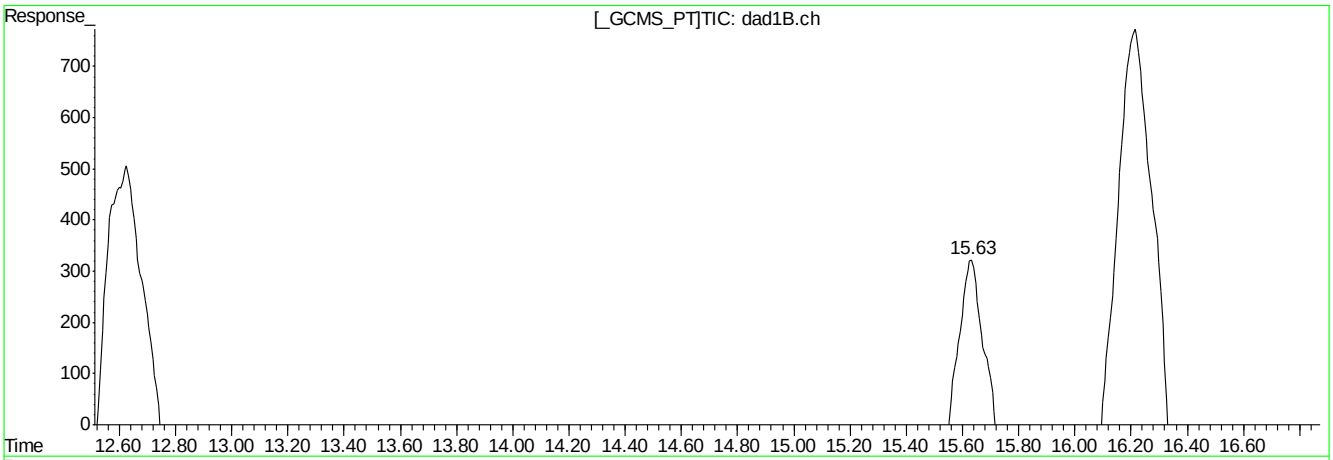
response 170148

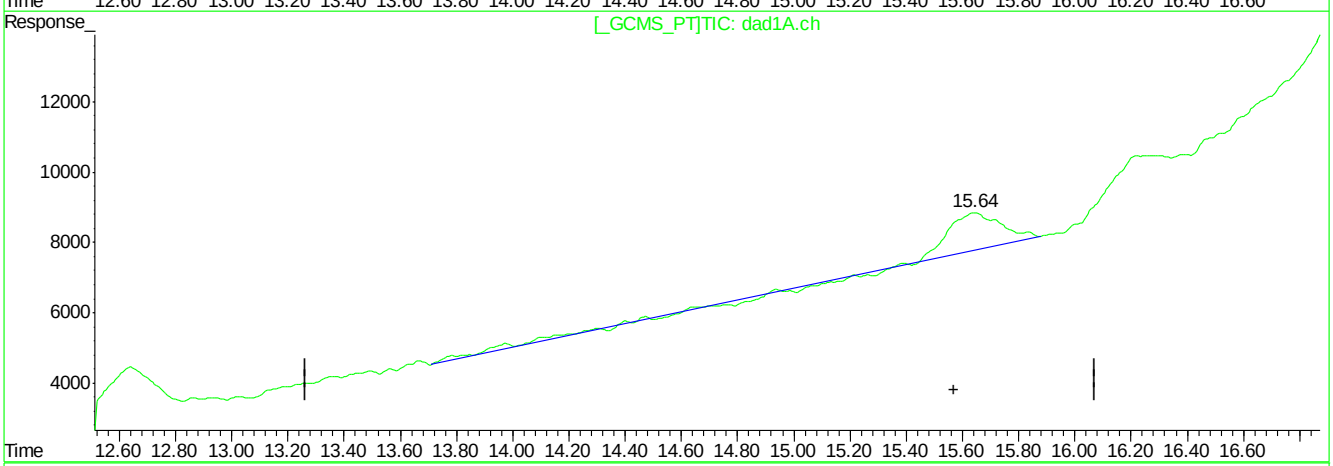
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:01:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.63min 55.312ppb

response 128439

(18) o-Nitrotoluene #2

15.65min 42.544ppb

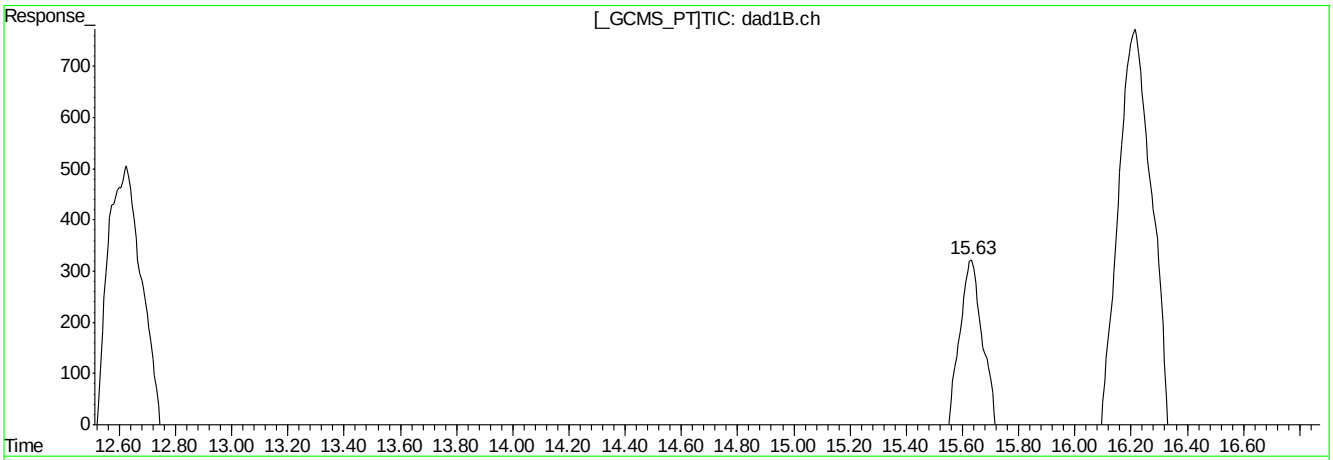
response 136206

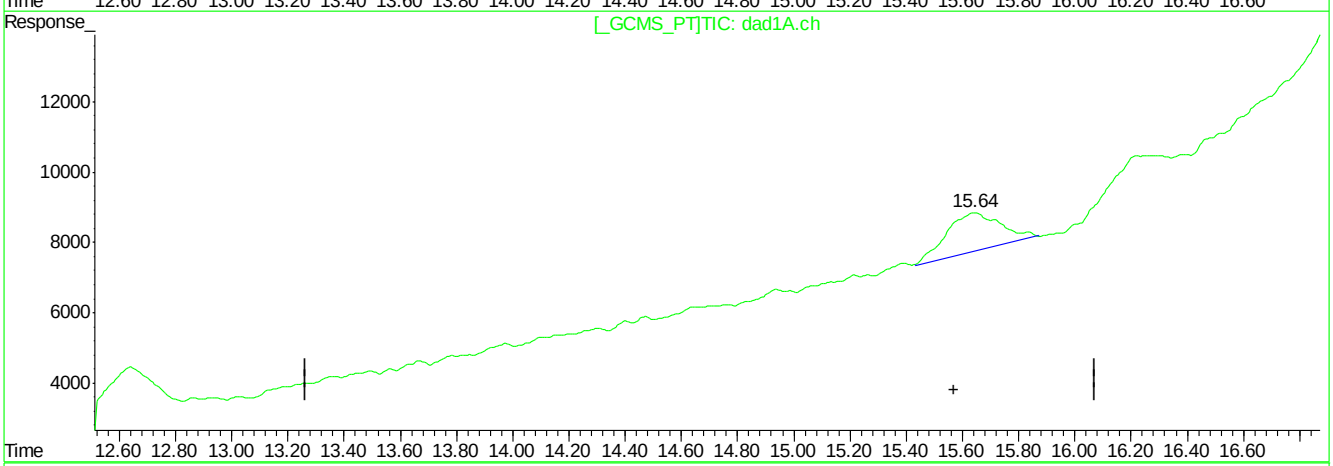
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:02:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.63min 55.312ppb

response 128439

(18) o-Nitrotoluene #2

15.64min 46.606ppb m

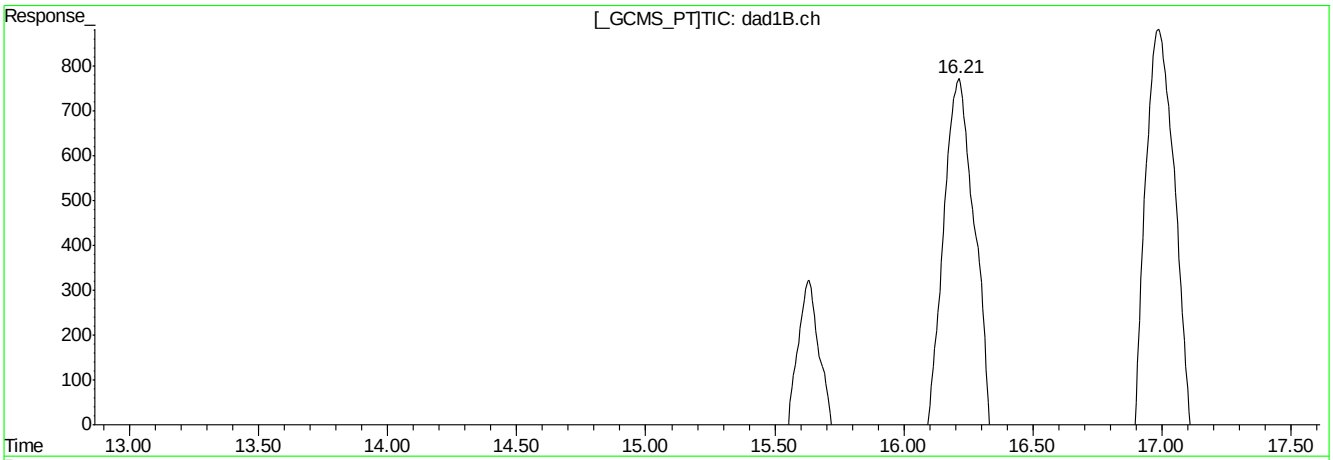
response 149210

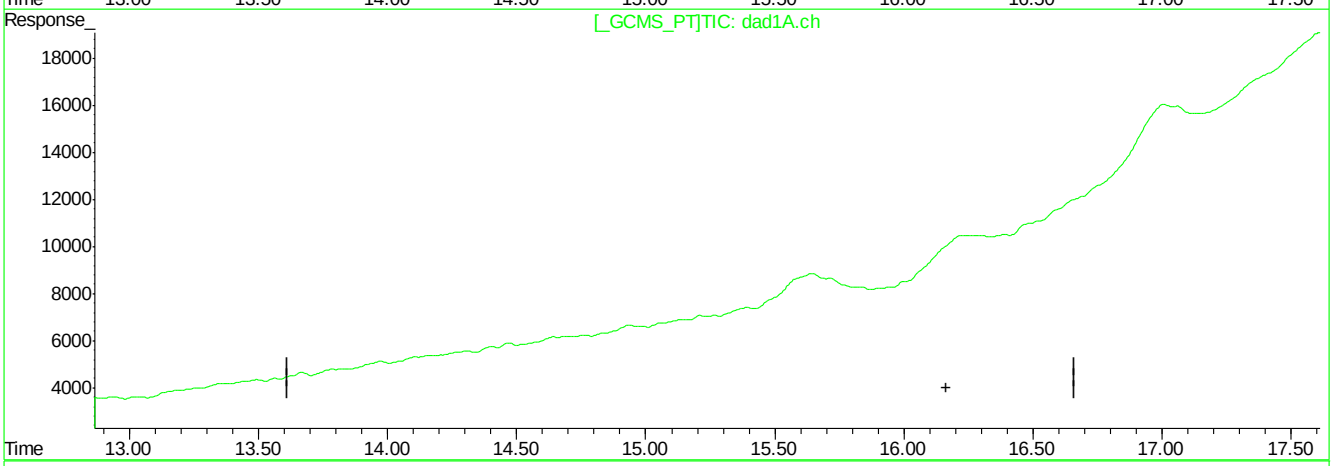
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:02:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.21min 54.363ppb

response 197662

(19) p-Nitrotoluene #2

0.00min 0.000ppb

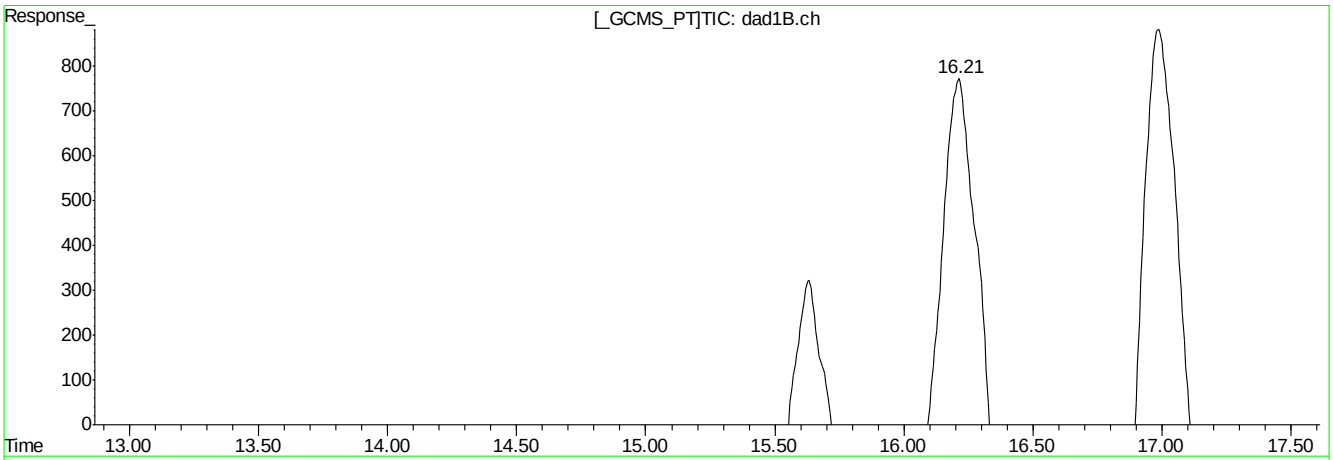
response 0

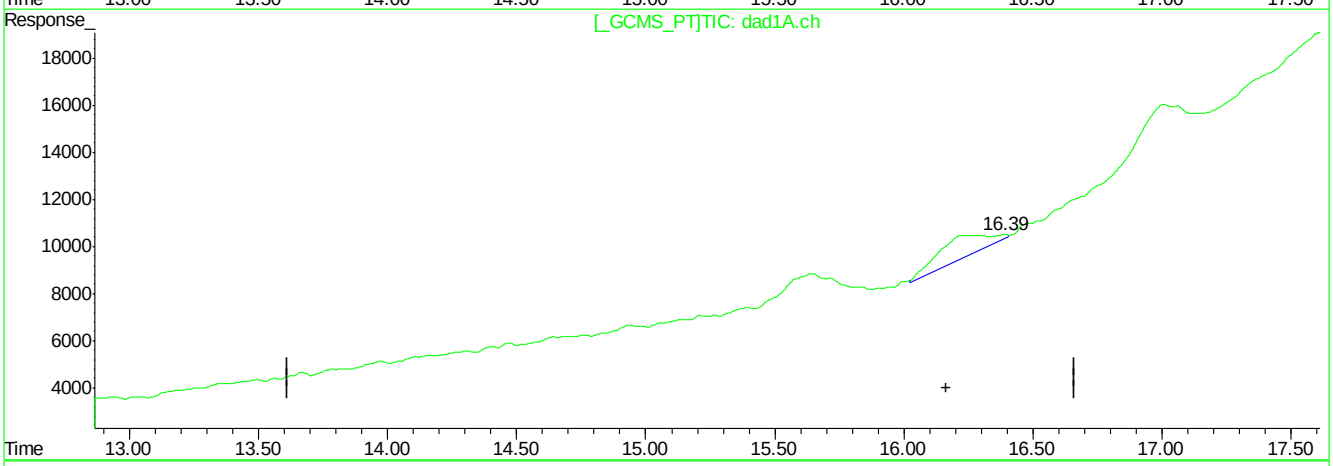
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:02:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.21min 54.363ppb

response 197662

(19) p-Nitrotoluene #2

16.39min 42.335ppb m

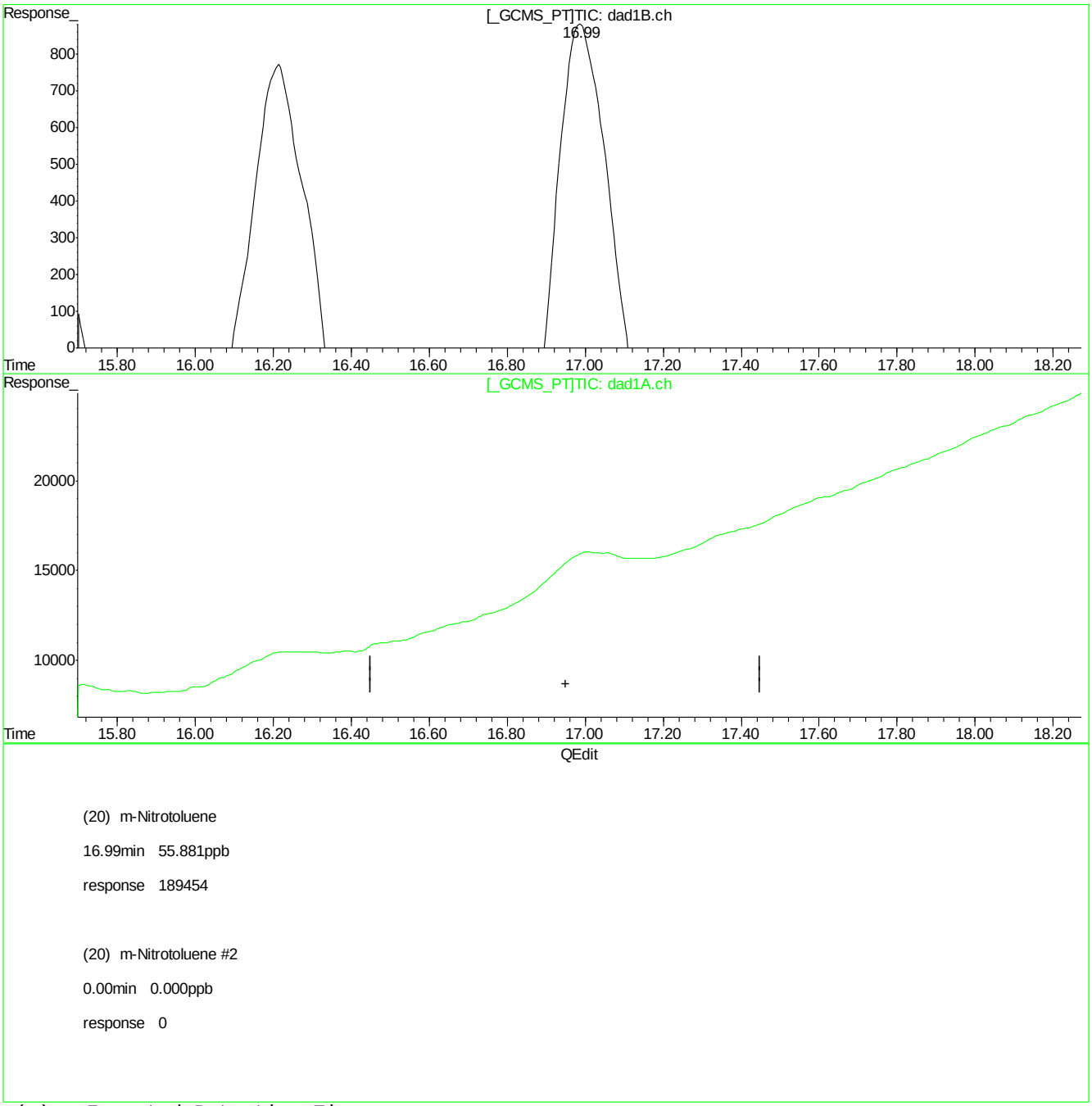
response 128928

(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:02:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration

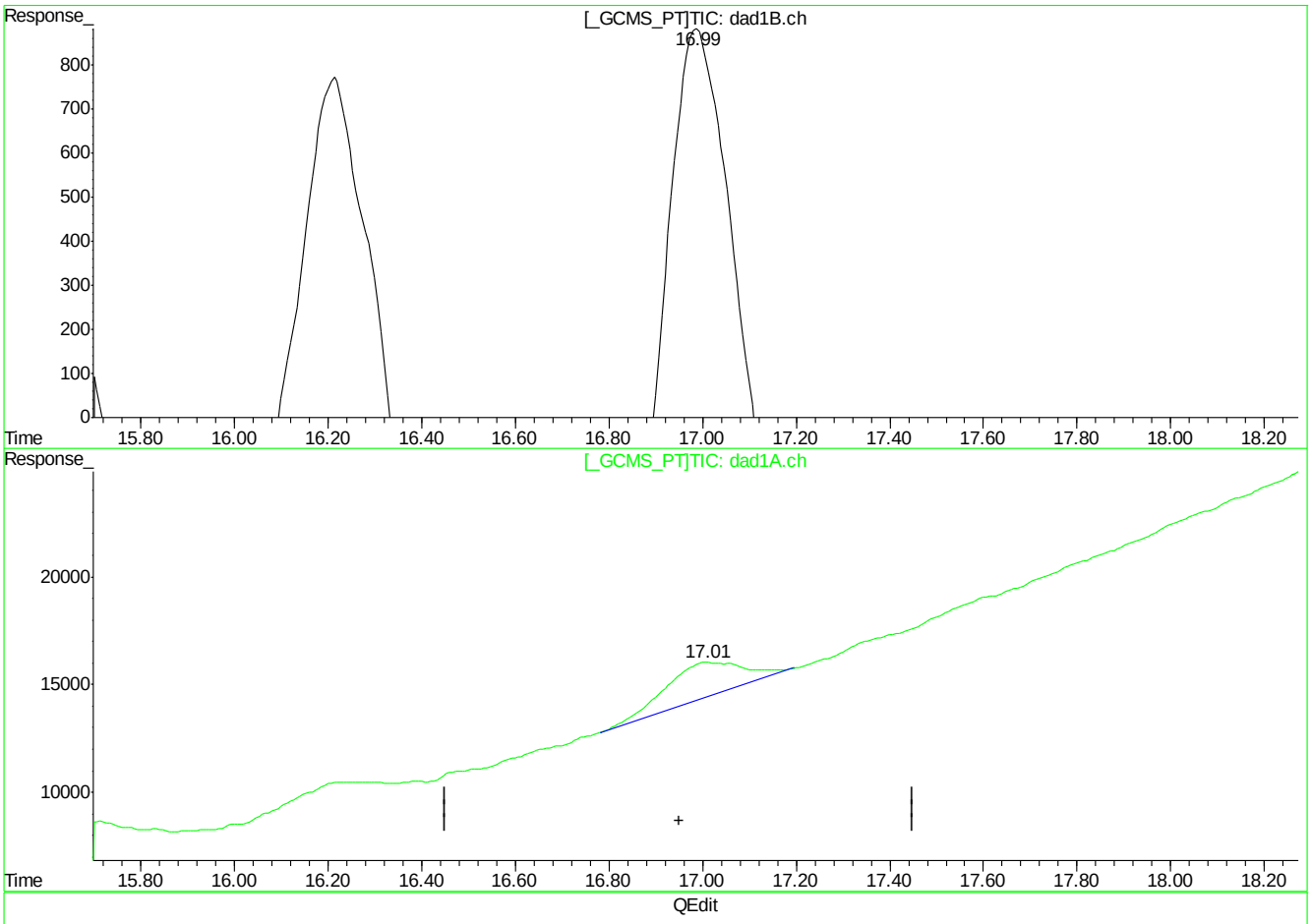


(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:02:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.99min 55.881ppb

response 189454

(20) m-Nitrotoluene #2

17.01min 44.655ppb m

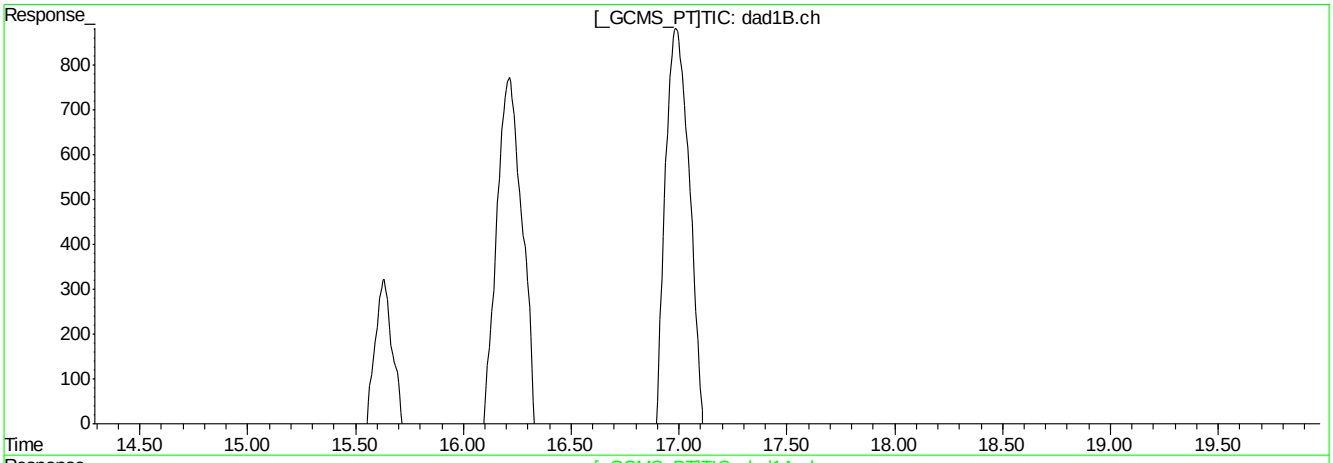
response 182182

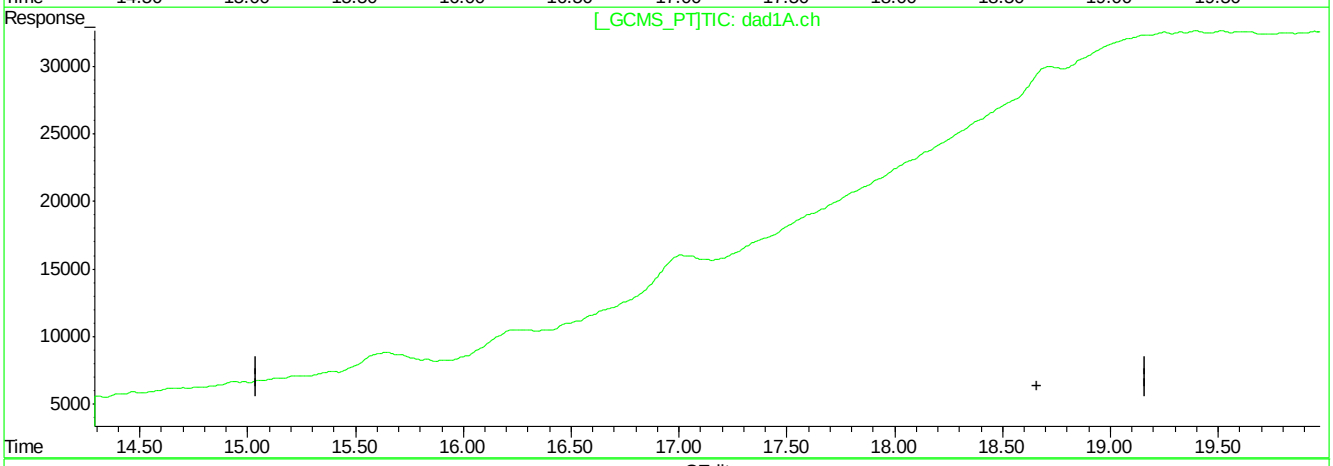
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:02:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

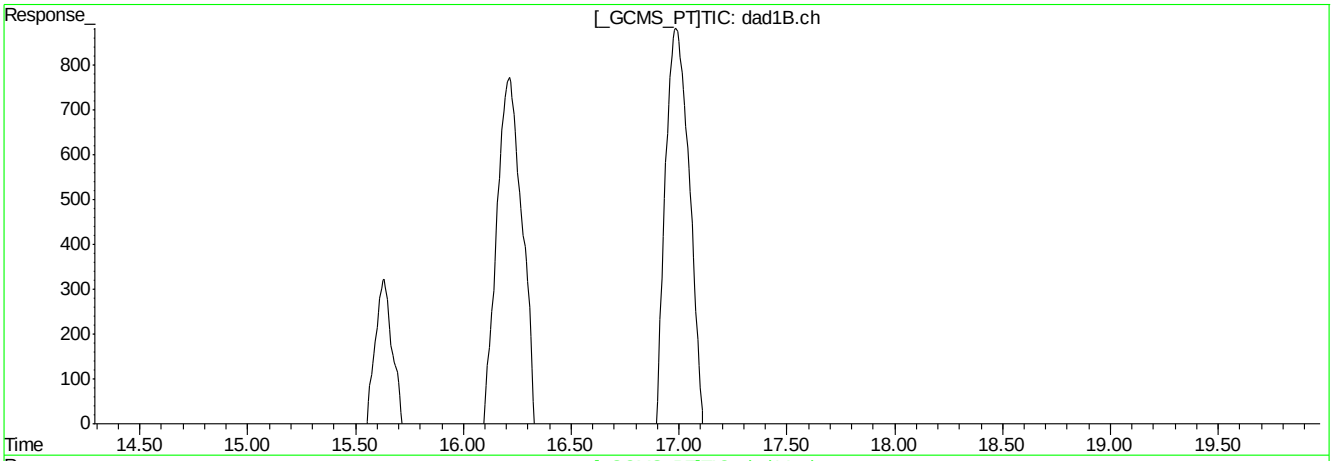
response 0

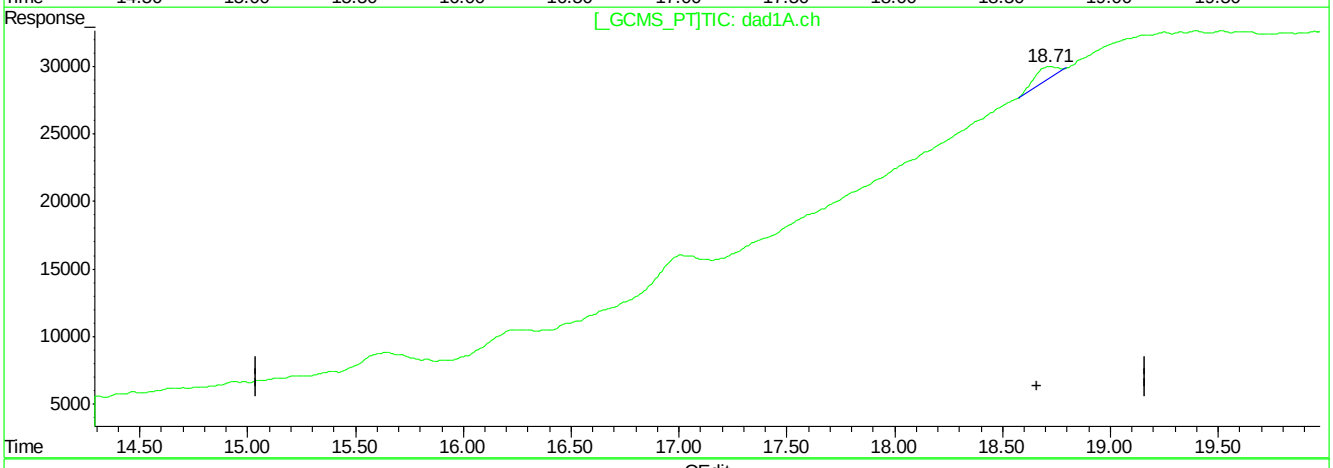
(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:02:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1B.ch Vial: 52
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389746.D\dad1A.ch
Acq On : 04-Feb-2021, 14:36:11 Operator: jamesb
Sample : ic2401-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.71min 52.733ppb m

response 70410

(+) = Expected Retention Time
PP389746.D GPP2401_020521PRI.M Fri Feb 05 08:02:39 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 05 07:48:31 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.50	11.49	241469	395681	109.303	100.418
	Spiked Amount 500.000	Range 70 - 136		Recovery =		21.86%#	20.08%#
	Target Compounds						
1)	TNX	1.35	1.35	338993	502120	107.997	106.392
2)	HMX	1.50	1.50	190446	573255	118.220	125.217
3)	DNX	1.75	1.75	312201	493240	112.286	112.641
4)	MNX	2.36	2.36	322638	498794	109.919	109.590
5)	RDX	3.00	3.00	220447	321469	114.167	105.926
6)	1,3,5-Trinitrobe	4.80	4.80	426026	842946	101.390	105.332
7)	1,3-Dinitrobenze	6.01	6.01	550620	422269	102.241	108.566m
8)	3,5-Dinitroanili	6.43	6.43	426967	765703	103.645	107.604m
9)	Nitrobenzene	7.60	7.59	320826	303670	99.097m	91.411m
10)	Nitroglycerin	0.00	9.25	0	149306	N.D.	122.107 #
11)	Tetryl	9.76	9.77	332460	524841	104.869m	105.941
12)	2,4,6-Trinitroto	10.15	10.16	404014	472744	104.938	100.905
13)	2-Amino-4,6-Dini	10.63	10.62	382862	491904	109.504	94.129
14)	4-Amino-2,6-Dini	11.13	11.13	263250	446468	105.116	88.698
16)	2,4-Dinitrotolue	12.16	12.15	491035	327176	100.213	98.962
17)	2,6-Dinitrotolue	12.62	12.62	289482	376471	100.982	104.635
18)	o-Nitrotoluene	15.64	15.64	239690	300406	103.221	93.833m
19)	p-Nitrotoluene	16.21	16.25	389145	239571	107.027	78.666m
20)	m-Nitrotoluene	17.00	17.00	349881	382875	103.201	93.848m
21)	PETN	0.00	18.70	0	122534	N.D.	91.771m#

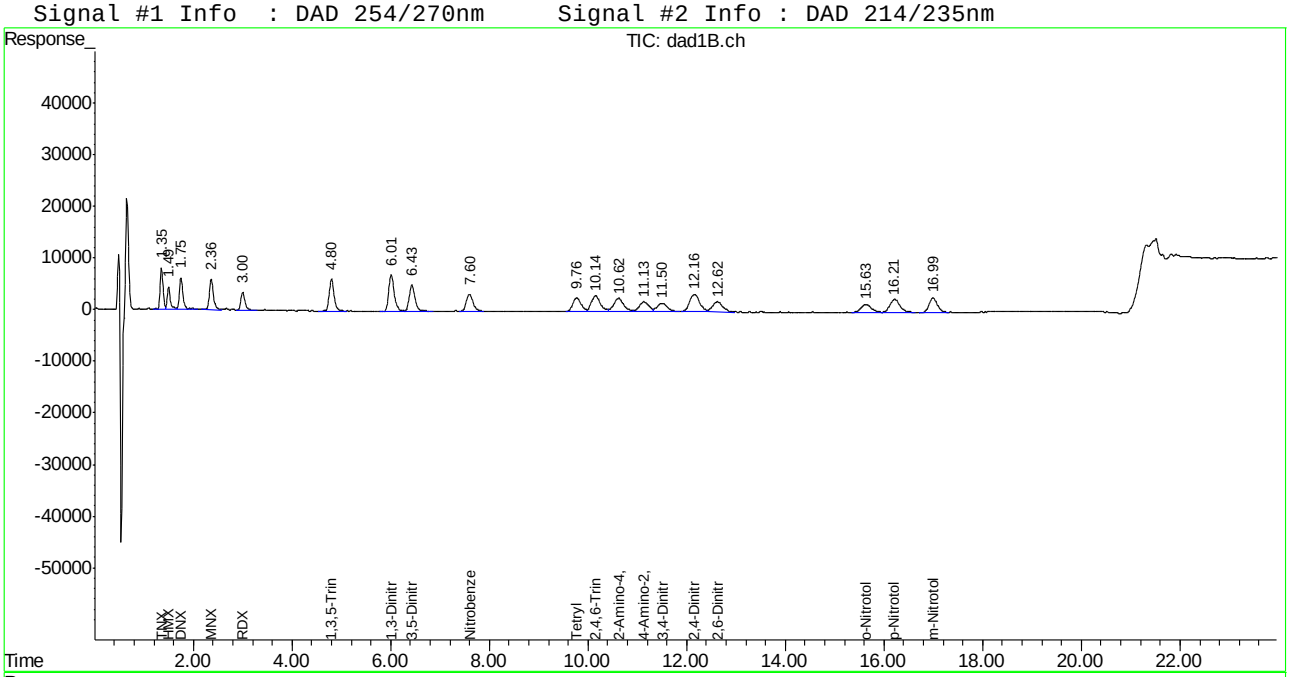
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389747.D GPP2401_020521PRI.M Fri Feb 05 08:39:46 2021 Page 1

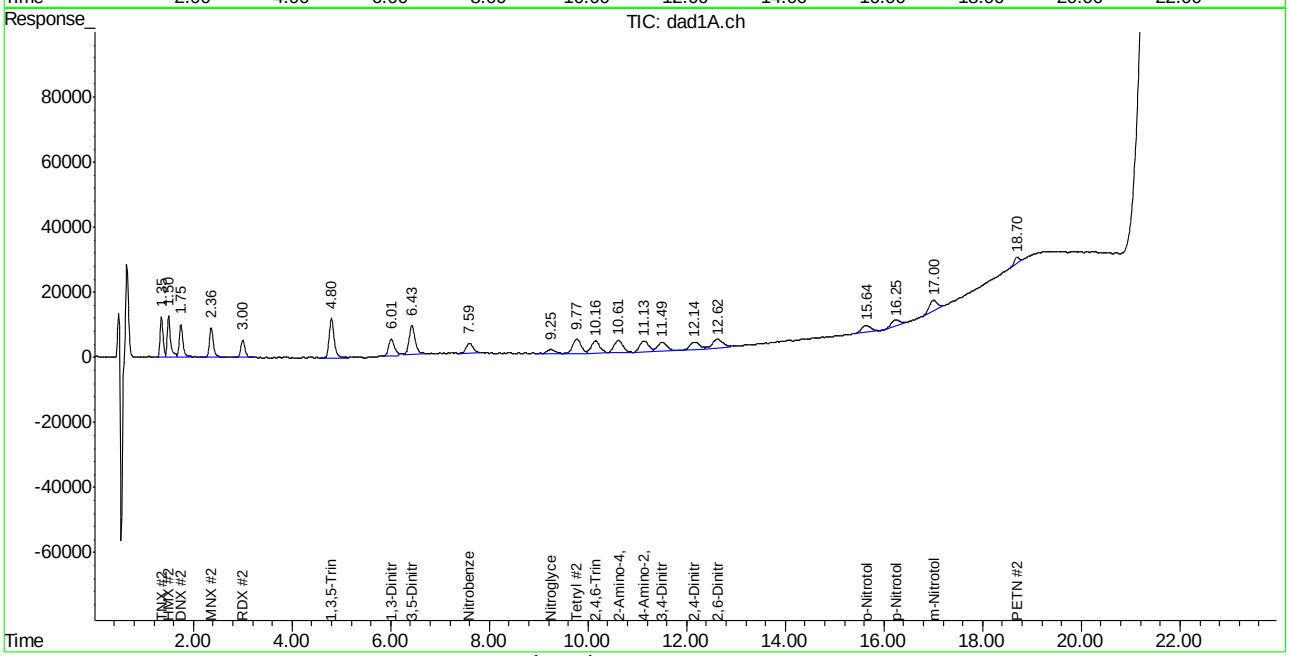
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:59 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

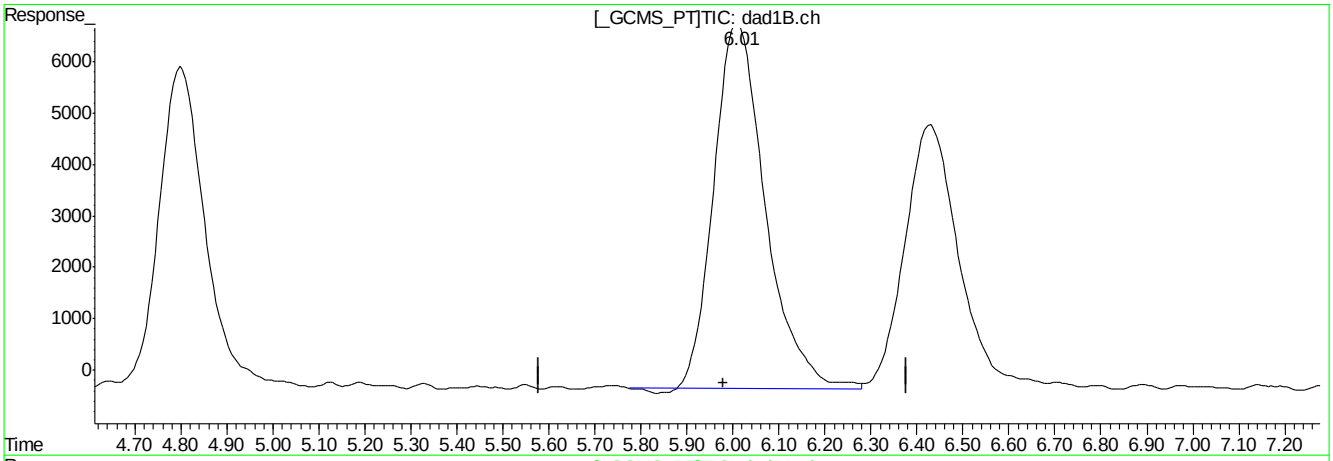
Sample Number: GPP2401-IC2401
Lab FileID: PP389747.D
Injection Time: 02/04/21 15:07
Method: SW846 8330B
Analyst approved: 02/05/21 09:14 James Boone
Supervisor approved: 02/08/21 13:01 Naresh Jiawan

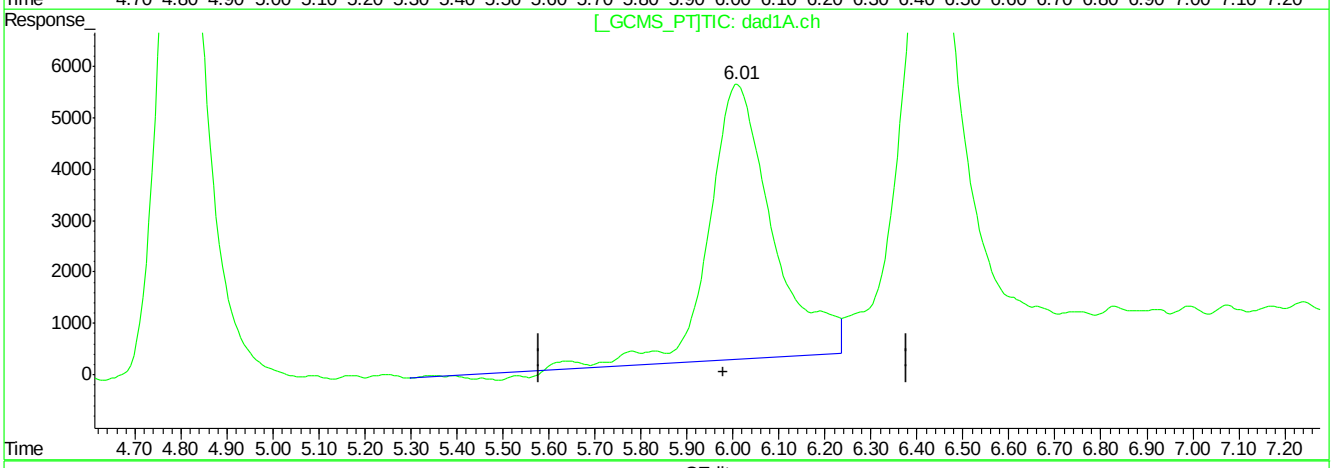
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.01	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.43	Poor instrument integration
Nitrobenzene	98-95-3	2	7.59	Poor instrument integration
Nitrobenzene	98-95-3	1	7.60	Poor instrument integration
Tetryl	479-45-8	1	9.76	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.64	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.25	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.00	Poor instrument integration
PETN	78-11-5	2	18.70	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.01min 102.241ppb

response 550620

(7) 1,3-Dinitrobenzene #2

6.01min 130.909ppb

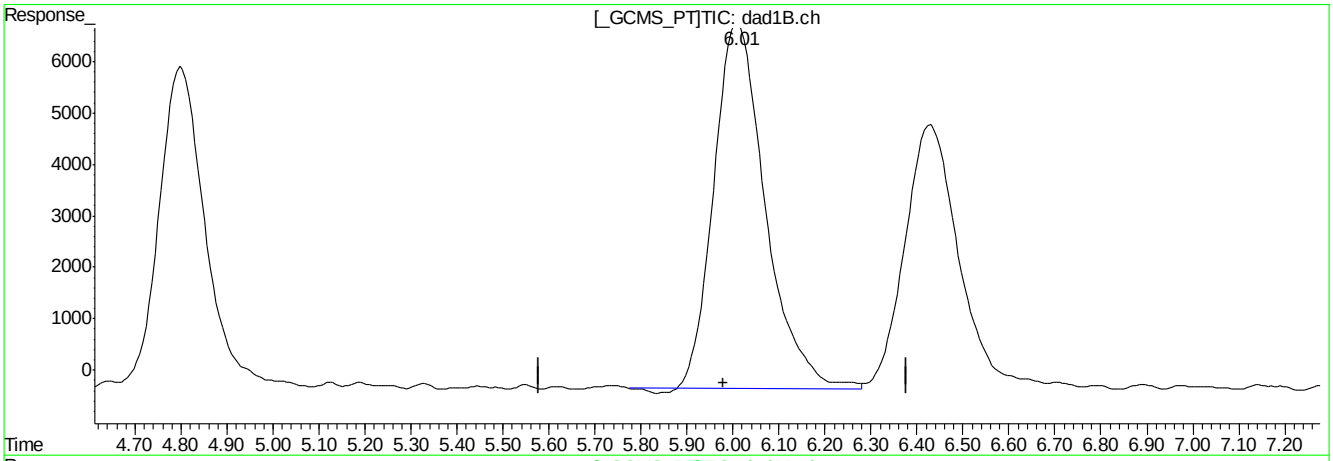
response 509173

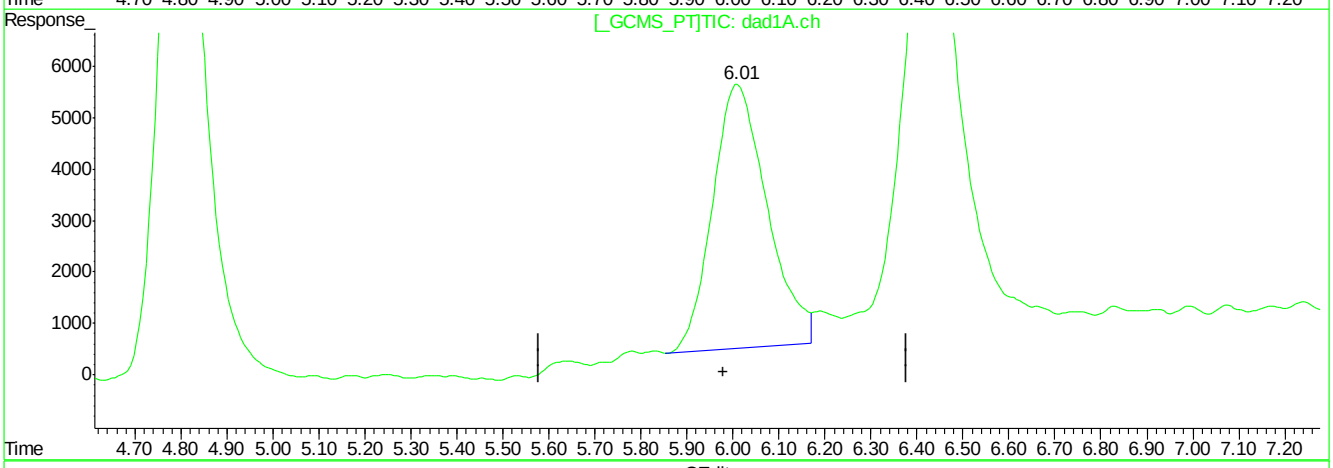
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:57:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.01min 102.241ppb

response 550620

(7) 1,3-Dinitrobenzene #2

6.01min 108.566ppb m

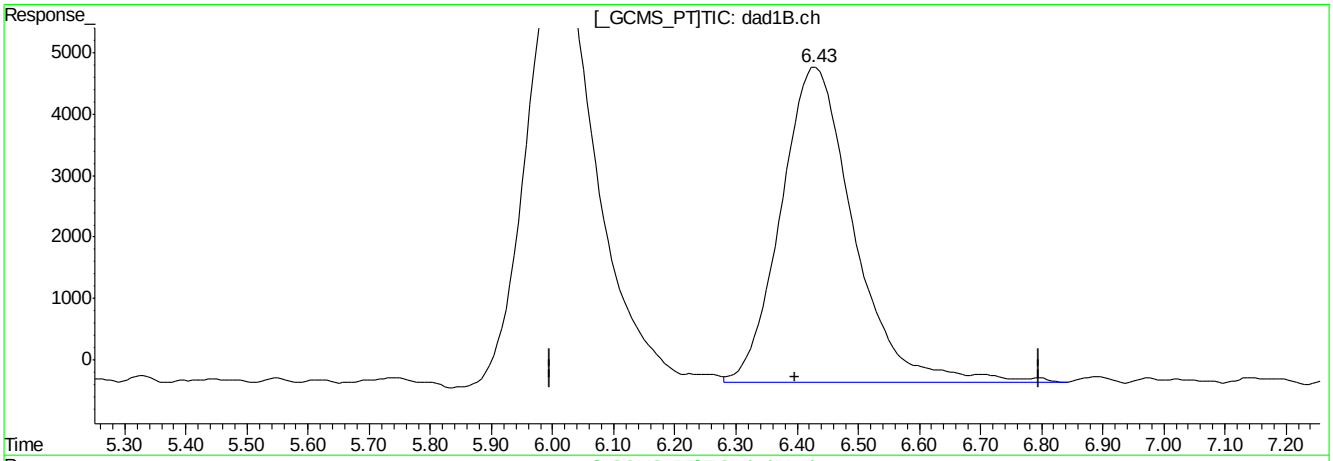
response 422269

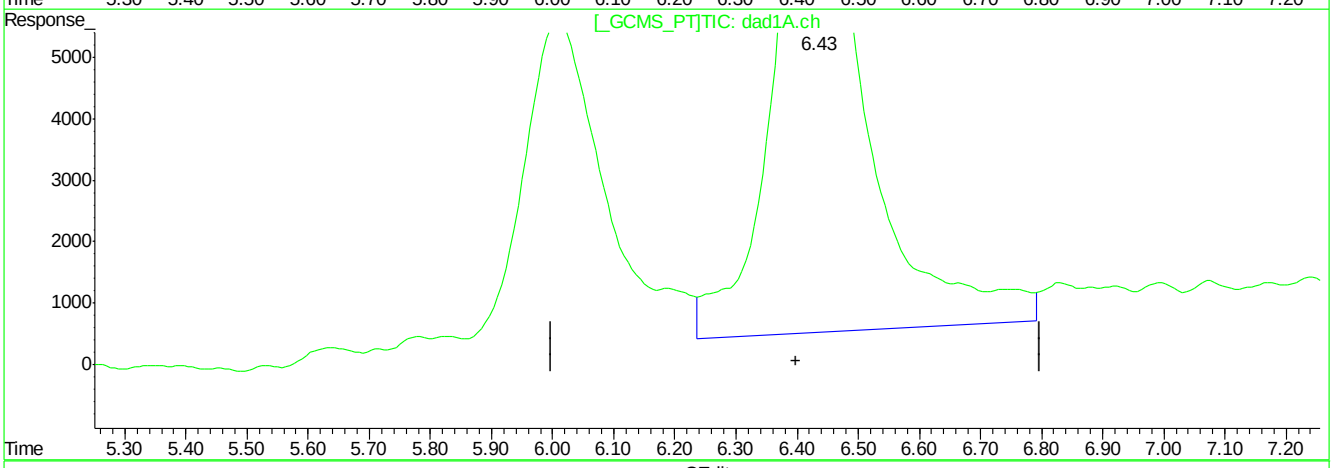
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:57:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.43min 103.645ppb

response 426967

(8) 3,5-Dinitroaniline #2

6.43min 127.289ppb

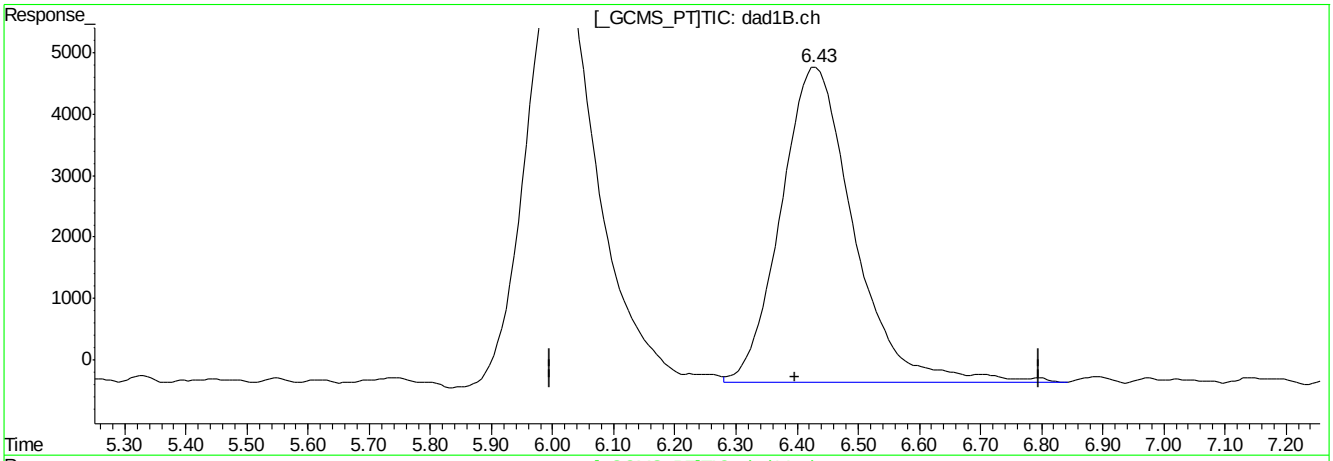
response 905785

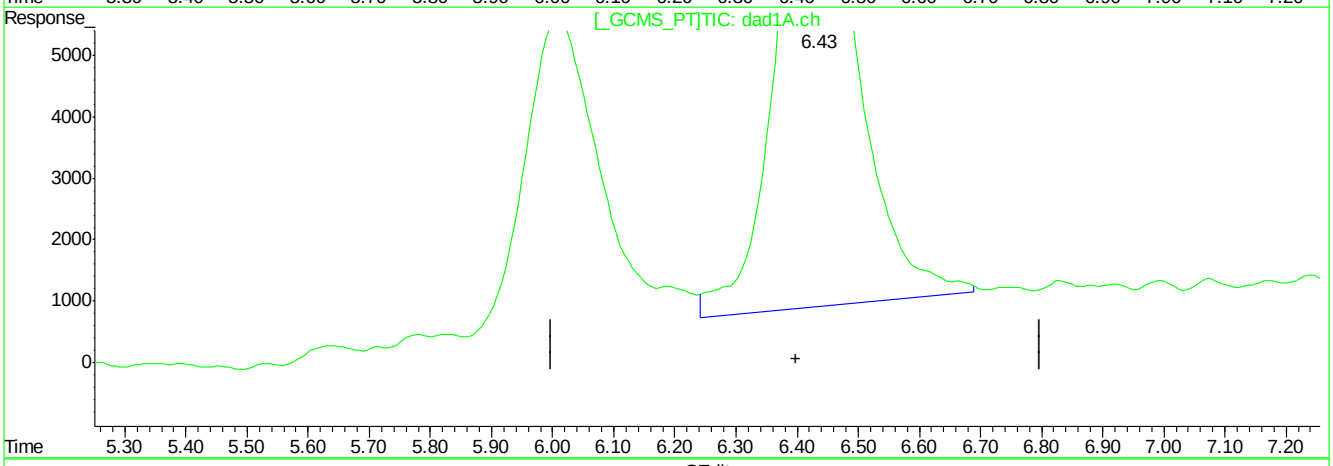
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:57:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.43min 103.645ppb

response 426967

(8) 3,5-Dinitroaniline #2

6.43min 107.604ppb m

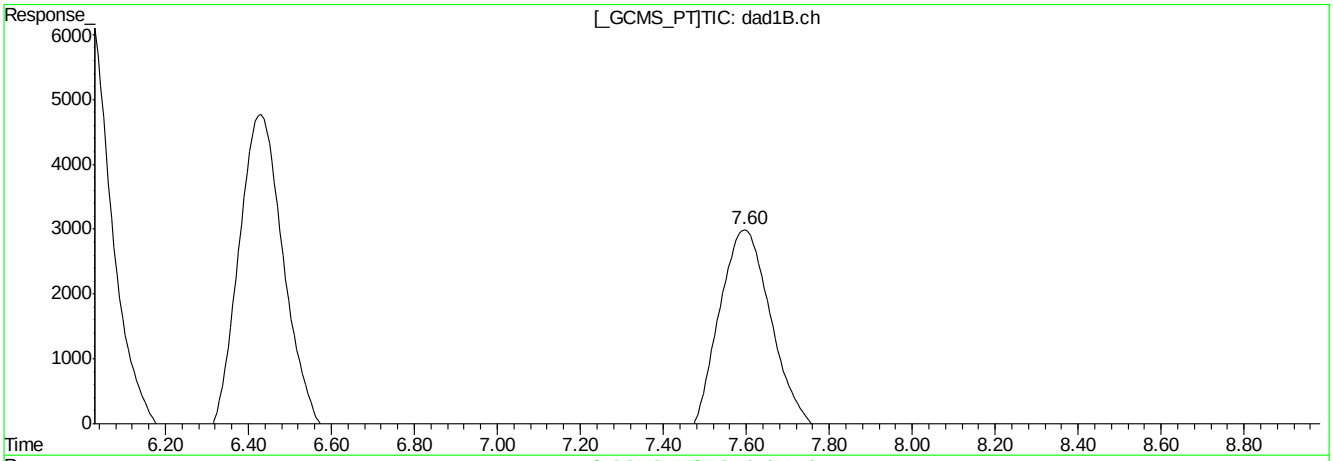
response 765703

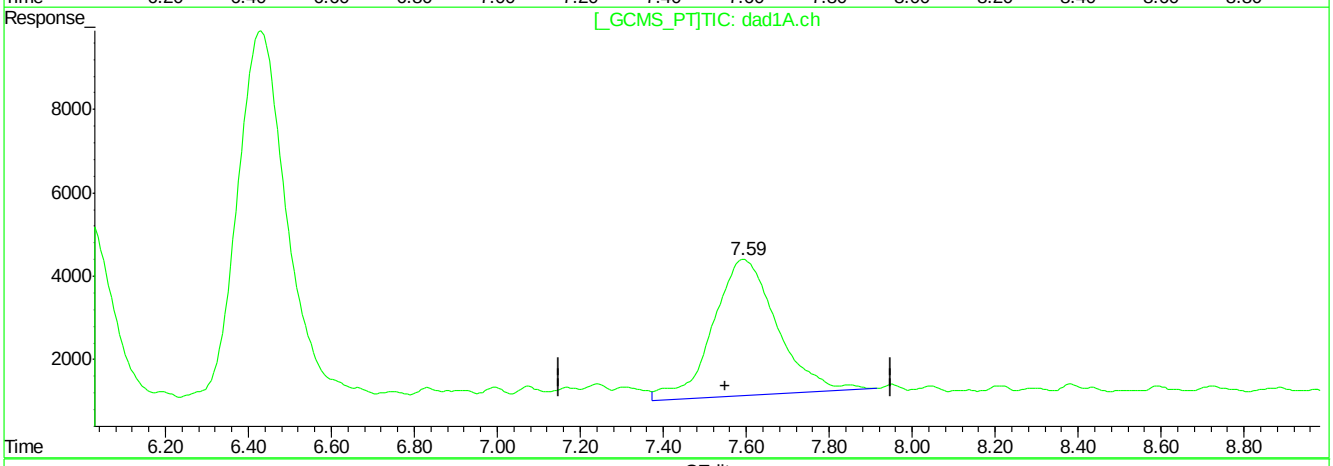
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:58:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.60min 100.556ppb

response 325549

(9) Nitrobenzene #2

7.60min 105.833ppb

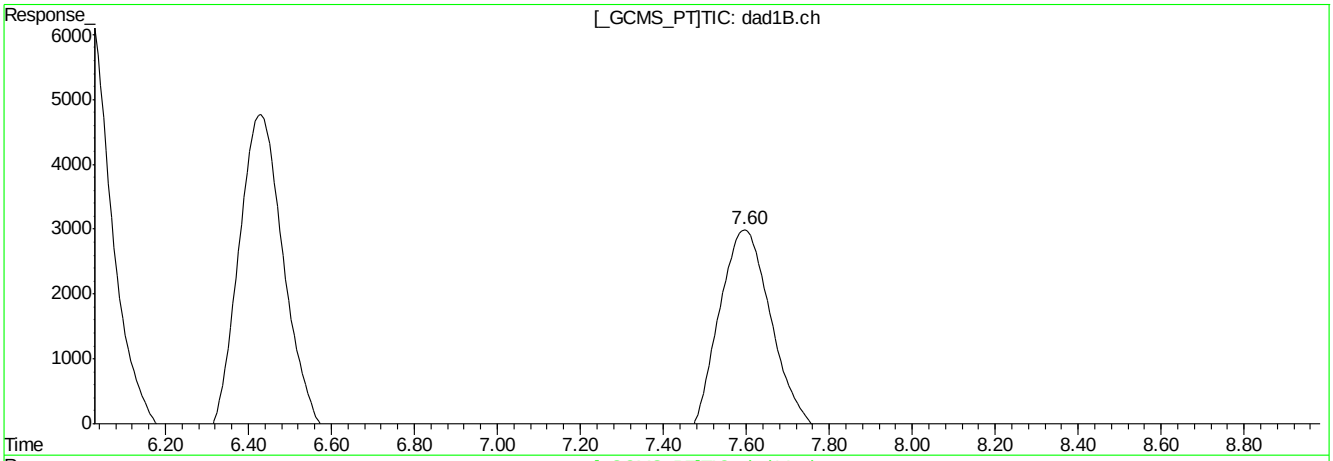
response 351580

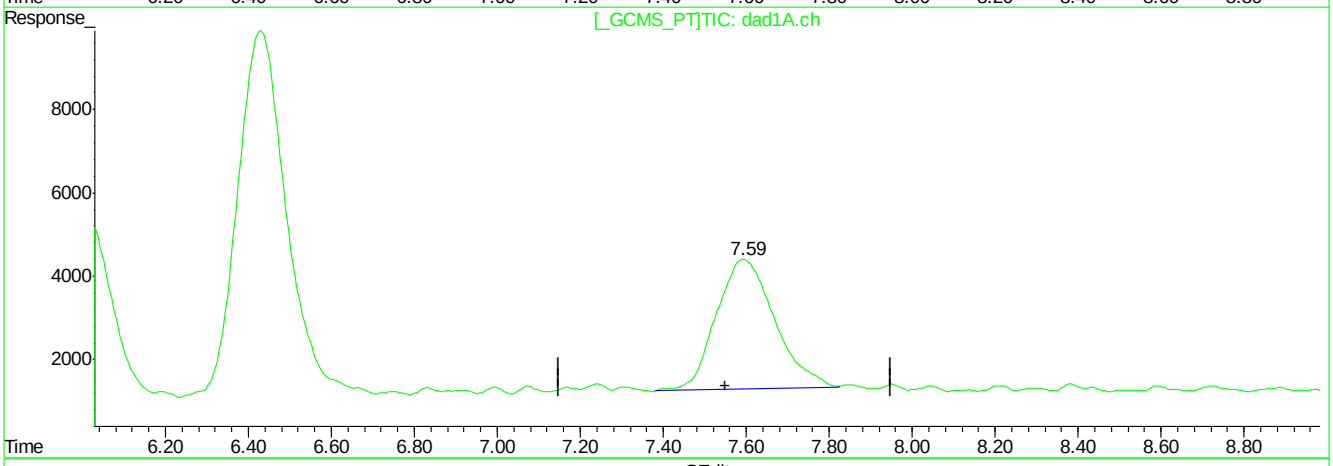
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:58:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.60min 100.556ppb

response 325549

(9) Nitrobenzene #2

7.59min 91.411ppb m

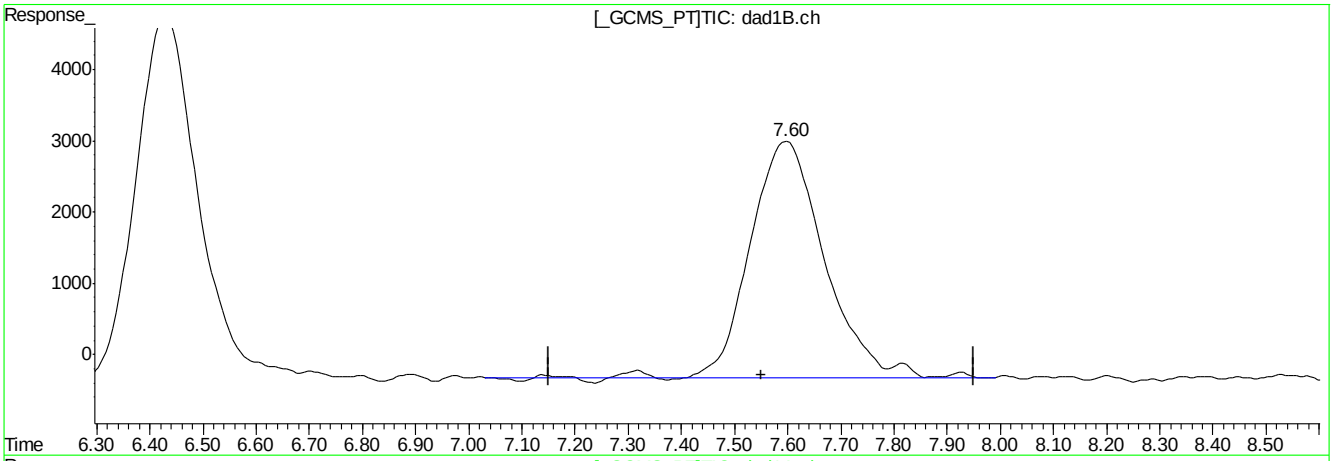
response 303670

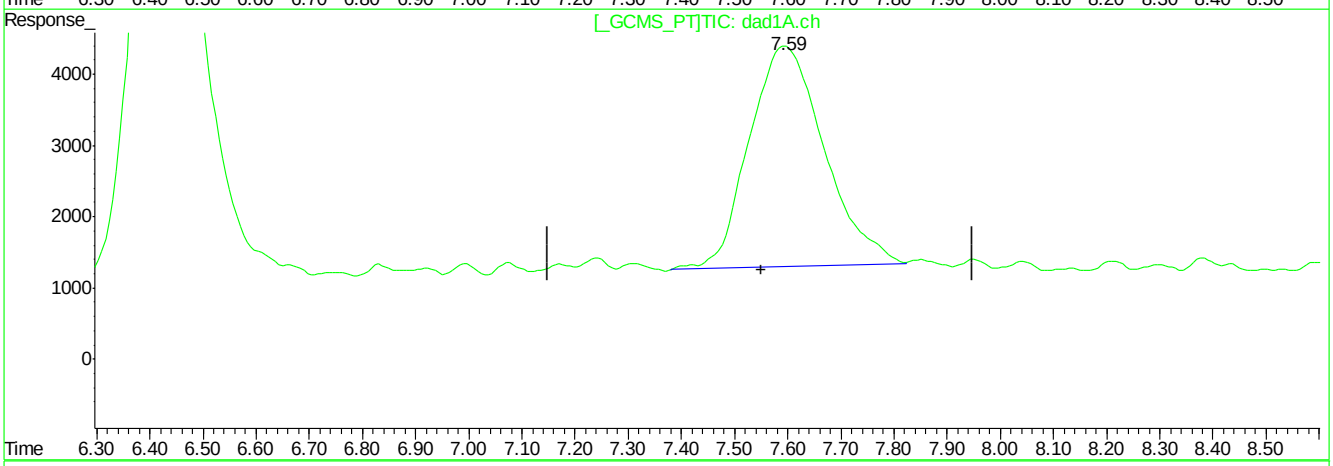
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:58:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.60min 100.556ppb

response 325549

(9) Nitrobenzene #2

7.59min 91.411ppb m

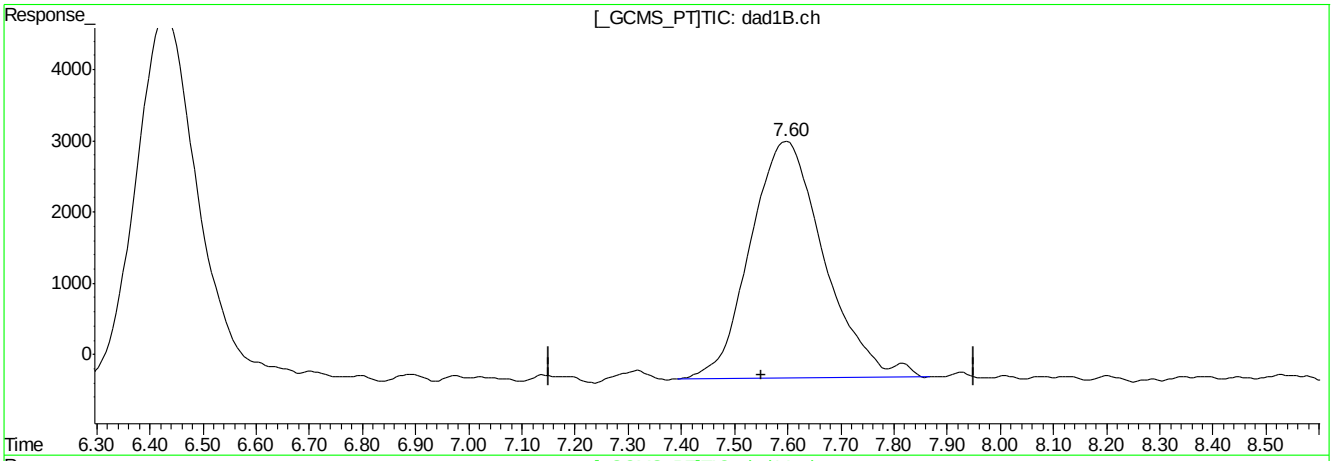
response 303670

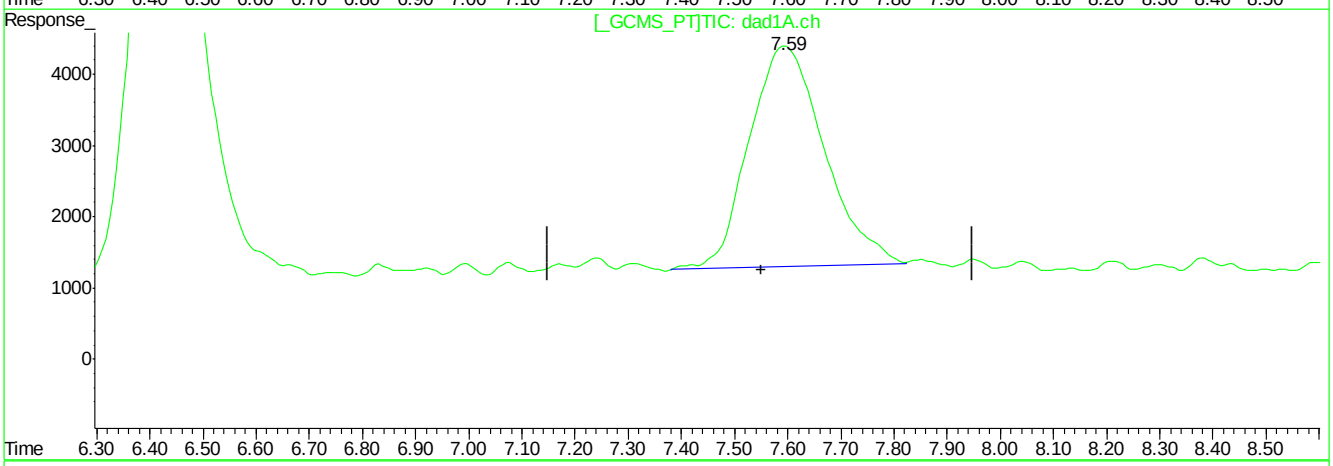
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:58:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.60min 99.097ppb m

response 320826

(9) Nitrobenzene #2

7.59min 91.411ppb m

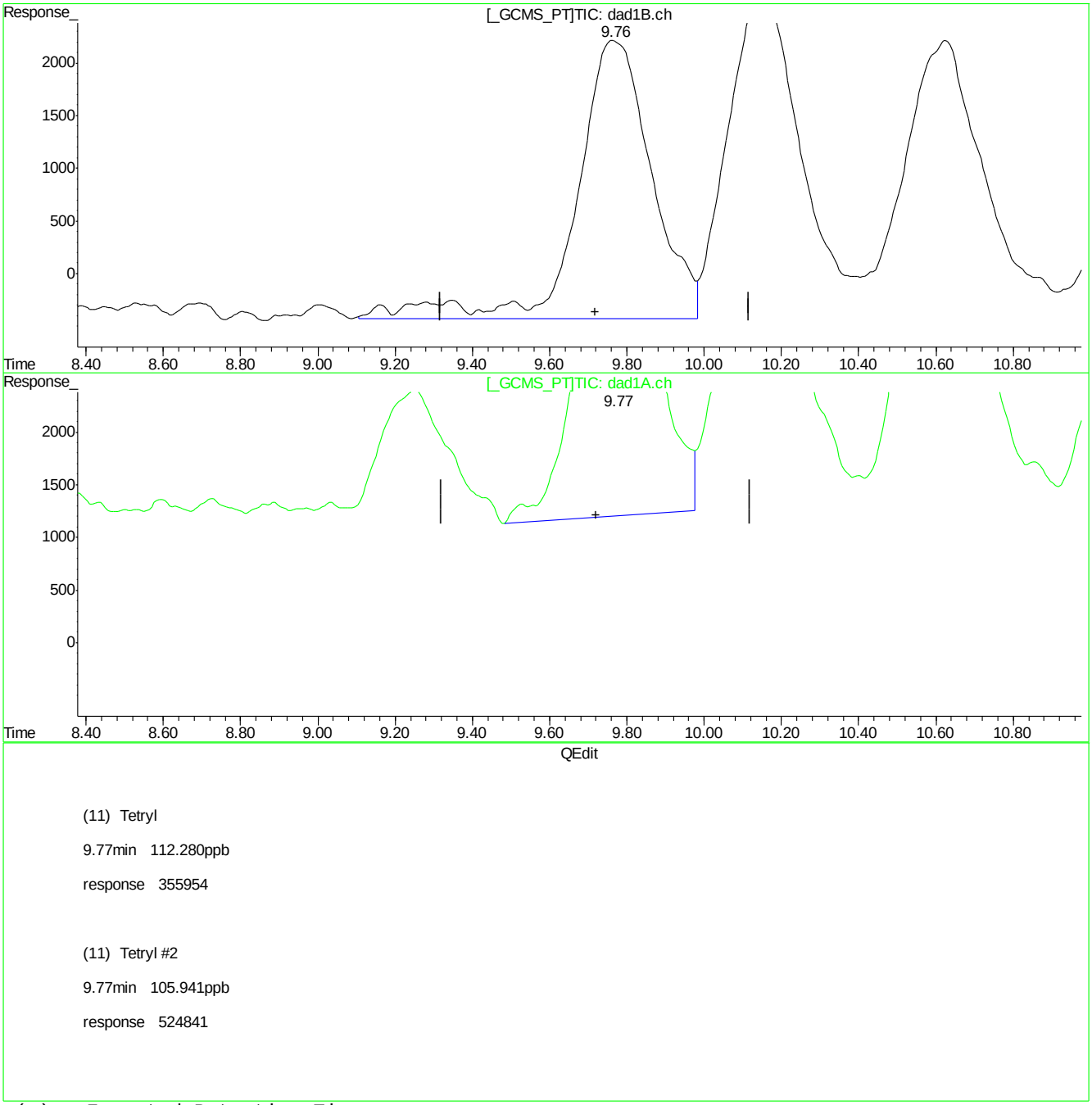
response 303670

(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:58:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(11) Tetryl

9.77min 112.280ppb

response 355954

(11) Tetryl #2

9.77min 105.941ppb

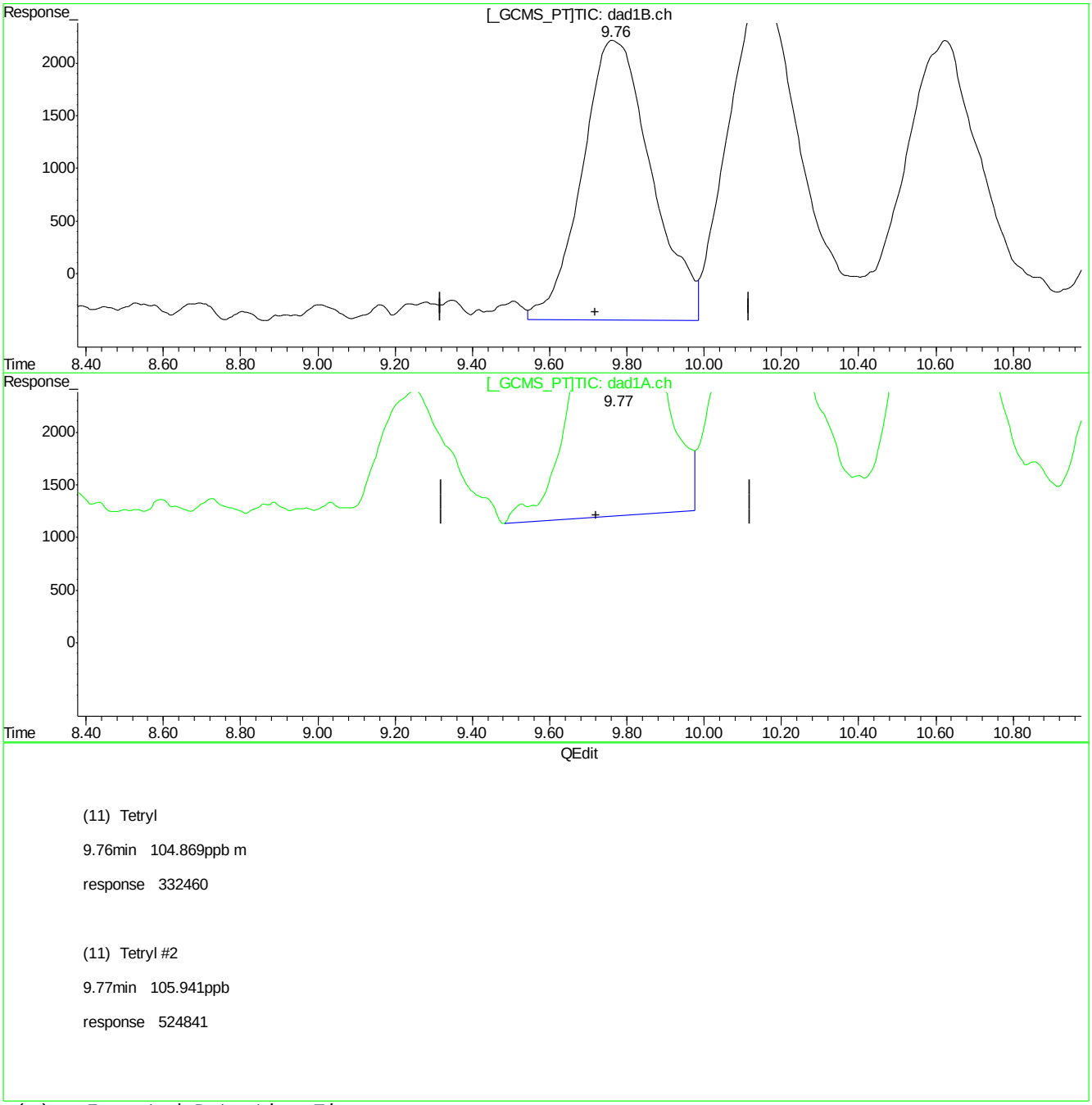
response 524841

(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:58:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(11) Tetryl

9.76min 104.869ppb m

response 332460

(11) Tetryl #2

9.77min 105.941ppb

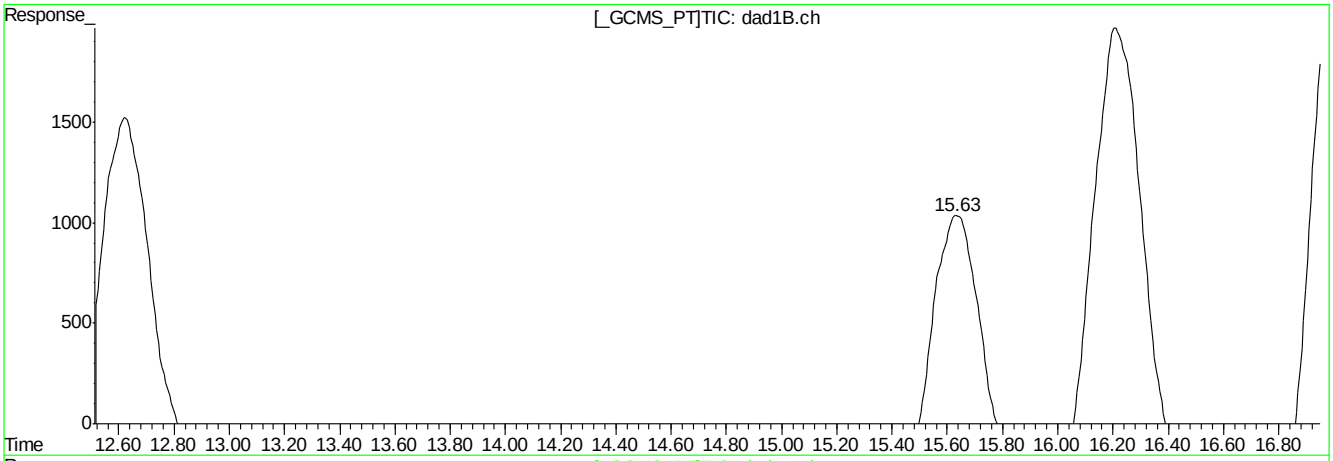
response 524841

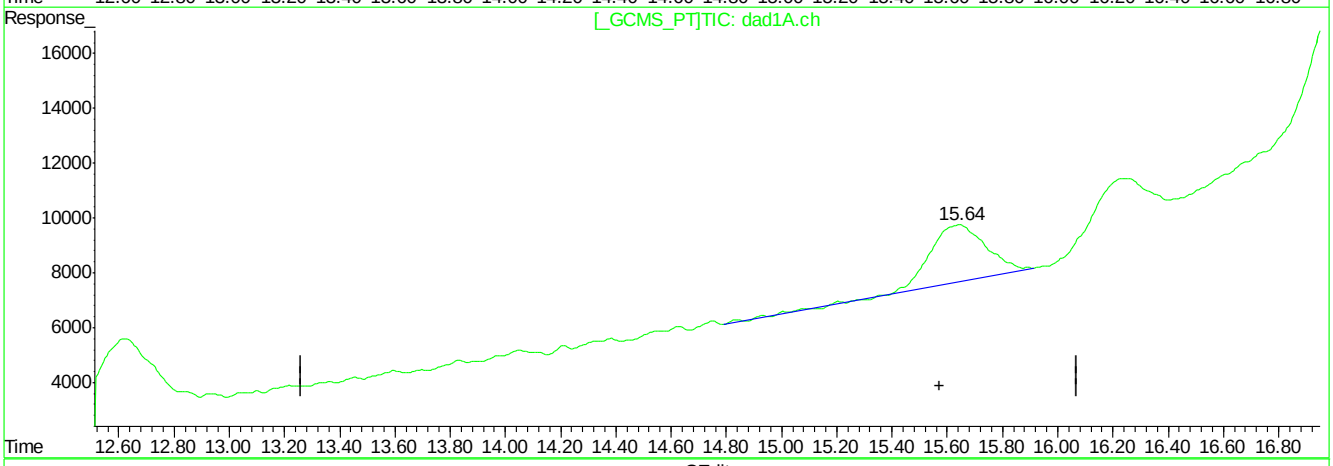
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:58:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.64min 103.221ppb

response 239690

(18) o-Nitrotoluene #2

15.65min 91.832ppb

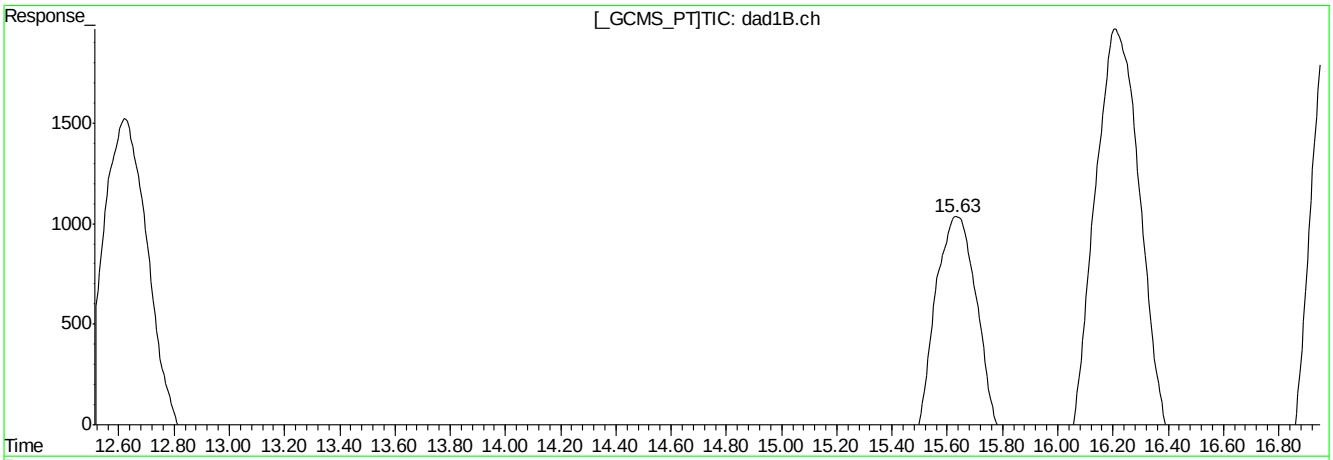
response 294000

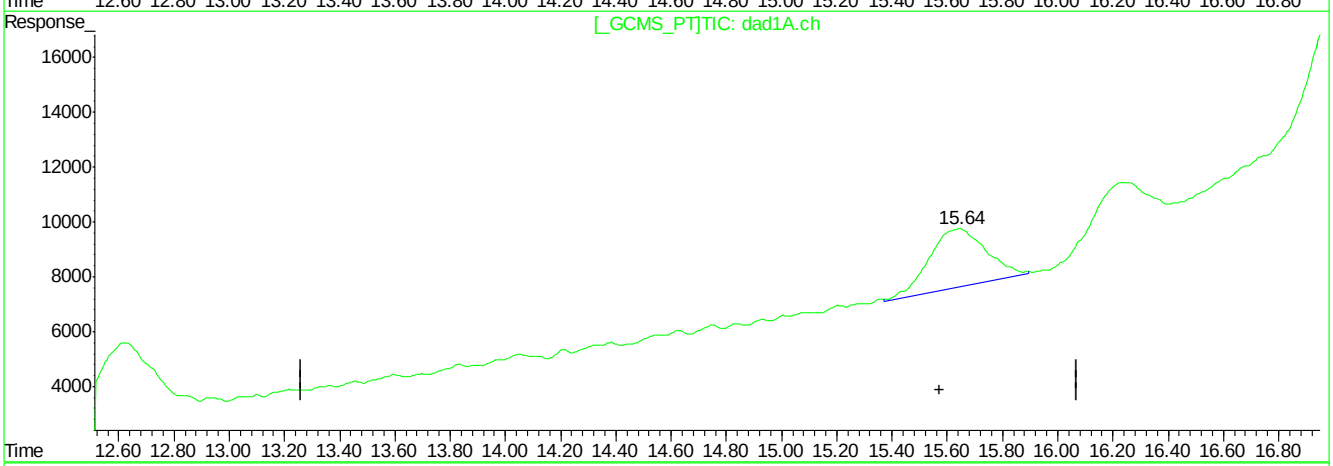
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:58:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.64min 103.221ppb

response 239690

(18) o-Nitrotoluene #2

15.64min 96.105ppb m

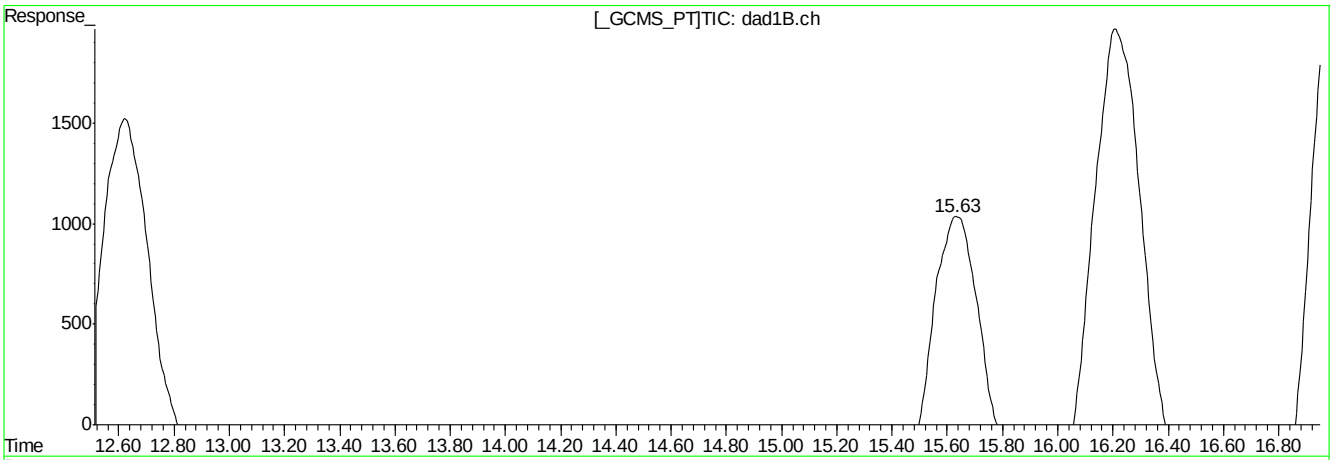
response 307679

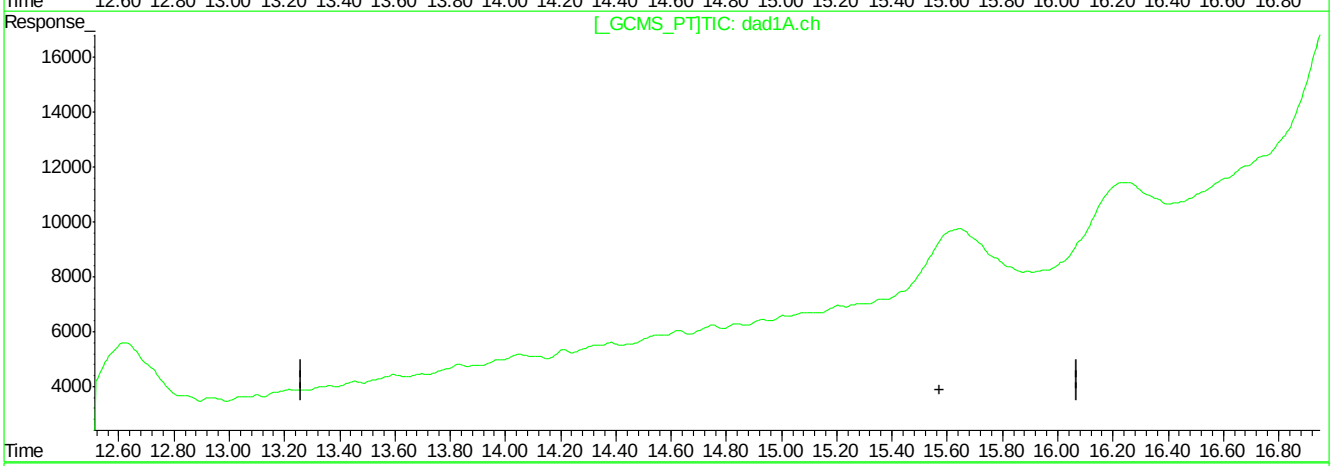
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:58:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.64min 103.221ppb

response 239690

(18) o-Nitrotoluene #2

0.00min 0.000ppb d

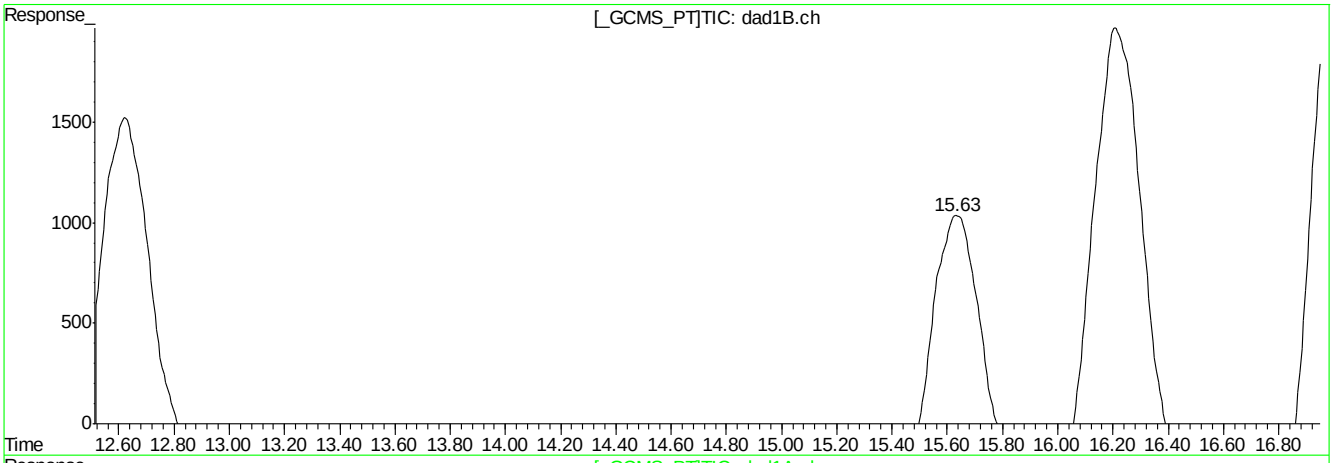
response 0

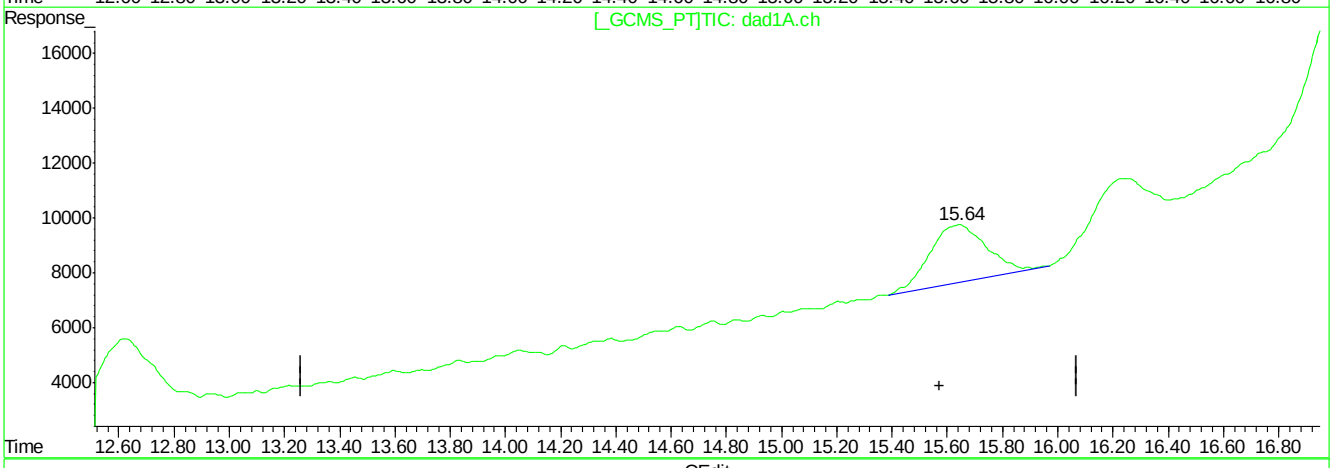
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:58:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.64min 103.221ppb

response 239690

(18) o-Nitrotoluene #2

15.64min 93.833ppb m

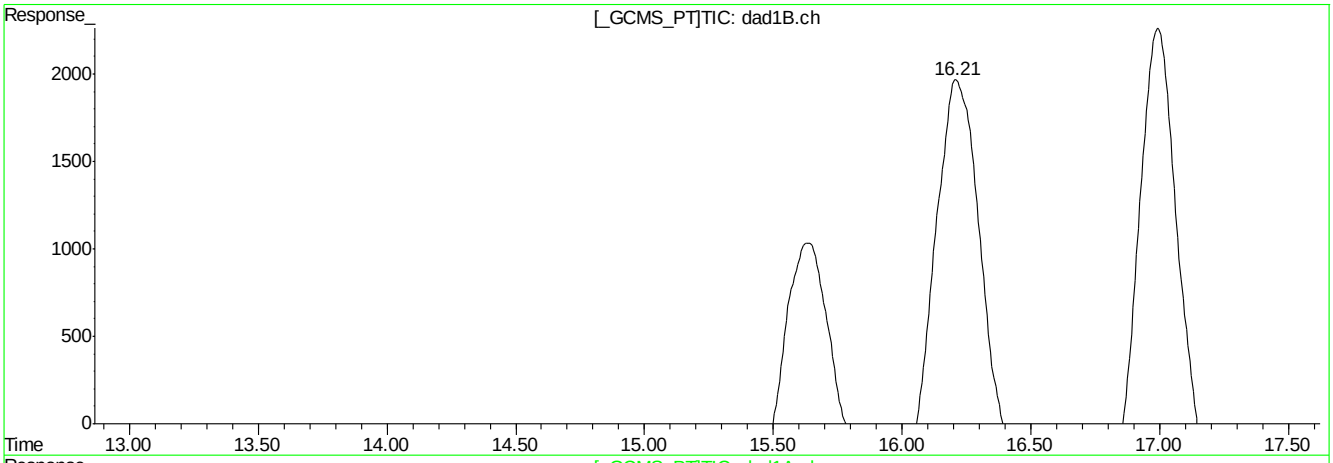
response 300406

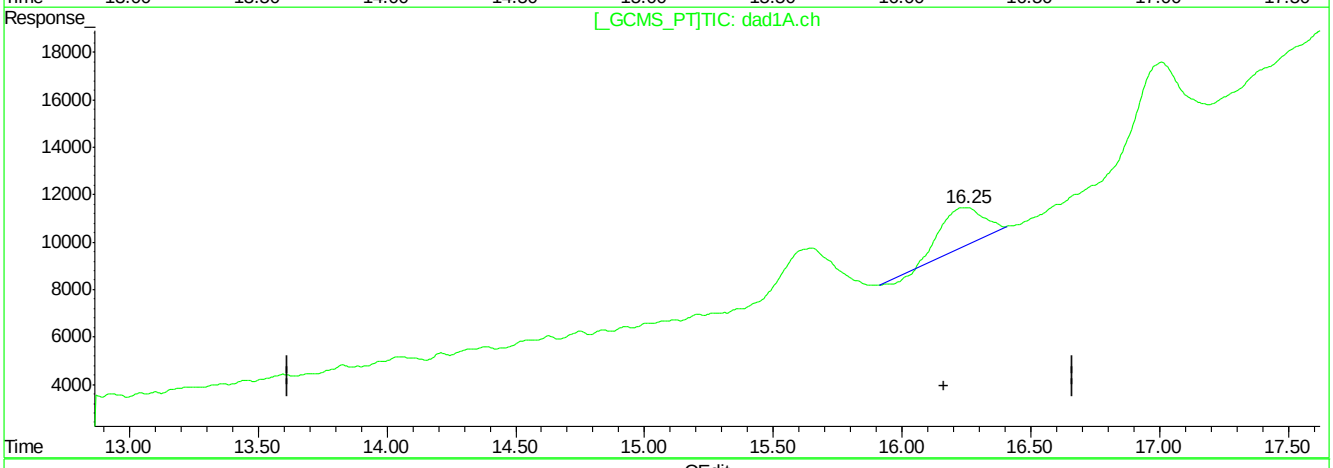
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:59:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.21min 107.027ppb

response 389145

(19) p-Nitrotoluene #2

16.25min 59.479ppb

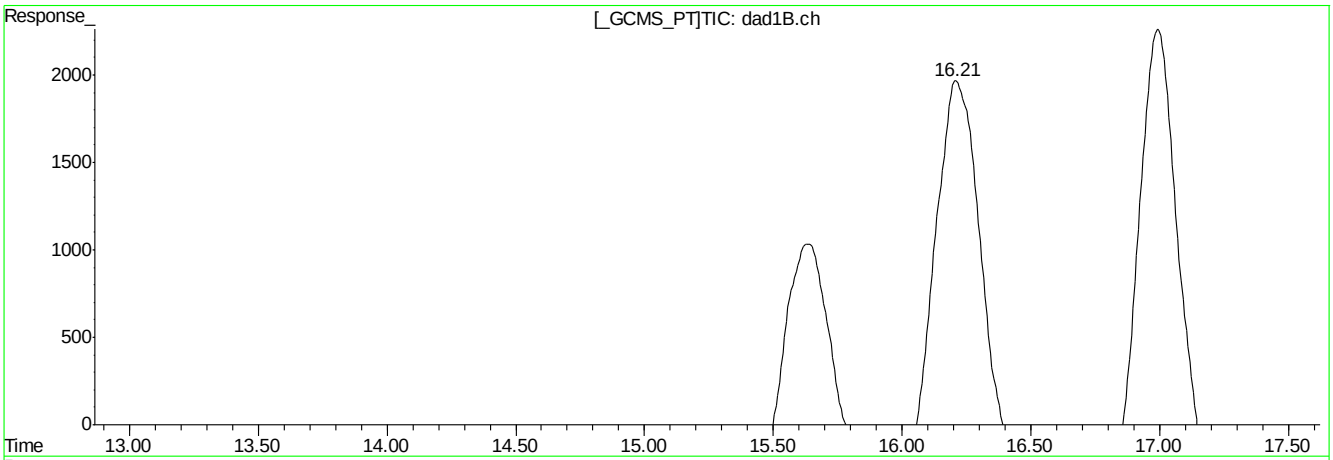
response 181137

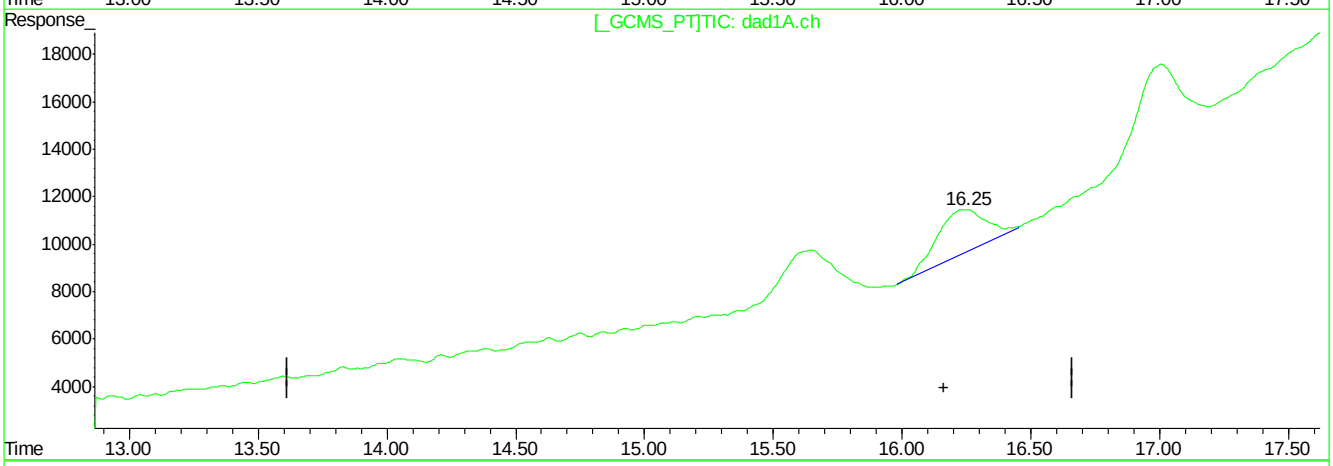
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:59:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.21min 107.027ppb

response 389145

(19) p-Nitrotoluene #2

16.25min 78.666ppb m

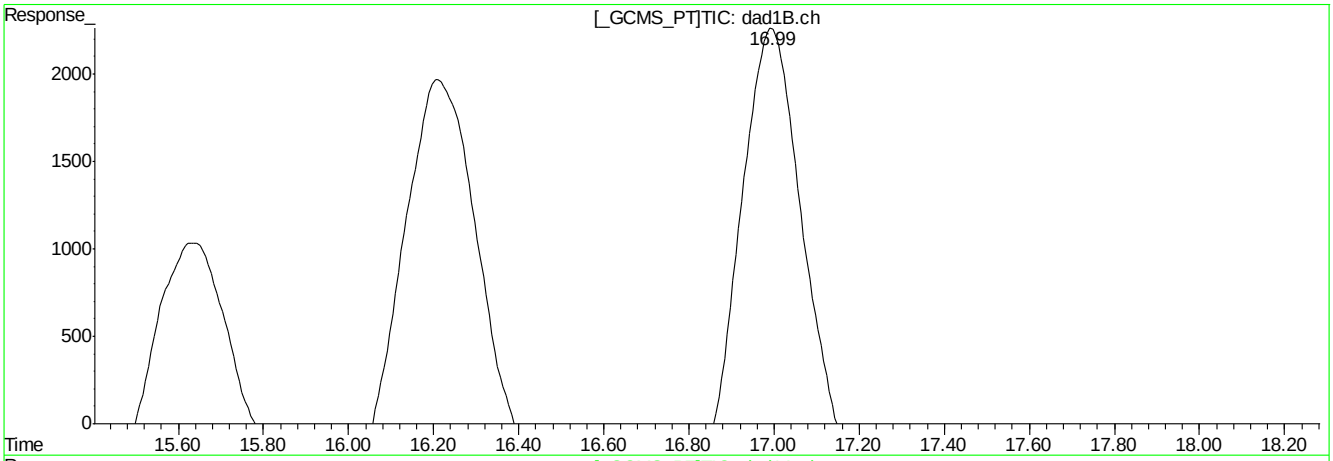
response 239571

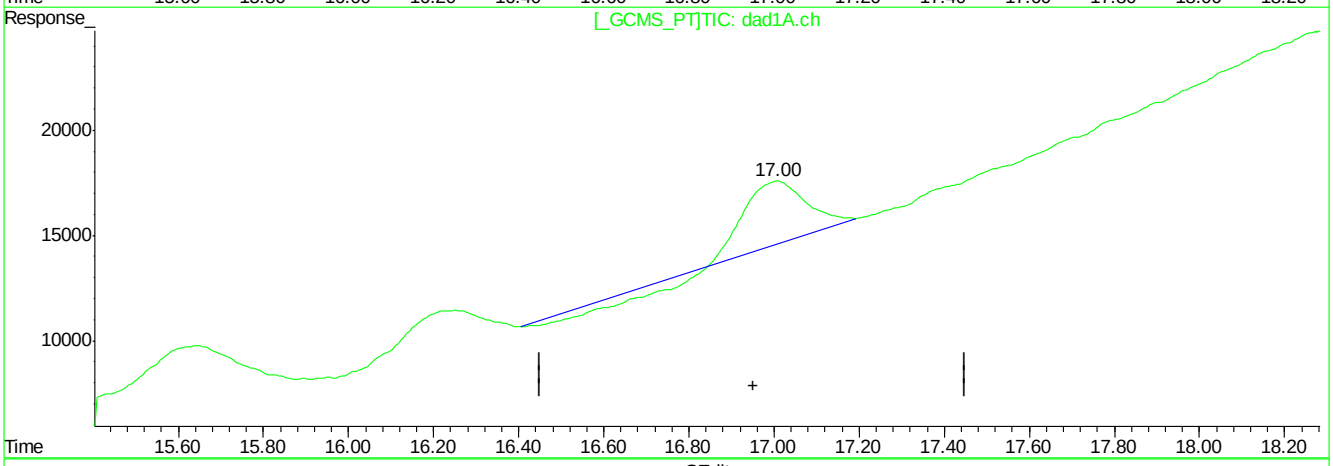
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:59:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.00min 103.201ppb

response 349881

(20) m-Nitrotoluene #2

17.01min 53.539ppb

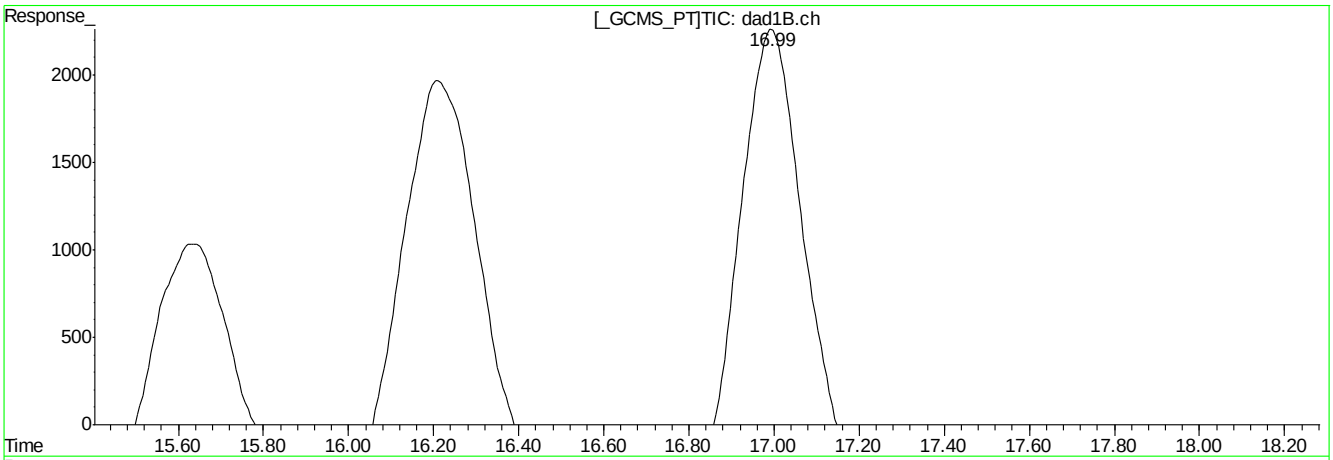
response 218425

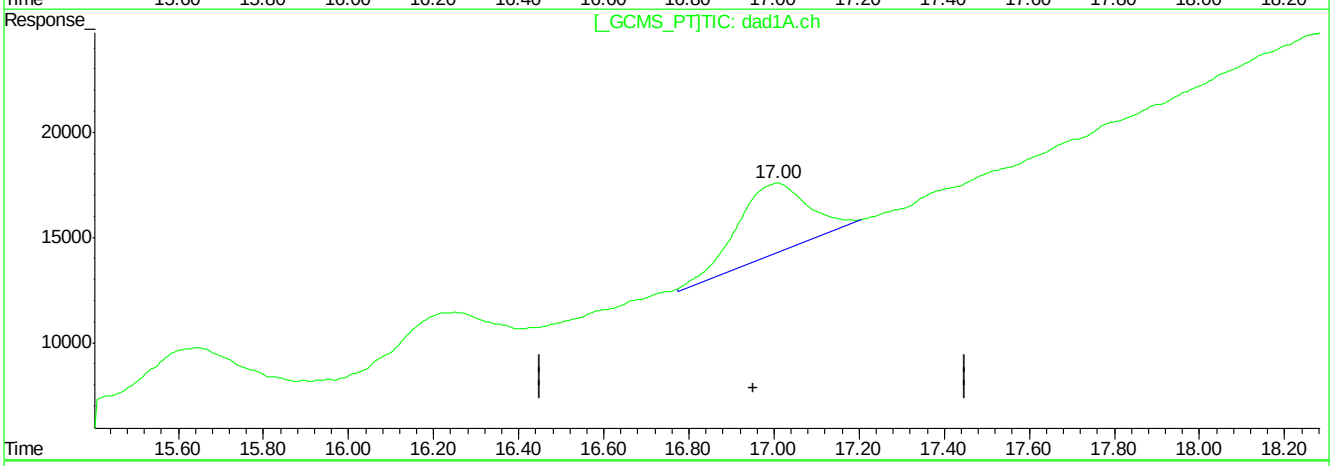
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:59:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.00min 103.201ppb

response 349881

(20) m-Nitrotoluene #2

17.00min 93.848ppb m

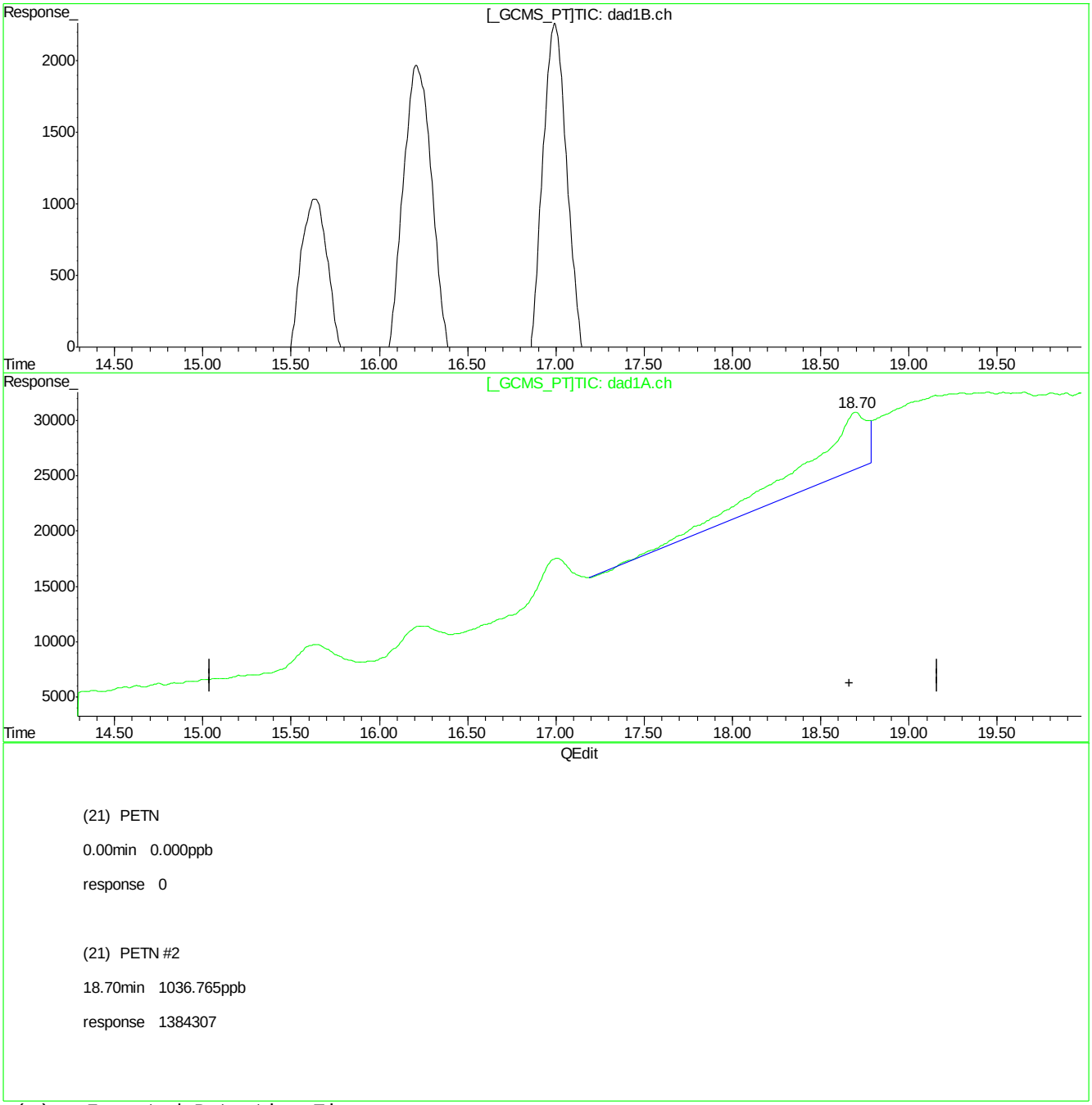
response 382875

(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:59:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration

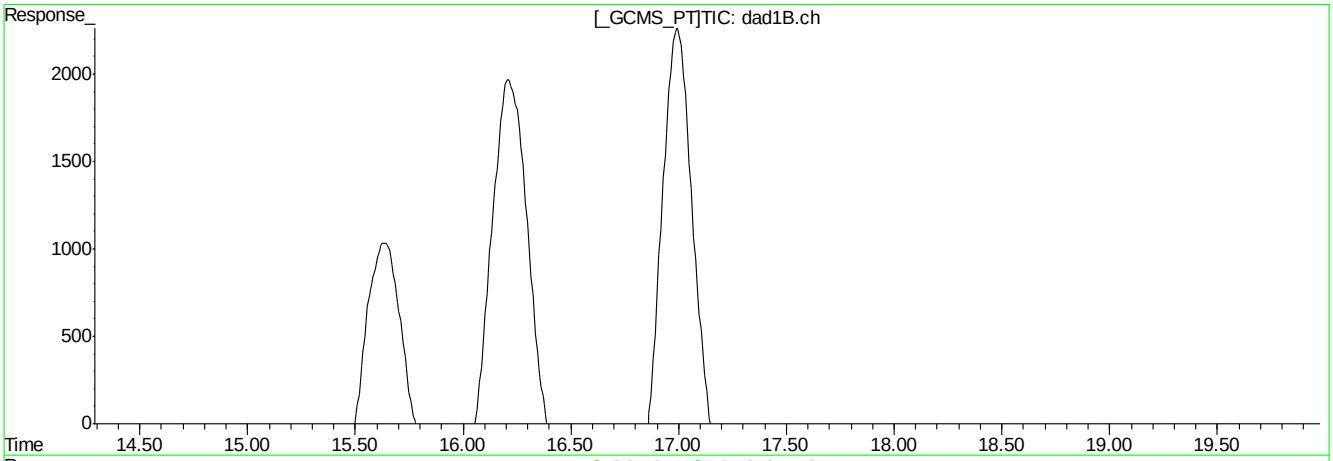


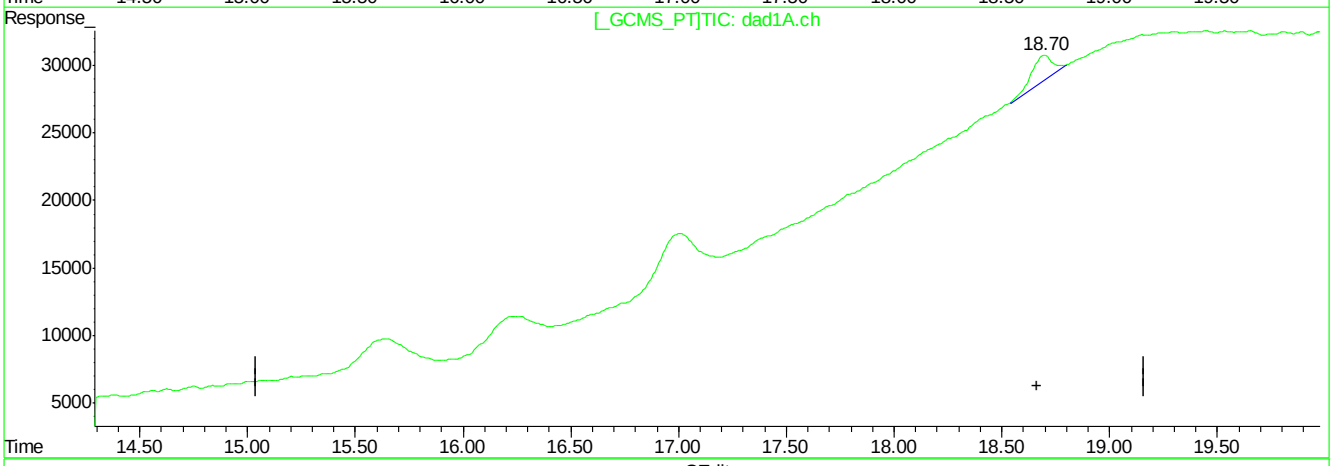
(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:59:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1B.ch Vial: 53
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389747.D\dad1A.ch
Acq On : 04-Feb-2021, 15:07:23 Operator: jamesb
Sample : ic2401-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.70min 91.771ppb m

response 122534

(+) = Expected Retention Time
PP389747.D GPP2401_020521PRI.M Fri Feb 05 07:59:44 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1B.ch Vial: 54
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1A.ch
Acq On : 04-Feb-2021, 15:38:26 Operator: jamesb
Sample : ic2401-200 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 05 07:48:32 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.48	11.49	475527	784900	215.251	199.136
	Spiked Amount 500.000	Range 70 - 136		Recovery =		43.05%#	39.83%#
	Target Compounds						
1)	TNX	1.35	1.35	644800	1011326	205.562	214.286
2)	HMX	1.50	1.50	323565	996044	201.017	217.811
3)	DNX	1.75	1.75	581119	962083	209.004	219.916
4)	MNX	2.36	2.36	646586	966520	220.285	212.354
5)	RDX	3.00	3.00	422231	642514	218.669	211.713
6)	1,3,5-Trinitrobe	4.79	4.80	868218	1678019	206.627m	209.681
7)	1,3-Dinitrobenze	6.01	6.01	1124102	913922	208.726	234.971
8)	3,5-Dinitroanili	6.42	6.42	863464	1615645	209.604	227.045
9)	Nitrobenzene	7.59	7.58	696413	638901	215.109	192.323m
10)	Nitroglycerin	0.00	9.24	0	263873	N.D.	215.803 #
11)	Tetryl	9.75	9.76	638778	985189	201.493m	198.864
12)	2,4,6-Trinitroto	10.14	10.14	814054	898883	211.442	191.863
13)	2-Amino-4,6-Dini	10.60	10.60	736247	967212	210.577	185.004
14)	4-Amino-2,6-Dini	11.12	11.12	525806	904036	210.108	179.601
16)	2,4-Dinitrotolue	12.14	12.14	1014005	664365	206.943	200.952
17)	2,6-Dinitrotolue	12.61	12.61	592839	777799	206.804	216.179
18)	o-Nitrotoluene	15.61	15.62	479773	617472	206.612	192.869
19)	p-Nitrotoluene	16.20	16.21	742216	497470	204.132	163.351
20)	m-Nitrotoluene	16.98	16.99	674902	793933	199.068	194.604m
21)	PETN	0.00	18.68	0	272557	N.D.	204.130m#

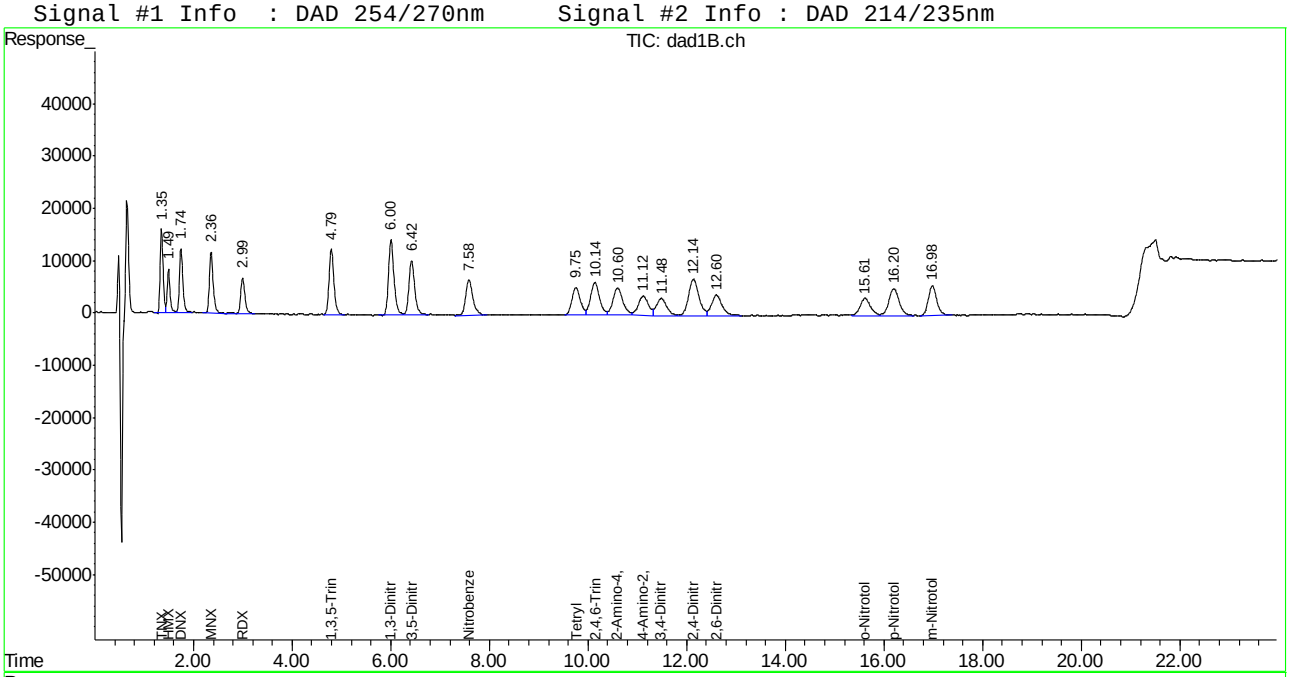
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389748.D GPP2401_020521PRI.M Fri Feb 05 08:39:47 2021 Page 1

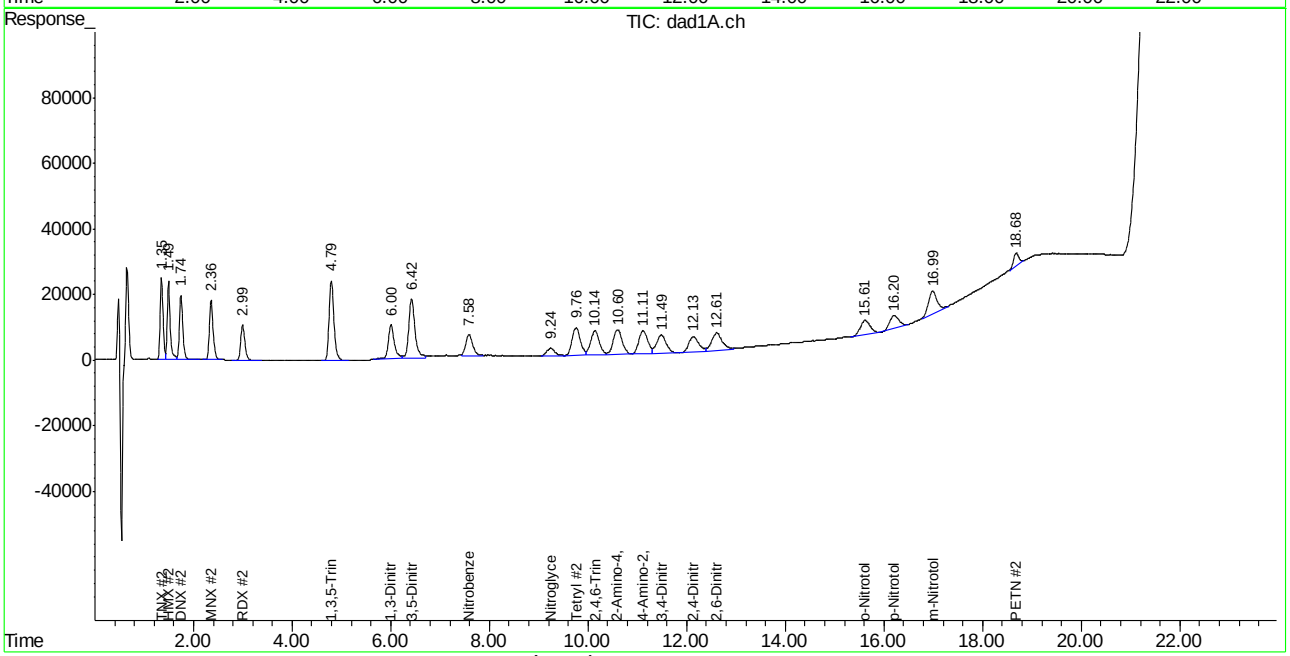
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1B.ch Vial: 54
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1A.ch
Acq On : 04-Feb-2021, 15:38:26 Operator: jamesb
Sample : ic2401-200 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:57 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

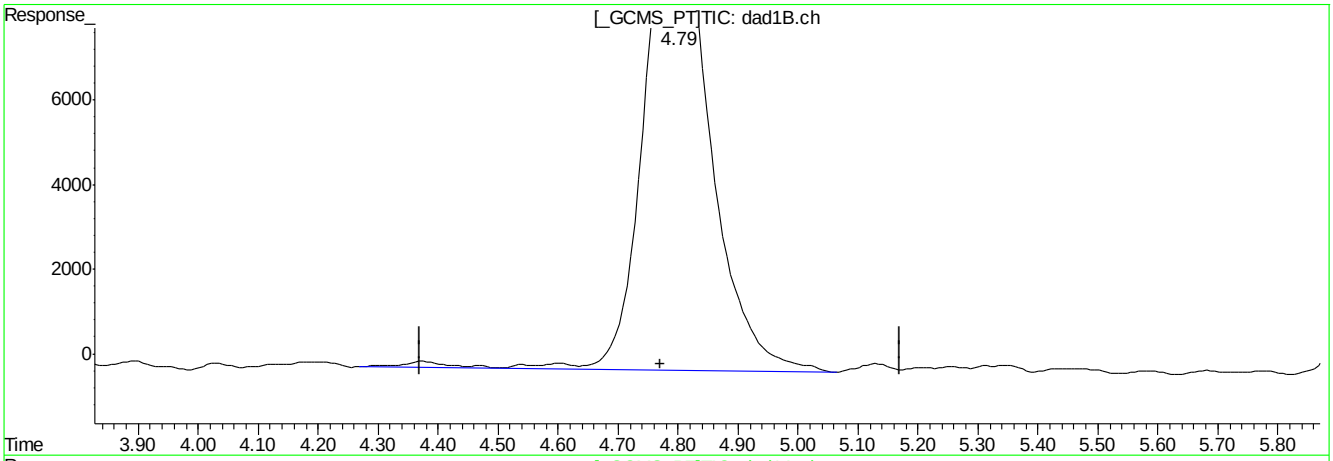
Sample Number: GPP2401-IC2401
Lab FileID: PP389748.D
Injection Time: 02/04/21 15:38
Method: SW846 8330B
Analyst approved: 02/05/21 09:14 James Boone
Supervisor approved: 02/08/21 13:01 Naresh Jiawan

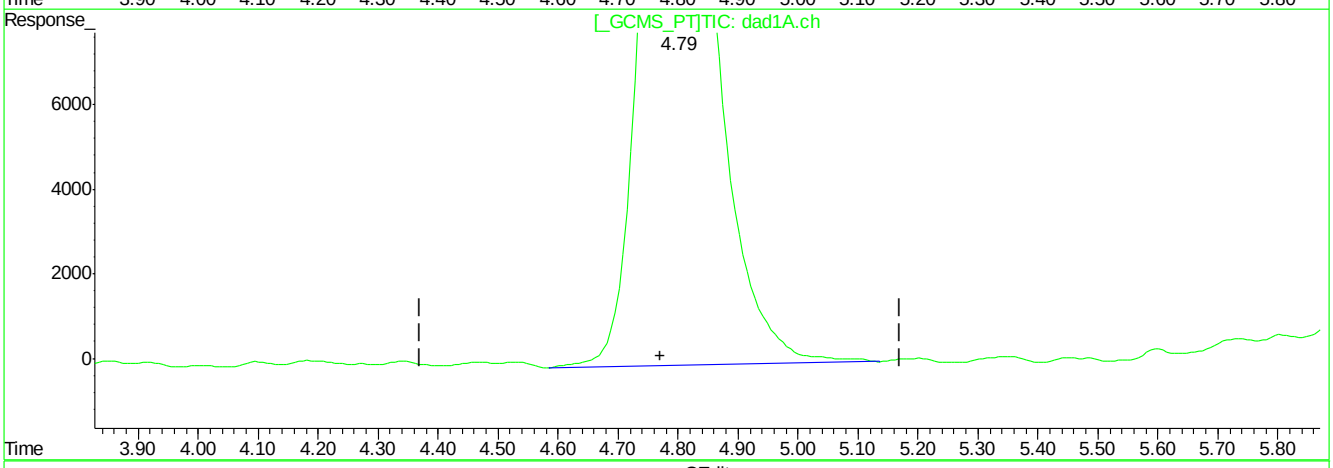
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	1	4.79	Poor instrument integration
Nitrobenzene	98-95-3	2	7.58	Poor instrument integration
Tetryl	479-45-8	1	9.75	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.99	Poor instrument integration
PETN	78-11-5	2	18.68	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1B.ch Vial: 54
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1A.ch
Acq On : 04-Feb-2021, 15:38:26 Operator: jamesb
Sample : ic2401-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.80min 210.951ppb

response 886387

(6) 1,3,5-Trinitrobenzene #2

4.80min 209.681ppb

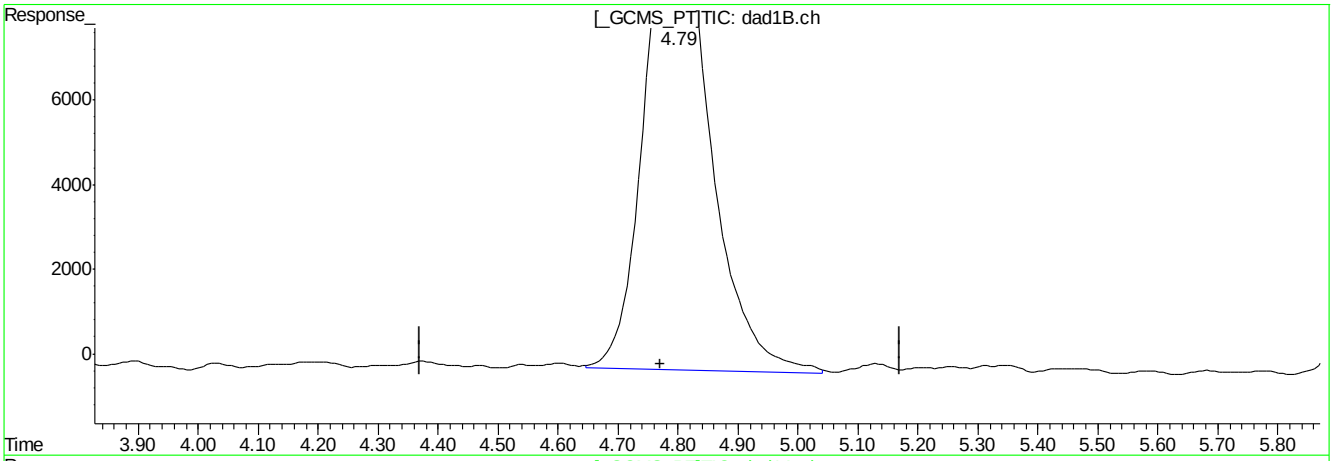
response 1678019

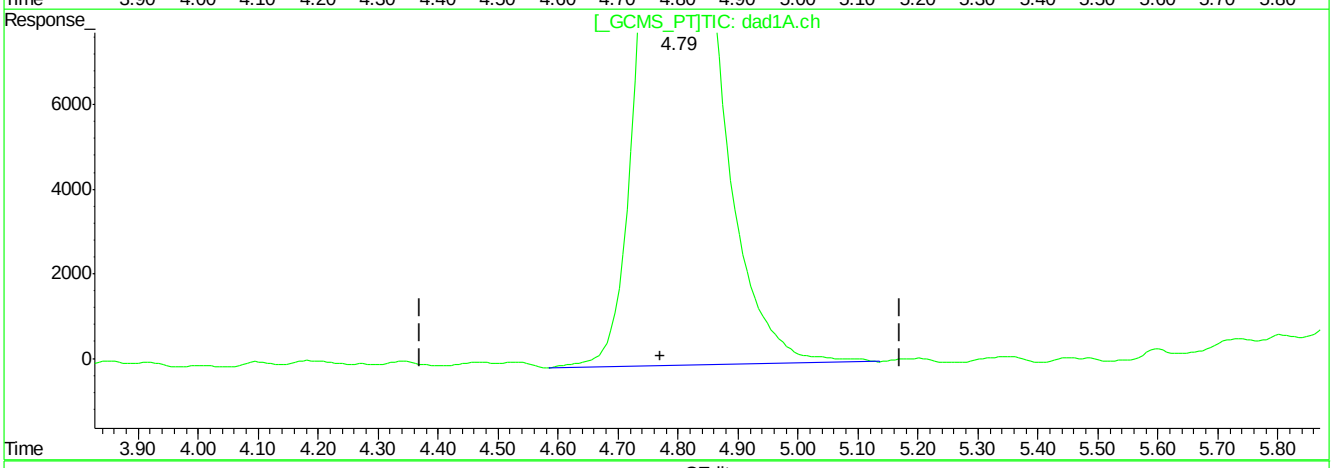
(+) = Expected Retention Time
PP389748.D GPP2401_020521PRI.M Fri Feb 05 07:55:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1B.ch Vial: 54
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1A.ch
Acq On : 04-Feb-2021, 15:38:26 Operator: jamesb
Sample : ic2401-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.79min 206.627ppb m

response 868218

(6) 1,3,5-Trinitrobenzene #2

4.80min 209.681ppb

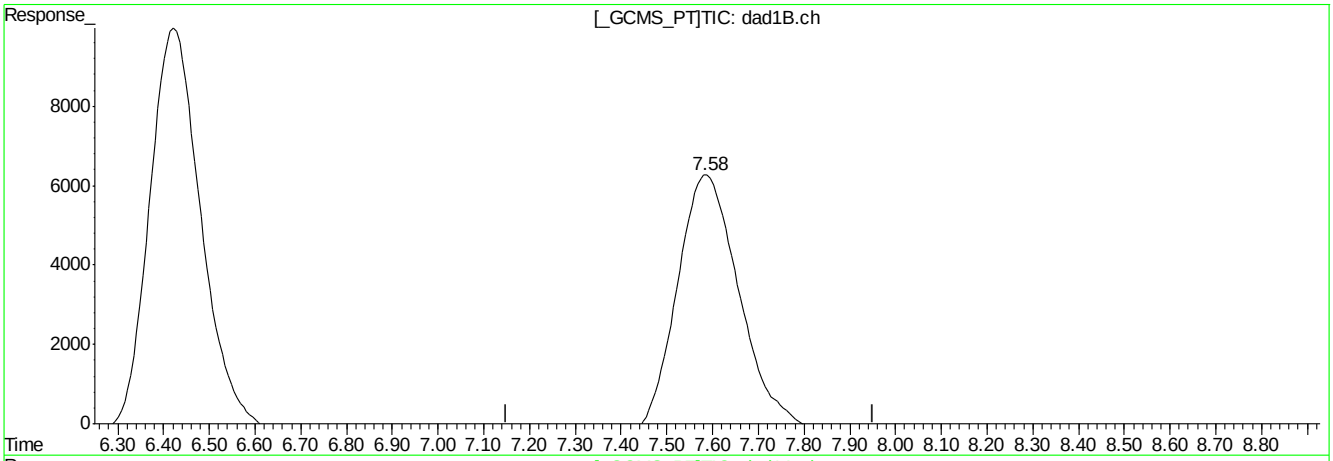
response 1678019

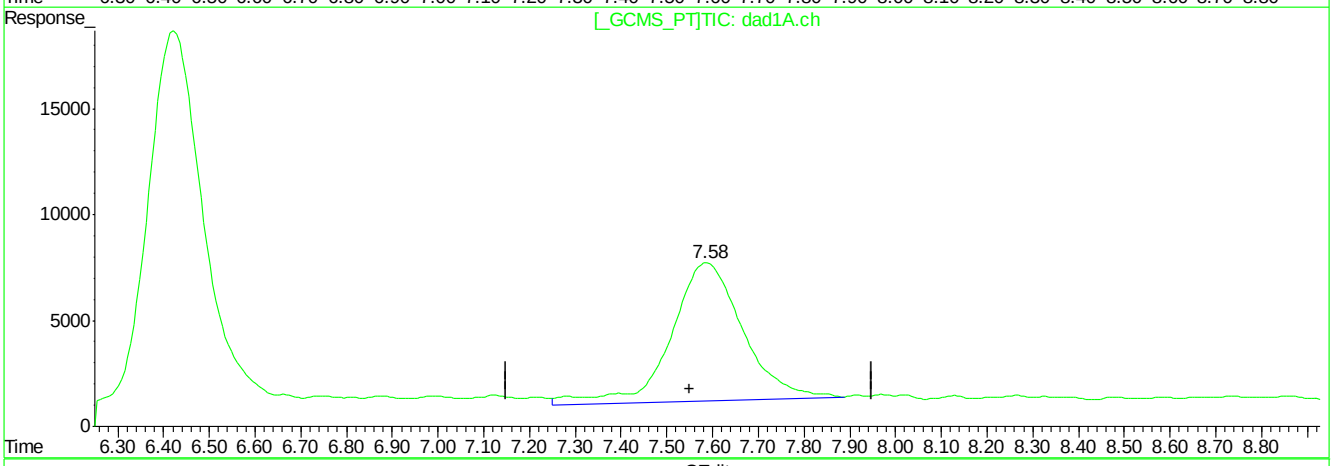
(+) = Expected Retention Time
PP389748.D GPP2401_020521PRI.M Fri Feb 05 07:56:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1B.ch Vial: 54
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1A.ch
Acq On : 04-Feb-2021, 15:38:26 Operator: jamesb
Sample : ic2401-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.59min 215.109ppb

response 696413

(9) Nitrobenzene #2

7.59min 213.399ppb

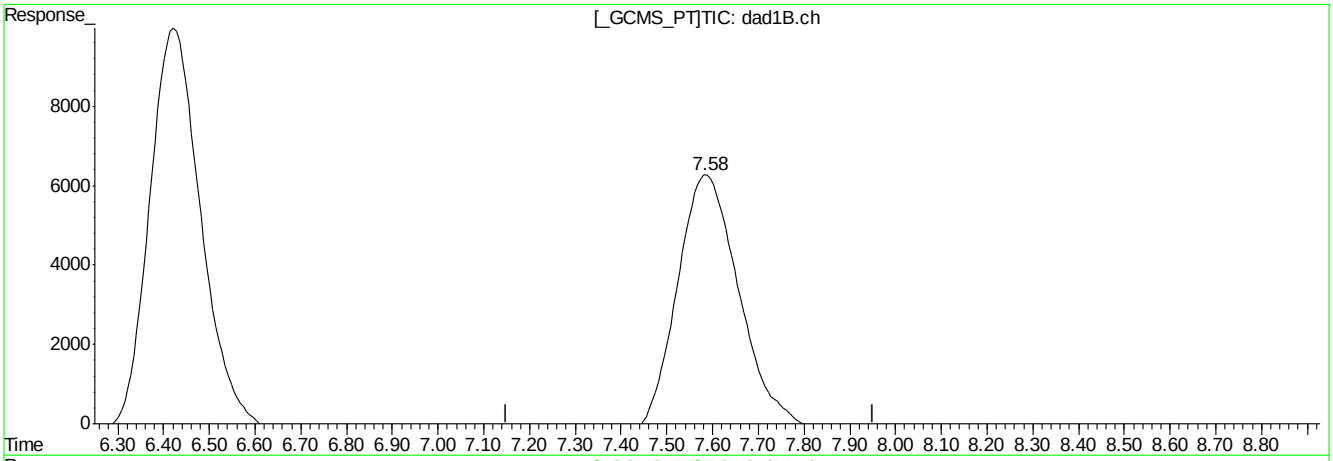
response 708917

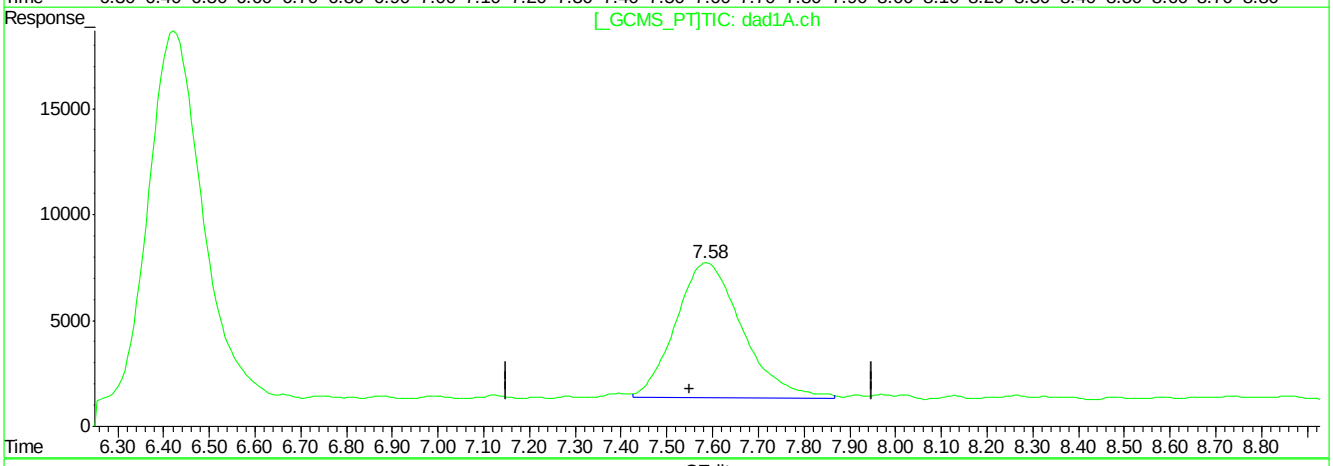
(+) = Expected Retention Time
PP389748.D GPP2401_020521PRI.M Fri Feb 05 07:56:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1B.ch Vial: 54
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1A.ch
Acq On : 04-Feb-2021, 15:38:26 Operator: jamesb
Sample : ic2401-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.59min 215.109ppb

response 696413

(9) Nitrobenzene #2

7.58min 192.323ppb m

response 638901

(+) = Expected Retention Time
PP389748.D GPP2401_020521PRI.M Fri Feb 05 07:56:17 2021

9.5.17.5

9

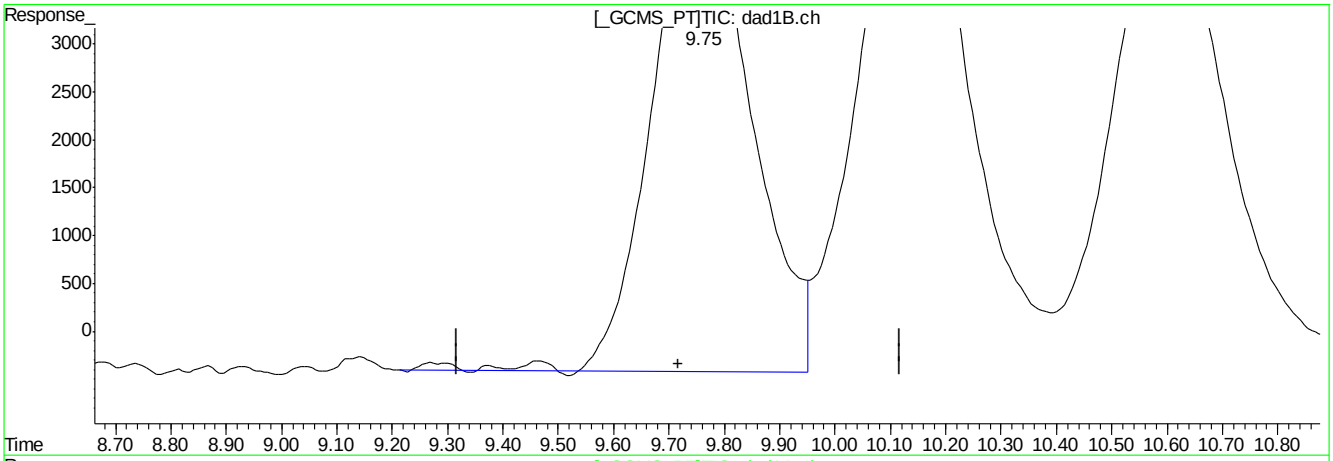
PP389748.D edits: Nitrobenzene

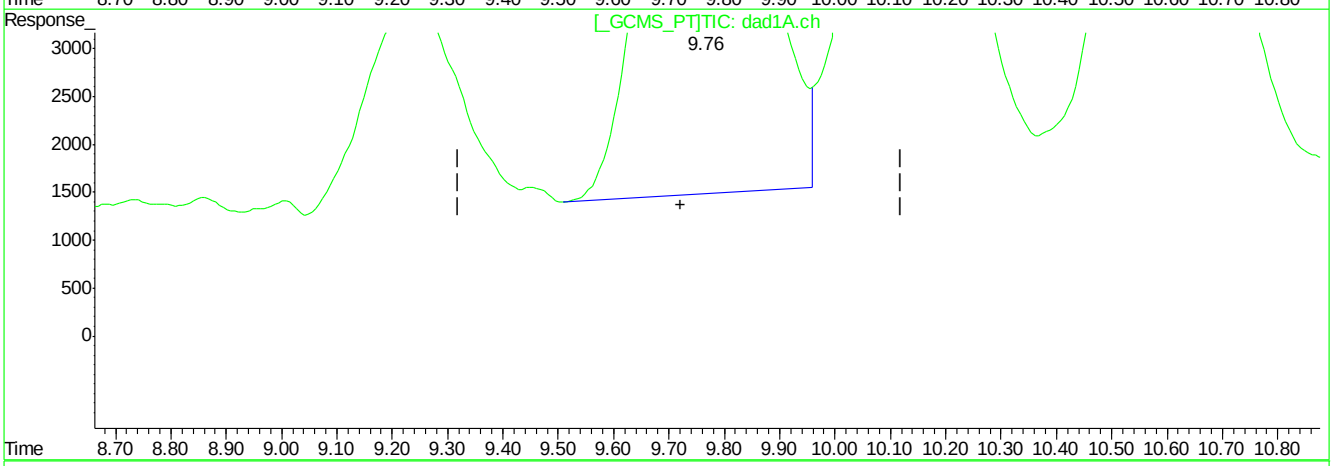
FA82653

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1B.ch Vial: 54
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1A.ch
Acq On : 04-Feb-2021, 15:38:26 Operator: jamesb
Sample : ic2401-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.76min 200.461ppb

response 635506

(11) Tetryl #2

9.76min 198.864ppb

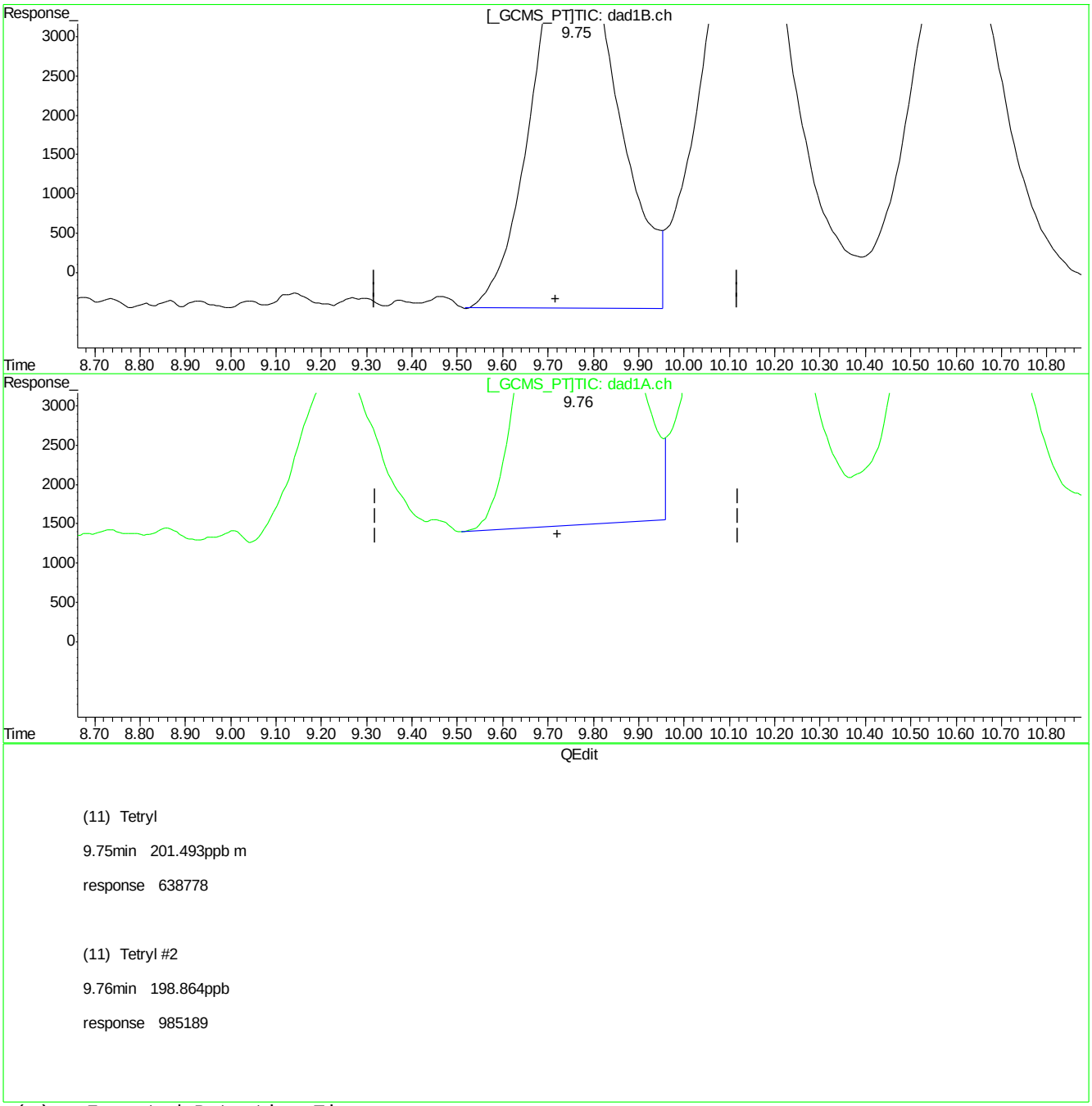
response 985189

(+) = Expected Retention Time
PP389748.D GPP2401_020521PRI.M Fri Feb 05 07:56:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1B.ch Vial: 54
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1A.ch
Acq On : 04-Feb-2021, 15:38:26 Operator: jamesb
Sample : ic2401-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(11) Tetryl

9.75min 201.493ppb m

response 638778

(11) Tetryl #2

9.76min 198.864ppb

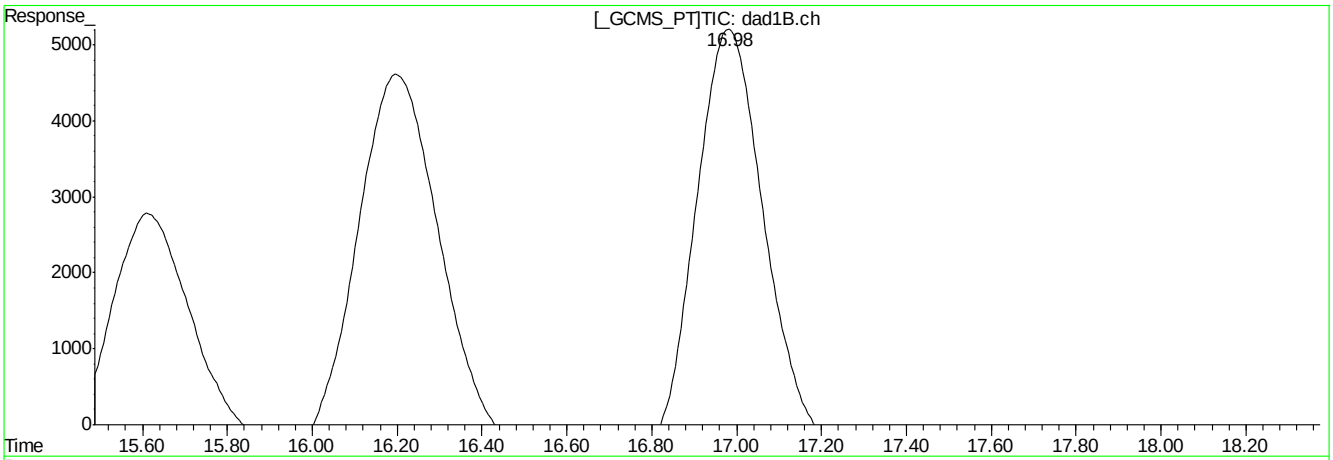
response 985189

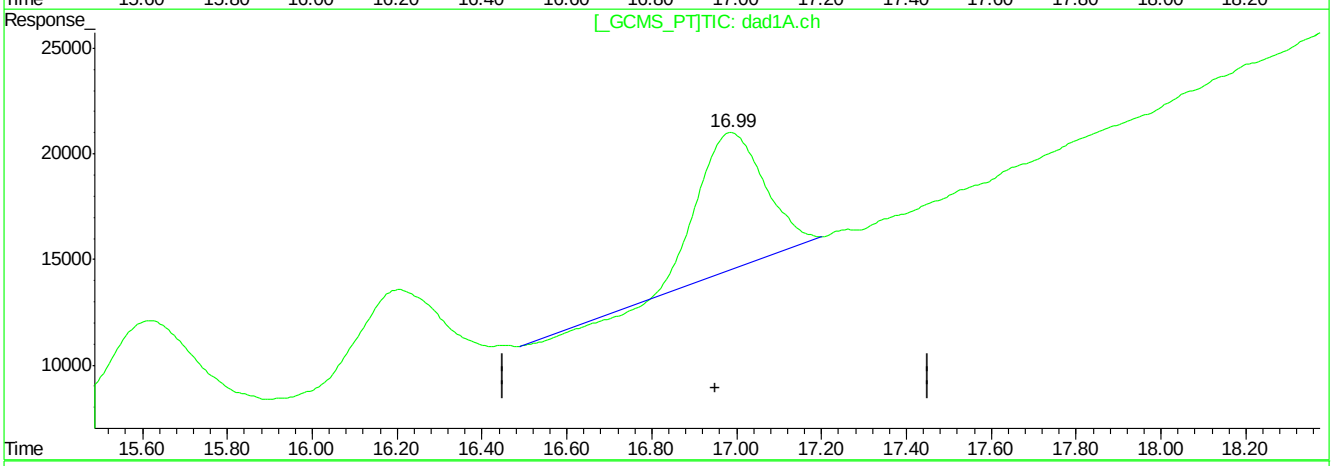
(+) = Expected Retention Time
PP389748.D GPP2401_020521PRI.M Fri Feb 05 07:56:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1B.ch Vial: 54
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1A.ch
Acq On : 04-Feb-2021, 15:38:26 Operator: jamesb
Sample : ic2401-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.98min 199.068ppb

response 674902

(20) m-Nitrotoluene #2

16.99min 166.137ppb

response 677793

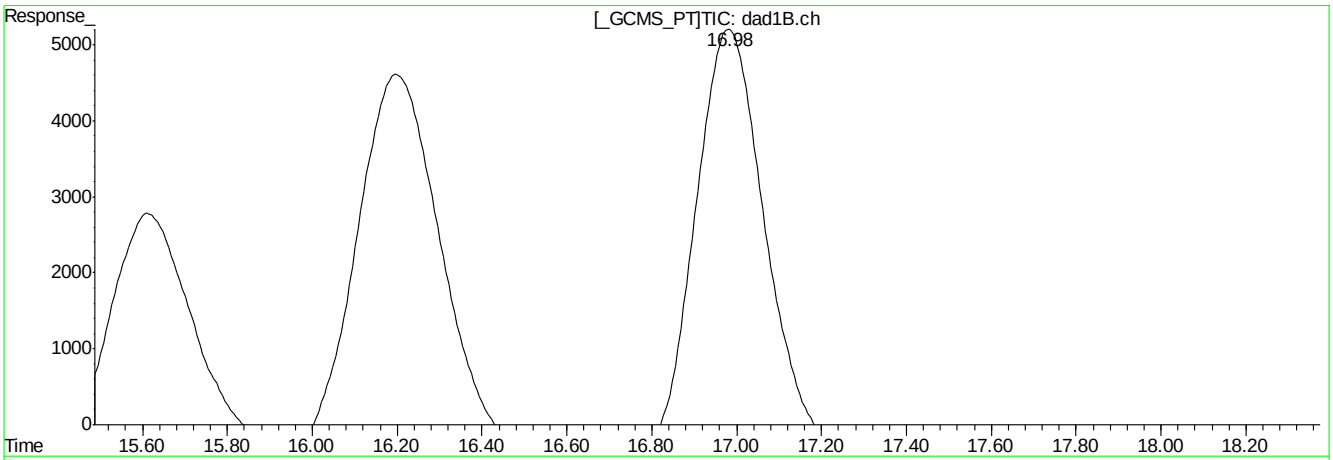
(+) = Expected Retention Time
PP389748.D GPP2401_020521PRI.M Fri Feb 05 07:56:38 2021

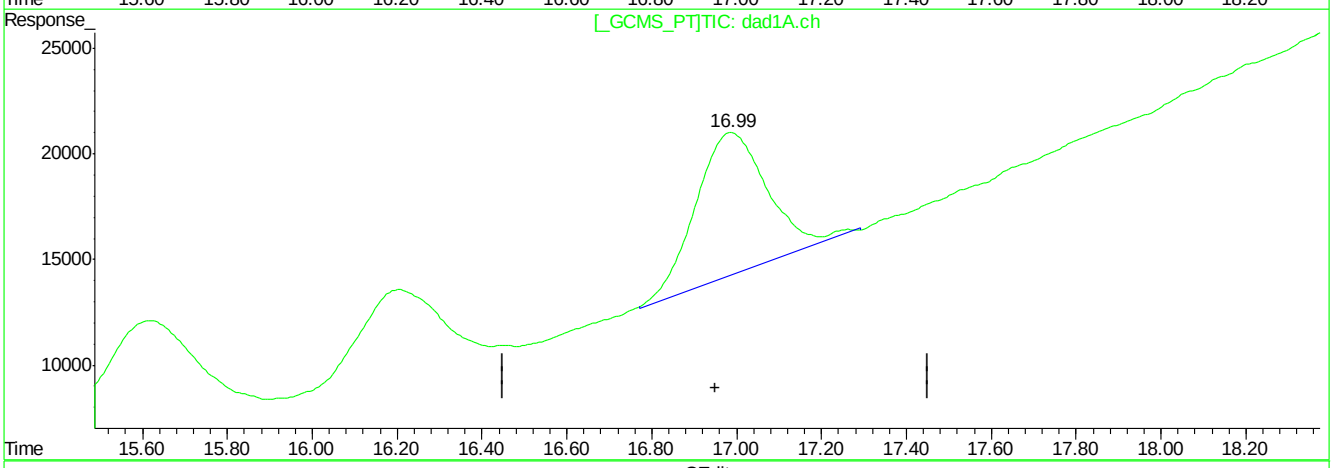
PP389748.D edits: m-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1B.ch Vial: 54
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1A.ch
Acq On : 04-Feb-2021, 15:38:26 Operator: jamesb
Sample : ic2401-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.98min 199.068ppb

response 674902

(20) m-Nitrotoluene #2

16.99min 194.604ppb m

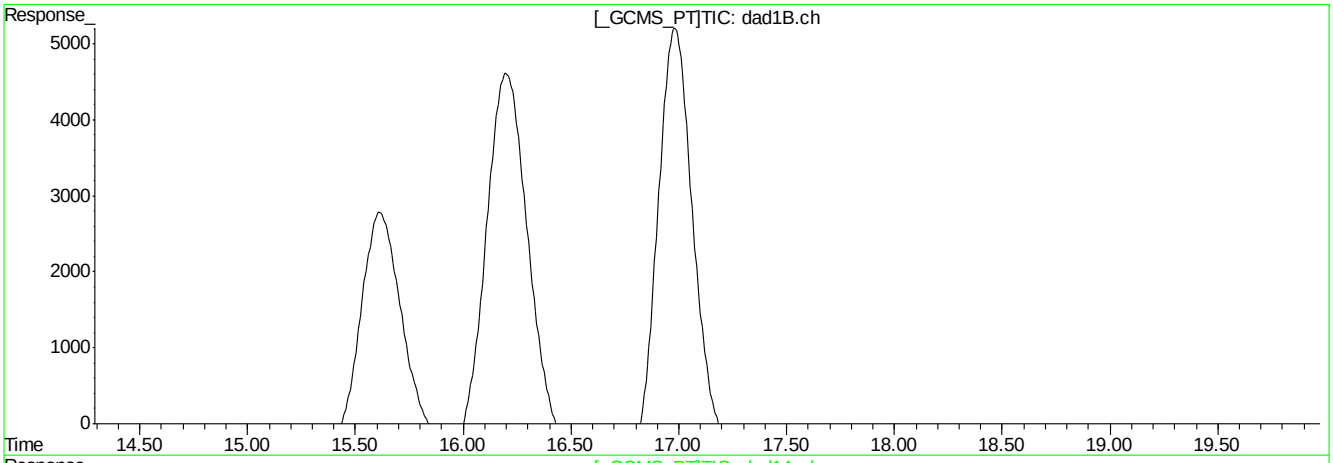
response 793933

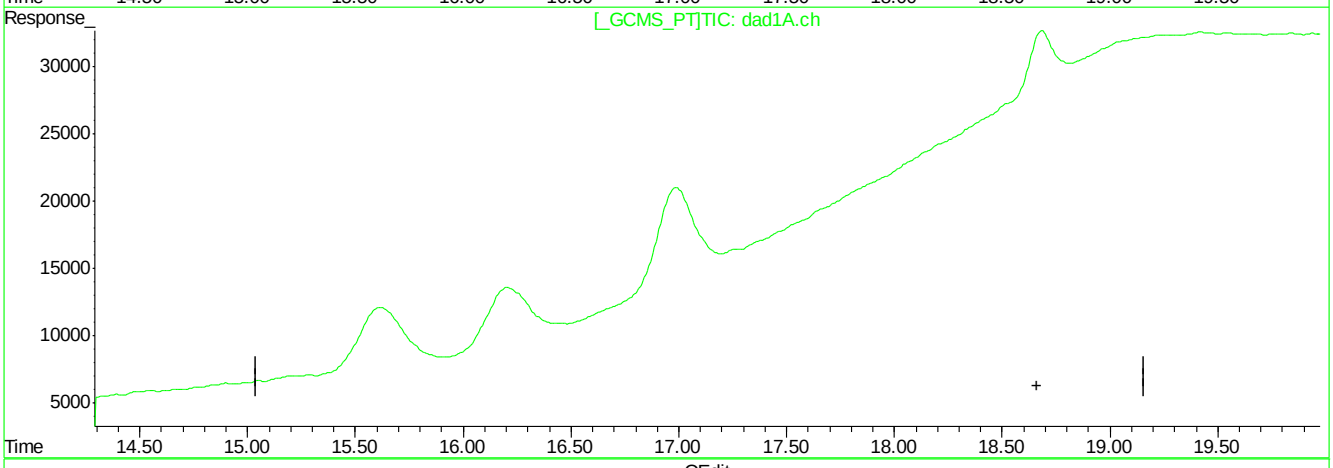
(+) = Expected Retention Time
PP389748.D GPP2401_020521PRI.M Fri Feb 05 07:56:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1B.ch Vial: 54
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1A.ch
Acq On : 04-Feb-2021, 15:38:26 Operator: jamesb
Sample : ic2401-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

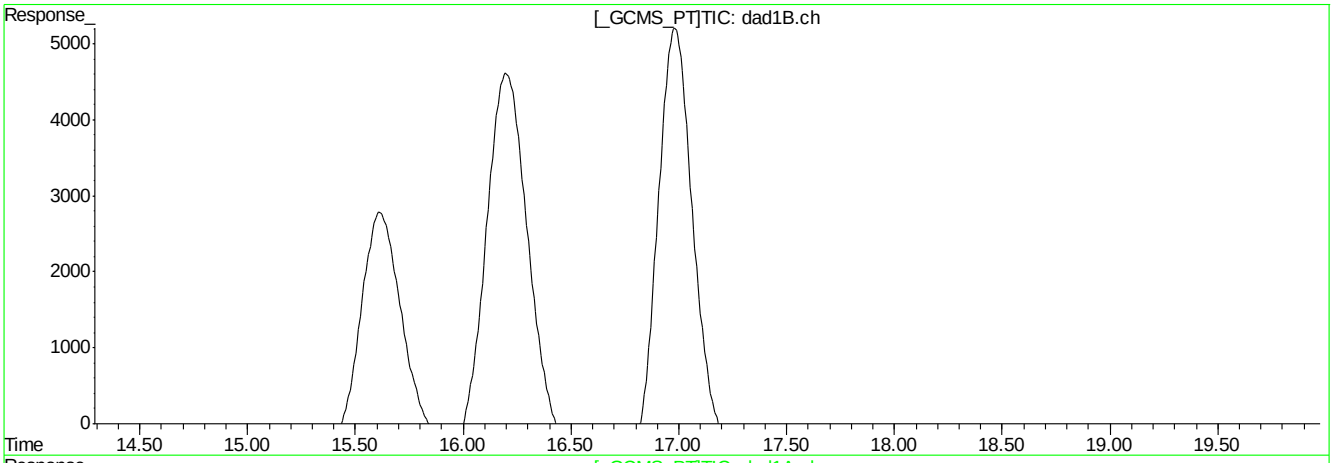
response 0

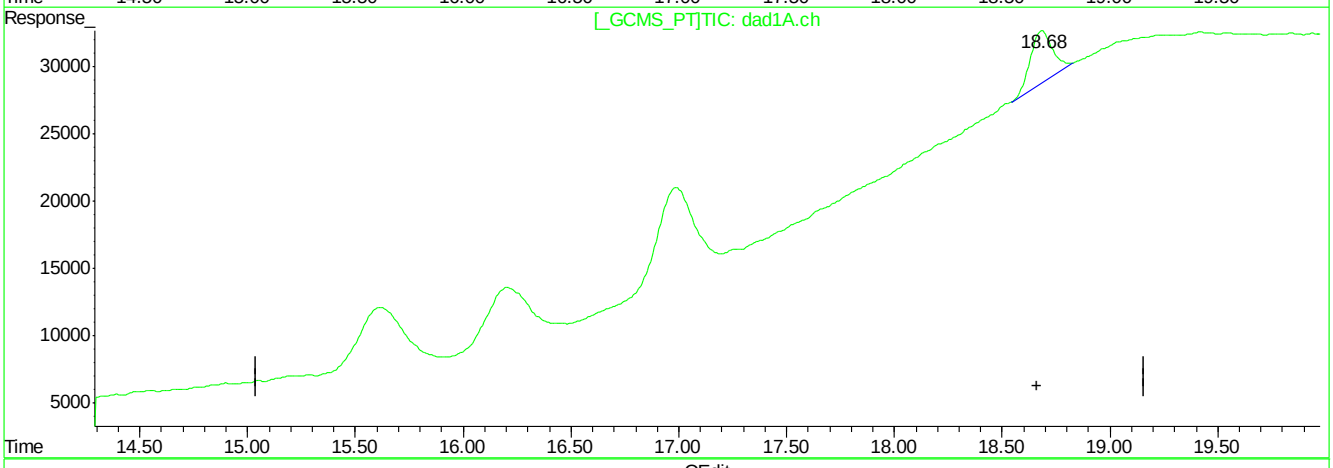
(+) = Expected Retention Time
PP389748.D GPP2401_020521PRI.M Fri Feb 05 07:56:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1B.ch Vial: 54
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389748.D\dad1A.ch
Acq On : 04-Feb-2021, 15:38:26 Operator: jamesb
Sample : ic2401-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.68min 204.130ppb m

response 272557

(+) = Expected Retention Time
PP389748.D GPP2401_020521PRI.M Fri Feb 05 07:57:03 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 02/08/21 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1B.ch Vial: 55
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1A.ch
Acq On : 04-Feb-2021, 16:09:25 Operator: jamesb
Sample : ic2401-500 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 05 07:48:33 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.48	11.48	1178419	2080936	533.421	527.430
Spiked Amount	500.000	Range	70 - 136	Recovery	=	106.68%	105.49%
	Target Compounds						
1)	TNX	1.35	1.35	1659739	2571898	530.331	544.949
2)	HMX	1.49	1.50	792674	2313799	493.864	507.755
3)	DNX	1.75	1.75	1463581	2363340	526.388	541.745
4)	MNX	2.36	2.36	1599079	2504948	544.790	550.363
5)	RDX	3.00	3.00	1007495	1618664	521.771	533.361
6)	1,3,5-Trinitrobe	4.80	4.80	2153069	4210349	512.409	526.114
7)	1,3-Dinitrobenze	6.00	6.00	2831614	2125598	525.782	546.494
8)	3,5-Dinitroanili	6.42	6.42	2136836	3869217	518.713	543.738
9)	Nitrobenzene	7.58	7.58	1707989	1661552	527.565	500.162
10)	Nitroglycerin	0.00	9.24	0	675755	N.D.	552.654 #
11)	Tetryl	9.76	9.76	1553240	2555128	489.946	515.762
12)	2,4,6-Trinitroto	10.14	10.14	2004711	2398054	520.702	511.855
13)	2-Amino-4,6-Dini	10.60	10.60	1785316	2627984	510.625	501.919
14)	4-Amino-2,6-Dini	11.12	11.12	1276401	2493328	511.118	495.346
16)	2,4-Dinitrotolue	12.14	12.14	2509836	1640180	512.219	496.110
17)	2,6-Dinitrotolue	12.60	12.61	1423877	1945501	496.701	540.726
18)	o-Nitrotoluene	15.62	15.61	1216349	1558877	523.814	486.920m
19)	p-Nitrotoluene	16.20	16.20	1895895	1434564	521.429	471.059
20)	m-Nitrotoluene	16.98	16.98	1750736	2074839	516.395	508.572m
21)	PETN	0.00	18.68	0	735854	N.D.	551.112m#

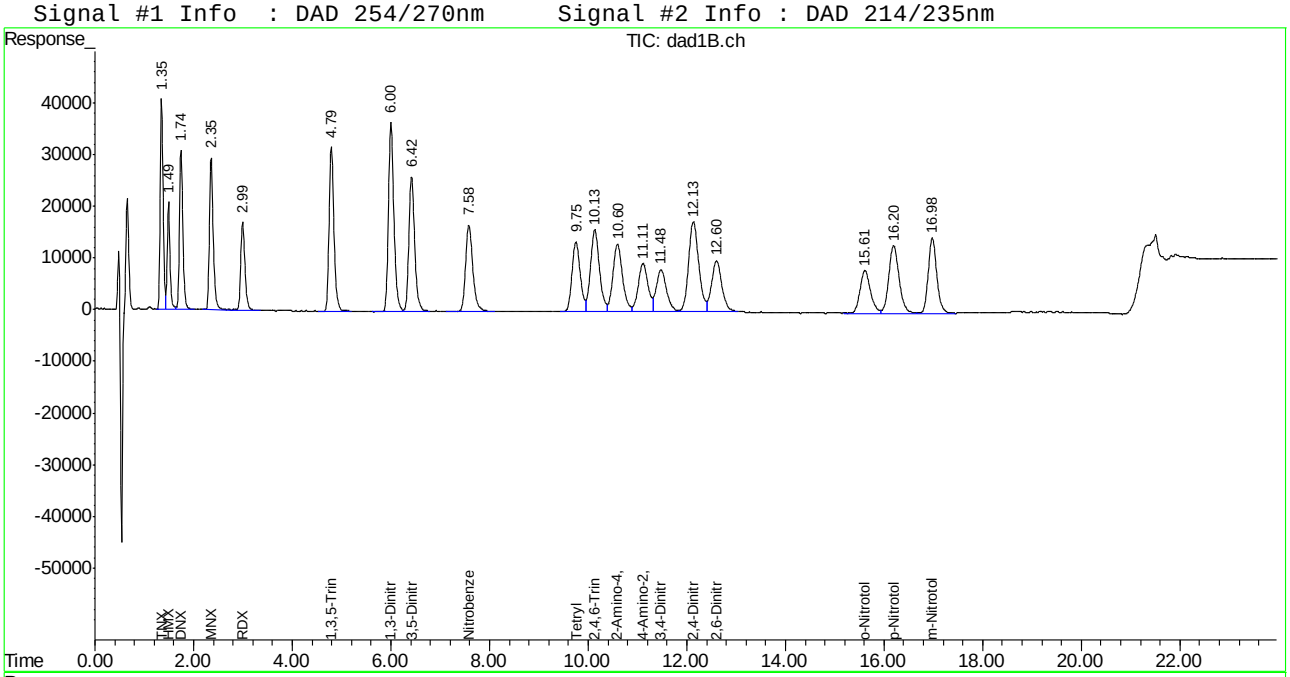
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389749.D GPP2401_020521PRI.M Fri Feb 05 08:39:48 2021 Page 1

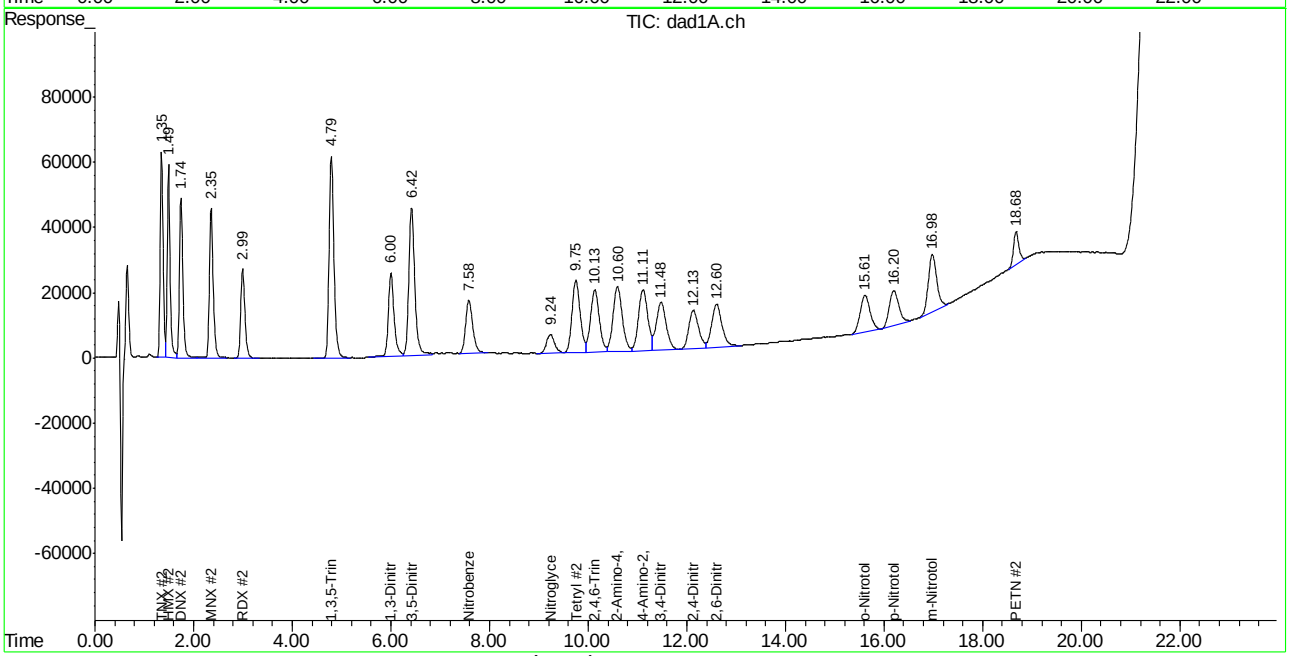
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1B.ch Vial: 55
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1A.ch
Acq On : 04-Feb-2021, 16:09:25 Operator: jamesb
Sample : ic2401-500 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:55 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

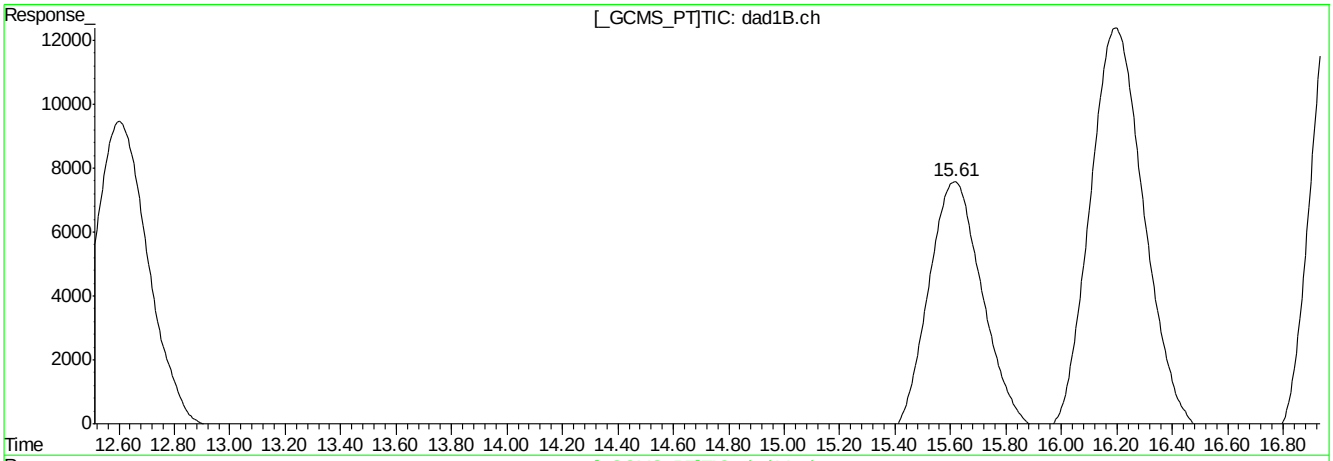
Sample Number: GPP2401-IC2401
Lab FileID: PP389749.D
Injection Time: 02/04/21 16:09
Method: SW846 8330B
Analyst approved: 02/05/21 09:14 James Boone
Supervisor approved: 02/08/21 13:01 Naresh Jiawan

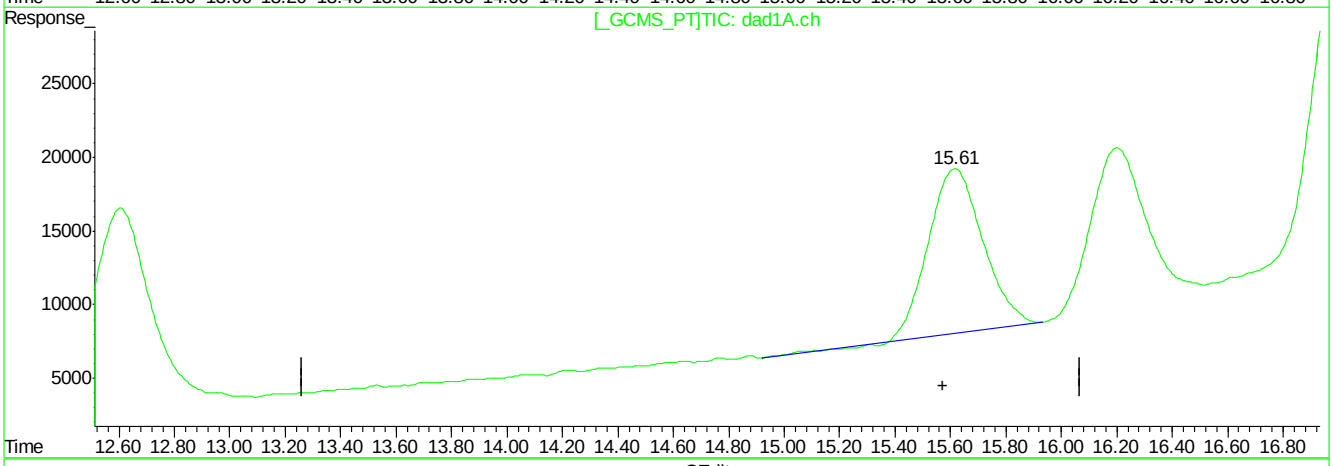
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.61	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.98	Poor instrument integration
PETN	78-11-5	2	18.68	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1B.ch Vial: 55
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1A.ch
Acq On : 04-Feb-2021, 16:09:25 Operator: jamesb
Sample : ic2401-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.62min 523.814ppb

response 1216349

(18) o-Nitrotoluene #2

15.62min 482.378ppb

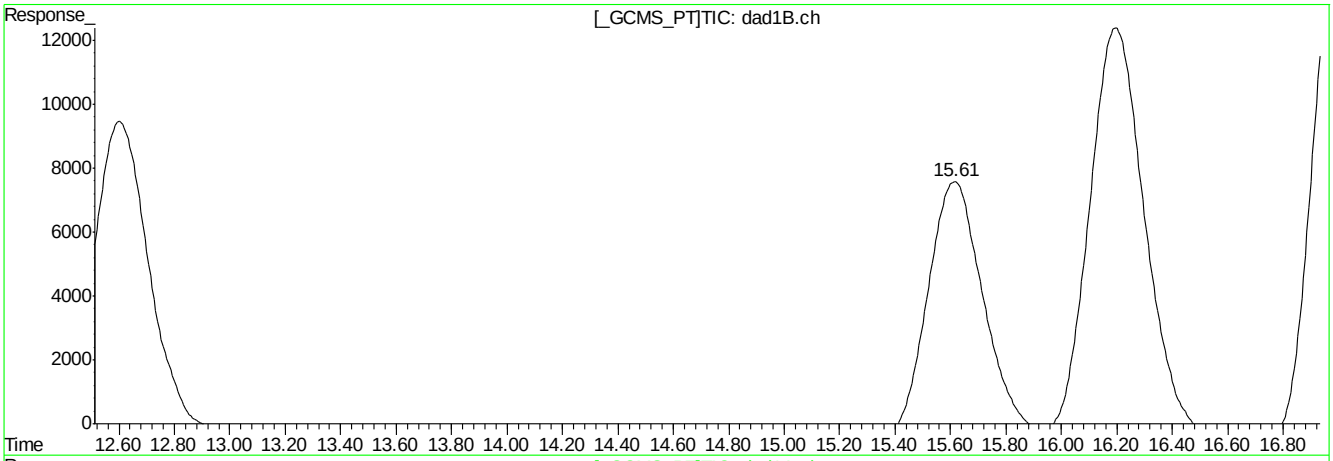
response 1544337

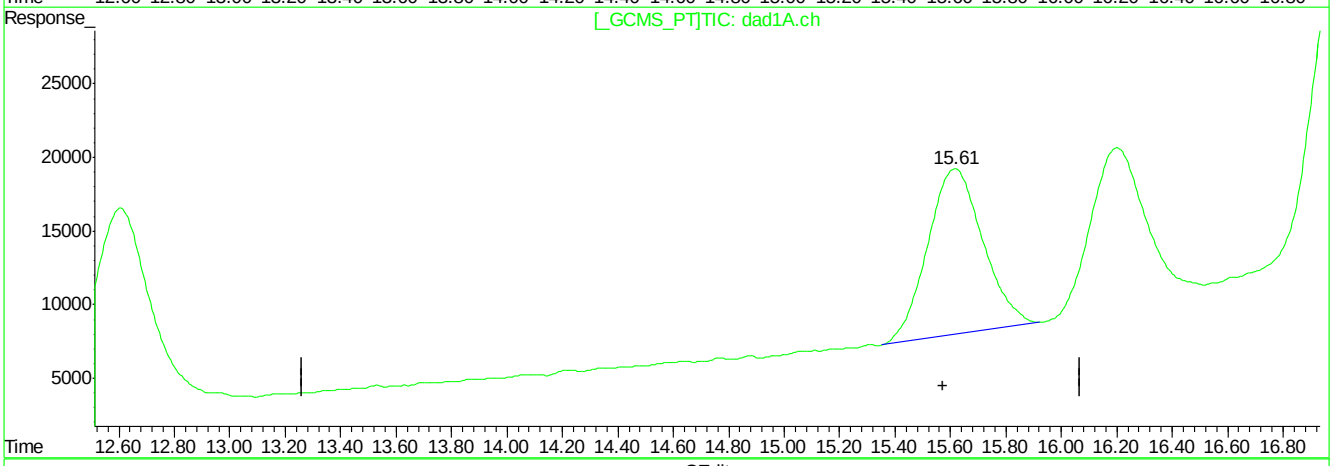
(+) = Expected Retention Time
PP389749.D GPP2401_020521PRI.M Fri Feb 05 07:54:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1B.ch Vial: 55
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1A.ch
Acq On : 04-Feb-2021, 16:09:25 Operator: jamesb
Sample : ic2401-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.62min 523.814ppb

response 1216349

(18) o-Nitrotoluene #2

15.61min 486.920ppb m

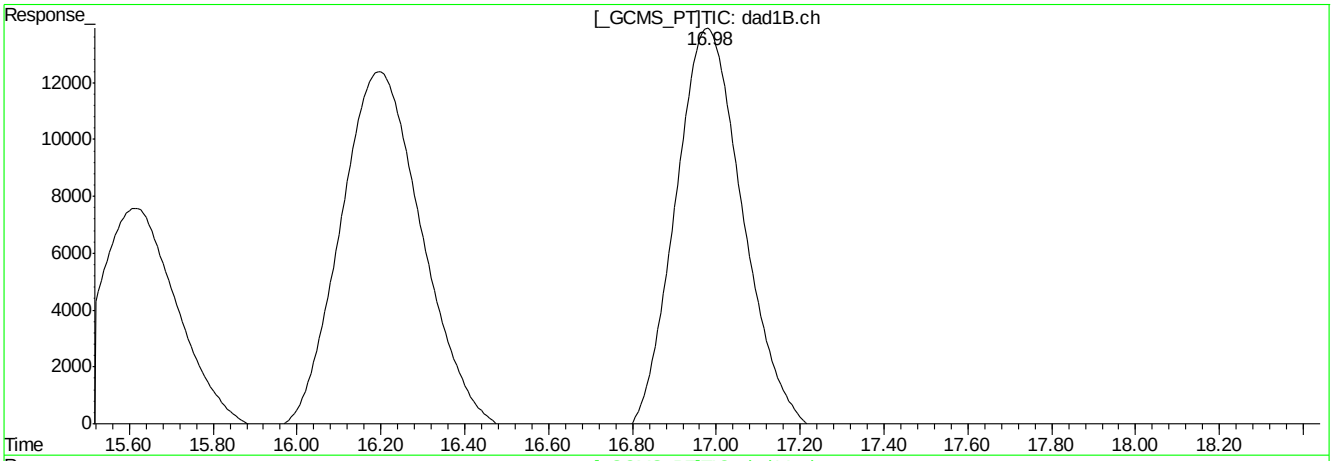
response 1558877

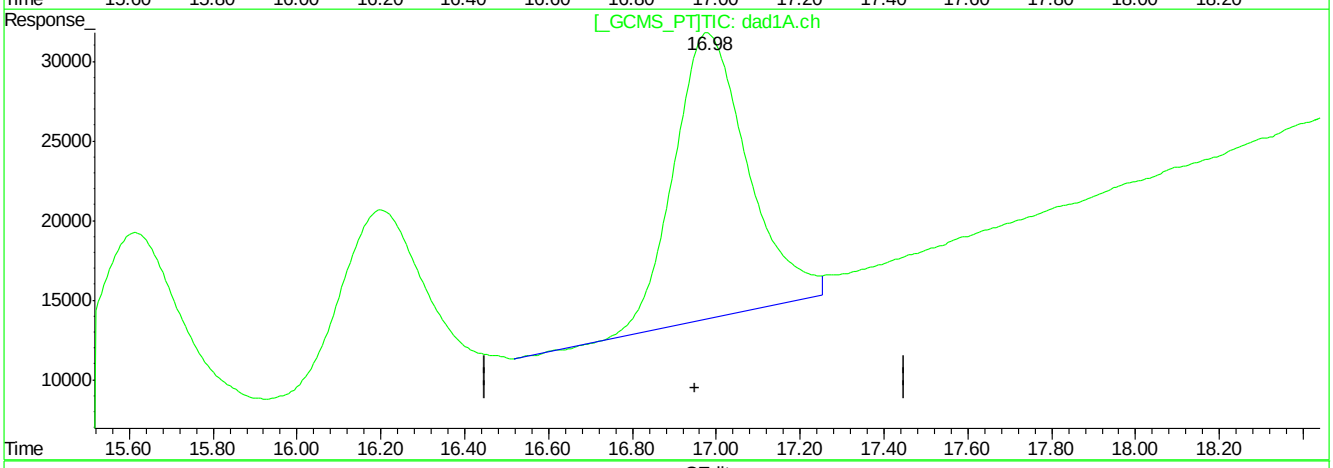
(+) = Expected Retention Time
PP389749.D GPP2401_020521PRI.M Fri Feb 05 07:54:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1B.ch Vial: 55
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1A.ch
Acq On : 04-Feb-2021, 16:09:25 Operator: jamesb
Sample : ic2401-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.98min 516.395ppb

response 1750736

(20) m-Nitrotoluene #2

16.98min 538.963ppb

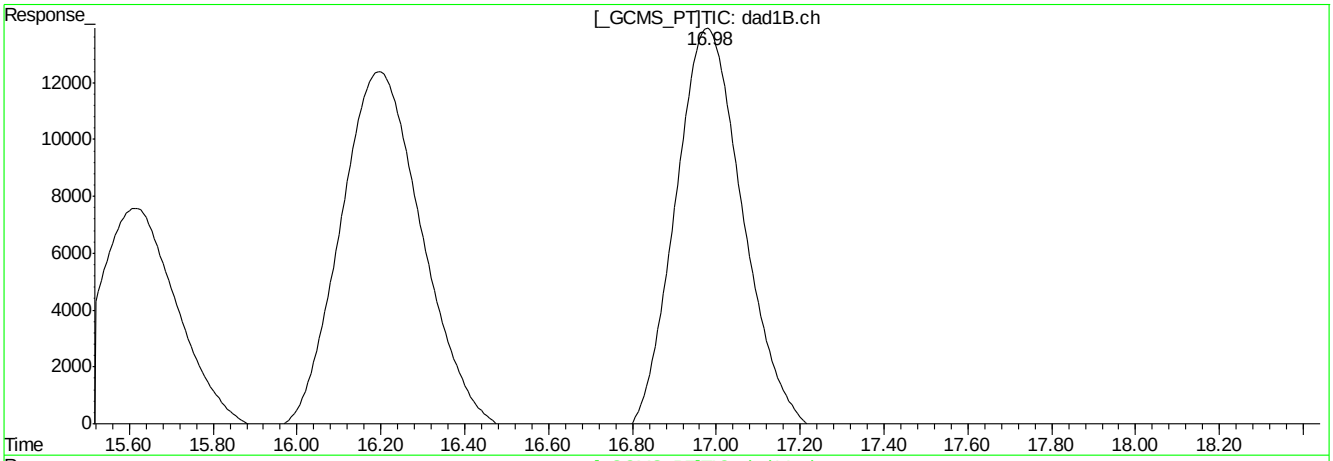
response 2198823

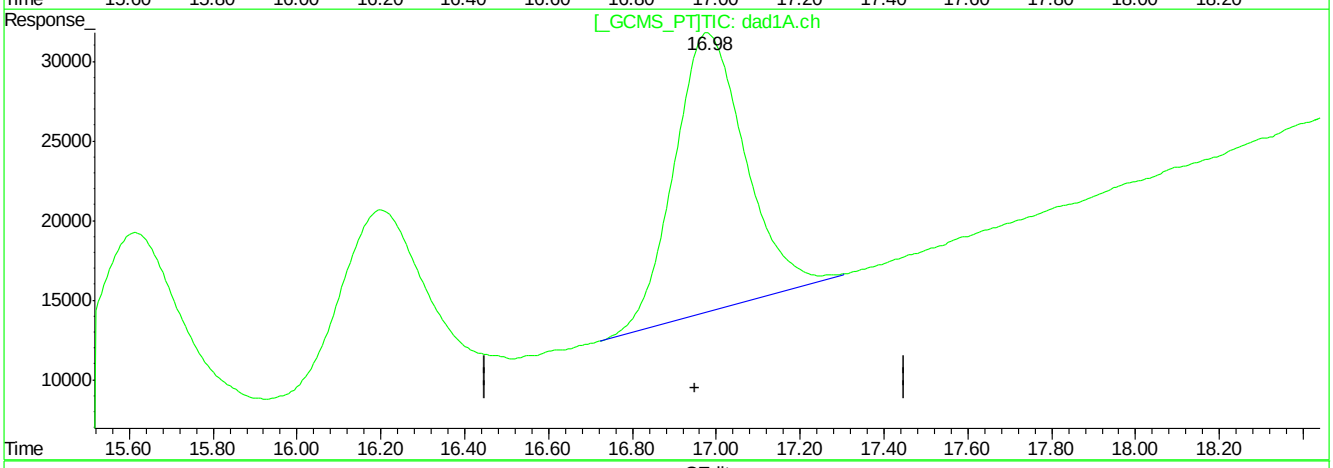
(+) = Expected Retention Time
PP389749.D GPP2401_020521PRI.M Fri Feb 05 07:55:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1B.ch Vial: 55
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1A.ch
Acq On : 04-Feb-2021, 16:09:25 Operator: jamesb
Sample : ic2401-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.98min 516.395ppb

response 1750736

(20) m-Nitrotoluene #2

16.98min 508.572ppb m

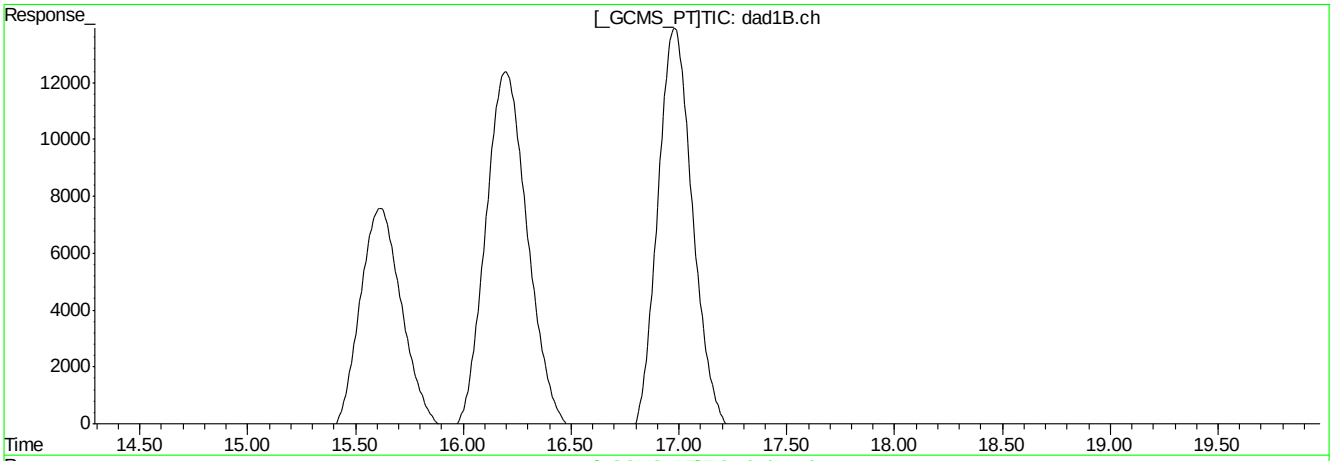
response 2074839

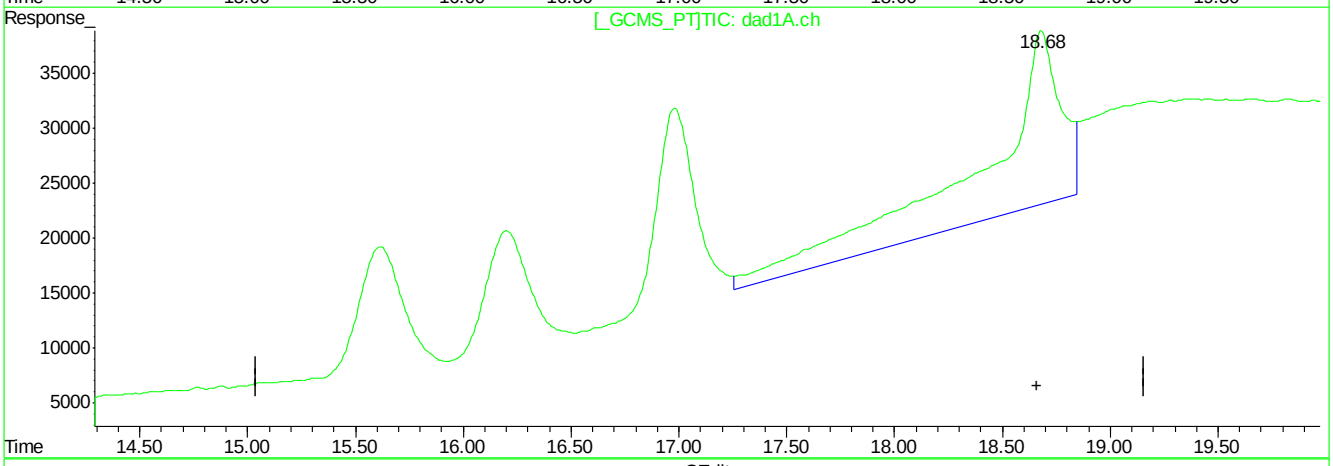
(+) = Expected Retention Time
PP389749.D GPP2401_020521PRI.M Fri Feb 05 07:55:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1B.ch Vial: 55
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1A.ch
Acq On : 04-Feb-2021, 16:09:25 Operator: jamesb
Sample : ic2401-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.68min 2949.799ppb

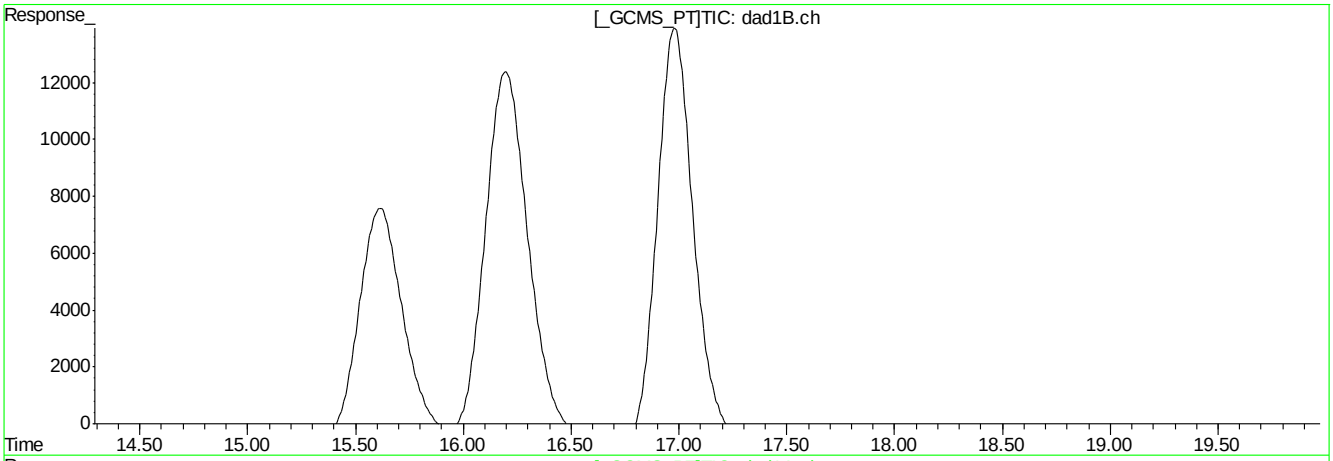
response 3938624

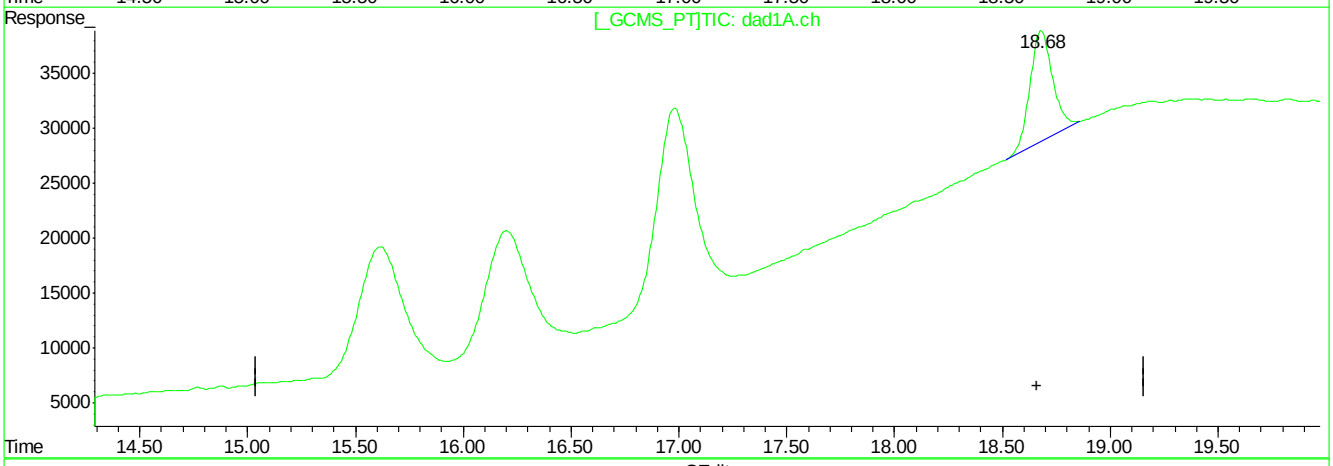
(+) = Expected Retention Time
PP389749.D GPP2401_020521PRI.M Fri Feb 05 07:55:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1B.ch Vial: 55
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389749.D\dad1A.ch
Acq On : 04-Feb-2021, 16:09:25 Operator: jamesb
Sample : ic2401-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.68min 551.112ppb m

response 735854

(+) = Expected Retention Time
PP389749.D GPP2401_020521PRI.M Fri Feb 05 07:55:20 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 02/08/21 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1B.ch Vial: 56
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1A.ch
Acq On : 04-Feb-2021, 16:40:25 Operator: jamesb
Sample : icc2401-1000 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 05 07:48:34 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.48	11.48	2423138	4198110	1096.854	1062.333
	Spiked Amount 500.000	Range 70 - 136		Recovery =		219.37%#	212.47%#
	Target Compounds						
1)	TNX	1.35	1.35	3306053	5124685	1060.317	1085.849
2)	HMX	1.49	1.49	1553623	4435259	972.516	978.903
3)	DNX	1.75	1.75	2908970	4657707	1046.233	1072.671
4)	MNX	2.36	2.36	3165005	4928919	1078.285	1082.934
5)	RDX	3.00	3.00	2025506	3225332	1048.988	1062.770
6)	1,3,5-Trinitrobe	4.79	4.79	4341625	8393197	1033.263	1048.791
7)	1,3-Dinitrobenze	6.00	6.00	5667246	4097302	1052.310	1053.422
8)	3,5-Dinitroanili	6.42	6.42	4280789	7539959	1039.153	1059.585
9)	Nitrobenzene	7.58	7.58	3352641	3409973	1035.566	1026.474
10)	Nitroglycerin	0.00	9.23	0	1322292	N.D.	1081.412 #
11)	Tetryl	9.75	9.75	3146803	5086494	992.611	1026.728
12)	2,4,6-Trinitroto	10.14	10.13	4027446	4830376	1046.085	1031.024
13)	2-Amino-4,6-Dini	10.59	10.59	3646089	5345760	1042.832	1018.511
14)	4-Amino-2,6-Dini	11.11	11.11	2567273	5081812	1031.796	1009.621
16)	2,4-Dinitrotolue	12.13	12.13	5086442	3247282	1038.064	982.215
17)	2,6-Dinitrotolue	12.60	12.60	2994923	3802213	1044.739	1056.775
18)	o-Nitrotoluene	15.61	15.61	2412302	3174087	1038.845	991.436m
19)	p-Nitrotoluene	16.19	16.19	3769088	2916195	1036.615	957.572
20)	m-Nitrotoluene	16.98	16.98	3450727	4046644	1017.822	991.890m
21)	PETN	0.00	18.68	0	1490209	N.D.	1116.080m#

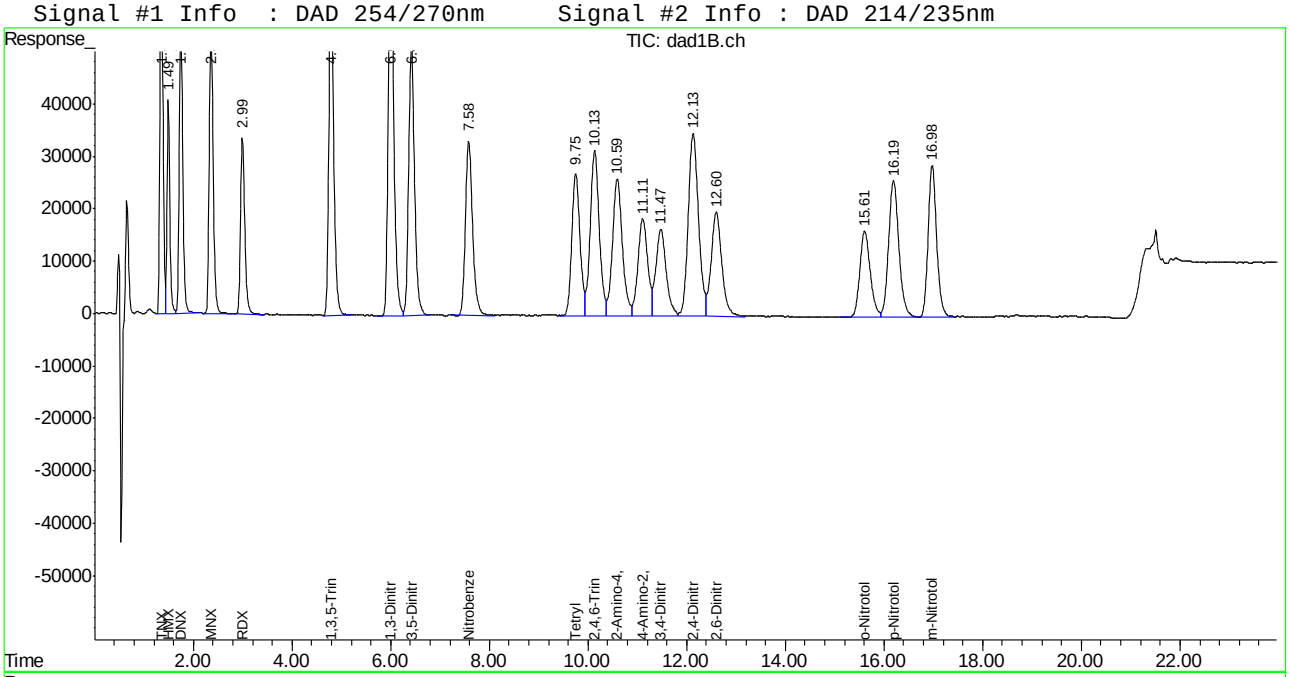
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389750.D GPP2401_020521PRI.M Fri Feb 05 08:39:49 2021 Page 1

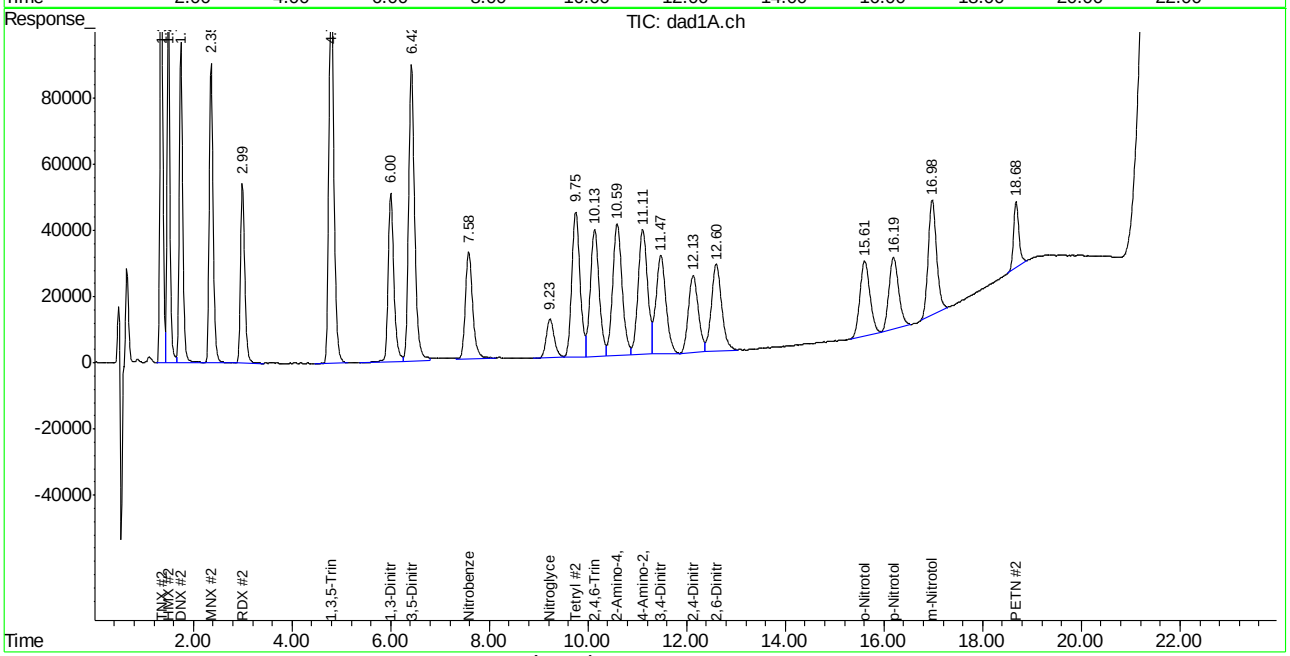
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1B.ch Vial: 56
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1A.ch
Acq On : 04-Feb-2021, 16:40:25 Operator: jamesb
Sample : icc2401-1000 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:53 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

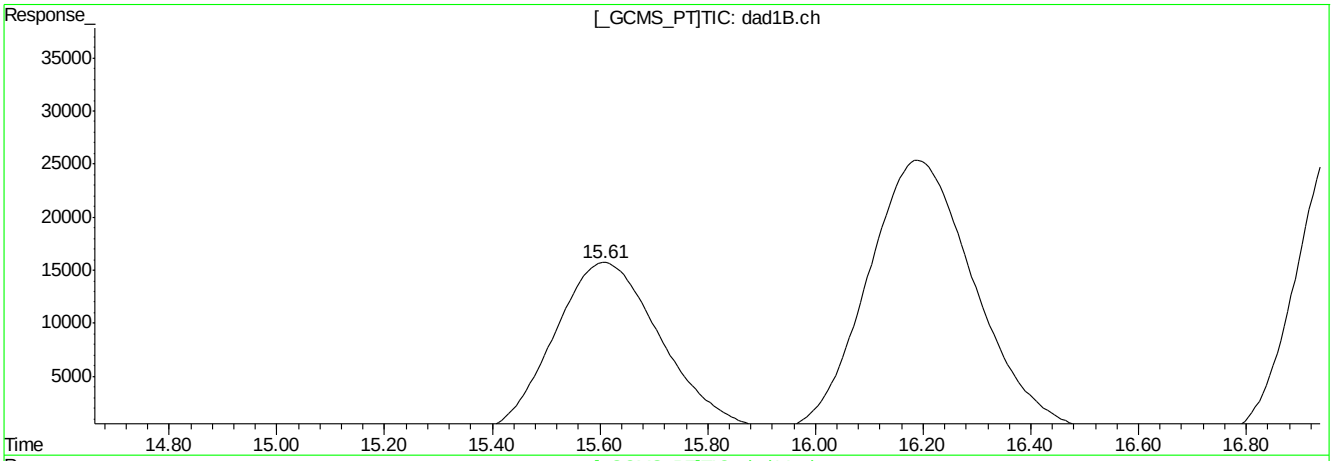
Sample Number: GPP2401-ICC2401
Lab FileID: PP389750.D
Injection Time: 02/04/21 16:40
Method: SW846 8330B
Analyst approved: 02/05/21 09:14 James Boone
Supervisor approved: 02/08/21 13:01 Naresh Jiawan

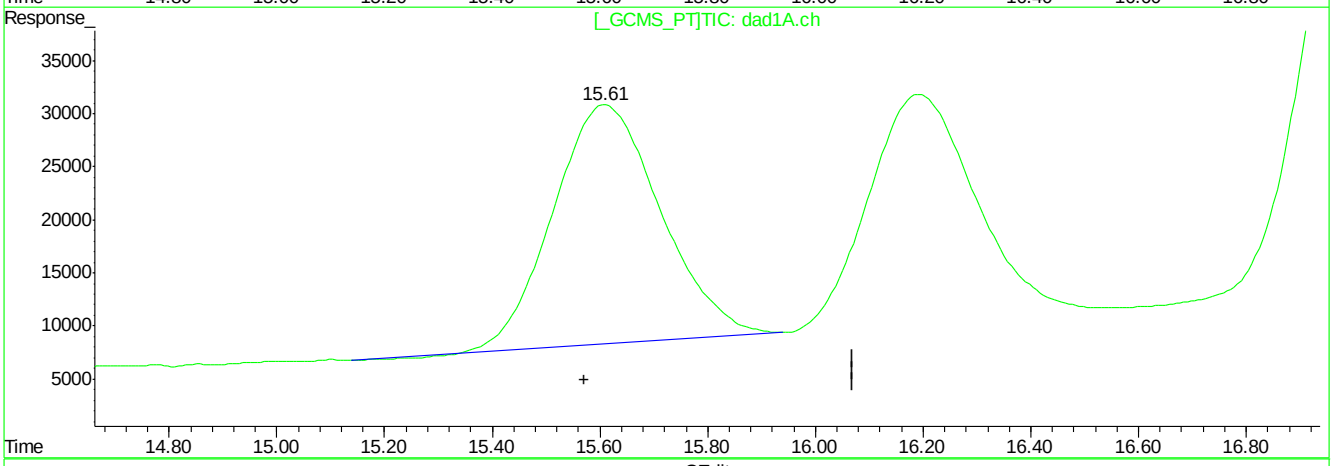
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.61	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.98	Poor instrument integration
PETN	78-11-5	2	18.68	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1B.ch Vial: 56
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1A.ch
Acq On : 04-Feb-2021, 16:40:25 Operator: jamesb
Sample : icc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.61min 1038.845ppb

response 2412302

(18) o-Nitrotoluene #2

15.61min 980.832ppb

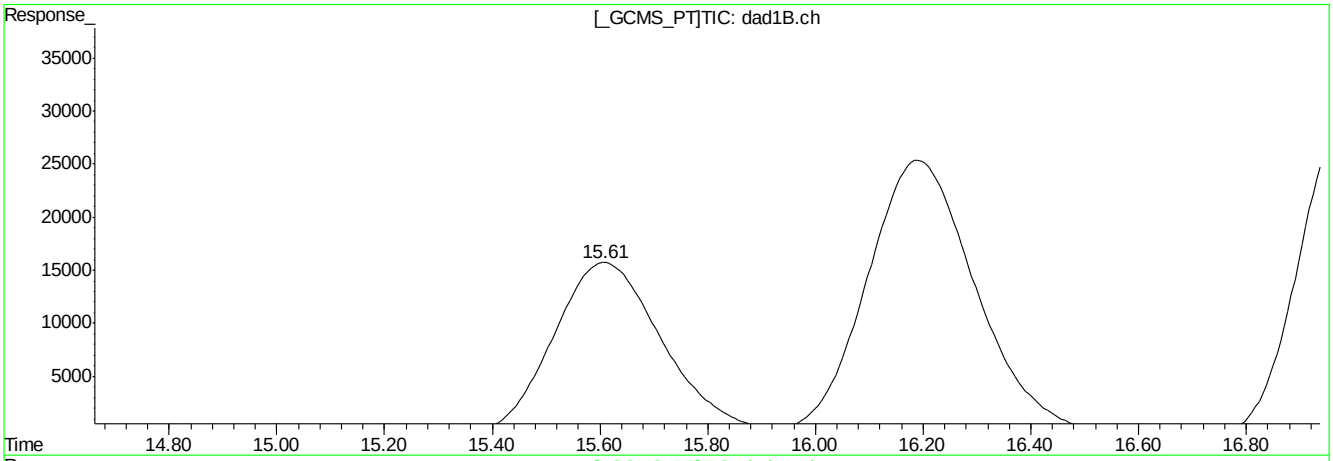
response 3140139

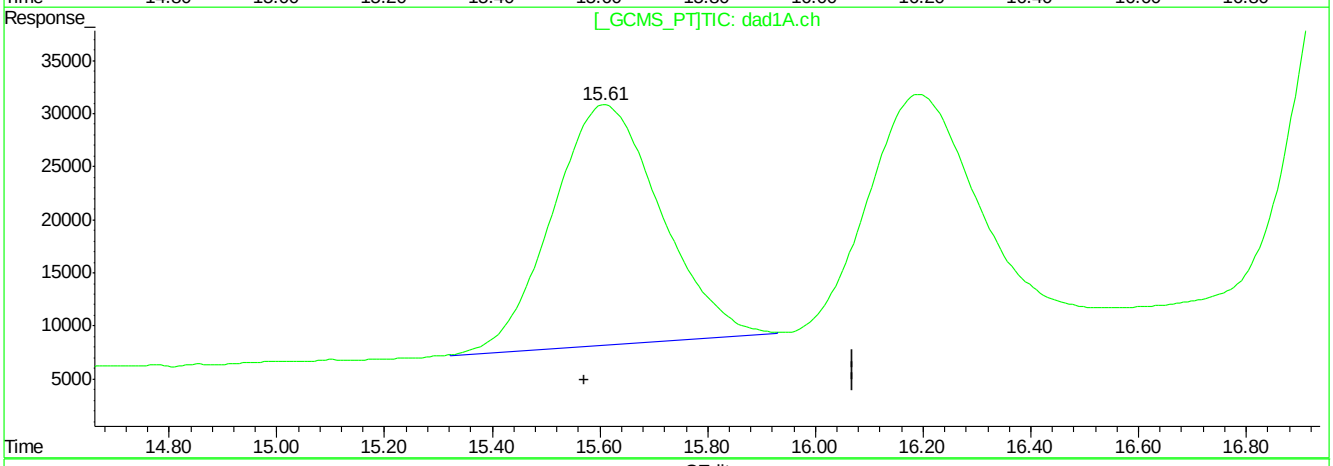
(+) = Expected Retention Time
PP389750.D GPP2401_020521PRI.M Fri Feb 05 07:53:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1B.ch Vial: 56
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1A.ch
Acq On : 04-Feb-2021, 16:40:25 Operator: jamesb
Sample : icc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.61min 1038.845ppb

response 2412302

(18) o-Nitrotoluene #2

15.61min 991.436ppb m

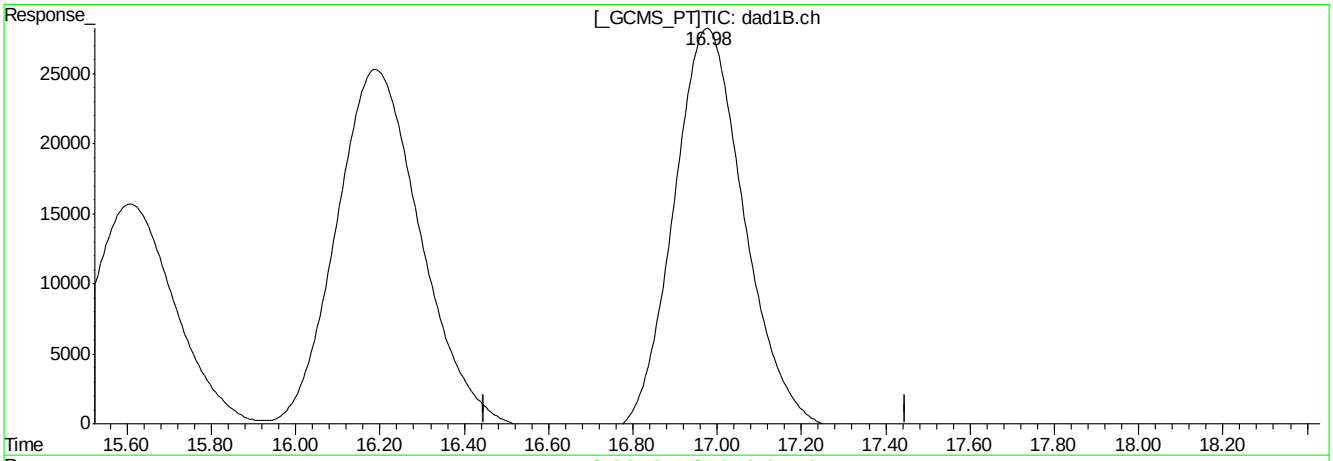
response 3174087

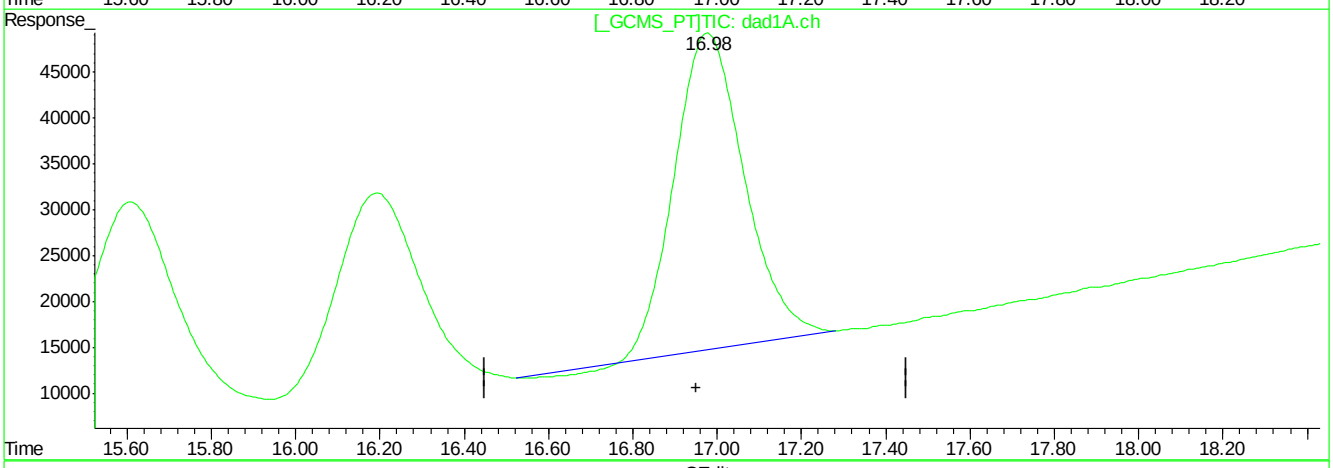
(+) = Expected Retention Time
PP389750.D GPP2401_020521PRI.M Fri Feb 05 07:53:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1B.ch Vial: 56
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1A.ch
Acq On : 04-Feb-2021, 16:40:25 Operator: jamesb
Sample : icc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.98min 1017.822ppb

response 3450727

(20) m-Nitrotoluene #2

16.98min 970.326ppb

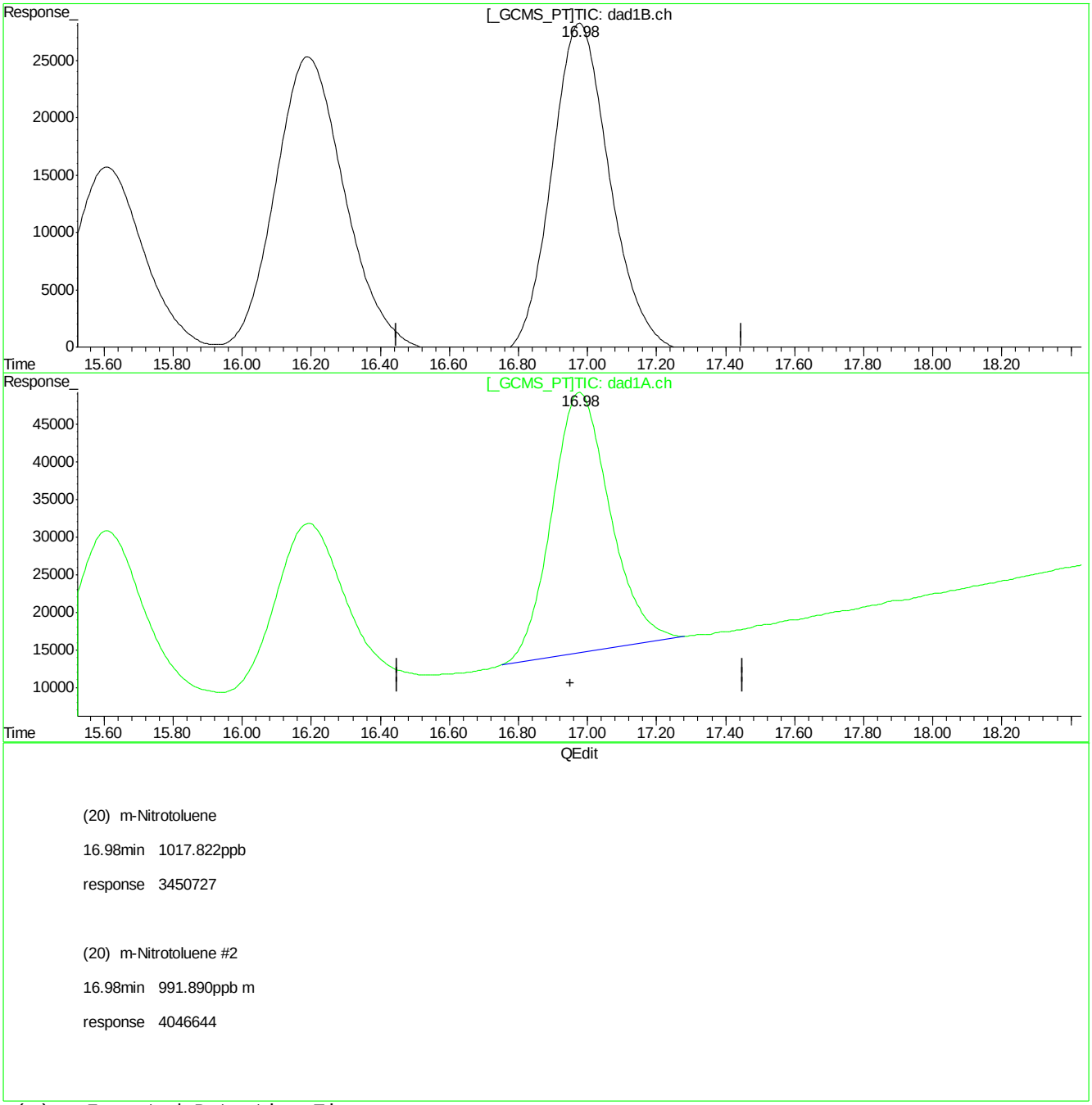
response 3958669

(+) = Expected Retention Time
PP389750.D GPP2401_020521PRI.M Fri Feb 05 07:53:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1B.ch Vial: 56
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1A.ch
Acq On : 04-Feb-2021, 16:40:25 Operator: jamesb
Sample : icc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.98min 1017.822ppb

response 3450727

(20) m-Nitrotoluene #2

16.98min 991.890ppb m

response 4046644

(+) = Expected Retention Time
PP389750.D GPP2401_020521PRI.M Fri Feb 05 07:53:51 2021

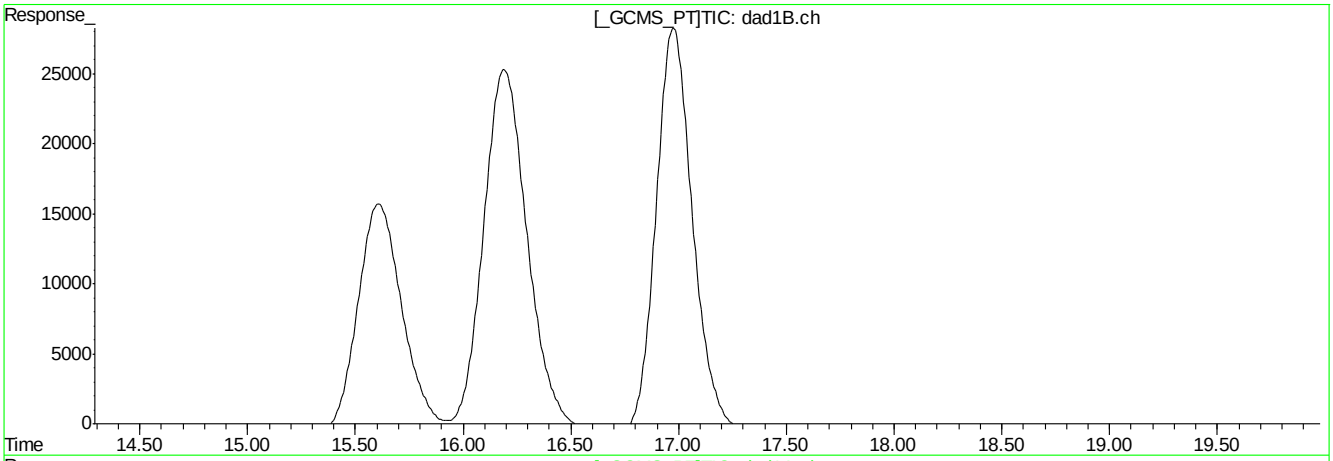
PP389750.D edits: m-Nitrotoluene

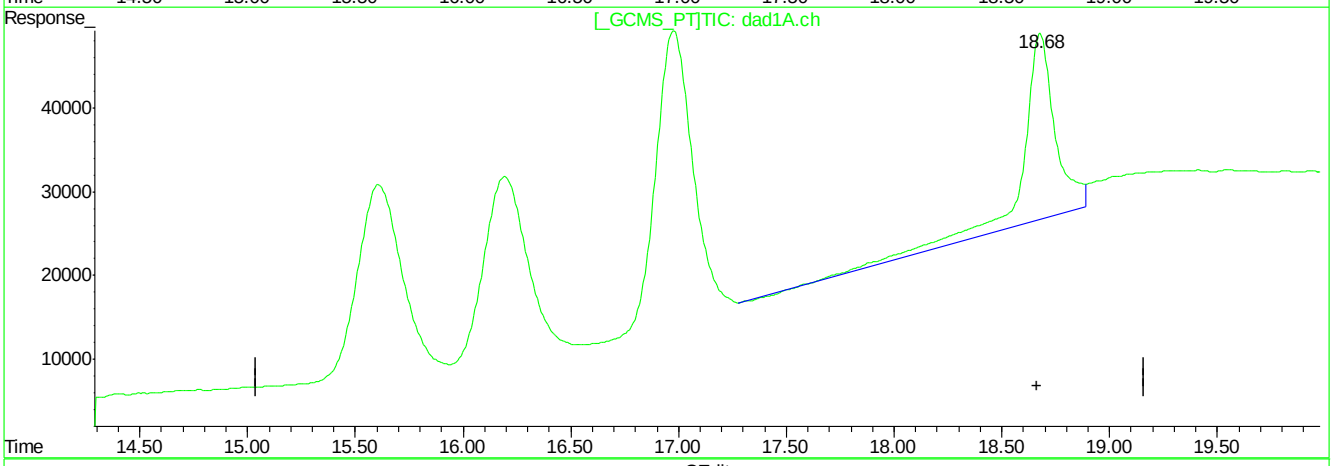
FA82653

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1B.ch Vial: 56
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1A.ch
Acq On : 04-Feb-2021, 16:40:25 Operator: jamesb
Sample : icc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.68min 1750.858ppb

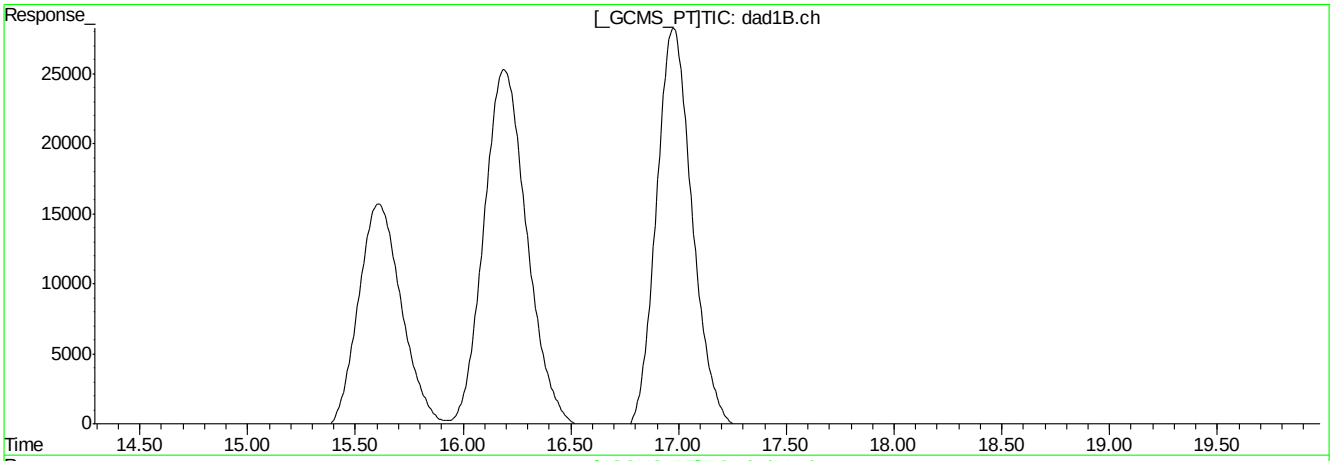
response 2337777

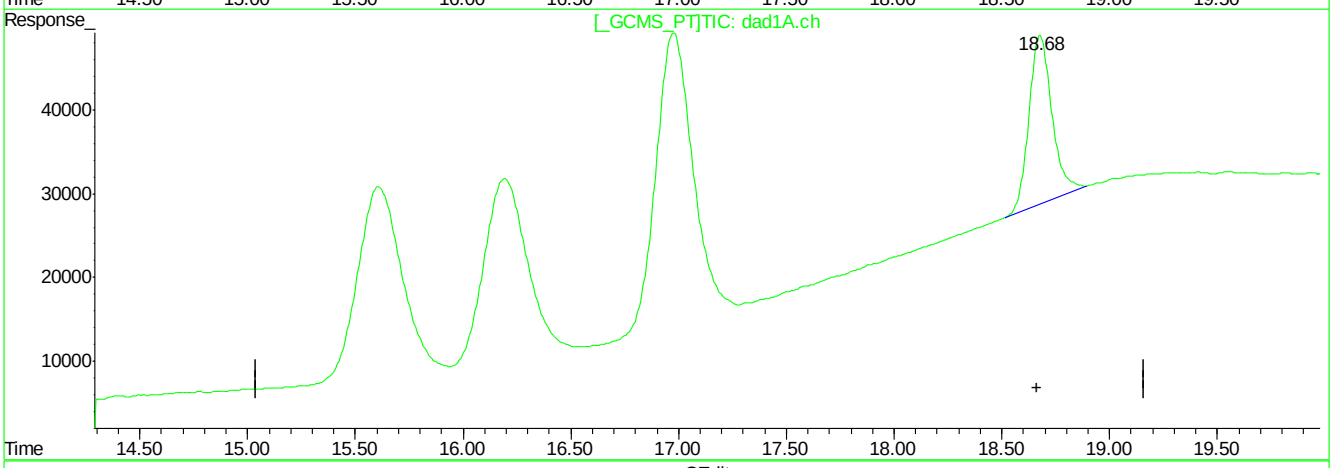
(+) = Expected Retention Time
PP389750.D GPP2401_020521PRI.M Fri Feb 05 07:53:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1B.ch Vial: 56
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389750.D\dad1A.ch
Acq On : 04-Feb-2021, 16:40:25 Operator: jamesb
Sample : icc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.68min 1116.080ppb m

response 1490209

(+) = Expected Retention Time
PP389750.D GPP2401_020521PRI.M Fri Feb 05 07:54:02 2021

PP389751.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 02/08/21 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1B.ch Vial: 57
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1A.ch
Acq On : 04-Feb-2021, 17:11:25 Operator: jamesb
Sample : ic2401-2500 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 05 07:48:35 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.48	11.48	6044881	10859900	2736.266	2734.351
	Spiked Amount 500.000	Range 70 - 136		Recovery =		547.25%#	546.87%#
	Target Compounds						
1)	TNX	1.35	1.35	8259335	12791220	2679.501	2710.281
2)	HMX	1.49	1.49	3844460	10837572	2441.766	2435.282
3)	DNX	1.75	1.75	7187251	11467356	2584.949	2678.827
4)	MNX	2.36	2.36	7843007	12250348	2672.033	2691.527
5)	RDX	2.99	2.99	4993362	8034707	2586.009	2647.494
6)	1,3,5-Trinitrobe	4.79	4.79	10791182	21103740	2568.192	2637.066
7)	1,3-Dinitrobenze	6.00	6.00	14146913	9956121	2626.838	2559.733
8)	3,5-Dinitroanili	6.42	6.42	10687100	18582708	2594.272	2611.414
9)	Nitrobenzene	7.58	7.58	8424902	8441414	2602.290	2541.044
10)	Nitroglycerin	0.00	9.23	0	3341231	N.D.	2732.562 #
11)	Tetryl	9.75	9.75	7885374	12824916	2487.321	2588.757
12)	2,4,6-Trinitroto	10.14	10.14	10074071	12295035	2616.629	2624.325
13)	2-Amino-4,6-Dini	10.59	10.59	9061177	13724912	2591.622	2595.744
14)	4-Amino-2,6-Dini	11.11	11.11	6391834	13078072	2597.517	2598.451
16)	2,4-Dinitrotolue	12.13	12.13	12629129	8344812	2577.410	2524.080
17)	2,6-Dinitrotolue	12.60	12.60	7372136	9667049	2571.671	2686.829
18)	o-Nitrotoluene	15.61	15.60	6026337	8248631	2595.211	2576.485m
19)	p-Nitrotoluene	16.19	16.19	9493663	7798976	2611.049	2560.900m
20)	m-Nitrotoluene	16.97	16.97	8725048	10387350	2573.528	2546.086m
21)	PETN	0.00	18.68	0	3738096	N.D. d	2799.614m

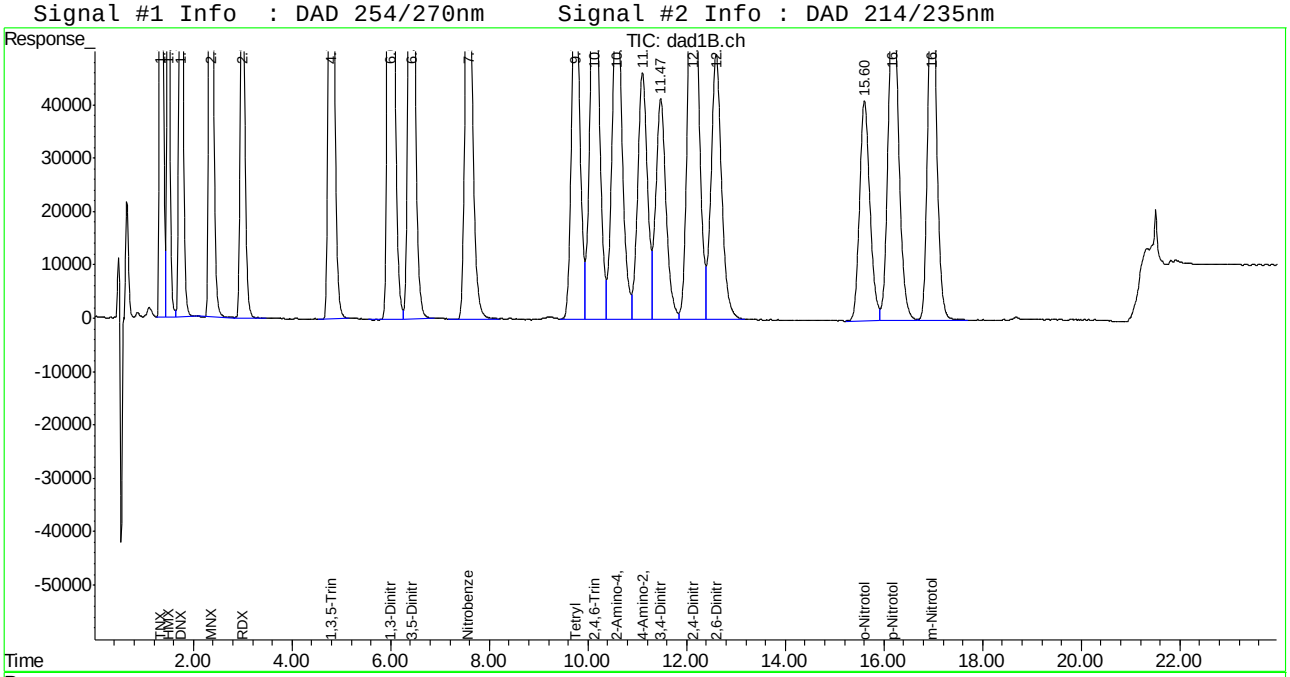
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

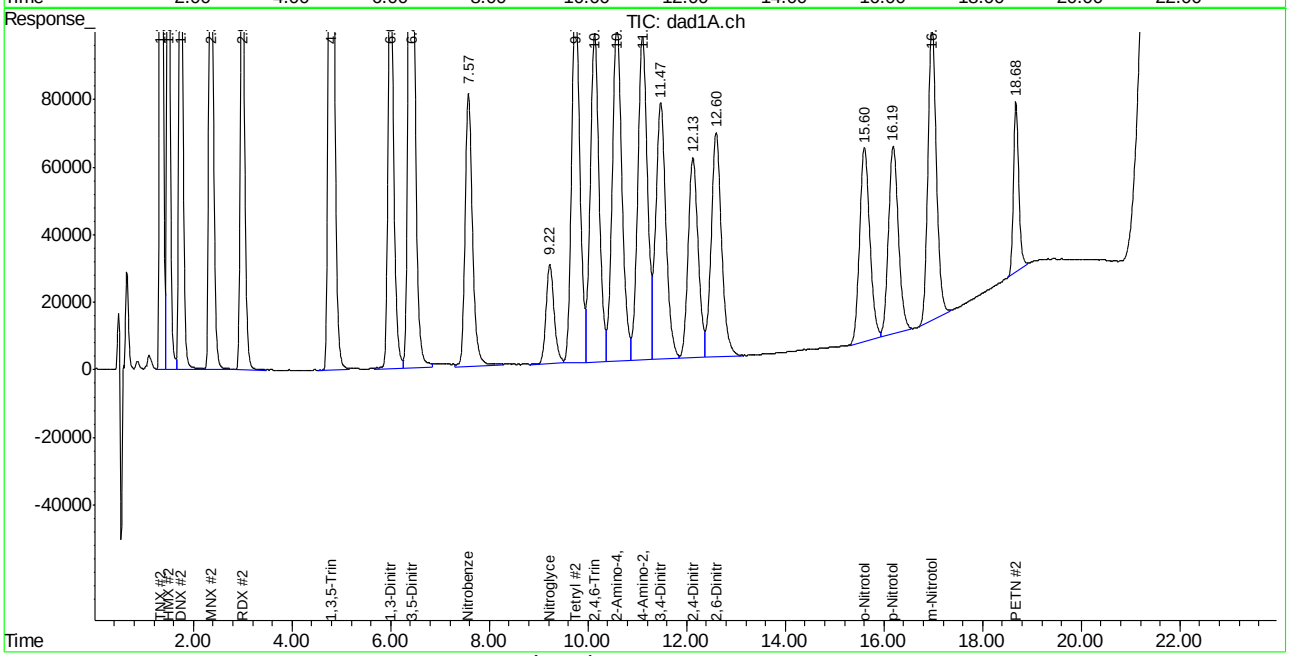
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1B.ch Vial: 57
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1A.ch
Acq On : 04-Feb-2021, 17:11:25 Operator: jamesb
Sample : ic2401-2500 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:53 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

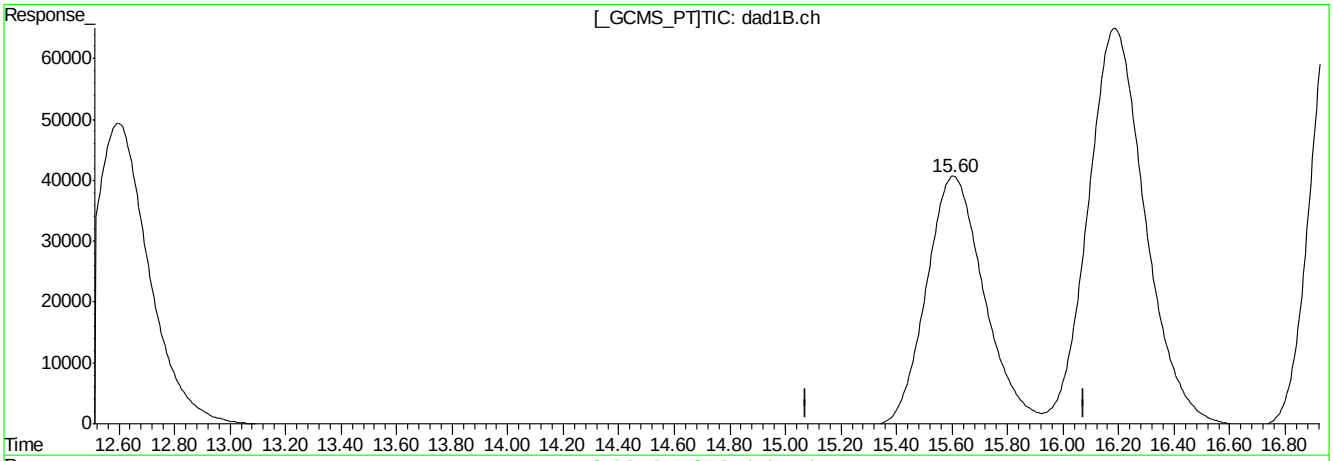
Sample Number: GPP2401-IC2401
Lab FileID: PP389751.D
Injection Time: 02/04/21 17:11
Method: SW846 8330B
Analyst approved: 02/05/21 09:14 James Boone
Supervisor approved: 02/08/21 13:01 Naresh Jiawan

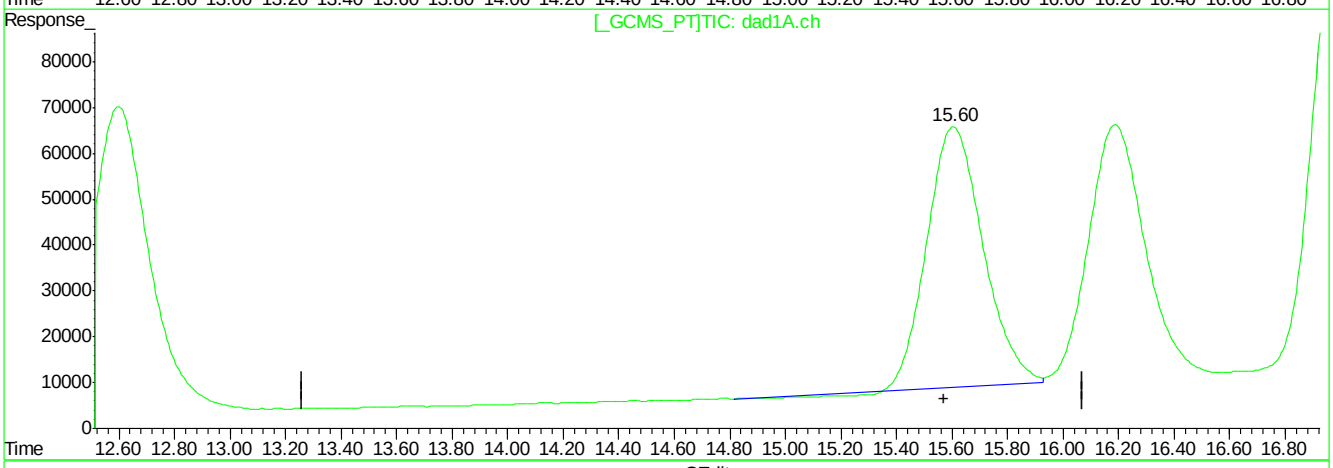
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.60	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.19	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.97	Poor instrument integration
PETN	78-11-5	2	18.68	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1B.ch Vial: 57
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1A.ch
Acq On : 04-Feb-2021, 17:11:25 Operator: jamesb
Sample : ic2401-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.61min 2595.211ppb

response 6026337

(18) o-Nitrotoluene #2

15.61min 2464.525ppb

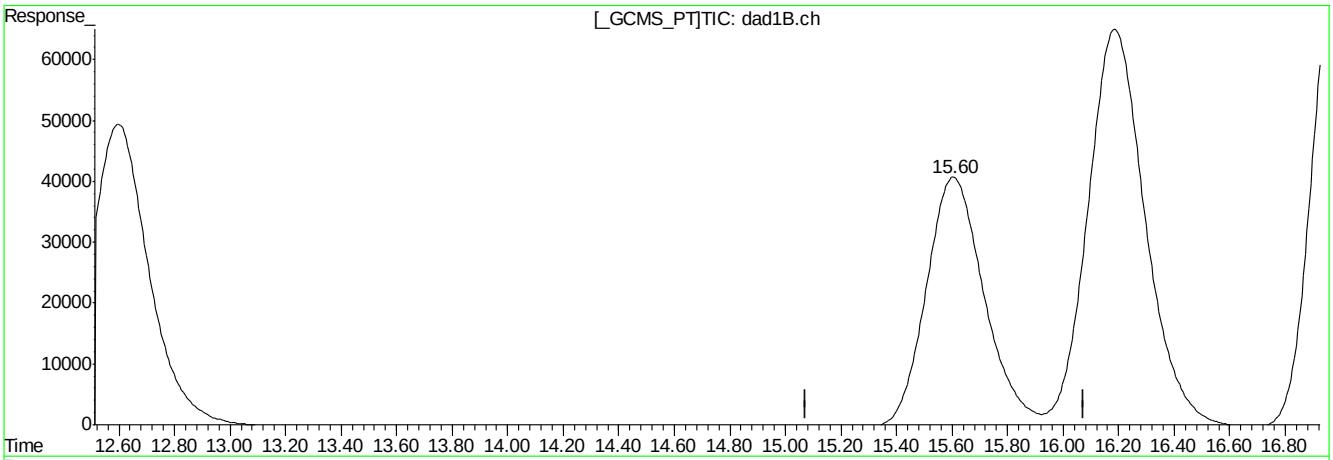
response 7890189

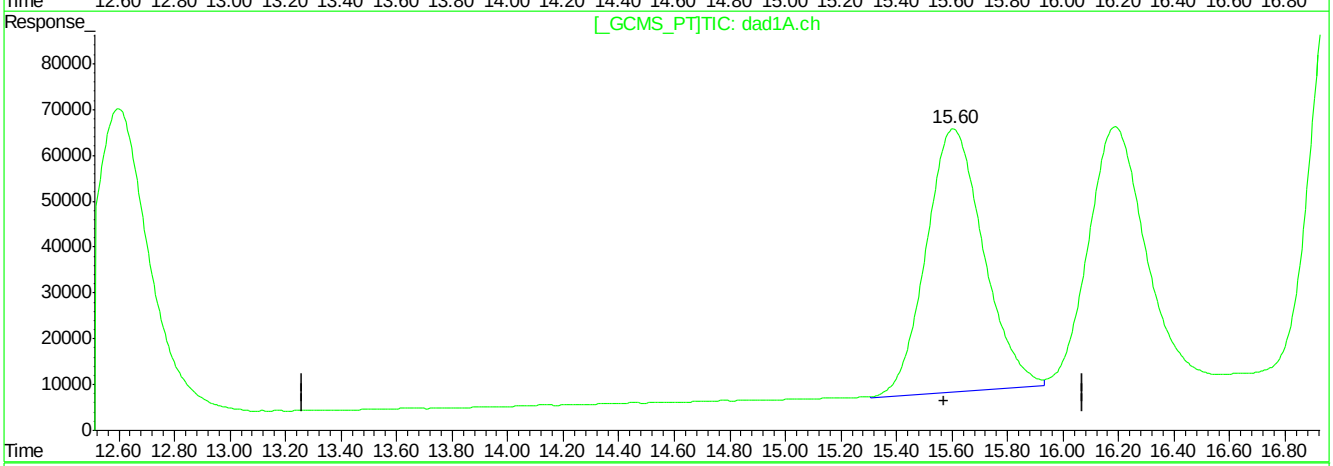
(+) = Expected Retention Time
PP389751.D GPP2401_020521PRI.M Fri Feb 05 07:52:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1B.ch Vial: 57
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1A.ch
Acq On : 04-Feb-2021, 17:11:25 Operator: jamesb
Sample : ic2401-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.61min 2595.211ppb

response 6026337

(18) o-Nitrotoluene #2

15.60min 2576.485ppb m

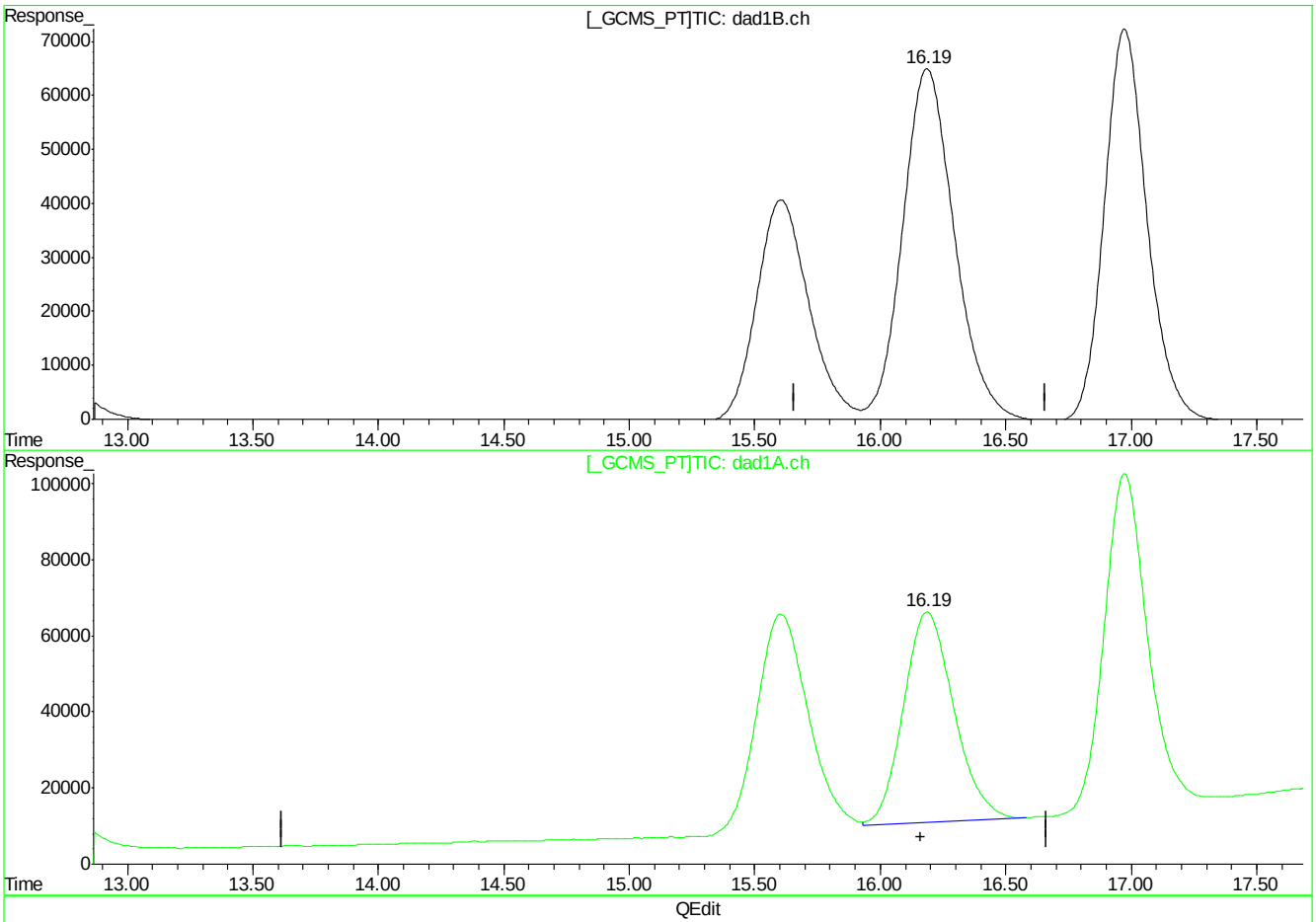
response 8248631

(+) = Expected Retention Time
PP389751.D GPP2401_020521PRI.M Fri Feb 05 07:52:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1B.ch Vial: 57
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1A.ch
Acq On : 04-Feb-2021, 17:11:25 Operator: jamesb
Sample : ic2401-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.19min 2611.049ppb

response 9493663

(19) p-Nitrotoluene #2

16.19min 2541.508ppb

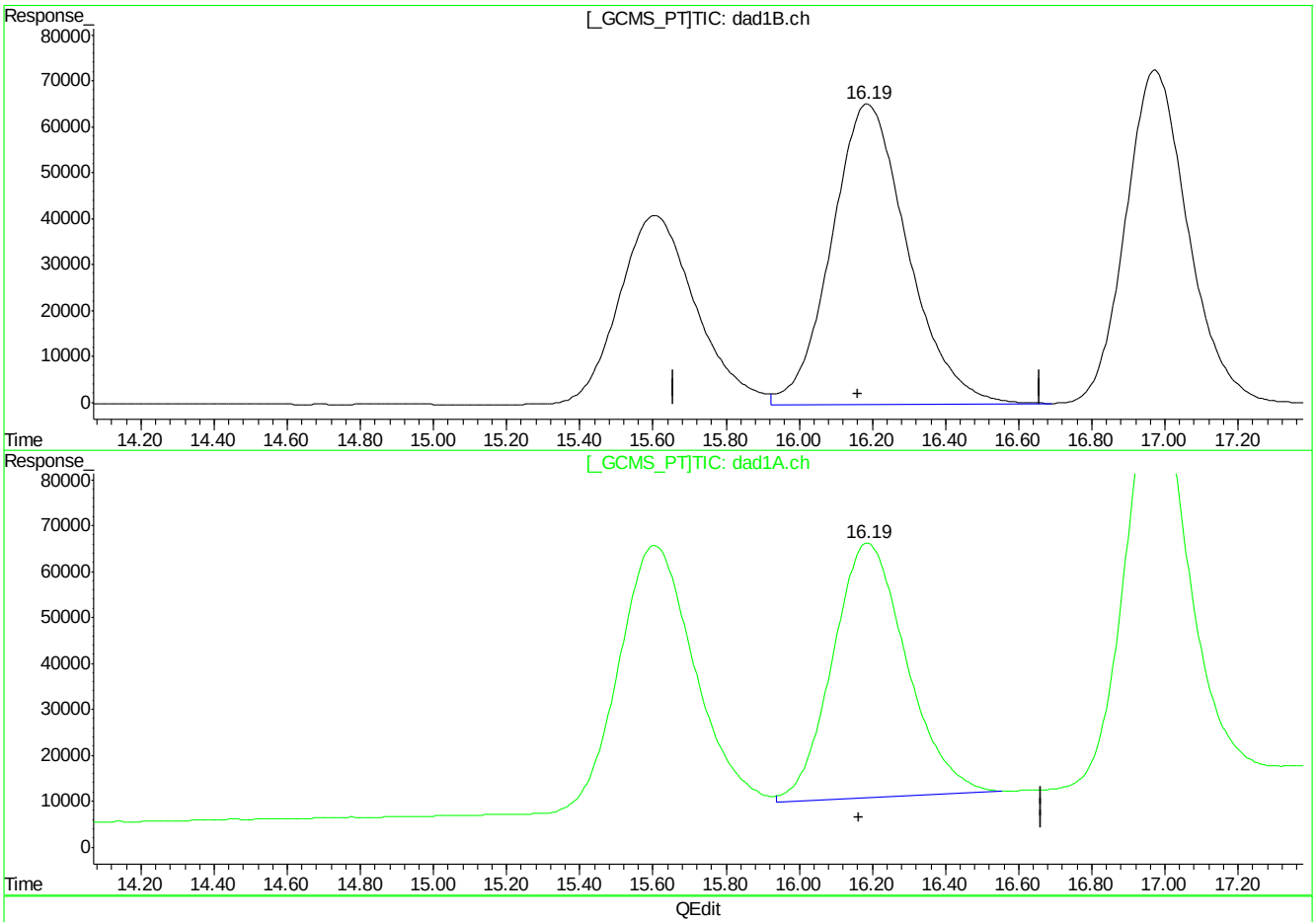
response 7739918

(+) = Expected Retention Time
PP389751.D GPP2401_020521PRI.M Fri Feb 05 07:52:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1B.ch Vial: 57
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1A.ch
Acq On : 04-Feb-2021, 17:11:25 Operator: jamesb
Sample : ic2401-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.19min 2611.049ppb

response 9493663

(19) p-Nitrotoluene #2

16.19min 2560.900ppb m

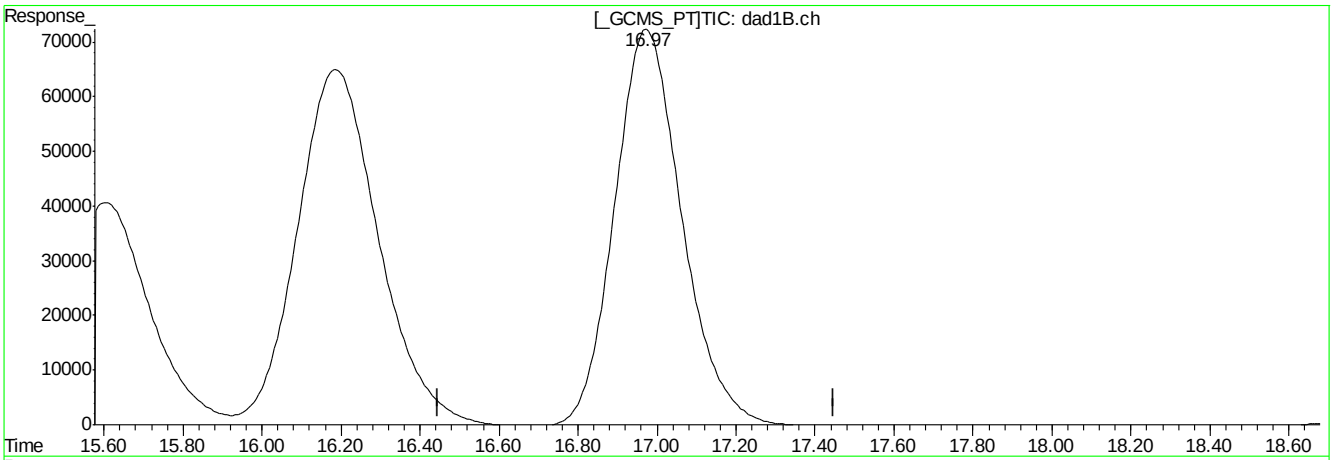
response 7798976

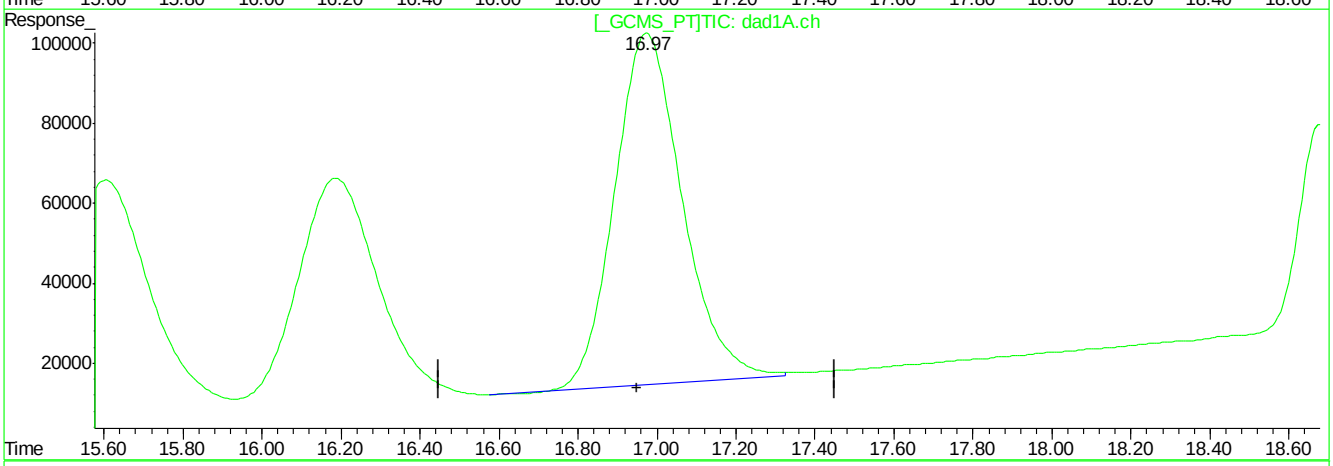
(+) = Expected Retention Time
PP389751.D GPP2401_020521PRI.M Fri Feb 05 07:52:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1B.ch Vial: 57
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1A.ch
Acq On : 04-Feb-2021, 17:11:25 Operator: jamesb
Sample : ic2401-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.97min 2573.528ppb

response 8725048

(20) m-Nitrotoluene #2

16.98min 2546.385ppb

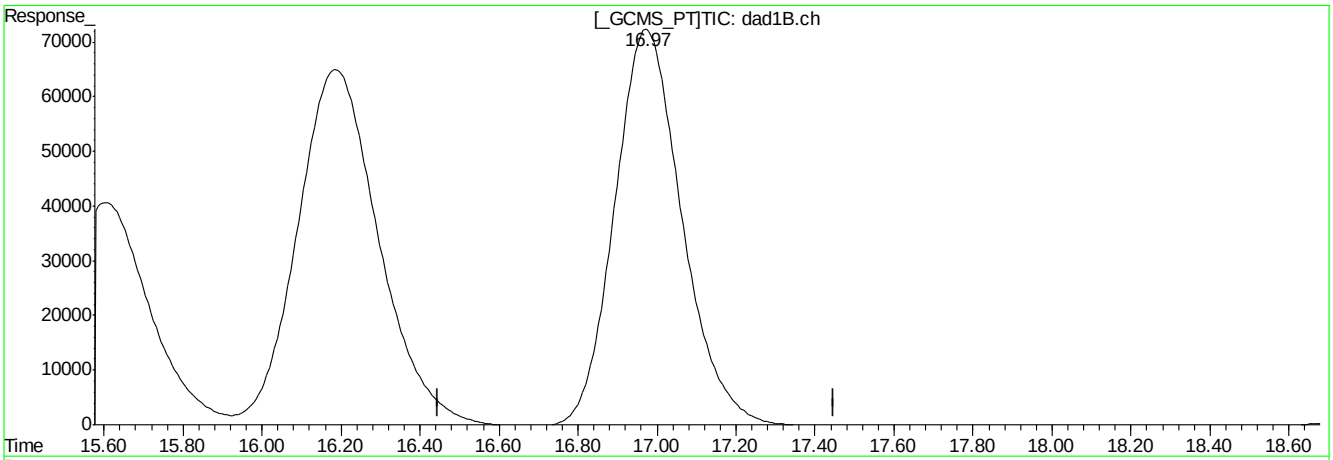
response 10388567

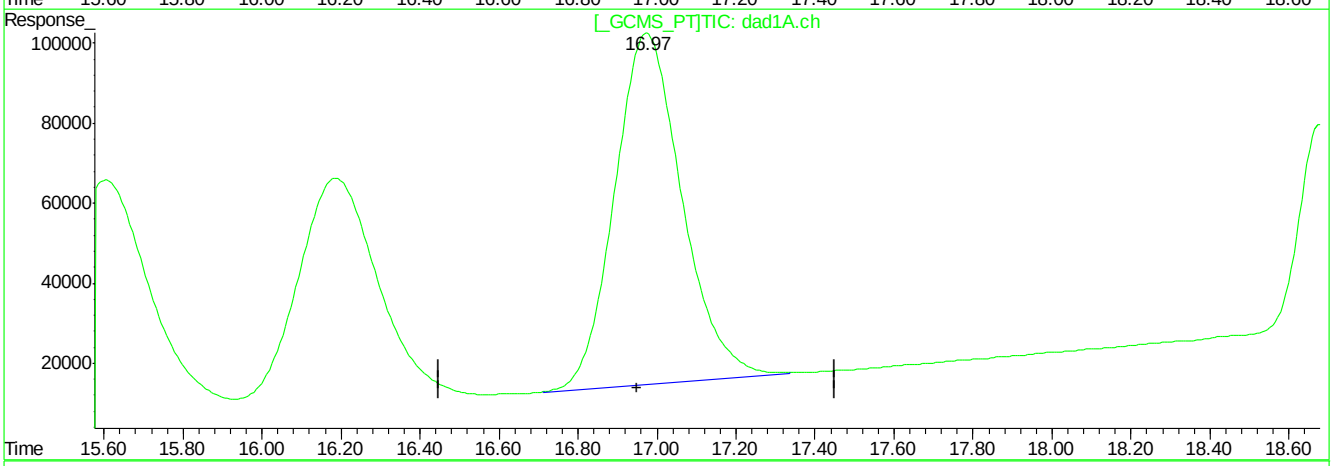
(+) = Expected Retention Time
PP389751.D GPP2401_020521PRI.M Fri Feb 05 07:52:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1B.ch Vial: 57
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1A.ch
Acq On : 04-Feb-2021, 17:11:25 Operator: jamesb
Sample : ic2401-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.97min 2573.528ppb

response 8725048

(20) m-Nitrotoluene #2

16.97min 2546.086ppb m

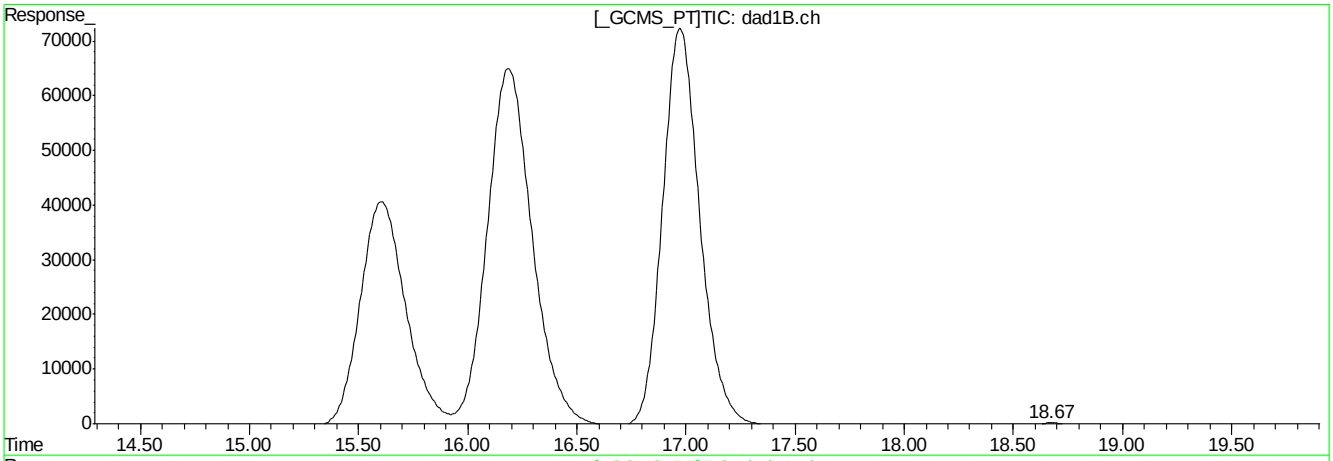
response 10387350

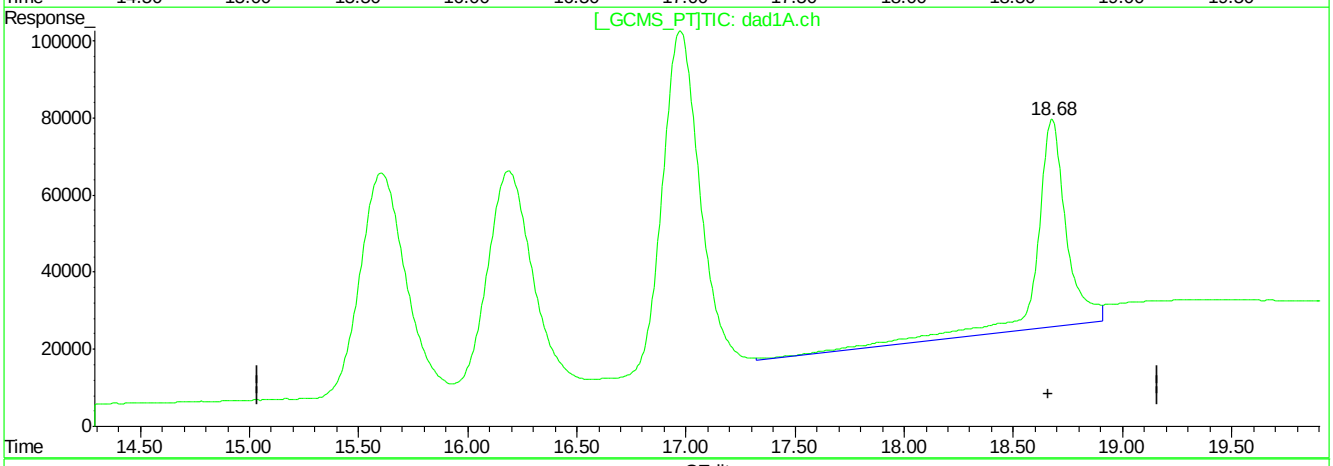
(+) = Expected Retention Time
PP389751.D GPP2401_020521PRI.M Fri Feb 05 07:52:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1B.ch Vial: 57
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1A.ch
Acq On : 04-Feb-2021, 17:11:25 Operator: jamesb
Sample : ic2401-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.68min 0.000ppb

response 44226

(21) PETN #2

18.68min 4020.165ppb

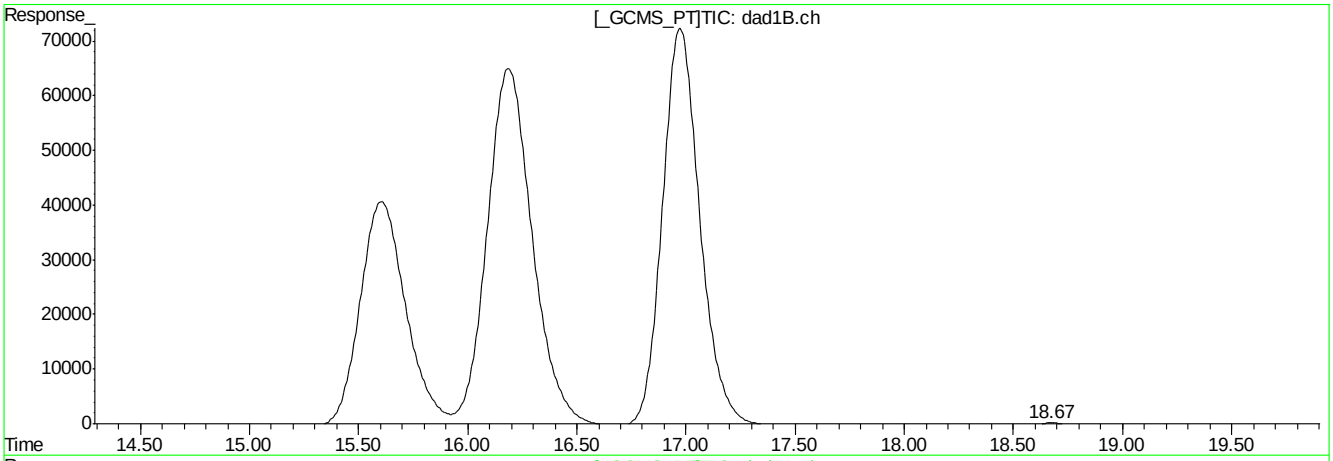
response 5367796

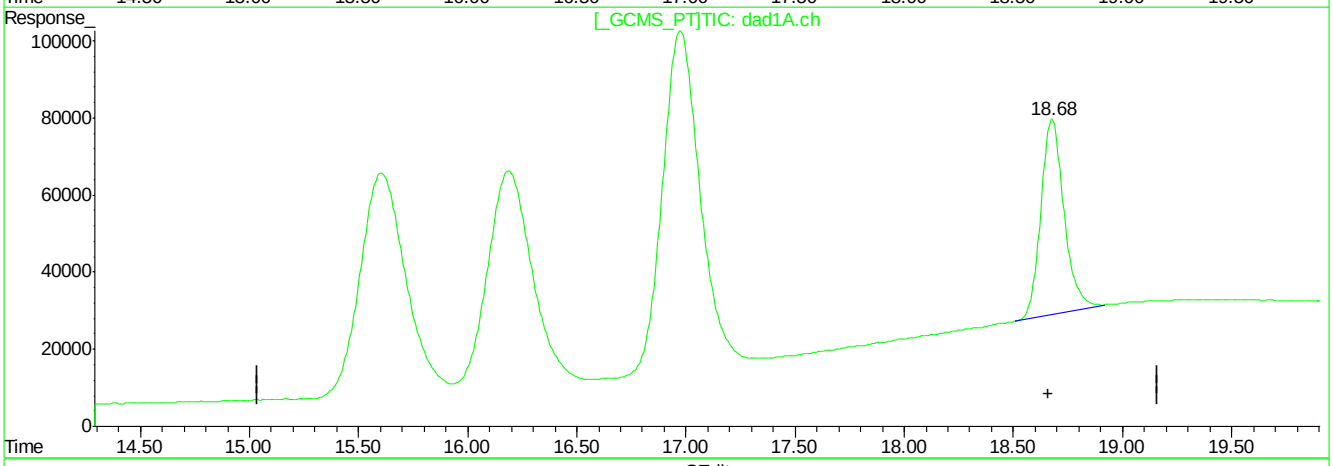
(+) = Expected Retention Time
PP389751.D GPP2401_020521PRI.M Fri Feb 05 07:52:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1B.ch Vial: 57
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389751.D\dad1A.ch
Acq On : 04-Feb-2021, 17:11:25 Operator: jamesb
Sample : ic2401-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.68min 0.000ppb

response 44226

(21) PETN #2

18.68min 2799.614ppb m

response 3738096

(+) = Expected Retention Time
PP389751.D GPP2401_020521PRI.M Fri Feb 05 07:52:57 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 02/08/21 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389752.D\dad1B.ch Vial: 58
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389752.D\dad1A.ch
Acq On : 04-Feb-2021, 17:42:26 Operator: jamesb
Sample : ic2401-5000 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 05 07:48:36 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.48	11.48	11645504	21310065	5271.434	5324.267
	Spiked Amount 500.000	Range 70 - 136		Recovery =		1054.29%#	1064.85%#
	Target Compounds						
1)	TNX	1.35	1.35	15910601	24622762	5258.375	5217.220
2)	HMX	1.49	1.49	7394683	20803204	4810.276	4817.361
3)	DNX	1.74	1.74	13946005	22054509	5015.785	5274.321
4)	MNX	2.35	2.35	15175765	23576747	5170.229	5180.052
5)	RDX	2.99	2.99	9628496	15465302	4986.496	5095.930
6)	1,3,5-Trinitrobe	4.79	4.79	20743495	40631134	4936.741	5077.156
7)	1,3-Dinitrobenze	6.00	6.00	27297527	18983631	5068.682	4880.719
8)	3,5-Dinitroanili	6.41	6.41	20509076	35297802	4978.537	4960.373
9)	Nitrobenzene	7.57	7.57	16116621	15580900	4978.113	4690.180
10)	Nitroglycerin	9.22	9.22	140316	6447843	NoCal	5273.247 #
11)	Tetryl	9.75	9.75	15111546	24800074	4766.707	5005.988
12)	2,4,6-Trinitroto	10.14	10.14	19324335	23777589	5019.283	5075.228
13)	2-Amino-4,6-Dini	10.58	10.58	17430246	26705970	4985.291	4994.960
14)	4-Amino-2,6-Dini	11.10	11.10	12292130	25416548	5085.287	5050.514
16)	2,4-Dinitrotolue	12.13	12.13	24387984	16332489	4977.211	4940.136
17)	2,6-Dinitrotolue	12.60	12.60	14293294	18759436	4986.025	5213.937
18)	o-Nitrotoluene	15.60	15.60	11457796	15842730	4934.241	4948.526
19)	p-Nitrotoluene	16.18	16.18	18117445	15290604	4982.853	5020.878
20)	m-Nitrotoluene	16.97	16.97	16582453	20109196	4891.137	4929.048
21)	PETN	0.00	18.67	0	7146106	N.D. d	5352.015m

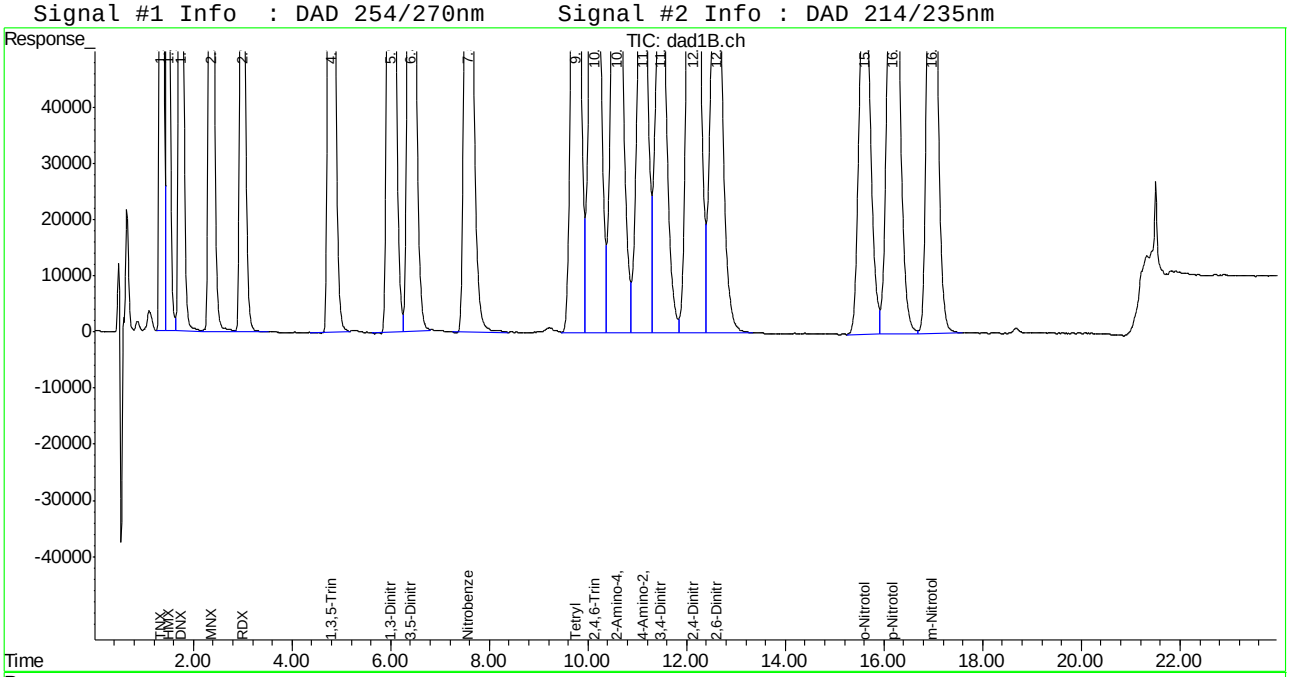
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389752.D GPP2401_020521PRI.M Fri Feb 05 08:39:51 2021 Page 1

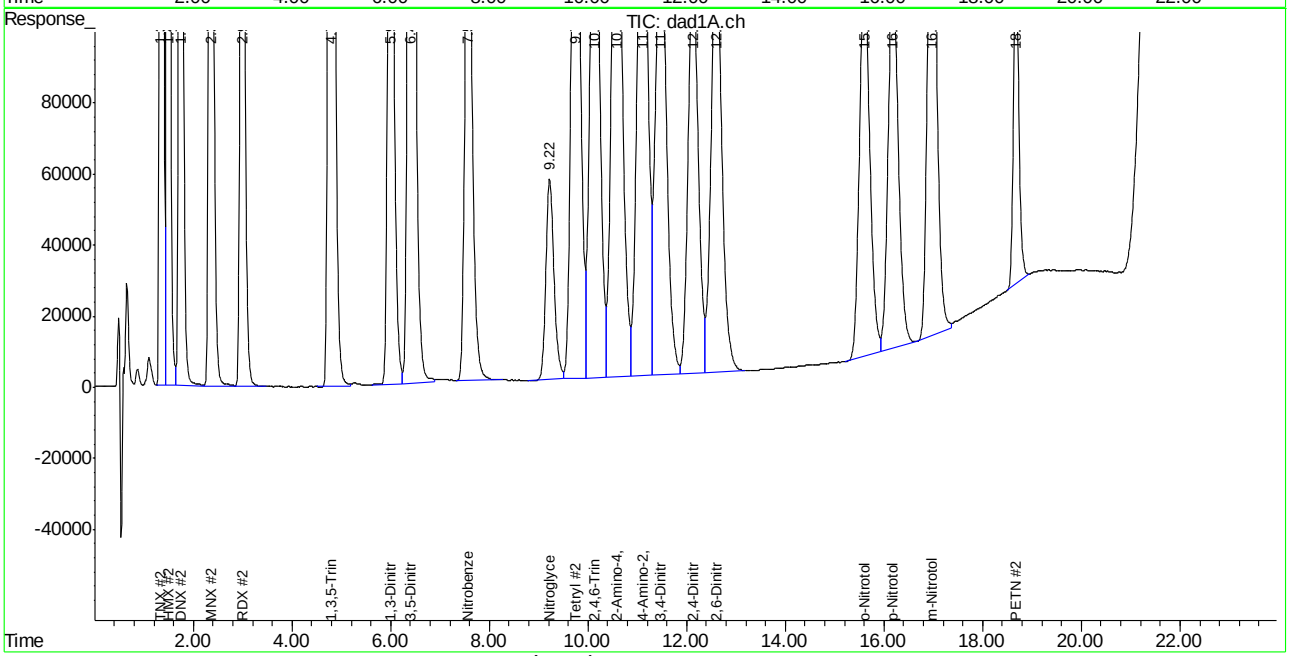
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389752.D\dad1B.ch Vial: 58
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389752.D\dad1A.ch
Acq On : 04-Feb-2021, 17:42:26 Operator: jamesb
Sample : ic2401-5000 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:51 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

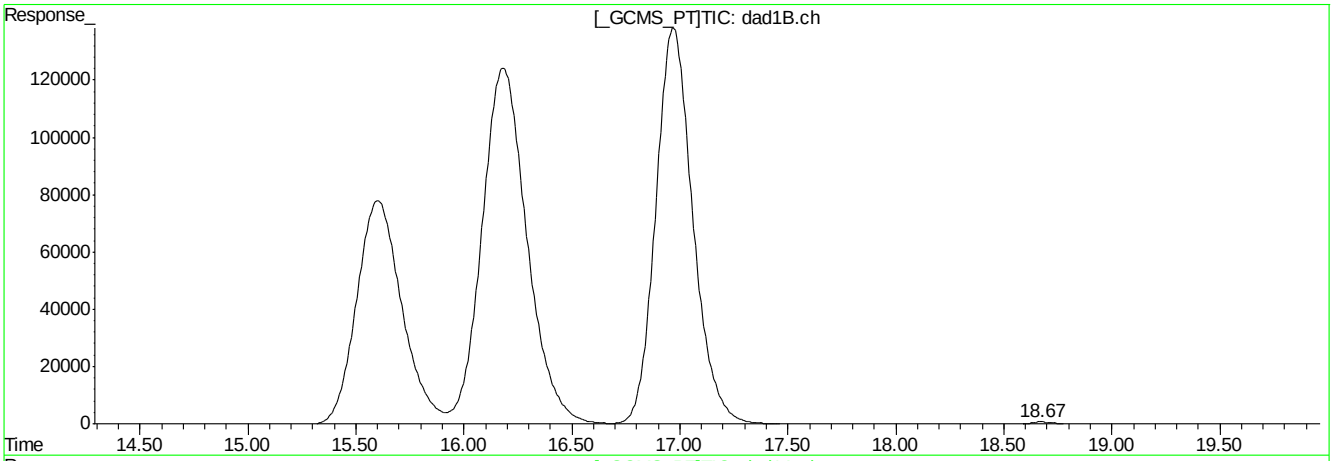
Sample Number: GPP2401-IC2401
Lab FileID: PP389752.D
Injection Time: 02/04/21 17:42
Method: SW846 8330B
Analyst approved: 02/05/21 09:14 James Boone
Supervisor approved: 02/08/21 13:01 Naresh Jiawan

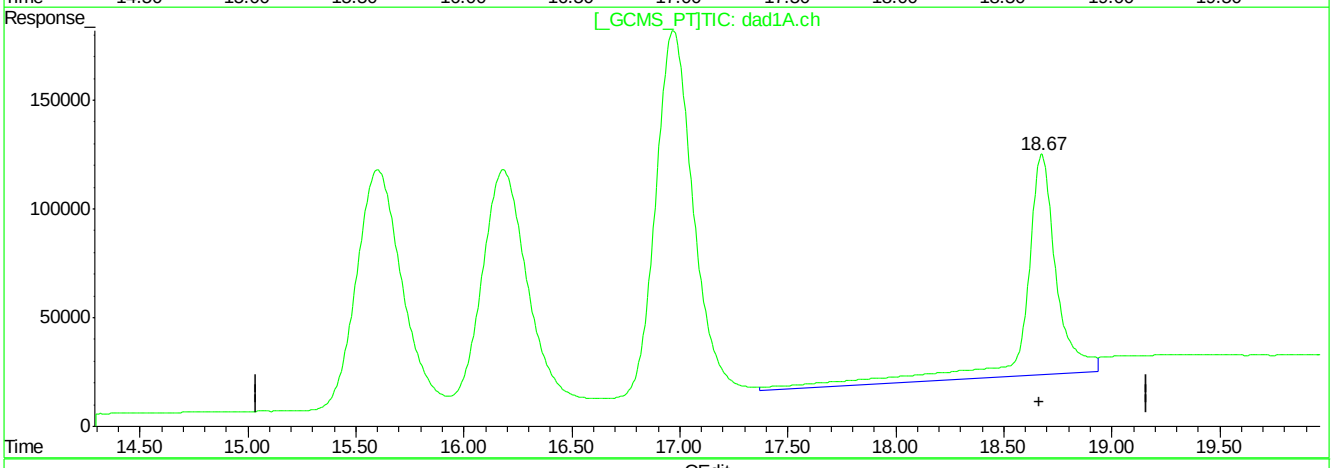
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.67	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389752.D\dad1B.ch Vial: 58
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389752.D\dad1A.ch
Acq On : 04-Feb-2021, 17:42:26 Operator: jamesb
Sample : ic2401-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.67min 0.000ppb

response 72643

(21) PETN #2

18.68min 7719.363ppb

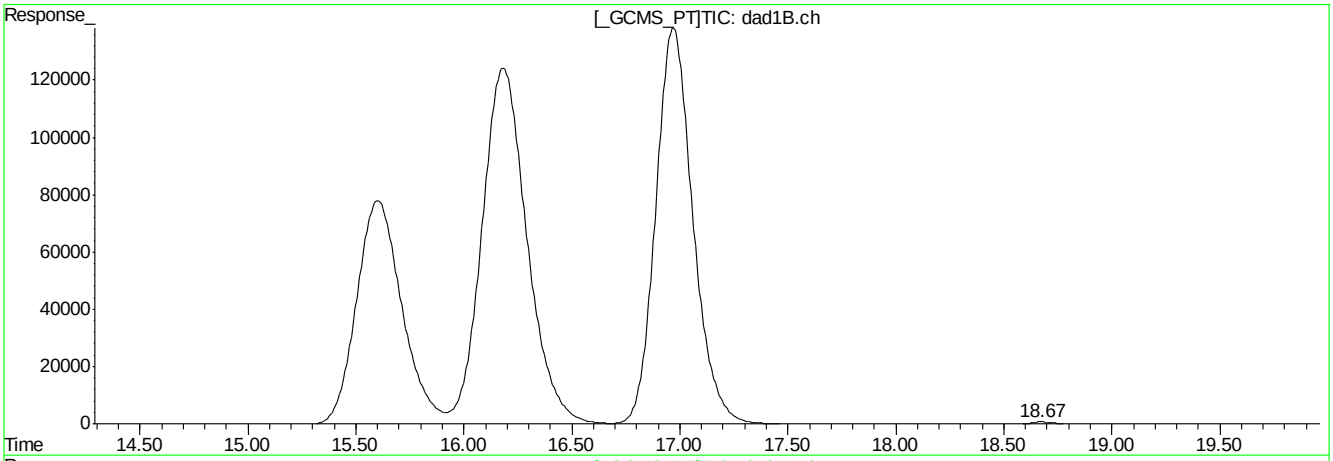
response 10307033

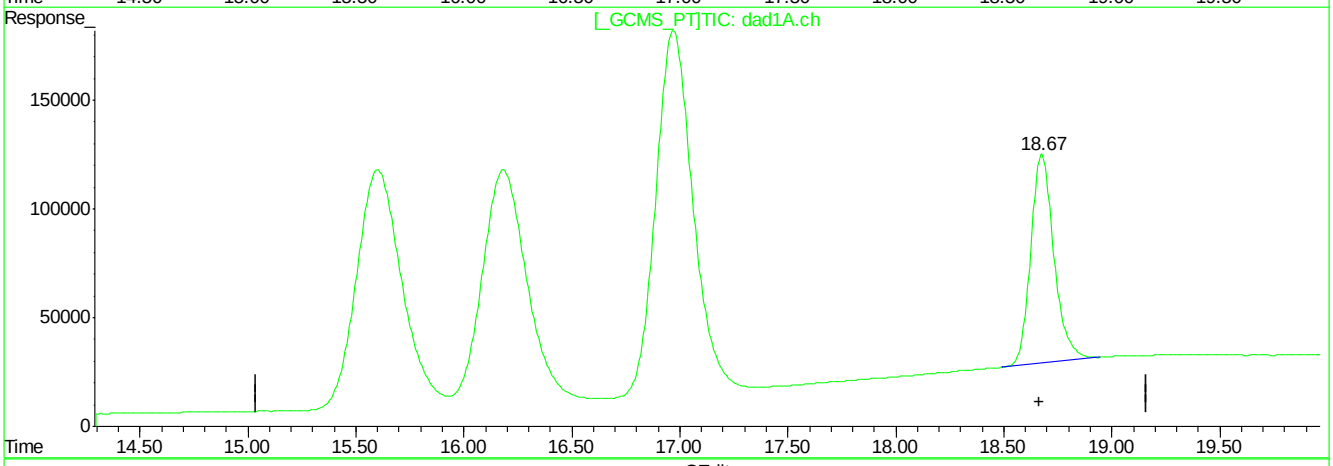
(+) = Expected Retention Time
PP389752.D GPP2401_020521PRI.M Fri Feb 05 07:50:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389752.D\dad1B.ch Vial: 58
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389752.D\dad1A.ch
Acq On : 04-Feb-2021, 17:42:26 Operator: jamesb
Sample : ic2401-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 7:48 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Feb 04 07:39:34 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.67min 0.000ppb

response 72643

(21) PETN #2

18.67min 5352.015ppb m

response 7146106

(+) = Expected Retention Time
PP389752.D GPP2401_020521PRI.M Fri Feb 05 07:51:11 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 02/08/21 13:01

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1B.ch Vial: 59
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1A.ch
Acq On : 04-Feb-2021, 18:13:27 Operator: jamesb
Sample : icv2401-1000 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 05 08:37:57 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	1.35	1.35	3153994	4895251	922.498	961.606
2)	HMX	1.50	1.50	1561520	4412505	994.540	988.429
3)	DNX	1.75	1.75	2546477	4033003	870.604	858.889
4)	MNX	2.36	2.36	2760774	4274709	864.542	856.185
5)	RDX	3.00	3.00	1813048	2927307	878.904	896.016
6)	1,3,5-Trinitrobe	4.79	4.79	3890749	7547324	873.704	892.472
7)	1,3-Dinitrobenze	6.00	6.00	5170328	3836903	914.275	907.167
8)	3,5-Dinitroanili	6.42	6.42	3694189	6636533	862.874	872.119
9)	Nitrobenzene	7.58	7.58	3045327	3258180	881.060	974.394
10)	Nitroglycerin	0.00	9.24	0	1392852	N.D.	1031.068 #
11)	Tetryl	9.76	9.76	2866518	4790974	896.460	930.796
12)	2,4,6-Trinitroto	10.14	10.14	3624347	4489368	914.953	941.875
13)	2-Amino-4,6-Dini	10.59	10.59	3287272	4990993	895.537	935.111
14)	4-Amino-2,6-Dini	11.11	11.11	2414476	4925853	934.781	944.384
16)	2,4-Dinitrotolue	12.13	12.13	4731608	3218453	917.820	986.190
17)	2,6-Dinitrotolue	12.60	12.60	2679876	3614423	884.847	974.295
18)	o-Nitrotoluene	15.61	15.61	2200959	2849596	894.565	892.363
19)	p-Nitrotoluene	16.19	16.19	3400156	2688298	897.296	877.624
20)	m-Nitrotoluene	16.98	16.97	3218383	3860406	923.564	953.428m
21)	PETN	0.00	18.68	0	1383388	N.D.	1002.116m#

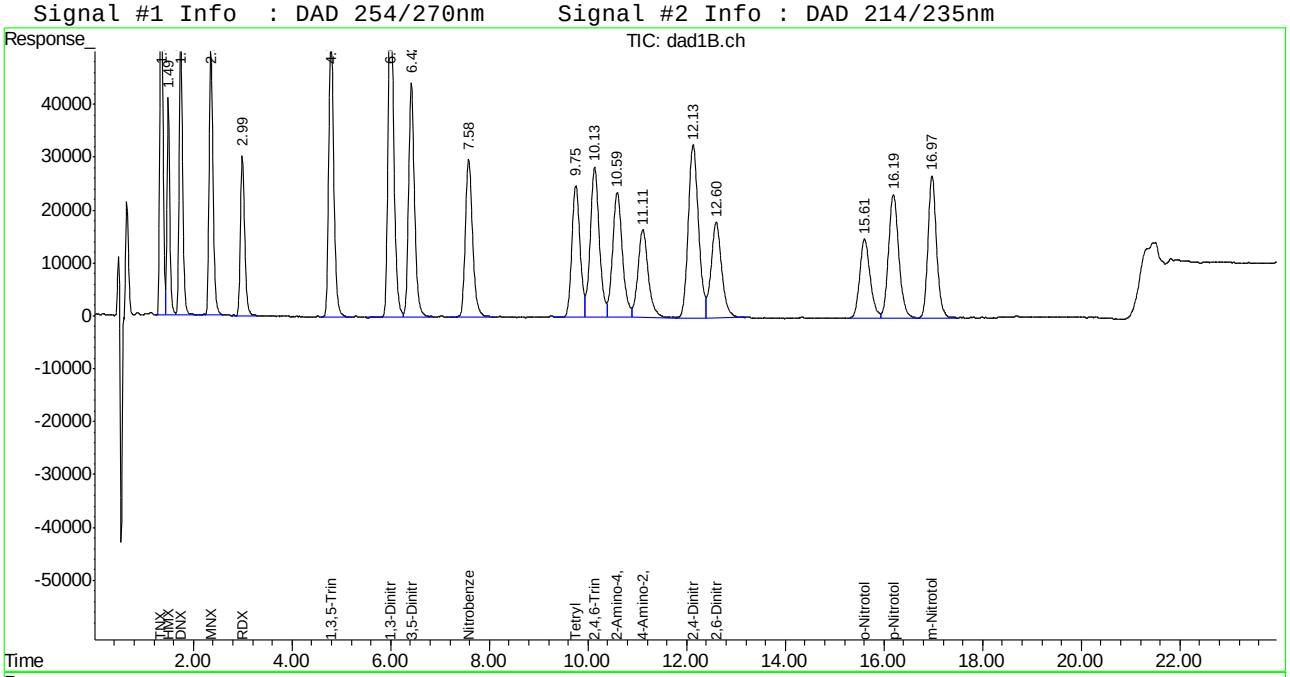
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389753.D GPP2401_020521PRI.M Mon Feb 08 12:33:45 2021 Page 1

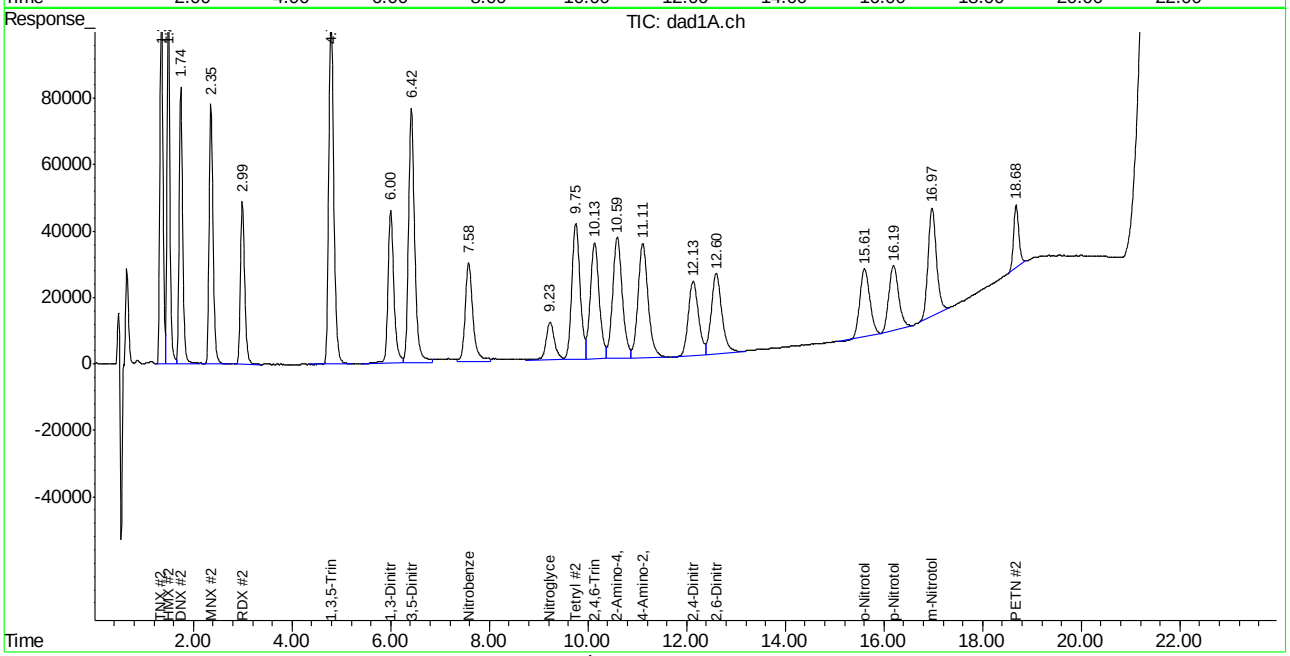
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1B.ch Vial: 59
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1A.ch
Acq On : 04-Feb-2021, 18:13:27 Operator: jamesb
Sample : icv2401-1000 Inst : G1315B
Misc : op83930,GPP2401,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 8:38 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

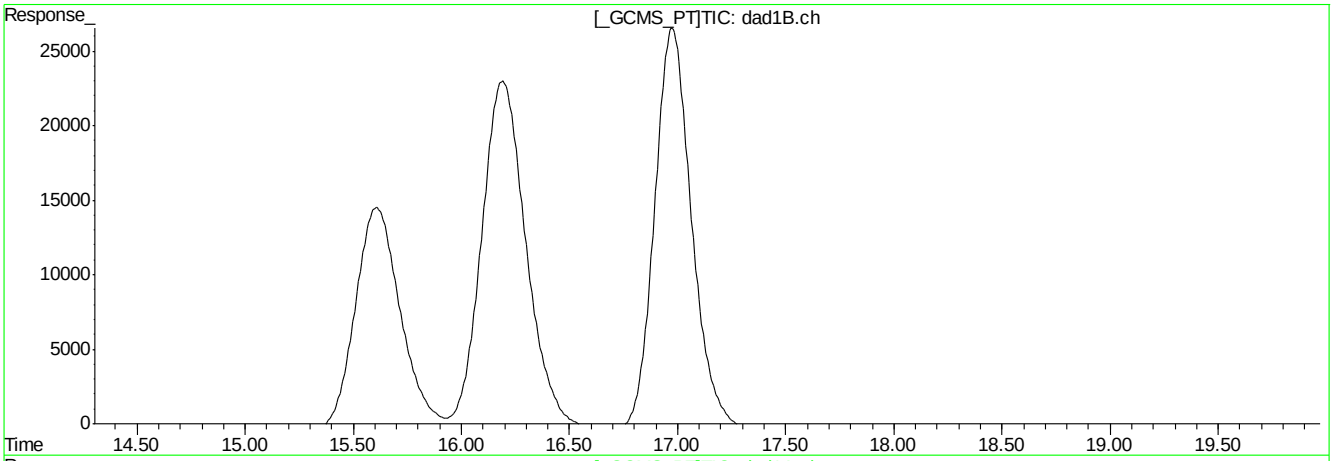
Sample Number: GPP2401-ICV2401
Lab FileID: PP389753.D
Injection Time: 02/04/21 18:13
Method: SW846 8330B
Analyst approved: 02/05/21 09:14 James Boone
Supervisor approved: 02/08/21 13:01 Naresh Jiawan

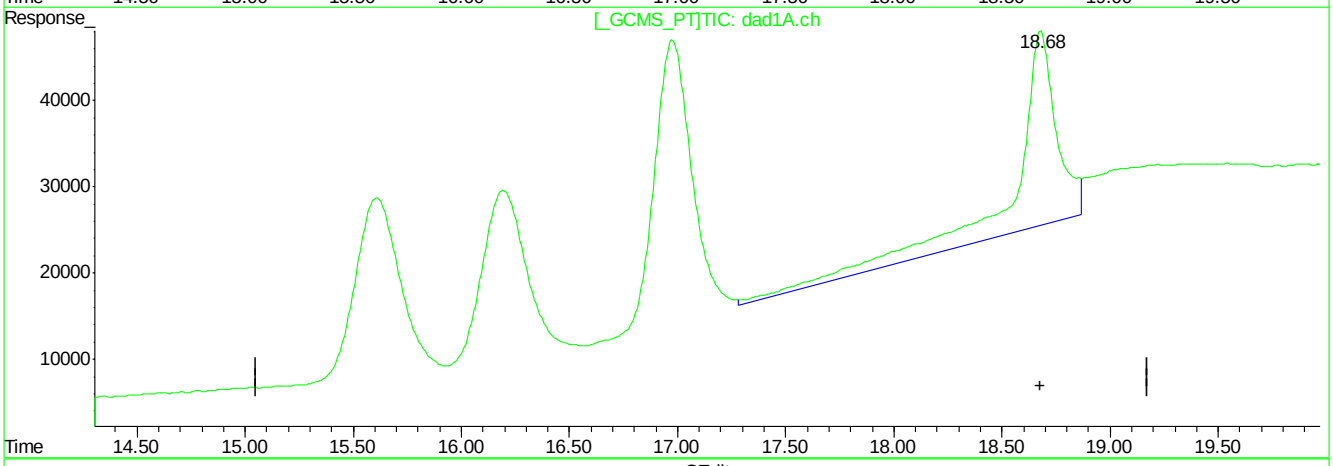
Parameter	CAS	Sig#	R.T. (min.)	Reason
m-Nitrotoluene	99-08-1	2	16.97	Poor instrument integration
PETN	78-11-5	2	18.68	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1B.ch Vial: 59
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1A.ch
Acq On : 04-Feb-2021, 18:13:27 Operator: jamesb
Sample : icv2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 8:28 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:27:49 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.68min 2220.095ppb

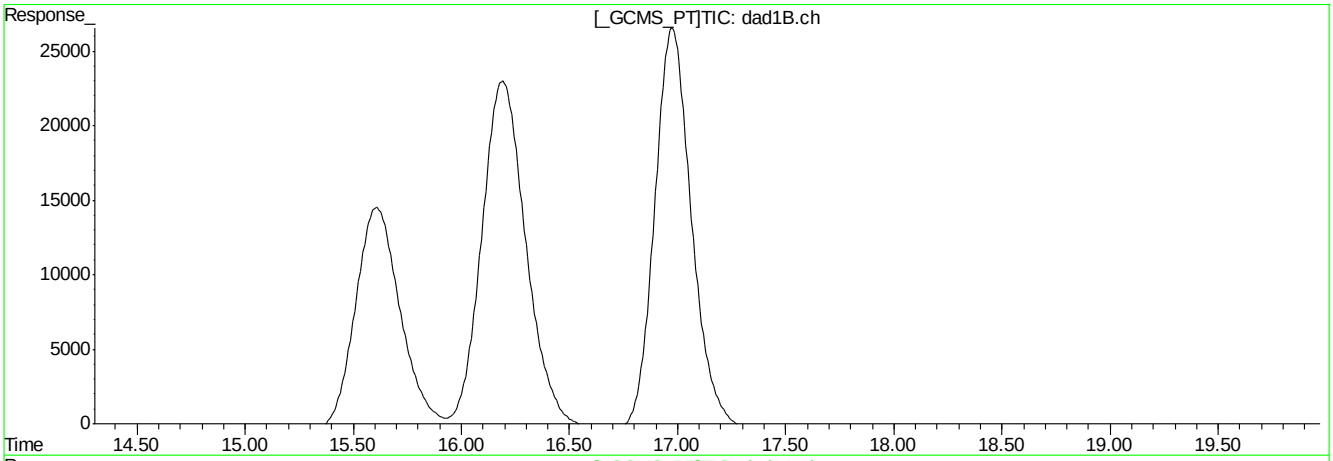
response 3064767

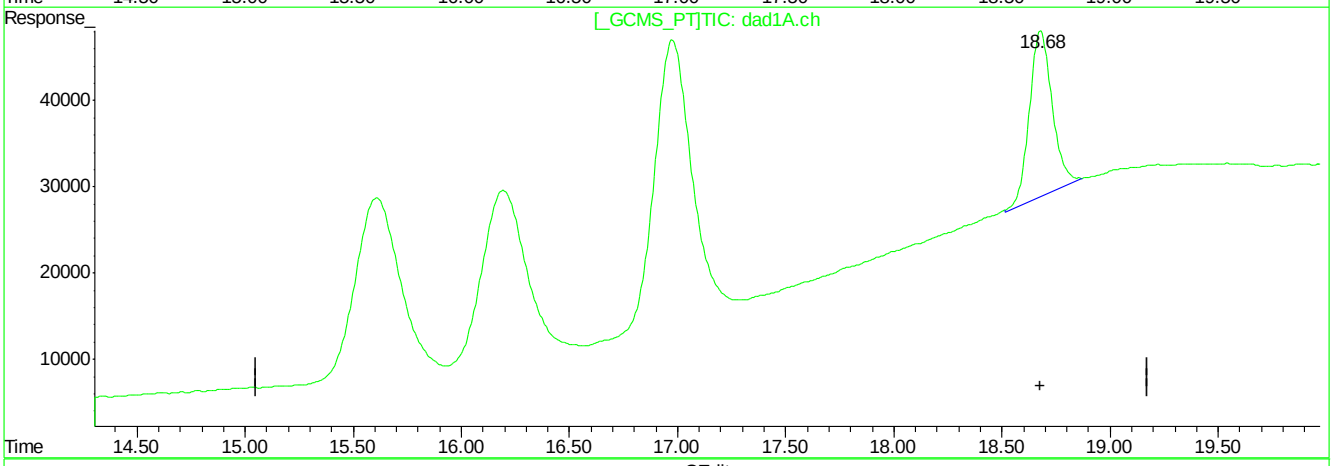
(+) = Expected Retention Time
PP389753.D GPP2401_020521PRI.M Fri Feb 05 08:29:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1B.ch Vial: 59
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1A.ch
Acq On : 04-Feb-2021, 18:13:27 Operator: jamesb
Sample : icv2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 8:28 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:27:49 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.68min 1015.130ppb m

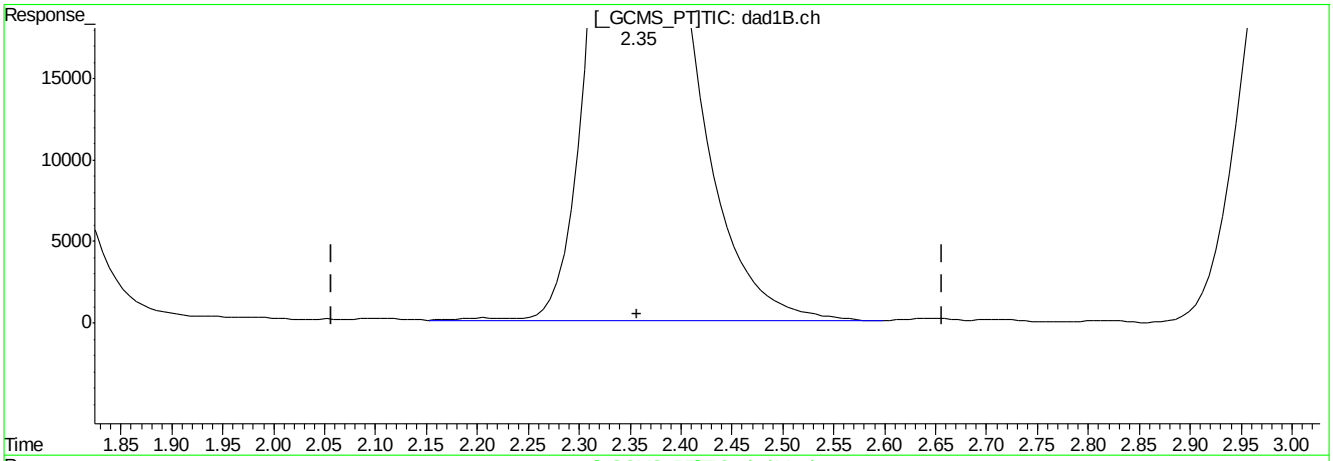
response 1401352

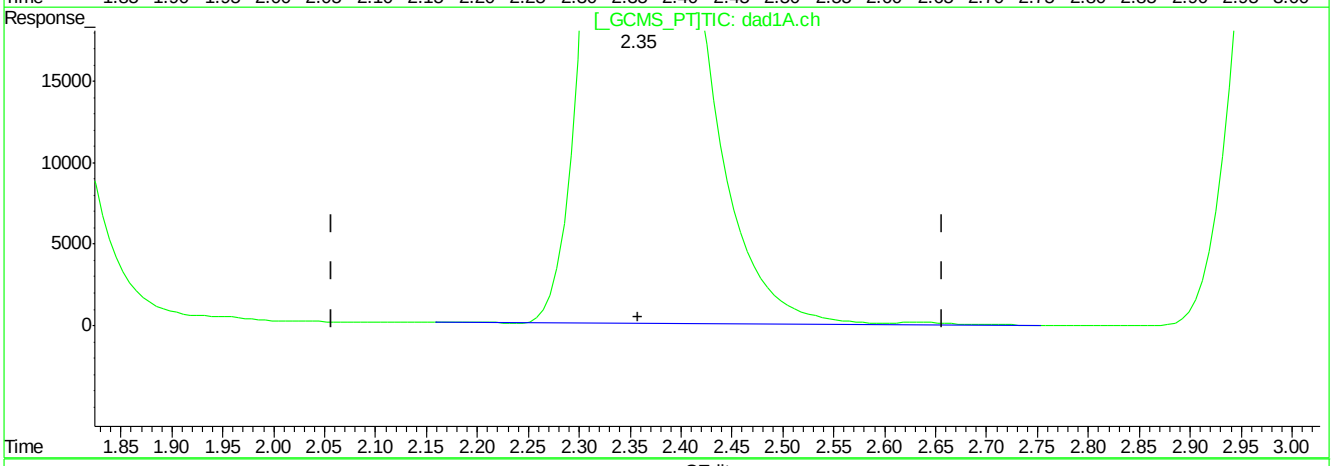
(+) = Expected Retention Time
PP389753.D GPP2401_020521PRI.M Fri Feb 05 08:29:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1B.ch Vial: 59
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1A.ch
Acq On : 04-Feb-2021, 18:13:27 Operator: jamesb
Sample : icv2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 8:29 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:27:49 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.36min 864.542ppb

response 2760774

(4) MNX #2

2.36min 844.123ppb

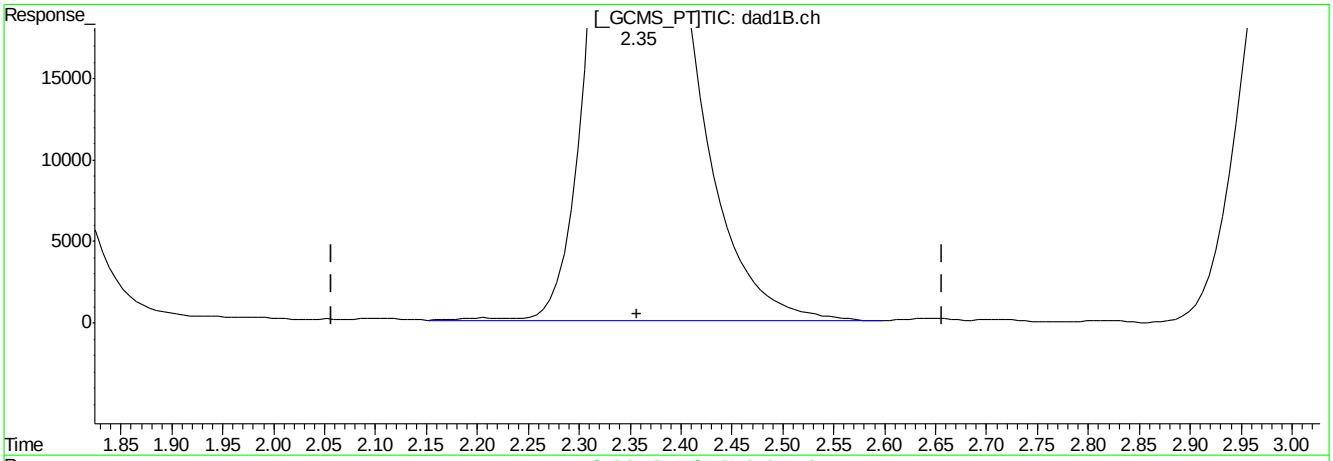
response 4274709

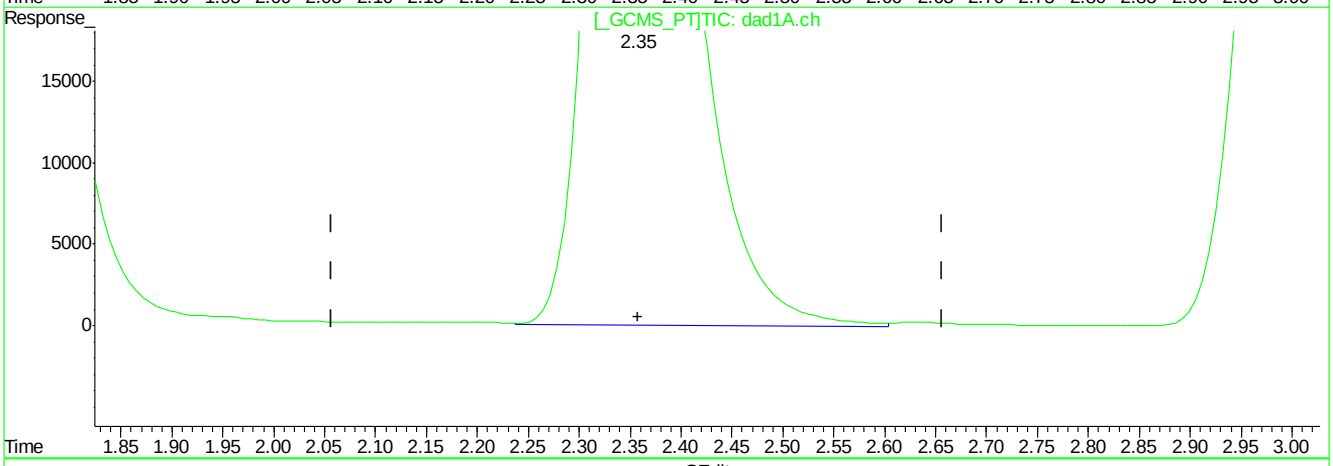
(+) = Expected Retention Time
PP389753.D GPP2401_020521PRI.M Fri Feb 05 08:30:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1B.ch Vial: 59
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1A.ch
Acq On : 04-Feb-2021, 18:13:27 Operator: jamesb
Sample : icv2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 8:29 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:27:49 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.36min 864.542ppb

response 2760774

(4) MNX #2

2.35min 847.353ppb m

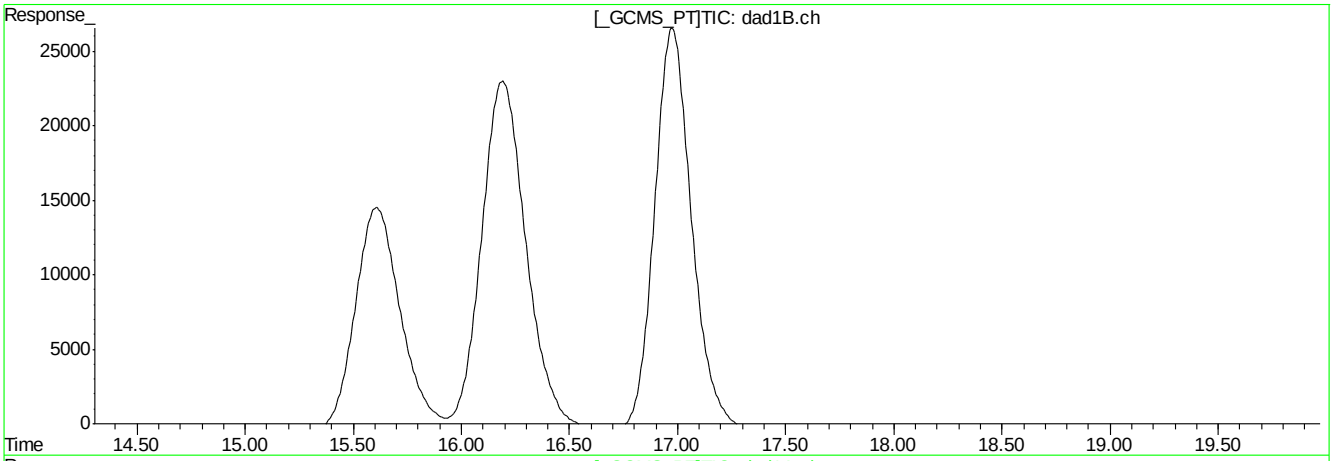
response 4291065

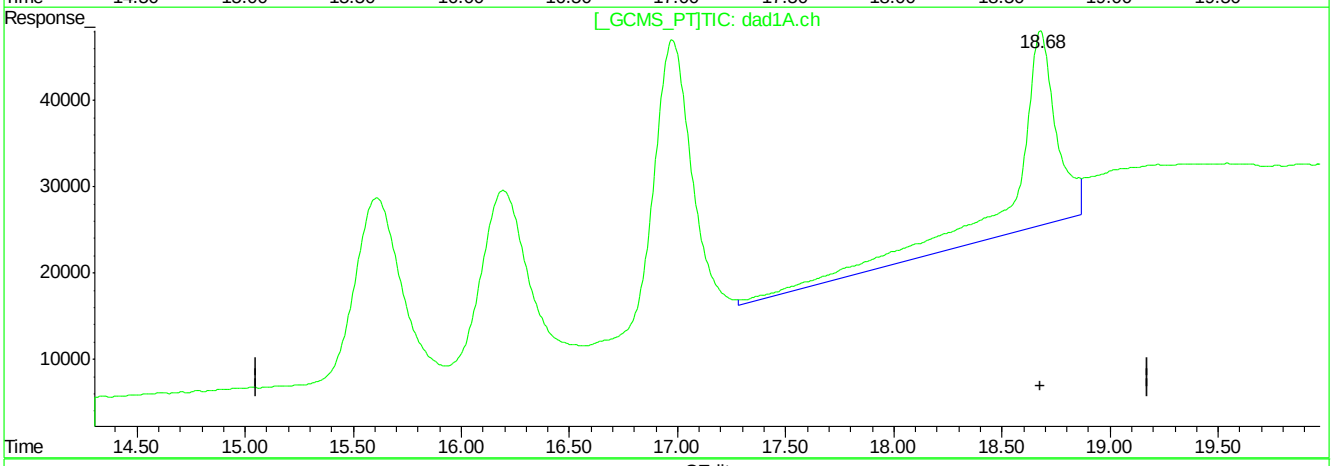
(+) = Expected Retention Time
PP389753.D GPP2401_020521PRI.M Fri Feb 05 08:31:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1B.ch Vial: 59
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1A.ch
Acq On : 04-Feb-2021, 18:13:27 Operator: jamesb
Sample : icv2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 8:37 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.68min 2220.095ppb

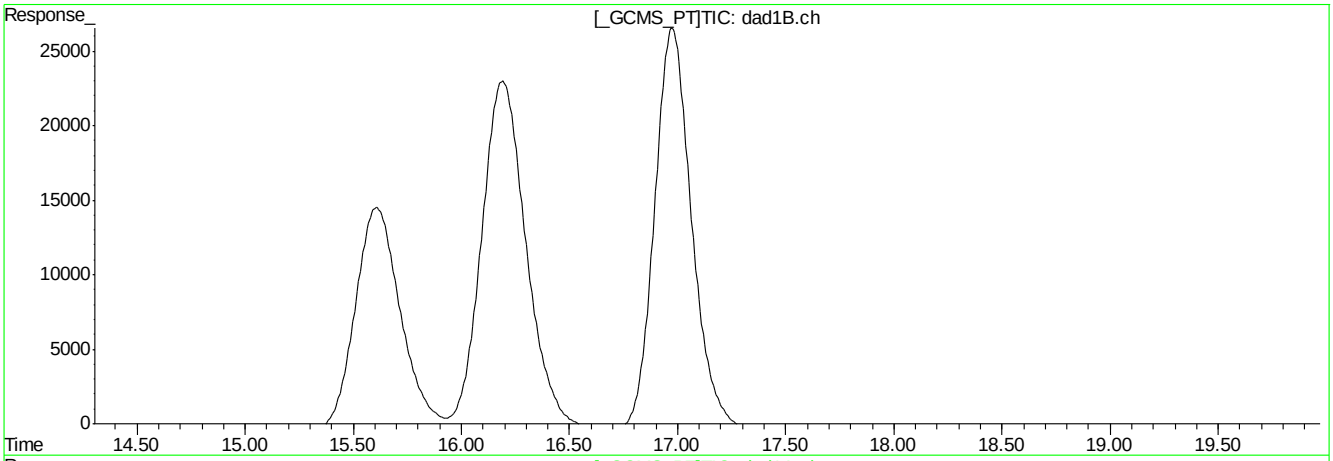
response 3064767

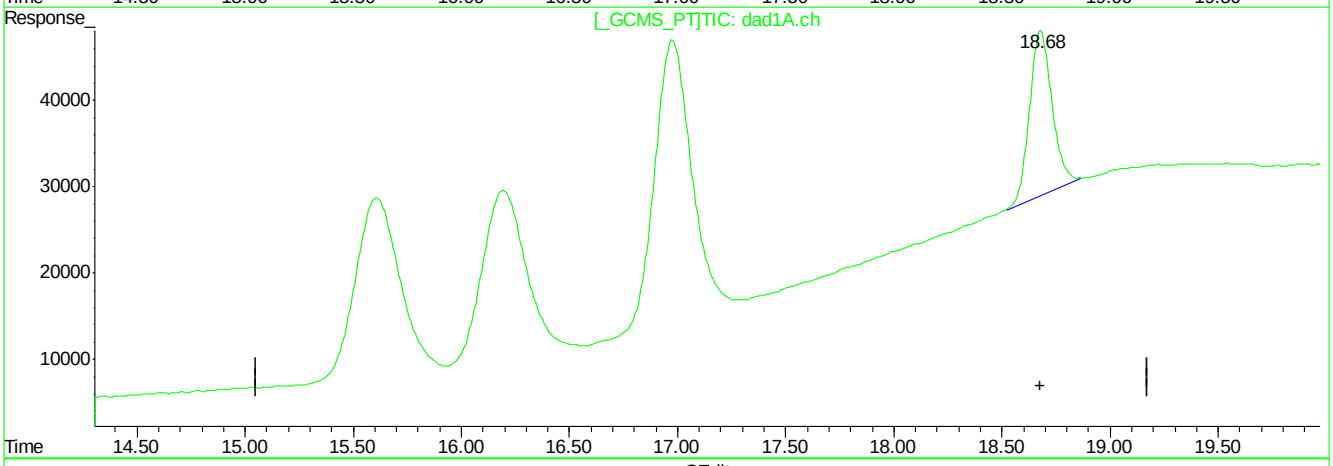
(+) = Expected Retention Time
PP389753.D GPP2401_020521PRI.M Fri Feb 05 08:38:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1B.ch Vial: 59
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1A.ch
Acq On : 04-Feb-2021, 18:13:27 Operator: jamesb
Sample : icv2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 8:37 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.68min 1002.116ppb m

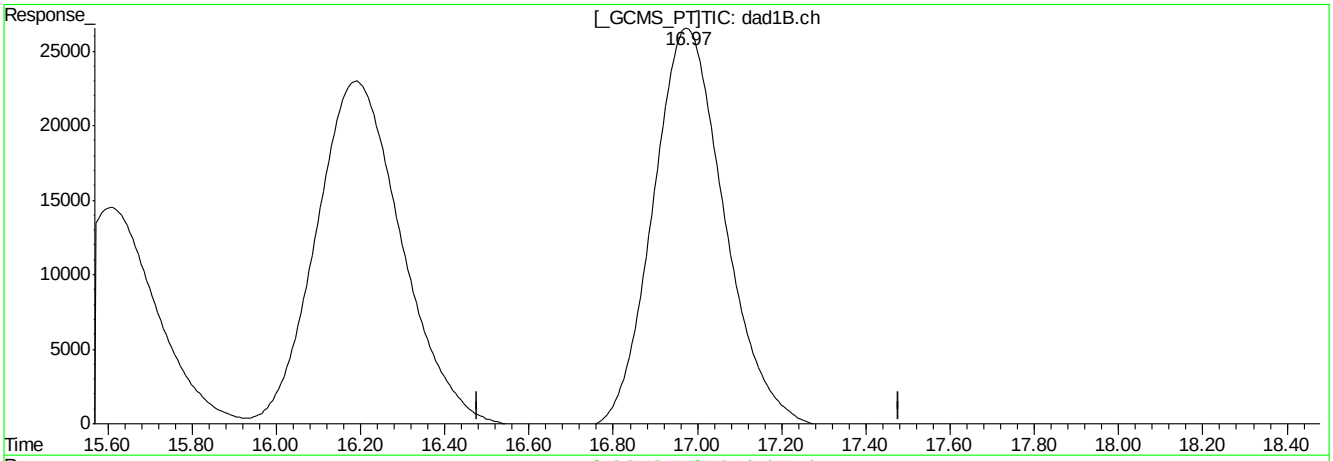
response 1383388

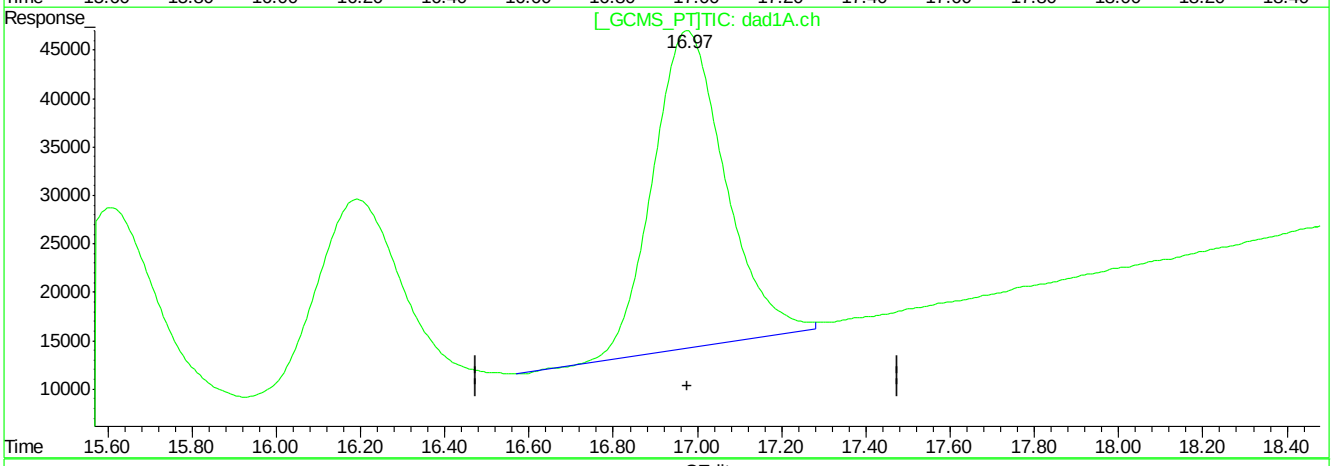
(+) = Expected Retention Time
PP389753.D GPP2401_020521PRI.M Fri Feb 05 08:38:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1B.ch Vial: 59
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1A.ch
Acq On : 04-Feb-2021, 18:13:27 Operator: jamesb
Sample : icv2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 8:37 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.98min 923.564ppb

response 3218383

(20) m-Nitrotoluene #2

16.98min 959.694ppb

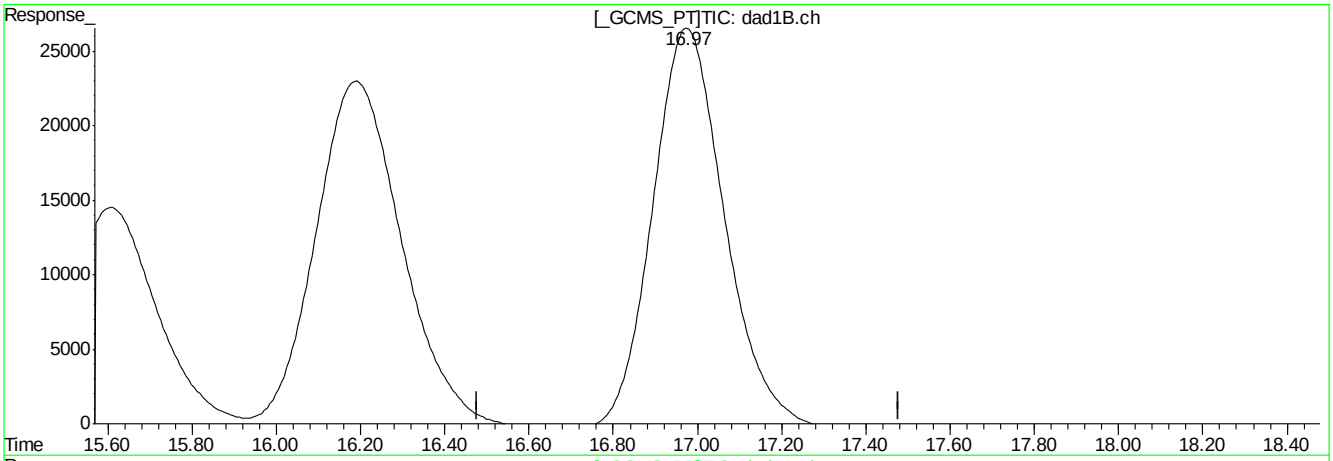
response 3885776

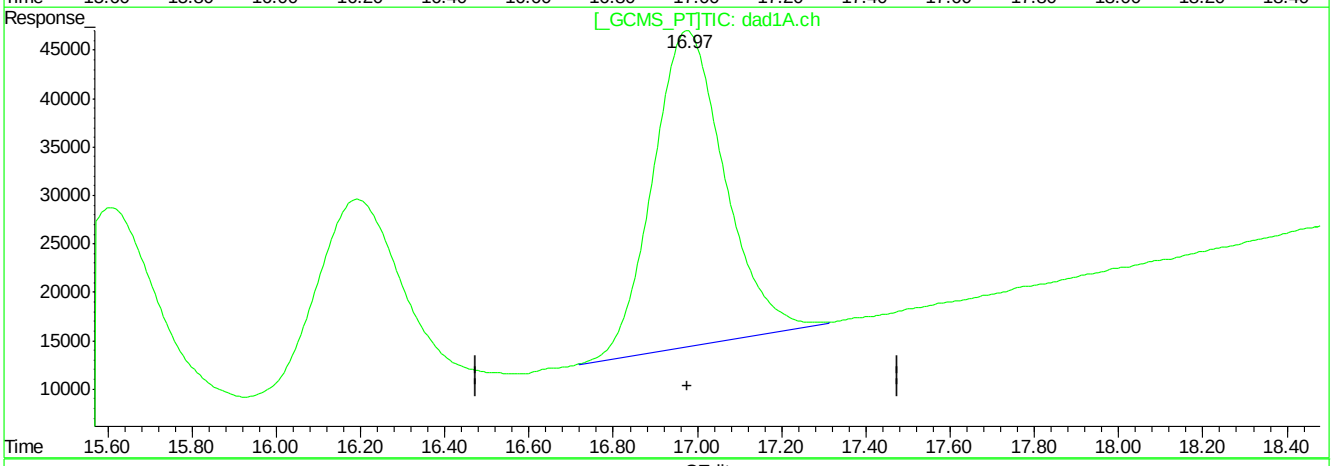
(+) = Expected Retention Time
PP389753.D GPP2401_020521PRI.M Fri Feb 05 08:38:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1B.ch Vial: 59
Signal #2 : C:\HPCHEM\2\DATA\GPP2401\PP389753.D\dad1A.ch
Acq On : 04-Feb-2021, 18:13:27 Operator: jamesb
Sample : icv2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 5 8:37 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.98min 923.564ppb

response 3218383

(20) m-Nitrotoluene #2

16.97min 953.428ppb m

response 3860406

(+) = Expected Retention Time
PP389753.D GPP2401_020521PRI.M Fri Feb 05 08:38:28 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:06

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1A.ch
Acq On : 05-Feb-2021, 15:21:17 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 08 08:00:54 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.51	11.51	2360791	4106872	963.743	951.955
	Spiked Amount 500.000	Range 70 - 136		Recovery =		192.75%#	190.39%#
	Target Compounds						
1)	TNX	1.35	1.35	3252235	5023328	951.233	986.765
2)	HMX	1.50	1.50	1528810	4344356	973.410	972.906
3)	DNX	1.75	1.75	2837022	4556707	971.031	972.029
4)	MNX	2.36	2.36	3099150	4835058	971.748	969.888
5)	RDX	3.00	3.00	1958780	3155672	949.550	966.796
6)	1,3,5-Trinitrobe	4.80	4.80	4211175	8221872	945.658	972.237
7)	1,3-Dinitrobenze	6.01	6.01	5546952	4004480	980.874	946.787
8)	3,5-Dinitroanili	6.43	6.43	4164384	7287720	972.701	957.693
9)	Nitrobenzene	7.60	7.60	3320131	3195059	960.565	955.517
10)	Nitroglycerin	0.00	9.26	0	1309389	N.D.	968.601 #
11)	Tetryl	9.78	9.78	3070102	4920214	960.128	955.904
12)	2,4,6-Trinitroto	10.17	10.17	3932958	4723121	992.861	990.916
13)	2-Amino-4,6-Dini	10.62	10.62	3571719	5232741	973.027	980.330
14)	4-Amino-2,6-Dini	11.14	11.14	2537924	5001847	982.575	959.037
16)	2,4-Dinitrotolue	12.17	12.17	4967750	3230195	963.626	989.788
17)	2,6-Dinitrotolue	12.64	12.64	2916806	3751544	963.077	1011.257
18)	o-Nitrotoluene	15.65	15.65	2366428	3153451	962.909	987.517
19)	p-Nitrotoluene	16.23	16.23	3712939	2960147	979.839	966.372
20)	m-Nitrotoluene	17.01	17.01	3399141	4001377	975.435	988.245m
21)	PETN	0.00	18.71	0	1418467	N.D.	1027.528m#

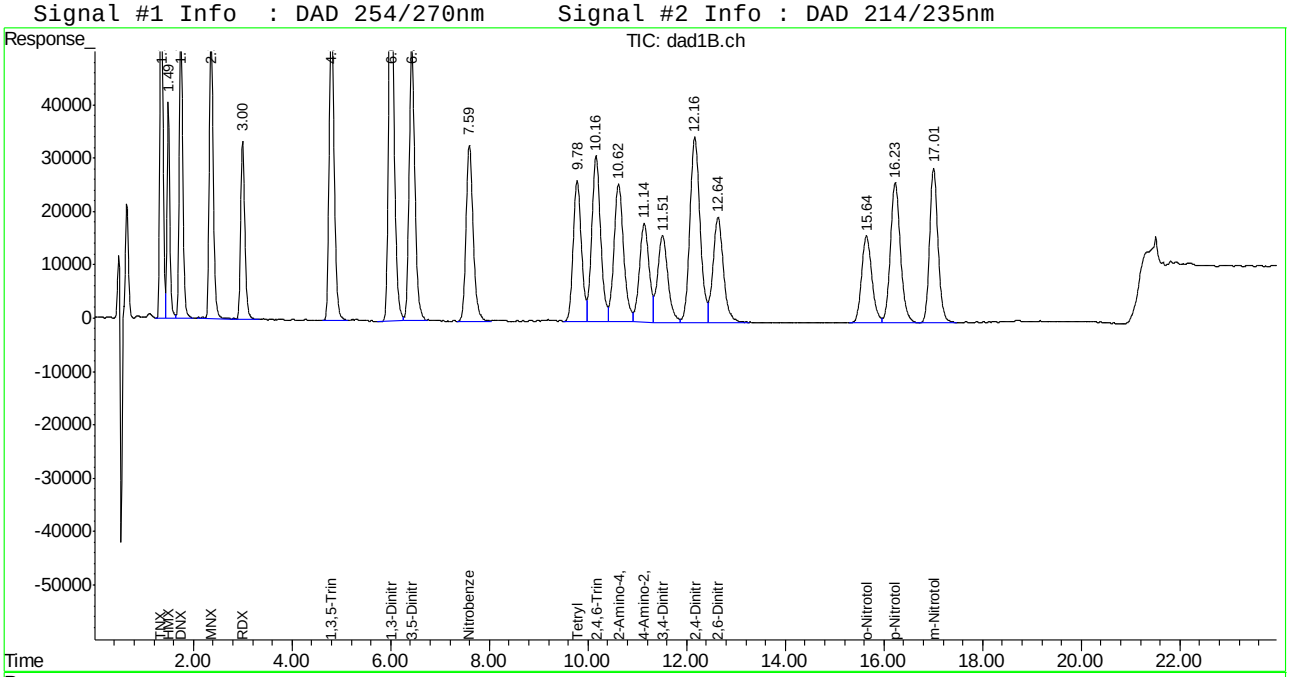
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389792.D GPP2401_020521PRI.M Mon Feb 08 10:09:46 2021 Page 1

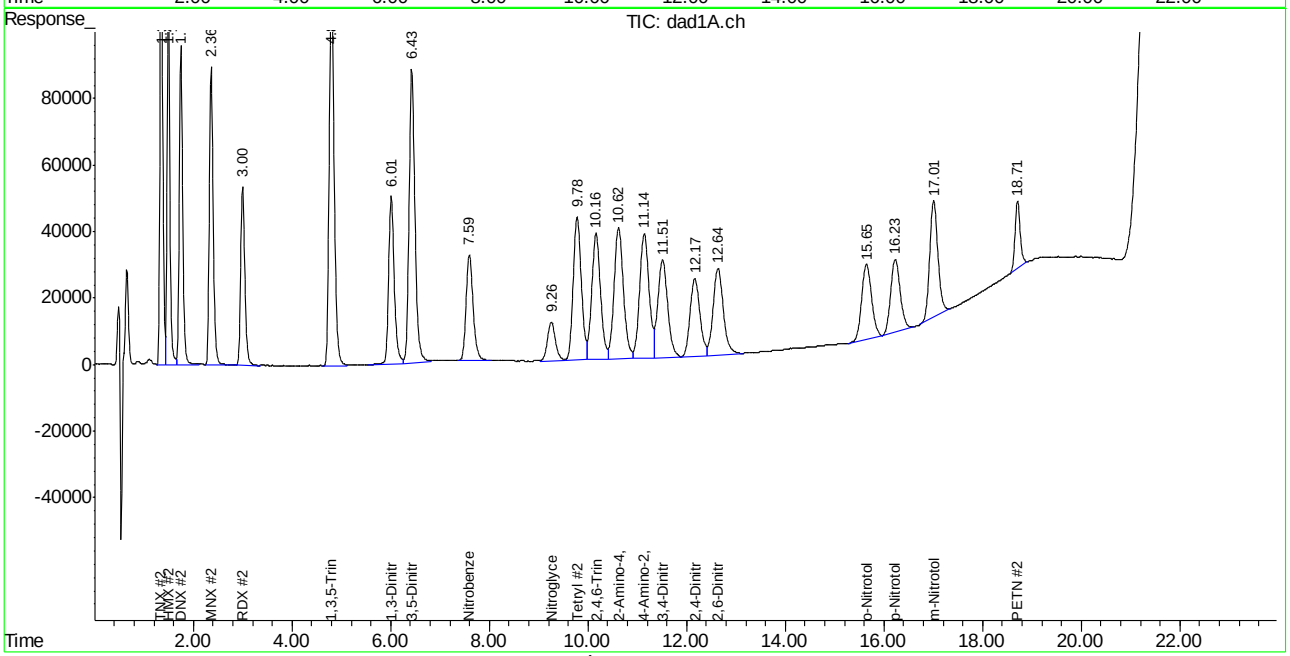
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1A.ch
Acq On : 05-Feb-2021, 15:21:17 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:03 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

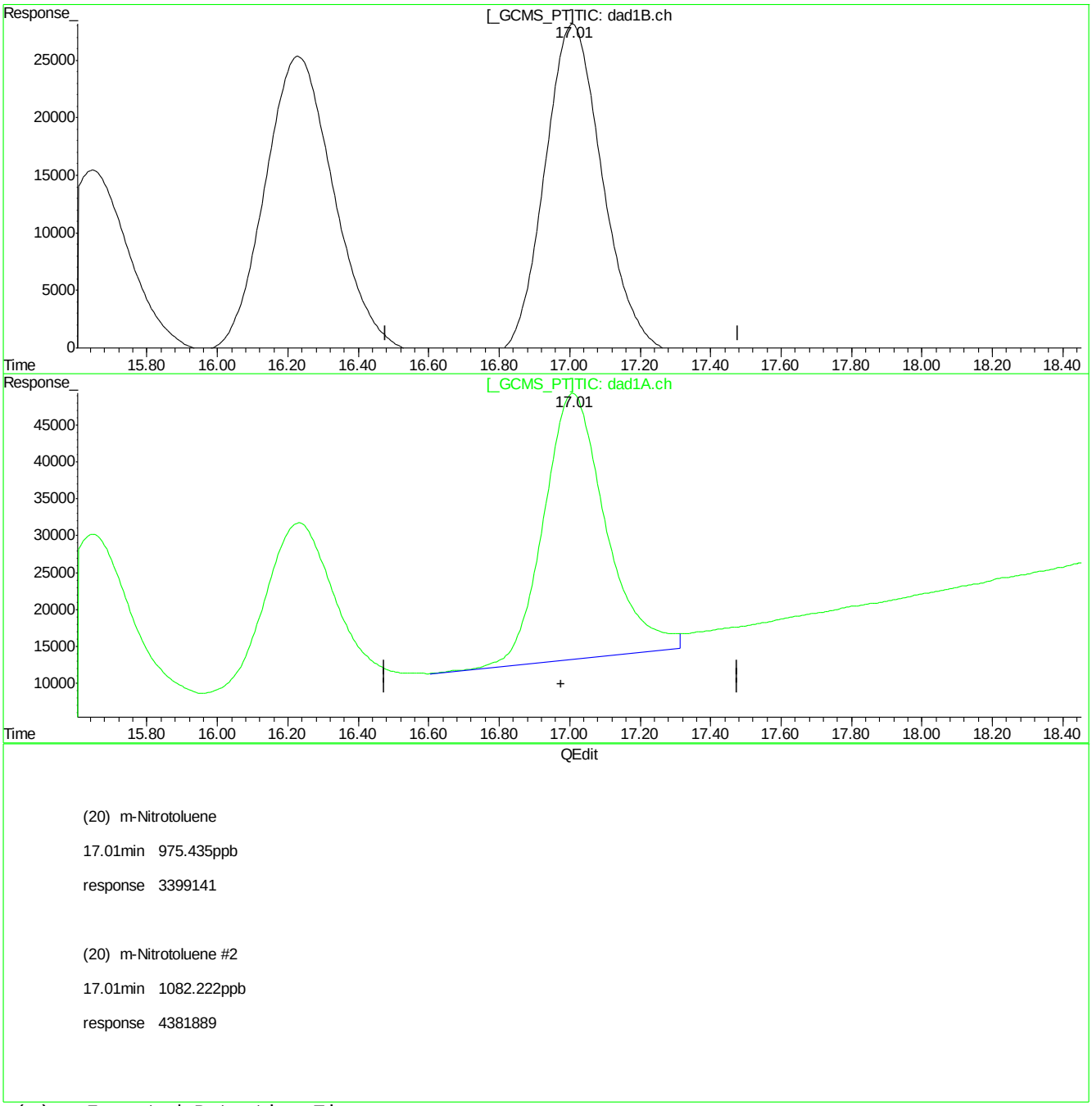
Sample Number: GPP2402-CC2401
Lab FileID: PP389792.D
Injection Time: 02/05/21 15:21
Method: SW846 8330B
Analyst approved: 02/08/21 10:54 James Boone
Supervisor approved: 02/08/21 13:06 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
m-Nitrotoluene	99-08-1	2	17.01	Poor instrument integration
PETN	78-11-5	2	18.71	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1A.ch
Acq On : 05-Feb-2021, 15:21:17 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:00 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration

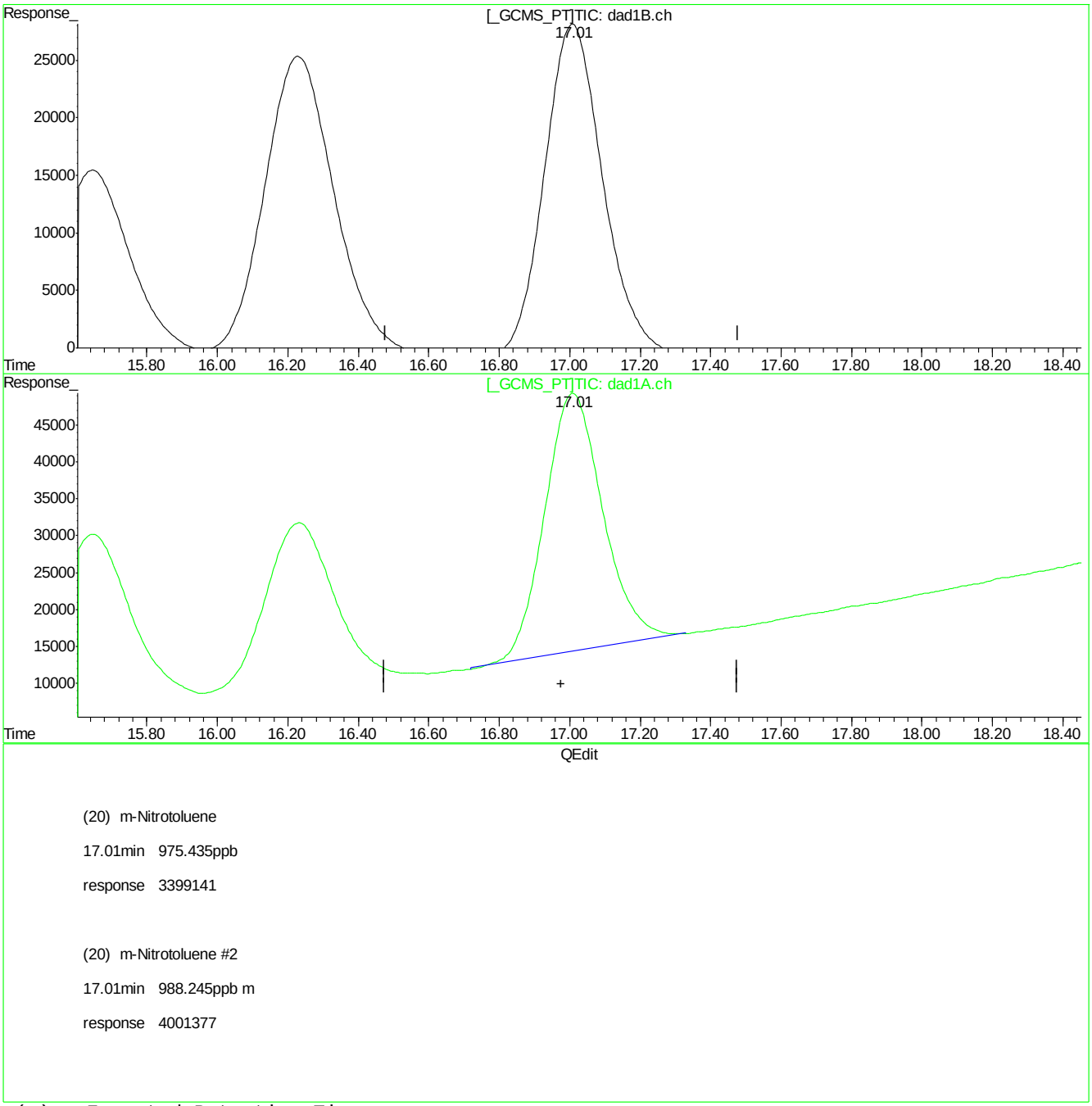


(+) = Expected Retention Time
PP389792.D GPP2401_020521PRI.M Mon Feb 08 08:03:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1A.ch
Acq On : 05-Feb-2021, 15:21:17 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:00 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration

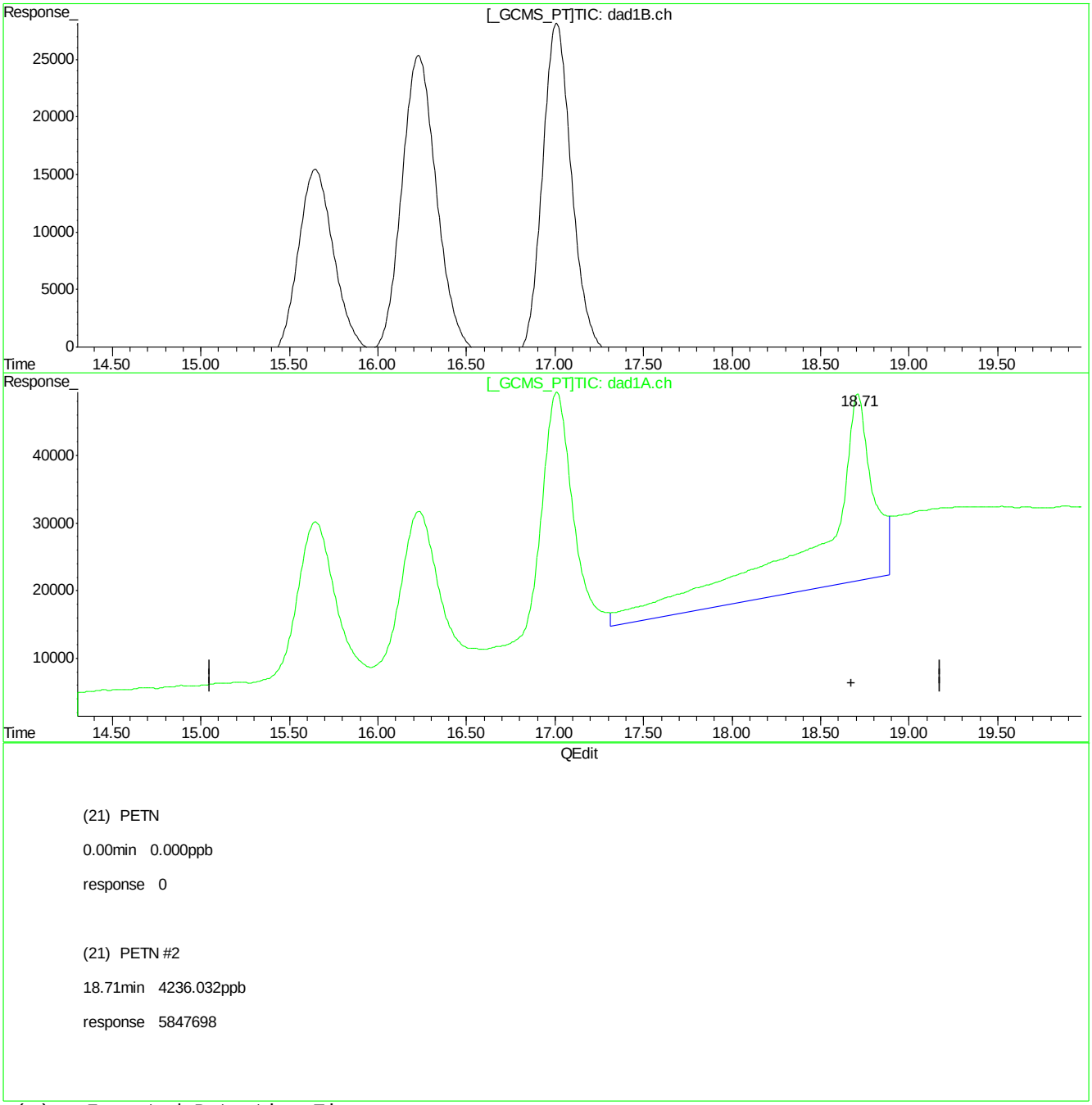


(+) = Expected Retention Time
PP389792.D GPP2401_020521PRI.M Mon Feb 08 08:03:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1A.ch
Acq On : 05-Feb-2021, 15:21:17 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:00 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration

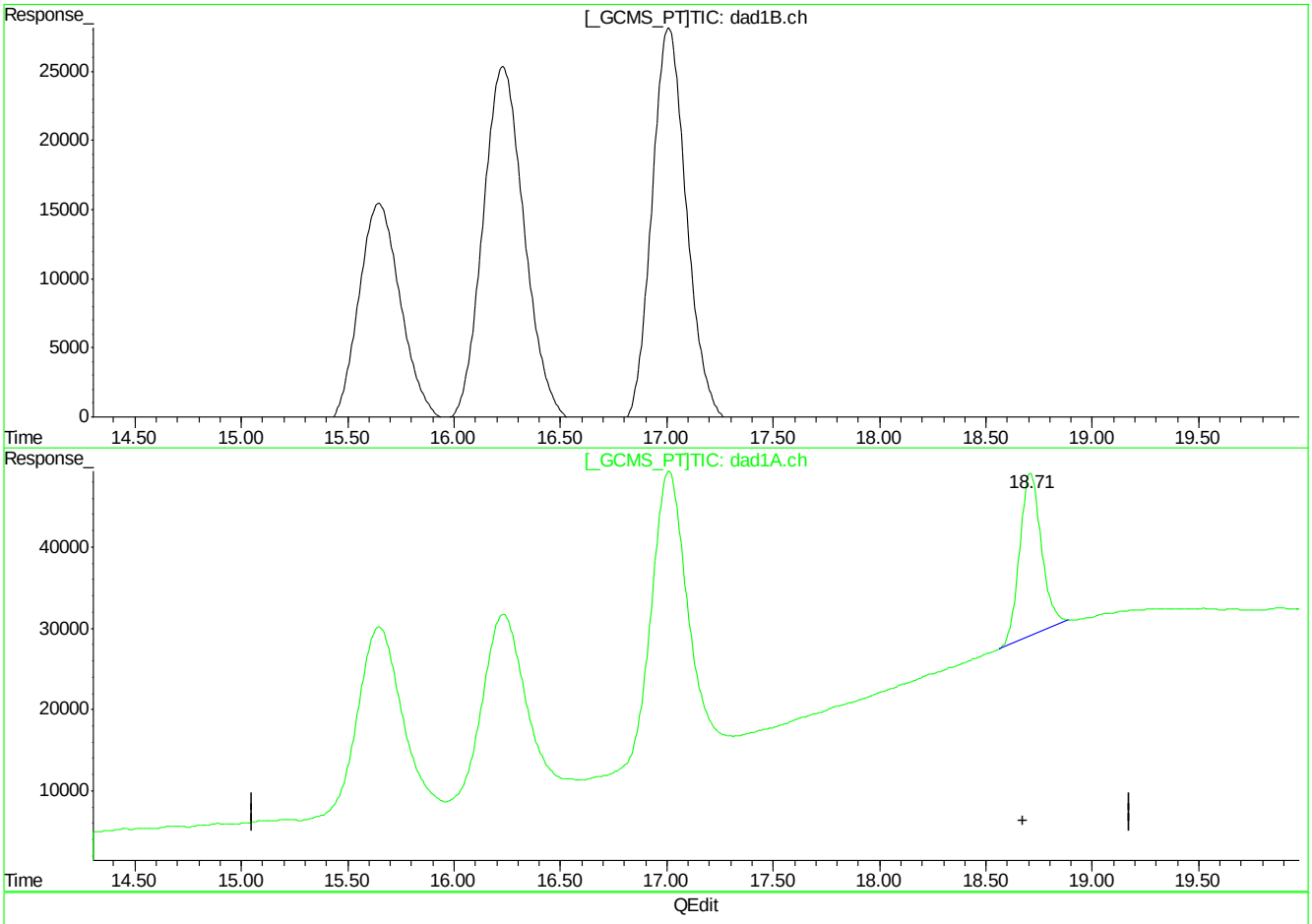


(+) = Expected Retention Time
PP389792.D GPP2401_020521PRI.M Mon Feb 08 08:03:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389792.D\dad1A.ch
Acq On : 05-Feb-2021, 15:21:17 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:00 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.71min 1027.528ppb m

response 1418467

(+) = Expected Retention Time
PP389792.D GPP2401_020521PRI.M Mon Feb 08 08:03:31 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:06

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1A.ch
Acq On : 05-Feb-2021, 21:33:14 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 08 08:01:06 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.51	11.51	2339431	4085926	955.023	947.088
	Spiked Amount 500.000	Range 70 - 136		Recovery =		191.00%#	189.42%#
	Target Compounds						
1)	TNX	1.35	1.35	3217842	4990762	941.173	980.368
2)	HMX	1.50	1.50	1511773	4321758	962.409	967.760
3)	DNX	1.75	1.75	2817155	4495221	964.156	958.726
4)	MNX	2.36	2.36	3063429	4761093	960.418	954.859
5)	RDX	3.00	3.00	1955814	3137837	948.112	961.264
6)	1,3,5-Trinitrobe	4.80	4.80	4191474	8183835	941.234	967.739
7)	1,3-Dinitrobenze	6.01	6.01	5499098	3993773	972.412	944.256
8)	3,5-Dinitroanili	6.43	6.43	4158681	7330670	971.369	963.337
9)	Nitrobenzene	7.60	7.60	3240365	3295276	937.488	985.488
10)	Nitroglycerin	0.00	9.26	0	1283015	N.D.	948.880 #
11)	Tetryl	9.78	9.78	3066605	4894288	959.034	950.868
12)	2,4,6-Trinitroto	10.17	10.16	3917570	4657739	988.976	977.199
13)	2-Amino-4,6-Dini	10.62	10.62	3545626	5193503	965.919	972.991
14)	4-Amino-2,6-Dini	11.14	11.14	2521553	4972767	976.237	953.429
16)	2,4-Dinitrotolue	12.16	12.16	4935876	3207854	957.443	982.942
17)	2,6-Dinitrotolue	12.63	12.64	2900253	3758781	957.611	1013.208
18)	o-Nitrotoluene	15.64	15.64	2313602	3045262	941.073	953.637
19)	p-Nitrotoluene	16.23	16.23	3652419	2915160	963.868	951.686
20)	m-Nitrotoluene	17.01	17.01	3330069	3994563	955.614	986.561m
21)	PETN	0.00	18.71	0	1435625	N.D.	1039.956m#

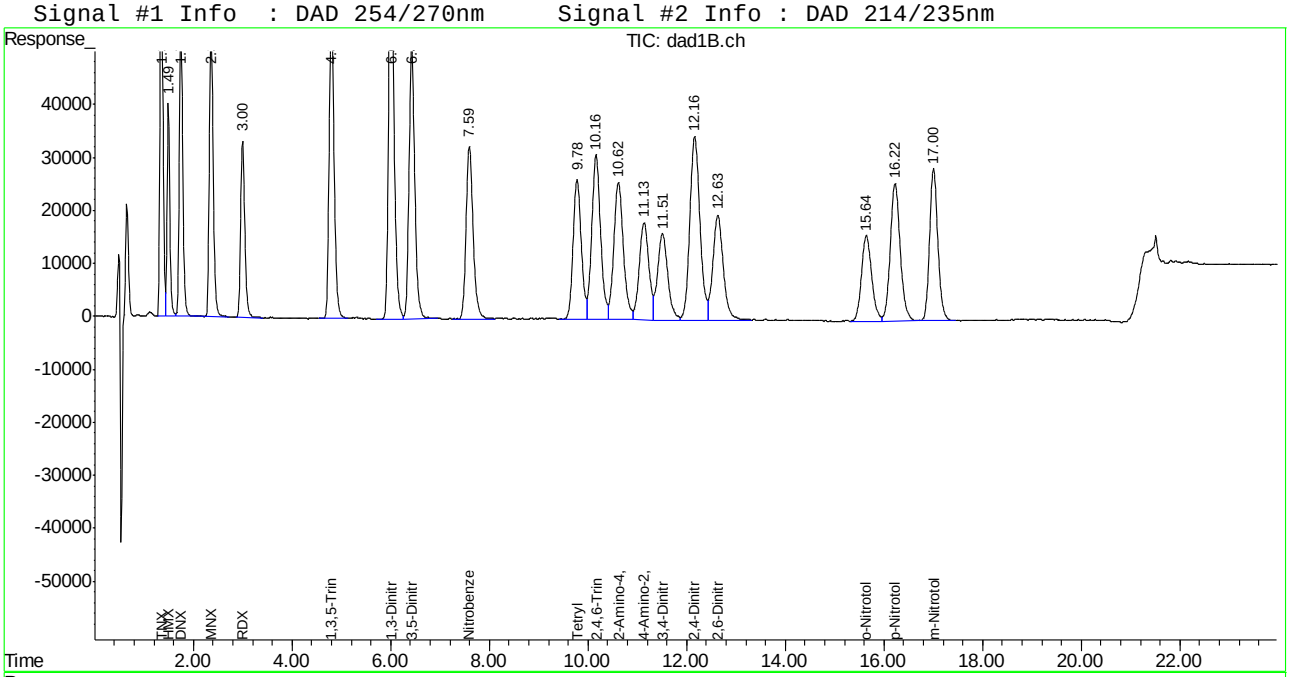
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP389804.D GPP2401_020521PRI.M Mon Feb 08 10:09:57 2021 Page 1

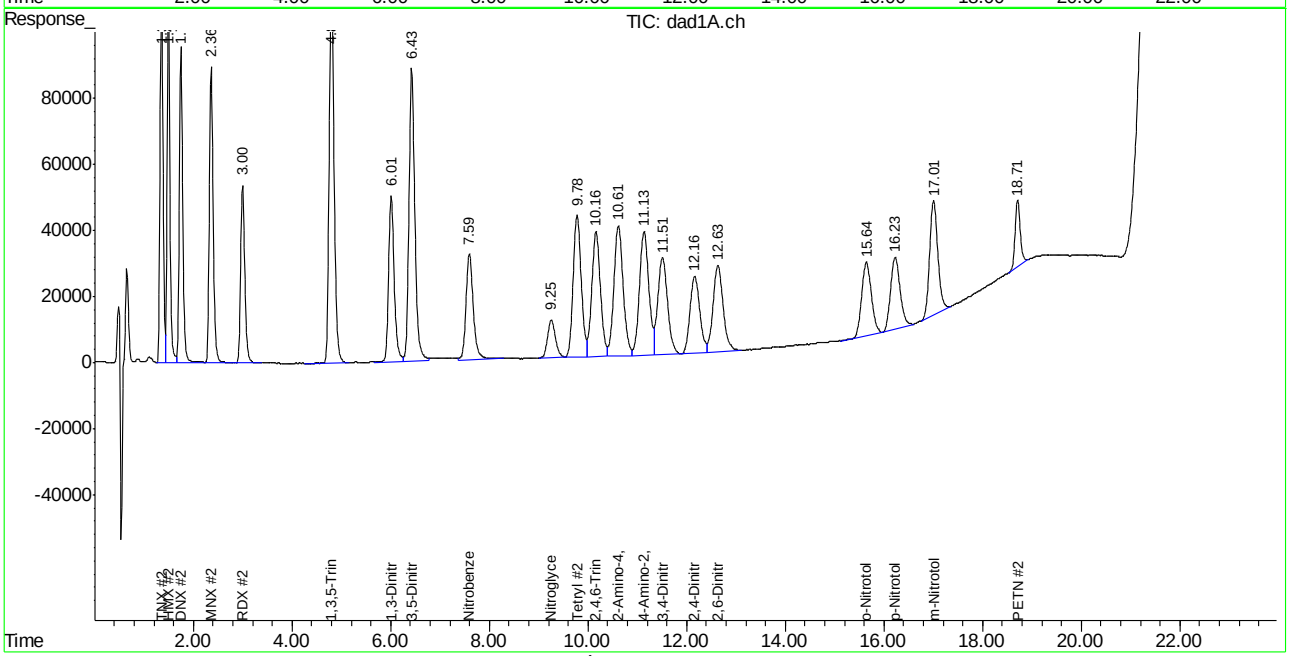
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1A.ch
Acq On : 05-Feb-2021, 21:33:14 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:02 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

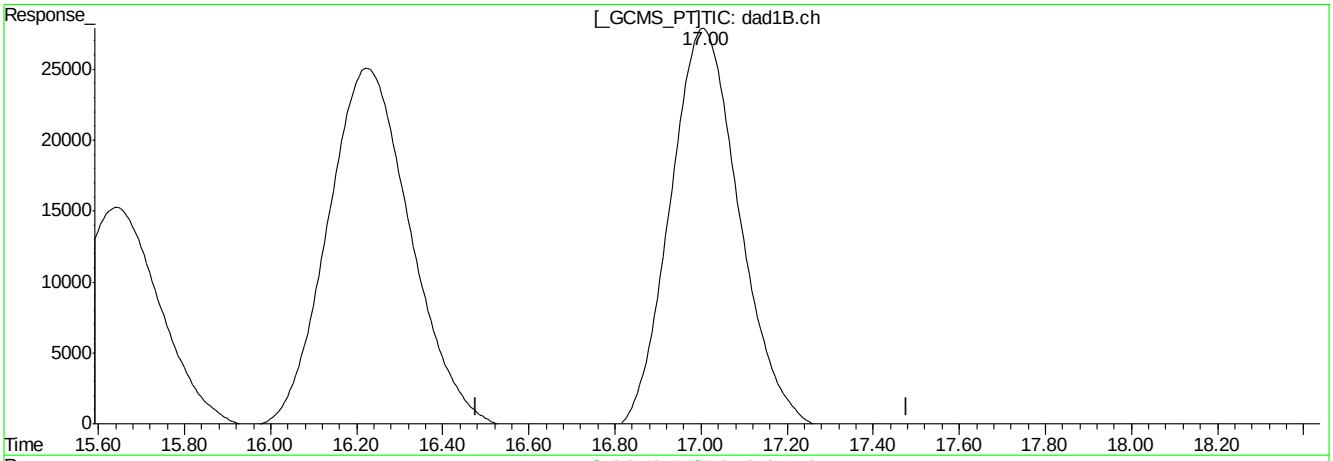
Sample Number: GPP2402-CC2401
Lab FileID: PP389804.D
Injection Time: 02/05/21 21:33
Method: SW846 8330B
Analyst approved: 02/08/21 10:54 James Boone
Supervisor approved: 02/08/21 13:06 Naresh Jiawan

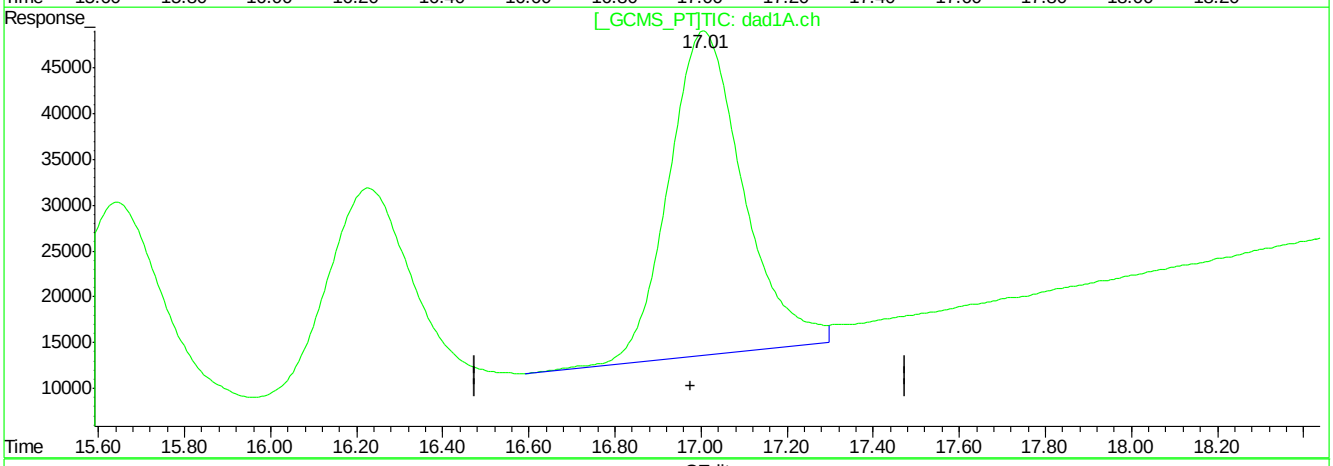
Parameter	CAS	Sig#	R.T. (min.)	Reason
m-Nitrotoluene	99-08-1	2	17.01	Poor instrument integration
PETN	78-11-5	2	18.71	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1A.ch
Acq On : 05-Feb-2021, 21:33:14 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.01min 955.614ppb

response 3330069

(20) m-Nitrotoluene #2

17.01min 1050.925ppb

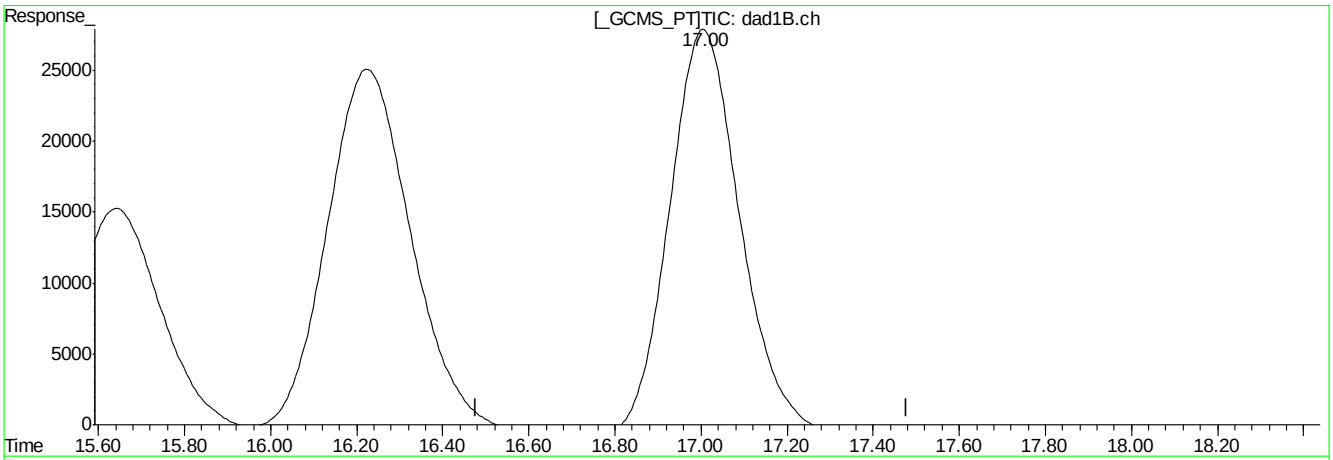
response 4255170

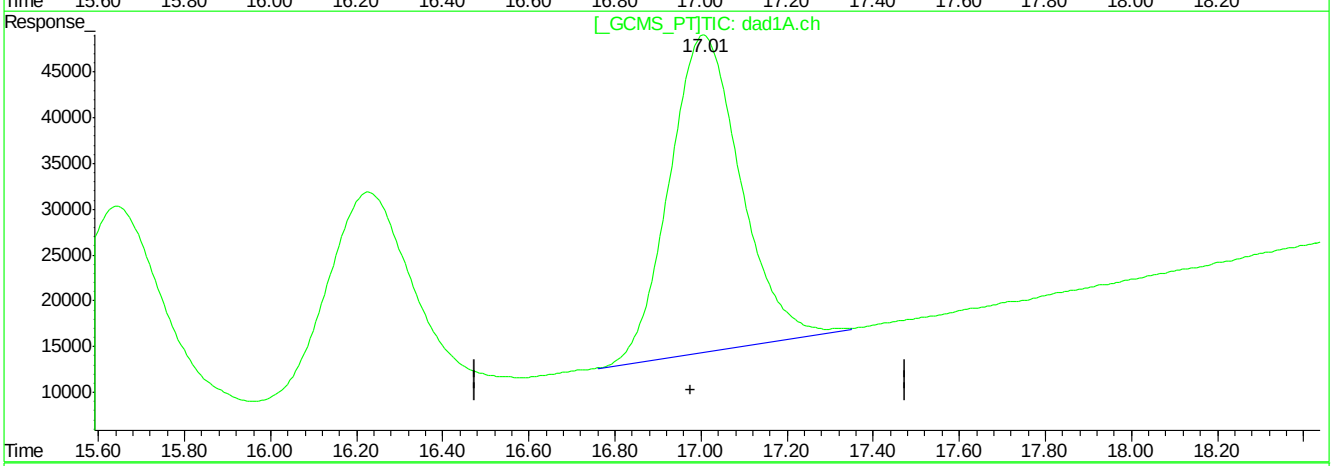
(+) = Expected Retention Time
PP389804.D GPP2401_020521PRI.M Mon Feb 08 08:01:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1A.ch
Acq On : 05-Feb-2021, 21:33:14 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.01min 955.614ppb

response 3330069

(20) m-Nitrotoluene #2

17.01min 986.561ppb m

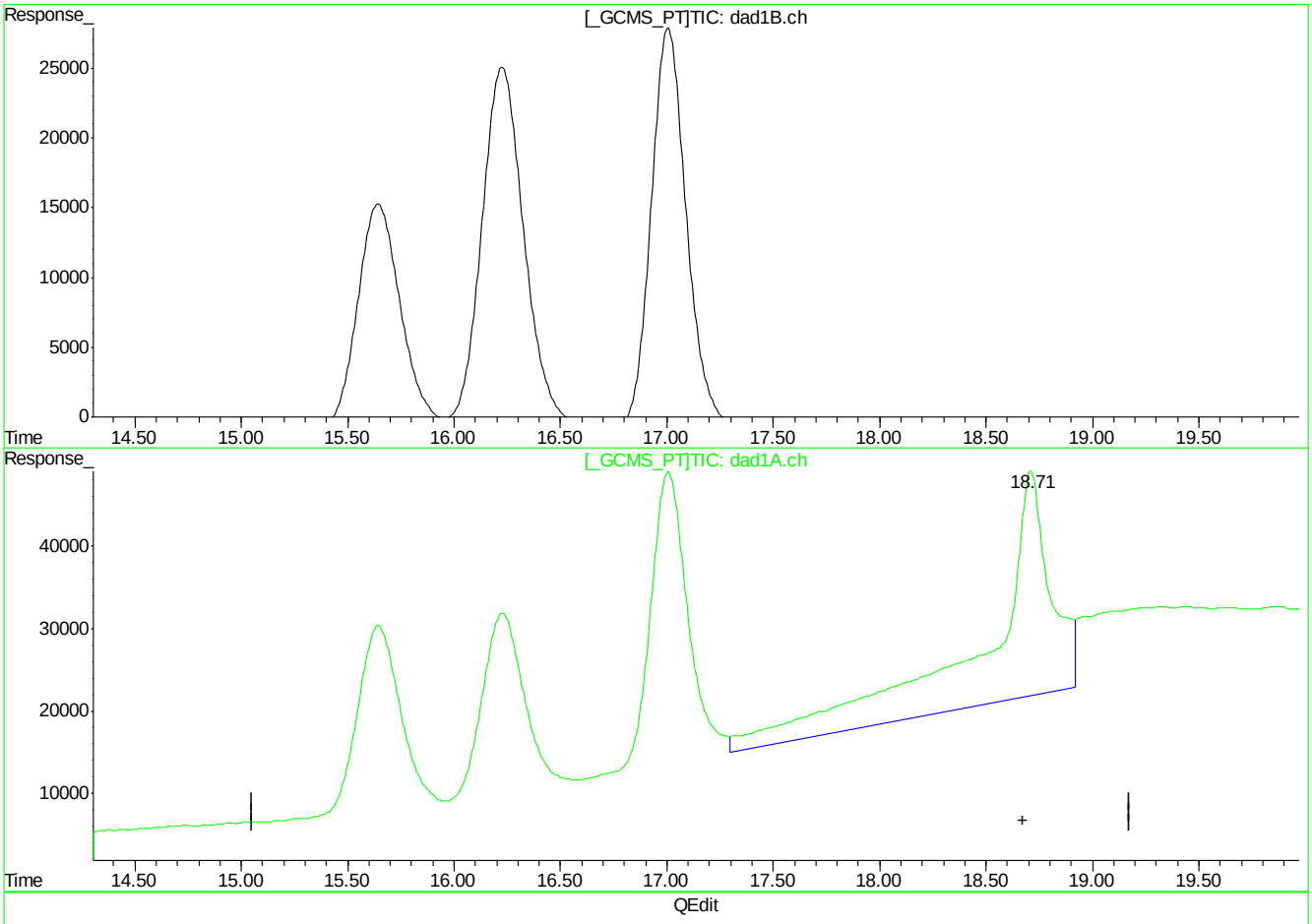
response 3994563

(+) = Expected Retention Time
PP389804.D GPP2401_020521PRI.M Mon Feb 08 08:02:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1A.ch
Acq On : 05-Feb-2021, 21:33:14 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.71min 4233.484ppb

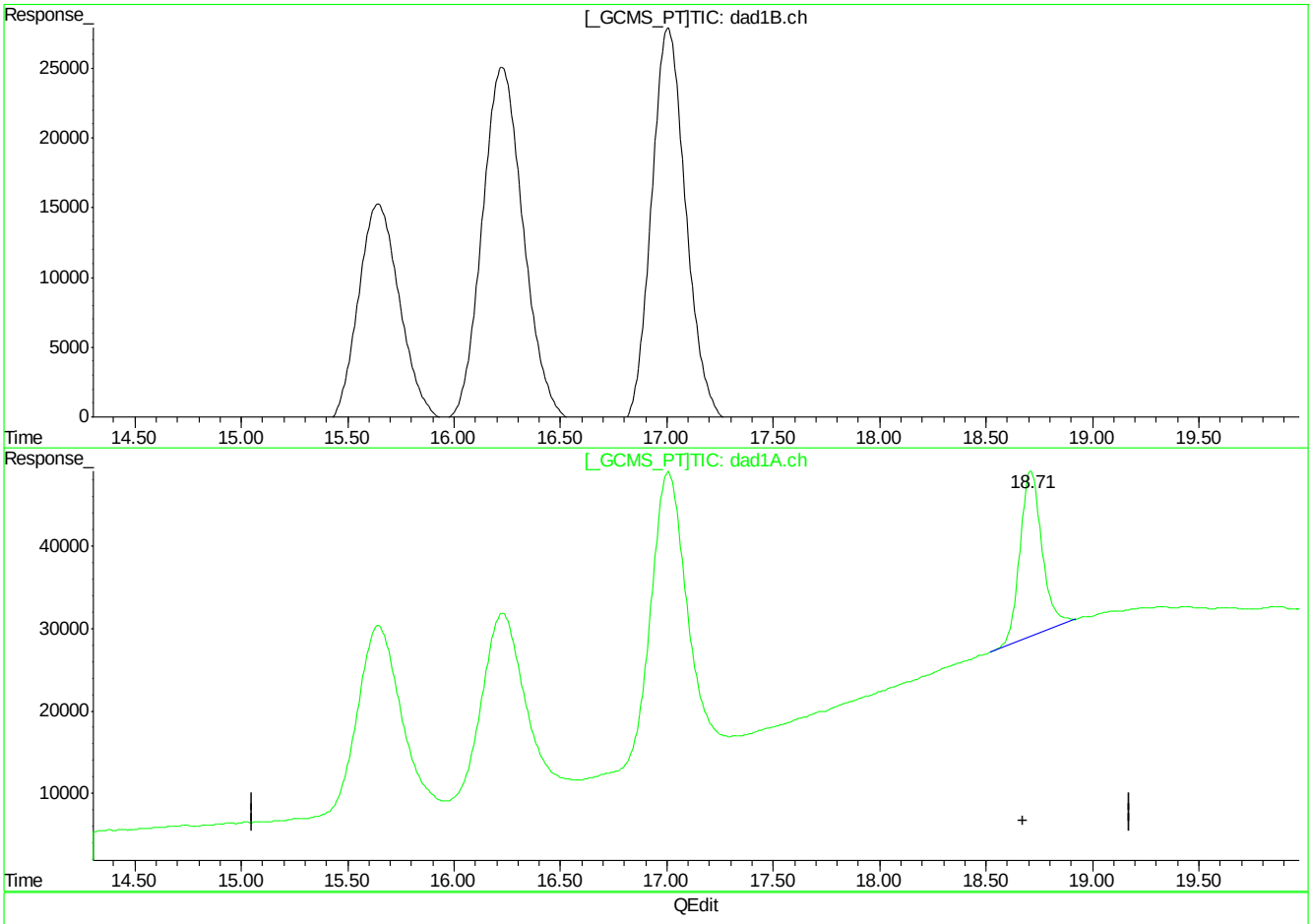
response 5844182

(+) = Expected Retention Time
PP389804.D GPP2401_020521PRI.M Mon Feb 08 08:02:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389804.D\dad1A.ch
Acq On : 05-Feb-2021, 21:33:14 Operator: jamesb
Sample : cc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
PP389804.D GPP2401_020521PRI.M Mon Feb 08 08:02:13 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/08/21 13:06

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1A.ch
Acq On : 06-Feb-2021, 03:44:57 Operator: jamesb
Sample : ecc2401-1000 Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 08 08:01:18 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.45	11.45	2304558	4021411	940.787	932.096
	Spiked Amount 500.000	Range 70 - 136		Recovery =		188.16%#	186.42%#
	Target Compounds						
1)	TNX	1.35	1.35	3188982	4938574	932.732	970.116
2)	HMX	1.49	1.49	1499219	4288092	954.305	960.096
3)	DNX	1.74	1.74	2809311	4512854	961.442	962.540
4)	MNX	2.35	2.35	3045096	4749625	954.604	952.530
5)	RDX	2.99	2.99	1949725	3135479	945.161	960.533
6)	1,3,5-Trinitrobe	4.79	4.79	4121106	8055431	925.433	952.555
7)	1,3-Dinitrobenze	5.99	5.99	5477312	3883350	968.559	918.148
8)	3,5-Dinitroanili	6.41	6.41	4124305	7101402	963.339	933.209
9)	Nitrobenzene	7.57	7.57	3142060	3024278	909.047	904.443
10)	Nitroglycerin	0.00	9.22	0	1262176	N.D.	933.304 #
11)	Tetryl	9.73	9.73	2986401	4832726	933.951	938.907
12)	2,4,6-Trinitroto	10.12	10.12	3837085	4614461	968.658	968.120
13)	2-Amino-4,6-Dini	10.57	10.57	3484391	5138037	949.237	962.616
14)	4-Amino-2,6-Dini	11.08	11.08	2475962	4934874	958.586	946.123
16)	2,4-Dinitrotolue	12.11	12.11	4894323	3172789	949.383	972.198
17)	2,6-Dinitrotolue	12.58	12.58	2890214	3731046	954.297	1005.732
18)	o-Nitrotoluene	15.59	15.59	2251525	2972560	915.434	930.870
19)	p-Nitrotoluene	16.17	16.17	3581425	2820631	945.133	920.826
20)	m-Nitrotoluene	16.96	16.96	3247506	3842716	931.921	949.059m
21)	PETN	0.00	18.68	0	1408221	N.D.	1020.106m#

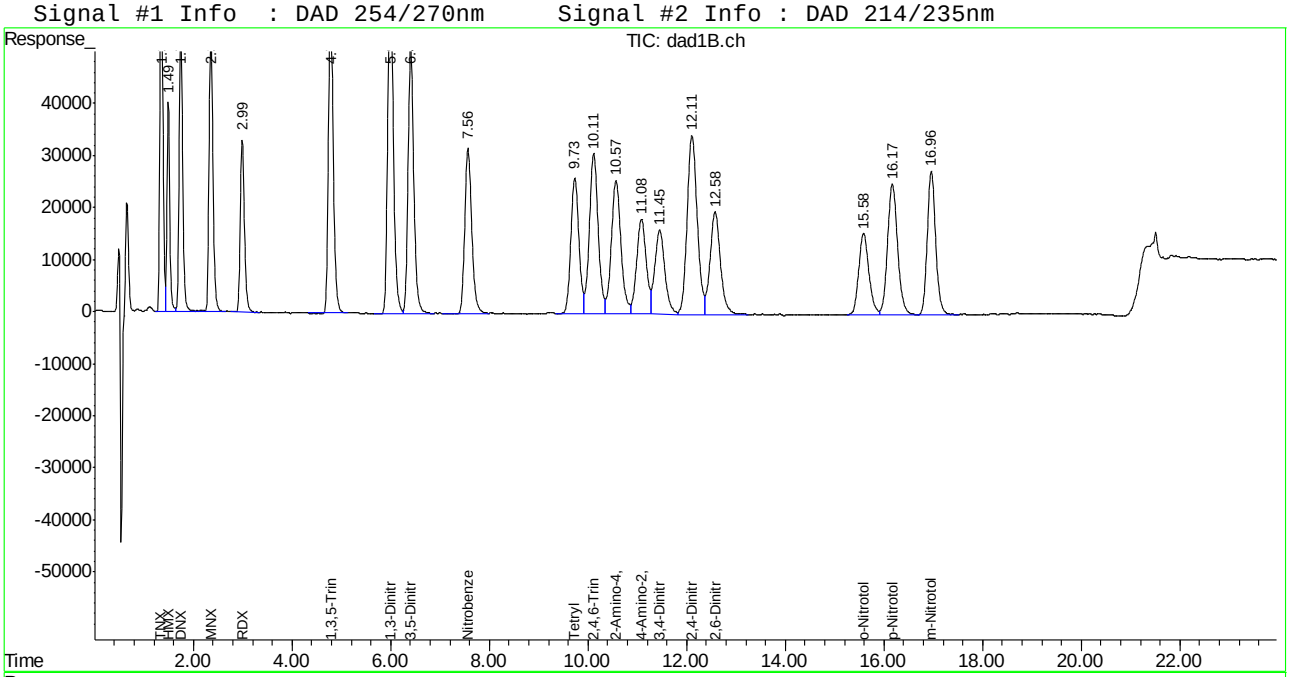
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

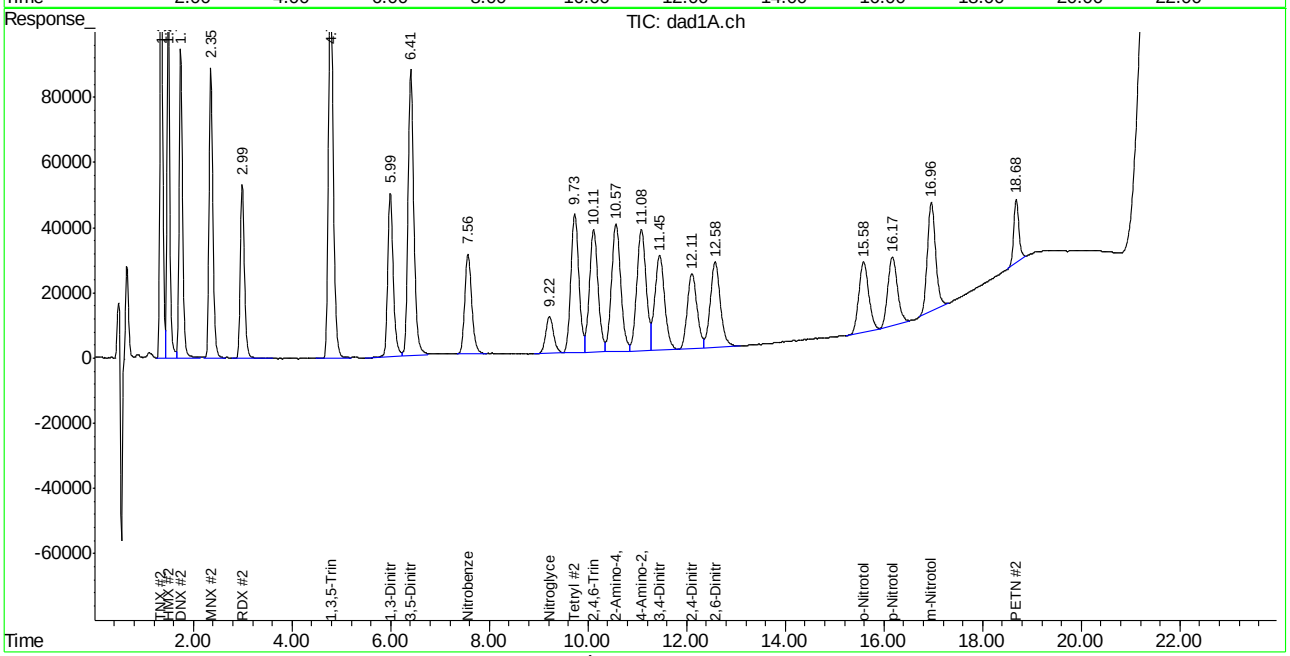
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1A.ch
Acq On : 06-Feb-2021, 03:44:57 Operator: jamesb
Sample : ecc2401-1000 Inst : G1315B
Misc : op83930,GPP2402,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:22 2021 Quant Results File: GPP2401_020521PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

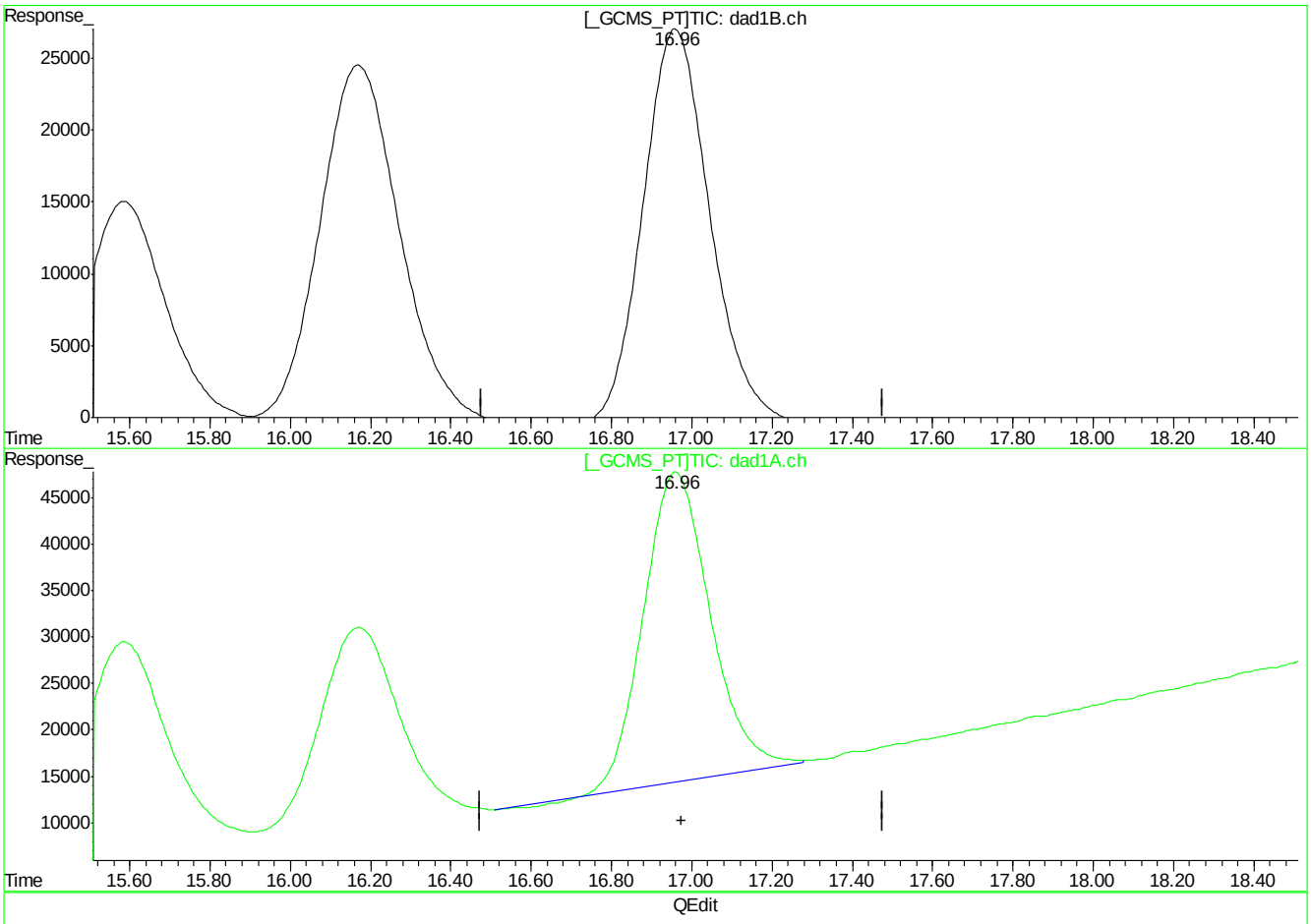
Sample Number:	GPP2402-ECC2401	**Method:**	SW846 8330B
Lab FileID:	PP389816.D	**Analyst approved:**	02/08/21 10:54 James Boone
Injection Time:	02/06/21 03:44	**Supervisor approved:**	02/08/21 13:06 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
m-Nitrotoluene	99-08-1	2	16.96	Poor instrument integration
PETN	78-11-5	2	18.68	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1A.ch
Acq On : 06-Feb-2021, 03:44:57 Operator: jamesb
Sample : ecc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.96min 931.921ppb

response 3247506

(20) m-Nitrotoluene #2

16.96min 945.501ppb

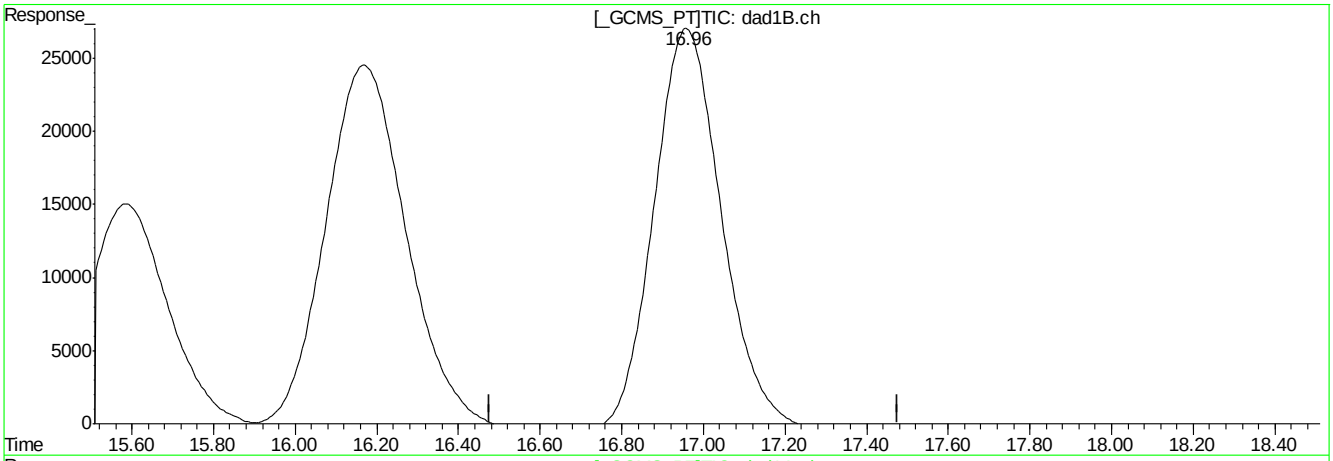
response 3828310

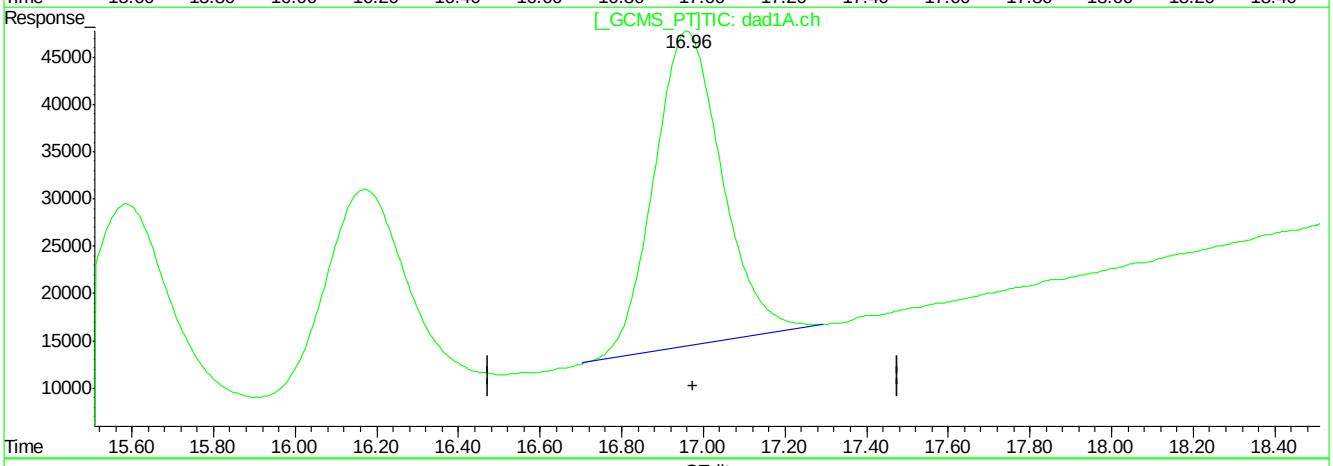
(+) = Expected Retention Time
PP389816.D GPP2401_020521PRI.M Mon Feb 08 08:21:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1A.ch
Acq On : 06-Feb-2021, 03:44:57 Operator: jamesb
Sample : ecc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.96min 931.921ppb

response 3247506

(20) m-Nitrotoluene #2

16.96min 949.059ppb m

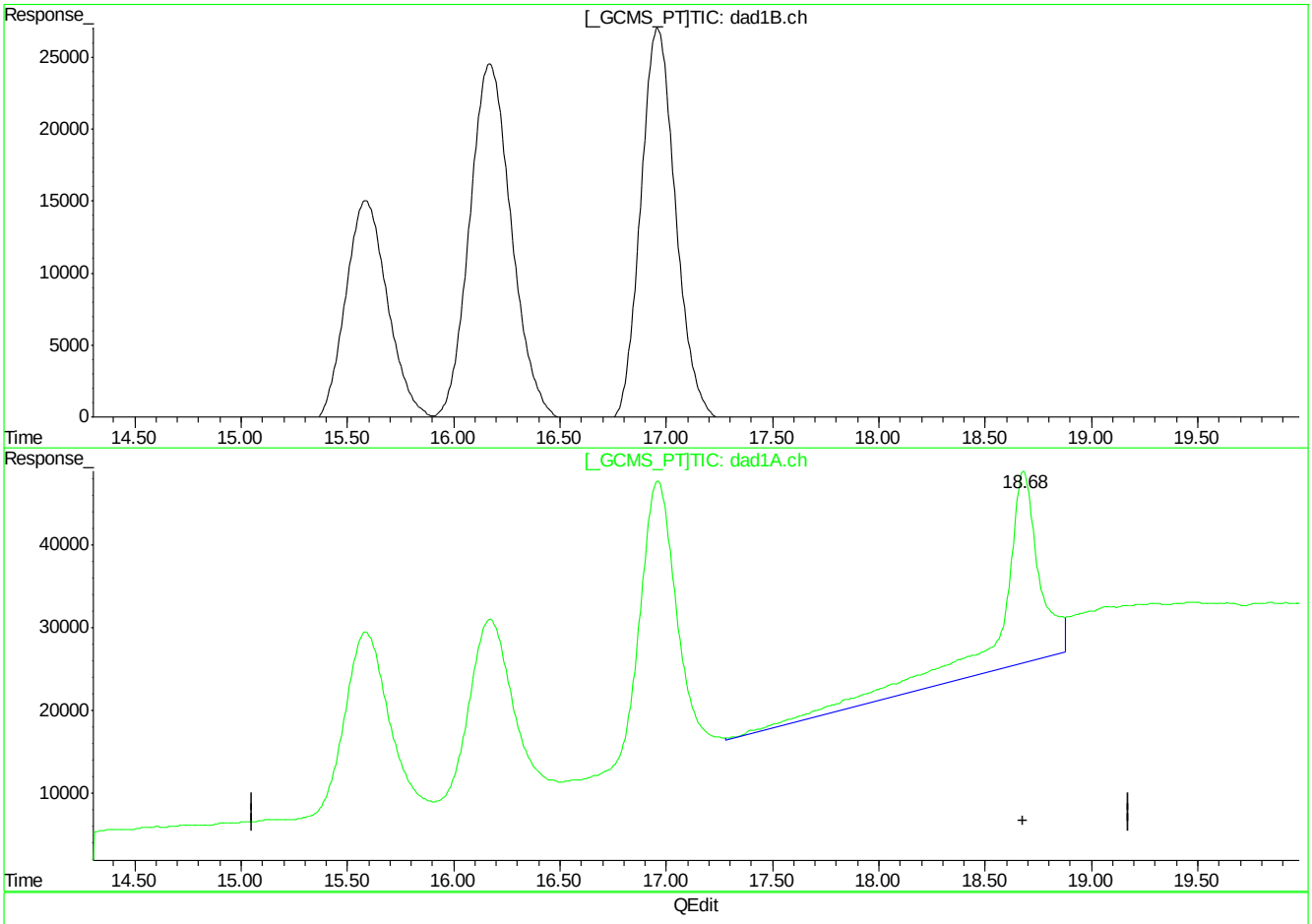
response 3842716

(+) = Expected Retention Time
PP389816.D GPP2401_020521PRI.M Mon Feb 08 08:22:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1A.ch
Acq On : 06-Feb-2021, 03:44:57 Operator: jamesb
Sample : ecc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.68min 2186.331ppb

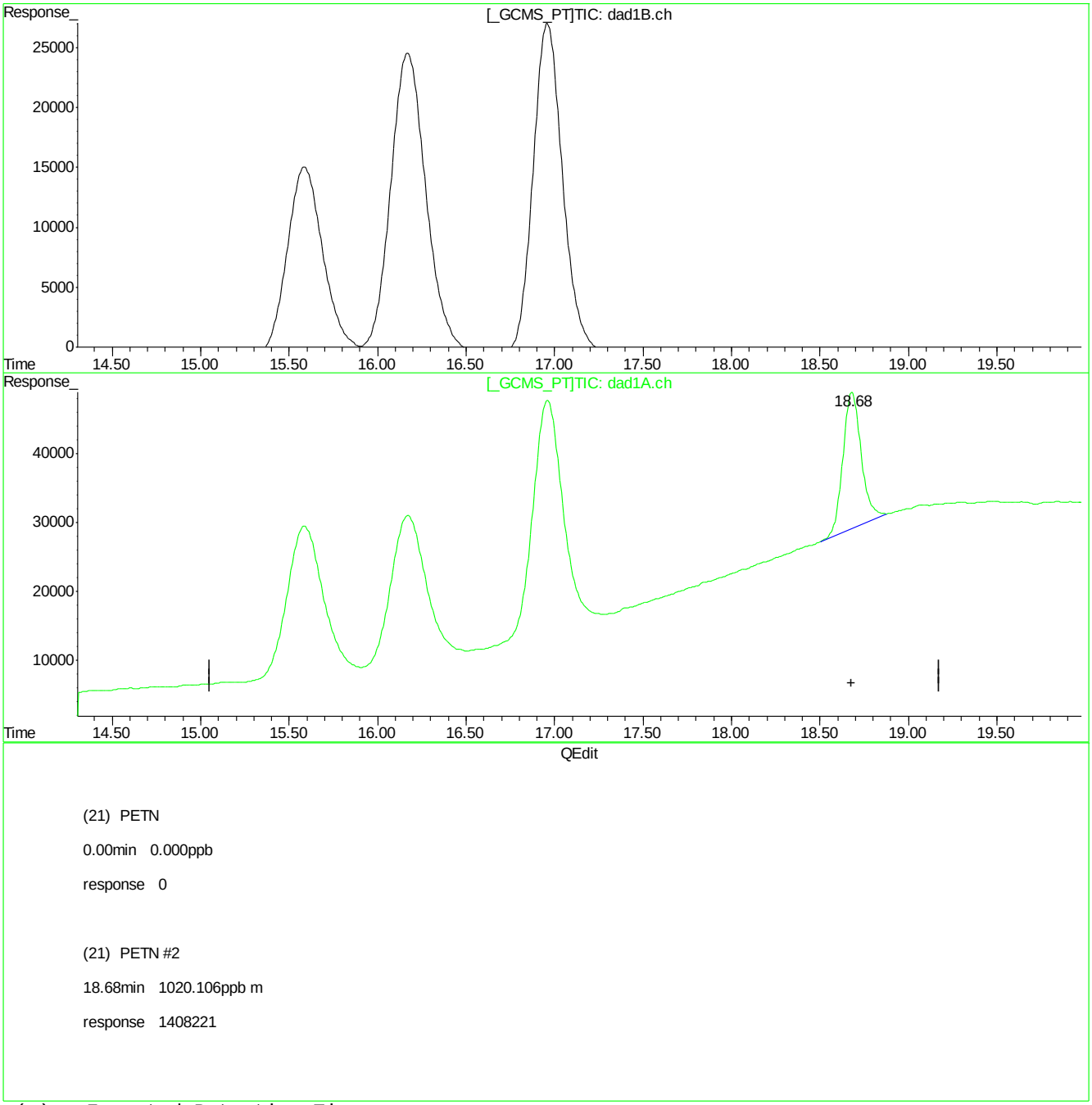
response 3018155

(+) = Expected Retention Time
PP389816.D GPP2401_020521PRI.M Mon Feb 08 08:22:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2402\PP389816.D\dad1A.ch
Acq On : 06-Feb-2021, 03:44:57 Operator: jamesb
Sample : ecc2401-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 8 8:01 2021 Quant Results File: GPP2401_020521PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2401_020521PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Fri Feb 05 08:37:51 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
PP389816.D GPP2401_020521PRI.M Mon Feb 08 08:22:15 2021

DATE	1/8/2021	METHODS	8330	IC/ICC STD LOT	LC1406
COLUMN TYPE	Bonus-RP	ACQ. METHOD	8330RPB3	ICV STD LOT	LC1399
AMOUNT INJ	100uL	PROC. METHOD	8330RPB.M_092519.M	SOLVENT	204903
INSTRUMENT	HPLC3-GG	CALIB. DATE	1/8/2020	SOLVENT	204513
ANALYST	JB	RUN BATCH	GGG2921	HEAD PRESSURE	102

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG620466	1	cbb	8330	1	op83582,GGG2921,1000,,,10,1,water	/
GG620467	4	ic2921-20	8330	2/500	op83582,GGG2921,1000,,,10,1,water	/
GG620468	5	ic2921-50	8330	5/500	op83582,GGG2921,1000,,,10,1,water	/
GG620469	6	ic2921-100	8330	10/500	op83582,GGG2921,1000,,,10,1,water	/
GG620470	7	ic2921-200	8330	20/500	op83582,GGG2921,1000,,,10,1,water	/
GG620471	8	ic2921-500	8330	50/500	op83582,GGG2921,1000,,,10,1,water	/
GG620472	9	icc2921-1000	8330	100/500	op83582,GGG2921,1000,,,10,1,water	/
GG620473	10	ic2921-2500	8330	250/500	op83582,GGG2921,1000,,,10,1,water	/
GG620474	11	ic2921-5000	8330	1	op83582,GGG2921,1000,,,10,1,water	/
GG620475	12	icv2921-1000	8330	1	op83582,GGG2921,1000,,,10,1,water	passes DOD criteria
GG620476	1	cbb	8330	1	op83582,GGG2921,1000,,,10,1,water	/
GG620477	13	op83582-MB	8330	1	op83582,GGG2921,1000,,,10,1,water	/
GG620478	14	FA82030-1Acf	8330	1	op83582,GGG2921,1050,,,10,1,water	/
GG620479	15	FA82030-2Acf	8330	1	op83582,GGG2921,1050,,,10,1,water	/
GG620480	16	FA82067-1cf	8330	1	op83582,GGG2921,1060,,,10,1,water	/
GG620481	17	FA82067-2cf	8330	1	op83582,GGG2921,1060,,,10,1,water	/
GG620482	18	FA82067-3cf	8330	1	op83582,GGG2921,1040,,,10,1,water	/
GG620483	19	FA82089-1cf	8330	1	op83582,GGG2921,1050,,,10,1,water	/
GG620484	20	FA82089-2cf	8330	1	op83582,GGG2921,1050,,,10,1,water	/
GG620485	21	op83606-MB	8330	1	op83606,GGG2921,1000,,,10,1,water	/
GG620486	22	FA82011-2cf	8330	1	op83606,GGG2921,1050,,,10,1,water	/
GG620487	2	cc2921-1000	8330	100/500	op83582,GGG2921,1000,,,10,1,water	PASS
GG620488	1	cbb	8330	1	op83582,GGG2921,1000,,,10,1,water	/
GG620489	23	FA82011-3cf	8330	1	op83606,GGG2921,1060,,,10,1,water	/
GG620490	24	op83588-MB	8330	1	op83588,GGG2921,2,,,20,1,soil	/
GG620491	25	FA82029-1cf	8330	1	op83588,GGG2921,2.32,,,20,1,soil	/
GG620492	26	FA82029-2cf	8330	1	op83588,GGG2921,2.08,,,20,1,soil	/
GG620493	27	FA82029-3cf	8330	1	op83588,GGG2921,2.3,,,20,1,soil	/
GG620494	28	op83632-MB	8330	1	op83632,GGG2921,1000,,,10,1,water	/
GG620495	29	FA82171-1cf	8330	1	op83632,GGG2921,1050,,,10,1,water	/
GG620496	30	FA82171-2cf	8330	1	op83632,GGG2921,1060,,,10,1,water	X-MNT ONT
GG620497	31	FA82171-2cf,10	8330	10	op83632,GGG2921,1060,,,10,10,water	/

GG620498	32	FA82171-3cf	8330	1	op83632,GGG2921,1050,,,10,1,water	X-NB
GG620499	2	cc2921-1000	8330	100/500	op83582,GGG2921,1000,,,10,1,water	PASS
GG620500	1	cbb	8330	1	op83582,GGG2921,1000,,,10,1,water	/
GG620501	33	FA82171-3cf,10	8330	10	op83632,GGG2921,1050,,,10,10,water	/
GG620502	34	FA82171-4cf	8330	1	op83632,GGG2921,1060,,,10,1,water	/
GG620503	35	FA82171-5cf	8330	1	op83632,GGG2921,1000,,,10,1,water	/
GG620504	36	FA82171-5cf,10	8330	10	op83632,GGG2921,1000,,,10,10,water	/
GG620505	37	FA82171-6cf	8330	1	op83632,GGG2921,1000,,,10,1,water	X-135
GG620506	2	ecc2921-1000	8330	100/500	op83632,GGG2921,1000,,,10,1,water	PASS

DATE	2/5/2021	METHODS	8330	IC/ICC STD LOT	LC1426
COLUMN TYPE	Bonus-RP	ACQ. METHOD	8330RPB3	ICV STD LOT	LC1399
AMOUNT INJ	100uL	PROC. METHOD	8330RPB.M_092519.M	SOLVENT	204903
INSTRUMENT	HPLC3-GG	CALIB. DATE	1/8/2020	SOLVENT	204513
ANALYST	JB	RUN BATCH	GGG2934	HEAD PRESSURE	113

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG620645	1	ccb	8330	1	op83940,GGG2934,1000,,,10,1,water	/
GG620646	2	cc2921-1000	8330	100/500	op83940,GGG2934,1000,,,10,1,water	(Ont FH)
GG620647	1	ccb	8330	1	op83940,GGG2934,1000,,,10,1,water	/
GG620648	3	op83940-MB	8330	1	op83940,GGG2934,1000,,,10,1,water	/
GG620649	4	FA82696-1cf	8330	1	op83940,GGG2934,1050,,,10,1,water	/
GG620650	5	FA82696-2cf	8330	1	op83940,GGG2934,1060,,,10,1,water	DNR
GG620651	6	FA82696-3cf	8330	1	op83940,GGG2934,1050,,,10,1,water	/
GG620652	7	FA82701-1cf	8330	1	op83940,GGG2934,1040,,,10,1,water	x-13 35
GG620653	8	FA82701-2cf	8330	1	op83940,GGG2934,1060,,,10,1,water	/
GG620654	9	FA82701-3cf	8330	1	op83940,GGG2934,1050,,,10,1,water	/
GG620655	10	op83930-MB	8330	1	op83930,GGG2934,1000,,,10,1,water	/
GG620656	11	FA82653-1cf	8330	1	op83930,GGG2934,1050,,,10,1,water	/
GG620657	12	FA82653-2cf	8330	1	op83930,GGG2934,1060,,,10,1,water	/
GG620658	2	cc2921-1000	8330	100/500	op83940,GGG2934,1000,,,10,1,water	PASS
GG620659	1	ccb	8330	1	op83940,GGG2934,1000,,,10,1,water	/
GG620660	13	FA82653-3cf	8330	1	op83930,GGG2934,1060,,,10,1,water	/
GG620661	14	FA82653-4cf	8330	1	op83930,GGG2934,1050,,,10,1,water	x-RDX
GG620662	2	ecc2921-1000	8330	100/500	op83940,GGG2934,1000,,,10,1,water	(Ont FHS2)

DATE	2/4/2021	METHODS	8330	IC/ICC STD LOT	LC1422
COLUMN TYPE	Extend C18	ACQ. METHOD	8330BPL	ICV STD LOT	LC1424
AMOUNT INJ	100uL	PROC. METHOD	GPP2385_122020PRI.M	SOLVENT	205227
INSTRUMENT	HPLC4-PP	CALIB. DATE	12/30/2020	SOLVENT	203405
ANALYST	JB	RUN BATCH	GPP2401	HEAD PRESSURE	176

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
PP389745	51	ic2401-20	8330	2/500	op83930,GPP2401,1000,,,10,1,water	/
PP389746	52	ic2401-50	8330	5/500	op83930,GPP2401,1000,,,10,1,water	/
PP389747	53	ic2401-100	8330	10/500	op83930,GPP2401,1000,,,10,1,water	/
PP389748	54	ic2401-200	8330	20/500	op83930,GPP2401,1000,,,10,1,water	/
PP389749	55	ic2401-500	8330	50/500	op83930,GPP2401,1000,,,10,1,water	/
PP389750	56	icc2401-1000	8330	100/500	op83930,GPP2401,1000,,,10,1,water	/
PP389751	57	ic2401-2500	8330	250/500	op83930,GPP2401,1000,,,10,1,water	/
PP389752	58	ic2401-5000	8330	1	op83930,GPP2401,1000,,,10,1,water	/
PP389753	59	icv2401-1000	8330	1	op83930,GPP2401,1000,,,10,1,water	Pass
PP389754	2	cc2381-1000	8330	100/500	op83940,GPP2401,1000,,,10,1,water	Vial Missing >:(
PP389755	1	ccb	8330	1	op83940,GPP2401,1000,,,10,1,water	DNR
PP389756	3	op83940-MB	8330	1	op83940,GPP2401,1000,,,10,1,water	DNR
PP389757	4	op83940-BS	8330	1	op83940,GPP2401,1000,,,10,1,water	DNR
PP389758	5	op83940-MS	8330	1	op83940,GPP2401,520,,,10,1,water	DNR
PP389759	6	op83940-MSD	8330	1	op83940,GPP2401,520,,,10,1,water	DNR
PP389760	7	FA82696-1	8330	1	op83940,GPP2401,1050,,,10,1,water	DNR
PP389761	8	FA82696-2	8330	1	op83940,GPP2401,1060,,,10,1,water	DNR
PP389762	9	FA82696-3	8330	1	op83940,GPP2401,1050,,,10,1,water	DNR
PP389763	10	FA82701-1	8330	1	op83940,GPP2401,1040,,,10,1,water	DNR
PP389764	11	FA82701-2	8330	1	op83940,GPP2401,1060,,,10,1,water	DNR
PP389765	12	FA82701-3	8330	1	op83940,GPP2401,1050,,,10,1,water	DNR
PP389766	2	cc2381-1000	8330	100/500	op83940,GPP2401,1000,,,10,1,water	Vial Missing >:(
PP389767	13	FA82648-1	8330	1	op83940,GPP2401,1060,,,10,1,water	DNR
PP389768	14	FA82648-2	8330	1	op83940,GPP2401,1050,,,10,1,water	DNR
PP389769	15	op83930-MB	8330	1	op83930,GPP2401,1000,,,10,1,water	DNR
PP389770	16	op83930-BS	8330	1	op83930,GPP2401,1000,,,10,1,water	DNR
PP389771	17	op83930-MS	8330	1	op83930,GPP2401,520,,,10,1,water	DNR
PP389772	18	op83930-MSD	8330	1	op83930,GPP2401,520,,,10,1,water	DNR
PP389773	19	FA82653-1	8330	1	op83930,GPP2401,1050,,,10,1,water	DNR
PP389774	20	FA82653-2	8330	1	op83930,GPP2401,1060,,,10,1,water	DNR
PP389775	21	FA82653-3	8330	1	op83930,GPP2401,1060,,,10,1,water	DNR
PP389776	22	FA82653-4	8330	1	op83930,GPP2401,1050,,,10,1,water	DNR

PP389777	2	cc2381-1000	8330	100/500	op83930,GPP2401,1000,,,10,1,water	Vial Missing >:(
PP389778	23	FA82653-5	8330	1	op83930,GPP2401,1040,,,10,1,water	DNR
PP389779	2	ecc2381-1000	8330	100/500	op83930,GPP2401,1000,,,10,1,water	Vial Missing >:(

DATE	2/5/2021	METHODS	8330	IC/ICC STD LOT	LC1422
COLUMN TYPE	Extend C18	ACQ. METHOD	8330BPL	ICV STD LOT	LC1424
AMOUNT INJ	100uL	PROC. METHOD	GPP2401_020512PRI.M	SOLVENT	205227
INSTRUMENT	HPLC4-PP	CALIB. DATE	2/5/2021	SOLVENT	203405
ANALYST	JB	RUN BATCH	GPP2402	HEAD PRESSURE	176

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
PP389780	2	cc2401-1000	8330	100/500	op83940,GPP2402,1000,,,10,1,water	PASS
PP389781	1	ccb	8330	1	op83940,GPP2402,1000,,,10,1,water	/
PP389782	3	op83940-MB	8330	1	op83940,GPP2402,1000,,,10,1,water	/
PP389783	4	op83940-BS	8330	1	op83940,GPP2402,1000,,,10,1,water	DNX Fail
PP389784	5	op83940-MS	8330	1	op83940,GPP2402,520,,,10,1,water	/
PP389785	6	op83940-MSD	8330	1	op83940,GPP2402,520,,,10,1,water	/
PP389786	7	FA82696-1	8330	1	op83940,GPP2402,1050,,,10,1,water	cf-NB
PP389787	8	FA82696-2	8330	1	op83940,GPP2402,1060,,,10,1,water	/
PP389788	9	FA82696-3	8330	1	op83940,GPP2402,1050,,,10,1,water	cf- 24 26
PP389789	10	FA82701-1	8330	1	op83940,GPP2402,1040,,,10,1,water	cf- HMX RDX 13 35 4a 24
PP389790	11	FA82701-2	8330	1	op83940,GPP2402,1060,,,10,1,water	cf-HMX RDX 24
PP389791	12	FA82701-3	8330	1	op83940,GPP2402,1050,,,10,1,water	cf- HMX RDX
PP389792	2	cc2401-1000	8330	100/500	op83940,GPP2402,1000,,,10,1,water	Pass
PP389793	1	ccb	8330	1	op83940,GPP2402,1000,,,10,1,water	/
PP389794	13	FA82648-1cf	8330	1	op83940,GPP2402,1050,,,10,1,water	/
PP389795	14	FA82648-2	8330	1	op83940,GPP2402,1050,,,10,1,water	/
PP389796	15	op83930-MB	8330	1	op83930,GPP2402,1000,,,10,1,water	/
PP389797	16	op83930-BS	8330	1	op83930,GPP2402,1000,,,10,1,water	TNX Fail
PP389798	17	op83930-MS	8330	1	op83930,GPP2402,520,,,10,1,water	/
PP389799	18	op83930-MSD	8330	1	op83930,GPP2402,520,,,10,1,water	/
PP389800	19	FA82653-1	8330	1	op83930,GPP2402,1050,,,10,1,water	cf-HMX RDX 135 35 246 2a 4a
PP389801	20	FA82653-2	8330	1	op83930,GPP2402,1060,,,10,1,water	cf-HMX RDX 135 35 246 2a 4a
PP389802	21	FA82653-3	8330	1	op83930,GPP2402,1060,,,10,1,water	cf-HMX RDX 135 35 246 2a 4a
PP389803	22	FA82653-4	8330	1	op83930,GPP2402,1050,,,10,1,water	cf-HMX RDX 135 35 246 2a 4a
PP389804	2	cc2401-1000	8330	100/500	op83930,GPP2402,1000,,,10,1,water	Pass
PP389805	1	ccb	8330	1	op83940,GPP2402,1000,,,10,1,water	/
PP389806	23	FA82653-5	8330	1	op83930,GPP2402,1040,,,10,1,water	/
PP389807	24	op83975-MB	8330	1	op83975,GPP2402,1000,,,10,1,water	/
PP389808	25	op83975-BS	8330	1	op83975,GPP2402,1000,,,10,1,water	/
PP389809	26	op83975-MS	8330	1	op83975,GPP2402,520,,,10,1,water	/
PP389810	27	op83975-MSD	8330	1	op83975,GPP2402,520,,,10,1,water	/
PP389811	28	FA82841-1	8330	1	op83975,GPP2402,1060,,,10,1,water	cf-RDX 135

PP389812	29	FA82841-2	8330	1	op83975,GPP2402,1050,,,10,1,water	10x RDX TNT cf-HMX MNX 135 35 NB 2a 4a 26 PETN
PP389813	30	FA82841-3	8330	1	op83975,GPP2402,1060,,,10,1,water	10x RDX cf-HMX MNX 135 NB TNT 24 Ont PETN
PP389814	31	FA82841-4	8330	1	op83975,GPP2402,1050,,,10,1,water	cf-RDX 135
PP389815	32	FA82841-5	8330	1	op83975,GPP2402,1060,,,10,1,water	10x-RDX cf-HMX DNX MNX 135 35 TNT 2a 4a
PP389816	2	ecc2401-1000	8330	100/500	op83930,GPP2402,1000,,,10,1,water	Pass
PP389817	1	ccb	8330	1	op83940,GPP2402,1000,,,10,1,water	/
PP389818	33	FA82841-6	8330	1	op83975,GPP2402,1050,,,10,1,water	DNR
PP389819	2	ecc2401-1000	8330	100/500	op83975,GPP2402,1000,,,10,1,water	Vial Empty

SGS - ORLANDO

SPE LIQUID SAMPLE PREP REPORT

Date/Time: Started 02/01/2021 0900 {mm/dd/yy 24:00}

Date/Time: Finished 02/01/2021 1600 {mm/dd/yy 24:00}

Prep Method: (3535A) or 537 or 537MOD (circle)

Analytical Method: 8330B

Batch#: OP83930 Ext. By: MB Conc. By: — Vialed By: MB

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP83930 MB	X	1000	6	N/A	250ul		10ml	AT-1	
OP83930 BS	X	1000				200 + 250ul			
FA82653-1	2	1050							
-2	2	1060							
-3	2	1060						AT-2	
-4	4	1050							
-5	2	1040							
FA82653-4 MS	5	520	6	N/A	250ul	200 + 250ul	10ml	AT-1	
-4 MSD	5	520	"	"	"	"	"	"	
DUP									

02/01/2021

MB

Comments:

Surr.1 ID: LC1421A Conc: 20 ppm Exp. Date: 07/20/21 Inj. By: MB Ver. By MB

Spk.1 ID: LC1423 Conc: 20 ppm Exp. Date: 07/29/21 Inj. By: MB Ver. By MB

Spk.2 ID: LC1383 Conc: 25 ppm Exp. Date: 05/21/21 Inj. By: MB Ver. By MB

Spk.3 ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

TurboVap Temp (Therm ID): — Observed Temp °C: — Corr. Temp °C: —

N-Evap Temp (Therm ID): — Observed Temp °C: — Corr. Temp °C: —

Methanol Lot # —

Acetonitrile Lot # 203066

Water Lot# DI H2O

Solvent# —

SPE Lot # 5214-0107

Syringe filter Lot # —

Pre-filter Lot# —

Carbon Lot# —

pH Paper # 23019

Reagent # —

Reagent # —

Other —

Relinquished By: [signature] Date: 02/01/2021

Accepted By: [signature] Date: 02/3/21

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718

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ANALYTICAL RESULTS FOR:

ANTHONY PACE
WESTON SOLUTIONS, INC.
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

PROJECT SITE:	RFAAP SWMU-49; RADFORD, VA
DOD CONTRACT #:	
PROJECT #:	
SDG:	***161060***
FOLDERS:	161060, 161088, 161178
PREPARED:	May 21, 2021
TOTAL # OF PAGES:	1407

The data contained in the following report have been reviewed by the appropriate CT Laboratories' LLC staff members. In addition, CT Laboratories LLC certifies that to the best of our knowledge that the analyses reported herein are true, complete and correct within the limits of the methods employed and that they follow the applicable requirements as specified by the project plan, state-specific, NELAC or DOD QSM requirements. The estimated uncertainty of measurement is only available upon request. The reported results relate only to the tested samples. This report shall not be reproduced, except in full, without written approval of CT Laboratories LLC.

APPROVED BY: Brett Szymanski
PROJECT MANAGER

Certifications: IL (NELAP 200073), KS (NELAP E-10368), WI (157066030), DOD ELAP (A2LA 3806.01), VA (NELAP 4602038), MD (WI 00061), LA (NELAP ACC20160002), ISO17025 (A2LA 3806.01), GA EDP Stipulation (Accreditor: LA NELAP, ACC#: ACC20160002, Scope: Non-potable water solid and chemical materials, biological tissue, Effective: 12/10/2014, Expires: annually)

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Case Narrative

Client: Weston Solutions
Project: RFAAP SWMU-49, Radford, VA
Sample Receipt Dates: 04/14/2021, 04/15/2021, & 04/17/2021
SDG #: *161060* (Folder #'s 161060, 161088, & 161178)

Fifteen water samples were received and analyzed for a variety of parameters, including: VOCs, Dissolved Gases, Metals, pH, COD, Anions, and TOC. Three Trip Blanks were included with the VOCs. The assigned sample ID number, date sampled, and date received are indicated in the attached Project Summary. The samples were received intact and at a temperature within method specified acceptance limits. A breakdown of sample receipt information can be found on the Sample Condition Report located in the last section of the data package and any exceptions are noted below. The analyses were performed following DOD QSM 5.3 requirements.

Manual integrations may have been performed on the data provided with this package. If manual integrations were performed, a Reason #(s) was included on the raw data that corresponds to the "Index Key for Manual Integration Rationale." The raw data includes a "Before" and "After" manual integration illustration. The manual integrations were initialed and dated by the analyst, as well as, by the person reviewing the data.

Sample Receipt Issues

All of the samples that were collected on 04/15/2021 were received past the 48-hour hold time for nitrate analysis due to a FedEx shipping delay. The client instructed the lab to proceed with the analysis of the samples and to qualify the data accordingly.

Sample Analysis and Quality Control

Volatile Analysis:

The samples were analyzed using US EPA Methods 8260C (VOC) and RSK-175 (Dissolved Gases). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Surrogate Recovery Data
Matrix Spike/Matrix Spike Duplicate Recovery Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log
Chromatograms

All analysis results met the method specified quality control criteria with the following exceptions:

Detailed reports were provided for the 8260 data for all detected compounds, as well as, for those compounds manually integrated (if applicable). Compounds not reported on the form 1's were either not detected or did not meet identification criteria so they were reported as non-detects.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

VOC (8260C) Water Analysis

1,2,3-Trichlorobenzene was detected in the Initial Calibration Blank (ICB) for ICAL # W041621.

Analytical Run # 180903

All analytical results for this run met the method/project specified quality control criteria for the targeted compounds.

Analytical Run # 181064

CCV1 (analyzed 04/19/2021 @ 15:41 on VMS3) had low recoveries outside of specified criteria for 1,2-dibromo-3-chloropropane, 2-butanone, 2-hexanone, acetone, and methyl acetate as well as high recoveries for dichlorodifluoromethane, 1,4-dioxane, and methylcyclohexane. These compounds were qualified with a "Z" flag in the associated samples.

The Laboratory Control Sample (LCS) had a low recovery for 1,4-dioxane. This compound was qualified with a "Q" flag in the associated samples.

Dissolved Gases (RSK-175) Analysis

Analytical Run # 180939

All analytical results for this run met the method/project specified quality control criteria.

Analytical Run # 181142

All analytical results for this run met the method/project specified quality control criteria.

Metals Analysis:

The samples were analyzed using US EPA Methods 6010C (ICP) and 7470A (Hg). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Initial and Continuing Calibration Verification
Blanks Summary
ICP Interference Check Data
Spike Sample Recovery
Duplicates Data
Laboratory Control Sample Data
Analysis Run Log

All analysis results met the method specified quality control criteria with the following exceptions:

ICP Metals (6010C) Water Analysis

Continuing Calibration Verification (CCV) standards were analyzed at two levels (CCV1 & CCV2) with potentially differing wavelengths. Data associated with CCV's were evaluated based on the concentration of the element in the samples and compared to the appropriate CCV level/wavelength.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Analytical Run # 181097

Beryllium was detected in the Method Blank (MB) greater than the Method Detection Limit (MDL) but less than ½ the Reporting Limit (RL). The sample was reported and qualified with a "B" flag for beryllium because the MB result was greater than 1/10th of the sample result.

The Duplicate (DUP) for sample # 554741 was not applicable for antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc because the parent sample results were less than five times the Limit of Quantitation (LOQ). A Matrix Spike Duplicate (MSD) was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

The Matrix Spike (MS) and MSD for sample # 554741 had recoveries outside of acceptable limits for aluminum and iron. A Serial Dilution (L) was analyzed and was acceptable for aluminum but not acceptable for iron because the result exceeded the Relative Percent Difference (RPD) limit. A Post Digestion Spike (PDS) was analyzed and was acceptable. The parent sample was reported and not qualified.

ICP Sodium & Potassium (6010C) Water Analysis

Analytical Run # 181100

All analytical results for this run met the method/project specified quality control criteria.

CVAA Mercury (7470A) Water Analysis

Analytical Run # 181172

The DUP for sample # 554741 was not applicable for mercury because the parent sample result was less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

Inorganic Analysis:

The samples were analyzed using US EPA Methods 9060A (TOC), 9040C (pH), 410.4 (COD) and 9056A (Anions). All samples were analyzed within the holding time unless noted below. The following summaries of quality control procedures are included:

Duplicate Analysis Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Anions (9056A) Water Analysis

Analytical Run # 180881

The MS/MSD analysis for this run was performed on a sample from a different SDG (SDG # 161057).

Analytical Run # 180945

The MS and the MSD for sample # 553554 had a low recovery for sulfate. The parent sample result for this analyte was qualified with an "M" flag.

Analytical Run # 181073

Sample #'s 554737, 554738, and 554739 were analyzed past the 48-hour hold time for nitrate due to a FedEx shipping delay. The nitrate results for these samples were qualified with an "H" flag.

The Matrix Spike (MS) for sample # 554737 had a high recovery for nitrate. The parent sample result was qualified with an "M" flag.

COD (410.4) Water Analysis

Analytical Run # 181214

All analytical results for this run met the method/project specified quality control criteria.

pH (9040C) Water Analysis

Analytical Run # 181070

All analytical results for this run met the method/project specified quality control criteria.

TOC (9060A) Water Analysis

Analytical Run # 180921

The DUP for sample 553554 was not applicable because the parent sample result was less than the LOQ. The DUP was considered invalid and the parent sample result was not qualified for the precision failure.

Analytical Run # 181146

All analytical results for this run met the method/project specified quality control criteria.

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Data Qualifiers

Code	Description
A	Analyte averaged calibration criteria within acceptable limits.
B	Analyte detected in associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was not above the detection level.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Calibration criteria exceeded.

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MANUAL INTEGRATION REASON CODES

CTLaboratories has identified four general cases with valid reasons supporting the use of manual integration techniques. These codes are used on chromatograms in this data package to document the reasons for manual integrations per CTLaboratories' SOP SS-10 current revision.

#1: **Data system failed to select the correct peak or missed the peak entirely.**
In some cases the chromatography system selects and integrates the "wrong peak". In this case the analyst must correct the selection and force the system to integrate the proper peak. In other instances the system may miss the peak completely. In this case the analyst manually integrated the peak

#2: **Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.**
This phenomenon is common at low concentrations where the signal to noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low or high area counts for the target compound.

#3: Improperly Integrated Isomers and/or coeluting compounds.
For when the system fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations may be inaccurate, and they must be corrected by manual integration. Prime examples are compounds that are unresolved and integrated improperly when present at low concentrations in standards or samples.

#4: System Established Incorrect Baseline.
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and may be corrected via manual procedures.

#5: Miscellaneous.
Some situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the group supervisor. If the form of manual integration is not clearly covered by these four cases, then review and approval by the group supervisor or the *QA/QC* Supervisor will be required.

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Sample Delivery Group

161060

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMU-49
Project #:

	CT Sample #	Folder #	Client Sample #	Sample Description	Matrix	Date Sampled	Date Received
1	553142	161060		50MW02	GROUND WATER	04/13/2021	04/14/2021
2	553148	161060		EQB-50MW02	GROUND WATER	04/13/2021	04/14/2021
3	553149	161060		48MW2	GROUND WATER	04/13/2021	04/14/2021
4	553150	161060		48MW3	GROUND WATER	04/13/2021	04/14/2021
5	553151	161060		48TW3	GROUND WATER	04/13/2021	04/14/2021
6	553152	161060		49MW02	GROUND WATER	04/13/2021	04/14/2021
7	553153	161060		TB-1	TRIP BLANK	04/13/2021	04/14/2021
8	553550	161088		13MW4	GROUND WATER	04/14/2021	04/15/2021
9	553551	161088		13MW3	GROUND WATER	04/14/2021	04/15/2021
10	553552	161088		13TW3	GROUND WATER	04/14/2021	04/15/2021
11	553553	161088		49MW04	GROUND WATER	04/14/2021	04/15/2021
12	553554	161088		13MW2	GROUND WATER	04/14/2021	04/15/2021
13	553555	161088		TB-2	TRIP BLANK	04/14/2021	04/15/2021
14	554737	161178		49MW01	GROUND WATER	04/15/2021	04/19/2021
15	554738	161178		48MW1	GROUND WATER	04/15/2021	04/19/2021
16	554739	161178		48MW06	GROUND WATER	04/15/2021	04/19/2021
17	554740	161178		TB-3	TRIP BLANK	04/15/2021	04/19/2021
18	554741	161178		IDW-48/49	GROUND WATER	04/15/2021	04/19/2021

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QC Batch Cross Reference Summary

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
SUITE 603

Project Name: RADFORD AAP SWMU-49
Project #:
Report Date: 05/12/2021
Date Received: 04/17/2021
SDG #: 161060

Inorganic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
554741	pH	EPA 9040C	GROUND WATER		181070

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
554741	COD QSM	EPA 410.4	GROUND WATER	80702	181214

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
553142	Anions QSM 5.0	EPA 9056A	GROUND WATER		180881
553148	Anions QSM 5.0	EPA 9056A	GROUND WATER		180881
553149	Anions QSM 5.0	EPA 9056A	GROUND WATER		180881
553150	Anions QSM 5.0	EPA 9056A	GROUND WATER		180881
553151	Anions QSM 5.0	EPA 9056A	GROUND WATER		180881
553152	Anions QSM 5.0	EPA 9056A	GROUND WATER		180881
553550	Anions QSM 5.0	EPA 9056A	GROUND WATER		180945
553551	Anions QSM 5.0	EPA 9056A	GROUND WATER		180945
553552	Anions QSM 5.0	EPA 9056A	GROUND WATER		180945
553553	Anions QSM 5.0	EPA 9056A	GROUND WATER		180945
553554	Anions QSM 5.0	EPA 9056A	GROUND WATER		180945
554737	Anions QSM 5.0	EPA 9056A	GROUND WATER		181073
554738	Anions QSM 5.0	EPA 9056A	GROUND WATER		181073
554739	Anions QSM 5.0	EPA 9056A	GROUND WATER		181073
553551	Anions QSM 5.0	EPA 9056A	GROUND WATER		180945
553552	Anions QSM 5.0	EPA 9056A	GROUND WATER		180945
554739	Anions QSM 5.0	EPA 9056A	GROUND WATER		181073

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
553142	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		180921
553148	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		180921
553149	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		180921
553150	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		180921

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Project Name: RADFORD AAP SWMU-49
Project #:
SDG #: 161060

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
553151	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		180921
553152	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		180921
553550	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		180921
553551	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		180921
553552	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		180921
553553	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		180921
553554	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		180921
554737	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		181146
554738	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		181146
554739	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		181146

Metal Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
554741	Potassium, Total QSM 5.0	EPA 6010C	GROUND WATER	80614	181100

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
554741	Sodium, Total QSM 5.0	EPA 6010C	GROUND WATER	80614	181100

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
554741	ICP Metals, Total QSM 5.0	EPA 6010C	GROUND WATER	80614	181097

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
554741	Mercury, Total QSM	EPA 7470A	GROUND WATER	80604	181172

Organic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
553142	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		180903
553148	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		180903
553149	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		180903
553150	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		180903
553151	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		180903
553152	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		180903
553153	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		180903
553550	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		180903
553551	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		180903
553552	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		180903
553553	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		180903

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Project Name: RADFORD AAP SWMU-49
Project #:
SDG #: 161060

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
553554	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		180903
553555	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		180903
554737	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		181064
554738	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		181064
554739	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		181064
554740	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		181064

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
553142	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80525	180922
553148	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80525	180922
553149	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80525	180922
553150	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80525	180922
553151	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80525	180922
553152	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80525	180922
553550	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80525	180922
553551	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80525	180922
553552	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80525	180922
553553	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80525	180922
553554	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80525	180922
554737	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80646	181142
554738	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80646	181142
554739	Dissolved Gases QSM 5.0	Mod RSK 175	GROUND WATER	80646	181142

VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL SUMMARY
DOCUMENTS

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1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553554
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/18/2021 / 00:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553554
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/18/2021 / 00:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.33	J	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553554
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/18/2021 / 00:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553554
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 12:26	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553551
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 12:07	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553551
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 23:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553551
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 23:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	5.3		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.43	J	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553551
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 23:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.97	J	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553550
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 11:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553550
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 22:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553550
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 22:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553550
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 22:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.45	J	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553552
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 12:10	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553552
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 23:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553552
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 23:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	5.0		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.45	J	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553552
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 23:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.89	J	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.2 (g/mL)	CTL Sample ID:	554739
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	20.2 (mL)	Date/Time Prepared:	04/21/2021 / 08:57
Analytical Method:	RSK 175	Analytical Prep Batch #	80646
Analytical Run #:	181142	Dilution Factor:	1
Date & Time Analyzed:	04/22/2021 / 13:11	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554739
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 19:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.83	J	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	3.8		0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U Z	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U Z	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U Z	4.0	10	20	20
71-43-2	Benzene	1.6	J	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554739
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 19:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	7.4		0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U Z	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U Z	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U Z	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.81	J	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554739
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 19:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	4.9		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.2 (g/mL)	CTL Sample ID:	554738
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	20.2 (mL)	Date/Time Prepared:	04/21/2021 / 08:57
Analytical Method:	RSK 175	Analytical Prep Batch #	80646
Analytical Run #:	181142	Dilution Factor:	1
Date & Time Analyzed:	04/22/2021 / 12:56	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554738
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 19:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.58	J	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U Z	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U Z	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U Z	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554738
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 19:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.39	J	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U Z	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U Z	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U Z	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554738
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 19:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.2		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553149
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 10:16	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553149
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 21:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553149
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 21:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	22		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	3.0		0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553149
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 21:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.00		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553150
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	5
Date & Time Analyzed:	04/18/2021 / 01:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	3.0	U	1.5	3.0	5.0	5.0
79-00-5	1,1,2-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-34-3	1,1-Dichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-35-4	1,1-Dichloroethene	5.0	U	2.0	5.0	10	10
87-61-6	1,2,3-Trichlorobenzene	3.0	U	1.2	3.0	5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	3.0	U	1.4	3.0	5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	3.0	U	1.3	3.0	5.0	5.0
106-93-4	1,2-Dibromoethane	3.0	U	1.5	3.0	5.0	5.0
95-50-1	1,2-Dichlorobenzene	3.0	U	1.5	3.0	5.0	5.0
107-06-2	1,2-Dichloroethane	1.4	J	1.2	3.0	5.0	5.0
78-87-5	1,2-Dichloropropane	3.0	U	0.90	3.0	5.0	5.0
541-73-1	1,3-Dichlorobenzene	3.0	U	1.3	3.0	5.0	5.0
123-91-1	1,4-Dioxane	250	U	170	250	500	500
78-93-3	2-Butanone	30	U	13	30	50	50
591-78-6	2-Hexanone	30	U	15	30	50	50
108-10-1	4-Methyl-2-pentanone	30	U	11	30	50	50
67-64-1	Acetone	50	U	20	50	100	100
71-43-2	Benzene	5.0	U	2.0	5.0	10	10
74-97-5	Bromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-27-4	Bromodichloromethane	3.0	U	1.5	3.0	5.0	5.0
75-25-2	Bromoform	5.0	U	2.0	5.0	10	10
74-83-9	Bromomethane	10	U	4.5	10	20	20
75-15-0	Carbon disulfide	10	U	3.0	10	20	20

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553150
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	5
Date & Time Analyzed:	04/18/2021 / 01:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	84		1.5	3.0	5.0	5.0
108-90-7	Chlorobenzene	3.0	U	1.5	3.0	5.0	5.0
75-00-3	Chloroethane	5.0	U	2.5	5.0	10	10
67-66-3	Chloroform	19		1.5	3.0	5.0	5.0
74-87-3	Chloromethane	5.0	U	3.0	5.0	10	10
156-59-2	cis-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	1.5	U	0.80	1.5	3.0	3.0
110-82-7	Cyclohexane	3.0	U	1.5	3.0	5.0	5.0
124-48-1	Dibromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-71-8	Dichlorodifluoromethane	5.0	U	2.0	5.0	10	10
100-41-4	Ethylbenzene	3.0	U	1.5	3.0	5.0	5.0
76-13-1	Freon 113	10	U	3.5	10	20	20
98-82-8	Isopropylbenzene	3.0	U	1.5	3.0	5.0	5.0
179601-23-1	m & p-Xylene	6.0	U	3.5	6.0	10	10
79-20-9	Methyl Acetate	5.0	U	2.5	5.0	10	10
1634-04-4	Methyl tert-butyl ether	3.0	U	1.5	3.0	5.0	5.0
108-87-2	Methylcyclohexane	3.0	U	1.3	3.0	5.0	5.0
75-09-2	Methylene chloride	5.0	U	2.0	5.0	10	10
95-47-6	o-Xylene	3.0	U	1.3	3.0	5.0	5.0
100-42-5	Styrene	3.0	U	1.5	3.0	5.0	5.0
127-18-4	Tetrachloroethene	3.0	U	1.4	3.0	5.0	5.0
108-88-3	Toluene	3.0	U	1.1	3.0	5.0	5.0
156-60-5	trans-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	3.0	U	1.2	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553150
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	5
Date & Time Analyzed:	04/18/2021 / 01:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	16		1.5	3.0	5.0	5.0
75-69-4	Trichlorofluoromethane	5.0	U	2.0	5.0	10	10
75-01-4	Vinyl chloride	1.5	U	0.70	1.5	3.0	3.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553150
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 10:20	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553151
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	5
Date & Time Analyzed:	04/18/2021 / 01:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	3.0	U	1.5	3.0	5.0	5.0
79-00-5	1,1,2-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-34-3	1,1-Dichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-35-4	1,1-Dichloroethene	5.0	U	2.0	5.0	10	10
87-61-6	1,2,3-Trichlorobenzene	3.0	U	1.2	3.0	5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	3.0	U	1.4	3.0	5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	3.0	U	1.3	3.0	5.0	5.0
106-93-4	1,2-Dibromoethane	3.0	U	1.5	3.0	5.0	5.0
95-50-1	1,2-Dichlorobenzene	3.0	U	1.5	3.0	5.0	5.0
107-06-2	1,2-Dichloroethane	1.4	J	1.2	3.0	5.0	5.0
78-87-5	1,2-Dichloropropane	3.0	U	0.90	3.0	5.0	5.0
541-73-1	1,3-Dichlorobenzene	3.0	U	1.3	3.0	5.0	5.0
123-91-1	1,4-Dioxane	250	U	170	250	500	500
78-93-3	2-Butanone	30	U	13	30	50	50
591-78-6	2-Hexanone	30	U	15	30	50	50
108-10-1	4-Methyl-2-pentanone	30	U	11	30	50	50
67-64-1	Acetone	50	U	20	50	100	100
71-43-2	Benzene	5.0	U	2.0	5.0	10	10
74-97-5	Bromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-27-4	Bromodichloromethane	3.0	U	1.5	3.0	5.0	5.0
75-25-2	Bromoform	5.0	U	2.0	5.0	10	10
74-83-9	Bromomethane	10	U	4.5	10	20	20
75-15-0	Carbon disulfide	10	U	3.0	10	20	20

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553151
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	5
Date & Time Analyzed:	04/18/2021 / 01:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	80		1.5	3.0	5.0	5.0
108-90-7	Chlorobenzene	3.0	U	1.5	3.0	5.0	5.0
75-00-3	Chloroethane	5.0	U	2.5	5.0	10	10
67-66-3	Chloroform	19		1.5	3.0	5.0	5.0
74-87-3	Chloromethane	5.0	U	3.0	5.0	10	10
156-59-2	cis-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	1.5	U	0.80	1.5	3.0	3.0
110-82-7	Cyclohexane	3.0	U	1.5	3.0	5.0	5.0
124-48-1	Dibromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-71-8	Dichlorodifluoromethane	5.0	U	2.0	5.0	10	10
100-41-4	Ethylbenzene	3.0	U	1.5	3.0	5.0	5.0
76-13-1	Freon 113	10	U	3.5	10	20	20
98-82-8	Isopropylbenzene	3.0	U	1.5	3.0	5.0	5.0
179601-23-1	m & p-Xylene	6.0	U	3.5	6.0	10	10
79-20-9	Methyl Acetate	5.0	U	2.5	5.0	10	10
1634-04-4	Methyl tert-butyl ether	3.0	U	1.5	3.0	5.0	5.0
108-87-2	Methylcyclohexane	3.0	U	1.3	3.0	5.0	5.0
75-09-2	Methylene chloride	5.0	U	2.0	5.0	10	10
95-47-6	o-Xylene	3.0	U	1.3	3.0	5.0	5.0
100-42-5	Styrene	3.0	U	1.5	3.0	5.0	5.0
127-18-4	Tetrachloroethene	3.0	U	1.4	3.0	5.0	5.0
108-88-3	Toluene	3.0	U	1.1	3.0	5.0	5.0
156-60-5	trans-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	3.0	U	1.2	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553151
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	5
Date & Time Analyzed:	04/18/2021 / 01:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	16		1.5	3.0	5.0	5.0
75-69-4	Trichlorofluoromethane	5.0	U	2.0	5.0	10	10
75-01-4	Vinyl chloride	1.5	U	0.70	1.5	3.0	3.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553151
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 10:24	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.2 (g/mL)	CTL Sample ID:	554737
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	20.2 (mL)	Date/Time Prepared:	04/21/2021 / 08:57
Analytical Method:	RSK 175	Analytical Prep Batch #	80646
Analytical Run #:	181142	Dilution Factor:	1
Date & Time Analyzed:	04/22/2021 / 12:51	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554737
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 18:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U Z	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U Z	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U Z	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554737
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 18:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	2.8		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.46	J	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U Z	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U Z	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U Z	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554737
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 18:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553152
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 10:27	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	1.6		0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553152
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 22:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553152
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 22:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553152
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 22:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553553
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/18/2021 / 00:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553553
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/18/2021 / 00:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.56	J	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553553
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/18/2021 / 00:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553553
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 12:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553142
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 10:07	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553142
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 21:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.30	J	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553142
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 21:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.83	J	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.39	J	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553142
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 21:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.3		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553148
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 10:10	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553148
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 20:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553148
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 20:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553148
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 20:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553153
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 19:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553153
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 19:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553153
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 19:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553555
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 20:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553555
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 20:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553555
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 20:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554740
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 18:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U Z	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U Z	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U Z	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554740
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 18:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U Z	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U Z	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U Z	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554740
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 18:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

CT LABORATORIES
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1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553429
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
74-84-0	Ethane	04/15/2021	09:58	0.38	U	0.38	1.0	***0.4***
74-85-1	Ethene	04/15/2021	09:58	0.59	U	0.59	1.4	***0.6***
74-82-8	Methane	04/15/2021	09:58	0.45	U	0.45	1.0	***0.4***

CT LABORATORIES
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1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **METHOD BLANK**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554697
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	180903	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	04/17/2021	19:14	0.38	U	0.38	1.0	***0.50***
79-34-5	1,1,2,2-Tetrachloroethane	04/17/2021	19:14	0.36	U	0.36	1.0	***0.5***
79-00-5	1,1,2-Trichloroethane	04/17/2021	19:14	0.27	U	0.27	1.0	***0.50***
75-34-3	1,1-Dichloroethane	04/17/2021	19:14	0.28	U	0.28	1.0	***0.50***
75-35-4	1,1-Dichloroethene	04/17/2021	19:14	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	04/17/2021	19:14	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	04/17/2021	19:14	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	04/17/2021	19:14	0.50	U	0.50	2.0	***1.0***
106-93-4	1,2-Dibromoethane	04/17/2021	19:14	0.33	U	0.33	1.0	***0.50***
95-50-1	1,2-Dichlorobenzene	04/17/2021	19:14	0.35	U	0.35	1.0	***0.50***
107-06-2	1,2-Dichloroethane	04/17/2021	19:14	0.69	U	0.69	2.0	***1.0***
78-87-5	1,2-Dichloropropane	04/17/2021	19:14	0.37	U	0.37	1.0	***0.50***
541-73-1	1,3-Dichlorobenzene	04/17/2021	19:14	0.30	U	0.30	1.0	***0.50***
123-91-1	1,4-Dioxane	04/17/2021	19:14	34	U	34	100	***50***
78-93-3	2-Butanone	04/17/2021	19:14	2.9	U	2.9	10	***5.0***
591-78-6	2-Hexanone	04/17/2021	19:14	3.3	U	3.3	10	***5.0***
108-10-1	4-Methyl-2-pentanone	04/17/2021	19:14	3.7	U	3.7	10	***5.0***
67-64-1	Acetone	04/17/2021	19:14	4.1	U	4.1	20	***10***
71-43-2	Benzene	04/17/2021	19:14	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	04/17/2021	19:14	0.26	U	0.26	1.0	***0.50***
75-27-4	Bromodichloromethane	04/17/2021	19:14	0.29	U	0.29	1.0	***0.50***
75-25-2	Bromoform	04/17/2021	19:14	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	04/17/2021	19:14	0.49	U	0.49	2.0	***1.0***

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Description

METHOD BLANK

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554697
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	180903	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
75-15-0	Carbon disulfide	04/17/2021	19:14	0.83	U	0.83	4.0	***2.0***
56-23-5	Carbon tetrachloride	04/17/2021	19:14	0.37	U	0.37	1.0	***0.50***
108-90-7	Chlorobenzene	04/17/2021	19:14	0.37	U	0.37	1.0	***0.50***
75-00-3	Chloroethane	04/17/2021	19:14	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	04/17/2021	19:14	0.46	U	0.46	1.0	***0.50***
74-87-3	Chloromethane	04/17/2021	19:14	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	04/17/2021	19:14	0.41	U	0.41	1.0	***0.50***
10061-01-5	cis-1,3-Dichloropropene	04/17/2021	19:14	0.34	U	0.34	1.0	***0.50***
110-82-7	Cyclohexane	04/17/2021	19:14	0.71	U	0.71	2.0	***1.0***
124-48-1	Dibromochloromethane	04/17/2021	19:14	0.35	U	0.35	1.0	***0.50***
75-71-8	Dichlorodifluoromethane	04/17/2021	19:14	0.63	U	0.63	2.0	***1.0***
100-41-4	Ethylbenzene	04/17/2021	19:14	0.42	U	0.42	1.0	***0.50***
76-13-1	Freon 113	04/17/2021	19:14	1.5	U	1.5	4.0	***2.0***
98-82-8	Isopropylbenzene	04/17/2021	19:14	0.39	U	0.39	1.0	***0.50***
179601-23-1	m & p-Xylene	04/17/2021	19:14	0.74	U	0.74	2.0	***1.0***
79-20-9	Methyl Acetate	04/17/2021	19:14	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	04/17/2021	19:14	0.28	U	0.28	1.0	***0.50***
108-87-2	Methylcyclohexane	04/17/2021	19:14	0.78	U	0.78	2.0	***1.0***
75-09-2	Methylene chloride	04/17/2021	19:14	1.2	U	1.2	4.0	***2.0***
95-47-6	o-Xylene	04/17/2021	19:14	0.72	U	0.72	2.0	***1.0***
100-42-5	Styrene	04/17/2021	19:14	0.33	U	0.33	1.0	***0.50***
127-18-4	Tetrachloroethene	04/17/2021	19:14	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	04/17/2021	19:14	0.27	U	0.27	1.0	***0.50***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554697
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	180903	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
156-60-5	trans-1,2-Dichloroethene	04/17/2021	19:14	0.35	U	0.35	1.0	***0.50***
10061-02-6	trans-1,3-Dichloropropene	04/17/2021	19:14	0.56	U	0.56	2.0	***1.0***
79-01-6	Trichloroethene	04/17/2021	19:14	0.39	U	0.39	1.0	***0.50***
75-69-4	Trichlorofluoromethane	04/17/2021	19:14	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	04/17/2021	19:14	0.14	U	0.14	0.60	***0.30***

CT LABORATORIES
delivering more than data from your environmental analyses

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	555289
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	181064	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	04/19/2021	17:00	0.38	U	0.38	1.0	***0.50***
79-34-5	1,1,2,2-Tetrachloroethane	04/19/2021	17:00	0.36	U	0.36	1.0	***0.5***
79-00-5	1,1,2-Trichloroethane	04/19/2021	17:00	0.27	U	0.27	1.0	***0.50***
75-34-3	1,1-Dichloroethane	04/19/2021	17:00	0.28	U	0.28	1.0	***0.50***
75-35-4	1,1-Dichloroethene	04/19/2021	17:00	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	04/19/2021	17:00	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	04/19/2021	17:00	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	04/19/2021	17:00	0.50	U	0.50	2.0	***1.0***
106-93-4	1,2-Dibromoethane	04/19/2021	17:00	0.33	U	0.33	1.0	***0.50***
95-50-1	1,2-Dichlorobenzene	04/19/2021	17:00	0.35	U	0.35	1.0	***0.50***
107-06-2	1,2-Dichloroethane	04/19/2021	17:00	0.69	U	0.69	2.0	***1.0***
78-87-5	1,2-Dichloropropane	04/19/2021	17:00	0.37	U	0.37	1.0	***0.50***
541-73-1	1,3-Dichlorobenzene	04/19/2021	17:00	0.30	U	0.30	1.0	***0.50***
123-91-1	1,4-Dioxane	04/19/2021	17:00	34	U	34	100	***50***
78-93-3	2-Butanone	04/19/2021	17:00	2.9	U	2.9	10	***5.0***
591-78-6	2-Hexanone	04/19/2021	17:00	3.3	U	3.3	10	***5.0***
108-10-1	4-Methyl-2-pentanone	04/19/2021	17:00	3.7	U	3.7	10	***5.0***
67-64-1	Acetone	04/19/2021	17:00	4.1	U	4.1	20	***10***
71-43-2	Benzene	04/19/2021	17:00	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	04/19/2021	17:00	0.26	U	0.26	1.0	***0.50***
75-27-4	Bromodichloromethane	04/19/2021	17:00	0.29	U	0.29	1.0	***0.50***
75-25-2	Bromoform	04/19/2021	17:00	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	04/19/2021	17:00	0.49	U	0.49	2.0	***1.0***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	555289
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	181064	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
75-15-0	Carbon disulfide	04/19/2021	17:00	0.83	U	0.83	4.0	***2.0***
56-23-5	Carbon tetrachloride	04/19/2021	17:00	0.37	U	0.37	1.0	***0.50***
108-90-7	Chlorobenzene	04/19/2021	17:00	0.37	U	0.37	1.0	***0.50***
75-00-3	Chloroethane	04/19/2021	17:00	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	04/19/2021	17:00	0.46	U	0.46	1.0	***0.50***
74-87-3	Chloromethane	04/19/2021	17:00	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	04/19/2021	17:00	0.41	U	0.41	1.0	***0.50***
10061-01-5	cis-1,3-Dichloropropene	04/19/2021	17:00	0.34	U	0.34	1.0	***0.50***
110-82-7	Cyclohexane	04/19/2021	17:00	0.71	U	0.71	2.0	***1.0***
124-48-1	Dibromochloromethane	04/19/2021	17:00	0.35	U	0.35	1.0	***0.50***
75-71-8	Dichlorodifluoromethane	04/19/2021	17:00	0.63	U	0.63	2.0	***1.0***
100-41-4	Ethylbenzene	04/19/2021	17:00	0.42	U	0.42	1.0	***0.50***
76-13-1	Freon 113	04/19/2021	17:00	1.5	U	1.5	4.0	***2.0***
98-82-8	Isopropylbenzene	04/19/2021	17:00	0.39	U	0.39	1.0	***0.50***
179601-23-1	m & p-Xylene	04/19/2021	17:00	0.74	U	0.74	2.0	***1.0***
79-20-9	Methyl Acetate	04/19/2021	17:00	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	04/19/2021	17:00	0.28	U	0.28	1.0	***0.50***
108-87-2	Methylcyclohexane	04/19/2021	17:00	0.78	U	0.78	2.0	***1.0***
75-09-2	Methylene chloride	04/19/2021	17:00	1.2	U	1.2	4.0	***2.0***
95-47-6	o-Xylene	04/19/2021	17:00	0.72	U	0.72	2.0	***1.0***
100-42-5	Styrene	04/19/2021	17:00	0.33	U	0.33	1.0	***0.50***
127-18-4	Tetrachloroethene	04/19/2021	17:00	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	04/19/2021	17:00	0.27	U	0.27	1.0	***0.50***

CT LABORATORIES
delivering more than data from your environmental analyses

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	555289
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	181064	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
156-60-5	trans-1,2-Dichloroethene	04/19/2021	17:00	0.35	U	0.35	1.0	***0.50***
10061-02-6	trans-1,3-Dichloropropene	04/19/2021	17:00	0.56	U	0.56	2.0	***1.0***
79-01-6	Trichloroethene	04/19/2021	17:00	0.39	U	0.39	1.0	***0.50***
75-69-4	Trichlorofluoromethane	04/19/2021	17:00	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	04/19/2021	17:00	0.14	U	0.14	0.60	***0.30***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description: **METHOD BLANK**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	161060
Sample wt/vol:	20.2 (g/mL)	CTL Sample ID:	555992
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	20.2 (mL)	Date/Time Prepared:	04/21/2021 / 08:57
Analytical Method:	RSK 175	Analytical Prep Batch #	80646
Analytical Run #:	181142	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
74-84-0	Ethane	04/22/2021	10:44	0.38	U	0.38	1.0	***0.4***
74-85-1	Ethene	04/22/2021	10:44	0.59	U	0.59	1.4	***0.6***
74-82-8	Methane	04/22/2021	10:44	0.45	U	0.45	1.0	***0.4***

CT LABORATORIES
delivering more than data from your environmental analyses

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Analytical Method: EPA 8260C | SDG: 161060

Analytical Run #: 180903 | ICAL Calibration #: W041621.

CTLab #	553142				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	81	118	
Bromofluorobenzene	100	104	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	99.0	80	119	

CTLab #	553148				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	104	81	118	
Bromofluorobenzene	100	104	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	101	80	119	

CTLab #	553149				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	103	81	118	
Bromofluorobenzene	100	105	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	101	80	119	

CTLab #	553150				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	104	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	98.0	80	119	

CTLab #	553151				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	104	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	100	80	119	

CTLab #	553152				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	104	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	102	80	119	

CT LABORATORIES
delivering more than data from your environmental analyses

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	161060
Analytical Run #:	180903	ICAL Calibration #:	W041621.

CTLab #	553153				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	100	80	119	

CTLab #	553550				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	99.0	80	119	

CTLab #	553551				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	81	118	
Bromofluorobenzene	100	104	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	101	80	119	

CTLab #	553552				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	102	80	119	

CTLab #	553553				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	104	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	100	80	119	

CTLab #	553554				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	102	80	119	

CT LABORATORIES
delivering more than data from your environmental analyses

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	161060
Analytical Run #:	180903	ICAL Calibration #:	W041621.

CTLab #	553555				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	99.0	80	119	
CTLab #	**554639**	Sample Type:		Lab Control Spike	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	99.0	89	112	
Dibromofluoromethane	100	102	80	119	
CTLab #	**554696**	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	70	120	
Bromofluorobenzene	100	103	70	120	
d8-Toluene	100	99.0	85	120	
Dibromofluoromethane	100	102	85	115	
CTLab #	**554697**	Sample Type:		Method Blank	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	70	120	
Bromofluorobenzene	100	105	75	120	
d8-Toluene	100	100	85	120	
Dibromofluoromethane	100	100	85	115	
CTLab #	**554700**	Sample Type:		Matrix Spike	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	81	118	
Bromofluorobenzene	100	97.0	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	98.0	80	119	
CTLab #	**554701**	Sample Type:		Matrix Spike Duplicate	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	100	80	119	

CT LABORATORIES
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2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	161060
Analytical Run #:	180903	ICAL Calibration #:	W041621.

CTLab #	554702	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	95.0	50	150	
Bromofluorobenzene	100	101	50	150	
d8-Toluene	100	103	50	150	
Dibromofluoromethane	100	100	50	150	

CT LABORATORIES
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2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	161060
Analytical Run #:	181064	ICAL Calibration #:	W041621.

CTLab #	554737				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	96.0	81	118	
Bromofluorobenzene	100	102	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	100	80	119	
CTLab #	**554738**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	81	118	
Bromofluorobenzene	100	102	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	100	80	119	
CTLab #	**554739**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	95.0	81	118	
Bromofluorobenzene	100	102	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	99.0	80	119	
CTLab #	**554740**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	81	118	
Bromofluorobenzene	100	103	85	114	
d8-Toluene	100	103	89	112	
Dibromofluoromethane	100	102	80	119	
CTLab #	**555266**	Sample Type:		Lab Control Spike	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	92.0	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	103	89	112	
Dibromofluoromethane	100	97.0	80	119	
CTLab #	**555267**	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	92.0	70	120	
Bromofluorobenzene	100	100	70	120	
d8-Toluene	100	103	85	120	
Dibromofluoromethane	100	97.0	85	115	

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2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	161060
Analytical Run #:	181064	ICAL Calibration #:	W041621.

CTLab #	555289	Sample Type:	Method Blank		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	95.0	70	120	
Bromofluorobenzene	100	101	75	120	
d8-Toluene	100	101	85	120	
Dibromofluoromethane	100	101	85	115	
CTLab #	**555293**	Sample Type:	Matrix Spike		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	96.0	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	99.0	80	119	
CTLab #	**555294**	Sample Type:	Matrix Spike Duplicate		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	81	118	
Bromofluorobenzene	100	102	85	114	
d8-Toluene	100	104	89	112	
Dibromofluoromethane	100	100	80	119	
CTLab #	**555305**	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	94.0	50	150	
Bromofluorobenzene	100	100	50	150	
d8-Toluene	100	102	50	150	
Dibromofluoromethane	100	98.0	50	150	

CT LABORATORIES
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3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: GROUND WATER
SDG No.: 161060
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 180903
Sample No.: 554700
Parent Sample No.: 553554
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W041621.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1,1-Trichloroethane	04/18/2021	02:15	74-131	11.2	BDL	10.0	112
1,1,2,2-Tetrachloroethane	04/18/2021	02:15	71-121	9.57	BDL	10.0	95.7
1,1,2-Trichloroethane	04/18/2021	02:15	80-119	10.6	BDL	10.0	106
1,1-Dichloroethane	04/18/2021	02:15	77-125	11.4	BDL	10.0	114
1,1-Dichloroethene	04/18/2021	02:15	71-131	12.4	BDL	10.0	124
1,2,3-Trichlorobenzene	04/18/2021	02:15	69-129	10.4	BDL	10.0	104
1,2,4-Trichlorobenzene	04/18/2021	02:15	69-130	10.7	BDL	10.0	107
1,2-Dibromo-3-chloropropane	04/18/2021	02:15	62-128	8.70	BDL	10.0	87.0
1,2-Dibromoethane	04/18/2021	02:15	77-121	10.1	BDL	10.0	101
1,2-Dichlorobenzene	04/18/2021	02:15	80-119	10.4	BDL	10.0	104
1,2-Dichloroethane	04/18/2021	02:15	73-128	10.2	BDL	10.0	102
1,2-Dichloropropane	04/18/2021	02:15	78-122	10.5	BDL	10.0	105
1,3-Dichlorobenzene	04/18/2021	02:15	80-119	10.7	BDL	10.0	107
1,4-Dioxane	04/18/2021	02:15	59-139	437	BDL	500	87.4
2-Butanone	04/18/2021	02:15	56-143	88.8	BDL	100	88.8
2-Hexanone	04/18/2021	02:15	57-139	85.5	BDL	100	85.5
4-Methyl-2-pentanone	04/18/2021	02:15	67-130	93.9	BDL	100	93.9
Acetone	04/18/2021	02:15	39-160	84.9	BDL	100	84.9
Benzene	04/18/2021	02:15	79-120	11.2	BDL	10.0	112
Bromochloromethane	04/18/2021	02:15	78-123	10.4	BDL	10.0	104
Bromodichloromethane	04/18/2021	02:15	79-125	10.6	BDL	10.0	106
Bromoform	04/18/2021	02:15	66-130	10.1	BDL	10.0	101
Bromomethane	04/18/2021	02:15	53-141	13.0	BDL	10.0	130
Carbon disulfide	04/18/2021	02:15	64-133	24.5	BDL	20.0	123
Carbon tetrachloride	04/18/2021	02:15	72-136	12.5	0.33	10.0	122
Chlorobenzene	04/18/2021	02:15	82-118	11.1	BDL	10.0	111
Chloroethane	04/18/2021	02:15	60-138	10.4	BDL	10.0	104
Chloroform	04/18/2021	02:15	79-124	10.8	BDL	10.0	108
Chloromethane	04/18/2021	02:15	50-139	12.2	BDL	10.0	122
cis-1,2-Dichloroethene	04/18/2021	02:15	78-123	10.9	BDL	10.0	109
cis-1,3-Dichloropropene	04/18/2021	02:15	75-124	10.3	BDL	10.0	103

CT LABORATORIES
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3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **13MW2**

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 161060

Analytical Method: EPA 8260C Concentration Units: ug/L

Analytical Run #: 180903 Sample No.: 554700 Parent Sample No.: 553554

Analytical Prep Batch #: 0 Analytical Preparation Date/Time:

ICAL Calibration #: W041621.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Cyclohexane	04/18/2021	02:15	71-130	12.0	BDL	10.0	120
Dibromochloromethane	04/18/2021	02:15	74-126	10.2	BDL	10.0	102
Dichlorodifluoromethane	04/18/2021	02:15	32-152	14.2	BDL	10.0	142
Ethylbenzene	04/18/2021	02:15	79-121	11.4	BDL	10.0	114
Freon 113	04/18/2021	02:15	70-136	25.1	BDL	20.0	126
Isopropylbenzene	04/18/2021	02:15	72-131	11.6	BDL	10.0	116
m & p-Xylene	04/18/2021	02:15	80-121	22.8	BDL	20.0	114
Methyl Acetate	04/18/2021	02:15	56-136	8.45	BDL	10.0	84.5
Methyl tert-butyl ether	04/18/2021	02:15	71-124	9.82	BDL	10.0	98.2
Methylcyclohexane	04/18/2021	02:15	72-132	12.0	BDL	10.0	120
Methylene chloride	04/18/2021	02:15	74-124	11.2	BDL	10.0	112
o-Xylene	04/18/2021	02:15	78-122	11.0	BDL	10.0	110
Styrene	04/18/2021	02:15	78-123	11.2	BDL	10.0	112
Tetrachloroethene	04/18/2021	02:15	74-129	11.5	BDL	10.0	115
Toluene	04/18/2021	02:15	80-121	11.4	BDL	10.0	114
trans-1,2-Dichloroethene	04/18/2021	02:15	75-124	11.2	BDL	10.0	112
trans-1,3-Dichloropropene	04/18/2021	02:15	73-127	10.4	BDL	10.0	104
Trichloroethene	04/18/2021	02:15	79-123	11.1	BDL	10.0	111
Trichlorofluoromethane	04/18/2021	02:15	65-141	12.5	BDL	10.0	125
Vinyl chloride	04/18/2021	02:15	58-137	12.9	BDL	10.0	129

Spike Recovery: 0 out of 51 outside QC limits

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3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description

13MW2

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 161060

Analytical Method: RSK 175 Concentration Units: ug/L

Analytical Run #: 180922 Sample No.: 553576 Parent Sample No.: 553554

Analytical Prep Batch #: 80525 Analytical Preparation Date/Time: 04/15/2021 09:00

ICAL Calibration #: P4DG121720

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Ethane	04/15/2021 12:31	74-131	4.03	BDL	4.77	84
Ethene	04/15/2021 12:31	72-133	5.73	BDL	6.79	84
Methane	04/15/2021 12:31	73-125	1.96	BDL	2.29	86

Spike Recovery: 0 out of 3 outside QC limits

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3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **49MW01**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: GROUND WATER
SDG No.: 161060
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 181064
Sample No.: 555293
Parent Sample No.: 554737
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W041621.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1,1-Trichloroethane	04/19/2021	22:58	74-131	10.6	BDL	10.0	106
1,1,2,2-Tetrachloroethane	04/19/2021	22:58	71-121	8.33	BDL	10.0	83.3
1,1,2-Trichloroethane	04/19/2021	22:58	80-119	9.58	BDL	10.0	95.8
1,1-Dichloroethane	04/19/2021	22:58	77-125	9.82	BDL	10.0	98.2
1,1-Dichloroethene	04/19/2021	22:58	71-131	10.4	BDL	10.0	104
1,2,3-Trichlorobenzene	04/19/2021	22:58	69-129	8.76	BDL	10.0	87.6
1,2,4-Trichlorobenzene	04/19/2021	22:58	69-130	9.53	BDL	10.0	95.3
1,2-Dibromo-3-chloropropane	04/19/2021	22:58	62-128	7.69	BDL	10.0	76.9
1,2-Dibromoethane	04/19/2021	22:58	77-121	9.01	BDL	10.0	90.1
1,2-Dichlorobenzene	04/19/2021	22:58	80-119	9.52	BDL	10.0	95.2
1,2-Dichloroethane	04/19/2021	22:58	73-128	9.14	BDL	10.0	91.4
1,2-Dichloropropane	04/19/2021	22:58	78-122	9.78	BDL	10.0	97.8
1,3-Dichlorobenzene	04/19/2021	22:58	80-119	10.0	BDL	10.0	100
1,4-Dioxane	04/19/2021	22:58	59-139	387	BDL	500	77.4
2-Butanone	04/19/2021	22:58	56-143	77.9	BDL	100	77.9
2-Hexanone	04/19/2021	22:58	57-139	74.2	BDL	100	74.2
4-Methyl-2-pentanone	04/19/2021	22:58	67-130	81.5	BDL	100	81.5
Acetone	04/19/2021	22:58	39-160	66.3	BDL	100	66.3
Benzene	04/19/2021	22:58	79-120	10.5	BDL	10.0	105
Bromochloromethane	04/19/2021	22:58	78-123	9.49	BDL	10.0	94.9
Bromodichloromethane	04/19/2021	22:58	79-125	9.44	BDL	10.0	94.4
Bromoform	04/19/2021	22:58	66-130	8.77	BDL	10.0	87.7
Bromomethane	04/19/2021	22:58	53-141	11.2	BDL	10.0	112
Carbon disulfide	04/19/2021	22:58	64-133	20.4	BDL	20.0	102
Carbon tetrachloride	04/19/2021	22:58	72-136	13.7	2.8	10.0	109
Chlorobenzene	04/19/2021	22:58	82-118	10.3	BDL	10.0	103
Chloroethane	04/19/2021	22:58	60-138	9.32	BDL	10.0	93.2
Chloroform	04/19/2021	22:58	79-124	10.5	0.46	10.0	100
Chloromethane	04/19/2021	22:58	50-139	9.99	BDL	10.0	99.9
cis-1,2-Dichloroethene	04/19/2021	22:58	78-123	9.98	BDL	10.0	99.8
cis-1,3-Dichloropropene	04/19/2021	22:58	75-124	9.45	BDL	10.0	94.5

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3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **49MW01**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: GROUND WATER
SDG No.: 161060
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 181064
Sample No.: 555293
Parent Sample No.: 554737
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W041621.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Cyclohexane	04/19/2021	22:58	71-130	10.7	BDL	10.0	107
Dibromochloromethane	04/19/2021	22:58	74-126	9.38	BDL	10.0	93.8
Dichlorodifluoromethane	04/19/2021	22:58	32-152	12.2	BDL	10.0	122
Ethylbenzene	04/19/2021	22:58	79-121	10.8	BDL	10.0	108
Freon 113	04/19/2021	22:58	70-136	20.4	BDL	20.0	102
Isopropylbenzene	04/19/2021	22:58	72-131	10.9	BDL	10.0	109
m & p-Xylene	04/19/2021	22:58	80-121	21.8	BDL	20.0	109
Methyl Acetate	04/19/2021	22:58	56-136	6.95	BDL	10.0	69.5
Methyl tert-butyl ether	04/19/2021	22:58	71-124	8.84	BDL	10.0	88.4
Methylcyclohexane	04/19/2021	22:58	72-132	10.3	BDL	10.0	103
Methylene chloride	04/19/2021	22:58	74-124	9.36	BDL	10.0	93.6
o-Xylene	04/19/2021	22:58	78-122	10.4	BDL	10.0	104
Styrene	04/19/2021	22:58	78-123	10.5	BDL	10.0	105
Tetrachloroethene	04/19/2021	22:58	74-129	10.9	BDL	10.0	109
Toluene	04/19/2021	22:58	80-121	10.7	BDL	10.0	107
trans-1,2-Dichloroethene	04/19/2021	22:58	75-124	10.2	BDL	10.0	102
trans-1,3-Dichloropropene	04/19/2021	22:58	73-127	9.37	BDL	10.0	93.7
Trichloroethene	04/19/2021	22:58	79-123	10.3	BDL	10.0	103
Trichlorofluoromethane	04/19/2021	22:58	65-141	10.6	BDL	10.0	106
Vinyl chloride	04/19/2021	22:58	58-137	10.8	BDL	10.0	108

Spike Recovery: 0 out of 51 outside QC limits

CT LABORATORIES
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3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

13MW2

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER
SDG No.: 161060

Analytical Method: EPA 8260C
Concentration Units: ug/L

Analytical Run #: 180903
Sample No.: 554701
Parent Sample No.: 554700

Analytical Prep Batch #: 0
Analytical Preparation Date/Time:

ICAL Calibration #: W041621.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1,1-Trichloroethane	04/18/2021	02:45	74-131	11.3	BDL	10.0	113
1,1,2,2-Tetrachloroethane	04/18/2021	02:45	71-121	9.31	BDL	10.0	93.1
1,1,2-Trichloroethane	04/18/2021	02:45	80-119	10.1	BDL	10.0	101
1,1-Dichloroethane	04/18/2021	02:45	77-125	10.6	BDL	10.0	106
1,1-Dichloroethene	04/18/2021	02:45	71-131	12.3	BDL	10.0	123
1,2,3-Trichlorobenzene	04/18/2021	02:45	69-129	10.5	BDL	10.0	105
1,2,4-Trichlorobenzene	04/18/2021	02:45	69-130	10.8	BDL	10.0	108
1,2-Dibromo-3-chloropropane	04/18/2021	02:45	62-128	8.54	BDL	10.0	85.4
1,2-Dibromoethane	04/18/2021	02:45	77-121	9.93	BDL	10.0	99.3
1,2-Dichlorobenzene	04/18/2021	02:45	80-119	10.3	BDL	10.0	103
1,2-Dichloroethane	04/18/2021	02:45	73-128	10.1	BDL	10.0	101
1,2-Dichloropropane	04/18/2021	02:45	78-122	10.3	BDL	10.0	103
1,3-Dichlorobenzene	04/18/2021	02:45	80-119	10.9	BDL	10.0	109
1,4-Dioxane	04/18/2021	02:45	59-139	430	BDL	500	86.0
2-Butanone	04/18/2021	02:45	56-143	84.3	BDL	100	84.3
2-Hexanone	04/18/2021	02:45	57-139	84.7	BDL	100	84.7
4-Methyl-2-pentanone	04/18/2021	02:45	67-130	92.0	BDL	100	92.0
Acetone	04/18/2021	02:45	39-160	77.4	BDL	100	77.4
Benzene	04/18/2021	02:45	79-120	11.1	BDL	10.0	111
Bromochloromethane	04/18/2021	02:45	78-123	10.2	BDL	10.0	102
Bromodichloromethane	04/18/2021	02:45	79-125	10.4	BDL	10.0	104
Bromoform	04/18/2021	02:45	66-130	9.83	BDL	10.0	98.3
Bromomethane	04/18/2021	02:45	53-141	12.2	BDL	10.0	122
Carbon disulfide	04/18/2021	02:45	64-133	24.2	BDL	20.0	121
Carbon tetrachloride	04/18/2021	02:45	72-136	12.2	0.33	10.0	119
Chlorobenzene	04/18/2021	02:45	82-118	11.0	BDL	10.0	110
Chloroethane	04/18/2021	02:45	60-138	10.4	BDL	10.0	104
Chloroform	04/18/2021	02:45	79-124	10.7	BDL	10.0	107
Chloromethane	04/18/2021	02:45	50-139	12.1	BDL	10.0	121
cis-1,2-Dichloroethene	04/18/2021	02:45	78-123	10.8	BDL	10.0	108
cis-1,3-Dichloropropene	04/18/2021	02:45	75-124	10.1	BDL	10.0	101

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

13MW2

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 161060

Analytical Method: EPA 8260C Concentration Units: ug/L

Analytical Run #: 180903 Sample No.: 554701 Parent Sample No.: 554700

Analytical Prep Batch #: 0 Analytical Preparation Date/Time:

ICAL Calibration #: W041621.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Cyclohexane	04/18/2021	02:45	71-130	12.2	BDL	10.0	122
Dibromochloromethane	04/18/2021	02:45	74-126	10.1	BDL	10.0	101
Dichlorodifluoromethane	04/18/2021	02:45	32-152	14.1	BDL	10.0	141
Ethylbenzene	04/18/2021	02:45	79-121	11.5	BDL	10.0	115
Freon 113	04/18/2021	02:45	70-136	25.3	BDL	20.0	127
Isopropylbenzene	04/18/2021	02:45	72-131	11.8	BDL	10.0	118
m & p-Xylene	04/18/2021	02:45	80-121	23.1	BDL	20.0	116
Methyl Acetate	04/18/2021	02:45	56-136	7.99	BDL	10.0	79.9
Methyl tert-butyl ether	04/18/2021	02:45	71-124	9.66	BDL	10.0	96.6
Methylcyclohexane	04/18/2021	02:45	72-132	12.0	BDL	10.0	120
Methylene chloride	04/18/2021	02:45	74-124	10.4	BDL	10.0	104
o-Xylene	04/18/2021	02:45	78-122	11.1	BDL	10.0	111
Styrene	04/18/2021	02:45	78-123	11.0	BDL	10.0	110
Tetrachloroethene	04/18/2021	02:45	74-129	11.8	BDL	10.0	118
Toluene	04/18/2021	02:45	80-121	11.2	BDL	10.0	112
trans-1,2-Dichloroethene	04/18/2021	02:45	75-124	11.0	BDL	10.0	110
trans-1,3-Dichloropropene	04/18/2021	02:45	73-127	10.2	BDL	10.0	102
Trichloroethene	04/18/2021	02:45	79-123	11.0	BDL	10.0	110
Trichlorofluoromethane	04/18/2021	02:45	65-141	12.3	BDL	10.0	123
Vinyl chloride	04/18/2021	02:45	58-137	12.8	BDL	10.0	128

Spike Recovery: 0 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

13MW2

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 161060

Analytical Method: RSK 175 Concentration Units: ug/L

Analytical Run #: 180922 Sample No.: 553577 Parent Sample No.: 553576

Analytical Prep Batch #: 80525 Analytical Preparation Date/Time: 04/15/2021 09:00

ICAL Calibration #: P4DG121720

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Ethane	04/15/2021	12:36	74-131	4.10	BDL	4.77	86
Ethene	04/15/2021	12:36	72-133	5.80	BDL	6.79	85
Methane	04/15/2021	12:36	73-125	2.00	BDL	2.29	87

Spike Recovery: 0 out of 3 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

49MW01

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 161060

Analytical Method: EPA 8260C Concentration Units: ug/L

Analytical Run #: 181064 Sample No.: 555294 Parent Sample No.: 555293

Analytical Prep Batch #: 0 Analytical Preparation Date/Time:

ICAL Calibration #: W041621.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1,1-Trichloroethane	04/19/2021	23:28	74-131	11.5	BDL	10.0	115
1,1,2,2-Tetrachloroethane	04/19/2021	23:28	71-121	9.06	BDL	10.0	90.6
1,1,2-Trichloroethane	04/19/2021	23:28	80-119	10.0	BDL	10.0	100
1,1-Dichloroethane	04/19/2021	23:28	77-125	10.7	BDL	10.0	107
1,1-Dichloroethene	04/19/2021	23:28	71-131	11.5	BDL	10.0	115
1,2,3-Trichlorobenzene	04/19/2021	23:28	69-129	10.2	BDL	10.0	102
1,2,4-Trichlorobenzene	04/19/2021	23:28	69-130	10.6	BDL	10.0	106
1,2-Dibromo-3-chloropropane	04/19/2021	23:28	62-128	8.73	BDL	10.0	87.3
1,2-Dibromoethane	04/19/2021	23:28	77-121	9.43	BDL	10.0	94.3
1,2-Dichlorobenzene	04/19/2021	23:28	80-119	10.4	BDL	10.0	104
1,2-Dichloroethane	04/19/2021	23:28	73-128	9.92	BDL	10.0	99.2
1,2-Dichloropropane	04/19/2021	23:28	78-122	10.5	BDL	10.0	105
1,3-Dichlorobenzene	04/19/2021	23:28	80-119	10.7	BDL	10.0	107
1,4-Dioxane	04/19/2021	23:28	59-139	431	BDL	500	86.2
2-Butanone	04/19/2021	23:28	56-143	83.7	BDL	100	83.7
2-Hexanone	04/19/2021	23:28	57-139	81.9	BDL	100	81.9
4-Methyl-2-pentanone	04/19/2021	23:28	67-130	89.2	BDL	100	89.2
Acetone	04/19/2021	23:28	39-160	70.9	BDL	100	70.9
Benzene	04/19/2021	23:28	79-120	11.3	BDL	10.0	113
Bromochloromethane	04/19/2021	23:28	78-123	10.1	BDL	10.0	101
Bromodichloromethane	04/19/2021	23:28	79-125	10.2	BDL	10.0	102
Bromoform	04/19/2021	23:28	66-130	9.34	BDL	10.0	93.4
Bromomethane	04/19/2021	23:28	53-141	11.5	BDL	10.0	115
Carbon disulfide	04/19/2021	23:28	64-133	21.9	BDL	20.0	110
Carbon tetrachloride	04/19/2021	23:28	72-136	14.7	2.8	10.0	119
Chlorobenzene	04/19/2021	23:28	82-118	11.0	BDL	10.0	110
Chloroethane	04/19/2021	23:28	60-138	10.1	BDL	10.0	101
Chloroform	04/19/2021	23:28	79-124	11.1	0.46	10.0	106
Chloromethane	04/19/2021	23:28	50-139	10.8	BDL	10.0	108
cis-1,2-Dichloroethene	04/19/2021	23:28	78-123	10.9	BDL	10.0	109
cis-1,3-Dichloropropene	04/19/2021	23:28	75-124	10.2	BDL	10.0	102

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

49MW01

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER

SDG No.: 161060

Analytical Method: EPA 8260C

Concentration Units: ug/L

Analytical Run #: 181064

Sample No.: 555294

Parent Sample No.: 555293

Analytical Prep Batch #: 0

Analytical Preparation Date/Time:

ICAL Calibration #: W041621.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Cyclohexane	04/19/2021	23:28	71-130	11.7	BDL	10.0	117
Dibromochloromethane	04/19/2021	23:28	74-126	9.84	BDL	10.0	98.4
Dichlorodifluoromethane	04/19/2021	23:28	32-152	13.2	BDL	10.0	132
Ethylbenzene	04/19/2021	23:28	79-121	11.4	BDL	10.0	114
Freon 113	04/19/2021	23:28	70-136	21.5	BDL	20.0	108
Isopropylbenzene	04/19/2021	23:28	72-131	11.7	BDL	10.0	117
m & p-Xylene	04/19/2021	23:28	80-121	22.9	BDL	20.0	115
Methyl Acetate	04/19/2021	23:28	56-136	7.23	BDL	10.0	72.3
Methyl tert-butyl ether	04/19/2021	23:28	71-124	9.49	BDL	10.0	94.9
Methylcyclohexane	04/19/2021	23:28	72-132	11.2	BDL	10.0	112
Methylene chloride	04/19/2021	23:28	74-124	10.2	BDL	10.0	102
o-Xylene	04/19/2021	23:28	78-122	11.1	BDL	10.0	111
Styrene	04/19/2021	23:28	78-123	11.0	BDL	10.0	110
Tetrachloroethene	04/19/2021	23:28	74-129	11.6	BDL	10.0	116
Toluene	04/19/2021	23:28	80-121	11.3	BDL	10.0	113
trans-1,2-Dichloroethene	04/19/2021	23:28	75-124	11.1	BDL	10.0	111
trans-1,3-Dichloropropene	04/19/2021	23:28	73-127	10.1	BDL	10.0	101
Trichloroethene	04/19/2021	23:28	79-123	11.3	BDL	10.0	113
Trichlorofluoromethane	04/19/2021	23:28	65-141	11.6	BDL	10.0	116
Vinyl chloride	04/19/2021	23:28	58-137	11.8	BDL	10.0	118

Spike Recovery: 0 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE LAB CONTROL SAMPLE

Sample Description: **LCS**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Sample No.: 553430
SDG No.: 161060

Analytical Method: RSK 175
Concentration Units: ug/L

Analytical Run #: 180922
Sample No.: 553430
Parent Sample No.: 0

Analytical Prep Batch #: 80525
Analytical Preparation Date/Time: 04/15/2021 09:00

ICAL Calibration #: P4DG121720

Analyte	Analysis Date/Time	Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)
Ethane	04/15/2021 09:20	4.22		4.77	88		74-131	20
Ethene	04/15/2021 09:20	5.90		6.79	87		72-133	20
Methane	04/15/2021 09:20	2.01		2.29	88		73-125	20

RPD or Spike Recovery: 0 out of 3 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE LAB CONTROL SAMPLE

Sample Description: **LCS**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 554639
SDG No.: 161060
Analytical Method: EPA 8260C
Concentration Units: ug/L

Analytical Run #: 180903 Sample No.: 554639 Parent Sample No.: 0
Analytical Prep Batch #: 0 Analytical Preparation Date/Time:
ICAL Calibration #: W041621.

Analyte	Analysis Date/Time	Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)
1,1,1-Trichloroethane	04/17/2021 18:15	11.0		10.0	110		74-131	20
1,1,2,2-Tetrachloroethane	04/17/2021 18:15	9.67		10.0	96.7		71-121	20
1,1,2-Trichloroethane	04/17/2021 18:15	9.73		10.0	97.3		80-119	20
1,1-Dichloroethane	04/17/2021 18:15	10.6		10.0	106		77-125	20
1,1-Dichloroethene	04/17/2021 18:15	10.9		10.0	109		71-131	20
1,2,3-Trichlorobenzene	04/17/2021 18:15	9.70		10.0	97.0		69-129	20
1,2,4-Trichlorobenzene	04/17/2021 18:15	10.1		10.0	101		69-130	20
1,2-Dibromo-3-chloropropane	04/17/2021 18:15	9.47		10.0	94.7		62-128	20
1,2-Dibromoethane	04/17/2021 18:15	10.3		10.0	103		77-121	20
1,2-Dichlorobenzene	04/17/2021 18:15	9.83		10.0	98.3		80-119	20
1,2-Dichloroethane	04/17/2021 18:15	10.2		10.0	102		73-128	20
1,2-Dichloropropane	04/17/2021 18:15	10.5		10.0	105		78-122	20
1,3-Dichlorobenzene	04/17/2021 18:15	10.2		10.0	102		80-119	20
1,4-Dioxane	04/17/2021 18:15	462		500	92.4		59-139	20
2-Butanone	04/17/2021 18:15	87.7		100	87.7		56-143	20
2-Hexanone	04/17/2021 18:15	83.9		100	83.9		57-139	20
4-Methyl-2-pentanone	04/17/2021 18:15	91.9		100	91.9		67-130	20
Acetone	04/17/2021 18:15	94.0		100	94.0		39-160	20
Benzene	04/17/2021 18:15	10.8		10.0	108		79-120	20
Bromochloromethane	04/17/2021 18:15	9.75		10.0	97.5		78-123	20
Bromodichloromethane	04/17/2021 18:15	10.3		10.0	103		79-125	20
Bromoform	04/17/2021 18:15	9.75		10.0	97.5		66-130	20
Bromomethane	04/17/2021 18:15	11.6		10.0	116		53-141	20
Carbon disulfide	04/17/2021 18:15	23.1		20.0	116		64-133	20
Carbon tetrachloride	04/17/2021 18:15	11.3		10.0	113		72-136	20
Chlorobenzene	04/17/2021 18:15	9.92		10.0	99.2		82-118	20
Chloroethane	04/17/2021 18:15	9.56		10.0	95.6		60-138	20
Chloroform	04/17/2021 18:15	9.82		10.0	98.2		79-124	20

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE LAB CONTROL SAMPLE

Sample Description: **LCS**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 554639
SDG No.: 161060
Analytical Method: EPA 8260C
Concentration Units: ug/L

Analytical Run #: 180903 Sample No.: 554639 Parent Sample No.: 0
Analytical Prep Batch #: 0 Analytical Preparation Date/Time:
ICAL Calibration #: W041621.

Analyte	Analysis Date/Time	Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)
Chloromethane	04/17/2021 18:15	10.7		10.0	107		50-139	20
cis-1,2-Dichloroethene	04/17/2021 18:15	10.1		10.0	101		78-123	20
cis-1,3-Dichloropropene	04/17/2021 18:15	10.5		10.0	105		75-124	20
Cyclohexane	04/17/2021 18:15	11.8		10.0	118		71-130	20
Dibromochloromethane	04/17/2021 18:15	9.73		10.0	97.3		74-126	20
Dichlorodifluoromethane	04/17/2021 18:15	11.8		10.0	118		32-152	20
Ethylbenzene	04/17/2021 18:15	10.6		10.0	106		79-121	20
Freon 113	04/17/2021 18:15	23.2		20.0	116		70-136	20
Isopropylbenzene	04/17/2021 18:15	10.9		10.0	109		72-131	20
m & p-Xylene	04/17/2021 18:15	20.8		20.0	104		80-121	20
Methyl Acetate	04/17/2021 18:15	9.37		10.0	93.7		56-136	20
Methyl tert-butyl ether	04/17/2021 18:15	10.1		10.0	101		71-124	20
Methylcyclohexane	04/17/2021 18:15	11.9		10.0	119		72-132	20
Methylene chloride	04/17/2021 18:15	9.94		10.0	99.4		74-124	20
o-Xylene	04/17/2021 18:15	10.2		10.0	102		78-122	20
Styrene	04/17/2021 18:15	10.3		10.0	103		78-123	20
Tetrachloroethene	04/17/2021 18:15	10.8		10.0	108		74-129	20
Toluene	04/17/2021 18:15	10.2		10.0	102		80-121	20
trans-1,2-Dichloroethene	04/17/2021 18:15	11.1		10.0	111		75-124	20
trans-1,3-Dichloropropene	04/17/2021 18:15	10.2		10.0	102		73-127	20
Trichloroethene	04/17/2021 18:15	11.0		10.0	110		79-123	20
Trichlorofluoromethane	04/17/2021 18:15	11.6		10.0	116		65-141	20
Vinyl chloride	04/17/2021 18:15	11.5		10.0	115		58-137	20

RPD or Spike Recovery: 0 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE LAB CONTROL SAMPLE

Sample Description: **LCS**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 555266
SDG No.: 161060
Analytical Method: EPA 8260C
Concentration Units: ug/L

Analytical Run #: 181064 Sample No.: 555266 Parent Sample No.: 0
Analytical Prep Batch #: 0 Analytical Preparation Date/Time:
ICAL Calibration #: W041621.

Analyte	Analysis Date/Time	Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)	
1,1,1-Trichloroethane	04/19/2021 15:41	10.6		10.0	106		74-131	20	
1,1,2,2-Tetrachloroethane	04/19/2021 15:41	8.14		10.0	81.4		71-121	20	
1,1,2-Trichloroethane	04/19/2021 15:41	9.51		10.0	95.1		80-119	20	
1,1-Dichloroethane	04/19/2021 15:41	10.1		10.0	101		77-125	20	
1,1-Dichloroethene	04/19/2021 15:41	10.2		10.0	102		71-131	20	
1,2,3-Trichlorobenzene	04/19/2021 15:41	9.77		10.0	97.7		69-129	20	
1,2,4-Trichlorobenzene	04/19/2021 15:41	10.3		10.0	103		69-130	20	
1,2-Dibromo-3-chloropropane	04/19/2021 15:41	7.59		10.0	75.9		62-128	20	
1,2-Dibromoethane	04/19/2021 15:41	8.82		10.0	88.2		77-121	20	
1,2-Dichlorobenzene	04/19/2021 15:41	9.68		10.0	96.8		80-119	20	
1,2-Dichloroethane	04/19/2021 15:41	9.09		10.0	90.9		73-128	20	
1,2-Dichloropropane	04/19/2021 15:41	9.94		10.0	99.4		78-122	20	
1,3-Dichlorobenzene	04/19/2021 15:41	10.2		10.0	102		80-119	20	
1,4-Dioxane	04/19/2021 15:41	182		500	36.4		59-139	20	*FAIL*
2-Butanone	04/19/2021 15:41	78.5		100	78.5		56-143	20	
2-Hexanone	04/19/2021 15:41	76.2		100	76.2		57-139	20	
4-Methyl-2-pentanone	04/19/2021 15:41	83.4		100	83.4		67-130	20	
Acetone	04/19/2021 15:41	75.4		100	75.4		39-160	20	
Benzene	04/19/2021 15:41	10.4		10.0	104		79-120	20	
Bromochloromethane	04/19/2021 15:41	9.71		10.0	97.1		78-123	20	
Bromodichloromethane	04/19/2021 15:41	9.42		10.0	94.2		79-125	20	
Bromoform	04/19/2021 15:41	8.79		10.0	87.9		66-130	20	
Bromomethane	04/19/2021 15:41	10.9		10.0	109		53-141	20	
Carbon disulfide	04/19/2021 15:41	21.6		20.0	108		64-133	20	
Carbon tetrachloride	04/19/2021 15:41	10.9		10.0	109		72-136	20	
Chlorobenzene	04/19/2021 15:41	10.3		10.0	103		82-118	20	
Chloroethane	04/19/2021 15:41	9.50		10.0	95.0		60-138	20	
Chloroform	04/19/2021 15:41	9.90		10.0	99.0		79-124	20	

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE LAB CONTROL SAMPLE

Sample Description: **LCS**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 555266
SDG No.: 161060
Analytical Method: EPA 8260C
Concentration Units: ug/L

Analytical Run #: 181064 Sample No.: 555266 Parent Sample No.: 0
Analytical Prep Batch #: 0 Analytical Preparation Date/Time:
ICAL Calibration #: W041621.

Analyte	Analysis Date/Time	Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)
Chloromethane	04/19/2021 15:41	9.91		10.0	99.1		50-139	20
cis-1,2-Dichloroethene	04/19/2021 15:41	10.3		10.0	103		78-123	20
cis-1,3-Dichloropropene	04/19/2021 15:41	10.1		10.0	101		75-124	20
Cyclohexane	04/19/2021 15:41	11.8		10.0	118		71-130	20
Dibromochloromethane	04/19/2021 15:41	9.25		10.0	92.5		74-126	20
Dichlorodifluoromethane	04/19/2021 15:41	12.3		10.0	123		32-152	20
Ethylbenzene	04/19/2021 15:41	11.1		10.0	111		79-121	20
Freon 113	04/19/2021 15:41	22.6		20.0	113		70-136	20
Isopropylbenzene	04/19/2021 15:41	11.6		10.0	116		72-131	20
m & p-Xylene	04/19/2021 15:41	22.5		20.0	113		80-121	20
Methyl Acetate	04/19/2021 15:41	6.97		10.0	69.7		56-136	20
Methyl tert-butyl ether	04/19/2021 15:41	9.15		10.0	91.5		71-124	20
Methylcyclohexane	04/19/2021 15:41	12.2		10.0	122		72-132	20
Methylene chloride	04/19/2021 15:41	9.06		10.0	90.6		74-124	20
o-Xylene	04/19/2021 15:41	10.5		10.0	105		78-122	20
Styrene	04/19/2021 15:41	10.8		10.0	108		78-123	20
Tetrachloroethene	04/19/2021 15:41	11.1		10.0	111		74-129	20
Toluene	04/19/2021 15:41	10.7		10.0	107		80-121	20
trans-1,2-Dichloroethene	04/19/2021 15:41	10.3		10.0	103		75-124	20
trans-1,3-Dichloropropene	04/19/2021 15:41	9.97		10.0	99.7		73-127	20
Trichloroethene	04/19/2021 15:41	10.8		10.0	108		79-123	20
Trichlorofluoromethane	04/19/2021 15:41	11.1		10.0	111		65-141	20
Vinyl chloride	04/19/2021 15:41	10.6		10.0	106		58-137	20

RPD or Spike Recovery: 1 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE LAB CONTROL SAMPLE

Sample Description: **LCS**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 555993
SDG No.: 161060
Analytical Method: RSK 175
Concentration Units: ug/L

Analytical Run #: 181142 Sample No.: 555993 Parent Sample No.: 0
Analytical Prep Batch #: 80646 Analytical Preparation Date/Time: 04/21/2021 08:57
ICAL Calibration #:

Analyte	Analysis Date/Time	Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)
Ethane	04/22/2021 10:24	4.11		4.78	86.0		74-131	20
Ethene	04/22/2021 10:24	5.72		6.79	84.2		72-133	20
Methane	04/22/2021 10:24	1.94		2.30	84.3		73-125	20

RPD or Spike Recovery: 0 out of 3 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE LAB CONTROL SAMPLE

Sample Description: **LCSD**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 555994
SDG No.: 161060
Analytical Method: RSK 175
Concentration Units: ug/L

Analytical Run #: 181142
Sample No.: 555994
Parent Sample No.: 555993
Analytical Prep Batch #: 80646
Analytical Preparation Date/Time: 04/21/2021 08:57
ICAL Calibration #: P4DG121720

Analyte	Analysis Date/Time	Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)
Ethane	04/22/2021 13:19	3.94	4.11	4.78	82.4	4.22	74-131	20
Ethene	04/22/2021 13:19	5.52	5.72	6.79	81.3	3.56	72-133	20
Methane	04/22/2021 13:19	1.85	1.94	2.30	80.4	4.75	73-125	20

RPD or Spike Recovery: 0 out of 3 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	553429	SDG No.:	161060
Matrix:	LIQUID	Date Extracted:	04/15/2021
Date Analyzed:	04/15/2021	Time Analyzed:	09:58
Analytical Method:	RSK 175	Extraction Method:	METHOD
Analytical Run #:	180922	Extraction Batch #:	80525
		ICAL Calibration #:	P4DG121720

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	CCV	554225	04/15/2021 09:15	P4DG121720
2	LCSW	553430	04/15/2021 09:20	P4DG121720
3	MBW	553429	04/15/2021 09:58	P4DG121720
4	50MW02	553142	04/15/2021 10:07	P4DG121720
5	EQB-50MW02	553148	04/15/2021 10:10	P4DG121720
6	48MW2	553149	04/15/2021 10:16	P4DG121720
7	48MW3	553150	04/15/2021 10:20	P4DG121720
8	48TW3	553151	04/15/2021 10:24	P4DG121720
9	49MW02	553152	04/15/2021 10:27	P4DG121720
10	13MW4	553550	04/15/2021 11:30	P4DG121720
11	13MW3	553551	04/15/2021 12:07	P4DG121720
12	13TW3	553552	04/15/2021 12:10	P4DG121720
13	49MW04	553553	04/15/2021 12:14	P4DG121720
14	CCV	554226	04/15/2021 12:18	P4DG121720
15	13MW2	553554	04/15/2021 12:26	P4DG121720
16	13MW2MSW	553576	04/15/2021 12:31	P4DG121720
17	13MW2MSDW	553577	04/15/2021 12:36	P4DG121720
18	CCV	554371	04/15/2021 16:07	

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	554697	SDG No.:	161060
Matrix:	LIQUID	Date Extracted:	
Date Analyzed:	04/17/2021	Time Analyzed:	19:14
Analytical Method:	EPA 8260C	Extraction Method:	NONE
Analytical Run #:	180903	Extraction Batch #:	0
		ICAL Calibration #:	W041621.

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	BFB	554753	04/17/2021 17:29	
2	LCSW	554639	04/17/2021 18:15	W041621.
3	CCV	554696	04/17/2021 18:15	W041621.
4	MBW	554697	04/17/2021 19:14	W041621.
5	TB-1	553153	04/17/2021 19:45	W041621.
6	TB-2	553555	04/17/2021 20:15	W041621.
7	EQB-50MW02	553148	04/17/2021 20:45	W041621.
8	50MW02	553142	04/17/2021 21:15	W041621.
9	48MW2	553149	04/17/2021 21:45	W041621.
10	49MW02	553152	04/17/2021 22:15	W041621.
11	13MW4	553550	04/17/2021 22:45	W041621.
12	13MW3	553551	04/17/2021 23:15	W041621.
13	13TW3	553552	04/17/2021 23:45	W041621.
14	49MW04	553553	04/18/2021 00:15	W041621.
15	13MW2	553554	04/18/2021 00:45	W041621.
16	48MW3	553150	04/18/2021 01:15	W041621.
17	48TW3	553151	04/18/2021 01:45	W041621.
18	13MW2MSW	554700	04/18/2021 02:15	W041621.
19	13MW2MSDW	554701	04/18/2021 02:45	W041621.
20	CCVF	554702	04/18/2021 03:15	W041621.

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	555289	SDG No.:	161060
Matrix:	LIQUID	Date Extracted:	
Date Analyzed:	04/19/2021	Time Analyzed:	17:00
Analytical Method:	EPA 8260C	Extraction Method:	NONE
Analytical Run #:	181064	Extraction Batch #:	0
		ICAL Calibration #:	W041621.

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	BFB	557726	04/19/2021 14:33	
2	LCSW	555266	04/19/2021 15:41	W041621.
3	CCV	555267	04/19/2021 15:41	W041621.
4	MBW	555289	04/19/2021 17:00	W041621.
5	TB-3	554740	04/19/2021 18:00	W041621.
6	49MW01	554737	04/19/2021 18:30	W041621.
7	48MW1	554738	04/19/2021 19:00	W041621.
8	48MW06	554739	04/19/2021 19:29	W041621.
9	49MW01MSW	555293	04/19/2021 22:58	W041621.
10	49MW01MSDW	555294	04/19/2021 23:28	W041621.
11	CCVF	555305	04/19/2021 23:58	W041621.

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	555992	SDG No.:	161060
Matrix:	LIQUID	Date Extracted:	04/21/2021
Date Analyzed:	04/22/2021	Time Analyzed:	10:44
Analytical Method:	RSK 175	Extraction Method:	METHOD
Analytical Run #:	181142	Extraction Batch #:	80646
		ICAL Calibration #:	

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	CCV	559229	04/22/2021 09:17	
2	LCSW	555993	04/22/2021 10:24	
3	MBW	555992	04/22/2021 10:44	
4	CCV	559230	04/22/2021 12:01	
5	49MW01	554737	04/22/2021 12:51	P4DG121720
6	48MW1	554738	04/22/2021 12:56	P4DG121720
7	48MW06	554739	04/22/2021 13:11	P4DG121720
8	LCSDW	555994	04/22/2021 13:19	P4DG121720
9	CCV	559239	04/22/2021 13:24	

VOLATILE ORGANIC ANALYSIS
SAMPLE DATA
DOCUMENTS

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553153.D Vial: 6
Acq On : 17 Apr 2021 19:45 Operator: RLD-DGS
Sample : 180903,553153, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 20:05:47 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1490739	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1133254	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	547481	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	390770	20.021	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
45) SURR12DCAd4	7.27	102	110429	20.167	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %			
61) SURRd8Tolule	9.71	98	1485862	20.213	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	599588	20.689	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	18488	Below	Cal	96
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	12768	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.85	59	6000	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	6.21	77	3504	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553153.D Vial: 6
Acq On : 17 Apr 2021 19:45 Operator: RLD-DGS
Sample : 180903,553153, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 20:05:47 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	9.04	43	3446	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.57	43	4323	Below Cal #	39
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.64	43	4770	Below Cal #	32
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	11.65	112	6649	N.D.	
73)	1Clhexane	11.63	91	3427	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	13.05	105	2529	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.65	91	3783	N.D.	
89)	2chlorotolue	13.65	91	3532	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	14.37	119	2743	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	14.69	105	5107	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.90	119	5586	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.50	91	5646	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553153.D Vial: 6
Acq On : 17 Apr 2021 19:45 Operator: RLD-DGS
Sample : 180903,553153, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 20:05:47 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	0.00	180	0	N.D.		
103)	Hexachlorobu	0.00	225	0	N.D.		
104)	Naphthalene	18.03	128	3380	N.D.		
105)	123Trichlben	0.00	180	0	N.D.		

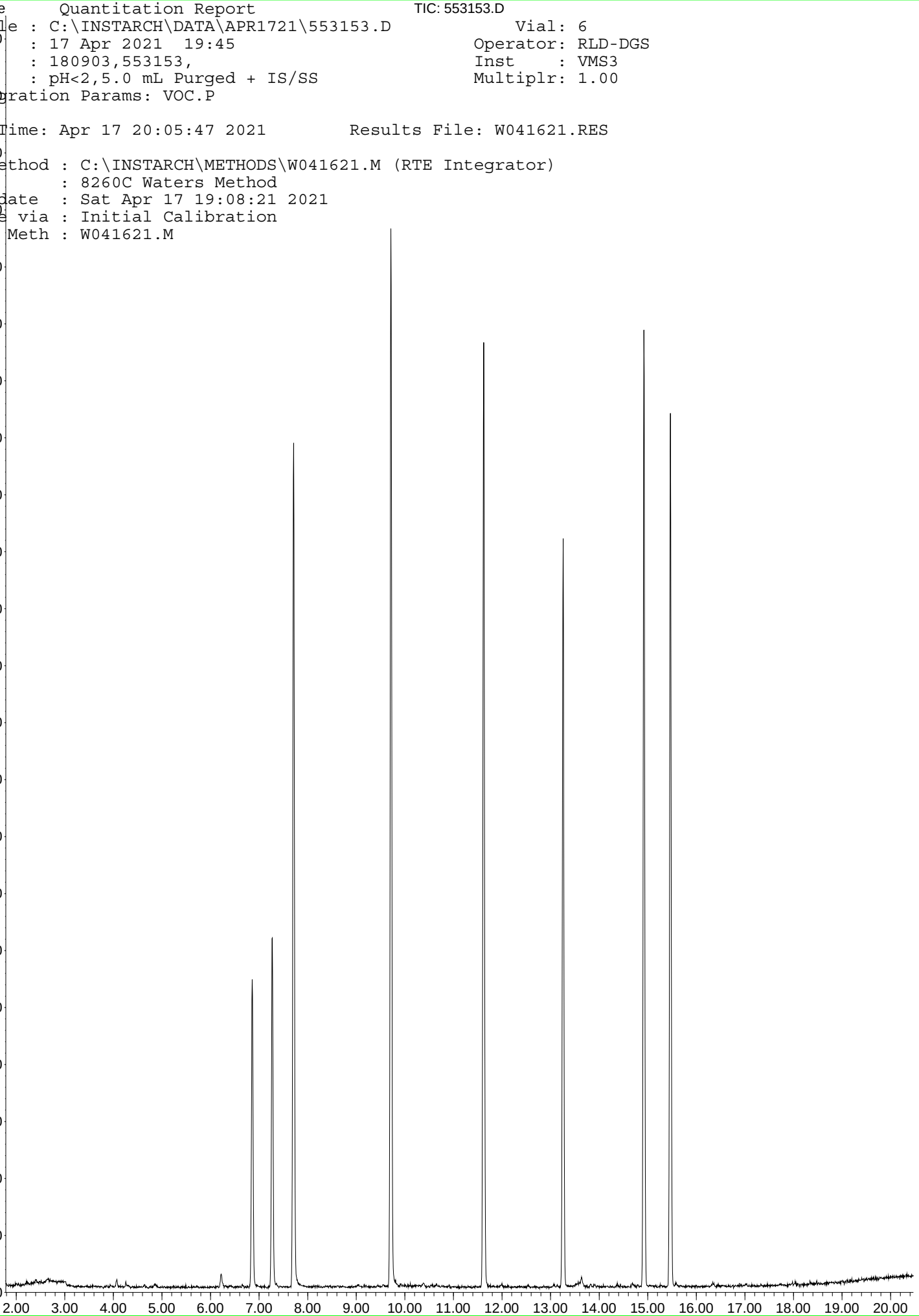
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 553153.D

Data File : C:\INSTARCH\DATA\APR1721\553153.D Vial: 6
Acq On : 17 Apr 2021 19:45 Operator: RLD-DGS
Sample : 180903,553153, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 20:05:47 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553155.D Vial: 7
Acq On : 17 Apr 2021 20:15 Operator: RLD-DGS
Sample : 180903,553555, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 20:35:57 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1492632	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1132294	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	547723	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	388625	19.886	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	110880	20.223	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %			
61) SURRd8Tolule	9.71	98	1481630	20.130	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	595832	20.550	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	16001	Below	Cal	94
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	12084	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.64	84	4329	N.D.		
21) tbutylalcohol	4.86	59	4300	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	6.21	77	2995	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553155.D Vial: 7
Acq On : 17 Apr 2021 20:15 Operator: RLD-DGS
Sample : 180903,553555, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 20:35:57 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	9.03	43	3782	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.56	43	3796	Below Cal #	39
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.64	43	3334	Below Cal #	32
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	11.66	112	7887	N.D.	
73)	1Clhexane	11.63	91	3804	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	14.69	105	3757	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.91	119	4557	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.49	91	6559	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553155.D Vial: 7
Acq On : 17 Apr 2021 20:15 Operator: RLD-DGS
Sample : 180903,553555, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 20:35:57 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	18.03	128	3489	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

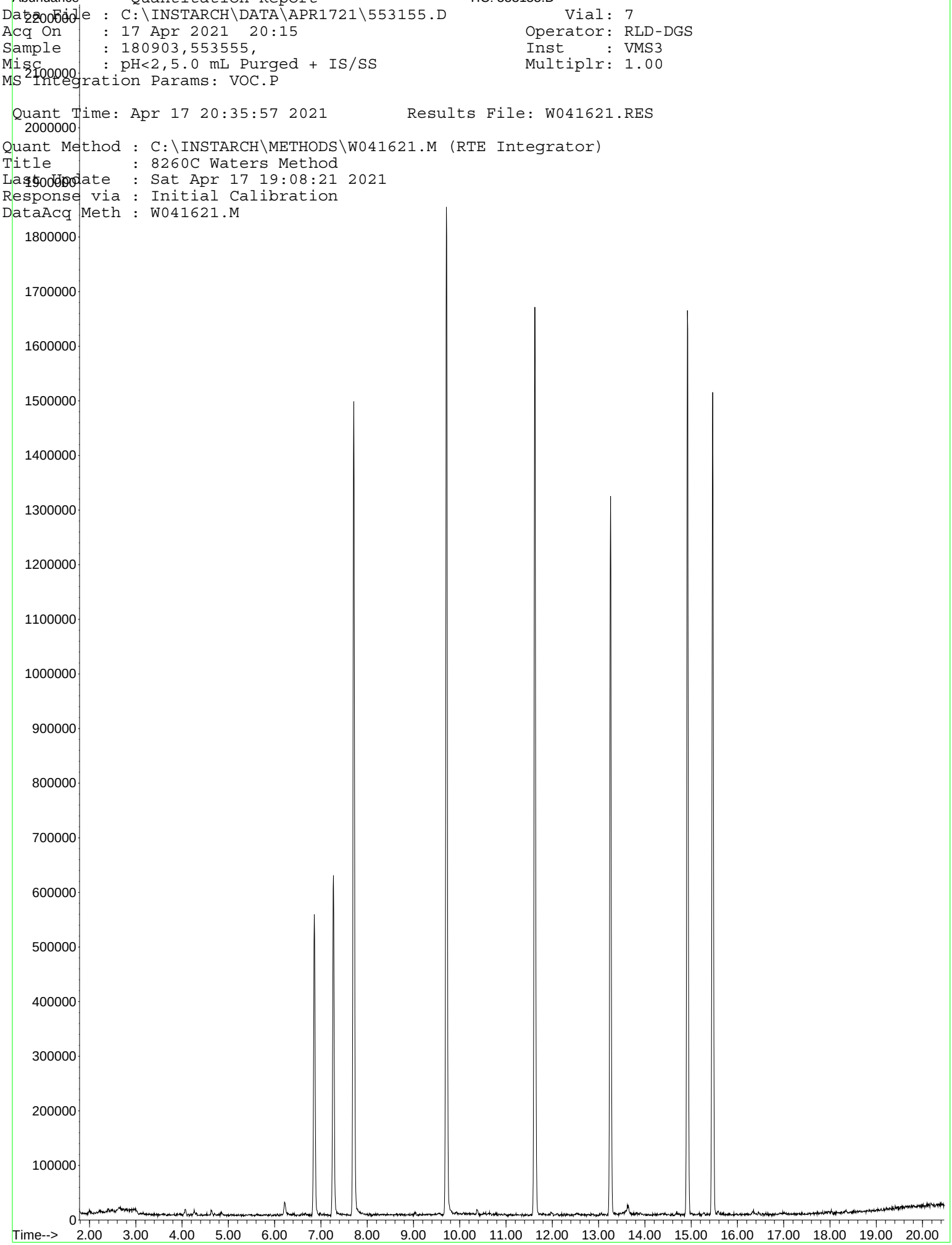
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 553155.D

Data File : C:\INSTARCH\DATA\APR1721\553155.D Vial: 7
Acq On : 17 Apr 2021 20:15 Operator: RLD-DGS
Sample : 180903,553555, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 20:35:57 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553148.D Vial: 8
Acq On : 17 Apr 2021 20:45 Operator: RLD-DGS
Sample : 180903,553148, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 21:05:39 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1460795	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1120713	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	532225	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	385909	20.177	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.27	102	111445	20.769	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 104	%		
61) SURRd8Tolule	9.71	98	1452622	20.166	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%		
83) SURR4BrFBenz	13.26	95	586234	20.808	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 104	%		

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	34796	N.D.		
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	10204	Below	Cal #	73
18) allylchloride	4.39	41	3588	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553148.D Vial: 8
Acq On : 17 Apr 2021 20:45 Operator: RLD-DGS
Sample : 180903,553148, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 21:05:39 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	3300	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	9.04	43	2988	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.65	43	2633	Below Cal #	32
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.63	91	3263	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.64	91	2555	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	14.69	105	3462	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.90	119	3364	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.50	91	4600	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553148.D Vial: 8
Acq On : 17 Apr 2021 20:45 Operator: RLD-DGS
Sample : 180903,553148, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 21:05:39 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	0.00	180	0	N.D.		
103)	Hexachlorobu	0.00	225	0	N.D.		
104)	Naphthalene	0.00	128	0	N.D.		
105)	123Trichlben	0.00	180	0	N.D.		

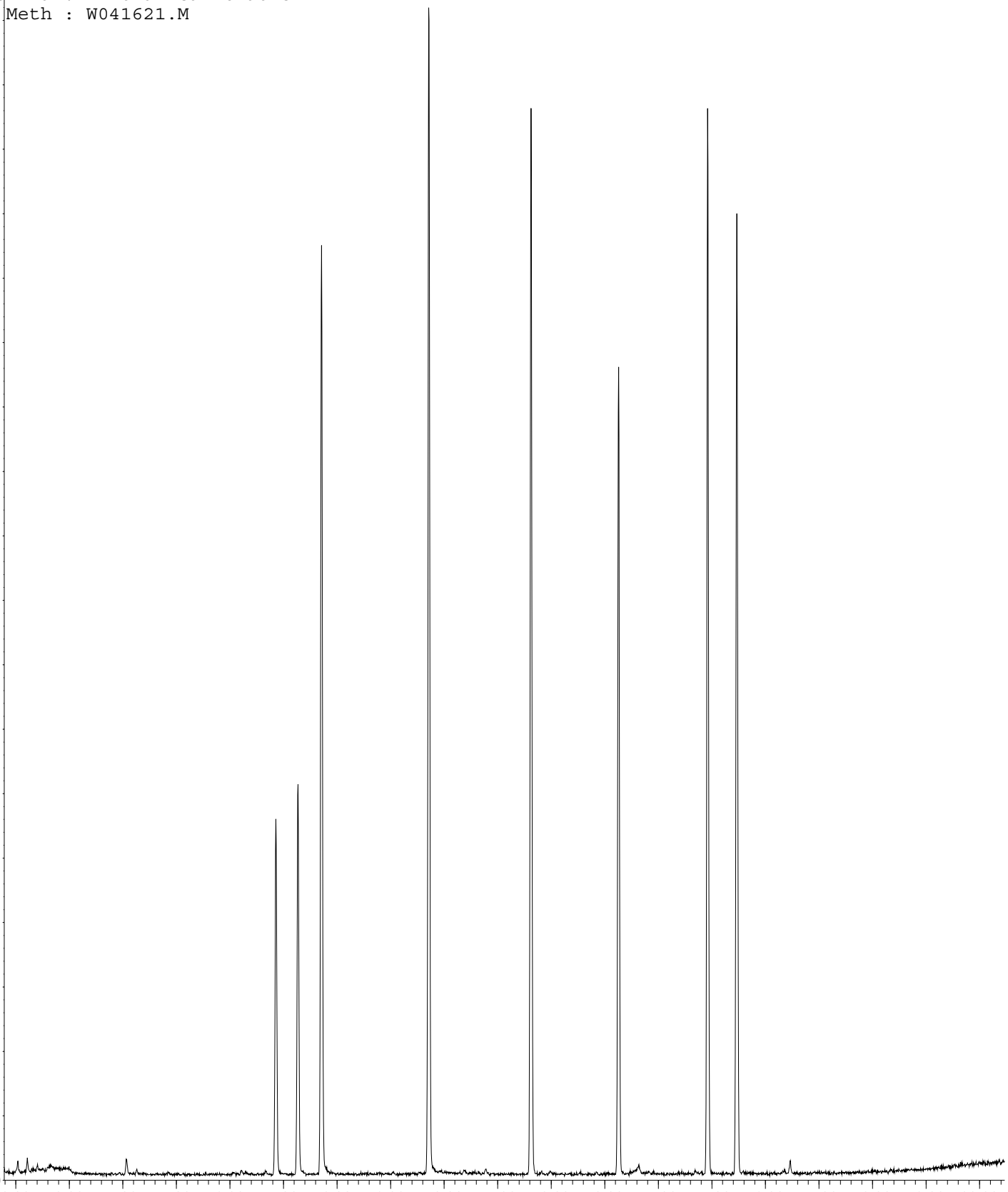
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 553148.D

Data File : C:\INSTARCH\DATA\APR1721\553148.D Vial: 8
Acq On : 17 Apr 2021 20:45 Operator: RLD-DGS
Sample : 180903,553148, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 21:05:39 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553142.D Vial: 9
Acq On : 17 Apr 2021 21:15 Operator: RLD-DGS
Sample : 180903,553142, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 21:36:05 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1478591	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1124174	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	535724	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	384851	19.880	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	108240	19.929	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100 %			
61) SURRd8Tolule	9.71	98	1472067	20.190	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	590584	20.825	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 104 %			

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.06	43	14394	Below	Cal	99
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	9702	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.86	59	2746	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.54	63	11026	0.3015	ug/L #	89
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	6.27	96	8451	0.3923	ug/L	96
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553142.D Vial: 9
Acq On : 17 Apr 2021 21:15 Operator: RLD-DGS
Sample : 180903,553142, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 21:36:05 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	5272	N.D.		
40)	111trichlota	6.91	97	4529	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	19180	0.8346	ug/L	96
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	7.36	78	3793	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	26705	1.3117	ug/L	98
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	9.04	43	2830	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.80	92	3622	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	10.52	166	3476	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	3386	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	14.69	105	2513	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	14.91	119	2798	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.50	91	3591	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553142.D Vial: 9
Acq On : 17 Apr 2021 21:15 Operator: RLD-DGS
Sample : 180903,553142, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 21:36:05 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

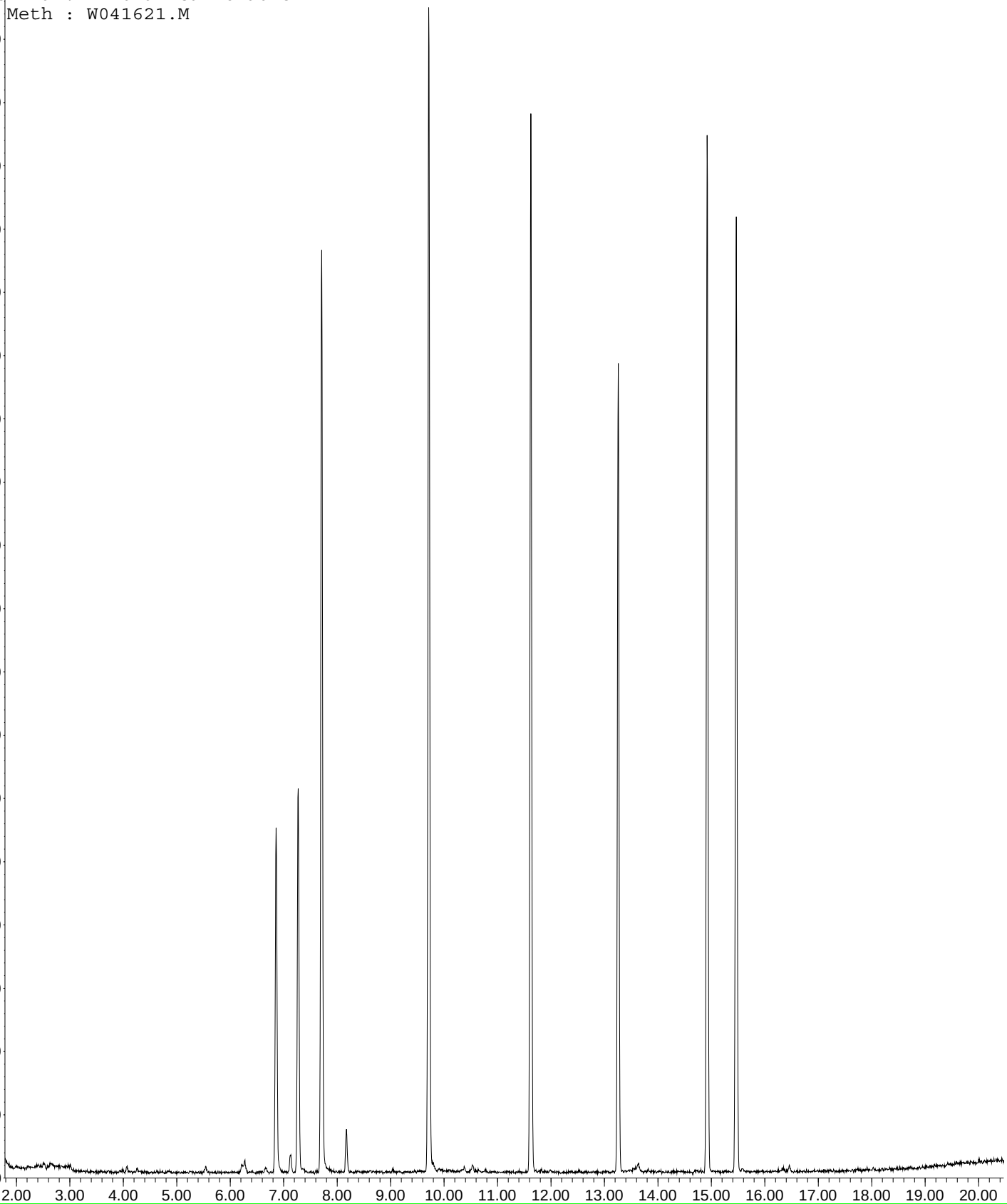
(#) = qualifier out of range (m) = manual integration

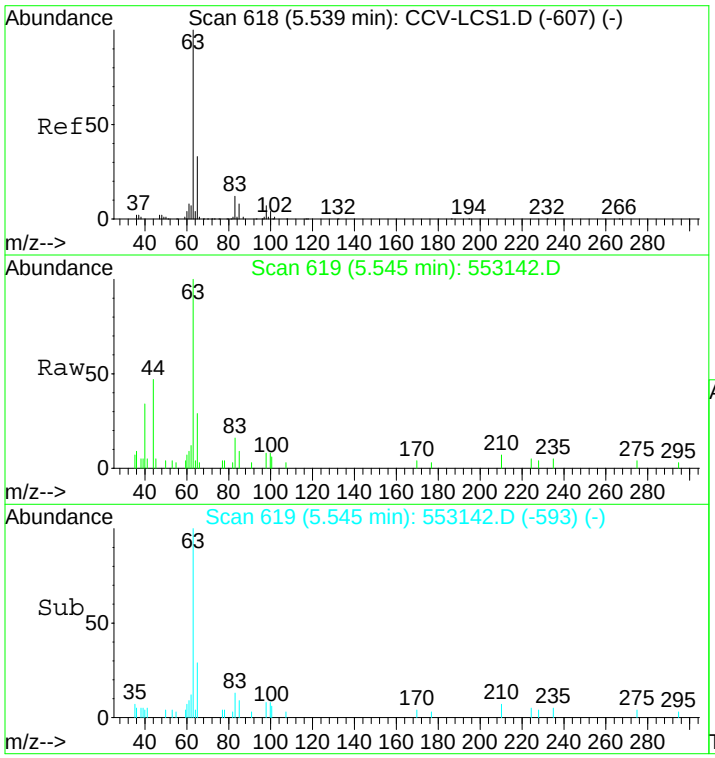
Abundance Quantitation Report TIC: 553142.D

Data File : C:\INSTARCH\DATA\APR1721\553142.D Vial: 9
Acq On : 17 Apr 2021 21:15 Operator: RLD-DGS
Sample : 180903,553142, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 21:36:05 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

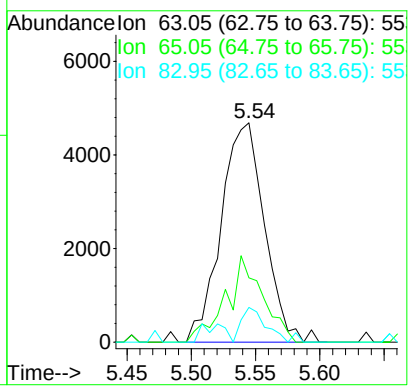


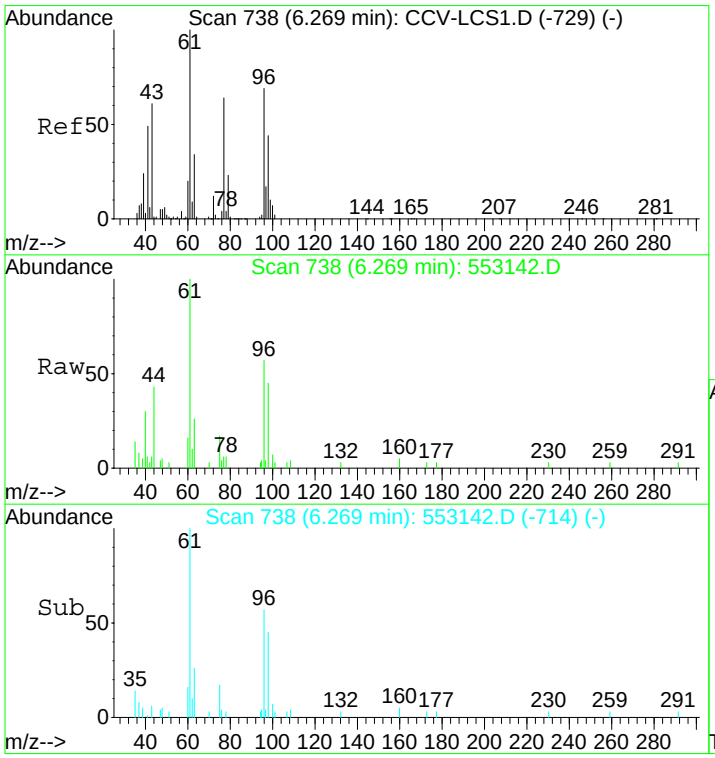


#26
11dichlorota
Concen: 0.30 ug/L
RT: 5.54 min Scan# 619
Delta R.T. 0.01 min
Lab File: 553142.D
Acq: 17 Apr 2021 21:15

Tgt Ion: 63 Resp: 11026

Ion	Ratio	Lower	Upper
63	100		
65	33.2	12.1	52.1
83	0.0	0.0	32.7

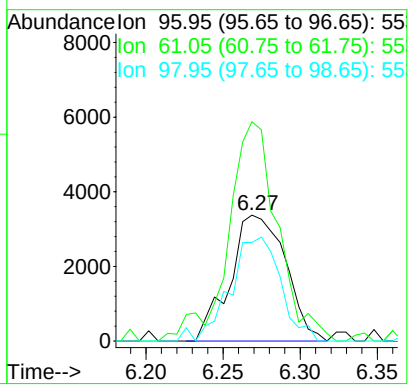


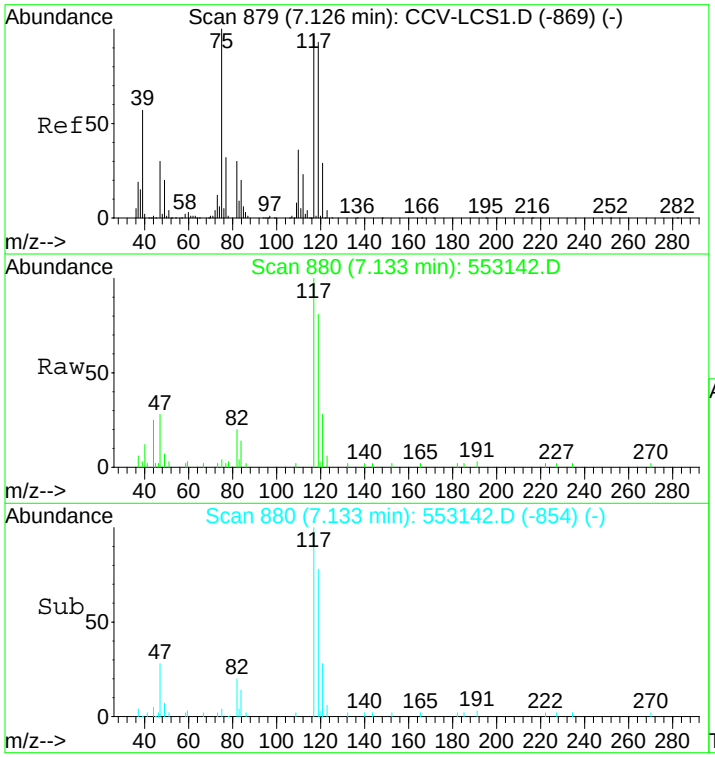


#32
c12dichlorte
Concen: 0.39 ug/L
RT: 6.27 min Scan# 738
Delta R.T. -0.01 min
Lab File: 553142.D
Acq: 17 Apr 2021 21:15

Tgt Ion: 96 Resp: 8451

Ion	Ratio	Lower	Upper
96	100		
61	154.7	132.8	172.8
98	75.4	46.6	86.6

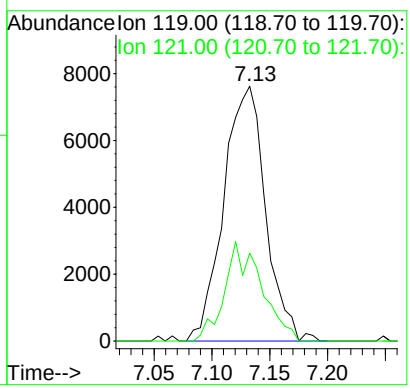


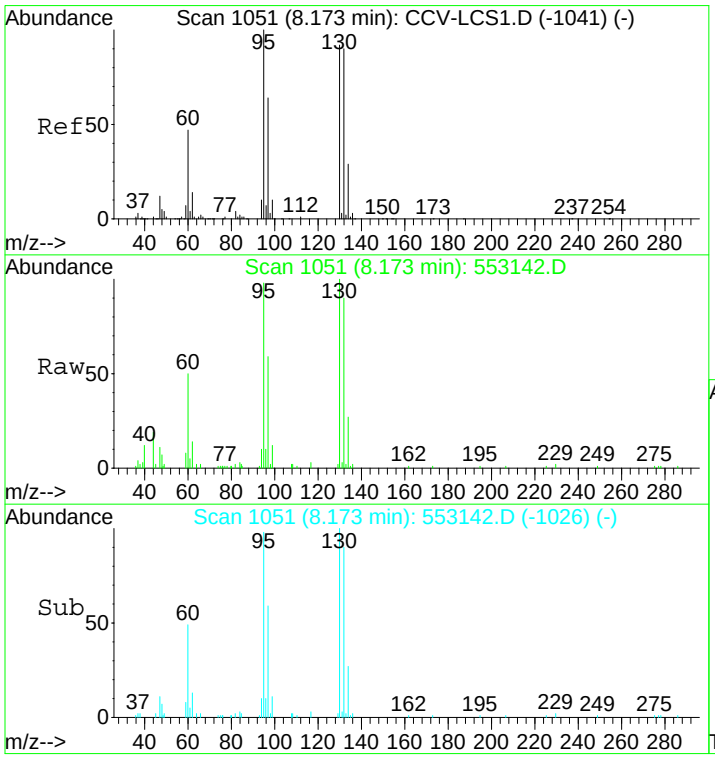


#43
Carbtetraclo
Concen: 0.83 ug/L
RT: 7.13 min Scan# 880
Delta R.T. 0.01 min
Lab File: 553142.D
Acq: 17 Apr 2021 21:15

Tgt Ion:119 Resp: 19180

Ion	Ratio	Lower	Upper
119	100		
121	34.5	12.2	52.2

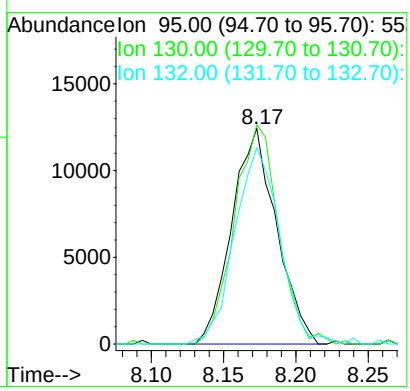




#49
trichloroete
Concen: 1.31 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. 0.00 min
Lab File: 553142.D
Acq: 17 Apr 2021 21:15

Tgt Ion: 95 Resp: 26705

Ion	Ratio	Lower	Upper
95	100		
130	101.0	77.4	117.4
132	92.1	72.4	112.4



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553149.D Vial: 10
Acq On : 17 Apr 2021 21:45 Operator: RLD-DGS
Sample : 180903,553149, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 22:05:40 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1498144	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1145163	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	544423	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	395353	20.156	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.27	102	113906	20.699	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103 %			
61) SURRd8Tolule	9.72	98	1480415	20.040	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %			
83) SURR4BrFBenz	13.26	95	605829	21.022	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 105 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	13691	Below	Cal	94
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.25	76	11450	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.85	59	2787	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	6.21	77	2784	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553149.D Vial: 10
Acq On : 17 Apr 2021 21:45 Operator: RLD-DGS
Sample : 180903,553149, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 22:05:40 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	101658	2.9682	ug/L	98
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	515885	22.1565	ug/L	100
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	20529	0.9952	ug/L	95
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	9.03	43	2934	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	9.55	43	3218	Below Cal #		39
62)	Toluene	9.80	92	2754	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	10.65	43	3019	Below Cal #		32
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	3089	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	14.43	105	3482	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.49	91	2946	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553149.D Vial: 10
Acq On : 17 Apr 2021 21:45 Operator: RLD-DGS
Sample : 180903,553149, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 22:05:40 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

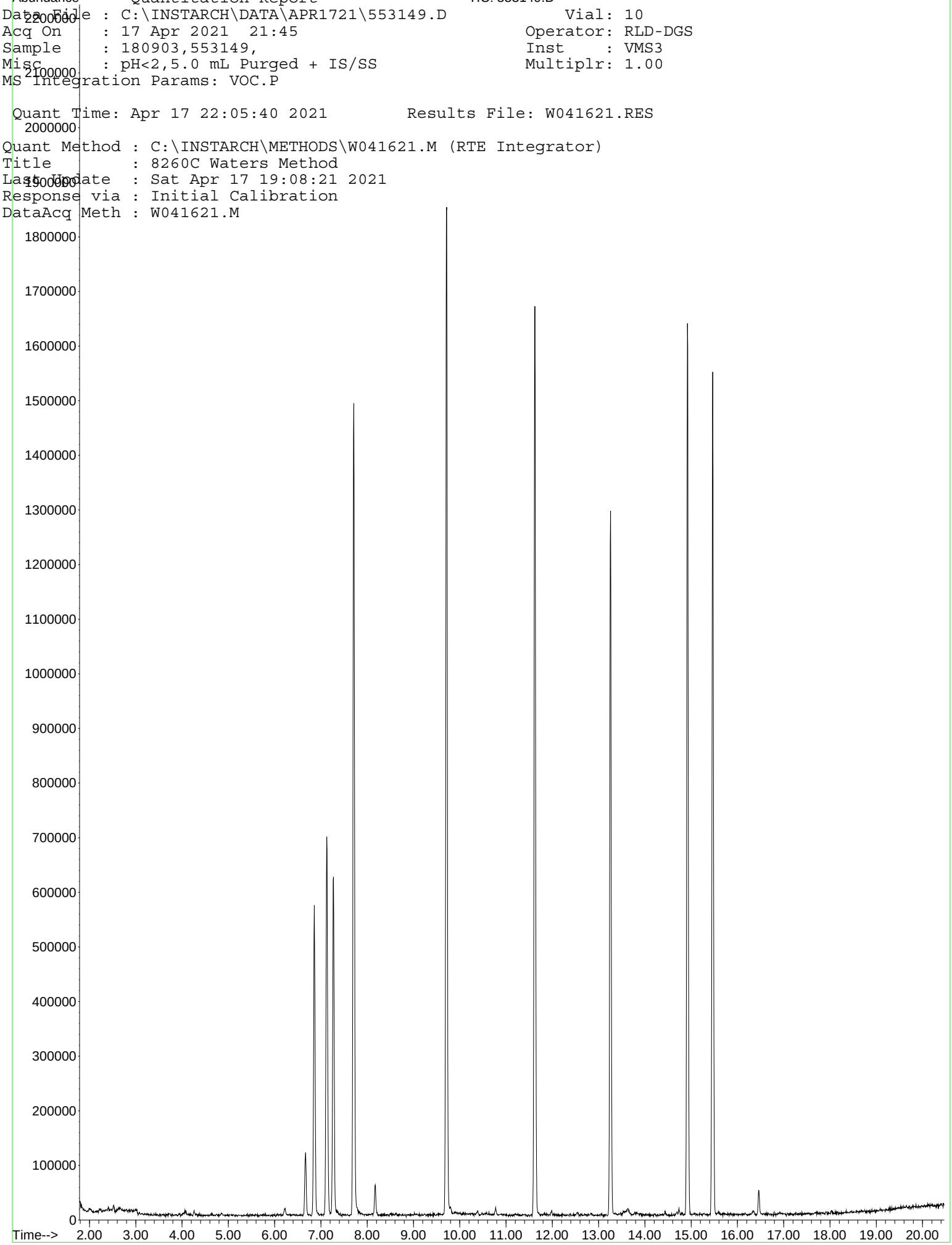
(#) = qualifier out of range (m) = manual integration

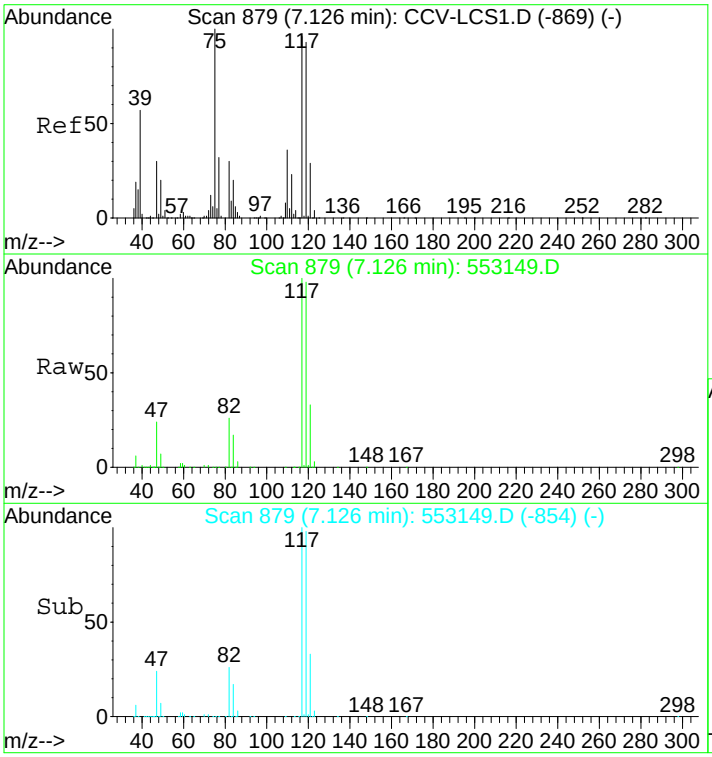
Abundance Quantitation Report TIC: 553149.D

Data File : C:\INSTARCH\DATA\APR1721\553149.D Vial: 10
Acq On : 17 Apr 2021 21:45 Operator: RLD-DGS
Sample : 180903,553149, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 22:05:40 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

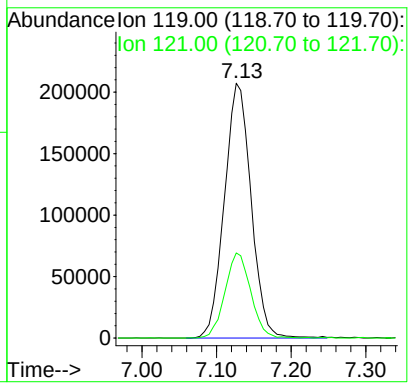


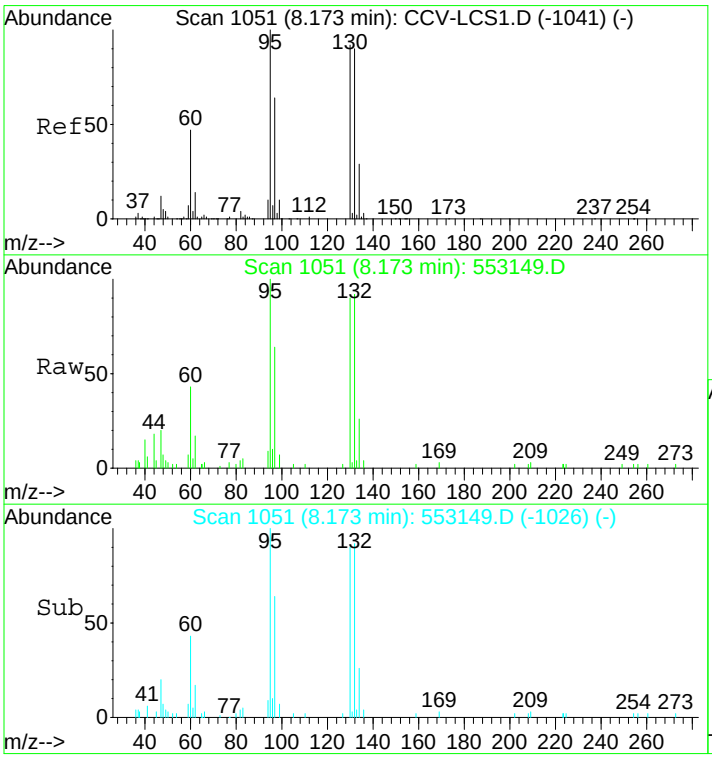


#43
Carbtetraclo
Concen: 22.16 ug/L
RT: 7.13 min Scan# 879
Delta R.T. -0.00 min
Lab File: 553149.D
Acq: 17 Apr 2021 21:45

Tgt Ion:119 Resp: 515885

Ion	Ratio	Lower	Upper
119	100		
121	32.3	12.2	52.2

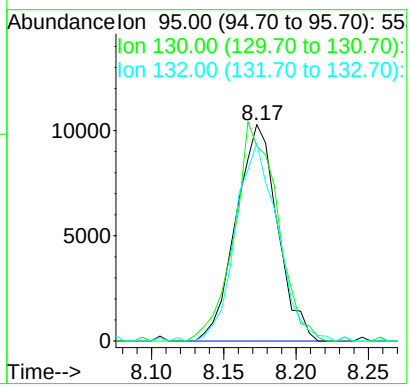




#49
trichloroete
Concen: 1.00 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. -0.00 min
Lab File: 553149.D
Acq: 17 Apr 2021 21:45

Tgt Ion: 95 Resp: 20529

Ion	Ratio	Lower	Upper
95	100		
130	104.9	77.4	117.4
132	93.8	72.4	112.4



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553152.D Vial: 11
Acq On : 17 Apr 2021 22:15 Operator: RLD-DGS
Sample : 180903,553152, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 22:35:53 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1518608	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1168531	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	549673	20.00	ug/L	0.00 NA%

System Monitoring Compounds						
41) SURRDibrflma	6.86	113	406661	20.453	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	110329	19.779	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.71	98	1513082	20.206	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%		
83) SURR4BrFBenz	13.26	95	603938	20.756	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 104	%		

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	12751	Below	Cal	96
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	10109	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553152.D Vial: 11
Acq On : 17 Apr 2021 22:15 Operator: RLD-DGS
Sample : 180903,553152, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 22:35:53 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.80	92	7640	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.63	43	2512	Below Cal #	32
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.63	91	3416	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	11.83	91	4192	N.D.	
76)	m p-Xylene	11.99	106	5442	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	12.55	104	2564	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	13.78	105	2730	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.44	105	4752	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.48	91	3134	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553152.D Vial: 11
Acq On : 17 Apr 2021 22:15 Operator: RLD-DGS
Sample : 180903,553152, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 22:35:53 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	18.02	128	4010	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

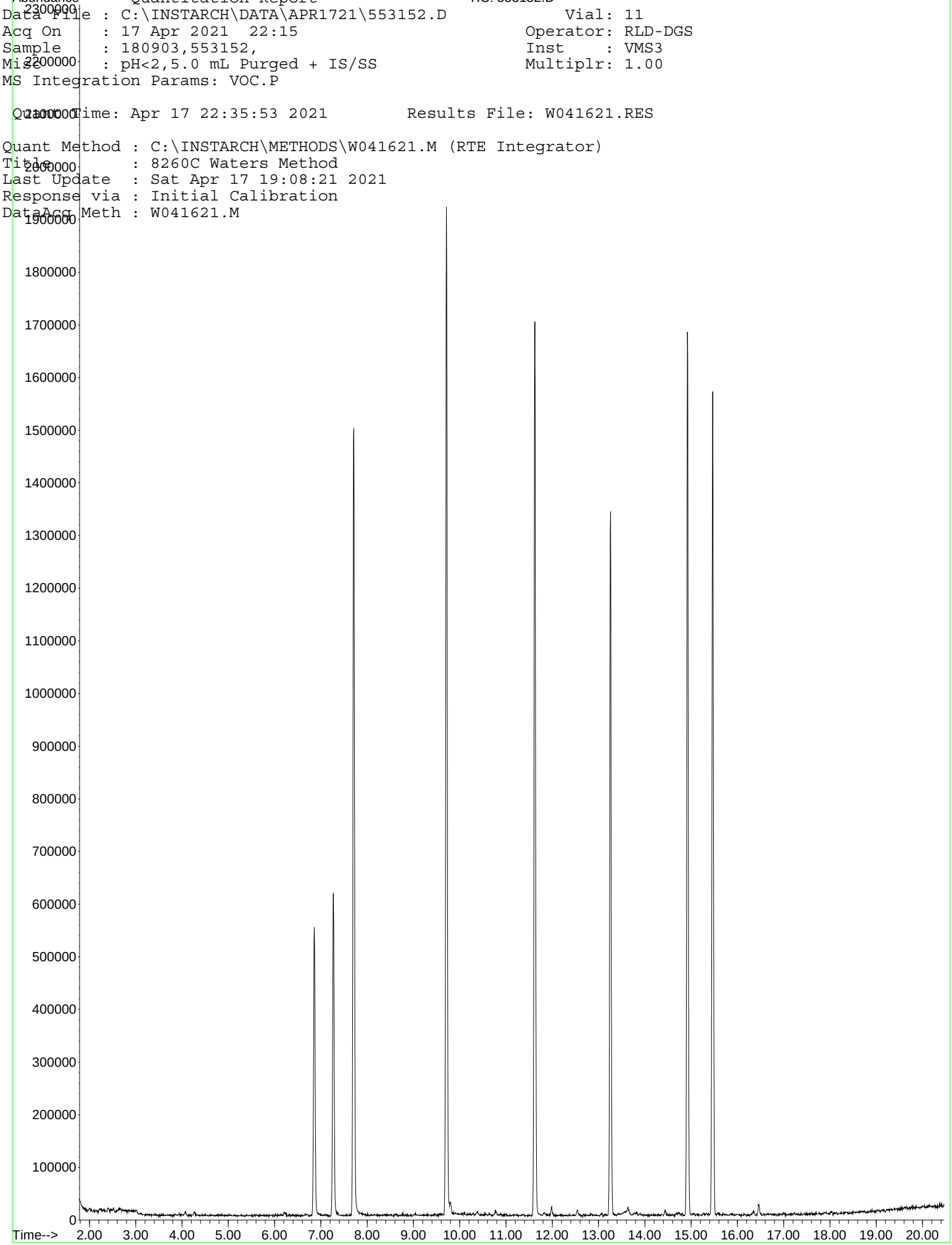
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 553152.D

Data File : C:\INSTARCH\DATA\APR1721\553152.D Vial: 11
Acq On : 17 Apr 2021 22:15 Operator: RLD-DGS
Sample : 180903,553152, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 22:35:53 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553550.D Vial: 12
Acq On : 17 Apr 2021 22:45 Operator: RLD-DGS
Sample : 180903,553550, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 23:05:38 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1458958	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1106228	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	527301	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	379835	19.884	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	104414	19.484	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.71	98	1447527	20.121	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	576716	20.661	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	13408	Below	Cal	98
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	7173	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553550.D Vial: 12
Acq On : 17 Apr 2021 22:45 Operator: RLD-DGS
Sample : 180903,553550, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 23:05:38 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	3221	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	9062	0.4511	ug/L	95
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	2538	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.49	91	3254	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553550.D Vial: 12
Acq On : 17 Apr 2021 22:45 Operator: RLD-DGS
Sample : 180903,553550, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 23:05:38 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

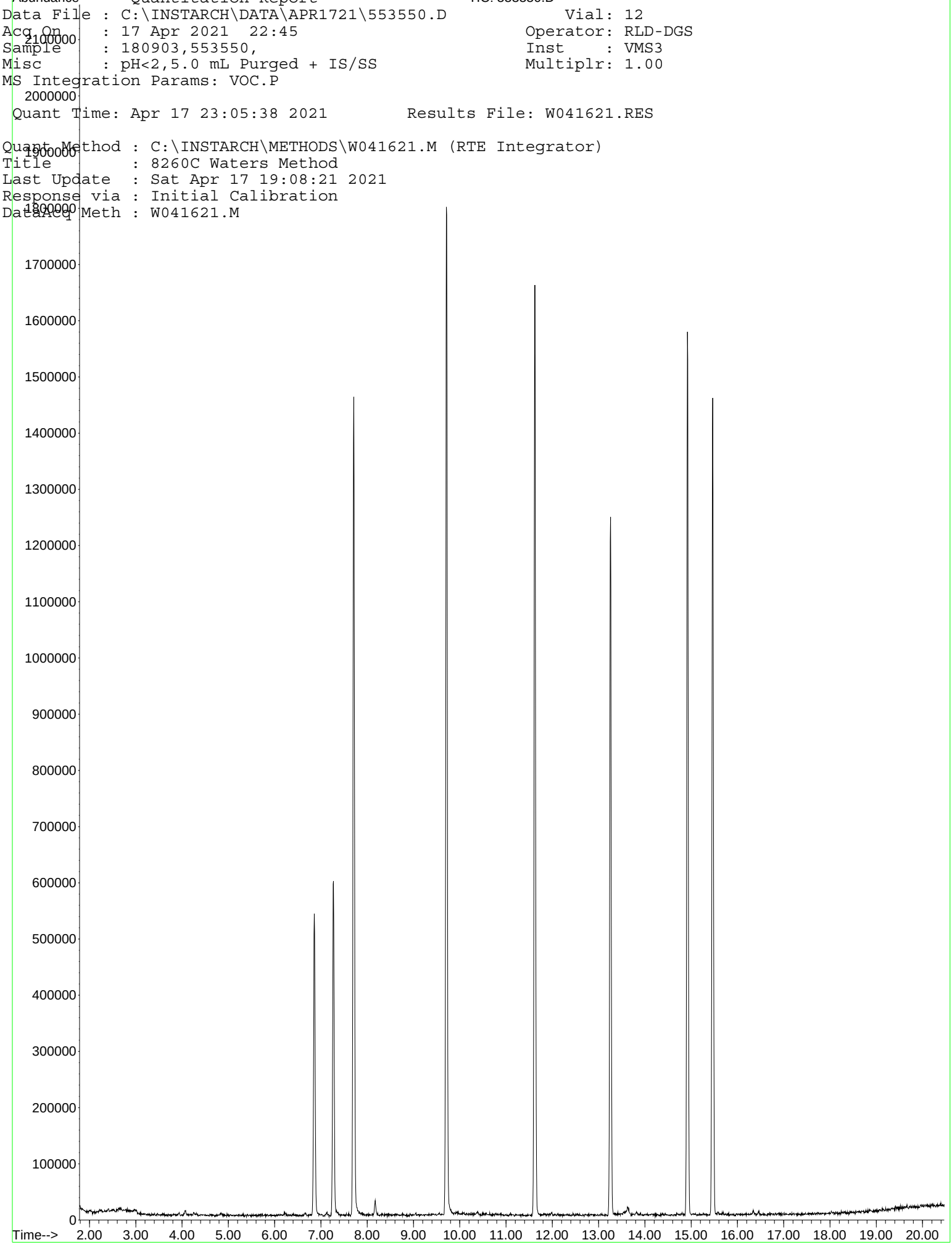
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	0.00	180	0	N.D.		
103)	Hexachlorobu	0.00	225	0	N.D.		
104)	Naphthalene	0.00	128	0	N.D.		
105)	123Trichlben	0.00	180	0	N.D.		

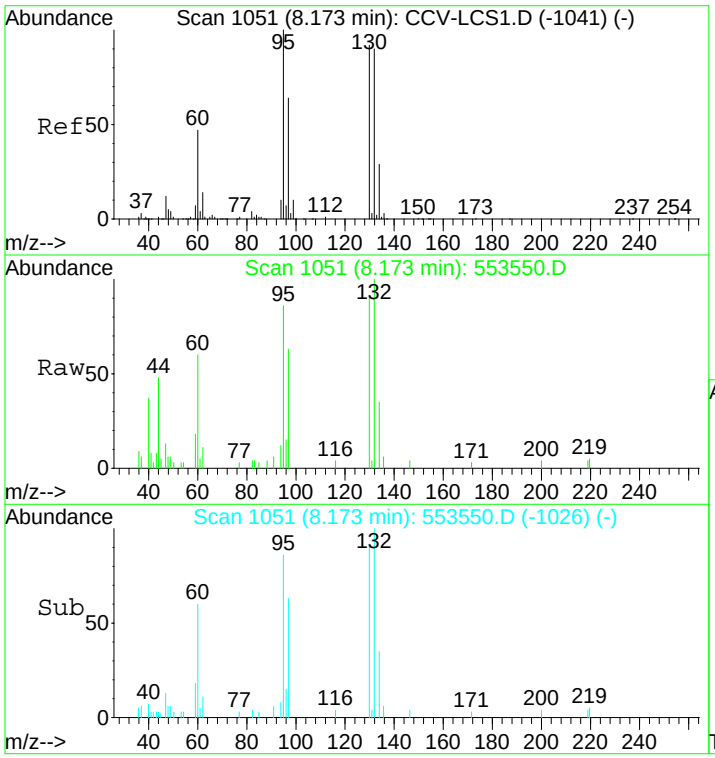
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\APR1721\553550.D Vial: 12
Acq On : 17 Apr 2021 22:45 Operator: RLD-DGS
Sample : 180903,553550, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 23:05:38 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

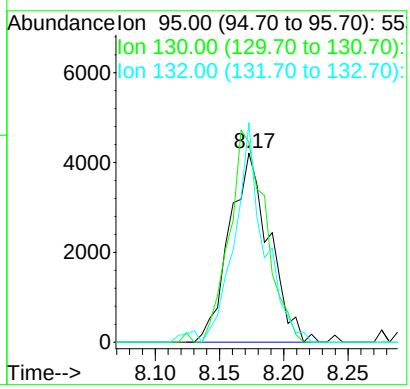




#49
trichloroete
Concen: 0.45 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. 0.00 min
Lab File: 553550.D
Acq: 17 Apr 2021 22:45

Tgt Ion: 95 Resp: 9062

Ion	Ratio	Lower	Upper
95	100		
130	102.4	77.4	117.4
132	87.8	72.4	112.4



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553551.D Vial: 13
Acq On : 17 Apr 2021 23:15 Operator: RLD-DGS
Sample : 180903,553551, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 23:36:01 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1485745	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1136876	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	539831	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	393072	20.206	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.27	102	105972	19.418	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.71	98	1471575	20.086	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %			
83) SURR4BrFBenz	13.26	95	592186	20.723	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 104 %			

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	3.28	101	6398	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	14007	Below	Cal	90
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	7416	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.85	59	2692	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.54	63	3493	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553551.D Vial: 13
Acq On : 17 Apr 2021 23:15 Operator: RLD-DGS
Sample : 180903,553551, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 23:36:01 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	14579	0.4292	ug/L	93
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	121809	5.2752	ug/L	100
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	19816	0.9686	ug/L	94
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	9.05	43	2636	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	0.00	91	0	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.47	91	3316	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

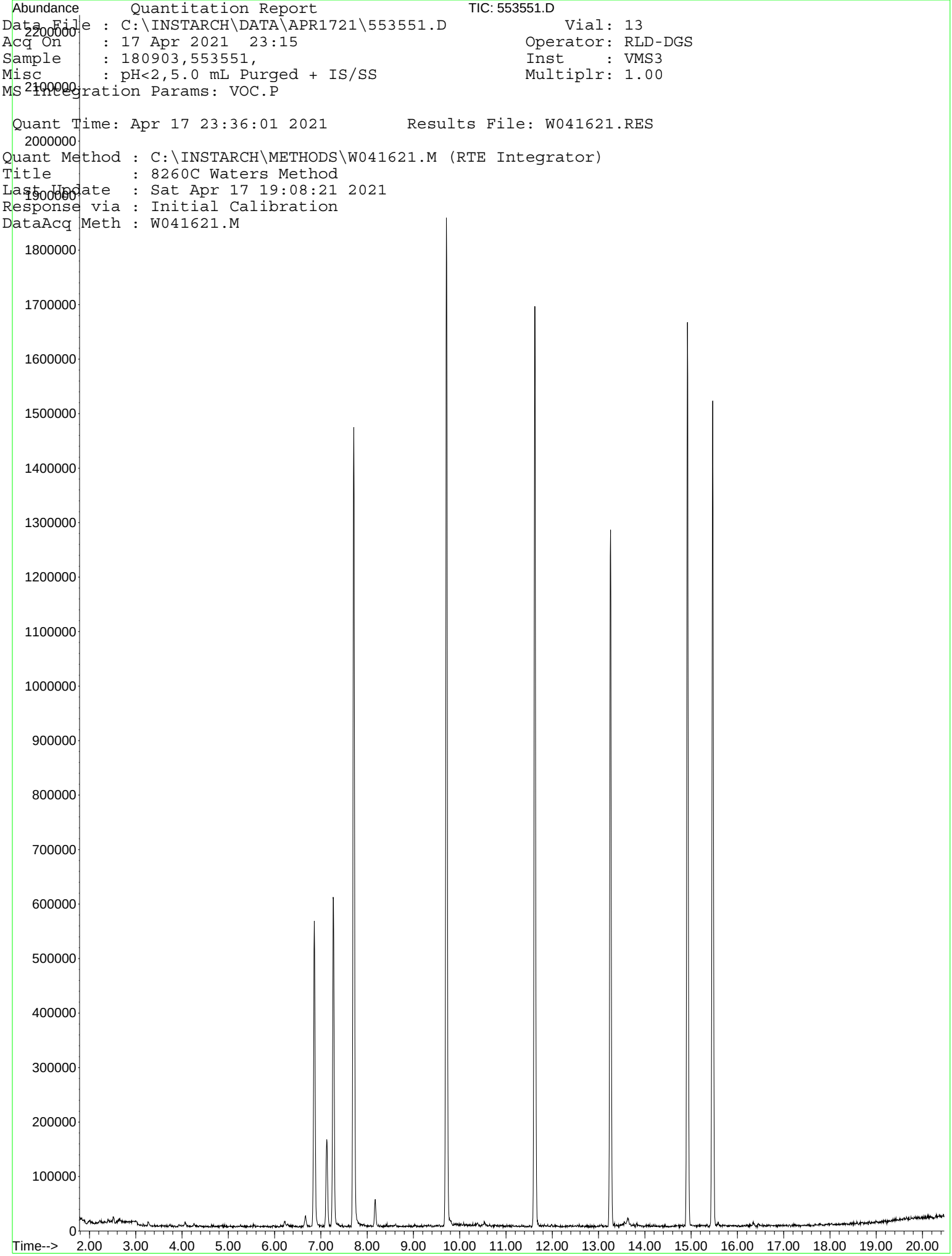
Data File : C:\INSTARCH\DATA\APR1721\553551.D Vial: 13
Acq On : 17 Apr 2021 23:15 Operator: RLD-DGS
Sample : 180903,553551, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 23:36:01 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: 553551.D
Data File : C:\INSTARCH\DATA\APR1721\553551.D
Vial: 13
Acq On : 17 Apr 2021 23:15
Operator: RLD-DGS
Sample : 180903,553551,
Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Apr 17 23:36:01 2021
Results File: W041621.RES
Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
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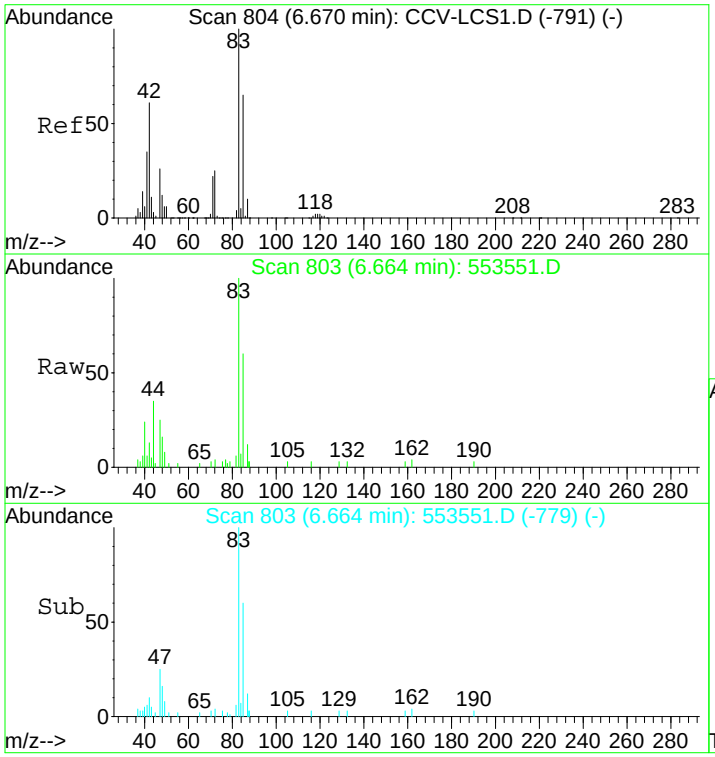
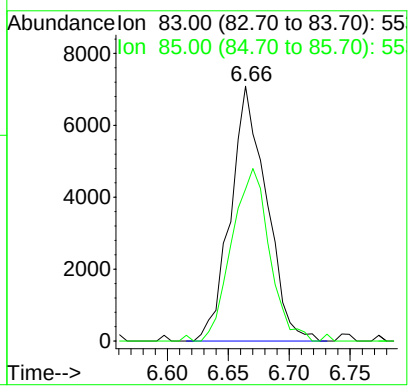
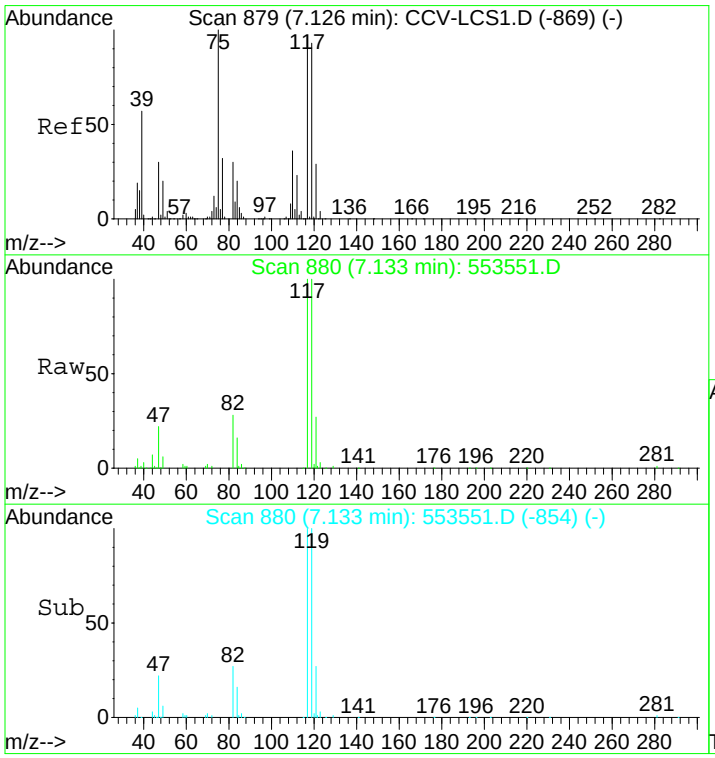


#39
Chloroform
Concen: 0.43 ug/L
RT: 6.66 min Scan# 803
Delta R.T. -0.01 min
Lab File: 553551.D
Acq: 17 Apr 2021 23:15

Tgt Ion: 83 Resp: 14579

Ion	Ratio	Lower	Upper
83	100		
85	70.7	45.0	85.0

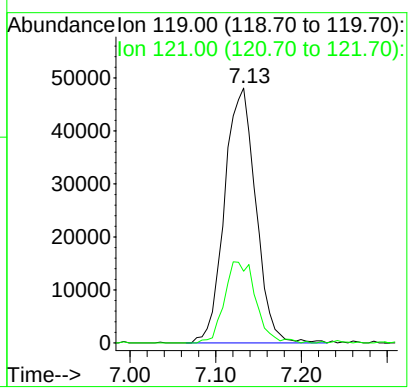


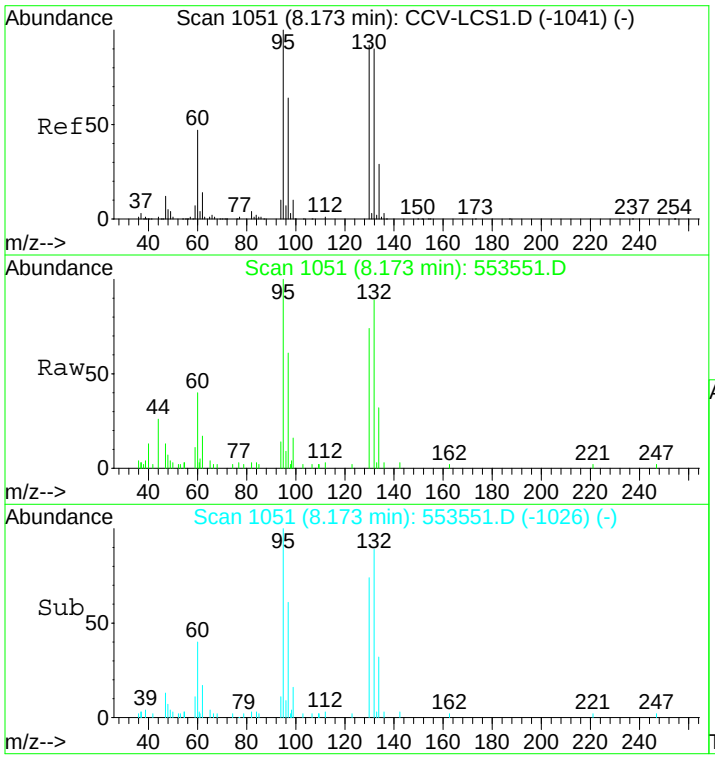


#43
Carbtetraclo
Concen: 5.28 ug/L
RT: 7.13 min Scan# 880
Delta R.T. 0.01 min
Lab File: 553551.D
Acq: 17 Apr 2021 23:15

Tgt Ion:119 Resp: 121809

Ion	Ratio	Lower	Upper
119	100		
121	32.0	12.2	52.2

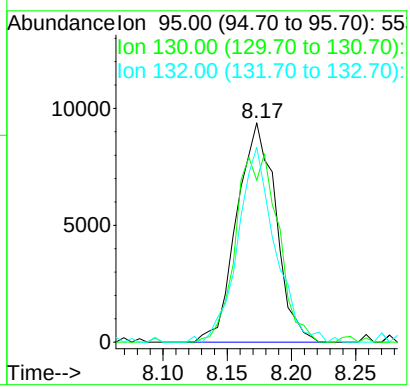




#49
trichloroete
Concen: 0.97 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. 0.00 min
Lab File: 553551.D
Acq: 17 Apr 2021 23:15

Tgt Ion: 95 Resp: 19816

Ion	Ratio	Lower	Upper
95	100		
130	93.2	77.4	117.4
132	85.1	72.4	112.4



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553552.D Vial: 14
Acq On : 17 Apr 2021 23:45 Operator: RLD-DGS
Sample : 180903,553552, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 00:06:10 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1444282	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1100794	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	523437	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	384393	20.328	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4	7.27	102	105031	19.798	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %			
61) SURRd8Tolule	9.71	98	1428392	20.057	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %			
83) SURR4BrFBenz	13.26	95	572803	20.672	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	3.27	101	6726	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	10803	Below	Cal	96
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.25	76	8234	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.85	59	2938	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.54	63	3736	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	6.23	77	2515	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553552.D Vial: 14
Acq On : 17 Apr 2021 23:45 Operator: RLD-DGS
Sample : 180903,553552, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 00:06:10 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	14923	0.4520	ug/L	99
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	113229	5.0444	ug/L	99
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	17682	0.8891	ug/L	96
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.63	91	2945	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.47	91	3758	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553552.D Vial: 14
Acq On : 17 Apr 2021 23:45 Operator: RLD-DGS
Sample : 180903,553552, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 00:06:10 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

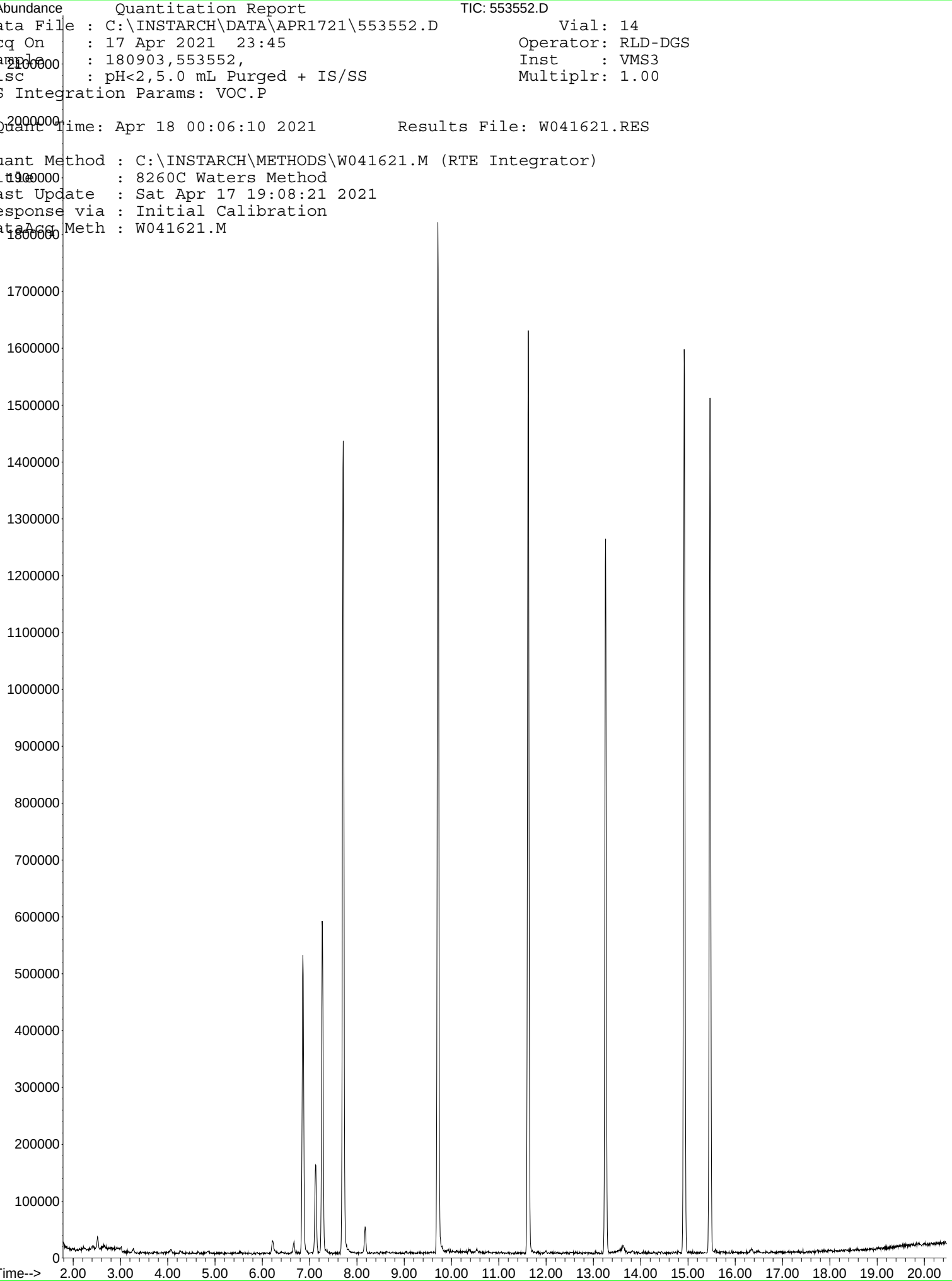
(#) = qualifier out of range (m) = manual integration

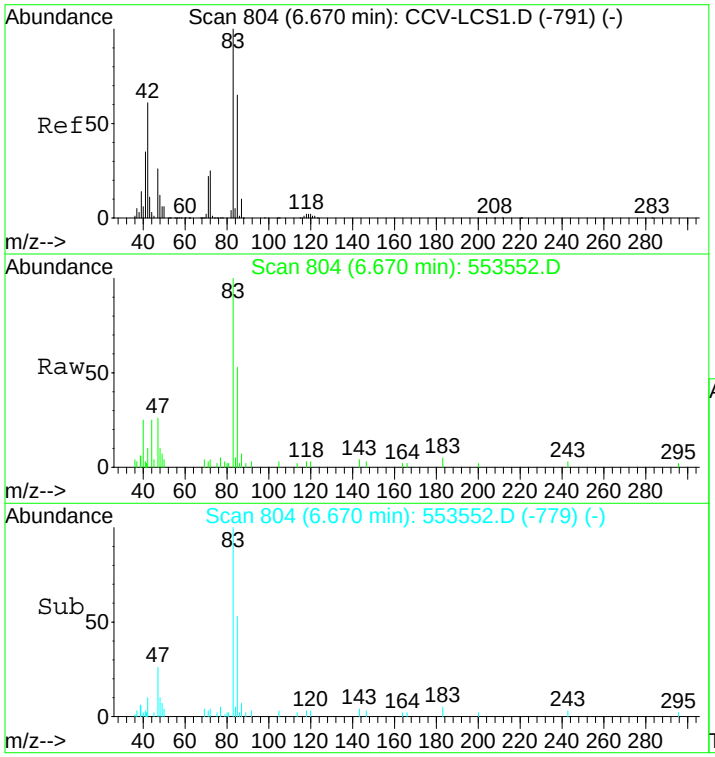
Abundance Quantitation Report TIC: 553552.D

Data File : C:\INSTARCH\DATA\APR1721\553552.D Vial: 14
Acq On : 17 Apr 2021 23:45 Operator: RLD-DGS
Sample : 180903,553552, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 00:06:10 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

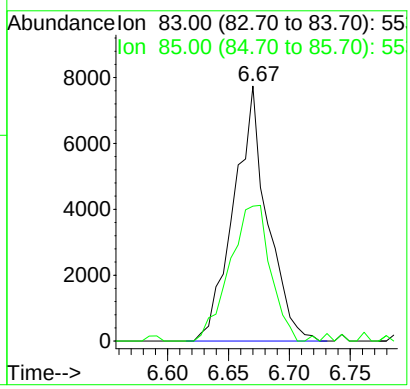


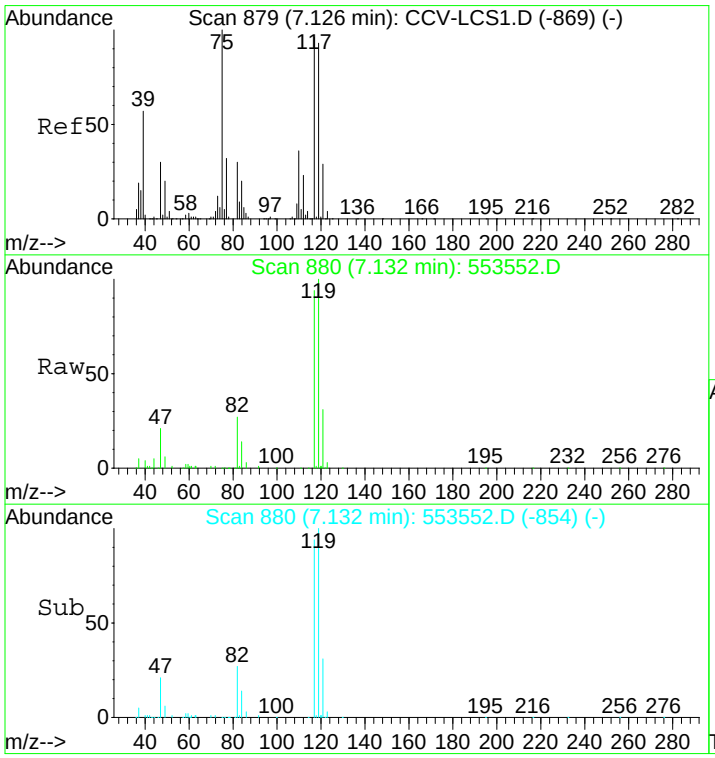


#39
Chloroform
Concen: 0.45 ug/L
RT: 6.67 min Scan# 804
Delta R.T. -0.00 min
Lab File: 553552.D
Acq: 17 Apr 2021 23:45

Tgt Ion: 83 Resp: 14923

Ion	Ratio	Lower	Upper
83	100		
85	64.2	45.0	85.0

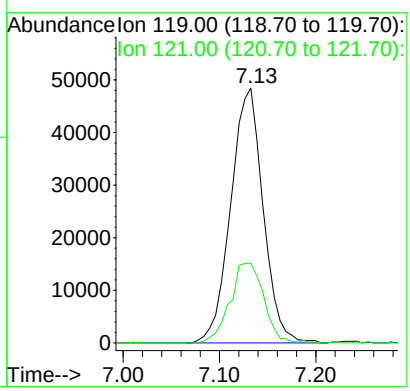


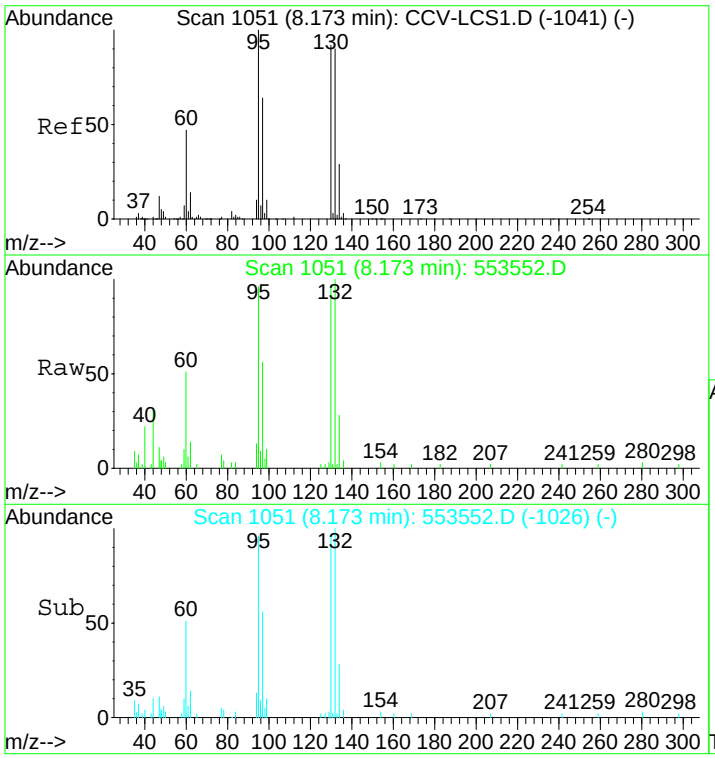


#43
Carbtetraclo
Concen: 5.04 ug/L
RT: 7.13 min Scan# 880
Delta R.T. 0.01 min
Lab File: 553552.D
Acq: 17 Apr 2021 23:45

Tgt Ion:119 Resp: 113229

Ion	Ratio	Lower	Upper
119	100		
121	32.7	12.2	52.2

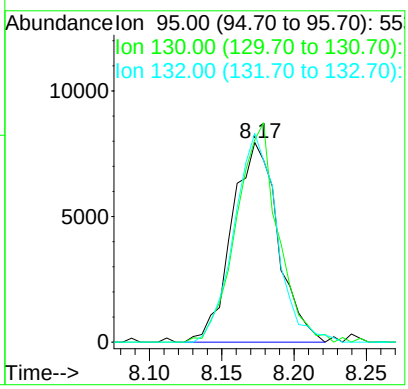




#49
trichloroete
Concen: 0.89 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. -0.00 min
Lab File: 553552.D
Acq: 17 Apr 2021 23:45

Tgt Ion: 95 Resp: 17682

Ion	Ratio	Lower	Upper
95	100		
130	99.9	77.4	117.4
132	96.9	72.4	112.4



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553553.D Vial: 15
Acq On : 18 Apr 2021 00:15 Operator: RLD-DGS
Sample : 180903,553553, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 00:36:09 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1481409	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1142345	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	540986	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	386809	19.943	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	107566	19.768	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.71	98	1486350	20.347	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.26	95	597742	20.873	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 104	%		

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	11184	Below	Cal	98
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	7004	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.85	59	2542	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553553.D Vial: 15
Acq On : 18 Apr 2021 00:15 Operator: RLD-DGS
Sample : 180903,553553, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 00:36:09 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	12810	0.5564	ug/L	99
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	2729	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553553.D Vial: 15
Acq On : 18 Apr 2021 00:15 Operator: RLD-DGS
Sample : 180903,553553, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 00:36:09 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

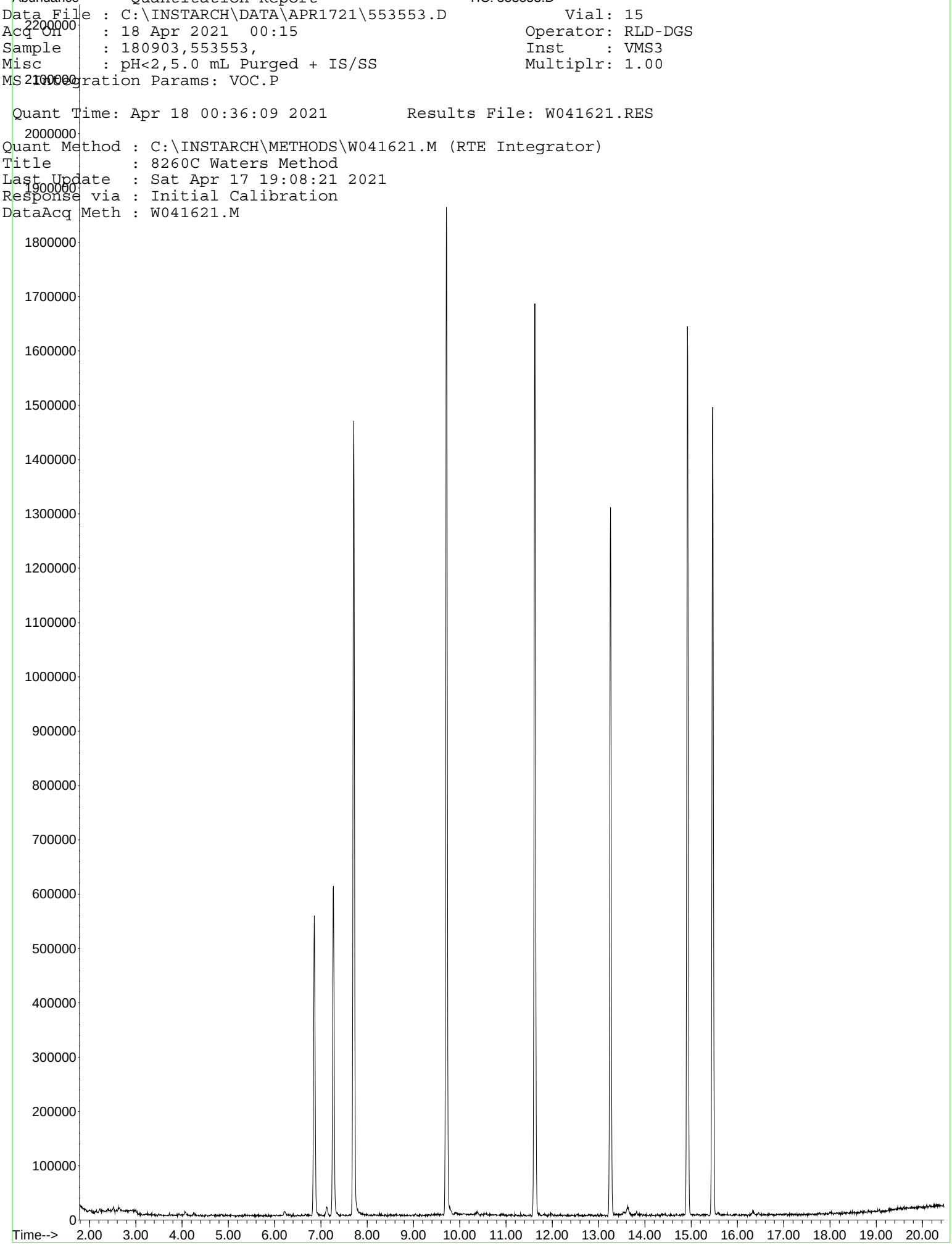
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

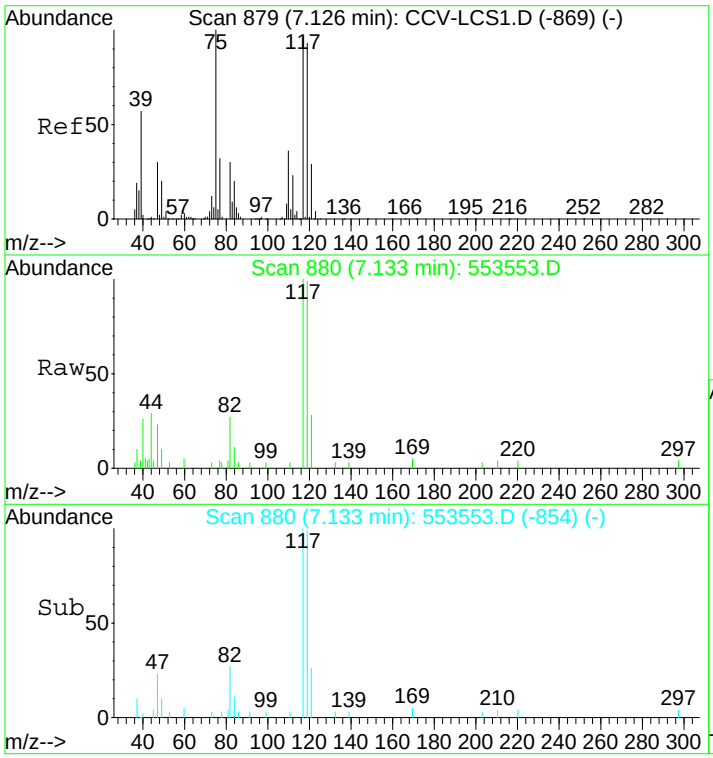
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\APR1721\553553.D Vial: 15
Acq On : 18 Apr 2021 00:15 Operator: RLD-DGS
Sample : 180903,553553, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 00:36:09 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

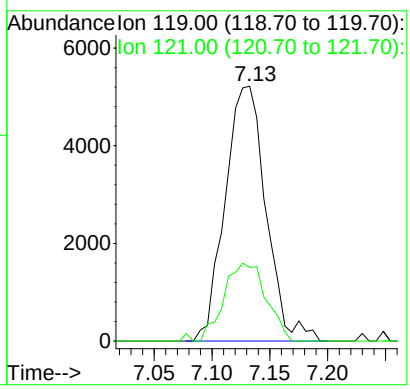




#43
Carbtetraclo
Concen: 0.56 ug/L
RT: 7.13 min Scan# 880
Delta R.T. 0.01 min
Lab File: 553553.D
Acq: 18 Apr 2021 00:15

Tgt Ion:119 Resp: 12810

Ion	Ratio	Lower	Upper
119	100		
121	31.6	12.2	52.2



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553554.D Vial: 16
Acq On : 18 Apr 2021 00:45 Operator: RLD-DGS
Sample : 180903,553554, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 01:06:09 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1466723	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1128352	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	540256	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	391271	20.375	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	109025	20.236	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1469749	20.322	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.26	95	591439	20.681	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103	%		

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	12688	Below	Cal	92
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.25	76	7305	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553554.D Vial: 16
Acq On : 18 Apr 2021 00:45 Operator: RLD-DGS
Sample : 180903,553554, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 01:06:09 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	2765	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	7589	0.3329	ug/L	95
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	9.04	43	2529	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.63	91	3527	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.46	91	2667	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553554.D Vial: 16
Acq On : 18 Apr 2021 00:45 Operator: RLD-DGS
Sample : 180903,553554, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 01:06:09 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

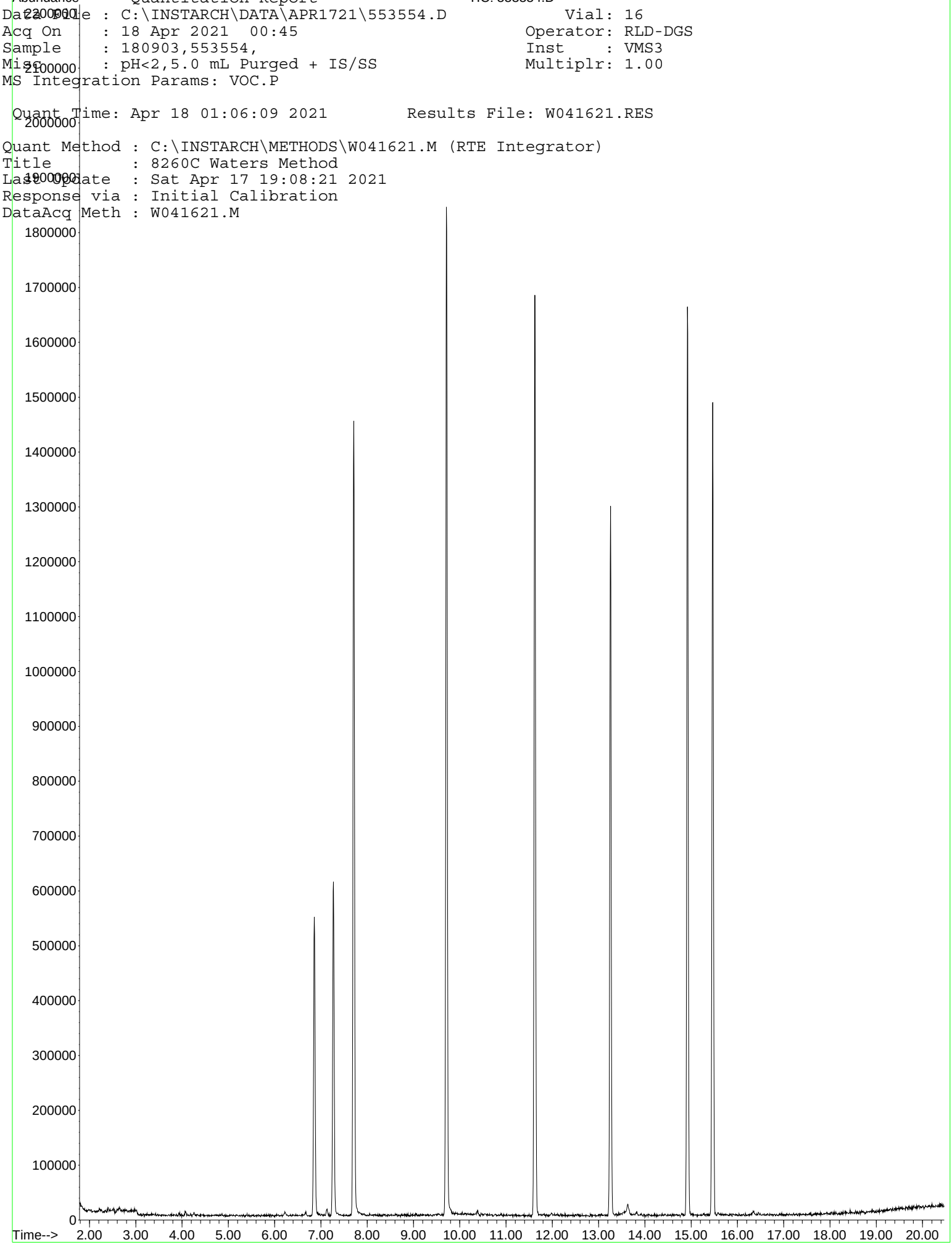
(#) = qualifier out of range (m) = manual integration

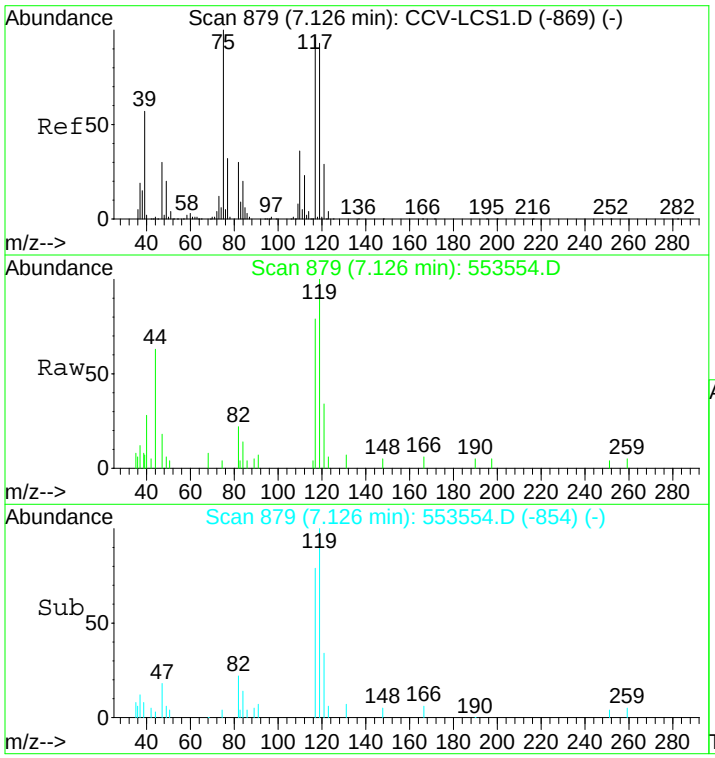
Quantitation Report (TIC: 553554.D)

Data File : C:\INSTARCH\DATA\APR1721\553554.D Vial: 16
Acq On : 18 Apr 2021 00:45 Operator: RLD-DGS
Sample : 180903,553554, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 01:06:09 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

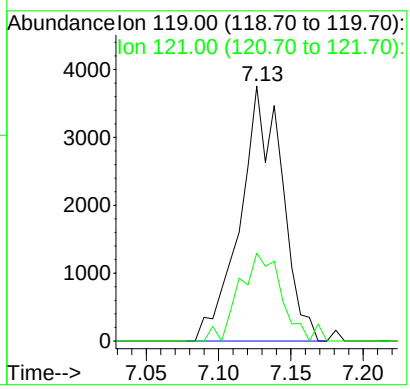




#43
Carbtetraclo
Concen: 0.33 ug/L
RT: 7.13 min Scan# 879
Delta R.T. -0.00 min
Lab File: 553554.D
Acq: 18 Apr 2021 00:45

Tgt Ion:119 Resp: 7589

Ion	Ratio	Lower	Upper
119	100		
121	35.2	12.2	52.2



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553150.D Vial: 17
Acq On : 18 Apr 2021 1:15 Operator: RLD-DGS
Sample : 180903,553150,5 Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 01:35:41 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1467750	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1124524	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	540116	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	377651	19.652	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
45) SURR12DCAd4	7.27	102	106396	19.734	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %			
61) SURRd8Tolule	9.71	98	1472534	20.346	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.26	95	596683	20.869	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 104 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	2.08	50	3022	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	14620	Below	Cal	100
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	8062	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.66	42	3153	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553150.D Vial: 17
Acq On : 18 Apr 2021 1:15 Operator: RLD-DGS
Sample : 180903,553150,5 Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 01:35:41 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	127210	3.7912	ug/L		99
40)	111trichlota	0.00	97	0	N.D.			
42)	Cyclohexane	0.00	56	0	N.D.			
43)	Carbtetraclo	7.13	119	381904	16.7419	ug/L		100
44)	11dicloprope	0.00	110	0	N.D.			
46)	Benzene	0.00	78	0	N.D.			
47)	12dichlorota	7.36	62	7451	0.2732	ug/L	#	88
48)	TAME	0.00	73	0	N.D.			
49)	trichloroete	8.18	95	66090	3.2702	ug/L		95
50)	methylcyclohexane	0.00	83	0	N.D.			
51)	12dicloropra	0.00	63	0	N.D.			
52)	23Dicl1propene	0.00	75	0	N.D.			
53)	Dibromometha	0.00	93	0	N.D.			
54)	methylmethacrylate	0.00	69	0	N.D.			
55)	14dioxane	0.00	88	0	N.D.			
56)	Bromodiclrma	0.00	83	0	N.D.			
57)	2Nitropropane	0.00	43	0	N.D.			
58)	2CLEVE	0.00	63	0	N.D.			
59)	c13dicloproe	0.00	75	0	N.D.			
60)	4Meth2Pentan	0.00	43	0	N.D.			
62)	Toluene	0.00	92	0	N.D.			
63)	t13Dicloprop	0.00	75	0	N.D.			
64)	ethylmethacrylate	0.00	69	0	N.D.			
65)	112Triclotha	0.00	83	0	N.D.			
66)	Tetrachlorte	0.00	166	0	N.D.			
67)	13Diclorpropa	0.00	76	0	N.D.			
69)	2Hexanone	0.00	43	0	N.D.			
70)	Clorodibrmta	0.00	129	0	N.D.			
71)	12Dibrometha	0.00	107	0	N.D.			
72)	Chlorobenzen	0.00	112	0	N.D.			
73)	1Clhexane	11.62	91	2730	N.D.			
74)	1112Tetclota	0.00	131	0	N.D.			
75)	Ethylbenzene	0.00	91	0	N.D.			
76)	m p-Xylene	0.00	106	0	N.D.			
77)	o-Xylene	0.00	106	0	N.D.			
78)	Styrene	0.00	104	0	N.D.			
79)	Bromoform	0.00	173	0	N.D.			
80)	Isopropylben	0.00	105	0	N.D.			
81)	cyclohexanone	0.00	55	0	N.D.			
84)	Bromobenzene	0.00	156	0	N.D.			
85)	1122Tetrclta	0.00	83	0	N.D.			
86)	123Triclproa	0.00	75	0	N.D.			
87)	14dichloro2butene	0.00	53	0	N.D.			
88)	n-Propylbenz	0.00	91	0	N.D.			
89)	2chlorotolue	0.00	91	0	N.D.			
90)	4chlorotolue	0.00	91	0	N.D.			
91)	135Trimebenz	0.00	105	0	N.D.			
92)	tbutylbenzen	0.00	119	0	N.D.			
93)	124Trimetben	0.00	105	0	N.D.			
94)	sbutylbenzen	0.00	105	0	N.D.			
95)	13Diclorbenz	0.00	146	0	N.D.			
96)	pIsopropylto	0.00	119	0	N.D.			
97)	14dichlorobe	0.00	146	0	N.D.			
98)	12dichlorobe	0.00	146	0	N.D.			
99)	nButylbenzen	15.46	91	3370	N.D.			
100)	12dibromo3cl	0.00	157	0	N.D.			
101)	135Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553150.D Vial: 17
Acq On : 18 Apr 2021 1:15 Operator: RLD-DGS
Sample : 180903,553150,5 Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 01:35:41 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

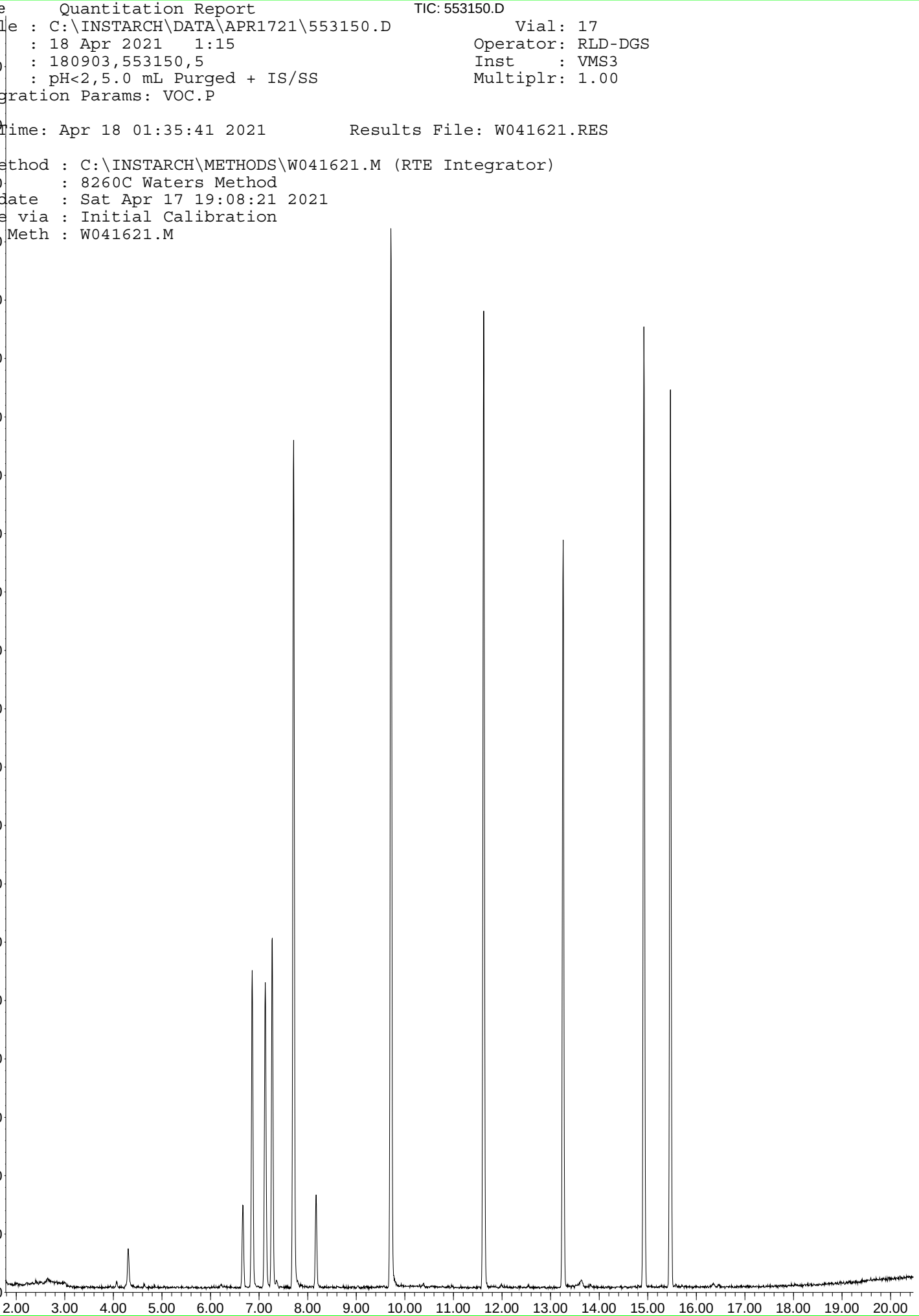
(#) = qualifier out of range (m) = manual integration

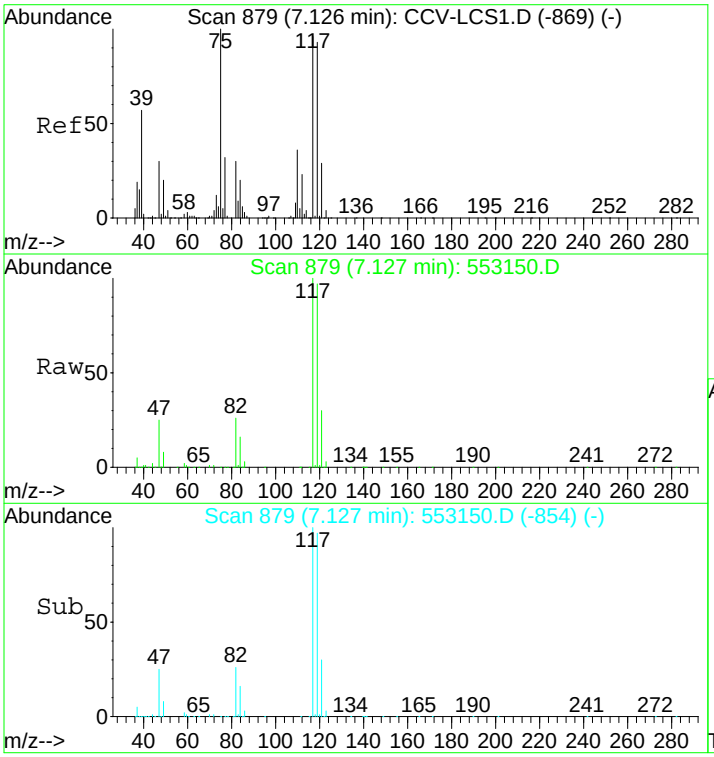
Abundance Quantitation Report TIC: 553150.D

Data File : C:\INSTARCH\DATA\APR1721\553150.D Vial: 17
Acq On : 18 Apr 2021 1:15 Operator: RLD-DGS
Sample : 180903,553150,5 Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 01:35:41 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

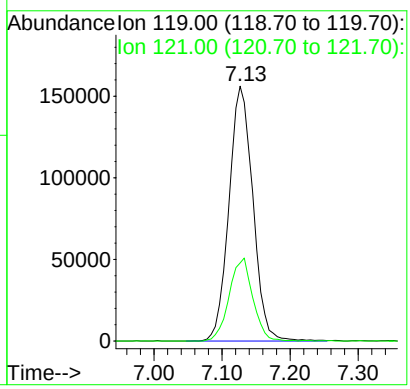


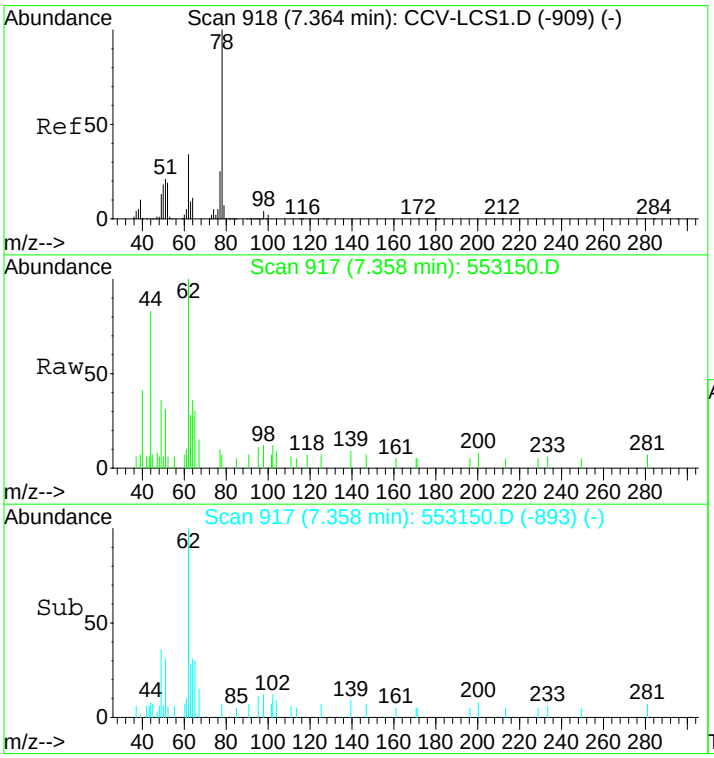


#43
Carbtetraclo
Concen: 16.74 ug/L
RT: 7.13 min Scan# 879
Delta R.T. 0.00 min
Lab File: 553150.D
Acq: 18 Apr 2021 1:15

Tgt Ion:119 Resp: 381904

Ion	Ratio	Lower	Upper
119	100		
121	32.1	12.2	52.2

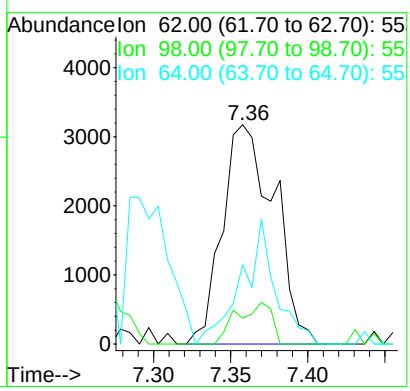


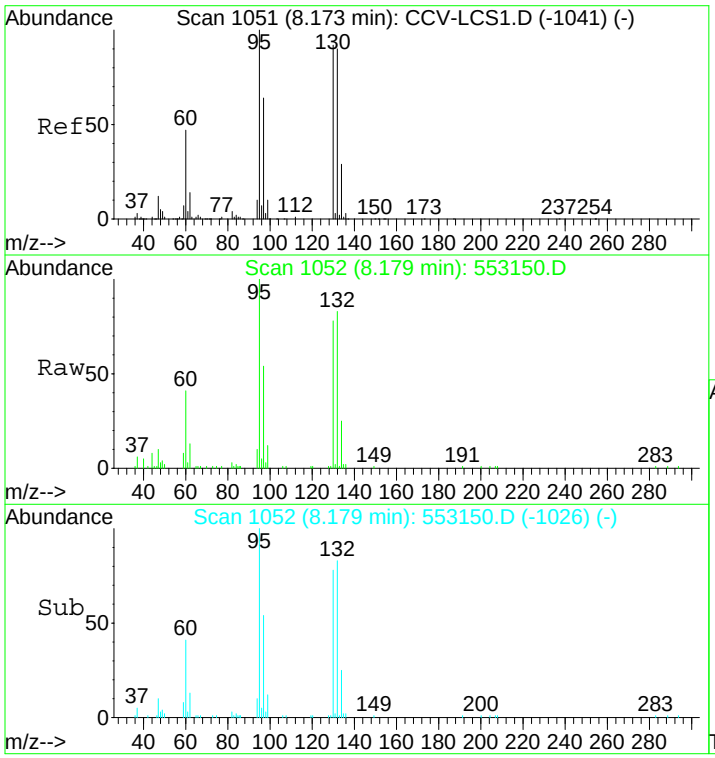


#47
12dichlorota
Concen: 0.27 ug/L
RT: 7.36 min Scan# 917
Delta R.T. -0.01 min
Lab File: 553150.D
Acq: 18 Apr 2021 1:15

Tgt Ion: 62 Resp: 7451

Ion	Ratio	Lower	Upper
62	100		
98	0.0	0.0	29.3
64	37.1	12.8	52.8

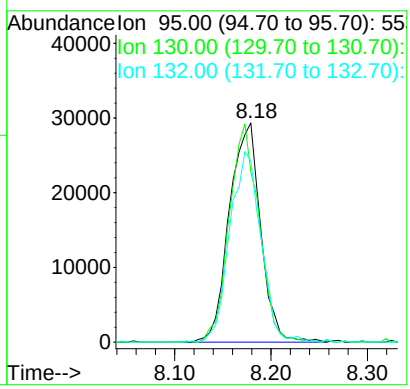




#49
trichloroete
Concen: 3.27 ug/L
RT: 8.18 min Scan# 1052
Delta R.T. 0.01 min
Lab File: 553150.D
Acq: 18 Apr 2021 1:15

Tgt Ion: 95 Resp: 66090

Ion	Ratio	Lower	Upper
95	100		
130	94.5	77.4	117.4
132	86.4	72.4	112.4



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553151.D Vial: 18
Acq On : 18 Apr 2021 1:45 Operator: RLD-DGS
Sample : 180903,553151,5 Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 02:06:01 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1475158	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1134799	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	544579	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	385567	19.963	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
45) SURR12DCAd4	7.27	102	107661	19.869	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %			
61) SURRd8Tolule	9.71	98	1450391	19.939	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %			
83) SURR4BrFBenz	13.26	95	597042	20.711	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 104 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.06	43	13794	Below	Cal	98
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	7820	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.65	42	2719	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553151.D Vial: 18
Acq On : 18 Apr 2021 1:45 Operator: RLD-DGS
Sample : 180903,553151,5 Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 02:06:01 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	129326	3.8349	ug/L		98
40)	111trichlota	0.00	97	0	N.D.			
42)	Cyclohexane	0.00	56	0	N.D.			
43)	Carbtetraclo	7.13	119	366941	16.0052	ug/L		99
44)	11dicloprope	0.00	110	0	N.D.			
46)	Benzene	0.00	78	0	N.D.			
47)	12dichlorota	7.36	62	7656	0.2793	ug/L	#	92
48)	TAME	0.00	73	0	N.D.			
49)	trichloroete	8.17	95	63347	3.1187	ug/L		98
50)	methylcyclohexane	0.00	83	0	N.D.			
51)	12dicloropra	0.00	63	0	N.D.			
52)	23Dicl1propene	0.00	75	0	N.D.			
53)	Dibromometha	0.00	93	0	N.D.			
54)	methylmethacrylate	0.00	69	0	N.D.			
55)	14dioxane	0.00	88	0	N.D.			
56)	Bromodiclrma	0.00	83	0	N.D.			
57)	2Nitropropane	0.00	43	0	N.D.			
58)	2CLEVE	0.00	63	0	N.D.			
59)	c13dicloproe	0.00	75	0	N.D.			
60)	4Meth2Pentan	0.00	43	0	N.D.			
62)	Toluene	0.00	92	0	N.D.			
63)	t13Dicloprop	0.00	75	0	N.D.			
64)	ethylmethacrylate	0.00	69	0	N.D.			
65)	112Triclotha	0.00	83	0	N.D.			
66)	Tetrachlorte	0.00	166	0	N.D.			
67)	13Diclorpropa	0.00	76	0	N.D.			
69)	2Hexanone	0.00	43	0	N.D.			
70)	Clorodibrmta	0.00	129	0	N.D.			
71)	12Dibrometha	0.00	107	0	N.D.			
72)	Chlorobenzen	0.00	112	0	N.D.			
73)	1Clhexane	11.62	91	3235	N.D.			
74)	1112Tetclota	0.00	131	0	N.D.			
75)	Ethylbenzene	0.00	91	0	N.D.			
76)	m p-Xylene	0.00	106	0	N.D.			
77)	o-Xylene	0.00	106	0	N.D.			
78)	Styrene	0.00	104	0	N.D.			
79)	Bromoform	0.00	173	0	N.D.			
80)	Isopropylben	0.00	105	0	N.D.			
81)	cyclohexanone	0.00	55	0	N.D.			
84)	Bromobenzene	0.00	156	0	N.D.			
85)	1122Tetrclta	0.00	83	0	N.D.			
86)	123Triclproa	0.00	75	0	N.D.			
87)	14dichloro2butene	0.00	53	0	N.D.			
88)	n-Propylbenz	0.00	91	0	N.D.			
89)	2chlorotolue	0.00	91	0	N.D.			
90)	4chlorotolue	0.00	91	0	N.D.			
91)	135Trimebenz	0.00	105	0	N.D.			
92)	tbutylbenzen	0.00	119	0	N.D.			
93)	124Trimetben	0.00	105	0	N.D.			
94)	sbutylbenzen	0.00	105	0	N.D.			
95)	13Diclorbenz	0.00	146	0	N.D.			
96)	pIsopropylto	0.00	119	0	N.D.			
97)	14dichlorobe	0.00	146	0	N.D.			
98)	12dichlorobe	0.00	146	0	N.D.			
99)	nButylbenzen	15.47	91	2783	N.D.			
100)	12dibromo3cl	0.00	157	0	N.D.			
101)	135Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553151.D Vial: 18
Acq On : 18 Apr 2021 1:45 Operator: RLD-DGS
Sample : 180903,553151,5 Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 02:06:01 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

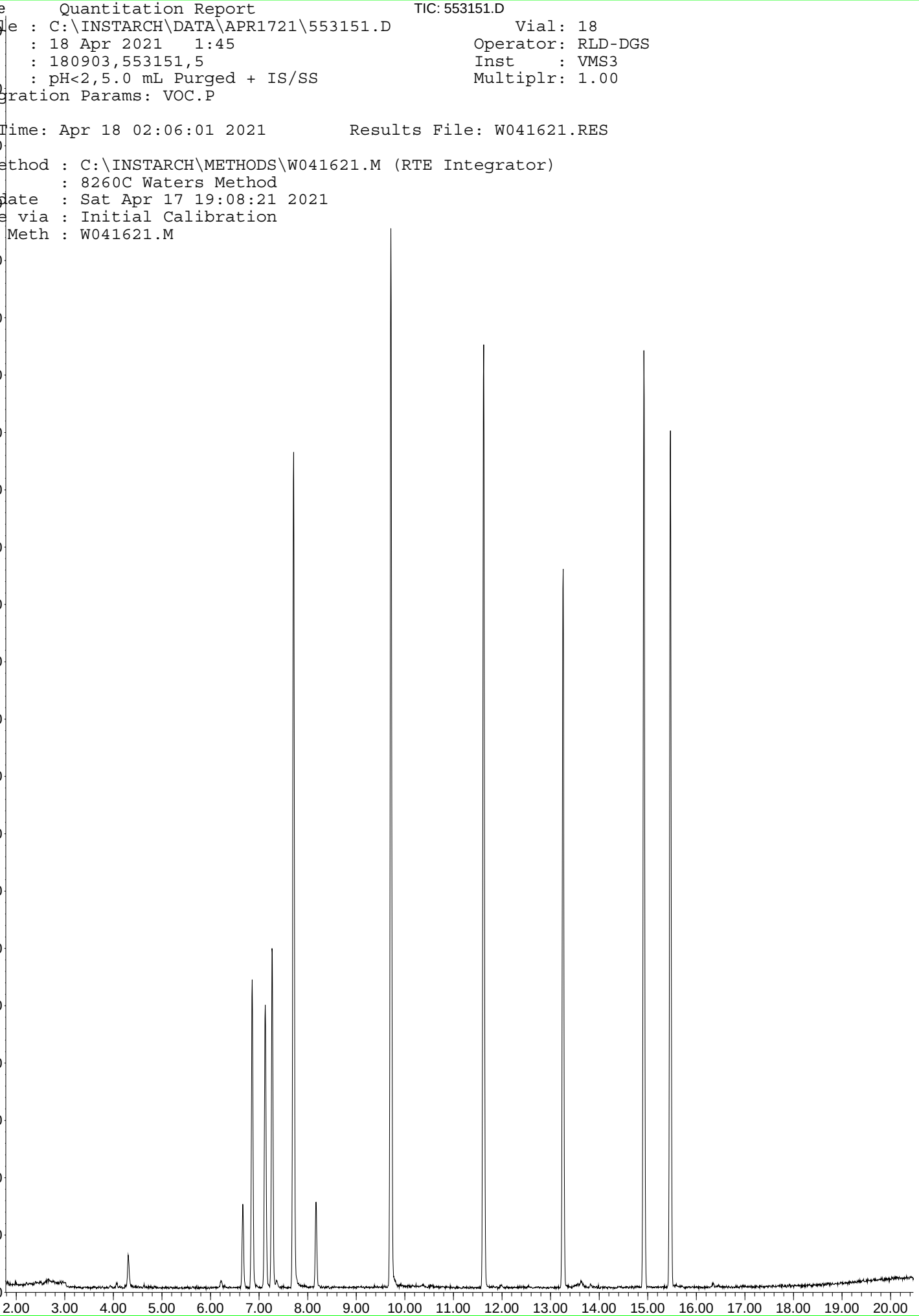
(#) = qualifier out of range (m) = manual integration

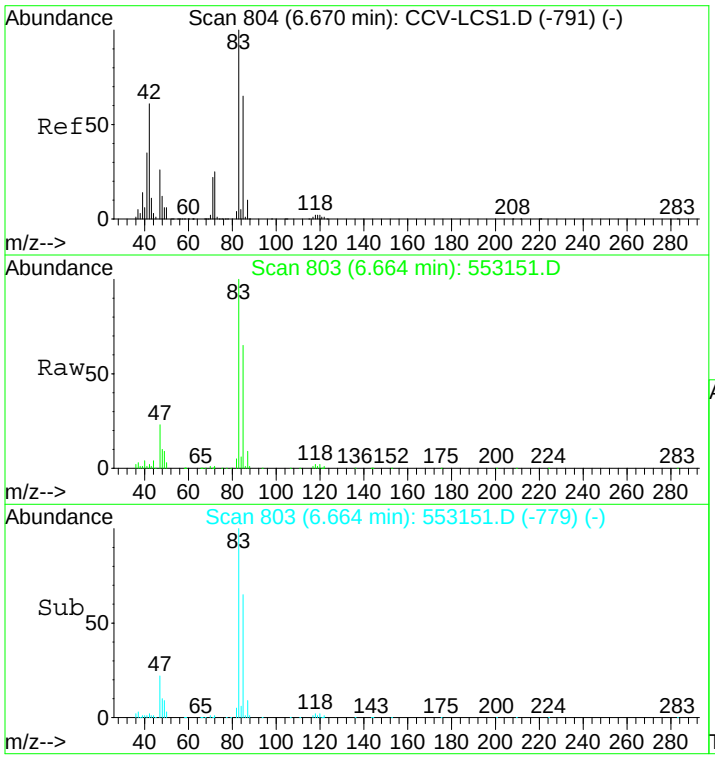
Abundance Quantitation Report TIC: 553151.D

Data File : C:\INSTARCH\DATA\APR1721\553151.D Vial: 18
Acq On : 18 Apr 2021 1:45 Operator: RLD-DGS
Sample : 180903,553151,5 Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 02:06:01 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

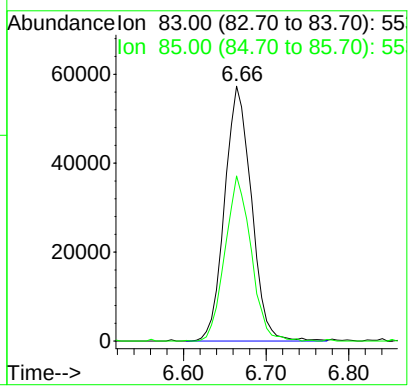


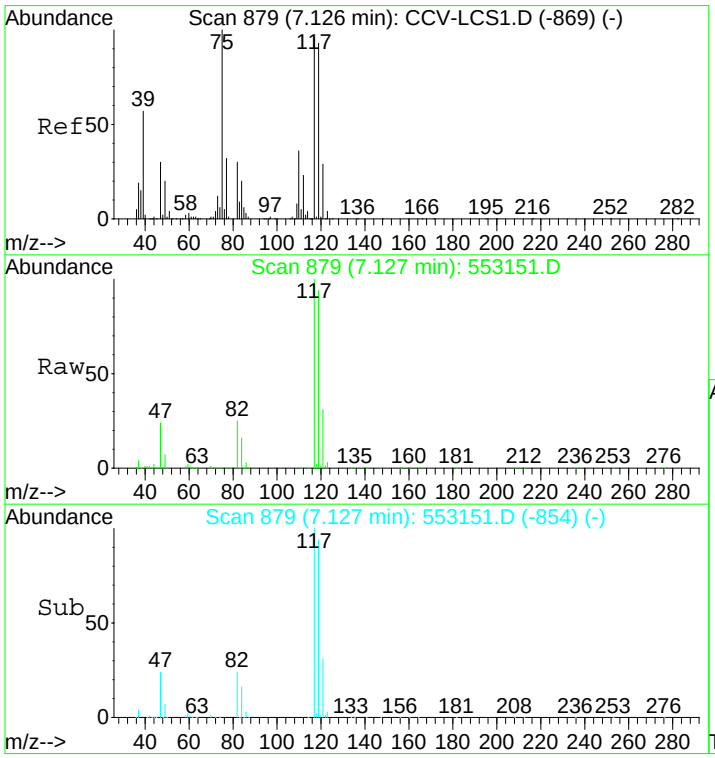


#39
Chloroform
Concen: 3.83 ug/L
RT: 6.66 min Scan# 803
Delta R.T. -0.01 min
Lab File: 553151.D
Acq: 18 Apr 2021 1:45

Tgt Ion: 83 Resp: 129326

Ion	Ratio	Lower	Upper
83	100		
85	63.1	45.0	85.0

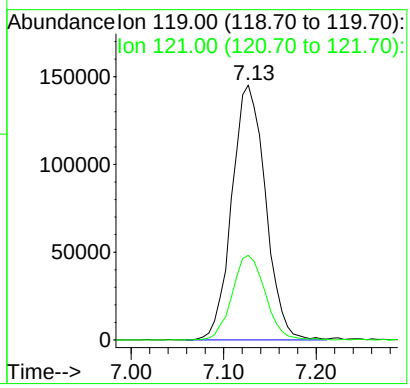


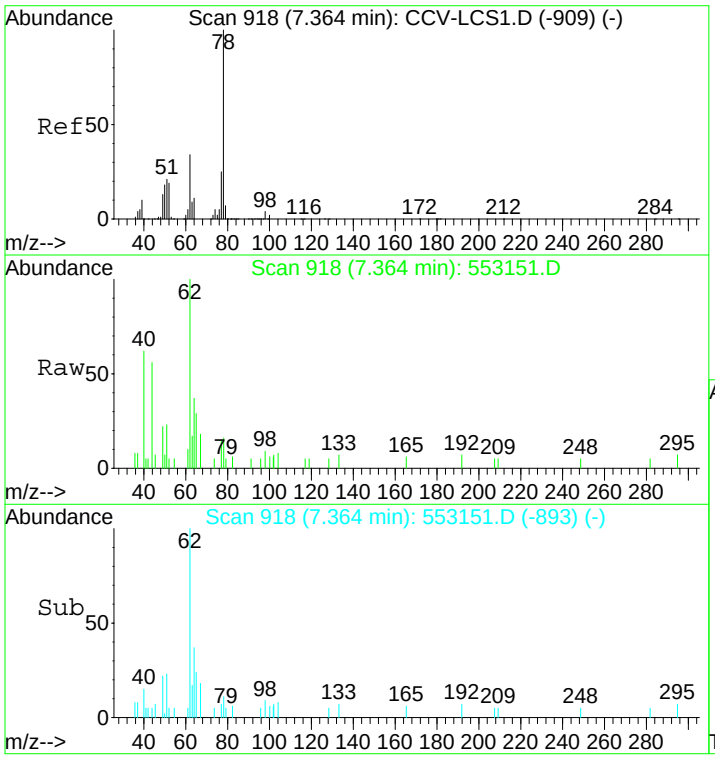


#43
Carbtetraclo
Concen: 16.01 ug/L
RT: 7.13 min Scan# 879
Delta R.T. 0.00 min
Lab File: 553151.D
Acq: 18 Apr 2021 1:45

Tgt Ion:119 Resp: 366941

Ion	Ratio	Lower	Upper
119	100		
121	32.8	12.2	52.2

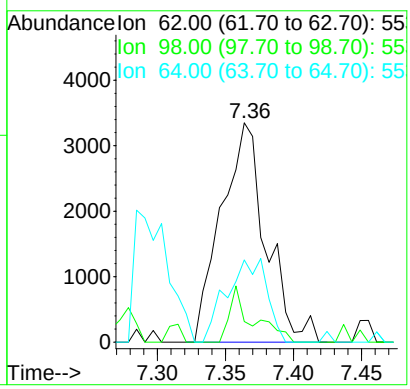


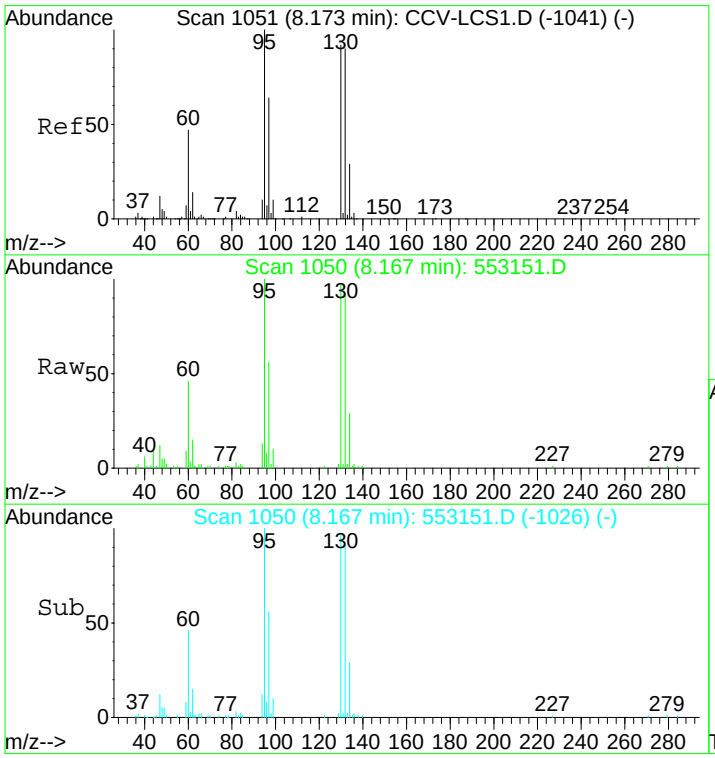


#47
12dichlorota
Concen: 0.28 ug/L
RT: 7.36 min Scan# 918
Delta R.T. 0.00 min
Lab File: 553151.D
Acq: 18 Apr 2021 1:45

Tgt Ion: 62 Resp: 7656

Ion	Ratio	Lower	Upper
62	100		
98	0.0	0.0	29.3
64	34.2	12.8	52.8

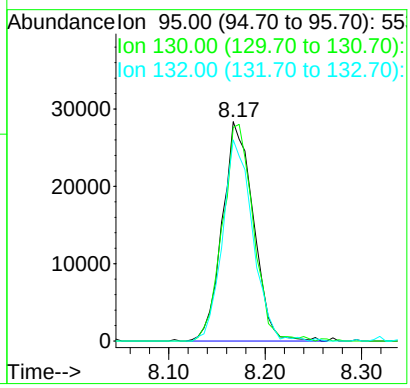




#49
trichloroete
Concen: 3.12 ug/L
RT: 8.17 min Scan# 1050
Delta R.T. -0.01 min
Lab File: 553151.D
Acq: 18 Apr 2021 1:45

Tgt Ion: 95 Resp: 63347

Ion	Ratio	Lower	Upper
95	100		
130	97.9	77.4	117.4
132	89.1	72.4	112.4



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554740.D Vial: 6
Acq On : 19 Apr 2021 18:00 Operator: RLD-DGS
Sample : 181064,554740, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 18:20:58 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1357769	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1077333	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	520169	20.00	ug/L	0.00 NA%

System Monitoring Compounds						
41) SURRDibrflma	6.86	113	361336	20.326	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4	7.27	102	96798	19.409	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.71	98	1383748	20.668	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103 %			
83) SURR4BrFBenz	13.26	95	567914	20.625	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	8193	Below	Cal	89
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.27	76	4348	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.64	84	3528	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554740.D Vial: 6
Acq On : 19 Apr 2021 18:00 Operator: RLD-DGS
Sample : 181064,554740, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 18:20:58 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	11.66	112	7096	N.D.	
73)	1Clhexane	11.62	91	3251	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	14.68	105	2875	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554740.D Vial: 6
Acq On : 19 Apr 2021 18:00 Operator: RLD-DGS
Sample : 181064,554740, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 18:20:58 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

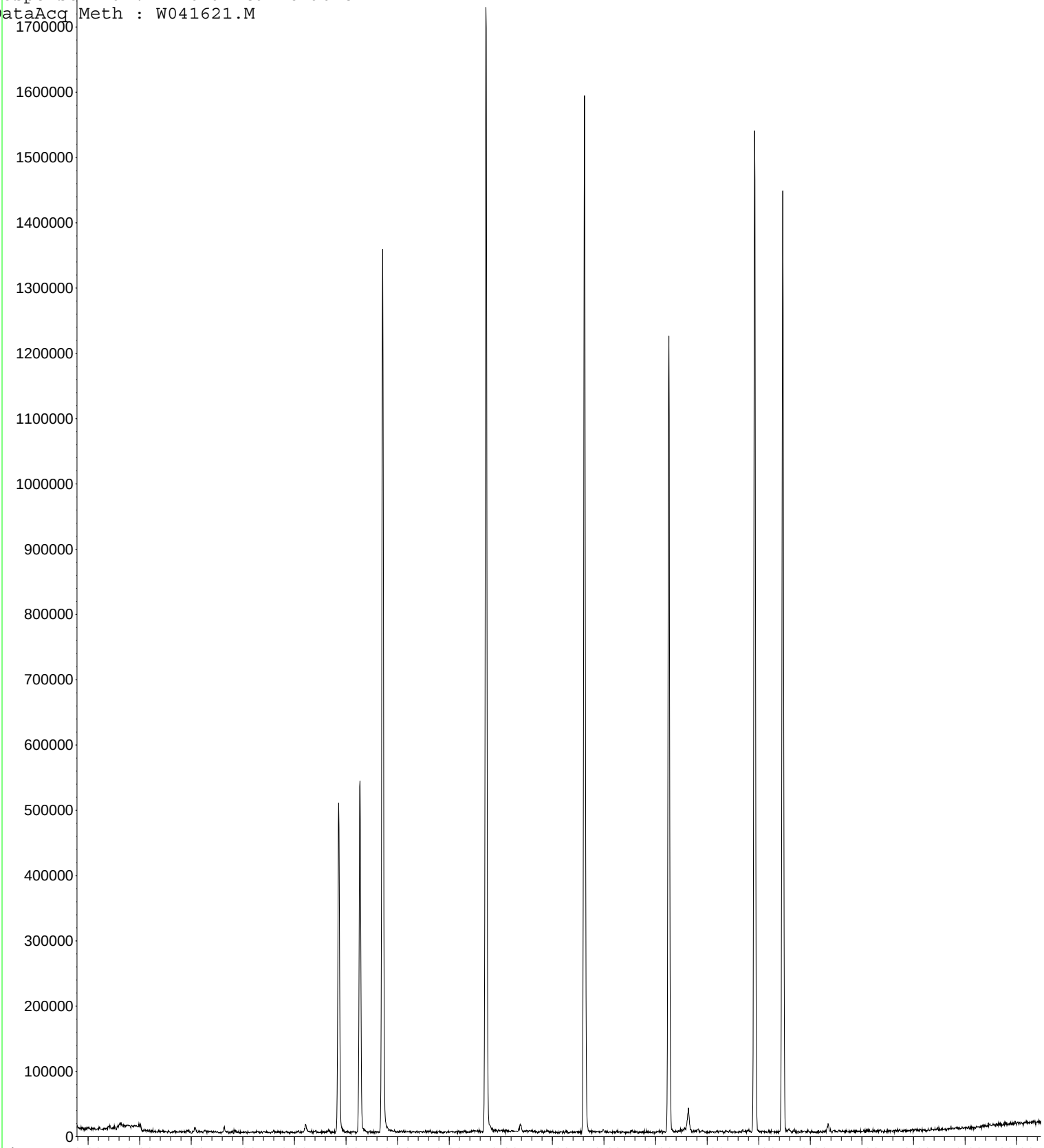
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 554740.D

Data File : C:\INSTARCH\DATA\APR1921B\554740.D Vial: 6
Acq On : 19 Apr 2021 18:00 Operator: RLD-DGS
Sample : 181064,554740, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 18:20:58 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554737.D Vial: 7
Acq On : 19 Apr 2021 18:30 Operator: RLD-DGS
Sample : 181064,554737, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 18:50:45 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1373060	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1069336	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	518178	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	358317	19.932	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	97123	19.257	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 96	%		
61) SURRd8Tolule	9.71	98	1360390	20.093	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.26	95	560072	20.418	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	3.73	67	19353	1.0223	ug/L	99
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	4.04	101	10590	N.D.		
15) Acetone	4.08	43	7374	Below Cal	#	43
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	4585	Below Cal	#	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554737.D Vial: 7
Acq On : 19 Apr 2021 18:30 Operator: RLD-DGS
Sample : 181064,554737, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 18:50:45 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.67	83	14381	0.4581 ug/L	96
40)	111trichlota	6.92	97	2986	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.13	119	60615	2.8405 ug/L	97
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.80	92	3092	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	2695	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	11.81	91	2678	N.D.	
76)	m p-Xylene	11.99	106	3783	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.65	91	2574	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.44	105	3607	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.50	91	3717	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554737.D Vial: 7
Acq On : 19 Apr 2021 18:30 Operator: RLD-DGS
Sample : 181064,554737, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 18:50:45 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

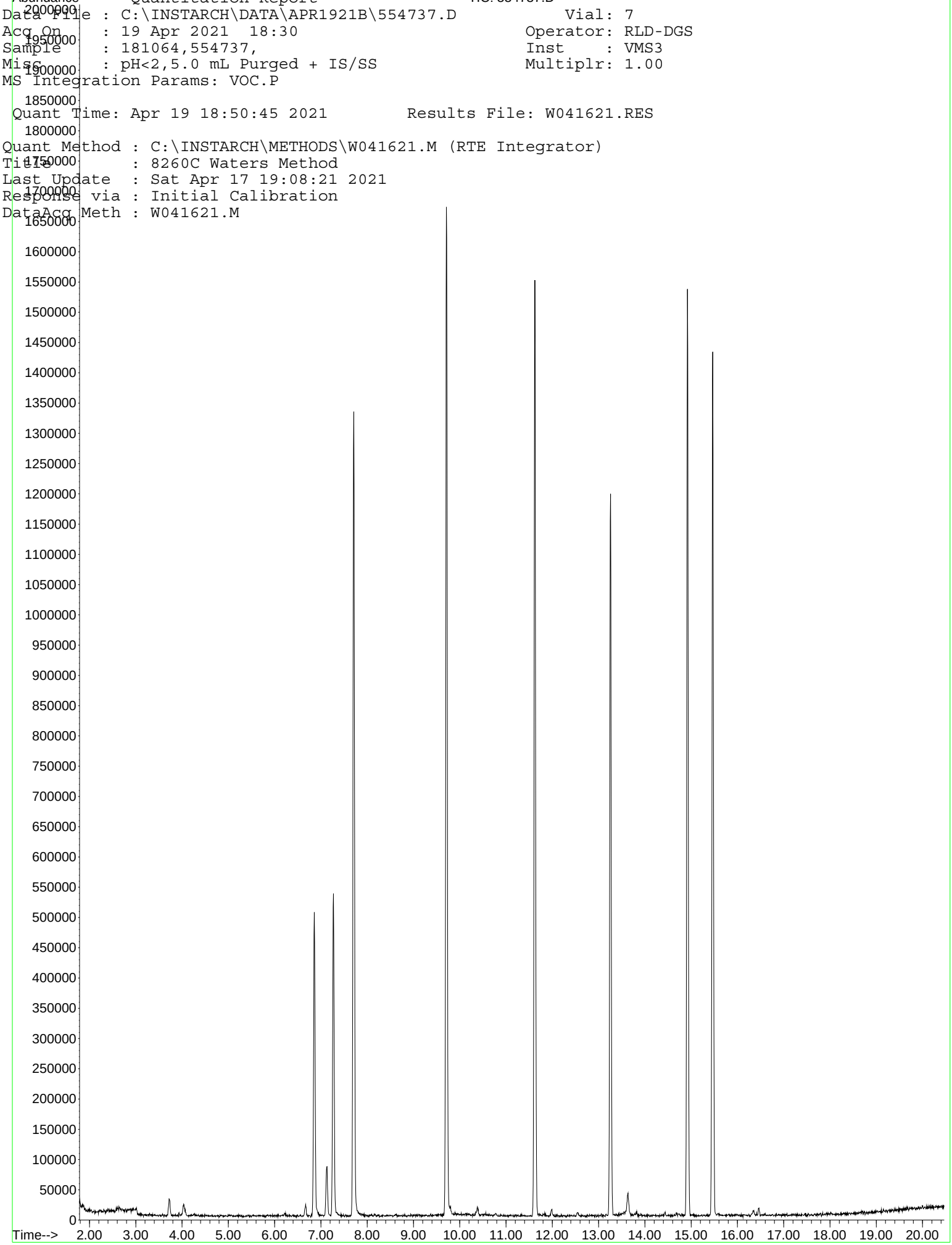
(#) = qualifier out of range (m) = manual integration

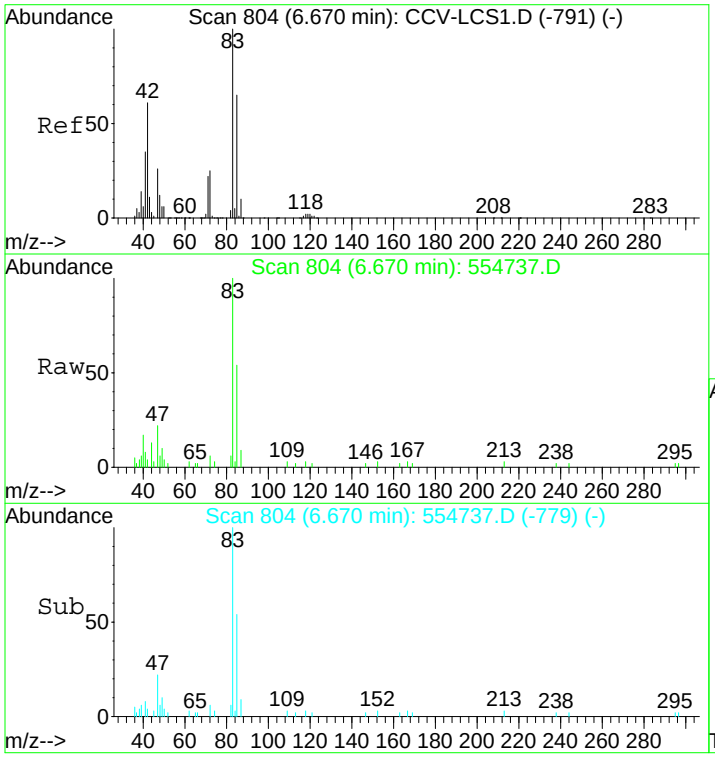
Abundance Quantitation Report TIC: 554737.D

Data File : C:\INSTARCH\DATA\APR1921B\554737.D Vial: 7
Acq On : 19 Apr 2021 18:30 Operator: RLD-DGS
Sample : 181064,554737, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 18:50:45 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

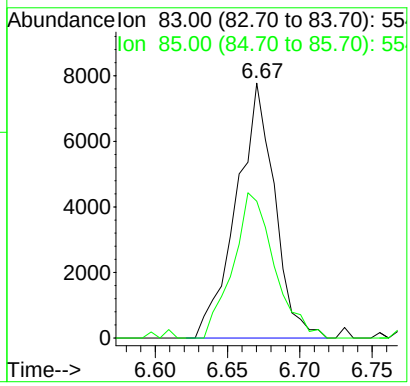


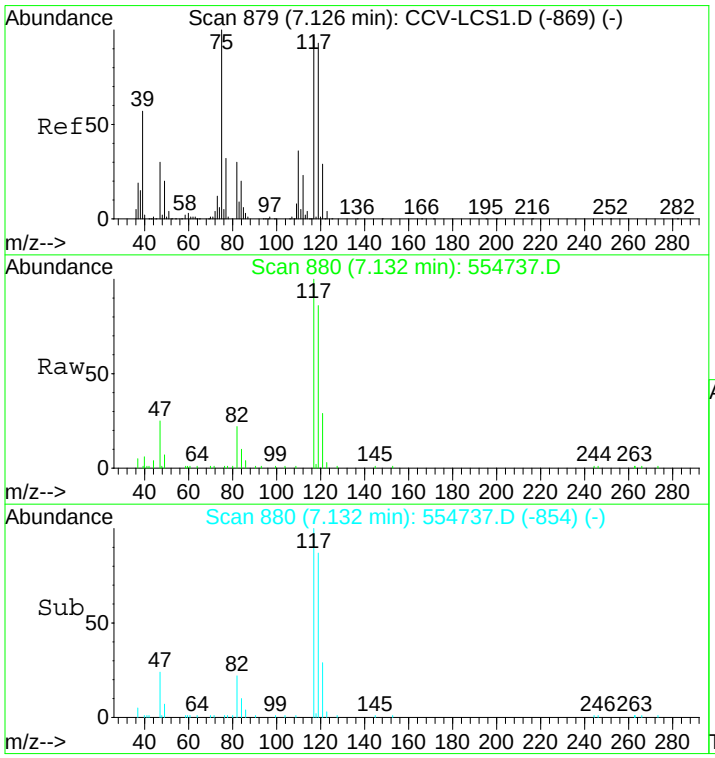


#39
Chloroform
Concen: 0.46 ug/L
RT: 6.67 min Scan# 804
Delta R.T. 0.00 min
Lab File: 554737.D
Acq: 19 Apr 2021 18:30

Tgt Ion: 83 Resp: 14381

Ion	Ratio	Lower	Upper
83	100		
85	61.6	45.0	85.0

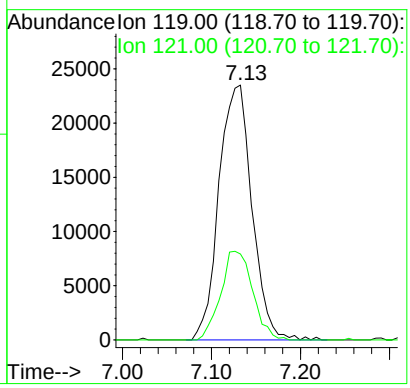




#43
Carbtetraclo
Concen: 2.84 ug/L
RT: 7.13 min Scan# 880
Delta R.T. 0.01 min
Lab File: 554737.D
Acq: 19 Apr 2021 18:30

Tgt Ion:119 Resp: 60615

Ion	Ratio	Lower	Upper
119	100		
121	33.7	12.2	52.2



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554738.D Vial: 8
Acq On : 19 Apr 2021 19:00 Operator: RLD-DGS
Sample : 181064,554738, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 19:20:57 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1365072	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1059769	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	521822	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	356604	19.952	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	98396	19.623	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98	%		
61) SURRd8Tolule	9.71	98	1376053	20.443	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.26	95	562957	20.380	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	3.72	67	3889	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.08	43	7798	Below	Cal	95
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.27	76	4414	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.54	63	19607	0.5808	ug/L	99
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	6.27	96	7802	0.3923	ug/L #	87
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554738.D Vial: 8
Acq On : 19 Apr 2021 19:00 Operator: RLD-DGS
Sample : 181064,554738, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 19:20:57 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	6.90	97	4951	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	7.37	78	3830	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	22262	1.1844	ug/L	99
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.80	92	5257	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.63	91	2655	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	11.83	91	3479	N.D.		
76)	m p-Xylene	11.98	106	5421	N.D.		
77)	o-Xylene	12.54	106	3046	N.D.		
78)	Styrene	12.55	104	4068	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	13.78	105	2964	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	14.45	105	5147	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554738.D Vial: 8
Acq On : 19 Apr 2021 19:00 Operator: RLD-DGS
Sample : 181064,554738, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 19:20:57 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

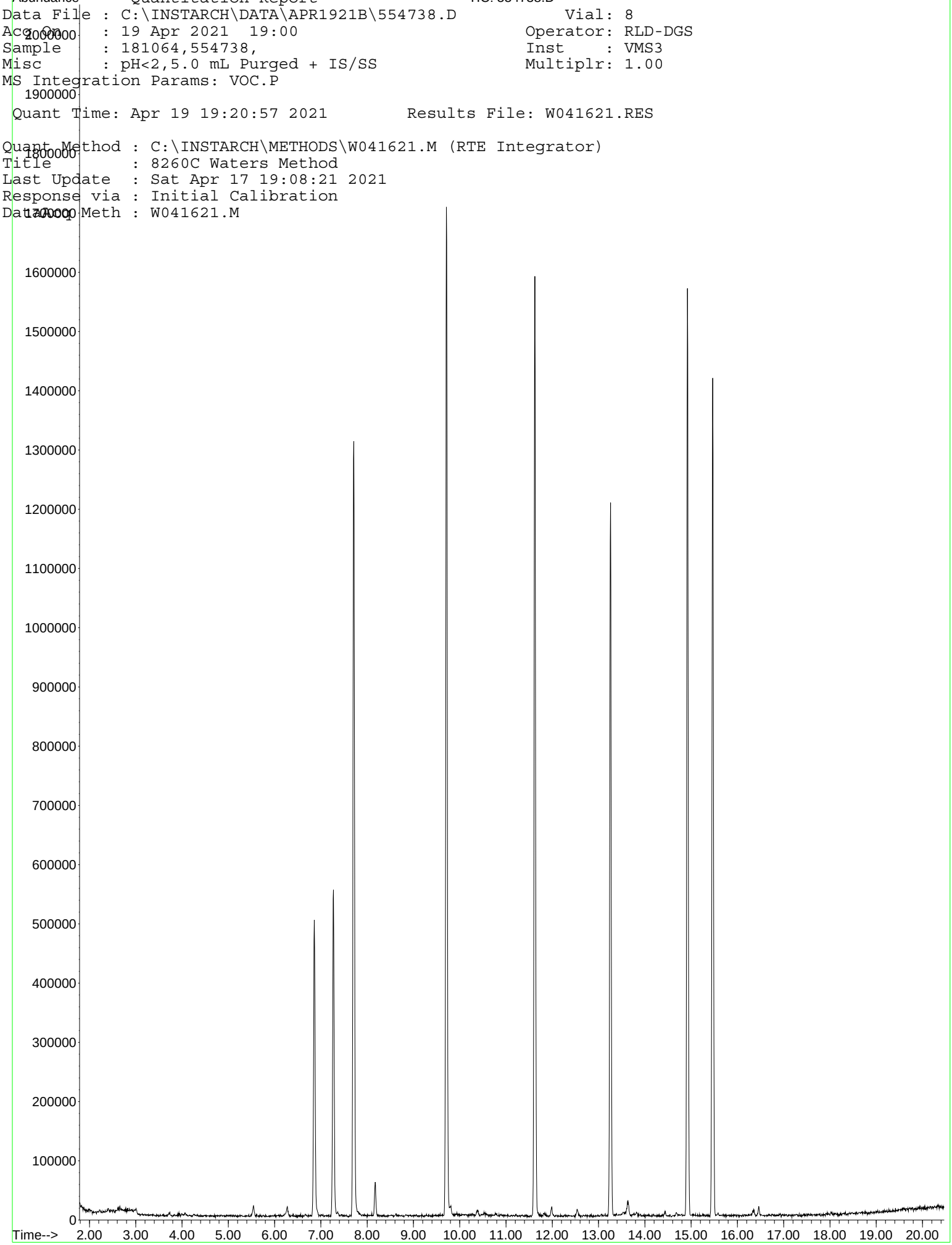
(#) = qualifier out of range (m) = manual integration

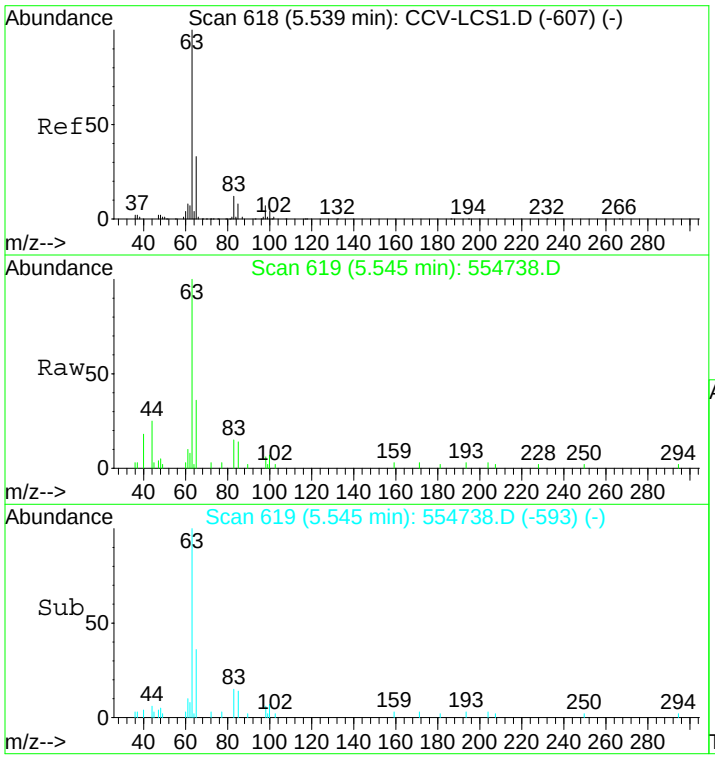
Abundance Quantitation Report TIC: 554738.D

Data File : C:\INSTARCH\DATA\APR1921B\554738.D Vial: 8
Acq On : 19 Apr 2021 19:00 Operator: RLD-DGS
Sample : 181064,554738, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 19:20:57 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
Data Path Meth : W041621.M

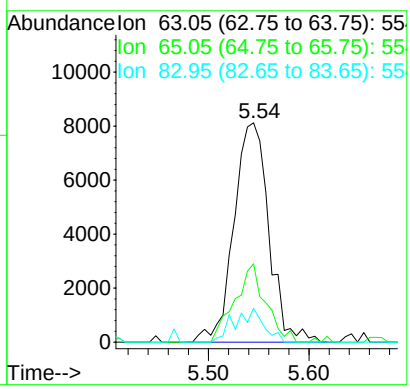


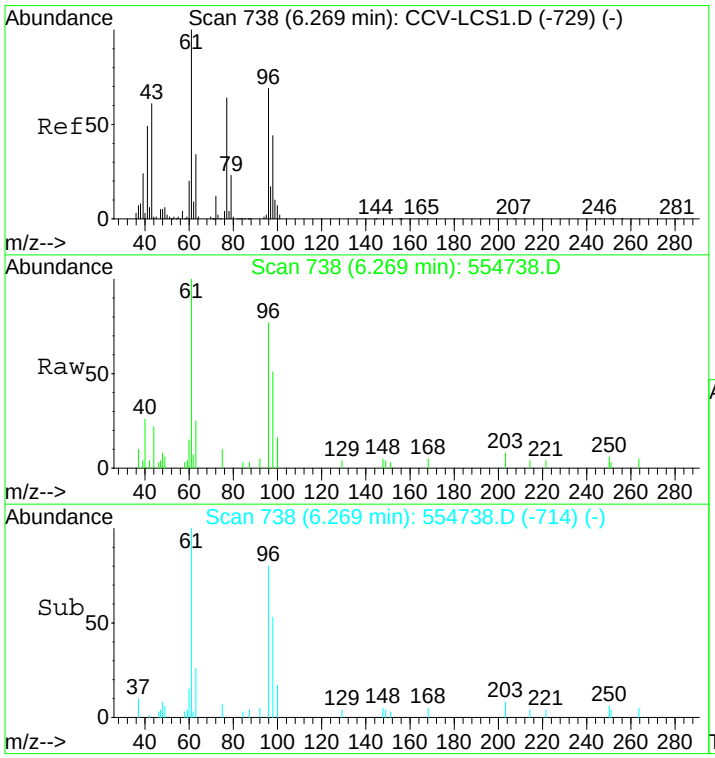


#26
11dichlorota
Concen: 0.58 ug/L
RT: 5.54 min Scan# 619
Delta R.T. 0.01 min
Lab File: 554738.D
Acq: 19 Apr 2021 19:00

Tgt Ion: 63 Resp: 19607

Ion	Ratio	Lower	Upper
63	100		
65	31.5	12.1	52.1
83	12.8	0.0	32.7

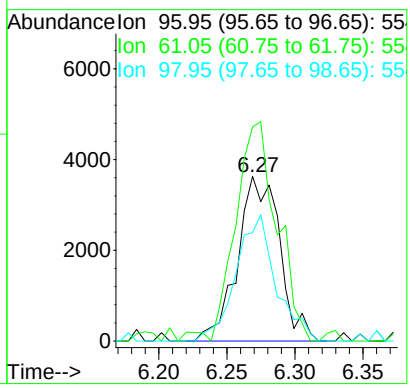


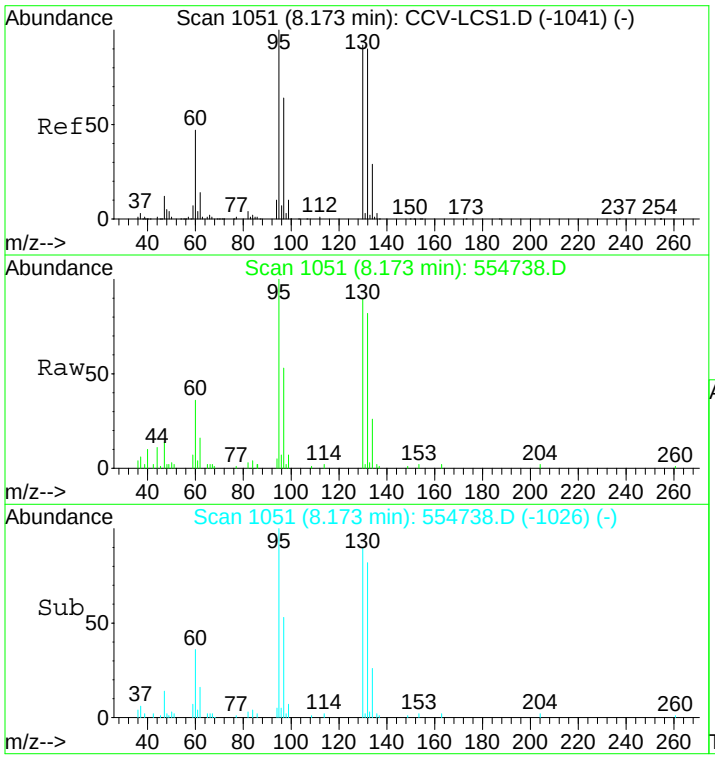


#32
c12dichlorte
Concen: 0.39 ug/L
RT: 6.27 min Scan# 738
Delta R.T. -0.01 min
Lab File: 554738.D
Acq: 19 Apr 2021 19:00

Tgt Ion: 96 Resp: 7802

Ion	Ratio	Lower	Upper
96	100		
61	132.6	132.8	172.8#
98	72.8	46.6	86.6

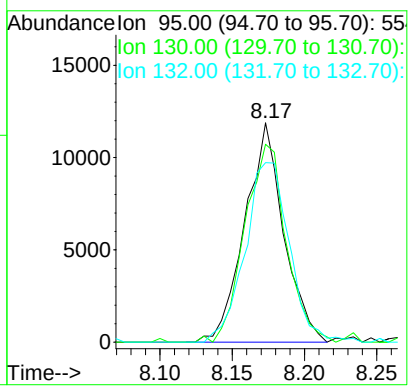




#49
trichloroete
Concen: 1.18 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. 0.00 min
Lab File: 554738.D
Acq: 19 Apr 2021 19:00

Tgt Ion: 95 Resp: 22262

Ion	Ratio	Lower	Upper
95	100		
130	96.4	77.4	117.4
132	93.6	72.4	112.4



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554739.D Vial: 9
Acq On : 19 Apr 2021 19:29 Operator: RLD-DGS
Sample : 181064,554739, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 19:50:15 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1345288	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1047140	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	517167	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	350088	19.876	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	94362	19.096	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 95 %			
61) SURRd8Tolule	9.71	98	1354683	20.421	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.26	95	557316	20.357	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %			

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	3.73	67	4446	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	4.00	96	3745	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	8110	Below	Cal	95
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	4326	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.84	59	2843	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.54	63	127956	3.8458	ug/L	99
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	6.27	96	145288	7.4127	ug/L #	88
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554739.D Vial: 9
Acq On : 19 Apr 2021 19:29 Operator: RLD-DGS
Sample : 181064,554739, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 19:50:15 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	6.91	97	21523	0.8318	ug/L	91
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	7.36	78	111468	1.6165	ug/L	96
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	89910	4.8538	ug/L	99
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	10.53	166	13972	0.8139	ug/L	96
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	3051	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	13.06	105	3002	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	14.69	105	17624	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554739.D Vial: 9
Acq On : 19 Apr 2021 19:29 Operator: RLD-DGS
Sample : 181064,554739, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 19:50:15 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

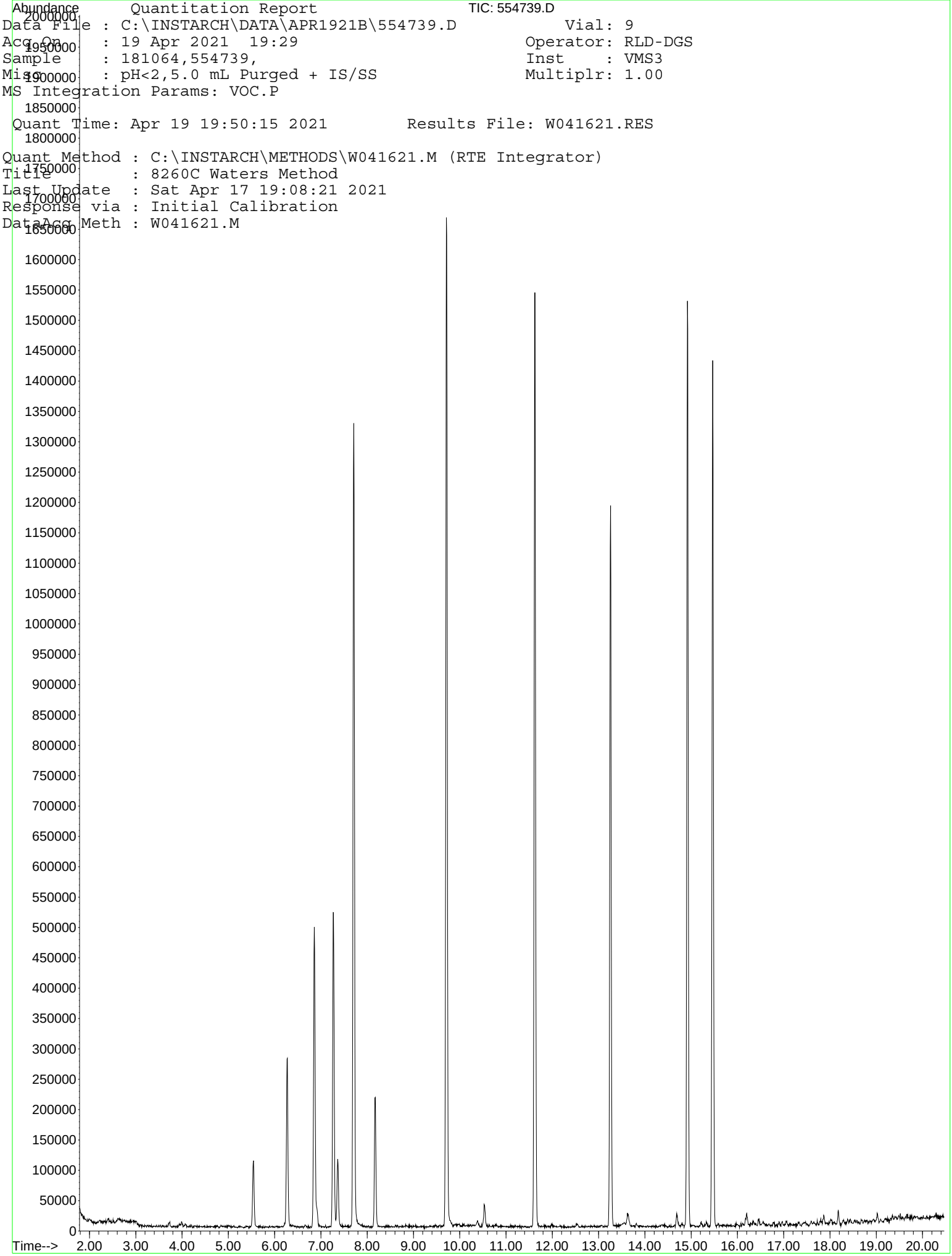
(#) = qualifier out of range (m) = manual integration

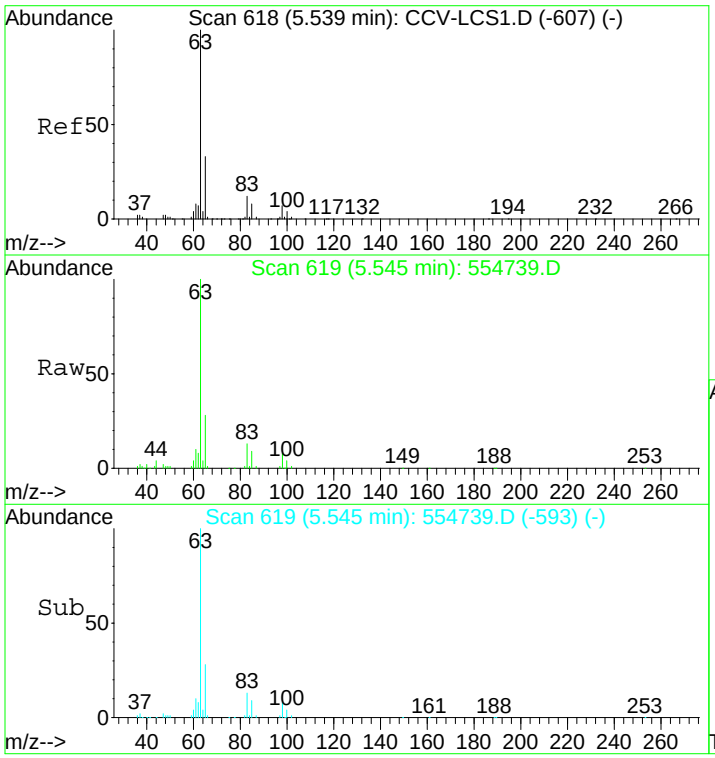
Abundance Quantitation Report TIC: 554739.D

Data File : C:\INSTARCH\DATA\APR1921B\554739.D Vial: 9
Acq On : 19 Apr 2021 19:29 Operator: RLD-DGS
Sample : 181064,554739, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 19:50:15 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

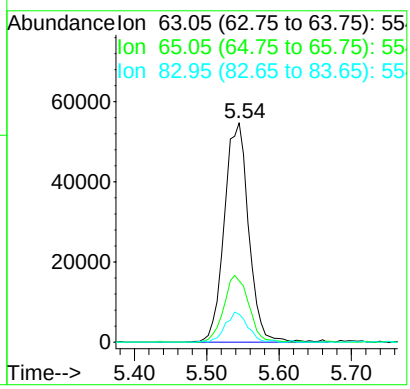


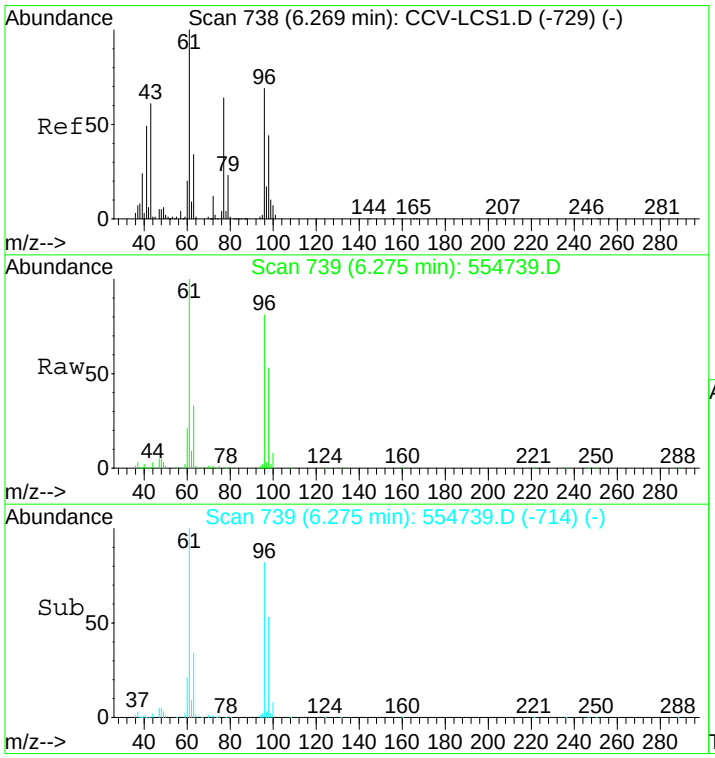


#26
11dichlorota
Concen: 3.85 ug/L
RT: 5.54 min Scan# 619
Delta R.T. 0.01 min
Lab File: 554739.D
Acq: 19 Apr 2021 19:29

Tgt Ion: 63 Resp: 127956

Ion	Ratio	Lower	Upper
63	100		
65	31.0	12.1	52.1
83	12.7	0.0	32.7

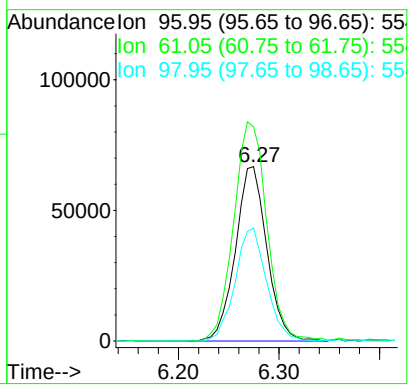


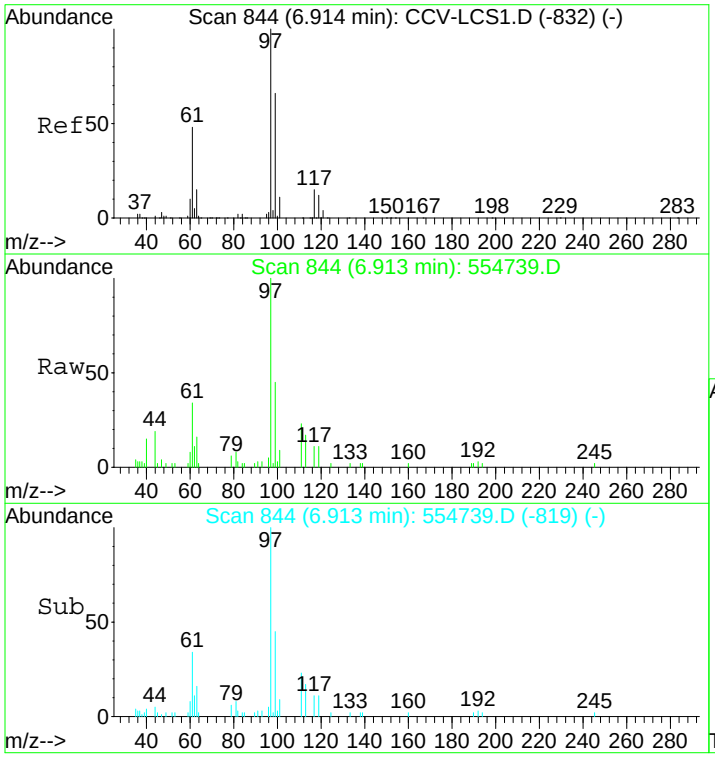


#32
c12dichlorte
Concen: 7.41 ug/L
RT: 6.27 min Scan# 739
Delta R.T. 0.00 min
Lab File: 554739.D
Acq: 19 Apr 2021 19:29

Tgt Ion: 96 Resp: 145288

Ion	Ratio	Lower	Upper
96	100		
61	132.7	132.8	172.8#
98	64.6	46.6	86.6

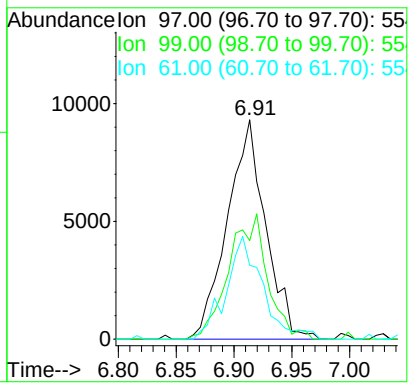


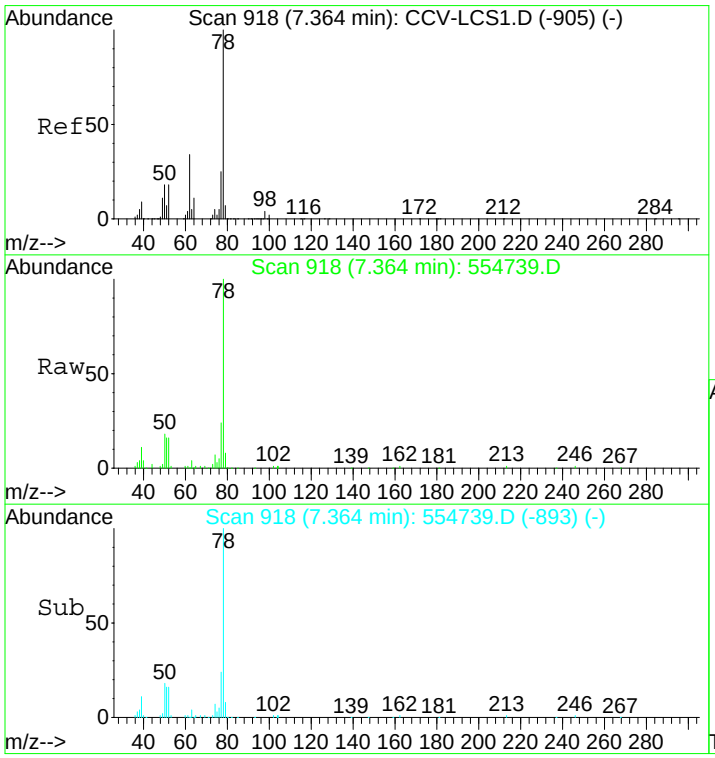


#40
111trichlota
Concen: 0.83 ug/L
RT: 6.91 min Scan# 844
Delta R.T. 0.00 min
Lab File: 554739.D
Acq: 19 Apr 2021 19:29

Tgt Ion: 97 Resp: 21523

Ion	Ratio	Lower	Upper
97	100		
99	57.7	45.6	85.6
61	44.3	29.6	69.6

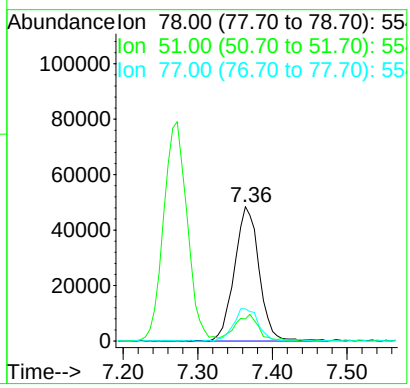


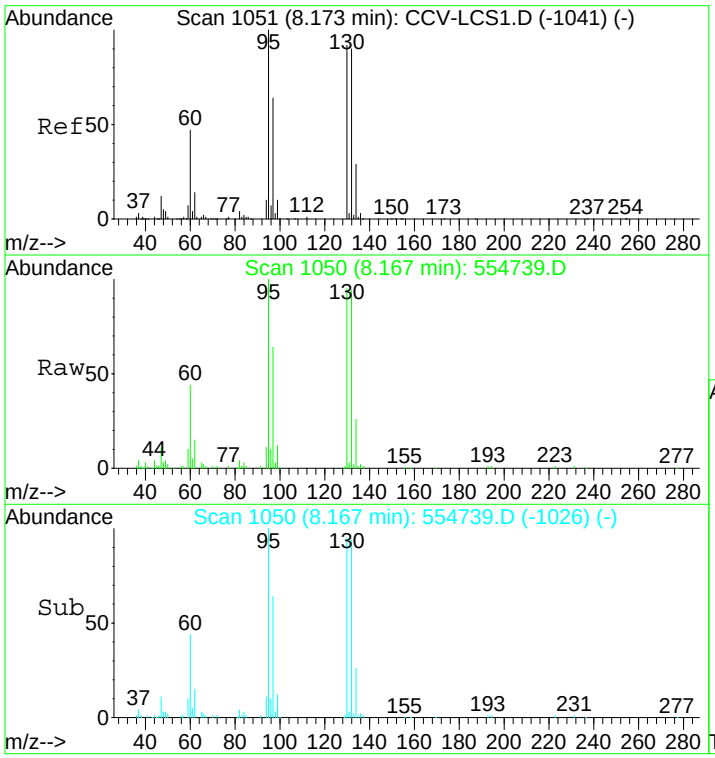


#46
Benzene
Concen: 1.62 ug/L
RT: 7.36 min Scan# 918
Delta R.T. 0.00 min
Lab File: 554739.D
Acq: 19 Apr 2021 19:29

Tgt Ion: 78 Resp: 111468

Ion	Ratio	Lower	Upper
78	100		
51	19.0	2.6	42.6
77	24.9	5.6	45.6

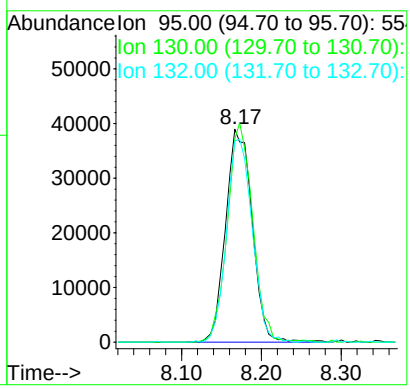


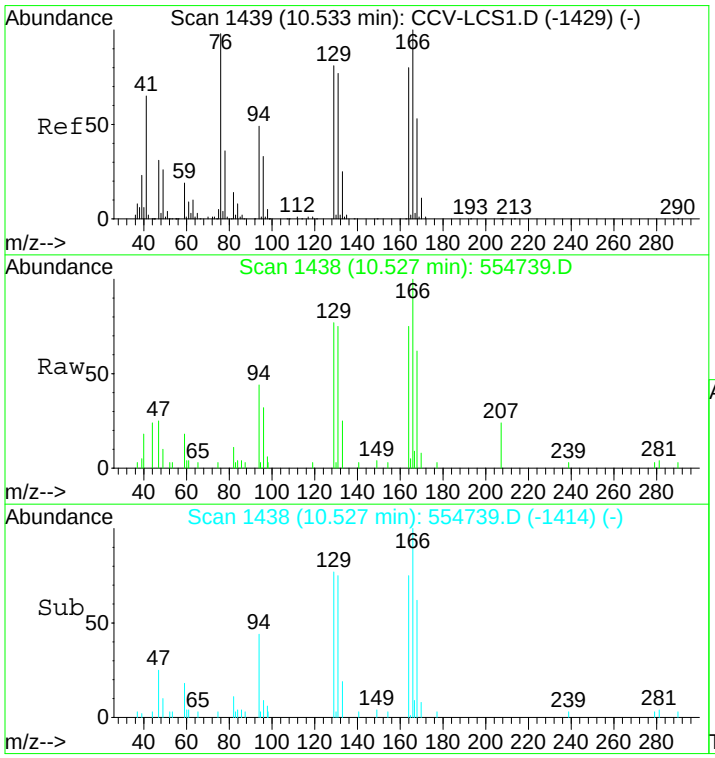


#49
trichloroete
Concen: 4.85 ug/L
RT: 8.17 min Scan# 1050
Delta R.T. -0.01 min
Lab File: 554739.D
Acq: 19 Apr 2021 19:29

Tgt Ion: 95 Resp: 89910

Ion	Ratio	Lower	Upper
95	100		
130	98.7	77.4	117.4
132	92.8	72.4	112.4

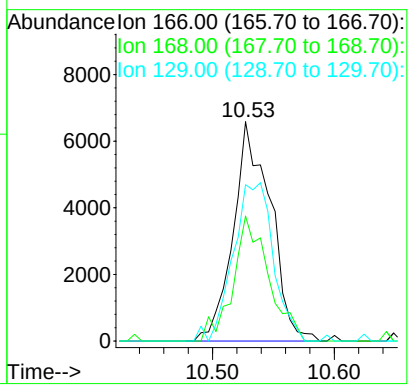




#66
Tetrachlorte
Concen: 0.81 ug/L
RT: 10.53 min Scan# 1438
Delta R.T. -0.01 min
Lab File: 554739.D
Acq: 19 Apr 2021 19:29

Tgt Ion:166 Resp: 13972

Ion	Ratio	Lower	Upper
166	100		
168	54.3	28.9	68.9
129	78.0	57.0	97.0

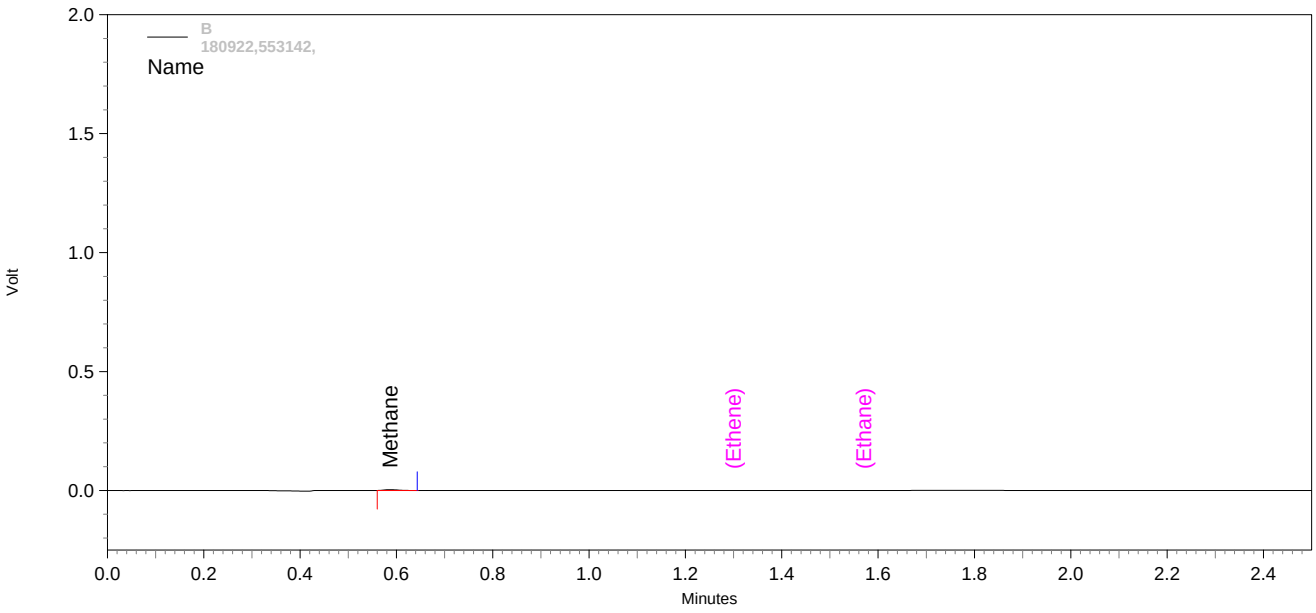


Dissolved Gases External Standard Report

NOT USED

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\005.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,553142,
Acquired: Apr 15, 2021 10:03:22
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



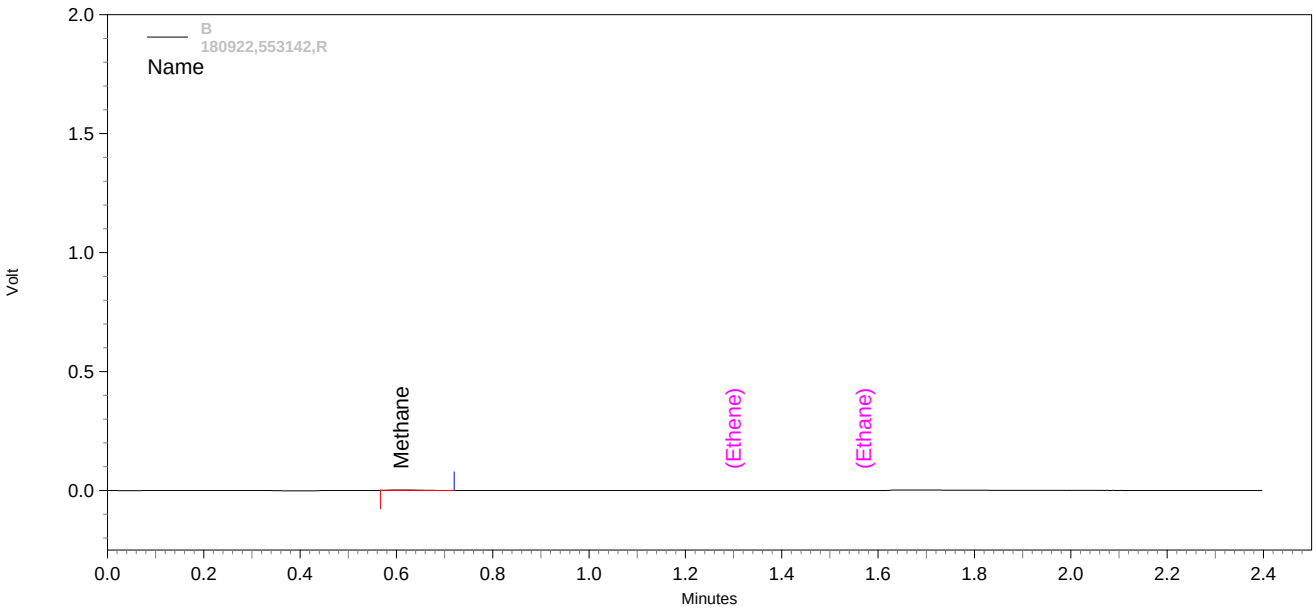
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.587**	**0.590**	**6104**	**0.000**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\006.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,553142,R
Acquired: Apr 15, 2021 10:07:20
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



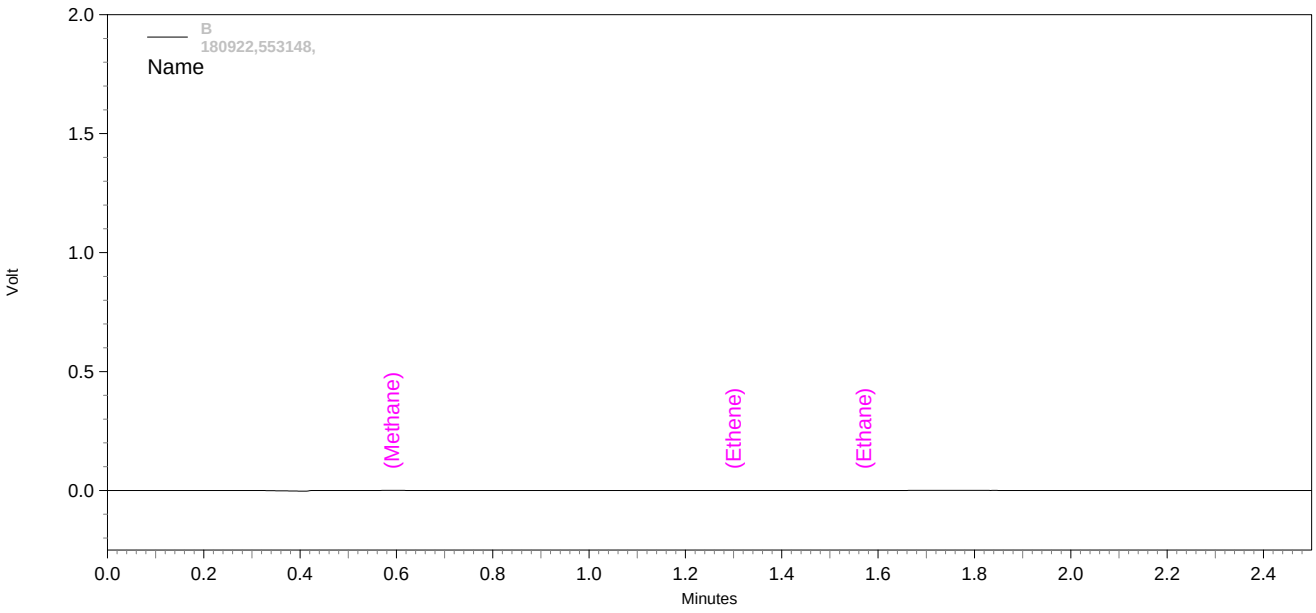
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.610**	**0.590**	**7237**	**0.000**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\007.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,553148,
Acquired: Apr 15, 2021 10:10:41
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



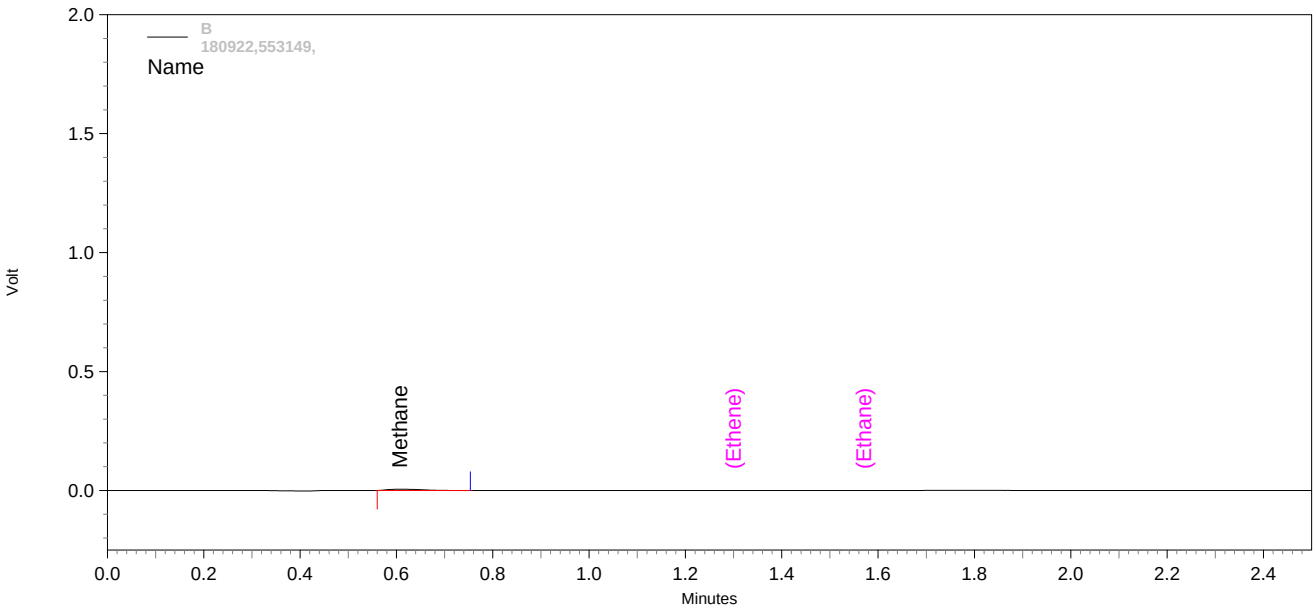
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\008.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,553149,
Acquired: Apr 15, 2021 10:16:06
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



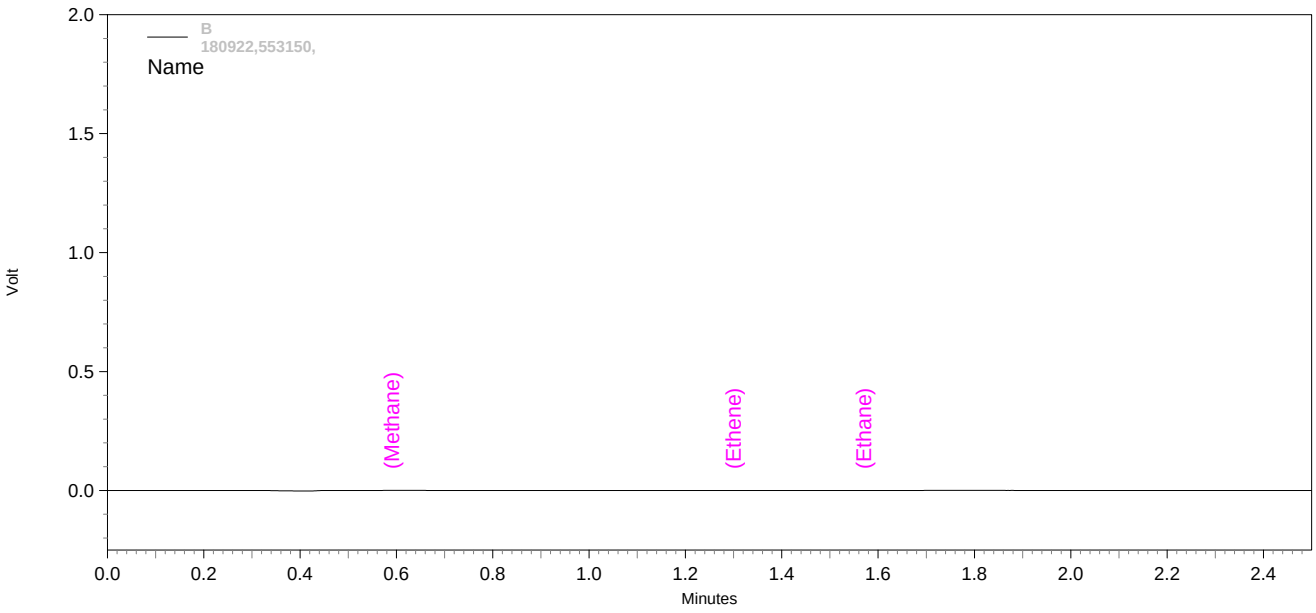
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.607**	**0.590**	**24451**	**4.398**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\009.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,553150,
Acquired: Apr 15, 2021 10:20:52
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



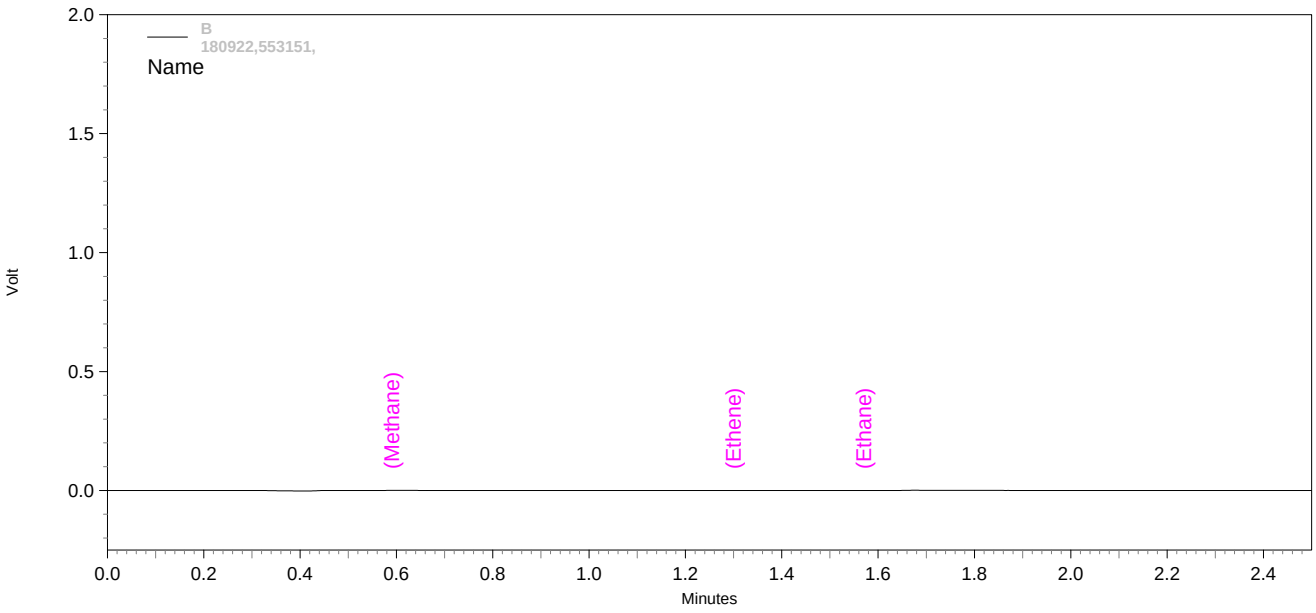
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\010.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,553151,
Acquired: Apr 15, 2021 10:24:21
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



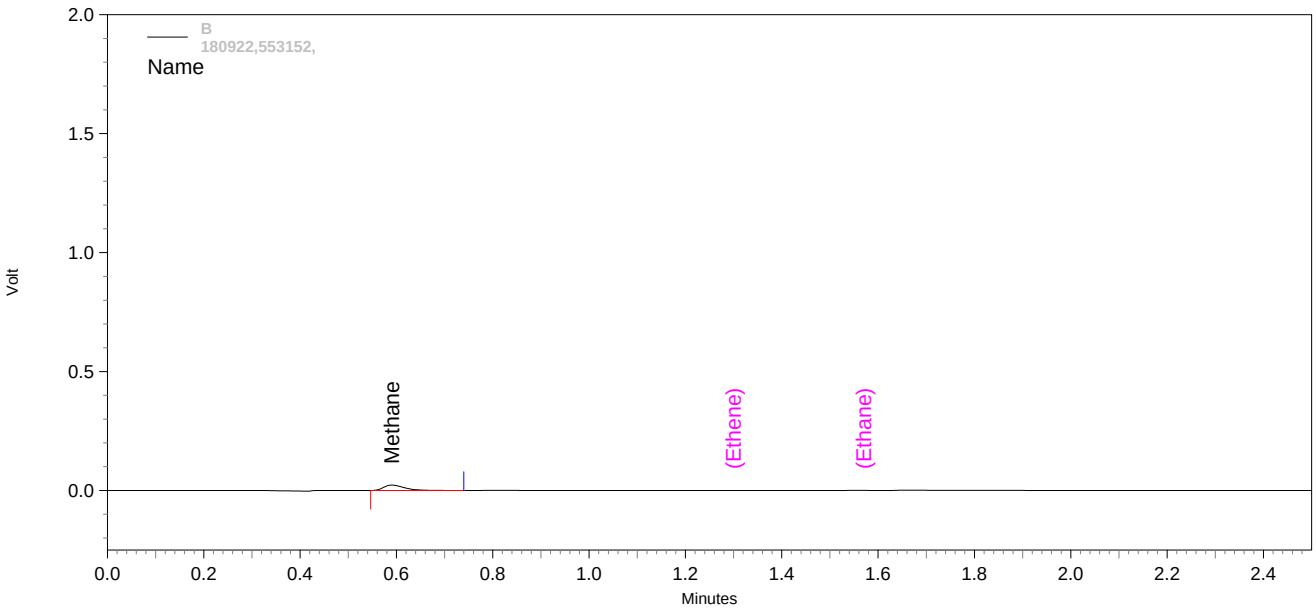
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\011.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,553152,
Acquired: Apr 15, 2021 10:27:50
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



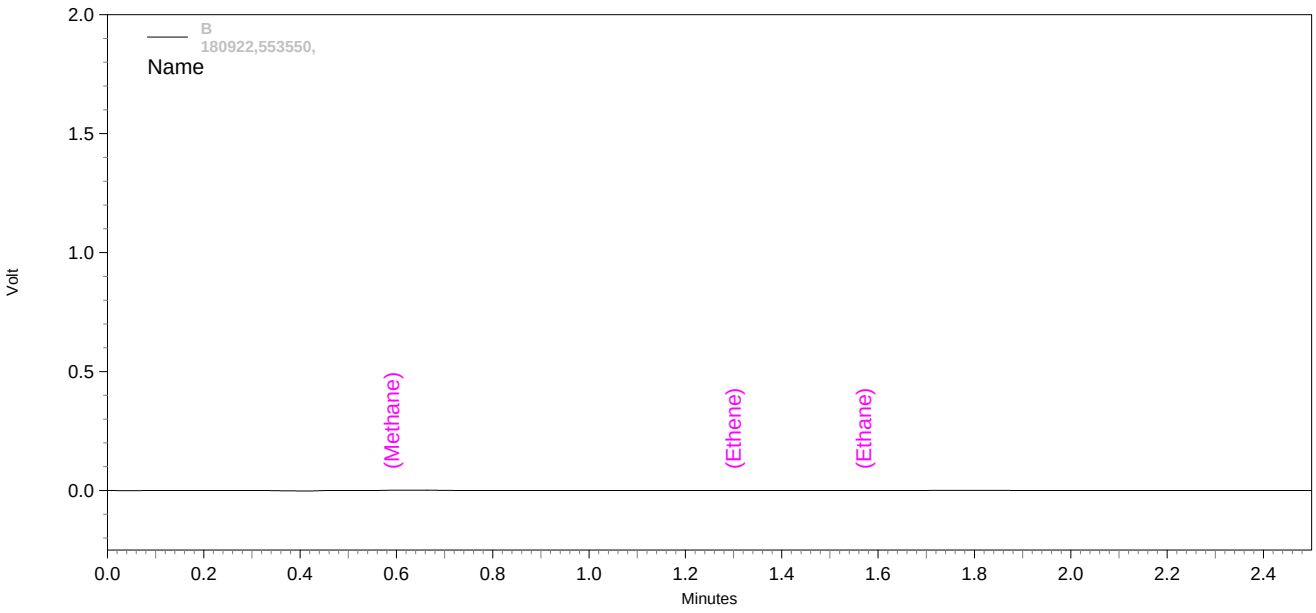
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.590**	**0.590**	**67399**	**16.922**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\012.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,553550,
Acquired: Apr 15, 2021 11:30:21
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



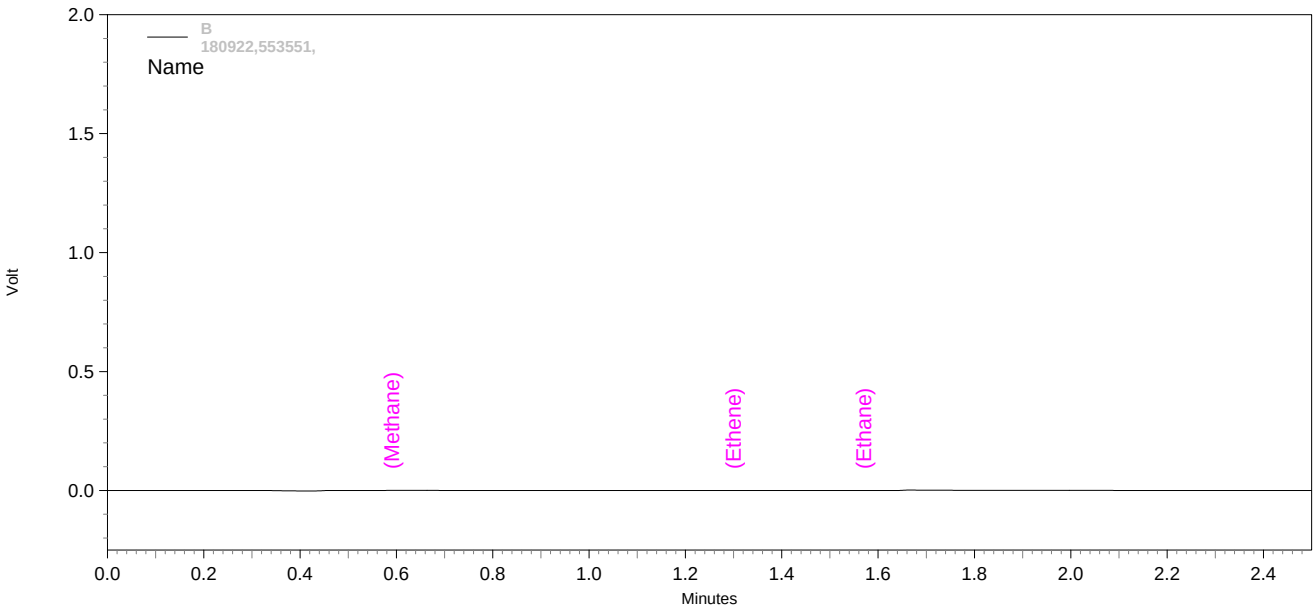
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\013.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,553551,
Acquired: Apr 15, 2021 12:07:29
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



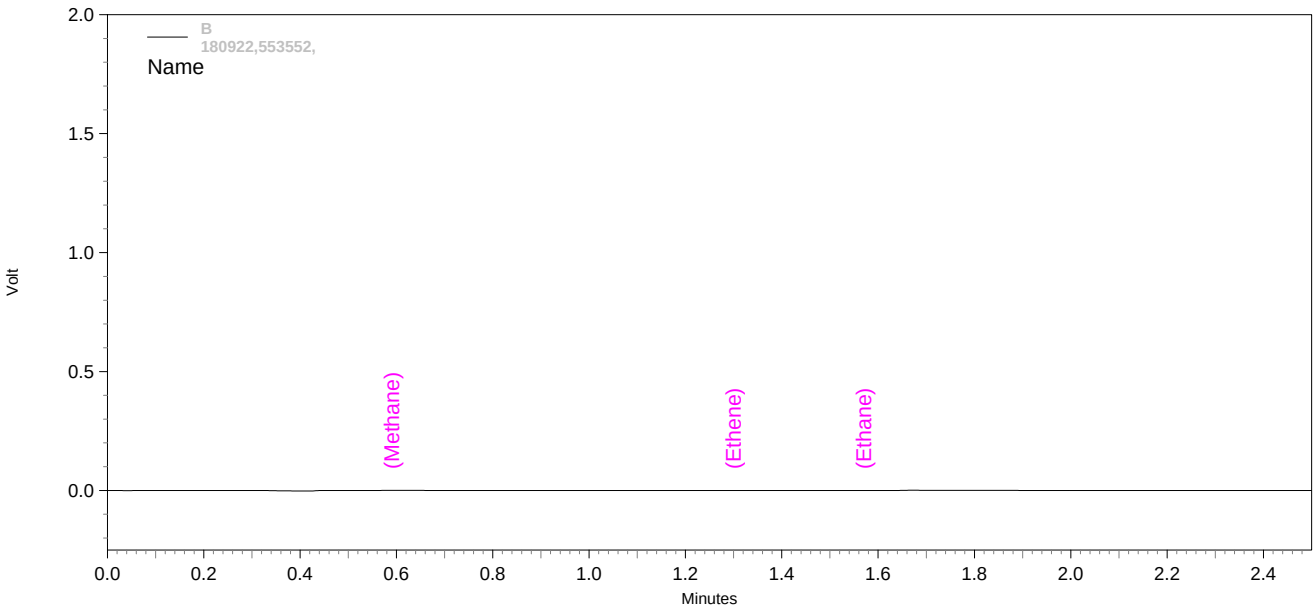
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\014.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,553552,
Acquired: Apr 15, 2021 12:10:55
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



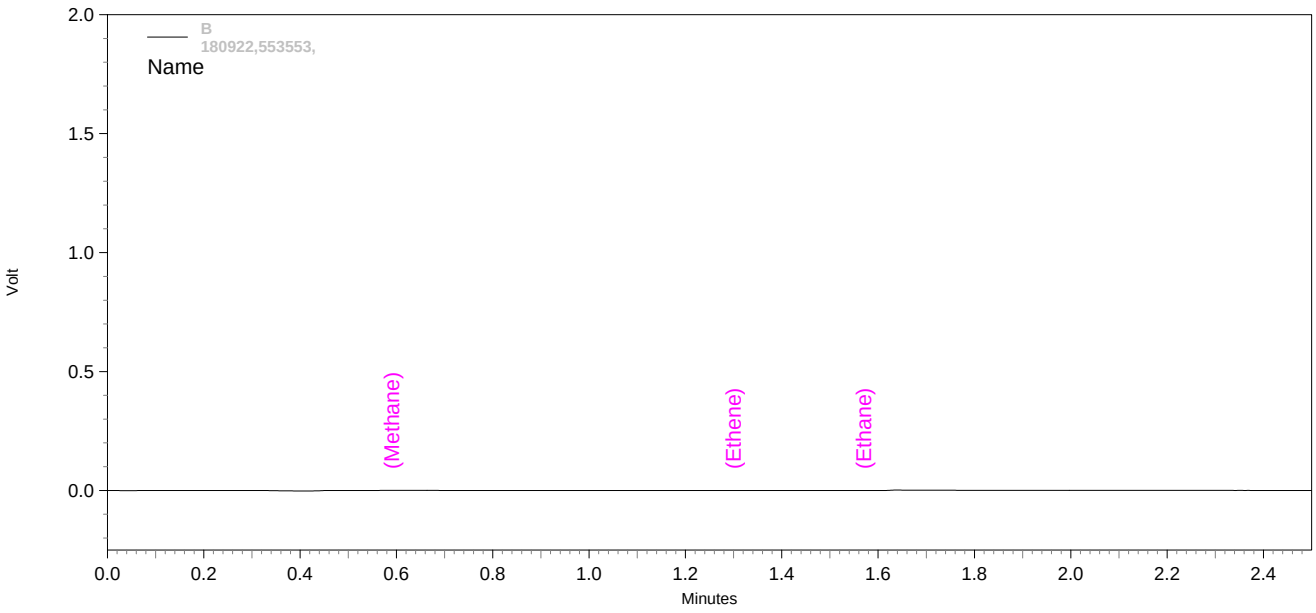
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\015.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,553553,
Acquired: Apr 15, 2021 12:14:45
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



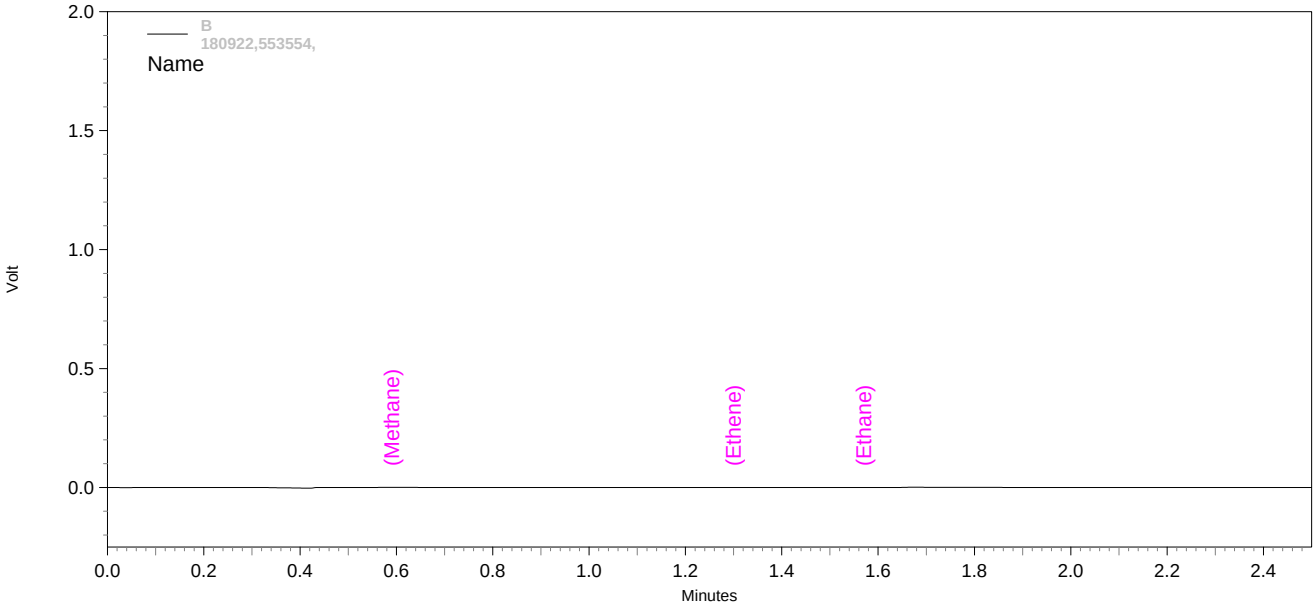
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\018.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,553554,
Acquired: Apr 15, 2021 12:26:41
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



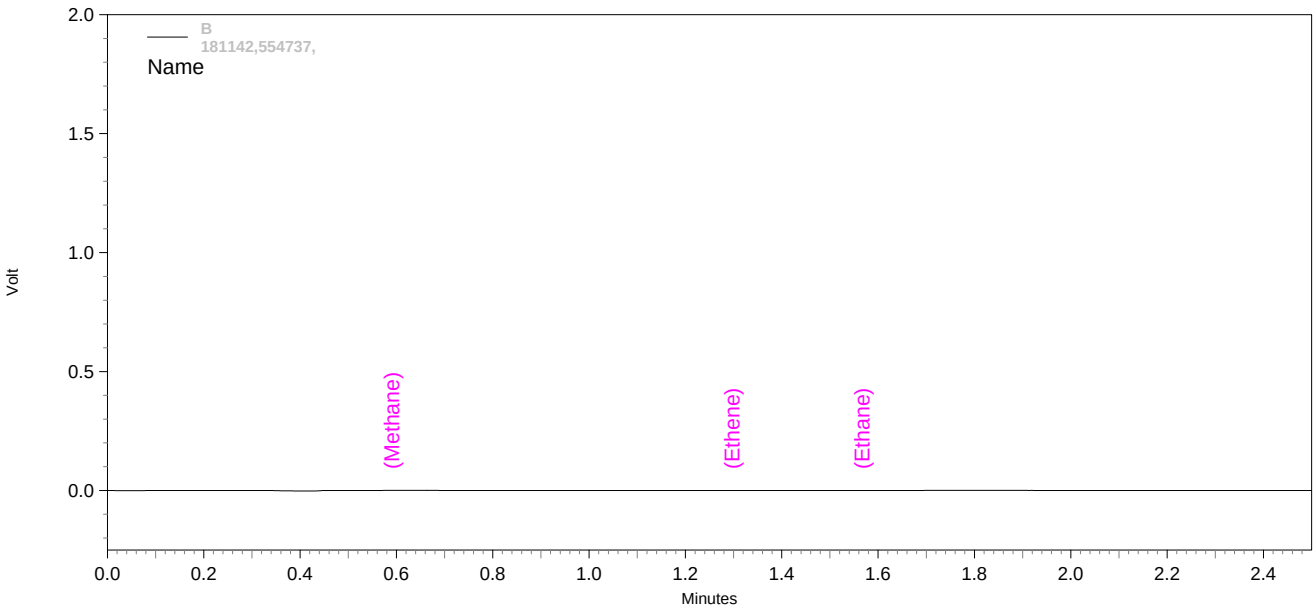
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\042221 -\024.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 181142,554737,
Acquired: Apr 22, 2021 12:51:52
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



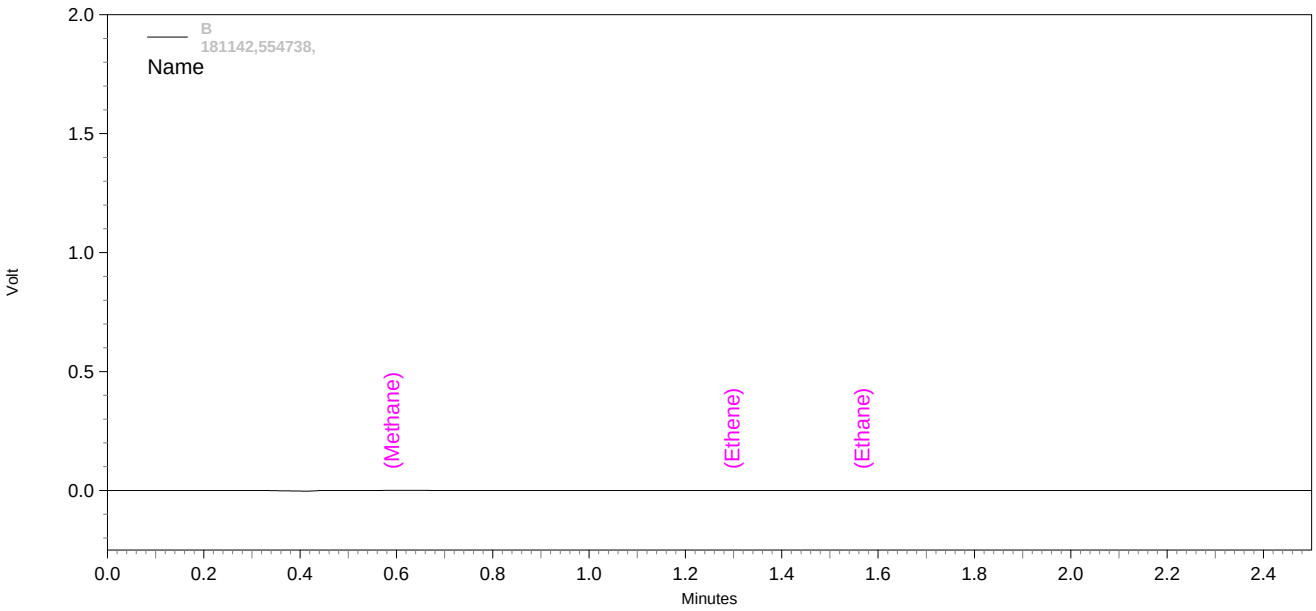
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.297**		**0.000 BDL**	**ppmV**
	Ethane		**1.567**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\042221 -\025.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 181142,554738,
Acquired: Apr 22, 2021 12:56:24
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



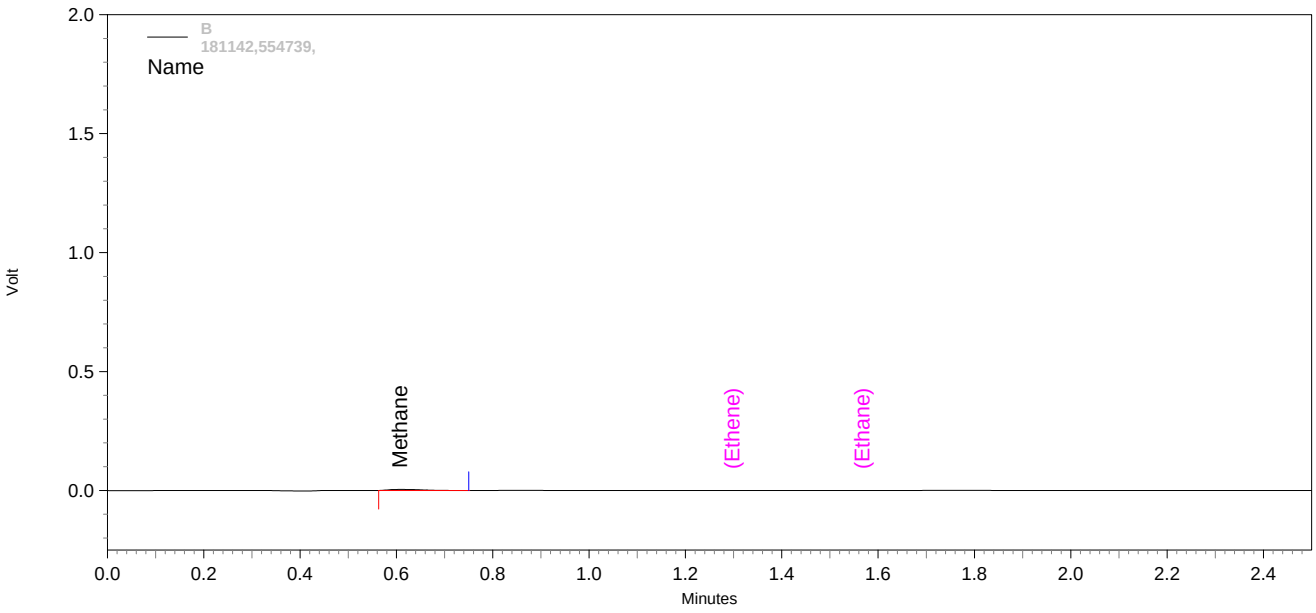
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.297**		**0.000 BDL**	**ppmV**
	Ethane		**1.567**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\042221 -\026.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 181142,554739,
Acquired: Apr 22, 2021 13:11:35
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.607**	**0.590**	**19209**	**2.870**	**ppmV**
	Ethene		**1.297**		**0.000 BDL**	**ppmV**
	Ethane		**1.567**		**0.000 BDL**	**ppmV**

VOLATILE ORGANIC ANALYSIS
INITIAL CALIBRATION
DOCUMENTS

Method Path : C:\INSTARCH\METHODS\
Method File : W041621.M
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response Via : Initial Calibration

RJ 04/21/2021

Calibration Files ug/L
1 0.5/5.0 =WCAL1.D 2 1.0/10.0 =WCAL2.D 3 2.0/20.0 =WCAL3.D
4 5.0/50.0 =WCAL4.D 5 10.0/100.0 =WCAL5.D 6 20.0/200.0 =WCAL6.D
7 30.0/300.0 =WCAL7.D 8 40.0/400.0 =WCAL8.D 9 80.0/800.0 =WCAL9.D

		Compound	1	2	3	4	5	6	7	Avg	%RSD
			8	9							
1)	I	FLUOROBENZENE**ISTD**	----------ISTD----------								
2)	PT	Dichlorodi	0.215	0.235	0.276	0.279	0.282	0.264	0.252	0.257	8.81
			0.265	0.241							
3)	PT	Chloromethan	0.382	0.399	0.390	0.374	0.344	0.326	0.302	0.347	11.99
			0.321	0.283							
4)	PT	VinylChlorid	0.283	0.291	0.355	0.350	0.335	0.323	0.306	0.318	8.27
			0.324	0.291							
5)	PT	Bromomethane		0.190	0.188	0.179	0.165	0.154	0.154	0.169	8.59
			0.166	0.158							
6)	PT	Chloroethane		0.219	0.232	0.221	0.215	0.206	0.198	0.211	6.27
			0.209	0.191							
7)	T	Dichloroflmetha	0.423	0.410	0.450	0.447	0.410	0.390	0.375	0.406	7.71
			0.394	0.355							
8)	PT	Trichlorofma	0.325	0.349	0.420	0.412	0.405	0.386	0.371	0.380	8.47
			0.396	0.355							
9)	T	Ethylether	0.221	0.230	0.238	0.239	0.222	0.219	0.218	0.226	3.90
			0.231	0.215							
10)	T	dichlorotfluoro	0.270	0.236	0.304	0.298	0.281	0.278	0.267	0.276	7.29
			0.284	0.264							
11)	T	propyleneoxide		0.044	0.047	0.048	0.042	0.041	0.040	0.043	8.09
			0.042	0.038							
12)	T	Acrolein		0.012	0.012	0.013	0.011	0.012	0.014	0.013#	12.92
			0.016								
13)	PT	11dichlorthe	0.222	0.215	0.253	0.254	0.246	0.244	0.236	0.240	5.77
			0.253	0.240							
14)	PT	Trichlorotfluor	0.195	0.190	0.255	0.247	0.244	0.237	0.228	0.229	9.92
			0.242	0.222							
15)	PT	Acetone	0.101	0.086	0.088	0.082	0.071	0.069	0.065	-----	#
			0.066	0.057							
								Q	A= -0.000 R=1.000		
									B= 0.072		
									C= 0.013		
16)	T	Iodomethane		0.172	0.205	0.239	0.241	0.260	0.260	0.239	14.51
			0.281	0.254							
17)	PT	Carbon Dislf	0.848	0.779	0.788	0.732	0.663	0.599	0.545	-----	
			0.558	0.443							
								Q	A= -0.024 R=0.999		
									B= 0.635		
									C= 0.028		
18)	T	allylchloride	0.511	0.480	0.503	0.502	0.466	0.453	0.425	0.459	10.99
			0.437	0.350							
19)	PT	methylacetate		0.065	0.067	0.066	0.051	0.056	0.058	0.060#	9.34
			0.060	0.056							
20)	PT	Methylchlorid	0.364	0.323	0.329	0.305	0.286	0.280	0.270	0.301	10.69
			0.289	0.265							
21)	T	tbutylalcohol	0.027	0.025	0.027	0.026	0.022	0.022	0.021	0.024#	11.25
			0.021								
22)	T	Acrylonitrile		0.095	0.106	0.104	0.093	0.093	0.088	0.093	9.89
			0.090	0.077							
23)	PT	t12dichlorte	0.276	0.259	0.291	0.279	0.267	0.267	0.258	0.270	4.94
			0.280	0.249							
24)	PT	MtBE	0.684	0.637	0.687	0.678	0.633	0.630	0.609	0.637	7.27

			0.638	0.537							
25)	T	Hexane	0.309	0.288	0.427	0.414	0.411	0.407	0.385	0.374	14.01
			0.404	0.324							
26)	PT	11dichlorota	0.528	0.489	0.547	0.535	0.487	0.479	0.465	0.495	7.40
			0.488	0.432							
27)	T	Vinylacetate	0.574	0.531	0.570	0.520	0.428	0.342	0.287	-----	
			0.268								
								Q	A= -0.007	R=0.995	
									B= 0.400		
									C= 0.167		
28)	T	chloroprene	0.399	0.431	0.504	0.500	0.472	0.435	0.410	0.438	10.73
			0.431	0.361							
29)	T	Diisopether	1.048	0.940	1.026	0.998	0.944	0.862	0.823	0.915	11.22
			0.858	0.738							
30)	T	ETBE	0.792	0.771	0.793	0.769	0.741	0.725	0.693	0.731	8.40
			0.691	0.602							
31)	T	22dichloropr	0.419	0.376	0.409	0.400	0.376	0.379	0.355	0.381	6.55
			0.368	0.343							
32)	PT	c12dichlorte	0.275	0.296	0.317	0.311	0.290	0.290	0.284	0.291	5.33
			0.292	0.268							
33)	PT	2Butanone		0.028	0.030	0.031	0.027	0.028	0.026	0.028#	7.29
			0.026	0.025							
34)	T	propionitrile		0.041	0.042	0.042	0.037	0.038	0.033	0.037	11.03
			0.034	0.032							
35)	T	Ethylacetate		0.010	0.012	0.011	0.010	0.011	0.010	0.010#	6.26
			0.010	0.010							
36)	T	methacrylonitri		0.104	0.113	0.112	0.101	0.105	0.099	0.104	5.61
			0.102	0.097							
37)	T	Bromochlorma	0.126	0.125	0.127	0.136	0.128	0.125	0.119	0.127	3.46
			0.129	0.125							
38)	T	Tetrahydofur	0.090	0.084	0.091	0.089	0.077	0.078	0.068	0.079	14.01
			0.069	0.060							
39)	PT	Chloroform	0.516	0.473	0.502	0.485	0.459	0.456	0.407	0.457	9.29
			0.429	0.389							
40)	PT	111trichlota	0.382	0.358	0.412	0.409	0.392	0.385	0.376	0.385	5.47
			0.399	0.350							
41)	S	SURRDibrflma	0.262	0.263	0.260	0.264	0.260	0.262	0.260	0.262	1.18
			0.268	0.257							
42)	PT	Cyclohexane	0.368	0.353	0.493	0.496	0.498	0.500	0.490	0.460	12.81
			0.497	0.449							
43)	PT	Carbtetraclo	0.270	0.262	0.335	0.326	0.318	0.323	0.314	0.311	8.76
			0.340	0.311							
44)	T	11dicloprope		0.111	0.140	0.140	0.135	0.136	0.136	0.135	7.63
			0.147	0.135							
45)	S	SURR12DCAd4	0.075	0.074	0.073	0.075	0.074	0.073	0.071	0.073	1.82
			0.075	0.072							
46)	PT	Benzene	1.127	1.118	1.179	1.142	1.061	1.005	0.933	1.025	13.82
			0.926	0.735							
47)	PT	12dichlorota	0.391	0.384	0.409	0.405	0.366	0.361	0.351	0.372	7.71
			0.359	0.319							
48)	T	TAME	0.660	0.648	0.684	0.687	0.643	0.660	0.623	0.643	6.14
			0.630	0.555							
49)	PT	trichloroete	0.255	0.257	0.298	0.298	0.277	0.277	0.270	0.275	6.25
			0.291	0.257							
50)	PT	methylcyclohexa	0.354	0.390	0.513	0.523	0.520	0.519	0.510	0.483	13.84
			0.548	0.469							
51)	PT	12dicloropra	0.324	0.300	0.346	0.327	0.311	0.310	0.302	0.314	5.85
			0.322	0.283							
52)	T	23Dicl1propene		0.407	0.455	0.446	0.418	0.424	0.413	0.422	5.98
			0.437	0.375							
53)	T	Dibromometha		0.154	0.172	0.169	0.159	0.157	0.156	0.160	5.20
			0.167	0.148							
54)	T	methylmethacryl		0.174	0.187	0.187	0.172	0.181	0.175	0.178	3.66
			0.179	0.169							
55)	T	14dioxane		0.003	0.003	0.003	0.003	0.003	0.003	0.003#	8.33
			0.003	0.003							
56)	PT	Bromodiclrma	0.386	0.334	0.370	0.372	0.339	0.338	0.330	0.347	7.35
			0.351	0.303							
57)	T	2Nitropropane	0.067	0.059	0.063	0.065	0.060	0.064	0.062	0.062	5.37
			0.063	0.056							

```
58) T   2CLEVE              0.175 0.184 0.187 0.169 0.166 0.151 0.163  13.34
                    0.147 0.122
59) PT  c13dicloproe    0.443 0.430 0.469 0.448 0.418 0.424 0.414 0.425   6.68
                    0.408 0.369
60) PT  4Meth2Pentan    0.273 0.258 0.270 0.260 0.219 0.199 0.167 -----
                    0.159
                                                    Q  A= -0.003 R=0.998
                                                       B=  0.224
                                                       C=  0.048
61) S   SURRd8Tolule    0.983 0.991 0.987 0.995 1.001 0.994 0.938 0.986   1.93
                    0.990 0.998
62) PT  Toluene         0.703 0.679 0.761 0.722 0.676 0.661 0.591 0.661  10.49
                    0.619 0.535
63) PT  t13Dicloprop    0.377 0.348 0.369 0.378 0.352 0.359 0.351 0.357   4.64
                    0.352 0.325
64) T   ethylmethacryla       0.301 0.338 0.340 0.318 0.320 0.287 0.307   9.13
                    0.293 0.256
65) PT  112Triclotha          0.199 0.211 0.213 0.195 0.202 0.189 0.198   5.54
                    0.191 0.181
66) PT  Tetrachlorte    0.211 0.240 0.265 0.275 0.260 0.262 0.257 0.255   7.57
                    0.273 0.254
67) T   13Diclorpropa   0.473 0.427 0.462 0.429 0.407 0.407 0.389 0.416   9.15
                    0.398 0.348

68) I   d5-CHLOROBENZENE**IST ----------------ISTD--------------------
69) PT  2Hexanone             0.246 0.273 0.251 0.216 0.205 0.176 -----
                    0.160
                                                    Q  A= -0.004 R=0.999
                                                       B=  0.235
                                                       C=  0.032
70) PT  Clorodibrmta    0.349 0.288 0.319 0.310 0.295 0.307 0.299 0.306   6.01
                    0.296 0.295
71) PT  12Dibrometha    0.298 0.307 0.347 0.320 0.299 0.308 0.297 0.304   6.82
                    0.283 0.277
72) PT  Chlorobenzen    1.088 1.022 1.088 1.068 0.988 0.961 0.907 0.971  11.63
                    0.855 0.759
73) T   1Clhexane      0.472 0.467 0.529 0.519 0.502 0.525 0.496 0.494   5.41
                    0.480 0.456
74) T   1112Tetclota         0.302 0.337 0.322 0.309 0.314 0.307 0.314   3.72
                    0.315 0.303
75) PT  Ethylbenzene    1.592 1.551 1.728 1.681 1.567 1.513 1.384 1.485  14.13
                    1.286 1.059
76) PT  m p-Xylene      0.613 0.589 0.667 0.659 0.614 0.610 0.559 0.591  10.53
                    0.541 0.466
77) PT  o-Xylene        0.611 0.577 0.627 0.630 0.590 0.616 0.578 0.593   5.25
                    0.575 0.533
78) PT  Styrene         0.959 0.927 1.070 1.068 1.022 1.011 0.926 0.965   9.10
                    0.906 0.797
79) PT  Bromoform             0.155 0.183 0.177 0.166 0.176 0.176 0.174   5.56
                    0.176 0.185
80) PT  Isopropylben    1.477 1.382 1.554 1.523 1.452 1.419 1.313 1.376  11.99
                    1.239 1.024
81) T   cyclohexanone        0.013 0.013 0.014 0.013 0.013 0.012 0.013#  6.19
                    0.012 0.011

82) I   d4-1,4-DICHLOROBENZEN ----------------ISTD--------------------
83) S   SURR4BrFBenz    1.110 1.091 1.099 1.042 1.046 1.065 1.074 1.059   3.78
                    1.007 0.994
84) T   Bromobenzene    0.713 0.654 0.805 0.719 0.680 0.701 0.686 0.694   7.47
                    0.666 0.620
85) PT  1122Tetrclta    0.924 0.792 0.933 0.857 0.750 0.773 0.759 0.787  13.42
                    0.681 0.612
86) T   123Triclproa          0.955 1.118 0.995 0.917 0.970 0.958 0.952   8.99
                    0.877 0.831
87) T   14dichloro2bute       0.205 0.259 0.225 0.212 0.228 0.232 0.225   7.24
                    0.220 0.220
88) T   n-Propylbenz    3.632 3.270 3.860 3.690 3.409 3.311 2.982 3.360  11.21
                    2.723
89) T   2chlorotolue    2.191 2.245 2.365 2.201 2.079 2.088 1.948 2.048  12.79
                    1.812 1.503
```

90)	T	4chlorotolue	2.408	2.432	2.687	2.603	2.427	2.421	2.211	2.328	12.98
			2.076	1.686							
91)	T	135Trimebenz	2.446	2.275	2.634	2.506	2.398	2.379	2.196	2.292	11.94
			2.089	1.707							
92)	T	tbutylbenzen	1.865	1.873	2.191	2.118	2.021	2.035	1.956	1.938	9.76
			1.840	1.546							
93)	T	124Trimetben	2.330	2.280	2.575	2.579	2.362	2.350	2.166	2.263	12.29
			2.050	1.676							
94)	T	sbutylbenzen	2.614	2.624	3.260	3.251	2.949	2.904	2.682	2.749	14.62
			2.484	1.970							
95)	PT	13Diclorbenz	1.322	1.244	1.452	1.441	1.268	1.280	1.244	1.275	9.83
			1.179	1.044							
96)	T	pIsopropylto	2.392	2.272	2.705	2.686	2.451	2.451	2.293	2.355	12.08
			2.183	1.759							
97)	PT	14dichlorobe	1.419	1.385	1.507	1.447	1.310	1.311	1.235	1.322	10.14
			1.209	1.077							
98)	PT	12dichlorobe	1.366	1.337	1.401	1.438	1.188	1.191	1.152	1.241	12.29
			1.111	0.983							
99)	T	nButylbenzen	2.409	2.227	2.609	2.627	2.332	2.326	2.162	2.260	13.55
			2.018	1.633							
100)	PT	12dibromo3cl		0.122	0.142	0.134	0.111	0.122	0.125	0.125	7.54
			0.121	0.123							
101)	T	135Trichloroben	0.892	0.878	0.938	0.930	0.828	0.865	0.866	0.871	5.50
			0.857	0.783							
102)	PT	124Trichlobe	0.723	0.722	0.784	0.757	0.709	0.746	0.744	0.735	3.91
			0.747	0.686							
103)	T	Hexachlorobu	0.316	0.307	0.389	0.349	0.326	0.333	0.336	0.339	7.21
			0.358	0.339							
104)	T	Naphthalene	1.820	1.649	1.756	1.746	1.542	1.627	1.575	1.613	9.94
			1.509	1.288							
105)	T	123Trichlben	0.721	0.666	0.726	0.692	0.631	0.666	0.665	0.673	5.35
			0.670	0.619							

Total Average %RSD 8.49

L = Linear LO = Linear+Origin Q = Quad QO = Quad+Origin R = Corr. Coef
(#) = Out of Range

W041621.M Wed Apr 21 10:07:35 2021

BFB

Data File : C:\INSTARCH\DATA\APR1621\BFB1.D Vial: 1
Acq On : 16 Apr 2021 13:37 Operator: RLD-DGS
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W041621.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.675 to 4.687 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.0	29530	PASS
75	95	30	60	51.1	68642	PASS
95	95	100	100	100.0	134336	PASS
96	95	5	9	7.1	9578	PASS
173	174	0.00	2	0.6	544	PASS
174	95	50	100	73.4	98630	PASS
175	174	5	9	7.6	7513	PASS
176	174	95	101	95.3	94024	PASS
177	176	5	9	6.1	5768	PASS

W041621.M Wed Apr 21 10:27:57 2021

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL1.D Vial: 5
Acq On : 16 Apr 2021 15:23 Operator: RLD-DGS
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:48:35 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:29:24 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1495193	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1134231	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	538169	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	391077	19.977	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	111771	20.351	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102	%		
61) SURRd8Tolule	9.71	98	1469754	19.935	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.26	95	597188	20.963	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 105	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	8034	0.4189	ug/L	98
3) Chloromethan	2.09	50	14279m	0.5337	ug/L	92
4) VinylChlorid	2.25	62	10590	0.4461	ug/L	90
5) Bromomethane	2.72	94	7151	0.5656	ug/L	91
6) Chloroethane	2.88	64	9952	0.6299	ug/L	95
7) Dichloroflmethane	3.19	67	15803	0.5208	ug/L	97
8) Trichlorofma	3.28	101	12156	0.4280	ug/L	93
9) Ethylether	3.72	59	8267	0.4894	ug/L #	72
10) dichlorotfluoroethan	3.73	67	10091	0.4895	ug/L	94
11) propyleneoxide	3.77	58	18074	5.6407	ug/L	90
12) Acrolein	3.84	56	2855	2.8311	ug/L	85
13) 11dichlorthe	3.99	96	8297	0.4621	ug/L	96
14) Trichlorotfluoroeth	4.04	101	14599	0.8534	ug/L	95
15) Acetone	4.07	43	37721m	6.4707	ug/L	100
16) Iodomethane	4.17	142	13578	0.7599	ug/L	96
17) Carbon Dislf	4.26	76	63380m	1.2675	ug/L	98
18) allylchloride	4.49	41	38165	1.1134	ug/L	98
19) methylacetate	4.55	74	3007	0.6722	ug/L	96
20) Methylchlorid	4.63	84	13596	0.6038	ug/L	92
21) tbutylalcohol	4.85	59	49739	28.8227	ug/L	98
22) Acrylonitrile	4.94	53	19457	2.7943	ug/L	97
23) t12dichlorte	5.00	96	10329	0.5126	ug/L	97
24) MtBE	5.06	73	25558	0.5367	ug/L	93
25) Hexane	5.41	57	23104	0.8259	ug/L	99
26) 11dichlorota	5.55	63	19752	0.5341	ug/L	99
27) Vinylacetate	5.63	43	214692	6.9885	ug/L	92
28) chloroprene	5.67	53	29834	0.9110	ug/L	97
29) Diisopether	5.69	45	39158	0.5724	ug/L	86
30) ETBE	6.14	59	29597	0.5417	ug/L	97
31) 22dichloropr	6.28	77	15660	0.5504	ug/L	92
32) c12dichlorte	6.27	96	10265	0.4712	ug/L	94
33) 2Butanone	6.31	72	11856	5.6925	ug/L	95
34) propionitrile	6.34	54	15784	5.6356	ug/L	92
35) Ethylacetate	6.39	88	2360	3.0473	ug/L #	77
36) methacrylonitrile	6.54	67	8611	1.1055	ug/L	95
37) Bromochlorma	6.56	128	4717	0.4979	ug/L	88
38) Tetrahydofur	6.66	42	33802	5.7528	ug/L	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL1.D Vial: 5
Acq On : 16 Apr 2021 15:23 Operator: RLD-DGS
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:48:35 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:29:24 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.67	83	19283	0.5641 ug/L		90
40)	111trichlota	6.91	97	14269	0.4961 ug/L		92
42)	Cyclohexane	7.00	56	13739	0.3992 ug/L		95
43)	Carbtetraclo	7.13	119	10079	0.4337 ug/L		95
44)	11dicloprope	7.12	110	4590	0.4549 ug/L		96
46)	Benzene	7.36	78	42128	0.5497 ug/L		95
47)	12dichlorota	7.36	62	14616	0.5261 ug/L		97
48)	TAME	7.53	73	24676	0.5130 ug/L		99
49)	trichloroete	8.17	95	9529	0.4628 ug/L		95
50)	methylcyclohexane	8.45	83	13215	0.3660 ug/L		96
51)	12dicloropra	8.43	63	12112	0.5159 ug/L		92
52)	23Dicl1propene	8.50	75	16974	0.5383 ug/L		96
53)	Dibromometha	8.57	93	6291	0.5249 ug/L		96
54)	methylmethacrylate	8.60	69	7225	0.5429 ug/L		97
55)	14dioxane	8.62	88	6262	28.3994 ug/L		96
56)	Bromodiclrma	8.77	83	14414	0.5558 ug/L		89
57)	2Nitropropane	9.04	43	24921	5.3728 ug/L		92
58)	2CLEVE	9.16	63	33849	2.7836 ug/L		97
59)	c13dicloproe	9.35	75	16552	0.5214 ug/L		99
60)	4Meth2Pentan	9.55	43	102220	6.4168 ug/L		91
62)	Toluene	9.80	92	26269	0.5317 ug/L		98
63)	t13Dicloprop	10.05	75	14095	0.5286 ug/L		86
64)	ethylmethacrylate	10.20	69	23740	1.0354 ug/L		92
65)	112Triclotha	10.30	83	8968	0.6068 ug/L		90
66)	Tetrachlorte	10.53	166	7904	0.4143 ug/L		88
67)	13Diclorpropa	10.52	76	17693	0.5694 ug/L		91
69)	2Hexanone	10.64	43	72811	6.2187 ug/L		93
70)	Clorodibrmta	10.82	129	9887	0.5692 ug/L		95
71)	12Dibrometha	10.97	107	8451	0.4901 ug/L		83
72)	Chlorobenzen	11.66	112	30837	0.5602 ug/L	#	65
73)	1Clhexane	11.63	91	13379	0.4777 ug/L	#	31
74)	1112Tetclota	11.77	131	9328	0.5244 ug/L		95
75)	Ethylbenzene	11.83	91	45152	0.5363 ug/L		100
76)	m p-Xylene	11.99	106	34741	1.0368 ug/L		99
77)	o-Xylene	12.53	106	17328	0.5153 ug/L		90
78)	Styrene	12.55	104	27193	0.4968 ug/L		93
79)	Bromoform	12.77	173	5129	0.5187 ug/L		98
80)	Isopropylben	13.06	105	41875	0.5366 ug/L		97
81)	cyclohexanone	13.14	55	7474	10.4399 ug/L	#	87
84)	Bromobenzene	13.48	156	9593	0.5138 ug/L	#	90
85)	1122Tetrclta	13.44	83	12427	0.5871 ug/L		90
86)	123Triclproa	13.49	75	15009	0.5857 ug/L		99
87)	14dichloro2butene	13.53	53	2996	0.4946 ug/L		97
88)	n-Propylbenz	13.64	91	48861	0.5645 ug/L		93
89)	2chlorotolue	13.76	91	29476	0.5349 ug/L		98
90)	4chlorotolue	13.90	91	32398	0.5172 ug/L		98
91)	135Trimebenz	13.90	105	32912	0.5336 ug/L		94
92)	tbutylbenzen	14.37	119	25088	0.4810 ug/L		99
93)	124Trimetben	14.44	105	31345	0.5147 ug/L		98
94)	sbutylbenzen	14.69	105	35174	0.4756 ug/L		100
95)	13Diclorbenz	14.82	146	17788	0.5185 ug/L		98
96)	pIsopropylto	14.90	119	32183	0.5079 ug/L	#	95
97)	14dichlorobe	14.96	146	19097	0.5367 ug/L	#	71
98)	12dichlorobe	15.49	146	18383	0.5507 ug/L	#	64
99)	nButylbenzen	15.50	91	32406	0.5329 ug/L		96
100)	12dibromo3cl	16.59	157	1808	0.5376 ug/L		94
101)	135Trichlorobenzene	16.91	180	12005	0.5123 ug/L		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL1.D Vial: 5
Acq On : 16 Apr 2021 15:23 Operator: RLD-DGS
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:48:35 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:29:24 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	9729	0.4917	ug/L	97
103)	Hexachlorobu	17.98	225	4247	0.4653	ug/L	90
104)	Naphthalene	18.03	128	24490	0.5644	ug/L	99
105)	123Trichlben	18.34	180	9702	0.5359	ug/L	96

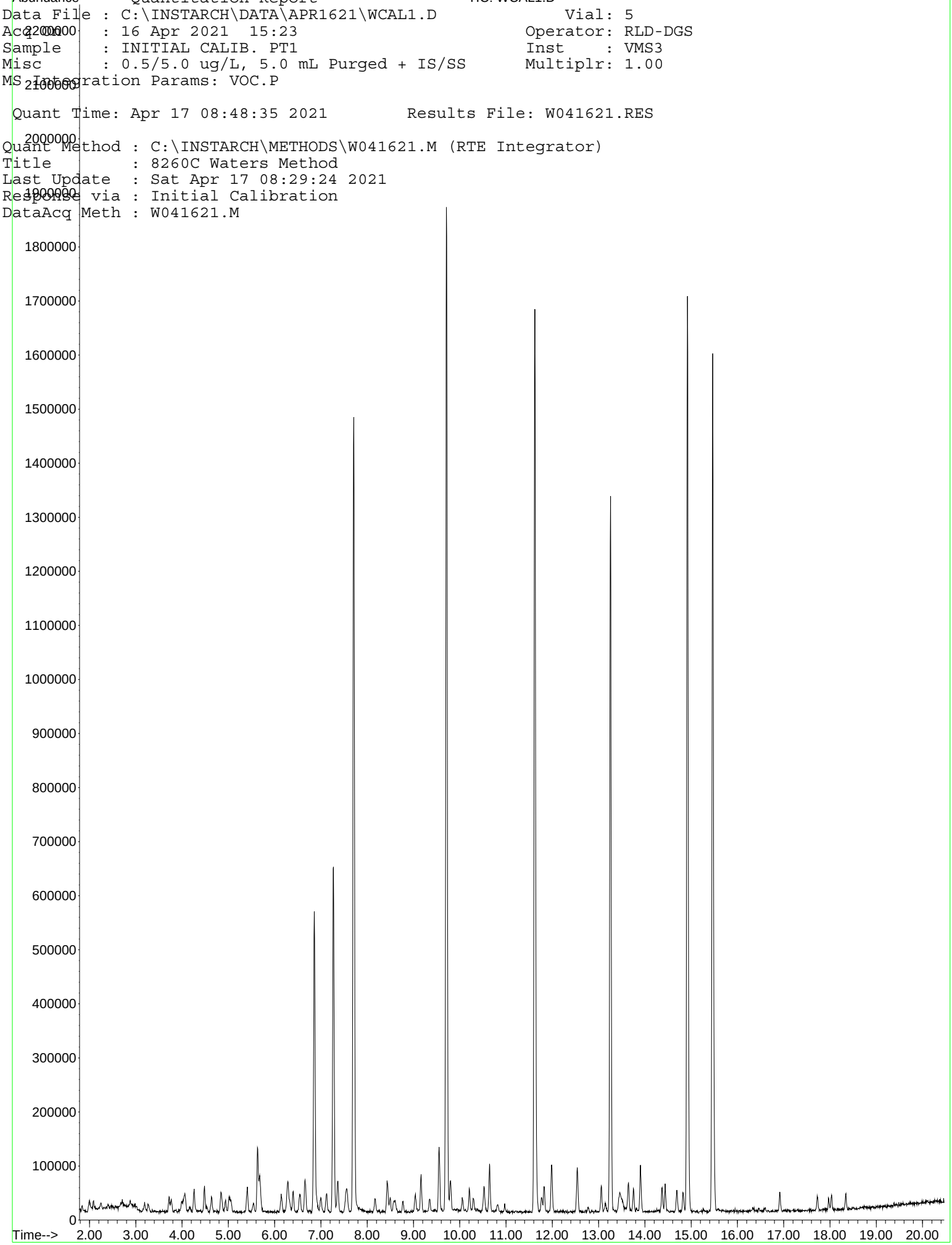
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL1.D

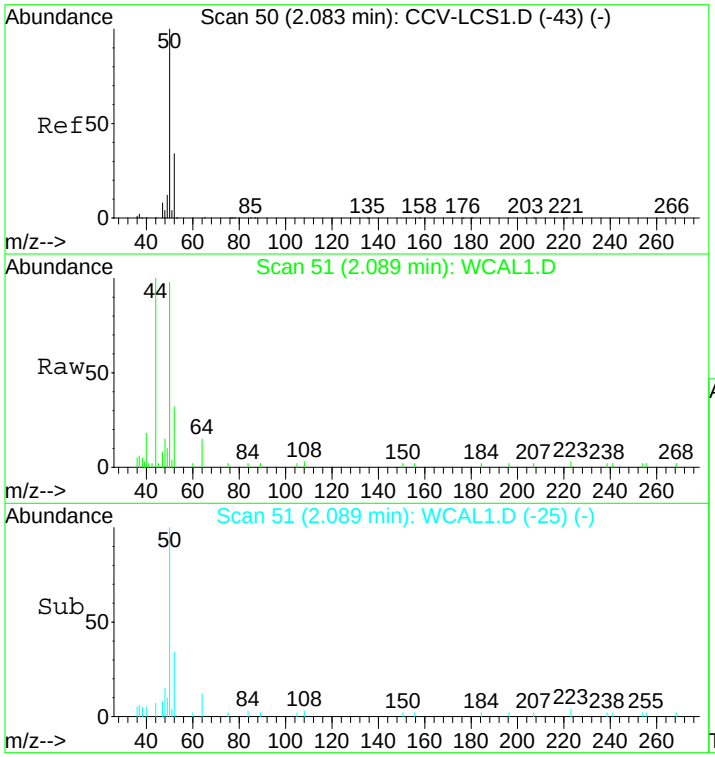
Data File : C:\INSTARCH\DATA\APR1621\WCAL1.D Vial: 5
Acq On : 16 Apr 2021 15:23 Operator: RLD-DGS
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:48:35 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:29:24 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



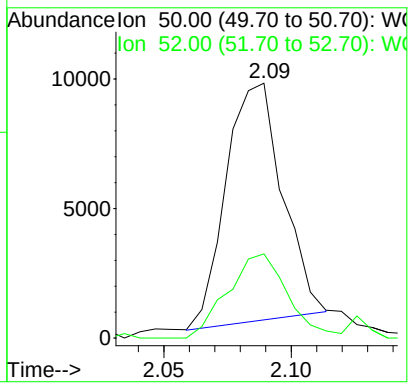
After Manual Integration



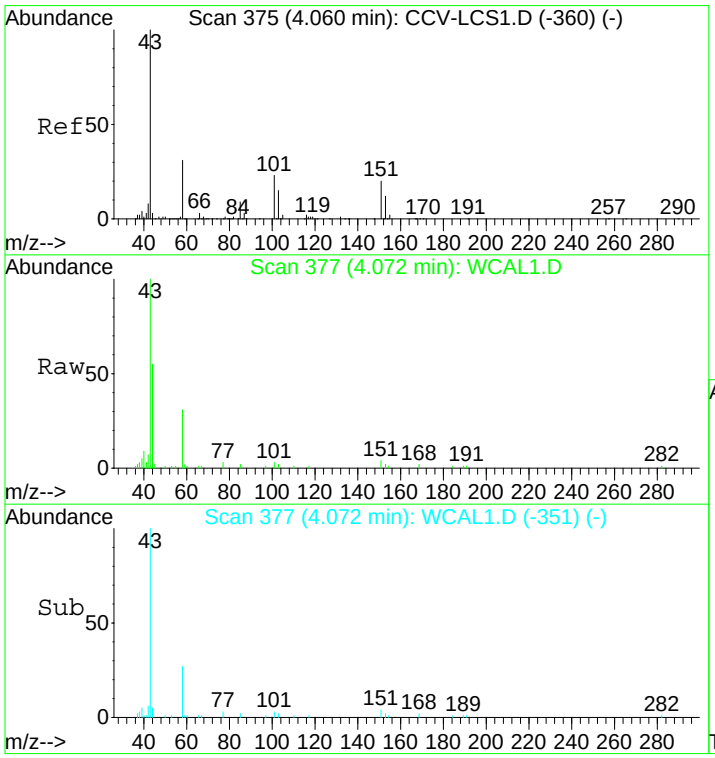
#3
Chloromethan
Concen: 0.53 ug/L m
RT: 2.09 min Scan# 51
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 16 Apr 2021 15:23

Tgt Ion: 50 Resp: 14279

Ion	Ratio	Lower	Upper
50	100		
52	37.3	14.2	54.2



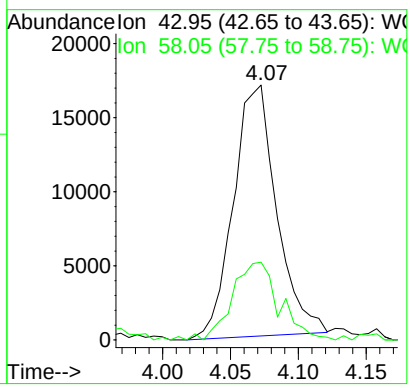
DGS 04/21/2021



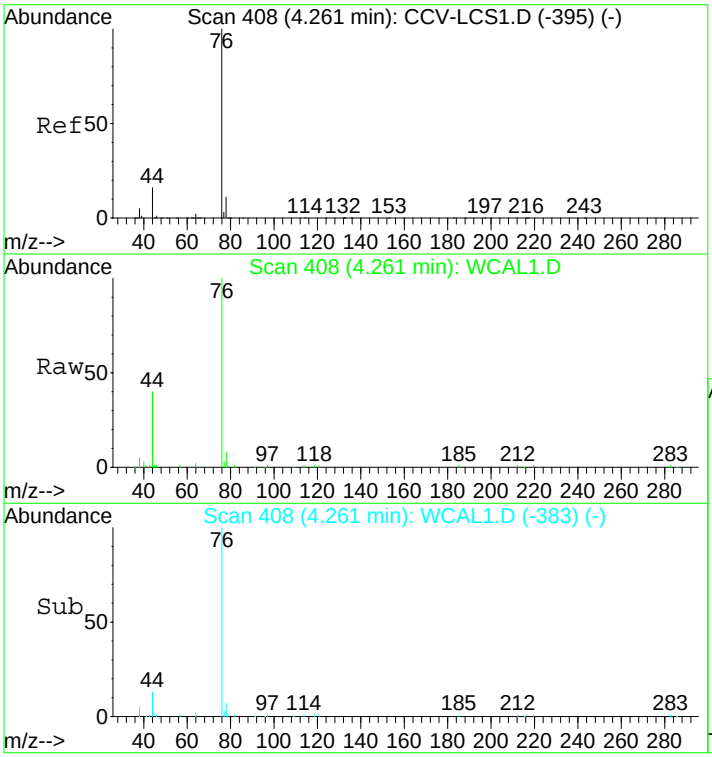
#15
Acetone
Concen: 6.47 ug/L m
RT: 4.07 min Scan# 377
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 16 Apr 2021 15:23

Tgt Ion: 43 Resp: 37721

Ion	Ratio	Lower	Upper
43	100		
58	33.7	11.4	51.4



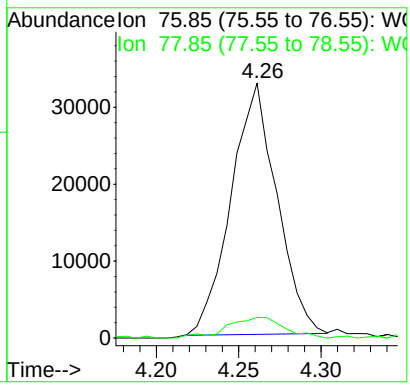
04/21/2021



#17
Carbon Dislf
Concen: 1.27 ug/L m
RT: 4.26 min Scan# 408
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 16 Apr 2021 15:23

Tgt Ion: 76 Resp: 63380

Ion	Ratio	Lower	Upper
76	100		
78	10.2	0.0	30.2

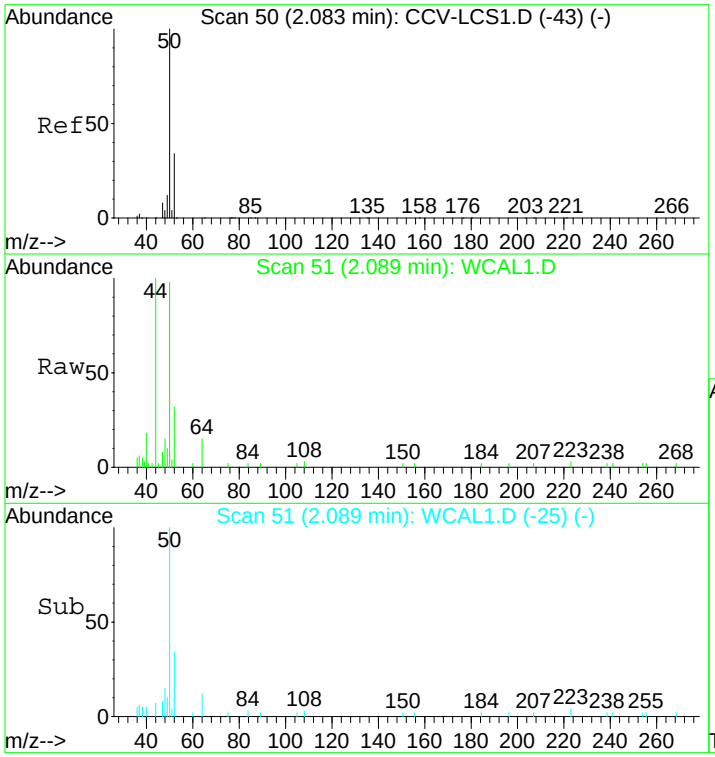


After Manual Integration

DGS 04/21/2021

RJ 04/21/2021

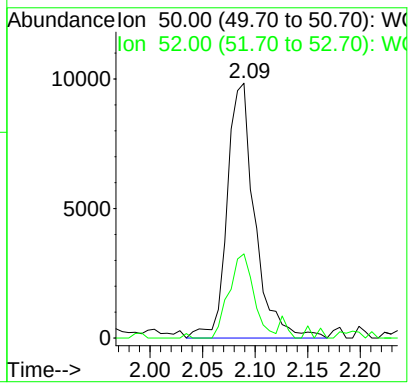
Before Manual Integration



#3
Chloromethan
Concen: 0.69 ug/L
RT: 2.09 min Scan# 51
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 16 Apr 2021 15:23

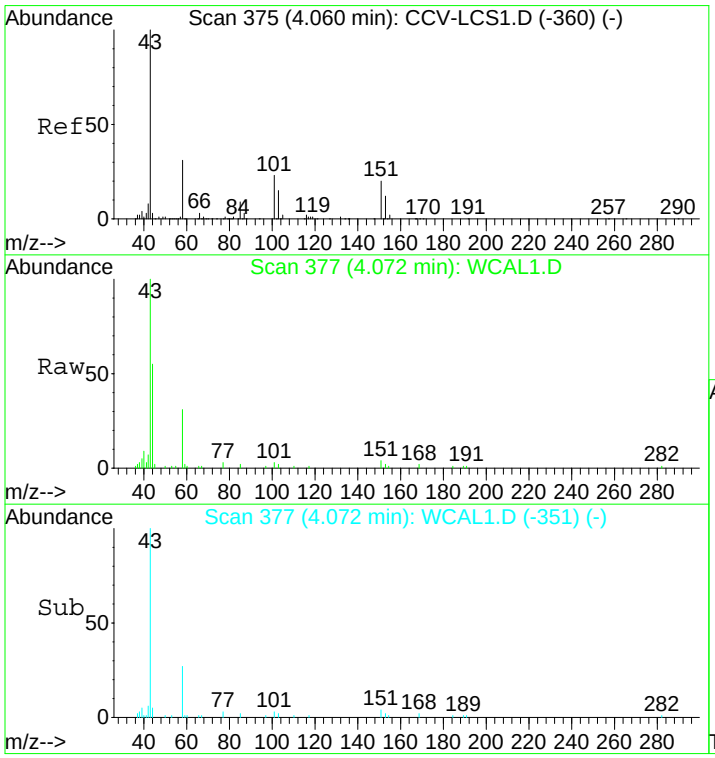
Tgt Ion: 50 Resp: 17992

Ion	Ratio	Lower	Upper
50	100		
52	29.6	14.2	54.2



DGS 04/21/2021

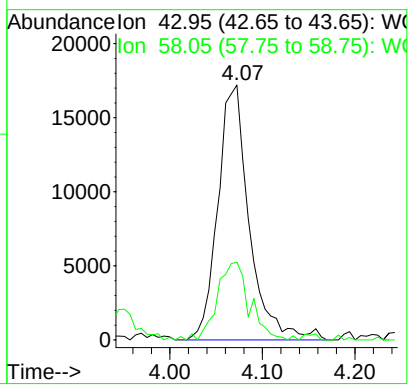
REASON # 2



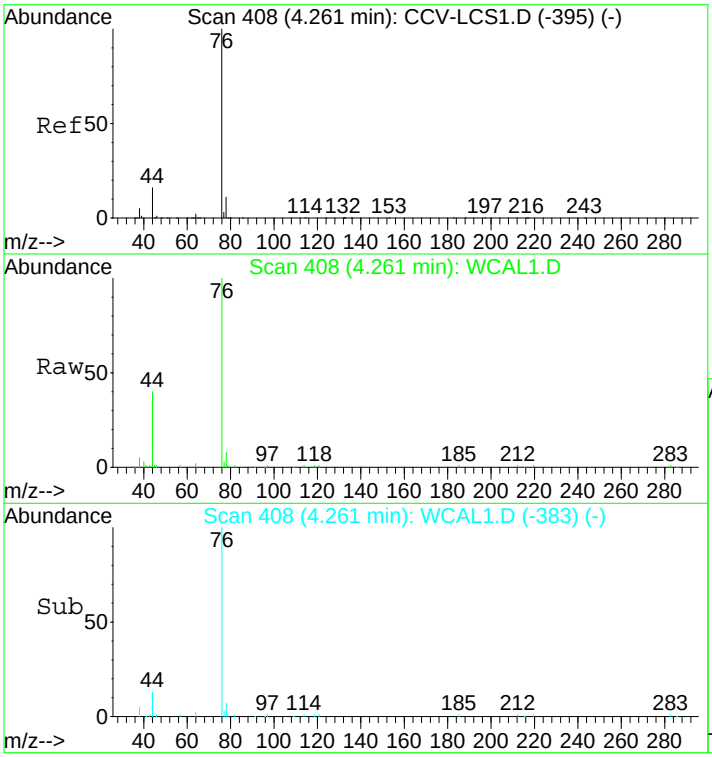
#15
Acetone
Concen: 4.10 ug/L
RT: 4.07 min Scan# 377
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 16 Apr 2021 15:23

Tgt Ion: 43 Resp: 40641

Ion	Ratio	Lower	Upper
43	100		
58	31.3	11.4	51.4



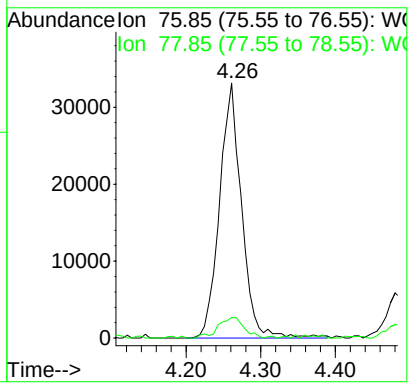
REASON # 2



#17
Carbon Dislf
Concen: 0.56 ug/L
RT: 4.26 min Scan# 408
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 16 Apr 2021 15:23

Tgt Ion: 76 Resp: 68137

Ion	Ratio	Lower	Upper
76	100		
78	9.5	0.0	30.2



Before Manual Integration

DGS 04/21/2021

REASON # 2

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL2.D Vial: 6
Acq On : 16 Apr 2021 15:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:49:35 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:29:06 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1482622	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1127620	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	544276	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.86	113	390077	20.095 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %		
45) SURR12DCAd4	7.27	102	108986	20.012 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100 %		
61) SURRd8Tolule	9.71	98	1468723	20.090 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %		
83) SURR4BrFBenz	13.26	95	593695	20.606 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %		
Target Compounds					Qvalue
2) Dichlorodi	1.84	85	17448	0.9175 ug/L	94
3) Chloromethan	2.08	50	29577	1.1149 ug/L	96
4) VinylChlorid	2.25	62	21581	0.9168 ug/L	100
5) Bromomethane	2.72	94	14072	1.1224 ug/L	99
6) Chloroethane	2.88	64	16238	1.0365 ug/L	96
7) Dichloroflmethane	3.19	67	30388	1.0099 ug/L	97
8) Trichlorofma	3.28	101	25836	0.9174 ug/L	98
9) Ethylether	3.72	59	17043	1.0174 ug/L	86
10) dichlorotfluoroethan	3.73	67	17466	0.8545 ug/L	97
11) propyleneoxide	3.77	58	32412	10.2012 ug/L	87
12) Acrolein	3.84	56	4354	4.3542 ug/L	95
13) 11dichlorthe	3.99	96	15930	0.8948 ug/L	96
14) Trichlorotfluoroeth	4.04	101	28226	1.6639 ug/L	97
15) Acetone	4.07	43	63480m	10.9817 ug/L	98
16) Iodomethane	4.18	142	25569	1.4431 ug/L	95
17) Carbon Dislf	4.26	76	115565	2.3308 ug/L	97
18) allylchloride	4.49	41	71108	2.0920 ug/L	99
19) methylacetate	4.53	74	4787	1.0791 ug/L	95
20) Methylchlorid	4.64	84	23926	1.0715 ug/L	98
21) tbutylalcohol	4.85	59	94450	55.1959 ug/L	95
22) Acrylonitrile	4.94	53	35324	5.1160 ug/L	93
23) t12dichlorte	5.02	96	19168	0.9593 ug/L	97
24) MtBE	5.06	73	47196	0.9994 ug/L	91
25) Hexane	5.40	57	42645	1.5373 ug/L	95
26) 11dichlorota	5.54	63	36286	0.9896 ug/L	100
27) Vinylacetate	5.63	43	393691	12.9237 ug/L	93
28) chloroprene	5.67	53	63940	1.9691 ug/L	96
29) Diisopether	5.70	45	69693	1.0274 ug/L	90
30) ETBE	6.15	59	57176	1.0553 ug/L	98
31) 22dichloropr	6.28	77	27853	0.9872 ug/L	97
32) c12dichlorte	6.27	96	21909	1.0143 ug/L	97
33) 2Butanone	6.29	72	21088	10.2109 ug/L	93
34) propionitrile	6.33	54	30417	10.9523 ug/L	95
35) Ethylacetate	6.40	88	3768	4.9066 ug/L #	89
36) methacrylonitrile	6.54	67	15458	2.0013 ug/L	94
37) Bromochlorma	6.55	128	9284	0.9883 ug/L	99
38) Tetrahydofur	6.65	42	62505	10.7281 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL2.D Vial: 6
Acq On : 16 Apr 2021 15:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:49:35 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:29:06 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.67	83	35039	1.0338 ug/L		98
40)	111trichlota	6.91	97	26558	0.9313 ug/L		95
42)	Cyclohexane	7.01	56	26159	0.7665 ug/L		94
43)	Carbtetraclo	7.13	119	19421	0.8428 ug/L		99
44)	11dicloprope	7.13	110	8263	0.8258 ug/L	#	93
46)	Benzene	7.37	78	82887	1.0907 ug/L		99
47)	12dichlorota	7.36	62	28461	1.0330 ug/L		96
48)	TAME	7.54	73	48053	1.0075 ug/L		98
49)	trichloroete	8.17	95	19029	0.9321 ug/L		94
50)	methylcyclohexane	8.43	83	28937	0.8082 ug/L		97
51)	12dicloropra	8.43	63	22223	0.9546 ug/L		95
52)	23Dicl1propene	8.49	75	30151	0.9642 ug/L		93
53)	Dibromometha	8.57	93	11394	0.9587 ug/L		95
54)	methylmethacrylate	8.60	69	12927	0.9796 ug/L		93
55)	14dioxane	8.62	88	12554	57.4176 ug/L		96
56)	Bromodiclrma	8.78	83	24727	0.9616 ug/L		98
57)	2Nitropropane	9.04	43	43748	9.5118 ug/L		95
58)	2CLEVE	9.16	63	65018	5.3921 ug/L		96
59)	c13dicloproe	9.35	75	31840	1.0115 ug/L		94
60)	4Meth2Pentan	9.55	43	191317	12.1116 ug/L		91
62)	Toluene	9.80	92	50338	1.0275 ug/L		98
63)	t13Dicloprop	10.05	75	25829	0.9769 ug/L		97
64)	ethylmethacrylate	10.21	69	44649	1.9638 ug/L		95
65)	112Triclotha	10.30	83	14733	1.0054 ug/L		94
66)	Tetrachlorte	10.54	166	17819	0.9418 ug/L		92
67)	13Diclorpropa	10.52	76	31682	1.0283 ug/L		92
69)	2Hexanone	10.64	43	138418	11.8915 ug/L		90
70)	Clorodibrmta	10.82	129	16243	0.9407 ug/L		96
71)	12Dibrometha	10.98	107	17337	1.0113 ug/L		95
72)	Chlorobenzen	11.66	112	57625	1.0530 ug/L	#	81
73)	1Clhexane	11.65	91	26308	0.9449 ug/L	#	65
74)	1112Tetclota	11.77	131	17033	0.9632 ug/L		98
75)	Ethylbenzene	11.82	91	87468	1.0449 ug/L		94
76)	m p-Xylene	11.99	106	66411	1.9936 ug/L		94
77)	o-Xylene	12.53	106	32506	0.9724 ug/L		98
78)	Styrene	12.55	104	52272	0.9607 ug/L		99
79)	Bromoform	12.78	173	8729	0.8880 ug/L		91
80)	Isopropylben	13.06	105	77930	1.0045 ug/L		95
81)	cyclohexanone	13.15	55	14415	20.2534 ug/L		96
84)	Bromobenzene	13.47	156	17803	0.9428 ug/L	#	81
85)	1122Tetrclta	13.45	83	21540	1.0062 ug/L		93
86)	123Triclproa	13.50	75	25977	1.0023 ug/L		92
87)	14dichloro2butene	13.53	53	5572	0.9096 ug/L		92
88)	n-Propylbenz	13.65	91	88993	1.0165 ug/L		97
89)	2chlorotolue	13.76	91	61105	1.0963 ug/L		99
90)	4chlorotolue	13.90	91	66184	1.0447 ug/L		97
91)	135Trimebenz	13.90	105	61903	0.9924 ug/L		99
92)	tbutylbenzen	14.37	119	50973	0.9663 ug/L		95
93)	124Trimetben	14.44	105	62041	1.0074 ug/L		99
94)	sbutylbenzen	14.69	105	71420	0.9548 ug/L		98
95)	13Diclorbenz	14.83	146	33842	0.9753 ug/L		98
96)	pIsopropylto	14.91	119	61822	0.9648 ug/L		99
97)	14dichlorobe	14.95	146	37702	1.0476 ug/L		86
98)	12dichlorobe	15.49	146	36373	1.0774 ug/L		87
99)	nButylbenzen	15.50	91	60598	0.9852 ug/L		95
100)	12dibromo3cl	16.59	157	3307	0.9723 ug/L		82
101)	135Trichlorobenzene	16.91	180	23903	1.0086 ug/L		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL2.D Vial: 6
Acq On : 16 Apr 2021 15:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:49:35 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:29:06 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	19638	0.9813	ug/L	96
103)	Hexachlorobu	17.97	225	8348	0.9043	ug/L	96
104)	Naphthalene	18.03	128	44877	1.0227	ug/L	98
105)	123Trichlben	18.34	180	18114	0.9892	ug/L	90

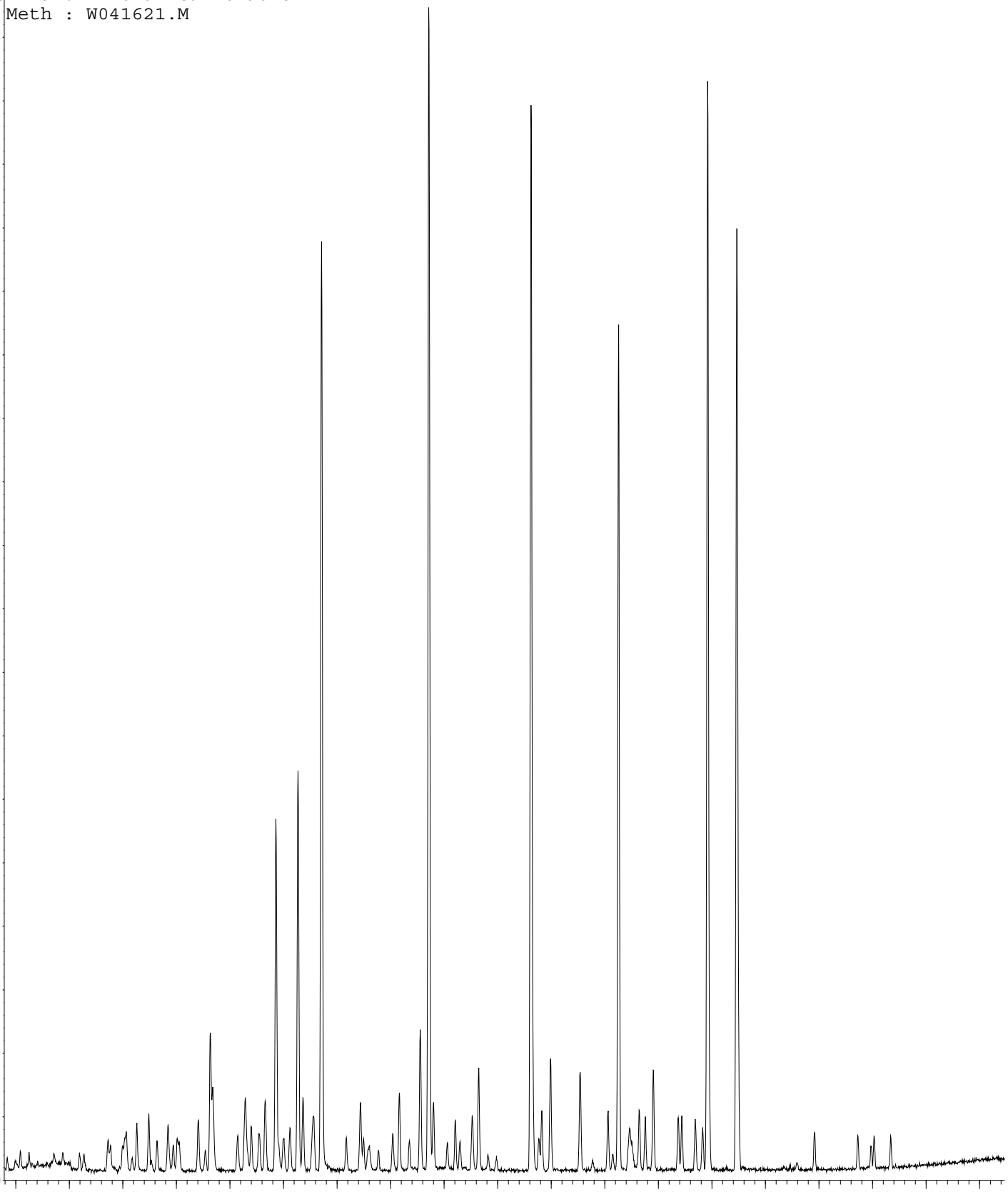
(#) = qualifier out of range (m) = manual integration

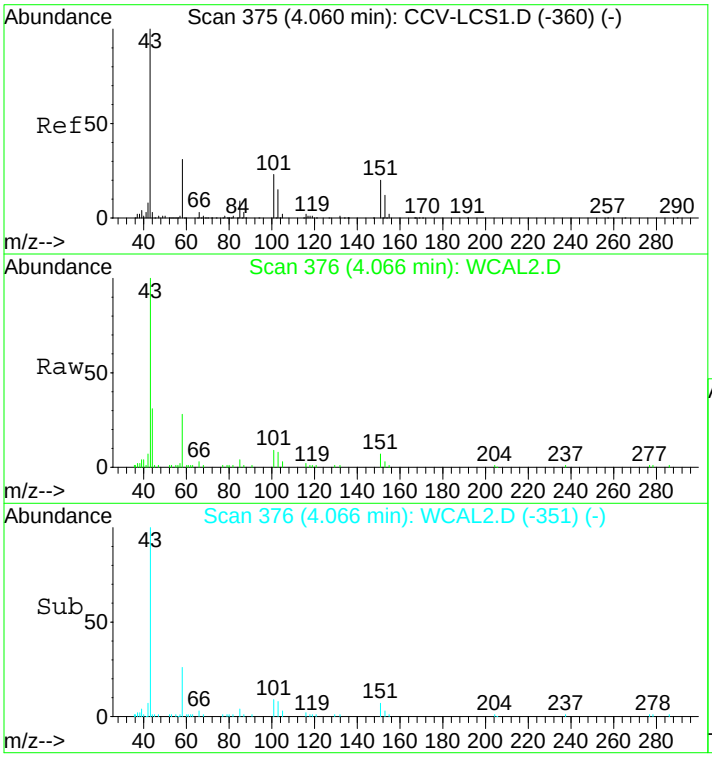
Abundance Quantitation Report TIC: WCAL2.D

Data File : C:\INSTARCH\DATA\APR1621\WCAL2.D Vial: 6
Acq On : 16 Apr 2021 15:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:49:35 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:29:06 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

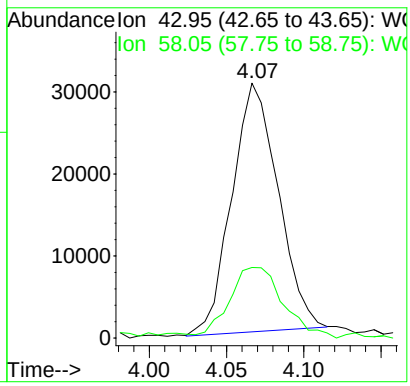




#15
Acetone
Concen: 10.98 ug/L m
RT: 4.07 min Scan# 376
Delta R.T. 0.00 min
Lab File: WCAL2.D
Acq: 16 Apr 2021 15:52

Tgt Ion: 43 Resp: 63480

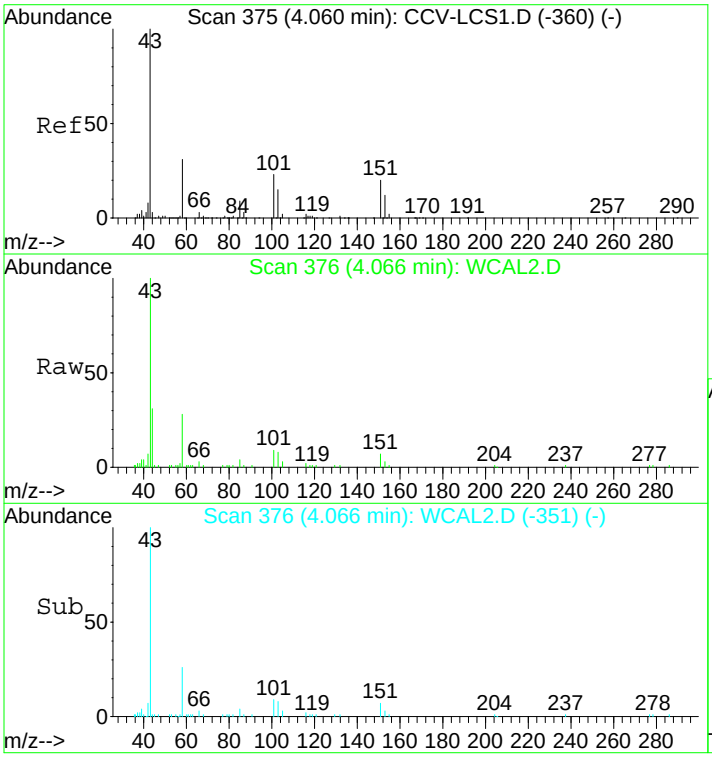
Ion	Ratio	Lower	Upper
43	100		
58	32.9	11.4	51.4



After Manual Integration

DGS 04/21/2021

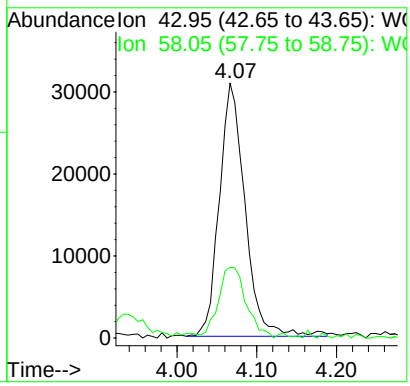
RJ 04/21/2021



#15
Acetone
Concen: 9.54 ug/L
RT: 4.07 min Scan# 376
Delta R.T. 0.00 min
Lab File: WCAL2.D
Acq: 16 Apr 2021 15:52

Tgt Ion: 43 Resp: 69163

Ion	Ratio	Lower	Upper
43	100		
58	30.2	11.4	51.4



Before Manual Integration

DGS 04/21/2021

REASON # 2

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL3.D Vial: 7
Acq On : 16 Apr 2021 16:22 Operator: RLD-DGS
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:07 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:26:58 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1490162	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1112416	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	539416	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	387030	19.812	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99	%		
45) SURR12DCAd4	7.27	102	108768	20.156	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1470275	19.944	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.26	95	593038	22.237	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 111	%#		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	41072	2.1770	ug/L	92
3) Chloromethan	2.08	50	58162	2.2618	ug/L	100
4) VinylChlorid	2.25	62	52842	2.3113	ug/L	97
5) Bromomethane	2.71	94	27957	2.1588	ug/L	97
6) Chloroethane	2.87	64	34560	2.2176	ug/L	97
7) Dichloroflmethane	3.19	67	66987	2.3595	ug/L	98
8) Trichlorofma	3.27	101	62640	2.2733	ug/L	96
9) Ethylether	3.71	59	35454	2.2097	ug/L	94
10) dichlorotfluoroethan	3.73	67	45235	2.4303	ug/L	96
11) propyleneoxide	3.76	58	70733	19.3902	ug/L	97
12) Acrolein	3.84	56	9076	8.1363	ug/L	93
13) 11dichlorthe	4.00	96	37658	2.1905	ug/L	95
14) Trichlorotfluoroeth	4.02	101	75967	4.6987	ug/L	99
15) Acetone	4.07	43	131864	19.9357	ug/L	99
16) Iodomethane	4.18	142	61117	3.2069	ug/L	98
17) Carbon Dislf	4.26	76	234860	4.9608	ug/L	99
18) allylchloride	4.48	41	149778	4.7548	ug/L	100
19) methylacetate	4.53	74	9933	1.9871	ug/L	88
20) Methylchlorid	4.63	84	49100	2.2901	ug/L	98
21) tbutylalcohol	4.84	59	199554	94.6710	ug/L	100
22) Acrylonitrile	4.94	53	79054	10.1149	ug/L	95
23) t12dichlorte	5.02	96	43409	2.2218	ug/L	99
24) MtBE	5.05	73	102376	2.1319	ug/L	98
25) Hexane	5.41	57	127116	4.9455	ug/L	95
26) 11dichlorota	5.54	63	81513	2.3816	ug/L	98
27) Vinylacetate	5.64	43	848678	25.4350	ug/L	94
28) chloroprene	5.67	53	150079	4.7799	ug/L	96
29) Diisopether	5.69	45	152919	2.3667	ug/L	96
30) ETBE	6.14	59	118119	2.2185	ug/L	99
31) 22dichloropr	6.27	77	61014	2.1852	ug/L	99
32) c12dichlorte	6.27	96	47281	2.2274	ug/L	99
33) 2Butanone	6.30	72	45157	18.1015	ug/L	97
34) propionitrile	6.33	54	62906	19.2670	ug/L	97
35) Ethylacetate	6.40	88	8617	9.2123	ug/L #	90
36) methacrylonitrile	6.54	67	33821	3.8035	ug/L	98
37) Bromochlorma	6.55	128	18971	2.0072	ug/L #	91
38) Tetrahydofur	6.65	42	135873	20.7324	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL3.D Vial: 7
Acq On : 16 Apr 2021 16:22 Operator: RLD-DGS
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:07 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:26:58 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	74744	2.2439 ug/L	96
40)	111trichlota	6.91	97	61359	2.1690 ug/L	99
42)	Cyclohexane	7.00	56	73510	2.3533 ug/L	98
43)	Carbtetraclo	7.13	119	49861	2.1625 ug/L	94
44)	11dicloprope	7.12	110	20824	2.1417 ug/L	98
46)	Benzene	7.37	78	175755	2.3817 ug/L	99
47)	12dichlorota	7.36	62	60989	2.2453 ug/L	99
48)	TAME	7.54	73	101943	2.1057 ug/L	96
49)	trichloroete	8.17	95	44360	2.2153 ug/L	97
50)	methylcyclohexane	8.45	83	76464	2.2514 ug/L	99
51)	12dicloropra	8.43	63	51631	2.3820 ug/L	91
52)	23Dicl1propene	8.50	75	67796	2.2652 ug/L	98
53)	Dibromometha	8.57	93	25663	2.1458 ug/L	99
54)	methylmethacrylate	8.60	69	27806	1.9081 ug/L	98
55)	14dioxane	8.62	88	23323	81.6056 ug/L	99
56)	Bromodiclrma	8.78	83	55172	2.2168 ug/L	97
57)	2Nitropropane	9.04	43	93914	16.3649 ug/L	96
58)	2CLEVE	9.16	63	137395	10.8045 ug/L	98
59)	c13dicloproe	9.35	75	69949	2.2708 ug/L	96
60)	4Meth2Pentan	9.55	43	402582	21.9699 ug/L	94
62)	Toluene	9.80	92	113462	2.3429 ug/L	94
63)	t13Dicloprop	10.06	75	55051	2.0651 ug/L	96
64)	ethylmethacrylate	10.21	69	100683	4.1423 ug/L	98
65)	112Triclotha	10.29	83	31468	2.1434 ug/L	97
66)	Tetrachlorte	10.53	166	39519	2.0027 ug/L	95
67)	13Diclorpropa	10.52	76	68825	2.2423 ug/L	98
69)	2Hexanone	10.64	43	304089	22.7176 ug/L	94
70)	Clorodibrmta	10.82	129	35434	2.0151 ug/L	99
71)	12Dibrometha	10.98	107	38639	2.2002 ug/L	98
72)	Chlorobenzen	11.66	112	121066	2.2972 ug/L	90
73)	1Clhexane	11.64	91	58837	2.2188 ug/L	85
74)	1112Tetclota	11.77	131	37535	2.1431 ug/L	99
75)	Ethylbenzene	11.82	91	192262	2.3739 ug/L	98
76)	m p-Xylene	11.99	106	148363	4.5646 ug/L	95
77)	o-Xylene	12.53	106	69709	2.1326 ug/L	97
78)	Styrene	12.55	104	119038	2.2279 ug/L	97
79)	Bromoform	12.77	173	20381	1.7900 ug/L	99
80)	Isopropylben	13.06	105	172882	2.2489 ug/L	98
81)	cyclohexanone	13.15	55	29522	33.0058 ug/L	98
84)	Bromobenzene	13.47	156	43449	2.3601 ug/L	98
85)	1122Tetrclta	13.44	83	50351	2.3200 ug/L	99
86)	123Triclproa	13.50	75	60298	2.2045 ug/L	100
87)	14dichloro2butene	13.53	53	13993	1.9257 ug/L	94
88)	n-Propylbenz	13.65	91	208204	2.4194 ug/L	96
89)	2chlorotolue	13.76	91	127572	2.4483 ug/L	99
90)	4chlorotolue	13.92	91	144966	2.4256 ug/L	98
91)	135Trimebenz	13.90	105	142085	2.3709 ug/L	100
92)	tbutylbenzen	14.37	119	118208	2.3256 ug/L	98
93)	124Trimetben	14.44	105	138923	2.3619 ug/L	99
94)	sbutylbenzen	14.69	105	175856	2.4827 ug/L	94
95)	13Diclorbenz	14.83	146	78307	2.3082 ug/L	98
96)	pIsopropylto	14.91	119	145933	2.3530 ug/L	97
97)	14dichlorobe	14.96	146	81265	2.3048 ug/L	93
98)	12dichlorobe	15.50	146	75555	2.2891 ug/L	95
99)	nButylbenzen	15.50	91	140724	2.4292 ug/L	95
100)	12dibromo3cl	16.59	157	7659	1.7518 ug/L	95
101)	135Trichlorobenzene	16.92	180	50601	2.1550 ug/L	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL3.D Vial: 7
Acq On : 16 Apr 2021 16:22 Operator: RLD-DGS
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:07 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:26:58 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

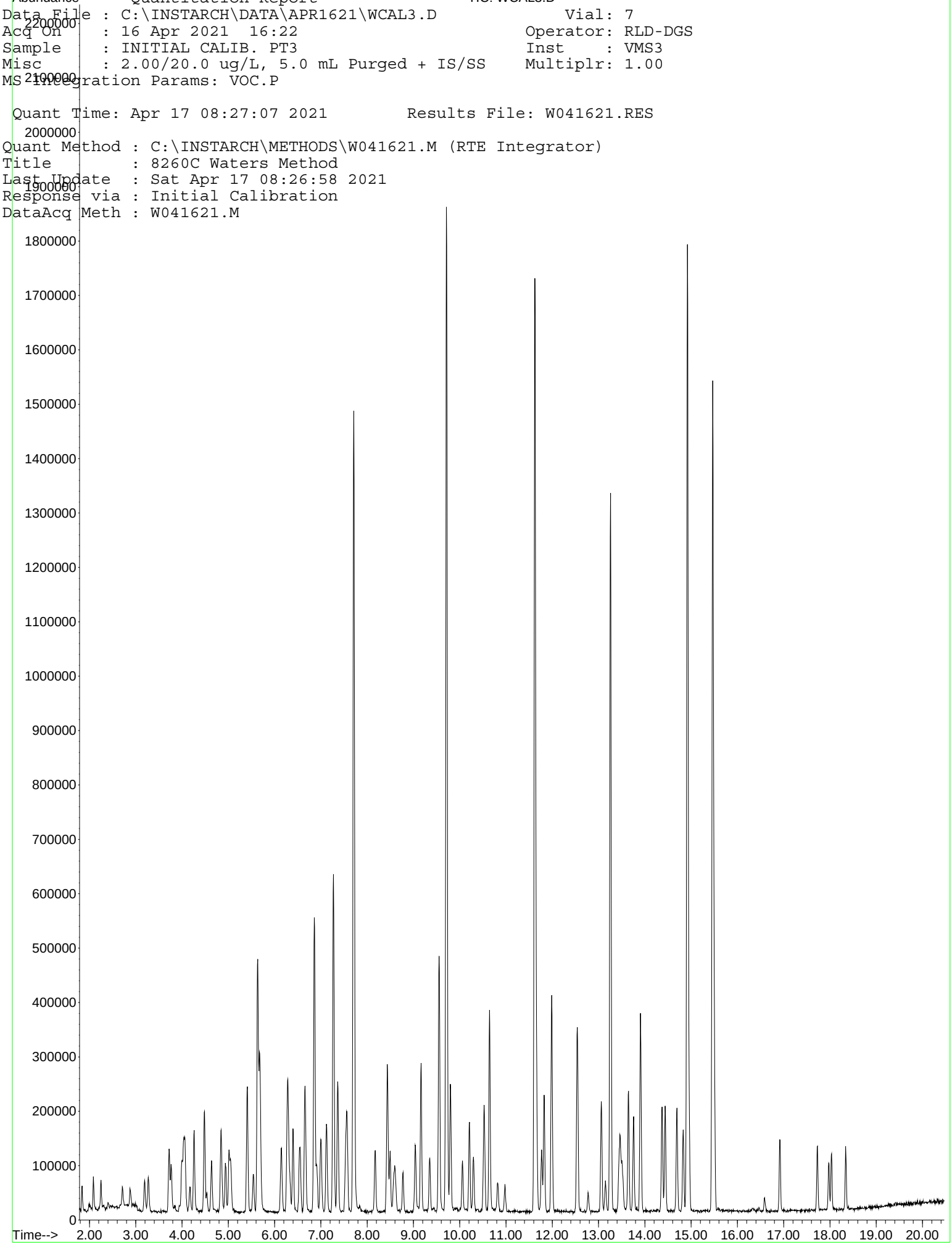
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	42295	2.1004	ug/L	100
103) Hexachlorobu	17.98	225	20994	2.2966	ug/L	92
104) Naphthalene	18.03	128	94717	1.9248	ug/L	99
105) 123Trichlben	18.34	180	39177	2.0931	ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\APR1621\WCAL3.D Vial: 7
Acq On : 16 Apr 2021 16:22 Operator: RLD-DGS
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:07 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:26:58 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL4.D Vial: 8
Acq On : 16 Apr 2021 16:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:21 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:15 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1521026	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1151159	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	587192	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	401141	20.122	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.27	102	113337	20.512	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103 %			
61) SURRd8Tolule	9.71	98	1513234	20.105	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	612058	20.783	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 104 %			

Target Compounds						Qvalue
2) Dichlorodi	1.84	85	106019	5.4483	ug/L	98
3) Chloromethan	2.08	50	142328	5.3760	ug/L	96
4) VinylChlorid	2.25	62	133211	5.6340	ug/L	95
5) Bromomethane	2.72	94	68003	5.3243	ug/L	99
6) Chloroethane	2.88	64	84217	5.2099	ug/L	99
7) Dichloroflmethane	3.20	67	170036	5.7611	ug/L	97
8) Trichlorofma	3.28	101	156603	5.4697	ug/L	100
9) Ethylether	3.71	59	91014	5.5087	ug/L	98
10) dichlorotfluoroethan	3.73	67	113496	5.7882	ug/L	95
11) propyleneoxide	3.77	58	182426	50.2105	ug/L	99
12) Acrolein	3.85	56	24051	21.4845	ug/L	93
13) 11dichlorthe	3.99	96	96399	5.4474	ug/L	98
14) Trichlorotfluoroeth	4.03	101	187705	11.1232	ug/L	99
15) Acetone	4.07	43	312579	47.9115	ug/L	99
16) Iodomethane	4.17	142	181523	9.5059	ug/L	97
17) Carbon Dislf	4.26	76	556601	11.2260	ug/L	98
18) allylchloride	4.49	41	381629	11.6414	ug/L	97
19) methylacetate	4.54	74	25277	5.0099	ug/L	86
20) Methylchlorid	4.64	84	115808	5.2560	ug/L	97
21) tbutylalcohol	4.85	59	502532	243.1399	ug/L	99
22) Acrylonitrile	4.94	53	197668	25.1817	ug/L	99
23) t12dichlorte	5.02	96	106242	5.2825	ug/L	100
24) MtBE	5.05	73	257886	5.2618	ug/L	97
25) Hexane	5.41	57	314747	11.6510	ug/L	99
26) 11dichlorota	5.54	63	203618	5.7184	ug/L	99
27) Vinylacetate	5.64	43	1977396	57.2017	ug/L	97
28) chloroprene	5.67	53	380227	11.6247	ug/L	98
29) Diisopether	5.69	45	379389	5.6352	ug/L	95
30) ETBE	6.15	59	292231	5.3322	ug/L	98
31) 22dichloropr	6.28	77	152136	5.2882	ug/L	99
32) c12dichlorte	6.27	96	118119	5.4093	ug/L	99
33) 2Butanone	6.30	72	117193	47.4995	ug/L	91
34) propionitrile	6.33	54	161554	49.5023	ug/L	98
35) Ethylacetate	6.40	88	19993	21.3896	ug/L	91
36) methacrylonitrile	6.54	67	84945	9.5862	ug/L	98
37) Bromochlorma	6.55	128	51535	5.3644	ug/L	99
38) Tetrahydofur	6.65	42	338294	51.3116	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL4.D Vial: 8
Acq On : 16 Apr 2021 16:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:21 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:15 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.67	83	184241	5.3595 ug/L	97
40)	111trichlota	6.91	97	155524	5.3363 ug/L	99
42)	Cyclohexane	7.00	56	188454	5.7555 ug/L	99
43)	Carbtetraclo	7.13	119	124021	5.2095 ug/L	96
44)	11dicloprope	7.12	110	53237	5.2732 ug/L	98
46)	Benzene	7.36	78	434187	5.7062 ug/L	99
47)	12dichlorota	7.36	62	153967	5.5258 ug/L	97
48)	TAME	7.54	73	261340	5.3063 ug/L	98
49)	trichloroete	8.17	95	113169	5.5129 ug/L	98
50)	methylcyclohexane	8.44	83	199057	5.6148 ug/L	98
51)	12dicloropra	8.43	63	124493	5.5121 ug/L	93
52)	23Dicl1propene	8.50	75	169728	5.5088 ug/L	97
53)	Dibromometha	8.57	93	64442	5.2640 ug/L	100
54)	methylmethacrylate	8.60	69	71004	4.8020 ug/L	98
55)	14dioxane	8.61	88	59792	212.9157 ug/L	99
56)	Bromodiclrma	8.78	83	141397	5.4807 ug/L	96
57)	2Nitropropane	9.04	43	247645	43.6580 ug/L	97
58)	2CLEVE	9.16	63	355380	27.4826 ug/L	99
59)	c13dicloproe	9.35	75	170175	5.3498 ug/L	99
60)	4Meth2Pentan	9.55	43	988060	53.8116 ug/L	98
62)	Toluene	9.80	92	274373	5.4815 ug/L	98
63)	t13Dicloprop	10.06	75	143561	5.2624 ug/L	100
64)	ethylmethacrylate	10.21	69	258470	10.4848 ug/L	97
65)	112Triclotha	10.30	83	81116	5.3827 ug/L	99
66)	Tetrachlorte	10.53	166	104391	5.2080 ug/L	98
67)	13Diclorpropa	10.52	76	163252	5.1734 ug/L	97
69)	2Hexanone	10.64	43	723420	52.9415 ug/L	97
70)	Clorodibrmta	10.83	129	89139	4.8999 ug/L	100
71)	12Dibrometha	10.98	107	92085	5.0543 ug/L	97
72)	Chlorobenzen	11.66	112	307297	5.5624 ug/L	98
73)	1Clhexane	11.64	91	149236	5.3647 ug/L	95
74)	1112Tetclota	11.77	131	92736	5.0920 ug/L	99
75)	Ethylbenzene	11.82	91	483810	5.7124 ug/L	99
76)	m p-Xylene	11.99	106	379463	11.1742 ug/L	98
77)	o-Xylene	12.53	106	181267	5.3309 ug/L	99
78)	Styrene	12.55	104	307338	5.5217 ug/L	98
79)	Bromoform	12.78	173	50935	4.3925 ug/L	96
80)	Isopropylben	13.06	105	438264	5.4946 ug/L	98
81)	cyclohexanone	13.14	55	79387	90.2555 ug/L	99
84)	Bromobenzene	13.47	156	105496	5.1640 ug/L	98
85)	1122Tetrclta	13.44	83	125774	5.2948 ug/L	93
86)	123Triclproa	13.50	75	146032	4.9078 ug/L	97
87)	14dichloro2butene	13.53	53	33039	4.2761 ug/L	99
88)	n-Propylbenz	13.65	91	541671	5.6676 ug/L	99
89)	2chlorotolue	13.76	91	323159	5.5925 ug/L	100
90)	4chlorotolue	13.91	91	382169	5.8016 ug/L	99
91)	135Trimebenz	13.90	105	367819	5.5616 ug/L	99
92)	tbutylbenzen	14.37	119	310977	5.5613 ug/L	99
93)	124Trimetben	14.44	105	378628	5.8498 ug/L	100
94)	sbutylbenzen	14.69	105	477217	6.0885 ug/L	97
95)	13Diclorbenz	14.83	146	211562	5.6908 ug/L	97
96)	pIsopropylto	14.91	119	394250	5.7765 ug/L	98
97)	14dichlorobe	14.96	146	212489	5.4884 ug/L	97
98)	12dichlorobe	15.49	146	211049	5.8462 ug/L	98
99)	nButylbenzen	15.50	91	385610	5.9968 ug/L	97
100)	12dibromo3cl	16.59	157	19705	4.3027 ug/L	94
101)	135Trichlorobenzene	16.92	180	136567	5.3344 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL4.D Vial: 8
Acq On : 16 Apr 2021 16:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:21 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:15 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

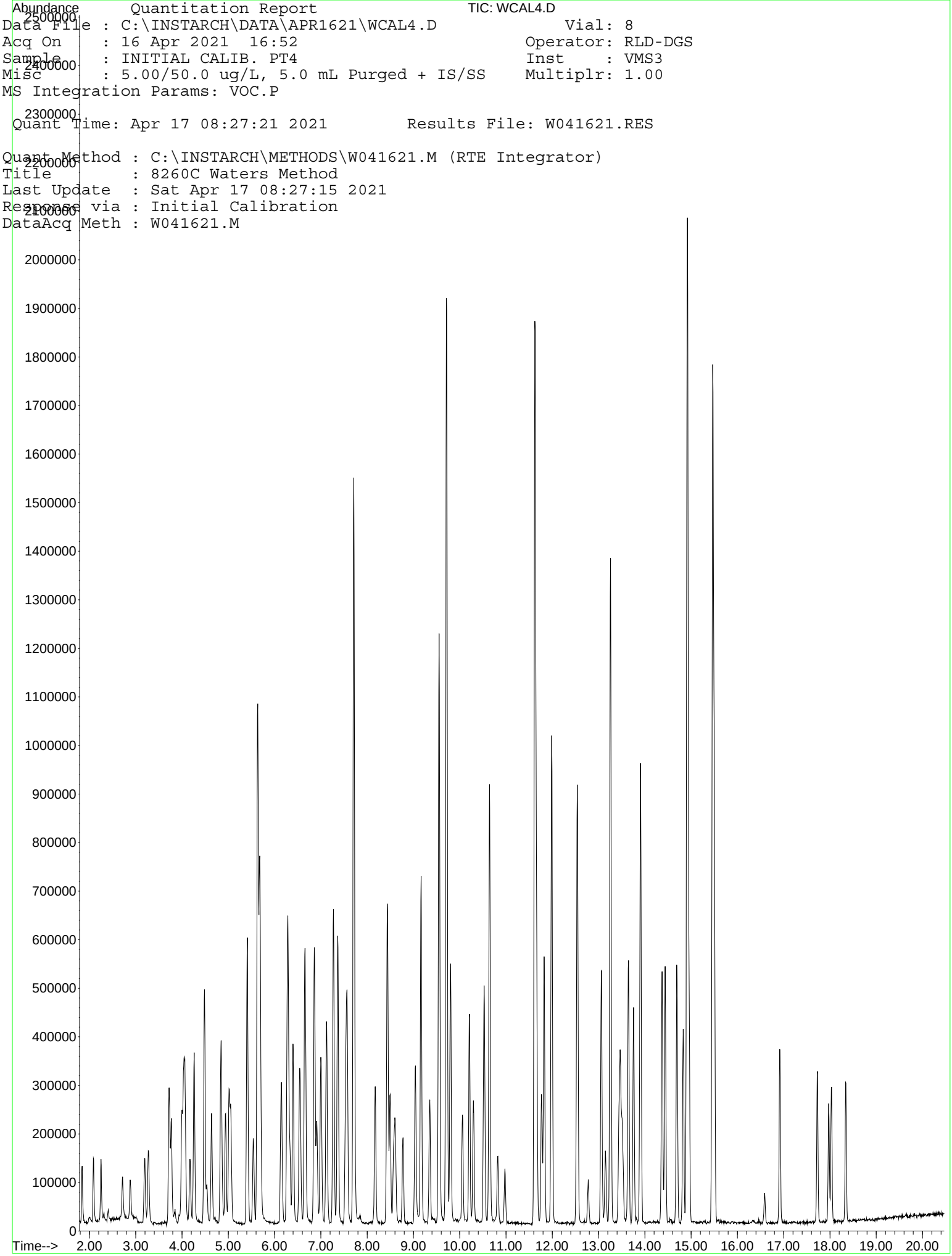
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	111178	5.0872	ug/L	97
103)	Hexachlorobu	17.97	225	51260	5.0609	ug/L	98
104)	Naphthalene	18.03	128	256367	4.9364	ug/L	99
105)	123Trichlben	18.34	180	101534	4.9645	ug/L	100

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\APR1621\WCAL4.D Vial: 8
Acq On : 16 Apr 2021 16:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:21 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:15 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL5.D Vial: 9
Acq On : 16 Apr 2021 17:22 Operator: RLD-DGS
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:34 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:28 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1534550	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1157879	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	592804	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	399034	19.829	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99	%		
45) SURR12DCAd4	7.27	102	113680	20.285	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1535763	20.204	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101	%		
83) SURR4BrFBenz	13.26	95	620096	20.649	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	216451	10.9747	ug/L	100
3) Chloromethan	2.08	50	264094	9.7906	ug/L	100
4) VinylChlorid	2.25	62	256655	10.6725	ug/L	100
5) Bromomethane	2.72	94	126399	10.0698	ug/L	100
6) Chloroethane	2.88	64	164848	10.0812	ug/L	100
7) Dichloroflmethane	3.20	67	314241	10.4128	ug/L	100
8) Trichlorofma	3.28	101	310880	10.7148	ug/L	100
9) Ethylether	3.71	59	170513	10.1235	ug/L	100
10) dichlorotfluoroethan	3.73	67	215755	10.6967	ug/L	100
11) propyleneoxide	3.77	58	324602	90.0437	ug/L	100
12) Acrolein	3.85	56	40578	36.8340	ug/L	99
13) 11dichlorthe	3.99	96	188623	10.4890	ug/L	100
14) Trichlorotfluoroeth	4.04	101	373832	21.7167	ug/L	100
15) Acetone	4.07	43	548050	85.0369	ug/L	100
16) Iodomethane	4.17	142	370000	19.4837	ug/L	100
17) Carbon Dislf	4.26	76	1017598	20.0580	ug/L	100
18) allylchloride	4.49	41	715449	21.2816	ug/L	100
19) methylacetate	4.53	74	39454	7.8347	ug/L	99
20) Methylchlorid	4.64	84	219407	9.8033	ug/L	100
21) tbutylalcohol	4.84	59	860374	427.3298	ug/L	100
22) Acrylonitrile	4.94	53	356034	45.8999	ug/L	100
23) t12dichlorte	5.02	96	204910	10.0576	ug/L	100
24) MtBE	5.05	73	485577	9.8324	ug/L	100
25) Hexane	5.41	57	630044	22.7961	ug/L	100
26) 11dichlorota	5.54	63	373770	10.2579	ug/L	100
27) Vinylacetate	5.63	43	3286421	95.0108	ug/L	100
28) chloroprene	5.67	53	724782	21.6752	ug/L	100
29) Diisopether	5.69	45	724081	10.5372	ug/L	100
30) ETBE	6.15	59	568481	10.2593	ug/L	100
31) 22dichloropr	6.29	77	288314	9.8853	ug/L	100
32) c12dichlorte	6.27	96	222334	10.0261	ug/L	100
33) 2Butanone	6.29	72	210661	86.3037	ug/L	100
34) propionitrile	6.33	54	282495	87.2445	ug/L	100
35) Ethylacetate	6.40	88	37419	41.0551	ug/L	100
36) methacrylonitrile	6.54	67	154844	17.6261	ug/L	100
37) Bromochlorma	6.56	128	98185	10.0995	ug/L	100
38) Tetrahydofur	6.65	42	590288	90.0903	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL5.D Vial: 9
Acq On : 16 Apr 2021 17:22 Operator: RLD-DGS
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:34 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:28 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	352514	10.0836	ug/L	100
40)	111trichlota	6.91	97	300515	10.1717	ug/L	100
42)	Cyclohexane	7.00	56	382174	11.3460	ug/L	100
43)	Carbtetraclo	7.13	119	244183	10.1525	ug/L	100
44)	11dicloprope	7.12	110	103763	10.1021	ug/L	100
46)	Benzene	7.36	78	813897	10.4943	ug/L	100
47)	12dichlorota	7.36	62	280525	9.8797	ug/L	100
48)	TAME	7.54	73	493495	9.9414	ug/L	100
49)	trichloroete	8.17	95	212322	10.1961	ug/L	100
50)	methylcyclohexane	8.44	83	399002	11.0396	ug/L	100
51)	12dicloropra	8.43	63	238789	10.3549	ug/L	100
52)	23Dicl1propene	8.50	75	320492	10.1865	ug/L	100
53)	Dibromometha	8.57	93	121794	9.8270	ug/L	100
54)	methylmethacrylate	8.60	69	132044	8.9922	ug/L	100
55)	14dioxane	8.62	88	106134	388.7979	ug/L	100
56)	Bromodiclrma	8.77	83	259972	9.8819	ug/L	100
57)	2Nitropropane	9.04	43	463035	83.7764	ug/L	100
58)	2CLEVE	9.16	63	647338	49.7640	ug/L	100
59)	c13dicloproe	9.35	75	320680	9.9458	ug/L	100
60)	4Meth2Pentan	9.55	43	1677176	91.9481	ug/L	100
62)	Toluene	9.80	92	519025	10.2178	ug/L	100
63)	t13Dicloprop	10.06	75	270141	9.8040	ug/L	100
64)	ethylmethacrylate	10.21	69	488124	19.7857	ug/L	100
65)	112Triclotha	10.30	83	149687	9.8094	ug/L	100
66)	Tetrachlorte	10.53	166	199157	9.9110	ug/L	100
67)	13Diclorpropa	10.52	76	311986	9.7925	ug/L	100
69)	2Hexanone	10.64	43	1251111	92.7459	ug/L	100
70)	Clorodibrmta	10.82	129	170546	9.3708	ug/L	100
71)	12Dibrometha	10.98	107	173086	9.4775	ug/L	100
72)	Chlorobenzen	11.66	112	571745	10.2136	ug/L	100
73)	1Clhexane	11.65	91	290560	10.3078	ug/L	100
74)	1112Tetclota	11.77	131	178877	9.7691	ug/L	100
75)	Ethylbenzene	11.82	91	907334	10.5977	ug/L	100
76)	m p-Xylene	11.99	106	710778	20.6882	ug/L	100
77)	o-Xylene	12.53	106	341625	9.9705	ug/L	100
78)	Styrene	12.55	104	591715	10.5241	ug/L	100
79)	Bromoform	12.77	173	96345	8.4303	ug/L	100
80)	Isopropylben	13.06	105	840862	10.4874	ug/L	100
81)	cyclohexanone	13.15	55	146180	168.9015	ug/L	100
84)	Bromobenzene	13.47	156	201562	9.8097	ug/L	100
85)	1122Tetrclta	13.44	83	222311	9.3020	ug/L	100
86)	123Triclproa	13.51	75	271685	9.1513	ug/L	100
87)	14dichloro2butene	13.53	53	62865	8.3262	ug/L	100
88)	n-Propylbenz	13.65	91	1010542	10.3816	ug/L	100
89)	2chlorotolue	13.76	91	616076	10.4709	ug/L	100
90)	4chlorotolue	13.91	91	719367	10.7061	ug/L	100
91)	135Trimebenz	13.90	105	710849	10.6412	ug/L	100
92)	tbutylbenzen	14.37	119	598951	10.6027	ug/L	100
93)	124Trimetben	14.44	105	700134	10.6342	ug/L	100
94)	sbutylbenzen	14.69	105	874106	10.9290	ug/L	100
95)	13Diclorbenz	14.83	146	375984	9.9703	ug/L	100
96)	pIsopropylto	14.91	119	726414	10.4948	ug/L	100
97)	14dichlorobe	14.96	146	388431	9.9017	ug/L	100
98)	12dichlorobe	15.50	146	352140	9.5542	ug/L	100
99)	nButylbenzen	15.50	91	691135	10.4802	ug/L	100
100)	12dibromo3cl	16.59	157	32784	7.4022	ug/L	100
101)	135Trichlorobenzene	16.91	180	245377	9.4901	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL5.D Vial: 9
Acq On : 16 Apr 2021 17:22 Operator: RLD-DGS
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:34 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:28 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

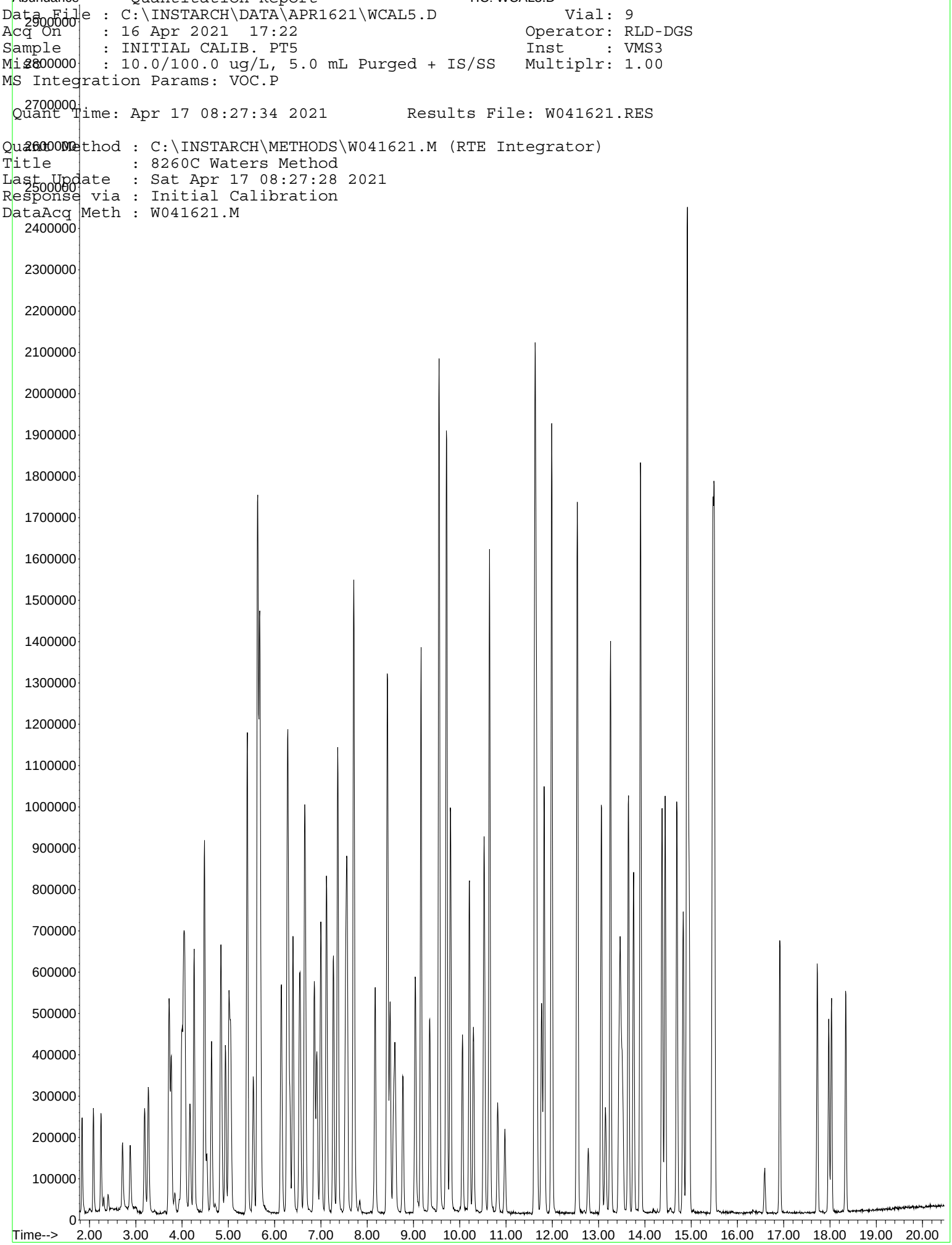
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	210257	9.5762	ug/L	100
103) Hexachlorobu	17.97	225	96566	9.4780	ug/L	100
104) Naphthalene	18.03	128	457063	8.9407	ug/L	100
105) 123Trichlben	18.34	180	187021	9.1530	ug/L	100

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\APR1621\WCAL5.D Vial: 9
Acq On : 16 Apr 2021 17:22 Operator: RLD-DGS
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:34 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:28 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL6.D Vial: 10
Acq On : 16 Apr 2021 17:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:51 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:44 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1579563	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1178402	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	597981	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	414635	20.017	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	115464	20.016	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100	%		
61) SURRd8Tolule	9.72	98	1570679	20.075	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.26	95	637006	21.028	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 105	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	416238	20.4750	ug/L	96
3) Chloromethan	2.08	50	514621	18.5380	ug/L	100
4) VinylChlorid	2.25	62	509928	20.6000	ug/L	97
5) Bromomethane	2.72	94	243407	18.7914	ug/L	100
6) Chloroethane	2.88	64	324766	19.2945	ug/L	99
7) Dichloroflmethane	3.19	67	615641	19.8159	ug/L	98
8) Trichlorofma	3.27	101	610054	20.4260	ug/L	100
9) Ethylether	3.71	59	345660	19.9374	ug/L	97
10) dichlorotfluoroethan	3.73	67	438534	21.1221	ug/L	97
11) propyleneoxide	3.77	58	655457	176.6405	ug/L	97
12) Acrolein	3.85	56	97055	85.4904	ug/L	100
13) 11dichlorthe	3.99	96	384716	20.7838	ug/L	100
14) Trichlorotfluoroeth	4.04	101	749759	42.3139	ug/L	99
15) Acetone	4.06	43	1096521	165.2483	ug/L	98
16) Iodomethane	4.17	142	820879	41.9946	ug/L	99
17) Carbon Dislf	4.26	76	1893487	36.2592	ug/L	98
18) allylchloride	4.49	41	1431549	41.3690	ug/L	98
19) methylacetate	4.53	74	88625	17.0762	ug/L	96
20) Methylchlorid	4.64	84	442059	19.1887	ug/L	99
21) tbutylalcohol	4.84	59	1749459	844.1580	ug/L	98
22) Acrylonitrile	4.94	53	732902	91.7931	ug/L	99
23) t12dichlorte	5.02	96	421087	20.0793	ug/L	97
24) MtBE	5.05	73	994817	19.5699	ug/L	99
25) Hexane	5.41	57	1286908	45.2357	ug/L	99
26) 11dichlorota	5.54	63	757246	20.1900	ug/L	99
27) Vinylacetate	5.63	43	5396940	151.5798	ug/L	95
28) chloroprene	5.67	53	1373092	39.8933	ug/L	99
29) Diisopether	5.69	45	1360871	19.2397	ug/L	99
30) ETBE	6.14	59	1145936	20.0912	ug/L	97
31) 22dichloropr	6.28	77	599066	19.9546	ug/L	99
32) c12dichlorte	6.27	96	458843	20.1017	ug/L	99
33) 2Butanone	6.29	72	447654	178.1690	ug/L	96
34) propionitrile	6.33	54	594995	178.5192	ug/L	100
35) Ethylacetate	6.40	88	86118	91.7937	ug/L #	86
36) methacrylonitrile	6.54	67	332691	36.7914	ug/L	99
37) Bromochlorma	6.55	128	197308	19.7170	ug/L	95
38) Tetrahydofur	6.65	42	1224883	181.6154	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL6.D Vial: 10
Acq On : 16 Apr 2021 17:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:51 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:44 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.67	83	721064	20.0381 ug/L	97
40)	111trichlota	6.91	97	607758	19.9848 ug/L	99
42)	Cyclohexane	7.00	56	789927	22.7830 ug/L	99
43)	Carbtetraclo	7.13	119	509855	20.5943 ug/L	100
44)	11dicloprope	7.12	110	214120	20.2521 ug/L	100
46)	Benzene	7.36	78	1587476	19.8855 ug/L	97
47)	12dichlorota	7.36	62	570826	19.5309 ug/L	99
48)	TAME	7.54	73	1041952	20.3919 ug/L	97
49)	trichloroete	8.17	95	437278	20.4005 ug/L	100
50)	methylcyclohexane	8.44	83	819990	22.0409 ug/L	99
51)	12dicloropra	8.43	63	490128	20.6483 ug/L	100
52)	23Dicl1propene	8.50	75	669552	20.6746 ug/L	97
53)	Dibromometha	8.57	93	248327	19.4654 ug/L	97
54)	methylmethacrylate	8.60	69	286078	18.9268 ug/L	98
55)	14dioxane	8.62	88	226120	804.7341 ug/L	98
56)	Bromodiclrma	8.78	83	533978	19.7200 ug/L	99
57)	2Nitropropane	9.04	43	1006822	176.9721 ug/L	99
58)	2CLEVE	9.16	63	1308288	97.7084 ug/L	96
59)	c13dicloproe	9.35	75	669315	20.1671 ug/L	99
60)	4Meth2Pentan	9.55	43	3137304	167.0906 ug/L	95
62)	Toluene	9.80	92	1044254	19.9720 ug/L	97
63)	t13Dicloprop	10.06	75	566346	19.9681 ug/L	99
64)	ethylmethacrylate	10.21	69	1010605	39.7967 ug/L	97
65)	112Triclotha	10.30	83	319013	20.3100 ug/L	97
66)	Tetrachlorte	10.53	166	414050	20.0179 ug/L	99
67)	13Diclorpropa	10.52	76	642797	19.6009 ug/L	98
69)	2Hexanone	10.64	43	2410020	175.5453 ug/L	96
70)	Clorodibrmta	10.82	129	361471	19.5155 ug/L	99
71)	12Dibrometha	10.98	107	362991	19.5298 ug/L	98
72)	Chlorobenzen	11.66	112	1132159	19.8725 ug/L	98
73)	1Clhexane	11.64	91	618374	21.5552 ug/L	97
74)	1112Tetclota	11.77	131	369469	19.8266 ug/L	98
75)	Ethylbenzene	11.82	91	1782471	20.4567 ug/L	96
76)	m p-Xylene	11.99	106	1438434	41.1385 ug/L	91
77)	o-Xylene	12.53	106	725529	20.8061 ug/L	92
78)	Styrene	12.55	104	1191411	20.8210 ug/L	97
79)	Bromoform	12.78	173	207363	17.8284 ug/L	98
80)	Isopropylben	13.06	105	1672222	20.4931 ug/L	97
81)	cyclohexanone	13.15	55	307850	349.5059 ug/L	98
84)	Bromobenzene	13.47	156	419106	20.2206 ug/L	100
85)	1122Tetrclta	13.44	83	462075	19.1669 ug/L	97
86)	123Triclproa	13.50	75	579958	19.3658 ug/L	100
87)	14dichloro2butene	13.53	53	136200	17.8829 ug/L	98
88)	n-Propylbenz	13.65	91	1979700	20.1620 ug/L	96
89)	2chlorotolue	13.76	91	1248827	21.0415 ug/L	97
90)	4chlorotolue	13.91	91	1447826	21.3610 ug/L	97
91)	135Trimebenz	13.90	105	1422634	21.1121 ug/L	97
92)	tbutylbenzen	14.37	119	1216870	21.3548 ug/L	98
93)	124Trimetben	14.44	105	1405044	21.1562 ug/L	95
94)	sbutylbenzen	14.69	105	1736272	21.5209 ug/L	96
95)	13Diclorbenz	14.83	146	765658	20.1278 ug/L	99
96)	pIsopropylto	14.91	119	1465730	20.9927 ug/L	97
97)	14dichlorobe	14.96	146	784191	19.8173 ug/L	99
98)	12dichlorobe	15.50	146	712118	19.1538 ug/L	99
99)	nButylbenzen	15.50	91	1390627	20.9045 ug/L	98
100)	12dibromo3cl	16.59	157	72959	16.3305 ug/L	98
101)	135Trichlorobenzene	16.91	180	517181	19.8291 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

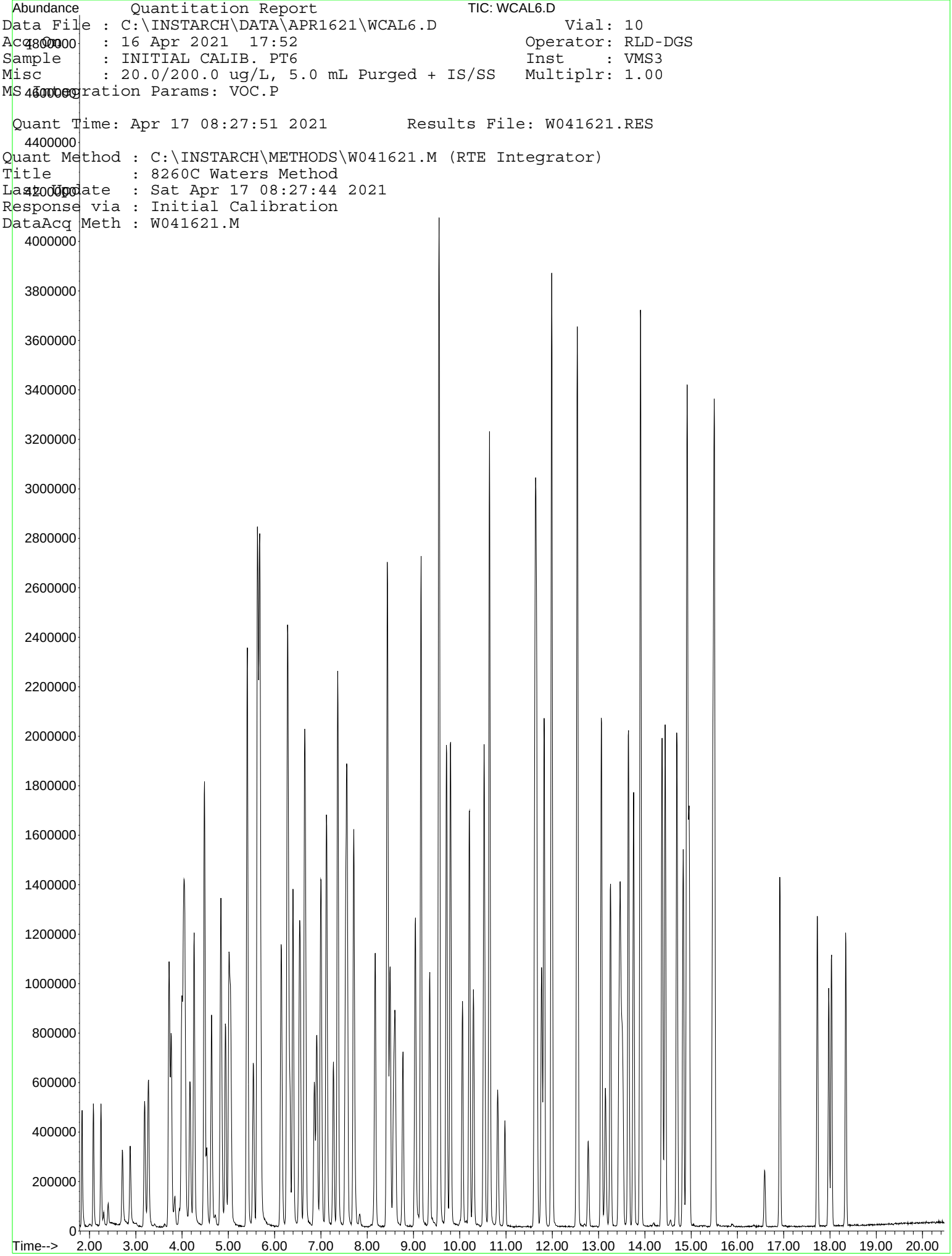
Data File : C:\INSTARCH\DATA\APR1621\WCAL6.D Vial: 10
Acq On : 16 Apr 2021 17:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:27:51 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:44 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	445907	20.1331	ug/L	100
103) Hexachlorobu	17.97	225	199246	19.3867	ug/L	98
104) Naphthalene	18.03	128	973087	18.8699	ug/L	99
105) 123Trichlben	18.34	180	398375	19.3281	ug/L	99

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: WCAL6.D
Data File : C:\INSTARCH\DATA\APR1621\WCAL6.D
Vial: 10
Acq On : 16 Apr 2021 17:52
Operator: RLD-DGS
Sample : INITIAL CALIB. PT6
Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Apr 17 08:27:51 2021
Results File: W041621.RES
Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:44 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
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Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL7.D Vial: 11
Acq On : 16 Apr 2021 18:22 Operator: RLD-DGS
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:28:04 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:58 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1619787	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1212613	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	605764	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	421671	19.859	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	115670	19.510	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98 %			
61) SURRd8Tolule	9.71	98	1518744	18.935	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 95 %			
83) SURR4BrFBenz	13.26	95	650573	20.890	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 104 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	613365	29.5685	ug/L	95
3) Chloromethan	2.08	50	734756	25.7930	ug/L	99
4) VinylChlorid	2.25	62	743274	29.2822	ug/L	99
5) Bromomethane	2.71	94	373231	28.6584	ug/L	100
6) Chloroethane	2.88	64	481748	28.0788	ug/L	99
7) Dichloroflmethane	3.19	67	910125	28.4332	ug/L	99
8) Trichlorofma	3.27	101	901836	29.5038	ug/L	98
9) Ethylether	3.71	59	530761	29.7697	ug/L	99
10) dichlorotfluoroethan	3.73	67	649141	30.2035	ug/L	98
11) propyleneoxide	3.77	58	979066	264.8266	ug/L	96
12) Acrolein	3.85	56	166760	146.1358	ug/L	96
13) 11dichlorthe	3.99	96	573673	30.0865	ug/L	98
14) Trichlorotfluoroeth	4.04	101	1106838	60.7334	ug/L	98
15) Acetone	4.06	43	1580005	238.7695	ug/L	96
16) Iodomethane	4.17	142	1263021	64.0719	ug/L	98
17) Carbon Dislf	4.26	76	2649660	49.4264	ug/L	95
18) allylchloride	4.49	41	2066604	57.5551	ug/L	97
19) methylacetate	4.53	74	140057	26.9675	ug/L	97
20) Methylchlorid	4.64	84	656781	27.6907	ug/L	99
21) tbutylalcohol	4.84	59	2530117	1242.8161	ug/L	98
22) Acrylonitrile	4.94	53	1063136	132.9558	ug/L	97
23) t12dichlorte	5.02	96	627672	29.1205	ug/L	98
24) MtBE	5.05	73	1480287	28.5364	ug/L	97
25) Hexane	5.41	57	1869053	63.4169	ug/L	98
26) 11dichlorota	5.54	63	1130127	29.1810	ug/L	98
27) Vinylacetate	5.63	43	6969727	192.3849	ug/L	91
28) chloroprene	5.67	53	1992248	56.4485	ug/L	97
29) Diisopether	5.69	45	1999056	27.4316	ug/L	97
30) ETBE	6.14	59	1684846	28.7011	ug/L	94
31) 22dichloropr	6.28	77	863254	27.9945	ug/L	98
32) c12dichlorte	6.27	96	689506	29.4337	ug/L	97
33) 2Butanone	6.29	72	634178	254.4676	ug/L	95
34) propionitrile	6.33	54	811420	244.0952	ug/L	99
35) Ethylacetate	6.40	88	115521	123.1638	ug/L #	91
36) methacrylonitrile	6.54	67	481426	53.0952	ug/L	98
37) Bromochlorma	6.55	128	289223	28.2005	ug/L	97
38) Tetrahydofur	6.65	42	1661706	245.4731	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL7.D Vial: 11
Acq On : 16 Apr 2021 18:22 Operator: RLD-DGS
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:28:04 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:58 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.67	83	987885	26.6607	ug/L		96
40)	111trichlota	6.91	97	913206	29.3549	ug/L		99
42)	Cyclohexane	7.00	56	1191710	33.1030	ug/L		98
43)	Carbtetraclo	7.13	119	762148	30.1160	ug/L		97
44)	11dicloprope	7.12	110	330627	30.5135	ug/L		96
46)	Benzene	7.36	78	2266016	27.5821	ug/L		95
47)	12dichlorota	7.36	62	852921	28.4307	ug/L		99
48)	TAME	7.54	73	1512950	28.8688	ug/L		96
49)	trichloroete	8.17	95	656443	29.9297	ug/L		100
50)	methylcyclohexane	8.44	83	1239851	32.3743	ug/L		99
51)	12dicloropra	8.43	63	734196	29.8769	ug/L		99
52)	23Dicl1propene	8.50	75	1003269	30.1562	ug/L		96
53)	Dibromometha	8.57	93	379893	29.1267	ug/L		97
54)	methylmethacrylate	8.60	69	424943	27.8812	ug/L		97
55)	14dioxane	8.62	88	342682	1251.4773	ug/L		98
56)	Bromodiclrma	8.77	83	801828	28.8227	ug/L		99
57)	2Nitropropane	9.04	43	1500036	267.8691	ug/L		99
58)	2CLEVE	9.16	63	1833929	134.9152	ug/L		94
59)	c13dicloproe	9.35	75	1005975	29.4790	ug/L		99
60)	4Meth2Pentan	9.55	43	4061090	215.1047	ug/L		90
62)	Toluene	9.80	92	1435796	26.7489	ug/L		94
63)	t13Dicloprop	10.06	75	851848	29.3604	ug/L		97
64)	ethylmethacrylate	10.20	69	1395715	54.1136	ug/L		95
65)	112Triclotha	10.30	83	459247	28.4845	ug/L		98
66)	Tetrachlorte	10.53	166	623401	29.6899	ug/L		100
67)	13Diclorpropa	10.52	76	945221	28.0882	ug/L		97
69)	2Hexanone	10.64	43	3202196	231.5688	ug/L		93
70)	Clorodibrmta	10.82	129	543059	28.6303	ug/L		98
71)	12Dibrometha	10.98	107	539635	28.4101	ug/L		97
72)	Chlorobenzen	11.66	112	1649961	28.0389	ug/L		98
73)	1Clhexane	11.65	91	901828	30.2993	ug/L		97
74)	1112Tetclota	11.77	131	558795	29.1444	ug/L		99
75)	Ethylbenzene	11.82	91	2516642	27.9651	ug/L		93
76)	m p-Xylene	11.99	106	2033561	56.4116	ug/L	#	84
77)	o-Xylene	12.53	106	1051219	29.1799	ug/L		88
78)	Styrene	12.55	104	1683805	28.5510	ug/L		96
79)	Bromoform	12.78	173	320001	27.5061	ug/L		98
80)	Isopropylben	13.06	105	2388370	28.4385	ug/L		94
81)	cyclohexanone	13.14	55	446498	513.2779	ug/L		97
84)	Bromobenzene	13.47	156	623504	29.6024	ug/L		99
85)	1122Tetrclta	13.44	83	689249	28.2521	ug/L		96
86)	123Triclproa	13.50	75	870373	28.9159	ug/L		99
87)	14dichloro2butene	13.53	53	210460	28.0609	ug/L		95
88)	n-Propylbenz	13.64	91	2710024	26.9096	ug/L		92
89)	2chlorotolue	13.76	91	1770263	29.0653	ug/L		95
90)	4chlorotolue	13.91	91	2008660	28.8824	ug/L		94
91)	135Trimebenz	13.90	105	1995669	29.0176	ug/L		95
92)	tbutylbenzen	14.37	119	1777659	30.5993	ug/L		97
93)	124Trimetben	14.44	105	1968305	29.0037	ug/L		93
94)	sbutylbenzen	14.69	105	2437367	29.5867	ug/L		93
95)	13Diclorbenz	14.83	146	1130771	29.3450	ug/L		98
96)	pIsopropylto	14.91	119	2083505	29.3391	ug/L		95
97)	14dichlorobe	14.96	146	1121785	27.9619	ug/L		98
98)	12dichlorobe	15.49	146	1046801	27.7898	ug/L		99
99)	nButylbenzen	15.50	91	1964116	28.9347	ug/L		95
100)	12dibromo3cl	16.59	157	114028	26.4901	ug/L		96
101)	135Trichlorobenzene	16.92	180	786802	29.8233	ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL7.D Vial: 11
Acq On : 16 Apr 2021 18:22 Operator: RLD-DGS
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:28:04 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:58 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	675865	30.2295	ug/L	99
103) Hexachlorobu	17.97	225	305216	29.5335	ug/L	98
104) Naphthalene	18.03	128	1430705	27.9834	ug/L	97
105) 123Trichlben	18.34	180	604474	29.2046	ug/L	99

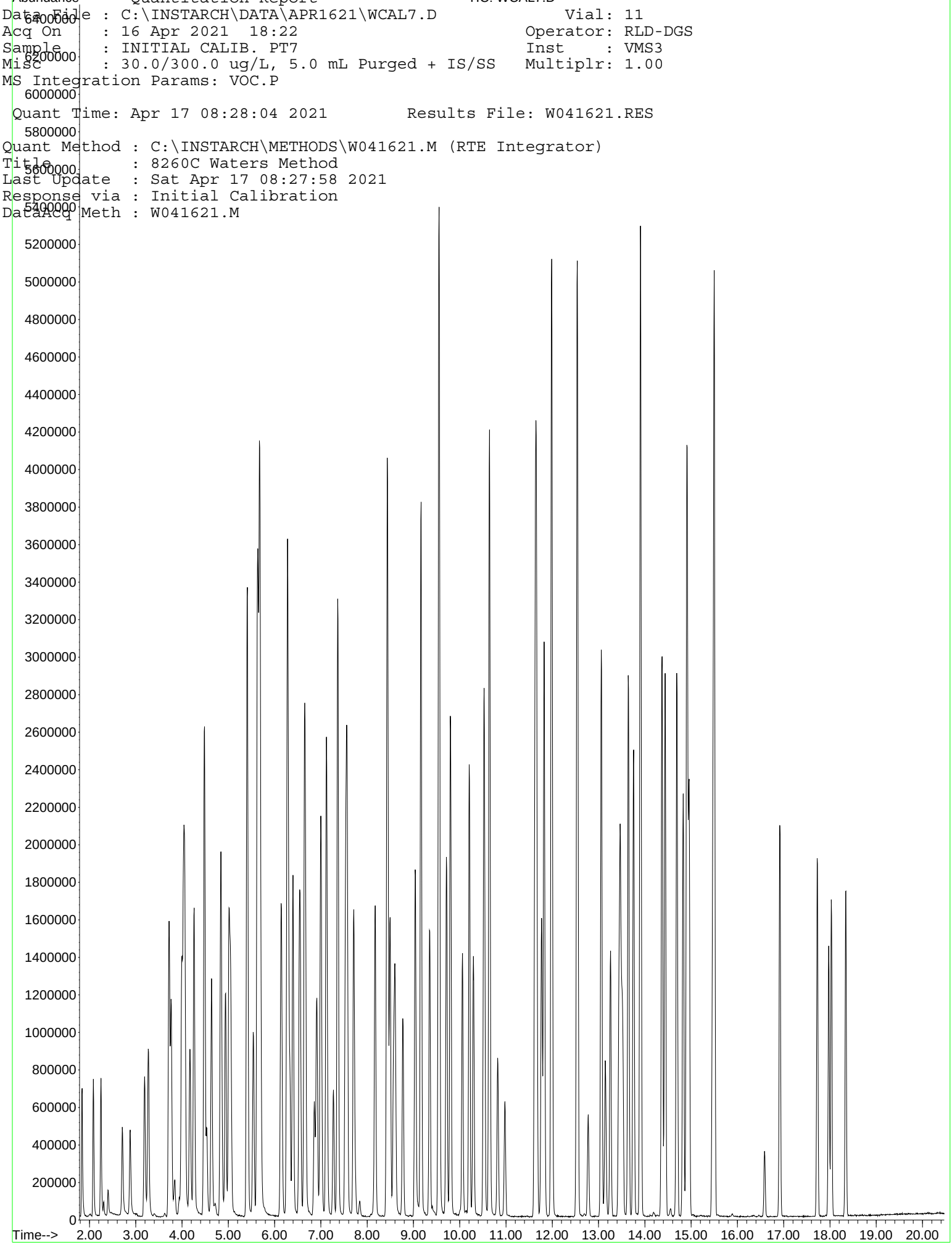
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL7.D

Data File : C:\INSTARCH\DATA\APR1621\WCAL7.D Vial: 11
Acq On : 16 Apr 2021 18:22 Operator: RLD-DGS
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:28:04 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:27:58 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL8.D Vial: 12
Acq On : 16 Apr 2021 18:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:28:19 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:28:12 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1551224	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1229437	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	628030	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	416157	20.481	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4	7.27	102	116683	20.550	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103 %			
61) SURRd8Tolule	9.71	98	1535375	20.103	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	632186	19.303	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 97 %			
Target Compounds						Qvalue
2) Dichlorodi	1.83	85	823501	41.5743	ug/L	94
3) Chloromethan	2.08	50	995912	36.4346	ug/L	98
4) VinylChlorid	2.25	62	1005609	41.3578	ug/L	100
5) Bromomethane	2.71	94	515299	41.8040	ug/L	97
6) Chloroethane	2.88	64	647094	39.4908	ug/L	100
7) Dichloroflmethane	3.19	67	1223856	39.7040	ug/L	96
8) Trichlorofma	3.27	101	1228680	42.0331	ug/L	98
9) Ethylether	3.71	59	715644	41.6659	ug/L	98
10) dichlorotfluoroethan	3.72	67	880240	42.3758	ug/L	99
11) propyleneoxide	3.76	58	1299592	376.2258	ug/L	96
12) Acrolein	3.84	56	244176	227.2945	ug/L	98
13) 11dichlorthe	3.99	96	785610	42.9810	ug/L	97
14) Trichlorotfluoroeth	4.03	101	1501040	85.8306	ug/L	97
15) Acetone	4.06	43	2051482	330.0499	ug/L	95
16) Iodomethane	4.17	142	1740614	93.4758	ug/L	96
17) Carbon Dislf	4.25	76	3464820	67.4588	ug/L	93
18) allylchloride	4.48	41	2712192	78.0693	ug/L	95
19) methylacetate	4.53	74	186111	38.1674	ug/L	98
20) Methylchlorid	4.64	84	898112	39.3421	ug/L	98
21) tbutylalcohol	4.84	59	3184717	1688.1514	ug/L	96
22) Acrylonitrile	4.94	53	1390285	185.6522	ug/L	98
23) t12dichlorte	5.01	96	867667	41.9768	ug/L	97
24) MtBE	5.05	73	1980757	40.0498	ug/L	96
25) Hexane	5.41	57	2507618	88.2644	ug/L	96
26) 11dichlorota	5.54	63	1513222	40.4426	ug/L	96
27) Vinylacetate	5.63	43	8301202	242.1415	ug/L	86
28) chloroprene	5.67	53	2672902	79.2485	ug/L	96
29) Diisopether	5.69	45	2661467	38.0198	ug/L	94
30) ETBE	6.14	59	2145194	38.0986	ug/L	94
31) 22dichloropr	6.28	77	1142279	38.7900	ug/L	96
32) c12dichlorte	6.27	96	905485	40.2893	ug/L	98
33) 2Butanone	6.29	72	819459	355.0831	ug/L	95
34) propionitrile	6.33	54	1062687	345.3040	ug/L	99
35) Ethylacetate	6.40	88	157633	182.4330	ug/L #	90
36) methacrylonitrile	6.54	67	632344	74.7350	ug/L	96
37) Bromochlorma	6.55	128	401277	41.1347	ug/L	95
38) Tetrahydofur	6.65	42	2153723	340.5904	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL8.D Vial: 12
Acq On : 16 Apr 2021 18:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:28:19 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:28:12 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.66	83	1331284	37.6474 ug/L		95
40)	111trichlota	6.91	97	1237506	41.6290 ug/L		98
42)	Cyclohexane	7.00	56	1540418	44.1123 ug/L		98
43)	Carbtetraclo	7.13	119	1054117	43.7064 ug/L		97
44)	11dicloprope	7.12	110	455416	43.8456 ug/L		95
46)	Benzene	7.36	78	2873259	36.4128 ug/L		93
47)	12dichlorota	7.36	62	1113499	38.7440 ug/L		98
48)	TAME	7.53	73	1953387	39.0571 ug/L		96
49)	trichloroete	8.17	95	902600	42.8553 ug/L		99
50)	methylcyclohexane	8.44	83	1700707	46.1965 ug/L		99
51)	12dicloropra	8.43	63	998238	42.0238 ug/L		99
52)	23Dicl1propene	8.50	75	1355787	42.2506 ug/L		94
53)	Dibromometha	8.57	93	517229	41.5730 ug/L		99
54)	methylmethacrylate	8.60	69	555983	38.8240 ug/L		96
55)	14dioxane	8.62	88	439269	1746.0793 ug/L		97
56)	Bromodiclrma	8.77	83	1087703	40.7990 ug/L		98
57)	2Nitropropane	9.04	43	1956736	380.0952 ug/L		99
58)	2CLEVE	9.16	63	2282384	177.4576 ug/L		91
59)	c13dicloproe	9.35	75	1265967	38.6530 ug/L		97
60)	4Meth2Pentan	9.55	43	4924599	277.7291 ug/L		86
62)	Toluene	9.80	92	1920716	37.5713 ug/L		90
63)	t13Dicloprop	10.06	75	1090986	39.3966 ug/L		97
64)	ethylmethacrylate	10.20	69	1818987	74.9306 ug/L		94
65)	112Triclotha	10.30	83	591946	38.4480 ug/L		99
66)	Tetrachlorte	10.53	166	846221	42.4410 ug/L		99
67)	13Diclorpropa	10.52	76	1235805	38.3794 ug/L		95
69)	2Hexanone	10.64	43	3945174	287.6611 ug/L		90
70)	Clorodibrmta	10.82	129	728245	38.1234 ug/L		98
71)	12Dibrometha	10.97	107	695550	36.3925 ug/L		97
72)	Chlorobenzen	11.66	112	2102873	35.1961 ug/L		96
73)	1Clhexane	11.64	91	1180957	39.0203 ug/L		97
74)	1112Tetclota	11.77	131	774181	40.0035 ug/L		99
75)	Ethylbenzene	11.82	91	3163190	34.6447 ug/L		90
76)	m p-Xylene	11.99	106	2659650	72.9919 ug/L	#	79
77)	o-Xylene	12.53	106	1414990	38.7698 ug/L	#	84
78)	Styrene	12.55	104	2227584	37.4206 ug/L		93
79)	Bromoform	12.78	173	433266	37.9630 ug/L		98
80)	Isopropylben	13.06	105	3046400	35.8605 ug/L		91
81)	cyclohexanone	13.15	55	574619	676.4997 ug/L		96
84)	Bromobenzene	13.47	156	836235	38.2943 ug/L		94
85)	1122Tetrclta	13.44	83	855023	33.8944 ug/L		94
86)	123Triclproa	13.50	75	1101322	35.5984 ug/L		100
87)	14dichloro2butene	13.53	53	276094	36.5093 ug/L		94
88)	n-Propylbenz	13.65	91	3420750	32.5457 ug/L		87
89)	2chlorotolue	13.76	91	2275816	35.7339 ug/L		92
90)	4chlorotolue	13.91	91	2607743	35.9365 ug/L		90
91)	135Trimebenz	13.90	105	2623374	36.6468 ug/L		92
92)	tbutylbenzen	14.37	119	2310587	38.1486 ug/L		96
93)	124Trimetben	14.44	105	2575491	36.4511 ug/L		91
94)	sbutylbenzen	14.69	105	3120056	36.3651 ug/L		90
95)	13Diclorbenz	14.83	146	1480732	36.9938 ug/L		96
96)	pIsopropylto	14.91	119	2741804	37.1867 ug/L		92
97)	14dichlorobe	14.96	146	1519088	36.5803 ug/L		96
98)	12dichlorobe	15.49	146	1394920	35.7519 ug/L		99
99)	nButylbenzen	15.50	91	2535296	35.8632 ug/L		92
100)	12dibromo3cl	16.59	157	152523	35.5604 ug/L		100
101)	135Trichlorobenzene	16.92	180	1076366	39.4092 ug/L		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL8.D Vial: 12
Acq On : 16 Apr 2021 18:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:28:19 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:28:12 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	938743	40.6115	ug/L	99
103) Hexachlorobu	17.97	225	449442	42.2104	ug/L	99
104) Naphthalene	18.03	128	1895504	36.4082	ug/L	96
105) 123Trichlben	18.34	180	841266	39.5019	ug/L	98

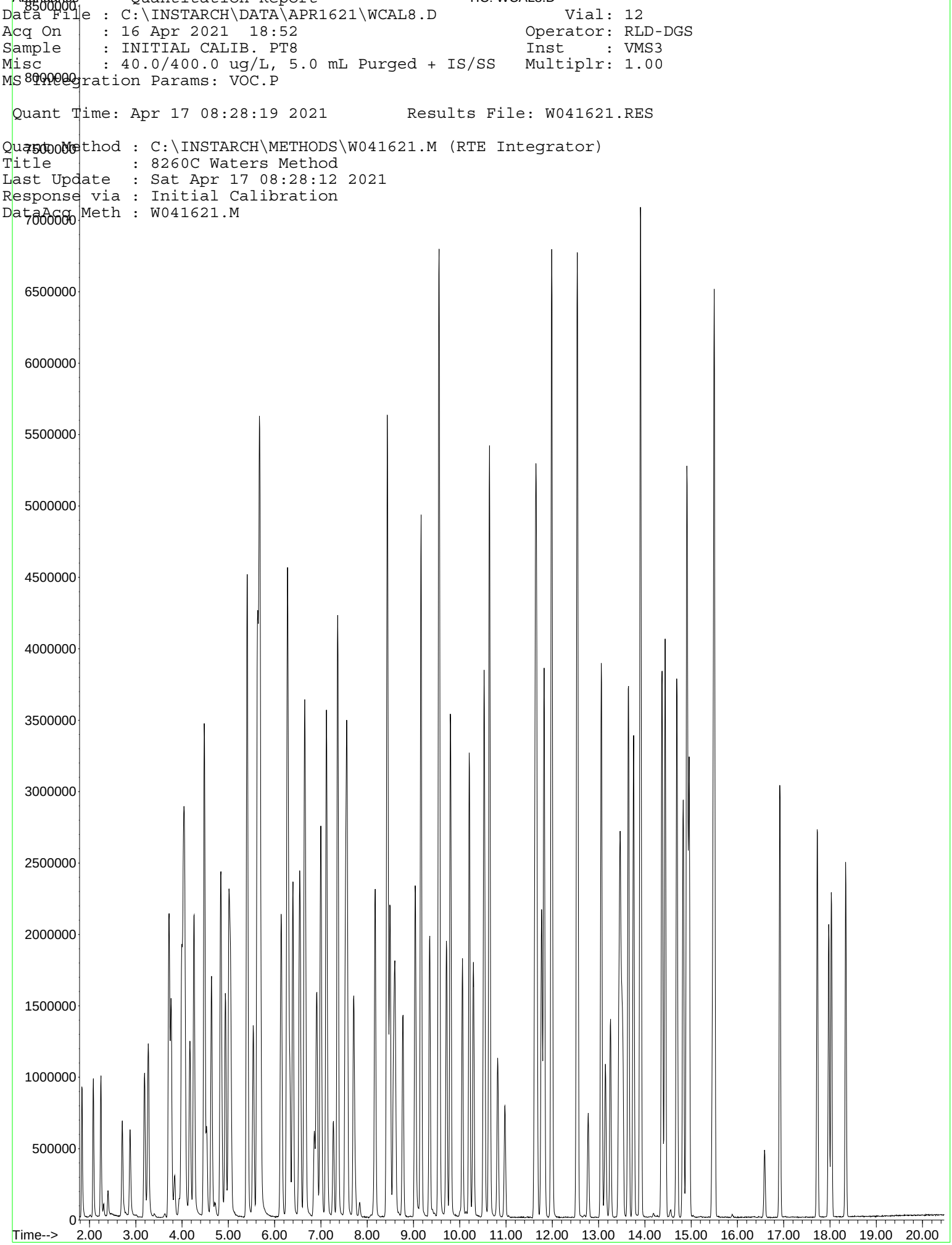
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL8.D

Data File : C:\INSTARCH\DATA\APR1621\WCAL8.D Vial: 12
Acq On : 16 Apr 2021 18:52 Operator: RLD-DGS
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:28:19 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:28:12 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL9.D Vial: 13
Acq On : 16 Apr 2021 19:21 Operator: RLD-DGS
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:28:36 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:28:28 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1588383	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1203210	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	646433	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	408991	19.648	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
45) SURR12DCAd4	7.27	102	113734	19.431	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.72	98	1585428	20.261	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	642765	18.933	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 95 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	1529001	75.2027	ug/L	92
3) Chloromethan	2.08	50	1794990	63.5653	ug/L	95
4) VinylChlorid	2.25	62	1848757	73.7610	ug/L	95
5) Bromomethane	2.70	94	1005029	78.5971	ug/L	99
6) Chloroethane	2.87	64	1212499	72.1725	ug/L	97
7) Dichloroflmethane	3.19	67	2258656	70.7294	ug/L	94
8) Trichlorofma	3.27	101	2253864	74.8855	ug/L	95
9) Ethylether	3.71	59	1366907	76.8625	ug/L	97
10) dichlorotfluoroethan	3.73	67	1679684	77.7725	ug/L	99
11) propyleneoxide	3.76	58	2397135	690.4751	ug/L	94
12) Acrolein	3.84	56	603630	555.0100	ug/L	100
13) 11dichlorthe	3.99	96	1522278	80.5350	ug/L	93
14) Trichlorotfluoroeth	4.04	101	2815051	155.9470	ug/L	94
15) Acetone	4.06	43	3626504	578.0417	ug/L	88
16) Iodomethane	4.17	142	3232843	170.1010	ug/L	91
17) Carbon Dislf	4.26	76	5623913	106.1873	ug/L	86
18) allylchloride	4.48	41	4452677	123.3014	ug/L	89
19) methylacetate	4.53	74	354819	72.4889	ug/L	99
20) Methylchlorid	4.64	84	1682565	71.0657	ug/L	97
21) tbutylalcohol	4.84	59	5243105	2796.2471	ug/L	90
22) Acrylonitrile	4.94	53	2446535	324.4582	ug/L	96
23) t12dichlorte	5.02	96	1579263	74.0135	ug/L	93
24) MtBE	5.05	73	3413181	67.1873	ug/L	91
25) Hexane	5.41	57	4117847	139.2938	ug/L #	91
26) 11dichlorota	5.54	63	2744526	70.6128	ug/L	92
27) Vinylacetate	5.63	43	11371207	325.4650	ug/L	74
28) chloroprene	5.67	53	4584470	132.0657	ug/L	90
29) Diisopether	5.69	45	4687746	64.8347	ug/L	89
30) ETBE	6.14	59	3826958	66.0849	ug/L	88
31) 22dichloropr	6.28	77	2176621	72.0565	ug/L	94
32) c12dichlorte	6.27	96	1705766	73.8663	ug/L	94
33) 2Butanone	6.29	72	1587956	695.0380	ug/L	92
34) propionitrile	6.33	54	2023114	661.6242	ug/L	97
35) Ethylacetate	6.40	88	327200	383.6096	ug/L #	81
36) methacrylonitrile	6.54	67	1231261	145.4127	ug/L	96
37) Bromochlorma	6.56	128	794276	79.2202	ug/L	94
38) Tetrahydofur	6.65	42	3822897	602.5271	ug/L	89

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL9.D Vial: 13
Acq On : 16 Apr 2021 19:21 Operator: RLD-DGS
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:28:36 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:28:28 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.67	83	2469740	68.0716 ug/L		93
40)	111trichlota	6.91	97	2225837	72.7731 ug/L		95
42)	Cyclohexane	7.00	56	2852566	78.7597 ug/L		96
43)	Carbtetraclo	7.13	119	1973701	79.7726 ug/L		94
44)	11dicloprope	7.12	110	857225	79.9469 ug/L	#	88
46)	Benzene	7.36	78	4672021	57.4860 ug/L		85
47)	12dichlorota	7.36	62	2025194	68.5557 ug/L		95
48)	TAME	7.53	73	3529323	68.9241 ug/L		95
49)	trichloroete	8.17	95	1632291	74.8575 ug/L		96
50)	methylcyclohexane	8.44	83	2978191	77.9648 ug/L		96
51)	12dicloropra	8.43	63	1800076	72.7547 ug/L		96
52)	23Dicl1propene	8.50	75	2382008	71.5281 ug/L		90
53)	Dibromometha	8.57	93	941188	73.5152 ug/L		95
54)	methylmethacrylate	8.60	69	1074505	74.5801 ug/L		94
55)	14dioxane	8.61	88	842207	3426.0588 ug/L		98
56)	Bromodiclrma	8.78	83	1926149	69.9633 ug/L		95
57)	2Nitropropane	9.04	43	3536363	696.2350 ug/L		96
58)	2CLEVE	9.16	63	3876816	297.3427 ug/L		84
59)	c13dicloproe	9.35	75	2342656	69.6136 ug/L		93
60)	4Meth2Pentan	9.55	43	7187553	401.1975 ug/L		71
62)	Toluene	9.80	92	3402316	64.9072 ug/L	#	82
63)	t13Dicloprop	10.06	75	2062881	72.7174 ug/L		93
64)	ethylmethacrylate	10.21	69	3258434	132.5772 ug/L		90
65)	112Triclotha	10.30	83	1152382	73.1946 ug/L		97
66)	Tetrachlorte	10.53	166	1616047	79.2728 ug/L		98
67)	13Diclorpropa	10.52	76	2208598	66.7682 ug/L		92
69)	2Hexanone	10.64	43	5981428	455.6725 ug/L		79
70)	Clorodibrmta	10.83	129	1421401	76.7476 ug/L		97
71)	12Dibrometha	10.98	107	1334172	72.2970 ug/L		97
72)	Chlorobenzen	11.66	112	3655085	62.6560 ug/L		92
73)	1Clhexane	11.64	91	2193873	74.0721 ug/L		96
74)	1112Tetclota	11.77	131	1457206	77.1872 ug/L		98
75)	Ethylbenzene	11.82	91	5096812	57.1673 ug/L		79
76)	m p-Xylene	11.99	106	4484312	126.1881 ug/L	#	67
77)	o-Xylene	12.53	106	2565242	71.9541 ug/L	#	75
78)	Styrene	12.55	104	3835757	66.0999 ug/L		86
79)	Bromoform	12.78	173	891548	82.7261 ug/L		98
80)	Isopropylben	13.06	105	4929653	59.5464 ug/L		80
81)	cyclohexanone	13.15	55	1106775	1399.0418 ug/L		95
84)	Bromobenzene	13.47	156	1604383	71.5007 ug/L		92
85)	1122Tetrclta	13.44	83	1583227	61.6279 ug/L		93
86)	123Triclproa	13.50	75	2147488	68.6770 ug/L		98
87)	14dichloro2butene	13.53	53	569538	75.7595 ug/L		91
88)	n-Propylbenz	13.65	91	5366263	49.4176 ug/L		76
89)	2chlorotolue	13.76	91	3886187	58.9649 ug/L		83
90)	4chlorotolue	13.91	91	4358773	58.1133 ug/L		82
91)	135Trimebenz	13.90	105	4412884	59.7285 ug/L		85
92)	tbutylbenzen	14.37	119	3996888	63.9625 ug/L		92
93)	124Trimetben	14.44	105	4332438	59.4111 ug/L		83
94)	sbutylbenzen	14.69	105	5093372	57.4991 ug/L		80
95)	13Diclorbenz	14.83	146	2699887	65.5553 ug/L		93
96)	pIsopropylto	14.91	119	4549462	59.8924 ug/L		84
97)	14dichlorobe	14.96	146	2785205	65.2311 ug/L		93
98)	12dichlorobe	15.50	146	2540653	63.3483 ug/L		96
99)	nButylbenzen	15.50	91	4221895	57.9030 ug/L		85
100)	12dibromo3cl	16.59	157	316951	75.2531 ug/L		100
101)	135Trichlorobenzene	16.92	180	2025386	72.1033 ug/L		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\WCAL9.D Vial: 13
Acq On : 16 Apr 2021 19:21 Operator: RLD-DGS
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:28:36 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:28:28 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

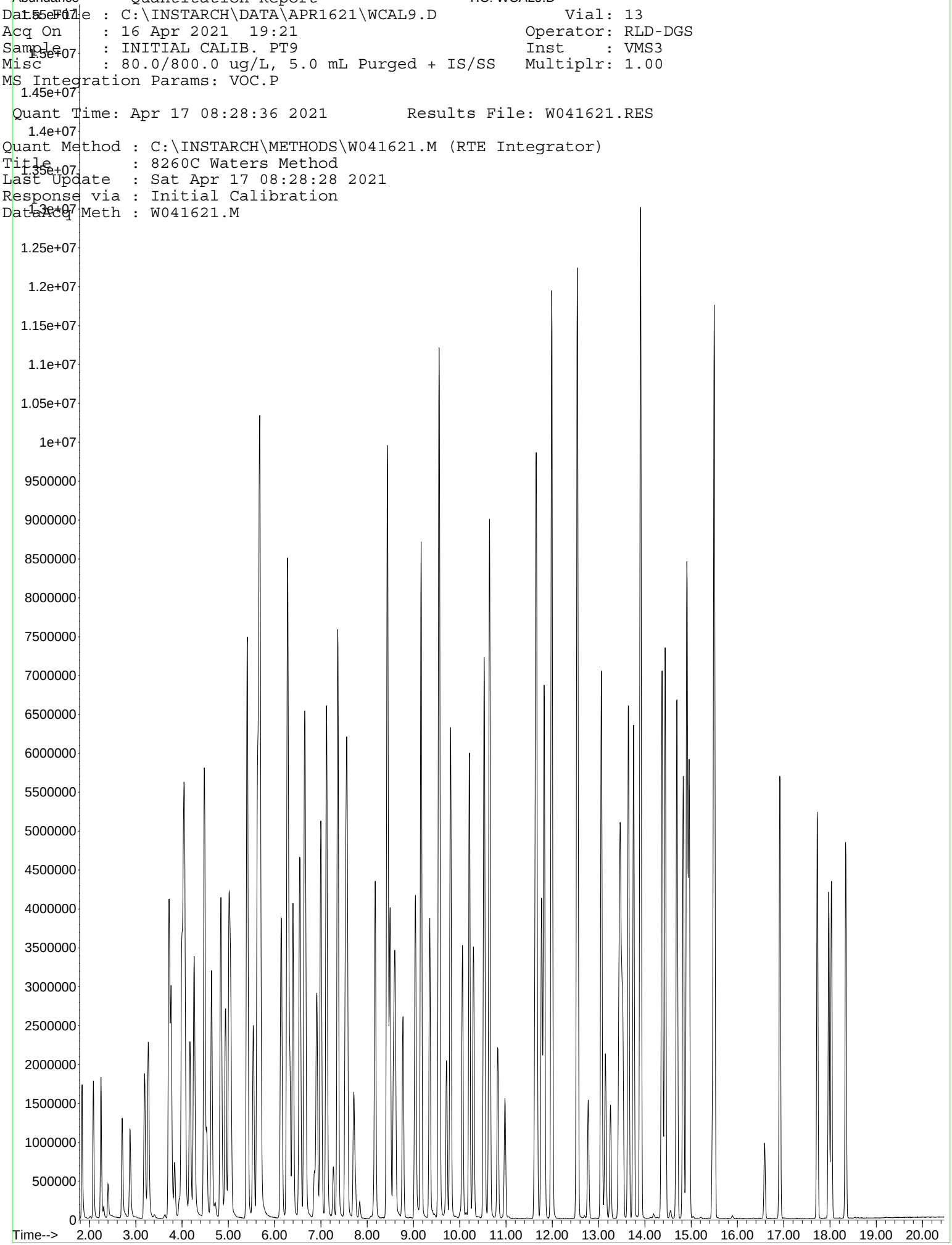
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	1773831	74.5837	ug/L	98
103) Hexachlorobu	17.97	225	877562	79.9981	ug/L	99
104) Naphthalene	18.03	128	3330406	63.2679	ug/L	90
105) 123Trichlben	18.34	180	1600072	73.3387	ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\APR1621\WCAL9.D Vial: 13
Acq On : 16 Apr 2021 19:21 Operator: RLD-DGS
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:28:36 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:28:28 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\Instarch\Data\APR1621\ICV1.D Vial: 15
Acq On : 16 Apr 2021 20:21 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:53:25 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:53:18 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1573633	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1181147	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	597220	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	405965	19.704	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	111306	19.256	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 96 %			
61) SURRd8Tolule	9.71	98	1559262	20.095	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %			
83) SURR4BrFBenz	13.25	95	637760	20.173	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	240979	11.9384	ug/L	97
3) Chloromethan	2.08	50	279441	10.2399	ug/L	99
4) VinylChlorid	2.25	62	274457	10.9856	ug/L	96
5) Bromomethane	2.72	94	153727	11.5523	ug/L	97
6) Chloroethane	2.88	64	160468	9.6509	ug/L	98
7) Dichloroflmethane	3.19	67	356129	11.1506	ug/L	100
8) Trichlorofma	3.28	101	327821	10.9667	ug/L	100
9) Ethylether	3.72	59	172222	9.6868	ug/L	99
10) dichlorotfluoroethan	3.73	67	229221	10.5652	ug/L	99
11) propyleneoxide	3.77	58	335581	99.5111	ug/L	99
12) Acrolein	3.84	56	43294	43.3205	ug/L	99
13) 11dichlorthe	3.99	96	198996	10.5312	ug/L	97
14) Trichlorotfluoroeth	4.04	101	391506	21.7440	ug/L	98
15) Acetone	4.07	43	577918	101.5849	ug/L	98
16) Iodomethane	4.17	142	372485	19.8077	ug/L	100
17) Carbon Dislf	4.26	76	1048059	20.9473	ug/L	100
18) allylchloride	4.49	41	744946	20.6489	ug/L	99
19) methylacetate	4.53	74	44868	9.5297	ug/L	99
20) Methylchlorid	4.64	84	241810	10.2028	ug/L	99
21) tbutylalcohol	4.84	59	956493	508.5236	ug/L	98
22) Acrylonitrile	4.94	53	355162	48.4636	ug/L	96
23) t12dichlorte	5.01	96	223326	10.5306	ug/L	97
24) MtBE	5.05	73	507528	10.1259	ug/L	100
25) Hexane	5.41	57	695354	23.6171	ug/L	98
26) 11dichlorota	5.54	63	402497	10.3419	ug/L	100
27) Vinylacetate	5.63	43	3366182	109.5467	ug/L	99
28) chloroprene	5.67	53	758081	21.9953	ug/L	99
29) Diisopether	5.69	45	710663	9.8708	ug/L	96
30) ETBE	6.14	59	581914	10.1191	ug/L	98
31) 22dichloropr	6.28	77	295559	9.8700	ug/L	98
32) c12dichlorte	6.27	96	239604	10.4509	ug/L	97
33) 2Butanone	6.29	72	218942	99.8819	ug/L	98
34) propionitrile	6.33	54	292654	99.2821	ug/L	99
35) Ethylacetate	6.40	88	39651	48.6460	ug/L	94
36) methacrylonitrile	6.54	67	174991	21.3457	ug/L	96
37) Bromochlorma	6.55	128	105681	10.5988	ug/L	98
38) Tetrahydofur	6.65	42	619886	100.2412	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1621\ICV1.D Vial: 15
Acq On : 16 Apr 2021 20:21 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:53:25 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:53:18 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	376138	10.4556	ug/L	100
40)	111trichlota	6.91	97	324692	10.7271	ug/L	100
42)	Cyclohexane	7.00	56	406512	11.2222	ug/L	99
43)	Carbtetraclo	7.13	119	268763	10.9893	ug/L	99
44)	11dicloprope	7.12	110	112580	10.6007	ug/L	99
46)	Benzene	7.36	78	855967	10.6121	ug/L	100
47)	12dichlorota	7.36	62	300952	10.2919	ug/L	99
48)	TAME	7.54	73	522497	10.3216	ug/L	98
49)	trichloroete	8.17	95	231166	10.6686	ug/L	99
50)	methylcyclohexane	8.44	83	428829	11.2844	ug/L	98
51)	12dicloropra	8.43	63	251801	10.1903	ug/L	99
52)	23Dicl1propene	8.50	75	341095	10.2775	ug/L	98
53)	Dibromometha	8.57	93	128579	10.1933	ug/L	99
54)	methylmethacrylate	8.60	69	138022	9.8540	ug/L	97
55)	14dioxane	8.62	88	109473	471.7339	ug/L	99
56)	Bromodiclrma	8.78	83	283138	10.3740	ug/L	99
57)	2Nitropropane	9.04	43	507549	103.9704	ug/L	100
58)	2CLEVE	9.16	63	688987	53.8352	ug/L	98
59)	c13dicloproe	9.35	75	340713	10.1976	ug/L	100
60)	4Meth2Pentan	9.55	43	1792577	106.3512	ug/L	99
62)	Toluene	9.80	92	552688	10.6289	ug/L	100
63)	t13Dicloprop	10.06	75	292060	10.4072	ug/L	99
64)	ethylmethacrylate	10.20	69	522604	21.6561	ug/L	99
65)	112Triclotha	10.30	83	160571	10.3234	ug/L	98
66)	Tetrachlorte	10.53	166	218327	10.8725	ug/L	98
67)	13Diclorpropa	10.52	76	330968	10.1212	ug/L	99
69)	2Hexanone	10.64	43	1375890	105.4582	ug/L	99
70)	Clorodibrmta	10.82	129	186391	10.3049	ug/L	99
71)	12Dibrometha	10.98	107	186680	10.3957	ug/L	96
72)	Chlorobenzen	11.66	112	623077	10.8695	ug/L	99
73)	1Clhexane	11.65	91	325233	11.1517	ug/L	99
74)	1112Tetclota	11.77	131	195090	10.5325	ug/L	99
75)	Ethylbenzene	11.82	91	992636	11.3210	ug/L	100
76)	m p-Xylene	11.99	106	789384	22.6227	ug/L	96
77)	o-Xylene	12.53	106	386677	11.0427	ug/L	95
78)	Styrene	12.55	104	636201	11.1622	ug/L	98
79)	Bromoform	12.78	173	109725	10.6565	ug/L	99
80)	Isopropylben	13.06	105	941322	11.5839	ug/L	99
81)	cyclohexanone	13.15	55	158845	213.0670	ug/L	97
84)	Bromobenzene	13.47	156	217393	10.4924	ug/L	99
85)	1122Tetrclta	13.44	83	237609	10.1155	ug/L	96
86)	123Triclproa	13.50	75	295983	10.4079	ug/L	99
87)	14dichloro2butene	13.52	53	67724	10.0756	ug/L	99
88)	n-Propylbenz	13.65	91	1119365	11.1576	ug/L	100
89)	2chlorotolue	13.76	91	671548	10.9807	ug/L	98
90)	4chlorotolue	13.91	91	782604	11.2581	ug/L	99
91)	135Trimebenz	13.90	105	789367	11.5327	ug/L	100
92)	tbutylbenzen	14.37	119	679975	11.7479	ug/L	99
93)	124Trimetben	14.44	105	775276	11.4721	ug/L	97
94)	sbutylbenzen	14.69	105	980213	11.9422	ug/L	100
95)	13Diclorbenz	14.83	146	405151	10.6416	ug/L	98
96)	pIsopropylto	14.91	119	830548	11.8122	ug/L	99
97)	14dichlorobe	14.96	146	421882	10.6835	ug/L	99
98)	12dichlorobe	15.50	146	383313	10.3471	ug/L	100
99)	nButylbenzen	15.50	91	784753	11.6278	ug/L	99
100)	12dibromo3cl	16.59	157	39046	10.4623	ug/L	93
101)	135Trichlorobenzene	16.91	180	271537	10.4417	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1621\ICV1.D Vial: 15
Acq On : 16 Apr 2021 20:21 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:53:25 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:53:18 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

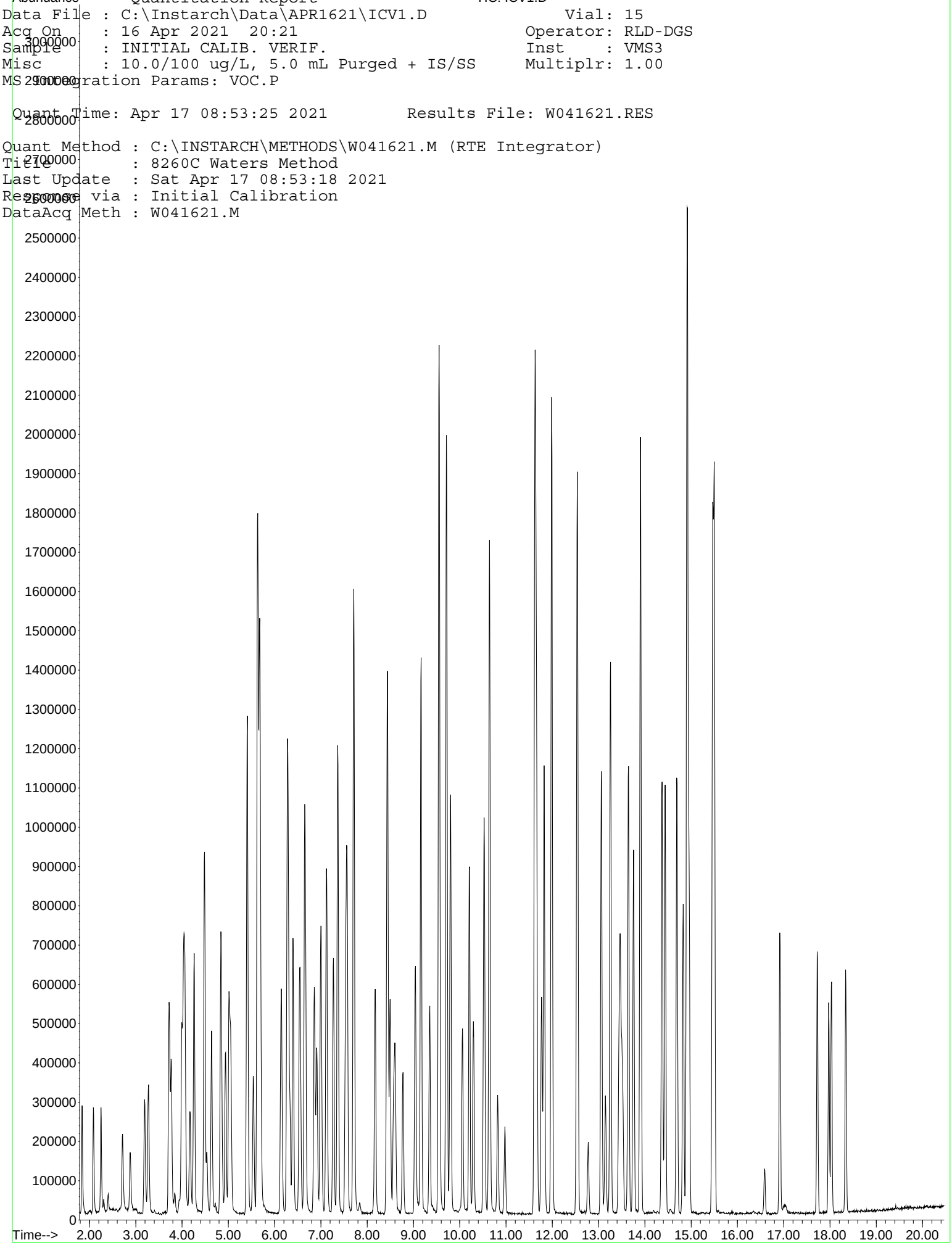
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	234188	10.6647	ug/L	99
103) Hexachlorobu	17.97	225	109604	10.8206	ug/L	99
104) Naphthalene	18.03	128	538595	11.1855	ug/L	100
105) 123Trichlben	18.34	180	216582	10.7795	ug/L	99

(#) = qualifier out of range (m) = manual integration

Data File : C:\Instarch\Data\APR1621\ICV1.D Vial: 15
Acq On : 16 Apr 2021 20:21 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:53:25 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:53:18 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR1621\ICV1.D Vial: 15
Acq On : 16 Apr 2021 20:21 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 17 08:53:25 2021

Quant Method : C:\INSTARCH\METHODS\W041621.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W041621.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	103	0.00
2	PT	Dichlorodi	10.0000	11.9384	-19.38	111	0.00
3	PT	Chloromethan	10.0000	10.2399	-2.40	106	0.00
4	PT	VinylChlorid	10.0000	10.9856	-9.86	107	0.00
5	PT	Bromomethane	10.0000	11.5523	-15.52	122	0.00
6	PT	Chloroethane	10.0000	9.6509	3.49	97	0.00
7	T	Dichloroflmethane	10.0000	11.1506	-11.51	113	0.00
8	PT	Trichlorofma	10.0000	10.9667	-9.67	105	0.00
9	T	Ethylether	10.0000	9.6868	3.13	101	0.00
10	T	dichlorotfluoroethan	10.0000	10.5652	-5.65	106	0.00
11	T	propyleneoxide	100.0000	99.5111	0.49	103	0.00
12	T	Acrolein	50.0000	43.3205	13.36	107	0.00
13	PT	11dichlorthe	10.0000	10.5312	-5.31	105	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.7440	-8.72	105	0.00
15	PT	Acetone	100.0000	101.5849	-1.58	105	0.00
16	T	Iodomethane	20.0000	19.8077	0.96	101	0.00
17	PT	Carbon Dislf	20.0000	20.9473	-4.74	103	0.00
18	T	allylchloride	20.0000	20.6489	-3.24	104	0.00
19	PT	methylacetate	10.0000	9.5297	4.70	114	0.00
20	PT	Methylchlorid	10.0000	10.2028	-2.03	110	0.00
21	T	tbutylalcohol	500.0000	508.5236	-1.70	111	0.00
22	T	Acrylonitrile	50.0000	48.4636	3.07	100	0.00
23	PT	t12dichlorte	10.0000	10.5306	-5.31	109	0.00
24	PT	MtBE	10.0000	10.1259	-1.26	105	0.00
25	T	Hexane	20.0000	23.6171	-18.09	110	0.00
26	PT	11dichlorota	10.0000	10.3419	-3.42	108	0.00
27	T	Vinylacetate	100.0000	109.5467	-9.55	102	0.00
28	T	chloroprene	20.0000	21.9953	-9.98	105	0.00
29	T	Diisopether	10.0000	9.8708	1.29	98	0.00
30	T	ETBE	10.0000	10.1191	-1.19	102	0.00
31	T	22dichloropr	10.0000	9.8700	1.30	103	0.00
32	PT	c12dichlorte	10.0000	10.4509	-4.51	108	0.00
33	PT	2Butanone	100.0000	99.8819	0.12	104	0.00
34	T	propionitrile	100.0000	99.2821	0.72	104	0.00
35	T	Ethylacetate	50.0000	48.6460	2.71	106	0.00
36	T	methacrylonitrile	20.0000	21.3457	-6.73	113	0.00
37	T	Bromochlorma	10.0000	10.5988	-5.99	108	0.00
38	T	Tetrahydofur	100.0000	100.2412	-0.24	105	0.00
39	PT	Chloroform	10.0000	10.4556	-4.56	107	0.00
40	PT	111trichlota	10.0000	10.7271	-7.27	108	0.00
41	S	SURRDibrflma	20.0000	19.7037	1.48	102	0.00
42	PT	Cyclohexane	10.0000	11.2222	-12.22	106	0.00
43	PT	Carbtetraclo	10.0000	10.9893	-9.89	110	0.00
44	T	11dicloprope	10.0000	10.6007	-6.01	108	0.00
45	S	SURR12DCAd4	20.0000	19.2561	3.72	98	0.00
46	PT	Benzene	10.0000	10.6121	-6.12	105	0.00
47	PT	12dichlorota	10.0000	10.2919	-2.92	107	0.00
48	T	TAME	10.0000	10.3216	-3.22	106	0.00

49	PT	trichloroete	10.0000	10.6686	-6.69	109	0.00
50	PT	methylcyclohexane	10.0000	11.2844	-12.84	107	0.00
51	PT	12dicloropra	10.0000	10.1903	-1.90	105	0.00
52	T	23Dicl1propene	10.0000	10.2775	-2.77	106	0.00
53	T	Dibromometha	10.0000	10.1933	-1.93	106	0.00
54	T	methylmethacrylate	10.0000	9.8540	1.46	105	0.00
55	T	14dioxane	500.0000	471.7339	5.65	103	0.00
56	PT	Bromodiclrma	10.0000	10.3740	-3.74	109	0.00
57	T	2Nitropropane	100.0000	103.9704	-3.97	110	0.00
58	T	2CLEVE	50.0000	53.8352	-7.67	106	0.00
59	PT	c13dicloproe	10.0000	10.1976	-1.98	106	0.00
60	PT	4Meth2Pentan	100.0000	106.3512	-6.35	107	0.00
61	S	SURRd8Tolule	20.0000	20.0945	-0.47	102	0.00
62	PT	Toluene	10.0000	10.6289	-6.29	106	0.00
63	PT	t13Dicloprop	10.0000	10.4072	-4.07	108	0.00
64	T	ethylmethacrylate	20.0000	21.6561	-8.28	107	0.00
65	PT	112Triclotha	10.0000	10.3234	-3.23	107	0.00
66	PT	Tetrachlorte	10.0000	10.8725	-8.73	110	0.00
67	T	13Diclorpropa	10.0000	10.1212	-1.21	106	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	102	0.00
69	PT	2Hexanone	100.0000	105.4582	-5.46	110	0.00
70	PT	Clorodibrmta	10.0000	10.3049	-3.05	109	0.00
71	PT	12Dibrometha	10.0000	10.3957	-3.96	108	0.00
72	PT	Chlorobenzen	10.0000	10.8695	-8.70	109	0.00
73	T	1Clhexane	10.0000	11.1517	-11.52	112	0.00
74	T	1112Tetclota	10.0000	10.5325	-5.33	109	0.00
75	PT	Ethylbenzene	10.0000	11.3210	-13.21	109	0.00
76	PT	m p-Xylene	20.0000	22.6227	-13.11	111	0.00
77	PT	o-Xylene	10.0000	11.0427	-10.43	113	0.00
78	PT	Styrene	10.0000	11.1622	-11.62	108	0.00
79	PT	Bromoform	10.0000	10.6565	-6.56	114	0.00
80	PT	Isopropylben	10.0000	11.5839	-15.84	112	0.00
81	T	cyclohexanone	200.0000	213.0670	-6.53	109	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	101	0.00
83	S	SURR4BrFBenz	20.0000	20.1732	-0.87	103	0.00
84	T	Bromobenzene	10.0000	10.4924	-4.92	108	0.00
85	PT	1122Tetrclta	10.0000	10.1155	-1.16	107	0.00
86	T	123Triclproa	10.0000	10.4079	-4.08	109	0.00
87	T	14dichloro2butene	10.0000	10.0756	-0.76	108	-0.01
88	T	n-Propylbenz	10.0000	11.1576	-11.58	111	0.00
89	T	2chlorotolue	10.0000	10.9807	-9.81	109	0.00
90	T	4chlorotolue	10.0000	11.2581	-12.58	109	0.00
91	T	135Trimebenz	10.0000	11.5327	-15.33	111	0.00
92	T	tbutylbenzen	10.0000	11.7479	-17.48	114	0.00
93	T	124Trimetben	10.0000	11.4721	-14.72	111	0.00
94	T	sbutylbenzen	10.0000	11.9422	-19.42	112	0.00
95	PT	13Diclorbenz	10.0000	10.6416	-6.42	108	0.00
96	T	pIsopropylto	10.0000	11.8122	-18.12	114	0.00
97	PT	14dichlorobe	10.0000	10.6835	-6.84	109	0.00
98	PT	12dichlorobe	10.0000	10.3471	-3.47	109	0.00
99	T	nButylbenzen	10.0000	11.6278	-16.28	114	0.00
100	PT	12dibromo3cl	10.0000	10.4623	-4.62	119	0.00
101	T	135Trichlorobenzene	10.0000	10.4417	-4.42	111	0.00
102	PT	124Trichlobe	10.0000	10.6647	-6.65	111	0.00
103	T	Hexachlorobu	10.0000	10.8206	-8.21	114	0.00
104	T	Naphthalene	10.0000	11.1855	-11.85	118	0.00
105	T	123Trichlben	10.0000	10.7795	-7.80	116	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W041621.M Wed Apr 21 10:06:02 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR1621\ICV1.D Vial: 15
Acq On : 16 Apr 2021 20:21 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 17 08:53:25 2021

Quant Method : C:\INSTARCH\METHODS\W041621.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W041621.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	103	0.00
2	PT	Dichlorodi	0.2565	0.3063	-19.42	111	0.00
3	PT	Chloromethan	0.3468	0.3552	-2.42	106	0.00
4	PT	VinylChlorid	0.3175	0.3488	-9.86	107	0.00
5	PT	Bromomethane	0.1691	0.1954	-15.55	122	0.00
6	PT	Chloroethane	0.2113	0.2039	3.50	97	0.00
7	T	Dichloroflmethane	0.4059	0.4526	-11.51	113	0.00
8	PT	Trichlorofma	0.3799	0.4166	-9.66	105	0.00
9	T	Ethylether	0.2260	0.2189	3.14	101	0.00
10	T	dichlorotfluoroethan	0.2757	0.2913	-5.66	106	0.00
11	T	propyleneoxide	0.0429	0.0427	0.47	103	0.00
12	T	Acrolein	0.0127	0.0110#	13.39	107	0.00
13	PT	11dichlorthe	0.2402	0.2529	-5.29	105	0.00
14	PT	Trichlorotfluoroeth	0.2288	0.2488	-8.74	105	0.00
15	PT	Acetone	0.0763	0.0735#	3.67	105	0.00
16	T	Iodomethane	0.2390	0.2367	0.96	101	0.00
17	PT	Carbon Dislf	0.6618	0.6660	-0.63	103	0.00
18	T	allylchloride	0.4585	0.4734	-3.25	104	0.00
19	PT	methylacetate	0.0598	0.0570#	4.68	114	0.00
20	PT	Methylchlorid	0.3012	0.3073	-2.03	110	0.00
21	T	tbutylalcohol	0.0239	0.0243#	-1.67	111	0.00
22	T	Acrylonitrile	0.0931	0.0903	3.01	100	0.00
23	PT	t12dichlorte	0.2695	0.2838	-5.31	109	0.00
24	PT	MtBE	0.6370	0.6450	-1.26	105	0.00
25	T	Hexane	0.3742	0.4419	-18.09	110	0.00
26	PT	11dichlorota	0.4946	0.5116	-3.44	108	0.00
27	T	Vinylacetate	0.4399	0.4278	2.75	102	0.00
28	T	chloroprene	0.4380	0.4817	-9.98	105	0.00
29	T	Diisopether	0.9150	0.9032	1.29	98	0.00
30	T	ETBE	0.7309	0.7396	-1.19	102	0.00
31	T	22dichloropr	0.3806	0.3756	1.31	103	0.00
32	PT	c12dichlorte	0.2914	0.3045	-4.50	108	0.00
33	PT	2Butanone	0.0279	0.0278#	0.36	104	0.00
34	T	propionitrile	0.0375	0.0372	0.80	104	0.00
35	T	Ethylacetate	0.0104	0.0101#	2.88	106	0.00
36	T	methacrylonitrile	0.1042	0.1112	-6.72	113	0.00
37	T	Bromochlorma	0.1267	0.1343	-6.00	108	0.00
38	T	Tetrahydofur	0.0786	0.0788	-0.25	105	0.00
39	PT	Chloroform	0.4572	0.4781	-4.57	107	0.00
40	PT	111trichlota	0.3847	0.4127	-7.28	108	0.00
41	S	SURRDibrflma	0.2619	0.2580	1.49	102	0.00
42	PT	Cyclohexane	0.4604	0.5167	-12.23	106	0.00
43	PT	Carbtetraclo	0.3108	0.3416	-9.91	110	0.00
44	T	11dicloprope	0.1350	0.1431	-6.00	108	0.00
45	S	SURR12DCAd4	0.0735	0.0707	3.81	98	0.00
46	PT	Benzene	1.0251	1.0879	-6.13	105	0.00
47	PT	12dichlorota	0.3716	0.3825	-2.93	107	0.00
48	T	TAME	0.6434	0.6641	-3.22	106	0.00

49	PT	trichloroete	0.2754	0.2938	-6.68	109	0.00
50	PT	methylcyclohexane	0.4830	0.5450	-12.84	107	0.00
51	PT	12dicloropra	0.3140	0.3200	-1.91	105	0.00
52	T	23Dicl1propene	0.4218	0.4335	-2.77	106	0.00
53	T	Dibromometha	0.1603	0.1634	-1.93	106	0.00
54	T	methylmethacrylate	0.1780	0.1754	1.46	105	0.00
55	T	14dioxane	0.0029	0.0028#	3.45	103	0.00
56	PT	Bromodiclrma	0.3469	0.3599	-3.75	109	0.00
57	T	2Nitropropane	0.0620	0.0645	-4.03	110	0.00
58	T	2CLEVE	0.1627	0.1751	-7.62	106	0.00
59	PT	c13dicloproe	0.4246	0.4330	-1.98	106	0.00
60	PT	4Meth2Pentan	0.2256	0.2278	-0.98	107	0.00
61	S	SURRd8Tolule	0.9862	0.9909	-0.48	102	0.00
62	PT	Toluene	0.6609	0.7024	-6.28	106	0.00
63	PT	t13Dicloprop	0.3567	0.3712	-4.07	108	0.00
64	T	ethylmethacrylate	0.3067	0.3321	-8.28	107	0.00
65	PT	112Triclotha	0.1977	0.2041	-3.24	107	0.00
66	PT	Tetrachlorte	0.2552	0.2775	-8.74	110	0.00
67	T	13Diclorpropa	0.4156	0.4206	-1.20	106	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	102	0.00
69	PT	2Hexanone	0.2182	0.2330	-6.78	110	0.00
70	PT	Clorodibrmta	0.3063	0.3156	-3.04	109	0.00
71	PT	12Dibrometha	0.3041	0.3161	-3.95	108	0.00
72	PT	Chlorobenzen	0.9706	1.0550	-8.70	109	0.00
73	T	1Clhexane	0.4938	0.5507	-11.52	112	0.00
74	T	1112Tetclota	0.3136	0.3303	-5.33	109	0.00
75	PT	Ethylbenzene	1.4847	1.6808	-13.21	109	0.00
76	PT	m p-Xylene	0.5908	0.6683	-13.12	111	0.00
77	PT	o-Xylene	0.5929	0.6547	-10.42	113	0.00
78	PT	Styrene	0.9651	1.0773	-11.63	108	0.00
79	PT	Bromoform	0.1743	0.1858	-6.60	114	0.00
80	PT	Isopropylben	1.3760	1.5939	-15.84	112	0.00
81	T	cyclohexanone	0.0126	0.0134#	-6.35	109	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	101	0.00
83	S	SURR4BrFBenz	1.0587	1.0679	-0.87	103	0.00
84	T	Bromobenzene	0.6939	0.7280	-4.91	108	0.00
85	PT	1122Tetrclta	0.7866	0.7957	-1.16	107	0.00
86	T	123Triclproa	0.9524	0.9912	-4.07	109	0.00
87	T	14dichloro2butene	0.2251	0.2268	-0.76	108	-0.01
88	T	n-Propylbenz	3.3597	3.7486	-11.58	111	0.00
89	T	2chlorotolue	2.0481	2.2489	-9.80	109	0.00
90	T	4chlorotolue	2.3279	2.6208	-12.58	109	0.00
91	T	135Trimebenz	2.2922	2.6435	-15.33	111	0.00
92	T	tbutylbenzen	1.9383	2.2771	-17.48	114	0.00
93	T	124Trimetben	2.2631	2.5963	-14.72	111	0.00
94	T	sbutylbenzen	2.7487	3.2826	-19.42	112	0.00
95	PT	13Diclorbenz	1.2750	1.3568	-6.42	108	0.00
96	T	pIsopropylto	2.3547	2.7814	-18.12	114	0.00
97	PT	14dichlorobe	1.3224	1.4128	-6.84	109	0.00
98	PT	12dichlorobe	1.2406	1.2837	-3.47	109	0.00
99	T	nButylbenzen	2.2601	2.6280	-16.28	114	0.00
100	PT	12dibromo3cl	0.1250	0.1308	-4.64	119	0.00
101	T	135Trichlorobenzene	0.8709	0.9093	-4.41	111	0.00
102	PT	124Trichlobe	0.7354	0.7843	-6.65	111	0.00
103	T	Hexachlorobu	0.3392	0.3670	-8.20	114	0.00
104	T	Naphthalene	1.6125	1.8037	-11.86	118	0.00
105	T	123Trichlben	0.6729	0.7253	-7.79	116	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W041621.M Wed Apr 21 10:05:30 2021

Quantitation Report

Data File : C:\Instarch\Data\APR1621\ICV2.D Vial: 16
Acq On : 16 Apr 2021 20:50 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:54:46 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:54:36 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1602536	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1207596	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	614785	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	420831	20.057	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
45) SURR12DCAd4	7.27	102	118869	20.194	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %			
61) SURRd8Tolule	9.71	98	1515957	19.184	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 96 %			
83) SURR4BrFBenz	13.26	95	639462	19.649	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	680147	33.0877	ug/L	96
3) Chloromethan	2.08	50	784042	28.2123	ug/L	100
4) VinylChlorid	2.25	62	786089	30.8971	ug/L	99
5) Bromomethane	2.71	94	418486	30.8813	ug/L	100
6) Chloroethane	2.88	64	472706	27.9169	ug/L	100
7) Dichloroflmethane	3.19	67	1008365	31.0029	ug/L	98
8) Trichlorofma	3.27	101	949377	31.1869	ug/L	98
9) Ethylether	3.71	59	519478	28.6915	ug/L	99
10) dichlorotfluoroethan	3.73	67	674025	30.5066	ug/L	99
11) propyleneoxide	3.77	58	947831	275.9948	ug/L	96
12) Acrolein	3.84	56	151610	148.9668	ug/L	99
13) 11dichlorthe	3.99	96	590407	30.6819	ug/L	99
14) Trichlorotfluoroeth	4.04	101	1138746	62.1046	ug/L	98
15) Acetone	4.06	43	1556990	289.1148	ug/L	96
16) Iodomethane	4.17	142	1247994	65.1677	ug/L	98
17) Carbon Dislf	4.26	76	2704111	58.9600	ug/L	96
18) allylchloride	4.48	41	2069502	56.3292	ug/L	96
19) methylacetate	4.53	74	130585	27.2352	ug/L	98
20) Methylchlorid	4.64	84	689255	28.5575	ug/L	99
21) tbutylalcohol	4.84	59	2512193	1311.5293	ug/L	98
22) Acrylonitrile	4.94	53	1023419	137.1318	ug/L	96
23) t12dichlorte	5.02	96	657779	30.4570	ug/L	98
24) MtBE	5.05	73	1467948	28.7594	ug/L	98
25) Hexane	5.41	57	1931859	64.4306	ug/L	98
26) 11dichlorota	5.54	63	1158153	29.2212	ug/L	97
27) Vinylacetate	5.63	43	6731621	266.8080	ug/L	92
28) chloroprene	5.67	53	2032674	57.9133	ug/L	97
29) Diisopether	5.69	45	1991800	27.1663	ug/L	97
30) ETBE	6.14	59	1704495	29.1056	ug/L	95
31) 22dichloropr	6.28	77	876724	28.7495	ug/L	97
32) c12dichlorte	6.27	96	716263	30.6782	ug/L	97
33) 2Butanone	6.29	72	619148	277.3625	ug/L	95
34) propionitrile	6.33	54	799299	266.2696	ug/L	99
35) Ethylacetate	6.40	88	115779	139.4820	ug/L #	90
36) methacrylonitrile	6.54	67	490684	58.7750	ug/L	99
37) Bromochlorma	6.56	128	307535	30.2866	ug/L	97
38) Tetrahydofur	6.65	42	1655629	262.9015	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1621\ICV2.D Vial: 16
Acq On : 16 Apr 2021 20:50 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:54:46 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:54:36 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.67	83	1057220	28.8577 ug/L		97
40)	111trichlota	6.91	97	949693	30.8099 ug/L		99
42)	Cyclohexane	7.00	56	1218538	33.0323 ug/L		98
43)	Carbtetraclo	7.13	119	802004	32.2011 ug/L		98
44)	11dicloprope	7.12	110	346344	32.0242 ug/L		96
46)	Benzene	7.36	78	2342055	28.5125 ug/L		95
47)	12dichlorota	7.36	62	869851	29.2104 ug/L		98
48)	TAME	7.54	73	1524925	29.5806 ug/L		96
49)	trichloroete	8.17	95	691568	31.3410 ug/L		99
50)	methylcyclohexane	8.44	83	1277110	33.0003 ug/L		99
51)	12dicloropra	8.43	63	747917	29.7220 ug/L		98
52)	23Dicl1propene	8.50	75	1004124	29.7095 ug/L		95
53)	Dibromometha	8.57	93	387691	30.1805 ug/L		98
54)	methylmethacrylate	8.60	69	432181	30.2989 ug/L		97
55)	14dioxane	8.62	88	332312	1406.1504 ug/L		99
56)	Bromodiclrma	8.77	83	823823	29.6401 ug/L		98
57)	2Nitropropane	9.04	43	1491345	299.9892 ug/L		99
58)	2CLEVE	9.16	63	1826186	140.1185 ug/L		94
59)	c13dicloproe	9.35	75	1017333	29.8997 ug/L		98
60)	4Meth2Pentan	9.55	43	4040503	284.0345 ug/L		90
62)	Toluene	9.80	92	1492817	28.1911 ug/L		94
63)	t13Dicloprop	10.06	75	877931	30.7197 ug/L		98
64)	ethylmethacrylate	10.20	69	1405255	57.1819 ug/L		95
65)	112Triclotha	10.30	83	462249	29.1827 ug/L		97
66)	Tetrachlorte	10.53	166	651234	31.8459 ug/L		98
67)	13Diclorpropa	10.52	76	971159	29.1631 ug/L		97
69)	2Hexanone	10.64	43	3179135	290.3766 ug/L		93
70)	Clorodibrmta	10.83	129	571639	30.9118 ug/L		99
71)	12Dibrometha	10.98	107	561625	30.5902 ug/L		97
72)	Chlorobenzen	11.66	112	1695271	28.9260 ug/L		97
73)	1Clhexane	11.65	91	932930	31.2881 ug/L		97
74)	1112Tetclota	11.77	131	588957	31.1002 ug/L		99
75)	Ethylbenzene	11.82	91	2610996	29.1262 ug/L		93
76)	m p-Xylene	11.99	106	2117411	59.3532 ug/L	#	83
77)	o-Xylene	12.53	106	1089966	30.4455 ug/L		89
78)	Styrene	12.55	104	1727165	29.6395 ug/L		94
79)	Bromoform	12.78	173	332278	31.5640 ug/L		98
80)	Isopropylben	13.06	105	2468454	29.7115 ug/L		93
81)	cyclohexanone	13.15	55	413326	542.2725 ug/L		98
84)	Bromobenzene	13.47	156	654561	30.6896 ug/L		97
85)	1122Tetrclta	13.44	83	679722	28.1103 ug/L		94
86)	123Triclproa	13.50	75	886159	30.2705 ug/L		100
87)	14dichloro2butene	13.53	53	200623	28.9947 ug/L		91
88)	n-Propylbenz	13.64	91	2825243	27.3568 ug/L		92
89)	2chlorotolue	13.76	91	1791432	28.4553 ug/L		93
90)	4chlorotolue	13.91	91	2056268	28.7352 ug/L		93
91)	135Trimebenz	13.90	105	2084038	29.5779 ug/L		93
92)	tbutylbenzen	14.37	119	1851538	31.0751 ug/L		98
93)	124Trimetben	14.44	105	2032645	29.2186 ug/L		92
94)	sbutylbenzen	14.69	105	2548460	30.1615 ug/L		94
95)	13Diclorbenz	14.83	146	1155190	29.4749 ug/L		98
96)	pIsopropylto	14.91	119	2167102	29.9403 ug/L		95
97)	14dichlorobe	14.96	146	1172504	28.8436 ug/L		97
98)	12dichlorobe	15.50	146	1091266	28.6159 ug/L		99
99)	nButylbenzen	15.50	91	2035426	29.2975 ug/L		95
100)	12dibromo3cl	16.59	157	110611	28.7912 ug/L		99
101)	135Trichlorobenzene	16.92	180	803051	29.9981 ug/L		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1621\ICV2.D Vial: 16
Acq On : 16 Apr 2021 20:50 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:54:46 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:54:36 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

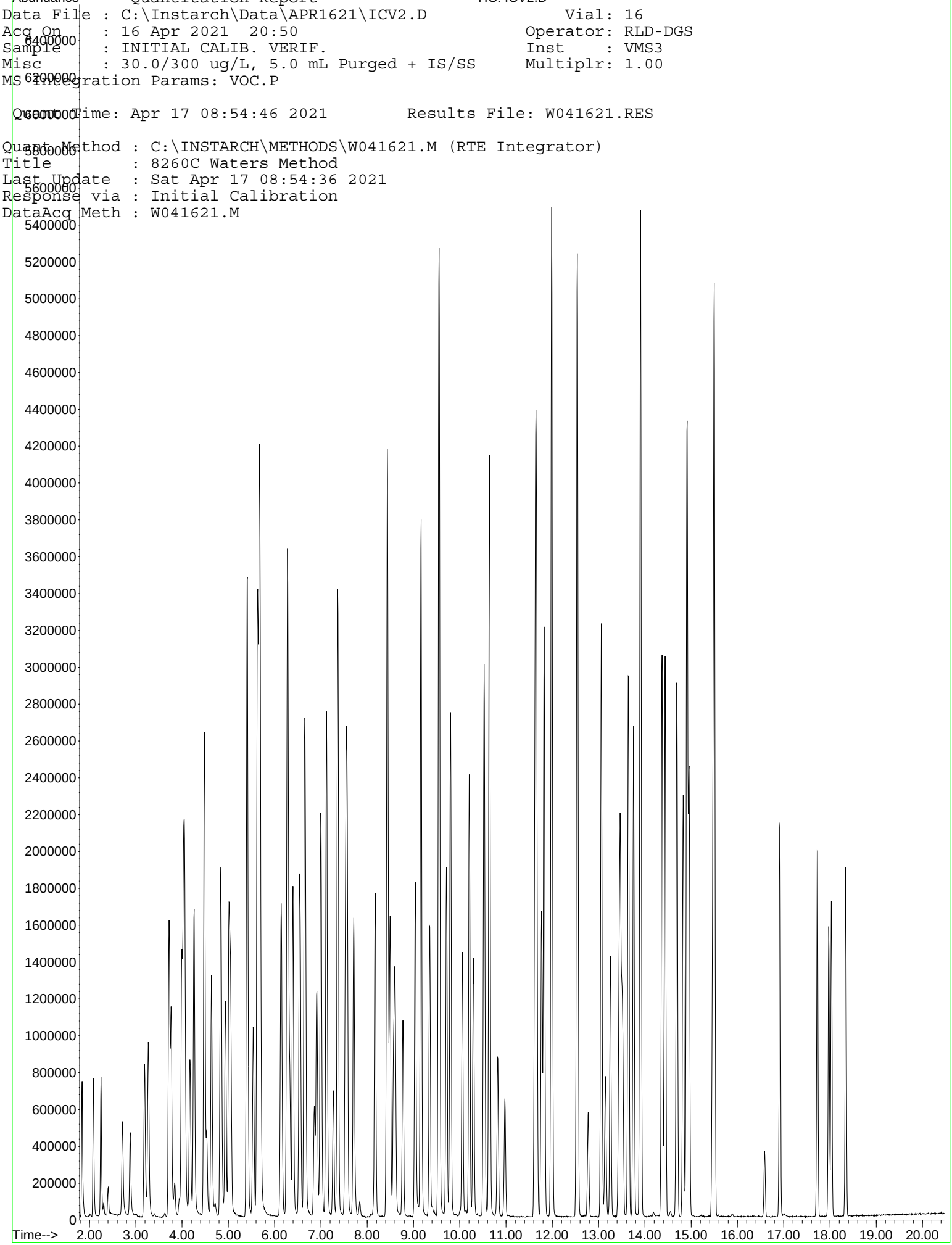
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	704835	31.1804	ug/L	98
103) Hexachlorobu	17.97	225	335932	32.2172	ug/L	99
104) Naphthalene	18.03	128	1465947	29.5749	ug/L	97
105) 123Trichlben	18.34	180	637252	30.8105	ug/L	99

(#) = qualifier out of range (m) = manual integration

Data File : C:\Instarch\Data\APR1621\ICV2.D Vial: 16
Acq On : 16 Apr 2021 20:50 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:54:46 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:54:36 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR1621\ICV2.D Vial: 16
Acq On : 16 Apr 2021 20:50 Operator: RLD-DGS
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 17 08:54:46 2021

Quant Method : C:\INSTARCH\METHODS\W041621.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W041621.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	99	0.00
2	PT	Dichlorodi	30.0000	33.0877	-10.29	111	0.00
3	PT	Chloromethan	30.0000	28.2123	5.96	107	0.00
4	PT	VinylChlorid	30.0000	30.8971	-2.99	106	0.00
5	PT	Bromomethane	30.0000	30.8813	-2.94	112	0.00
6	PT	Chloroethane	30.0000	27.9169	6.94	98	0.00
7	T	Dichloroflmethane	30.0000	31.0029	-3.34	111	0.00
8	PT	Trichlorofma	30.0000	31.1869	-3.96	105	0.00
9	T	Ethylether	30.0000	28.6915	4.36	98	0.00
10	T	dichlorotfluoroethan	30.0000	30.5066	-1.69	104	0.00
11	T	propyleneoxide	300.0000	275.9948	8.00	97	0.00
12	T	Acrolein	150.0000	148.9668	0.69	91	0.00
13	PT	11dichlorthe	30.0000	30.6819	-2.27	103	0.00
14	PT	Trichlorotfluoroeth	60.0000	62.1046	-3.51	103	0.00
15	PT	Acetone	300.0000	289.1148	3.63	99	0.00
16	T	Iodomethane	60.0000	65.1677	-8.61	99	0.00
17	PT	Carbon Dislf	60.0000	58.9600	1.73	102	0.00
18	T	allylchloride	60.0000	56.3292	6.12	100	0.00
19	PT	methylacetate	30.0000	27.2352	9.22	93	0.00
20	PT	Methylchlorid	30.0000	28.5575	4.81	105	0.00
21	T	tbutylalcohol	1500.0000	1311.5293	12.56	99	0.00
22	T	Acrylonitrile	150.0000	137.1318	8.58	96	0.00
23	PT	t12dichlorte	30.0000	30.4570	-1.52	105	0.00
24	PT	MtBE	30.0000	28.7594	4.14	99	0.00
25	T	Hexane	60.0000	64.4306	-7.38	103	0.00
26	PT	11dichlorota	30.0000	29.2212	2.60	102	0.00
27	T	Vinylacetate	300.0000	266.8080	11.06	97	0.00
28	T	chloroprene	60.0000	57.9133	3.48	102	0.00
29	T	Diisopether	30.0000	27.1663	9.45	100	0.00
30	T	ETBE	30.0000	29.1056	2.98	101	0.00
31	T	22dichloropr	30.0000	28.7495	4.17	102	0.00
32	PT	c12dichlorte	30.0000	30.6782	-2.26	104	0.00
33	PT	2Butanone	300.0000	277.3625	7.55	98	0.00
34	T	propionitrile	300.0000	266.2696	11.24	99	0.00
35	T	Ethylacetate	150.0000	139.4820	7.01	100	0.00
36	T	methacrylonitrile	60.0000	58.7750	2.04	102	0.00
37	T	Bromochlorma	30.0000	30.2866	-0.96	106	0.00
38	T	Tetrahydofur	300.0000	262.9015	12.37	100	0.00
39	PT	Chloroform	30.0000	28.8577	3.81	107	0.00
40	PT	111trichlota	30.0000	30.8099	-2.70	104	0.00
41	S	SURRDibrflma	20.0000	20.0568	-0.28	100	0.00
42	PT	Cyclohexane	30.0000	33.0323	-10.11	102	0.00
43	PT	Carbtetraclo	30.0000	32.2011	-7.34	105	0.00
44	T	11dicloprope	30.0000	32.0242	-6.75	105	0.00
45	S	SURR12DCAd4	20.0000	20.1936	-0.97	103	0.00
46	PT	Benzene	30.0000	28.5125	4.96	103	0.00
47	PT	12dichlorota	30.0000	29.2104	2.63	102	0.00
48	T	TAME	30.0000	29.5806	1.40	101	0.00

49	PT	trichloroete	30.0000	31.3410	-4.47	105	0.00
50	PT	methylcyclohexane	30.0000	33.0003	-10.00	103	0.00
51	PT	12dicloropra	30.0000	29.7220	0.93	102	0.00
52	T	23Dicl1propene	30.0000	29.7095	0.97	100	0.00
53	T	Dibromometha	30.0000	30.1805	-0.60	102	0.00
54	T	methylmethacrylate	30.0000	30.2989	-1.00	102	0.00
55	T	14dioxane	1500.0000	1406.1504	6.26	97	0.00
56	PT	Bromodiclrma	30.0000	29.6401	1.20	103	0.00
57	T	2Nitropropane	300.0000	299.9892	0.00	99	0.00
58	T	2CLEVE	150.0000	140.1185	6.59	100	0.00
59	PT	c13dicloproe	30.0000	29.8997	0.33	101	0.00
60	PT	4Meth2Pentan	300.0000	284.0345	5.32	99	0.00
61	S	SURRd8Tolule	20.0000	19.1841	4.08	100	0.00
62	PT	Toluene	30.0000	28.1911	6.03	104	0.00
63	PT	t13Dicloprop	30.0000	30.7197	-2.40	103	0.00
64	T	ethylmethacrylate	60.0000	57.1819	4.70	101	0.00
65	PT	112Triclotha	30.0000	29.1827	2.72	101	0.00
66	PT	Tetrachlorte	30.0000	31.8459	-6.15	104	0.00
67	T	13Diclorpropa	30.0000	29.1631	2.79	103	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	100	0.00
69	PT	2Hexanone	300.0000	290.3766	3.21	99	0.00
70	PT	Clorodibrmta	30.0000	30.9118	-3.04	105	0.00
71	PT	12Dibrometha	30.0000	30.5902	-1.97	104	0.00
72	PT	Chlorobenzen	30.0000	28.9260	3.58	103	0.00
73	T	1Clhexane	30.0000	31.2881	-4.29	103	0.00
74	T	1112Tetclota	30.0000	31.1002	-3.67	105	0.00
75	PT	Ethylbenzene	30.0000	29.1262	2.91	104	0.00
76	PT	m p-Xylene	60.0000	59.3532	1.08	104	0.00
77	PT	o-Xylene	30.0000	30.4455	-1.48	104	0.00
78	PT	Styrene	30.0000	29.6395	1.20	103	0.00
79	PT	Bromoform	30.0000	31.5640	-5.21	104	0.00
80	PT	Isopropylben	30.0000	29.7115	0.96	103	0.00
81	T	cyclohexanone	600.0000	542.2725	9.62	93	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	101	0.00
83	S	SURR4BrFBenz	20.0000	19.6491	1.75	98	0.00
84	T	Bromobenzene	30.0000	30.6896	-2.30	105	0.00
85	PT	1122Tetrclta	30.0000	28.1103	6.30	99	0.00
86	T	123Triclproa	30.0000	30.2705	-0.90	102	0.00
87	T	14dichloro2butene	30.0000	28.9947	3.35	95	0.00
88	T	n-Propylbenz	30.0000	27.3568	8.81	104	0.00
89	T	2chlorotolue	30.0000	28.4553	5.15	101	0.00
90	T	4chlorotolue	30.0000	28.7352	4.22	102	0.00
91	T	135Trimebenz	30.0000	29.5779	1.41	104	0.00
92	T	tbutylbenzen	30.0000	31.0751	-3.58	104	0.00
93	T	124Trimetben	30.0000	29.2186	2.60	103	0.00
94	T	sbutylbenzen	30.0000	30.1615	-0.54	105	0.00
95	PT	13Diclorbenz	30.0000	29.4749	1.75	102	0.00
96	T	pIsopropylto	30.0000	29.9403	0.20	104	0.00
97	PT	14dichlorobe	30.0000	28.8436	3.85	105	0.00
98	PT	12dichlorobe	30.0000	28.6159	4.61	104	0.00
99	T	nButylbenzen	30.0000	29.2975	2.34	104	0.00
100	PT	12dibromo3cl	30.0000	28.7912	4.03	97	0.00
101	T	135Trichlorobenzene	30.0000	29.9981	0.01	102	0.00
102	PT	124Trichlobe	30.0000	31.1804	-3.93	104	0.00
103	T	Hexachlorobu	30.0000	32.2172	-7.39	110	0.00
104	T	Naphthalene	30.0000	29.5749	1.42	102	0.00
105	T	123Trichlben	30.0000	30.8105	-2.70	105	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W041621.M Wed Apr 21 10:06:48 2021

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\ICB1.D Vial: 18
Acq On : 16 Apr 2021 21:50 Operator: RLD-DGS
Sample : 180726,ICB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:56:14 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:54:36 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1483183	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1124871	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	546075	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	389736	20.070	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
45) SURR12DCAd4	7.27	102	105755	19.411	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.71	98	1470388	20.105	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	592831	20.508	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	2.08	50	3956	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.06	43	24247	N.D.		
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	14978	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.85	59	14568	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	5.63	43	3837	Below	Cal #	70
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\ICB1.D Vial: 18
Acq On : 16 Apr 2021 21:50 Operator: RLD-DGS
Sample : 180726,ICB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:56:14 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:54:36 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	0.00	83	0	N.D.			
40)	111trichlota	0.00	97	0	N.D.			
42)	Cyclohexane	0.00	56	0	N.D.			
43)	Carbtetraclo	0.00	119	0	N.D.			
44)	11dicloprope	0.00	110	0	N.D.			
46)	Benzene	0.00	78	0	N.D.			
47)	12dichlorota	0.00	62	0	N.D.			
48)	TAME	0.00	73	0	N.D.			
49)	trichloroete	0.00	95	0	N.D.			
50)	methylcyclohexane	0.00	83	0	N.D.			
51)	12dicloropra	0.00	63	0	N.D.			
52)	23Dicl1propene	0.00	75	0	N.D.			
53)	Dibromometha	0.00	93	0	N.D.			
54)	methylmethacrylate	0.00	69	0	N.D.			
55)	14dioxane	0.00	88	0	N.D.			
56)	Bromodiclrma	0.00	83	0	N.D.			
57)	2Nitropropane	9.03	43	7958	1.7296	ug/L	#	82
58)	2CLEVE	0.00	63	0	N.D.			
59)	c13dicloproe	0.00	75	0	N.D.			
60)	4Meth2Pentan	9.56	43	18328	Below	Cal		88
62)	Toluene	0.00	92	0	N.D.			
63)	t13Dicloprop	0.00	75	0	N.D.			
64)	ethylmethacrylate	0.00	69	0	N.D.			
65)	112Triclotha	0.00	83	0	N.D.			
66)	Tetrachlorte	0.00	166	0	N.D.			
67)	13Diclorpropa	0.00	76	0	N.D.			
69)	2Hexanone	10.64	43	21645	Below	Cal		88
70)	Clorodibrmta	0.00	129	0	N.D.			
71)	12Dibrometha	0.00	107	0	N.D.			
72)	Chlorobenzen	11.66	112	2740	N.D.			
73)	1Clhexane	11.64	91	6172	N.D.			
74)	1112Tetclota	0.00	131	0	N.D.			
75)	Ethylbenzene	11.82	91	5764	N.D.			
76)	m p-Xylene	11.99	106	4612	N.D.			
77)	o-Xylene	0.00	106	0	N.D.			
78)	Styrene	0.00	104	0	N.D.			
79)	Bromoform	0.00	173	0	N.D.			
80)	Isopropylben	13.06	105	11454	N.D.			
81)	cyclohexanone	13.15	55	5999	8.4493	ug/L	#	42
84)	Bromobenzene	0.00	156	0	N.D.			
85)	1122Tetrclta	0.00	83	0	N.D.			
86)	123Triclproa	0.00	75	0	N.D.			
87)	14dichloro2butene	0.00	53	0	N.D.			
88)	n-Propylbenz	13.65	91	15293	N.D.			
89)	2chlorotolue	13.75	91	4022	N.D.			
90)	4chlorotolue	13.91	91	4597	N.D.			
91)	135Trimebenz	13.90	105	8911	N.D.			
92)	tbutylbenzen	14.38	119	10780	N.D.			
93)	124Trimetben	14.44	105	7582	N.D.			
94)	sbutylbenzen	14.69	105	21382	N.D.			
95)	13Diclorbenz	0.00	146	0	N.D.			
96)	pIsopropylto	14.90	119	18994	N.D.			
97)	14dichlorobe	0.00	146	0	N.D.			
98)	12dichlorobe	15.50	146	2794	N.D.			
99)	nButylbenzen	15.50	91	22327	0.3618	ug/L		94
100)	12dibromo3cl	0.00	157	0	N.D.			
101)	135Trichlorobenzene	16.92	180	3470	N.D.			

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1621\ICB1.D Vial: 18
Acq On : 16 Apr 2021 21:50 Operator: RLD-DGS
Sample : 180726,ICB, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:56:14 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:54:36 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
102)	124Trichlobe	17.73	180	4181	N.D.			
103)	Hexachlorobu	17.98	225	3482	N.D.			
104)	Naphthalene	18.03	128	15755	0.3578	ug/L	#	72
105)	123Trichlben	18.34	180	6105	0.3323	ug/L	#	84

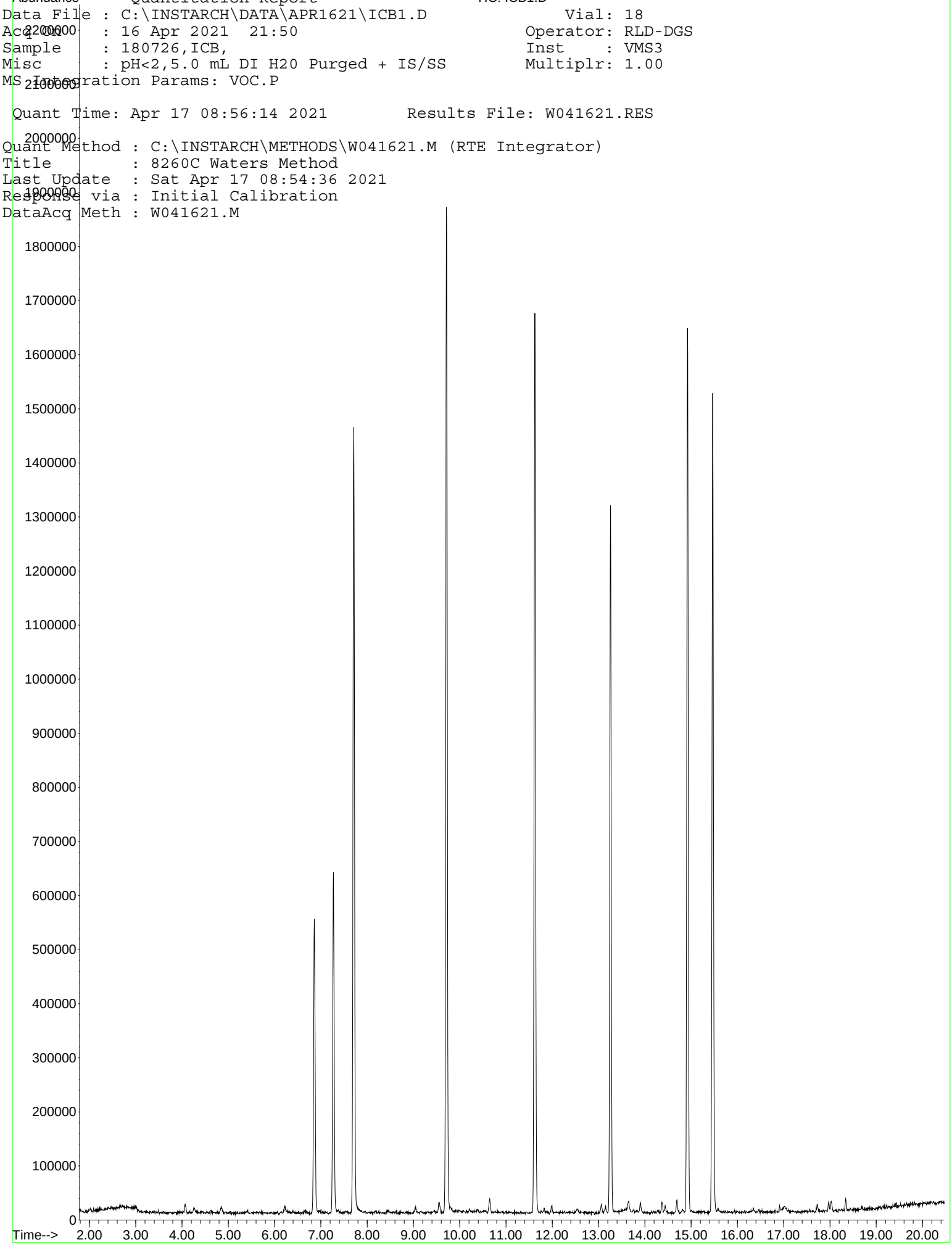
(#) = qualifier out of range (m) = manual integration

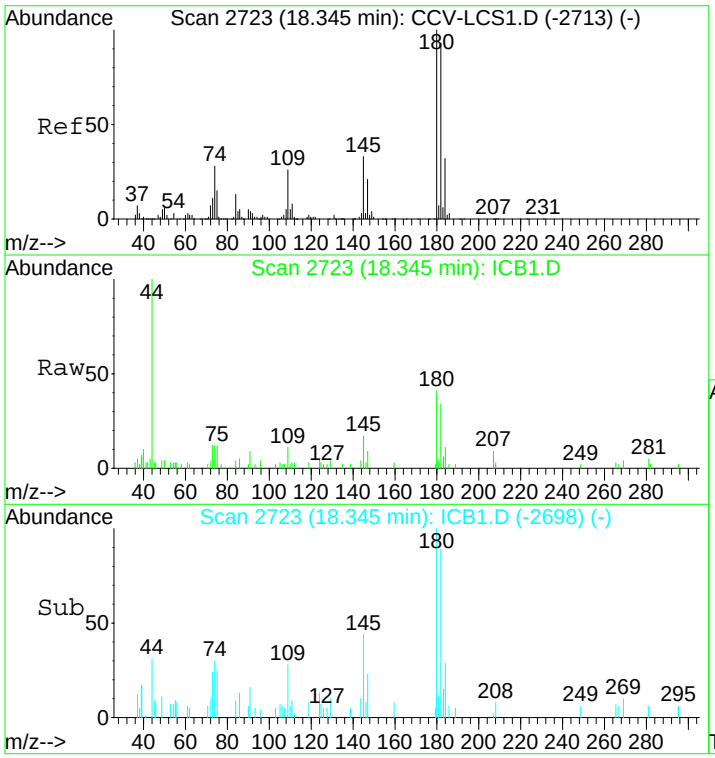
Abundance Quantitation Report TIC: ICB1.D

Data File : C:\INSTARCH\DATA\APR1621\ICB1.D Vial: 18
Acq On : 16 Apr 2021 21:50 Operator: RLD-DGS
Sample : 180726,ICB, Inst : VMS3
Misc : pH<2,5.0 mL DI H2O Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 08:56:14 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 08:54:36 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

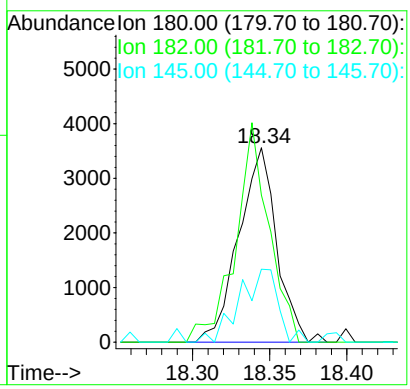




#105
123Trichlben
Concen: 0.33 ug/L
RT: 18.34 min Scan# 2723
Delta R.T. 0.00 min
Lab File: ICB1.D
Acq: 16 Apr 2021 21:50

Tgt Ion:180 Resp: 6105

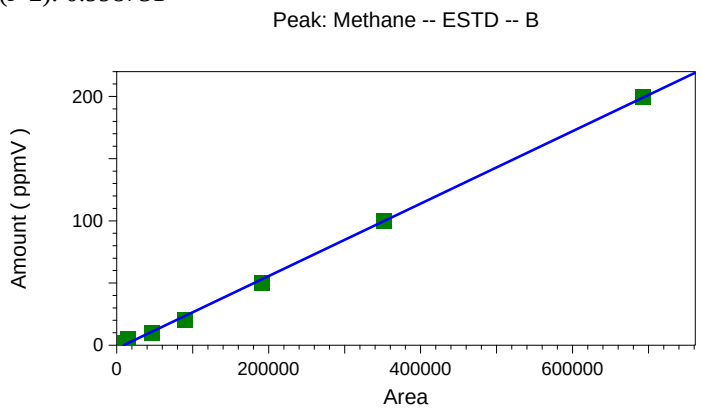
Ion	Ratio	Lower	Upper
180	100		
182	98.9	76.2	116.2
145	0.0	11.4	51.4#



Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121720.met
Print Time: Dec 17, 2020 12:51:30
User: KMT
Instrument: PVOC4

Methane (B)
Average RF: 0.000271249 RF StDev: 3.98267e-005 RF %RSD: 14.6827
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 0.000291229x - 2.65898
Goodness of fit (r^2): 0.998751



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	6598	15554	46371	89657	190739
RF	0.000303122	0.00032146071	0.000215652023	0.000223072375	0.0002621383
	158229767	7500321	894244	832339	14660347
Last Area					
Residual	2.73746	3.12921	-0.845592	-3.45173	-2.88973
Rep StDev					
Rep %RSD					
Rep 1 Area	6598	15554	46371	89657	190739
Rep 1 User	KMT	KMT	KMT	KMT	KMT
Rep 1 Data File	C:\Instarch\PVOC4\Data\121720icdg\001.dat	C:\Instarch\PVOC4\Data\121720icdg\002.dat	C:\Instarch\PVOC4\Data\121720icdg\003.dat	C:\Instarch\PVOC4\Data\121720icdg\004.dat	C:\Instarch\PVOC4\Data\121720icdg\005.dat
Rep 1 Sample ID	MEE PT1 - 2 ppmV	MEE PT2 - 5 ppmV	MEE PT3 - 10 ppmV	MEE PT4 - 20 ppmV	MEE PT5 - 50 ppmV
Rep 1 Calib. Time	Dec 17, 2020 11:19:45	Dec 17, 2020 11:20:05	Dec 17, 2020 11:20:21	Dec 17, 2020 11:20:37	Dec 17, 2020 11:20:59

	Level 6	Level 7
Amount	100	200
Area	351688	692156

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121720.met
Print Time: Dec 17, 2020 12:51:30
User: KMT
Instrument: PVOC4

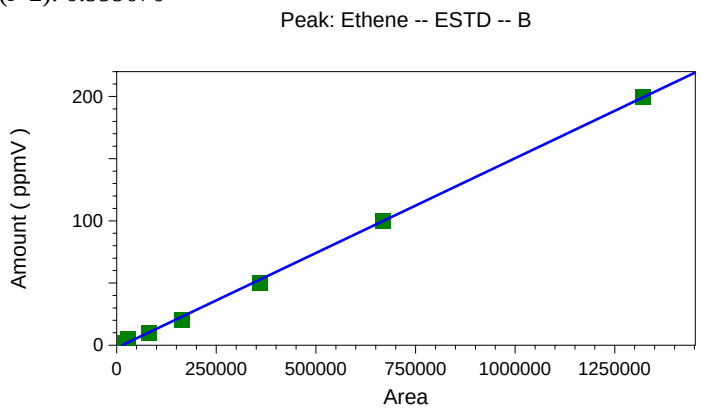
RF	0.000284342940333477	0.00028895220 1526823
Last Area Residual	0.237261	1.08313
Rep StDev		
Rep %RSD		
Rep 1 Area	351688	692156
Rep 1 User	KMT	KMT
Rep 1 Data File	C:\Instarch\PVOC4\Data\121720icdg\006.dat	C:\Instarch\PVOC4\Data\121720icdg\007.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Dec 17, 2020 11:26:34	Dec 17, 2020 11:31:40

RJ 01/04/2021

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121720.met
Print Time: Dec 17, 2020 12:51:46
User: KMT
Instrument: PVOC4

Ethene (B)
Average RF: 0.000146882 RF StDev: 2.06707e-005 RF %RSD: 14.0730
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 0.000152404x - 2.04051
Goodness of fit (r^2): 0.999070



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	11784	28782	81599	164558	358899
RF	0.000169721	0.00017371968	0.000122550521	0.000121537694	0.0001393149
	656483367	5914808	452469	916078	60476346
Last Area					
Residual	2.24458	2.65401	-0.395534	-3.03885	-2.65728
Rep StDev					
Rep %RSD					
Rep 1 Area	11784	28782	81599	164558	358899
Rep 1 User	KMT	KMT	KMT	KMT	KMT
Rep 1 Data File	C:\Instarch\P	C:\Instarch\PV	C:\Instarch\PVO	C:\Instarch\PVO	C:\Instarch\PV
	VOC4\Data\1	OC4\Data\1217	C4\Data\121720	C4\Data\121720	OC4\Data\121
	21720icdg\00	20icdg\002.dat	icdg\003.dat	icdg\004.dat	720icdg\005.d
	1.dat				at
Rep 1 Sample ID	MEE PT1 - 2	MEE PT2 - 5	MEE PT3 - 10	MEE PT4 - 20	MEE PT5 - 50
	ppmV	ppmV	ppmV	ppmV	ppmV
Rep 1 Calib. Time	Dec 17, 2020	Dec 17, 2020	Dec 17, 2020	Dec 17, 2020	Dec 17, 2020
	11:19:45	11:20:05	11:20:21	11:20:37	11:20:59

	Level 6	Level 7
Amount	100	200
Area	667612	1319784

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121720.met
Print Time: Dec 17, 2020 12:51:46
User: KMT
Instrument: PVOC4

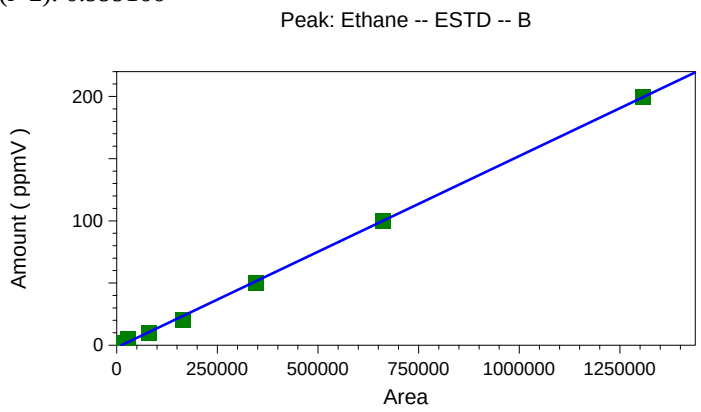
RF	0.000149787601181525	0.000151539948961345
Last Area Residual	0.29349	0.899589
Rep StDev		
Rep %RSD		
Rep 1 Area	667612	1319784
Rep 1 User	KMT	KMT
Rep 1 Data File	C:\Instarch\PVOC4\Data\121720icdg\006.dat	C:\Instarch\PVOC4\Data\121720icdg\007.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Dec 17, 2020 11:26:34	Dec 17, 2020 11:31:40

RJ 01/04/2021

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121720.met
Print Time: Dec 17, 2020 12:52:01
User: KMT
Instrument: PVOC4

Ethane (B)
Average RF: 0.000151663 RF StDev: 2.42326e-005 RF %RSD: 15.9779
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 0.000153899x - 1.77416
Goodness of fit (r^2): 0.999166



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	10854	27657	79302	164453	346450
RF	0.000184263	0.00018078605	0.000126100224	0.000121615294	0.0001443209
	865855906	7779224	4584	339416	69836917
Last Area					
Residual	2.10374	2.51777	-0.430372	-3.53507	-1.54431
Rep StDev					
Rep %RSD					
Rep 1 Area	10854	27657	79302	164453	346450
Rep 1 User	KMT	KMT	KMT	KMT	KMT
Rep 1 Data File	C:\Instarch\P	C:\Instarch\PV	C:\Instarch\PVO	C:\Instarch\PVO	C:\Instarch\PV
	VOC4\Data\1	OC4\Data\1217	C4\Data\121720	C4\Data\121720	OC4\Data\121
	21720icdg\00	20icdg\002.dat	icdg\003.dat	icdg\004.dat	720icdg\005.d
	1.dat				at
Rep 1 Sample ID	MEE PT1 - 2	MEE PT2 - 5	MEE PT3 - 10	MEE PT4 - 20	MEE PT5 - 50
	ppmV	ppmV	ppmV	ppmV	ppmV
Rep 1 Calib. Time	Dec 17, 2020	Dec 17, 2020	Dec 17, 2020	Dec 17, 2020	Dec 17, 2020
	11:19:45	11:20:05	11:20:21	11:20:37	11:20:59

	Level 6	Level 7
Amount	100	200
Area	660274	1306335

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG121720.met
Print Time: Dec 17, 2020 12:52:01
User: KMT
Instrument: PVOC4

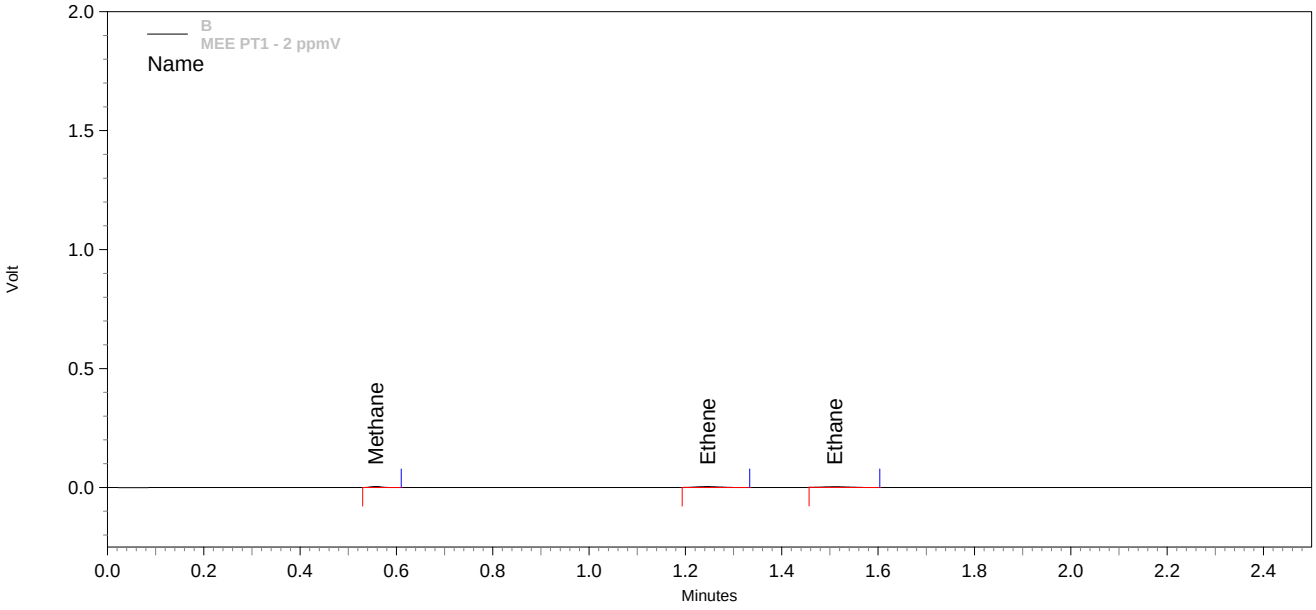
RF	0.000151452 27587335	0.00015310008 5353298
Last Area Residual	0.158344	0.729896
Rep StDev		
Rep %RSD		
Rep 1 Area	660274	1306335
Rep 1 User	KMT	KMT
Rep 1 Data File	C:\Instarch\PVOC4\Data\121720icdg\006.dat	C:\Instarch\PVOC4\Data\121720icdg\007.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Dec 17, 2020 11:26:34	Dec 17, 2020 11:31:40

RJ 01/04/2021

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\001.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT1 - 2 ppmV
Acquired: Dec 17, 2020 10:17:50
File Desc. 0.01 mL injection (Methane, Ethene, Ethane)



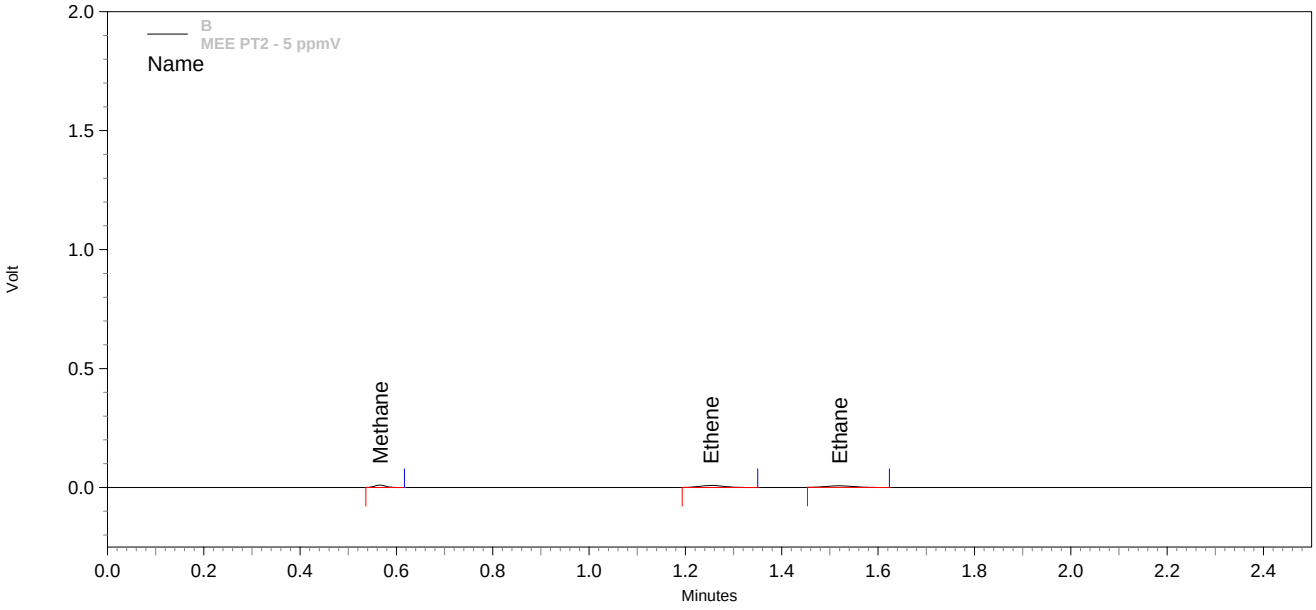
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.557**	**0.583**	**6598**	**2.000 CAL**	**ppmV**
2	**Ethene**	**1.247**	**1.273**	**11784**	**2.000 CAL**	**ppmV**
3	**Ethane**	**1.510**	**1.533**	**10854**	**2.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\002.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT2 - 5 ppmV
Acquired: Dec 17, 2020 10:50:22
File Desc. 0.025 mL injection (Methane, Ethene, Ethane)



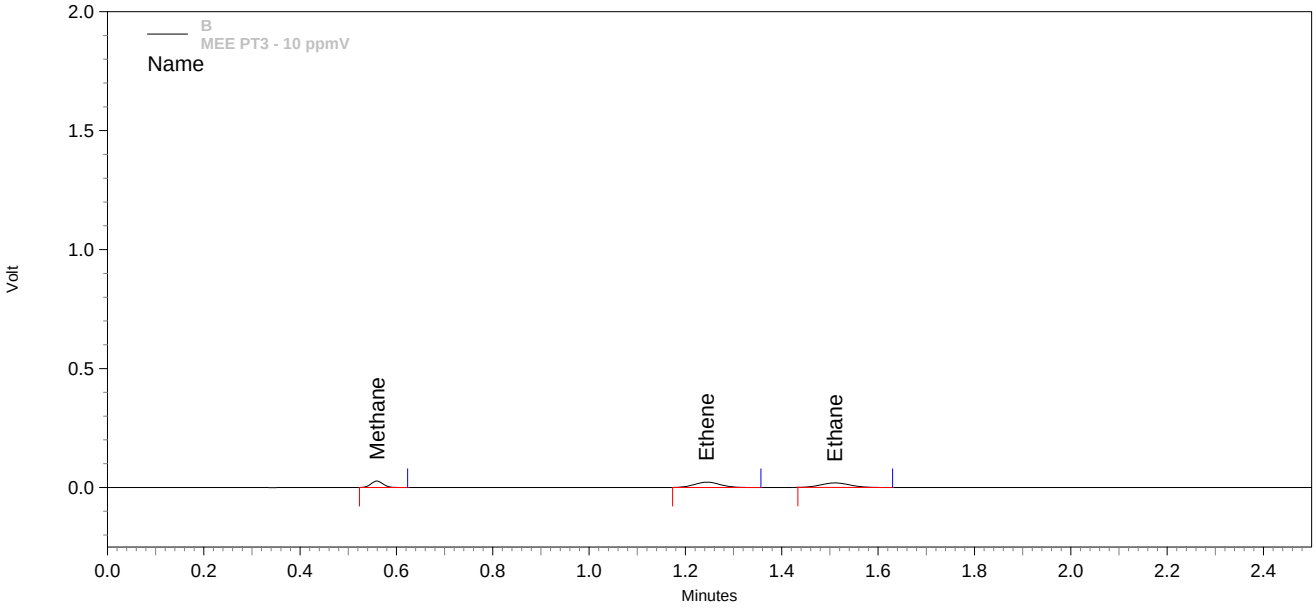
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.567**	**0.557**	**15554**	**5.000 CAL**	**ppmV**
2	**Ethene**	**1.253**	**1.247**	**28782**	**5.000 CAL**	**ppmV**
3	**Ethane**	**1.520**	**1.510**	**27657**	**5.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\003.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT3 - 10 ppmV
Acquired: Dec 17, 2020 11:04:41
File Desc. 0.05 mL injection (Methane, Ethene, Ethane)



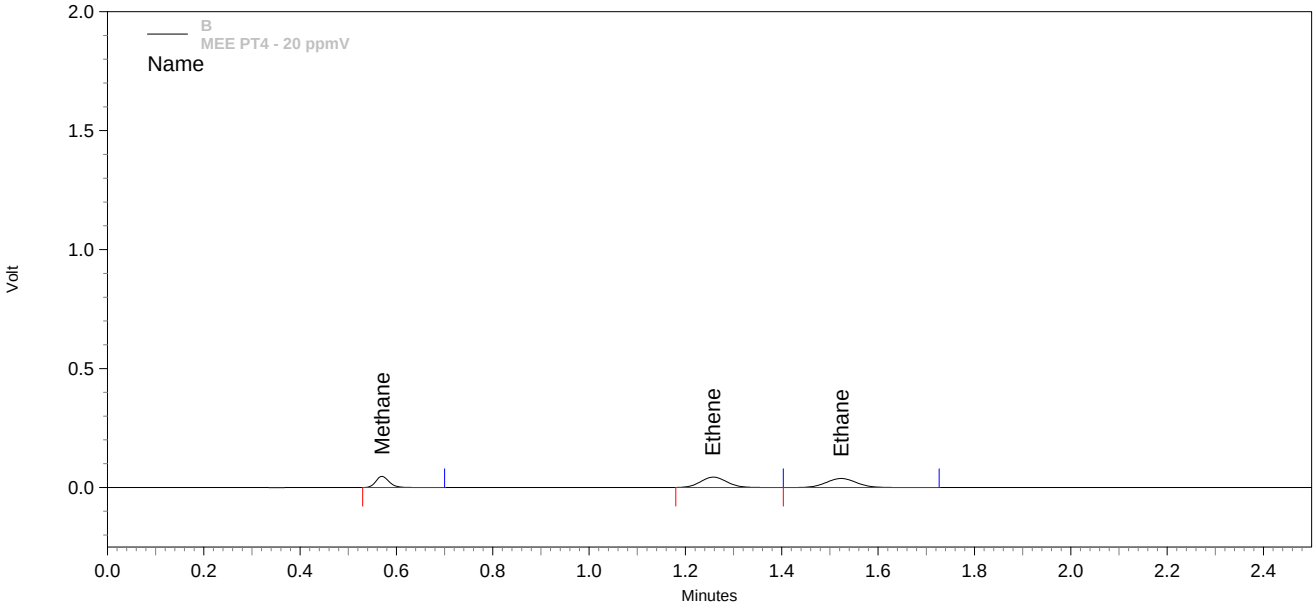
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.560**	**0.567**	**46371**	**10.000 CAL**	**ppmV**
2	**Ethene**	**1.243**	**1.253**	**81599**	**10.000 CAL**	**ppmV**
3	**Ethane**	**1.510**	**1.520**	**79302**	**10.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\004.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT4 - 20 ppmV
Acquired: Dec 17, 2020 11:08:50
File Desc. 0.1 mL injection (Methane, Ethene, Ethane)



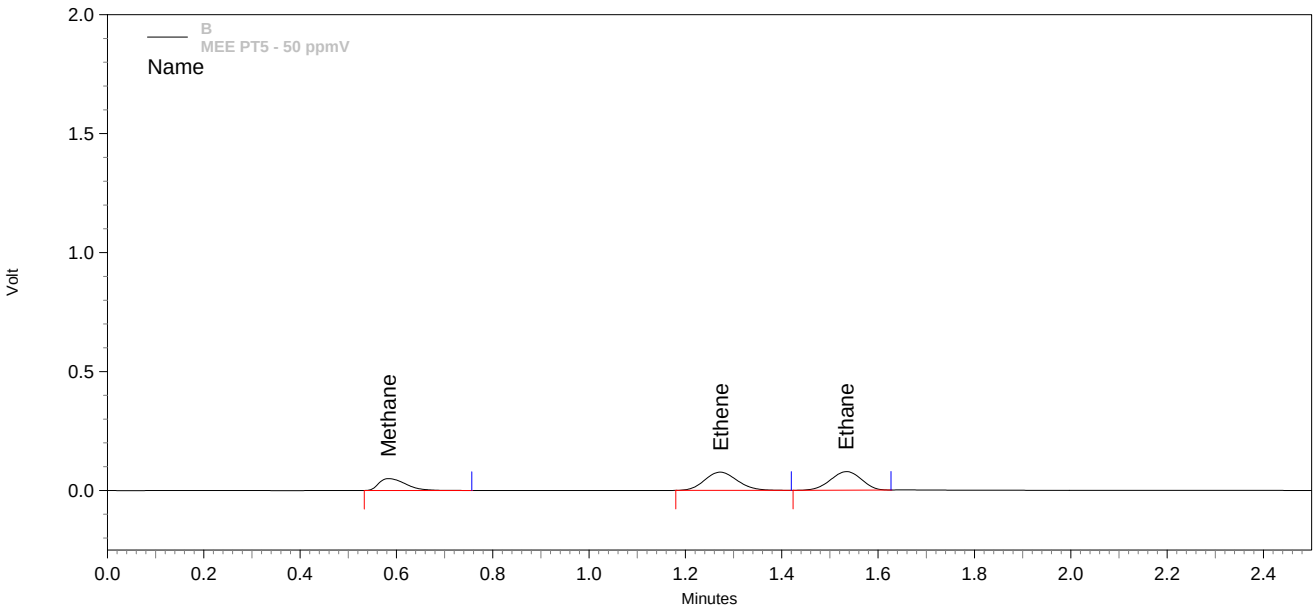
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.570**	**0.560**	**89657**	**20.000 CAL**	**ppmV**
2	**Ethene**	**1.257**	**1.243**	**164558**	**20.000 CAL**	**ppmV**
3	**Ethane**	**1.523**	**1.510**	**164453**	**20.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\005.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT5 - 50 ppmV
Acquired: Dec 17, 2020 11:16:03
File Desc. 0.25 mL injection (Methane, Ethene, Ethane)



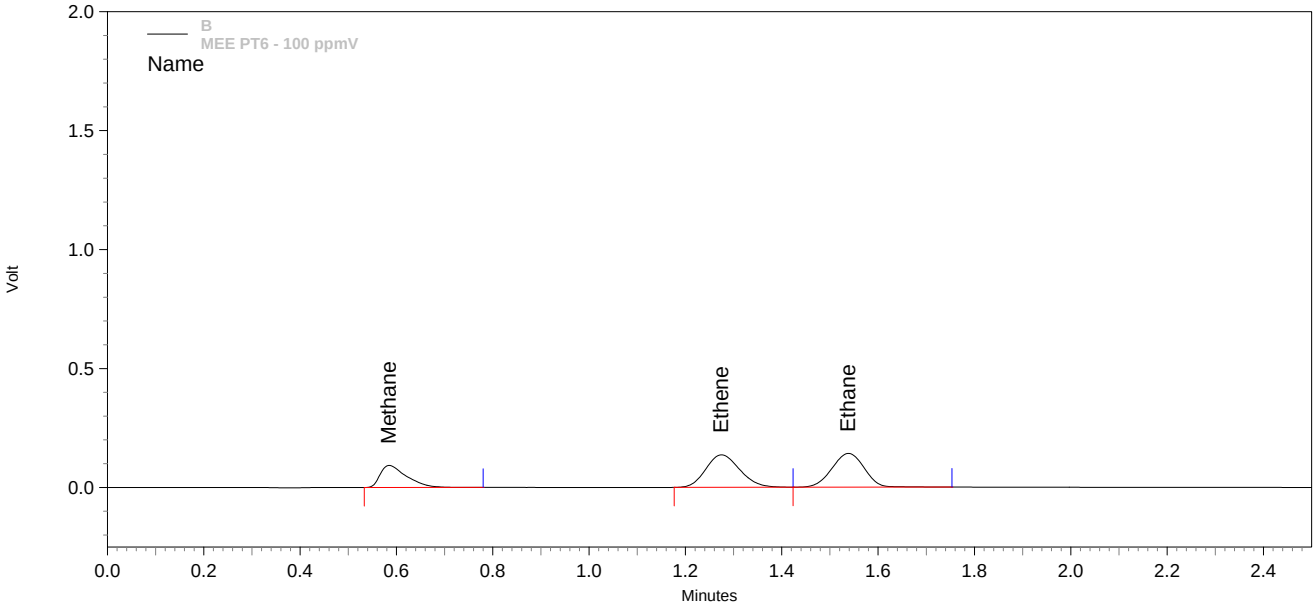
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.583**	**0.570**	**190739**	**50.000 CAL**	**ppmV**
2	**Ethene**	**1.273**	**1.257**	**358899**	**50.000 CAL**	**ppmV**
3	**Ethane**	**1.533**	**1.523**	**346450**	**50.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\006.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT6 - 100 ppmV
Acquired: Dec 17, 2020 11:23:11
File Desc. 0.5 mL injection (Methane, Ethene, Ethane)



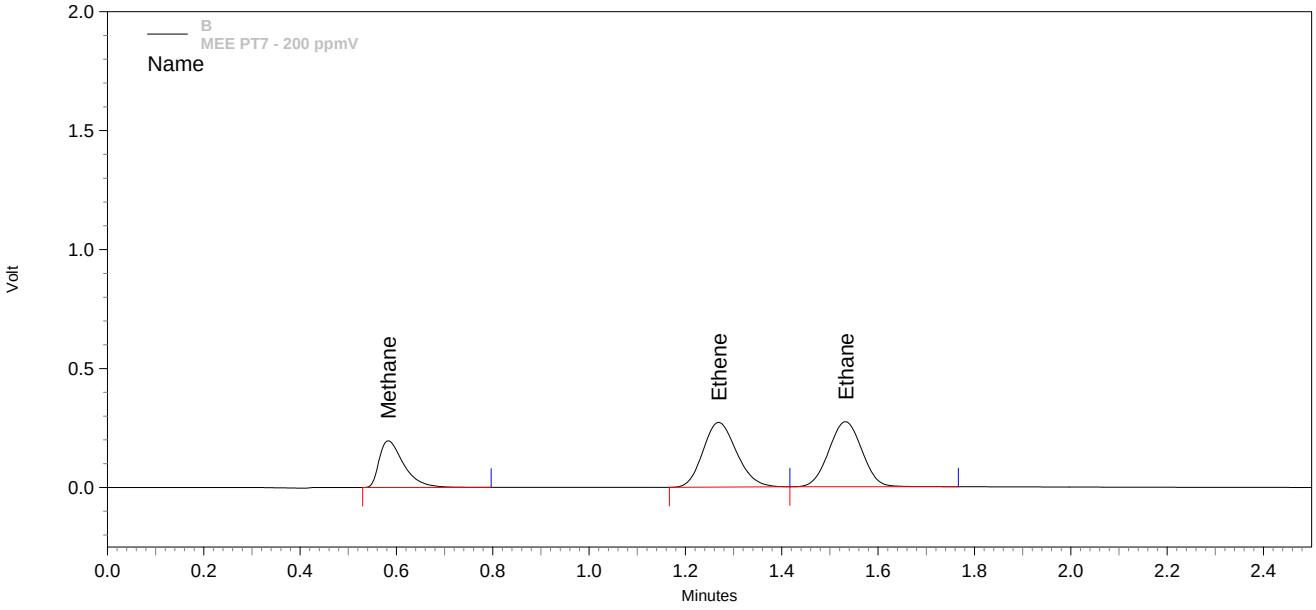
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.583**	**0.583**	**351688**	**100.000 CAL**	**ppmV**
2	**Ethene**	**1.273**	**1.273**	**667612**	**100.000 CAL**	**ppmV**
3	**Ethane**	**1.537**	**1.533**	**660274**	**100.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\007.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: MEE PT7 - 200 ppmV
Acquired: Dec 17, 2020 11:27:57
File Desc. 1.0 mL injection (Methane, Ethene, Ethane)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.583**	**0.583**	**692156**	**200.000 CAL**	**ppmV**
2	**Ethene**	**1.270**	**1.273**	**1319784**	**200.000 CAL**	**ppmV**
3	**Ethane**	**1.533**	**1.537**	**1306335**	**200.000 CAL**	**ppmV**

QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\121720 - MEE ICAL.seq
User : KMT
Printed : Dec 17, 2020 12:37:01

File	Sample ID	Acquired
C:\Instarch\PVOC4\Data\121720icdg\008.dat	ICV - 50 ppmV	Dec 17, 2020 12:37:01

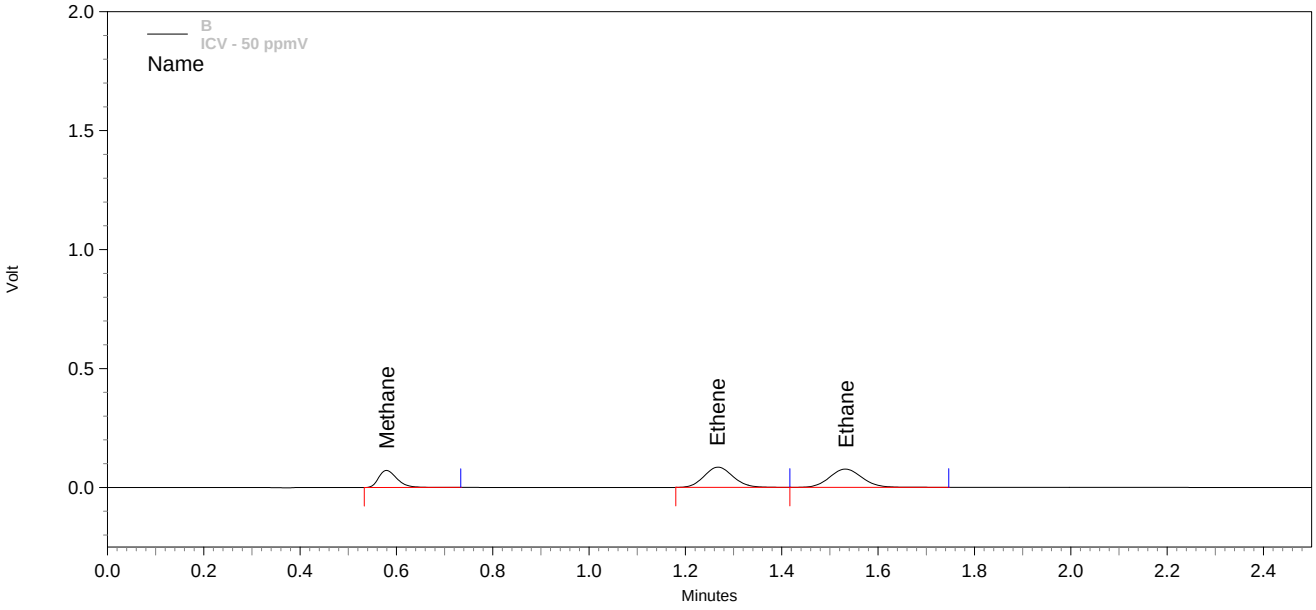
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	52.315	4.630	15.000	**Passed**
Ethene	50.000	51.903	3.806	15.000	**Passed**
Ethane	50.000	53.057	6.113	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\008.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: ICV - 50 ppmV
Acquired: Dec 17, 2020 12:04:44
File Desc. INITIAL CALIB. VERIF. - 0.25 mL injection (Methane, Ethene, Ethane)



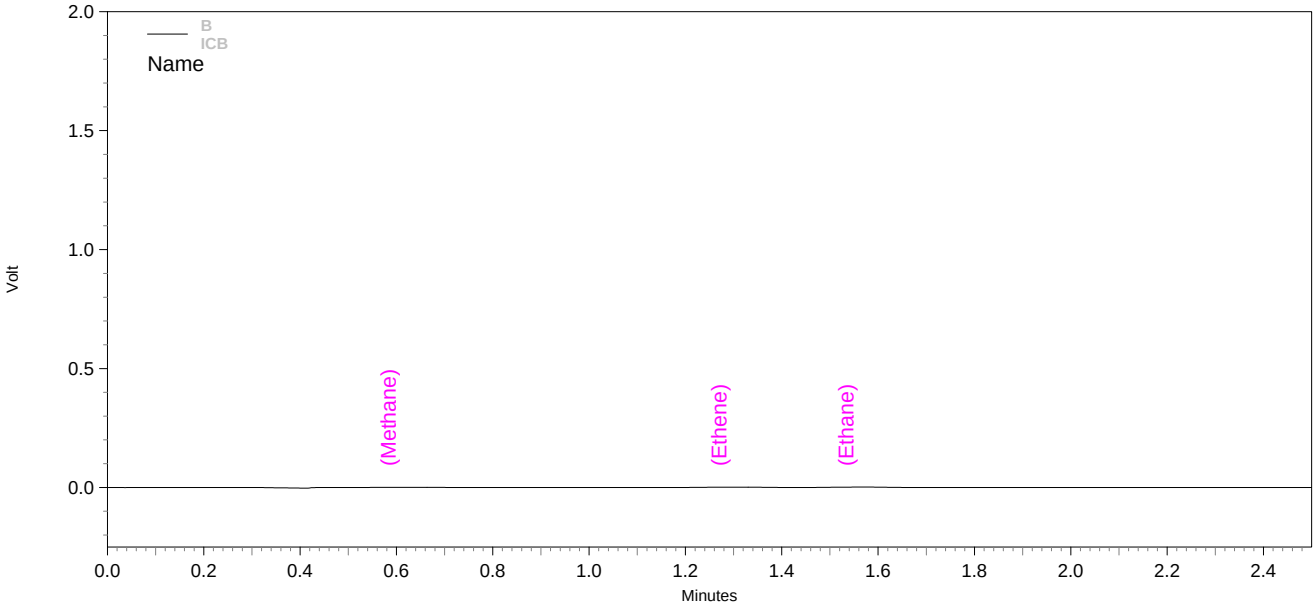
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.580**	**0.583**	**188766**	**52.315**	**ppmV**
2	**Ethene**	**1.267**	**1.270**	**353950**	**51.903**	**ppmV**
3	**Ethane**	**1.533**	**1.533**	**356277**	**53.057**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\121720icdg\009.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: ICB
Acquired: Dec 17, 2020 12:14:07
File Desc. INITIAL CALIB. BLANK. - 1.0 mL



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.583**		**0.000 BDL**	**ppmV**
	Ethene		**1.270**		**0.000 BDL**	**ppmV**
	Ethane		**1.533**		**0.000 BDL**	**ppmV**

VOLATILE ORGANIC ANALYSIS
CONTINUING CALIBRATION
DOCUMENTS

BFB

Data File : C:\INSTARCH\DATA\APR1721\BFB1.D Vial: 1
Acq On : 17 Apr 2021 17:29 Operator: RLD-DGS
Sample : 180903,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W041621.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.663 to 4.675 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.6	24938	PASS
75	95	30	60	48.0	58229	PASS
95	95	100	100	100.0	121304	PASS
96	95	5	9	6.9	8315	PASS
173	174	0.00	2	0.4	369	PASS
174	95	50	100	70.4	85378	PASS
175	174	5	9	8.4	7130	PASS
176	174	95	101	97.3	83072	PASS
177	176	5	9	6.5	5389	PASS

W041621.M Tue Apr 20 08:04:53 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR1721\CCV-LCS1.D Vial: 3
Acq On : 17 Apr 2021 18:15 Operator: RLD-DGS
Sample : 180903,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 17 18:35:46 2021

Quant Method : C:\INSTARCH\METHODS\W041621.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W041621.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	97	0.00
2	PT	Dichlorodi	0.2565	0.3031	-18.17	105	0.00
3	PT	Chloromethan	0.3468	0.3722	-7.32	105	0.00
4	PT	VinylChlorid	0.3175	0.3659	-15.24	106	0.00
5	PT	Bromomethane	0.1691	0.1967	-16.32	116	0.00
6	PT	Chloroethane	0.2113	0.2021	4.35	92	0.00
7	T	Dichloroflmethane	0.4059	0.4324	-6.53	103	0.00
8	PT	Trichlorofma	0.3799	0.4400	-15.82	106	0.00
9	T	Ethylether	0.2260	0.2289	-1.28	100	0.00
10	T	dichlorotfluoroethan	0.2757	0.3063	-11.10	106	0.00
11	T	propyleneoxide	0.0429	0.0412	3.96	95	0.00
12	T	Acrolein	0.0127	0.0120#	5.51	111	0.00
13	PT	11dichlorthe	0.2402	0.2623	-9.20	104	0.00
14	PT	Trichlorotfluoroeth	0.2288	0.2649	-15.78	106	0.00
15	PT	Acetone	0.0763	0.0683#	10.48	93	0.00
16	T	Iodomethane	0.2390	0.2410	-0.84	97	0.00
17	PT	Carbon Dislf	0.6618	0.7279	-9.99	107	0.00
18	T	allylchloride	0.4585	0.5022	-9.53	105	0.00
19	PT	methylacetate	0.0598	0.0560#	6.35	106	0.00
20	PT	Methylchlorid	0.3012	0.2996	0.53	102	0.00
21	T	tbutylalcohol	0.0239	0.0212#	11.30	92	0.00
22	T	Acrylonitrile	0.0931	0.0900	3.33	94	0.00
23	PT	t12dichlorte	0.2695	0.2994	-11.09	109	0.00
24	PT	MtBE	0.6370	0.6448	-1.22	99	0.00
25	T	Hexane	0.3742	0.4345	-16.11	103	0.00
26	PT	11dichlorota	0.4946	0.5250	-6.15	105	0.00
27	T	Vinylacetate	0.4399	0.4225	3.96	96	0.00
28	T	chloroprene	0.4380	0.4786	-9.27	99	0.00
29	T	Diisopether	0.9150	0.9058	1.01	93	0.00
30	T	ETBE	0.7309	0.7143	2.27	94	0.00
31	T	22dichloropr	0.3806	0.3957	-3.97	102	-0.01
32	PT	c12dichlorte	0.2914	0.2954	-1.37	99	0.00
33	PT	2Butanone	0.0279	0.0244#	12.54	87	0.00
34	T	propionitrile	0.0375	0.0332	11.47	88	0.00
35	T	Ethylacetate	0.0104	0.0088#	15.38	88	0.00
36	T	methacrylonitrile	0.1042	0.0952	8.64	92	0.00
37	T	Bromochlorma	0.1267	0.1236	2.45	94	0.00
38	T	Tetrahydofur	0.0786	0.0696	11.45	88	0.00
39	PT	Chloroform	0.4572	0.4492	1.75	95	0.00
40	PT	111trichlota	0.3847	0.4242	-10.27	105	0.00
41	S	SURRDibrflma	0.2619	0.2681	-2.37	100	0.00
42	PT	Cyclohexane	0.4604	0.5447	-18.31	106	0.00
43	PT	Carbtetraclo	0.3108	0.3515	-13.10	108	0.00
44	T	11dicloprope	0.1350	0.1468	-8.74	106	0.00
45	S	SURR12DCAd4	0.0735	0.0727	1.09	96	0.00
46	PT	Benzene	1.0251	1.1022	-7.52	101	0.00
47	PT	12dichlorota	0.3716	0.3786	-1.88	101	0.00
48	T	TAME	0.6434	0.6557	-1.91	99	0.00

49	PT	trichloroete	0.2754	0.3020	-9.66	106	0.00
50	PT	methylcyclohexane	0.4830	0.5763	-19.32	108	0.00
51	PT	12dicloropra	0.3140	0.3294	-4.90	103	0.00
52	T	23Dicl1propene	0.4218	0.4479	-6.19	104	0.00
53	T	Dibromometha	0.1603	0.1635	-2.00	100	0.00
54	T	methylmethacrylate	0.1780	0.1704	4.27	96	0.00
55	T	14dioxane	0.0029	0.0027#	6.90	96	0.00
56	PT	Bromodiclrma	0.3469	0.3561	-2.65	102	0.00
57	T	2Nitropropane	0.0620	0.0649	-4.68	105	0.00
58	T	2CLEVE	0.1627	0.1659	-1.97	96	0.00
59	PT	c13dicloproe	0.4246	0.4455	-4.92	104	0.00
60	PT	4Meth2Pentan	0.2256	0.2004	11.17	89	0.00
61	S	SURRd8Tolule	0.9862	0.9795	0.68	95	0.00
62	PT	Toluene	0.6609	0.6759	-2.27	97	0.00
63	PT	t13Dicloprop	0.3567	0.3640	-2.05	101	0.00
64	T	ethylmethacrylate	0.3067	0.2949	3.85	90	0.00
65	PT	112Triclotha	0.1977	0.1923	2.73	96	0.00
66	PT	Tetrachlorte	0.2552	0.2766	-8.39	104	0.00
67	T	13Diclorpropa	0.4156	0.4222	-1.59	101	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	99	0.00
69	PT	2Hexanone	0.2182	0.1902	12.83	87	0.00
70	PT	Clorodibrmta	0.3063	0.2980	2.71	100	0.00
71	PT	12Dibrometha	0.3041	0.3119	-2.56	104	0.00
72	PT	Chlorobenzen	0.9706	0.9627	0.81	97	0.00
73	T	1Clhexane	0.4938	0.5100	-3.28	101	0.00
74	T	1112Tetclota	0.3136	0.3154	-0.57	101	0.00
75	PT	Ethylbenzene	1.4847	1.5720	-5.88	100	0.00
76	PT	m p-Xylene	0.5908	0.6156	-4.20	99	0.00
77	PT	o-Xylene	0.5929	0.6070	-2.38	102	0.00
78	PT	Styrene	0.9651	0.9910	-2.68	96	0.00
79	PT	Bromoform	0.1743	0.1699	2.52	101	0.00
80	PT	Isopropylben	1.3760	1.5032	-9.24	103	0.00
81	T	cyclohexanone	0.0126	0.0105#	16.67	82	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	97	0.00
83	S	SURR4BrFBenz	1.0587	1.0879	-2.76	101	0.00
84	T	Bromobenzene	0.6939	0.7169	-3.31	102	0.00
85	PT	1122Tetrclta	0.7866	0.7609	3.27	98	0.00
86	T	123Triclproa	0.9524	0.9384	1.47	99	0.00
87	T	14dichloro2butene	0.2251	0.2171	3.55	99	0.00
88	T	n-Propylbenz	3.3597	3.5763	-6.45	101	0.00
89	T	2chlorotolue	2.0481	2.1364	-4.31	99	0.00
90	T	4chlorotolue	2.3279	2.4669	-5.97	98	0.00
91	T	135Trimebenz	2.2922	2.4615	-7.39	99	0.00
92	T	tbutylbenzen	1.9383	2.1123	-8.98	101	0.00
93	T	124Trimetben	2.2631	2.3867	-5.46	98	0.00
94	T	sbutylbenzen	2.7487	3.0736	-11.82	101	0.00
95	PT	13Diclorbenz	1.2750	1.3044	-2.31	99	0.00
96	T	pIsopropylto	2.3547	2.5414	-7.93	100	0.00
97	PT	14dichlorobe	1.3224	1.2947	2.09	96	0.00
98	PT	12dichlorobe	1.2406	1.2199	1.67	99	0.00
99	T	nButylbenzen	2.2601	2.3394	-3.51	97	0.00
100	PT	12dibromo3cl	0.1250	0.1183	5.36	103	0.00
101	T	135Trichlorobenzene	0.8709	0.8705	0.05	102	0.00
102	PT	124Trichlobe	0.7354	0.7426	-0.98	101	0.00
103	T	Hexachlorobu	0.3392	0.3564	-5.07	106	0.00
104	T	Naphthalene	1.6125	1.5159	5.99	95	0.00
105	T	123Trichlben	0.6729	0.6530	2.96	100	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W041621.M Tue Apr 20 07:45:27 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR1721\CCV-LCS1.D Vial: 3
Acq On : 17 Apr 2021 18:15 Operator: RLD-DGS
Sample : 180903,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 17 18:35:46 2021

Quant Method : C:\INSTARCH\METHODS\W041621.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W041621.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	97	0.00
2	PT	Dichlorodi	10.0000	11.8131	-18.13	105	0.00
3	PT	Chloromethan	10.0000	10.7309	-7.31	105	0.00
4	PT	VinylChlorid	10.0000	11.5234	-15.23	106	0.00
5	PT	Bromomethane	10.0000	11.6306	-16.31	116	0.00
6	PT	Chloroethane	10.0000	9.5628	4.37	92	0.00
7	T	Dichloroflmethane	10.0000	10.6531	-6.53	103	0.00
8	PT	Trichlorofma	10.0000	11.5818	-15.82	106	0.00
9	T	Ethylether	10.0000	10.1289	-1.29	100	0.00
10	T	dichlorotfluoroethan	10.0000	11.1083	-11.08	106	0.00
11	T	propyleneoxide	100.0000	96.2171	3.78	95	0.00
12	T	Acrolein	50.0000	47.4242	5.15	111	0.00
13	PT	11dichlorthe	10.0000	10.9223	-9.22	104	0.00
14	PT	Trichlorotfluoroeth	20.0000	23.1526	-15.76	106	0.00
15	PT	Acetone	100.0000	94.0084	5.99	93	0.00
16	T	Iodomethane	20.0000	20.1649	-0.82	97	0.00
17	PT	Carbon Dislf	20.0000	23.0755	-15.38	107	0.00
18	T	allylchloride	20.0000	21.9037	-9.52	105	0.00
19	PT	methylacetate	10.0000	9.3663	6.34	106	0.00
20	PT	Methylchlorid	10.0000	9.9448	0.55	102	0.00
21	T	tbutylalcohol	500.0000	443.4800	11.30	92	0.00
22	T	Acrylonitrile	50.0000	48.3313	3.34	94	0.00
23	PT	t12dichlorte	10.0000	11.1064	-11.06	109	0.00
24	PT	MtBE	10.0000	10.1219	-1.22	99	0.00
25	T	Hexane	20.0000	23.2253	-16.13	103	0.00
26	PT	11dichlorota	10.0000	10.6135	-6.14	105	0.00
27	T	Vinylacetate	100.0000	107.8925	-7.89	96	0.00
28	T	chloroprene	20.0000	21.8512	-9.26	99	0.00
29	T	Diisopether	10.0000	9.8994	1.01	93	0.00
30	T	ETBE	10.0000	9.7737	2.26	94	0.00
31	T	22dichloropr	10.0000	10.3974	-3.97	102	-0.01
32	PT	c12dichlorte	10.0000	10.1379	-1.38	99	0.00
33	PT	2Butanone	100.0000	87.6581	12.34	87	0.00
34	T	propionitrile	100.0000	88.7243	11.28	88	0.00
35	T	Ethylacetate	50.0000	42.4369	15.13	88	0.00
36	T	methacrylonitrile	20.0000	18.2785	8.61	92	0.00
37	T	Bromochlorma	10.0000	9.7513	2.49	94	0.00
38	T	Tetrahydofur	100.0000	88.5231	11.48	88	0.00
39	PT	Chloroform	10.0000	9.8248	1.75	95	0.00
40	PT	111trichlota	10.0000	11.0260	-10.26	105	0.00
41	S	SURRDibrflma	20.0000	20.4792	-2.40	100	0.00
42	PT	Cyclohexane	10.0000	11.8316	-18.32	106	0.00
43	PT	Carbtetraclo	10.0000	11.3088	-13.09	108	0.00
44	T	11dicloprope	10.0000	10.8748	-8.75	106	0.00
45	S	SURR12DCAd4	20.0000	19.7900	1.05	96	0.00
46	PT	Benzene	10.0000	10.7516	-7.52	101	0.00
47	PT	12dichlorota	10.0000	10.1861	-1.86	101	0.00
48	T	TAME	10.0000	10.1909	-1.91	99	0.00

49	PT	trichloroete	10.0000	10.9649	-9.65	106	0.00
50	PT	methylcyclohexane	10.0000	11.9324	-19.32	108	0.00
51	PT	12dicloropra	10.0000	10.4874	-4.87	103	0.00
52	T	23Dicl1propene	10.0000	10.6192	-6.19	104	0.00
53	T	Dibromometha	10.0000	10.1966	-1.97	100	0.00
54	T	methylmethacrylate	10.0000	9.5709	4.29	96	0.00
55	T	14dioxane	500.0000	461.9594	7.61	96	0.00
56	PT	Bromodiclrma	10.0000	10.2656	-2.66	102	0.00
57	T	2Nitropropane	100.0000	104.6428	-4.64	105	0.00
58	T	2CLEVE	50.0000	50.9974	-1.99	96	0.00
59	PT	c13dicloproe	10.0000	10.4914	-4.91	104	0.00
60	PT	4Meth2Pentan	100.0000	91.8614	8.14	89	0.00
61	S	SURRd8Tolule	20.0000	19.8650	0.68	95	0.00
62	PT	Toluene	10.0000	10.2269	-2.27	97	0.00
63	PT	t13Dicloprop	10.0000	10.2045	-2.04	101	0.00
64	T	ethylmethacrylate	20.0000	19.2271	3.86	90	0.00
65	PT	112Triclotha	10.0000	9.7255	2.74	96	0.00
66	PT	Tetrachlorte	10.0000	10.8369	-8.37	104	0.00
67	T	13Diclorpropa	10.0000	10.1593	-1.59	101	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	99	0.00
69	PT	2Hexanone	100.0000	83.9112	16.09	87	0.00
70	PT	Clorodibrmta	10.0000	9.7301	2.70	100	0.00
71	PT	12Dibrometha	10.0000	10.2579	-2.58	104	0.00
72	PT	Chlorobenzen	10.0000	9.9180	0.82	97	0.00
73	T	1Clhexane	10.0000	10.3279	-3.28	101	0.00
74	T	1112Tetclota	10.0000	10.0566	-0.57	101	0.00
75	PT	Ethylbenzene	10.0000	10.5884	-5.88	100	0.00
76	PT	m p-Xylene	20.0000	20.8374	-4.19	99	0.00
77	PT	o-Xylene	10.0000	10.2372	-2.37	102	0.00
78	PT	Styrene	10.0000	10.2684	-2.68	96	0.00
79	PT	Bromoform	10.0000	9.7473	2.53	101	0.00
80	PT	Isopropylben	10.0000	10.9248	-9.25	103	0.00
81	T	cyclohexanone	200.0000	165.9151	17.04	82	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	97	0.00
83	S	SURR4BrFBenz	20.0000	20.5506	-2.75	101	0.00
84	T	Bromobenzene	10.0000	10.3328	-3.33	102	0.00
85	PT	1122Tetrclta	10.0000	9.6730	3.27	98	0.00
86	T	123Triclproa	10.0000	9.8533	1.47	99	0.00
87	T	14dichloro2butene	10.0000	9.6466	3.53	99	0.00
88	T	n-Propylbenz	10.0000	10.6449	-6.45	101	0.00
89	T	2chlorotolue	10.0000	10.4311	-4.31	99	0.00
90	T	4chlorotolue	10.0000	10.5967	-5.97	98	0.00
91	T	135Trimebenz	10.0000	10.7388	-7.39	99	0.00
92	T	tbutylbenzen	10.0000	10.8975	-8.98	101	0.00
93	T	124Trimetben	10.0000	10.5461	-5.46	98	0.00
94	T	sbutylbenzen	10.0000	11.1819	-11.82	101	0.00
95	PT	13Diclorbenz	10.0000	10.2303	-2.30	99	0.00
96	T	pIsopropylto	10.0000	10.7929	-7.93	100	0.00
97	PT	14dichlorobe	10.0000	9.7903	2.10	96	0.00
98	PT	12dichlorobe	10.0000	9.8335	1.66	99	0.00
99	T	nButylbenzen	10.0000	10.3508	-3.51	97	0.00
100	PT	12dibromo3cl	10.0000	9.4670	5.33	103	0.00
101	T	135Trichlorobenzene	10.0000	9.9959	0.04	102	0.00
102	PT	124Trichlobe	10.0000	10.0980	-0.98	101	0.00
103	T	Hexachlorobu	10.0000	10.5076	-5.08	106	0.00
104	T	Naphthalene	10.0000	9.4007	5.99	95	0.00
105	T	123Trichlben	10.0000	9.7047	2.95	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W041621.M Tue Apr 20 07:46:09 2021

Quantitation Report

Data File : C:\Instarch\Data\APR1721\CCV-LCS1.D Vial: 3
Acq On : 17 Apr 2021 18:15 Operator: RLD-DGS
Sample : 180903,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 18:35:46 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 18:34:17 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1493609	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1148819	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	573274	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	400486	20.479	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	108575	19.790	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.71	98	1463060	19.865	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99	%		
83) SURR4BrFBenz	13.26	95	623642	20.551	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103	%		
Target Compounds						Qvalue
2) Dichlorodi	1.83	85	226323	11.8131	ug/L	98
3) Chloromethan	2.08	50	277949	10.7309	ug/L	98
4) VinylChlorid	2.25	62	273253	11.5234	ug/L	97
5) Bromomethane	2.71	94	146898	11.6306	ug/L	99
6) Chloroethane	2.88	64	150917	9.5628	ug/L	100
7) Dichloroflmethane	3.19	67	322938	10.6531	ug/L	99
8) Trichlorofma	3.27	101	328604	11.5818	ug/L	99
9) Ethylether	3.71	59	170925	10.1289	ug/L	98
10) dichlorotfluoroethan	3.73	67	228749	11.1083	ug/L	97
11) propyleneoxide	3.76	58	307972	96.2171	ug/L	98
12) Acrolein	3.84	56	44985	47.4242	ug/L	96
13) 11dichlorthe	3.99	96	195890	10.9223	ug/L	98
14) Trichlorotfluoroeth	4.04	101	395669	23.1526	ug/L	99
15) Acetone	4.06	43	510003	94.0084	ug/L	97
16) Iodomethane	4.17	142	359920	20.1649	ug/L	99
17) Carbon Dislf	4.26	76	1087136	23.0755	ug/L	100
18) allylchloride	4.48	41	750032	21.9037	ug/L	100
19) methylacetate	4.53	74	41856	9.3663	ug/L	94
20) Methylchlorid	4.64	84	223710	9.9448	ug/L	99
21) tbutylalcohol	4.84	59	791732	443.4800	ug/L	97
22) Acrylonitrile	4.94	53	336181	48.3313	ug/L	99
23) t12dichlorte	5.01	96	223561	11.1064	ug/L	98
24) MtBE	5.05	73	481530	10.1219	ug/L	99
25) Hexane	5.41	57	649044	23.2253	ug/L	99
26) 11dichlorota	5.54	63	392064	10.6135	ug/L	100
27) Vinylacetate	5.63	43	3155414	107.8925	ug/L	99
28) chloroprene	5.67	53	714815	21.8512	ug/L	99
29) Diisopether	5.69	45	676477	9.8994	ug/L	96
30) ETBE	6.14	59	533466	9.7737	ug/L	99
31) 22dichloropr	6.27	77	295519	10.3974	ug/L	99
32) c12dichlorte	6.27	96	220607	10.1379	ug/L	99
33) 2Butanone	6.29	72	182376	87.6581	ug/L	97
34) propionitrile	6.33	54	248233	88.7243	ug/L	97
35) Ethylacetate	6.40	88	32831	42.4369	ug/L	96
36) methacrylonitrile	6.54	67	142226	18.2785	ug/L	97
37) Bromochlorma	6.56	128	92286	9.7513	ug/L	98
38) Tetrahydofur	6.65	42	519584	88.5231	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1721\CCV-LCS1.D Vial: 3
Acq On : 17 Apr 2021 18:15 Operator: RLD-DGS
Sample : 180903,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 18:35:46 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 18:34:17 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	335473	9.8248	ug/L	99
40)	111trichlota	6.91	97	316767	11.0260	ug/L	100
42)	Cyclohexane	7.00	56	406791	11.8316	ug/L	99
43)	Carbtetraclo	7.13	119	262514	11.3088	ug/L	99
44)	11dicloprope	7.12	110	109617	10.8748	ug/L	98
46)	Benzene	7.36	78	823125	10.7516	ug/L	99
47)	12dichlorota	7.36	62	282713	10.1861	ug/L	99
48)	TAME	7.53	73	489650	10.1909	ug/L	96
49)	trichloroete	8.17	95	225505	10.9649	ug/L	97
50)	methylcyclohexane	8.44	83	430397	11.9324	ug/L	99
51)	12dicloropra	8.43	63	245964	10.4874	ug/L	98
52)	23Dicl1propene	8.50	75	334514	10.6192	ug/L	97
53)	Dibromometha	8.57	93	122080	10.1966	ug/L	98
54)	methylmethacrylate	8.60	69	127239	9.5709	ug/L	98
55)	14dioxane	8.62	88	101753	461.9594	ug/L	97
56)	Bromodiclrma	8.78	83	265931	10.2656	ug/L	99
57)	2Nitropropane	9.04	43	484854	104.6428	ug/L	98
58)	2CLEVE	9.16	63	619479	50.9974	ug/L	98
59)	c13dicloproe	9.35	75	332703	10.4914	ug/L	98
60)	4Meth2Pentan	9.55	43	1496781	91.8614	ug/L	100
62)	Toluene	9.80	92	504739	10.2269	ug/L	99
63)	t13Dicloprop	10.06	75	271809	10.2045	ug/L	99
64)	ethylmethacrylate	10.20	69	440392	19.2271	ug/L	96
65)	112Triclotha	10.30	83	143579	9.7255	ug/L	99
66)	Tetrachlorte	10.53	166	206547	10.8369	ug/L	97
67)	13Diclorpropa	10.52	76	315318	10.1593	ug/L	99
69)	2Hexanone	10.64	43	1092437	83.9112	ug/L	99
70)	Clorodibrmta	10.82	129	171176	9.7301	ug/L	97
71)	12Dibrometha	10.98	107	179165	10.2579	ug/L	99
72)	Chlorobenzen	11.66	112	552971	9.9180	ug/L	99
73)	1Clhexane	11.65	91	292961	10.3279	ug/L	99
74)	1112Tetclota	11.77	131	181176	10.0566	ug/L	96
75)	Ethylbenzene	11.82	91	902991	10.5884	ug/L	99
76)	m p-Xylene	11.99	106	707186	20.8374	ug/L	98
77)	o-Xylene	12.53	106	348661	10.2372	ug/L	97
78)	Styrene	12.55	104	569239	10.2684	ug/L	98
79)	Bromoform	12.78	173	97617	9.7473	ug/L	99
80)	Isopropylben	13.06	105	863463	10.9248	ug/L	100
81)	cyclohexanone	13.15	55	120307	165.9151	ug/L	98
84)	Bromobenzene	13.47	156	205502	10.3328	ug/L	99
85)	1122Tetrclta	13.44	83	218105	9.6730	ug/L	96
86)	123Triclproa	13.50	75	268976	9.8533	ug/L	97
87)	14dichloro2butene	13.53	53	62241	9.6466	ug/L	99
88)	n-Propylbenz	13.64	91	1025109	10.6449	ug/L	99
89)	2chlorotolue	13.76	91	612361	10.4311	ug/L	98
90)	4chlorotolue	13.91	91	707091	10.5967	ug/L	100
91)	135Trimebenz	13.90	105	705560	10.7388	ug/L	99
92)	tbutylbenzen	14.37	119	605459	10.8975	ug/L	99
93)	124Trimetben	14.44	105	684122	10.5461	ug/L	97
94)	sbutylbenzen	14.69	105	881005	11.1819	ug/L	99
95)	13Diclorbenz	14.83	146	373877	10.2303	ug/L	99
96)	pIsopropylto	14.91	119	728447	10.7929	ug/L	100
97)	14dichlorobe	14.96	146	371109	9.7903	ug/L	97
98)	12dichlorobe	15.49	146	349678	9.8335	ug/L	99
99)	nButylbenzen	15.50	91	670557	10.3508	ug/L	99
100)	12dibromo3cl	16.59	157	33915	9.4670	ug/L	95
101)	135Trichlorobenzene	16.92	180	249522	9.9959	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

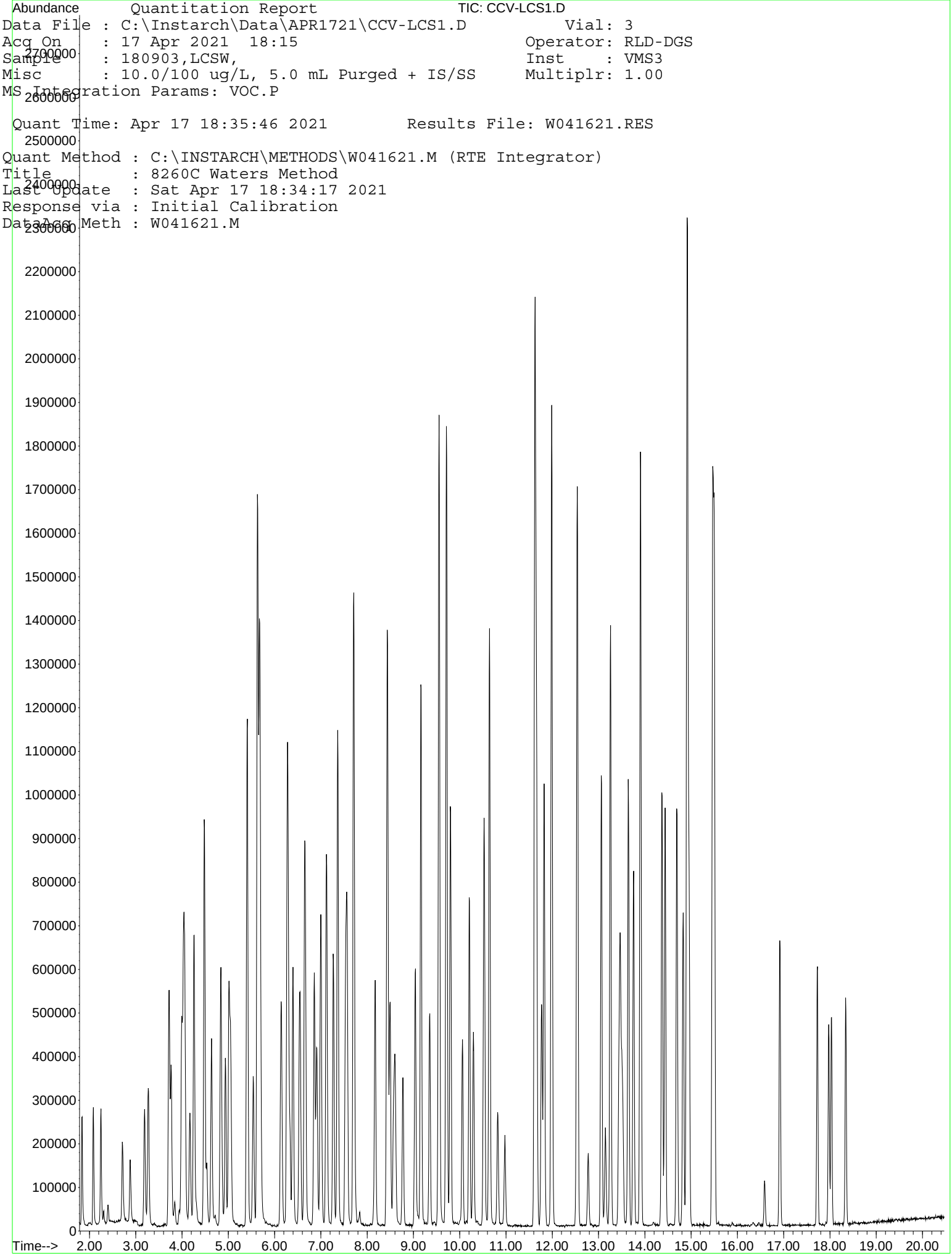
Data File : C:\Instarch\Data\APR1721\CCV-LCS1.D Vial: 3
Acq On : 17 Apr 2021 18:15 Operator: RLD-DGS
Sample : 180903,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 18:35:46 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 18:34:17 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	212852	10.0980	ug/L	99
103) Hexachlorobu	17.97	225	102166	10.5076	ug/L	99
104) Naphthalene	18.03	128	434505	9.4007	ug/L	99
105) 123Trichlben	18.34	180	187168	9.7047	ug/L	98

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: CCV-LCS1.D
Data File : C:\Instarch\Data\APR1721\CCV-LCS1.D
Vial: 3
Acq On : 17 Apr 2021 18:15
Operator: RLD-DGS
Sample : 180903,LCSW,
Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Apr 17 18:35:46 2021
Results File: W041621.RES
Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 18:34:17 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
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Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR1721\CCVF1.D Vial: 21
Acq On : 18 Apr 2021 3:15 Operator: RLD-DGS
Sample : 180903,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 18 03:36:15 2021

Quant Method : C:\INSTARCH\METHODS\W041621.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W041621.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	94	0.00
2	PT	Dichlorodi	0.2565	0.3181	-24.02	106	0.00
3	PT	Chloromethan	0.3468	0.3822	-10.21	104	0.00
4	PT	VinylChlorid	0.3175	0.3648	-14.90	102	0.00
5	PT	Bromomethane	0.1691	0.1896	-12.12	108	0.00
6	PT	Chloroethane	0.2113	0.1995	5.58	87	0.00
7	T	Dichloroflmethane	0.4059	0.4109	-1.23	94	0.00
8	PT	Trichlorofma	0.3799	0.4236	-11.50	98	0.00
9	T	Ethylether	0.2260	0.2203	2.52	93	0.00
10	T	dichlorotfluoroethan	0.2757	0.2875	-4.28	96	0.00
11	T	propyleneoxide	0.0429	0.0374	12.82	83	0.00
12	T	Acrolein	0.0127	0.0361	-184.25#	320#	0.00
13	PT	11dichlorthe	0.2402	0.2527	-5.20	96	0.00
14	PT	Trichlorotfluoroeth	0.2288	0.2499	-9.22	96	0.00
15	PT	Acetone	0.0763	0.0610#	20.05	80	0.00
16	T	Iodomethane	0.2390	0.2470	-3.35	96	0.00
17	PT	Carbon Dislf	0.6618	0.6638	-0.30	94	0.00
18	T	allylchloride	0.4585	0.4585	0.00	92	0.00
19	PT	methylacetate	0.0598	0.0484#	19.06	88	0.00
20	PT	Methylchlorid	0.3012	0.2896	3.85	95	0.00
21	T	tbutylalcohol	0.0239	0.0199#	16.74	83	0.00
22	T	Acrylonitrile	0.0931	0.0842	9.56	85	0.00
23	PT	t12dichlorte	0.2695	0.2703	-0.30	95	0.00
24	PT	MtBE	0.6370	0.6175	3.06	91	0.00
25	T	Hexane	0.3742	0.3943	-5.37	90	0.00
26	PT	11dichlorota	0.4946	0.4941	0.10	95	0.00
27	T	Vinylacetate	0.4399	0.3453	21.50	76	0.00
28	T	chloroprene	0.4380	0.4790	-9.36	95	0.00
29	T	Diisopether	0.9150	0.9328	-1.95	93	0.00
30	T	ETBE	0.7309	0.7309	0.00	92	0.00
31	T	22dichloropr	0.3806	0.3375	11.32	84	0.00
32	PT	c12dichlorte	0.2914	0.2988	-2.54	97	0.00
33	PT	2Butanone	0.0279	0.0241#	13.62	82	0.00
34	T	propionitrile	0.0375	0.0335	10.67	85	0.00
35	T	Ethylacetate	0.0104	0.0100#	3.85	96	0.00
36	T	methacrylonitrile	0.1042	0.0965	7.39	90	0.00
37	T	Bromochlorma	0.1267	0.1241	2.05	91	0.00
38	T	Tetrahydofur	0.0786	0.0711	9.54	87	0.00
39	PT	Chloroform	0.4572	0.4684	-2.45	96	0.00
40	PT	111trichlota	0.3847	0.4031	-4.78	96	0.00
41	S	SURRDibrflma	0.2619	0.2607	0.46	94	0.00
42	PT	Cyclohexane	0.4604	0.5227	-13.53	98	0.00
43	PT	Carbtetraclo	0.3108	0.3442	-10.75	101	0.00
44	T	11dicloprope	0.1350	0.1386	-2.67	96	0.00
45	S	SURR12DCAd4	0.0735	0.0700	4.76	89	0.00
46	PT	Benzene	1.0251	1.0722	-4.59	95	0.00
47	PT	12dichlorota	0.3716	0.3580	3.66	92	0.00
48	T	TAME	0.6434	0.6300	2.08	92	0.00

49	PT	trichloroete	0.2754	0.2975	-8.02	101	0.00
50	PT	methylcyclohexane	0.4830	0.5406	-11.93	97	0.00
51	PT	12dicloropra	0.3140	0.3052	2.80	92	0.00
52	T	23Dicl1propene	0.4218	0.4296	-1.85	96	0.00
53	T	Dibromometha	0.1603	0.1529	4.62	90	0.00
54	T	methylmethacrylate	0.1780	0.1613	9.38	88	0.00
55	T	14dioxane	0.0029	0.0026#	10.34	87	0.00
56	PT	Bromodiclrma	0.3469	0.3423	1.33	95	0.00
57	T	2Nitropropane	0.0620	0.0536	13.55	83	0.00
58	T	2CLEVE	0.1627	0.1565	3.81	87	0.00
59	PT	c13dicloproe	0.4246	0.4116	3.06	92	0.00
60	PT	4Meth2Pentan	0.2256	0.2024	10.28	87	0.00
61	S	SURRd8Tolule	0.9862	1.0109	-2.50	95	0.00
62	PT	Toluene	0.6609	0.6953	-5.21	96	0.00
63	PT	t13Dicloprop	0.3567	0.3463	2.92	92	0.00
64	T	ethylmethacrylate	0.3067	0.3016	1.66	89	0.00
65	PT	112Triclotha	0.1977	0.1948	1.47	94	0.00
66	PT	Tetrachlorte	0.2552	0.2737	-7.25	99	0.00
67	T	13Diclorpropa	0.4156	0.4074	1.97	94	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	96	0.00
69	PT	2Hexanone	0.2182	0.1931	11.50	85	0.00
70	PT	Clorodibrmta	0.3063	0.2951	3.66	96	0.00
71	PT	12Dibrometha	0.3041	0.2917	4.08	93	0.00
72	PT	Chlorobenzen	0.9706	1.0036	-3.40	97	0.00
73	T	1Clhexane	0.4938	0.4969	-0.63	95	0.00
74	T	1112Tetclota	0.3136	0.3164	-0.89	98	0.00
75	PT	Ethylbenzene	1.4847	1.5923	-7.25	97	0.00
76	PT	m p-Xylene	0.5908	0.6325	-7.06	98	0.00
77	PT	o-Xylene	0.5929	0.6189	-4.39	100	0.00
78	PT	Styrene	0.9651	1.0422	-7.99	97	0.00
79	PT	Bromoform	0.1743	0.1642	5.79	94	0.00
80	PT	Isopropylben	1.3760	1.4765	-7.30	97	0.00
81	T	cyclohexanone	0.0126	0.0104#	17.46	79	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	95	0.00
83	S	SURR4BrFBenz	1.0587	1.0671	-0.79	97	0.00
84	T	Bromobenzene	0.6939	0.7163	-3.23	100	0.00
85	PT	1122Tetrclta	0.7866	0.6674	15.15	84	0.00
86	T	123Triclproa	0.9524	0.8633	9.36	89	0.00
87	T	14dichloro2butene	0.2251	0.1812	19.50	81	0.00
88	T	n-Propylbenz	3.3597	3.4452	-2.54	96	0.00
89	T	2chlorotolue	2.0481	2.1411	-4.54	98	0.00
90	T	4chlorotolue	2.3279	2.4679	-6.01	96	0.00
91	T	135Trimebenz	2.2922	2.4875	-8.52	98	0.00
92	T	tbutylbenzen	1.9383	2.1100	-8.86	99	0.00
93	T	124Trimetben	2.2631	2.4517	-8.33	98	0.00
94	T	sbutylbenzen	2.7487	3.0300	-10.23	97	0.00
95	PT	13Diclorbenz	1.2750	1.3135	-3.02	98	0.00
96	T	pIsopropylto	2.3547	2.5673	-9.03	99	0.00
97	PT	14dichlorobe	1.3224	1.3421	-1.49	97	0.00
98	PT	12dichlorobe	1.2406	1.2273	1.07	98	0.00
99	T	nButylbenzen	2.2601	2.3551	-4.20	96	0.00
100	PT	12dibromo3cl	0.1250	0.1045	16.40	90	0.00
101	T	135Trichlorobenzene	0.8709	0.9023	-3.61	103	0.00
102	PT	124Trichlobe	0.7354	0.7583	-3.11	101	0.00
103	T	Hexachlorobu	0.3392	0.3641	-7.34	106	0.00
104	T	Naphthalene	1.6125	1.5647	2.96	96	0.00
105	T	123Trichlben	0.6729	0.6948	-3.25	104	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W041621.M Tue Apr 20 07:47:08 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR1721\CCVF1.D Vial: 21
Acq On : 18 Apr 2021 3:15 Operator: RLD-DGS
Sample : 180903,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 18 03:36:15 2021

Quant Method : C:\INSTARCH\METHODS\W041621.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W041621.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	94	0.00
2	PT	Dichlorodi	10.0000	12.3997	-24.00	106	0.00
3	PT	Chloromethan	10.0000	11.0183	-10.18	104	0.00
4	PT	VinylChlorid	10.0000	11.4885	-14.89	102	0.00
5	PT	Bromomethane	10.0000	11.2121	-12.12	108	0.00
6	PT	Chloroethane	10.0000	9.4394	5.61	87	0.00
7	T	Dichloroflmethane	10.0000	10.1226	-1.23	94	0.00
8	PT	Trichlorofma	10.0000	11.1506	-11.51	98	0.00
9	T	Ethylether	10.0000	9.7488	2.51	93	0.00
10	T	dichlorotfluoroethan	10.0000	10.4259	-4.26	96	0.00
11	T	propyleneoxide	100.0000	87.3462	12.65	83	0.00
12	T	Acrolein	50.0000	142.0720	-184.14#	320	0.00
13	PT	11dichlorthe	10.0000	10.5212	-5.21	96	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.8374	-9.19	96	0.00
15	PT	Acetone	100.0000	83.3850	16.61	80	0.00
16	T	Iodomethane	20.0000	20.6723	-3.36	96	0.00
17	PT	Carbon Dislf	20.0000	20.8722	-4.36	94	0.00
18	T	allylchloride	20.0000	20.0007	-0.00	92	0.00
19	PT	methylacetate	10.0000	8.0824	19.18	88	0.00
20	PT	Methylchlorid	10.0000	9.6139	3.86	95	0.00
21	T	tbutylalcohol	500.0000	416.0342	16.79	83	0.00
22	T	Acrylonitrile	50.0000	45.2269	9.55	85	0.00
23	PT	t12dichlorte	10.0000	10.0275	-0.27	95	0.00
24	PT	MtBE	10.0000	9.6931	3.07	91	0.00
25	T	Hexane	20.0000	21.0763	-5.38	90	0.00
26	PT	11dichlorota	10.0000	9.9899	0.10	95	0.00
27	T	Vinylacetate	100.0000	84.4668	15.53	76	0.00
28	T	chloroprene	20.0000	21.8711	-9.36	95	0.00
29	T	Diisopether	10.0000	10.1944	-1.94	93	0.00
30	T	ETBE	10.0000	9.9999	0.00	92	0.00
31	T	22dichloropr	10.0000	8.8683	11.32	84	0.00
32	PT	c12dichlorte	10.0000	10.2556	-2.56	97	0.00
33	PT	2Butanone	100.0000	86.4632	13.54	82	0.00
34	T	propionitrile	100.0000	89.3186	10.68	85	0.00
35	T	Ethylacetate	50.0000	48.1727	3.65	96	0.00
36	T	methacrylonitrile	20.0000	18.5259	7.37	90	0.00
37	T	Bromochlorma	10.0000	9.7925	2.07	91	0.00
38	T	Tetrahydofur	100.0000	90.5258	9.47	87	0.00
39	PT	Chloroform	10.0000	10.2445	-2.45	96	0.00
40	PT	111trichlota	10.0000	10.4789	-4.79	96	0.00
41	S	SURRDibrflma	20.0000	19.9129	0.44	94	0.00
42	PT	Cyclohexane	10.0000	11.3541	-13.54	98	0.00
43	PT	Carbtetraclo	10.0000	11.0729	-10.73	101	0.00
44	T	11dicloprope	10.0000	10.2714	-2.71	96	0.00
45	S	SURR12DCAd4	20.0000	19.0556	4.72	89	0.00
46	PT	Benzene	10.0000	10.4586	-4.59	95	0.00
47	PT	12dichlorota	10.0000	9.6338	3.66	92	0.00
48	T	TAME	10.0000	9.7928	2.07	92	0.00

49	PT	trichloroete	10.0000	10.8018	-8.02	101	0.00
50	PT	methylcyclohexane	10.0000	11.1928	-11.93	97	0.00
51	PT	12dicloropra	10.0000	9.7183	2.82	92	0.00
52	T	23Dicl1propene	10.0000	10.1856	-1.86	96	0.00
53	T	Dibromometha	10.0000	9.5392	4.61	90	0.00
54	T	methylmethacrylate	10.0000	9.0587	9.41	88	0.00
55	T	14dioxane	500.0000	434.9028	13.02	87	0.00
56	PT	Bromodiclrma	10.0000	9.8668	1.33	95	0.00
57	T	2Nitropropane	100.0000	86.4078	13.59	83	0.00
58	T	2CLEVE	50.0000	48.0969	3.81	87	0.00
59	PT	c13dicloproe	10.0000	9.6925	3.07	92	0.00
60	PT	4Meth2Pentan	100.0000	92.8673	7.13	87	0.00
61	S	SURRd8Tolule	20.0000	20.5015	-2.51	95	0.00
62	PT	Toluene	10.0000	10.5216	-5.22	96	0.00
63	PT	t13Dicloprop	10.0000	9.7085	2.91	92	0.00
64	T	ethylmethacrylate	20.0000	19.6673	1.66	89	0.00
65	PT	112Triclotha	10.0000	9.8544	1.46	94	0.00
66	PT	Tetrachlorte	10.0000	10.7232	-7.23	99	0.00
67	T	13Diclorpropa	10.0000	9.8021	1.98	94	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	96	0.00
69	PT	2Hexanone	100.0000	85.3746	14.63	85	0.00
70	PT	Clorodibrmta	10.0000	9.6362	3.64	96	0.00
71	PT	12Dibrometha	10.0000	9.5935	4.06	93	0.00
72	PT	Chlorobenzen	10.0000	10.3399	-3.40	97	0.00
73	T	1Clhexane	10.0000	10.0612	-0.61	95	0.00
74	T	1112Tetclota	10.0000	10.0883	-0.88	98	0.00
75	PT	Ethylbenzene	10.0000	10.7249	-7.25	97	0.00
76	PT	m p-Xylene	20.0000	21.4110	-7.06	98	0.00
77	PT	o-Xylene	10.0000	10.4383	-4.38	100	0.00
78	PT	Styrene	10.0000	10.7994	-7.99	97	0.00
79	PT	Bromoform	10.0000	9.4156	5.84	94	0.00
80	PT	Isopropylben	10.0000	10.7306	-7.31	97	0.00
81	T	cyclohexanone	200.0000	165.0232	17.49	79	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	95	0.00
83	S	SURR4BrFBenz	20.0000	20.1580	-0.79	97	0.00
84	T	Bromobenzene	10.0000	10.3230	-3.23	100	0.00
85	PT	1122Tetrclta	10.0000	8.4844	15.16	84	0.00
86	T	123Triclproa	10.0000	9.0645	9.35	89	0.00
87	T	14dichloro2butene	10.0000	8.0491	19.51	81	0.00
88	T	n-Propylbenz	10.0000	10.2546	-2.55	96	0.00
89	T	2chlorotolue	10.0000	10.4543	-4.54	98	0.00
90	T	4chlorotolue	10.0000	10.6012	-6.01	96	0.00
91	T	135Trimebenz	10.0000	10.8523	-8.52	98	0.00
92	T	tbutylbenzen	10.0000	10.8858	-8.86	99	0.00
93	T	124Trimetben	10.0000	10.8333	-8.33	98	0.00
94	T	sbutylbenzen	10.0000	11.0235	-10.24	97	0.00
95	PT	13Diclorbenz	10.0000	10.3022	-3.02	98	0.00
96	T	pIsopropylto	10.0000	10.9029	-9.03	99	0.00
97	PT	14dichlorobe	10.0000	10.1489	-1.49	97	0.00
98	PT	12dichlorobe	10.0000	9.8931	1.07	98	0.00
99	T	nButylbenzen	10.0000	10.4204	-4.20	96	0.00
100	PT	12dibromo3cl	10.0000	8.3652	16.35	90	0.00
101	T	135Trichlorobenzene	10.0000	10.3605	-3.61	103	0.00
102	PT	124Trichlobe	10.0000	10.3111	-3.11	101	0.00
103	T	Hexachlorobu	10.0000	10.7345	-7.35	106	0.00
104	T	Naphthalene	10.0000	9.7034	2.97	96	0.00
105	T	123Trichlben	10.0000	10.3268	-3.27	104	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W041621.M Tue Apr 20 07:47:26 2021

Quantitation Report

Data File : C:\Instarch\Data\APR1721\CCVF1.D Vial: 21
Acq On : 18 Apr 2021 3:15 Operator: RLD-DGS
Sample : 180903,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 03:36:15 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1437721	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1105882	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	562468	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	374840	19.913	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
45) SURR12DCAd4	7.27	102	100634	19.056	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 95 %			
61) SURRd8Tolule	9.71	98	1453445	20.502	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103 %			
83) SURR4BrFBenz	13.26	95	600197	20.158	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	1.83	85	228672	12.3997	ug/L	97
3) Chloromethan	2.08	50	274714	11.0183	ug/L	98
4) VinylChlorid	2.25	62	262232	11.4885	ug/L	99
5) Bromomethane	2.72	94	136314	11.2121	ug/L	97
6) Chloroethane	2.88	64	143395	9.4394	ug/L	99
7) Dichloroflmethane	3.19	67	295376	10.1226	ug/L	100
8) Trichlorofma	3.28	101	304531	11.1506	ug/L	99
9) Ethylether	3.71	59	158355	9.7488	ug/L	99
10) dichlorotfluoroethan	3.73	67	206664	10.4259	ug/L	98
11) propyleneoxide	3.77	58	269117	87.3462	ug/L	99
12) Acrolein	3.84	56	129722	142.0720	ug/L	92
13) 11dichlorthe	3.99	96	181636	10.5212	ug/L	100
14) Trichlorotfluoroeth	4.03	101	359228	21.8374	ug/L	98
15) Acetone	4.06	43	438662	83.3850	ug/L	99
16) Iodomethane	4.17	142	355170	20.6723	ug/L	99
17) Carbon Dislf	4.26	76	954387	20.8722	ug/L	99
18) allylchloride	4.48	41	659241	20.0007	ug/L	98
19) methylacetate	4.53	74	34767	8.0824	ug/L	99
20) Methylchlorid	4.64	84	208173	9.6139	ug/L	99
21) tbutylalcohol	4.84	59	714942	416.0342	ug/L	97
22) Acrylonitrile	4.94	53	302816	45.2269	ug/L	97
23) t12dichlorte	5.01	96	194291	10.0275	ug/L	98
24) MtBE	5.05	73	443875	9.6931	ug/L	99
25) Hexane	5.41	57	566949	21.0763	ug/L	98
26) 11dichlorota	5.54	63	355219	9.9899	ug/L	99
27) Vinylacetate	5.63	43	2482211	84.4668	ug/L	97
28) chloroprene	5.67	53	688694	21.8711	ug/L	99
29) Diisopether	5.69	45	670570	10.1944	ug/L	95
30) ETBE	6.14	59	525391	9.9999	ug/L	98
31) 22dichloropr	6.28	77	242628	8.8683	ug/L	98
32) c12dichlorte	6.27	96	214819	10.2556	ug/L	97
33) 2Butanone	6.29	72	173159	86.4632	ug/L	99
34) propionitrile	6.33	54	240545	89.3186	ug/L	99
35) Ethylacetate	6.40	88	35874	48.1727	ug/L #	76
36) methacrylonitrile	6.54	67	138757	18.5259	ug/L	99
37) Bromochlorma	6.55	128	89208	9.7925	ug/L	97
38) Tetrahydofur	6.65	42	511457	90.5258	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1721\CCVF1.D Vial: 21
Acq On : 18 Apr 2021 3:15 Operator: RLD-DGS
Sample : 180903,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 03:36:15 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	336713	10.2445	ug/L	100
40)	111trichlota	6.91	97	289784	10.4789	ug/L	99
42)	Cyclohexane	7.00	56	375767	11.3541	ug/L	100
43)	Carbtetraclo	7.13	119	247419	11.0729	ug/L	100
44)	11dicloprope	7.12	110	99661	10.2714	ug/L	99
46)	Benzene	7.36	78	770731	10.4586	ug/L	99
47)	12dichlorota	7.36	62	257379	9.6338	ug/L	99
48)	TAME	7.54	73	452914	9.7928	ug/L	86
49)	trichloroete	8.17	95	213839	10.8018	ug/L	99
50)	methylcyclohexane	8.44	83	388613	11.1928	ug/L	100
51)	12dicloropra	8.43	63	219397	9.7183	ug/L	94
52)	23Dicl1propene	8.50	75	308847	10.1856	ug/L	98
53)	Dibromometha	8.57	93	109936	9.5392	ug/L	96
54)	methylmethacrylate	8.60	69	115923	9.0587	ug/L	97
55)	14dioxane	8.62	88	92209	434.9028	ug/L	97
56)	Bromodiclrma	8.77	83	246035	9.8668	ug/L	100
57)	2Nitropropane	9.04	43	385383	86.4078	ug/L	98
58)	2CLEVE	9.16	63	562384	48.0969	ug/L	98
59)	c13dicloproe	9.35	75	295868	9.6925	ug/L	98
60)	4Meth2Pentan	9.55	43	1454620	92.8673	ug/L	100
62)	Toluene	9.80	92	499854	10.5216	ug/L	99
63)	t13Dicloprop	10.06	75	248922	9.7085	ug/L	99
64)	ethylmethacrylate	10.20	69	433619	19.6673	ug/L	99
65)	112Triclotha	10.30	83	140038	9.8544	ug/L	99
66)	Tetrachlorte	10.53	166	196732	10.7232	ug/L	100
67)	13Diclorpropa	10.51	76	292849	9.8021	ug/L	99
69)	2Hexanone	10.64	43	1067991	85.3746	ug/L	99
70)	Clorodibrmta	10.82	129	163188	9.6362	ug/L	98
71)	12Dibrometha	10.97	107	161297	9.5935	ug/L	97
72)	Chlorobenzen	11.66	112	554948	10.3399	ug/L	99
73)	1Clhexane	11.64	91	274729	10.0612	ug/L	100
74)	1112Tetclota	11.77	131	174955	10.0883	ug/L	100
75)	Ethylbenzene	11.82	91	880446	10.7249	ug/L	100
76)	m p-Xylene	11.99	106	699495	21.4110	ug/L	97
77)	o-Xylene	12.53	106	342220	10.4383	ug/L	95
78)	Styrene	12.55	104	576302	10.7994	ug/L	100
79)	Bromoform	12.77	173	90770	9.4156	ug/L	96
80)	Isopropylben	13.06	105	816414	10.7306	ug/L	100
81)	cyclohexanone	13.15	55	115188	165.0232	ug/L	97
84)	Bromobenzene	13.47	156	201438	10.3230	ug/L	96
85)	1122Tetrclta	13.44	83	187698	8.4844	ug/L	94
86)	123Triclproa	13.50	75	242778	9.0645	ug/L	99
87)	14dichloro2butene	13.53	53	50955	8.0491	ug/L	96
88)	n-Propylbenz	13.64	91	968912	10.2546	ug/L	99
89)	2chlorotolue	13.76	91	602151	10.4543	ug/L	99
90)	4chlorotolue	13.91	91	694057	10.6012	ug/L	98
91)	135Trimebenz	13.90	105	699577	10.8523	ug/L	99
92)	tbutylbenzen	14.37	119	593412	10.8858	ug/L	99
93)	124Trimetben	14.44	105	689507	10.8333	ug/L	100
94)	sbutylbenzen	14.69	105	852152	11.0235	ug/L	99
95)	13Diclorbenz	14.83	146	369406	10.3022	ug/L	100
96)	pIsopropylto	14.91	119	722006	10.9029	ug/L	98
97)	14dichlorobe	14.96	146	377448	10.1489	ug/L	98
98)	12dichlorobe	15.50	146	345169	9.8931	ug/L	100
99)	nButylbenzen	15.50	91	662343	10.4204	ug/L	100
100)	12dibromo3cl	16.59	157	29403	8.3652	ug/L	98
101)	135Trichlorobenzene	16.91	180	253749	10.3605	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1721\CCVF1.D Vial: 21
Acq On : 18 Apr 2021 3:15 Operator: RLD-DGS
Sample : 180903,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 03:36:15 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	213249	10.3111	ug/L	99
103) Hexachlorobu	17.97	225	102405	10.7345	ug/L	99
104) Naphthalene	18.03	128	440040	9.7034	ug/L	99
105) 123Trichlben	18.34	180	195412	10.3268	ug/L	98

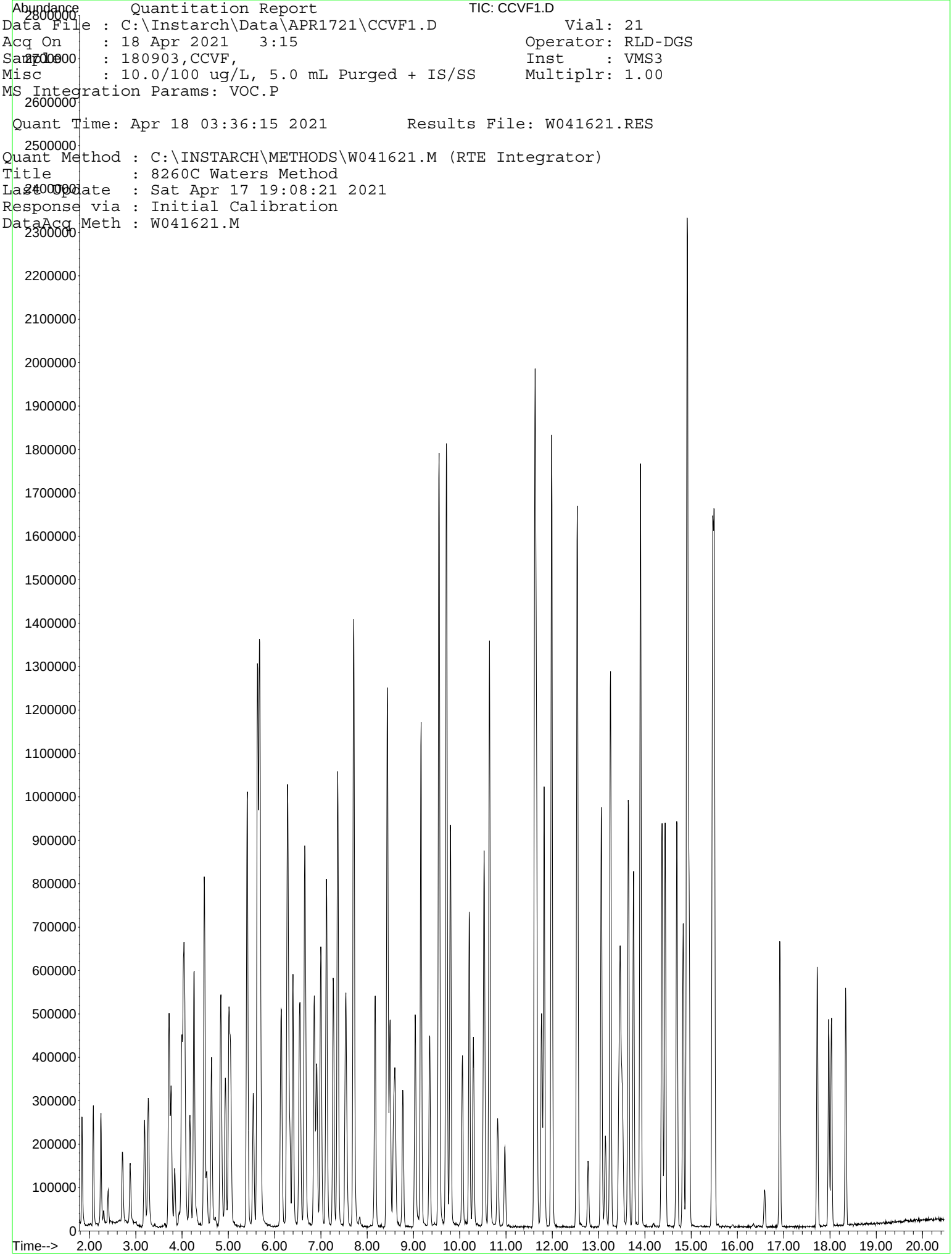
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCVF1.D

Data File : C:\Instarch\Data\APR1721\CCVF1.D Vial: 21
Acq On : 18 Apr 2021 3:15 Operator: RLD-DGS
Sample : 180903,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 03:36:15 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



BFB

Data File : C:\Instarch\Data\APR1921B\BFB1.D Vial: 1
Acq On : 19 Apr 2021 14:33 Operator: RLD-DGS
Sample : 181068,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W041621.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.669 to 4.693 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	17407	PASS
75	95	30	60	45.4	45396	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.4	6354	PASS
173	174	0.00	2	0.8	522	PASS
174	95	50	100	68.9	68922	PASS
175	174	5	9	8.1	5602	PASS
176	174	95	101	97.2	66960	PASS
177	176	5	9	6.4	4293	PASS

W041621.M Thu Apr 22 12:17:33 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR1921B\CCV-LCS1.D Vial: 2
Acq On : 19 Apr 2021 15:41 Operator: RLD-DGS
Sample : 181068,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 19 16:02:29 2021

Quant Method : C:\INSTARCH\METHODS\W041621.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W041621.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	98	0.00
2	PT	Dichlorodi	0.2565	0.3159	-23.16#	110	0.00
3	PT	Chloromethan	0.3468	0.3437	0.89	98	0.00
4	PT	VinylChlorid	0.3175	0.3362	-5.89	98	0.00
5	PT	Bromomethane	0.1691	0.1841	-8.87	109	0.00
6	PT	Chloroethane	0.2113	0.2007	5.02	91	0.00
7	T	Dichloroflmethane	0.4059	0.4053	0.15	97	0.00
8	PT	Trichlorofma	0.3799	0.4219	-11.06	102	0.00
9	T	Ethylether	0.2260	0.2085	7.74	92	0.00
10	T	dichlorotfluoroethan	0.2757	0.2916	-5.77	101	0.00
11	T	propyleneoxide	0.0429	0.0378	11.89	87	0.00
12	T	Acrolein	0.0127	0.0115#	9.45	106	-0.01
13	PT	11dichlorthe	0.2402	0.2452	-2.08	98	0.00
14	PT	Trichlorotfluoroeth	0.2288	0.2586	-13.02	104	0.00
15	PT	Acetone	0.0763	0.0555#	27.26#	76	0.00
16	T	Iodomethane	0.2390	0.2693	-12.68	109	0.00
17	PT	Carbon Dislf	0.6618	0.6848	-3.48	101	0.00
18	T	allylchloride	0.4585	0.4817	-5.06	101	0.00
19	PT	methylacetate	0.0598	0.0417#	30.27#	79	0.00
20	PT	Methylchlorid	0.3012	0.2730	9.36	93	0.00
21	T	tbutylalcohol	0.0239	0.0137#	42.68#	60	0.00
22	T	Acrylonitrile	0.0931	0.0751	19.33	79	0.00
23	PT	t12dichlorte	0.2695	0.2786	-3.38	102	0.00
24	PT	MtBE	0.6370	0.5826	8.54	90	0.00
25	T	Hexane	0.3742	0.4898	-30.89#	117	0.00
26	PT	11dichlorota	0.4946	0.4981	-0.71	100	0.00
27	T	Vinylacetate	0.4399	0.4114	6.48	94	0.00
28	T	chloroprene	0.4380	0.4859	-10.94	101	0.00
29	T	Diisopether	0.9150	0.9122	0.31	95	0.00
30	T	ETBE	0.7309	0.7203	1.45	95	0.00
31	T	22dichloropr	0.3806	0.4059	-6.65	106	0.00
32	PT	c12dichlorte	0.2914	0.3001	-2.99	101	0.00
33	PT	2Butanone	0.0279	0.0219#	21.51#	78	0.00
34	T	propionitrile	0.0375	0.0269#	28.27#	72	0.00
35	T	Ethylacetate	0.0104	0.0084#	19.23	84	0.00
36	T	methacrylonitrile	0.1042	0.0884	15.16	86	0.00
37	T	Bromochlorma	0.1267	0.1230	2.92	94	0.00
38	T	Tetrahydofur	0.0786	0.0609	22.52#	77	0.00
39	PT	Chloroform	0.4572	0.4526	1.01	96	0.00
40	PT	111trichlota	0.3847	0.4077	-5.98	102	0.00
41	S	SURRDibrflma	0.2619	0.2549	2.67	96	0.00
42	PT	Cyclohexane	0.4604	0.5423	-17.79	107	0.00
43	PT	Carbtetraclo	0.3108	0.3394	-9.20	104	0.00
44	T	11dicloprope	0.1350	0.1432	-6.07	104	0.00
45	S	SURR12DCAd4	0.0735	0.0677	7.89	89	0.00
46	PT	Benzene	1.0251	1.0688	-4.26	99	0.00
47	PT	12dichlorota	0.3716	0.3377	9.12	90	0.00
48	T	TAME	0.6434	0.6180	3.95	94	0.00

49	PT	trichloroete	0.2754	0.2962	-7.55	105	0.00
50	PT	methylcyclohexane	0.4830	0.5885	-21.84#	111	0.00
51	PT	12dicloropra	0.3140	0.3122	0.57	98	0.00
52	T	23Dicl1propene	0.4218	0.4471	-6.00	105	0.00
53	T	Dibromometha	0.1603	0.1465	8.61	90	0.00
54	T	methylmethacrylate	0.1780	0.1487	16.46	85	0.00
55	T	14dioxane	0.0029	0.0011#	62.07#	38#	0.00
56	PT	Bromodiclrma	0.3469	0.3268	5.79	94	0.00
57	T	2Nitropropane	0.0620	0.0427	31.13#	69	0.00
58	T	2CLEVE	0.1627	0.1541	5.29	89	0.00
59	PT	c13dicloproe	0.4246	0.4276	-0.71	100	0.00
60	PT	4Meth2Pentan	0.2256	0.1841	18.40	82	0.00
61	S	SURRd8Tolule	0.9862	1.0111	-2.52	99	0.00
62	PT	Toluene	0.6609	0.7076	-7.07	102	0.00
63	PT	t13Dicloprop	0.3567	0.3556	0.31	99	0.00
64	T	ethylmethacrylate	0.3067	0.2832	7.66	87	0.00
65	PT	112Triclotha	0.1977	0.1880	4.91	94	0.00
66	PT	Tetrachlorte	0.2552	0.2824	-10.66	106	0.00
67	T	13Diclorpropa	0.4156	0.3867	6.95	93	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	99	0.00
69	PT	2Hexanone	0.2182	0.1745	20.03#	80	0.00
70	PT	Clorodibrmta	0.3063	0.2832	7.54	95	0.00
71	PT	12Dibrometha	0.3041	0.2682	11.81	89	0.00
72	PT	Chlorobenzen	0.9706	0.9996	-2.99	100	0.00
73	T	1Clhexane	0.4938	0.5669	-14.80	112	0.00
74	T	1112Tetclota	0.3136	0.3115	0.67	100	0.00
75	PT	Ethylbenzene	1.4847	1.6459	-10.86	104	0.00
76	PT	m p-Xylene	0.5908	0.6660	-12.73	108	0.00
77	PT	o-Xylene	0.5929	0.6224	-4.98	105	0.00
78	PT	Styrene	0.9651	1.0380	-7.55	101	0.00
79	PT	Bromoform	0.1743	0.1533	12.05	91	0.00
80	PT	Isopropylben	1.3760	1.5935	-15.81	109	0.00
81	T	cyclohexanone	0.0126	0.0065#	48.41#	51	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	100	0.00
83	S	SURR4BrFBenz	1.0587	1.0598	-0.10	102	0.00
84	T	Bromobenzene	0.6939	0.6834	1.51	101	0.00
85	PT	1122Tetrclta	0.7866	0.6404	18.59	86	0.00
86	T	123Triclproa	0.9524	0.7711	19.04	84	0.00
87	T	14dichloro2butene	0.2251	0.1597	29.05#	76	0.00
88	T	n-Propylbenz	3.3597	3.6533	-8.74	108	0.00
89	T	2chlorotolue	2.0481	2.1733	-6.11	105	0.00
90	T	4chlorotolue	2.3279	2.5321	-8.77	105	0.00
91	T	135Trimebenz	2.2922	2.5323	-10.47	106	0.00
92	T	tbutylbenzen	1.9383	2.2289	-14.99	111	0.00
93	T	124Trimetben	2.2631	2.4845	-9.78	106	0.00
94	T	sbutylbenzen	2.7487	3.2002	-16.43	109	0.00
95	PT	13Diclorbenz	1.2750	1.3039	-2.27	103	0.00
96	T	pIsopropylto	2.3547	2.7390	-16.32	112	0.00
97	PT	14dichlorobe	1.3224	1.3264	-0.30	102	0.00
98	PT	12dichlorobe	1.2406	1.2013	3.17	102	0.00
99	T	nButylbenzen	2.2601	2.5167	-11.35	108	0.00
100	PT	12dibromo3cl	0.1250	0.0948	24.16#	86	0.00
101	T	135Trichlorobenzene	0.8709	0.9180	-5.41	111	0.00
102	PT	124Trichlobe	0.7354	0.7570	-2.94	107	0.00
103	T	Hexachlorobu	0.3392	0.3864	-13.92	119	0.00
104	T	Naphthalene	1.6125	1.3789	14.49	90	0.00
105	T	123Trichlben	0.6729	0.6571	2.35	105	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W041621.M Thu Apr 22 12:22:49 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR1921B\CCV-LCS1.D Vial: 2
Acq On : 19 Apr 2021 15:41 Operator: RLD-DGS
Sample : 181068,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 19 16:02:29 2021

Quant Method : C:\INSTARCH\METHODS\W041621.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W041621.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	98	0.00
2	PT	Dichlorodi	10.0000	12.3121	-23.12#	110	0.00
3	PT	Chloromethan	10.0000	9.9091	0.91	98	0.00
4	PT	VinylChlorid	10.0000	10.5868	-5.87	98	0.00
5	PT	Bromomethane	10.0000	10.8827	-8.83	109	0.00
6	PT	Chloroethane	10.0000	9.4984	5.02	91	0.00
7	T	Dichloroflmethane	10.0000	9.9842	0.16	97	0.00
8	PT	Trichlorofma	10.0000	11.1041	-11.04	102	0.00
9	T	Ethylether	10.0000	9.2293	7.71	92	0.00
10	T	dichlorotfluoroethan	10.0000	10.5756	-5.76	101	0.00
11	T	propyleneoxide	100.0000	88.1261	11.87	87	0.00
12	T	Acrolein	50.0000	45.1394	9.72	106	-0.01
13	PT	11dichlorthe	10.0000	10.2085	-2.09	98	0.00
14	PT	Trichlorotfluoroeth	20.0000	22.6046	-13.02	104	0.00
15	PT	Acetone	100.0000	75.3702	24.63#	76	0.00
16	T	Iodomethane	20.0000	22.5313	-12.66	109	0.00
17	PT	Carbon Dislf	20.0000	21.5926	-7.96	101	0.00
18	T	allylchloride	20.0000	21.0117	-5.06	101	0.00
19	PT	methylacetate	10.0000	6.9724	30.28#	79	0.00
20	PT	Methylchlorid	10.0000	9.0623	9.38	93	0.00
21	T	tbutylalcohol	500.0000	286.7080	42.66#	60	0.00
22	T	Acrylonitrile	50.0000	40.3293	19.34	79	0.00
23	PT	t12dichlorte	10.0000	10.3372	-3.37	102	0.00
24	PT	MtBE	10.0000	9.1464	8.54	90	0.00
25	T	Hexane	20.0000	26.1763	-30.88#	117	0.00
26	PT	11dichlorota	10.0000	10.0700	-0.70	100	0.00
27	T	Vinylacetate	100.0000	104.4323	-4.43	94	0.00
28	T	chloroprene	20.0000	22.1850	-10.92	101	0.00
29	T	Diisopether	10.0000	9.9695	0.30	95	0.00
30	T	ETBE	10.0000	9.8549	1.45	95	0.00
31	T	22dichloropr	10.0000	10.6658	-6.66	106	0.00
32	PT	c12dichlorte	10.0000	10.2977	-2.98	101	0.00
33	PT	2Butanone	100.0000	78.5333	21.47#	78	0.00
34	T	propionitrile	100.0000	71.8412	28.16#	72	0.00
35	T	Ethylacetate	50.0000	40.5396	18.92	84	0.00
36	T	methacrylonitrile	20.0000	16.9718	15.14	86	0.00
37	T	Bromochlorma	10.0000	9.7081	2.92	94	0.00
38	T	Tetrahydofur	100.0000	77.4975	22.50#	77	0.00
39	PT	Chloroform	10.0000	9.8990	1.01	96	0.00
40	PT	111trichlota	10.0000	10.5971	-5.97	102	0.00
41	S	SURRDibrflma	20.0000	19.4678	2.66	96	0.00
42	PT	Cyclohexane	10.0000	11.7782	-17.78	107	0.00
43	PT	Carbtetraclo	10.0000	10.9186	-9.19	104	0.00
44	T	11dicloprope	10.0000	10.6085	-6.08	104	0.00
45	S	SURR12DCAd4	20.0000	18.4235	7.88	89	0.00
46	PT	Benzene	10.0000	10.4258	-4.26	99	0.00
47	PT	12dichlorota	10.0000	9.0869	9.13	90	0.00
48	T	TAME	10.0000	9.6051	3.95	94	0.00

49	PT	trichloroete	10.0000	10.7567	-7.57	105	0.00
50	PT	methylcyclohexane	10.0000	12.1857	-21.86#	111	0.00
51	PT	12dicloropra	10.0000	9.9407	0.59	98	0.00
52	T	23Dicl1propene	10.0000	10.6001	-6.00	105	0.00
53	T	Dibromometha	10.0000	9.1407	8.59	90	0.00
54	T	methylmethacrylate	10.0000	8.3557	16.44	85	0.00
55	T	14dioxane	500.0000	181.5024	63.70#	38	0.00
56	PT	Bromodiclrma	10.0000	9.4212	5.79	94	0.00
57	T	2Nitropropane	100.0000	68.8596	31.14#	69	0.00
58	T	2CLEVE	50.0000	47.3701	5.26	89	0.00
59	PT	c13dicloproe	10.0000	10.0703	-0.70	100	0.00
60	PT	4Meth2Pentan	100.0000	83.3886	16.61	82	0.00
61	S	SURRd8Tolule	20.0000	20.5042	-2.52	99	0.00
62	PT	Toluene	10.0000	10.7070	-7.07	102	0.00
63	PT	t13Dicloprop	10.0000	9.9713	0.29	99	0.00
64	T	ethylmethacrylate	20.0000	18.4668	7.67	87	0.00
65	PT	112Triclotha	10.0000	9.5082	4.92	94	0.00
66	PT	Tetrachlorte	10.0000	11.0642	-10.64	106	0.00
67	T	13Diclorpropa	10.0000	9.3036	6.96	93	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	99	0.00
69	PT	2Hexanone	100.0000	76.2188	23.78#	80	0.00
70	PT	Clorodibrmta	10.0000	9.2474	7.53	95	0.00
71	PT	12Dibrometha	10.0000	8.8218	11.78	89	0.00
72	PT	Chlorobenzen	10.0000	10.2981	-2.98	100	0.00
73	T	1Clhexane	10.0000	11.4790	-14.79	112	0.00
74	T	1112Tetclota	10.0000	9.9311	0.69	100	0.00
75	PT	Ethylbenzene	10.0000	11.0857	-10.86	104	0.00
76	PT	m p-Xylene	20.0000	22.5429	-12.71	108	0.00
77	PT	o-Xylene	10.0000	10.4970	-4.97	105	0.00
78	PT	Styrene	10.0000	10.7549	-7.55	101	0.00
79	PT	Bromoform	10.0000	8.7925	12.07	91	0.00
80	PT	Isopropylben	10.0000	11.5806	-15.81	109	0.00
81	T	cyclohexanone	200.0000	102.7250	48.64#	51	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	100	0.00
83	S	SURR4BrFBenz	20.0000	20.0201	-0.10	102	0.00
84	T	Bromobenzene	10.0000	9.8494	1.51	101	0.00
85	PT	1122Tetrclta	10.0000	8.1405	18.60	86	0.00
86	T	123Triclproa	10.0000	8.0968	19.03	84	0.00
87	T	14dichloro2butene	10.0000	7.0932	29.07#	76	0.00
88	T	n-Propylbenz	10.0000	10.8740	-8.74	108	0.00
89	T	2chlorotolue	10.0000	10.6113	-6.11	105	0.00
90	T	4chlorotolue	10.0000	10.8770	-8.77	105	0.00
91	T	135Trimebenz	10.0000	11.0479	-10.48	106	0.00
92	T	tbutylbenzen	10.0000	11.4992	-14.99	111	0.00
93	T	124Trimetben	10.0000	10.9780	-9.78	106	0.00
94	T	sbutylbenzen	10.0000	11.6425	-16.43	109	0.00
95	PT	13Diclorbenz	10.0000	10.2265	-2.26	103	0.00
96	T	pIsopropylto	10.0000	11.6322	-16.32	112	0.00
97	PT	14dichlorobe	10.0000	10.0299	-0.30	102	0.00
98	PT	12dichlorobe	10.0000	9.6830	3.17	102	0.00
99	T	nButylbenzen	10.0000	11.1352	-11.35	108	0.00
100	PT	12dibromo3cl	10.0000	7.5868	24.13#	86	0.00
101	T	135Trichlorobenzene	10.0000	10.5406	-5.41	111	0.00
102	PT	124Trichlobe	10.0000	10.2936	-2.94	107	0.00
103	T	Hexachlorobu	10.0000	11.3920	-13.92	119	0.00
104	T	Naphthalene	10.0000	8.5515	14.48	90	0.00
105	T	123Trichlben	10.0000	9.7660	2.34	105	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W041621.M Thu Apr 22 12:23:15 2021

Quantitation Report

Data File : C:\Instarch\Data\APR1921B\CCV-LCS1.D Vial: 2
Acq On : 19 Apr 2021 15:41 Operator: RLD-DGS
Sample : 181068,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 16:02:29 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1501364	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1149326	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	595397	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	382685	19.468	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 97 %			
45) SURR12DCAd4	7.27	102	101603	18.424	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 92 %			
61) SURRd8Tolule	9.71	98	1517984	20.504	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103 %			
83) SURR4BrFBenz	13.26	95	630988	20.020	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	237109	12.3121	ug/L	94
3) Chloromethan	2.08	50	257997	9.9091	ug/L	97
4) VinylChlorid	2.25	62	252346	10.5868	ug/L	97
5) Bromomethane	2.72	94	138166	10.8827	ug/L	98
6) Chloroethane	2.88	64	150679	9.4984	ug/L	98
7) Dichloroflmethane	3.19	67	304234	9.9842	ug/L	99
8) Trichlorofma	3.27	101	316686	11.1041	ug/L	100
9) Ethylether	3.71	59	156553	9.2293	ug/L	99
10) dichlorotfluoroethan	3.73	67	218910	10.5756	ug/L	99
11) propyleneoxide	3.76	58	283539	88.1261	ug/L	99
12) Acrolein	3.84	56	43040	45.1394	ug/L	97
13) 11dichlorthe	3.99	96	184039	10.2085	ug/L	97
14) Trichlorotfluoroeth	4.04	101	388310	22.6046	ug/L	97
15) Acetone	4.06	43	416700	75.3702	ug/L	98
16) Iodomethane	4.17	142	404244	22.5313	ug/L	99
17) Carbon Dislf	4.25	76	1028169	21.5926	ug/L	100
18) allylchloride	4.48	41	723222	21.0117	ug/L	97
19) methylacetate	4.53	74	31320	6.9724	ug/L	100
20) Methylchlorid	4.63	84	204917	9.0623	ug/L	96
21) tbutylalcohol	4.84	59	514509	286.7080	ug/L	98
22) Acrylonitrile	4.94	53	281977	40.3293	ug/L	99
23) t12dichlorte	5.01	96	209158	10.3372	ug/L	99
24) MtBE	5.05	73	437378	9.1464	ug/L	99
25) Hexane	5.40	57	735308	26.1763	ug/L	99
26) 11dichlorota	5.54	63	373918	10.0700	ug/L	100
27) Vinylacetate	5.63	43	3088070	104.4323	ug/L	100
28) chloroprene	5.67	53	729505	22.1850	ug/L	98
29) Diisopether	5.68	45	684807	9.9695	ug/L	97
30) ETBE	6.14	59	540690	9.8549	ug/L	99
31) 22dichloropr	6.28	77	304723	10.6658	ug/L	98
32) c12dichlorte	6.27	96	225249	10.2977	ug/L	99
33) 2Butanone	6.29	72	164240	78.5333	ug/L	97
34) propionitrile	6.33	54	202041	71.8412	ug/L	99
35) Ethylacetate	6.40	88	31526	40.5396	ug/L #	89
36) methacrylonitrile	6.54	67	132744	16.9718	ug/L	94
37) Bromochlorma	6.55	128	92354	9.7081	ug/L	96
38) Tetrahydofur	6.65	42	457231	77.4975	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1921B\CCV-LCS1.D Vial: 2
Acq On : 19 Apr 2021 15:41 Operator: RLD-DGS
Sample : 181068,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 16:02:29 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	339760	9.8990	ug/L	99
40)	111trichlota	6.91	97	306026	10.5971	ug/L	99
42)	Cyclohexane	7.00	56	407059	11.7782	ug/L	100
43)	Carbtetraclo	7.13	119	254771	10.9186	ug/L	99
44)	11dicloprope	7.11	110	107488	10.6085	ug/L	99
46)	Benzene	7.36	78	802325	10.4258	ug/L	99
47)	12dichlorota	7.36	62	253515	9.0869	ug/L	99
48)	TAME	7.53	73	463897	9.6051	ug/L	97
49)	trichloroete	8.17	95	222372	10.7567	ug/L	98
50)	methylcyclohexane	8.44	83	441813	12.1857	ug/L	100
51)	12dicloropra	8.43	63	234353	9.9407	ug/L	92
52)	23Dicl1propene	8.50	75	335644	10.6001	ug/L	98
53)	Dibromometha	8.57	93	110006	9.1407	ug/L	96
54)	methylmethacrylate	8.59	69	111661	8.3557	ug/L	94
55)	14dioxane	8.61	88	40186	181.5024	ug/L	99
56)	Bromodiclrma	8.77	83	245323	9.4212	ug/L	100
57)	2Nitropropane	9.04	43	320712	68.8596	ug/L	97
58)	2CLEVE	9.16	63	578405	47.3701	ug/L	98
59)	c13dicloproe	9.35	75	321010	10.0703	ug/L	100
60)	4Meth2Pentan	9.55	43	1381723	83.3886	ug/L	99
62)	Toluene	9.80	92	531178	10.7070	ug/L	99
63)	t13Dicloprop	10.06	75	266977	9.9713	ug/L	99
64)	ethylmethacrylate	10.20	69	425175	18.4668	ug/L	98
65)	112Triclotha	10.29	83	141100	9.5082	ug/L	97
66)	Tetrachlorte	10.53	166	211974	11.0642	ug/L	97
67)	13Diclorpropa	10.52	76	290258	9.3036	ug/L	98
69)	2Hexanone	10.64	43	1002636	76.2188	ug/L	98
70)	Clorodibrmta	10.82	129	162756	9.2474	ug/L	98
71)	12Dibrometha	10.98	107	154149	8.8218	ug/L	94
72)	Chlorobenzen	11.66	112	574419	10.2981	ug/L	99
73)	1Clhexane	11.64	91	325757	11.4790	ug/L	98
74)	1112Tetclota	11.77	131	178995	9.9311	ug/L	100
75)	Ethylbenzene	11.82	91	945819	11.0857	ug/L	100
76)	m p-Xylene	11.99	106	765407	22.5429	ug/L	95
77)	o-Xylene	12.53	106	357667	10.4970	ug/L	97
78)	Styrene	12.55	104	596472	10.7549	ug/L	99
79)	Bromoform	12.78	173	88093	8.7925	ug/L	99
80)	Isopropylben	13.06	105	915700	11.5806	ug/L	100
81)	cyclohexanone	13.14	55	74520	102.7250	ug/L	95
84)	Bromobenzene	13.47	156	203447	9.8494	ug/L	97
85)	1122Tetrclta	13.44	83	190634	8.1405	ug/L	94
86)	123Triclproa	13.50	75	229556	8.0968	ug/L	100
87)	14dichloro2butene	13.53	53	47532	7.0932	ug/L	97
88)	n-Propylbenz	13.65	91	1087589	10.8740	ug/L	99
89)	2chlorotolue	13.76	91	646975	10.6113	ug/L	99
90)	4chlorotolue	13.91	91	753802	10.8770	ug/L	99
91)	135Trimebenz	13.90	105	753876	11.0479	ug/L	98
92)	tbutylbenzen	14.37	119	663548	11.4992	ug/L	98
93)	124Trimetben	14.44	105	739618	10.9780	ug/L	96
94)	sbutylbenzen	14.69	105	952696	11.6425	ug/L	98
95)	13Diclorbenz	14.83	146	388162	10.2265	ug/L	100
96)	pIsopropylto	14.91	119	815394	11.6322	ug/L	98
97)	14dichlorobe	14.96	146	394860	10.0299	ug/L	100
98)	12dichlorobe	15.50	146	357615	9.6830	ug/L	99
99)	nButylbenzen	15.50	91	749213	11.1352	ug/L	99
100)	12dibromo3cl	16.59	157	28228	7.5868	ug/L	98
101)	135Trichlorobenzene	16.92	180	273273	10.5406	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1921B\CCV-LCS1.D Vial: 2
Acq On : 19 Apr 2021 15:41 Operator: RLD-DGS
Sample : 181068,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 16:02:29 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	225349	10.2936	ug/L	100
103) Hexachlorobu	17.98	225	115040	11.3920	ug/L	96
104) Naphthalene	18.03	128	410507	8.5515	ug/L	99
105) 123Trichlben	18.34	180	195619	9.7660	ug/L	99

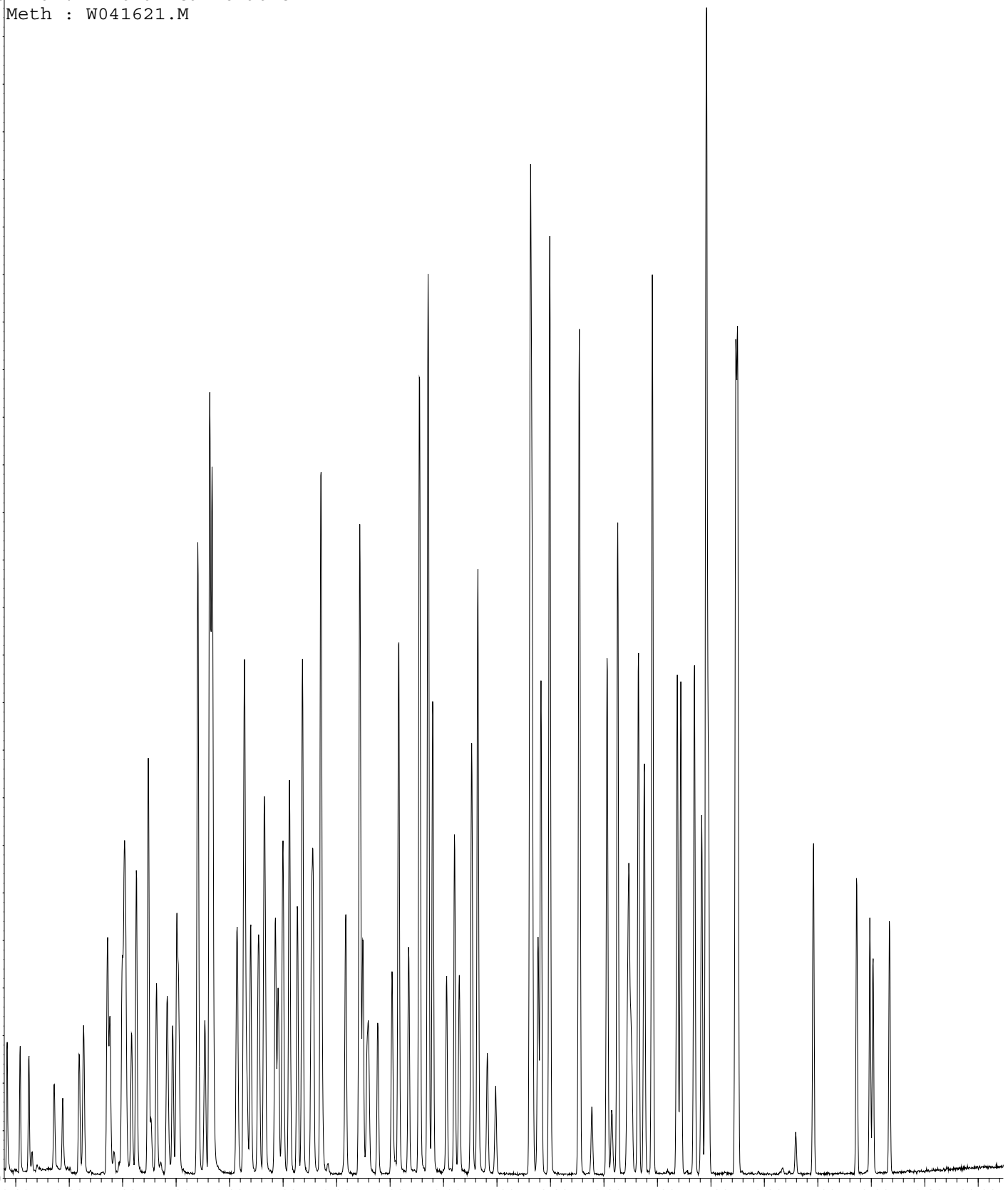
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCV-LCS1.D

Data File : C:\Instarch\Data\APR1921B\CCV-LCS1.D Vial: 2
Acq On : 19 Apr 2021 15:41 Operator: RLD-DGS
Sample : 181068,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 16:02:29 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\APR1921B\CCVF-LCSD1.D Vial: 18
Acq On : 19 Apr 2021 23:58 Operator: RLD-DGS
Sample : 181068,LCSDW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 20 00:19:22 2021

Quant Method : C:\INSTARCH\METHODS\W041621.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W041621.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	94	0.00
2	PT	Dichlorodi	0.2565	0.3231	-25.96	108	0.00
3	PT	Chloromethan	0.3468	0.3472	-0.12	95	0.00
4	PT	VinylChlorid	0.3175	0.3288	-3.56	92	0.00
5	PT	Bromomethane	0.1691	0.1760	-4.08	100	0.00
6	PT	Chloroethane	0.2113	0.2002	5.25	88	0.00
7	T	Dichloroflmethane	0.4059	0.4050	0.22	93	0.00
8	PT	Trichlorofma	0.3799	0.4203	-10.63	98	0.00
9	T	Ethylether	0.2260	0.2060	8.85	87	0.00
10	T	dichlorotfluoroethan	0.2757	0.2859	-3.70	96	0.00
11	T	propyleneoxide	0.0429	0.0315	26.57	70	0.00
12	T	Acrolein	0.0127	0.0301	-137.01#	268#	0.00
13	PT	11dichlorthe	0.2402	0.2526	-5.16	97	0.00
14	PT	Trichlorotfluoroeth	0.2288	0.2509	-9.66	97	0.00
15	PT	Acetone	0.0763	0.0506#	33.68	67	0.00
16	T	Iodomethane	0.2390	0.2420	-1.26	94	0.00
17	PT	Carbon Dislf	0.6618	0.6678	-0.91	95	0.00
18	T	allylchloride	0.4585	0.4395	4.14	89	0.00
19	PT	methylacetate	0.0598	0.0430#	28.09	79	0.00
20	PT	Methylchlorid	0.3012	0.2854	5.25	94	0.00
21	T	tbutylalcohol	0.0239	0.0160#	33.05	67	0.00
22	T	Acrylonitrile	0.0931	0.0731	21.48	74	0.00
23	PT	t12dichlorte	0.2695	0.2785	-3.34	98	0.00
24	PT	MtBE	0.6370	0.5762	9.54	86	0.00
25	T	Hexane	0.3742	0.4099	-9.54	94	0.00
26	PT	11dichlorota	0.4946	0.4967	-0.42	96	0.00
27	T	Vinylacetate	0.4399	0.3442	21.75	76	0.00
28	T	chloroprene	0.4380	0.4753	-8.52	95	0.00
29	T	Diisopether	0.9150	0.9081	0.75	90	0.00
30	T	ETBE	0.7309	0.7023	3.91	89	0.00
31	T	22dichloropr	0.3806	0.3362	11.67	84	0.00
32	PT	c12dichlorte	0.2914	0.2907	0.24	94	0.00
33	PT	2Butanone	0.0279	0.0205#	26.52	70	0.00
34	T	propionitrile	0.0375	0.0282#	24.80	72	0.00
35	T	Ethylacetate	0.0104	0.0085#	18.27	82	0.00
36	T	methacrylonitrile	0.1042	0.0860	17.47	80	0.00
37	T	Bromochlorma	0.1267	0.1232	2.76	90	0.00
38	T	Tetrahydofur	0.0786	0.0605	23.03	74	0.00
39	PT	Chloroform	0.4572	0.4589	-0.37	94	0.00
40	PT	111trichlota	0.3847	0.4001	-4.00	96	0.00
41	S	SURRDibrflma	0.2619	0.2575	1.68	93	0.00
42	PT	Cyclohexane	0.4604	0.5244	-13.90	99	0.00
43	PT	Carbtetraclo	0.3108	0.3266	-5.08	96	0.00
44	T	11dicloprope	0.1350	0.1361	-0.81	95	0.00
45	S	SURR12DCAd4	0.0735	0.0689	6.26	87	0.00
46	PT	Benzene	1.0251	1.0691	-4.29	95	0.00
47	PT	12dichlorota	0.3716	0.3399	8.53	87	0.00
48	T	TAME	0.6434	0.6006	6.65	88	0.00

49	PT	trichloroete	0.2754	0.2926	-6.25	99	0.00
50	PT	methylcyclohexane	0.4830	0.5410	-12.01	98	0.00
51	PT	12dicloropra	0.3140	0.3086	1.72	93	0.00
52	T	23Dicl1propene	0.4218	0.4203	0.36	95	0.00
53	T	Dibromometha	0.1603	0.1461	8.86	87	0.00
54	T	methylmethacrylate	0.1780	0.1394	21.69	76	0.00
55	T	14dioxane	0.0029	0.0022#	24.14	74	0.00
56	PT	Bromodiclrma	0.3469	0.3298	4.93	91	0.00
57	T	2Nitropropane	0.0620	0.0371	40.16	58	0.00
58	T	2CLEVE	0.1627	0.1407	13.52	78	0.00
59	PT	c13dicloproe	0.4246	0.4026	5.18	91	0.00
60	PT	4Meth2Pentan	0.2256	0.1766	21.72	76	0.00
61	S	SURRd8Tolule	0.9862	1.0061	-2.02	94	0.00
62	PT	Toluene	0.6609	0.7030	-6.37	98	0.00
63	PT	t13Dicloprop	0.3567	0.3275	8.19	87	0.00
64	T	ethylmethacrylate	0.3067	0.2713	11.54	80	0.00
65	PT	112Triclotha	0.1977	0.1788	9.56	86	0.00
66	PT	Tetrachlorte	0.2552	0.2792	-9.40	101	0.00
67	T	13Diclorpropa	0.4156	0.3846	7.46	89	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	96	0.00
69	PT	2Hexanone	0.2182	0.1652	24.29	73	0.00
70	PT	Clorodibrmta	0.3063	0.2763	9.79	90	0.00
71	PT	12Dibrometha	0.3041	0.2663	12.43	85	0.00
72	PT	Chlorobenzen	0.9706	0.9967	-2.69	96	0.00
73	T	1Clhexane	0.4938	0.4942	-0.08	94	0.00
74	T	1112Tetclota	0.3136	0.3088	1.53	96	0.00
75	PT	Ethylbenzene	1.4847	1.5835	-6.65	97	0.00
76	PT	m p-Xylene	0.5908	0.6327	-7.09	99	0.00
77	PT	o-Xylene	0.5929	0.6050	-2.04	98	0.00
78	PT	Styrene	0.9651	1.0135	-5.02	95	0.00
79	PT	Bromoform	0.1743	0.1428	18.07	82	0.00
80	PT	Isopropylben	1.3760	1.4885	-8.18	98	0.00
81	T	cyclohexanone	0.0126	0.0086#	31.75	65	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	97	0.00
83	S	SURR4BrFBenz	1.0587	1.0569	0.17	98	0.00
84	T	Bromobenzene	0.6939	0.6815	1.79	97	0.00
85	PT	1122Tetrclta	0.7866	0.5908	24.89	76	0.00
86	T	123Triclproa	0.9524	0.7580	20.41	80	0.00
87	T	14dichloro2butene	0.2251	0.1622	27.94	74	0.00
88	T	n-Propylbenz	3.3597	3.3732	-0.40	96	0.00
89	T	2chlorotolue	2.0481	2.1336	-4.17	100	0.00
90	T	4chlorotolue	2.3279	2.4301	-4.39	97	0.00
91	T	135Trimebenz	2.2922	2.4501	-6.89	99	0.00
92	T	tbutylbenzen	1.9383	2.0815	-7.39	100	0.00
93	T	124Trimetben	2.2631	2.4113	-6.55	99	0.00
94	T	sbutylbenzen	2.7487	2.9495	-7.31	97	0.00
95	PT	13Diclorbenz	1.2750	1.2992	-1.90	99	0.00
96	T	pIsopropylto	2.3547	2.5381	-7.79	101	0.00
97	PT	14dichlorobe	1.3224	1.3145	0.60	97	0.00
98	PT	12dichlorobe	1.2406	1.2161	1.97	99	0.00
99	T	nButylbenzen	2.2601	2.3222	-2.75	97	0.00
100	PT	12dibromo3cl	0.1250	0.0856	31.52	75	0.00
101	T	135Trichlorobenzene	0.8709	0.8726	-0.20	102	0.00
102	PT	124Trichlobe	0.7354	0.7269	1.16	99	0.00
103	T	Hexachlorobu	0.3392	0.3583	-5.63	107	0.00
104	T	Naphthalene	1.6125	1.3741	14.78	86	0.00
105	T	123Trichlben	0.6729	0.6247	7.16	96	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W041621.M Thu Apr 22 12:25:55 2021

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\APR1921B\CCVF-LCSD1.D Vial: 18
Acq On : 19 Apr 2021 23:58 Operator: RLD-DGS
Sample : 181068,LCSDW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Apr 20 00:19:22 2021

Quant Method : C:\INSTARCH\METHODS\W041621.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W041621.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	94	0.00
2	PT	Dichlorodi	10.0000	12.5955	-25.95	108	0.00
3	PT	Chloromethan	10.0000	10.0097	-0.10	95	0.00
4	PT	VinylChlorid	10.0000	10.3539	-3.54	92	0.00
5	PT	Bromomethane	10.0000	10.4071	-4.07	100	0.00
6	PT	Chloroethane	10.0000	9.4751	5.25	88	0.00
7	T	Dichloroflmethane	10.0000	9.9769	0.23	93	0.00
8	PT	Trichlorofma	10.0000	11.0624	-10.62	98	0.00
9	T	Ethylether	10.0000	9.1145	8.86	87	0.00
10	T	dichlorotfluoroethan	10.0000	10.3688	-3.69	96	0.00
11	T	propyleneoxide	100.0000	73.4361	26.56	70	0.00
12	T	Acrolein	50.0000	118.5702	-137.14#	268	0.00
13	PT	11dichlorthe	10.0000	10.5167	-5.17	97	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.9319	-9.66	97	0.00
15	PT	Acetone	100.0000	68.2891	31.71	67	0.00
16	T	Iodomethane	20.0000	20.2505	-1.25	94	0.00
17	PT	Carbon Dislf	20.0000	21.0078	-5.04	95	0.00
18	T	allylchloride	20.0000	19.1703	4.15	89	0.00
19	PT	methylacetate	10.0000	7.1853	28.15	79	0.00
20	PT	Methylchlorid	10.0000	9.4744	5.26	94	0.00
21	T	tbutylalcohol	500.0000	335.0415	32.99	67	0.00
22	T	Acrylonitrile	50.0000	39.2429	21.51	74	0.00
23	PT	t12dichlorte	10.0000	10.3335	-3.34	98	0.00
24	PT	MtBE	10.0000	9.0458	9.54	86	0.00
25	T	Hexane	20.0000	21.9092	-9.55	94	0.00
26	PT	11dichlorota	10.0000	10.0417	-0.42	96	0.00
27	T	Vinylacetate	100.0000	84.1348	15.87	76	0.00
28	T	chloroprene	20.0000	21.7029	-8.51	95	0.00
29	T	Diisopether	10.0000	9.9239	0.76	90	0.00
30	T	ETBE	10.0000	9.6097	3.90	89	0.00
31	T	22dichloropr	10.0000	8.8350	11.65	84	0.00
32	PT	c12dichlorte	10.0000	9.9775	0.23	94	0.00
33	PT	2Butanone	100.0000	73.5589	26.44	70	0.00
34	T	propionitrile	100.0000	75.1898	24.81	72	0.00
35	T	Ethylacetate	50.0000	41.1444	17.71	82	0.00
36	T	methacrylonitrile	20.0000	16.5165	17.42	80	0.00
37	T	Bromochlorma	10.0000	9.7193	2.81	90	0.00
38	T	Tetrahydofur	100.0000	77.0330	22.97	74	0.00
39	PT	Chloroform	10.0000	10.0375	-0.37	94	0.00
40	PT	111trichlota	10.0000	10.4011	-4.01	96	0.00
41	S	SURRDibrflma	20.0000	19.6657	1.67	93	0.00
42	PT	Cyclohexane	10.0000	11.3900	-13.90	99	0.00
43	PT	Carbtetraclo	10.0000	10.5083	-5.08	96	0.00
44	T	11dicloprope	10.0000	10.0869	-0.87	95	0.00
45	S	SURR12DCAd4	20.0000	18.7684	6.16	87	0.00
46	PT	Benzene	10.0000	10.4284	-4.28	95	0.00
47	PT	12dichlorota	10.0000	9.1452	8.55	87	0.00
48	T	TAME	10.0000	9.3350	6.65	88	0.00

49	PT	trichloroete	10.0000	10.6239	-6.24	99	0.00
50	PT	methylcyclohexane	10.0000	11.2011	-12.01	98	0.00
51	PT	12dicloropra	10.0000	9.8271	1.73	93	0.00
52	T	23Dicl1propene	10.0000	9.9653	0.35	95	0.00
53	T	Dibromometha	10.0000	9.1121	8.88	87	0.00
54	T	methylmethacrylate	10.0000	7.8288	21.71	76	0.00
55	T	14dioxane	500.0000	368.0176	26.40	74	0.00
56	PT	Bromodiclrma	10.0000	9.5069	4.93	91	0.00
57	T	2Nitropropane	100.0000	59.8718	40.13	58	0.00
58	T	2CLEVE	50.0000	43.2465	13.51	78	0.00
59	PT	c13dicloproe	10.0000	9.4818	5.18	91	0.00
60	PT	4Meth2Pentan	100.0000	79.5439	20.46	76	0.00
61	S	SURRd8Tolule	20.0000	20.4040	-2.02	94	0.00
62	PT	Toluene	10.0000	10.6374	-6.37	98	0.00
63	PT	t13Dicloprop	10.0000	9.1832	8.17	87	0.00
64	T	ethylmethacrylate	20.0000	17.6897	11.55	80	0.00
65	PT	112Triclotha	10.0000	9.0463	9.54	86	0.00
66	PT	Tetrachlorte	10.0000	10.9412	-9.41	101	0.00
67	T	13Diclorpropa	10.0000	9.2547	7.45	89	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	96	0.00
69	PT	2Hexanone	100.0000	71.7212	28.28	73	0.00
70	PT	Clorodibrmta	10.0000	9.0223	9.78	90	0.00
71	PT	12Dibrometha	10.0000	8.7584	12.42	85	0.00
72	PT	Chlorobenzen	10.0000	10.2681	-2.68	96	0.00
73	T	1Clhexane	10.0000	10.0078	-0.08	94	0.00
74	T	1112Tetclota	10.0000	9.8455	1.55	96	0.00
75	PT	Ethylbenzene	10.0000	10.6658	-6.66	97	0.00
76	PT	m p-Xylene	20.0000	21.4163	-7.08	99	0.00
77	PT	o-Xylene	10.0000	10.2044	-2.04	98	0.00
78	PT	Styrene	10.0000	10.5014	-5.01	95	0.00
79	PT	Bromoform	10.0000	8.1891	18.11	82	0.00
80	PT	Isopropylben	10.0000	10.8177	-8.18	98	0.00
81	T	cyclohexanone	200.0000	135.9898	32.01	65	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	97	0.00
83	S	SURR4BrFBenz	20.0000	19.9654	0.17	98	0.00
84	T	Bromobenzene	10.0000	9.8217	1.78	97	0.00
85	PT	1122Tetrclta	10.0000	7.5099	24.90	76	0.00
86	T	123Triclproa	10.0000	7.9591	20.41	80	0.00
87	T	14dichloro2butene	10.0000	7.2075	27.93	74	0.00
88	T	n-Propylbenz	10.0000	10.0403	-0.40	96	0.00
89	T	2chlorotolue	10.0000	10.4177	-4.18	100	0.00
90	T	4chlorotolue	10.0000	10.4390	-4.39	97	0.00
91	T	135Trimebenz	10.0000	10.6889	-6.89	99	0.00
92	T	tbutylbenzen	10.0000	10.7386	-7.39	100	0.00
93	T	124Trimetben	10.0000	10.6546	-6.55	99	0.00
94	T	sbutylbenzen	10.0000	10.7304	-7.30	97	0.00
95	PT	13Diclorbenz	10.0000	10.1896	-1.90	99	0.00
96	T	pIsopropylto	10.0000	10.7792	-7.79	101	0.00
97	PT	14dichlorobe	10.0000	9.9401	0.60	97	0.00
98	PT	12dichlorobe	10.0000	9.8028	1.97	99	0.00
99	T	nButylbenzen	10.0000	10.2747	-2.75	97	0.00
100	PT	12dibromo3cl	10.0000	6.8505	31.49	75	0.00
101	T	135Trichlorobenzene	10.0000	10.0196	-0.20	102	0.00
102	PT	124Trichlobe	10.0000	9.8851	1.15	99	0.00
103	T	Hexachlorobu	10.0000	10.5615	-5.62	107	0.00
104	T	Naphthalene	10.0000	8.5217	14.78	86	0.00
105	T	123Trichlben	10.0000	9.2839	7.16	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W041621.M Thu Apr 22 13:10:21 2021

Quantitation Report

Data File : C:\Instarch\Data\APR1921B\CCVF-LCSD1.D Vial: 18
Acq On : 19 Apr 2021 23:58 Operator: RLD-DGS
Sample : 181068,LCSDW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 20 00:19:22 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1442459	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1106961	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	575410	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	371408	19.666	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
45) SURR12DCAd4	7.27	102	99444	18.768	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 94 %			
61) SURRd8Tolule	9.71	98	1451294	20.404	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.26	95	608140	19.965	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	233050	12.5955	ug/L	96
3) Chloromethan	2.08	50	250391	10.0097	ug/L	97
4) VinylChlorid	2.25	62	237112	10.3539	ug/L	100
5) Bromomethane	2.72	94	126944	10.4071	ug/L	98
6) Chloroethane	2.88	64	144412	9.4751	ug/L	98
7) Dichloroflmethane	3.19	67	292082	9.9769	ug/L	100
8) Trichlorofma	3.27	101	303117	11.0624	ug/L	99
9) Ethylether	3.71	59	148540	9.1145	ug/L	98
10) dichlorotfluoroethan	3.73	67	206209	10.3688	ug/L	99
11) propyleneoxide	3.77	58	227005	73.4361	ug/L	99
12) Acrolein	3.85	56	108620	118.5702	ug/L	93
13) 11dichlorthe	3.99	96	182157	10.5167	ug/L	98
14) Trichlorotfluoroeth	4.04	101	361972	21.9319	ug/L	99
15) Acetone	4.06	43	365082	68.2891	ug/L	98
16) Iodomethane	4.17	142	349069	20.2505	ug/L	98
17) Carbon Dislf	4.26	76	963240	21.0078	ug/L	100
18) allylchloride	4.48	41	633953	19.1703	ug/L	99
19) methylacetate	4.53	74	31010	7.1853	ug/L	92
20) Methylchlorid	4.64	84	205829	9.4744	ug/L	98
21) tbutylalcohol	4.84	59	577656	335.0415	ug/L	97
22) Acrylonitrile	4.94	53	263616	39.2429	ug/L	99
23) t12dichlorte	5.02	96	200879	10.3335	ug/L	98
24) MtBE	5.05	73	415598	9.0458	ug/L	99
25) Hexane	5.41	57	591298	21.9092	ug/L	98
26) 11dichlorota	5.54	63	358237	10.0417	ug/L	100
27) Vinylacetate	5.63	43	2482288	84.1348	ug/L	97
28) chloroprene	5.67	53	685650	21.7029	ug/L	99
29) Diisopether	5.69	45	654928	9.9239	ug/L	99
30) ETBE	6.14	59	506552	9.6097	ug/L	98
31) 22dichloropr	6.28	77	242513	8.8350	ug/L	100
32) c12dichlorte	6.27	96	209682	9.9775	ug/L	99
33) 2Butanone	6.29	72	147801	73.5589	ug/L	98
34) propionitrile	6.33	54	203162	75.1898	ug/L	98
35) Ethylacetate	6.40	88	30741	41.1444	ug/L #	73
36) methacrylonitrile	6.54	67	124115	16.5165	ug/L	95
37) Bromochlorma	6.56	128	88833	9.7193	ug/L	96
38) Tetrahydofur	6.65	42	436659	77.0330	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1921B\CCVF-LCSD1.D Vial: 18
Acq On : 19 Apr 2021 23:58 Operator: RLD-DGS
Sample : 181068,LCSDW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 20 00:19:22 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.67	83	330996	10.0375 ug/L	100
40)	111trichlota	6.91	97	288581	10.4011 ug/L	98
42)	Cyclohexane	7.00	56	378198	11.3900 ug/L	98
43)	Carbtetraclo	7.13	119	235577	10.5083 ug/L	99
44)	11dicloprope	7.11	110	98193	10.0869 ug/L	98
46)	Benzene	7.36	78	771038	10.4284 ug/L	99
47)	12dichlorota	7.36	62	245130	9.1452 ug/L	99
48)	TAME	7.53	73	433162	9.3350 ug/L	86
49)	trichloroete	8.17	95	211010	10.6239 ug/L	99
50)	methylcyclohexane	8.44	83	390182	11.2011 ug/L	99
51)	12dicloropra	8.43	63	222586	9.8271 ug/L	99
52)	23Dicl1propene	8.50	75	303165	9.9653 ug/L	97
53)	Dibromometha	8.57	93	105359	9.1121 ug/L	99
54)	methylmethacrylate	8.60	69	100515	7.8288 ug/L	95
55)	14dioxane	8.61	88	78285	368.0176 ug/L	99
56)	Bromodiclrma	8.77	83	237842	9.5069 ug/L	99
57)	2Nitropropane	9.04	43	267911	59.8718 ug/L	97
58)	2CLEVE	9.16	63	507336	43.2465 ug/L	98
59)	c13dicloproe	9.35	75	290391	9.4818 ug/L	100
60)	4Meth2Pentan	9.55	43	1273366	79.5439 ug/L	100
62)	Toluene	9.80	92	507019	10.6374 ug/L	97
63)	t13Dicloprop	10.06	75	236229	9.1832 ug/L	99
64)	ethylmethacrylate	10.20	69	391302	17.6897 ug/L	98
65)	112Triclotha	10.30	83	128979	9.0463 ug/L	99
66)	Tetrachlorte	10.53	166	201393	10.9412 ug/L	99
67)	13Diclorpropa	10.52	76	277406	9.2547 ug/L	99
69)	2Hexanone	10.64	43	914251	71.7212 ug/L	99
70)	Clorodibrmta	10.83	129	152942	9.0223 ug/L	100
71)	12Dibrometha	10.98	107	147401	8.7584 ug/L	99
72)	Chlorobenzen	11.66	112	551633	10.2681 ug/L	99
73)	1Clhexane	11.64	91	273539	10.0078 ug/L	99
74)	1112Tetclota	11.77	131	170910	9.8455 ug/L	100
75)	Ethylbenzene	11.82	91	876445	10.6658 ug/L	98
76)	m p-Xylene	11.99	106	700351	21.4163 ug/L	95
77)	o-Xylene	12.53	106	334879	10.2044 ug/L	98
78)	Styrene	12.55	104	560944	10.5014 ug/L	98
79)	Bromoform	12.77	173	79023	8.1891 ug/L	95
80)	Isopropylben	13.06	105	823842	10.8177 ug/L	99
81)	cyclohexanone	13.15	55	95015	135.9898 ug/L	98
84)	Bromobenzene	13.47	156	196065	9.8217 ug/L	98
85)	1122Tetrclta	13.44	83	169963	7.5099 ug/L	97
86)	123Triclproa	13.50	75	218078	7.9591 ug/L	99
87)	14dichloro2butene	13.53	53	46677	7.2075 ug/L	96
88)	n-Propylbenz	13.65	91	970490	10.0403 ug/L	99
89)	2chlorotolue	13.76	91	613850	10.4177 ug/L	99
90)	4chlorotolue	13.91	91	699166	10.4390 ug/L	99
91)	135Trimebenz	13.90	105	704897	10.6889 ug/L	100
92)	tbutylbenzen	14.37	119	598854	10.7386 ug/L	99
93)	124Trimetben	14.44	105	693736	10.6546 ug/L	98
94)	sbutylbenzen	14.69	105	848587	10.7304 ug/L	99
95)	13Diclorbenz	14.83	146	373778	10.1896 ug/L	99
96)	pIsopropylto	14.91	119	730235	10.7792 ug/L	98
97)	14dichlorobe	14.96	146	378189	9.9401 ug/L	98
98)	12dichlorobe	15.49	146	349888	9.8028 ug/L	97
99)	nButylbenzen	15.50	91	668110	10.2747 ug/L	99
100)	12dibromo3cl	16.59	157	24633	6.8505 ug/L	100
101)	135Trichlorobenzene	16.92	180	251047	10.0196 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1921B\CCVF-LCSD1.D Vial: 18
Acq On : 19 Apr 2021 23:58 Operator: RLD-DGS
Sample : 181068,LCSDW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 20 00:19:22 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	209141	9.8851	ug/L	98
103)	Hexachlorobu	17.97	225	103073	10.5615	ug/L	99
104)	Naphthalene	18.03	128	395346	8.5217	ug/L	98
105)	123Trichlben	18.34	180	179721	9.2839	ug/L	99

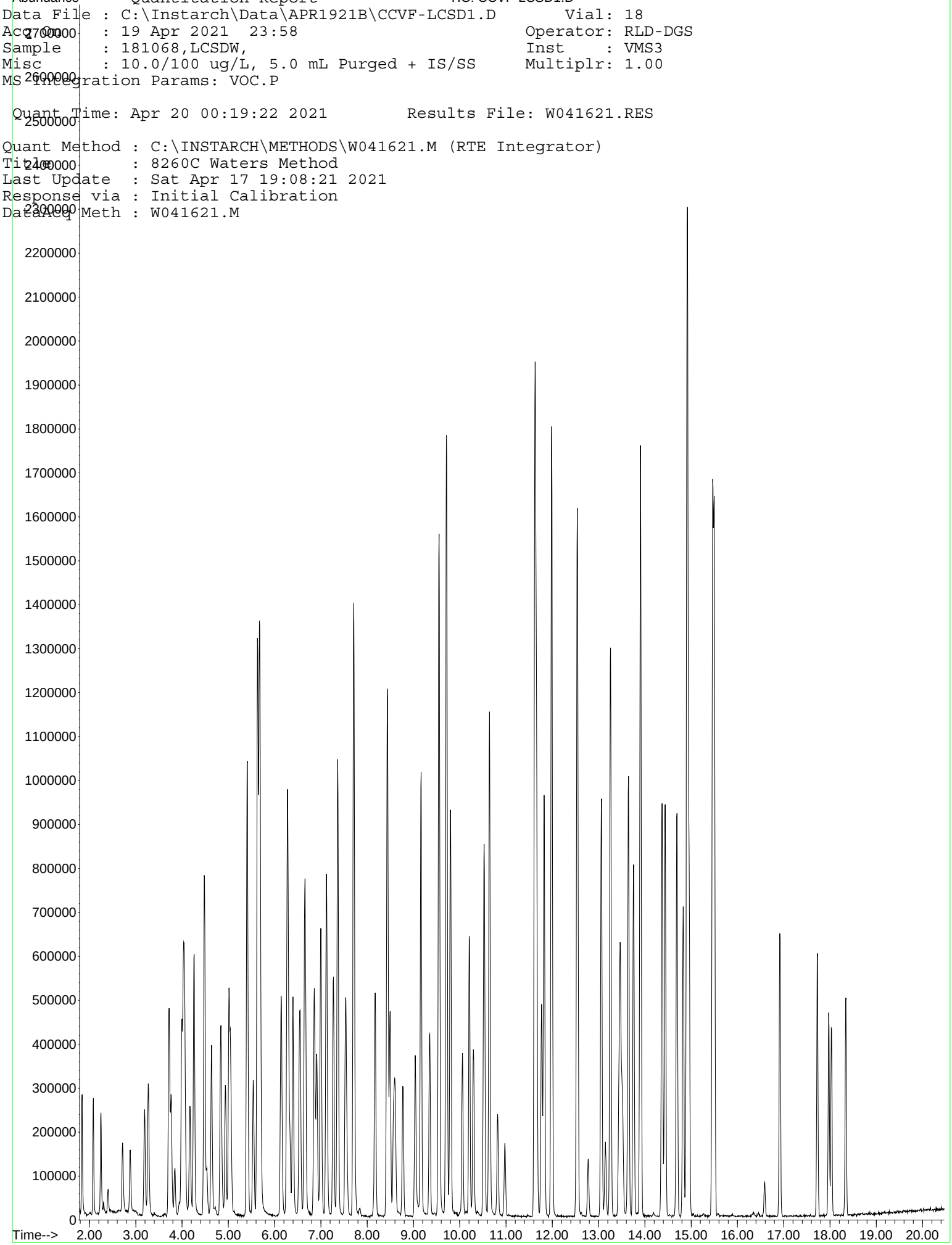
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCVF-LCSD1.D

Data File : C:\Instarch\Data\APR1921B\CCVF-LCSD1.D Vial: 18
Acq On : 19 Apr 2021 23:58 Operator: RLD-DGS
Sample : 181068,LCSDW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 20 00:19:22 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\041521 - 180922.seq
User : KMT
Printed : Apr 16, 2021 08:47:57

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\041521 -\002.dat	180922,CCV,	Apr 16, 2021 08:47:57

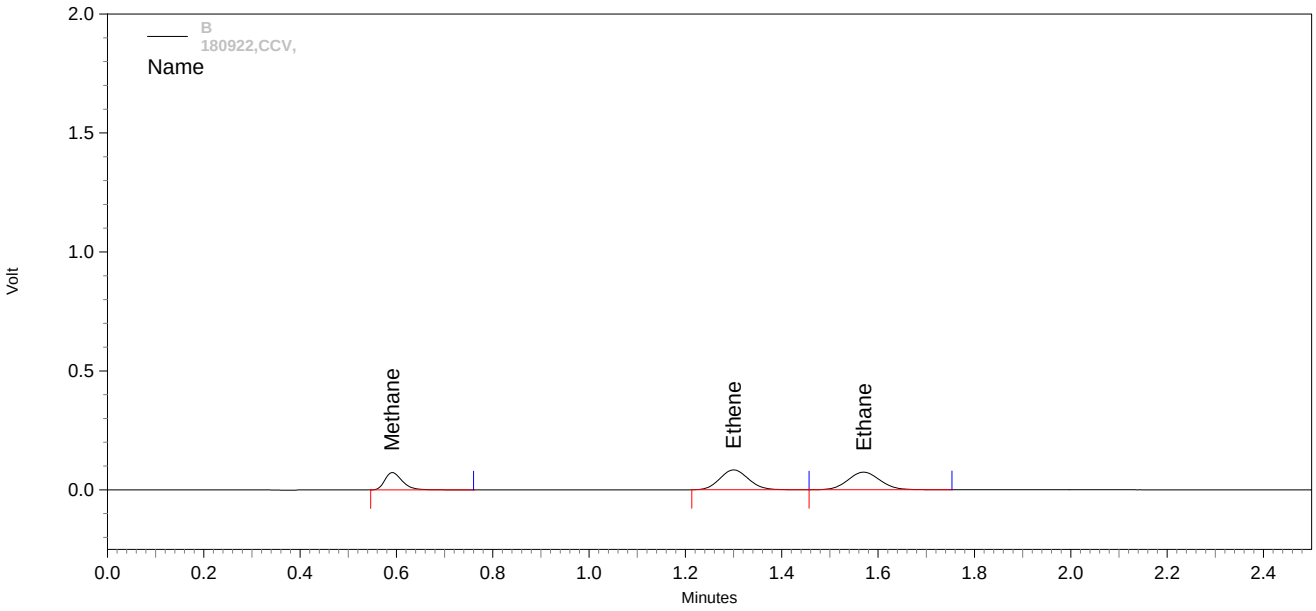
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	50.460	0.921	15.000	**Passed**
Ethene	50.000	50.604	1.208	15.000	**Passed**
Ethane	50.000	50.682	1.365	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\002.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,CCV,
Acquired: Apr 15, 2021 09:15:05
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.590**	**0.590**	**182418**	**50.460**	**ppmV**
2	**Ethene**	**1.300**	**1.300**	**345454**	**50.604**	**ppmV**
3	**Ethane**	**1.570**	**1.570**	**340875**	**50.682**	**ppmV**

QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\041521 - 180922.seq
User : KMT
Printed : Apr 16, 2021 09:00:17

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\041521 -\016.dat	180922,CCV,	Apr 16, 2021 09:00:17

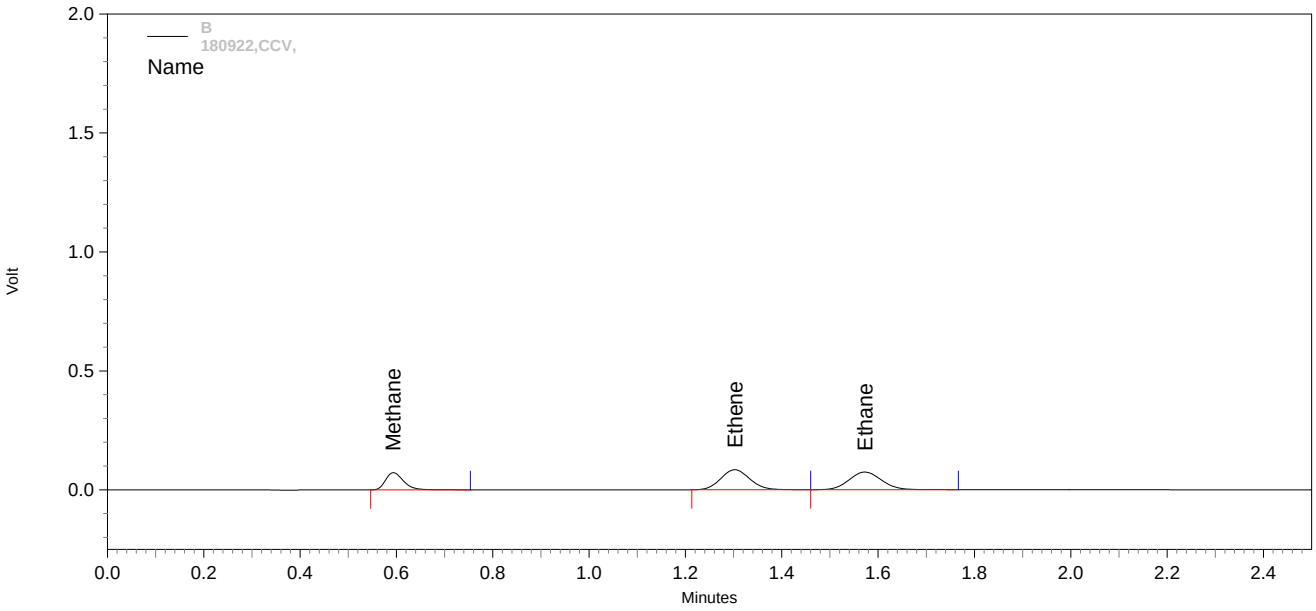
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	51.909	3.818	15.000	**Passed**
Ethene	50.000	51.516	3.032	15.000	**Passed**
Ethane	50.000	51.519	3.039	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\016.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,CCV,
Acquired: Apr 15, 2021 12:18:45
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



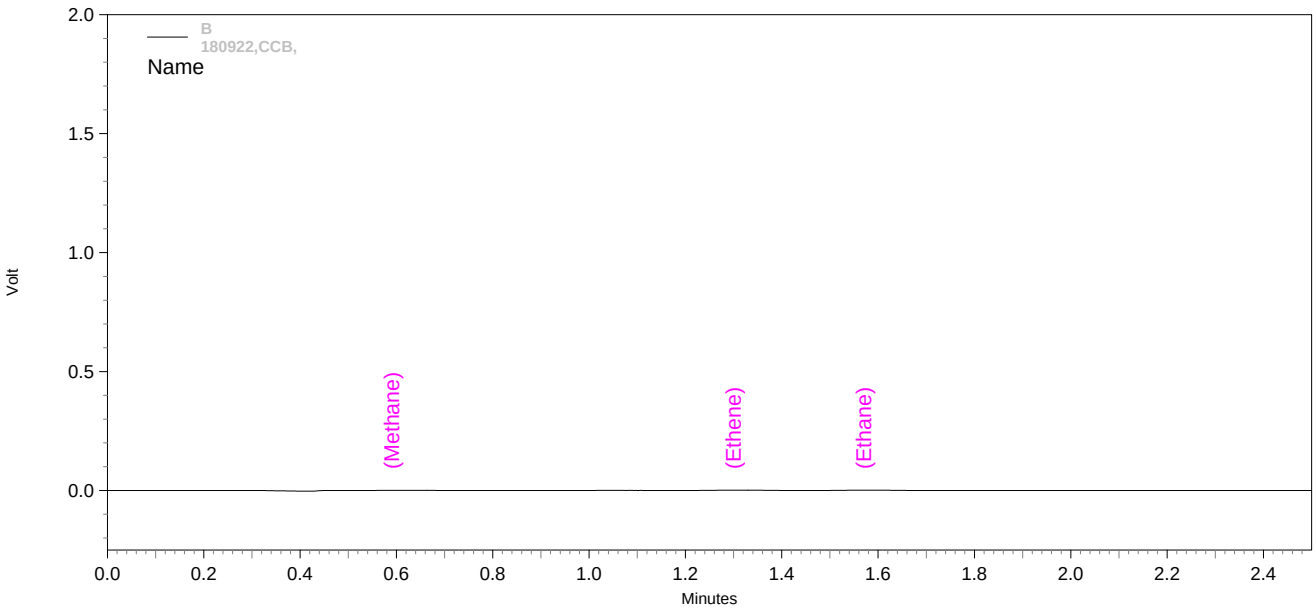
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.593**	**0.590**	**187386**	**51.909**	**ppmV**
2	**Ethene**	**1.303**	**1.300**	**351433**	**51.516**	**ppmV**
3	**Ethane**	**1.573**	**1.570**	**346309**	**51.519**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\017.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,CCB,
Acquired: Apr 15, 2021 12:22:14
File Desc. MEE Continuing Calibration BLANK - 1ML HELIUM



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\041521 - 180922.seq
User : KMT
Printed : Apr 16, 2021 09:05:19

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\041521 -\041.dat	180939,CCV,	Apr 16, 2021 09:05:18

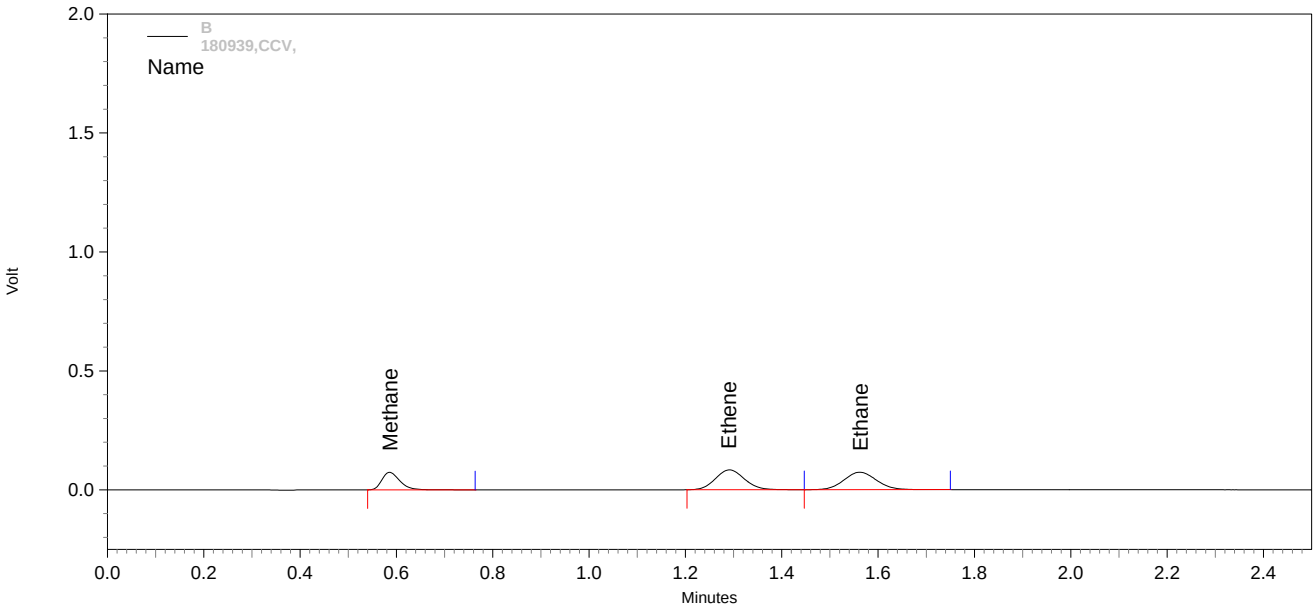
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	52.391	4.782	15.000	**Passed**
Ethene	50.000	51.036	2.072	15.000	**Passed**
Ethane	50.000	51.019	2.038	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\041.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180939,CCV,
Acquired: Apr 15, 2021 16:07:12
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	Methane	0.587	0.590	189039	52.391	ppmV
2	Ethene	1.290	1.300	348286	51.036	ppmV
3	Ethane	1.563	1.570	343059	51.019	ppmV

QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\042221 - 181140 181142.seq
User : KMT
Printed : Apr 22, 2021 13:39:11

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\042221 -\002.dat	181140,CCV,	Apr 22, 2021 13:39:11

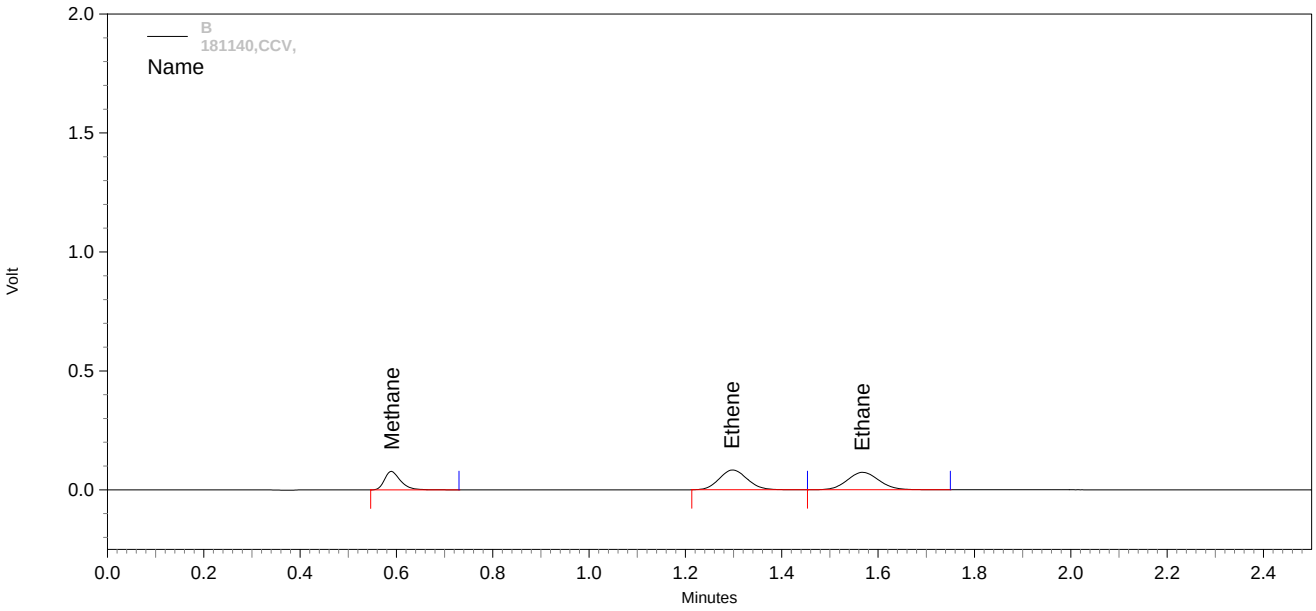
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	49.051	1.898	15.000	**Passed**
Ethene	50.000	49.205	1.589	15.000	**Passed**
Ethane	50.000	49.570	0.860	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\042221 -\002.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 181140,CCV,
Acquired: Apr 22, 2021 09:17:19
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.590**	**0.590**	**177585**	**49.051**	**ppmV**
2	**Ethene**	**1.297**	**1.297**	**336286**	**49.205**	**ppmV**
3	**Ethane**	**1.567**	**1.567**	**333653**	**49.570**	**ppmV**

QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\042221 - 181140 181142.seq
User : KMT
Printed : Apr 22, 2021 13:41:36

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\042221 -\017.dat	181140,CCV,	Apr 22, 2021 13:41:36

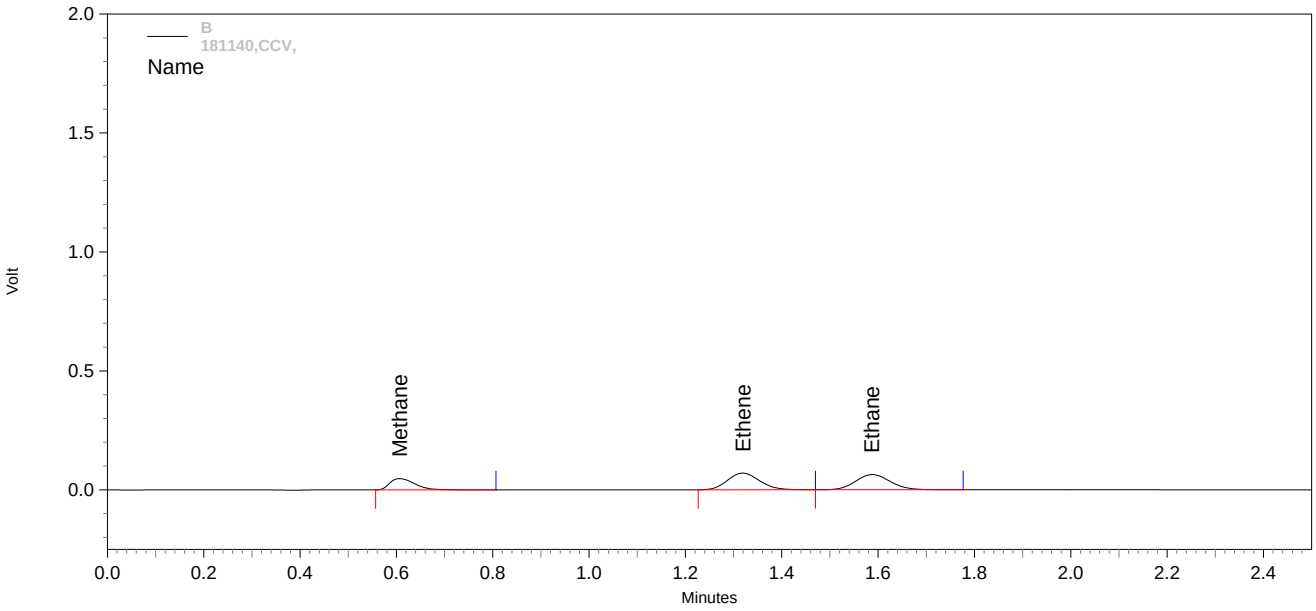
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	46.798	6.404	15.000	**Passed**
Ethene	50.000	47.310	5.380	15.000	**Passed**
Ethane	50.000	47.132	5.737	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\042221 -\017.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 181140,CCV,
Acquired: Apr 22, 2021 12:01:49
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



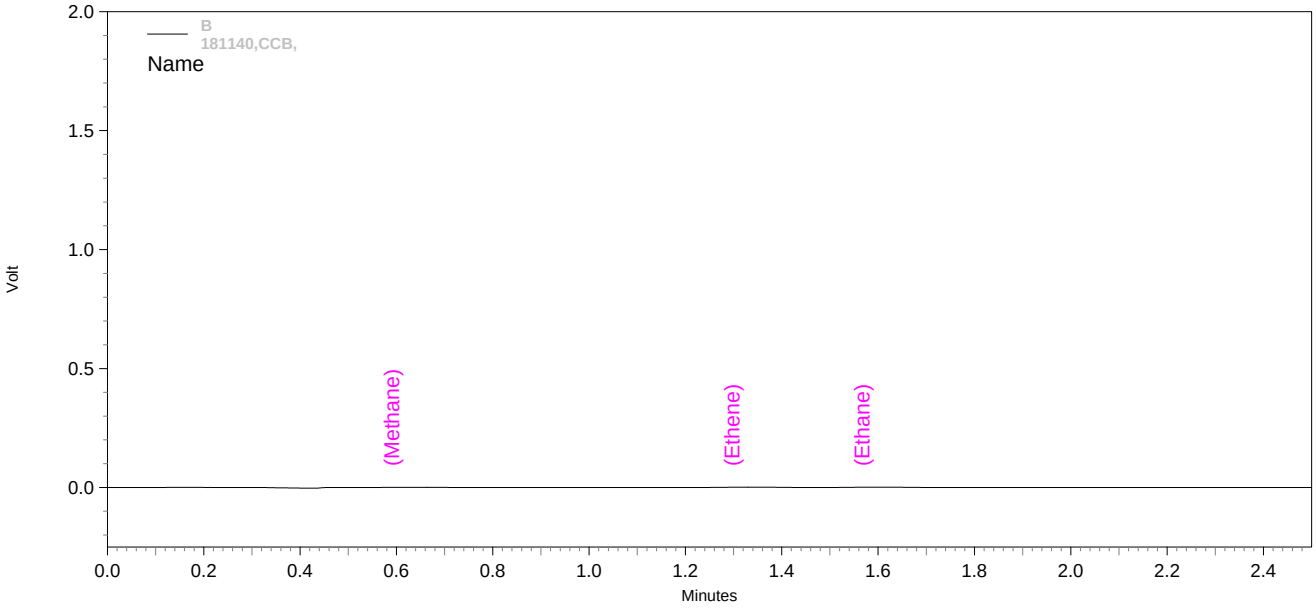
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	Methane	0.607	0.590	169858	46.798	ppmV
2	Ethene	1.320	1.297	323860	47.310	ppmV
3	Ethane	1.587	1.567	317821	47.132	ppmV

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\042221 -\018.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 181140,CCB,
Acquired: Apr 22, 2021 12:17:24
File Desc. MEE Continuing Calibration BLANK - 1ML HELIUM



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.297**		**0.000 BDL**	**ppmV**
	Ethane		**1.567**		**0.000 BDL**	**ppmV**

QC Check Standard Report

Sequence : C:\InStarch\PVOC4\Sequence\042221 - 181140 181142.seq
User : KMT
Printed : Apr 22, 2021 13:42:44

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\042221 -\028.dat	181140,CCV,	Apr 22, 2021 13:42:44

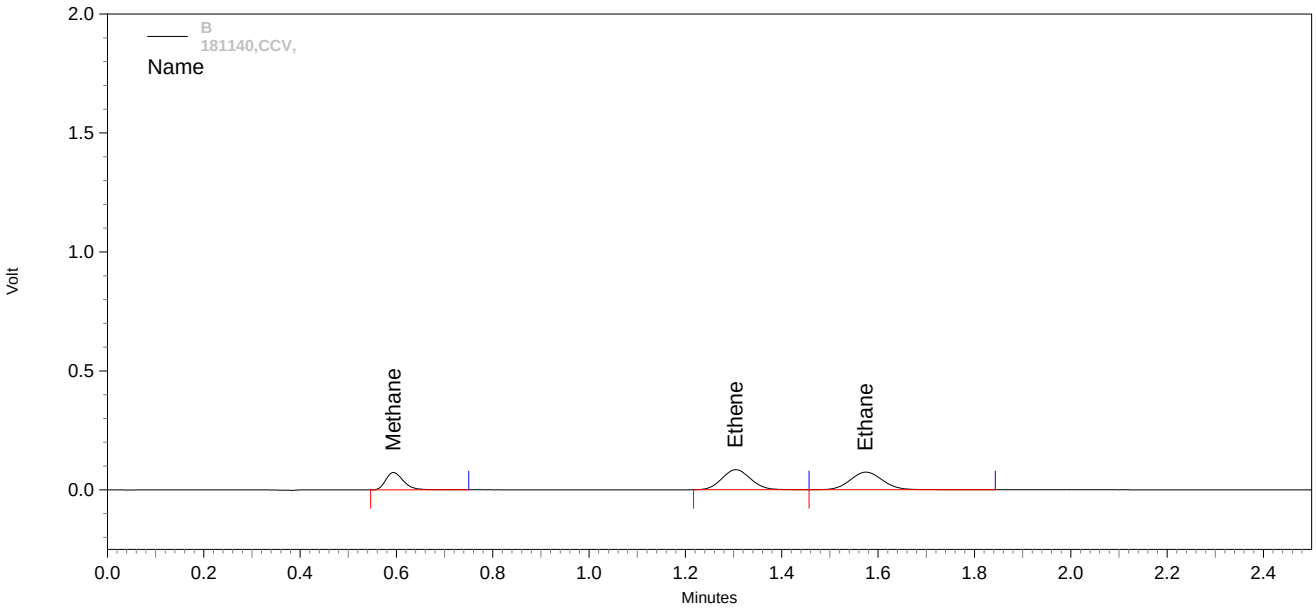
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	51.464	2.928	15.000	**Passed**
Ethene	50.000	51.055	2.110	15.000	**Passed**
Ethane	50.000	51.139	2.279	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\042221 -\028.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 181140,CCV,
Acquired: Apr 22, 2021 13:24:43
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.593**	**0.590**	**185860**	**51.464**	**ppmV**
2	**Ethene**	**1.303**	**1.297**	**348410**	**51.055**	**ppmV**
3	**Ethane**	**1.573**	**1.567**	**343841**	**51.139**	**ppmV**

VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL
DOCUMENTS

Quantitation Report

Data File : C:\Instarch\Data\APR1721\CCV-LCS1.D Vial: 3
Acq On : 17 Apr 2021 18:15 Operator: RLD-DGS
Sample : 180903,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 18:35:46 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 18:34:17 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1493609	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1148819	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	573274	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	400486	20.479	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	108575	19.790	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.71	98	1463060	19.865	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99	%		
83) SURR4BrFBenz	13.26	95	623642	20.551	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103	%		
Target Compounds						Qvalue
2) Dichlorodi	1.83	85	226323	11.8131	ug/L	98
3) Chloromethan	2.08	50	277949	10.7309	ug/L	98
4) VinylChlorid	2.25	62	273253	11.5234	ug/L	97
5) Bromomethane	2.71	94	146898	11.6306	ug/L	99
6) Chloroethane	2.88	64	150917	9.5628	ug/L	100
7) Dichloroflmethane	3.19	67	322938	10.6531	ug/L	99
8) Trichlorofma	3.27	101	328604	11.5818	ug/L	99
9) Ethylether	3.71	59	170925	10.1289	ug/L	98
10) dichlorotfluoroethan	3.73	67	228749	11.1083	ug/L	97
11) propyleneoxide	3.76	58	307972	96.2171	ug/L	98
12) Acrolein	3.84	56	44985	47.4242	ug/L	96
13) 11dichlorthe	3.99	96	195890	10.9223	ug/L	98
14) Trichlorotfluoroeth	4.04	101	395669	23.1526	ug/L	99
15) Acetone	4.06	43	510003	94.0084	ug/L	97
16) Iodomethane	4.17	142	359920	20.1649	ug/L	99
17) Carbon Dislf	4.26	76	1087136	23.0755	ug/L	100
18) allylchloride	4.48	41	750032	21.9037	ug/L	100
19) methylacetate	4.53	74	41856	9.3663	ug/L	94
20) Methylchlorid	4.64	84	223710	9.9448	ug/L	99
21) tbutylalcohol	4.84	59	791732	443.4800	ug/L	97
22) Acrylonitrile	4.94	53	336181	48.3313	ug/L	99
23) t12dichlorte	5.01	96	223561	11.1064	ug/L	98
24) MtBE	5.05	73	481530	10.1219	ug/L	99
25) Hexane	5.41	57	649044	23.2253	ug/L	99
26) 11dichlorota	5.54	63	392064	10.6135	ug/L	100
27) Vinylacetate	5.63	43	3155414	107.8925	ug/L	99
28) chloroprene	5.67	53	714815	21.8512	ug/L	99
29) Diisopether	5.69	45	676477	9.8994	ug/L	96
30) ETBE	6.14	59	533466	9.7737	ug/L	99
31) 22dichloropr	6.27	77	295519	10.3974	ug/L	99
32) c12dichlorte	6.27	96	220607	10.1379	ug/L	99
33) 2Butanone	6.29	72	182376	87.6581	ug/L	97
34) propionitrile	6.33	54	248233	88.7243	ug/L	97
35) Ethylacetate	6.40	88	32831	42.4369	ug/L	96
36) methacrylonitrile	6.54	67	142226	18.2785	ug/L	97
37) Bromochlorma	6.56	128	92286	9.7513	ug/L	98
38) Tetrahydofur	6.65	42	519584	88.5231	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1721\CCV-LCS1.D Vial: 3
Acq On : 17 Apr 2021 18:15 Operator: RLD-DGS
Sample : 180903,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 18:35:46 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 18:34:17 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	335473	9.8248	ug/L	99
40)	111trichlota	6.91	97	316767	11.0260	ug/L	100
42)	Cyclohexane	7.00	56	406791	11.8316	ug/L	99
43)	Carbtetraclo	7.13	119	262514	11.3088	ug/L	99
44)	11dicloprope	7.12	110	109617	10.8748	ug/L	98
46)	Benzene	7.36	78	823125	10.7516	ug/L	99
47)	12dichlorota	7.36	62	282713	10.1861	ug/L	99
48)	TAME	7.53	73	489650	10.1909	ug/L	96
49)	trichloroete	8.17	95	225505	10.9649	ug/L	97
50)	methylcyclohexane	8.44	83	430397	11.9324	ug/L	99
51)	12dicloropra	8.43	63	245964	10.4874	ug/L	98
52)	23Dicl1propene	8.50	75	334514	10.6192	ug/L	97
53)	Dibromometha	8.57	93	122080	10.1966	ug/L	98
54)	methylmethacrylate	8.60	69	127239	9.5709	ug/L	98
55)	14dioxane	8.62	88	101753	461.9594	ug/L	97
56)	Bromodiclrma	8.78	83	265931	10.2656	ug/L	99
57)	2Nitropropane	9.04	43	484854	104.6428	ug/L	98
58)	2CLEVE	9.16	63	619479	50.9974	ug/L	98
59)	c13dicloproe	9.35	75	332703	10.4914	ug/L	98
60)	4Meth2Pentan	9.55	43	1496781	91.8614	ug/L	100
62)	Toluene	9.80	92	504739	10.2269	ug/L	99
63)	t13Dicloprop	10.06	75	271809	10.2045	ug/L	99
64)	ethylmethacrylate	10.20	69	440392	19.2271	ug/L	96
65)	112Triclotha	10.30	83	143579	9.7255	ug/L	99
66)	Tetrachlorte	10.53	166	206547	10.8369	ug/L	97
67)	13Diclorpropa	10.52	76	315318	10.1593	ug/L	99
69)	2Hexanone	10.64	43	1092437	83.9112	ug/L	99
70)	Clorodibrmta	10.82	129	171176	9.7301	ug/L	97
71)	12Dibrometha	10.98	107	179165	10.2579	ug/L	99
72)	Chlorobenzen	11.66	112	552971	9.9180	ug/L	99
73)	1Clhexane	11.65	91	292961	10.3279	ug/L	99
74)	1112Tetclota	11.77	131	181176	10.0566	ug/L	96
75)	Ethylbenzene	11.82	91	902991	10.5884	ug/L	99
76)	m p-Xylene	11.99	106	707186	20.8374	ug/L	98
77)	o-Xylene	12.53	106	348661	10.2372	ug/L	97
78)	Styrene	12.55	104	569239	10.2684	ug/L	98
79)	Bromoform	12.78	173	97617	9.7473	ug/L	99
80)	Isopropylben	13.06	105	863463	10.9248	ug/L	100
81)	cyclohexanone	13.15	55	120307	165.9151	ug/L	98
84)	Bromobenzene	13.47	156	205502	10.3328	ug/L	99
85)	1122Tetrclta	13.44	83	218105	9.6730	ug/L	96
86)	123Triclproa	13.50	75	268976	9.8533	ug/L	97
87)	14dichloro2butene	13.53	53	62241	9.6466	ug/L	99
88)	n-Propylbenz	13.64	91	1025109	10.6449	ug/L	99
89)	2chlorotolue	13.76	91	612361	10.4311	ug/L	98
90)	4chlorotolue	13.91	91	707091	10.5967	ug/L	100
91)	135Trimebenz	13.90	105	705560	10.7388	ug/L	99
92)	tbutylbenzen	14.37	119	605459	10.8975	ug/L	99
93)	124Trimetben	14.44	105	684122	10.5461	ug/L	97
94)	sbutylbenzen	14.69	105	881005	11.1819	ug/L	99
95)	13Diclorbenz	14.83	146	373877	10.2303	ug/L	99
96)	pIsopropylto	14.91	119	728447	10.7929	ug/L	100
97)	14dichlorobe	14.96	146	371109	9.7903	ug/L	97
98)	12dichlorobe	15.49	146	349678	9.8335	ug/L	99
99)	nButylbenzen	15.50	91	670557	10.3508	ug/L	99
100)	12dibromo3cl	16.59	157	33915	9.4670	ug/L	95
101)	135Trichlorobenzene	16.92	180	249522	9.9959	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

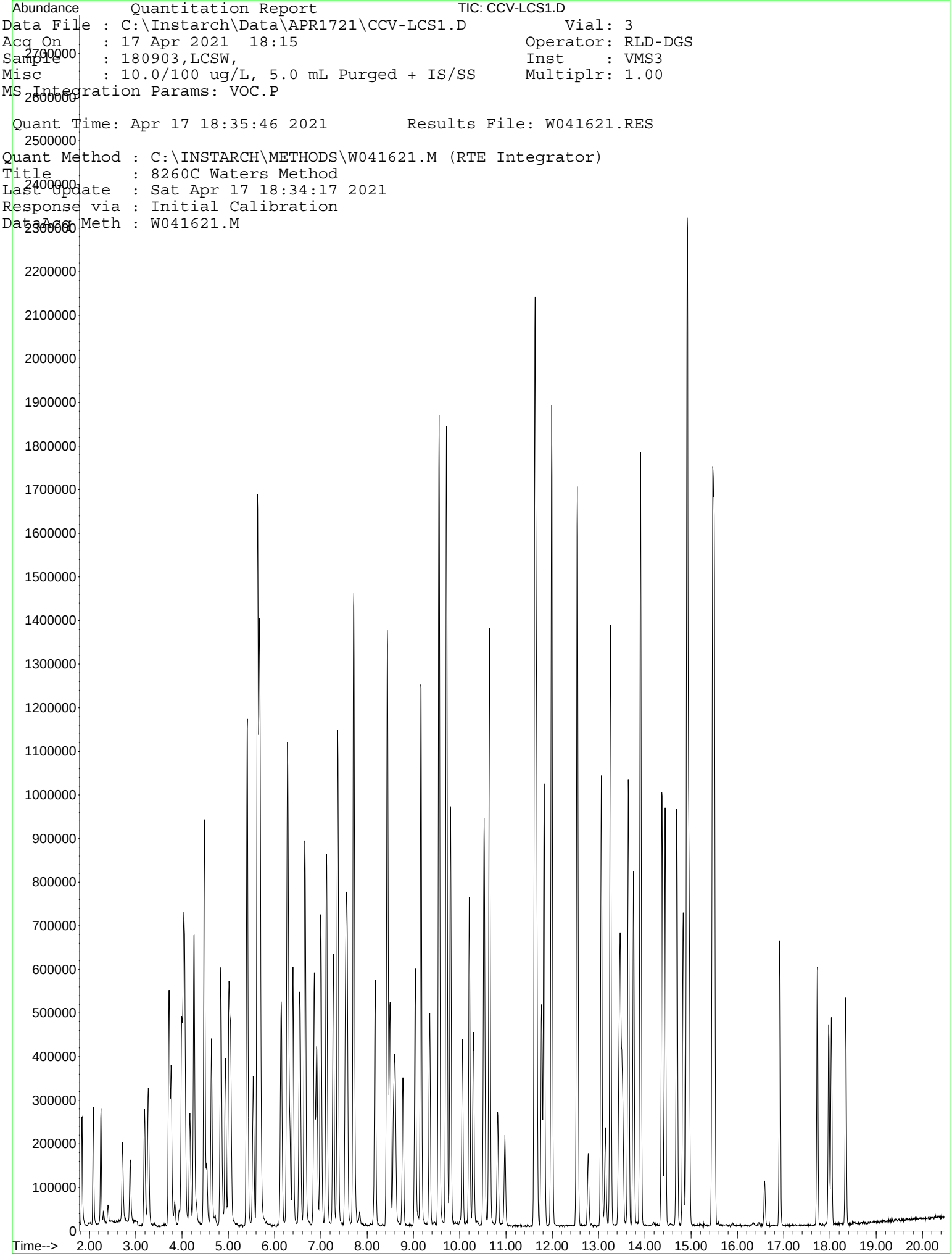
Data File : C:\Instarch\Data\APR1721\CCV-LCS1.D Vial: 3
Acq On : 17 Apr 2021 18:15 Operator: RLD-DGS
Sample : 180903,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 18:35:46 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 18:34:17 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	212852	10.0980	ug/L	99
103) Hexachlorobu	17.97	225	102166	10.5076	ug/L	99
104) Naphthalene	18.03	128	434505	9.4007	ug/L	99
105) 123Trichlben	18.34	180	187168	9.7047	ug/L	98

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: CCV-LCS1.D
Data File : C:\Instarch\Data\APR1721\CCV-LCS1.D
Vial: 3
Acq On : 17 Apr 2021 18:15
Operator: RLD-DGS
Sample : 180903,LCSW,
Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Apr 17 18:35:46 2021
Results File: W041621.RES
Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 18:34:17 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
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20.00

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\MB1.D Vial: 5
Acq On : 17 Apr 2021 19:14 Operator: RLD-DGS
Sample : 180903,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 19:35:16 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1491658	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1133883	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	538834	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	390638	20.002	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	109188	19.928	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100	%		
61) SURRd8Tolule	9.71	98	1468340	19.963	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.26	95	601424	21.085	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 105	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	2.08	50	3800	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	21846	N.D.		
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	14550	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.85	59	7381	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.66	42	2589	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\MB1.D Vial: 5
Acq On : 17 Apr 2021 19:14 Operator: RLD-DGS
Sample : 180903,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 19:35:16 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	9.04	43	4741	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.55	43	7419	Below Cal #	72
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.64	43	6630	Below Cal #	84
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.63	91	3571	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	13.06	105	4135	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.65	91	5344	N.D.	
89)	2chlorotolue	13.65	91	4873	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	13.90	105	2927	N.D.	
92)	tbutylbenzen	14.37	119	3591	N.D.	
93)	124Trimetben	14.43	105	2816	N.D.	
94)	sbutylbenzen	14.69	105	8297	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.91	119	7489	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.50	91	9105	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\MB1.D Vial: 5
Acq On : 17 Apr 2021 19:14 Operator: RLD-DGS
Sample : 180903,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 19:35:16 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102)	124Trichlobe	0.00	180	0	N.D.	
103)	Hexachlorobu	0.00	225	0	N.D.	
104)	Naphthalene	18.03	128	5566	N.D.	
105)	123Trichlben	0.00	180	0	N.D.	

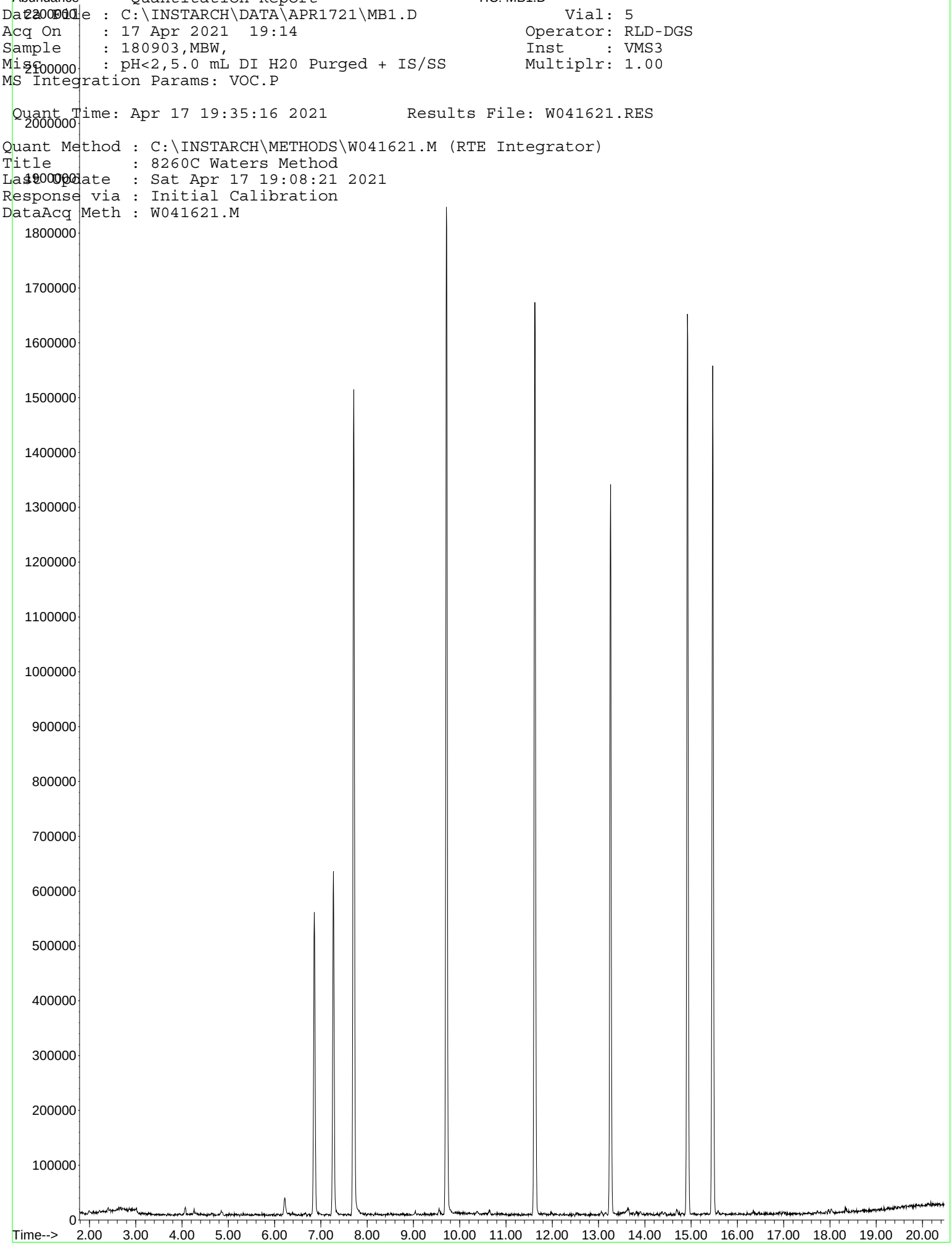
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: MB1.D

Data File : C:\INSTARCH\DATA\APR1721\MB1.D Vial: 5
Acq On : 17 Apr 2021 19:14 Operator: RLD-DGS
Sample : 180903,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 17 19:35:16 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553554MS.D Vial: 19
Acq On : 18 Apr 2021 2:15 Operator: RLD-DGS
Sample : 180903,MSW553554, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 02:35:57 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1428841	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1098059	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	568896	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	366834	19.609	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
45) SURR12DCAd4	7.27	102	104730	19.954	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100 %			
61) SURRd8Tolule	9.71	98	1439369	20.429	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.26	95	586066	19.461	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 97 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	260338	14.2045	ug/L	96
3) Chloromethan	2.08	50	303499	12.2484	ug/L	97
4) VinylChlorid	2.25	62	293005	12.9165	ug/L	98
5) Bromomethane	2.72	94	156854	12.9818	ug/L	99
6) Chloroethane	2.88	64	156329	10.3547	ug/L	98
7) Dichloroflmethane	3.19	67	345659	11.9195	ug/L	100
8) Trichlorofma	3.28	101	338843	12.4841	ug/L	100
9) Ethylether	3.71	59	156156	9.6732	ug/L	93
10) dichlorotfluoroethan	3.73	67	249368	12.6585	ug/L	96
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.84	56	156193	172.1262	ug/L	96
13) 11dichlorthe	3.99	96	212535	12.3875	ug/L	98
14) Trichlorotfluoroeth	4.04	101	409768	25.0645	ug/L	99
15) Acetone	4.07	43	443548	84.9349	ug/L	100
16) Iodomethane	4.17	142	337346	19.7569	ug/L	99
17) Carbon Dislf	4.26	76	1099649	24.5231	ug/L	100
18) allylchloride	4.48	41	711632	21.7244	ug/L	99
19) methylacetate	4.53	74	36142	8.4542	ug/L	93
20) Methylchlorid	4.64	84	242087	11.2496	ug/L	99
21) tbutylalcohol	4.84	59	720714	421.9994	ug/L	99
22) Acrylonitrile	4.94	53	308116	46.3045	ug/L	98
23) t12dichlorte	5.02	96	216582	11.2474	ug/L	98
24) MtBE	5.05	73	446792	9.8175	ug/L	99
25) Hexane	5.41	57	656476	24.5561	ug/L	99
26) 11dichlorota	5.54	63	402970	11.4032	ug/L	100
27) Vinylacetate	5.63	43	3030533	108.4138	ug/L	99
28) chloroprene	5.67	53	732266	23.3993	ug/L	100
29) Diisopether	5.69	45	681680	10.4277	ug/L	96
30) ETBE	6.14	59	532735	10.2027	ug/L	99
31) 22dichloropr	6.28	77	273855	10.0719	ug/L	99
32) c12dichlorte	6.27	96	227124	10.9105	ug/L	99
33) 2Butanone	6.29	72	176736	88.7978	ug/L	96
34) propionitrile	6.33	54	240889	90.0022	ug/L	99
35) Ethylacetate	6.40	88	31586	42.6783	ug/L #	92
36) methacrylonitrile	6.54	67	146622	19.6976	ug/L	98
37) Bromochlorma	6.55	128	94280	10.4136	ug/L	98
38) Tetrahydofur	6.65	42	505527	90.0323	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553554MS.D Vial: 19
Acq On : 18 Apr 2021 2:15 Operator: RLD-DGS
Sample : 180903,MSW553554, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 02:35:57 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	353496	10.8219	ug/L	98
40)	111trichlota	6.91	97	308478	11.2242	ug/L	100
42)	Cyclohexane	7.00	56	394919	12.0069	ug/L	99
43)	Carbtetraclo	7.13	119	277466	12.4948	ug/L	100
44)	11dicloprope	7.12	110	107592	11.1577	ug/L	99
46)	Benzene	7.36	78	820210	11.1992	ug/L	99
47)	12dichlorota	7.36	62	269776	10.1606	ug/L	98
48)	TAME	7.54	73	448915	9.7667	ug/L	85
49)	trichloroete	8.17	95	217761	11.0683	ug/L	98
50)	methylcyclohexane	8.44	83	413604	11.9866	ug/L	100
51)	12dicloropra	8.43	63	234632	10.4577	ug/L	98
52)	23Dicl1propene	8.49	75	325077	10.7874	ug/L	97
53)	Dibromometha	8.57	93	114493	9.9964	ug/L	94
54)	methylmethacrylate	8.60	69	119376	9.3865	ug/L	97
55)	14dioxane	8.62	88	92007	436.6470	ug/L	94
56)	Bromodiclrma	8.77	83	262653	10.5987	ug/L	99
57)	2Nitropropane	9.04	43	408634	92.1904	ug/L	99
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.35	75	312903	10.3143	ug/L	98
60)	4Meth2Pentan	9.55	43	1459799	93.9047	ug/L	100
62)	Toluene	9.80	92	537135	11.3766	ug/L	98
63)	t13Dicloprop	10.06	75	265032	10.4011	ug/L	100
64)	ethylmethacrylate	10.21	69	443943	20.2607	ug/L	99
65)	112Triclotha	10.30	83	150069	10.6259	ug/L	96
66)	Tetrachlorte	10.53	166	209306	11.4795	ug/L	99
67)	13Diclorpropa	10.52	76	306173	10.3118	ug/L	100
69)	2Hexanone	10.64	43	1061842	85.5013	ug/L	100
70)	Clorodibrmta	10.82	129	171305	10.1875	ug/L	98
71)	12Dibrometha	10.98	107	168124	10.0708	ug/L	97
72)	Chlorobenzen	11.66	112	593847	11.1435	ug/L	99
73)	1Clhexane	11.65	91	294310	10.8550	ug/L	99
74)	1112Tetclota	11.77	131	185740	10.7865	ug/L	100
75)	Ethylbenzene	11.82	91	929866	11.4076	ug/L	99
76)	m p-Xylene	11.99	106	739827	22.8068	ug/L	97
77)	o-Xylene	12.53	106	359481	11.0429	ug/L	96
78)	Styrene	12.55	104	592582	11.1836	ug/L	99
79)	Bromoform	12.77	173	96792	10.1117	ug/L	100
80)	Isopropylben	13.06	105	874302	11.5733	ug/L	99
81)	cyclohexanone	13.15	55	101657	146.6757	ug/L	97
84)	Bromobenzene	13.47	156	204450	10.3590	ug/L	98
85)	1122Tetrclta	13.44	83	214156	9.5710	ug/L	96
86)	123Triclproa	13.50	75	257538	9.5069	ug/L	98
87)	14dichloro2butene	13.53	53	56586	8.8376	ug/L	92
88)	n-Propylbenz	13.65	91	1041820	10.9017	ug/L	99
89)	2chlorotolue	13.76	91	641314	11.0084	ug/L	100
90)	4chlorotolue	13.91	91	749240	11.3148	ug/L	100
91)	135Trimebenz	13.90	105	750685	11.5136	ug/L	100
92)	tbutylbenzen	14.37	119	628440	11.3981	ug/L	100
93)	124Trimetben	14.44	105	728020	11.3092	ug/L	98
94)	sbutylbenzen	14.69	105	917901	11.7398	ug/L	99
95)	13Diclorbenz	14.83	146	388686	10.7174	ug/L	98
96)	pIsopropylto	14.91	119	771486	11.5185	ug/L	100
97)	14dichlorobe	14.96	146	405202	10.7720	ug/L	100
98)	12dichlorobe	15.49	146	366993	10.3998	ug/L	99
99)	nButylbenzen	15.50	91	714145	11.1084	ug/L	99
100)	12dibromo3cl	16.59	157	30912	8.6952	ug/L	99
101)	135Trichlorobenzene	16.92	180	259227	10.4646	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553554MS.D Vial: 19
Acq On : 18 Apr 2021 2:15 Operator: RLD-DGS
Sample : 180903,MSW553554, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 02:35:57 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

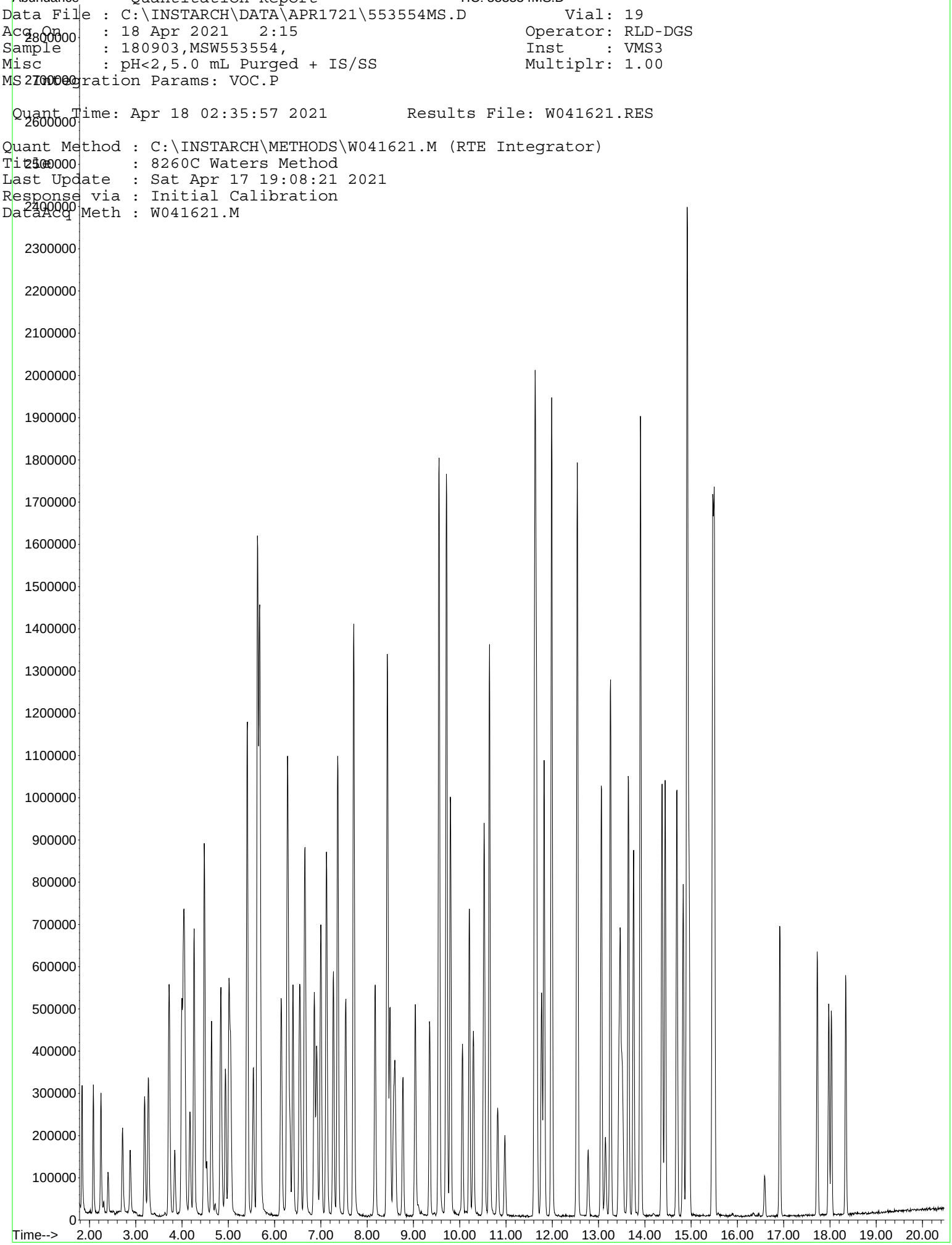
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	223613	10.6901	ug/L	99
103) Hexachlorobu	17.97	225	107822	11.1746	ug/L	99
104) Naphthalene	18.03	128	435743	9.5001	ug/L	99
105) 123Trichlben	18.34	180	198380	10.3652	ug/L	99

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\APR1721\553554MS.D Vial: 19
Acq On : 18 Apr 2021 2:15 Operator: RLD-DGS
Sample : 180903,MSW553554, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 02:35:57 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553554SD.D Vial: 20
Acq On : 18 Apr 2021 2:45 Operator: RLD-DGS
Sample : 180903,MSDW553554, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 03:05:58 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1455658	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1116265	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	572289	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	382888	20.090	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
45) SURR12DCAd4	7.27	102	103227	19.306	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.71	98	1458920	20.325	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.25	95	593909	19.604	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	263584	14.1166	ug/L	99
3) Chloromethan	2.08	50	304890	12.0779	ug/L	98
4) VinylChlorid	2.25	62	296361	12.8238	ug/L	97
5) Bromomethane	2.72	94	150429	12.2207	ug/L	100
6) Chloroethane	2.88	64	159846	10.3926	ug/L	98
7) Dichloroflmethane	3.19	67	346849	11.7402	ug/L	99
8) Trichlorofma	3.27	101	340234	12.3044	ug/L	99
9) Ethylether	3.71	59	154125	9.3715	ug/L	96
10) dichlorotfluoroethan	3.73	67	239623	11.9397	ug/L	97
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.84	56	145775	157.6860	ug/L	99
13) 11dichlorthe	3.99	96	215103	12.3062	ug/L	99
14) Trichlorotfluoroeth	4.04	101	422023	25.3385	ug/L	99
15) Acetone	4.06	43	414106	77.3830	ug/L	97
16) Iodomethane	4.17	142	378609	21.7650	ug/L	99
17) Carbon Dislf	4.26	76	1104735	24.1518	ug/L	100
18) allylchloride	4.48	41	724104	21.6979	ug/L	98
19) methylacetate	4.53	74	34785	7.9869	ug/L	99
20) Methylchlorid	4.64	84	227334	10.3694	ug/L	99
21) tbutylalcohol	4.84	59	724535	416.4212	ug/L	97
22) Acrylonitrile	4.94	53	299812	44.2265	ug/L	98
23) t12dichlorte	5.02	96	216330	11.0274	ug/L	99
24) MtBE	5.05	73	447700	9.6562	ug/L	99
25) Hexane	5.41	57	658517	24.1787	ug/L	99
26) 11dichlorota	5.54	63	381107	10.5859	ug/L	99
27) Vinylacetate	5.63	43	2983621	103.9893	ug/L	99
28) chloroprene	5.67	53	725041	22.7416	ug/L	100
29) Diisopether	5.69	45	685275	10.2896	ug/L	100
30) ETBE	6.14	59	538077	10.1152	ug/L	99
31) 22dichloropr	6.27	77	277646	10.0232	ug/L	99
32) c12dichlorte	6.27	96	229796	10.8355	ug/L	99
33) 2Butanone	6.29	72	171028	84.3469	ug/L	98
34) propionitrile	6.33	54	240235	88.1043	ug/L	99
35) Ethylacetate	6.39	88	32119	42.5989	ug/L #	86
36) methacrylonitrile	6.54	67	137254	18.0994	ug/L	98
37) Bromochlorma	6.55	128	93858	10.1760	ug/L	96
38) Tetrahydofur	6.65	42	499186	87.2652	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553554SD.D Vial: 20
Acq On : 18 Apr 2021 2:45 Operator: RLD-DGS
Sample : 180903,MSDW553554, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 03:05:58 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	357265	10.7358	ug/L	97
40)	111trichlota	6.91	97	317213	11.3294	ug/L	100
42)	Cyclohexane	7.00	56	408878	12.2023	ug/L	99
43)	Carbtetraclo	7.13	119	276685	12.2301	ug/L	99
44)	11dicloprope	7.11	110	108644	11.0592	ug/L	99
46)	Benzene	7.37	78	828667	11.1062	ug/L	100
47)	12dichlorota	7.36	62	274376	10.1435	ug/L	98
48)	TAME	7.53	73	458443	9.7902	ug/L	84
49)	trichloroete	8.17	95	220514	11.0018	ug/L	98
50)	methylcyclohexane	8.44	83	420982	11.9757	ug/L	99
51)	12dicloropra	8.43	63	236137	10.3309	ug/L	98
52)	23Dicl1propene	8.49	75	322921	10.5185	ug/L	98
53)	Dibromometha	8.57	93	114690	9.8291	ug/L	95
54)	methylmethacrylate	8.60	69	114471	8.8350	ug/L	98
55)	14dioxane	8.62	88	92230	429.6417	ug/L	98
56)	Bromodiclrma	8.77	83	263625	10.4419	ug/L	98
57)	2Nitropropane	9.04	43	394497	87.3614	ug/L	97
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.35	75	313390	10.1400	ug/L	100
60)	4Meth2Pentan	9.55	43	1460099	91.9581	ug/L	100
62)	Toluene	9.80	92	537533	11.1753	ug/L	100
63)	t13Dicloprop	10.06	75	265321	10.2206	ug/L	100
64)	ethylmethacrylate	10.20	69	445531	19.9586	ug/L	98
65)	112Triclotha	10.30	83	144863	10.0683	ug/L	98
66)	Tetrachlorte	10.53	166	218324	11.7535	ug/L	100
67)	13Diclorpropa	10.52	76	307424	10.1632	ug/L	100
69)	2Hexanone	10.64	43	1070214	84.6835	ug/L	100
70)	Clorodibrmta	10.82	129	173020	10.1217	ug/L	98
71)	12Dibrometha	10.98	107	168448	9.9256	ug/L	100
72)	Chlorobenzen	11.66	112	596181	11.0048	ug/L	99
73)	1Clhexane	11.65	91	295704	10.7286	ug/L	99
74)	1112Tetclota	11.77	131	181674	10.3783	ug/L	96
75)	Ethylbenzene	11.82	91	953222	11.5034	ug/L	99
76)	m p-Xylene	11.99	106	762680	23.1279	ug/L	95
77)	o-Xylene	12.53	106	367182	11.0955	ug/L	94
78)	Styrene	12.55	104	594644	11.0395	ug/L	98
79)	Bromoform	12.78	173	95645	9.8290	ug/L	98
80)	Isopropylben	13.06	105	907777	11.8204	ug/L	100
81)	cyclohexanone	13.15	55	111645	158.4596	ug/L	98
84)	Bromobenzene	13.47	156	215575	10.8579	ug/L	95
85)	1122Tetrclta	13.44	83	209515	9.3080	ug/L	96
86)	123Triclproa	13.50	75	253045	9.2857	ug/L	99
87)	14dichloro2butene	13.52	53	53332	8.2801	ug/L	97
88)	n-Propylbenz	13.65	91	1060079	11.0270	ug/L	99
89)	2chlorotolue	13.76	91	641460	10.9456	ug/L	97
90)	4chlorotolue	13.91	91	747712	11.2248	ug/L	99
91)	135Trimebenz	13.90	105	761997	11.6178	ug/L	99
92)	tbutylbenzen	14.37	119	652324	11.7612	ug/L	99
93)	124Trimetben	14.44	105	738680	11.4068	ug/L	98
94)	sbutylbenzen	14.69	105	945072	12.0157	ug/L	99
95)	13Diclorbenz	14.83	146	399396	10.9474	ug/L	99
96)	pIsopropylto	14.91	119	784672	11.6459	ug/L	99
97)	14dichlorobe	14.96	146	403936	10.6747	ug/L	98
98)	12dichlorobe	15.50	146	365397	10.2932	ug/L	98
99)	nButylbenzen	15.50	91	732475	11.3260	ug/L	100
100)	12dibromo3cl	16.59	157	30528	8.5362	ug/L	96
101)	135Trichlorobenzene	16.92	180	265993	10.6741	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1721\553554SD.D Vial: 20
Acq On : 18 Apr 2021 2:45 Operator: RLD-DGS
Sample : 180903,MSDW553554, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 03:05:58 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	228180	10.8438	ug/L	100
103)	Hexachlorobu	17.97	225	115100	11.8582	ug/L	98
104)	Naphthalene	18.03	128	438089	9.4946	ug/L	100
105)	123Trichlben	18.34	180	202647	10.5253	ug/L	99

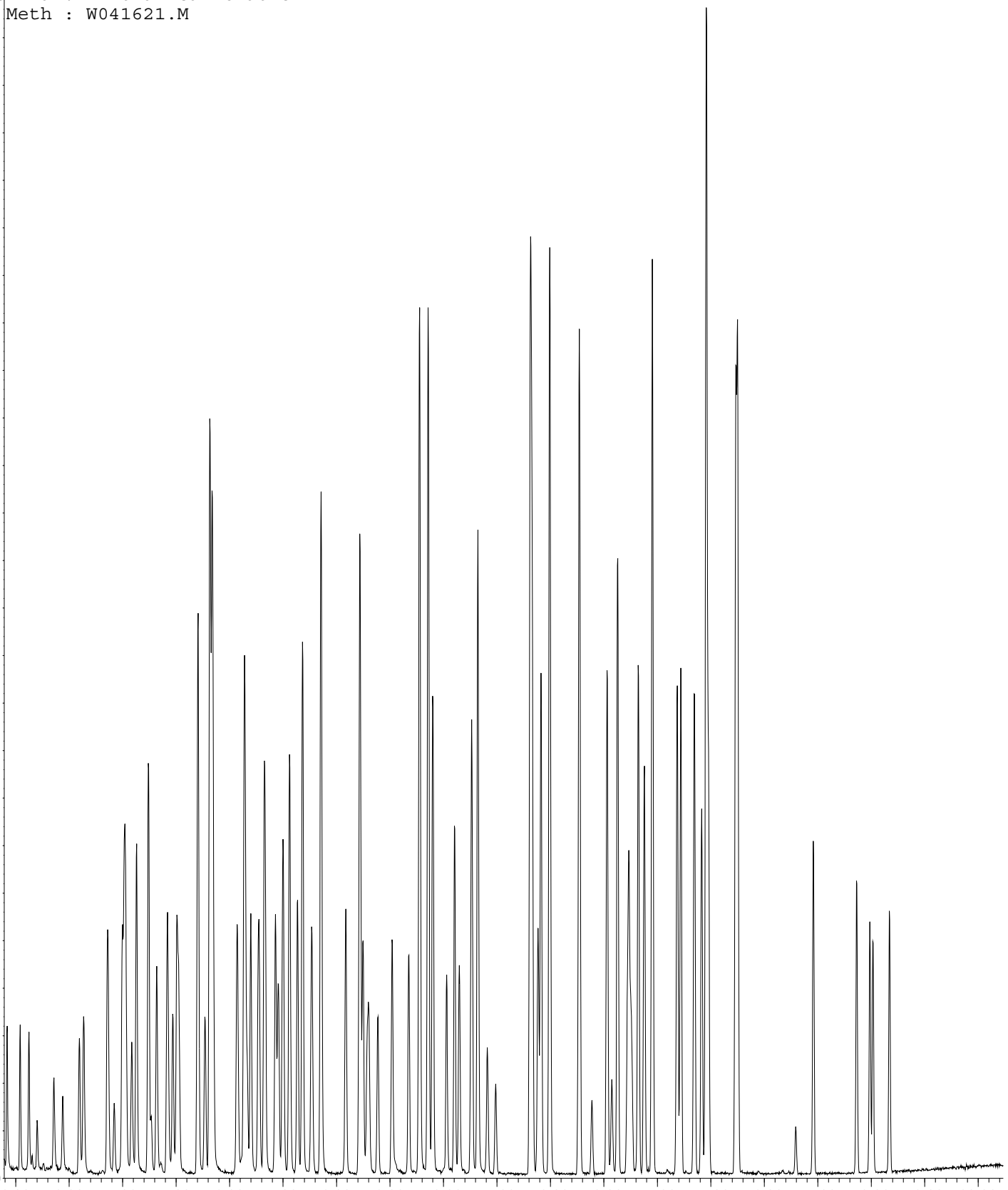
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 553554SD.D

Data File : C:\INSTARCH\DATA\APR1721\553554SD.D Vial: 20
Acq On : 18 Apr 2021 2:45 Operator: RLD-DGS
Sample : 180903,MSDW553554, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 18 03:05:58 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\Instarch\Data\APR1921B\CCV-LCS1.D Vial: 2
Acq On : 19 Apr 2021 15:41 Operator: RLD-DGS
Sample : 181068,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 16:02:29 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1501364	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1149326	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	595397	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	382685	19.468	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 97 %			
45) SURR12DCAd4	7.27	102	101603	18.424	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 92 %			
61) SURRd8Tolule	9.71	98	1517984	20.504	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103 %			
83) SURR4BrFBenz	13.26	95	630988	20.020	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	237109	12.3121	ug/L	94
3) Chloromethan	2.08	50	257997	9.9091	ug/L	97
4) VinylChlorid	2.25	62	252346	10.5868	ug/L	97
5) Bromomethane	2.72	94	138166	10.8827	ug/L	98
6) Chloroethane	2.88	64	150679	9.4984	ug/L	98
7) Dichloroflmethane	3.19	67	304234	9.9842	ug/L	99
8) Trichlorofma	3.27	101	316686	11.1041	ug/L	100
9) Ethylether	3.71	59	156553	9.2293	ug/L	99
10) dichlorotfluoroethan	3.73	67	218910	10.5756	ug/L	99
11) propyleneoxide	3.76	58	283539	88.1261	ug/L	99
12) Acrolein	3.84	56	43040	45.1394	ug/L	97
13) 11dichlorthe	3.99	96	184039	10.2085	ug/L	97
14) Trichlorotfluoroeth	4.04	101	388310	22.6046	ug/L	97
15) Acetone	4.06	43	416700	75.3702	ug/L	98
16) Iodomethane	4.17	142	404244	22.5313	ug/L	99
17) Carbon Dislf	4.25	76	1028169	21.5926	ug/L	100
18) allylchloride	4.48	41	723222	21.0117	ug/L	97
19) methylacetate	4.53	74	31320	6.9724	ug/L	100
20) Methylchlorid	4.63	84	204917	9.0623	ug/L	96
21) tbutylalcohol	4.84	59	514509	286.7080	ug/L	98
22) Acrylonitrile	4.94	53	281977	40.3293	ug/L	99
23) t12dichlorte	5.01	96	209158	10.3372	ug/L	99
24) MtBE	5.05	73	437378	9.1464	ug/L	99
25) Hexane	5.40	57	735308	26.1763	ug/L	99
26) 11dichlorota	5.54	63	373918	10.0700	ug/L	100
27) Vinylacetate	5.63	43	3088070	104.4323	ug/L	100
28) chloroprene	5.67	53	729505	22.1850	ug/L	98
29) Diisopether	5.68	45	684807	9.9695	ug/L	97
30) ETBE	6.14	59	540690	9.8549	ug/L	99
31) 22dichloropr	6.28	77	304723	10.6658	ug/L	98
32) c12dichlorte	6.27	96	225249	10.2977	ug/L	99
33) 2Butanone	6.29	72	164240	78.5333	ug/L	97
34) propionitrile	6.33	54	202041	71.8412	ug/L	99
35) Ethylacetate	6.40	88	31526	40.5396	ug/L #	89
36) methacrylonitrile	6.54	67	132744	16.9718	ug/L	94
37) Bromochlorma	6.55	128	92354	9.7081	ug/L	96
38) Tetrahydofur	6.65	42	457231	77.4975	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1921B\CCV-LCS1.D Vial: 2
Acq On : 19 Apr 2021 15:41 Operator: RLD-DGS
Sample : 181068,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 16:02:29 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	339760	9.8990	ug/L	99
40)	111trichlota	6.91	97	306026	10.5971	ug/L	99
42)	Cyclohexane	7.00	56	407059	11.7782	ug/L	100
43)	Carbtetraclo	7.13	119	254771	10.9186	ug/L	99
44)	11dicloprope	7.11	110	107488	10.6085	ug/L	99
46)	Benzene	7.36	78	802325	10.4258	ug/L	99
47)	12dichlorota	7.36	62	253515	9.0869	ug/L	99
48)	TAME	7.53	73	463897	9.6051	ug/L	97
49)	trichloroete	8.17	95	222372	10.7567	ug/L	98
50)	methylcyclohexane	8.44	83	441813	12.1857	ug/L	100
51)	12dicloropra	8.43	63	234353	9.9407	ug/L	92
52)	23Dicl1propene	8.50	75	335644	10.6001	ug/L	98
53)	Dibromometha	8.57	93	110006	9.1407	ug/L	96
54)	methylmethacrylate	8.59	69	111661	8.3557	ug/L	94
55)	14dioxane	8.61	88	40186	181.5024	ug/L	99
56)	Bromodiclrma	8.77	83	245323	9.4212	ug/L	100
57)	2Nitropropane	9.04	43	320712	68.8596	ug/L	97
58)	2CLEVE	9.16	63	578405	47.3701	ug/L	98
59)	c13dicloproe	9.35	75	321010	10.0703	ug/L	100
60)	4Meth2Pentan	9.55	43	1381723	83.3886	ug/L	99
62)	Toluene	9.80	92	531178	10.7070	ug/L	99
63)	t13Dicloprop	10.06	75	266977	9.9713	ug/L	99
64)	ethylmethacrylate	10.20	69	425175	18.4668	ug/L	98
65)	112Triclotha	10.29	83	141100	9.5082	ug/L	97
66)	Tetrachlorte	10.53	166	211974	11.0642	ug/L	97
67)	13Diclorpropa	10.52	76	290258	9.3036	ug/L	98
69)	2Hexanone	10.64	43	1002636	76.2188	ug/L	98
70)	Clorodibrmta	10.82	129	162756	9.2474	ug/L	98
71)	12Dibrometha	10.98	107	154149	8.8218	ug/L	94
72)	Chlorobenzen	11.66	112	574419	10.2981	ug/L	99
73)	1Clhexane	11.64	91	325757	11.4790	ug/L	98
74)	1112Tetclota	11.77	131	178995	9.9311	ug/L	100
75)	Ethylbenzene	11.82	91	945819	11.0857	ug/L	100
76)	m p-Xylene	11.99	106	765407	22.5429	ug/L	95
77)	o-Xylene	12.53	106	357667	10.4970	ug/L	97
78)	Styrene	12.55	104	596472	10.7549	ug/L	99
79)	Bromoform	12.78	173	88093	8.7925	ug/L	99
80)	Isopropylben	13.06	105	915700	11.5806	ug/L	100
81)	cyclohexanone	13.14	55	74520	102.7250	ug/L	95
84)	Bromobenzene	13.47	156	203447	9.8494	ug/L	97
85)	1122Tetrclta	13.44	83	190634	8.1405	ug/L	94
86)	123Triclproa	13.50	75	229556	8.0968	ug/L	100
87)	14dichloro2butene	13.53	53	47532	7.0932	ug/L	97
88)	n-Propylbenz	13.65	91	1087589	10.8740	ug/L	99
89)	2chlorotolue	13.76	91	646975	10.6113	ug/L	99
90)	4chlorotolue	13.91	91	753802	10.8770	ug/L	99
91)	135Trimebenz	13.90	105	753876	11.0479	ug/L	98
92)	tbutylbenzen	14.37	119	663548	11.4992	ug/L	98
93)	124Trimetben	14.44	105	739618	10.9780	ug/L	96
94)	sbutylbenzen	14.69	105	952696	11.6425	ug/L	98
95)	13Diclorbenz	14.83	146	388162	10.2265	ug/L	100
96)	pIsopropylto	14.91	119	815394	11.6322	ug/L	98
97)	14dichlorobe	14.96	146	394860	10.0299	ug/L	100
98)	12dichlorobe	15.50	146	357615	9.6830	ug/L	99
99)	nButylbenzen	15.50	91	749213	11.1352	ug/L	99
100)	12dibromo3cl	16.59	157	28228	7.5868	ug/L	98
101)	135Trichlorobenzene	16.92	180	273273	10.5406	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\APR1921B\CCV-LCS1.D Vial: 2
Acq On : 19 Apr 2021 15:41 Operator: RLD-DGS
Sample : 181068,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 16:02:29 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	225349	10.2936	ug/L	100
103)	Hexachlorobu	17.98	225	115040	11.3920	ug/L	96
104)	Naphthalene	18.03	128	410507	8.5515	ug/L	99
105)	123Trichlben	18.34	180	195619	9.7660	ug/L	99

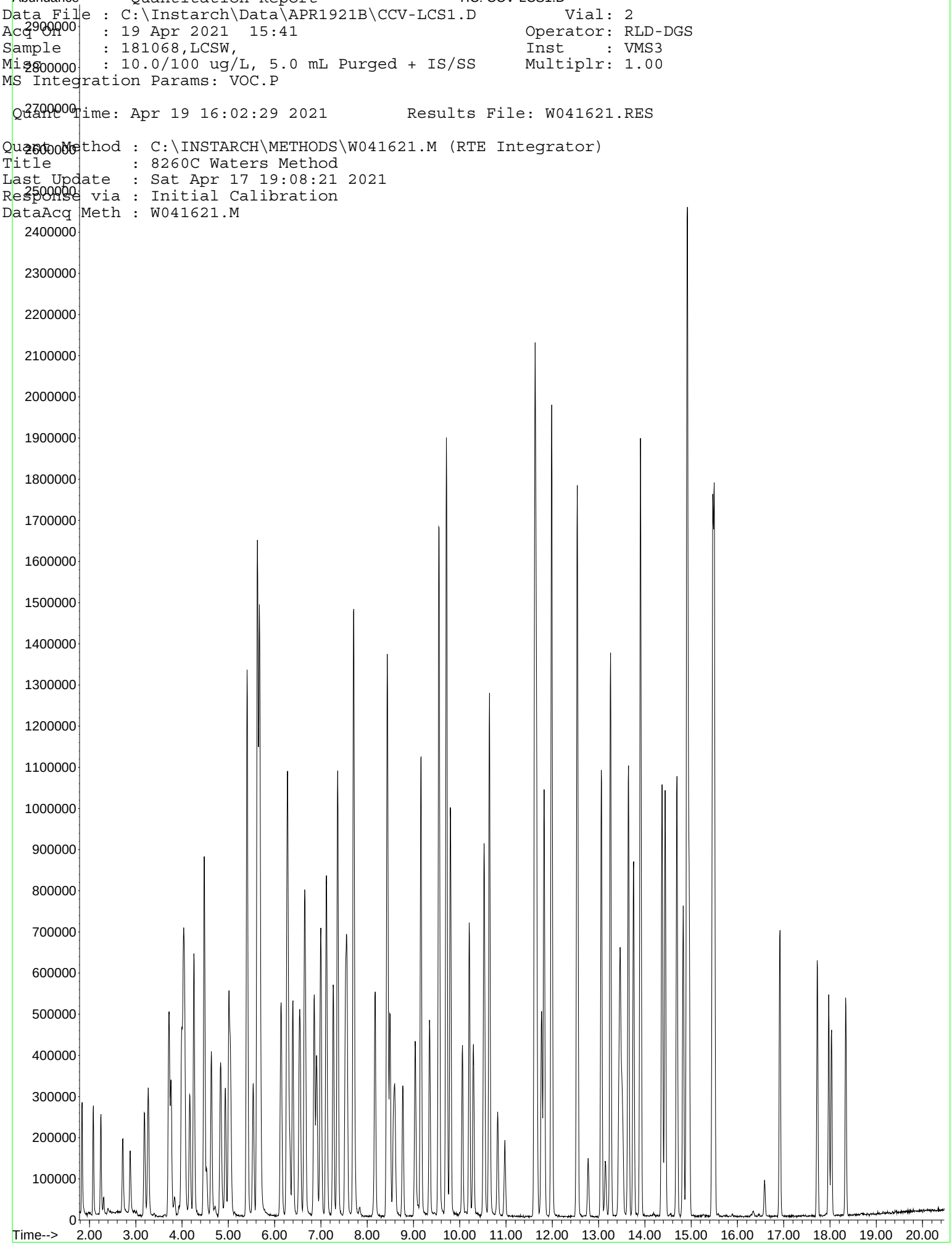
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCV-LCS1.D

Data File : C:\Instarch\Data\APR1921B\CCV-LCS1.D Vial: 2
Acq On : 19 Apr 2021 15:41 Operator: RLD-DGS
Sample : 181068,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 16:02:29 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\MB1.D Vial: 4
Acq On : 19 Apr 2021 17:00 Operator: RLD-DGS
Sample : 181068,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 17:21:15 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1386489	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1077990	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	534073	20.00	ug/L	0.00 NA%

System Monitoring Compounds						
41) SURRDibrflma	6.86	113	364960	20.104	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.27	102	96431	18.934	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 95 %			
61) SURRd8Tolule	9.71	98	1387652	20.297	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	573141	20.273	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %			

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	12736	Below	Cal	92
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	4337	Below	Cal #	73
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.67	42	5842	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\MB1.D Vial: 4
Acq On : 19 Apr 2021 17:00 Operator: RLD-DGS
Sample : 181068,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 17:21:15 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3597	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	13.06	105	2823	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.65	91	3809	N.D.	
89)	2chlorotolue	13.65	91	3587	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	14.68	105	4419	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.91	119	3098	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.51	91	5478	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\MB1.D Vial: 4
Acq On : 19 Apr 2021 17:00 Operator: RLD-DGS
Sample : 181068,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 17:21:15 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

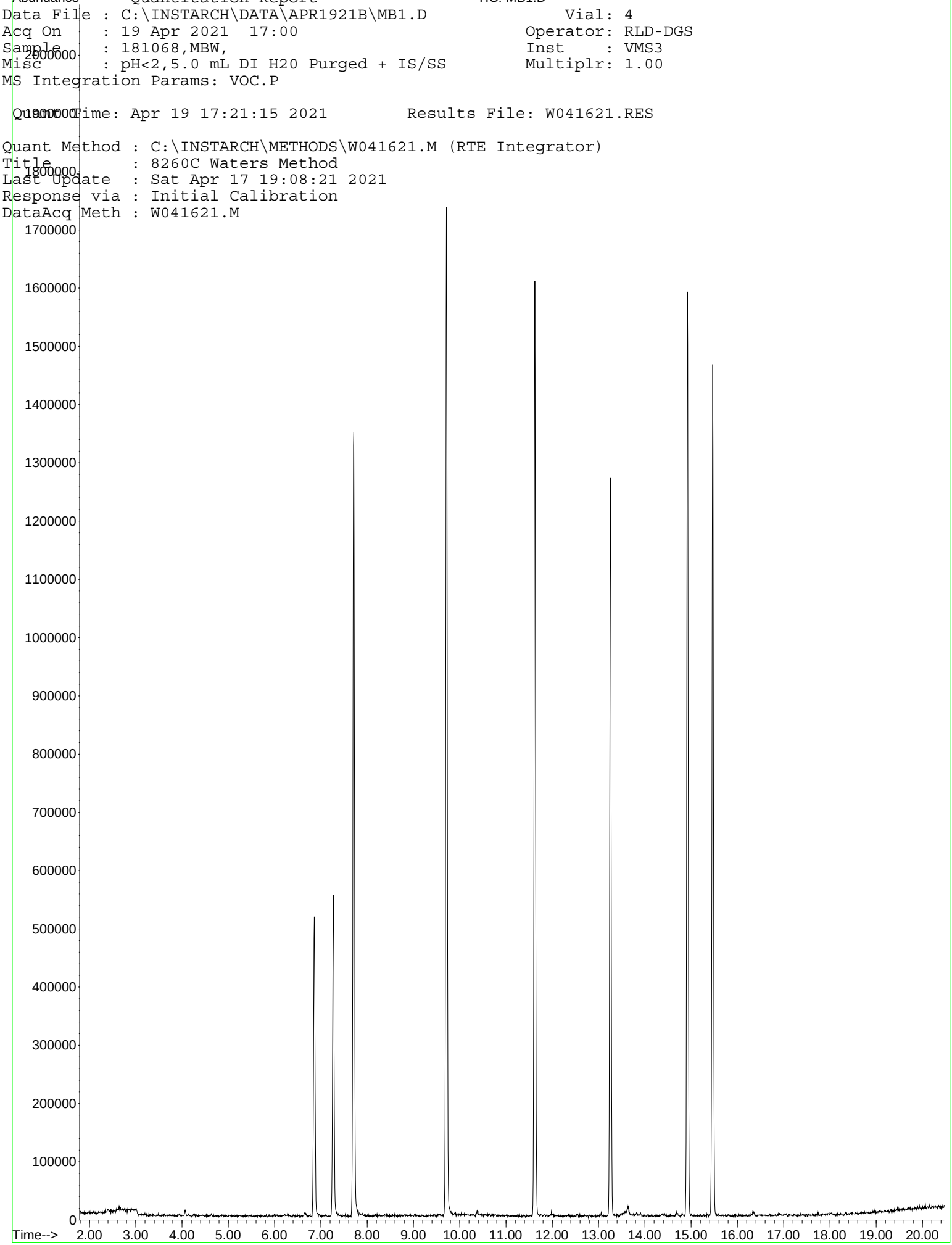
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	18.02	128	2506	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\APR1921B\MB1.D Vial: 4
Acq On : 19 Apr 2021 17:00 Operator: RLD-DGS
Sample : 181068,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 17:21:15 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554737MS.D Vial: 16
Acq On : 19 Apr 2021 22:58 Operator: RLD-DGS
Sample : 181064,MSW554737, Inst : VMS3
Misc : pH<2,10.0/100 ug/L,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 23:19:27 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1438237	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1101870	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	584706	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	373488	19.834	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	101080	19.133	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 96 %			
61) SURRd8Tolule	9.71	98	1445972	20.389	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.26	95	612368	19.785	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	225884	12.2441	ug/L	97
3) Chloromethan	2.08	50	249169	9.9901	ug/L	98
4) VinylChlorid	2.25	62	245578	10.7551	ug/L	96
5) Bromomethane	2.72	94	135955	11.1786	ug/L	99
6) Chloroethane	2.88	64	141673	9.3227	ug/L	100
7) Dichloroflmethane	3.19	67	309255	10.5945	ug/L	99
8) Trichlorofma	3.27	101	288384	10.5556	ug/L	99
9) Ethylether	3.71	59	132197	8.1355	ug/L	93
10) dichlorotfluoroethan	3.73	67	223661	11.2794	ug/L	99
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.84	56	128336	140.5036	ug/L	99
13) 11dichlorthe	3.99	96	179093	10.3702	ug/L	99
14) Trichlorotfluoroeth	4.04	101	335021	20.3585	ug/L	98
15) Acetone	4.06	43	354335	66.3449	ug/L	98
16) Iodomethane	4.17	142	306813	17.8514	ug/L	100
17) Carbon Dislf	4.26	76	932856	20.3519	ug/L	99
18) allylchloride	4.48	41	626693	19.0064	ug/L	97
19) methylacetate	4.53	74	29896	6.9475	ug/L	97
20) Methylchlorid	4.64	84	202846	9.3645	ug/L	99
21) tbutylalcohol	4.84	59	591164	343.8827	ug/L	97
22) Acrylonitrile	4.94	53	261670	39.0675	ug/L	98
23) t12dichlorte	5.02	96	198120	10.2215	ug/L	98
24) MtBE	5.05	73	404881	8.8384	ug/L	98
25) Hexane	5.41	57	557796	20.7286	ug/L	99
26) 11dichlorota	5.54	63	349325	9.8206	ug/L	98
27) Vinylacetate	5.63	43	2674703	92.4123	ug/L	98
28) chloroprene	5.67	53	653886	20.7582	ug/L	99
29) Diisopether	5.69	45	627750	9.5400	ug/L	99
30) ETBE	6.14	59	487101	9.2678	ug/L	99
31) 22dichloropr	6.27	77	246041	8.9898	ug/L	99
32) c12dichlorte	6.27	96	209224	9.9849	ug/L	99
33) 2Butanone	6.29	72	156016	77.8753	ug/L	99
34) propionitrile	6.33	54	213775	79.3499	ug/L	98
35) Ethylacetate	6.40	88	27999	37.5845	ug/L #	90
36) methacrylonitrile	6.54	67	129975	17.3471	ug/L	93
37) Bromochlorma	6.55	128	86487	9.4904	ug/L	98
38) Tetrahydofur	6.65	42	443971	78.5529	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554737MS.D Vial: 16
Acq On : 19 Apr 2021 22:58 Operator: RLD-DGS
Sample : 181064,MSW554737, Inst : VMS3
Misc : pH<2,10.0/100 ug/L,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 23:19:27 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	344103	10.4656	ug/L	98
40)	111trichlota	6.91	97	294060	10.6297	ug/L	98
42)	Cyclohexane	7.00	56	353383	10.6739	ug/L	99
43)	Carbtetraclo	7.13	119	307040	13.7362	ug/L	99
44)	11dicloprope	7.12	110	99216	10.2219	ug/L	98
46)	Benzene	7.36	78	772642	10.4808	ug/L	98
47)	12dichlorota	7.36	62	244245	9.1389	ug/L	99
48)	TAME	7.53	73	414202	8.9526	ug/L	85
49)	trichloroete	8.17	95	204701	10.3365	ug/L	99
50)	methylcyclohexane	8.44	83	357997	10.3073	ug/L	100
51)	12dicloropra	8.43	63	220928	9.7826	ug/L	99
52)	23Dicl1propene	8.50	75	299992	9.8900	ug/L	98
53)	Dibromometha	8.57	93	102443	8.8859	ug/L	94
54)	methylmethacrylate	8.60	69	101398	7.9208	ug/L	97
55)	14dioxane	8.62	88	82057	386.8822	ug/L	97
56)	Bromodiclrma	8.78	83	235524	9.4419	ug/L	97
57)	2Nitropropane	9.04	43	279592	62.6656	ug/L	97
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.35	75	288446	9.4460	ug/L	100
60)	4Meth2Pentan	9.55	43	1297299	81.5104	ug/L	100
62)	Toluene	9.80	92	506825	10.6645	ug/L	97
63)	t13Dicloprop	10.06	75	240231	9.3662	ug/L	97
64)	ethylmethacrylate	10.20	69	398097	18.0497	ug/L	99
65)	112Triclotha	10.30	83	136191	9.5802	ug/L	97
66)	Tetrachlorte	10.53	166	199720	10.8822	ug/L	98
67)	13Diclorpropa	10.52	76	285220	9.5433	ug/L	99
69)	2Hexanone	10.64	43	938787	74.2417	ug/L	99
70)	Clorodibrmta	10.82	129	158240	9.3780	ug/L	99
71)	12Dibrometha	10.98	107	150943	9.0103	ug/L	96
72)	Chlorobenzen	11.66	112	551507	10.3132	ug/L	99
73)	1Clhexane	11.65	91	269585	9.9087	ug/L	98
74)	1112Tetclota	11.77	131	168232	9.7360	ug/L	100
75)	Ethylbenzene	11.82	91	887428	10.8493	ug/L	98
76)	m p-Xylene	11.99	106	708505	21.7657	ug/L	96
77)	o-Xylene	12.53	106	339114	10.3812	ug/L	96
78)	Styrene	12.55	104	558615	10.5061	ug/L	98
79)	Bromoform	12.78	173	84245	8.7705	ug/L	98
80)	Isopropylben	13.06	105	828540	10.9296	ug/L	99
81)	cyclohexanone	13.15	55	95237	136.9373	ug/L	100
84)	Bromobenzene	13.47	156	199103	9.8153	ug/L	97
85)	1122Tetrclta	13.44	83	191655	8.3338	ug/L	97
86)	123Triclproa	13.50	75	234240	8.4131	ug/L	99
87)	14dichloro2butene	13.52	53	52168	7.9273	ug/L	98
88)	n-Propylbenz	13.65	91	988631	10.0654	ug/L	99
89)	2chlorotolue	13.76	91	614037	10.2552	ug/L	100
90)	4chlorotolue	13.91	91	709428	10.4239	ug/L	99
91)	135Trimebenz	13.90	105	707668	10.5603	ug/L	100
92)	tbutylbenzen	14.37	119	598191	10.5561	ug/L	99
93)	124Trimetben	14.44	105	687333	10.3885	ug/L	98
94)	sbutylbenzen	14.69	105	866163	10.7786	ug/L	100
95)	13Diclorbenz	14.83	146	373492	10.0200	ug/L	100
96)	pIsopropylto	14.91	119	726285	10.5504	ug/L	99
97)	14dichlorobe	14.96	146	383120	9.9096	ug/L	98
98)	12dichlorobe	15.50	146	345268	9.5196	ug/L	99
99)	nButylbenzen	15.50	91	666331	10.0844	ug/L	100
100)	12dibromo3cl	16.59	157	28113	7.6940	ug/L	98
101)	135Trichlorobenzene	16.92	180	243602	9.5679	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554737MS.D Vial: 16
Acq On : 19 Apr 2021 22:58 Operator: RLD-DGS
Sample : 181064,MSW554737, Inst : VMS3
Misc : pH<2,10.0/100 ug/L,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 23:19:27 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

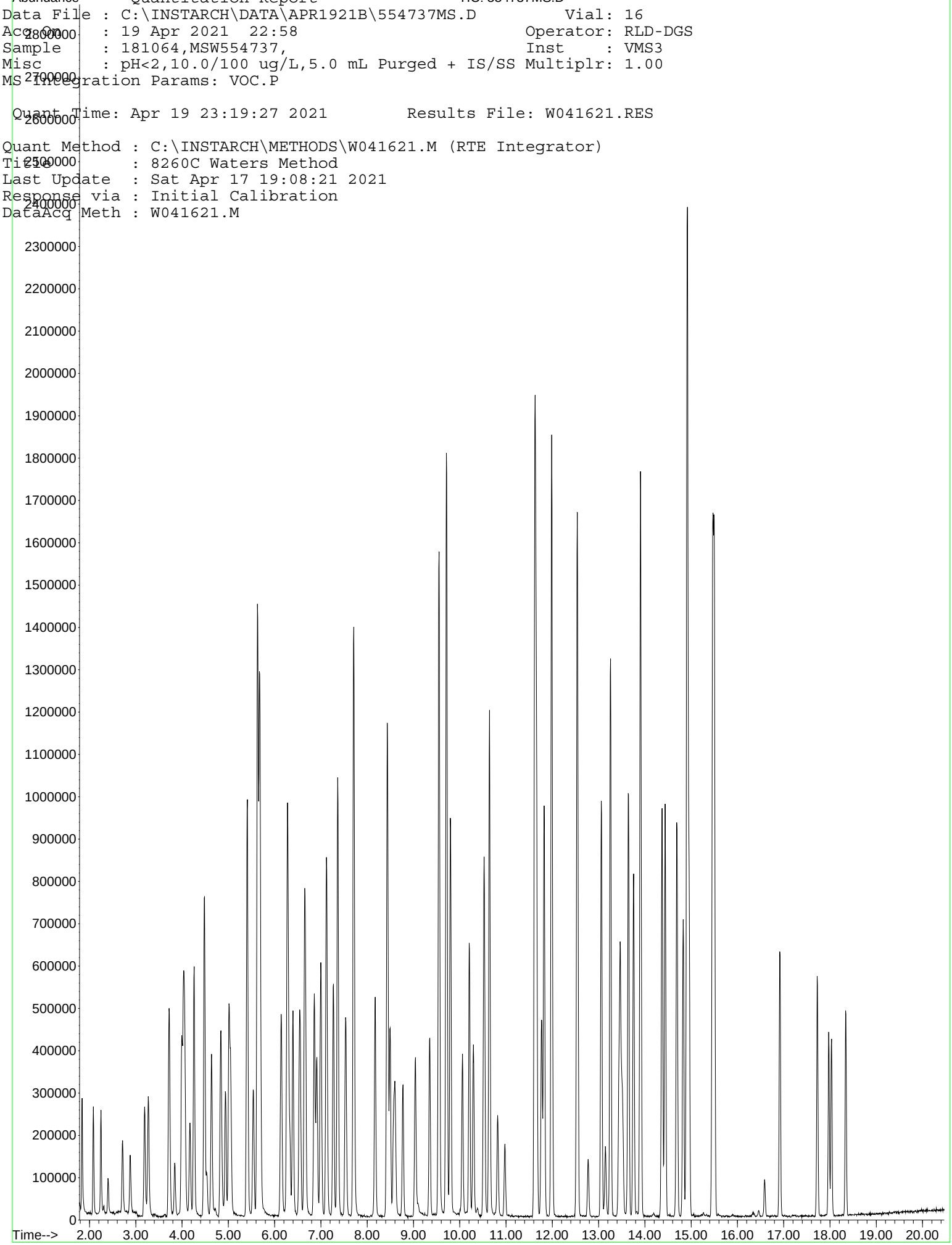
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	17.72	180	204987	9.5347 ug/L	99
103) Hexachlorobu	17.97	225	96102	9.6907 ug/L	98
104) Naphthalene	18.03	128	380492	8.0712 ug/L	99
105) 123Trichlben	18.34	180	172222	8.7551 ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\APR1921B\554737MS.D Vial: 16
Acq On : 19 Apr 2021 22:58 Operator: RLD-DGS
Sample : 181064,MSW554737, Inst : VMS3
Misc : pH<2,10.0/100 ug/L,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 23:19:27 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M



Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554737SD.D Vial: 17
Acq On : 19 Apr 2021 23:28 Operator: RLD-DGS
Sample : 181064,MSDW554737, Inst : VMS3
Misc : pH<2,10.0/100 ug/L,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 23:49:00 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1423767	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1108235	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	567147	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	371807	19.945	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	101076	19.327	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97	%		
61) SURRd8Tolule	9.71	98	1458013	20.768	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 104	%		
83) SURR4BrFBenz	13.26	95	610499	20.335	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	240753	13.1827	ug/L	97
3) Chloromethan	2.08	50	265908	10.7696	ug/L	99
4) VinylChlorid	2.25	62	265708	11.7549	ug/L	96
5) Bromomethane	2.72	94	138102	11.4705	ug/L	99
6) Chloroethane	2.88	64	152304	10.1241	ug/L	99
7) Dichloroflmethane	3.19	67	330941	11.4526	ug/L	98
8) Trichlorofma	3.27	101	314155	11.6157	ug/L	98
9) Ethylether	3.71	59	143464	8.9186	ug/L	94
10) dichlorotfluoroethan	3.72	67	240657	12.2598	ug/L	100
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.84	56	137346	151.8960	ug/L	97
13) 11dichlorthe	3.99	96	197318	11.5416	ug/L	99
14) Trichlorotfluoroeth	4.04	101	349592	21.4599	ug/L	95
15) Acetone	4.06	43	373046	70.8682	ug/L	96
16) Iodomethane	4.17	142	354784	20.8523	ug/L	100
17) Carbon Dislf	4.26	76	987617	21.8965	ug/L	100
18) allylchloride	4.48	41	659656	20.2094	ug/L	99
19) methylacetate	4.53	74	30818	7.2345	ug/L	99
20) Methylchlorid	4.64	84	219309	10.2274	ug/L	99
21) tbutylalcohol	4.83	59	683881	401.8597	ug/L	97
22) Acrylonitrile	4.94	53	283324	42.7304	ug/L	98
23) t12dichlorte	5.02	96	212308	11.0648	ug/L	99
24) MtBE	5.05	73	430235	9.4873	ug/L	99
25) Hexane	5.41	57	596911	22.4076	ug/L	99
26) 11dichlorota	5.54	63	377994	10.7346	ug/L	100
27) Vinylacetate	5.63	43	2818434	99.6815	ug/L	99
28) chloroprene	5.67	53	704848	22.6034	ug/L	99
29) Diisopether	5.69	45	662876	10.1762	ug/L	96
30) ETBE	6.14	59	516830	9.9334	ug/L	98
31) 22dichloropr	6.27	77	263962	9.7427	ug/L	99
32) c12dichlorte	6.27	96	225777	10.8844	ug/L	98
33) 2Butanone	6.29	72	166055	83.7286	ug/L	100
34) propionitrile	6.33	54	228571	85.7042	ug/L	97
35) Ethylacetate	6.40	88	29839	40.4615	ug/L #	91
36) methacrylonitrile	6.54	67	136341	18.3817	ug/L	97
37) Bromochlorma	6.56	128	91177	10.1067	ug/L	96
38) Tetrahydofur	6.65	42	479635	85.7255	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554737SD.D Vial: 17
Acq On : 19 Apr 2021 23:28 Operator: RLD-DGS
Sample : 181064,MSDW554737, Inst : VMS3
Misc : pH<2,10.0/100 ug/L,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 23:49:00 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	362007	11.1220	ug/L	98
40)	111trichlota	6.91	97	314245	11.4748	ug/L	98
42)	Cyclohexane	7.00	56	383398	11.6982	ug/L	100
43)	Carbtetraclo	7.13	119	324369	14.6590	ug/L	100
44)	11dicloprope	7.11	110	107993	11.2392	ug/L	99
46)	Benzene	7.36	78	824743	11.3012	ug/L	99
47)	12dichlorota	7.36	62	262474	9.9208	ug/L	97
48)	TAME	7.53	73	447183	9.7636	ug/L	84
49)	trichloroete	8.17	95	222030	11.3255	ug/L	98
50)	methylcyclohexane	8.44	83	385304	11.2063	ug/L	99
51)	12dicloropra	8.43	63	235351	10.5271	ug/L	98
52)	23Dicl1propene	8.50	75	311937	10.3883	ug/L	96
53)	Dibromometha	8.57	93	110546	9.6862	ug/L	96
54)	methylmethacrylate	8.60	69	112398	8.8693	ug/L	99
55)	14dioxane	8.61	88	90447	430.7733	ug/L	98
56)	Bromodiclrma	8.78	83	251654	10.1910	ug/L	98
57)	2Nitropropane	9.04	43	300786	68.1011	ug/L	96
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.35	75	308495	10.2052	ug/L	99
60)	4Meth2Pentan	9.55	43	1390724	89.2240	ug/L	99
62)	Toluene	9.80	92	532281	11.3140	ug/L	99
63)	t13Dicloprop	10.06	75	255588	10.0662	ug/L	99
64)	ethylmethacrylate	10.20	69	423288	19.3869	ug/L	99
65)	112Triclotha	10.30	83	140917	10.0134	ug/L	98
66)	Tetrachlorte	10.53	166	210998	11.6135	ug/L	99
67)	13Diclorpropa	10.51	76	304350	10.2869	ug/L	99
69)	2Hexanone	10.64	43	1031218	81.9010	ug/L	99
70)	Clorodibrmta	10.82	129	166926	9.8360	ug/L	98
71)	12Dibrometha	10.97	107	158922	9.4321	ug/L	96
72)	Chlorobenzen	11.66	112	589310	10.9568	ug/L	99
73)	1Clhexane	11.65	91	287260	10.4977	ug/L	100
74)	1112Tetclota	11.77	131	176663	10.1652	ug/L	99
75)	Ethylbenzene	11.82	91	941926	11.4494	ug/L	100
76)	m p-Xylene	11.99	106	750790	22.9323	ug/L	95
77)	o-Xylene	12.53	106	363641	11.0681	ug/L	96
78)	Styrene	12.55	104	587418	10.9844	ug/L	99
79)	Bromoform	12.78	173	90267	9.3435	ug/L	99
80)	Isopropylben	13.06	105	892258	11.7025	ug/L	99
81)	cyclohexanone	13.15	55	105183	150.3697	ug/L	94
84)	Bromobenzene	13.47	156	208422	10.5928	ug/L	96
85)	1122Tetrclta	13.44	83	202176	9.0634	ug/L	96
86)	123Triclproa	13.50	75	246223	9.1173	ug/L	99
87)	14dichloro2butene	13.53	53	56033	8.7783	ug/L	97
88)	n-Propylbenz	13.64	91	1045574	10.9747	ug/L	99
89)	2chlorotolue	13.76	91	652136	11.2287	ug/L	99
90)	4chlorotolue	13.91	91	740165	11.2122	ug/L	99
91)	135Trimebenz	13.90	105	745623	11.4712	ug/L	99
92)	tbutylbenzen	14.37	119	641940	11.6789	ug/L	99
93)	124Trimetben	14.44	105	728023	11.3441	ug/L	98
94)	sbutylbenzen	14.69	105	923430	11.8470	ug/L	100
95)	13Diclorbenz	14.83	146	385906	10.6735	ug/L	98
96)	pIsopropylto	14.91	119	770803	11.5438	ug/L	100
97)	14dichlorobe	14.96	146	400812	10.6882	ug/L	99
98)	12dichlorobe	15.49	146	365464	10.3884	ug/L	99
99)	nButylbenzen	15.50	91	709145	11.0647	ug/L	99
100)	12dibromo3cl	16.59	157	30942	8.7305	ug/L	99
101)	135Trichlorobenzene	16.91	180	255491	10.3456	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\APR1921B\554737SD.D Vial: 17
Acq On : 19 Apr 2021 23:28 Operator: RLD-DGS
Sample : 181064,MSDW554737, Inst : VMS3
Misc : pH<2,10.0/100 ug/L,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 23:49:00 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
DataAcq Meth : W041621.M

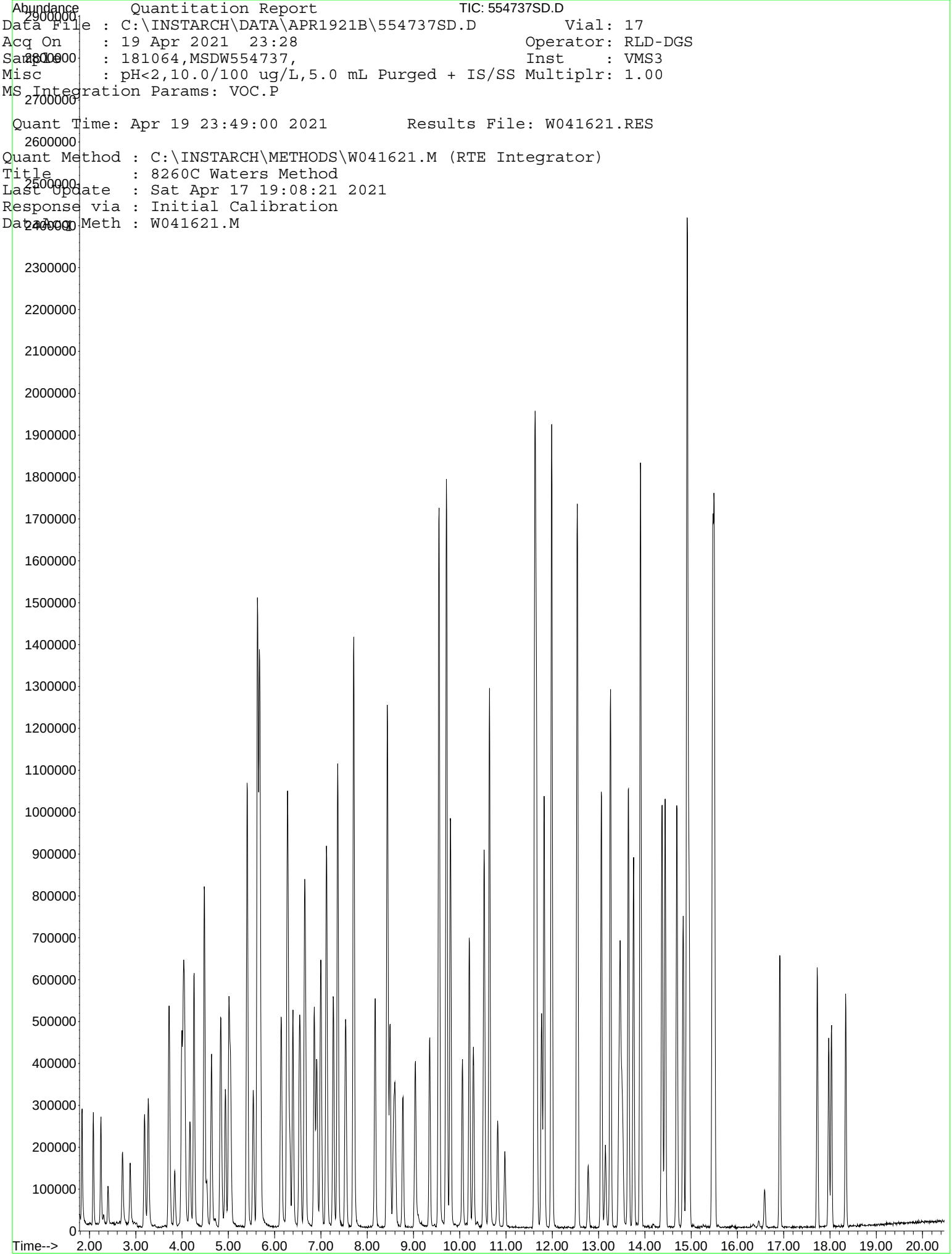
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	220762	10.5864	ug/L	99
103) Hexachlorobu	17.97	225	100677	10.4663	ug/L	98
104) Naphthalene	18.03	128	430404	9.4126	ug/L	100
105) 123Trichlben	18.34	180	194506	10.1941	ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\APR1921B\554737SD.D Vial: 17
Acq On : 19 Apr 2021 23:28 Operator: RLD-DGS
Sample : 181064,MSDW554737, Inst : VMS3
Misc : pH<2,10.0/100 ug/L,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Apr 19 23:49:00 2021 Results File: W041621.RES

Quant Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Apr 17 19:08:21 2021
Response via : Initial Calibration
Data Acq Meth : W041621.M

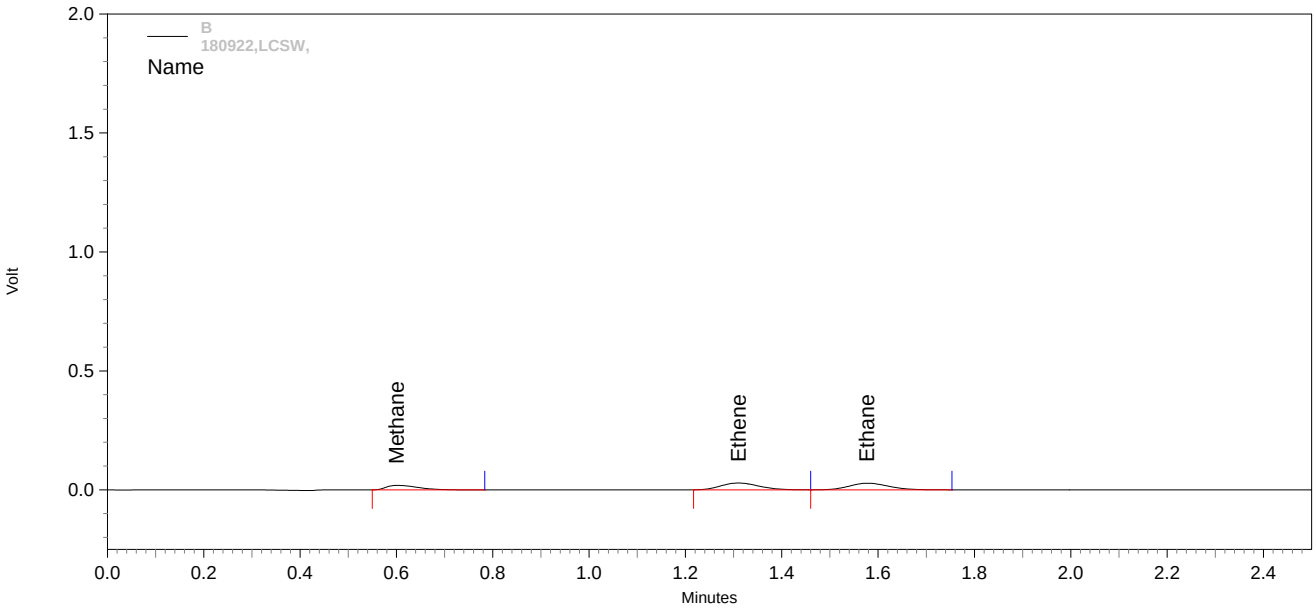


Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\003.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,LCSW,
Acquired: Apr 15, 2021 09:20:49
File Desc. Laboratory Control Sample - 25 ppmV -

500 uL of the 200 ppmV MEE Std. into 4 mL of headspace. 1.0 mL injection (Methane, Ethene, Ethane,)



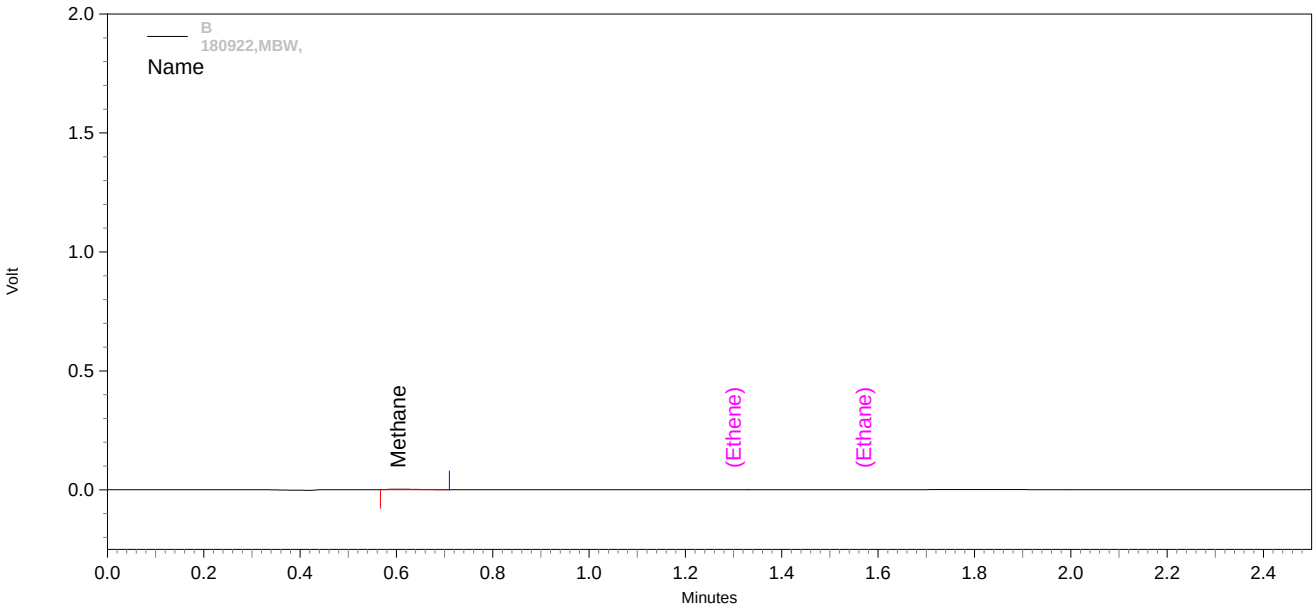
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.600**	**0.590**	**84563**	**21.927**	**ppmV**
2	**Ethene**	**1.310**	**1.300**	**156271**	**21.745**	**ppmV**
3	**Ethane**	**1.577**	**1.570**	**155424**	**22.118**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\004.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,MBW,
Acquired: Apr 15, 2021 09:58:36
File Desc. Method Blank
1.0 mL injection (Methane, Ethene, Ethane)



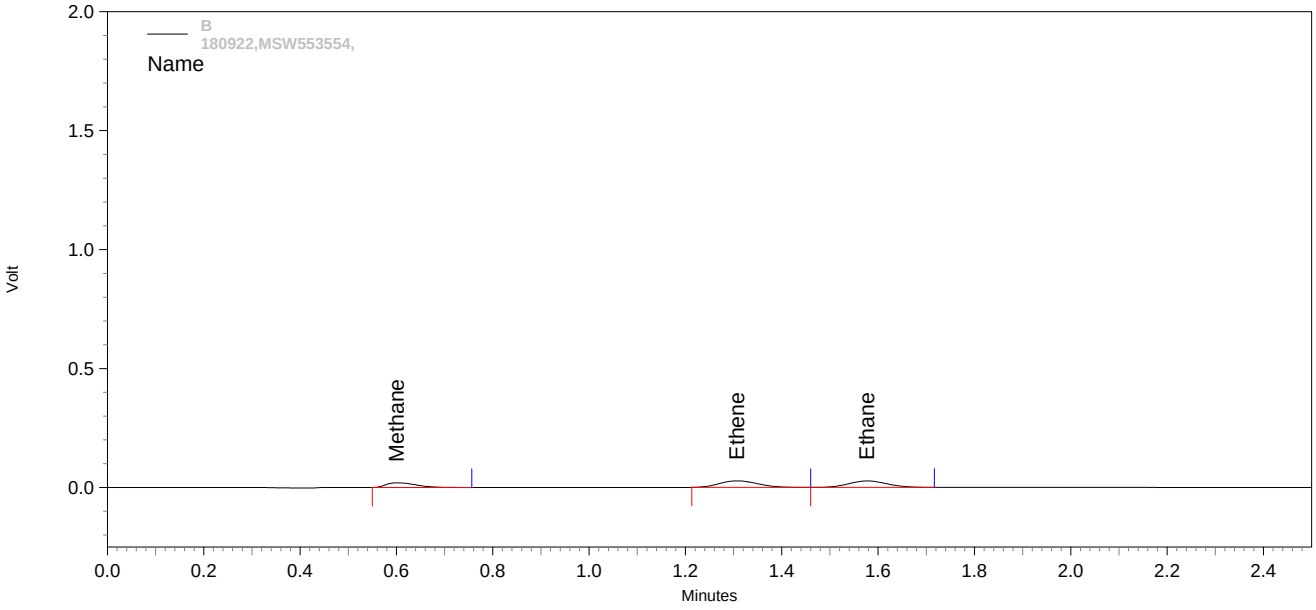
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.603**	**0.590**	**7124**	**0.000**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.570**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\019.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,MSW553554,
Acquired: Apr 15, 2021 12:31:48
File Desc. MATRIX SPIKE 1mL injection (Methane, Ethene, Ethane)



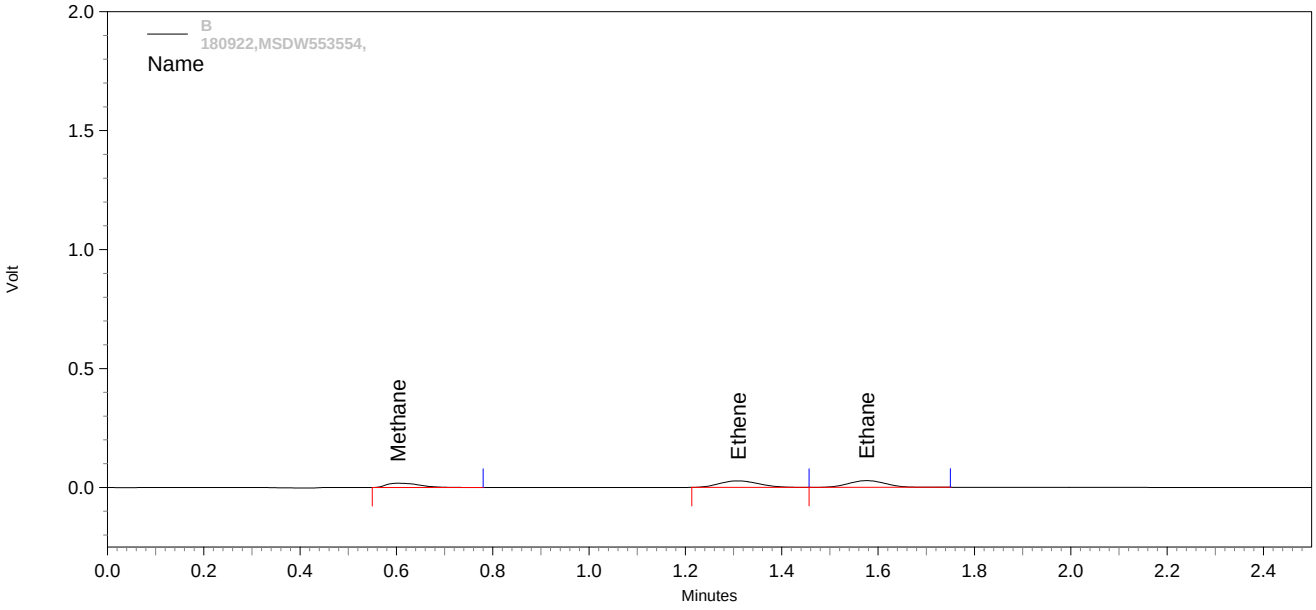
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.600**	**0.590**	**82722**	**21.390**	**ppmV**
2	**Ethene**	**1.307**	**1.300**	**152079**	**21.105**	**ppmV**
3	**Ethane**	**1.577**	**1.570**	**148673**	**21.078**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\041521 -\020.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 180922,MSDW553554,
Acquired: Apr 15, 2021 12:36:00
File Desc. MATRIX SPIKE DUPLICATE 1mL injection (Methane, Ethene, Ethane)



B Results

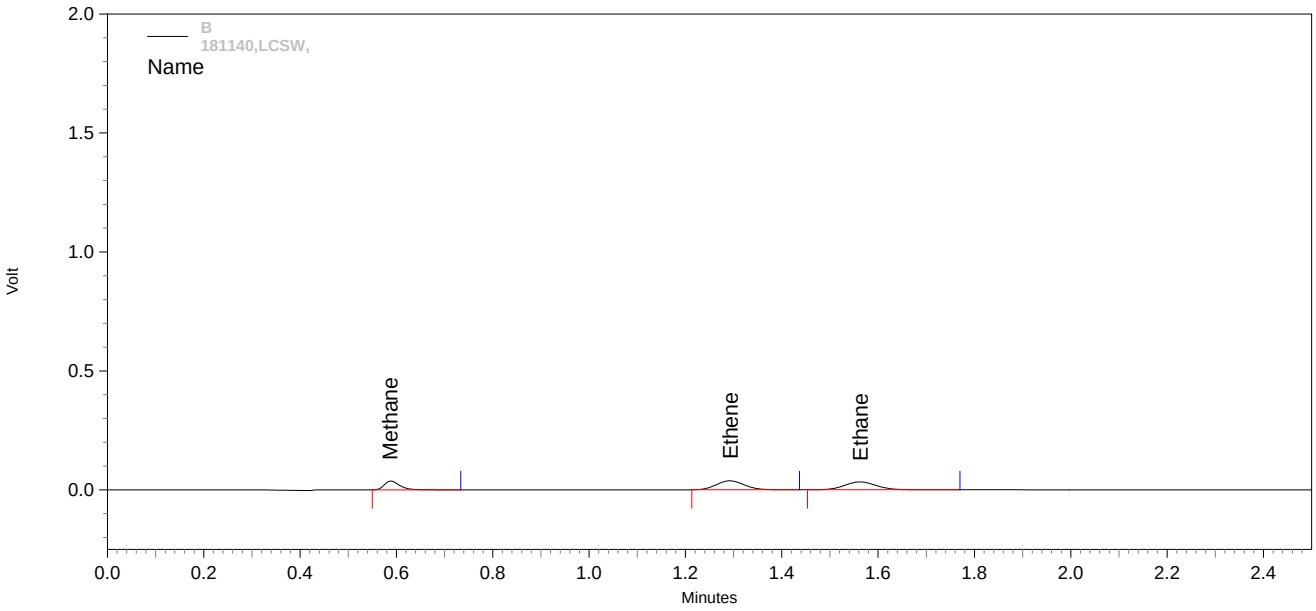
Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.603**	**0.590**	**84052**	**21.778**	**ppmV**
2	**Ethene**	**1.310**	**1.300**	**153810**	**21.369**	**ppmV**
3	**Ethane**	**1.577**	**1.570**	**151125**	**21.456**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\042221 -\003.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 181140,LCSW,
Acquired: Apr 22, 2021 10:24:47
File Desc. Laboratory Control Sample - 25 ppmV -

500 uL of the 200 ppmV MEE Std. into 4 mL of headspace. 1.0 mL injection (Methane, Ethene, Ethane,)



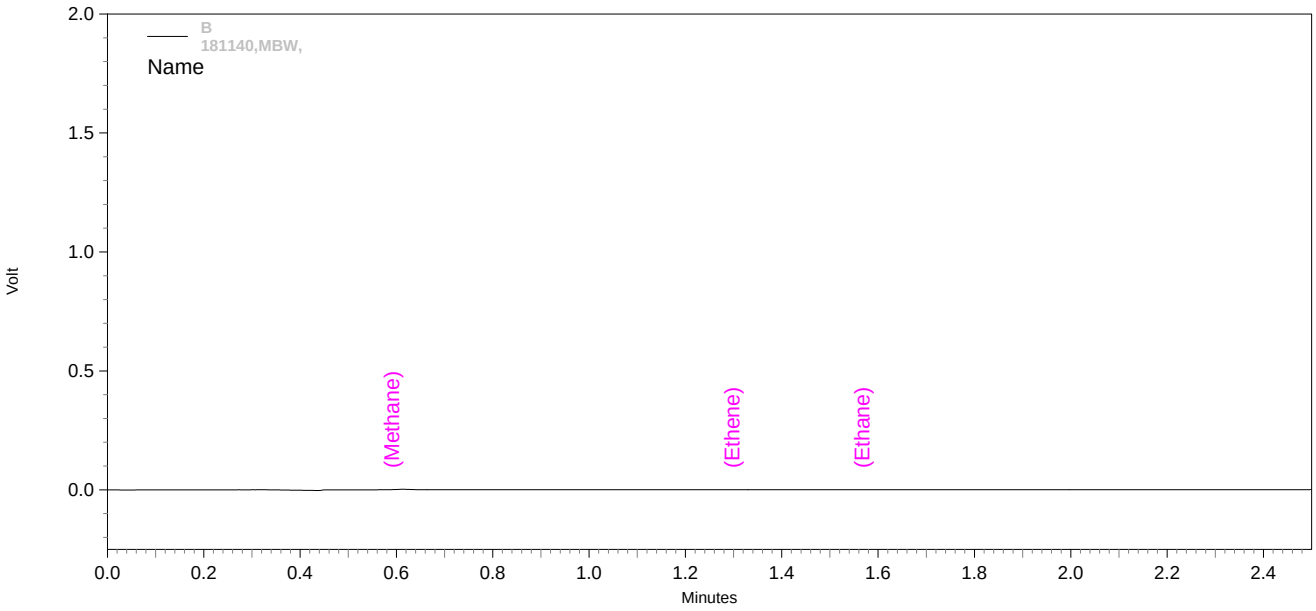
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.587**	**0.590**	**81895**	**21.149**	**ppmV**
2	**Ethene**	**1.293**	**1.297**	**151835**	**21.068**	**ppmV**
3	**Ethane**	**1.563**	**1.567**	**151326**	**21.487**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\042221 -\004.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 181140,MBW,
Acquired: Apr 22, 2021 10:44:09
File Desc. Method Blank
1.0 mL injection (Methane, Ethene, Ethane)



B Results

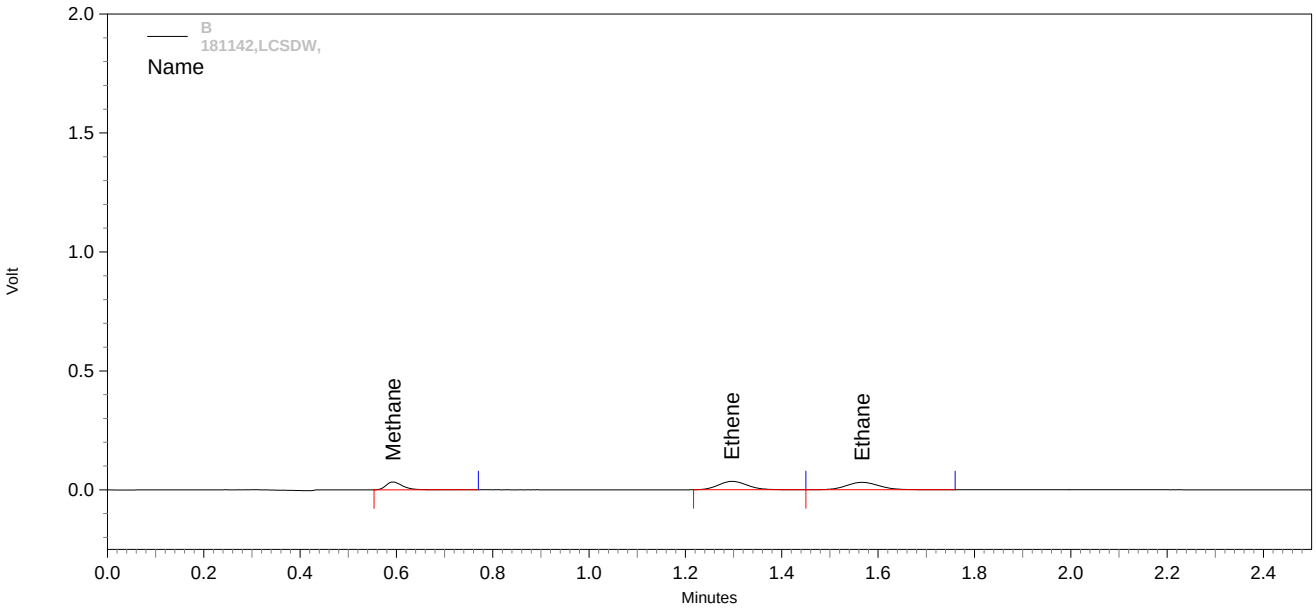
Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.590**		**0.000 BDL**	**ppmV**
	Ethene		**1.297**		**0.000 BDL**	**ppmV**
	Ethane		**1.567**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\042221 -\027.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG121720.met
Sample ID: 181142,LCSDW,
Acquired: Apr 22, 2021 13:19:40
File Desc. Laboratory Control Sample DUPLICATE- 25 ppmV -

500 uL of the 200 ppmV MEE Std. into 4 mL of headspace. 1.0 mL injection (Methane, Ethene, Ethane,)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.593**	**0.590**	**78470**	**20.150**	**ppmV**
2	**Ethene**	**1.297**	**1.297**	**146875**	**20.311**	**ppmV**
3	**Ethane**	**1.567**	**1.567**	**145706**	**20.621**	**ppmV**

VOLATILE ORGANIC ANALYSIS
LOGBOOK
DOCUMENTS

VOC 8260 QSM WATER 5.0 Analytical Run
180903 on 4/21/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	554753							VOC 8260 QSM WATER 5.0				
					BFB				0			
	554639							VOC 8260 QSM WATER 5.0				
					LCSW				0			
	554696							VOC 8260 QSM WATER 5.0				
					CCV				0			
	554697							VOC 8260 QSM WATER 5.0				
					MBW				0			
161060	553153		4/13/2021	1400		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	4	
		TB-1										
161088	553555		4/14/2021	1300		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	4	
		TB-2										
161060	553148		4/13/2021	1030		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		EQB-50MW02										
161060	553142		4/13/2021	1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		50MW02										
161060	553149		4/13/2021	1130		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		48MW2										
161060	553152		4/13/2021	1355		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		49MW02										
161088	553550		4/14/2021	0915		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		13MW4										
161088	553551		4/14/2021	0955		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		13MW3										
161088	553552		4/14/2021	0955		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		13TW3										
161088	553553		4/14/2021	1055		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		49MW04										
161088	553554		4/14/2021	1150		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		13MW2			Designated MS/MSD							
161060	553150		4/13/2021	1235		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		48MW3										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: Volatiles C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp8377.tmp Page 1 of 1

VOC 8260 QSM WATER 5.0 Analytical Run
180903 on 4/21/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
161060	553151		4/13/2021	1235			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		48TW3											
	554700		4/14/2021	1150					VOC 8260 QSM 5.0				
		13MW2			MSW	553554				0			
	554701		4/14/2021	1150					VOC 8260 QSM 5.0				
		13MW2			MSDW	554700				0			
	554702								VOC 8260 QSM WATER 5.0				
					CCVF					0			

20 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp8377.tmp

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\APR1721\BFB1.D
Injection Date : 17 Apr 2021 Log Time Period (hrs) : ALL
Injection Time : 17:29 Total files within period : 20
Sample Directory : C:\INSTARCH\DATA\APR1721\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
IB1	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged + IS	17 Apr 2021	17:44
CCV-LCS1	1.00	1.00	1.00	180903,LCSW, 10.0/100 ug/L, 5.0 mL Pur	17 Apr 2021	18:15
IB2	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged + IS	17 Apr 2021	18:44
MB1	1.00	1.00	1.00	180903,MBW, pH<2,5.0 mL DI H20 Purged	17 Apr 2021	19:14
553153	1.00	1.00	1.00	180903,553153, pH<2,5.0 mL Purged + IS/S	17 Apr 2021	19:45
553155	1.00	1.00	1.00	180903,553555, pH<2,5.0 mL Purged + IS/S	17 Apr 2021	20:15
553148	1.00	1.00	1.00	180903,553148, pH<2,5.0 mL Purged + IS/S	17 Apr 2021	20:45
553142	1.00	1.00	1.00	180903,553142, pH<2,5.0 mL Purged + IS/S	17 Apr 2021	21:15
553149	1.00	1.00	1.00	180903,553149, pH<2,5.0 mL Purged + IS/S	17 Apr 2021	21:45
553152	1.00	1.00	1.00	180903,553152, pH<2,5.0 mL Purged + IS/S	17 Apr 2021	22:15
553550	1.00	1.00	1.00	180903,553550, pH<2,5.0 mL Purged + IS/S	17 Apr 2021	22:45
553551	1.00	1.00	1.00	180903,553551, pH<2,5.0 mL Purged + IS/S	17 Apr 2021	23:15
553552	1.00	1.00	1.00	180903,553552, pH<2,5.0 mL Purged + IS/S	17 Apr 2021	23:45
553553	1.00	1.00	1.00	180903,553553, pH<2,5.0 mL Purged + IS/S	18 Apr 2021	00:15
553554	1.00	1.00	1.00	180903,553554, pH<2,5.0 mL Purged + IS/S	18 Apr 2021	00:45
553150	1.00	1.00	1.00	180903,553150,5 pH<2,5.0 mL Purged + IS/S	18 Apr 2021	01:15
553151	1.00	1.00	1.00	180903,553151,5 pH<2,5.0 mL Purged + IS/S	18 Apr 2021	01:45
553554MS	1.00	1.00	1.00	180903,MSW553554, pH<2,5.0 mL Purged + IS/S	18 Apr 2021	02:15
553554SD	1.00	1.00	1.00	180903,MSDW553554, pH<2,5.0 mL Purged + IS/S	18 Apr 2021	02:45
CCVF1	1.00	1.00	1.00	180903,CCVF, 10.0/100 ug/L, 5.0 mL Pur	18 Apr 2021	03:15

8260 ISTD/SSTD 20ug/ml VOC0826
8260 BFB STD. 50ug/ml VOC0825
8260 ICV STD. 100ug/ml VOC0829
8260 CCV/CALIB. 100ug/ml VOC0830

FVO4-01 Data Review Checklist

INDEPENDENT DATA REVIEW CHECKLIST			Method: GCMS (EPA SW-846 8260C)					
Analysis Date	**LIMS Run #(s):**	**Analyst/Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved?**			**Instrument**
					Yes	No		
04/17/2021	180903	DGS	RLD	04/21/2021	Yes			VMS3

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	
I. BFB Tune Check						
Was a BFB tune check analyzed with acceptable results?	Relative abundance criteria met?	Yes		Yes		
II. Initial Calibration Verification (ICV)						
Was initial calibration performed using a minimum of five standard concentration levels (minimum of 6 levels for quadratic curves)?	Lowest standard at or below RL?	Yes		Yes		
Were the Average Relative Response Factors (ARRF) acceptable?	ARRF<or= specified limits (<15%D.)see SOP)	Yes		Yes		
Was a second-source ICV(s) analyzed (for Quadratic Curve)?	Required before sample analyses.	Yes		Yes		
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		
Was Initial Calibration Blank (ICB) analyzed?	Required before sample analyses.	Yes		Yes		
Were the ICB results for all target analytes less than the limit of detection (LOD).	<LOD or < project/program specific limits		No		No	
III. Continuing Calibration Verification (CCV)						
Was an acceptable BFB tune check run at the beginning of every twelve hour shift?	Relative abundance criteria met?	Yes		Yes		
Was a CCV analyzed after every 12 hour tune check?	Required before sample analyses.	Yes		Yes		
Was a second CCV (CCV2) for compounds calibrated using quadratic curves analyzed after every 12 hour tune check?	Required before analyses of WI samples (above the inflection point of the curve).					
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		
If necessary, were the results for outlying compounds qualified?						

IV. Blanks						
Was a Method Blank (MB) analyzed prior to analysis of samples?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MB results for all target analytes less than the limit of detection (LOD)?	*All target analytes <LOD or < project/program specific limits (<1/2 RL for DoD-QSM)	Yes		Yes		
If analytes were detected in the MB with no associated positives in the samples, no further action is needed. If the analyte detects in the MB were greater than the acceptance criteria and there were detects in the samples, was the data qualified.?		Yes		Yes		
V. Laboratory Control Spike (LCS)						
Was a LCS (and LCSD if needed) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the LCS (LCSD) recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.	Yes		Yes		
If applicable, were associated sample detects (and non-detects for low recoveries) qualified?						
Is the relative percent difference (RPD) for each analyte between the LCS and LSCD (if applicable) acceptable?	Default 20%, or see internally generated limits, or client specific limits.					
VI. Matrix Spike/Matrix Spike Duplicate (MS/MSD)						
Was a Martrix Spike (MS) and a Matrix Spike Duplicate (MSD) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MS/MSD recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.	Yes		Yes		
Is the relative percent difference (RPD) for each analyte between the MS and MSD acceptable?	Default 20%, or see internally generated limits, or client specific limits.	Yes		Yes		
VII. Sample Analyses						
Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
Were surrogate recoveries for all samples and QC within acceptance criteria?	Default 70-130%, or see internally generated program limits, or client specified limits.	Yes		Yes		
If possible, were the affected samples reanalyzed?						
**Were reported sample results with failing surrogate recoveries qualified?						
Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed? If not qualify (X).	Target upper middle range of calibration curve.	Yes		Yes		
Did all samples meet hold time and preservation criteria as defined by method/program?	H2O sample: pH < 2 = 14 days, pH >2 = 7 days. Soil samples: 14 days (other criteria may apply)	Yes		Yes		
Were all samples and QC injected within 12 hours of BFB tune check?		Yes		Yes		
Were internal standard recoveries acceptable relevant to associated ICAL?	Response = -50 to +200%; Ret. time = +/- 30 sec.	Yes		Yes		

VIII. Records and Reporting						
Is sequence file / injection log present in the data package?		Yes		Yes		
Were all data, calculations, and values verified in LIMS (including removal of non-detections) upon completion of data capture?		Yes		Yes		
Were manual integrations performed correctly?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms.	Yes		Yes		
Was the rational for the manual integration verified?		Yes		Yes		
Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

ᵏNon-Applicable Yes/No Cells Are Left Blank*

Comments:

VOC 8260 QSM WATER 5.0 Analytical Run
181064 on 4/23/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	557726								VOC 8260 QSM WATER 5.0				
					BFB					0			
	555266								VOC 8260 QSM WATER 5.0				
					LCSW					0			
	555267								VOC 8260 QSM WATER 5.0				
					CCV					0			
	555289								VOC 8260 QSM WATER 5.0				
					MBW					0			
161178	554740		4/15/2021	13:00			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	**4**	
		TB-3											
161178	554737		4/15/2021	10:20			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		49MW01											
161178	554738		4/15/2021	11:25			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		48MW1											
161178	554739		4/15/2021	12:25			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		48MW06											
	555293		4/15/2021	10:20					VOC 8260 QSM 5.0				
		49MW01			MSW	554737				0			
	555294		4/15/2021	10:20					VOC 8260 QSM 5.0				
		49MW01			MSDW	555293				0			
	555305								VOC 8260 QSM WATER 5.0				
					CCVF					0			

11 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W041621.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\APR1921B\BFB1.D
Injection Date : 19 Apr 2021 Log Time Period (hrs) : ALL
Injection Time : 14:33 Total files within period : 17
Sample Directory : C:\INSTARCH\DATA\APR1921B\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	181068,LCSW, 10.0/100 ug/L, 5.0 mL Pur	19 Apr 2021	15:41
IB2	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged + IS	19 Apr 2021	16:30
MB1	1.00	1.00	1.00	181068,MBW, pH<2,5.0 mL DI H20 Purged	19 Apr 2021	17:00
554740	1.00	1.00	1.00	181064,554740, pH<2,5.0 mL Purged + IS/S	19 Apr 2021	18:00
554737	1.00	1.00	1.00	181064,554737, pH<2,5.0 mL Purged + IS/S	19 Apr 2021	18:30
554738	1.00	1.00	1.00	181064,554738, pH<2,5.0 mL Purged + IS/S	19 Apr 2021	19:00
554739	1.00	1.00	1.00	181064,554739,	19 Apr 2021	19:29
554737MS	1.00	1.00	1.00	181064,MSW554737, pH<2,10.0/100 ug/L,5.0 mL	19 Apr 2021	22:58
554737SD	1.00	1.00	1.00	181064,MSDW554737, pH<2,10.0/100 ug/L,5.0 mL	19 Apr 2021	23:28
CCVF-L~1	1.00	1.00	1.00	181068,LCSDW, 10.0/100 ug/L, 5.0 mL Pur	19 Apr 2021	23:58

8260 ISTD/SSTD 20ug/ml VOC0826
8260 BFB STD. 50ug/ml VOC0825
8260 ICV STD. 100ug/ml VOC0829
8260 CCV/CALIB. 100ug/ml VOC0830

FVO4-01 Data Review Checklist

FORM #: FVO4-01
Rev. #: 2.2
Effective Date: 08/05/19

INDEPENDENT DATA REVIEW CHECKLIST			Method: GCMS (EPA SW-846 8260C)					
Analysis Date	**LIMS Run #(s):**	**Analyst/Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved?**			**Instrument**
					Yes	No		
04/19/21B	181068 181067 181066 181065 181064 181052	DGS	RLD	04/23/2021	Yes			VMS3

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	
I. BFB Tune Check						
Was a BFB tune check analyzed with acceptable results?	Relative abundance criteria met?	Yes		Yes		
II. Initial Calibration Verification (ICV)						
Was initial calibration performed using a minimum of five standard concentration levels (minimum of 6 levels for quadratic curves)?	Lowest standard at or below RL?	Yes		Yes		
Were the Average Relative Response Factors (ARRF) acceptable?	ARRF<or= specified limits (<15%D.)see SOP)	Yes		Yes		
Was a second-source ICV(s) analyzed (for Quadratic Curve)?	Required before sample analyses.	Yes		Yes		
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		
Was Initial Calibration Blank (ICB) analyzed?	Required before sample analyses.	Yes		Yes		
Were the ICB results for all target analytes less than the limit of detection (LOD).	<LOD or < project/program specific limits		No		No	
III. Continuing Calibration Verification (CCV)						
Was an acceptable BFB tune check run at the beginning of every twelve hour shift?	Relative abundance criteria met?	Yes		Yes		
Was a CCV analyzed after every 12 hour tune check?	Required before sample analyses.	Yes		Yes		
Was a second CCV (CCV2) for compounds calibrated using quadratic curves analyzed after every 12 hour tune check?	Required before analyses of WI samples (above the inflection point of the curve).					
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific		No		No	Affected compounds were Z flagged
If necessary, were the results for outlying compounds qualified?		Yes		Yes		

IV. Blanks						
Was a Method Blank (MB) analyzed prior to analysis of samples?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MB results for all target analytes less than the limit of detection (LOD)?	*All target analytes <LOD or < project/program specific limits (<1/2 RL for DoD-QSM)	Yes		Yes		
If analytes were detected in the MB with no associated positives in the samples, no further action is needed. If the analyte detects in the MB were greater than the acceptance criteria and there were detects in the samples, was the data qualified.?						
V. Laboratory Control Spike (LCS)						
Was a LCS (and LCSD if needed) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the LCS (LCSD) recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.		No		No	Affected compounds were Q flagged
If applicable, were associated sample detects (and non-detects for low recoveries) qualified?		Yes		Yes		
Is the relative percent difference (RPD) for each analyte between the LCS and LSCD (if applicable) acceptable?	Default 20%, or see internally generated limits, or client specific limits.		No		No	Affected compounds were Y flagged
VI. Matrix Spike/Matrix Spike Duplicate (MS/MSD)						
Was a Martrix Spike (MS) and a Matrix Spike Duplicate (MSD) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MS/MSD recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.	Yes		Yes		
Is the relative percent difference (RPD) for each analyte between the MS and MSD acceptable?	Default 20%, or see internally generated limits, or client specific limits.	Yes		Yes		
VII. Sample Analyses						
Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
Were surrogate recoveries for all samples and QC within acceptance criteria?	Default 70-130%, or see internally generated program limits, or client specified limits.	Yes		Yes		
If possible, were the affected samples reanalyzed?						
**Were reported sample results with failing surrogate recoveries qualified?						
Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed? If not qualify (X).	Target upper middle range of calibration curve.	Yes		Yes		
Did all samples meet hold time and preservation criteria as defined by method/program?	H2O sample: pH < 2 = 14 days, pH >2 = 7 days. Soil samples: 14 days (other criteria may apply)	Yes		Yes		
Were all samples and QC injected within 12 hours of BFB tune check?		Yes		Yes		
Were internal standard recoveries acceptable relevant to associated ICAL?	Response = -50 to +200%; Ret. time = +/- 30 sec.	Yes		Yes		

VIII. Records and Reporting						
Is sequence file / injection log present in the data package?		Yes		Yes		
Were all data, calculations, and values verified in LIMS (including removal of non-detections) upon completion of data capture?		Yes		Yes		
Were manual integrations performed correctly?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms.	Yes		Yes		
Was the rational for the manual integration verified?		Yes		Yes		
Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

ᵏNon-Applicable Yes/No Cells Are Left Blank*

Comments:

pl_ilog
Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W041621.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\APR1621\BFB1.D
Injection Date : 16 Apr 2021 Log Time Period (hrs) : ALL
Injection Time : 13:37 Total files within period : 17
Sample Directory : C:\INSTARCH\DATA\APR1621\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT1 0.5/5.0 ug/L, 5.0 mL	16 Apr 2021	15:23
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT2 1.00/10.00 ug/L, 5.0	16 Apr 2021	15:52
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT3 2.00/20.0 ug/L, 5.0	16 Apr 2021	16:22
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT4 5.00/50.0 ug/L, 5.0	16 Apr 2021	16:52
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT5 10.0/100.0 ug/L, 5.0	16 Apr 2021	17:22
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT6 20.0/200.0 ug/L, 5.0	16 Apr 2021	17:52
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT7 30.0/300.0 ug/L, 5.0	16 Apr 2021	18:22
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT8 40.0/400.0 ug/L, 5.0	16 Apr 2021	18:52
WCAL9	1.00	1.00	1.00	INITIAL CALIB. PT9 80.0/800.0 ug/L, 5.0	16 Apr 2021	19:21
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	16 Apr 2021	20:21
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF 30.0/300 ug/L, 5.0 m	16 Apr 2021	20:50
ICB1	1.00	1.00	1.00	180726,ICB, pH<2,5.0 mL DI H20 P	16 Apr 2021	21:50

8260 ISTD/SSTD 20ug/ml VOC0826
8260 BFB STD. 50ug/ml VOC0825
8260 ICV STD. 100ug/ml VOC0829
8260 CCV/CALIB. 100ug/ml VOC0830

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0831	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0969, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0985, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0982 into 2250uL of MeOH.	MeOH / B&J / DZ644-U	100 ug/mL	04/21/2121	04/28/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0832	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0970, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0986, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0983 into 2250uL of MeOH.	MeOH / B&J / DZ644-U	100 ug/mL	04/21/2021	04/28/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0829	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0969, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0985, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0982 into 2250uL of MeOH.	MeOH / B&J / DZ644-U	100 ug/mL	04/13/2021	04/20/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0830	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0970, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0986, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0983 into 2250uL of MeOH.	MeOH / B&J / DZ644-U	100 ug/mL	04/13/2021	04/20/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0825	8260 BFB Std.	75uL of 2,000 ug/mL 4-Bromofluorobenzene Std. V0984 into 2925uL of MeOH.	MeOH / B&J / DZ644-U	50 ug/mL	04/02/2021	05/02/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0826	8260 ISTD/SSTD	200uL of 2,500 ug/mL 8260 Istd./Sstd. Mix V0944 and 250uL of 2000 ug/mL 1,2-Dichlorobenzene-$_{d4}$ Std. V0945 into 25mL of MeOH.	MeOH / B&J / DZ644-U	20 ug/mL	04/02/2021	05/02/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0827	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0969, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0985, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0982 into 2250uL of MeOH.	MeOH / B&J / DZ644-U	100 ug/mL	04/02/2021	04/09/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0828	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0970, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0986, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0983 into 2250uL of MeOH.	MeOH / B&J / DZ644-U	100 ug/mL	04/02/2021	04/09/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0820	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0969, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0971, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0982 into 2250uL of MeOH.	MeOH / B&J / DZ644-U	100 ug/mL	03/25/2021	04/01/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0821	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0970, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0972, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0983 into 2250uL of MeOH.	MeOH / B&J / DZ644-U	100 ug/mL	03/25/2021	04/01/2021	RLD

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0988	8260 VOC Mix	AccuStandard	M-502-10X-PAK	220121048
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	12/08/2023	04/28/2021	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 ICV/Spiking Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0987	8260 VOC Mix	Agilent	DWM-588-1	0006585945
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	03/31/2024	04/16/2021	RLD
# of Ampules/Units:	4	Comments:	Used to prepare 8260 CCV/Calib. Standard.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0985	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	CP210319014
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	09/15/2021	03/29/2021	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0986	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA210310006
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	09/06/2021	03/29/2021	RLD
# of Ampules/Units:	1	Comments:	Used for 8260 ICV/Spiking Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0982	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	AA210309012
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	06/07/2021	03/17/2021	RLD
# of Ampules/Units:	2	Comments:	Used to prepare 8260 ICV standard.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0983	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	CP210309007
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	06/07/2021	03/17/2021	RLD
# of Ampules/Units:	2	Comments:	Used to prepare 8260 CCV standard.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0984	4-Bromofluorobenzene	Agilent	STS-110N	0006476760
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,000 ug/mL	MeOH	07/31/2022	03/18/2021	RLD
# of Ampules/Units:	4	Comments:	Used to prepare 8260 tuning standard and 8021 surrogate standard.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0978	1,2-Dichlorobenzene-$_{d4}$	Agilent	STS-210-1	0006552847
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	09/30/2024	01/14/2021	RLD
# of Ampules/Units:	4	Comments:	Used for 8015/8260 SSTD preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0973	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA201211006
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	06/09/2021	12/15/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0974	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA201210008
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	06/08/2020	12/15/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0971	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	CP201210001
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	03/10/2021	12/14/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0972	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	AA20120002
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	03/10/2021	12/14/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0970	8260 VOC Mix	Agilent	DWM-588-1	0006518400
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	04/30/2023	11/10/2020	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 CCV/Calib. standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0969	8260 VOC Mix	AccuStandard	M-502-10X-PAK	220091206
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	09/21/2023	11/25/2020	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 ICV/Spiking standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0964	4-Bromofluorobenzene	Agilent	STS-110N	0006476760
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	07/31/2022	09/17/2020	RLD
# of Ampules/Units:	4	Comments:	Used for 8021/8260 ISTD and SSTD mixes.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0949	8260 VOC Mix	Agilent	DWM-588-1	0006518399
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,000 ug/mL	MeOH	04/30/2023	04/23/2020	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 CCV/Calib. Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0950	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	EN200424002
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	07/23/2020	04/27/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0951	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	AA200424003
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	07/23/2020	04/27/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0948	8260 VOC Mix	AccuStandard	M-502-10X-PAK	219111249
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	11/21/2022	04/01/2020	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 ICV/Spiking standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0944	8260 ISTD/SSTD Mix	Agilent	STM-540	CT-0055
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,500 ug/mL	MeOH	2/28/2022	01/31/2020	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 ISTD/SSTD preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0945	1,2-Dichlorobenzene-$_{d4}$	Agilent	STS-210-1	CM-4301A
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,000 ug/mL	MeOH	07/31/2021	01/31/2020	RLD
# of Ampules/Units:	4	Comments:	Used for 524.2 & 8021 IS/SS and SS preparation.	

V METH, ETH, ETHENE QSM 5.0 Analytical Run # 180922 on Apr 16, 2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

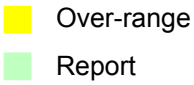
COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	554225						V METH, ETH, ETHENE QSM 5.				
				CCV				0			
	553430						METH,ETH,ETHE QSM 5.0				
				LCSW				80525			
	553429						METH,ETH,ETHE QSM 5.0				
				MBW				80525			
161060	553142		Apr 13, 2021 1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		50MW02						80525			
161060	553148		Apr 13, 2021 1030		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		EQB-50MW02						80525			
161060	553149		Apr 13, 2021 1130		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW2						80525			
161060	553150		Apr 13, 2021 1235		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW3						80525			
161060	553151		Apr 13, 2021 1235		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48TW3						80525			
161060	553152		Apr 13, 2021 1355		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49MW02						80525			
161088	553550		Apr 14, 2021 0915		WESTON SOLUTIONS, INC.	RADFORD AAP	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13MW4						80525			
161088	553551		Apr 14, 2021 0955		WESTON SOLUTIONS, INC.	RADFORD AAP	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13MW3						80525			
161088	553552		Apr 14, 2021 0955		WESTON SOLUTIONS, INC.	RADFORD AAP	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13TW3						80525			
161088	553553		Apr 14, 2021 1055		WESTON SOLUTIONS, INC.	RADFORD AAP	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49MW04						80525			
	554226						V METH, ETH, ETHENE QSM 5.				
				CCV				0			
161088	553554		Apr 14, 2021 1150		WESTON SOLUTIONS, INC.	RADFORD AAP	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13MW2		Designated MS/MSD				80525			
	553576		Apr 14, 2021 1150				METH,ETH,ETHE QSM 5.0				
		13MW2		MSW 553554				80525			
	553577		Apr 14, 2021 1150				METH,ETH,ETHE QSM 5.0				
		13MW2		MSDW 553576				80525			
	554371						V METH, ETH, ETHENE QSM 5.				
				CCV							

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Sequence Summary Report

Sequence Filename: C:\InStarch\PVOC4\Sequence\041521 - 180922.seq
Instrument: PVOC4
Processing Date: Apr 15, 2021 16:07:12

'Run Number	Sample ID	Data Filename	Method Filename	Run Time
2	180922,CCV,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 09:15:05
3	180922,LCSW,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 09:20:49
4	180922,MBW,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 09:58:36
5	180922,553142,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 10:03:22
6	180922,553142,R	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 10:07:20
7	180922,553148	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 10:10:41
8	180922,553149,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 10:16:06
9	180922,553150,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 10:20:52
10	180922,553151,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 10:24:21
11	180922,553152,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 10:27:50
12	180922,553550,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 11:30:21
13	180922,553551,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 12:07:29
14	180922,553552,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 12:10:55
15	180922,553553,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 12:14:45
16	180922,CCV,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 12:18:45
17	180922,CCB,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 12:22:14
18	180922,553554,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 12:26:41
19	180922,MSW553554,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 12:31:48
20	180922,MSDW553554,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 12:36:00
41	180939,CCV,	C:\InStarch\PVOC4\Data\041521 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 15, 2021 16:07:12



Sequence Summary Report

Sequence Filename: C:\InStarch\PVOC4\Sequence\121720 - MEE ICAL.seq
Instrument: PVOC4
Processing Date: Dec 17, 2020 12:14:07

'Run Number	Sample ID	Data Filename	Method Filename	Run Time
1	MEE PT1 - 2 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 10:17:50
2	MEE PT2 - 5 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 10:50:22
3	MEE PT3 - 10 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:04:41
4	MEE PT4 - 20 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:08:50
5	MEE PT5 - 50 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:16:03
6	MEE PT6 - 100 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:23:11
7	MEE PT7 - 200 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 11:27:57
8	ICV - 50 ppmV	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 12:04:44
9	ICB	C:\Instarch\PVOC4\Data\121720i...	C:\Instarch\PVOC4\Methods\P4...	Dec 17, 2020 12:14:07

PREP WORKSHEET
on Apr 16, 2021

Prep Batch **80,525** Date Prepped: Apr 15, 2021 Prepped By KMT

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	553429	MBW		METH,ETH,ETHE QSM	LIQUID	20.7				
	553430	LCSW		METH,ETH,ETHE QSM	LIQUID	20.7				
161060	553142			METH,ETH,ETHE QSM	GROUND WATER	20.7			4	
	553148			METH,ETH,ETHE QSM	GROUND WATER	20.7			4	
	553149			METH,ETH,ETHE QSM	GROUND WATER	20.7			4	
	553150			METH,ETH,ETHE QSM	GROUND WATER	20.7			4	
	553151			METH,ETH,ETHE QSM	GROUND WATER	20.7			4	
	553152			METH,ETH,ETHE QSM	GROUND WATER	20.7			4	
161088	553550			METH,ETH,ETHE QSM	GROUND WATER	20.7			4	
	553551			METH,ETH,ETHE QSM	GROUND WATER	20.7			4	
	553552			METH,ETH,ETHE QSM	GROUND WATER	20.7			4	
	553553			METH,ETH,ETHE QSM	GROUND WATER	20.7			4	
	553554	sample designated for QC		METH,ETH,ETHE QSM	GROUND WATER	20.7			4	
	553576	MSW	553554	METH,ETH,ETHE QSM	GROUND WATER	20.7				
	553577	MSDW	553576	METH,ETH,ETHE QSM	GROUND WATER	20.7				

Notes:_____

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 4/15/2021 **Instrument:** PVOC4

Calibration Date: 12/17/2020 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
1	PS	0.25	43		
2	CCV	0.25	43	①	
3	LCSW	1	43	20.7	①
4	MBW	1	43	20.7	
5	SS3142	1	43	20.7	LZ
6	SS3142R	1	43	20.7	LZ
7	SS3148	1	43	20.7	LZ
8	SS3149	1	43	20.7	LZ
9	SS3150	1	43	20.7	LZ
10	SS3151	1	43	20.7	LZ
11	SS3152	1	43	20.7	LZ
12	SS3550	1	43	20.7	LZ
13	SS3551	1	43	20.7	LZ
14	SS3552	1	43	20.7	LZ
15	SS3553	1	43	20.7	LZ
16	CCV	0.25	43	①	
17	CCB	1	43		
18	SS3554	1	43	20.7	LZ
19	MSWSS3554	1	43	20.7	LZ
20	MSDWSS3554	1	43	20.7	LZ
21	SS3154	1	43	20.7	LZ
22	SS3154x10	0.1	43	20.7	LZ
23	SS3166	1	43	20.7	LZ
24	SS3166x10	0.1	43	20.7	LZ
25	SS3170	1	43	20.7	LZ

Calibration Standard Ref. #: VD886

Second Source Ref. #: VDC0726

① N/A KMT 4/15/2021

Page 1

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 4/15/2021 **Instrument:** PVOC4

Calibration Date: 12/17/2020 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
26	SS3587	1	43	20.7	LZ
27	SS3587X10	0.1	43	20.7	LZ
28	SS3589	1	43	20.7	LZ
29	SS3593	1	43	20.7	LZ
30	SS3593X5	0.2	43	20.7	LZ
31	MSWSS3593	1	43	20.7	LZ
32	MSDWSS3593	1	43	20.7	LZ
33	SS3593R	1	43	20.7	LZ
34	SS3593X20	0.05	43	20.7	LZ
35	SS3600	1	43	20.7	LZ
36	SS3600X20	0.05	43	20.7	LZ
37	SS3622	1	43	20.7	LZ
38	SS3622X100	0.01	43	20.7	LZ
39	SS3627	1	43	20.7	LZ
40	SS3627R	1	43	20.7	LZ
41	CCV	0.25	43	①	
42			43		
43			43		
44		①	43		
45			43		
46			43		
47			43		
48			43		
49			43		
50			43		

Calibration Standard Ref. #: VO886

Second Source Ref. #: VOCD726

① N/A KMT 4/15/2021

FVO1-01 Data Review Checklist

	FVO1-01 Method: Dissolved Gases (EPA SW-846 8015 / RSK 175 Modified)					
LIMS Run #(s)	**Analysis Date (s)**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**	**Instrument**
180922, 180939	04/15/2021	KMT	RLD	04/19/2021	Yes	PVOC4

Instructions: Complete one checklist per *analytical sequence*. Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
1. INITIAL CALIBRATION (ICAL)		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
a. Was the initial calibration performed using a minimum of five concentration levels?	Lowest standard at or below RL	Yes		Yes		
b. For each analyte/component is the variation between calibration response factors for all concentration levels <20% RSD or is $r^2 \geq .99$ or $r \geq .995$ for the regression line?	RSD <20% or $r^2 \geq .99$ or $r \geq .995$ or program/project specific	Yes		Yes		
c. Are the identification and date of the ICAL listed on the printout (or PDF) of the analytical run and in the method file?	ID# and date of ICAL listed	Yes		Yes		
d. Was an Initial Calibration Verification (ICV) analyzed after the ICAL?	Analyzed prior to sample analyses	Yes		Yes		
e. Were the recoveries for each analyte in the ICV within required limits?	Recoveries 85 - 115% or within program/project specific limits	Yes		Yes		
f. Was an Initial Calibration Blank (ICB) analyzed?		Yes		Yes		
g. Were the ICB results for all target analytes/components less than the reporting limit (RL)?	<RL or < program/project specific	Yes		Yes		
2. CONTINUING CALIBRATION VERIFICATION (CCV)						
a . Was a CCV analyzed at the beginning and end of a sequential analysis run, as well as after ever 10 samples?		Yes		Yes		
b. Were the recoveries for each analyte/component in the CCV within acceptance criteria?	Recoveries 85 - 115% or within program/project specific limits	Yes		Yes		
3. METHOD BLANKS (MB)						
a. Was a method blank (MB) analyzed?	1 / 20 or program/project specific	Yes		Yes		
b. Were the MB results for all analytes/components less than reporting limit?	All target analytes/components <RL or within program/project specific limits (DoD-QSM: <1/2 the RL)	Yes		Yes		
4. LABORATORY CONTROL SAMPLE (LCS)						
a. Was a LCS analyzed at the required frequency?	1 / 20 or program/project specific	Yes		Yes		
b. Were LCS recoveries for all analytes within the acceptance criteria?	Default = 70-130%, or within In-house generated or program/project specific limits	Yes		Yes		
c. If LCS recoveries exceed acceptance criteria, was the LCS reanalyzed in an effort to eliminate the possibility of a preparation error?		Yes		Yes		

5. MATRIX SPIKE (MS)/ MATRIX SPIKE DUPLICATES (MSD) and DUPLICATE						
a. Was a MS, MSD, and/or Duplicate (if valid) Vial analyzed with each batch of 20 samples (or program-specified frequency)?	1 / 20 or program/project specific frequency (QSM samples, duplicate only valid if sample result ≥ 5x the LOQ)	Yes		Yes		
b. Were MS/MSD recoveries for all analytes within acceptance criteria?	Default =70-130%, or within In-house generated or program/project specific limits		No		No	Affected analyte M flagged
6. PRECISION						
a. Is the relative percent difference (RPD) for each analyte between duplicate QC samples (i.e. parent sample / Duplicate vial), or for each MS/MSD within the acceptance criteria?	Default = 20 % RPD, or within In-house generated or program/project specific limits	Yes		Yes		
7. SAMPLES (INCLUDING BLANKS, STANDARDS, AND QC SAMPLES)						
a. Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
b. Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed or reanalyzed using a smaller sample aliquot? Affected analyte detects should remain above the limit of quantitation (LOQ) after reanalysis.		Yes		Yes		
c. Was the correct ambient temperature recorded on sample spreadsheets?		Yes		Yes		
d. Were all samples adequately preserved and analyzed within holding time?	CO_2 samples received unpreserved (analyze within 7 days or program/project specific) Methane, Ethene, Ethane samples received preserved to <2 (analyze within 14 days or program/project specific)	Yes		Yes		
8. RECORDS AND REPORTING						
a. Is a sequence run file present in the raw data file?		Yes		Yes		
b. Is the data initialed and dated by analyst?	Analysis Run sheet is initialed & dated by the analyst processing the raw data.	Yes		Yes		
c. Do all values, units, etc. listed match the raw data and associated calculations and records?		Yes		Yes		
e. Has the data been electronically transferred to the LIMS and were the applicable qualifiers assigned?		Yes		Yes		
f. Were manual integrations addressed properly and were the audit trails turned on (where applicable)?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms. Audit trail must be on (if available).	Yes		Yes		
g. Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier in LIMS and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

* Non-Applicable Yes/No Cells Are Left Blank*

Comments: _____

V METH, ETH, ETHENE QSM 5.0 Analytical Run
181142 on 4/28/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	559229								V METH, ETH, ETHENE QSM 5.0				
					CCV								
	555993								METH,ETH,ETHE QSM 5.0				
					LCSW					80646			
	555992								METH,ETH,ETHE QSM 5.0				
					MBW					80646			
	559230								V METH, ETH, ETHENE QSM 5.0				
					CCV								
161178	554737		4/15/2021	10:20			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49MW01								80646			
161178	554738		4/15/2021	11:25			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW1								80646			
161178	554739		4/15/2021	12:25			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW06								80646			
	555994								METH,ETH,ETHE QSM 5.0				
					LCSDW	555993				80646			
	559239								V METH, ETH, ETHENE QSM 5.0				
					CCV								

9 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp27F2.tmp

Sequence Summary Report

Sequence Filename: C:\InStarch\PVOC4\Sequence\042221 - 181140 181142.seq
Instrument: PVOC4
Processing Date: Apr 22, 2021 13:24:43

'Run Number	Sample ID	Data Filename	Method Filename	Run Time
2	181140,CCV,	C:\InStarch\PVOC4\Data\042221 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 22, 2021 09:17:19
3	181140,LCSW,	C:\InStarch\PVOC4\Data\042221 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 22, 2021 10:24:47
4	181140,MBW,	C:\InStarch\PVOC4\Data\042221 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 22, 2021 10:44:09
17	181140,CCV,	C:\InStarch\PVOC4\Data\042221 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 22, 2021 12:01:49
18	181140,CCB,	C:\InStarch\PVOC4\Data\042221 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 22, 2021 12:17:24
24	181142,554737,	C:\InStarch\PVOC4\Data\042221 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 22, 2021 12:51:52
25	181142,554738,	C:\InStarch\PVOC4\Data\042221 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 22, 2021 12:56:24
26	181142,554739,	C:\InStarch\PVOC4\Data\042221 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 22, 2021 13:11:35
27	181142,LCSDW,	C:\InStarch\PVOC4\Data\042221 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 22, 2021 13:19:40
28	181140,CCV,	C:\InStarch\PVOC4\Data\042221 ...	C:\Instarch\PVOC4\Methods\P4...	Apr 22, 2021 13:24:43

PREP WORKSHEET
on 4/28/2021

Prep Batch **80,646** Date Prepped: 4/21/2021 Prepped By:: KMT

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	555992	MBW		METH,ETH,ETHE QSM 5.0	LIQUID	20.2				
	555993	LCSW		METH,ETH,ETHE QSM 5.0	LIQUID	20.2				
161178	554737			METH,ETH,ETHE QSM 5.0	GROUND WATER	20.2			4	
	554738			METH,ETH,ETHE QSM 5.0	GROUND WATER	20.2			4	
	554739			METH,ETH,ETHE QSM 5.0	GROUND WATER	20.2			4	
	555994	LCSDW	555993	METH,ETH,ETHE QSM 5.0	LIQUID	20.2				

Notes:_____

PREP WORKSHEET 2
on 4/28/2021

Prep Batch: **80646**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	555992	MBW	0	METH,ETH,ETHE QSM 5.0			LIQUID			
	555993	LCSW	0	METH,ETH,ETHE QSM 5.0			LIQUID			
161178	554737		0	METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	49MW01	GROUND WATER	4/15/21 10:20	5/1/21	4
	554738		0	METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	48MW1	GROUND WATER	4/15/21 11:25	5/1/21	4
	554739		0	METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	48MW06	GROUND WATER	4/15/21 12:25	5/1/21	4
	555994	LCSDW	555993	METH,ETH,ETHE QSM 5.0			LIQUID			

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp903.tmp

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 4/22/2021 **Instrument:** PVOC4

Calibration Date: 12/17/2020 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
1	PS	0.25	43	①	
2	CCV	0.25	43		
3	LCSW	1	43	20.2	①
4	MBW	1	43	20.2	
5	SSS458	1	43	20.2	LZ
6	SSS459	1	43	20.2	LZ
7	SSS464	1	43	20.2	LZ
8	MSWSSS464	1	43	20.2	LZ
9	MSDWSSS464	1	43	20.2	LZ
10	SSS467	1	43	20.2	LZ
11	SSS469	1	43	20.2	LZ
12	SSS470	1	43	20.2	LZ
13	SSS481	1	43	20.2	LZ
14	SSS482	1	43	20.2	LZ
15	SSS483	1	43	20.2	LZ
16	SSS485	1	43	20.2	LZ
17	CCV	0.25	43	①	
18	CCB	1	43		
19	SSS486	1	43	20.2	LZ
20	SSS487	1	43	20.2	LZ
21	SSS488	1	43	20.2	LZ
22	SSS493	1	43	20.2	LZ
23	SSS495	1	43	20.2	LZ
24	SS4737	1	43	20.2	LZ
25	SS4738	1	43	20.2	LZ

Calibration Standard Ref. #: VD9886

Second Source Ref. #: VOC0726

① N/A KMT 4/22/2021

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 4/22/2021 **Instrument:** PVOC4

Calibration Date: 12/17/2020 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
26	584739	1	43	20.2	6.2
27	LCSDW	1	43	20.2	①
28	CCV		43		①
29	C		43		
30			43		
31			43		
32			43		
33			43		
34			43		
35		①	43		
36			43		
37			43		
38			43		
39			43		
40			43		
41			43		
42			43		
43			43		
44			43		
45			43		
46			43		
47			43		
48			43		
49			43		
50			43		

Calibration Standard Ref. #: V0886

Second Source Ref. #: V0C0726

① N/A KMT 4/22/2021

Page 1

FVO1-01 Data Review Checklist

	FVO1-01 Method: Dissolved Gases (EPA SW-846 8015 / RSK 175 Modified)					
LIMS Run #(s)	**Analysis Date (s)**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**	**Instrument**
181140, 181142	04/22/2021	KMT	RLD	04/28/2021	Yes	PVOC4

Instructions: Complete one checklist per *analytical sequence*. Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments**
1. INITIAL CALIBRATION (ICAL)		**Yes**	**No**	**Yes**	**No**	(Indicate reference to an attachment if necessary)
a. Was the initial calibration performed using a minimum of five concentration levels?	Lowest standard at or below RL	Yes		Yes		
b. For each analyte/component is the variation between calibration response factors for all concentration levels <20% RSD or is $r^2 \geq .99$ or $r \geq .995$ for the regression line?	RSD <20% or $r^2 \geq .99$ or $r \geq .995$ or program/project specific	Yes		Yes		
c. Are the identification and date of the ICAL listed on the printout (or PDF) of the analytical run and in the method file?	ID# and date of ICAL listed	Yes		Yes		
d. Was an Initial Calibration Verification (ICV) analyzed after the ICAL?	Analyzed prior to sample analyses	Yes		Yes		
e. Were the recoveries for each analyte in the ICV within required limits?	Recoveries 85 - 115% or within program/project specific limits	Yes		Yes		
f. Was an Initial Calibration Blank (ICB) analyzed?		Yes		Yes		
g. Were the ICB results for all target analytes/components less than the reporting limit (RL)?	<RL or < program/project specific	Yes		Yes		
2. CONTINUING CALIBRATION VERIFICATION (CCV)						
a . Was a CCV analyzed at the beginning and end of a sequential analysis run, as well as after ever 10 samples?		Yes		Yes		
b. Were the recoveries for each analyte/component in the CCV within acceptance criteria?	Recoveries 85 - 115% or within program/project specific limits	Yes		Yes		
3. METHOD BLANKS (MB)						
a. Was a method blank (MB) analyzed?	1 / 20 or program/project specific	Yes		Yes		
b. Were the MB results for all analytes/components less than reporting limit?	All target analytes/components <RL or within program/project specific limits (DoD-QSM: <1/2 the RL)	Yes		Yes		
4. LABORATORY CONTROL SAMPLE (LCS)						
a. Was a LCS analyzed at the required frequency?	1 / 20 or program/project specific	Yes		Yes		
b. Were LCS recoveries for all analytes within the acceptance criteria?	Default = 70-130%, or within In-house generated or program/project specific limits	Yes		Yes		
c. If LCS recoveries exceed acceptance criteria, was the LCS reanalyzed in an effort to eliminate the possibility of a preparation error?		Yes		Yes		

5. MATRIX SPIKE (MS)/ MATRIX SPIKE DUPLICATES (MSD) and DUPLICATE						
a. Was a MS, MSD, and/or Duplicate (if valid) Vial analyzed with each batch of 20 samples (or program-specified frequency)?	1 / 20 or program/project specific frequency (QSM samples, duplicate only valid if sample result ≥ 5x the LOQ)	Yes		Yes		
b. Were MS/MSD recoveries for all analytes within acceptance criteria?	Default =70-130%, or within In-house generated or program/project specific limits	Yes		Yes		
6. PRECISION						
a. Is the relative percent difference (RPD) for each analyte between duplicate QC samples (i.e. parent sample / Duplicate vial), or for each MS/MSD within the acceptance criteria?	Default = 20 % RPD, or within In-house generated or program/project specific limits	Yes		Yes		
7. SAMPLES (INCLUDING BLANKS, STANDARDS, AND QC SAMPLES)						
a. Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
b. Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed or reanalyzed using a smaller sample aliquot? Affected analyte detects should remain above the limit of quantitation (LOQ) after reanalysis.		Yes		Yes		
c. Was the correct ambient temperature recorded on sample spreadsheets?		Yes		Yes		
d. Were all samples adequately preserved and analyzed within holding time?	CO_2 samples received unpreserved (analyze within 7 days or program/project specific) Methane, Ethene, Ethane samples received preserved to <2 (analyze within 14 days or program/project specific)	Yes		Yes		
8. RECORDS AND REPORTING						
a. Is a sequence run file present in the raw data file?		Yes		Yes		
b. Is the data initialed and dated by analyst?	Analysis Run sheet is initialed & dated by the analyst processing the raw data.	Yes		Yes		
c. Do all values, units, etc. listed match the raw data and associated calculations and records?		Yes		Yes		
e. Has the data been electronically transferred to the LIMS and were the applicable qualifiers assigned?		Yes		Yes		
f. Were manual integrations addressed properly and were the audit trails turned on (where applicable)?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms. Audit trail must be on (if available).	Yes		Yes		
g. Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier in LIMS and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

* Non-Applicable Yes/No Cells Are Left Blank*

Comments: _____

LSVO1-01
Volatiles Standards Logbook
Logbook Created: 12/08/2015

NOTEBOOK VIEW: LTN_LSVO1_01_VOC_Default, NOTEBOOK: LSVO1_01_VOC, PAGE: 64
Page is Locked
Author: rdigmann on: 5/25/2018 7:47:52 AM
Witness: akurth on: 7/31/2018 9:54:19 AM
Project: Unassigned
Page Title: 05/24/18

Standard Log #:	VO886	Standard/Reagent:	Methane Ethene Ethane STI
Analyst:	AGK	Final Concentration:	200.0 PPM
Prep Date:	05/24/18	Expiration Date:	05/17/21
Prep:	Airgas Methane, Ethene, Ethane Standard Received 05/24/18 LOT# 54-401204472-1 REF# 54-401204472-1 Cylinder # P180959		

Standard Log #:	VOC0726	Standard/Reagent:	MEE RECERTIFICATION O
Analyst:	KMT	Final Concentration:	N/A
Prep Date:	07/1/2020	Expiration Date:	7/1/2021
Prep:	Recertification of methane, ethane, ethane tank (V681). Ran 4 consecutive CCV's with acceptable recoveries.		

LPVO1-02 VOC
Volatiles Standards Prep Logbook
Logbook Created: 10/10/16
Balance used in reagent prep: VOB01
NOTEBOOK VIEW: LTN_LPVO1_02_VOC_Default, NOTEBOOK: LPVO1_02_VOC, PAGE: 27
Page is Locked
Author: AKURTH on: 22.03.2017 10:57:51
Page is not Witnessed
Project: Unassigned
Page Title: N/A

Standard Log #:	VOC0299	Standard/Reagent:	MEE RECERTIFICATION O
Analyst:	AGK	Final Concentration:	N/A
Prep Date:	03/17/17	Expiration Date:	03/17/20
Prep:	Recertification of methane, ethane, ethane tank (V681). Ran 4 consecutive CCV's with acceptable recoveries.		

1

CT Laboratories, LLC

Airgas
an Air Liquide company

Expires 5/17/21 V0886 AGK 5/24/18

Airgas Specialty Gases
Airgas USA, LLC
12722 S. Wentworth Ave.
Chicago, IL 60628
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04HE99C353Q80	Reference Number:	54-401204472-1
Cylinder Number:	P180959	Cylinder Volume:	31.6 CF
Laboratory:	124 - Chicago (SAP) - IL	Cylinder Pressure:	2013 PSIG
Analysis Date:	May 17, 2018	Valve Outlet:	350
Lot Number:	54-401204472-1		

Expiration Date: May 17, 2021

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
ETHANE	200.0 PPM	198.9 PPM	+/- 2%
ETHYLENE	200.0 PPM	198.3 PPM	+/- 2%
METHANE	200.0 PPM	198.3 PPM	+/- 2%
HELIUM	Balance		

Approved for Release

Airgas

Recert VOC0726
~~6/30/2020~~ Ex: 7/1/2021
7/1/2020

Recert VOC0299
3/17/17 Ex: 3/17/20

Airgas Specialty Gases
12722 South Wentworth Avenue
Chicago, IL 60628
(773) 785-3000 Fax: (773) 785-1928
www.airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04HE99C353Q80	Reference Number:	54-124397530-1
Cylinder Number:	4774182	Cylinder Volume:	31.6 CF
Laboratory:	ASG - Chicago - IL	Cylinder Pressure:	2013 PSIG
Analysis Date:	Oct 07, 2013	Valve Outlet:	350
Lot Number:	54-124397530-1		

V681 Exp: 10/21/16
10/21/13
BMS

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration (Mole %)	Analytical Uncertainty
ETHANE	200.0 PPM	202.9 PPM	+/- 2%
ETHYLENE	200.0 PPM	200.3 PPM	+/- 2%
METHANE	200.0 PPM	204.3 PPM	+/- 2%
HELIUM	Balance		

Notes:

Approved for Release

METALS
CLP FORMS
DOCUMENTS

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554741
Analytical Method:	EPA 6010C	Date Received:	04/19/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181097	Analysis Date/Time	04/22/2021 10:01
Analytical Prep Batch #:	80614	Prep. Date/Time:	04/20/2021 16:41
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	5120		10	20	40	40
7440-36-0	Total Antimony	10	U	4.7	10	20	20
7440-38-2	Total Arsenic	25	U	12	25	50	50
7440-39-3	Total Barium	75.8		0.82	2.0	4.0	4.0
7440-41-7	Total Beryllium	0.31	J B	0.10	0.30	0.60	0.60
7440-43-9	Total Cadmium	1.0	U	0.42	1.0	2.0	2.0
7440-70-2	Total Calcium	151000		19	50	100	100
7440-47-3	Total Chromium	15.7		1.6	3.5	5.0	5.0
7440-48-4	Total Cobalt	8.5		0.60	2.5	4.0	4.0
7440-50-8	Total Copper	19.3	J	11	25	50	50
7439-89-6	Total Iron	9090		33	70	100	100
7439-92-1	Total Lead	10.6		1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	77800		10	25	40	40
7439-96-5	Total Manganese	616		1.5	3.0	5.0	5.0
7440-02-0	Total Nickel	25.4		1.4	3.0	5.0	5.0
7440-09-7	Total Potassium	6720		120	250	500	500
7782-49-2	Total Selenium	20	U	9.9	20	40	40
7440-22-4	Total Silver	2.0	U	0.70	2.0	4.0	4.0
7440-23-5	Total Sodium	20800		180	500	500	500
7440-28-0	Total Thallium	12	U	5.9	12	20	20
7440-62-2	Total Vanadium	10.8		1.1	2.5	5.0	5.0
7440-66-6	Total Zinc	38.0		5.0	10	20	20

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554741
Analytical Method:	EPA 7470A	Date Received:	04/19/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181172	Analysis Date/Time	04/21/2021 13:58
Analytical Prep Batch #:	80604	Prep. Date/Time:	04/20/2021 14:10
ICAL Calibration #:	04212021	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	0.020	0.080	0.12	0.12

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181172

Lab Sample ID: 556943

ICAL Calibration #: 04212021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	4/21/21	10:13	3.0	2.80	93.3	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181172 Lab Sample ID: 557669

ICAL Calibration #: 04212021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	4/21/21 10:17	3.0	2.83	94.3	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181100 Lab Sample ID: 1000766

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	4/21/21	12:58	5000	4870	97.4	90	110
Sodium	4/21/21	12:58	5000	5070	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181100 Lab Sample ID: 1000767

ICAL Calibration #: Concentration Units:

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	4/21/21	13:09	15000	14200	94.7	80	120
Sodium	4/21/21	13:09	3000	3230	108	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181097 Lab Sample ID: 1000779

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	4/21/21	12:58	12000	11500	95.8	90	110
Antimony	4/21/21	12:58	500.0	490.0	98.0	90	110
Arsenic	4/21/21	12:58	2000	1930	96.5	90	110
Barium	4/21/21	12:58	2000	1980	99.0	90	110
Beryllium	4/21/21	12:58	50.0	49.30	98.6	90	110
Cadmium	4/21/21	12:58	50.0	48.10	96.2	90	110
Calcium	4/21/21	12:58	10000	9730	97.3	90	110
Chromium	4/21/21	12:58	200.0	200.0	100	90	110
Cobalt	4/21/21	12:58	500.0	495.0	99.0	90	110
Copper	4/21/21	12:58	250.0	244.0	97.6	90	110
Iron	4/21/21	12:58	5000	5020	100	90	110
Lead	4/21/21	12:58	500.0	489.0	97.8	90	110
Magnesium	4/21/21	12:58	10000	9550	95.5	90	110
Manganese	4/21/21	12:58	500.0	524.0	105	90	110
Nickel	4/21/21	12:58	500.0	509.0	102	90	110
Selenium	4/21/21	12:58	2000	2030	102	90	110
Silver	4/21/21	12:58	50.0	49.90	99.8	90	110
Thallium	4/21/21	12:58	2000	2010	101	90	110
Vanadium	4/21/21	12:58	500.0	513.0	103	90	110
Zinc	4/21/21	12:58	500.0	516.0	103	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181097 Lab Sample ID: 1000780

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	4/21/21	13:09	1200	1280	107	80	120
Antimony	4/21/21	13:09	60.0	63.60	106	80	120
Arsenic	4/21/21	13:09	60.0	58.30	97.2	80	120
Barium	4/21/21	13:09	30.0	30.0	100	80	120
Beryllium	4/21/21	13:09	12.00	13.10	109	80	120
Cadmium	4/21/21	13:09	15.00	15.90	106	80	120
Calcium	4/21/21	13:09	1500	1580	105	80	120
Chromium	4/21/21	13:09	30.0	31.40	105	80	120
Cobalt	4/21/21	13:09	30.0	31.20	104	80	120
Copper	4/21/21	13:09	30.0	31.30	104	80	120
Iron	4/21/21	13:09	900.0	942.0	105	80	120
Lead	4/21/21	13:09	30.0	29.90	99.7	80	120
Magnesium	4/21/21	13:09	1500	1580	105	80	120
Manganese	4/21/21	13:09	30.0	32.50	108	80	120
Nickel	4/21/21	13:09	30.0	33.10	110	80	120
Selenium	4/21/21	13:09	60.0	64.10	107	80	120
Thallium	4/21/21	13:09	60.0	62.10	104	80	120
Vanadium	4/21/21	13:09	30.0	33.30	111	80	120
Zinc	4/21/21	13:09	30.0	33.30	111	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

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Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181097

Lab Sample ID: 1000784

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Silver	4/21/21	13:52	10.0	11.10	111	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181172 Lab Sample ID: 556946

ICAL Calibration #: 04212021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	4/21/21 13:08	3.0	2.78	92.7	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181172

Lab Sample ID: 556948

ICAL Calibration #: 04212021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	4/21/21	13:49	3.0	2.84	94.7	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181172

Lab Sample ID: 556950

ICAL Calibration #: 04212021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	4/21/21	14:30	3.0	2.72	90.7	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181100 Lab Sample ID: 1000772

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	4/22/21	09:32	50000	48900	97.8	90	110
Sodium	4/22/21	09:32	50000	51100	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181100 Lab Sample ID: 1000773

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	4/22/21	09:37	5000	5080	102	90	110
Sodium	4/22/21	09:37	5000	5190	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181100 Lab Sample ID: 1000776

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	4/22/21	10:51	50000	50200	100	90	110
Sodium	4/22/21	10:51	50000	50900	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181100 Lab Sample ID: 1000777

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	4/22/21	10:56	5000	5250	105	90	110
Sodium	4/22/21	10:56	5000	5220	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181097 Lab Sample ID: 1000785

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	4/22/21	09:32	5000	5380	108	90	110
Antimony	4/22/21	09:32	5000	5280	106	90	110
Arsenic	4/22/21	09:32	5000	5220	104	90	110
Barium	4/22/21	09:32	5000	5240	105	90	110
Beryllium	4/22/21	09:32	500.0	518.0	104	90	110
Cadmium	4/22/21	09:32	500.0	538.0	108	90	110
Calcium	4/22/21	09:32	5000	5180	104	90	110
Chromium	4/22/21	09:32	5000	5310	106	90	110
Cobalt	4/22/21	09:32	5000	5380	108	90	110
Copper	4/22/21	09:32	5000	5110	102	90	110
Iron	4/22/21	09:32	5000	5310	106	90	110
Lead	4/22/21	09:32	5000	5020	100	90	110
Magnesium	4/22/21	09:32	5000	5060	101	90	110
Manganese	4/22/21	09:32	5000	5270	105	90	110
Nickel	4/22/21	09:32	5000	5260	105	90	110
Selenium	4/22/21	09:32	5000	5290	106	90	110
Silver	4/22/21	09:32	500.0	488.0	97.6	90	110
Thallium	4/22/21	09:32	5000	5200	104	90	110
Vanadium	4/22/21	09:32	5000	5240	105	90	110
Zinc	4/22/21	09:32	5000	5260	105	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181097 Lab Sample ID: 1000786

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	4/22/21	09:37	500.0	538.0	108	90	110
Antimony	4/22/21	09:37	500.0	518.0	104	90	110
Arsenic	4/22/21	09:37	500.0	514.0	103	90	110
Barium	4/22/21	09:37	500.0	506.0	101	90	110
Beryllium	4/22/21	09:37	50.0	52.60	105	90	110
Cadmium	4/22/21	09:37	50.0	51.70	103	90	110
Calcium	4/22/21	09:37	500.0	513.0	103	90	110
Chromium	4/22/21	09:37	500.0	524.0	105	90	110
Cobalt	4/22/21	09:37	500.0	516.0	103	90	110
Copper	4/22/21	09:37	500.0	518.0	104	90	110
Iron	4/22/21	09:37	500.0	532.0	106	90	110
Lead	4/22/21	09:37	500.0	514.0	103	90	110
Magnesium	4/22/21	09:37	500.0	523.0	105	90	110
Manganese	4/22/21	09:37	500.0	547.0	109	90	110
Nickel	4/22/21	09:37	500.0	529.0	106	90	110
Selenium	4/22/21	09:37	500.0	516.0	103	90	110
Silver	4/22/21	09:37	50.0	51.30	103	90	110
Thallium	4/22/21	09:37	500.0	518.0	104	90	110
Vanadium	4/22/21	09:37	500.0	518.0	104	90	110
Zinc	4/22/21	09:37	500.0	519.0	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181097 Lab Sample ID: 1000789

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	4/22/21	10:51	5000	5400	108	90	110
Antimony	4/22/21	10:51	5000	5350	107	90	110
Arsenic	4/22/21	10:51	5000	5330	107	90	110
Barium	4/22/21	10:51	5000	5310	106	90	110
Beryllium	4/22/21	10:51	500.0	511.0	102	90	110
Cadmium	4/22/21	10:51	500.0	549.0	110	90	110
Calcium	4/22/21	10:51	5000	5220	104	90	110
Chromium	4/22/21	10:51	5000	5400	108	90	110
Cobalt	4/22/21	10:51	5000	5360	107	90	110
Copper	4/22/21	10:51	5000	5150	103	90	110
Iron	4/22/21	10:51	5000	5320	106	90	110
Lead	4/22/21	10:51	5000	5040	101	90	110
Magnesium	4/22/21	10:51	5000	5120	102	90	110
Manganese	4/22/21	10:51	5000	5320	106	90	110
Nickel	4/22/21	10:51	5000	5270	105	90	110
Selenium	4/22/21	10:51	5000	5380	108	90	110
Silver	4/22/21	10:51	500.0	485.0	97.0	90	110
Thallium	4/22/21	10:51	5000	5230	105	90	110
Vanadium	4/22/21	10:51	5000	5340	107	90	110
Zinc	4/22/21	10:51	5000	5310	106	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181097 Lab Sample ID: 1000790

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	4/22/21	10:56	500.0	544.0	109	90	110
Antimony	4/22/21	10:56	500.0	525.0	105	90	110
Arsenic	4/22/21	10:56	500.0	518.0	104	90	110
Barium	4/22/21	10:56	500.0	517.0	103	90	110
Beryllium	4/22/21	10:56	50.0	53.20	106	90	110
Cadmium	4/22/21	10:56	50.0	52.50	105	90	110
Calcium	4/22/21	10:56	500.0	518.0	104	90	110
Chromium	4/22/21	10:56	500.0	533.0	107	90	110
Cobalt	4/22/21	10:56	500.0	524.0	105	90	110
Copper	4/22/21	10:56	500.0	523.0	105	90	110
Iron	4/22/21	10:56	500.0	528.0	106	90	110
Lead	4/22/21	10:56	500.0	521.0	104	90	110
Magnesium	4/22/21	10:56	500.0	525.0	105	90	110
Manganese	4/22/21	10:56	500.0	549.0	110	90	110
Nickel	4/22/21	10:56	500.0	531.0	106	90	110
Selenium	4/22/21	10:56	500.0	531.0	106	90	110
Silver	4/22/21	10:56	50.0	50.70	101	90	110
Thallium	4/22/21	10:56	500.0	522.0	104	90	110
Vanadium	4/22/21	10:56	500.0	518.0	104	90	110
Zinc	4/22/21	10:56	500.0	521.0	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181172 Lab Sample ID: 556945

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 04212021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	04/21/2021 10:29	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181100 Lab Sample ID: 1000768

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	04/21/2021 13:15	55.90	U	120	250
Sodium	04/21/2021 13:15	-9.53	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

3-1

ICB

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181097 Lab Sample ID: 1000781

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	04/21/2021 13:15	-4.66	U	10	20
Antimony	04/21/2021 13:15	-0.793	U	4.7	10
Arsenic	04/21/2021 13:15	-0.971	U	12	25
Barium	04/21/2021 13:15	0.005	U	0.82	2.0
Beryllium	04/21/2021 13:15	0.178		0.10	0.30
Cadmium	04/21/2021 13:15	0.078	U	0.42	1.0
Calcium	04/21/2021 13:15	-1.33	U	19	50
Chromium	04/21/2021 13:15	0.116	U	1.6	2.5
Cobalt	04/21/2021 13:15	0.10	U	0.6	2.0
Copper	04/21/2021 13:15	-1.74	U	11	25
Iron	04/21/2021 13:15	-7.64	U	33	50
Lead	04/21/2021 13:15	-0.087	U	1.4	2.0
Magnesium	04/21/2021 13:15	-0.484	U	10	20
Manganese	04/21/2021 13:15	-0.199	U	1.5	2.5
Nickel	04/21/2021 13:15	0.212	U	1.4	2.5
Selenium	04/21/2021 13:15	-5.03	U	9.9	20
Silver	04/21/2021 13:15	-1.11	U	0.7	2.0
Thallium	04/21/2021 13:15	-0.699	U	5.9	10
Vanadium	04/21/2021 13:15	-0.42	U	1.1	2.5
Zinc	04/21/2021 13:15	-1.02	U	5.0	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181172 Lab Sample ID: 556947

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 04212021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	04/21/2021 13:14	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181172

Lab Sample ID: 556949

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: 04212021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	04/21/2021 13:55	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181172 Lab Sample ID: 556951

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 04212021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	04/21/2021 14:36	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181100

Lab Sample ID: 1000774

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	04/22/2021 09:43	32.10	U	120	250
Sodium	04/22/2021 09:43	3.40	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181100 Lab Sample ID: 1000778

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	04/22/2021 11:02	106.0	U	120	250
Sodium	04/22/2021 11:02	9.31	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181097

Lab Sample ID: 1000787

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	04/22/2021 09:43	-3.05	U	10	20
Antimony	04/22/2021 09:43	-1.41	U	4.7	10
Arsenic	04/22/2021 09:43	-0.351	U	12	25
Barium	04/22/2021 09:43	0.022	U	0.82	2.0
Beryllium	04/22/2021 09:43	0.126		0.10	0.30
Cadmium	04/22/2021 09:43	0.297	U	0.42	1.0
Calcium	04/22/2021 09:43	1.30	U	19	50
Chromium	04/22/2021 09:43	-0.004	U	1.6	2.5
Cobalt	04/22/2021 09:43	0.043	U	0.6	2.0
Copper	04/22/2021 09:43	-1.22	U	11	25
Iron	04/22/2021 09:43	-15.8	U	33	50
Lead	04/22/2021 09:43	-0.216	U	1.4	2.0
Magnesium	04/22/2021 09:43	0.59	U	10	20
Manganese	04/22/2021 09:43	-0.053	U	1.5	2.5
Nickel	04/22/2021 09:43	0.387	U	1.4	2.5
Selenium	04/22/2021 09:43	-2.33	U	9.9	20
Silver	04/22/2021 09:43	-0.12	U	0.7	2.0
Thallium	04/22/2021 09:43	0.011	U	5.9	10
Vanadium	04/22/2021 09:43	-0.176	U	1.1	2.5
Zinc	04/22/2021 09:43	-0.591	U	5.0	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181097 Lab Sample ID: 1000791

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	04/22/2021 11:02	-2.25	U	10	20
Antimony	04/22/2021 11:02	-1.39	U	4.7	10
Arsenic	04/22/2021 11:02	-2.61	U	12	25
Barium	04/22/2021 11:02	-0.103	U	0.82	2.0
Beryllium	04/22/2021 11:02	0.047	U	0.10	0.30
Cadmium	04/22/2021 11:02	0.015	U	0.42	1.0
Calcium	04/22/2021 11:02	2.03	U	19	50
Chromium	04/22/2021 11:02	0.155	U	1.6	2.5
Cobalt	04/22/2021 11:02	0.245	U	0.6	2.0
Copper	04/22/2021 11:02	-1.35	U	11	25
Iron	04/22/2021 11:02	-9.45	U	33	50
Lead	04/22/2021 11:02	-0.024	U	1.4	2.0
Magnesium	04/22/2021 11:02	0.884	U	10	20
Manganese	04/22/2021 11:02	-0.123	U	1.5	2.5
Nickel	04/22/2021 11:02	0.154	U	1.4	2.5
Selenium	04/22/2021 11:02	-0.669	U	9.9	20
Silver	04/22/2021 11:02	-0.238	U	0.7	2.0
Thallium	04/22/2021 11:02	-1.06	U	5.9	10
Vanadium	04/22/2021 11:02	-0.036	U	1.1	2.5
Zinc	04/22/2021 11:02	-0.551	U	5.0	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181172 Lab Sample ID: 554884

Analytical Prep Batch # 80604 Preparation Date/Time: 04/20/2021 14:10

ICAL Calibration #: 04212021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Mercury	04/21/2021 13:33	0	U	0.020	0.06

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181100 Lab Sample ID: 555190

Analytical Prep Batch # 80614 Preparation Date/Time: 04/20/2021 16:41

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit	
Total Aluminum	04/22/2021 09:55	-0.269	U	10	20	
Total Antimony	04/22/2021 09:55	0.113	U	4.7	10	
Total Arsenic	04/22/2021 09:55	0.786	U	12	25	
Total Barium	04/22/2021 09:55	0.610	U	0.82	2.0	
Total Beryllium	04/22/2021 09:55	0.130		0.10	0.30	FAIL
Total Cadmium	04/22/2021 09:55	0.339	U	0.42	1.0	
Total Calcium	04/22/2021 09:55	11.60	U	19	50	
Total Chromium	04/22/2021 09:55	-0.167	U	1.6	2.5	
Total Cobalt	04/22/2021 09:55	0.0360	U	0.6	2.0	
Total Copper	04/22/2021 09:55	-0.0480	U	11	25	
Total Iron	04/22/2021 09:55	0.697	U	33	50	
Total Lead	04/22/2021 09:55	-1.14	U	1.4	2.0	
Total Magnesium	04/22/2021 09:55	2.73	U	10	20	
Total Manganese	04/22/2021 09:55	-0.226	U	1.5	2.5	
Total Nickel	04/22/2021 09:55	0.0800	U	1.4	2.5	
Total Potassium	04/22/2021 09:55	59.20	U	123	250	
Total Selenium	04/22/2021 09:55	-4.30	U	9.9	20	
Total Silver	04/22/2021 09:55	-1.11	U	0.7	2.0	
Total Sodium	04/22/2021 09:55	29.60	U	183	250	
Total Thallium	04/22/2021 09:55	-2.30	U	5.9	10	
Total Vanadium	04/22/2021 09:55	-0.180	U	1.1	2.5	
Total Zinc	04/22/2021 09:55	0.0440	U	5.0	10	

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181100 Lab Sample ID: 555190

Analytical Prep Batch # 80614 Preparation Date/Time: 04/20/2021 16:41

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit	
Total Aluminum	04/22/2021 09:55	-0.269	U	10	20	
Total Antimony	04/22/2021 09:55	0.113	U	4.7	10	
Total Arsenic	04/22/2021 09:55	0.786	U	12	25	
Total Barium	04/22/2021 09:55	0.610	U	0.82	2.0	
Total Beryllium	04/22/2021 09:55	0.130		0.10	0.30	FAIL
Total Cadmium	04/22/2021 09:55	0.339	U	0.42	1.0	
Total Calcium	04/22/2021 09:55	11.60	U	19	50	
Total Chromium	04/22/2021 09:55	-0.167	U	1.6	2.5	
Total Cobalt	04/22/2021 09:55	0.0360	U	0.6	2.0	
Total Copper	04/22/2021 09:55	-0.0480	U	11	25	
Total Iron	04/22/2021 09:55	0.697	U	33	50	
Total Lead	04/22/2021 09:55	-1.14	U	1.4	2.0	
Total Magnesium	04/22/2021 09:55	2.73	U	10	20	
Total Manganese	04/22/2021 09:55	-0.226	U	1.5	2.5	
Total Nickel	04/22/2021 09:55	0.0800	U	1.4	2.5	
Total Potassium	04/22/2021 09:55	59.20	U	123	250	
Total Selenium	04/22/2021 09:55	-4.30	U	9.9	20	
Total Silver	04/22/2021 09:55	-1.11	U	0.7	2.0	
Total Sodium	04/22/2021 09:55	29.60	U	183	250	
Total Thallium	04/22/2021 09:55	-2.30	U	5.9	10	
Total Vanadium	04/22/2021 09:55	-0.180	U	1.1	2.5	
Total Zinc	04/22/2021 09:55	0.0440	U	5.0	10	

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

3-3

METHOD BLANKS

MB

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181100 Lab Sample ID: 555190

Analytical Prep Batch # 80614 Preparation Date/Time: 04/20/2021 16:41

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit	
Total Aluminum	04/22/2021 09:55	-0.269	U	10	20	
Total Antimony	04/22/2021 09:55	0.113	U	4.7	10	
Total Arsenic	04/22/2021 09:55	0.786	U	12	25	
Total Barium	04/22/2021 09:55	0.610	U	0.82	2.0	
Total Beryllium	04/22/2021 09:55	0.130		0.10	0.30	FAIL
Total Cadmium	04/22/2021 09:55	0.339	U	0.42	1.0	
Total Calcium	04/22/2021 09:55	11.60	U	19	50	
Total Chromium	04/22/2021 09:55	-0.167	U	1.6	2.5	
Total Cobalt	04/22/2021 09:55	0.0360	U	0.6	2.0	
Total Copper	04/22/2021 09:55	-0.0480	U	11	25	
Total Iron	04/22/2021 09:55	0.697	U	33	50	
Total Lead	04/22/2021 09:55	-1.14	U	1.4	2.0	
Total Magnesium	04/22/2021 09:55	2.73	U	10	20	
Total Manganese	04/22/2021 09:55	-0.226	U	1.5	2.5	
Total Nickel	04/22/2021 09:55	0.0800	U	1.4	2.5	
Total Potassium	04/22/2021 09:55	59.20	U	123	250	
Total Selenium	04/22/2021 09:55	-4.30	U	9.9	20	
Total Silver	04/22/2021 09:55	-1.11	U	0.7	2.0	
Total Sodium	04/22/2021 09:55	29.60	U	183	250	
Total Thallium	04/22/2021 09:55	-2.30	U	5.9	10	
Total Vanadium	04/22/2021 09:55	-0.180	U	1.1	2.5	
Total Zinc	04/22/2021 09:55	0.0440	U	5.0	10	

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 161060
ICS Source: SPEX

Analytical Run #: 181100
Lab Sample ID: 1000769
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	04/21/2021 13:34	500000	490000	98.0	80	120
Calcium	04/21/2021 13:34	500000	464000	92.8	80	120
Iron	04/21/2021 13:34	500000	435000	87.0	80	120
Magnesium	04/21/2021 13:34	500000	496000	99.2	80	120
Potassium	04/21/2021 13:34	0	3.98	0	-170	170
Sodium	04/21/2021 13:34	0	1.26	0	-140	140

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 161060
ICS Source: SPEX

Analytical Run #: 181097
Lab Sample ID: 1000782
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	04/21/2021 13:34	500000	490000	98.0	80	120
Antimony	04/21/2021 13:34	0	-6.56	0	-10	10
Arsenic	04/21/2021 13:34	0	0.196	0	-20	20
Barium	04/21/2021 13:34	0	0.052	0	-1.7	1.7
Beryllium	04/21/2021 13:34	0	0.088	0	-.7	.7
Cadmium	04/21/2021 13:34	0	1.02	0	-1.3	1.3
Calcium	04/21/2021 13:34	500000	464000	92.8	80	120
Chromium	04/21/2021 13:34	0	-0.274	0	-13	13
Cobalt	04/21/2021 13:34	0	0.847	0	-2	2
Copper	04/21/2021 13:34	0	-0.143	0	-7	7
Iron	04/21/2021 13:34	500000	435000	87.0	80	120
Lead	04/21/2021 13:34	0	0.166	0	-4.7	4.7
Magnesium	04/21/2021 13:34	500000	496000	99.2	80	120
Manganese	04/21/2021 13:34	0	0.493	0	-7.3	7.3
Nickel	04/21/2021 13:34	0	2.42	0	-7	7
Selenium	04/21/2021 13:34	0	-3.66	0	-13	13
Silver	04/21/2021 13:34	0	-0.469	0	-7.3	7.3
Thallium	04/21/2021 13:34	0	-4.52	0	-7.3	7.3
Vanadium	04/21/2021 13:34	10000	9780	0	8000	12000
Zinc	04/21/2021 13:34	0	-1.63	0	-20	20

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 161060
ICS Source: SPEX, Ultra

Analytical Run #: 181100
Lab Sample ID: 1000770
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	04/21/2021 13:40	500000	492000	98.4	80	120
Calcium	04/21/2021 13:40	500000	446000	89.2	80	120
Iron	04/21/2021 13:40	500000	432000	86.4	80	120
Magnesium	04/21/2021 13:40	500000	501000	100	80	120
Potassium	04/21/2021 13:40	50000	51800	104	80	120
Sodium	04/21/2021 13:40	50000	52800	106	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 161060
ICS Source: SPEX, Ultra

Analytical Run #: 181097
Lab Sample ID: 1000783
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	04/21/2021 13:40	500000	492000	98.4	80	120
Antimony	04/21/2021 13:40	500.0	510.0	102	80	120
Arsenic	04/21/2021 13:40	500.0	527.0	105	80	120
Barium	04/21/2021 13:40	500.0	498.0	99.6	80	120
Beryllium	04/21/2021 13:40	500.0	489.0	97.8	80	120
Cadmium	04/21/2021 13:40	500.0	511.0	102	80	120
Calcium	04/21/2021 13:40	500000	466000	93.2	80	120
Chromium	04/21/2021 13:40	500.0	489.0	97.8	80	120
Cobalt	04/21/2021 13:40	500.0	498.0	99.6	80	120
Copper	04/21/2021 13:40	500.0	521.0	104	80	120
Iron	04/21/2021 13:40	500000	432000	86.4	80	120
Lead	04/21/2021 13:40	500.0	469.0	93.8	80	120
Magnesium	04/21/2021 13:40	500000	501000	100	80	120
Manganese	04/21/2021 13:40	500.0	514.0	103	80	120
Nickel	04/21/2021 13:40	500.0	502.0	100	80	120
Selenium	04/21/2021 13:40	500.0	494.0	98.8	80	120
Silver	04/21/2021 13:40	500.0	402.0	80.4	80	120
Thallium	04/21/2021 13:40	500.0	489.0	97.8	80	120
Vanadium	04/21/2021 13:40	500.0	507.0	101	80	120
Zinc	04/21/2021 13:40	500.0	510.0	102	80	120

CT LABORATORIES
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5A

SPIKE SAMPLE RECOVERY

Sample Description: **IDW-48/49**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	ug/L
Sample No	554887	Parent Sample No.:	554741
Analytical Prep Batch #	80604	Analytical Preparation Date/Time:	04/20/2021 14:10
Analytical Run #:	181172	ICAL Calibration #:	04212021

Analysis Type: *Initial Analysis* Analysis Date: ----- 04/21/2021 Analysis Time: -------- 14:20

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Mercury	82-119	1.7		BDL		2.0	85.0		CV

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description: **IDW-48/49**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	ug/L
Sample No	555193	Parent Sample No.:	554741
Analytical Prep Batch #	80614	Analytical Preparation Date/Time:	04/20/2021 16:41
Analytical Run #:	181097	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 04/22/2021 Analysis Time: -------- 10:21

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Aluminum	86-115	9700		5120		800	573		P	*FAIL*
Total Antimony	88-113	218		BDL		200	109		P	
Total Arsenic	87-113	883		BDL		800	110		P	
Total Barium	88-113	893		75.8		800	102		P	
Total Beryllium	89-112	22.0		0.31		20.0	108		P	
Total Cadmium	88-113	20.4		BDL		20.0	102		P	
Total Calcium	87-113	347000		151000		200000	98.0		P	
Total Chromium	90-113	105		15.7		80.0	112		P	
Total Cobalt	89-114	220		8.5		200	106		P	
Total Copper	86-114	130		19.3		100	111		P	
Total Iron	87-115	10700		9090		400	403		P	*FAIL*
Total Lead	86-113	221		10.6		200	105		P	
Total Magnesium	85-113	184000		77800		100000	106		P	
Total Manganese	90-114	808		616		200	96.0		P	
Total Nickel	88-113	239		25.4		200	107		P	
Total Selenium	83-114	874		BDL		800	109		P	
Total Silver	84-115	20.9		BDL		20.0	105		P	
Total Thallium	85-114	848		BDL		800	106		P	
Total Vanadium	90-111	224		10.8		200	107		P	
Total Zinc	87-115	267		38.0		200	115		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	ug/L
Sample No	555193	Parent Sample No.:	554741
Analytical Prep Batch #	80614	Analytical Preparation Date/Time:	04/20/2021 16:41
Analytical Run #:	181100	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 04/22/2021 Analysis Time: -------- 10:21

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Potassium	86-114	112000		6720		100000	105		P
Total Sodium	87-115	126000		20800		100000	105		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **IDW-48/49**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1000788	Parent Sample No.:	554741
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	181097	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 04/22/2021 Analysis Time: -------- 10:33

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Aluminum	80-120	9720		5120		4000	115		P
Iron	80-120	10700		9090		2000	80.5		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	ug/L
Sample No	554888	Parent Sample No.:	554887
Analytical Prep Batch #	80604	Analytical Preparation Date/Time:	04/20/2021 14:10
Analytical Run #:	181172	ICAL Calibration #:	04212021

Analysis Type *Initial Analysis* Analysis Date: ----- 04/21/2021 Analysis Time: -------- 14:24

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Mercury	82-119	1.9		BDL		2.0	95.0		CV

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

Sample Description

IDW-48/49

SPIKE DUPLICATE SAMPLE RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	ug/L
Sample No	555194	Parent Sample No.:	555193
Analytical Prep Batch #	80614	Analytical Preparation Date/Time:	04/20/2021 16:41
Analytical Run #:	181097	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 04/22/2021 Analysis Time: -------- 10:27

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Aluminum	86-115	10200		5120		800	635		P	*FAIL*
Total Antimony	88-113	213		BDL		200	107		P	
Total Arsenic	87-113	868		BDL		800	109		P	
Total Barium	88-113	881		75.8		800	101		P	
Total Beryllium	89-112	21.5		0.31		20.0	106		P	
Total Cadmium	88-113	20.0		BDL		20.0	100		P	
Total Calcium	87-113	348000		151000		200000	98.5		P	
Total Chromium	90-113	105		15.7		80.0	112		P	
Total Cobalt	89-114	217		8.5		200	104		P	
Total Copper	86-114	129		19.3		100	110		P	
Total Iron	87-115	11300		9090		400	553		P	*FAIL*
Total Lead	86-113	217		10.6		200	103		P	
Total Magnesium	85-113	184000		77800		100000	106		P	
Total Manganese	90-114	807		616		200	95.5		P	
Total Nickel	88-113	236		25.4		200	105		P	
Total Selenium	83-114	854		BDL		800	107		P	
Total Silver	84-115	20.8		BDL		20.0	104		P	
Total Thallium	85-114	828		BDL		800	104		P	
Total Vanadium	90-111	220		10.8		200	105		P	
Total Zinc	87-115	264		38.0		200	113		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	ug/L
Sample No	555194	Parent Sample No.:	555193
Analytical Prep Batch #	80614	Analytical Preparation Date/Time:	04/20/2021 16:41
Analytical Run #:	181100	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 04/22/2021 Analysis Time: -------- 10:27

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Potassium	86-114	111000		6720		100000	104		P
Total Sodium	87-115	125000		20800		100000	104		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

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DUPLICATES

Sample Description

IDW-48/49

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 161060

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 80604

Analytical Run #: 181172

ICAL Calibration #: 04212021

Sample #: 554886

Parent Sample #: 554741

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Mercury	04/21/2021	14:01		0.020	U	0.020		200		CV

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

IDW-48/49

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 161060

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 80614

Analytical Run #: 181097

ICAL Calibration #:

Sample #: 555192

Parent Sample #: 554741

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Aluminum	04/22/2021	10:14		5120		5730		11.2		P
Total Antimony	04/22/2021	10:14		4.7	U	4.7		0		P
Total Arsenic	04/22/2021	10:14		12	U	12		0		P
Total Barium	04/22/2021	10:14		75.8		81.2		6.88		P
Total Beryllium	04/22/2021	10:14		0.31	J	0.27		13.8		P
Total Cadmium	04/22/2021	10:14		0.42	U	0.42		200		P
Total Calcium	04/22/2021	10:14		151000		147000		2.68		P
Total Chromium	04/22/2021	10:14		15.7		17.1		8.54		P
Total Cobalt	04/22/2021	10:14		8.5		8.4		1.18		P
Total Copper	04/22/2021	10:14		19.3	J	20.7		7.00		P
Total Iron	04/22/2021	10:14		9090		9600		5.46		P
Total Lead	04/22/2021	10:14		10.6		11.2		5.50		P
Total Magnesium	04/22/2021	10:14		77800		76700		1.42		P
Total Manganese	04/22/2021	10:14		616		602		2.30		P
Total Nickel	04/22/2021	10:14		25.4		25.2		0.791		P
Total Selenium	04/22/2021	10:14		9.9	U	9.9		0		P
Total Silver	04/22/2021	10:14		0.70	U	0.70		0		P
Total Thallium	04/22/2021	10:14		5.9	U	5.9		0		P
Total Vanadium	04/22/2021	10:14		10.8		11.5		6.28		P
Total Zinc	04/22/2021	10:14		38.0		39.3		3.36		P

CT LABORATORIES
delivering more than data from your environmental analyses

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DUPLICATES

Sample Description

IDW-48/49

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 161060

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 80614

Analytical Run #: 181100

ICAL Calibration #:

Sample #: 555192

Parent Sample #: 554741

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	04/22/2021	10:14		6720		6740		0.297		P
Total Sodium	04/22/2021	10:14		20800		20300		2.43		P

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **IDW-48/49**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 161060
% Solid for Sample:
Concentration Units: ug/L
Analytical Prep Batch #: 80604
Analytical Preparation Date/Time: 04/20/2021 14:10
Analytical Run #: 181172
ICAL Calibration #: 04212021
Sample #: 554888
Parent Sample #: 554887

Analysis Type: *Initial Analysis*

Analyte	Analysis Date/Tim	RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Mercury	04/21/2021 14:24		1.7		1.9		10.2		CV

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **IDW-48/49**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 161060
% Solid for Sample:
Concentration Units: ug/L
Analytical Prep Batch #: 80614
Analytical Preparation Date/Time: 04/20/2021 16:41
Analytical Run #: 181097
ICAL Calibration #:
Sample #: 555194
Parent Sample #: 555193

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Aluminum	04/22/2021	10:27		9700		10200		5.03		P
Total Antimony	04/22/2021	10:27		218		213		2.32		P
Total Arsenic	04/22/2021	10:27		883		868		1.71		P
Total Barium	04/22/2021	10:27		893		881		1.35		P
Total Beryllium	04/22/2021	10:27		22.0		21.5		2.30		P
Total Cadmium	04/22/2021	10:27		20.4		20.0		1.98		P
Total Calcium	04/22/2021	10:27		347000		348000		0.288		P
Total Chromium	04/22/2021	10:27		105		105		0		P
Total Cobalt	04/22/2021	10:27		220		217		1.37		P
Total Copper	04/22/2021	10:27		130		129		0.772		P
Total Iron	04/22/2021	10:27		10700		11300		5.45		P
Total Lead	04/22/2021	10:27		221		217		1.83		P
Total Magnesium	04/22/2021	10:27		184000		184000		0		P
Total Manganese	04/22/2021	10:27		808		807		0.124		P
Total Nickel	04/22/2021	10:27		239		236		1.26		P
Total Selenium	04/22/2021	10:27		874		854		2.31		P
Total Silver	04/22/2021	10:27		20.9		20.8		0.480		P
Total Thallium	04/22/2021	10:27		848		828		2.39		P
Total Vanadium	04/22/2021	10:27		224		220		1.80		P
Total Zinc	04/22/2021	10:27		267		264		1.13		P

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **IDW-48/49**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 161060
% Solid for Sample:
Concentration Units: ug/L
Analytical Prep Batch #: 80614
Analytical Preparation Date/Time: 04/20/2021 16:41
Analytical Run #: 181100
ICAL Calibration #:
Sample #: 555194
Parent Sample #: 555193

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	04/22/2021	10:27		112000		111000		0.897		P
Total Sodium	04/22/2021	10:27		126000		125000		0.797		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 161060

Concentration Units: ug/L

Analytical Run #: 181172

Sample No.:#: 554885

Analytical Prep Batch #: 80604

Preparation Date/Time: 04/20/2021 14:10

ICAL Calibration #: 04212021

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Mercury	04/21/2021 13:27	82-119	1.72		2.00	86.0		CV

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 161060

Concentration Units: ug/L

Analytical Run #: 181097 Sample No.:#: 555191

Analytical Prep Batch #: 80614 Preparation Date/Time: 04/20/2021 16:41

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Aluminum	04/22/2021 09:49	86-115	854.0		800.0	107		P
Total Antimony	04/22/2021 09:49	88-113	217.0		200.0	109		P
Total Arsenic	04/22/2021 09:49	87-113	851.0		800.0	106		P
Total Barium	04/22/2021 09:49	88-113	812.0		800.0	102		P
Total Beryllium	04/22/2021 09:49	89-112	21.50		20.0	108		P
Total Cadmium	04/22/2021 09:49	88-113	20.50		20.0	103		P
Total Calcium	04/22/2021 09:49	87-113	205000		200000	103		P
Total Chromium	04/22/2021 09:49	90-113	84.90		80.0	106		P
Total Cobalt	04/22/2021 09:49	89-114	208.0		200.0	104		P
Total Copper	04/22/2021 09:49	86-114	107.0		100.0	107		P
Total Iron	04/22/2021 09:49	87-115	417.0		400.0	104		P
Total Lead	04/22/2021 09:49	86-113	211.0		200.0	106		P
Total Magnesium	04/22/2021 09:49	85-113	104000		100000	104		P
Total Manganese	04/22/2021 09:49	90-114	208.0		200.0	104		P
Total Nickel	04/22/2021 09:49	88-113	211.0		200.0	106		P
Total Potassium	04/22/2021 09:49	86-114	102000		100000	102		P
Total Selenium	04/22/2021 09:49	83-114	855.0		800.0	107		P
Total Silver	04/22/2021 09:49	84-115	21.50		20.0	108		P
Total Sodium	04/22/2021 09:49	87-115	104000		100000	104		P
Total Thallium	04/22/2021 09:49	85-114	838.0		800.0	105		P
Total Vanadium	04/22/2021 09:49	90-111	209.0		200.0	105		P
Total Zinc	04/22/2021 09:49	87-115	220.0		200.0	110		P

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ICP SERIAL DILUTION

Sample Description

IDW-48/49

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID SDG No.: 161060

Concentration Units: ug/L

Sample No.: 1001082 Parent Sample No.: 554741

LIMS Run #: 181097 ICAL Calibration #:.:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Aluminum	04/22/2021 10:08	5120		4925		3.81		P	
Iron	04/22/2021 10:08	9090		10900		19.9		P	*FAIL*

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	Fe	0.000006	0.000000	No
			Ce	0.000000	0.000000	No
Ag 338.289 {100}	☒	1	Fe	0.000906	0.000000	No
Al 167.079 {501}	☒	None				
Al 308.215 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	1	Al	0.001713	0.000000	No
As 197.262 {471}	☒	1	Al	-0.000113	0.000000	No
Ba 233.527 {445}	☒	3	Fe	-0.000038	0.000000	No
			V	0.000180	0.000000	No
			Al	0.000000	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000002	0.000000	No
Ba 493.409 { 68}	☒	1	Fe	0.000029	0.000000	No
Be 313.042 {108}	☒	1	Fe	0.000000	0.000000	No
Be 234.861 {144}	☒	1	Fe	-0.000016	0.000000	No
Ca 315.887 {107}	☒	None				
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	1	Cu	0.000000	0.000000	No
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	2	Fe	0.000090	0.000000	No
			Al	0.000000	0.000000	No
Cd 228.802 {147}	☒	None				
Co 228.616 {447}	☒	5	Fe	0.000009	0.000000	No
			Ti	0.003000	0.000000	No
			Ba	-0.001300	0.000000	No
			Ni	0.000040	0.000000	No
			Al	0.000001	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000188	0.000000	No
Cr 205.560 {464}	☒	1	Fe	-0.000004	0.000000	No
Cr 267.716 {126}	☒	1	Fe	-0.000014	0.000000	No
Cu 224.700 {450}	☒	5	Fe	0.000274	0.000000	No
			Mo	0.001320	0.000000	No
			Ni	-0.006000	0.000000	No
			Pb	0.003030	0.000000	No
			Al	0.000000	0.000000	No
Cu 324.754 {104}	☒	1	Fe	-0.000136	0.000000	No
Cu 327.396 {103}	☒	1	Fe	0.000069	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	-0.000086	0.000000	No

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mn 259.373 {130}	☒	1	Mg	0.001339	0.000000	No
Mo 202.030 {466}	☒	1	Fe	-0.000011	0.000000	No
Mo 203.844 {465}	☒	1	Fe	-0.000020	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000036	0.000000	No
Ni 221.647 {452}	☒	1	Ca	0.000021	0.000000	No
Ni 231.604 {445}	☒	3	Fe	0.000012	0.000000	No
			Co	0.000000	0.000000	No
			Mo	0.000000	0.000000	No
Pb 216.999 {455}	☒	2	Al	0.001241	0.000000	No
			Na	0.000000	0.000000	No
Pb 220.353 {453}	☒	3	Si	0.000000	0.000000	No
			Al	0.000001	0.000000	No
			Fe	0.000018	0.000000	No
Pb 220.353 {153}	☒	1	Al	-0.000040	0.000000	No
Sb 206.833 {463}	☒	1	Fe	0.000009	0.000000	No
Sb 217.581 {455}	☒	3	Fe	-0.000069	0.000000	No
			V	0.002070	0.000000	No
			Pb	-0.001040	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000360	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.001308	0.000000	No
Tl 190.856 {476}	☒	5	Fe	0.000024	0.000000	No
			Be	-0.000013	0.000000	No
			Ti	0.000050	0.000000	No
			Cr	0.000251	0.000000	No
			V	-0.003800	0.000000	No
Tl 190.856 {477}	☒	1	Fe	-0.000048	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000073	0.000000	No
V 292.402 {115}	☒	3	Fe	0.000020	0.000000	No
			Cr	-0.000400	0.000000	No
			Al	0.000000	0.000000	No
Zn 202.548 {466}	☒	1	Fe	-0.000239	0.000000	No
Zn 206.200 {463}	☒	1	Fe	-0.000003	0.000000	No
Zn 213.856 {457}	☒	2	Fe	0.000167	0.000000	No
			Cu	0.007413	0.000000	No
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Y 224.306 {451}*	☒	None				
Na 588.995 { 57}	☒	1	Fe	0.000106	0.000000	No
Si 251.611 {134}	☒	2	Fe	-0.000105	0.000000	No
			Mo	0.005400	0.000000	No
Ti 323.452 {104}	☒	1	Fe	0.000036	0.000000	No
Ti 334.941 {101}	☒	1	Fe	0.000052	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000014	0.000000	No
Sr 421.552 { 80}	☒	1	Fe	0.000014	0.000000	No

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Sn 189.989 {477}	☒	1	Fe	0.000013	0.000000	No
B 249.678 {135}	☒	2	Fe	0.000001	0.000000	No
			Co	0.003970	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000357	0.000000	No
Li 670.784 { 50}	☒	1	Fe	0.000011	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000216	0.000000	No
P 213.618 {457}	☒	1	Fe	-0.000079	0.000000	No
S 182.034 {485}	☒	1	Mg	0.000100	0.000000	No
Hg 184.950 {482}	☒	1	Fe	0.000001	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

ICP LINEAR RANGES (QUARTERLY)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

ICP ID Number: TA SDG No.: 161060

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	15.00	1000000	P
Antimony	15.00	10000	P
Arsenic	15.00	10000	P
Barium	15.00	10000	P
Beryllium	15.00	1000	P
Boron	15.00	1000	P
Cadmium	15.00	1000	P
Calcium	15.00	1000000	P
Chromium	15.00	100000	P
Cobalt	15.00	10000	P
Copper	15.00	100000	P
Iron	15.00	1000000	P
Lead	15.00	100000	P
Lithium	15.00	10000	P
Magnesium	15.00	1000000	P
Manganese	15.00	100000	P
Molybdenum	15.00	10000	P
Nickel	15.00	10000	P
Potassium	15.00	200000	P
Selenium	15.00	10000	P
Silicon	15.00	1000	P
Silver	15.00	100	P
Sodium	15.00	200000	P
Strontium	15.00	10000	P
Thallium	15.00	10000	P
Tin	15.00	10000	P
Titanium	15.00	1000	P
Tungsten	15.00	10000	P
Vanadium	15.00	10000	P
Zinc	15.00	100000	P

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PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Method: EPA 7470A

SDG No.: 161060

Preparation Batch #: 80604

Preparation Date/Time: 04/20/2021 / 14:10

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
554741	Normal Sample	IDW-48/49	GROUND WATER	
554884	Method Blank		LIQUID	
554885	Lab Control Spike		LIQUID	
554886	Lab Duplicate	IDW-48/49	GROUND WATER	
554887	Matrix Spike	IDW-48/49	GROUND WATER	
554888	Matrix Spike Duplicate	IDW-48/49	GROUND WATER	

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PREPARATION LOG

Lab Name: CT Laboratories | Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Method: EPA 3010A | SDG No.: 161060

Preparation Batch #: 80614 | Preparation Date/Time: 04/20/2021 / 16:41

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
554741	Normal Sample	IDW-48/49	GROUND WATER	
555190	Method Blank		LIQUID	
555191	Lab Control Spike		LIQUID	
555192	Lab Duplicate	IDW-48/49	GROUND WATER	
555193	Matrix Spike	IDW-48/49	GROUND WATER	
555194	Matrix Spike Duplicate	IDW-48/49	GROUND WATER	

CT LABORATORIES
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ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Lab Code: CTL

SDG No.: 161060

Instrument ID Number: CETAC

Method Number: CV

Start & End Date: 04/21/2021 to 04/21/2021

Analytical Run #: 181172

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
556943	ICV	1	4/21 10:13																X													
557669	ICV	1	4/21 10:17																X													
556945	ICB	1	4/21 10:29																X													
556946	CCV	1	4/21 13:08																X													
556947	CCB	1	4/21 13:14																X													
554885	LCSW	1	4/21 13:27																X													
554884	MBW	1	4/21 13:33																X													
556948	CCV	1	4/21 13:49																X													
556949	CCB	1	4/21 13:55																X													
554741	Initial	1	4/21 13:58																X													
554886	DUP	1	4/21 14:01																X													
554887	MSW	1	4/21 14:20																X													
554888	MSDW	1	4/21 14:24																X													
556950	CCV	1	4/21 14:30																X													
556951	CCB	1	4/21 14:36																X													

CT LABORATORIES
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ANALYSIS RUN LOG

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Lab Code: CTL
SDG No.: 161060

Instrument ID Number: TJA
Method Number: P

Start & End Date: 04/21/2021 to 04/22/2021
Analytical Run #: 181097

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1000779	ICV	1	4/21 12:58	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1000780	ICVLL	1	4/21 13:09	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X			X	X
1000781	ICB	1	4/21 13:15	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1000782	ICSA	1	4/21 13:34	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1000783	ICSAB	1	4/21 13:40	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1000784	ICVLL	1	4/21 13:52																							X							
1000785	CCV1	1	4/22 09:32	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1000786	CCV2	1	4/22 09:37	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1000787	CCB	1	4/22 09:43	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
555191	LCSW	1	4/22 09:49	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
554741	Initial	1	4/22 10:01	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1001082	L	5	4/22 10:08	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
555192	DUP	1	4/22 10:14	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
555193	MSW	1	4/22 10:21	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
555194	MSDW	1	4/22 10:27	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1000788	PDSW	1	4/22 10:33	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1000789	CCV1	1	4/22 10:51	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1000790	CCV2	1	4/22 10:56	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1000791	CCB	1	4/22 11:02	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X

CT LABORATORIES
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ANALYSIS RUN LOG

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Lab Code: CTL | SDG No.: 161060

Instrument ID Number: TJA | Method Number: P

Start & End Date: 04/21/2021 to 04/22/2021 | Analytical Run #: 181100

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1000766	ICV	1	4/21 12:58																				X				X						
1000767	ICVLL	1	4/21 13:09																				X				X						
1000768	ICB	1	4/21 13:15																				X				X						
1000769	ICSA	1	4/21 13:34	X							X				X		X						X				X						
1000770	ICSAB	1	4/21 13:40	X							X				X		X						X				X						
1000772	CCV1	1	4/22 09:32																				X				X						
1000773	CCV2	1	4/22 09:37																				X				X						
1000774	CCB	1	4/22 09:43																				X				X						
555190	MBW	1	4/22 09:55	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
554741	Initial	1	4/22 10:01																				X				X						
1001076	L	5	4/22 10:08																				X										
1001077	L	5	4/22 10:08																								X						
555192	DUP	1	4/22 10:14																				X				X						
555193	MSW	1	4/22 10:21																				X				X						
555194	MSDW	1	4/22 10:27																				X				X						
1001078	PDSW	1	4/22 10:33																				X										
1001079	PDSW	1	4/22 10:33																								X						
1000776	CCV1	1	4/22 10:51																				X				X						
1000777	CCV2	1	4/22 10:56																				X				X						
1000778	CCB	1	4/22 11:02																				X				X						

METALS
RAW DATA
DOCUMENTS

	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
	Ag 328.068 {103}	05/03/2021 09:36:04	04/21/2021 12:08:12	Linear	1/Conc	14.251295	3.815241	0.000000	1.000000	0.999412	0.072024	0.895929	2.986429
	Ag 338.289 {100}	05/03/2021 09:36:04	04/21/2021 12:51:57	Linear	1/Conc	0.287800	0.075910	0.000000	1.000000	0.999231	0.054057	12.650921	42.169736
	Al 167.079 {501}	05/03/2021 09:36:04	04/21/2021 12:13:45	Linear	None	0.000023	0.000003	0.000000	1.000000	0.999961	0.000016	0.796015	2.653383
	Al 308.215 {109}	05/03/2021 09:36:04	04/21/2021 12:32:22	Linear	1/Conc	0.000123	0.000000	0.000000	1.000000	0.999967	0.000001	57.789981	192.633268
	Al 396.152 { 85}	05/03/2021 09:36:04	04/21/2021 12:45:31	Curvilin	1/Var	-0.000155	0.000002	0.000000	1.000000	0.999872	0.000446	13.795749	45.985830
	As 193.759 {474}	05/03/2021 09:36:04	04/21/2021 12:13:46	Linear	1/Var	0.000003	0.000001	0.000000	1.000000	0.999991	0.000002	5.897324	19.657747
	As 197.262 {471}	05/03/2021 09:36:04	04/21/2021 12:19:16	Linear	1/Var	-0.000005	0.000000	0.000000	1.000000	0.999994	0.000002	8.632503	28.775010
	Ba 233.527 {445}	05/03/2021 09:36:04	04/21/2021 12:13:46	Linear	1/Conc	0.000001	0.000007	0.000000	1.000000	0.999956	0.000000	0.535758	1.785860
	Ba 455.403 { 74}	05/03/2021 09:36:04	04/21/2021 12:19:16	Linear	1/Conc	0.000200	0.000112	0.000000	1.000000	0.999962	0.000004	0.279320	0.931068
	Ba 493.409 { 68}	05/03/2021 09:36:04	04/21/2021 12:51:57	Linear	1/Var	0.016053	0.000098	0.000000	1.000000	0.999932	0.000368	0.905230	3.017432
	Be 313.042 {108}	05/03/2021 09:36:04	04/21/2021 12:13:47	Linear	1/Conc	0.000037	0.000062	0.000000	1.000000	0.999994	0.000000	0.030676	0.102253
	Be 234.861 {144}	05/03/2021 09:36:04	04/21/2021 12:13:47	Linear	1/Var	-0.000000	0.000001	0.000000	1.000000	0.999993	0.000002	6.150465	20.501551
	Ca 315.887 {107}	05/03/2021 09:36:04	04/21/2021 12:45:31	Curvilin	1/Conc	0.000076	0.000000	0.000000	1.000000	0.999993	0.000003	16.136229	53.787429
	Ca 317.933 {106}	05/03/2021 09:36:04	04/21/2021 12:45:31	Linear	1/Var	0.000058	0.000000	0.000000	1.000000	0.997813	0.000076	110.634365	368.781217
	Ca 393.366 { 86}	05/03/2021 09:36:04	04/21/2021 12:13:47	Linear	None	0.000745	0.000393	0.000000	1.000000	0.999999	0.000521	0.062618	0.208726
	Ca 396.847 { 85}	05/03/2021 09:36:04	04/21/2021 12:19:17	Linear	1/Conc	0.000130	0.000185	0.000000	1.000000	0.999964	0.000074	0.129687	0.432291
	Cd 226.502 {449}	05/03/2021 09:36:04	04/21/2021 12:13:48	Linear	1/Conc	-0.000003	0.000023	0.000000	1.000000	0.999948	0.000000	0.250998	0.836659
	Cd 228.802 {447}	05/03/2021 09:36:04	04/21/2021 12:13:48	Linear	1/Conc	0.000025	0.000044	0.000000	1.000000	0.999970	0.000000	0.189052	0.630173
	Co 228.616 {447}	05/03/2021 09:36:04	04/21/2021 12:19:17	Linear	1/Conc	-0.000001	0.000022	0.000000	1.000000	0.999986	0.000000	0.337015	1.123385
	Co 238.892 {141}	05/03/2021 09:36:04	04/21/2021 12:19:17	Linear	1/Conc	0.000002	0.000001	0.000000	1.000000	0.999992	0.000000	0.958787	3.195956
	Cr 205.560 {464}	05/03/2021 09:36:04	04/21/2021 12:25:59	Linear	1/Var	-0.000002	0.000011	0.000000	1.000000	0.999186	0.000050	0.416787	1.389291
	Cr 267.716 {126}	05/03/2021 09:36:04	04/21/2021 12:19:18	Linear	1/Conc	-0.000000	0.000003	0.000000	1.000000	0.999969	0.000000	0.599390	1.997968
	Cu 223.008 {451}	05/03/2021 09:36:04	04/21/2021 12:13:49	Linear	1/Conc	0.000013	0.000006	0.000000	1.000000	0.999986	0.000000	1.222411	4.074704
	Cu 224.700 {450}	05/03/2021 09:36:04	04/21/2021 12:25:59	Linear	None	-0.000642	0.000006	0.000000	1.000000	0.999990	0.001066	0.702199	2.340664
	Cu 324.754 {104}	05/03/2021 09:36:04	04/21/2021 12:25:59	Linear	1/Var	0.000353	0.000002	0.000000	1.000000	0.999880	0.000048	7.163694	23.878980
	Cu 327.396 {103}	05/03/2021 09:36:04	04/21/2021 12:26:00	Linear	1/Var	0.000004	0.000003	0.000000	1.000000	0.999824	0.000077	9.155208	30.517359
	Fe 234.349 {144}	05/03/2021 09:36:04	04/21/2021 12:32:22	Linear	1/Var	0.000014	0.000000	0.000000	1.000000	0.999901	0.000004	1.452980	4.843267
	Fe 239.562 {140}	05/03/2021 09:36:04	04/21/2021 12:45:32	Linear	1/Conc	0.000007	0.000000	0.000000	1.000000	0.998156	0.000027	23.059426	76.864754
	Fe 259.940 {129}	05/03/2021 09:36:04	04/21/2021 12:38:54	Linear	1/Var	0.000009	0.000001	0.000000	1.000000	0.999355	0.000063	9.346056	31.153521
	Mg 202.582 {466}	05/03/2021 09:36:04	04/21/2021 12:45:32	Linear	1/Var	-0.000001	0.000000	0.000000	1.000000	0.999184	0.000009	3.880593	12.935309
	Mg 279.079 {121}	05/03/2021 09:36:04	04/21/2021 12:45:32	Linear	1/Var	0.000004	0.000000	0.000000	1.000000	0.999825	0.000045	111.212175	370.707250
	Mg 280.270 {120}	05/03/2021 09:36:04	04/21/2021 12:19:19	Linear	1/Conc	0.000048	0.000030	0.000000	1.000000	0.999557	0.000042	0.035417	0.118058
	Mn 257.610 {131}	05/03/2021 09:36:04	04/21/2021 12:19:19	Linear	1/Conc	0.000000	0.000010	0.000000	1.000000	0.999875	0.000001	0.097552	0.325173
	Mn 259.373 {130}	05/03/2021 09:36:04	04/21/2021 12:26:00	Linear	1/Var	0.000008	0.000004	0.000000	1.000000	0.999968	0.000022	1.966922	6.556406
	Mo 202.030 {466}	05/03/2021 09:36:04	04/21/2021 12:13:51	Linear	1/Conc	0.000002	0.000007	0.000000	1.000000	0.999981	0.000000	0.660944	2.203148
	Mo 202.030 {467}	05/03/2021 09:36:04	04/21/2021 12:13:51	Linear	None	0.000004	0.000007	0.000000	1.000000	0.999999	0.000004	0.627160	2.090533
	Mo 204.598 {464}	05/03/2021 09:36:04	04/21/2021 12:19:20	Linear	1/Var	-0.000003	0.000005	0.000000	1.000000	0.999994	0.000004	1.113850	3.712832
	Ni 221.647 {452}	05/03/2021 09:36:04	04/21/2021 12:19:20	Linear	1/Var	-0.000001	0.000015	0.000000	1.000000	0.999954	0.000032	0.575731	1.919102
	Ni 231.604 {445}	05/03/2021 09:36:04	04/21/2021 12:19:20	Linear	1/Conc	-0.000033	0.000015	0.000000	1.000000	0.999968	0.000000	0.575445	1.918151
	Pb 216.999 {455}	05/03/2021 09:36:04	04/21/2021 12:26:00	Linear	1/Var	0.000003	0.000001	0.000000	1.000000	0.999892	0.000061	6.139198	20.463992
	Pb 216.999 {456}	05/03/2021 09:36:04	04/21/2021 12:26:00	Linear	None	-0.000015	0.000000	0.000000	1.000000	0.999989	0.000035	20.914819	69.716062
	Pb 220.353 {153}	05/03/2021 09:36:04	04/21/2021 12:26:00	Linear	1/Conc	0.000003	0.000001	0.000000	1.000000	0.999905	0.000003	5.578345	18.594485
	Pb 220.353 {453}	05/03/2021 09:36:04	04/21/2021 12:13:52	Linear	1/Conc	0.000023	0.000002	0.000000	1.000000	0.999835	0.000000	3.371749	11.239164
	Sb 206.833 {463}	05/03/2021 09:36:04	04/21/2021 12:19:21	Linear	1/Conc	-0.000002	0.000002	0.000000	1.000000	0.999991	0.000000	2.934793	9.782642

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	OK.	1.000000	0.000000	1	0
	Ag 338.289 {100}	OK.	1.000000	0.000000	1	0
	Al 167.079 {501}	OK.	1.000000	0.000000	1	0
	Al 308.215 {109}	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	OK.	1.000000	0.000000	1	0
	As 193.759 {474}	OK.	1.000000	0.000000	1	0
	As 197.262 {471}	OK.	1.000000	0.000000	1	0
	Ba 233.527 {445}	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	OK.	1.000000	0.000000	1	0
	Ba 493.409 { 68}	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	OK.	1.000000	0.000000	1	0
	Be 234.861 {144}	OK.	1.000000	0.000000	1	0
	Ca 315.887 {107}	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	OK.	1.000000	0.000000	1	0
	Ca 393.366 { 86}	OK.	1.000000	0.000000	1	0
	Ca 396.847 { 85}	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	OK.	1.000000	0.000000	1	0
	Cd 228.802 {447}	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	OK.	1.000000	0.000000	1	0
	Co 238.892 {141}	OK.	1.000000	0.000000	1	0
	Cr 205.560 {464}	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	OK.	1.000000	0.000000	1	0
	Cu 223.008 {451}	OK.	1.000000	0.000000	1	0
	Cu 224.700 {450}	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	OK.	1.000000	0.000000	1	0
	Cu 327.396 {103}	OK.	1.000000	0.000000	1	0
	Fe 234.349 {144}	OK.	1.000000	0.000000	1	0
	Fe 239.562 {140}	OK.	1.000000	0.000000	1	0
	Fe 259.940 {129}	OK.	1.000000	0.000000	1	0
	Mg 202.582 {466}	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	OK.	1.000000	0.000000	1	0
	Mg 280.270 {120}	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	OK.	1.000000	0.000000	1	0
	Mn 259.373 {130}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {466}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	OK.	1.000000	0.000000	1	0
	Mo 204.598 {464}	OK.	1.000000	0.000000	1	0
	Ni 221.647 {452}	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {455}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {456}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {153}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	OK.	1.000000	0.000000	1	0

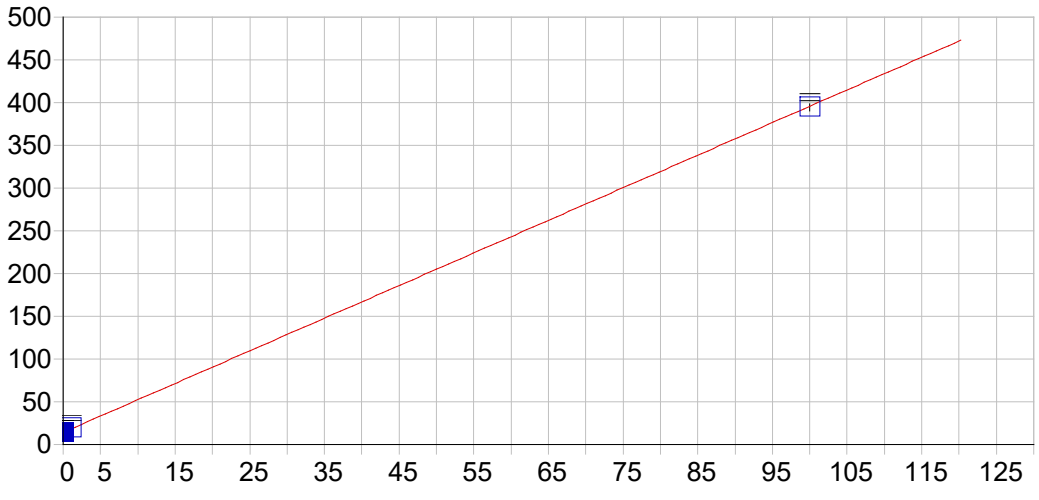
	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
	Sb 217.581 {455}	05/03/2021 09:36:04	04/21/2021 12:19:21	Linear	1/Conc	0.000006	0.000002	0.000000	1.000000	0.999921	0.000000	3.106942	10.356474
	Se 196.090 {472}	05/03/2021 09:36:04	04/21/2021 12:13:53	Linear	1/Conc	0.000002	0.000001	0.000000	1.000000	0.999745	0.000000	6.146369	20.487896
	Se 203.985 {465}	05/03/2021 09:36:04	04/21/2021 12:13:53	Linear	1/Var	0.000002	0.000001	0.000000	1.000000	0.999992	0.000001	8.686475	28.954917
	Se 206.279 {463}	05/03/2021 09:36:04	04/21/2021 12:19:21	Linear	1/Conc	-0.000002	0.000000	0.000000	1.000000	0.999991	0.000000	30.667581	102.225268
	Tl 190.856 {476}	05/03/2021 09:36:04	04/21/2021 12:13:53	Linear	1/Conc	0.000007	0.000002	0.000000	1.000000	0.999744	0.000000	2.816750	9.389165
	Tl 190.856 {477}	05/03/2021 09:36:04	04/21/2021 12:19:21	Linear	1/Conc	0.000002	0.000001	0.000000	1.000000	0.999862	0.000000	5.087080	16.956932
	V 290.882 {116}	05/03/2021 09:36:04	04/21/2021 12:19:22	Linear	None	0.000002	0.000001	0.000000	1.000000	0.999999	0.000006	9.836683	32.788944
	V 292.402 {115}	05/03/2021 09:36:04	04/21/2021 12:19:22	Linear	1/Conc	-0.000001	0.000004	0.000000	1.000000	0.999996	0.000000	0.738405	2.461350
	Zn 206.200 {463}	05/03/2021 09:36:04	04/21/2021 12:26:00	Linear	1/Var	0.000025	0.000020	0.000000	1.000000	0.999692	0.000016	0.281089	0.936964
	Zn 213.856 {457}	05/03/2021 09:36:04	04/21/2021 12:13:54	Linear	1/Var	0.000048	0.000032	0.000000	1.000000	0.999994	0.000021	0.181949	0.606497
	Y 224.306 {450}*	05/03/2021 09:36:04	04/21/2021 11:25:04	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 324.228 {104}*	05/03/2021 09:36:04	04/21/2021 11:25:05	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 371.030 { 91}*	05/03/2021 09:36:04	04/21/2021 11:25:05	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Na 588.995 { 57}	05/03/2021 09:36:04	04/21/2021 12:45:32	Curvilin	1/Conc	0.009259	0.000018	-0.000000	1.000000	0.999995	0.000076	6.656673	22.188909
	Na 589.592 { 57}	05/03/2021 09:36:04	04/21/2021 12:45:32	Linear	1/Var	0.000192	0.000006	0.000000	1.000000	0.999836	0.000636	11.530243	38.434144
	Si 251.611 {134}	05/03/2021 09:36:04	04/21/2021 12:45:32	Curvilin	1/Conc	-0.000007	0.000000	0.000000	1.000000	1.000000	0.000000	25.885925	86.286417
	Ti 323.452 {104}	05/03/2021 09:36:04	04/21/2021 12:19:22	Linear	1/Conc	0.000261	0.000008	0.000000	1.000000	0.999999	0.000000	2.124889	7.082962
	Ti 334.941 {101}	05/03/2021 09:36:04	04/21/2021 12:19:23	Linear	1/Conc	-0.000008	0.000007	0.000000	1.000000	0.999905	0.000001	2.015989	6.719965
	Sr 407.771 { 83}	05/03/2021 09:36:04	04/21/2021 12:19:23	Linear	1/Conc	0.000041	0.000196	0.000000	1.000000	0.999977	0.000005	0.160614	0.535381
	Sr 421.552 { 80}	05/03/2021 09:36:04	04/21/2021 12:19:23	Linear	1/Conc	-0.000002	0.000192	0.000000	1.000000	0.999985	0.000004	0.154140	0.513801
	Sn 189.989 {477}	05/03/2021 09:36:04	04/21/2021 12:19:23	Linear	1/Conc	0.000004	0.000004	0.000000	1.000000	0.999982	0.000000	1.110059	3.700198
	B 249.678 {135}	05/03/2021 09:36:04	04/21/2021 12:19:23	Linear	1/Conc	-0.000000	0.000002	0.000000	1.000000	0.999997	0.000000	1.028170	3.427233
	B 249.773 {135}	05/03/2021 09:36:04	04/21/2021 12:19:24	Linear	1/Var	-0.000001	0.000003	0.000000	1.000000	0.999995	0.000001	0.668819	2.229395
	Li 670.784 { 50}	05/03/2021 09:36:04	04/21/2021 12:19:24	Linear	1/Conc	-0.000109	0.000062	0.000000	1.000000	0.999997	0.000002	1.347733	4.492443
	K 766.490 { 44}	05/03/2021 09:36:04	04/21/2021 12:45:33	Linear	1/Var	0.000212	0.000002	0.000000	1.000000	0.999525	0.000723	40.253422	134.178073
	K 769.896 { 44}	05/03/2021 09:36:04	04/21/2021 12:45:33	Curvilin	1/Conc	0.000127	0.000001	0.000000	1.000000	0.999977	0.000009	85.710421	285.701404
	P 213.618 {457}	05/03/2021 09:36:04	04/21/2021 12:45:33	Linear	1/Conc	-0.000013	0.000001	0.000000	1.000000	0.999482	0.000056	4.658276	15.527587
	S 182.034 {485}	05/03/2021 09:36:04	04/21/2021 12:45:33	Linear	1/Var	0.000018	0.000001	0.000000	1.000000	0.998655	0.000116	5.581056	18.603518
	Hg 184.950 {482}	05/03/2021 09:36:04	04/21/2021 12:13:57	Linear	1/Conc	-0.000000	0.000000	0.000000	1.000000	0.999985	0.000000	1.165568	3.885228
	Ce 404.076 { 83}	05/03/2021 09:36:04	04/21/2021 12:13:57	Linear	1/Conc	0.000028	0.000001	0.000000	1.000000	1.000000	0.000000	25.806350	86.021166

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Sb 217.581 {455}	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	OK.	1.000000	0.000000	1	0
	Se 203.985 {465}	OK.	1.000000	0.000000	1	0
	Se 206.279 {463}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {476}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	OK.	1.000000	0.000000	1	0
	V 290.882 {116}	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	OK.	1.000000	0.000000	1	0
	Zn 206.200 {463}	OK.	1.000000	0.000000	1	0
	Zn 213.856 {457}	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	Warnin	1.000000	0.000000	1	0
	Y 324.228 {104}*	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	Warnin	1.000000	0.000000	1	0
	Na 588.995 { 57}	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	OK.	1.000000	0.000000	1	0
	Si 251.611 {134}	OK.	1.000000	0.000000	1	0
	Ti 323.452 {104}	OK.	1.000000	0.000000	1	0
	Ti 334.941 {101}	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	OK.	1.000000	0.000000	1	0
	Sr 421.552 { 80}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	OK.	1.000000	0.000000	1	0
	B 249.678 {135}	OK.	1.000000	0.000000	1	0
	B 249.773 {135}	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	OK.	1.000000	0.000000	1	0
	K 769.896 { 44}	OK.	1.000000	0.000000	1	0
	P 213.618 {457}	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	OK.	1.000000	0.000000	1	0
	Hg 184.950 {482}	OK.	1.000000	0.000000	1	0
	Ce 404.076 { 83}	OK.	1.000000	0.000000	1	0

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	1	Ce	-0.004337	0.000000	No
Ag 338.289 {100}	☒	1	Fe	0.001541	0.000000	No
Al 167.079 {501}	☒	None				
Al 308.215 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	4	Al	0.001389	0.000000	No
			Mn	-0.000003	0.000000	No
			Ni	-0.000722	0.000000	No
			Cr	0.000734	0.000000	No
As 197.262 {471}	☒	1	Al	0.000112	0.000000	No
Ba 233.527 {445}	☒	1	Fe	0.000006	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000002	0.000000	No
Ba 493.409 { 68}	☒	1	Fe	0.000009	0.000000	No
Be 313.042 {108}	☒	2	Fe	0.000011	0.000000	No
			Ni	0.000000	0.000000	No
Be 234.861 {144}	☒	1	Fe	-0.000013	0.000000	No
Ca 315.887 {107}	☒	1	Fe	0.000000	0.000000	No
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	None				
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	1	Fe	0.000125	0.000000	No
Cd 228.802 {447}	☒	1	Fe	-0.000005	0.000000	No
Co 228.616 {447}	☒	3	Fe	-0.000023	0.000000	No
			Ba	-0.001175	0.000000	No
			Ti	0.001700	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000226	0.000000	No
Cr 205.560 {464}	☒	1	Fe	0.000000	0.000000	No
Cr 267.716 {126}	☒	4	Fe	0.000005	0.000000	No
			Mn	0.000157	0.000000	No
			Ti	0.000100	0.000000	No
			V	-0.000002	0.000000	No
Cu 223.008 {451}	☒	2	Fe	-0.000023	0.000000	No
			Mo	0.008000	0.000000	No
Cu 224.700 {450}	☒	2	Fe	0.003134	0.000000	No
			Ni	-0.007040	0.000000	No
Cu 324.754 {104}	☒	1	Fe	-0.000081	0.000000	No
Cu 327.396 {103}	☒	2	Fe	-0.000009	0.000000	No
			Mo	-0.000319	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mn 257.610 {131}	☒	2	Al	-0.000002	0.000000	No
			K	0.000100	0.000000	No
Mn 259.373 {130}	☒	1	Mg	0.001114	0.000000	No
Mo 202.030 {466}	☒	1	Fe	-0.000013	0.000000	No
Mo 202.030 {467}	☒	1	Fe	-0.000009	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000052	0.000000	No
Ni 221.647 {452}	☒	2	Ca	-0.000003	0.000000	No
			Mg	-0.000003	0.000000	No
Ni 231.604 {445}	☒	6	Fe	-0.000059	0.000000	No
			Co	-0.000134	0.000000	No
			Mo	0.000840	0.000000	No
			Al	0.000003	0.000000	No
			Mn	0.000019	0.000000	No
			Be	-0.000294	0.000000	No
Pb 216.999 {455}	☒	2	Al	0.001866	0.000000	No
			Na	0.000000	0.000000	No
Pb 216.999 {456}	☒	1	Al	0.003022	0.000000	No
Pb 220.353 {153}	☒	1	Fe	-0.000011	0.000000	No
Pb 220.353 {453}	☒	5	Si	0.000000	0.000000	No
			Al	0.000008	0.000000	No
			Ni	0.000106	0.000000	No
			Mo	-0.001644	0.000000	No
			V	-0.000018	0.000000	No
Sb 206.833 {463}	☒	2	Fe	-0.000097	0.000000	No
			Cr	0.000000	0.000000	No
Sb 217.581 {455}	☒	2	Fe	-0.000051	0.000000	No
			Ni	0.000133	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000448	0.000000	No
Se 203.985 {465}	☒	1	Fe	-0.000160	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.000965	0.000000	No
Tl 190.856 {476}	☒	7	Fe	-0.000021	0.000000	No
			Be	-0.000013	0.000000	No
			Ti	0.000000	0.000000	No
			Mn	0.000000	0.000000	No
			Ni	0.000000	0.000000	No
			Co	0.002495	0.000000	No
			Cr	0.000220	0.000000	No
Tl 190.856 {477}	☒	2	Fe	-0.000126	0.000000	No
			Cr	0.000000	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000207	0.000000	No
V 292.402 {115}	☒	5	Fe	0.000045	0.000000	No
			Cr	-0.000051	0.000000	No
			Al	0.000000	0.000000	No
			Ti	0.000420	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Mo	-0.000481	0.000000	No
Zn 206.200 {463}	☒	1	Fe	0.000032	0.000000	No
Zn 213.856 {457}	☒	5	Fe	0.000140	0.000000	No
			Mn	0.000094	0.000000	No
			Ni	0.004500	0.000000	No
			Ti	-0.000307	0.000000	No
			Mo	0.000034	0.000000	No
Y 224.306 {450}*	☒	None				
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Na 588.995 { 57}	☒	1	Fe	0.000201	0.000000	No
Na 589.592 { 57}	☒	1	Fe	0.000152	0.000000	No
Si 251.611 {134}	☒	1	Fe	-0.000125	0.000000	No
Ti 323.452 {104}	☒	1	Fe	0.000004	0.000000	No
Ti 334.941 {101}	☒	1	Fe	0.000140	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000015	0.000000	No
Sr 421.552 { 80}	☒	1	Ca	0.000013	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000016	0.000000	No
B 249.678 {135}	☒	1	Fe	0.000001	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000371	0.000000	No
Li 670.784 { 50}	☒	1	Fe	0.000016	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000217	0.000000	No
K 769.896 { 44}	☒	1	Fe	0.000480	0.000000	No
P 213.618 {457}	☒	1	Fe	-0.000011	0.000000	No
S 182.034 {485}	☒	2	Mn	0.002145	0.000000	No
			Fe	0.001283	0.000000	No
Hg 184.950 {482}	☒	1	Fe	0.000009	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

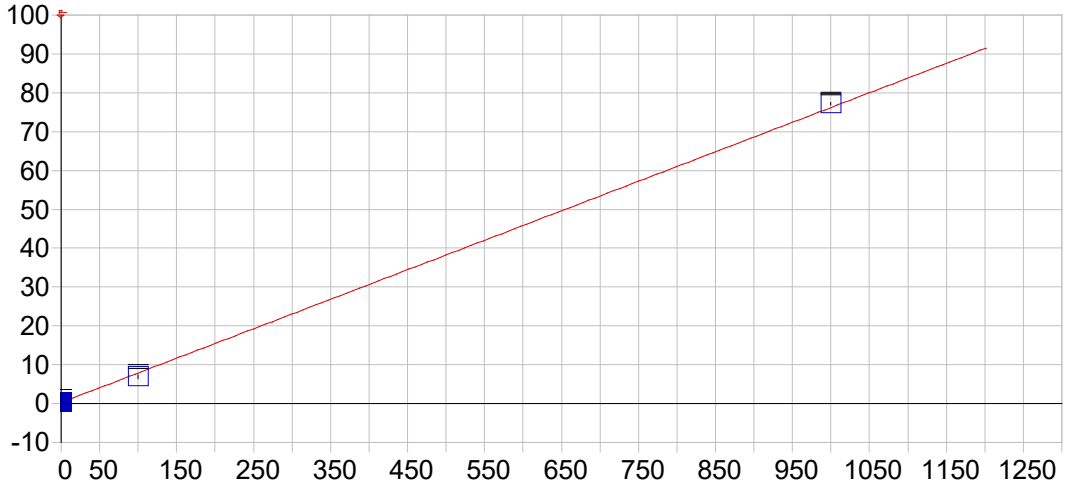


Ag 328.068 {103}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	14.251295	Re-Slope:	1.000000
A1 (Gain):	3.815241	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999412	Status:	OK.
Std Error of Est:	0.072024		
Predicted MDL:	0.895929		
Predicted MQL:	2.986429		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00034	-.000	.000	14.250	1.84	1
CalStd8=100	100.00	99.657	-.343	-.343	394.47	4.01	1
CalStd3=1	1.0000	1.3430	.343	34.3	19.375	2.89	1

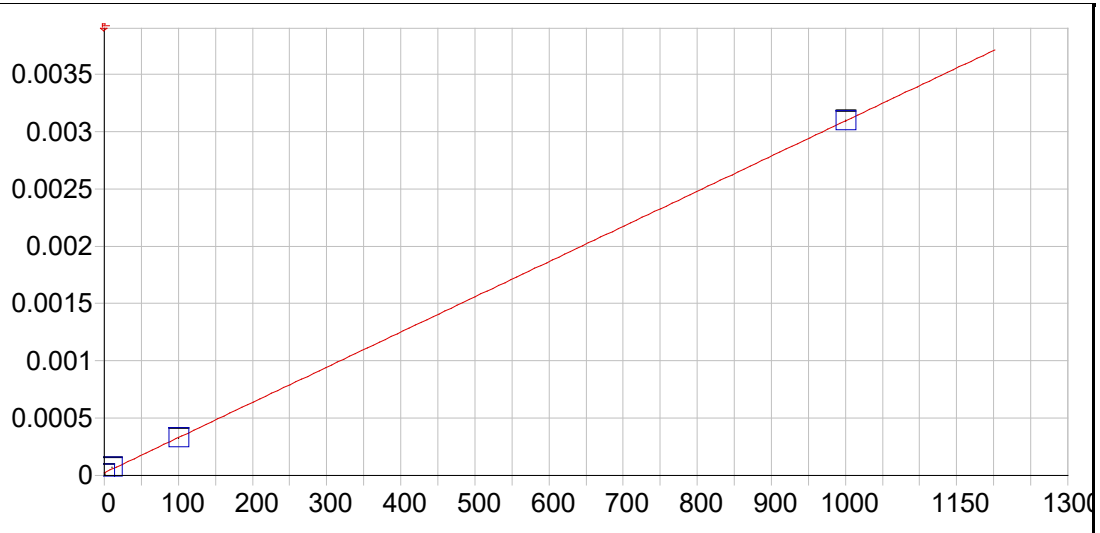


Ag 338.289 {100}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.287800	Re-Slope:	1.000000
A1 (Gain):	0.075910	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999231	Status:	OK.
Std Error of Est:	0.054057		
Predicted MDL:	12.650921		
Predicted MQL:	42.169736		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.01116	.011	.000	.28865	.683	1
CalStd8=100	100.00	87.601	-12.4	-12.4	6.9376	.486	1
Ag Ba 1000,	1000.0	1012.4	12.4	1.24	77.139	.333	1

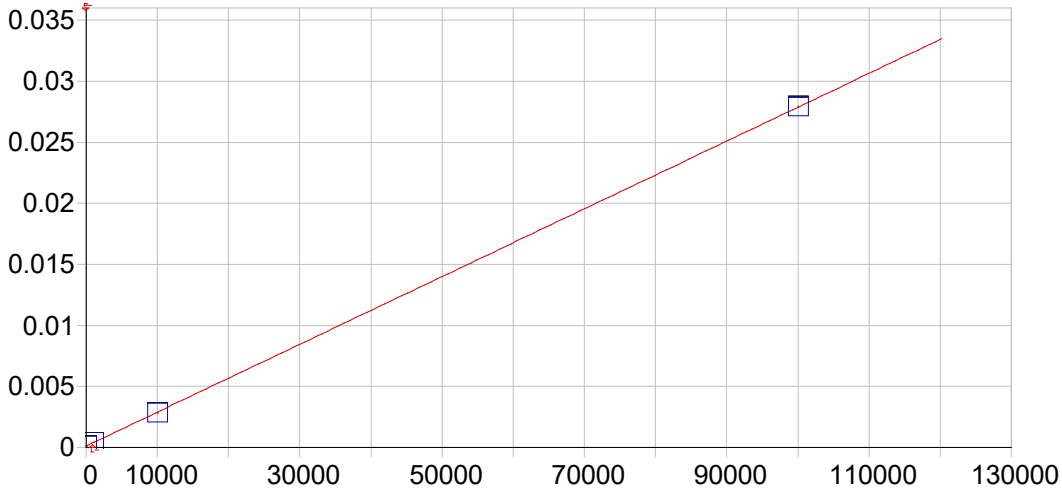


Al 167.079 {501}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000023	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999961	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.796015		
Predicted MQL:	2.653383		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-4.6587	-4.66	.000	.00001	.000	1
CalStd9=100	1000.0	1000.1	.051	.005	.00309	.000	1
CalStd5=10	10.000	15.686	5.69	56.9	.00007	.000	1
CalStd8=100	100.00	98.922	-1.08	-1.08	.00033	.000	1

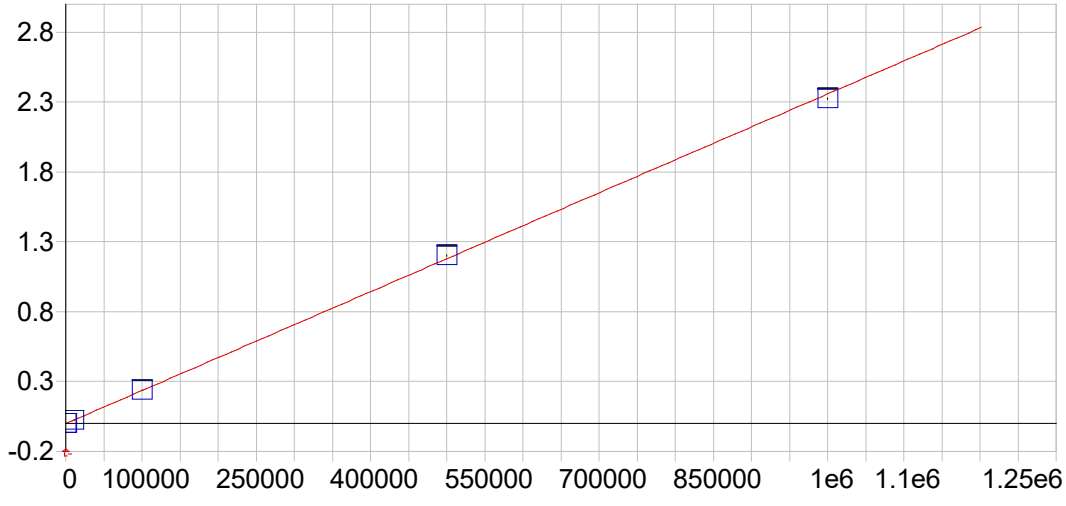


Al 308.215 {109}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000123	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	57.789981		
Predicted MQL:	192.633268		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01085	-.011	.000	.00012	.000	1
CalStd10=10	10000.	9758.2	-242.	-2.42	.00283	.000	1
CalStd9=100	1000.0	1032.9	32.9	3.29	.00041	.000	1
CalStd13=10	100000.	100210.	209.	.209	.02792	.000	1

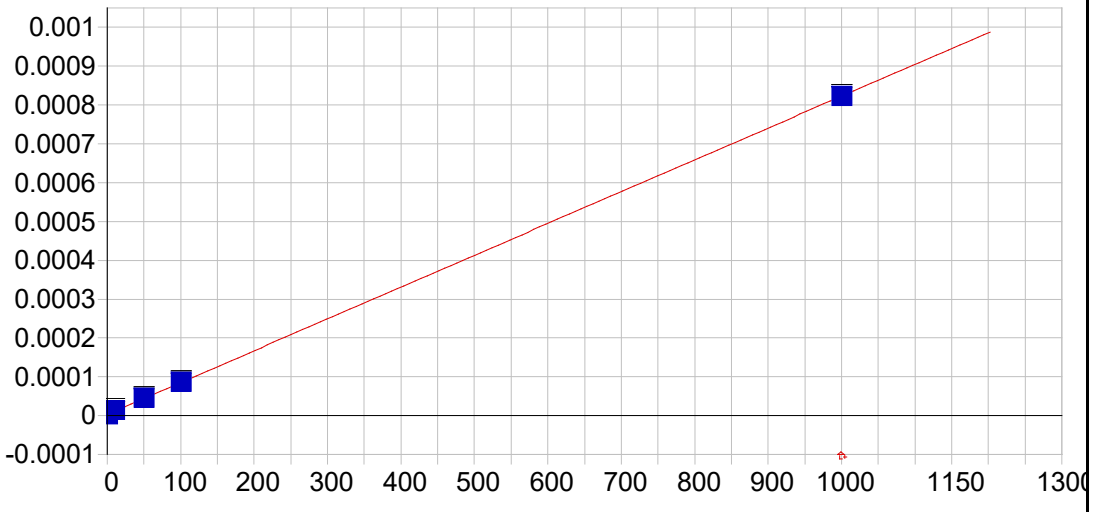


Al 396.152 { 85}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	-0.000155	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999872	Status:	OK.
Std Error of Est:	0.000446		
Predicted MDL:	13.795749		
Predicted MQL:	45.985830		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	28.301	28.3	.000	-.00009	.000	1
CalStd14=50	500000.	510100.	10100.	2.02	1.2029	.005	1
CalStd13=10	100000.	101110.	1110.	1.11	.23830	.000	1
CalStd10=10	10000.	9737.3	-263.	-2.63	.02281	.000	1
CalStd9=100	1000.0	1053.3	53.3	5.33	.00233	.000	1
CalibStd15=1	1000000.	986310.	-13700.	-1.37	2.3259	.004	1

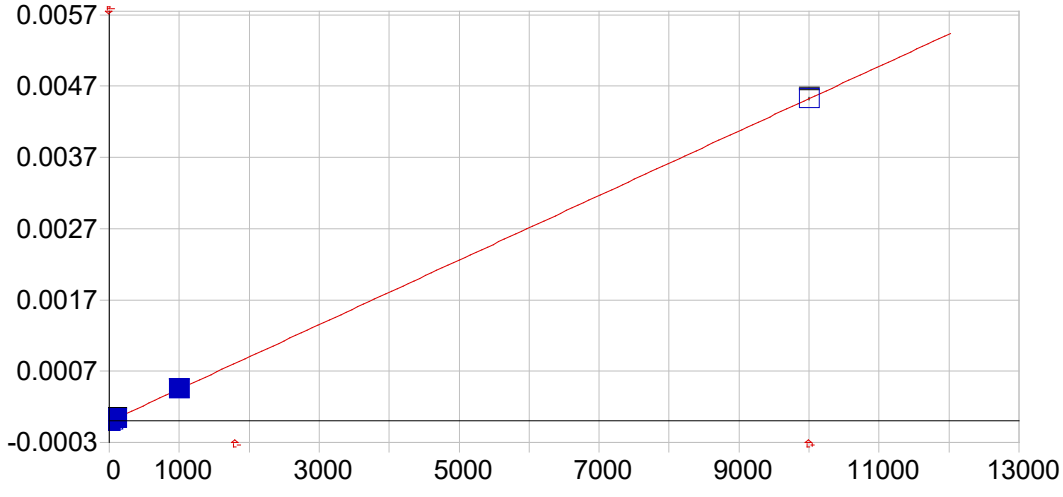


As 193.759 {474}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999991	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	5.897324		
Predicted MQL:	19.657747		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.6839	-1.68	.000	.00000	.000	1
CalStd9=100	1000.0	999.87	-.125	-.013	.00082	.000	1
CalStd7=50	50.000	51.122	1.12	2.24	.00005	.000	1
CalStd5=10	10.000	12.955	2.95	29.5	.00001	.000	1
CalStd8=100	100.00	100.23	.226	.226	.00009	.000	1

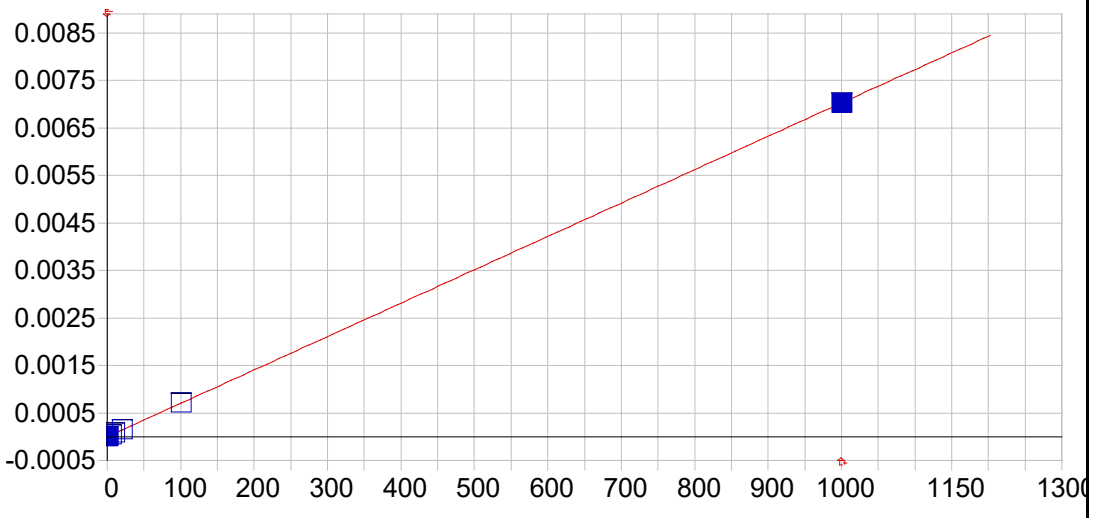


As 197.262 {471}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	8.632503		
Predicted MQL:	28.775010		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.79181	.792	.000	-.00000	.000	1
CalStd9=100	1000.0	1001.7	1.65	.165	.00045	.000	1
CalStd7=50	50.000	44.318	-5.68	-11.4	.00002	.000	1
CalStd5=10	10.000	8.7647	-1.24	-12.4	-.00000	.000	1
CalStd8=100	100.00	103.95	3.95	3.95	.00004	.000	1
CalStd10=10	10000.	9997.9	-2.14	-.021	.00452	.000	1

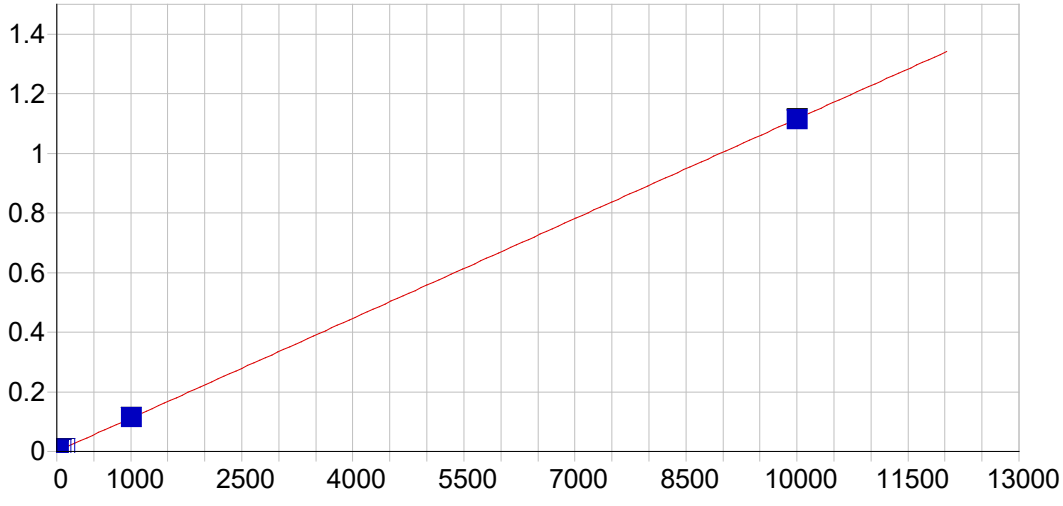


Ba 233.527 {445}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999956	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.535758		
Predicted MQL:	1.785860		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00032	-.000	.000	.00000	.000	1
CalStd5=10	10.000	10.405	.405	4.05	.00007	.000	1
CalStd6=20	20.000	20.443	.443	2.22	.00014	.000	1
CalStd8=100	100.00	99.808	-.192	-.192	.00070	.000	1
CalStd4=5	5.0000	4.9369	-.063	-1.26	.00004	.000	1
CalStd9=100	1000.0	999.14	-.862	-.086	.00702	.000	1
CalStd3=1	1.0000	1.2693	.269	26.9	.00001	.000	1

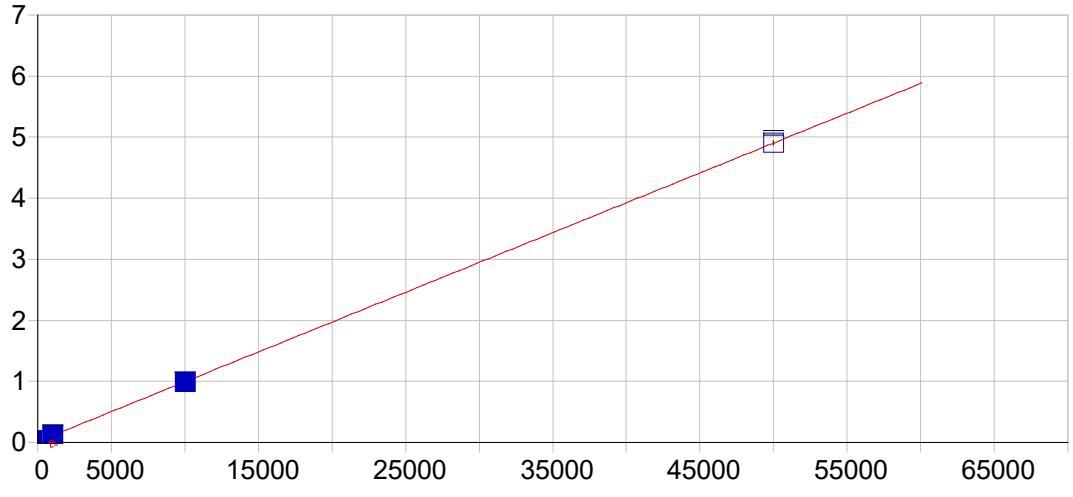


Ba 455.403 { 74}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000200	Re-Slope:	1.000000
A1 (Gain):	0.000112	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999962	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.279320		
Predicted MQL:	0.931068		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00043	-.000	.000	.00020	.000	1
CalStd7=50	50.000	52.039	2.04	4.08	.00600	.000	1
CalStd5=10	10.000	10.666	.666	6.66	.00139	.000	1
CalStd6=20	20.000	21.191	1.19	5.96	.00256	.000	1
CalStd8=100	100.00	102.18	2.18	2.18	.01160	.000	1
CalStd4=5	5.0000	5.7985	.799	16.0	.00085	.000	1
CalStd9=100	1000.0	1020.1	20.1	2.01	.11398	.000	1
CalStd3=1	1.0000	1.0672	.067	6.72	.00032	.000	1
CalStd10=10	10000.	9973.0	-27.0	-.270	1.1126	.001	1

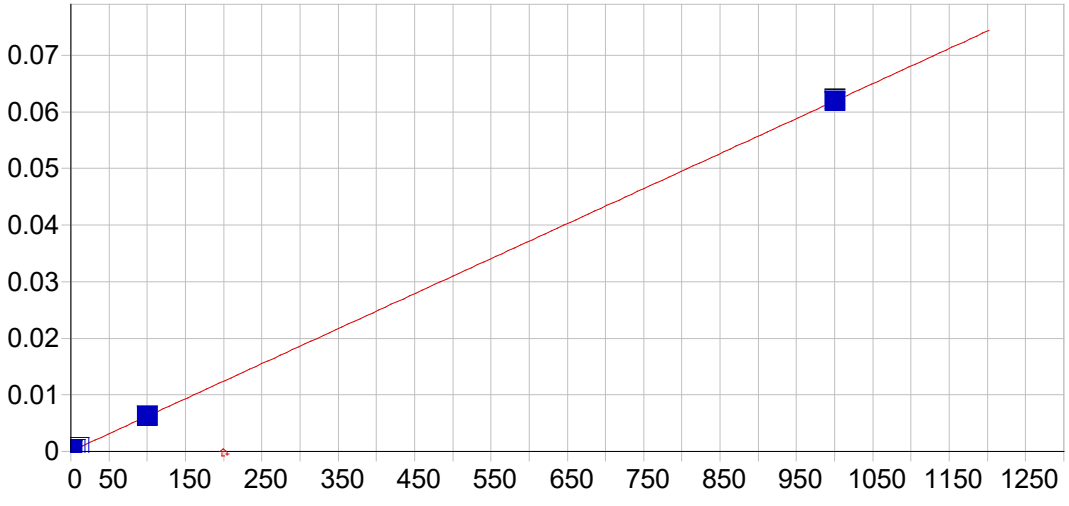


Ba 493.409 { 68}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.016053	Re-Slope:	1.000000
A1 (Gain):	0.000098	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999932	Status:	OK.
Std Error of Est:	0.000368		
Predicted MDL:	0.905230		
Predicted MQL:	3.017432		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.4364	-1.44	.000	.01591	.000	1
CalStd9=100	1000.0	1006.6	6.62	.662	.11444	.000	1
CalStd8=100	100.00	101.71	1.71	1.71	.02599	.000	1
Ag Ba 1000,	50000.	50004.	4.31	.009	4.9034	.037	1
CalStd10=10	10000.	9861.5	-139.	-1.39	.97991	.002	1

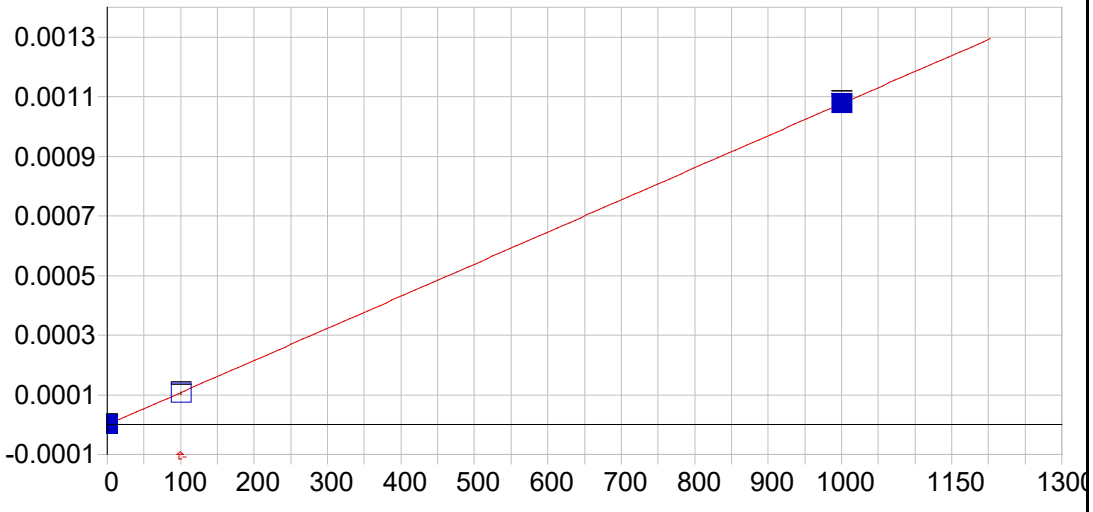


Be 313.042 {108}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000037	Re-Slope:	1.000000
A1 (Gain):	0.000062	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.030676		
Predicted MQL:	0.102253		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00006	-.000	.000	.00004	.000	1
CalStd5=10	10.000	10.186	.186	1.86	.00067	.000	1
CalStd8=100	100.00	99.322	-.678	-.678	.00618	.000	1
CalStd2=0.5	.50000	.52158	.022	4.32	.00007	.000	1
CalStd4=5	5.0000	5.1379	.138	2.76	.00036	.000	1
CalStd9=100	1000.0	1000.3	.302	.030	.06192	.000	1
CalStd3=1	1.0000	1.0315	.032	3.15	.00010	.000	1

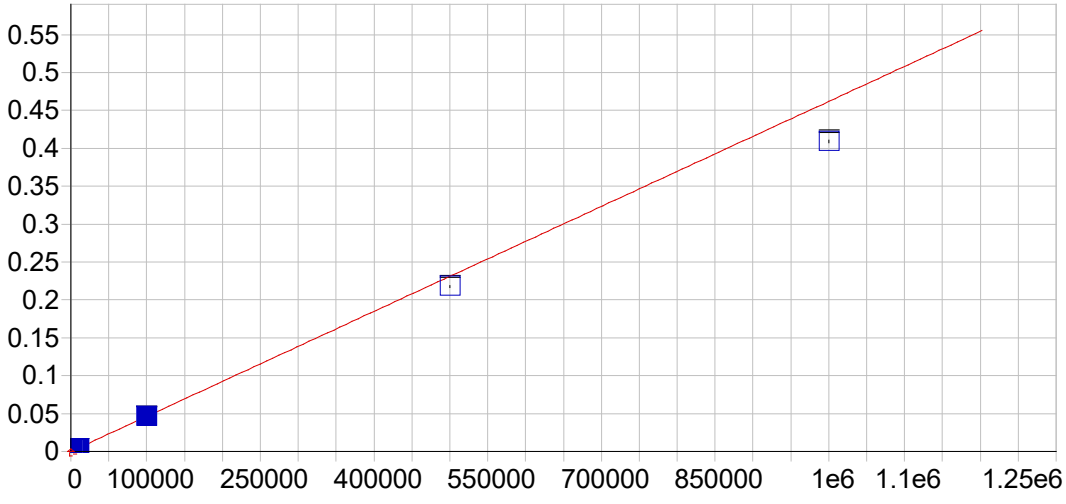


Be 234.861 {144}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999993	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	6.150465		
Predicted MQL:	20.501551		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	1.2071	1.21	.000	.00000	.000	1
CalStd9=100	1000.0	1000.4	.439	.044	.00108	.000	1
CalStd8=100	100.00	98.672	-1.33	-1.33	.00011	.000	1

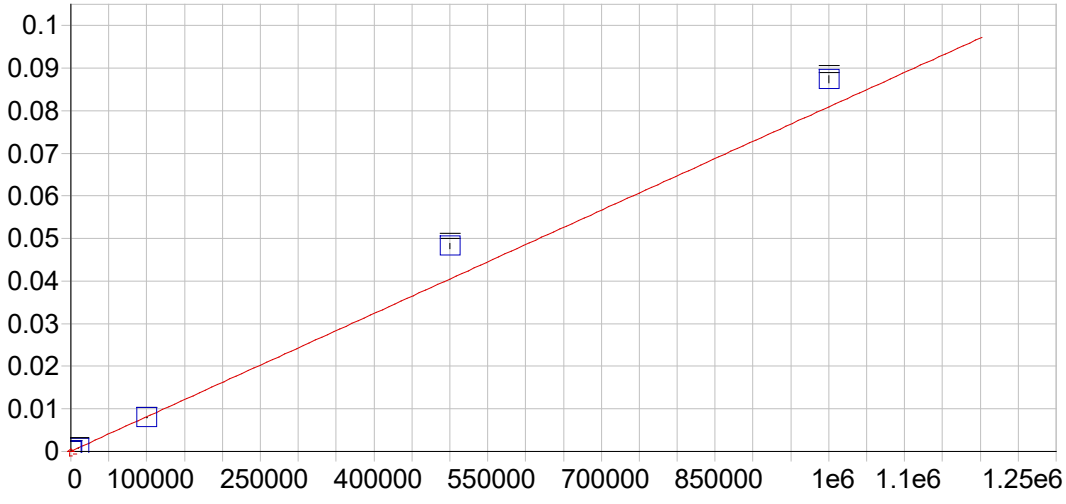


Ca 315.887 {107}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000076	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999993	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	16.136229		
Predicted MQL:	53.787429		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.05442	.054	.000	.00008	.000	1
CalStd10=10	10000.	9598.9	-401.	-4.01	.00451	.000	1
CalStd13=10	100000.	99333.	-667.	-.667	.04595	.000	1
CalStd14=50	500000.	471270.	-28700.	-5.75	.21771	.001	1
CalStd9=100	1000.0	979.76	-20.2	-2.02	.00053	.000	1
CalibStd15=1	1000000.	885280.	-115000.	-11.5	.40890	.001	1

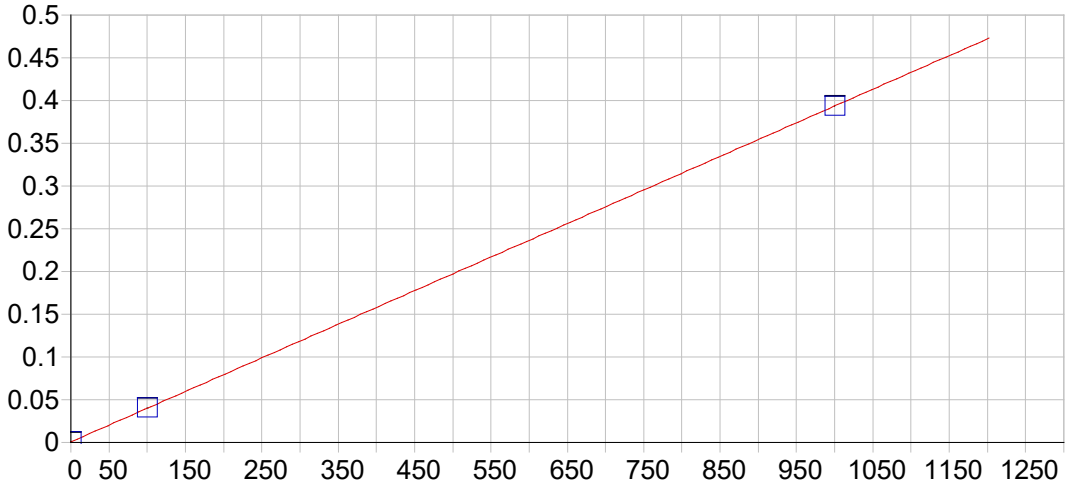


Ca 317.933 {106}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000058	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997813	Status:	OK.
Std Error of Est:	0.000076		
Predicted MDL:	110.634365		
Predicted MQL:	368.781217		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	121.13	121.	.000	.00007	.000	1
CalStd10=10	10000.	9387.7	-612.	-6.12	.00082	.000	1
CalStd13=10	100000.	97282.	-2720.	-2.72	.00792	.000	1
CalStd14=50	500000.	596110.	96100.	19.2	.04825	.001	1
CalStd9=100	1000.0	1075.6	75.6	7.56	.00015	.000	1
CalibStd15=1	1000000.	1079700.	79700.	7.97	.08735	.001	1

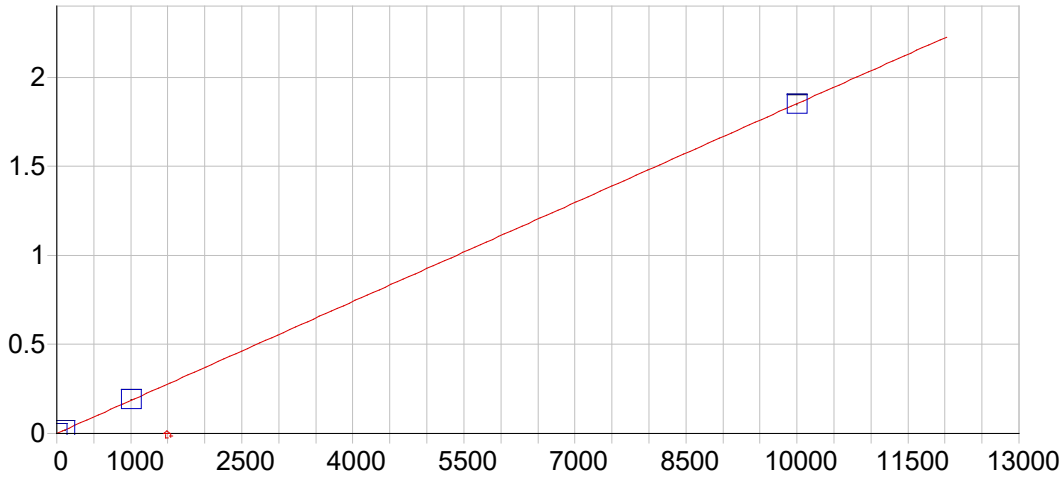


Ca 393.366 { 86}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000745	Re-Slope:	1.000000
A1 (Gain):	0.000393	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000521		
Predicted MDL:	0.062618		
Predicted MQL:	0.208726		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.88421	-.884	.000	.00040	.000	1
CalStd9=100	1000.0	999.90	-.098	-.010	.39356	.001	1
CalStd8=100	100.00	100.98	.982	.982	.04042	.000	1

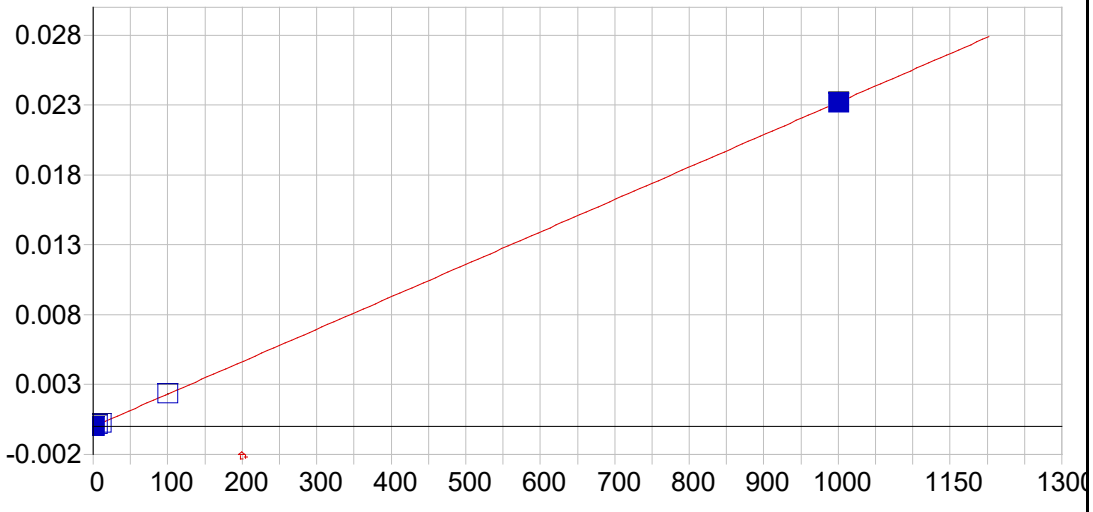


Ca 396.847 { 85}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000130	Re-Slope:	1.000000
A1 (Gain):	0.000185	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999964	Status:	OK.
Std Error of Est:	0.000074		
Predicted MDL:	0.129687		
Predicted MQL:	0.432291		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00612	-.006	.000	.00013	.000	1
CalStd10=10	10000.	9972.3	-27.7	-.277	1.8467	.003	1
CalStd8=100	100.00	104.03	4.03	4.03	.01939	.000	1
CalStd9=100	1000.0	1023.7	23.7	2.37	.18968	.000	1

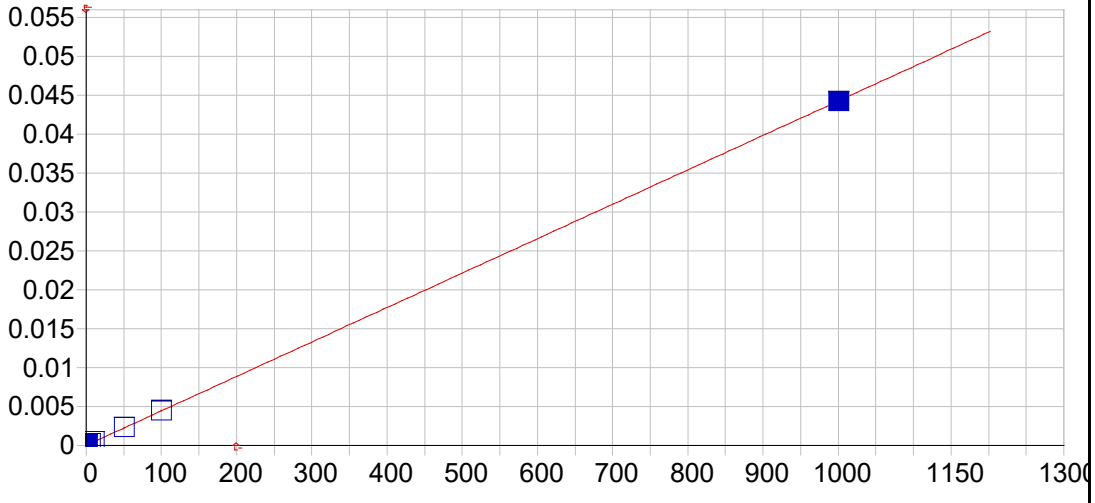


Cd 226.502 {449}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000023	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999948	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.250998		
Predicted MQL:	0.836659		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00023	-.000	.000	-.00000	.000	1
CalStd3=1	1.0000	1.1808	.181	18.1	.00002	.000	1
CalStd2=0.5	.50000	.56305	.063	12.6	.00001	.000	1
CalStd4=5	5.0000	5.5094	.509	10.2	.00013	.000	1
CalStd8=100	100.00	100.43	.430	.430	.00233	.000	1
CalStd5=10	10.000	10.447	.447	4.47	.00024	.000	1
CalStd9=100	1000.0	998.37	-1.63	-.163	.02317	.000	1

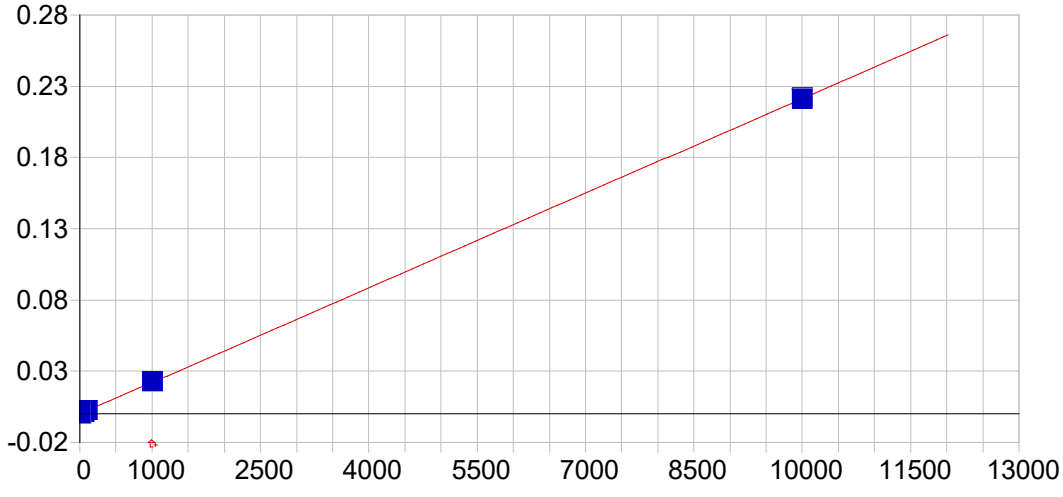


Cd 228.802 {447}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000025	Re-Slope:	1.000000
A1 (Gain):	0.000044	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999970	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.189052		
Predicted MQL:	0.630173		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00019	-.000	.000	.00003	.000	1
CalStd7=50	50.000	50.887	.887	1.77	.00228	.000	1
CalStd3=1	1.0000	1.0415	.041	4.15	.00007	.000	1
CalStd2=0.5	.50000	.63004	.130	26.0	.00005	.000	1
CalStd4=5	5.0000	5.1499	.150	3.00	.00025	.000	1
CalStd8=100	100.00	100.32	.315	.315	.00446	.000	1
CalStd5=10	10.000	10.304	.304	3.04	.00048	.000	1
CalStd9=100	1000.0	998.17	-1.83	-.183	.04419	.000	1

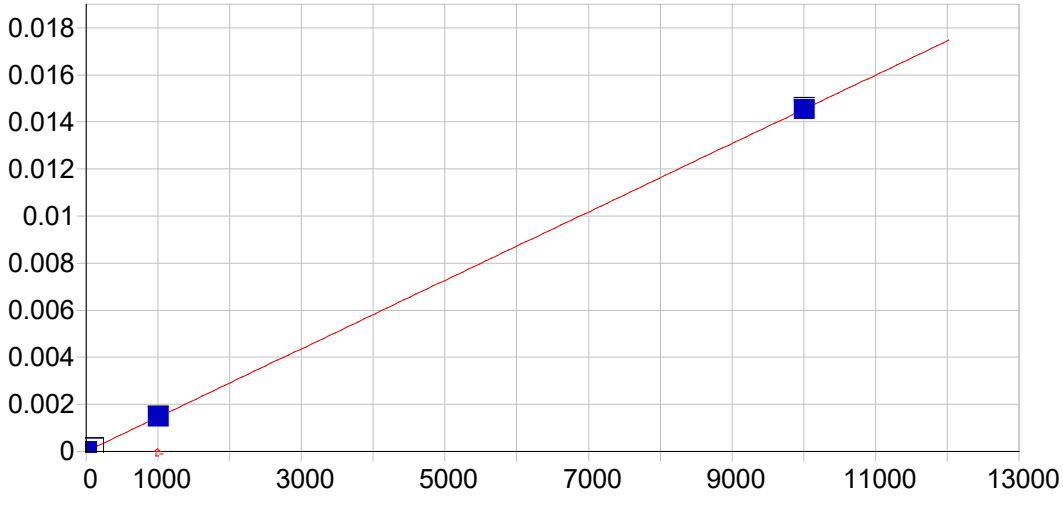


Co 228.616 {447}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000022	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.337015		
Predicted MQL:	1.123385		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00013	-.000	.000	-.00000	.000	1
CalStd7=50	50.000	51.453	1.45	2.91	.00114	.000	1
CalStd5=10	10.000	10.493	.493	4.93	.00023	.000	1
CalStd4=5	5.0000	5.3724	.372	7.45	.00012	.000	1
CalStd8=100	100.00	102.03	2.03	2.03	.00226	.000	1
CalStd9=100	1000.0	1012.5	12.5	1.25	.02243	.000	1
CalStd3=1	1.0000	.94781	-.052	-5.22	.00002	.000	1
CalStd10=10	10000.	9983.2	-16.8	-.168	.22138	.001	1

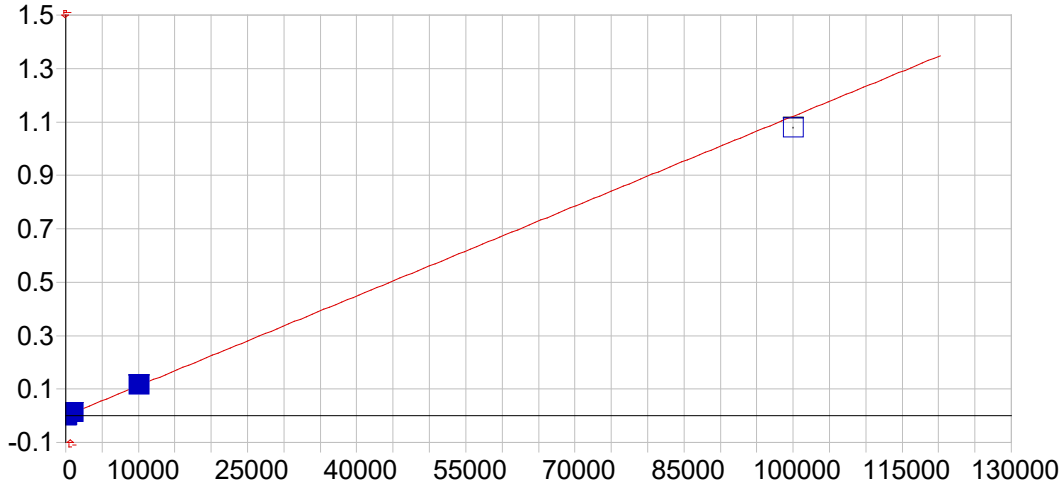


Co 238.892 {141}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999992	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.958787		
Predicted MQL:	3.195956		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00325	-.003	.000	.00000	.000	1
CalStd9=100	1000.0	1010.3	10.3	1.03	.00147	.000	1
CalStd10=10	10000.	9987.4	-12.6	-.126	.01452	.000	1
CalStd8=100	100.00	102.34	2.34	2.34	.00015	.000	1

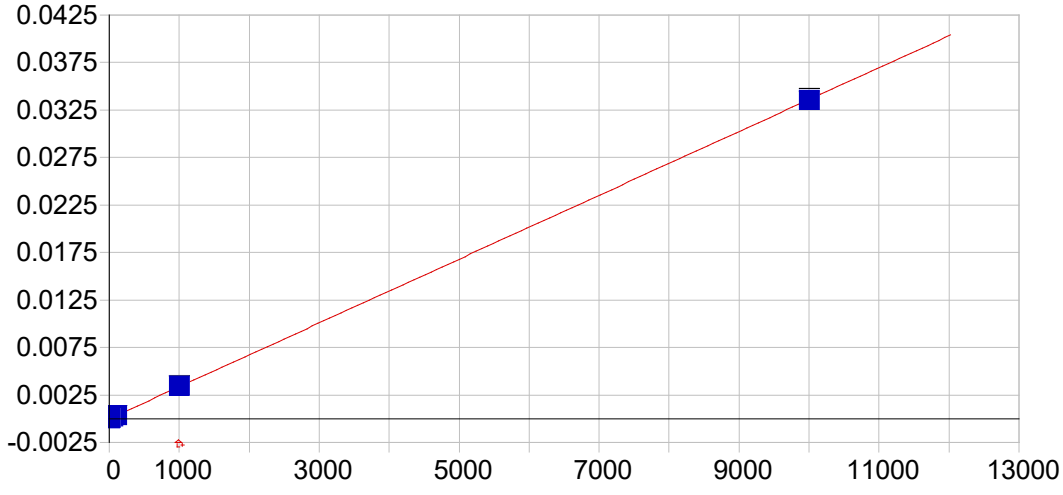


Cr 205.560 {464}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000011	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999186	Status:	OK.
Std Error of Est:	0.000050		
Predicted MDL:	0.416787		
Predicted MQL:	1.389291		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.57893	-.579	.000	-.00001	.000	1
CalStd5=10	10.000	9.9216	-.078	-.784	.00011	.000	1
CalStd7=50	50.000	51.789	1.79	3.58	.00058	.000	1
CalStd9=100	1000.0	1046.8	46.8	4.68	.01173	.000	1
CalStd8=100	100.00	103.21	3.21	3.21	.00115	.000	1
CalStd4=5	5.0000	5.4439	.444	8.88	.00006	.000	1
CalStd3=1	1.0000	.70508	-.295	-29.5	.00001	.000	1
CalStd10=10	10000.	10204.	204.	2.04	.11439	.000	1
CalStd12=10	100000.	96197.	-3800.	-3.80	1.0785	.001	1

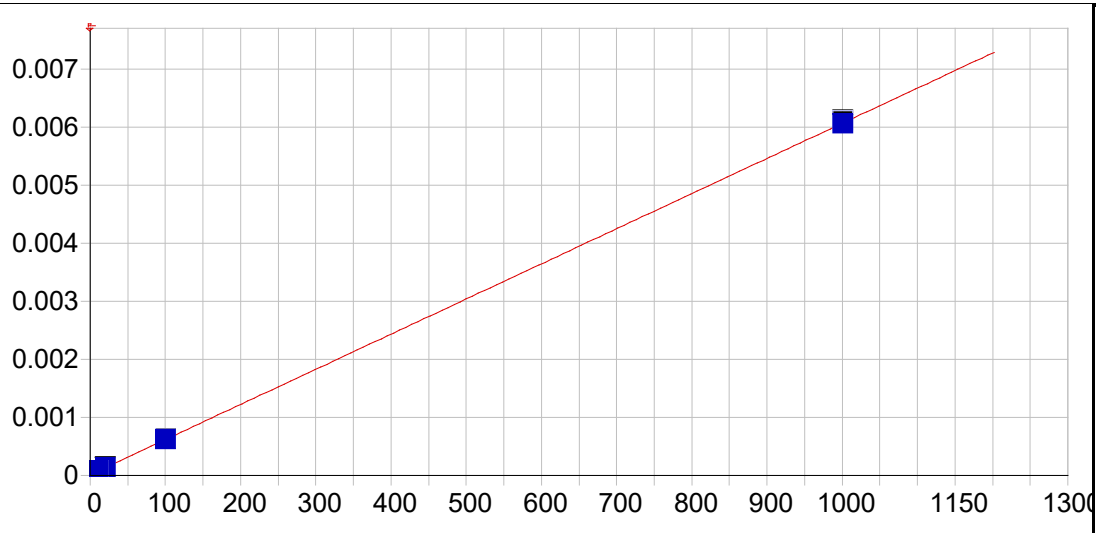


Cr 267.716 {126}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999969	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.599390		
Predicted MQL:	1.997968		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00128	-.001	.000	-.00000	.000	1
CalStd5=10	10.000	10.551	.551	5.51	.00004	.000	1
CalStd7=50	50.000	51.495	1.50	2.99	.00017	.000	1
CalStd9=100	1000.0	1021.0	21.0	2.10	.00343	.000	1
CalStd8=100	100.00	101.26	1.26	1.26	.00034	.000	1
CalStd4=5	5.0000	5.6956	.696	13.9	.00002	.000	1
CalStd10=10	10000.	9975.0	-25.0	-.250	.03353	.000	1

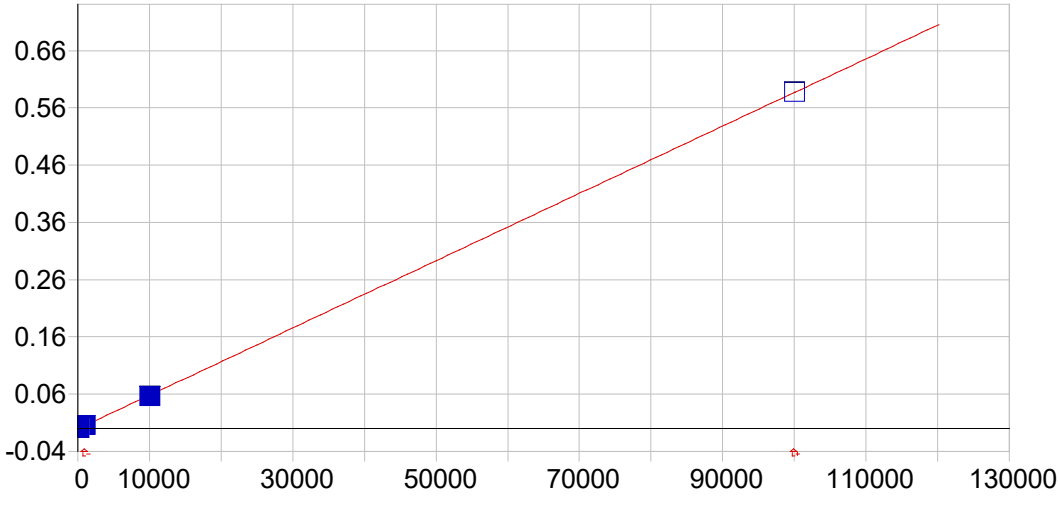


Cu 223.008 {451}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000013	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.222411		
Predicted MQL:	4.074704		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00067	-.001	.000	.00001	.000	1
CalStd9=100	1000.0	998.94	-1.06	-.106	.00611	.000	1
CalStd8=100	100.00	100.28	.280	.280	.00062	.000	1
CalStd6=20	20.000	20.252	.252	1.26	.00014	.000	1
CalStd5=10	10.000	10.523	.523	5.23	.00008	.000	1

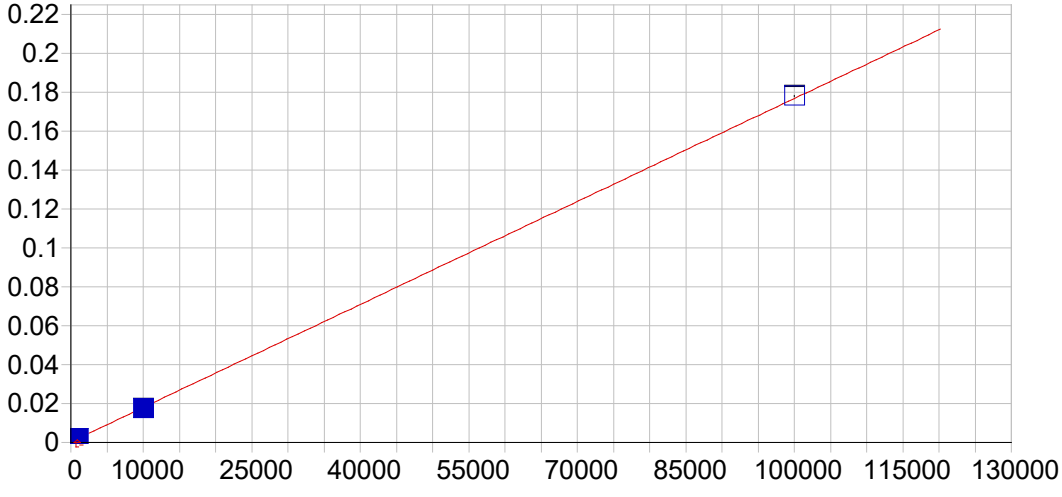


Cu 224.700 {450}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.000642	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999990	Status:	OK.
Std Error of Est:	0.001066		
Predicted MDL:	0.702199		
Predicted MQL:	2.340664		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	110.31	110.	.000	.00001	.000	1
CalStd9=100	1000.0	1014.3	14.3	1.43	.00529	.000	1
CalStd7=50	50.000	118.71	68.7	137.	.00006	.000	1
CalStd8=100	100.00	144.31	44.3	44.3	.00020	.000	1
CalStd6=20	20.000	113.85	93.9	469.	.00003	.000	1
CalStd12=10	100000.	100040.	36.4	.036	.58704	.000	1
CalStd10=10	10000.	9632.1	-368.	-3.68	.05571	.000	1

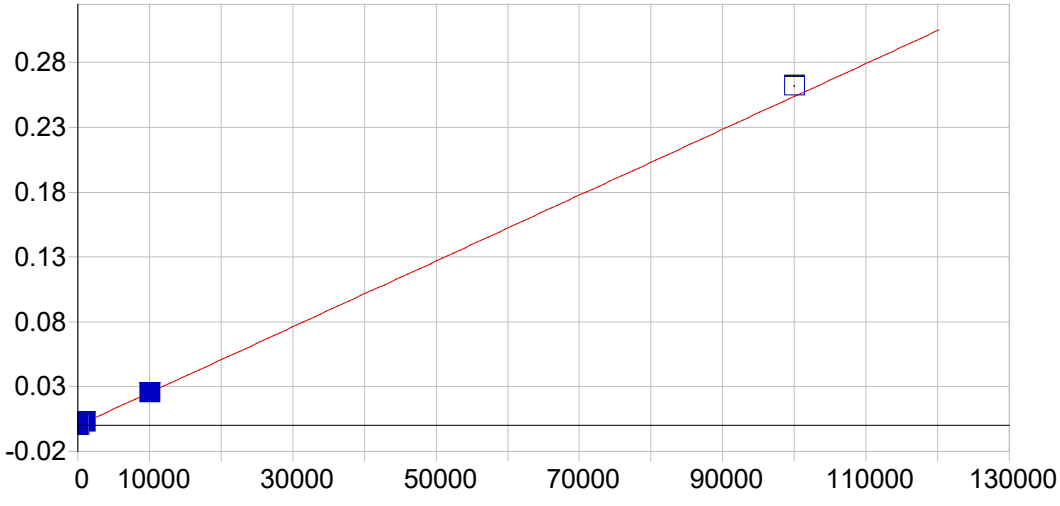


Cu 324.754 {104}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000353	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999880	Status:	OK.
Std Error of Est:	0.000048		
Predicted MDL:	7.163694		
Predicted MQL:	23.878980		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	5.0642	5.06	.000	.00036	.000	1
CalStd9=100	1000.0	987.63	-12.4	-1.24	.00210	.000	1
CalStd8=100	100.00	102.24	2.24	2.24	.00053	.000	1
CalStd10=10	10000.	9675.8	-324.	-3.24	.01743	.000	1
CalStd12=10	100000.	100760.	760.	.760	.17819	.000	1
CalStd5=10	10.000	15.213	5.21	52.1	.00038	.000	1
CalStd6=20	20.000	19.014	-.986	-4.93	.00039	.000	1
CalStd7=50	50.000	48.442	-1.56	-3.12	.00044	.000	1

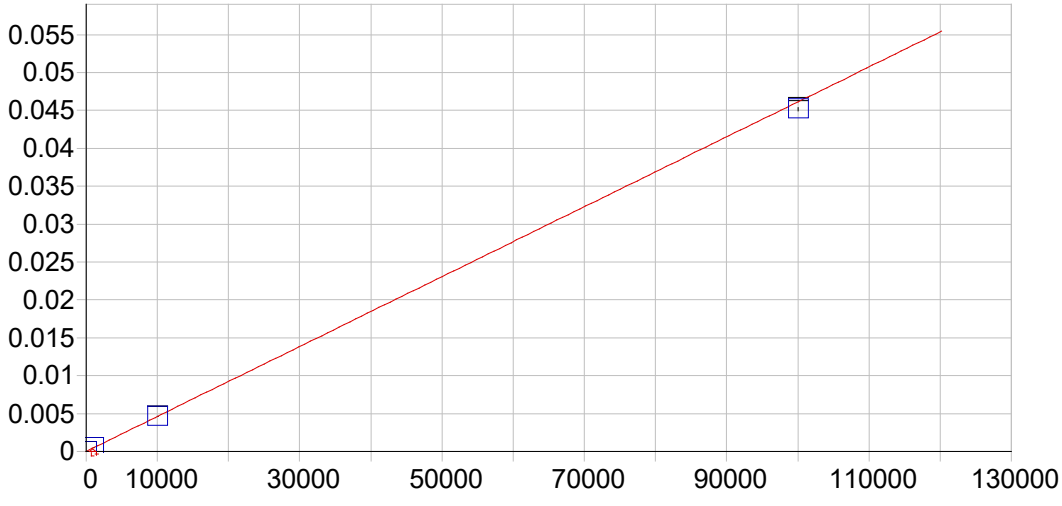


Cu 327.396 {103}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999824	Status:	OK.
Std Error of Est:	0.000077		
Predicted MDL:	9.155208		
Predicted MQL:	30.517359		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.92384	.924	.000	.00001	.000	1
CalStd6=20	20.000	19.387	-.613	-3.06	.00005	.000	1
CalStd7=50	50.000	45.328	-4.67	-9.34	.00012	.000	1
CalStd8=100	100.00	94.632	-5.37	-5.37	.00024	.000	1
CalStd9=100	1000.0	1009.0	8.96	.896	.00257	.000	1
CalStd10=10	10000.	9885.6	-114.	-1.14	.02510	.000	1
CalStd4=5	5.0000	.59269	-4.41	-88.1	.00001	.000	1
CalStd5=10	10.000	11.210	1.21	12.1	.00003	.000	1
CalStd12=10	100000.	103230.	3230.	3.23	.26211	.001	1

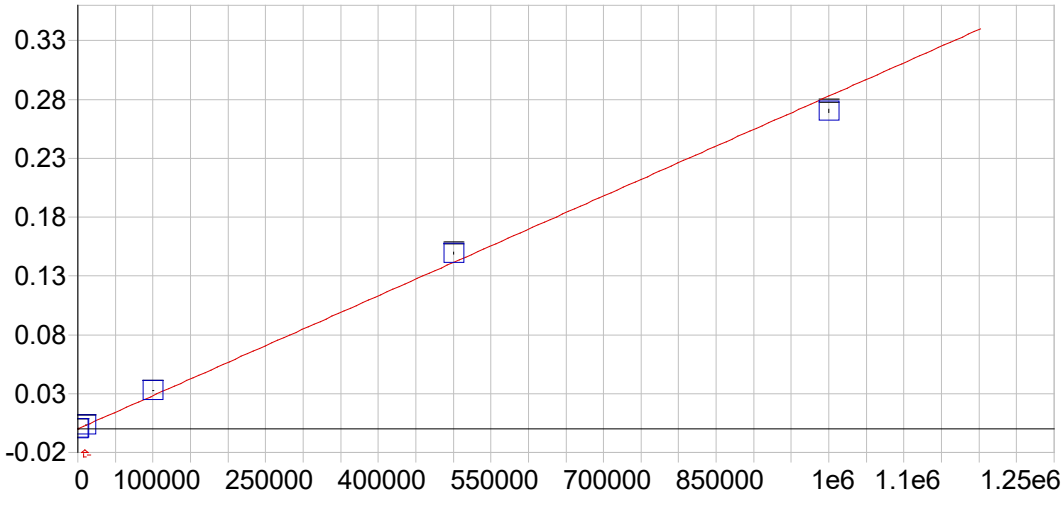


Fe 234.349 {144}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000014	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999901	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	1.452980		
Predicted MQL:	4.843267		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.3273	-1.33	.000	.00001	.000	1
CalStd10=10	10000.	9973.8	-26.2	-.262	.00461	.000	1
CalStd13=10	100000.	97938.	-2060.	-2.06	.04517	.000	1
CalStd9=100	1000.0	1012.8	12.8	1.28	.00048	.000	1

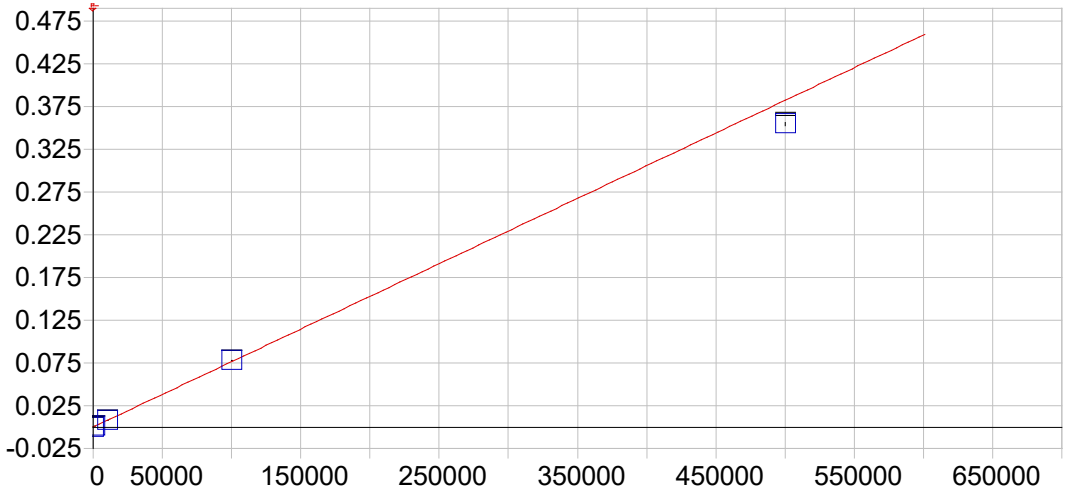


Fe 239.562 {140}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998156	Status:	OK.
Std Error of Est:	0.000027		
Predicted MDL:	23.059426		
Predicted MQL:	76.864754		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.42838	-.428	.000	.00001	.000	1
CalStd10=10	10000.	11268.	1270.	12.7	.00319	.000	1
CalStd13=10	100000.	114940.	14900.	14.9	.03251	.000	1
CalStd14=50	500000.	528060.	28100.	5.61	.14935	.001	1
CalStd9=100	1000.0	1140.5	141.	14.1	.00033	.000	1
CalibStd15=1	1000000.	955600.	-44400.	-4.44	.27026	.001	1

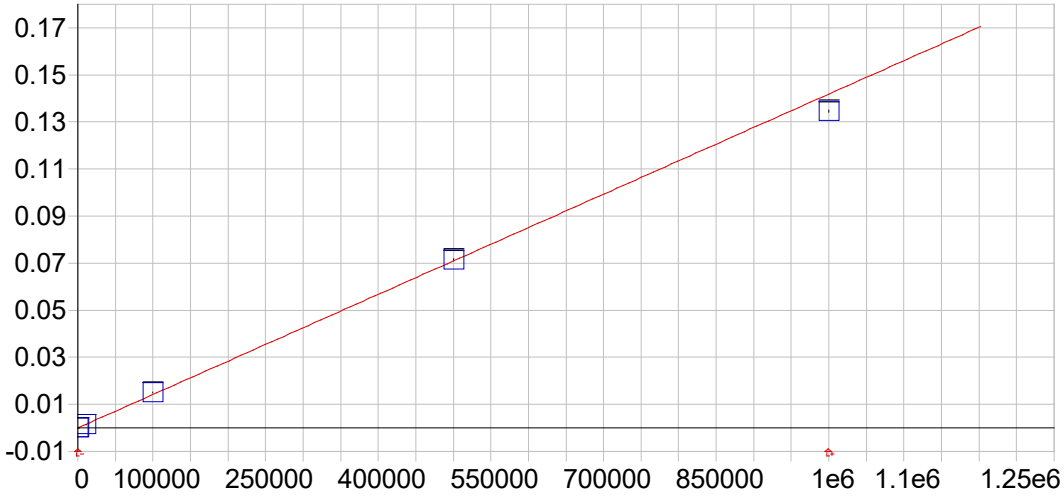


Fe 259.940 {129}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999355	Status:	OK.
Std Error of Est:	0.000063		
Predicted MDL:	9.346056		
Predicted MQL:	31.153521		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-10.936	-10.9	.000	.00000	.000	1
CalStd10=10	10000.	10034.	34.4	.344	.00768	.000	1
CalStd13=10	100000.	101820.	1820.	1.82	.07786	.000	1
CalStd14=50	500000.	463890.	-36100.	-7.22	.35468	.002	1
CalStd9=100	1000.0	1017.7	17.7	1.77	.00079	.000	1

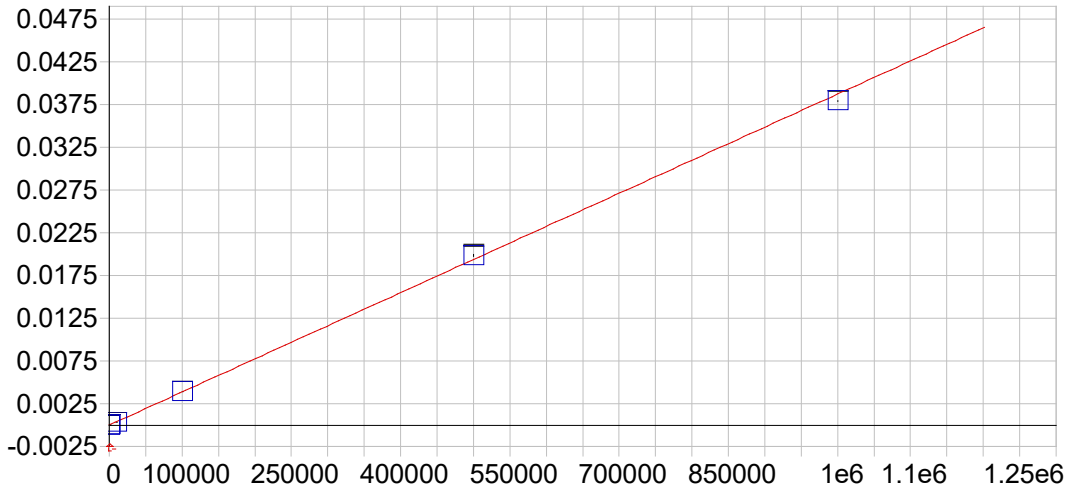


Mg 202.582 {466}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999184	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	3.880593		
Predicted MQL:	12.935309		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-4.8935	-4.89	.000	-.00000	.000	1
CalStd13=10	100000.	105960.	5960.	5.96	.01503	.000	1
CalStd10=10	10000.	10227.	227.	2.27	.00145	.000	1
CalStd14=50	500000.	503170.	3170.	.633	.07138	.000	1
CalStd9=100	1000.0	1032.1	32.1	3.21	.00015	.000	1
CalibStd15=1	1000000.	948760.	-51200.	-5.12	.13460	.000	1

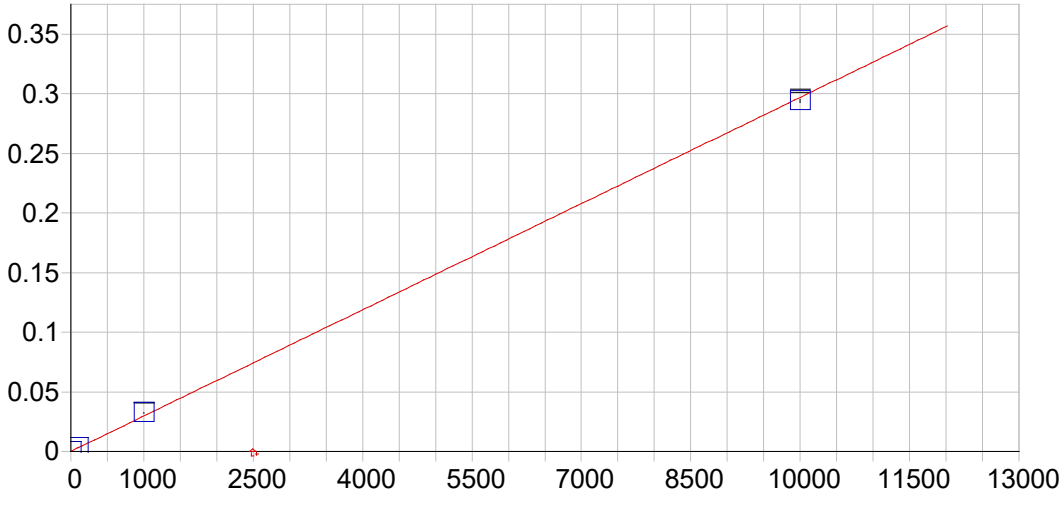


Mg 279.079 {121}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999825	Status:	OK.
Std Error of Est:	0.000045		
Predicted MDL:	111.212175		
Predicted MQL:	370.707250		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-206.80	-207.	.000	-.00000	.000	1
CalStd13=10	100000.	101320.	1320.	1.32	.00393	.000	1
CalStd10=10	10000.	9286.7	-713.	-7.13	.00036	.000	1
CalStd14=50	500000.	512450.	12500.	2.49	.01985	.000	1
CalStd9=100	1000.0	761.81	-238.	-23.8	.00003	.000	1
CalibStd15=1	1000000.	979260.	-20700.	-2.07	.03793	.000	1

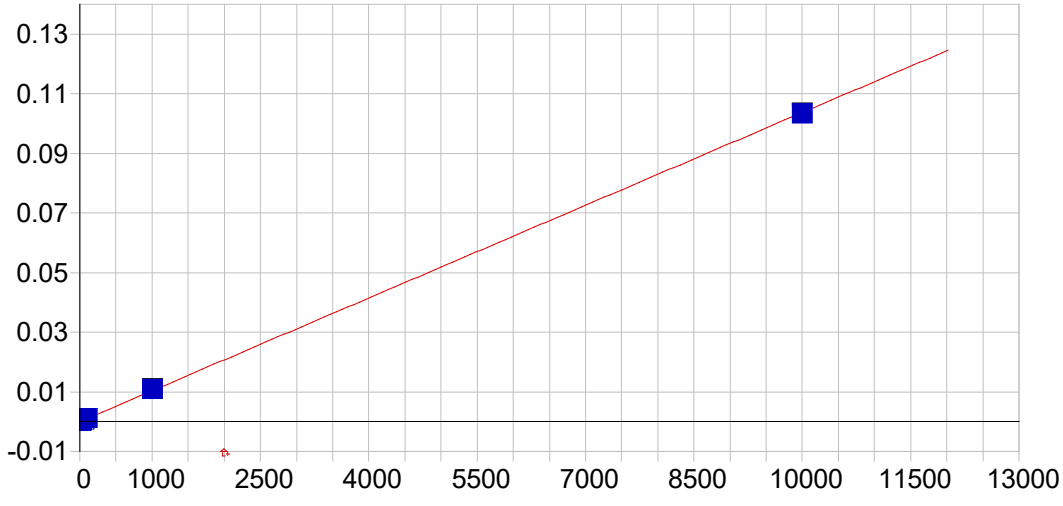


Mg 280.270 {120}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000048	Re-Slope:	1.000000
A1 (Gain):	0.000030	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999557	Status:	OK.
Std Error of Est:	0.000042		
Predicted MDL:	0.035417		
Predicted MQL:	0.118058		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01663	-.017	.000	.00005	.000	1
CalStd9=100	1000.0	1090.2	90.2	9.02	.03241	.000	1
CalStd10=10	10000.	9901.2	-98.8	-.988	.29397	.001	1
CalStd8=100	100.00	108.60	8.60	8.60	.00327	.000	1

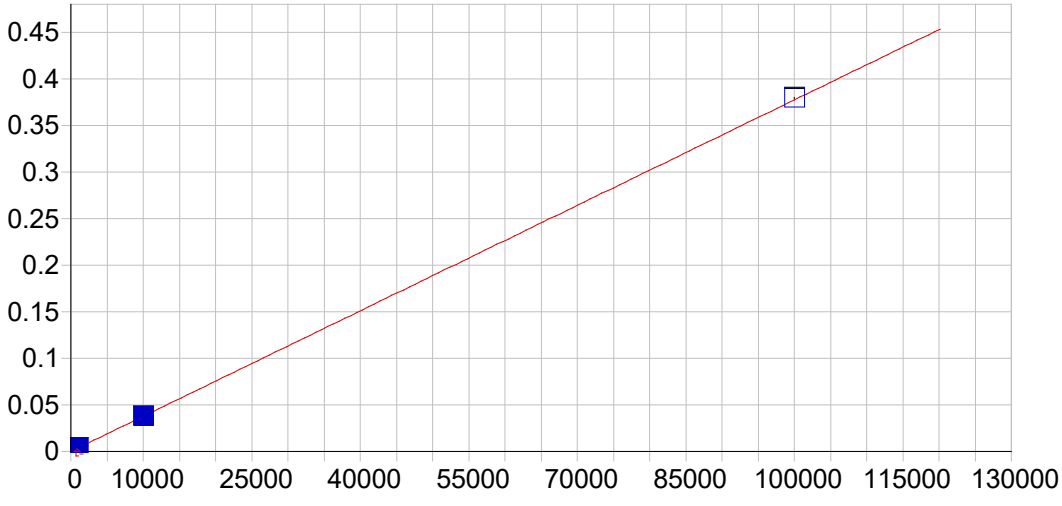


Mn 257.610 {131}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000010	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999875	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.097552		
Predicted MQL:	0.325173		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00216	-.002	.000	.00000	.000	1
CalStd5=10	10.000	10.809	.809	8.09	.00011	.000	1
CalStd7=50	50.000	53.147	3.15	6.29	.00055	.000	1
CalStd6=20	20.000	21.359	1.36	6.80	.00022	.000	1
CalStd8=100	100.00	104.64	4.64	4.64	.00109	.000	1
CalStd4=5	5.0000	5.6852	.685	13.7	.00006	.000	1
CalStd9=100	1000.0	1042.9	42.9	4.29	.01081	.000	1
CalStd10=10	10000.	9946.4	-53.6	-.536	.10314	.000	1

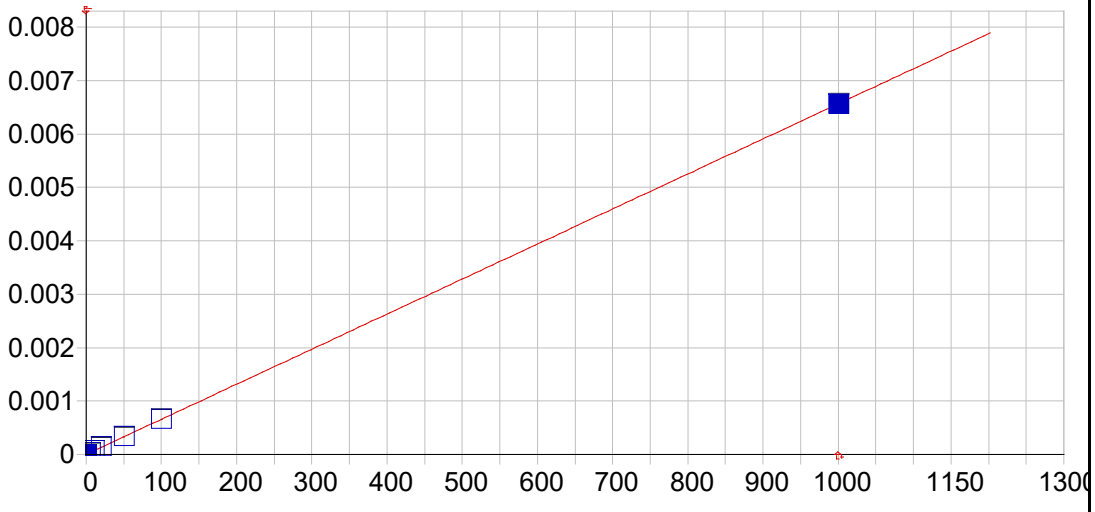


Mn 259.373 {130}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999968	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	1.966922		
Predicted MQL:	6.556406		

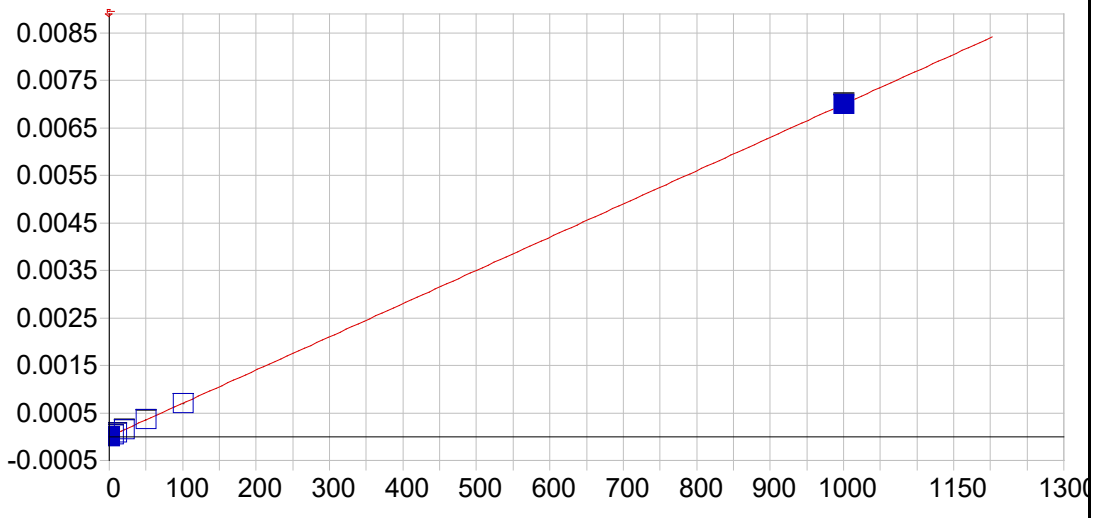
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.22072	-.221	.000	.00001	.000	1
CalStd10=10	10000.	9917.7	-82.3	-.823	.03747	.000	1
CalStd9=100	1000.0	1015.9	15.9	1.59	.00385	.000	1
CalStd12=10	100000.	100560.	555.	.555	.37944	.001	1



Mo 202.030 {466}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000007		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999981		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.660944				
Predicted MQL:	2.203148				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00037	-.000	.000	.00000	.000	1
CalStd7=50	50.000	50.137	.137	.273	.00033	.000	1
CalStd6=20	20.000	20.838	.838	4.19	.00014	.000	1
CalStd5=10	10.000	10.228	.228	2.28	.00007	.000	1
CalStd8=100	100.00	99.396	-.604	-.604	.00065	.000	1
CalStd4=5	5.0000	5.0691	.069	1.38	.00004	.000	1
CalStd9=100	1000.0	999.33	-.669	-.067	.00656	.000	1

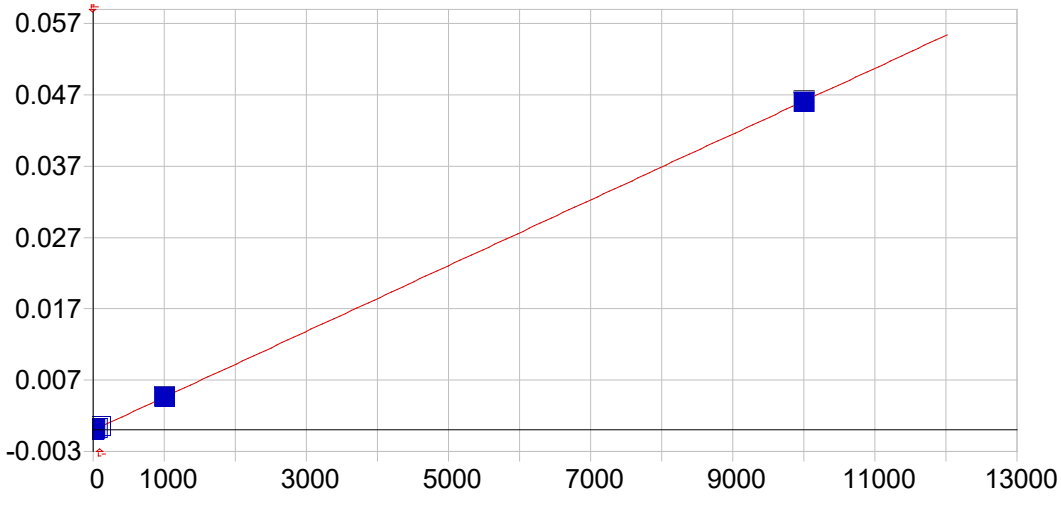


Mo 202.030 {467}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.627160		
Predicted MQL:	2.090533		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.12082	-.121	.000	.00000	.000	1
CalStd7=50	50.000	50.149	.149	.297	.00035	.000	1
CalStd6=20	20.000	20.503	.503	2.51	.00015	.000	1
CalStd5=10	10.000	10.055	.055	.553	.00007	.000	1
CalStd8=100	100.00	99.014	-.986	-.986	.00070	.000	1
CalStd4=5	5.0000	5.3215	.321	6.43	.00004	.000	1
CalStd9=100	1000.0	1000.1	.079	.008	.00700	.000	1

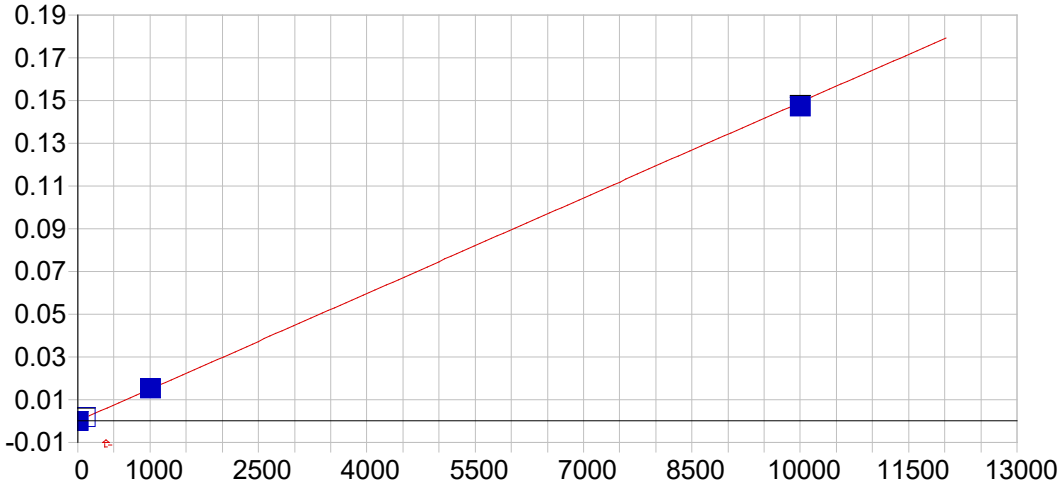


Mo 204.598 {464}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	1.113850		
Predicted MQL:	3.712832		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.02628	-.026	.000	-.00000	.000	1
CalStd7=50	50.000	49.964	-.036	-.072	.00023	.000	1
CalStd6=20	20.000	20.687	.687	3.43	.00009	.000	1
CalStd5=10	10.000	9.5053	-.495	-4.95	.00004	.000	1
CalStd8=100	100.00	98.861	-1.14	-1.14	.00045	.000	1
CalStd4=5	5.0000	4.4921	-.508	-10.2	.00002	.000	1
CalStd9=100	1000.0	1002.1	2.15	.215	.00462	.000	1
CalStd10=10	10000.	9969.2	-30.8	-.308	.04598	.000	1

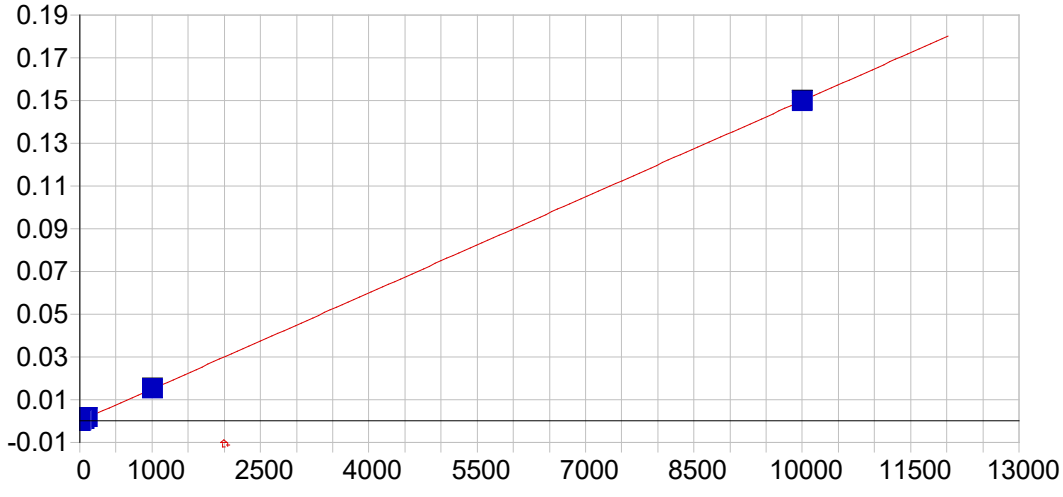


Ni 221.647 {452}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000015	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999954	Status:	OK.
Std Error of Est:	0.000032		
Predicted MDL:	0.575731		
Predicted MQL:	1.919102		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.0519	-1.05	.000	-.00002	.000	1
CalStd10=10	10000.	9860.5	-140.	-1.40	.14712	.000	1
CalStd8=100	100.00	100.31	.310	.310	.00150	.000	1
CalStd9=100	1000.0	1004.8	4.77	.477	.01499	.000	1

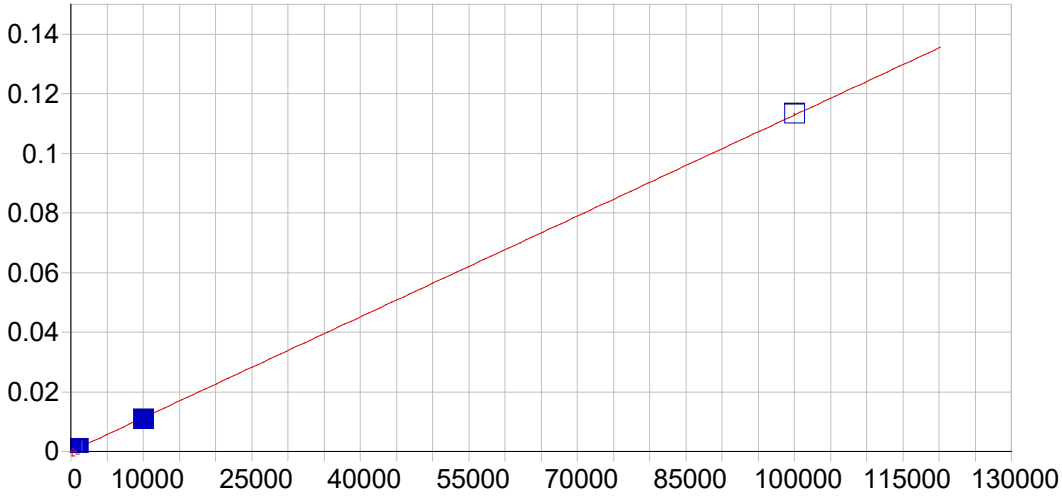


Ni 231.604 {445}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000033	Re-Slope:	1.000000
A1 (Gain):	0.000015	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999968	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.575445		
Predicted MQL:	1.918151		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00063	-.001	.000	-.00003	.000	1
CalStd7=50	50.000	52.312	2.31	4.62	.00075	.000	1
CalStd5=10	10.000	10.719	.719	7.19	.00013	.000	1
CalStd8=100	100.00	101.88	1.88	1.88	.00149	.000	1
CalStd4=5	5.0000	5.7532	.753	15.1	.00005	.000	1
CalStd9=100	1000.0	1016.0	16.0	1.60	.01520	.000	1
CalStd3=1	1.0000	1.3318	.332	33.2	-.00001	.000	1
CalStd10=10	10000.	9978.0	-22.0	-.220	.14953	.000	1

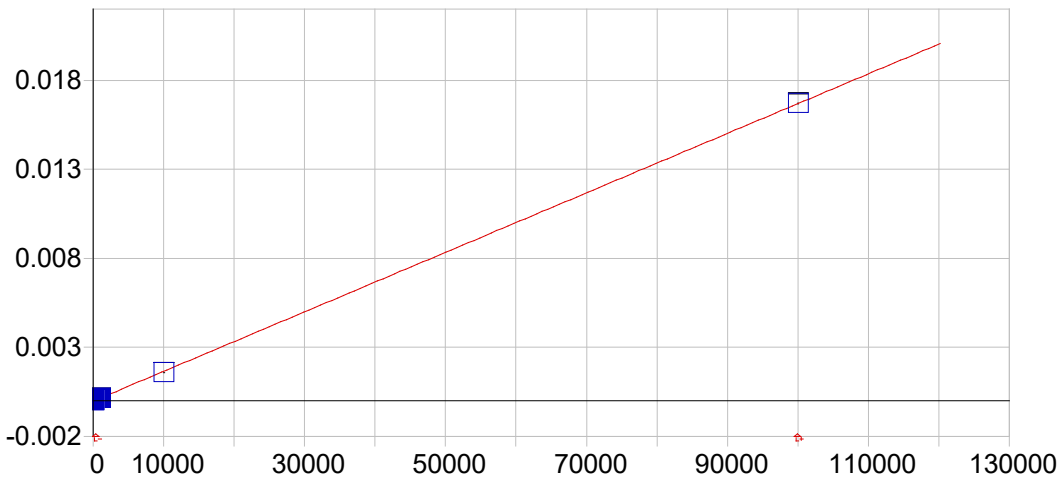


Pb 216.999 {455}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999892	Status:	OK.
Std Error of Est:	0.000061		
Predicted MDL:	6.139198		
Predicted MQL:	20.463992		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	8.8575	8.86	.000	.00001	.000	1
CalStd9=100	1000.0	965.96	-34.0	-3.40	.00109	.000	1
CalStd10=10	10000.	9488.8	-511.	-5.11	.01071	.000	1
CalStd8=100	100.00	103.07	3.07	3.07	.00012	.000	1
CalStd5=10	10.000	17.176	7.18	71.8	.00002	.000	1
CalStd12=10	100000.	100420.	423.	.423	.11328	.000	1

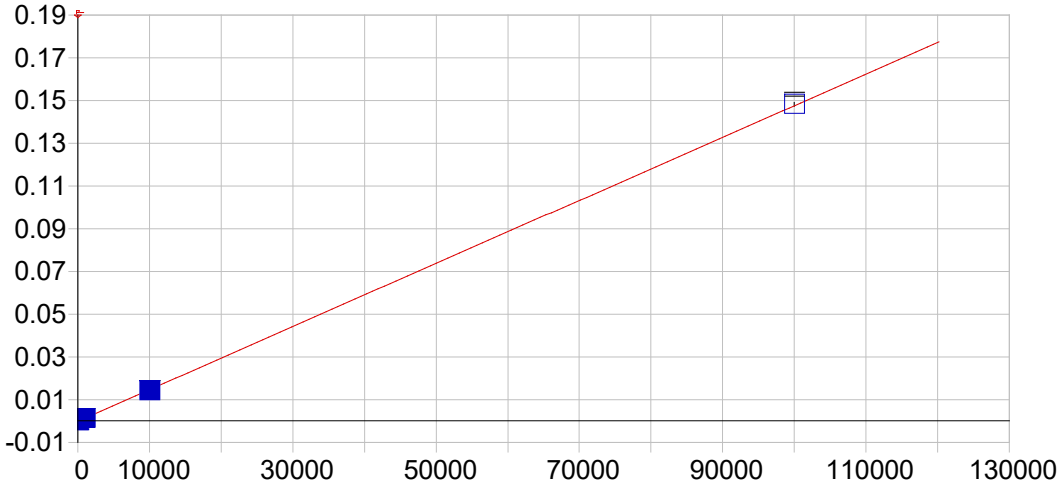


Pb 216.999 {456}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.000015	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999989	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	20.914819		
Predicted MQL:	69.716062		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	91.706	91.7	.000	-.00000	.000	1
CalStd9=100	1000.0	1051.6	51.6	5.16	.00016	.000	1
CalStd10=10	10000.	9621.2	-379.	-3.79	.00159	.000	1
CalStd8=100	100.00	198.64	98.6	98.6	.00002	.000	1
CalStd5=10	10.000	109.57	99.6	996.	.00000	.000	1
CalStd12=10	100000.	100040.	37.3	.037	.01670	.000	1

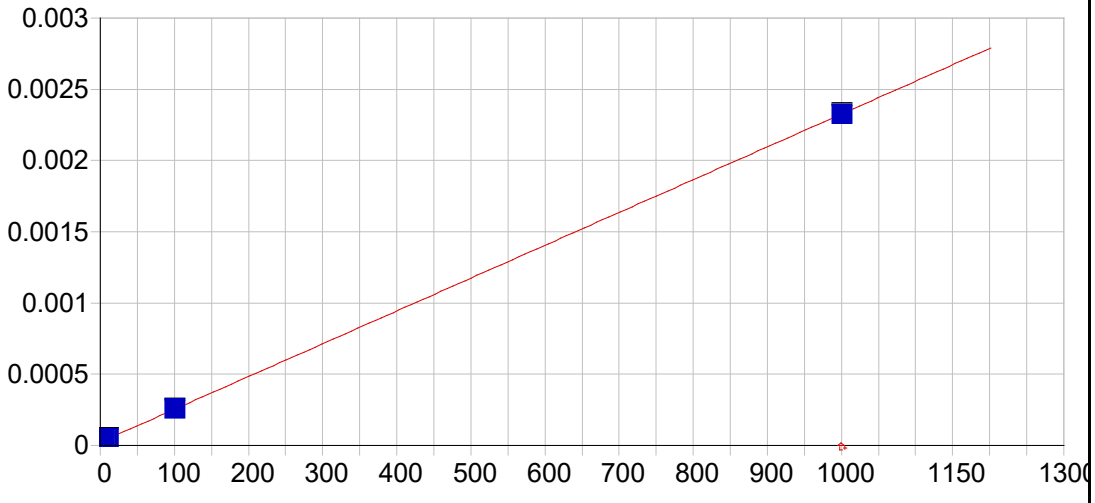


Pb 220.353 {153}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999905	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	5.578345		
Predicted MQL:	18.594485		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00924	.009	.000	.00000	.000	1
CalStd9=100	1000.0	971.48	-28.5	-2.85	.00144	.000	1
CalStd10=10	10000.	9573.4	-427.	-4.27	.01413	.000	1
CalStd8=100	100.00	97.421	-2.58	-2.58	.00015	.000	1
CalStd12=10	100000.	100460.	458.	.458	.14824	.001	1

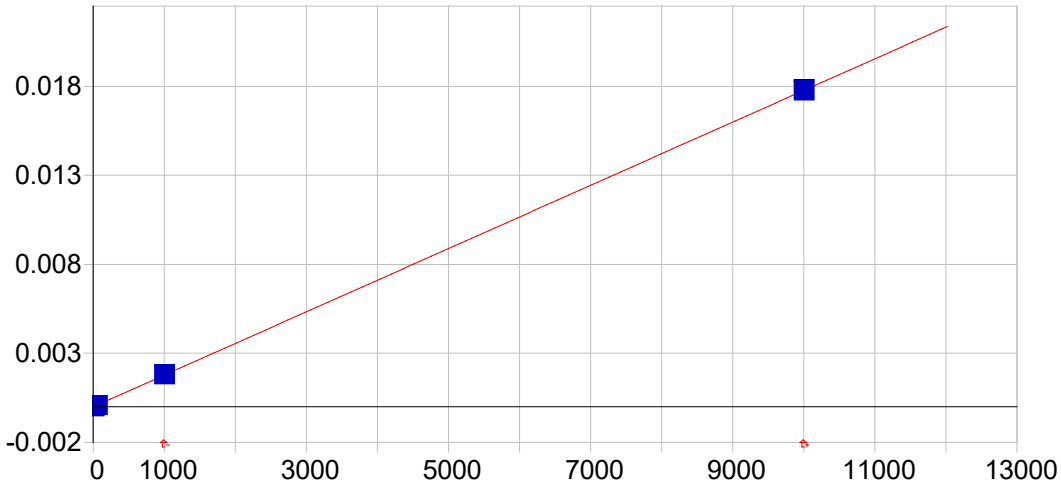


Pb 220.353 {453}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000023	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999835	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	3.371749		
Predicted MQL:	11.239164		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00042	.000	.000	.00002	.000	1
CalStd5=10	10.000	11.230	1.23	12.3	.00005	.000	1
CalStd8=100	100.00	100.13	.128	.128	.00025	.000	1
CalStd4=5	5.0000	3.9631	-1.04	-20.7	.00003	.000	1
CalStd9=100	1000.0	999.68	-.321	-.032	.00232	.000	1

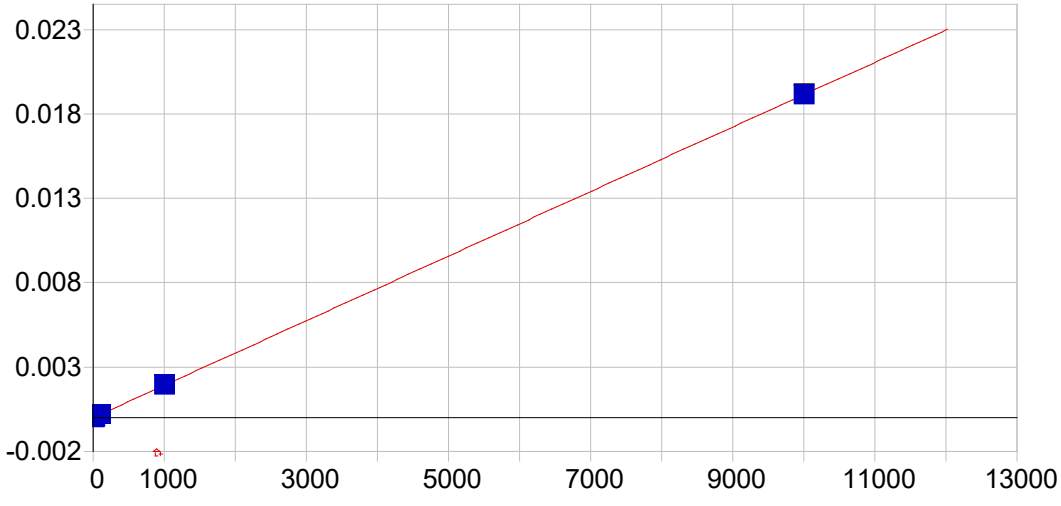


Sb 206.833 {463}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999991	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.934793		
Predicted MQL:	9.782642		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00108	.001	.000	-.00000	.000	1
CalStd9=100	1000.0	1008.2	8.20	.820	.00179	.000	1
CalStd5=10	10.000	8.8580	-1.14	-11.4	.00001	.000	1
CalStd7=50	50.000	49.950	-.050	-.100	.00009	.000	1
CalStd10=10	10000.	9993.0	-7.01	-.070	.01774	.000	1

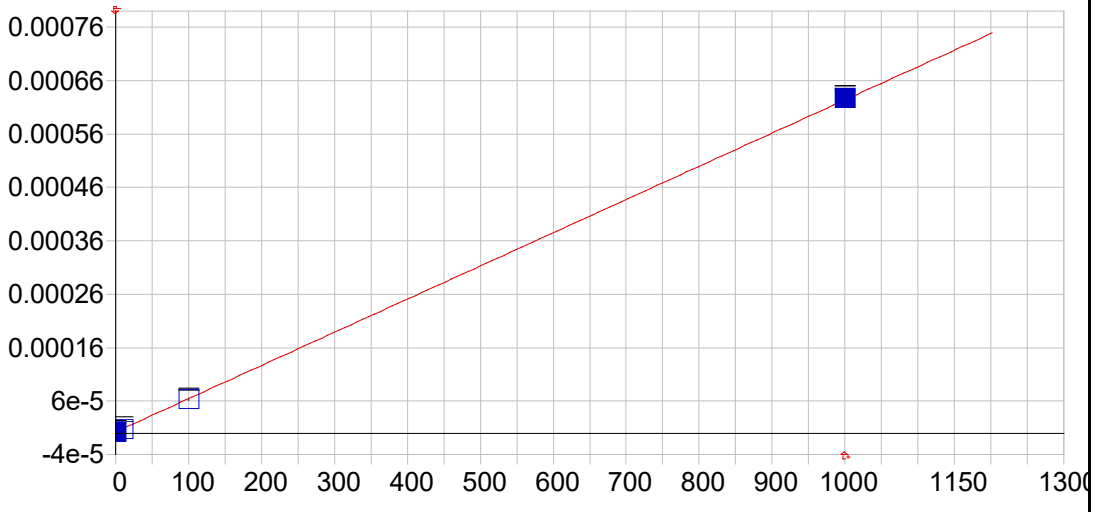


Sb 217.581 {455}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999921	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	3.106942		
Predicted MQL:	10.356474		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00169	-.002	.000	.00001	.000	1
CalStd9=100	1000.0	1007.7	7.67	.767	.00193	.000	1
CalStd6=20	20.000	21.097	1.10	5.48	.00005	.000	1
CalStd5=10	10.000	7.8823	-2.12	-21.2	.00002	.000	1
CalStd8=100	100.00	100.18	.183	.183	.00020	.000	1
CalStd4=5	5.0000	7.4347	2.43	48.7	.00002	.000	1
CalStd10=10	10000.	9990.7	-9.27	-.093	.01913	.000	1

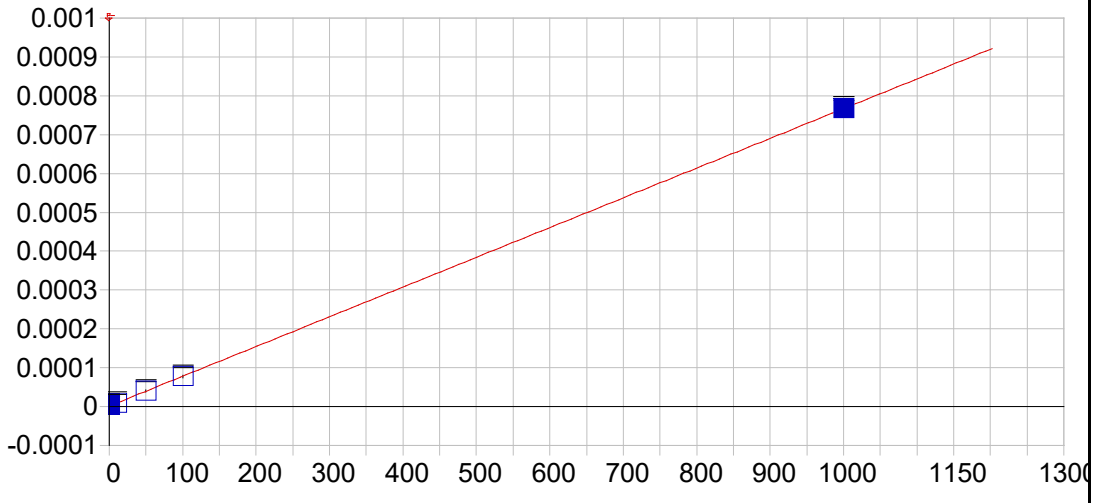


Se 196.090 {472}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999745	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	6.146369		
Predicted MQL:	20.487896		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00241	.002	.000	.00000	.000	1
CalStd9=100	1000.0	1004.4	4.36	.436	.00063	.000	1
CalStd5=10	10.000	7.7588	-2.24	-22.4	.00001	.000	1
CalStd8=100	100.00	97.881	-2.12	-2.12	.00006	.000	1

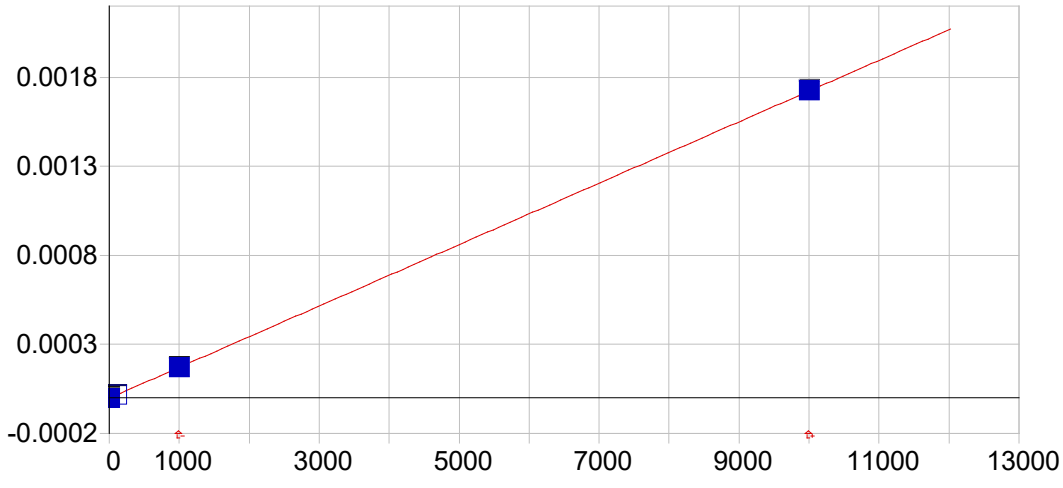


Se 203.985 {465}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999992	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	8.686475		
Predicted MQL:	28.954917		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	1.9546	1.95	.000	.00000	.000	1
CalStd7=50	50.000	49.886	-.114	-.228	.00004	.000	1
CalStd9=100	1000.0	1000.3	.271	.027	.00077	.000	1
CalStd5=10	10.000	8.9671	-1.03	-10.3	.00001	.000	1
CalStd8=100	100.00	98.914	-1.09	-1.09	.00008	.000	1

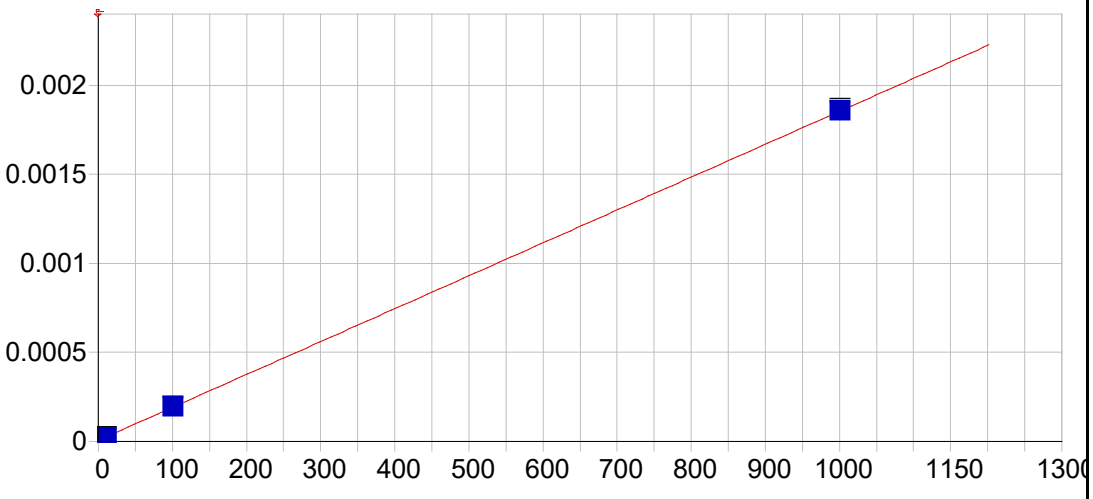


Se 206.279 {463}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999991	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	30.667581		
Predicted MQL:	102.225268		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00278	.003	.000	-.00000	.000	1
CalStd9=100	1000.0	987.70	-12.3	-1.23	.00017	.000	1
CalStd10=10	10000.	10014.	14.0	.140	.00173	.000	1
CalStd8=100	100.00	98.311	-1.69	-1.69	.00002	.000	1

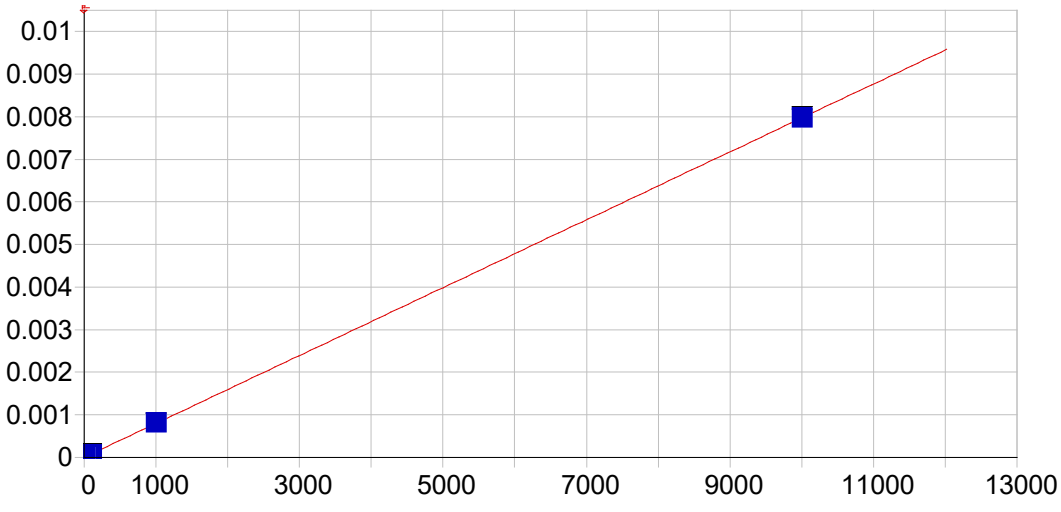


Tl 190.856 {476}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999744	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.816750		
Predicted MQL:	9.389165		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00223	.002	.000	.00001	.000	1
CalStd9=100	1000.0	1001.2	1.18	.118	.00186	.000	1
CalStd8=100	100.00	101.18	1.18	1.18	.00019	.000	1
CalStd5=10	10.000	7.6413	-2.36	-23.6	.00002	.000	1

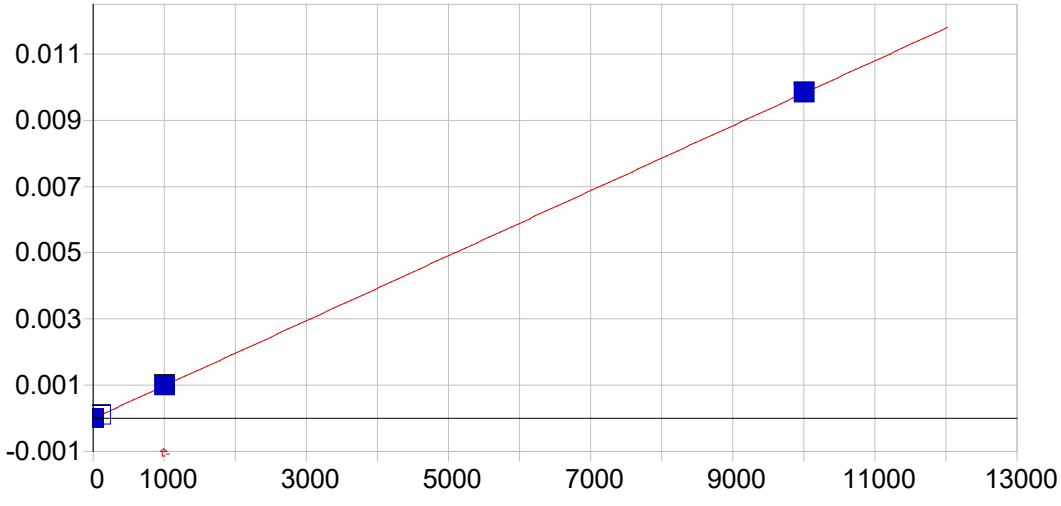


Tl 190.856 {477}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999862	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	5.087080		
Predicted MQL:	16.956932		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00559	.006	.000	.00000	.000	1
CalStd9=100	1000.0	1007.3	7.31	.731	.00080	.000	1
CalStd8=100	100.00	97.935	-2.06	-2.06	.00008	.000	1
CalStd5=10	10.000	4.5453	-5.45	-54.5	.00001	.000	1
CalStd10=10	10000.	10000.	.209	.002	.00797	.000	1

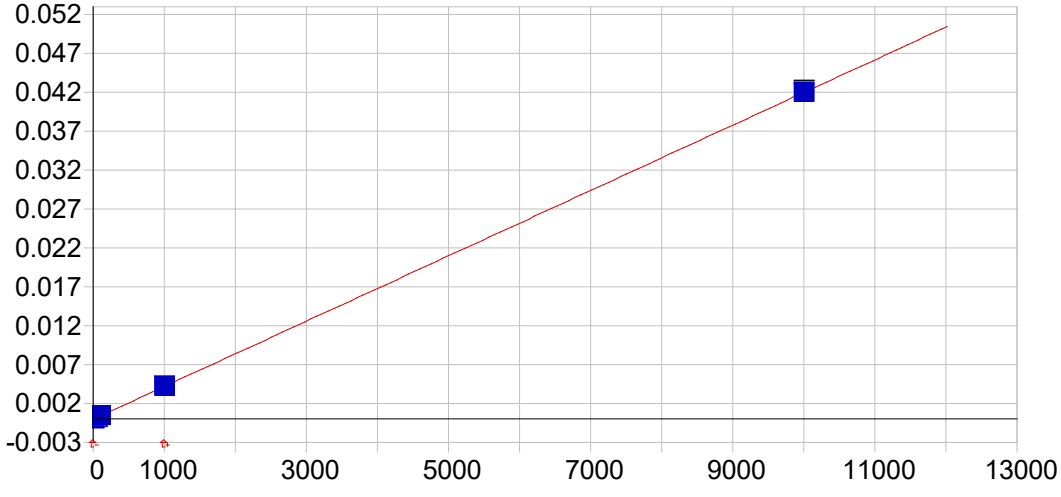


V 290.882 {116}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	9.836683		
Predicted MQL:	32.788944		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.49927	-.499	.000	.00000	.000	1
CalStd9=100	1000.0	1007.0	6.95	.695	.00099	.000	1
CalStd10=10	10000.	9999.4	-.637	-.006	.00982	.000	1
CalStd8=100	100.00	94.186	-5.81	-5.81	.00009	.000	1

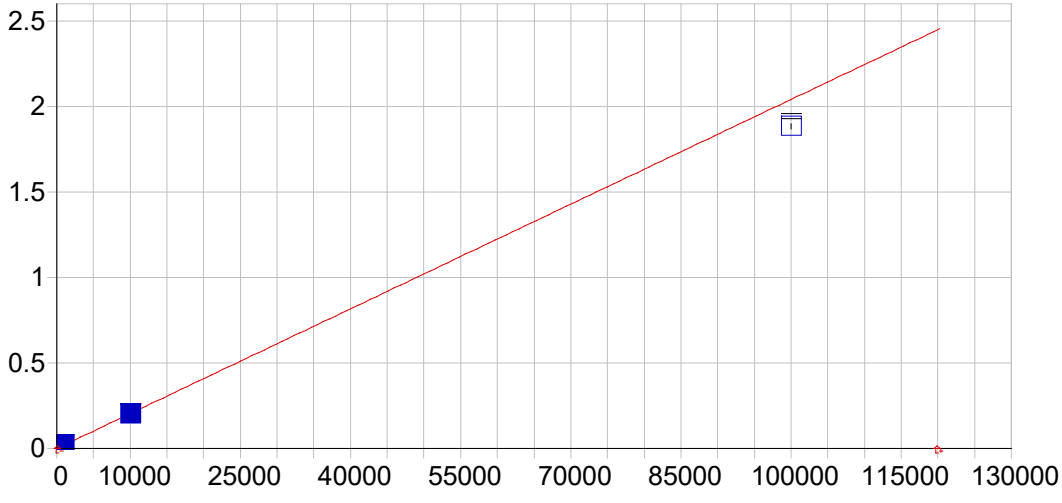


V 292.402 {115}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999996	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.738405		
Predicted MQL:	2.461350		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00088	-.001	.000	-.00000	.000	1
CalStd7=50	50.000	50.175	.175	.350	.00021	.000	1
CalStd9=100	1000.0	998.07	-1.93	-.193	.00419	.000	1
CalStd6=20	20.000	20.460	.460	2.30	.00009	.000	1
CalStd5=10	10.000	10.751	.751	7.51	.00004	.000	1
CalStd8=100	100.00	98.764	-1.24	-1.24	.00041	.000	1
CalStd10=10	10000.	10002.	1.78	.018	.04201	.000	1

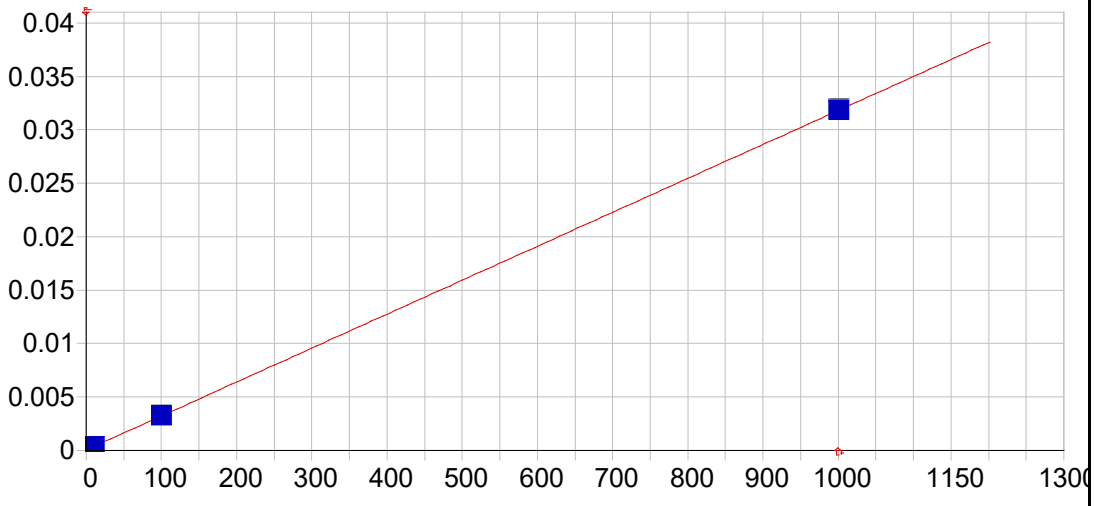


Zn 206.200 {463}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000025	Re-Slope:	1.000000
A1 (Gain):	0.000020	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999692	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.281089		
Predicted MQL:	0.936964		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CalStd10=10	10000.	9883.3	-117.	-1.17	.20173	.001	1
Blank	.00000	-.63815	-.638	.000	.00001	.000	1
CalStd9=100	1000.0	1017.0	17.0	1.70	.02078	.000	1
CalStd12=10	100000.	92270.	-7730.	-7.73	1.8831	.014	1
CalStd5=10	10.000	9.9770	-.023	-.230	.00023	.000	1
CalStd8=100	100.00	101.60	1.60	1.60	.00210	.000	1

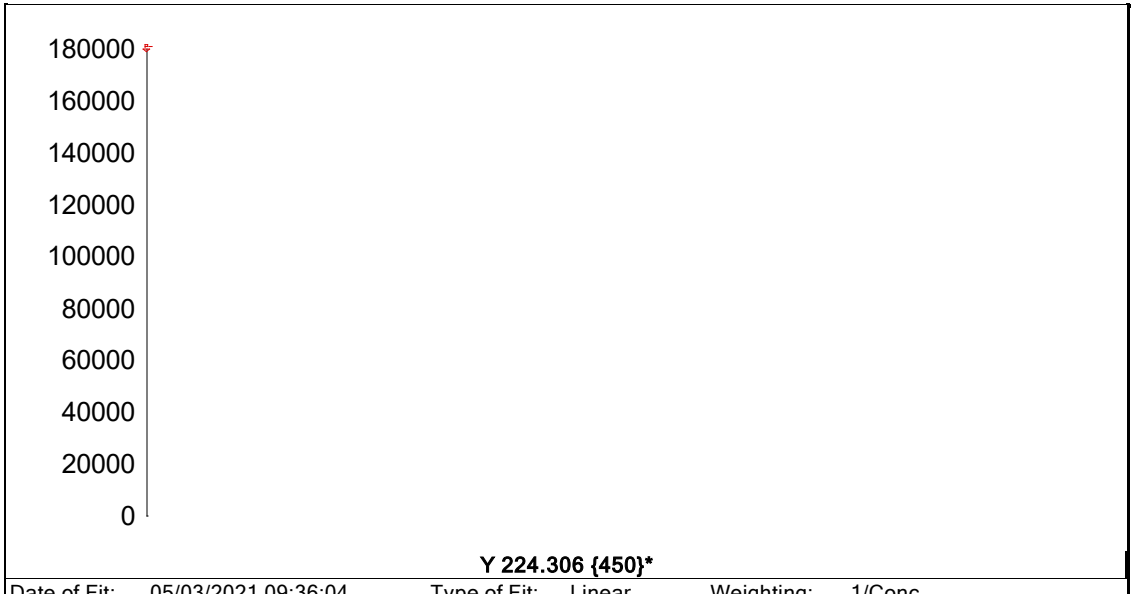


Zn 213.856 {457}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

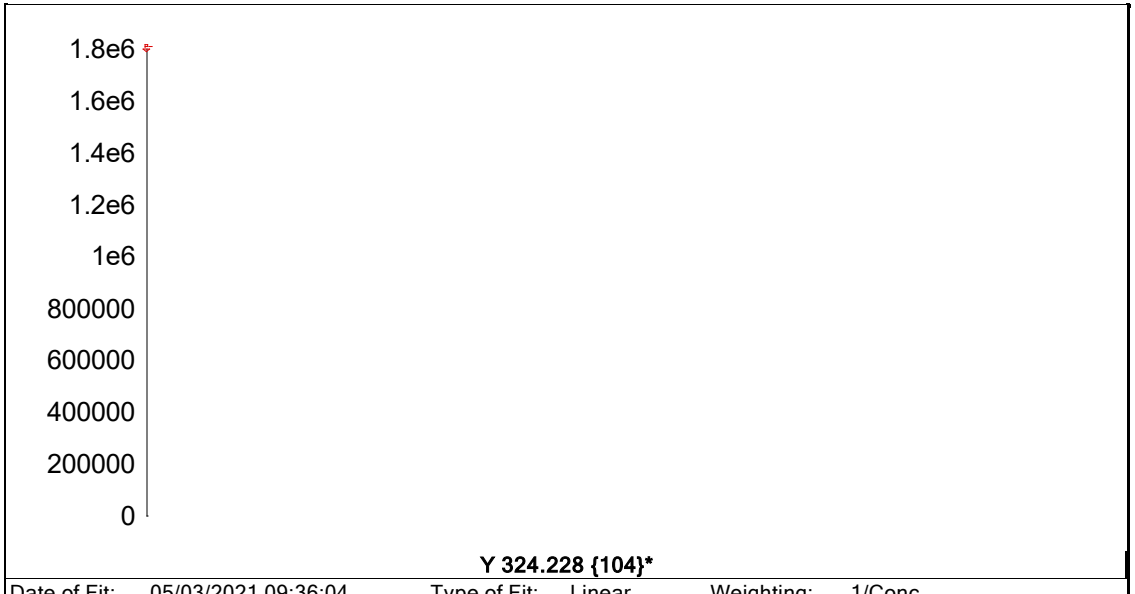
A0 (Offset):	0.000048	Re-Slope:	1.000000
A1 (Gain):	0.000032	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.181949		
Predicted MQL:	0.606497		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.67405	-.674	.000	.00003	.000	1
CalStd9=100	1000.0	999.22	-.777	-.078	.03193	.000	1
CalStd5=10	10.000	10.166	.166	1.66	.00037	.000	1
CalStd8=100	100.00	100.53	.531	.531	.00325	.000	1



Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000000		Re-Slope:	1.000000		
A1 (Gain):	0.000000		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

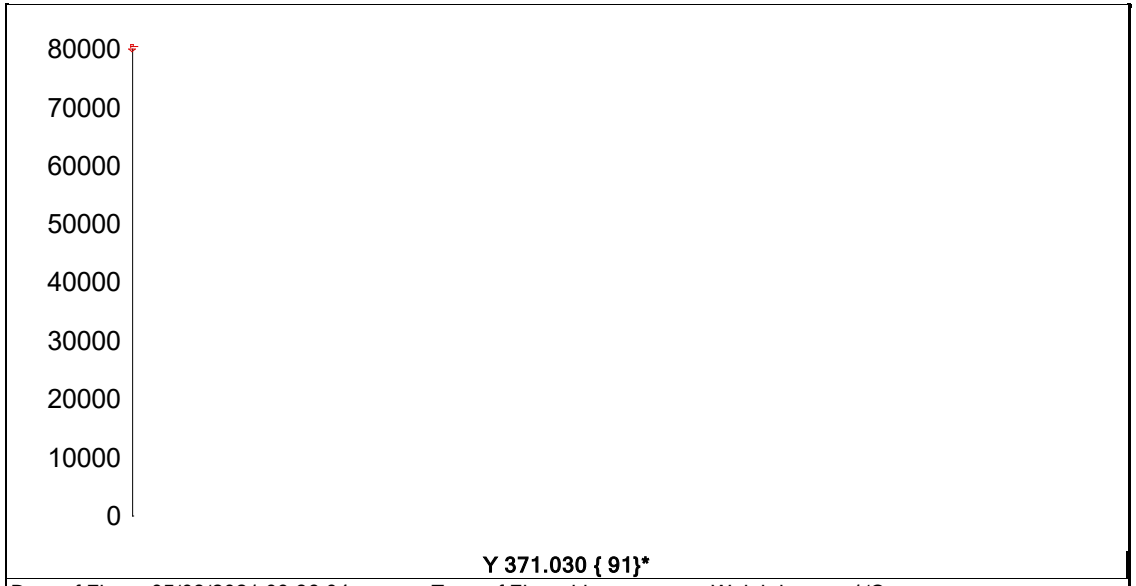
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	170100.	648.	1



Y 324.228 {104}*

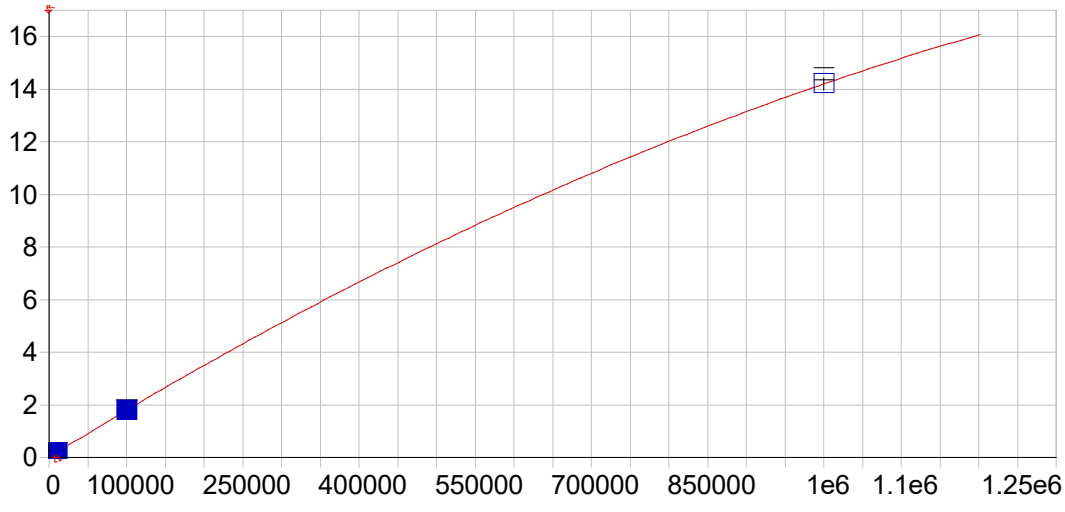
Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000000		Re-Slope:	1.000000		
A1 (Gain):	0.000000		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	1684700.	2910.	1



Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000000		Re-Slope:	1.000000		
A1 (Gain):	0.000000		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	74967.	218.	1

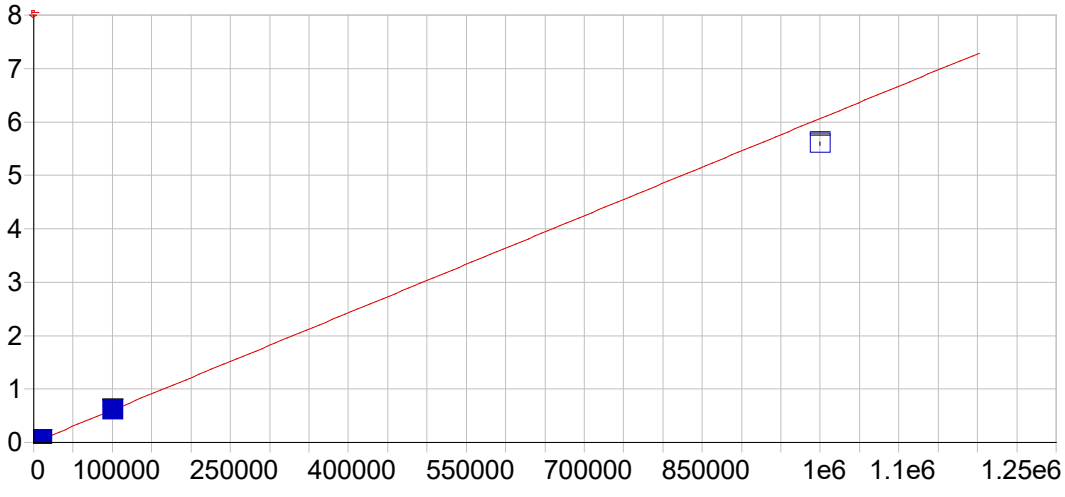


Na 588.995 { 57}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.009259	Re-Slope:	1.000000
A1 (Gain):	0.000018	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000076		
Predicted MDL:	6.656673		
Predicted MQL:	22.188909		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00904	-.009	.000	.00926	.000	1
CalStd9=100	1000.0	1030.4	30.4	3.04	.02808	.000	1
CalStd10=10	10000.	9762.8	-237.	-2.37	.18726	.000	1
CalStd13=10	100000.	100240.	237.	.237	1.7998	.005	1
CalibStd15=1	1000000.	999960.	-36.6	-.004	14.199	.241	1

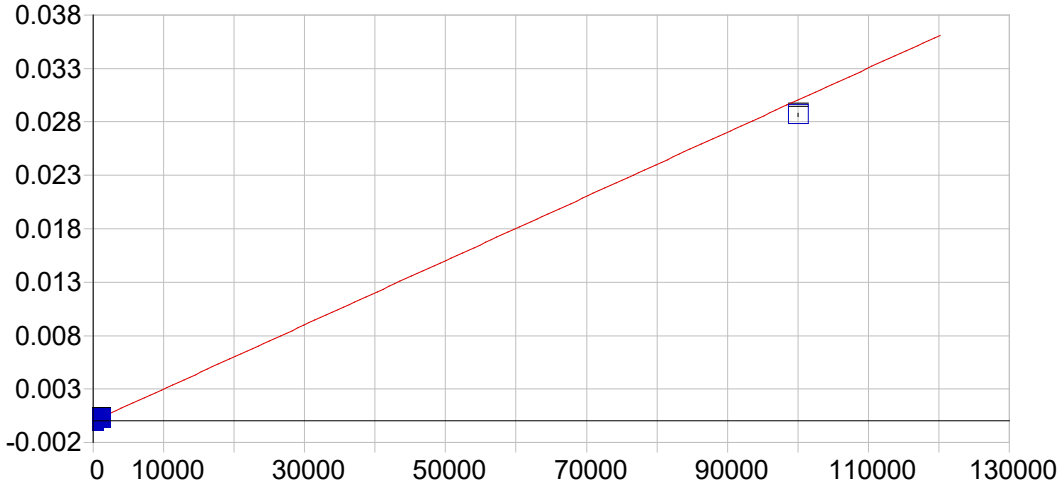


Na 589.592 { 57}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000192	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999836	Status:	OK.
Std Error of Est:	0.000636		
Predicted MDL:	11.530243		
Predicted MQL:	38.434144		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-22.962	-23.0	.000	.00005	.000	1
CalStd9=100	1000.0	1029.6	29.6	2.96	.00643	.000	1
CalStd10=10	10000.	9959.9	-40.1	-.401	.06059	.000	1
CalibStd15=1	1000000.	922960.	-77000.	-7.70	5.5959	.033	1
CalStd13=10	100000.	101380.	1380.	1.38	.61492	.001	1

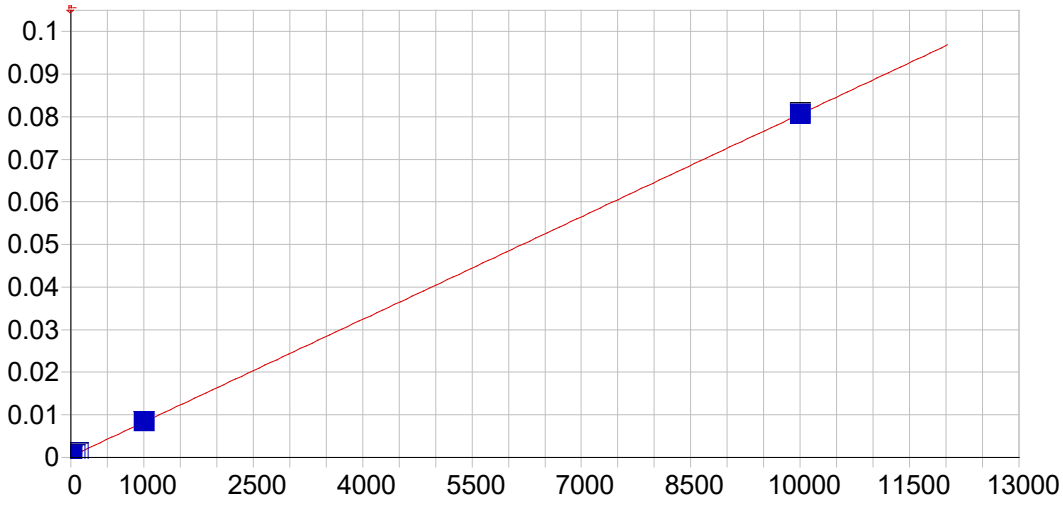


Si 251.611 {134}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	-0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	25.885925		
Predicted MQL:	86.286417		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00001	.000	1
CalStd9=100	1000.0	999.54	-.455	-.046	.00029	.000	1
CalibStd15=1	100000.	95448.	-4550.	-4.55	.02867	.000	1

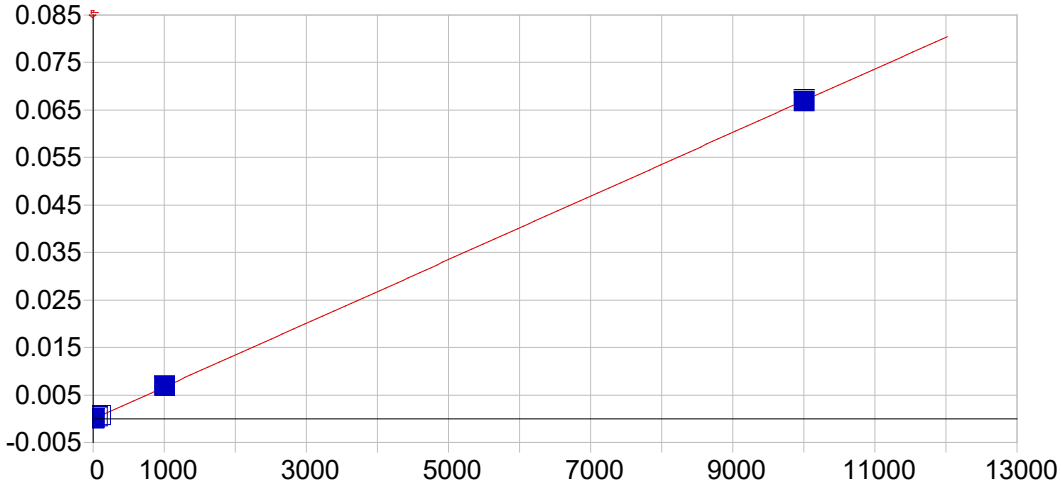


Ti 323.452 {104}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000261	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.124889		
Predicted MQL:	7.082962		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00014	.000	.000	.00026	.000	1
CalStd5=10	10.000	9.6883	-.312	-3.12	.00034	.000	1
CalStd8=100	100.00	99.479	-.521	-.521	.00106	.000	1
CalStd9=100	1000.0	1003.3	3.33	.333	.00833	.000	1
CalStd10=10	10000.	9997.4	-2.56	-.026	.08061	.000	1
CalStd7=50	50.000	50.042	.042	.085	.00066	.000	1
CalStd4=5	5.0000	5.0180	.018	.360	.00030	.000	1

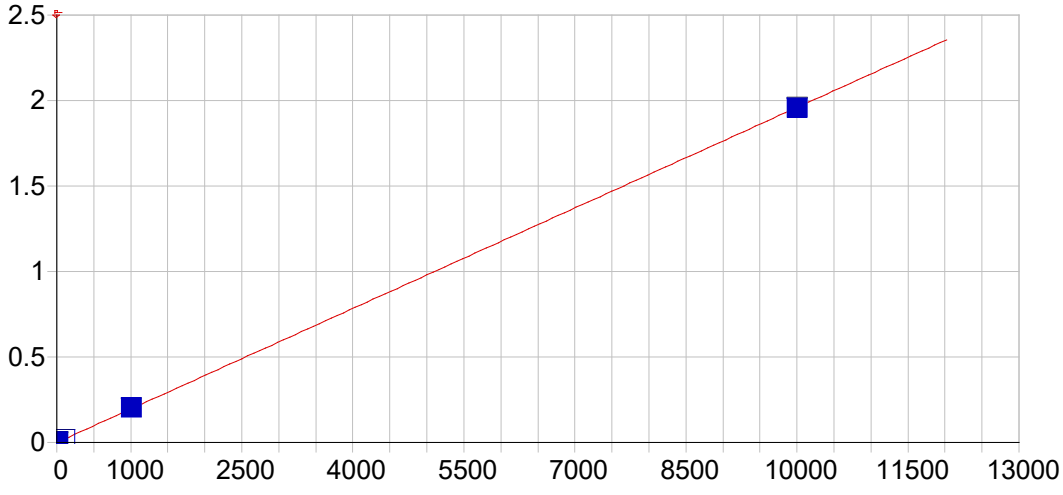


Ti 334.941 {101}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999905	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	2.015989		
Predicted MQL:	6.719965		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00338	-.003	.000	-.00001	.000	1
CalStd5=10	10.000	13.514	3.51	35.1	.00008	.000	1
CalStd8=100	100.00	101.45	1.45	1.45	.00067	.000	1
CalStd9=100	1000.0	1016.8	16.8	1.68	.00680	.000	1
CalStd10=10	10000.	9973.5	-26.5	-.265	.06680	.000	1
CalStd7=50	50.000	53.635	3.63	7.27	.00035	.000	1
CalStd4=5	5.0000	6.1149	1.11	22.3	.00003	.000	1

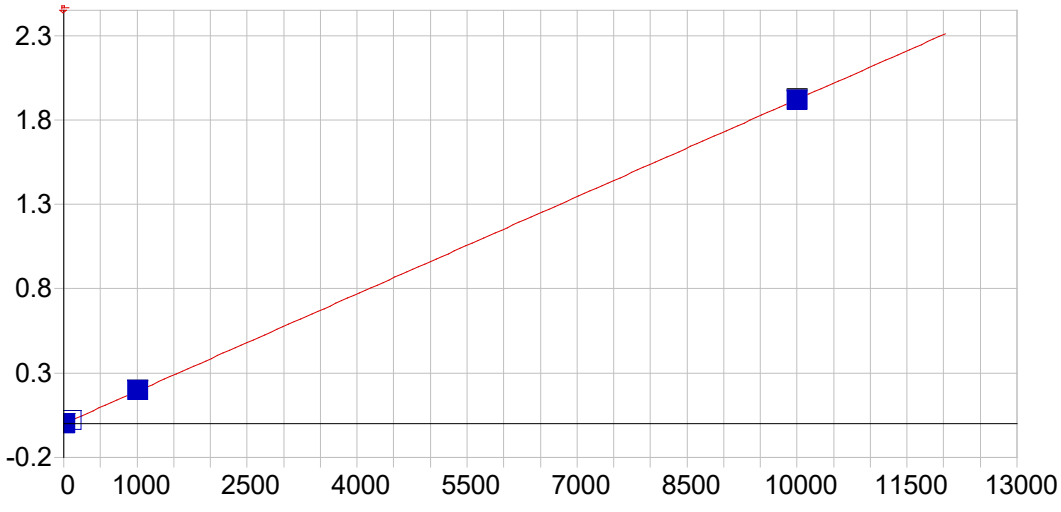


Sr 407.771 { 83}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000041	Re-Slope:	1.000000
A1 (Gain):	0.000196	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999977	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	0.160614		
Predicted MQL:	0.535381		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00018	-.000	.000	.00004	.000	1
CalStd3=1	1.0000	1.0418	.042	4.18	.00024	.000	1
CalStd4=5	5.0000	5.2703	.270	5.41	.00107	.000	1
CalStd5=10	10.000	10.488	.488	4.88	.00210	.000	1
CalStd8=100	100.00	101.26	1.26	1.26	.01988	.000	1
CalStd9=100	1000.0	1020.0	20.0	2.00	.19990	.000	1
CalStd10=10	10000.	9977.9	-22.1	-.221	1.9550	.004	1

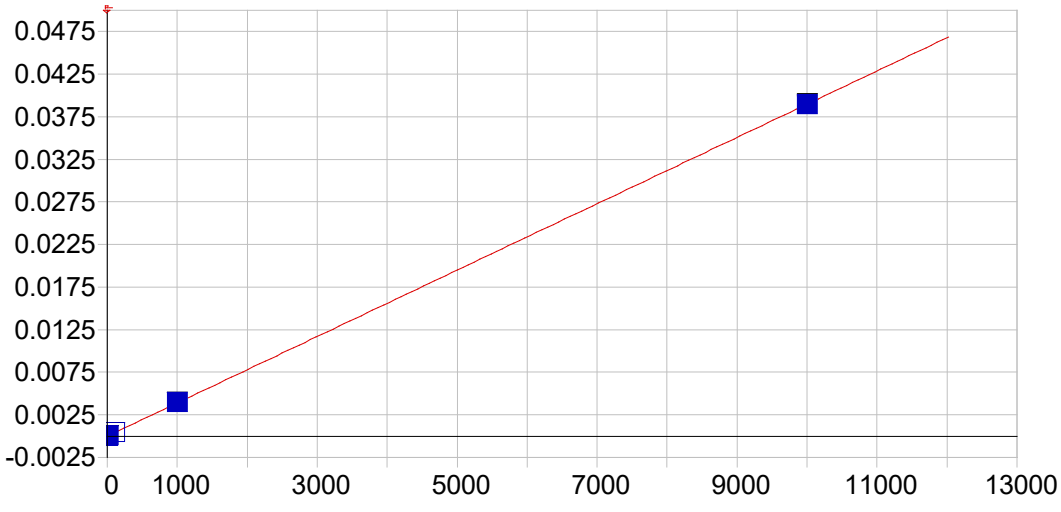


Sr 421.552 { 80}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000192	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.154140		
Predicted MQL:	0.513801		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00025	-.000	.000	-.00000	.000	1
CalStd3=1	1.0000	1.0933	.093	9.33	.00021	.000	1
CalStd4=5	5.0000	5.3960	.396	7.92	.00103	.000	1
CalStd5=10	10.000	10.538	.538	5.38	.00202	.000	1
CalStd8=100	100.00	101.05	1.05	1.05	.01942	.000	1
CalStd9=100	1000.0	1015.1	15.1	1.51	.19506	.000	1
CalStd10=10	10000.	9982.8	-17.2	-.172	1.9184	.004	1

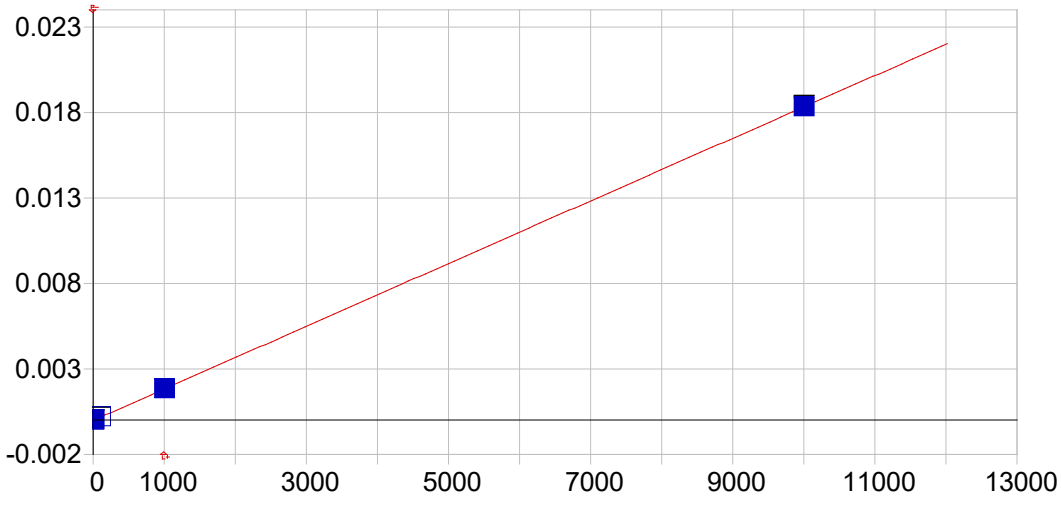


Sn 189.989 {477}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999982	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.110059		
Predicted MQL:	3.700198		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00129	-.001	.000	.00000	.000	1
CalStd10=10	10000.	9981.7	-18.3	-.183	.03891	.000	1
CalStd9=100	1000.0	1015.5	15.5	1.55	.00396	.000	1
CalStd8=100	100.00	101.78	1.78	1.78	.00040	.000	1
CalStd5=10	10.000	10.975	.975	9.75	.00005	.000	1

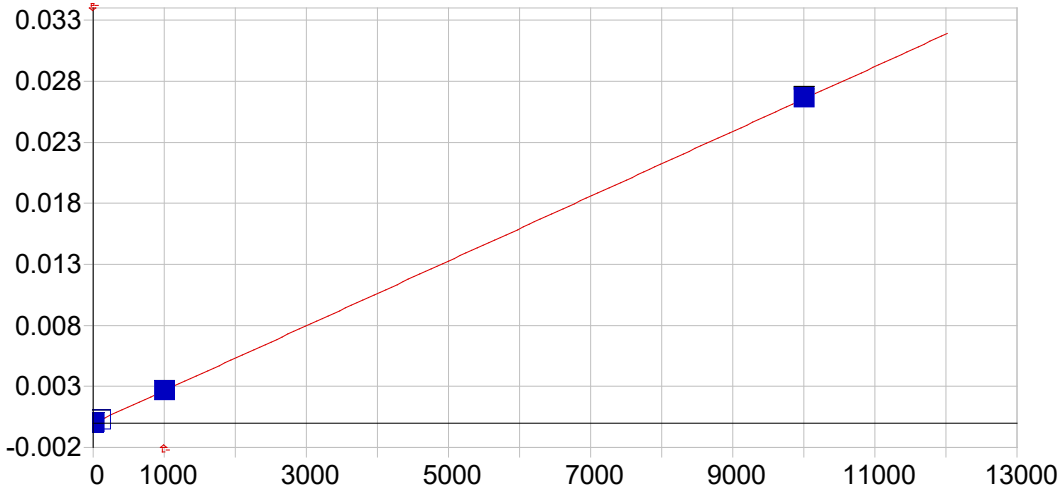


B 249.678 {135}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.028170		
Predicted MQL:	3.427233		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00081	-.001	.000	-.00000	.000	1
CalStd8=100	100.00	99.898	-.102	-.102	.00018	.000	1
CalStd5=10	10.000	10.821	.821	8.21	.00002	.000	1
CalStd9=100	1000.0	999.64	-.362	-.036	.00183	.000	1
CalStd10=10	10000.	9999.6	-.356	-.004	.01832	.000	1

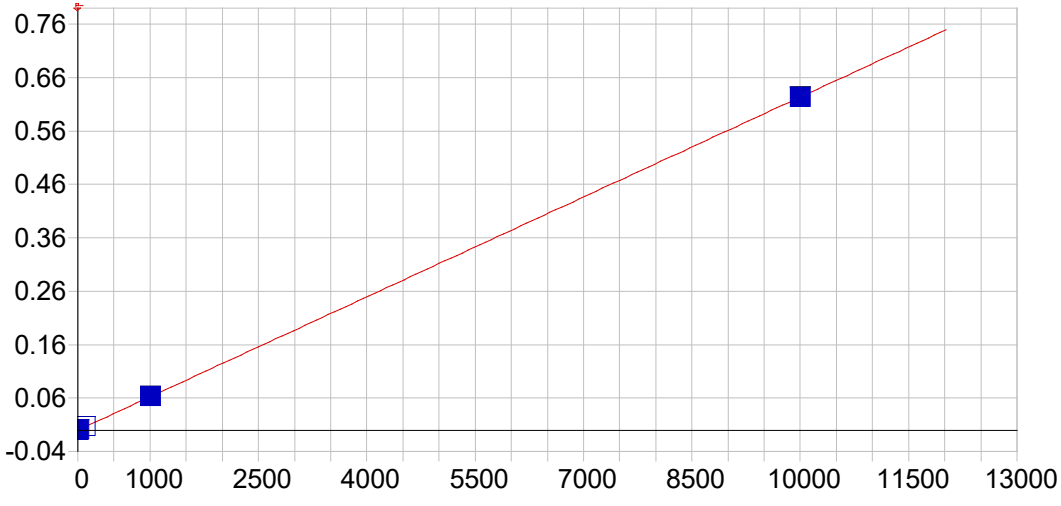


B 249.773 {135}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.668819		
Predicted MQL:	2.229395		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.01238	.012	.000	-.00000	.000	1
CalStd8=100	100.00	99.784	-.216	-.216	.00026	.000	1
CalStd5=10	10.000	10.181	.181	1.81	.00003	.000	1
CalStd9=100	1000.0	1000.2	.196	.020	.00265	.000	1
CalStd10=10	10000.	10029.	29.0	.290	.02663	.000	1

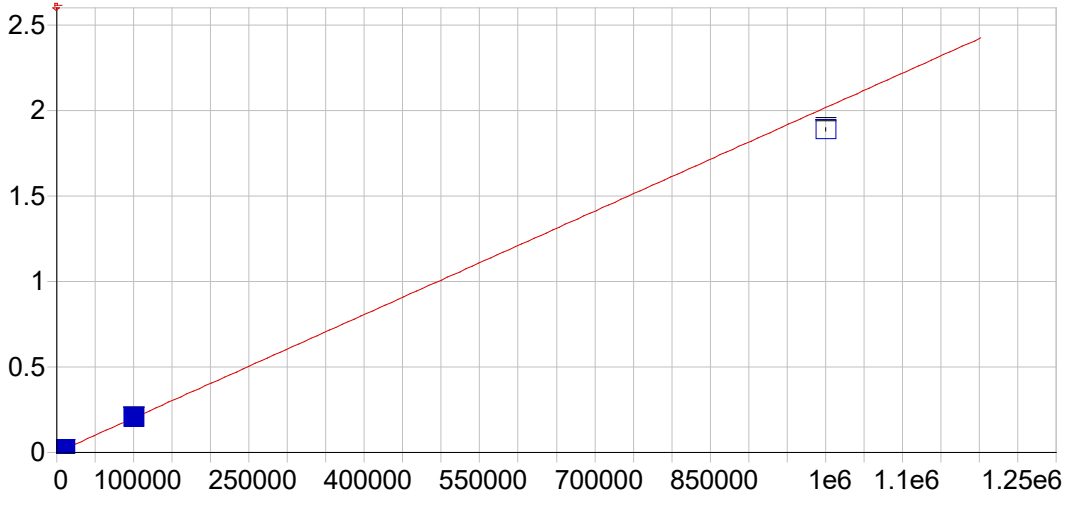


Li 670.784 { 50}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000109	Re-Slope:	1.000000
A1 (Gain):	0.000062	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	1.347733		
Predicted MQL:	4.492443		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00030	-.000	.000	-.00011	.000	1
CalStd5=10	10.000	10.256	.256	2.56	.00053	.000	1
CalStd8=100	100.00	99.794	-.206	-.206	.00611	.000	1
CalStd9=100	1000.0	1007.4	7.37	.737	.06272	.000	1
CalStd10=10	10000.	9992.6	-7.42	-.074	.62308	.001	1

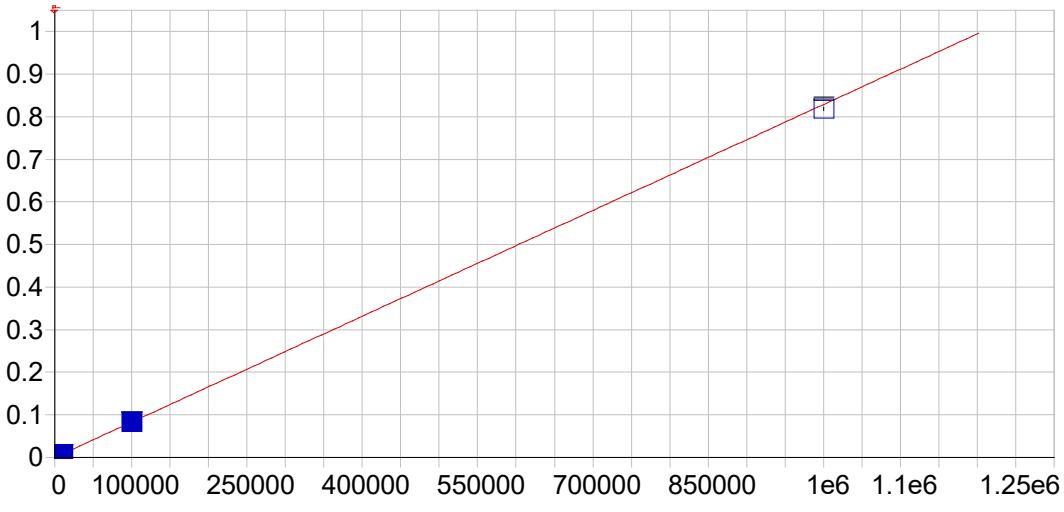


K 766.490 { 44}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000212	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999525	Status:	OK.
Std Error of Est:	0.000723		
Predicted MDL:	40.253422		
Predicted MQL:	134.178073		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-25.905	-25.9	.000	.00016	.000	1
CalStd9=100	1000.0	1089.1	89.1	8.91	.00241	.000	1
CalStd10=10	10000.	9806.1	-194.	-1.94	.01999	.000	1
CalibStd15=1	1000000.	936990.	-63000.	-6.30	1.8893	.010	1
CalStd13=10	100000.	101750.	1750.	1.75	.20539	.000	1

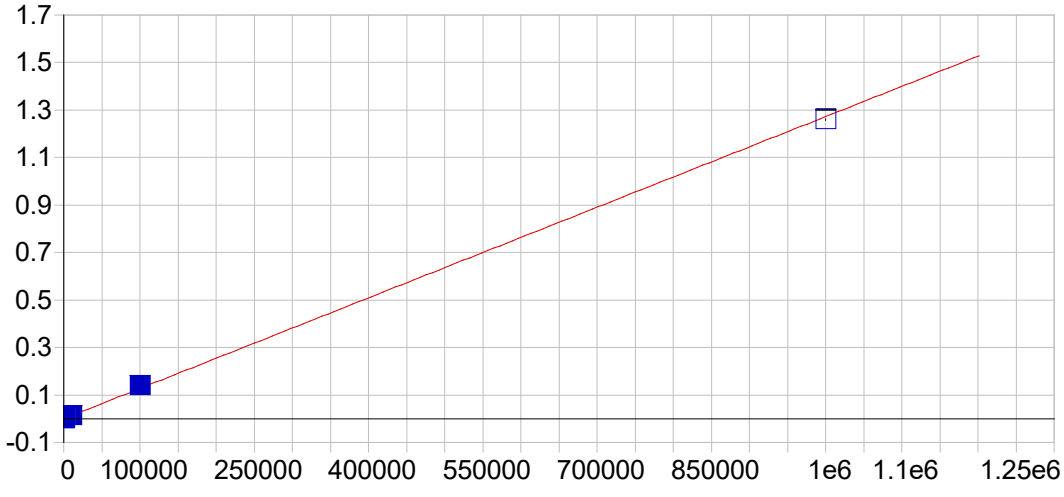


K 769.896 { 44}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000127	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999977	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	85.710421		
Predicted MQL:	285.701404		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.16967	-.170	.000	.00013	.000	1
CalStd9=100	1000.0	1199.0	199.	19.9	.00112	.000	1
CalStd10=10	10000.	9694.4	-306.	-3.06	.00816	.000	1
CalibStd15=1	1000000.	987440.	-12600.	-1.26	.81835	.003	1
CalStd13=10	100000.	99988.	-11.6	-.012	.08302	.000	1

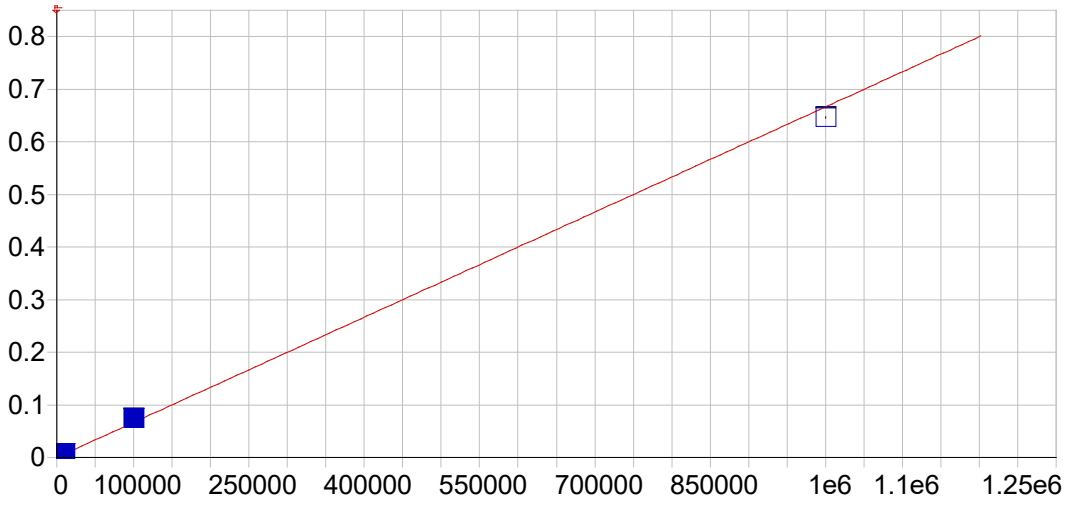


P 213.618 {457}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000013	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999482	Status:	OK.
Std Error of Est:	0.000056		
Predicted MDL:	4.658276		
Predicted MQL:	15.527587		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.24140	-.241	.000	-.00001	.000	1
CalStd10=10	10000.	10834.	834.	8.34	.01377	.000	1
CalStd9=100	1000.0	1070.7	70.7	7.07	.00135	.000	1
CalibStd15=1	1000000.	989290.	-10700.	-1.07	1.2588	.002	1
CalStd13=10	100000.	109810.	9810.	9.81	.13971	.000	1

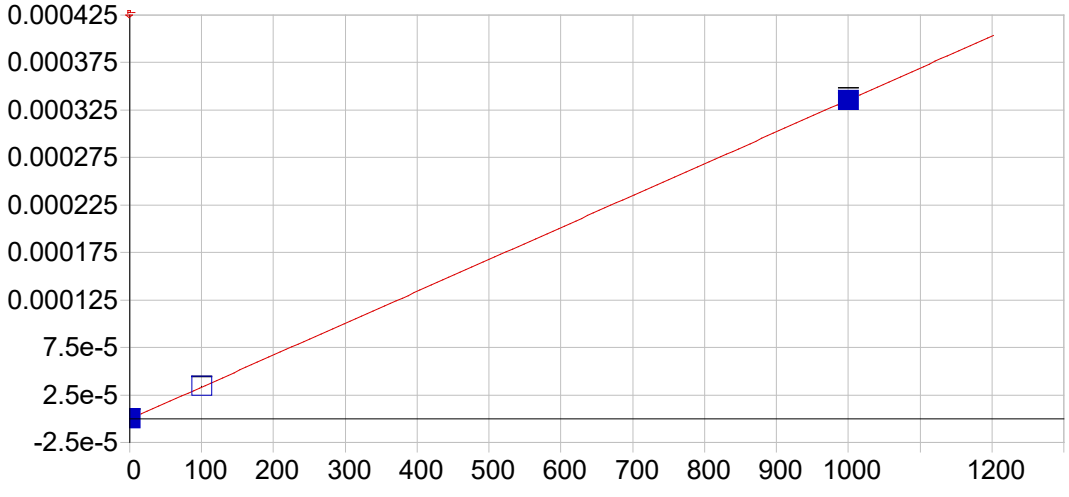


S 182.034 {485}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000018	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998655	Status:	OK.
Std Error of Est:	0.000116		
Predicted MDL:	5.581056		
Predicted MQL:	18.603518		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-18.468	-18.5	.000	.00001	.000	1
CalStd9=100	1000.0	1037.8	37.8	3.78	.00071	.000	1
CalStd10=10	10000.	10603.	603.	6.03	.00711	.000	1
CalibStd15=1	1000000.	969810.	-30200.	-3.02	.64632	.001	1
CalStd13=10	100000.	111250.	11200.	11.2	.07424	.000	1

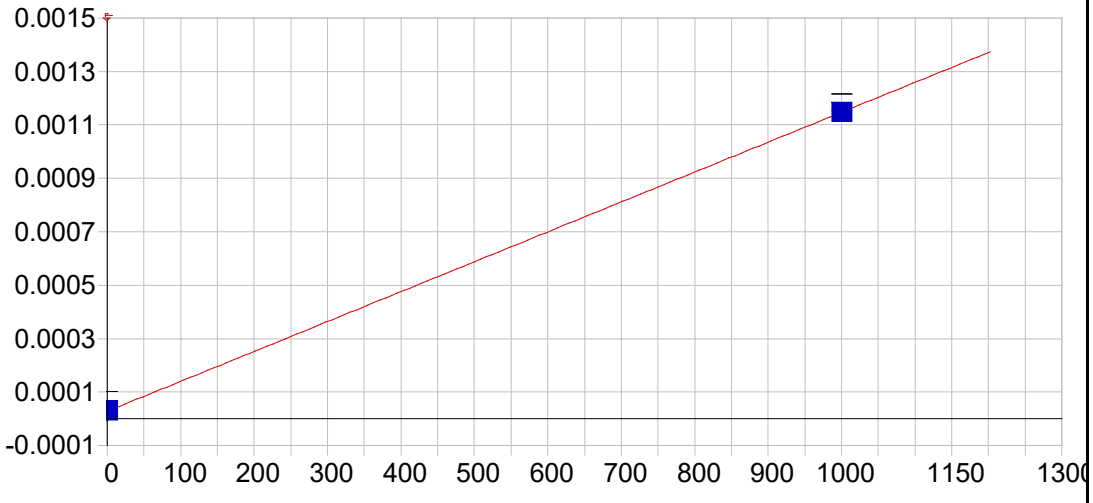


Hg 184.950 {482}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.165568		
Predicted MQL:	3.885228		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00156	-.002	.000	-.00000	.000	1
CalStd8=100	100.00	101.74	1.74	1.74	.00003	.000	1
CalStd9=100	1000.0	998.26	-1.74	-.174	.00034	.000	1



Ce 404.076 { 83}

Date of Fit:	05/03/2021 09:36:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000028	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	25.806350		
Predicted MQL:	86.021166		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00003	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00115	.000	1

Sample Name: Blank Acquired: 04/21/2021 11:18:52 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	As1972	Ba2335	Ba4934	Be3130	Be2348	Ca3158	Ca3933	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**14.2**	**.000**	**-.000**	**.000**	**-.000**	**.000**	**.016**	**.000**	**.000**	**.000**	**.000**	**-.000**	**.000**
Stddev	1.8	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	12.9	2.53	34.3	115.	61.4	472.	.297	2.02	355.	9.80	11.4	190.	6.85

Elem	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Cu2247	Fe2343	Fe2395	Fe2599	Mg2790	Mg2802	Mn2576	Mn2593
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**-.000**	**-.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**-.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1210.	64.5	29.8	2470.	14.6	38.2	3.22	144.	407.	125.	.563	305.	40.8

Elem	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**-.000**	**-.000**	**-.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**-.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	80.7	72.8	43.8	20.4	30.4	14.1	186.	111.	102.	280.	32.5	362.	76.1

Elem	Zn2062	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.009**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000
%RSD	82.2	18.2	.792	86.4	31.7	18.0

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**170100.**	**1684700.**	**74967.**
Stddev	648.	2908.	218.
%RSD	.38087	.17260	.29061

Sample Name: CalStd2=0.5 Acquired: 04/21/2021 11:25:10 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Be3130	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**
Stddev	.000	.000	.000
%RSD	1.50	26.8	13.1

Int. Std.	Y_2243	Y_3242
Units	Cts/S	Cts/S
Avg	**166820.**	**1645700.**
Stddev	486.	8654.
%RSD	.29119	.52589

Sample Name: CalStd3=1 Acquired: 04/21/2021 11:31:22 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Ba2335	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**19.4**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**-.000**
Stddev	2.9	.000	.000	.000	.000	.000	.000	.000
%RSD	14.9	35.7	2.13	25.4	8.84	35.9	18.7	20.5

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**167570.**	**1662900.**	**72760.**
Stddev	584.	17044.	195.
%RSD	.34845	1.0250	.26811

Sample Name: CalStd4=5 Acquired: 04/21/2021 11:37:36 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba2335	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Mo2045	Ni2316	Pb2203	Sb2175
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	11.1	.915	4.56	1.49	3.11	6.55	8.59	2.18	17.2	26.1	14.5	15.5	23.4

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**167570.**	**1650500.**	**72721.**
Stddev	395.	10199.	258.
%RSD	.23559	.61790	.35429

Sample Name: CalStd5=10 Acquired: 04/21/2021 11:43:50 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al1670	As1937	As1972	Ba2335	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Cu2230	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**-.000**	**.000**	**.001**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.56	28.6	517.	3.69	1.02	1.39	2.12	2.01	2.73	3.62	9.49	.904	5.30

Elem	Mo2045	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	11.2	5.36	28.3	14.2	51.4	25.9	56.3	19.5	3.79	.423	1.07

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**167320.**	**1662900.**	**72755.**
Stddev	746.	11090.	170.
%RSD	.44570	.66688	.23360

Sample Name: CalStd6=20 Acquired: 04/21/2021 11:50:05 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba2335	Cu2230	Cu2247	Mn2576	Mo2020	Mo2045	Sb2175	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.71	2.77	11.3	.826	1.89	3.24	11.0	1.92

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**167450.**	**1669600.**	**73193.**
Stddev	523.	17415.	66.
%RSD	.31232	1.0431	.09055

Sample Name: CalStd7=50 Acquired: 04/21/2021 11:56:15 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	As1937	As1972	Cd2288	Co2286	Cr2055	Cr2677	Cu2247	Mn2576	Mo2020	Mo2045	Ni2316	Sb2068	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.002**	**.001**	**.001**	**.000**	**.000**	**.000**	**.000**	**.000**	**.001**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	6.22	23.8	.405	.914	1.26	1.16	5.98	.926	1.58	2.00	.716	1.46	2.23

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**166730.**	**1650600.**	**72433.**
Stddev	759.	11412.	282.
%RSD	.45516	.69142	.38977

Sample Name: CalStd8=100 Acquired: 04/21/2021 12:02:19 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	As1972	Ba2335	Ba4934	Be3130	Be2348	Ca3933	Cd2265	Cd2288	Co2286	Co2388
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**394.**	**.000**	**.000**	**.000**	**.001**	**.026**	**.006**	**.000**	**.040**	**.002**	**.004**	**.002**	**.000**
Stddev	4.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.02	.759	3.96	8.06	.221	.232	1.06	4.07	.290	.257	.173	.507	1.39

Elem	Cr2055	Cr2677	Cu2230	Cu2247	Mg2802	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.001**	**.000**	**.001**	**.000**	**.003**	**.001**	**.001**	**.000**	**.001**	**.001**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.513	1.02	.846	.583	.762	.888	.196	1.03	.299	.728	5.45	2.46	.753

Elem	Se1960	Se2062	Tl1908	V_2908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.001**	**.002**	**.003**
Stddev	.000	.000	.000	.000	.000	.000	.000
%RSD	2.98	20.9	2.38	8.39	.766	.367	.161

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**166950.**	**1653600.**	**72909.**
Stddev	476.	14746.	248.
%RSD	.28510	.89172	.34023

Sample Name: CalStd9=1000 Acquired: 04/21/2021 12:08:24 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al1670	Al3961	As1937	As1972	Ba2335	Ba4934	Be3130	Be2348	Ca3158	Ca3933	Cd2265	Cd2288	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.003**	**.002**	**.001**	**.000**	**.007**	**.114**	**.062**	**.001**	**.001**	**.394**	**.023**	**.044**	**.022**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000
%RSD	.223	1.47	.412	1.14	.047	.160	.540	.729	1.81	.153	.196	.088	.081

Elem	Co2388	Cr2055	Cr2677	Cu2230	Cu2247	Fe2343	Fe2395	Fe2599	Mg2790	Mg2802	Mn2576	Mn2593	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.002**	**.012**	**.003**	**.006**	**.005**	**.000**	**.000**	**.001**	**.000**	**.028**	**.009**	**.004**	**.007**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.827	.128	.519	.187	.062	.283	3.50	.633	8.41	.607	.702	.524	.093

Elem	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.005**	**.015**	**.015**	**.001**	**.002**	**.002**	**.002**	**.001**	**.000**	**.002**	**.001**	**.006**	**.021**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.177	.184	.161	.762	.388	.467	.484	.748	1.70	.539	.940	.751	.289

Elem	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.032**	**.028**	**.006**	**.002**	**.001**
Stddev	.000	.000	.000	.000	.000
%RSD	.061	.456	.629	2.58	2.44

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**166750.**	**1647100.**	**72604.**
Stddev	288.	7418.	189.
%RSD	.17261	.45037	.26056

Sample Name: CalStd10=10000 Acquired: 04/21/2021 12:14:01 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	As1972	Ba4934	Ca3158	Co2286	Co2388	Cr2055	Cr2677	Cu2247	Fe2343	Fe2395	Fe2599	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.023**	**.005**	**.980**	**.005**	**.221**	**.020**	**.114**	**.034**	**.056**	**.005**	**.003**	**.008**	**.001**
Stddev	.000	.000	.002	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.244	.374	.243	.340	.229	.546	.256	.519	.152	.364	.720	.685	.786

Elem	Mg2802	Mn2576	Mn2593	Mo2045	Ni2216	Ni2316	Pb2169	Sb2068	Sb2175	Se2062	V_2908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.257**	**.085**	**.037**	**.046**	**.147**	**.150**	**.011**	**.018**	**.019**	**.002**	**.010**	**.057**	**.202**
Stddev	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001
%RSD	.437	.228	.216	.228	.288	.238	.329	.274	.205	.286	.295	.453	.290

Elem	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.187**	**.061**	**.020**	**.007**
Stddev	.000	.000	.000	.000
%RSD	.131	.115	.488	.369

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**164150.**	**1612100.**	**72417.**
Stddev	287.	5366.	67.
%RSD	.17493	.33283	.09196

Sample Name: CalStd12=100K Acquired: 04/21/2021 12:19:29 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Cr2055	Cu2247	Mn2593	Pb2169	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.08**	**.587**	**.379**	**.113**	**1.88**
Stddev	.00	.000	.001	.000	.01
%RSD	.116	.060	.211	.085	.760

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**165030.**	**72253.**
Stddev	465.	270.
%RSD	.28164	.37317

Sample Name: CalStd13=100000 Acquired: 04/21/2021 12:26:05 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2343	Fe2395	Fe2599	Mg2790	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.238**	**.046**	**.045**	**.033**	**.078**	**.006**	**1.80**	**.615**	**.205**	**.070**
Stddev	.000	.000	.000	.000	.000	.000	.01	.001	.000	.000
%RSD	.169	.301	.411	.164	.274	.185	.273	.163	.229	.320

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**157710.**	**1565100.**	**71317.**
Stddev	539.	9825.	225.
%RSD	.34165	.62776	.31484

Sample Name: CalStd14=500000 Acquired: 04/21/2021 12:32:28 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2395	Fe2599	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.20**	**.218**	**.149**	**.355**	**.028**
Stddev	.01	.001	.001	.002	.000
%RSD	.449	.601	.618	.545	.598

Int. Std.	Y_3242	Y_3710
Units	Cts/S	Cts/S
Avg	**1483300.**	**69414.**
Stddev	7198.	385.
%RSD	.48530	.55462

Sample Name: CalibStd15=1000k Acquired: 04/21/2021 12:38:59 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2395	Mg2790	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.33**	**.409**	**.270**	**.053**	**14.2**	**5.60**	**1.89**	**.683**
Stddev	.00	.001	.001	.000	.2	.03	.01	.002
%RSD	.167	.356	.470	.047	1.70	.583	.538	.361

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**136300.**	**1356600.**	**65976.**
Stddev	265.	3375.	226.
%RSD	.19435	.24880	.34295

Sample Name: Ag Ba 1000, 50000 Acquired: 04/21/2021 12:45:37 Type: Cal
Method: DOD Calibration Updated 060614(v4355) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba4934
Units	Cts/S
Avg	**4.90**
Stddev	.04
%RSD	.759

Int. Std.	Y_3710
Units	Cts/S
Avg	**74240.**
Stddev	549.
%RSD	.74001

Sample Name: icv Acquired: 04/21/2021 12:58:11 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599	Mg2790
Avg	**49.9**	**11500.**	**1930.**	**1980.**	**49.3**	**9730.**	**48.1**	**495.**	**200.**	**244.**	**5020.**	**9550.**
Stddev	.3	43.	7.	1.	.3	46.	.2	1.	3.	2.	28.	83.
%RSD	.547	.372	.343	.069	.674	.471	.459	.111	1.28	1.00	.569	.873
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se2062	Tl1908	V_2924	Zn2062
Avg	**524.**	**548.**	**567.**	**501.**	**509.**	**491.**	**489.**	**490.**	**2030.**	**2010.**	**513.**	**508.**
Stddev	5.	1.	1.	.	1.	7.	4.	3.	34.	2.	4.	1.
%RSD	.872	.263	.089	.092	.127	1.39	.723	.524	1.69	.105	.715	.262
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Zn2138	Na5889	Na5895	K_7664	K_7698
Avg	**516.**	**4910.**	**5070.**	**5030.**	**4870.**
Stddev	1.	7.	5.	48.	89.
%RSD	.152	.150	.105	.945	1.83
Check ?	None	None	None	None	None
Value					
Range					

Sample Name: icv Acquired: 04/21/2021 12:58:11 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**172690.**	**1645100.**	**73485.**
Stddev	386.	9245.	31.
%RSD	.22358	.56200	.04165

Sample Name: ICVLL Acquired: 04/21/2021 13:09:51 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3158	Ca3933	Cd2265	Co2286	Cr2677	Cu2230
Avg	F **33.4**	**1240.**	**1280.**	**58.3**	**30.0**	**13.1**	**1540.**	**1580.**	**15.9**	**31.2**	**31.4**	**31.3**
Stddev	.3	4.	8.	3.4	.9	.0	21.	1.	.1	.2	.7	1.2
%RSD	.972	.315	.594	5.82	3.12	.368	1.33	.064	.579	.751	2.16	3.69
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	60.0											
Range	-30.0%											

Elem	Fe2343	Fe2599	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Avg	**937.**	**942.**	**1580.**	**32.5**	**31.9**	**33.1**	**29.9**	**63.6**	**64.1**	**62.1**	**33.3**	**33.3**
Stddev	4.	8.	5.	.1	.8	.1	2.2	2.2	3.4	1.1	.4	.2
%RSD	.388	.799	.303	.452	2.35	.281	7.21	3.40	5.28	1.82	1.16	.745
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Na5889	Na5895	K_7664	K_7698
Avg	**3160.**	**3230.**	**14800.**	**14200.**
Stddev	7.	11.	57.	109.
%RSD	.235	.352	.387	.768
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Sample Name: ICVLL Acquired: 04/21/2021 13:09:51 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**177020.**	**1674300.**	**75441.**
Stddev	494.	1716.	345.
%RSD	.27893	.10247	.45729

Sample Name: icb Acquired: 04/21/2021 13:15:51 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599	Mg2802
Avg	**-1.11**	**-4.66**	**-.971**	**.005**	**.178**	**-1.33**	**.078**	**.100**	**.116**	**-1.74**	**-4.16**	**-7.64**	**-.484**
Stddev	.56	.44	7.45	.266	.031	.06	.175	.560	.407	.97	.52	6.34	.041
%RSD	50.6	9.44	767.	5090.	17.4	4.62	224.	560.	350.	55.4	12.5	83.0	8.54
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Avg	**-.199**	**-.340**	**.212**	**-.087**	**-.793**	**-5.03**	**-.699**	**-.420**	**-1.02**	**27.7**	**-9.53**	**43.7**	**55.9**
Stddev	.109	.305	.163	2.03	1.38	3.96	1.30	.472	.14	5.4	2.19	54.4	89.6
%RSD	54.7	89.7	77.0	2330.	174.	78.8	186.	112.	13.7	19.5	23.0	125.	160.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**178480.**	**1698600.**	**76019.**
Stddev	347.	6806.	102.
%RSD	.19461	.40069	.13476

Sample Name: MRL/LLOQ Acquired: 04/21/2021 13:28:13 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599	Mg2802
Avg	F **9.05**	**424.**	**17.8**	**10.2**	**4.59**	**527.**	**5.58**	**10.7**	**10.8**	**9.48**	**313.**	**313.**	**538.**
Stddev	.35	2.	6.2	.7	.03	1.	.27	.2	.5	1.29	1.	15.	1.
%RSD	3.91	.583	34.8	6.55	.564	.183	4.78	1.75	4.89	13.6	.424	4.89	.263
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	20.0												
Range	-30.0%												

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Avg	**11.3**	**11.0**	**11.5**	**7.28**	**20.7**	**21.6**	**19.7**	**11.1**	**10.5**	**1040.**	**1030.**	**4980.**	**4860.**
Stddev	.1	.6	.4	1.50	1.2	5.6	1.4	.3	.2	11.	4.	23.	8.
%RSD	.496	5.29	3.59	20.6	5.71	26.2	7.31	2.88	2.32	1.04	.369	.460	.169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**178140.**	**1672400.**	**75262.**
Stddev	195.	5753.	176.
%RSD	.10953	.34402	.23370

Sample Name: ICSA Acquired: 04/21/2021 13:34:20 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2395
Avg	**-.469**	**490000.**	**.196**	**.052**	**.088**	**464000.**	**1.02**	**.847**	**-.274**	**-.143**	**516000.**
Stddev	1.41	548.	12.4	.688	.040	1050.	.49	.316	.337	.612	1530.
%RSD	301.	.112	6350.	1330.	45.9	.227	48.2	37.3	123.	428.	.297
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Fe2599	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2908	Zn2138
Avg	**435000.**	**496000.**	**.493**	**-1.11**	**2.42**	**.166**	**-6.56**	**-3.66**	**-4.52**	**9780.**	**-1.63**
Stddev	595.	1690.	.244	.82	.78	1.01	2.78	4.06	5.31	35.	.50
%RSD	.137	.342	49.4	73.7	32.1	606.	42.4	111.	118.	.362	30.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit											
Low Limit											

Elem	Na5889	Na5895	K_7664	K_7698
Avg	**7.37**	**1.26**	**1.89**	**3.98**
Stddev	10.5	24.0	63.9	108.
%RSD	143.	1910.	3380.	2710.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Sample Name: ICSA Acquired: 04/21/2021 13:34:20 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**154000.**	**1485600.**	**70559.**
Stddev	314.	9143.	178.
%RSD	.20406	.61546	.25226

Sample Name: ICSAB Acquired: 04/21/2021 13:40:47 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3382	Al3961	As1937	Ba2335	Be2348	Ca3158	Cd2288	Co2286	Cr2677	Cu2230	Fe2395
Avg	**402.**	**492000.**	**527.**	**498.**	**489.**	**466000.**	**511.**	**498.**	**489.**	**521.**	**508000.**
Stddev	.	1230.	13.	1.	11.	1630.	1.	1.	3.	.	1080.
%RSD	.008	.250	2.37	.152	2.30	.349	.123	.197	.699	.003	.212
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Fe2599	Mg2790	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2203	Sb2175	Se1960	Tl1908
Avg	**432000.**	**501000.**	**514.**	**508.**	**522.**	**501.**	**502.**	**469.**	**510.**	**494.**	**489.**
Stddev	517.	88.	3.	2.	5.	1.	1.	7.	.	4.	2.
%RSD	.120	.018	.495	.396	1.03	.224	.164	1.43	.029	.864	.409
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	V_2924	Zn2062	Zn2138	Na5895	K_7664	K_7698
Avg	**507.**	**462.**	**510.**	**52800.**	**52600.**	**51800.**
Stddev	2.	1.	1.	25.	236.	372.
%RSD	.346	.166	.231	.047	.448	.718
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: ICSAB Acquired: 04/21/2021 13:40:47 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**153180.**	**1494100.**	**70162.**
Stddev	624.	8568.	225.
%RSD	.40735	.57342	.32000

Sample Name: ICVLL ag Acquired: 04/21/2021 13:52:49 Type: Unk
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**11.1**	**6.30**	**4.22**	**-.064**	**.181**	**10.9**	**.176**	**.036**	**.151**	**-.830**	**161.**	**191.**	**9.01**
Stddev	.4	.76	3.43	.481	.014	.9	.158	.120	.501	1.07	2.	32.	.20
%RSD	4.01	12.0	81.3	748.	7.72	8.00	89.7	338.	332.	128.	.987	16.5	2.26

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**10.4**	**-.181**	**.504**	**-2.47**	**-.197**	**.576**	**-.348**	**-.049**	**-.577**	**54.6**	**20.1**	**123.**	**261.**
Stddev	.1	.610	.150	3.56	2.12	6.00	2.56	.524	.140	14.1	8.2	24.	28.
%RSD	.969	338.	29.7	144.	1080.	1040.	737.	1060.	24.3	25.8	40.7	19.5	10.8

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**172960.**	**1644300.**	**73115.**
Stddev	307.	4068.	443.
%RSD	.17760	.24742	.60575

Sample Name: ccv1 Acquired: 04/22/2021 09:32:04 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be2348	Ca3158	Cd2288	Co2388	Cr2055	Cu2230	Cu2247	Fe2599
Avg	**488.**	**5380.**	**5220.**	**5240.**	**518.**	**5180.**	**538.**	**5380.**	**5310.**	**5180.**	**5110.**	**5310.**
Stddev	1.	15.	22.	8.	12.	18.	2.	37.	8.	14.	15.	27.
%RSD	.167	.274	.419	.153	2.32	.344	.301	.678	.150	.272	.285	.514
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2790	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2908	Zn2062	Na5895	K_7664
Avg	**5060.**	**5270.**	**5340.**	**5260.**	**5020.**	**5280.**	**5290.**	**5200.**	**5240.**	**5260.**	**51100.**	**50300.**
Stddev	67.	11.	8.	4.	18.	21.	19.	11.	12.	7.	62.	97.
%RSD	1.32	.199	.155	.076	.360	.396	.367	.204	.234	.134	.121	.194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	K_7698
Avg	**48900.**
Stddev	185.
%RSD	.379
Check ?	Chk Pass
Value	
Range	

Sample Name: ccv1 Acquired: 04/22/2021 09:32:04 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**165820.**	**1573700.**	**72112.**
Stddev	516.	9176.	171.
%RSD	.31111	.58310	.23673

Sample Name: ccv2 Acquired: 04/22/2021 09:37:22 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599	Mg2802
Avg	**51.3**	**538.**	**514.**	**506.**	**52.6**	**513.**	**51.7**	**516.**	**524.**	**518.**	**523.**	**532.**	**523.**
Stddev	.7	1.	7.	1.	.3	1.	.2	.	1.	1.	4.	8.	3.
%RSD	1.45	.203	1.45	.270	.519	.176	.332	.087	.264	.195	.844	1.54	.597
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Avg	**547.**	**506.**	**527.**	**524.**	**529.**	**507.**	**514.**	**518.**	**516.**	**518.**	**518.**	**525.**	**519.**
Stddev	4.	2.	.	1.	2.	7.	2.	7.	3.	1.	3.	2.	1.
%RSD	.748	.347	.091	.115	.290	1.35	.401	1.31	.506	.258	.639	.453	.135
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Na5889	Na5895	K_7664	K_7698
Avg	**5100.**	**5190.**	**5080.**	**5080.**
Stddev	5.	21.	24.	84.
%RSD	.103	.400	.480	1.65
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Sample Name: ccv2 Acquired: 04/22/2021 09:37:22 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	168120.	1603800.	72787.
Stddev	276.	6584.	160.
%RSD	.16435	.41052	.21980

Sample Name: ccb Acquired: 04/22/2021 09:43:09 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599	Mg2802
Avg	**-.120**	**-3.05**	**-.351**	**.022**	**.126**	**1.30**	**.297**	**.043**	**-.004**	**-1.22**	**-1.80**	**-15.8**	**.590**
Stddev	.688	.60	3.16	.470	.013	.05	.048	.327	.498	.91	.56	5.8	.042
%RSD	573.	19.8	902.	2140.	10.3	3.85	16.2	766.	11200.	74.8	31.3	36.7	7.07
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Avg	**-.053**	**.121**	**.387**	**-.216**	**-1.41**	**-2.33**	**.011**	**-.176**	**-.591**	**38.1**	**3.40**	**22.5**	**32.1**
Stddev	.064	.492	.511	3.27	1.82	3.00	2.13	.560	.094	12.8	3.17	15.4	65.3
%RSD	120.	406.	132.	1510.	129.	129.	18700.	318.	15.8	33.6	93.1	68.6	204.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**172890.**	**1637900.**	**74530.**
Stddev	348.	5688.	187.
%RSD	.20128	.34724	.25132

Sample Name: lcsw80614 Acquired: 04/22/2021 09:49:23 Type: Unk
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**21.5**	**854.**	**851.**	**812.**	**21.5**	**205000.**	**20.5**	**208.**	**84.9**	**107.**	**415.**
Stddev	.6	4.	3.	1.	.1	520.	.2	.	.4	2.	2.
%RSD	2.72	.416	.328	.173	.566	.254	1.08	.180	.475	2.24	.410

Elem	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**417.**	**104000.**	**208.**	**2480.**	**211.**	**211.**	**217.**	**855.**	**838.**	**209.**	**213.**
Stddev	7.	339.	1.	5.	.	2.	4.	5.	3.	2.	1.
%RSD	1.62	.326	.509	.218	.203	1.05	1.89	.531	.377	.938	.248

Elem	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L
Avg	**220.**	**104000.**	**104000.**	**102000.**
Stddev	1.	122.	217.	397.
%RSD	.364	.117	.209	.388

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**158210.**	**1518600.**	**70738.**
Stddev	158.	8589.	92.
%RSD	.10003	.56557	.13027

Sample Name: mbw80614 Acquired: 04/22/2021 09:55:39 Type: Unk
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-1.11**	**-.269**	**.786**	**.610**	**.130**	**11.6**	**.339**	**.036**	**-.167**	**-.048**	**1.27**	**.697**	**2.73**
Stddev	.11	.369	4.46	.342	.012	.7	.073	.092	.593	.532	3.38	10.6	.05
%RSD	9.43	137.	567.	56.1	9.56	6.34	21.5	256.	355.	1110.	266.	1510.	1.68

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895	K_7664
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.226**	**1.45**	**.080**	**-1.14**	**.113**	**-4.30**	**-2.30**	**-.180**	**.044**	**57.4**	**29.6**	**59.2**
Stddev	.046	.02	.613	1.49	.905	.72	1.15	.259	.157	1.6	1.0	11.0
%RSD	20.4	1.51	769.	130.	801.	16.8	50.1	144.	359.	2.70	3.41	18.6

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**168010.**	**1612000.**	**72534.**
Stddev	855.	7448.	154.
%RSD	.50898	.46206	.21163

Sample Name: 554741 Acquired: 04/22/2021 10:01:52 Type: Unk
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2395
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-1.04**	**5120.**	**1.34**	**75.8**	**.310**	**151000.**	**-.066**	**8.49**	**15.7**	**19.3**	**10500.**
Stddev	.89	8.	7.43	.6	.029	841.	.294	.34	.7	1.4	36.
%RSD	85.8	.165	556.	.749	9.26	.559	449.	4.03	4.65	7.08	.343

Elem	Fe2599	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**9090.**	**77800.**	**616.**	**7.48**	**25.4**	**10.6**	**-3.54**	**-7.28**	**-.847**	**10.8**	**38.0**
Stddev	45.	294.	3.	.52	.7	2.4	2.38	5.85	2.35	.6	.2
%RSD	.497	.378	.407	6.93	2.73	22.9	67.3	80.4	278.	5.92	.401

Elem	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L
Avg	**20800.**	**6720.**	**6540.**
Stddev	50.	22.	45.
%RSD	.241	.332	.681

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**157530.**	**1536700.**	**72267.**
Stddev	342.	5376.	600.
%RSD	.21683	.34986	.83032

Sample Name: I554741 Acquired: 04/22/2021 10:08:14 Type: Unk
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.502**	**985.**	**1270.**	**2.00**	**14.6**	**.154**	**37100.**	**.042**	**1.52**	**3.38**	**2.02**	**2180.**
Stddev	.572	37.	55.	8.42	.7	.013	1440.	.160	.27	.41	1.09	88.
%RSD	114.	3.70	4.37	422.	4.91	8.33	3.88	383.	18.0	12.0	54.2	4.06

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**18800.**	**135.**	**1.42**	**5.03**	**-1.11**	**-1.80**	**.706**	**-.281**	**1.91**	**6.80**	**4870.**	**4940.**
Stddev	849.	4.	.13	.69	2.24	1.43	3.93	2.17	.22	.24	157.	150.
%RSD	4.52	3.10	9.13	13.7	202.	79.7	556.	773.	11.3	3.50	3.23	3.03

Elem	K_7664	K_7698
Units	ug/L	ug/L
Avg	**1560.**	**1580.**
Stddev	64.	127.
%RSD	4.11	8.05

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**163950.**	**1592800.**	**73321.**
Stddev	308.	5491.	352.
%RSD	.18816	.34476	.48013

Sample Name: dup554741 Acquired: 04/22/2021 10:14:51 Type: Unk
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2395
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-1.51**	**5730.**	**-.661**	**81.2**	**.267**	**147000.**	**.005**	**8.37**	**17.1**	**20.7**	**11100.**
Stddev	.17	6.	2.90	.4	.022	275.	.340	.10	.4	.9	78.
%RSD	11.5	.106	439.	.505	8.19	.187	7090.	1.24	2.50	4.54	.703

Elem	Fe2599	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**9600.**	**76700.**	**602.**	**7.58**	**25.2**	**11.2**	**-.242**	**-3.41**	**-.310**	**11.5**	**39.3**
Stddev	36.	258.	4.	.66	.5	4.7	2.47	5.65	.488	.5	.2
%RSD	.377	.337	.687	8.73	1.80	42.4	1020.	166.	158.	4.66	.626

Elem	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L
Avg	**20300.**	**6740.**	**6550.**
Stddev	28.	65.	98.
%RSD	.139	.958	1.50

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**155310.**	**1534500.**	**71697.**
Stddev	347.	9348.	253.
%RSD	.22357	.60921	.35286

Sample Name: msw554741 Acquired: 04/22/2021 10:21:13 Type: Unk
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2395
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**20.9**	**9700.**	**883.**	**893.**	**22.0**	**347000.**	**20.4**	**220.**	**105.**	**130.**	**12400.**
Stddev	.8	30.	9.	2.	.1	1110.	.1	1.	1.	1.	79.
%RSD	4.06	.307	.983	.190	.388	.319	.684	.274	.747	1.12	.635

Elem	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**10700.**	**184000.**	**808.**	**2530.**	**239.**	**221.**	**218.**	**874.**	**848.**	**224.**	**250.**
Stddev	66.	508.	2.	4.	1.	5.	4.	4.	4.	2.	1.
%RSD	.612	.276	.277	.173	.459	2.14	1.74	.432	.502	.693	.283

Elem	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L
Avg	**267.**	**126000.**	**113000.**	**112000.**
Stddev	.	282.	211.	427.
%RSD	.144	.223	.186	.382

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**149710.**	**1472400.**	**70508.**
Stddev	260.	2247.	377.
%RSD	.17392	.15257	.53470

Sample Name: msdw554741 Acquired: 04/22/2021 10:27:18 Type: Unk
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2395
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**20.8**	**10200.**	**868.**	**881.**	**21.5**	**348000.**	**20.0**	**217.**	**105.**	**129.**	**12900.**
Stddev	.4	14.	3.	2.	.1	1010.	.1	1.	.	1.	98.
%RSD	1.84	.140	.305	.208	.445	.290	.637	.275	.365	1.06	.764

Elem	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**11300.**	**184000.**	**807.**	**2480.**	**236.**	**217.**	**213.**	**854.**	**828.**	**220.**	**251.**
Stddev	44.	777.	5.	6.	1.	4.	5.	6.	3.	2.	1.
%RSD	.390	.422	.623	.222	.315	1.72	2.44	.672	.387	.727	.362

Elem	Zn2138	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L
Avg	**264.**	**125000.**	**112000.**	**111000.**
Stddev	1.	129.	189.	356.
%RSD	.223	.103	.168	.321

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**150060.**	**1485100.**	**69988.**
Stddev	138.	6680.	288.
%RSD	.09215	.44979	.41136

Sample Name: pdsw554741 Acquired: 04/22/2021 10:33:28 Type: Unk
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3130	Be2348	Ca3158	Cd2265	Co2388	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**96.5**	**9720.**	**4330.**	**4290.**	**95.6**	**105.**	**519000.**	**98.6**	**1010.**	**427.**	**539.**
Stddev	1.6	16.	12.	7.	.6	2.	1820.	.4	4.	2.	4.
%RSD	1.61	.162	.278	.164	.663	2.04	.351	.422	.361	.514	.791

Elem	Fe2395	Fe2599	Mg2790	Mn2576	Mn2593	Mo2045	Ni2216	Ni2316	Pb2169	Sb2068	Se2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**12300.**	**10700.**	**278000.**	**1570.**	**1260.**	**6060.**	**1050.**	**1040.**	**1060.**	**1040.**	**4300.**
Stddev	52.	36.	1730.	9.	4.	3.	1.	1.	10.	5.	21.
%RSD	.423	.339	.621	.546	.280	.044	.106	.085	.974	.461	.477

Elem	Tl1908	V_2908	Zn2062	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**4010.**	**1050.**	**1050.**	**223000.**	**103000.**	**102000.**
Stddev	6.	10.	2.	346.	200.	241.
%RSD	.159	.938	.231	.156	.193	.235

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**147310.**	**1448800.**	**68640.**
Stddev	295.	4965.	376.
%RSD	.20014	.34266	.54819

Sample Name: ccv1 Acquired: 04/22/2021 10:51:41 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be2348	Ca3158	Cd2288	Co2388	Cr2055	Cu2230	Cu2247	Fe2599
Avg	**485.**	**5400.**	**5330.**	**5310.**	**511.**	**5220.**	**549.**	**5360.**	**5400.**	**5220.**	**5150.**	**5320.**
Stddev	1.	12.	19.	11.	15.	46.	1.	37.	9.	8.	6.	28.
%RSD	.282	.227	.349	.201	2.93	.883	.224	.689	.173	.144	.118	.529
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Mg2790	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2908	Zn2062	Na5895	K_7664
Avg	**5120.**	**5320.**	**5340.**	**5270.**	**5040.**	**5350.**	**5380.**	**5230.**	**5340.**	**5310.**	**50900.**	**50900.**
Stddev	37.	10.	9.	5.	12.	2.	26.	10.	15.	7.	108.	70.
%RSD	.713	.191	.173	.101	.243	.035	.479	.186	.281	.133	.213	.138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	K_7698
Avg	**50200.**
Stddev	116.
%RSD	.232
Check ?	Chk Pass
Value	
Range	

Sample Name: ccv1 Acquired: 04/22/2021 10:51:41 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**161980.**	**1569900.**	**70645.**
Stddev	373.	8981.	342.
%RSD	.23056	.57203	.48387

Sample Name: ccv2 Acquired: 04/22/2021 10:56:59 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599	Mg2802
Avg	**50.7**	**544.**	**518.**	**517.**	**53.2**	**518.**	**52.5**	**524.**	**533.**	**523.**	**535.**	**528.**	**525.**
Stddev	1.3	3.	3.	1.	.2	1.	.3	1.	2.	2.	3.	14.	2.
%RSD	2.62	.639	.669	.107	.390	.234	.560	.144	.324	.420	.514	2.58	.361
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Avg	**549.**	**517.**	**530.**	**527.**	**531.**	**510.**	**521.**	**525.**	**531.**	**522.**	**518.**	**530.**	**521.**
Stddev	2.	1.	1.	.	1.	7.	3.	4.	4.	1.	2.	1.	1.
%RSD	.341	.167	.272	.057	.224	1.37	.631	.761	.803	.220	.455	.118	.138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Na5889	Na5895	K_7664	K_7698
Avg	**5120.**	**5220.**	**5220.**	**5250.**
Stddev	11.	7.	44.	103.
%RSD	.215	.136	.840	1.95
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Sample Name: ccv2 Acquired: 04/22/2021 10:56:59 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**164240.**	**1591600.**	**71645.**
Stddev	425.	4644.	141.
%RSD	.25905	.29177	.19676

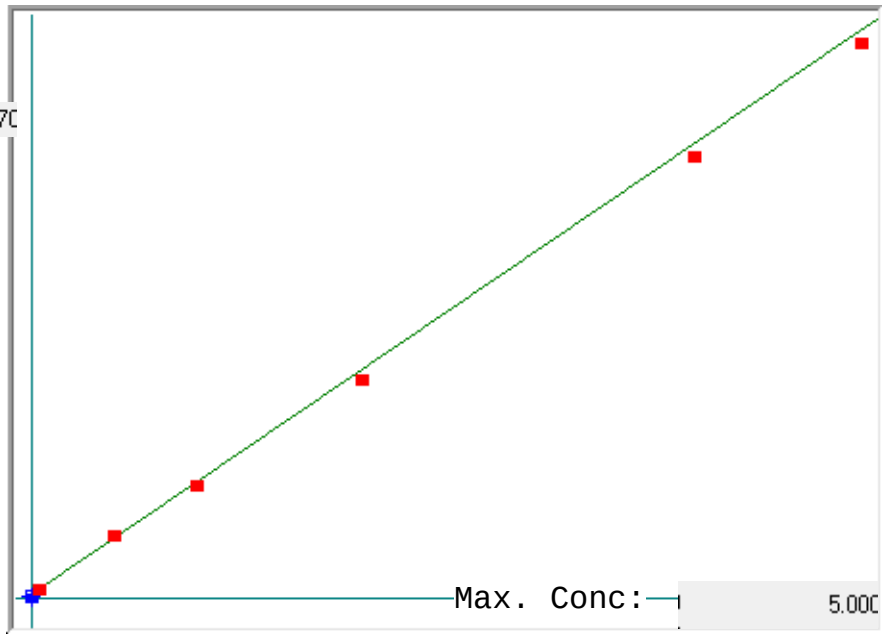
Sample Name: ccb Acquired: 04/22/2021 11:02:44 Type: QC
Method: DOD Calibration Updated 060614(v4355) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6000: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599	Mg2802
Avg	**-.238**	**-2.25**	**-2.61**	**-.103**	**.047**	**2.03**	**.015**	**.245**	**.155**	**-1.35**	**-2.37**	**-9.45**	**.884**
Stddev	.830	.52	3.59	.230	.039	.10	.104	.292	.635	.76	1.40	11.1	.080
%RSD	348.	23.0	138.	224.	82.6	5.16	715.	119.	409.	56.6	58.9	117.	9.07
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Avg	**-.123**	**.552**	**.154**	**-.024**	**-1.39**	**-.669**	**-1.06**	**-.036**	**-.551**	**36.7**	**9.31**	**46.7**	**106.**
Stddev	.032	.467	.294	.925	.85	2.52	2.75	.315	.074	7.7	6.63	24.5	88.
%RSD	25.8	84.6	190.	3810.	61.5	377.	259.	886.	13.4	20.9	71.2	52.4	83.2
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Int. Std.	Y_2243	Y_3242	Y_3710
Avg	**168180.**	**1637800.**	**73074.**
Stddev	448.	9121.	49.
%RSD	.26623	.55694	.06768

Hg WATERS



A= 0.0000e+000

B= 1.5849e-004

C= -3.0353e-002

Rho= 0.9986613

Accept= Accepted

Accepted Date=

04/21/21 10:13

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
CALIBRATION BLANK	0.000	-0.001	-0.001	184	8.874	170	186	188	194	
0.05	0.050	0.056	0.006	541	3.9 %	513	533	550	571	
0.5	0.500	0.547	0.047	3645	3.5 %	3478	3577	3708	3817	
1.0	1.000	0.991	-0.009	6446	3.6 %	6124	6358	6565	6739	
2.0	2.000	1.920	-0.080	12307	3.5 %	11681	12158	12551	12841	
4.0	4.000	3.901	-0.099	24804	3.3 %	23826	24326	25063	26003	
5.0	5.000	4.894	-0.106	31069	3.5 %	29605	30562	31588	32523	

042121w

Method: Hg WATERS Operator: Admin Date of Analysis: 21 Apr 2021 09:49:24

Sample ID	Date	Element	Units	Extended ID	Mean
CALIBRATION BLANK	21 Apr 2021 09:51:39	Hg			[ ] 184.500
0.05	21 Apr 2021 09:54:49	Hg			[ ] 541.750
0.5	21 Apr 2021 09:58:01	Hg			[ ] 3645.000
1.0	21 Apr 2021 10:01:12	Hg			[ ] 6446.500
2.0	21 Apr 2021 10:04:24	Hg			[ ] 12307.750
4.0	21 Apr 2021 10:07:35	Hg			[ ] 24804.500
5.0	21 Apr 2021 10:10:45	Hg			[ ] 31069.500
ICV	21 Apr 2021 10:13:56	Hg			(L)93.2% 2.796
ICV	21 Apr 2021 10:17:05	Hg			(L)94.5% 2.834
ICB	21 Apr 2021 10:29:39	Hg			-0.004
lcsw	21 Apr 2021 10:32:49	Hg			1.872
mbw	21 Apr 2021 10:39:08	Hg			-0.004 [ ]
554144	21 Apr 2021 10:42:17	Hg			-0.007 [ ]
554145	21 Apr 2021 10:45:27	Hg			0.093
554146	21 Apr 2021 10:48:36	Hg			0.003
554236dup 554146	21 Apr 2021 10:51:47	Hg			0.008
554147	21 Apr 2021 10:54:57	Hg			0.011
554237msw 554146	21 Apr 2021 10:58:07	Hg			1.631
554238msdw 554146	21 Apr 2021 11:01:18	Hg			1.599
CCV	21 Apr 2021 11:04:28	Hg			95.5% 2.864
CCB	21 Apr 2021 11:10:48	Hg			-0.003
554148	21 Apr 2021 11:13:57	Hg			0.002
554149	21 Apr 2021 11:17:08	Hg			-0.004 [ ]
554150	21 Apr 2021 11:20:19	Hg			0.002
554151	21 Apr 2021 11:23:29	Hg			-0.005 [ ]
554152	21 Apr 2021 11:26:38	Hg			-0.003 [ ]
554153	21 Apr 2021 11:29:48	Hg			-0.006 [ ]
554186	21 Apr 2021 11:32:58	Hg			-0.006 [ ]
554197	21 Apr 2021 11:36:08	Hg			0.027
554302	21 Apr 2021 11:39:18	Hg			-0.004 [ ]
554876dup 554302	21 Apr 2021 11:42:28	Hg			-0.006 [ ]
CCV	21 Apr 2021 11:45:39	Hg			97.7% 2.930
CCB	21 Apr 2021 11:51:59	Hg			-0.006
554877msw 554302	21 Apr 2021 11:55:08	Hg			1.860
554878msdw 554302	21 Apr 2021 11:58:19	Hg			1.811
553774lcsw 80558	21 Apr 2021 12:01:30	Hg			1.836
553773mbw 80558	21 Apr 2021 12:07:53	Hg			-0.006 [ ]
553186	21 Apr 2021 12:11:03	Hg			0.364
553200	21 Apr 2021 12:14:13	Hg			-0.006 [ ]
553201	21 Apr 2021 12:17:23	Hg			0.023
553202	21 Apr 2021 12:20:34	Hg			-0.005 [ ]
553203	21 Apr 2021 12:23:43	Hg			-0.001 [ ]
CCV	21 Apr 2021 12:26:53	Hg			95.9% 2.876
CCB	21 Apr 2021 12:33:13	Hg			-0.012
553204	21 Apr 2021 12:36:22	Hg			-0.008 [ ]
553775dup 553204	21 Apr 2021 12:39:32	Hg			-0.008 [ ]
553205	21 Apr 2021 12:42:43	Hg			0.117
553206	21 Apr 2021 12:45:53	Hg			-0.016 [ ]
553654	21 Apr 2021 12:49:04	Hg			-0.005 [ ]
553655	21 Apr 2021 12:52:15	Hg			-0.006 [ ]
553656	21 Apr 2021 12:55:27	Hg			0.054
553657	21 Apr 2021 12:58:36	Hg			0.033
553776msw 553204	21 Apr 2021 13:01:46	Hg			1.877
553777msdw 553204	21 Apr 2021 13:04:56	Hg			1.856
CCV	21 Apr 2021 13:08:06	Hg			92.8% 2.783
CCB	21 Apr 2021 13:14:26	Hg			-0.004
553658	21 Apr 2021 13:17:35	Hg			-0.004 [ ]
553659	21 Apr 2021 13:20:45	Hg			0.043
553660	21 Apr 2021 13:23:55	Hg			-0.008 [ ]
lcsw	21 Apr 2021 13:27:05	Hg			1.721
mbw	21 Apr 2021 13:33:26	Hg			-0.002 [ ]
553012	21 Apr 2021 13:36:37	Hg			-0.002 [ ]
553765dup 553012	21 Apr 2021 13:39:48	Hg			-0.003 [ ]
553766msw 553012	21 Apr 2021 13:42:59	Hg			1.799
553767msdw 553012	21 Apr 2021 13:46:09	Hg			1.804
CCV	21 Apr 2021 13:49:19	Hg			94.6% 2.839
CCB	21 Apr 2021 13:55:38	Hg			-0.002
554741	21 Apr 2021 13:58:48	Hg			0.004
554886dup 554741	21 Apr 2021 14:01:58	Hg			0.019
553792	21 Apr 2021 14:05:08	Hg			0.069
553802	21 Apr 2021 14:08:18	Hg			0.214

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Method: Hg WATERS Operator: Admin Date of Analysis: 21 Apr 2021 09:49:24

Sample ID	Date	Element	Units	Extended ID	Mean
554423	21 Apr 2021 14:11:28	Hg			-0.002 [ ]
555414	21 Apr 2021 14:14:38	Hg			-0.012 [ ]
554799	21 Apr 2021 14:17:48	Hg			0.007
554887msw 554741	21 Apr 2021 14:20:59	Hg			1.737
554888msdw 554741	21 Apr 2021 14:24:09	Hg			1.923
555542msw 554799	21 Apr 2021 14:27:21	Hg			1.878
CCV	21 Apr 2021 14:30:33	Hg			90.5% 2.716
CCB	21 Apr 2021 14:36:52	Hg			-0.004
554001msw 553792	21 Apr 2021 14:40:02	Hg			1.842
554002msdw 553792	21 Apr 2021 14:43:12	Hg			1.840
555590msw 555414	21 Apr 2021 14:46:22	Hg			1.637
555591msdw 555414	21 Apr 2021 14:49:33	Hg			1.670
555544lcsw 80632	21 Apr 2021 14:52:43	Hg			1.840
555543mbw 80632	21 Apr 2021 14:59:05	Hg			-0.007 [ ]
553956	21 Apr 2021 15:02:16	Hg			0.002
553962	21 Apr 2021 15:05:27	Hg			-0.002 [ ]
555587dup 553962	21 Apr 2021 15:08:37	Hg			-0.004 [ ]
CCV	21 Apr 2021 15:11:48	Hg			90.7% 2.722
CCB	21 Apr 2021 15:18:07	Hg			-0.005
555588msw 553962	21 Apr 2021 15:21:17	Hg			1.889
555589msdw 553962	21 Apr 2021 15:24:28	Hg			1.903
CCV	21 Apr 2021 15:27:40	Hg			(L)88.5% 2.656
CCV	21 Apr 2021 15:30:50	Hg			96.8% 2.904
CCB	21 Apr 2021 15:37:09	Hg			-0.005

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Method: Hg WATERS Operator: Admin Date of Analysis: 21 Apr 2021 09:49:24

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CALIBRATION BLANK - 1	21 Apr 2021 09:51:39	Hg			170	-
CALIBRATION BLANK - 2	21 Apr 2021 09:51:39	Hg			186	-
CALIBRATION BLANK - 3	21 Apr 2021 09:51:39	Hg			188	-
CALIBRATION BLANK - 4	21 Apr 2021 09:51:39	Hg			194	-
0.05 - 1	21 Apr 2021 09:54:49	Hg			513	-
0.05 - 2	21 Apr 2021 09:54:49	Hg			533	-
0.05 - 3	21 Apr 2021 09:54:49	Hg			550	-
0.05 - 4	21 Apr 2021 09:54:49	Hg			571	-
0.5 - 1	21 Apr 2021 09:58:01	Hg			3478	-
0.5 - 2	21 Apr 2021 09:58:01	Hg			3577	-
0.5 - 3	21 Apr 2021 09:58:01	Hg			3708	-
0.5 - 4	21 Apr 2021 09:58:01	Hg			3817	-
1.0 - 1	21 Apr 2021 10:01:12	Hg			6124	-
1.0 - 2	21 Apr 2021 10:01:12	Hg			6358	-
1.0 - 3	21 Apr 2021 10:01:12	Hg			6565	-
1.0 - 4	21 Apr 2021 10:01:12	Hg			6739	-
2.0 - 1	21 Apr 2021 10:04:24	Hg			11681	-
2.0 - 2	21 Apr 2021 10:04:24	Hg			12158	-
2.0 - 3	21 Apr 2021 10:04:24	Hg			12551	-
2.0 - 4	21 Apr 2021 10:04:24	Hg			12841	-
4.0 - 1	21 Apr 2021 10:07:35	Hg			23826	-
4.0 - 2	21 Apr 2021 10:07:35	Hg			24326	-
4.0 - 3	21 Apr 2021 10:07:35	Hg			25063	-
4.0 - 4	21 Apr 2021 10:07:35	Hg			26003	-
5.0 - 1	21 Apr 2021 10:10:45	Hg			29605	-
5.0 - 2	21 Apr 2021 10:10:45	Hg			30562	-
5.0 - 3	21 Apr 2021 10:10:45	Hg			31588	-
5.0 - 4	21 Apr 2021 10:10:45	Hg			32523	-
ICV - 1	21 Apr 2021 10:13:56	Hg			17199	(L)89.9% 2.696
ICV - 2	21 Apr 2021 10:13:56	Hg			17657	(L)92.3% 2.768
ICV - 3	21 Apr 2021 10:13:56	Hg			18002	(L)94.1% 2.823
ICV - 4	21 Apr 2021 10:13:56	Hg			18479	96.6% 2.898
ICV - 1	21 Apr 2021 10:17:05	Hg			17166	(L)89.7% 2.690
ICV - 2	21 Apr 2021 10:17:05	Hg			17848	(L)93.3% 2.798
ICV - 3	21 Apr 2021 10:17:05	Hg			18392	96.2% 2.885
ICV - 4	21 Apr 2021 10:17:05	Hg			18884	98.8% 2.963
ICB - 1	21 Apr 2021 10:29:39	Hg			159	-0.005
ICB - 2	21 Apr 2021 10:29:39	Hg			167	-0.004
ICB - 3	21 Apr 2021 10:29:39	Hg			169	-0.004
ICB - 4	21 Apr 2021 10:29:39	Hg			165	-0.004
lcsw - 1	21 Apr 2021 10:32:49	Hg			11393	1.775
lcsw - 2	21 Apr 2021 10:32:49	Hg			11794	1.839
lcsw - 3	21 Apr 2021 10:32:49	Hg			12235	1.909
lcsw - 4	21 Apr 2021 10:32:49	Hg			12589	1.965
mbw - 1	21 Apr 2021 10:39:08	Hg			160	-0.005 [ ]
mbw - 2	21 Apr 2021 10:39:08	Hg			165	-0.004 [ ]
mbw - 3	21 Apr 2021 10:39:08	Hg			171	-0.003 [ ]
mbw - 4	21 Apr 2021 10:39:08	Hg			174	-0.003 [ ]
554144 - 1	21 Apr 2021 10:42:17	Hg			140	-0.008 [ ]
554144 - 2	21 Apr 2021 10:42:17	Hg			145	-0.007 [ ]
554144 - 3	21 Apr 2021 10:42:17	Hg			145	-0.007 [ ]
554144 - 4	21 Apr 2021 10:42:17	Hg			151	-0.006 [ ]
554145 - 1	21 Apr 2021 10:45:27	Hg			754	0.089
554145 - 2	21 Apr 2021 10:45:27	Hg			769	0.092
554145 - 3	21 Apr 2021 10:45:27	Hg			792	0.095
554145 - 4	21 Apr 2021 10:45:27	Hg			809	0.098
554146 - 1	21 Apr 2021 10:48:36	Hg			208	0.003
554146 - 2	21 Apr 2021 10:48:36	Hg			210	0.003
554146 - 3	21 Apr 2021 10:48:36	Hg			212	0.003
554146 - 4	21 Apr 2021 10:48:36	Hg			223	0.005
554236dup 554146 - 1	21 Apr 2021 10:51:47	Hg			229	0.006
554236dup 554146 - 2	21 Apr 2021 10:51:47	Hg			242	0.008
554236dup 554146 - 3	21 Apr 2021 10:51:47	Hg			250	0.009
554236dup 554146 - 4	21 Apr 2021 10:51:47	Hg			256	0.010
554147 - 1	21 Apr 2021 10:54:57	Hg			256	0.010
554147 - 2	21 Apr 2021 10:54:57	Hg			269	0.012
554147 - 3	21 Apr 2021 10:54:57	Hg			267	0.012
554147 - 4	21 Apr 2021 10:54:57	Hg			261	0.011
554237msw 554146 - 1	21 Apr 2021 10:58:07	Hg			9952	1.547
554237msw 554146 - 2	21 Apr 2021 10:58:07	Hg			10268	1.597
554237msw 554146 - 3	21 Apr 2021 10:58:07	Hg			10697	1.665
554237msw 554146 - 4	21 Apr 2021 10:58:07	Hg			11002	1.713
554238msdw 554146 - 1	21 Apr 2021 11:01:18	Hg			9912	1.541
554238msdw 554146 - 2	21 Apr 2021 11:01:18	Hg			10127	1.575
554238msdw 554146 - 3	21 Apr 2021 11:01:18	Hg			10401	1.618
554238msdw 554146 - 4	21 Apr 2021 11:01:18	Hg			10685	1.663
CCV - 1	21 Apr 2021 11:04:28	Hg			17454	91.2% 2.736
CCV - 2	21 Apr 2021 11:04:28	Hg			17950	93.8% 2.815
CCV - 3	21 Apr 2021 11:04:28	Hg			18561	97.0% 2.911

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Method: Hg WATERS Operator: Admin Date of Analysis: 21 Apr 2021 09:49:24

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CCV - 4	21 Apr 2021 11:04:28	Hg			19081	99.8% 2.994
CCB - 1	21 Apr 2021 11:10:48	Hg			158	-0.005
CCB - 2	21 Apr 2021 11:10:48	Hg			166	-0.004
CCB - 3	21 Apr 2021 11:10:48	Hg			177	-0.002
CCB - 4	21 Apr 2021 11:10:48	Hg			180	-0.002
554148 - 1	21 Apr 2021 11:13:57	Hg			195	0.001
554148 - 2	21 Apr 2021 11:13:57	Hg			207	0.002
554148 - 3	21 Apr 2021 11:13:57	Hg			210	0.003
554148 - 4	21 Apr 2021 11:13:57	Hg			214	0.004
554149 - 1	21 Apr 2021 11:17:08	Hg			155	-0.006 [ ]
554149 - 2	21 Apr 2021 11:17:08	Hg			165	-0.004 [ ]
554149 - 3	21 Apr 2021 11:17:08	Hg			165	-0.004 [ ]
554149 - 4	21 Apr 2021 11:17:08	Hg			174	-0.003 [ ]
554150 - 1	21 Apr 2021 11:20:19	Hg			201	0.002
554150 - 2	21 Apr 2021 11:20:19	Hg			206	0.002
554150 - 3	21 Apr 2021 11:20:19	Hg			206	0.002
554150 - 4	21 Apr 2021 11:20:19	Hg			210	0.003
554151 - 1	21 Apr 2021 11:23:29	Hg			147	-0.007 [ ]
554151 - 2	21 Apr 2021 11:23:29	Hg			160	-0.005 [ ]
554151 - 3	21 Apr 2021 11:23:29	Hg			161	-0.005 [ ]
554151 - 4	21 Apr 2021 11:23:29	Hg			167	-0.004 [ ]
554152 - 1	21 Apr 2021 11:26:38	Hg			159	-0.005 [ ]
554152 - 2	21 Apr 2021 11:26:38	Hg			169	-0.004 [ ]
554152 - 3	21 Apr 2021 11:26:38	Hg			176	-0.002 [ ]
554152 - 4	21 Apr 2021 11:26:38	Hg			179	-0.002 [ ]
554153 - 1	21 Apr 2021 11:29:48	Hg			155	-0.006 [ ]
554153 - 2	21 Apr 2021 11:29:48	Hg			151	-0.006 [ ]
554153 - 3	21 Apr 2021 11:29:48	Hg			151	-0.006 [ ]
554153 - 4	21 Apr 2021 11:29:48	Hg			160	-0.005 [ ]
554186 - 1	21 Apr 2021 11:32:58	Hg			147	-0.007 [ ]
554186 - 2	21 Apr 2021 11:32:58	Hg			148	-0.007 [ ]
554186 - 3	21 Apr 2021 11:32:58	Hg			155	-0.006 [ ]
554186 - 4	21 Apr 2021 11:32:58	Hg			160	-0.005 [ ]
554197 - 1	21 Apr 2021 11:36:08	Hg			339	0.023
554197 - 2	21 Apr 2021 11:36:08	Hg			357	0.026
554197 - 3	21 Apr 2021 11:36:08	Hg			368	0.028
554197 - 4	21 Apr 2021 11:36:08	Hg			373	0.029
554302 - 1	21 Apr 2021 11:39:18	Hg			156	-0.006 [ ]
554302 - 2	21 Apr 2021 11:39:18	Hg			161	-0.005 [ ]
554302 - 3	21 Apr 2021 11:39:18	Hg			167	-0.004 [ ]
554302 - 4	21 Apr 2021 11:39:18	Hg			172	-0.003 [ ]
554876dup 554302 - 1	21 Apr 2021 11:42:28	Hg			143	-0.008 [ ]
554876dup 554302 - 2	21 Apr 2021 11:42:28	Hg			149	-0.007 [ ]
554876dup 554302 - 3	21 Apr 2021 11:42:28	Hg			154	-0.006 [ ]
554876dup 554302 - 4	21 Apr 2021 11:42:28	Hg			159	-0.005 [ ]
CCV - 1	21 Apr 2021 11:45:39	Hg			17939	93.8% 2.813
CCV - 2	21 Apr 2021 11:45:39	Hg			18593	97.2% 2.916
CCV - 3	21 Apr 2021 11:45:39	Hg			18983	99.3% 2.978
CCV - 4	21 Apr 2021 11:45:39	Hg			19199	100.4% 3.013
CCB - 1	21 Apr 2021 11:51:59	Hg			152	-0.006
CCB - 2	21 Apr 2021 11:51:59	Hg			157	-0.005
CCB - 3	21 Apr 2021 11:51:59	Hg			154	-0.006
CCB - 4	21 Apr 2021 11:51:59	Hg			150	-0.007
554877msw 554302 - 1	21 Apr 2021 11:55:08	Hg			11442	1.783
554877msw 554302 - 2	21 Apr 2021 11:55:08	Hg			11765	1.834
554877msw 554302 - 3	21 Apr 2021 11:55:08	Hg			12097	1.887
554877msw 554302 - 4	21 Apr 2021 11:55:08	Hg			12399	1.935
554878msdw 554302 - 1	21 Apr 2021 11:58:19	Hg			11140	1.735
554878msdw 554302 - 2	21 Apr 2021 11:58:19	Hg			11394	1.775
554878msdw 554302 - 3	21 Apr 2021 11:58:19	Hg			11763	1.834
554878msdw 554302 - 4	21 Apr 2021 11:58:19	Hg			12164	1.898
553774lcsw 80558 - 1	21 Apr 2021 12:01:30	Hg			11443	1.783
553774lcsw 80558 - 2	21 Apr 2021 12:01:30	Hg			11671	1.819
553774lcsw 80558 - 3	21 Apr 2021 12:01:30	Hg			11847	1.847
553774lcsw 80558 - 4	21 Apr 2021 12:01:30	Hg			12139	1.894
553773mbw 80558 - 1	21 Apr 2021 12:07:53	Hg			143	-0.008 [ ]
553773mbw 80558 - 2	21 Apr 2021 12:07:53	Hg			148	-0.007 [ ]
553773mbw 80558 - 3	21 Apr 2021 12:07:53	Hg			154	-0.006 [ ]
553773mbw 80558 - 4	21 Apr 2021 12:07:53	Hg			160	-0.005 [ ]
553186 - 1	21 Apr 2021 12:11:03	Hg			2403	0.351
553186 - 2	21 Apr 2021 12:11:03	Hg			2468	0.361
553186 - 3	21 Apr 2021 12:11:03	Hg			2511	0.368
553186 - 4	21 Apr 2021 12:11:03	Hg			2562	0.376
553200 - 1	21 Apr 2021 12:14:13	Hg			149	-0.007 [ ]
553200 - 2	21 Apr 2021 12:14:13	Hg			151	-0.006 [ ]
553200 - 3	21 Apr 2021 12:14:13	Hg			155	-0.006 [ ]
553200 - 4	21 Apr 2021 12:14:13	Hg			159	-0.005 [ ]
553201 - 1	21 Apr 2021 12:17:23	Hg			317	0.020
553201 - 2	21 Apr 2021 12:17:23	Hg			329	0.022

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Method: Hg WATERS Operator: Admin Date of Analysis: 21 Apr 2021 09:49:24

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
553201 - 3	21 Apr 2021 12:17:23	Hg			340	0.024
553201 - 4	21 Apr 2021 12:17:23	Hg			348	0.025
553202 - 1	21 Apr 2021 12:20:34	Hg			157	-0.005 [ ]
553202 - 2	21 Apr 2021 12:20:34	Hg			159	-0.005 [ ]
553202 - 3	21 Apr 2021 12:20:34	Hg			161	-0.005 [ ]
553202 - 4	21 Apr 2021 12:20:34	Hg			162	-0.005 [ ]
553203 - 1	21 Apr 2021 12:23:43	Hg			178	-0.002 [ ]
553203 - 2	21 Apr 2021 12:23:43	Hg			184	-0.001 [ ]
553203 - 3	21 Apr 2021 12:23:43	Hg			187	-0.001 [ ]
553203 - 4	21 Apr 2021 12:23:43	Hg			193	0.000
CCV - 1	21 Apr 2021 12:26:53	Hg			17680	92.4% 2.772
CCV - 2	21 Apr 2021 12:26:53	Hg			18161	94.9% 2.848
CCV - 3	21 Apr 2021 12:26:53	Hg			18603	97.3% 2.918
CCV - 4	21 Apr 2021 12:26:53	Hg			18906	98.9% 2.966
CCB - 1	21 Apr 2021 12:33:13	Hg			115	-0.012
CCB - 2	21 Apr 2021 12:33:13	Hg			118	-0.012
CCB - 3	21 Apr 2021 12:33:13	Hg			114	-0.012
CCB - 4	21 Apr 2021 12:33:13	Hg			116	-0.012
553204 - 1	21 Apr 2021 12:36:22	Hg			133	-0.009 [ ]
553204 - 2	21 Apr 2021 12:36:22	Hg			135	-0.009 [ ]
553204 - 3	21 Apr 2021 12:36:22	Hg			141	-0.008 [ ]
553204 - 4	21 Apr 2021 12:36:22	Hg			148	-0.007 [ ]
553775dup 553204 - 1	21 Apr 2021 12:39:32	Hg			137	-0.009 [ ]
553775dup 553204 - 2	21 Apr 2021 12:39:32	Hg			140	-0.008 [ ]
553775dup 553204 - 3	21 Apr 2021 12:39:32	Hg			142	-0.008 [ ]
553775dup 553204 - 4	21 Apr 2021 12:39:32	Hg			143	-0.008 [ ]
553205 - 1	21 Apr 2021 12:42:43	Hg			871	0.108
553205 - 2	21 Apr 2021 12:42:43	Hg			918	0.115
553205 - 3	21 Apr 2021 12:42:43	Hg			952	0.121
553205 - 4	21 Apr 2021 12:42:43	Hg			973	0.124
553206 - 1	21 Apr 2021 12:45:53	Hg			90	-0.016 [ ]
553206 - 2	21 Apr 2021 12:45:53	Hg			94	-0.015 [ ]
553206 - 3	21 Apr 2021 12:45:53	Hg			94	-0.015 [ ]
553206 - 4	21 Apr 2021 12:45:53	Hg			85	-0.017 [ ]
553654 - 1	21 Apr 2021 12:49:04	Hg			153	-0.006 [ ]
553654 - 2	21 Apr 2021 12:49:04	Hg			166	-0.004 [ ]
553654 - 3	21 Apr 2021 12:49:04	Hg			163	-0.005 [ ]
553654 - 4	21 Apr 2021 12:49:04	Hg			165	-0.004 [ ]
553655 - 1	21 Apr 2021 12:52:15	Hg			146	-0.007 [ ]
553655 - 2	21 Apr 2021 12:52:15	Hg			151	-0.006 [ ]
553655 - 3	21 Apr 2021 12:52:15	Hg			154	-0.006 [ ]
553655 - 4	21 Apr 2021 12:52:15	Hg			159	-0.005 [ ]
553656 - 1	21 Apr 2021 12:55:27	Hg			500	0.049
553656 - 2	21 Apr 2021 12:55:27	Hg			527	0.053
553656 - 3	21 Apr 2021 12:55:27	Hg			544	0.056
553656 - 4	21 Apr 2021 12:55:27	Hg			549	0.057
553657 - 1	21 Apr 2021 12:58:36	Hg			385	0.031
553657 - 2	21 Apr 2021 12:58:36	Hg			391	0.032
553657 - 3	21 Apr 2021 12:58:36	Hg			402	0.033
553657 - 4	21 Apr 2021 12:58:36	Hg			414	0.035
553776msw 553204 - 1	21 Apr 2021 13:01:46	Hg			11553	1.801
553776msw 553204 - 2	21 Apr 2021 13:01:46	Hg			11874	1.852
553776msw 553204 - 3	21 Apr 2021 13:01:46	Hg			12167	1.898
553776msw 553204 - 4	21 Apr 2021 13:01:46	Hg			12544	1.958
553777msdw 553204 - 1	21 Apr 2021 13:04:56	Hg			11302	1.761
553777msdw 553204 - 2	21 Apr 2021 13:04:56	Hg			11729	1.829
553777msdw 553204 - 3	21 Apr 2021 13:04:56	Hg			12150	1.895
553777msdw 553204 - 4	21 Apr 2021 13:04:56	Hg			12417	1.938
CCV - 1	21 Apr 2021 13:08:06	Hg			16987	(L)88.7% 2.662
CCV - 2	21 Apr 2021 13:08:06	Hg			17436	91.1% 2.733
CCV - 3	21 Apr 2021 13:08:06	Hg			18003	94.1% 2.823
CCV - 4	21 Apr 2021 13:08:06	Hg			18580	97.1% 2.914
CCB - 1	21 Apr 2021 13:14:26	Hg			160	-0.005
CCB - 2	21 Apr 2021 13:14:26	Hg			168	-0.004
CCB - 3	21 Apr 2021 13:14:26	Hg			168	-0.004
CCB - 4	21 Apr 2021 13:14:26	Hg			176	-0.002
553658 - 1	21 Apr 2021 13:17:35	Hg			155	-0.006 [ ]
553658 - 2	21 Apr 2021 13:17:35	Hg			161	-0.005 [ ]
553658 - 3	21 Apr 2021 13:17:35	Hg			166	-0.004 [ ]
553658 - 4	21 Apr 2021 13:17:35	Hg			173	-0.003 [ ]
553659 - 1	21 Apr 2021 13:20:45	Hg			432	0.038
553659 - 2	21 Apr 2021 13:20:45	Hg			452	0.041
553659 - 3	21 Apr 2021 13:20:45	Hg			468	0.044
553659 - 4	21 Apr 2021 13:20:45	Hg			490	0.047
553660 - 1	21 Apr 2021 13:23:55	Hg			130	-0.010 [ ]
553660 - 2	21 Apr 2021 13:23:55	Hg			138	-0.008 [ ]
553660 - 3	21 Apr 2021 13:23:55	Hg			140	-0.008 [ ]
553660 - 4	21 Apr 2021 13:23:55	Hg			145	-0.007 [ ]
lcsw - 1	21 Apr 2021 13:27:05	Hg			10583	1.647

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Method: Hg WATERS Operator: Admin Date of Analysis: 21 Apr 2021 09:49:24

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
lcsw - 2	21 Apr 2021 13:27:05	Hg			10950	1.705
lcsw - 3	21 Apr 2021 13:27:05	Hg			11218	1.748
lcsw - 4	21 Apr 2021 13:27:05	Hg			11460	1.786
mbw - 1	21 Apr 2021 13:33:26	Hg			170	-0.003 [ ]
mbw - 2	21 Apr 2021 13:33:26	Hg			176	-0.002 [ ]
mbw - 3	21 Apr 2021 13:33:26	Hg			182	-0.002 [ ]
mbw - 4	21 Apr 2021 13:33:26	Hg			184	-0.001 [ ]
553012 - 1	21 Apr 2021 13:36:37	Hg			174	-0.003 [ ]
553012 - 2	21 Apr 2021 13:36:37	Hg			174	-0.003 [ ]
553012 - 3	21 Apr 2021 13:36:37	Hg			181	-0.002 [ ]
553012 - 4	21 Apr 2021 13:36:37	Hg			188	-0.001 [ ]
553765dup 553012 - 1	21 Apr 2021 13:39:48	Hg			160	-0.005 [ ]
553765dup 553012 - 2	21 Apr 2021 13:39:48	Hg			169	-0.004 [ ]
553765dup 553012 - 3	21 Apr 2021 13:39:48	Hg			177	-0.002 [ ]
553765dup 553012 - 4	21 Apr 2021 13:39:48	Hg			182	-0.002 [ ]
553766msw 553012 - 1	21 Apr 2021 13:42:59	Hg			11001	1.713
553766msw 553012 - 2	21 Apr 2021 13:42:59	Hg			11418	1.779
553766msw 553012 - 3	21 Apr 2021 13:42:59	Hg			11785	1.837
553766msw 553012 - 4	21 Apr 2021 13:42:59	Hg			11961	1.865
553767msdw 553012 - 1	21 Apr 2021 13:46:09	Hg			11119	1.732
553767msdw 553012 - 2	21 Apr 2021 13:46:09	Hg			11393	1.775
553767msdw 553012 - 3	21 Apr 2021 13:46:09	Hg			11711	1.826
553767msdw 553012 - 4	21 Apr 2021 13:46:09	Hg			12077	1.884
CCV - 1	21 Apr 2021 13:49:19	Hg			17498	91.4% 2.743
CCV - 2	21 Apr 2021 13:49:19	Hg			17861	93.3% 2.800
CCV - 3	21 Apr 2021 13:49:19	Hg			18317	95.8% 2.873
CCV - 4	21 Apr 2021 13:49:19	Hg			18729	97.9% 2.938
CCB - 1	21 Apr 2021 13:55:38	Hg			173	-0.003
CCB - 2	21 Apr 2021 13:55:38	Hg			176	-0.002
CCB - 3	21 Apr 2021 13:55:38	Hg			177	-0.002
CCB - 4	21 Apr 2021 13:55:38	Hg			184	-0.001
554741 - 1	21 Apr 2021 13:58:48	Hg			217	0.004
554741 - 2	21 Apr 2021 13:58:48	Hg			213	0.003
554741 - 3	21 Apr 2021 13:58:48	Hg			213	0.003
554741 - 4	21 Apr 2021 13:58:48	Hg			225	0.005
554886dup 554741 - 1	21 Apr 2021 14:01:58	Hg			297	0.017
554886dup 554741 - 2	21 Apr 2021 14:01:58	Hg			308	0.018
554886dup 554741 - 3	21 Apr 2021 14:01:58	Hg			318	0.020
554886dup 554741 - 4	21 Apr 2021 14:01:58	Hg			332	0.022
553792 - 1	21 Apr 2021 14:05:08	Hg			602	0.065
553792 - 2	21 Apr 2021 14:05:08	Hg			612	0.067
553792 - 3	21 Apr 2021 14:05:08	Hg			633	0.070
553792 - 4	21 Apr 2021 14:05:08	Hg			656	0.074
553802 - 1	21 Apr 2021 14:08:18	Hg			1478	0.204
553802 - 2	21 Apr 2021 14:08:18	Hg			1521	0.211
553802 - 3	21 Apr 2021 14:08:18	Hg			1568	0.218
553802 - 4	21 Apr 2021 14:08:18	Hg			1602	0.224
554423 - 1	21 Apr 2021 14:11:28	Hg			175	-0.003 [ ]
554423 - 2	21 Apr 2021 14:11:28	Hg			175	-0.003 [ ]
554423 - 3	21 Apr 2021 14:11:28	Hg			185	-0.001 [ ]
554423 - 4	21 Apr 2021 14:11:28	Hg			189	-0.000 [ ]
555414 - 1	21 Apr 2021 14:14:38	Hg			118	-0.012 [ ]
555414 - 2	21 Apr 2021 14:14:38	Hg			116	-0.012 [ ]
555414 - 3	21 Apr 2021 14:14:38	Hg			114	-0.012 [ ]
555414 - 4	21 Apr 2021 14:14:38	Hg			122	-0.011 [ ]
554799 - 1	21 Apr 2021 14:17:48	Hg			229	0.006
554799 - 2	21 Apr 2021 14:17:48	Hg			236	0.007
554799 - 3	21 Apr 2021 14:17:48	Hg			239	0.008
554799 - 4	21 Apr 2021 14:17:48	Hg			246	0.009
554887msw 554741 - 1	21 Apr 2021 14:20:59	Hg			10860	1.691
554887msw 554741 - 2	21 Apr 2021 14:20:59	Hg			11075	1.725
554887msw 554741 - 3	21 Apr 2021 14:20:59	Hg			11222	1.748
554887msw 554741 - 4	21 Apr 2021 14:20:59	Hg			11436	1.782
554888msdw 554741 - 1	21 Apr 2021 14:24:09	Hg			11834	1.845
554888msdw 554741 - 2	21 Apr 2021 14:24:09	Hg			12194	1.902
554888msdw 554741 - 3	21 Apr 2021 14:24:09	Hg			12510	1.952
554888msdw 554741 - 4	21 Apr 2021 14:24:09	Hg			12771	1.994
555542msw 554799 - 1	21 Apr 2021 14:27:21	Hg			11564	1.802
555542msw 554799 - 2	21 Apr 2021 14:27:21	Hg			11908	1.857
555542msw 554799 - 3	21 Apr 2021 14:27:21	Hg			12217	1.906
555542msw 554799 - 4	21 Apr 2021 14:27:21	Hg			12481	1.948
CCV - 1	21 Apr 2021 14:30:33	Hg			16548	(L)86.4% 2.592
CCV - 2	21 Apr 2021 14:30:33	Hg			17132	(L)89.5% 2.685
CCV - 3	21 Apr 2021 14:30:33	Hg			17673	92.4% 2.771
CCV - 4	21 Apr 2021 14:30:33	Hg			17968	93.9% 2.817
CCB - 1	21 Apr 2021 14:36:52	Hg			161	-0.005
CCB - 2	21 Apr 2021 14:36:52	Hg			170	-0.003
CCB - 3	21 Apr 2021 14:36:52	Hg			172	-0.003
CCB - 4	21 Apr 2021 14:36:52	Hg			170	-0.003

042121w detailed

Method: Hg WATERS Operator: Admin Date of Analysis: 21 Apr 2021 09:49:24

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
554001msw 553792 - 1	21 Apr 2021 14:40:02	Hg			11463	1.786
554001msw 553792 - 2	21 Apr 2021 14:40:02	Hg			11689	1.822
554001msw 553792 - 3	21 Apr 2021 14:40:02	Hg			11891	1.854
554001msw 553792 - 4	21 Apr 2021 14:40:02	Hg			12220	1.906
554002msdw 553792 - 1	21 Apr 2021 14:43:12	Hg			11279	1.757
554002msdw 553792 - 2	21 Apr 2021 14:43:12	Hg			11563	1.802
554002msdw 553792 - 3	21 Apr 2021 14:43:12	Hg			11970	1.867
554002msdw 553792 - 4	21 Apr 2021 14:43:12	Hg			12396	1.934
555590msw 555414 - 1	21 Apr 2021 14:46:22	Hg			10096	1.570
555590msw 555414 - 2	21 Apr 2021 14:46:22	Hg			10347	1.610
555590msw 555414 - 3	21 Apr 2021 14:46:22	Hg			10643	1.656
555590msw 555414 - 4	21 Apr 2021 14:46:22	Hg			10991	1.712
555591msdw 555414 - 1	21 Apr 2021 14:49:33	Hg			10327	1.606
555591msdw 555414 - 2	21 Apr 2021 14:49:33	Hg			10659	1.659
555591msdw 555414 - 3	21 Apr 2021 14:49:33	Hg			10885	1.695
555591msdw 555414 - 4	21 Apr 2021 14:49:33	Hg			11049	1.721
555544lcsw 80632 - 1	21 Apr 2021 14:52:43	Hg			11338	1.767
555544lcsw 80632 - 2	21 Apr 2021 14:52:43	Hg			11710	1.826
555544lcsw 80632 - 3	21 Apr 2021 14:52:43	Hg			11991	1.870
555544lcsw 80632 - 4	21 Apr 2021 14:52:43	Hg			12176	1.899
555543mbw 80632 - 1	21 Apr 2021 14:59:05	Hg			146	-0.007 [ ]
555543mbw 80632 - 2	21 Apr 2021 14:59:05	Hg			144	-0.008 [ ]
555543mbw 80632 - 3	21 Apr 2021 14:59:05	Hg			149	-0.007 [ ]
555543mbw 80632 - 4	21 Apr 2021 14:59:05	Hg			155	-0.006 [ ]
553956 - 1	21 Apr 2021 15:02:16	Hg			201	0.002
553956 - 2	21 Apr 2021 15:02:16	Hg			201	0.002
553956 - 3	21 Apr 2021 15:02:16	Hg			211	0.003
553956 - 4	21 Apr 2021 15:02:16	Hg			215	0.004
553962 - 1	21 Apr 2021 15:05:27	Hg			170	-0.003 [ ]
553962 - 2	21 Apr 2021 15:05:27	Hg			178	-0.002 [ ]
553962 - 3	21 Apr 2021 15:05:27	Hg			186	-0.001 [ ]
553962 - 4	21 Apr 2021 15:05:27	Hg			192	0.000
555587dup 553962 - 1	21 Apr 2021 15:08:37	Hg			167	-0.004 [ ]
555587dup 553962 - 2	21 Apr 2021 15:08:37	Hg			168	-0.004 [ ]
555587dup 553962 - 3	21 Apr 2021 15:08:37	Hg			167	-0.004 [ ]
555587dup 553962 - 4	21 Apr 2021 15:08:37	Hg			166	-0.004 [ ]
CCV - 1	21 Apr 2021 15:11:48	Hg			16789	(L)87.7% 2.631
CCV - 2	21 Apr 2021 15:11:48	Hg			17141	(L)89.5% 2.686
CCV - 3	21 Apr 2021 15:11:48	Hg			17543	91.7% 2.750
CCV - 4	21 Apr 2021 15:11:48	Hg			17993	94.0% 2.821
CCB - 1	21 Apr 2021 15:18:07	Hg			158	-0.005
CCB - 2	21 Apr 2021 15:18:07	Hg			161	-0.005
CCB - 3	21 Apr 2021 15:18:07	Hg			158	-0.005
CCB - 4	21 Apr 2021 15:18:07	Hg			166	-0.004
555588msw 553962 - 1	21 Apr 2021 15:21:17	Hg			11592	1.807
555588msw 553962 - 2	21 Apr 2021 15:21:17	Hg			11942	1.862
555588msw 553962 - 3	21 Apr 2021 15:21:17	Hg			12291	1.918
555588msw 553962 - 4	21 Apr 2021 15:21:17	Hg			12609	1.968
555589msdw 553962 - 1	21 Apr 2021 15:24:28	Hg			11790	1.838
555589msdw 553962 - 2	21 Apr 2021 15:24:28	Hg			12142	1.894
555589msdw 553962 - 3	21 Apr 2021 15:24:28	Hg			12343	1.926
555589msdw 553962 - 4	21 Apr 2021 15:24:28	Hg			12530	1.956
CCV - 1	21 Apr 2021 15:27:40	Hg			16420	(L)85.7% 2.572
CCV - 2	21 Apr 2021 15:27:40	Hg			16799	(L)87.7% 2.632
CCV - 3	21 Apr 2021 15:27:40	Hg			17088	(L)89.3% 2.678
CCV - 4	21 Apr 2021 15:27:40	Hg			17501	91.4% 2.743
CCV - 1	21 Apr 2021 15:30:50	Hg			17763	92.8% 2.785
CCV - 2	21 Apr 2021 15:30:50	Hg			18482	96.6% 2.899
CCV - 3	21 Apr 2021 15:30:50	Hg			18828	98.5% 2.954
CCV - 4	21 Apr 2021 15:30:50	Hg			18992	99.3% 2.980
CCB - 1	21 Apr 2021 15:37:09	Hg			158	-0.005
CCB - 2	21 Apr 2021 15:37:09	Hg			165	-0.004
CCB - 3	21 Apr 2021 15:37:09	Hg			162	-0.005
CCB - 4	21 Apr 2021 15:37:09	Hg			156	-0.006

METALS
LOGBOOK
DOCUMENTS

MICP WATER QSM Analytical Run
181097 on 5/3/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1000779								MICP WATER QSM				
					ICV					0			
	1000780								MICP WATER QSM				
					ICVLL					0			
	1000781								MICP WATER QSM				
					ICB					0			
	1000782								MICP WATER QSM				
					ICSA					0			
	1000783								MICP WATER QSM				
					ICSAB					0			
	1000784								MICP WATER QSM				
					ICVLL					0			
	1000785								MICP WATER QSM				
					CCV1					0			
	1000786								MICP WATER QSM				
					CCV2					0			
	1000787								MICP WATER QSM				
					CCB					0			
	555191								ICP K TOTAL QSM 5.0				
					LCSW					80614			
	555191								ICP NA TOTAL QSM 5.0				
					LCSW					80614			
	555191								ICP TOTAL QSM 5.0				
					LCSW					80614			
161178	554741		4/15/2021	13:00			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ICP TOTAL QSM 5.0		GW	4	
		IDW-48/49								80614			
	1001082								ICP TOTAL QSM 5.0				
					L	554741							
	555192		4/15/2021	13:00					ICP TOTAL QSM 5.0				
		IDW-48/49			DUP	554741				80614			
	555193		4/15/2021	13:00					ICP TOTAL QSM 5.0				
		IDW-48/49			MSW	554741				80614			
	555194		4/15/2021	13:00					ICP TOTAL QSM 5.0				
		IDW-48/49			MSDW	555193				80614			
	1000788								ICP TOTAL QSM 5.0				
					PDSW	554741				0			
	1000789								MICP WATER QSM				
					CCV1					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpB62F.tmp

MICP WATER QSM Analytical Run
181097 on 5/3/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1000790						MICP WATER QSM				
				CCV2				0			
	1000791						MICP WATER QSM				
				CCB				0			

21 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MICP WATER QSM K&Na Analytical Run
181100 on 5/3/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1000766								MICP WATER QSM K&Na				
					ICV					0			
	1000767								MICP WATER QSM K&Na				
					ICVLL					0			
	1000768								MICP WATER QSM K&Na				
					ICB					0			
	1000769								MICP WATER QSM K&Na				
					ICSA					0			
	1000770								MICP WATER QSM K&Na				
					ICSAB					0			
	1000772								MICP WATER QSM K&Na				
					CCV1					0			
	1000773								MICP WATER QSM K&Na				
					CCV2					0			
	1000774								MICP WATER QSM K&Na				
					CCB					0			
	555190								ICP K TOTAL QSM 5.0				
					MBW					80614			
	555190								ICP NA TOTAL QSM 5.0				
					MBW					80614			
	555190								ICP TOTAL QSM 5.0				
					MBW					80614			
161178	554741		4/15/2021	13:00			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ICP K TOTAL QSM 5.0		GW	**4**	
		IDW-48/49								80614			
161178	554741		4/15/2021	13:00			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ICP NA TOTAL QSM 5.0		GW	**4**	
		IDW-48/49								80614			
	1001076								ICP K TOTAL QSM 5.0				
					L	554741							
	1001077								ICP NA TOTAL QSM 5.0				
					L	554741							
	555192		4/15/2021	13:00					ICP K TOTAL QSM 5.0				
		IDW-48/49			DUP	554741				80614			
	555192		4/15/2021	13:00					ICP NA TOTAL QSM 5.0				
		IDW-48/49			DUP	554741				80614			
	555193		4/15/2021	13:00					ICP K TOTAL QSM 5.0				
		IDW-48/49			MSW	554741				80614			
	555193		4/15/2021	13:00					ICP NA TOTAL QSM 5.0				
		IDW-48/49			MSW	554741				80614			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp5204.tmp

MICP WATER QSM K&Na Analytical Run
181100 on 5/3/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	555194		4/15/2021	13:00					ICP K TOTAL QSM 5.0				
		IDW-48/49			MSDW	555193				80614			
	555194		4/15/2021	13:00					ICP NA TOTAL QSM 5.0				
		IDW-48/49			MSDW	555193				80614			
	1001078								ICP K TOTAL QSM 5.0				
					PDSW	554741							
	1001079								ICP NA TOTAL QSM 5.0				
					PDSW	554741							
	1000776								MICP WATER QSM K&Na				
					CCV1					0			
	1000777								MICP WATER QSM K&Na				
					CCV2					0			
	1000778								MICP WATER QSM K&Na				
					CCB					0			

26 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp5204.tmp Page 1 of 1

MERCURY QSM 5.0 Analytical Run
181172 on 4/22/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	556943								MERCURY QSM 5.0				
					ICV					0			
	556945								MERCURY QSM 5.0				
					ICB					0			
	556946								MERCURY QSM 5.0				
					CCV					0			
	556947								MERCURY QSM 5.0				
					CCB					0			
	554885								MERCURY TOTAL QSM 5.0				
					LCSW					80604			
	554884								MERCURY TOTAL QSM 5.0				
					MBW					80604			
	556948								MERCURY QSM 5.0				
					CCV					0			
	556949								MERCURY QSM 5.0				
					CCB					0			
161178	554741		4/15/2021	13:00			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	MERCURY TOTAL QSM 5.0		GW	**4**	
		IDW-48/49								80604			
	554886		4/15/2021	13:00					MERCURY TOTAL QSM 5.0				
		IDW-48/49			DUP	554741				80604			
	554887		4/15/2021	13:00					MERCURY TOTAL QSM 5.0				
		IDW-48/49			MSW	554741				80604			
	554888		4/15/2021	13:00					MERCURY TOTAL QSM 5.0				
		IDW-48/49			MSDW	554887				80604			
	556950								MERCURY QSM 5.0				
					CCV					0			
	556951								MERCURY QSM 5.0				
					CCB					0			

14 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpB61.tmp

PrepWrkSht2
on 5/3/2021

Prep Batch: **80614**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	555190	MBW	0	ICP K TOTAL QSM 5.0			LIQUID				
	555190	MBW	0	ICP NA TOTAL QSM 5.0			LIQUID				
	555190	MBW	0	ICP TOTAL QSM 5.0			LIQUID				
	555191	LCSW	0	ICP K TOTAL QSM 5.0			LIQUID				
	555191	LCSW	0	ICP NA TOTAL QSM 5.0			LIQUID				
	555191	LCSW	0	ICP TOTAL QSM 5.0			LIQUID				
161178	554741			ICP TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	IDW-48/49	GROUND WATER	4/15/21	13:00	5/1/21	4
	554741			ICP K TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	IDW-48/49	GROUND WATER	4/15/21	13:00	5/1/21	4
	554741			ICP NA TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	IDW-48/49	GROUND WATER	4/15/21	13:00	5/1/21	4
	555192	DUP	554741	ICP K TOTAL QSM 5.0		IDW-48/49	GROUND WATER	4/15/21	13:00		
	555192	DUP	554741	ICP NA TOTAL QSM 5.0		IDW-48/49	GROUND WATER	4/15/21	13:00		
	555192	DUP	554741	ICP TOTAL QSM 5.0		IDW-48/49	GROUND WATER	4/15/21	13:00		
	555193	MSW	554741	ICP K TOTAL QSM 5.0		IDW-48/49	GROUND WATER	4/15/21	13:00		
	555193	MSW	554741	ICP NA TOTAL QSM 5.0		IDW-48/49	GROUND WATER	4/15/21	13:00		
	555193	MSW	554741	ICP TOTAL QSM 5.0		IDW-48/49	GROUND WATER	4/15/21	13:00		
	555194	MSDW	555193	ICP K TOTAL QSM 5.0		IDW-48/49	GROUND WATER	4/15/21	13:00		
	555194	MSDW	555193	ICP NA TOTAL QSM 5.0		IDW-48/49	GROUND WATER	4/15/21	13:00		

Distibution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpEC8F.tmp

PrepWrkSht2
on 5/3/2021

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	555194	MSDW	555193	ICP TOTAL QSM 5.0		IDW-48/49	GROUND WATER	4/15/21 13:00		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpEC8F.tmp

PrepWrkSht2
on 5/20/2021

Prep Batch: **80604**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	554884	MBW	0	MERCURY TOTAL QSM 5.0			LIQUID				
	554885	LCSW	0	MERCURY TOTAL QSM 5.0			LIQUID				
161178	554741		0	MERCURY TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	IDW-48/49	GROUND WATER	4/15/21	13:00	5/1/21	4
	554886	DUP	554741	MERCURY TOTAL QSM 5.0		IDW-48/49	GROUND WATER	4/15/21	13:00		
	554887	MSW	554741	MERCURY TOTAL QSM 5.0		IDW-48/49	GROUND WATER	4/15/21	13:00		
	554888	MSDW	554887	MERCURY TOTAL QSM 5.0		IDW-48/49	GROUND WATER	4/15/21	13:00		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpDBA1.tmp

Metals Digestion Bench Sheet

Program: EPA
*Matrix: liquid

Prep Methods:
200.2= ICP/GFAA Liquids
3010= ICP Liquids
3020= GFAA Liquids
3005= Sb Liquids
3050= ICP/GFAA Solids
7060/7740= GFAA, As & Se Liquids

Prep Batch #:	80614
Prep Method:	200.2
Analyst:	NAH
Date:	04/19/2021
Start Time:	16:41

Prep Analyst: NAH
Balance ID:

End Date: 04/19/2021
End Time: 01:11
Digestion Tube Lot #: 3375
Block Used: D2
Cell Position for Temp. Check: 60
Initial-DigestionTemp (ºC,corrected): 91
Final-Digestion Temp (ºC,corrected): 92

Reagent:	Ref. #
Nitric Acid:	AB.702
Hydrochloric Acid:	AB.700
Hydrogen Peroxide:	

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
555190	(MB)			50.0	50
555191	(LCS)			50.0	50
554741				50.0	50
	Comments:				50
					50
					50
					50
					50
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					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
555192	(DUP)			50.0	50
555193	(MS)	Parent Sample		50.0	50
555194	(MSD)	554741		50.0	50
	(DUP)				50
	(MS)	Parent Sample			50
	(MSD)				50
Leave >>	(DUP) if applicable				50
blank	(MS)	Parent Sample			50
if N/A	(MSD)				50

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

MS/MSD Spike Amount (ml)	Spike Ref. #
0.2	M14639
0.5	M14625
0.5	M14627
0.1	M14569

LCS Spike Amount (ml)	Spike Ref. #
0.2	M14639
0.5	M14625
0.5	M14627
0.1	M14569

Reviewed x

05/03/202112:13

FMT12-03

Mercury Digestion Bench Sheet

(Prep Methods 7470A & 7471A)

CCV ID: M14826
ICV/LCSW ID: M14827

*Matrix: GW
Balance ID:

Prep Batch #:	80604
Prep Method:	7470A
Analyst:	MDS
Date:	04/20/2021
Start Time:	14:10

7470A= Hg Liquids
7471A= Hg Solids

End Date: 04/20/2021
End Time: 16:10

Digestion Tube Lot #: 2821002
Block Used: B
Cell Position for Temp. Check: E-5
Initial-DigestionTemp (ºC,corrected): 92.7
Final-Digestion Temp (ºC,corrected): 92.7
Additional KMnO4 added (ml):
Aqua Regia added (ml)
Calibration Stds: M14825

Reagent:	Ref. #
HNO3:	AB.700
H2SO4:	AB.696
NaCl/Hydrox.SO4:	M14831
KMnO4:	M14828
K2S2O8:	M14829
Aqua-Regia:	

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
554884	(MB)			25.0	25
554885	(LCS)			25.0	25
554741				25.0	25
	Comments:				25
					25
					25
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					25
					25
					25
					25
					25
					25
554886	(DUP) if applicable			25.0	25
554887	(MS)	Parent Sample		25.0	25
554888	(MSD)	554741		25.0	25
Leave >>	(DUP) if applicable				25
blank	(MS)	Parent Sample			25
	(MSD)				25
	(DUP) if applicable				25
	(MS)	Parent Sample			25
if N/A	(MSD)				25

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

A:

Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #
0.5	100	M14827

B:

Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #

Reviewed By/Date: X

iCAP 6000 / 6500 Data Review Checklist	Analysis Date: 4/21/21	Data File: 000\Results	Date of review: 5/3/21
Cal Std ID: M1981 | LIMS # : 181100, 181097	Analyst: JG	Reviewer: MDS	Approved? (Yes) No

Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)

Prep Batch Check /

QC Parameters : 6010 / 200.7 / QSM / Other	YES	NO	YES	NO	Comments:
1) Calibration linearity: r > 0.995 / r > 0.998	✓		✓		
2) ICV: 90-110% / 95-105%	✓		✓		
2) ICVLL: 70-130% / 80-120%	✓		✓		
3) ICB: < 3X IDL / <LOD / <LOQ	✓		✓		
4) ICSA: < ABS LOD	✓		✓		
5) ICSAB: 80-120%	✓		✓		
6) MRL: 70-130% / 80-120%	✓		✓		
7) MDL Check: >LOD					
8) CCV1/CCB1 (CCV: 90-110%)	✓		✓		
9) CCV2/CCB2 (CCB: < 3X IDL / <LOD / <LOQ)					
10) CCV3/CCB3					
11) CCV4/CCB4					
12) CCV5/CCB5					
Preparation Batch Parameters	**YES**	**NO**	**YES**	**NO**	
Prep Batch ID#: 50614 Dig. Meth. 200.2	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD or ≤ ½ RL	✓	✓	✓	✓	Be >LOD ≤ ½ RL "B"
Spiked samples in batch:					
a) 554744 matrix = GW	✓	✓	✓	✓	Fe, ~~Mn~~ Al
b)_____ matrix = _____					
c)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#: 2	✓				PDS para No flag.
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#:_____					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#:_____					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#:_____					

GFAA / FLAA / CVAA Data Review checklist		Method: 200.9	7000 series AA	245.1 & 245.2	245.7	7470a / 7471a
Instrumentation:	THERMO M SERIES AA			Hydra II Hg ANALYZER		
Analysis Date: 4/21/21	Data File: 042121w		Date Review: 4/23/21	Analyte: Hg		
Cal Std ID: M14825	LIMS # : 181172	Analyst: MOS	Reviewer:	Approved?	Yes	No

Prep Batch Check ✓

Is Audit Trail turned on or Manual Manipulations addressed? (Yes) / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)

Calibration Parameters -	YES	NO	YES	NO	Comments:
1) Calibration linearity - r > 0.995	✓		✓		
2) ICV: (90-110%) 95-105%	✓		✓		
2) ICVLL: 70-130% 80-120%					
3) ICB: <IDL / <LOD / <LOQ / <½ RL	✓		✓		
6) MRL: 70-130%					
7) CCV1/CCB1- (CCV: 90-110% / 80-120%)	✓		✓		
8) CCV2/CCB2 (CCB: <IDL / <LOD / <LOQ / <½ RL)					
9) CCV3/CCB3					
10) CCV4/CCB4					
11) CCV5/CCB5					
Preparation Batch Parameters	**YES**	**NO**	**YES**	**NO**	
Prep Batch ID#: 80604 Dig. Meth. 7470a	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD / <2.2X LOD / ≤ ½RL	✓		✓		
Spiked samples in batch:					
a) 554741 matrix = GW	✓	✓	✓	✓	Dup invalid
b)_____ matrix = _____					
c)_____ matrix = _____					
d)_____ matrix = _____					
e)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#_____					
MSA Performed? Yes No					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
d)_____ matrix = _____					
e)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#_____					
MSA Performed? Yes No					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
d)_____ matrix = _____					
e)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#_____					

CT Laboratories, LLC

ICP-6500 Instrument Run Logbook

Date	Time: Start / End	Analyst	Analytes / Sequence I.D.	Method	LIMS # or Sample Description	Nebulizer Pressure (kpa)	Calib. Std ID	Version	Comments
3/31/21	1425 / 0214	ZA	033121	DODCal U	180478 180501 180479 180508	270	M14655 M14361 M14656	V4302 V4301	M14657 M14623 M14658 M14639
4/1/21	1048 1425 1346 0414/21	ZA	040121	DODCal U	180504 180281	270	M14655 M14361 M14656	V4303	M14657 M14623 M14658 M14639
4/2/21	1409 / 2300	ZA	040221	DODCal U	180450 180507, 180449 180445 47 180545 180444 180544 180351	270	M14655 M14361 M14656	V4306 V4305	M14657 M14623 M14658 M14639
4/6/21	0836 / 2232	ZA	040621	DODCal U	180605 180604 180606 180607 180570 180569 180572 180571 180567	280	M14655 M14361 M14656	V4314 V4308	M14657 M14623 M14658 M14639
4/9/21	1205 / 0610	ZA	040921	DODCal U	180691, 96, 92 180690 180684 180783 180741 180727 180736 180751	280	M14655 M14361 M14656	V4316	M14657 M14623 M14658 M14639
4/12/21	0946 / 2223	ZA	041221	DODCal U	180678 180739 180816 180768 180738 180737 180769 180735 180810	280	M14655 M14361 M14656	V4318 V4317	M14657 M14623 M14658 M14639
4/13/21	0728 / 1913	ZA	041321	DODCal U	180804 180808 180819 180805 180809 180806 180807 180811	280	M14655 M14811 M14361 M14656	V4319	M14657 M14623 M14658 M14639
4/14/21	1135 / 1515	ZA	041421	DODCal U	180804 180884	280	M14811 M14361 M14656	V4321	M14657 M14623 M14658 M14639
4/16/21	1231 / 1218	ZA	041621	DODCal U	180929 180937 180997 181010 180995 180885 181008 181012 180978 181003 181015 181014, 13, 181016 181017	280	M14811 M14361 M14656	V4325 V4324 V4326	M14657 M14623 M14658 M14639
4/19/21	1355 / 0454	ZA	041921	DODCal U	181105 181111 181120 181077 181028 181019, 181098, 181101	270	M14811 M14820 M14821	V4329	M14822 M14656 M14823 M14824
4/21/21	1118 / 1400	ZA	042121	DODCal U	181028, 27 181093, 113, 106 095 181024, 26 181174, 181087, 181018 181103, 181209, 181303, 181223	270	M14811 M14820 M14821	V4354 V4355 V4334	M14822 M14656 M14823 M14824
4/22/21	1422 / 1300 4/23	ZA	042221	DODCal U	181108 181109, 181178, 181281 181139 181213 181211, 181290 181218, 181217, 181284 181261	270	M14811 M14820 M14821	V4337 V4335 V4344 V4346 V4347	M14822 M14656 M14823

Comments: Processed on the ICP6000 Data Base

Checked By / Date: _____

CT Laboratories

Mercury Analyzer Instrument Run Log

Instrument ID: Cetac M-6000A

Analysis Date	Start Time	End Time	Analyst	LIMS Run # (s)	Method File ID #	Cal. Std. ID #	Lamp Current (mA)	Analysis Tube Lot #	Comments
3/12/21	0750	0857	MDS	179946, 179947	031221W	M14755	10.158	380450-4851	$SnCl_2$: M14762
3/17/21	0953	1119	MDS	180122	031721S	M14764	10.154	380450-4851	$SnCl_2$: M14771
3/18/21	0921	1209	MDS	180140, 180138, 180139, 180141, 180142	031821W	M14764	10.220	380450-4851	$SnCl_2$: M14771
3/24/21	0840	1025	MDS	180299, 180300	032421W	M14777	10.014	380450-4851	$SnCl_2$: M14771
3/24/21	1039	1308	MDS	180303, 180302, 180301	032421S	M14777	10.033	380450-4851	$SnCl_2$: M14771
3/31/21	0839	0949	MDS	180504	033121S	M14789	9.926	380450-4851	$SnCl_2$: M14796
4/2/21	0910	1145	MDS	180551, 180554	040221W	M14789	9.897	380450-4851	$SnCl_2$: M14796
4/2/21	1202	1418	MDS	180555, 180553, 180552	040221bW	M14789	10.128	380450-4851	$SnCl_2$: M14796
4/7/21	0844	0944	MDS	180655	040721S	M14800	9.941	380450-4851	$SnCl_2$: M14807
4/7/21	1017	1316	MDS	180657, 180658, 180660, 180661, 180659,	040721W	M14800	10.040	380450-4851	$SnCl_2$: M14807
4/15/21	0932	1118	MDS	180940, 180941	041521S	M14812	—	380450-4851	$SnCl_2$: M14819
4/15/21	1156	1300	MDS	180940, 180941	041521bS	M14812	9.978	380450-4851	$SnCl_2$: M14819
4/16/21	0925	1159	MDS	180951, 180950, 180952	041621W	M14812	10.073	380450-4851	$SnCl_2$: M14819
4/21/21	0838	0938	MDS	181153	042121S	M14825	9.919	380450-4851	$SnCl_2$: M14832
4/21/21	0951	1537	MDS	181171, 181169, 181170, 181163, 181166, 181164, 181167, 181172, 181165	042121W	M14825	10.073	380450-4851	$SnCl_2$: M14832
4/22/21	0839	1005	MDS	181161, 181162, 181168	042221W	M14825	9.970	380450-4851	$SnCl_2$: M14832
4/28/21	0805	1122	MDS	181419, 181420	042821S	M14835	9.989	385853-4851	$SnCl_2$: M14842
4/28/21	1226	1445	MDS	181420, 181421, 181422	042821bS	M14835	10.047	385853-4851	$SnCl_2$: M14842
4/29/21	0919	1151	MDS	181476, 181477	042921W	M14835	10.044	385853-4851	$SnCl_2$: M14842
4/29/21	1253	1533	MDS	181477, 181480	042921bW	M14835	—	385853-4851	$SnCl_2$: M14842
4/30/21	0851	1108	MDS	181480, 181478, 181479, 181481	043021W	M14835	10.132	385853-4851	$SnCl_2$: M14842
5/5/21	1002	1412	MDS	MDS 5/6/21 191615, 191616, 191617 191611, 191612, 191613, 191614	050521W	M14847	10.081	385853-4851	$SnCl_2$: M14854
5/6/21	1208	1314	MDS	191622	050621S	M14847	10.055	385853-4851	$SnCl_2$: M14854 *started New Database
5/12/21	0839	1220	MDS	191843, 191844, 191845, 191846, 191848	051221W	M14857	10.084	385853-4851	$SnCl_2$: M14864

Reviewed By/Date:_____

Type	Date/Time	Message	User name	Application	Sequence Name
	04/20/2021 01:43:31	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	04/20/2021 01:49:46	Running pdsw552776 (145)	NAH	Analyst	S_DOD Calibration
	04/20/2021 01:55:57	Running 552887 (146)	NAH	Analyst	S_DOD Calibration
	04/20/2021 02:02:27	Running 553210 (147)	NAH	Analyst	S_DOD Calibration
	04/20/2021 02:09:12	Running 553214 (148)	NAH	Analyst	S_DOD Calibration
	04/20/2021 02:15:55	Running 553286 (149)	NAH	Analyst	S_DOD Calibration
	04/20/2021 02:22:31	Running 553811 (150)	NAH	Analyst	S_DOD Calibration
	04/20/2021 02:29:07	Running lcsw80565 (151)	NAH	Analyst	S_DOD Calibration
	04/20/2021 02:35:23	Running mbw80565 (152)	NAH	Analyst	S_DOD Calibration
	04/20/2021 02:41:34	Running 553564 (153)	NAH	Analyst	S_DOD Calibration
	04/20/2021 02:48:31	Running 553565 (154)	NAH	Analyst	S_DOD Calibration
	04/20/2021 02:55:06	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	04/20/2021 03:00:22	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	04/20/2021 03:06:07	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	04/20/2021 03:12:22	Running 553566 (155)	NAH	Analyst	S_DOD Calibration
	04/20/2021 03:18:44	Running 553567 (156)	NAH	Analyst	S_DOD Calibration
	04/20/2021 03:25:22	Running msw553567 (157)	NAH	Analyst	S_DOD Calibration
	04/20/2021 03:31:35	Running msdw553567 (158)	NAH	Analyst	S_DOD Calibration
	04/20/2021 03:37:49	Running pdsw553567 (159)	NAH	Analyst	S_DOD Calibration
	04/20/2021 03:44:10	Running lcss80574 (160)	NAH	Analyst	S_DOD Calibration
	04/20/2021 03:50:09	Running mbw80574 (161)	NAH	Analyst	S_DOD Calibration
	04/20/2021 03:56:24	Running 553807 (162)	NAH	Analyst	S_DOD Calibration
	04/20/2021 04:02:46	Running mss553807 (163)	NAH	Analyst	S_DOD Calibration
	04/20/2021 04:08:33	Running msds553807 (164)	NAH	Analyst	S_DOD Calibration
	04/20/2021 04:14:21	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	04/20/2021 04:19:36	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	04/20/2021 04:25:20	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	04/20/2021 04:31:34	Running pdss553807 (165)	NAH	Analyst	S_DOD Calibration
	04/20/2021 04:37:32	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	04/20/2021 04:43:41	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	04/20/2021 04:48:57	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	04/20/2021 04:54:41	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	04/20/2021 05:00:53	Plasma extinguished successfully	NAH	Analyst	
	04/20/2021 05:00:54	Plasma off	NAH	iTEVA Control Center	
	04/20/2021 05:00:56	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	04/20/2021 06:55:40	Plasma On	NAH	iTEVA Control Center	
	04/20/2021 06:55:46	Plasma ignition successful	NAH	Analyst	
	04/20/2021 06:56:33	D33534 - Debug:Wavelength check : x = 0.772, y =-0.855	NAH	Analyst	
	04/20/2021 14:58:06	Plasma off	NAH	iTEVA Control Center	
	04/20/2021 14:58:07	Plasma extinguished successfully	NAH	Analyst	
	04/21/2021 06:55:45	Plasma On	NAH	iTEVA Control Center	
	04/21/2021 06:55:50	Plasma ignition successful	NAH	Analyst	
	04/21/2021 06:56:30	D33534 - Debug:Wavelength check : x = 0.789, y =-0.878	NAH	Analyst	
	04/21/2021 11:18:31	Autosampler Run Started	NAH	Analyst	
	04/21/2021 11:18:31	Sequence Started	NAH	Analyst	S_DOD Calibration
	04/21/2021 11:18:52	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	04/21/2021 11:25:10	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	04/21/2021 11:31:22	Running CalStd3=1 (3)	NAH	Analyst	S_DOD Calibration
	04/21/2021 11:37:36	Running CalStd4=5 (4)	NAH	Analyst	S_DOD Calibration
	04/21/2021 11:43:50	Running CalStd5=10 (5)	NAH	Analyst	S_DOD Calibration
	04/21/2021 11:50:05	Running CalStd6=20 (6)	NAH	Analyst	S_DOD Calibration
	04/21/2021 11:56:15	Running CalStd7=50 (7)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	04/21/2021 12:02:19	Running CalStd8=100 (8)	NAH	Analyst	S_DOD Calibration
	04/21/2021 12:08:24	Running CalStd9=1000 (9)	NAH	Analyst	S_DOD Calibration
	04/21/2021 12:14:01	Running CalStd10=10000 (10)	NAH	Analyst	S_DOD Calibration
	04/21/2021 12:19:28	Running CalStd12=100K (11)	NAH	Analyst	S_DOD Calibration
	04/21/2021 12:26:05	Running CalStd13=100000 (12)	NAH	Analyst	S_DOD Calibration
	04/21/2021 12:32:28	Running CalStd14=500000 (13)	NAH	Analyst	S_DOD Calibration
	04/21/2021 12:38:59	Running CalibStd15=1000k (14)	NAH	Analyst	S_DOD Calibration
	04/21/2021 12:45:37	Running Ag Ba 1000, 50000 (15)	NAH	Analyst	S_DOD Calibration
	04/21/2021 12:52:02	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	04/21/2021 12:58:11	Running icv (16)	NAH	Analyst	S_DOD Calibration
	04/21/2021 13:04:00	Running icv (16)	NAH	Analyst	S_DOD Calibration
	04/21/2021 13:09:51	Running ICVLL (24)	NAH	Analyst	S_DOD Calibration
	04/21/2021 13:09:55	Closing will close the method and all associated samples.	NAH	Analyst	
	04/21/2021 13:09:58	Closing will close the method and all associated samples.	NAH	Analyst	
	04/21/2021 13:10:14	Closing will close the method and all associated samples.	NAH	Analyst	
	04/21/2021 13:10:17	Closing will close the method and all associated samples.	NAH	Analyst	
	04/21/2021 13:15:51	Running icb (17)	NAH	Analyst	S_DOD Calibration
	04/21/2021 13:22:02	Running icb (17)	NAH	Analyst	S_DOD Calibration
	04/21/2021 13:28:13	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	04/21/2021 13:34:20	Running ICSA (20)	NAH	Analyst	S_DOD Calibration
	04/21/2021 13:40:47	Running ICSAB (21)	NAH	Analyst	S_DOD Calibration
	04/21/2021 13:46:43	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	04/21/2021 13:52:49	Running ICVLL ag (1)	NAH	Analyst	S_DOD Calibration
	04/21/2021 13:52:52	Closing will close the method and all associated samples.	NAH	Analyst	
	04/21/2021 13:59:01	Running ccv1 (178)	NAH	Analyst	S_DOD Calibration
	04/21/2021 14:04:19	Running ccv2 (179)	NAH	Analyst	S_DOD Calibration
	04/21/2021 14:10:04	Running lcsw80587 86 (2)	NAH	Analyst	S_DOD Calibration
	04/21/2021 14:16:18	Running mbw80587 86 (3)	NAH	Analyst	S_DOD Calibration
	04/21/2021 14:22:30	Running 554391 (4)	NAH	Analyst	S_DOD Calibration
	04/21/2021 14:28:41	Running msw554391 (5)	NAH	Analyst	S_DOD Calibration
	04/21/2021 14:34:55	Running msdw554391 (6)	NAH	Analyst	S_DOD Calibration
	04/21/2021 14:41:09	Running pdsw554391 (7)	NAH	Analyst	S_DOD Calibration
	04/21/2021 14:47:28	Running 554259 (8)	NAH	Analyst	S_DOD Calibration
	04/21/2021 14:54:00	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	04/21/2021 14:59:13	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	04/21/2021 15:04:57	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	04/21/2021 15:11:10	Running msw554259 (9)	NAH	Analyst	S_DOD Calibration
	04/21/2021 15:17:27	Running msdw554259 (10)	NAH	Analyst	S_DOD Calibration
	04/21/2021 15:23:44	Running pdsw554259 (11)	NAH	Analyst	S_DOD Calibration
	04/21/2021 15:30:08	Running lcsw PT1 (51)	NAH	Analyst	S_DOD Calibration
	04/21/2021 15:35:56	Running mbw PT1 (52)	NAH	Analyst	S_DOD Calibration
	04/21/2021 15:42:09	Running 552989 (53)	NAH	Analyst	S_DOD Calibration
	04/21/2021 15:48:21	Running l552989 (54)	NAH	Analyst	S_DOD Calibration
	04/21/2021 15:54:33	Running dup552989 (55)	NAH	Analyst	S_DOD Calibration
	04/21/2021 16:00:45	Running msw552989 (56)	NAH	Analyst	S_DOD Calibration
	04/21/2021 16:06:43	Running 553018 (57)	NAH	Analyst	S_DOD Calibration
	04/21/2021 16:12:55	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	04/21/2021 16:18:08	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	04/21/2021 16:23:49	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	04/21/2021 16:30:02	Running l553018 (58)	NAH	Analyst	S_DOD Calibration
	04/21/2021 16:36:14	Running dup553018 (59)	NAH	Analyst	S_DOD Calibration
	04/21/2021 16:42:26	Running msw553018 (60)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	04/21/2021 16:48:15	Running 553019 (61)	NAH	Analyst	S_DOD Calibration
	04/21/2021 16:54:54	Running l553019 (62)	NAH	Analyst	S_DOD Calibration
	04/21/2021 17:01:37	Running dup553019 (63)	NAH	Analyst	S_DOD Calibration
	04/21/2021 17:08:16	Running msw553019 (64)	NAH	Analyst	S_DOD Calibration
	04/21/2021 17:13:59	Running 553022 (65)	NAH	Analyst	S_DOD Calibration
	04/21/2021 17:19:42	Running l553022 (66)	NAH	Analyst	S_DOD Calibration
	04/21/2021 17:25:41	Running dup553022 (67)	NAH	Analyst	S_DOD Calibration
	04/21/2021 17:31:25	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	04/21/2021 17:36:38	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	04/21/2021 17:42:21	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	04/21/2021 17:48:34	Running msw553022 (68)	NAH	Analyst	S_DOD Calibration
	04/21/2021 17:54:13	Running 553121 (69)	NAH	Analyst	S_DOD Calibration
	04/21/2021 18:00:26	Running l553121 (70)	NAH	Analyst	S_DOD Calibration
	04/21/2021 18:06:40	Running dup553121 (71)	NAH	Analyst	S_DOD Calibration
	04/21/2021 18:12:52	Running msw553121 (72)	NAH	Analyst	S_DOD Calibration
	04/21/2021 18:18:41	Running 555470 (73)	NAH	Analyst	S_DOD Calibration
	04/21/2021 18:24:35	Running l555470 (74)	NAH	Analyst	S_DOD Calibration
	04/21/2021 18:30:41	Running dup555470 (75)	NAH	Analyst	S_DOD Calibration
	04/21/2021 18:36:35	Running msw555470 (76)	NAH	Analyst	S_DOD Calibration
	04/21/2021 18:42:20	Running lcsw80601 (45)	NAH	Analyst	S_DOD Calibration
	04/21/2021 18:48:35	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	04/21/2021 18:53:49	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	04/21/2021 18:59:33	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	04/21/2021 19:05:45	Running mbw80601 (46)	NAH	Analyst	S_DOD Calibration
	04/21/2021 19:11:58	Running 554726 (47)	NAH	Analyst	S_DOD Calibration
	04/21/2021 19:18:31	Running msw554726 (48)	NAH	Analyst	S_DOD Calibration
	04/21/2021 19:24:42	Running msdw554726 (49)	NAH	Analyst	S_DOD Calibration
	04/21/2021 19:30:54	Running pdsw554726 (50)	NAH	Analyst	S_DOD Calibration
	04/21/2021 19:36:40	Running lcsw80584 (12)	NAH	Analyst	S_DOD Calibration
	04/21/2021 19:42:54	Running mbw80584 (13)	NAH	Analyst	S_DOD Calibration
	04/21/2021 19:49:02	Running 554302 (14)	NAH	Analyst	S_DOD Calibration
	04/21/2021 19:55:38	Running l554302 (15)	NAH	Analyst	S_DOD Calibration
	04/21/2021 20:01:46	Running dup554302 (16)	NAH	Analyst	S_DOD Calibration
	04/21/2021 20:08:21	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	04/21/2021 20:13:34	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	04/21/2021 20:19:18	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	04/21/2021 20:25:30	Running msw554302 (17)	NAH	Analyst	S_DOD Calibration
	04/21/2021 20:31:38	Running msdw554302 (18)	NAH	Analyst	S_DOD Calibration
	04/21/2021 20:37:49	Running pdsw554302 (19)	NAH	Analyst	S_DOD Calibration
	04/21/2021 20:44:13	Running lcsw80585 (20)	NAH	Analyst	S_DOD Calibration
	04/21/2021 20:50:28	Running mbw80585 (21)	NAH	Analyst	S_DOD Calibration
	04/21/2021 20:56:41	Running 554144 (22)	NAH	Analyst	S_DOD Calibration
	04/21/2021 21:03:19	Running l554144 (23)	NAH	Analyst	S_DOD Calibration
	04/21/2021 21:09:27	Running dup554144 (24)	NAH	Analyst	S_DOD Calibration
	04/21/2021 21:16:05	Running msw554144 (25)	NAH	Analyst	S_DOD Calibration
	04/21/2021 21:22:17	Running msdw554144 (26)	NAH	Analyst	S_DOD Calibration
	04/21/2021 21:28:28	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	04/21/2021 21:33:41	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	04/21/2021 21:39:26	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	04/21/2021 21:45:38	Running pdsw554144 (27)	NAH	Analyst	S_DOD Calibration
	04/21/2021 21:51:56	Running 554145 (28)	NAH	Analyst	S_DOD Calibration
	04/21/2021 21:58:30	Running 554146 (29)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	04/21/2021 22:04:51	Running 554147 (30)	NAH	Analyst	S_DOD Calibration
	04/21/2021 22:11:25	Running 554148 (31)	NAH	Analyst	S_DOD Calibration
	04/21/2021 22:17:48	Running 554149 (32)	NAH	Analyst	S_DOD Calibration
	04/21/2021 22:24:16	Running 554150 (33)	NAH	Analyst	S_DOD Calibration
	04/21/2021 22:30:50	Running 554151 (34)	NAH	Analyst	S_DOD Calibration
	04/21/2021 22:36:58	Running 554152 (35)	NAH	Analyst	S_DOD Calibration
	04/21/2021 22:43:20	Running 554153 (36)	NAH	Analyst	S_DOD Calibration
	04/21/2021 22:49:44	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	04/21/2021 22:55:00	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	04/21/2021 23:00:45	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	04/21/2021 23:06:58	Running 554186 (37)	NAH	Analyst	S_DOD Calibration
	04/21/2021 23:13:09	Running 554197 (38)	NAH	Analyst	S_DOD Calibration
	04/21/2021 23:19:43	Running lcsw80582 (39)	NAH	Analyst	S_DOD Calibration
	04/21/2021 23:25:48	Running mbw80582 (40)	NAH	Analyst	S_DOD Calibration
	04/21/2021 23:31:59	Running 554093 (41)	NAH	Analyst	S_DOD Calibration
	04/21/2021 23:38:29	Running msw554093 (42)	NAH	Analyst	S_DOD Calibration
	04/21/2021 23:44:36	Running msdw554093 (43)	NAH	Analyst	S_DOD Calibration
	04/21/2021 23:50:43	Running pdsw554093 (44)	NAH	Analyst	S_DOD Calibration
	04/21/2021 23:57:00	Running lcsw80567 (119)	NAH	Analyst	S_DOD Calibration
	04/22/2021 00:03:15	Running mbw80567 (120)	NAH	Analyst	S_DOD Calibration
	04/22/2021 00:09:27	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	04/22/2021 00:14:43	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	04/22/2021 00:20:26	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	04/22/2021 00:26:40	Running 553587 (121)	NAH	Analyst	S_DOD Calibration
	04/22/2021 00:33:09	Running 553589 (122)	NAH	Analyst	S_DOD Calibration
	04/22/2021 00:39:43	Running 553593 (123)	NAH	Analyst	S_DOD Calibration
	04/22/2021 00:45:45	Running l553593 (124)	NAH	Analyst	S_DOD Calibration
	04/22/2021 00:51:57	Running dup553593 (125)	NAH	Analyst	S_DOD Calibration
	04/22/2021 00:57:59	Running msw553593 (126)	NAH	Analyst	S_DOD Calibration
	04/22/2021 01:04:09	Running msdw553593 (127)	NAH	Analyst	S_DOD Calibration
	04/22/2021 01:10:19	Running pdsw553593 (128)	NAH	Analyst	S_DOD Calibration
	04/22/2021 01:16:51	Running 553600 (129)	NAH	Analyst	S_DOD Calibration
	04/22/2021 01:22:56	Running 553602 (130)	NAH	Analyst	S_DOD Calibration
	04/22/2021 01:29:31	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	04/22/2021 01:34:47	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	04/22/2021 01:40:30	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	04/22/2021 01:46:44	Running 553604 (131)	NAH	Analyst	S_DOD Calibration
	04/22/2021 01:53:19	Running 553615 (132)	NAH	Analyst	S_DOD Calibration
	04/22/2021 01:59:33	Running 553616 (133)	NAH	Analyst	S_DOD Calibration
	04/22/2021 02:06:04	Running 553617 (134)	NAH	Analyst	S_DOD Calibration
	04/22/2021 02:12:19	Running 553618 (135)	NAH	Analyst	S_DOD Calibration
	04/22/2021 02:18:56	Running 553619 (136)	NAH	Analyst	S_DOD Calibration
	04/22/2021 02:25:32	Running 553620 (137)	NAH	Analyst	S_DOD Calibration
	04/22/2021 02:32:14	Running 553622 (138)	NAH	Analyst	S_DOD Calibration
	04/22/2021 02:38:23	Running 553627 (139)	NAH	Analyst	S_DOD Calibration
	04/22/2021 02:44:38	Running lcsw80545 61 (140)	NAH	Analyst	S_DOD Calibration
	04/22/2021 02:50:53	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	04/22/2021 02:56:08	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	04/22/2021 03:01:53	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	04/22/2021 03:08:07	Running mbw80545 61 (141)	NAH	Analyst	S_DOD Calibration
	04/22/2021 03:14:22	Running 552776 (142)	NAH	Analyst	S_DOD Calibration
	04/22/2021 03:20:49	Running msw552776 (143)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	04/22/2021 03:26:49	Running msdw552776 (144)	NAH	Analyst	S_DOD Calibration
	04/22/2021 03:32:48	Running pdsw552776 (145)	NAH	Analyst	S_DOD Calibration
	04/22/2021 03:39:18	Running 552887 (146)	NAH	Analyst	S_DOD Calibration
	04/22/2021 03:46:03	Running 553210 (147)	NAH	Analyst	S_DOD Calibration
	04/22/2021 03:52:48	Running 553214 (148)	NAH	Analyst	S_DOD Calibration
	04/22/2021 03:59:44	Running 553286 (149)	NAH	Analyst	S_DOD Calibration
	04/22/2021 04:06:21	Running 553811 (150)	NAH	Analyst	S_DOD Calibration
	04/22/2021 04:12:58	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	04/22/2021 04:18:13	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	04/22/2021 04:23:56	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	04/22/2021 04:30:11	Running lcsw80565 (151)	NAH	Analyst	S_DOD Calibration
	04/22/2021 04:36:27	Running mbw80565 (152)	NAH	Analyst	S_DOD Calibration
	04/22/2021 04:42:38	Running 553564 (153)	NAH	Analyst	S_DOD Calibration
	04/22/2021 04:49:37	Running 553565 (154)	NAH	Analyst	S_DOD Calibration
	04/22/2021 04:56:06	Running 553566 (155)	NAH	Analyst	S_DOD Calibration
	04/22/2021 05:02:29	Running 553567 (156)	NAH	Analyst	S_DOD Calibration
	04/22/2021 05:09:08	Running msw553567 (157)	NAH	Analyst	S_DOD Calibration
	04/22/2021 05:15:22	Running msdw553567 (158)	NAH	Analyst	S_DOD Calibration
	04/22/2021 05:21:36	Running pdsw553567 (159)	NAH	Analyst	S_DOD Calibration
	04/22/2021 05:28:10	Running lcss80574 (160)	NAH	Analyst	S_DOD Calibration
	04/22/2021 05:34:06	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	04/22/2021 05:39:21	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	04/22/2021 05:45:05	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	04/22/2021 05:51:19	Running mbw80574 (161)	NAH	Analyst	S_DOD Calibration
	04/22/2021 05:57:34	Running 553807 (162)	NAH	Analyst	S_DOD Calibration
	04/22/2021 06:03:58	Running mss553807 (163)	NAH	Analyst	S_DOD Calibration
	04/22/2021 06:09:44	Running msds553807 (164)	NAH	Analyst	S_DOD Calibration
	04/22/2021 06:15:31	Running pdss553807 (165)	NAH	Analyst	S_DOD Calibration
	04/22/2021 06:22:04	Running lcsw80613 (77)	NAH	Analyst	S_DOD Calibration
	04/22/2021 06:28:19	Running mbw80613 (78)	NAH	Analyst	S_DOD Calibration
	04/22/2021 06:34:32	Running 554873 (79)	NAH	Analyst	S_DOD Calibration
	04/22/2021 06:40:43	Running 554879 (80)	NAH	Analyst	S_DOD Calibration
	04/22/2021 06:47:12	Running 554880 (81)	NAH	Analyst	S_DOD Calibration
	04/22/2021 06:53:18	Running ccv1 (31)	NAH	Analyst	S_DOD Calibration
	04/22/2021 06:58:34	Running ccv2 (29)	NAH	Analyst	S_DOD Calibration
	04/22/2021 07:04:20	Running ccb (30)	NAH	Analyst	S_DOD Calibration
	04/22/2021 07:10:34	Running 554882 (82)	NAH	Analyst	S_DOD Calibration
	04/22/2021 07:17:05	Running 554883 (83)	NAH	Analyst	S_DOD Calibration
	04/22/2021 07:23:06	Running 554889 (84)	NAH	Analyst	S_DOD Calibration
	04/22/2021 07:29:24	Running 554895 (85)	NAH	Analyst	S_DOD Calibration
	04/22/2021 07:35:26	Running 554896 (86)	NAH	Analyst	S_DOD Calibration
	04/22/2021 07:41:42	Running l554896 (87)	NAH	Analyst	S_DOD Calibration
	04/22/2021 07:47:49	Running dup554896 (88)	NAH	Analyst	S_DOD Calibration
	04/22/2021 07:54:04	Running msw554896 (89)	NAH	Analyst	S_DOD Calibration
	04/22/2021 08:00:17	Running msdw554896 (90)	NAH	Analyst	S_DOD Calibration
	04/22/2021 08:06:31	Running pdsw554896 (91)	NAH	Analyst	S_DOD Calibration
	04/22/2021 08:12:21	Running ccv1 (31)	NAH	Analyst	S_DOD Calibration
	04/22/2021 08:17:38	Running ccv2 (29)	NAH	Analyst	S_DOD Calibration
	04/22/2021 08:23:24	Running ccb (30)	NAH	Analyst	S_DOD Calibration
	04/22/2021 08:29:40	Running 554897 (92)	NAH	Analyst	S_DOD Calibration
	04/22/2021 08:35:51	Running 554899 (93)	NAH	Analyst	S_DOD Calibration
	04/22/2021 08:41:59	Running 554900 (94)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	04/22/2021 08:48:14	Running 554901 (95)	NAH	Analyst	S_DOD Calibration
	04/22/2021 08:54:29	Running 554902 (96)	NAH	Analyst	S_DOD Calibration
	04/22/2021 09:00:46	Running 554903 (97)	NAH	Analyst	S_DOD Calibration
	04/22/2021 09:07:01	Running 554904 (98)	NAH	Analyst	S_DOD Calibration
	04/22/2021 09:13:11	Running 554905 (99)	NAH	Analyst	S_DOD Calibration
	04/22/2021 09:19:31	Running 554907 (100)	NAH	Analyst	S_DOD Calibration
	04/22/2021 09:25:50	Running 554914 (101)	NAH	Analyst	S_DOD Calibration
	04/22/2021 09:32:04	Running ccv1 (31)	NAH	Analyst	S_DOD Calibration
	04/22/2021 09:37:22	Running ccv2 (29)	NAH	Analyst	S_DOD Calibration
	04/22/2021 09:43:09	Running ccb (30)	NAH	Analyst	S_DOD Calibration
	04/22/2021 09:49:23	Running lcsw80614 (102)	NAH	Analyst	S_DOD Calibration
	04/22/2021 09:55:39	Running mbw80614 (103)	NAH	Analyst	S_DOD Calibration
	04/22/2021 10:01:52	Running 554741 (104)	NAH	Analyst	S_DOD Calibration
	04/22/2021 10:08:14	Running l554741 (105)	NAH	Analyst	S_DOD Calibration
	04/22/2021 10:14:51	Running dup554741 (106)	NAH	Analyst	S_DOD Calibration
	04/22/2021 10:21:13	Running msw554741 (107)	NAH	Analyst	S_DOD Calibration
	04/22/2021 10:27:18	Running msdw554741 (108)	NAH	Analyst	S_DOD Calibration
	04/22/2021 10:33:28	Running pdsw554741 (109)	NAH	Analyst	S_DOD Calibration
	04/22/2021 10:39:09	Running lcsw80595 (110)	NAH	Analyst	S_DOD Calibration
	04/22/2021 10:45:26	Running mbw80595 (111)	NAH	Analyst	S_DOD Calibration
	04/22/2021 10:51:41	Running ccv1 (31)	NAH	Analyst	S_DOD Calibration
	04/22/2021 10:56:58	Running ccv2 (29)	NAH	Analyst	S_DOD Calibration
	04/22/2021 11:02:44	Running ccb (30)	NAH	Analyst	S_DOD Calibration
	04/22/2021 11:08:59	Running 554423 (112)	NAH	Analyst	S_DOD Calibration
	04/22/2021 11:15:31	Running msw554423 (113)	NAH	Analyst	S_DOD Calibration
	04/22/2021 11:21:41	Running msdw554423 (114)	NAH	Analyst	S_DOD Calibration
	04/22/2021 11:27:51	Running pdsw554423 (115)	NAH	Analyst	S_DOD Calibration
	04/22/2021 11:33:33	Running lcswtclp1 (116)	NAH	Analyst	S_DOD Calibration
	04/22/2021 11:39:18	Running mbwtclp1 (117)	NAH	Analyst	S_DOD Calibration
	04/22/2021 11:45:28	Running 554799 (118)	NAH	Analyst	S_DOD Calibration
	04/22/2021 11:52:22	Running msw554799 (166)	NAH	Analyst	S_DOD Calibration
	04/22/2021 11:58:28	Running lcsw80633 (167)	NAH	Analyst	S_DOD Calibration
	04/22/2021 12:04:44	Running mbw80633 (168)	NAH	Analyst	S_DOD Calibration
	04/22/2021 12:11:01	Running ccv1 (31)	NAH	Analyst	S_DOD Calibration
	04/22/2021 12:16:19	Running ccv2 (29)	NAH	Analyst	S_DOD Calibration
	04/22/2021 12:22:04	Running ccb (30)	NAH	Analyst	S_DOD Calibration
	04/22/2021 12:28:19	Running 553956 (169)	NAH	Analyst	S_DOD Calibration
	04/22/2021 12:35:17	Running 553956 (170)	NAH	Analyst	S_DOD Calibration
	04/22/2021 12:42:02	Running l553956 (171)	NAH	Analyst	S_DOD Calibration
	04/22/2021 12:49:00	Running dup553956 (172)	NAH	Analyst	S_DOD Calibration
	04/22/2021 12:55:38	Running msw553956 (173)	NAH	Analyst	S_DOD Calibration
	04/22/2021 13:02:15	Running msdw553956 (174)	NAH	Analyst	S_DOD Calibration
	04/22/2021 13:08:23	Running pdsw553956 (175)	NAH	Analyst	S_DOD Calibration
	04/22/2021 13:10:48	Closing will close the method and all associated samples.	NAH	Analyst	
	04/22/2021 13:15:22	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	04/22/2021 13:21:33	Running ccv1 (31)	NAH	Analyst	S_DOD Calibration
	04/22/2021 13:26:51	Running ccv2 (29)	NAH	Analyst	S_DOD Calibration
	04/22/2021 13:32:37	Running ccb (30)	NAH	Analyst	S_DOD Calibration
	04/22/2021 13:38:46	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	04/22/2021 14:22:14	Sequence Started	NAH	Analyst	S_DOD Calibration
	04/22/2021 14:22:14	Autosampler Run Started	NAH	Analyst	
	04/22/2021 14:22:35	Running Blank (1)	NAH	Analyst	S_DOD Calibration

		Instrument:	CETAC
Standard Log #:	M14854	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/05/2021	Expiration Date:	06/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard Log #:	M14855	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/05/2021	Expiration Date:	05/05/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14856	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/05/2021	Expiration Date:	05/05/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14850	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	06/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14851	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	06/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14852	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	05/05/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14853	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/05/2021	Expiration Date:	06/05/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14847	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/04/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14848	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/04/2021	Expiration Date:	05/02/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14849	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/04/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14846	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	ACID WASHED TCLP FILTERS
Date Received:	04/29/2021	Lot #:	400175-1081-AG
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

		Instrument:	CETAC
Standard Log #:	M14842	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/28/2021	Expiration Date:	05/28/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard Log #:	M14843	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/19/2021	Expiration Date:	04/19/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard ID#:	M14844	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	04/28/2021	Lot #:	L060-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14845	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	04/28/2021	Lot #:	L060-06
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M14838	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	05/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14839	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	05/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14840	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	04/28/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14841	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/28/2021	Expiration Date:	05/28/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14835	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14836	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14837	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/27/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14832	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/21/2021	Expiration Date:	05/21/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard ID#:	M14833	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	04/21/2021	Lot #:	18-102WLX
Expiration Date (if any):	04/30/2022	Catalog #:	INT-A1

Standard ID#:	M14834	Vendor:	Custom Assurance Std
Analyst:	NAH	Chemical:	Ca 20000 Mg,Na 10000: THardness
Date Received:	04/21/2021	Lot #:	16-022AB
Expiration Date (if any):	04/30/2022	Catalog #:	XCTIWI-1-500

Standard Log #:	M14828	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	05/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14829	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	05/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14830	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	04/21/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14831	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/21/2021	Expiration Date:	05/21/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14825	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/20/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14826	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/20/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14827	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/20/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14824	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	04/15/2021	Expiration Date:	09/21
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14821	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	04/15/2021	Expiration Date:	06/21
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14395 , **15 mL** Fe (10,000 mg/L) M14738 , **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 , **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14788 , **2.5 mLs Na 10,000 ug/mL** M14736 ,**2.5 mLs k 10,000 ug/mL** 14625 **2.5 mLs S 10,000 ug/mL** M14570 , **0.5 mls Si 1000 ug/mL** M14477 and brought up to volume with milli-Q .	

		Instrument:	ICP 6500
Standard Log #:	M14822	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	04/15/2021	Expiration Date:	06/21
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14395 and 15 **mL** 10000 mg/L Fe M14738 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M14682 and brought up to volume with milli-Q H_2O.	

		Instrument:	ICP 6500
Standard Log #:	M14823	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	04/15/2021	Expiration Date:	09/21
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.	

MRL BASE STD M14820 Analyst NAH

Prep Date 04/15/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	XX
Al	400	M14737	10000	2	XX
Ba	10	M14772	1000	0.5	XX
Be	4	M14203	1000	0.2	09/21
Cd	5	M14740	1000	0.25	09/21
Co	10	M14204	1000	0.5	09/21
Cr	10	M14205	10000	0.05	09/21
Cu	10	M14199	10000	0.05	09/21
Mg	500	M14676	10000	2.5	XX
Mn	10	M14200	10000	0.05	09/21
Mo	10	M14684	1000	0.5	XX
Ni	10	M14196	1000	0.5	09/21
Pb	10	M14202	10000	0.05	09/21
Sb	20	M14622	1000	1	XX
V	10	M14198	1000	0.5	09/21
Zn	10	M14197	10000	0.05	09/21
K	1000	M14741	10000	5	XX
Na	1000	M14736	10000	5	XX
As	20	M14621	1000	1	XX
Ca	500	M14740	10000	2.5	XX
Fe	300	M14738	10000	1.5	XX
Se	20	M14624	1000	1	XX
Tl	20	M14674	1000	1	XX
Si	100	M14735	1000	5	XX
B	20	M14675	1000	1	09/21
Li	20	M14681	1000	1	XX
W	50	MXXX	1000	2.5	XXXXX
Ti	10	M14674	1000	0.5	XX
Sr	10	M14775	1000	0.5	XX
Sn	50	M14774	1000	2.5	XX
S	300	M14773	10000	1.5	XX

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M14815	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	05/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14816	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	05/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14817	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	04/15/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14818	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/15/2021	Expiration Date:	05/15/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14819	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/15/2021	Expiration Date:	05/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14812	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/14/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14813	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/14/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14814	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/14/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14811	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	04/13/2021	Expiration Date:	09/2021
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 and **1 mL** of Si (1000 mg/L) M14477. *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14625. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14736. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14676, **10 mL** of Fe (10,000 mg/L) M14676, **10 mL** of Ca (10,000 mg/L) M14740 and **10 mL** Al (10,000 mg/L) M14478. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	GFAA
Standard Log #:	M14808	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14809	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14810	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14803	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	05/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14804	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	05/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14805	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	04/07/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14806	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/07/2021	Expiration Date:	05/07/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14807	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/07/2021	Expiration Date:	05/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14800	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/06/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14801	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/06/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14802	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/06/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14799	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	04/06/2021	Lot #:	A0417285
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M14797	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV
Date Received:	04/05/2021	Lot #:	S2-MEB703691
Expiration Date (if any):	04/12/2021	Catalog #:	CTI-SPK-1

Standard ID#:	M14798	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE
Date Received:	04/05/2021	Lot #:	S2-MEB703690
Expiration Date (if any):	04/12/2021	Catalog #:	CTI-GFCAL-1

Standard Log #:	M14792	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/30/2021	Expiration Date:	04/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14793	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/30/2021	Expiration Date:	03/31/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14794	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

Standard Log #:	M14795	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14796	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14789	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/30/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14790	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/30/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14791	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/30/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14787	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Phosphorus 10,000 mg/L
Date Received:	03/29/2021	Lot #:	AR18-111PY
Expiration Date (if any):	3/29/2022	Catalog #:	PLP9-3Y

Standard ID#:	M14788	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	03/29/2021	Lot #:	4-070MF
Expiration Date (if any):	03/29/2021	Catalog #:	XCTWI-5-500

Standard Log #:	M14786	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/25/2021	Expiration Date:	03/25/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14785	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	03/24/2021	Expiration Date:	08/24/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC208 and brought up to volume.		

Standard Log #:	M14780	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	04/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14781	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	04/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14782	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	03/24/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14783	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/24/2021	Expiration Date:	04/24/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14784	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/24/2021	Expiration Date:	04/24/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14777	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/23/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14778	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/23/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14779	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/23/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14772	Vendor:	CPI
Analyst:	NAH	Chemical:	Ba 1000 mg/mL
Date Received:	03/22/2021	Lot #:	994634-134
Expiration Date (if any):	09/2022	Catalog #:	S4400-100041

Standard ID#:	M14773	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/mL
Date Received:	03/22/2021	Lot #:	1050965-34
Expiration Date (if any):	09/2022	Catalog #:	4400-10M544

Standard ID#:	M14774	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/mL
Date Received:	03/22/2021	Lot #:	1066479-21
Expiration Date (if any):	09/2022	Catalog #:	S4400-1000613

Standard ID#:	M14775	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/mL
Date Received:	03/22/2021	Lot #:	1096004-1
Expiration Date (if any):	09/2022	Catalog #:	S4400-1000531

Standard ID#:	M14776	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	03/23/2021	Lot #:	56-049CR
Expiration Date (if any):	03/30/2022	Catalog #:	XSPIKE-1-250

Standard Log #:	M14767	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	04/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14768	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	03/17/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14769	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	04/16/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

Standard Log #:	M14770	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/17/2021	Expiration Date:	04/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14771	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/17/2021	Expiration Date:	04/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14764	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14765	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14766	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/16/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14763	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	TCLP Acid Washed Filters
Date Received:	01/05/21	Lot #:	400182-0364-T
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

Standard Log #:	M14758	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/09/2021	Expiration Date:	04/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14759	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/09/2021	Expiration Date:	03/10/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14760	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

Standard Log #:	M14761	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14762	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14755	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14756	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14757	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/09/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14754	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Mod.
Date Received:	03/04/2021	Lot #:	225022
Expiration Date (if any):	03/31/2022	Catalog #:	39043

		Instrument:	GFAA
Standard Log #:	M14751	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14752	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14753	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14748	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/02/2021	Expiration Date:	04/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14749	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/02/2021	Expiration Date:	04/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard Log #:	M14750	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/02/2021	Expiration Date:	03/02/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14745	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	04/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14746	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	04/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14747	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	03/02/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14742	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14743	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14744	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/01/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14740	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Calcium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1072921-23
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M91

Standard ID#:	M14741	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Potassium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1053109-37
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M411

Standard ID#:	M14735	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Silicon 1000 µg/mL
Date Received:	02/25/2021	Lot #:	1047570-64
Expiration Date (if any):	08/20/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14736	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Sodium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1055526-35
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M521

Standard ID#:	M14737	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Aluminum 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1077245-17
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M11

Standard ID#:	M14738	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Iron 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1034257-40
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M261

Standard ID#:	M14739	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Magnesium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1075232-5
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M311

Standard Log #:	M14731	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/16/2021	Expiration Date:	03/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14732	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/16/2021	Expiration Date:	03/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14733	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/17/2021	Expiration Date:	03/17/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14734	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/17/2021	Expiration Date:	03/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14728	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14729	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14730	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/16/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14725	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14726	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14727	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14720	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/09/2021	Expiration Date:	03/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14721	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/09/2021	Expiration Date:	03/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14722	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/10/2021	Expiration Date:	03/10/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14723	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/10/2021	Expiration Date:	03/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard ID#:	M14724	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Potassium Permanganate
Date Received:	02/08/2021	Lot #:	201466
Expiration Date (if any):	Suggested Retest 04/202	Catalog #:	P279

		Instrument:	HydraII
Standard Log #:	M14717	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14718	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14719	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/09/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14713	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	02/05/2021	Lot #:	L022-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14714	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	02/05/2021	Lot #:	L022-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14715 (1) & (2)	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	02/3/2021	Lot #:	2023715-500
Expiration Date (if any):	08/31/2022	Catalog #:	10M67-1-500

Standard ID#:	M14716	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Phosphorus 10000 mg/L
Date Received:	02/08/2021	Lot #:	AR18-111PY
Expiration Date (if any):	02/28/2022	Catalog #:	PLP9--3Y

Standard Log #:	M14708	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	03/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14709	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	03/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14710	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	02/03/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14711	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/03/2021	Expiration Date:	03/03/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14712	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/03/2021	Expiration Date:	03/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14705	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/02/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14706	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/02/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14707	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/02/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14702	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	01/27/2022
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14703	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/28/2021	Expiration Date:	02/28/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14704	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/28/2021	Expiration Date:	02/28/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard Log #:	M14699	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	02/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14700	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	02/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14701	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	01/28/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14696	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14697	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14698	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/27/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14694	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	01/26/2021	Expiration Date:	09/2021
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) N/A **3.2 mL** of As (1000 mg/L) M14621 **3.2 mL** of Se (1000 mg/L) M14624 **0.08 mL** of Pb (10,000 mg/L) M14202 **1.0 mL** of Tl (1000 mg/L) M14626 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M14695	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	01/26/2021	Expiration Date:	09/2021
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M14622 **1.0 mL** of As (1000 mg/L) M14621 **2.0 mL** of Se (1000 mg/L) M14624 **0.045 mL** of Pb (10,000 mg/L) M14202 **0.4 mL** of Tl (1000 mg/L) M14626 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M14689	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	02/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14690	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	02/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14691	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	01/20/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14692	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/20/2021	Expiration Date:	02/20/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14693	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/20/2021	Expiration Date:	02/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14686	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14687	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14688	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/19/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14680	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	01/15/2021	Lot #:	1047870-29
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14681	Vendor:	CPI
Analyst:	NAH	Chemical:	Li 1000 mg/L
Date Received:	01/15/2021	Lot #:	104768-6
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000291

Standard ID#:	M14682	Vendor:	CPI
Analyst:	NAH	Chemical:	Ce 1000 mg/L
Date Received:	01/15/2021	Lot #:	S4400-1000101
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000101

Standard ID#:	M14683	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	01/15/2021	Lot #:	1096004-1
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000531

Standard ID#:	M14684	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	01/15/2021	Lot #:	1075718-2
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000343

Standard ID#:	M14685	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance standard
Date Received:	01/18/2021	Lot #:	XCTWI-4-500
Expiration Date (if any):	01/30/2022	Catalog #:	14-242AB

Standard ID#:	M14674	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	01/15/2021	Lot #:	1038255-27
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000623

Standard ID#:	M14675	Vendor:	CPI
Analyst:	NAH	Chemical:	B 1000 mg/L
Date Received:	01/15/2021	Lot #:	1024903-65
Expiration Date (if any):	07/2022	Catalog #:	S4400-100074

Standard ID#:	M14676	Vendor:	CPI
Analyst:	NAH	Chemical:	M 10000 mg/L
Date Received:	01/15/2021	Lot #:	1013353
Expiration Date (if any):	07/2022	Catalog #:	4400-10M311

Standard ID#:	M14677	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	01/15/2021	Lot #:	1050965-25
Expiration Date (if any):	07/2022	Catalog #:	4400-10M544

Standard ID#:	M14678	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10000 mg/L
Date Received:	01/15/2021	Lot #:	1079898-6
Expiration Date (if any):	07/2022	Catalog #:	S4400-10M391

Standard ID#:	M14679	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	01/15/2021	Lot #:	1034527-40
Expiration Date (if any):	07/2022	Catalog #:	4400-10M261

Standard Log #:	M14673	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	01/13/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M14623	1000	0.01
As	2	M14621	1000	0.1
Pb	2	M14202	10000	0.01
Sb	2	M14622	1000	0.1
Se	2	M14624	1000	0.1
Tl	2	M14626	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14670	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/12/2021	Expiration Date:	02/12/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14671	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/12/2021	Expiration Date:	02/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

Standard Log #:	M14672	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	01/12/2021	Expiration Date:	01/12/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14667	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	02/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14668	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	02/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14669	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	01/12/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14664	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14665	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14666	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/11/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14663	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	8 µg/L As 10 µg/L Pb 8 µg/L Sb 16 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	01/06/2021	Expiration Date:	09/2021

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M14621	10,000
Pb	0.1	10,000	M14202	10,000
Tl	1	1000	M14626	10,000
Se	1	1000	M14624	10,000
Sb	1	1000	M14622	10,000
Ag	0.1	1000	M14623	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	0.8	10,000	8
Pb	1.0	10,000	10
Tl	1.0	10,000	10
Se	1.6	10,000	16
Sb	0.8	10,000	8
Ag	0.6	1000	0.6

		Instrument:	GFAA
Standard Log #:	M14660	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14661	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14662	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

MRL BASE STD M14659 Analyst NAH

Prep Date 01/04/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	02/22
Al	400	M14478	10000	2	02/22
Ba	10	M14568	1000	0.5	05/22
Be	4	M14203	1000	0.2	09/21
Cd	5	M14201	1000	0.25	09/21
Co	10	M14204	1000	0.5	09/21
Cr	10	M14205	10000	0.05	09/21
Cu	10	M14199	10000	0.05	09/21
Mg	500	M14472	10000	2.5	02/22
Mn	10	M14200	10000	0.05	09/21
Mo	10	M14569	1000	0.5	05/22
Ni	10	M14196	1000	0.5	09/21
Pb	10	M14202	10000	0.05	09/21
Sb	20	M14622	1000	1	02/22
V	10	M14198	1000	0.5	09/21
Zn	10	M14197	10000	0.05	09/21
K	1000	M14436	10000	5	02/22
Na	1000	M14559	10000	5	02/22
As	20	M14621	1000	1	02/22
Ca	500	M14476	10000	2.5	02/22
Fe	300	M14470	10000	1.5	02/22
Se	20	M14624	1000	1	02/22
Tl	20	M14626	1000	1	02/22
Si	100	M14435	1000	5	02/22
B	20	M14131	1000	1	07/21
Li	20	M14127	1000	1	07/21
W	50	xxxxxxxx	1000	2.5	xxxxxx
Ti	10	M14009	1000	0.5	04/21
Sr	10	M14007	1000	0.5	04/21
Sn	50	M14008	1000	2.5	04/21
S	300	M14570	10000	1.5	05/22

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	ICP 6500
Standard Log #:	M14658	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	1/04/2021	Expiration Date:	03/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14359, **15 mL** Fe (10,000 mg/L) M14470, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14628, **2.5 mLs Na 10,000 ug/mL** M14473 ,**2.5 mLs k 10,000 ug/mL** M14436 **2.5 mLs S 10,000 ug/mL** M14570, **0.5 mls Si 1000 ug/mL** M14477 and brought up to volume with milli-Q .	

		Instrument:	ICP 6500
Standard Log #:	M14656	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	01/04/2021	Expiration Date:	06/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14639, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14359, **0.5 mL** Mo (1000 mg/L) M14569, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008, **0.5 mL** Ti (1000 mg/L) M14009, **0.5 mL** W (1000 mg/L) xxxxxxx, **0.5 mL** Si (1000 mg/L) M14567, **0.5 mL** S (10000 mg/L) M14372, **0.5 mL** K (10000 mg/L) M14436, and **0.5 mL** Na (10000 mg/L) M14559		

		Instrument:	ICP 6500
Standard Log #:	M14657	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	01/04/2021	Expiration Date:	06/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14359 and 15 **mL** 10000 mg/L Fe M14470 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M1359 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14655	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	01/04/2021	Expiration Date:	03/30/2021

Prep:

Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O.
(5% HNO_3, 5% HCl)
1000 ug/L Std. - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14628, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **1 mL** of Si (1000 mg/L) M14435 and 1 mL M13859 Ce
0.25 ug/L Std. - **0.25 mL** of the 1000 ug/L Std.
0.5 ug/L Std. - **0.5 mL** of the 1000 ug/L Std.
1 ug/L Std. - **1 mL** of the 1000 ug/L Std.
5 ug/L Std. - **5 mL** of the 1000 ug/L Std.
10 ug/L Std. - **10 mL** of the 1000 ug/L Std.
20 ug/L Std. - **20 mL** of the 1000 ug/L Std.
50 ug/L Std. - **50 mL** of the 1000 ug/L Std.
100 ug/L Std. - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3
10,000 ug/L Std. - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14625.
100k ug/L Std. - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14559.
100,000 ug/L Std. - **10 mL** of Mg (10,000 mg/L) M14472, **10 mL** of Fe (10,000 mg/L) M14470, **10 mL** of Ca (10,000 mg/L) M14476 and **10 mL** Al (10,000 mg/L) M14478.
500,000 ug/L Std. - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L)
1000k ug/L Std. - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)

Standard Log #:	M14653	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/31/2020	Expiration Date:	01/31/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14654	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/31/2020	Expiration Date:	01/31/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

Standard Log #:	M14651	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/30/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14652	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/30/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14648	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/30/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14649	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/30/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14650	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/30/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14643	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/22/2020	Expiration Date:	01/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14644	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/22/2020	Expiration Date:	01/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14645	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/22/2020	Expiration Date:	12/23/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14646	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/23/2020	Expiration Date:	01/23/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14647	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/23/2020	Expiration Date:	01/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14640	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/22/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14641	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/22/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14642	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/22/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14637	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	ACID WASHED TCLP FILTERS
Date Received:	11/25/2020	Lot #:	400182-0316-D
Expiration Date (if any):		Catalog #:	FG77150MM

Standard Log #:	M14638	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/16/2020	Expiration Date:	12/16/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard ID#:	M14639	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/16/2020	Lot #:	55-139CR
Expiration Date (if any):	12/30/2021	Catalog #:	XSPIKE-1-250

Standard Log #:	M14632	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/15/2020	Expiration Date:	01/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14633	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/15/2020	Expiration Date:	12/16/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14634	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/16/2020	Expiration Date:	01/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14635	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/16/2020	Expiration Date:	01/16/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14636	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/16/2020	Expiration Date:	01/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14629	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/15/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14630	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/15/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14631	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/15/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14627	Vendor:	CPI
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/15/2020	Lot #:	55-113CR
Expiration Date (if any):	12/30/2021	Catalog #:	XCTWI-1-500

Standard ID#:	M14628	Vendor:	CPI
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/15/2020	Lot #:	55-112CR
Expiration Date (if any):	12/30/2021	Catalog #:	CTWI-5-500

Standard ID#:	M14623	Vendor:	CPI
Analyst:	NAH	Chemical:	Ag 1000 mg/L
Date Received:	12/09/2020	Lot #:	1026960-37
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000511

Standard ID#:	M14624	Vendor:	CPI
Analyst:	NAH	Chemical:	Se 1000 mg/L
Date Received:	12/09/2020	Lot #:	1063158-14
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000491

Standard ID#:	M14625	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	12/09/2020	Lot #:	1053109-46
Expiration Date (if any):	02/2022	Catalog #:	4400-10M411

Standard ID#:	M14626	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	12/09/2020	Lot #:	1025512-33
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000581

Standard Log #:	M14619	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/09/2020	Expiration Date:	01/09/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14620	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/09/2020	Expiration Date:	01/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

Standard ID#:	M14621	Vendor:	CPI
Analyst:	NAH	Chemical:	As 1000 mg/L
Date Received:	12/09/2020	Lot #:	1034904-74
Expiration Date (if any):	02/2022	Catalog #:	S4400-100031

Standard ID#:	M14622	Vendor:	CPI
Analyst:	NAH	Chemical:	Sb 1000 mg/L
Date Received:	12/09/2020	Lot #:	1045232-19
Expiration Date (if any):	02/2022	Catalog #:	S4400-100023

Standard Log #:	M14615	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/08/2020	Expiration Date:	01/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14616	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/08/2020	Expiration Date:	01/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14617	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/08/2020	Expiration Date:	12/09/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14618	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/08/2020	Expiration Date:	12/08/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard ID#:	M14611	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Hydroxlyamine Sulfate
Date Received:	12/07/2020	Lot #:	189407A
Expiration Date (if any):		Catalog #:	H331-500

		Instrument:	HydraII
Standard Log #:	M14612	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/08/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14613	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/08/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14614	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/08/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14610	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	12/03/2020	Expiration Date:	12/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M13951	1000	0.01
As	2	M13863	1000	0.1
Pb	2	M14202	10000	0.01
Sb	2	M13950	1000	0.1
Se	2	M13948	1000	0.1
Tl	2	M14207	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14605	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/01/2020	Expiration Date:	01/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14606	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/01/2020	Expiration Date:	01/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14607	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/01/2020	Expiration Date:	12/02/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14608	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/02/2020	Expiration Date:	01/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14609	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/02/2020	Expiration Date:	01/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14602	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/01/2020	Expiration Date:	05/02/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14603	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/01/2020	Expiration Date:	05/02/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14604	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/01/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14600	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate ACS
Date Received:	11/30/2020	Lot #:	A0412553
Expiration Date (if any):		Catalog #:	424185000

Standard Log #:	M14601	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/30/2020	Expiration Date:	11/30/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard ID#:	M14597	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	11/19/2020	Lot #:	K309-14
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14598	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	11/19/2020	Lot #:	K309-14
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14599	Vendor:	ThermoFisher
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	11/19/2020	Lot #:	225022
Expiration Date (if any):	03/31/2022	Catalog #:	39043

Standard Log #:	M14592	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/17/2020	Expiration Date:	12/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14593	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/17/2020	Expiration Date:	12/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14479 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14594	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/17/2020	Expiration Date:	11/18/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14595	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/18/2020	Expiration Date:	12/18/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14596	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/18/2020	Expiration Date:	12/18/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14589	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/17/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14590	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/17/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14591	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/17/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14586	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	11/17/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14587	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	11/17/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14588	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	11/17/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14582	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	11/13/2020	Expiration Date:	07/20/2021
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M14126 and Na (10,000 mg/L) M14473 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14583	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	11/13/2020	Expiration Date:	07/20/2021
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M14473 and **0.15 mL** K (10,000 µg/mL) M14126 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14584	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	11/13/2020	Expiration Date:	07/20/2021
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M14359, **2.5 mL** of K (10,000 mg/L) M14126, **2.5 mL** of Na (10,000 mg/L) M14473 and **7.5 mL** of Fe (10,000 mg/L) M14101 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M14585	Vendor:	Environmental Epress
Analyst:	BMM	Chemical:	Acid washed TCLP Filters
Date Received:	10/29/2020	Lot #:	400157-0277-D
Expiration Date (if any):	xxxxx	Catalog #:	FG77150MM

Standard Log #:	M14579	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/12/2020	Expiration Date:	12/12/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14580	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/12/2020	Expiration Date:	12/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

Standard ID#:	M14581	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	11/12/2020	Lot #:	55-080CR
Expiration Date (if any):	11/30/2021	Catalog #:	XSPIKE-1-250

Standard Log #:	M14576	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/11/2020	Expiration Date:	12/11/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14577	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/11/2020	Expiration Date:	12/11/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14578	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/11/2020	Expiration Date:	11/12/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14573	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/11/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14574	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/11/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14575	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/11/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14571	Vendor:	CPI International
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	11/05/2020	Lot #:	1084154-12
Expiration Date (if any):	05/02/2022	Catalog #:	S4400-1000331

Standard ID#:	M14572	Vendor:	SPEX Certiprep
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	11/05/2020	Lot #:	CL12-01HGY
Expiration Date (if any):	11/30/2021	Catalog #:	CLHG4-2Y

Standard ID#:	M14567	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	11/05/2020	Lot #:	1047570-22
Expiration Date (if any):	05/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14568	Vendor:	CPI
Analyst:	NAH	Chemical:	Ba 1000 mg/L
Date Received:	11/05/2020	Lot #:	994634-121
Expiration Date (if any):	05/2022	Catalog #:	S4400-100041

Standard ID#:	M14569	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	11/05/2020	Lot #:	1075718-2
Expiration Date (if any):	05/2022	Catalog #:	S4400-1000343

Standard ID#:	M14570	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	11/05/2020	Lot #:	1050965-25
Expiration Date (if any):	05/2022	Catalog #:	4400-10M544

Standard Log #:	M14563	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14564	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

Standard Log #:	M14565	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14566	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14560	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14561	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14562	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6000
Standard Log #:	M14556	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	11/03/2020	Expiration Date:	02/2022
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M14471 and K (1000 µg/mL) M14475 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14557	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	11/03/2020	Expiration Date:	02/2022
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M14471 and **0.5 mL** K (1000 µg/mL) M14475 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M14558	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	11/04/2020	Lot #:	997484-34
Expiration Date (if any):	02/2022	Catalog #:	4400-10M671

Standard ID#:	M14559	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 mg/L
Date Received:	11/04/20020	Lot #:	1055526-11
Expiration Date (if any):	02/2022	Catalog #:	4400-10M521

Standard Log #:	M14554	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/29/2020	Expiration Date:	11/29/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14555	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/29/2020	Expiration Date:	11/29/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

Standard Log #:	M14551	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/28/2020	Expiration Date:	11/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14552	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/28/2020	Expiration Date:	11/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14553	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/28/2020	Expiration Date:	10/29/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14548	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14549	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14550	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/28/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14545	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	10/26/2020	Expiration Date:	03/26/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC44 and brought up to volume.		

Standard Log #:	M14546	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/26/2020	Expiration Date:	10/26/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14547	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/26/2020	Expiration Date:	10/26/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M14543	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/21/2020	Expiration Date:	11/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

Standard ID#:	M14544	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	10/19/2020	Lot #:	202332
Expiration Date (if any):		Catalog #:	S271-3

Standard Log #:	M14539	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/20/2020	Expiration Date:	11/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14540	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/20/2020	Expiration Date:	11/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14541	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/20/2020	Expiration Date:	10/21/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14542	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/21/2020	Expiration Date:	11/21/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14536	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/20/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14537	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/20/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14538	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/20/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14533	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/19/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14534	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/19/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14535	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/19/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M14530	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/14/2020	Expiration Date:	10/15/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14531	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/14/2020	Expiration Date:	11/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14532	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/14/2020	Expiration Date:	11/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

Standard Log #:	M14526	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	11/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14527	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	10/14/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14528	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	11/13/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14529	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	11/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14523	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14524	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14525	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/13/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14521	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/08/2020	Expiration Date:	10/09/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14522	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/09/2020	Expiration Date:	04/2021
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M14508 and **10 mL** Mg (10,000 mg/L) M13984 and brought up to volume.		

Standard Log #:	M14519	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/07/2020	Expiration Date:	11/07/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14520	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/08/2020	Expiration Date:	11/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14461 and brought up to volume.		

Standard Log #:	M14514	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/05/2020	Expiration Date:	11/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14515	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/05/2020	Expiration Date:	10/06/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14516	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/05/2020	Expiration Date:	11/05/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14517	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/06/2020	Expiration Date:	11/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14461 and brought up to volume.		

Standard ID#:	M14518	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	10/05/2020	Lot #:	55-031CR
Expiration Date (if any):	09/30/2021	Catalog #:	XSPIKE-1-250

		Instrument:	HydraII
Standard Log #:	M14511	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14512	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14513	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14508	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	Palladium (Matrix Modifier)
Date Received:	10/02/2020	Lot #:	2003608-100
Expiration Date (if any):	09/30/2021	Catalog #:	HP1900-100

Standard ID#:	M14509	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/05/2020	Lot #:	K269-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14510	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/05/2020	Lot #:	K269-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14507	Vendor:	Fisher
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	09/29/2020	Lot #:	189407A
Expiration Date (if any):	05/2024	Catalog #:	H331

Standard Log #:	M14502	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/21/2020	Expiration Date:	10/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14503	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/21/2020	Expiration Date:	10/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14504	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/21/2020	Expiration Date:	09/22/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14505	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/23/2020	Expiration Date:	10/23/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14506	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/23/2020	Expiration Date:	10/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14461 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14499	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14500	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14501	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/21/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14497	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/16/2020	Expiration Date:	09/16/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14498	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/16/2020	Expiration Date:	09/16/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14492	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/15/2020	Expiration Date:	10/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14493	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/15/2020	Expiration Date:	10/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14494	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/15/2020	Expiration Date:	09/16/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14495	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/16/2020	Expiration Date:	10/16/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14496	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/16/2020	Expiration Date:	10/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14460 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14489	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/15/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14490	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/15/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14491	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/15/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14487	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/09/2020	Expiration Date:	10/09/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14488	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/09/2020	Expiration Date:	10/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14460 and brought up to volume.		

Standard Log #:	M14483	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/08/2020	Expiration Date:	10/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14484	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/08/2020	Expiration Date:	10/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14485	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/08/2020	Expiration Date:	09/09/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard ID#:	M14486	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	09/04/2020	Lot #:	1933801-500
Expiration Date (if any):	03/31/2022	Catalog #:	HP10M67-1-500

Standard ID#:	M14479	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	09/03/2020	Lot #:	A0410243
Expiration Date (if any):		Catalog #:	202015000

		Instrument:	HydraII
Standard Log #:	M14480	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/08/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14481	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/08/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14482	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/08/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14478	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	09/01/2020	Lot #:	992536-34
Expiration Date (if any):	02/2022	Catalog #:	4400-10M11

Standard ID#:	M14471	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 1000 mg/L
Date Received:	09/01/2020	Lot #:	1038021-64
Expiration Date (if any):	02/2022	Catalog #:	4400-1000521-500

Standard ID#:	M14472	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	09/01/2020	Lot #:	1013353-76
Expiration Date (if any):	02/2022	Catalog #:	4400-10m311

Standard ID#:	M14473	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 mg/L
Date Received:	09/01/2020	Lot #:	1055526-11
Expiration Date (if any):	02/2022	Catalog #:	4400-10M521

Standard ID#:	M14474	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10000 mg/L
Date Received:	09/01/2020	Lot #:	1079898-2
Expiration Date (if any):	02/2022	Catalog #:	S4400-10M391

Standard ID#:	M14475	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	09/01/2020	Lot #:	1023166-47
Expiration Date (if any):	02/2022	Catalog #:	4400-1000411-500

Standard ID#:	M14476	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	09/01/2020	Lot #:	1072921-5
Expiration Date (if any):	02/2022	Catalog #:	4400-10M91

Standard ID#:	M14477	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	09/01/2020	Lot #:	1047570-22
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000504F

Standard Log #:	M14466	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/01/2020	Expiration Date:	10/01/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14467	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/01/2020	Expiration Date:	10/01/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14468	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/02/2020	Expiration Date:	10/02/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14469	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/02/2020	Expiration Date:	10/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14460 and brought up to volume.		

Standard ID#:	M14470	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	09/01/2020	Lot #:	1034257-21
Expiration Date (if any):	02/2022	Catalog #:	4400-10m261

		Instrument:	HydraII
Standard Log #:	M14463	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/01/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14464	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/01/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14465	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/01/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14460	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	08/26/2020	Lot #:	K196-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14461	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	08/26/2020	Lot #:	K196-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14462	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/31/2020	Lot #:	2-155mf
Expiration Date (if any):	08/31/2021	Catalog #:	XCTWI-1-500

Standard Log #:	M14457	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/26/2020	Expiration Date:	09/26/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14458	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/26/2020	Expiration Date:	09/26/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14355 and brought up to volume.		

Standard Log #:	M14459	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/26/2020	Expiration Date:	09/26/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14453	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/25/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14454	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/25/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14455	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/25/2020	Expiration Date:	09/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14456	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/25/2020	Expiration Date:	08/26/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.694 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M14450	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	08/24/2020	Expiration Date:	06/30/2021
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M14359, **2.5 mL** of K (10,000 mg/L) M14126, **2.5 mL** of Na (10,000 mg/L) M14103 and **7.5 mL** of Fe (10,000 mg/L) M14101 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14451	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	08/24/2020	Expiration Date:	10/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13808 and **0.5 mL** K (1000 µg/mL) M13809 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M14452	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/25/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

Standard ID#:	M14446	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	08/24/2020	Lot #:	197591
Expiration Date (if any):		Catalog #:	S271-500

		Instrument:	ICP 6000
Standard Log #:	M14447	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	08/24/2020	Expiration Date:	10/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13808 and K (1000 µg/mL) M13809 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14448	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	08/24/2020	Expiration Date:	07/2021
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M14126 and Na (10,000 mg/L) M14103 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14449	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	08/24/2020	Expiration Date:	07/2021
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M14103 and **0.15 mL** K (10,000 µg/mL) M14126 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M14445	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/21/2020	Lot #:	2-140MF
Expiration Date (if any):	08/30/2021	Catalog #:	XCTWI-5-500

Standard Log #:	M14440	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/19/2020	Expiration Date:	09/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14441	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/19/2020	Expiration Date:	09/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14442	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/19/2020	Expiration Date:	08/20/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14443	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/20/2020	Expiration Date:	09/20/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14444	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/20/2020	Expiration Date:	09/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14355 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14437	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14438	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14439	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/19/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14434	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	08/17/2020	Lot #:	997484-34
Expiration Date (if any):	02/2022	Catalog #:	4400-10M671

Standard ID#:	M14435	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 mg/L
Date Received:	08/17/2020	Lot #:	1047570-22
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14436	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	08/17/2020	Lot #:	1053109-27
Expiration Date (if any):	02/2022	Catalog #:	4400-10M411-500

Standard Log #:	M14429	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/12/2020	Expiration Date:	09/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14430	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/12/2020	Expiration Date:	09/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

Standard Log #:	M14431	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/13/2020	Expiration Date:	09/13/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14432	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/13/2020	Expiration Date:	08/14/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14433	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/13/2020	Expiration Date:	09/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14355 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14426	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14427	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14428	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/12/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14425	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	08/10/2020	Expiration Date:	08/10/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14420	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/05/2020	Expiration Date:	09/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14421	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/05/2020	Expiration Date:	09/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14422	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/06/2020	Expiration Date:	08/07/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14423	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/06/2020	Expiration Date:	09/06/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14424	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/06/2020	Expiration Date:	09/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14417	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14418	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14419	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14416	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	08/03/2020	Lot #:	189407A
Expiration Date (if any):		Catalog #:	H331

		Instrument:	GFAA
Standard Log #:	M14413	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	07/30/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14414	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	07/30/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14415	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	07/30/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14408	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/28/2020	Expiration Date:	08/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14409	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/28/2020	Expiration Date:	08/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14410	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/28/2020	Expiration Date:	07/29/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14411	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/29/2020	Expiration Date:	08/29/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14412	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/29/2020	Expiration Date:	08/29/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14405	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14406	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14407	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/28/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14404	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	07/24/2020	Lot #:	54-207CR
Expiration Date (if any):	07/30/2020	Catalog #:	XSPIKE-1-250

Standard Log #:	M14399	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/21/2020	Expiration Date:	08/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14400	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/21/2020	Expiration Date:	08/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

Standard Log #:	M14401	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/22/2020	Expiration Date:	08/22/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14402	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/22/2020	Expiration Date:	07/23/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14403	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/22/2020	Expiration Date:	08/22/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14396	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/21/2020	Expiration Date:	07/21/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14397	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/21/2020	Expiration Date:	07/21/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14398	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/21/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14395	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	07/20/2020	Expiration Date:	09/30/2020
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13954 and **10 mL** Mg (10,000 mg/L) M13984 and brought up to volume.		

Standard Log #:	M14394	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	07/17/2020	Expiration Date:	07/17/2021
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14389	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/13/2020	Expiration Date:	08/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14390	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/13/2020	Expiration Date:	08/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14391	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/13/2020	Expiration Date:	07/14/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14392	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/14/2020	Expiration Date:	08/14/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14393	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/14/2020	Expiration Date:	08/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14386	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14387	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14388	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/13/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14384	Vendor:	Environmantal Express
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	07/08/2020	Lot #:	1933801-500
Expiration Date (if any):	01/31/2022	Catalog #:	HP10M67-1-500

Standard Log #:	M14385	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	12 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	07/08/2020	Expiration Date:	12/2020

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13863	10,000
Pb	0.1	10,000	M14202	10,000
Tl	1	1000	M14207	10,000
Se	1	1000	M13948	10,000
Sb	1	1000	M13950	10,000
Ag	0.1	1000	M13951	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.2	10,000	12
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

Standard Log #:	M14383	Reagent:	TCLP 1 N HCL
Analyst:	BMM		
Prep Date:	07/07/2020	Expiration Date:	07/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, added 83 mL HCL AB.685 and brought up to volume.		

Standard Log #:	M14381	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/03/2020	Expiration Date:	08/03/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14382	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/03/2020	Expiration Date:	08/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

Standard Log #:	M14378	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/02/2020	Expiration Date:	08/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14379	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/02/2020	Expiration Date:	08/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14380	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/02/2020	Expiration Date:	07/03/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14375	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/02/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14376	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/02/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14377	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/02/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14373	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/01/2020	Expiration Date:	07/01/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard ID#:	M14374	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	ACID WASHED TCLP FILTERS
Date Received:	06/18/2020	Lot #:	400169-0154-AG
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

Standard ID#:	M14368	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	06/30/2020	Lot #:	987189-75
Expiration Date (if any):	12/2021	Catalog #:	S4400-1000343

Standard ID#:	M14369	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	06/30/2020	Lot #:	1053109-22
Expiration Date (if any):	12/2021	Catalog #:	S4400-10M411-500

Standard ID#:	M14370	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	06/30/2020	Lot #:	1053109-8
Expiration Date (if any):	12/2021	Catalog #:	4400-10M411

Standard ID#:	M14371	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	06/30/2020	Lot #:	1047570-9
Expiration Date (if any):	12/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14372	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	06/30/2020	Lot #:	1050965-10
Expiration Date (if any):	12/2021	Catalog #:	4400-10M544

Standard Log #:	M14363	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/24/2020	Expiration Date:	07/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14364	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/24/2020	Expiration Date:	07/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14365	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/24/2020	Expiration Date:	06/25/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14366	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/25/2020	Expiration Date:	07/25/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14367	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/25/2020	Expiration Date:	07/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14360	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14361	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14362	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/24/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14358	Vendor:	Spex Certprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/22/2020	Lot #:	54-161CR
Expiration Date (if any):	06/30/2021	Catalog #:	XSOIKE-1-250

Standard ID#:	M14359	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/23/2020	Lot #:	52-213CRX
Expiration Date (if any):	06/30/2021	Catalog #:	INT-A1

Standard ID#:	M14355	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	06/17/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14356	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	06/17/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14357	Vendor:	Mettler toledo
Analyst:	NAH	Chemical:	Electrolyte Friscolyt-b
Date Received:	06/17/2020	Lot #:	1F091L
Expiration Date (if any):	03/31/2023	Catalog #:	51340053

Standard Log #:	M14350	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/16/2020	Expiration Date:	07/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14351	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/16/2020	Expiration Date:	07/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14352	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/16/2020	Expiration Date:	06/17/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14353	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/17/2020	Expiration Date:	07/17/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14354	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/17/2020	Expiration Date:	07/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14347	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/16/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14348	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/16/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14349	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/16/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14346	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	06/16/2020	Lot #:	196616
Expiration Date (if any):		Catalog #:	S271-500

Standard Log #:	M14344	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/12/2020	Expiration Date:	06/12/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14345	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/12/2020	Expiration Date:	06/12/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

		Instrument:	ICP 6500
Standard Log #:	M14342	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	06/11/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14214, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14120, **0.5 mL** Mo (1000 mg/L) M14121, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008 and **0.5 mL** Ti (1000 mg/L) M14009.		

		Instrument:	ICP 6500
Standard Log #:	M14343	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	06/11/2020	Expiration Date:	01/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14120, **15 mL** Fe (10,000 mg/L) M14101, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14340	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	06/11/2020	Expiration Date:	03/20/2021
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14195 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14341	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	06/11/2020	Expiration Date:	03/20/2021
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14195 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14337	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	06/11/2020	Expiration Date:	04/21
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M14196 5.0 **mL** 10000 mg/L Ti M14009 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14338	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ba, Be, and Sn
Prep Date:	06/11/2020	Expiration Date:	04/21
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M14130 5.0 **mL** 10000 mg/L Be M14203 5.0 **mL** 10000 mg/L Sn M14008 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14339	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	06/11/2020	Expiration Date:	07/21
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M14205 0.5 **mL** 10000 mg/L Cu M14199 5.0 **mL** 1000 mg/L Co M14204 5.0 **mL** 1000 mg/L Mo M14129 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14335	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/11/2020	Expiration Date:	12/2020
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **1 mL** of Si (1000 mg/L) M14006 and 1 mL M13859 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14104. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14103. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M13984, **10 mL** of Fe (10,000 mg/L) M14004, **10 mL** of Ca (10,000 mg/L) M13985 and **10 mL** Al (10,000 mg/L) M14105. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	ICP 6500
Standard Log #:	M14336	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	06/11/2020	Expiration Date:	04/21
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M14200 brought up to volume with milli-Q H_2O.		

		Instrument:	GFAA
Standard Log #:	M14332	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/11/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14333	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/11/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14334	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/11/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14327	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/09/2020	Expiration Date:	07/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14328	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/09/2020	Expiration Date:	07/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14329	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/10/2020	Expiration Date:	07/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

Standard Log #:	M14330	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/10/2020	Expiration Date:	07/10/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14331	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/10/2020	Expiration Date:	06/11/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14324	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/09/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14325	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/09/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14326	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/09/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14323	Vendor:	ThermoFisher
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	06/08/2020	Lot #:	216646
Expiration Date (if any):	11/30/2021	Catalog #:	39043

Standard Log #:	M14318	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/03/2020	Expiration Date:	07/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14319	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/03/2020	Expiration Date:	07/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14320	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/03/2020	Expiration Date:	06/04/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14321	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/04/2020	Expiration Date:	07/04/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14277 and brought up to volume.		

Standard Log #:	M14322	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/04/2020	Expiration Date:	07/04/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14315	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/03/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14316	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/03/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14317	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/03/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14310	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/27/2020	Expiration Date:	06/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14311	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/27/2020	Expiration Date:	06/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14312	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/28/2020	Expiration Date:	06/28/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14313	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	05/28/2020	Expiration Date:	05/29/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14314	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/28/2020	Expiration Date:	06/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14277 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14307	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14308	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14309	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/27/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14304	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/27/2020	Expiration Date:	05/27/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14305	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/27/2020	Expiration Date:	05/27/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard ID#:	M14306	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	05/27/2020	Lot #:	189407A
Expiration Date (if any):		Catalog #:	H331-500

Standard Log #:	M14299	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/19/2020	Expiration Date:	06/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14300	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/19/2020	Expiration Date:	06/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14301	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/20/2020	Expiration Date:	06/20/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14302	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/19/2020	Expiration Date:	05/20/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14303	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/20/2020	Expiration Date:	06/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14277 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14296	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14297	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14298	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/19/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14291	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14292	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14293	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14294	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	05/13/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14295	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14288	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14289	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14290	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/12/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14287	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	05/08/2020	Expiration Date:	05/08/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC07 and brought up to volume.		

Standard Log #:	M14282	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/05/2020	Expiration Date:	06/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14283	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/05/2020	Expiration Date:	06/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14284	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/06/2020	Expiration Date:	06/06/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14285	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/05/2020	Expiration Date:	05/06/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14286	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/06/2020	Expiration Date:	06/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14279	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14280	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14281	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14277	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	05/05/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14278	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	05/05/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14276	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	05/01/2020	Lot #:	195918
Expiration Date (if any):		Catalog #:	S271-500

		Instrument:	CETAC
Standard Log #:	M14275	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/29/2020	Expiration Date:	04/30/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14271	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/27/2020	Expiration Date:	05/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14272	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/27/2020	Expiration Date:	05/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14273	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/28/2020	Expiration Date:	05/28/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14274	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/28/2020	Expiration Date:	05/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14268	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14269	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14270	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/27/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14266	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/22/2020	Expiration Date:	05/22/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13463 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14267	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/22/2020	Expiration Date:	05/22/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14262	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/21/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14263	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/21/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14264	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/21/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14265	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/21/2020	Expiration Date:	04/22/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14259	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/21/2020	Expiration Date:	04/21/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

		Instrument:	HydraII
Standard Log #:	M14260	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14261	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M14254	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/14/2020	Expiration Date:	05/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14255	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/14/2020	Expiration Date:	05/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14256	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/15/2020	Expiration Date:	05/15/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14257	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/15/2020	Expiration Date:	05/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14258	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/14/2020	Expiration Date:	04/15/20220
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14251	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/14/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14252	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/14/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14253	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/14/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14250	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	04/14/2020	Expiration Date:	12/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M13951	1000	2
Al	800	M13982	**10000**	4
As	40	M13863	1000	2
Ba	20	M14130	1000	1
Be	8	M14203	1000	0.4
Ca	1000	M13985	**10000**	5
Cd	10	M14201	1000	0.5
Co	20	M14204	1000	1
Cr	20	M14205	**10000**	0.1
Cu	20	M14199	**10000**	0.1
Fe	600	M14101	**10000**	3
Mg	1000	M14108	**10000**	5
Mn	20	M14200	**10000**	0.1
Mo	20	M14129	1000	1
Ni	20	M14196	1000	1
Pb	20	M14202	**10000**	0.1
Sb	40	M13950	1000	2
Se	40	M13948	1000	2
Tl	40	M14207	1000	2
V	20	M14198	1000	1
Zn	20	M14197	**10000**	0.1
Na	10000	M14103	**10000**	50
K	10000	M14104	**10000**	50
B	40	M13947	1000	2
Si	200	M14106	1000	10
S	2000	M14102	**10000**	10
Li	40	M14127	1000	2
Sr	20	M14007	1000	1
Sn	100	M14008	1000	5
Ti	20	M14009	1000	10

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M14247	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/10/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14248	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/10/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14249	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/10/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M14246	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	04/08/2020	Lot #:	A0412553
Expiration Date (if any):		Catalog #:	424185000

Standard Log #:	M14242	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/06/2020	Expiration Date:	05/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14243	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/06/2020	Expiration Date:	05/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14244	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/07/2020	Expiration Date:	05/07/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14245	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/07/2020	Expiration Date:	05/07/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14239	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/06/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14240	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/06/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14241	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/06/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14234	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/31/2020	Expiration Date:	04/30/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14235	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/31/2020	Expiration Date:	04/30/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14236	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/01/2020	Expiration Date:	05/01/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14237	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/01/2020	Expiration Date:	05/01/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14158 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14238	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/01/2020	Expiration Date:	04/02/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14231	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/31/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14232	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/31/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14233	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/31/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

MRL BASE STD M14230 Analyst NAH

Prep Date 03/27/2020

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13951	1000	1	02/2021
Al	400	M14105	10000	2	07/2021
Ba	10	M14130	1000	0.5	07/2021
Be	4	M14203	1000	0.2	09/2021
Cd	5	M14201	1000	0.25	09/2021
Co	10	M14204	1000	0.5	09/2021
Cr	10	M14205	10000	0.05	09/2021
Cu	10	M14199	10000	0.05	09/2021
Mg	500	M14108	10000	2.5	07/2021
Mn	10	M14200	10000	0.05	09/2021
Mo	10	M14129	1000	0.5	07/2021
Ni	10	M14196	1000	0.5	09/2021
Pb	10	M14202	10000	0.05	09/2021
Sb	20	M13950	1000	1	02/2021
V	10	M14198	1000	0.5	09/2021
Zn	10	M14197	10000	0.05	09/2021
K	1000	M14104	10000	5	07/2021
Na	1000	M14103	10000	5	07/2021
As	20	M13863	1000	1	12/2020
Ca	500	M14107	10000	2.5	07/2021
Fe	300	M14101	10000	1.5	07/2021
Se	20	M13948	1000	1	02/2021
Tl	20	M14207	1000	1	09/2021
Si	100	M14106	1000	5	07/2021
B	20	M14131	1000	1	07/2021
Li	20	M14127	1000	1	07/2021
W	50	xxxxxxxd	1000	2.5	xxxxxxx
Ti	10	M14009	1000	0.5	04/2021
Sr	10	M14007	1000	0.5	04/2021
Sn	50	M14008	1000	2.5	04/2021
S	300	M14102	10000	1.5	07/2021

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M14224	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/25/2020	Expiration Date:	04/25/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14225	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/25/2020	Expiration Date:	04/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14158 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14226	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/25/2020	Expiration Date:	03/26/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

Standard ID#:	M14227	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV
Date Received:	03/25/2020	Lot #:	R2-MEB691217
Expiration Date (if any):		Catalog #:	CTI-SPK-1

Standard ID#:	M14228	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE
Date Received:	03/25/2020	Lot #:	R2-MEB691216
Expiration Date (if any):		Catalog #:	CTI-GFCAL-1

Standard ID#:	M14229	Vendor:	HACH
Analyst:	NAH	Chemical:	StablCal Standard 200 NTU
Date Received:	03/25/2020	Lot #:	A0038
Expiration Date (if any):	02/2022	Catalog #:	2660449

Standard Log #:	M14222	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/24/2020	Expiration Date:	04/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14223	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/24/2020	Expiration Date:	04/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14219	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14220	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14221	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/24/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14218	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	03/19/2020	Lot #:	54-035CR
Expiration Date (if any):	03/30/2021	Catalog #:	XCTWI-1-500

		Instrument:	CETAC
Standard Log #:	M14216	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	03/18/2020	Expiration Date:	03/19/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14217	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/18/2020	Expiration Date:	04/18/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14158 and brought up to volume.		

Standard Log #:	M14211	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/17/2020	Expiration Date:	04/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14212	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/17/2020	Expiration Date:	04/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14213	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/17/2020	Expiration Date:	04/17/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

Standard ID#:	M14214	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	03/17/2020	Lot #:	54-027CR
Expiration Date (if any):	03/30/2021	Catalog #:	XSPIKE-1-250

Standard ID#:	M14215	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	03/17/2020	Lot #:	54-028CR
Expiration Date (if any):	03/30/2021	Catalog #:	XCTWI-5-500

		Instrument:	HydraII
Standard Log #:	M14208	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14209	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14210	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/17/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14201	Vendor:	CPI
Analyst:	NAH	Chemical:	Cd 1000 mg/L
Date Received:	03/11/2020	Lot #:	996631-64
Expiration Date (if any):	09/2021	Catalog #:	S4400-100081

Standard ID#:	M14202	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 10000
Date Received:	03/11/2020	Lot #:	168223-44
Expiration Date (if any):	09/2021	Catalog #:	4400-10M281

Standard ID#:	M14203	Vendor:	CPI
Analyst:	NAH	Chemical:	Be 1000 mg/L
Date Received:	03/11/2020	Lot #:	998969-61
Expiration Date (if any):	09/2021	Catalog #:	S4400-100051

Standard ID#:	M14204	Vendor:	CPI
Analyst:	NAH	Chemical:	Co 1000 mg/L
Date Received:	03/11/2020	Lot #:	1024904-44
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000131

Standard ID#:	M14205	Vendor:	CPI
Analyst:	NAH	Chemical:	Cr 10000 mg/L
Date Received:	03/11/2020	Lot #:	880115-56
Expiration Date (if any):	09/2021	Catalog #:	S4400-10M121

Standard ID#:	M14206	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	03/11/2020	Lot #:	997484-19
Expiration Date (if any):	09/2021	Catalog #:	4400-10M671

Standard ID#:	M14207	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	03/11/2020	Lot #:	991734-85
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000581

Standard ID#:	M14195	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	03/09/2020	Lot #:	54-005CR
Expiration Date (if any):	3/30/2021	Catalog #:	XCTWI-4-500

Standard ID#:	M14196	Vendor:	CPI
Analyst:	NAH	Chemical:	Ni 1000 mg/L
Date Received:	03/11/2020	Lot #:	984273-111
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000361

Standard ID#:	M14197	Vendor:	CPI
Analyst:	NAH	Chemical:	Zn 10000 mg/L
Date Received:	03/11/2020	Lot #:	1025267-1
Expiration Date (if any):	09/2021	Catalog #:	4400-10M681

Standard ID#:	M14198	Vendor:	CPI
Analyst:	NAH	Chemical:	V 1000 mg/L
Date Received:	03/11/2020	Lot #:	990117-98
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000651

Standard ID#:	M14199	Vendor:	CPI
Analyst:	NAH	Chemical:	Cu 10000 mg/L
Date Received:	03/11/2020	Lot #:	982824-45
Expiration Date (if any):	09/2021	Catalog #:	S4400-10M141

Standard ID#:	M14200	Vendor:	CPI
Analyst:	NAH	Chemical:	Mn 10000 mg/L
Date Received:	03/11/2020	Lot #:	985851-17
Expiration Date (if any):	09/2021	Catalog #:	S4400-10M321

Standard ID#:	M14193	Vendor:	Fisher
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	03/09/2020	Lot #:	189407
Expiration Date (if any):		Catalog #:	H331-500

Standard ID#:	M14194	Vendor:	Fisher
Analyst:	NAH	Chemical:	Sodium Chloride
Date Received:	03/09/2020	Lot #:	193465
Expiration Date (if any):		Catalog #:	S271-500

		Instrument:	CETAC
Standard Log #:	M14189	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/10/2020	Expiration Date:	04/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M14190	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/09/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M14191	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/09/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M14192	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/09/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	HydraII
Standard Log #:	M14186	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14187	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14188	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14182	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/06/2020	Expiration Date:	04/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

Standard Log #:	M14183	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/06/2020	Expiration Date:	04/06/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

Standard Log #:	M14184	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14185	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14180	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/04/2020	Expiration Date:	04/04/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14181	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/04/2020	Expiration Date:	03/05/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14177	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/04/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14178	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/04/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14179	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/04/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14175	Vendor:	COLE-PARMER
Analyst:	BMM	Chemical:	Acid Washed TCLP Filters
Date Received:	03/02/2020	Lot #:	400168
Expiration Date (if any):		Catalog #:	FG77150MM

Standard Log #:	M14176	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/03/2020	Expiration Date:	03/03/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

		Instrument:	ICP 6500
Standard Log #:	M14172	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14121 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14173	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	02/25/2020	Expiration Date:	01/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14137 and 15 **mL** 10000 mg/L Fe M14004 5.0 **mL** 1000 mg/L V M13578 5.0 **mL** 1000 mg/L Ce M13859 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14174	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14137, **15 mL** Fe (10,000 mg/L) M14004, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14121, **2.5 mLs Na 10,000 ug/mL** M14103 ,**2.5 mLs k 10,000 ug/mL** M14126 **2.5 mLs S 10,000 ug/mL** M14102, **0.5 mls Si 1000 ug/mL** M13981 and brought up to volume with milli-Q .		

		Instrument:	ICP 6500
Standard Log #:	M14170	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	02/25/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14138, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14137, **0.5 mL** Mo (1000 mg/L) M14129, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008, **0.5 mL** Ti (1000 mg/L) M141009, **0.5 mL** W (1000 mg/L) Mxxxx, **0.5 mL** Si (1000 mg/L) M14106, **0.5 mL** S (10000 mg/L) M14102, **0.5 mL** K (10000 mg/L) M14126, and **0.5 mL** Na (10000 mg/L) M14103		

		Instrument:	ICP 6500
Standard Log #:	M14171	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14121 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M14168	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/24/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M14169	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14121, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827 and **1 mL** of Si (1000 mg/L) M14106 and 1 mL M13859 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14104. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M13618, **10 mL** of Mn (10,000 mg/L) M13616, **10 mL** of Cr (10,000 mg/L) M13617, **10 mL** Pb (10,000 mg/L) M13615, **10 mL** of Zn (10,000 mg/L) M13610 and **10 mL** of Na (10,000 mg/L) M14103. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14108, **10 mL** of Fe (10,000 mg/L) M14004, **10 mL** of Ca (10,000 mg/L) M14107 and **10 mL** Al (10,000 mg/L) M14105. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	HydraII
Standard Log #:	M14165	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14166	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14167	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/24/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6000
Standard Log #:	M14163	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	02/21/2020	Expiration Date:	07/2021
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M14103 and **0.15 mL** K (10,000 µg/mL) M14109 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14164	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	02/21/2020	Expiration Date:	01/30/2021
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M14120, **2.5 mL** of K (10,000 mg/L) M14109, **2.5 mL** of Na (10,000 mg/L) M14103 and **7.5 mL** of Fe (10,000 mg/L) M14101 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M14159	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/20/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	ICP 6000
Standard Log #:	M14160	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	02/21/2020	Expiration Date:	10/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13808 and K (1000 µg/mL) M13809 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14161	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	02/21/2020	Expiration Date:	10/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13808 and **0.5 mL** K (1000 µg/mL) M13809 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14162	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	02/21/2020	Expiration Date:	07/2021
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M14109 and Na (10,000 mg/L) M14103 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6500
Standard Log #:	M14156	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	02/19/2020	Expiration Date:	01/30/21
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14138, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14120, **0.5 mL** Mo (1000 mg/L) M14129, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M141008, **0.5 mL** Ti (1000 mg/L) M14009, **0.5 mL** W (1000 mg/L) Mxxxxxxx, **0.5 mL** Si (1000 mg/L) M13981, **0.5 mL** S (10000 mg/L) M14102, **0.5 mL** K (10000 mg/L) M14109, and **0.5 mL** Na (10000 mg/L) M14103		

Standard ID#:	M14157	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	02/19/2020	Lot #:	J347-07
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14158	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	02/19/2020	Lot #:	J347-07
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	CETAC
Standard Log #:	M14148	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/13/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

Standard Log #:	M14152	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14153	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14154	Reagent:	Potassium Persulfate Solution
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14155	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14149	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14150	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14151	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/17/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	HydraII
Standard Log #:	M14145	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/11/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14146	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/11/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14147	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/11/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14144	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/06/2020	Expiration Date:	03/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

Standard Log #:	M14142	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	02/05/2020	Expiration Date:	07/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14143	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	02/05/2020	Expiration Date:	02/06/2020
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14139	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14140	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14141	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14137	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/04/2020	Lot #:	53-196CR
Expiration Date (if any):	01/30/2021	Catalog #:	XCTIWI-1-500

Standard ID#:	M14138	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/04/2020	Lot #:	XSPIKE-1-250
Expiration Date (if any):	01/30/2021	Catalog #:	53-197CR

		Instrument:	CETAC
Standard Log #:	M14136	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/30/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14132	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/29/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14133	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/29/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14134	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/29/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14135	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	01/29/2020	Expiration Date:	01/30/2020
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

Standard ID#:	M14125	Vendor:	CPI International
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	01/24/2020	Lot #:	1009904-41
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-1000331

Standard ID#:	M14126	Vendor:	CPI International
Analyst:	MDS	Chemical:	Potassium 10,000 µg/mL
Date Received:	01/24/2020	Lot #:	980507-31
Expiration Date (if any):	07/20/2021	Catalog #:	4400-10M411

Standard ID#:	M14127	Vendor:	CPI International
Analyst:	MDS	Chemical:	Lithium 1000 µg/mL
Date Received:	01/24/2020	Lot #:	1017511-7
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-1000291

Standard ID#:	M14128	Vendor:	CPI International
Analyst:	MDS	Chemical:	Phosphorus 10,000 µg/mL
Date Received:	01/24/2020	Lot #:	979480-24
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-10M391

Standard ID#:	M14129	Vendor:	CPI International
Analyst:	MDS	Chemical:	Molybdenum 1000 µg/mL
Date Received:	01/24/2020	Lot #:	987189-55
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-1000343

Standard ID#:	M14130	Vendor:	CPI International
Analyst:	MDS	Chemical:	Barium 1000 µg/mL
Date Received:	01/24/2020	Lot #:	994634-53
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-100041

Standard ID#:	M14131	Vendor:	CPI International
Analyst:	MDS	Chemical:	Boron 1000 µg/mL
Date Received:	01/24/2020	Lot #:	1024903-6
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-100074

		Instrument:	HydraII
Standard Log #:	M14122	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/23/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14123	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/23/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14124	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/23/2020	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14119	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Hg 1000 ug/mL
Date Received:	01/21/2020	Lot #:	CL11-96HGY
Expiration Date (if any):	01/30/2021	Catalog #:	CLHG4-2Y

Standard ID#:	M14120	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	01/21/2020	Lot #:	2-96JX
Expiration Date (if any):	01/30/2021	Catalog #:	INT-A1

Standard ID#:	M14121	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	01/21/2020	Lot #:	1-008DMP
Expiration Date (if any):	01/21/2021	Catalog #:	XCTWI-5-500

		Instrument:	CETAC
Standard Log #:	M14117	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/17/2020	Expiration Date:	02/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

Standard Log #:	M14118	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	01/17/2020	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M13951	1000	0.01
As	2	M13863	1000	0.1
Pb	2	M13615	10000	0.01
Sb	2	M13950	1000	0.1
Se	2	M13948	1000	0.1
Tl	2	M13583	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	HydraII
Standard Log #:	M14114	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/16/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14115	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/16/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14116	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/16/2020	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14111	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/13/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14112	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/13/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14113	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/13/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M14106	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	01/13/2020	Lot #:	175213-60
Expiration Date (if any):	07/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14107	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 ug/mL
Date Received:	01/13/2020	Lot #:	855297-68
Expiration Date (if any):	07/2021	Catalog #:	4400-10M91

Standard ID#:	M14108	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 ug/mL
Date Received:	01/13/2020	Lot #:	1013353-36
Expiration Date (if any):	07/2021	Catalog #:	4400-10M311

Standard ID#:	M14109	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000ug/mL
Date Received:	01/13/2020	Lot #:	980507-79
Expiration Date (if any):	07/2021	Catalog #:	4400-10M411

Standard Log #:	M14110	Reagent:	TCLP EXTRACTION FLUID #2
Analyst:	BMM	pH:	2.88 ± 0.05
Prep Date:	01/14/2020	Expiration Date:	01/14/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 . Dilute to 20 L and mix.		

Standard ID#:	M14100	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 ug/mL
Date Received:	01/10/2020	Lot #:	1905324-500
Expiration Date (if any):	07/31/2021	Catalog #:	HP10M67-1-500

Standard ID#:	M14101	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 ug/mL
Date Received:	01/13/2020	Lot #:	998527-45
Expiration Date (if any):	07/2021	Catalog #:	4400-10M261

Standard ID#:	M14102	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10000 ug/mL
Date Received:	01/13/2020	Lot #:	9987745-28
Expiration Date (if any):	07/2021	Catalog #:	4400-10M544

Standard ID#:	M14103	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 10000 ug/mL
Date Received:	01/13/2020	Lot #:	752887-79
Expiration Date (if any):	01/2021	Catalog #:	4400-40M521

Standard ID#:	M14104	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10000 ug/mL
Date Received:	01/13/2020	Lot #:	980507-31
Expiration Date (if any):	07/2021	Catalog #:	4400-10M411

Standard ID#:	M14105	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 ug/mL
Date Received:	01/13/2020	Lot #:	992536-34
Expiration Date (if any):	07/2021	Catalog #:	4400-10M11

Standard Log #:	M14099revised below	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	01/09/2020	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M13951	1000	0.25
Al	10	M13962	**10000**	0.05
As	20	M13863	1000	1
Ba	2	M13949	1000	0.1
Be	0.5	M13579	1000	0.025
Ca	50	M13841	**10000**	0.25
Cd	0.5	M13570	1000	0.025
Co	2.5	M13575	1000	0.125
Cr	5.0	M13617	**10000**	0.025
Cu	10	M13618	**10000**	0.05
Fe	40	M13963	**10000**	0.2
Mg	25	M13752	**10000**	0.125
Mn	5	M13616	**10000**	0.025
Mo	2.5	M13860	1000	0.125
Ni	5	M13569	1000	0.25
Pb	10	M13615	**10000**	0.05
Sb	20	M13950	1000	1
Se	20	M13948	1000	1
Tl	20	M13583	1000	1
V	5	M13578	1000	0.25
Zn	5	M13610	**10000**	0.025

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14099	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	01/09/2020	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M13951	1000	0.25
Al	10	M13962	**10000**	0.05
As	20	M13863	1000	1
Ba	2	M13949	1000	0.1
Be	0.5	M13579	1000	0.025
Ca	50	M13841	**10000**	0.25
Cd	0.5	M13570	1000	0.025
Co	2.5	M13575	1000	0.125
Cr	5.0	M13617	**10000**	0.025
Cu	10	M13618	**10000**	0.05
Fe	40	M13963	**10000**	0.2
Mg	25	M13752	**10000**	0.125
Mn	5	M13616	**10000**	0.025
Mo	2.5	M13860	1000	0.125
Ni	5	M13569	1000	0.25
Pb	10	M13615	**10000**	0.05
Sb	20	M13950	1000	1
Se	20	M13948	1000	1
Tl	20	M13583	1000	1
V	5	M13578	1000	0.25
Zn	5	M13610	**10000**	0.025
Na	500	M13862	**10000**	2.5
K	500	M14003	**10000**	2.5
B	20	M13947	1000	1
Si	100	M13981	1000	5
S	200	M13696	**10000**	1
Li	20	M13577	1000	1
Sr	20	M14007	1000	1
Sn	20	M14008	1000	1
Ti	20	M14009	1000	1

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M14097	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/09/2020	Expiration Date:	02/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

Standard Log #:	M14098	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 S Spiking Solution
Prep Date:	01/09/2020	Expiration Date:	06/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	240	M13696	10000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M14096	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	01/08/2020	Expiration Date:	01/09/2020
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14093	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/08/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14094	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/08/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14095	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/08/2020	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14092	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/26/2019	Expiration Date:	01/26/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14088	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/20/2019	Expiration Date:	01/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14089	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/24/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14090	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/24/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14091	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/24/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14086	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/19/2019	Expiration Date:	12/20/2019
Prep:	Carefully mixed **3** parts HCl AB.862 with **1** part HNO_3 AB.861 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14087	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/24/2019	Expiration Date:	12/25/2019
Prep:	Carefully mixed **3** parts HCl AB.862 with **1** part HNO_3 AB.861 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14083	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/18/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14084	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/18/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14085	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/18/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14082	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	Acid Washed TCLP Filters
Date Received:	12/11/2019	Lot #:	400168-9329-CM
Expiration Date (if any):		Catalog #:	FG77150MM

Standard ID#:	M14079	Vendor:	Thermofisher Scientific
Analyst:	MDS	Chemical:	GFAA Nickel Nitrate Modifier
Date Received:	12/12/2019	Lot #:	9192422
Expiration Date (if any):	04/30/2021	Catalog #:	39043

Standard ID#:	M14080	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	12/12/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14081	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	12/12/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M14078A	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	12/11/2019	Expiration Date:	02/21

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13947	1000	0.8
Si	200	M13810	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14078b Combined with	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	12/11/2019	Expiration Date:	03/201

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M13604	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14077	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	12/11/2019	Expiration Date:	02/20

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13851	1000	0.2
Al	36	M13982	**10000**	0.18
As	24	M13863	1000	1.2
Ba	1.8	M13949	1000	0.09
Be	0.6	M13579	1000	0.03
Ca	100	M13841	**10000**	0.5
Cd	2.0	M13570	1000	0.1
Co	4	M13575	1000	0.2
Cr	4	M13617	**10000**	0.02
Cu	7	M13618	**10000**	0.035
Fe	100	M13983	**10000**	0.5
Mg	40	M13752	**10000**	0.2
Mn	4	M13616	**10000**	0.02
Mo	7	M13860	1000	0.35
Ni	6	M13569	1000	0.2
Pb	4	M13615	**10000**	0.02
Sb	12	M13950	1000	0.6
Se	13	M13948	1000	0.65
Tl	20	M13583	1000	0.75
V	5	M13578	1000	0.25
Zn	10	M13610	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14076	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	12/10/2019	Expiration Date:	02/20

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13951	1000	0.2
Al	9.6	M13982	**10000**	0.048
As	32	M13863	1000	1.6
Ba	2	M13949	1000	0.1
Be	1.6	M13579	1000	0.08
Ca	56	M13841	**10000**	0.28
Cd	1.6	M13570	1000	0.08
Co	9.6	M13575	1000	0.48
Cr	5.6	M13617	**10000**	0.028
Cu	16	M13618	**10000**	0.08
Fe	72	M13983	**10000**	0.36
Mg	32	M13752	**10000**	0.16
Mn	6	M13616	**10000**	0.03
Mo	9.6	M13860	1000	0.48
Ni	4.8	M13569	1000	0.24
Pb	10	M13615	**10000**	0.05
Sb	32	M13950	1000	1.6
Se	16	M13948	1000	0.8
Tl	19	M13583	1000	0.95
V	3.2	M13578	1000	0.16
Zn	12	M13610	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M14074	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	12/10/2019	Expiration Date:	02/2021
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13951 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M14075	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/10/2019	Expiration Date:	12/11/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	GFAA
Standard Log #:	M14072	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	12/10/2019	Expiration Date:	02/2020
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13950 **3.2 mL** of As (1000 mg/L) M13863 **3.2 mL** of Se (1000 mg/L) M13948 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M14073	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	12/10/2019	Expiration Date:	02/2020
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13950 **1.0 mL** of As (1000 mg/L) M13863 **2.0 mL** of Se (1000 mg/L) M13948 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M14071	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	12 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	12/10/2019	Expiration Date:	02/2020

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13863	10,000
Pb	0.1	10,000	M13615	10,000
Tl	1	1000	M13583	10,000
Se	1	1000	M13948	10,000
Sb	1	1000	M13950	10,000
Ag	0.1	1000	M13951	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.2	10,000	12
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

		Instrument:	HydraII
Standard Log #:	M14068	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/10/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14069	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	12/10/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13734 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M14070	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/10/2019	Expiration Date:	01/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14065	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/05/2019	Expiration Date:	01/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14066	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/06/2019	Expiration Date:	01/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14067	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/10/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M14063	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/03/2019	Expiration Date:	01/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14064	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/04/2019	Expiration Date:	12/05/2019
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14061	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/02/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14062	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	Acid Washed TCLP Filters
Date Received:	12/02/2019	Lot #:	400168-9305-CM
Expiration Date (if any):		Catalog #:	

		Instrument:	CETAC
Standard Log #:	M14058	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/20/2019	Expiration Date:	12/20/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M14017 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14059	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/02/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14060	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/02/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M14056	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/26/2019	Expiration Date:	11/26/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

Standard Log #:	M14057	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/26/2019	Expiration Date:	11/26/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

Standard ID#:	M14054	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	11/20/2019	Lot #:	53-042CR
Expiration Date (if any):	11/30/2020	Catalog #:	XCTWI-5-500

Standard ID#:	M14055	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	11/20/2019	Lot #:	53-041CR
Expiration Date (if any):	11/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	GFAA
Standard Log #:	M14051	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	11/20/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14052	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	11/20/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14053	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	11/20/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M14048	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/19/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14049	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/19/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14050	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	11/19/2019	Expiration Date:	11/20/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14045	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/11/2019	Expiration Date:	05/11/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.681 and dissolved **100 g** Stannous chloride M14017 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14046	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/13/19	Expiration Date:	05/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.681 and dissolved **100 g** Stannous chloride M14017 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14047	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/19/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

Standard Log #:	M14044	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/13/2019	Expiration Date:	11/13/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M14041	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	11/09/2019	Expiration Date:	11/10/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14042	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	11/12/2019	Expiration Date:	11/13/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M14043	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	11/12/2019	Expiration Date:	04/12/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13993 and **60 g** hydroxylamine sulfate M13874 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14038	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14039	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14040	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/07/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6000
Standard Log #:	M14035	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/04/2019	Expiration Date:	02/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M14008 Sr (1000 µg/mL) M14007 Ti (1000 µg/mL) M14009 W (1000 µg/mL) MXXXXX		

		Instrument:	ICP 6000
Standard Log #:	M14036	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	11/04/2019	Expiration Date:	02/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	MXXXX	1000	5	XX/XXXX
Ti	10/30	M14009	1000	0.5	04/2021
Sr	10/30	M14007	1000	0.5	04/2021
Sn	20/60	M14008	1000	1	04/2021

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	CETAC
Standard Log #:	M14037	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/04/2019	Expiration Date:	05/04/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13922 and brought up to volume.		

		Instrument:	ICP
Standard Log #:	M14033	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	11/04/2019	Expiration Date:	05/30/2020
Prep:	Standard Conc. (ug/L)	Pipette the following:	
	1	**0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.001 mL** W (1000 µg/mL) MXXXXX into 1L = *1 µg/L*	
	10	**0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.01 mL** W (1000 µg/mL) MXXXXX into 1L = *10 µg/L*	
	100	**1 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.1 mL** W (1000 µg/mL) MXXXXX into 1L = *100 µg/L*	
	1000 (CCV)	**2 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.2 mL** W (1000 µg/mL) MXXXXX into 200mL = *1000 µg/L*	
	10000	**20 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **2 mL** W (1000 µg/mL) MXXXXX into 200mL = *10000 µg/L*	

		Instrument:	ICP 6000
Standard Log #:	M14034	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/04/2019	Expiration Date:	02/28/2020
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **6 mL** of Fe (10,000 mg/L) M13751, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M14008, **0.1 mL** of Sr (1000 µg/mL) M14007, **0.1 mL** of Ti (1000 µg/mL) M14009, and **0.1 mL** of W (1000 µg/mL) MXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	CETAC
Standard Log #:	M14032	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/31/2019	Expiration Date:	10/31/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M14028	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	10/30/2019	Expiration Date:	10/2020
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13947 and Si (1000 mg/L) M13810 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14029	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/30/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **0.05 mL** of B (1000 µg/mL) M13947, **0.05 mL** of Si (1000 µg/mL) M13810 and **3 mL** of Fe (10,000 mg/L) M13751 and brought up to volume using Milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M14030	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	10/30/2019	Expiration Date:	05/30/2020
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13839 and **1.0 mL** Si (1000 mg/L) M13981 and brought up to volume using milli-Q H_2O.		

Standard ID#:	M14031	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Acid Washed TCLP filters
Date Received:	10/31/2019	Lot #:	400165
Expiration Date (if any):		Catalog #:	FG77150MM

		Instrument:	HydraII
Standard Log #:	M14024	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/29/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14025	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/29/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14026	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/29/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14027	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/30/2019	Expiration Date:	04/30/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13922 and brought up to volume.		

MRL BASE STD M14024 Analyst NAH

Prep Date 10/30/2019

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13951	1000	1	02/2021
Al	400	M13690	10000	2	06/2020
Ba	10	M13949	1000	0.5	02/2021
Be	4	M13579	1000	0.2	02/2020
Cd	5	M13570	1000	0.25	01/2020
Co	10	M13575	1000	0.5	01/2020
Cr	10	M13617	10000	0.05	03/2020
Cu	10	M13618	10000	0.05	03/2020
Mg	500	M13752	10000	2.5	09/2020
Mn	10	M13616	10000	0.05	03/2020
Mo	10	M13860	1000	0.5	12/2020
Ni	10	M13569	1000	0.5	01/2020
Pb	10	M13615	10000	0.05	03/2020
Sb	20	M13950	1000	1	02/2021
V	10	M13578	1000	0.5	02/2020
Zn	10	M13610	10000	0.05	03/2020
K	1000	M14003	10000	5	04/2021
Na	1000	M13862	10000	5	12/2020
As	20	M13763	1000	1	12/2020
Ca	500	M13985	10000	2.5	04/2021
Fe	300	M13751	10000	1.5	09/2020
Se	20	M13948	1000	1	02/2021
Tl	20	M13583	1000	1	02/2020
Si	100	M13810	1000	5	10/2020
B	20	M13947	1000	1	02/2021
Li	20	M13577	1000	1	02/2020
W	50	Mxxxxxx	1000	2.5	xxxxxxxx
Ti	10	M14009	1000	0.5	04/2021
Sr	10	M14007	1000	0.5	03/2020
Sn	50	M14008	1000	2.5	04/2021
S	300	M13604	10000	1.5	03/2020

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M14022	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13922 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M14023	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	10/30/2019	Expiration Date:	02/2020
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M13738 and 15 **mL** 10000 mg/L Fe M14004 5.0 **mL** 1000 mg/L V M13578 5.0 **mL** 1000 mg/L Ce M13859 and brought up to volume with milli-Q H_2O.		

Standard Log #:	M14020	Reagent:	Potassium Persulfate Solution
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14021	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13993 and **60 g** hydroxylamine sulfate M13874 and brought up to volume.		

Standard ID#:	M14016	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/23/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14017	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/23/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	CETAC
Standard Log #:	M14018	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	10/24/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M14019	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14012	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/21/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14013	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/21/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14014	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/21/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14015	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/22/2019	Expiration Date:	09/30/2020
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13954 and **10 mL** Mg (10,000 mg/L) M13752 and brought up to volume.		

Standard Log #:	M14010	Reagent:	SPLP ACID MIX
Analyst:	BMM		60/40 H_2SO_4 - HNO_3
Prep Date:	10/21/2019	Expiration Date:	10/21/2020
Prep:	Into a 200 mL volumetric flask, partially filled with DI H_2O, add **12 g** H_2SO_4 AB.674 and **8 g** HNO_3 AB.677 and bring up to volume using DI H_2O.		

Standard Log #:	M14011	Reagent:	SPLP EXTRACTION FLUID EAST #
Analyst:	BMM	pH:	4.20 ± 0.05
Prep Date:	10/21/2019	Expiration Date:	10/21/2020
Prep:	Into a 20 L carboy filled with DI H_2O, adjust pH to 4.20 ± 0.05 using 60/40 HNO_3 - H_2SO_4 M14010.		

Standard ID#:	M14005	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	10/17/2019	Lot #:	168189-30
Expiration Date (if any):	04/2021	Catalog #:	4400-110M671

Standard ID#:	M14006	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	10/17/2019	Lot #:	1004985-62
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14007	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	10/17/2019	Lot #:	168227-95
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000531

Standard ID#:	M14008	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/L
Date Received:	10/17/2019	Lot #:	977645-2
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000613

Standard ID#:	M14009	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	10/17/2019	Lot #:	987438-36
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000623

		Instrument:	CETAC
Standard Log #:	M14000	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/16/2019	Expiration Date:	04/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

Standard ID#:	M14001	Vendor:	ThermoFisher
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	10/17/2019	Lot #:	9192422
Expiration Date (if any):	04/30/2021	Catalog #:	39043

Standard Log #:	M14002	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	10/17/2019	Expiration Date:	10/17/2020
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W47366 and brought up to volume.		

Standard ID#:	M14003	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	10/17/2019	Lot #:	980507-31
Expiration Date (if any):	04/2021	Catalog #:	4400-10M411

Standard ID#:	M14004	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	10/17/2019	Lot #:	998527-45
Expiration Date (if any):	04/2021	Catalog #:	4400-10M261

		Instrument:	GFAA
Standard Log #:	M13997	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/16/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13998	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/16/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13999	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/16/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M13993	Vendor:	Thermo fisher Scientific
Analyst:	NAH	Chemical:	Sodium Chloride
Date Received:	10/15/2019	Lot #:	193463
Expiration Date (if any):	06/2024	Catalog #:	S271-500

Standard ID#:	M13994	Vendor:	Thermo Fisher Scientific
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	10/15/2019	Lot #:	189407
Expiration Date (if any):	05/2024	Catalog #:	H331-500

		Instrument:	CETAC
Standard Log #:	M13995	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/15/2019	Expiration Date:	10/16/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13996	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/16/2019	Expiration Date:	10/16/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

		Instrument:	ICP 6000
Standard Log #:	M13992	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	10/15/2019	Expiration Date:	01/2020
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **6 mL** of Fe (10,000 mg/L) M13751, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) MXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	ICP 6000
Standard Log #:	M13989	Standard:	Sulfur ICAL
Analyst:	MDS	Concentrations:	1000 10,000 100,000 1000K µg/L (S)
Prep Date:	10/14/2019	Expiration Date:	06/2020
Prep:	Into four, 100 mL volumetric flasks, pipetted the following from stock standard S (10,000 µg/mL) M13696 and brought up to volume using milli-Q H_2O. *1000 ug/L std.* - **0.01 mL** *10,000 ug/L std.* - **0.1 mL** *100,000 ug/L std.* -**1.0 mL**, also used as the CCV *1000K ug/L std.* - **10 mL**		

		Instrument:	ICP 6000
Standard Log #:	M13990	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	10/14/2019	Expiration Date:	03/2020
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M13604 and brought up to volume using Milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13991	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/14/2019	Expiration Date:	12/2019
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **0.05 mL** of B (1000 µg/mL) M13531, **0.05 mL** of Si (1000 µg/mL) M13861 and **3 mL** of Fe (10,000 mg/L) M13751 and brought up to volume using Milli-Q H_2O.		

		Instrument:	HydraII
Standard Log #:	M13986	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/15/2019	Expiration Date:	04/15/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13987	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/15/2019	Expiration Date:	04/15/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13988	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/15/2019	Expiration Date:	04/15/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M13982	Vendor:	CPI
Analyst:	NAH	Chemical:	Aluminum 10000 mg/L
Date Received:	10/09/2019	Lot #:	992536-16
Expiration Date (if any):	04/2021	Catalog #:	4400-10M11

Standard ID#:	M13983	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	10/09/2019	Lot #:	998527-45
Expiration Date (if any):	04/2021	Catalog #:	4400-10M261

Standard ID#:	M13984	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	10/09/2019	Lot #:	1013353-4
Expiration Date (if any):	04/2021	Catalog #:	4400-10M311

Standard ID#:	M13985	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	10/09/2019	Lot #:	855297-68
Expiration Date (if any):	04/2021	Catalog #:	4400-10M91

		Instrument:	CETAC
Standard Log #:	M13978	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/08/2019	Expiration Date:	04/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13979	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/09/2019	Expiration Date:	04/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

Standard ID#:	M13980	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	10/08/2019	Lot #:	52-248CR
Expiration Date (if any):	10/30/2020	Catalog #:	XSPIKE-1-250

Standard ID#:	M13981	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 mg/l
Date Received:	10/09/2019	Lot #:	1004985-62
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000504F

		Instrument:	HydraII
Standard Log #:	M13976	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	10/07/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13975 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13977	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/07/2019	Expiration Date:	10/07/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13973	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13974	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13975	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/07/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M13970	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/07/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13971	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/07/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13972	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/07/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13969	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	10/02/2019	Expiration Date:	10/02/2020
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13967	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	10/01/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13966 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13968	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/01/2019	Expiration Date:	10/01/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13964	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/01/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13965	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/01/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13966	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/01/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M13963	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/30/2019	Expiration Date:	09/30/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard ID#:	M13961	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	09/24/2019	Lot #:	7-093AB
Expiration Date (if any):	09/30/2020	Catalog #:	XCTWI-1-500

		Instrument:	CETAC
Standard Log #:	M13962	Reagent:	Stannous Chloride Solution
Analyst:	NAH		
Prep Date:	09/25/2019	Expiration Date:	09/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13960	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/19/2019	Expiration Date:	03/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.678 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M13958	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/17/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	HydraII
Standard Log #:	M13959	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	09/17/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13958 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13955	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	09/17/2019	Expiration Date:	09/17/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13956	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/17/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13957	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/17/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M13952	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/13/2019	Expiration Date:	09/13/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard Log #:	M13953	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/13/2019	Expiration Date:	09/13/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard ID#:	M13954	Vendor:	Environmental Expresss
Analyst:	MDS	Chemical:	1% Pd Matrix Modifier
Date Received:	09/13/2019	Lot #:	1925215
Expiration Date (if any):	09/30/2020	Catalog #:	HP1900-100

		Instrument:	CETAC
Standard Log #:	M13946	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/10/2019	Expiration Date:	03/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

Standard ID#:	M13947	Vendor:	CPI
Analyst:	NAH	Chemical:	Boron 1000 mg/lL
Date Received:	09/10/2019	Lot #:	982524-80
Expiration Date (if any):	02/2021	Catalog #:	S4400-100074

Standard ID#:	M13948	Vendor:	CPI
Analyst:	NAH	Chemical:	Selenium 1000 mg/L
Date Received:	09/10/2019	Lot #:	982461-61
Expiration Date (if any):	02/2021	Catalog #:	S4400-1000491

Standard ID#:	M13949	Vendor:	CPI
Analyst:	NAH	Chemical:	Barium 1000 mg/L
Date Received:	09/10/2019	Lot #:	994634-28
Expiration Date (if any):	02/2021	Catalog #:	S4400-100041

Standard ID#:	M13950	Vendor:	CPI
Analyst:	NAH	Chemical:	Antimony 1000 mg/L
Date Received:	09/10/2019	Lot #:	1013797-3
Expiration Date (if any):	02/2019	Catalog #:	S4400-100023

Standard ID#:	M13951	Vendor:	CPI
Analyst:	NAH	Chemical:	Silver 1000 mg/L
Date Received:	09/10/2019	Lot #:	975475-71
Expiration Date (if any):	02/2021	Catalog #:	S4400-1000511

		Instrument:	HydraII
Standard Log #:	M13944	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	09/09/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13943 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13945	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	09/09/2019	Expiration Date:	09/09/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13941	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/09/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13942	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/09/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13943	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/09/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M13938	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	09/09/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13939	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	09/09/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13940	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	09/09/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13937	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	09/06/2019	Expiration Date:	02/28/2020
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **2.5 mL** of K (10,000 mg/L) M13755, **2.5 mL** of Na (10,000 mg/L) M13691 and **7.5 mL** of Fe (10,000 mg/L) M13695 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13933	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	09/06/2019	Expiration Date:	03/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13607 and K (1000 µg/mL) M13606 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13934	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	09/06/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13607 and **0.5 mL** K (1000 µg/mL) M13606 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13935	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	09/06/2019	Expiration Date:	06/2020
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13755 and Na (10,000 mg/L) M13691 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13936	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	09/06/2019	Expiration Date:	06/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M13691 and **0.15 mL** K (10,000 µg/mL) M13755 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M13929	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13928 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13930	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/03/2019	Expiration Date:	10/03/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

Standard Log #:	M13931	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/03/2019	Expiration Date:	09/03/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard Log #:	M13932	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/03/2019	Expiration Date:	09/03/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

		Instrument:	HydraII
Standard Log #:	M13926	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13927	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13928	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M13924	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	08/29/2019	Lot #:	1833905
Expiration Date (if any):	02/28/2021	Catalog #:	HP10M67-1

		Instrument:	HydraII
Standard Log #:	M13920	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/27/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13919 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13921	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/28/2019	Expiration Date:	09/28/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

Standard ID#:	M13922	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	08/28/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M13923	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	08/28/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	HydraII
Standard Log #:	M13917	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/27/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13918	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/27/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13919	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/27/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M13916	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	08/26/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	GFAA
Standard Log #:	M13914	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	08/26/2019	Expiration Date:	10/2019
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13459 **3.2 mL** of As (1000 mg/L) M13863 **3.2 mL** of Se (1000 mg/L) M13460 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M13915	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	08/26/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13459 **1.0 mL** of As (1000 mg/L) M13863 **2.0 mL** of Se (1000 mg/L) M13460 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M13913 (A)	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	08/26/2019	Expiration Date:	12/19/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13531	1000	0.8
Si	200	M13861	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13913 combined with A	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	08/26/2019	Expiration Date:	06/20/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M13696	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M13911	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/21/2019	Expiration Date:	02/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13912	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	08/21/2019	Expiration Date:	08/21/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13909	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/20/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13908 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13910	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	08/20/2019	Expiration Date:	08/20/2020
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.655 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13906	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/20/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13907	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/20/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13908	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/20/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M13904	Reagent:	Potassium Persulfate Solution
Analyst:	BMM		
Prep Date:	08/19/2019	Expiration Date:	08/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

Standard Log #:	M13905	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	08/19/2019	Expiration Date:	08/19/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13728 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13902	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/15/2019	Expiration Date:	02/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

Standard ID#:	M13903	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/15/2019	Lot #:	52-161Cr
Expiration Date (if any):	8/30/2020	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13898	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	08/13/2019	Expiration Date:	08/13/2020
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13899	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/13/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13900	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/13/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13901	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/13/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13734 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13897	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	12 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	08/12/2019	Expiration Date:	10/2019

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13863	10,000
Pb	0.1	10,000	M13615	10,000
Tl	1	1000	M13583	10,000
Se	1	1000	M13460	10,000
Sb	1	1000	M13459	10,000
Ag	0.1	1000	M13458	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.2	10,000	12
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

Standard Log #:	M13896	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	08/09/2019	Expiration Date:	08/09/2020
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13895	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/06/2019	Expiration Date:	02/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13894	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/05/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13893 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13891	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/05/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13892	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/05/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13893	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/05/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13890	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/29/2019	Expiration Date:	01/29/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

Standard ID#:	M13888	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	07/25/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M13889	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	07/25/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	CETAC
Standard Log #:	M13884	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	07/22/2019	Expiration Date:	
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13885	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	07/22/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13886	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	07/22/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13887	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	07/22/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M13883	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/18/2019	Expiration Date:	01/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13879	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13880	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/18/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13881	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/18/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13882	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	07/18/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13881 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13876	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13877	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W45383 and brought up to volume.		

Standard Log #:	M13878	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M45383. Dilute to 20 L and mix.		

Standard Log #:	M13873	Reagent:	Potassium Permanganate Solution
Analyst:	NAH		
Prep Date:	07/17/2019	Expiration Date:	07/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard ID#:	M13874	Vendor:	Fisher
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	07/17/2019	Lot #:	175511
Expiration Date (if any):		Catalog #:	H331-500

Standard Log #:	M13875	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	NAH		
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13728 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13872	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/12/2019	Expiration Date:	07/12/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13871	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/11/2019	Expiration Date:	07/11/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13870	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/10/2019	Expiration Date:	07/10/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13869	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/08/2019	Expiration Date:	07/08/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13868	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	07/03/2019	Expiration Date:	01/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13864	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	07/02/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13865	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	01/02/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13728 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

Standard Log #:	M13866	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	01/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M13867	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	01/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13858	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/26/2019	Expiration Date:	06/26/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13859	Vendor:	CPI
Analyst:	NAH	Chemical:	Ce 1000 mg/L
Date Received:	06-26-2019	Lot #:	171633-12
Expiration Date (if any):	12/2020	Catalog #:	S4400-1000101

Standard ID#:	M13860	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	06-26-2019	Lot #:	987189-17
Expiration Date (if any):	12/2020	Catalog #:	S4400-1000343

Standard ID#:	M13861	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	06-26-2019	Lot #:	175213-60
Expiration Date (if any):	12/2020	Catalog #:	S4400-1000504F

Standard ID#:	M13862	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 mg/L
Date Received:	06-26-2019	Lot #:	752887-32
Expiration Date (if any):	12/2020	Catalog #:	4400-10M521

Standard ID#:	M13863	Vendor:	CPI
Analyst:	NAH	Chemical:	As 1000 mg/L
Date Received:	06-26-2019	Lot #:	175385-105
Expiration Date (if any):	12/2020	Catalog #:	S4400-100031

Standard Log #:	M13856	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/21/2019	Expiration Date:	06/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13857	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/21/2019	Expiration Date:	06/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M13855	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/19/2019	Expiration Date:	06/19/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13851	Vendor:	CPI
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06-19-2019	Lot #:	52-082CR
Expiration Date (if any):	06/30/2020	Catalog #:	XSPIKE-1-250

		Instrument:	GFAA
Standard Log #:	M13852	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13853	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13854	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	CETAC
Standard Log #:	M13850	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/14/2019	Expiration Date:	06/14/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13849	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	06/13/2019	Expiration Date:	07/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M13458	1000	0.01
As	2	M13392	1000	0.1
Pb	2	M13615	10000	0.01
Sb	2	M13459	1000	0.1
Se	2	M13460	1000	0.1
Tl	2	M13583	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13848	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	06/11/2019	Expiration Date:	10/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	36	M13611	**10000**	0.18
As	24	M13753	1000	1.2
Ba	1.8	M13457	1000	0.09
Be	0.6	M13579	1000	0.03
Ca	100	M13692	**10000**	0.5
Cd	2.0	M13570	1000	0.1
Co	4	M13575	1000	0.2
Cr	4	M13697	**10000**	0.02
Cu	7	M13618	**10000**	0.035
Fe	100	M13609	**10000**	0.5
Mg	40	M13694	**10000**	0.2
Mn	4	M13616	**10000**	0.02
Mo	7	M13697	1000	0.35
Ni	6	M13569	1000	0.2
Pb	4	M13615	**10000**	0.02
Sb	12	M13459	1000	0.6
Se	13	M13460	1000	0.65
Tl	20	M13583	1000	0.75
V	5	M13578	1000	0.25
Zn	10	M13610	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13847	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	06/11/2019	Expiration Date:	10/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	9.6	M13611	**10000**	0.048
As	32	M13753	1000	1.6
Ba	2	M13457	1000	0.1
Be	1.6	M13579	1000	0.08
Ca	56	M13692	**10000**	0.28
Cd	1.6	M13570	1000	0.08
Co	9.6	M13575	1000	0.48
Cr	5.6	M13697	**10000**	0.028
Cu	16	M13618	**10000**	0.08
Fe	72	M13609	**10000**	0.36
Mg	32	M13694	**10000**	0.16
Mn	6	M13616	**10000**	0.03
Mo	9.6	M13697	1000	0.48
Ni	4.8	M13569	1000	0.24
Pb	10	M13615	**10000**	0.05
Sb	32	M13459	1000	1.6
Se	16	M13460	1000	0.8
Tl	19	M13583	1000	0.95
V	3.2	M13578	1000	0.16
Zn	12	M13610	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13845	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 k&na Spiking Solution
Prep Date:	06/11/2019	Expiration Date:	06/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
K	500	M13811	10000	2.5
Na	600	M13691	10000	3

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13846	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 k&na Spiking Solution
Prep Date:	06/11/2019	Expiration Date:	06/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
K	2640	M13811	10000	13.2
Na	960	M13691	10000	4.8

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard ID#:	M13839	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/11/2019	Lot #:	52-038CR
Expiration Date (if any):	05/30/2020	Catalog #:	XCTWI-5-500

Standard ID#:	M13840	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/11/2019	Lot #:	5-244AB
Expiration Date (if any):	06/30/2020	Catalog #:	XCTWWI-1-500

Standard ID#:	M13841	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 mg/L
Date Received:	06/11/2019	Lot #:	855297-41
Expiration Date (if any):	11/2020	Catalog #:	4400-10M91

Standard ID#:	M13842	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 mg/L
Date Received:	06/11/2019	Lot #:	169484-36
Expiration Date (if any):	11/2020	Catalog #:	4400-10M11

Standard ID#:	M13843	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	06/11/2019	Lot #:	168189-30
Expiration Date (if any):	11/20	Catalog #:	4400-10M671

Standard ID#:	M13844	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	06/11/2019	Lot #:	175213-60
Expiration Date (if any):	11/2020	Catalog #:	S4400-1000504F

		Instrument:	GFAA
Standard Log #:	M13838	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	06/07/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	GFAA
Standard Log #:	M13836	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	06/07/2019	Expiration Date:	07/2019
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13459 **3.2 mL** of As (1000 mg/L) M13392 **3.2 mL** of Se (1000 mg/L) M13460 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M13837	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	06/07/2019	Expiration Date:	07/2019
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13459 **1.0 mL** of As (1000 mg/L) M13392 **2.0 mL** of Se (1000 mg/L) M13460 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

		Instrument:	CETAC
Standard Log #:	M13835	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/06/2019	Expiration Date:	06/06/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	ICP 6500
Standard Log #:	M13832	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13833	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13834	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M13738, **15 mL** Fe (10,000 mg/L) M13751, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and brought up to volume with milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M13830	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	06/03/2019	Expiration Date:	12/03/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M13831	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827 and **1 mL** of Si (1000 mg/L) M13810 and 1 mL M13703 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M13811. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M13618, **10 mL** of Mn (10,000 mg/L) M13616, **10 mL** of Cr (10,000 mg/L) M13617, **10 mL** Pb (10,000 mg/L) M13610, **10 mL** of Zn (10,000 mg/L) M13615 and **10 mL** of Na (10,000 mg/L) M13691. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M13752, **10 mL** of Fe (10,000 mg/L) M13751, **10 mL** of Ca (10,000 mg/L) M13690 and **10 mL** Al (10,000 mg/L) M13693. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	CETAC
Standard Log #:	M13829	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/31/2019	Expiration Date:	05/31/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13828	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/30/2019	Expiration Date:	05/30/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13827	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05-29-2019	Lot #:	XCTWI-4-500
Expiration Date (if any):	5/30/2020	Catalog #:	5-116AB

		Instrument:	CETAC
Standard Log #:	M13823	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	05/24/2019	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13824	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	05/24/2019	Expiration Date:	11/24/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

Standard Log #:	M13825	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	05/24/2019	Expiration Date:	11/24/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

Standard Log #:	M13826	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/24/2019	Expiration Date:	11/24/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13820	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/24/2019	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13821	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/24/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13822	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	05/24/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13734 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13818	Reagent:	TCLP 1 N HCL
Analyst:	BMM		
Prep Date:	05/22/2019	Expiration Date:	05/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, added 83 mL HCL AB.676 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13819	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/22/2019	Expiration Date:	05/22/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13817	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/16/2019	Expiration Date:	05/16/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13813	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	05/14/2019	Expiration Date:	09/30/2019
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13600 and **10 mL** Mg (10,000 mg/L) M13694 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M13814	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	05/14/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13815	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	05/14/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13816	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	05/14/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13812	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/13/2019	Expiration Date:	11/13/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard ID#:	M13808	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 ug/mL
Date Received:	05-09-2019	Lot #:	158237-121
Expiration Date (if any):	10/20	Catalog #:	4400-1000521-500

Standard ID#:	M13809	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 ug/mL
Date Received:	05-09-2019	Lot #:	832313-110
Expiration Date (if any):	10/20	Catalog #:	4400-1000411-500

Standard ID#:	M13810	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	05-09-2019	Lot #:	175213-60
Expiration Date (if any):	10/20	Catalog #:	S400-1000504F

Standard ID#:	M13811	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 ug/mL
Date Received:	05-09-2019	Lot #:	980507-14
Expiration Date (if any):	10/20	Catalog #:	4400-10M411-500

		Instrument:	CETAC
Standard Log #:	M13805	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/07/2019	Expiration Date:	05/07/2019
Prep:	Carefully mixed **3** parts HCl AB.677 with **1** part HNO_3 AB.676 in a hood.		

Standard Log #:	M13806	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/07/2019	Expiration Date:	05/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13807	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/07/2019	Expiration Date:	05/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

MRL BASE STD M13804

Analyst NAH

Prep Date 05/07/2019

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13458	1000	1	10/19
Al	400	M13611	10000	2	3/20
Ba	10	M13457	1000	0.5	10/19
Be	4	M13579	1000	0.2	2/20
Cd	5	M13570	1000	0.25	1/20
Co	10	M13575	1000	0.5	1/20
Cr	10	M13617	10000	0.05	3/20
Cu	10	M13618	10000	0.05	3/20
Mg	500	M13694	10000	2.5	6/20
Mn	10	M13616	10000	0.05	3/20
Mo	10	M13697	1000	0.5	6/20
Ni	10	M13569	1000	0.5	1/20
Pb	10	M13615	10000	0.05	3/20
Sb	20	M13579	1000	1	10/19
V	10	M13578	1000	0.5	2/20
Zn	10	M13610	10000	0.05	3/20
K	1000	M13755	10000	5	9/20
Na	1000	M13691	10000	5	6/20
As	20	M13753	1000	1	10000 std 0.1, 9/20
Ca	500	M13692	10000	2.5	6/20
Fe	300	M13695	10000	1.5	6/20
Se	20	M13460	1000	1	10/19
Tl	20	M13583	1000	1	2/20
Si	100	M13754	1000	5	9/20
B	20	M13531	1000	1	12/19
Li	20	M13577	1000	1	2/20
W	50	xxxx	1000	2.5	xxxx
Ti	10	M13573	1000	0.5	1/20
Sr	10	M13580	1000	0.5	2/20
Sn	50	M13572	1000	2.5	1/20
S	300	M13604	10000	1.5	3/20

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Expiration Date: 10/19

		Instrument:	CETAC
Standard Log #:	M13800	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	05/06/2019	Expiration Date:	11/06/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	ICP 6000
Standard Log #:	M13801	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	05/06/2019	Expiration Date:	12/2019
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13531 and Si (1000 mg/L) M13731 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13802	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	05/06/2019	Expiration Date:	02/28/2020
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and **1.0 mL** Si (1000 mg/L) M13754 and brought up to volume using milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13803	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	05/06/2019	Expiration Date:	09/30/2019
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **0.05 mL** of B (1000 µg/mL) M13531, **0.05 mL** of Si (1000 µg/mL) M13731 and **3 mL** of Fe (10,000 mg/L) M13609 and brought up to volume using Milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13798	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	05/03/2019	Expiration Date:	01/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M13572 Sr (1000 µg/mL) M13580 Ti (1000 µg/mL) M13573 W (1000 µg/mL) MXXXXX		

		Instrument:	ICP 6000
Standard Log #:	M13799	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	05/03/2019	Expiration Date:	01/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	MXXXXX	1000	5	XX/XXXX
Ti	10/30	M13573	1000	0.5	01/2020
Sr	10/30	M13580	1000	0.5	02/2020
Sn	20/60	M13572	1000	1	01/2020

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	CETAC
Standard Log #:	M13795	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/03/2019	Expiration Date:	05/03/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	ICP
Standard Log #:	M13796	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	05/03/2019	Expiration Date:	02/28/2020
Prep:	Standard Conc. (ug/L) — Pipette the following: 1 — **0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.001 mL** W (1000 µg/mL) MXXXXX into 1L = *1 µg/L* 10 — **0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.01 mL** W (1000 µg/mL) MXXXXX into 1L = *10 µg/L* 100 — **1 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.1 mL** W (1000 µg/mL) MXXXXX into 1L = *100 µg/L* 1000 (CCV) — **2 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.2 mL** W (1000 µg/mL) MXXXXX into 200mL = *1000 µg/L* 10000 — **20 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **2 mL** W (1000 µg/mL) MXXXXX into 200mL = *10000 µg/L*		

		Instrument:	ICP 6000
Standard Log #:	M13797	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	05/03/2019	Expiration Date:	09/30/2019
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **6 mL** of Fe (10,000 mg/L) M13609, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) MXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

Standard Log #:	M13793	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/02/2019	Expiration Date:	11/02/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13793 and brought up to volume.		

Standard Log #:	M13794	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	05/02/2019	Expiration Date:	11/02/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13511 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

Standard ID#:	M13790	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	04/29/2019	Lot #:	1833905
Expiration Date (if any):	10/31/2020	Catalog #:	HP10M67-1

Standard ID#:	M13791	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	04/29/2019	Lot #:	51-239CR
Expiration Date (if any):	02/28/2020	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13792	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/29/2019	Expiration Date:	04/29/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13785	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV BASE STD
Date Received:	04/19/2019	Lot #:	P2-MEB678822
Expiration Date (if any):	04/19/2020	Catalog #:	CTI-SPK-1

Standard ID#:	M13786	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE BASE STD
Date Received:	04/19/2019	Lot #:	P2-MEB678821
Expiration Date (if any):	04/19/2020	Catalog #:	CTI-GFCAL-1

		Instrument:	GFAA
Standard Log #:	M13787	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13788	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13789	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

Standard Log #:	M13782	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/18/2019	Expiration Date:	04/18/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard ID#:	M13783	Vendor:	Alfa Aesar
Analyst:	MDS	Chemical:	GFAA 1% Nickel Nitrate Matrix Mod.
Date Received:	04/18/2019	Lot #:	9166009
Expiration Date (if any):	09/30/2020	Catalog #:	39043

Standard Log #:	M13784	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	04/18/2019	Expiration Date:	10/18/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M13780	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	04/17/2019	Expiration Date:	10/17/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13781	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/17/2019	Expiration Date:	04/17/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M13779	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	04/12/2019	Expiration Date:	09/30/2019
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **2.5 mL** of K (10,000 mg/L) M13693, **2.5 mL** of Na (10,000 mg/L) M13605 and **7.5 mL** of Fe (10,000 mg/L) M13609 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M13778	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	04/11/2019	Expiration Date:	04/11/2020
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.672 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13777	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/09/2019	Expiration Date:	04/09/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

Standard Log #:	M13775	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	04/02/2019	Expiration Date:	09/30/2019
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13600 and **10 mL** Mg (10,000 mg/L) M13614 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13776	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/03/2019	Expiration Date:	04/03/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13771	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/26/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13772	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/26/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13773	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/26/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13774	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	03/26/2019	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M13770	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	03/25/2019	Expiration Date:	03/25/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13768	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	03/21/2019	Expiration Date:	01/01/2019
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13769	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	03/21/2019	Expiration Date:	09/21/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13765	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/21/2019	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13766	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/21/2019	Expiration Date:	04/30/2019
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13444 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13767	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	03/21/2019	Expiration Date:	04/30/2019
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13444 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13763	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/20/2019	Expiration Date:	03/20/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13764	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/20/2019	Expiration Date:	03/20/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M13761	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	03/19/2019	Expiration Date:	03/19/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard Log #:	M13762	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	03/19/2019	Expiration Date:	09/19/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13511 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M13758	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	03/13/2019	Expiration Date:	01/2020
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M13569 5.0 **mL** 10000 mg/L Ti M13573 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13759	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ba, Be, and Sn
Prep Date:	03/13/2019	Expiration Date:	10/2019
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M13457 5.0 **mL** 10000 mg/L Be M13579 5.0 **mL** 10000 mg/L Sn M13572 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13760	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	03/13/2019	Expiration Date:	09/2019
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M13635 and 15 **mL** 10000 mg/L Fe M13609 5.0 **mL** 1000 mg/L V M13578 5.0 **mL** 1000 mg/L Ce M13203 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13756	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	03/13/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M13616 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13757	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	03/13/2019	Expiration Date:	01/20
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M13617 0.5 **mL** 10000 mg/L Cu M13618 5.0 **mL** 1000 mg/L Co M13575 5.0 **mL** 1000 mg/L Mo M13697 brought up to volume with milli-Q H_2O.		

Standard ID#:	M13751	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	03/12/2019	Lot #:	998527-19
Expiration Date (if any):	09/2020	Catalog #:	4400-10M261

Standard ID#:	M13752	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	03/12/2019	Lot #:	982185-12
Expiration Date (if any):	09/2020	Catalog #:	4400-10M311

Standard ID#:	M13753	Vendor:	CPI
Analyst:	NAH	Chemical:	As 10000 mg/L
Date Received:	03/12/2019	Lot #:	166531-32
Expiration Date (if any):	09/2020	Catalog #:	S4400--10M31

Standard ID#:	M13754	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	03/12/2019	Lot #:	175213-60
Expiration Date (if any):	09/2020	Catalog #:	S4400-1000504F

Standard ID#:	M13755	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	03/12/2019	Lot #:	172053-77
Expiration Date (if any):	09/2020	Catalog #:	4400-10M411

		Instrument:	CETAC
Standard Log #:	M13749	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	03/08/2019	Expiration Date:	03/08/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard Log #:	M13750	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	03/08/2019	Expiration Date:	03/08/2020
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W45383 and brought up to volume.		

Standard ID#:	M13748	Vendor:	Potters Ind. LLC (Gainger)
Analyst:	NAH	Chemical:	Glass beads Extra Fine
Date Received:	03/07/2019	Lot #:	
Expiration Date (if any):	XXXXXX	Catalog #:	6ZC13

		Instrument:	ICP
Standard Log #:	M13746	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	03/04/2019	Expiration Date:	09/30/2019

Prep:

Standard Conc. (ug/L)	Pipette the following:
1	**0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.001 mL** W (1000 µg/mL) XXXXXX into 1L = *1 µg/L*
10	**0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.01 mL** W (1000 µg/mL) XXXXXX into 1L = *10 µg/L*
100	**1 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.1 mL** W (1000 µg/mL) XXXXXX into 1L = *100 µg/L*
1000 (CCV)	**2 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.2 mL** W (1000 µg/mL) XXXXXX into 200mL = *1000 µg/L*
10000	**20 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **2 mL** W (1000 µg/mL) XXXXXX into 200mL = *10000 µg/L*

		Instrument:	ICP 6000
Standard Log #:	M13747	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	03/04/2019	Expiration Date:	09/30/2019

Prep:

Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **6 mL** of Fe (10,000 mg/L) M13609, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) XXXXXX and brought up to volume using Milli-Q H_2O.
(0.5% HNO_3, 0.5% HCl)

Standard Log #:	M13743	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	02/26/2019	Expiration Date:	10/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M13458	1000	0.25
Al	10	M13611	**10000**	0.05
As	20	M13392	1000	1
Ba	2	M13457	1000	0.1
Be	0.5	M13579	1000	0.025
Ca	50	M13692	**10000**	0.25
Cd	0.5	M13570	1000	0.025
Co	2.5	M13575	1000	0.125
Cr	5.0	M13617	**10000**	0.025
Cu	10	M13618	**10000**	0.05
Fe	40	M13609	**10000**	0.2
Mg	25	M13694	**10000**	0.125
Mn	5	M13616	**10000**	0.025
Mo	2.5	M13697	1000	0.125
Ni	5	M13569	1000	0.25
Pb	10	M13615	**10000**	0.05
Sb	20	M13459	1000	1
Se	20	M13460	1000	1
Tl	20	M13583	1000	1
V	5	M13578	1000	0.25
Zn	5	M13610	**10000**	0.025
Na	500	M13605	**10000**	2.5
K	500	M13733	**10000**	2.5
B	20	M13531	1000	1
Si	100	M13731	1000	5
S	200	M13604	**10000**	1
Li	20	M13537	1000	1
Sr	20	M13572	1000	1
Sn	20	M13580	1000	1
Ti	20	M13573	1000	1

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	ICP 6000
Standard Log #:	M13740	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	02/26/2019	Expiration Date:	03/2020
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M13604 and brought up to volume using Milli-Q H_2O.		

Standard ID#:	M13741	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02-26-2019	Lot #:	3-153AB
Expiration Date (if any):	02/28/2020	Catalog #:	XCTWI-5-500

Standard ID#:	M13742	Vendor:	IKOHE Blasting Media
Analyst:	NAH	Chemical:	Glass Neads X-fine-20u
Date Received:	02/26/2019	Lot #:	52-144
Expiration Date (if any):	*********	Catalog #:	UL-49/52-1544

		Instrument:	CETAC
Standard Log #:	M13739	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/22/2019	Expiration Date:	02/22/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard ID#:	M13734	Vendor:	SPEX CERTIPREP
Analyst:	LJF	Chemical:	HG 1000 ug/mL
Date Received:	02/21/2019	Lot #:	CL10-136HGY
Expiration Date (if any):	02/28/2020	Catalog #:	CLHG4-2Y

Standard Log #:	M13735	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/21/2019	Expiration Date:	02/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13736	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/21/2019	Expiration Date:	02/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13737	Vendor:	SPEX CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	02/21/2019	Lot #:	51-117CR
Expiration Date (if any):	02/28/2020	Catalog #:	XSPIKE-1-250

Standard ID#:	M13738	Vendor:	SPEX CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	02/21/2019	Lot #:	2-230SGX
Expiration Date (if any):	02/28/2020	Catalog #:	INT-A1

		Instrument:	CETAC
Standard Log #:	M13730	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/14/2019	Expiration Date:	02/14/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard ID#:	M13731	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 ug/mL
Date Received:	02/14/2019	Lot #:	175213-60
Expiration Date (if any):	08/20	Catalog #:	S4400-1000504F

Standard ID#:	M13732	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10000 ug/mL
Date Received:	02/14/2019	Lot #:	139448-54
Expiration Date (if any):	08/20	Catalog #:	4400-10M671

Standard ID#:	M13733	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10000 ug/mL
Date Received:	02/14/2019	Lot #:	172053-36
Expiration Date (if any):	08/20	Catalog #:	4400-10M411

Standard ID#:	M13727	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	02/08/2019	Lot #:	175511
Expiration Date (if any):		Catalog #:	H331-500

Standard ID#:	M13728	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	02/08/2019	Lot #:	186819
Expiration Date (if any):		Catalog #:	S271-500

Standard Log #:	M13729	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	02/11/2019	Expiration Date:	08/11/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

Standard Log #:	M13724	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/07/2019	Expiration Date:	02/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13725	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/07/2019	Expiration Date:	02/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13726	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	02/07/2019	Expiration Date:	08/07/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13721	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/05/2019	Expiration Date:	02/05/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard Log #:	M13722	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	02/05/2019	Expiration Date:	08/05/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13723	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	02/05/2019	Expiration Date:	08/05/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.671 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13720	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	01/31/2019	Expiration Date:	01/31/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13716	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/30/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13717	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/30/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13718	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/30/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13719	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	01/30/2019	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13713	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	01/29/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

Standard ID#:	M13714	Vendor:	ACROS ORGANICS
Analyst:	LJF	Chemical:	POTASSIUM PERSULFATE
Date Received:	01/29/2019	Lot #:	A0391673
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M13715	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	1/29/2019	Lot #:	51-013CR
Expiration Date (if any):	01/30/2020	Catalog #:	XCTWI-1-500

		Instrument:	GFAA
Standard Log #:	M13711	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	01/29/2019	Expiration Date:	07/2019
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13459 **3.2 mL** of As (1000 mg/L) M13392 **3.2 mL** of Se (1000 mg/L) M13460 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M13712	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	01/29/2019	Expiration Date:	07/2019
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13459 **1.0 mL** of As (1000 mg/L) M13392 **2.0 mL** of Se (1000 mg/L) M13460 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

		Instrument:	CETAC
Standard Log #:	M13710	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	01/22/2019	Expiration Date:	01/22/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M13709	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	01/10/2019	Expiration Date:	09/30/2019
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **2.5 mL** of K (10,000 mg/L) M13689, **2.5 mL** of Na (10,000 mg/L) M13605 and **7.5 mL** of Fe (10,000 mg/L) M13609 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13705	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13607 and K (1000 µg/mL) M13606 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13706	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13607 and **0.5 mL** K (1000 µg/mL) M13606 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13707	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13689 and Na (10,000 mg/L) M13605 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13708	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M13605 and **0.15 mL** K (10,000 µg/mL) M13689 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M13703	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/20/2018	Expiration Date:	12/20/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13704	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/20/2018	Expiration Date:	12/20/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13701	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	12/13/2018	Expiration Date:	06/13/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

Standard ID#:	M13696	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10,000 mg/L
Date Received:	12/11/2018	Lot #:	167967-42
Expiration Date (if any):	06/20	Catalog #:	4400-10M544

Standard ID#:	M13697	Vendor:	CPI
Analyst:	NAH	Chemical:	Moybdenum 1000 mg/L
Date Received:	12/11/2018	Lot #:	169424-59
Expiration Date (if any):	06/20	Catalog #:	4400-1000343

Standard ID#:	M13698	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 mg/L
Date Received:	12/11/2018	Lot #:	175213-60
Expiration Date (if any):	06/20	Catalog #:	S4400-10005044F

Standard ID#:	M13699	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/11/2018	Lot #:	50-120CR
Expiration Date (if any):	12/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13700	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	12/12/2018	Expiration Date:	12/12/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

Standard ID#:	M13689	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	169484-36
Expiration Date (if any):	06/20	Catalog #:	4400-10M11

Standard ID#:	M13690	Vendor:	CPI
Analyst:	NAH	Chemical:	Aluminum 10,000 mg/L
Date Received:	12/11/2018	Lot #:	169484-36
Expiration Date (if any):	06/20	Catalog #:	4400-10M11

Standard ID#:	M13691	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	752887-32
Expiration Date (if any):	06/20	Catalog #:	4400-10M521

Standard ID#:	M13692	Vendor:	CPI
Analyst:	NAH	Chemical:	Calcium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	855297-1
Expiration Date (if any):	06/20	Catalog #:	4400-10M91

Standard ID#:	M13693	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	156651-78
Expiration Date (if any):	06/20	Catalog #:	4400-10M261

Standard ID#:	M13694	Vendor:	CPI
Analyst:	NAH	Chemical:	Magnesium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	148250-72
Expiration Date (if any):	06/20	Catalog #:	4400-10M311

Standard ID#:	M13695	Vendor:	CPI
Analyst:	NAH	Chemical:	Iron 10,000 mg/L
Date Received:	12/11/2018	Lot #:	156651-78
Expiration Date (if any):	06/20	Catalog #:	4400-10M261

		Instrument:	GFAA
Standard Log #:	M13686	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	12/07/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13687	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	12/07/2018	Expiration Date:	05/17/2018
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13688	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	12/07/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13684	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	12/04/2018	Expiration Date:	06/04/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard ID#:	M13683	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	10000 mg/L
Date Received:	11/30/2018	Lot #:	1805105
Expiration Date (if any):	5/31/2020	Catalog #:	HP10M67-1

Standard Log #:	M13681	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 B&Si Spiking Solution
Prep Date:	11/29/2018	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	52	M13531	1000	2.6
Si	192	M13394	1000	9.6

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M13682	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/29/2018	Expiration Date:	11/29/2018

Prep: Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.

Standard Log #:	M13679	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 L2 Spiking Solution
Prep Date:	11/29/2018	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Li	14.4	M13517	1000	0.72
Sn	20	M13572	1000	1
Sr	3.2	M13586	1000	0.16
Ti	9.6	M13573	1000	0.48
W	24	xxxxxxxx	1000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13680	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	11/29/2018	Expiration Date:	07/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13531	1000	0.8
Si	200	M13394	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13677	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	11/29/2018	Expiration Date:	04/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	9.6	M13562	**10000**	0.048
As	32	M13392	1000	1.6
Ba	2	M13457	1000	0.1
Be	1.6	M13579	1000	0.08
Ca	56	M13324	**10000**	0.28
Cd	1.6	M13570	1000	0.08
Co	9.6	M13575	1000	0.48
Cr	5.6	M13617	**10000**	0.028
Cu	16	M13618	**10000**	0.08
Fe	72	M13463	**10000**	0.36
Mg	32	M13319	**10000**	0.16
Mn	6	M13616	**10000**	0.03
Mo	9.6	M13608	1000	0.48
Ni	4.8	M13569	1000	0.24
Pb	10	M13610	**10000**	0.05
Sb	32	M13459	1000	1.6
Se	16	M13460	1000	0.8
Tl	19	M13583	1000	0.95
V	3.2	M13578	1000	0.16
Zn	12	M13610	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13676	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	11/29/2018	Expiration Date:	04/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	36	M13462	**10000**	0.18
As	24	M13392	1000	1.2
Ba	1.8	M13457	1000	0.09
Be	0.6	M13579	1000	0.03
Ca	100	M13324	**10000**	0.5
Cd	2.0	M13570	1000	0.1
Co	4	M13575	1000	0.2
Cr	4	M13617	**10000**	0.02
Cu	7	M13618	**10000**	0.035
Fe	100	M13463	**10000**	0.5
Mg	40	M13319	**10000**	0.2
Mn	4	M13616	**10000**	0.02
Mo	7	M13608	1000	0.35
Ni	6	M13569	1000	0.2
Pb	4	M13610	**10000**	0.02
Sb	12	M13459	1000	0.6
Se	13	M13460	1000	0.65
Tl	20	M13583	1000	0.75
V	5	M13578	1000	0.25
Zn	10	M13610	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M13675	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/26/2018	Expiration Date:	11/26/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13671	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	11/21/2018	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13672	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	11/21/2018	Expiration Date:	05/21/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.668 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

Standard Log #:	M13673	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	11/21/2018	Expiration Date:	05/21/2018
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M13674	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	11/21/2018	Expiration Date:	05/21/2018
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13668	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/21/2018	Expiration Date:	01/01/2019
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13669	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/21/2018	Expiration Date:	04/30/2019
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13444 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13670	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	11/21/2018	Expiration Date:	04/30/2019
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13444 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	ICP
Standard Log #:	M13666	Standard:	As Pb ICV1
Analyst:	MDS	Concentrations:	5000 ug/L (As,Pb)
Prep Date:	11/19/2018	Expiration Date:	07/2019
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** of As (1000 mg/L) M13392 and **0.5 mL** Pb (10,000 mg/L) M13615 and brought to volume with Milli-Q H_2O. (2% HNO_3, 2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13667	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/19/2018	Expiration Date:	11/19/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

Standard Log #:	M13664	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/16/2018	Expiration Date:	11/16/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13665	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/16/2018	Expiration Date:	11/16/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M13659	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/01/2018	Expiration Date:	11/01/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

		Instrument:	ICP 6500
Standard Log #:	M13660	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg
Prep Date:	11/01/2018	Expiration Date:	09/19
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M13635 and **15 mL** Fe (10000 mg/L) M13609 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13661	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	11/06/2018	Expiration Date:	10/19
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M13637, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M13635, **0.5 mL** Mo (1000 mg/L) M13608, **0.5 mL** B (1000 mg/L) M13531, **0.5 mL** Sr (1000 mg/L) M13580, **0.5 mL** Li (1000 mg/L) M13577, **0.5 mL** Sn (1000 mg/L) M13572, **0.5 mL** Ti (1000 mg/L) M13573, **0.5 mL** W (1000 mg/L) Mxxxxx, **0.5 mL** Si (1000 mg/L) M13571, **0.5 mL** S (10000 mg/L) M13530, **0.5 mL** K (10000 mg/L) M13612, and **0.5 mL** K (10000 mg/L)		

		Instrument:	ICP 6000
Standard Log #:	M13657	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/2/2018	Expiration Date:	01/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M13572 Sr (1000 µg/mL) M13580 Ti (1000 µg/mL) M13573 W (1000 µg/mL) XXX		

		Instrument:	ICP 6000
Standard Log #:	M13658	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	11/2/2018	Expiration Date:	01/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	XXX	1000	5	XXX
Ti	10/30	M13573	1000	0.5	01/2020
Sr	10/30	M13580	1000	0.5	02/2020
Sn	20/60	M13572	1000	1	01/2020

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	ICP
Standard Log #:	M13655	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	11/2/2018	Expiration Date:	02/28/2019
Prep:	Standard Conc. (ug/L) — Pipette the following: 1 — **0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.001 mL** W (1000 µg/mL) xxx into 1L = *1 µg/L* 10 — **0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.01 mL** W (1000 µg/mL) xxx into 1L = *10 µg/L* 100 — **1 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.1 mL** W (1000 µg/mL) xxx into 1L = *100 µg/L* 1000 (CCV) — **2 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.2 mL** W (1000 µg/mL) xxx into 200mL = *1000 µg/L* 10000 — **20 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **2 mL** W (1000 µg/mL) xxx into 200mL = *10000 µg/L*		

		Instrument:	ICP 6000
Standard Log #:	M13656	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/2/2018	Expiration Date:	02/28/2019
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13410, **6 mL** of Fe (10,000 mg/L) M13529, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) XXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	GFAA
Standard Log #:	M13651	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	10/29/2018	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13652	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	10/29/2018	Expiration Date:	10/2019
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13612 and Na (10,000 mg/L) M13461 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M13653	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance std
Date Received:	10/29/2018	Lot #:	2-036AB
Expiration Date (if any):	10/30/2019	Catalog #:	XCTWI-1-500

		Instrument:	ICP 6000
Standard Log #:	M13648	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	10/26/2018	Expiration Date:	07/2019
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13390 and Si (1000 mg/L) M13528 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13649	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	10/26/2018	Expiration Date:	07/30/2019
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13576 and **1.0 mL** Si (1000 mg/L) M13571 and brought up to volume using milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13650	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/27/2018	Expiration Date:	02/28/2019
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13410 , **0.05 mL** of B (1000 µg/mL) M13390 , **0.05 mL** of Si (1000 µg/mL) M13528 and **3 mL** of Fe (10,000 mg/L) M13529 and brought up to volume using Milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M13645	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/24/2018	Expiration Date:	10/24/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

Standard ID#:	M13646	Vendor:	Alfa Aesar
Analyst:	MDS	Chemical:	1% Nickel Nitrate Matrix Modifier
Date Received:	10/25/2018	Lot #:	8137324
Expiration Date (if any):	12/31/2019	Catalog #:	39043

Standard ID#:	M13647	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	10/24/2018	Lot #:	H226-02
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M13643	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/24/2018	Expiration Date:	10/24/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13644	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/24/2018	Expiration Date:	10/24/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

		Instrument:	GFAA
Standard Log #:	M13639	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/24/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13640	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/24/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13641	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/24/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13642	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/24/2018	Expiration Date:	10/24/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13638	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	10 µg/L As 6 µg/L Pb 12 µg/L Sb 20 µg/L Se 14 µg/L Tl 0.6 µg/L Ag
Prep Date:	10/23/2018	Expiration Date:	07/2019

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13392	10,000
Pb	0.1	10,000	M13615	10,000
Tl	1	1000	M13583	10,000
Se	1	1000	M13460	10,000
Sb	1	1000	M13459	10,000
Ag	0.1	1000	M13458	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.0	10,000	10
Pb	0.6	10,000	6
Tl	1.4	10,000	14
Se	2.0	10,000	20
Sb	1.2	10,000	12
Ag	0.6	1000	0.6

Standard ID#:	M13634	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,0000 mg/L
Date Received:	10/18/2018	Lot #:	139448-54
Expiration Date (if any):	04/20	Catalog #:	4400-10m671

Standard ID#:	M13635	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	10/18/2018	Lot #:	2-230sgx
Expiration Date (if any):	09/30/2019	Catalog #:	INT-A1

		Instrument:	CETAC
Standard Log #:	M13636	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/18/2018	Expiration Date:	10/18/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.665 in a hood.		

Standard ID#:	M13637	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance standard
Date Received:	10/18/2018	Lot #:	50-0007CR
Expiration Date (if any):	10/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13633	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/16/2018	Expiration Date:	10/16/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.665 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13632	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	10/16/2018	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

Standard Log #:	M13627	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/03/2018	Expiration Date:	10/03/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13628	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/03/2018	Expiration Date:	10/03/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

MRL BASE STD M13626

Analyst NAH

Prep Date 10/01/2018

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13458	1000	1	10/2019
Al	400	M13462	10000	2	10/2019
Ba	10	M13457	1000	0.5	10/2019
Be	4	M13579	1000	0.2	02/20
Cd	5	M13570	1000	0.25	01/20
Co	10	M13575	1000	0.5	01/20
Cr	10	M13617	10000	0.05	03/20
Cu	10	M13618	10000	0.05	03/20
Mg	500	M13319	10000	2.5	04/19
Mn	10	M13616	10000	0.05	03/20
Mo	10	M13608	1000	0.5	03/20
Ni	10	M13569	1000	0.5	03/20
Pb	10	M13610	10000	0.05	03/20
Sb	20	M13459	1000	1	03/20
V	10	M13578	1000	0.5	02/20
Zn	10	M13610	10000	0.05	02/20
K	1000	M13341	10000	5	05/19
Na	1000	M13402	10000	5	08/19
As	20	M13392	1000	1	07/19
Ca	500	M13324	10000	2.5	04/19
Fe	300	M13463	10000	1.5	10/19
Se	20	M13460	1000	1	10/19
Tl	20	M13583	1000	1	02/20
Si	100	M13394	1000	5	07/19
B	20	M13531	1000	1	07/19
Li	20	M13517	1000	1	02/20
W	50	xxxxxxx	1000	2.5	xxxxxxx
Ti	10	M13573	1000	0.5	02/20
Sr	10	M13586	1000	0.5	02/20
Sn	50	M13572	1000	2.5	02/20
S	300	M13391	10000	1.5	07/19

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M13625	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/03/2018	Expiration Date:	09/30/2019
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13600 and **10 mL** Mg (10,000 mg/L) M13464 and brought up to volume.		

Standard ID#:	M13618	Vendor:	CPI
Analyst:	NAH	Chemical:	Cu 10000 mg/L
Date Received:	09/20/2018	Lot #:	148796-39
Expiration Date (if any):	03/2020	Catalog #:	S4400-10M141

		Instrument:	CETAC
Standard Log #:	M13619	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	09/19/2018	Expiration Date:	09/19/2018
Prep:	Carefully mixed **3** parts HCl AB.664 with **1** part HNO_3 AB.665 in a hood.		

Standard ID#:	M13620	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	09/04/2018	Lot #:	177409
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13611	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	09/20/2018	Lot #:	169484-18
Expiration Date (if any):	03/2020	Catalog #:	4400-10M11

Standard ID#:	M13612	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	09/20/2018	Lot #:	172053-36
Expiration Date (if any):	03/2020	Catalog #:	440010M411

Standard ID#:	M13613	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	09/20/2018	Lot #:	855297-1
Expiration Date (if any):	03/2020	Catalog #:	4400-10M91

Standard ID#:	M13614	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	09/20/2018	Lot #:	148250-72
Expiration Date (if any):	03/2020	Catalog #:	4400-10M311

Standard ID#:	M13615	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 10000 mg/L
Date Received:	09/20/2018	Lot #:	168223-17
Expiration Date (if any):	03/2020	Catalog #:	4400-10M281

Standard ID#:	M13616	Vendor:	CPI
Analyst:	NAH	Chemical:	Mn 10000 mg/L
Date Received:	09/20/2018	Lot #:	167540-6
Expiration Date (if any):	03/2020	Catalog #:	S4400-10M321

Standard ID#:	M13617	Vendor:	CPI
Analyst:	NAH	Chemical:	Cr 10000 mg/L
Date Received:	09/20/2018	Lot #:	158236-7
Expiration Date (if any):	03/2020	Catalog #:	s4400-10M121

Standard ID#:	M13604	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10000 mg/L
Date Received:	09/20/2018	Lot #:	167967-37
Expiration Date (if any):	03/2020	Catalog #:	4400-10M544

Standard ID#:	M13605	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 10000 mg/L
Date Received:	09/20/2018	Lot #:	752887-3
Expiration Date (if any):	03/2020	Catalog #:	4400-10M521

Standard ID#:	M13606	Vendor:	CPI
Analyst:	NAH	Chemical:	K 1000 mg/L
Date Received:	09/20/2018	Lot #:	144467-179
Expiration Date (if any):	03/2020	Catalog #:	4400-1000411-500

Standard ID#:	M13607	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 1000 mg/L
Date Received:	09/20/2018	Lot #:	158237-113
Expiration Date (if any):	03/2020	Catalog #:	4400-1000521-500

Standard ID#:	M13608	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	09/20/2018	Lot #:	169424-37
Expiration Date (if any):	03/2020	Catalog #:	S4400-1000343

Standard ID#:	M13609	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	09/20/2018	Lot #:	156651-53
Expiration Date (if any):	03/2020	Catalog #:	4400-10M261

Standard ID#:	M13610	Vendor:	CPI
Analyst:	NAH	Chemical:	Zn 10000 mg/L
Date Received:	09/20/2018	Lot #:	979871-2
Expiration Date (if any):	03/2020	Catalog #:	4400-10M681

Standard Log #:	M13601	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/12/2018	Expiration Date:	09/12/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13602	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	09-12-2018	Lot #:	1-124AB
Expiration Date (if any):	09-30-2019	Catalog #:	XCTWI-5-500

Standard ID#:	M13600	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	1% Pd Matrix Modifier
Date Received:	09/11/2018	Lot #:	1808015
Expiration Date (if any):	09/30/2019	Catalog #:	HP1900-100

Standard Log #:	M13599	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/08/2018	Expiration Date:	09/08/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13595	Vendor:	SPEX CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	08/29/2018	Lot #:	49-151CR
Expiration Date (if any):	08/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13596	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	08/30/2018	Expiration Date:	08/30/2018
Prep:	Carefully mixed **3** parts HCl AB.664 with **1** part HNO_3 AB.665 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M13597	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	08/30/2018	Expiration Date:	05/2019
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13339 and K (1000 µg/mL) M13340 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13598	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	08/30/2018	Expiration Date:	05/2019
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13339 and **0.5 mL** K (1000 µg/mL) M13340 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M13588	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	08/21/2018	Expiration Date:	08/21/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13589	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	08/21/2018	Expiration Date:	08/21/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13590	Vendor:	AMCO Clear
Analyst:	NAH	Chemical:	turbidity std 2.0 ntu
Date Received:	08/21/2018	Lot #:	18272791
Expiration Date (if any):	08/2019	Catalog #:	8008

		Instrument:	ICP 6000
Standard Log #:	M13586	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	08/20/2018	Expiration Date:	01/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M13572 Sr (1000 µg/mL) M13580 Ti (1000 µg/mL) M13573 W (1000 µg/mL) MXXX		

		Instrument:	ICP 6000
Standard Log #:	M13587	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	08/20/2018	Expiration Date:	01/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	XXX	1000	5	XXX
Ti	10/30	M13573	1000	0.5	01/2020
Sr	10/30	M13580	1000	0.5	02/2020
Sn	20/60	M13572	1000	1	01/2020

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	ICP
Standard Log #:	M13584	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	08/20/2018	Expiration Date:	07/30/2019
Prep:	Standard Conc. (ug/L)	Pipette the following:	
	1	**0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.001 mL** W (1000 µg/mL) MXXX into 1L = *1 µg/L*	
	10	**0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.01 mL** W (1000 µg/mL) MXXX into 1L = *10 µg/L*	
	100	**1 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.1 mL** W (1000 µg/mL) MXXX into 1L = *100 µg/L*	
	1000 (CCV)	**2 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.2 mL** W (1000 µg/mL) MXXX into 200mL = *1000 µg/L*	
	10000	**20 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **2 mL** W (1000 µg/mL) MXXX into 200mL = *10000 µg/L*	

		Instrument:	ICP 6000
Standard Log #:	M13585	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	08/20/2018	Expiration Date:	
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13410, **6 mL** of Fe (10,000 mg/L) M13463, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) MXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

Standard ID#:	M13577	Vendor:	CPI
Analyst:	NAH	Chemical:	Li 1000 mg/L
Date Received:	08/17/2018	Lot #:	751942-25
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000291

Standard ID#:	M13578	Vendor:	CPI
Analyst:	NAH	Chemical:	V 1000 mg/L
Date Received:	08/17/2018	Lot #:	152207-68
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000651

Standard ID#:	M13579	Vendor:	CPI
Analyst:	NAH	Chemical:	Be 1000 mg/L
Date Received:	08/17/2018	Lot #:	660981-5
Expiration Date (if any):	02/2020	Catalog #:	S4400-100051

Standard ID#:	M13580	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	08/17/2018	Lot #:	168227-29
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000531

Standard ID#:	M13581	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	08/17/2018	Lot #:	172053-36
Expiration Date (if any):	02/2020	Catalog #:	4400-10411

Standard ID#:	M13582	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	08/17/2018	Lot #:	1805105
Expiration Date (if any):	02/2020	Catalog #:	HP10M67-1

Standard ID#:	M13583	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	08/17/2018	Lot #:	148983-70
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000581

Standard ID#:	M13576	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/04/2018	Lot #:	49-045CR
Expiration Date (if any):	07/30/2019	Catalog #:	XCTWI-5-500

Standard ID#:	M13569	Vendor:	CPI
Analyst:	NAH	Chemical:	Ni 1000 mg/L
Date Received:	07/27/2018	Lot #:	166665-86
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000361

Standard ID#:	M13570	Vendor:	CPI
Analyst:	NAH	Chemical:	Cd 1000 mg/L
Date Received:	07/27/2018	Lot #:	160499-32
Expiration Date (if any):	01/2020	Catalog #:	s4400-100081

Standard ID#:	M13571	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	07/27/2018	Lot #:	175213-28
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000504F

Standard ID#:	M13572	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/L
Date Received:	07/27/2018	Lot #:	144466-74
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000613

Standard ID#:	M13573	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	07/27/2018	Lot #:	152616-55
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000623

Standard ID#:	M13574	Vendor:	CPI
Analyst:	NAH	Chemical:	Hg 1000 mg/L
Date Received:	07/27/2018	Lot #:	175191-22
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000331

Standard ID#:	M13575	Vendor:	CPI
Analyst:	NAH	Chemical:	Co 1000 mg/L
Date Received:	07/27/2018	Lot #:	161693-10
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000131

Standard Log #:	M13563	Instrument:	ICP
Analyst:	LJF	Standard:	LOQ 3050 S Spiking Solution
Prep Date:	07/19/2018	Expiration Date:	10/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	240	M13466	10000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard ID#:	M13557	Vendor:	Alfa Aesar Specpure
Analyst:	MDS	Chemical:	1% Nickel Nitrate Matrix Modifier
Date Received:	07/17/2018	Lot #:	8137324
Expiration Date (if any):	12/31/2019	Catalog #:	39043

		Instrument:	ICP 6000
Standard Log #:	M13558	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	07/17/2018	Expiration Date:	05/2019
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13518 and **1.0 mL** Si (1000 mg/L) M13338 and brought up to volume using milli-Q H_2O.		

Standard Log #:	M13559	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	07/17/2018	Expiration Date:	01/17/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13559 and brought up to volume.		

Standard Log #:	M13554	Instrument:	ICP
Analyst:	LJF	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	07/13/2018	Expiration Date:	05/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13390	1000	0.8
Si	200	M13338	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13555	Instrument:	ICP
Analyst:	LJF	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	07/13/2018	Expiration Date:	10/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M13466	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M13553	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	07/12/2018	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13547	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	07/09/2018	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

Standard Log #:	M13548	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	07/10/2018	Expiration Date:	01/10/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13226 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M13549	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	07/10/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

Standard Log #:	M13534	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	10 µg/L As 6 µg/L Pb 12 µg/L Sb 20 µg/L Se 14 µg/L Tl 0.6 µg/L Ag
Prep Date:	07/02/2018	Expiration Date:	09/16/2018

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13392	10,000
Pb	0.1	10,000	M13169	10,000
Tl	1	1000	M13124	10,000
Se	1	1000	M13460	10,000
Sb	1	1000	M13459	10,000
Ag	0.1	1000	M13458	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.0	10,000	10
Pb	0.6	10,000	6
Tl	1.4	10,000	14
Se	2.0	10,000	20
Sb	1.2	10,000	12
Ag	0.6	1000	0.6

Standard ID#:	M13535	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	07/02/2018	Lot #:	48-179CR
Expiration Date (if any):	06/30/2019	Catalog #:	XSPIKE-1-250

Standard ID#:	M13526	Vendor:	CPI
Analyst:	NAH	Chemical:	YTTRIUM 10,000 ug/mL
Date Received:	06/22/2018	Lot #:	138448-54
Expiration Date (if any):	12/2019	Catalog #:	4400-10M671

Standard ID#:	M13527	Vendor:	CPI
Analyst:	NAH	Chemical:	POTASSIUM 10,000
Date Received:	06/22/2018	Lot #:	172053-32
Expiration Date (if any):	12/2019	Catalog #:	4400-104411

Standard ID#:	M13528	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	06/22/2018	Lot #:	142610-115
Expiration Date (if any):	12/2019	Catalog #:	S4400-1000504F

Standard ID#:	M13529	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10,000 ug/mL
Date Received:	06/22/2018	Lot #:	156651-42
Expiration Date (if any):	12/2019	Catalog #:	4400-10M261

Standard ID#:	M13530	Vendor:	CPI
Analyst:	NAH	Chemical:	SULFUR 10,000ug/mL
Date Received:	06/22/2018	Lot #:	129880-46
Expiration Date (if any):	12/2019	Catalog #:	4400-10M544

Standard ID#:	M13531	Vendor:	CPI
Analyst:	NAH	Chemical:	BORON 1000 ug/mL
Date Received:	06/22/2018	Lot #:	158372-91
Expiration Date (if any):	12/2019	Catalog #:	S4400-100074

Standard ID#:	M13532	Vendor:	CPI
Analyst:	NAH	Chemical:	CUSTOM ASSURANCE STANDARD
Date Received:	06/22/2018	Lot #:	48-146CR
Expiration Date (if any):	06/30/2019	Catalog #:	XCTWI-1-500

Standard ID#:	M13520	Vendor:	FRISCOLYT
Analyst:	NAH	Chemical:	Electrolyte Solution
Date Received:	06/13/2018	Lot #:	1DO71H
Expiration Date (if any):	12/03/2021	Catalog #:	51 340 053

		Instrument:	ICP
Standard Log #:	M13521	Standard:	As Pb ICV1
Analyst:	MDS	Concentrations:	5000 ug/L (As,Pb)
Prep Date:	06/13/2018	Expiration Date:	10/20/2018
Prep:	Into a 1 L volumetric flask, pipetted **0.5 mL** of As (10,000 mg/L) M13392 and **0.5 mL** Pb (10,000 mg/L) M13169 and brought to volume with Milli-Q H_2O. (2% HNO_3, 2% HCl)		

Standard ID#:	M13518	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/11/2018	Lot #:	48-060CR
Expiration Date (if any):	06/30/2019	Catalog #:	XCTWI-5-500

		Instrument:	ICP 6500
Standard Log #:	M13519	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/11/2018	Expiration Date:	06/30/2019

Prep:

Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O.
(5% HNO_3, 5% HCl)
1000 ug/L Std. - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13518, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13506 and **1 mL** of Si (1000 mg/L) M13394 and 1 mL M13203 Ce
0.25 ug/L Std. - **0.25 mL** of the 1000 ug/L Std.
0.5 ug/L Std. - **0.5 mL** of the 1000 ug/L Std.
1 ug/L Std. - **1 mL** of the 1000 ug/L Std.
5 ug/L Std. - **5 mL** of the 1000 ug/L Std.
10 ug/L Std. - **10 mL** of the 1000 ug/L Std.
20 ug/L Std. - **20 mL** of the 1000 ug/L Std.
50 ug/L Std. - **50 mL** of the 1000 ug/L Std.
100 ug/L Std. - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3
10,000 ug/L Std. - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M13465.
100k ug/L Std. - **10 mL** of Cu (10,000 mg/L) M13166, **10 mL** of Mn (10,000 mg/L) M13167, **10 mL** of Cr (10,000 mg/L) M13165, **10 mL** Pb (10,000 mg/L) M13169, **10 mL** of Zn (10,000 mg/L) M13168 and **10 mL** of Na (10,000 mg/L) M13461.
100,000 ug/L Std. - **10 mL** of Mg (10,000 mg/L) M13319, **10 mL** of Fe (10,000 mg/L) M13463, **10 mL** of Ca (10,000 mg/L) M13467 and **10 mL** Al (10,000 mg/L) M13462.
500,000 ug/L Std. - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L)
1000k ug/L Std. - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)

		Instrument:	CETAC
Standard Log #:	M13510	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/01/2018	Expiration Date:	06/01/2018
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.655 in a hood.		

Standard ID#:	M13511	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	06/04/2018	Lot #:	176877
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13506	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05/22/2018	Lot #:	48-042CR
Expiration Date (if any):	05/30/2019	Catalog #:	XCTWI-4-500

Standard ID#:	M13507	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05/22/2018	Lot #:	48-041CR
Expiration Date (if any):	05/30/2019	Catalog #:	XSPIKE-1-250

Standard ID#:	M13508	Vendor:	RESTEK
Analyst:	NAH	Chemical:	Diatomaceous earth (Celite 566)
Date Received:	05/22/2018	Lot #:	811030-BG
Expiration Date (if any):	N/A	Catalog #:	26033

Standard ID#:	M13495	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	05/15/2018	Lot #:	H052-17
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	ICP 6000
Standard Log #:	M13485	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	05/07/2018	Expiration Date:	05/2019
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13339 and K (1000 µg/mL) M13340 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13486	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	05/07/2018	Expiration Date:	08/2019
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13400 and Na (10,000 mg/L) M13402 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13487	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	05/07/2018	Expiration Date:	08/2019
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M13402 and **0.15 mL** K (10,000 µg/mL) M13400 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13488	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	05/07/2018	Expiration Date:	05/2019
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13339 and **0.5 mL** K (1000 µg/mL) M13340 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M13484	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	05/03/2018	Lot #:	1805105
Expiration Date (if any):	10/31/2019	Catalog #:	HP10M67-1

		Instrument:	ICP 6000
Standard Log #:	M13471	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	04/26/2018	Expiration Date:	07/2019
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13390 and Si (1000 mg/L) M13394 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13472	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	04/26/2018	Expiration Date:	07/02/2018
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13364 and **1.0 mL** Si (1000 mg/L) M13085 and brought up to volume using milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13473	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	04/26/2018	Expiration Date:	10/30/2018
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13305 , **0.05 mL** of B (1000 µg/mL) M13390 , **0.05 mL** of Si (1000 µg/mL) M13394 and **3 mL** of Fe (10,000 mg/L) M13321 and brought up to volume using Milli-Q H_2O.		

Standard ID#:	M13467	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	04/20/2018	Lot #:	147497-47
Expiration Date (if any):	10/2019	Catalog #:	4400-10M91

Standard ID#:	M13468	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	04/24/2018	Lot #:	174236
Expiration Date (if any):		Catalog #:	H331-500

		Instrument:	CETAC
Standard Log #:	M13469	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/24/2018	Expiration Date:	04/24/2018
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.655 in a hood.		

Standard ID#:	M13462	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	04/20/2018	Lot #:	158058-23
Expiration Date (if any):	10/2019	Catalog #:	4400-10M11

Standard ID#:	M13463	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	04/20/2018	Lot #:	156651-18
Expiration Date (if any):	10/2019	Catalog #:	4400-10M261

Standard ID#:	M13464	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	04/20/2018	Lot #:	148250-67
Expiration Date (if any):	10/2019	Catalog #:	4400-10M311

Standard ID#:	M13465	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	04/20/2018	Lot #:	172053-2
Expiration Date (if any):	10/2019	Catalog #:	4400-10M411

Standard ID#:	M13466	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	04/20/2018	Lot #:	129880-37
Expiration Date (if any):	10/2019	Catalog #:	4400-10M544

Standard ID#:	M13457	Vendor:	CPI
Analyst:	NAH	Chemical:	Barium 1000 mg/L
Date Received:	04/20/2018	Lot #:	158364-3
Expiration Date (if any):	10/2019	Catalog #:	S4400-100041

Standard ID#:	M13458	Vendor:	CPI
Analyst:	NAH	Chemical:	Ag 1000 mg/L
Date Received:	04/20/2018	Lot #:	162712-9
Expiration Date (if any):	10/2019	Catalog #:	S4400-1000511

Standard ID#:	M13459	Vendor:	CPI
Analyst:	NAH	Chemical:	Sb 1000 mg/L
Date Received:	04/20/2018	Lot #:	153992-1
Expiration Date (if any):	10/2019	Catalog #:	S4400-100023

Standard ID#:	M13460	Vendor:	CPI
Analyst:	NAH	Chemical:	Se 1000 mg/L
Date Received:	04/20/2018	Lot #:	154366-16
Expiration Date (if any):	10/2019	Catalog #:	S4400-1000491

Standard ID#:	M13461	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 mg/L
Date Received:	04/20/2018	Lot #:	107139-108
Expiration Date (if any):	10/2019	Catalog #:	4400-10M521

Standard Log #:	M13445	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	04/19/2018	Expiration Date:	10/19/2018
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M12652 and brought up to volume.		

		Instrument:	Hach 2100 turbidity meter
Standard Log #:	M13446	Standard:	Turbity ICAL
Analyst:	NAH	Concentrations:	20, 100, 200 ntu
Prep Date:	04/19/2018	Expiration Date:	12/2019
Prep:	Using the hach vials , pipet the following: *20 ntu Std.* = **1 ml** M13436 and 9 mls DI H20. *100 ntu Std.* = **5 mls** M13436 and 5 mls DI H20. *200 ntu Std.* = ***10 mls*** M13436 *and* 0 mls DI H20.		

LPMT1-04
Metals Reagents and Standards
Prep Logbook
Created: 12/19/17

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Author: nhenn on: 4/19/2018 11:15:48 AM
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Project: Unassigned
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		Instrument:	ICP 6000
Standard Log #:	M13438	Standard:	Sulfur ICAL
Analyst:	MDS	Concentrations:	1000 10,000 100,000 1000K µg/L (S)
Prep Date:	04/11/2018	Expiration Date:	07/2019
Prep:	Into four, 100 mL volumetric flasks, pipetted the following from stock standard S (10,000 µg/mL) M13391 and brought up to volume using milli-Q H_2O. *1000 ug/L std.* - **0.01 mL** *10,000 ug/L std.* - **0.1 mL** *100,000 ug/L std.* -**1.0 mL**, also used as the CCV *1000K ug/L std.* - **10 mL**		

		Instrument:	ICP 6000
Standard Log #:	M13439	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	04/11/2018	Expiration Date:	01/19/2019
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M13280 and brought up to volume using Milli-Q H_2O.		

Standard Log #:	M13437	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 B&Si Spiking Solution
Prep Date:	04/10/2018	Expiration Date:	07/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	52	M13390	1000	2.6
Si	192	M13394	1000	9.6

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Content below was appended to locked page by mszymanski on 4/19/2018 12:20:57 PM

Standard ID#:	M13436a	Vendor:	HACH
Analyst:	NAH	Chemical:	StablCal 200 NTU
Date Received:	04/10/2018	Lot #:	A7354
Expiration Date (if any):	12/2019	Catalog #:	2660449

Standard ID#:	M13400	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 ug/mL
Date Received:	02/15/2018	Lot #:	106958-116
Expiration Date (if any):	08/2019	Catalog #:	4400-10M411

Standard ID#:	M13401	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 ug/mL
Date Received:	02/15/2018	Lot #:	139448-54
Expiration Date (if any):	08/2019	Catalog #:	4400-10M671

Standard ID#:	M13402	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 ug/mL
Date Received:	02/15/2018	Lot #:	107139-126
Expiration Date (if any):	08/2019	Catalog #:	4400-10M521

Standard Log #:	M13388	Reagent:	SPLP EXTRACTION FLUID EAST #
Analyst:	BMM	pH:	4.20 ± 0.05
Prep Date:	01/23/2018	Expiration Date:	01/23/2019
Prep:	Into a 20 L carboy filled with DI H_2O, adjust pH to 4.20 ± 0.05 using 60/40 SPLP extraction fluid acid mixture M12457 .		

Standard Log #:	M13389	Reagent:	SPLP EXTRACTION FLUID WEST #
Analyst:	BMM	pH:	5.00 ± 0.05
Prep Date:	01/23/2018	Expiration Date:	01/23/2019
Prep:	Into a 20 L carboy filled with DI H_2O, adjust pH to 5.00 ± 0.05 using 60/40 SPLP extraction fluid acid mixture M12457 .		

Standard ID#:	M13390	Vendor:	CPI
Analyst:	NAH	Chemical:	Boron 1000 ug/mL
Date Received:	01/23/2018	Lot #:	158372-29
Expiration Date (if any):	07/2019	Catalog #:	S4400-100074

Standard ID#:	M13391	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10000 ug/mL
Date Received:	01/23/2018	Lot #:	129880-28
Expiration Date (if any):	07/2019	Catalog #:	4400-10M544

Standard ID#:	M13392	Vendor:	CPI
Analyst:	NAH	Chemical:	Arsenic 1000 ug/mL
Date Received:	01/23/2018	Lot #:	143356-61
Expiration Date (if any):	07/2019	Catalog #:	S4400-100031

Standard ID#:	M13393	Vendor:	CPI
Analyst:	NAH	Chemical:	Molybdenum 1000 ug/mL
Date Received:	01/23/2018	Lot #:	134169R-102
Expiration Date (if any):	07/2019	Catalog #:	S4400-1000343

Standard ID#:	M13394	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 ug/mL
Date Received:	01/23/2018	Lot #:	142610-58
Expiration Date (if any):	07/2019	Catalog #:	S4400-1000504F

Standard ID#:	M13350	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	12/12/2017	Lot #:	1729606
Expiration Date (if any):	06//2019	Catalog #:	10M67-1

Standard ID#:	M13226	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	07/21/2017	Lot #:	170229
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13199	Vendor:	National Institute of Standards and Te
Analyst:	NAH	Chemical:	SRM Montana I soil
Date Received:	05/15/2017	Lot #:	2710a
Expiration Date (if any):		Catalog #:	

Standard ID#:	M13200	Vendor:	National Institute of Standards and Te
Analyst:	NAH	Chemical:	SRM Montana II soil
Date Received:	05/15/2017	Lot #:	2711a
Expiration Date (if any):		Catalog #:	

Standard ID#:	M13186	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	05/22/2017	Lot #:	166161
Expiration Date (if any):		Catalog #:	H331-500

Standard ID#:	M13187	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10,000 ug/mL
Date Received:	05/22/2017	Lot #:	1705408
Expiration Date (if any):	11/16/2018	Catalog #:	HP10M67-1

Standard ID#:	M13080	Vendor:	FISHER
Analyst:	LJF	Chemical:	POTASSIUM PERMANGANATE
Date Received:	01/30/2017	Lot #:	164080
Expiration Date (if any):		Catalog #:	P279-212

Standard ID#:	M13059	Vendor:	ACROS ORGANICS
Analyst:	LJF	Chemical:	POTASSIUM PERSULFATE
Date Received:	12/19/2016	Lot #:	A0375670
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M13024	Vendor:	METTLER TOLEDO
Analyst:	LJF	Chemical:	FRISCOLYT
Date Received:	11/01/2016	Lot #:	1B167D
Expiration Date (if any):		Catalog #:	51340053

INORGANIC
CLP FORMS
DOCUMENTS

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553554
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/15/2021 15:38
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.9		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.30	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	33	M	0.80	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553554
Analytical Method:	EPA 9060A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/16/2021 16:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.6	J	0.50	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553551
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/15/2021 14:07
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.8		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553551
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/19/2021 14:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	87		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553551
Analytical Method:	EPA 9060A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 17:03
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553550
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/15/2021 13:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.74		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	25		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553550
Analytical Method:	EPA 9060A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 16:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553552
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/15/2021 14:43
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.8		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553552
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/19/2021 15:01
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	87		4.0	7.5	15	15

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553552
Analytical Method:	EPA 9060A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 17:21
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554739
Analytical Method:	EPA 9060A	Date Received:	04/19/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181146	Analysis Date/Time	04/22/2021 12:39
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.8	J	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554739
Analytical Method:	EPA 9056A	Date Received:	04/19/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181073	Analysis Date/Time	04/17/2021 16:32
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	8.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	3.8	H	0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554739
Analytical Method:	EPA 9056A	Date Received:	04/19/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181073	Analysis Date/Time	04/21/2021 16:50
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	140		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554738
Analytical Method:	EPA 9056A	Date Received:	04/19/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181073	Analysis Date/Time	04/17/2021 15:56
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.6		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.2	H	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	43		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554738
Analytical Method:	EPA 9060A	Date Received:	04/19/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181146	Analysis Date/Time	04/21/2021 17:13
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553149
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 15:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553149
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 18:33
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.9	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.83		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	3.3		0.80	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553150
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 16:06
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.59	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553150
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 18:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.5	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	4.7		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	22		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553151
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 16:17
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553151
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 19:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.4	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	4.7		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	22		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554737
Analytical Method:	EPA 9056A	Date Received:	04/19/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181073	Analysis Date/Time	04/17/2021 14:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
16887-00-6	Chloride	5.3			1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.39	J	H,M	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	0.87	J		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554737
Analytical Method:	EPA 9060A	Date Received:	04/19/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181146	Analysis Date/Time	04/21/2021 17:01
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553152
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 16:34
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.91	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553152
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 19:27
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.7	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.38	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	13		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553553
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/15/2021 15:19
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.22	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	58		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553553
Analytical Method:	EPA 9060A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 17:40
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553142
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 14:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553142
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 17:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.4		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	62		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553148
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 15:08
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553148
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 18:15
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.5	U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	1.5	U	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554741
Analytical Method:	EPA 410.4	Date Received:	04/19/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181214	Analysis Date/Time	04/22/2021 13:47
Analytical Prep Batch #:	80702	Prep. Date/Time:	04/22/2021 09:19
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	310		18	50	75	75

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554741
Analytical Method:	EPA 9040C	Date Received:	04/19/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181070	Analysis Date/Time	04/19/2021 14:50
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	8.37		0.1	0.1	0.1	0.1

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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180881 Lab Sample ID: 553594

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	1/18/21	22:04	15.00	13.94	93	90	110
Nitrate Nitrogen	1/18/21	22:04	3.500	3.321	95	90	110
Sulfate	1/18/21	22:04	25.00	23.35	93	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921 Lab Sample ID: 555208

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	2/2/21	14:17	50.0	46.93	93.9	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181146 Lab Sample ID: 558520

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	2/2/21	14:17	50.0	46.93	93.9	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180881 Lab Sample ID: 553372

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/14/21	12:13	15.00	14.64	98	90	110
Nitrate Nitrogen	4/14/21	12:13	3.500	3.580	102	90	110
Sulfate	4/14/21	12:13	25.00	24.16	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180881

Lab Sample ID: 553374

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/14/21	19:45	15.00	14.55	97	90	110
Nitrate Nitrogen	4/14/21	19:45	3.500	3.567	102	90	110
Sulfate	4/14/21	19:45	25.00	24.04	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180881

Lab Sample ID: 553377

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/14/21	15:50	15.00	14.59	97	90	110
Nitrate Nitrogen	4/14/21	15:50	3.500	3.560	102	90	110
Sulfate	4/14/21	15:50	25.00	24.00	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921

Lab Sample ID: 554174

ICAL Calibration #: ICAL 0469 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	4/15/21	12:37	50.00	49.54	99	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921 Lab Sample ID: 554177

ICAL Calibration #: ICAL 0469 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	4/15/21	15:26	50.00	48.14	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921 Lab Sample ID: 554180

ICAL Calibration #: ICAL 0469 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	4/15/21	18:20	50.00	48.64	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921 Lab Sample ID: 554184

ICAL Calibration #: ICAL 0469 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	4/15/21	19:13	50.00	47.00	94	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180945

Lab Sample ID: 554261

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/15/21	12:55	15.00	14.68	98	90	110
Nitrate Nitrogen	4/15/21	12:55	3.500	3.586	102	90	110
Sulfate	4/15/21	12:55	25.00	24.39	98	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180945 Lab Sample ID: 554266

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/15/21	16:50	15.00	14.58	97	90	110
Nitrate Nitrogen	4/15/21	16:50	3.500	3.565	102	90	110
Sulfate	4/15/21	16:50	25.00	24.07	96	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921 Lab Sample ID: 555203

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	4/16/21	16:25	50.0	50.42	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921

Lab Sample ID: 555205

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	4/16/21	18:10	50.0	49.46	98.9	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181073 Lab Sample ID: 555352

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/17/21	13:31	15.00	14.68	97.9	90	110
Nitrate Nitrogen	4/17/21	13:31	3.500	3.640	104	90	110
Sulfate	4/17/21	13:31	25.00	24.94	99.8	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181073 Lab Sample ID: 555354

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/17/21	17:08	15.00	14.61	97.4	90	110
Nitrate Nitrogen	4/17/21	17:08	3.500	3.594	103	90	110
Sulfate	4/17/21	17:08	25.00	24.26	97.0	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181146

Lab Sample ID: 556809

ICAL Calibration #: ICAL 0469

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	4/21/21	16:20	50.0	50.81	102	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181146

Lab Sample ID: 556815

ICAL Calibration #: ICAL 0469

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	4/21/21	19:26	50.0	49.54	99.1	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181146

Lab Sample ID: 556817

ICAL Calibration #: ICAL 0469

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	4/22/21	10:22	50.0	51.79	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181146

Lab Sample ID: 556819

ICAL Calibration #: ICAL 0469

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	4/22/21	12:50	50.0	53.23	106	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181214

Lab Sample ID: 558182

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	4/22/21 13:47	400.0	414.8	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181214

Lab Sample ID: 558184

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	4/22/21 13:47	400.0	395.6	98.9	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921 Lab Sample ID: 555207

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	02/02/2021 14:28	0.05	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181146 Lab Sample ID: 558519

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	02/02/2021 14:28	0.05	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180881 Lab Sample ID: 553595

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	01/19/2021 12:11	0.6123	U	1.0	1.5
Nitrate Nitrogen	01/19/2021 12:11	0	U	0.12	0.20
Sulfate	01/19/2021 12:11	0	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180881 Lab Sample ID: 553371

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/14/2021 12:31	0.6376	U	1.0	1.5
Nitrate Nitrogen	04/14/2021 12:31	0.09620	U	0.12	0.20
Sulfate	04/14/2021 12:31	0.7184	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180881 Lab Sample ID: 553373

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/14/2021 20:03	0.6396	U	1.0	1.5
Nitrate Nitrogen	04/14/2021 20:03	0.09660	U	0.12	0.20
Sulfate	04/14/2021 20:03	0.7146	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921

Lab Sample ID: 554178

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0469 I

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	04/15/2021 15:38	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921 Lab Sample ID: 554181

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0469 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	04/15/2021 18:32	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921 Lab Sample ID: 554185

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0469 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	04/15/2021 19:25	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180945 Lab Sample ID: 554265

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/15/2021 17:08	0.6384	U	1.0	1.5
Nitrate Nitrogen	04/15/2021 17:08	0.09630	U	0.12	0.20
Sulfate	04/15/2021 17:08	0.7231	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921

Lab Sample ID: 555204

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	04/16/2021 16:37	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921

Lab Sample ID: 555206

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	04/16/2021 18:21	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181073

Lab Sample ID: 555353

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/17/2021 17:26	0.6320	U	1.0	1.5
Nitrate Nitrogen	04/17/2021 17:26	0.09440	U	0.12	0.20
Sulfate	04/17/2021 17:26	0.7181	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181146

Lab Sample ID: 556816

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0469

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	04/21/2021 19:38	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181146

Lab Sample ID: 556818

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0469

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	04/22/2021 10:46	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181146 Lab Sample ID: 556820

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0469 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	04/22/2021 13:03	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181214

Lab Sample ID: 558183

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	04/22/2021 13:47	6.90			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181214

Lab Sample ID: 558185

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	04/22/2021 13:47	2.10			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180881 Lab Sample ID: 553375

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/14/2021 16:26	0.6398	U	1.0	1.5
Nitrate Nitrogen	04/14/2021 16:26	0.09660	U	0.12	0.20
Sulfate	04/14/2021 16:26	0.7202	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180921 Lab Sample ID: 554176

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0469 I Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	04/15/2021 13:02	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 180945 Lab Sample ID: 554263

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/15/2021 13:31	0.6322	U	1.0	1.5
Nitrate Nitrogen	04/15/2021 13:31	0.09490	U	0.12	0.20
Sulfate	04/15/2021 13:31	0.7188	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181073 Lab Sample ID: 555350

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/17/2021 14:07	0.6329	U	1.0	1.5
Nitrate Nitrogen	04/17/2021 14:07	0	U	0.12	0.20
Sulfate	04/17/2021 14:07	0.7260	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181146 Lab Sample ID: 556811

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0469 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	04/21/2021 16:44	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 161060

Analytical Run #: 181214 Lab Sample ID: 556902

Analytical Prep Batch # 80702 Preparation Date/Time: 04/22/2021 09:19

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total COD	04/22/2021 13:47	6.90	U	18	37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

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5A

SPIKE SAMPLE RECOVERY

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	mg/L
Sample No	554182	Parent Sample No.:	553554
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	180921	ICAL Calibration #:	ICAL 0469 I

Analysis Type	*Initial Analysis*	Analysis Date: -----	04/15/2021	Analysis Time: --------	18:50

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	54.8		1.6	J	50.0	106		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5A

SPIKE SAMPLE RECOVERY

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	mg/L
Sample No	554267	Parent Sample No.:	553554
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	180945	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	04/15/2021	Analysis Time: --------	16:14

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	11.3		3.9		8.00	92.5			
Nitrate Nitrogen	88-111	2.27		0.30	J	2.00	98.5			
Sulfate	87-112	39.7		33		8.00	83.8			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	mg/L
Sample No	555356	Parent Sample No.:	554737
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	181073	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	04/17/2021	Analysis Time: --------	15:20

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	14.0		5.3		8.00	109			
Nitrate Nitrogen	88-111	2.73		0.39	J	2.00	117			*FAIL*
Sulfate	87-112	9.33		0.87	J	8.00	106			

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5A

SPIKE SAMPLE RECOVERY

Sample Description: **48MW06**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	mg/L
Sample No	556813	Parent Sample No.:	554739
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	181146	ICAL Calibration #:	ICAL 0469

Analysis Type: *Initial Analysis* Analysis Date: ----- 04/21/2021 Analysis Time: -------- 17:48

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	54.0		2.5	J	50.0	103		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5A

SPIKE SAMPLE RECOVERY

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	mg/L
Sample No	556904	Parent Sample No.:	554741
Analytical Prep Batch #	80702	Analytical Preparation Date/Time:	04/22/2021 09:19
Analytical Run #:	181214	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 04/22/2021 Analysis Time: -------- 13:47

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
COD	90-110	456		310		148	98.6		SP

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	mg/L
Sample No	554183	Parent Sample No.:	554182
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	180921	ICAL Calibration #:	ICAL 0469 I

Analysis Type	*Initial Analysis*	Analysis Date: -----	04/15/2021	Analysis Time: --------	19:01

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	53.1		1.6	J	50.0	103		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **48MW06**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	mg/L
Sample No	556814	Parent Sample No.:	556813
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	181146	ICAL Calibration #:	ICAL 0469

Analysis Type: *Initial Analysis* Analysis Date: ----- 04/21/2021 Analysis Time: -------- 17:59

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	51.6		2.5	J	50.0	98.2		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **IDW-48/49**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	mg/L
Sample No	556905	Parent Sample No.:	556904
Analytical Prep Batch #	80702	Analytical Preparation Date/Time:	04/22/2021 09:19
Analytical Run #:	181214	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 04/22/2021 Analysis Time: -------- 13:47

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
COD	90-110	451		310		148	95.3		SP

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 161060
% Solids for Sample:
Concentration Units: mg/L
Sample No: 554705
Parent Sample No.: 554267
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 180945
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 04/15/2021 Analysis Time: -------- 16:32

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	11.5		3.9		8.0	95.0		IC	
Nitrate Nitrogen	88-111	2.30		0.30		2.0	100		IC	
Sulfate	87-112	39.9		33		8.0	86.3		IC	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	161060
% Solids for Sample:		Concentration Units:	mg/L
Sample No	557009	Parent Sample No.:	555356
Analytical Prep Batch #		Analytical Preparation Date/Time:	
Analytical Run #:	181073	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 04/17/2021 Analysis Time: -------- 15:38

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	12.7		5.3		8.0	92.5		IC
Nitrate Nitrogen	88-111	2.41		0.39		2.0	101		IC
Sulfate	87-112	8.18		0.87		8.0	91.4		IC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

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DUPLICATES

Sample Description

13MW2

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 161060

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 180921

ICAL Calibration #: ICAL 0469 I

Sample #: 554179

Parent Sample #: 553554

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M	
Total Organic Carbon	04/15/2021	18:09	20	1.6	J	1.26	J	23.8		TOC	*FAIL*

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

13MW2

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 161060

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 180945

ICAL Calibration #:

Sample #: 554268

Parent Sample #: 553554

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	04/15/2021	15:56	10	3.9		3.88		0.514		
Nitrate Nitrogen	04/15/2021	15:56	10	0.30	J	0.302	J	0.664		
Sulfate	04/15/2021	15:56	10	33		33.2		0.604		

CT LABORATORIES
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6

DUPLICATES

Sample Description

49MW01

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 161060
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch # 1
Analytical Preparation Date/Time 0
Analytical Run #: 181073
ICAL Calibration #:
Sample #: 555357
Parent Sample #: 554737

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	04/17/2021	15:01	10	5.3		5.30		0		
Nitrate Nitrogen	04/17/2021	15:01	10	0.39	J	0.394	J	1.02		
Sulfate	04/17/2021	15:01	10	0.87	J	0.865	J	0.576		

CT LABORATORIES
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6

DUPLICATES

Sample Description

IDW-48/49

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 161060

% Solid for Sample:

Concentration Units: S.U.

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 181070

ICAL Calibration #:

Sample #: 555614

Parent Sample #: 554741

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
pH	04/19/2021	14:50	1	8.37		8.33		0.479		ELEC

CT LABORATORIES
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6

DUPLICATES

Sample Description

48MW06

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 161060

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 181146

ICAL Calibration #: ICAL 0469

Sample #: 556812

Parent Sample #: 554739

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	04/21/2021	17:37	20	1.8	J	1.86	J	3.28		TOC

CT LABORATORIES
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6

DUPLICATES

Sample Description

IDW-48/49

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 161060

% Solid for Sample:

Concentration Units: S.U.

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 181070

ICAL Calibration #:

Sample #: 558063

Parent Sample #: 554741

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
pH	04/19/2021	00:00	1	8.37		8.33		0.479		ELEC

CT LABORATORIES
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6A

MATRIX SPIKE DUPLICATES

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 161060
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 180921
ICAL Calibration #: ICAL 0469 I
Sample #: 554183
Parent Sample #: 554182

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	04/15/2021	19:01	20	54.8		53.1		3.06		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **48MW06**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 161060
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 181146
ICAL Calibration #: ICAL 0469
Sample #: 556814
Parent Sample #: 556813

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	04/21/2021	17:59	20	54.0		51.6		4.58		TOC

CT LABORATORIES
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6A

MATRIX SPIKE DUPLICATES

Sample Description: **IDW-48/49**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 161060
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 80702
Analytical Preparation Date/Time: 04/22/2021 09:19
Analytical Run #: 181214
ICAL Calibration #:
Sample #: 556905
Parent Sample #: 556904

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim	RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
COD	04/22/2021 13:47		456		451		1.06		SP

CT LABORATORIES
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6A

MATRIX SPIKE DUPLICATES

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 161060
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 180945
ICAL Calibration #:
Sample #: 554705
Parent Sample #: 554267

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	04/15/2021	16:32	15	11.3		11.5		1.20		IC
Nitrate Nitrogen	04/15/2021	16:32	15	2.27		2.30		1.46		IC
Sulfate	04/15/2021	16:32	15	39.7		39.9		0.390		IC

CT LABORATORIES
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6A

MATRIX SPIKE DUPLICATES

Sample Description: **49MW01**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 161060
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 181073
ICAL Calibration #:
Sample #: 557009
Parent Sample #: 555356

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	04/17/2021	15:38	15	14.0		12.7		9.46		IC
Nitrate Nitrogen	04/17/2021	15:38	15	2.73		2.41		12.2		IC
Sulfate	04/17/2021	15:38	15	9.33		8.18		13.1		IC

CT LABORATORIES
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7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 161060

Concentration Units: mg/L

Analytical Run #: 180881 Sample No.:#: 553376

Analytical Prep Batch #: 0 Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	04/14/2021 16:08	87-111	14.91		15.00	99		
Nitrate Nitrogen	04/14/2021 16:08	88-111	3.564		3.500	102		
Sulfate	04/14/2021 16:08	87-112	25.02		25.00	100		

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 161060

Concentration Units: mg/L

Analytical Run #: 180921

Sample No.:#: 554175

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0469 I

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Organic Carbon	04/15/2021 12:49	85-111	48.03		50.00	96		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 161060

Concentration Units: mg/L

Analytical Run #: 180945 Sample No.:#: 554262

Analytical Prep Batch #: 0 Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	04/15/2021 13:13	87-111	14.79		15.00	99		
Nitrate Nitrogen	04/15/2021 13:13	88-111	3.546		3.500	101		
Sulfate	04/15/2021 13:13	87-112	24.81		25.00	99		

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 161060

Concentration Units: mg/L

Analytical Run #: 181073

Sample No.:#: 555351

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	04/17/2021 13:49	87-111	14.79		15.00	98.6		
Nitrate Nitrogen	04/17/2021 13:49	88-111	3.572		3.500	102		
Sulfate	04/17/2021 13:49	87-112	25.05		25.00	100		

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 161060

Concentration Units: mg/L

Analytical Run #: 181146

Sample No.:#: 556810

Analytical Prep Batch #: 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0469

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Organic Carbon	04/21/2021 16:32	85-111	50.56		50.0	101		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 161060

Concentration Units: mg/L

Analytical Run #: 181214 Sample No.:#: 556903

Analytical Prep Batch #: 80702 Preparation Date/Time: 04/22/2021 09:19

ICAL Calibration #:

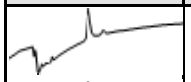
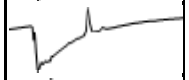
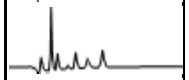
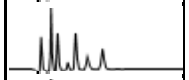
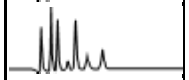
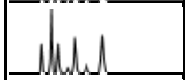
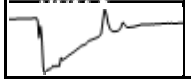
Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
COD	04/22/2021 13:47	90-110	410.0		400.0	103		SP

INORGANICS
RAW DATA
DOCUMENTS

Sequence: 011621 - 178692 IC3449A
Last Update Operator: AQUION

RJ 01/26/2021

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	IB	1.0000	Unknown		27	5000	Anions 1.0	IC3352A	Finished
	STD1	1.0000	Calibration Standard	1	28	5000	Anions 1.0	IC3449A	Finished
	STD2	1.0000	Calibration Standard	2	29	5000	Anions 1.0	IC3449A	Finished
	STD3	1.0000	Calibration Standard	3	30	5000	Anions 1.0	IC3449A	Finished
	STD4	1.0000	Calibration Standard	4	31	5000	Anions 1.0	IC3449A	Finished
	STD5	1.0000	Calibration Standard	5	32	5000	Anions 1.0	IC3449A	Finished
	STD6	1.0000	Calibration Standard	6	33	5000	Anions 1.0	IC3449A	Finished
	STD7	1.0000	Calibration Standard	7	34	5000	Anions 1.0	IC3449A	Finished
	STD8	1.0000	Calibration Standard	8	35	5000	Anions 1.0	IC3449A	Finished
	STD9	1.0000	Calibration Standard	9	36	5000	Anions 1.0	IC3449A	Finished
	ICV	1.0000	Unknown		37	5000	Anions 1.0	IC3449A	Finished
	ICB	1.0000	Unknown		2	5000	Anions	IC3449A	Finished

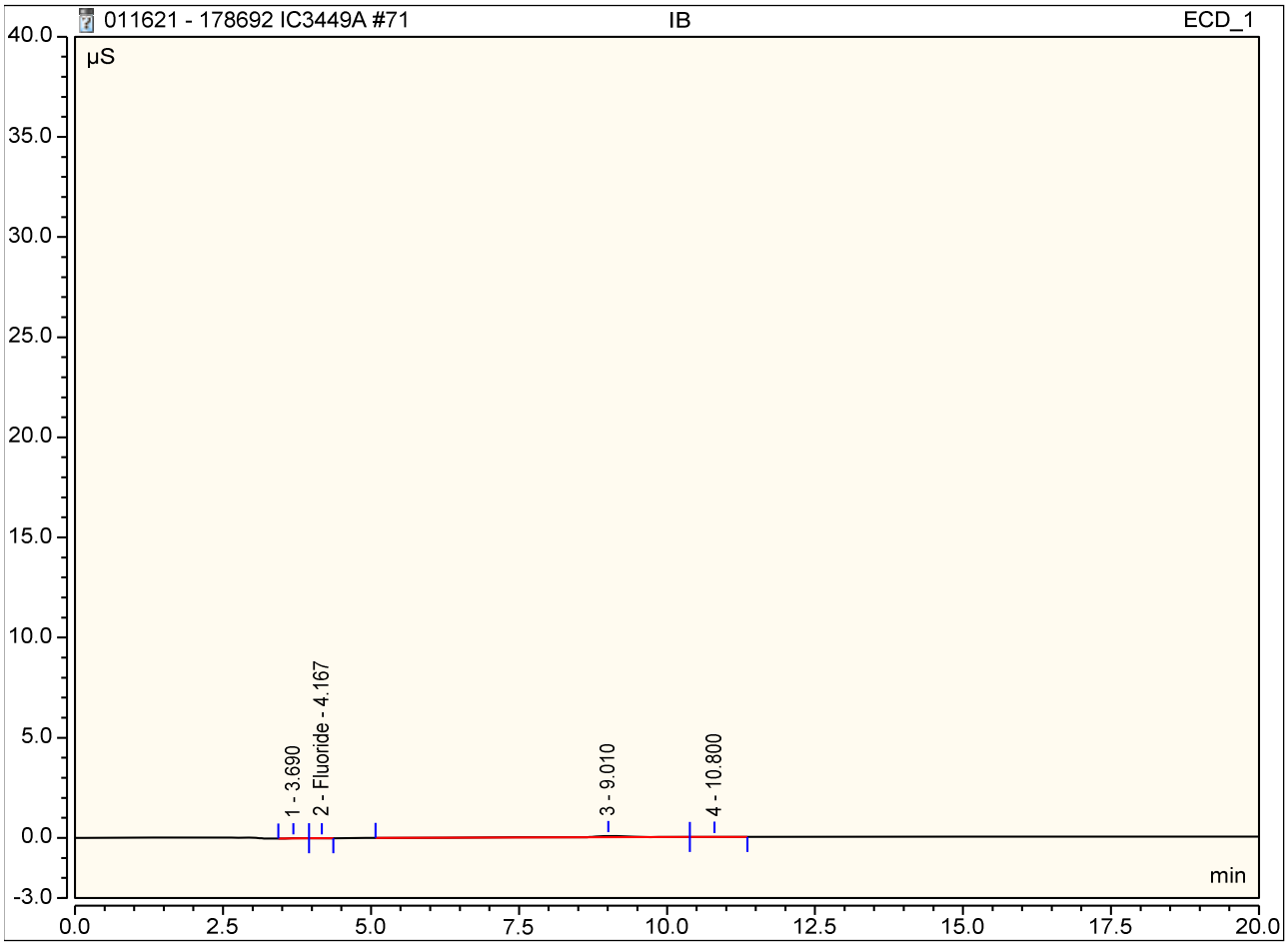
Calibration Concentrations

Instrument:AQUION 4	Cal. File:	IC3449A			ICV	IC3442 IC3450		Analyst/Date: TMG 01/18/2021		
Analyte	Cal Level 1 (mg/L)	Cal Level 2 (mg/L)	Cal Level 3 (mg/L)	Cal Level 4 (mg/L)	Cal Level 5 (mg/L)	Cal Level 6 (mg/L)	Cal Level 7 (mg/L)	Cal Level 8 (mg/L)	Cal Level 9 (mg/L)	ICV (mg/L)
Fluoride	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Chloride	0.0	0.5	0.75	1.0	5.0	10.0	20.0	30.0	40.0	15.0
Bromide	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrite	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrate	0.0	0.1	0.30	0.5	1.0	2.0	5.0	7.0		3.5
O-Phosphorous	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Sulfate	0.0	0.5	0.75	1.0	5.0	10.0	30.0	50.0	70.0	25.0

Peak Integration Report

Sample Name:	**IB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3352A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 18:43**	*Run Time:*	**20.00**

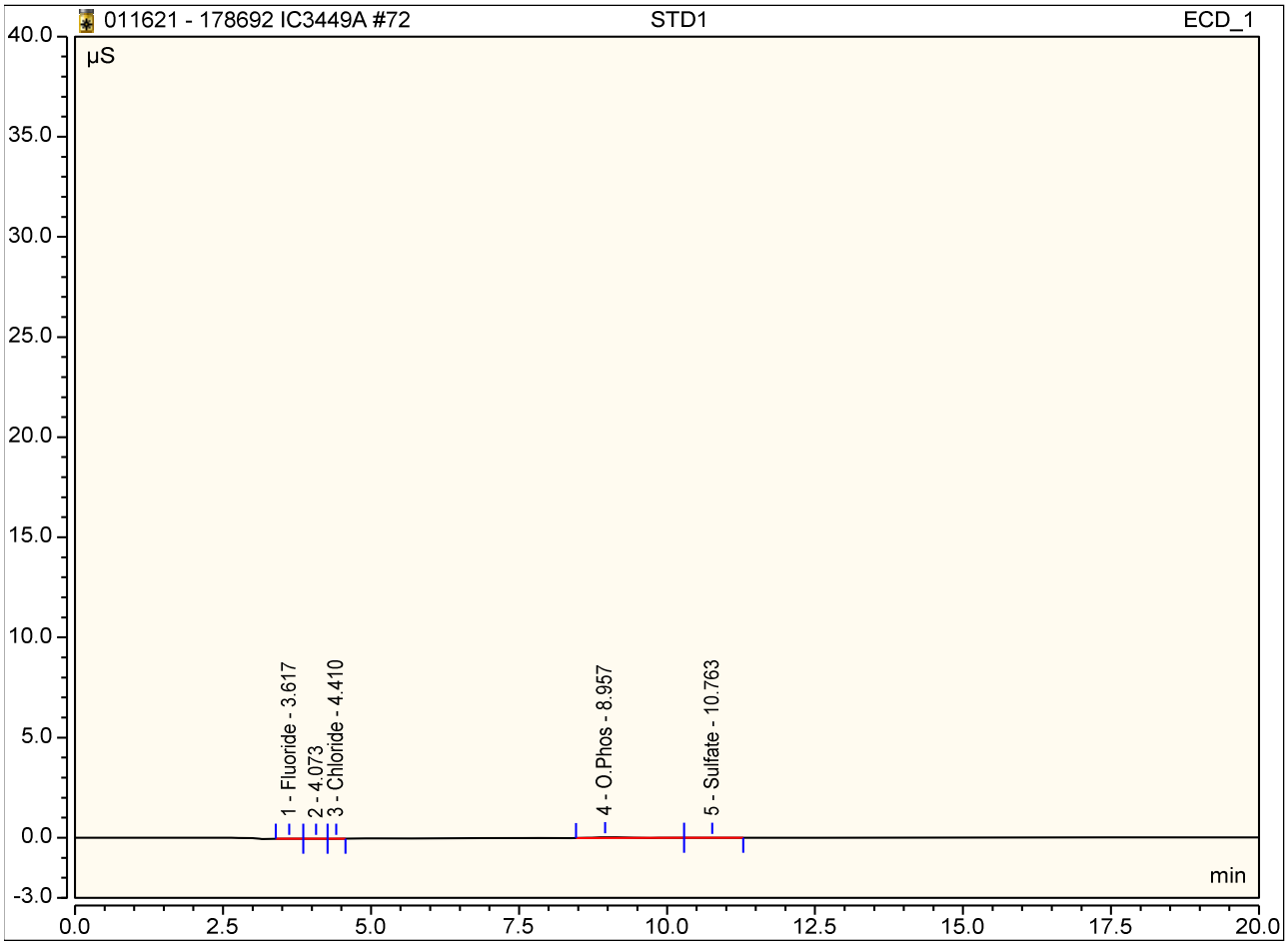
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	4.17	Fluoride	0.001	0.003	0.0109



Peak Integration Report

Sample Name:	**STD1**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 19:03**	*Run Time:*	**20.00**

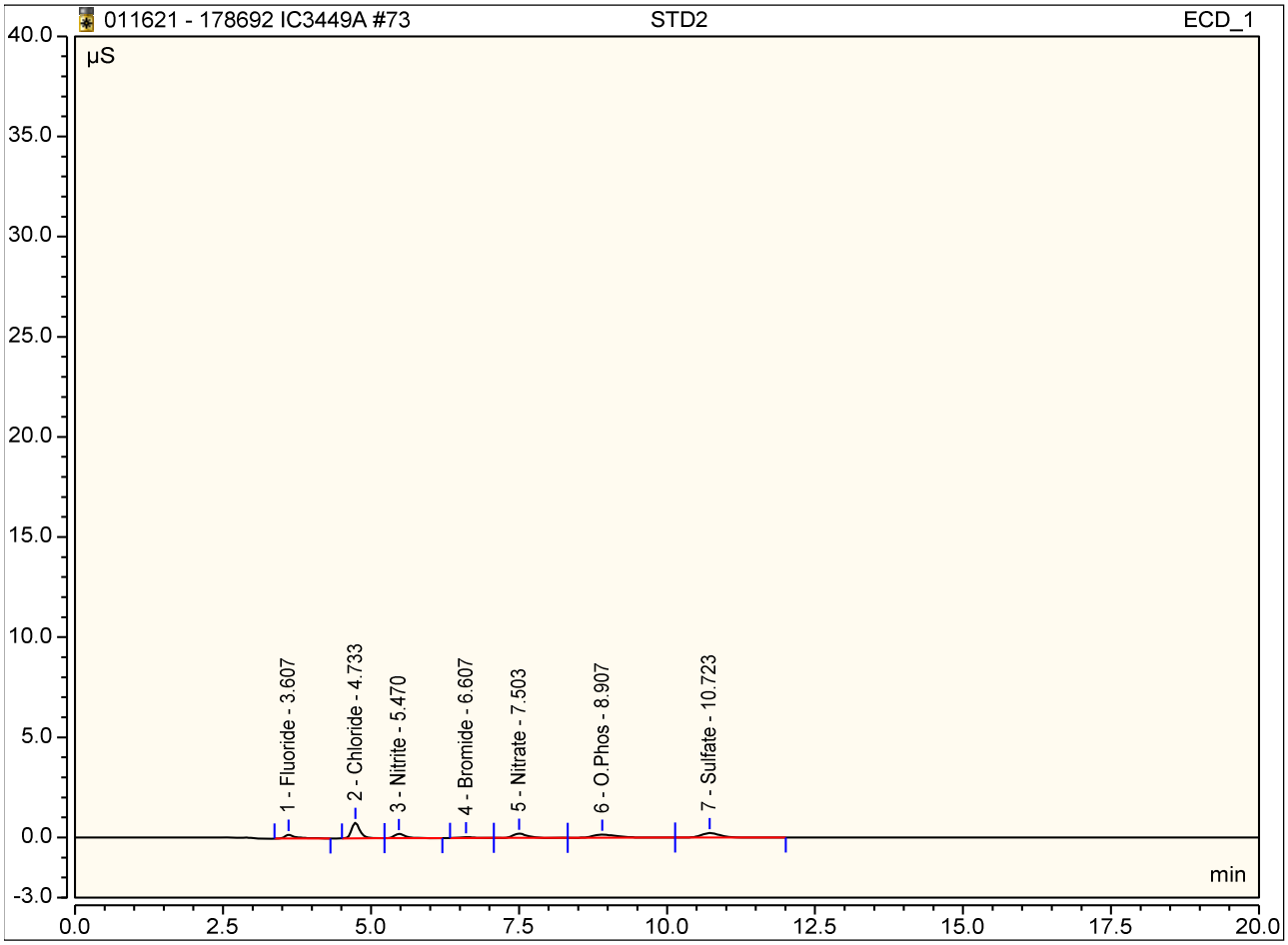
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.62	Fluoride	0.001	0.005	0.0550
3	4.41	Chloride	0.000	0.002	0.6119
4	8.96	O.Phos	0.020	0.038	n.a.
5	10.76	Sulfate	0.002	0.004	0.6978



Peak Integration Report

Sample Name:	**STD2**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 19:23**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	0.041	0.192	0.1648
2	4.73	Chloride	0.129	0.771	1.0448
3	5.47	Nitrite	0.044	0.211	0.1253
4	6.61	Bromide	0.010	0.045	0.1116
5	7.50	Nitrate	0.056	0.210	0.1772
6	8.91	O.Phos	0.073	0.154	0.0981
7	10.72	Sulfate	0.084	0.224	1.1035



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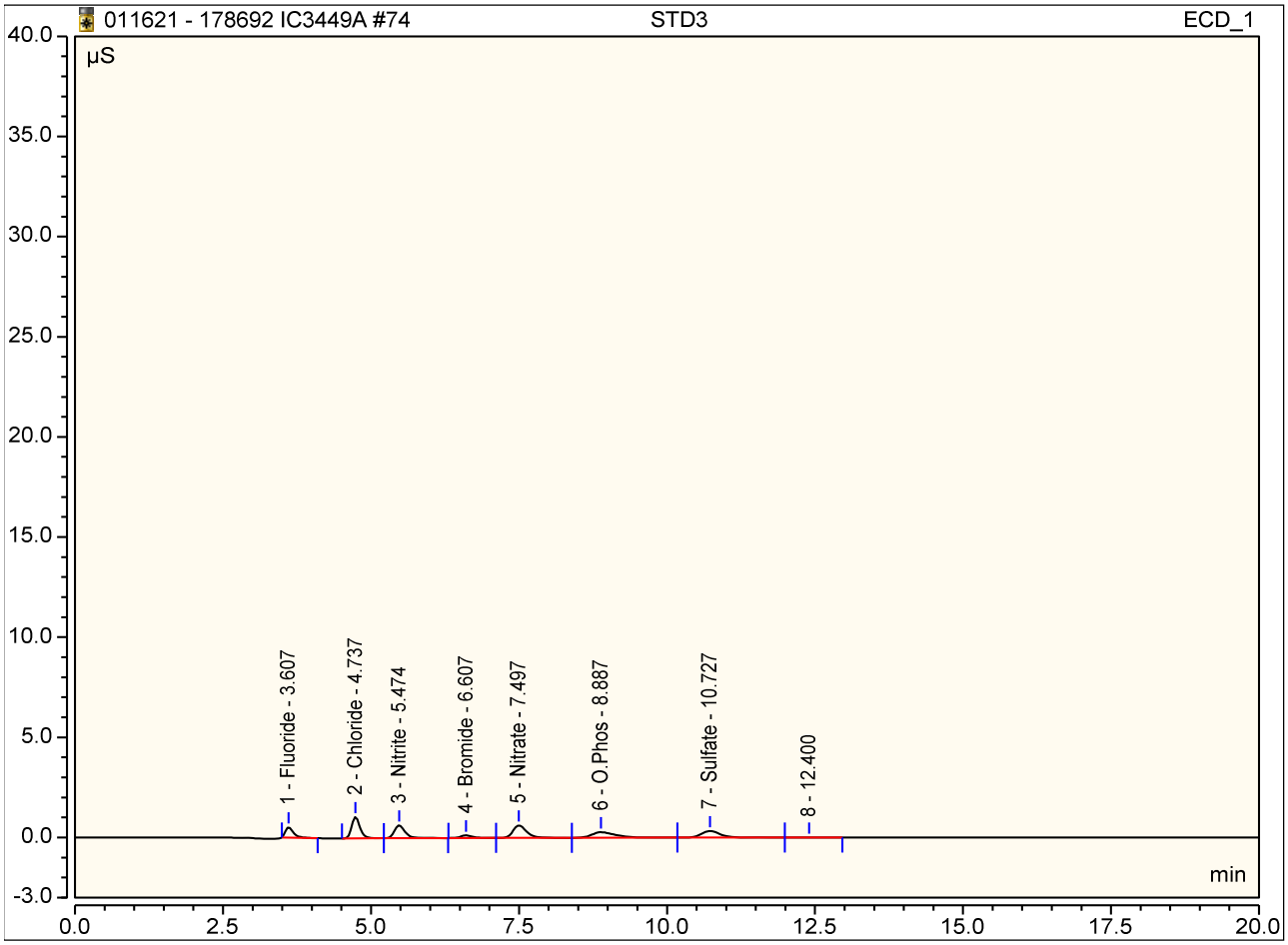
Peak Integration Report

Sample Name:	**STD3**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 19:44**	*Run Time:*	**20.00**

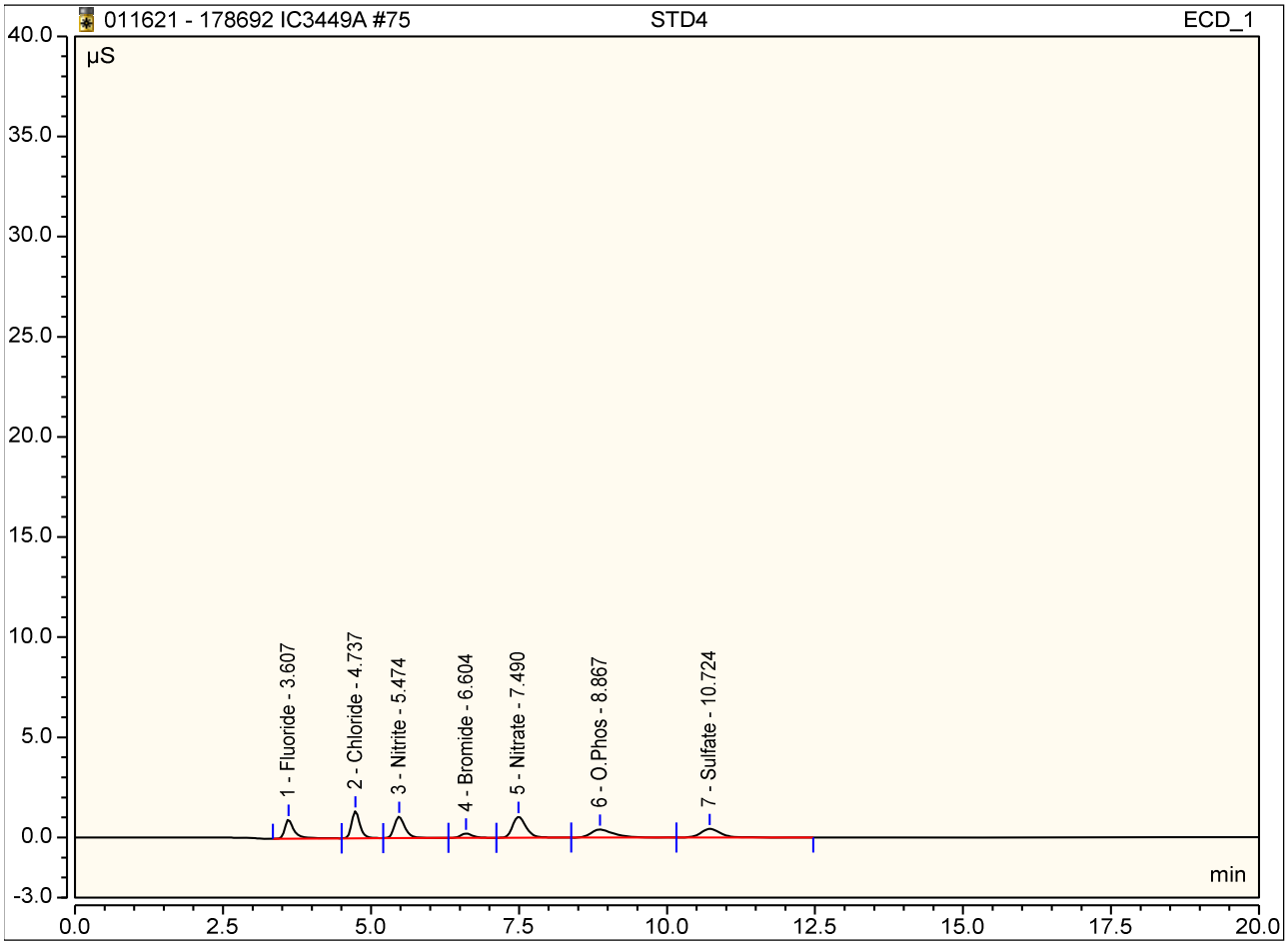
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	0.083	0.520	0.2786
2	4.74	Chloride	0.175	1.065	1.1996
3	5.47	Nitrite	0.132	0.635	0.3094
4	6.61	Bromide	0.029	0.129	0.3005
5	7.50	Nitrate	0.164	0.620	0.3443
6	8.89	O.Phos	0.126	0.276	0.3353
7	10.73	Sulfate	0.123	0.329	1.2947



Peak Integration Report

Sample Name:	**STD4**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 20:04**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	0.173	0.942	0.5257
2	4.74	Chloride	0.222	1.342	1.3565
3	5.47	Nitrite	0.223	1.066	0.5008
4	6.60	Bromide	0.048	0.214	0.4956
5	7.49	Nitrate	0.276	1.041	0.5188
6	8.87	O.Phos	0.178	0.401	0.5696
7	10.72	Sulfate	0.163	0.433	1.4902



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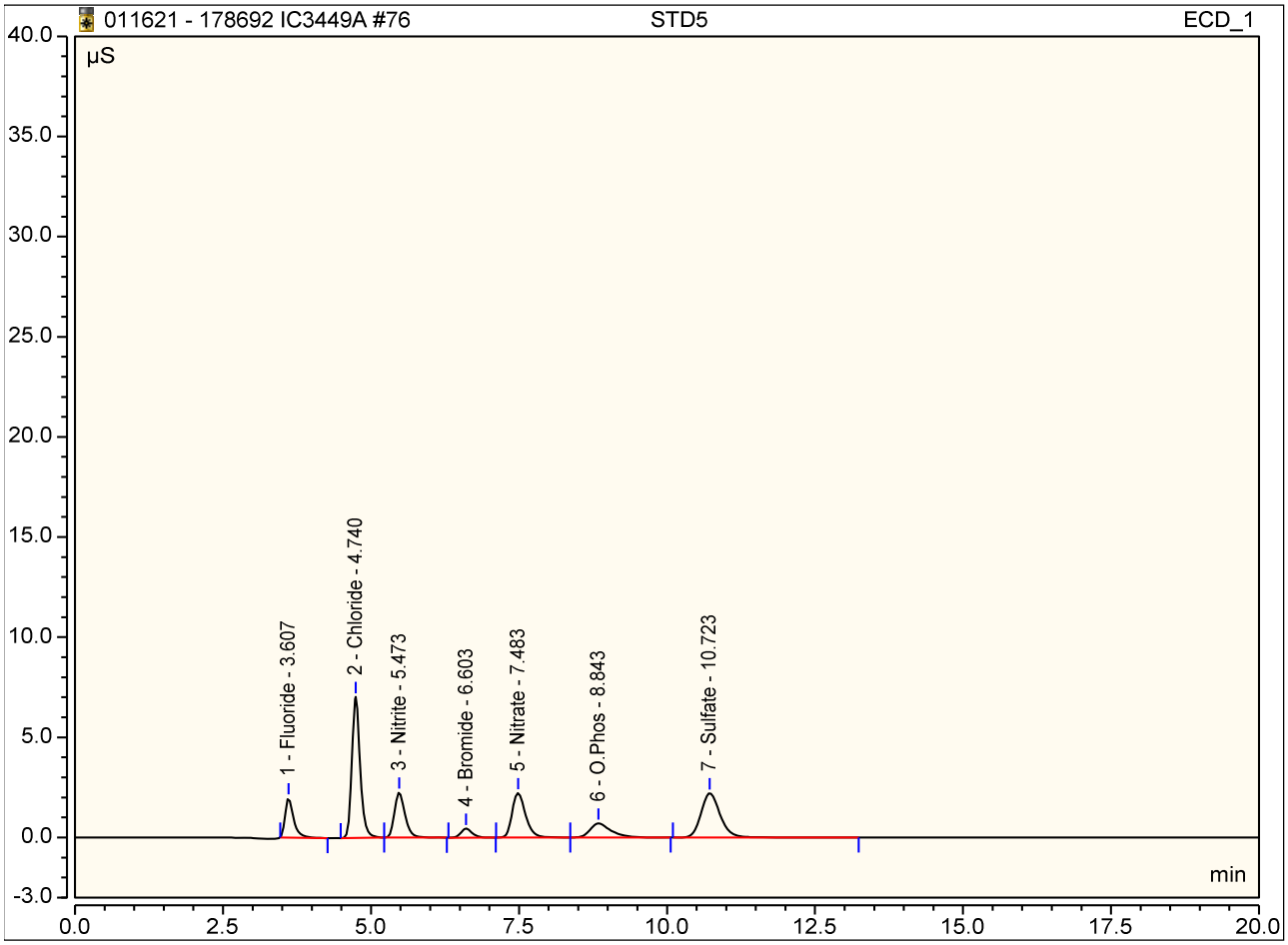
Peak Integration Report

Sample Name:	**STD5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 20:24**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	0.332	1.963	0.9580
2	4.74	Chloride	1.149	7.040	4.4741
3	5.47	Nitrite	0.470	2.257	1.0188
4	6.60	Bromide	0.100	0.448	1.0333
5	7.48	Nitrate	0.589	2.223	1.0064
6	8.84	O.Phos	0.291	0.706	1.0771
7	10.72	Sulfate	0.837	2.217	4.7914



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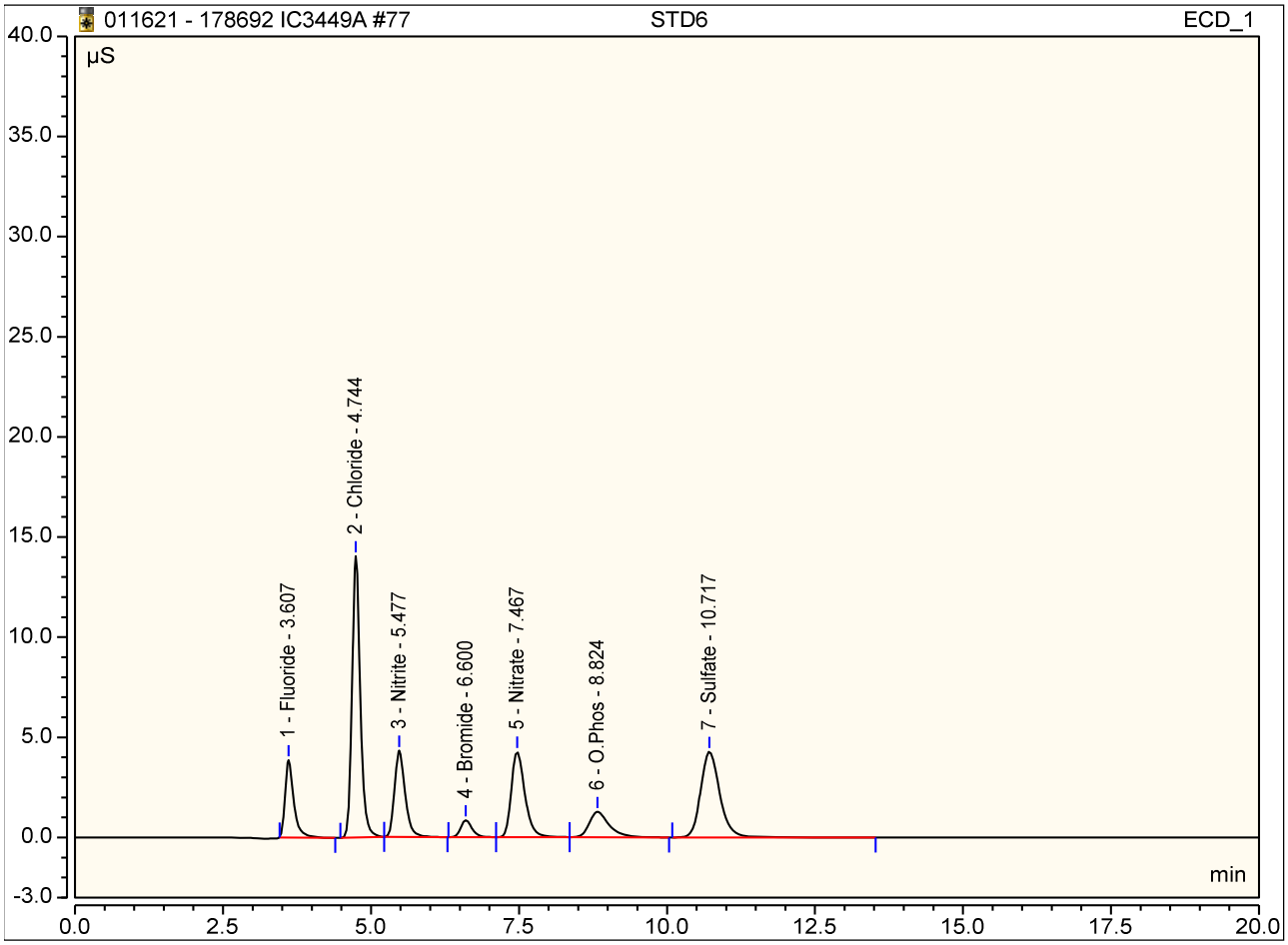
Peak Integration Report

Sample Name:	**STD6**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 20:44**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	0.659	3.859	1.8535
2	4.74	Chloride	2.266	14.044	8.2280
3	5.48	Nitrite	0.898	4.303	1.9176
4	6.60	Bromide	0.189	0.843	1.9426
5	7.47	Nitrate	1.129	4.265	1.8478
6	8.82	O.Phos	0.491	1.261	1.9761
7	10.72	Sulfate	1.611	4.279	8.5848



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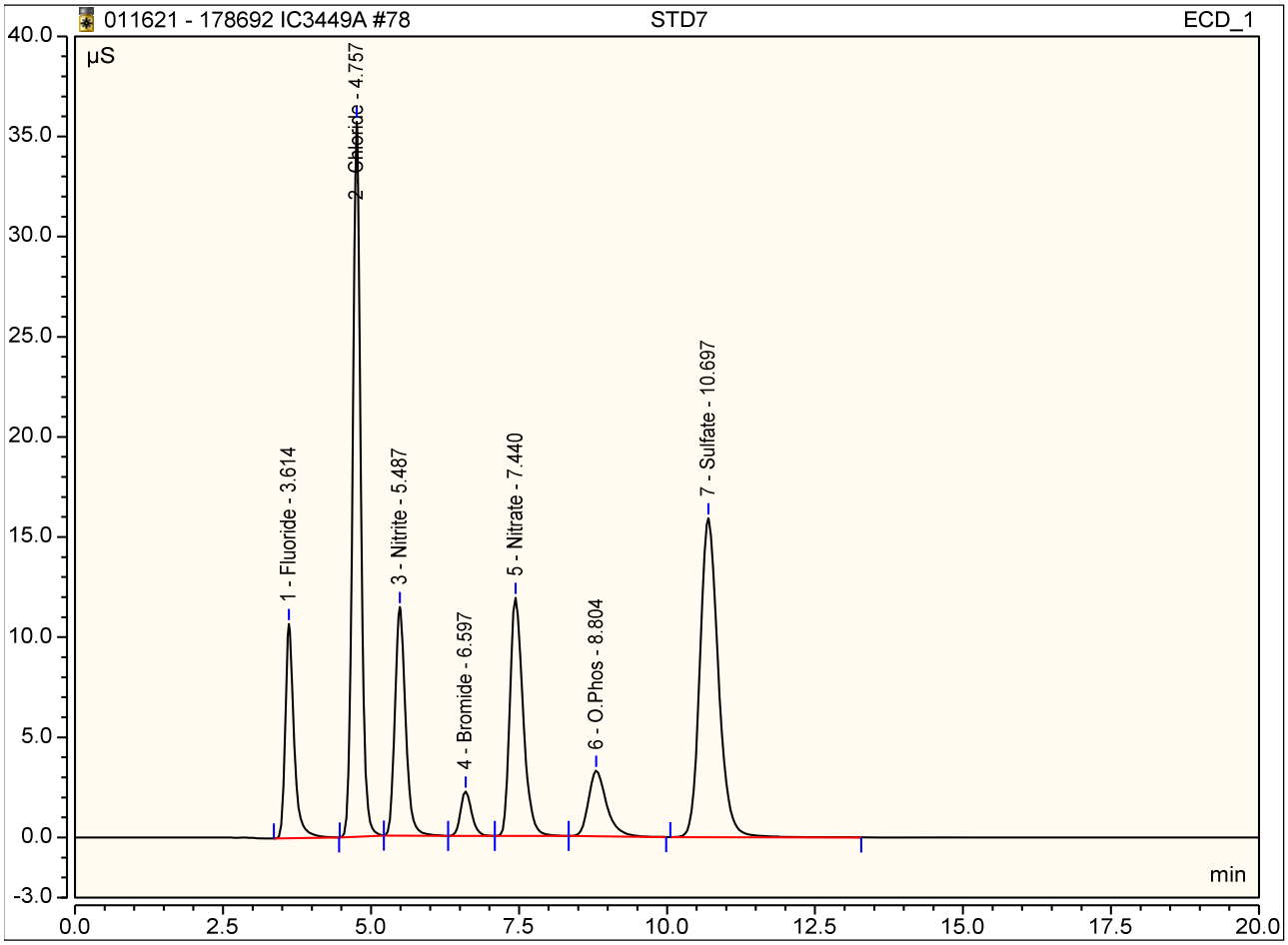
Peak Integration Report

Sample Name:	**STD7**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 21:04**	*Run Time:*	**20.00**

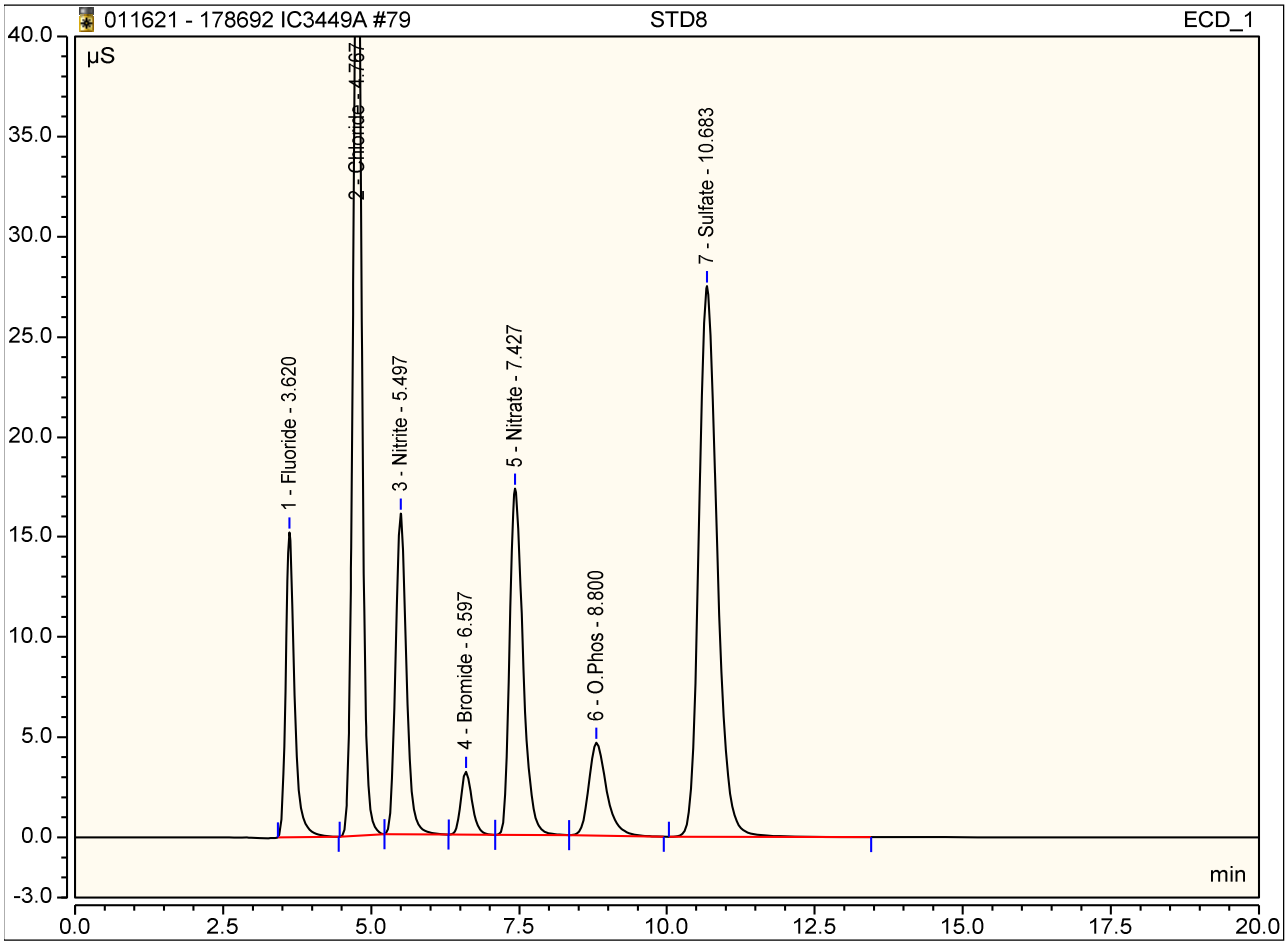
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	1.835	10.694	5.0644
2	4.76	Chloride	5.692	35.687	19.7470
3	5.49	Nitrite	2.379	11.407	5.0280
4	6.60	Bromide	0.490	2.222	5.0165
5	7.44	Nitrate	3.079	11.894	4.8854
6	8.80	O.Phos	1.161	3.274	4.9851
7	10.70	Sulfate	5.745	15.922	28.8499



Peak Integration Report

Sample Name:	**STD8**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 21:24**	*Run Time:*	**20.00**

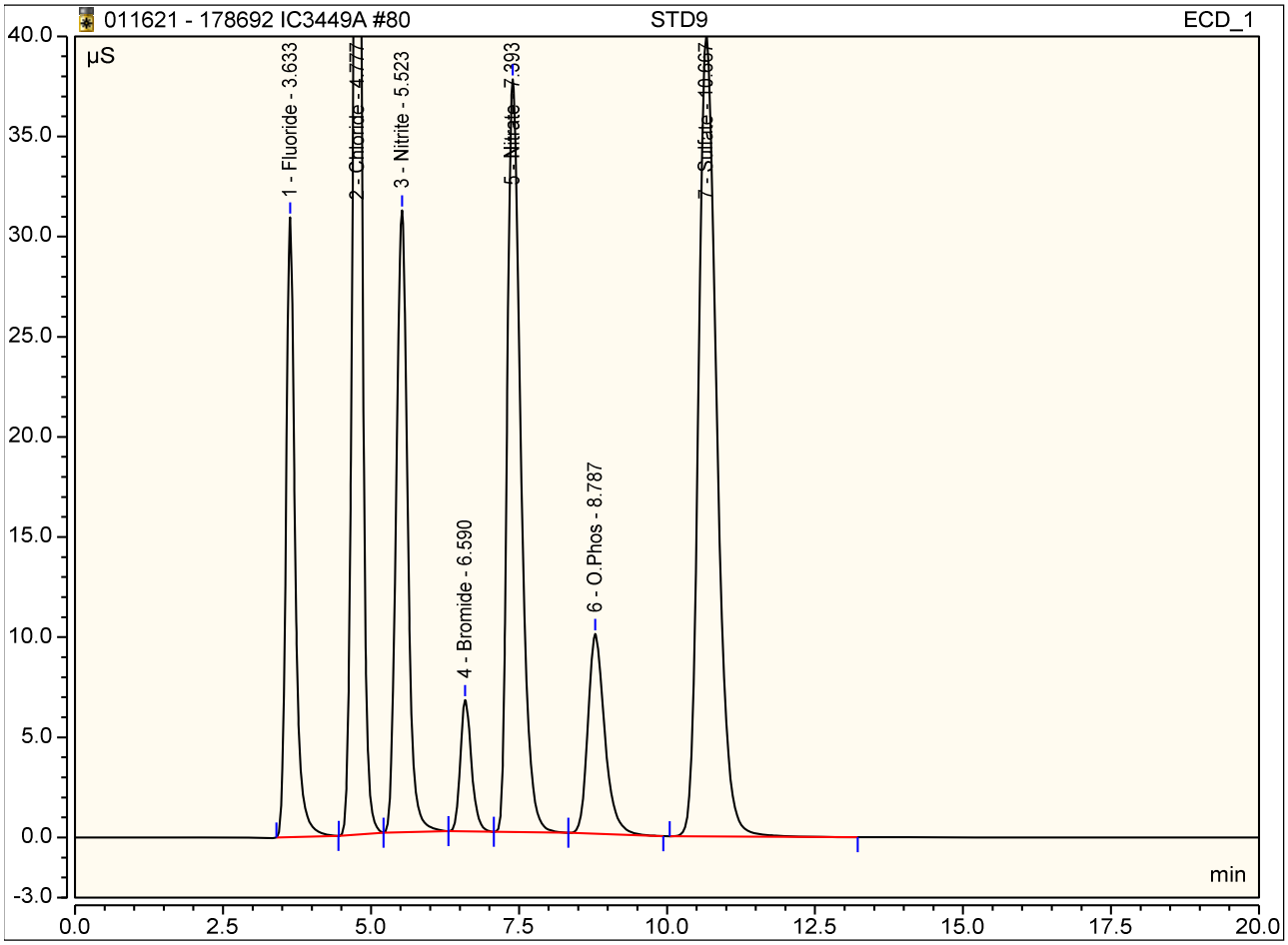
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.62	Fluoride	2.634	15.196	7.2486
2	4.77	Chloride	8.714	52.950	29.9077
3	5.50	Nitrite	3.415	16.001	7.2026
4	6.60	Bromide	0.699	3.139	7.1564
5	7.43	Nitrate	4.513	17.279	7.1201
6	8.80	O.Phos	1.612	4.634	7.0060
7	10.68	Sulfate	9.877	27.511	49.1072



Peak Integration Report

Sample Name:	**STD9**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 21:44**	*Run Time:*	**20.00**

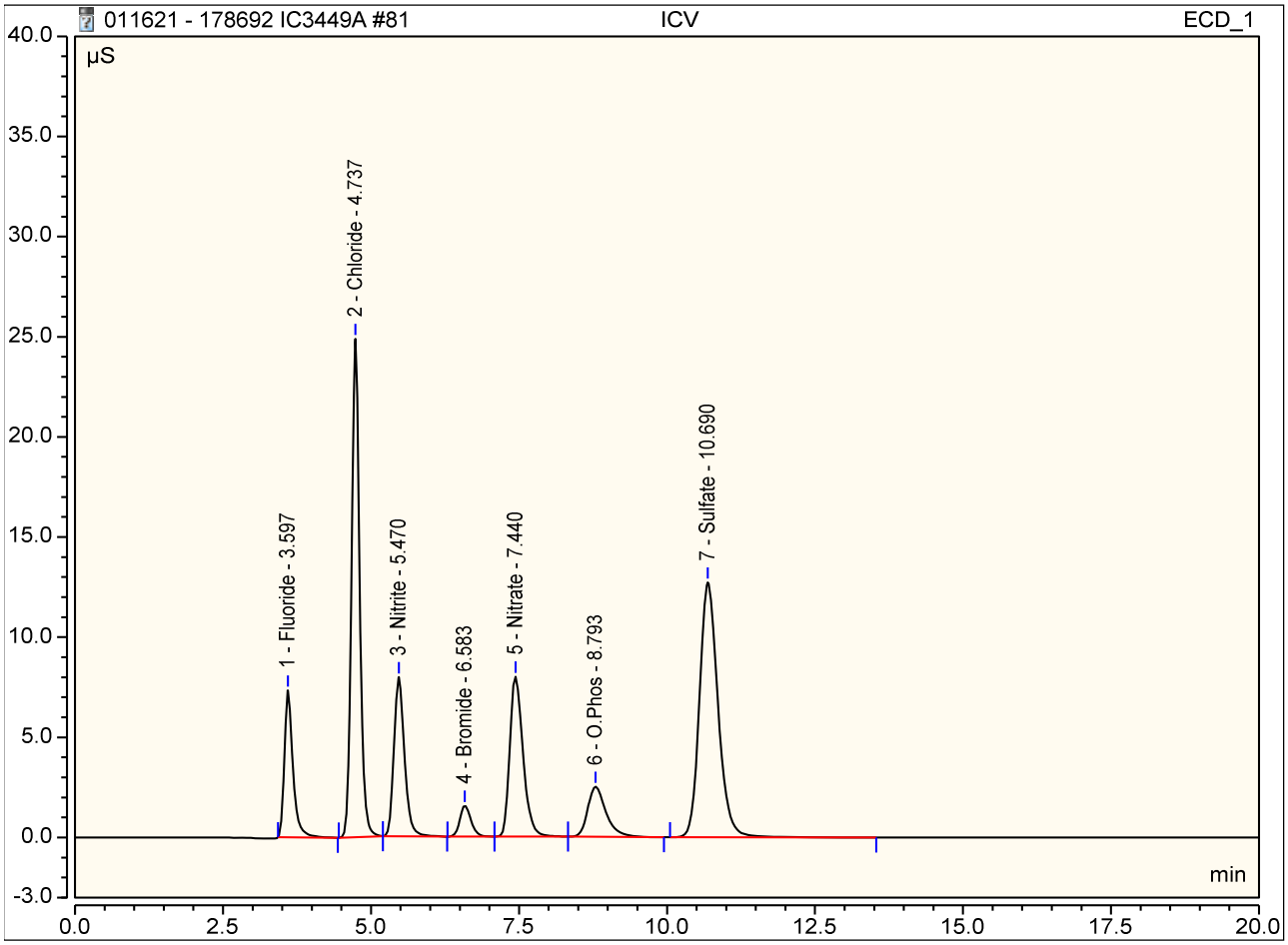
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.63	Fluoride	5.501	30.945	15.0785
2	4.78	Chloride	11.919	69.546	40.6804
3	5.52	Nitrite	6.974	31.055	14.6765
4	6.59	Bromide	1.443	6.557	14.7619
5	7.39	Nitrate	9.915	37.586	15.5362
6	8.79	O.Phos	3.298	9.971	14.5799
7	10.67	Sulfate	14.411	40.034	71.3306



Peak Integration Report

Sample Name:	**ICV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**18-Jan-2021 / 22:04**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.60	Fluoride	1.236	7.341	3.4299
2	4.74	Chloride	3.965	24.873	13.9410
3	5.47	Nitrite	1.650	7.943	3.4962
4	6.58	Bromide	0.342	1.544	3.5049
5	7.44	Nitrate	2.074	7.990	3.3211
6	8.79	O.Phos	0.895	2.503	3.7902
7	10.69	Sulfate	4.623	12.732	23.3497



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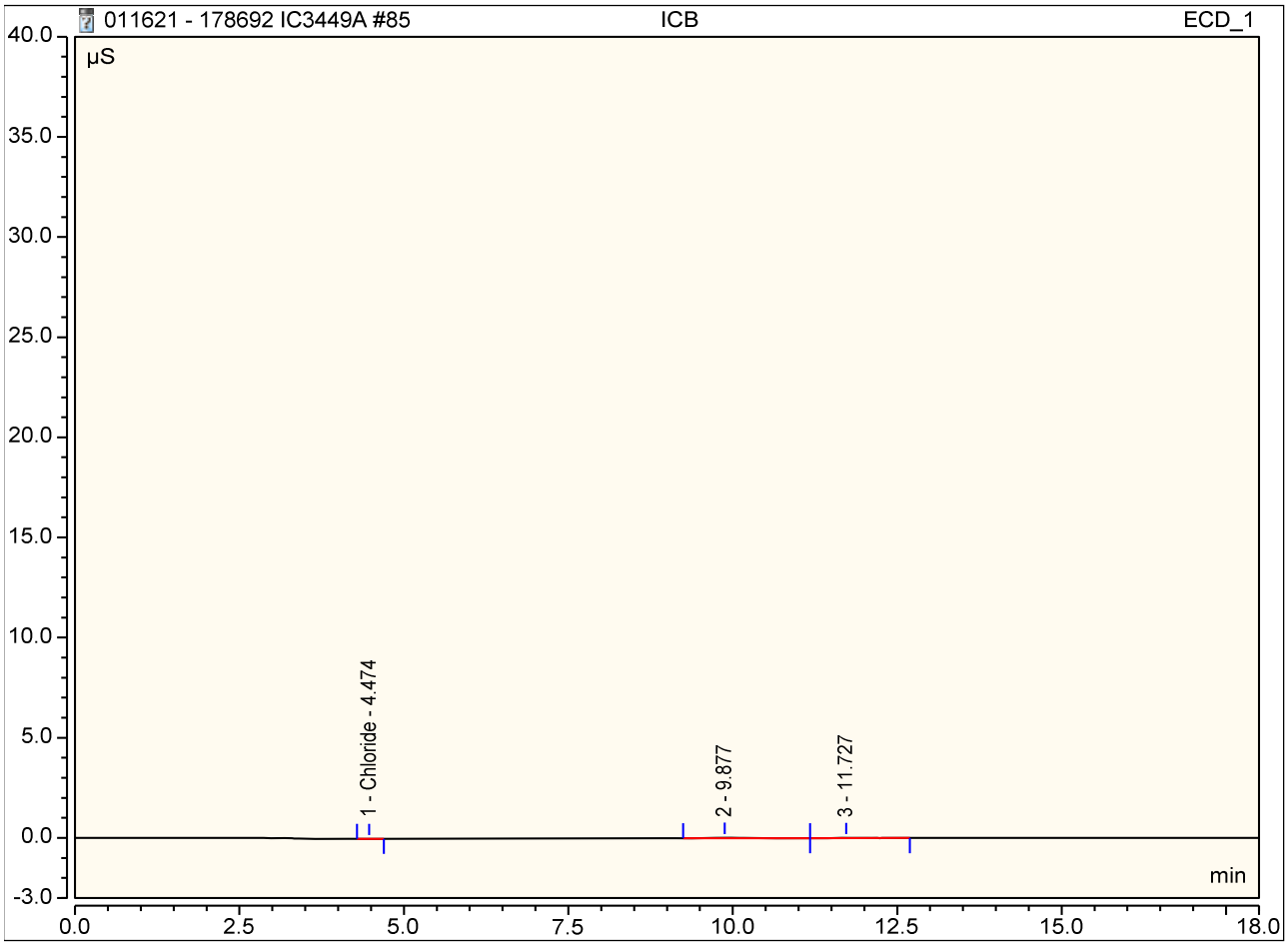
Peak Integration Report

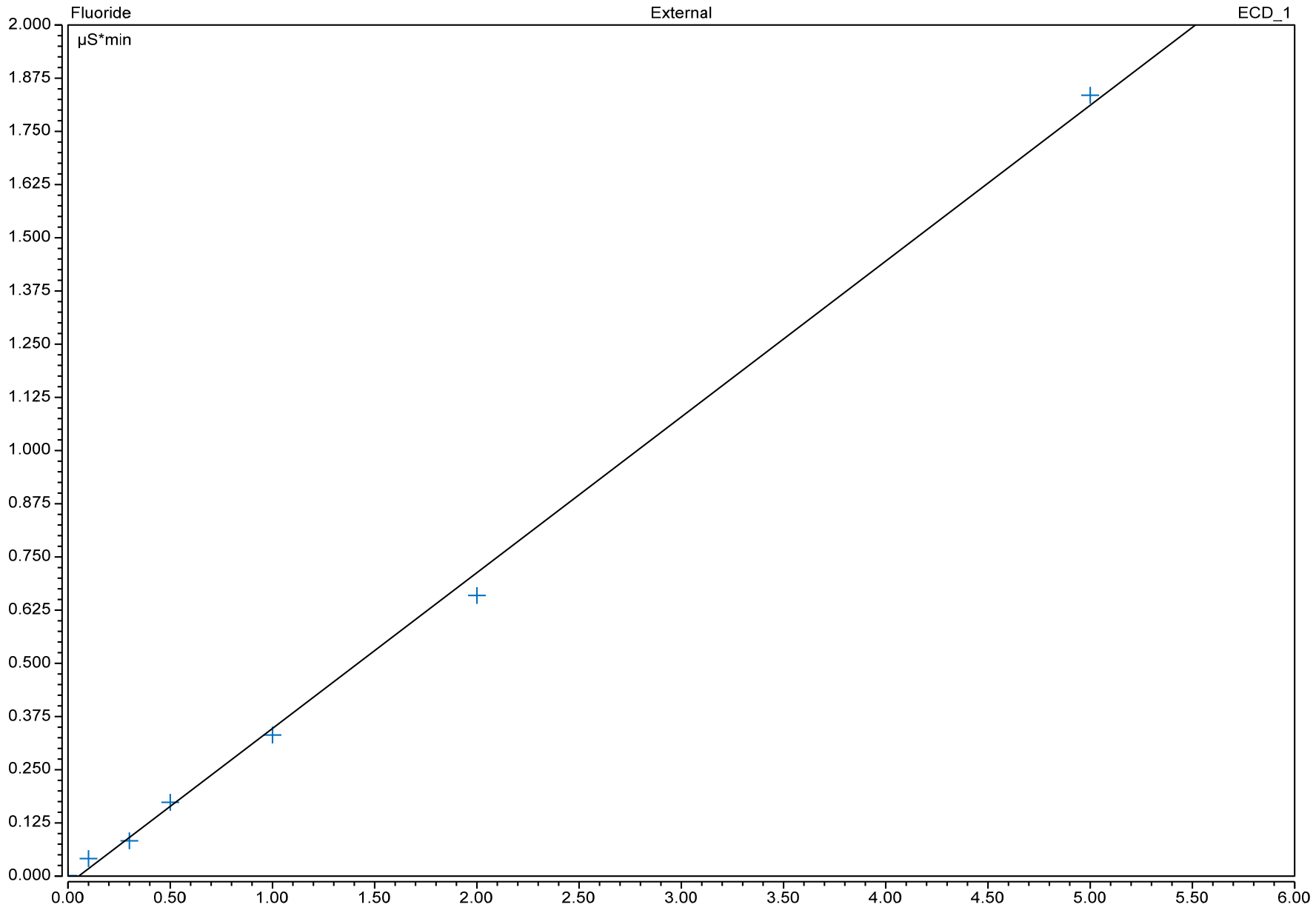
Sample Name:	**ICB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**19-Jan-2021 / 12:11**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.47	Chloride	0.000	0.002	0.6123



Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	Fluoride	Lin, WithOffset	Area	7	6.9323	0.99813	-0.0191	0.3661	0.0000
2	Chloride	Lin, WithOffset	Area	9	7.4399	0.99718	-0.1817	0.2975	0.0000
3	Nitrite	Lin, WithOffset	Area	6	3.2041	0.99950	-0.0152	0.4762	0.0000
4	Bromide	Lin, WithOffset	Area	6	2.3528	0.99972	-0.0006	0.0978	0.0000
5	Nitrate	Lin, WithOffset	Area	7	4.9791	0.99864	-0.0574	0.6419	0.0000
6	O.Phos	Lin, WithOffset	Area	7	5.3966	0.99828	0.0512	0.2227	0.0000
7	*Sulfate*	*Lin, WithOffset*	*Area*	*9*	*5.7167*	*0.99862*	*-0.1407*	*0.2040*	*0.0000*
Maximum					**7.4399**	0.99972			
Minimum					2.3528	**0.99718**			

RJ 01/26/2021


Fluoride
External
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µS*min
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1.000
0.875
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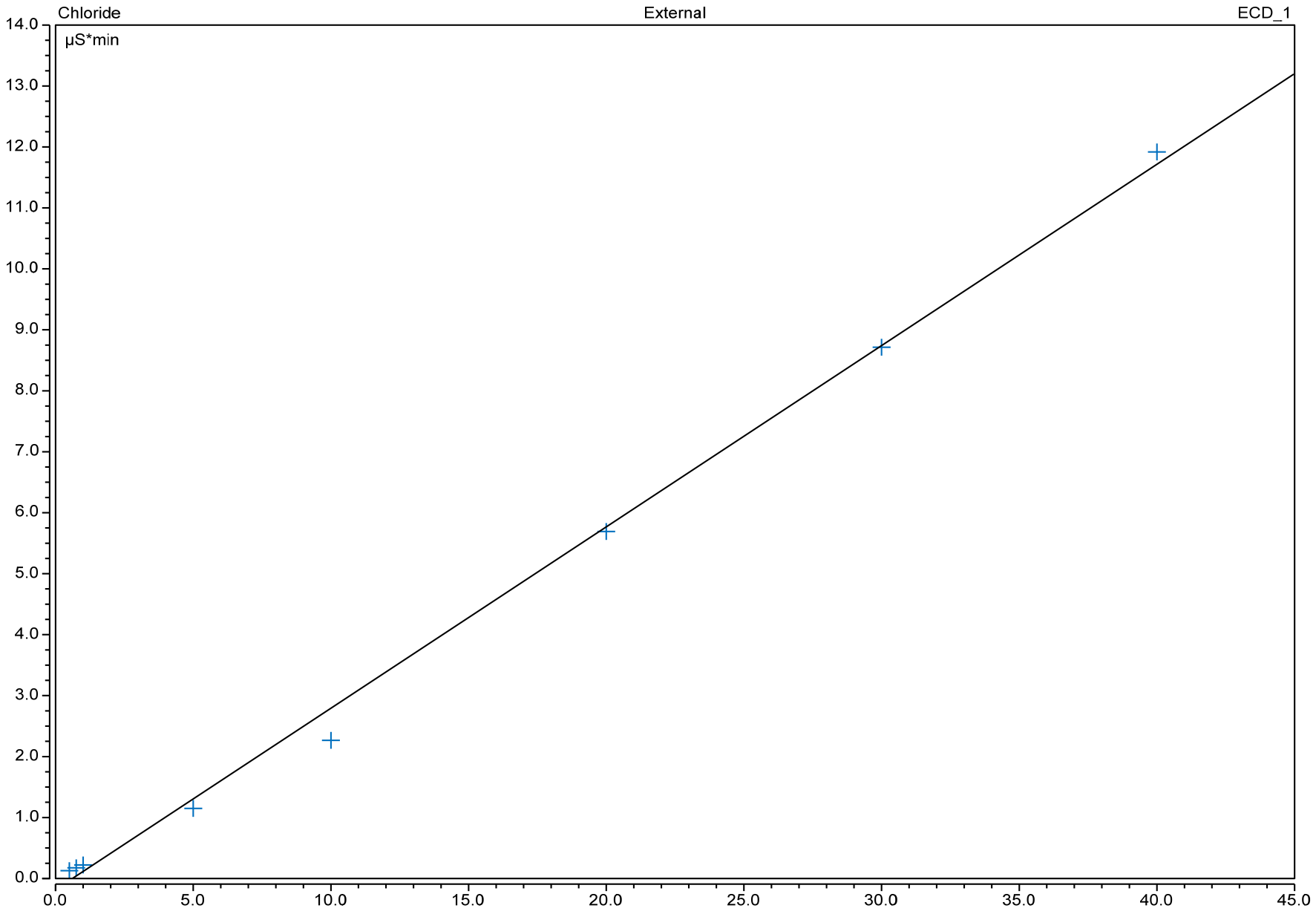
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External
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µS*min
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3.0
2.0
1.0
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0.0
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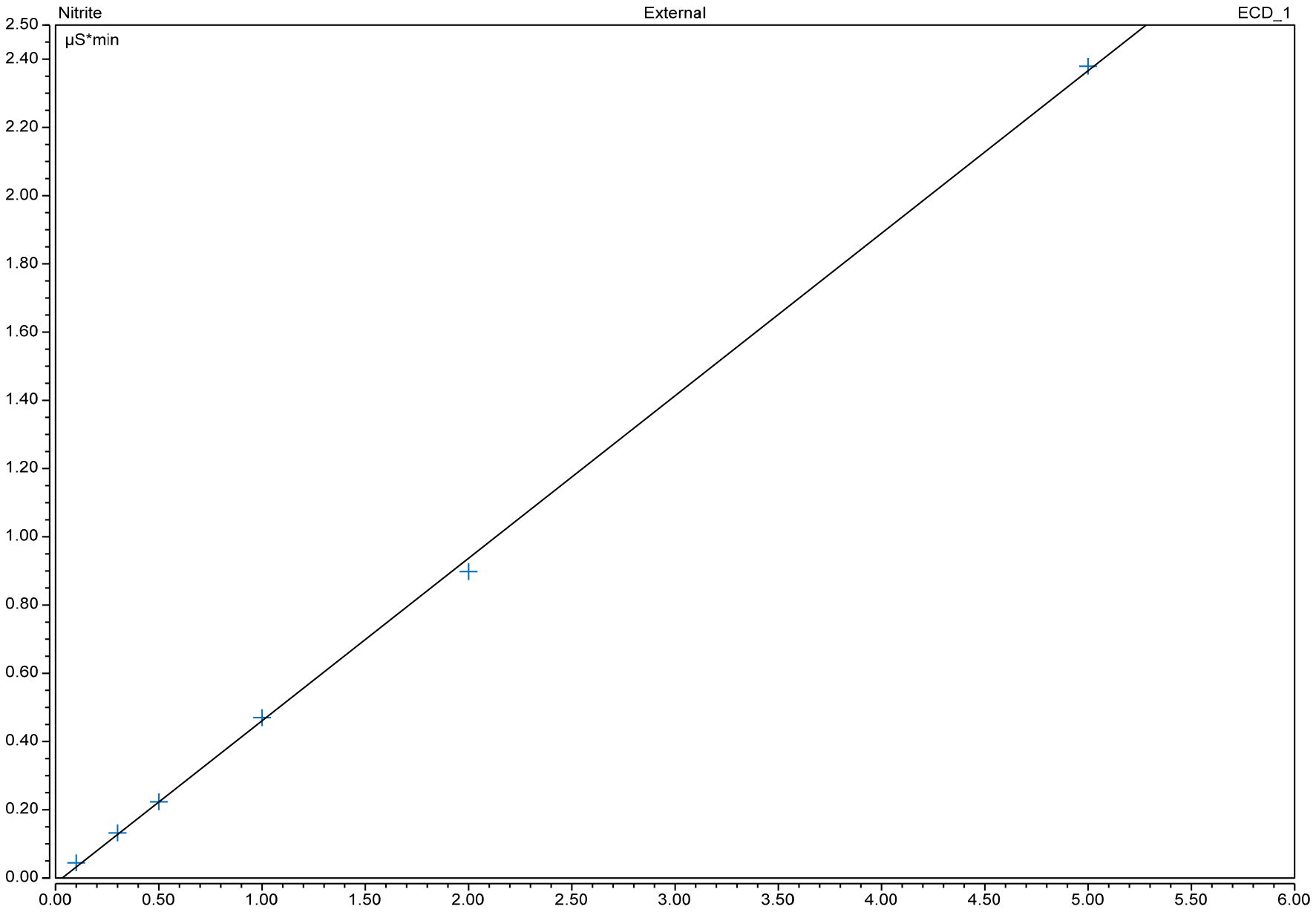
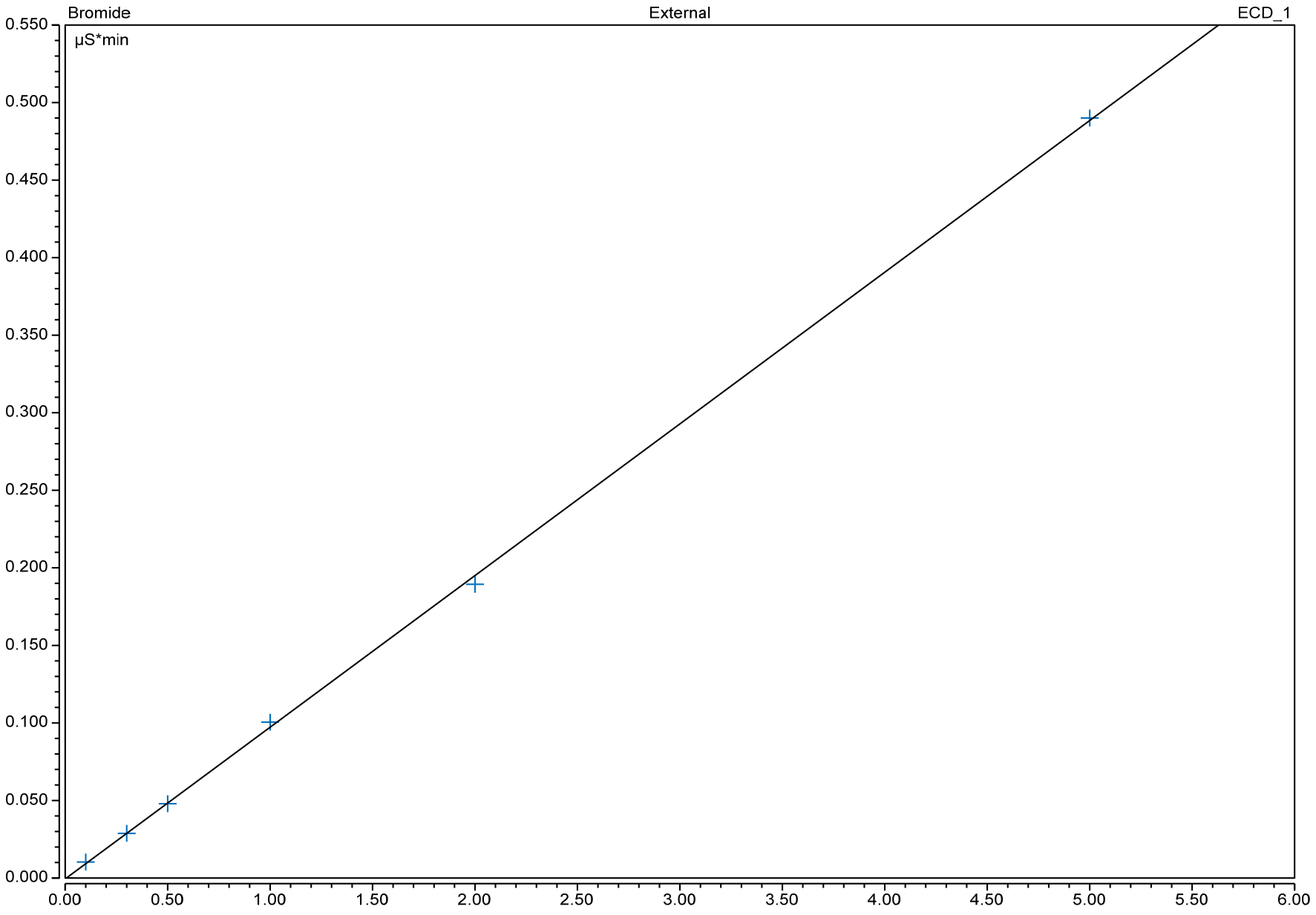
40.0
45.0


Nitrite
External
ECD_1
µS*min
2.50
2.40
2.20
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00

RJ 01/26/2021


Bromide
External
ECD_1
µS*min
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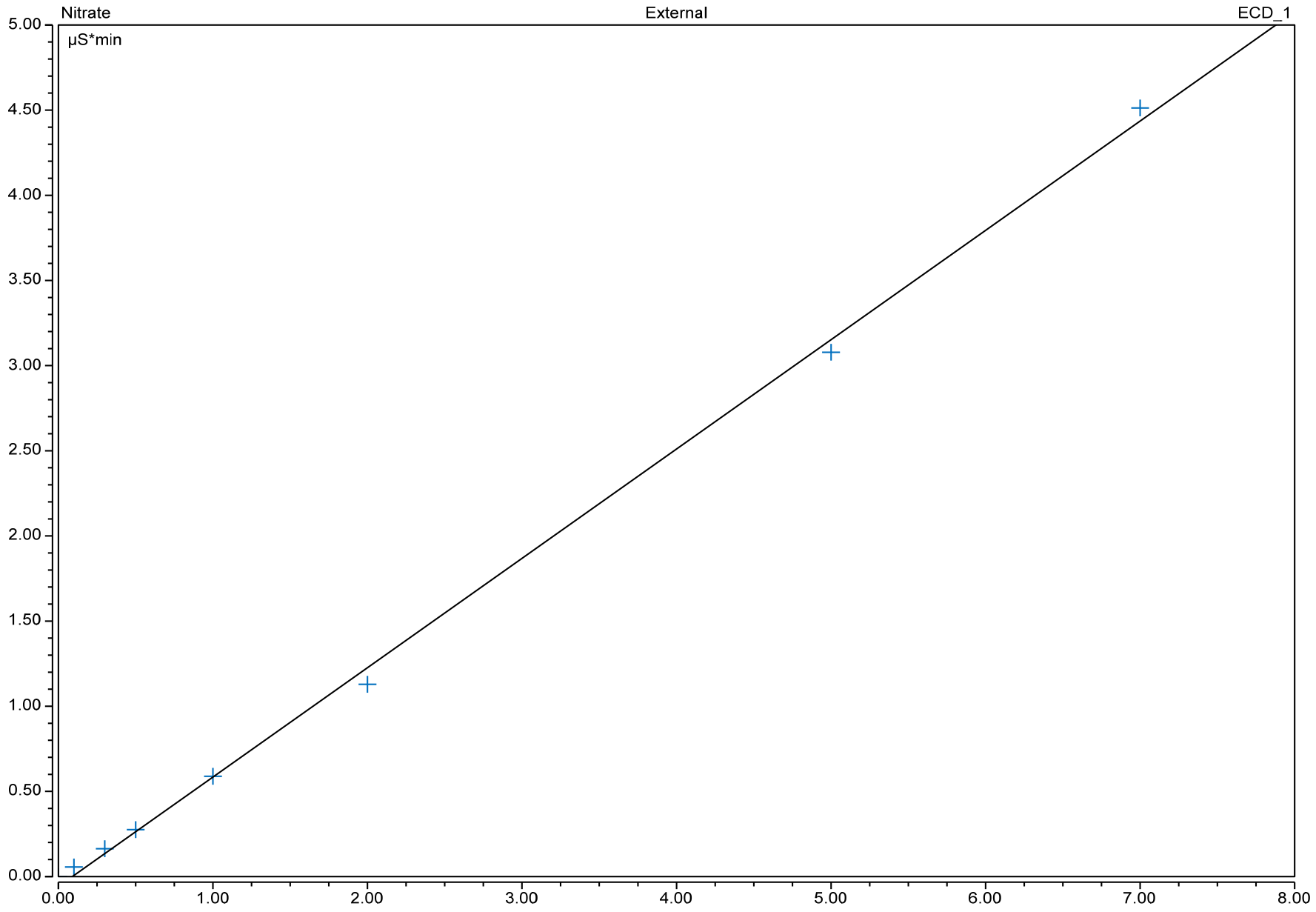
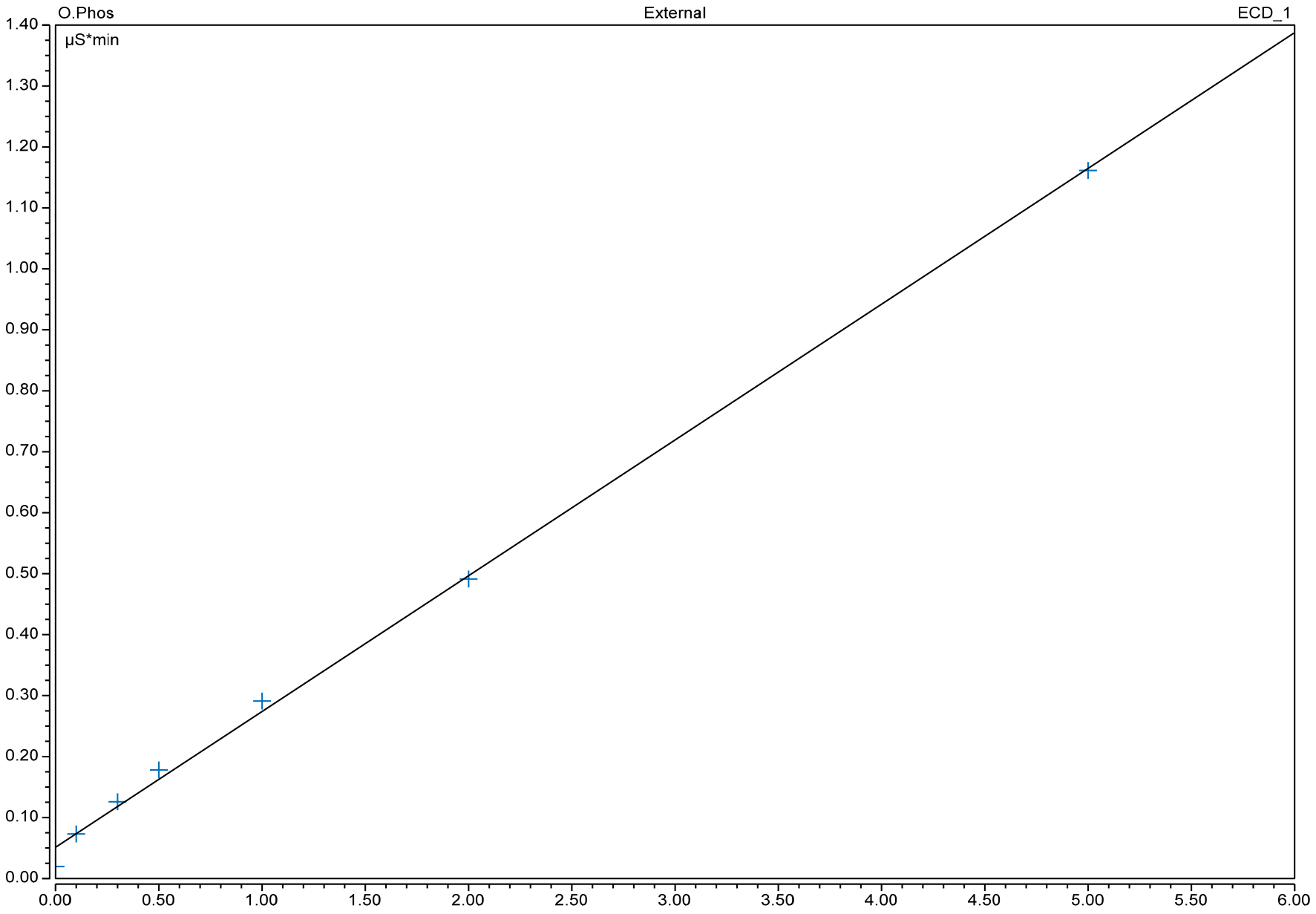
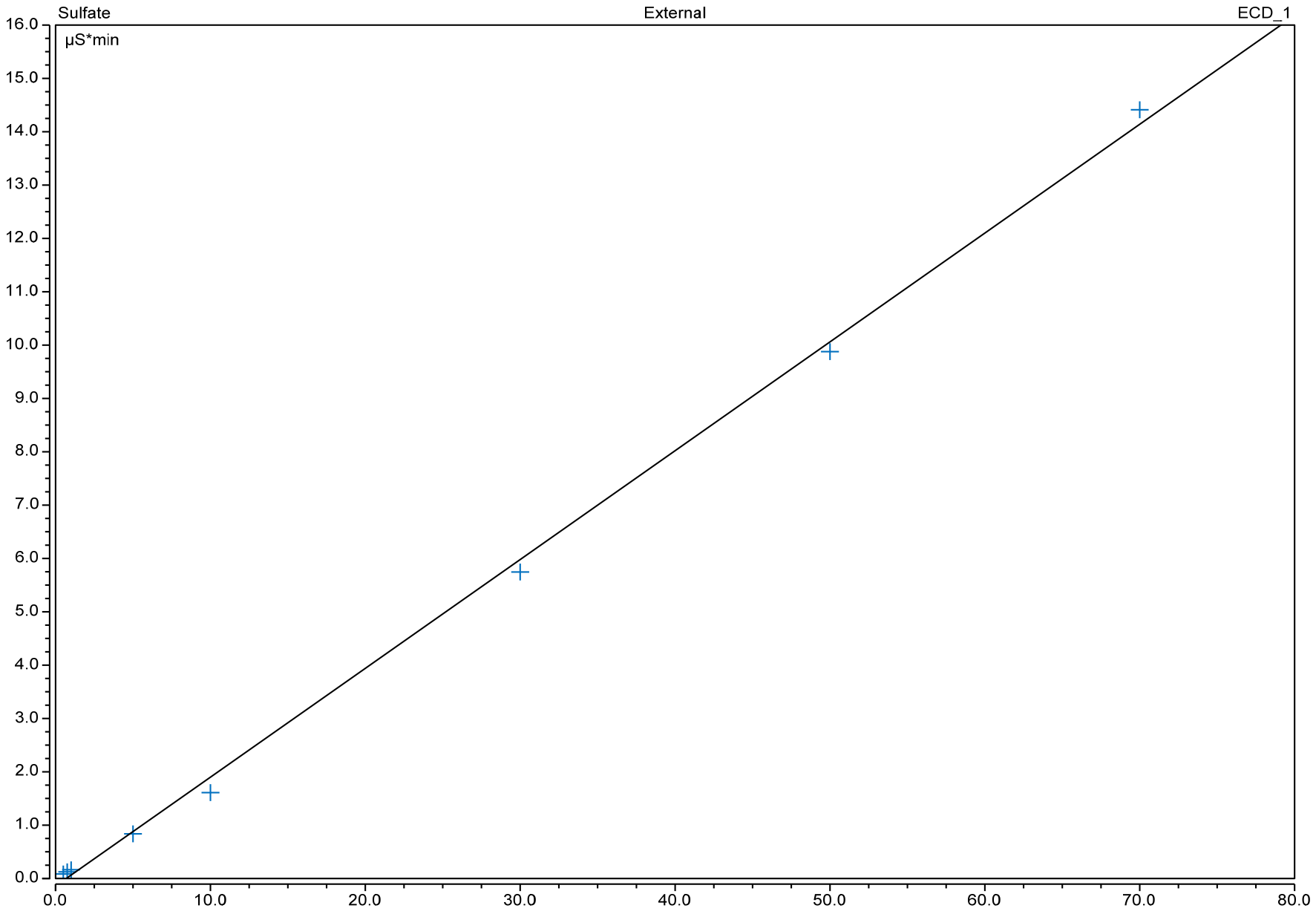
0.500
0.450
0.400
0.350
0.300
0.250
0.200
0.150
0.100
0.050
0.000
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00

RJ 01/26/2021


Nitrate
External
ECD_1
µS*min
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00

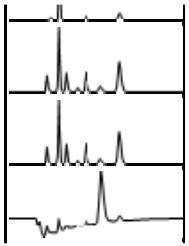
RJ 01/26/2021

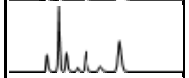
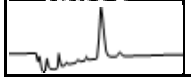

O.Phos
External
ECD_1
µS*min
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00


Sulfate
External
ECD_1
µS*min
16.0
15.0
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0

RJ 01/26/2021

Sequence: 041421 - 180857 180881
Last Update Operator: AQUION

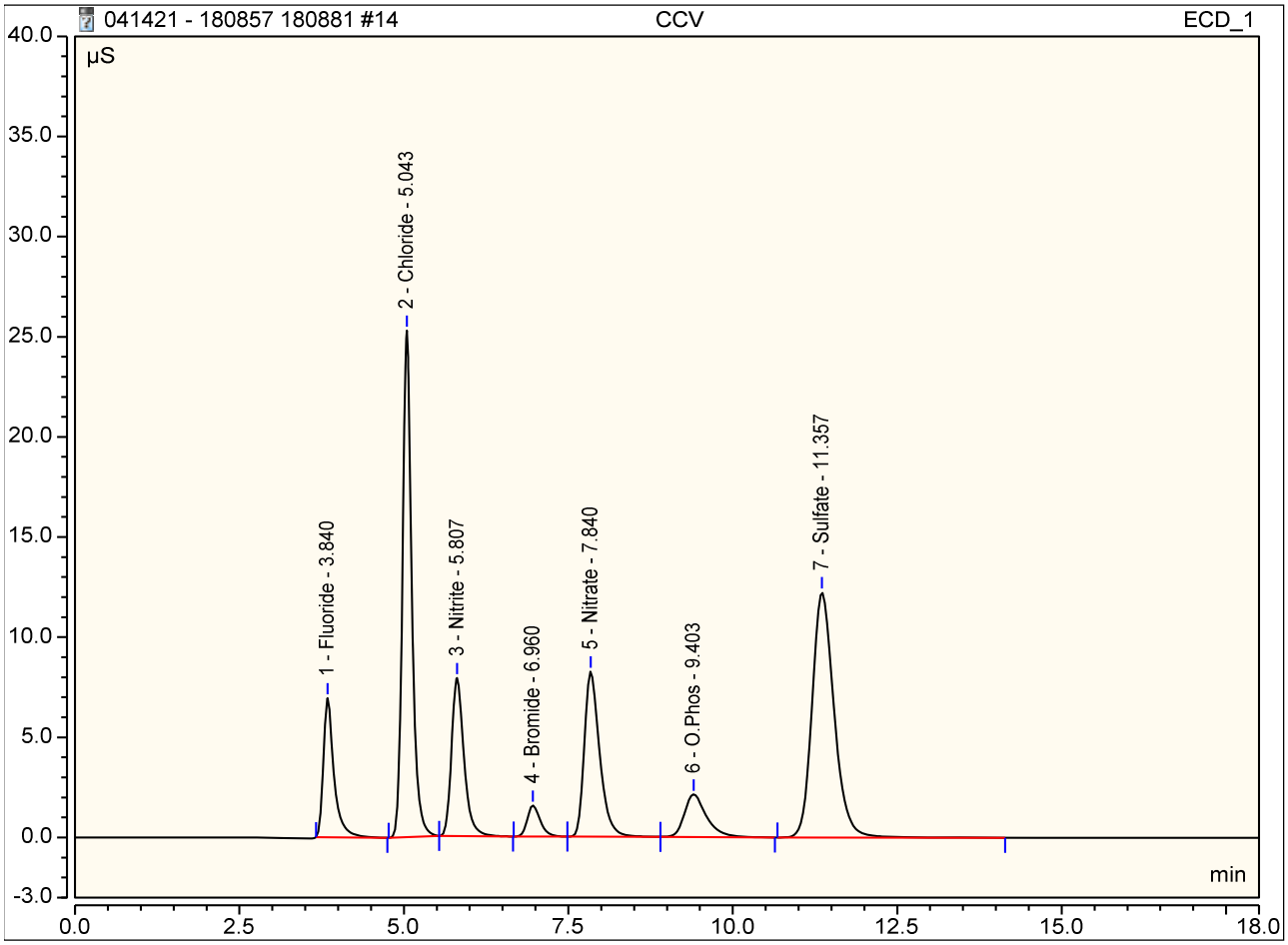
ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	CCV	1.0000	Unknown		14	5000	Anions	IC3449A	Finished
	LCSW	1.0000	Unknown		15	5000	Anions	IC3449A	Finished
	MBW-CCB	1.0000	Unknown		16	5000	Anions	IC3449A	Finished

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	553142	1.0000	Unknown		21	5000	Anions	IC3449A	Finished
	553148	1.0000	Unknown		22	5000	Anions	IC3449A	Finished
	553149	1.0000	Unknown		23	5000	Anions	IC3449A	Finished
	553150	1.0000	Unknown		24	5000	Anions	IC3449A	Finished
	553151	1.0000	Unknown		25	5000	Anions	IC3449A	Finished
	553152	1.0000	Unknown		26	5000	Anions	IC3449A	Finished
	CCV	1.0000	Unknown		27	5000	Anions	IC3449A	Finished
	CCB	1.0000	Unknown		28	5000	Anions	IC3449A	Finished

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**14-Apr-2021 / 15:50**	*Run Time:*	**18.00**

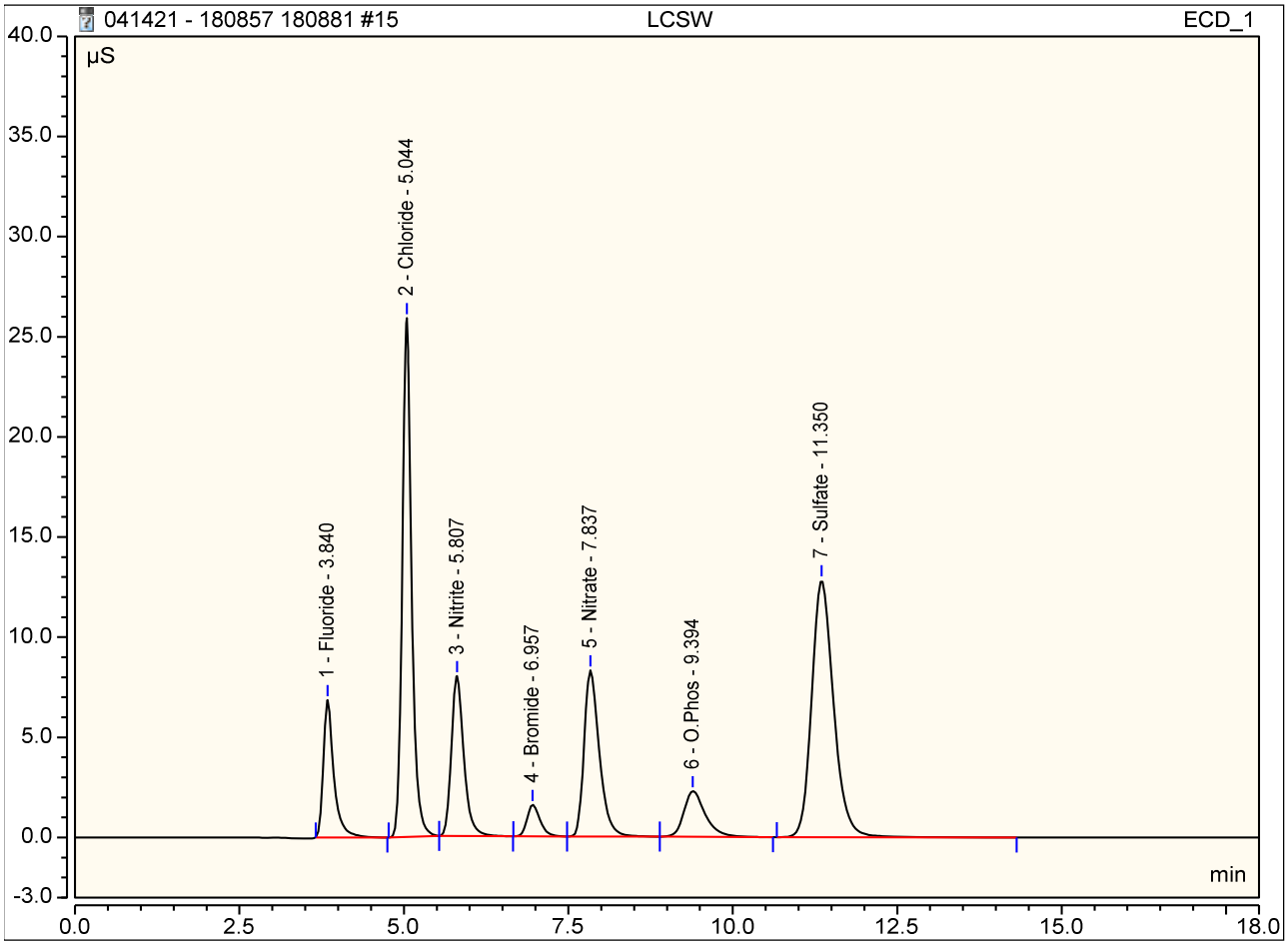
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	1.308	6.955	3.6262
2	5.04	Chloride	4.159	25.297	14.5938
3	5.81	Nitrite	1.742	7.892	3.6900
4	6.96	Bromide	0.359	1.549	3.6721
5	7.84	Nitrate	2.228	8.249	3.5599
6	9.40	O.Phos	0.825	2.121	3.4736
7	11.36	Sulfate	4.756	12.248	24.0038



Peak Integration Report

Sample Name:	**LCSW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**14-Apr-2021 / 16:08**	*Run Time:*	**18.00**

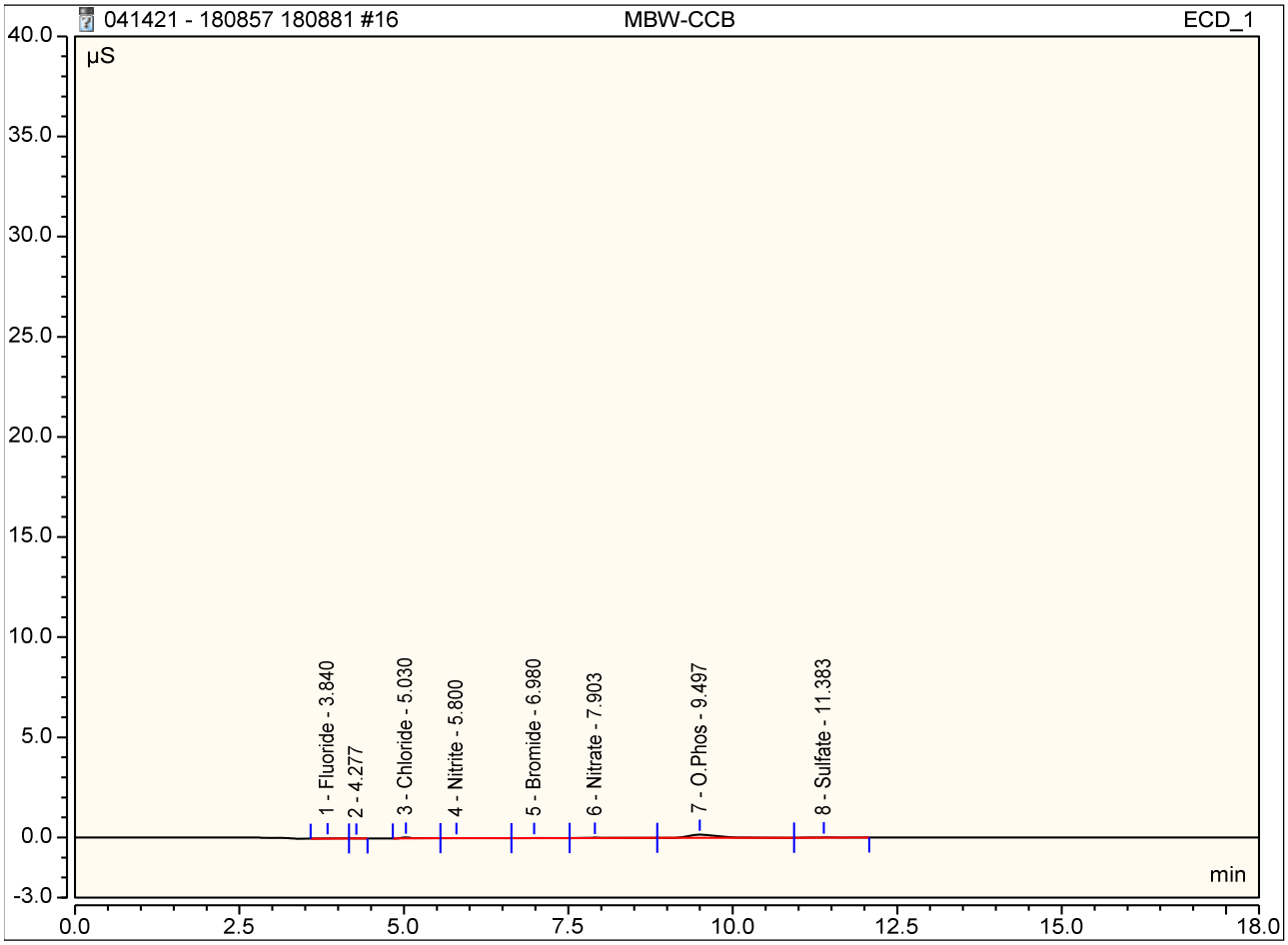
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	1.280	6.857	3.5485
2	5.04	Chloride	4.253	25.906	14.9081
3	5.81	Nitrite	1.756	7.983	3.7200
4	6.96	Bromide	0.364	1.578	3.7248
5	7.84	Nitrate	2.230	8.296	3.5641
6	9.39	O.Phos	0.862	2.280	3.6393
7	11.35	Sulfate	4.964	12.837	25.0213



Peak Integration Report

Sample Name:	**MBW-CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**14-Apr-2021 / 16:26**	*Run Time:*	**18.00**

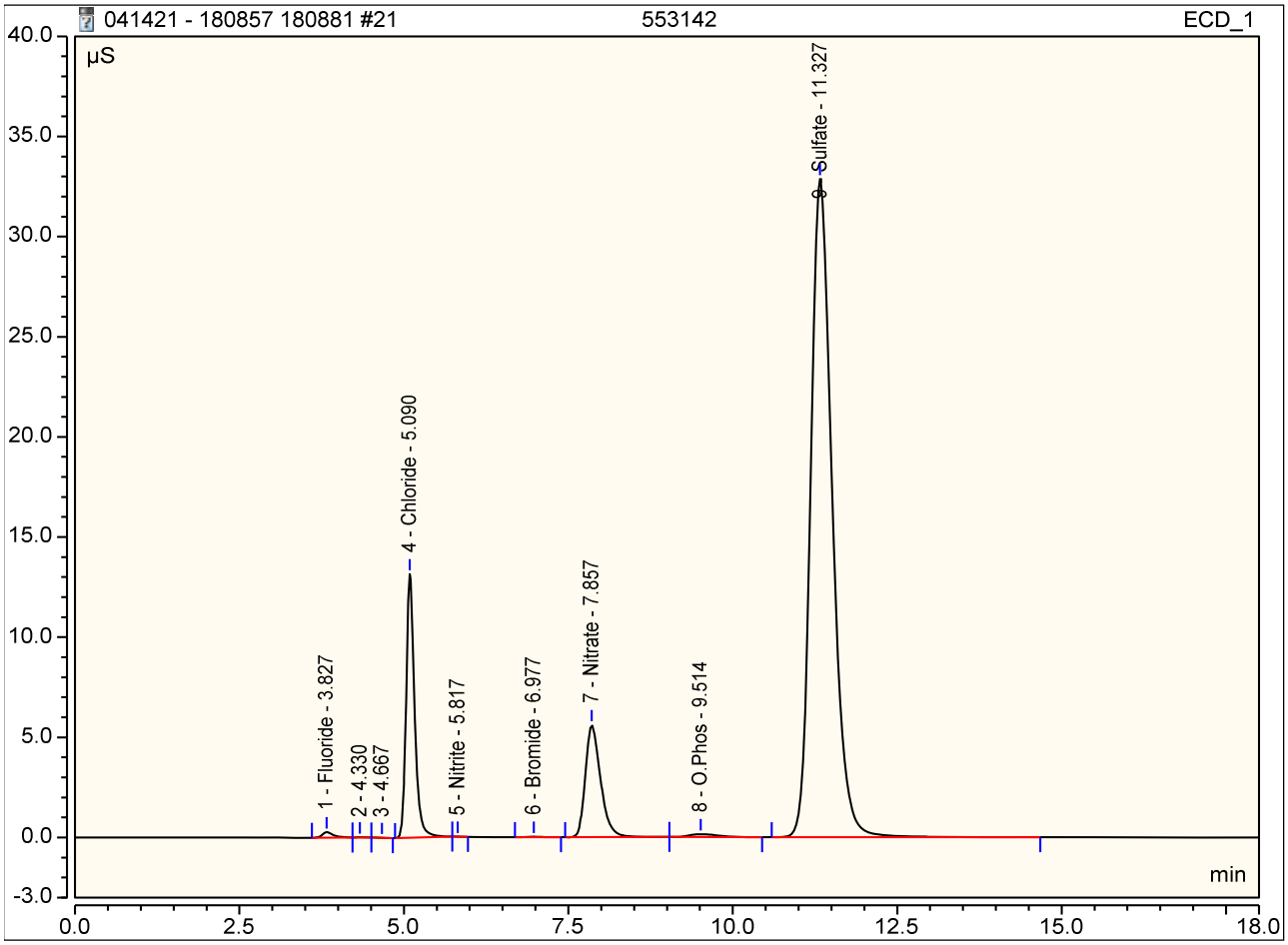
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.005	0.025	0.0656
3	5.03	Chloride	0.009	0.045	0.6398
4	5.80	Nitrite	0.004	0.014	0.0394
5	6.98	Bromide	0.002	0.006	0.0222
6	7.90	Nitrate	0.005	0.015	0.0966
7	9.50	O.Phos	0.080	0.159	0.1296
8	11.38	Sulfate	0.006	0.016	0.7202



Peak Integration Report

Sample Name:	**553142**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**14-Apr-2021 / 17:57**	*Run Time:*	**18.00**

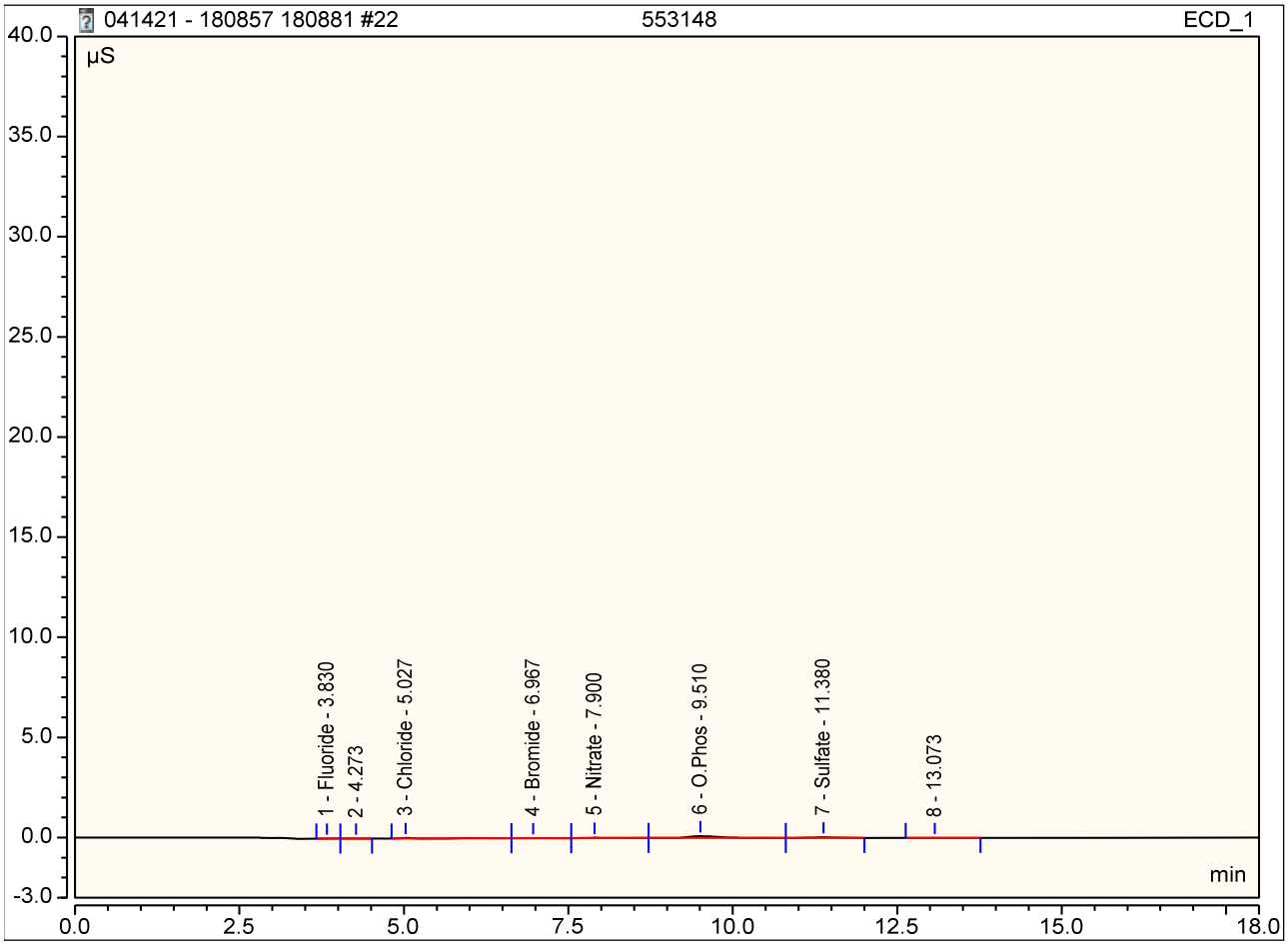
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.053	0.273	0.1957
4	5.09	Chloride	1.944	13.162	7.1476
5	5.82	Nitrite	0.000	0.002	0.0325
6	6.98	Bromide	0.005	0.023	0.0612
7	7.86	Nitrate	1.504	5.603	2.4318
8	9.51	O.Phos	0.072	0.146	0.0947
9	11.33	Sulfate	12.424	32.864	61.5901



Peak Integration Report

Sample Name:	**553148**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**14-Apr-2021 / 18:15**	*Run Time:*	**18.00**

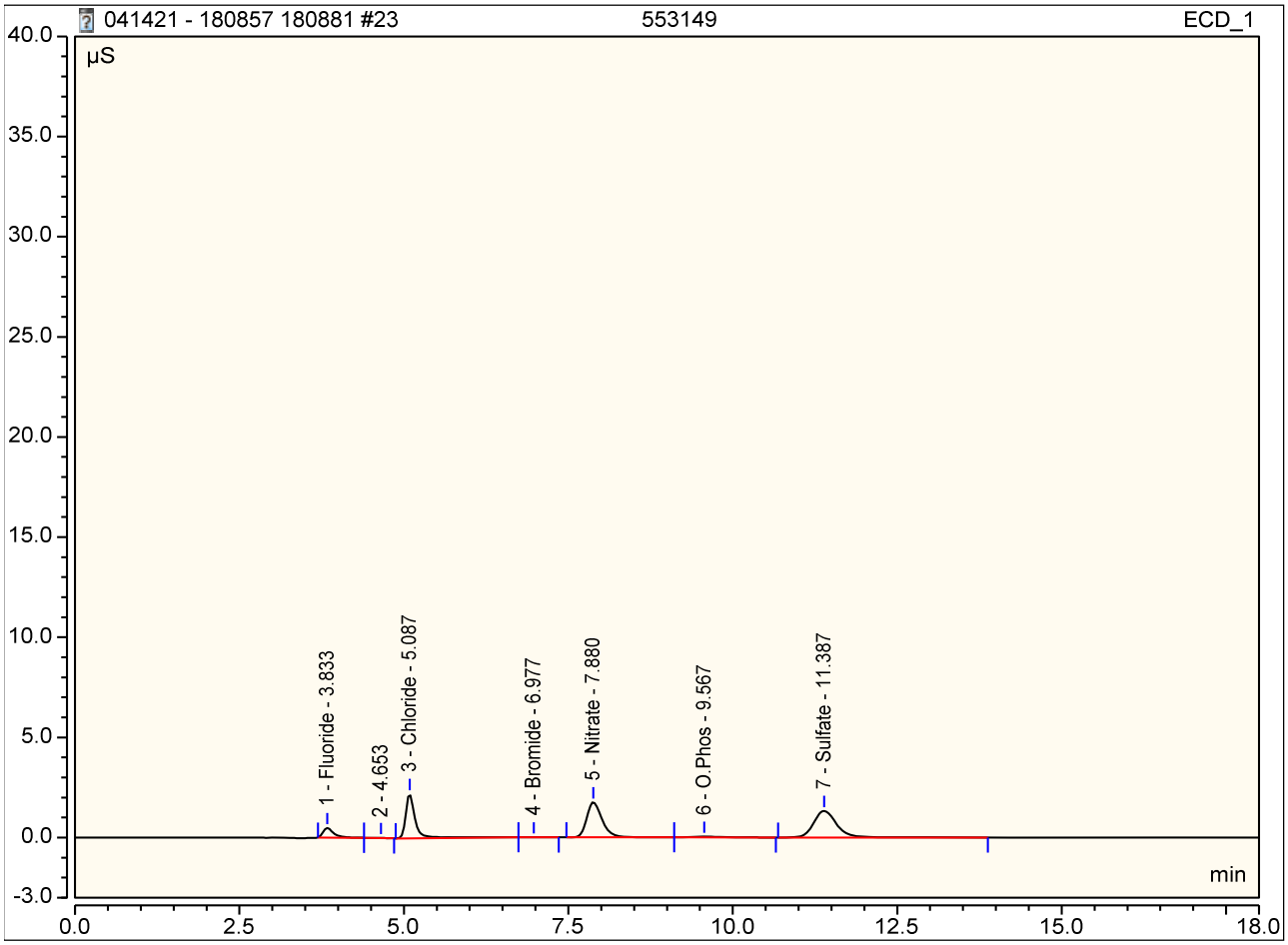
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.001	0.005	0.0544
3	5.03	Chloride	0.008	0.031	0.6371
4	6.97	Bromide	0.002	0.006	0.0230
5	7.90	Nitrate	0.006	0.019	0.0984
6	9.51	O.Phos	0.048	0.091	n.a.
7	11.38	Sulfate	0.011	0.026	0.7419



Peak Integration Report

Sample Name:	**553149**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**14-Apr-2021 / 18:33**	*Run Time:*	**18.00**

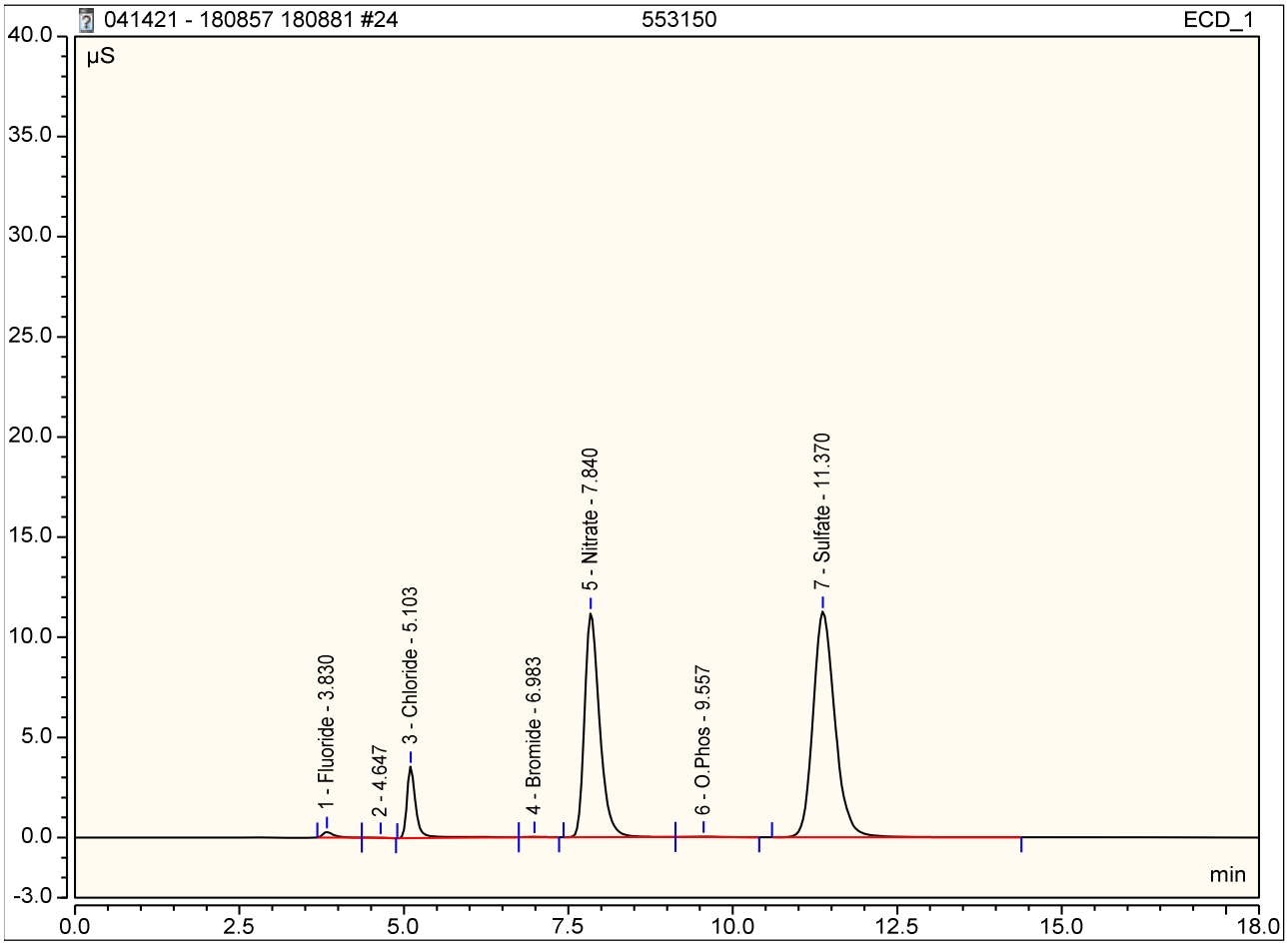
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.090	0.479	0.2982
3	5.09	Chloride	0.376	2.212	1.8746
4	6.98	Bromide	0.002	0.008	0.0242
5	7.88	Nitrate	0.477	1.758	0.8332
6	9.57	O.Phos	0.020	0.038	n.a.
7	11.39	Sulfate	0.537	1.328	3.3216



Peak Integration Report

Sample Name:	**553150**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**14-Apr-2021 / 18:51**	*Run Time:*	**18.00**

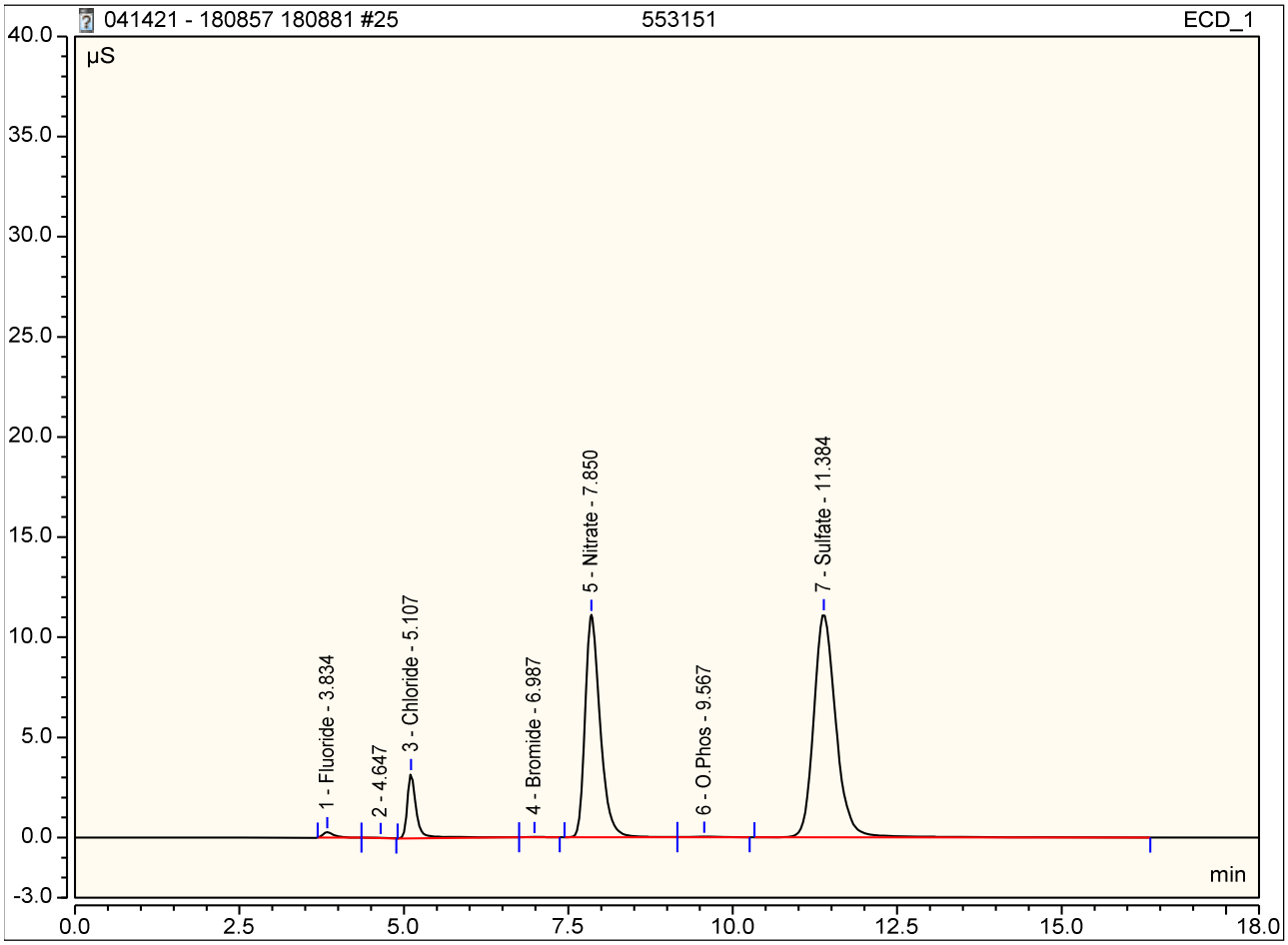
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.054	0.278	0.1986
3	5.10	Chloride	0.574	3.569	2.5413
4	6.98	Bromide	0.005	0.020	0.0522
5	7.84	Nitrate	2.971	11.198	4.7175
6	9.56	O.Phos	0.016	0.033	n.a.
7	11.37	Sulfate	4.362	11.266	22.0724



Peak Integration Report

Sample Name:	**553151**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**14-Apr-2021 / 19:09**	*Run Time:*	**18.00**

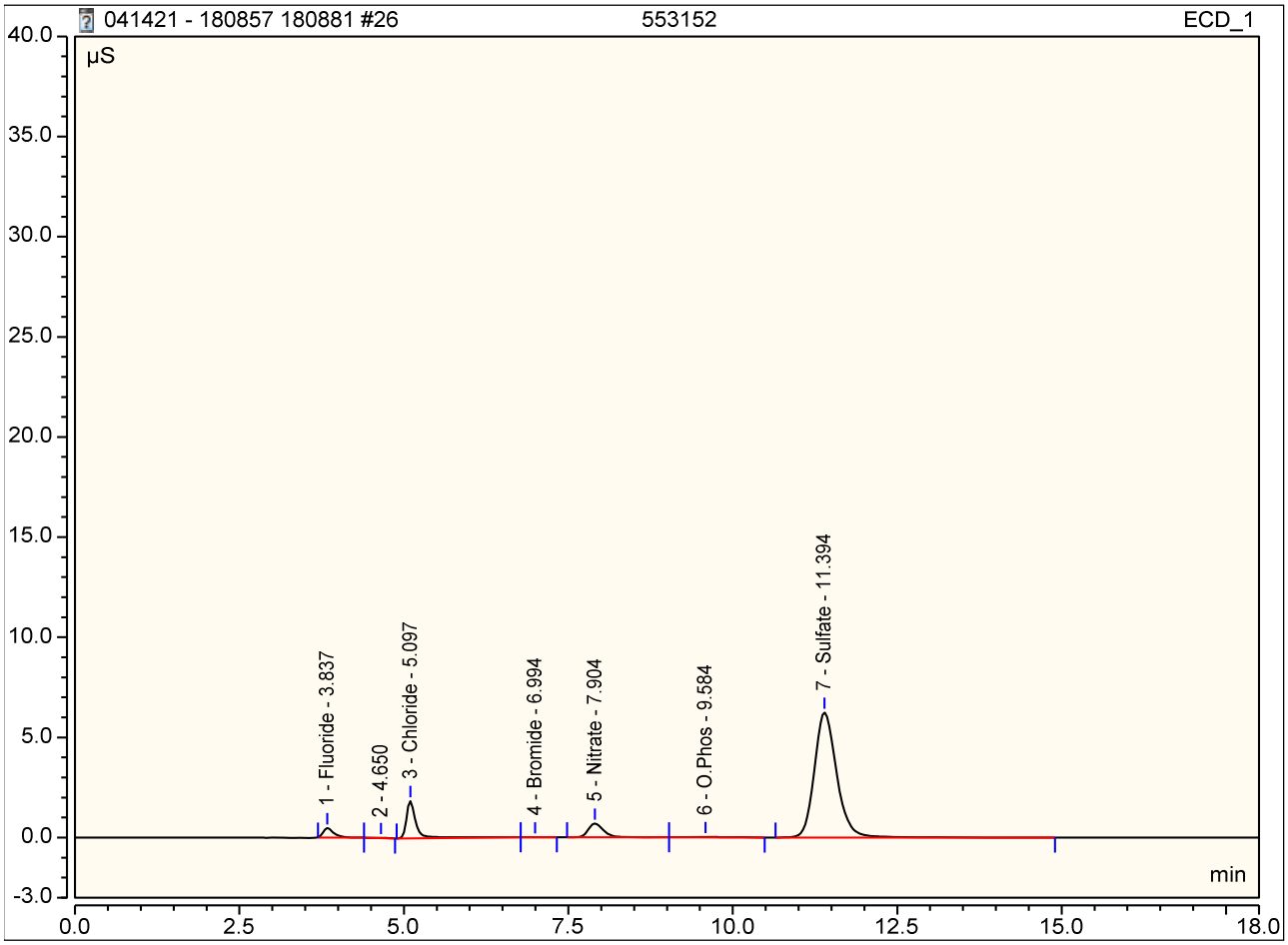
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.053	0.274	0.1966
3	5.11	Chloride	0.521	3.210	2.3641
4	6.99	Bromide	0.004	0.019	0.0491
5	7.85	Nitrate	2.947	11.106	4.6803
6	9.57	O.Phos	0.013	0.028	n.a.
7	11.38	Sulfate	4.364	11.144	22.0810



Peak Integration Report

Sample Name:	**553152**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**14-Apr-2021 / 19:27**	*Run Time:*	**18.00**

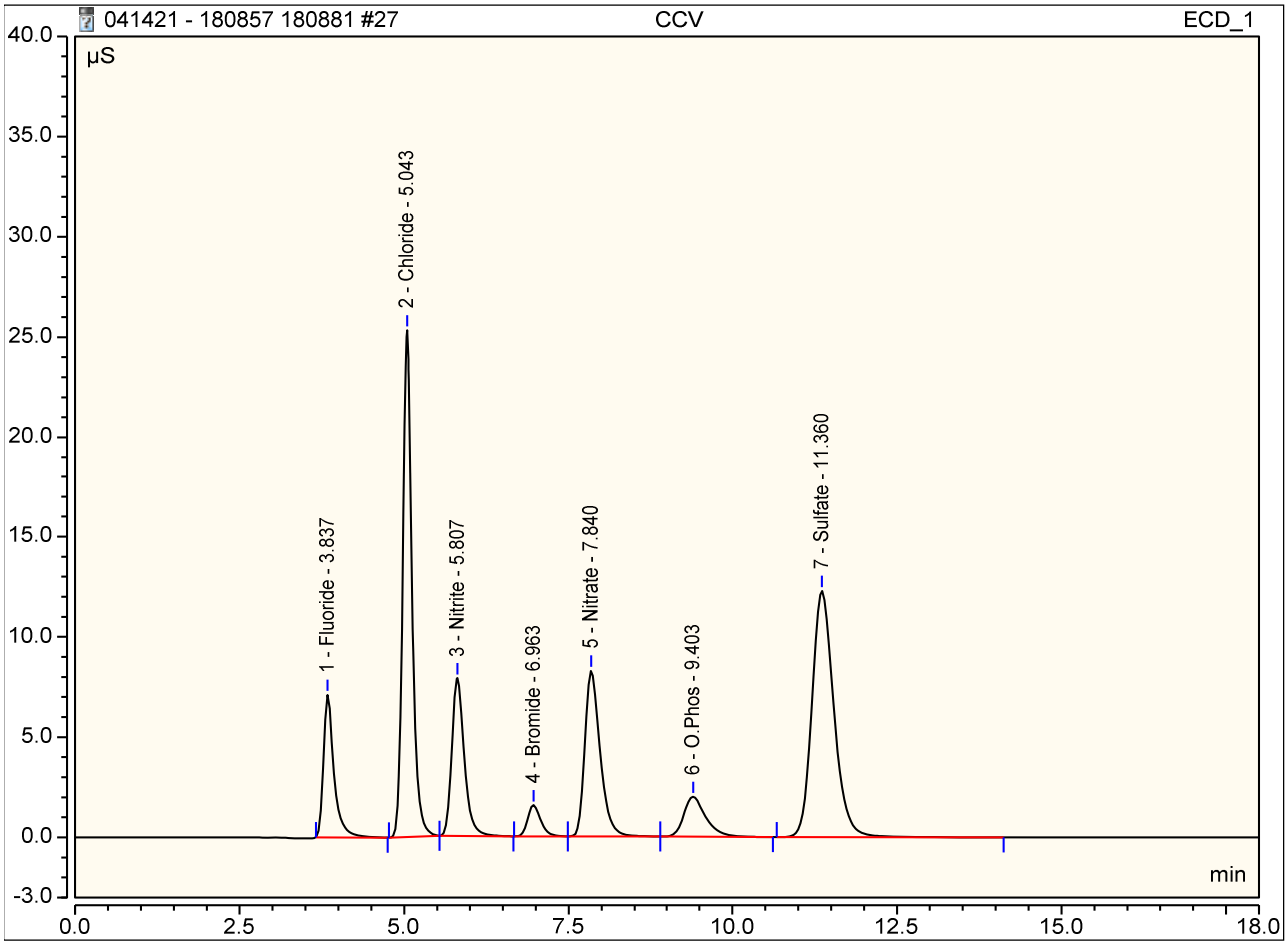
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.089	0.469	0.2957
3	5.10	Chloride	0.324	1.867	1.6994
4	6.99	Bromide	0.001	0.006	0.0193
5	7.90	Nitrate	0.188	0.689	0.3822
6	9.58	O.Phos	0.011	0.021	n.a.
7	11.39	Sulfate	2.458	6.237	12.7394



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**14-Apr-2021 / 19:45**	*Run Time:*	**18.00**

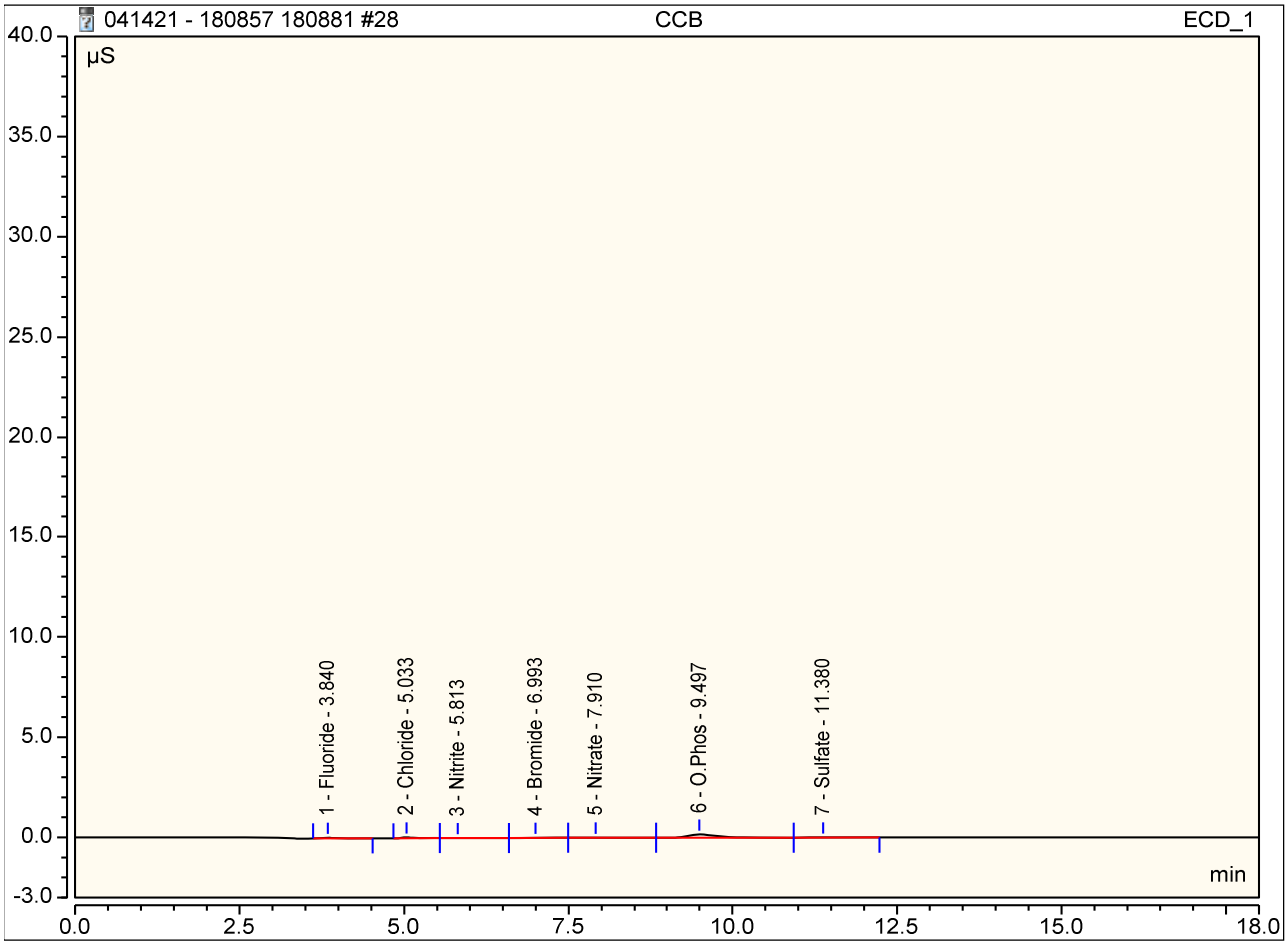
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	1.320	7.113	3.6589
2	5.04	Chloride	4.148	25.326	14.5546
3	5.81	Nitrite	1.734	7.870	3.6736
4	6.96	Bromide	0.359	1.554	3.6756
5	7.84	Nitrate	2.232	8.271	3.5667
6	9.40	O.Phos	0.771	1.993	3.2305
7	11.36	Sulfate	4.763	12.288	24.0372



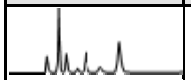
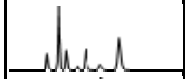
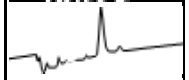
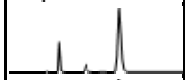
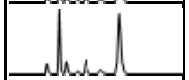
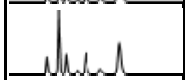
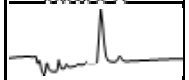
Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**14-Apr-2021 / 20:03**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.009	0.038	0.0777
2	5.03	Chloride	0.009	0.044	0.6396
3	5.81	Nitrite	0.002	0.009	0.0369
4	6.99	Bromide	0.002	0.008	0.0291
5	7.91	Nitrate	0.005	0.015	0.0966
6	9.50	O.Phos	0.081	0.161	0.1339
7	11.38	Sulfate	0.005	0.013	0.7146



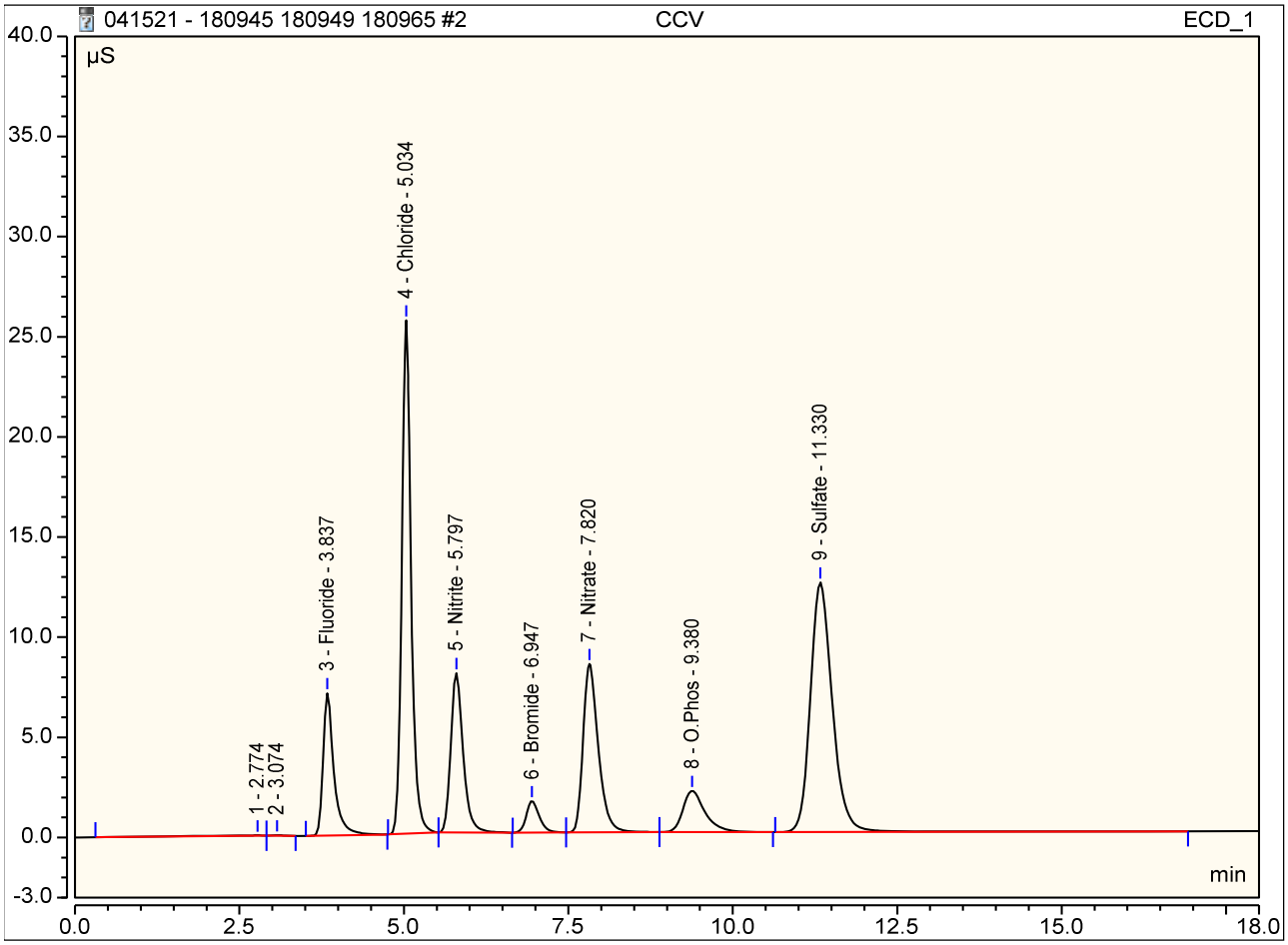
Sequence: 041521 - 180945 180949 180965
Last Update Operator: AQUION

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	CCV	1.0000	Unknown		2	5000	Anions	IC3449A	Finished
	LCSW	1.0000	Unknown		3	5000	Anions	IC3449A	Finished
	MBW	1.0000	Unknown		4	5000	Anions	IC3449A	Finished
	553550	1.0000	Unknown		5	5000	Anions	IC3449A	Finished
	553551	1.0000	Unknown		6	5000	Anions	IC3449A	Finished
	553551X5	1.0000	Unknown		7	5000	Anions	IC3449A	Finished
	553552	1.0000	Unknown		8	5000	Anions	IC3449A	Finished
	553552X5	1.0000	Unknown		9	5000	Anions	IC3449A	Finished
	553553	1.0000	Unknown		10	5000	Anions	IC3449A	Finished
	553554	1.0000	Unknown		11	5000	Anions	IC3449A	Finished
	DUP553554	1.0000	Unknown		12	5000	Anions	IC3449A	Finished
	MSW553554	1.0000	Unknown		13	5000	Anions	IC3449A	Finished
	MSDW553554	1.0000	Unknown		14	5000	Anions	IC3449A	Finished
	CCV	1.0000	Unknown		15	5000	Anions	IC3449A	Finished
	CCB	1.0000	Unknown		16	5000	Anions	IC3449A	Finished

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 12:55**	*Run Time:*	**18.00**

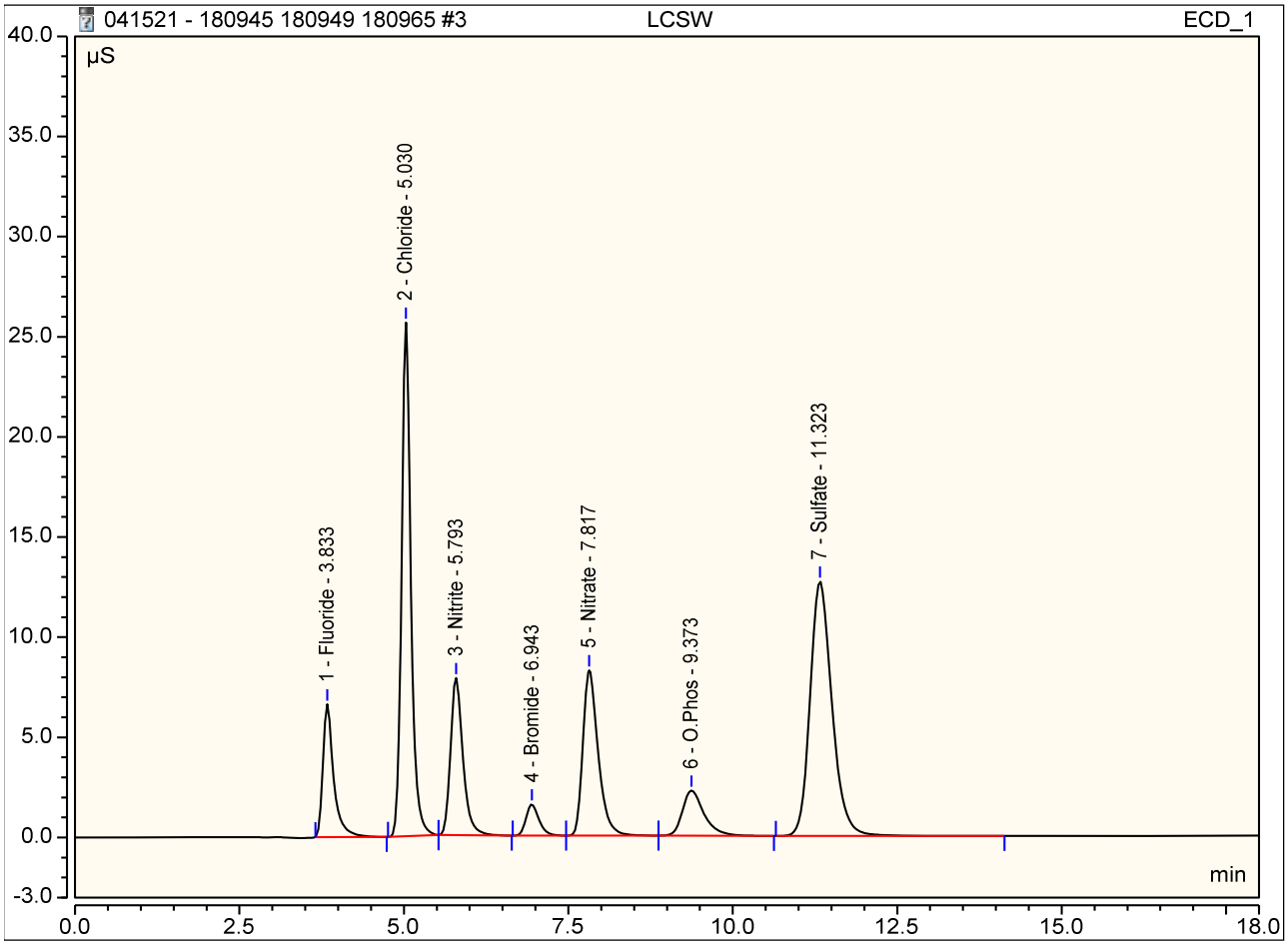
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
3	3.84	Fluoride	1.358	7.111	3.7612
4	5.03	Chloride	4.184	25.636	14.6783
5	5.80	Nitrite	1.743	7.964	3.6927
6	6.95	Bromide	0.361	1.576	3.6936
7	7.82	Nitrate	2.244	8.402	3.5860
8	9.38	O.Phos	0.803	2.059	3.3753
9	11.33	Sulfate	4.836	12.461	24.3936



Peak Integration Report

Sample Name:	**LCSW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 13:13**	*Run Time:*	**18.00**

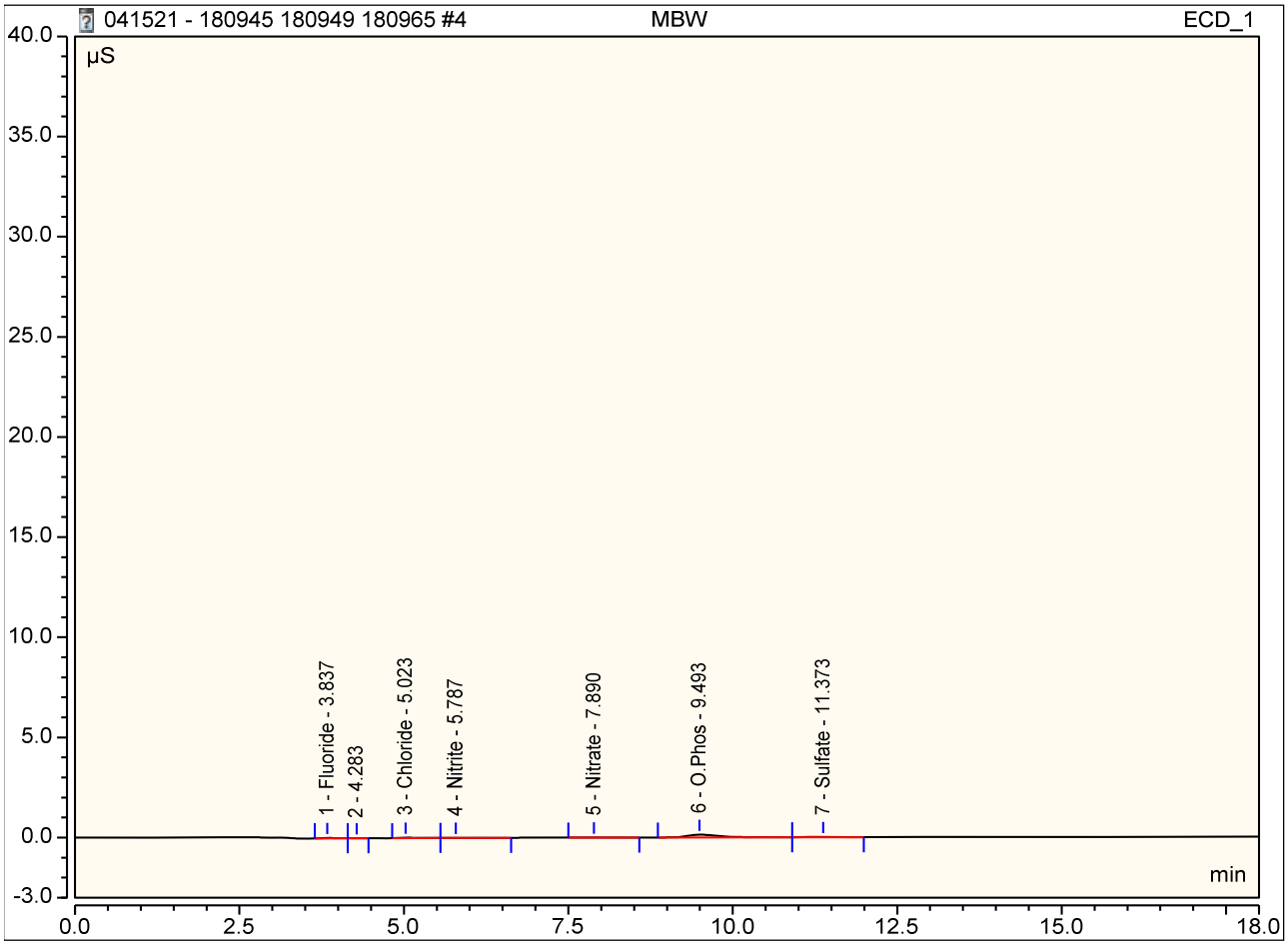
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	1.262	6.626	3.5004
2	5.03	Chloride	4.217	25.657	14.7882
3	5.79	Nitrite	1.724	7.849	3.6522
4	6.94	Bromide	0.361	1.566	3.6945
5	7.82	Nitrate	2.219	8.258	3.5464
6	9.37	O.Phos	0.861	2.256	3.6342
7	11.32	Sulfate	4.921	12.715	24.8105



Peak Integration Report

Sample Name:	**MBW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 13:31**	*Run Time:*	**18.00**

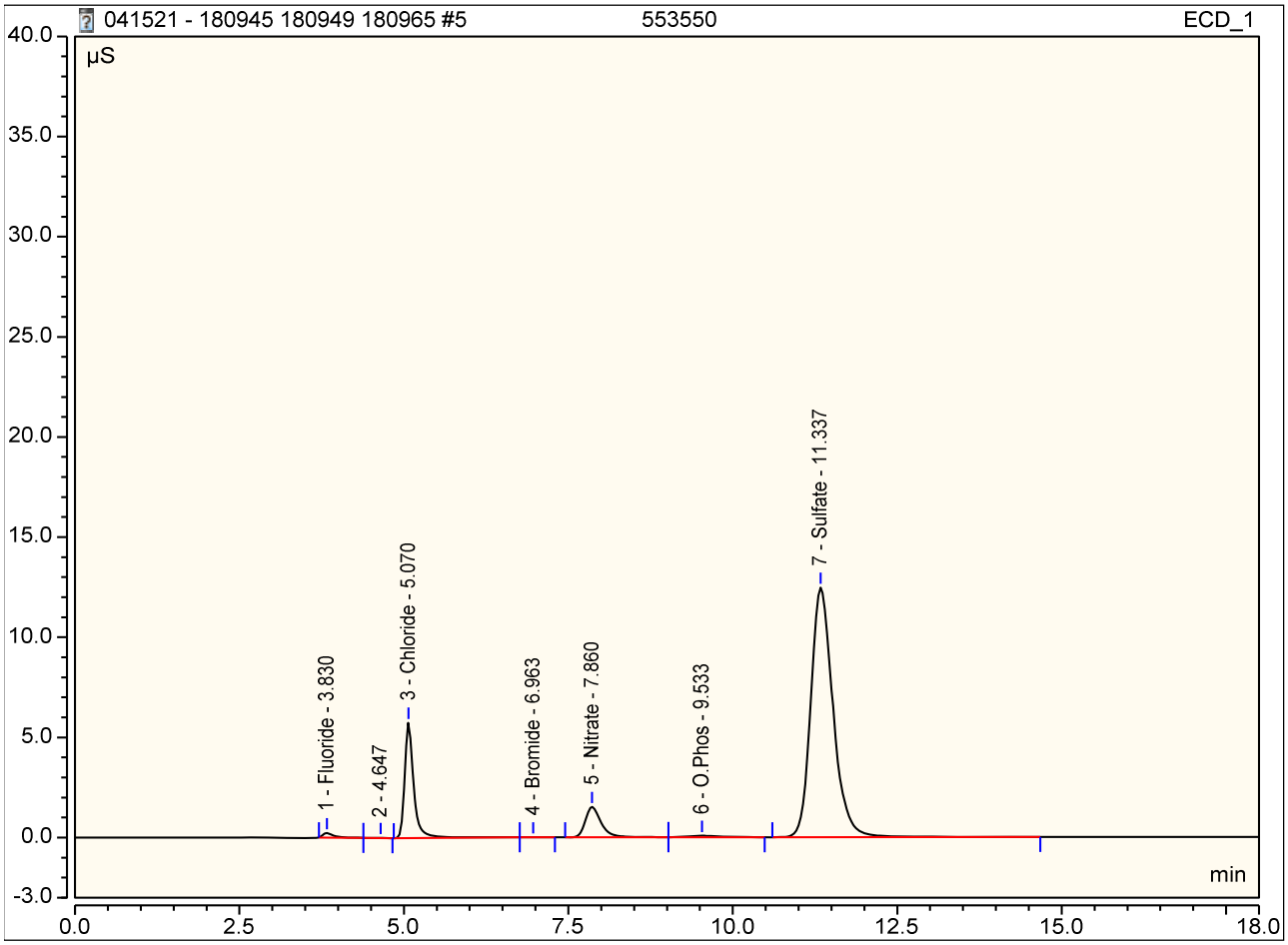
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	0.004	0.019	0.0622
3	5.02	Chloride	0.006	0.031	0.6322
4	5.79	Nitrite	0.003	0.011	0.0380
5	7.89	Nitrate	0.003	0.011	0.0949
6	9.49	O.Phos	0.072	0.139	0.0951
7	11.37	Sulfate	0.006	0.015	0.7188



Peak Integration Report

Sample Name:	**553550**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 13:49**	*Run Time:*	**18.00**

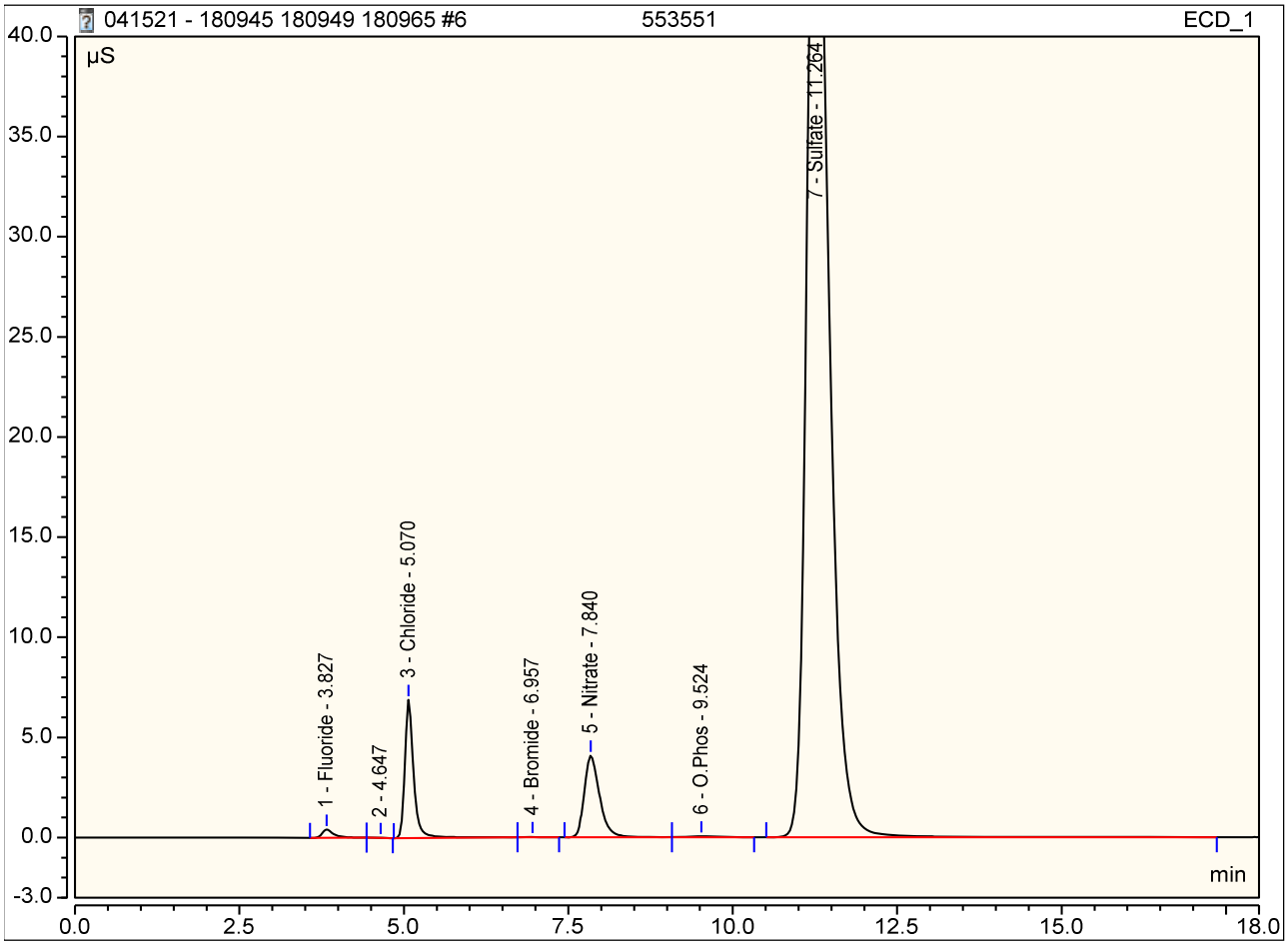
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.041	0.222	0.1640
3	5.07	Chloride	0.939	5.769	3.7674
4	6.96	Bromide	0.002	0.007	0.0224
5	7.86	Nitrate	0.418	1.514	0.7404
6	9.53	O.Phos	0.035	0.067	n.a.
7	11.34	Sulfate	4.899	12.455	24.7023



Peak Integration Report

Sample Name:	**553551**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 14:07**	*Run Time:*	**18.00**

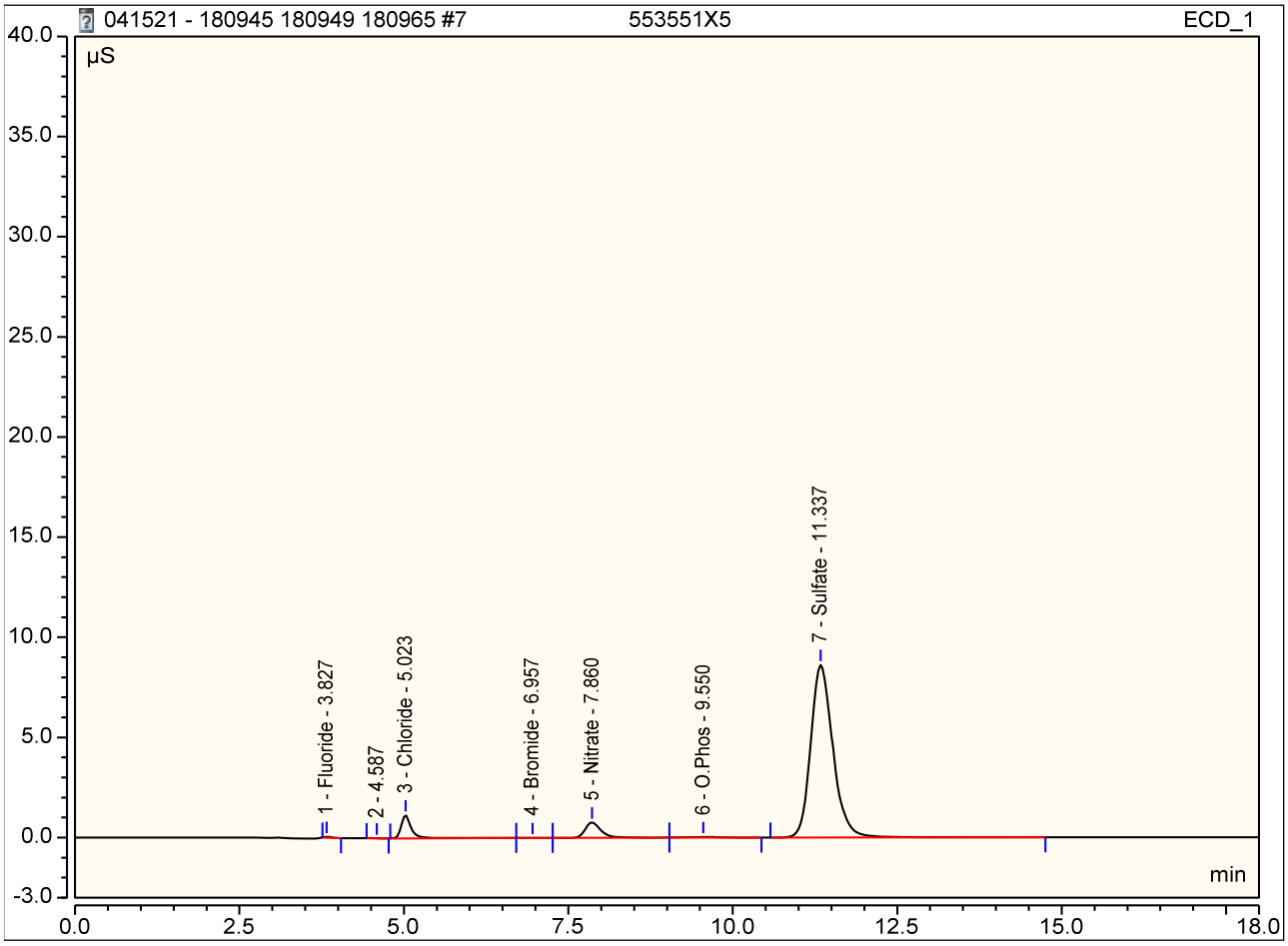
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.085	0.408	0.2848
3	5.07	Chloride	1.085	6.897	4.2573
4	6.96	Bromide	0.003	0.014	0.0389
5	7.84	Nitrate	1.099	4.076	1.8017
6	9.52	O.Phos	0.023	0.046	n.a.
7	11.26	Sulfate	20.720	54.200	102.2560



Peak Integration Report

Sample Name:	**553551X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 14:25**	*Run Time:*	**18.00**

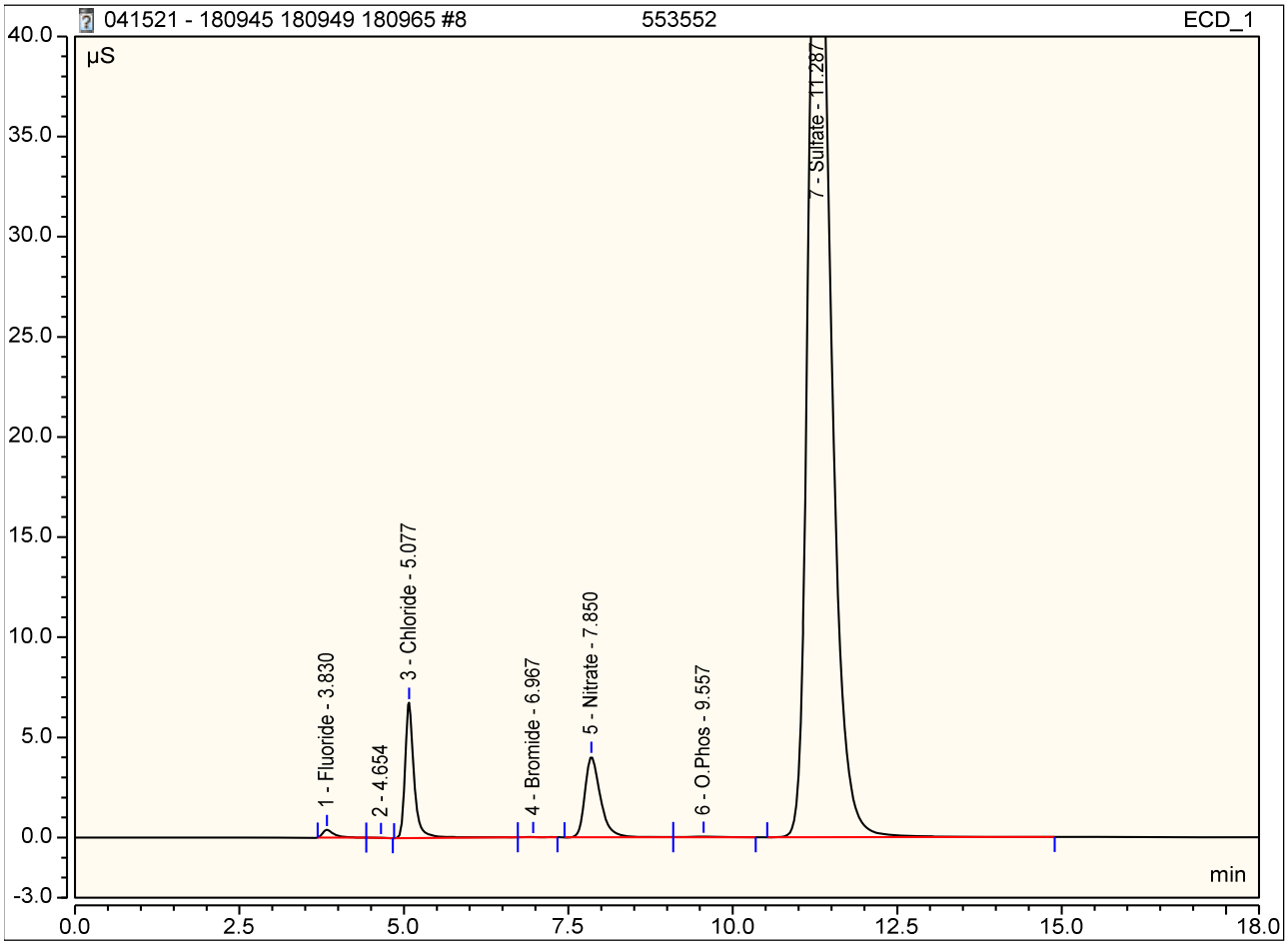
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.006	0.044	0.0675
3	5.02	Chloride	0.208	1.156	1.3111
4	6.96	Bromide	0.001	0.005	0.0188
5	7.86	Nitrate	0.212	0.771	0.4204
6	9.55	O.Phos	0.018	0.035	n.a.
7	11.34	Sulfate	3.389	8.624	17.3005



Peak Integration Report

Sample Name:	**553552**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 14:43**	*Run Time:*	**18.00**

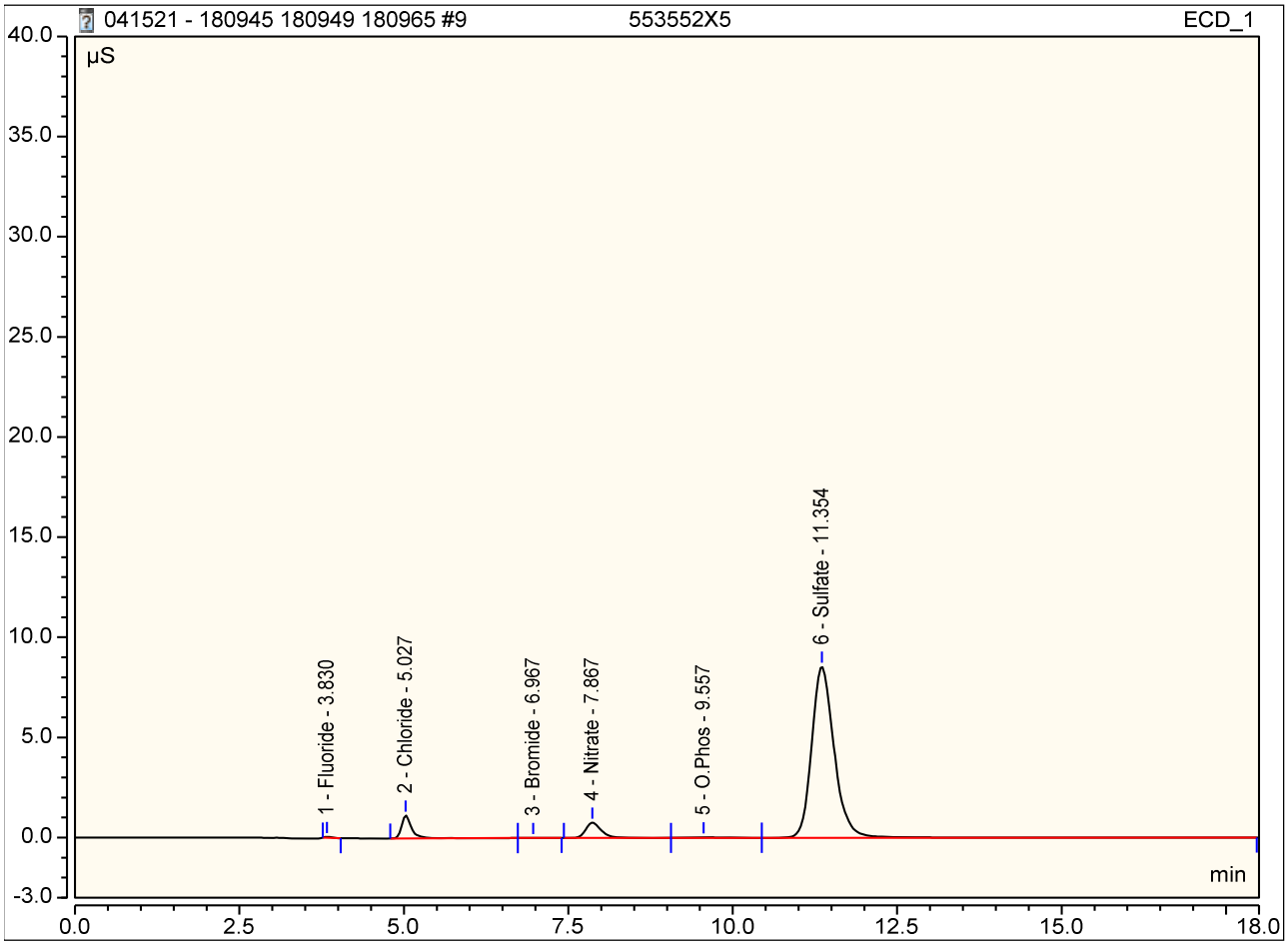
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.076	0.382	0.2610
3	5.08	Chloride	1.079	6.753	4.2371
4	6.97	Bromide	0.003	0.014	0.0388
5	7.85	Nitrate	1.099	4.027	1.8013
6	9.56	O.Phos	0.014	0.028	n.a.
7	11.29	Sulfate	20.652	53.449	101.9206



Peak Integration Report

Sample Name:	**553552X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 15:01**	*Run Time:*	**18.00**

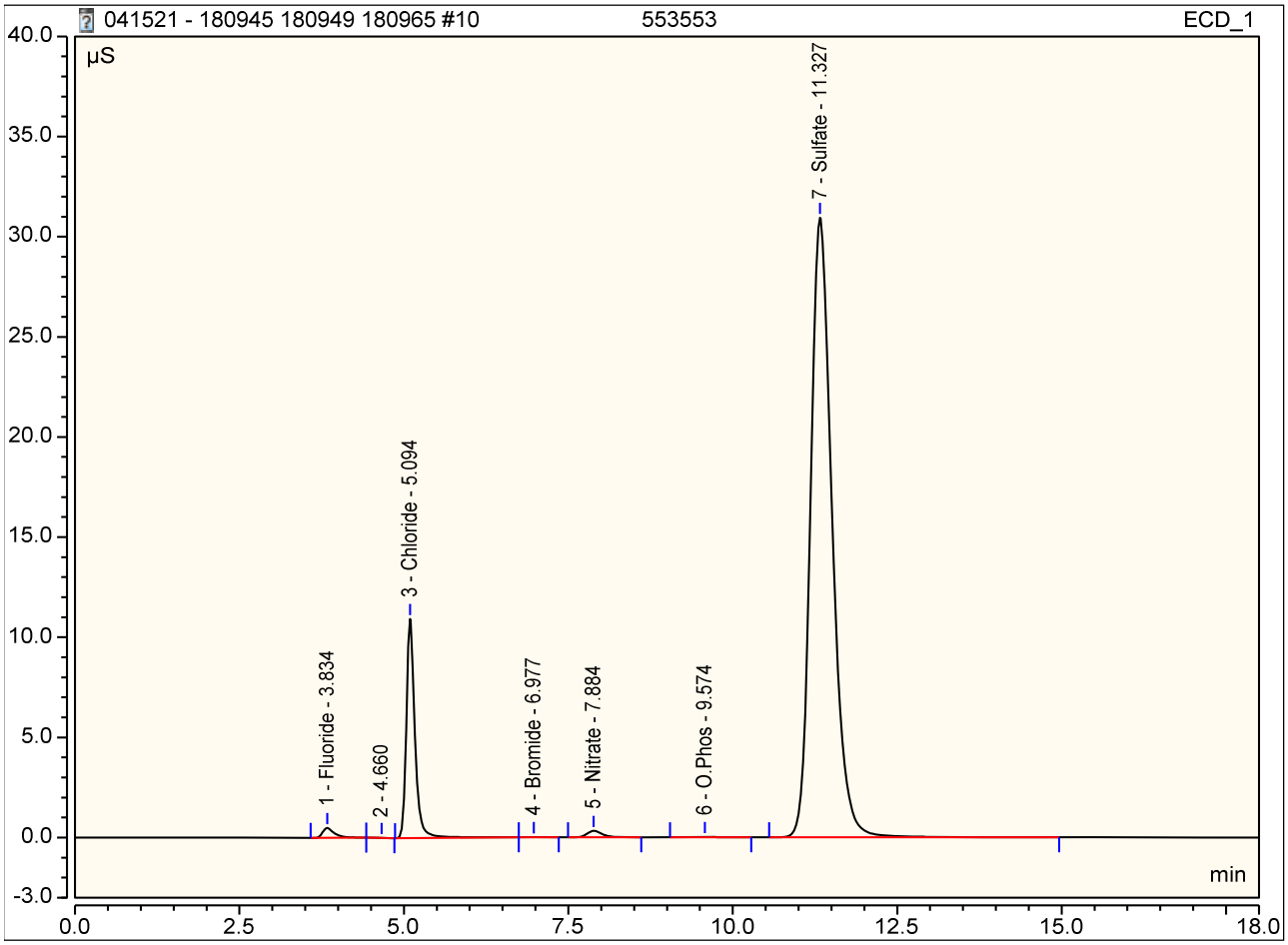
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.005	0.041	0.0659
2	5.03	Chloride	0.207	1.146	1.3066
3	6.97	Bromide	0.001	0.005	0.0182
4	7.87	Nitrate	0.212	0.766	0.4192
5	9.56	O.Phos	0.013	0.024	n.a.
6	11.35	Sulfate	3.404	8.552	17.3732



Peak Integration Report

Sample Name:	**553553**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 15:19**	*Run Time:*	**18.00**

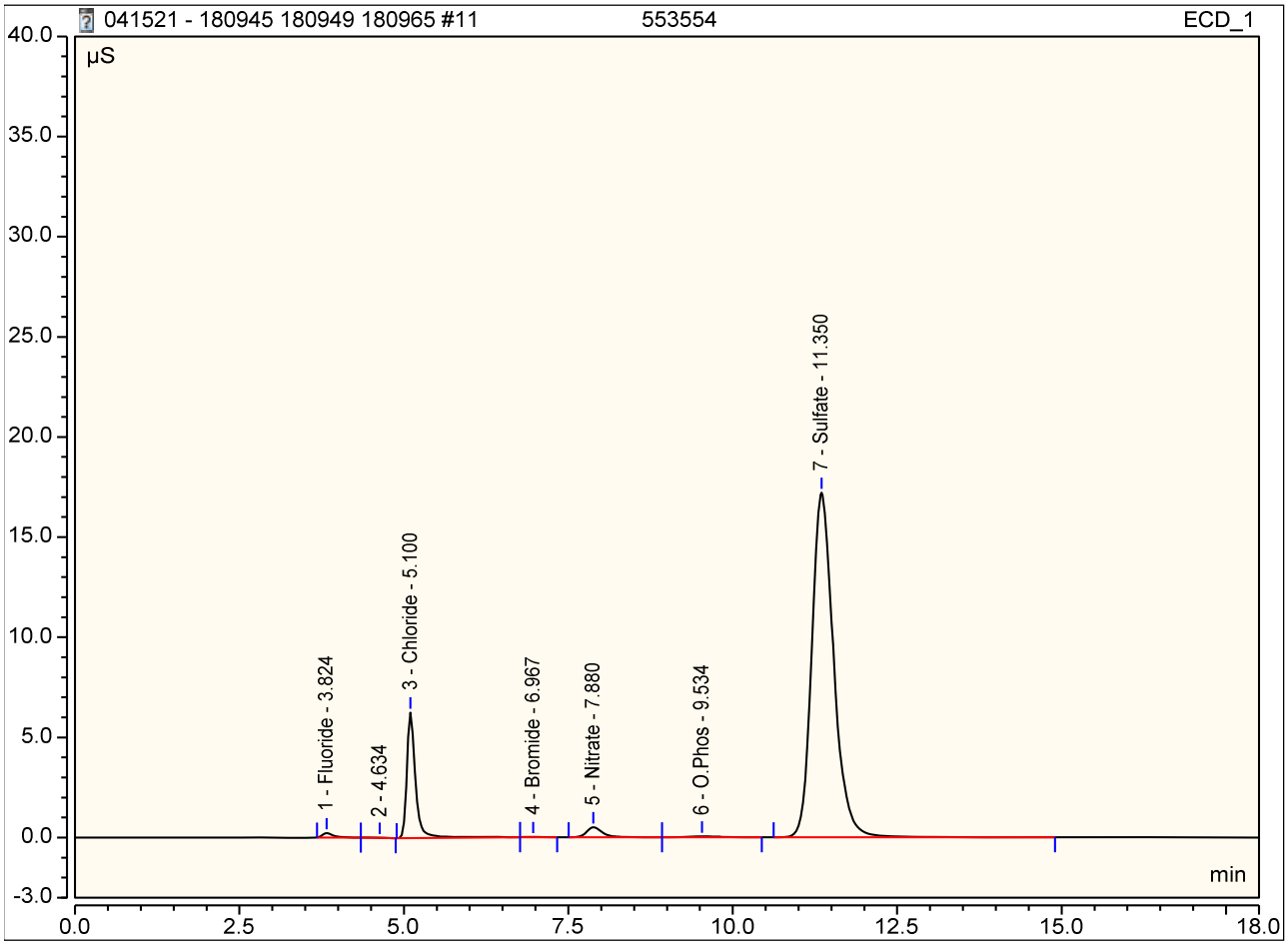
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.103	0.492	0.3350
3	5.09	Chloride	1.659	10.950	6.1868
4	6.98	Bromide	0.003	0.014	0.0391
5	7.88	Nitrate	0.086	0.321	0.2228
6	9.57	O.Phos	0.008	0.016	n.a.
7	11.33	Sulfate	11.735	30.938	58.2133



Peak Integration Report

Sample Name:	**553554**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 15:38**	*Run Time:*	**18.00**

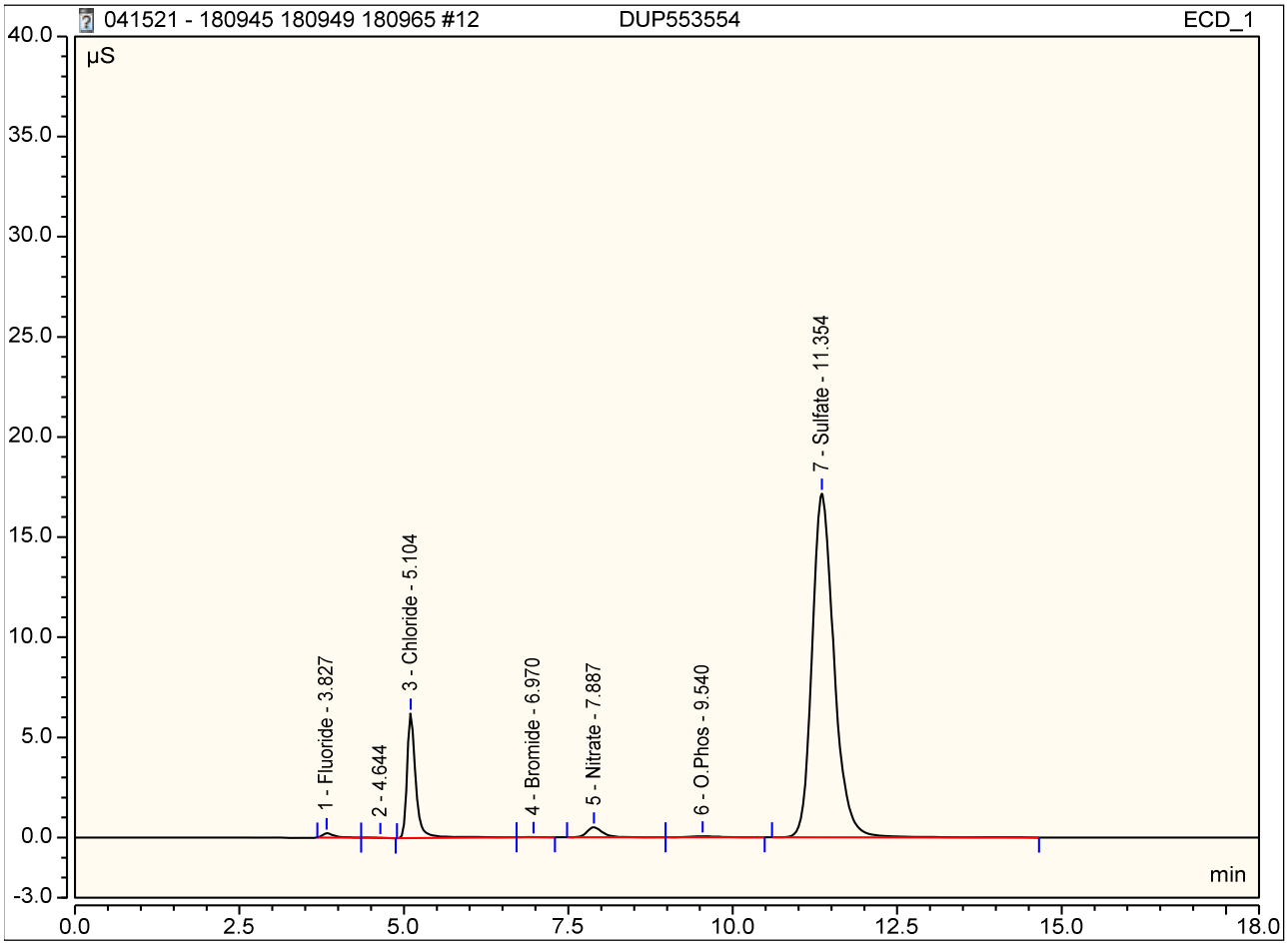
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.82	Fluoride	0.044	0.218	0.1719
3	5.10	Chloride	0.973	6.279	3.8805
4	6.97	Bromide	0.002	0.008	0.0238
5	7.88	Nitrate	0.136	0.500	0.3009
6	9.53	O.Phos	0.021	0.040	n.a.
7	11.35	Sulfate	6.650	17.204	33.2881



Peak Integration Report

Sample Name:	**DUP553554**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 15:56**	*Run Time:*	**18.00**

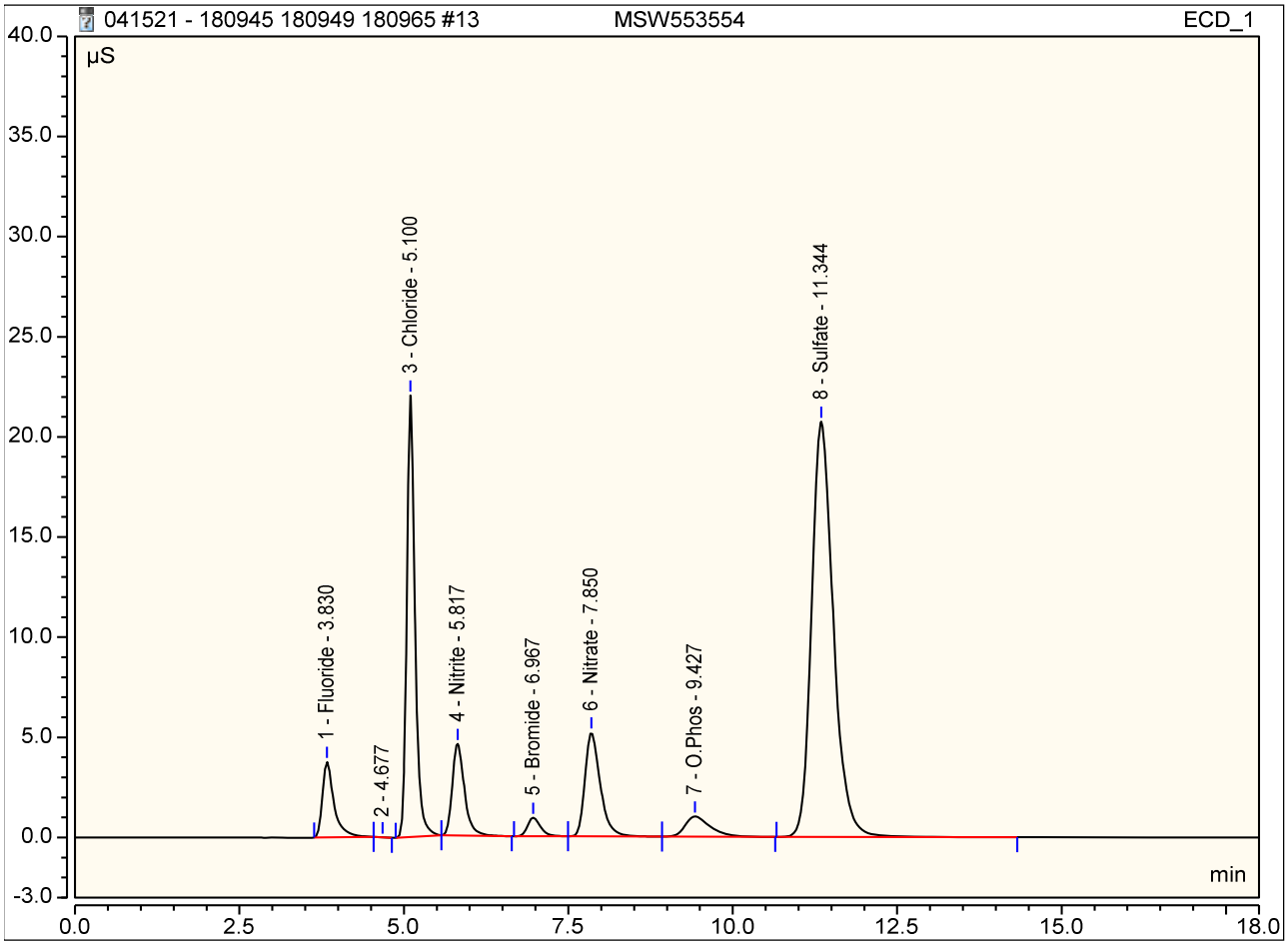
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.044	0.216	0.1715
3	5.10	Chloride	0.971	6.231	3.8754
4	6.97	Bromide	0.002	0.007	0.0222
5	7.89	Nitrate	0.136	0.500	0.3015
6	9.54	O.Phos	0.025	0.048	n.a.
7	11.35	Sulfate	6.640	17.165	33.2394



Peak Integration Report

Sample Name:	**MSW553554**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 16:14**	*Run Time:*	**18.00**

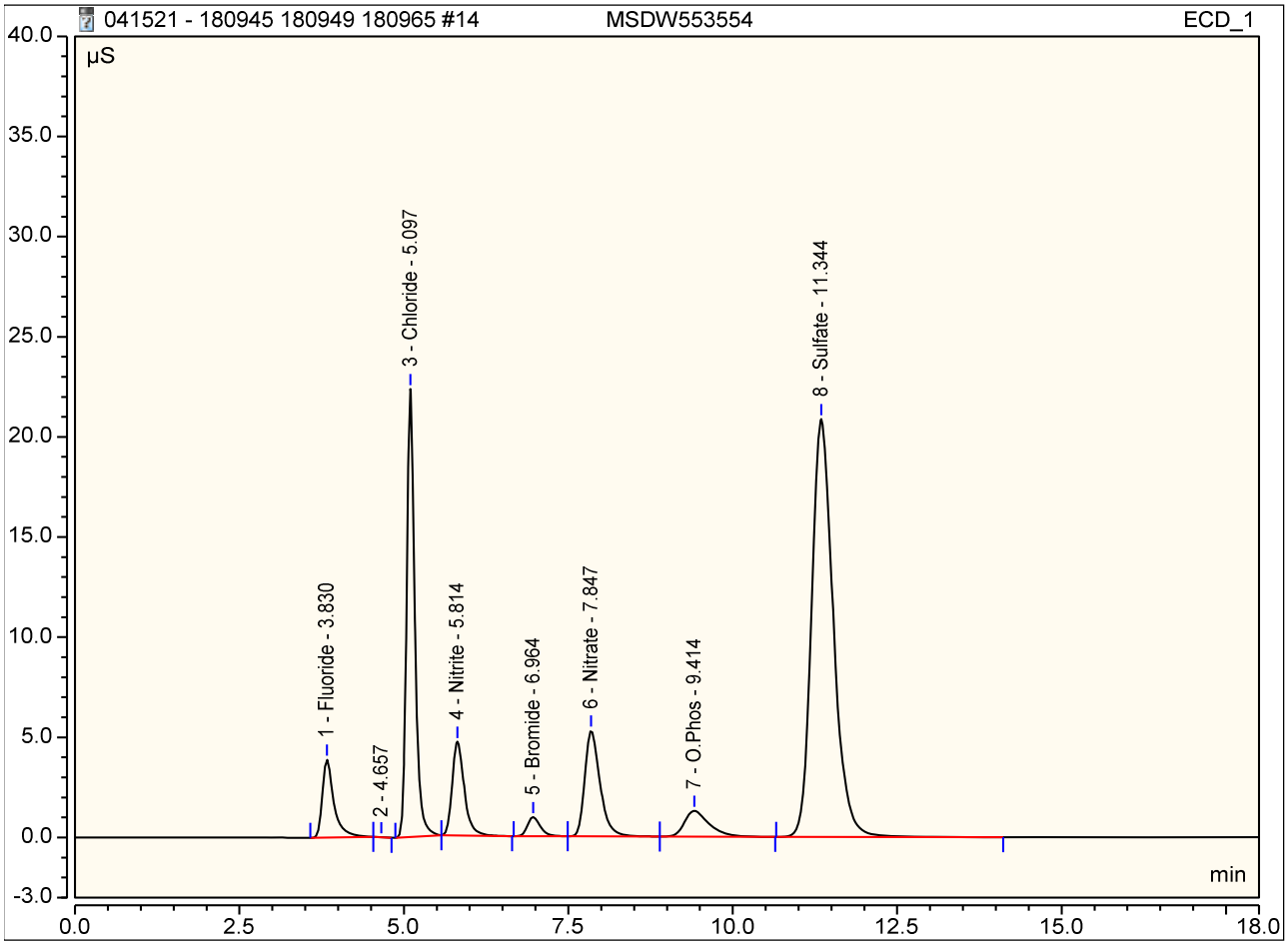
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.773	3.773	2.1633
3	5.10	Chloride	3.188	22.047	11.3301
4	5.82	Nitrite	0.980	4.580	2.0907
5	6.97	Bromide	0.215	0.935	2.2016
6	7.85	Nitrate	1.400	5.194	2.2702
7	9.43	O.Phos	0.448	1.011	1.7830
8	11.34	Sulfate	7.968	20.742	39.7496



Peak Integration Report

Sample Name:	**MSDW553554**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 16:32**	*Run Time:*	**18.00**

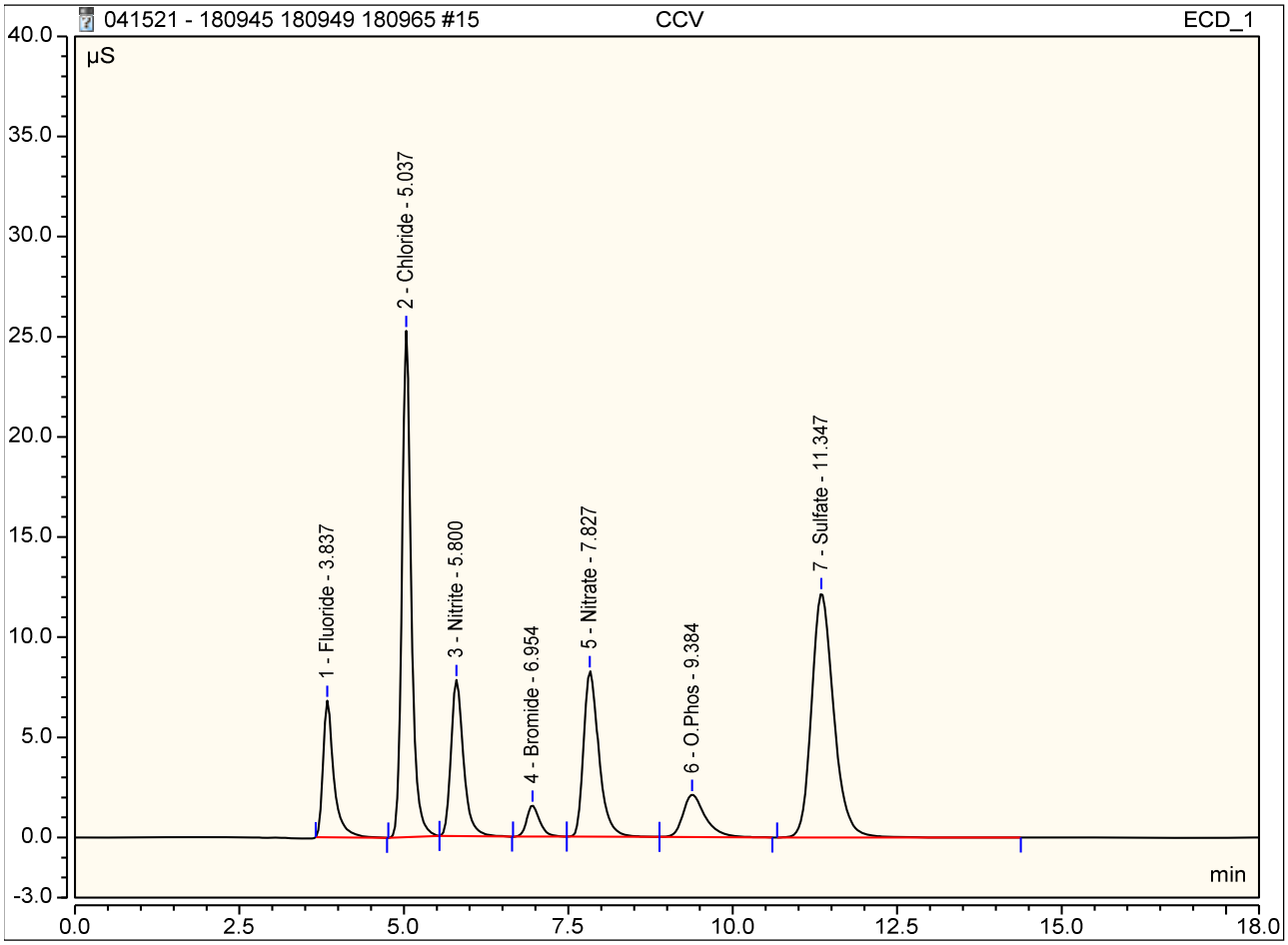
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.796	3.892	2.2257
3	5.10	Chloride	3.229	22.360	11.4664
4	5.81	Nitrite	0.998	4.678	2.1271
5	6.96	Bromide	0.219	0.957	2.2458
6	7.85	Nitrate	1.421	5.292	2.3035
7	9.41	O.Phos	0.561	1.292	2.2885
8	11.34	Sulfate	8.000	20.860	39.9050



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 16:50**	*Run Time:*	**18.00**

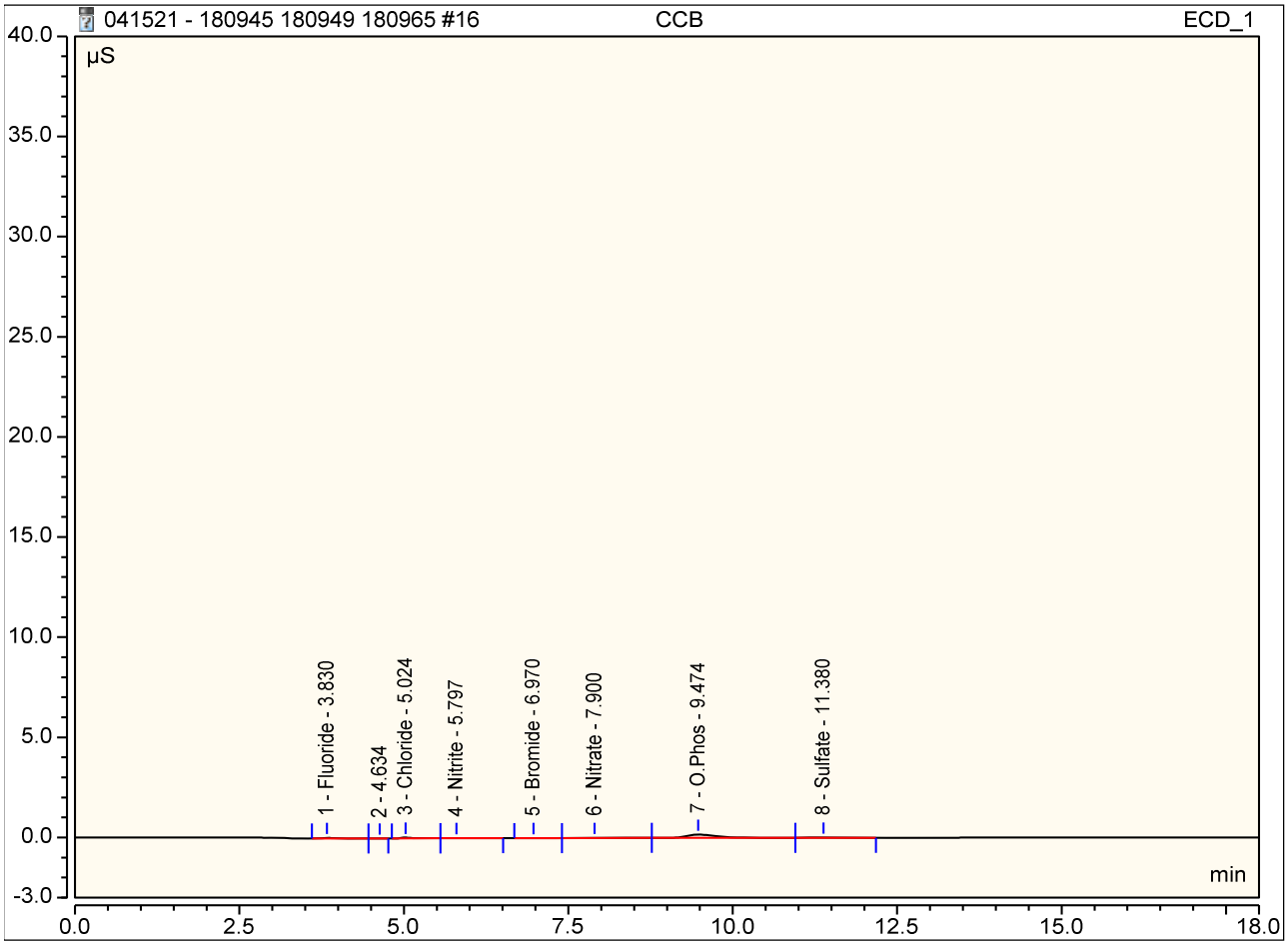
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.84	Fluoride	1.303	6.819	3.6111
2	5.04	Chloride	4.156	25.271	14.5826
3	5.80	Nitrite	1.720	7.788	3.6440
4	6.95	Bromide	0.359	1.551	3.6721
5	7.83	Nitrate	2.231	8.264	3.5650
6	9.38	O.Phos	0.823	2.104	3.4637
7	11.35	Sulfate	4.769	12.205	24.0677



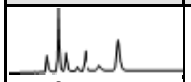
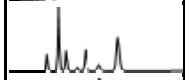
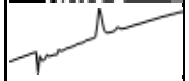
Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**15-Apr-2021 / 17:08**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.009	0.036	0.0764
3	5.02	Chloride	0.008	0.040	0.6384
4	5.80	Nitrite	0.003	0.013	0.0388
5	6.97	Bromide	0.001	0.005	0.0191
6	7.90	Nitrate	0.004	0.014	0.0963
7	9.47	O.Phos	0.085	0.168	0.1540
8	11.38	Sulfate	0.007	0.016	0.7231



Sequence: 041721 - 181073
Last Update Operator: AQUION

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	CCV	1.0000	Unknown		2	5000	Anions	IC3449A	Finished
	LCSW	1.0000	Unknown		3	5000	Anions	IC3449A	Finished
	MBW	1.0000	Unknown		4	5000	Anions	IC3449A	Finished
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	554737X5	1.0000	Unknown		6	5000	Anions	IC3449A	Finished
	DUP554737	1.0000	Unknown		7	5000	Anions	IC3449A	Finished
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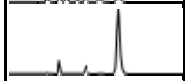	554738	1.0000	Unknown		10	5000	Anions	IC3449A	Finished
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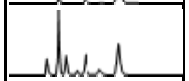
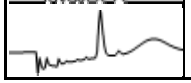
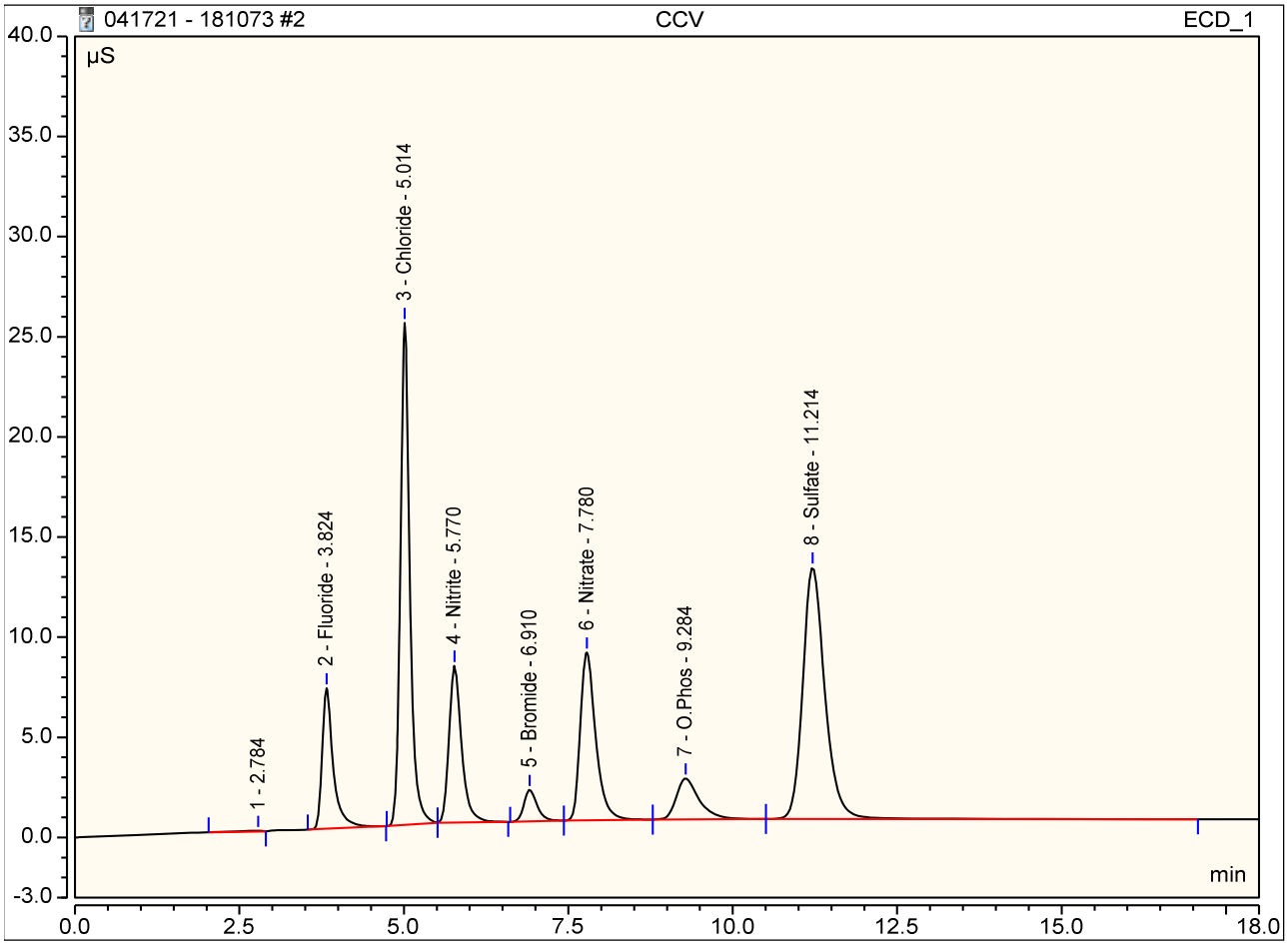
	554739X5	1.0000	Unknown		13	5000	Anions	IC3449A	Finished
	CCV	1.0000	Unknown		14	5000	Anions	IC3449A	Finished
	CCB	1.0000	Unknown		15	5000	Anions	IC3449A	Finished

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 13:31**	*Run Time:*	**18.00**

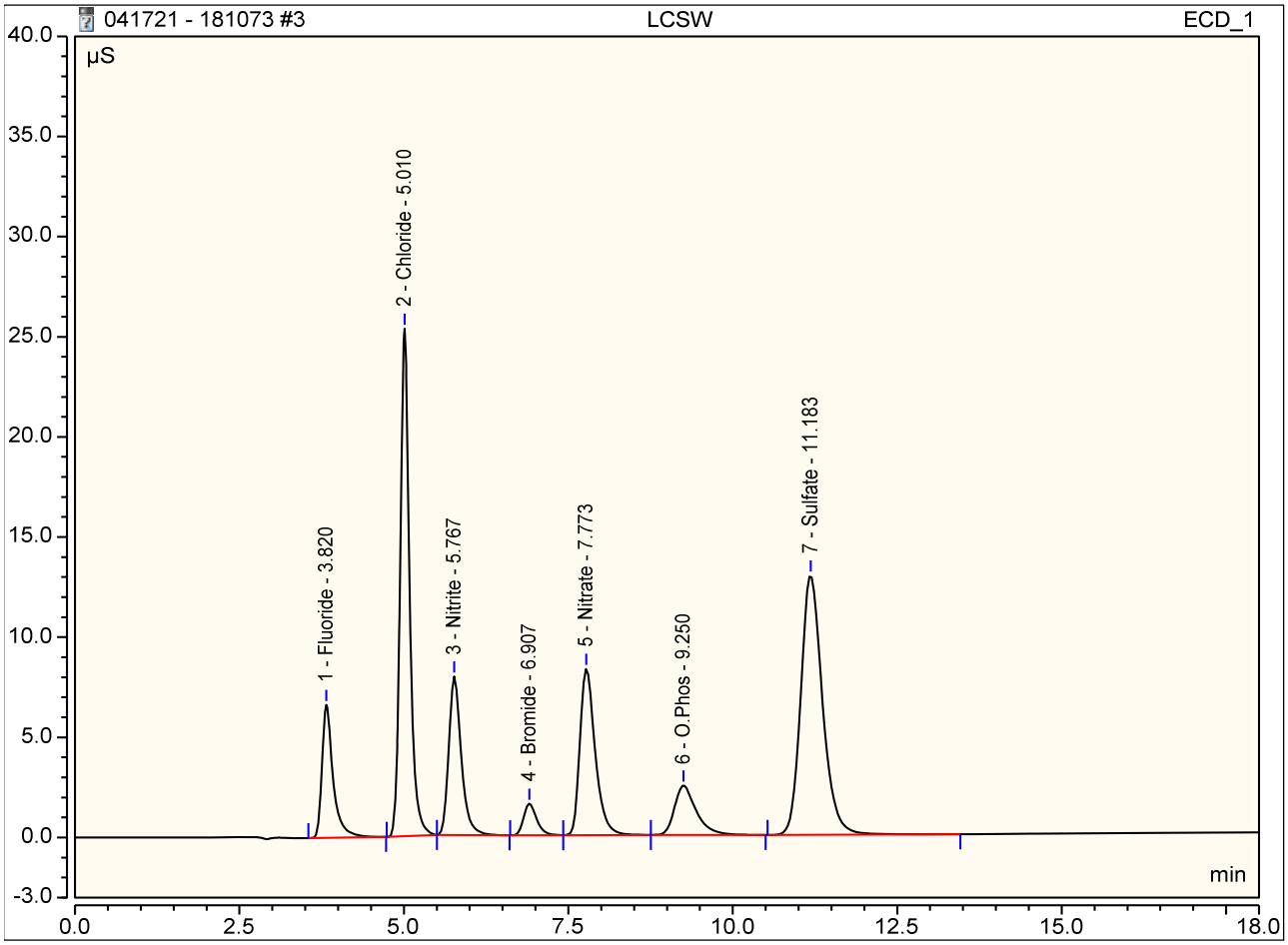
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	3.82	Fluoride	1.378	7.021	3.8174
3	5.01	Chloride	4.185	25.064	14.6795
4	5.77	Nitrite	1.742	7.829	3.6897
5	6.91	Bromide	0.368	1.579	3.7735
6	7.78	Nitrate	2.279	8.387	3.6401
7	9.28	O.Phos	0.822	2.048	3.4603
8	11.21	Sulfate	4.947	12.564	24.9372



Peak Integration Report

Sample Name:	**LCSW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 13:49**	*Run Time:*	**18.00**

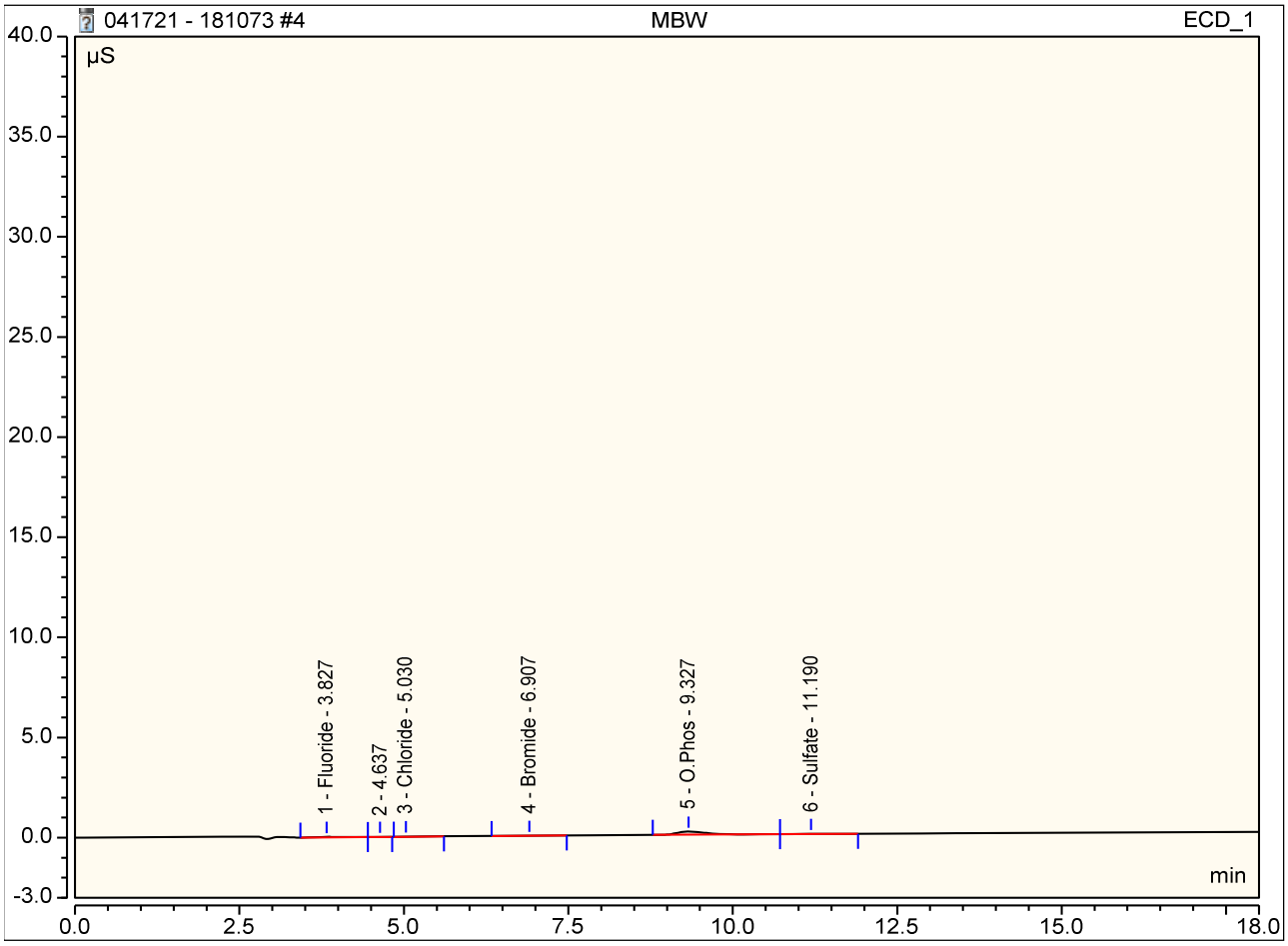
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.82	Fluoride	1.302	6.645	3.6101
2	5.01	Chloride	4.218	25.349	14.7924
3	5.77	Nitrite	1.759	7.923	3.7252
4	6.91	Bromide	0.367	1.587	3.7609
5	7.77	Nitrate	2.235	8.303	3.5715
6	9.25	O.Phos	0.943	2.470	4.0059
7	11.18	Sulfate	4.969	12.954	25.0461



Peak Integration Report

Sample Name:	**MBW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 14:07**	*Run Time:*	**18.00**

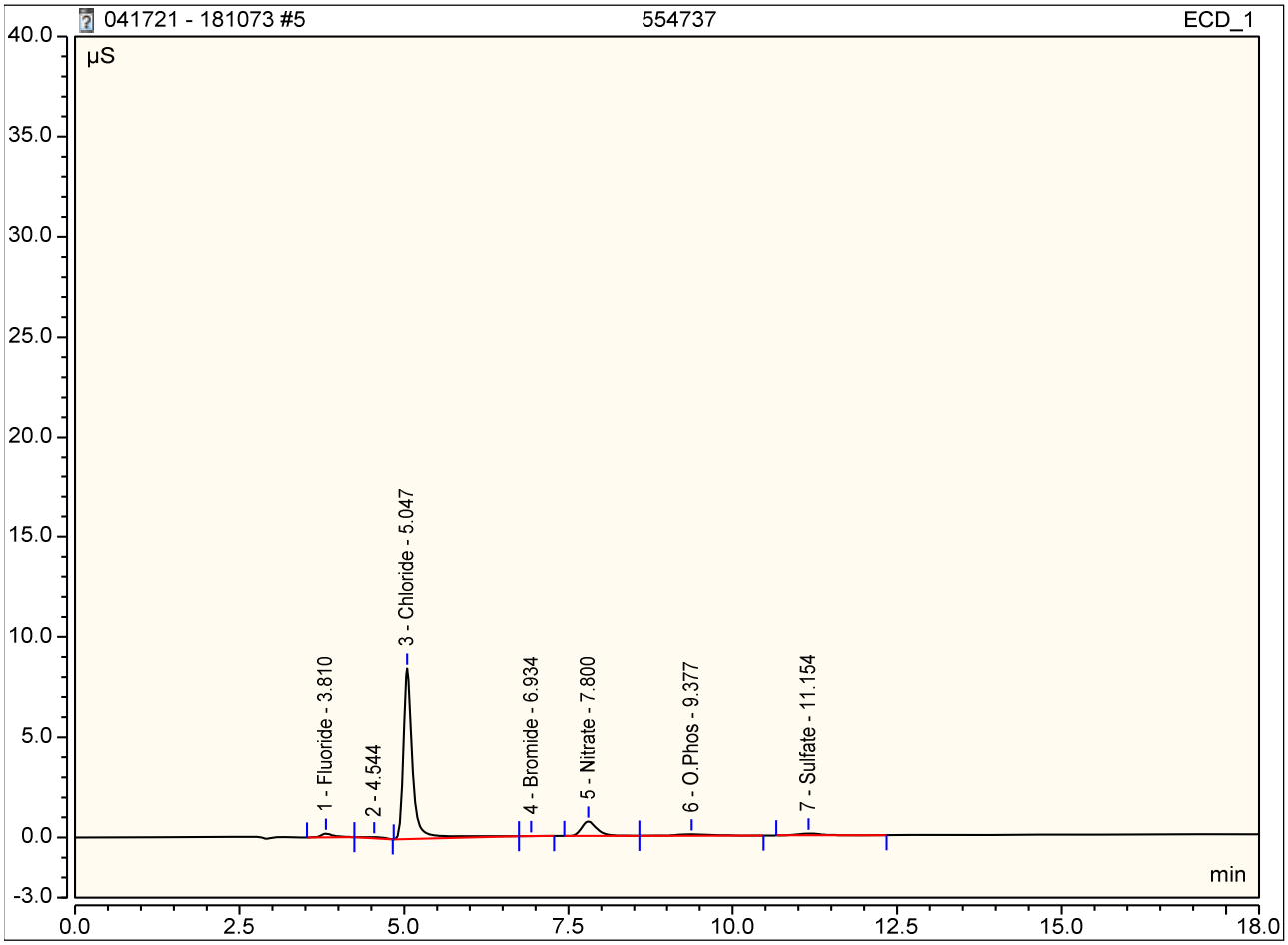
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	0.008	0.024	0.0734
3	5.03	Chloride	0.007	0.025	0.6329
4	6.91	Bromide	0.002	0.004	0.0237
5	9.33	O.Phos	0.083	0.160	0.1424
6	11.19	Sulfate	0.007	0.018	0.7260



Peak Integration Report

Sample Name:	**554737**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 14:25**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.81	Fluoride	0.041	0.183	0.1638
3	5.05	Chloride	1.394	8.501	5.2988
4	6.93	Bromide	0.001	0.005	0.0159
5	7.80	Nitrate	0.195	0.721	0.3929
6	9.38	O.Phos	0.036	0.066	n.a.
7	11.15	Sulfate	0.037	0.092	0.8716

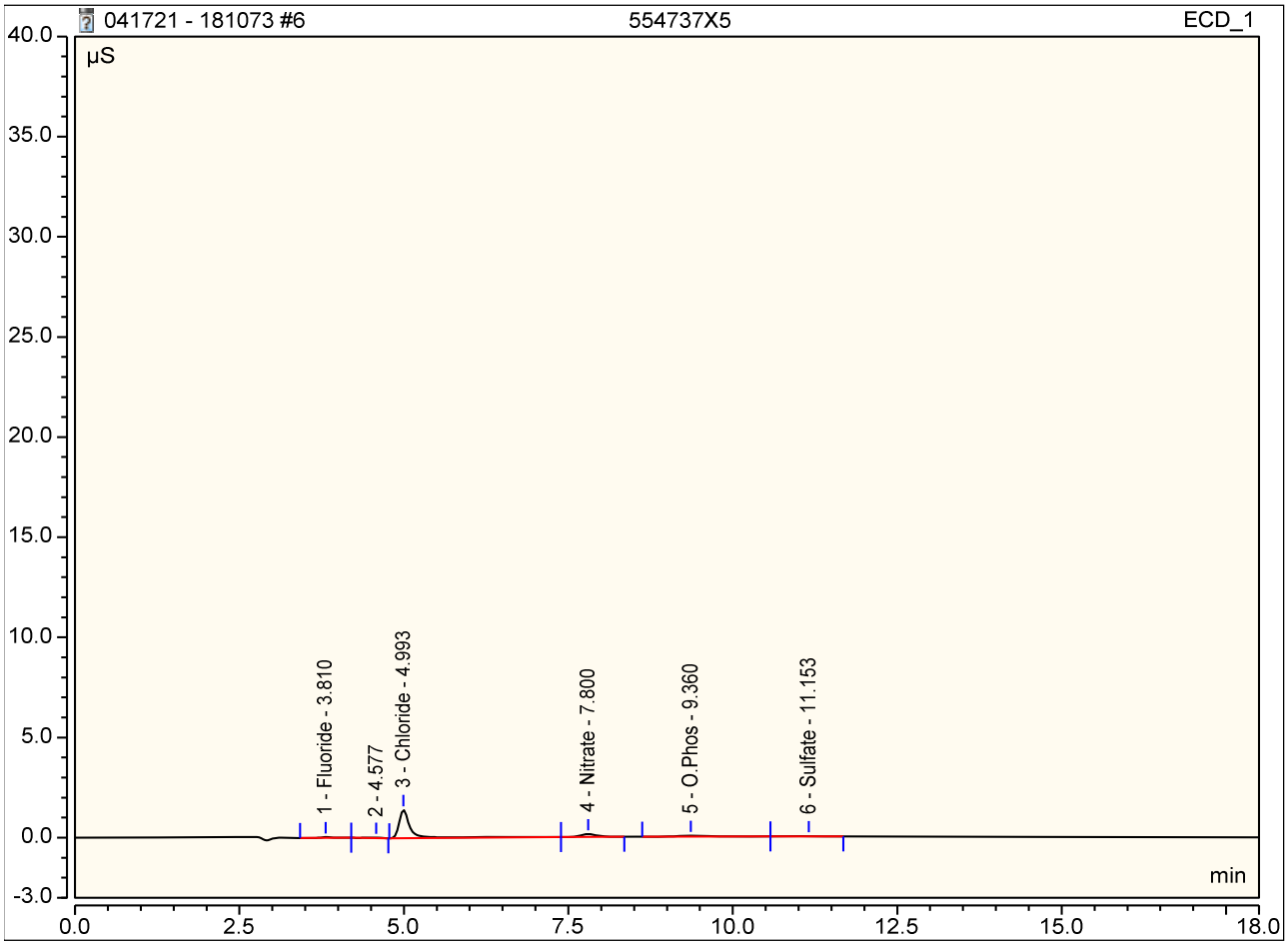


NOT USED

Peak Integration Report

Sample Name:	**554737X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 14:43**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.81	Fluoride	0.009	0.040	0.0776
3	4.99	Chloride	0.283	1.404	1.5626
4	7.80	Nitrate	0.037	0.137	0.1478
5	9.36	O.Phos	0.028	0.048	n.a.
6	11.15	Sulfate	0.010	0.025	0.7386

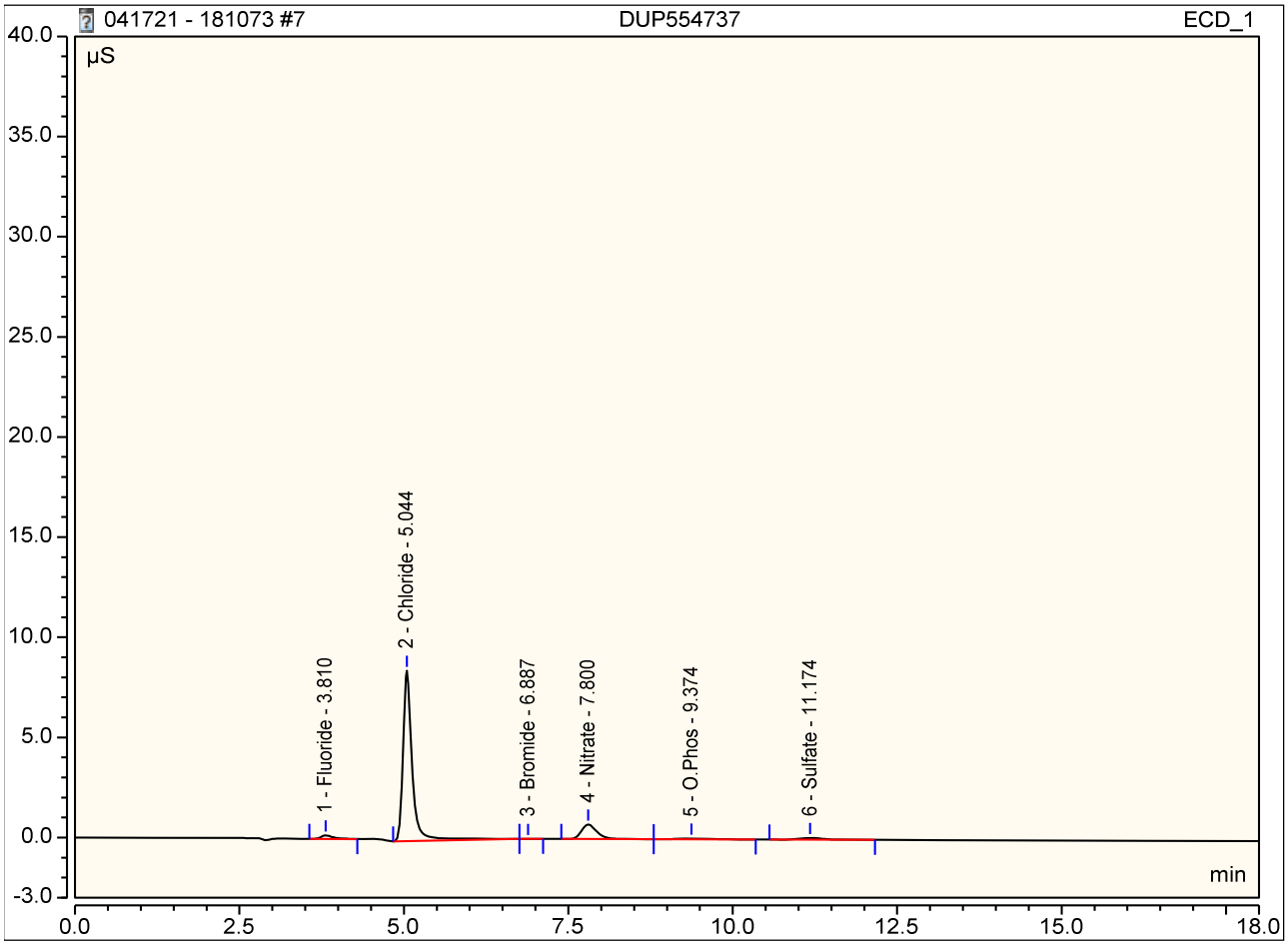


Chromeleon (c) Dionex 1996-2009
Version 7.2.9.11323

Peak Integration Report

Sample Name:	**DUP554737**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 15:01**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.81	Fluoride	0.040	0.179	0.1605
2	5.04	Chloride	1.396	8.505	5.3049
3	6.89	Bromide	0.001	0.005	0.0152
4	7.80	Nitrate	0.195	0.723	0.3935
5	9.37	O.Phos	0.018	0.034	n.a.
6	11.17	Sulfate	0.036	0.089	0.8651

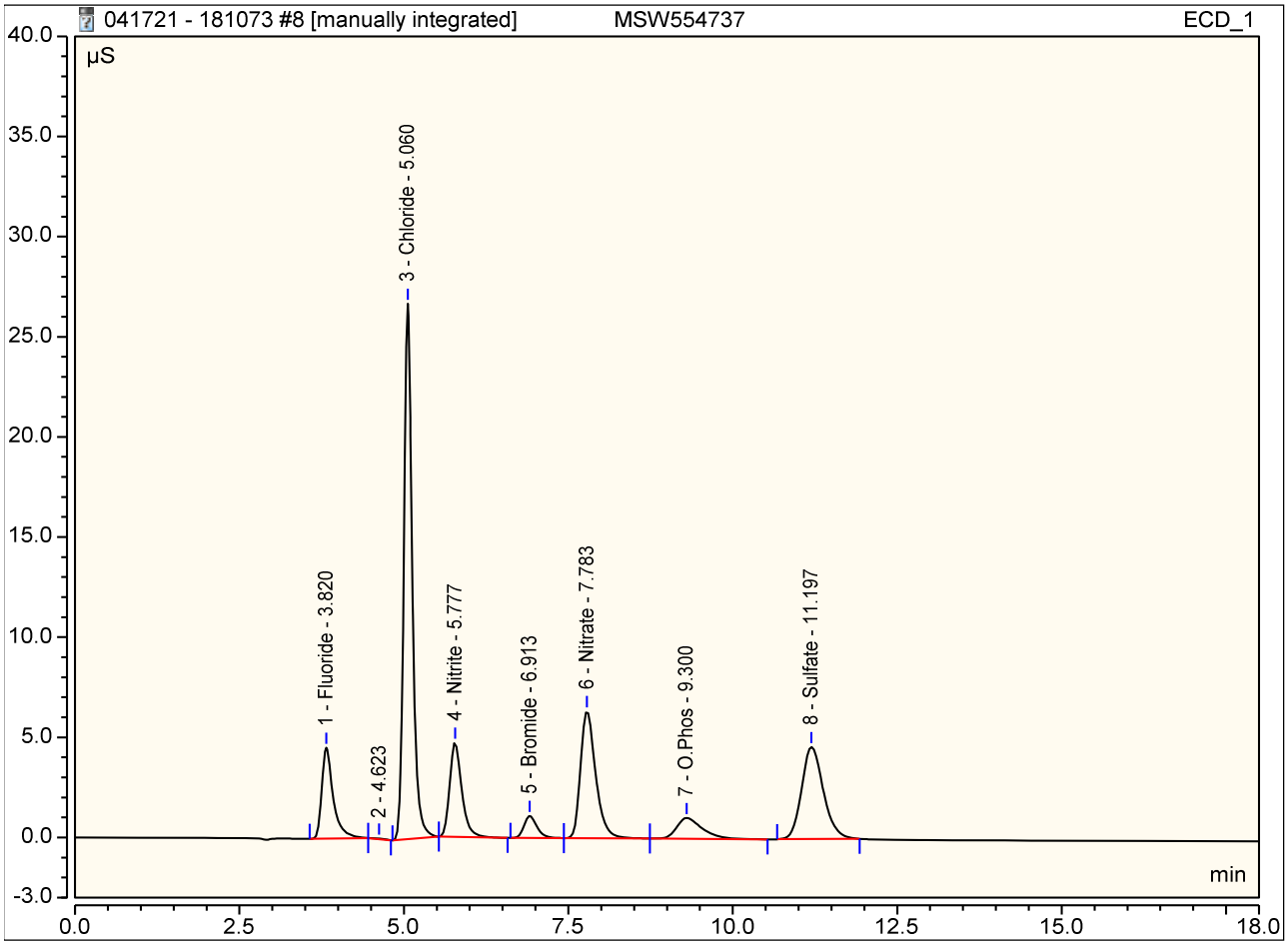


Peak Integration Report

TMC 04/21/2021

Sample Name:	**MSW554737**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 15:20**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.82	Fluoride	0.913	4.538	2.5459
3	5.06	Chloride	3.978	26.739	13.9847
4	5.78	Nitrite	1.010	4.709	2.1538
5	6.91	Bromide	0.253	1.106	2.5918
6	7.78	Nitrate	1.693	6.347	2.7266
7	9.30	O.Phos	0.465	1.032	1.8564
8	11.20	Sulfate	1.763	4.597	9.3335



RJ 04/23/2021

Before Manual Integration

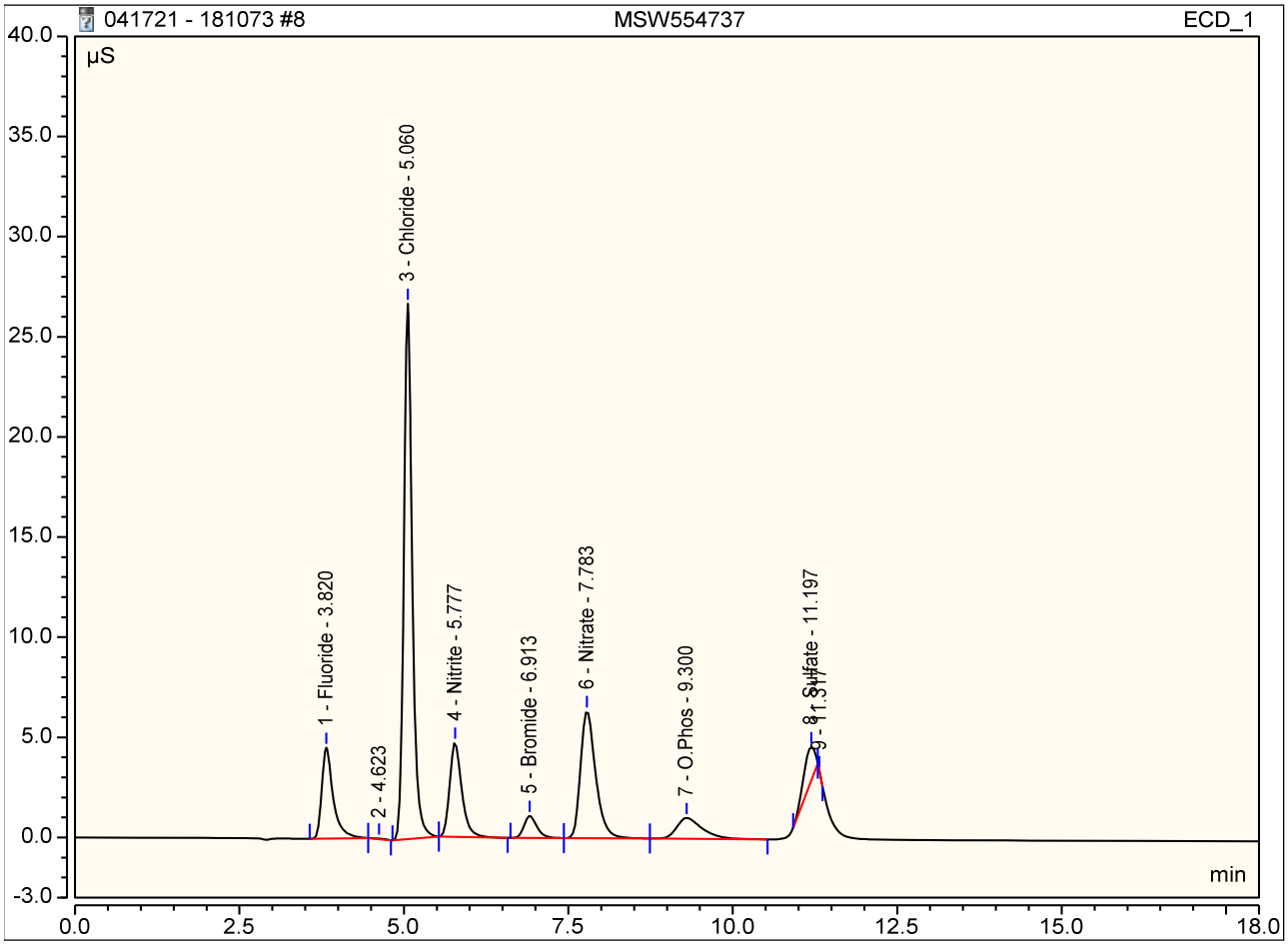
REASON #4

TMC 04/21/2021

Peak Integration Report

Sample Name:	**MSW554737**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 15:20**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.82	Fluoride	0.913	4.538	2.5459
3	5.06	Chloride	3.978	26.739	13.9847
4	5.78	Nitrite	1.010	4.709	2.1538
5	6.91	Bromide	0.253	1.106	2.5918
6	7.78	Nitrate	1.693	6.347	2.7266
7	9.30	O.Phos	0.465	1.032	1.8564
8	11.20	Sulfate	0.360	1.658	2.4558

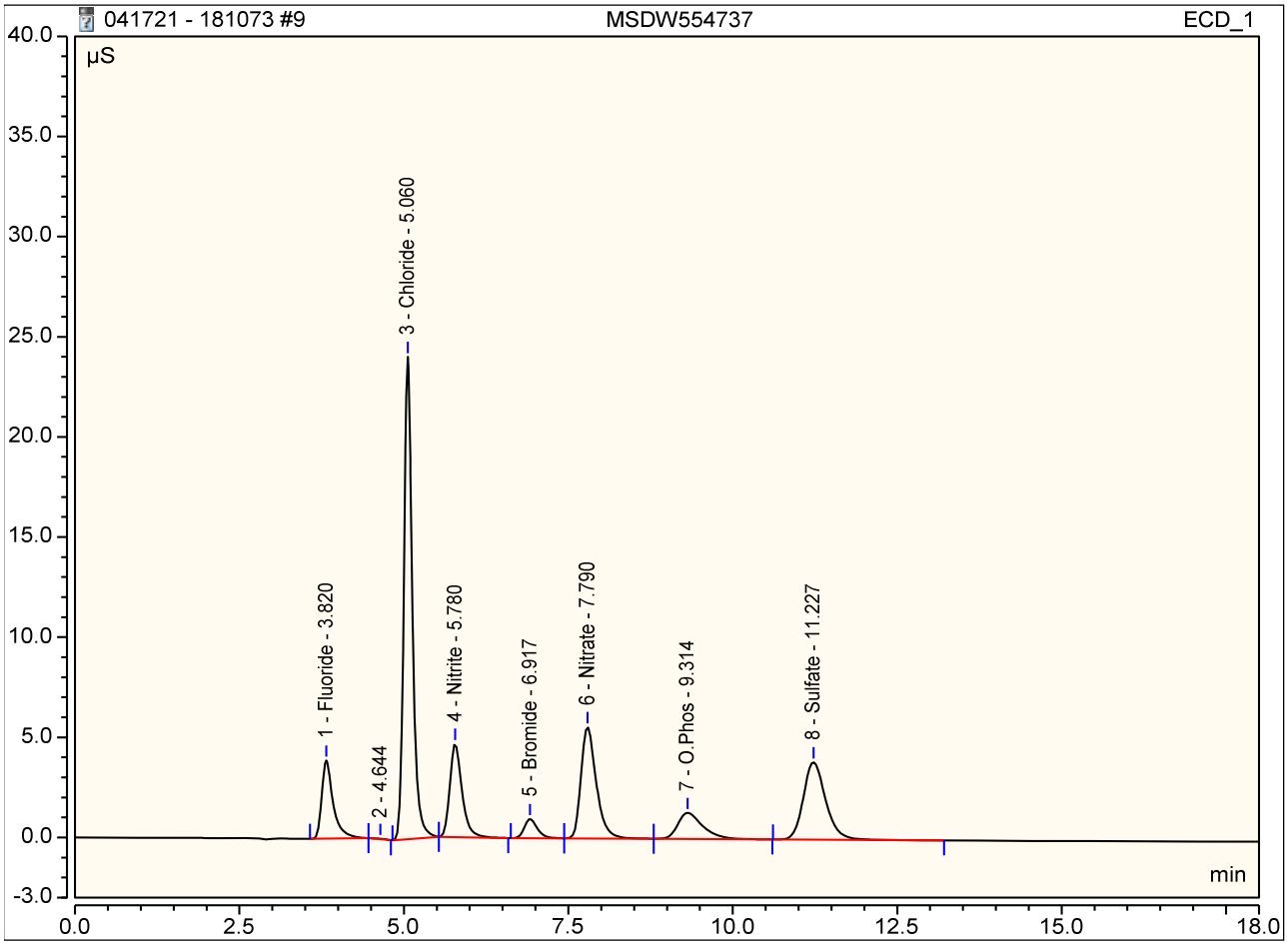


Chromeleon (c) Dionex 1996-2009
Version 7.2.9.11323

Peak Integration Report

Sample Name:	**MSDW554737**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 15:38**	*Run Time:*	**18.00**

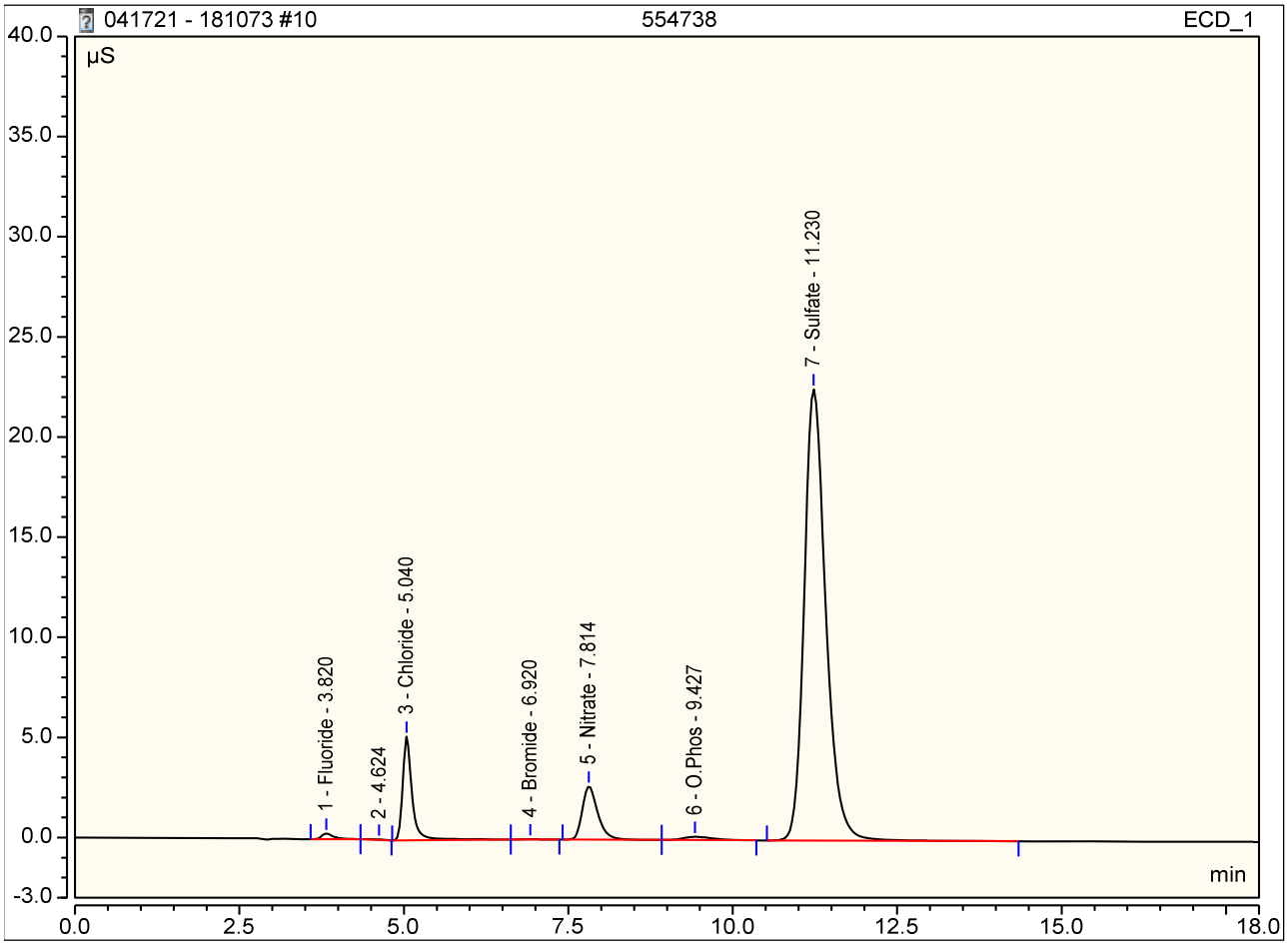
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.82	Fluoride	0.788	3.902	2.2063
3	5.06	Chloride	3.602	24.077	12.7217
4	5.78	Nitrite	1.005	4.666	2.1423
5	6.92	Bromide	0.220	0.960	2.2596
6	7.79	Nitrate	1.492	5.562	2.4142
7	9.31	O.Phos	0.573	1.302	2.3436
8	11.23	Sulfate	1.529	3.870	8.1826



Peak Integration Report

Sample Name:	**554738**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 15:56**	*Run Time:*	**18.00**

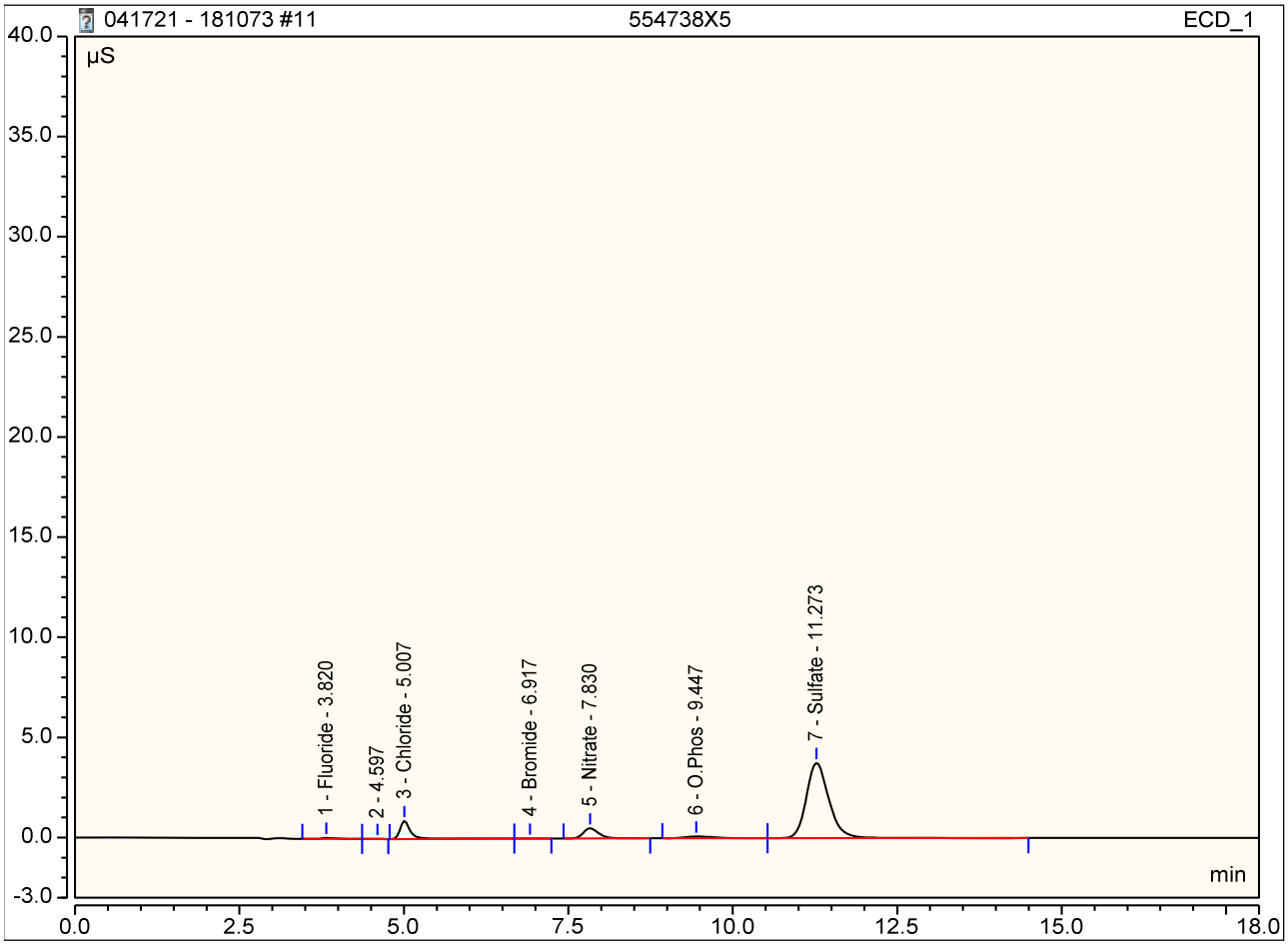
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.82	Fluoride	0.059	0.282	0.2134
3	5.04	Chloride	0.881	5.183	3.5731
4	6.92	Bromide	0.005	0.019	0.0533
5	7.81	Nitrate	0.728	2.667	1.2238
6	9.43	O.Phos	0.083	0.165	0.1428
7	11.23	Sulfate	8.607	22.534	42.8795



Peak Integration Report

Sample Name:	**554738X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 16:14**	*Run Time:*	**18.00**

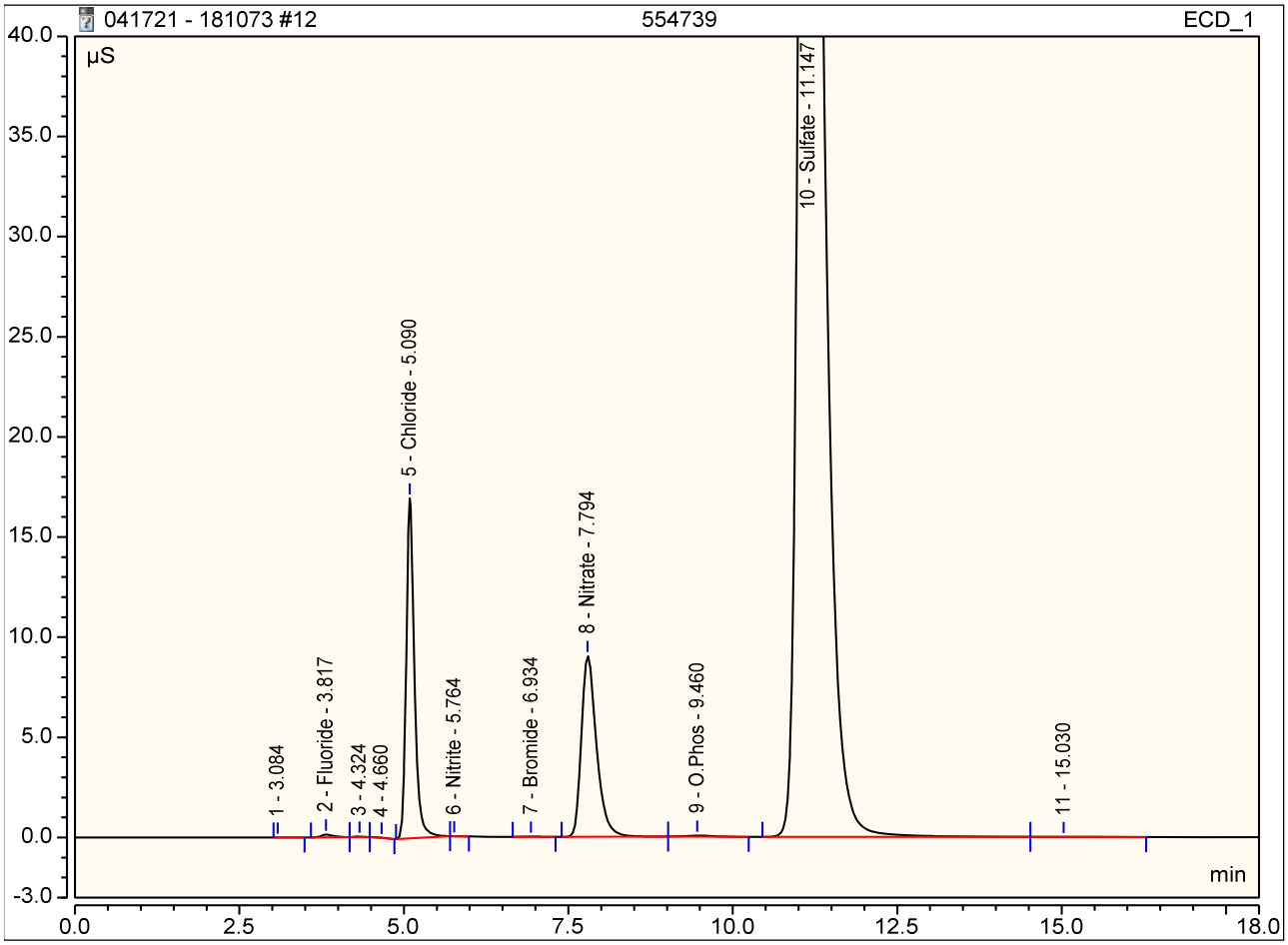
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.82	Fluoride	0.013	0.059	0.0879
3	5.01	Chloride	0.168	0.900	1.1770
4	6.92	Bromide	0.001	0.004	0.0138
5	7.83	Nitrate	0.139	0.509	0.3068
6	9.45	O.Phos	0.049	0.094	n.a.
7	11.27	Sulfate	1.500	3.759	8.0403



Peak Integration Report

Sample Name:	**554739**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 16:32**	*Run Time:*	**18.00**

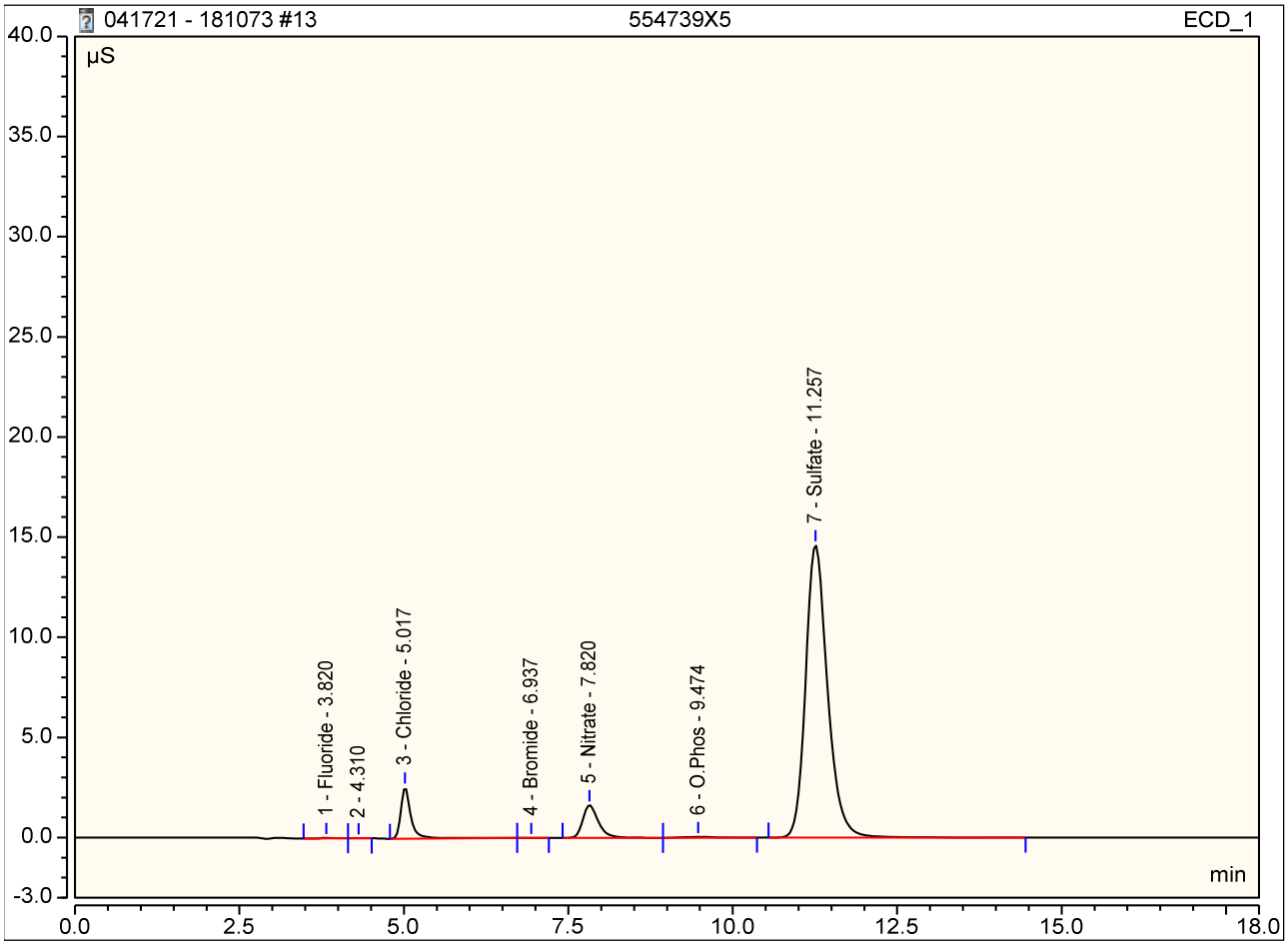
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	3.82	Fluoride	0.029	0.142	0.1308
5	5.09	Chloride	2.447	16.981	8.8380
6	5.76	Nitrite	0.001	0.006	0.0341
7	6.93	Bromide	0.004	0.018	0.0481
8	7.79	Nitrate	2.412	9.031	3.8476
9	9.46	O.Phos	0.028	0.057	n.a.
10	11.15	Sulfate	35.204	89.257	173.2526



Peak Integration Report

Sample Name:	**554739X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 16:50**	*Run Time:*	**18.00**

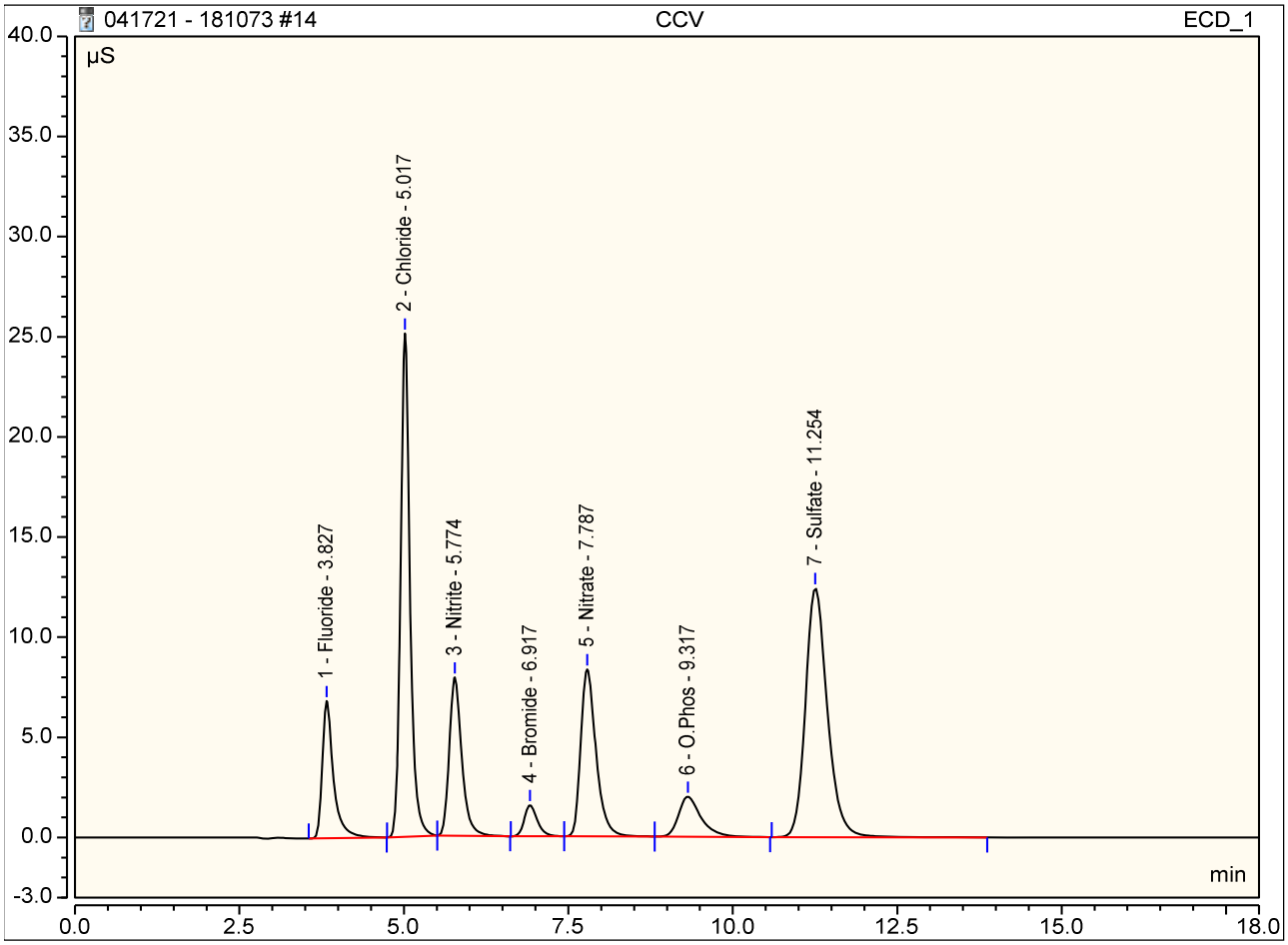
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.82	Fluoride	0.006	0.031	0.0691
3	5.02	Chloride	0.461	2.561	2.1614
4	6.94	Bromide	0.001	0.004	0.0139
5	7.82	Nitrate	0.450	1.637	0.7910
6	9.47	O.Phos	0.023	0.045	n.a.
7	11.26	Sulfate	5.662	14.614	28.4455



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 17:08**	*Run Time:*	**18.00**

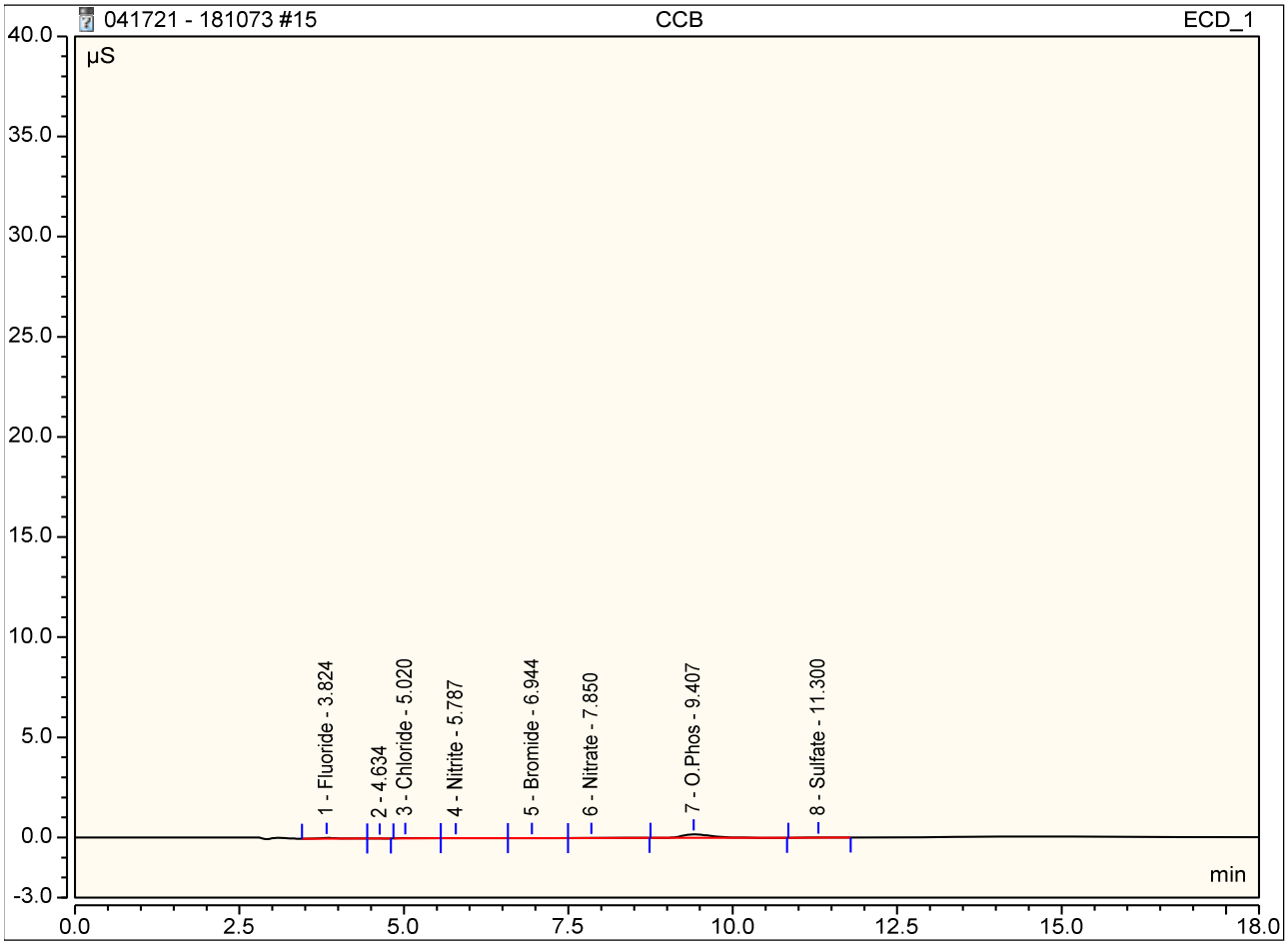
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.83	Fluoride	1.352	6.848	3.7452
2	5.02	Chloride	4.164	25.133	14.6086
3	5.77	Nitrite	1.756	7.915	3.7189
4	6.92	Bromide	0.363	1.567	3.7181
5	7.79	Nitrate	2.249	8.345	3.5936
6	9.32	O.Phos	0.789	1.998	3.3130
7	11.25	Sulfate	4.809	12.438	24.2611



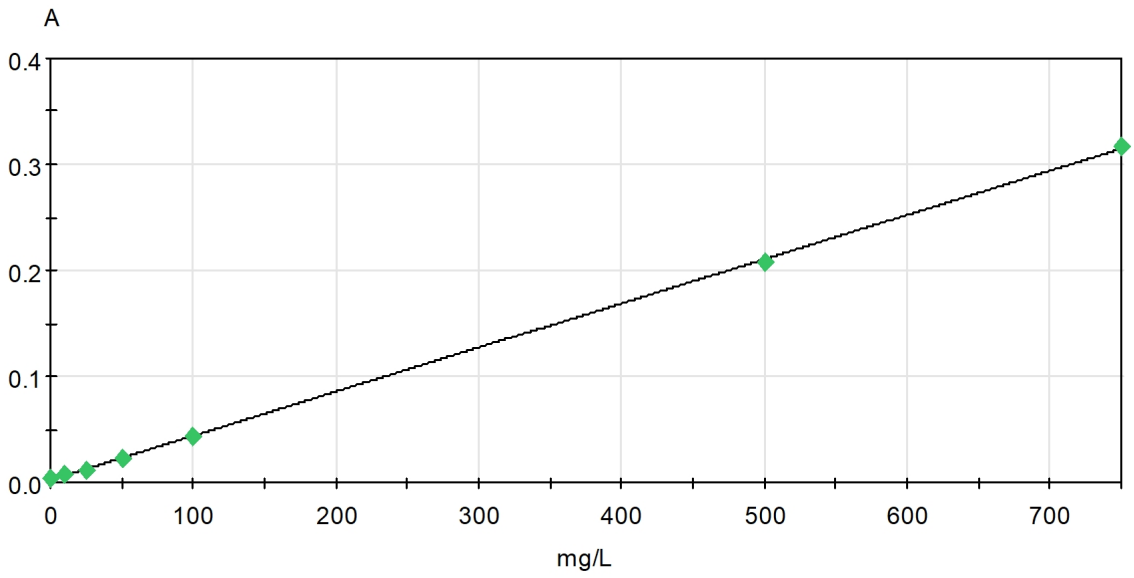
Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3449A**	*Operator:*	**AQUION**
Inj. Date / Time:	**17-Apr-2021 / 17:26**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.82	Fluoride	0.010	0.036	0.0788
3	5.02	Chloride	0.006	0.027	0.6320
4	5.79	Nitrite	0.002	0.007	0.0361
5	6.94	Bromide	0.001	0.005	0.0202
6	7.85	Nitrate	0.003	0.010	0.0944
7	9.41	O.Phos	0.089	0.175	0.1703
8	11.30	Sulfate	0.006	0.015	0.7181



Method: W50550.mqa (600 nm)
Last modified: 04/10/2021 11:25:45 by CTLABORATORIES\SPEC
Spectrophotometer: GENESYS 30
Serial number: 9A1W117104
Firmware: 104

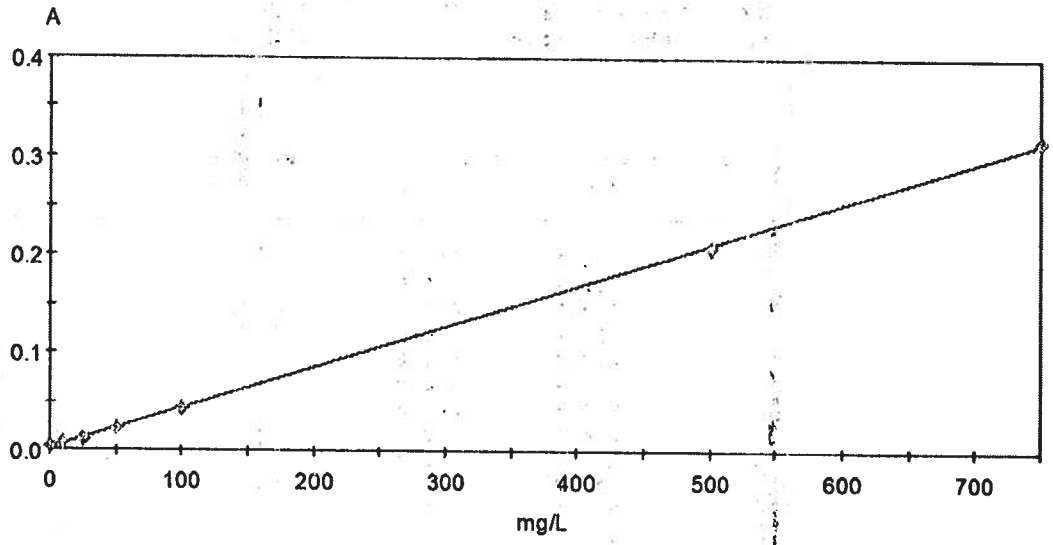


Curve parameters: y = 4.167153E-04 x + 2.144799E-03
Residual error: 0.0020 Correlation coefficient: 0.99990
Date: 04/10/2021 11:24:54 Autozero 04/10/2021 11:23:11

Standards

No.	Concentration [mg/L]	Ordinate [A]	Error [A]	Used
1	0.0	0.003	0.001	Yes
2	10.0	0.007	0.001	Yes
3	25.0	0.012	-0.001	Yes
4	50.0	0.023	0.000	Yes
5	100.0	0.044	0.000	Yes
6	500.0	0.207	-0.004	Yes
7	750.0	0.317	0.002	Yes

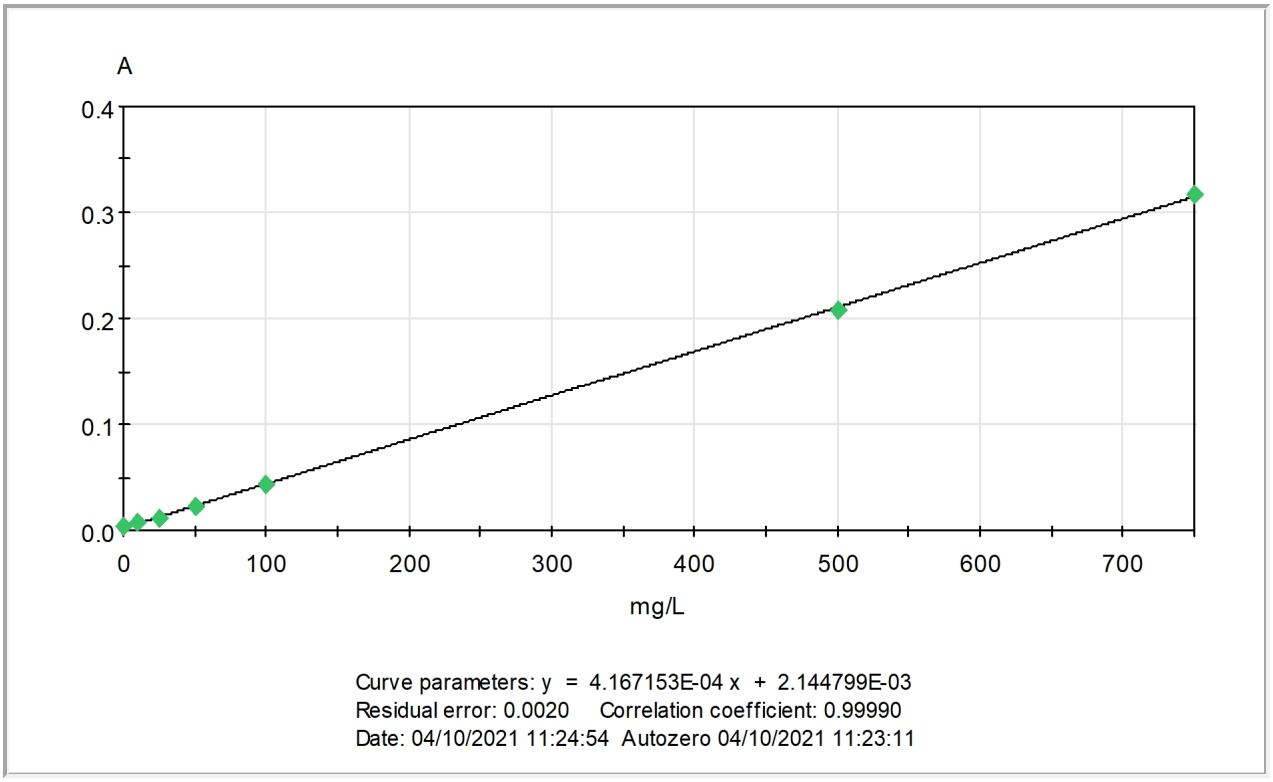
Method:	W50550.mqa (600 nm)
Last modified:	04/10/2021 11:25:45 by CTLABORATORIES\SPEC
Spectrophotometer:	GENESYS 30
Serial number:	9A1W117104
Firmware:	104
Autozero:	04/12/2021 08:35:49
Measured:	04/12/2021 08:44:40 by CTLABORATORIES\SPEC
Result filename:	180767 DATA.rqa



Curve parameters: y = 4.167153E-04 x + 2.144799E-03
Residual error: 0.0020 Correlation coefficient: 0.99990
Date: 04/10/2021 11:24:54 Autozero 04/10/2021 11:23:11

Sample	Dilution Factor	Ordinate [A]	Concentration [mg/L]
CCV	1	0.171	405.2
CCB	1	0.001	-2.7
ICV	1	0.168	398.0
ICB	1	0.000	-5.1

Method: W50550.mqa (600 nm)
Last modified: 04/10/2021 11:25:45 by CTLABORATORIES\SPEC
Spectrophotometer: GENESYS 30
Serial number: 9A1W117104
Firmware: 104
Autozero: 04/22/2021 13:36:13
Measured: 04/22/2021 13:47:33 by CTLABORATORIES\SPEC
Result filename: 181209 212 214 DATA.rqa



Curve parameters: y = 4.167153E-04 x + 2.144799E-03
Residual error: 0.0020 Correlation coefficient: 0.99990
Date: 04/10/2021 11:24:54 Autozero 04/10/2021 11:23:11

Sample	Dilution Factor	Ordinate [A]	Concentration [mg/L]
CCV	1	0.166	393.2
CCB	1	0.003	2.1
556864	1	0.173	410.0
556863	1	0.003	2.1
553564 (X50)	1	0.065	150.8
553565 (X50)	1	0.145	342.8
553792	1	0.017	35.6
MSW553792	1	0.088	206.0
MSDW553792	1	0.084	196.4
553800	1	0.020	42.8
553802	1	0.020	42.8
554259 (X50)		0.341	discarded
554259 (X100)	1	0.174	412.4
CCV	1	0.167	395.6
CCB	1	0.002	-0.3
555549	1	0.048	110.0

MSW555549	1	0.105	246.8
MSDW555549	1	0.125	294.8
555556	1	0.031	69.2
555652	1	0.033	74.0
MSW555652	1	0.100	234.8
MSDW555652	1	0.101	237.2
CCV		0.178	discarded
CCV	1	0.168	398.0
CCB	1	0.006	9.3
556873	1	0.175	414.8
556872	1	0.004	4.5
553654	1	0.005	6.9
MSW553654	1	0.075	174.8
MSDW553654	1	0.071	165.2
553655	1	0.008	14.1
553656	1	0.024	52.4
553657	1	0.005	6.9
553658	1	0.006	9.3
553659	1	0.007	11.7
CCV	1	0.168	398.0
CCB	1	0.005	6.9
553660	1	0.007	11.7
CCV	1	0.175	414.8
CCB	1	0.005	6.9
556903		0.182	discarded
556903	1	0.173	410.0
556902	1	0.005	6.9
554741	1	0.133	314.0
MSW554741	1	0.192	455.6
MSDW554741	1	0.190	450.8
CCV	1	0.167	395.6
CCB	1	0.003	2.1

pH - Mettler Toledo Seven Easy

Date:	04/19/2021	Analyst:	RLB	Lims #:	181070	Slope (%)	99%

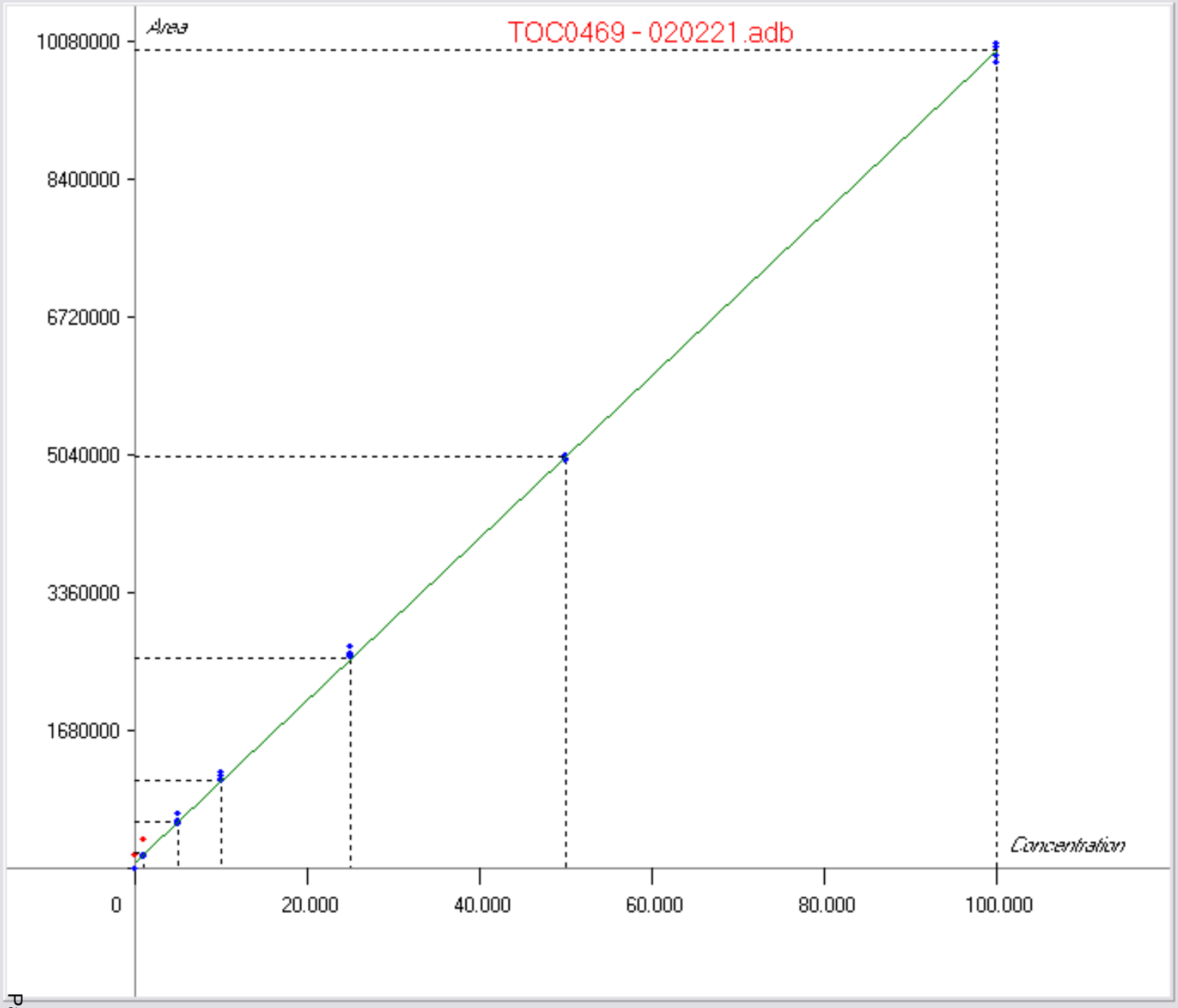
GRP	Sample ID#	Matrix	Corrected Temp (°C)*	Result	
1	BUFFER 7	QC	24.0	6.97	
2	554709	WW	17.6	7.21	
3					
4					
5					
6					
7					
8					
9					
10					
11	554726	WW	16.4	9.63	
dup 11	554726	WW	16.6	9.64	
12	BUFFER 7	QC	22.1	7.02	
13					
14					
15					
16					
17					
18					
19					
20					
21	BUFFER 7	QC	22.0	7.01	
23	554741	GW	14.8	8.37	
dup 23	554741	GW	14.8	8.33	
24	BUFFER 7	QC	22.9	6.98	
25	554797	SLG	20.3	6.06	
dup 25	554797	SLG	20.3	6.02	
26					
dup 26					

To datacapture: Save CSV file under the TSS datacapture folder.

*Temperature of samples should be room temperature around 25°C

Buffer Standard IDs:

pH 4: WC205 pH 7: WC234 pH 10: WC105



Cursor Position

Concentration	Area
113.600 mg/l	-1386000

A2	0
A1	98898
A0	92649
Correlation	0.99980
Order	1
Volume	100 µl
Conc.	100.00
Area	10065027

☐ Confidence Intervals 95%

☐ Detection/Determination 95%

Conc.	Area	Sel.
0	175110	☐
0	0	☑
0	0	☑
0	0	☑
0	0	☑
1	359233	☐
1	172418	☑
1	177922	☑

• Used Value
• Ignored Value

CurveNo:1 CurveType:TC

<-- --> Print... Exit

RJ 02/03/2021

Analysis Name TOC0469 - 020221.adb

Template Name CURVE TEMP.tdb
Method Name N / A
Operator KMT

Date Tuesday, February 2, 2021
Time 11:09

Start Oven Temp. 780 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0469
STOCK 0476

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	This Analysis	Feb 2 2021, 11:09	10065027	100	1	0.99980	100 µl	Yes
	A2: 0		*A1: 98897.6073592651*		*A0: 92649.3920543394*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**3.03**	**369383**	**141.55**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 11:20:26	68.74	6890593	1	775	2	-	-
2	2 2 2021 11:25:04	10.62	1143064	1	773	2	-	Yes
3	2 2 2021 11:28:13	1.17	208273	1	771	2	-	Yes
4	2 2 2021 11:30:50	0.34	126195	1	771	2	-	Yes
5	2 2 2021 11:32:51	0.00	0	0	769	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	2	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**165098**	**57.03**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 11:37:42	2.12	302035	1	770	2	-	Yes
2	2 2 2021 11:40:46	0.52	143970	1	767	2	-	Yes
3	2 2 2021 11:43:02	0.33	125743	1	766	2	-	Yes
4	2 2 2021 11:45:20	ZERO !	88647	1	765	2	-	Yes
5	2 2 2021 11:47:28	0.00	0	0	764	2	-	-

Inj. Order	Position	Type	Identification	Dilution Factor
3	3	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**89811**	**89.36**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 11:52:20	1.03	194894	1	766	2	-	Yes
2	2 2 2021 11:55:22	ZERO !	89185	1	764	2	-	Yes
3	2 2 2021 11:57:20	ZERO !	75165	1	763	2	-	Yes
4	2 2 2021 11:59:26	0.00	0	0	762	2	-	Yes
5	2 2 2021 12:03:27	0.00	0	0	763	2	-	-

Inj. Order	Position	Type	Identification	Dilution Factor
4	4	Unknown	BLANK	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**82229**	**138.69**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 12:08:18	1.51	241821	1	762	2	-	Yes
2	2 2 2021 12:11:13	ZERO !	87096	1	760	2	-	Yes
3	2 2 2021 12:13:20	0.00	0	0	759	2	-	Yes
4	2 2 2021 12:17:22	0.00	0	0	760	2	-	Yes
5	2 2 2021 12:21:24	0.00	0	0	759	2	-	-

5 5 Unknown BLANK 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 12:26:17	0.84	175474	1	759	2	-	-
2	2 2 2021 12:29:18	0.00	0	0	757	2	-	Yes
3	2 2 2021 12:33:19	0.00	0	0	757	2	-	Yes
4	2 2 2021 12:37:21	0.00	0	0	756	2	-	Yes
5	2 2 2021 12:41:22	0.00	0	0	756	2	-	Yes

---

6 S1 Standard TC Std 0.00 mg/l 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 12:46:15	0.83	175110	1	756	2	-	-
2	2 2 2021 12:49:15	0.00	0	1	754	2	-	Yes
3	2 2 2021 12:53:16	0.00	0	1	755	2	-	Yes
4	2 2 2021 12:57:18	0.00	0	1	755	2	-	Yes
5	2 2 2021 13:01:20	0.00	0	1	754	2	-	Yes

---

7 S2 Standard TC Std 1.00 mg/l 1 x

TC **0.78** **169987** **4.03** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 13:06:12	2.70	359233	1	754	2	-	-
2	2 2 2021 13:09:09	0.81	172418	1	753	2	-	Yes
3	2 2 2021 13:11:18	0.86	177922	1	752	2	-	Yes
4	2 2 2021 13:13:24	0.76	167814	1	752	2	-	Yes
5	2 2 2021 13:15:29	0.70	161797	1	752	2	-	Yes

---

8 S3 Standard TC Std. 5.00 mg/l 1 x

TC **5.22** **608668** **8.42** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 13:18:32	5.93	679358	1	753	2	-	Yes
2	2 2 2021 13:21:39	4.72	559714	1	753	2	-	Yes
3	2 2 2021 13:23:55	5.22	608769	1	753	2	-	Yes
4	2 2 2021 13:26:12	5.00	586831	1	752	2	-	Yes

---

9 S4 Standard TC Std. 10.00 mg/l 1 x

TC **10.45** **1126290** **3.76** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 13:29:41	10.97	1177792	1	754	2	-	Yes
2	2 2 2021 13:32:45	10.01	1082287	1	753	2	-	Yes
3	2 2 2021 13:35:04	10.21	1102839	1	752	2	-	Yes
4	2 2 2021 13:37:24	10.61	1142245	1	752	2	-	Yes

---

10 S5 Standard TC Std. 25.00 mg/l 1 x

TC **25.78** **2642585** **1.86** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 13:40:50	26.49	2712305	1	753	2	-	Yes
2	2 2 2021 13:44:11	25.39	2603795	1	753	2	-	Yes
3	2 2 2021 13:46:52	25.48	2612617	1	753	2	-	Yes
4	2 2 2021 13:49:33	25.77	2641624	1	752	2	-	Yes

---

11 S6 Standard TC Std. 50.00 mg/l 1 x

TC **49.90** **5027966** **0.59** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 13:52:56	50.15	5052717	1	753	2	-	Yes
2	2 2 2021 13:56:12	49.54	4992064	1	753	2	-	Yes
3	2 2 2021 13:58:48	49.78	5015752	1	753	2	-	Yes
4	2 2 2021 14:01:21	50.14	5051334	1	752	2	-	Yes

---

12 S7 Standard TC Std. 100.00 mg/l 1 x

TC **99.80** **9962490** **1.02** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	2 2 2021 14:04:46	100.45	10027362	1	753	2	-	Yes
2	2 2 2021 14:08:18	100.84	10065027	1	753	2	-	Yes
3	2 2 2021 14:11:00	99.30	9913097	1	753	2	-	Yes

	4	2 2 2021 14:13:39	98.61	9844475	1	752	2	-	Yes

13	S8	Unknown	ICV - 50.00 mg/L				1 x		
		TC	**46.93**	**4733749**	**1.17**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	2 2 2021 14:17:14	47.45	4785229	1	753	2	-	Yes
	2	2 2 2021 14:20:29	46.34	4675527	1	752	2	-	Yes
	3	2 2 2021 14:22:59	47.36	4776666	1	752	2	-	Yes
	4	2 2 2021 14:25:35	46.56	4697574	1	752	2	-	Yes

14	S9	Unknown	ICB				1 x		
		TC	**0.05**	**51391**	**115.67**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	2 2 2021 14:28:56	0.15	107035	1	753	2	-	Yes
	2	2 2 2021 14:31:46	0.06	98529	1	752	2	-	Yes
	3	2 2 2021 14:33:53	0	0	0	751	2	-	Yes
	4	2 2 2021 14:37:54	0	0	0	753	2	-	Yes
	5	2 2 2021 14:41:56	0	0	0	753	2	-	-

RJ 02/03/2021

Analysis Name 041521B - 180904 180921.adb

Template Name 041521 - 180904 180921.tdb
Method Name N / A
Operator KMT

Date Thursday, April 15, 2021
Time 12:06

Start Oven Temp. 771 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0469 INST: TOCW
CCV 0485 LCS 0486 SPIKE 0439

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0469 - 020221	Feb 2 2021, 11:09	10065027	100	1	0.99980	100 µl	Yes
	A2: 0		*A1: 98897.6073592651*		*A0: 92649.3920543394*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 15 2021 12:16:40	9.72	1054402	1	772	2	-	-
2	4 15 2021 12:20:40	0	0	0	770	2	-	Yes
3	4 15 2021 12:24:41	0	0	0	769	2	-	Yes
4	4 15 2021 12:28:42	0	0	0	769	2	-	Yes
5	4 15 2021 12:32:45	0	0	0	769	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**49.54**	**4992347**	**0.32**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 15 2021 12:37:37	49.76	5014121	1	768	2	-	Yes
2	4 15 2021 12:40:58	49.41	4978821	1	766	2	-	Yes
3	4 15 2021 12:43:37	49.44	4982161	1	765	2	-	Yes
4	4 15 2021 12:46:24	49.56	4994287	1	765	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	S5	Unknown	LCSW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**48.03**	**4841972**	**0.95**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 15 2021 12:49:52	48.70	4908743	1	764	2	-	Yes
2	4 15 2021 12:53:19	47.95	4834845	1	763	2	-	Yes
3	4 15 2021 12:55:55	47.71	4810642	1	762	2	-	Yes
4	4 15 2021 12:58:29	47.74	4813661	1	762	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	2	Unknown	MBW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 15 2021 13:02:04	0	0	0	762	2	-	Yes
2	4 15 2021 13:06:43	0	0	0	762	2	-	Yes
3	4 15 2021 13:10:44	0	0	0	761	2	-	Yes
4	4 15 2021 13:14:45	0	0	0	761	2	-	Yes

		TC	**ZERO !**	**-43979**		**0.00**		**100 µl**	
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		4 15 2021 14:51:50	0.22	114316	1	754	2	-	-
2		4 15 2021 14:54:19	ZERO !	-8138	1	753	2	-	Yes
3		4 15 2021 14:57:32	ZERO !	-37727	1	754	2	-	Yes
4		4 15 2021 15:01:11	ZERO !	-60363	1	755	2	-	Yes
5		4 15 2021 15:04:27	ZERO !	-69689	1	754	2	-	Yes

14	12	Unknown	553148		1 x

		TC	**0.00**	**0**		**0.00**		**100 µl**	
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		4 15 2021 15:08:52	0	0	0	754	2	-	Yes
2		4 15 2021 15:13:29	0	0	0	754	2	-	Yes
3		4 15 2021 15:17:30	0	0	0	754	2	-	Yes
4		4 15 2021 15:21:32	0	0	0	754	2	-	Yes

15	S1	Unknown	CCV		1 x

		TC	**48.14**	**4853850**		**1.18**		**100 µl**	
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		4 15 2021 15:26:24	47.80	4819994	1	754	2	-	Yes
2		4 15 2021 15:29:39	47.54	4794312	1	753	2	-	Yes
3		4 15 2021 15:32:10	48.42	4881578	1	752	2	-	Yes
4		4 15 2021 15:34:45	48.81	4919519	1	752	2	-	Yes

16	13	Unknown	CCB		1 x

		TC	**0.00**	**0**		**0.00**		**100 µl**	
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		4 15 2021 15:38:12	0	0	0	753	2	-	Yes
2		4 15 2021 15:42:50	0	0	0	753	2	-	Yes
3		4 15 2021 15:46:51	0	0	0	753	2	-	Yes
4		4 15 2021 15:50:52	0	0	0	753	2	-	Yes

17	14	Unknown	553149		1 x

		TC	**0.12**	**104142**		**8.12**		**100 µl**	
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		4 15 2021 15:55:43	0.50	142123	1	753	2	-	-
2		4 15 2021 15:58:21	0.24	116492	1	752	2	-	Yes
3		4 15 2021 16:00:16	0.10	102327	1	751	2	-	Yes
4		4 15 2021 16:02:09	0.08	100171	1	750	2	-	Yes
5		4 15 2021 16:04:03	0.05	97578	1	750	2	-	Yes

18	15	Unknown	553150		1 x

		TC	**0.59**	**150892**		**4.90**		**100 µl**	
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		4 15 2021 16:06:51	1.09	200845	1	751	2	-	-
2		4 15 2021 16:09:28	0.69	161001	1	751	2	-	Yes
3		4 15 2021 16:11:20	0.59	150807	1	751	2	-	Yes
4		4 15 2021 16:13:10	0.56	148291	1	750	2	-	Yes
5		4 15 2021 16:14:59	0.51	143472	1	750	2	-	Yes

19	16	Unknown	553151		1 x

		TC	**ZERO !**	**-16875**		**0.00**		**100 µl**	
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		4 15 2021 16:17:59	0.40	132496	1	751	2	-	-
2		4 15 2021 16:20:27	ZERO !	18261	1	751	2	-	Yes
3		4 15 2021 16:23:27	ZERO !	-40245	1	751	2	-	Yes
4		4 15 2021 16:27:23	ZERO !	-22804	1	753	2	-	Yes
5		4 15 2021 16:30:33	ZERO !	-22712	1	753	2	-	Yes

20	17	Unknown	553152		1 x

		TC	**0.91**	**182862**		**1.69**		**100 µl**	
Sample		Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1		4 15 2021 16:34:29	1.33	224339	1	753	2	-	-
2		4 15 2021 16:37:00	0.87	178936	1	752	2	-	Yes

3	4 15 2021 16:38:45	0.92	183601	1	751	2	-	Yes
4	4 15 2021 16:40:32	0.95	186422	1	751	2	-	Yes
5	4 15 2021 16:42:19	0.91	182492	1	750	2	-	Yes

21 18 Unknown 553550 1 x

TC **ZERO !** **-81566** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 15 2021 16:45:38	ZERO !	-10323	1	752	2	-	-
2	4 15 2021 16:49:54	ZERO !	-52361	1	753	2	-	Yes
3	4 15 2021 16:52:51	ZERO !	-98212	1	753	2	-	Yes
4	4 15 2021 16:56:01	ZERO !	-75377	1	752	2	-	Yes
5	4 15 2021 16:59:14	ZERO !	-100314	1	753	2	-	Yes

22 19 Unknown 553551 1 x

TC **ZERO !** **-75111** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 15 2021 17:03:18	ZERO !	17914	1	753	2	-	-
2	4 15 2021 17:06:51	ZERO !	-100669	1	753	2	-	Yes
3	4 15 2021 17:10:11	ZERO !	-34183	1	753	2	-	Yes
4	4 15 2021 17:13:24	ZERO !	-96396	1	752	2	-	Yes
5	4 15 2021 17:17:26	ZERO !	-69199	1	753	2	-	Yes

23 20 Unknown 553552 1 x

TC **ZERO !** **-75683** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 15 2021 17:21:47	ZERO !	-43720	1	753	2	-	Yes
2	4 15 2021 17:25:21	ZERO !	-115924	1	752	2	-	Yes
3	4 15 2021 17:29:09	ZERO !	-65158	1	752	2	-	Yes
4	4 15 2021 17:32:20	ZERO !	-77932	1	752	2	-	Yes
5	4 15 2021 17:35:35	0	0	0	752	2	-	-

24 21 Unknown 553553 1 x

TC **ZERO !** **80838** **101.86** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 15 2021 17:40:28	0.84	175858	1	753	2	-	Yes
2	4 15 2021 17:43:01	0.29	121673	1	751	2	-	Yes
3	4 15 2021 17:44:49	ZERO !	27337	1	750	2	-	Yes
4	4 15 2021 17:47:52	ZERO !	-1516	1	751	2	-	Yes
5	4 15 2021 17:50:59	ZERO !	-54505	1	752	2	-	-

25 22 Unknown 553554 1 x

NOT USED

TC **ZERO !** **156002** **50.29** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 15 2021 17:55:33	1.19	210730	1	753	2	-	Yes
2	4 15 2021 17:58:06	0.83	174514	1	751	2	-	Yes
3	4 15 2021 17:59:54	ZERO !	40501	1	750	2	-	Yes
4	4 15 2021 18:03:30	1.07	198265	1	752	2	-	Yes
5	4 15 2021 18:05:23	ZERO !	31380	1	751	2	-	-

26 23 Unknown DUP553554 1 x

TC **1.26** **217203** **7.47** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 15 2021 18:09:38	1.48	238834	1	752	2	-	Yes
2	4 15 2021 18:12:09	1.14	205688	1	751	2	-	Yes
3	4 15 2021 18:13:54	1.12	203813	1	751	2	-	Yes
4	4 15 2021 18:15:42	1.29	220480	1	750	2	-	Yes

27 S1 Unknown CCV 1 x

TC **48.64** **4903485** **0.48** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 15 2021 18:20:48	48.32	4871629	1	753	2	-	Yes
2	4 15 2021 18:24:09	48.61	4900410	1	752	2	-	Yes
3	4 15 2021 18:26:44	48.78	4916800	1	752	2	-	Yes
4	4 15 2021 18:29:21	48.86	4925104	1	752	2	-	Yes

28	24	Unknown	CCB			1 x		
		TC	**0.00**	**0**	**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve Oven	Cooler	Edited	Sel.
	1	4 15 2021 18:32:48	0	0	0 752	2	-	Yes
	2	4 15 2021 18:37:27	0	0	0 753	2	-	Yes
	3	4 15 2021 18:41:28	0	0	0 753	2	-	Yes
	4	4 15 2021 18:45:29	0	0	0 753	2	-	Yes

29	25	Unknown	MSW553554			1 x		
		TC	**54.78**	**5510179**	**0.96**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve Oven	Cooler	Edited	Sel.
	1	4 15 2021 18:50:24	55.00	5531655	1 753	2	-	Yes
	2	4 15 2021 18:53:38	53.98	5431365	1 752	2	-	Yes
	3	4 15 2021 18:56:06	55.13	5544442	1 752	2	-	Yes
	4	4 15 2021 18:58:35	55.01	5533256	1 752	2	-	Yes

30	26	Unknown	MSDW553554			1 x		
		TC	**53.13**	**5346513**	**0.58**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve Oven	Cooler	Edited	Sel.
	1	4 15 2021 19:01:52	52.71	5305777	1 752	2	-	Yes
	2	4 15 2021 19:04:56	53.10	5344297	1 752	2	-	Yes
	3	4 15 2021 19:07:21	53.23	5356549	1 752	2	-	Yes
	4	4 15 2021 19:09:45	53.46	5379430	1 752	2	-	Yes

31	S2	Unknown	CCV			1 x		
		TC	**47.00**	**4740780**	**0.49**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve Oven	Cooler	Edited	Sel.
	1	4 15 2021 19:13:06	46.89	4730298	1 752	2	-	Yes
	2	4 15 2021 19:16:24	46.75	4716501	1 752	2	-	Yes
	3	4 15 2021 19:19:00	47.31	4771214	1 752	2	-	Yes
	4	4 15 2021 19:21:37	47.04	4745109	1 752	2	-	Yes

32	27	Unknown	CCB			1 x		
		TC	**0.00**	**0**	**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve Oven	Cooler	Edited	Sel.
	1	4 15 2021 19:25:04	0	0	0 753	2	-	Yes
	2	4 15 2021 19:29:42	0	0	0 753	2	-	Yes
	3	4 15 2021 19:33:43	0	0	0 753	2	-	Yes
	4	4 15 2021 19:37:45	0	0	0 753	2	-	Yes

Analysis Name 041621 - 180905 180908 180921RR.adb

Template Name	041621 - 180905 180908 180921RR.tdb
Method Name	N / A
Operator	KMT
Date	Friday, April 16, 2021
Time	10:06
Start Oven Temp.	739 °C
Start Cooler Temp.	2 °C
Version	2.55 Release
Info	ICAL 0469 INST: TOCW CCV 0487 LCS 0488 SPIKE 0439

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0469 - 020221	Feb 2 2021, 11:09	10065027	100	1	0.99980	100 µl	Yes
	A2: 0		*A1: 98897.6073592651*		*A0: 92649.3920543394*				

27	S1	Unknown	CCV				1 x		
		TC	**50.42**	**5078655**		**1.27**	**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	4 16 2021 16:25:37	49.56	4993854	1	752	2	-	Yes
	2	4 16 2021 16:28:55	50.28	5065213	1	751	2	-	Yes
	3	4 16 2021 16:31:28	51.03	5139213	1	751	2	-	Yes
	4	4 16 2021 16:34:05	50.80	5116341	1	751	2	-	Yes
28	24	Unknown	CCB				1 x		
		TC	**ZERO !**	**83199**		**18.83**	**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	4 16 2021 16:37:36	0.13	105421	1	752	2	-	Yes
	2	4 16 2021 16:40:18	ZERO !	-36557	1	751	2	-	-
	3	4 16 2021 16:43:26	ZERO !	71495	1	752	2	-	Yes

4	4 16 2021 16:45:17	ZERO !	72949	1	751	2	-	Yes
5	4 16 2021 16:47:08	ZERO !	82931	1	750	2	-	Yes

29 25 Unknown 553554 1 x

	TC	**1.56**	**246736**	**3.28**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 16 2021 16:49:52	1.65	256306	1	752	2	-	Yes
2	4 16 2021 16:52:32	1.57	247450	1	751	2	-	Yes
3	4 16 2021 16:54:30	1.56	246666	1	751	2	-	Yes
4	4 16 2021 16:56:25	1.45	236525	1	751	2	-	Yes

34 S2 Unknown CCV 1 x

	TC	**49.46**	**4984081**	**1.88**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 16 2021 18:10:04	48.56	4894849	1	753	2	-	Yes
2	4 16 2021 18:13:22	49.09	4947141	1	753	2	-	Yes
3	4 16 2021 18:15:51	49.42	4979913	1	752	2	-	Yes
4	4 16 2021 18:18:25	50.78	5114424	1	752	2	-	Yes

35 30 Unknown CCB 1 x

	TC	**ZERO !**	**86102**	**7.93**		**100 µl**	
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 16 2021 18:21:57	0.03	95931	1	752	2	-	Yes
2	4 16 2021 18:24:33	ZERO !	-90	1	752	2	-	-
3	4 16 2021 18:27:39	ZERO !	85491	1	752	2	-	Yes
4	4 16 2021 18:29:31	ZERO !	81045	1	751	2	-	Yes
5	4 16 2021 18:31:23	ZERO !	81942	1	751	2	-	Yes

Analysis Name 042121 - 181146 181147.adb

Template Name 042121 - 181146 181147.tdb
Method Name N / A
Operator KMT

Date Wednesday, April 21, 2021
Time 15:49

Start Oven Temp. 732 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0469 INST: TOCW
CCV 0487 LCS 0488 SPIKE 0359

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %

SampleTime 240 s

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0469 - 020221	Feb 2 2021, 11:09	10065027	100	1	0.99980	100 µl	Yes
	A2: 0		*A1: 98897.6073592651*		*A0: 92649.3920543394*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 21 2021 16:00:22	0.21	113597	1	746	2	-	-
2	4 21 2021 16:03:07	0	0	0	746	2	-	Yes
3	4 21 2021 16:07:09	0	0	0	749	2	-	Yes
4	4 21 2021 16:11:11	0	0	0	752	2	-	Yes
5	4 21 2021 16:15:13	0	0	0	754	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**50.81**	**5117972**	**0.74**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 21 2021 16:20:04	50.92	5128640	1	755	2	-	Yes
2	4 21 2021 16:23:26	50.26	5063661	1	756	2	-	Yes
3	4 21 2021 16:25:54	50.91	5127175	1	756	2	-	Yes
4	4 21 2021 16:28:35	51.16	5152415	1	757	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	S5	Unknown	LCSW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**50.56**	**5092607**	**0.21**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 21 2021 16:32:07	50.65	5101840	1	758	2	-	Yes
2	4 21 2021 16:35:31	50.64	5100568	1	757	2	-	Yes
3	4 21 2021 16:38:08	50.53	5089634	1	757	2	-	Yes
4	4 21 2021 16:40:44	50.41	5078388	1	757	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	2	Unknown	MBW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 21 2021 16:44:13	0	0	0	759	2	-	Yes
2	4 21 2021 16:48:50	0	0	0	759	2	-	Yes
3	4 21 2021 16:52:52	0	0	0	760	2	-	Yes
4	4 21 2021 16:56:52	0	0	0	760	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
5	3	Unknown	554737	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**119870**	**16.36**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 21 2021 17:01:44	0.97	188240	1	760	2	-	-
2	4 21 2021 17:04:28	0.45	136674	1	758	2	-	Yes
3	4 21 2021 17:06:29	0.34	125949	1	758	2	-	Yes
4	4 21 2021 17:08:23	0.33	125356	1	757	2	-	Yes
5	4 21 2021 17:10:21	ZERO !	91501	1	757	2	-	Yes

---

6 4 Unknown 554738 1 x

TC **0.17** **109051** **20.01** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 21 2021 17:13:18	0.47	139222	1	758	2	-	Yes
2	4 21 2021 17:15:55	0.18	110940	1	758	2	-	Yes
3	4 21 2021 17:17:50	0.01	93181	1	757	2	-	Yes
4	4 21 2021 17:19:43	0.00	92861	1	757	2	-	Yes
5	4 21 2021 17:21:34	0	0	0	756	2	-	-

---

7 5 Unknown 554739 1 x

NOT USED

TC **2.48** **338155** **9.50** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 21 2021 17:26:25	2.94	383321	1	758	2	-	Yes
2	4 21 2021 17:29:11	2.49	338781	1	757	2	-	Yes
3	4 21 2021 17:31:12	2.27	316762	1	756	2	-	Yes
4	4 21 2021 17:33:08	2.24	313756	1	756	2	-	Yes

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8 6 Unknown DUP554739 1 x

TC **1.86** **276392** **11.31** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 21 2021 17:37:33	2.30	319644	1	757	2	-	Yes
2	4 21 2021 17:40:12	1.74	264775	1	756	2	-	Yes
3	4 21 2021 17:42:09	1.85	275152	1	755	2	-	Yes
4	4 21 2021 17:44:06	1.55	245999	1	755	2	-	Yes
5	4 21 2021 17:45:59	ZERO !	71380	1	755	2	-	-

---

9 7 Unknown MSW554739 1 x

TC **54.01** **5434382** **0.31** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 21 2021 17:48:40	53.91	5424693	1	756	2	-	Yes
2	4 21 2021 17:51:42	54.07	5440095	1	755	2	-	Yes
3	4 21 2021 17:54:09	53.84	5417429	1	755	2	-	Yes
4	4 21 2021 17:56:33	54.22	5455314	1	755	2	-	Yes

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10 8 Unknown MSDW554739 1 x

TC **51.59** **5195405** **2.28** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 21 2021 17:59:47	53.31	5365075	1	755	2	-	Yes
2	4 21 2021 18:02:56	50.54	5091104	1	755	2	-	Yes
3	4 21 2021 18:05:15	51.18	5154553	1	754	2	-	Yes
4	4 21 2021 18:07:40	51.35	5170889	1	754	2	-	Yes

15	S1	Unknown	CCV				1 x		
		TC	**49.54**	**4991834**	**0.34**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	4 21 2021 19:26:29	49.61	4998991	1	754	2	-	Yes
	2	4 21 2021 19:29:43	49.45	4982789	1	753	2	-	Yes
	3	4 21 2021 19:32:17	49.35	4973452	1	752	2	-	Yes
	4	4 21 2021 19:34:49	49.74	5012105	1	753	2	-	Yes

16	13	Unknown	CCB				1 x		
		TC	**0.00**	**0**	**0.00**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	4 21 2021 19:38:17	ZERO !	61790	1	753	2	-	-
	2	4 21 2021 19:40:55	0	0	0	752	2	-	Yes
	3	4 21 2021 19:44:57	0	0	0	753	2	-	Yes
	4	4 21 2021 19:48:58	0	0	0	753	2	-	Yes
	5	4 21 2021 19:53:00	0	0	0	753	2	-	Yes

Analysis Name 042221 - 181148PT 181149PT 181150PT 181146RR.adb

Template Name 042221 - 181148PT 181149PT 181150PT 181146RR.tdb
Method Name N / A
Operator KMT

Date Thursday, April 22, 2021
Time 9:51

Start Oven Temp. 754 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0469 INST: TOCW
CCV 0487 LCS 0488 SPIKE 0439

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0469 - 020221	Feb 2 2021, 11:09	10065027	100	1	0.99980	100 µl	Yes
	A2: 0		*A1: 98897.6073592651*		*A0: 92649.3920543394*				

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2 S1 Unknown CCV 1 x

TC **51.79** **5214286** **0.28** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 22 2021 10:22:14	51.70	5205173	1	758	2	-	Yes
2	4 22 2021 10:25:40	51.64	5199767	1	757	2	-	Yes
3	4 22 2021 10:28:17	51.96	5231716	1	757	2	-	Yes
4	4 22 2021 10:31:04	51.85	5220491	1	756	2	-	Yes

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4 2 Unknown MBW-CCB 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	4 22 2021 10:46:51	0	0	0	756	2	-	Yes
2	4 22 2021 10:51:28	0	0	0	757	2	-	Yes
3	4 22 2021 10:55:29	0	0	0	757	2	-	Yes
4	4 22 2021 10:59:31	0	0	0	757	2	-	Yes

13	11	Unknown	554739				1 x		
		TC	**1.79**	**269258**		**6.05**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	4 22 2021 12:39:28	1.99	289274	1	753	2	-	Yes
	2	4 22 2021 12:42:18	1.70	260434	1	752	2	-	Yes
	3	4 22 2021 12:44:37	1.84	274952	1	752	2	-	Yes
	4	4 22 2021 12:46:47	1.62	252372	1	751	2	-	Yes

14	S1	Unknown	CCV				1 x		
		TC	**53.23**	**5357038**		**0.69**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	4 22 2021 12:50:36	52.92	5326612	1	753	2	-	Yes
	2	4 22 2021 12:53:57	52.89	5323517	1	752	2	-	Yes
	3	4 22 2021 12:56:37	53.56	5389448	1	753	2	-	Yes
	4	4 22 2021 12:59:28	53.55	5388577	1	753	2	-	Yes

15	12	Unknown	CCB				1 x		
		TC	**0.00**	**0**		**0.00**		**100 µl**	
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	4 22 2021 13:03:05	0	0	0	753	2	-	Yes
	2	4 22 2021 13:07:42	0	0	0	753	2	-	Yes
	3	4 22 2021 13:11:44	0	0	0	753	2	-	Yes
	4	4 22 2021 13:15:45	0	0	0	753	2	-	Yes

INORGANICS
LOGBOOK
DOCUMENTS

WANIONS IC QSM 5.0 Anion Run
181073 on 4/22/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	555352							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	555351							WANIONS IC QSM 5.0				
		Chloride			LCSW				0			
		Nitrate Nitrogen			LCSW				0			
		Sulfate			LCSW				0			
	555350							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			MBW				0			
		Chloride			MBW				0			
		Sulfate			MBW				0			
161178	554737		4/15/2021	10:20		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
	555357		4/15/2021	10:20				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			DUP	554737			0			
		Chloride			DUP	554737			0			
		Sulfate			DUP	554737			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
181073 on 4/22/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	555356		4/15/2021	10:20					ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSW	554737				0			
		Chloride			MSW	554737				0			
		Sulfate			MSW	554737				0			
	557009		4/15/2021	10:20					ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSDW	555356							
		Chloride			MSDW	555356							
		Sulfate			MSDW	555356							
161178	554738		4/15/2021	11:25			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride											
		Nitrate Nitrogen											
		Sulfate											
161178	554739		4/15/2021	12:25			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride											
		Nitrate Nitrogen											
		Sulfate											
	555354								WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV					0			
		Chloride			CCV					0			
		Sulfate			CCV					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
181073 on 4/22/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	555353						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			
161178	554739		4/15/2021 12:25		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Nitrate Nitrogen	***RERUN***								
		Chloride	***RERUN***								
		Sulfate	***RERUN***								

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Data Review Checklist

	Method: Anions by Ion Chromatography 300.0/9056	Independent Data Review Checklist	Instrument: Aquion - System 4

LIMS Run #(s)	Analysis Date	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes/No)
181073	04/17/2021	TMG	RLD	04/23/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3		No		No	Affected sample results were "H" flagged
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits		No		No	Affected sample results were "M" flagged
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits	Yes		Yes		
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

WANIONS IC QSM 5.0 Anion Run
180945 on 5/21/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	554261							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	554262							WANIONS IC QSM 5.0				
		Chloride			LCSW				0			
		Nitrate Nitrogen			LCSW				0			
		Sulfate			LCSW				0			
	554263							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			MBW				0			
		Chloride			MBW				0			
		Sulfate			MBW				0			
161088	553550		4/14/2021	0915		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
161088	553551		4/14/2021	0955		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Nitrate Nitrogen										
		Chloride										
		Sulfate										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
180945 on 5/21/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
161088	553552		4/14/2021	0955		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
161088	553553		4/14/2021	1055		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
161088	553554		4/14/2021	1150		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride			*							
		Nitrate Nitrogen			*							
		Sulfate			*							
	554268		4/14/2021	1150				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			DUP	553554			0			
		Chloride			DUP	553554			0			
		Sulfate			DUP	553554			0			
	554267		4/14/2021	1150				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSW	553554			0			
		Chloride			MSW	553554			0			
		Sulfate			MSW	553554			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
180945 on 5/21/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	554705		4/14/2021 1150				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSDW 554267							
		Chloride		MSDW 554267							
		Sulfate		MSDW 554267							
	554266						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	554265						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			
161088	553551		4/14/2021 0955		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Sulfate	***RERUN***								
161088	553552		4/14/2021 0955		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
		Chloride	***RERUN***								

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Data Review Checklist

	Method: Anions by Ion Chromatography 300.0/9056	Independent Data Review Checklist	Instrument: Aquion - System 4

LIMS Run #(s)	Analysis Date	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes/No)
180945 180949 180965	04/15/2021	TMG	RLD	04/19/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3	Yes		Yes		
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits		No		No	Affected sample results were "M" flagged
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits		No		No	Affected sample results were "Y" flagged
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

WANIONS IC QSM 5.0 Analytical Run
180881 on 04/15/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	553594						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICV							
		Chloride		ICV							
		Sulfate		ICV							
	553595						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICB							
		Chloride		ICB							
		Sulfate		ICB							
	553372						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	553371						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
180881 on 04/15/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	553369		04/12/2021 1140				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSW 553008				0			
		Chloride		MSW 553008				0			
		Sulfate		MSW 553008				0			
	553592		04/12/2021 1140				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSDW 553369							
		Chloride		MSDW 553369							
		Sulfate		MSDW 553369							
	553377						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	553376						WANIONS IC QSM 5.0				
		Chloride		LCSW				0			
		Nitrate Nitrogen		LCSW				0			
		Sulfate		LCSW				0			
	553375						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		MBW				0			
		Chloride		MBW				0			
		Sulfate		MBW				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
180881 on 04/15/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
161060	553142		04/13/2021 1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
161060	553148		04/13/2021 1030		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
161060	553149		04/13/2021 1130		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
161060	553150		04/13/2021 1235		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
161060	553151		04/13/2021 1235		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Analytical Run
180881 on 04/15/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
161060	553152		04/13/2021 1355		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride									
		Nitrate Nitrogen									
		Sulfate									
	553374						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	553373						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Data Review Checklist

	Method: Anions by Ion Chromatography 300.0/9056	Independent Data Review Checklist	Instrument: Aquion - System 4

LIMS Run #(s)	Analysis Date	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes/No)
180857 180881	04/14/2021	TMG	RLD	04/15/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3		No		No	Affected sample results were"H" flagged
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits		No		No	Affected sample results were "M" flagged
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits	Yes		Yes		
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

Aquion Run Log - System 4

Start Date	Start Time	End Date	End Time	Analyst	Lims Run #(s)	Calibration ID#	Data File	CCV ID's	LCS ID's	Spike ID's	Total Cond.	Pressure (Mpa)	Flow (mL/min)	Comments	Reviewed/Date
02/25/21	14:43	02/25/21	18:22	TMG	179623	IC3449A	022521 -	IC3507 IC3510	IC3508 IC3511	IC3509 IC3512	21.52	1101	0.94		RLD 03/25/2021
02/26/21	12:53	03/01/21	09:23	KMT	179661	IC3449A	022621 -	IC3507 IC3510	IC3508 IC3511	IC3509 IC3512	21.18	1092	0.94		RLD 03/25/2021
03/01/21	13:39	03/02/21	09:46	TMG	179692 179693	IC3449A	030121 -	IC3507 IC3513	IC3508 IC3514	IC3509 IC3515	21.39	1091	0.94		RLD 03/25/2021
03/02/21	11:48	03/03/21	09:59	KMT	179709 179720 179721	IC3449A	030221 -	IC3507 IC3513	IC3508 IC3514	IC3509 IC3515	21.71	1102	0.94		RLD 03/25/2021
03/03/21	14:38	03/03/21	18:35	KMT	179709 179761	IC3449A	030321 -	IC3507 IC3516	IC3508 IC3517	IC3509 IC3518	21.54	1099	0.94		RLD 03/25/2021
03/04/21	15:20	03/04/21	18:56	KMT	179788	IC3449A	030421 -	IC3519 IC3522	IC3520 IC3523	IC3521 IC3524	21.2	1110	0.94		RLD 03/25/2021
03/05/21	12:10	03/08/21	09:25	TMG	179819	IC3449A	030521 -	IC3519 IC3522	IC3520 IC3523	IC3521 IC3524	21.21	1119	0.94		RLD 03/25/2021
03/10/21	12:07	03/11/21	09:47	TMG	179901 179904 179909	IC3449A	031021 -	IC3519 IC3525	IC3520 IC3526	IC3521 IC3527	21.31	1103	0.94		RLD 03/25/2021
03/11/21	14:41	03/12/21	08:22	TMG	179970	IC3449A	031121 -	IC3529 IC3532	IC3530 IC3533	IC3532 IC3534	22.15	1086	0.94		RLD 03/25/2021
03/12/21	13:00	03/15/21	08:56	TMG	180013 180014	IC3449A	031221 -	IC3529 IC3532	IC3530 IC3533	IC3532 IC3534	21.86	1107	0.94		RLD 03/25/2021
03/16/21	7:50	03/16/21	13:36	TMG	180050	IC3449A	031621 -	IC3529 IC3532	IC3530 IC3533	IC3532 IC3534	21.82	1098	0.94		RLD 03/25/2021
03/17/21	11:30	03/17/21	17:31	TMG	180090 180110	IC3449A	031721 -	IC3529 IC3532	IC3530 IC3533	IC3532 IC3534	21.82	1111	0.94		RLD 03/25/2021
03/18/21	12:43	03/19/21	09:57	TMG	180129 180149	IC3449A	031821 -	IC3535 IC3538	IC3536 IC3539	IC3537 IC3540	21.85	1099	0.94		RLD 03/25/2021
03/19/21	13:14	03/19/21	17:08	TMG	180189	IC3449A	031921 -	IC3535 IC3538	IC3536 IC3539	IC3537 IC3540	22.44	1112	0.94		RLD 03/25/2021
03/22/21	15:01	03/23/21	08:58	TMG	180237 180238	IC3449A	032221 -	IC3535 IC3538	IC3536 IC3539	IC3537 IC3540	22.07	1112	0.94		RLD 03/25/2021
03/23/21	14:25	03/24/21	09:06	TMG	180270	IC3449A	032321 -	IC3535 IC3544	IC3536 IC3545	IC3537 IC3546	22.31	1103	0.94		RLD 03/25/2021
03/24/21	12:24	03/25/21	08:44	TMG	180312 180313	IC3449A	032421 -	IC3535 IC3544	IC3536 IC3545	IC3537 IC3546	22.54	1099	0.94		RLD 03/25/2021
03/25/21	14:32	03/26/21	03:47	TMG	180358 180359	IC3449A	032521 -	IC3547 IC3550	IC3548 IC3551	IC3549 IC3552	21.58	1094	0.94		RLD 04/13/2021
03/26/21	13:11	03/29/21	08:47	TMG	180394 180395	IC3449A	032621 -	IC3547 IC3550	IC3548 IC3551	IC3549 IC3552	21.47	1110	0.94		RLD 04/13/2021
03/29/21	11:28	03/30/21	10:26	TMG	180387 180388	IC3449A	032921 -	IC3547 IC3550	IC3548 IC3551	IC3549 IC3552	21.51	1110	0.94		RLD 04/13/2021
03/30/21	12:21	03/30/21	20:11	TMG	180475	IC3449A	033021 -	IC3547 IC3553	IC3548 IC3554	IC3549 IC3555	21.47	1112	0.94		RLD 04/13/2021
03/31/21	11:09	04/01/21	10:47	TMG	180494 180503	IC3449A	033121 -	IC3547 IC3553	IC3548 IC3554	IC3549 IC3555	21.01	1103	0.94		RLD 04/13/2021
04/02/21	11:11	04/02/21	15:24	TMG	180531	IC3449A	040221 -	IC3556 IC3559	IC3557 IC3560	IC3558 IC3561	21.02	1104	0.94		RLD 04/13/2021
04/06/21	12:31	04/07/21	12:47	TMG	180613 180615	IC3449A	040621 -	IC3556 IC3559	IC3557 IC3560	IC3558 IC3561	21.24	1107	0.94		RLD 04/13/2021
04/07/21	14:13	04/08/21	09:47	TMG	180663 180664	IC3449A	040721 -	IC3556 IC3559	IC3557 IC3560	IC3558 IC3561	21.62	1110	0.94		RLD 04/13/2021
04/08/21	12:48	04/09/21	09:04	TMG	180714 180715	IC3449A	040821 -	IC3569 IC3572	IC3570 IC3573	IC3571 IC3574	21.54	1093	0.94		RLD 04/13/2021
04/09/21	13:09	04/12/21	11:40	TMG	180763	IC3449A	040921 -	IC3569 IC3572	IC3570 IC3573	IC3571 IC3574	21.43	1105	0.94		RLD 04/13/2021
04/12/21	15:50	04/13/21	08:40	TMG	180796	IC3449A	041221 -	IC3569 IC3572	IC3570 IC3573	IC3571 IC3574	21.47	1096	0.94		RLD 04/13/2021
04/13/21	11:37	04/14/21	08:51	TMG	180841 180842	IC3449A	041321 -	IC3569 IC3578	IC3570 IC3579	IC3571 IC3580	21.51	1075	0.94		
04/14/21	12:13	04/14/21	20:03	TMG	180857 180881	IC3449A	041421 -	IC3569 IC3578	IC3570 IC3579	IC3571 IC3580	21.47	1079	0.94		
04/15/21	12:55	04/16/21	09:08	TMG	180945 180949	IC3449A	041521 -	IC3583 IC3586	IC3584 IC3587	IC3585 IC3588	21.15	1097	0.94		
04/17/21	13:31	04/17/21	17:26	KMT	181073	IC3449A	041721 -	IC3583 IC3586	IC3584 IC3587	IC3585 IC3588	21.38	1110	0.94		
04/19/21	16:39	04/19/21	19:40	TMG	181074	IC3449A	041921 -	IC3583 IC3586	IC3584 IC3587	IC3585 IC3588	21.59	1099	0.94		
04/20/21	14:08	04/21/21	10:41	TMG	181107	IC3449A	042021 -	IC3583 IC3589	IC3584 IC3590	IC3585 IC3591	21.49	1115	0.94		
04/21/21	14:16	04/22/21	08:54	TMG	IC3592 ML	IC3592ML	042121 -	IC3593	IC3594	NA	21.79	1152	1		
04/22/21	12:32	04/22/21	21:02	TMG	181233	IC3592ML	042221 -	IC3593	IC3594	IC3597	21.8	1166	1		

WCOD QSM Analytical Run
181214 on 5/5/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
161178	554741		4/15/2021	13:00			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	COD QSM		GW	4	
		IDW-48/49								80702			
	556902								COD QSM				
					MBW					80702			
	556903								COD QSM				
					LCSW					80702			
	556904		4/15/2021	13:00					COD QSM				
		IDW-48/49			MSW	554741				80702			
	556905		4/15/2021	13:00					COD QSM				
		IDW-48/49			MSDW	556904				80702			
	558182								WCOD QSM				
					CCV								
	558183								WCOD QSM				
					CCB								
	558184								WCOD QSM				
					CCV								
	558185								WCOD QSM				
					CCB								

9 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp65BB.tmp

COD Data Validation Checklist

		Method: Chemical Oxygen Demand EPA 410.4			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
181209 212 214	04/22/2021	ATJ			

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Does a digestion sheet accompany the data package?	---	Yes		Yes		
2. Does the digestion sheet include all reagent and standard prep log numbers?	---	Yes		Yes		
3. Was a passing calibration test applied to sample analysis?	≥0.995	Yes		Yes		
4. Was a passing ICV analyzed immediately after the calibration?	90-110%	Yes		Yes		
5. Was a passing ICB analyzed immediately after the ICV?	< |LOD|or client/project specific	Yes		Yes		
6. Were CCVs and CCB analyzed at the required frequency?	1 per 10 samples	Yes		Yes		
7. Did analyzed CCVs meet the required acceptance criteria?	90-110%	Yes		Yes		
8. Did analyzed CCBs meet the acceptance criteria?	< |LOD|or client/project specific	Yes		Yes		
9. Was a Method Blank prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes		Yes		
10. Was the method blank within acceptance criteria?	< |LOD|or client/project specific	Yes		Yes		
11. Was an LCS prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes		Yes		
12. Did the LCS meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits	Yes		Yes		
13. Was an MS and MSD prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes		Yes		
14. Did the MS/ MSD's meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits		No		No	553792 MS failed high, 555549 MSD failed high, 553654MS/MSD failed high, M FLAGGED

15. Did the MS/MSD's meet the RPD criteria?	Within in-house or contract/program specific limits	Yes		Yes		
16. Was a Duplicate prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes		Yes		
17. Did the Duplicate meet the RPD criteria?	Within in-house or contract/program specific limits	Yes		Yes		
18. Were the samples digested within hold time?	28 days	Yes		Yes		
19. Was the max temperature(s) for reactor(s) documented?	---	Yes				
20. Was the method specifed temperature reached?		Yes				
21. Were reagents/standards used before expiration date?	---	Yes				
22. Are all samples on the job lists accounted for?	---	Yes				

CHEMICAL OXYGEN DEMAND REAGENT LOG

Prep Batch(es): 80699 80701 80702
Date/Time/Analyst: 4-22-2021 10:00 ATJ
Run(s): 181209 212 214
Date/Time/Analyst: 04-22-2021 13:47 ATJ

Reagents:	W #	Exp Date
ICAL Preparation	50550	07/10/2021
CCV Preparation	50552	07/10/2021
LCS/ICV Preparation	50553	07/10/2021
Silver Sulfate Acid	49897	12/07/2021
Potassium Dichromate Dig Solution	49362	09/04/2021

Spiked Samples:	W #	Exp Date
Spiking Solution	50551	07/10/2021
Concentration 2000 mg/L		
Volume of Spike Used 0.2 mL		
Final Sample Volume 2.5 mL		
Final Spike Concentration 148.2 mg/L		

COD DIGESTION BLOCK TEMPS

Date: 04/15/2021
Time: 10:00

	A	B
Temperature (Max) 150°C ± 2°C:	148.2	

	E	D
Temperature (Max) 150°C ± 2°C:	150.3	

GENESYS 30 Instrument Run Logbook

Date	Start Time	End Time	Analyst	Test/Analyte	Calibration Test #	Run #/ Comments
04/22/21	13:20	14:15	ATJ	COD	CODW50550	181209 212 214
04/29/21	15:44	16:00	ATJ	COD	CODW50550	181457 458

PrepWrkSht2
on 4/22/2021

Prep Batch: 80699
Date Prepped: 4-22-21

CCV 1

Prepped By:
Date Entered:

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	556863 3	MBW	0	COD TOTAL			LIQUID				
	556864 2	LCSW	0	COD TOTAL			LIQUID				
161090	553564 4	X50		COD TOTAL	BYTEC, INC	647	WASTE WATER	4/13/21	0600	4/27/21	1
	553565 5	X50		COD TOTAL	BYTEC, INC	655	WASTE WATER	4/13/21	0600	4/27/21	1
161105	553792 6, 7, 8			COD TOTAL	TRC ENVIRONMENTAL	SYSTEM EFFLUENT	GROUND WATER	4/14/21	0925	4/27/21	
	553800 9			COD TOTAL	TRC ENVIRONMENTAL	FBR EFFLUENT	GROUND WATER	4/14/21	0940	4/27/21	
	553802 10			COD TOTAL	TRC ENVIRONMENTAL	FBR INFLUENT	GROUND WATER	4/14/21	0945	4/27/21	
161145	554259 11	X50 X100		COD TOTAL	BYTEC, INC	660	WASTE WATER	4/15/21	0800	4/28/21	1
161201	555549 12, 13, 14			COD TOTAL	MSA PROFESSIONAL SERVICES	LEACHATE #1	LEACHATE	4/19/21		5/2/21	
	555556 15			COD TOTAL	MSA PROFESSIONAL SERVICES	LEACHATE #2	LEACHATE	4/19/21		5/2/21	
161208	555652 16, 17, 18			COD TOTAL	SAPUTO CHEESE, INC.	POLISHER WATER	WASTE WATER	4/20/21	12:30	5/2/21	1

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

4-22-21

Distibution:WetChem

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp7EEE.tmp

PrepWrkSht2
on 4/22/2021

Prep Batch: 80701

Date Prepped: 4-22-21

CCV 19

Prepped By:

Date Entered:

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	556872 21	MBW	0	COD QSM			LIQUID				
	556873 20	LCSW	0	COD QSM			LIQUID				
161101	553654 22,23,24			COD QSM	ECC	WWLF-WW04R-041421	GROUND WATER	4/14/21	1120	4/27/21	2
	553655 25			COD QSM	ECC	WWLF-WW05-041421	GROUND WATER	4/14/21	1145	4/27/21	2
	553656 26			COD QSM	ECC	WWLF-WW09-041421	GROUND WATER	4/14/21	1305	4/27/21	2
	553657 27			COD QSM	ECC	WWLF-WW10-041421	GROUND WATER	4/14/21	1135	4/27/21	2
	553658 28			COD QSM	ECC	WWLF-WW10-041421DUP	GROUND WATER	4/14/21	1135	4/27/21	2
	553659 29			COD QSM	ECC	WWLF-WW11R-041421	GROUND WATER	4/14/21	1345	4/27/21	2
	553660 30			COD QSM	ECC	WWLF-WW11R-041421RB	GROUND WATER	4/14/21	1410	4/27/21	2

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

PrepWrkSht2
on 4/22/2021

Prep Batch: 80702

Date Prepped: 4-22-21

CCV 31

Prepped By: AES

Date Entered:

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	556902 33	MBW	0	COD QSM			LIQUID			
	556903 32	LCSW	0	COD QSM			LIQUID			
161178	554741 34, 35, 36			COD QSM	WESTON SOLUTIONS, INC.	IDW-48/49	GROUND WATER	4/15/21 13:00	5/1/21	4

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

WPH Analytical Run
181070 on 5/5/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	558062		4/19/2021 08:00				PH SM4500H+B				
		EFFLUENT SAMPLE		DUP 554726				0			
	558063		4/15/2021 13:00				PH				
		IDW-48/49		DUP 554741				0			
	558064		4/19/2021 07:00				PH				
		SLUDGE LANDFILL TEST		DUP 554797				0			
161178	554741		4/15/2021 13:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	PH		GW	4	
		IDW-48/49									
	555614		4/15/2021 13:00				PH				
		IDW-48/49		DUP 554741				0			

10 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp505C.tmp

pH Data Validation Checklist

		Method: pH EPA 150.1, SM 4500-H+B, EPA 9040C, EPA 9045D			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
181070	04/19/2021	RLB	SRW	04/21/2021	YES

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Was the calibration slope recorded on the bench sheet?	95-110%	Yes		Yes		
2. Were reagents/standards used before expiration date?	---	Yes		Yes		
3. Were duplicates analyzed at the appropriate frequency?	1 every 20 samples of the same matrix	Yes		Yes		
4. Were the duplicates within acceptable limits?	Differ by $\leq$ 0.10 pH units	Yes		Yes		
5. Are all samples on the job lists accounted for?	---	Yes		Yes		
6. Were SM 4500-H+B samples bracketed by calibration buffer 7?	Every 10 samples, Differ by $\leq$ 0.10 pH units	Yes		Yes		

Mettler Toledo (Easy Seven) Instrument Run Logbook

Date	Start Time	End Time	Analyst	Analyte	Lims Run #(s)
04/19/21	14:50	15:30	RLB	PH	181070
04/20/21	14:06	14:17	LAY	PH	181122
04/21/21	15:00	15:45	SRW	PH	181195
04/22/21	15:10	15:45	HLB	PH	181256
04/23/21	14:30	15:00	HLB	PH	181308
04/26/21	15:00	15:15	RLB	PH	181363
04/27/21	14:00	14:20	LAY	PH	181398
04/28/21	15:00	15:30	SRW	PH	181442
04/29/21	14:50	15:15	ATJ	PH	181487
04/30/21	14:00	14:30	HLB	PH	181528
05/03/21	14:30	14:45	RLB	PH	191565
05/04/21	14:21	14:38	LAY	PH	191595
05/05/21	14:30	15:00	SRW	PH	191629

Mettler Toledo (Easy Seven) pH Calibration & Maintenance Run Logb

		pH Buffer Reference ID #			3 Point Calibration				
Date	Analyst	pH 7	pH 4	pH 10	1st Buffer	2nd Buffer	3rd Buffer	Slope (95-110%)	Temp ° C
04/17/21	ATJ	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC105 EX:05/04/21	7.01	4	10.02	97%	24
04/19/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC105 EX:05/04/21	7.02	4	10.07	99%	19.2
04/20/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC105 EX:05/04/21	7.01	4	10.02	98%	24.2
04/21/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC105 EX:05/04/21	7	4	10.01	98%	24.6
04/22/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC105 EX:05/04/21	7.01	4	10.02	98%	24
04/23/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC105 EX:05/04/21	7	4	10.01	98%	24.7
04/26/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC105 EX:05/04/21	7.03	4	10.08	98%	18.1
04/27/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC105 EX:05/04/21	7.01	4	10.02	98%	24.2
04/28/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC105 EX:05/04/21	7	4	10.02	98%	24.5
04/29/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC105 EX:05/04/21	7	4	10.02	98%	24.4
04/30/21	HLB	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC105 EX:05/04/21	7	4	10.01	98%	24.8
05/03/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC105 EX:05/04/21	7	4	10.01	98%	24.6
05/04/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.02	4	10.06	98%	19.8
05/05/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	98%	24.4

WORGANIC CARBON QSM 5.0 Analytical Run
180921 on 4/19/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	555208							WORGANIC CARBON QSM 5.0				
					ICV							
	555207							WORGANIC CARBON QSM 5.0				
					ICB							
	554174							WORGANIC CARBON QSM 5.0				
					CCV				0			
	554175							WORGANIC CARBON QSM 5.0				
					LCSW				0			
	554176							WORGANIC CARBON QSM 5.0				
					MBW				0			
161060	553142		4/13/2021	1010		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		50MW02										
161060	553148		4/13/2021	1030		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		EQB-50MW02										
	554177							WORGANIC CARBON QSM 5.0				
					CCV				0			
	554178							WORGANIC CARBON QSM 5.0				
					CCB				0			
161060	553149		4/13/2021	1130		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		48MW2										
161060	553150		4/13/2021	1235		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		48MW3										
161060	553151		4/13/2021	1235		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		48TW3										
161060	553152		4/13/2021	1355		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		49MW02										
161088	553550		4/14/2021	0915		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		13MW4										
161088	553551		4/14/2021	0955		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		13MW3										
161088	553552		4/14/2021	0955		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		13TW3										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: WetChem C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp5B39.tmp

WORGANIC CARBON QSM 5.0 Analytical Run
180921 on 4/19/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
161088	553553		4/14/2021	1055			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		49MW04											
	554179		4/14/2021	1150					ORGAN CARBON T QSM 5.0				
		13MW2			DUP	553554				0			
	554180								WORGANIC CARBON QSM 5.0				
					CCV					0			
	554181								WORGANIC CARBON QSM 5.0				
					CCB					0			
	554182		4/14/2021	1150					ORGAN CARBON T QSM 5.0				
		13MW2			MSW	553554				0			
	554183		4/14/2021	1150					ORGAN CARBON T QSM 5.0				
		13MW2			MSDW	554182				0			
	554184								WORGANIC CARBON QSM 5.0				
					CCV					0			
	554185								WORGANIC CARBON QSM 5.0				
					CCB					0			
	555203								WORGANIC CARBON QSM 5.0				
					CCV								
	555204								WORGANIC CARBON QSM 5.0				
					CCB								
161088	553554		4/14/2021	1150			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		13MW2			Designated MS/MSD								
	555205								WORGANIC CARBON QSM 5.0				
					CCV								
	555206								WORGANIC CARBON QSM 5.0				
					CCB								

29 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp5B39.tmp

FWC39-01 Data Review Checklist

	Method: Total Organic Carbon Method 415.1/9060	Independent Data Review Checklist	Instrument: TOCW

LIMS Run #(s)	Analysis Date	Analyst / Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes or No)
180904, 180921	04/15/2021, 04/16/2021	KMT	RLD	04/20/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples preserved prior to analysis and analyzed within hold time?	pH <2, 28 days or program/project specific	Yes		Yes		
2. Was the calibration curve performed using the required number of standards?	3 standards and a blank	Yes		Yes		
3. Was the correlation coefficient acceptable?	r ≥ .995	Yes		Yes		
4. Were the ICV and ICB analyzed?	---	Yes		Yes		
5. Was the ICV result acceptable?	90 – 110 % Rec. or contract/program specific	Yes		Yes		
6. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
7. Was an LCS & MB run with each batch of samples?	One each per analytical batch or contract/program specific frequency.	Yes		Yes		
8. Was the LCS recovery acceptable?	In-house derived or contract/program specific limits.	Yes		Yes		
9. Were the MB results acceptable?	< LOD or project/ program specific (<1/2 RL for DOD-QSM).	Yes		Yes		
10. Were the CCV's analyzed at the required frequency?	Beginning, after every 10 sample, & at the end of a sequence.	Yes		Yes		
11. Were the CCB's analyzed at the required frequency?	After each CCV (unless MB analyzed after CCV)	Yes		Yes		
12. Were the CCV recoveries acceptable?	90 – 110 % Rec. or project/ program specific	Yes		Yes		
13. Were the CCB results acceptable?	< LOD or project/ program specific	Yes		Yes		

14. Were all positive results that were reported within the calibration curve?	---	Yes		Yes		
15. Was an MS and MSD analyzed at the required frequency?	1 / 20 of the same matrix or project/ program specific	Yes		Yes		
16. Were the MS and MSD recoveries acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
17. Was the RPD between the MS and MSD acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
18. Was a Duplicate analyzed at the required frequency?	1 per 20 of the same matrix or contract/program specific	Yes		Yes		
19. Was the RPD between the Duplicate (if valid) and the sample acceptable?	In-house derived or project/ program specific limits (QSM samples, duplicate only valid when sample result ≥5x the LOQ)	Yes		Yes		
20. Are all samples on the job lists accounted for?	---	Yes		Yes		
21. Is the standards prep log numbers noted on the analytical report?	---	Yes		Yes		
22. Were post analysis corrections addressed and/or the Audit Trail function turned on (if available)?	Correction should be initialed, dated, and reason given. Audit trail must be on (if available)	Yes		Yes		
23. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

WORGANIC CARBON QSM 5.0 Analytical Run
181146 on 4/26/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	558520								WORGANIC CARBON QSM 5.0				
					ICV								
	558519								WORGANIC CARBON QSM 5.0				
					ICB								
	556809								WORGANIC CARBON QSM 5.0				
					CCV					0			
	556810								WORGANIC CARBON QSM 5.0				
					LCSW					0			
	556811								WORGANIC CARBON QSM 5.0				
					MBW					0			
161178	554737		4/15/2021	10:20			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		49MW01											
161178	554738		4/15/2021	11:25			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		48MW1											
	556812		4/15/2021	12:25					ORGAN CARBON T QSM 5.0				
		48MW06			DUP	554739				0			
	556813		4/15/2021	12:25					ORGAN CARBON T QSM 5.0				
		48MW06			MSW	554739				0			
	556814		4/15/2021	12:25					ORGAN CARBON T QSM 5.0				
		48MW06			MSDW	556813				0			
	556815								WORGANIC CARBON QSM 5.0				
					CCV					0			
	556816								WORGANIC CARBON QSM 5.0				
					CCB					0			
	556817								WORGANIC CARBON QSM 5.0				
					CCV					0			
	556818								WORGANIC CARBON QSM 5.0				
					CCB					0			
161178	554739		4/15/2021	12:25			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		48MW06											
	556819								WORGANIC CARBON QSM 5.0				
					CCV					0			
	556820								WORGANIC CARBON QSM 5.0				
					CCB					0			

17 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp94A5.tmp

FWC39-01 Data Review Checklist

	Method: Total Organic Carbon Method 415.1/9060	Independent Data Review Checklist	Instrument: TOCW

LIMS Run #(s)	Analysis Date	Analyst / Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes or No)
181146, 181147	04/21/2021, 04/22/2021	KMT	RLD	04/27/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples preserved prior to analysis and analyzed within hold time?	pH <2, 28 days or program/project specific	Yes		Yes		
2. Was the calibration curve performed using the required number of standards?	3 standards and a blank	Yes		Yes		
3. Was the correlation coefficient acceptable?	r ≥ .995	Yes		Yes		
4. Were the ICV and ICB analyzed?	---	Yes		Yes		
5. Was the ICV result acceptable?	90 – 110 % Rec. or contract/program specific	Yes		Yes		
6. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
7. Was an LCS & MB run with each batch of samples?	One each per analytical batch or contract/program specific frequency.	Yes		Yes		
8. Was the LCS recovery acceptable?	In-house derived or contract/program specific limits.	Yes		Yes		
9. Were the MB results acceptable?	< LOD or project/ program specific (<1/2 RL for DOD-QSM).	Yes		Yes		
10. Were the CCV's analyzed at the required frequency?	Beginning, after every 10 sample, & at the end of a sequence.	Yes		Yes		
11. Were the CCB's analyzed at the required frequency?	After each CCV (unless MB analyzed after CCV)	Yes		Yes		
12. Were the CCV recoveries acceptable?	90 – 110 % Rec. or project/ program specific	Yes		Yes		
13. Were the CCB results acceptable?	< LOD or project/ program specific	Yes		Yes		

14. Were all positive results that were reported within the calibration curve?	---	Yes		Yes		
15. Was an MS and MSD analyzed at the required frequency?	1 / 20 of the same matrix or project/ program specific	Yes		Yes		
16. Were the MS and MSD recoveries acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
17. Was the RPD between the MS and MSD acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
18. Was a Duplicate analyzed at the required frequency?	1 per 20 of the same matrix or contract/program specific	Yes		Yes		
19. Was the RPD between the Duplicate (if valid) and the sample acceptable?	In-house derived or project/ program specific limits (QSM samples, duplicate only valid when sample result ≥5x the LOQ)	Yes		Yes		
20. Are all samples on the job lists accounted for?	---	Yes		Yes		
21. Is the standards prep log numbers noted on the analytical report?	---	Yes		Yes		
22. Were post analysis corrections addressed and/or the Audit Trail function turned on (if available)?	Correction should be initialed, dated, and reason given. Audit trail must be on (if available)	Yes		Yes		
23. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

TOC Instrument Run Logbook

Start Date	Start Time	End Date	End Time	Analyst	LIMs Run #	Matrix (S or W)	Calibration ID #	COMMENTS
3/23/2021	09:09	3/23/2021	13:07	KMT	180248	W	0469	
3/24/2021	08:50	3/24/2021	13:41	KMT	180287, 180292	W	0469	NIA KMT 4/6/2021
3/24/2021	14:19	3/24/2021	18:56	KMT	180309	W	0469	
3/26/2021	09:49	3/26/2021	15:27	KMT	180377	W	0469	
3/29/2021	09:46	3/29/2021	17:06	KMT	180422, 180377R	W	0469	
4/7/2021	15:25	4/7/2021	23:16	KMT	180673, 180674, 180675	W	0469	
4/8/2021	16:07	4/8/2021	20:43	KMT	180727	W	0469	
4/12/2021	08:49	4/12/2021	14:18	KMT	180771	W	0469	
4/13/2021	15:42	4/13/2021	~~4/14~~ 21:24 ①	KMT	180865	W	0469	NIA KMT 4/21/2021
~~4/14/2021~~ 4/15/2021 KMT 4/15/2021	08:57	~~4/14/2021~~ 4/15/2021 KMT 4/15/2021	11:22	KMT	180901	W	0469	
4/15/2021	12:16	4/15/2021	19:37	KMT	180904, 180921	W	0469	
4/16/2021	10:17	4/16/2021	18:31	KMT	180905, 180908, 180921R	W	0469	
4/19/2021	11:39	4/19/2021	17:39	KMT	181033, 181037	W	0469	
4/20/2021	16:11	4/21/2021	00:46	KMT	181036	W	0469	
~~4/21/2020~~ 4/21/2021 KMT 4/21/2021	~~13:54~~ 14:14 KMT 4/21/2021	4/21/2021	13:52	KMT	~~180911~~ KMT 4/21/2021 / CAL0483	S	~~0493~~ ~~0483~~ KMT 04/21/2021	ICAL ~~0483~~ 0493 KMT 4/21/2021
4/21/2021	14:05	4/21/2021	15:03	KMT	180911	S	0493	
4/21/2021	16:00	4/22/2021	00:53	KMT	181146, 181147	W	0469	NIA KMT 4/22/2021
4/22/2021	10:02	4/22/2021	13:03	KMT	181148 PT, 181149 PT, 181150 PT	W	0469	

181146 RR

① KMT 4/13/2021

Reviewed By: _____

CHAIN OF CUSTODY,
PM CONFIRMATION
AND
SAMPLE CONDITION FORMS
DOCUMENTS

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: WESTON SOLUTIONS
Project Contact: TONY PACE
Telephone: 757 619 5310
Project Name: RADFORD AAP
Project #:
Location: RADFORD VA
Sampled By: BOWERS/TAYLOR

Folder #: 161060
Company: WESTON SOLUTIONS,
Project: RADFORD AAP
Logged By: EKB PM: BM

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To:
EMAIL: TONY.PACE@WESTONSOLUTIONS.COM
Company: WESTON SOLUTIONS
Address: 2 EATON ST STE 603
HAMPTON VA 23666

Invoice To:*
EMAIL:
Company: SAME
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	ANALYSES REQUESTED: VOC	MEE	TOC	ANIONS	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test						
4/13/21	1010	GW	G		50MW02	N	X	X	X	X	7		553142
4/13/21	1030	GW	G		EQB-50MW02	N	X	X	X	X	7		553148
4/13/21	1130	GW	G		48MW2	N	X	X	X	X	7		553149
4/13/21	1235	GW	G		48MW3	N	X	X	X	X	7		553150
4/13/21	1235	GW	G		48TW3	N	X	X	X	X	7		553151
4/13/21	1355	GW	G		49MW02	N	X	X	X	X	7		553152
4/13/21	1406	GW	G		TB-1	N	X	X	X		3		553153

Relinquished By:	Date/Time	Received By:	Date/Time
	4/13/21 1400		4-14-21 1:15
Received by:	Date/Time	Received for Laboratory by:	Date/Time
			4-14-21 12:18

Lab Use Only
Ice Present (Yes) No
Temp 0.9 - 1 IR Gun 27
Cooler # 6531

Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 0.9

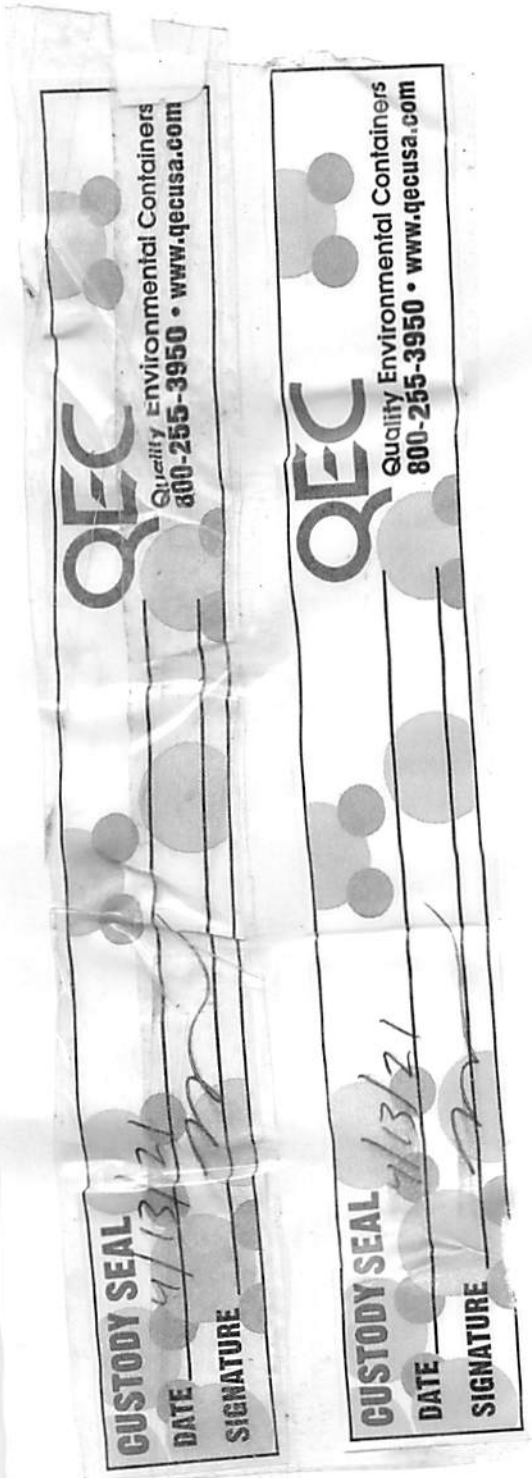
Actual Temperature 1.3

IR Gun # 23

Initials clb

Date 4-14-21 Time 11:56

Cooler #: 6531



Folder #: 161060

PM LOGIN CONFIRMATION

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 161721

Project Manager: *BMS* **Date Received:** 04/14/21 **Log Date:** 04/14/2021

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 1.3 oC

SAMPLE #: 553142 **DESCR:** 50MW02 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 04/13/2021 **Time:** 1010

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		04/26/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					04/26/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					04/26/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					04/26/2021		Logged

Folder #: 161060 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 553148 **DESCR:** EQB-50MW02 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 04/13/2021 **Time:** 1030

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		04/26/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					04/26/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					04/26/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					04/26/2021		Logged

SAMPLE #: 553149 **DESCR:** 48MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 04/13/2021 **Time:** 1130

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		04/26/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					04/26/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					04/26/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					04/26/2021		Logged

Folder #: 161060 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 553150 **DESCR:** 48MW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 04/13/2021 **Time:** 1235

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		04/26/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					04/26/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					04/26/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					04/26/2021		Logged

SAMPLE #: 553151 **DESCR:** 48TW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 04/13/2021 **Time:** 1235

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		04/26/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					04/26/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					04/26/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					04/26/2021		Logged

Folder #: 161060 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 553152 **DESCR:** 49MW02 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 04/13/2021 **Time:** 1355

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		04/26/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					04/26/2021		Logged
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					04/26/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					04/26/2021		Logged

SAMPLE #: 553153 **DESCR:** TB-1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED:** 04/13/2021 **Time:** 1400

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	04/27/2021	04/26/2021		Logged

Folder #: 161060 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

Invoice Number: 161721 **Preliminary Invoice Estimate:** $ 1,092.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	6	$ 12.00	0.00	$ 72.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	6	$ 12.00	0.00	$ 72.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	6	$ 12.00	0.00	$ 72.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	6	$ 16.00	0.00	$ 96.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	6	$ 16.00	0.00	$ 96.00
METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	6	$ 16.00	0.00	$ 96.00
ORGAN CARBON T QSM 5.0	GROUND WATER	6	$ 28.00	0.00	$ 168.00
VOC 8260 QSM 5.0	GROUND WATER	6	$ 60.00	0.00	$ 360.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$ 60.00	0.00	$ 60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$ 0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**6**	TOC
UNPRES PL	**6**	Anions
VOA HCL	**32**	GAS,VOC

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #: 161060
Client: WESTON SOLUTIONS, INC.

Print Date / Time: 04/14/2021 14:46
Received Date / Time / By: 04/14/2021 11:56 EKB

Project Name: RADFORD AAP SWMU-49
Project Phase: RADFORD, VA

Log-In Date / Time / By: 04/14/2021 12:18 EKB
Project #: PM: BMS

Coolers: 6531
Custody Seals Present : **Y**

Temperature: 1.3 C On Ice: **Y**
COC Present:? **Y** Complete? **Y**

Seal Intact? **Y**
Ship Method: FEDEX EXPRESS
Adequate Packaging: **Y**

Numbers: DATED AND SIGNED
Tracking Number: 785936430556
Temp Blank Enclosed? **Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 4/13/21 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
553142 50MW02				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
553142 50MW02				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
553142 50MW02				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
553148 EQB-50MW02				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
553148 EQB-50MW02				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
553148 EQB-50MW02				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
553149 48MW2				

		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
553149	48MW2				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		
553149	48MW2				
		H2SO4 PL	1	Y /	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
553150 48MW3				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	**(*UNPRES PL*) = 1**		
553150 48MW3				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	**(*VOA HCL*) = 5**		
553150 48MW3				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
553151 48TW3				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	**(*UNPRES PL*) = 1**		
553151 48TW3				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	**(*VOA HCL*) = 5**		
553151 48TW3				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
553152 49MW02				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	**(*UNPRES PL*) = 1**		
553152 49MW02				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	**(*VOA HCL*) = 5**		

553152 49MW02

H2SO4 PL	1	Y	/	TOC

Total # of Containers of Type (*H2SO4 PL*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

553153 TB-1

VOA HCL	1	/	VOC
VOA HCL	1	/	VOC

Total # of Containers of Type (*VOA HCL*) = 2

Condition Code	*Condition Description*
1	Sample Received OK

161060

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: WESTON SOLUTIONS
Project Contact: TONY PLACE
Telephone: 757 819 5310
Project Name: RADFORD AAP
Project #:
Location: RADFORD VA
Sampled By: BOUNDS / TAYLOR

Folder #: 161088
Company: WESTON SOLUTIONS
Project: RADFORD AAP
Logged By: EKB PM: BM

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: TONY PLACE
EMAIL: TONY.PLACE@WESTONSOLUTIONS.COM
Company: WESTON SOLUTIONS
Address: 2 EATON ST STE 603
HAMPTON VA 23669

Invoice To:*
EMAIL:
Company: SAME
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

ANALYSES REQUESTED

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	TOC	ANIONS	VOC	MEE	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
4/14/21	0915	GW	G		13MW4	N	X	X	X	X	7		553550
4/14/21	0955	GW	G		13MW3	N	X	X	X	X	7		553551
4/14/21	0955	GW	G		13TW3	N	X	X	X	X	7		553552
4/14/21	1055	GW	G		49MW01	N	X	X	X	X	7		553553
4/14/21	1150	GW	G		13MW2	N	X	X	X	X	21		553554
4/14/21	1300	GW	G		TB-2	N	X	X	X	X	3		553555

Fill in Spaces with Bottles per Test

Relinquished By:	Date/Time	Received By:	Date/Time
	4/14/21 1600		4-15-21 09.40
Received by:	Date/Time	Received for Laboratory by:	Date/Time
			4-15-21 10:07

Lab Use Only
Ice Present (Yes) No
Temp 1.4 IR Gun 28
Cooler # 5042

Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 1.4

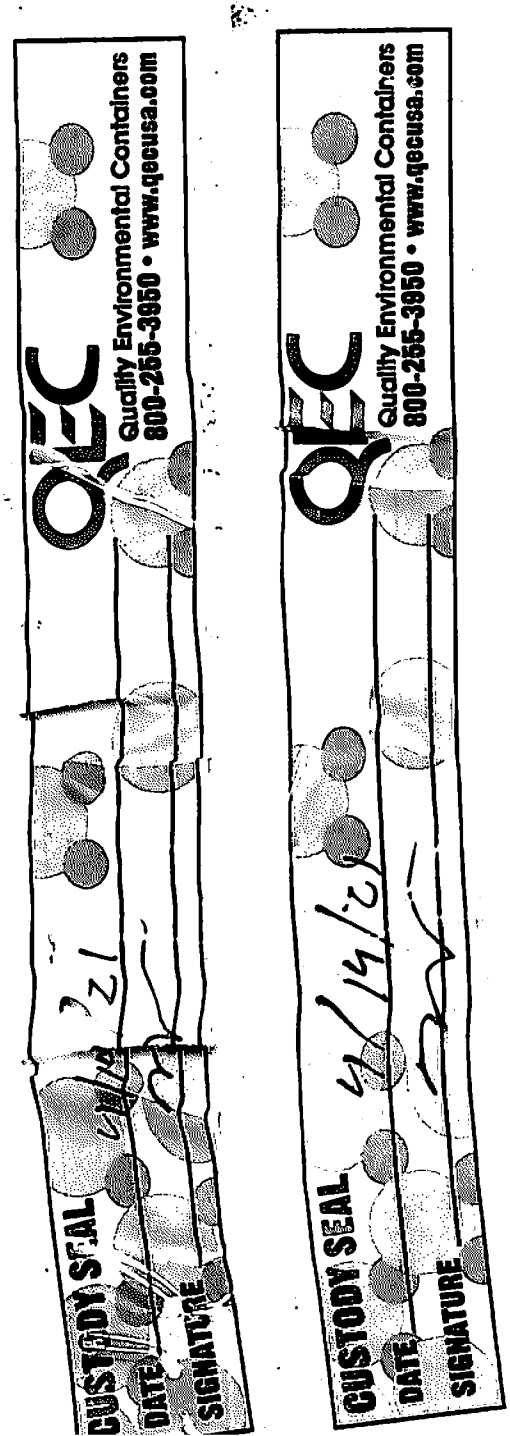
Actual Temperature 2.0

IR Gun # 28

Initials elb

Date 4.15.21 Time 09:40

Cooler # 5042



ORIGIN ID:WALA (757) 416-2449
BILL BOUNDS
WESTON SOLUTIONS INC/OU1239
2 EATON ST STE 603

HAMPTON, VA 23669
UNITED STATES US

SHIP DATE: 14APR21
ACTWGT: 48.65 LB
CAD: 6995155/SSFE2201
DIMS: 24x13x13 IN

BILL THIRD PARTY

TO CT LAB
CT LAB
1230 LANGE CT

BARABOO WI 53913
(608) 356-2760 REF: 03886.552.500.2230
INV:
PO: DEPT:

FedEx Express

THU - 15 APR 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7859 8112 0192

AHS
53913
WI-US MSN

XH LNRA

Folder #: 161088

PM LOGIN CONFIRMATION

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 161750

Project Manager: *BMS* **Date Received:** 04/15/21 **Log Date:** 04/15/2021

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 2.0 oC

SAMPLE #: 553550 **DESCR:** 13MW4 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 04/14/2021 **Time:** 0915

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		04/27/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					04/27/2021		Entered
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					04/27/2021		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					04/27/2021		Entered

Folder #: 161088 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 553551 **DESCR:** 13MW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 04/14/2021 **Time:** 0955

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		04/27/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					04/27/2021		Entered
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					04/27/2021		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					04/27/2021		Entered

SAMPLE #: 553552 **DESCR:** 13TW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 04/14/2021 **Time:** 0955

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		04/27/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					04/27/2021		Entered
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					04/27/2021		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					04/27/2021		Entered

Folder #: 161088 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 553553 **DESCR:** 49MW04 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 04/14/2021 **Time:** 1055

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*		04/27/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)					04/27/2021		Entered
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)					04/27/2021		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)					04/27/2021		Entered

SAMPLE #: 553554 **DESCR:** 13MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 04/14/2021 **Time:** 1150

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y* ***DESIGNATED MATRIX SPIKE***		04/27/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)			***DESIGNATED MATRIX SPIKE***		04/27/2021		Entered
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)			***DESIGNATED MATRIX SPIKE***		04/27/2021		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.(	(EPA 9060A)			***DESIGNATED MATRIX SPIKE***		04/27/2021		Entered

Folder #: 161088 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 553555 **DESCR:** TB-2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED:** 04/14/2021 **Time:** 1300

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	04/28/2021	04/27/2021		Logged

Invoice Number: 161750 **Preliminary Invoice Estimate:** $ 1,264.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	7	$ 12.00	0.00	$ 84.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	7	$ 12.00	0.00	$ 84.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	7	$ 12.00	0.00	$ 84.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	7	$ 16.00	0.00	$ 112.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	7	$ 16.00	0.00	$ 112.00
METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	7	$ 16.00	0.00	$ 112.00
ORGAN CARBON T QSM 5.0	GROUND WATER	7	$ 28.00	0.00	$ 196.00
VOC 8260 QSM 5.0	GROUND WATER	7	$ 60.00	0.00	$ 420.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$ 60.00	0.00	$ 60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$ 0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**7**	TOC
UNPRES PL	**7**	Anions
VOA HCL	**37**	GAS,VOC

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #: 161088
Client: WESTON SOLUTIONS, INC.

Print Date / Time: 04/15/2021 12:17
Received Date / Time / By: 04/15/2021 09:40 EKB

Project Name: RADFORD AAP SWMU-49
Project Phase: RADFORD, VA

Log-In Date / Time / By: 04/15/2021 10:07 EKB
Project #: PM: BMS

Coolers: 5042
Custody Seals Present : **Y**

Temperature: 2.0 C On Ice: **Y**
COC Present:? **Y** Complete? **Y**

Seal Intact? **Y**
Ship Method: FEDEX EXPRESS
Adequate Packaging: **Y**

Numbers: DATED AND SIGNED
Tracking Number: 785981120192
Temp Blank Enclosed? **Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 4/14/21 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
553550 13MW4				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
553550 13MW4				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
553550 13MW4				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
553551 13MW3				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
553551 13MW3				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
553551 13MW3				
	H2SO4 PL	1	Y /	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
553552 13TW3				

		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		

553552	13TW3				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		

553552	13TW3				
		H2SO4 PL	1	Y /	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**

553553	49MW04				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		

553553	49MW04				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		

553553	49MW04				
		H2SO4 PL	1	Y /	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**

553554	13MW2				
		UNPRES PL	1	/	ANIONS
		UNPRES PL	1	/	ANIONS
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 3**		

553554	13MW2				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 15**		

553554	13MW2				
		H2SO4 PL	1	Y /	TOC
		H2SO4 PL	1	Y /	TOC
		H2SO4 PL	1	Y /	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 3**		

Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**

553555 TB-2

VOA HCL	1	/	VOC
VOA HCL	1	/	VOC

Total # of Containers of Type (***VOA HCL***) = **2**

Condition Code	*Condition Description*
1	Sample Received OK

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: WESTON SOLUTIONS
Project Contact: TONY PACE
Telephone: 757 817 5310
Project Name: RADFORD AAP
Project #:
Location: RADFORD VA
Sampled By: BOWMS/TAYLOR

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 161178
Company: WESTON SOLUTIONS, INC.
Project: RADFORD AAP
Logged By: EKB PM: BMS

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: TONY PACE
EMAIL: TONY.PACE@WESTONSOLUTIONS.COM
Company: WESTONSOLUTIONS
Address: 2 EATON ST STE 603
HAMPTON VA 23669

Invoice To:*
EMAIL:
Company: SAME
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	TOC	ANIONS	VOC	MEE	pH	TAL METALS	COD	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test										
4/15/21	1020	GW	G		49MW01	N	X	X	X	X					7	554737
4/15/21	1125	GW	G		48MW1	N	X	X	X	X					7	554738
4/15/21	1235	GW	G		48MW06	N	X	X	X	X					7	554739
4/15/21	1300				TB-3	N			X						3	554740
4/15/21	1300	GW	G		IDW-48/49	N					X	X	X		3	554741

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Relinquished By:	Date/Time	Received By:	Date/Time
	4/15/21 1700		4-19-21
Received by:	Date/Time	Received for Laboratory by:	Date/Time
		Brett Szymanski	04/17/2021 11:15

Lab Use Only
Ice Present (Yes) No
Temp 2.3°C/2.7°C IR Gun SRT28
Cooler # XXXX

Cooler Receipt Form

resent (YES) NO

erved Temperature 2.3°C

al Temperature 2.7°C

un # SRT 28

als Bms

e 04/17/2021 Time 11:15

ler # XXXX

ORIGIN ID:WALA (757) 416-2449
BILL BOUNDS
WESTON SOLUTIONS INC/OU1239
2 EATON ST STE 603

HAMPTON, VA 23669
UNITED STATES US

SHIP DATE: 15APR21
ACTWGT: 31.00 LB
CAD: 6995155/SSFE2201
DIMS: 17x10x17 IN

BILL THIRD PARTY

TO

CT LABORATORIES
1230 LANGE CT

BARABOO WI 53913
(608) 356-2760

INV:
PO:
REF:
DEPT:

FedEx Express

TRK# 0201 7860 2631 9674

FRI – 16 APR 10:30A
PRIORITY OVERNIGHT
AHS
53913
WI-US MSN

XH LNRA

CUSTODY SEAL
DATE 4/15/2021
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • www.qecusa.com

CUSTODY SEAL
DATE 4/15/2021
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • www.qecusa.com

Folder #: 161178

PM LOGIN CONFIRMATION

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 161842

Project Manager: *BMS* **Date Received:** 04/19/21 **Log Date:** 04/17/2021

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603

Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Collected By:
Collector's Phone: 757-819-5310

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Arrival Temperature: oC

SAMPLE #: 554737 **DESCR:** 49MW01 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/15/2021 **Time:** 10:20

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	4/29/2021	5/1/2021		Entered
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				4/29/2021	5/1/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/17/2021	5/1/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/13/2021	5/1/2021		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpF8EC.tmp

Folder #: 161178 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 554738 **DESCR:** 48MW1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/15/2021 **Time:** 11:25

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	4/29/2021	5/1/2021		Entered
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				4/29/2021	5/1/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/17/2021	5/1/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/13/2021	5/1/2021		Logged

SAMPLE #: 554739 **DESCR:** 48MW06 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/15/2021 **Time:** 12:25

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	4/29/2021	5/1/2021		Entered
1224	METH,ETH,ETHE QSM 5.0	(Mod RSK 175)				4/29/2021	5/1/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				4/17/2021	5/1/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				5/13/2021	5/1/2021		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpF8EC.tmp

Folder #: 161178 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 554740 **DESCR:** TB-3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED:** 4/15/2021 **Time:** 13:00

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	4/29/2021	5/1/2021		Entered

SAMPLE #: 554741 **DESCR:** IDW-48/49 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/15/2021 **Time:** 13:00

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
203	PH	(EPA 9040C)					5/1/2021		Logged
989	COD QSM	(EPA 410.4)				5/13/2021	5/1/2021		NeedPrep
1183	ICP K TOTAL QSM 5.0	(EPA 6010C)				10/12/2021	5/1/2021		Logged
1190	ICP NA TOTAL QSM 5.0	(EPA 6010C)				10/12/2021	5/1/2021		Logged
1200	ICP TOTAL QSM 5.0	(EPA 6010C)				10/12/2021	5/1/2021		Logged
			Total Aluminum						
			Total Antimony						
			Total Arsenic						
			Total Barium						
			Total Beryllium						
			Total Cadmium						
			Total Calcium						
			Total Chromium						
			Total Cobalt						
			Total Copper						
			Total Iron						
			Total Lead						
			Total Magnesium						
			Total Manganese						
			Total Nickel						
			Total Selenium						
			Total Silver						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpF8EC.tmp

Folder #: 161178 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 554741 **DESCR:** IDW-48/49 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 4/15/2021 **Time:** 13:00

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Total Thallium						
			Total Vanadium						
			Total Zinc						
1208	MERCURY TOTAL QSM 5.0	(EPA 7470A)				5/13/2021	5/1/2021		NeedPrep

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpF8EC.tmp

Invoice Number: 161842 **Preliminary Invoice Estimate:** $704.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	3	$12.00	0.00	$36.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	3	$12.00	0.00	$36.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	3	$12.00	0.00	$36.00
COD QSM	GROUND WATER	1	$18.00	0.00	$18.00
ICP K TOTAL QSM 5.0	GROUND WATER	1	$3.50	0.00	$3.50
ICP NA TOTAL QSM 5.0	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Aluminum	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Antimony	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Arsenic	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Barium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Beryllium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Cadmium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Calcium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Chromium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Cobalt	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Copper	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Iron	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Lead	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Magnesium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Manganese	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Nickel	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Selenium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Silver	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Thallium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Vanadium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Zinc	GROUND WATER	1	$3.50	0.00	$3.50
MERCURY TOTAL QSM 5.0	GROUND WATER	1	$23.00	0.00	$23.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	3	$16.00	0.00	$48.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	3	$16.00	0.00	$48.00

METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	3	$16.00	0.00	$48.00
ORGAN CARBON T QSM 5.0	GROUND WATER	3	$28.00	0.00	$84.00
PH	GROUND WATER	1	$10.00	0.00	$10.00
VOC 8260 QSM 5.0	GROUND WATER	3	$60.00	0.00	$180.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$60.00	0.00	$60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**4**	COD
HNO3	**1**	HG,ICP,K,NA
UNPRES PL	**4**	Anions
VOA HCL	**17**	VOC

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #: 161178
Print Date / Time: 04/19/2021 09:18
Client: WESTON SOLUTIONS, INC.
Received Date / Time / By: 04/17/2021 11::15 BMS
Project Name: RADFORD AAP SWMU-49
Log-In Date / Time / By: 04/19/2021 09::18 EKB
Project Phase: RADFORD, VA
Project #: PM: BMS
Coolers: XXXX
Temperature: 2.7 C On Ice: **Y**
Custody Seals Present : **Y**
COC Present:? **Y** Complete? **Y**
Seal Intact? **Y**
Numbers: DATED AND SIGNED
Ship Method: FEDEX EXPRESS
Tracking Number: 786026319674
Adequate Packaging: **Y**
Temp Blank Enclosed? **Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 4/15/2021 AND SIGNED.

THE SAMPLES WERE RECEIVED PAST THE 48-HOUR HOLD TIME FOR NITRATE. THE CLIENT CONFIRMED THAT THE LAB SHOULD PROCEED WITH THE ANALYSIS OF THE SAMPLES.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
554737 49MW01				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type		**(*UNPRES PL*) = 1**	
554737 49MW01				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type		**(*VOA HCL*) = 5**	
554737 49MW01				
	H2SO4 PL	1	Y / N	TOC
	Total # of Containers of Type		**(*H2SO4 PL*) = 1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
554738 48MW1				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type		**(*UNPRES PL*) = 1**	
554738 48MW1				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC

	VOA HCL	1	/		GAS,VOC
		Total # of Containers of Type		**(*VOA HCL*) =**	**5**
554738	48MW1				
	H2SO4 PL	1	Y / N		TOC
		Total # of Containers of Type		**(*H2SO4 PL*) =**	**1**

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
554739 48MW06				
	UNPRES PL	1	/	Anions
		Total # of Containers of Type		**(*UNPRES PL*) = 1**
554739 48MW06				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type		**(*VOA HCL*) = 5**
554739 48MW06				
	H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type		**(*H2SO4 PL*) = 1**

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
554740 TB-3				
	VOA HCL	1	/	VOC
	VOA HCL	1	/	VOC
		Total # of Containers of Type		**(*VOA HCL*) = 2**
554741 IDW-48/49				
	H2SO4 PL	1	Y / N	COD
		Total # of Containers of Type		**(*H2SO4 PL*) = 1**
554741 IDW-48/49				
	HNO3	1	/	HG,ICP,K,NA
		Total # of Containers of Type		**(*HNO3*) = 1**
554741 IDW-48/49				
	UNPRES PL	1	/	pH
		Total # of Containers of Type		**(*UNPRES PL*) = 1**

Condition Code	*Condition Description*
1	Sample Received OK

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Weston Solutions, Inc

Radford AAP; VA

SGS Job Number: FA84640

Sampling Date: 04/12/21

Report to:

Weston Solutions, Inc
2 Eaton St Suite 603
Hampton, VA 23669
pacea@westonsolutions.com

ATTN: Tony Pace

Total number of pages in report: **872**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Weston Solutions, Inc

Radford AAP; VA

Job No: FA84640

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA84640-1	04/12/21	10:25	WBPT	04/13/21	AQ	Ground Water	54MW13
FA84640-2	04/12/21	10:25	WBPT	04/13/21	AQ	Ground Water	54TW13
FA84640-3	04/12/21	11:40	WBPT	04/13/21	AQ	Ground Water	54MW12
FA84640-3D	04/12/21	11:40	WBPT	04/13/21	AQ	Water Dup/MSD	54MW12
FA84640-3S	04/12/21	11:40	WBPT	04/13/21	AQ	Water Matrix Spike	54MW12
FA84640-4	04/12/21	13:35	WBPT	04/13/21	AQ	Ground Water	54MW10
FA84640-5	04/12/21	14:35	WBPT	04/13/21	AQ	Ground Water	54MW1

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Weston Solutions, Inc **Job No:** FA84640

Site: Radford AAP; VA **Report Date** 4/28/2021 11:00:02

5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 04/12/2021 and were received at SGS North America Inc - Orlando on 04/13/2021 properly preserved, at 2.2 Deg. C and intact. These Samples received an SGS Orlando job number of FA84640. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Semi-volatiles By Method SW846 6850

Matrix: AQ **Batch ID:** OP84925

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA84640-3MSD, FA84640-3MS were used as the QC samples indicated.

Matrix Spike Recovery(s) for Perchlorate are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix Spike Duplicate Recovery(s) for Perchlorate are outside control limits. Probable cause is due to matrix interference.

GC/LC Semi-volatiles By Method SW846 8330B

Matrix: AQ **Batch ID:** OP84960

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) FA84640-3MS, FA84640-3MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recovery(s) for 1,3,5-Trinitrobenzene, 2,4-Dinitrotoluene, 2-amino-4,6-Dinitrotoluene, 3,5-Dinitroaniline, 4-amino-2,6-Dinitrotoluene, o-Nitrotoluene, PETN, RDX, 2,4,6-Trinitrotoluene, HMX are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix Spike Duplicate Recovery(s) for 1,3,5-Trinitrobenzene, 2,4,6-Trinitrotoluene, 2,4-Dinitrotoluene, 2-amino-4,6-Dinitrotoluene, 3,5-Dinitroaniline, 4-amino-2,6-Dinitrotoluene, HMX, o-Nitrotoluene, PETN, RDX, Tetryl are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for 2,4,6-Trinitrotoluene, Tetryl are outside control limits for sample OP84960-MSD. Probable cause is due to sample non-homogeneity.

Sample(s) FA84640-3 have surrogates outside control limits.

Sample(s) FA84640-3 are outside limits due to dilution.

FA84640-1 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA84640-1: All hits confirmed by reanalysis on a dissimilar column.

FA84640-1: Confirmation run.

FA84640-2 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA84640-2: All hits confirmed by reanalysis on a dissimilar column.

FA84640-2: Confirmation run.

FA84640-3 for 3,4-Dinitrotoluene: Outside control limits due to dilution.

FA84640-3 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA84640-3: All hits confirmed by reanalysis on a dissimilar column.

FA84640-3: Confirmation run.

FA84640-4 for 3,5-Dinitroaniline: Primary and confirmation results differ by more than 40%.

FA84640-4: All hits confirmed by reanalysis on a dissimilar column.

FA84640-4: Confirmation run.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Ariel Hartney, Client Services (signature on file)

Summary of Hits

Job Number: FA84640
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 04/12/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA84640-1	**54MW13**					
Perchlorate		0.34	0.20	0.10	ug/l	SW846 6850
HMX [a]		8.3	0.19	0.096	ug/l	SW846 8330B
RDX [b]		0.57	0.19	0.096	ug/l	SW846 8330B
3,5-Dinitroaniline [a]		0.39	0.19	0.096	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [b]		1.9	0.19	0.096	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [b]		1.3	0.19	0.096	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [b]		17.7	0.19	0.096	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [b]		17.7	0.19	0.096	ug/l	SW846 8330B
FA84640-2	**54TW13**					
Perchlorate		0.34	0.20	0.10	ug/l	SW846 6850
HMX [a]		9.1	0.19	0.095	ug/l	SW846 8330B
RDX [b]		0.55	0.19	0.095	ug/l	SW846 8330B
3,5-Dinitroaniline [a]		0.38	0.19	0.095	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [b]		2.0	0.19	0.095	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		1.3	0.19	0.095	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [b]		17.9	0.19	0.095	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [b]		19.2	0.19	0.095	ug/l	SW846 8330B
FA84640-3	**54MW12**					
Perchlorate		1.5	0.20	0.10	ug/l	SW846 6850
HMX [a]		25.8	0.19	0.096	ug/l	SW846 8330B
RDX [b]		6.0	0.19	0.096	ug/l	SW846 8330B
3,5-Dinitroaniline [a]		0.23	0.19	0.096	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [b]		7.6	0.19	0.096	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [b]		5.3	0.19	0.096	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [b]		19.1	0.19	0.096	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [b]		51.4	1.9	0.96	ug/l	SW846 8330B
FA84640-4	**54MW10**					
Perchlorate		0.38	0.20	0.10	ug/l	SW846 6850
HMX [a]		10.2	0.19	0.095	ug/l	SW846 8330B
RDX [b]		3.8	0.19	0.095	ug/l	SW846 8330B
3,5-Dinitroaniline [a]		0.42	0.19	0.095	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [b]		2.9	0.19	0.095	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [b]		2.5	0.19	0.095	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [b]		16.1	0.19	0.095	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [b]		30.3	0.19	0.095	ug/l	SW846 8330B

Summary of Hits

Job Number: FA84640
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 04/12/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA84640-5	**54MW1**					

No hits reported in this sample.

(a) All hits confirmed by reanalysis on a dissimilar column. Primary and confirmation results differ by more than 40%.
(b) All hits confirmed by reanalysis on a dissimilar column.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA84640-1
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q80609.D	1	04/14/21 22:47	NAF	04/14/21 09:00	OP84925	SQ1764
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.34	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA84640-1
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP390604.D	1	04/22/21 12:42	JB	04/16/21 09:30	OP84960	GPP2438
Run #2 [b]	GG621164.D	1	04/23/21 14:10	JB	04/16/21 09:30	OP84960	GGG2966

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX [c]	8.3	0.19	0.096	0.077	ug/l	
121-82-4	RDX	0.57	0.19	0.096	0.077	ug/l	
	DNX	0.096 U	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX	0.096 U	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.39	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.9	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.3	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	17.7	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	17.7	0.19	0.096	0.077	ug/l	
55-63-0	Nitroglycerine	0.96 U	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	102%	130%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54TW13		
Lab Sample ID:	FA84640-2	**Date Sampled:**	04/12/21
Matrix:	AQ - Ground Water	**Date Received:**	04/13/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q80610.D	1	04/14/21 22:56	NAF	04/14/21 09:00	OP84925	SQ1764
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.34	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54TW13
Lab Sample ID: FA84640-2
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP390605.D	1	04/22/21 13:13	JB	04/16/21 09:30	OP84960	GPP2438
Run #2 [b]	GG621165.D	1	04/23/21 14:41	JB	04/16/21 09:30	OP84960	GGG2966

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX [c]	9.1	0.19	0.095	0.076	ug/l	
121-82-4	RDX	0.55	0.19	0.095	0.076	ug/l	
	DNX	0.095 U	0.19	0.095	0.076	ug/l	
	MNX	0.095 U	0.19	0.095	0.076	ug/l	
	TNX	0.095 U	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.38	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	2.0	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	1.3	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	17.9	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	19.2	0.19	0.095	0.076	ug/l	
55-63-0	Nitroglycerine	0.95 U	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	100%	136%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW12		
Lab Sample ID:	FA84640-3	**Date Sampled:**	04/12/21
Matrix:	AQ - Ground Water	**Date Received:**	04/13/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q80611.D	1	04/14/21 23:05	NAF	04/14/21 09:00	OP84925	SQ1764
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	1.5	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW12
Lab Sample ID: FA84640-3
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP390606.D	1	04/22/21 13:44	JB	04/16/21 09:30	OP84960	GPP2438
Run #2 [b]	GG621166.D	1	04/23/21 15:13	JB	04/16/21 09:30	OP84960	GGG2966
Run #3 [a]	BB068941.D	10	04/24/21 03:24	JB	04/16/21 09:30	OP84960	GBB2027
Run #4 [b]	GG621167.D	10	04/23/21 15:44	JB	04/16/21 09:30	OP84960	GGG2966

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml
Run #3	1040 ml	10.0 ml
Run #4	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX [c]	25.8	0.19	0.096	0.077	ug/l	
121-82-4	RDX	6.0	0.19	0.096	0.077	ug/l	
	DNX	0.096 U	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX	0.096 U	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.23	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	7.6	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	5.3	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	19.1	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	51.4 [d]	1.9	0.96	0.77	ug/l	
55-63-0	Nitroglycerine	0.96 U	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Run# 4	Limits
610-39-9	3,4-Dinitrotoluene	88%	128%	0% [e]	0% [e]	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	54MW12		
Lab Sample ID:	FA84640-3	**Date Sampled:**	04/12/21
Matrix:	AQ - Ground Water	**Date Received:**	04/13/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q

(d) Result is from Run# 3
(e) Outside control limits due to dilution.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA84640-4	**Date Sampled:**	04/12/21
Matrix:	AQ - Ground Water	**Date Received:**	04/13/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q80614.D	1	04/14/21 23:32	NAF	04/14/21 09:00	OP84925	SQ1764
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.38	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW10
Lab Sample ID: FA84640-4
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP390607.D	1	04/22/21 14:15	JB	04/16/21 09:30	OP84960	GPP2438
Run #2 [b]	GG621168.D	1	04/23/21 16:16	JB	04/16/21 09:30	OP84960	GGG2966

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX [c]	10.2	0.19	0.095	0.076	ug/l	
121-82-4	RDX	3.8	0.19	0.095	0.076	ug/l	
	DNX	0.095 U	0.19	0.095	0.076	ug/l	
	MNX	0.095 U	0.19	0.095	0.076	ug/l	
	TNX	0.095 U	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.42	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	2.9	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	2.5	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	16.1	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	30.3	0.19	0.095	0.076	ug/l	
55-63-0	Nitroglycerine	0.95 U	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	90%	126%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW1
Lab Sample ID: FA84640-5
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q80615.D	1	04/14/21 23:40	NAF	04/14/21 09:00	OP84925	SQ1764
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.10 U	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW1
Lab Sample ID: FA84640-5
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP390608.D	1	04/22/21 14:46	JB	04/16/21 09:30	OP84960	GPP2438
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.094 U	0.19	0.094	0.075	ug/l	
121-82-4	RDX	0.094 U	0.19	0.094	0.075	ug/l	
	DNX	0.094 U	0.19	0.094	0.075	ug/l	
	MNX	0.094 U	0.19	0.094	0.075	ug/l	
	TNX	0.094 U	0.19	0.094	0.075	ug/l	
618-87-1	3,5-Dinitroaniline	0.094 U	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.094 U	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
55-63-0	Nitroglycerine	0.94 U	1.9	0.94	0.47	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	104%		70-136%

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

SGS North America Inc - Orlando FA84640

Chain of Custody

SGS - ORLANDO JOB # : PAGE 1 OF 1

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: WESTON SOLUTIONS
Address: 2 EATON ST STE 603
City: HAMPTON State: VA Zip: 23669
Project Contact: TONY PACE Email: TONY.PACE@WESTONSOLUTIONS.COM
Phone #: 757 819-5310
Sampler(s) Name(s) (Printed)
Sampler 1: Sampler 2:

Project Information

Project Name: RADFORD AAP
Street
City RADFORD State VA
Project #
Fax #
Client Purchase Order #

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZNAS	DI WATER	MEOH	EXPLOSIVES	PERCHLORATE		LAB USE ONLY
1	SA MW 13	4/12/21	1025	WS/PT	GW	3		/								X	X		
2	SA TW 13	4/12/21	1025	WS/PT	GW	3		/								X	X		
3	SA MW 12	4/12/21	1140	WS/PT	GW	3		X								X	X	MS/MSD	
4	SA MW 10	4/12/21	1335	WS/PT	GW	3		X								X	X		
5	SA MW 1	4/12/21	1435	WS/PT	GW	3		X								X	X		

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other 14 DAY
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

INITIAL ASSESSMENT
LABEL VERIFICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1		4/12/21 1400	2 FX	3 FX	4/13/21 1400	4
5	Relinquished by/Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	Date Time:	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 2.1C IR4

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (4).xls Rev 031318

FA84640: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA84640 **Client:** WESTOW SOLUTIONS **Project:** RADFORD AAP

Date / Time Received: 4/13/2021 2:00:00 PM **Delivery Method:** FED EX **Airbill #'s:** 785889632901

Therm ID: IR4; **Therm CF:** -0.8; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.2);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: CARLOSD Date: 4/13/2021 2:00:00 PM Reviewer: _____ Date: _____

QC Evaluation: DOD QSM5.x Limits

Job Number: FA84640
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 04/12/21

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP84925	SW846 6850						
OP84925-BS	14797-73-0	Perchlorate	BSP	REC	90	%	84-119
OP84925-MS	14797-73-0	Perchlorate	MS	REC	150 [a]	%	84-119
OP84925-MSD	14797-73-0	Perchlorate	MSD	REC	150 [a]	%	84-119
OP84925-MSD	14797-73-0	Perchlorate	MSD	RPD	0	%	15
OP84960	SW846 8330B						
OP84960-BS	2691-41-0	HMX	BSP	REC	88	%	65-135
OP84960-BS	121-82-4	RDX	BSP	REC	88	%	68-130
OP84960-BS		DNX	BSP	REC	86	%	66-119
OP84960-BS		MNX	BSP	REC	72	%	57-132
OP84960-BS	618-87-1	3,5-Dinitroaniline	BSP	REC	90	%	71-117
OP84960-BS	99-65-0	1,3-Dinitrobenzene	BSP	REC	94	%	78-120
OP84960-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	114	%	77-127
OP84960-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	92	%	78-120
OP84960-BS	35572-78-2	2-amino-4,6-Dinitrotoluene	BSP	REC	92	%	79-120
OP84960-BS	19406-51-0	4-amino-2,6-Dinitrotoluene	BSP	REC	102	%	76-125
OP84960-BS	98-95-3	Nitrobenzene	BSP	REC	82	%	65-134
OP84960-BS	88-72-2	o-Nitrotoluene	BSP	REC	80	%	70-127
OP84960-BS	99-08-1	m-Nitrotoluene	BSP	REC	84	%	73-125
OP84960-BS	99-99-0	p-Nitrotoluene	BSP	REC	84	%	71-127
OP84960-BS	479-45-8	Tetryl	BSP	REC	82	%	64-128
OP84960-BS	99-35-4	1,3,5-Trinitrobenzene	BSP	REC	92	%	73-125
OP84960-BS	118-96-7	2,4,6-Trinitrotoluene	BSP	REC	88	%	71-123
OP84960-BS	55-63-0	Nitroglycerine	BSP	REC	96	%	74-127
OP84960-BS	78-11-5	PETN	BSP	REC	110	%	73-127
OP84960-MS	2691-41-0	HMX	MS	REC	-74 [a]	%	65-135
OP84960-MS	2691-41-0	HMX	MS	REC	-166 [a]	%	65-135
OP84960-MS	121-82-4	RDX	MS	REC	126	%	68-130
OP84960-MS	121-82-4	RDX	MS	REC	37	%	68-130
OP84960-MS	618-87-1	3,5-Dinitroaniline	MS	REC	169	%	71-117
OP84960-MS	618-87-1	3,5-Dinitroaniline	MS	REC	94	%	71-117
OP84960-MS	99-65-0	1,3-Dinitrobenzene	MS	REC	122	%	78-120
OP84960-MS	99-65-0	1,3-Dinitrobenzene	MS	REC	99	%	78-120
OP84960-MS	606-20-2	2,6-Dinitrotoluene	MS	REC	106	%	77-127
OP84960-MS	606-20-2	2,6-Dinitrotoluene	MS	REC	106	%	77-127
OP84960-MS	121-14-2	2,4-Dinitrotoluene	MS	REC	129	%	78-120
OP84960-MS	121-14-2	2,4-Dinitrotoluene	MS	REC	97	%	78-120
OP84960-MS	35572-78-2	2-amino-4,6-Dinitrotoluene	MS	REC	14	%	79-120
OP84960-MS	35572-78-2	2-amino-4,6-Dinitrotoluene	MS	REC	129	%	79-120
OP84960-MS	19406-51-0	4-amino-2,6-Dinitrotoluene	MS	REC	40	%	76-125
OP84960-MS	19406-51-0	4-amino-2,6-Dinitrotoluene	MS	REC	115	%	76-125

* Sample used for QC is not from job FA84640

QC Evaluation: DOD QSM5.x Limits

Job Number: FA84640
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 04/12/21

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP84960-MS	98-95-3	Nitrobenzene	MS	REC	95	%	65-134
OP84960-MS	98-95-3	Nitrobenzene	MS	REC	82	%	65-134
OP84960-MS	88-72-2	o-Nitrotoluene	MS	REC	104	%	70-127
OP84960-MS	88-72-2	o-Nitrotoluene	MS	REC	75	%	70-127
OP84960-MS	99-08-1	m-Nitrotoluene	MS	REC	96	%	73-125
OP84960-MS	99-08-1	m-Nitrotoluene	MS	REC	83	%	73-125
OP84960-MS	99-99-0	p-Nitrotoluene	MS	REC	101	%	71-127
OP84960-MS	99-99-0	p-Nitrotoluene	MS	REC	88	%	71-127
OP84960-MS	479-45-8	Tetryl	MS	REC	88	%	64-128
OP84960-MS	479-45-8	Tetryl	MS	REC	72	%	64-128
OP84960-MS	99-35-4	1,3,5-Trinitrobenzene	MS	REC	160	%	73-125
OP84960-MS	99-35-4	1,3,5-Trinitrobenzene	MS	REC	-106	%	73-125
OP84960-MS	118-96-7	2,4,6-Trinitrotoluene	MS	REC	214 [a]	%	71-123
OP84960-MS	118-96-7	2,4,6-Trinitrotoluene	MS	REC	-447 [a]	%	71-123
OP84960-MS	55-63-0	Nitroglycerine	MS	REC	119	%	74-127
OP84960-MS	55-63-0	Nitroglycerine	MS	REC	105	%	74-127
OP84960-MS	78-11-5	PETN	MS	REC	131	%	73-127
OP84960-MS	78-11-5	PETN	MS	REC	336	%	73-127
OP84960-MSD	2691-41-0	HMX	MSD	REC	-165 [a]	%	65-135
OP84960-MSD	2691-41-0	HMX	MSD	REC	-66 [a]	%	65-135
OP84960-MSD	2691-41-0	HMX	MSD	RPD	4	%	20
OP84960-MSD	2691-41-0	HMX	MSD	RPD	1	%	20
OP84960-MSD	121-82-4	RDX	MSD	REC	35	%	68-130
OP84960-MSD	121-82-4	RDX	MSD	REC	133	%	68-130
OP84960-MSD	121-82-4	RDX	MSD	RPD	4	%	20
OP84960-MSD	121-82-4	RDX	MSD	RPD	2	%	20
OP84960-MSD	618-87-1	3,5-Dinitroaniline	MSD	REC	95	%	71-117
OP84960-MSD	618-87-1	3,5-Dinitroaniline	MSD	REC	184	%	71-117
OP84960-MSD	618-87-1	3,5-Dinitroaniline	MSD	RPD	1	%	20
OP84960-MSD	618-87-1	3,5-Dinitroaniline	MSD	RPD	8	%	20
OP84960-MSD	99-65-0	1,3-Dinitrobenzene	MSD	REC	99	%	78-120
OP84960-MSD	99-65-0	1,3-Dinitrobenzene	MSD	REC	121	%	78-120
OP84960-MSD	99-65-0	1,3-Dinitrobenzene	MSD	RPD	0	%	20
OP84960-MSD	99-65-0	1,3-Dinitrobenzene	MSD	RPD	1	%	20
OP84960-MSD	606-20-2	2,6-Dinitrotoluene	MSD	REC	101	%	77-127
OP84960-MSD	606-20-2	2,6-Dinitrotoluene	MSD	REC	106	%	77-127
OP84960-MSD	606-20-2	2,6-Dinitrotoluene	MSD	RPD	5	%	20
OP84960-MSD	606-20-2	2,6-Dinitrotoluene	MSD	RPD	0	%	20
OP84960-MSD	121-14-2	2,4-Dinitrotoluene	MSD	REC	95	%	78-120
OP84960-MSD	121-14-2	2,4-Dinitrotoluene	MSD	REC	137	%	78-120
OP84960-MSD	121-14-2	2,4-Dinitrotoluene	MSD	RPD	2	%	20
OP84960-MSD	121-14-2	2,4-Dinitrotoluene	MSD	RPD	6	%	20
OP84960-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	REC	135	%	79-120
OP84960-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	REC	14	%	79-120
OP84960-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	RPD	3	%	20

* Sample used for QC is not from job FA84640

QC Evaluation: DOD QSM5.x Limits

Job Number: FA84640
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 04/12/21

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP84960-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	RPD	0	%	20
OP84960-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	REC	38	%	76-125
OP84960-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	REC	122	%	76-125
OP84960-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	RPD	1	%	20
OP84960-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	RPD	4	%	20
OP84960-MSD	98-95-3	Nitrobenzene	MSD	REC	94	%	65-134
OP84960-MSD	98-95-3	Nitrobenzene	MSD	REC	80	%	65-134
OP84960-MSD	98-95-3	Nitrobenzene	MSD	RPD	3	%	20
OP84960-MSD	98-95-3	Nitrobenzene	MSD	RPD	1	%	20
OP84960-MSD	88-72-2	o-Nitrotoluene	MSD	REC	74	%	70-127
OP84960-MSD	88-72-2	o-Nitrotoluene	MSD	REC	104	%	70-127
OP84960-MSD	88-72-2	o-Nitrotoluene	MSD	RPD	0	%	20
OP84960-MSD	88-72-2	o-Nitrotoluene	MSD	RPD	1	%	20
OP84960-MSD	99-08-1	m-Nitrotoluene	MSD	REC	95	%	73-125
OP84960-MSD	99-08-1	m-Nitrotoluene	MSD	REC	87	%	73-125
OP84960-MSD	99-08-1	m-Nitrotoluene	MSD	RPD	5	%	20
OP84960-MSD	99-08-1	m-Nitrotoluene	MSD	RPD	1	%	20
OP84960-MSD	99-99-0	p-Nitrotoluene	MSD	REC	85	%	71-127
OP84960-MSD	99-99-0	p-Nitrotoluene	MSD	REC	101	%	71-127
OP84960-MSD	99-99-0	p-Nitrotoluene	MSD	RPD	0	%	20
OP84960-MSD	99-99-0	p-Nitrotoluene	MSD	RPD	4	%	20
OP84960-MSD	479-45-8	Tetryl	MSD	REC	37	%	64-128
OP84960-MSD	479-45-8	Tetryl	MSD	REC	84	%	64-128
OP84960-MSD	479-45-8	Tetryl	MSD	RPD	63	%	20
OP84960-MSD	479-45-8	Tetryl	MSD	RPD	5	%	20
OP84960-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	REC	-107	%	73-125
OP84960-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	REC	186	%	73-125
OP84960-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	RPD	7	%	20
OP84960-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	RPD	1	%	20
OP84960-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	REC	241 [a]	%	71-123
OP84960-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	REC	-461 [a]	%	71-123
OP84960-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	RPD	17	%	20
OP84960-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	RPD	4	%	20
OP84960-MSD	55-63-0	Nitroglycerine	MSD	REC	111	%	74-127
OP84960-MSD	55-63-0	Nitroglycerine	MSD	REC	110	%	74-127
OP84960-MSD	55-63-0	Nitroglycerine	MSD	RPD	5	%	20
OP84960-MSD	55-63-0	Nitroglycerine	MSD	RPD	6	%	20
OP84960-MSD	78-11-5	PETN	MSD	REC	146	%	73-127
OP84960-MSD	78-11-5	PETN	MSD	REC	331	%	73-127
OP84960-MSD	78-11-5	PETN	MSD	RPD	2	%	20
OP84960-MSD	78-11-5	PETN	MSD	RPD	11	%	20

(a) Outside control limits due to high level in sample relative to spike amount.

* Sample used for QC is not from job FA84640

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Instrument Blank

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
SQ1764-IBLK	Q80618.D	1	04/15/21	NAF	n/a	n/a	SQ1764

The QC reported here applies to the following samples: **Method:** SW846 6850

FA84640-1, FA84640-2, FA84640-3, FA84640-4, FA84640-5

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Method Blank Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84925-MB	Q80608.D	1	04/14/21	NAF	04/14/21	OP84925	SQ1764

The QC reported here applies to the following samples: **Method:** SW846 6850

FA84640-1, FA84640-2, FA84640-3, FA84640-4, FA84640-5

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Blank Spike Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84925-BS	Q80607.D	1	04/14/21	NAF	04/14/21	OP84925	SQ1764

The QC reported here applies to the following samples: **Method:** SW846 6850

FA84640-1, FA84640-2, FA84640-3, FA84640-4, FA84640-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
14797-73-0	Perchlorate	0.2	0.18	90	80-120

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84925-MS	Q80612.D	1	04/14/21	NAF	04/14/21	OP84925	SQ1764
OP84925-MSD	Q80613.D	1	04/14/21	NAF	04/14/21	OP84925	SQ1764
FA84640-3	Q80611.D	1	04/14/21	NAF	04/14/21	OP84925	SQ1764

The QC reported here applies to the following samples: **Method:** SW846 6850

FA84640-1, FA84640-2, FA84640-3, FA84640-4, FA84640-5

CAS No.	Compound	FA84640-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
14797-73-0	Perchlorate	1.5		0.2	1.8	150* [a]	0.2	1.8	150* [a]	0	80-120/15

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1764-CC1764	**Injection Date:**	04/14/21
Lab File ID:	Q80604.D	**Injection Time:**	22:03
Instrument ID:	GCMSQ	**Method:**	SW846 6850

	IS 1 AREA	RT
Initial Cal [a]	83698	6.49
Check Std [b]	80143	6.72
Upper Limit [c]	125547	8.72
Lower Limit [d]	41849	4.72

Lab Sample ID	IS 1 AREA	RT
OP84925-BS	79134	6.76
OP84925-MB	78612	6.82
FA84640-1	59311	6.53
FA84640-2	60674	6.56
FA84640-3	61781	6.56
OP84925-MS	66287	6.30
OP84925-MSD	64122	6.26
FA84640-4	60190	6.21
FA84640-5	60065	6.22

IS 1 = Cl18O4 (ISTD)

(a) Initial Cal is: SQ1764-ICC1764 Q80538.D 04/14/21 12:01. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to + 50% of initial cal area.
(c) Upper Limit = + 50% of initial standard area; Retention time + 2 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -2 minutes of check standard.

Initial Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1764-ICC1764
Lab FileID: Q80538.D

Initial Calibration Report

Method Path	D:\MassHunter\Methods
Method File	6850_041421_SQ1764.quantmethod.xml
Batch Name	D:\MassHunter\Data\0414_6850_SQ1764\QuantResults\SQ1764.batch.bin
Last Calib Update	4/15/2021 7:56:21 AM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\0414_6850_SQ1764\Q80535.d	4/14/2021 11:34:48 AM	4/15/2021 7:56:21 AM
2	D:\MassHunter\Data\0414_6850_SQ1764\Q80536.d	4/14/2021 11:43:42 AM	4/15/2021 7:56:21 AM
3	D:\MassHunter\Data\0414_6850_SQ1764\Q80537.d	4/14/2021 11:52:36 AM	4/15/2021 7:56:21 AM
4	D:\MassHunter\Data\0414_6850_SQ1764\Q80538.d	4/14/2021 12:01:30 PM	4/15/2021 7:56:21 AM
5	D:\MassHunter\Data\0414_6850_SQ1764\Q80539.d	4/14/2021 12:10:25 PM	4/15/2021 7:56:21 AM
6	D:\MassHunter\Data\0414_6850_SQ1764\Q80540.d	4/14/2021 12:19:20 PM	4/15/2021 7:56:21 AM
7	D:\MassHunter\Data\0414_6850_SQ1764\Q80541.d	4/14/2021 12:28:14 PM	4/15/2021 7:56:21 AM
8	D:\MassHunter\Data\0414_6850_SQ1764\Q80542.d	4/14/2021 12:37:07 PM	4/15/2021 7:56:21 AM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I Cl18O4						ISTD					
T Perchlorate	Avg RF	1.2656	1.3352	1.3575	1.3985	1.4390	1.4826	1.6179	1.6201	1.4395	8.935

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Generated at 7:56 AM on 4/15/2021

Initial Calibration Verification

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1764-ICV1764
Lab FileID: Q80543.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0414_6850_SQ1764\SQ1764.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0414_6850_SQ1764\Q80535.d
2:D:\MassHunter\Data\0414_6850_SQ1764\Q80536.d
3:D:\MassHunter\Data\0414_6850_SQ1764\Q80537.d
4:D:\MassHunter\Data\0414_6850_SQ1764\Q80538.d
5:D:\MassHunter\Data\0414_6850_SQ1764\Q80539.d
6:D:\MassHunter\Data\0414_6850_SQ1764\Q80540.d
7:D:\MassHunter\Data\0414_6850_SQ1764\Q80541.d
8:D:\MassHunter\Data\0414_6850_SQ1764\Q80542.d

Data File: Q80543
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.813	-9.4	90.6

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1764-CC1764
Lab FileID: Q80604.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0414_6850_SQ1764\SQ1764.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0414_6850_SQ1764\Q80535.d
2:D:\MassHunter\Data\0414_6850_SQ1764\Q80536.d
3:D:\MassHunter\Data\0414_6850_SQ1764\Q80537.d
4:D:\MassHunter\Data\0414_6850_SQ1764\Q80538.d
5:D:\MassHunter\Data\0414_6850_SQ1764\Q80539.d
6:D:\MassHunter\Data\0414_6850_SQ1764\Q80540.d
7:D:\MassHunter\Data\0414_6850_SQ1764\Q80541.d
8:D:\MassHunter\Data\0414_6850_SQ1764\Q80542.d

Data File: Q80604
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.921	-3.9	96.1

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1764-CC1764
Lab FileID: Q80605.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0414_6850_SQ1764\SQ1764.batch.bin

Level ID:Calibration File
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2:D:\MassHunter\Data\0414_6850_SQ1764\Q80536.d
3:D:\MassHunter\Data\0414_6850_SQ1764\Q80537.d
4:D:\MassHunter\Data\0414_6850_SQ1764\Q80538.d
5:D:\MassHunter\Data\0414_6850_SQ1764\Q80539.d
6:D:\MassHunter\Data\0414_6850_SQ1764\Q80540.d
7:D:\MassHunter\Data\0414_6850_SQ1764\Q80541.d
8:D:\MassHunter\Data\0414_6850_SQ1764\Q80542.d

Data File: Q80605
Type : QC
Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	0.200	0.178	-10.8	89.2

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1764-CC1764
Lab FileID: Q80616.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0414_6850_SQ1764\SQ1764.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0414_6850_SQ1764\Q80535.d
2:D:\MassHunter\Data\0414_6850_SQ1764\Q80536.d
3:D:\MassHunter\Data\0414_6850_SQ1764\Q80537.d
4:D:\MassHunter\Data\0414_6850_SQ1764\Q80538.d
5:D:\MassHunter\Data\0414_6850_SQ1764\Q80539.d
6:D:\MassHunter\Data\0414_6850_SQ1764\Q80540.d
7:D:\MassHunter\Data\0414_6850_SQ1764\Q80541.d
8:D:\MassHunter\Data\0414_6850_SQ1764\Q80542.d

Data File: Q80616
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.915	-4.2	95.8

CC Criteria: +/- 15%

Run Sequence Report

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: SQ1764 **Method:** SW846 6850 **Instrument ID:** GCMSQ

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ1764-IC1764	Q80535.D	04/14/21 11:34	n/a	Initial cal 0.2
SQ1764-IC1764	Q80536.D	04/14/21 11:43	n/a	Initial cal 0.5
SQ1764-IC1764	Q80537.D	04/14/21 11:52	n/a	Initial cal 1.0
SQ1764-ICC1764	Q80538.D	04/14/21 12:01	n/a	Initial cal 2.0
SQ1764-IC1764	Q80539.D	04/14/21 12:10	n/a	Initial cal 5.0
SQ1764-IC1764	Q80540.D	04/14/21 12:19	n/a	Initial cal 10
SQ1764-IC1764	Q80541.D	04/14/21 12:28	n/a	Initial cal 25
SQ1764-IC1764	Q80542.D	04/14/21 12:37	n/a	Initial cal 50
SQ1764-ICV1764	Q80543.D	04/14/21 12:46	n/a	Initial cal verification 2.0
OP84923-BS	Q80545.D	04/14/21 13:06	OP84923	Blank Spike
OP84923-MB	Q80546.D	04/14/21 13:15	OP84923	Method Blank
ZZZZZZ	Q80547.D	04/14/21 13:24	OP84923	(unrelated sample)
ZZZZZZ	Q80548.D	04/14/21 13:34	OP84923	(unrelated sample)
ZZZZZZ	Q80549.D	04/14/21 13:43	OP84923	(unrelated sample)
FA84550-22	Q80550.D	04/14/21 13:51	OP84923	(used for QC only; not part of job FA84640)
OP84923-MS	Q80551.D	04/14/21 14:01	OP84923	Matrix Spike
OP84923-MSD	Q80552.D	04/14/21 14:20	OP84923	Matrix Spike Duplicate
ZZZZZZ	Q80553.D	04/14/21 14:29	OP84923	(unrelated sample)
ZZZZZZ	Q80554.D	04/14/21 14:38	OP84923	(unrelated sample)
SQ1764-CC1764	Q80555.D	04/14/21 14:46	n/a	Continuing cal 2.0
SQ1764-CC1764	Q80556.D	04/14/21 14:55	n/a	Continuing cal 0.2
ZZZZZZ	Q80558.D	04/14/21 15:13	OP84923	(unrelated sample)
ZZZZZZ	Q80559.D	04/14/21 15:22	OP84923	(unrelated sample)
ZZZZZZ	Q80560.D	04/14/21 15:31	OP84923	(unrelated sample)
ZZZZZZ	Q80561.D	04/14/21 15:40	OP84923	(unrelated sample)
ZZZZZZ	Q80562.D	04/14/21 15:49	OP84923	(unrelated sample)
ZZZZZZ	Q80563.D	04/14/21 15:58	OP84923	(unrelated sample)
ZZZZZZ	Q80564.D	04/14/21 16:07	OP84923	(unrelated sample)
ZZZZZZ	Q80565.D	04/14/21 16:15	OP84923	(unrelated sample)
ZZZZZZ	Q80566.D	04/14/21 16:24	OP84923	(unrelated sample)
ZZZZZZ	Q80567.D	04/14/21 16:33	OP84923	(unrelated sample)
SQ1764-CC1764	Q80568.D	04/14/21 16:42	n/a	Continuing cal 2.0
SQ1764-CC1764	Q80569.D	04/14/21 16:51	n/a	Continuing cal 0.2
ZZZZZZ	Q80571.D	04/14/21 17:09	OP84923	(unrelated sample)
ZZZZZZ	Q80574.D	04/14/21 17:36	OP84923	(unrelated sample)
OP84924-BS	Q80576.D	04/14/21 17:53	OP84924	Blank Spike
OP84924-MB	Q80577.D	04/14/21 18:02	OP84924	Method Blank
ZZZZZZ	Q80578.D	04/14/21 18:11	OP84924	(unrelated sample)
ZZZZZZ	Q80579.D	04/14/21 18:20	OP84924	(unrelated sample)
ZZZZZZ	Q80580.D	04/14/21 18:29	OP84924	(unrelated sample)
SQ1764-CC1764	Q80581.D	04/14/21 18:38	n/a	Continuing cal 2.0
SQ1764-CC1764	Q80582.D	04/14/21 18:47	n/a	Continuing cal 0.2
ZZZZZZ	Q80584.D	04/14/21 19:05	OP84924	(unrelated sample)
ZZZZZZ	Q80585.D	04/14/21 19:14	OP84924	(unrelated sample)
ZZZZZZ	Q80586.D	04/14/21 19:22	OP84924	(unrelated sample)
ZZZZZZ	Q80587.D	04/14/21 19:31	OP84924	(unrelated sample)

Run Sequence Report

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: SQ1764	**Method:** SW846 6850	**Instrument ID:** GCMSQ

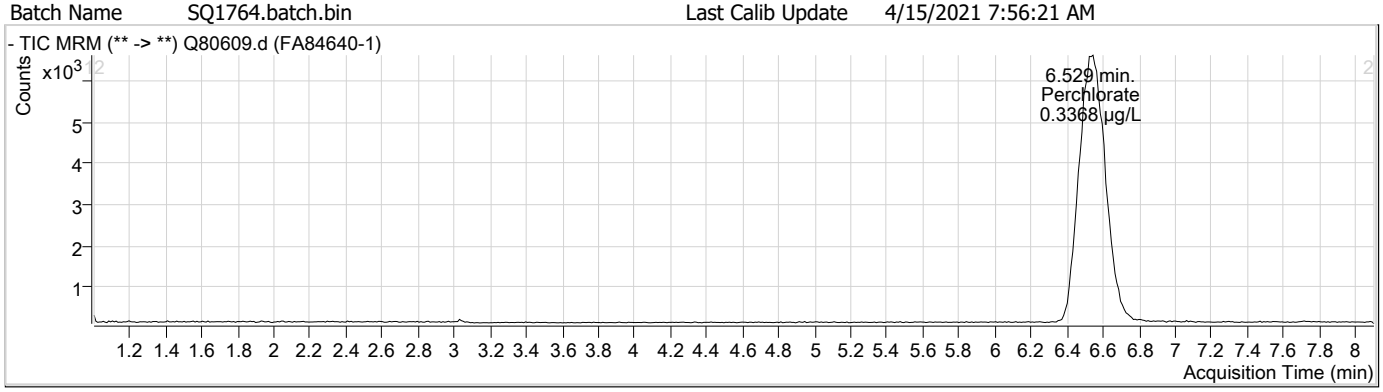
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
ZZZZZZ	Q80588.D	04/14/21 19:40	OP84924	(unrelated sample)
ZZZZZZ	Q80589.D	04/14/21 19:49	OP84924	(unrelated sample)
ZZZZZZ	Q80590.D	04/14/21 19:58	OP84924	(unrelated sample)
ZZZZZZ	Q80591.D	04/14/21 20:07	OP84924	(unrelated sample)
ZZZZZZ	Q80592.D	04/14/21 20:16	OP84924	(unrelated sample)
SQ1764-CC1764	Q80593.D	04/14/21 20:25	n/a	Continuing cal 2.0
SQ1764-CC1764	Q80594.D	04/14/21 20:34	n/a	Continuing cal 0.2
FA84596-15	Q80596.D	04/14/21 20:51	OP84924	(used for QC only; not part of job FA84640)
OP84924-MS	Q80597.D	04/14/21 21:00	OP84924	Matrix Spike
OP84924-MSD	Q80598.D	04/14/21 21:09	OP84924	Matrix Spike Duplicate
ZZZZZZ	Q80599.D	04/14/21 21:18	OP84924	(unrelated sample)
ZZZZZZ	Q80600.D	04/14/21 21:27	OP84924	(unrelated sample)
ZZZZZZ	Q80601.D	04/14/21 21:36	OP84924	(unrelated sample)
ZZZZZZ	Q80602.D	04/14/21 21:45	OP84924	(unrelated sample)
ZZZZZZ	Q80603.D	04/14/21 21:54	OP84924	(unrelated sample)
SQ1764-CC1764	Q80604.D	04/14/21 22:03	n/a	Continuing cal 2.0
SQ1764-CC1764	Q80605.D	04/14/21 22:12	n/a	Continuing cal 0.2
OP84925-BS	Q80607.D	04/14/21 22:29	OP84925	Blank Spike
OP84925-MB	Q80608.D	04/14/21 22:38	OP84925	Method Blank
FA84640-1	Q80609.D	04/14/21 22:47	OP84925	54MW13
FA84640-2	Q80610.D	04/14/21 22:56	OP84925	54TW13
FA84640-3	Q80611.D	04/14/21 23:05	OP84925	54MW12
OP84925-MS	Q80612.D	04/14/21 23:14	OP84925	Matrix Spike
OP84925-MSD	Q80613.D	04/14/21 23:23	OP84925	Matrix Spike Duplicate
FA84640-4	Q80614.D	04/14/21 23:32	OP84925	54MW10
FA84640-5	Q80615.D	04/14/21 23:40	OP84925	54MW1
SQ1764-CC1764	Q80616.D	04/14/21 23:49	n/a	Continuing cal 2.0
SQ1764-ECC1764	Q80617.D	04/14/21 23:58	n/a	Ending cal 0.2
SQ1764-IBLK	Q80618.D	04/15/21 00:07	n/a	Method Blank

MS Semi-volatiles

Raw Data

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80609.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 10:47:40 PM
Sample Name	FA84640-1	Instrument	Instrument 1
Vial	P2-A6	Sample Information	OP84925,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

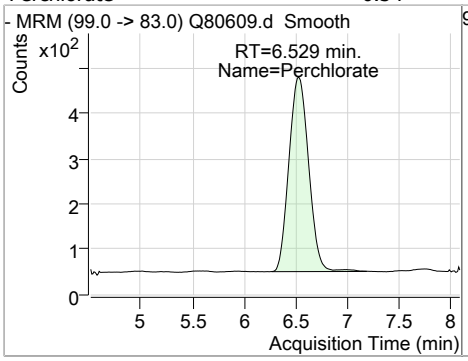


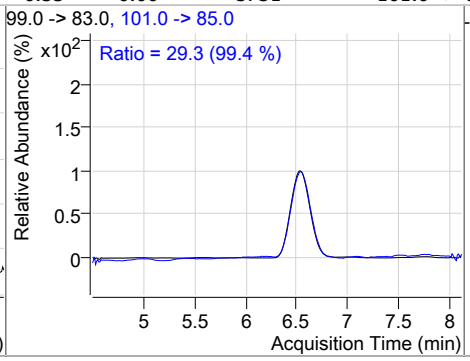
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.533	107.0 -> 89.0	59311	NoQ	5.00 µg/L	0.041
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.529	99.0 -> 83.0	5751	3.4	0.34 µg/L	100

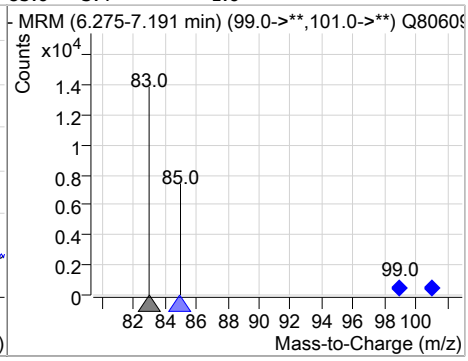
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.34	6.53	0.06	5751	101.0 -> 85.0	3.4	1.6	

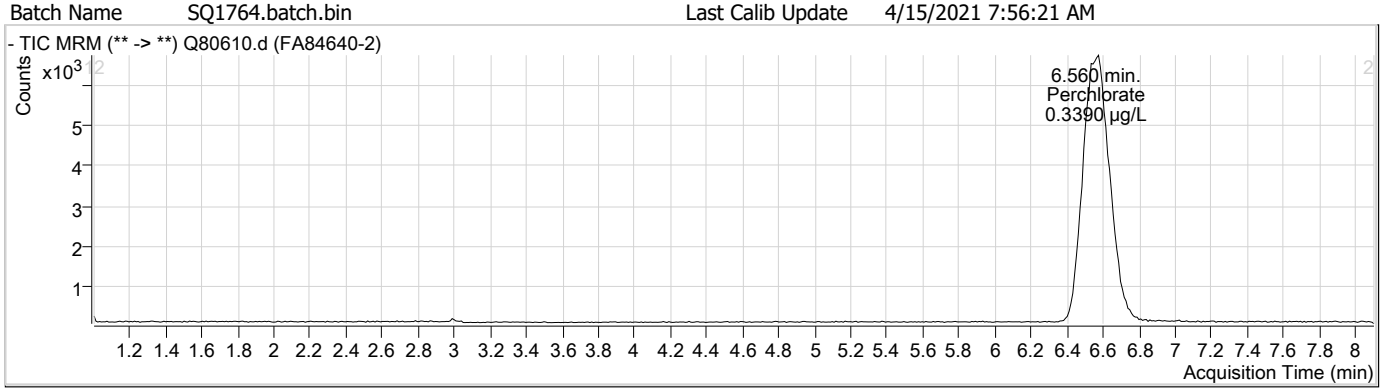






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80610.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 10:56:32 PM
Sample Name	FA84640-2	Instrument	Instrument 1
Vial	P2-A7	Sample Information	OP84925,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

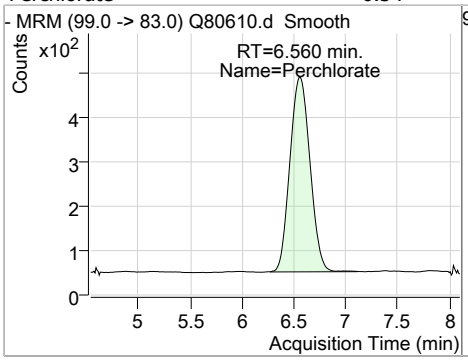


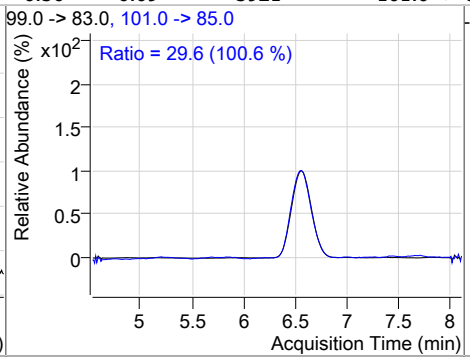
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.563	107.0 -> 89.0	60674	NoQ	5.00	µg/L	0.071
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.560	99.0 -> 83.0	5921	3.4	0.34	µg/L	100

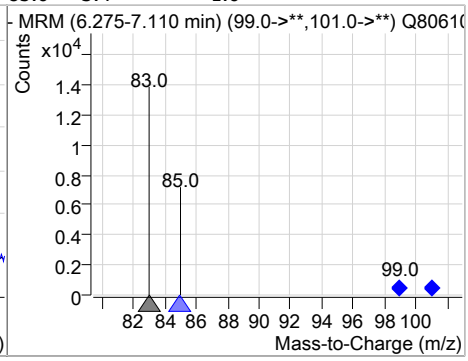
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.34	6.56	0.09	5921	101.0 -> 85.0	3.4	1.6	

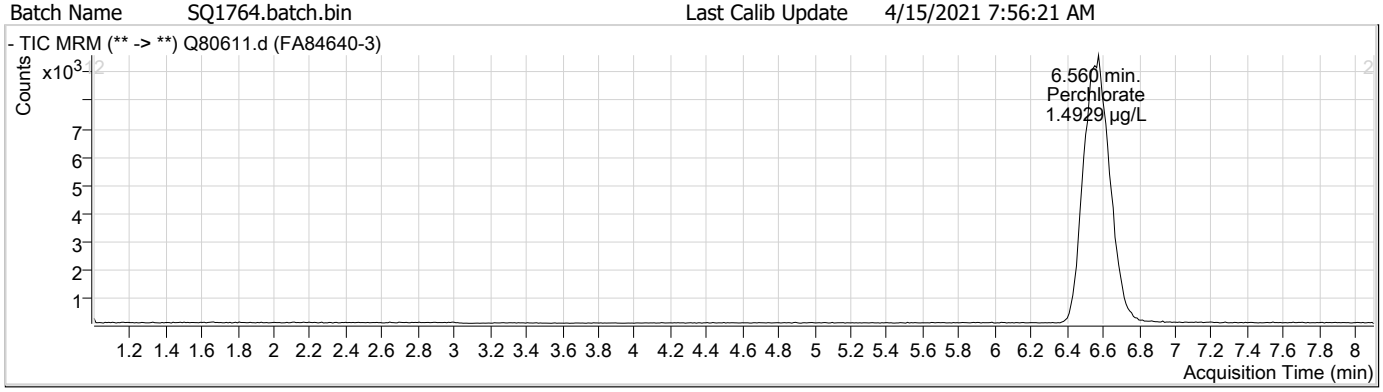






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80611.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 11:05:24 PM
Sample Name	FA84640-3	Instrument	Instrument 1
Vial	P2-A8	Sample Information	OP84925,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

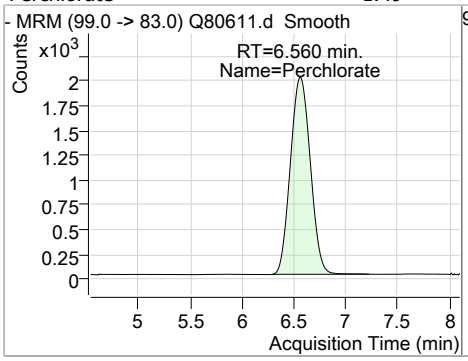


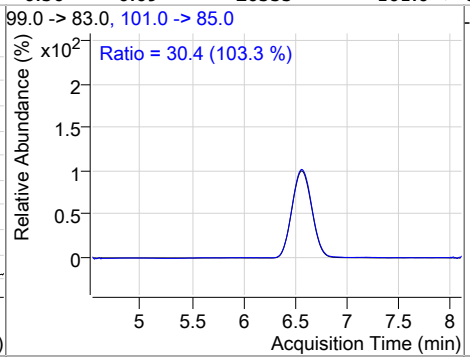
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.563	107.0 -> 89.0	61781	NoQ	5.00	µg/L	0.071
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.560	99.0 -> 83.0	26555	3.3	1.49	µg/L	98

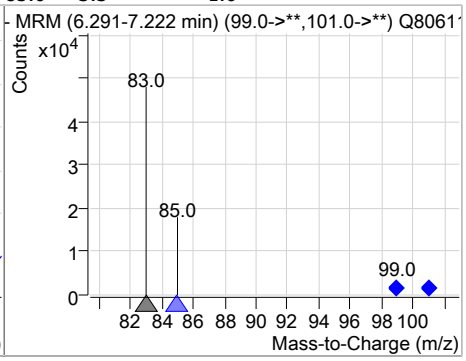
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.49	6.56	0.09	26555	101.0 -> 85.0	3.3	1.6	

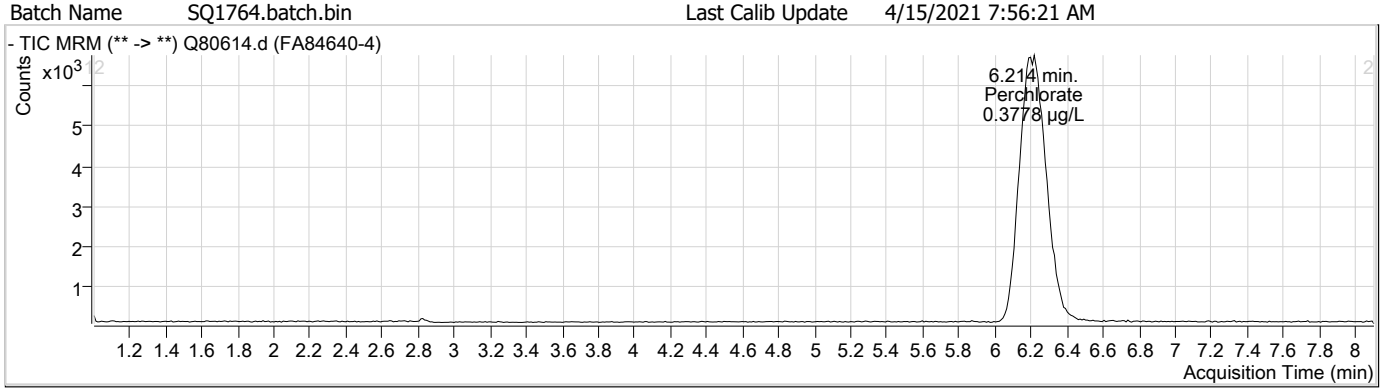






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80614.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 11:32:04 PM
Sample Name	FA84640-4	Instrument	Instrument 1
Vial	P2-B2	Sample Information	OP84925,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

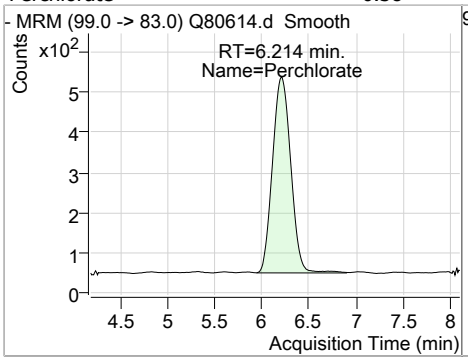


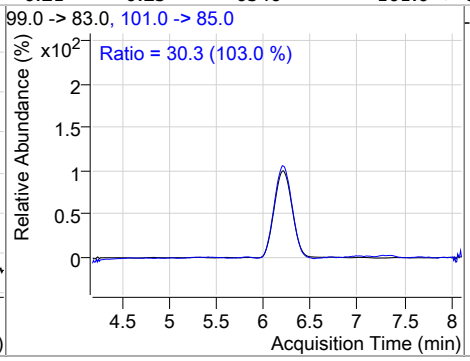
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.207	107.0 -> 89.0	60190	NoQ	5.00	µg/L	-0.285
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.214	99.0 -> 83.0	6546	3.3	0.38	µg/L	98

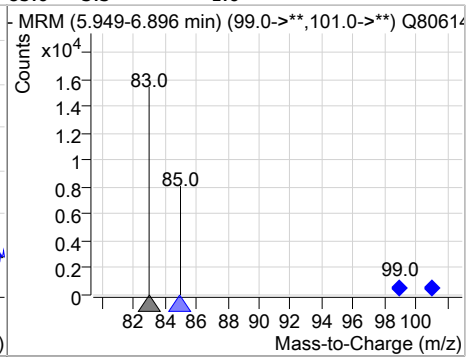
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.38	6.21	-0.25	6546	101.0 -> 85.0	3.3	1.6	

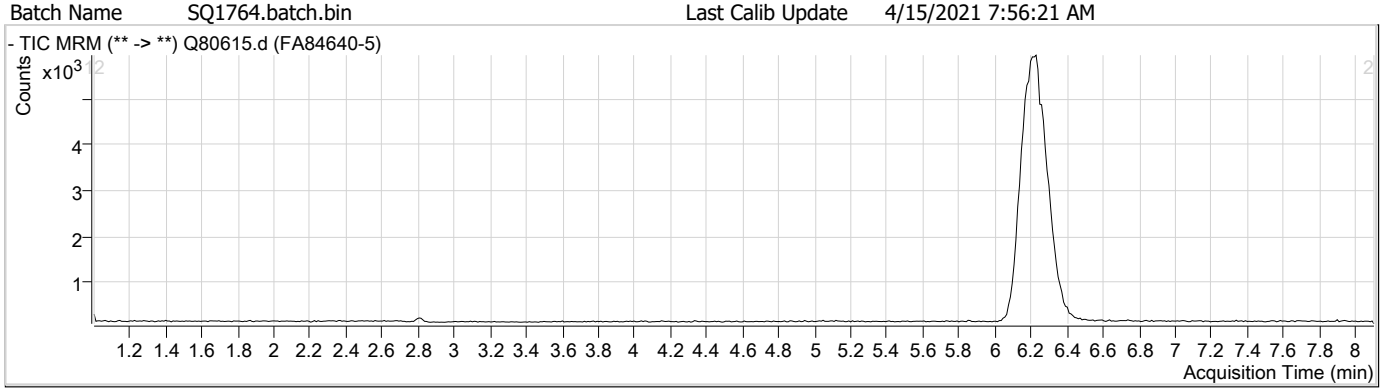






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80615.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 11:40:58 PM
Sample Name	FA84640-5	Instrument	Instrument 1
Vial	P2-B3	Sample Information	OP84925,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

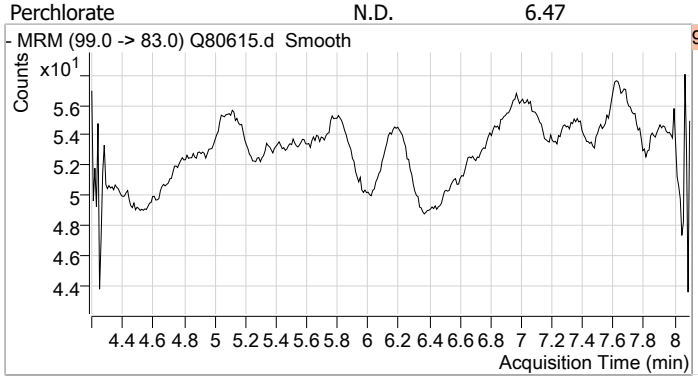


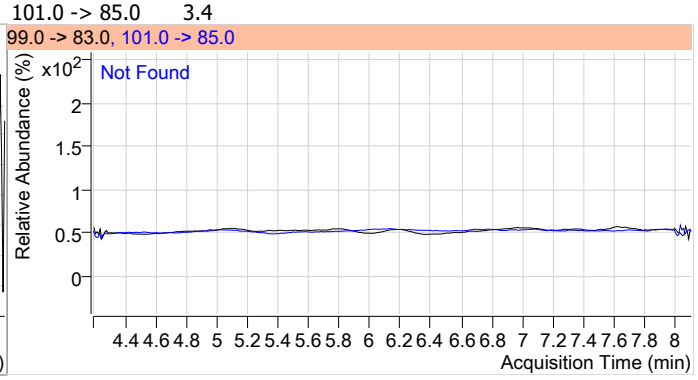
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.217	107.0 -> 89.0	60065	NoQ	5.00	µg/L	-0.275
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	-	99.0 -> 83.0		-	N.D.		

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

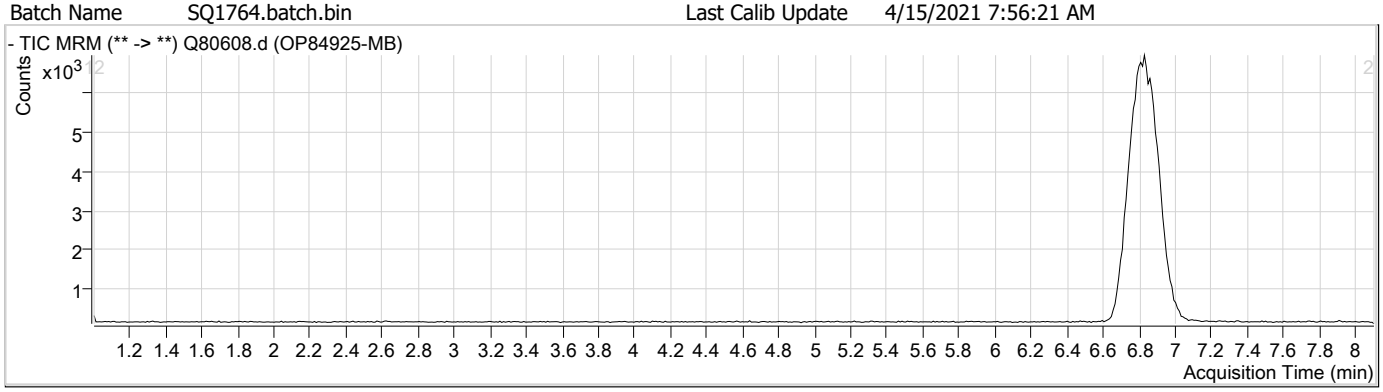
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	6.47	101.0 -> 85.0	3.4





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80608.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 10:38:45 PM
Sample Name	OP84925-MB	Instrument	Instrument 1
Vial	P2-A5	Sample Information	OP84925,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

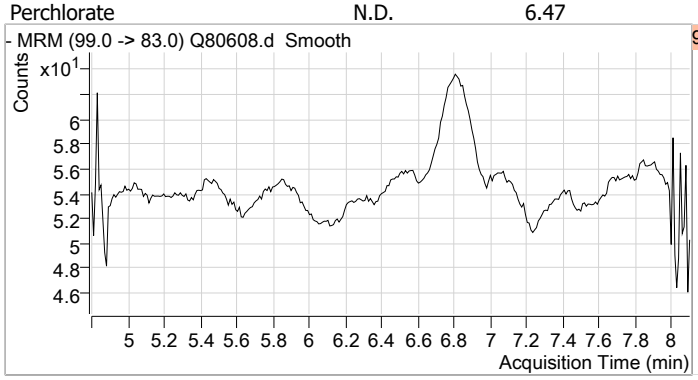


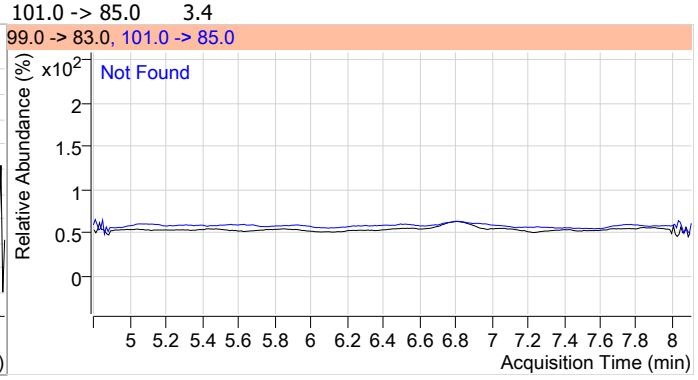
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.818	107.0 -> 89.0	78612	NoQ	5.00 µg/L	0.326
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	-	99.0 -> 83.0		-	N.D.	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

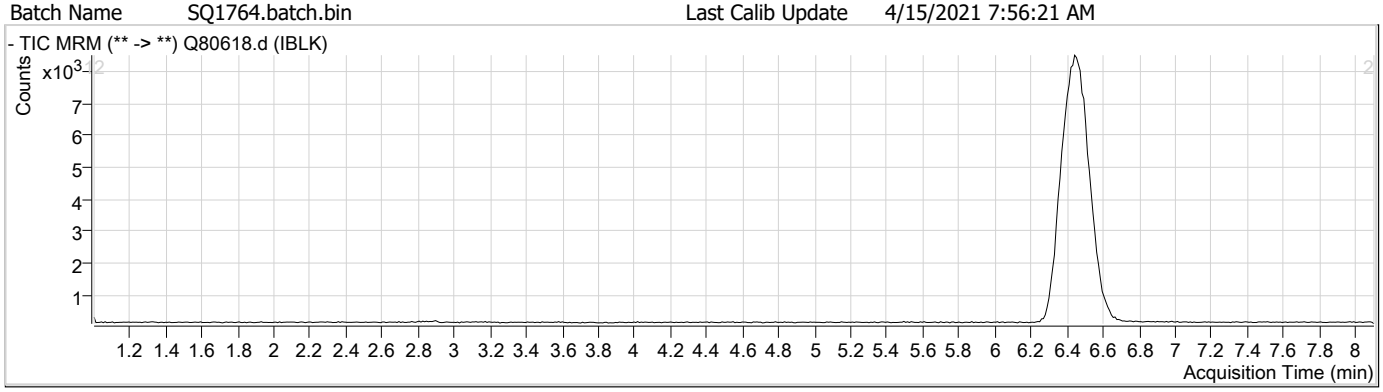
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	6.47	101.0 -> 85.0	3.4





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80618.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/15/2021 12:07:41 AM
Sample Name	IBLK	Instrument	Instrument 1
Vial	P1-A1	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

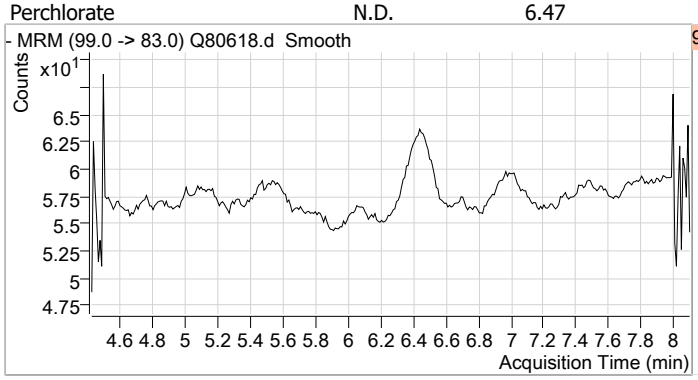


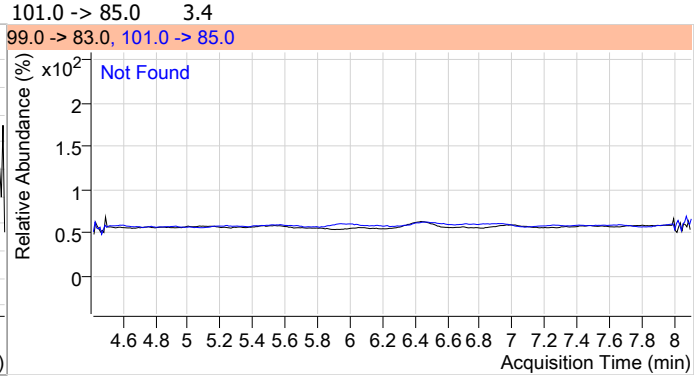
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.441	107.0 -> 89.0	91425	NoQ	5.00 µg/L	-0.051
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	-	99.0 -> 83.0		-	N.D.	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

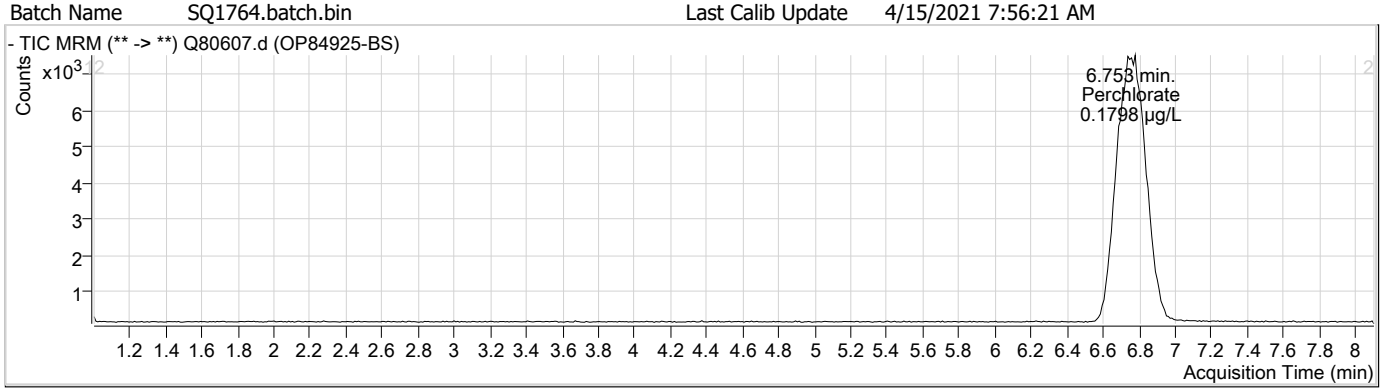
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	6.47	101.0 -> 85.0	3.4





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80607.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 10:29:51 PM
Sample Name	OP84925-BS	Instrument	Instrument 1
Vial	P2-A4	Sample Information	OP84925,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

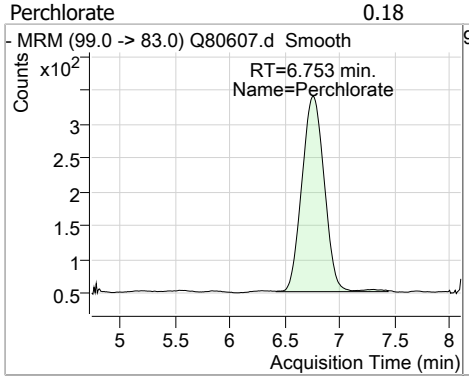


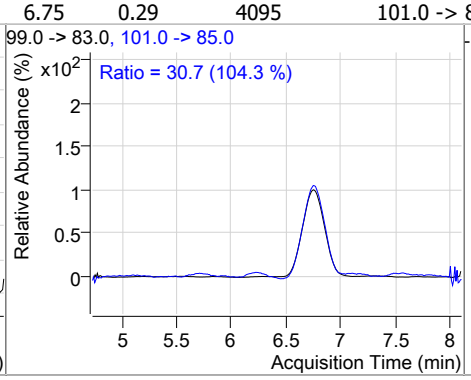
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.757	107.0 -> 89.0	79134	NoQ	5.00	µg/L	0.265
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.753	99.0 -> 83.0	4095	3.3	0.18	µg/L	98

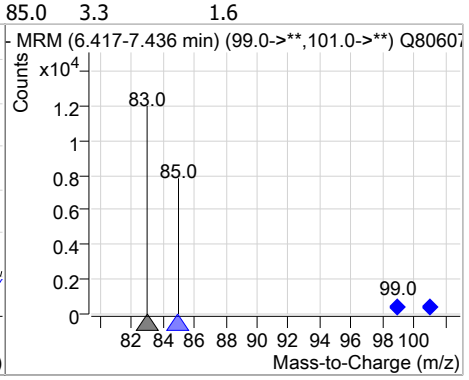
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.18	6.75	0.29	4095	101.0 -> 85.0	3.3	1.6	

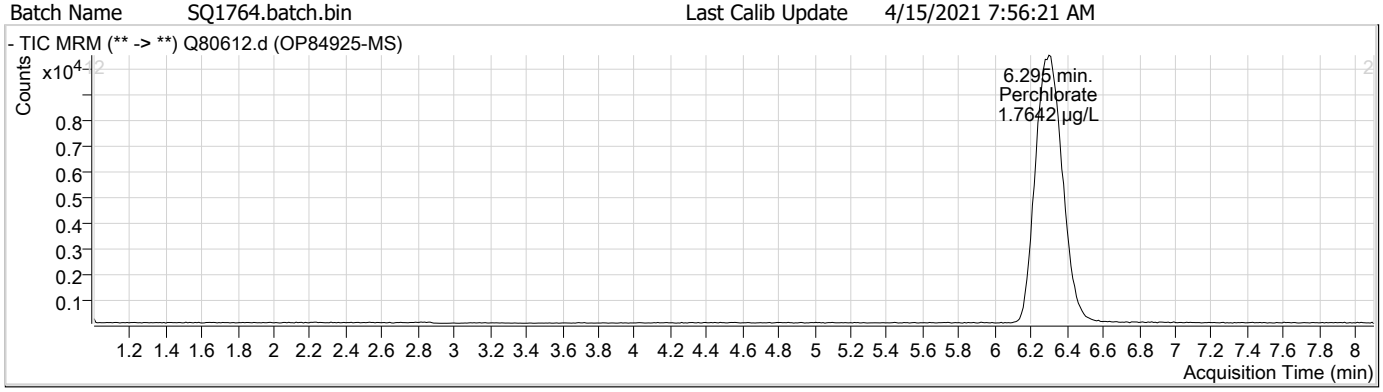






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80612.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 11:14:18 PM
Sample Name	OP84925-MS	Instrument	Instrument 1
Vial	P2-A9	Sample Information	OP84925,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

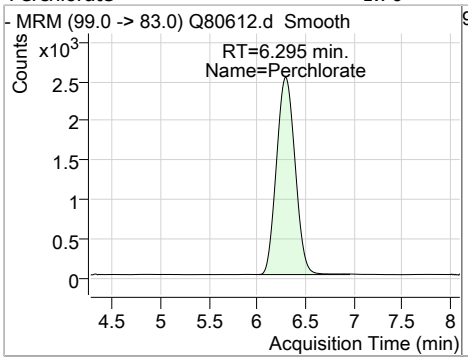


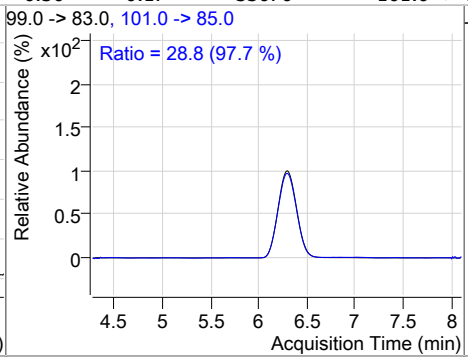
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.298	107.0 -> 89.0	66287	NoQ	5.00	µg/L	-0.194
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.295	99.0 -> 83.0	33670	3.5	1.76	µg/L	99

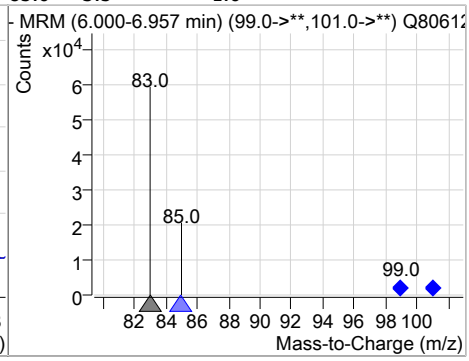
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.76	6.30	-0.17	33670	101.0 -> 85.0	3.5	1.6	

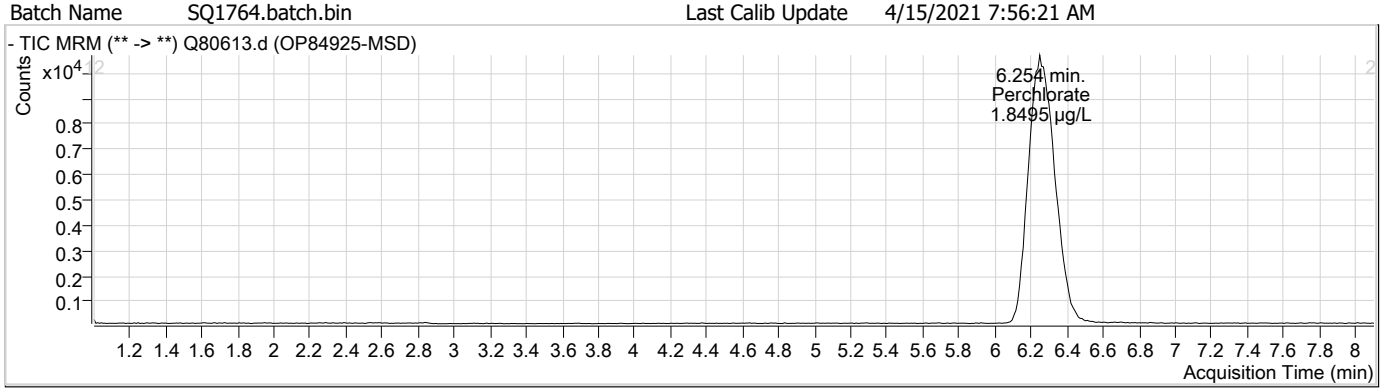






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80613.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 11:23:11 PM
Sample Name	OP84925-MSD	Instrument	Instrument 1
Vial	P2-B1	Sample Information	OP84925,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

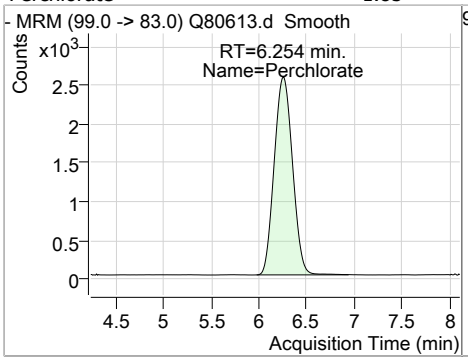


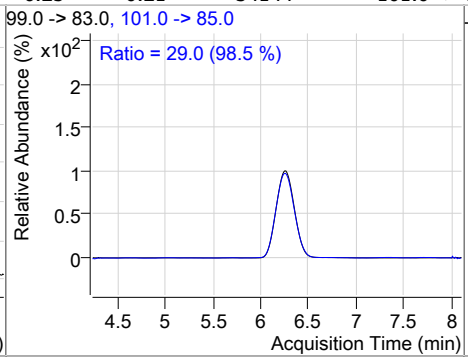
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.258	107.0 -> 89.0	64122	NoQ	5.00	µg/L	-0.234
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.254	99.0 -> 83.0	34144	3.4	1.85	µg/L	99

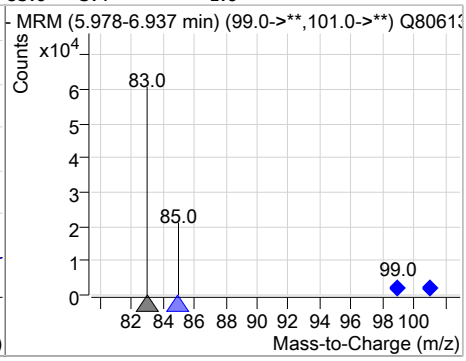
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.85	6.25	-0.21	34144	101.0 -> 85.0	3.4	1.6	

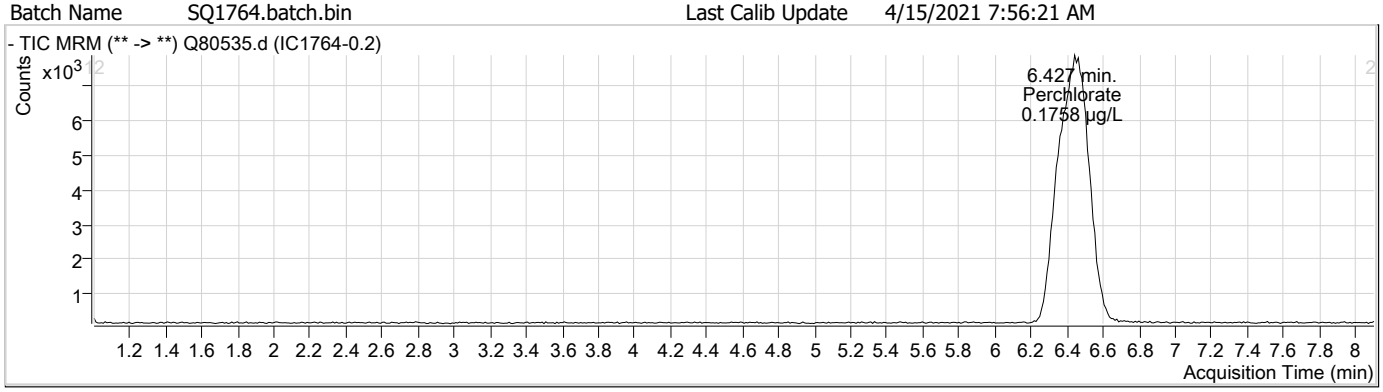






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80535.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 11:34:48 AM
Sample Name	IC1764-0.2	Instrument	Instrument 1
Vial	P1-A2	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

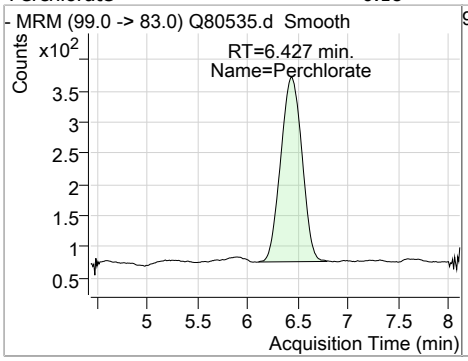


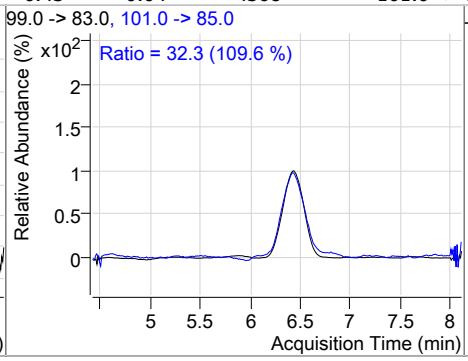
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.451	107.0 -> 89.0	86290	NoQ	5.00	µg/L	-0.041
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.427	99.0 -> 83.0	4368	3.1	0.18	µg/L	95

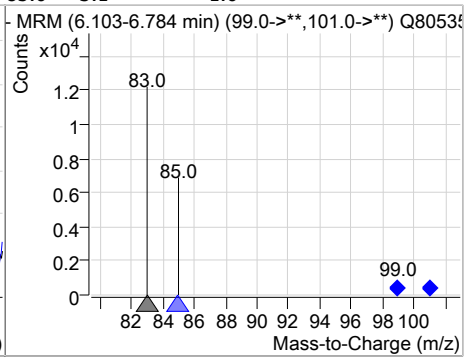
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.18	6.43	-0.04	4368	101.0 -> 85.0	3.1	1.6	

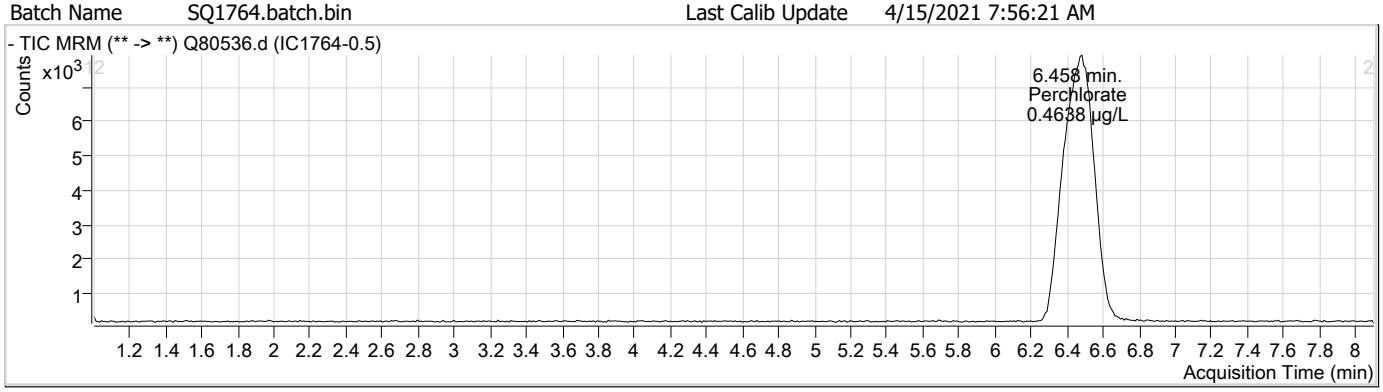






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80536.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 11:43:42 AM
Sample Name	IC1764-0.5	Instrument	Instrument 1
Vial	P1-A3	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

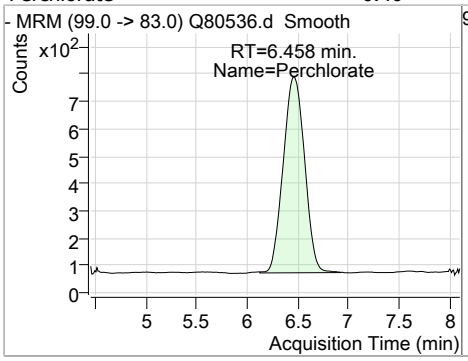


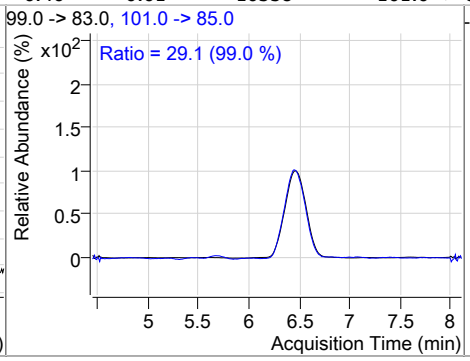
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.472	107.0 -> 89.0	79076	NoQ	5.00	µg/L	-0.020
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.458	99.0 -> 83.0	10558	3.4	0.46	µg/L	100

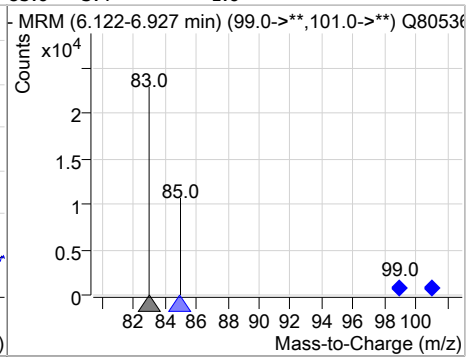
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.46	6.46	-0.01	10558	101.0 -> 85.0	3.4	1.6	

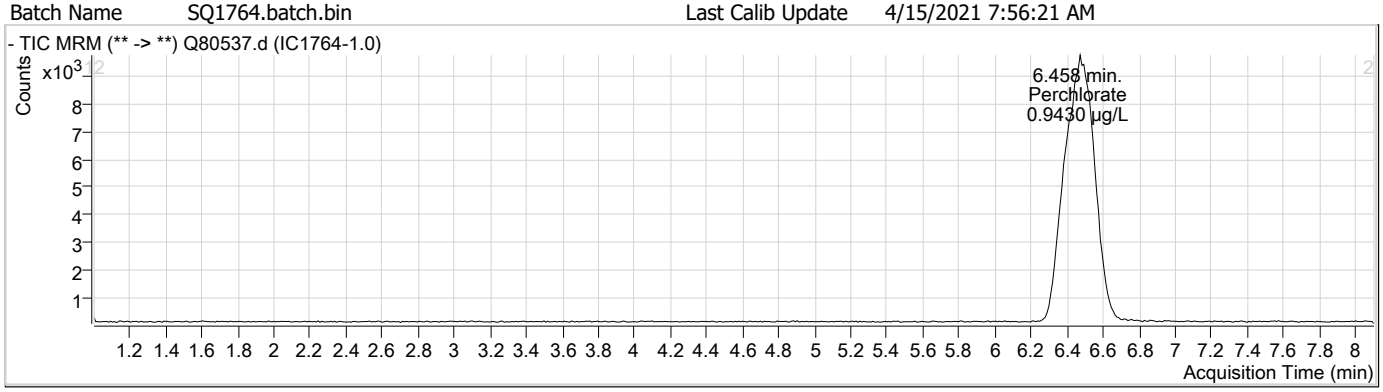






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80537.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 11:52:36 AM
Sample Name	IC1764-1.0	Instrument	Instrument 1
Vial	P1-A4	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

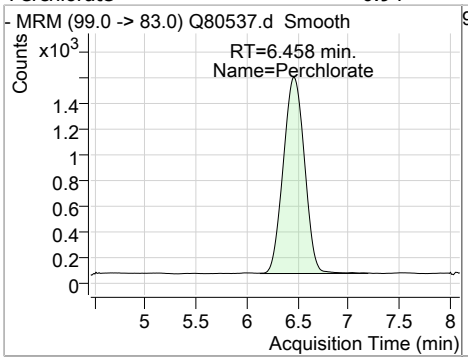


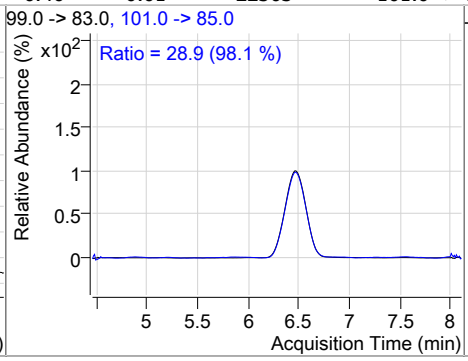
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.482	107.0 -> 89.0	82369	NoQ	5.00 µg/L	-0.010
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.458	99.0 -> 83.0	22363	3.5	0.94 µg/L	99

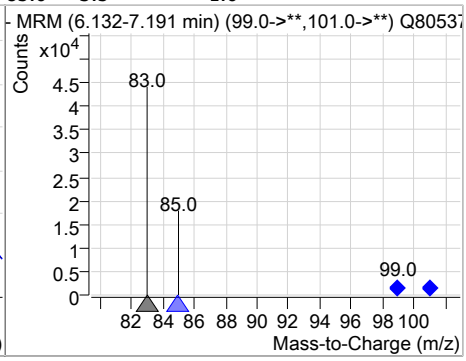
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.94	6.46	-0.01	22363	101.0 -> 85.0	3.5	1.6	

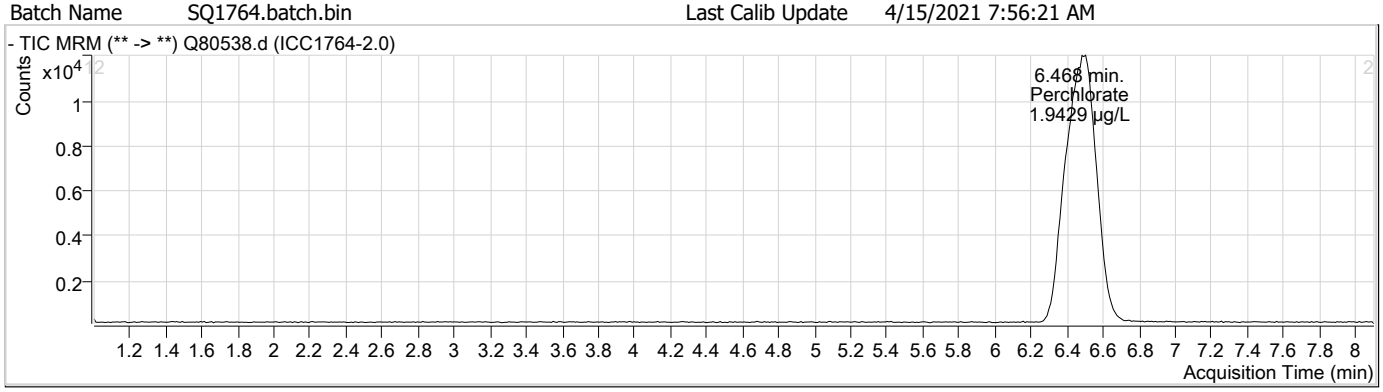






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80538.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 12:01:30 PM
Sample Name	ICC1764-2.0	Instrument	Instrument 1
Vial	P1-A5	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

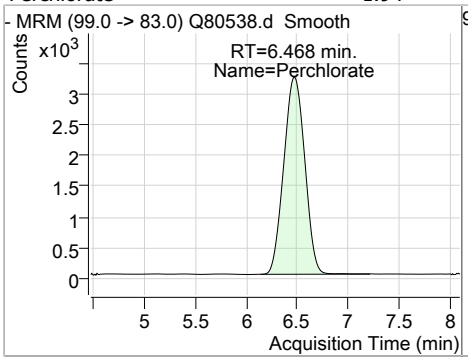


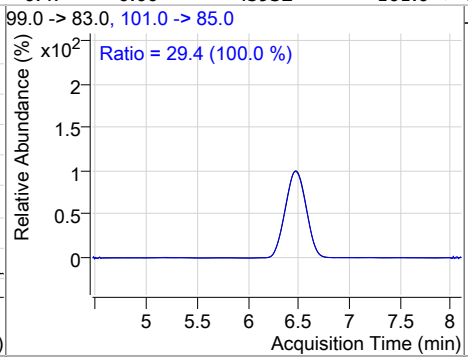
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.492	107.0 -> 89.0	82111	NoQ	5.00 µg/L	0.000
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.468	99.0 -> 83.0	45932	3.4	1.94 µg/L	100

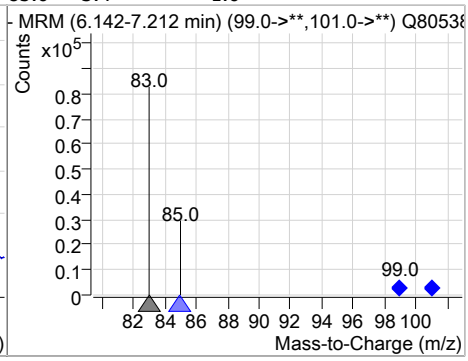
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.94	6.47	0.00	45932	101.0 -> 85.0	3.4	1.6	

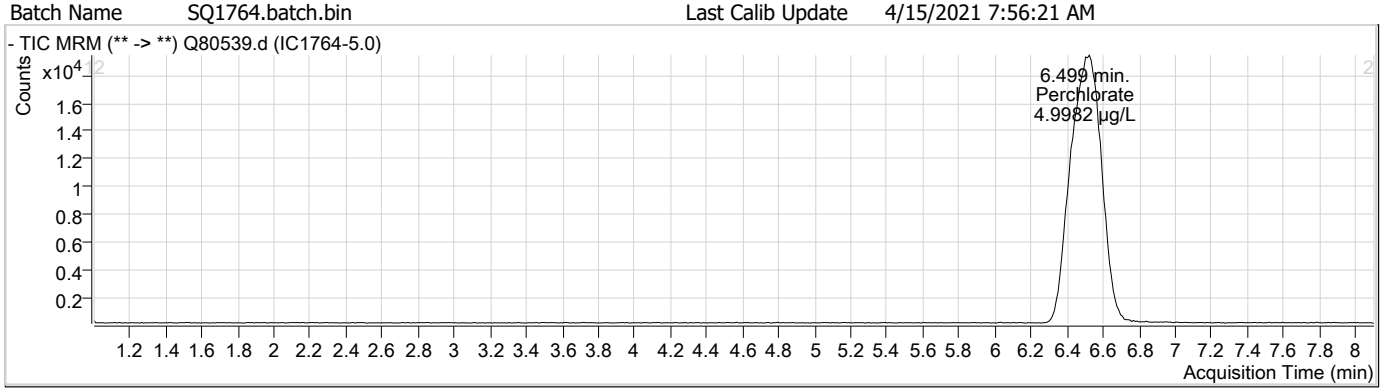






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80539.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 12:10:25 PM
Sample Name	IC1764-5.0	Instrument	Instrument 1
Vial	P1-A6	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

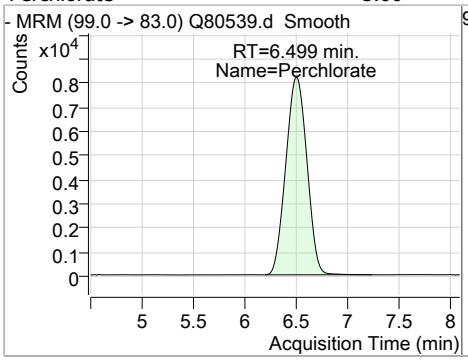


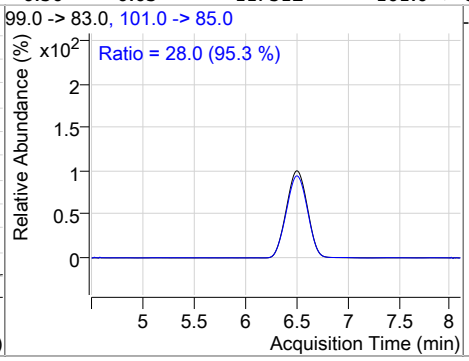
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.512	107.0 -> 89.0	81661	NoQ	5.00 µg/L	0.020
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.499	99.0 -> 83.0	117512	3.6	5.00 µg/L	97

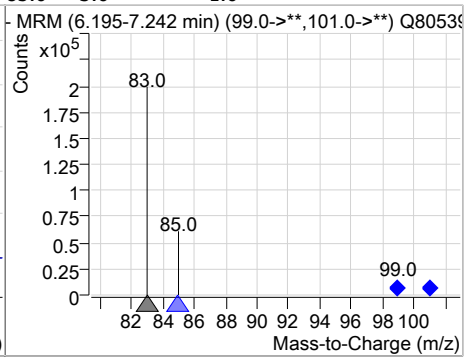
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	5.00	6.50	0.03	117512	101.0 -> 85.0	3.6	1.6	

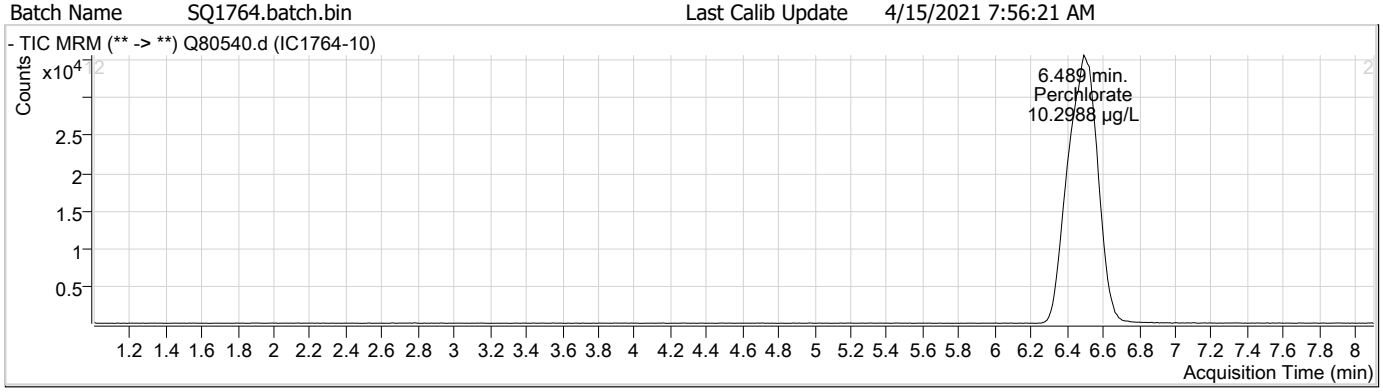






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80540.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 12:19:20 PM
Sample Name	IC1764-10	Instrument	Instrument 1
Vial	P1-A7	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

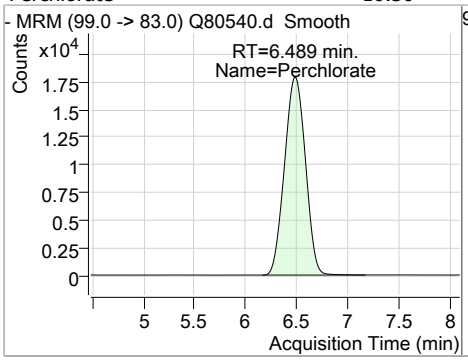


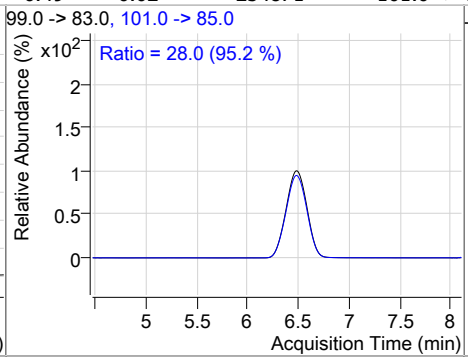
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.502	107.0 -> 89.0	85957	NoQ	5.00	µg/L	0.010
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.489	99.0 -> 83.0	254871	3.6	10.30	µg/L	97

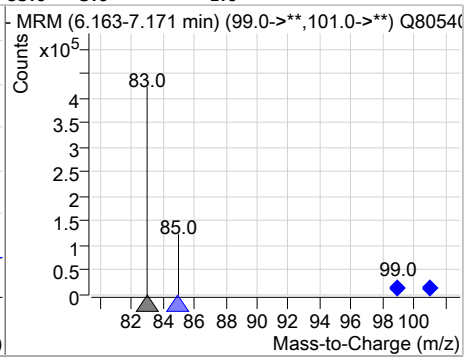
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	10.30	6.49	0.02	254871	101.0 -> 85.0	3.6	1.6	

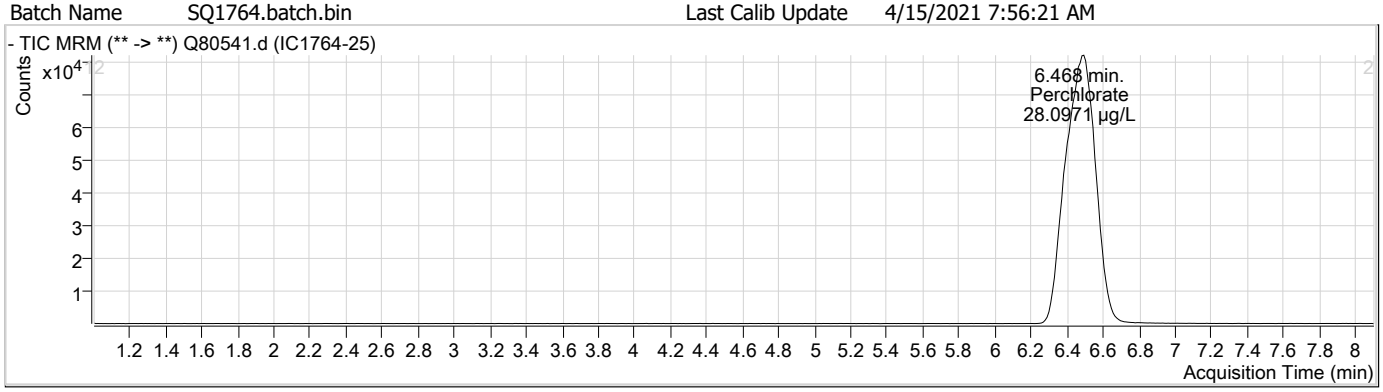






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80541.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 12:28:14 PM
Sample Name	IC1764-25	Instrument	Instrument 1
Vial	P1-A8	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

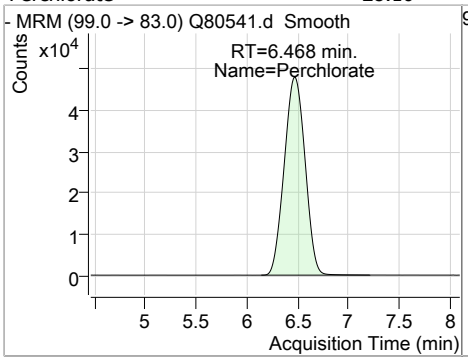


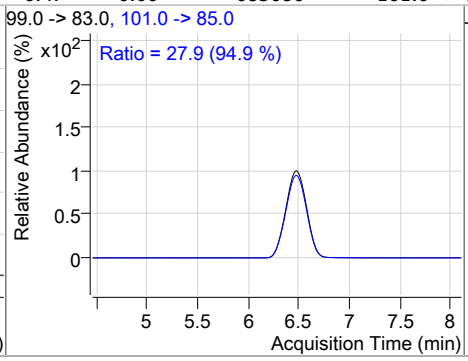
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.482	107.0 -> 89.0	84764	NoQ	5.00 µg/L	-0.010
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.468	99.0 -> 83.0	685686	3.6	28.10 µg/L	97

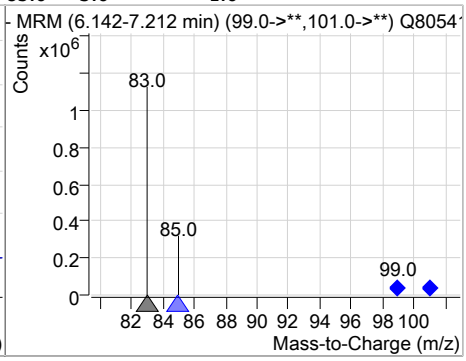
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	28.10	6.47	0.00	685686	101.0 -> 85.0	3.6	1.6	

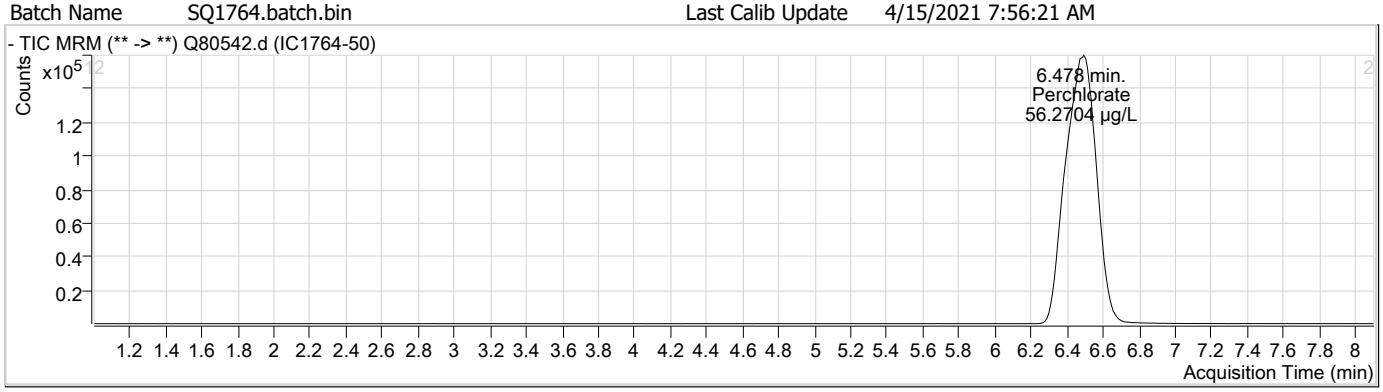






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80542.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 12:37:07 PM
Sample Name	IC1764-50	Instrument	Instrument 1
Vial	P1-A9	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

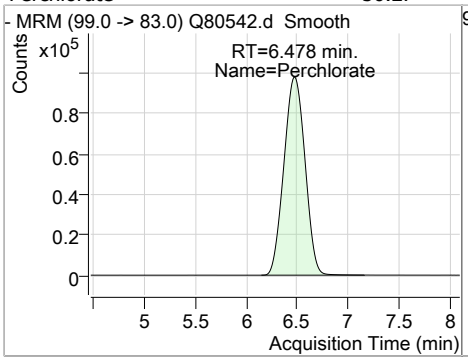


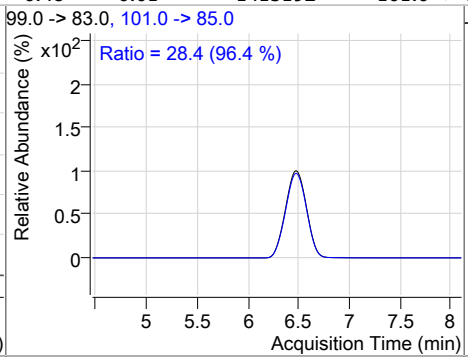
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.492	107.0 -> 89.0	87354	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.478	99.0 -> 83.0	1415192	3.5	56.27	µg/L	98

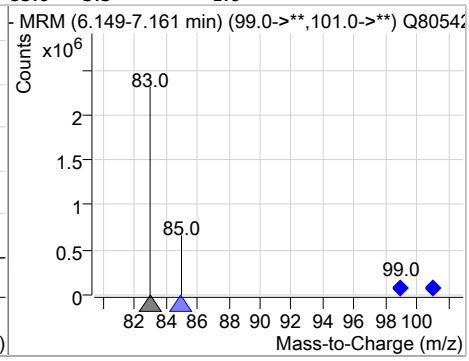
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	56.27	6.48	0.01	1415192	101.0 -> 85.0	3.5	1.6	

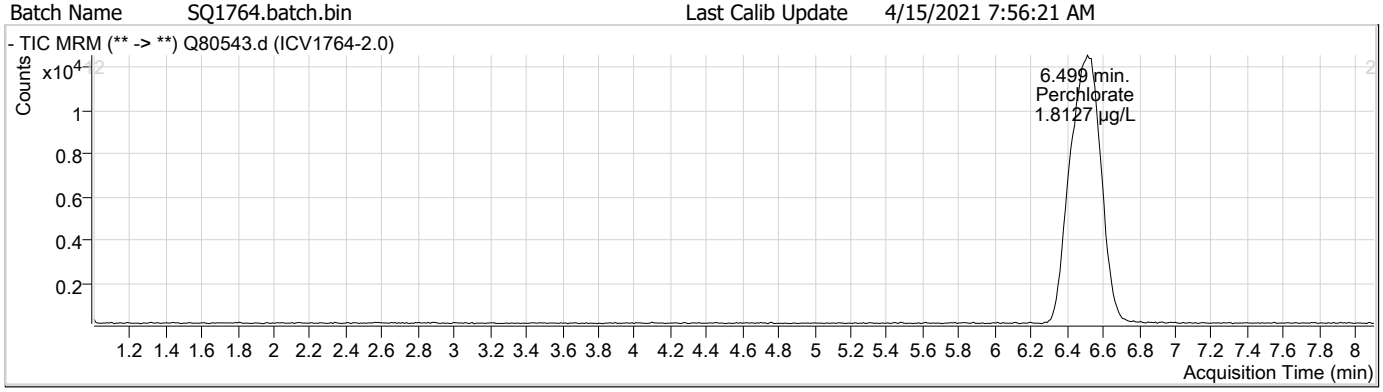






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80543.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 12:46:02 PM
Sample Name	ICV1764-2.0	Instrument	Instrument 1
Vial	P1-B1	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

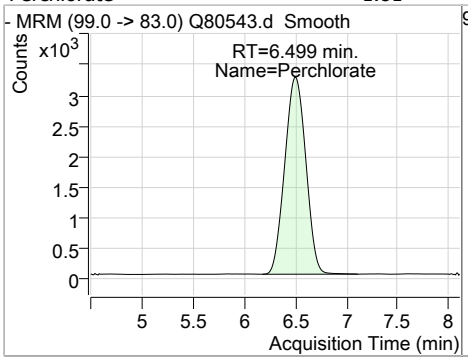


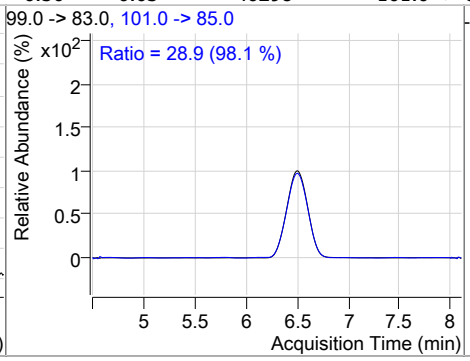
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.512	107.0 -> 89.0	88709	NoQ	5.00	µg/L	0.020
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.499	99.0 -> 83.0	46298	3.5	1.81	µg/L	99

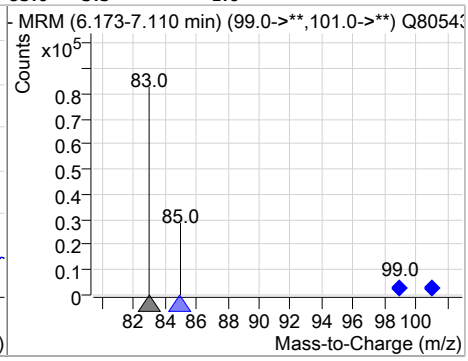
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.81	6.50	0.03	46298	101.0 -> 85.0	3.5	1.6	

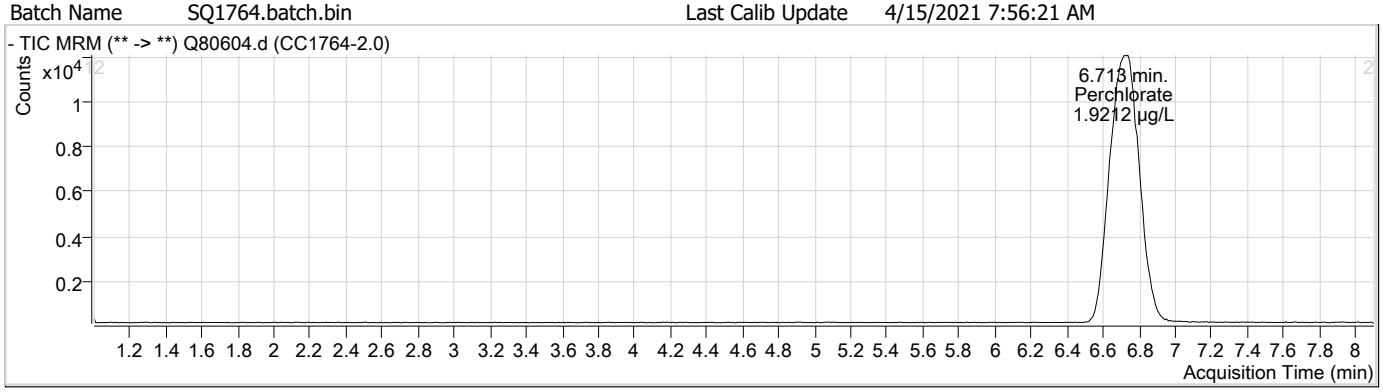






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80604.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 10:03:08 PM
Sample Name	CC1764-2.0	Instrument	Instrument 1
Vial	P1-A5	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

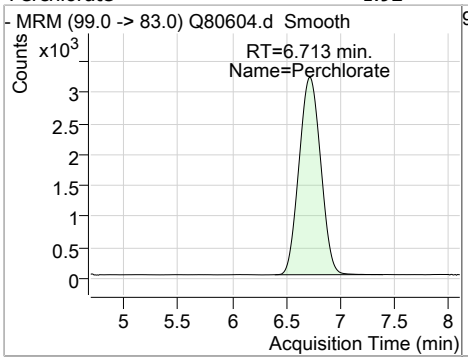


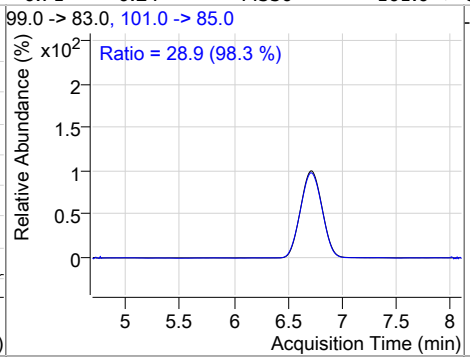
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.716	107.0 -> 89.0	80143	NoQ	5.00	µg/L	0.224
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.713	99.0 -> 83.0	44330	3.5	1.92	µg/L	99

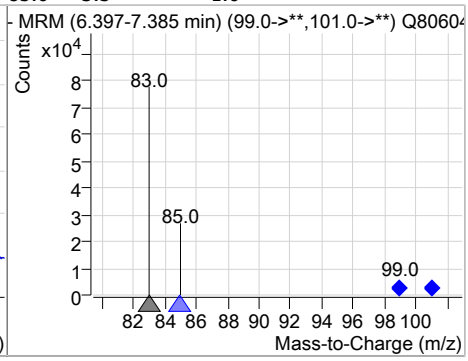
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.92	6.71	0.24	44330	101.0 -> 85.0	3.5	1.6	

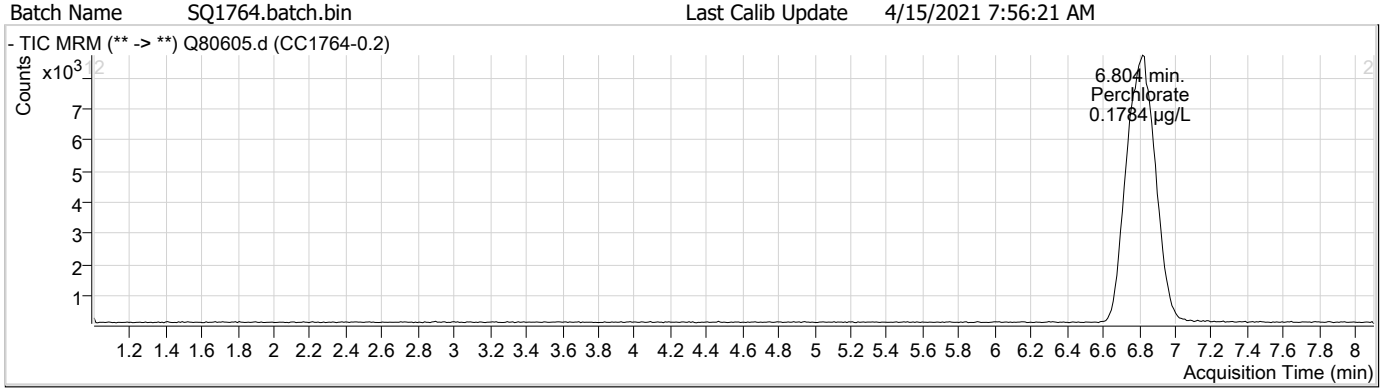






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80605.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 10:12:02 PM
Sample Name	CC1764-0.2	Instrument	Instrument 1
Vial	P1-A2	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

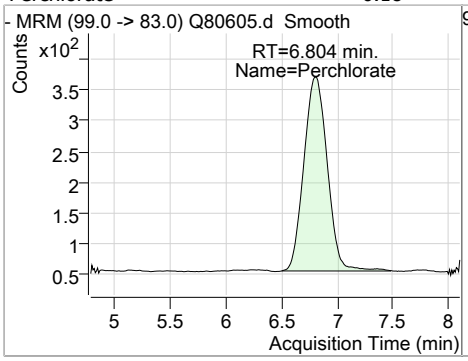


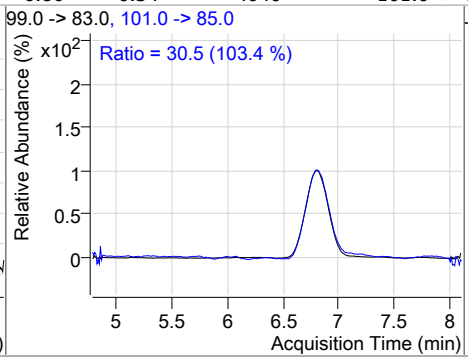
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.808	107.0 -> 89.0	90339	NoQ	5.00 µg/L	0.316
System Monitoring Compounds						
Target Compounds						QValue
Perchlorate	6.804	99.0 -> 83.0	4640	3.3	0.18 µg/L	98

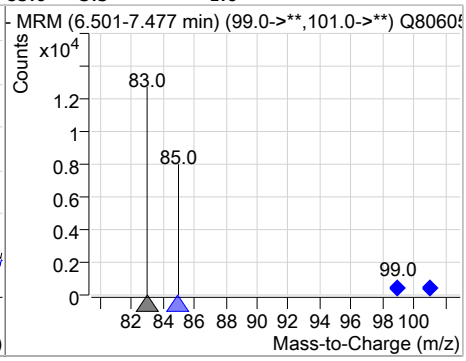
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.18	6.80	0.34	4640	101.0 -> 85.0	3.3	1.6	

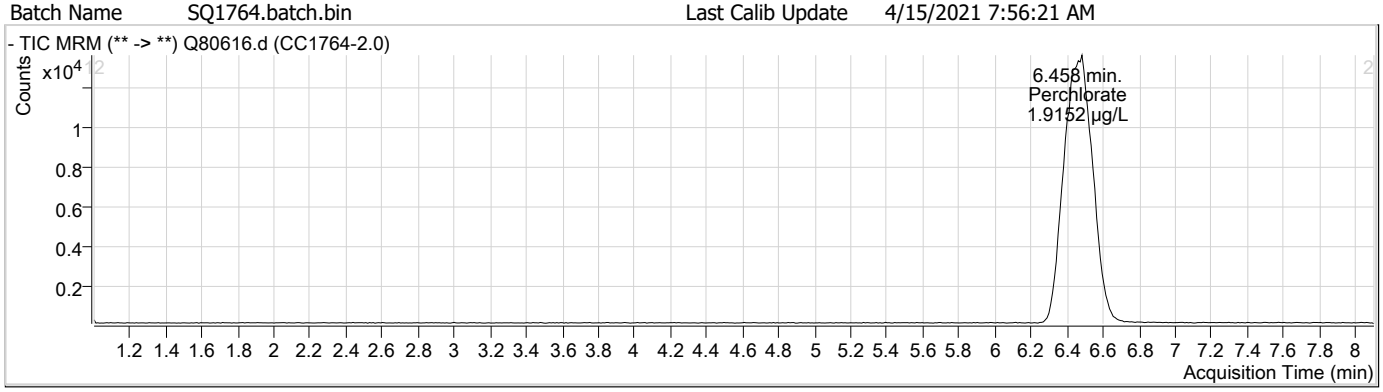






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q80616.d	Operator	NANCYF
Acq. Method	Perchlorate2.m	Acq. Date-Time	4/14/2021 11:49:53 PM
Sample Name	CC1764-2.0	Instrument	Instrument 1
Vial	P1-A5	Sample Information	OP84923,SQ1764,10,,,10,1,water
DA Method File	6850_041421_SQ1764.quantmethod.xml	Comment	
Batch Name	SQ1764.batch.bin	Last Calib Update	4/15/2021 7:56:21 AM

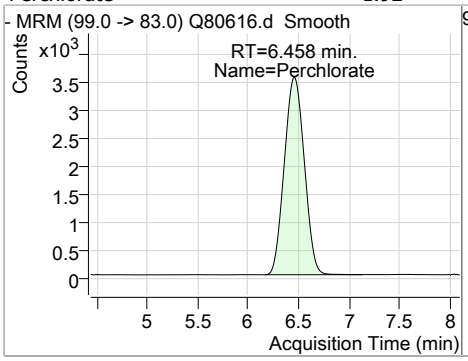


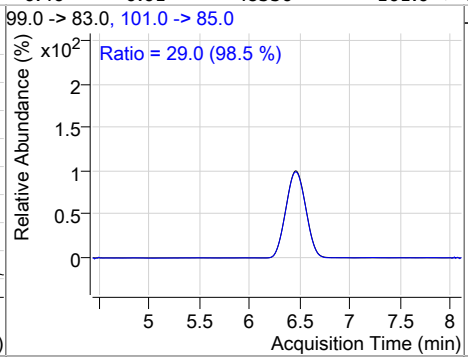
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.461	107.0 -> 89.0	88060	NoQ	5.00	µg/L	-0.031
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.458	99.0 -> 83.0	48556	3.4	1.92	µg/L	99

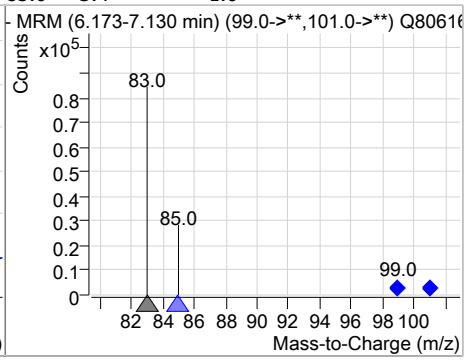
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.92	6.46	-0.01	48556	101.0 -> 85.0	3.4	1.6	







SGS ORLANDO

LCMS1-Q ANALYSIS LOG

DATE:	04/14/21
COLUMN TYPE:	K PRIME
AMOUNT INJ:	7.5 ul
INSTRUMENT:	LCMS1-Q

METHODS:	SW846 6850
PROC. METH:	6850_041421_SQ1764
CAL DATE:	04/14/21
ANALYST:	NAS
RUN BATCH:	SQ1764

ELUENT A LOT #:	207355 W/0.1% AA
ELUENT B LOT #:	204566 W/0.1% AA
IC/CC STD LOT #:	LCMS1604
ICV STD LOT #:	LCMS1636
ISTD/ID STD LOT #:	10307

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	Q80530.d	P1-A1	ccb	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
2	Q80531.d	P1-A1	ccb	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
3	Q80532.d	P1-A1	ccb	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
4	Q80533.d	P1-A1	ccb	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
5	Q80534.d	P1-A1	ccb	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
6	Q80535.d	P1-A2	IC1764-0.2	Perchlorate2.m	Calibration	500X	OP84923,SQ1764,10,,,10,1,water	✓
7	Q80536.d	P1-A3	IC1764-0.5	Perchlorate2.m	Calibration	200X	OP84923,SQ1764,10,,,10,1,water	✓
8	Q80537.d	P1-A4	IC1764-1.0	Perchlorate2.m	Calibration	100X	OP84923,SQ1764,10,,,10,1,water	✓
9	Q80538.d	P1-A5	ICC1764-2.0	Perchlorate2.m	Calibration	50X	OP84923,SQ1764,10,,,10,1,water	✓
10	Q80539.d	P1-A6	IC1764-5.0	Perchlorate2.m	Calibration	20X	OP84923,SQ1764,10,,,10,1,water	✓
11	Q80540.d	P1-A7	IC1764-10	Perchlorate2.m	Calibration	10X	OP84923,SQ1764,10,,,10,1,water	✓
12	Q80541.d	P1-A8	IC1764-25	Perchlorate2.m	Calibration	4X	OP84923,SQ1764,10,,,10,1,water	✓
13	Q80542.d	P1-A9	IC1764-50	Perchlorate2.m	Calibration	2X	OP84923,SQ1764,10,,,10,1,water	✓
14	Q80543.d	P1-B1	ICV1764-2.0	Perchlorate2.m	QC	50X	OP84923,SQ1764,10,,,10,1,water	PASS
15	Q80544.d	P1-B2	ICS1764-0.2	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
16	Q80545.d	P1-B3	OP84923-BS	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
17	Q80546.d	P1-B4	OP84923-MB	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
18	Q80547.d	P1-B5	FA84453-7	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
19	Q80548.d	P1-B6	JD22724-1F	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
20	Q80549.d	P1-B7	JD22724-2F	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
21	Q80550.d	P1-D6	FA84550-22	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
22	Q80551.d	P1-D7	OP84923-MS	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
23	Q80552.d	P1-D8	OP84923-MSD	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
24	Q80553.d	P1-B8	FA84550-1	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
25	Q80554.d	P1-B9	FA84550-2	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
26	Q80555.d	P1-A5	CC1764-2.0	Perchlorate2.m	QC	50X	OP84923,SQ1764,10,,,10,1,water	PASS
27	Q80556.d	P1-A2	CC1764-0.2	Perchlorate2.m	QC	500X	OP84923,SQ1764,10,,,10,1,water	PASS
28	Q80557.d	P1-A1	ccb	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	BDL
29	Q80558.d	P1-C1	FA84550-3	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
30	Q80559.d	P1-C2	FA84550-4	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
31	Q80560.d	P1-C3	FA84550-5	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
32	Q80561.d	P1-C4	FA84550-6	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
33	Q80562.d	P1-C5	FA84550-7	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
34	Q80563.d	P1-C6	FA84550-8	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
35	Q80564.d	P1-C7	FA84550-9	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓

SGS ORLANDO LCMS1-Q ANALYSIS LOG

36	Q80565.d	P1-C8	FA84550-10	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
37	Q80566.d	P1-C9	FA84550-11	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
38	Q80567.d	P1-D1	FA84550-12	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
39	Q80568.d	P1-A5	CC1764-2.0	Perchlorate2.m	QC	50X	OP84923,SQ1764,10,,,10,1,water	PASS
40	Q80569.d	P1-A2	CC1764-0.2	Perchlorate2.m	QC	500X	OP84923,SQ1764,10,,,10,1,water	PASS
41	Q80570.d	P1-A1	ccb	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	BDL
42	Q80571.d	P1-D2	FA84550-13	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
43	Q80572.d	P1-D3	FA84550-14	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	50X
44	Q80573.d	P1-D4	FA84550-15	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	RR CO
45	Q80574.d	P1-D5	FA84550-16	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
46	Q80575.d	P1-A1	ccb	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	✓
47	Q80576.d	P1-D9	OP84924-BS	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
48	Q80577.d	P1-E1	OP84924-MB	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
49	Q80578.d	P1-E2	FA84550-17	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
50	Q80579.d	P1-E3	FA84550-18	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
51	Q80580.d	P1-E4	FA84550-19	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
52	Q80581.d	P1-A5	CC1764-2.0	Perchlorate2.m	QC	50X	OP84923,SQ1764,10,,,10,1,water	PASS
53	Q80582.d	P1-A2	CC1764-0.2	Perchlorate2.m	QC	500X	OP84923,SQ1764,10,,,10,1,water	PASS
54	Q80583.d	P1-A1	ccb	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	BDL
55	Q80584.d	P1-E5	FA84550-20	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
56	Q80585.d	P1-E6	FA84550-21	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
57	Q80586.d	P1-E7	FA84550-23	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
58	Q80587.d	P1-E8	FA84550-24	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
59	Q80588.d	P1-E9	FA84550-25	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
60	Q80589.d	P1-F1	FA84550-26	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
61	Q80590.d	P1-F2	FA84550-27	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
62	Q80591.d	P1-F3	FA84550-28	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
63	Q80592.d	P1-F4	FA84550-29	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
64	Q80593.d	P1-A5	CC1764-2.0	Perchlorate2.m	QC	50X	OP84923,SQ1764,10,,,10,1,water	PASS
65	Q80594.d	P1-A2	CC1764-0.2	Perchlorate2.m	QC	500X	OP84923,SQ1764,10,,,10,1,water	PASS
66	Q80595.d	P1-A1	ccb	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	BDL
67	Q80596.d	P1-F5	FA84596-15	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
68	Q80597.d	P1-F6	OP84924-MS	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
69	Q80598.d	P1-F7	OP84924-MSD	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
70	Q80599.d	P1-F8	FA84596-4	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
71	Q80600.d	P1-F9	FA84596-5	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
72	Q80601.d	P2-A1	FA84596-6	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
73	Q80602.d	P2-A2	FA84596-7	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
74	Q80603.d	P2-A3	FA84596-14	Perchlorate2.m	Sample		OP84924,SQ1764,10,,,10,1,water	✓
75	Q80604.d	P1-A5	CC1764-2.0	Perchlorate2.m	QC	50X	OP84923,SQ1764,10,,,10,1,water	PASS
76	Q80605.d	P1-A2	CC1764-0.2	Perchlorate2.m	QC	500X	OP84923,SQ1764,10,,,10,1,water	PASS
77	Q80606.d	P1-A1	ccb	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	BDL
78	Q80607.d	P2-A4	OP84925-BS	Perchlorate2.m	Sample		OP84925,SQ1764,10,,,10,1,water	✓

SGS ORLANDO LCMS1-Q ANALYSIS LOG

79	Q80608.d	P2-A5	OP84925-MB	Perchlorate2.m	Sample		OP84925,SQ1764,10,,,10,1,water	✓
80	Q80609.d	P2-A6	FA84640-1	Perchlorate2.m	Sample		OP84925,SQ1764,10,,,10,1,water	✓
81	Q80610.d	P2-A7	FA84640-2	Perchlorate2.m	Sample		OP84925,SQ1764,10,,,10,1,water	✓
82	Q80611.d	P2-A8	FA84640-3	Perchlorate2.m	Sample		OP84925,SQ1764,10,,,10,1,water	✓
83	Q80612.d	P2-A9	OP84925-MS	Perchlorate2.m	Sample		OP84925,SQ1764,10,,,10,1,water	✓
84	Q80613.d	P2-B1	OP84925-MSD	Perchlorate2.m	Sample		OP84925,SQ1764,10,,,10,1,water	✓
85	Q80614.d	P2-B2	FA84640-4	Perchlorate2.m	Sample		OP84925,SQ1764,10,,,10,1,water	✓
86	Q80615.d	P2-B3	FA84640-5	Perchlorate2.m	Sample		OP84925,SQ1764,10,,,10,1,water	✓
87	Q80616.d	P1-A5	CC1764-2.0	Perchlorate2.m	QC	50X	OP84923,SQ1764,10,,,10,1,water	PASS
88	Q80617.d	P1-A2	ECC1764-0.2	Perchlorate2.m	QC	500X	OP84923,SQ1764,10,,,10,1,water	PASS
89	Q80618.d	P1-A1	IBLK	Perchlorate2.m	Sample		OP84923,SQ1764,10,,,10,1,water	BDL

SGS - ORLANDO

LIQUID SAMPLE PREP REPORT

Date/Time: 04-14-21 0900 Started {mm/dd/yy 24:00}

Date/Time: 04-14-21 1400 Finished {mm/dd/yy 24:00}

Prep Method: 3510C 3580A or Method (circle)

Analytical Method: 6850

Batch#: OP84925 Ext. By: NAS Conc. By: — Vialed By: NAS

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 84925-MB		10					10	
OP — BS						20ul		
FA84640-1	1							
-2								
-3								MS/MSD
-4								
-5								

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- GC Identification Summaries (Explosives)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84960-MB	PP390599.D	1	04/22/21	JB	04/16/21	OP84960	GPP2438

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA84640-1, FA84640-2, FA84640-3, FA84640-4, FA84640-5

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	98%	70-136%

Blank Spike Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84960-BS	PP390603.D	1	04/22/21	JB	04/16/21	OP84960	GPP2438

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA84640-1, FA84640-2, FA84640-3, FA84640-4, FA84640-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
2691-41-0	HMX	5	4.4	88	77-144
121-82-4	RDX	5	4.4	88	77-125
	DNX	5	4.3	86	66-127
	MNX	5.8	4.2	72	71-137
	TNX	2.35	2.2	94	60-126
618-87-1	3,5-Dinitroaniline	5	4.5	90	77-115
99-65-0	1,3-Dinitrobenzene	5	4.7	94	79-122
606-20-2	2,6-Dinitrotoluene	5	5.7	114	81-131
121-14-2	2,4-Dinitrotoluene	5	4.6	92	80-123
35572-78-2	2-amino-4,6-Dinitrotoluene	5	4.6	92	81-120
19406-51-0	4-amino-2,6-Dinitrotoluene	5	5.1	102	79-119
98-95-3	Nitrobenzene	5	4.1	82	78-130
88-72-2	o-Nitrotoluene	5	4.0	80	76-131
99-08-1	m-Nitrotoluene	5	4.2	84	78-122
99-99-0	p-Nitrotoluene	5	4.2	84	79-124
479-45-8	Tetryl	5	4.1	82	65-124
99-35-4	1,3,5-Trinitrobenzene	5	4.6	92	79-128
118-96-7	2,4,6-Trinitrotoluene	5	4.4	88	72-112
55-63-0	Nitroglycerine	5	4.8	96	69-123
78-11-5	PETN	5	5.5	110	73-145

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	98%	70-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84960-MS	PP390609.D	1	04/22/21	JB	04/16/21	OP84960	GPP2438
OP84960-MSD	PP390610.D	1	04/22/21	JB	04/16/21	OP84960	GPP2438
FA84640-3 [a]	PP390606.D	1	04/22/21	JB	04/16/21	OP84960	GPP2438
FA84640-3 [b]	GG621166.D	1	04/23/21	JB	04/16/21	OP84960	GGG2966

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA84640-1, FA84640-2, FA84640-3, FA84640-4, FA84640-5

CAS No.	Compound	FA84640-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	25.8		9.62	18.7	-74* [c]	9.62	19.5	-66* [c]	4	77-144/21
121-82-4	RDX	6.0		9.62	18.1	126*	9.62	18.8	133*	4	77-125/19
618-87-1	3,5-Dinitroaniline	0.23		9.62	16.5	169*	9.62	17.9	184*	8	77-115/19
99-65-0	1,3-Dinitrobenzene	0.19	U	9.62	11.7	122	9.62	11.6	121	1	79-122/17
606-20-2	2,6-Dinitrotoluene	0.19	U	9.62	10.2	106	9.62	9.7	101	5	81-131/17
121-14-2	2,4-Dinitrotoluene	0.19	U	9.62	12.4	129*	9.62	13.2	137*	6	80-123/19
35572-78-2	2-amino-4,6-Dinitrotoluene	7.6		9.62	20.0	129*	9.62	20.6	135*	3	81-120/19
19406-51-0	4-amino-2,6-Dinitrotoluene	5.3		9.62	16.4	115	9.62	17.0	122*	4	79-119/20
98-95-3	Nitrobenzene	0.19	U	9.62	7.9	82	9.62	7.7	80	3	78-130/19
88-72-2	o-Nitrotoluene	0.19	U	9.62	7.2	75*	9.62	7.1	74*	1	76-131/20
99-08-1	m-Nitrotoluene	0.19	U	9.62	8.0	83	9.62	8.4	87	5	78-122/18
99-99-0	p-Nitrotoluene	0.19	U	9.62	8.5	88	9.62	8.2	85	4	79-124/18
479-45-8	Tetryl	0.19	U	9.62	8.5	88	9.62	8.1	84	5	65-124/20
99-35-4	1,3,5-Trinitrobenzene	19.1		9.62	34.5	160*	9.62	37.0	186*	7	79-128/16
118-96-7	2,4,6-Trinitrotoluene	51.4 [d]		9.62	71.9	214* [c]	9.62	74.5	241* [c]	4	72-112/16
55-63-0	Nitroglycerine	1.9	U	9.62	11.4	119	9.62	10.7	111	6	69-123/18
78-11-5	PETN	1.9	U	9.62	12.6	131	9.62	14.0	146*	11	73-145/18

CAS No.	Surrogate Recoveries	MS	MSD	FA84640-3	FA84640-3	Limits
610-39-9	3,4-Dinitrotoluene	86%	90%	88%	128%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Outside control limits due to high level in sample relative to spike amount.
(d) Result is from Run #3.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84960-MS	PP390609.D	1	04/22/21	JB	04/16/21	OP84960	GPP2438
OP84960-MSD	BB068969.D	1	04/26/21	JB	04/16/21	OP84960	GBB2028
FA84640-3 [a]	PP390606.D	1	04/22/21	JB	04/16/21	OP84960	GPP2438
FA84640-3 [b]	GG621166.D	1	04/23/21	JB	04/16/21	OP84960	GGG2966

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA84640-1, FA84640-2, FA84640-3, FA84640-4, FA84640-5

CAS No.	Compound	FA84640-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	25.8		9.62	18.7	-74* [c]	9.62	9.9	-165* [c]	1	77-144/21
121-82-4	RDX	6.0		9.62	18.1	126*	9.62	9.4	35*	2	77-125/19
618-87-1	3,5-Dinitroaniline	0.23		9.62	16.5	169*	9.62	9.4	95	1	77-115/19
99-65-0	1,3-Dinitrobenzene	0.19	U	9.62	11.7	122	9.62	9.5	99	0	79-122/17
606-20-2	2,6-Dinitrotoluene	0.19	U	9.62	10.2	106	9.62	10.2	106	0	81-131/17
121-14-2	2,4-Dinitrotoluene	0.19	U	9.62	12.4	129*	9.62	9.1	95	2	80-123/19
35572-78-2	2-amino-4,6-Dinitrotoluene	7.6		9.62	20.0	129*	9.62	8.9	14*	0	81-120/19
19406-51-0	4-amino-2,6-Dinitrotoluene	5.3		9.62	16.4	115	9.62	9.0	38*	1	79-119/20
98-95-3	Nitrobenzene	0.19	U	9.62	7.9	82	9.62	9.0	94	1	78-130/19
88-72-2	o-Nitrotoluene	0.19	U	9.62	7.2	75*	9.62	10.0	104	0	76-131/20
99-08-1	m-Nitrotoluene	0.19	U	9.62	8.0	83	9.62	9.1	95	1	78-122/18
99-99-0	p-Nitrotoluene	0.19	U	9.62	8.5	88	9.62	9.7	101	0	79-124/18
479-45-8	Tetryl	0.19	U	9.62	8.5	88	9.62	3.6	37*	63*	65-124/20
99-35-4	1,3,5-Trinitrobenzene	19.1		9.62	34.5	160*	9.62	8.8	-107*	1	79-128/16
118-96-7	2,4,6-Trinitrotoluene	51.4 [d]		9.62	71.9	214* [c]	9.62	7.1	-461* [c]	17*	72-112/16
55-63-0	Nitroglycerine	1.9	U	9.62	11.4	119	9.62	10.6	110	5	69-123/18
78-11-5	PETN	1.9	U	9.62	12.6	131	9.62	31.8	331*	2	73-145/18

CAS No.	Surrogate Recoveries	MS	MSD	FA84640-3	FA84640-3	Limits
610-39-9	3,4-Dinitrotoluene	86%	92%	88%	128%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Outside control limits due to high level in sample relative to spike amount.
(d) Result is from Run #3.

* = Outside of Control Limits.

GC Identification Summary (Explosives)

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA84640-1	**Method:**	SW846 8330B
Client ID:	54MW13		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP390604.D	1	OP84960	GPP2438	04/22/21 12:42	GCPP
Confirmation	GG621164.D	1	OP84960	GGG2966	04/23/21 14:10	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX [a]	PP390604.D	1	1	8.3		ug/l	51.5
HMX	GG621164.D	1	1	4.9		ug/l	
RDX	PP390604.D	1	1	.57		ug/l	23.3
RDX	GG621164.D	1	1	.72		ug/l	
3,5-Dinitroaniline [a]	PP390604.D	1	1	.39		ug/l	137.3
3,5-Dinitroaniline	GG621164.D	1	1	2.1		ug/l	
2-amino-4,6-Dinitrotoluene	PP390604.D	1	1	1.9		ug/l	10.0
2-amino-4,6-Dinitrotoluene	GG621164.D	1	1	2.1		ug/l	
4-amino-2,6-Dinitrotoluene	PP390604.D	1	1	1.3		ug/l	32.3
4-amino-2,6-Dinitrotoluene	GG621164.D	1	1	1.8		ug/l	
1,3,5-Trinitrobenzene	PP390604.D	1	1	17.7		ug/l	5.2
1,3,5-Trinitrobenzene	GG621164.D	1	1	16.8		ug/l	
2,4,6-Trinitrotoluene	PP390604.D	1	1	17.7		ug/l	8.6
2,4,6-Trinitrotoluene	GG621164.D	1	1	19.3		ug/l	

(a) Primary and confirmation results differ by more than 40%.

GC Identification Summary (Explosives)

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA84640-2	**Method:**	SW846 8330B
Client ID:	54TW13		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP390605.D	1	OP84960	GPP2438	04/22/21 13:13	GCPP
Confirmation	GG621165.D	1	OP84960	GGG2966	04/23/21 14:41	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX [a]	PP390605.D	1	1	9.1		ug/l	52.8
HMX	GG621165.D	1	1	5.3		ug/l	
RDX	PP390605.D	1	1	.55		ug/l	28.1
RDX	GG621165.D	1	1	.73		ug/l	
3,5-Dinitroaniline [a]	PP390605.D	1	1	.38		ug/l	141.1
3,5-Dinitroaniline	GG621165.D	1	1	2.2		ug/l	
2-amino-4,6-Dinitrotoluene	PP390605.D	1	1	2		ug/l	9.5
2-amino-4,6-Dinitrotoluene	GG621165.D	1	1	2.2		ug/l	
4-amino-2,6-Dinitrotoluene [a]	PP390605.D	1	1	1.3		ug/l	42.4
4-amino-2,6-Dinitrotoluene	GG621165.D	1	1	2		ug/l	
1,3,5-Trinitrobenzene	PP390605.D	1	1	17.9		ug/l	0.6
1,3,5-Trinitrobenzene	GG621165.D	1	1	17.8		ug/l	
2,4,6-Trinitrotoluene	PP390605.D	1	1	19.2		ug/l	6.1
2,4,6-Trinitrotoluene	GG621165.D	1	1	20.4		ug/l	

(a) Primary and confirmation results differ by more than 40%.

GC Identification Summary (Explosives)

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID: FA84640-3 **Method:** SW846 8330B
Client ID: 54MW12

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP390606.D	1	OP84960	GPP2438	04/22/21 13:44	GCPP
Reportable	BB068941.D	10	OP84960	GBB2027	04/24/21 03:24	GCBB
Confirmation	GG621166.D	1	OP84960	GGG2966	04/23/21 15:13	GCGG
Confirmation	GG621167.D	10	OP84960	GGG2966	04/23/21 15:44	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX [a]	PP390606.D	1	1	25.8		ug/l	58.0
HMX	GG621166.D	1	1	14.2		ug/l	
RDX	PP390606.D	1	1	6		ug/l	9.5
RDX	GG621166.D	1	1	6.6		ug/l	
3,5-Dinitroaniline [a]	PP390606.D	1	1	.23		ug/l	154.7
3,5-Dinitroaniline	GG621166.D	1	1	1.8		ug/l	
2-amino-4,6-Dinitrotoluene	PP390606.D	1	1	7.6		ug/l	8.8
2-amino-4,6-Dinitrotoluene	GG621166.D	1	1	8.3		ug/l	
4-amino-2,6-Dinitrotoluene	PP390606.D	1	1	5.3		ug/l	12.4
4-amino-2,6-Dinitrotoluene	GG621166.D	1	1	6		ug/l	
1,3,5-Trinitrobenzene	PP390606.D	1	1	19.1		ug/l	2.6
1,3,5-Trinitrobenzene	GG621166.D	1	1	19.6		ug/l	
2,4,6-Trinitrotoluene	BB068941.D	10	1	51.4		ug/l	3.2
2,4,6-Trinitrotoluene	GG621167.D	10	1	49.8		ug/l	

(a) Primary and confirmation results differ by more than 40%.

GC Identification Summary (Explosives)

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA84640-4	**Method:**	SW846 8330B
Client ID:	54MW10		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP390607.D	1	OP84960	GPP2438	04/22/21 14:15	GCPP
Confirmation	GG621168.D	1	OP84960	GGG2966	04/23/21 16:16	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX [a]	PP390607.D	1	1	10.2		ug/l	41.4
HMX	GG621168.D	1	1	6.7		ug/l	
RDX	PP390607.D	1	1	3.8		ug/l	7.6
RDX	GG621168.D	1	1	4.1		ug/l	
3,5-Dinitroaniline [a]	PP390607.D	1	1	.42		ug/l	127.6
3,5-Dinitroaniline	GG621168.D	1	1	1.9		ug/l	
2-amino-4,6-Dinitrotoluene	PP390607.D	1	1	2.9		ug/l	12.9
2-amino-4,6-Dinitrotoluene	GG621168.D	1	1	3.3		ug/l	
4-amino-2,6-Dinitrotoluene	PP390607.D	1	1	2.5		ug/l	18.2
4-amino-2,6-Dinitrotoluene	GG621168.D	1	1	3		ug/l	
1,3,5-Trinitrobenzene	PP390607.D	1	1	16.1		ug/l	0.0
1,3,5-Trinitrobenzene	GG621168.D	1	1	16.1		ug/l	
2,4,6-Trinitrotoluene	PP390607.D	1	1	30.3		ug/l	4.8
2,4,6-Trinitrotoluene	GG621168.D	1	1	31.8		ug/l	

(a) Primary and confirmation results differ by more than 40%.

Surrogate Recovery Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Method: SW846 8330B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
FA84640-1	GG621164.D	130
FA84640-1	PP390604.D	102
FA84640-2	GG621165.D	136
FA84640-2	PP390605.D	100
FA84640-3	GG621166.D	128
FA84640-3	GG621167.D	0* [b]
FA84640-3	PP390606.D	88
FA84640-3	BB068941.D	0* [b]
FA84640-4	PP390607.D	90
FA84640-4	GG621168.D	126
FA84640-5	PP390608.D	104
OP84960-BS	PP390603.D	98
OP84960-MB	PP390599.D	98
OP84960-MS	PP390609.D	86
OP84960-MS	BB068968.D	94
OP84960-MSD	PP390610.D	90
OP84960-MSD	BB068969.D	92

Surrogate Compounds	Recovery Limits
S1 = 3,4-Dinitrotoluene	70-136%

(a) Recovery from GC signal #1
(b) Outside control limits due to dilution.

GC Surrogate Retention Time Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GBB2027-CC2026	**Injection Date:**	04/23/21
Lab File ID:	BB068931.D	**Injection Time:**	22:14
Instrument ID:	GCBB	**Method:**	SW846 8330B

	S1 [a] RT	S1 [b] RT
Check Std	10.99	10.99

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB068933.D	04/23/21	23:16		10.96
ZZZZZZ	BB068934.D	04/23/21	23:47		10.99
ZZZZZZ	BB068935.D	04/24/21	00:18		10.99
ZZZZZZ	BB068936.D	04/24/21	00:49		10.98
FA84757-15	BB068937.D	04/24/21	01:20		10.96
OP85042-MS	BB068938.D	04/24/21	01:51		10.96
OP85042-MSD	BB068939.D	04/24/21	02:22		10.94
ZZZZZZ	BB068940.D	04/24/21	02:53		10.97
FA84640-3	BB068941.D	04/24/21	03:24		0.00
GBB2027-ECC2026	BB068942.D	04/24/21	03:55	10.92	10.92

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GBB2028-CC2026	**Injection Date:**	04/26/21
Lab File ID:	BB068963.D	**Injection Time:**	17:23
Instrument ID:	GCBB	**Method:**	SW846 8330B

	S1 [a] RT	S1 [b] RT
Check Std	10.92	10.92

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB068964.D	04/26/21	17:54		10.95
ZZZZZZ	BB068965.D	04/26/21	18:25		10.96
ZZZZZZ	BB068966.D	04/26/21	18:55		10.95
ZZZZZZ	BB068967.D	04/26/21	19:26		10.94
OP84960-MS	BB068968.D	04/26/21	19:57		10.92
OP84960-MSD	BB068969.D	04/26/21	20:28		10.91
ZZZZZZ	BB068970.D	04/26/21	20:59		0.00
ZZZZZZ	BB068971.D	04/26/21	21:30		0.00
ZZZZZZ	BB068972.D	04/26/21	22:01		0.00
ZZZZZZ	BB068973.D	04/26/21	22:32		0.00
GBB2028-ECC2026	BB068974.D	04/26/21	23:03	10.94	10.94

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GGG2966-CC2952	**Injection Date:**	04/23/21
Lab File ID:	GG621161.D	**Injection Time:**	12:36
Instrument ID:	GCGG	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	14.09

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
FA84640-1	GG621164.D	04/23/21	14:10	14.03
FA84640-2	GG621165.D	04/23/21	14:41	14.05
FA84640-3	GG621166.D	04/23/21	15:13	14.06
FA84640-3	GG621167.D	04/23/21	15:44	0.00
FA84640-4	GG621168.D	04/23/21	16:16	14.08
OP85001-MB	GG621170.D	04/23/21	17:18	14.06
ZZZZZZ	GG621171.D	04/23/21	17:50	14.06
ZZZZZZ	GG621172.D	04/23/21	18:21	14.06

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GPP2438-CC2428	**Injection Date:**	04/22/21
Lab File ID:	PP390597.D	**Injection Time:**	09:06
Instrument ID:	GCPP	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	11.52

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP84960-MB	PP390599.D	04/22/21	10:07	11.57
FA84596-15	PP390600.D	04/22/21	10:38	0.00

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GPP2438-CC2428	**Injection Date:**	04/22/21
Lab File ID:	PP390601.D	**Injection Time:**	11:10
Instrument ID:	GCPP	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	11.59

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP84960-BS	PP390603.D	04/22/21	12:11	11.60
FA84640-1	PP390604.D	04/22/21	12:42	11.53
FA84640-2	PP390605.D	04/22/21	13:13	11.53
FA84640-3	PP390606.D	04/22/21	13:44	11.55
FA84640-4	PP390607.D	04/22/21	14:15	11.52
FA84640-5	PP390608.D	04/22/21	14:46	11.53
OP84960-MS	PP390609.D	04/22/21	15:17	11.56
OP84960-MSD	PP390610.D	04/22/21	15:48	11.57

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2026-ICC2026
Lab FileID: BB068885.D

Response Factor Report G1315B

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Initial Calibration

Calibration Files
20 =BB068880.D 50 =BB068881.D 100 =BB068882.D 200 =BB068883.D
500 =BB068884.D 1000=BB068885.D 2500=BB068886.D 5000=BB068887.D

Compound	20	50	100	200	500	1000	2500	5000	Avg	%RSD
1) TNX	2.239	2.329	2.386	2.479	2.433	2.405	2.393	2.343	2.376 E3	3.07
2) HMX	1.158	1.266	1.631	1.736	1.647	1.629	1.610	1.578	1.532 E3	13.35
3) DNX	2.209	2.422	2.655	2.734	2.609	2.569	2.542	2.490	2.529 E3	6.36
4) MNX	3.024	2.928	2.984	3.011	2.940	2.895	2.879	2.817	2.935 E3	2.41
5) RDX	1.724	1.836	1.928	1.919	1.907	1.885	1.880	1.841	1.865 E3	3.53
6) 1,3,5-Trinit	3.633	3.883	4.010	4.106	4.102	4.068	4.067	3.997	3.983 E3	4.00
7) 1,3-Dinitrob	4.959	5.188	5.316	5.441	5.341	5.287	5.279	5.194	5.251 E3	2.72
8) 3,5-Dinitroa	3.699	3.946	4.017	4.146	4.070	4.027	4.018	3.966	3.986 E3	3.30
9) Nitrobenzene	2.901	3.031	3.091	3.212	3.186	3.127	3.116	3.030	3.087 E3	3.22
10) Nitroglyceri									0.000	-1.00
11) Tetryl	2.995	3.141	3.089	3.196	3.134	3.092	3.080	3.016	3.093 E3	2.13
12) 2,4,6-Trinit	3.556	3.732	3.736	3.853	3.785	3.743	3.741	3.669	3.727 E3	2.32
13) 2-Amino-4,6-	3.331	3.384	3.345	3.455	3.401	3.367	3.363	3.298	3.368 E3	1.41
14) 4-Amino-2,6-	2.518	2.514	2.503	2.551	2.514	2.482	2.479	2.429	2.499 E3	1.45
15) 3,4-Dinitrot	2.290	2.082	2.088	2.164	2.142	2.124	2.129	2.091	2.139 E3	3.15
16) 2,4-Dinitrot	3.830	4.473	4.634	4.760	4.725	4.680	4.694	4.611	4.551 E3	6.68
17) 2,6-Dinitrot	3.867	2.579	2.724	2.763	2.772	2.744	2.713	2.670	2.854 E3	14.50
18) o-Nitrotolue	1.902	2.215	2.284	2.269	2.249	2.201	2.223	2.172	2.189 E3	5.56
19) p-Nitrotolue	2.687	3.379	3.395	3.463	3.414	3.385	3.412	3.339	3.309 E3	7.67
20) m-Nitrotolue	3.385	3.480	3.147	3.269	3.268	3.251	3.251	3.216	3.283 E3	3.14
21) PETN									0.000	-1.00

Signal #2

1) TNX	3.557	3.609	3.745	3.811	3.728	3.682	3.662	3.584	3.672 E3	2.37
2) HMX	4.007	4.321	4.602	4.836	4.472	4.435	4.370	4.294	4.417 E3	5.46
3) DNX	3.434	5.082	4.753	4.878	4.181	4.148	4.006	3.934	4.302 E3	12.90
4) MNX	4.579	4.706	4.640	4.694	4.520	4.461	4.421	4.332	4.544 E3	2.96
5) RDX	2.767	2.910	3.062	3.090	3.041	2.997	2.985	2.924	2.972 E3	3.50
6) 1,3,5-Trinit	5.547	5.981	6.248	6.429	6.507	6.439	6.427	6.300	6.235 E3	5.19
7) 1,3-Dinitrob	2.950	3.824	3.805	3.813	3.707	3.667	3.759	3.550	3.634 E3	8.02
8) 3,5-Dinitroa	6.535	7.009	7.028	7.102	6.972	6.910	6.889	6.668	6.889 E3	2.80
9) Nitrobenzene	2.900	3.014	3.015	3.178	3.121	3.071	3.074	3.009	3.048 E3	2.75
10) Nitroglyceri	1.239	1.218	1.258	1.326	1.301	1.281	1.286	1.268	1.272 E3	2.68
11) Tetryl	4.220	4.625	4.772	4.975	4.926	4.883	4.892	4.841	4.767 E3	5.15
12) 2,4,6-Trinit	3.733	4.284	4.414	4.617	4.579	4.545	4.546	4.482	4.400 E3	6.58
13) 2-Amino-4,6-	4.460	4.664	4.925	5.106	5.088	5.061	5.064	5.008	4.922 E3	4.79
14) 4-Amino-2,6-	4.373	4.598	4.784	5.010	5.013	4.980	4.984	4.931	4.834 E3	4.86
15) 3,4-Dinitrot	2.775	3.175	3.463	3.735	3.753	3.754	3.781	3.783	3.527 E3	10.55
16) 2,4-Dinitrot	2.159	2.704	2.855	3.061	3.081	3.081	3.104	3.106	2.894 E3	11.42
17) 2,6-Dinitrot	4.608	3.057	3.209	3.543	3.586	3.557	3.570	3.530	3.582 E3	12.80
18) o-Nitrotolue	2.639	2.820	2.949	3.180	3.210	3.193	3.217	3.129	3.042 E3	7.13
19) p-Nitrotolue	2.627	2.472	2.679	2.882	2.907	2.916	2.947	2.905	2.792 E3	6.28
20) m-Nitrotolue	2.960	3.355	3.447	3.719	3.880	3.937	3.979	3.867	3.643 E3	9.84
21) PETN	0.908	1.112	1.309	1.414	1.428	1.422	1.437	1.410	1.305 E3	14.88

(#) = Out of Range ### Number of calibration levels exceeded format ###

Initial Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2026-ICC2026
Lab FileID: BB068885.D

8330B_042221_PLUS.M Fri Apr 23 08:58:53 2021

Initial Calibration Verification

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2026-ICV2026
Lab FileID: BB068888.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1A.ch
Acq On : 22-Apr-2021, 17:11:28 Operator: jamesb
Sample : icv2026-1000 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1101.154	-10.1	109	0.00	1.03- 1.63
2	HMX	1000.000	1037.745	-3.8	98	0.00	1.16- 1.76
3	DNX	1000.000	1071.140	-7.1	105	0.00	1.40- 2.00
4	MNX	1000.000	1046.961	-4.7	106	0.00	1.98- 2.58
5	RDX	1000.000	992.250	0.8	98	0.00	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	1002.783	-0.3	98	0.00	4.22- 5.02
7	1,3-Dinitrobenzene	1000.000	987.520	1.2	98	0.00	5.39- 6.19
8	3,5-Dinitroaniline	1000.000	1010.710	-1.1	100	0.00	5.77- 6.57
9	Nitrobenzene	1000.000	981.839	1.8	97	0.00	6.91- 7.71
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	983.267	1.7	98	0.00	8.91- 9.71
12	2,4,6-Trinitrotoluene	1000.000	981.076	1.9	98	0.00	9.29-10.09
13	2-Amino-4,6-Dinitrotol	1000.000	1001.356	-0.1	100	-0.01	9.66-10.46
14	4-Amino-2,6-Dinitrotol	1000.000	999.768	0.0	101	-0.01	10.16-10.96
15 S	3,4-Dinitrotoluene		----------NA----------				
16	2,4-Dinitrotoluene	1000.000	1004.888	-0.5	98	-0.01	11.16-11.96
17	2,6-Dinitrotoluene	1000.000	940.351	6.0	98	-0.01	11.64-12.44
18	o-Nitrotoluene	1000.000	987.038	1.3	98	-0.01	14.66-15.53
19	p-Nitrotoluene	1000.000	1020.264	-2.0	100	-0.01	15.12-16.12
20	m-Nitrotoluene	1000.000	970.233	3.0	98	-0.01	15.99-16.99
21	PETN		----------NA----------				

***** Signal #2 *****

1	TNX	1000.000	1088.215	-8.8	109	0.00	1.03- 1.63
2	HMX	1000.000	972.639	2.7	97	0.00	1.16- 1.76
3	DNX	1000.000	994.284	0.6	103	0.00	1.40- 2.00
4	MNX	1000.000	1038.954	-3.9	106	0.00	1.98- 2.58
5	RDX	1000.000	988.427	1.2	98	0.00	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	965.231	3.5	93	0.00	4.21- 5.01
7	1,3-Dinitrobenzene	1000.000	1017.845	-1.8	101	0.00	5.38- 6.18
8	3,5-Dinitroaniline	1000.000	1008.250	-0.8	101	0.00	5.77- 6.57
9	Nitrobenzene	1000.000	979.320	2.1	97	0.00	6.91- 7.71
10	Nitroglycerin	1000.000	991.271	0.9	98	0.00	8.44- 9.44
11	Tetryl	1000.000	1019.840	-2.0	100	0.00	8.91- 9.71
12	2,4,6-Trinitrotoluene	1000.000	1020.657	-2.1	99	0.00	9.29-10.09
13	2-Amino-4,6-Dinitrotol	1000.000	1044.298	-4.4	102	-0.01	9.66-10.46
14	4-Amino-2,6-Dinitrotol	1000.000	1050.274	-5.0	102	-0.01	10.16-10.96
15 S	3,4-Dinitrotoluene		----------NA----------				
16	2,4-Dinitrotoluene	1000.000	1068.805	-6.9	100	-0.01	11.16-11.96
17	2,6-Dinitrotoluene	1000.000	988.552	1.1	100	-0.01	11.64-12.44

Initial Calibration Verification

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2026-ICV2026
Lab FileID: BB068888.D

18	o-Nitrotoluene	1000.000	1023.155	-2.3	97	-0.01	14.53-15.53
19	p-Nitrotoluene	1000.000	1022.971	-2.3	98	-0.01	15.11-16.11
20	m-Nitrotoluene	1000.000	1038.710	-3.9	96	-0.01	15.99-16.99
21	PETN	1000.000	1127.756	-12.8	104	0.00	17.87-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 11:10:37 2021

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2027-CC2026
Lab FileID: BB068931.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1A.ch
Acq On : 23-Apr-2021, 22:14:28 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : op85067,GBB2027,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1009.040	-0.9	100	0.00	1.03- 1.63
2	HMX	1000.000	1052.823	-5.3	99	0.01	1.16- 1.76
3	DNX	1000.000	1011.046	-1.1	100	0.01	1.40- 2.00
4	MNX	1000.000	977.299	2.3	99	0.02	1.98- 2.58
5	RDX	1000.000	999.911	0.0	99	0.03	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	1010.853	-1.1	99	0.04	4.22- 5.02
7	1,3-Dinitrobenzene	1000.000	1003.132	-0.3	100	0.05	5.39- 6.19
8	3,5-Dinitroaniline	1000.000	1001.056	-0.1	99	0.05	5.77- 6.57
9	Nitrobenzene	1000.000	966.060	3.4	95	0.05	6.91- 7.71
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	968.336	3.2	97	0.08	8.91- 9.71
12	2,4,6-Trinitrotoluene	1000.000	998.075	0.2	99	0.07	9.29-10.09
13	2-Amino-4,6-Dinitrotol	1000.000	985.182	1.5	99	0.07	9.66-10.46
14	4-Amino-2,6-Dinitrotol	1000.000	980.140	2.0	99	0.07	10.16-10.96
15 S	3,4-Dinitrotoluene	1000.000	985.054	1.5	99	0.08	10.51-11.31
16	2,4-Dinitrotoluene	1000.000	1021.919	-2.2	99	0.07	11.16-11.96
17	2,6-Dinitrotoluene	1000.000	949.827	5.0	99	0.07	11.64-12.44
18	o-Nitrotoluene	1000.000	964.728	3.5	96	0.07	14.66-15.53
19	p-Nitrotoluene	1000.000	990.125	1.0	97	0.07	15.12-16.12
20	m-Nitrotoluene	1000.000	948.664	5.1	96	0.06	15.99-16.99
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	1000.000	998.226	0.2	100	0.00	1.03- 1.63
2	HMX	1000.000	994.562	0.5	99	0.01	1.16- 1.76
3	DNX	1000.000	954.557	4.5	99	0.01	1.40- 2.00
4	MNX	1000.000	968.637	3.1	99	0.02	1.98- 2.58
5	RDX	1000.000	997.436	0.3	99	0.03	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	981.905	1.8	95	0.04	4.21- 5.01
7	1,3-Dinitrobenzene	1000.000	1059.561	-6.0	105	0.05	5.38- 6.18
8	3,5-Dinitroaniline	1000.000	999.348	0.1	100	0.05	5.77- 6.57
9	Nitrobenzene	1000.000	976.635	2.3	97	0.05	6.91- 7.71
10	Nitroglycerin	1000.000	999.971	0.0	99	0.07	8.44- 9.44
11	Tetryl	1000.000	1005.994	-0.6	98	0.08	8.91- 9.71
12	2,4,6-Trinitrotoluene	1000.000	1023.179	-2.3	99	0.07	9.29-10.09
13	2-Amino-4,6-Dinitrotol	1000.000	1008.210	-0.8	98	0.07	9.66-10.46
14	4-Amino-2,6-Dinitrotol	1000.000	1012.039	-1.2	98	0.07	10.16-10.96
15 S	3,4-Dinitrotoluene	1000.000	1058.194	-5.8	99	0.08	10.51-11.31
16	2,4-Dinitrotoluene	1000.000	1059.927	-6.0	100	0.07	11.16-11.96
17	2,6-Dinitrotoluene	1000.000	982.390	1.8	99	0.07	11.64-12.44

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2027-CC2026
Lab FileID: BB068931.D

18	o-Nitrotoluene	1000.000	980.856	1.9	93	0.07	14.53-15.53
19	p-Nitrotoluene	1000.000	960.778	3.9	92	0.07	15.11-16.11
20	m-Nitrotoluene	1000.000	977.739	2.2	90	0.06	15.99-16.99
21	PETN	1000.000	1079.928	-8.0	99	0.05	17.87-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB068885.D 8330B_042221_PLUS.M Mon Apr 26 14:34:41 2021

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2027-ECC2026
Lab FileID: BB068942.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1A.ch
Acq On : 24-Apr-2021, 03:55:12 Operator: jamesb
Sample : ecc2026-1000 Inst : G1315B
Misc : op85067,GBB2027,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1009.492	-0.9	100	0.00	1.03- 1.63
2	HMX	1000.000	1055.509	-5.6	99	0.00	1.16- 1.76
3	DNX	1000.000	1003.039	-0.3	99	0.00	1.40- 2.00
4	MNX	1000.000	973.068	2.7	99	0.00	1.98- 2.58
5	RDX	1000.000	1000.273	-0.0	99	0.00	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	1009.961	-1.0	99	0.00	4.22- 5.02
7	1,3-Dinitrobenzene	1000.000	1001.857	-0.2	100	0.00	5.39- 6.19
8	3,5-Dinitroaniline	1000.000	1001.847	-0.2	99	0.00	5.77- 6.57
9	Nitrobenzene	1000.000	937.660	6.2	93	0.00	6.91- 7.71
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	962.653	3.7	96	0.02	8.91- 9.71
12	2,4,6-Trinitrotoluene	1000.000	1000.574	-0.1	100	0.01	9.29-10.09
13	2-Amino-4,6-Dinitrotol	1000.000	988.416	1.2	99	0.01	9.66-10.46
14	4-Amino-2,6-Dinitrotol	1000.000	983.100	1.7	99	0.01	10.16-10.96
15 S	3,4-Dinitrotoluene	1000.000	987.692	1.2	99	0.01	10.51-11.31
16	2,4-Dinitrotoluene	1000.000	1023.463	-2.3	100	0.01	11.16-11.96
17	2,6-Dinitrotoluene	1000.000	951.769	4.8	99	0.01	11.64-12.44
18	o-Nitrotoluene	1000.000	933.366	6.7	93	0.00	14.66-15.53
19	p-Nitrotoluene	1000.000	968.518	3.1	95	0.00	15.12-16.12
20	m-Nitrotoluene	1000.000	921.399	7.9	93	0.00	15.99-16.99
21	PETN		----------NA----------				

***** Signal #2 *****

1	TNX	1000.000	997.264	0.3	99	0.00	1.03- 1.63
2	HMX	1000.000	987.001	1.3	98	0.00	1.16- 1.76
3	DNX	1000.000	937.228	6.3	97	0.00	1.40- 2.00
4	MNX	1000.000	964.898	3.5	98	0.00	1.98- 2.58
5	RDX	1000.000	998.184	0.2	99	0.00	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	968.919	3.1	94	0.00	4.21- 5.01
7	1,3-Dinitrobenzene	1000.000	1046.273	-4.6	104	0.00	5.38- 6.18
8	3,5-Dinitroaniline	1000.000	999.560	0.0	100	0.00	5.77- 6.57
9	Nitrobenzene	1000.000	938.643	6.1	93	0.00	6.91- 7.71
10	Nitroglycerin	1000.000	1005.316	-0.5	100	0.02	8.44- 9.44
11	Tetryl	1000.000	1001.873	-0.2	98	0.02	8.91- 9.71
12	2,4,6-Trinitrotoluene	1000.000	1027.508	-2.8	99	0.01	9.29-10.09
13	2-Amino-4,6-Dinitrotol	1000.000	1013.084	-1.3	99	0.01	9.66-10.46
14	4-Amino-2,6-Dinitrotol	1000.000	1015.800	-1.6	99	0.01	10.16-10.96
15 S	3,4-Dinitrotoluene	1000.000	1061.006	-6.1	100	0.01	10.51-11.31
16	2,4-Dinitrotoluene	1000.000	1057.434	-5.7	99	0.01	11.16-11.96
17	2,6-Dinitrotoluene	1000.000	986.584	1.3	99	0.01	11.64-12.44

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2027-ECC2026
Lab FileID: BB068942.D

18	o-Nitrotoluene	1000.000	960.538	3.9	92	0.00	14.53-15.53
19	p-Nitrotoluene	1000.000	996.645	0.3	95	0.00	15.11-16.11
20	m-Nitrotoluene	1000.000	953.088	4.7	88	0.00	15.99-16.99
21	PETN	1000.000	1094.161	-9.4	100	0.01	17.87-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB068885.D 8330B_042221_PLUS.M Mon Apr 26 14:34:42 2021

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2028-CC2026
Lab FileID: BB068963.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2028\BB068963.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2028\BB068963.D\dad1A.ch
Acq On : 26-Apr-2021, 17:23:03 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : op85001,GBB2028,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	966.255	3.4	95	0.00	1.03- 1.63
2	HMX	1000.000	1011.967	-1.2	95	0.00	1.16- 1.76
3	DNX	1000.000	966.711	3.3	95	0.00	1.40- 2.00
4	MNX	1000.000	941.910	5.8	95	0.00	1.98- 2.58
5	RDX	1000.000	966.741	3.3	96	0.00	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	971.380	2.9	95	0.00	4.22- 5.02
7	1,3-Dinitrobenzene	1000.000	959.019	4.1	95	0.00	5.39- 6.19
8	3,5-Dinitroaniline	1000.000	966.031	3.4	96	0.00	5.77- 6.57
9	Nitrobenzene	1000.000	951.364	4.9	94	0.00	6.91- 7.71
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	929.360	7.1	93	0.02	8.91- 9.71
12	2,4,6-Trinitrotoluene	1000.000	958.930	4.1	95	0.01	9.29-10.09
13	2-Amino-4,6-Dinitrotol	1000.000	952.091	4.8	95	0.01	9.66-10.46
14	4-Amino-2,6-Dinitrotol	1000.000	945.892	5.4	95	0.01	10.16-10.96
15 S	3,4-Dinitrotoluene	1000.000	944.854	5.5	95	0.01	10.51-11.31
16	2,4-Dinitrotoluene	1000.000	977.682	2.2	95	0.01	11.16-11.96
17	2,6-Dinitrotoluene	1000.000	909.942	9.0	95	0.01	11.64-12.44
18	o-Nitrotoluene	1000.000	945.219	5.5	94	0.00	14.66-15.53
19	p-Nitrotoluene	1000.000	961.998	3.8	94	0.00	15.12-16.12
20	m-Nitrotoluene	1000.000	925.789	7.4	94	0.00	15.99-16.99
21	PETN		----------NA----------				

***** Signal #2 *****

1	TNX	1000.000	956.472	4.4	95	0.00	1.03- 1.63
2	HMX	1000.000	951.127	4.9	95	0.00	1.16- 1.76
3	DNX	1000.000	904.004	9.6	94	0.00	1.40- 2.00
4	MNX	1000.000	934.485	6.6	95	0.00	1.98- 2.58
5	RDX	1000.000	962.916	3.7	95	0.00	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	984.426	1.6	95	0.00	4.21- 5.01
7	1,3-Dinitrobenzene	1000.000	1005.347	-0.5	100	0.00	5.38- 6.18
8	3,5-Dinitroaniline	1000.000	967.497	3.3	96	0.00	5.77- 6.57
9	Nitrobenzene	1000.000	951.819	4.8	94	0.00	6.91- 7.71
10	Nitroglycerin	1000.000	962.905	3.7	96	0.02	8.44- 9.44
11	Tetryl	1000.000	972.831	2.7	95	0.02	8.91- 9.71
12	2,4,6-Trinitrotoluene	1000.000	985.798	1.4	95	0.01	9.29-10.09
13	2-Amino-4,6-Dinitrotol	1000.000	975.838	2.4	95	0.01	9.66-10.46
14	4-Amino-2,6-Dinitrotol	1000.000	976.814	2.3	95	0.01	10.16-10.96
15 S	3,4-Dinitrotoluene	1000.000	1016.206	-1.6	95	0.01	10.51-11.31
16	2,4-Dinitrotoluene	1000.000	1011.083	-1.1	95	0.01	11.16-11.96
17	2,6-Dinitrotoluene	1000.000	946.176	5.4	95	0.01	11.64-12.44

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2028-CC2026
Lab FileID: BB068963.D

18	o-Nitrotoluene	1000.000	984.100	1.6	94	0.00	14.53-15.53
19	p-Nitrotoluene	1000.000	993.343	0.7	95	0.00	15.11-16.11
20	m-Nitrotoluene	1000.000	1046.264	-4.6	97	0.00	15.99-16.99
21	PETN	1000.000	1032.810	-3.3	95	0.02	17.87-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB068885.D 8330B_042221_PLUS.M Tue Apr 27 09:19:15 2021

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2028-ECC2026
Lab FileID: BB068974.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GBB2028\BB068974.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2028\BB068974.D\dad1A.ch
Acq On : 26-Apr-2021, 23:03:47 Operator: jamesb
Sample : ecc2026-1000 Inst : G1315B
Misc : op85042,GBB2028,1040,,,10,10,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	969.370	3.1	96	0.00	1.03- 1.63
2	HMX	1000.000	1020.550	-2.1	96	0.00	1.16- 1.76
3	DNX	1000.000	975.602	2.4	96	0.00	1.40- 2.00
4	MNX	1000.000	942.184	5.8	96	0.00	1.98- 2.58
5	RDX	1000.000	966.031	3.4	96	0.00	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	971.842	2.8	95	0.00	4.22- 5.02
7	1,3-Dinitrobenzene	1000.000	959.498	4.1	95	0.00	5.39- 6.19
8	3,5-Dinitroaniline	1000.000	966.443	3.4	96	0.00	5.77- 6.57
9	Nitrobenzene	1000.000	916.606	8.3	90	0.00	6.91- 7.71
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	924.805	7.5	93	0.02	8.91- 9.71
12	2,4,6-Trinitrotoluene	1000.000	960.593	3.9	96	0.02	9.29-10.09
13	2-Amino-4,6-Dinitrotol	1000.000	952.102	4.8	95	0.03	9.66-10.46
14	4-Amino-2,6-Dinitrotol	1000.000	945.450	5.5	95	0.03	10.16-10.96
15 S	3,4-Dinitrotoluene	1000.000	942.115	5.8	95	0.03	10.51-11.31
16	2,4-Dinitrotoluene	1000.000	977.373	2.3	95	0.03	11.16-11.96
17	2,6-Dinitrotoluene	1000.000	910.418	9.0	95	0.03	11.64-12.44
18	o-Nitrotoluene	1000.000	904.553	9.5	90	0.03	14.66-15.53
19	p-Nitrotoluene	1000.000	933.582	6.6	91	0.03	15.12-16.12
20	m-Nitrotoluene	1000.000	891.751	10.8	90	0.03	15.99-16.99
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	1000.000	958.001	4.2	96	0.00	1.03- 1.63
2	HMX	1000.000	961.533	3.8	96	0.00	1.16- 1.76
3	DNX	1000.000	921.613	7.8	96	0.00	1.40- 2.00
4	MNX	1000.000	933.844	6.6	95	0.00	1.98- 2.58
5	RDX	1000.000	961.681	3.8	95	0.00	2.49- 3.29
6	1,3,5-Trinitrobenzene	1000.000	981.898	1.8	95	0.00	4.21- 5.01
7	1,3-Dinitrobenzene	1000.000	1035.774	-3.6	103	0.00	5.38- 6.18
8	3,5-Dinitroaniline	1000.000	979.607	2.0	98	0.00	5.77- 6.57
9	Nitrobenzene	1000.000	925.459	7.5	92	0.00	6.91- 7.71
10	Nitroglycerin	1000.000	956.500	4.3	95	0.02	8.44- 9.44
11	Tetryl	1000.000	965.050	3.5	94	0.02	8.91- 9.71
12	2,4,6-Trinitrotoluene	1000.000	984.567	1.5	95	0.02	9.29-10.09
13	2-Amino-4,6-Dinitrotol	1000.000	972.677	2.7	95	0.03	9.66-10.46
14	4-Amino-2,6-Dinitrotol	1000.000	974.254	2.6	95	0.03	10.16-10.96
15 S	3,4-Dinitrotoluene	1000.000	1011.438	-1.1	95	0.03	10.51-11.31
16	2,4-Dinitrotoluene	1000.000	1008.169	-0.8	95	0.03	11.16-11.96
17	2,6-Dinitrotoluene	1000.000	940.376	6.0	95	0.03	11.64-12.44

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GBB2028-ECC2026
Lab FileID: BB068974.D

18	o-Nitrotoluene	1000.000	968.217	3.2	92	0.03	14.53-15.53
19	p-Nitrotoluene	1000.000	949.802	5.0	91	0.03	15.11-16.11
20	m-Nitrotoluene	1000.000	994.990	0.5	92	0.02	15.99-16.99
21	PETN	1000.000	1047.256	-4.7	96	0.03	17.87-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB068885.D 8330B_042221_PLUS.M Tue Apr 27 10:16:56 2021

Initial Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2952-ICC2952
Lab FileID: GG620958.D

Response Factor Report G1315B

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue Mar 23 10:33:40 2021
Response via : Initial Calibration

Calibration Files
20 =GG620953.D 50 =GG620954.D 100 =GG620955.D 200 =GG620956.D
500 =GG620957.D 1000=GG620958.D 2500=GG620959.D 5000=GG620960.D

Compound	20	50	100	200	500	1000	2500	5000	Avg		%RSD
1) TNX	7.116	7.918	7.826	7.272	6.973	6.894	6.774	6.791	7.196	E3	6.25
2) HMX	4.278	3.984	3.435	3.255	3.086	3.015	2.957	2.948	3.370	E3	14.94
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000											
Response Ratio = 0.00000 + 2953.62075 *A											
3) DNX	8.322	6.957	6.503	6.279	5.997	5.948	5.837	5.870	6.464	E3	13.02
4) MNX	6.816	6.177	5.964	6.186	5.956	5.931	5.858	5.885	6.097	E3	5.18
5) 1,3,5-Trinit	9.575	8.949	8.864	9.145	8.943	8.888	8.789	8.813	8.996	E3	2.87
6) RDX	4.052	4.003	4.140	4.312	4.204	4.203	4.127	4.165	4.151	E3	2.30
7) 1,3-Dinitrob	1.381	1.303	1.217	1.244	1.215	1.212	1.194	1.200	1.246	E4	5.20
8) Nitrobenzene	8.515	8.134	7.936	7.879	7.831	7.846	7.720	7.744	7.951	E3	3.29
9) 2,4,6-Trinit	9.696	8.008	8.044	8.272	8.114	8.084	7.976	8.029	8.278	E3	7.01
10) Nitroglyceri									0.000		-1.00
11) Tetryl	6.548	5.823	5.527	5.603	5.558	5.543	5.488	5.572	5.708	E3	6.21
12) 3,4-Dinitrot	4.944	4.846	4.745	4.776	4.604	4.593	4.588	4.599	4.712	E3	2.90
13) 2,6-Dinitrot	6.299	6.257	6.088	6.098	5.952	5.959	5.873	5.917	6.055	E3	2.61
14) 2,4-Dinitrot	1.178	1.133	1.103	1.129	1.095	1.096	1.087	1.093	1.114	E4	2.77
15) 3,5-Dinitroa	1.005	0.952	0.942	0.950	0.926	0.926	0.918	0.923	0.943	E4	3.00
16) o-Nitrotolue	5.621	4.946	5.066	5.039	4.884	4.924	4.878	4.912	5.034	E3	4.91
17) p-Nitrotolue	5.524	4.900	5.110	5.232	5.058	5.070	5.030	5.060	5.123	E3	3.64
18) 4-Amino-2,6-	5.524	4.900	5.110	5.232	5.058	5.070	5.030	5.060	5.123	E3	3.64
19) m-Nitrotolue	6.186	5.746	5.415	5.530	5.361	5.381	5.345	5.361	5.541	E3	5.29
20) 2-Amino-4,6-	8.486	8.165	8.082	8.439	8.230	8.173	8.093	8.161	8.229	E3	1.85
21) PETN									0.000		-1.00

Signal #2

1) TNX	7.045	7.918	7.826	7.272	6.973	6.894	6.774	6.791	7.187	E3	6.29
2) HMX	4.117	3.984	3.435	3.255	3.086	3.015	2.957	2.948	3.349	E3	13.83
3) DNX	8.322	6.957	6.503	6.279	5.997	5.948	5.837	5.870	6.464	E3	13.02
4) MNX	6.816	6.177	5.964	6.186	5.956	5.931	5.858	5.885	6.097	E3	5.18
5) 1,3,5-Trinit	9.588	8.949	8.864	9.145	8.943	8.888	8.789	8.812	8.997	E3	2.92
6) RDX	4.236	4.003	4.140	4.312	4.204	4.203	4.127	4.161	4.173	E3	2.17
7) 1,3-Dinitrob	1.653	1.276	0.876	1.134	0.994	0.973	0.898	0.906	1.089	E4	24.37
---- Linear regr., Force(0,0) ---- Coefficient = 0.9997											
Response Ratio = 0.00000 + 9077.16974 *A											
8) Nitrobenzene	1.010	0.934	0.640	1.014	0.828	0.817	0.714	0.723	0.835	E4	16.83
---- Linear regr., Force(0,0) ---- Coefficient = 0.9991											
Response Ratio = 0.00000 + 7251.72558 *A											
9) 2,4,6-Trinit	1.671	1.210	0.943	1.326	1.139	1.100	1.052	1.059	1.187	E4	19.06
---- Linear regr., Force(0,0) ---- Coefficient = 0.9998											
Response Ratio = 0.00000 + 10596.93569 *A											
10) Nitroglyceri	4.743	5.302	2.538	3.531	2.993	3.085	2.814	2.870	3.485	E3	28.73
---- Linear regr., Force(0,0) ---- Coefficient = 0.9996											

8.7.7

8

Initial Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2952-ICC2952
Lab FileID: GG620958.D

```
              Response Ratio = 0.00000 + 2867.99493 *A

11) Tetryl       1.342 1.130 0.960 0.991 0.943 0.976 0.944 0.961 1.031 E4  13.54
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 9582.86137 *A

12) 3,4-Dinitrot 1.451 1.044 0.895 0.894 0.927 0.918 0.916 0.920 0.996 E4  19.08
            ---- Linear regr., Force(0,0) ----  Coefficient =  1.0000
              Response Ratio = 0.00000 + 9195.72564 *A

13) 2,6-Dinitrot 5.988 8.902 8.838 8.279 8.595 8.579 8.398 8.461 8.255 E3  11.38
14) 2,4-Dinitrot 8.506 7.525 8.426 7.540 7.662 7.660 7.705 7.830 7.857 E3   4.94
15) 3,5-Dinitroa 1.695 1.706 1.553 1.578 1.528 1.542 1.512 1.533 1.581 E4   4.84
16) o-Nitrotolue 7.409 6.662 7.551 7.002 7.190 7.392 7.191 7.297 7.212 E3   3.85
17) p-Nitrotolue 6.600 7.284 8.507 9.189 9.262 9.228 9.237 9.294 8.575 E3  12.31
18) 4-Amino-2,6- 6.740 7.294 8.507 9.189 9.262 9.228 9.237 9.294 8.594 E3  11.83
19) m-Nitrotolue 1.070 1.112 0.934 0.977 0.911 0.911 0.918 0.914 0.968 E4   8.22
20) 2-Amino-4,6- 0.899 1.280 1.199 1.237 1.159 1.178 1.170 1.174 1.162 E4   9.78
21) PETN         2.508 4.452 3.393 3.205 3.094 3.339 3.165 3.130 3.286 E3  16.51
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 3143.52072 *A

--------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          GGG2952_032221.M        Tue Mar 23 10:46:54 2021
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8.7.7

8

Initial Calibration Verification

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA
Sample: GGG2952-ICV2952
Lab FileID: GG620961.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1A.ch
Acq On : 22-Mar-2021, 18:02:59 Operator: jamesb
Sample : icv2952-1000 Inst : G1315B
Misc : op84497,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue Mar 23 10:33:40 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	964.008	3.6	101	0.00	4.36- 5.36
	Amount Calc. %Drift						
2	HMX	1000.000	1003.049	-0.3	98	0.00	4.82- 5.82
	Amount Calc. %Drift						
3	DNX	1000.000	1019.672	-2.0	111	0.00	4.99- 5.99
4	MNX	1000.000	1123.260	-12.3	115	0.00	6.15- 7.15
5	1,3,5-Trinitrobenzene	1000.000	980.679	1.9	99	0.00	7.12- 8.12
6	RDX	1000.000	1009.691	-1.0	100	0.00	7.45- 8.45
7	1,3-Dinitrobenzene	1000.000	963.558	3.6	99	0.00	9.39-10.39
8	Nitrobenzene	1000.000	972.806	2.7	99	0.00	10.31-11.31
9	2,4,6-Trinitrotoluene	1000.000	1009.900	-1.0	103	0.00	11.32-12.32
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	1146.146	-14.6	118	0.00	12.68-13.68
12 S	3,4-Dinitrotoluene		----------NA----------				
13	2,6-Dinitrotoluene	1000.000	951.593	4.8	97	0.00	14.02-15.02
14	2,4-Dinitrotoluene	1000.000	977.259	2.3	99	-0.01	14.67-15.67
15	3,5-Dinitroaniline	1000.000	1111.337	-11.1	113	-0.02	15.46-16.46
16	o-Nitrotoluene	1000.000	971.233	2.9	99	0.00	16.17-17.17
17	p-Nitrotoluene	2000.000	1979.526	1.0	100	-0.01	17.24-18.24
18	4-Amino-2,6-Dinitrotol	2000.000	1979.526	1.0	100	-0.01	17.24-18.24
19	m-Nitrotoluene	1000.000	961.220	3.9	99	0.00	18.41-19.41
20	2-Amino-4,6-Dinitrotol	1000.000	1001.271	-0.1	101	-0.01	19.11-20.11
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	1000.000	965.197	3.5	101	0.00	4.36- 5.36
2	HMX	1000.000	884.514	11.5	98	0.00	4.82- 5.82
3	DNX	1000.000	1019.672	-2.0	111	0.00	4.99- 5.99
4	MNX	1000.000	1123.260	-12.3	115	0.00	6.15- 7.15
5	1,3,5-Trinitrobenzene	1000.000	980.523	1.9	99	0.00	7.12- 8.12
6	RDX	1000.000	1004.277	-0.4	100	0.00	7.45- 8.45
	Amount Calc. %Drift						
7	1,3-Dinitrobenzene	1000.000	1041.049	-4.1	97	0.00	9.39-10.39
8	Nitrobenzene	1000.000	1090.343	-9.0	97	0.00	10.31-11.31
9	2,4,6-Trinitrotoluene	1000.000	1079.205	-7.9	104	0.00	11.32-12.32
10	Nitroglycerin	1000.000	1083.708	-8.4	101	0.00	12.13-13.13
11	Tetryl	1000.000	1209.896	-21.0#	119	0.00	12.68-13.68

Initial Calibration Verification

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2952-ICV2952
Lab FileID: GG620961.D

12	S	3,4-Dinitrotoluene			----------NA----------			
			Amount	Calc.	%Drift			
13		2,6-Dinitrotoluene	1000.000	1028.201	-2.8	99	0.00	14.02-15.02
14		2,4-Dinitrotoluene	1000.000	988.026	1.2	101	-0.01	14.67-15.67
15		3,5-Dinitroaniline	1000.000	1107.264	-10.7	114	-0.02	15.46-16.46
16		o-Nitrotoluene	1000.000	1009.925	-1.0	99	0.00	16.17-17.17
17		p-Nitrotoluene	2000.000	2176.629	-8.8	101	-0.01	17.24-18.24
18		4-Amino-2,6-Dinitrotol	2000.000	2171.897	-8.6	101	-0.01	17.24-18.24
19		m-Nitrotoluene	1000.000	950.876	4.9	101	0.00	18.41-19.41
20		2-Amino-4,6-Dinitrotol	1000.000	1022.974	-2.3	101	-0.01	19.11-20.11
			Amount	Calc.	%Drift			
21		PETN	1000.000	1099.126	-9.9	103	-0.01	21.27-22.27

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG620958.D GGG2952_032221.M Tue Mar 23 10:46:43 2021

8.7.8

8

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2966-CC2952
Lab FileID: GG621161.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621161.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621161.D\dad1A.ch
Acq On : 23-Apr-2021, 12:36:02 Operator: jamesb
Sample : cc2952-1000 Inst : G1315B
Misc : op84960,GGG2966,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	1000.000	816.194	18.4#	85	-0.01	4.36- 5.36
		Amount Calc. %Drift						
2		HMX	1000.000	1041.031	-4.1	102	-0.01	4.83- 5.83
		Amount Calc. %Drift						
3		DNX	1000.000	955.766	4.4	104	-0.02	4.99- 5.99
4		MNX	1000.000	1076.595	-7.7	111	-0.03	6.14- 7.14
5		1,3,5-Trinitrobenzene	1000.000	1003.315	-0.3	102	-0.03	7.10- 8.10
6		RDX	1000.000	1024.070	-2.4	101	-0.04	7.43- 8.43
7		1,3-Dinitrobenzene	1000.000	983.327	1.7	101	-0.04	9.35-10.35
8		Nitrobenzene	1000.000	999.659	0.0	101	-0.04	10.26-11.26
9		2,4,6-Trinitrotoluene	1000.000	1041.276	-4.1	107	-0.04	11.25-12.25
10		Nitroglycerin	----------NA----------					
11		Tetryl	1000.000	1200.853	-20.1#	124	-0.05	12.59-13.59
12	S	3,4-Dinitrotoluene	1000.000	1037.883	-3.8	106	-0.05	13.64-14.64
13		2,6-Dinitrotoluene	1000.000	983.645	1.6	100	-0.05	13.94-14.94
14		2,4-Dinitrotoluene	1000.000	998.672	0.1	101	-0.06	14.58-15.58
15		3,5-Dinitroaniline	1000.000	997.720	0.2	102	-0.07	15.33-16.33
16		o-Nitrotoluene	1000.000	990.789	0.9	101	-0.07	16.07-17.07
17		p-Nitrotoluene	2000.000	2017.376	-0.9	102	-0.09	17.12-18.12
18		4-Amino-2,6-Dinitrotol	2000.000	2017.376	-0.9	102	-0.09	17.12-18.12
19		m-Nitrotoluene	1000.000	994.549	0.5	102	-0.08	18.30-19.30
20		2-Amino-4,6-Dinitrotol	1000.000	1011.196	-1.1	102	-0.08	18.96-19.96
21		PETN	----------NA----------					
*****		Signal #2 *****						
1		TNX	1000.000	817.201	18.3#	85	-0.01	4.36- 5.36
2		HMX	1000.000	918.008	8.2	102	-0.01	4.83- 5.83
3		DNX	1000.000	955.766	4.4	104	-0.02	4.99- 5.99
4		MNX	1000.000	1076.595	-7.7	111	-0.03	6.14- 7.14
5		1,3,5-Trinitrobenzene	1000.000	1003.155	-0.3	102	-0.03	7.10- 8.10
6		RDX	1000.000	1018.579	-1.9	101	-0.04	7.43- 8.43
		Amount Calc. %Drift						
7		1,3-Dinitrobenzene	1000.000	1062.832	-6.3	99	-0.04	9.35-10.35
8		Nitrobenzene	1000.000	1076.537	-7.7	96	-0.04	10.26-11.26
9		2,4,6-Trinitrotoluene	1000.000	1096.226	-9.6	106	-0.04	11.25-12.25
10		Nitroglycerin	1000.000	1052.673	-5.3	98	-0.04	12.05-13.05
11		Tetryl	1000.000	1254.239	-25.4#	123	-0.06	12.59-13.59

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2966-CC2952
Lab FileID: GG621161.D

			Amount	Calc.	%Drift			
12	S	3,4-Dinitrotoluene	1000.000	1065.154	-6.5	107	-0.05	13.64-14.64
			Amount	Calc.	%Drift			
13		2,6-Dinitrotoluene	1000.000	1035.357	-3.5	100	-0.05	13.94-14.94
14		2,4-Dinitrotoluene	1000.000	1030.511	-3.1	106	-0.06	14.58-15.58
15		3,5-Dinitroaniline	1000.000	989.180	1.1	101	-0.07	15.33-16.33
16		o-Nitrotoluene	1000.000	1037.130	-3.7	101	-0.07	16.08-17.08
17		p-Nitrotoluene	2000.000	2206.191	-10.3	103	-0.09	17.12-18.12
18		4-Amino-2,6-Dinitrotol	2000.000	2201.395	-10.1	103	-0.09	17.12-18.12
19		m-Nitrotoluene	1000.000	983.090	1.7	104	-0.08	18.30-19.30
20		2-Amino-4,6-Dinitrotol	1000.000	1032.287	-3.2	102	-0.08	18.97-19.97
			Amount	Calc.	%Drift			
21		PETN	1000.000	991.968	0.8	93	-0.07	21.13-22.13

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG620958.D GGG2952_032221.M Mon Apr 26 14:13:13 2021

8.7.9

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Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2966-CC2952
Lab FileID: GG621173.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621173.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621173.D\dad1A.ch
Acq On : 23-Apr-2021, 18:53:10 Operator: jamesb
Sample : cc2952-1000 Inst : G1315B
Misc : op84960,GGG2966,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	1000.000	819.089	18.1#	85	0.00	4.36- 5.36
		Amount Calc. %Drift						
2		HMX	1000.000	1040.023	-4.0	102	0.00	4.83- 5.83
		Amount Calc. %Drift						
3		DNX	1000.000	952.519	4.7	104	0.00	4.99- 5.99
4		MNX	1000.000	1073.553	-7.4	110	-0.01	6.14- 7.14
5		1,3,5-Trinitrobenzene	1000.000	1004.532	-0.5	102	-0.02	7.10- 8.10
6		RDX	1000.000	1026.808	-2.7	101	-0.03	7.43- 8.43
7		1,3-Dinitrobenzene	1000.000	983.866	1.6	101	-0.03	9.35-10.35
8		Nitrobenzene	1000.000	988.728	1.1	100	-0.03	10.26-11.26
9		2,4,6-Trinitrotoluene	1000.000	1039.238	-3.9	106	-0.03	11.25-12.25
10		Nitroglycerin		NA				
11		Tetryl	1000.000	1190.084	-19.0#	123	-0.05	12.59-13.59
12	S	3,4-Dinitrotoluene	1000.000	1043.904	-4.4	107	-0.04	13.64-14.64
13		2,6-Dinitrotoluene	1000.000	971.426	2.9	99	-0.04	13.94-14.94
14		2,4-Dinitrotoluene	1000.000	994.746	0.5	101	-0.03	14.58-15.58
15		3,5-Dinitroaniline	1000.000	996.452	0.4	101	-0.02	15.33-16.33
16		o-Nitrotoluene	1000.000	976.376	2.4	100	-0.02	16.07-17.07
17		p-Nitrotoluene	2000.000	2004.757	-0.2	101	-0.02	17.12-18.12
18		4-Amino-2,6-Dinitrotol	2000.000	2004.757	-0.2	101	-0.02	17.12-18.12
19		m-Nitrotoluene	1000.000	979.167	2.1	101	-0.02	18.30-19.30
20		2-Amino-4,6-Dinitrotol	1000.000	1009.235	-0.9	102	0.00	18.96-19.96
21		PETN		NA				

***** Signal #2 *****

1		TNX	1000.000	820.100	18.0#	85	0.00	4.36- 5.36
2		HMX	1000.000	917.119	8.3	102	0.00	4.83- 5.83
3		DNX	1000.000	952.519	4.7	104	0.00	4.99- 5.99
4		MNX	1000.000	1073.553	-7.4	110	-0.01	6.14- 7.14
5		1,3,5-Trinitrobenzene	1000.000	1004.372	-0.4	102	-0.02	7.10- 8.10
6		RDX	1000.000	1021.302	-2.1	101	-0.03	7.43- 8.43
		Amount Calc. %Drift						
7		1,3-Dinitrobenzene	1000.000	1040.772	-4.1	97	-0.03	9.35-10.35
8		Nitrobenzene	1000.000	1055.843	-5.6	94	-0.03	10.26-11.26
9		2,4,6-Trinitrotoluene	1000.000	1120.258	-12.0	108	-0.03	11.25-12.25
10		Nitroglycerin	1000.000	1107.317	-10.7	103	-0.04	12.05-13.05
11		Tetryl	1000.000	1246.148	-24.6#	122	-0.05	12.59-13.59

8.7.10

8

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG2966-CC2952
Lab FileID: GG621173.D

			Amount	Calc.	%Drift			
12	S	3,4-Dinitrotoluene	1000.000	1071.065	-7.1	107	-0.04	13.64-14.64
			Amount	Calc.	%Drift			
13		2,6-Dinitrotoluene	1000.000	1021.195	-2.1	98	-0.03	13.94-14.94
14		2,4-Dinitrotoluene	1000.000	1000.760	-0.1	103	-0.03	14.58-15.58
15		3,5-Dinitroaniline	1000.000	991.814	0.8	102	-0.02	15.33-16.33
16		o-Nitrotoluene	1000.000	1028.834	-2.9	100	-0.03	16.08-17.08
17		p-Nitrotoluene	2000.000	2194.418	-9.7	102	-0.02	17.12-18.12
18		4-Amino-2,6-Dinitrotol	2000.000	2189.648	-9.5	102	-0.02	17.12-18.12
19		m-Nitrotoluene	1000.000	960.461	4.0	102	-0.02	18.30-19.30
20		2-Amino-4,6-Dinitrotol	1000.000	1030.729	-3.1	102	0.00	18.97-19.97
			Amount	Calc.	%Drift			
21		PETN	1000.000	936.141	6.4	88	-0.04	21.13-22.13

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG620958.D GGG2952_032221.M Mon Apr 26 14:13:14 2021

8.7.10

8

Initial Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2428-ICC2428
Lab FileID: PP390451.D

Response Factor Report G1315B

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Initial Calibration

Calibration Files
20 =PP390446.D 50 =PP390447.D 100 =PP390448.D 200 =PP390449.D
500 =PP390450.D 1000=PP390451.D 2500=PP390452.D 5000=PP390453.D

Compound	20	50	100	200	500	1000	2500	5000	Avg		%RSD
1) TNX	2.238	2.333	2.909	2.629	2.732	2.656	2.616	2.617	2.591	E3	8.24
2) HMX	1.672	1.507	1.680	1.367	1.510	1.478	1.458	1.461	1.517	E3	7.10
3) DNX	2.826	2.540	2.879	2.561	2.450	2.424	2.375	2.377	2.554	E3	7.70
4) MNX	3.505	2.998	2.970	2.755	2.737	2.658	2.653	2.639	2.864	E3	10.27
5) RDX	2.166	1.890	2.133	1.745	1.787	1.737	1.722	1.705	1.860	E3	10.08
6) 1,3,5-Trinit	4.386	3.842	4.470	3.949	3.830	3.772	3.724	3.712	3.961	E3	7.54
7) 1,3-Dinitrob	6.442	5.043	5.548	5.273	5.042	4.949	4.900	4.903	5.263	E3	9.98
8) 3,5-Dinitroa	4.758	4.546	4.379	3.928	3.795	3.680	3.669	3.696	4.056	E3	10.80
9) Nitrobenzene	3.601	3.473	3.272	3.148	2.988	2.936	2.889	2.889	3.150	E3	8.74
10) Nitroglyceri									0.000		-1.00
11) Tetryl	3.441	2.884	3.180	2.802	2.751	2.658	2.622	2.598	2.867	E3	10.39
12) 2,4,6-Trinit	4.236	4.042	4.174	3.659	3.623	3.489	3.467	3.460	3.769	E3	8.72
13) 2-Amino-4,6-	3.741	3.661	3.731	3.307	3.196	3.086	3.082	3.071	3.359	E3	8.99
14) 4-Amino-2,6-	3.349	2.355	2.734	2.488	2.346	2.259	2.257	2.250	2.505	E3	15.09
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000											
Response Ratio = 0.00000 + 2252.58229 *A											
15) 3,4-Dinitrot	1.783	2.572	2.307	2.284	1.895	1.831	1.838	1.840	2.044	E3	14.62
16) 2,4-Dinitrot	5.653	4.669	5.090	4.809	4.490	4.375	4.368	4.369	4.728	E3	9.58
17) 2,6-Dinitrot	3.395	3.207	2.693	2.582	2.534	2.468	2.486	2.484	2.731	E3	13.28
18) o-Nitrotolue	2.995	2.328	2.383	2.025	2.191	2.123	2.080	2.081	2.276	E3	13.91
19) p-Nitrotolue	4.339	3.604	3.544	3.299	3.289	3.252	3.218	3.228	3.472	E3	10.95
20) m-Nitrotolue	3.955	3.063	3.426	3.354	3.116	3.062	3.072	3.094	3.268	E3	9.55
21) PETN									0.000		-1.00

Signal #2

1) TNX	3.962	3.850	4.507	4.213	4.129	4.017	4.042	3.988	4.089	E3	4.91
2) HMX	4.820	4.432	4.682	4.543	4.228	4.176	4.103	3.994	4.372	E3	6.72
3) DNX	6.486	4.802	5.044	4.564	4.036	3.920	3.840	3.755	4.556	E3	20.07
---- Linear regr., Force(0,0) ---- Coefficient = 0.9999											
Response Ratio = 0.00000 + 3779.93113 *A											
4) MNX	4.874	4.497	5.140	4.279	4.253	4.196	4.152	4.126	4.440	E3	8.44
5) RDX	3.114	3.062	3.288	2.918	2.863	2.813	2.781	2.767	2.951	E3	6.31
6) 1,3,5-Trinit	8.692	7.589	8.223	7.669	7.524	7.333	7.282	7.258	7.696	E3	6.60
7) 1,3-Dinitrob	3.949	3.606	4.122	3.661	3.547	3.375	3.468	3.426	3.644	E3	7.21
8) 3,5-Dinitroa	7.655	6.712	7.399	6.865	6.447	6.294	6.277	6.385	6.754	E3	7.73
9) Nitrobenzene	4.340	3.228	3.170	2.964	2.866	2.798	2.818	2.875	3.132	E3	16.39
---- Linear regr., Force(0,0) ---- Coefficient = 0.9999											
Response Ratio = 0.00000 + 2862.16162 *A											
10) Nitroglyceri	2.211	1.806	1.379	1.255	1.194	1.173	1.161	1.155	1.417	E3	27.39
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000											
Response Ratio = 0.00000 + 1157.16673 *A											
11) Tetryl	6.028	5.026	4.841	4.460	4.302	4.191	4.179	4.190	4.652	E3	13.78

8.7.11

8

Initial Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2428-ICC2428
Lab FileID: PP390451.D

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12) 2,4,6-Trinit 5.750 4.896 4.949 4.561 4.307 4.239 4.238 4.270 4.651 E3  11.40
13) 2-Amino-4,6- 6.048 5.150 5.580 4.951 4.730 4.686 4.730 4.767 5.080 E3   9.72
14) 4-Amino-2,6- 5.041 4.281 5.330 4.764 4.692 4.622 4.664 4.709 4.763 E3   6.49
15) 3,4-Dinitrot 2.080 3.107 3.645 3.430 3.271 3.256 3.313 3.366 3.184 E3  14.83
16) 2,4-Dinitrot 3.173 3.506 3.331 3.166 2.968 2.891 2.904 2.956 3.112 E3   7.16
17) 2,6-Dinitrot 2.944 4.274 4.268 3.626 3.369 3.321 3.283 3.318 3.550 E3  13.56
18) o-Nitrotolue 2.387 3.212 3.448 2.904 2.919 2.857 2.842 2.856 2.928 E3  10.51
19) p-Nitrotolue 4.858 2.834 2.392 2.396 2.622 2.578 2.655 2.692 2.878 E3  28.26
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 2680.05833 *A

20) m-Nitrotolue 5.491 3.211 3.816 3.976 3.677 3.644 3.623 3.628 3.883 E3  17.63
            ---- Linear regr., Force(0,0) ----  Coefficient =  1.0000
              Response Ratio = 0.00000 + 3628.09866 *A

21) PETN         1.475 1.357 1.265 1.282 1.328 1.319 1.306 1.291 1.328 E3   4.97
------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          GPP2428_040221PRI.M        Mon Apr 05 09:48:00 2021
```

8.7.11

8

Initial Calibration Verification

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA
Sample: GPP2428-ICV2428
Lab FileID: PP390454.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	1053.490	-5.3	103	0.00	1.03- 1.63
2	HMX	1000.000	1047.321	-4.7	107	0.00	1.17- 1.77
3	DNX	1000.000	1016.793	-1.7	107	0.00	1.42- 2.02
4	MNX	1000.000	1055.416	-5.5	114	0.00	2.02- 2.62
5	RDX	1000.000	1043.832	-4.4	112	0.00	2.54- 3.34
6	1,3,5-Trinitrobenzene	1000.000	1057.615	-5.8	111	0.00	4.30- 5.10
7	1,3-Dinitrobenzene	1000.000	1048.584	-4.9	111	0.00	5.49- 6.29
8	3,5-Dinitroaniline	1000.000	1036.111	-3.6	114	0.00	5.91- 6.71
9	Nitrobenzene	1000.000	1017.201	-1.7	109	0.00	7.03- 7.83
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	1132.369	-13.2	122	0.02	9.17- 9.97
12	2,4,6-Trinitrotoluene	1000.000	1037.196	-3.7	112	0.02	9.53-10.33
13	2-Amino-4,6-Dinitrotol	1000.000	1052.913	-5.3	115	0.02	10.01-10.81
	----------	Amount	Calc.	%Drift	----------		
14	4-Amino-2,6-Dinitrotol	1000.000	1079.022	-7.9	108	0.02	10.54-11.34
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene		----------NA----------				
16	2,4-Dinitrotoluene	1000.000	1039.882	-4.0	112	0.02	11.49-12.29
17	2,6-Dinitrotoluene	1000.000	1013.880	-1.4	112	0.02	11.88-12.78
18	o-Nitrotoluene	1000.000	1039.296	-3.9	111	0.02	14.87-15.87
19	p-Nitrotoluene	1000.000	1061.193	-6.1	113	0.02	15.45-16.45
20	m-Nitrotoluene	1000.000	1054.692	-5.5	113	0.02	16.27-17.27
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	1000.000	1048.387	-4.8	107	0.00	1.03- 1.63
2	HMX	1000.000	1038.791	-3.9	109	0.00	1.17- 1.77
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	1083.242	-8.3	104	0.00	1.42- 2.02
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1000.000	1068.423	-6.8	113	0.00	2.02- 2.62
5	RDX	1000.000	1068.724	-6.9	112	0.00	2.54- 3.34
6	1,3,5-Trinitrobenzene	1000.000	1070.628	-7.1	112	0.00	4.30- 5.10
7	1,3-Dinitrobenzene	1000.000	1069.153	-6.9	115	0.01	5.49- 6.29
8	3,5-Dinitroaniline	1000.000	1090.476	-9.0	117	0.01	5.91- 6.71

Initial Calibration Verification

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2428-ICV2428
Lab FileID: PP390454.D

			Amount	Calc.	%Drift			
9		Nitrobenzene	1000.000	1100.426	-10.0	113	0.01	7.03- 7.83
10		Nitroglycerin	1000.000	1112.130	-11.2	110	0.02	8.56- 9.56
			Amount	Calc.	%Drift			
11		Tetryl	1000.000	1116.838	-11.7	124	0.02	9.18- 9.98
12		2,4,6-Trinitrotoluene	1000.000	1030.927	-3.1	113	0.02	9.53-10.33
13		2-Amino-4,6-Dinitrotol	1000.000	1075.978	-7.6	117	0.02	10.01-10.81
14		4-Amino-2,6-Dinitrotol	1000.000	1078.864	-7.9	111	0.02	10.54-11.34
15	S	3,4-Dinitrotoluene			NA			
16		2,4-Dinitrotoluene	1000.000	1082.557	-8.3	117	0.02	10.69-12.29
17		2,6-Dinitrotoluene	1000.000	1066.442	-6.6	114	0.02	11.05-12.78
18		o-Nitrotoluene	1000.000	1079.356	-7.9	111	0.02	13.06-15.87
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	1105.379	-10.5	115	0.02	13.40-16.45
20		m-Nitrotoluene	1000.000	1131.455	-13.1	113	0.01	16.27-17.27
			Amount	Calc.	%Drift			
21		PETN	1000.000	1082.560	-8.3	109	0.02	14.93-19.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP390451.D GPP2428_040221PRI.M Mon Apr 05 09:47:49 2021

8.7.12

8

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2438-CC2428
Lab FileID: PP390597.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390597.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390597.D\dad1A.ch
Acq On : 22-Apr-2021, 09:06:04 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	968.134	3.2	94	0.00	1.05- 1.65
2	HMX	1000.000	997.715	0.2	102	0.00	1.20- 1.80
3	DNX	1000.000	912.066	8.8	96	0.00	1.45- 2.05
4	MNX	1000.000	899.172	10.1	97	0.00	2.06- 2.66
5	RDX	1000.000	929.619	7.0	100	0.00	2.60- 3.40
6	1,3,5-Trinitrobenzene	1000.000	940.574	5.9	99	-0.02	4.40- 5.20
7	1,3-Dinitrobenzene	1000.000	938.025	6.2	100	-0.02	5.60- 6.40
8	3,5-Dinitroaniline	1000.000	917.457	8.3	101	-0.02	6.02- 6.82
9	Nitrobenzene	1000.000	920.358	8.0	99	-0.03	7.18- 7.98
10	Nitroglycerin	----------	NA	----------			
11	Tetryl	1000.000	887.028	11.3	96	-0.05	9.45-10.25
12	2,4,6-Trinitrotoluene	1000.000	929.875	7.0	100	-0.06	9.81-10.61
13	2-Amino-4,6-Dinitrotol	1000.000	924.792	7.5	101	-0.06	10.26-11.06
	----------	Amount	Calc.	%Drift	----------		
14	4-Amino-2,6-Dinitrotol	1000.000	1024.202	-2.4	102	-0.06	10.81-11.61
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene	1000.000	964.485	3.6	108	-0.07	11.19-11.99
16	2,4-Dinitrotoluene	1000.000	933.520	6.6	101	-0.07	11.79-12.59
17	2,6-Dinitrotoluene	1000.000	930.142	7.0	103	-0.06	12.17-13.07
18	o-Nitrotoluene	1000.000	911.037	8.9	98	-0.08	15.16-16.16
19	p-Nitrotoluene	1000.000	924.798	7.5	99	-0.07	15.75-16.75
20	m-Nitrotoluene	1000.000	930.319	7.0	99	-0.06	16.52-17.52
21	PETN	----------	NA	----------			
*****	Signal #2 *****						
1	TNX	1000.000	929.886	7.0	95	0.00	1.05- 1.65
2	HMX	1000.000	947.050	5.3	99	0.00	1.20- 1.80
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	1005.365	-0.5	97	0.00	1.45- 2.05
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1000.000	911.380	8.9	96	0.00	2.06- 2.66
5	RDX	1000.000	945.390	5.5	99	0.00	2.60- 3.40
6	1,3,5-Trinitrobenzene	1000.000	949.734	5.0	100	-0.02	4.40- 5.20
7	1,3-Dinitrobenzene	1000.000	974.878	2.5	105	-0.02	5.60- 6.40
8	3,5-Dinitroaniline	1000.000	962.569	3.7	103	-0.02	6.02- 6.82

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2438-CC2428
Lab FileID: PP390597.D

			Amount	Calc.	%Drift			
9		Nitrobenzene	1000.000	985.697	1.4	101	-0.03	7.18- 7.98
10		Nitroglycerin	1000.000	936.596	6.3	92	-0.04	8.81- 9.81
			Amount	Calc.	%Drift			
11		Tetryl	1000.000	876.546	12.3	97	-0.05	9.46-10.26
12		2,4,6-Trinitrotoluene	1000.000	881.164	11.9	97	-0.05	9.81-10.61
13		2-Amino-4,6-Dinitrotol	1000.000	884.321	11.6	96	-0.05	10.25-11.05
14		4-Amino-2,6-Dinitrotol	1000.000	932.363	6.8	96	-0.06	10.81-11.61
15	S	3,4-Dinitrotoluene	1000.000	1038.829	-3.9	102	-0.07	11.19-11.99
16		2,4-Dinitrotoluene	1000.000	873.657	12.6	94	-0.07	10.99-12.59
17		2,6-Dinitrotoluene	1000.000	905.097	9.5	97	-0.07	11.35-13.08
18		o-Nitrotoluene	1000.000	944.050	5.6	97	-0.07	13.35-16.16
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	883.160	11.7	92	-0.08	13.71-16.76
20		m-Nitrotoluene	1000.000	1006.398	-0.6	100	-0.06	16.52-17.52
			Amount	Calc.	%Drift			
21		PETN	1000.000	989.173	1.1	100	-0.05	15.18-19.30

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP390451.D GPP2428_040221PRI.M Thu Apr 22 11:51:12 2021

8.7.13

8

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2438-CC2428
Lab FileID: PP390601.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1A.ch
Acq On : 22-Apr-2021, 11:10:00 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	970.307	3.0	95	0.00	1.05- 1.65
2	HMX	1000.000	1001.544	-0.2	103	0.00	1.20- 1.80
3	DNX	1000.000	913.132	8.7	96	0.00	1.45- 2.05
4	MNX	1000.000	900.576	9.9	97	0.00	2.06- 2.66
5	RDX	1000.000	929.350	7.1	100	0.00	2.60- 3.40
6	1,3,5-Trinitrobenzene	1000.000	940.444	6.0	99	0.00	4.40- 5.20
7	1,3-Dinitrobenzene	1000.000	938.746	6.1	100	0.00	5.60- 6.40
8	3,5-Dinitroaniline	1000.000	915.585	8.4	101	0.01	6.02- 6.82
9	Nitrobenzene	1000.000	916.594	8.3	98	0.00	7.18- 7.98
10	Nitroglycerin	----------	----------NA----------				
11	Tetryl	1000.000	881.798	11.8	95	0.00	9.45-10.25
12	2,4,6-Trinitrotoluene	1000.000	929.993	7.0	100	0.00	9.81-10.61
13	2-Amino-4,6-Dinitrotol	1000.000	925.933	7.4	101	0.01	10.26-11.06
	----------	Amount	Calc.	%Drift	----------		
14	4-Amino-2,6-Dinitrotol	1000.000	1015.613	-1.6	101	0.01	10.81-11.61
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene	1000.000	966.049	3.4	108	0.00	11.19-11.99
16	2,4-Dinitrotoluene	1000.000	928.330	7.2	100	0.00	11.79-12.59
17	2,6-Dinitrotoluene	1000.000	928.517	7.1	103	0.01	12.17-13.07
18	o-Nitrotoluene	1000.000	909.697	9.0	98	0.00	15.16-16.16
19	p-Nitrotoluene	1000.000	924.908	7.5	99	0.00	15.75-16.75
20	m-Nitrotoluene	1000.000	931.817	6.8	99	0.00	16.52-17.52
21	PETN	----------	----------NA----------				
*****	Signal #2 *****						
1	TNX	1000.000	930.664	6.9	95	0.00	1.05- 1.65
2	HMX	1000.000	949.263	5.1	99	0.00	1.20- 1.80
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	1008.846	-0.9	97	0.00	1.45- 2.05
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1000.000	915.156	8.5	97	0.00	2.06- 2.66
5	RDX	1000.000	948.093	5.2	99	0.00	2.60- 3.40
6	1,3,5-Trinitrobenzene	1000.000	941.080	5.9	99	0.00	4.40- 5.20
7	1,3-Dinitrobenzene	1000.000	980.714	1.9	106	0.00	5.60- 6.40
8	3,5-Dinitroaniline	1000.000	955.075	4.5	102	0.01	6.02- 6.82

8.7.14

8

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2438-CC2428
Lab FileID: PP390601.D

			Amount	Calc.	%Drift			
9		Nitrobenzene	1000.000	990.700	0.9	101	0.00	7.18- 7.98
10		Nitroglycerin	1000.000	943.393	5.7	93	0.00	8.81- 9.81
			Amount	Calc.	%Drift			
11		Tetryl	1000.000	871.961	12.8	97	0.00	9.46-10.26
12		2,4,6-Trinitrotoluene	1000.000	884.234	11.6	97	0.00	9.81-10.61
13		2-Amino-4,6-Dinitrotol	1000.000	884.487	11.6	96	0.01	10.25-11.05
14		4-Amino-2,6-Dinitrotol	1000.000	927.641	7.2	96	0.00	10.81-11.61
15	S	3,4-Dinitrotoluene	1000.000	1047.868	-4.8	102	0.00	11.19-11.99
16		2,4-Dinitrotoluene	1000.000	874.502	12.5	94	0.00	10.99-12.59
17		2,6-Dinitrotoluene	1000.000	904.700	9.5	97	0.00	11.35-13.08
18		o-Nitrotoluene	1000.000	923.826	7.6	95	0.00	13.35-16.16
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	898.569	10.1	93	0.00	13.71-16.76
20		m-Nitrotoluene	1000.000	961.370	3.9	96	0.00	16.52-17.52
			Amount	Calc.	%Drift			
21		PETN	1000.000	968.164	3.2	97	0.00	15.18-19.30

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP390451.D GPP2428_040221PRI.M Thu Apr 22 11:51:13 2021

8.7.14

8

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2438-CC2428
Lab FileID: PP390611.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1A.ch
Acq On : 22-Apr-2021, 16:19:39 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	1000.000	970.277	3.0	95	0.00	1.05- 1.65
2		HMX	1000.000	995.786	0.4	102	0.00	1.20- 1.80
3		DNX	1000.000	915.133	8.5	96	0.00	1.45- 2.05
4		MNX	1000.000	899.916	10.0	97	0.00	2.06- 2.66
5		RDX	1000.000	927.464	7.3	99	0.00	2.60- 3.40
6		1,3,5-Trinitrobenzene	1000.000	938.915	6.1	99	0.01	4.40- 5.20
7		1,3-Dinitrobenzene	1000.000	937.365	6.3	100	0.01	5.60- 6.40
8		3,5-Dinitroaniline	1000.000	912.617	8.7	101	0.02	6.02- 6.82
9		Nitrobenzene	1000.000	911.126	8.9	98	0.01	7.18- 7.98
10		Nitroglycerin			NA			
11		Tetryl	1000.000	882.986	11.7	95	0.03	9.45-10.25
12		2,4,6-Trinitrotoluene	1000.000	929.514	7.0	100	0.02	9.81-10.61
13		2-Amino-4,6-Dinitrotol	1000.000	927.644	7.2	101	0.03	10.26-11.06
		Compound	Amount	Calc.	%Drift			
14		4-Amino-2,6-Dinitrotol	1000.000	1017.784	-1.8	101	0.03	10.81-11.61
		Compound	Amount	Calc.	%Drift			
15	S	3,4-Dinitrotoluene	1000.000	962.060	3.8	107	0.03	11.19-11.99
16		2,4-Dinitrotoluene	1000.000	931.068	6.9	101	0.02	11.79-12.59
17		2,6-Dinitrotoluene	1000.000	928.787	7.1	103	0.03	12.17-13.07
18		o-Nitrotoluene	1000.000	900.262	10.0	96	0.02	15.16-16.16
19		p-Nitrotoluene	1000.000	917.633	8.2	98	0.02	15.75-16.75
20		m-Nitrotoluene	1000.000	921.677	7.8	98	0.02	16.52-17.52
21		PETN			NA			

***** Signal #2 *****

1		TNX	1000.000	933.156	6.7	95	0.00	1.05- 1.65
2		HMX	1000.000	951.091	4.9	100	0.00	1.20- 1.80
		Compound	Amount	Calc.	%Drift			
3		DNX	1000.000	1014.469	-1.4	98	0.00	1.45- 2.05
		Compound	Amount	Calc.	%Drift			
4		MNX	1000.000	916.120	8.4	97	0.00	2.06- 2.66
5		RDX	1000.000	947.460	5.3	99	0.00	2.60- 3.40
6		1,3,5-Trinitrobenzene	1000.000	941.378	5.9	99	0.01	4.40- 5.20
7		1,3-Dinitrobenzene	1000.000	979.673	2.0	106	0.01	5.60- 6.40
8		3,5-Dinitroaniline	1000.000	957.889	4.2	103	0.02	6.02- 6.82

Continuing Calibration Summary

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2438-CC2428
Lab FileID: PP390611.D

			Amount	Calc.	%Drift			
9		Nitrobenzene	1000.000	976.893	2.3	100	0.01	7.18- 7.98
10		Nitroglycerin	1000.000	948.982	5.1	94	0.02	8.81- 9.81
			Amount	Calc.	%Drift			
11		Tetryl	1000.000	876.015	12.4	97	0.03	9.46-10.26
12		2,4,6-Trinitrotoluene	1000.000	886.270	11.4	97	0.03	9.81-10.61
13		2-Amino-4,6-Dinitrotol	1000.000	887.771	11.2	96	0.03	10.25-11.05
14		4-Amino-2,6-Dinitrotol	1000.000	931.617	6.8	96	0.03	10.81-11.61
15	S	3,4-Dinitrotoluene	1000.000	1048.861	-4.9	103	0.03	11.19-11.99
16		2,4-Dinitrotoluene	1000.000	880.571	11.9	95	0.03	10.99-12.59
17		2,6-Dinitrotoluene	1000.000	907.536	9.2	97	0.03	11.35-13.08
18		o-Nitrotoluene	1000.000	902.534	9.7	93	0.03	13.35-16.16
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	896.530	10.3	93	0.02	13.71-16.76
20		m-Nitrotoluene	1000.000	950.308	5.0	95	0.02	16.52-17.52
			Amount	Calc.	%Drift			
21		PETN	1000.000	978.906	2.1	99	0.01	15.18-19.30

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP390451.D GPP2428_040221PRI.M Fri Apr 23 14:26:03 2021

8.7.15

8

Run Sequence Report

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GBB2026	**Method:** SW846 8330A	**Instrument ID:** GCBB

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GBB2026-IC2026	BB068880.D	04/22/21 13:03	n/a	Initial cal 20
GBB2026-IC2026	BB068881.D	04/22/21 13:34	n/a	Initial cal 50
GBB2026-IC2026	BB068882.D	04/22/21 14:05	n/a	Initial cal 100
GBB2026-IC2026	BB068883.D	04/22/21 14:36	n/a	Initial cal 200
GBB2026-IC2026	BB068884.D	04/22/21 15:07	n/a	Initial cal 500
GBB2026-ICC2026	BB068885.D	04/22/21 15:38	n/a	Initial cal 1000
GBB2026-IC2026	BB068886.D	04/22/21 16:09	n/a	Initial cal 2500
GBB2026-IC2026	BB068887.D	04/22/21 16:40	n/a	Initial cal 5000
GBB2026-ICV2026	BB068888.D	04/22/21 17:11	n/a	Initial cal verification 1000
OP85043-MB	BB068890.D	04/22/21 18:13	OP85043	Method Blank
OP85043-BS	BB068891.D	04/22/21 18:44	OP85043	Blank Spike
ZZZZZZ	BB068892.D	04/22/21 19:15	OP85043	(unrelated sample)
ZZZZZZ	BB068893.D	04/22/21 19:46	OP85043	(unrelated sample)
ZZZZZZ	BB068894.D	04/22/21 20:17	OP85043	(unrelated sample)
FA84553-4	BB068895.D	04/22/21 20:48	OP85043	(used for QC only; not part of job FA84640)
ZZZZZZ	BB068896.D	04/22/21 21:19	OP85043	(unrelated sample)
ZZZZZZ	BB068897.D	04/22/21 21:50	OP85043	(unrelated sample)
ZZZZZZ	BB068898.D	04/22/21 22:21	OP85043	(unrelated sample)
ZZZZZZ	BB068899.D	04/22/21 22:52	OP85043	(unrelated sample)
GBB2026-CC2026	BB068900.D	04/22/21 23:23	n/a	Continuing cal 1000
ZZZZZZ	BB068902.D	04/23/21 00:25	OP85043	(unrelated sample)
OP85043-MS	BB068903.D	04/23/21 00:56	OP85043	Matrix Spike
OP85043-MSD	BB068904.D	04/23/21 01:27	OP85043	Matrix Spike Duplicate
GBB2026-ECC2026	BB068905.D	04/23/21 01:58	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GBB2027 **Method:** SW846 8330A **Instrument ID:** GCBB

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GBB2027-CC2026	BB068906.D	04/23/21 09:20	n/a	Continuing cal 1000
OP85067-MB	BB068908.D	04/23/21 10:22	OP85067	Method Blank
OP85067-BS	BB068909.D	04/23/21 10:52	OP85067	Blank Spike
ZZZZZZ	BB068910.D	04/23/21 11:23	OP85067	(unrelated sample)
ZZZZZZ	BB068911.D	04/23/21 11:54	OP85067	(unrelated sample)
ZZZZZZ	BB068912.D	04/23/21 12:25	OP85067	(unrelated sample)
FA84824-1	BB068913.D	04/23/21 12:56	OP85067	(used for QC only; not part of job FA84640)
ZZZZZZ	BB068914.D	04/23/21 13:27	OP85067	(unrelated sample)
ZZZZZZ	BB068915.D	04/23/21 13:58	OP85067	(unrelated sample)
OP85067-MS	BB068916.D	04/23/21 14:29	OP85067	Matrix Spike
OP85067-MSD	BB068917.D	04/23/21 15:00	OP85067	Matrix Spike Duplicate
GBB2027-CC2026	BB068918.D	04/23/21 15:31	n/a	Continuing cal 1000
OP85042-MB	BB068920.D	04/23/21 16:33	OP85042	Method Blank
OP85042-BS	BB068921.D	04/23/21 17:04	OP85042	Blank Spike
ZZZZZZ	BB068922.D	04/23/21 17:35	OP85042	(unrelated sample)
ZZZZZZ	BB068923.D	04/23/21 18:06	OP85042	(unrelated sample)
ZZZZZZ	BB068924.D	04/23/21 18:37	OP85042	(unrelated sample)
ZZZZZZ	BB068925.D	04/23/21 19:08	OP85042	(unrelated sample)
ZZZZZZ	BB068926.D	04/23/21 19:39	OP85042	(unrelated sample)
ZZZZZZ	BB068927.D	04/23/21 20:10	OP85042	(unrelated sample)
ZZZZZZ	BB068928.D	04/23/21 20:41	OP85042	(unrelated sample)
ZZZZZZ	BB068929.D	04/23/21 21:12	OP85042	(unrelated sample)
OP85001-MB	BB068930.D	04/23/21 21:43	OP85001	Method Blank
GBB2027-CC2026	BB068931.D	04/23/21 22:14	n/a	Continuing cal 1000
ZZZZZZ	BB068933.D	04/23/21 23:16	OP85042	(unrelated sample)
ZZZZZZ	BB068934.D	04/23/21 23:47	OP85042	(unrelated sample)
ZZZZZZ	BB068935.D	04/24/21 00:18	OP85042	(unrelated sample)
ZZZZZZ	BB068936.D	04/24/21 00:49	OP85042	(unrelated sample)
FA84757-15	BB068937.D	04/24/21 01:20	OP85042	(used for QC only; not part of job FA84640)
OP85042-MS	BB068938.D	04/24/21 01:51	OP85042	Matrix Spike
OP85042-MSD	BB068939.D	04/24/21 02:22	OP85042	Matrix Spike Duplicate
ZZZZZZ	BB068940.D	04/24/21 02:53	OP85001	(unrelated sample)
FA84640-3	BB068941.D	04/24/21 03:24	OP84960	54MW12
GBB2027-ECC2026	BB068942.D	04/24/21 03:55	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GBB2028 **Method:** SW846 8330A **Instrument ID:** GCBB

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GBB2028-CC2026	BB068958.D	04/26/21 14:48	n/a	Continuing cal 1000
ZZZZZZ	BB068959.D	04/26/21 15:19	OP85001	(unrelated sample)
ZZZZZZ	BB068960.D	04/26/21 15:50	OP85001	(unrelated sample)
ZZZZZZ	BB068961.D	04/26/21 16:21	OP85001	(unrelated sample)
ZZZZZZ	BB068962.D	04/26/21 16:52	OP85001	(unrelated sample)
GBB2028-CC2026	BB068963.D	04/26/21 17:23	n/a	Continuing cal 1000
ZZZZZZ	BB068964.D	04/26/21 17:54	OP85001	(unrelated sample)
ZZZZZZ	BB068965.D	04/26/21 18:25	OP85001	(unrelated sample)
ZZZZZZ	BB068966.D	04/26/21 18:55	OP85001	(unrelated sample)
ZZZZZZ	BB068967.D	04/26/21 19:26	OP85001	(unrelated sample)
OP84960-MS	BB068968.D	04/26/21 19:57	OP84960	Matrix Spike
OP84960-MSD	BB068969.D	04/26/21 20:28	OP84960	Matrix Spike Duplicate
ZZZZZZ	BB068970.D	04/26/21 20:59	OP85067	(unrelated sample)
ZZZZZZ	BB068971.D	04/26/21 21:30	OP85067	(unrelated sample)
ZZZZZZ	BB068972.D	04/26/21 22:01	OP85067	(unrelated sample)
ZZZZZZ	BB068973.D	04/26/21 22:32	OP85042	(unrelated sample)
GBB2028-ECC2026	BB068974.D	04/26/21 23:03	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG2952	**Method:** SW846 8330A	**Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG2952-IC2952	GG620953.D	03/22/21 13:51	n/a	Initial cal 20
GGG2952-IC2952	GG620954.D	03/22/21 14:22	n/a	Initial cal 50
GGG2952-IC2952	GG620955.D	03/22/21 14:54	n/a	Initial cal 100
GGG2952-IC2952	GG620956.D	03/22/21 15:25	n/a	Initial cal 200
GGG2952-IC2952	GG620957.D	03/22/21 15:57	n/a	Initial cal 500
GGG2952-ICC2952	GG620958.D	03/22/21 16:28	n/a	Initial cal 1000
GGG2952-IC2952	GG620959.D	03/22/21 17:00	n/a	Initial cal 2500
GGG2952-IC2952	GG620960.D	03/22/21 17:31	n/a	Initial cal 5000
GGG2952-ICV2952	GG620961.D	03/22/21 18:02	n/a	Initial cal verification 1000

Run Sequence Report

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG2966 **Method:** SW846 8330A **Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG2966-CC2952	GG621161.D	04/23/21 12:36	n/a	Continuing cal 1000
FA84640-1	GG621164.D	04/23/21 14:10	OP84960	54MW13
FA84640-2	GG621165.D	04/23/21 14:41	OP84960	54TW13
FA84640-3	GG621166.D	04/23/21 15:13	OP84960	54MW12
FA84640-3	GG621167.D	04/23/21 15:44	OP84960	54MW12
FA84640-4	GG621168.D	04/23/21 16:16	OP84960	54MW10
OP85001-MB	GG621170.D	04/23/21 17:18	OP85001	Method Blank
ZZZZZZ	GG621171.D	04/23/21 17:50	OP85001	(unrelated sample)
ZZZZZZ	GG621172.D	04/23/21 18:21	OP85001	(unrelated sample)
GGG2966-CC2952	GG621173.D	04/23/21 18:53	n/a	Continuing cal 1000
ZZZZZZ	GG621175.D	04/23/21 19:56	OP85001	(unrelated sample)
ZZZZZZ	GG621176.D	04/23/21 20:27	OP85001	(unrelated sample)
ZZZZZZ	GG621177.D	04/23/21 20:58	OP85001	(unrelated sample)
ZZZZZZ	GG621178.D	04/23/21 21:30	OP85001	(unrelated sample)
ZZZZZZ	GG621179.D	04/23/21 22:01	OP85001	(unrelated sample)
ZZZZZZ	GG621180.D	04/23/21 22:33	OP85001	(unrelated sample)
ZZZZZZ	GG621181.D	04/23/21 23:04	OP85001	(unrelated sample)
ZZZZZZ	GG621183.D	04/24/21 00:07	OP85001	(unrelated sample)
ZZZZZZ	GG621184.D	04/24/21 00:38	OP85001	(unrelated sample)
GGG2966-CC2952	GG621185.D	04/24/21 01:10	n/a	Continuing cal 1000
OP85067-MB	GG621186.D	04/24/21 01:41	OP85067	Method Blank
ZZZZZZ	GG621187.D	04/24/21 02:13	OP85067	(unrelated sample)
ZZZZZZ	GG621188.D	04/24/21 02:44	OP85067	(unrelated sample)
ZZZZZZ	GG621189.D	04/24/21 03:15	OP85067	(unrelated sample)
ZZZZZZ	GG621190.D	04/24/21 03:47	OP85067	(unrelated sample)
ZZZZZZ	GG621191.D	04/24/21 04:18	OP85067	(unrelated sample)
ZZZZZZ	GG621192.D	04/24/21 04:50	OP85067	(unrelated sample)
FA84824-1	GG621193.D	04/24/21 05:21	OP85067	(used for QC only; not part of job FA84640)
ZZZZZZ	GG621194.D	04/24/21 05:53	OP85067	(unrelated sample)
ZZZZZZ	GG621195.D	04/24/21 06:24	OP85067	(unrelated sample)
GGG2966-ECC2952	GG621196.D	04/24/21 06:56	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GPP2428	**Method:** SW846 8330A	**Instrument ID:** GCPP

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GPP2428-IC2428	PP390446.D	04/02/21 08:10	n/a	Initial cal 20
GPP2428-IC2428	PP390447.D	04/02/21 08:41	n/a	Initial cal 50
GPP2428-IC2428	PP390448.D	04/02/21 09:12	n/a	Initial cal 100
GPP2428-IC2428	PP390449.D	04/02/21 09:43	n/a	Initial cal 200
GPP2428-IC2428	PP390450.D	04/02/21 10:14	n/a	Initial cal 500
GPP2428-ICC2428	PP390451.D	04/02/21 10:45	n/a	Initial cal 1000
GPP2428-IC2428	PP390452.D	04/02/21 11:16	n/a	Initial cal 2500
GPP2428-IC2428	PP390453.D	04/02/21 11:47	n/a	Initial cal 5000
GPP2428-ICV2428	PP390454.D	04/02/21 12:18	n/a	Initial cal verification 1000

Run Sequence Report

Job Number: FA84640
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GPP2438 **Method:** SW846 8330B **Instrument ID:** GCPP

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GPP2438-CC2428	PP390597.D	04/22/21 09:06	n/a	Continuing cal 1000
OP84960-MB	PP390599.D	04/22/21 10:07	OP84960	Method Blank
FA84596-15	PP390600.D	04/22/21 10:38	OP84948	(used for QC only; not part of job FA84640)
GPP2438-CC2428	PP390601.D	04/22/21 11:10	n/a	Continuing cal 1000
OP84960-BS	PP390603.D	04/22/21 12:11	OP84960	Blank Spike
FA84640-1	PP390604.D	04/22/21 12:42	OP84960	54MW13
FA84640-2	PP390605.D	04/22/21 13:13	OP84960	54TW13
FA84640-3	PP390606.D	04/22/21 13:44	OP84960	54MW12
FA84640-4	PP390607.D	04/22/21 14:15	OP84960	54MW10
FA84640-5	PP390608.D	04/22/21 14:46	OP84960	54MW1
OP84960-MS	PP390609.D	04/22/21 15:17	OP84960	Matrix Spike
OP84960-MSD	PP390610.D	04/22/21 15:48	OP84960	Matrix Spike Duplicate
GPP2438-CC2428	PP390611.D	04/22/21 16:19	n/a	Continuing cal 1000
OP85001-MB	PP390612.D	04/22/21 16:50	OP85001	Method Blank
OP85001-BS	PP390613.D	04/22/21 17:21	OP85001	Blank Spike
ZZZZZZ	PP390614.D	04/22/21 17:52	OP85001	(unrelated sample)
ZZZZZZ	PP390615.D	04/22/21 18:23	OP85001	(unrelated sample)
ZZZZZZ	PP390616.D	04/22/21 18:54	OP85001	(unrelated sample)
ZZZZZZ	PP390617.D	04/22/21 19:25	OP85001	(unrelated sample)
ZZZZZZ	PP390618.D	04/22/21 19:56	OP85001	(unrelated sample)
ZZZZZZ	PP390619.D	04/22/21 20:27	OP85001	(unrelated sample)
GPP2438-ECC2428	PP390621.D	04/22/21 21:29	n/a	Ending cal 1000

GC/LC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/26/21 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : op84960,GPP2438,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18:43 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.53	11.53	521169	900753	255.001m	282.943m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		51.00%#	56.59%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.49	1.49	1316167	2465484	867.834m	563.894m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.98	2.98	109448	166751	58.829m	56.508m
6)	1,3,5-Trinitrobe	4.78	4.78	7286245	13972918	1839.708	1815.520
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.40	6.40	165089	309260	40.700m	45.788m
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	10.14	10.14	6956900	8602940	1845.832m	1849.617m
13)	2-Amino-4,6-Dini	10.59	10.60	656863	941797	195.536m	185.387m
14)	4-Amino-2,6-Dini	11.15	11.16	314590	570029	139.657m	119.682m
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	18.80	0	48944	N.D. d	36.852m

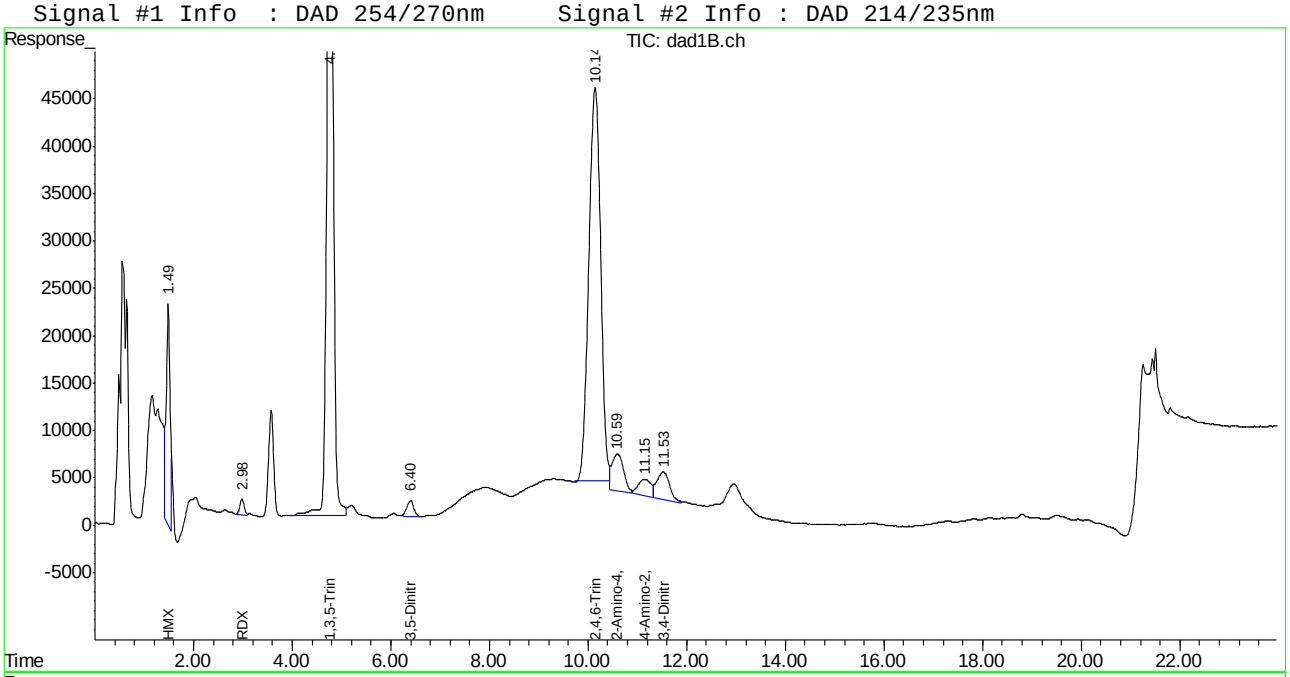
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP390604.D GPP2439_042321PRI.M Mon Apr 26 14:44:29 2021 Page 1

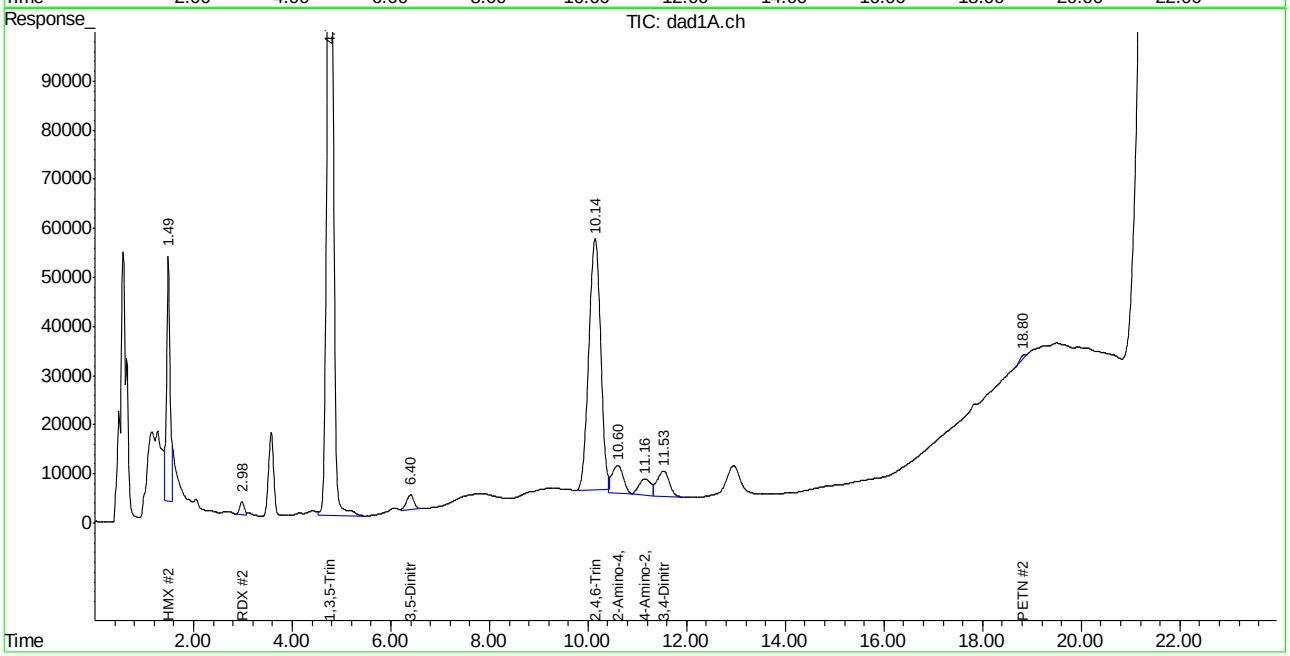
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : op84960,GPP2438,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 14:44 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

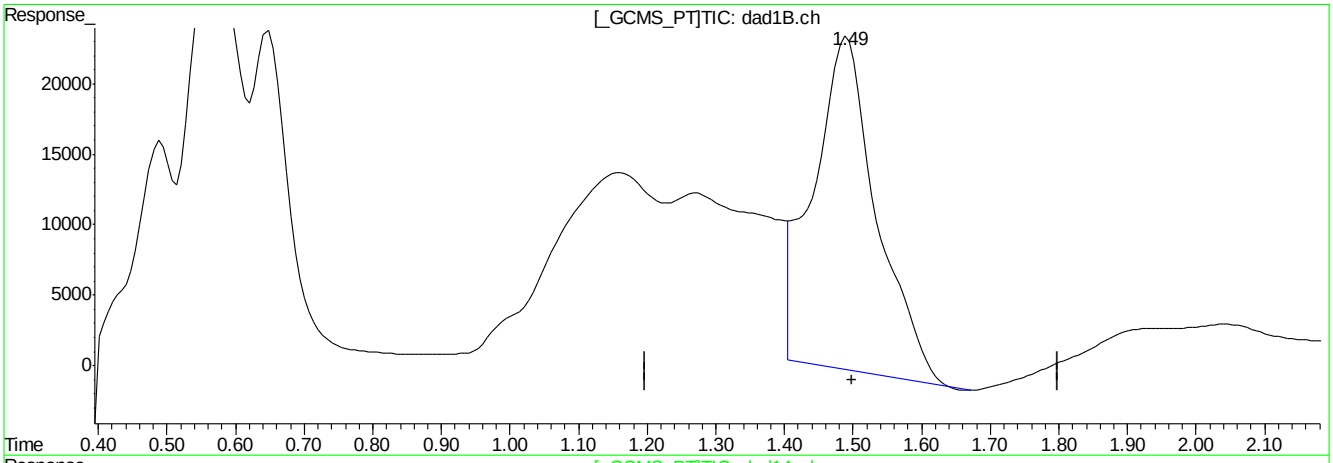
Sample Number: FA84640-1
Lab FileID: PP390604.D
Injection Time: 04/22/21 12:42
Method: SW846 8330B
Analyst approved: 04/23/21 14:31 James Boone
Supervisor approved: 04/26/21 15:26 Naresh Jiawan

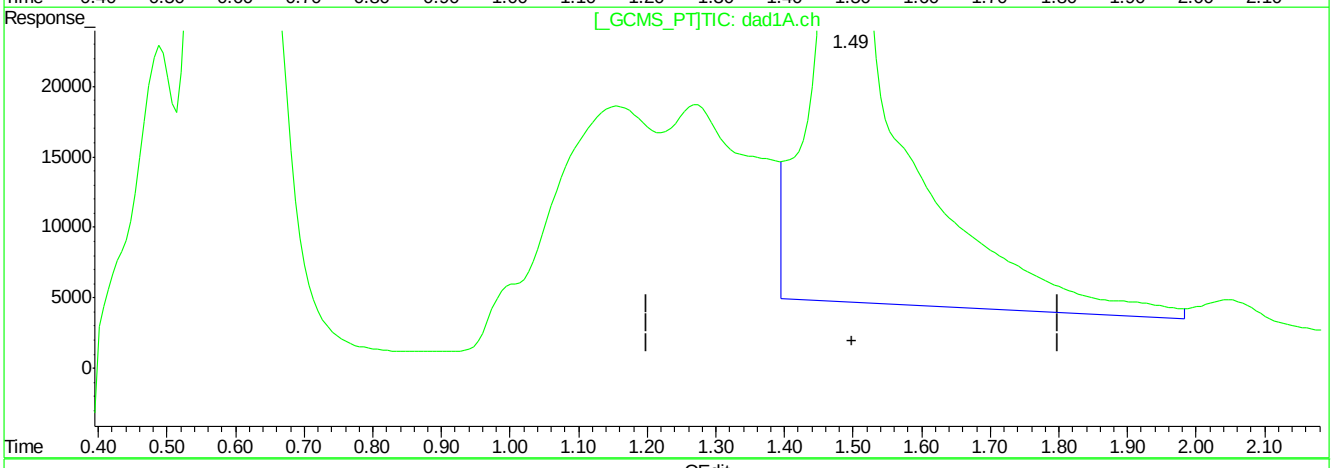
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.49	Poor instrument integration
HMX	2691-41-0	2	1.49	Poor instrument integration
RDX	121-82-4	1	2.98	Poor instrument integration
RDX	121-82-4	2	2.98	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.05	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.07	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.40	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.40	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.14	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.14	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.59	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.60	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	11.15	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	11.16	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.53	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.53	Poor instrument integration
PETN	78-11-5	2	18.80	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.49min 1013.776ppb

response 1537503

(2) HMX #2

1.49min 771.914ppb

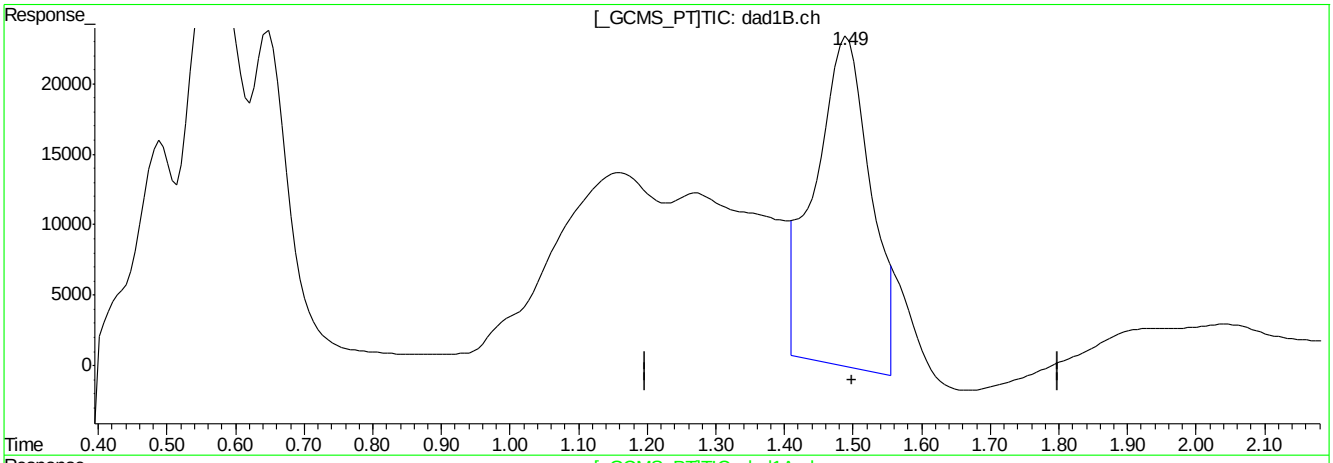
response 3374997

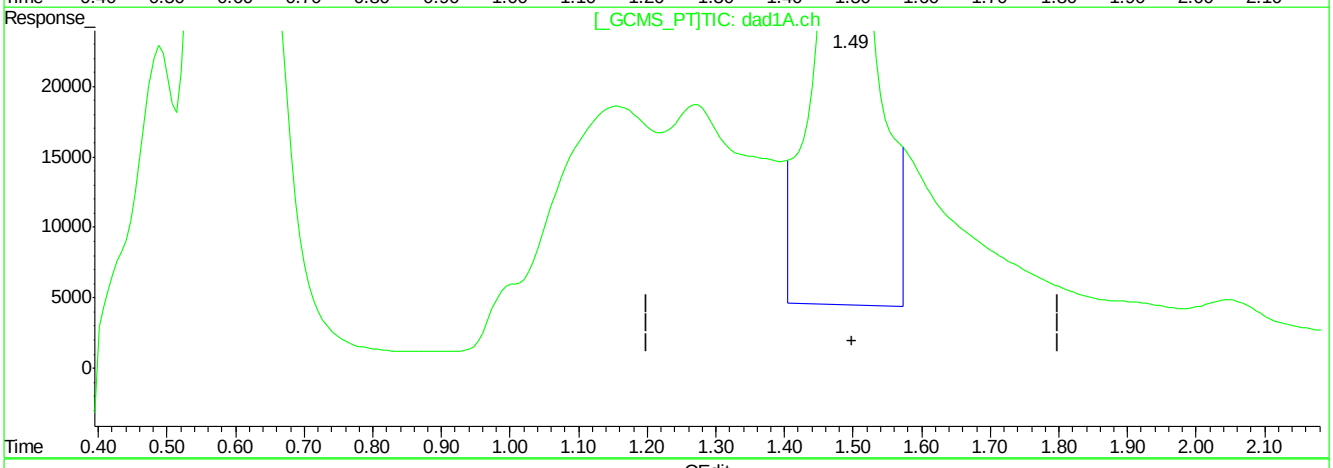
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:53:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.49min 867.834ppb m

response 1316167

(2) HMX #2

1.49min 563.894ppb m

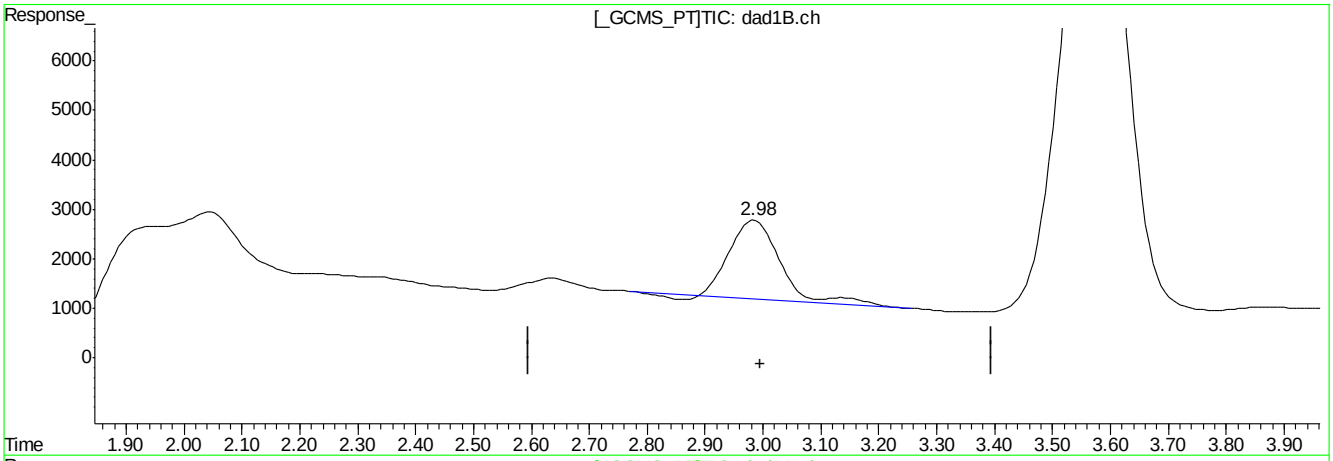
response 2465484

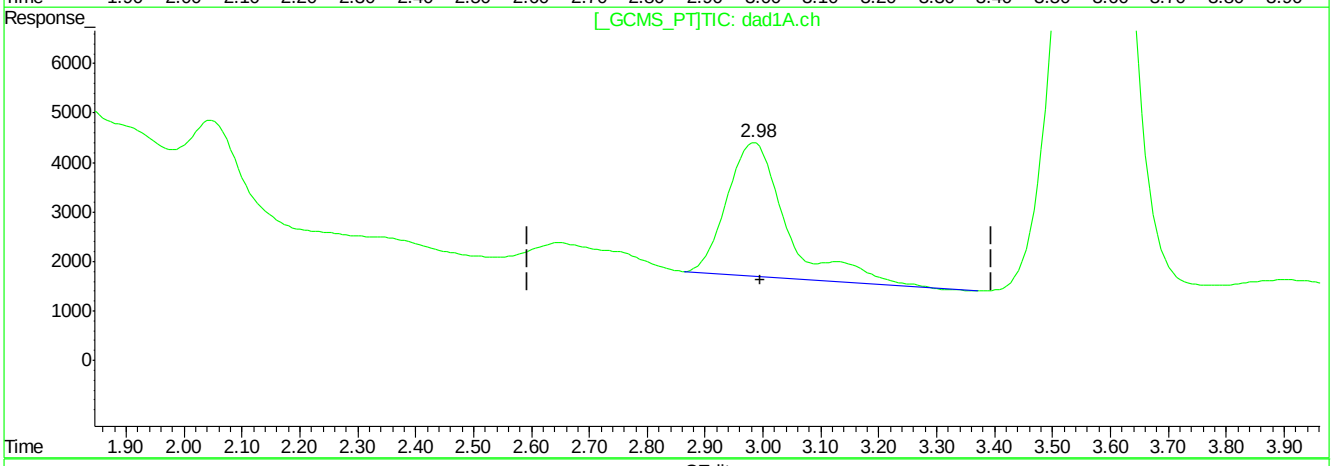
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:53:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.99min 51.967ppb

response 96683

(5) RDX #2

2.99min 65.663ppb

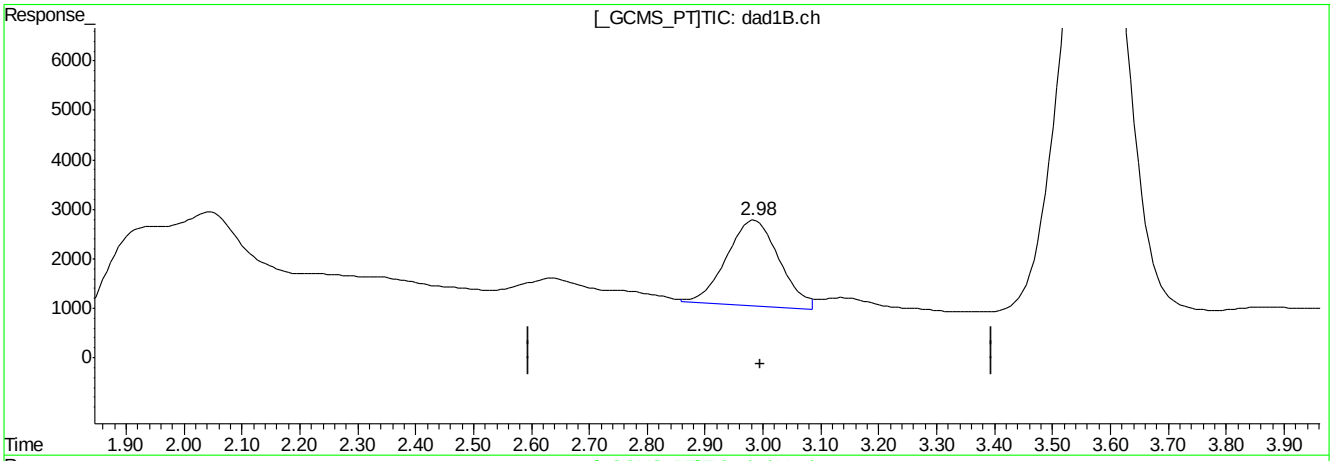
response 193766

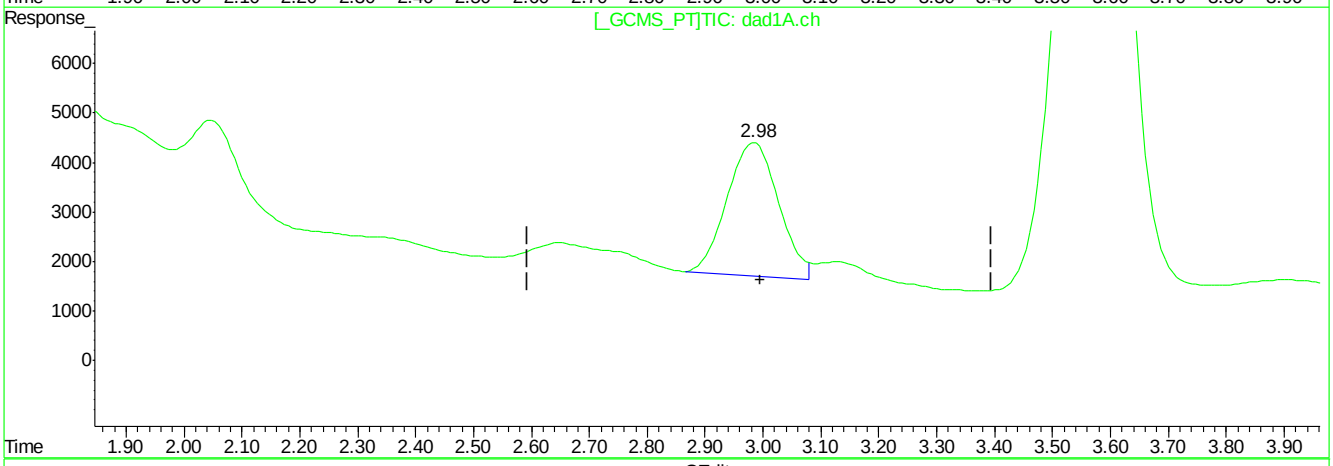
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:53:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.98min 58.829ppb m

response 109448

(5) RDX #2

2.98min 56.508ppb m

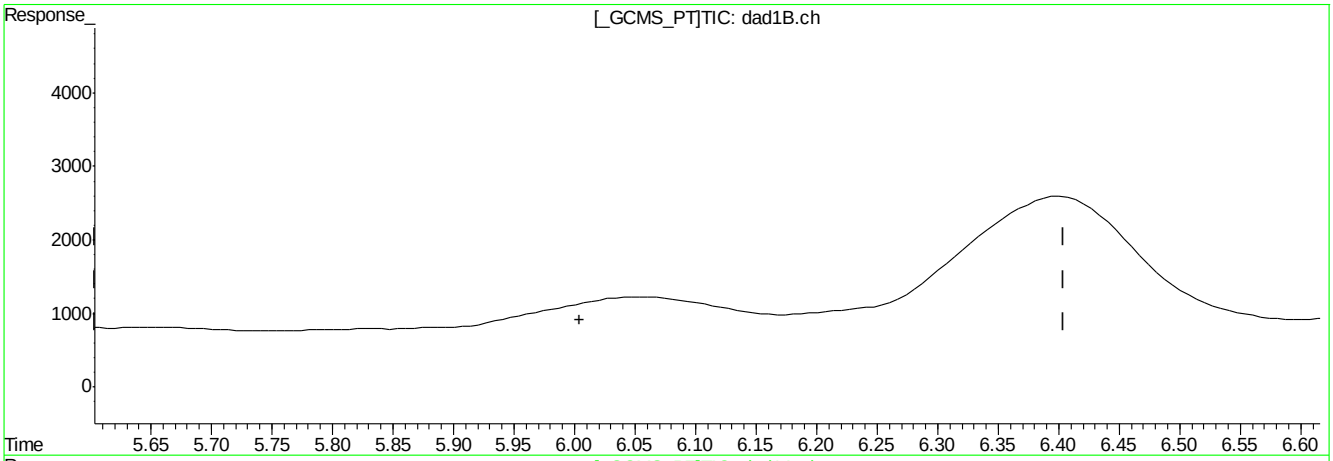
response 166751

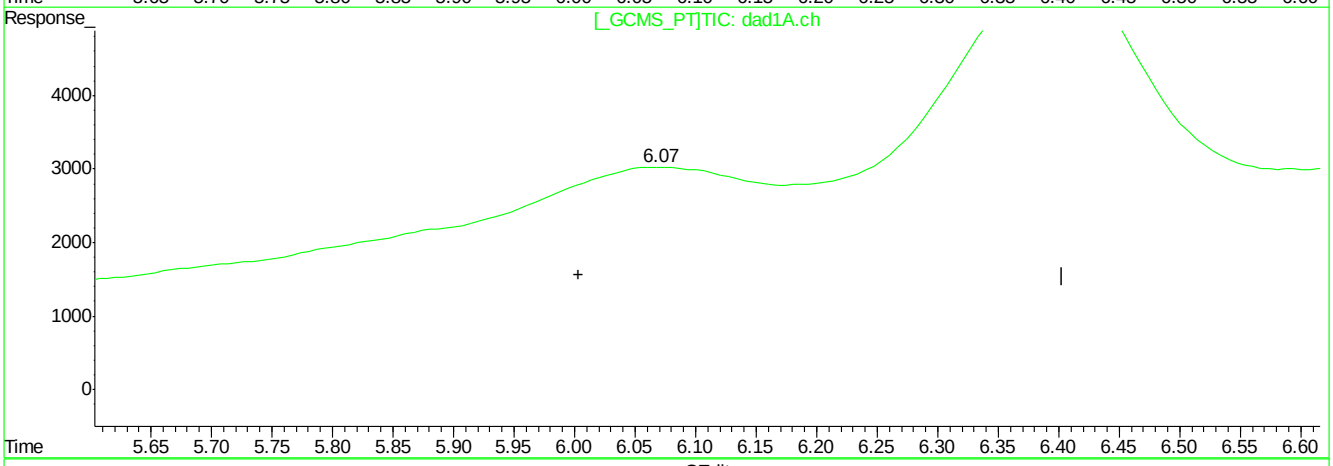
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:53:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

0.00min 0.000ppb

response 0

(7) 1,3-Dinitrobenzene #2

6.07min 57.276ppb

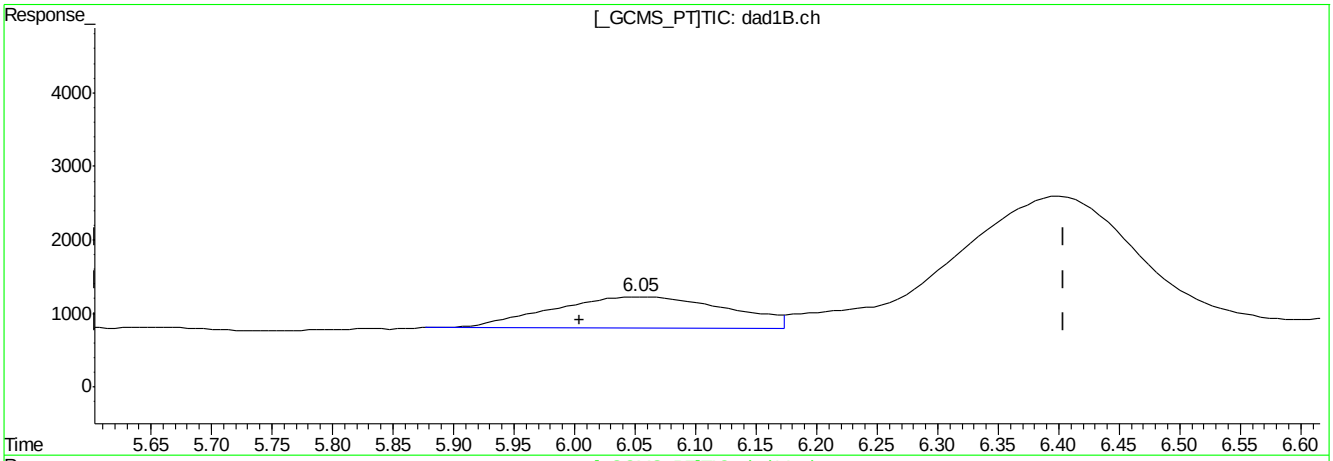
response 208725

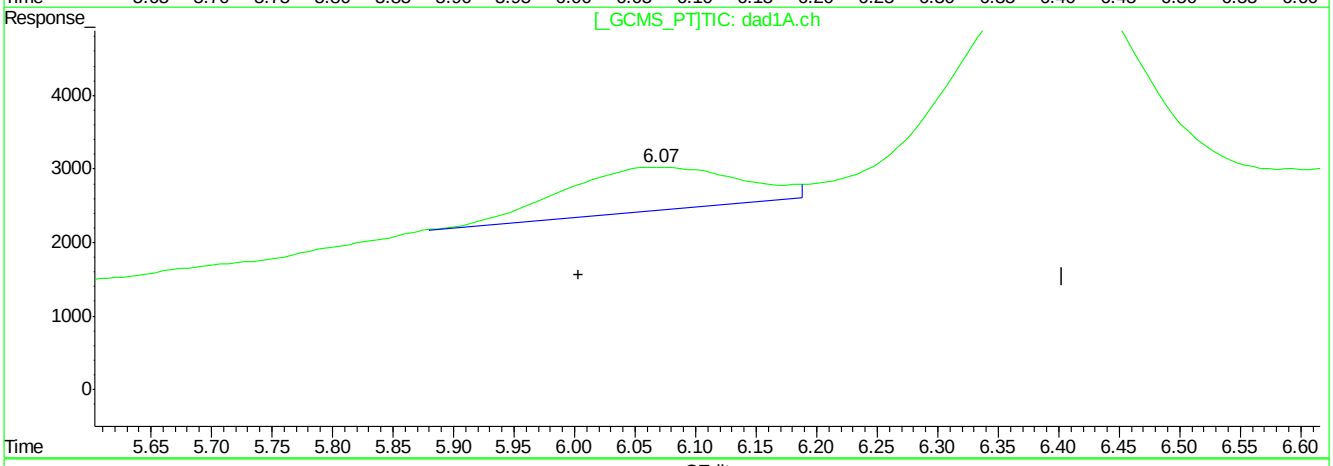
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:53:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.05min 8.154ppb m

response 42912

(7) 1,3-Dinitrobenzene #2

6.07min 16.600ppb m

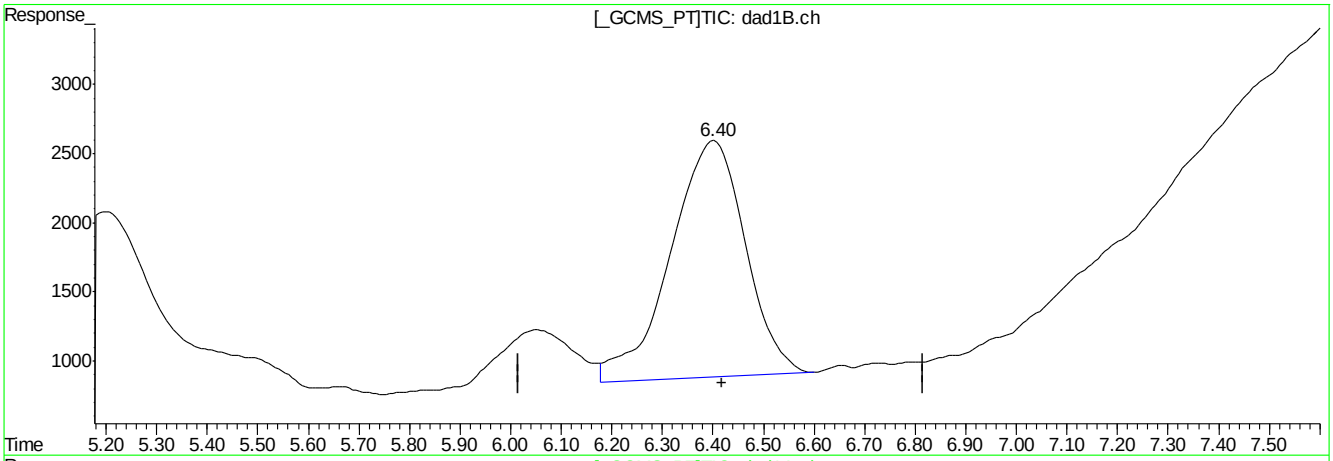
response 60493

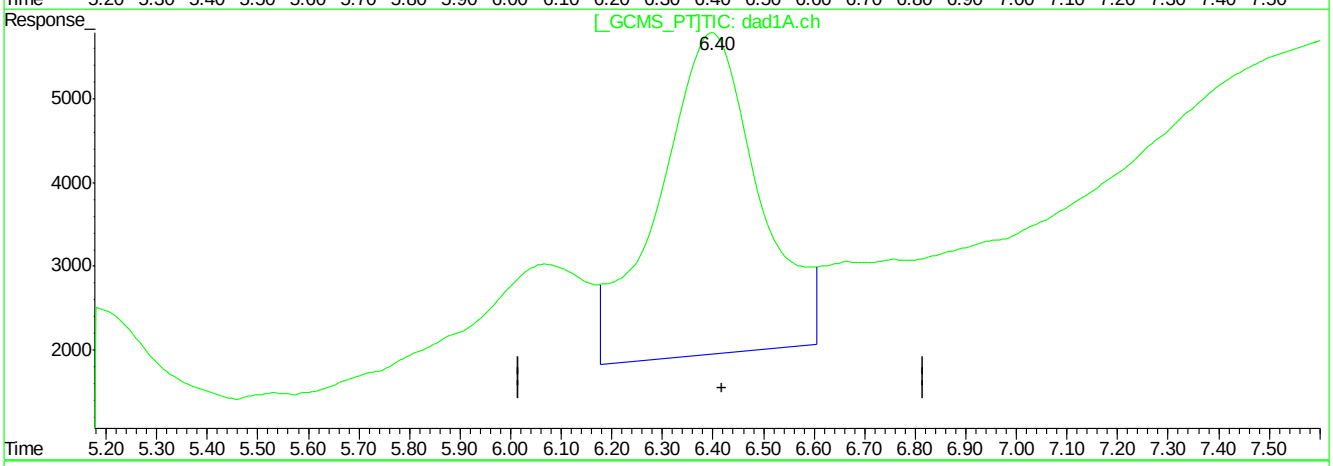
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:54:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.40min 43.465ppb

response 176305

(8) 3,5-Dinitroaniline #2

6.40min 77.343ppb

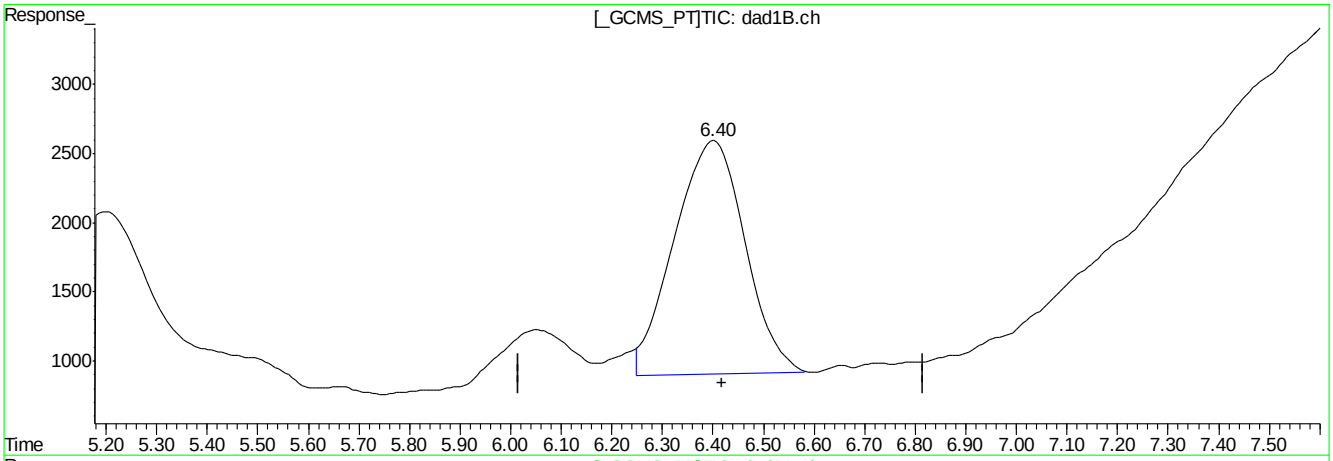
response 522388

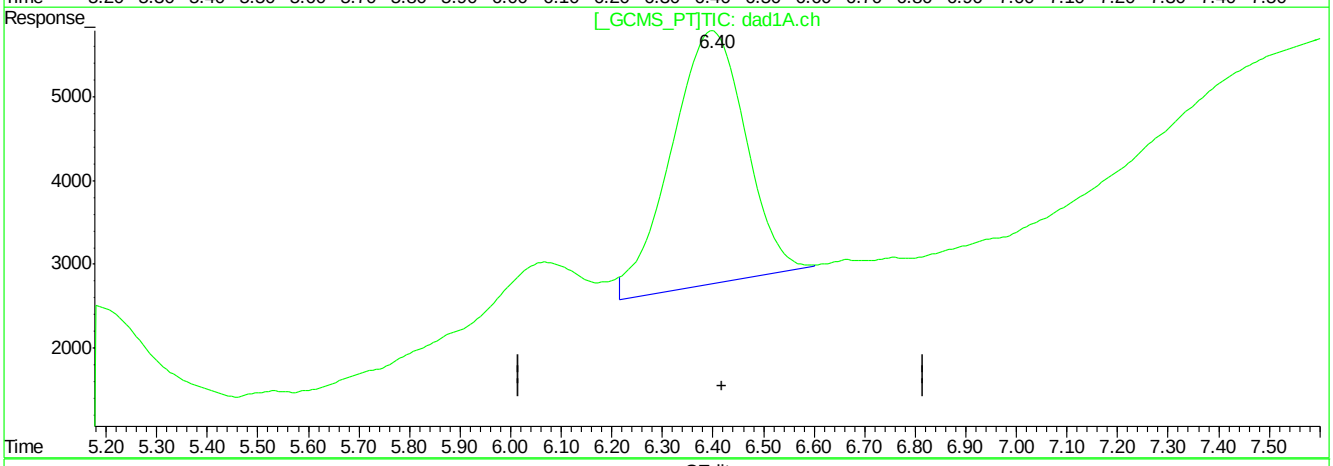
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:54:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.40min 40.700ppb m

response 165089

(8) 3,5-Dinitroaniline #2

6.40min 45.788ppb m

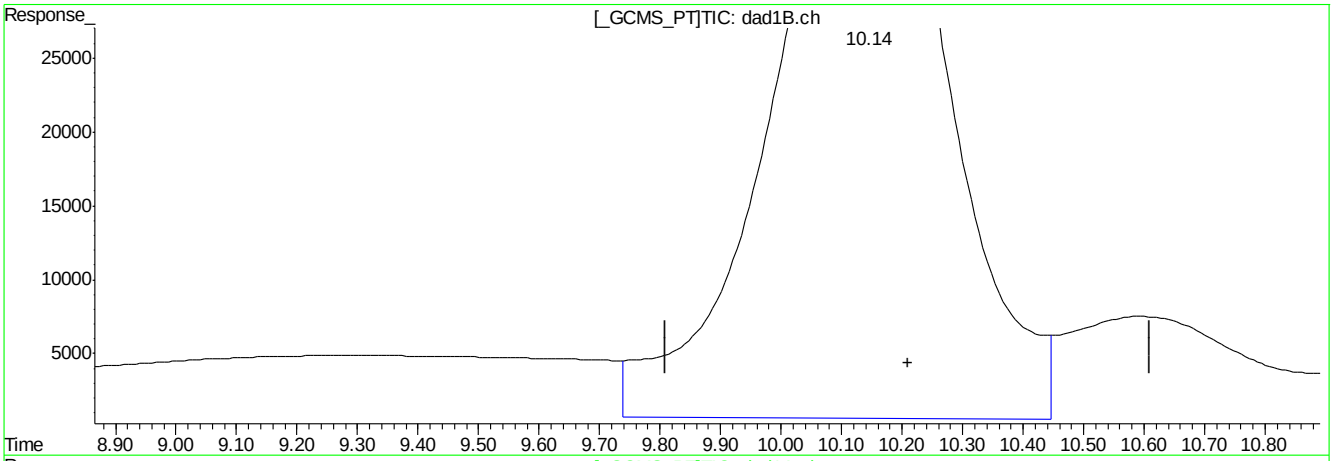
response 309260

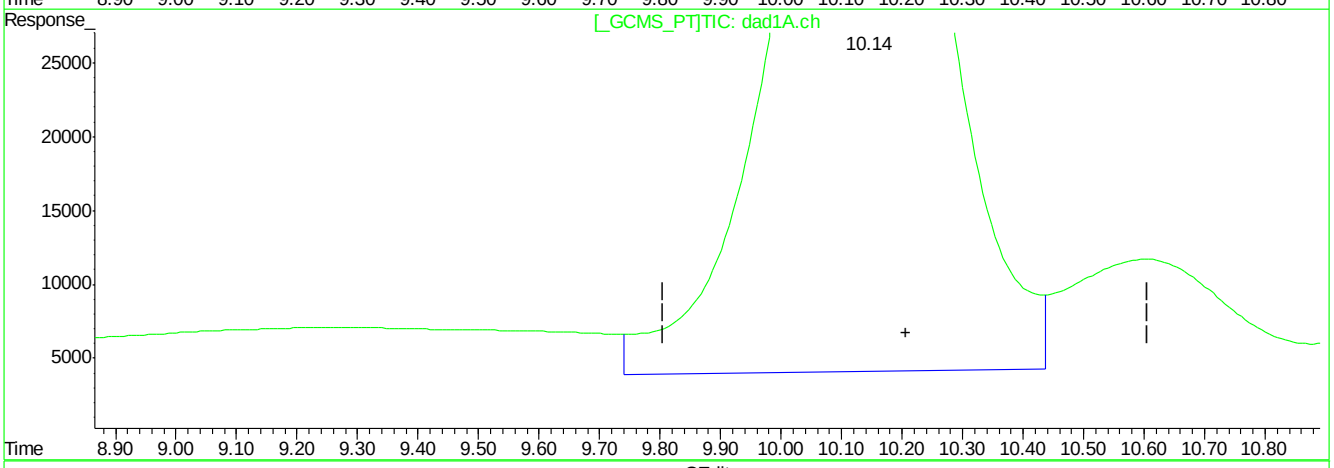
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:54:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.14min 2297.940ppb

response 8660882

(12) 2,4,6-Trinitrotoluene #2

10.14min 2084.780ppb

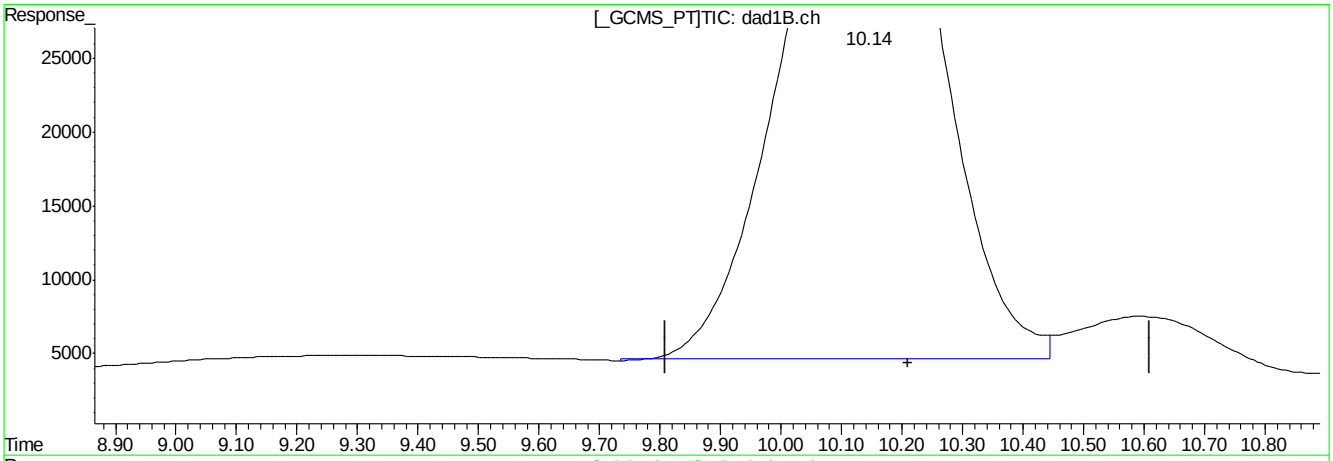
response 9696728

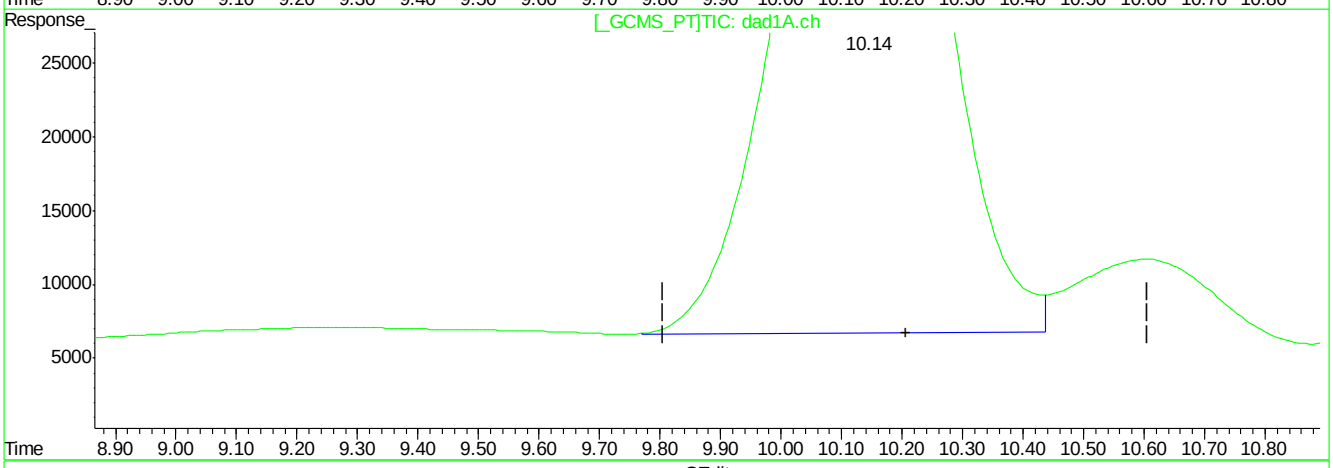
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:54:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.14min 1845.832ppb m

response 6956900

(12) 2,4,6-Trinitrotoluene #2

10.14min 1849.617ppb m

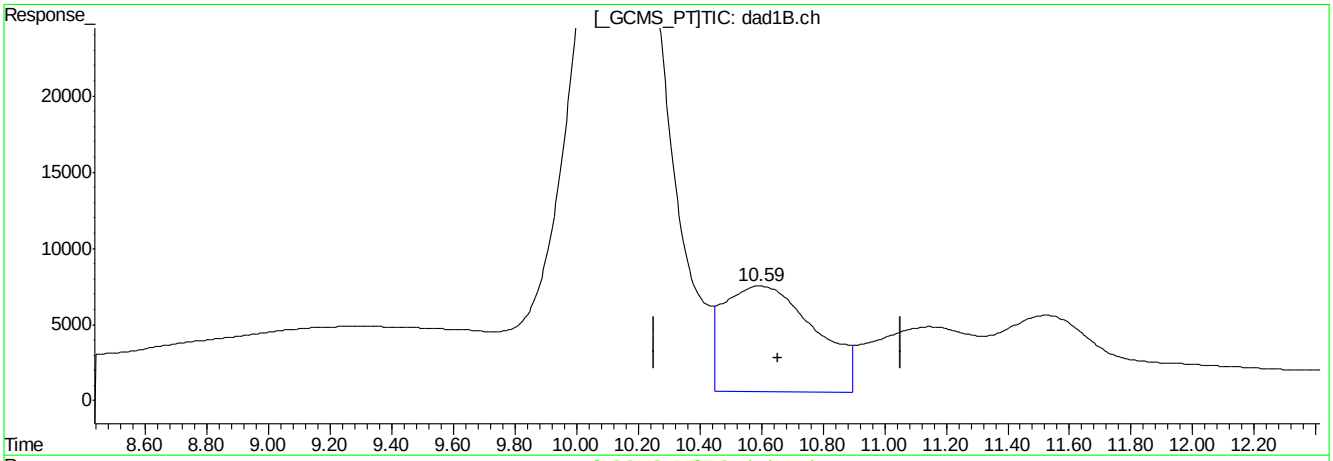
response 8602940

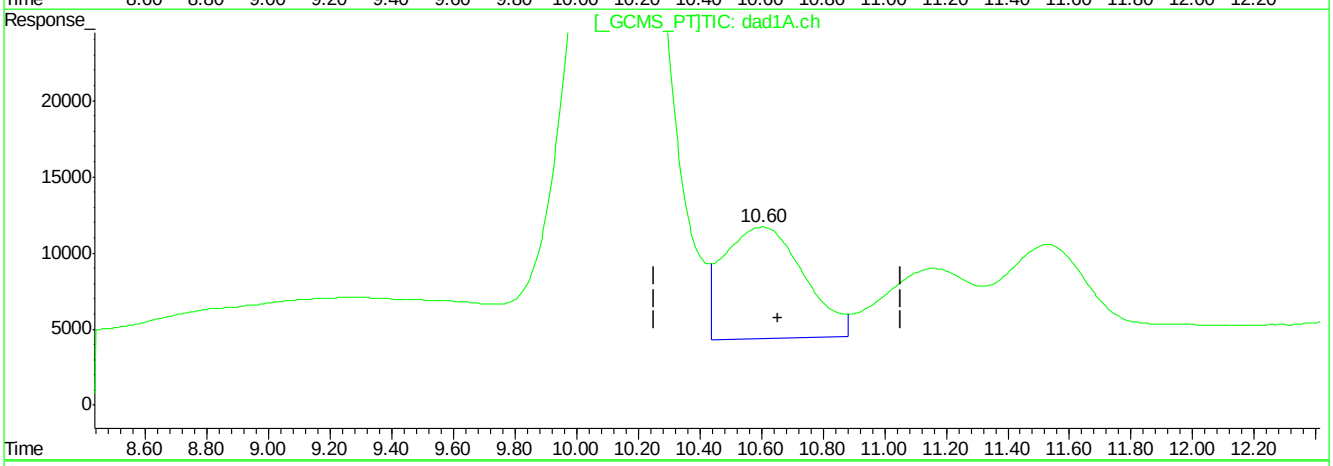
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:54:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.60min 431.704ppb

response 1450216

(13) 2-Amino-4,6-Dinitrotoluene #2

10.60min 261.821ppb

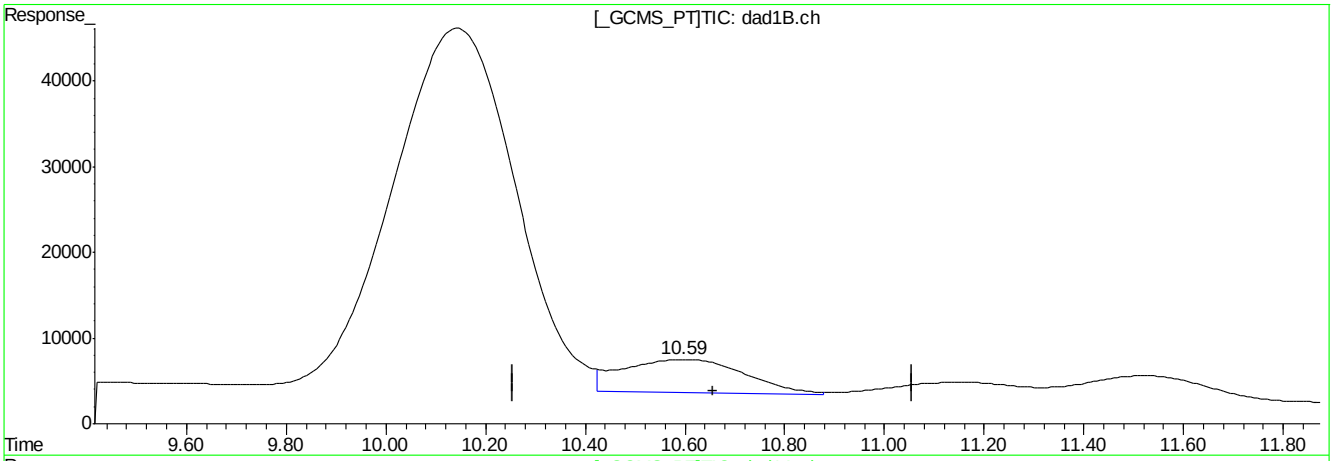
response 1330094

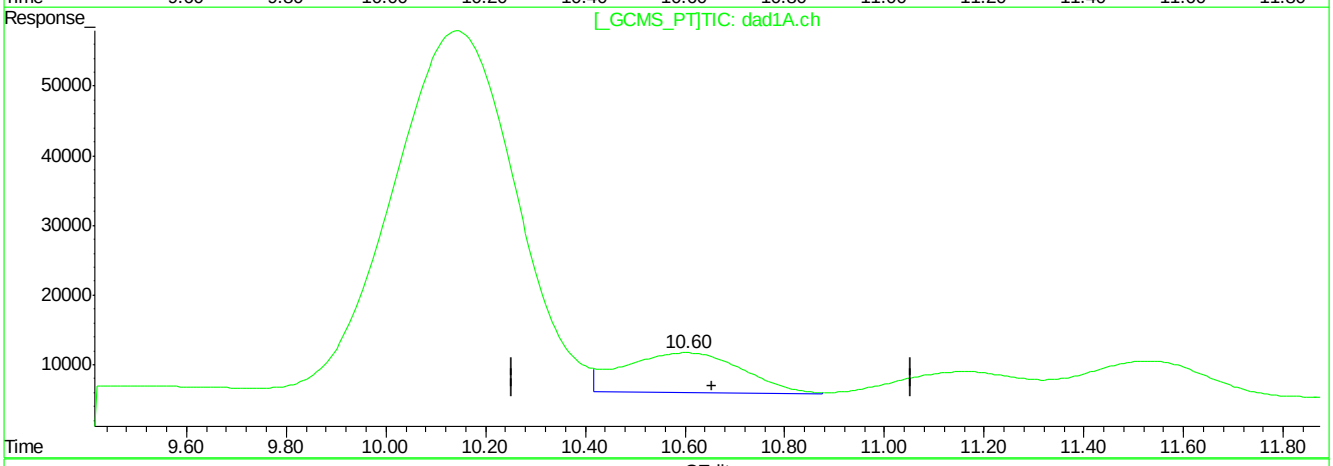
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:54:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.59min 195.536ppb m

response 656863

(13) 2-Amino-4,6-Dinitrotoluene #2

10.60min 185.387ppb m

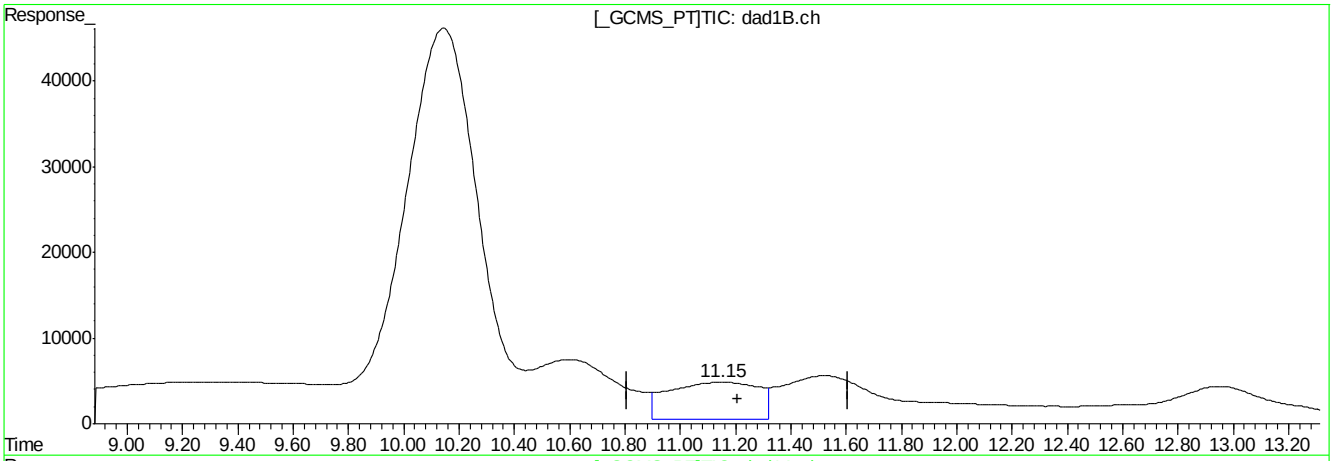
response 941797

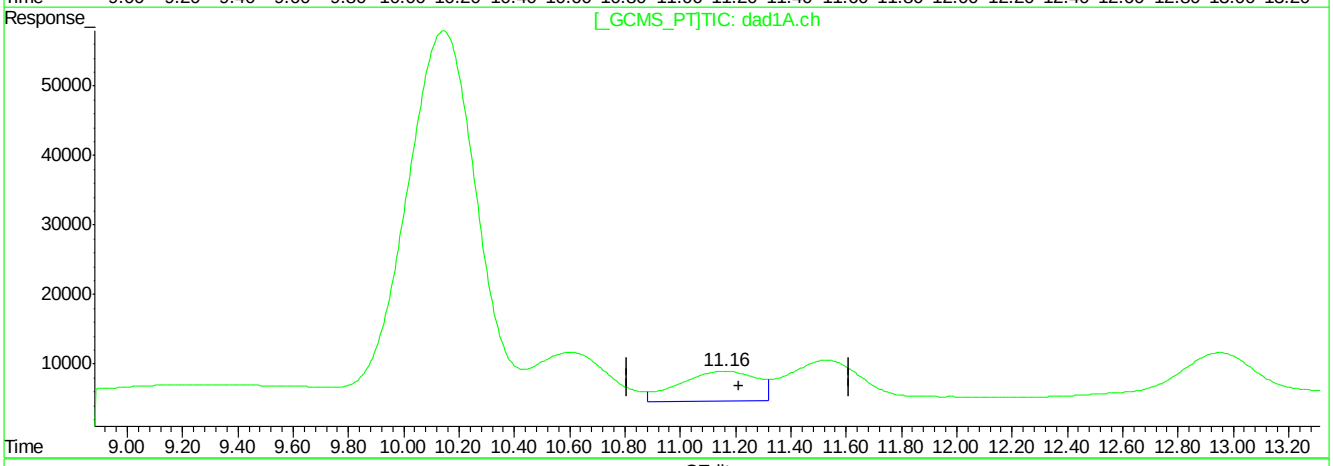
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:55:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.15min 433.398ppb

response 976266

(14) 4-Amino-2,6-Dinitrotoluene #2

11.16min 175.548ppb

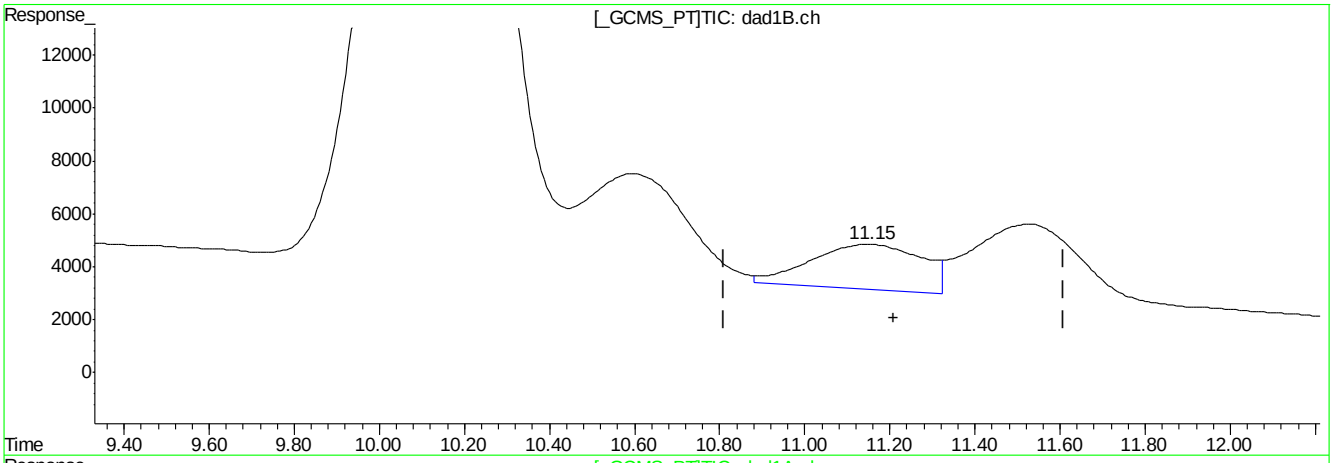
response 836110

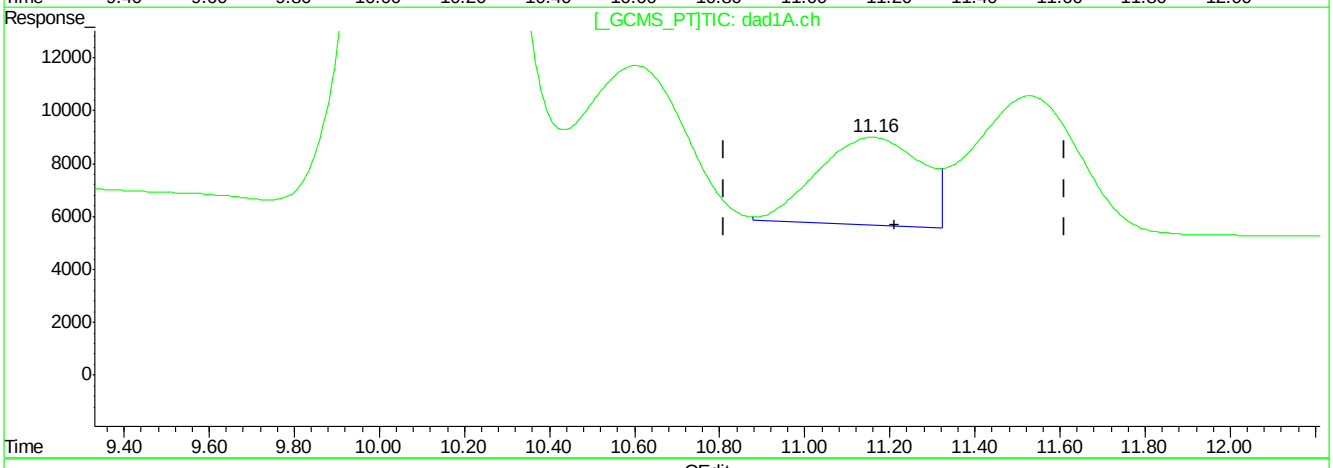
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:55:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.15min 139.657ppb m

response 314590

(14) 4-Amino-2,6-Dinitrotoluene #2

11.16min 119.682ppb m

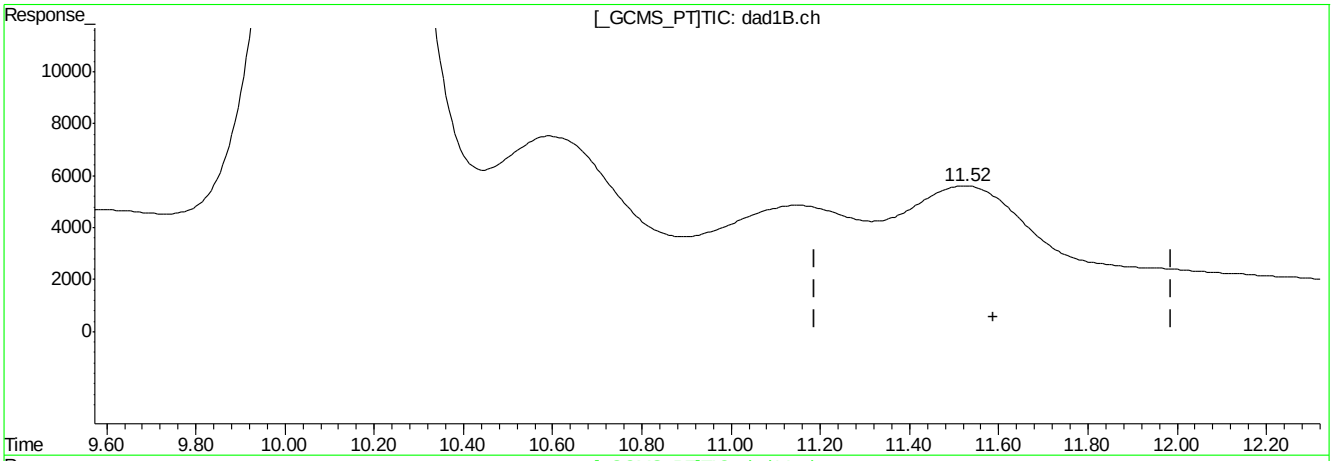
response 570029

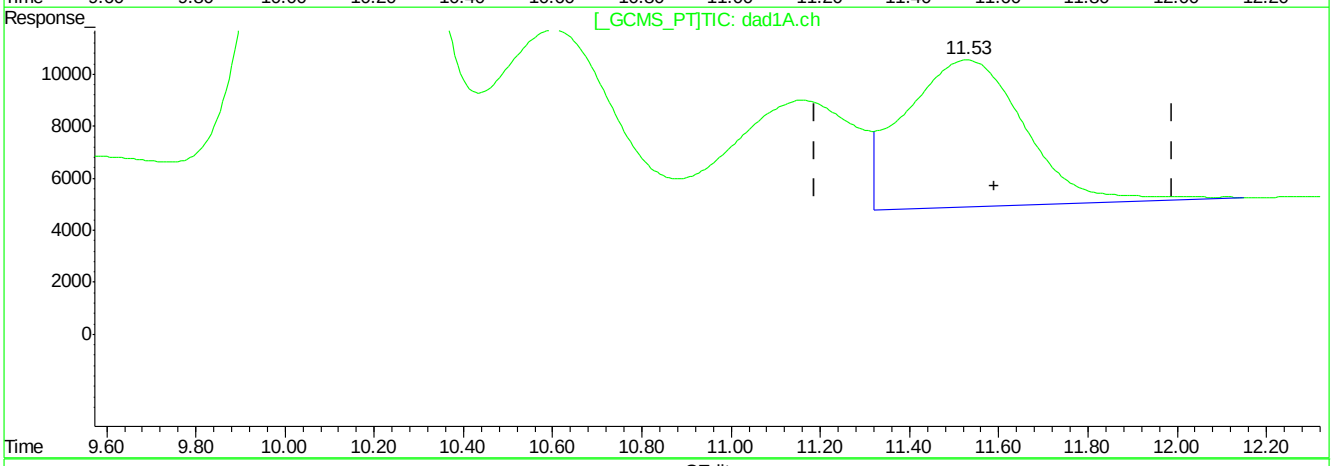
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:55:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.52min 911.647ppb

response 1863216

(15) 3,4-Dinitrotoluene #2 (S)

11.53min 334.971ppb

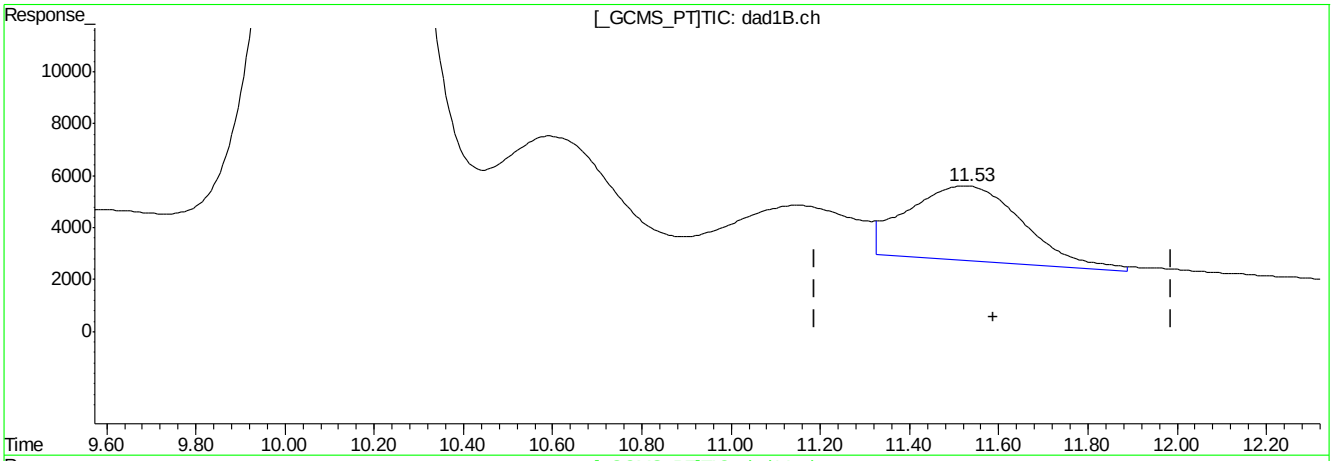
response 1066384

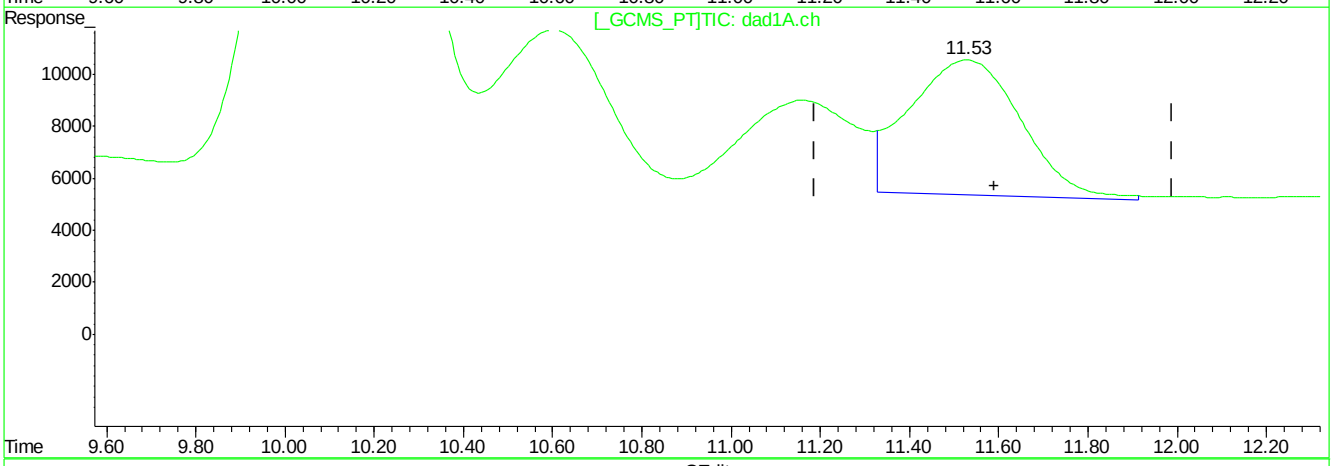
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:55:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.53min 255.001ppb m

response 521169

(15) 3,4-Dinitrotoluene #2 (S)

11.53min 282.943ppb m

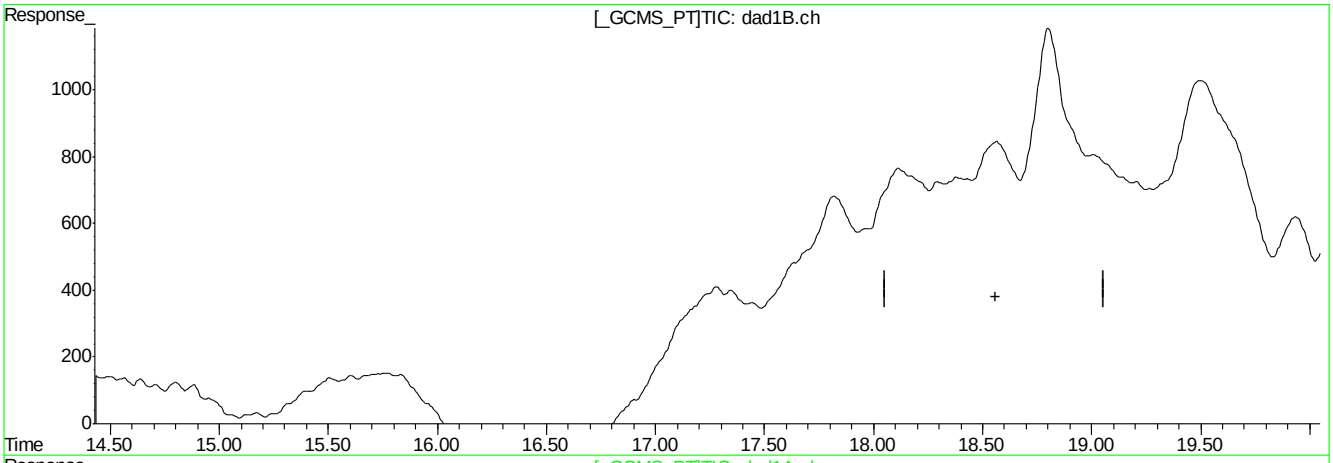
response 900753

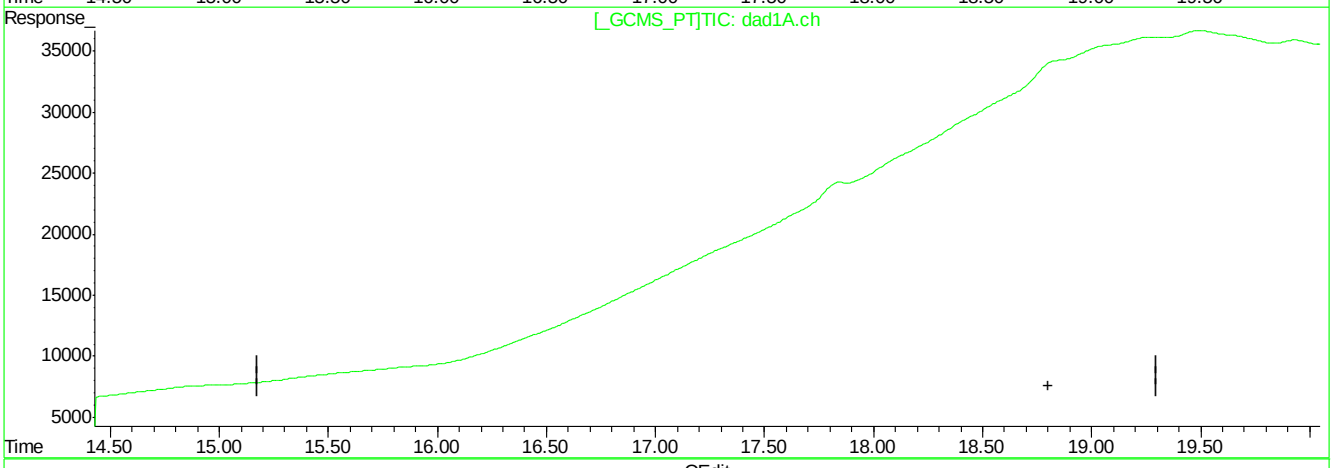
(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:56:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390604.D\dad1A.ch
Acq On : 22-Apr-2021, 12:42:51 Operator: jamesb
Sample : FA84640-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

0.00min 0.000ppb

response 0

(+) = Expected Retention Time
PP390604.D GPP2428_040221PRI.M Fri Apr 23 09:56:19 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/26/21 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1A.ch
Acq On : 23-Apr-2021, 14:10:19 Operator: jamesb
Sample : FA84640-1cf Inst : G1315B
Misc : op84960,GGG2966,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50:03 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.03	14.03	1529981	2919291	324.697	317.462
	Spiked Amount 500.000	Range 70 - 136		Recovery =		64.94%#	63.49%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.32	5.32	1500911	1500911	508.160	448.108
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.57	7.57	15702925	15917619	1745.590m	1769.175m
6)	RDX	7.83	7.83	312468	331528	75.281m	79.445m
7)	1,3-Dinitrobenze	9.84	9.82	22896	13249	1.838m	1.460m
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.71	11.71	16578084	22963676	2002.701	2167.011
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.74	15.74	2063001	3714973	218.828	235.011
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.48	17.49	957769	1492406	186.957	173.661
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.34	19.34	1768973	2631445	214.981	226.423
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

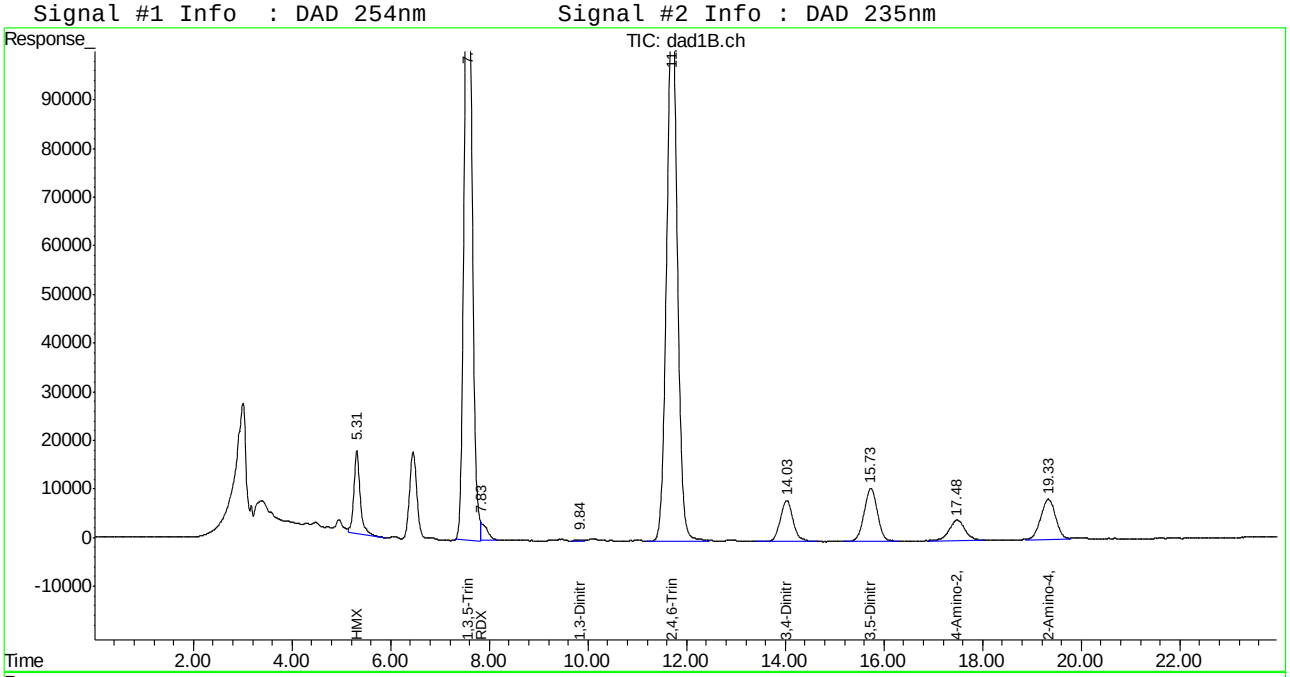
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG621164.D GGG2952_032221.M Mon Apr 26 14:12:21 2021 Page 1

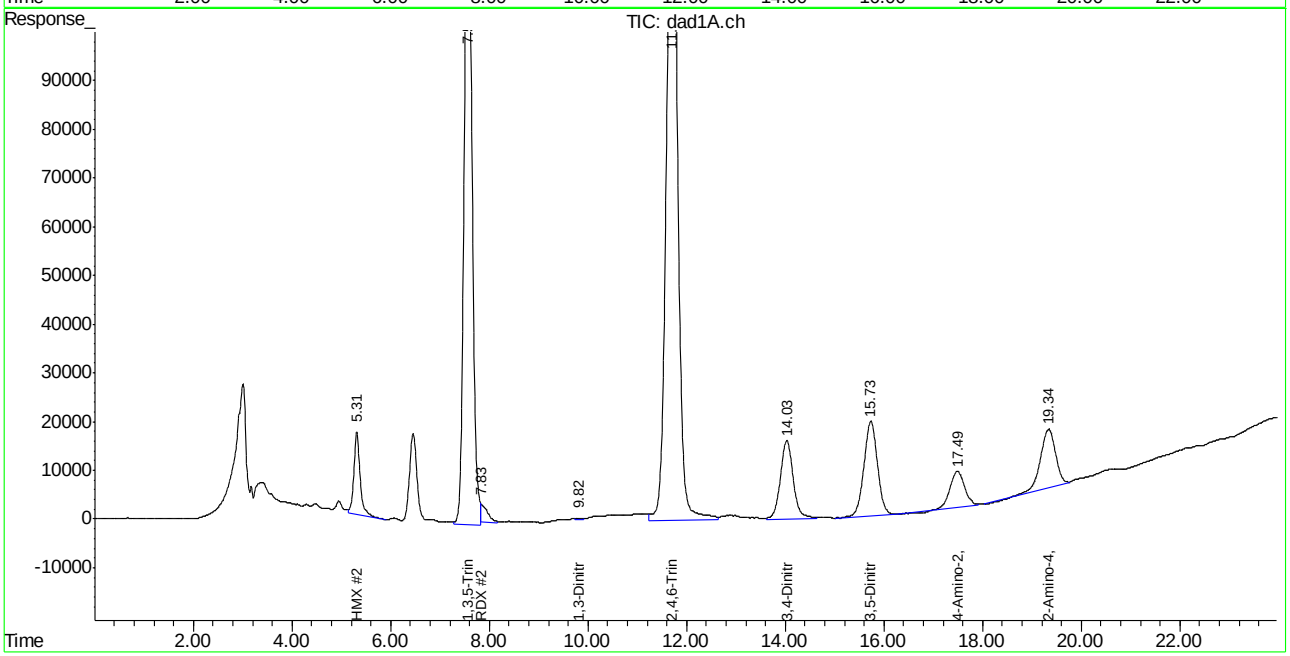
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1A.ch
Acq On : 23-Apr-2021, 14:10:19 Operator: jamesb
Sample : FA84640-1cf Inst : G1315B
Misc : op84960,GGG2966,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 13:01 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





GG621164.D GGG2952_032221.M Mon Apr 26 14:12:21 2021 Page 2

Manual Integration Approval Summary

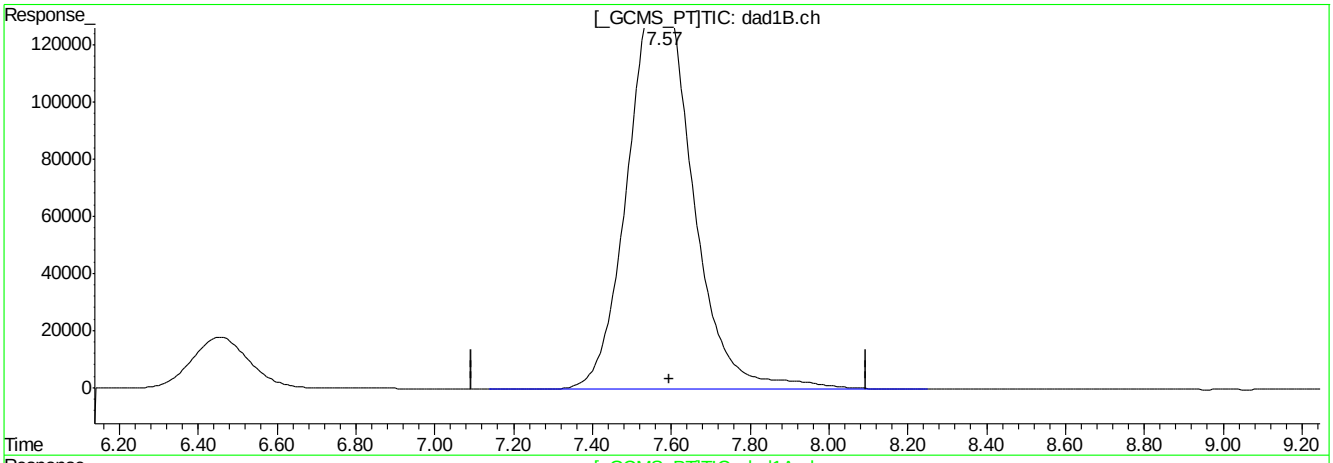
Sample Number: FA84640-1
Lab FileID: GG621164.D
Injection Time: 04/23/21 14:10
Method: SW846 8330B
Analyst approved: 04/26/21 14:19 James Boone
Supervisor approved: 04/26/21 15:26 Naresh Jiawan

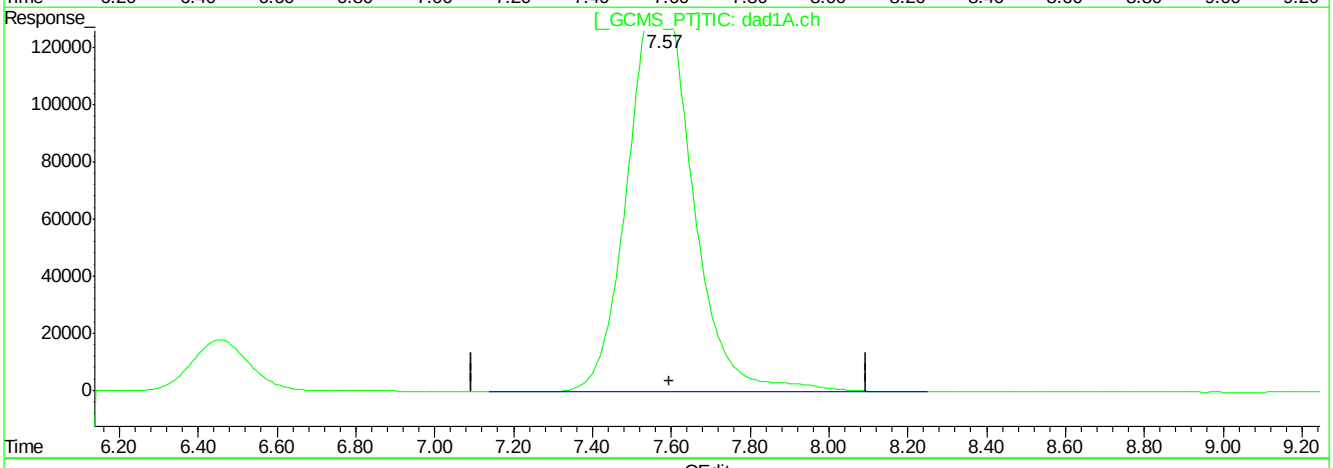
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	1	7.57	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.57	Poor instrument integration
RDX	121-82-4	1	7.83	Poor instrument integration
RDX	121-82-4	2	7.83	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.82	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	9.84	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1A.ch
Acq On : 23-Apr-2021, 14:10:19 Operator: jamesb
Sample : FA84640-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.57min 1783.663ppb

response 16045422

(5) 1,3,5-Trinitrobenzene #2

7.57min 1783.379ppb

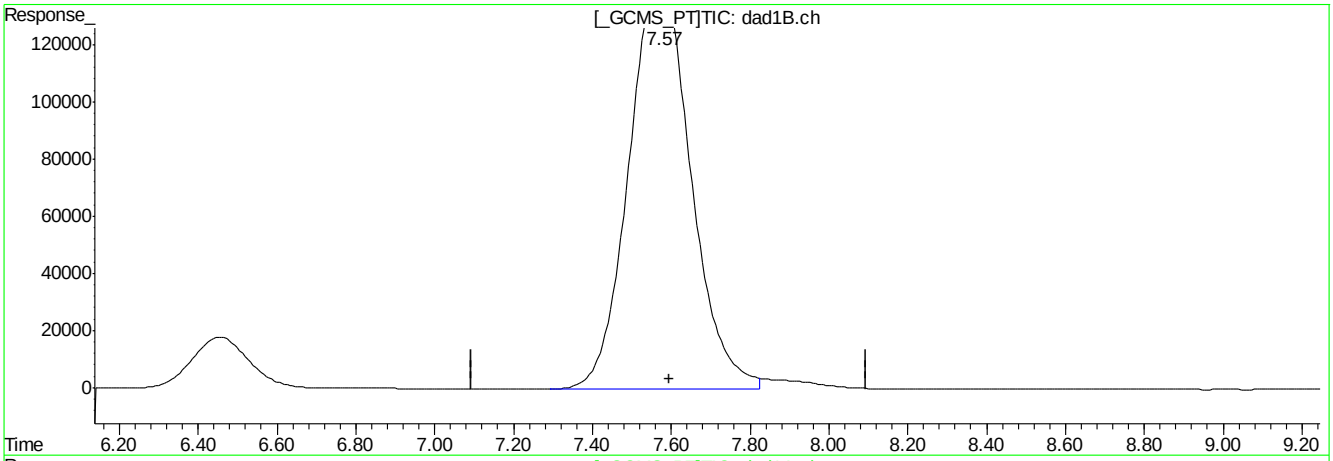
response 16045422

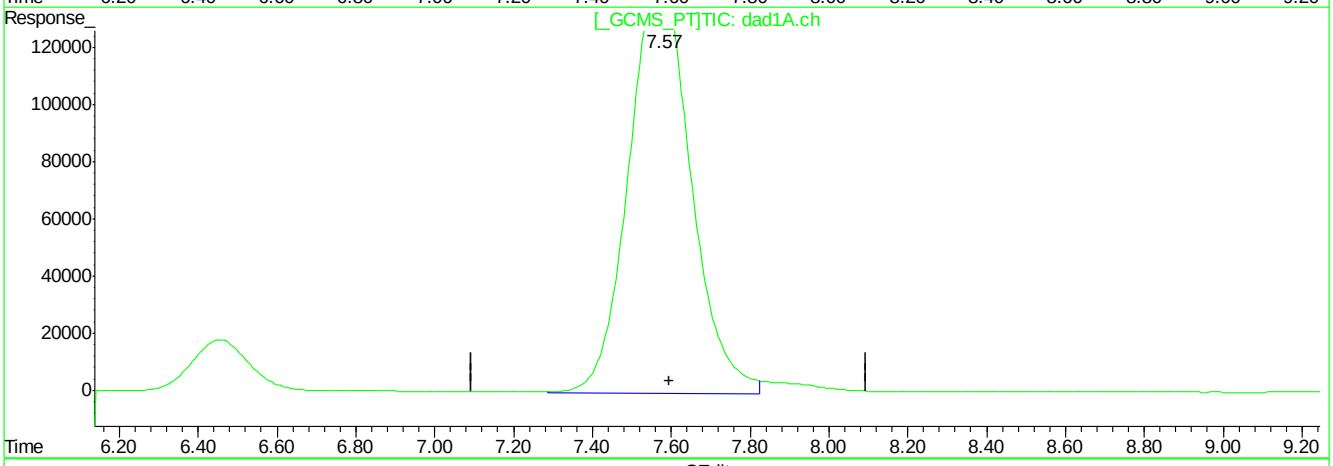
(+) = Expected Retention Time
GG621164.D GGG2952_032221.M Mon Apr 26 12:57:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1A.ch
Acq On : 23-Apr-2021, 14:10:19 Operator: jamesb
Sample : FA84640-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.57min 1745.590ppb m

response 15702925

(5) 1,3,5-Trinitrobenzene #2

7.57min 1769.175ppb m

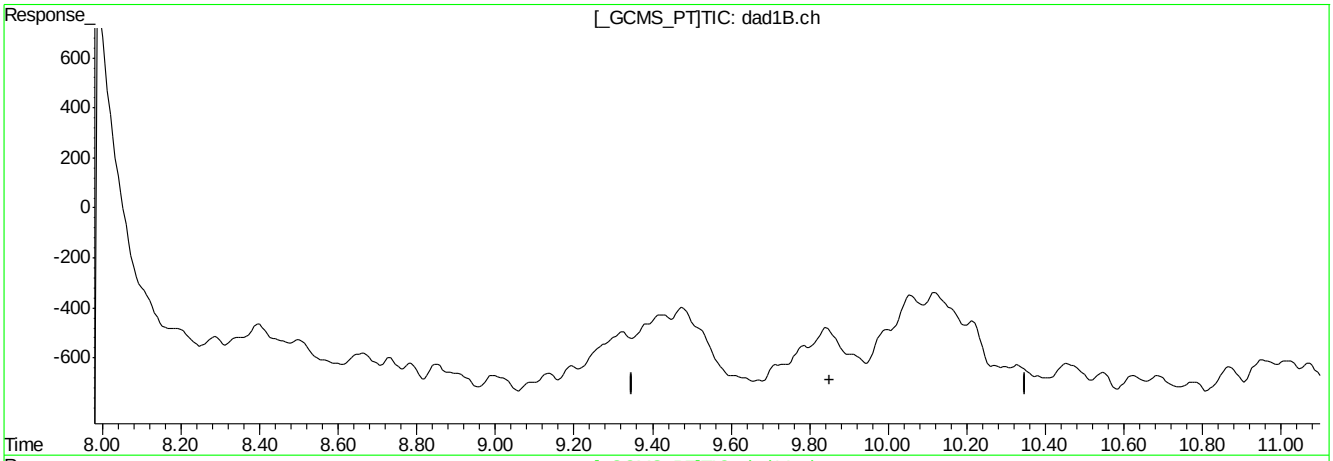
response 15917619

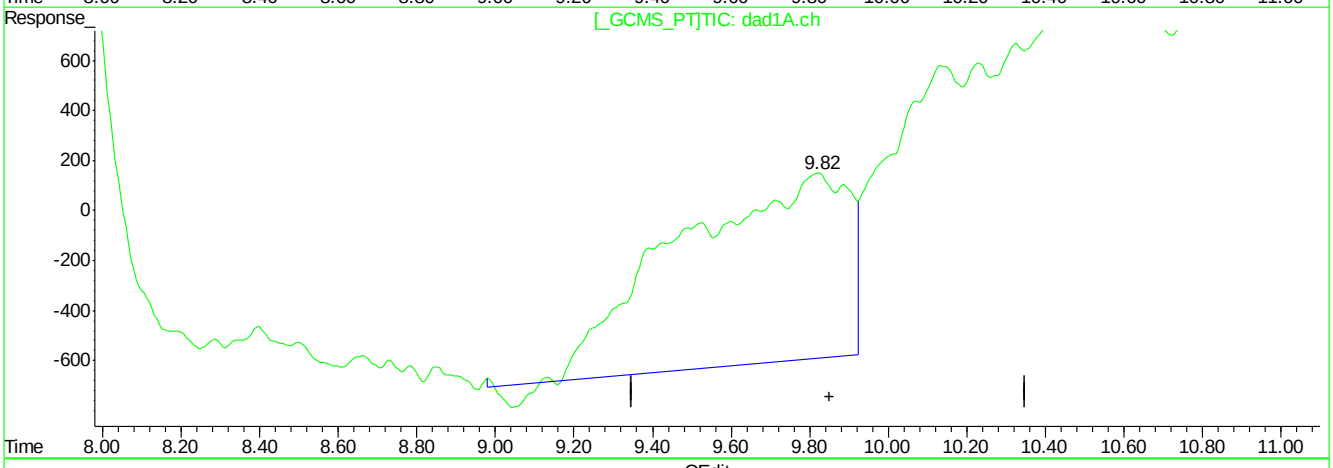
(+) = Expected Retention Time
GG621164.D GGG2952_032221.M Mon Apr 26 12:57:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1A.ch
Acq On : 23-Apr-2021, 14:10:19 Operator: jamesb
Sample : FA84640-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

0.00min 0.000ppb

response 0

(7) 1,3-Dinitrobenzene #2

9.82min 24.412ppb

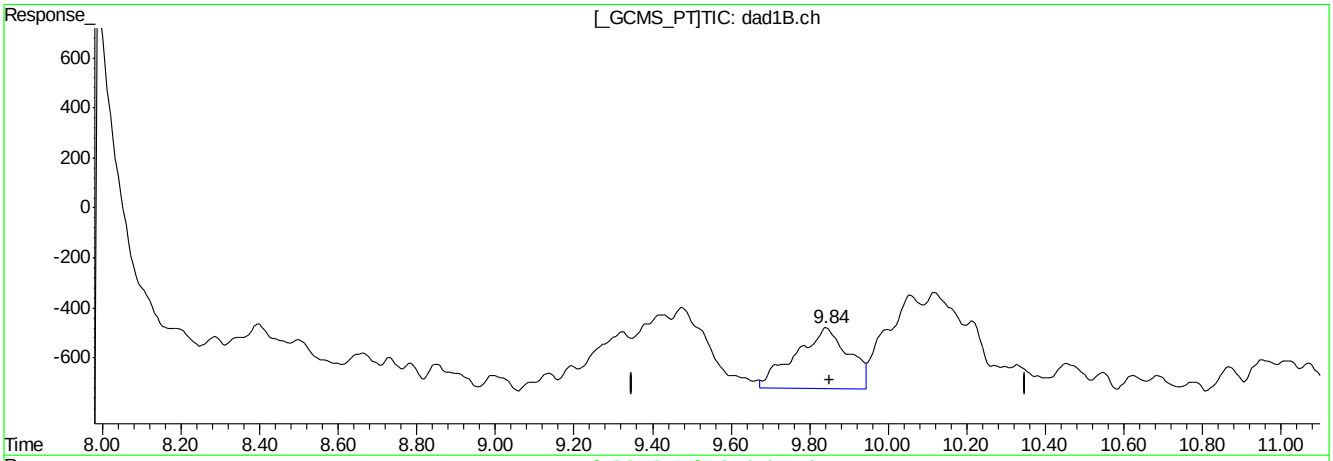
response 221594

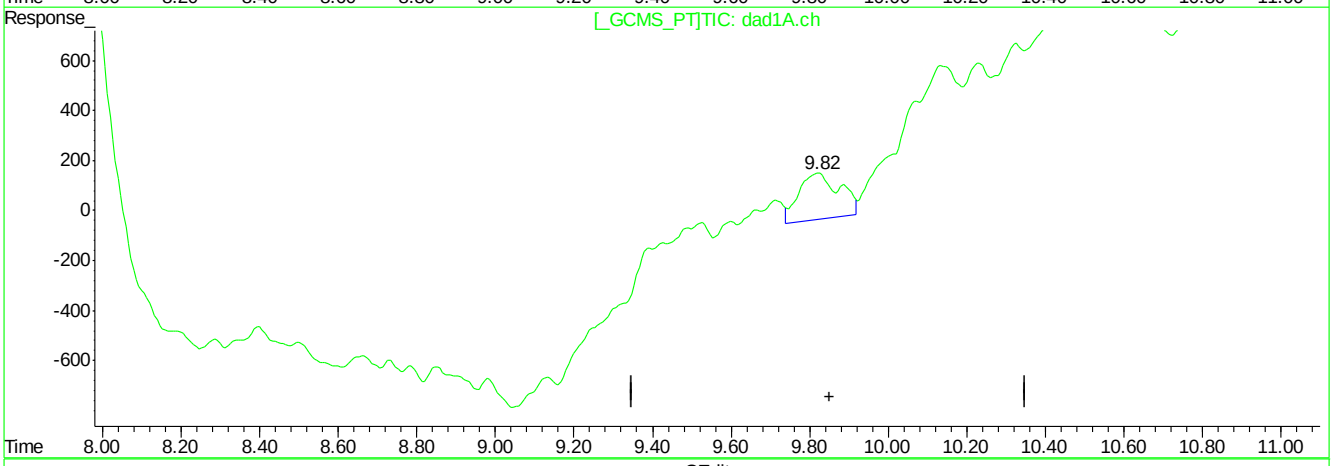
(+) = Expected Retention Time
GG621164.D GGG2952_032221.M Mon Apr 26 12:57:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1A.ch
Acq On : 23-Apr-2021, 14:10:19 Operator: jamesb
Sample : FA84640-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.84min 1.838ppb m

response 22896

(7) 1,3-Dinitrobenzene #2

9.82min 1.460ppb m

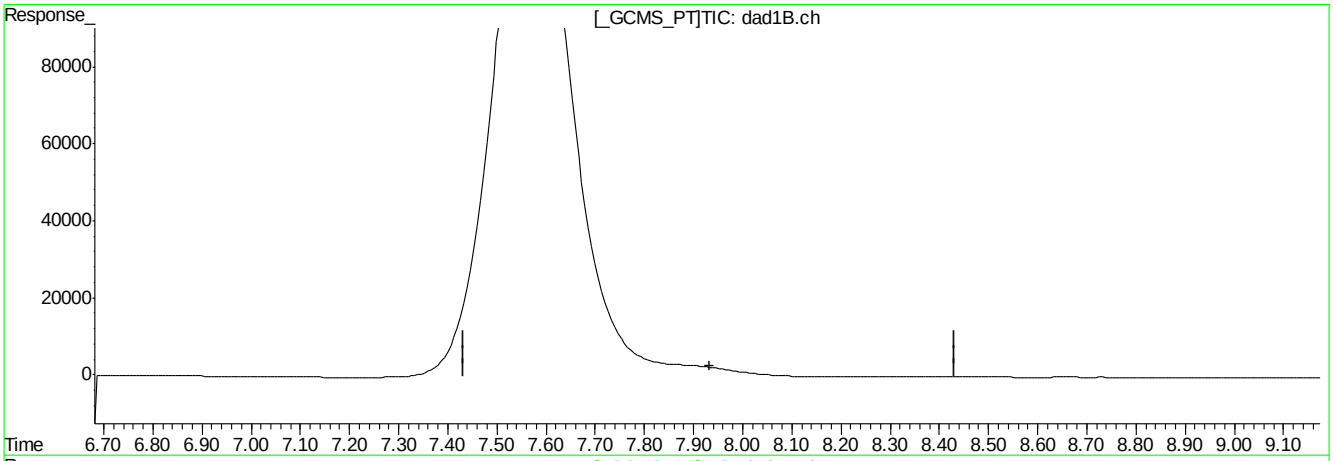
response 13249

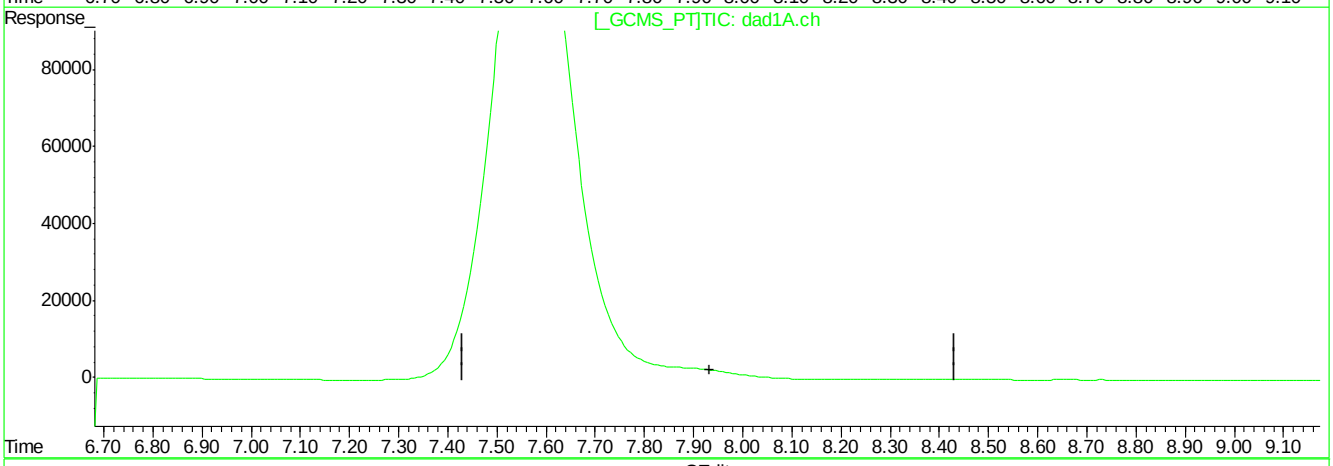
(+) = Expected Retention Time
GG621164.D GGG2952_032221.M Mon Apr 26 12:57:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1A.ch
Acq On : 23-Apr-2021, 14:10:19 Operator: jamesb
Sample : FA84640-1cf Inst : G1315B
Misc : op84690,GGG2966,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:57 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

0.00min 0.000ppb

response 0

(6) RDX #2

0.00min 0.000ppb

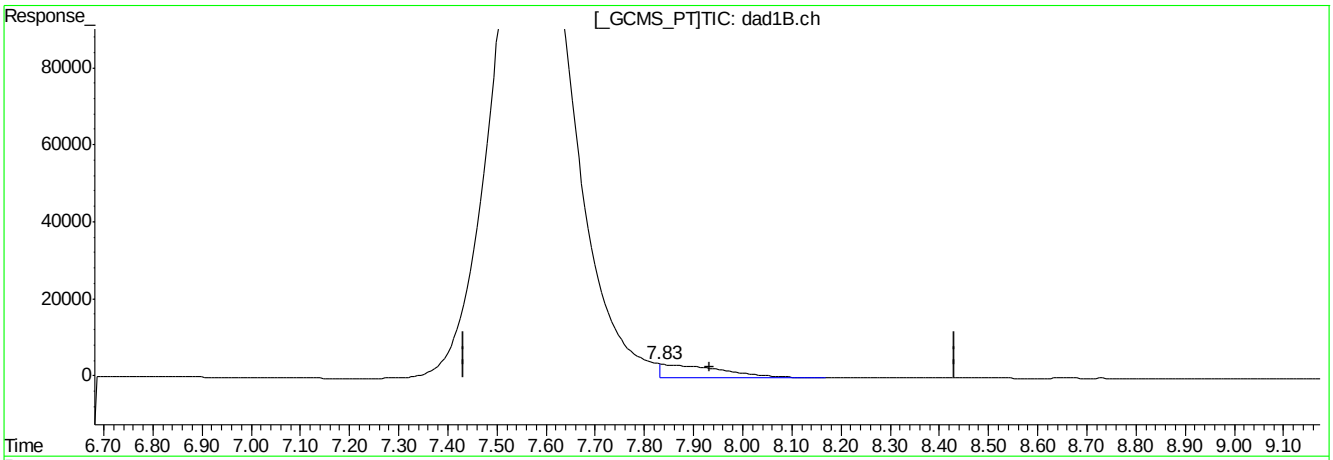
response 0

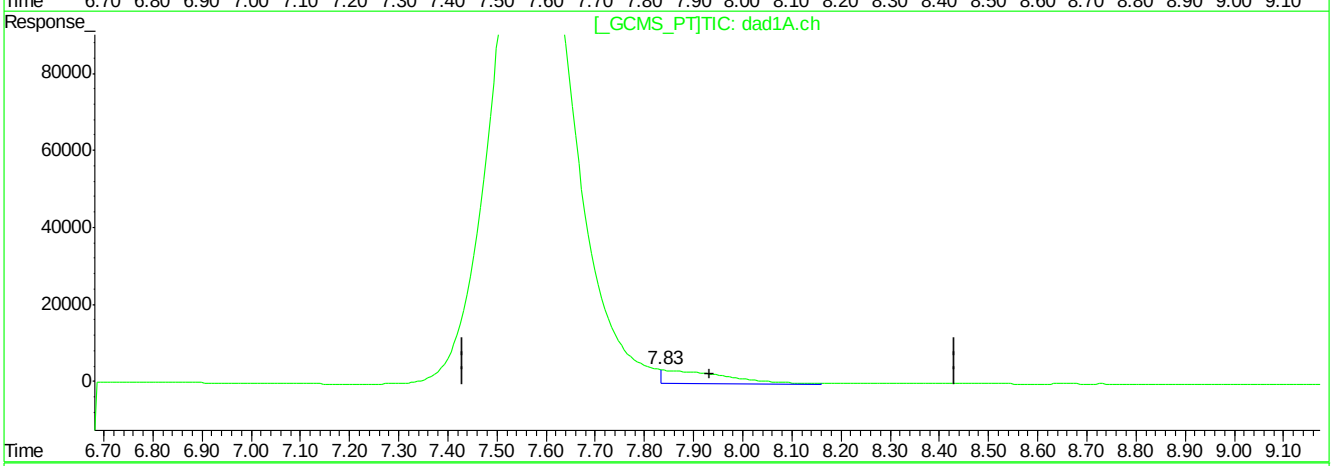
(+) = Expected Retention Time
GG621164.D GGG2952_032221.M Mon Apr 26 13:01:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621164.D\dad1A.ch
Acq On : 23-Apr-2021, 14:10:19 Operator: jamesb
Sample : FA84640-1cf Inst : G1315B
Misc : op84690,GGG2966,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:57 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.83min 75.281ppb m

response 312468

(6) RDX #2

7.83min 79.445ppb m

response 331528

(+) = Expected Retention Time
GG621164.D GGG2952_032221.M Mon Apr 26 13:01:19 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/26/21 15:27

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : op84960,GPP2438,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18:44 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.53	11.53	511807	904685	250.421m	284.178m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	50.08%#	56.84%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.49	1.49	1441831	2611425	950.693m	597.273m
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.99	2.99	108074	182049	58.090m	61.692m
6)	1,3,5-Trinitrobe	4.78	4.78	7454859	14506090	1882.281m	1884.796m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.41	6.41	161257	368914	39.755	54.620
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	9.04	0.00	3447289	0	NoCal	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	10.15	10.15	7606969	9352639	2018.311m	2010.801m
13)	2-Amino-4,6-Dini	10.61	10.61	689558	1042358	205.269m	205.182m
14)	4-Amino-2,6-Dini	11.16	11.16	307294	613577	136.419m	128.825m
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

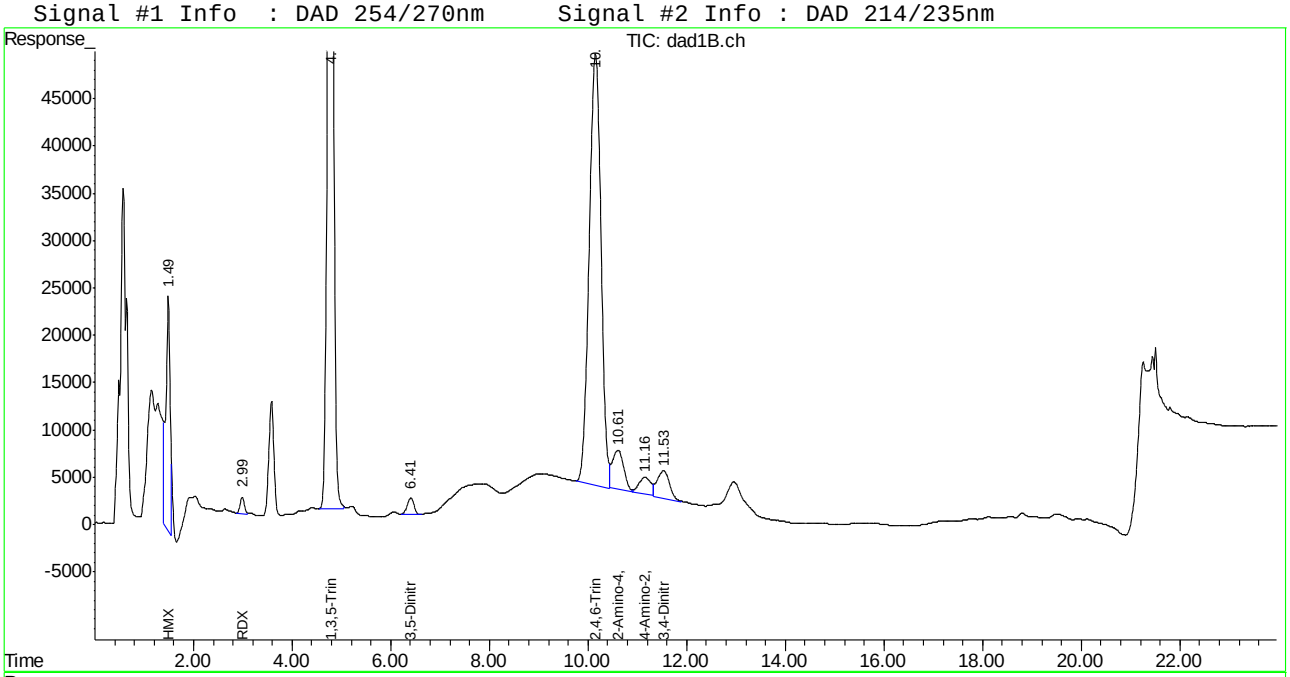
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

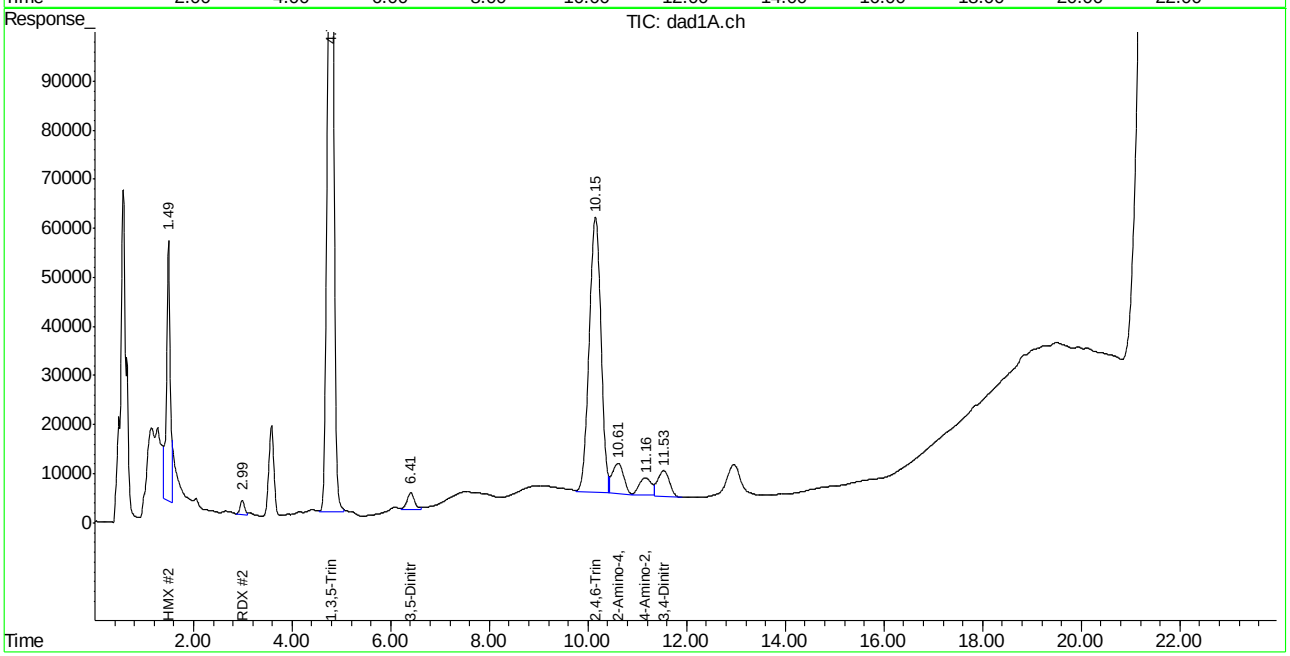
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : op84960,GPP2438,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 14:45 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





PP390605.D GPP2439_042321PRI.M Mon Apr 26 14:45:36 2021 Page 2

Manual Integration Approval Summary

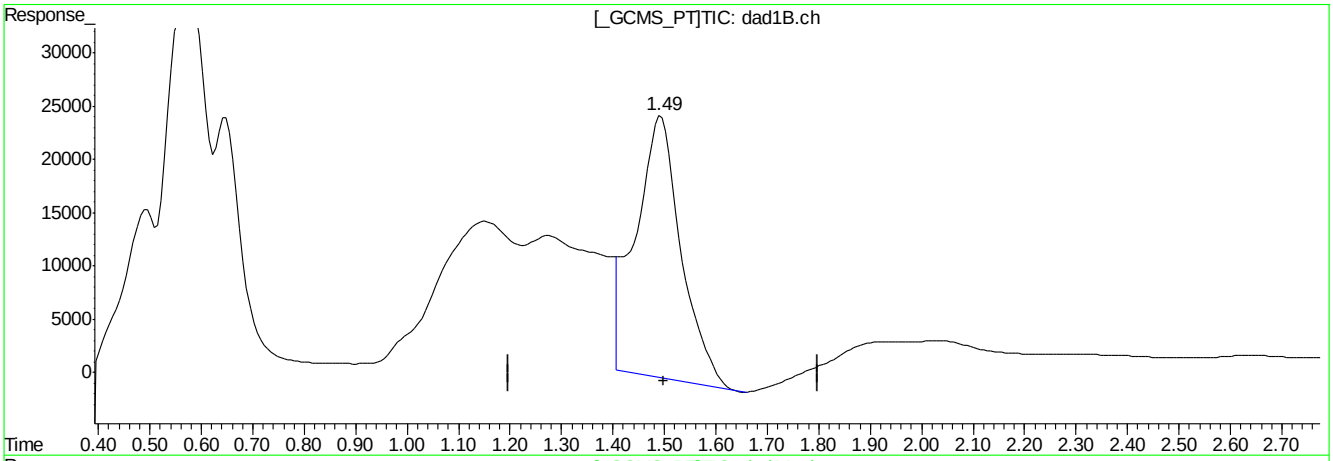
Sample Number: FA84640-2
Lab FileID: PP390605.D
Injection Time: 04/22/21 13:13
Method: SW846 8330B
Analyst approved: 04/23/21 14:31 James Boone
Supervisor approved: 04/26/21 15:27 Naresh Jiawan

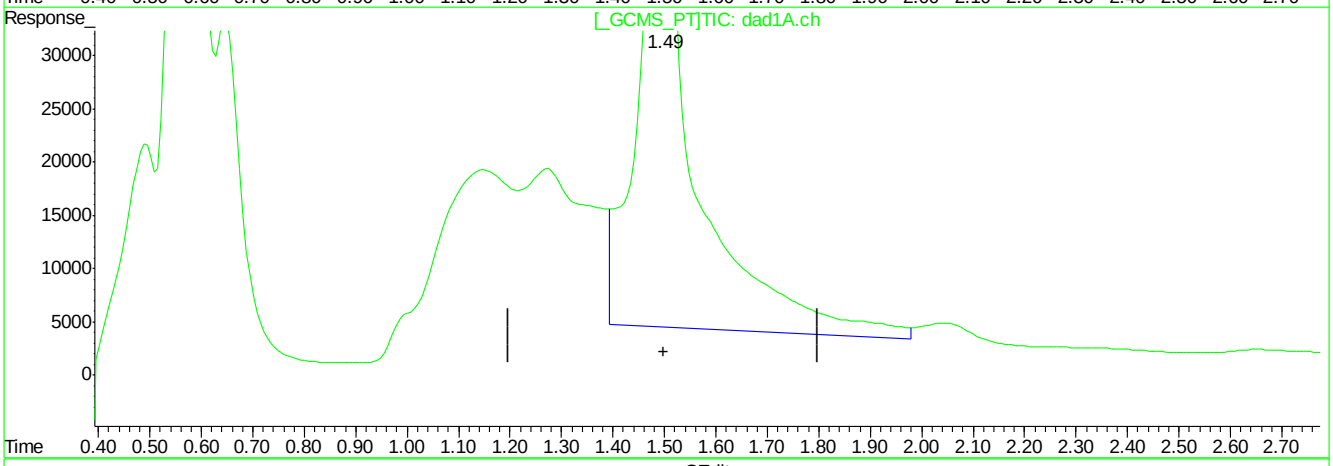
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.49	Poor instrument integration
HMX	2691-41-0	2	1.49	Poor instrument integration
RDX	121-82-4	1	2.99	Poor instrument integration
RDX	121-82-4	2	2.99	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.78	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.78	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.05	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.07	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.15	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.15	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.61	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.61	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	11.16	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	11.16	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.53	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.53	Poor instrument integration
PETN	78-11-5	2	18.80	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.49min 1014.451ppb

response 1538528

(2) HMX #2

1.49min 827.893ppb

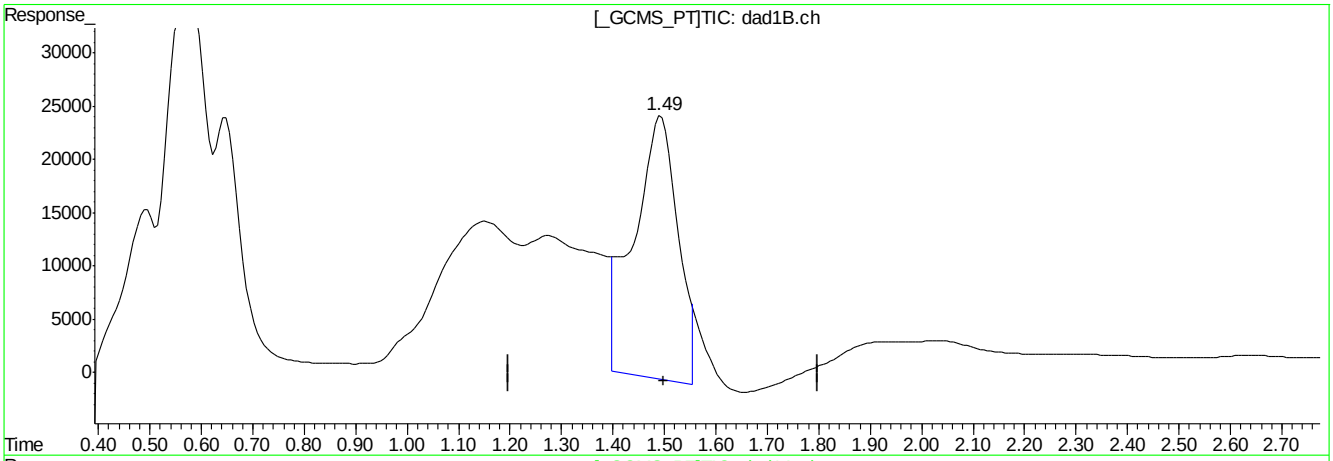
response 3619751

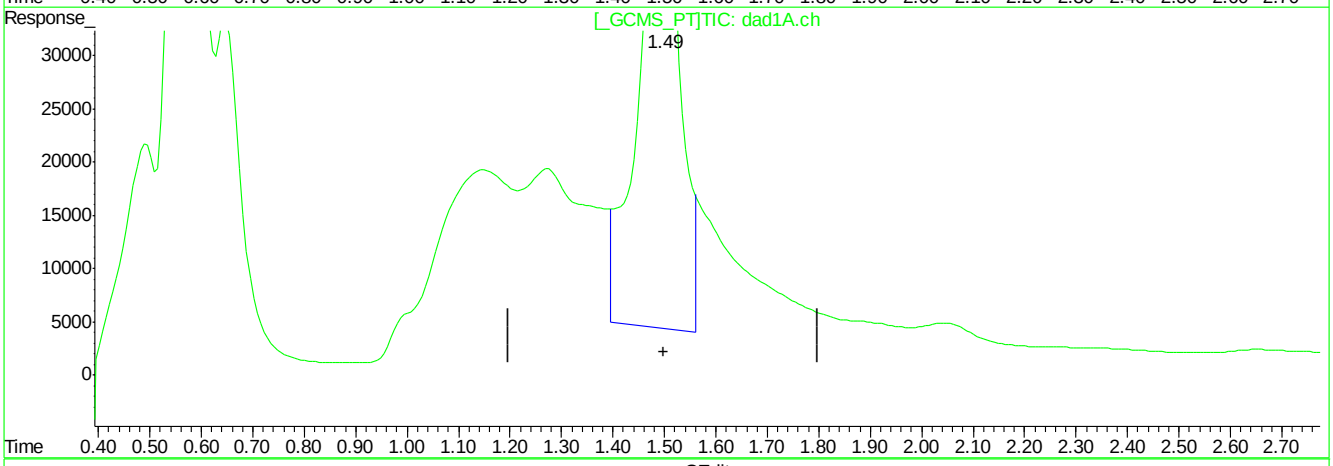
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:57:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.49min 950.693ppb m

response 1441831

(2) HMX #2

1.49min 597.273ppb m

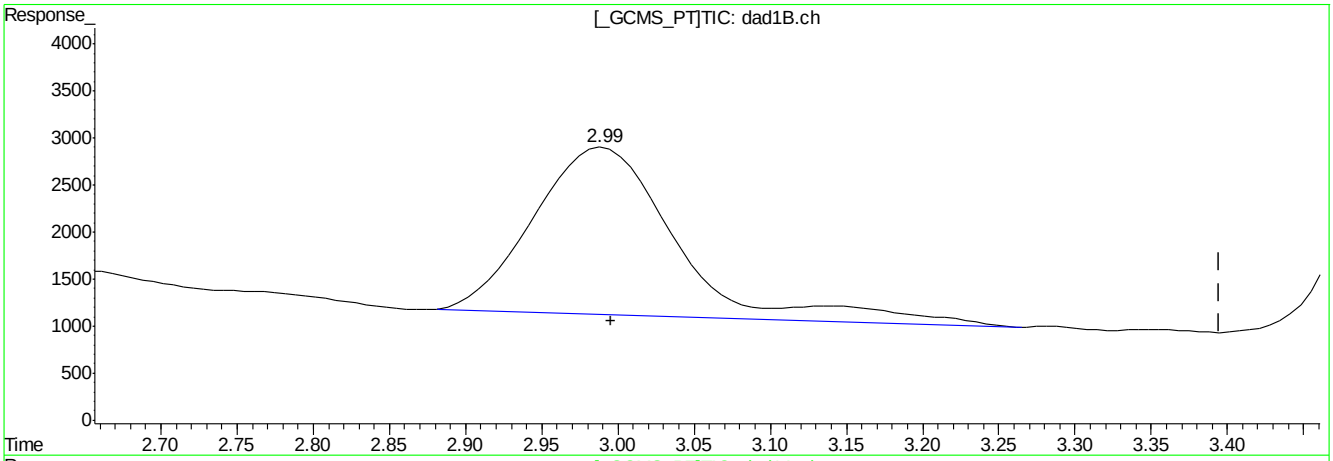
response 2611425

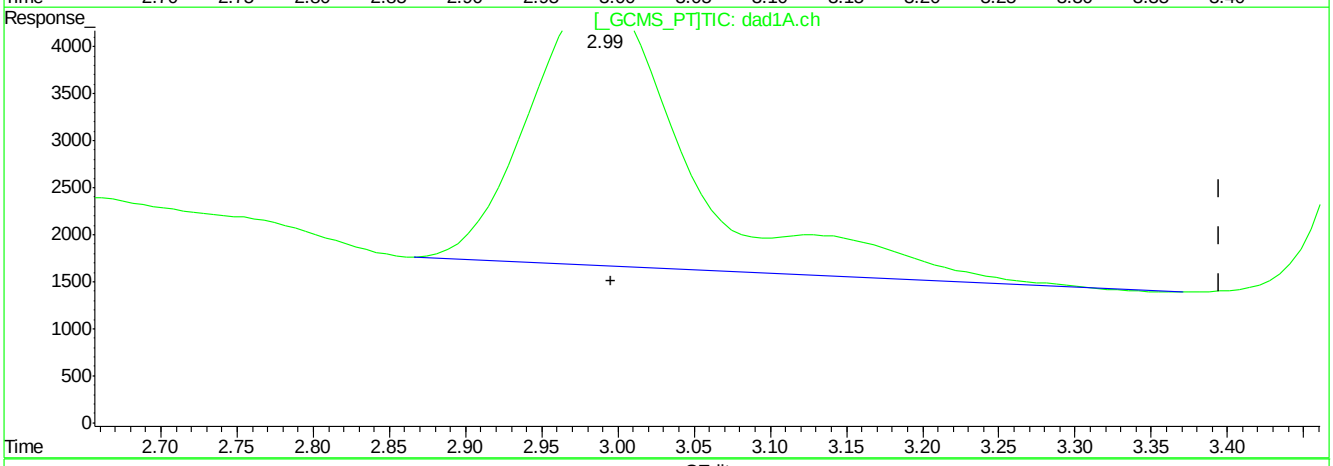
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:57:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.99min 62.932ppb

response 117083

(5) RDX #2

2.99min 71.704ppb

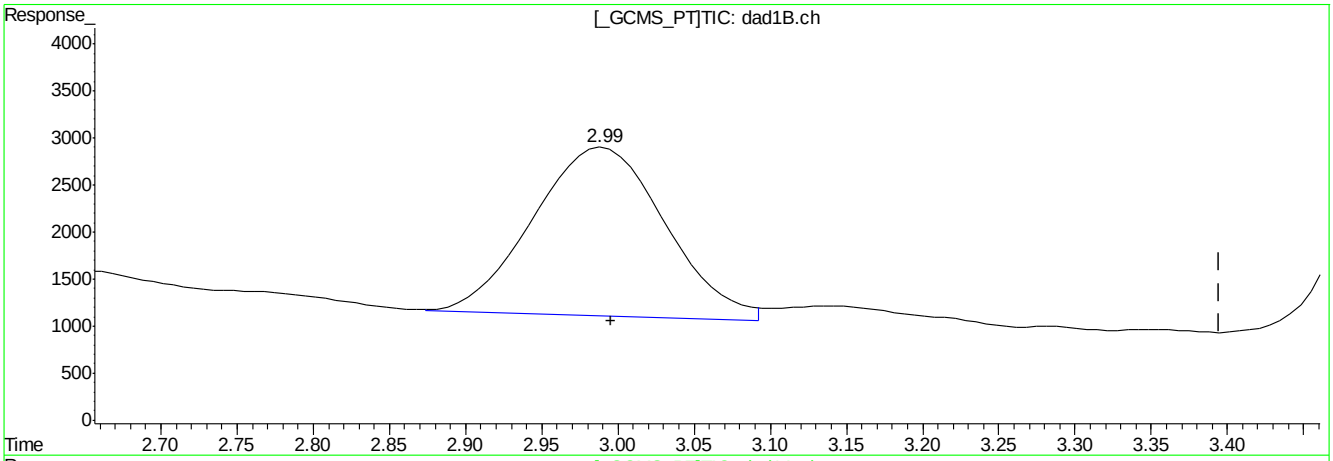
response 211591

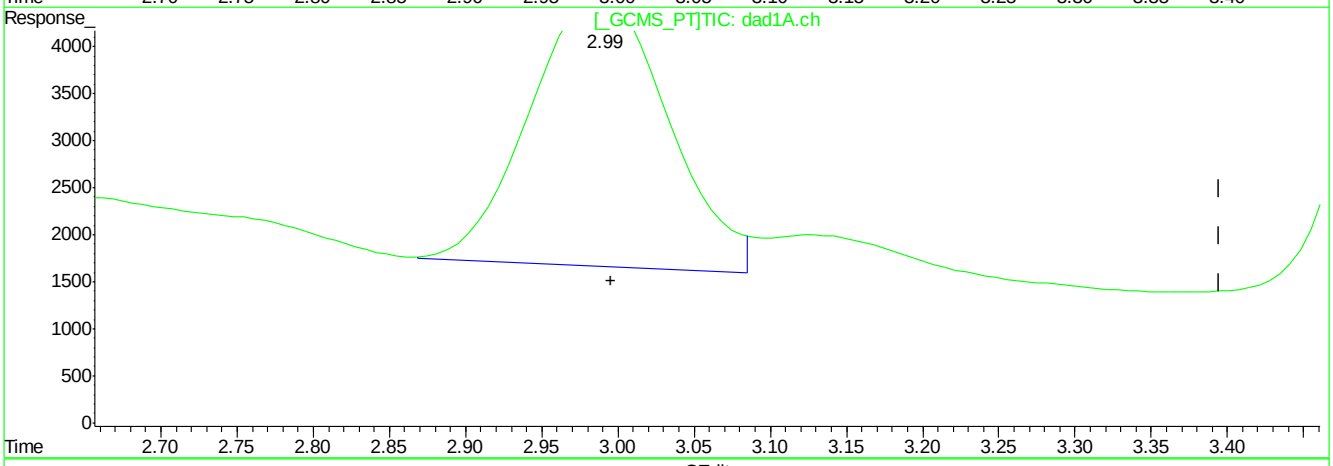
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:57:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.99min 58.090ppb m

response 108074

(5) RDX #2

2.99min 61.692ppb m

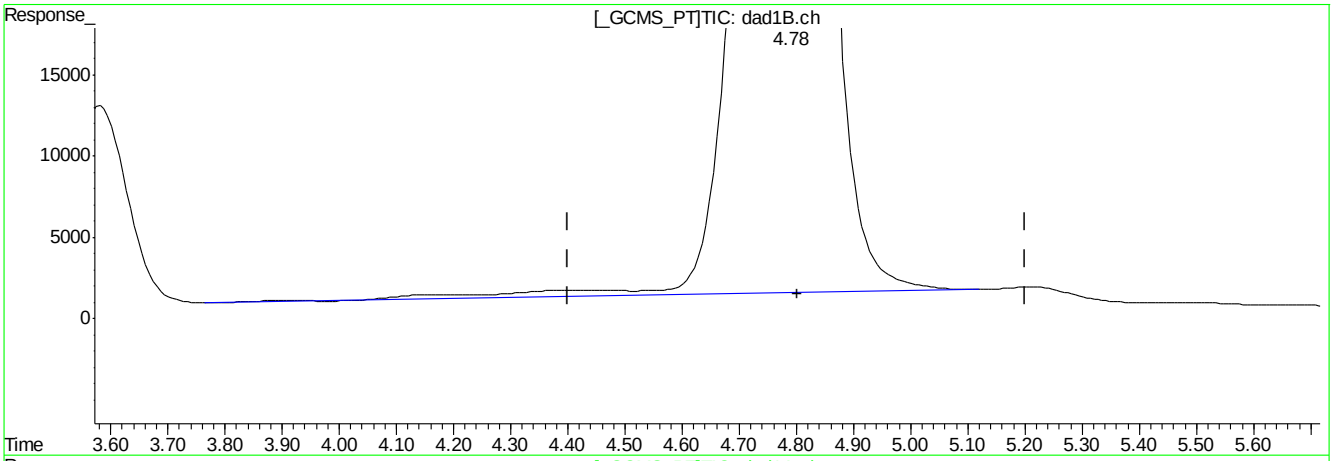
response 182049

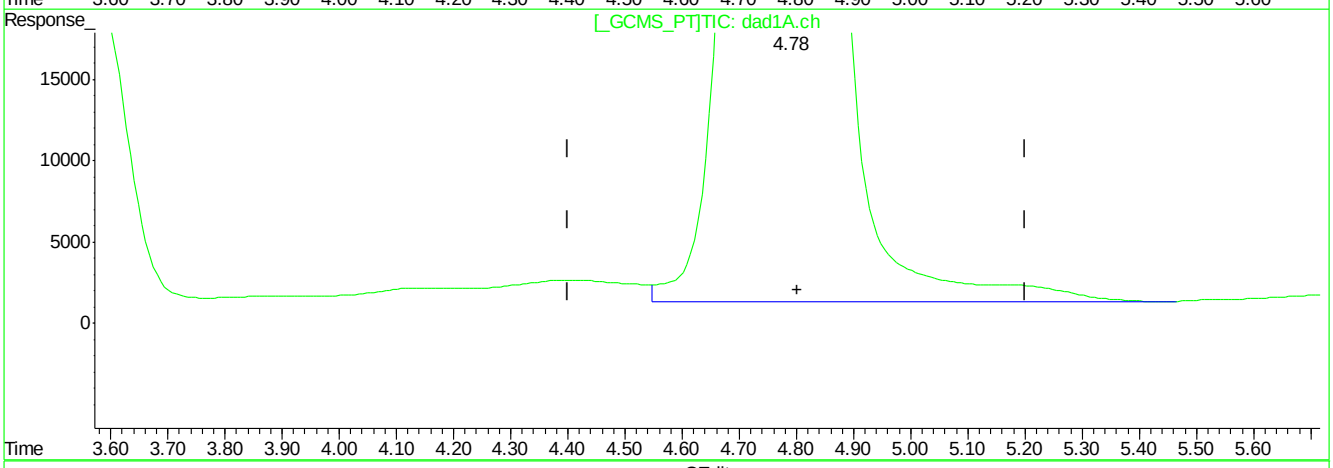
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:57:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.78min 1908.853ppb

response 7560099

(6) 1,3,5-Trinitrobenzene #2

4.78min 1941.104ppb

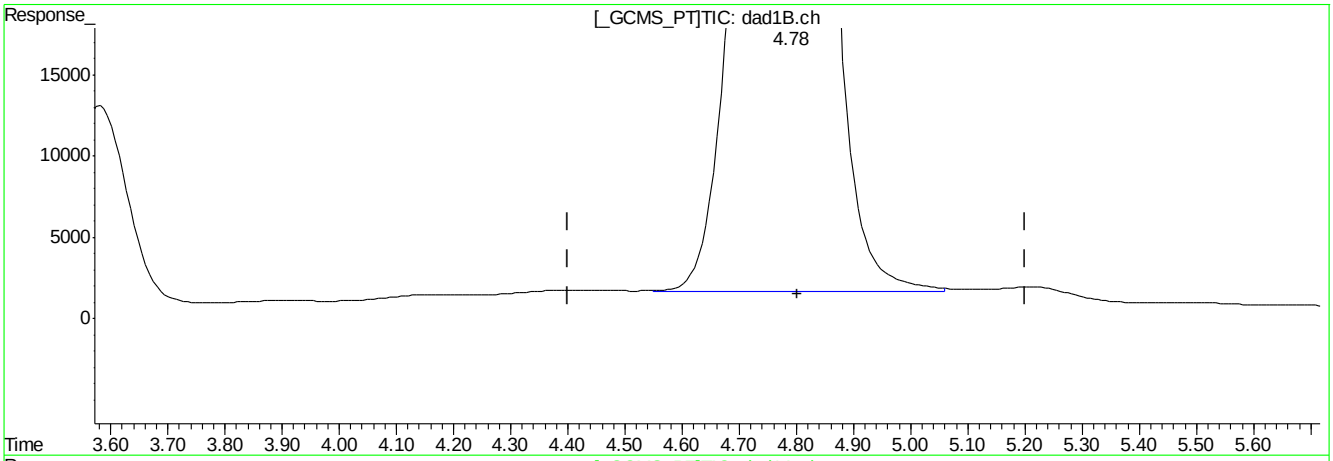
response 14939457

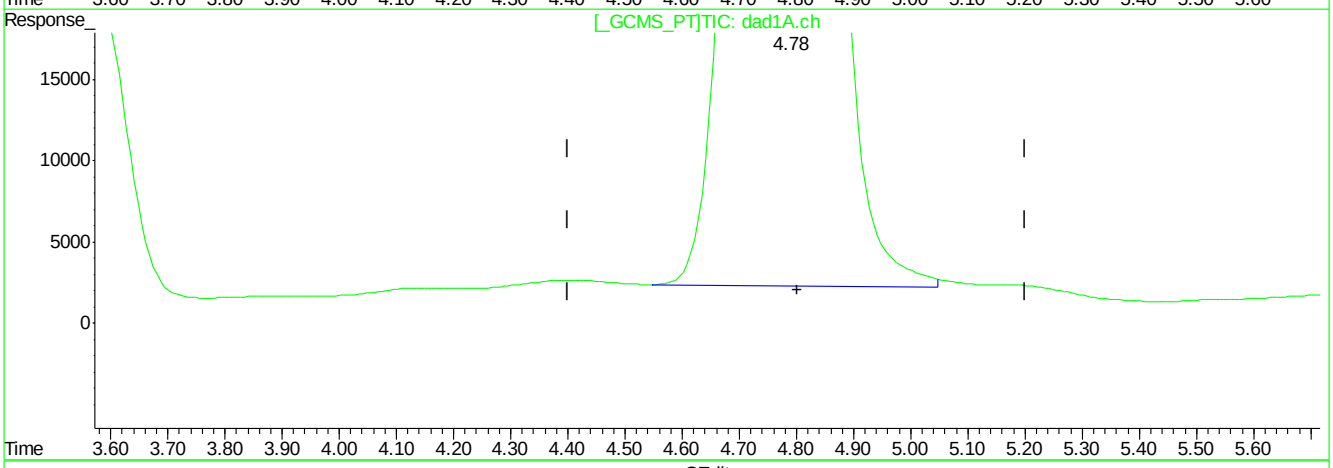
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:57:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.78min 1882.281ppb m

response 7454859

(6) 1,3,5-Trinitrobenzene #2

4.78min 1884.796ppb m

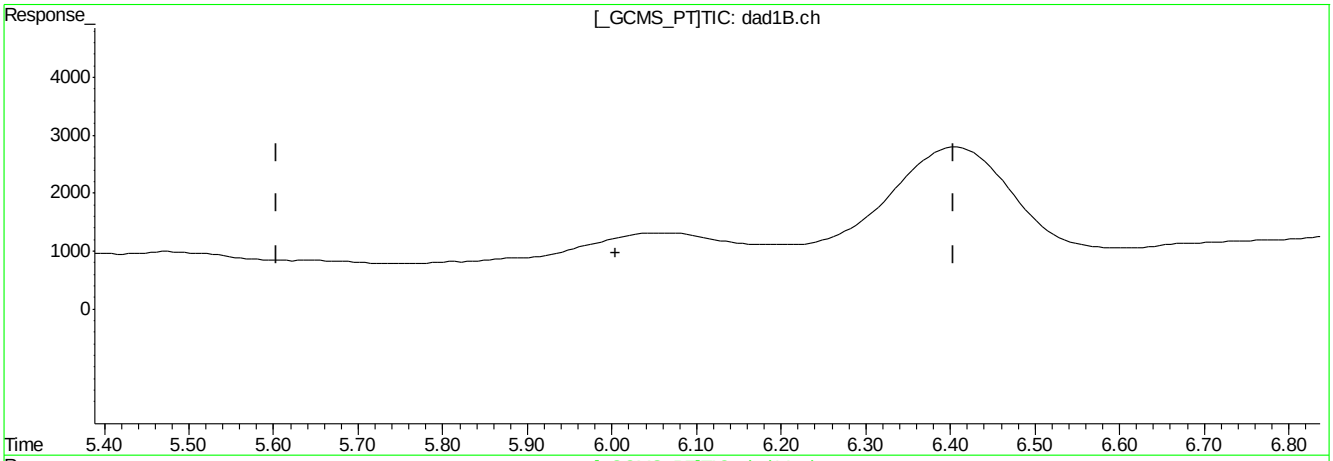
response 14506090

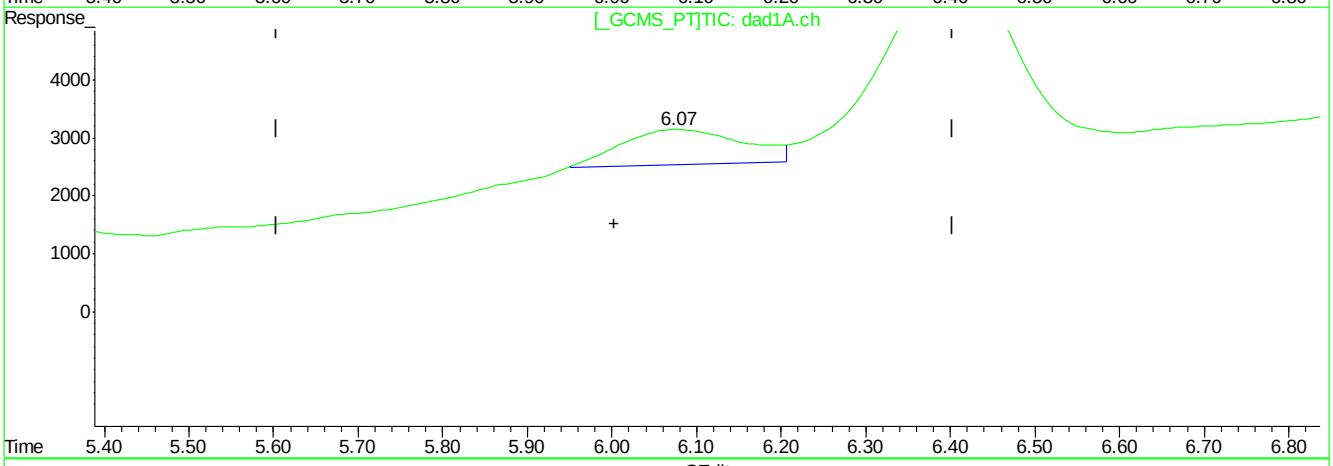
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:57:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

0.00min 0.000ppb

response 0

(7) 1,3-Dinitrobenzene #2

6.08min 16.391ppb

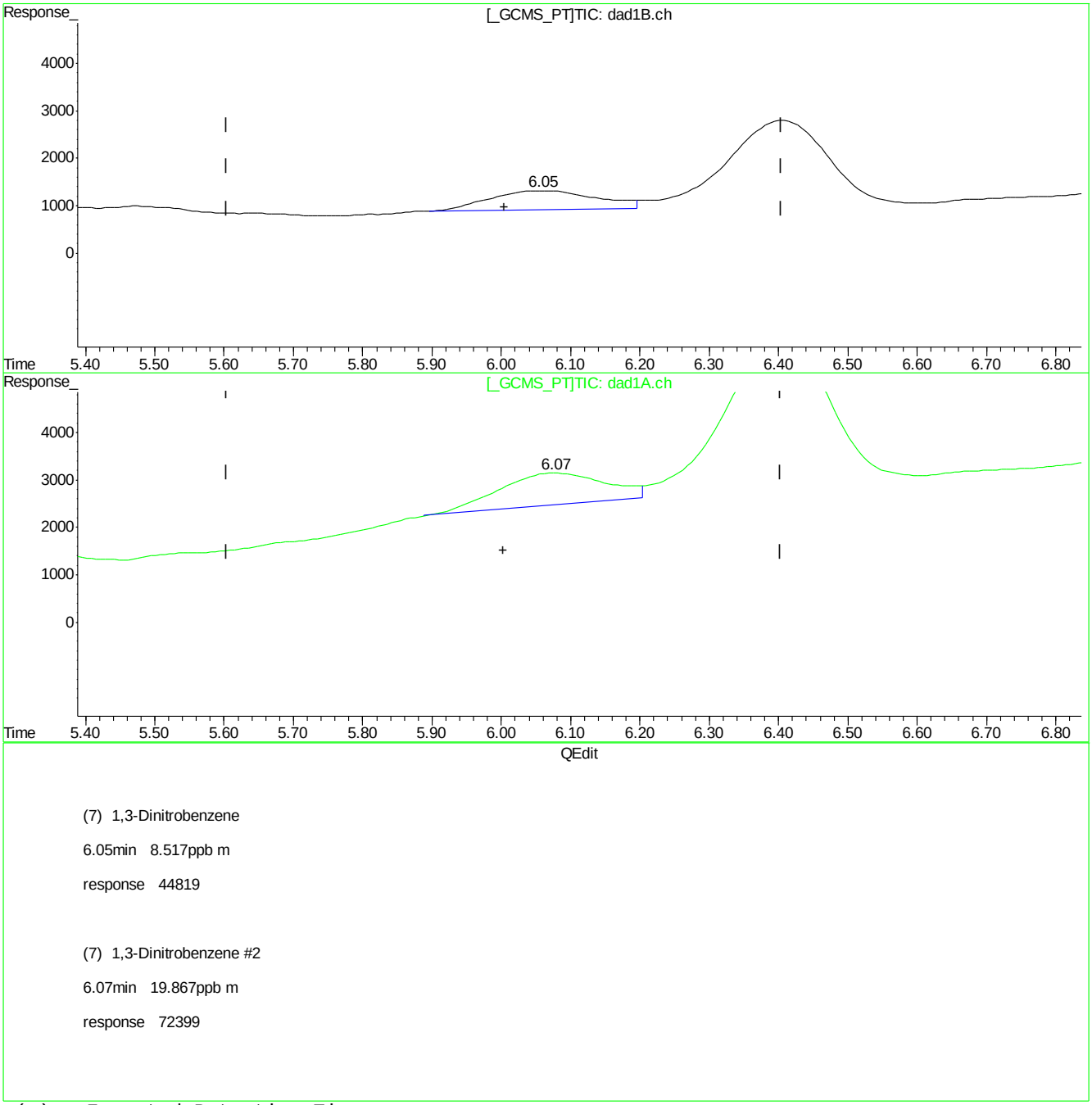
response 59733

(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:57:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

6.05min 8.517ppb m

response 44819

(7) 1,3-Dinitrobenzene #2

6.07min 19.867ppb m

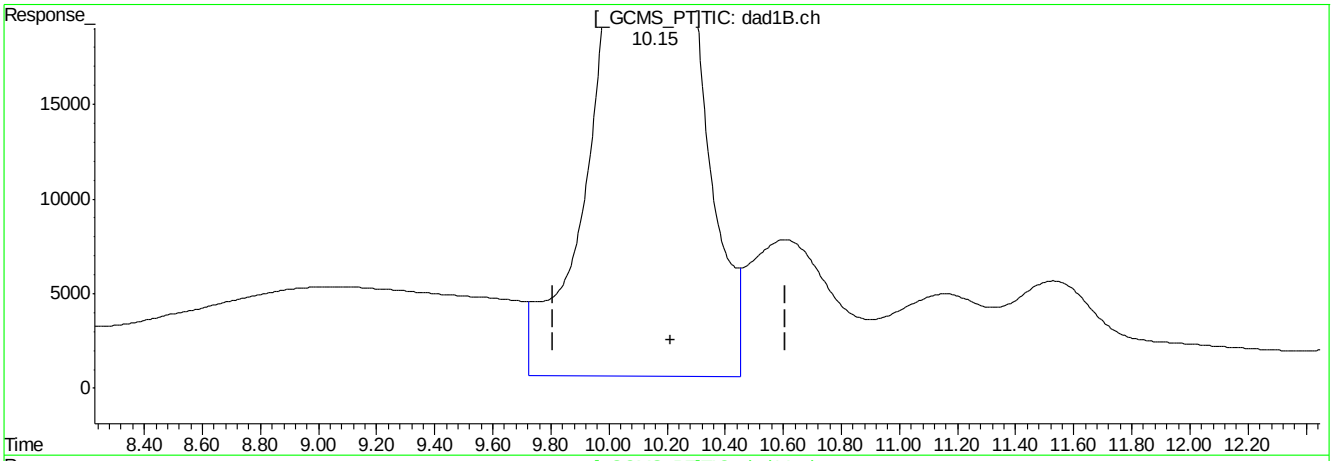
response 72399

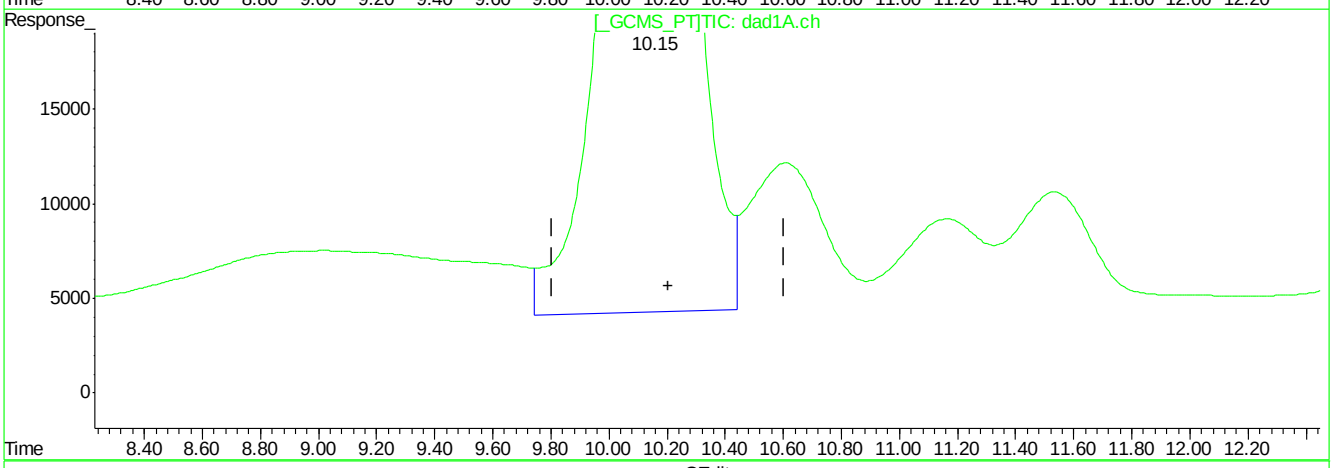
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:57:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.15min 2439.216ppb

response 9193351

(12) 2,4,6-Trinitrotoluene #2

10.15min 2193.337ppb

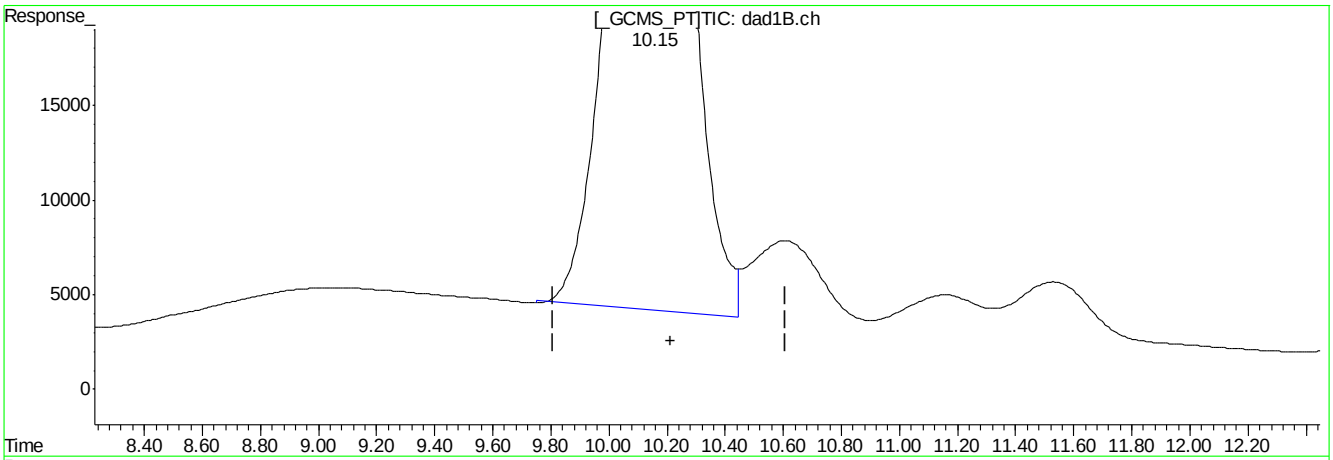
response 10201651

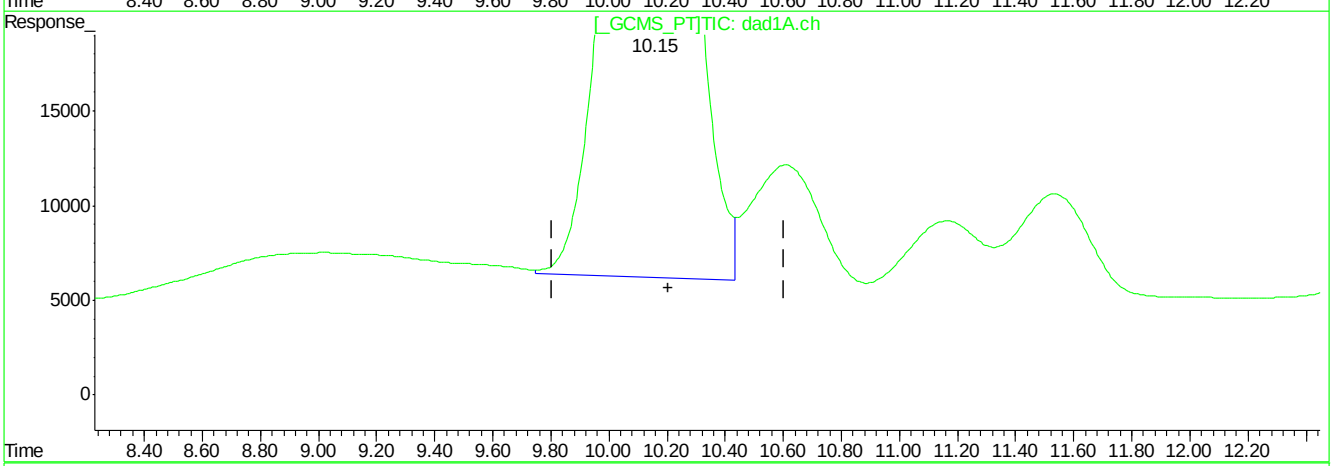
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:58:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.15min 2018.311ppb m

response 7606969

(12) 2,4,6-Trinitrotoluene #2

10.15min 2010.801ppb m

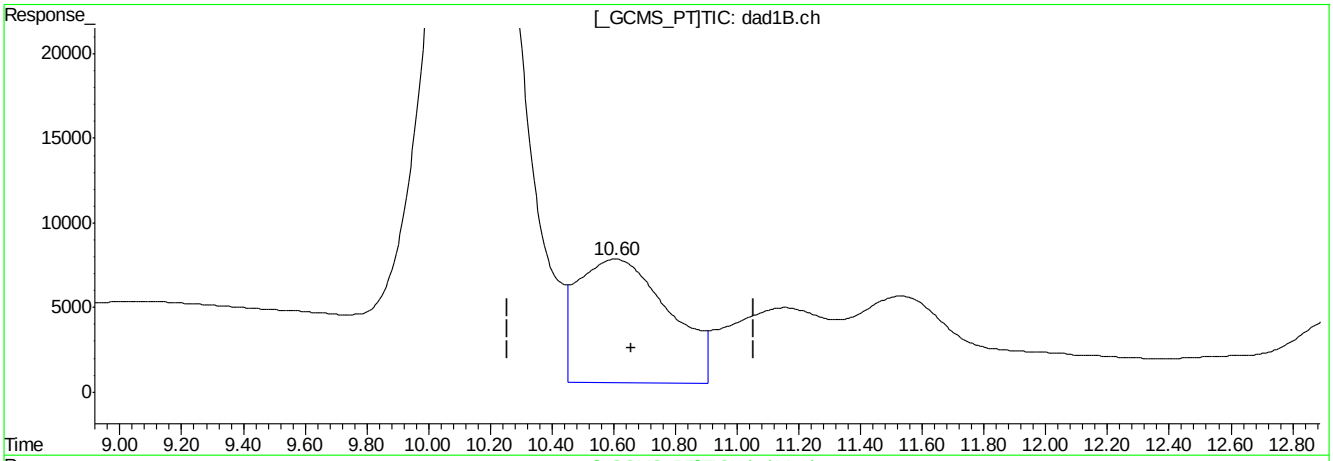
response 9352639

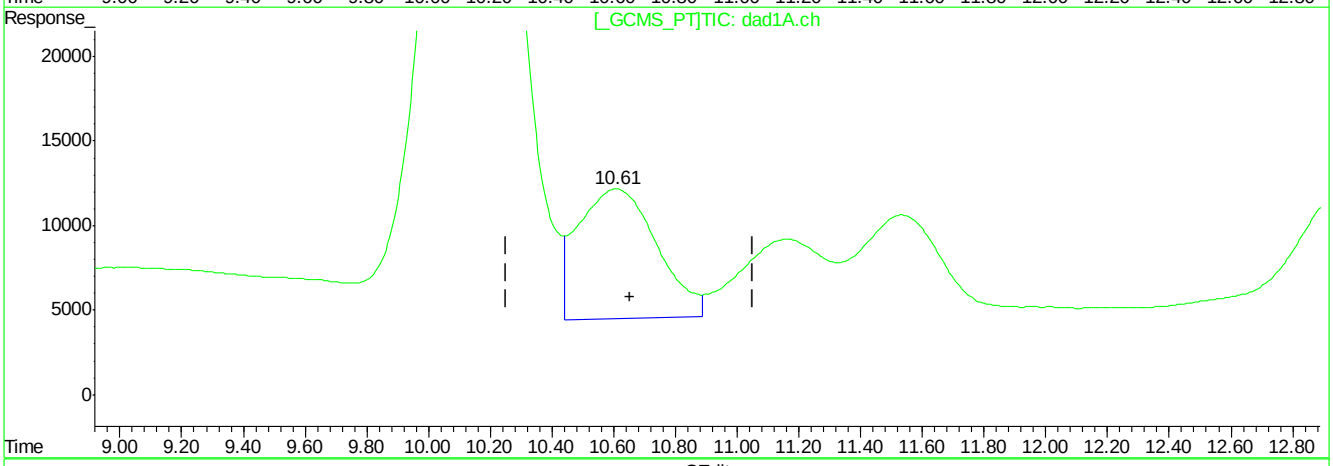
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:58:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.61min 447.021ppb

response 1501672

(13) 2-Amino-4,6-Dinitrotoluene #2

10.61min 268.573ppb

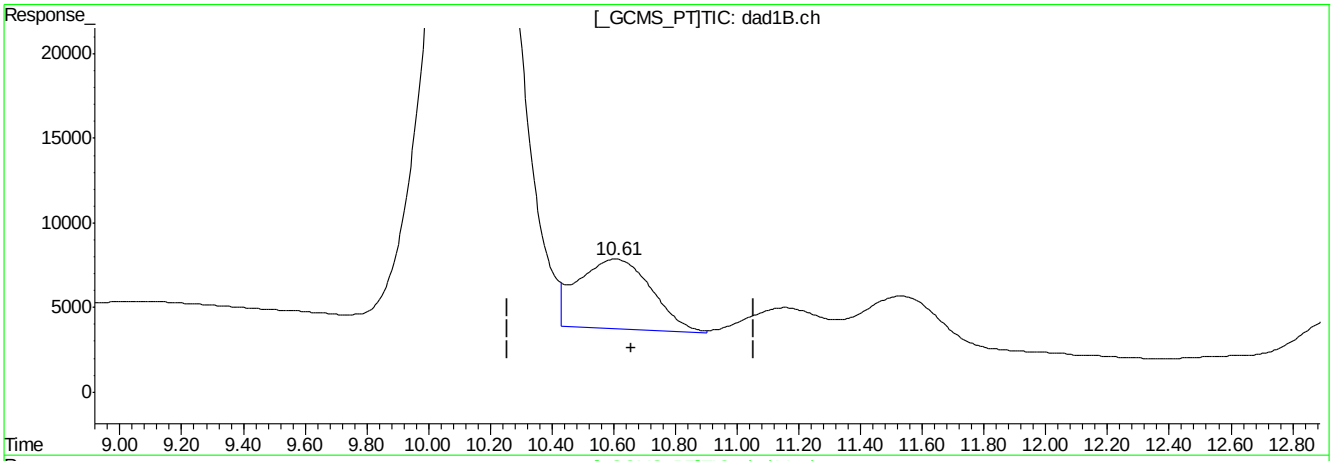
response 1364399

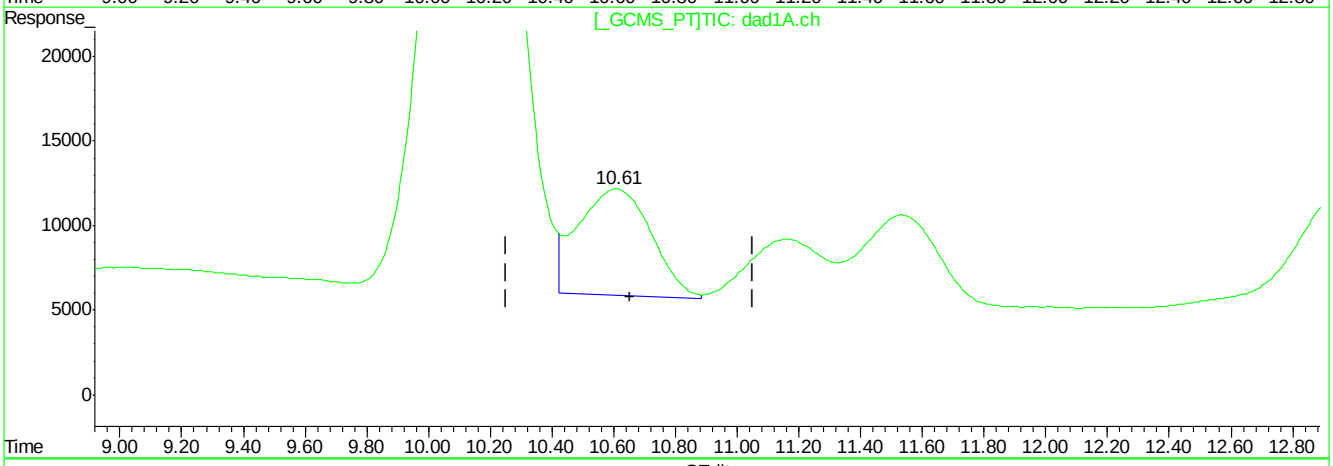
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:58:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.61min 205.269ppb m

response 689558

(13) 2-Amino-4,6-Dinitrotoluene #2

10.61min 205.182ppb m

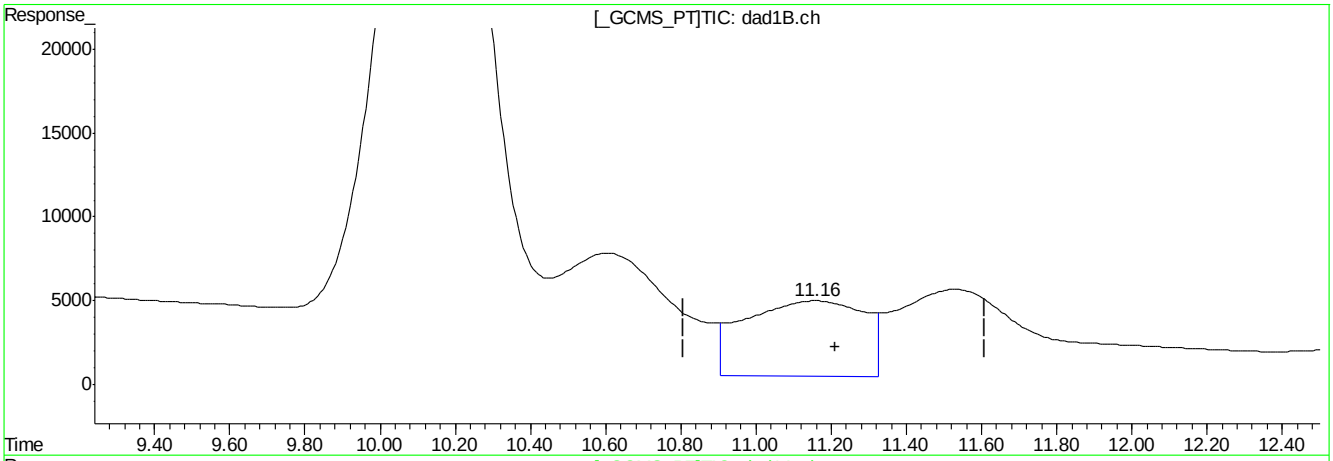
response 1042358

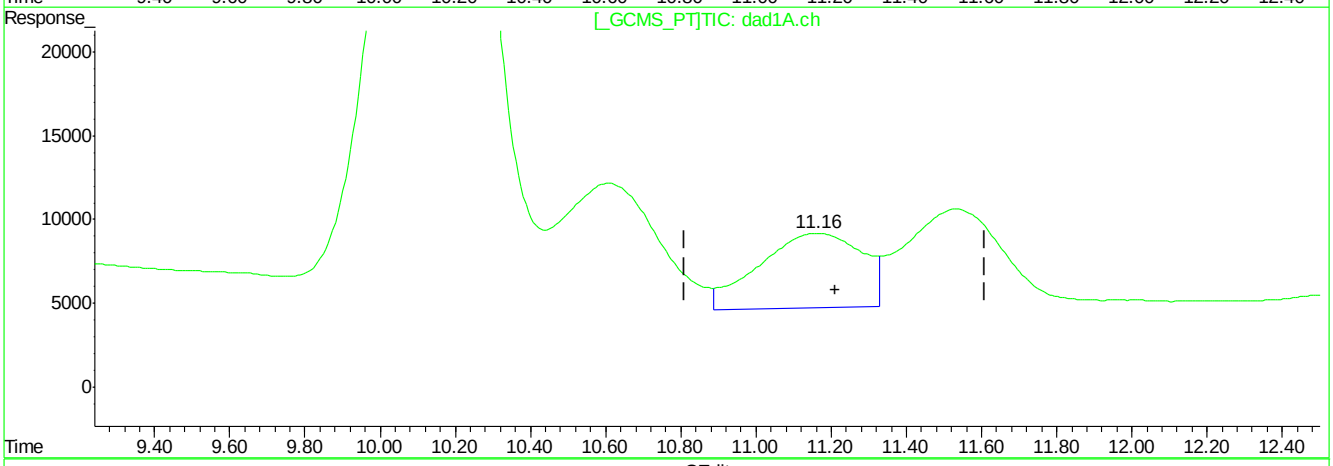
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:58:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.16min 440.908ppb

response 993182

(14) 4-Amino-2,6-Dinitrotoluene #2

11.16min 178.401ppb

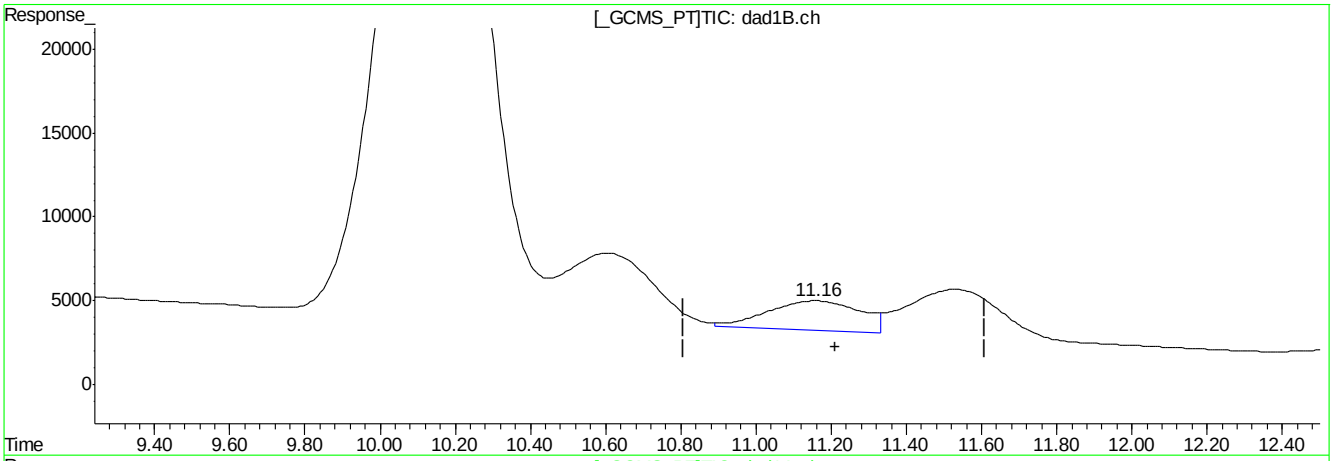
response 849703

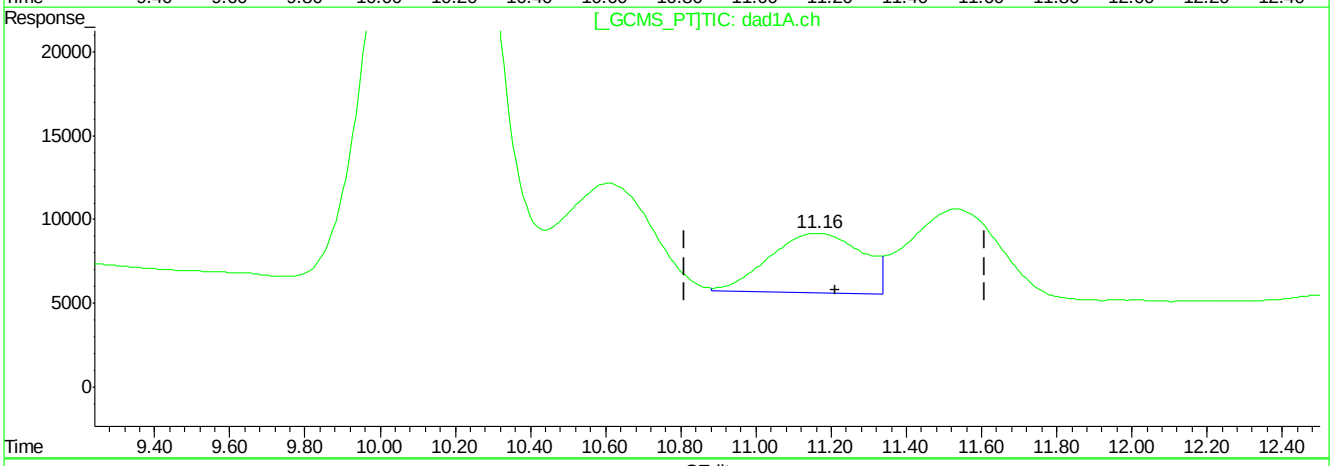
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:58:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.16min 136.419ppb m

response 307294

(14) 4-Amino-2,6-Dinitrotoluene #2

11.16min 128.825ppb m

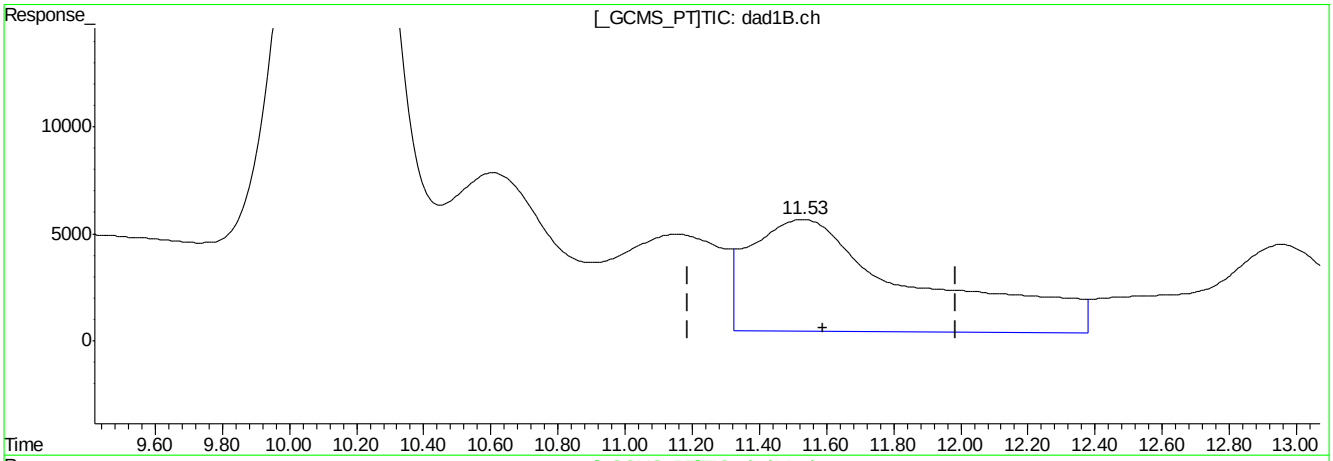
response 613577

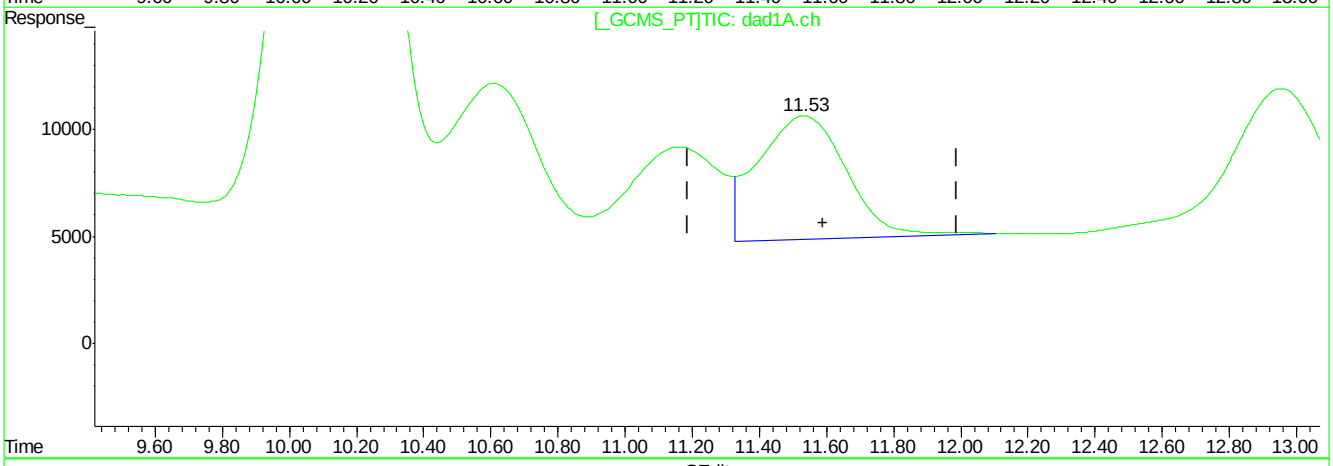
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:59:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.53min 883.859ppb

response 1806423

(15) 3,4-Dinitrotoluene #2 (S)

11.53min 332.154ppb

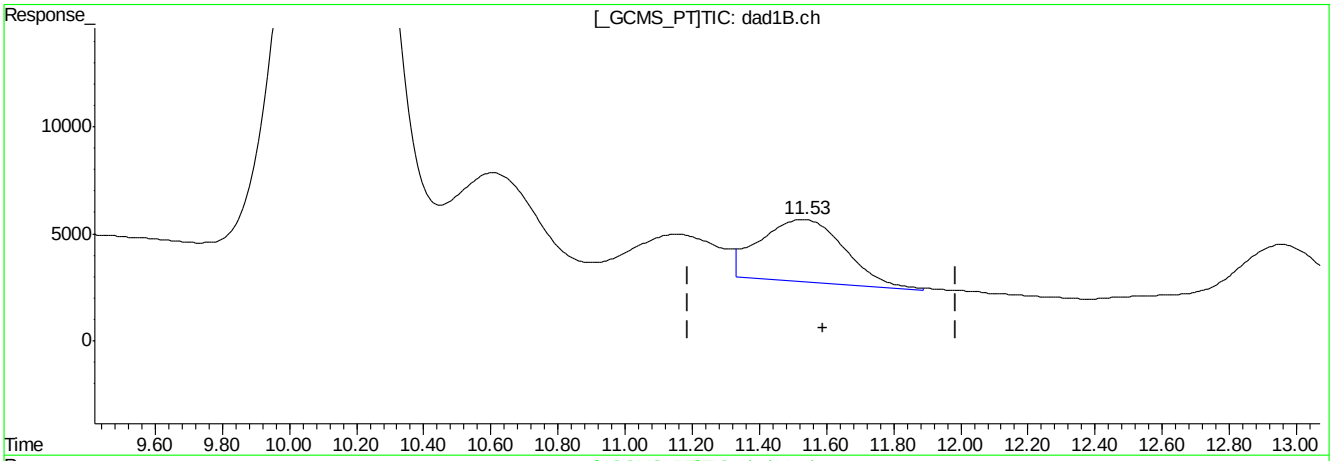
response 1057418

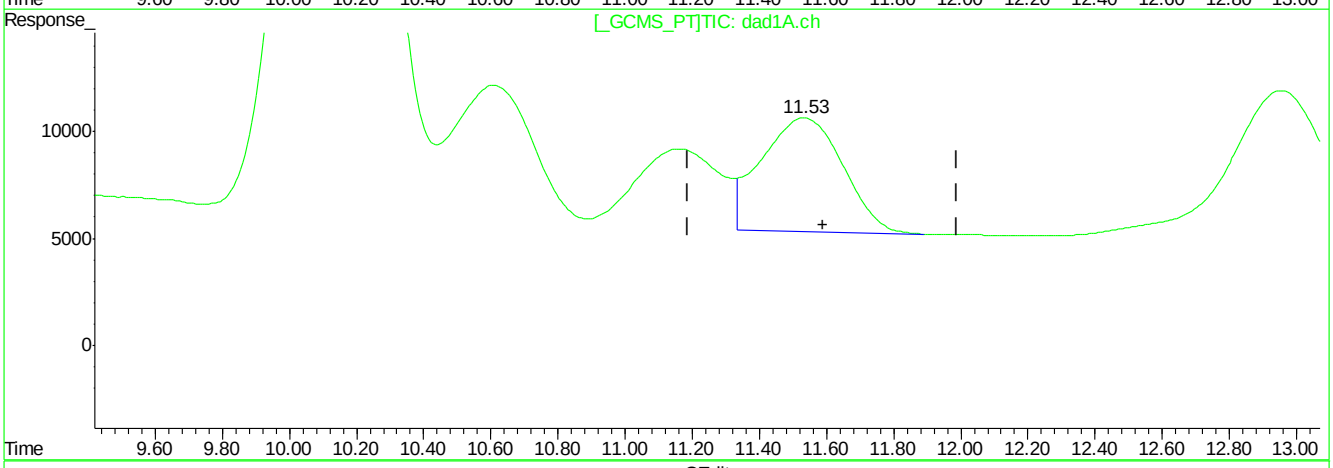
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:59:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.53min 250.421ppb m

response 511807

(15) 3,4-Dinitrotoluene #2 (S)

11.53min 284.178ppb m

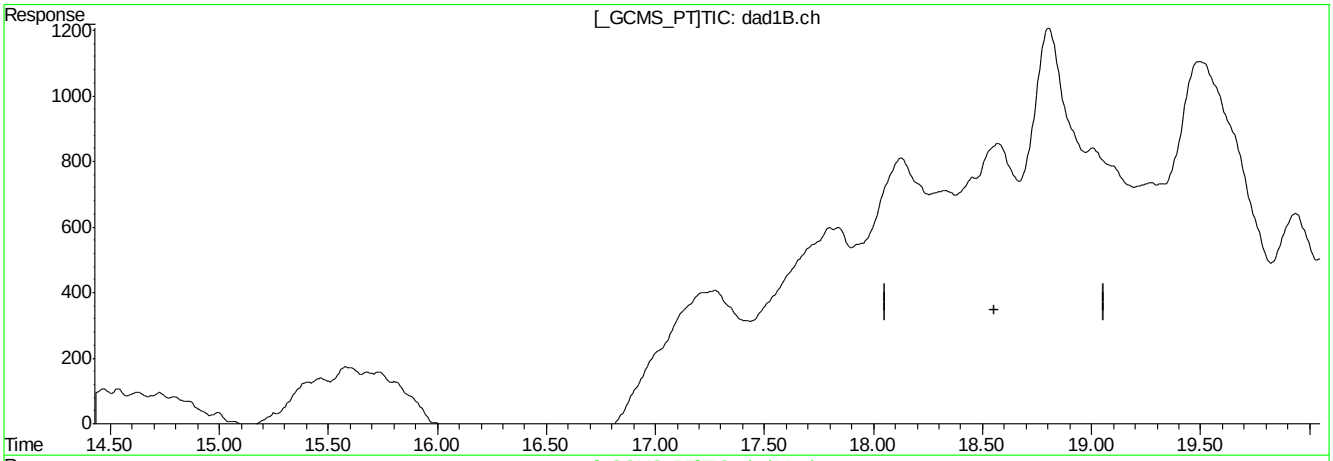
response 904685

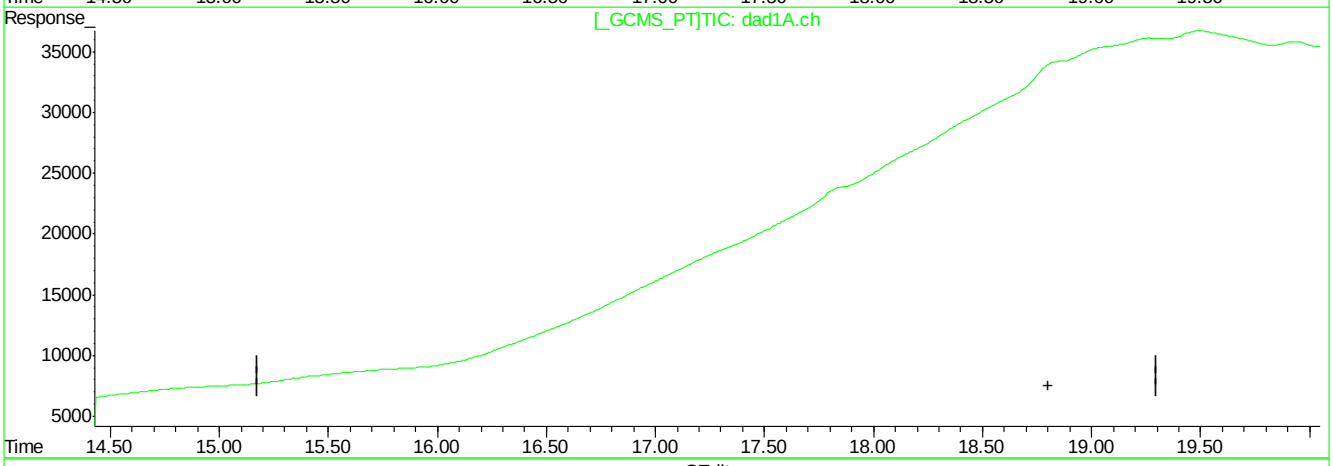
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:59:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

0.00min 0.000ppb

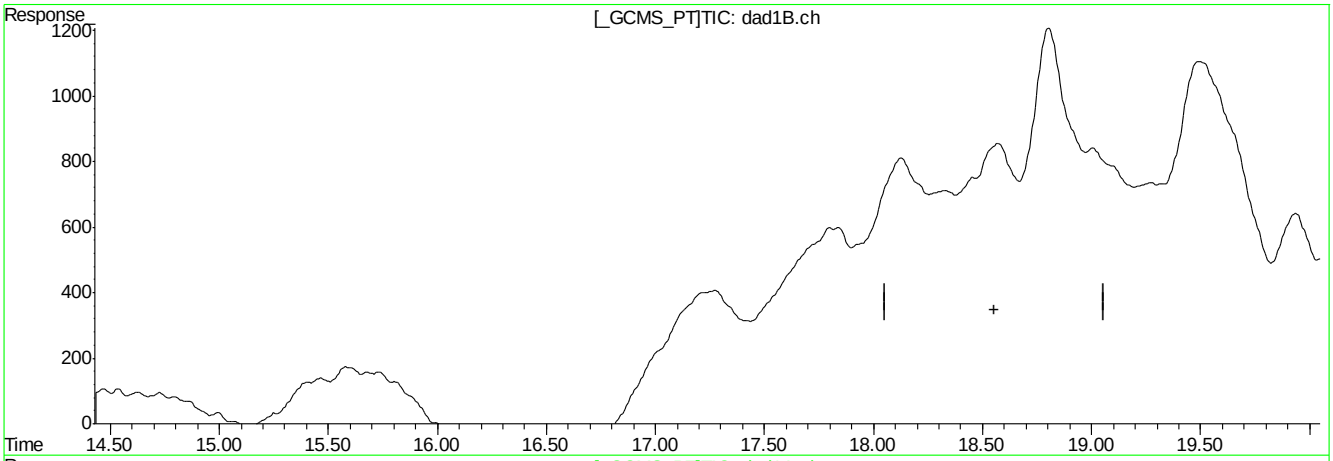
response 0

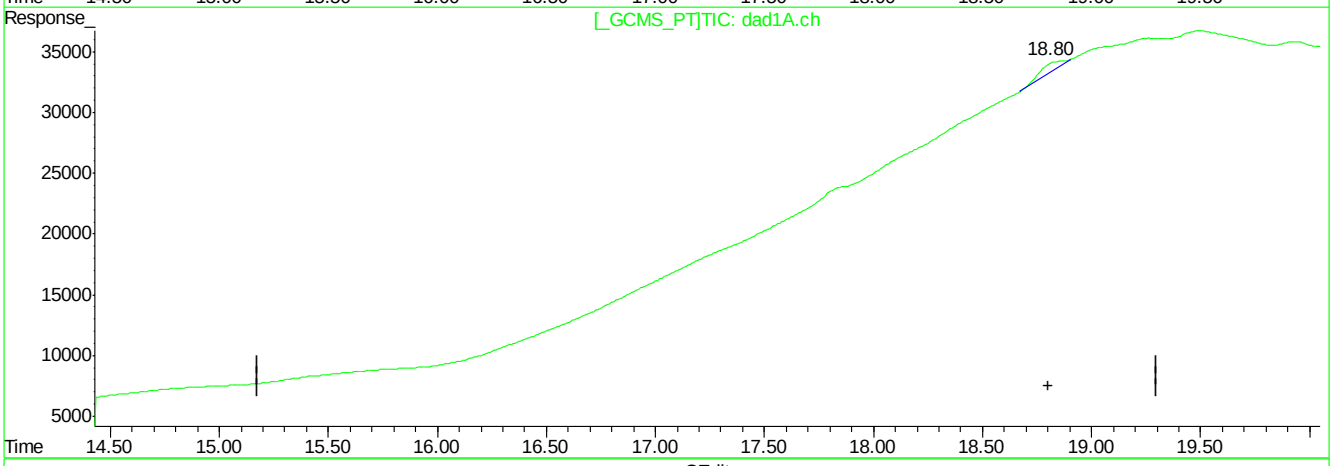
(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:59:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390605.D\dad1A.ch
Acq On : 22-Apr-2021, 13:13:47 Operator: jamesb
Sample : FA84640-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.80min 40.813ppb m

response 54204

(+) = Expected Retention Time
PP390605.D GPP2428_040221PRI.M Fri Apr 23 09:59:49 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/26/21 15:27

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1A.ch
Acq On : 23-Apr-2021, 14:41:44 Operator: jamesb
Sample : FA84640-2cf Inst : G1315B
Misc : op84960,GGG2966,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50:04 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.05	14.05	1603901	3009096	340.385	327.228
	Spiked Amount 500.000	Range 70 - 136		Recovery =		68.08%#	65.45%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.32	5.32	1629902	1629902	551.832	486.620
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.58	7.58	16828670	16835487	1870.732m	1871.192m
6)	RDX	7.85	7.85	318714	402753	76.786m	96.513m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.71	11.71	17761219	23949896	2145.629	2260.078
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.76	15.76	2178156	3697290	231.043	233.892
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.50	17.49	1062736	1725103	207.447	200.738m
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.35	19.35	1905537	2600250	231.577	223.739m
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

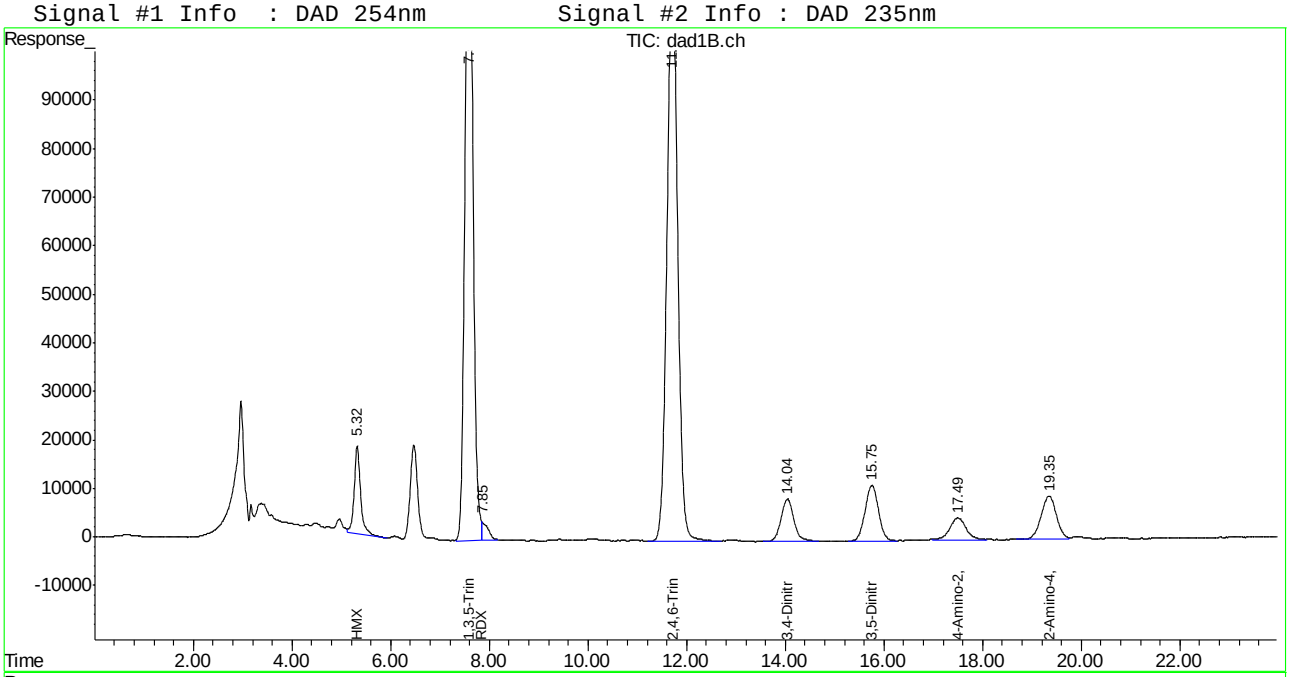
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG621165.D GGG2952_032221.M Mon Apr 26 14:12:22 2021 Page 1

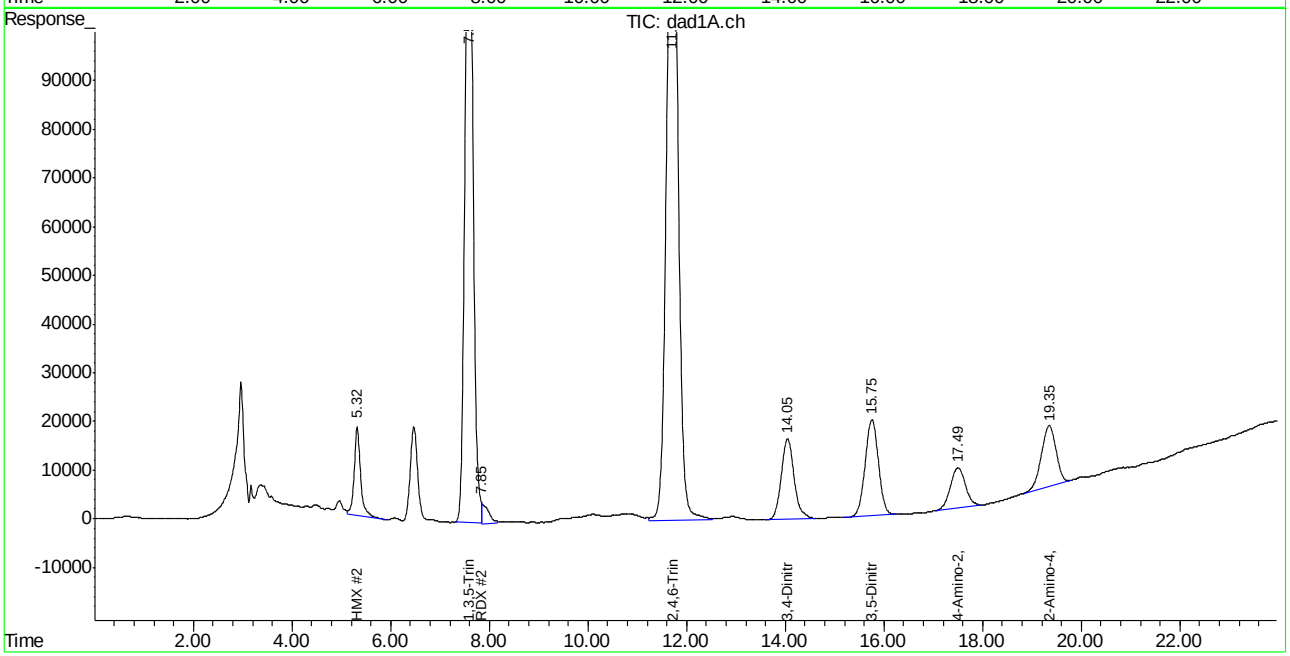
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1A.ch
Acq On : 23-Apr-2021, 14:41:44 Operator: jamesb
Sample : FA84640-2cf Inst : G1315B
Misc : op84960,GGG2966,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 13:00 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

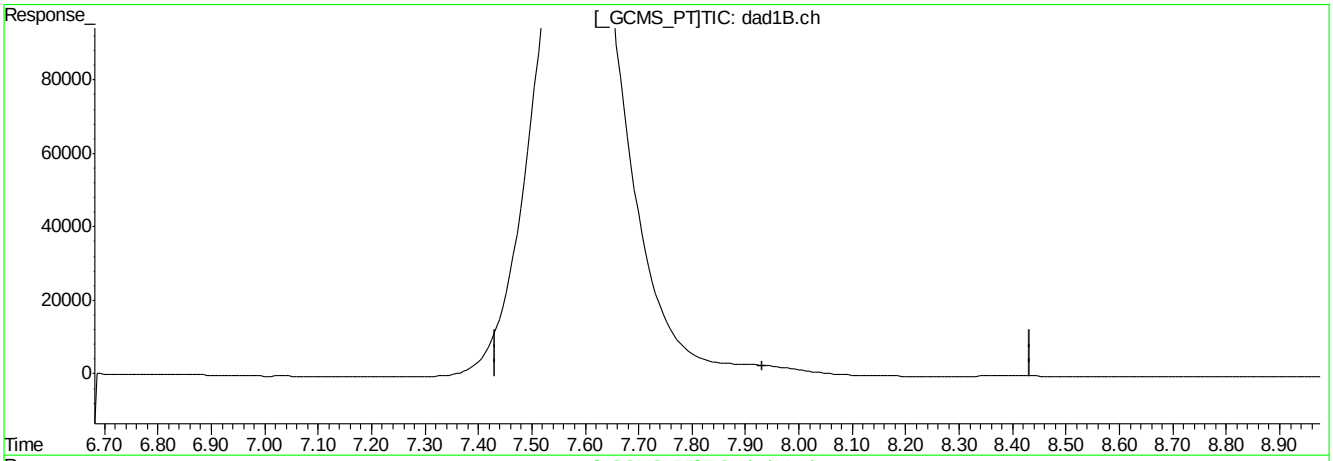
Sample Number: FA84640-2
Lab FileID: GG621165.D
Injection Time: 04/23/21 14:41
Method: SW846 8330B
Analyst approved: 04/26/21 14:19 James Boone
Supervisor approved: 04/26/21 15:27 Naresh Jiawan

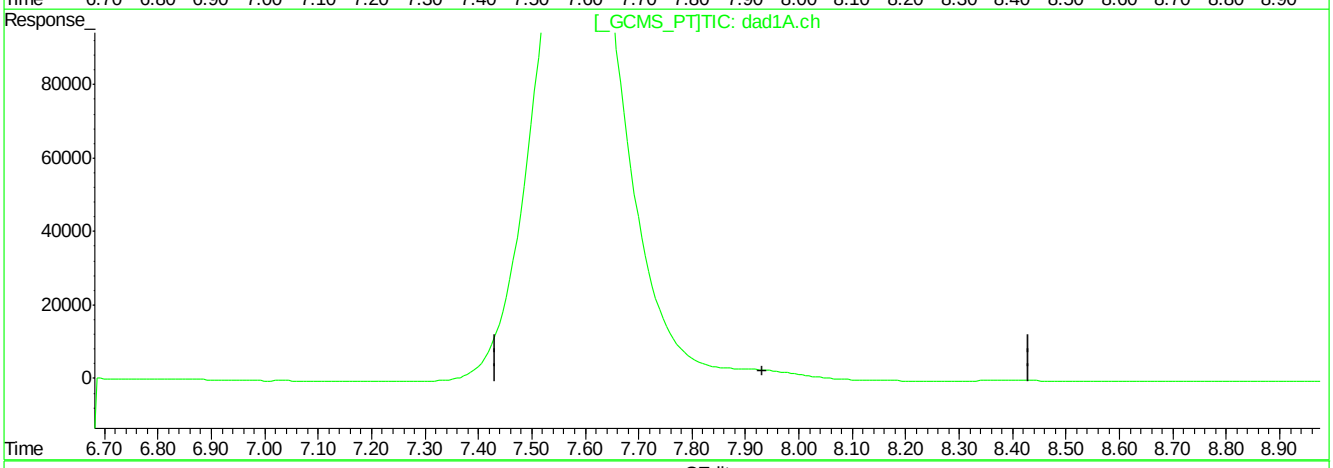
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	1	7.58	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.58	Poor instrument integration
RDX	121-82-4	1	7.85	Poor instrument integration
RDX	121-82-4	2	7.85	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.49	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.35	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1A.ch
Acq On : 23-Apr-2021, 14:41:44 Operator: jamesb
Sample : FA84640-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

0.00min 0.000ppb

response 0

(6) RDX #2

0.00min 0.000ppb

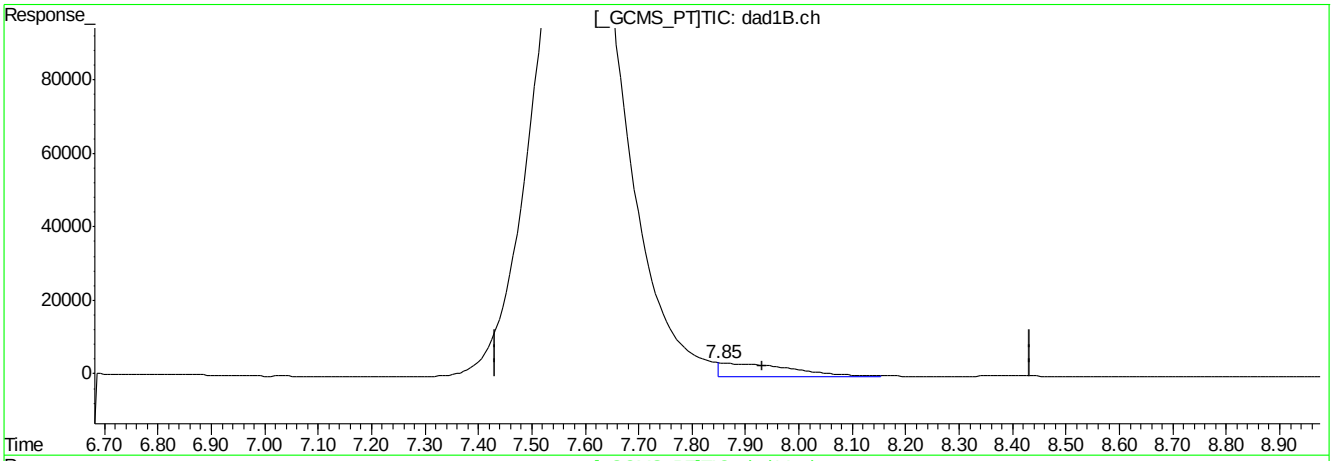
response 0

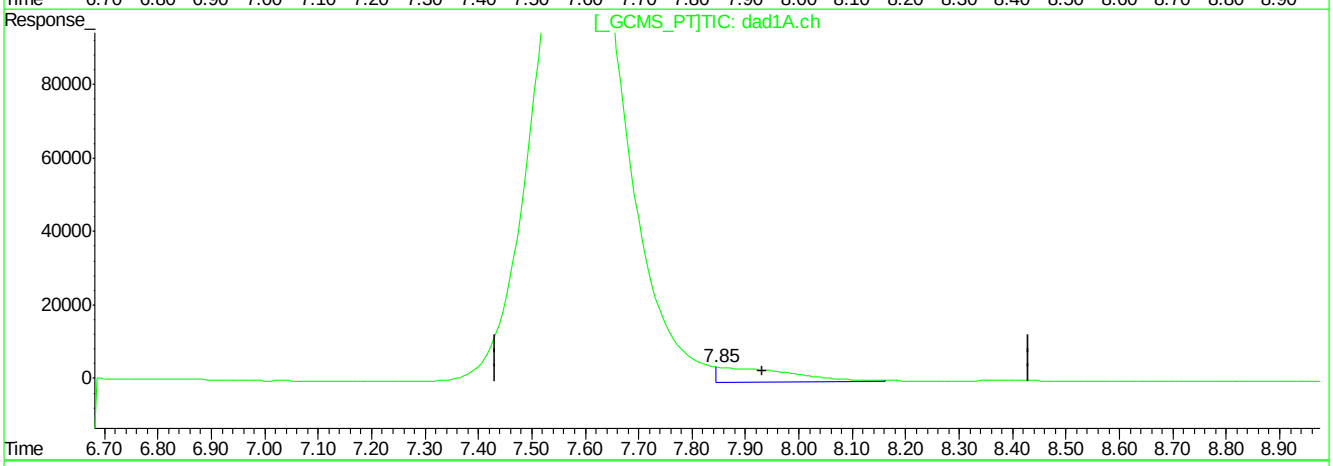
(+) = Expected Retention Time
GG621165.D GGG2952_032221.M Mon Apr 26 12:59:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1A.ch
Acq On : 23-Apr-2021, 14:41:44 Operator: jamesb
Sample : FA84640-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.85min 76.786ppb m

response 318714

(6) RDX #2

7.85min 96.513ppb m

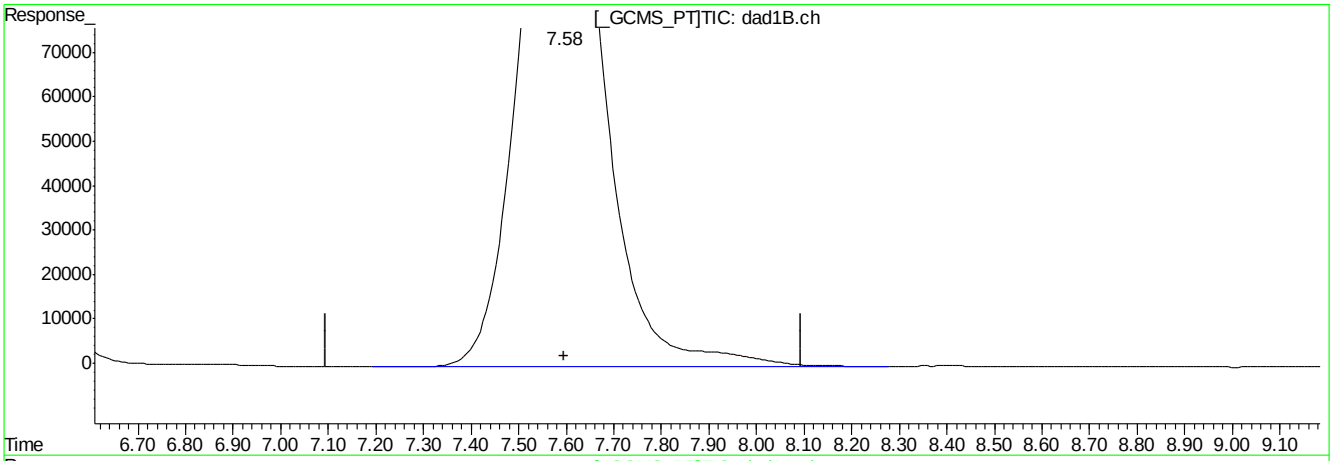
response 402753

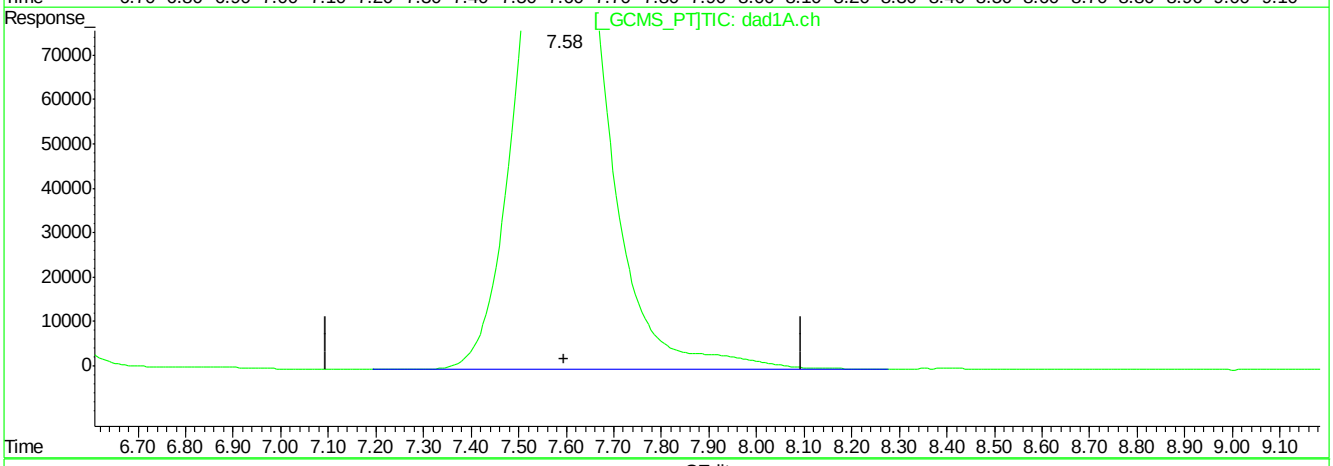
(+) = Expected Retention Time
GG621165.D GGG2952_032221.M Mon Apr 26 12:59:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1A.ch
Acq On : 23-Apr-2021, 14:41:44 Operator: jamesb
Sample : FA84640-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.59min 1909.052ppb

response 17173390

(5) 1,3,5-Trinitrobenzene #2

7.59min 1908.748ppb

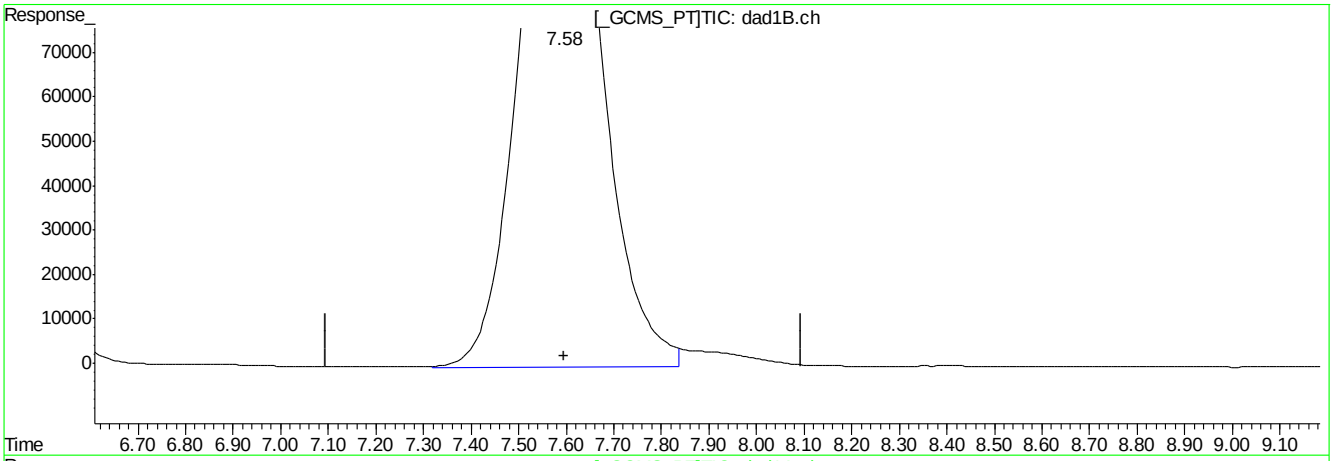
response 17173390

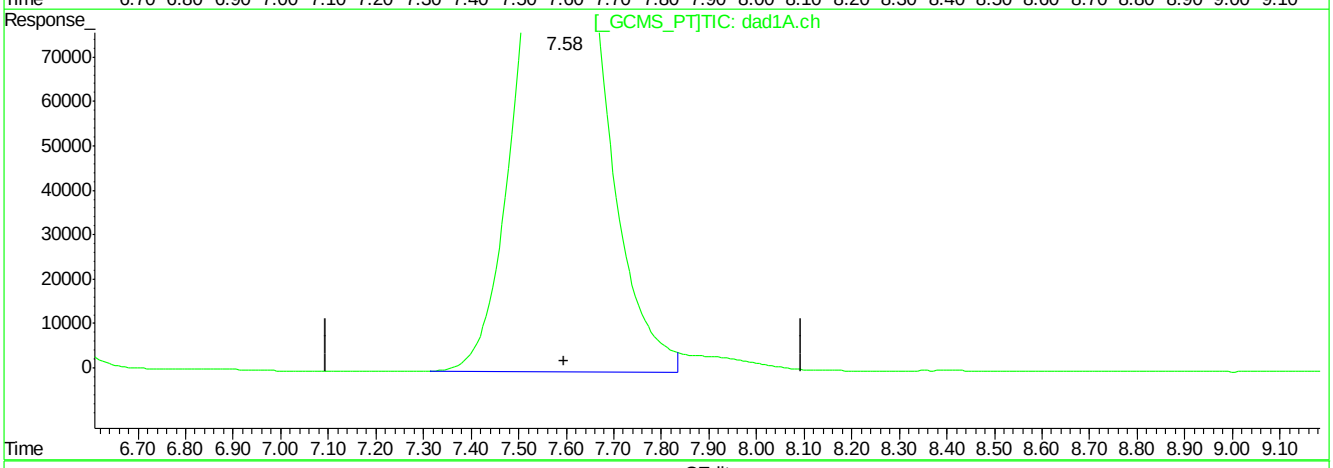
(+) = Expected Retention Time
GG621165.D GGG2952_032221.M Mon Apr 26 12:59:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1A.ch
Acq On : 23-Apr-2021, 14:41:44 Operator: jamesb
Sample : FA84640-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.58min 1870.732ppb m

response 16828670

(5) 1,3,5-Trinitrobenzene #2

7.58min 1871.192ppb m

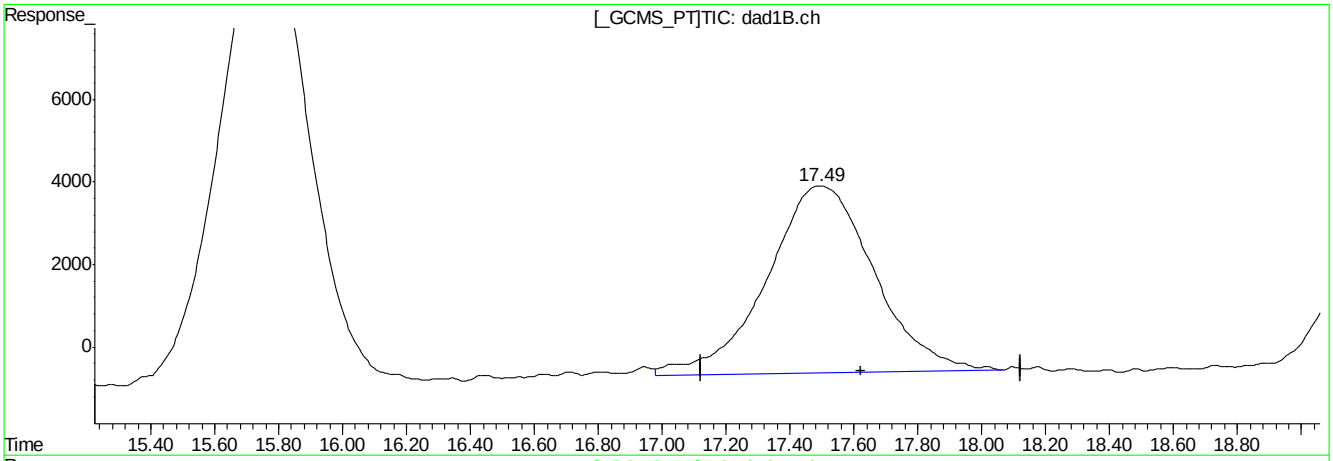
response 16835487

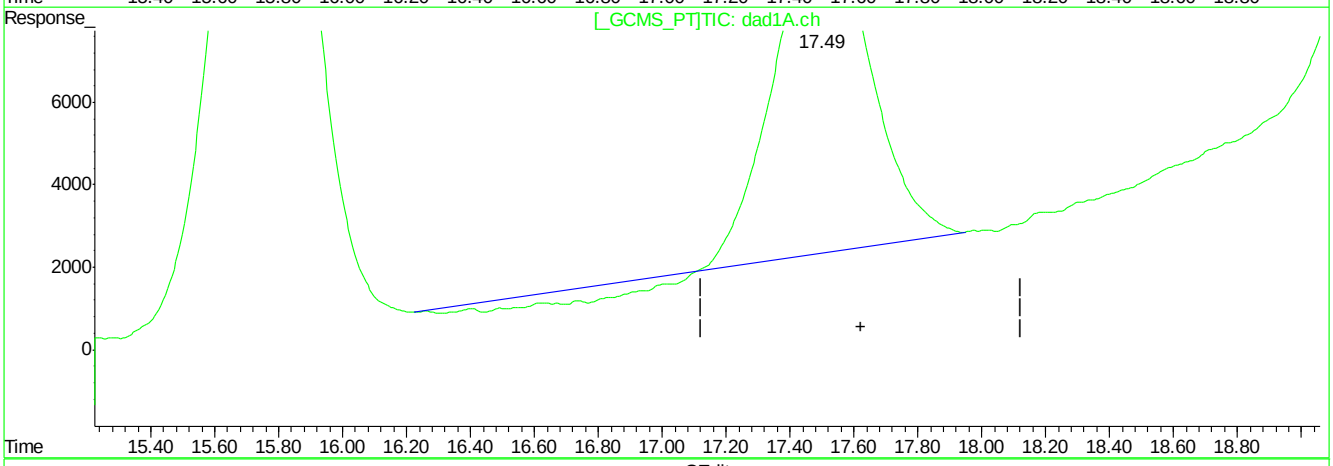
(+) = Expected Retention Time
GG621165.D GGG2952_032221.M Mon Apr 26 12:59:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1A.ch
Acq On : 23-Apr-2021, 14:41:44 Operator: jamesb
Sample : FA84640-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.50min 207.447ppb

response 1062736

(18) 4-Amino-2,6-Dinitrotoluene #2

17.50min 181.090ppb

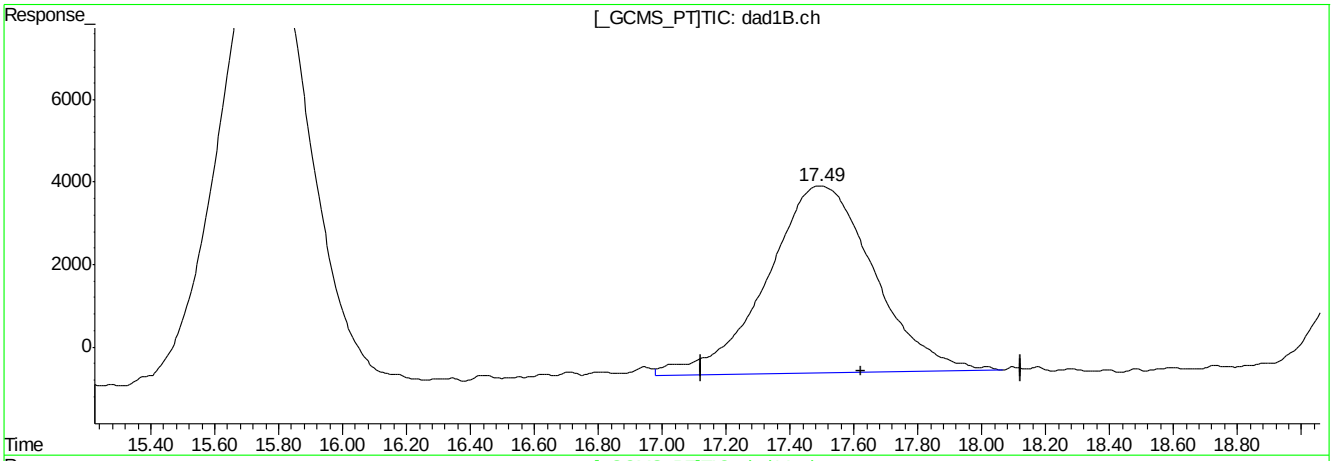
response 1556252

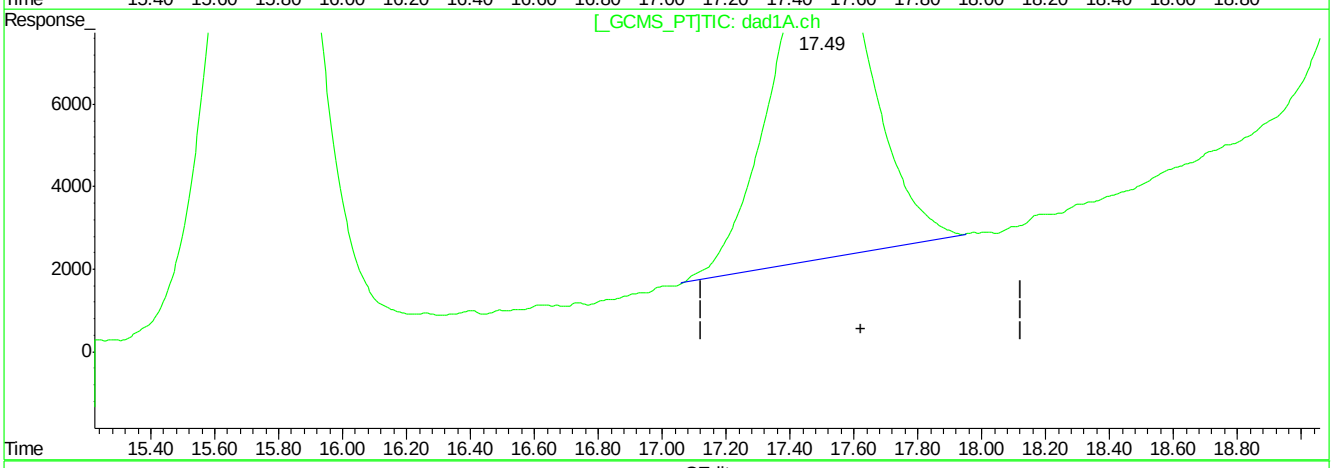
(+) = Expected Retention Time
GG621165.D GGG2952_032221.M Mon Apr 26 13:00:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1A.ch
Acq On : 23-Apr-2021, 14:41:44 Operator: jamesb
Sample : FA84640-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.50min 207.447ppb

response 1062736

(18) 4-Amino-2,6-Dinitrotoluene #2

17.49min 200.738ppb m

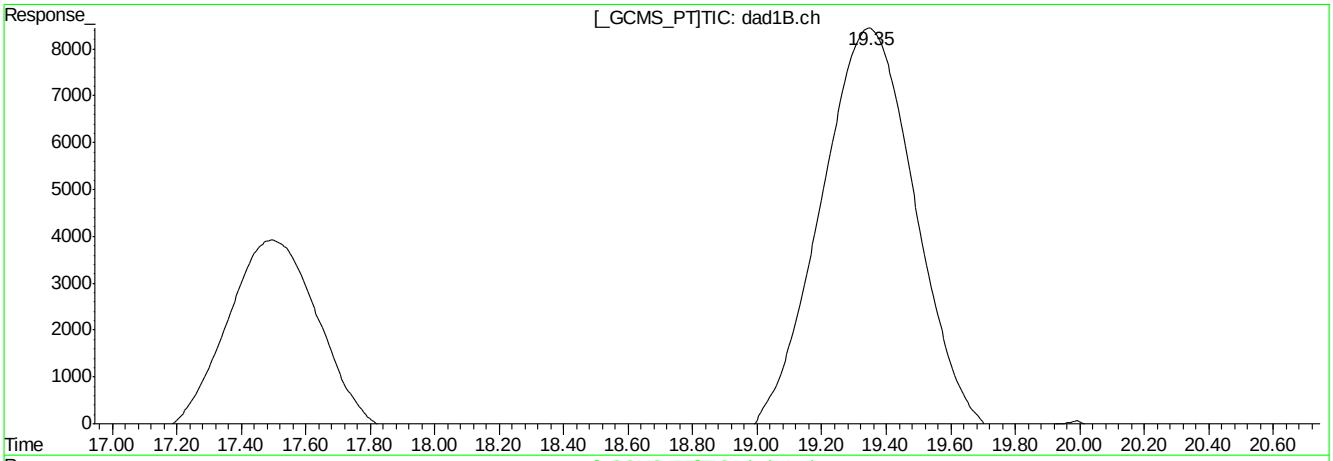
response 1725103

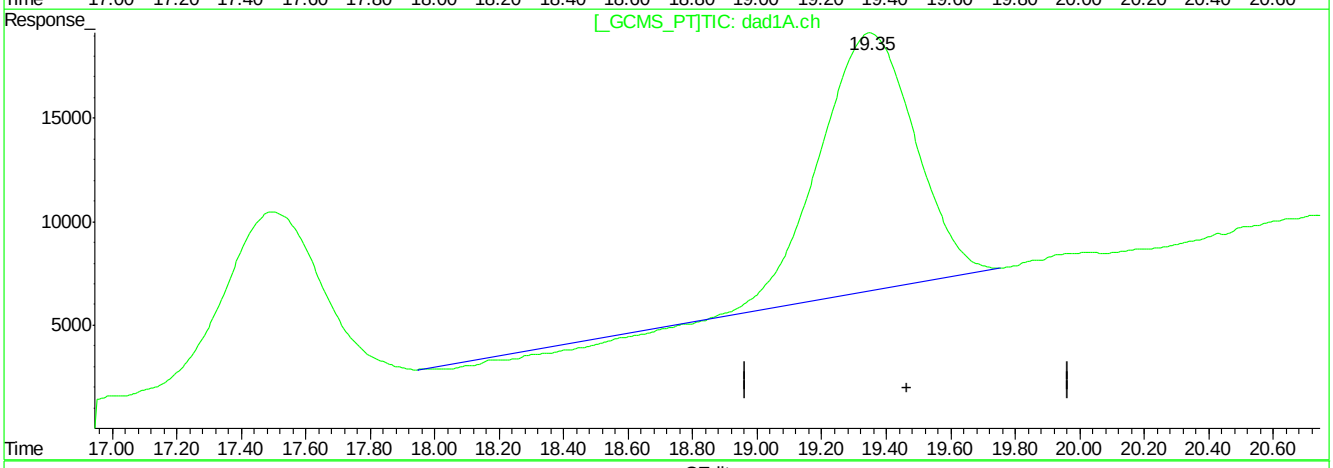
(+) = Expected Retention Time
GG621165.D GGG2952_032221.M Mon Apr 26 13:00:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1A.ch
Acq On : 23-Apr-2021, 14:41:44 Operator: jamesb
Sample : FA84640-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.35min 231.577ppb

response 1905537

(20) 2-Amino-4,6-Dinitrotoluene #2

19.35min 211.739ppb

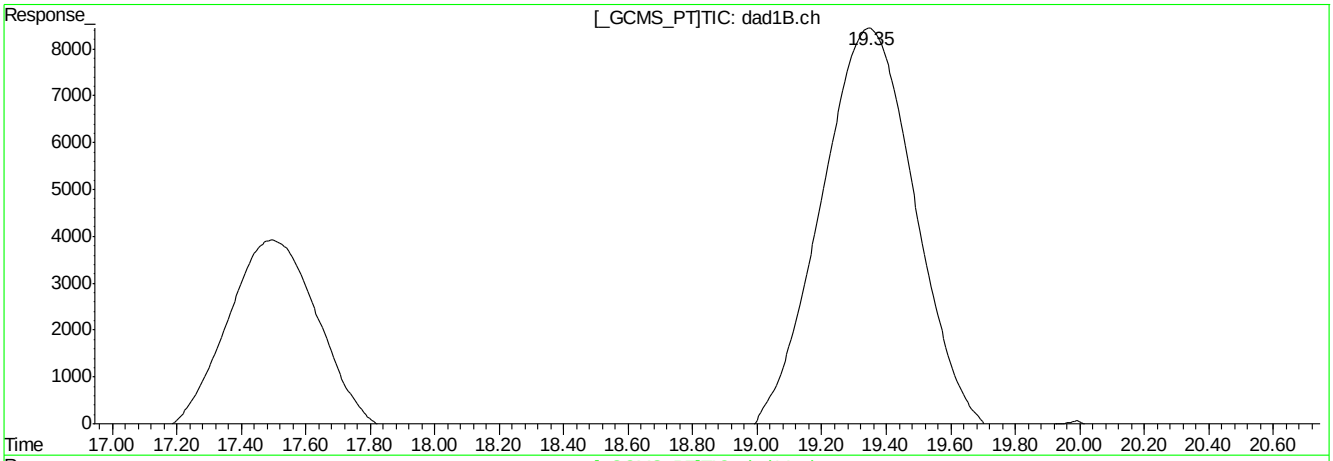
response 2460787

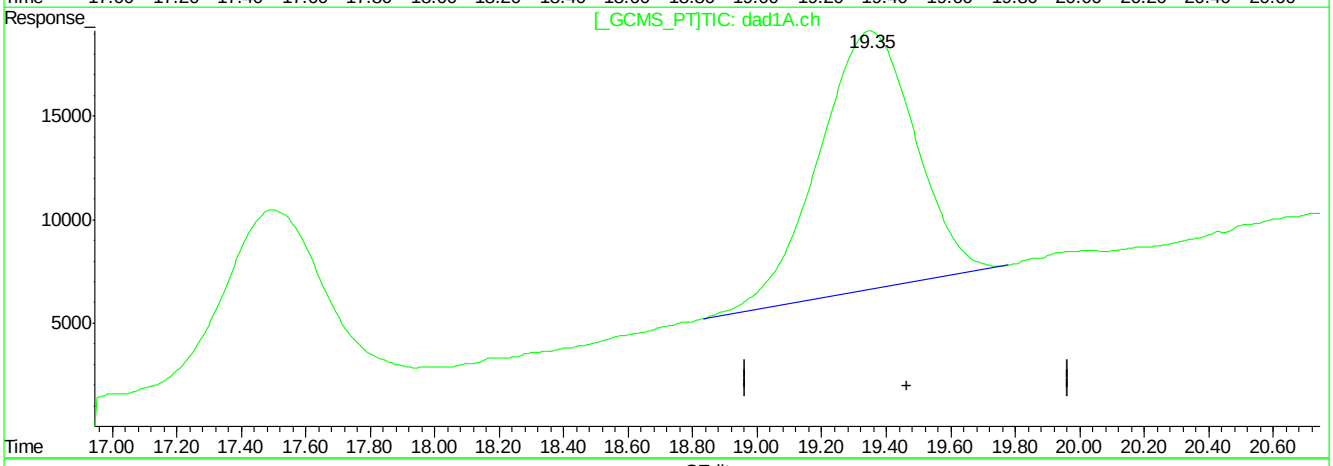
(+) = Expected Retention Time
GG621165.D GGG2952_032221.M Mon Apr 26 13:00:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621165.D\dad1A.ch
Acq On : 23-Apr-2021, 14:41:44 Operator: jamesb
Sample : FA84640-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.35min 231.577ppb

response 1905537

(20) 2-Amino-4,6-Dinitrotoluene #2

19.35min 223.739ppb m

response 2600250

(+) = Expected Retention Time
GG621165.D GGG2952_032221.M Mon Apr 26 13:00:30 2021

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068941.D\dad1B.ch Vial: 31
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068941.D\dad1A.ch
Acq On : 24-Apr-2021, 03:24:17 Operator: jamesb
Sample : FA84640-3,10 Inst : G1315B
Misc : op84960,GBB2027,1040,,,10,10,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:58:03 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	9.73	9.73	1992291	2428102	534.582	551.856
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

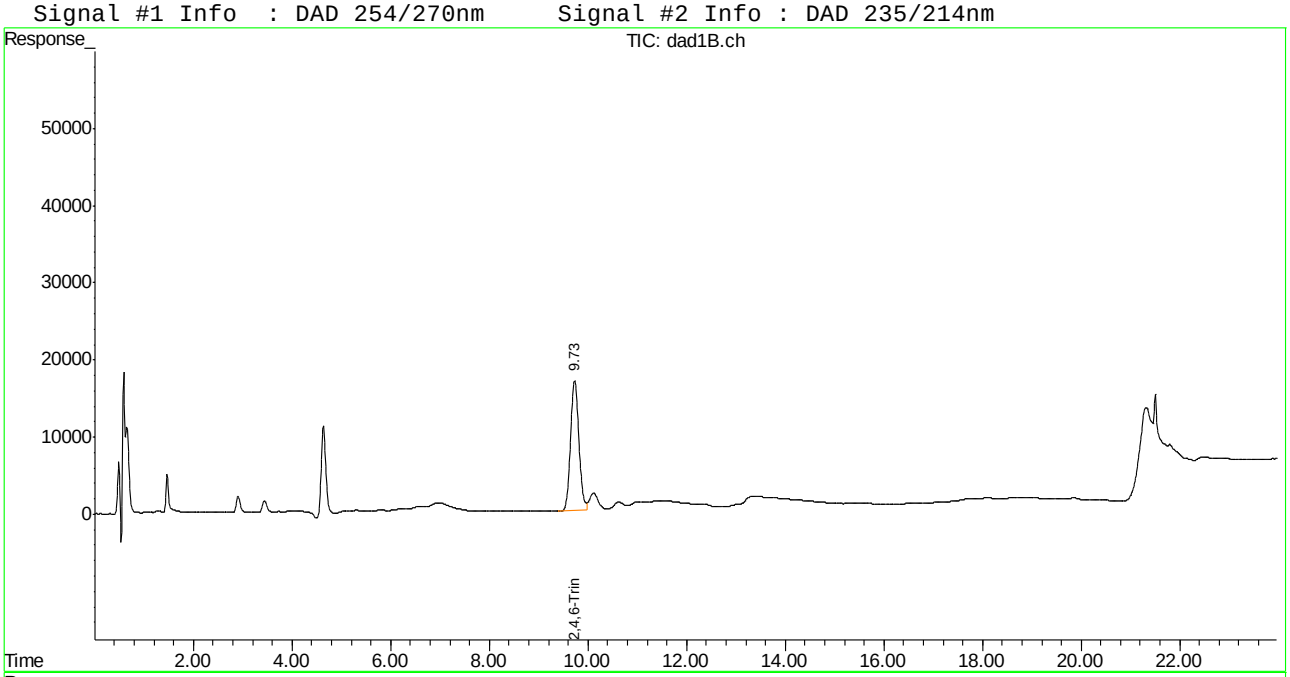
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068941.D 8330B_042221_PLUS.M Mon Apr 26 14:34:19 2021 Page 1

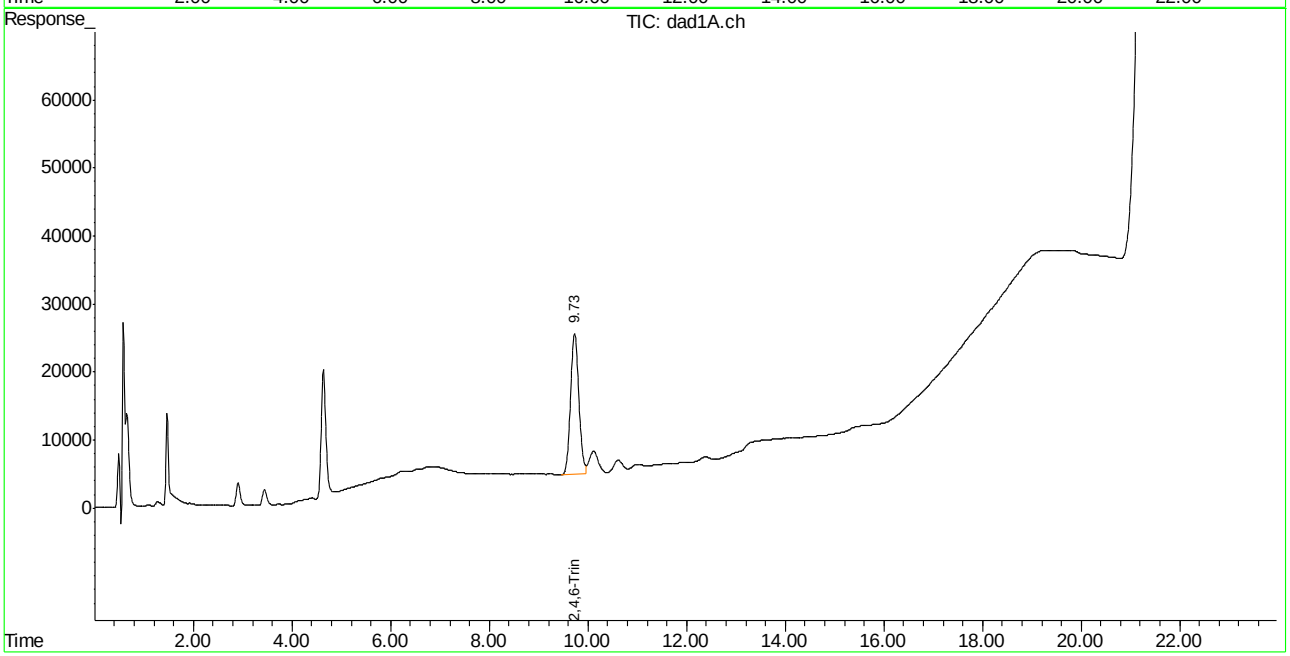
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068941.D\dad1B.ch Vial: 31
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068941.D\dad1A.ch
Acq On : 24-Apr-2021, 03:24:17 Operator: jamesb
Sample : FA84640-3,10 Inst : G1315B
Misc : op84960,GBB2027,1040,,,10,10,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 11:39 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/26/21 16:24

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : op84960,GPP2438,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18:45 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.55	11.56	451158	756274	220.746m	237.560
	Spiked Amount 500.000	Range 70 - 136		Recovery =		44.15%#	47.51%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.50	1.50	4075492	5377034	2687.236m	1229.811 #
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	2.99	2.99	1157999	1894750	622.425m	642.090m
6)	1,3,5-Trinitrobe	4.79	4.79	7887451	15509654	1991.506m	2015.190m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	6.41	6.41	96201	177878	23.717m	26.336
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	10.17	10.17	20093383	24726822	5331.256m	5316.224
13)	2-Amino-4,6-Dini	10.63	10.63	2662705	3942060	792.640m	775.969
14)	4-Amino-2,6-Dini	11.18	11.18	1239335	2090472	550.184m	438.910
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

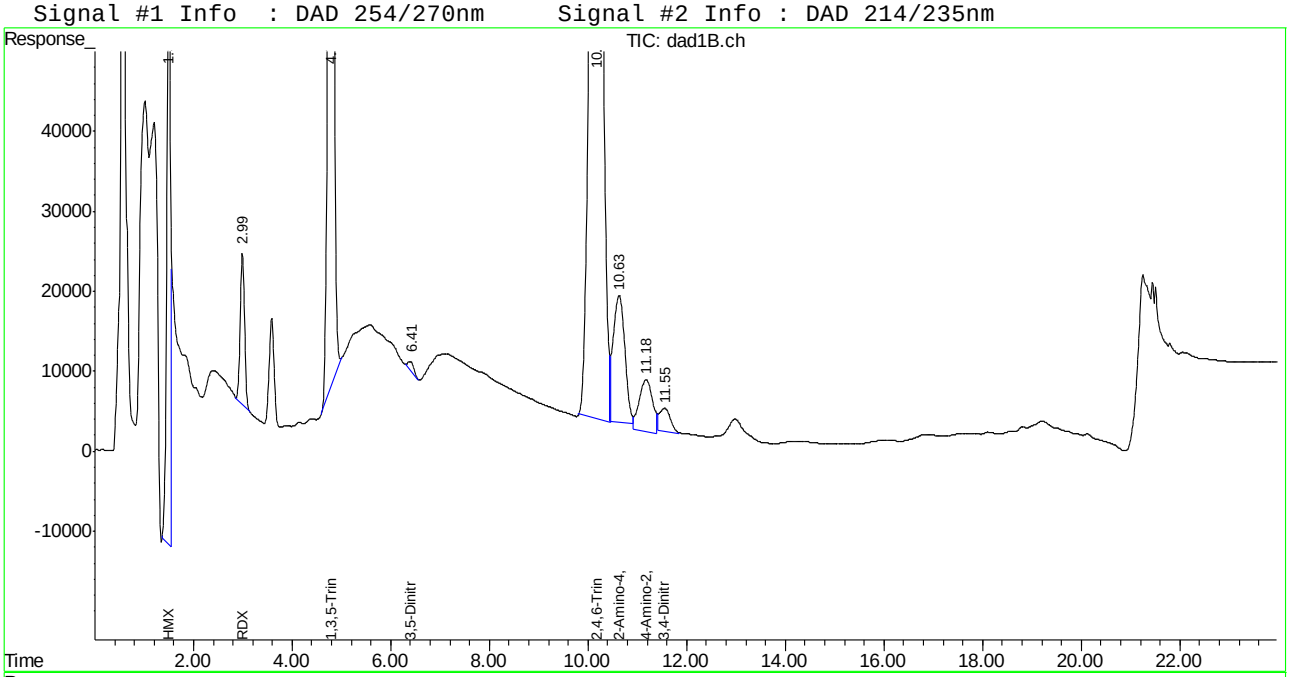
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP390606.D GPP2439_042321PRI.M Mon Apr 26 15:41:25 2021 Page 1

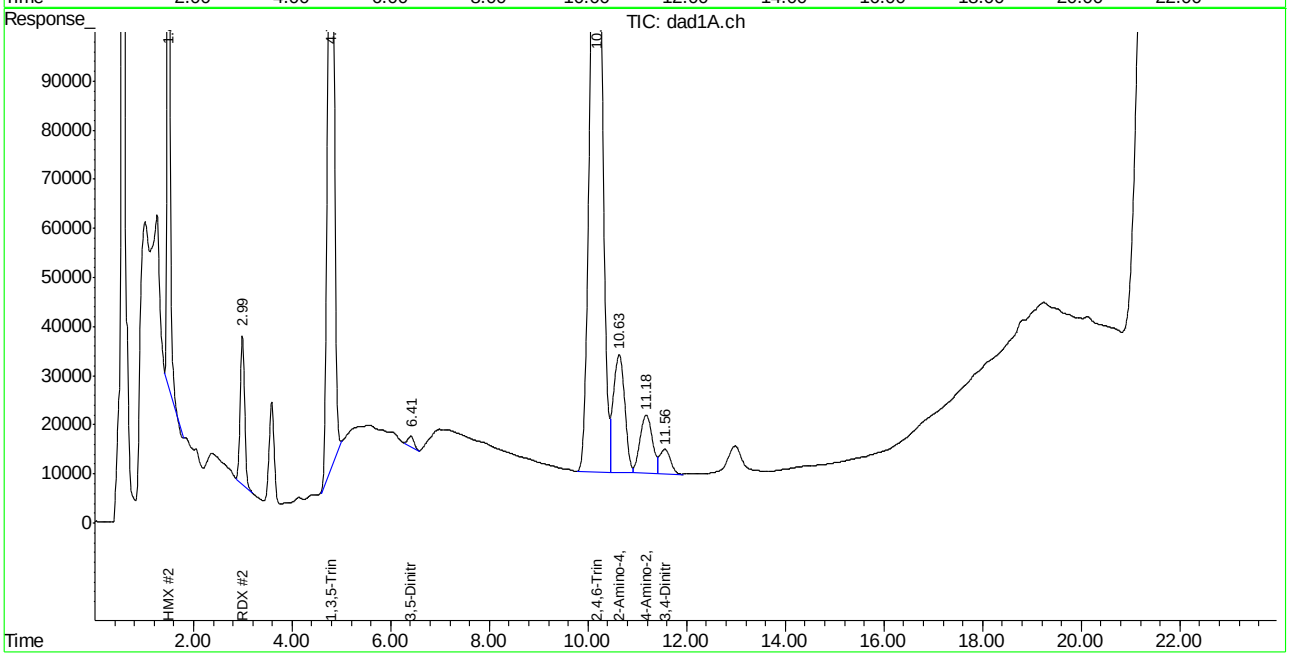
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : op84960,GPP2438,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 15:37 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

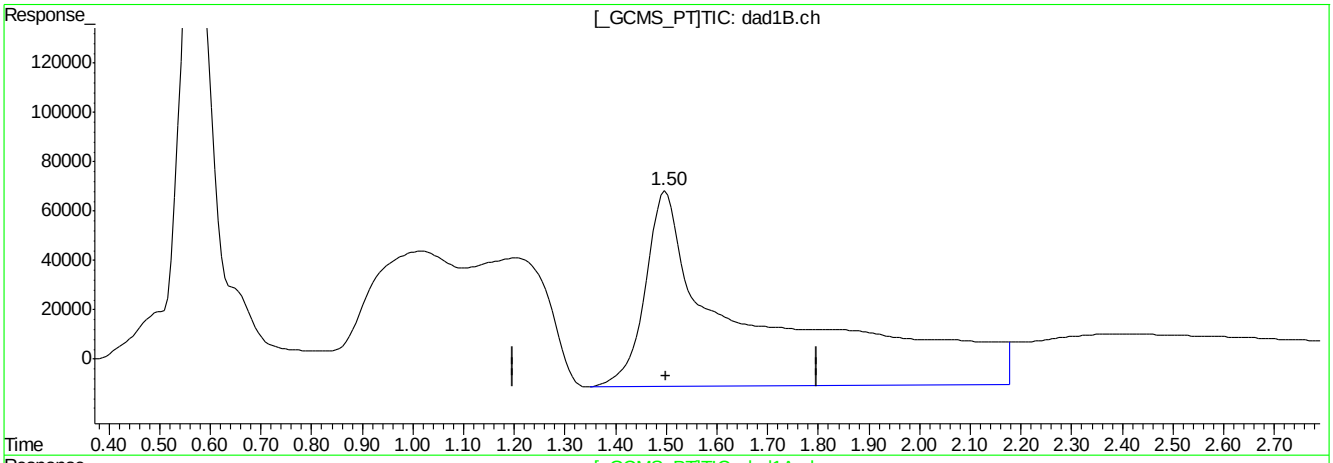
Sample Number: FA84640-3
Lab FileID: PP390606.D
Injection Time: 04/22/21 13:44
Method: SW846 8330B
Analyst approved: 04/26/21 15:42 James Boone
Supervisor approved: 04/26/21 16:24 Naresh Jiawan

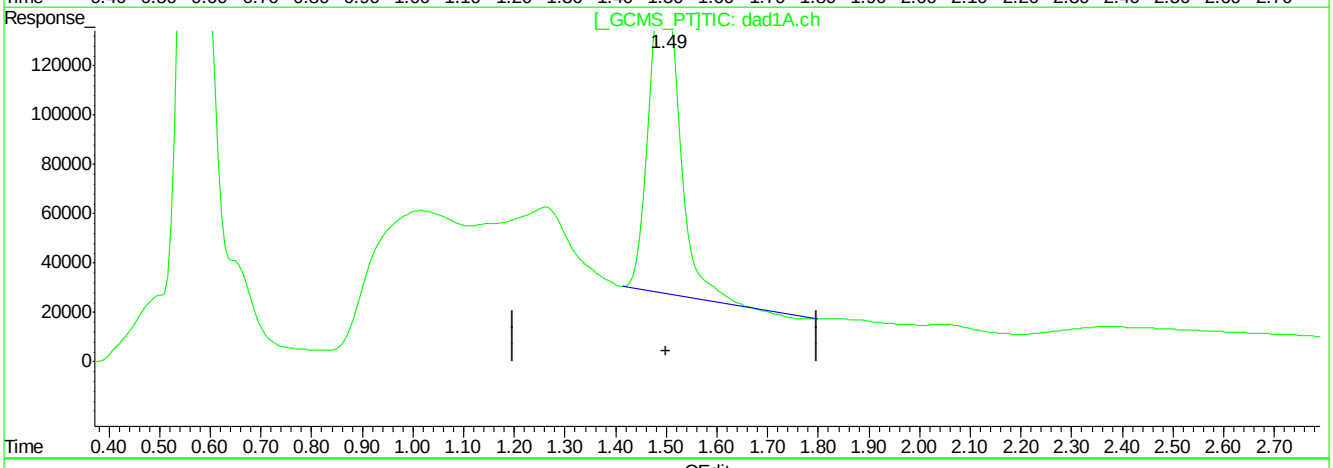
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.50	Poor instrument integration
RDX	121-82-4	1	2.99	Poor instrument integration
RDX	121-82-4	2	2.99	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.79	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.79	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.41	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.17	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.63	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	11.18	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.55	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.50min 8021.782ppb

response 12165923

(2) HMX #2

1.50min 1229.811ppb

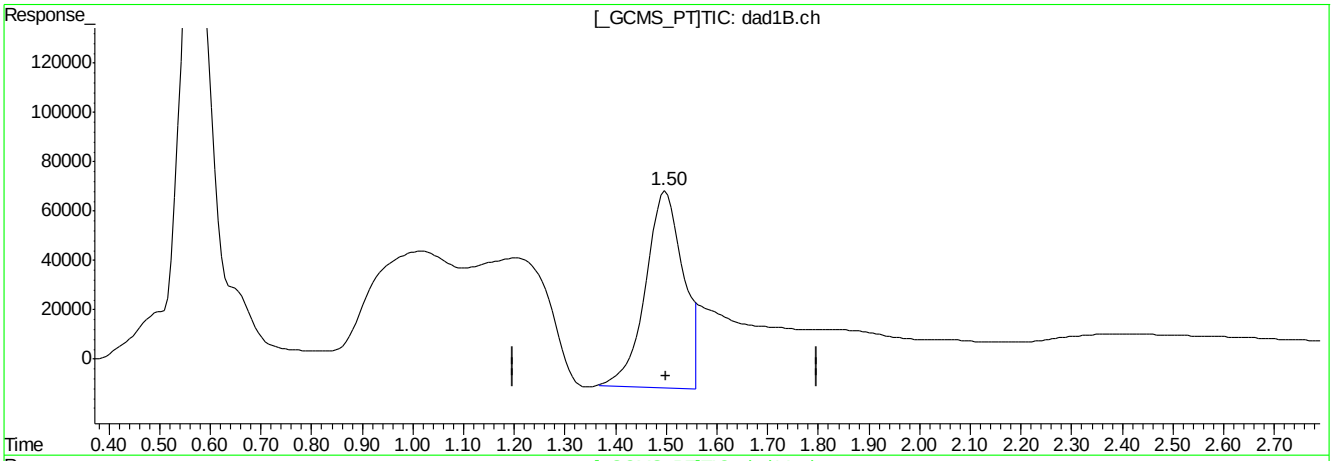
response 5377034

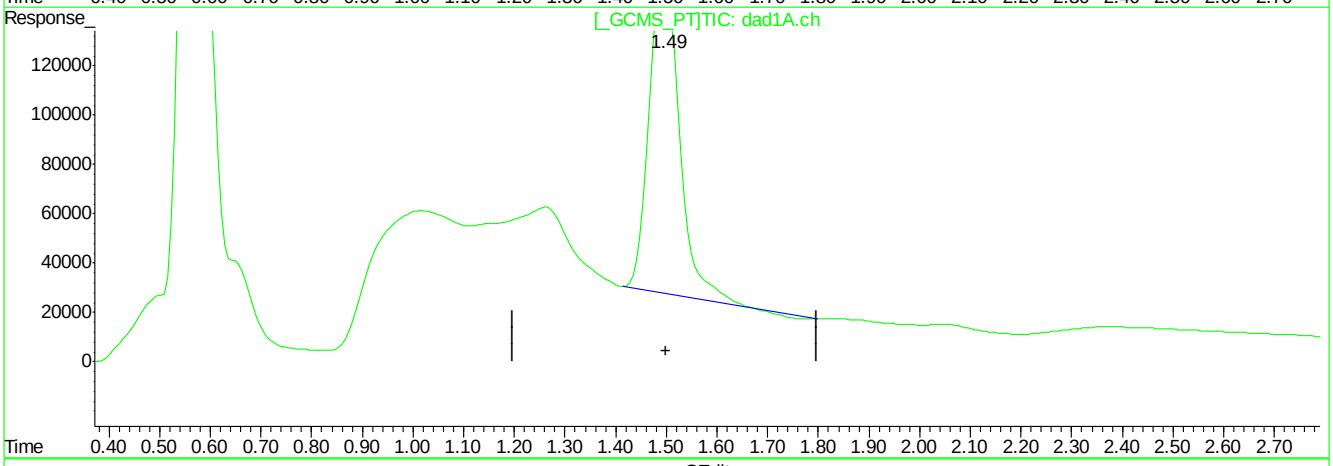
(+) = Expected Retention Time
PP390606.D GPP2428_040221PRI.M Fri Apr 23 10:00:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.50min 2687.236ppb m

response 4075492

(2) HMX #2

1.50min 1229.811ppb

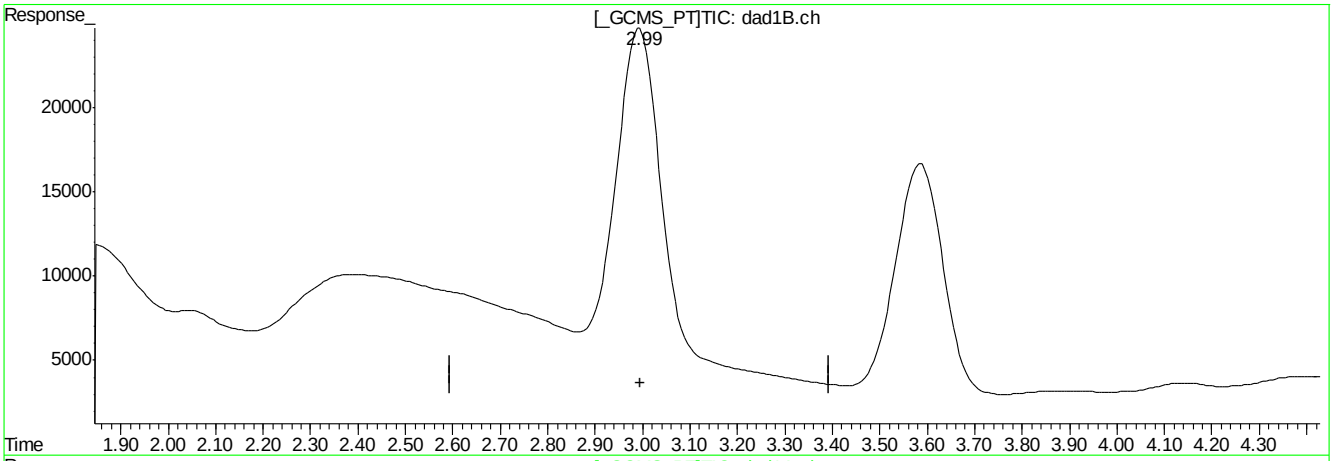
response 5377034

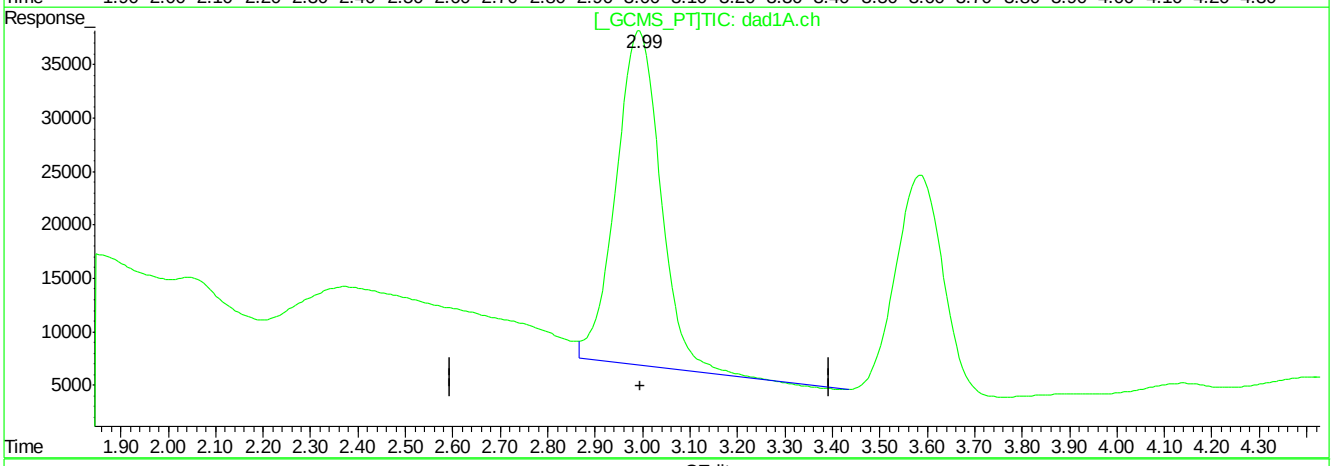
(+) = Expected Retention Time
PP390606.D GPP2428_040221PRI.M Fri Apr 23 10:00:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.99min 3218.803ppb

response 5988468

(5) RDX #2

2.99min 695.437ppb

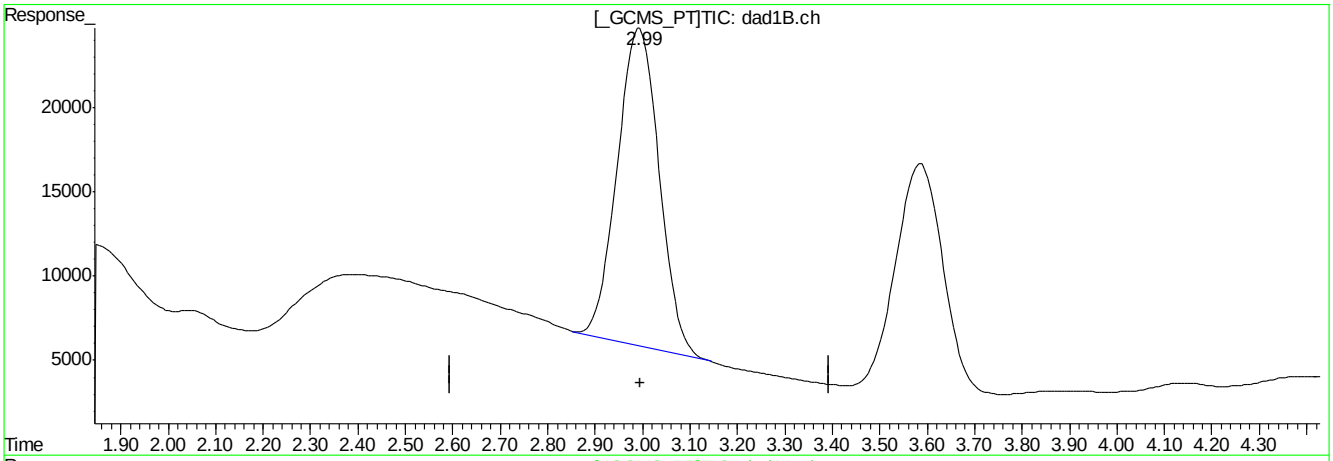
response 2052175

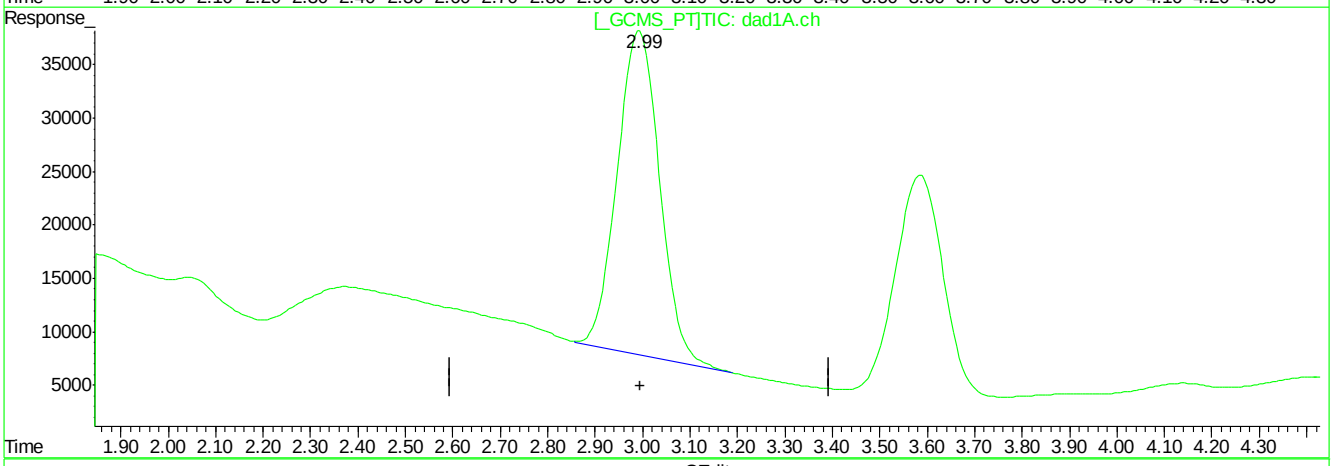
(+) = Expected Retention Time
PP390606.D GPP2428_040221PRI.M Fri Apr 23 10:00:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.99min 622.425ppb m

response 1157999

(5) RDX #2

2.99min 642.090ppb m

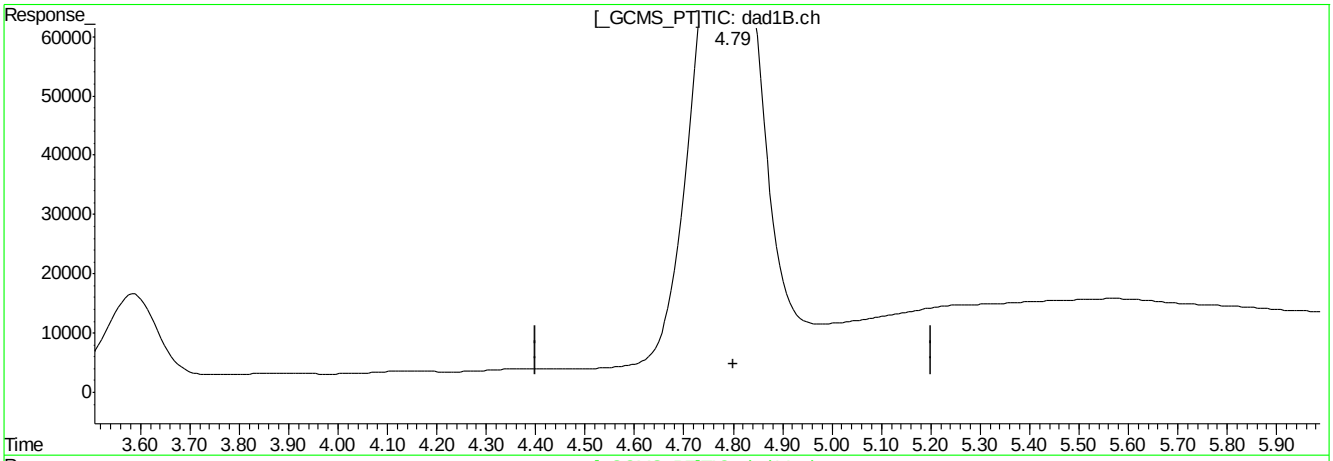
response 1894750

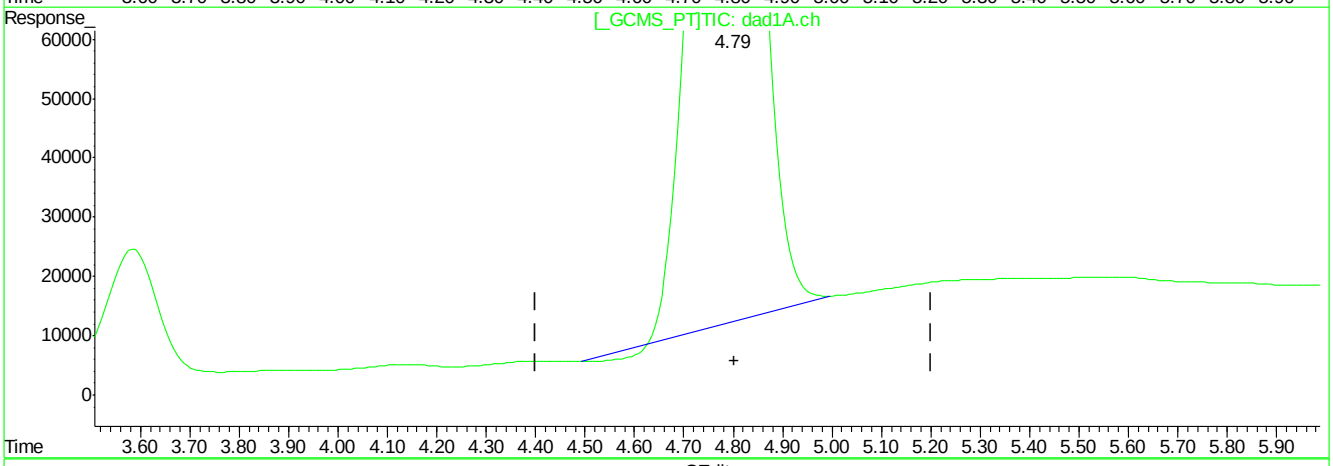
(+) = Expected Retention Time
PP390606.D GPP2428_040221PRI.M Fri Apr 23 10:00:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.79min 3079.136ppb

response 12195056

(6) 1,3,5-Trinitrobenzene #2

4.79min 1977.949ppb

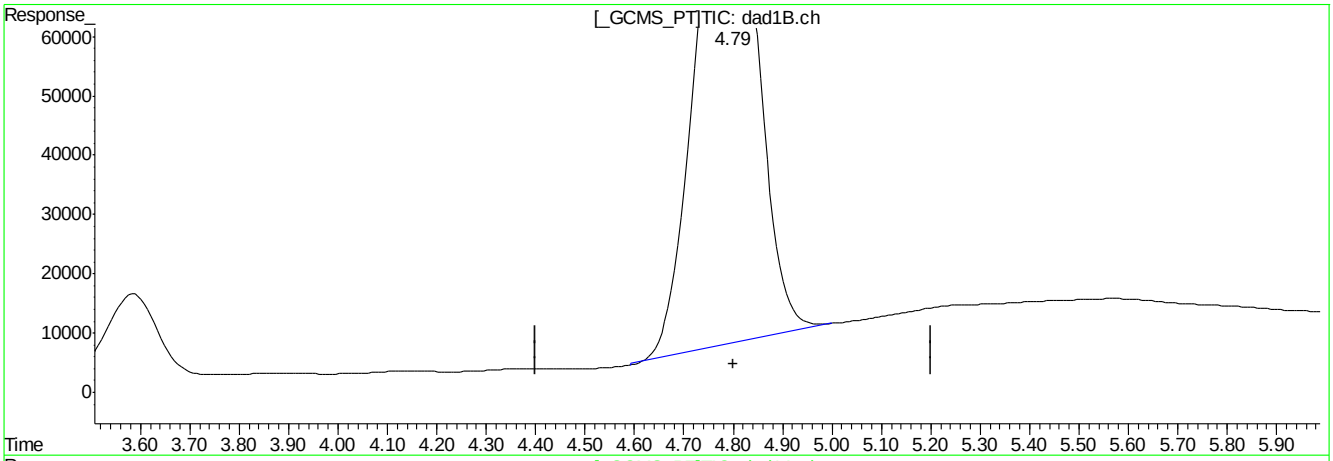
response 15223031

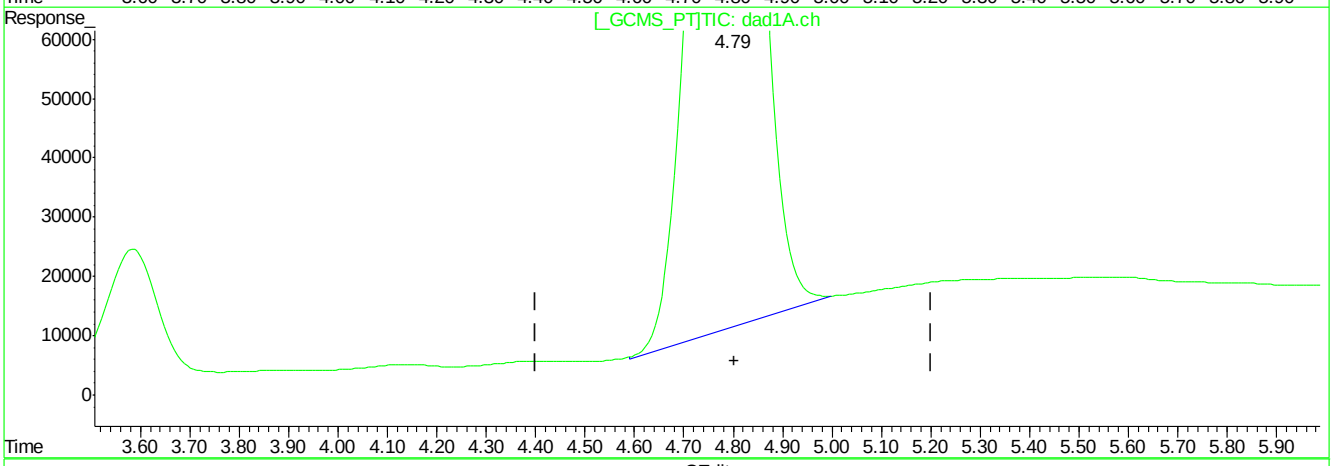
(+) = Expected Retention Time
PP390606.D GPP2428_040221PRI.M Fri Apr 23 10:00:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.79min 1991.506ppb m

response 7887451

(6) 1,3,5-Trinitrobenzene #2

4.79min 2015.190ppb m

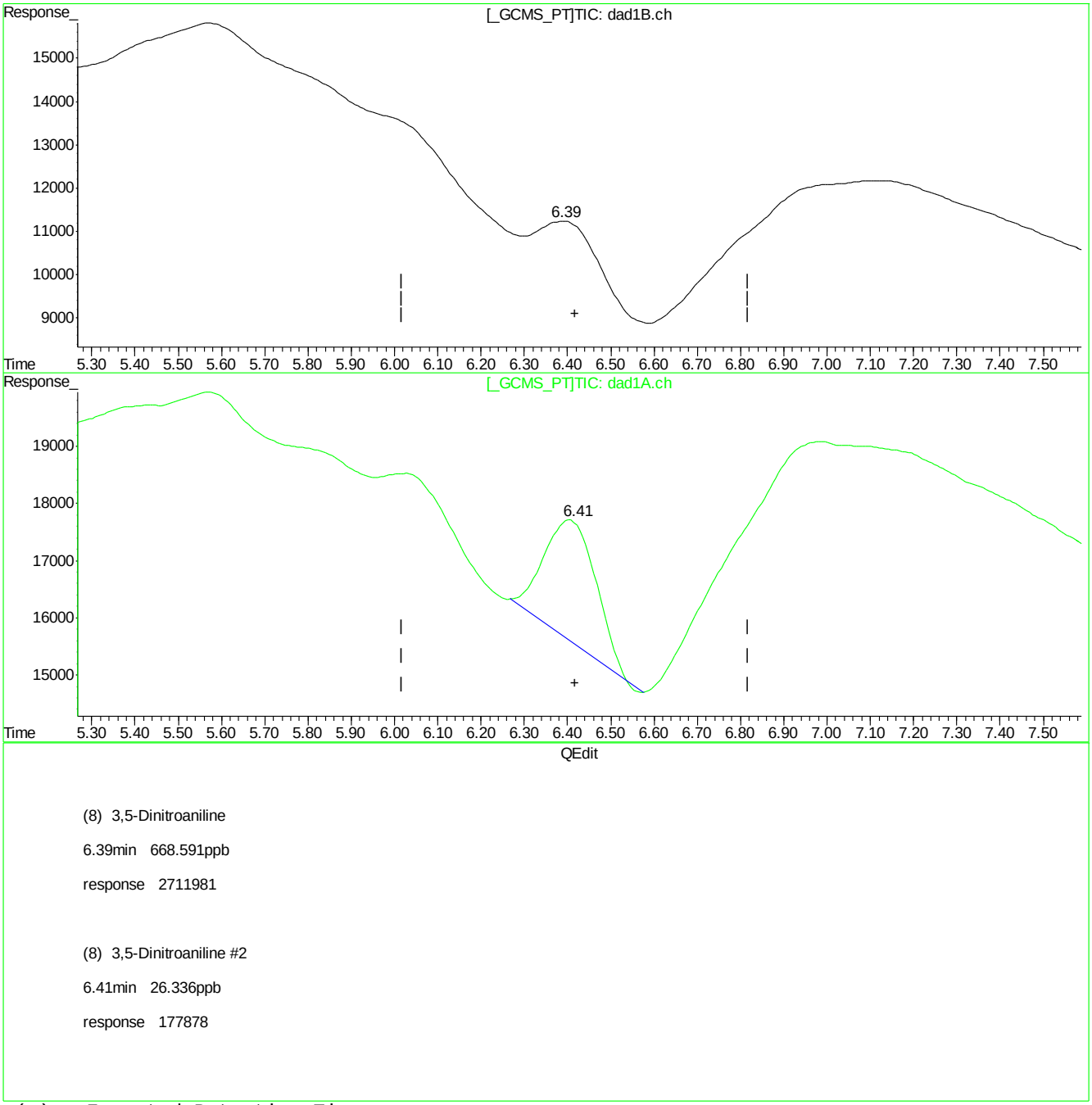
response 15509654

(+) = Expected Retention Time
PP390606.D GPP2428_040221PRI.M Fri Apr 23 10:00:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.39min 668.591ppb

response 2711981

(8) 3,5-Dinitroaniline #2

6.41min 26.336ppb

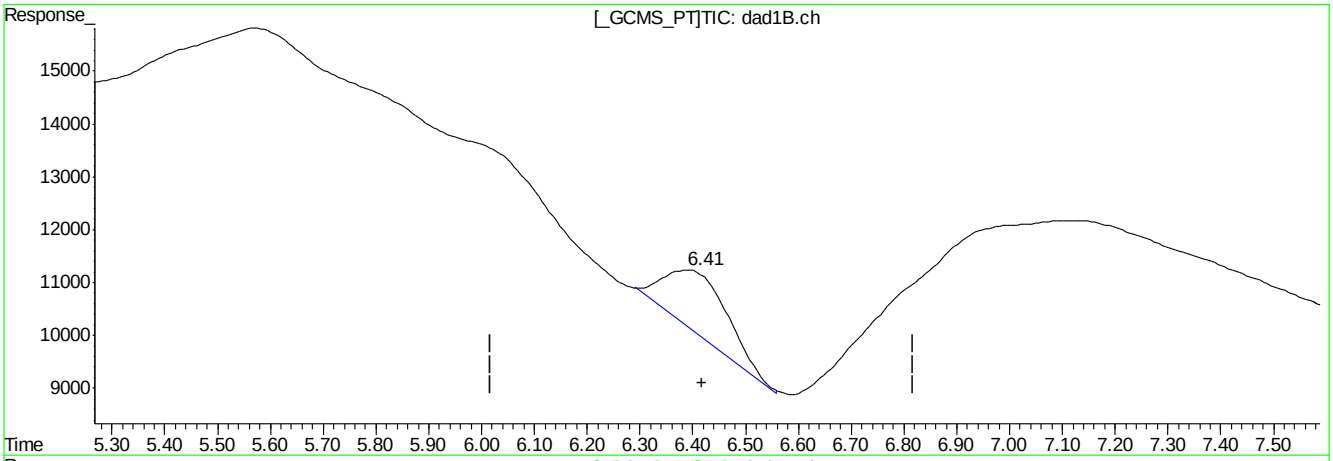
response 177878

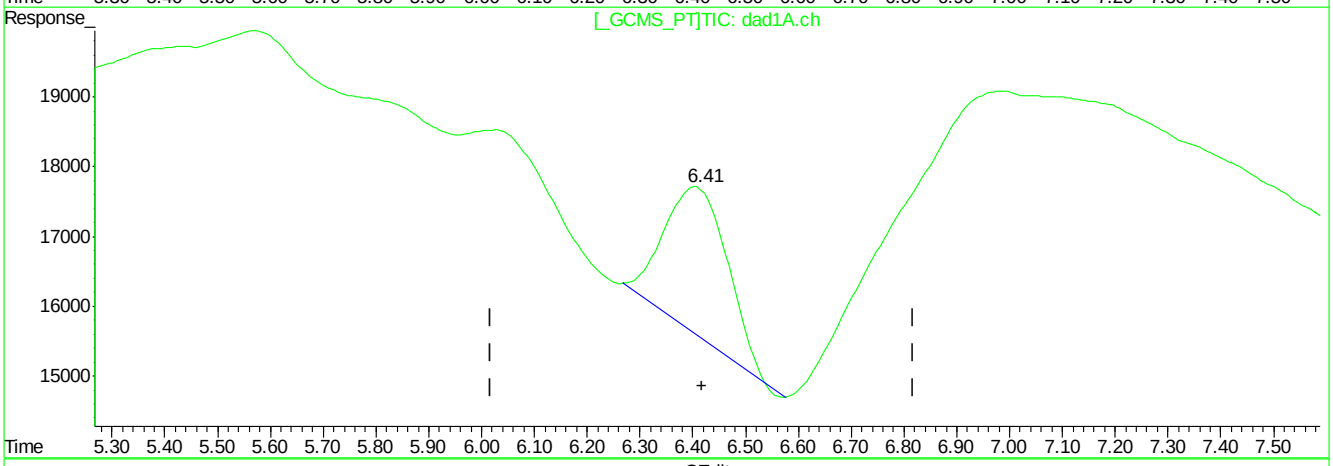
(+) = Expected Retention Time
PP390606.D GPP2428_040221PRI.M Fri Apr 23 10:01:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.41min 23.717ppb m

response 96201

(8) 3,5-Dinitroaniline #2

6.41min 26.336ppb

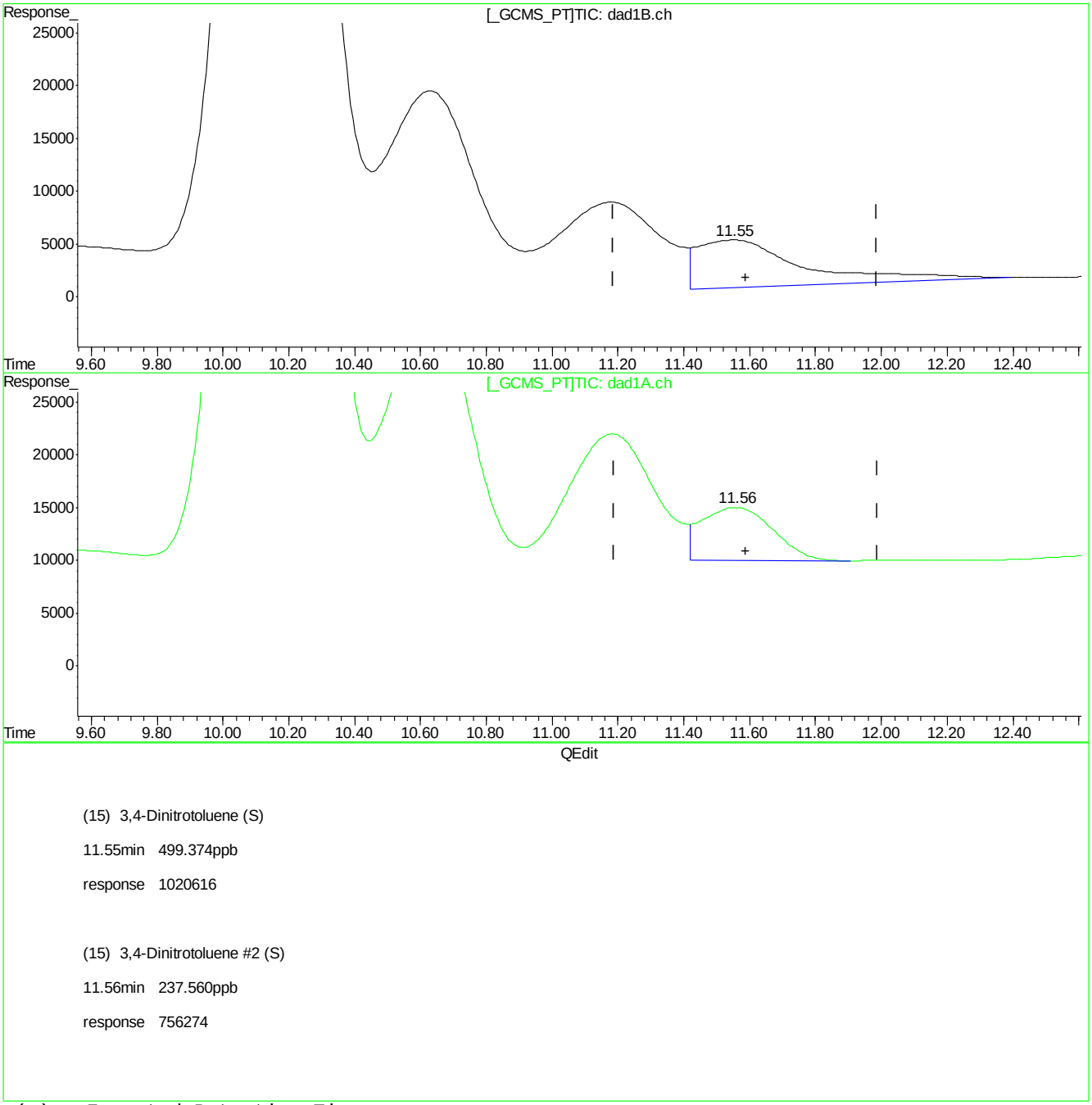
response 177878

(+) = Expected Retention Time
PP390606.D GPP2428_040221PRI.M Fri Apr 23 10:01:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(15) 3,4-Dinitrotoluene (S)

11.55min 499.374ppb

response 1020616

(15) 3,4-Dinitrotoluene #2 (S)

11.56min 237.560ppb

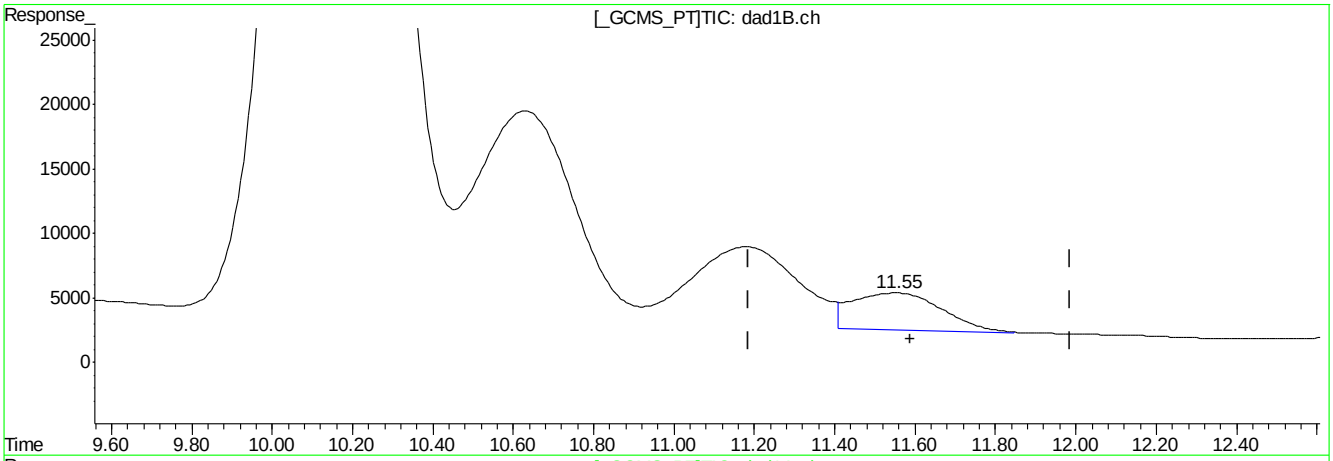
response 756274

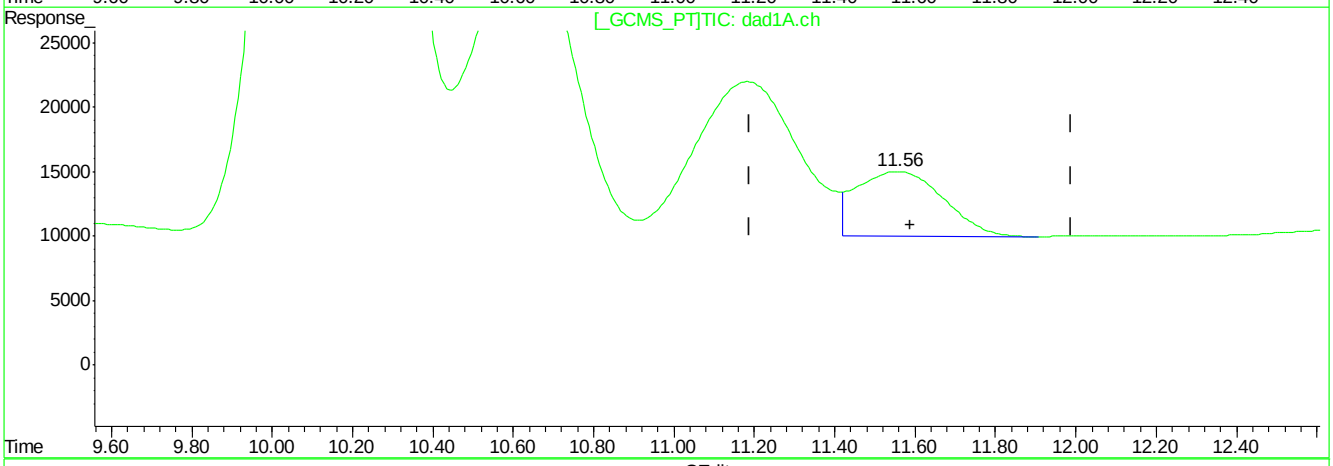
(+) = Expected Retention Time
PP390606.D GPP2428_040221PRI.M Fri Apr 23 10:01:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.55min 220.746ppb m

response 451158

(15) 3,4-Dinitrotoluene #2 (S)

11.56min 237.560ppb

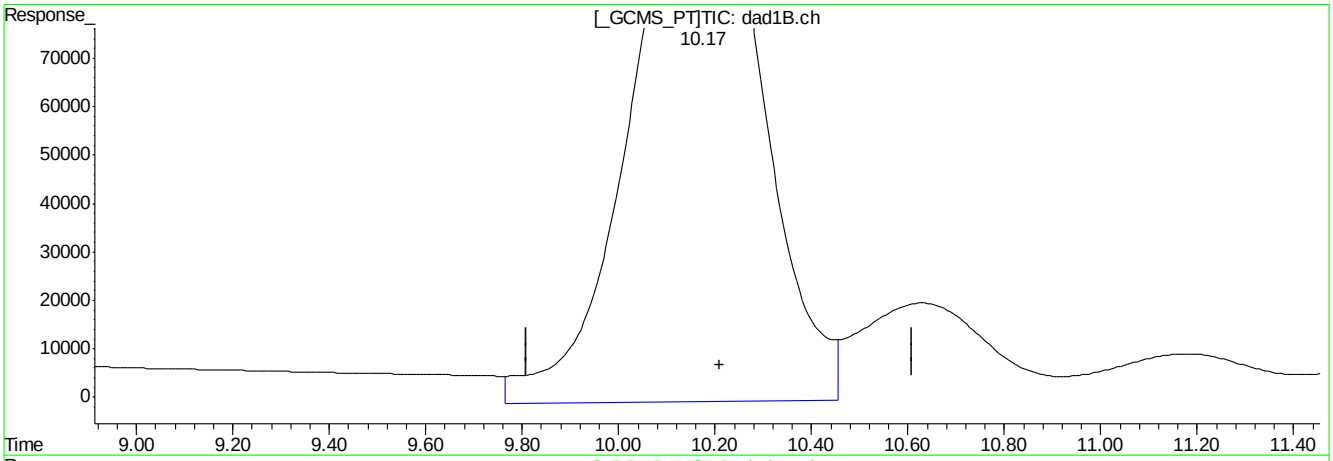
response 756274

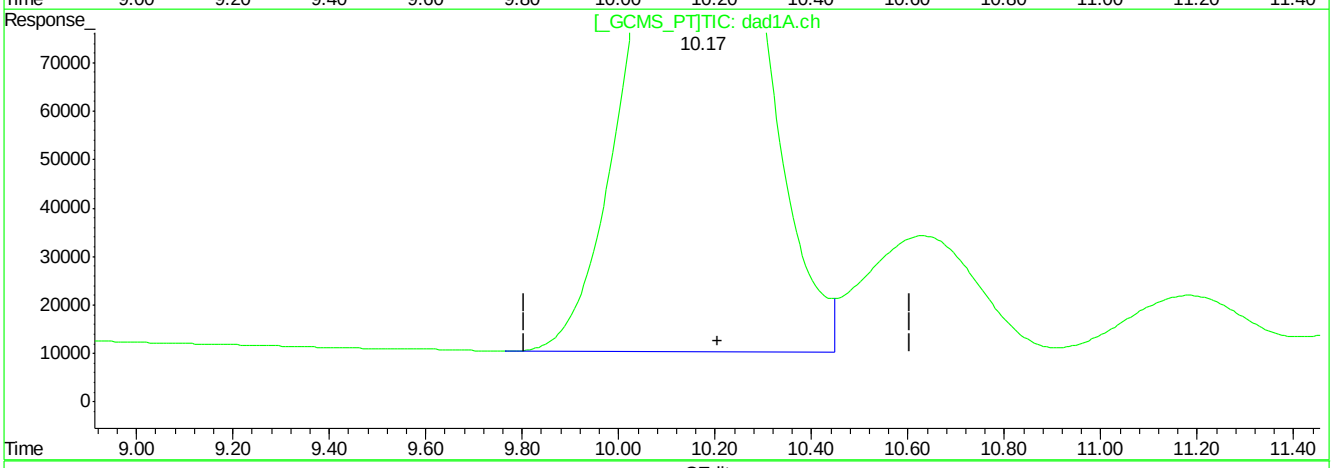
(+) = Expected Retention Time
PP390606.D GPP2428_040221PRI.M Fri Apr 23 10:02:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : op84960,GPP2438,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:02 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.17min 5894.406ppb

response 22215884

(12) 2,4,6-Trinitrotoluene #2

10.17min 5316.224ppb

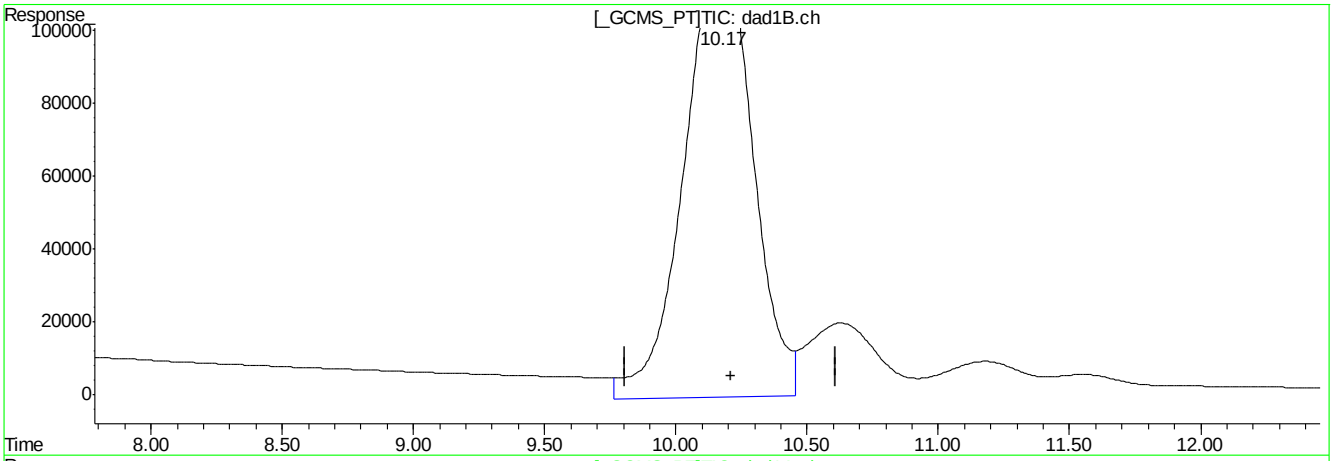
response 24726822

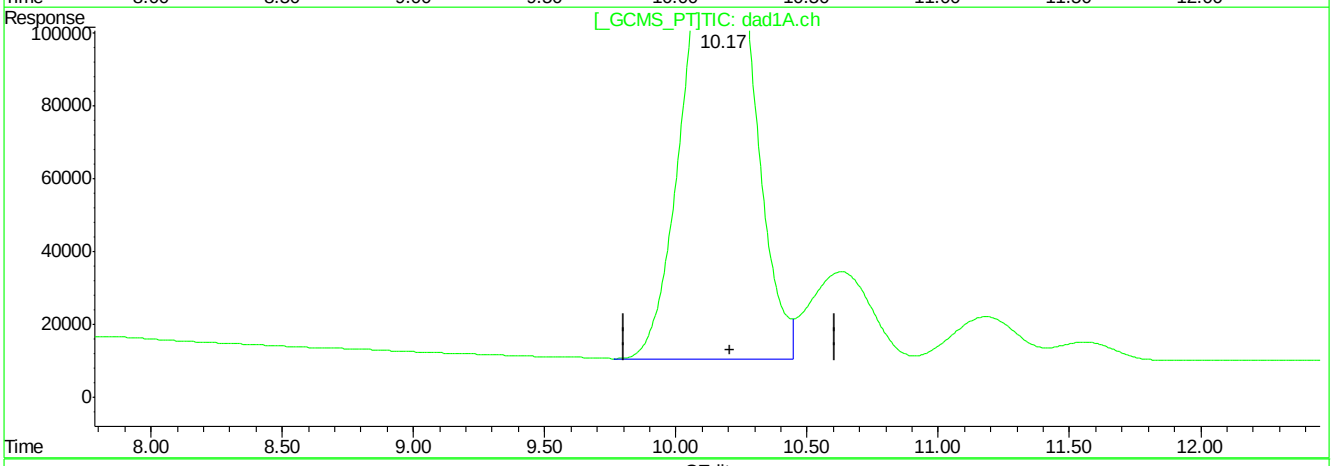
(+) = Expected Retention Time
PP390606.D GPP2439_042321PRI.M Mon Apr 26 15:36:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : op84960,GPP2438,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:02 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.17min 5894.406ppb

response 22215884

(12) 2,4,6-Trinitrotoluene #2

10.17min 5316.224ppb

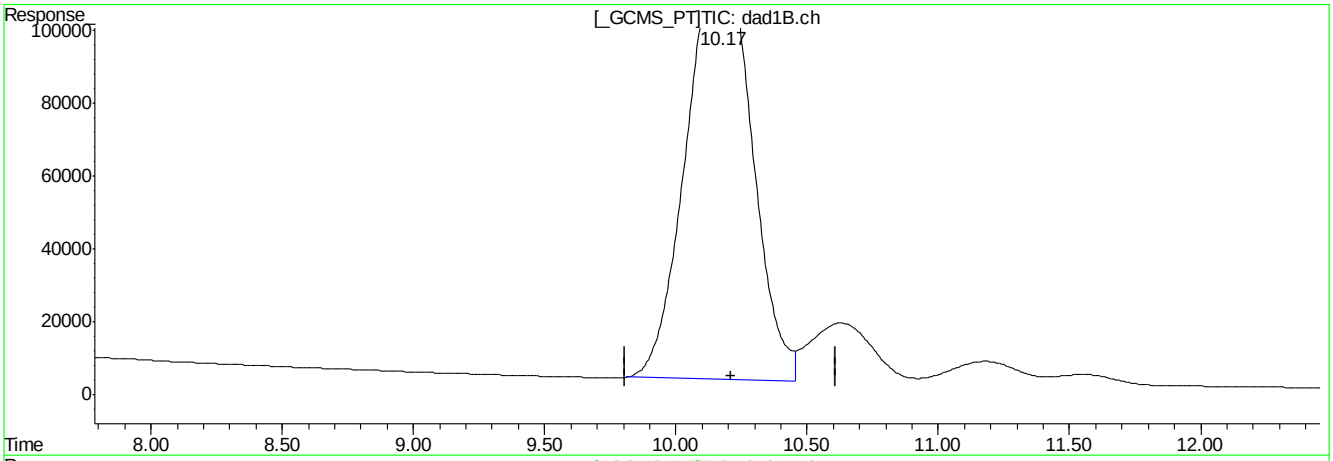
response 24726822

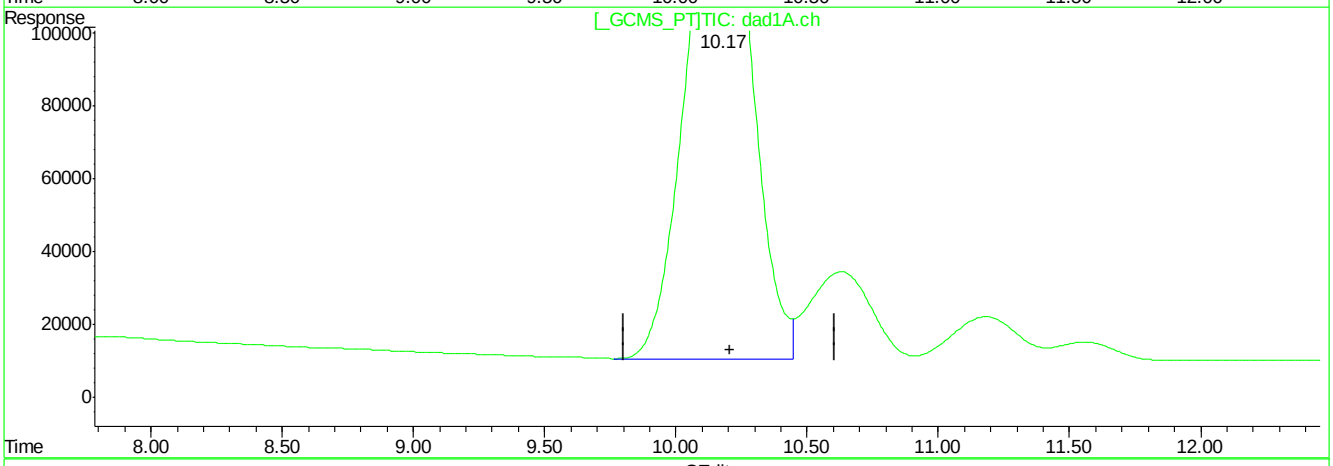
(+) = Expected Retention Time
PP390606.D GPP2439_042321PRI.M Mon Apr 26 15:36:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : op84960,GPP2438,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:02 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.17min 5331.256ppb m

response 20093383

(12) 2,4,6-Trinitrotoluene #2

10.17min 5316.224ppb

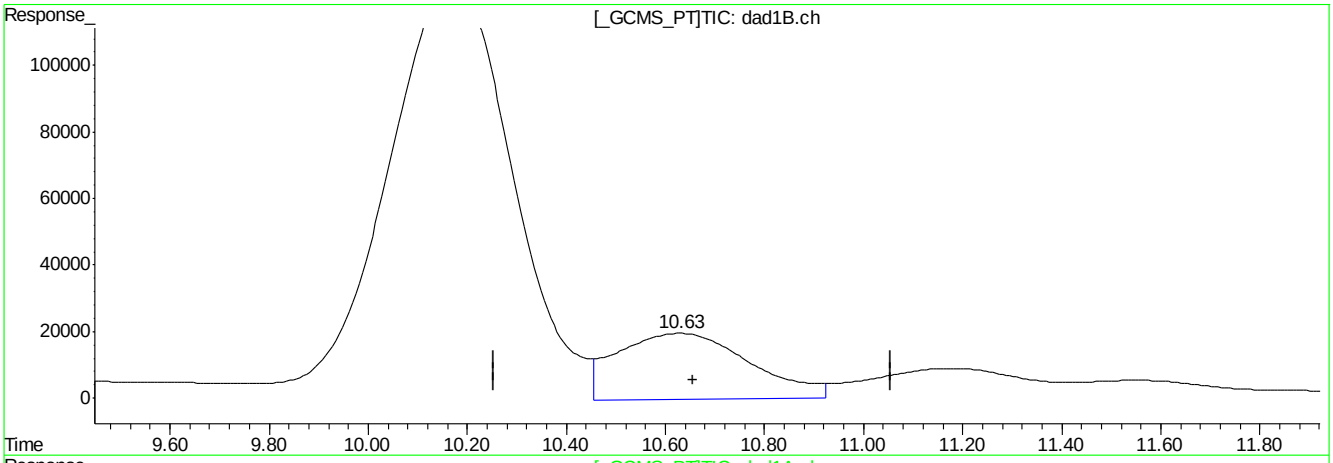
response 24726822

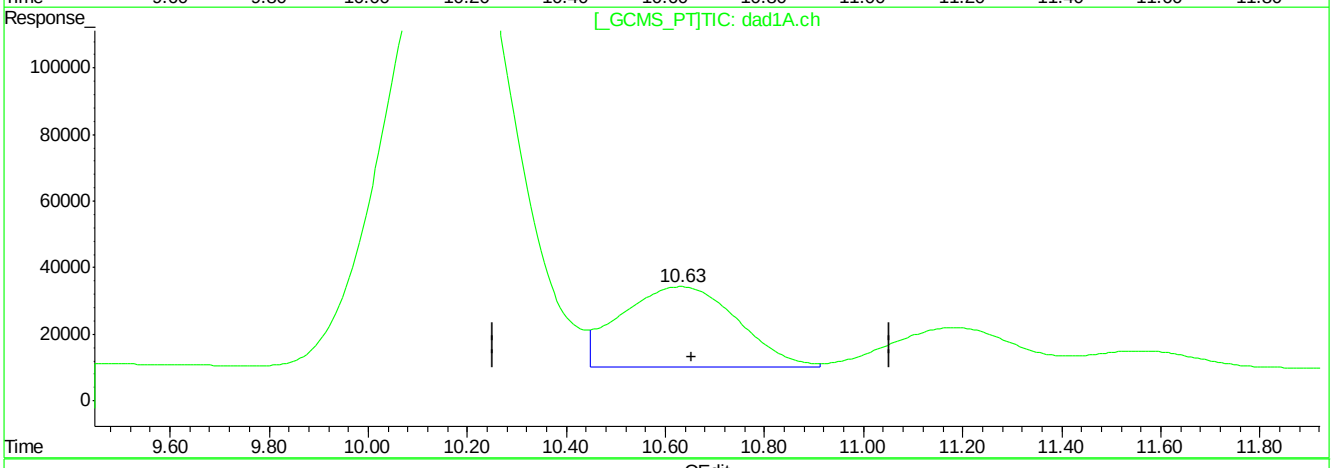
(+) = Expected Retention Time
PP390606.D GPP2439_042321PRI.M Mon Apr 26 15:36:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : op84960,GPP2438,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:02 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.63min 1099.310ppb

response 3692897

(13) 2-Amino-4,6-Dinitrotoluene #2

10.63min 775.969ppb

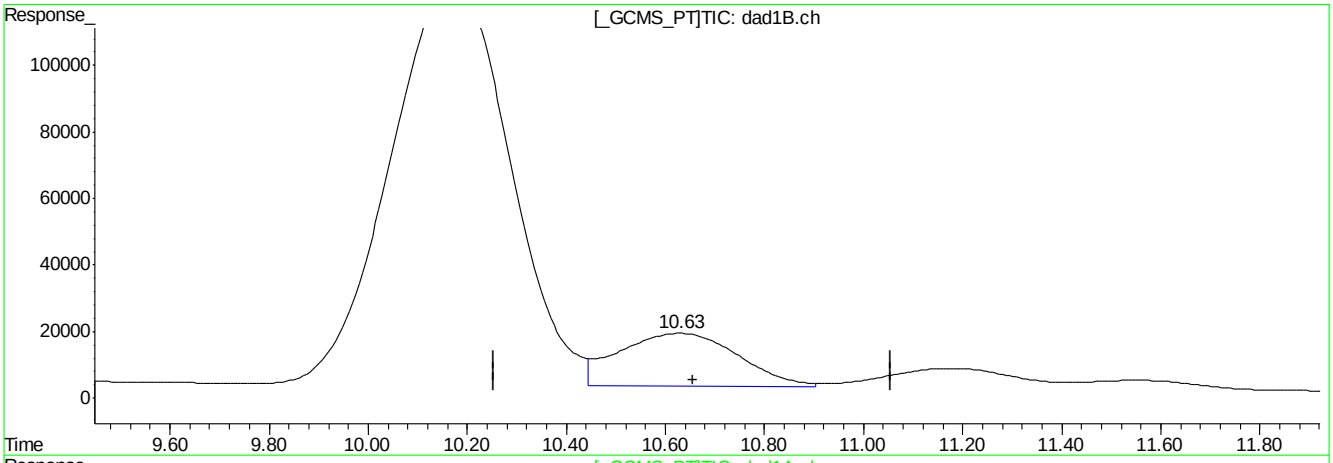
response 3942060

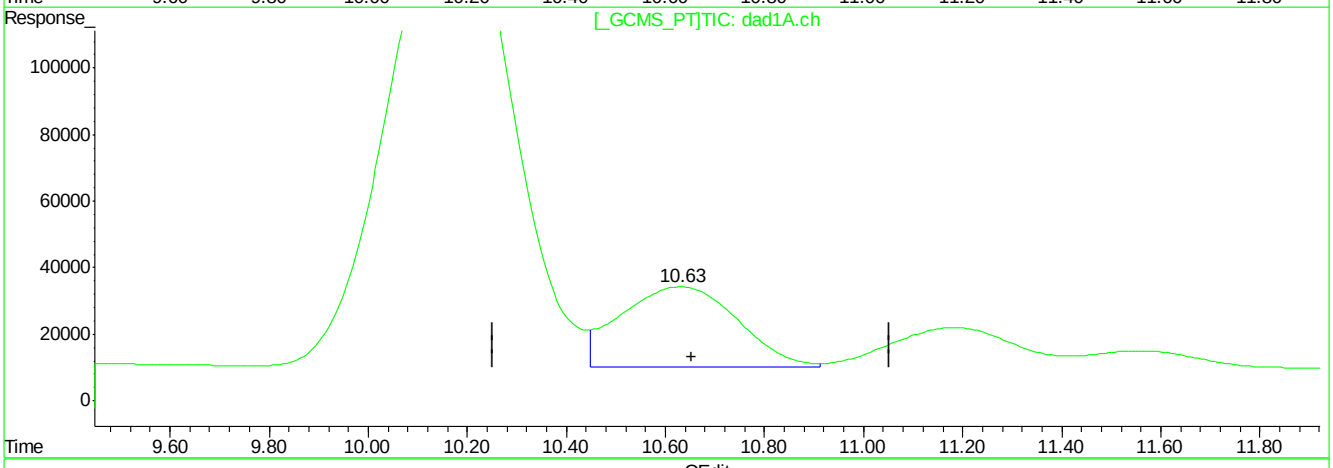
(+) = Expected Retention Time
PP390606.D GPP2439_042321PRI.M Mon Apr 26 15:36:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : op84960,GPP2438,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:02 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.63min 792.640ppb m

response 2662705

(13) 2-Amino-4,6-Dinitrotoluene #2

10.63min 775.969ppb

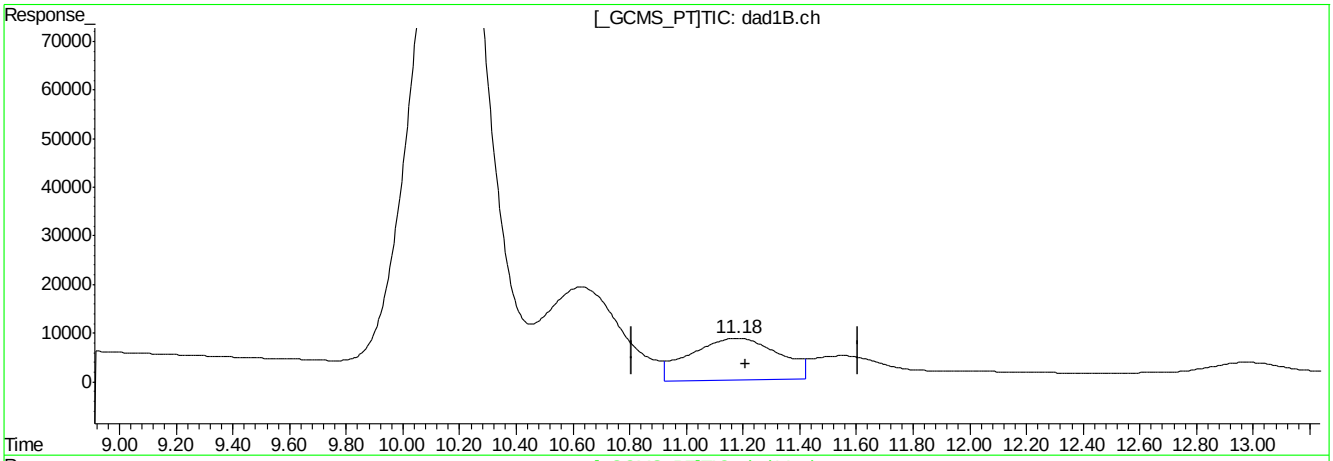
response 3942060

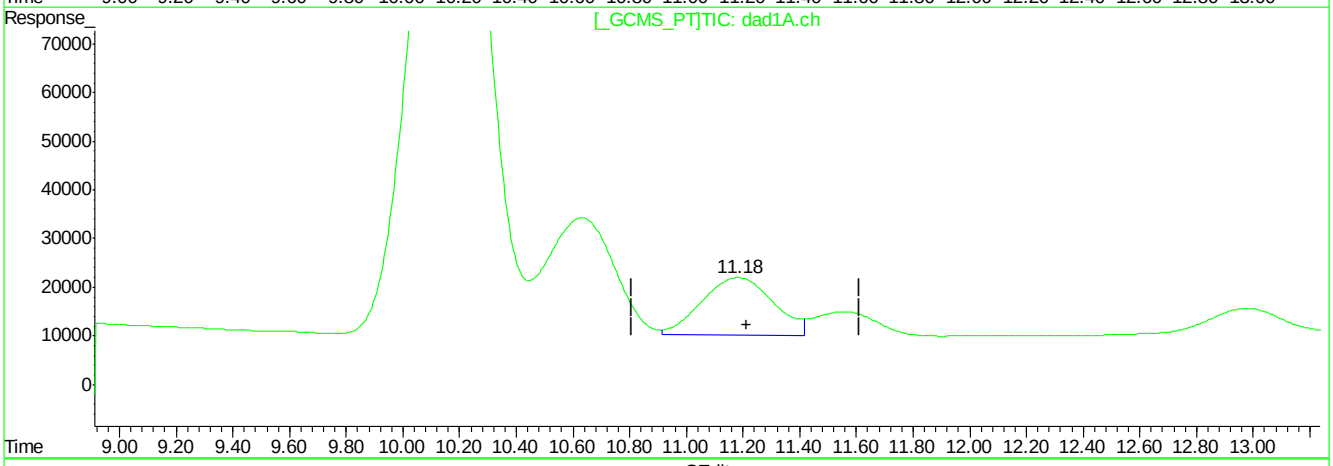
(+) = Expected Retention Time
PP390606.D GPP2439_042321PRI.M Mon Apr 26 15:36:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : op84960,GPP2438,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:02 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.18min 833.427ppb

response 1877362

(14) 4-Amino-2,6-Dinitrotoluene #2

11.18min 438.910ppb

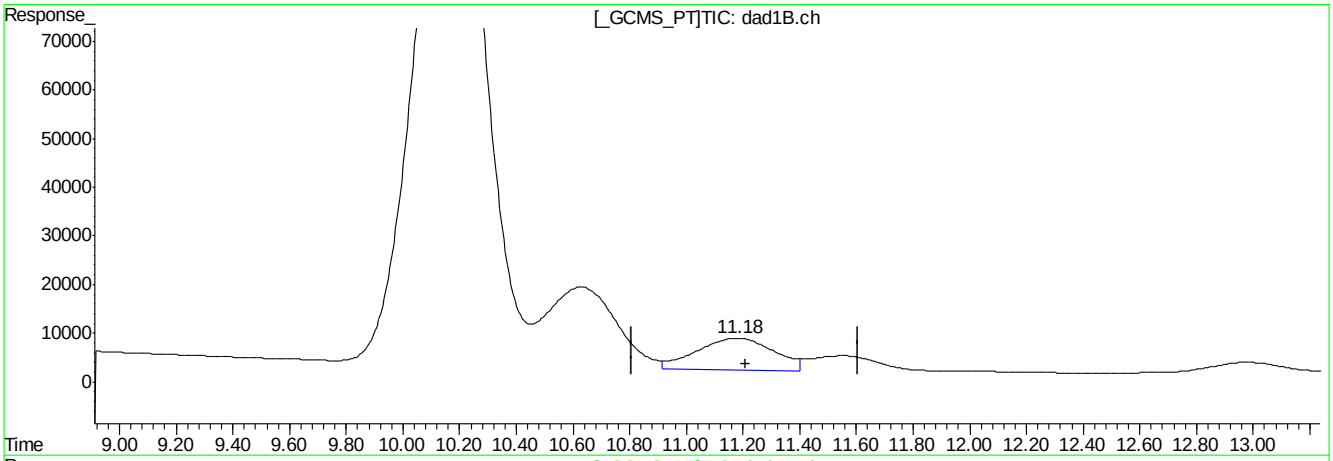
response 2090472

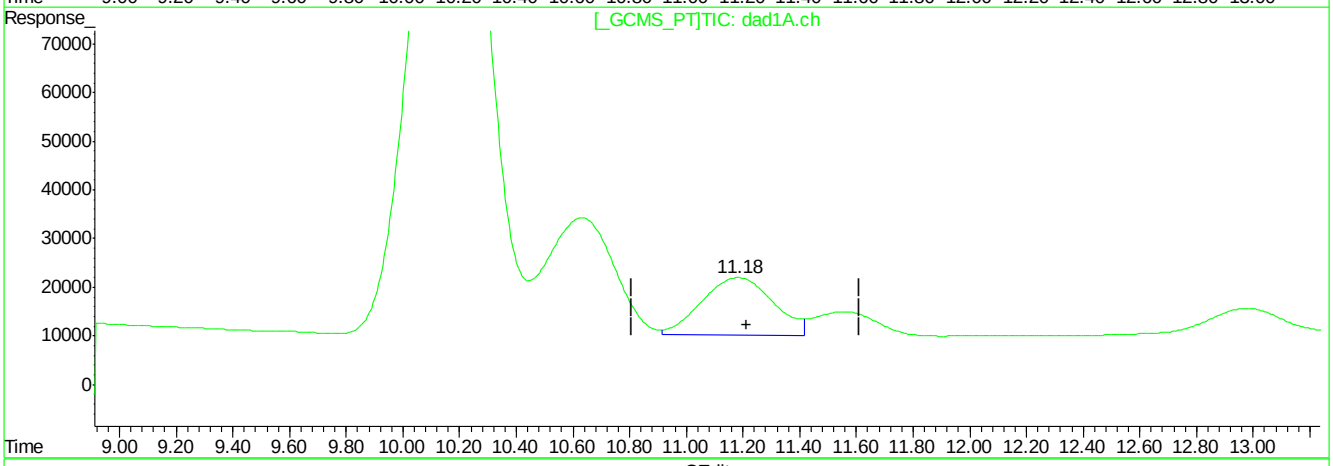
(+) = Expected Retention Time
PP390606.D GPP2439_042321PRI.M Mon Apr 26 15:36:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390606.D\dad1A.ch
Acq On : 22-Apr-2021, 13:44:42 Operator: jamesb
Sample : FA84640-3 Inst : G1315B
Misc : op84960,GPP2438,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:02 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.18min 550.184ppb m

response 1239335

(14) 4-Amino-2,6-Dinitrotoluene #2

11.18min 438.910ppb

response 2090472

(+) = Expected Retention Time
PP390606.D GPP2439_042321PRI.M Mon Apr 26 15:37:03 2021

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621166.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621166.D\dad1A.ch
Acq On : 23-Apr-2021, 15:13:09 Operator: jamesb
Sample : FA84640-3cf Inst : G1315B
Misc : op84960,GGG2966,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50:05 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.06	14.06	1511206	3028007	320.713	329.284
	Spiked Amount 500.000	Range 70 - 136		Recovery =		64.14%#	65.86%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.32	5.32	4357389	4357389	1475.270	1300.932
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.58	7.58	18334712	18334712	2038.149	2037.824
6)	RDX	7.91	7.91	2831439	2831439	682.162	678.504
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.71	11.71	46892498	62345232	5664.807	5883.326
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.77	15.76	1769558	3160049	187.701	199.906
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.50	17.50	3215139	5887410	627.597	685.077
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.33	19.33	7116693	10245915	864.882	881.612
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

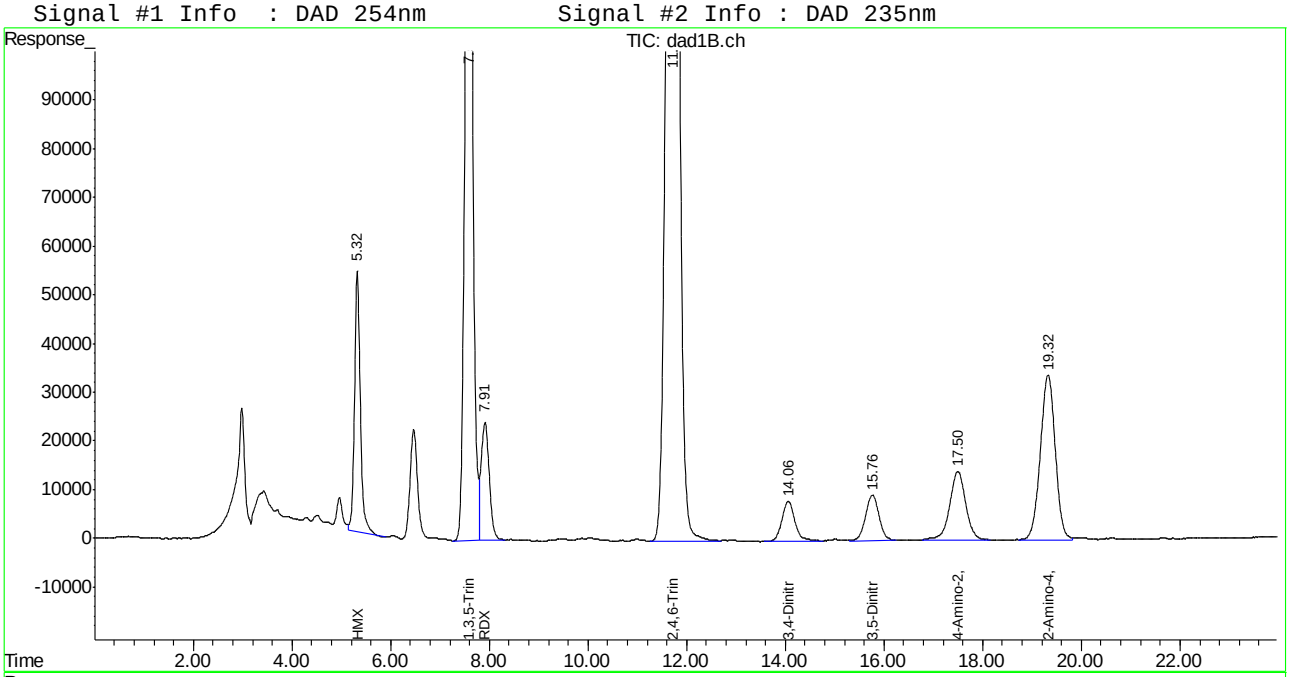
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG621166.D GGG2952_032221.M Mon Apr 26 14:12:23 2021 Page 1

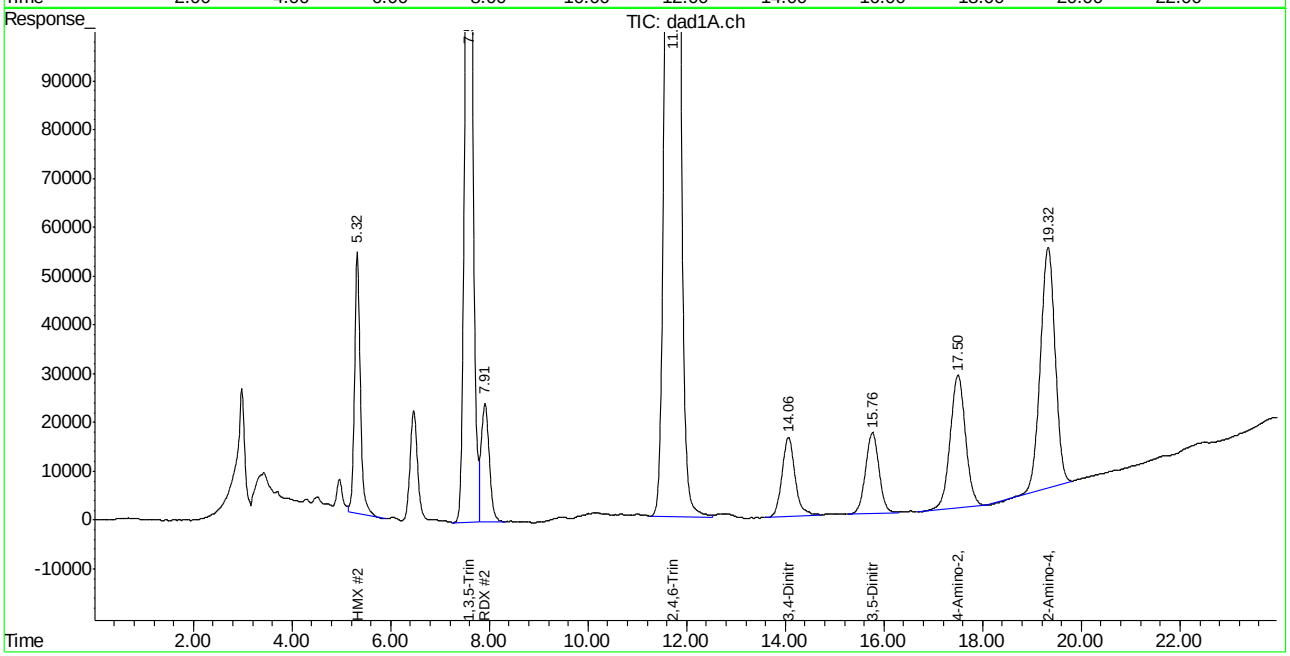
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621166.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621166.D\dad1A.ch
Acq On : 23-Apr-2021, 15:13:09 Operator: jamesb
Sample : FA84640-3cf Inst : G1315B
Misc : op84960,GGG2966,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 13:01 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621167.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621167.D\dad1A.ch
Acq On : 23-Apr-2021, 15:44:34 Operator: jamesb
Sample : FA84640-3cf,10 Inst : G1315B
Misc : op84960,GGG2966,1040,,,10,10,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50:06 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
	Spiked Amount 500.000	Range 70 - 136		Recovery =		0.00%#	0.00%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
6)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.69	11.69	4286120	6049142	517.781	570.839
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

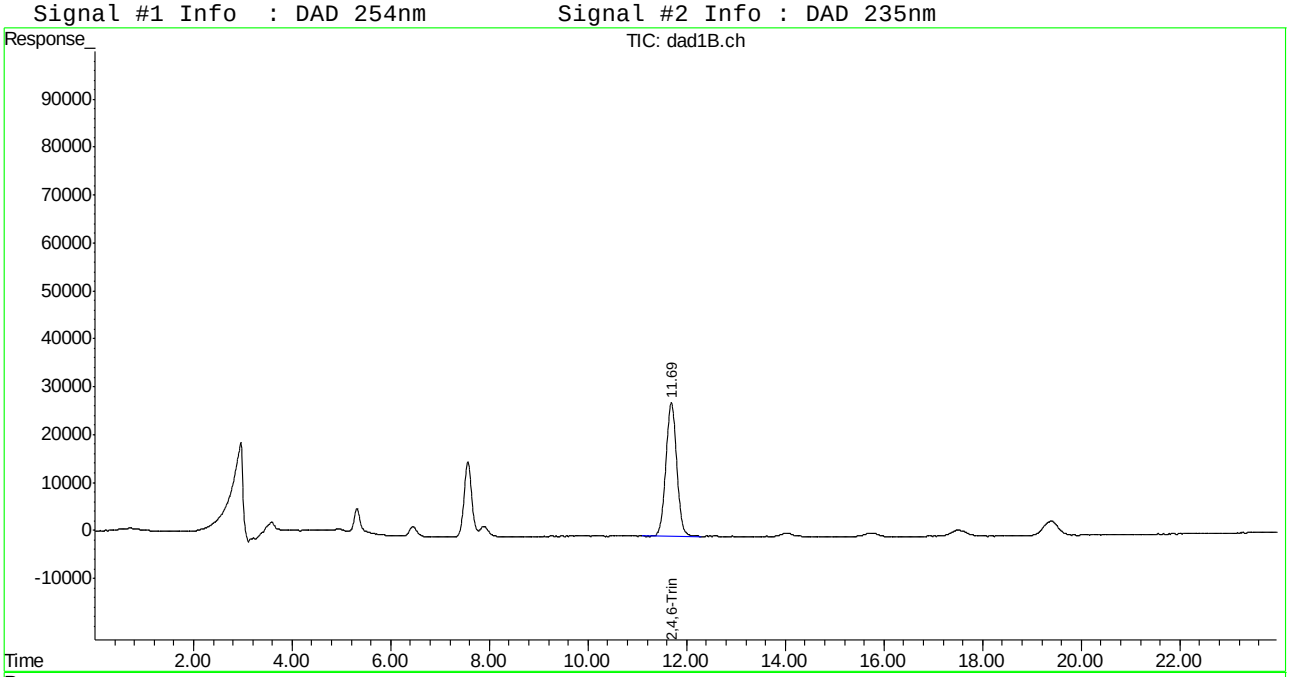
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG621167.D GGG2952_032221.M Mon Apr 26 14:12:24 2021 Page 1

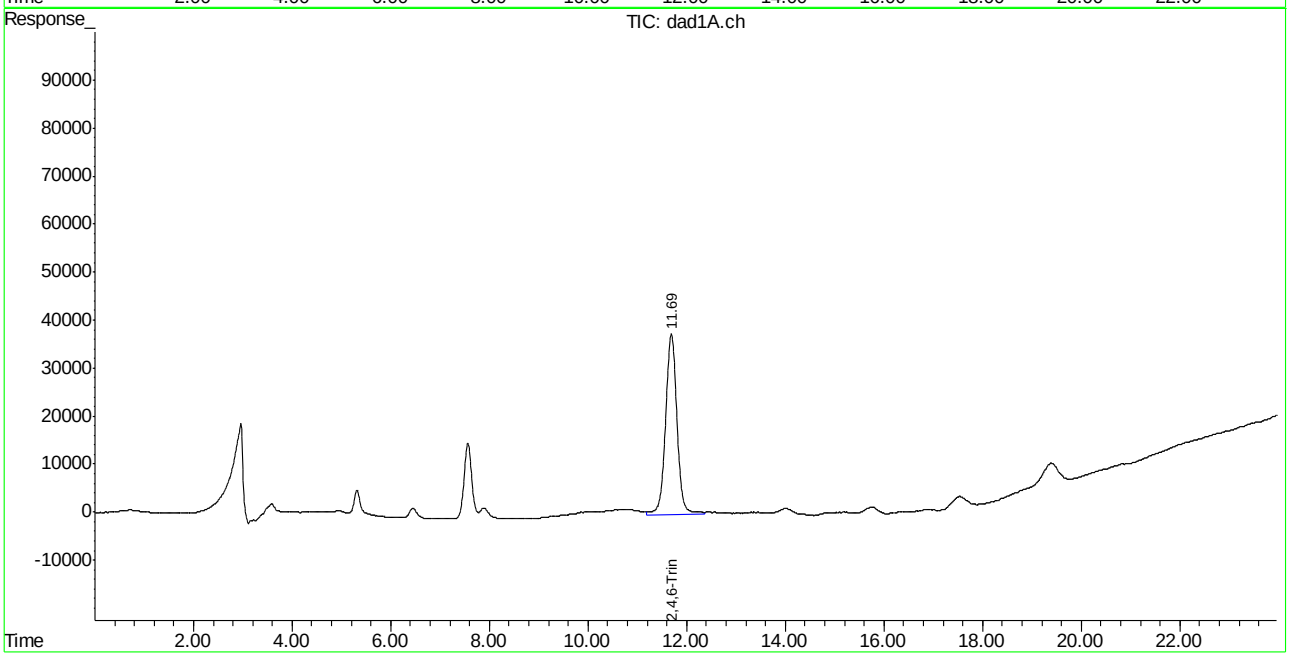
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621167.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621167.D\dad1A.ch
Acq On : 23-Apr-2021, 15:44:34 Operator: jamesb
Sample : FA84640-3cf,10 Inst : G1315B
Misc : op84960,GGG2966,1040,,,10,10,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 13:02 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/26/21 16:24

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : op84960,GPP2438,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 09:51:57 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.52	11.52	459459	764315	224.807m	240.085m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		44.96%#	48.02%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.48	1.49	1620562	4152599	1068.542m	949.764m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.98	2.98	750963	1202373	403.643	407.458
6)	1,3,5-Trinitrobe	4.77	4.77	6674867	13002068	1685.340m	1689.376m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.40	6.40	180306	379120	44.451	56.131
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	10.14	10.14	11973025	14595280	3176.730m	3137.960m
13)	2-Amino-4,6-Dini	10.60	10.59	1010734	1784416	300.878m	351.251
14)	4-Amino-2,6-Dini	11.18	11.17	599503	1447207	266.140m	303.852
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

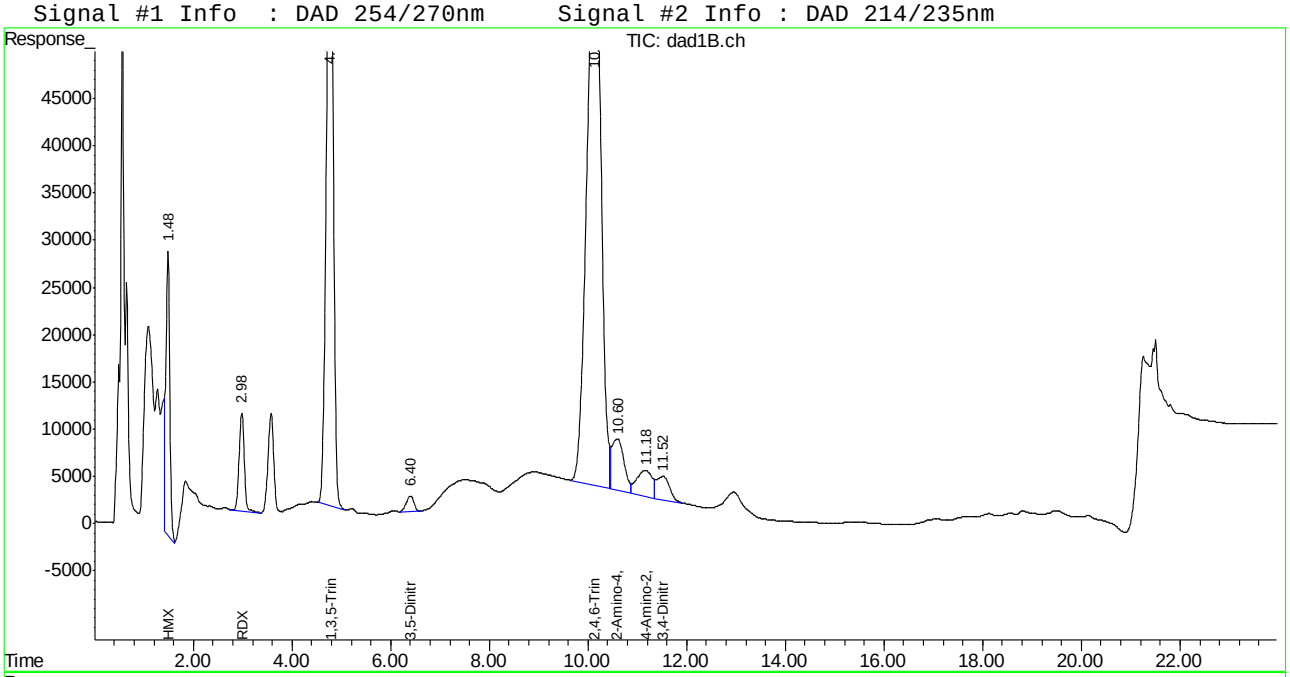
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP390607.D GPP2439_042321PRI.M Mon Apr 26 15:41:26 2021 Page 1

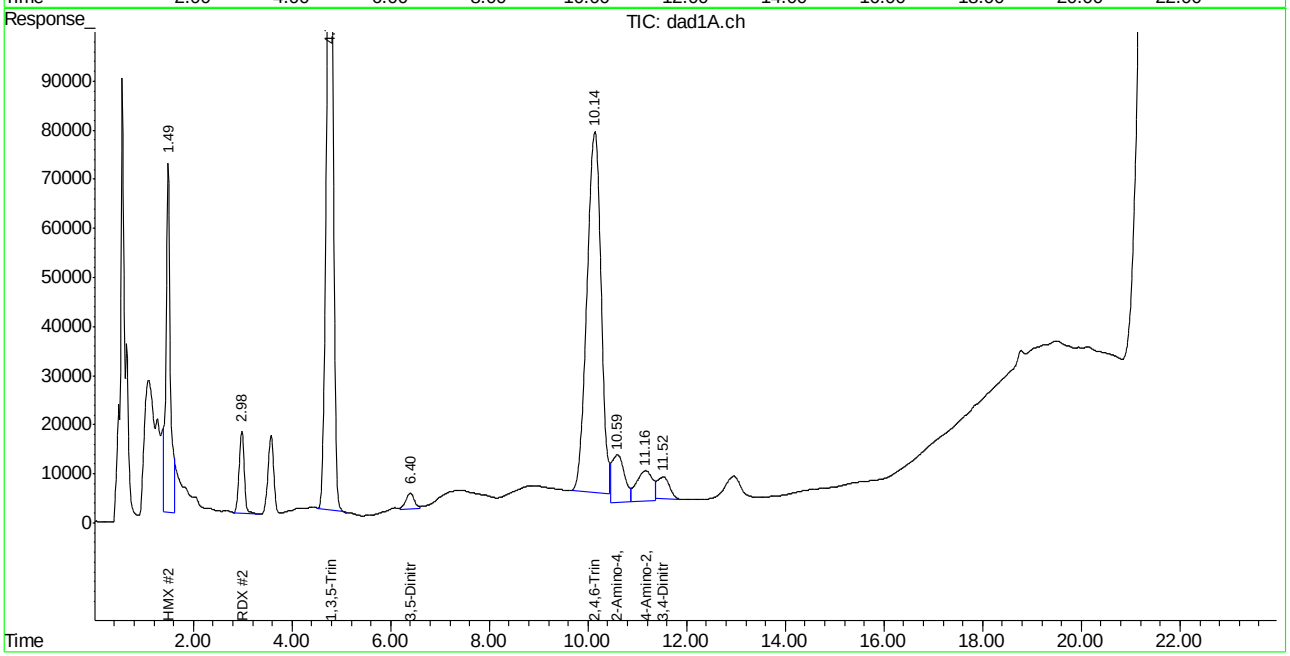
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : op84960,GPP2438,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 15:37 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

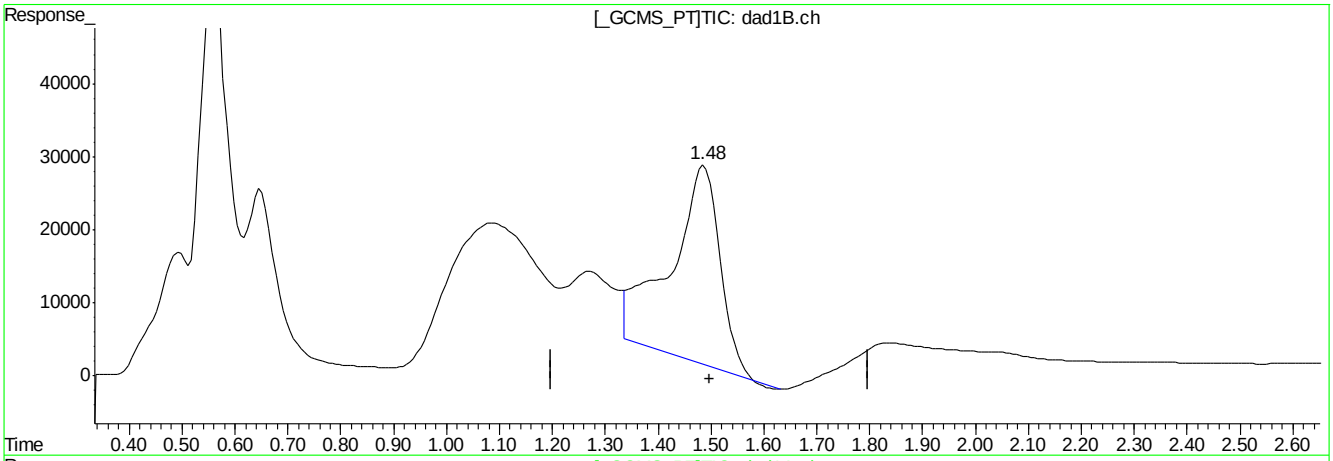
Sample Number: FA84640-4
Lab FileID: PP390607.D
Injection Time: 04/22/21 14:15
Method: SW846 8330B
Analyst approved: 04/26/21 15:42 James Boone
Supervisor approved: 04/26/21 16:24 Naresh Jiawan

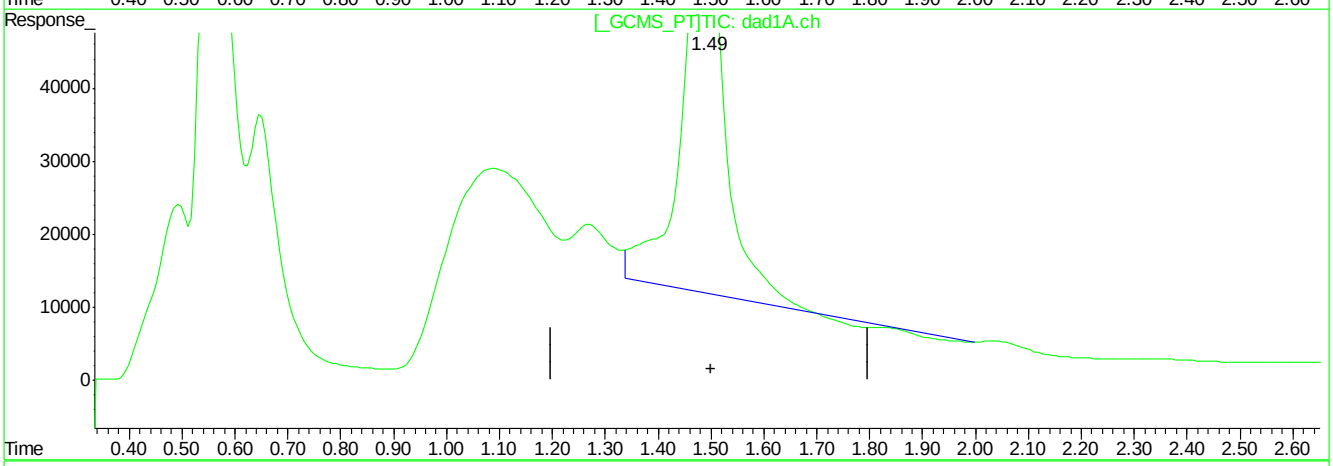
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.48	Poor instrument integration
HMX	2691-41-0	2	1.49	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.77	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.77	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.14	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.14	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.60	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	11.18	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.52	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.52	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.49min 1178.664ppb

response 1787574

(2) HMX #2

1.49min 713.356ppb

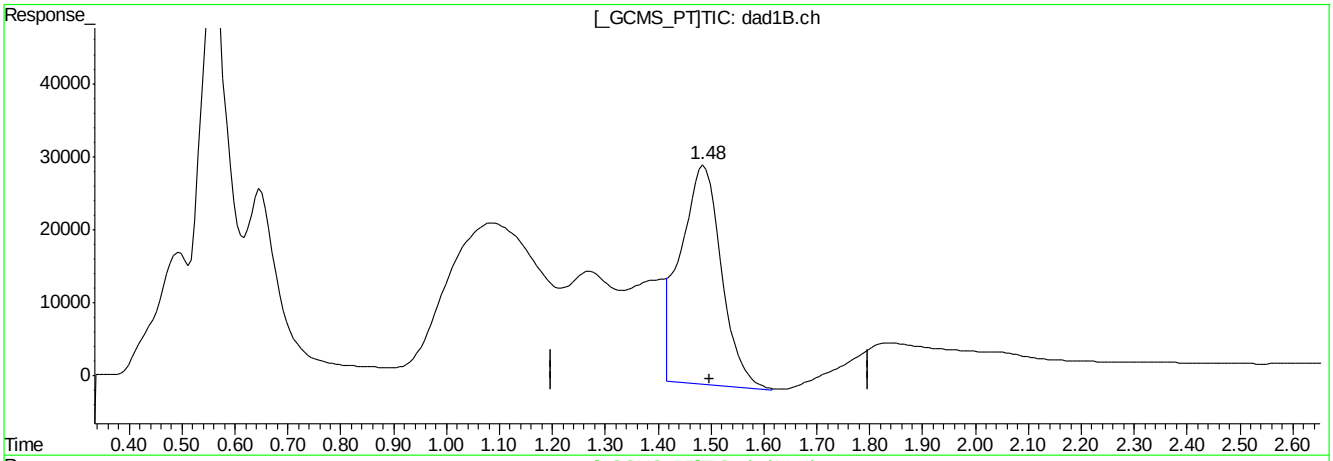
response 3118967

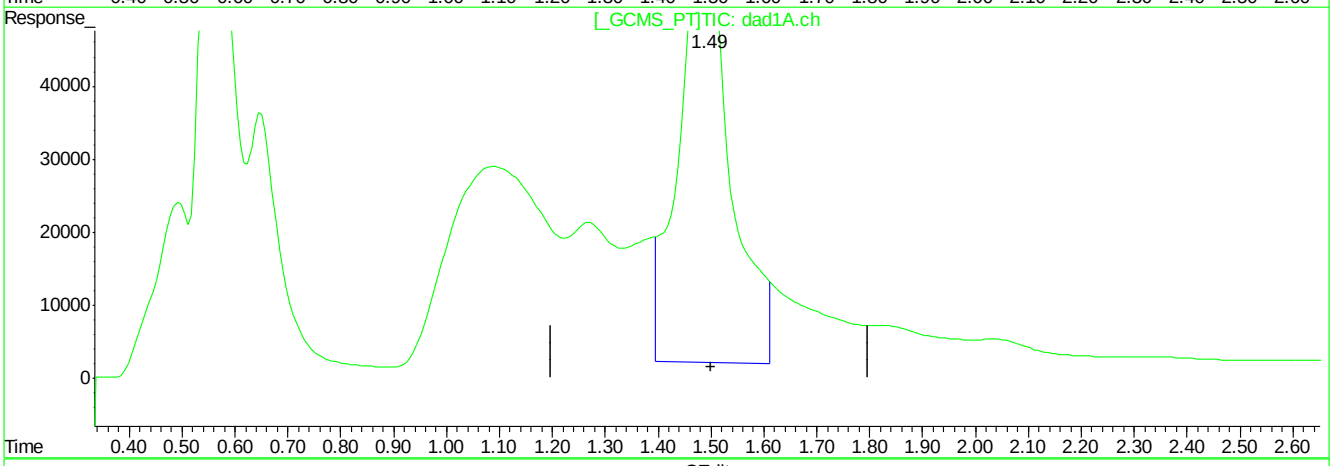
(+) = Expected Retention Time
PP390607.D GPP2428_040221PRI.M Fri Apr 23 10:02:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.48min 1068.542ppb m

response 1620562

(2) HMX #2

1.49min 949.764ppb m

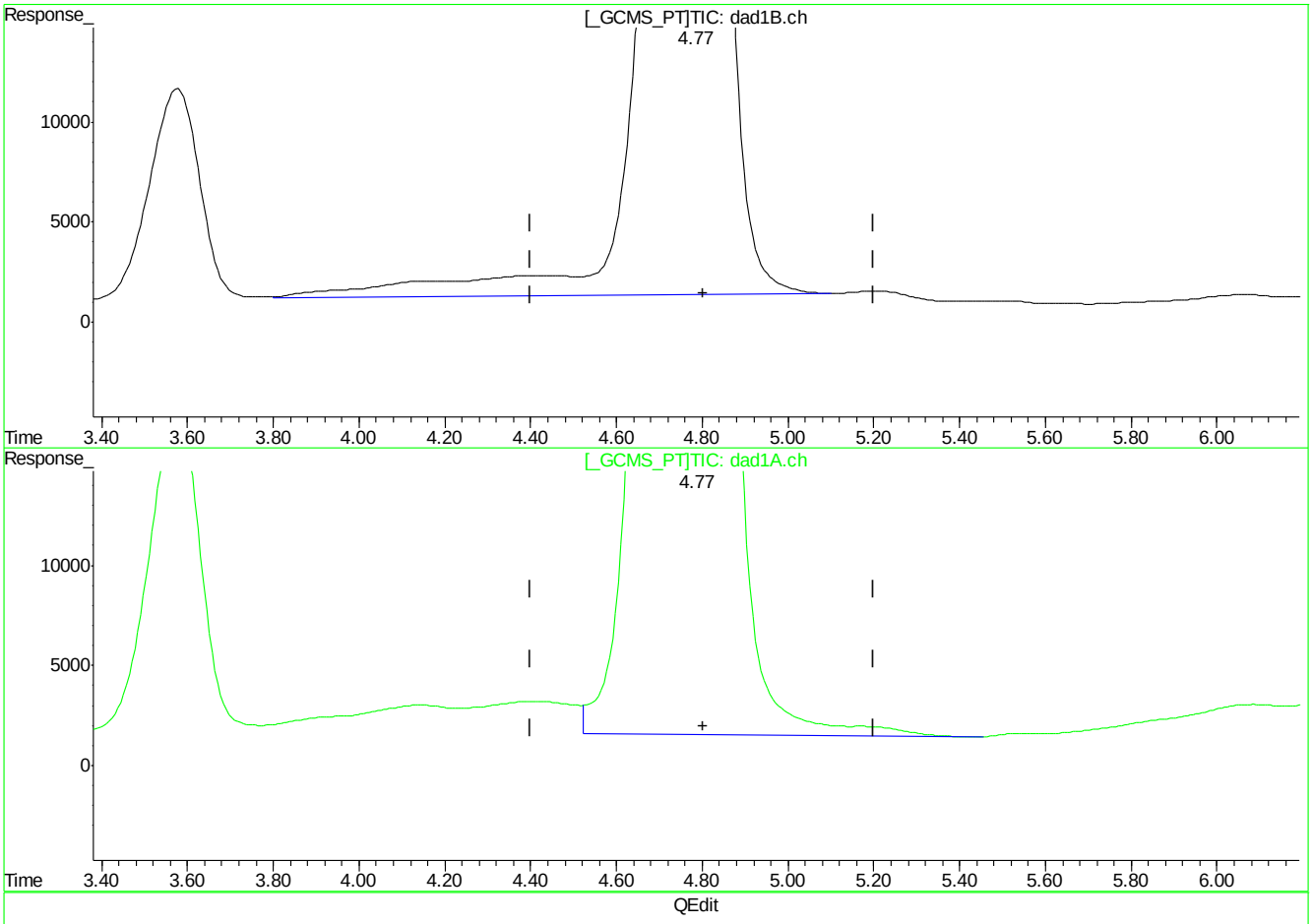
response 4152599

(+) = Expected Retention Time
PP390607.D GPP2428_040221PRI.M Fri Apr 23 10:03:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(6) 1,3,5-Trinitrobenzene

4.78min 1801.181ppb

response 7133659

(6) 1,3,5-Trinitrobenzene #2

4.78min 1741.109ppb

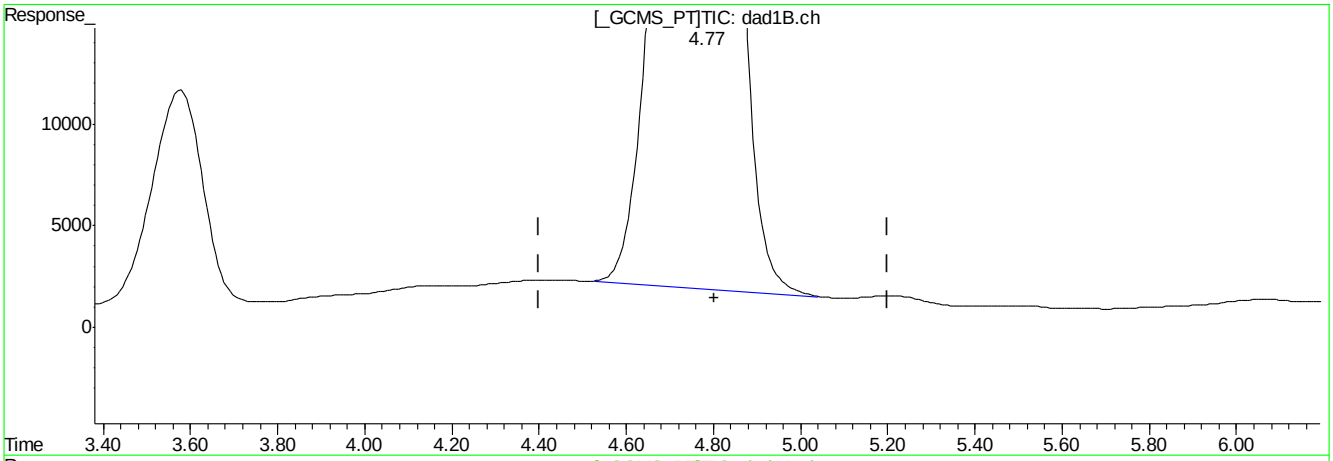
response 13400225

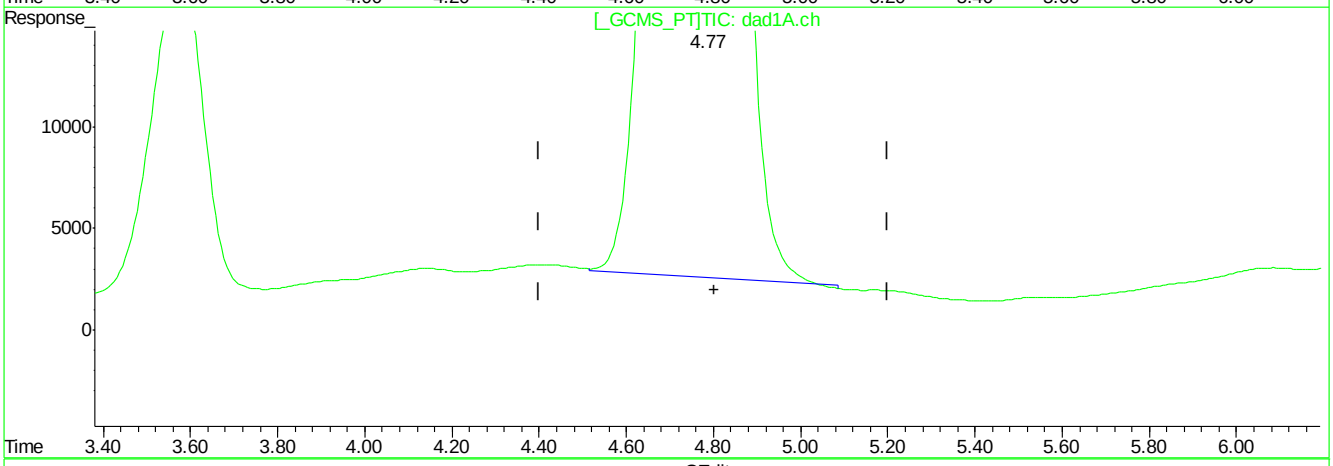
(+) = Expected Retention Time
PP390607.D GPP2428_040221PRI.M Fri Apr 23 10:03:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.77min 1685.340ppb m

response 6674867

(6) 1,3,5-Trinitrobenzene #2

4.77min 1689.376ppb m

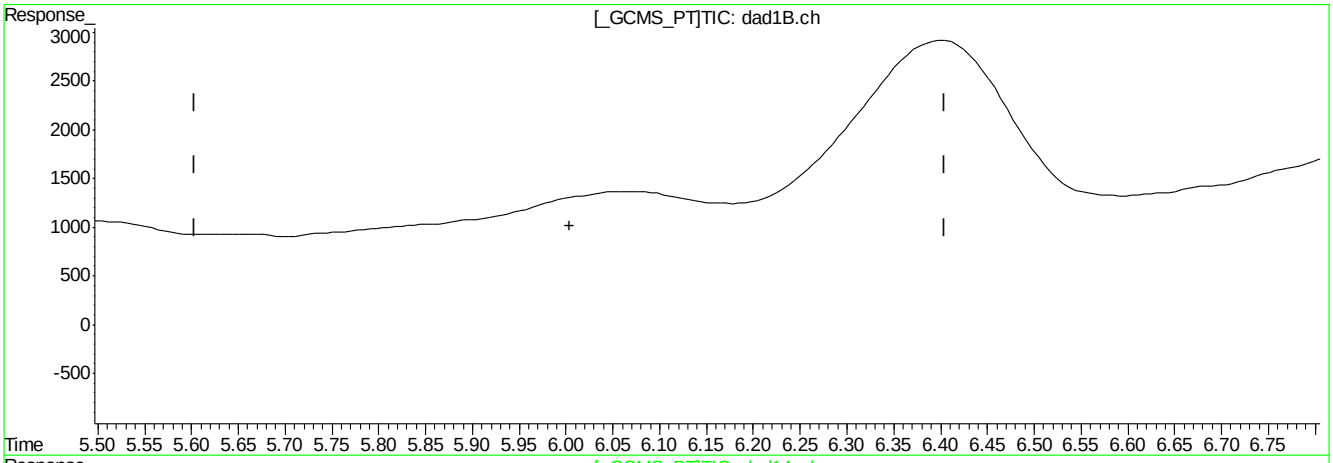
response 13002068

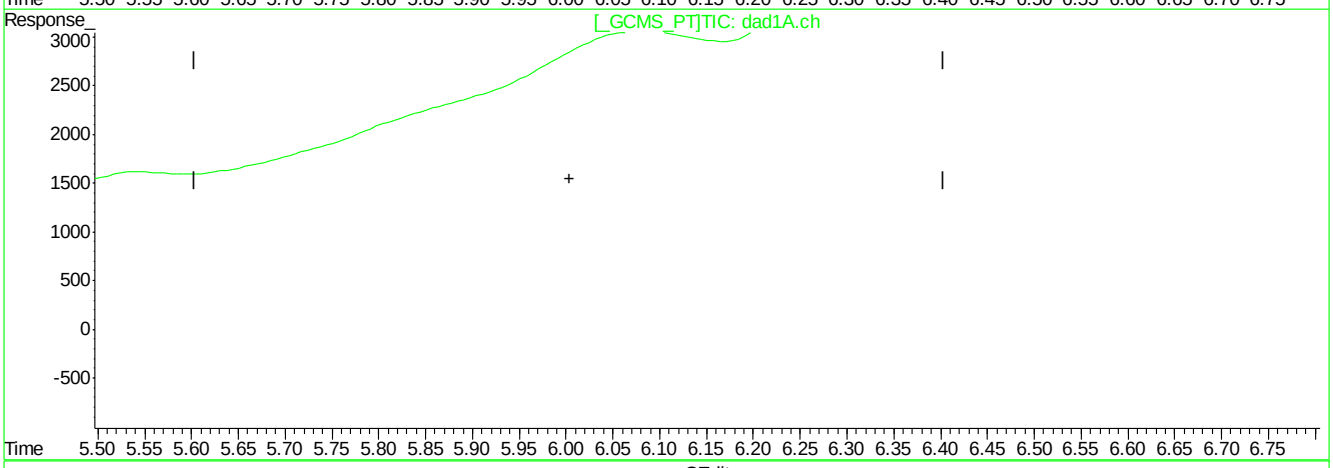
(+) = Expected Retention Time
PP390607.D GPP2428_040221PRI.M Fri Apr 23 10:03:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

0.00min 0.000ppb

response 0

(7) 1,3-Dinitrobenzene #2

0.00min 0.000ppb

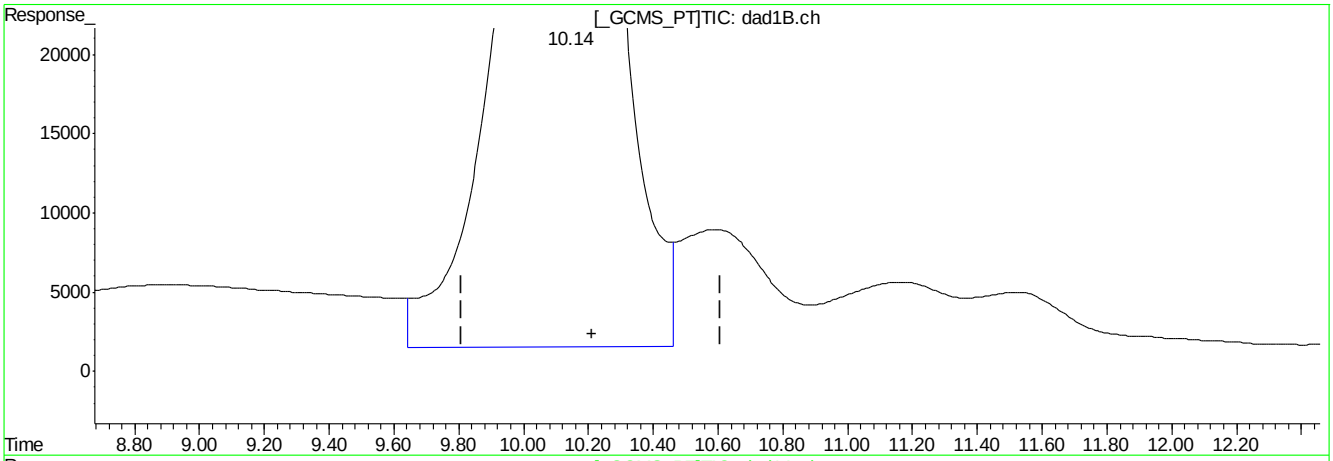
response 0

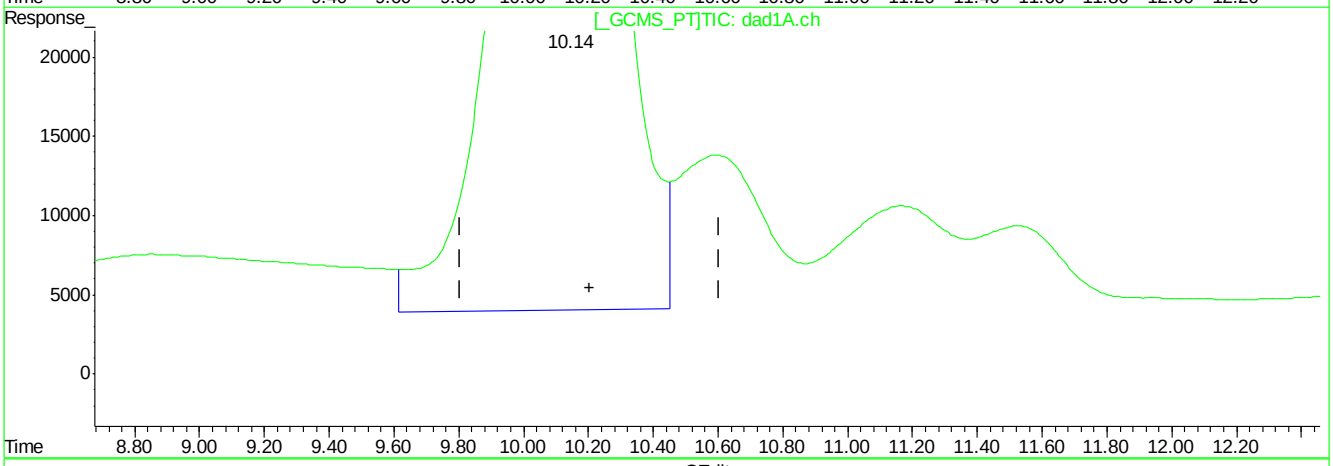
(+) = Expected Retention Time
PP390607.D GPP2428_040221PRI.M Fri Apr 23 10:03:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.14min 3521.494ppb

response 13272431

(12) 2,4,6-Trinitrotoluene #2

10.14min 3396.471ppb

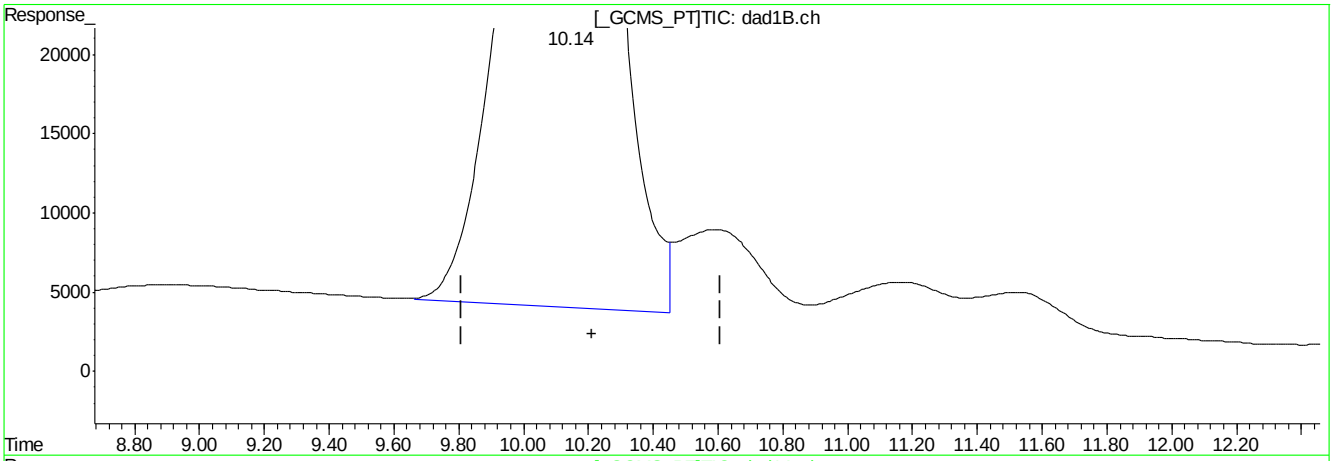
response 15797666

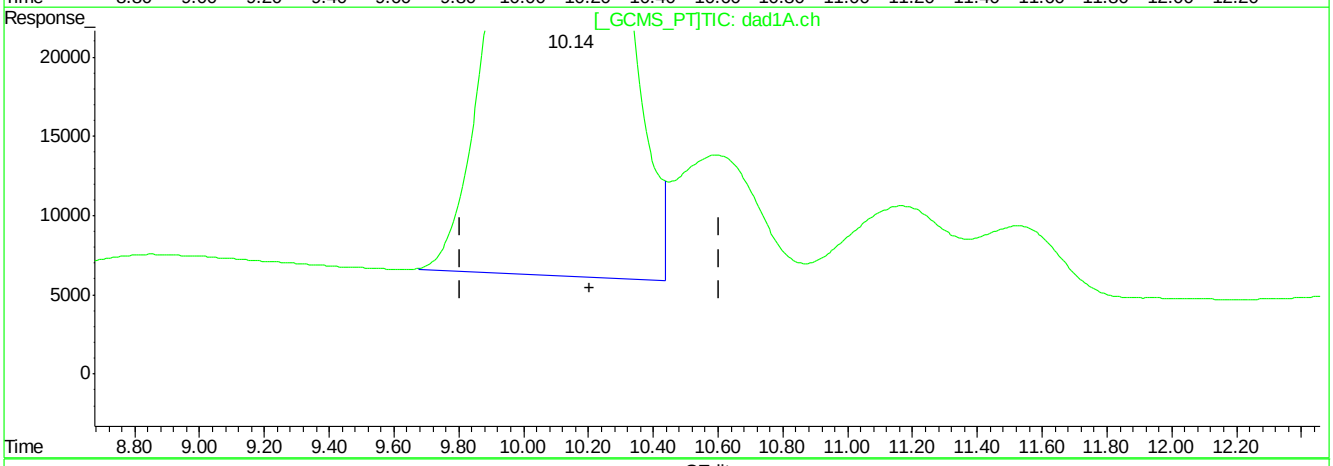
(+) = Expected Retention Time
PP390607.D GPP2428_040221PRI.M Fri Apr 23 10:04:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.14min 3176.730ppb m

response 11973025

(12) 2,4,6-Trinitrotoluene #2

10.14min 3137.960ppb m

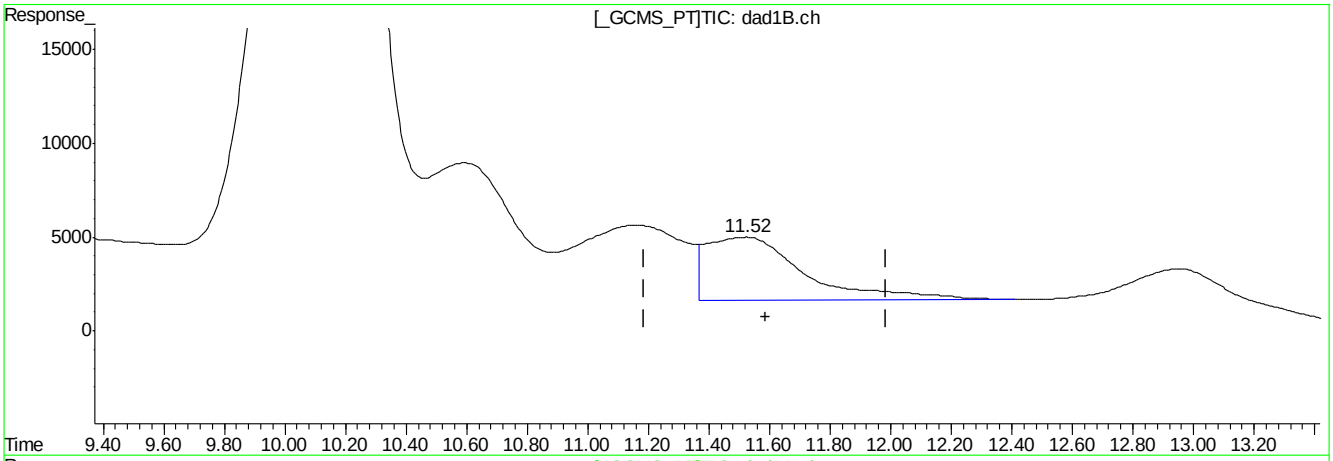
response 14595280

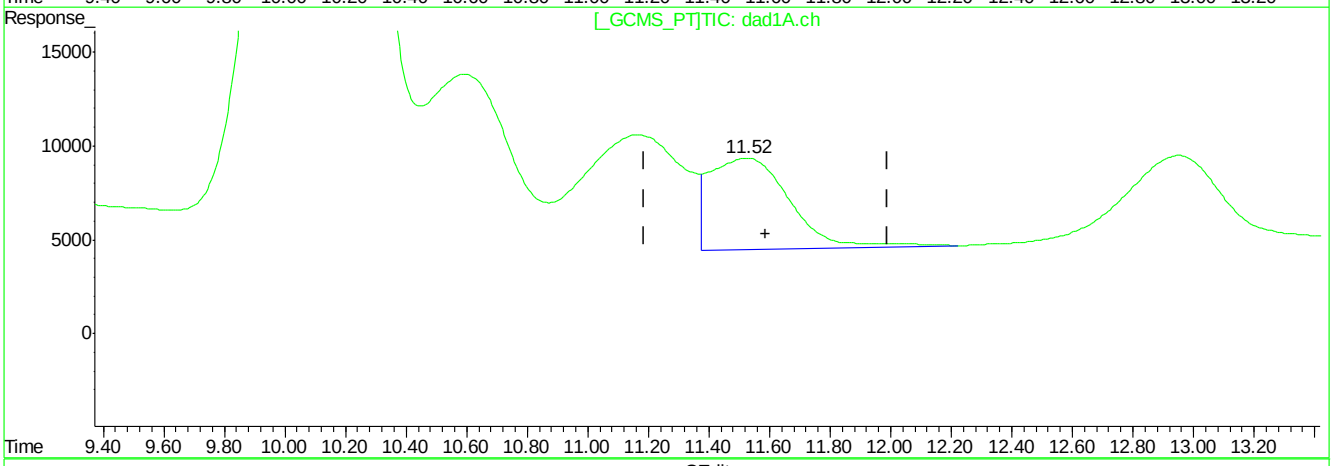
(+) = Expected Retention Time
PP390607.D GPP2428_040221PRI.M Fri Apr 23 10:04:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.52min 375.681ppb

response 767814

(15) 3,4-Dinitrotoluene #2 (S)

11.53min 282.578ppb

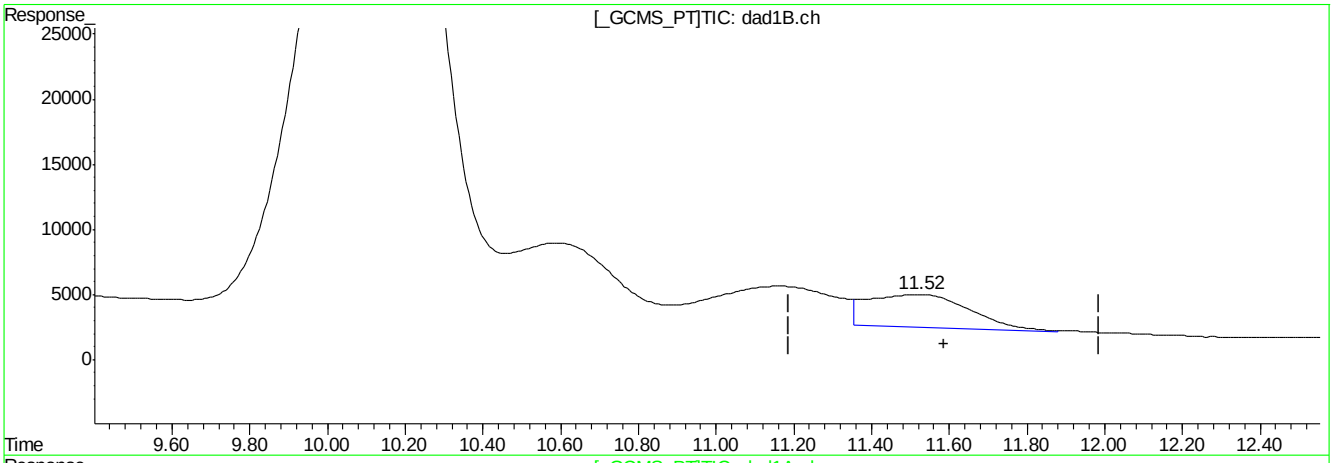
response 899591

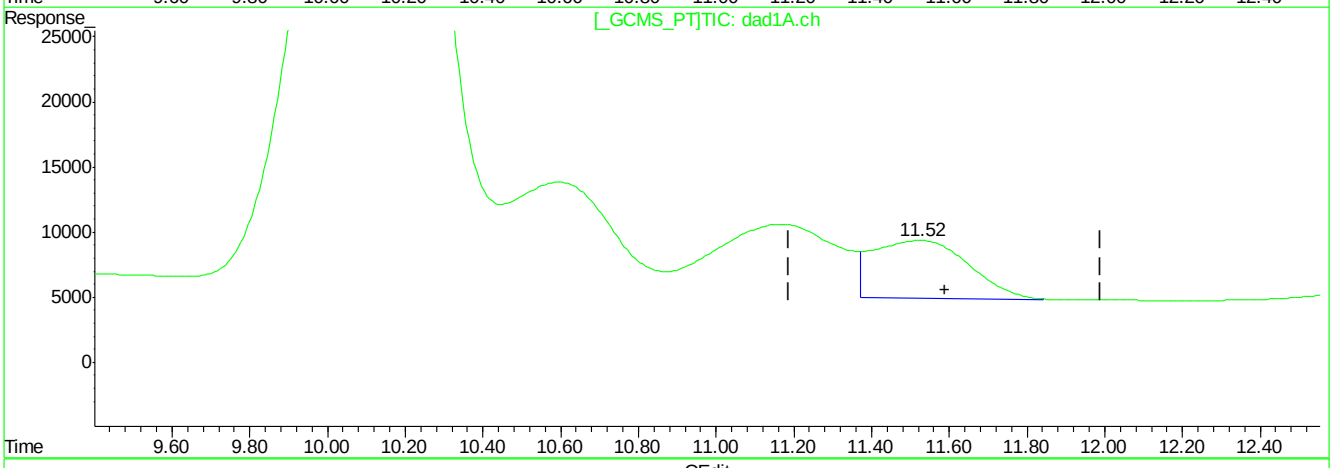
(+) = Expected Retention Time
PP390607.D GPP2428_040221PRI.M Fri Apr 23 10:04:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.52min 224.807ppb m

response 459459

(15) 3,4-Dinitrotoluene #2 (S)

11.52min 240.085ppb m

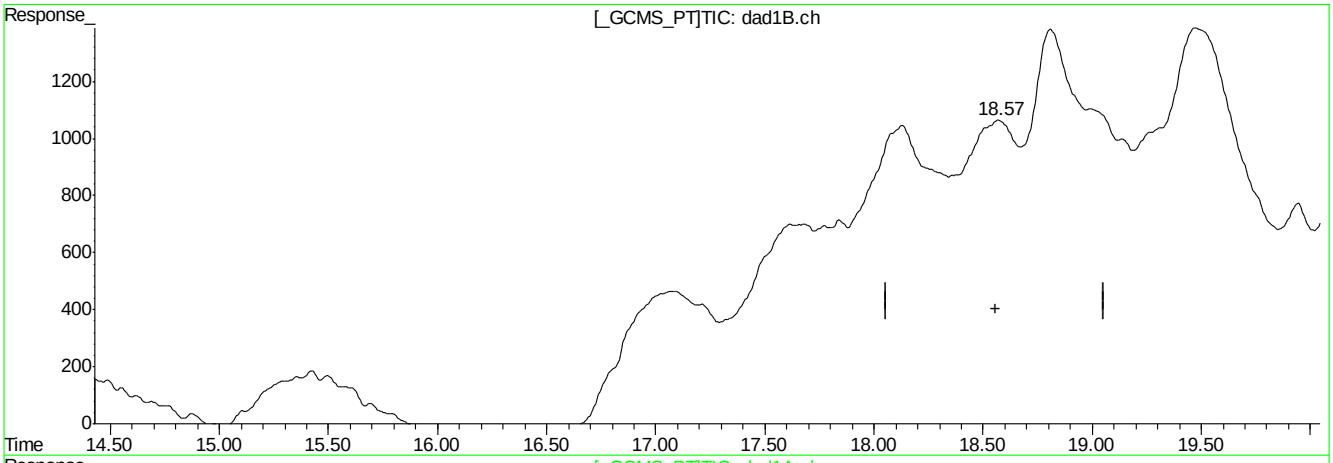
response 764315

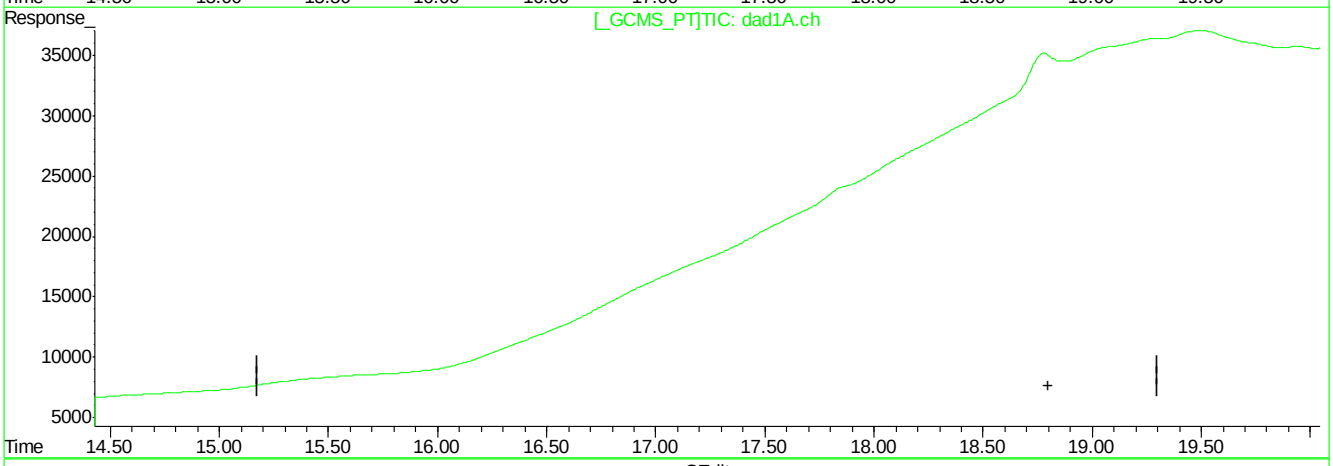
(+) = Expected Retention Time
PP390607.D GPP2428_040221PRI.M Fri Apr 23 10:04:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.57min 0.000ppb

response 287413

(21) PETN #2

0.00min 0.000ppb

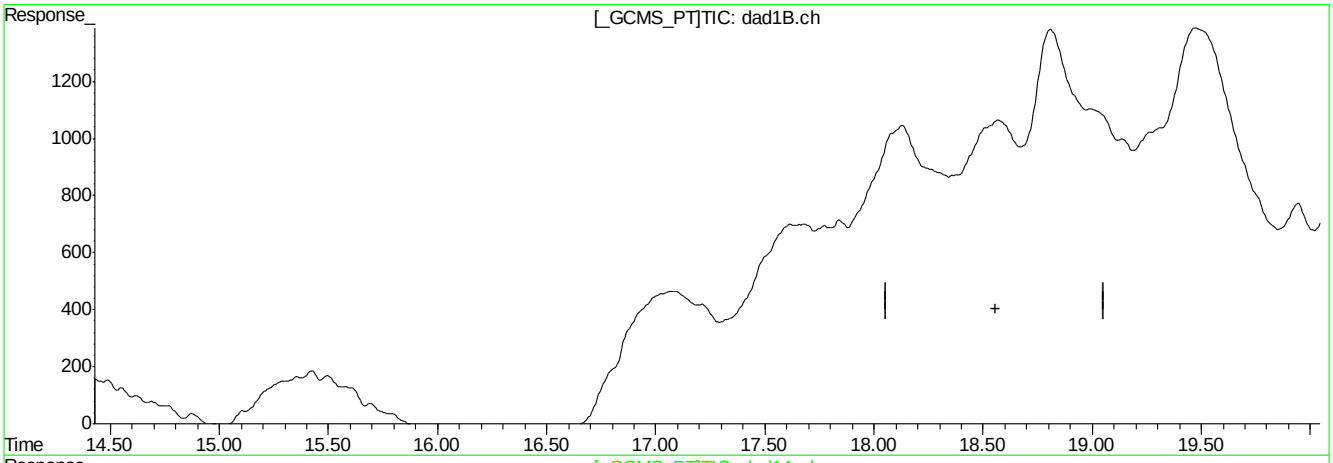
response 0

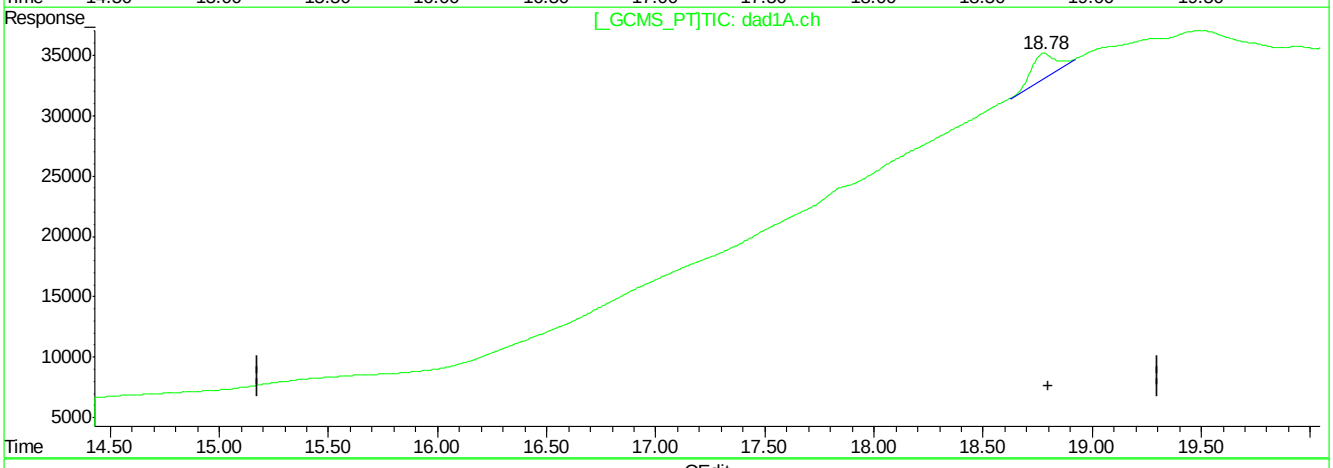
(+) = Expected Retention Time
PP390607.D GPP2428_040221PRI.M Fri Apr 23 10:04:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.78min 120.129ppb m

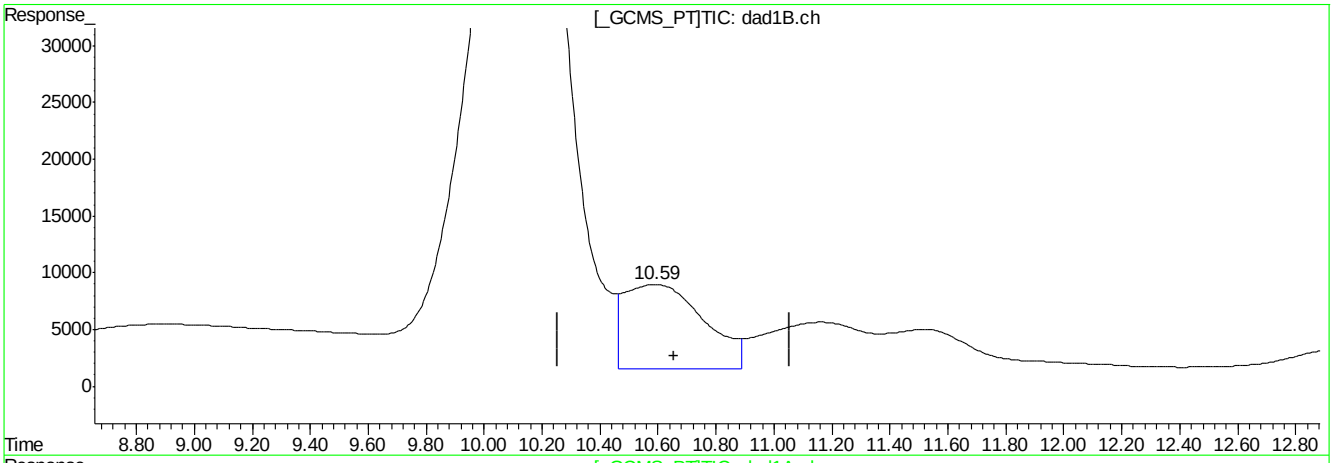
response 159544

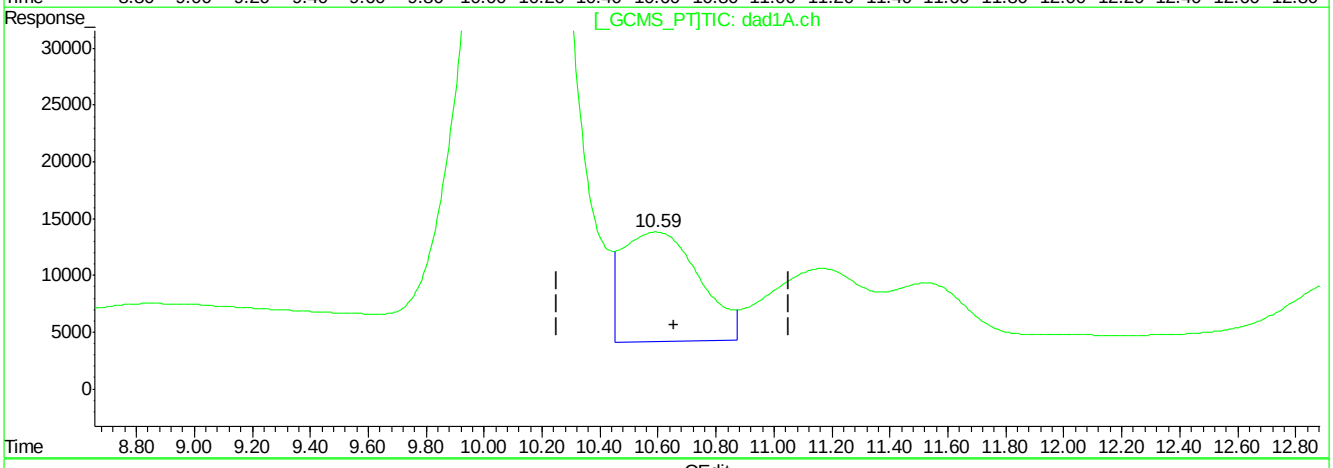
(+) = Expected Retention Time
PP390607.D GPP2428_040221PRI.M Fri Apr 23 10:05:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : op84960,GPP2438,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 14:48 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.59min 421.826ppb

response 1417033

(13) 2-Amino-4,6-Dinitrotoluene #2

10.59min 351.251ppb

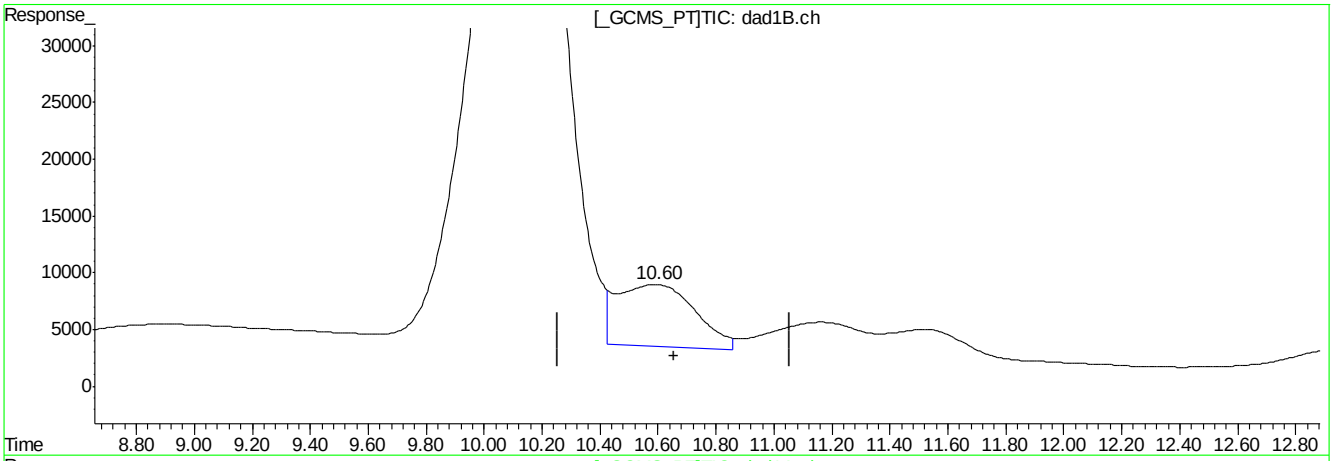
response 1784416

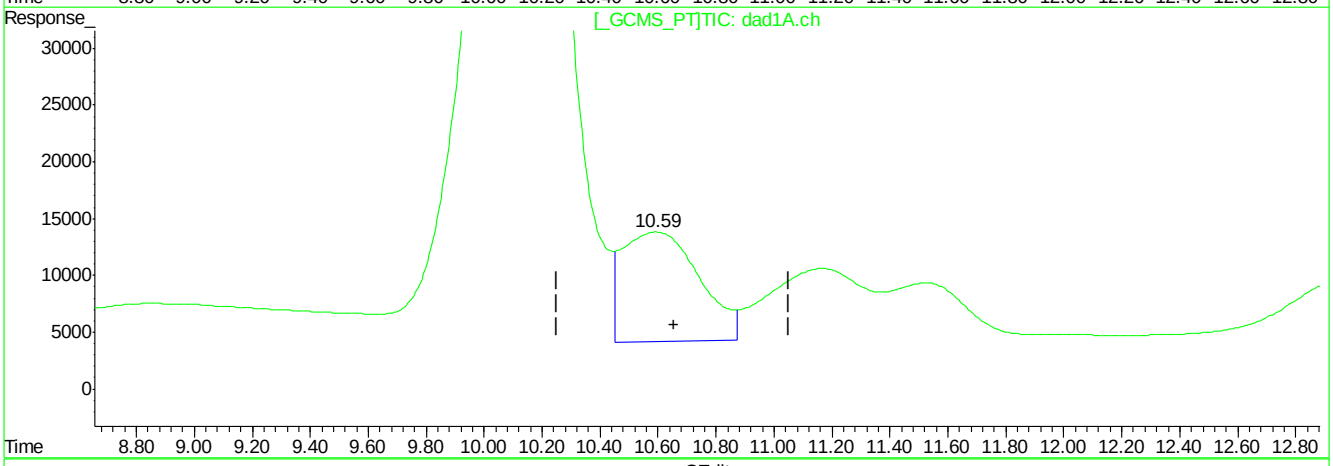
(+) = Expected Retention Time
PP390607.D GPP2439_042321PRI.M Mon Apr 26 15:37:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : op84960,GPP2438,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 14:48 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.60min 300.878ppb m

response 1010734

(13) 2-Amino-4,6-Dinitrotoluene #2

10.59min 351.251ppb

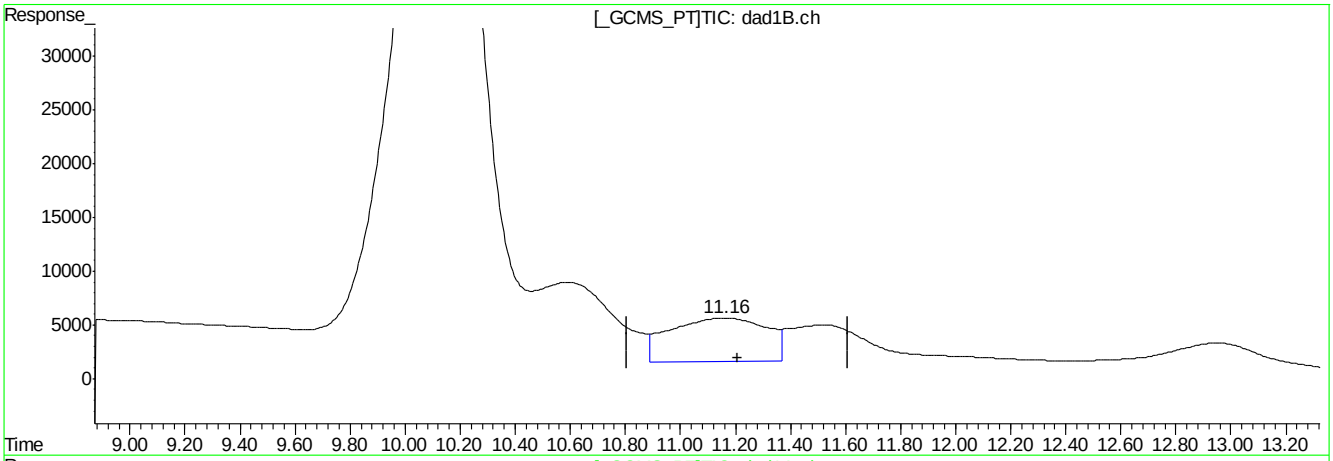
response 1784416

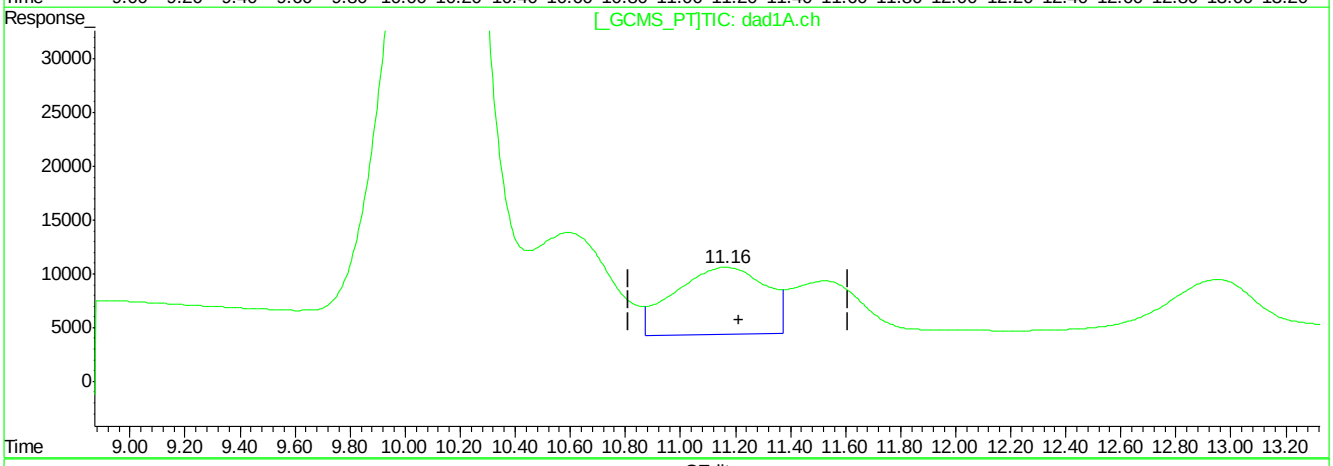
(+) = Expected Retention Time
PP390607.D GPP2439_042321PRI.M Mon Apr 26 15:37:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : op84960,GPP2438,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 14:48 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.16min 441.028ppb

response 993453

(14) 4-Amino-2,6-Dinitrotoluene #2

11.17min 303.852ppb

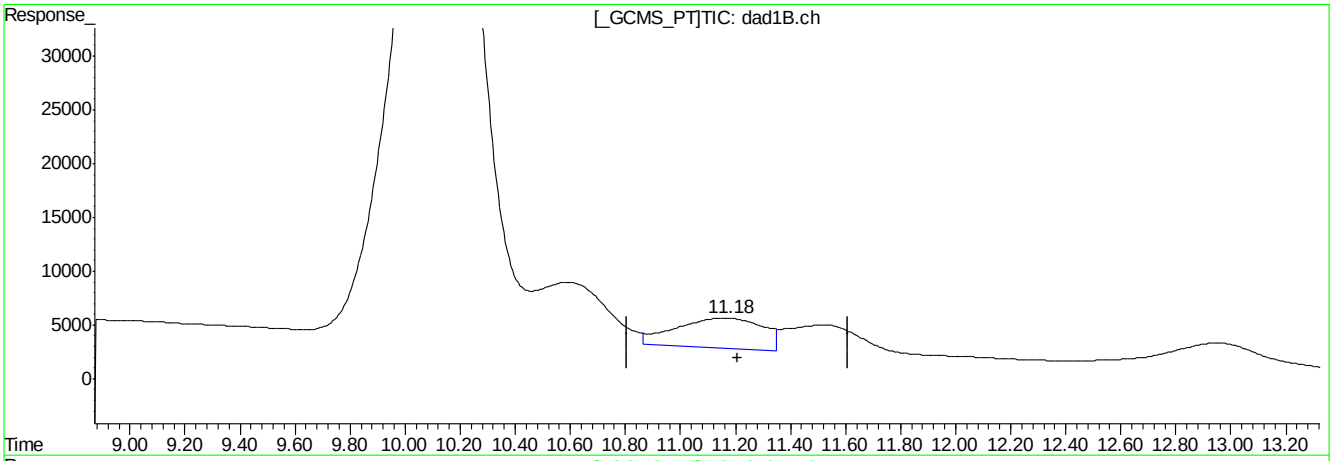
response 1447207

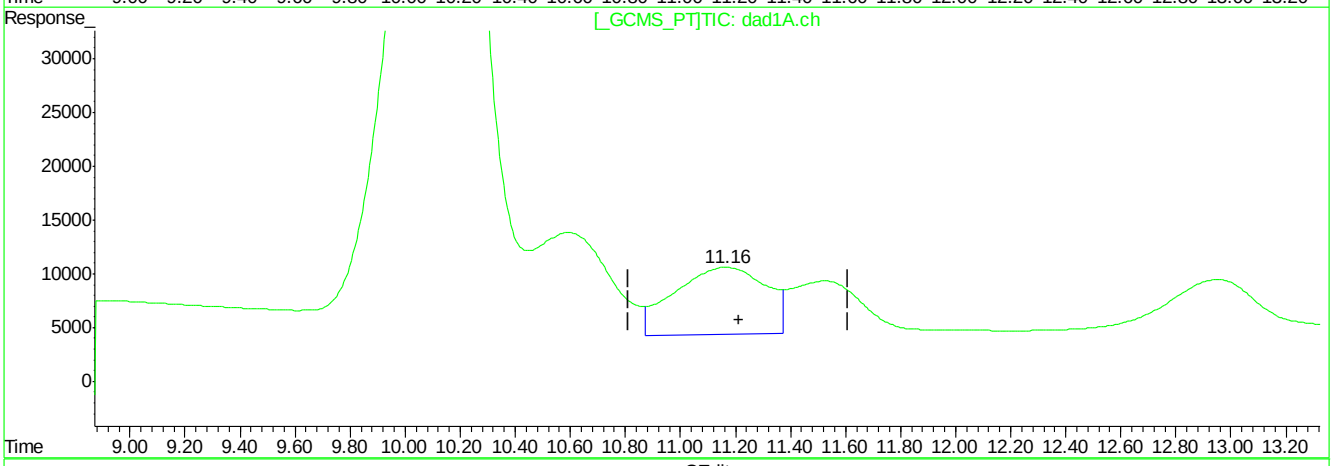
(+) = Expected Retention Time
PP390607.D GPP2439_042321PRI.M Mon Apr 26 15:37:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390607.D\dad1A.ch
Acq On : 22-Apr-2021, 14:15:42 Operator: jamesb
Sample : FA84640-4 Inst : G1315B
Misc : op84960,GPP2438,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 14:48 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.18min 266.140ppb m

response 599503

(14) 4-Amino-2,6-Dinitrotoluene #2

11.17min 303.852ppb

response 1447207

(+) = Expected Retention Time
PP390607.D GPP2439_042321PRI.M Mon Apr 26 15:37:49 2021

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621168.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621168.D\dad1A.ch
Acq On : 23-Apr-2021, 16:16:01 Operator: jamesb
Sample : FA84640-4cf Inst : G1315B
Misc : op84960,GGG2966,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50:07 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.08	14.08	1482512	2964569	314.623	322.386
	Spiked Amount 500.000	Range 70 - 136		Recovery =		62.92%#	64.48%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.33	5.33	2083597	2083597	705.438	622.074
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.59	7.59	15193293	15193293	1688.938	1688.669
6)	RDX	7.93	7.93	1794435	1794435	432.323	430.005
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.73	11.73	27616174	37742725	3336.148	3561.664
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.81	15.82	1890014	3532188	200.479	223.448
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.60	17.60	1618797	2947112	315.990	342.935
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.45	19.45	2808713	3947519	341.339	339.665
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

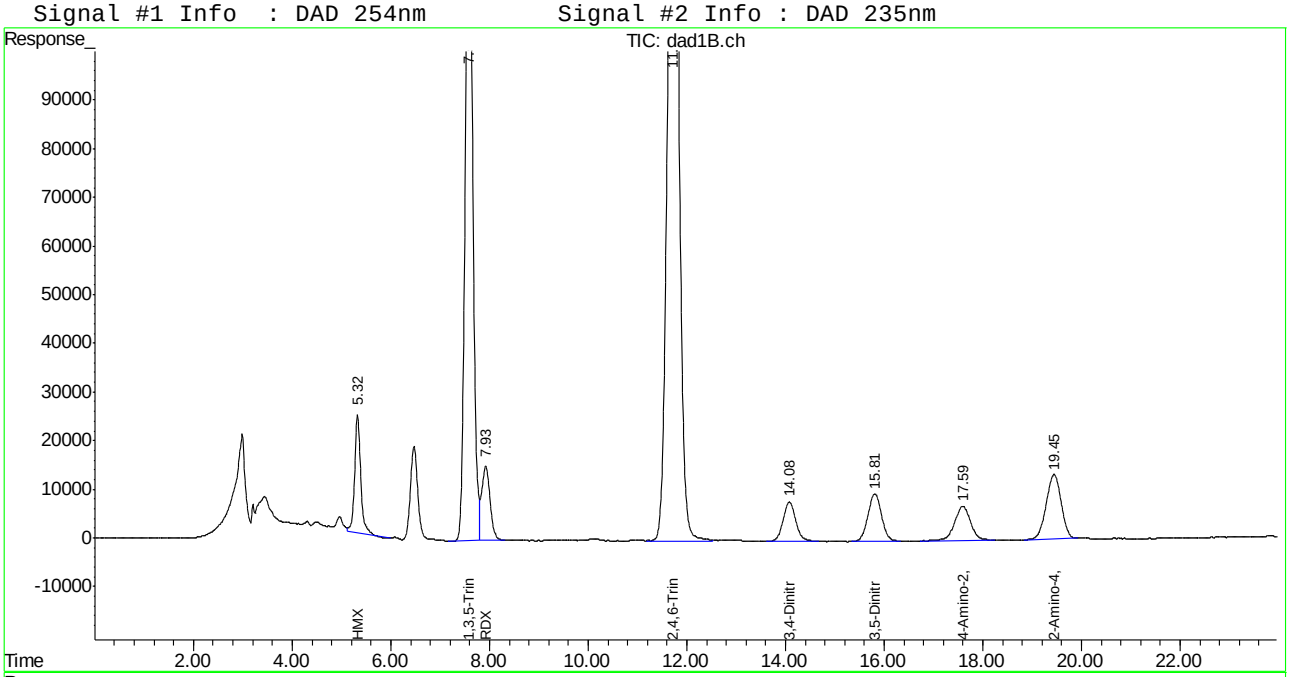
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG621168.D GGG2952_032221.M Mon Apr 26 14:12:25 2021 Page 1

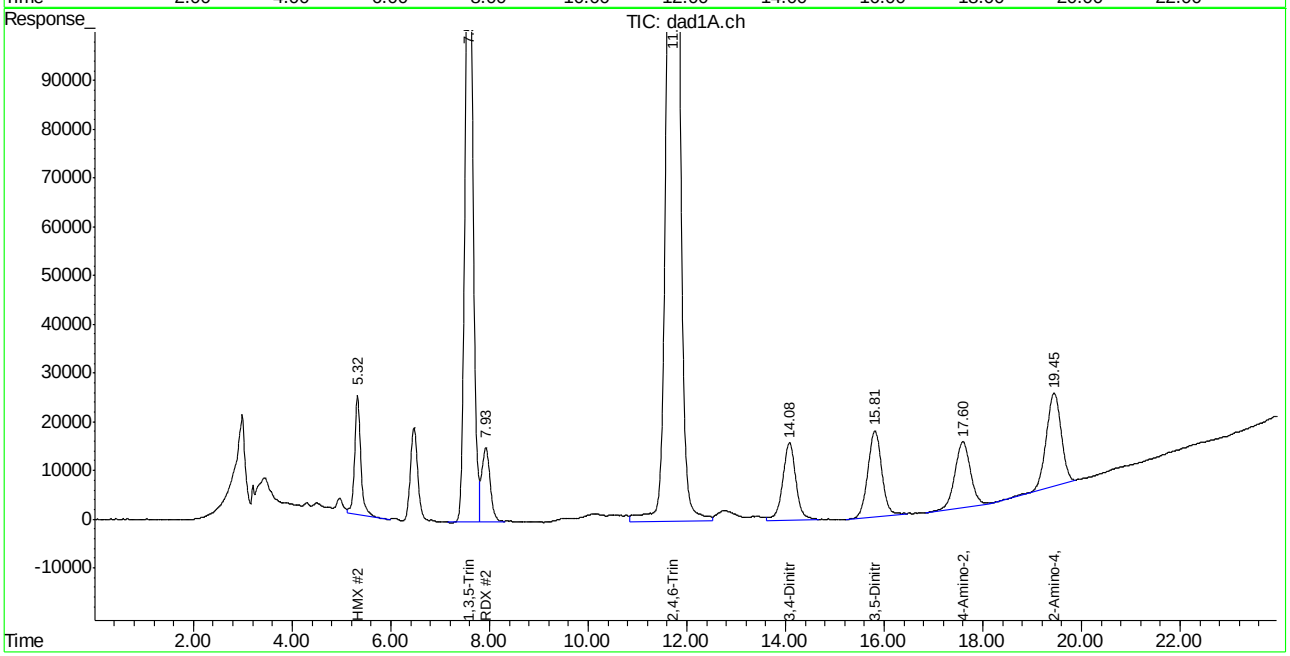
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621168.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621168.D\dad1A.ch
Acq On : 23-Apr-2021, 16:16:01 Operator: jamesb
Sample : FA84640-4cf Inst : G1315B
Misc : op84960,GGG2966,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 13:05 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/26/21 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390608.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390608.D\dad1A.ch
Acq On : 22-Apr-2021, 14:46:41 Operator: jamesb
Sample : FA84640-5 Inst : G1315B
Misc : op84960,GPP2438,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 09:51:58 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.53	11.53	530328	918896	259.482	288.642
	Spiked Amount 500.000	Range 70 - 136		Recovery =		51.90%#	57.73%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

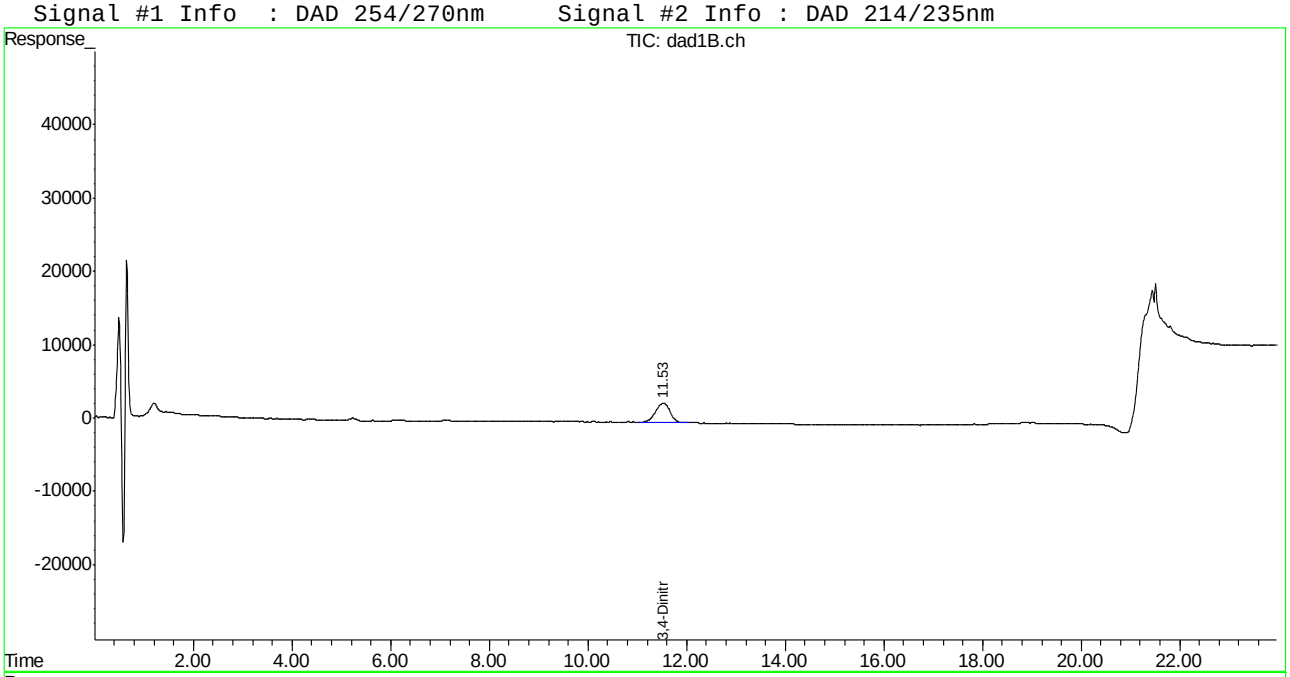
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP390608.D GPP2439_042321PRI.M Mon Apr 26 14:49:01 2021 Page 1

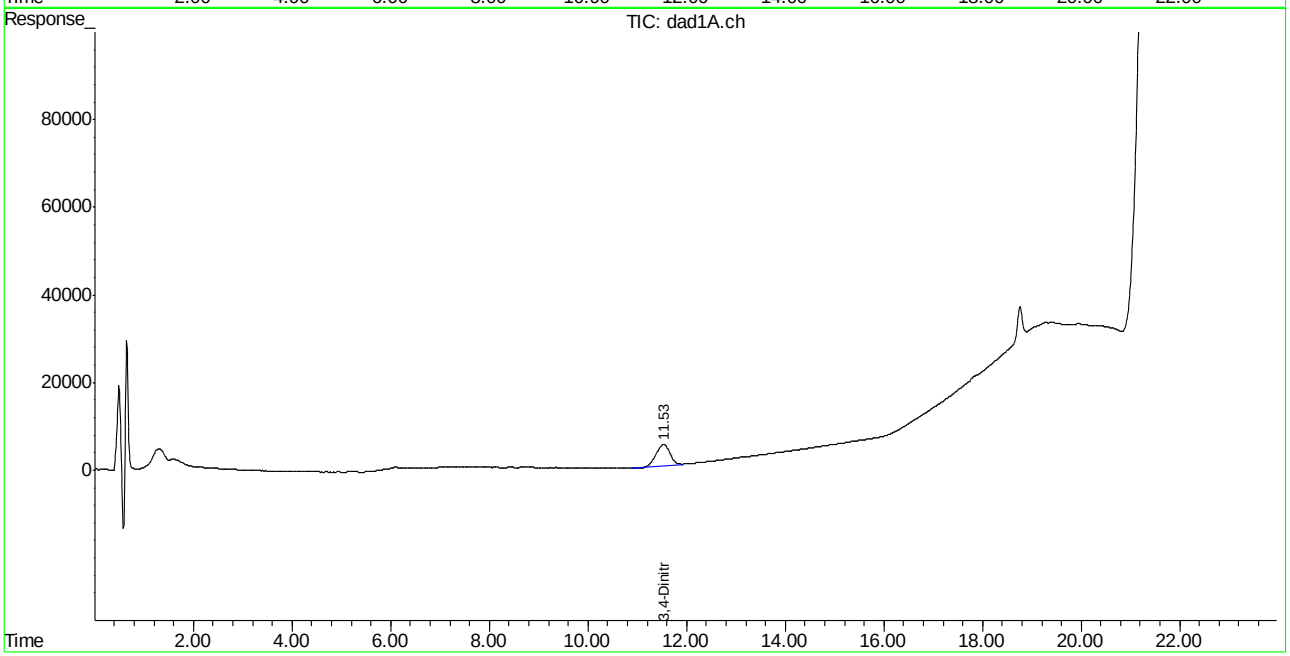
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390608.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390608.D\dad1A.ch
Acq On : 22-Apr-2021, 14:46:41 Operator: jamesb
Sample : FA84640-5 Inst : G1315B
Misc : op84960,GPP2438,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 14:48 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

Sample Number: FA84640-5
Lab FileID: PP390608.D
Injection Time: 04/22/21 14:46

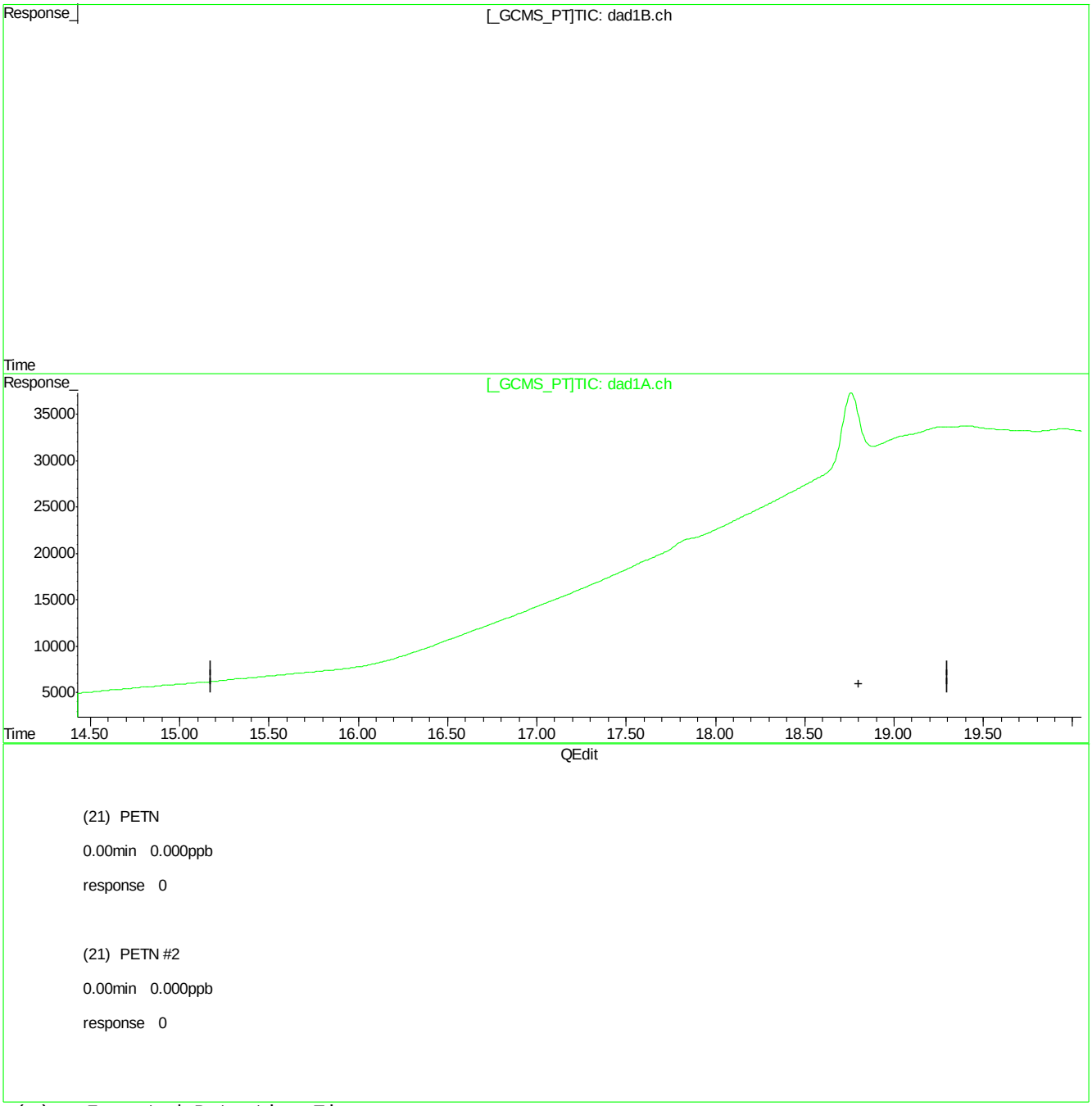
Method: SW846 8330B
Analyst approved: 04/23/21 14:31 James Boone
Supervisor approved: 04/26/21 15:26 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.76	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390608.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390608.D\dad1A.ch
Acq On : 22-Apr-2021, 14:46:41 Operator: jamesb
Sample : FA84640-5 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration

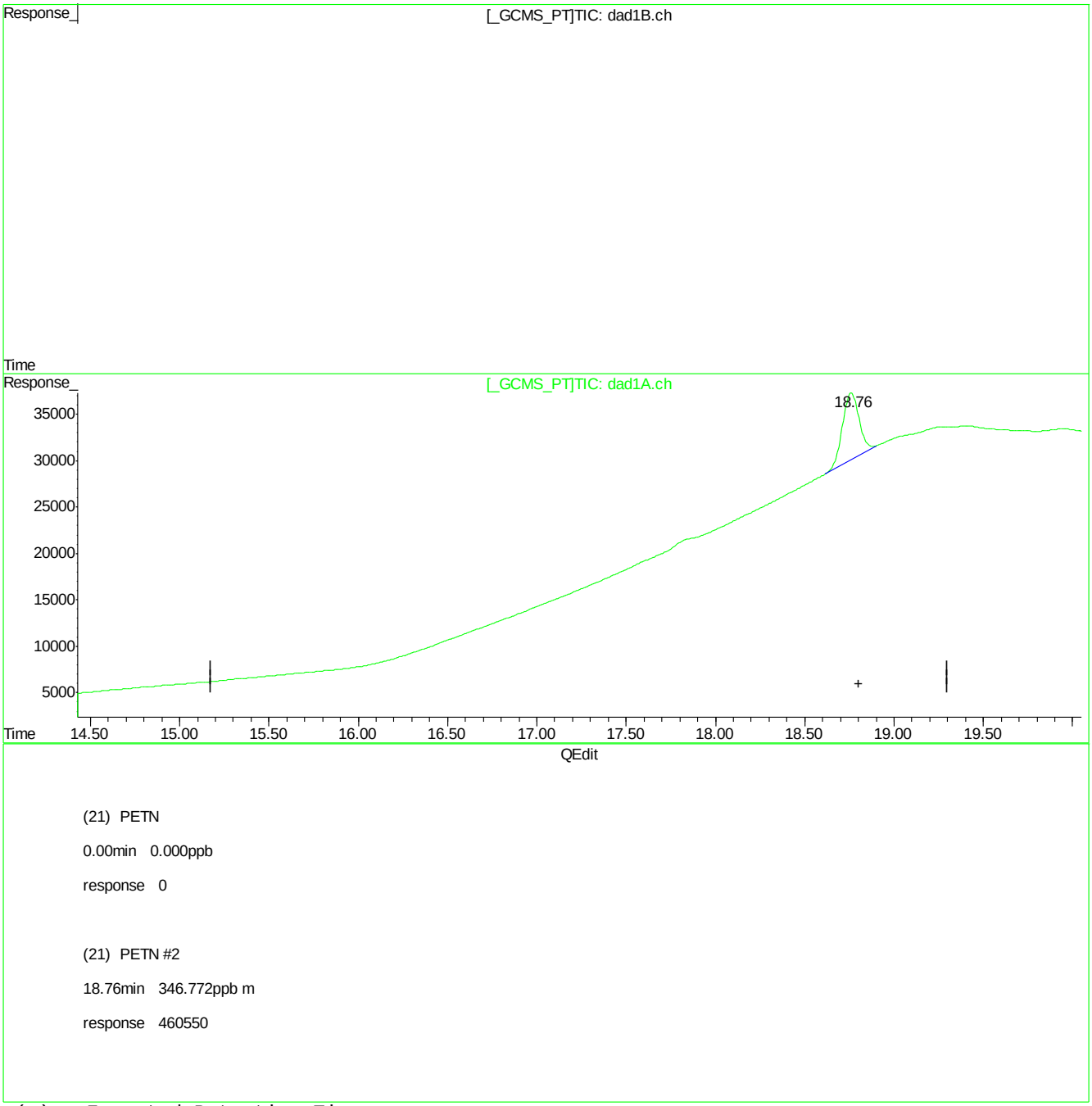


(+) = Expected Retention Time
PP390608.D GPP2428_040221PRI.M Fri Apr 23 10:06:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390608.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390608.D\dad1A.ch
Acq On : 22-Apr-2021, 14:46:41 Operator: jamesb
Sample : FA84640-5 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.76min 346.772ppb m

response 460550

(+) = Expected Retention Time
PP390608.D GPP2428_040221PRI.M Fri Apr 23 10:06:08 2021

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390599.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390599.D\dad1A.ch
Acq On : 22-Apr-2021, 10:07:58 Operator: jamesb
Sample : op84960-MB Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 11:21:46 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.57	11.58	501379	900049	245.318	282.722
	Spiked Amount 500.000	Range 70 - 136		Recovery =		49.06%#	56.54%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

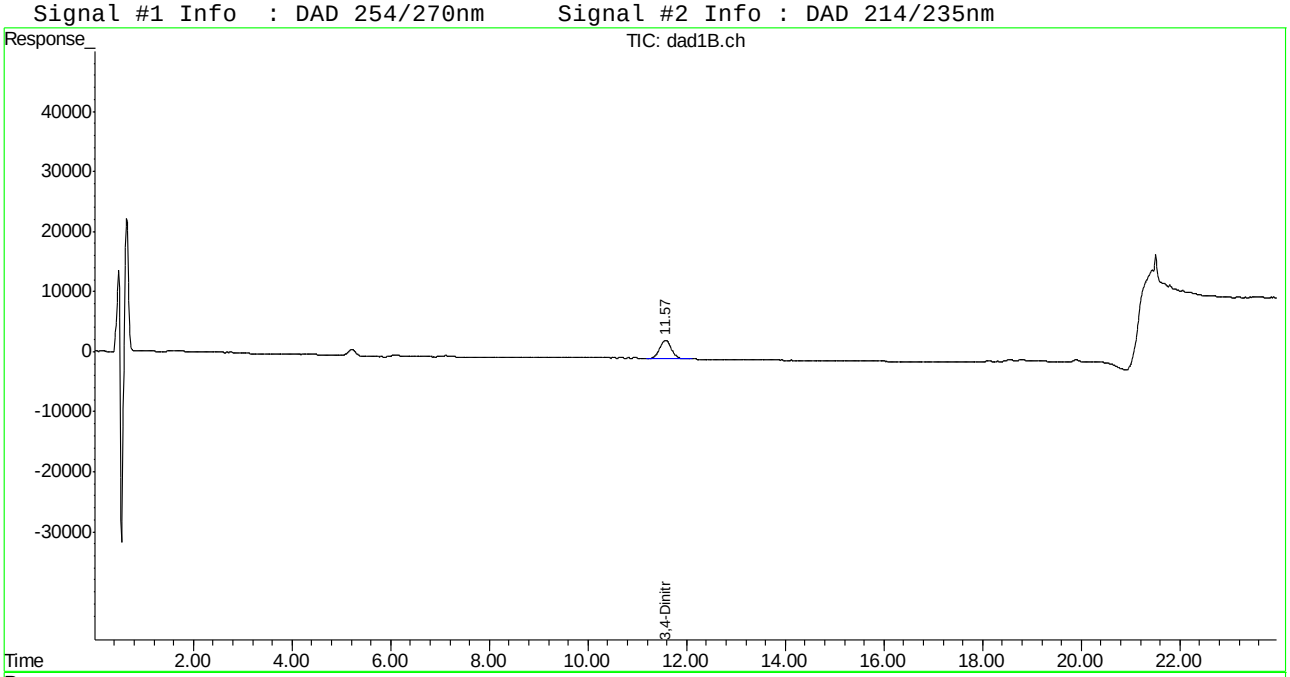
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP390599.D GPP2428_040221PRI.M Thu Apr 22 11:50:49 2021 Page 1

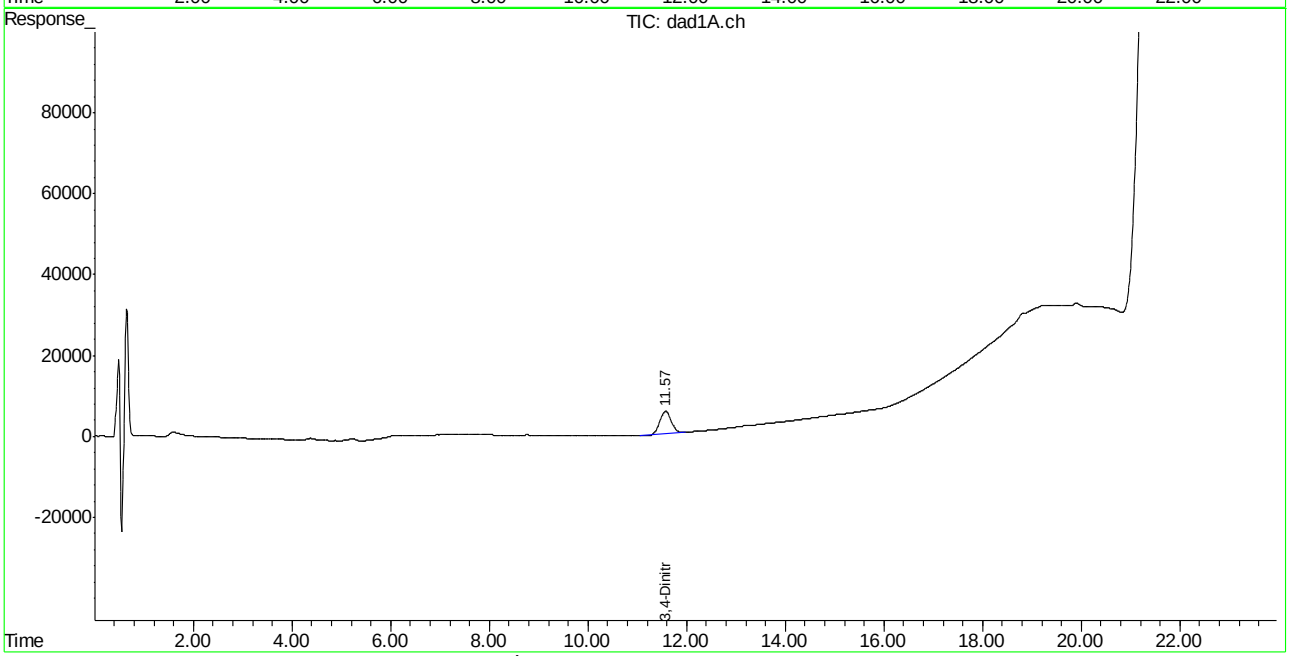
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390599.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390599.D\dad1A.ch
Acq On : 22-Apr-2021, 10:07:58 Operator: jamesb
Sample : op84960-MB Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 11:21 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/26/21 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390603.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390603.D\dad1A.ch
Acq On : 22-Apr-2021, 12:11:54 Operator: jamesb
Sample : op84960-BS Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18:42 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.60	11.61	497701	769689	243.519	241.773
	Spiked Amount 500.000	Range 70 - 136		Recovery =		48.70%#	48.35%#
	Target Compounds						
1)	TNX	1.35	1.35	570161	877810	220.041	214.694
2)	HMX	1.50	1.50	666335	1910805	439.358	437.031
3)	DNX	1.75	1.75	1096997	1836761	429.526	485.924
4)	MNX	2.36	2.36	1208249	1901105	421.830	428.213
5)	RDX	3.00	3.00	813246	1305403	437.120	442.373
6)	1,3,5-Trinitrobe	4.81	4.81	1820506	3583565	459.660	465.617
7)	1,3-Dinitrobenze	6.02	6.02	2472502	1847521	469.832	506.974
8)	3,5-Dinitroanili	6.43	6.43	1842072	3227566	454.131	477.860
9)	Nitrobenzene	7.59	7.59	1288379	1259533	409.055	440.063
10)	Nitroglycerin	0.00	9.32	0	556054	N.D.	480.531 #
11)	Tetryl	9.88	9.88	1168115	1856588	407.444	399.075
12)	2,4,6-Trinitroto	10.23	10.23	1673230	1956750	443.948	420.698
13)	2-Amino-4,6-Dini	10.68	10.68	1543834	2171188	459.572	427.384
14)	4-Amino-2,6-Dini	11.23	11.23	1141333	2122107	506.678	445.552
16)	2,4-Dinitrotolue	12.20	12.21	2180245	1350024	461.151	433.832
17)	2,6-Dinitrotolue	12.71	12.70	1560781	1633903	571.458	460.206
18)	o-Nitrotoluene	15.68	15.68	919141	1173923	403.904	400.920m
19)	p-Nitrotoluene	16.26	16.27	1466292	1057706	422.362	394.658
20)	m-Nitrotoluene	17.04	17.04	1358680	1692027	415.793	466.367
21)	PETN	0.00	18.81	0	730082	N.D. d	549.716m

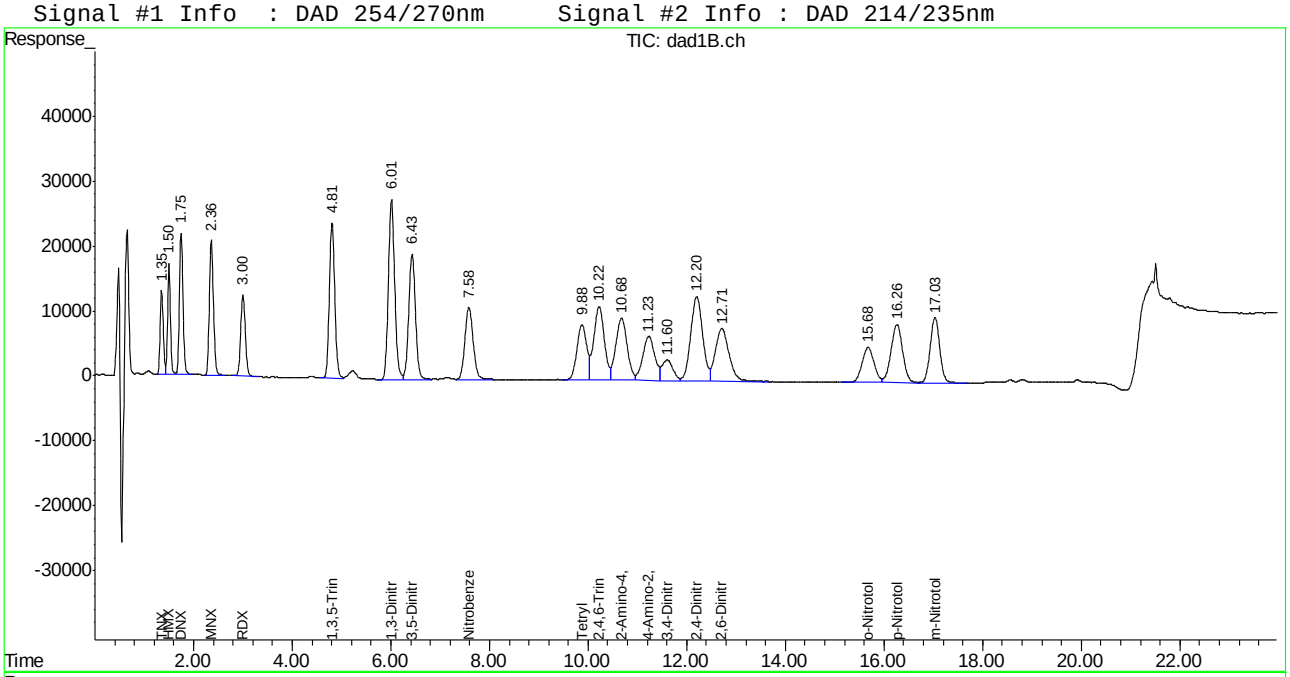
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

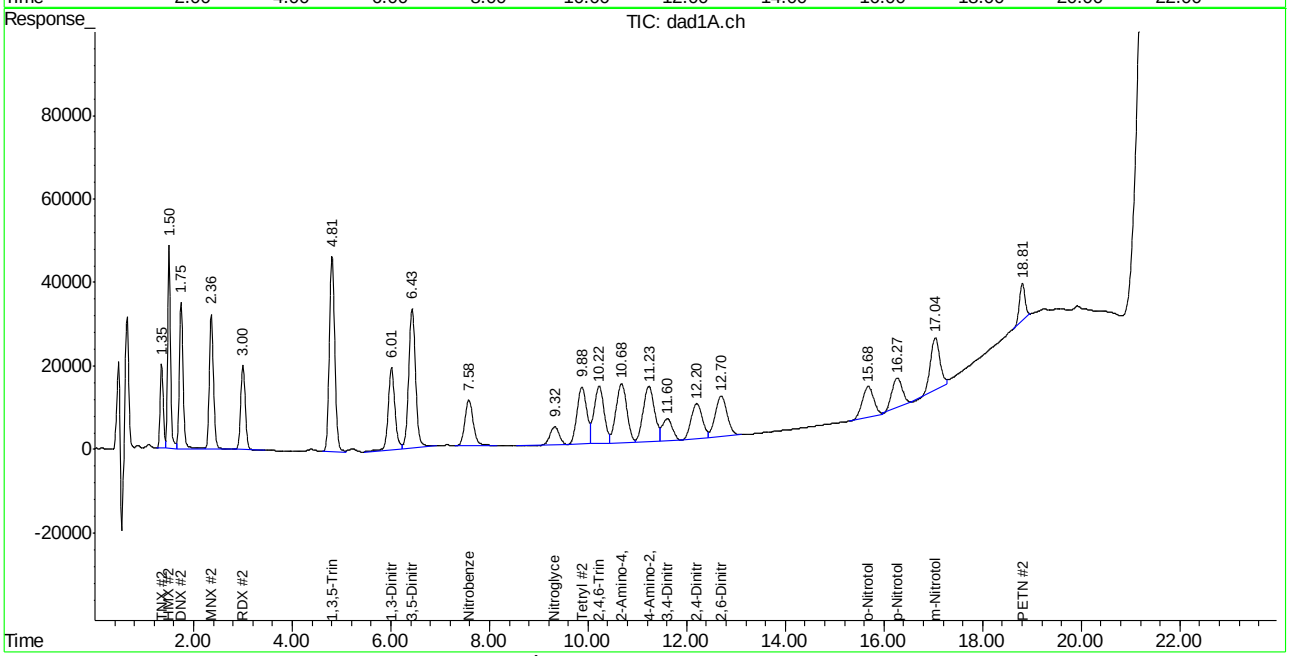
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390603.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390603.D\dad1A.ch
Acq On : 22-Apr-2021, 12:11:54 Operator: jamesb
Sample : op84960-BS Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:19 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

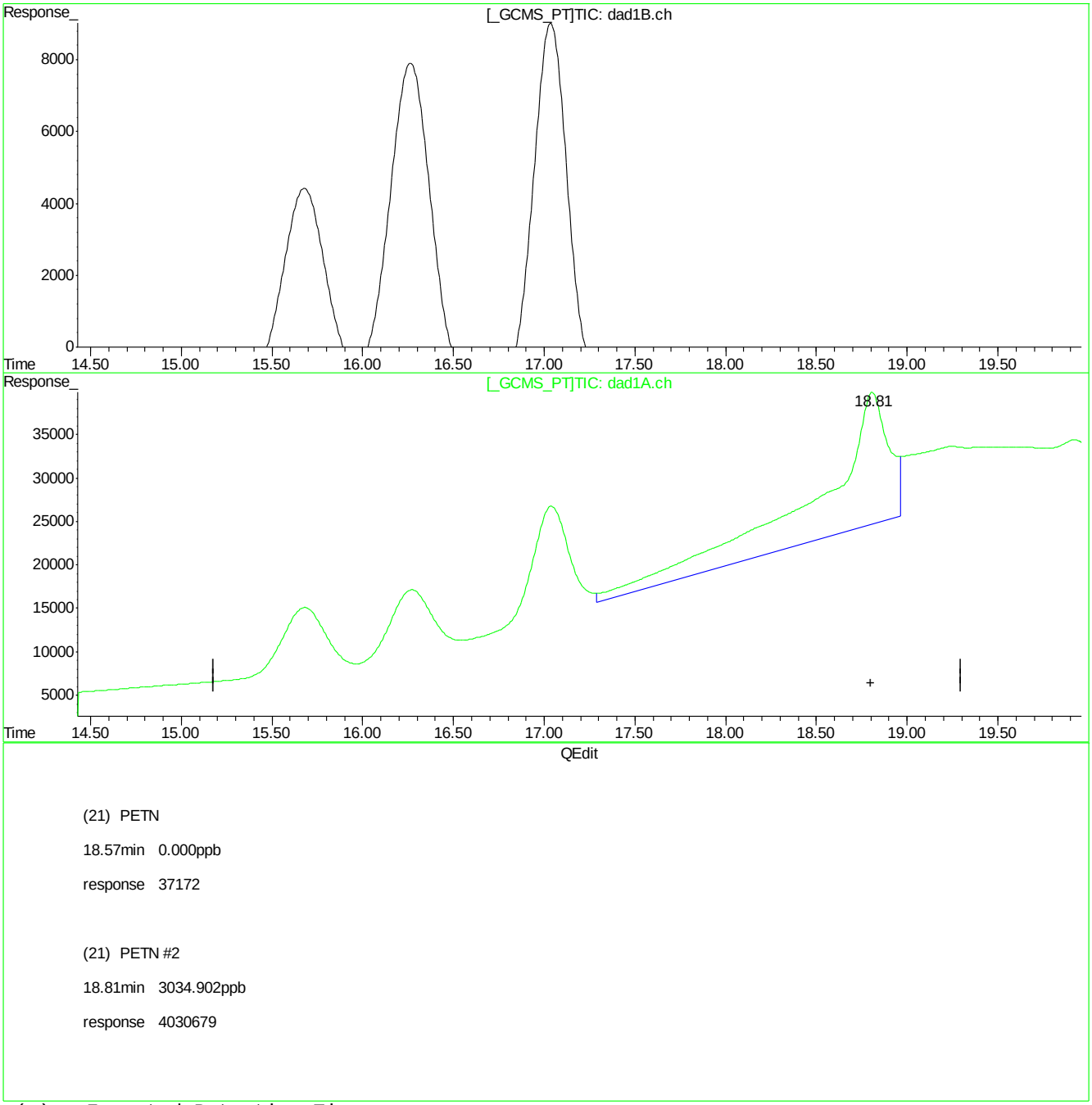
Sample Number:	OP84960-BS	**Method:**	SW846 8330B
Lab FileID:	PP390603.D	**Analyst approved:**	04/22/21 14:20 James Boone
Injection Time:	04/22/21 12:11	**Supervisor approved:**	04/26/21 15:26 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.68	Poor instrument integration
PETN	78-11-5	2	18.81	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390603.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390603.D\dad1A.ch
Acq On : 22-Apr-2021, 12:11:54 Operator: jamesb
Sample : op84960-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(21) PETN

18.57min 0.000ppb

response 37172

(21) PETN #2

18.81min 3034.902ppb

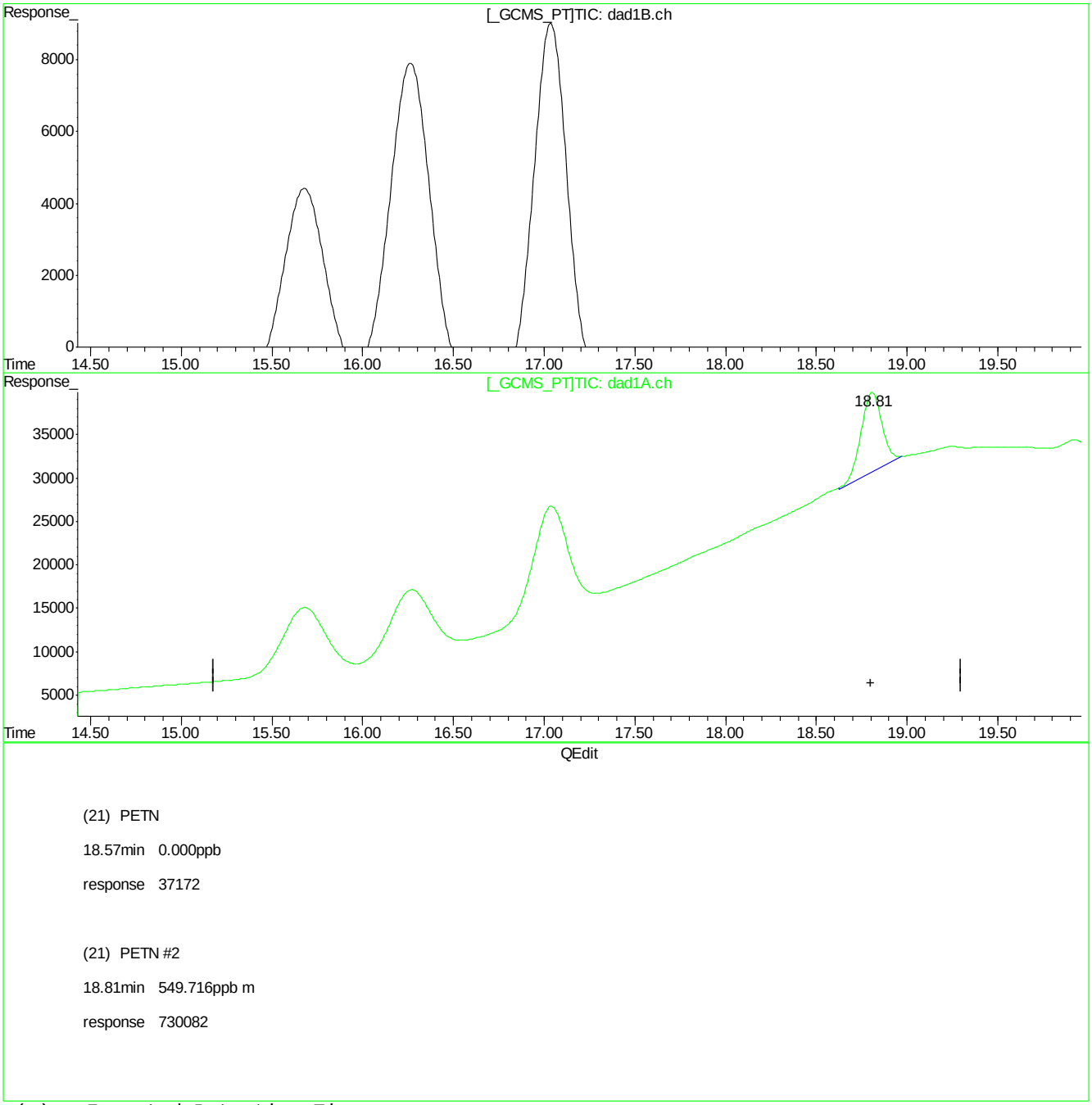
response 4030679

(+) = Expected Retention Time
PP390603.D GPP2428_040221PRI.M Thu Apr 22 14:18:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390603.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390603.D\dad1A.ch
Acq On : 22-Apr-2021, 12:11:54 Operator: jamesb
Sample : op84960-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration

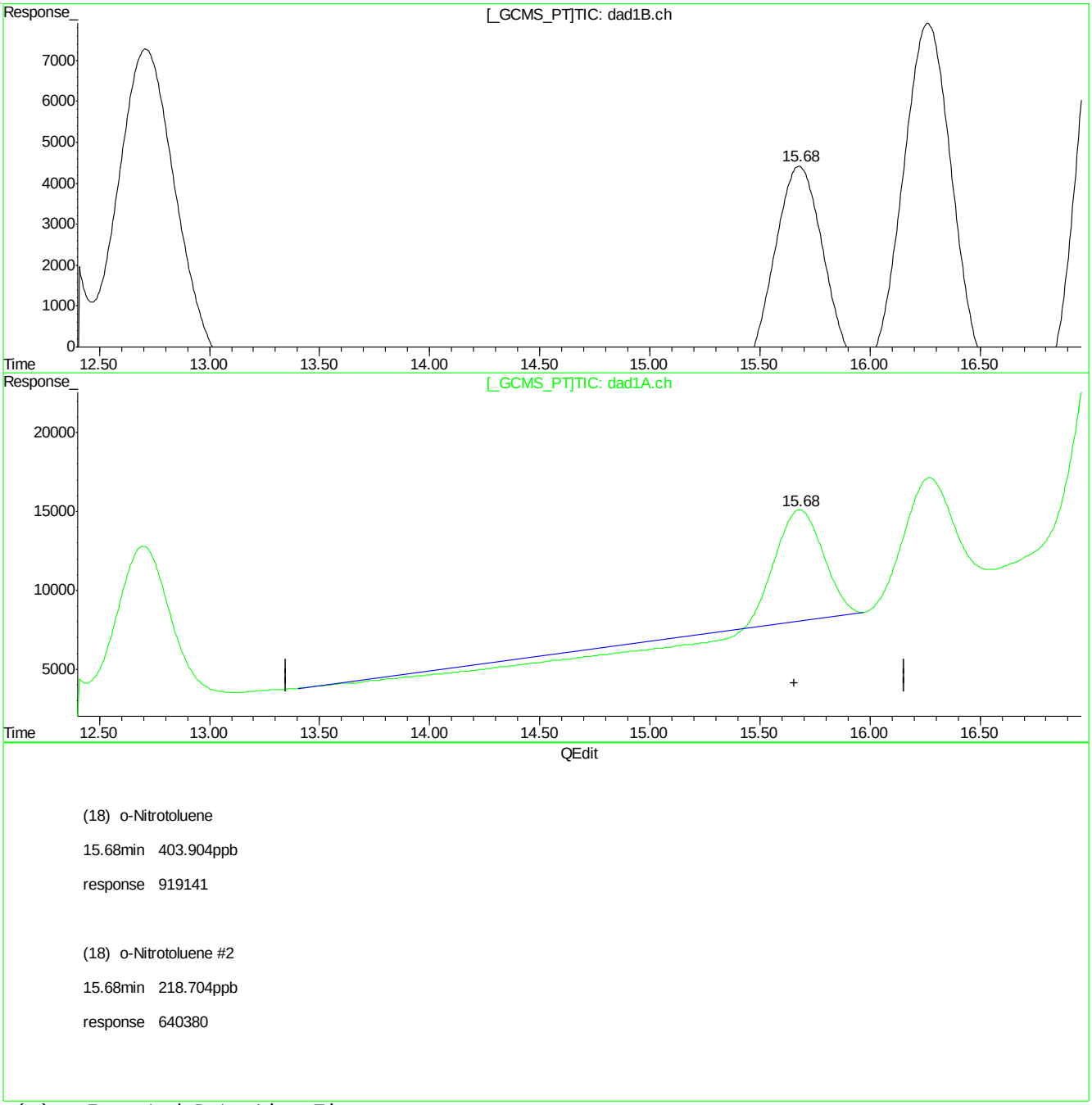


(+) = Expected Retention Time
PP390603.D GPP2428_040221PRI.M Thu Apr 22 14:19:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390603.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390603.D\dad1A.ch
Acq On : 22-Apr-2021, 12:11:54 Operator: jamesb
Sample : op84960-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.68min 403.904ppb

response 919141

(18) o-Nitrotoluene #2

15.68min 218.704ppb

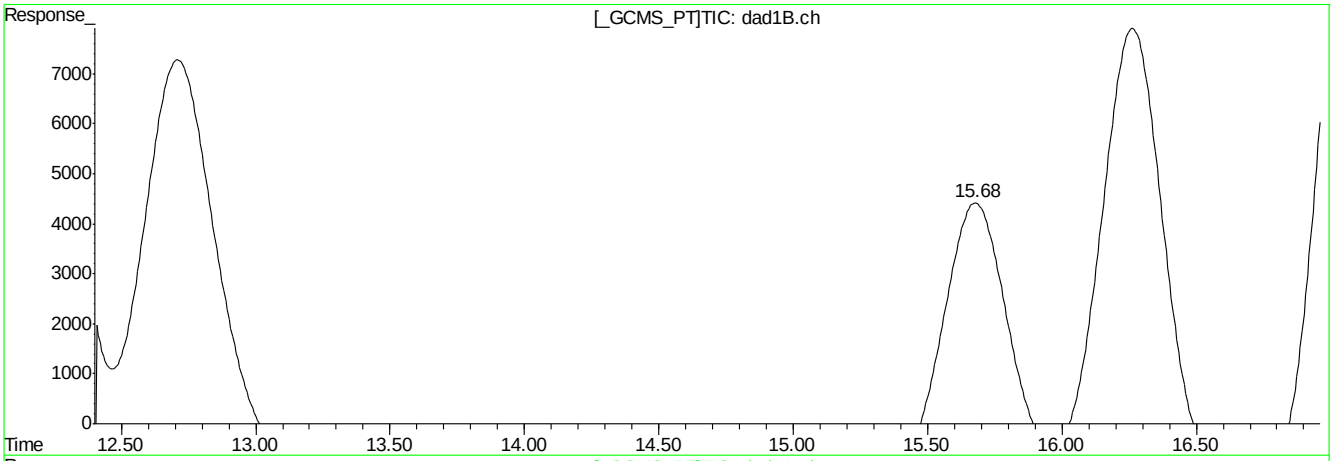
response 640380

(+) = Expected Retention Time
PP390603.D GPP2428_040221PRI.M Thu Apr 22 14:19:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390603.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390603.D\dad1A.ch
Acq On : 22-Apr-2021, 12:11:54 Operator: jamesb
Sample : op84960-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 14:18 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.68min 403.904ppb

response 919141

(18) o-Nitrotoluene #2

15.68min 400.920ppb m

response 1173923

(+) = Expected Retention Time
PP390603.D GPP2428_040221PRI.M Thu Apr 22 14:19:14 2021

PP390603.D edits: o-Nitrotoluene

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/26/21 16:24

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84960-MS Inst : G1315B
Misc : op84960,GPP2438,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 09:51:59 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.56	11.55	444472	812638	217.475m	255.265
	Spiked Amount 500.000	Range 70 - 136		Recovery =		43.49%#	51.05%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.50	1.50	1477225	5809558	974.030	1328.736
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	3.00	3.00	1749541	2905541	940.379	984.624
6)	1,3,5-Trinitrobe	4.79	4.79	7114985	13770237	1796.466	1789.185
7)	1,3-Dinitrobenze	6.00	6.00	3196660	2575303	607.439	706.683
8)	3,5-Dinitroanili	6.42	6.42	3481472	5597356	858.296	828.722m
9)	Nitrobenzene	7.57	7.57	1291932	1234160	410.183m	431.199m
10)	Nitroglycerin	0.00	9.27	0	684589	N.D.	591.608m#
11)	Tetryl	9.90	9.84	1263713	1949137	440.789m	418.968m
12)	2,4,6-Trinitroto	10.18	10.18	14085353	17344726	3737.182m	3729.086m
13)	2-Amino-4,6-Dini	10.63	10.64	3491948	5644430	1039.491m	1111.070
14)	4-Amino-2,6-Dini	11.18	11.19	1916543	4428495	850.820m	929.796
16)	2,4-Dinitrotolue	12.16	12.16	3039703	1537718	642.937	494.147
17)	2,6-Dinitrotolue	12.65	12.65	1446916	1825965	529.768m	514.302m
18)	o-Nitrotoluene	15.66	15.66	854389	1138563	375.449m	388.844m
19)	p-Nitrotoluene	16.25	16.26	1535252	1119247	442.226m	417.620
20)	m-Nitrotoluene	17.04	17.04	1354376	1841804	414.476m	507.650
21)	PETN	0.00	18.82	0	869322	N.D. d	654.556m

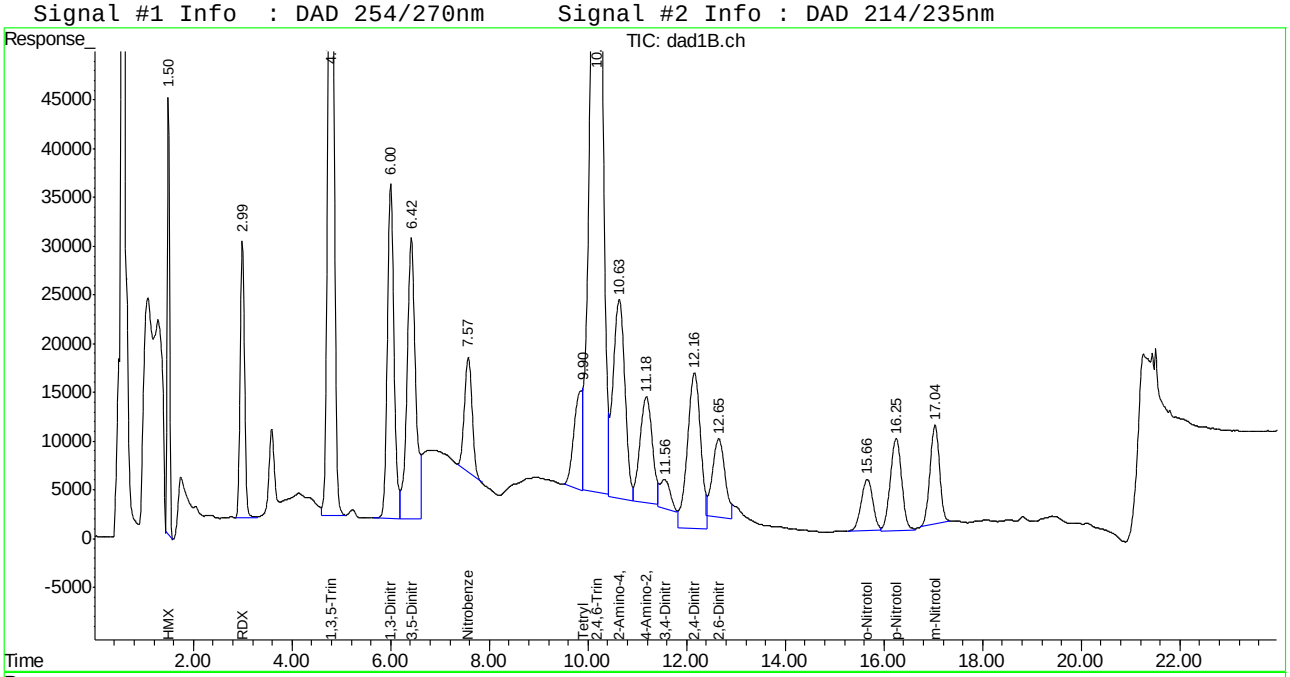
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

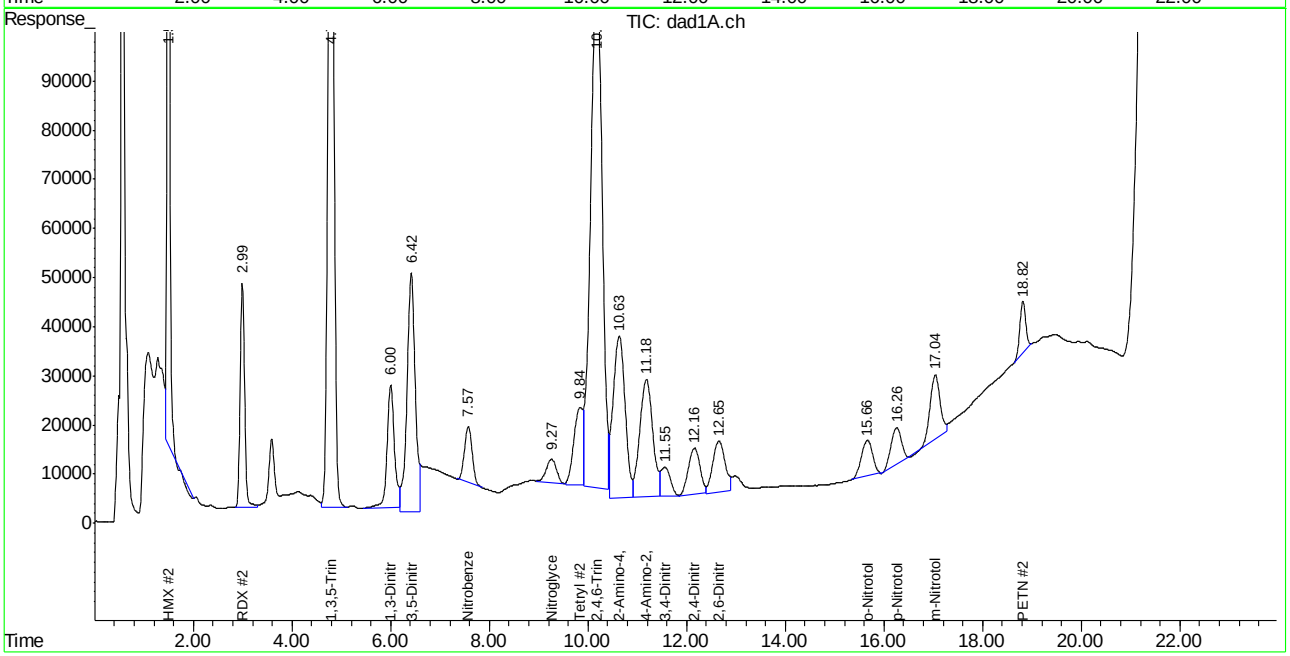
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84960-MS Inst : G1315B
Misc : op84960,GPP2438,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 15:38 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

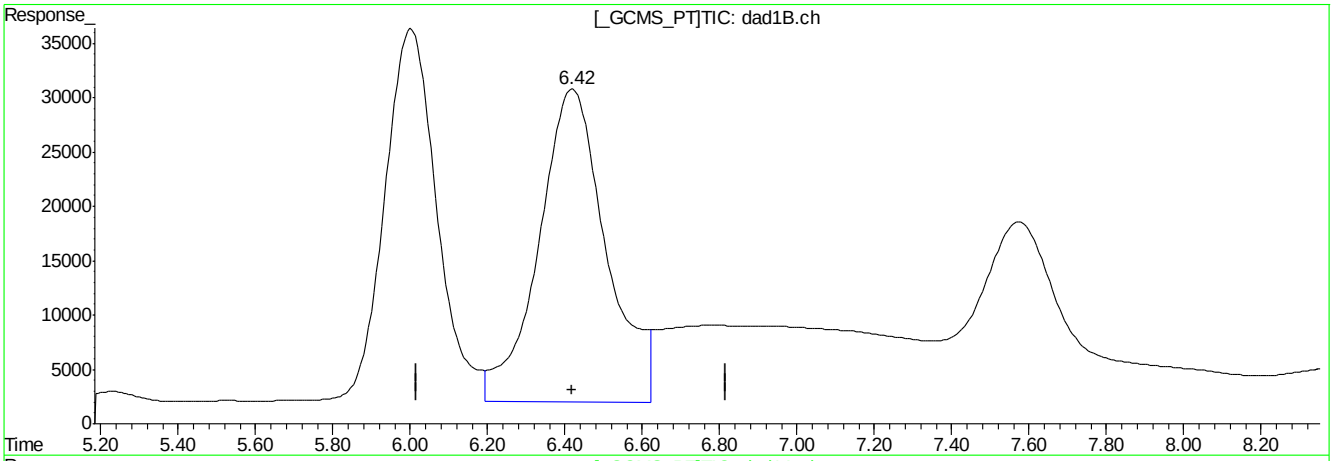
Sample Number: OP84960-MS
Lab FileID: PP390609.D
Injection Time: 04/22/21 15:17
Method: SW846 8330B
Analyst approved: 04/26/21 15:42 James Boone
Supervisor approved: 04/26/21 16:24 Naresh Jiawan

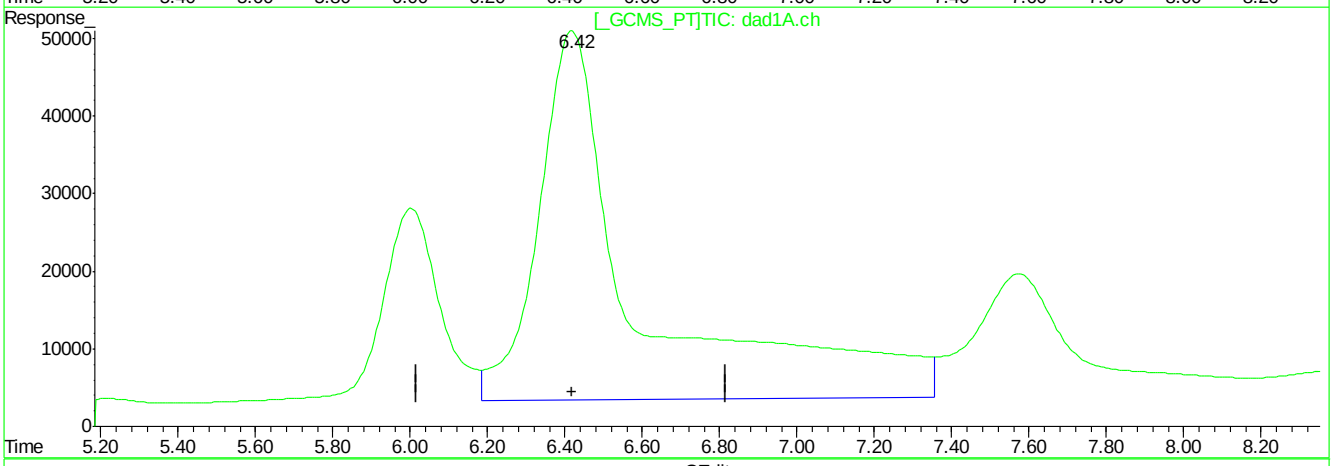
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,5-Dinitroaniline	618-87-1	2	6.42	Poor instrument integration
Nitrobenzene	98-95-3	1	7.57	Poor instrument integration
Nitrobenzene	98-95-3	2	7.57	Poor instrument integration
Nitroglycerine	55-63-0	2	9.27	Poor instrument integration
Tetryl	479-45-8	2	9.84	Poor instrument integration
Tetryl	479-45-8	1	9.90	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.18	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.18	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.63	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	11.18	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.56	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.65	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.65	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.66	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.66	Poor instrument integration
p-Nitrotoluene	99-99-0	1	16.25	Poor instrument integration
m-Nitrotoluene	99-08-1	1	17.04	Poor instrument integration
PETN	78-11-5	2	18.82	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.42min 858.296ppb

response 3481472

(8) 3,5-Dinitroaniline #2

6.42min 1261.732ppb

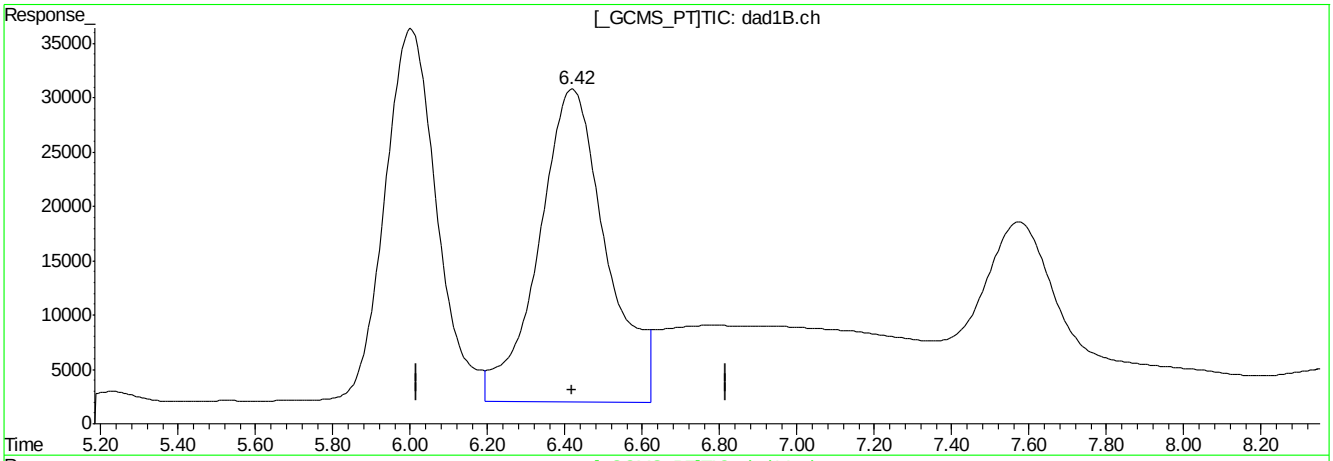
response 8521993

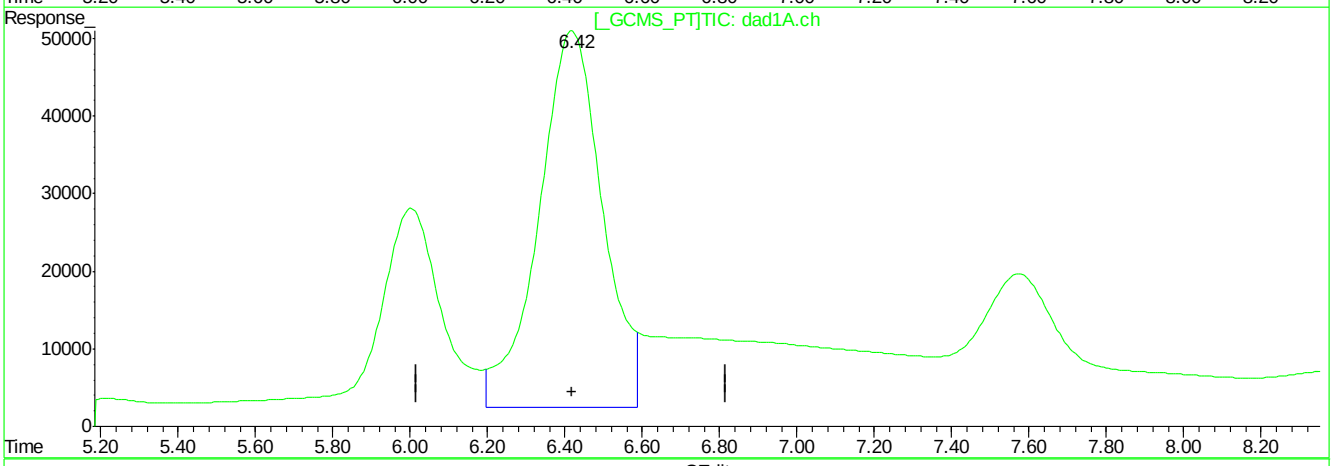
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:07:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.42min 858.296ppb

response 3481472

(8) 3,5-Dinitroaniline #2

6.42min 828.722ppb m

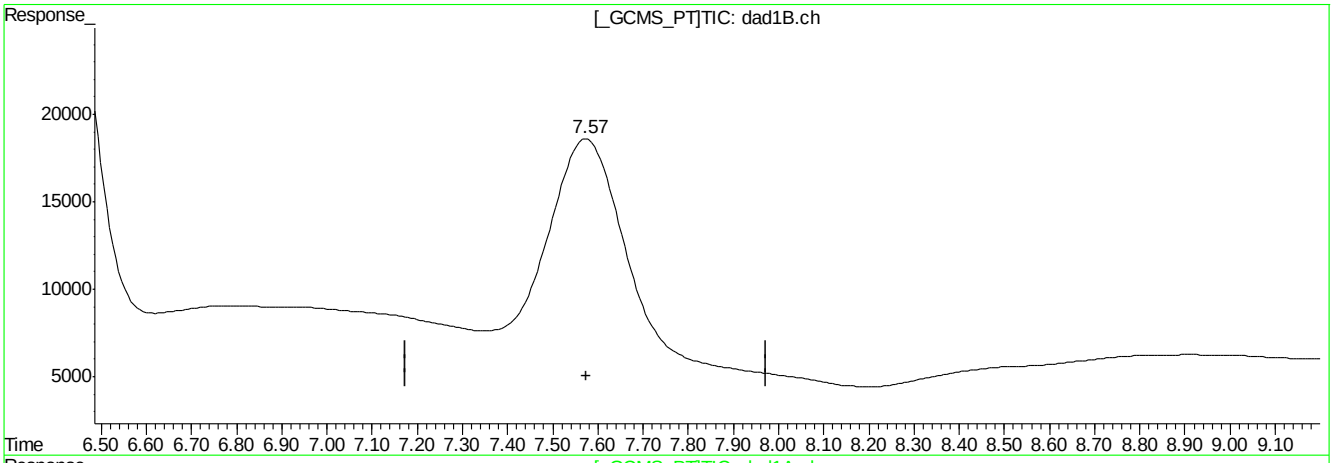
response 5597356

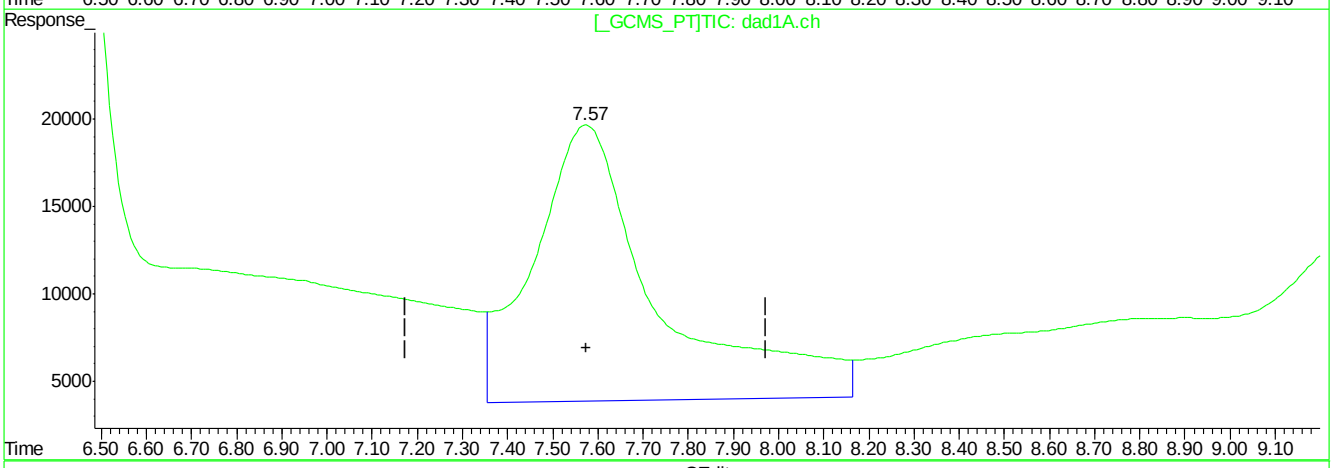
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:07:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.58min 1087.535ppb

response 3425351

(9) Nitrobenzene #2

7.58min 1051.531ppb

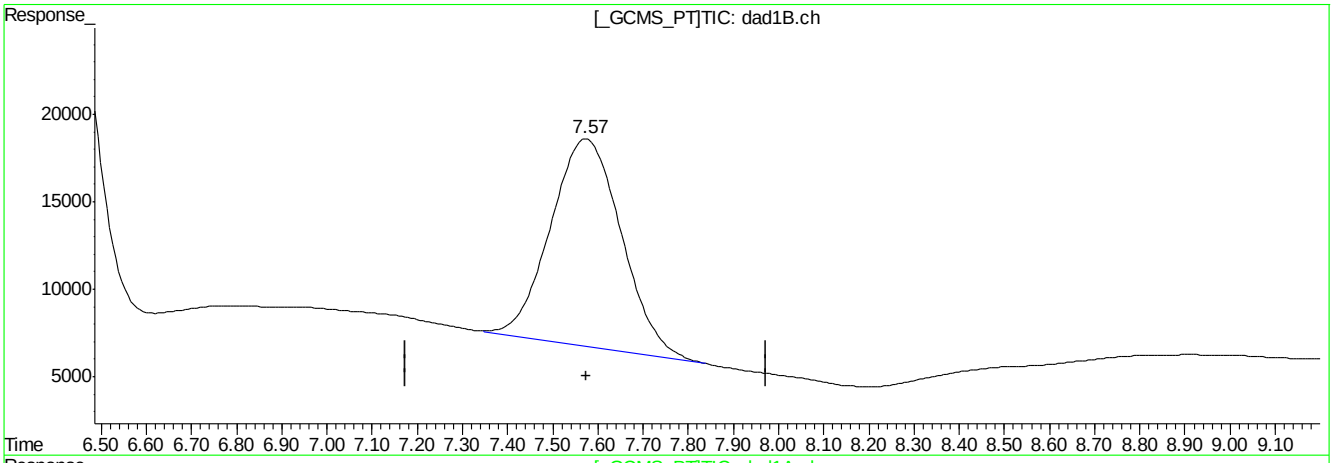
response 3009652

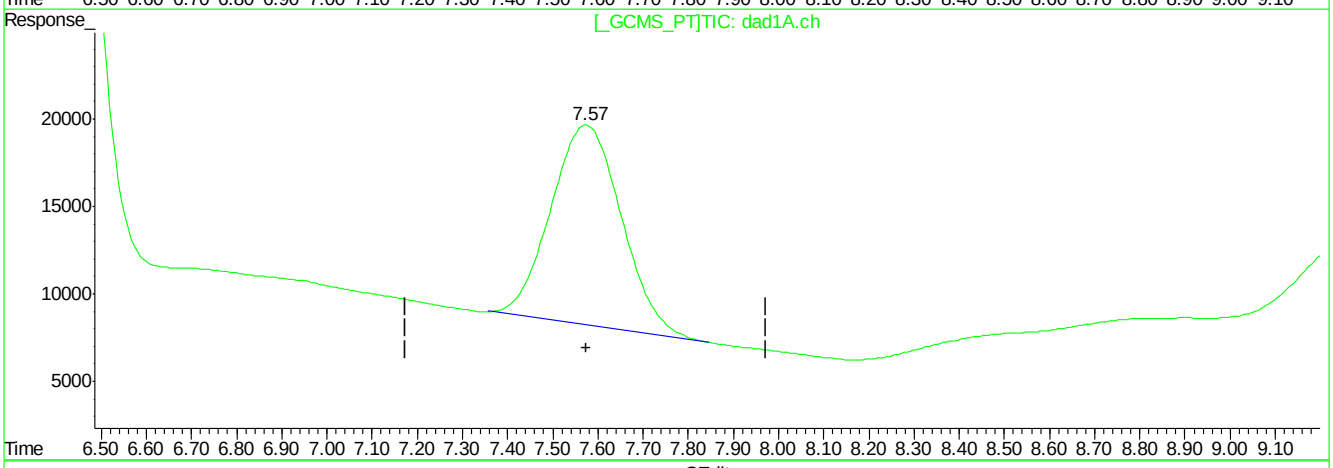
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:07:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.57min 410.183ppb m

response 1291932

(9) Nitrobenzene #2

7.57min 431.199ppb m

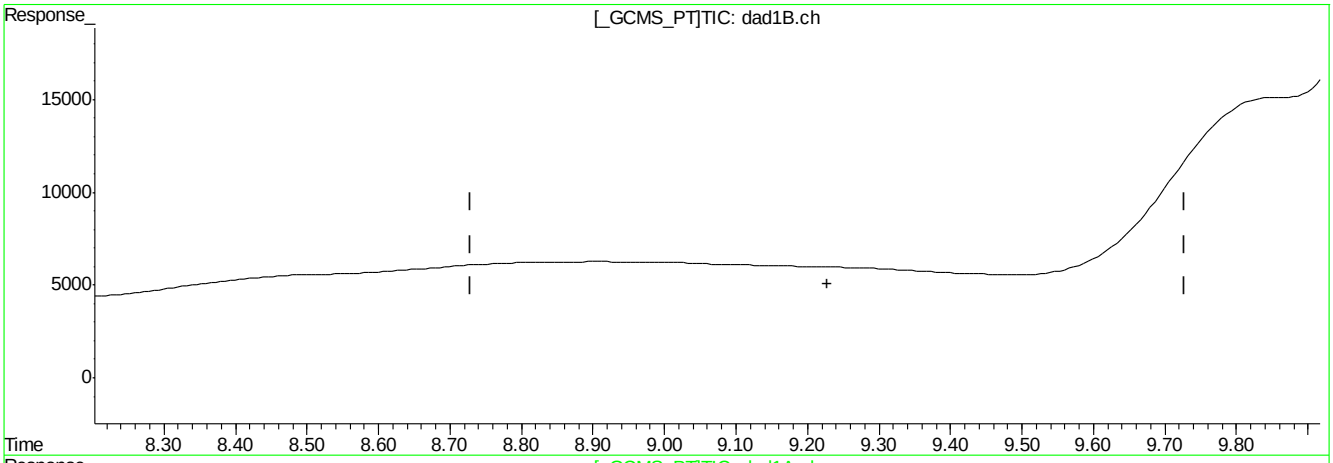
response 1234160

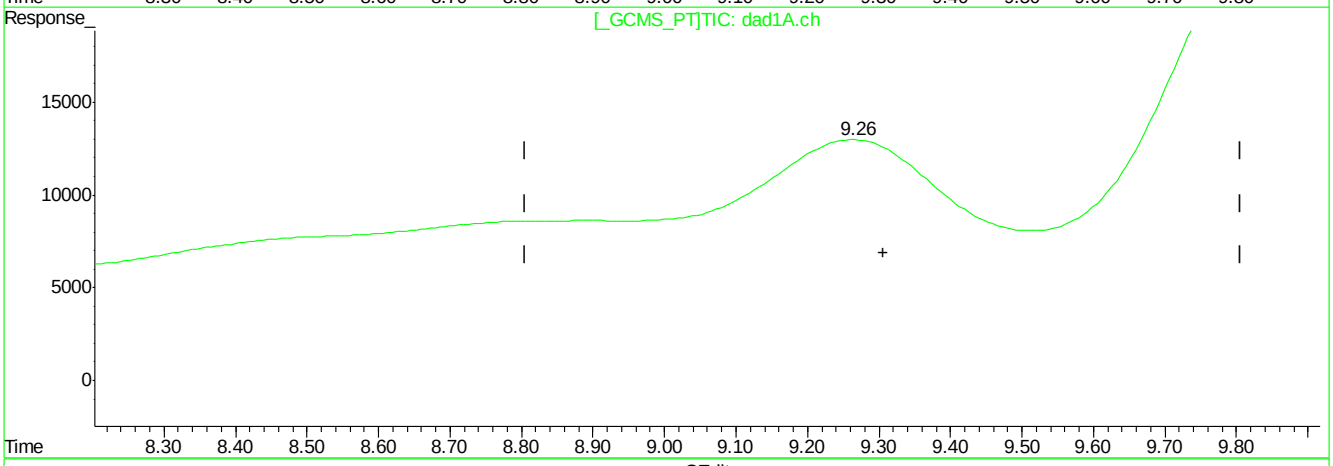
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:07:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.27min 3095.789ppb

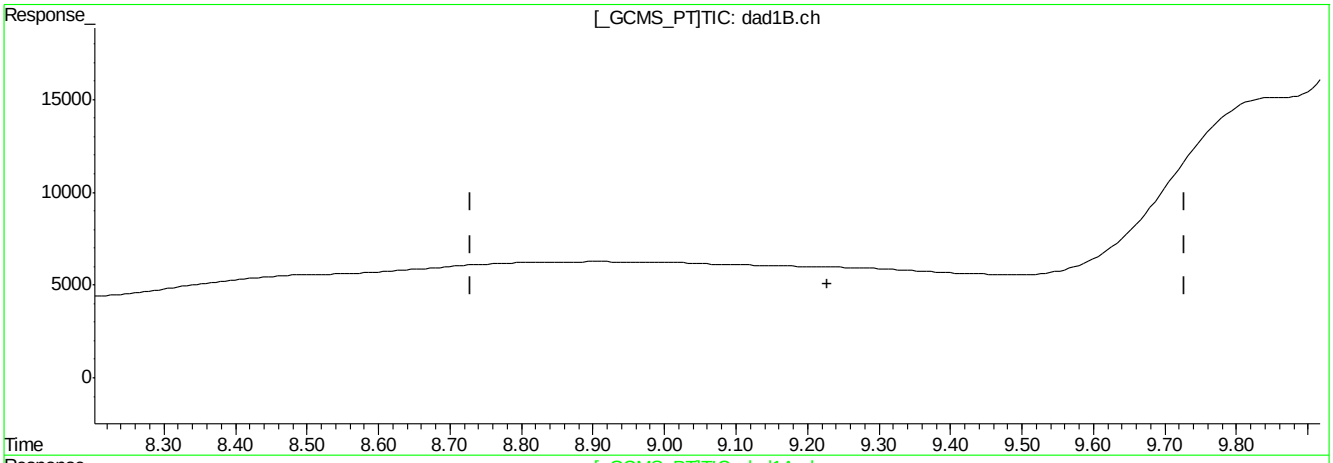
response 3582344

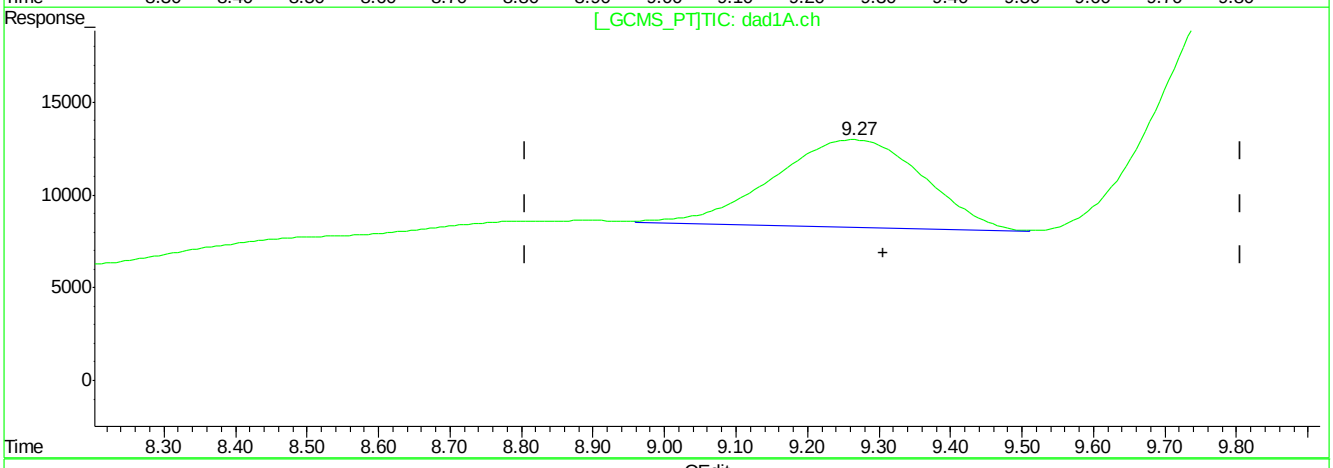
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:07:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.27min 591.608ppb m

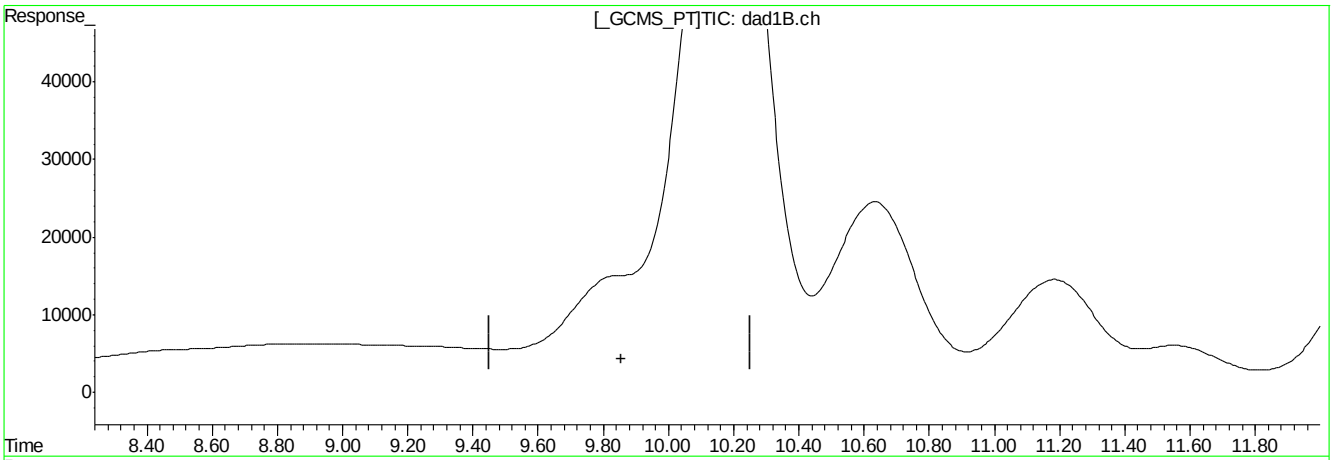
response 684589

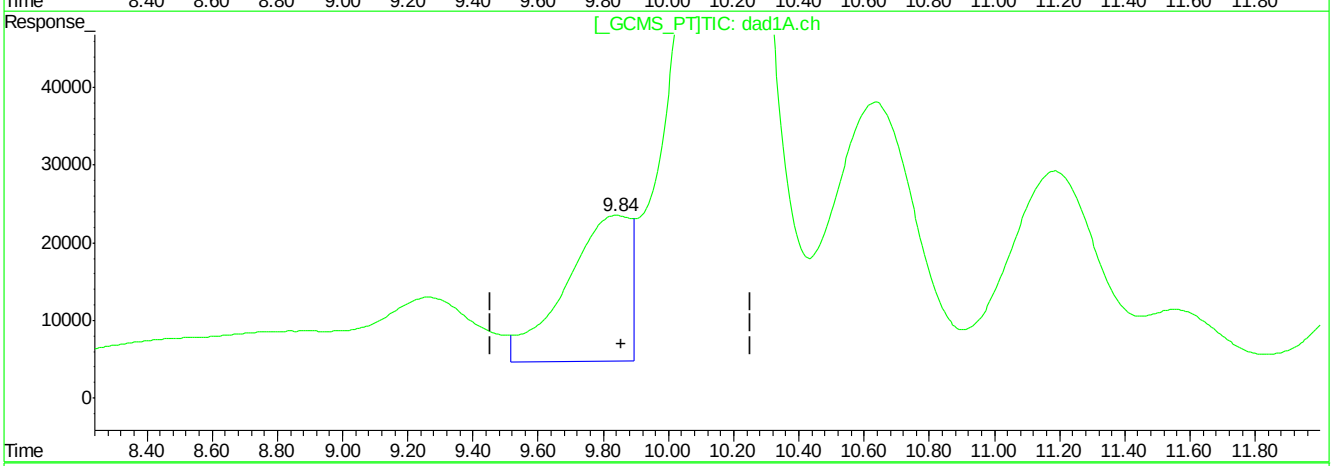
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:07:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

0.00min 0.000ppb

response 0

(11) Tetryl #2

9.84min 549.458ppb

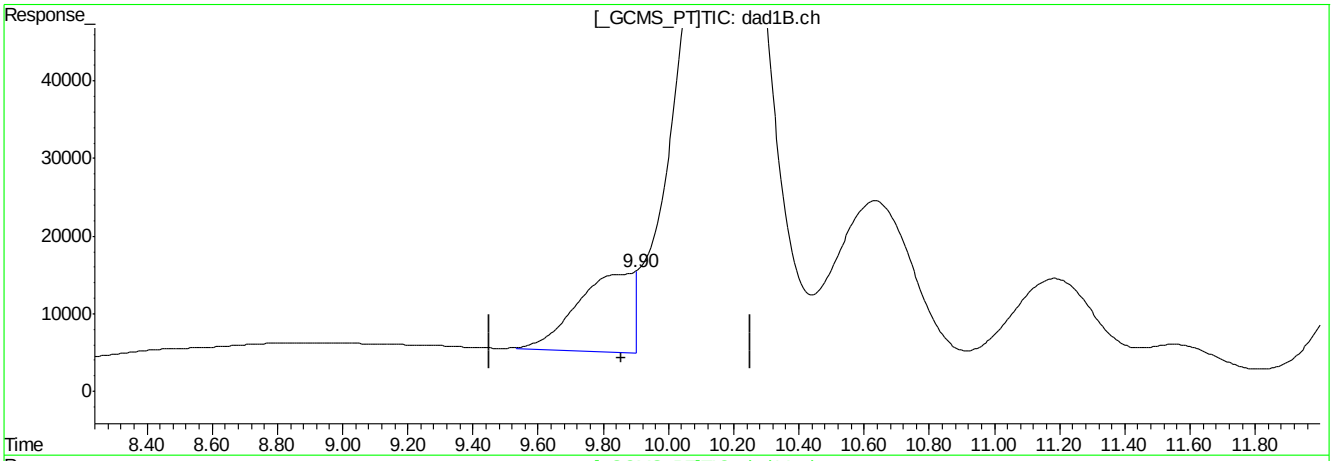
response 2556207

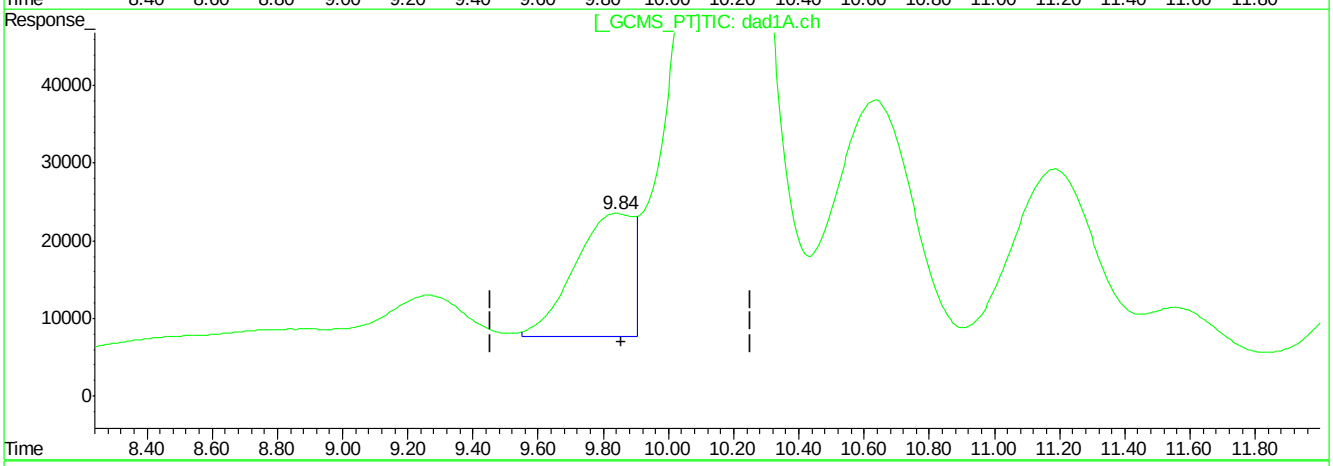
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:08:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.90min 440.789ppb m

response 1263713

(11) Tetryl #2

9.84min 418.968ppb m

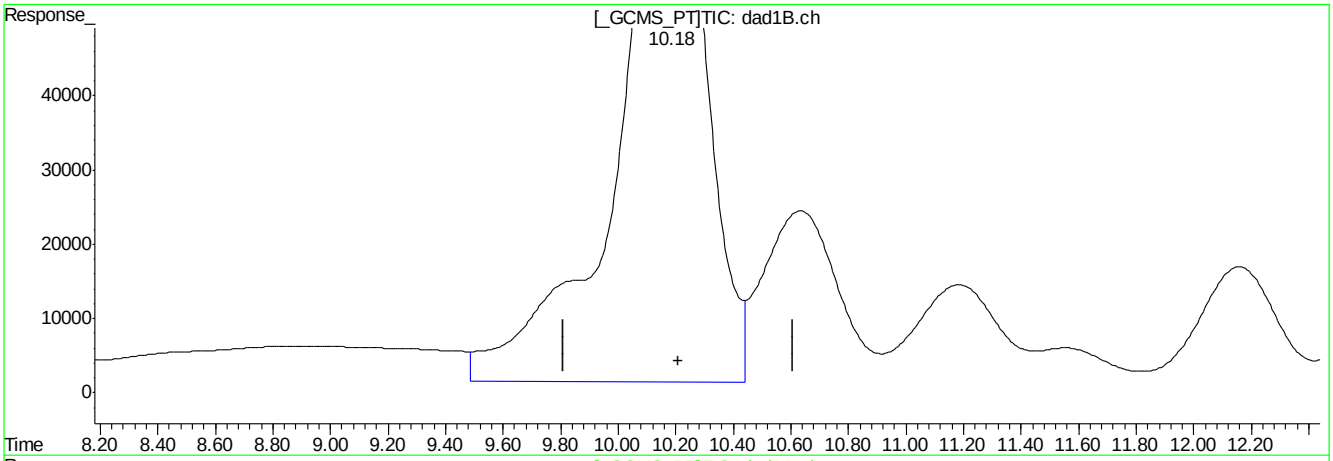
response 1949137

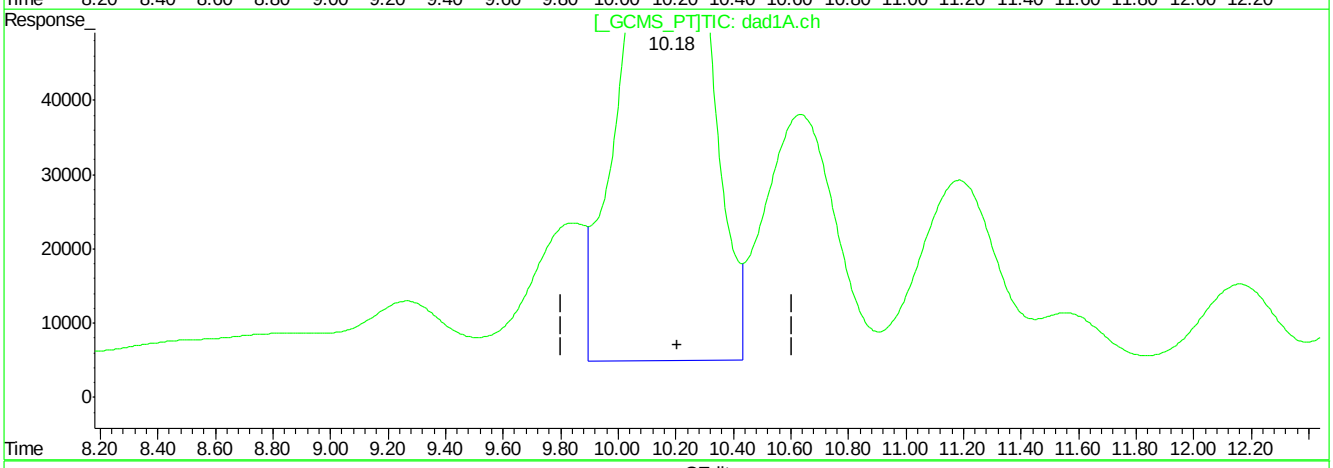
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:08:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.18min 4620.939ppb

response 17416215

(12) 2,4,6-Trinitrotoluene #2

10.18min 3942.951ppb

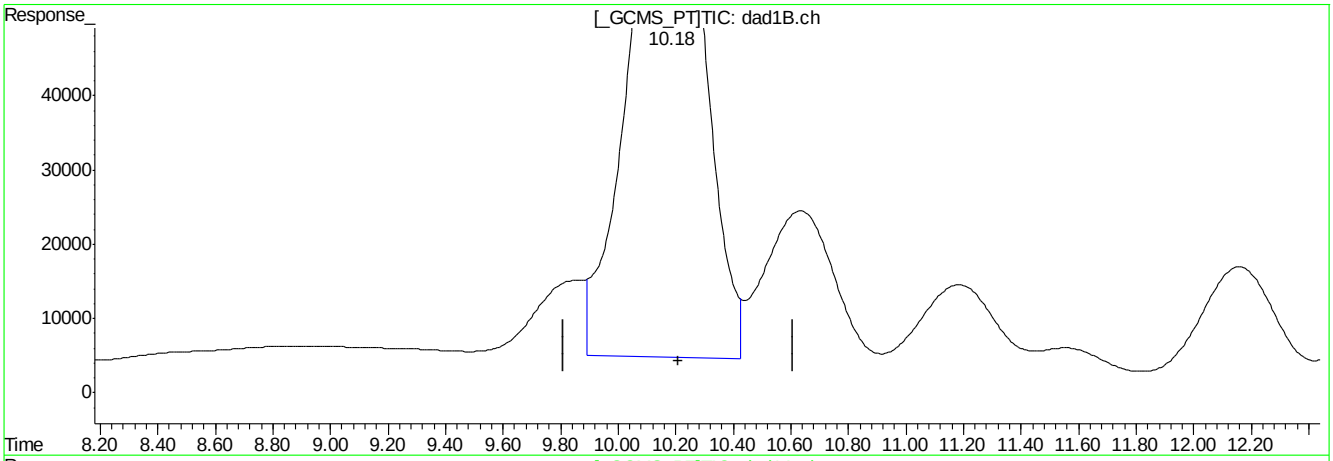
response 18339456

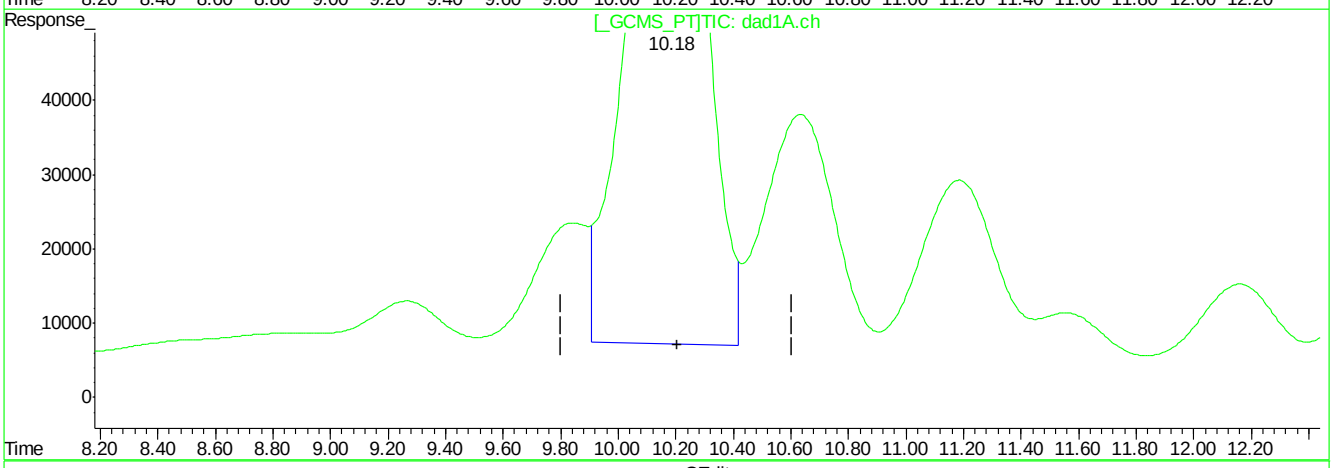
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:08:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.18min 3737.182ppb m

response 14085353

(12) 2,4,6-Trinitrotoluene #2

10.18min 3729.086ppb m

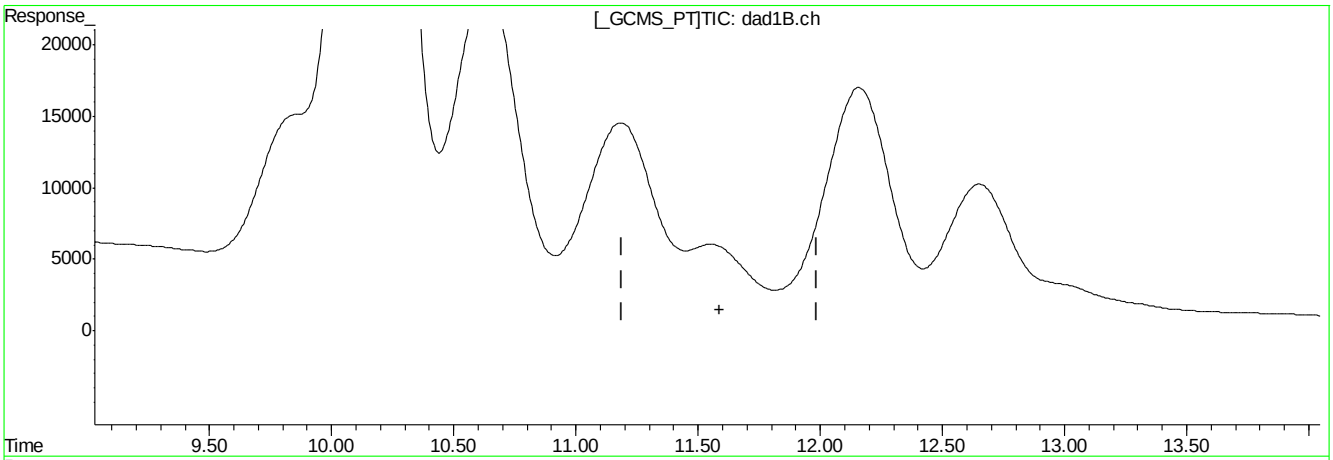
response 17344726

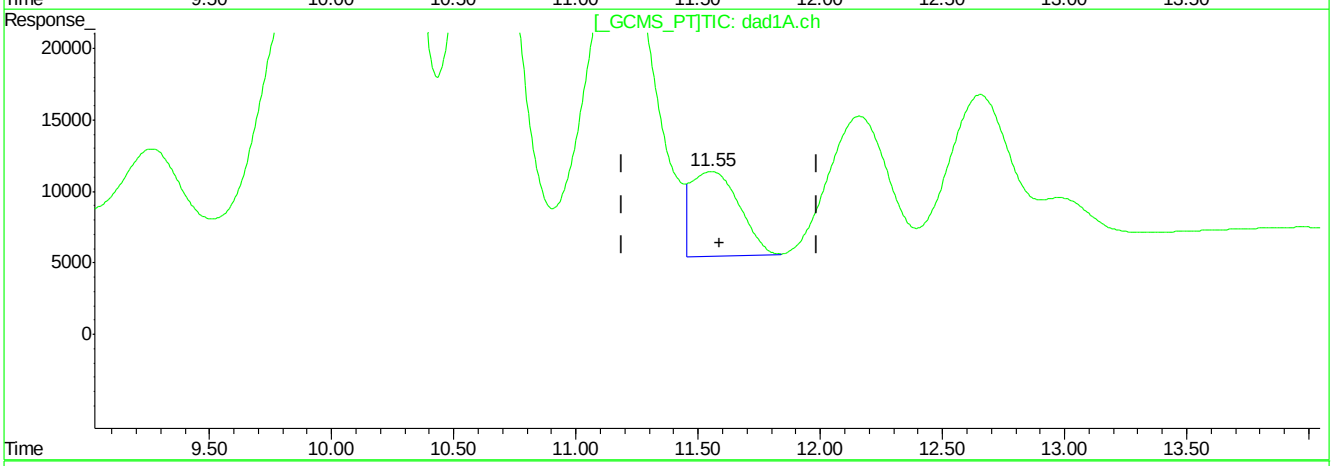
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:08:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

0.00min 0.000ppb

response 0

(15) 3,4-Dinitrotoluene #2 (S)

11.55min 255.265ppb

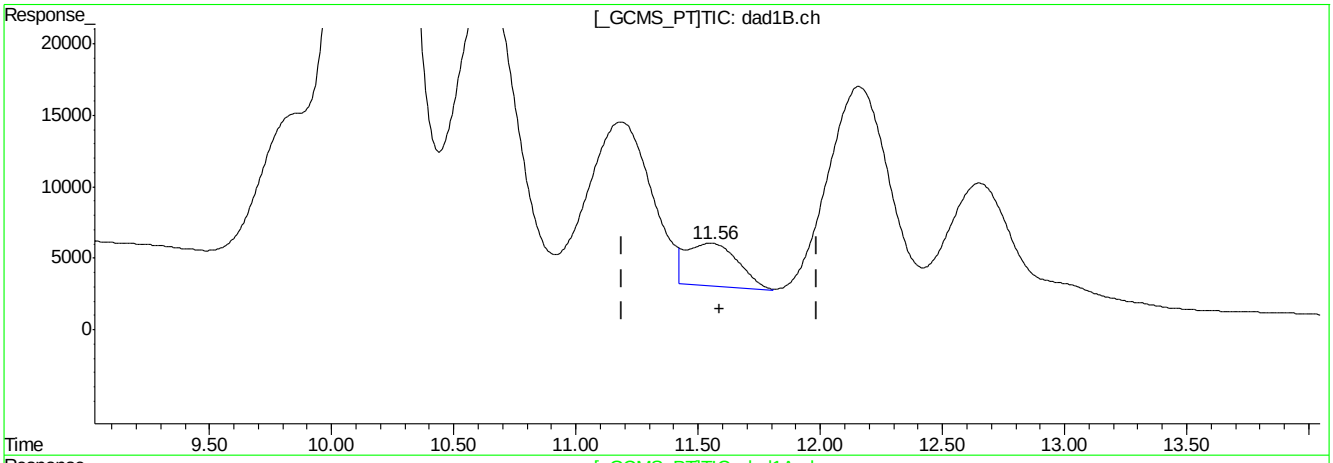
response 812638

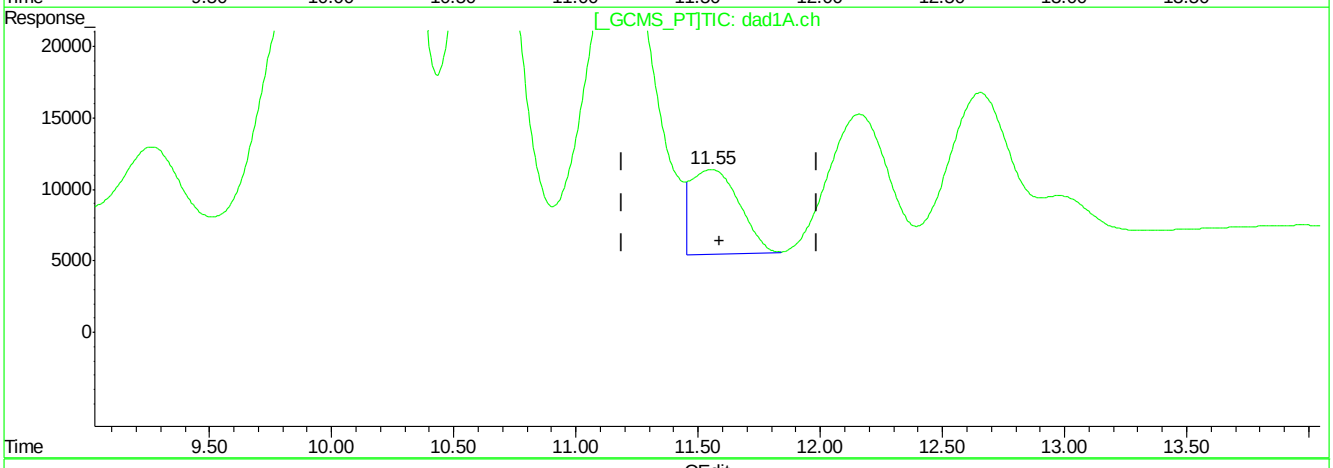
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:08:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.56min 217.475ppb m

response 444472

(15) 3,4-Dinitrotoluene #2 (S)

11.55min 255.265ppb

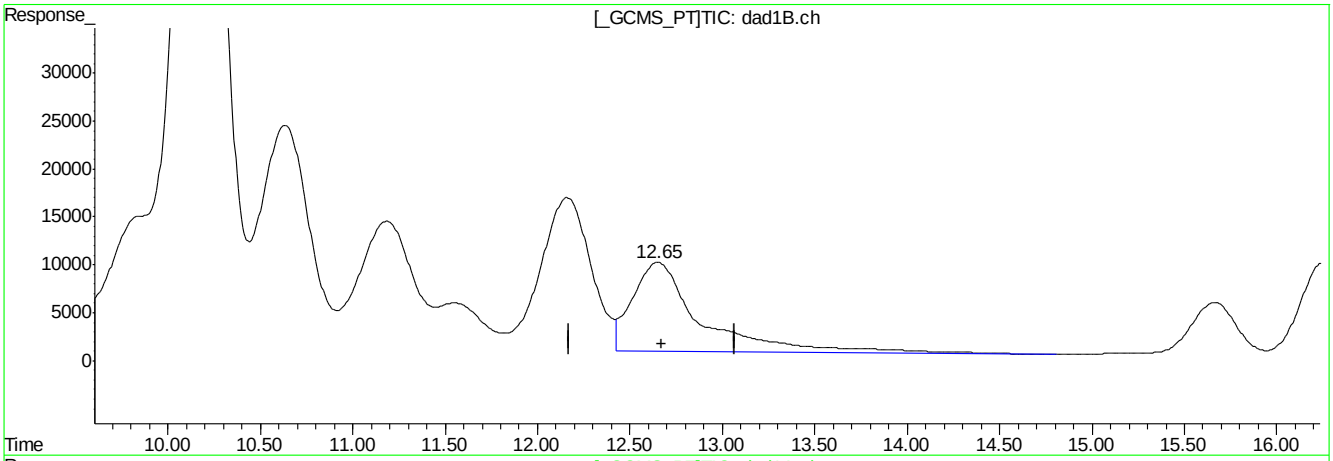
response 812638

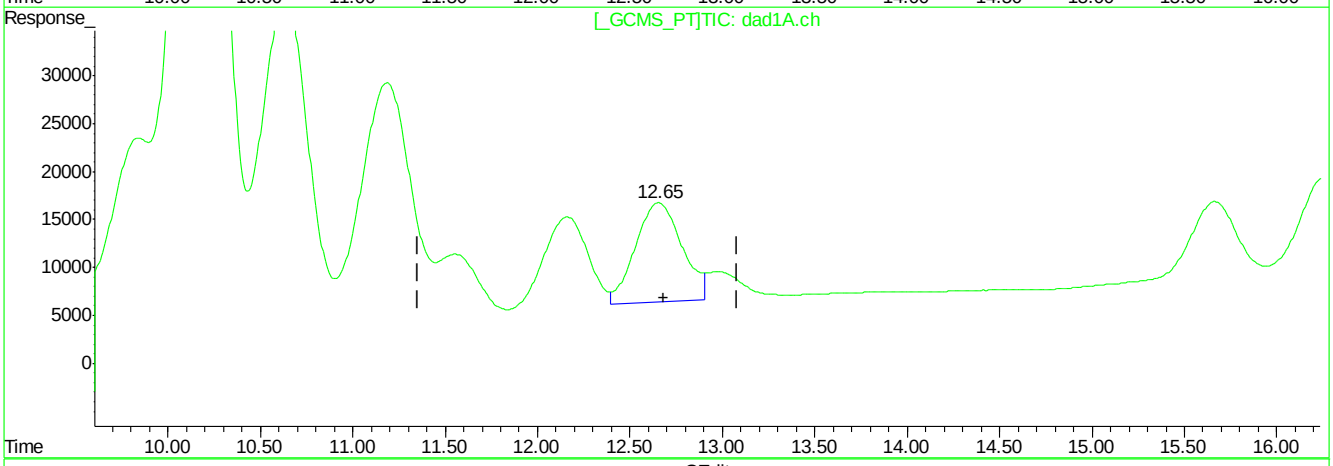
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:09:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.65min 904.203ppb

response 2469584

(17) 2,6-Dinitrotoluene #2

12.66min 510.614ppb

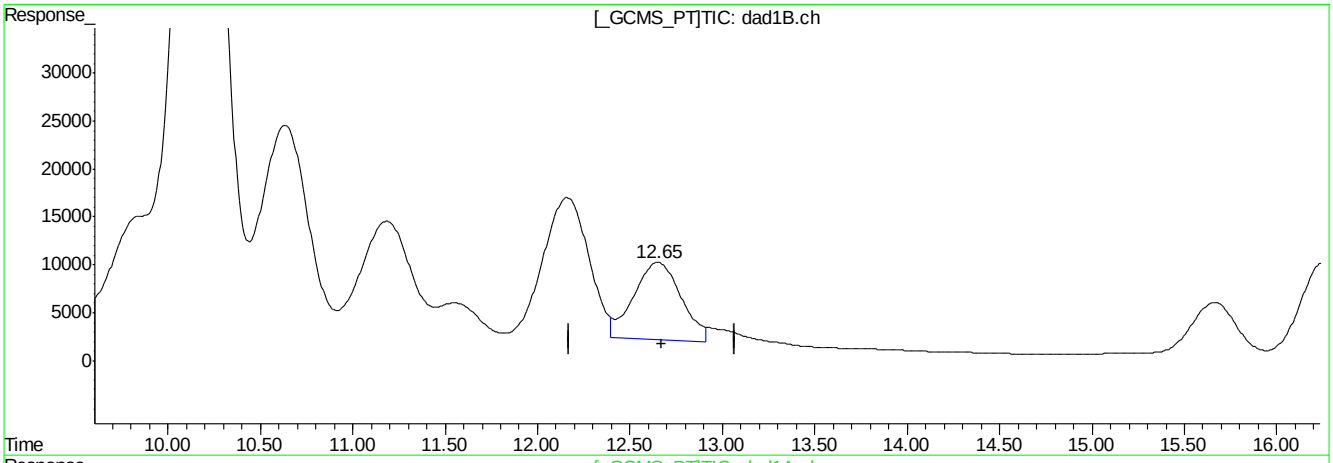
response 1812872

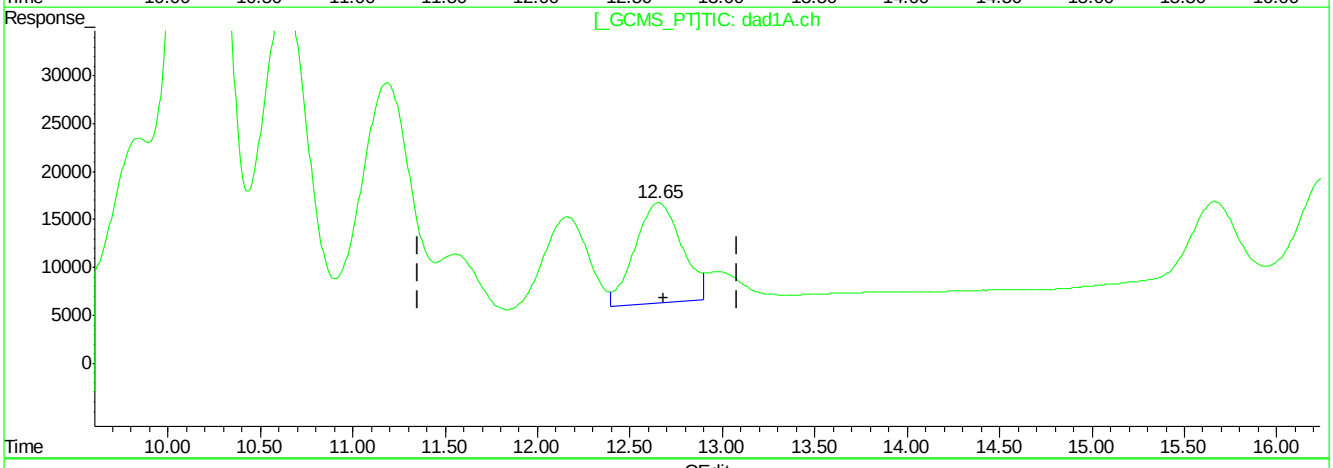
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:09:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.65min 529.768ppb m

response 1446916

(17) 2,6-Dinitrotoluene #2

12.65min 514.302ppb m

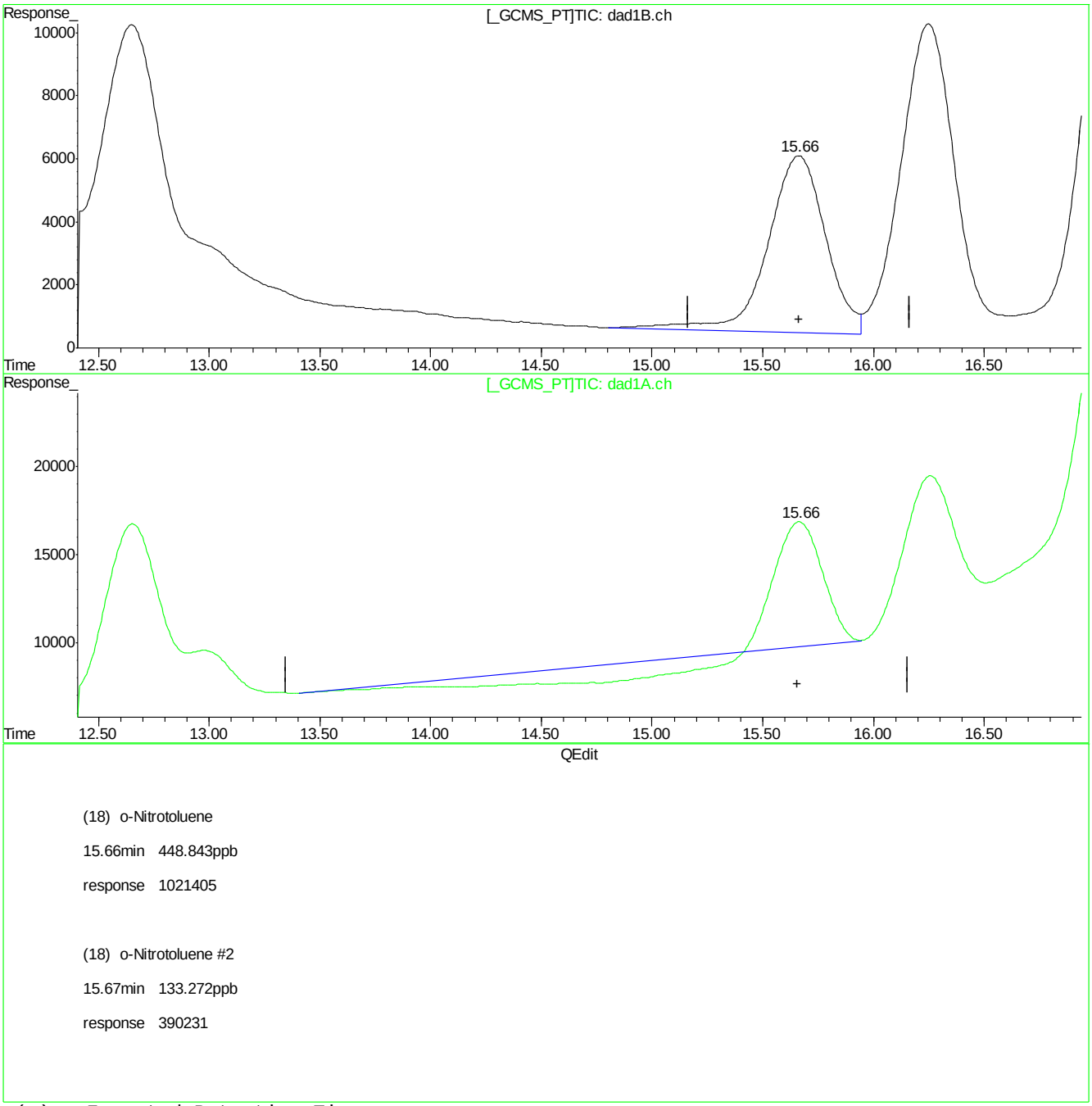
response 1825965

(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:09:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.66min 448.843ppb

response 1021405

(18) o-Nitrotoluene #2

15.67min 133.272ppb

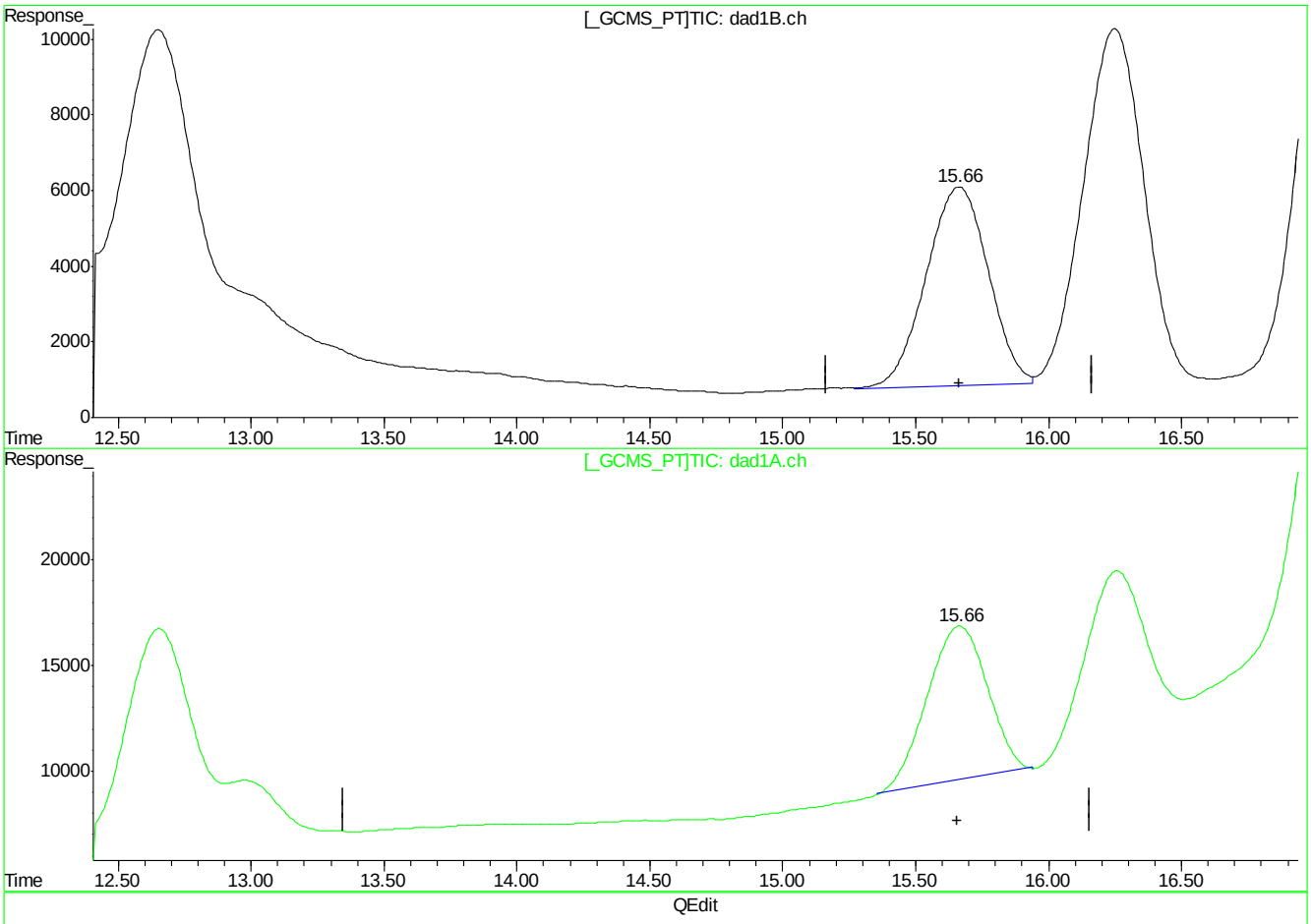
response 390231

(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:09:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.66min 375.449ppb m

response 854389

(18) o-Nitrotoluene #2

15.66min 388.844ppb m

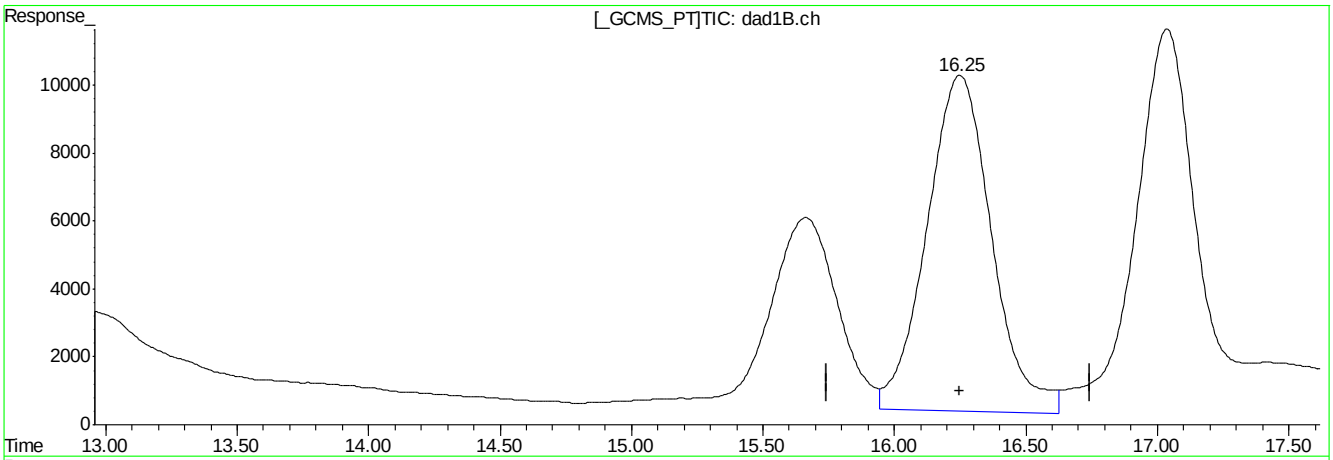
response 1138563

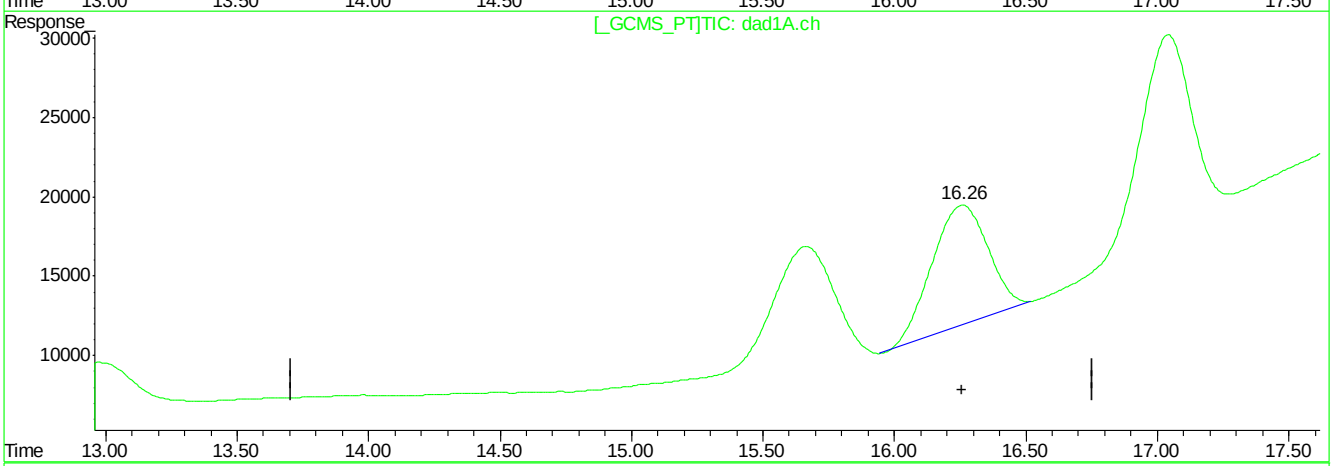
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:09:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.25min 489.077ppb

response 1697903

(19) p-Nitrotoluene #2

16.26min 417.620ppb

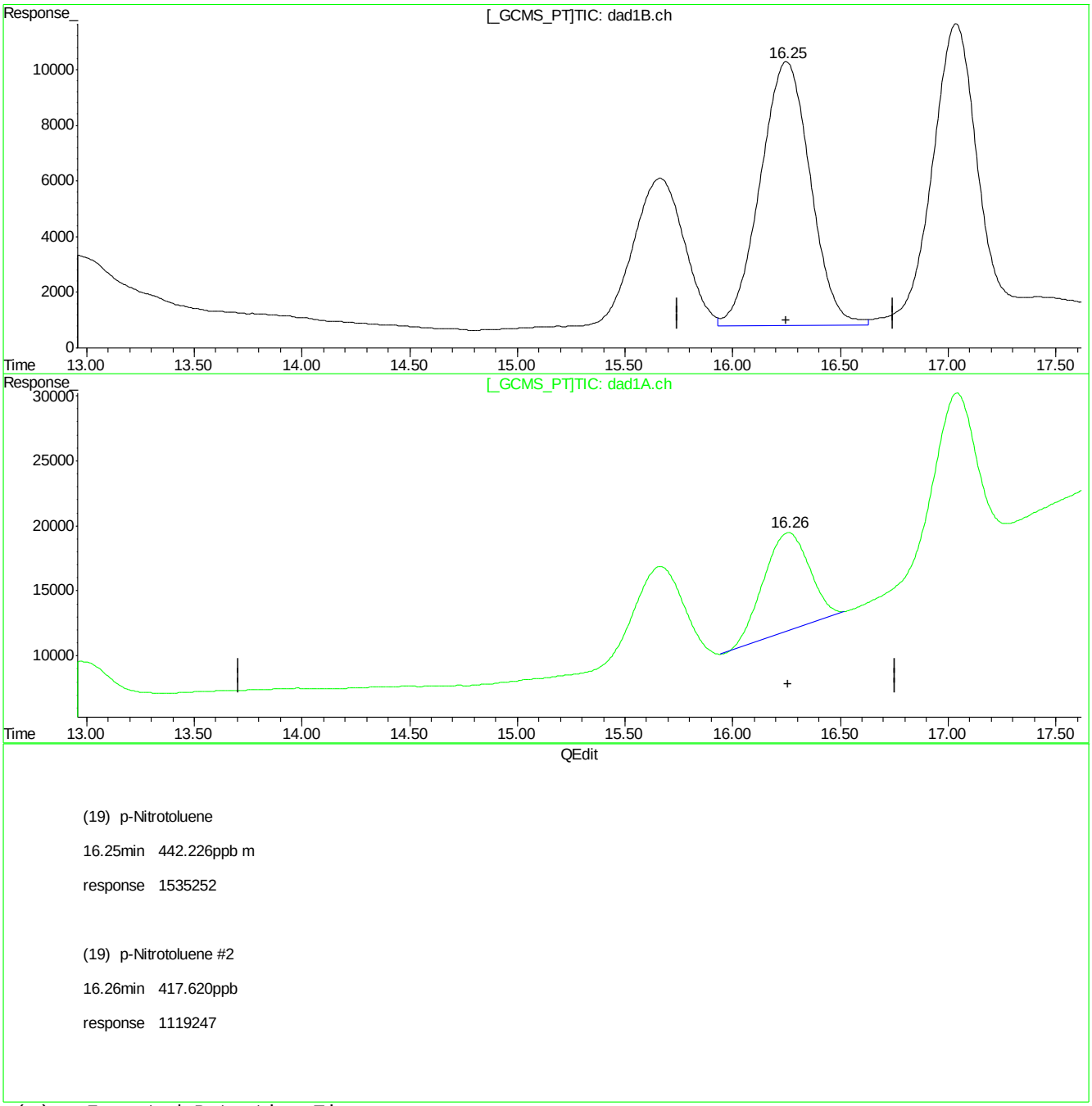
response 1119247

(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:09:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.25min 442.226ppb m

response 1535252

(19) p-Nitrotoluene #2

16.26min 417.620ppb

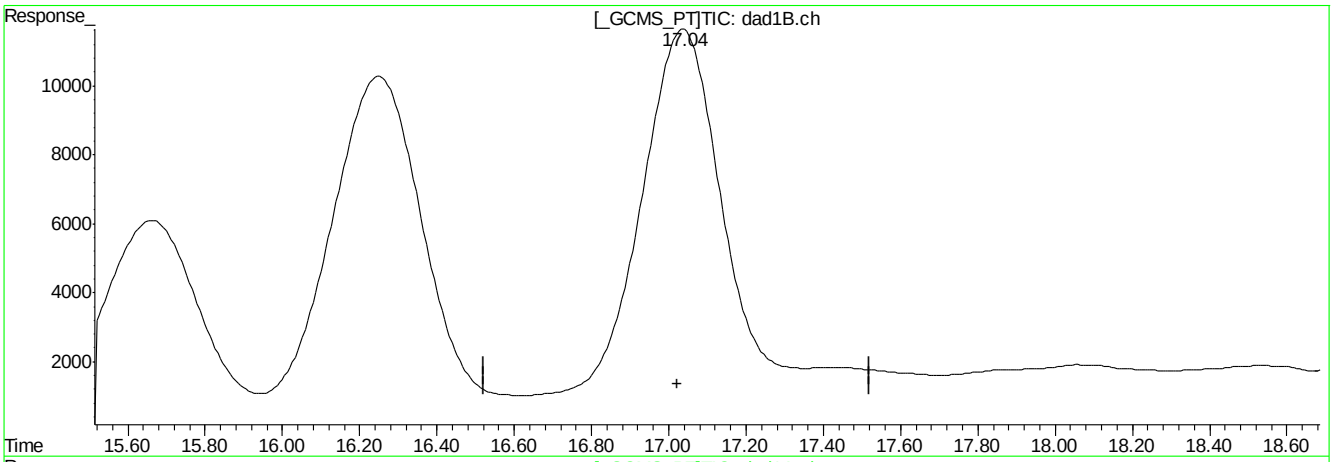
response 1119247

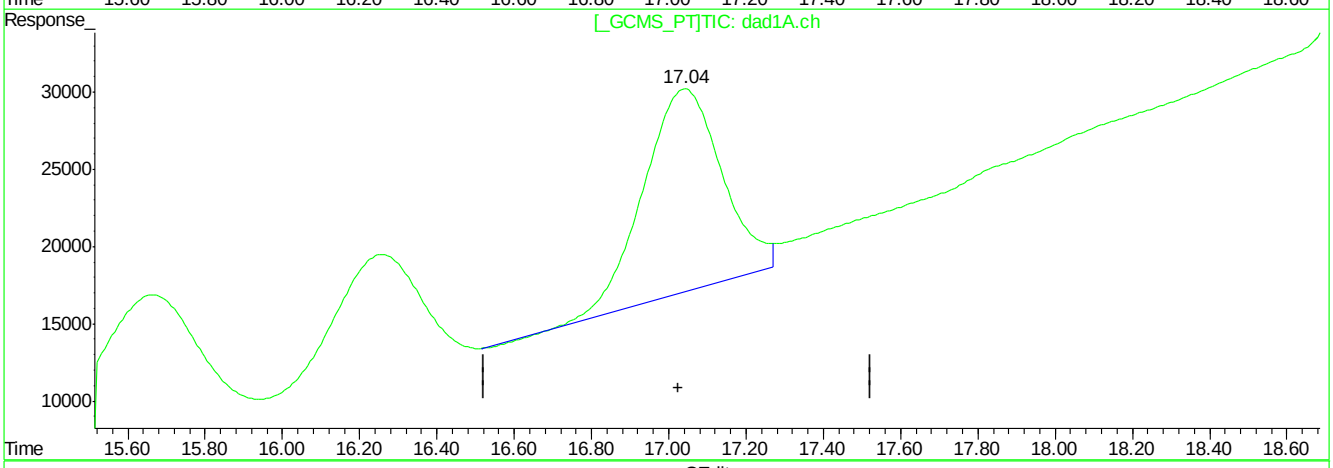
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:09:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.04min 666.233ppb

response 2177040

(20) m-Nitrotoluene #2

17.04min 507.650ppb

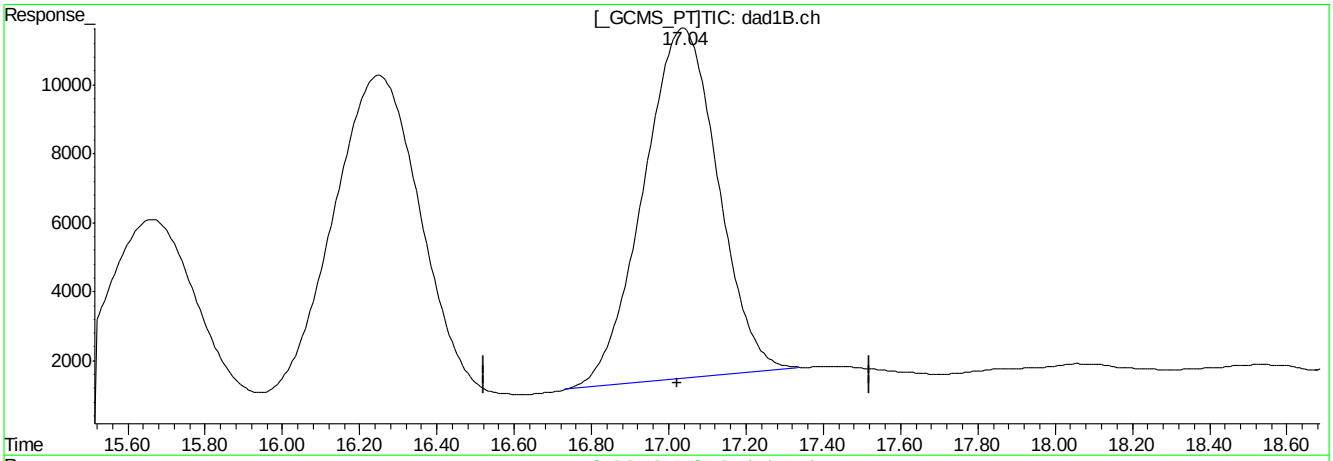
response 1841804

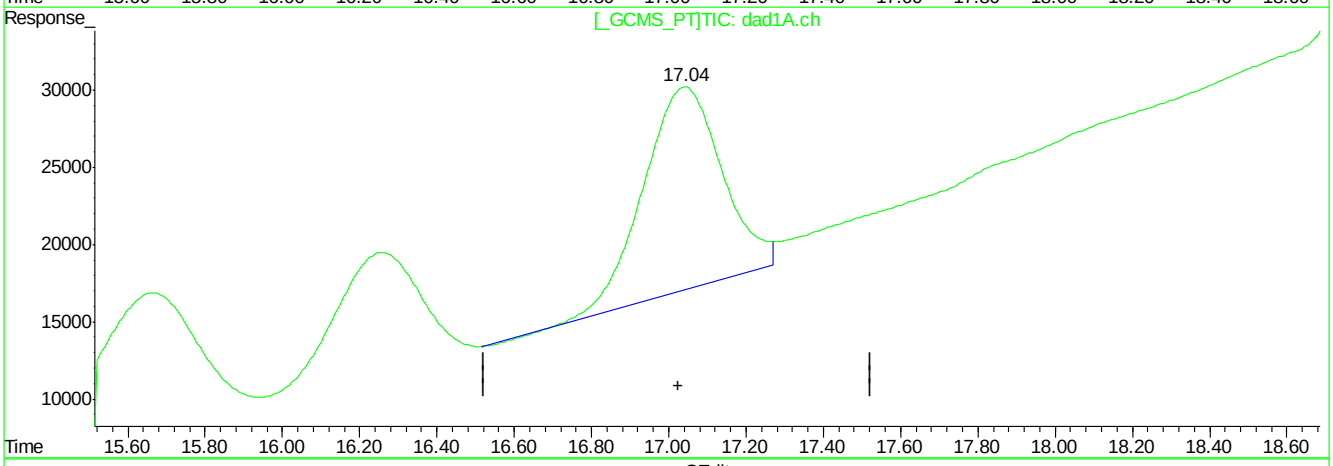
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:09:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.04min 414.476ppb m

response 1354376

(20) m-Nitrotoluene #2

17.04min 507.650ppb

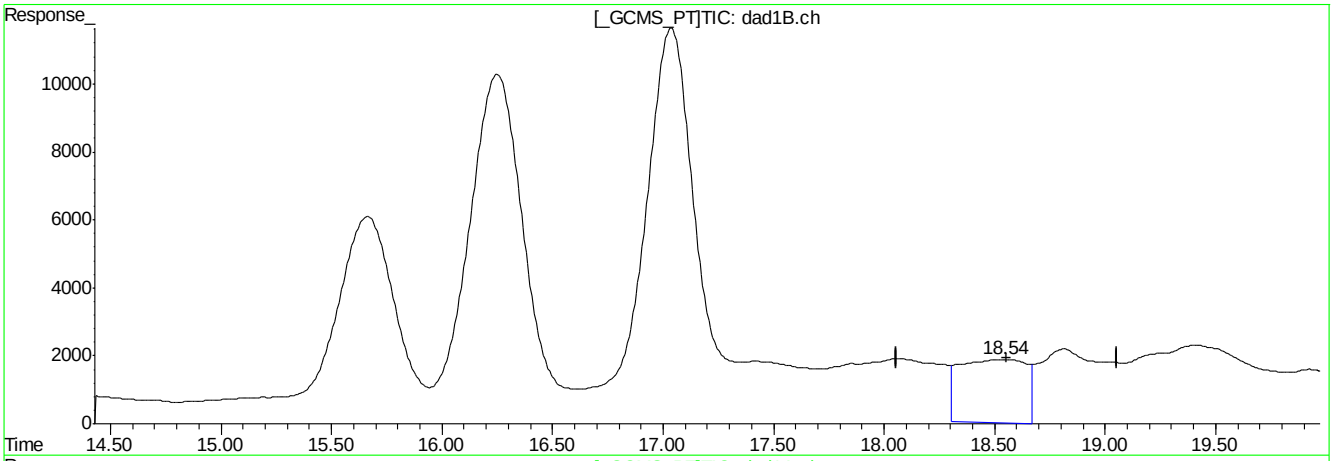
response 1841804

(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:10:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(21) PETN

18.54min 0.000ppb

response 394523

(21) PETN #2

18.82min 3052.262ppb

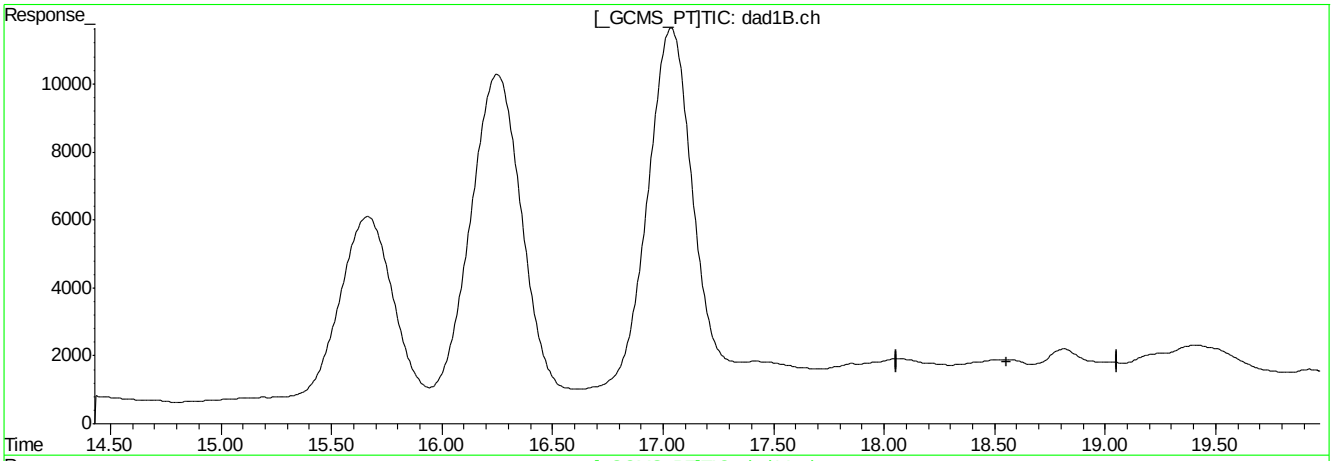
response 4053735

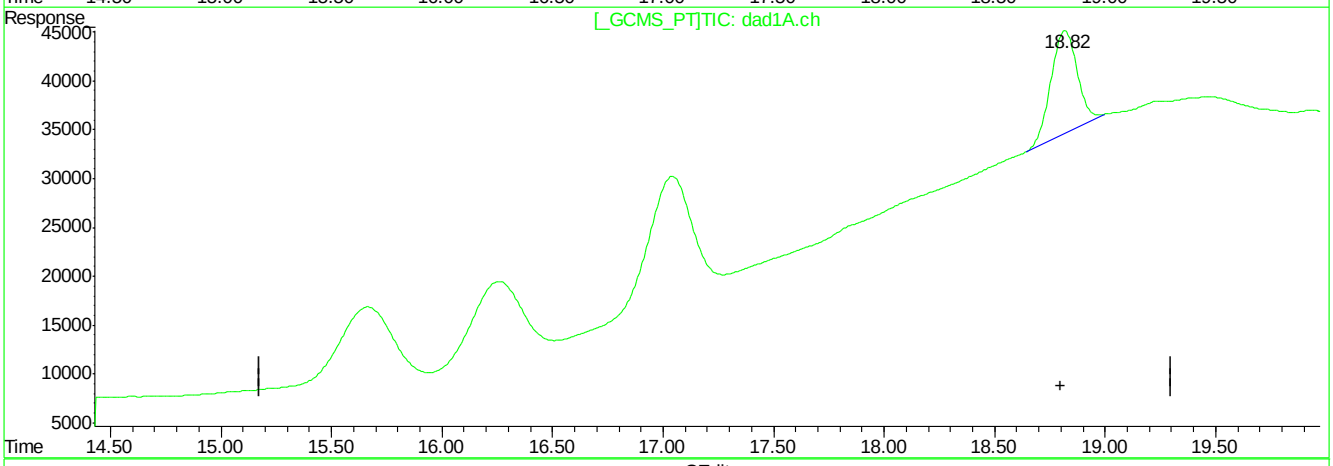
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:10:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84640-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:51 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.82min 654.556ppb m

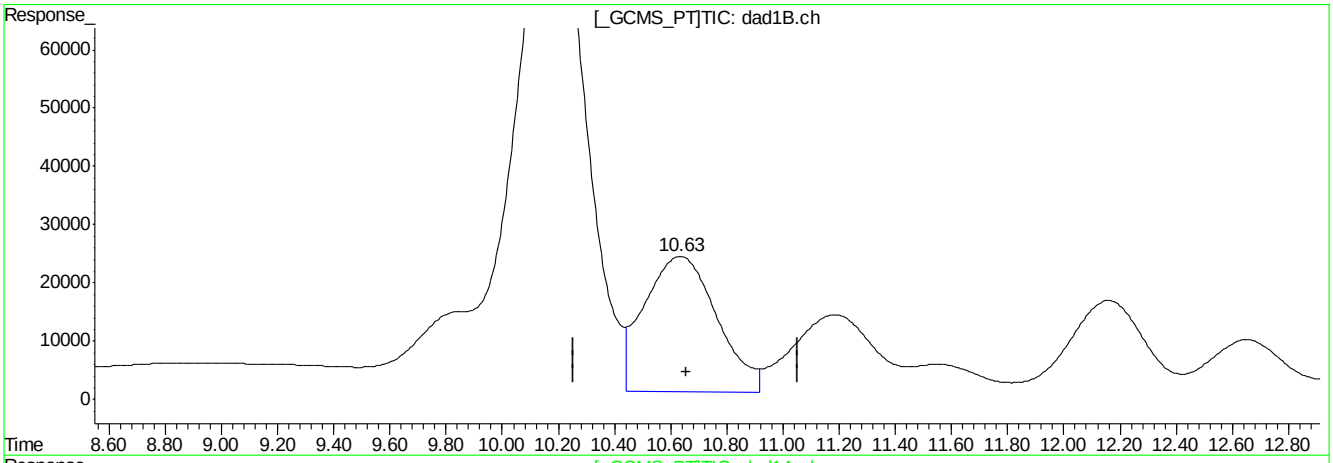
response 869322

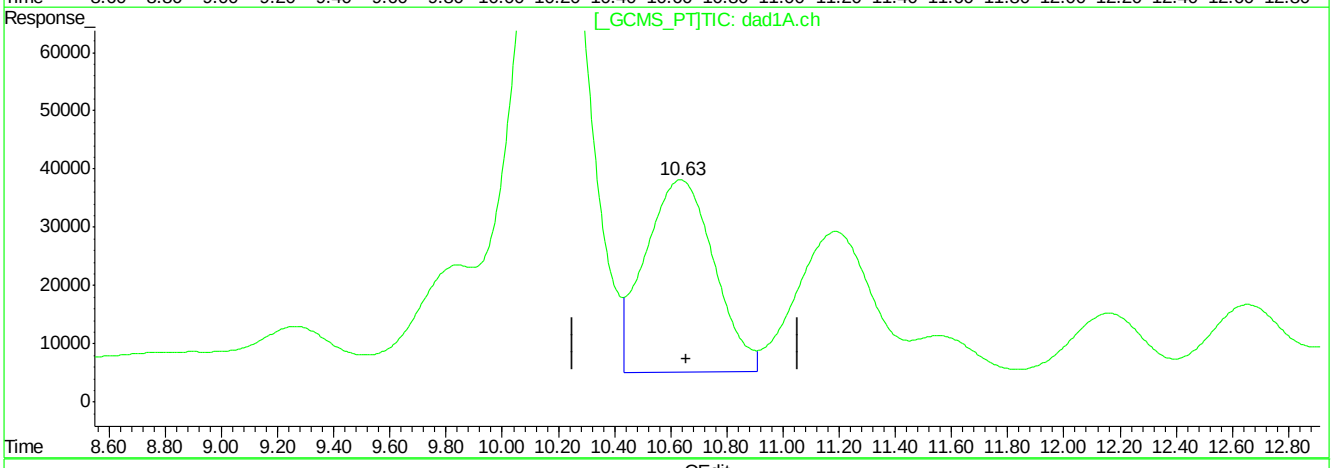
(+) = Expected Retention Time
PP390609.D GPP2428_040221PRI.M Fri Apr 23 10:10:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84960-MS Inst : G1315B
Misc : op84960,GPP2438,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:10 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.64min 1244.552ppb

response 4180806

(13) 2-Amino-4,6-Dinitrotoluene #2

10.64min 1111.070ppb

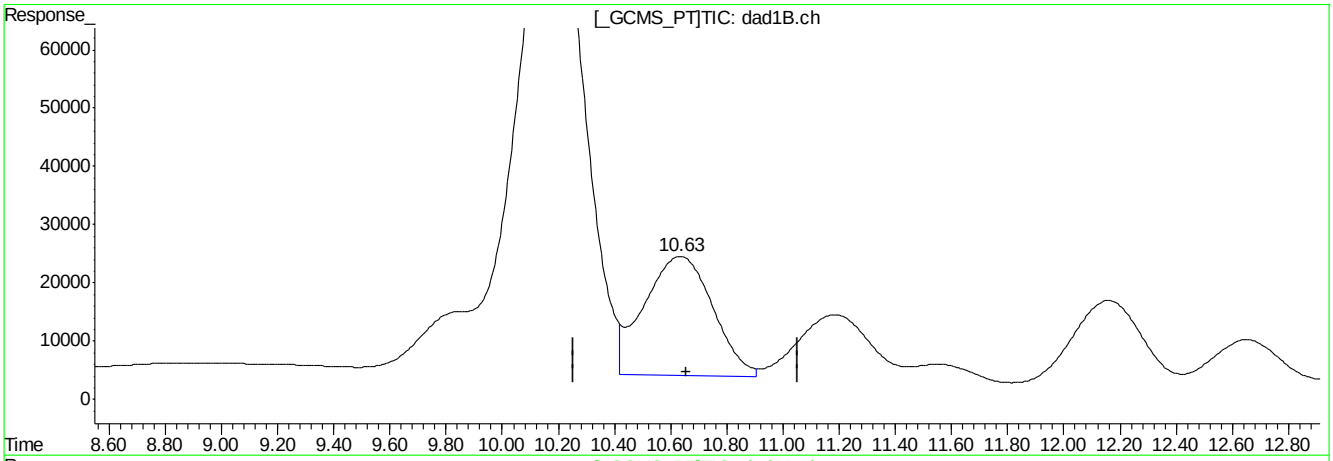
response 5644430

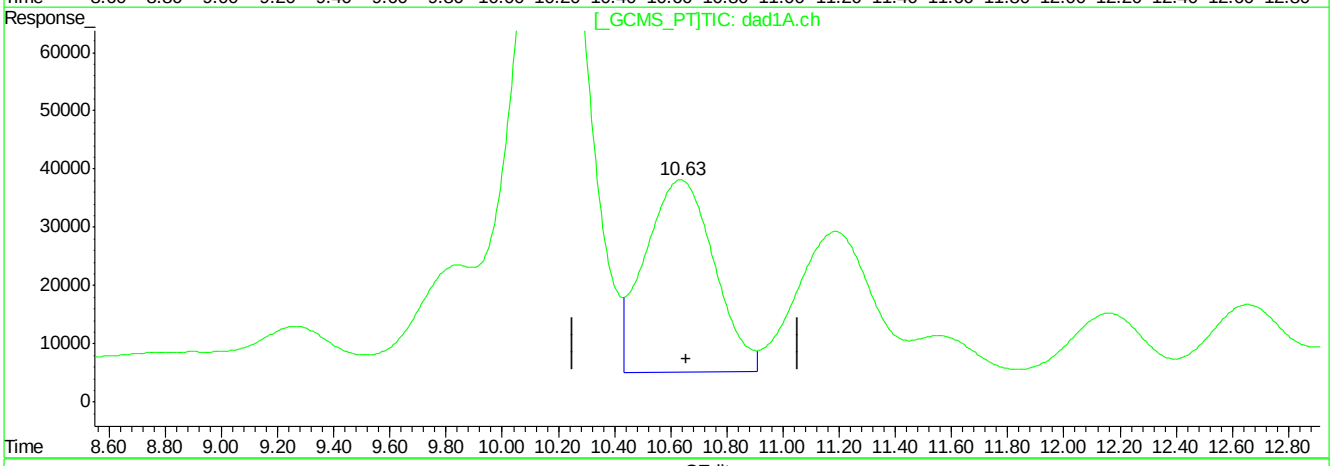
(+) = Expected Retention Time
PP390609.D GPP2439_042321PRI.M Mon Apr 26 15:38:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84960-MS Inst : G1315B
Misc : op84960,GPP2438,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:10 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.63min 1039.491ppb m

response 3491948

(13) 2-Amino-4,6-Dinitrotoluene #2

10.64min 1111.070ppb

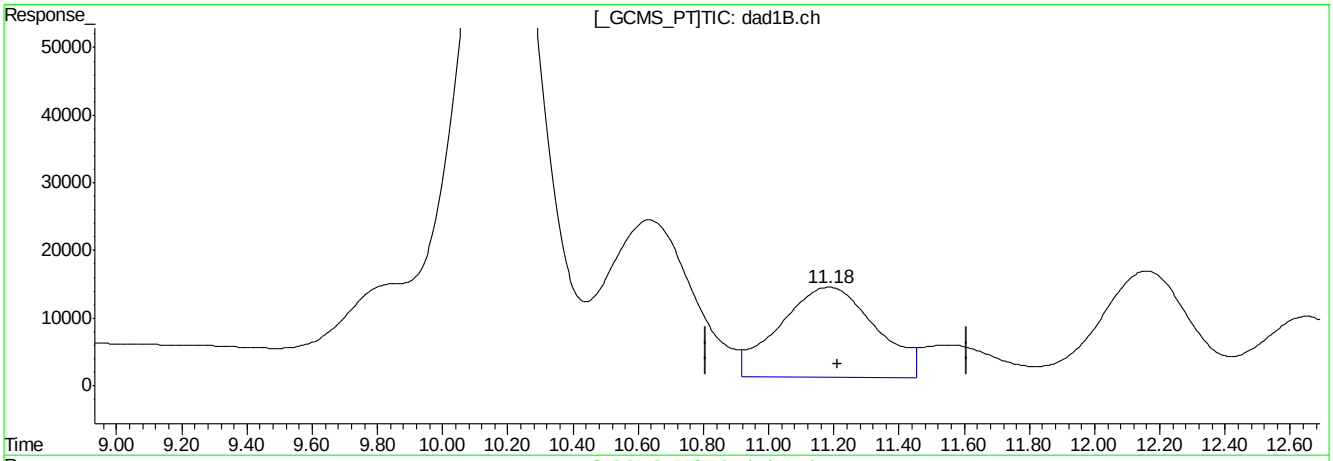
response 5644430

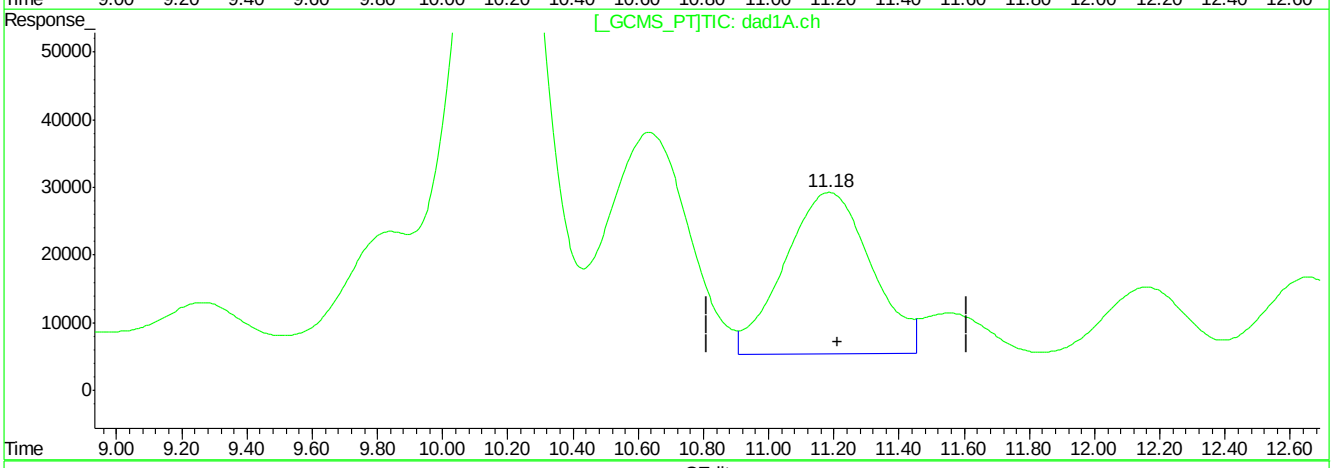
(+) = Expected Retention Time
PP390609.D GPP2439_042321PRI.M Mon Apr 26 15:38:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84960-MS Inst : G1315B
Misc : op84960,GPP2438,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:10 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.19min 1214.668ppb

response 2736139

(14) 4-Amino-2,6-Dinitrotoluene #2

11.19min 929.796ppb

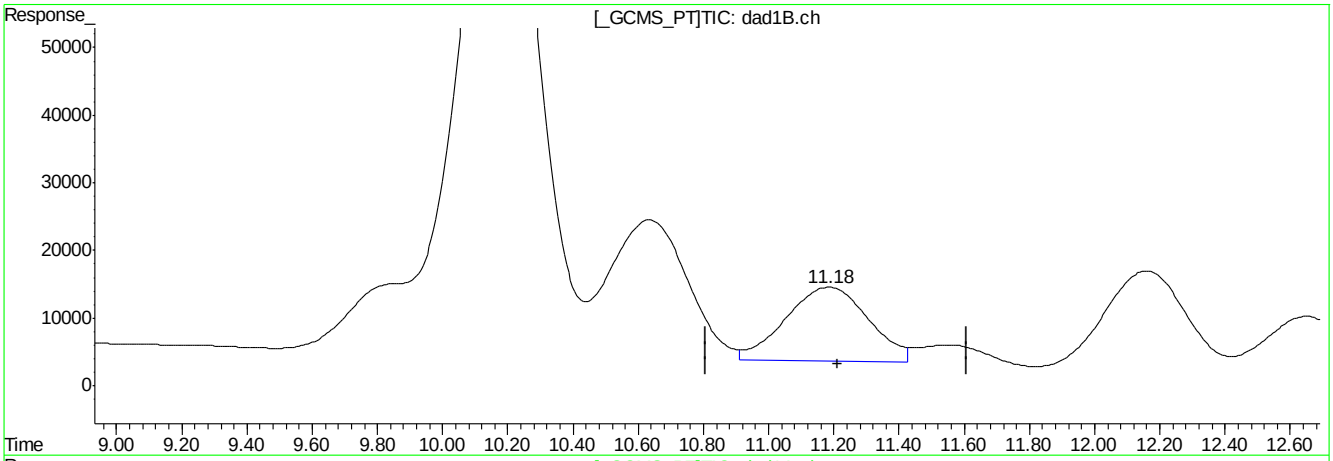
response 4428495

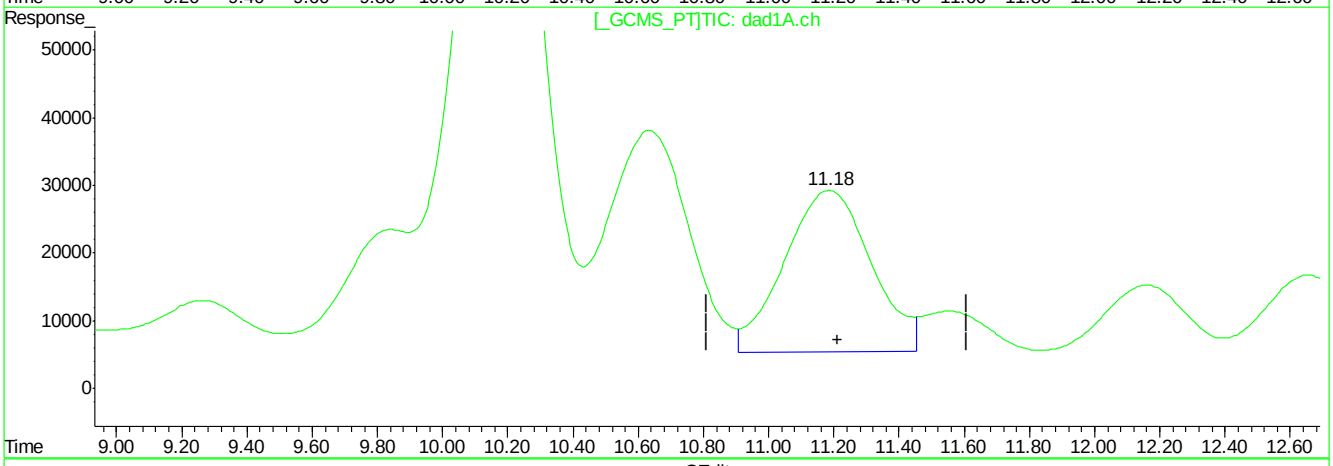
(+) = Expected Retention Time
PP390609.D GPP2439_042321PRI.M Mon Apr 26 15:38:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390609.D\dad1A.ch
Acq On : 22-Apr-2021, 15:17:38 Operator: jamesb
Sample : op84960-MS Inst : G1315B
Misc : op84960,GPP2438,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:10 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.18min 850.820ppb m

response 1916543

(14) 4-Amino-2,6-Dinitrotoluene #2

11.19min 929.796ppb

response 4428495

(+) = Expected Retention Time
PP390609.D GPP2439_042321PRI.M Mon Apr 26 15:38:52 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/26/21 16:24

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84960-MSD Inst : G1315B
Misc : op84960,GPP2438,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 09:52:00 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.57	11.56	462540	809990	226.315m	254.433
	Spiked Amount 500.000	Range 70 - 136		Recovery =		45.26%#	50.89%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.50	1.49	1541076	5884342	1016.131	1345.840m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.99	2.99	1823605	2972216	980.188	1007.219
6)	1,3,5-Trinitrobe	4.79	4.79	7621488	14301264	1924.353	1858.182
7)	1,3-Dinitrobenze	6.00	6.00	3180567	2353141	604.381m	645.720m
8)	3,5-Dinitroanili	6.42	6.42	3769846	5675022	929.390m	840.221m
9)	Nitrobenzene	7.57	7.57	1256115	1206815	398.811m	421.645m
10)	Nitroglycerin	0.00	9.26	0	645044	N.D.	557.434m#
11)	Tetryl	9.89	9.90	1202458	2033590	419.423m	437.122m
12)	2,4,6-Trinitroto	10.18	10.18	14607423	18126936	3875.699m	3897.260m
13)	2-Amino-4,6-Dini	10.64	10.64	3592950	5757639	1069.557m	1133.355
14)	4-Amino-2,6-Dini	11.19	11.19	1986608	4547832	881.925m	954.852
16)	2,4-Dinitrotolue	12.17	12.17	3233655	1573957	683.961	505.793
17)	2,6-Dinitrotolue	12.66	12.66	1376814	1879492	504.101m	529.379
18)	o-Nitrotoluene	15.66	15.67	841289	1195849	369.693m	408.408m
19)	p-Nitrotoluene	16.25	16.26	1479043	1115418	426.035m	416.192
20)	m-Nitrotoluene	17.04	17.05	1421199	1818820	434.925m	501.315
21)	PETN	0.00	18.82	0	970081	N.D. d	730.423m

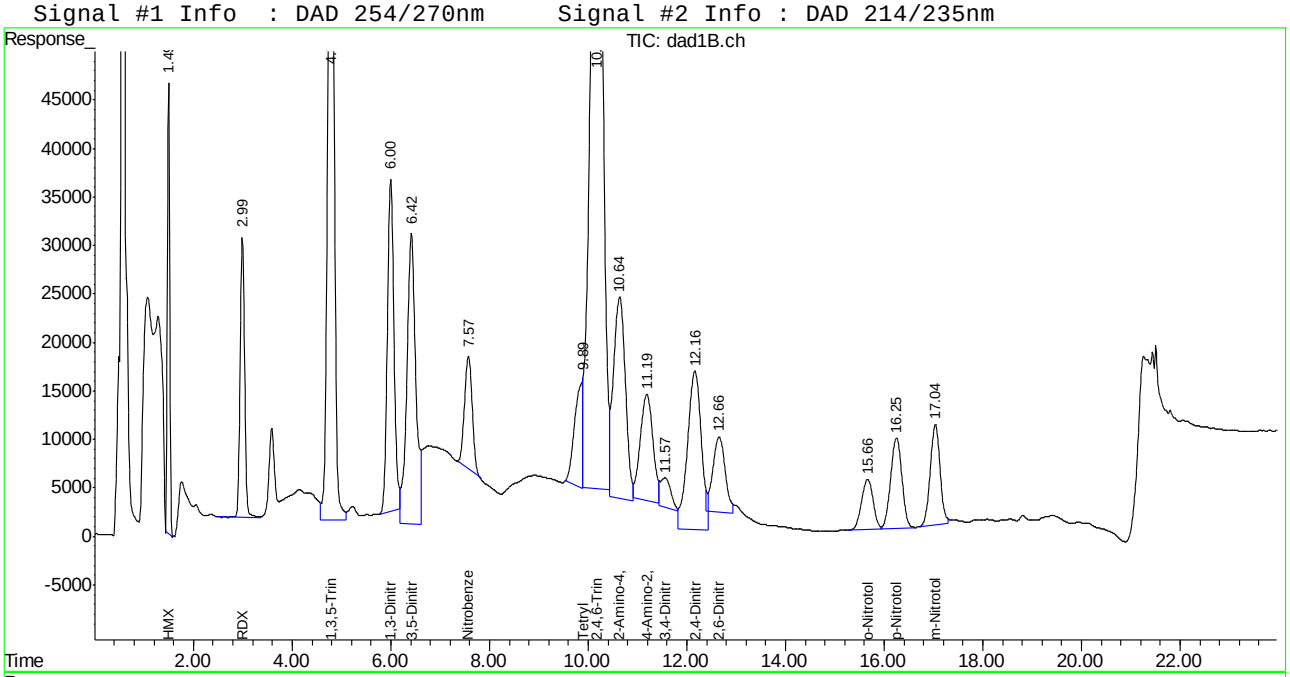
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

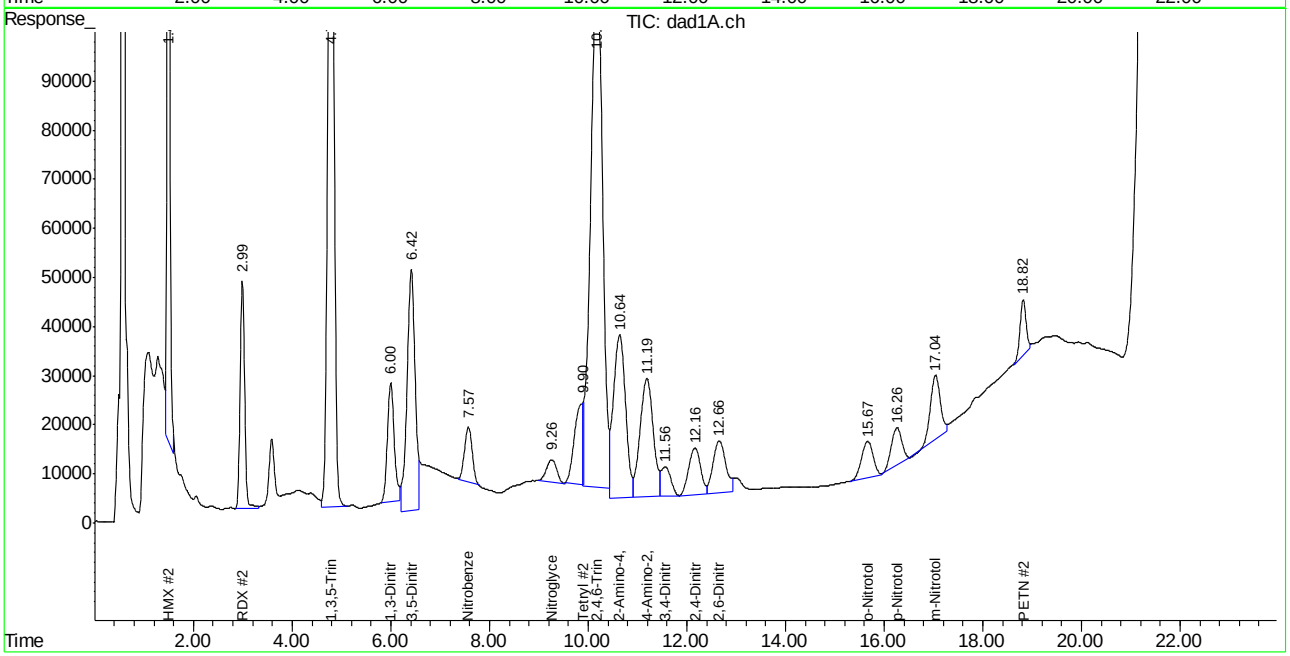
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84960-MSD Inst : G1315B
Misc : op84960,GPP2438,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 15:39 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

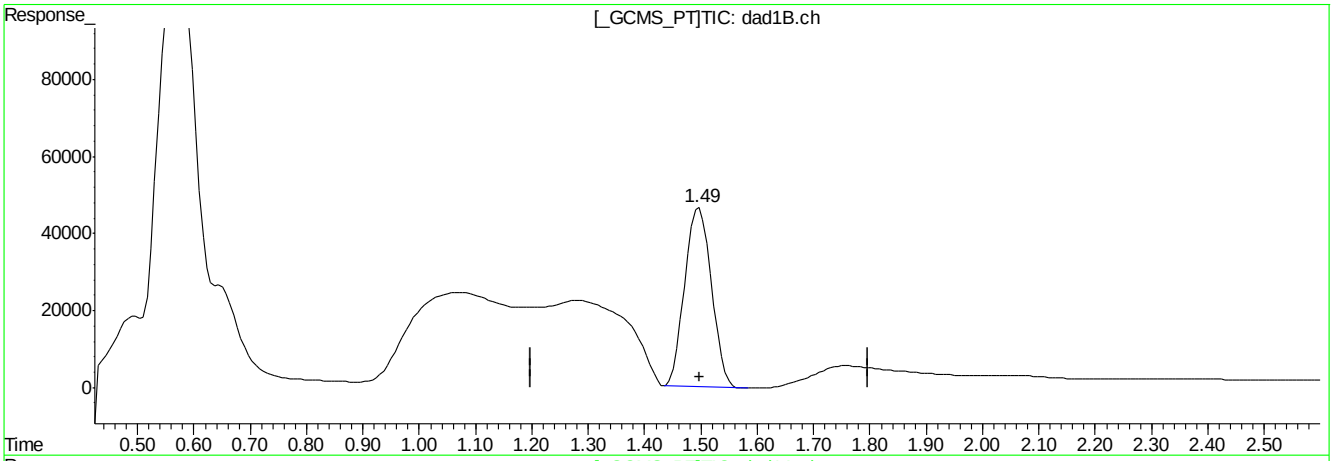
Sample Number: OP84960-MSD
Lab FileID: PP390610.D
Injection Time: 04/22/21 15:48
Method: SW846 8330B
Analyst approved: 04/26/21 15:42 James Boone
Supervisor approved: 04/26/21 16:24 Naresh Jiawan

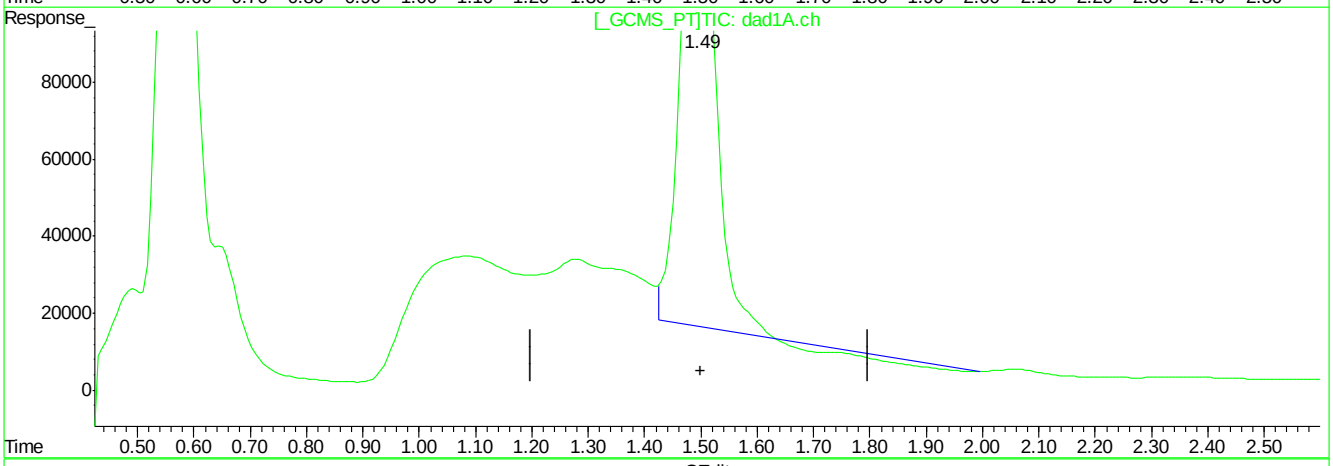
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	2	1.49	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.00	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.00	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.42	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.42	Poor instrument integration
Nitrobenzene	98-95-3	1	7.57	Poor instrument integration
Nitrobenzene	98-95-3	2	7.57	Poor instrument integration
Nitroglycerine	55-63-0	2	9.26	Poor instrument integration
Tetryl	479-45-8	1	9.89	Poor instrument integration
Tetryl	479-45-8	2	9.90	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.18	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.18	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.64	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	11.19	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.57	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.66	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.66	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.67	Poor instrument integration
p-Nitrotoluene	99-99-0	1	16.25	Poor instrument integration
m-Nitrotoluene	99-08-1	1	17.04	Poor instrument integration
PETN	78-11-5	2	18.82	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.50min 1016.131ppb

response 1541076

(2) HMX #2

1.50min 1307.228ppb

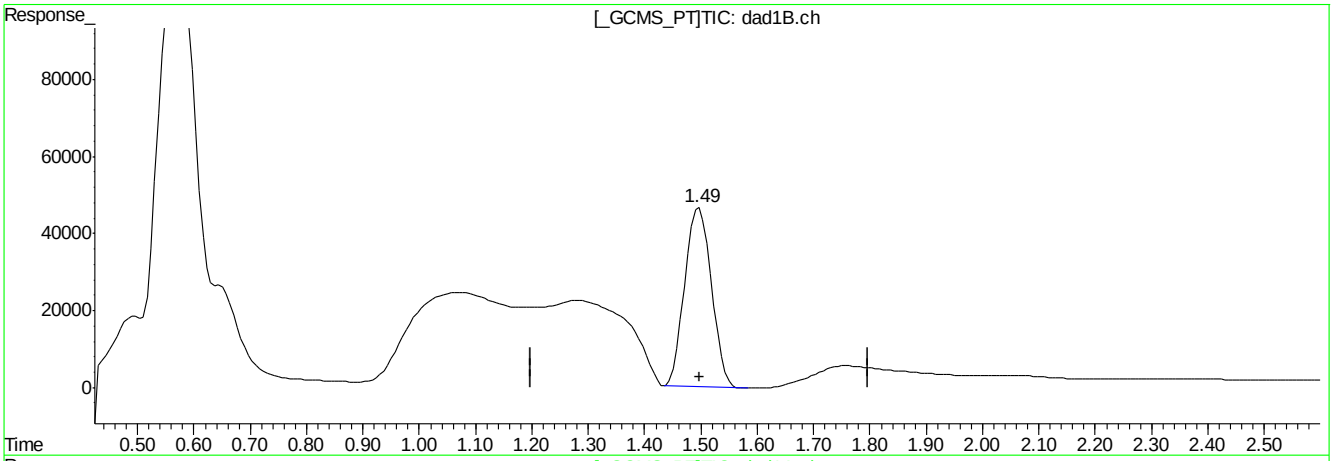
response 5715520

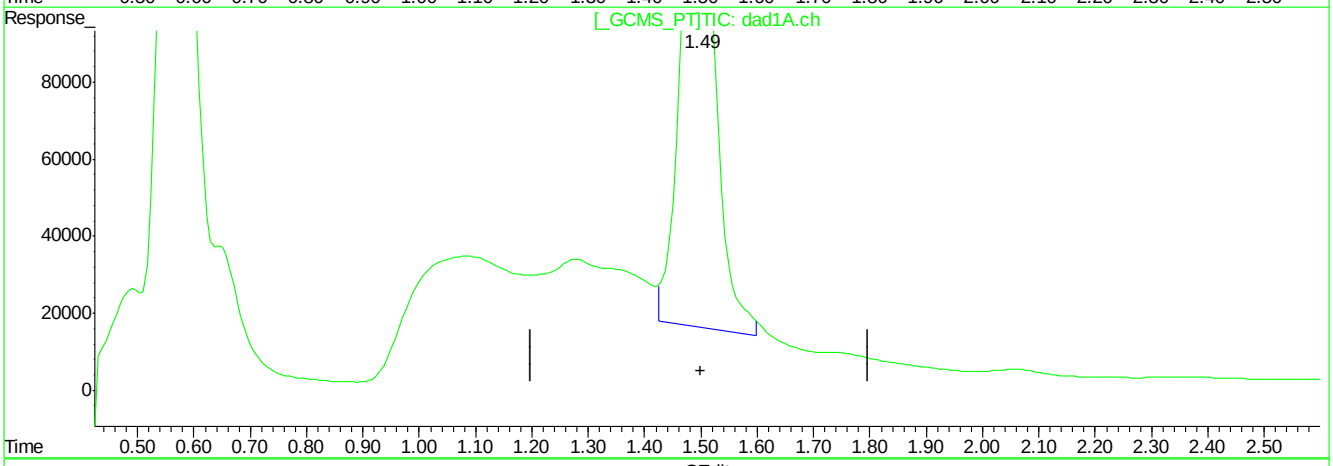
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:10:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.50min 1016.131ppb

response 1541076

(2) HMX #2

1.49min 1345.840ppb m

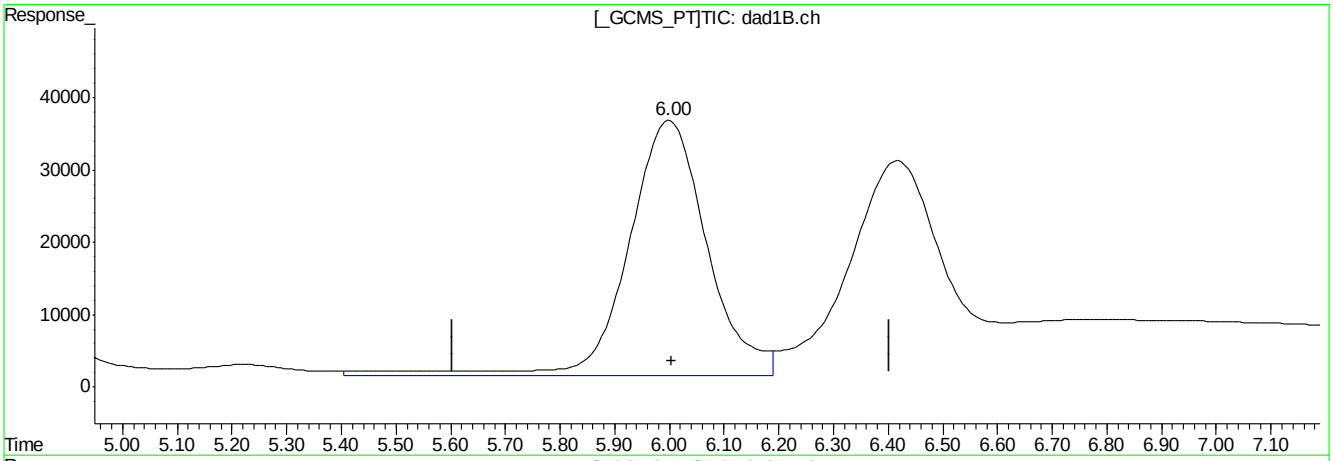
response 5884342

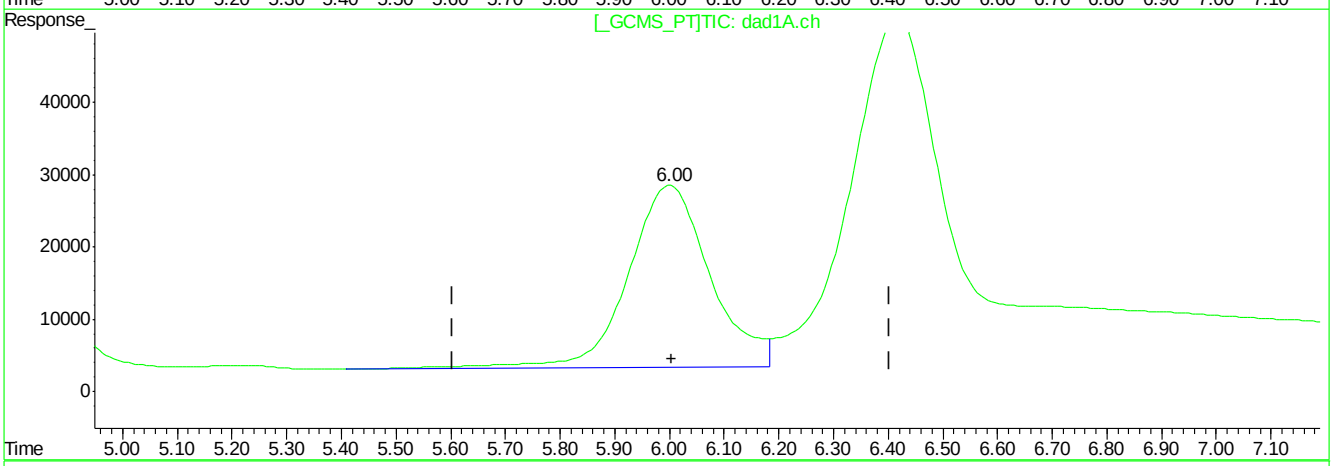
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:10:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.00min 676.204ppb

response 3558536

(7) 1,3-Dinitrobenzene #2

6.00min 726.551ppb

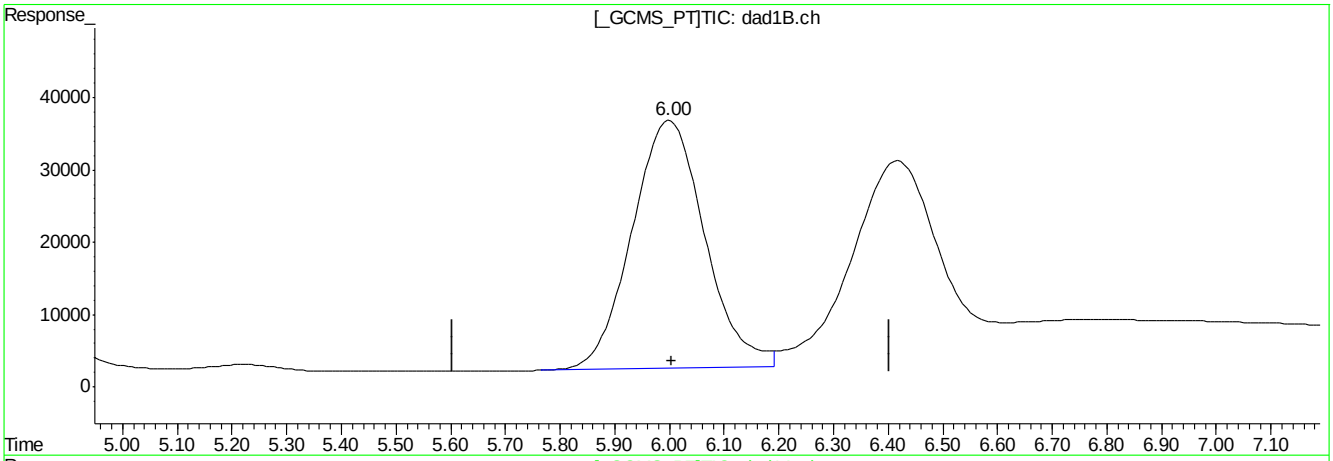
response 2647706

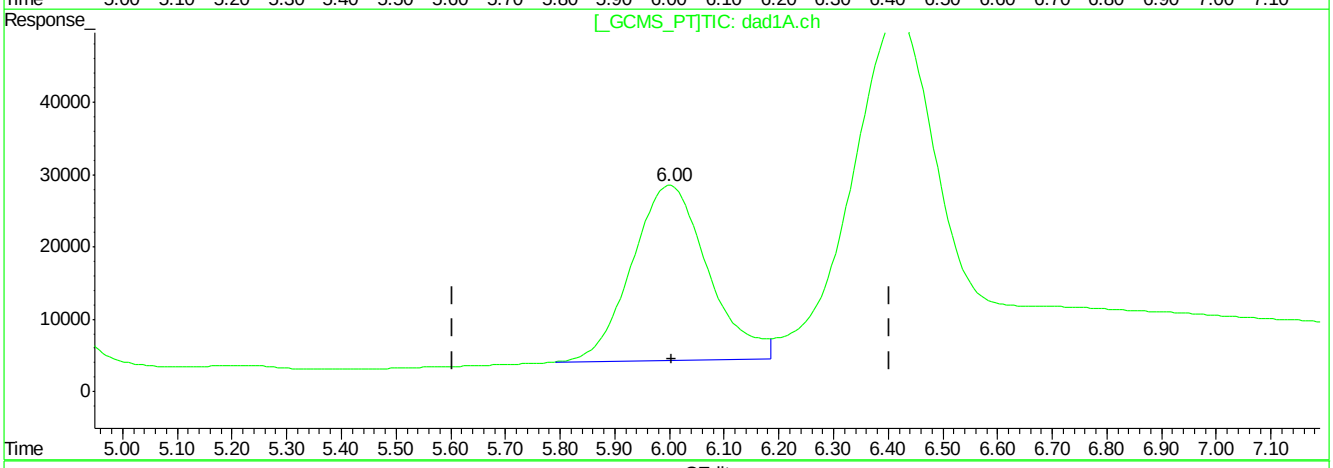
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:10:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.00min 604.381ppb m

response 3180567

(7) 1,3-Dinitrobenzene #2

6.00min 645.720ppb m

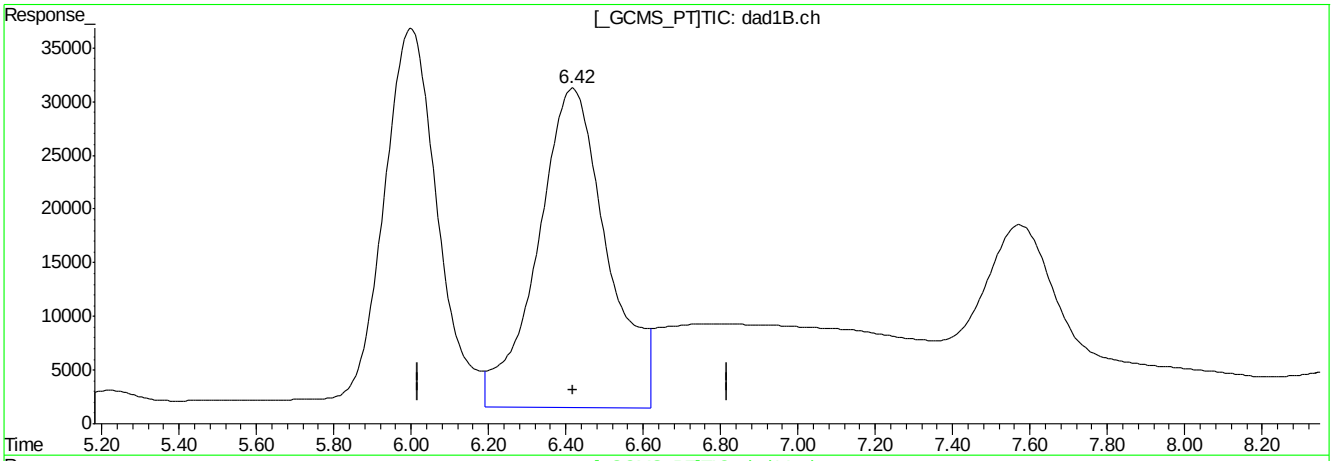
response 2353141

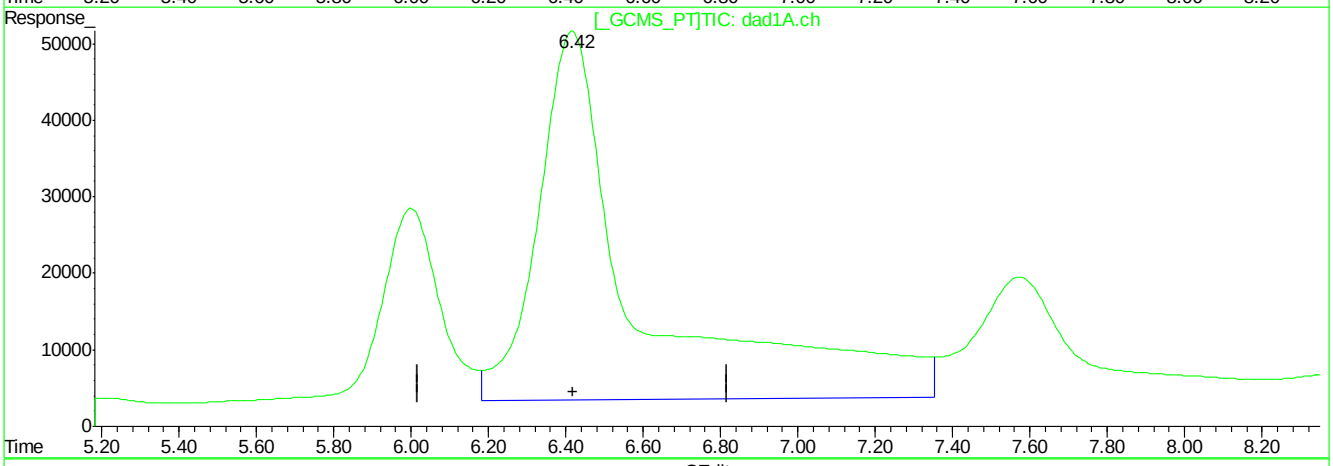
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:10:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.42min 918.109ppb

response 3724089

(8) 3,5-Dinitroaniline #2

6.42min 1290.734ppb

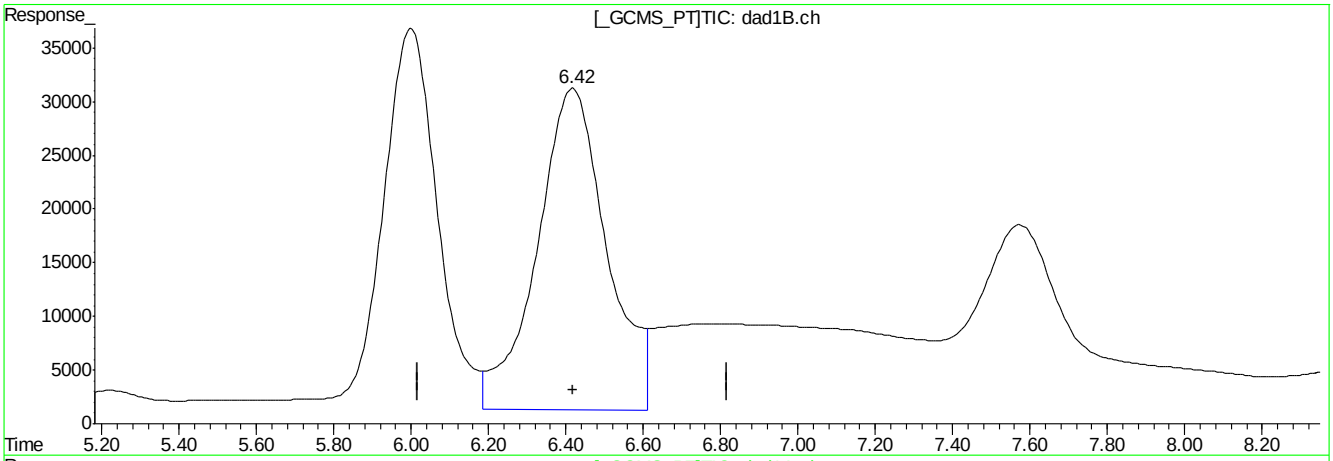
response 8717879

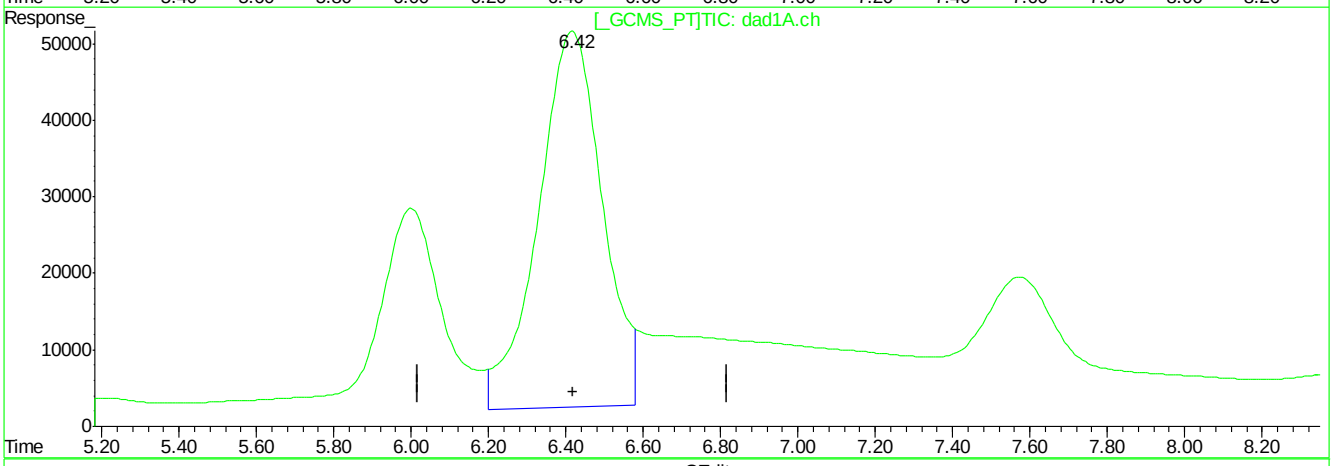
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:10:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.42min 929.390ppb m

response 3769846

(8) 3,5-Dinitroaniline #2

6.42min 840.221ppb m

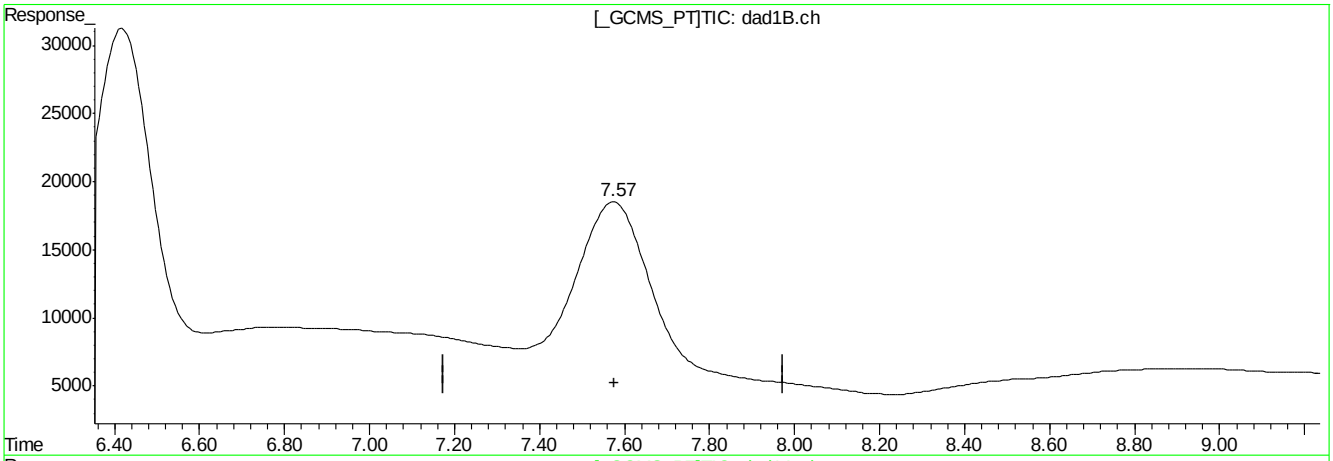
response 5675022

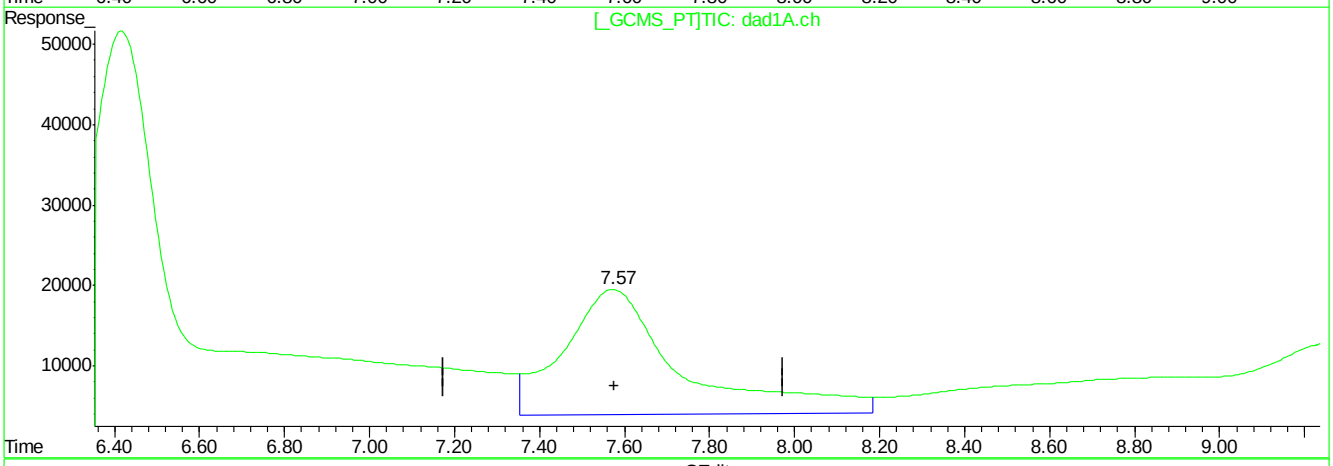
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:11:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.57min 1195.763ppb

response 3766231

(9) Nitrobenzene #2

7.57min 1051.517ppb

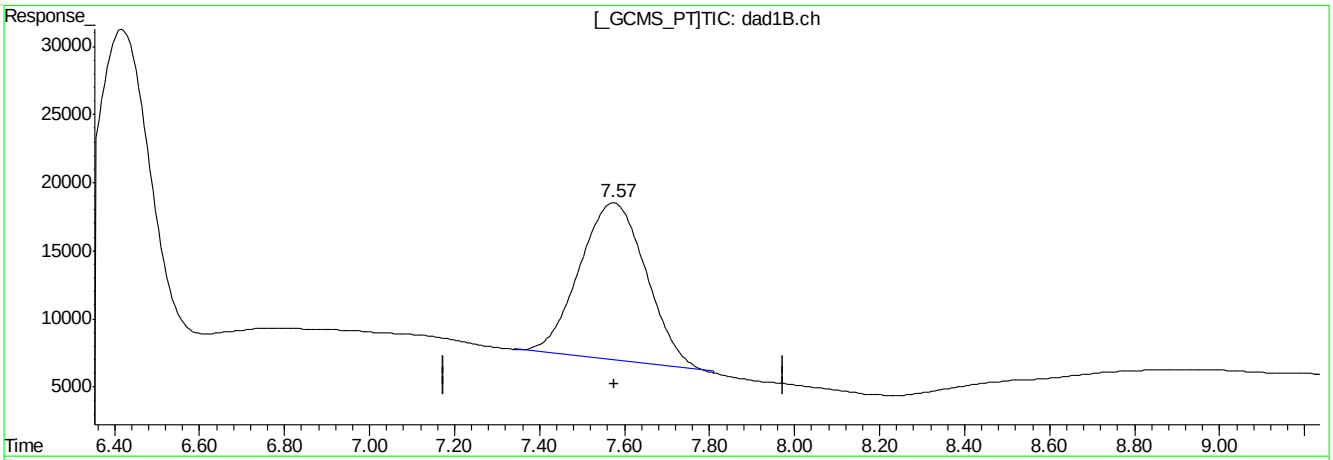
response 3009611

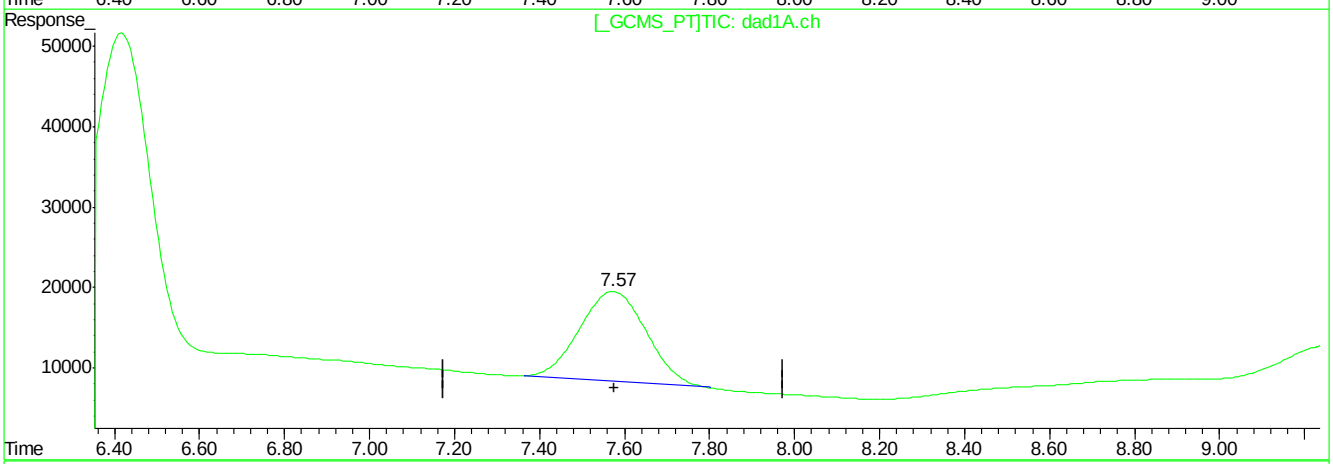
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:11:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.57min 398.811ppb m

response 1256115

(9) Nitrobenzene #2

7.57min 421.645ppb m

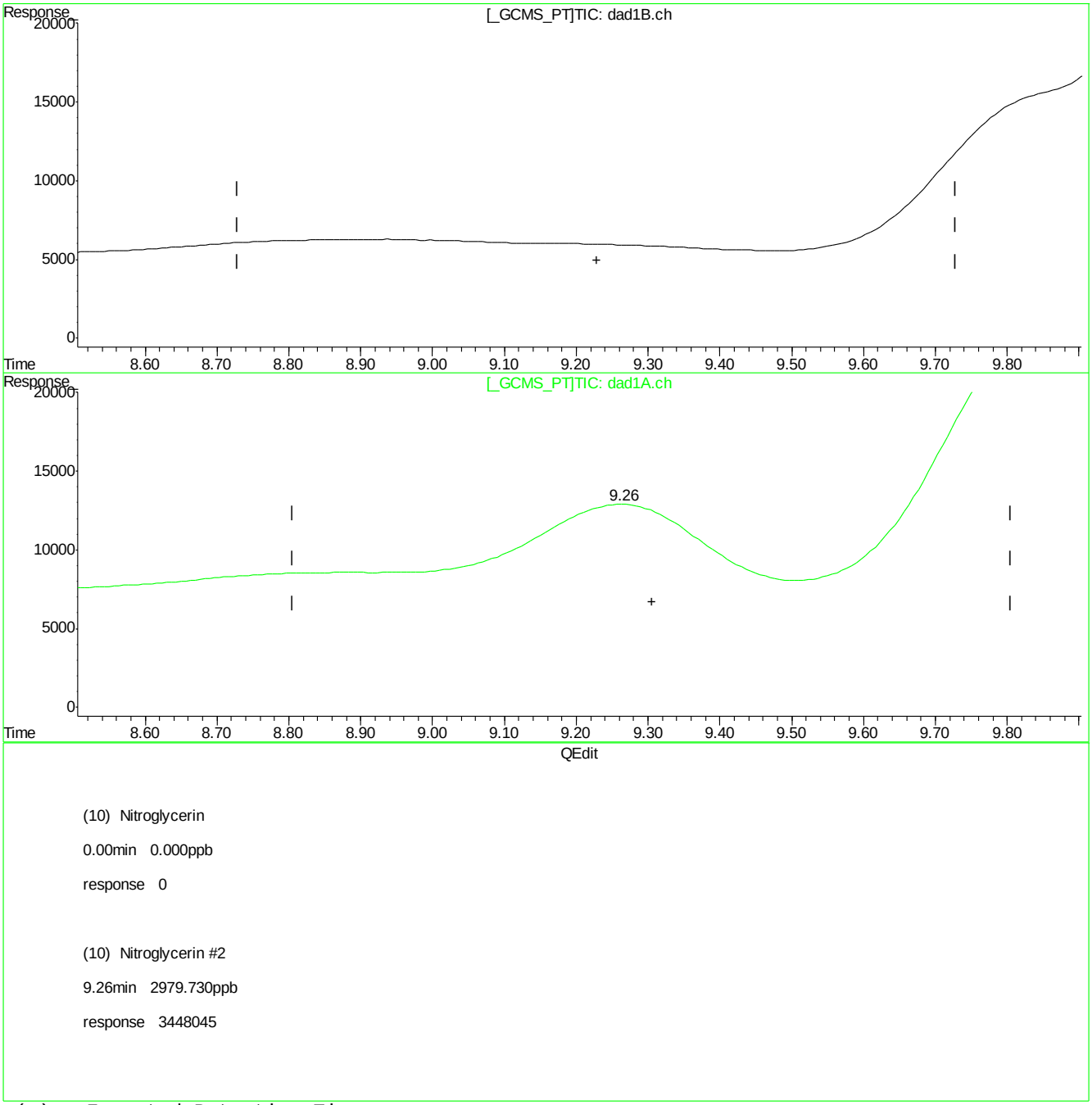
response 1206815

(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:11:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.26min 2979.730ppb

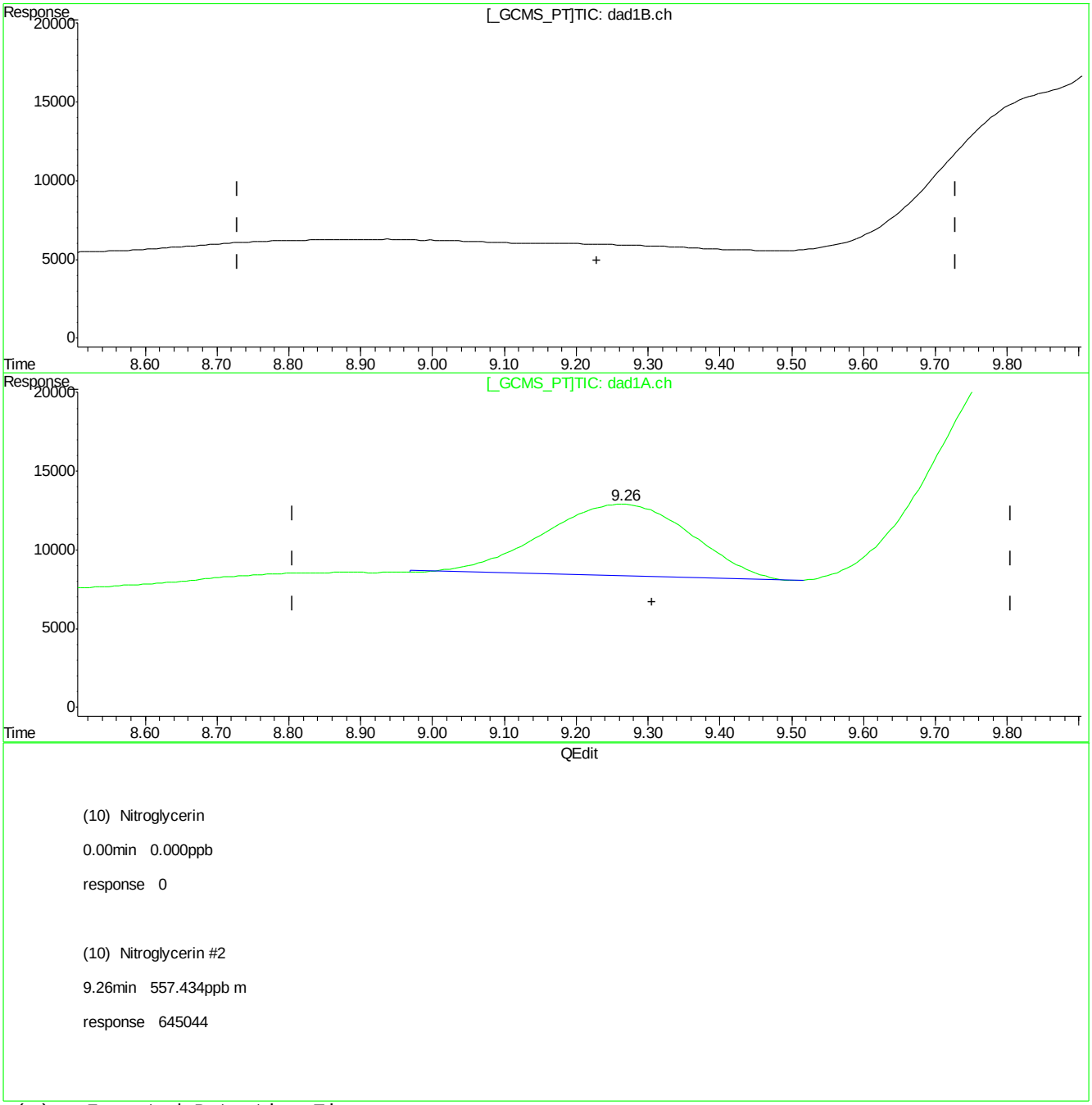
response 3448045

(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:11:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration

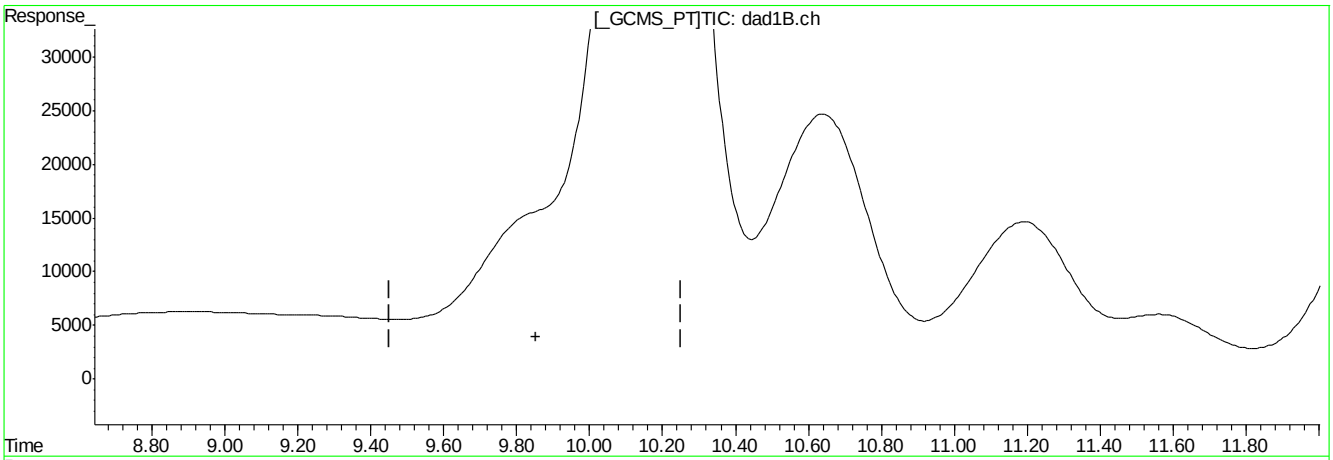


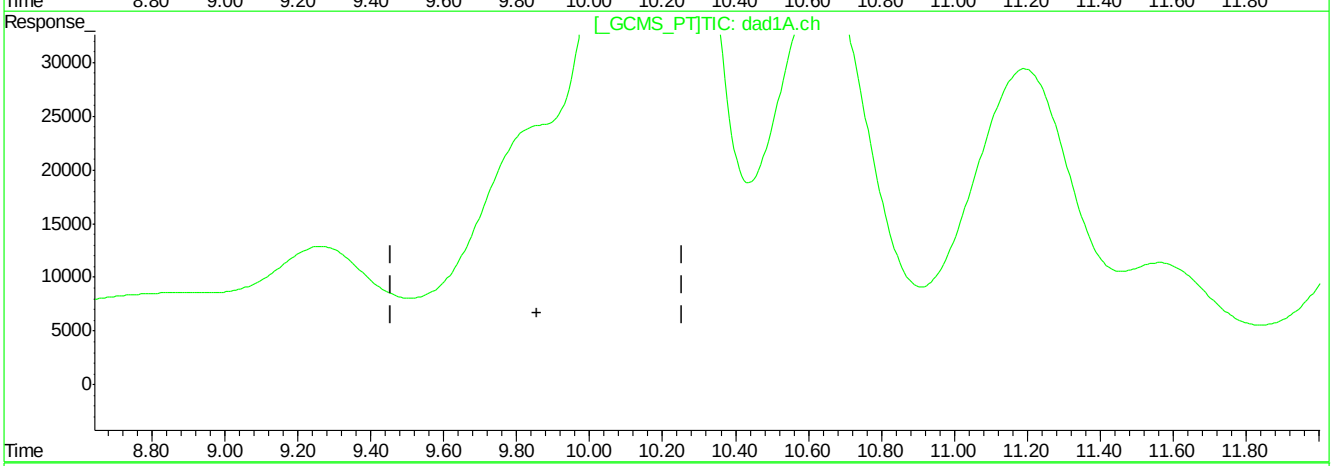
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:11:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

0.00min 0.000ppb

response 0

(11) Tetryl #2

0.00min 0.000ppb

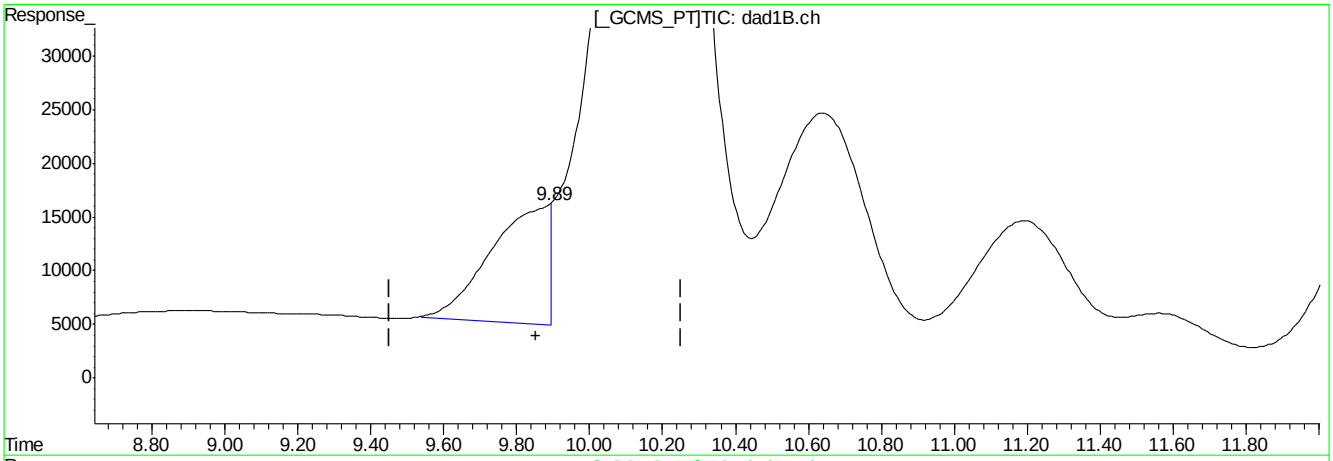
response 0

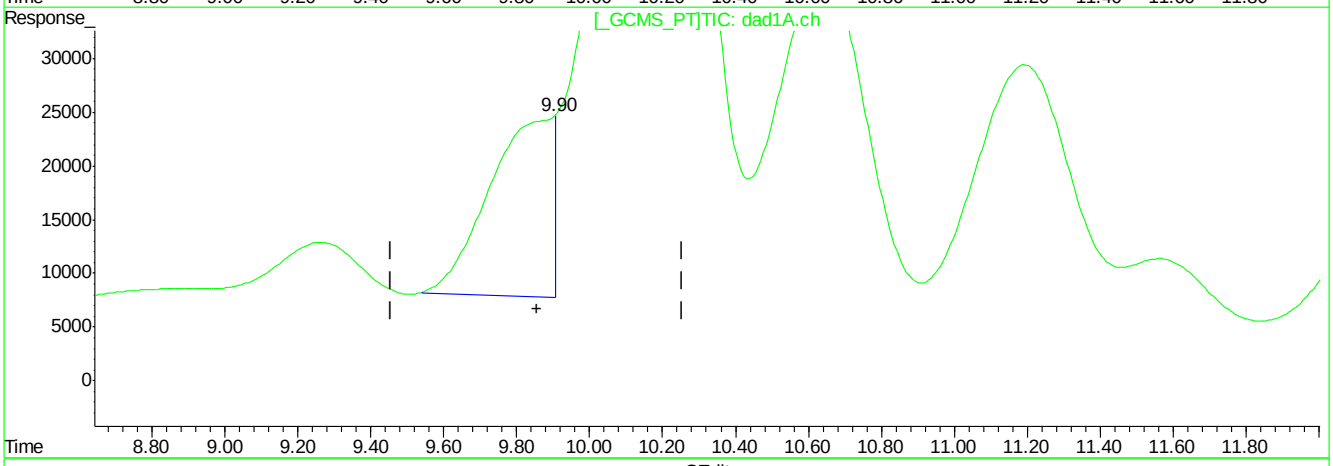
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:11:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.89min 419.423ppb m

response 1202458

(11) Tetryl #2

9.90min 437.122ppb m

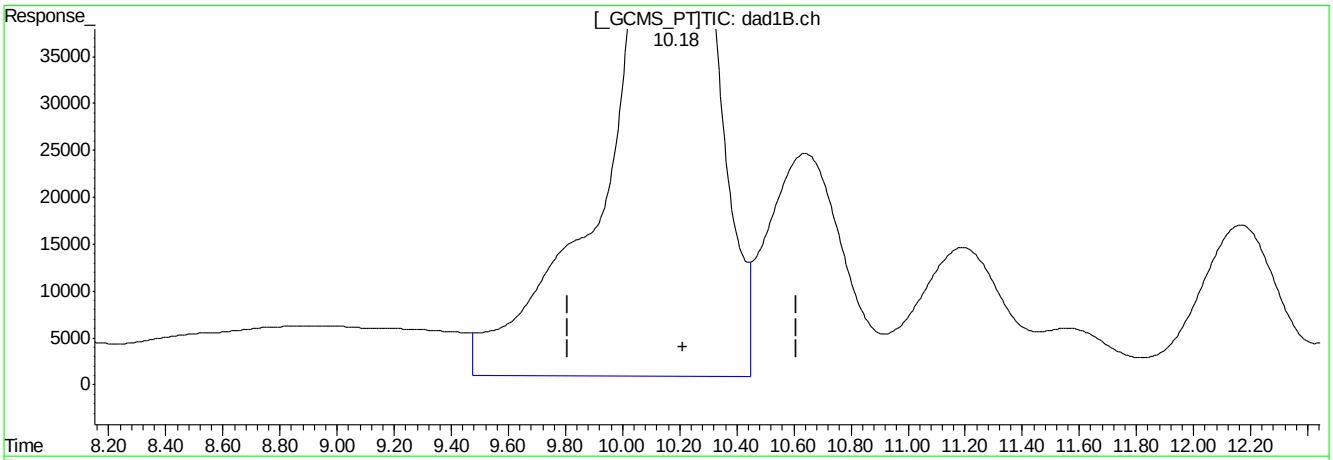
response 2033590

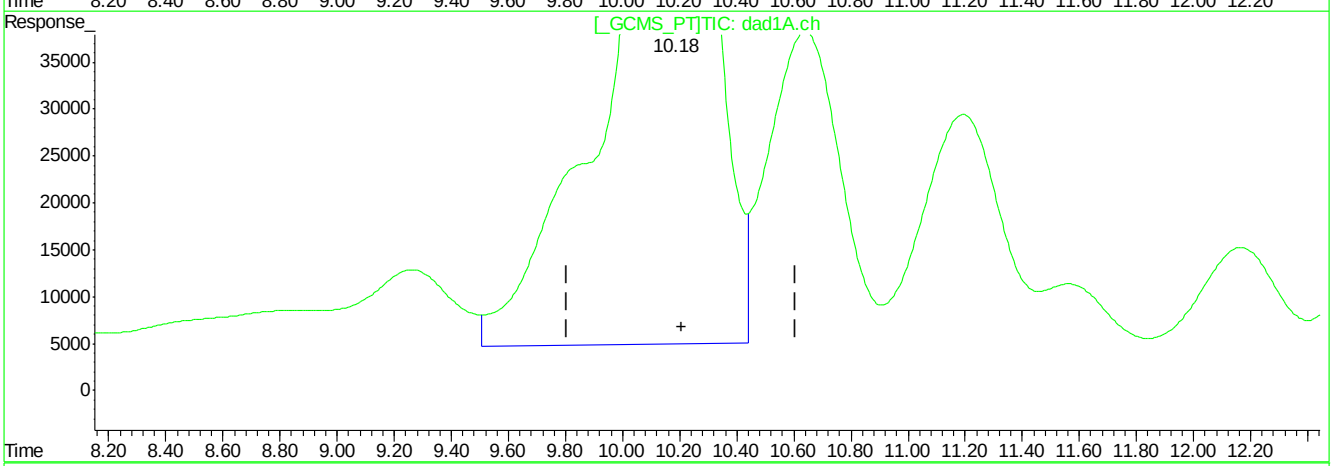
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:11:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.18min 4858.943ppb

response 18313245

(12) 2,4,6-Trinitrotoluene #2

10.18min 4655.542ppb

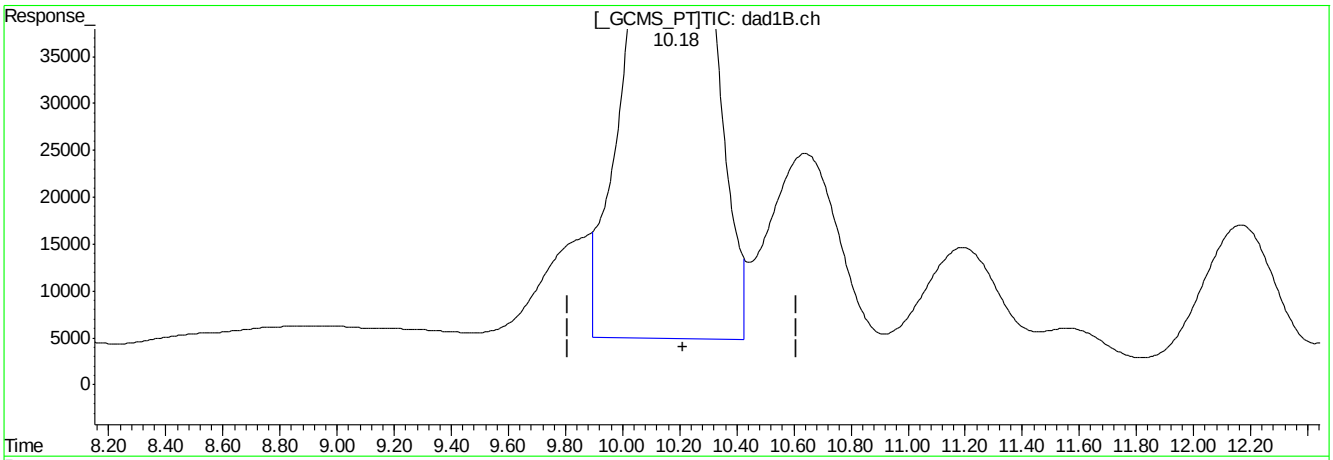
response 21653856

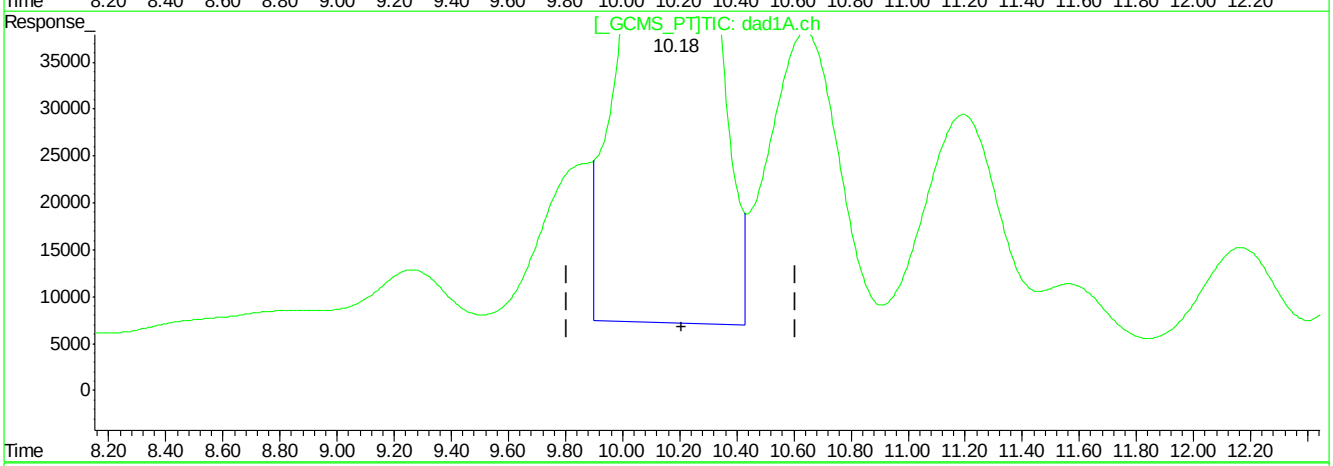
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:12:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.18min 3875.699ppb m

response 14607423

(12) 2,4,6-Trinitrotoluene #2

10.18min 3897.260ppb m

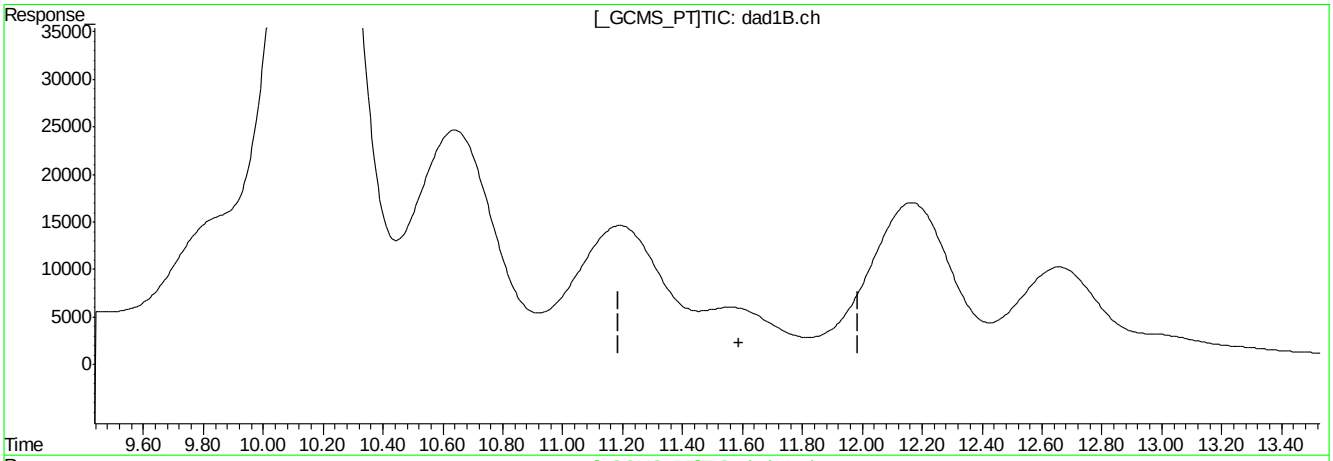
response 18126936

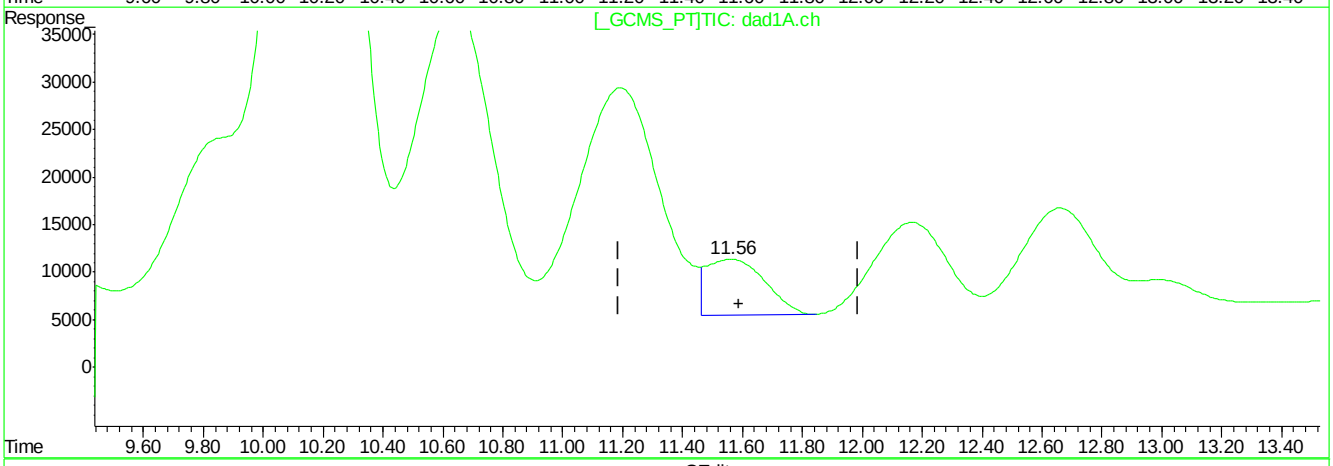
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:12:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

0.00min 0.000ppb

response 0

(15) 3,4-Dinitrotoluene #2 (S)

11.56min 254.433ppb

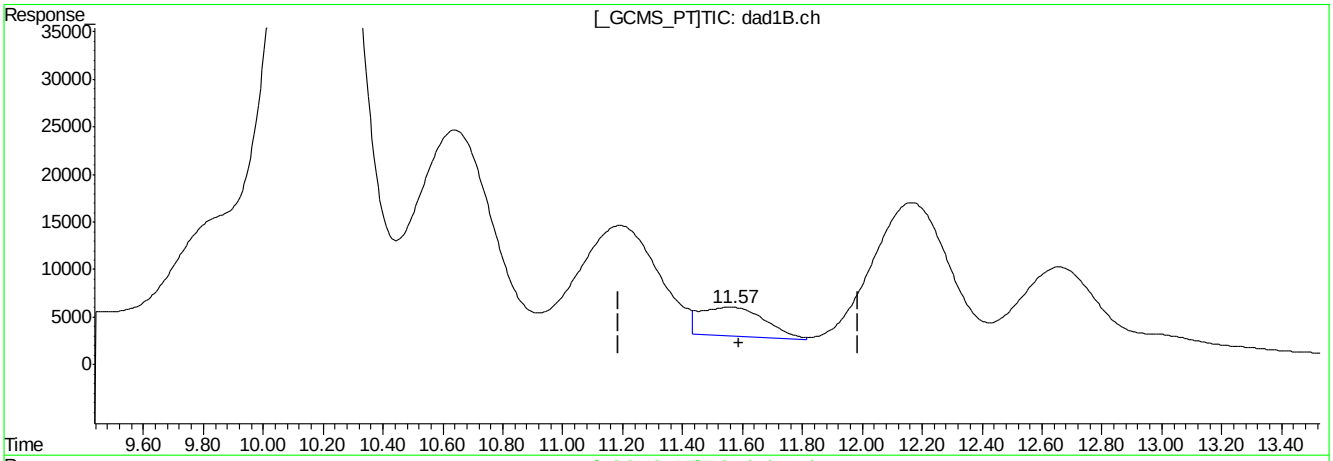
response 809990

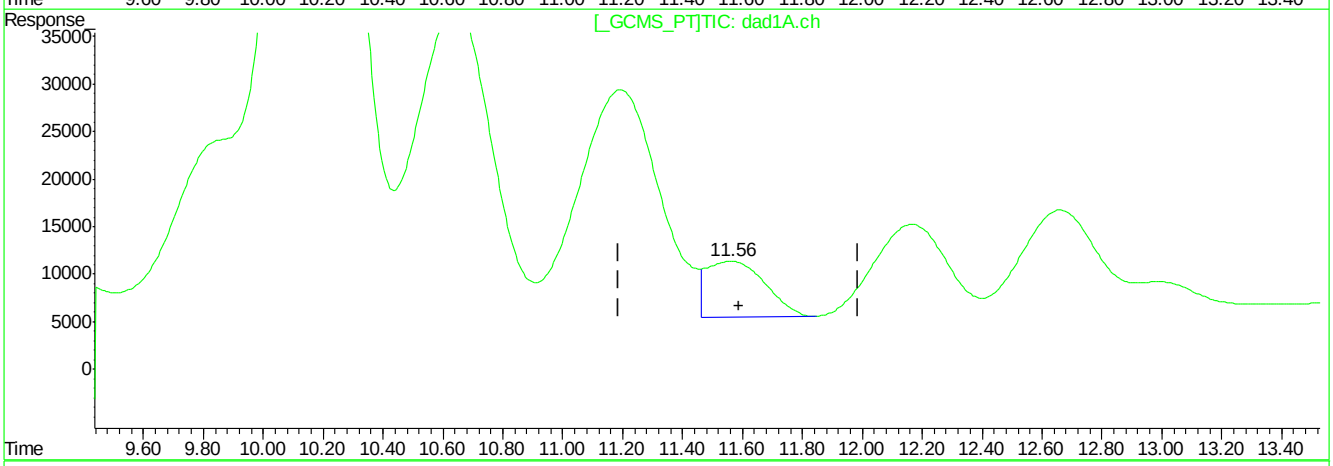
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:12:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.57min 226.315ppb m

response 462540

(15) 3,4-Dinitrotoluene #2 (S)

11.56min 254.433ppb

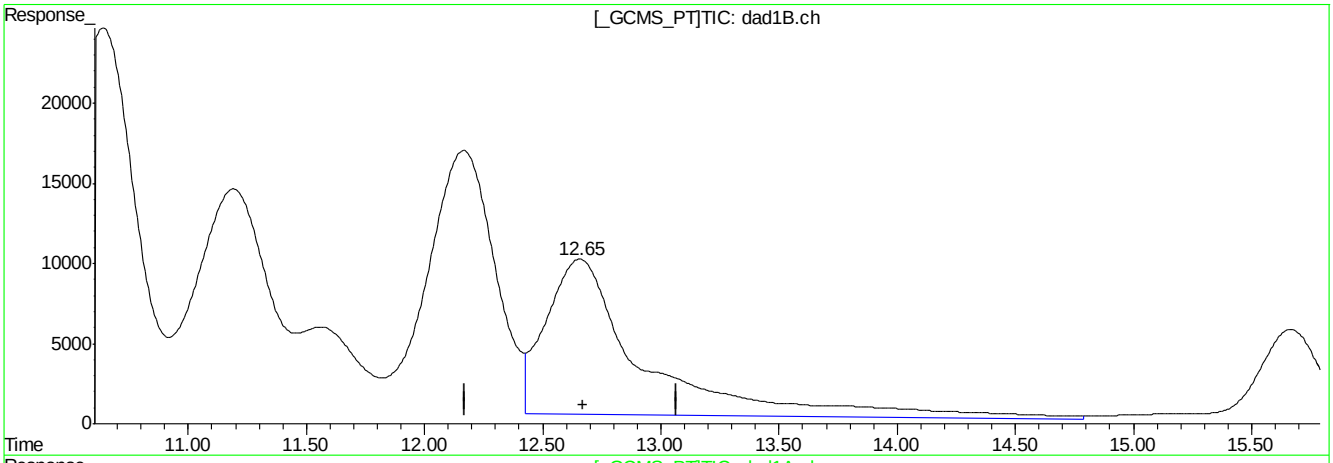
response 809990

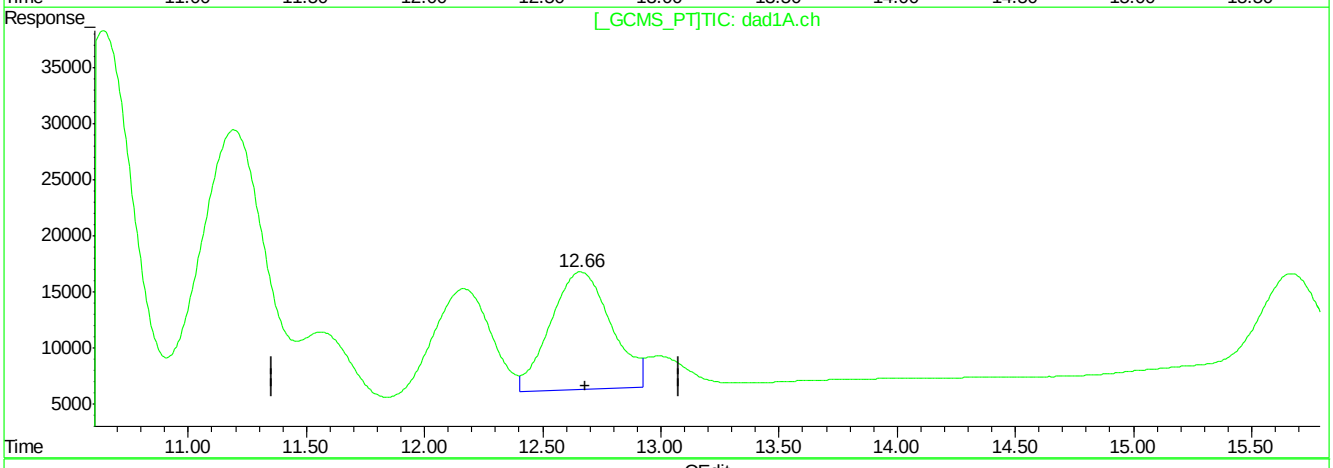
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:12:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.66min 1036.281ppb

response 2830319

(17) 2,6-Dinitrotoluene #2

12.66min 529.379ppb

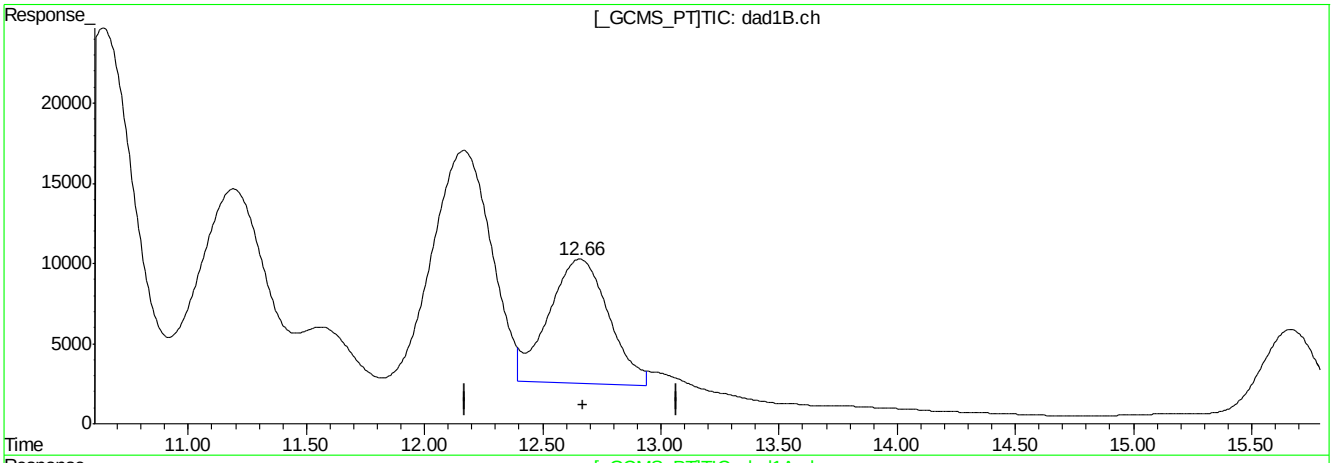
response 1879492

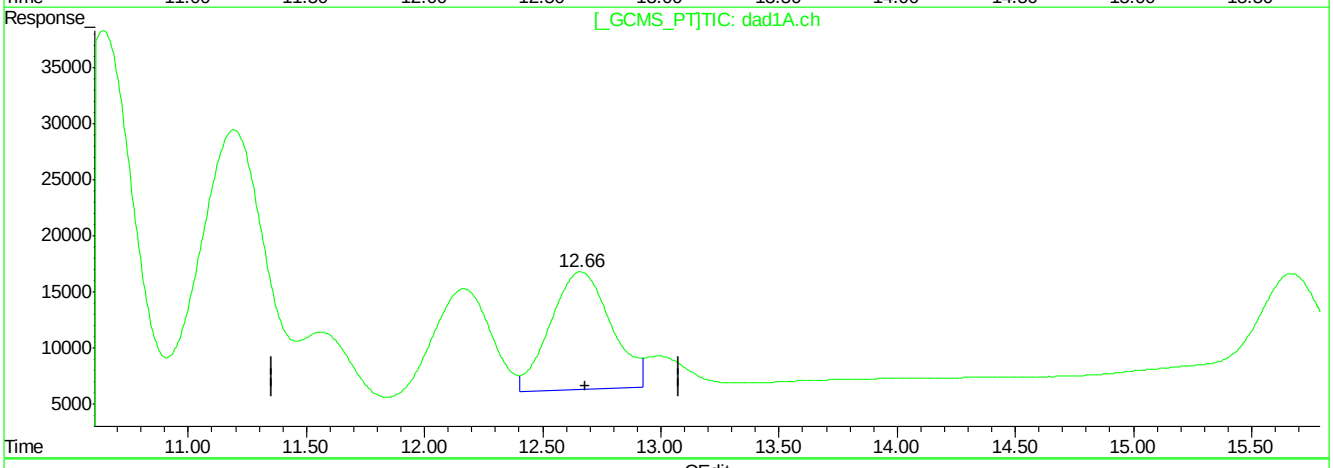
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:12:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.66min 504.101ppb m

response 1376814

(17) 2,6-Dinitrotoluene #2

12.66min 529.379ppb

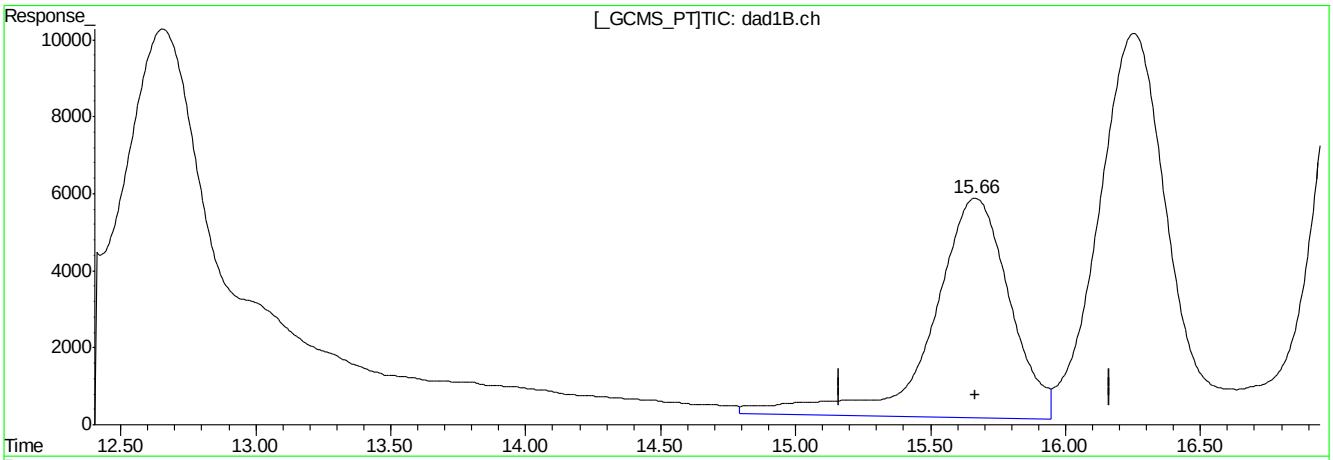
response 1879492

(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:12:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.67min 500.492ppb

response 1138940

(18) o-Nitrotoluene #2

15.67min 124.959ppb

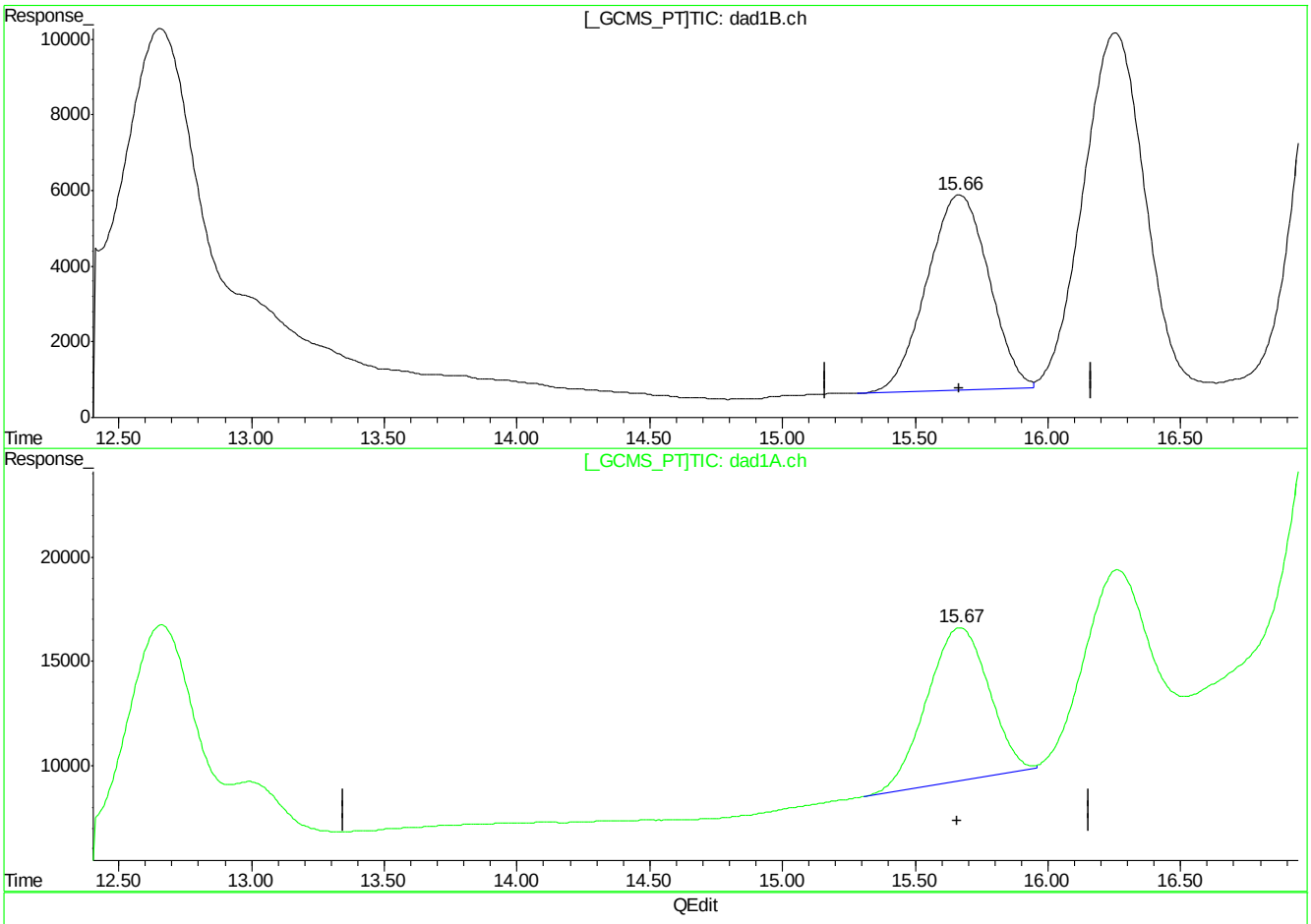
response 365890

(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:12:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.66min 369.693ppb m

response 841289

(18) o-Nitrotoluene #2

15.67min 408.408ppb m

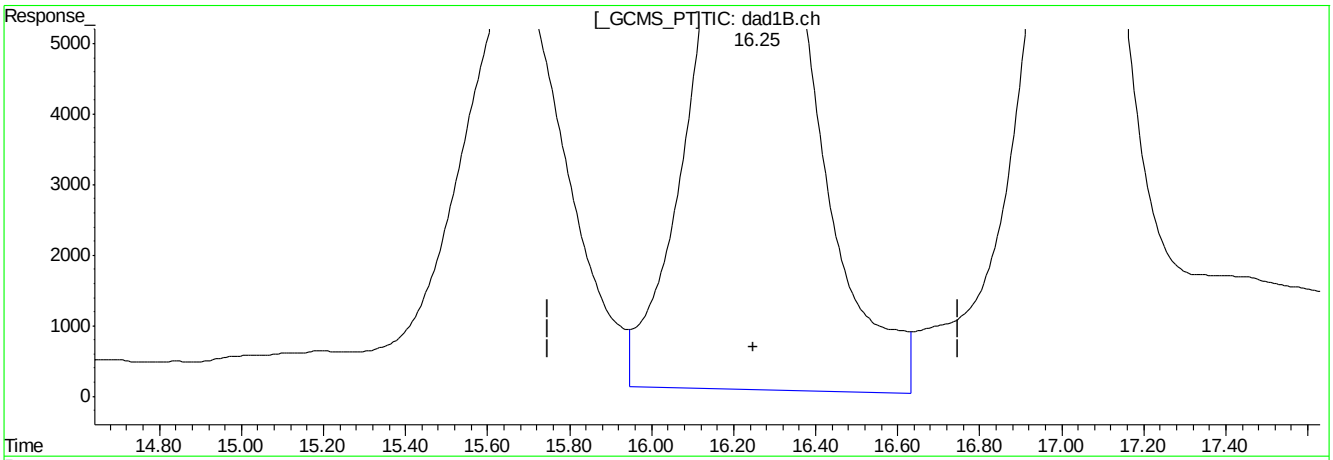
response 1195849

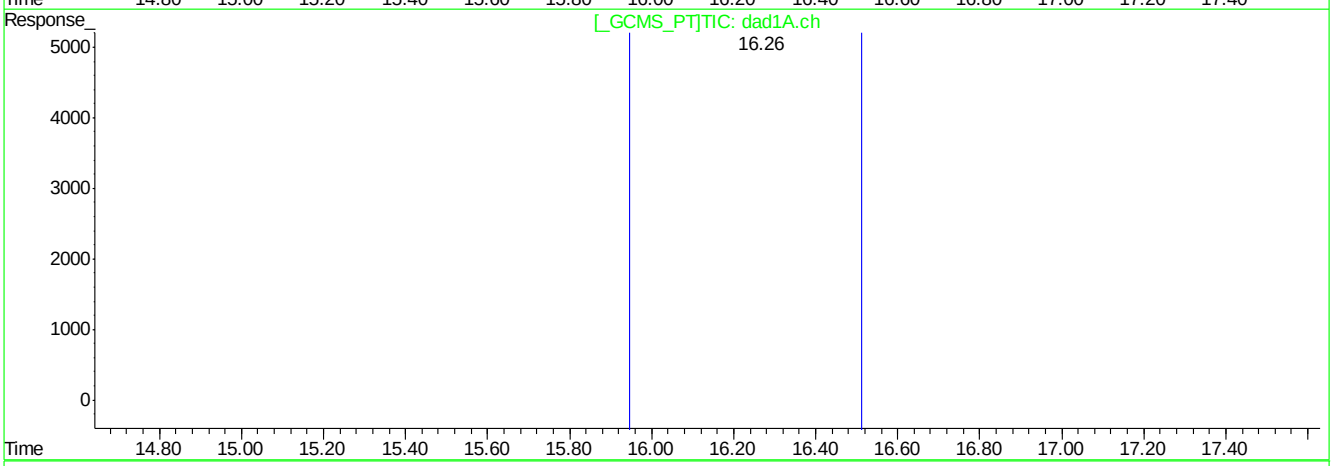
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:13:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.25min 516.210ppb

response 1792100

(19) p-Nitrotoluene #2

16.26min 416.192ppb

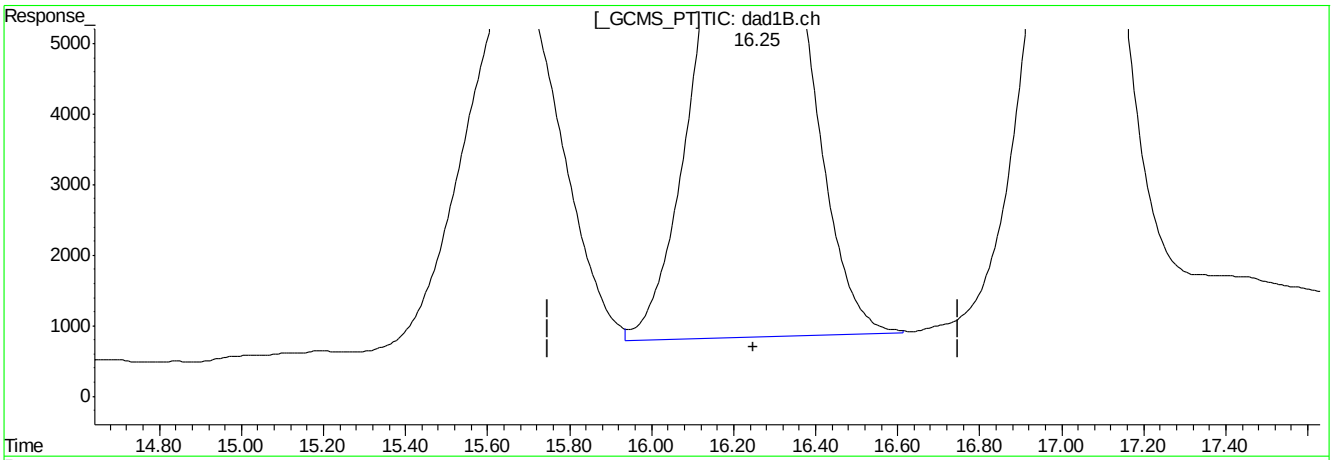
response 1115418

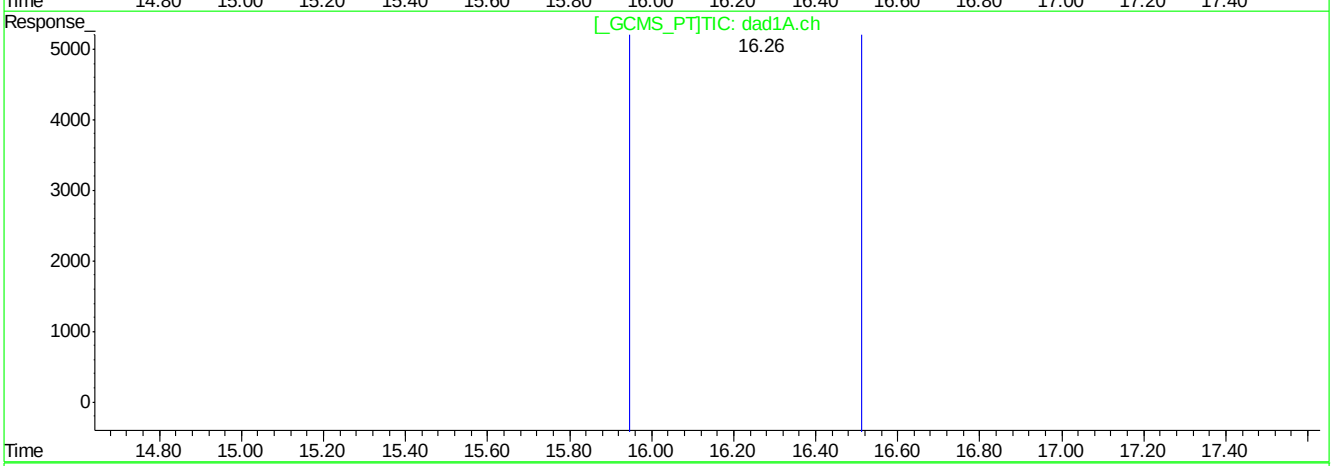
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:13:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.25min 426.035ppb m

response 1479043

(19) p-Nitrotoluene #2

16.26min 416.192ppb

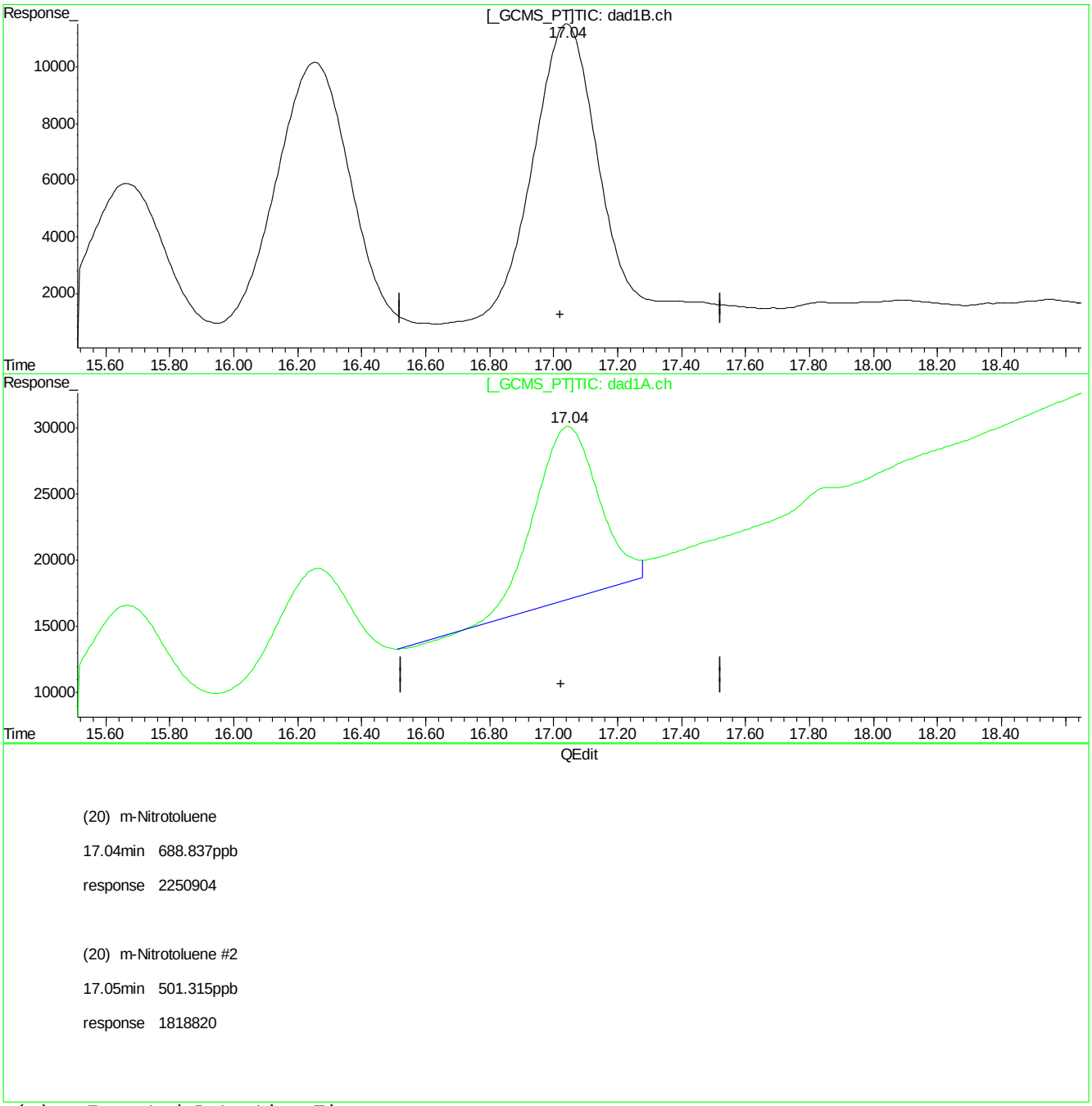
response 1115418

(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:13:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.04min 688.837ppb

response 2250904

(20) m-Nitrotoluene #2

17.05min 501.315ppb

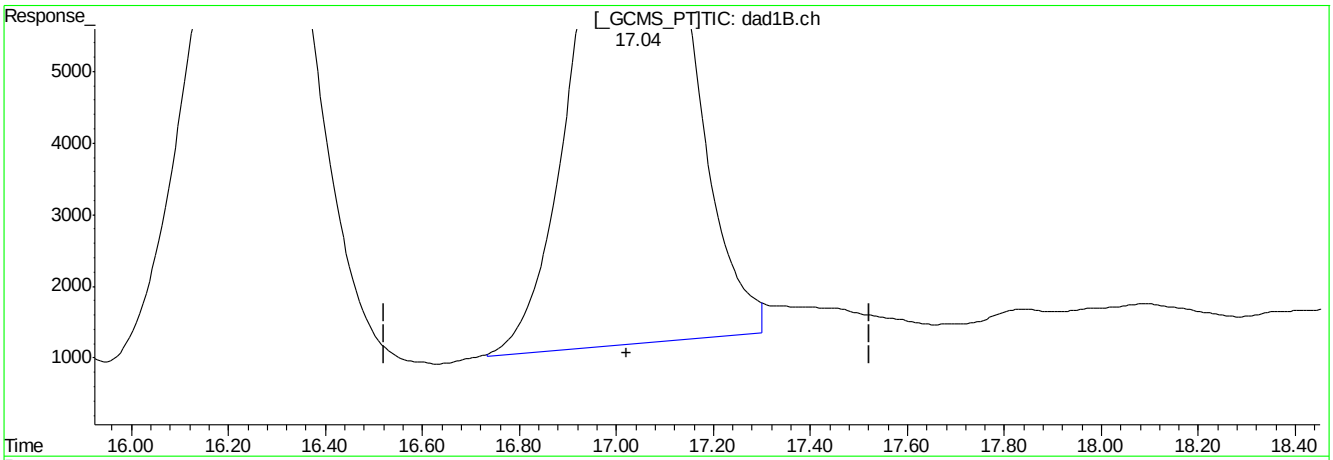
response 1818820

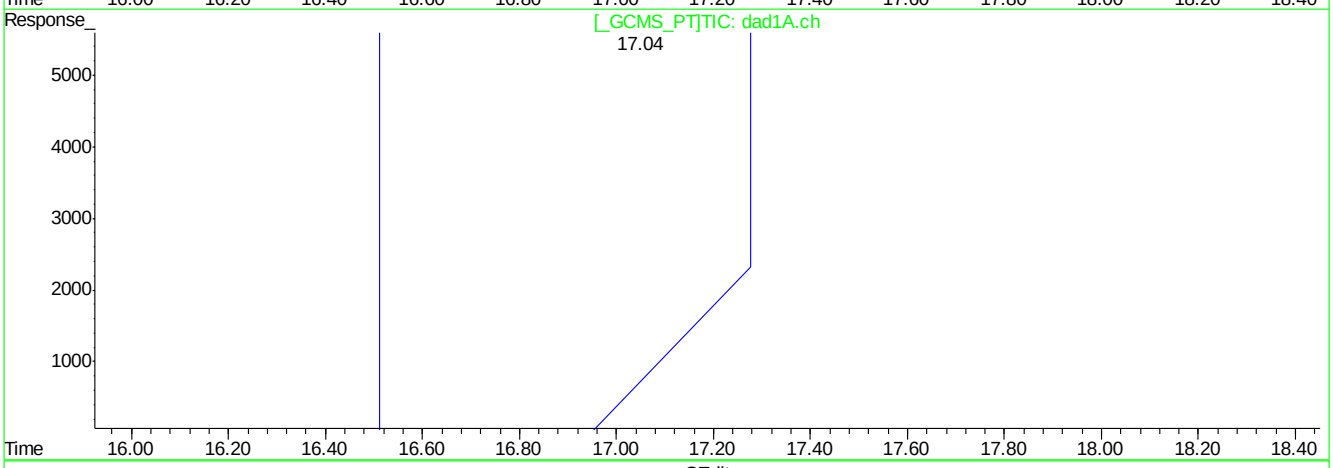
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:13:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.04min 434.925ppb m

response 1421199

(20) m-Nitrotoluene #2

17.05min 501.315ppb

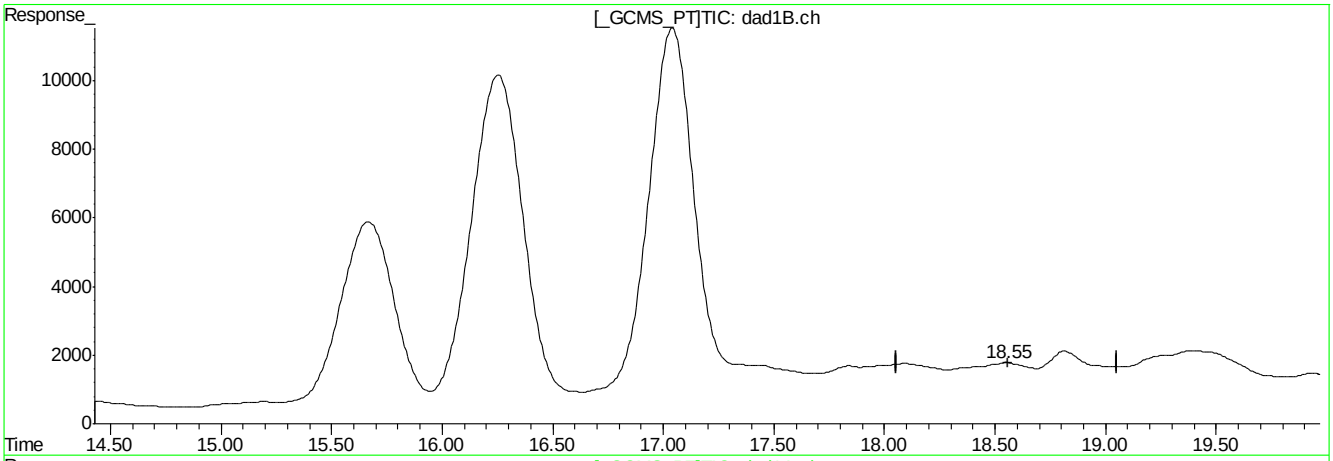
response 1818820

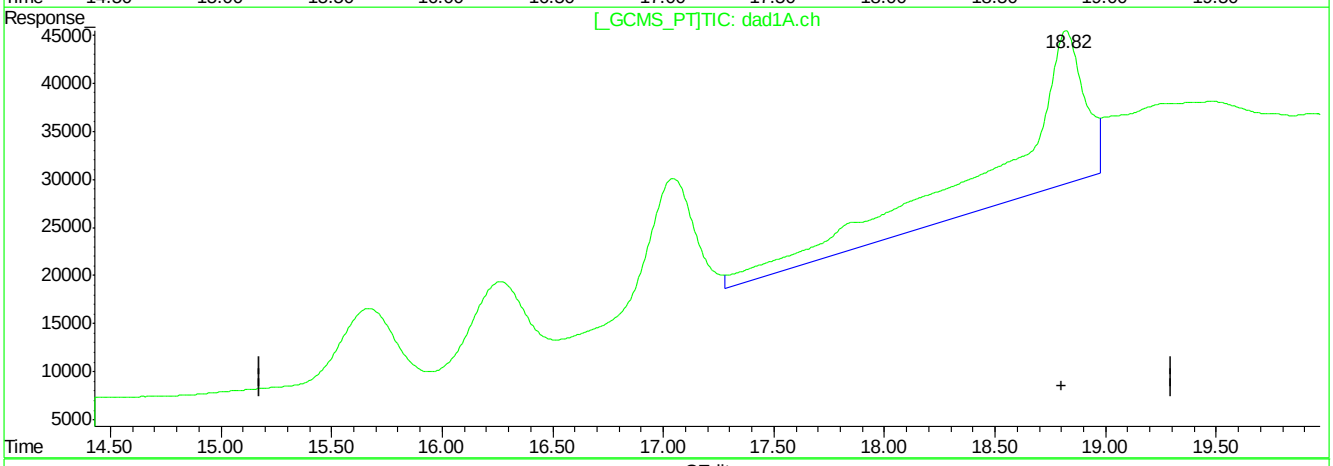
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:13:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.55min 0.000ppb

response 453461

(21) PETN #2

18.82min 2961.503ppb

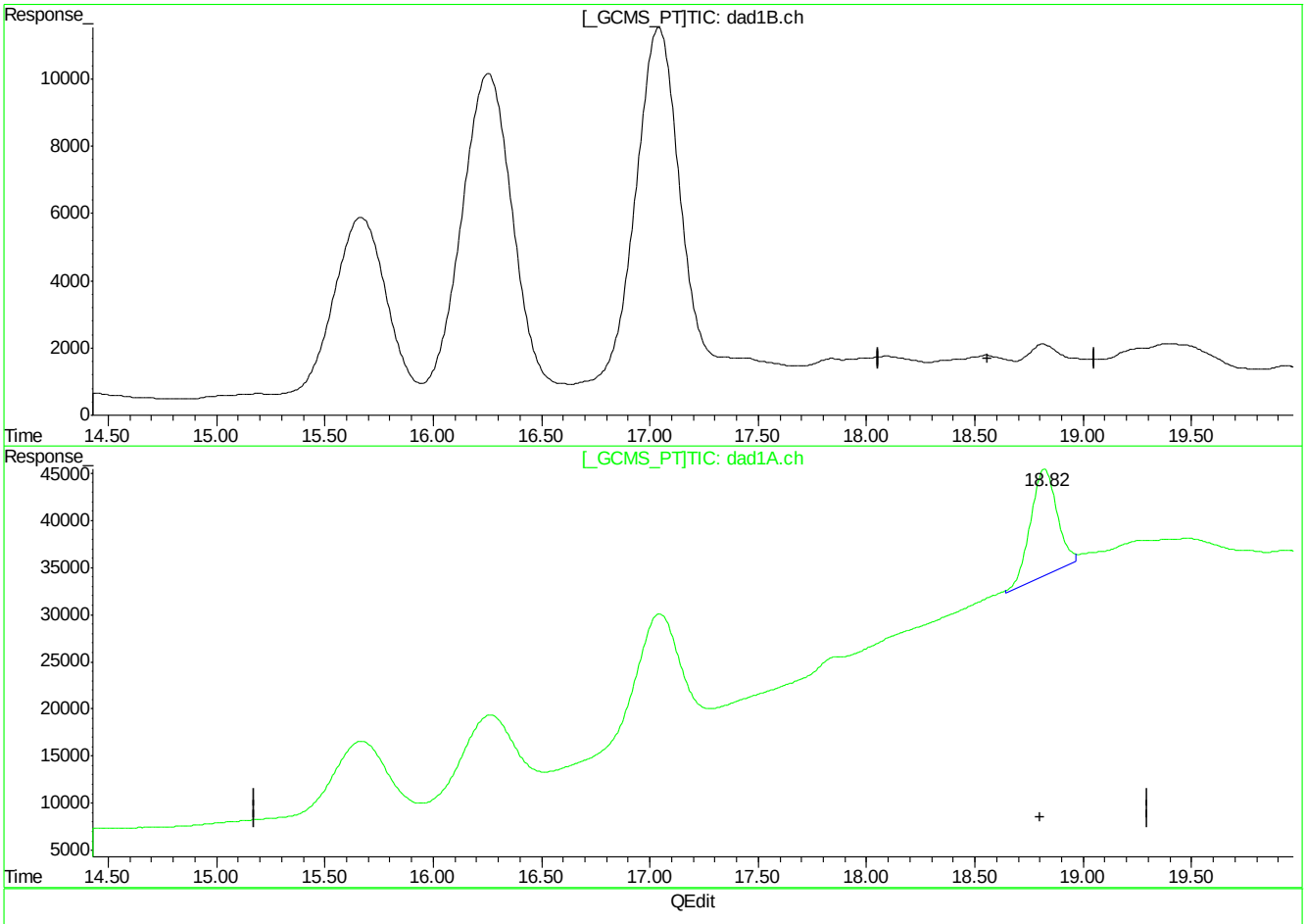
response 3933197

(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:13:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84640-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.82min 730.423ppb m

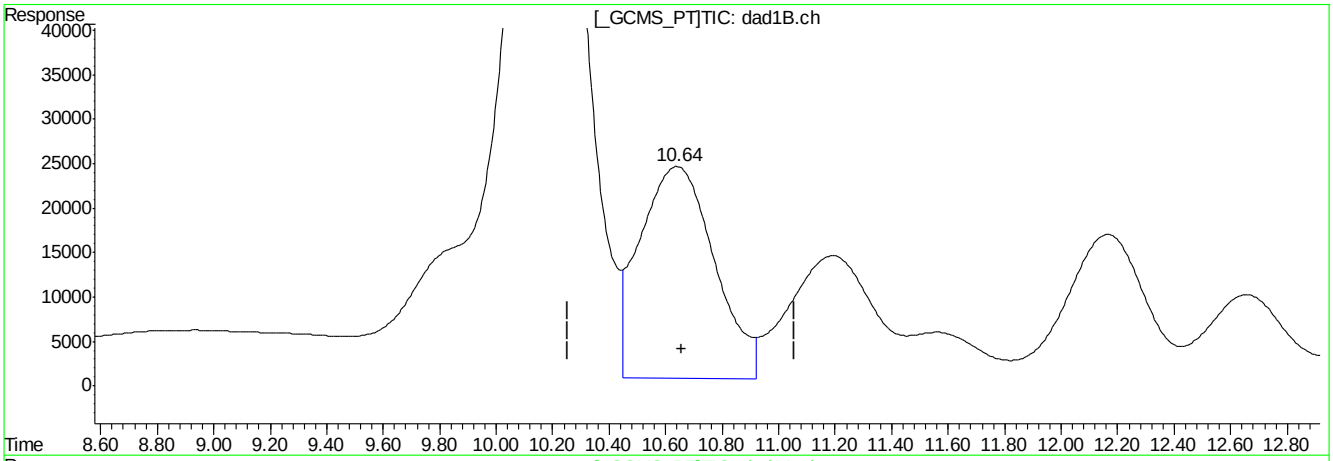
response 970081

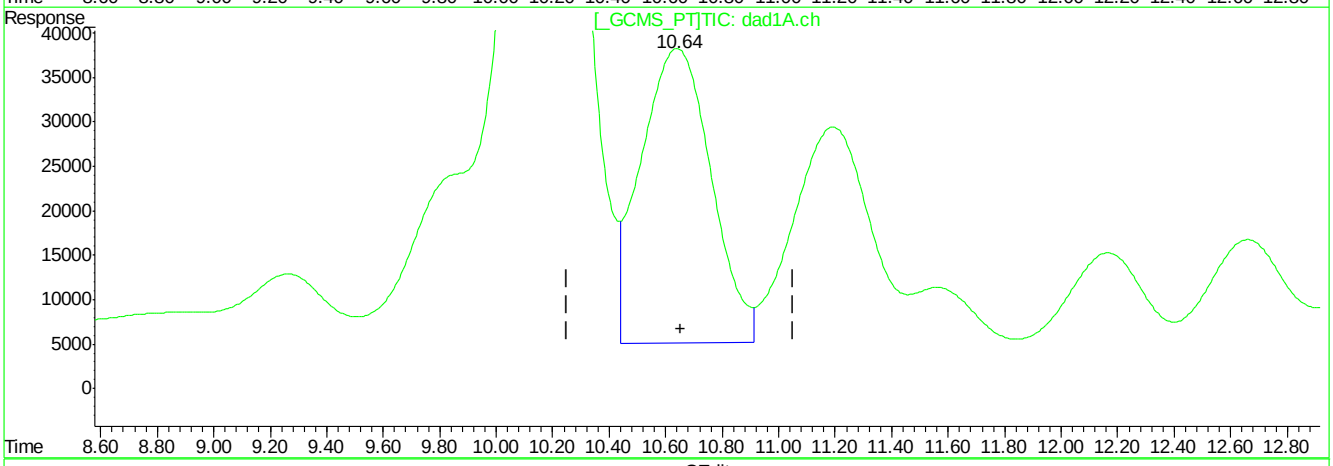
(+) = Expected Retention Time
PP390610.D GPP2428_040221PRI.M Fri Apr 23 10:13:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84960-MSD Inst : G1315B
Misc : op84960,GPP2438,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:13 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.64min 1303.592ppb

response 4379138

(13) 2-Amino-4,6-Dinitrotoluene #2

10.64min 1133.355ppb

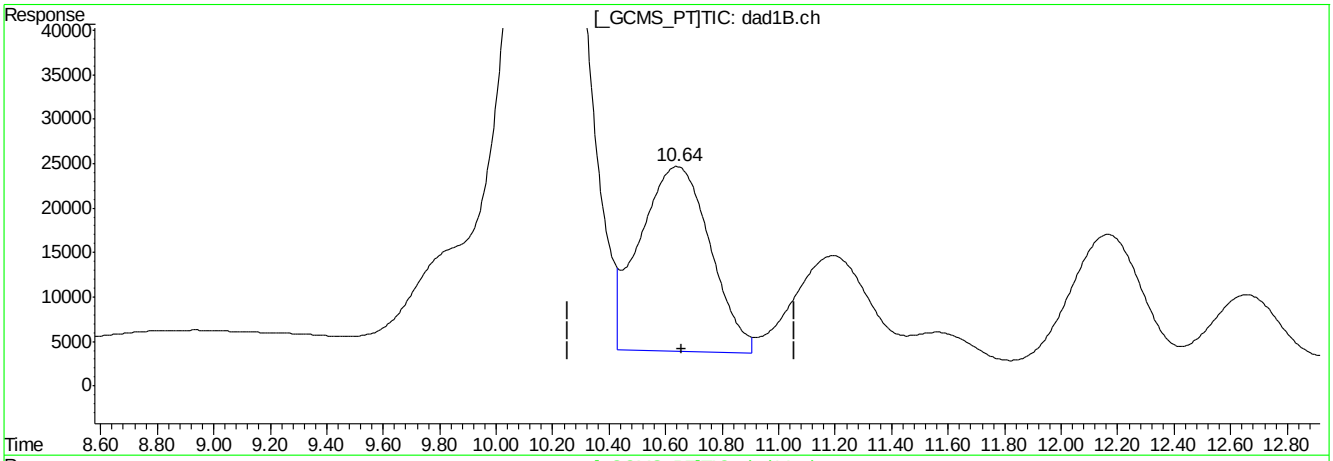
response 5757639

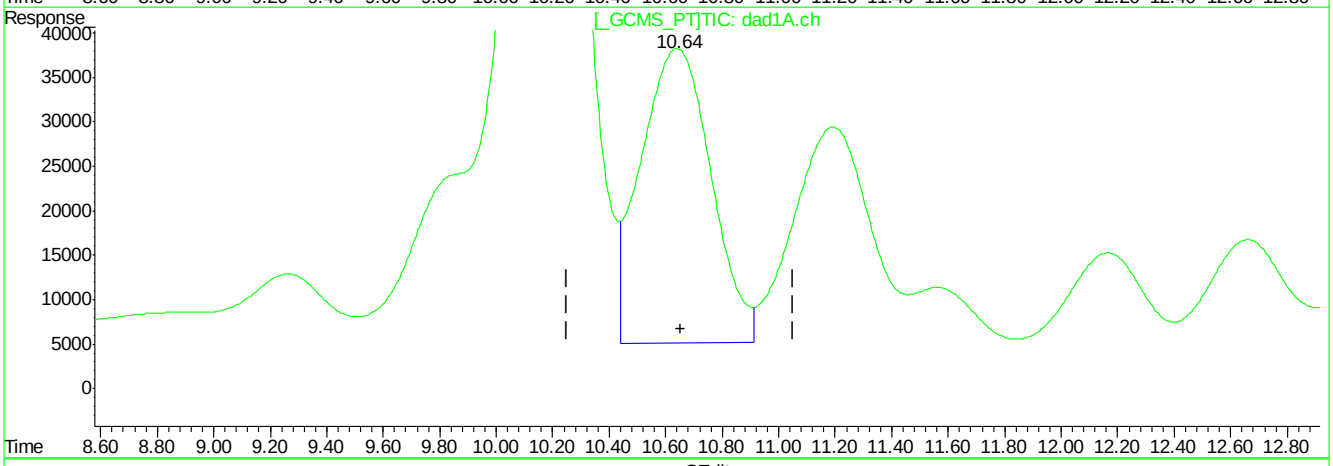
(+) = Expected Retention Time
PP390610.D GPP2439_042321PRI.M Mon Apr 26 15:39:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84960-MSD Inst : G1315B
Misc : op84960,GPP2438,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:13 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.64min 1069.557ppb m

response 3592950

(13) 2-Amino-4,6-Dinitrotoluene #2

10.64min 1133.355ppb

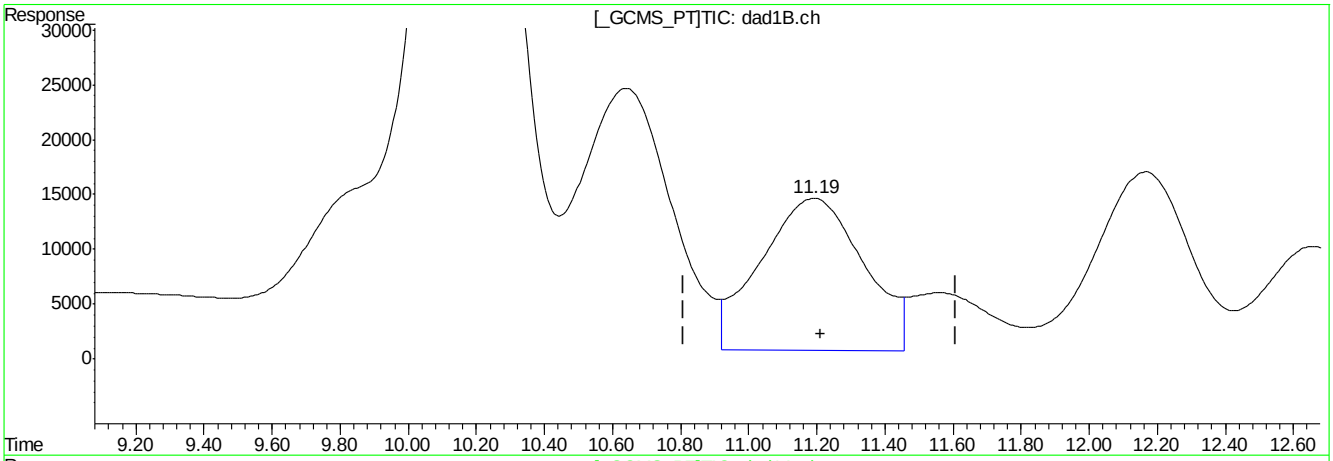
response 5757639

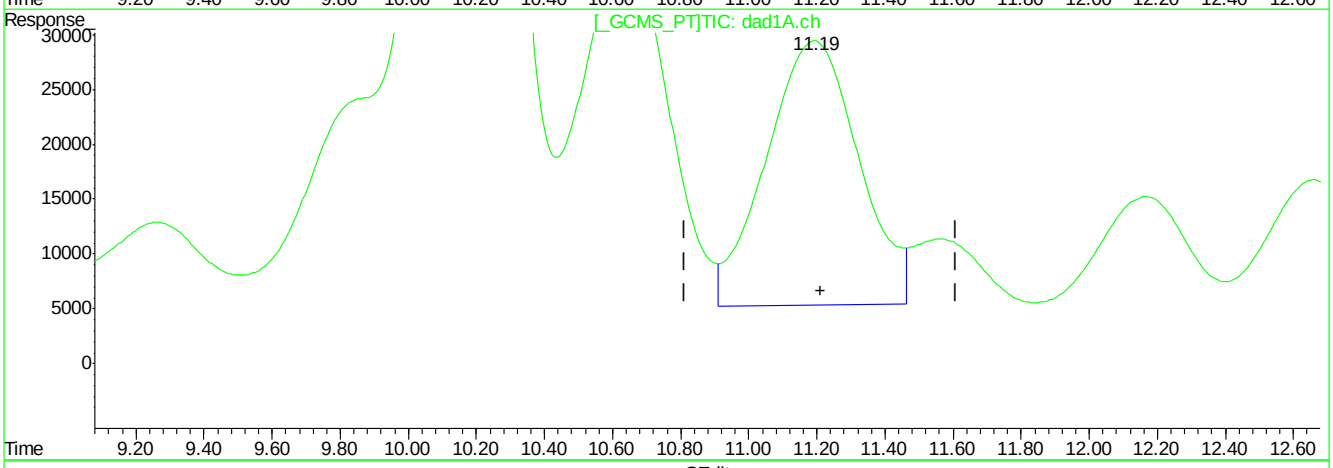
(+) = Expected Retention Time
PP390610.D GPP2439_042321PRI.M Mon Apr 26 15:39:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84960-MSD Inst : G1315B
Misc : op84960,GPP2438,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:13 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.19min 1297.310ppb

response 2922297

(14) 4-Amino-2,6-Dinitrotoluene #2

11.19min 954.852ppb

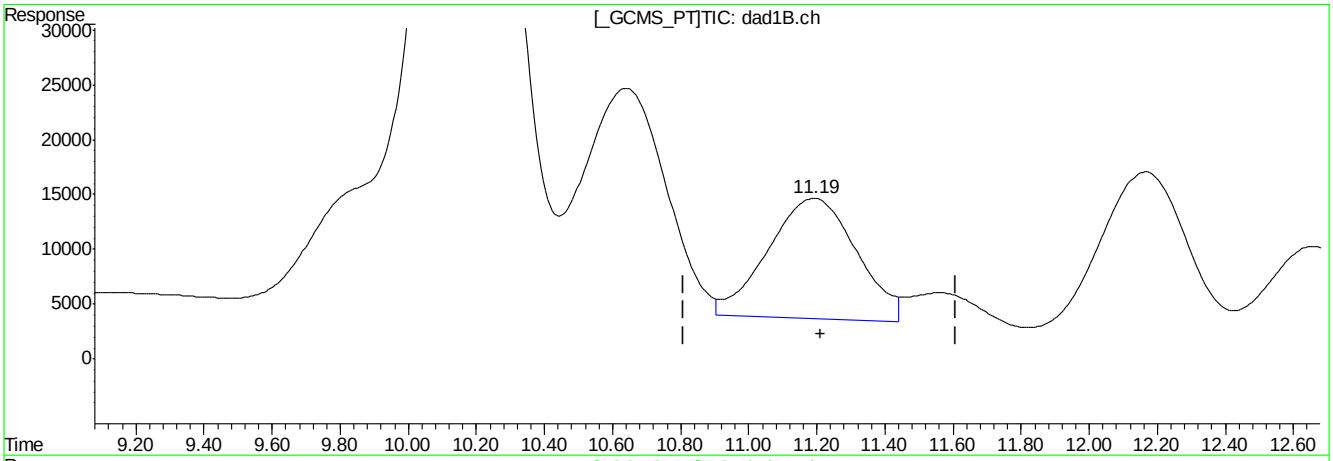
response 4547832

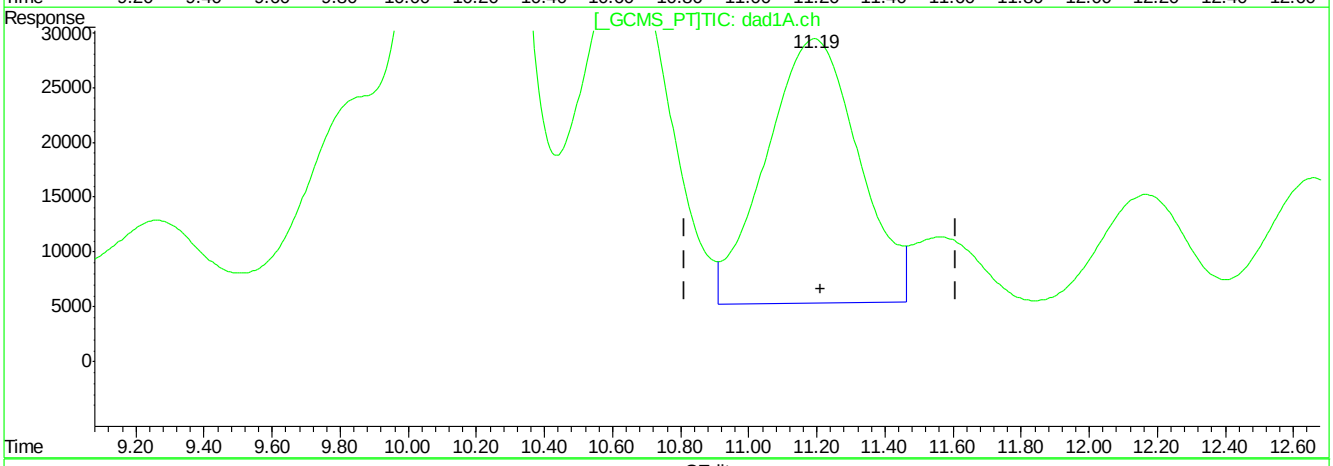
(+) = Expected Retention Time
PP390610.D GPP2439_042321PRI.M Mon Apr 26 15:39:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390610.D\dad1A.ch
Acq On : 22-Apr-2021, 15:48:44 Operator: jamesb
Sample : op84960-MSD Inst : G1315B
Misc : op84960,GPP2438,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:13 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2439_042321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 26 09:37:23 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

11.19min 881.925ppb m

response 1986608

(14) 4-Amino-2,6-Dinitrotoluene #2

11.19min 954.852ppb

response 4547832

(+) = Expected Retention Time
PP390610.D GPP2439_042321PRI.M Mon Apr 26 15:39:36 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/27/21 12:29

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2028\BB068968.D\dad1B.ch Vial: 40
Signal #2 : C:\HPCHEM\2\DATA\GBB2028\BB068968.D\dad1A.ch
Acq On : 26-Apr-2021, 19:57:54 Operator: jamesb
Sample : op84960-MS Inst : G1315B
Misc : op84960,GBB2028,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 27 09:06:55 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.92	10.92	504485	824583	235.887	233.777
	Spiked Amount 500.000	Range 70 - 136		Recovery =		47.18%#	46.76%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.46	1.46	777895	2255792	507.760	510.709
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	2.88	2.87	931043	1444513	499.238m	486.090m
6)	1,3,5-Trinitrobe	4.61	4.61	1848301	2933925	464.013	470.583
7)	1,3-Dinitrobenze	5.77	5.77	2590790	1977409	493.413	544.073
8)	3,5-Dinitroanili	6.15	6.15	1936878	6394702	485.921	928.229 #
9)	Nitrobenzene	7.29	7.28	1458431	1271267	472.470	417.134m
10)	Nitroglycerin	0.00	8.96	0	666330	N.D.	523.753 #
11)	Tetryl	9.32	9.32	1103316	1822587	356.721	382.361
12)	2,4,6-Trinitroto	9.69	9.70	1622565	2119755	435.375	481.775
13)	2-Amino-4,6-Dini	10.07	10.07	1564985	2412152	464.667	490.091
14)	4-Amino-2,6-Dini	10.57	10.57	1179255	2236739	471.923	462.705
16)	2,4-Dinitrotolue	11.57	11.57	2192826	1430384	481.849	494.278
17)	2,6-Dinitrotolue	12.04	12.05	1520432	1797251	532.710	501.682
18)	o-Nitrotoluene	15.04	15.04	1142967	1514792	522.028	497.944m
19)	p-Nitrotoluene	15.62	15.62	1673503	1482878	505.713	531.127m
20)	m-Nitrotoluene	16.50	16.50	1571564	2025359	478.646	555.948m
21)	PETN	0.00	18.45	0	2192175	N.D. d	1679.976

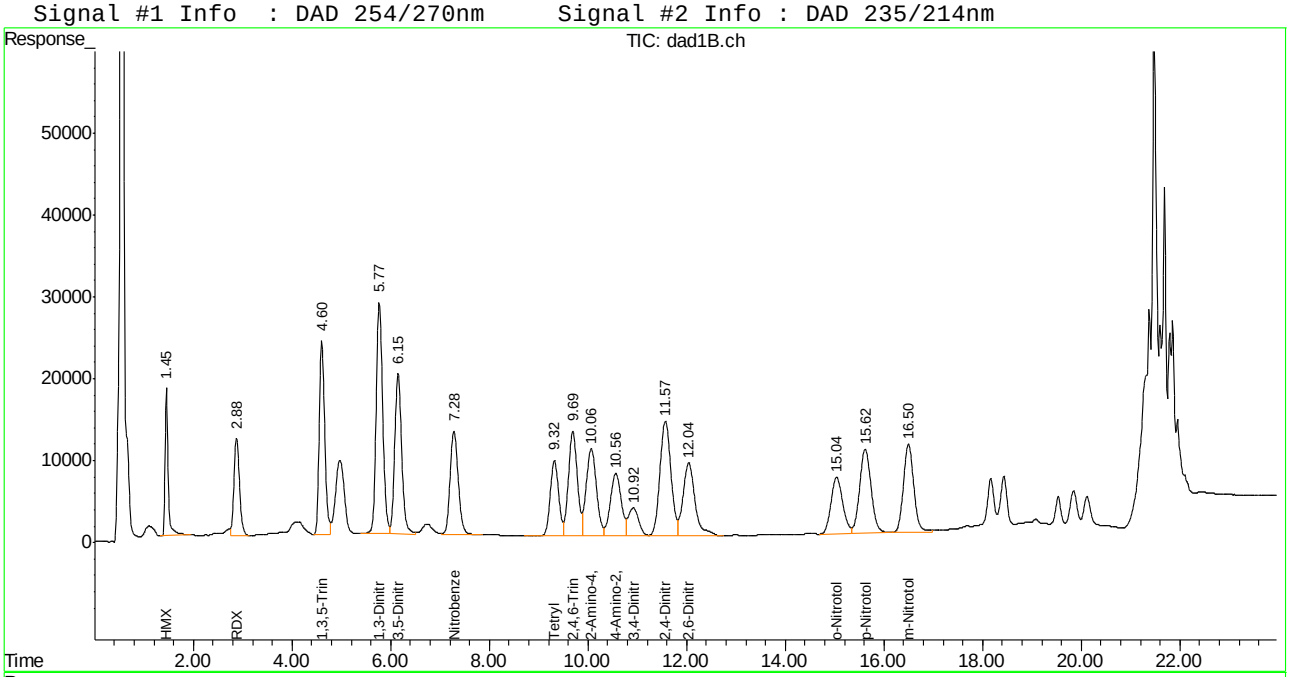
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068968.D 8330B_042221_PLUS.M Tue Apr 27 10:18:00 2021 Page 1

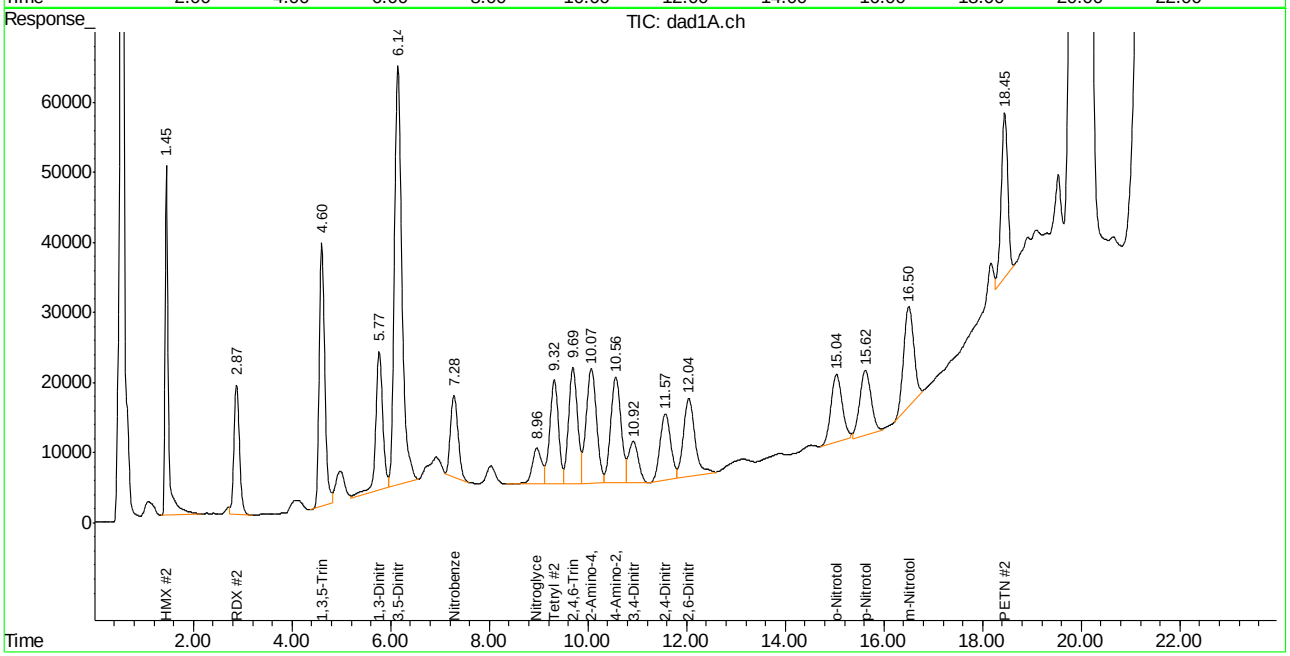
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2028\BB068968.D\dad1B.ch Vial: 40
Signal #2 : C:\HPCHEM\2\DATA\GBB2028\BB068968.D\dad1A.ch
Acq On : 26-Apr-2021, 19:57:54 Operator: jamesb
Sample : op84960-MS Inst : G1315B
Misc : op84960,GBB2028,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 27 10:13 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number: OP84960-MS
Lab FileID: BB068968.D
Injection Time: 04/26/21 19:57
Method: SW846 8330B
Analyst approved: 04/27/21 10:35 Naresh Jiawan
Supervisor approved: 04/27/21 12:29 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
RDX	121-82-4	2	2.87	Poorly defined baseline
RDX	121-82-4	1	2.88	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.28	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.04	Poorly defined baseline
p-Nitrotoluene	99-99-0	2	15.62	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.50	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/27/21 12:29

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2028\BB068969.D\dad1B.ch Vial: 41
Signal #2 : C:\HPCHEM\2\DATA\GBB2028\BB068969.D\dad1A.ch
Acq On : 26-Apr-2021, 20:28:53 Operator: jamesb
Sample : op84960-MSD Inst : G1315B
Misc : op84960,GBB2028,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 27 09:06:56 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.91	10.91	496924	830693	232.351	235.509
	Spiked Amount 500.000	Range 70 - 136		Recovery =		46.47%#	47.10%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.46	1.46	789384	2270480	515.260	514.034
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.88	2.88	910773	1470919	488.368m	494.976
6)	1,3,5-Trinitrobe	4.61	4.61	1816813	2877625	456.108	461.553
7)	1,3-Dinitrobenze	5.77	5.77	2581787	1878148	491.699	516.762
8)	3,5-Dinitroanili	6.15	6.15	1945624	6090820	488.115	884.119 #
9)	Nitrobenzene	7.29	7.29	1450875	1315969	470.022	431.801m
10)	Nitroglycerin	0.00	8.96	0	700308	N.D.	550.460 #
11)	Tetryl	9.31	9.31	572385	1011031	185.062	212.104
12)	2,4,6-Trinitroto	9.69	9.69	1369091	1853420	367.362	421.243
13)	2-Amino-4,6-Dini	10.06	10.06	1551229	2430397	460.582	493.798
14)	4-Amino-2,6-Dini	10.56	10.56	1173003	2254250	469.421	466.328
16)	2,4-Dinitrotolue	11.57	11.57	2162585	1395813	475.203	482.332
17)	2,6-Dinitrotolue	12.04	12.05	1511129	1767729	529.451	493.442
18)	o-Nitrotoluene	15.05	15.04	1140038	1495753	520.690	491.686m
19)	p-Nitrotoluene	15.63	15.63	1669601	1476524	504.534	528.851m
20)	m-Nitrotoluene	16.51	16.51	1550188	1981690	472.135	543.961m
21)	PETN	0.00	18.45	0	2156521	N.D. d	1652.653

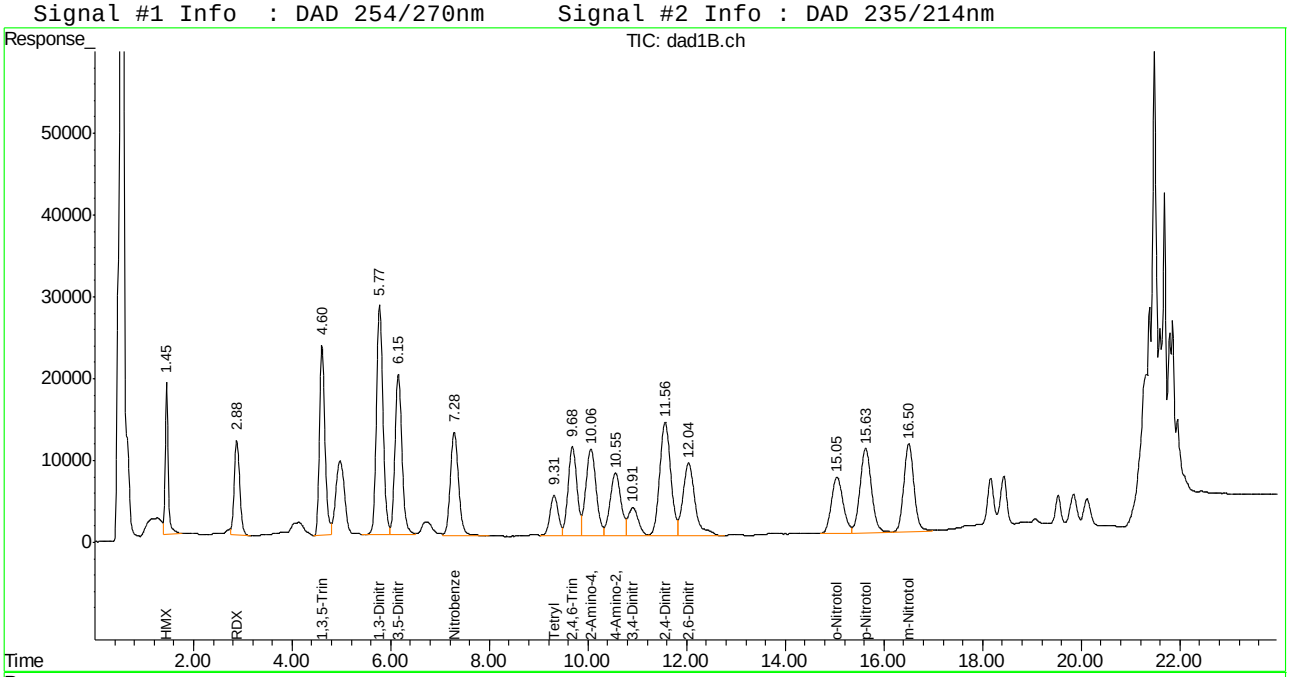
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068969.D 8330B_042221_PLUS.M Tue Apr 27 10:18:01 2021 Page 1

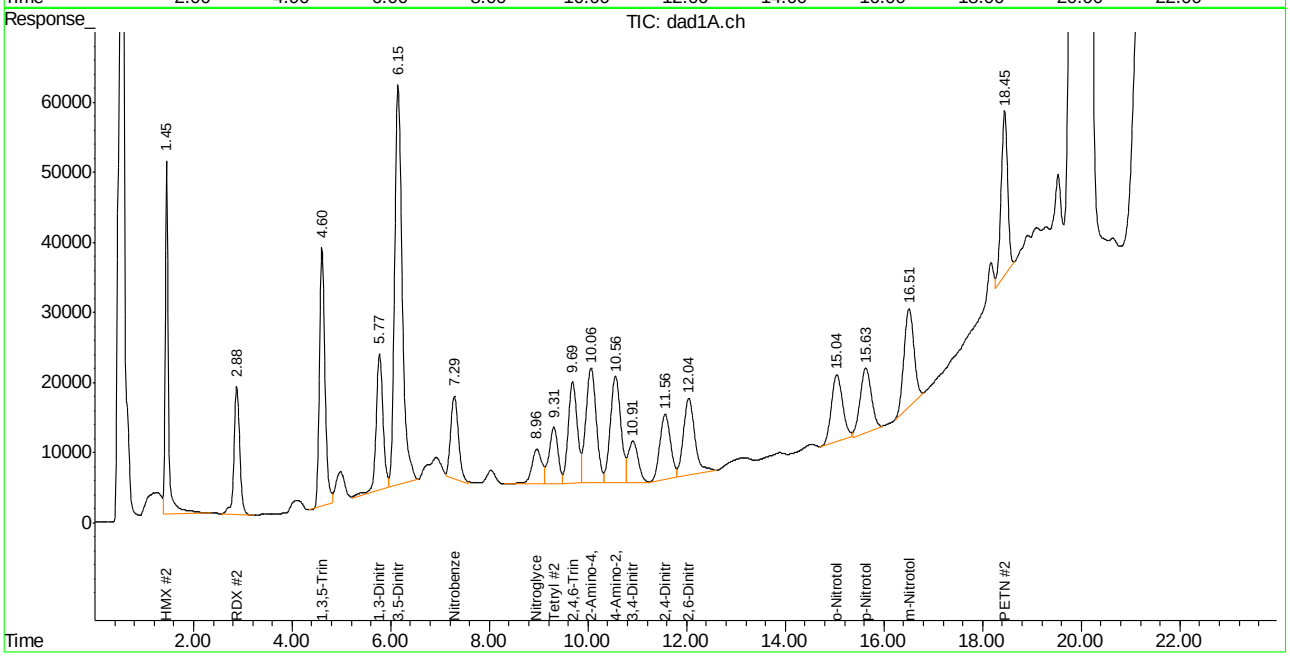
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2028\BB068969.D\dad1B.ch Vial: 41
Signal #2 : C:\HPCHEM\2\DATA\GBB2028\BB068969.D\dad1A.ch
Acq On : 26-Apr-2021, 20:28:53 Operator: jamesb
Sample : op84960-MSD Inst : G1315B
Misc : op84960,GBB2028,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 27 10:14 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number: OP84960-MSD
Lab FileID: BB068969.D
Injection Time: 04/26/21 20:28
Method: SW846 8330B
Analyst approved: 04/27/21 10:35 Naresh Jiawan
Supervisor approved: 04/27/21 12:29 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
RDX	121-82-4	1	2.88	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.29	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.04	Poorly defined baseline
p-Nitrotoluene	99-99-0	2	15.63	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.51	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/23/21 11:35

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 08:34:17 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.89	10.89	45794	55503	22.795	15.409
	Spiked Amount 500.000	Range 70 - 136		Recovery =		4.56%#	3.08%#
	Target Compounds						
1)	TNX	1.32	1.32	44777	71149	15.043m	15.921m
2)	HMX	1.46	1.46	23158	80138	12.597	17.744 #
3)	DNX	1.70	1.70	44186	68686	17.438m	18.278m
4)	MNX	2.28	2.28	60486	91583	23.365	23.016
5)	RDX	2.89	2.89	34489	55341	18.934	18.395
6)	1,3,5-Trinitrobe	4.61	4.61	72650	110937	18.434	17.716m
7)	1,3-Dinitrobenze	5.78	5.78	99187	59005	19.106	16.084m
8)	3,5-Dinitroanili	6.16	6.15	73972	130701	18.810	19.479m
9)	Nitrobenzene	7.30	7.30	58015	57993	19.962	20.406
10)	Nitroglycerin	0.00	8.91	0	24788	N.D.	20.881 #
11)	Tetryl	9.28	9.28	59892	84409	26.314	31.541
12)	2,4,6-Trinitroto	9.66	9.66	71126	74652	19.349	18.709
13)	2-Amino-4,6-Dini	10.03	10.04	66621	89191	19.646	17.749
14)	4-Amino-2,6-Dini	10.53	10.53	50364	87464	21.358	17.827
16)	2,4-Dinitrotolue	11.53	11.55	76610	43179	16.809	14.364m
17)	2,6-Dinitrotolue	12.02	12.02	77336	92162	28.201	25.966m
18)	o-Nitrotoluene	15.00	15.04	38037	52773	19.301m	21.575m
19)	p-Nitrotoluene	15.60	15.66	53744	52548	17.492	22.846m
20)	m-Nitrotoluene	16.47	16.45	67699	59201	22.825m	16.473m
21)	PETN	0.00	18.43	0	18153	N.D.	14.141m#

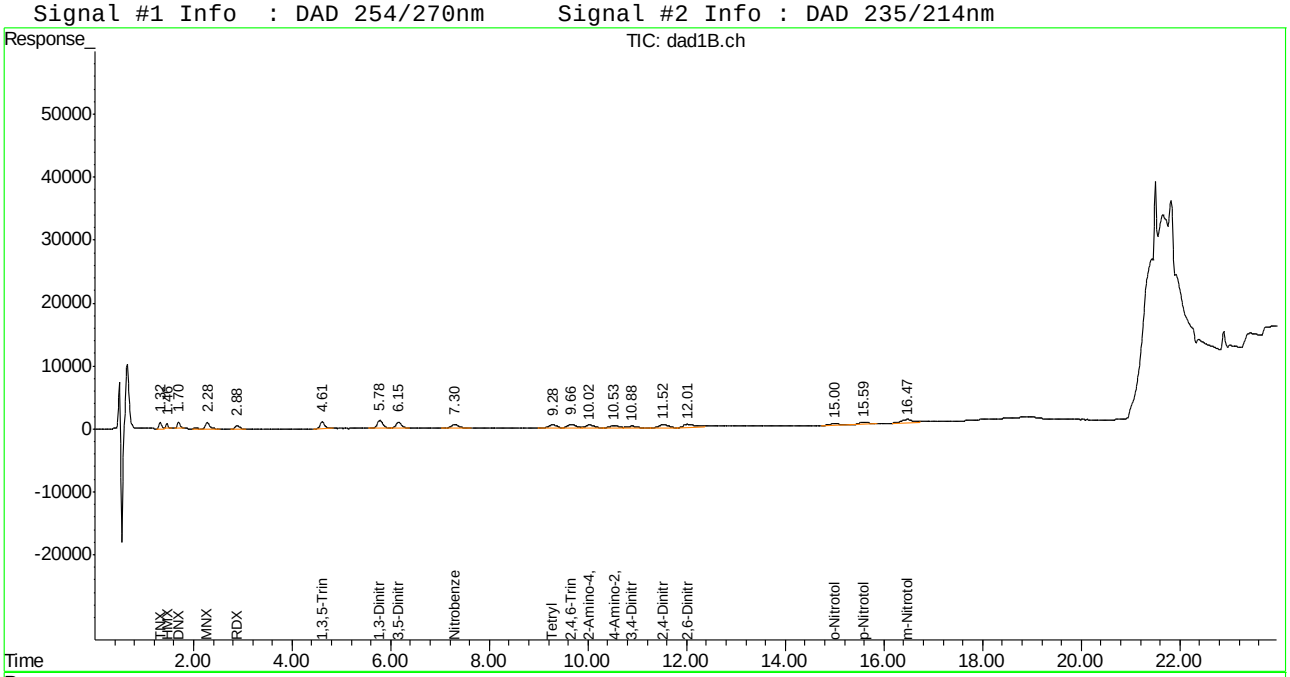
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:57:39 2021 Page 1

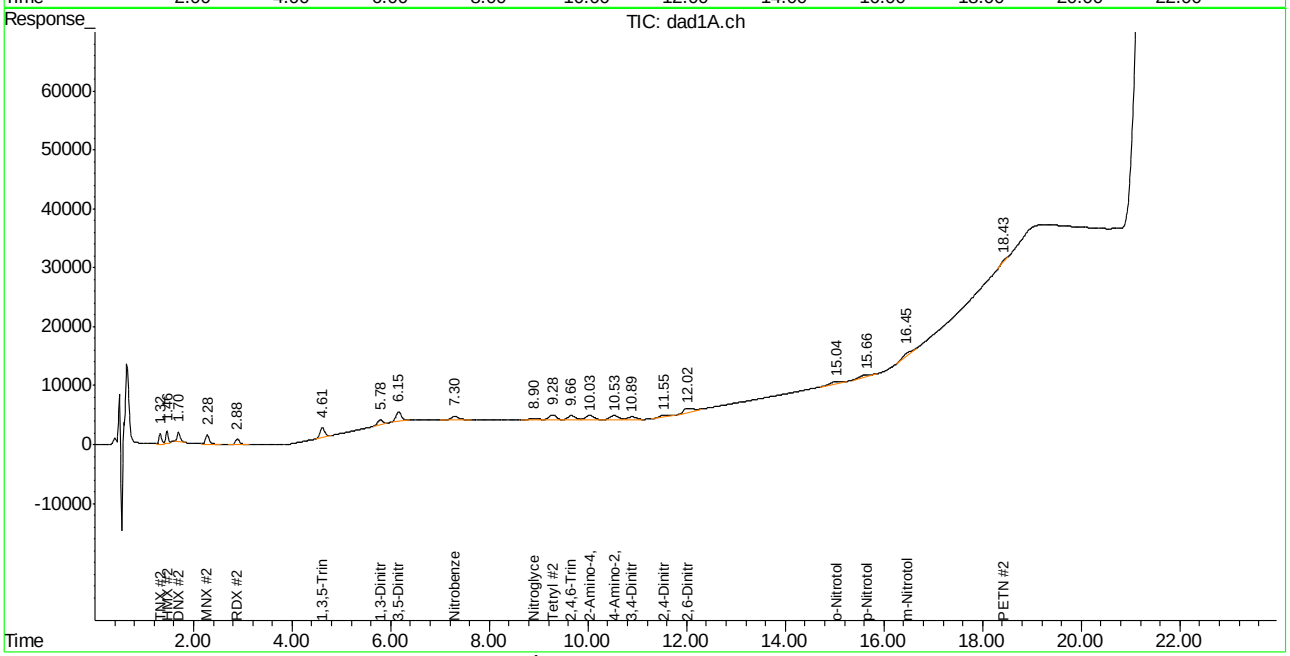
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:53 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

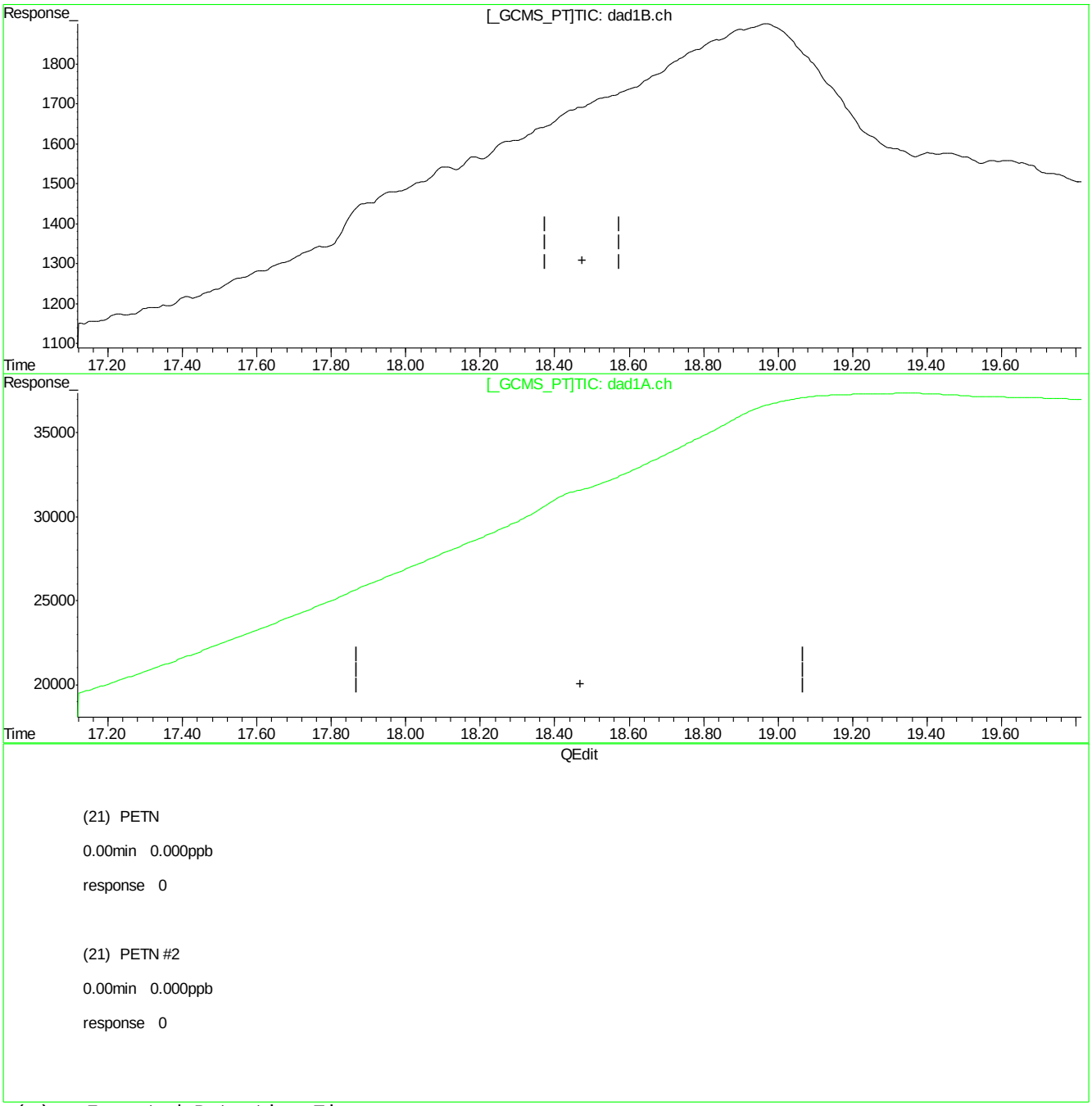
Sample Number: GBB2026-IC2026
Lab FileID: BB068880.D
Injection Time: 04/22/21 13:03
Method: SW846 8330A
Analyst approved: 04/23/21 08:56 James Boone
Supervisor approved: 04/23/21 11:35 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.32	Poor instrument integration
TNX		2	1.32	Poor instrument integration
DNX		1	1.70	Poor instrument integration
DNX		2	1.70	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.61	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.78	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.15	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	11.55	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.02	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.00	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.04	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.66	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.45	Poor instrument integration
m-Nitrotoluene	99-08-1	1	16.47	Poor instrument integration
PETN	78-11-5	2	18.43	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



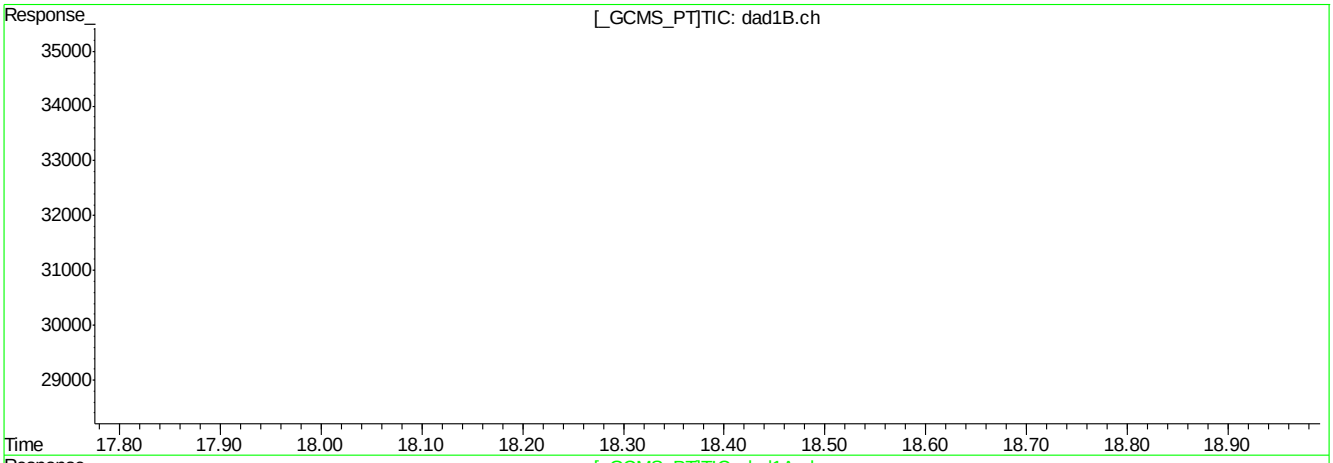
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:50:37 2021

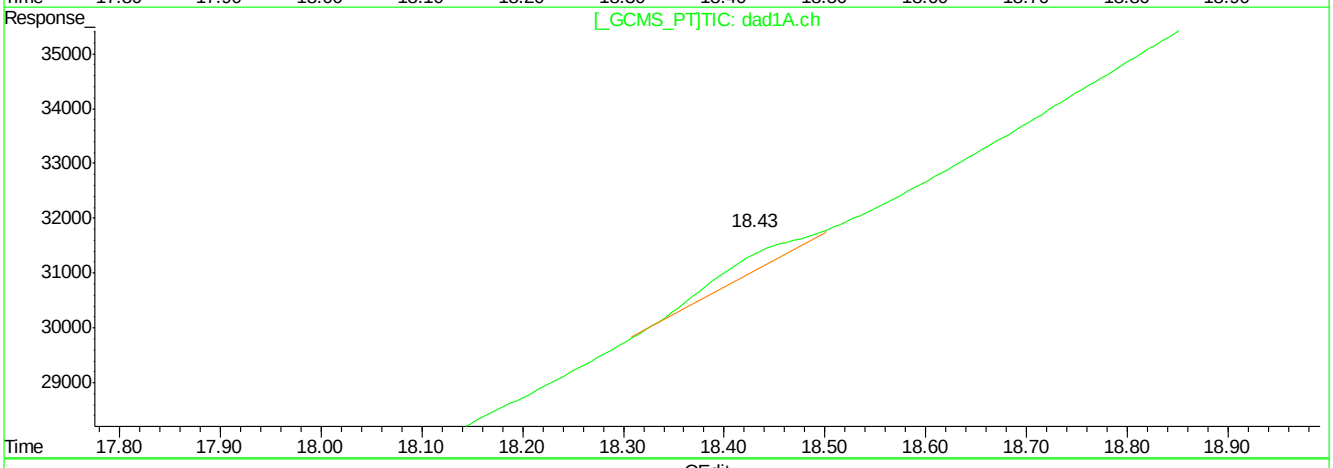
BB068880.D edits: PETN

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.43min 14.141ppb m

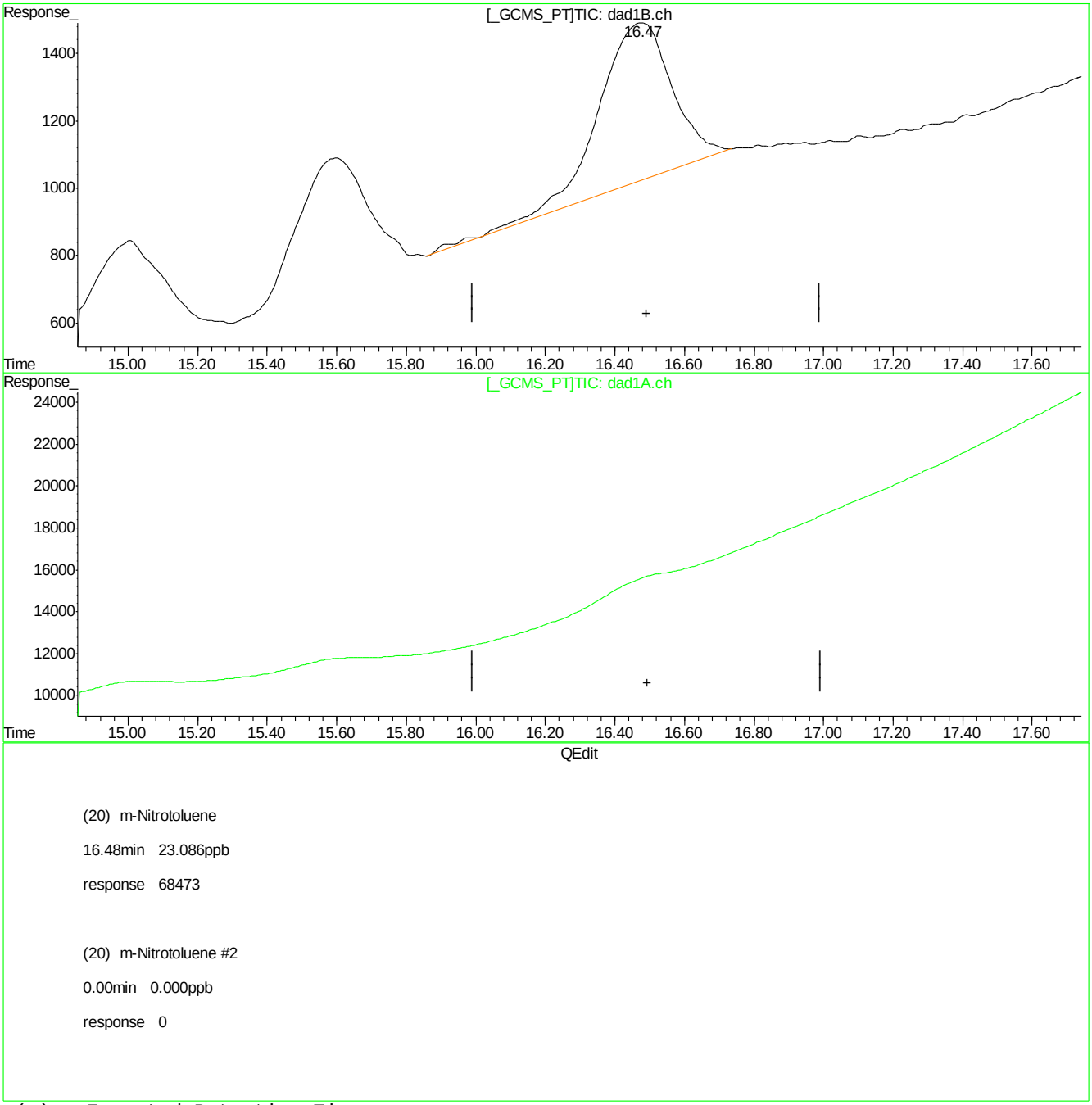
response 18153

(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:50:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration

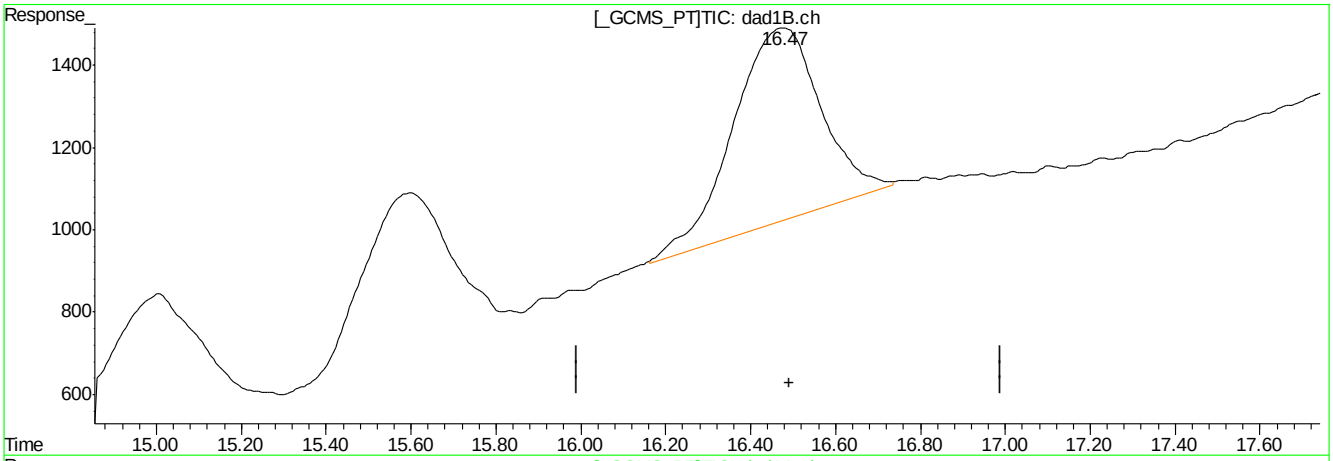


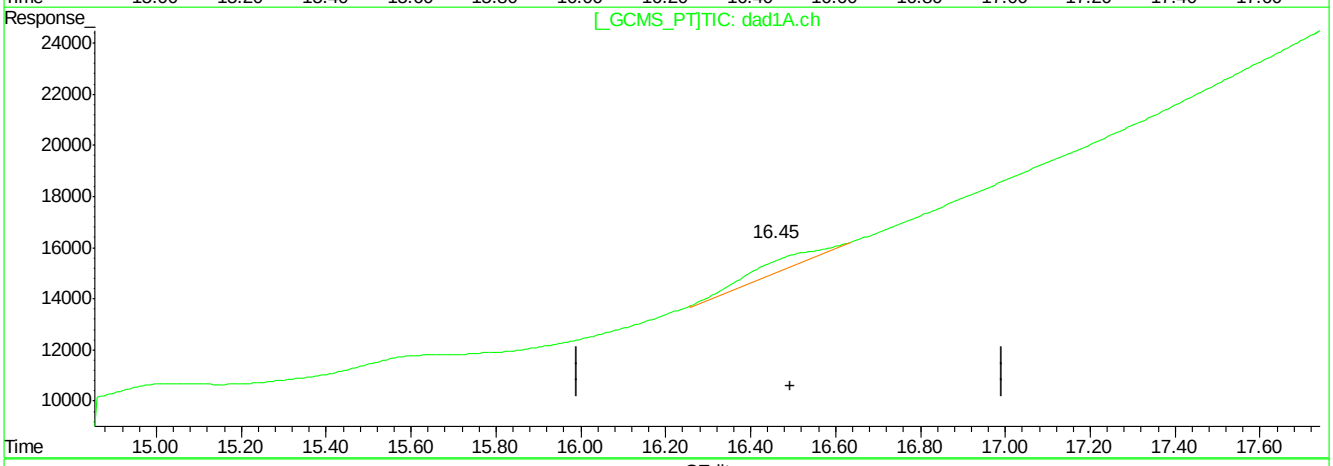
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:50:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.47min 22.825ppb m

response 67699

(20) m-Nitrotoluene #2

16.45min 16.473ppb m

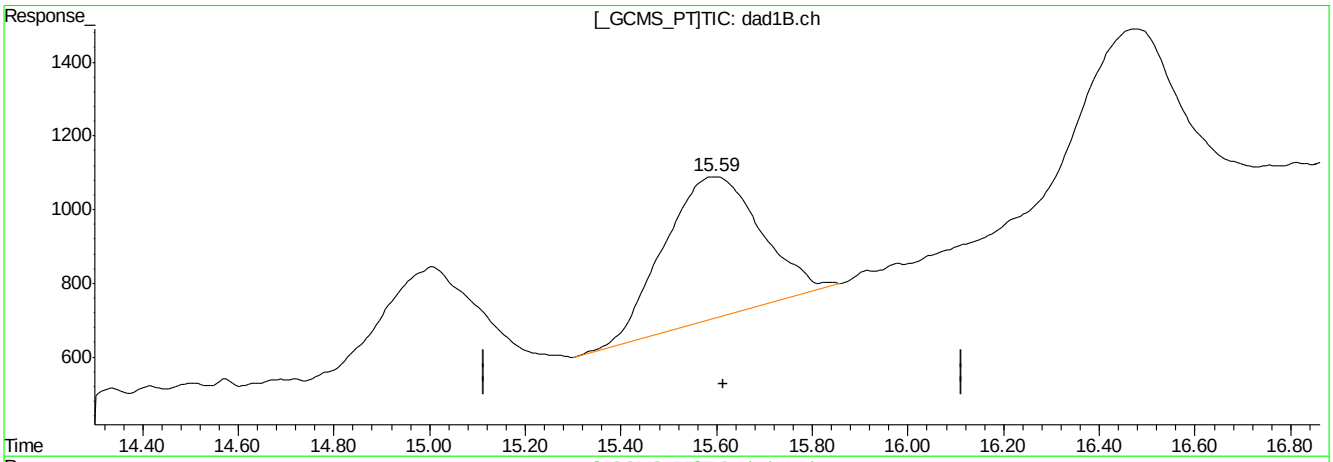
response 59201

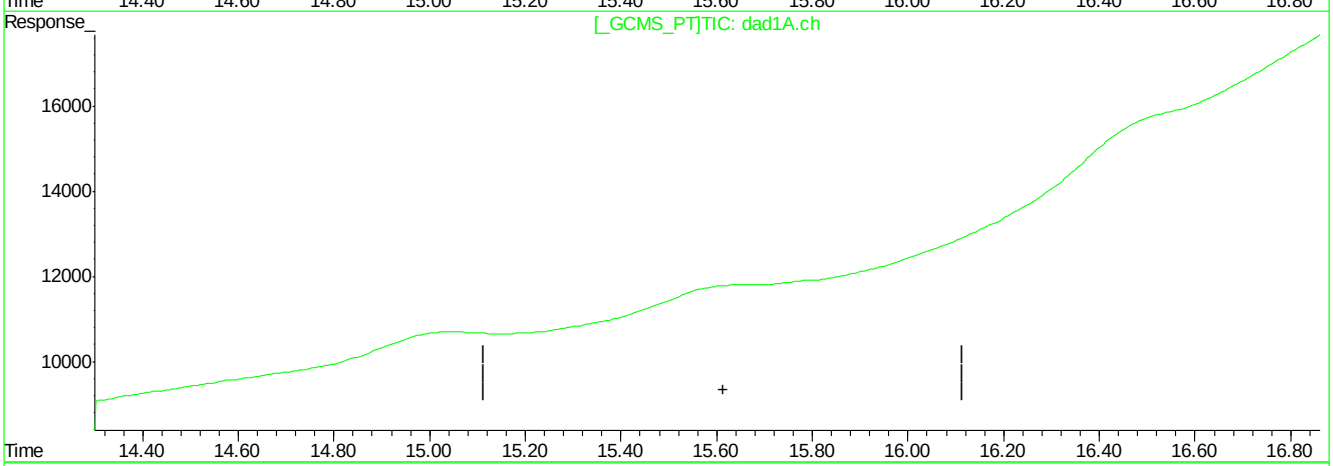
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:51:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.60min 17.492ppb

response 53744

(19) p-Nitrotoluene #2

0.00min 0.000ppb

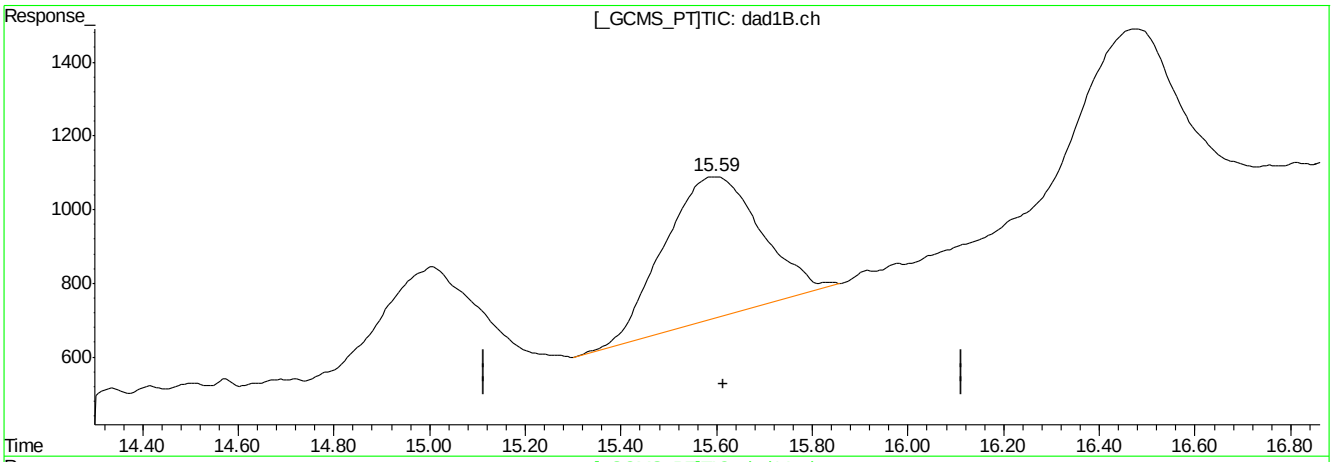
response 0

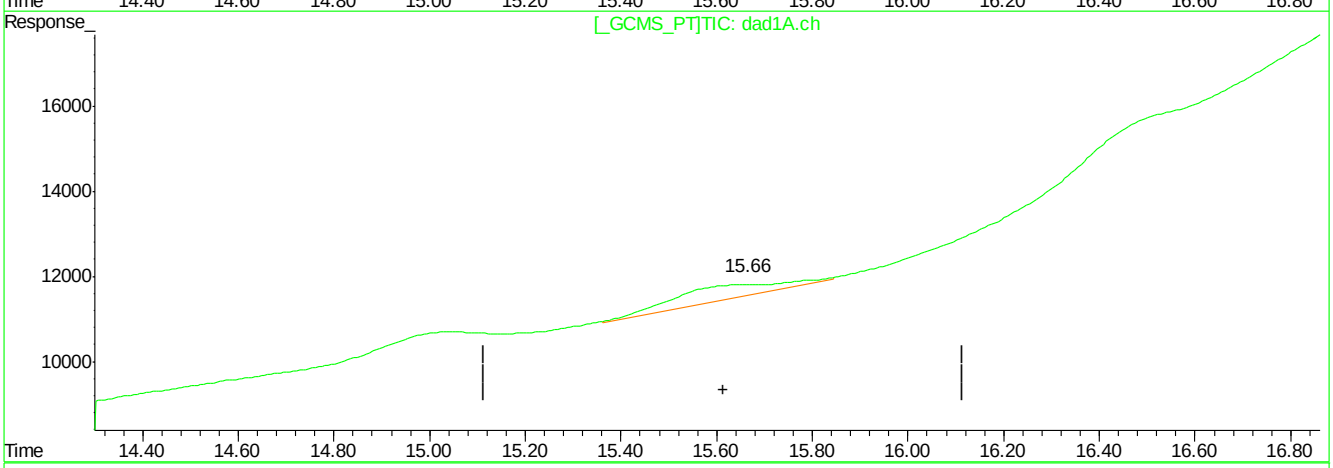
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:51:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.60min 17.492ppb

response 53744

(19) p-Nitrotoluene #2

15.66min 22.846ppb m

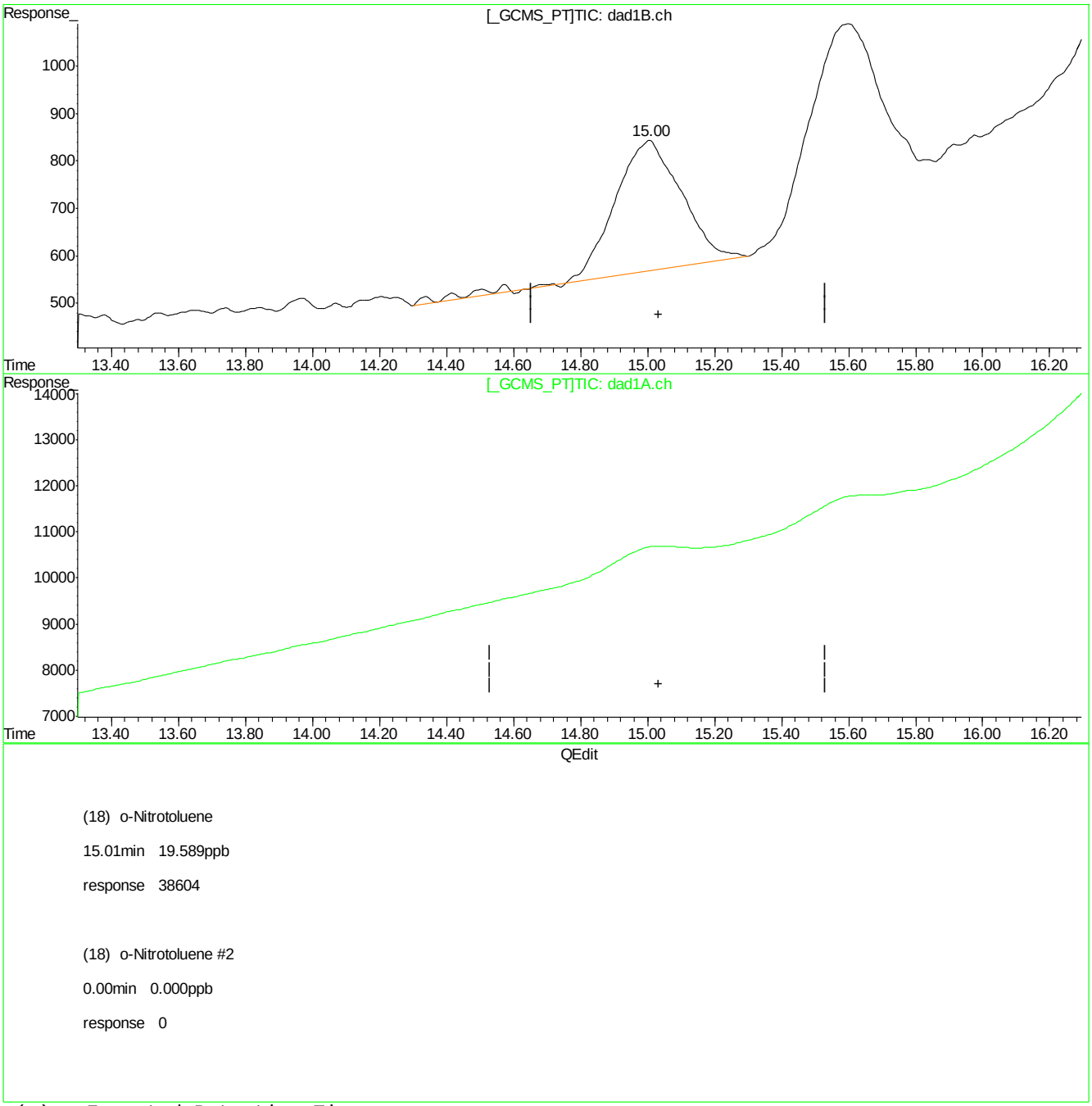
response 52548

(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:51:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



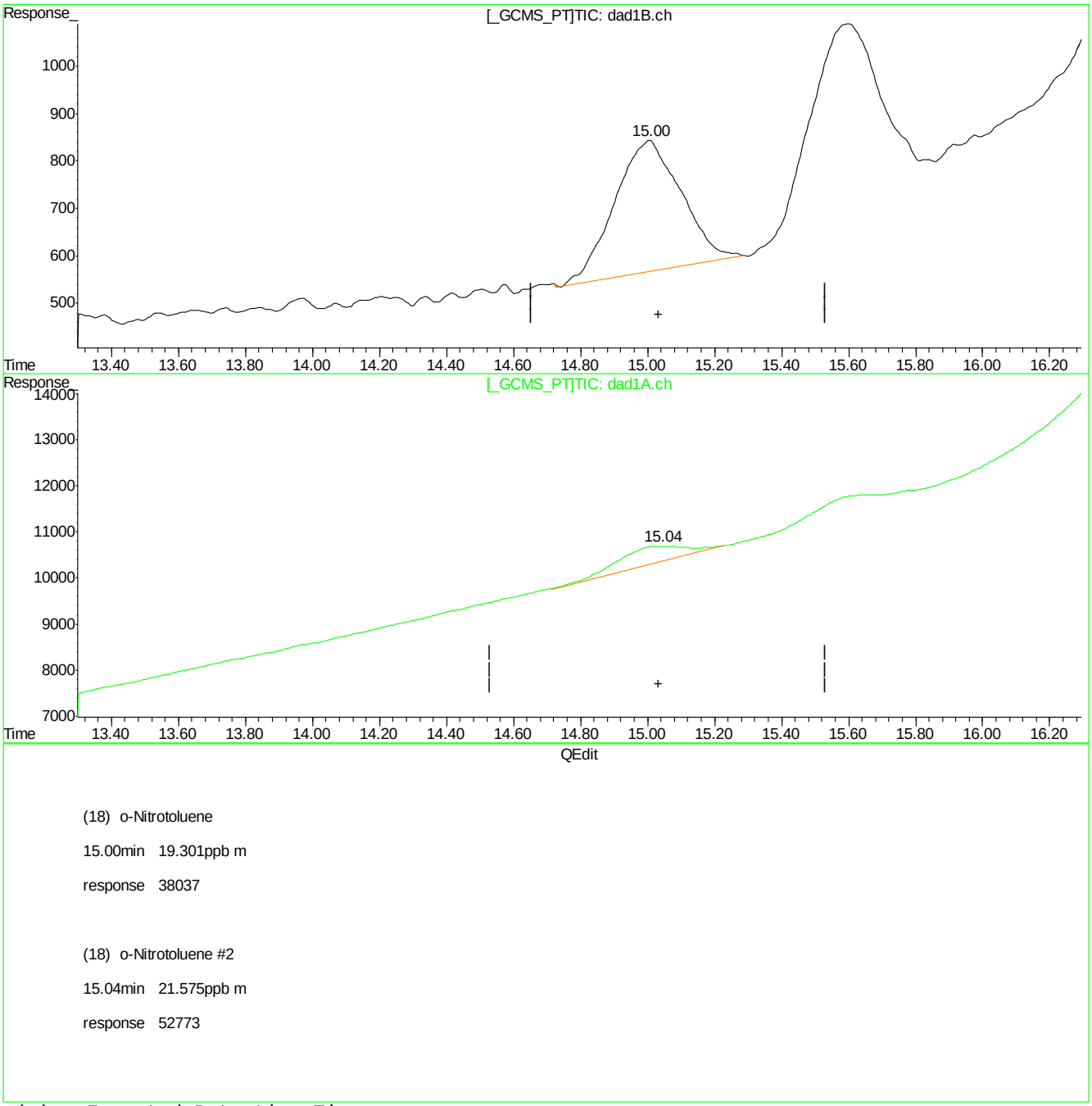
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:51:17 2021

BB068880.D edits: o-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



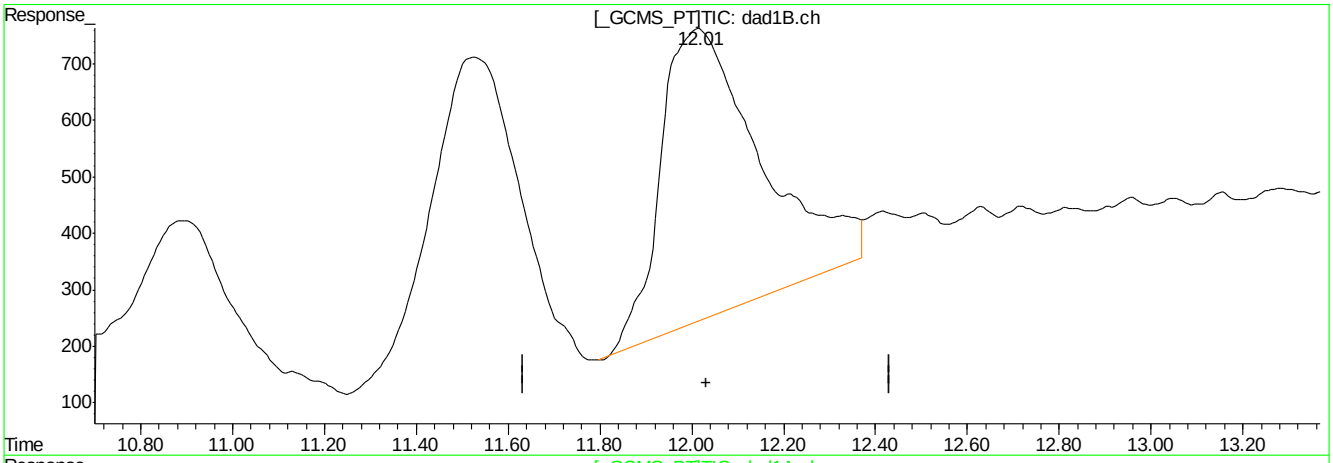
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:51:24 2021

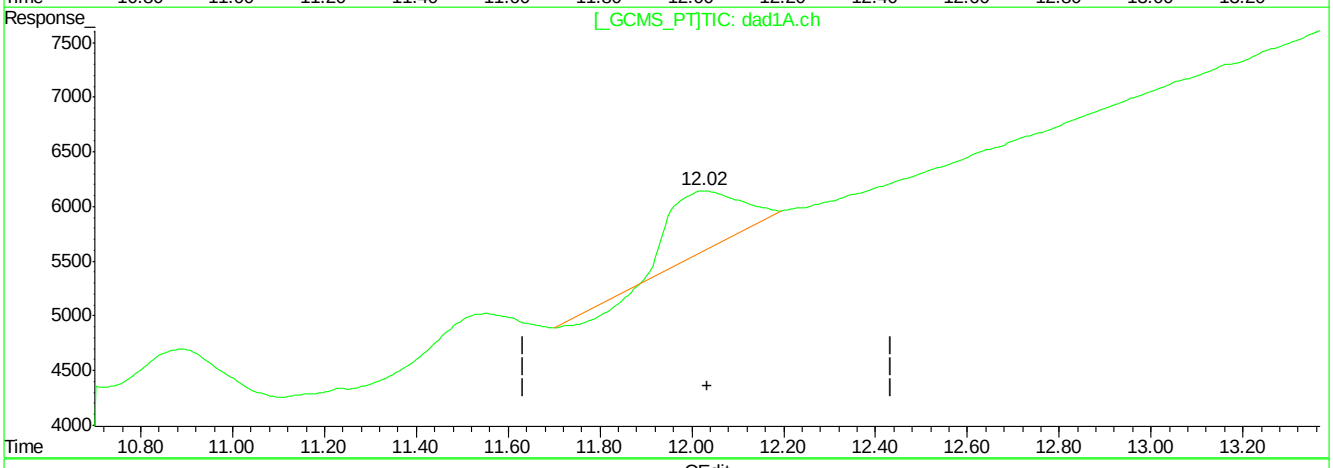
BB068880.D edits: o-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.02min 28.201ppb

response 77336

(17) 2,6-Dinitrotoluene #2

12.03min 14.058ppb

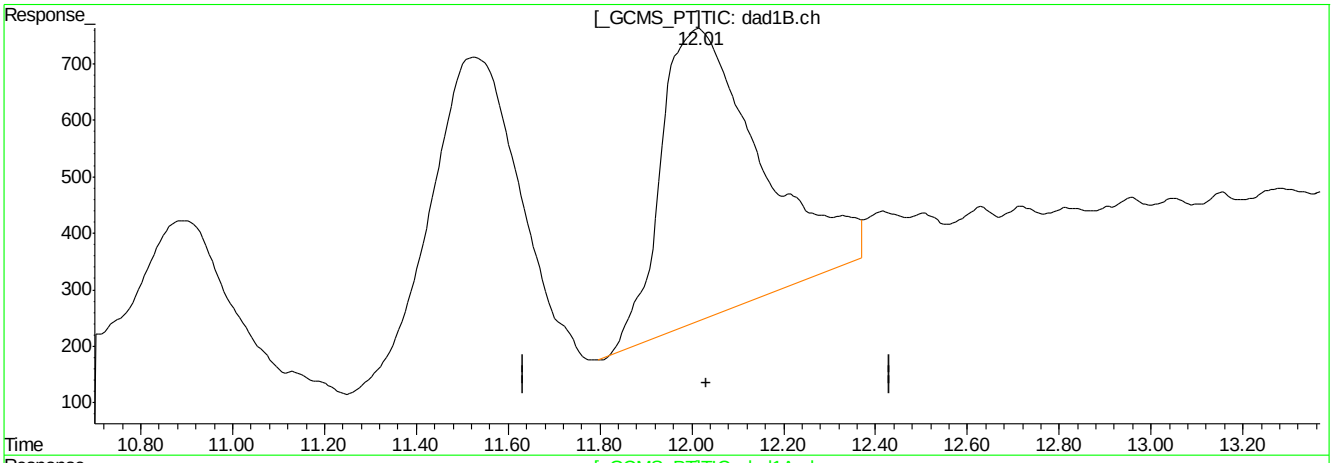
response 49897

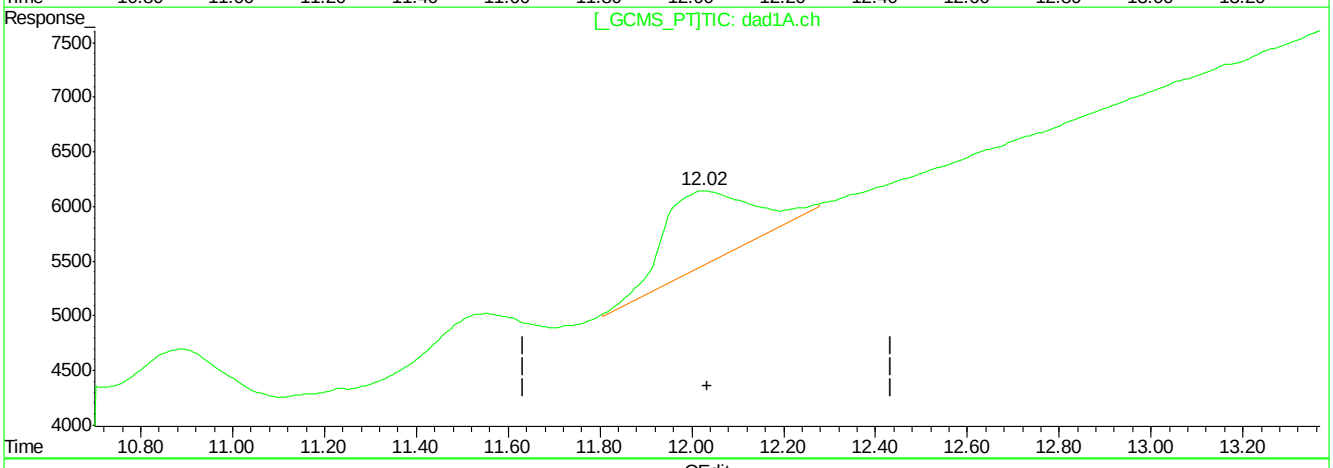
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:51:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.02min 28.201ppb

response 77336

(17) 2,6-Dinitrotoluene #2

12.02min 25.966ppb m

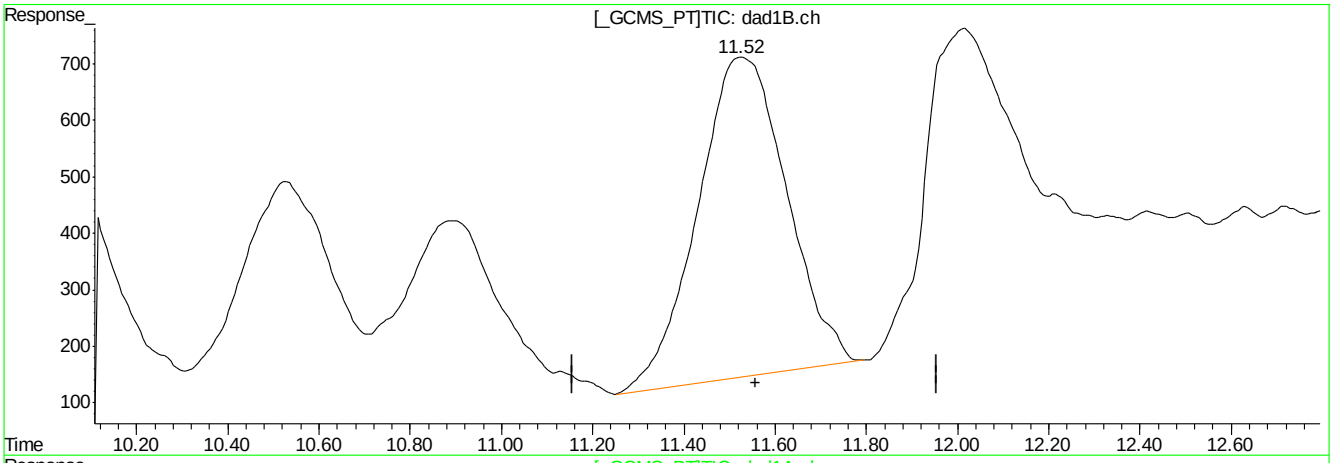
response 92162

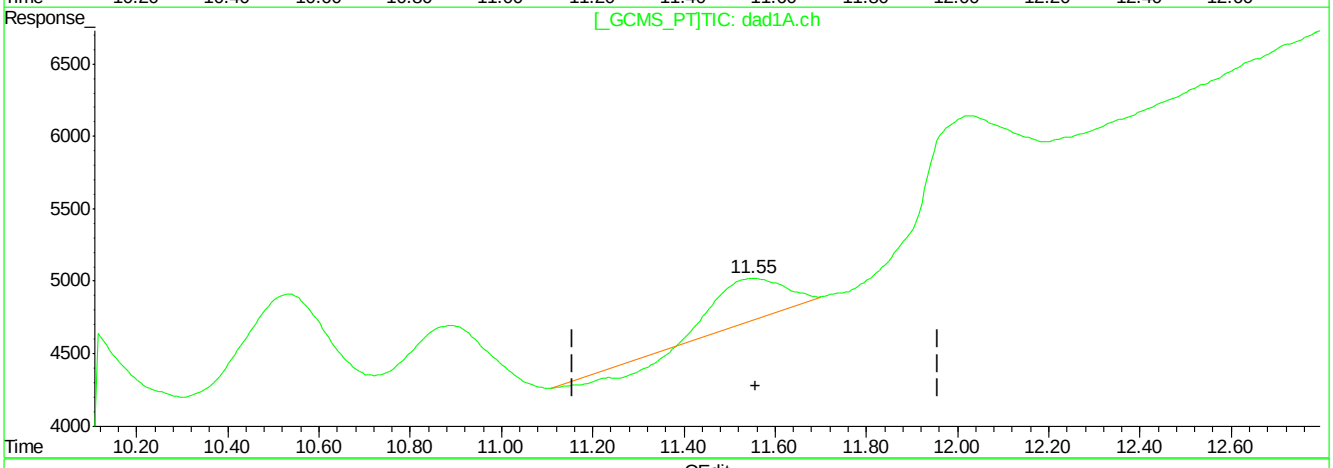
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:51:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.53min 16.809ppb

response 76610

(16) 2,4-Dinitrotoluene #2

11.55min 7.424ppb

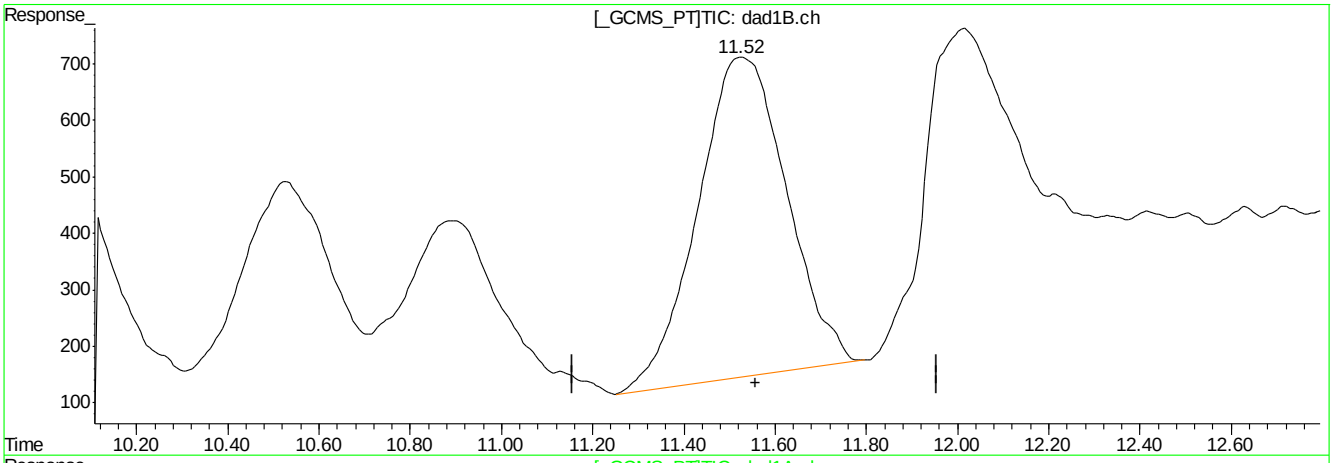
response 22319

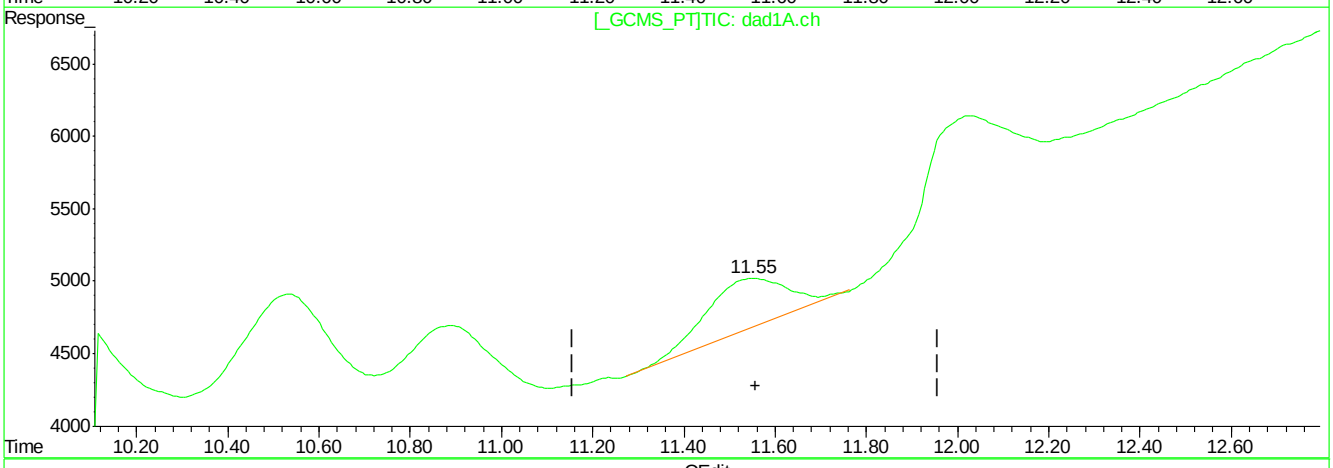
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:51:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.53min 16.809ppb

response 76610

(16) 2,4-Dinitrotoluene #2

11.55min 14.364ppb m

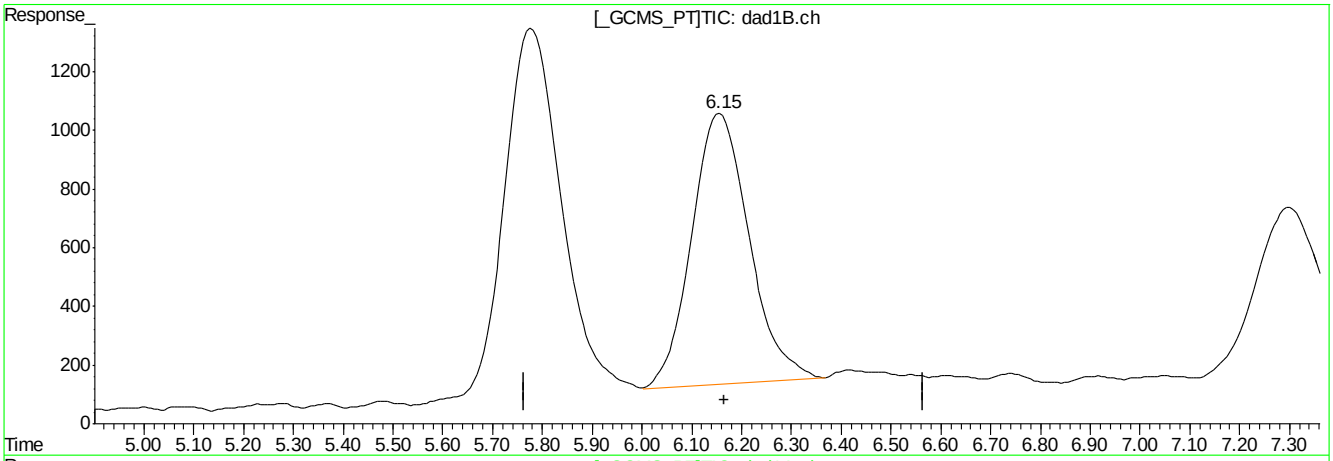
response 43179

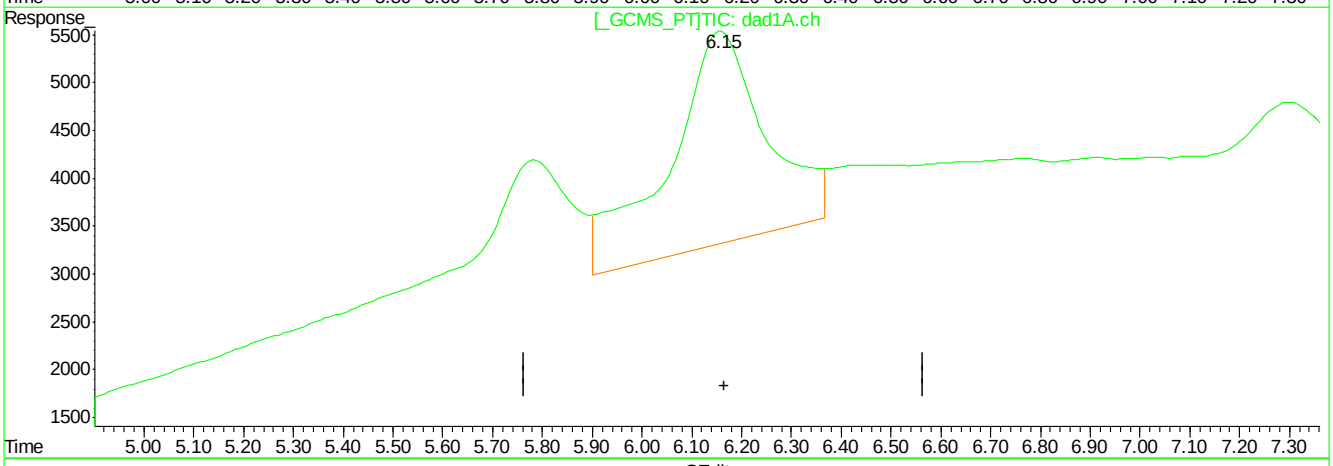
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:51:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.16min 18.810ppb

response 73972

(8) 3,5-Dinitroaniline #2

6.16min 44.384ppb

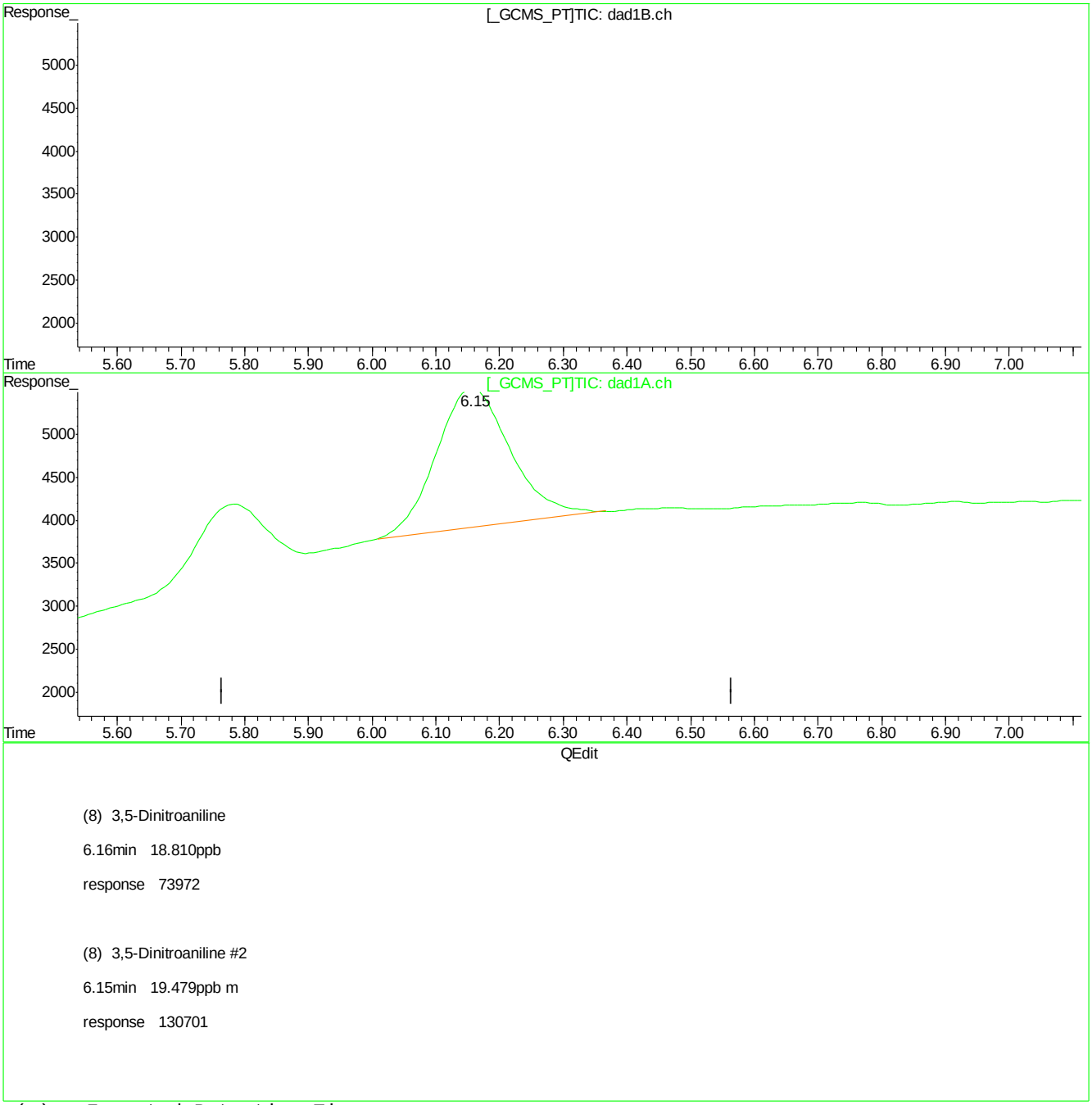
response 297810

(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:51:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration

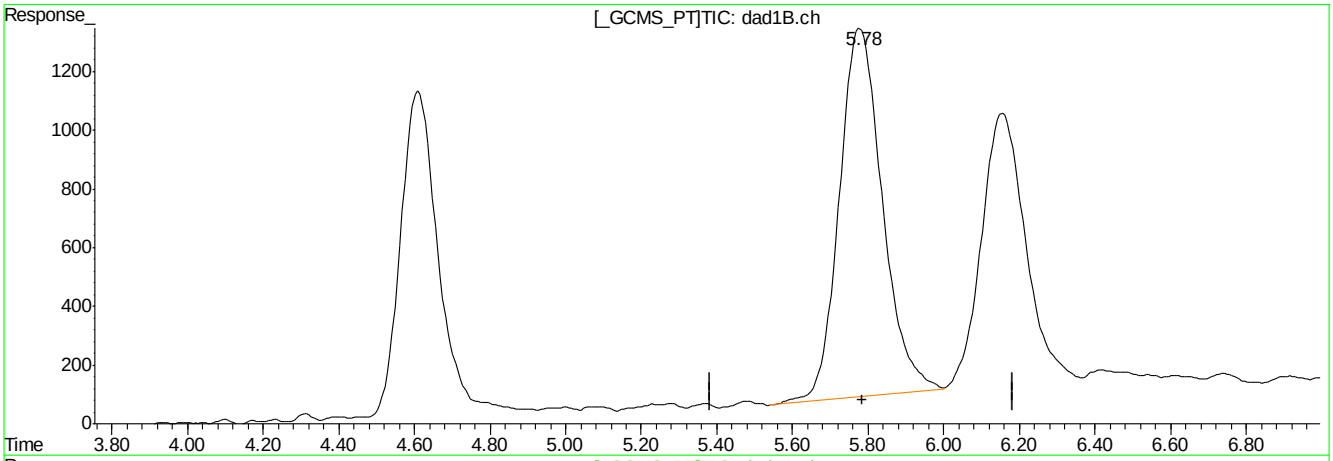


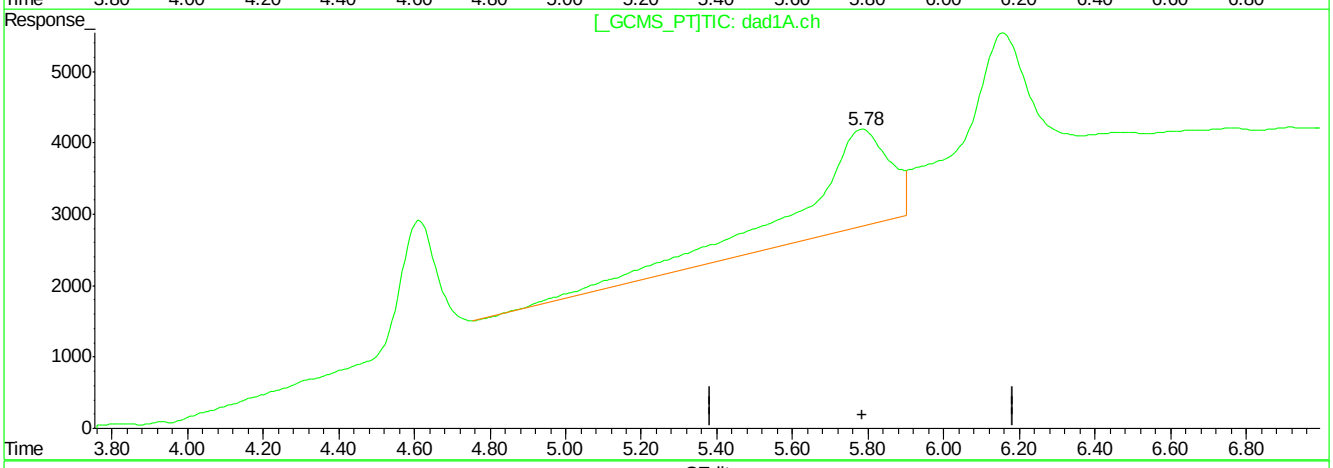
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:52:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.78min 19.106ppb

response 99187

(7) 1,3-Dinitrobenzene #2

5.79min 62.237ppb

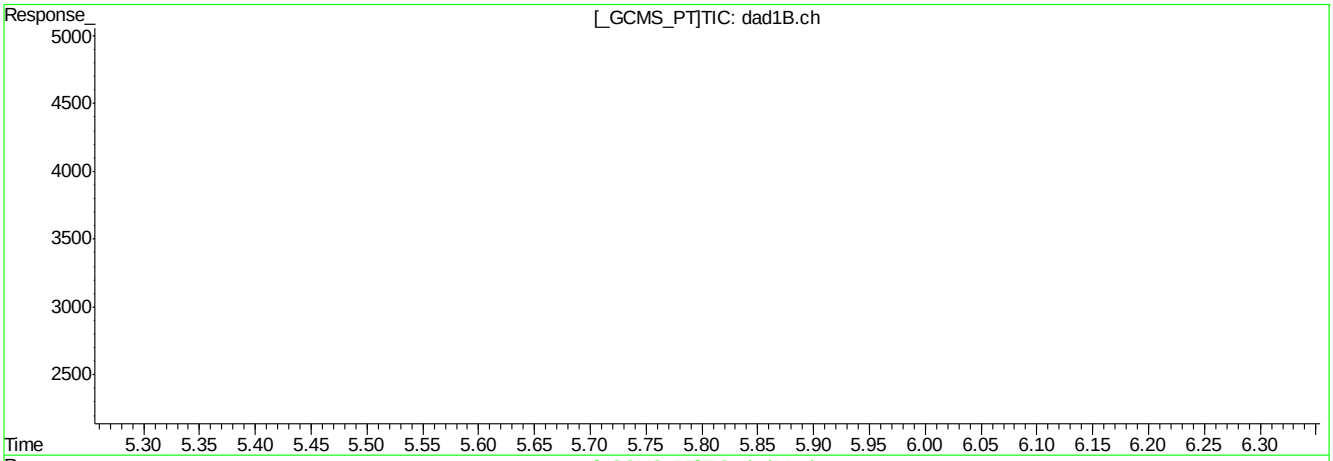
response 228318

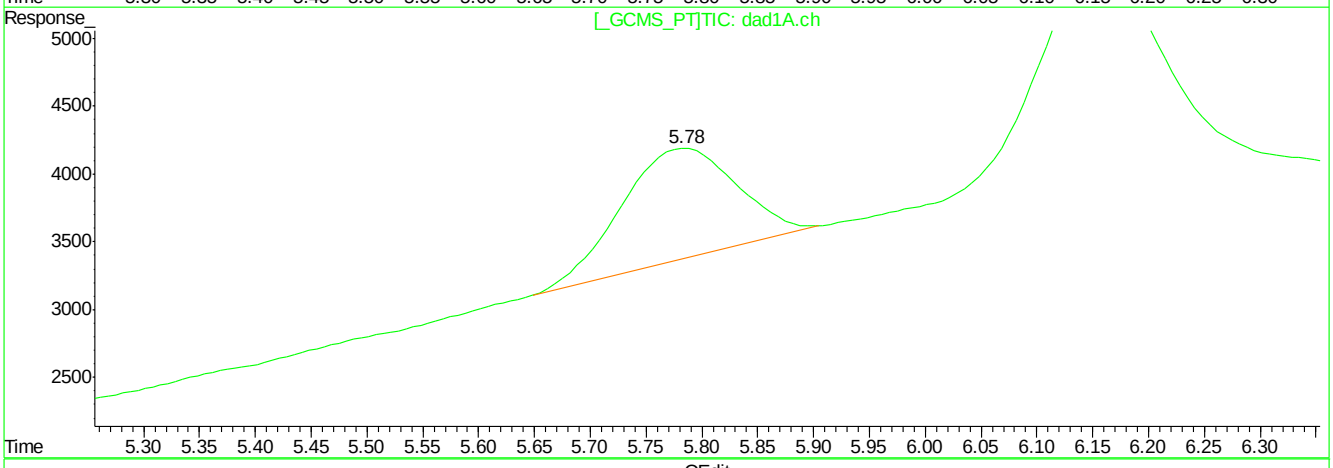
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:52:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.78min 19.106ppb

response 99187

(7) 1,3-Dinitrobenzene #2

5.78min 16.084ppb m

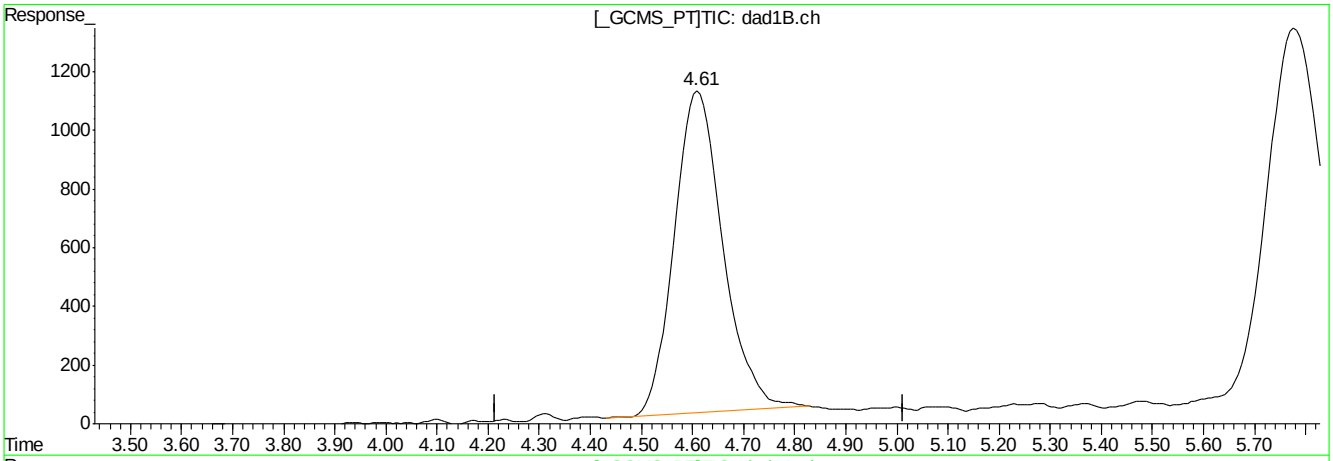
response 59005

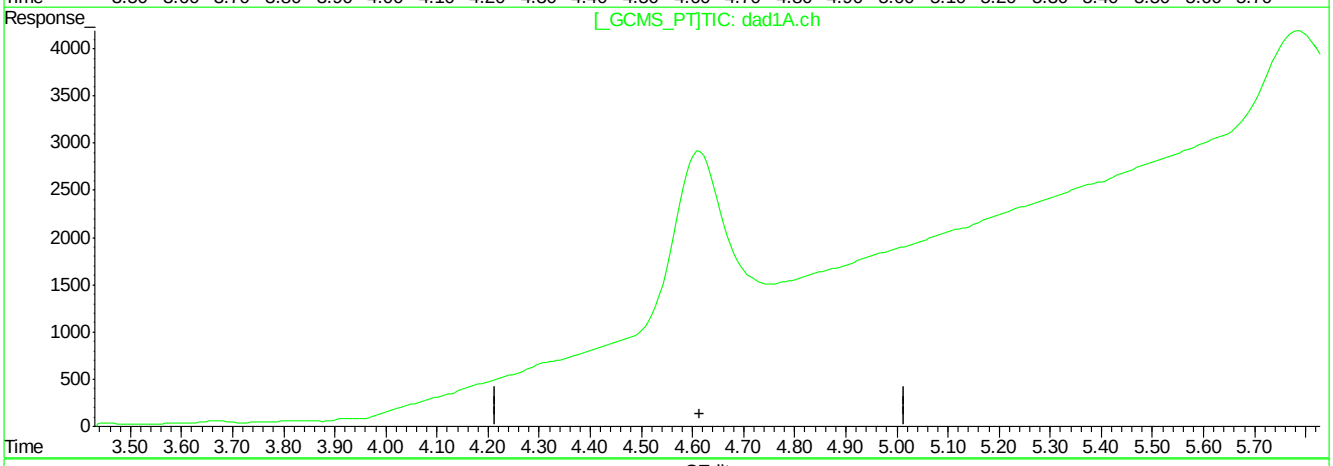
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:52:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.61min 18.434ppb

response 72650

(6) 1,3,5-Trinitrobenzene #2

0.00min 0.000ppb

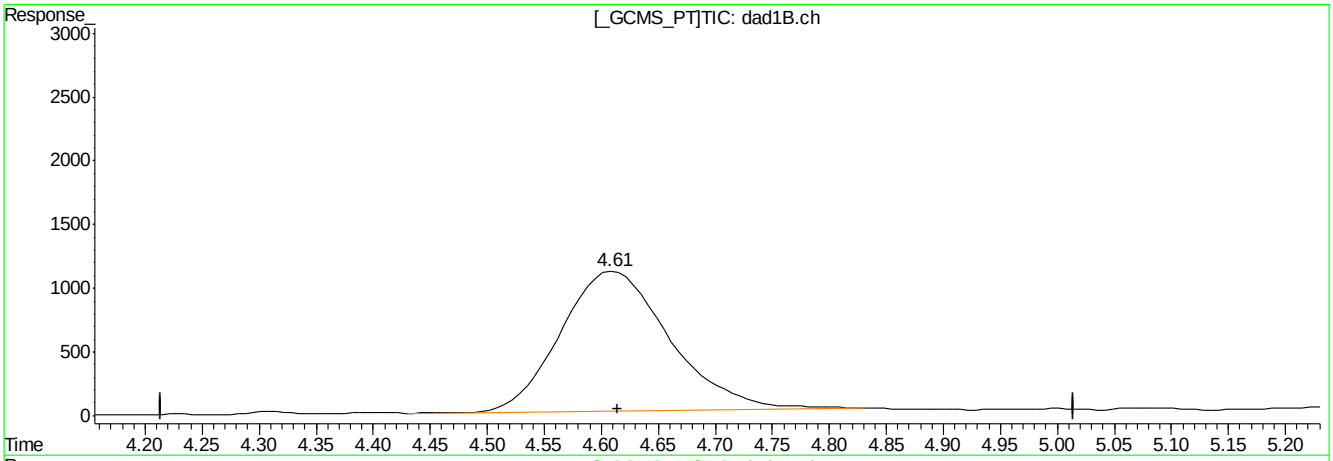
response 0

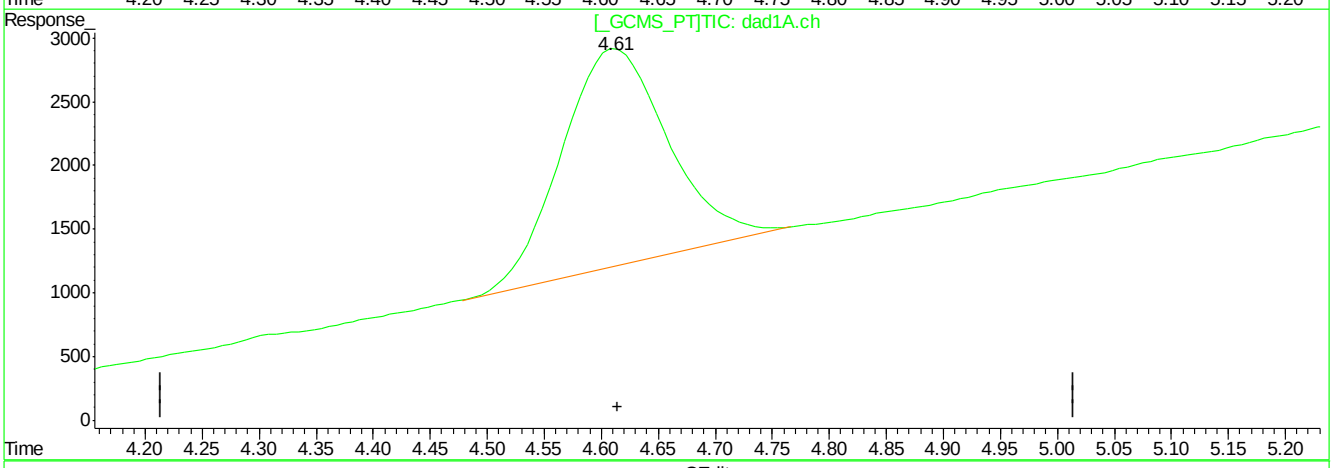
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:52:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.61min 18.434ppb

response 72650

(6) 1,3,5-Trinitrobenzene #2

4.61min 17.716ppb m

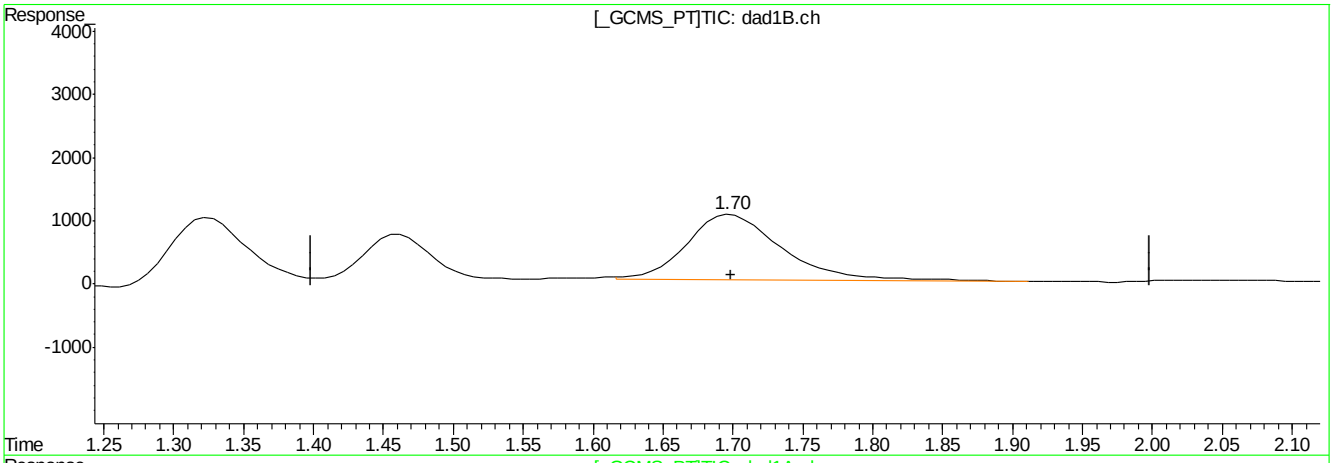
response 110937

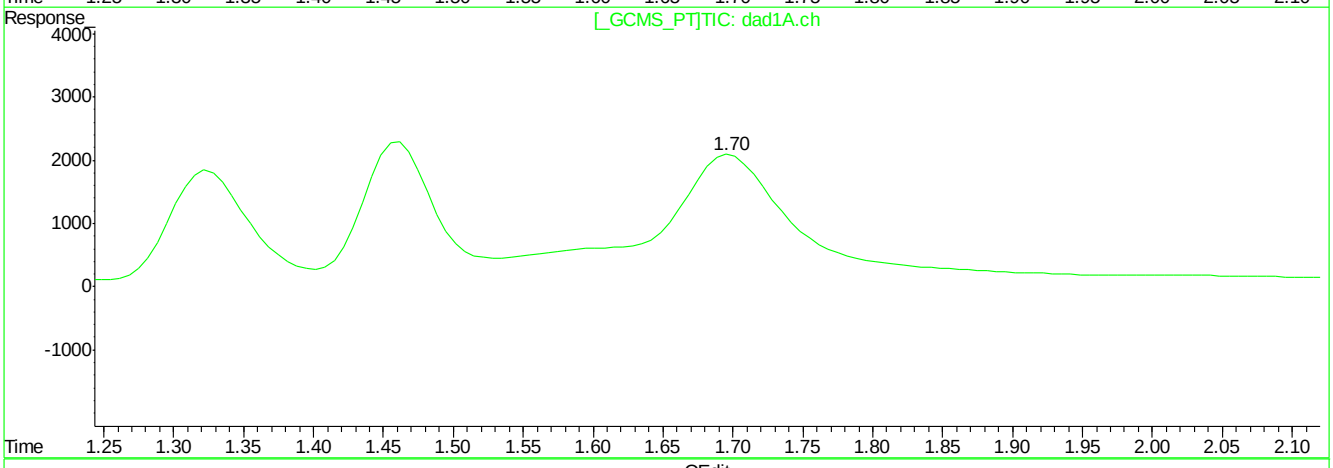
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:52:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.70min 19.269ppb

response 48826

(3) DNX #2

1.70min 44.656ppb

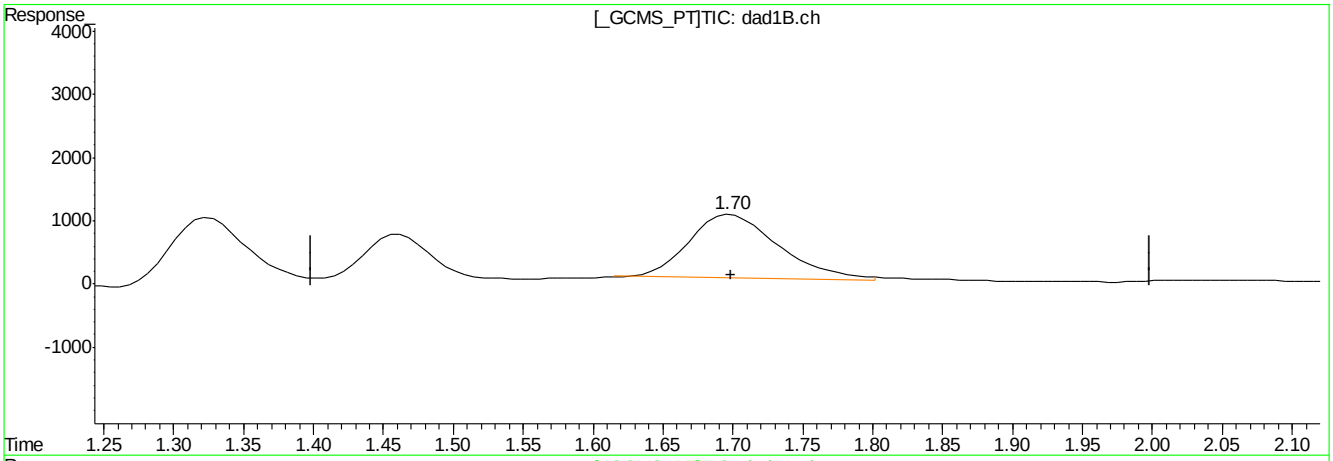
response 167854

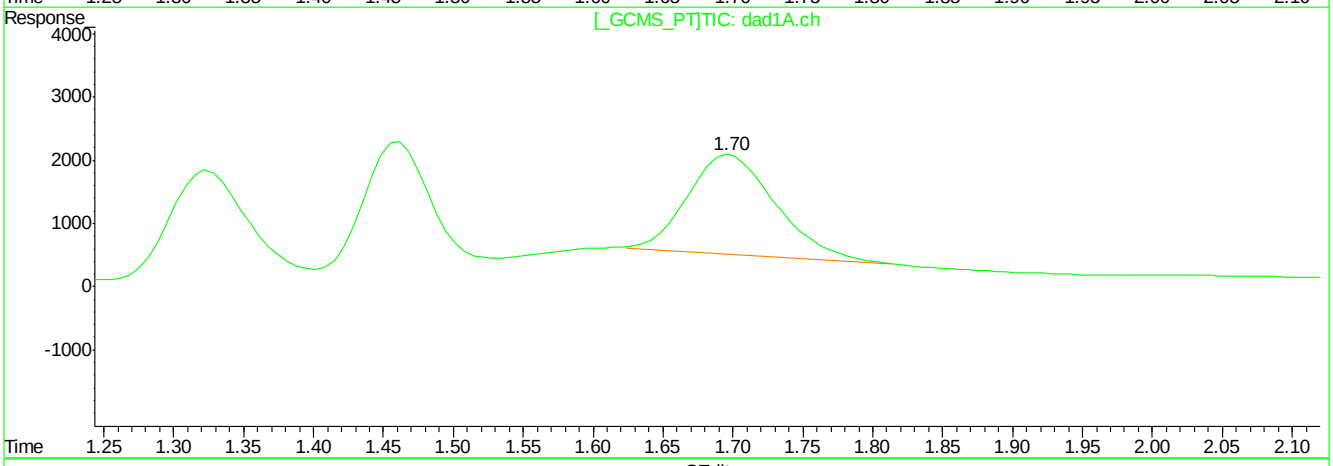
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:52:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.70min 17.438ppb m

response 44186

(3) DNX #2

1.70min 18.278ppb m

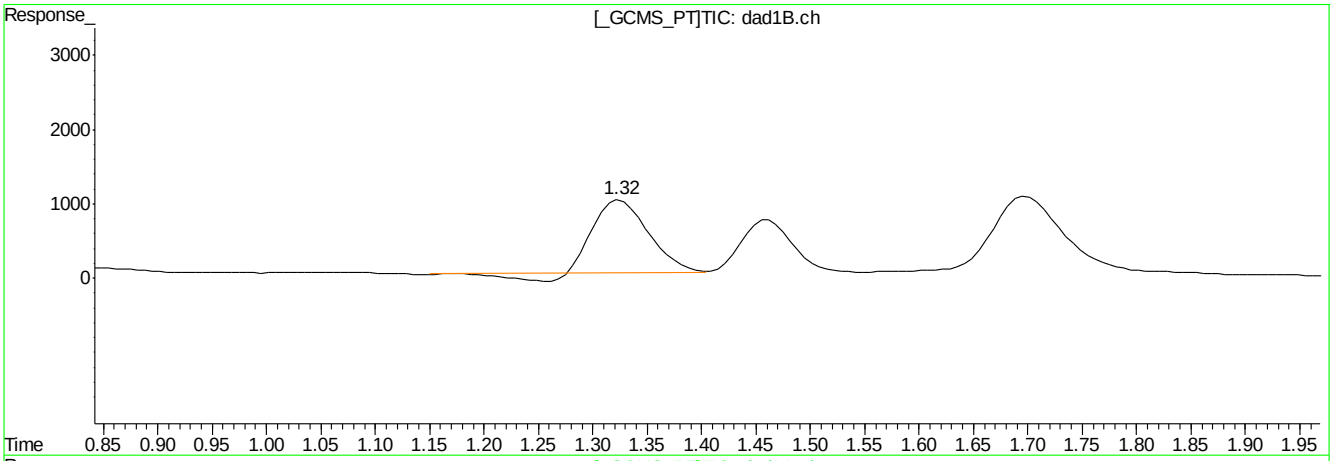
response 68686

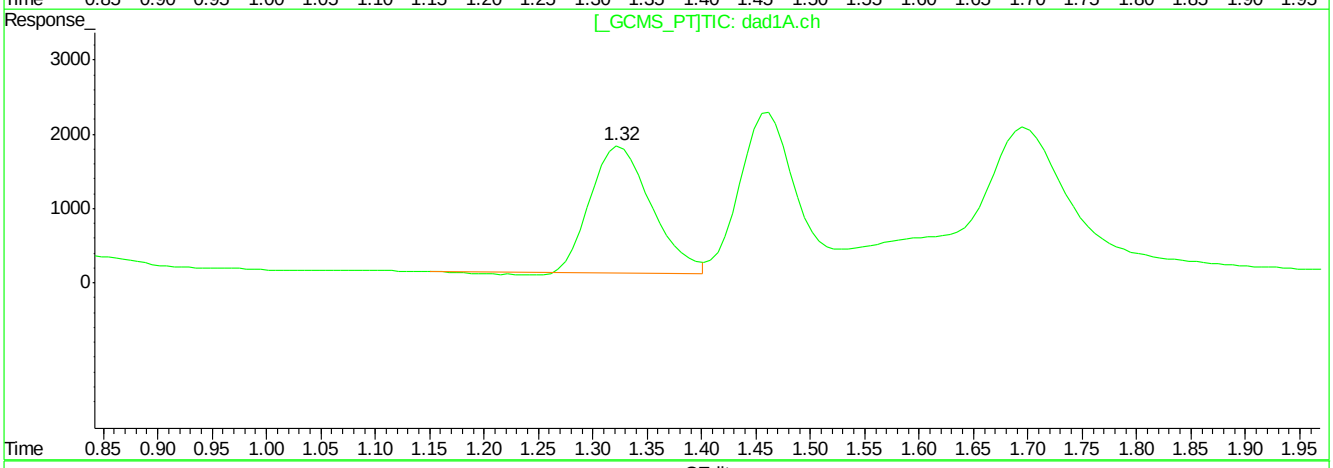
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:52:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 10.828ppb

response 32233

(1) TNX #2

1.33min 14.670ppb

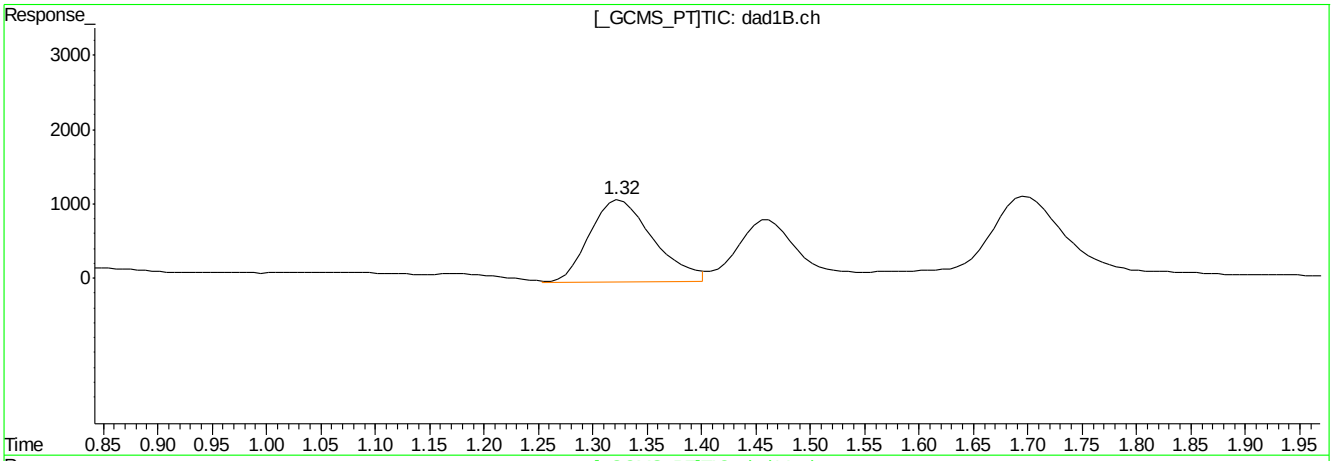
response 65559

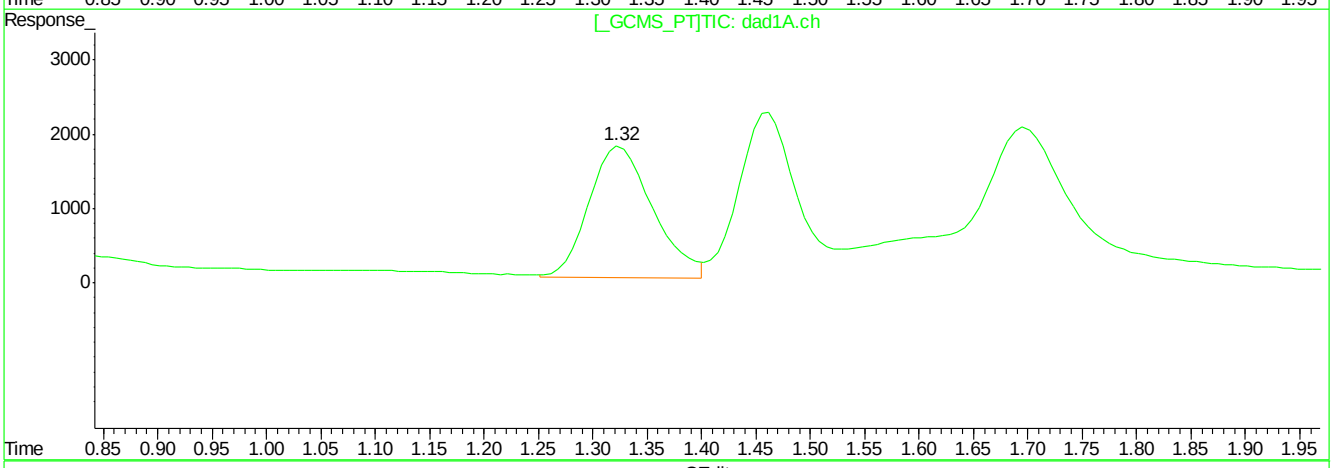
(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:52:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068880.D\dad1A.ch
Acq On : 22-Apr-2021, 13:03:23 Operator: jamesb
Sample : ic2026-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.32min 15.043ppb m

response 44777

(1) TNX #2

1.32min 15.921ppb m

response 71149

(+) = Expected Retention Time
BB068880.D 8330B_042221_PLUS.M Fri Apr 23 08:53:05 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/23/21 11:35

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 08:34:18 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.89	10.89	104093	158726	51.815	44.066
Spiked Amount	500.000	Range	70 - 136	Recovery	=	10.36%#	8.81%#
	Target Compounds						
1)	TNX	1.32	1.33	116445	180467	39.119m	40.383
2)	HMX	1.46	1.46	63325	216040	34.469	47.852
3)	DNX	1.70	1.70	121100	254094	47.792m	67.583m#
4)	MNX	2.28	2.28	146392	235284	56.549	59.130
5)	RDX	2.89	2.89	91784	145478	50.389	48.356
6)	1,3,5-Trinitrobe	4.61	4.61	194160	299033	49.266	47.753m
7)	1,3-Dinitrobenze	5.78	5.78	259417	191205	49.971	52.120m
8)	3,5-Dinitroanili	6.16	6.16	197290	350434	50.168	52.227m
9)	Nitrobenzene	7.30	7.30	151563	150686	52.151	53.021
10)	Nitroglycerin	0.00	8.92	0	60924	N.D.	51.322 #
11)	Tetryl	9.28	9.29	157071	231235	69.010m	85.756
12)	2,4,6-Trinitroto	9.67	9.67	186588	214207	50.759	53.683
13)	2-Amino-4,6-Dini	10.04	10.05	169182	233187	49.891	46.404
14)	4-Amino-2,6-Dini	10.54	10.54	125705	229894	53.308	46.858
16)	2,4-Dinitrotolue	11.54	11.55	223645	135186	49.071	44.970m
17)	2,6-Dinitrotolue	12.01	12.02	128952	152858	47.023	43.067
18)	o-Nitrotoluene	15.02	15.03	110745	140981	56.195m	57.636m
19)	p-Nitrotoluene	15.61	15.61	168956	123609	54.991	53.666m
20)	m-Nitrotoluene	16.48	16.51	173982	167740	58.658m	46.675m
21)	PETN	0.00	18.47	0	55619	N.D.	43.326m#

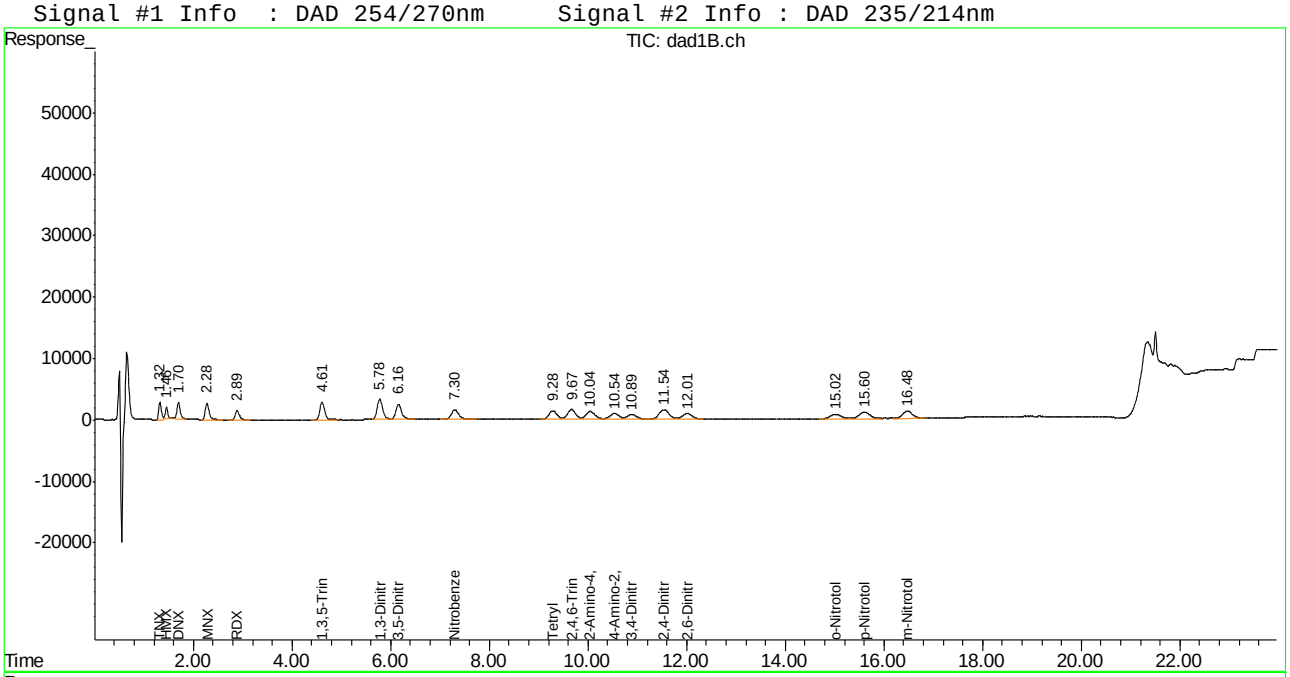
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:57:40 2021 Page 1

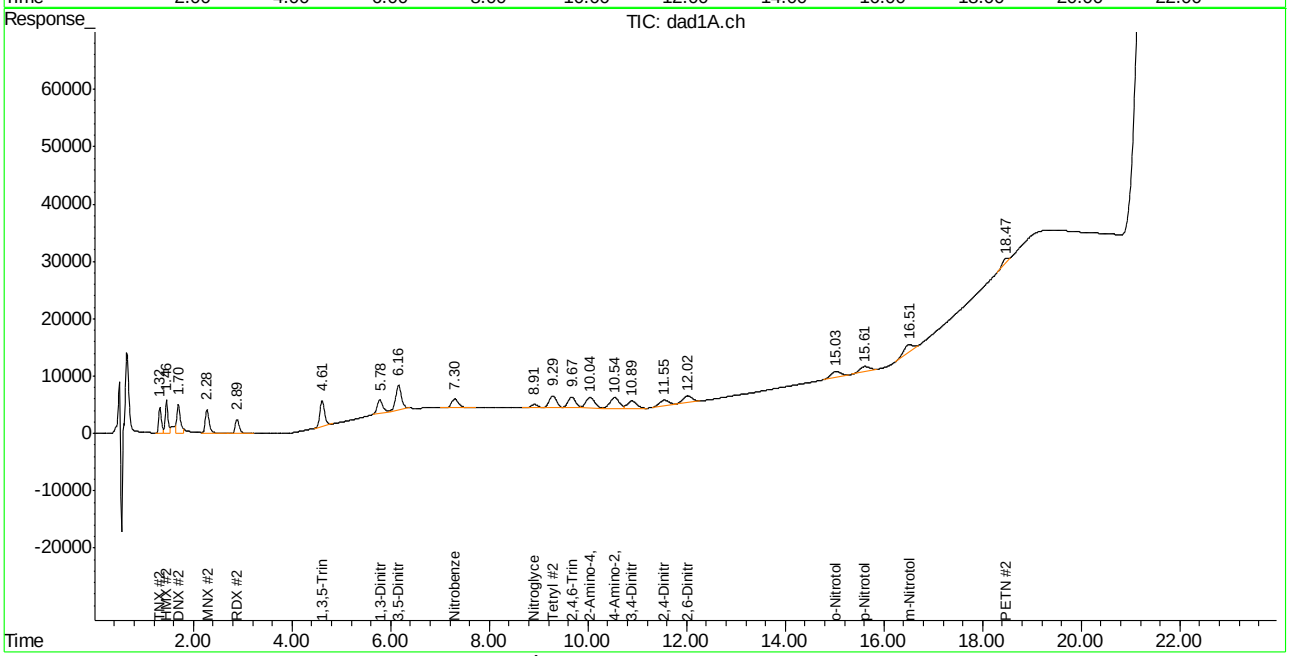
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:50 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

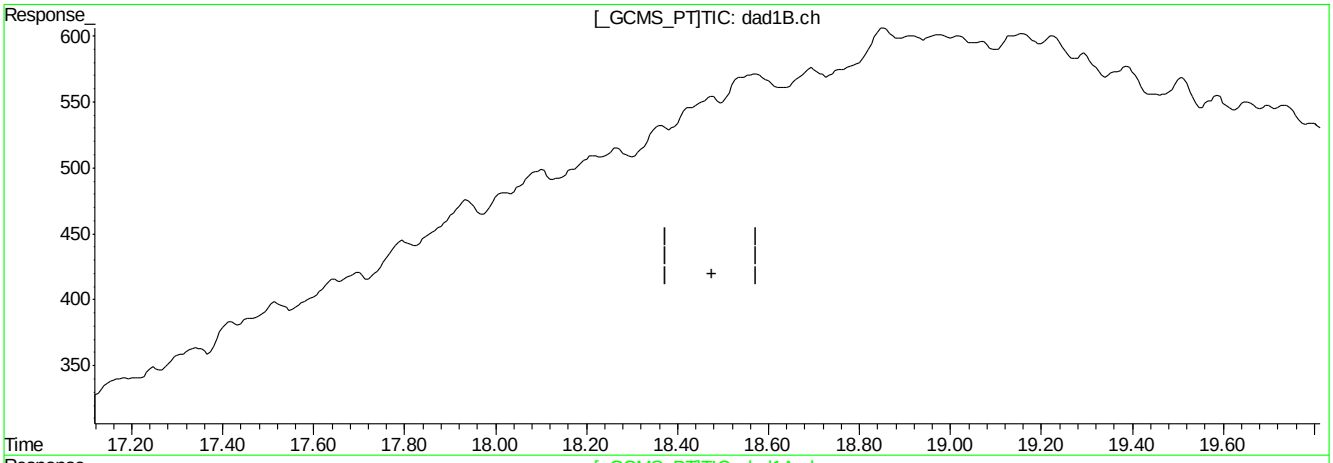
Sample Number: GBB2026-IC2026
Lab FileID: BB068881.D
Injection Time: 04/22/21 13:34
Method: SW846 8330A
Analyst approved: 04/23/21 08:56 James Boone
Supervisor approved: 04/23/21 11:35 Naresh Jiawan

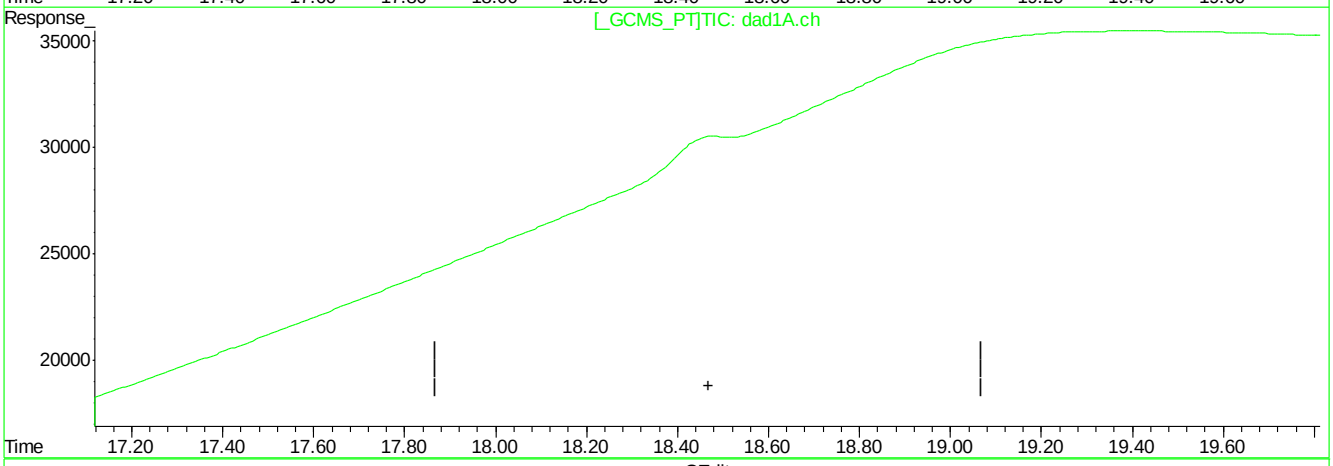
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.32	Poor instrument integration
DNX		1	1.70	Poor instrument integration
DNX		2	1.70	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.61	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.78	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.16	Poor instrument integration
Tetryl	479-45-8	1	9.28	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	11.55	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.02	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.03	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.61	Poor instrument integration
m-Nitrotoluene	99-08-1	1	16.48	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.51	Poor instrument integration
PETN	78-11-5	2	18.47	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

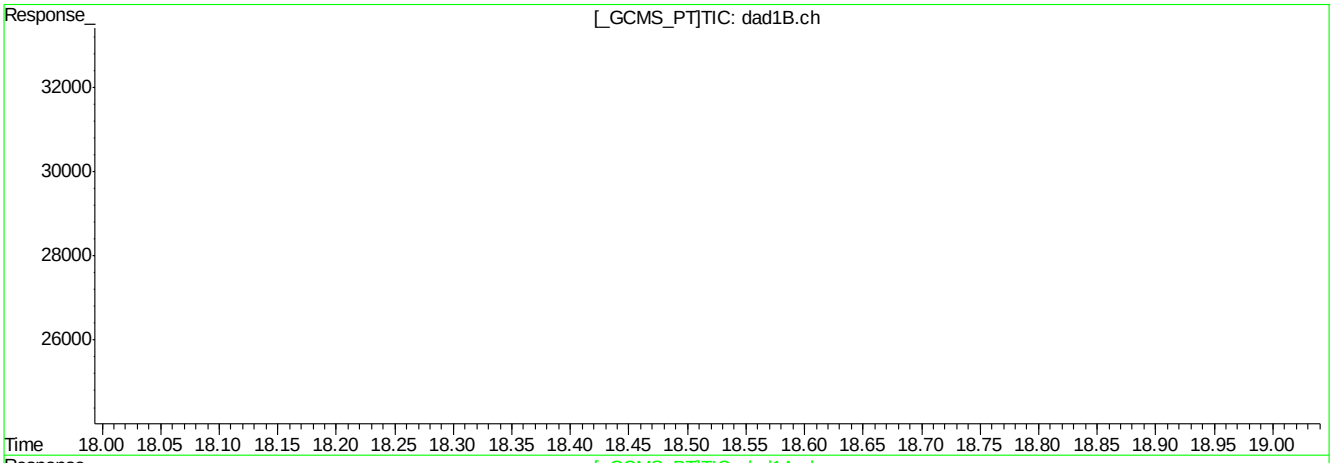
response 0

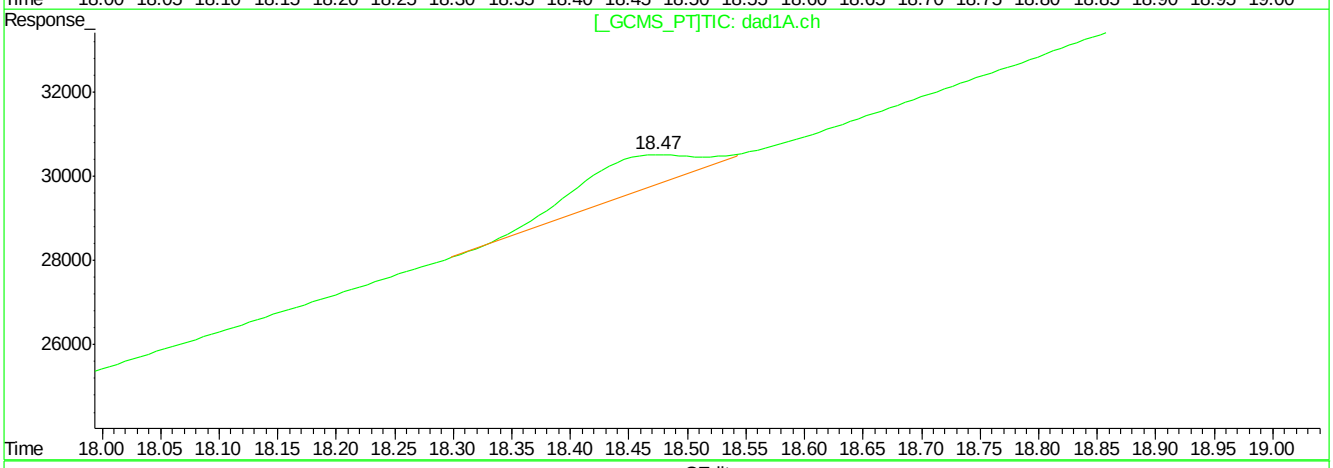
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:47:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.47min 43.326ppb m

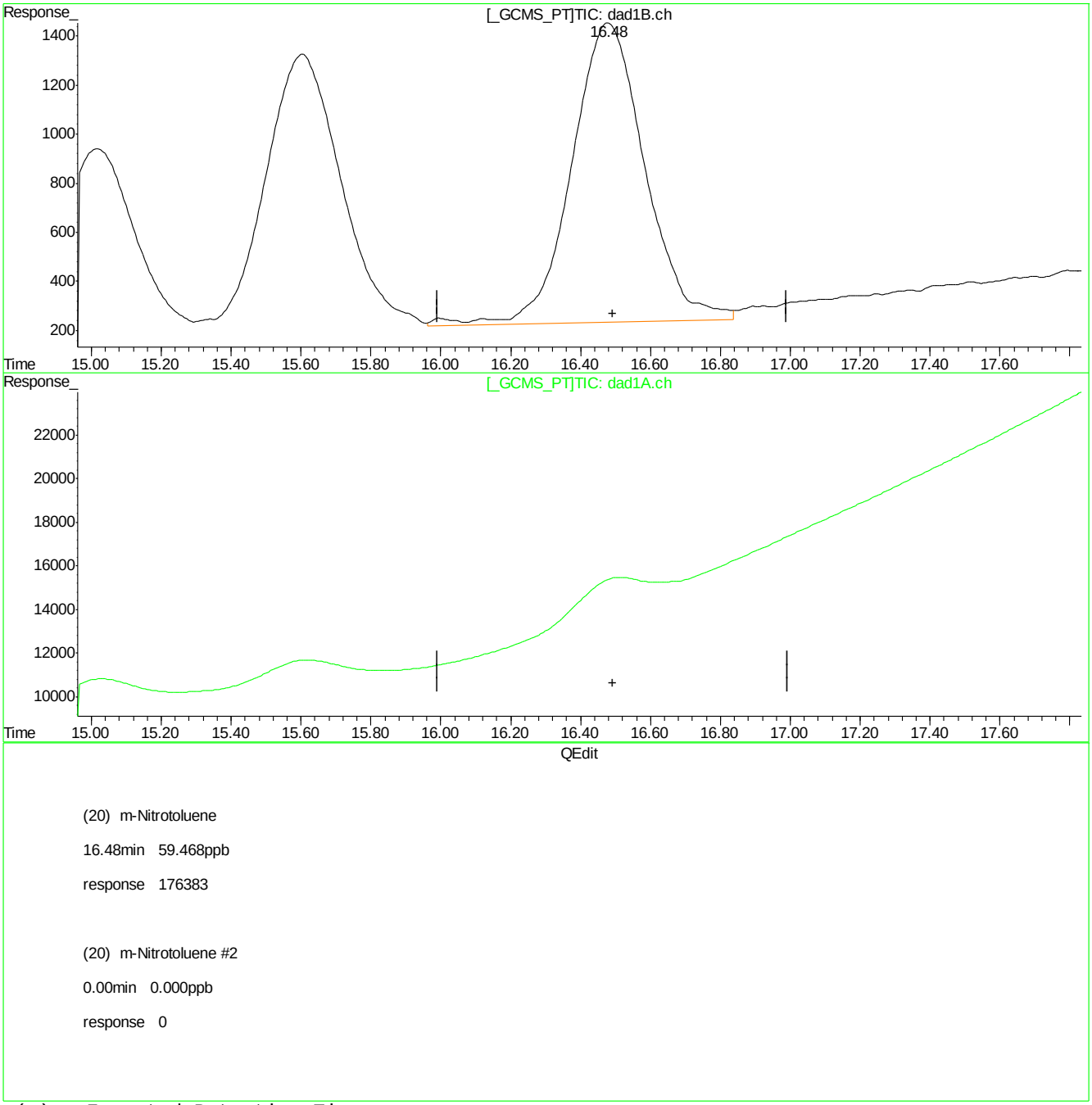
response 55619

(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:47:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.48min 59.468ppb

response 176383

(20) m-Nitrotoluene #2

0.00min 0.000ppb

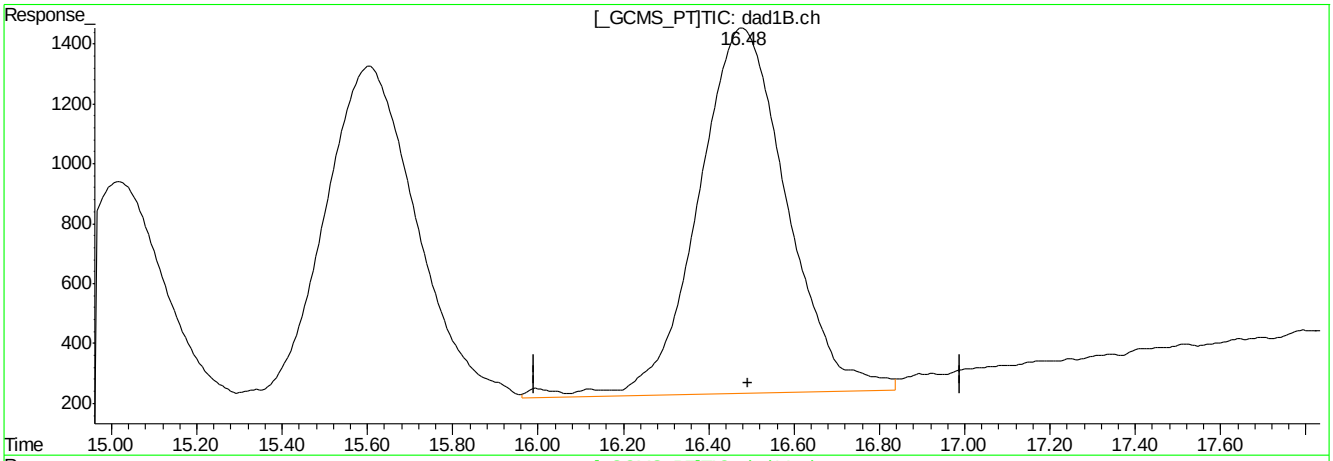
response 0

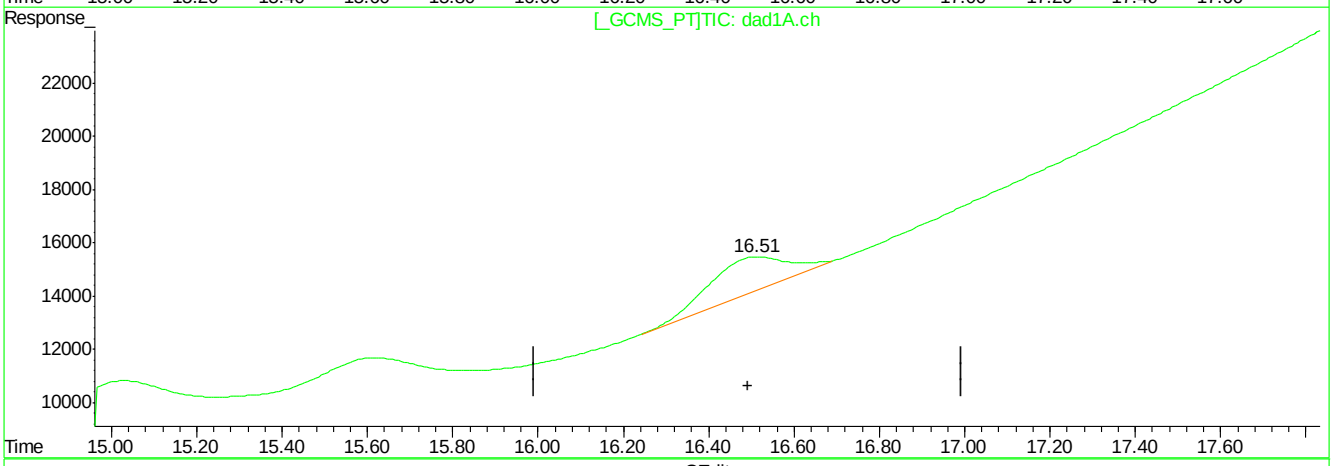
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:47:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.48min 59.468ppb

response 176383

(20) m-Nitrotoluene #2

16.51min 46.675ppb m

response 167740

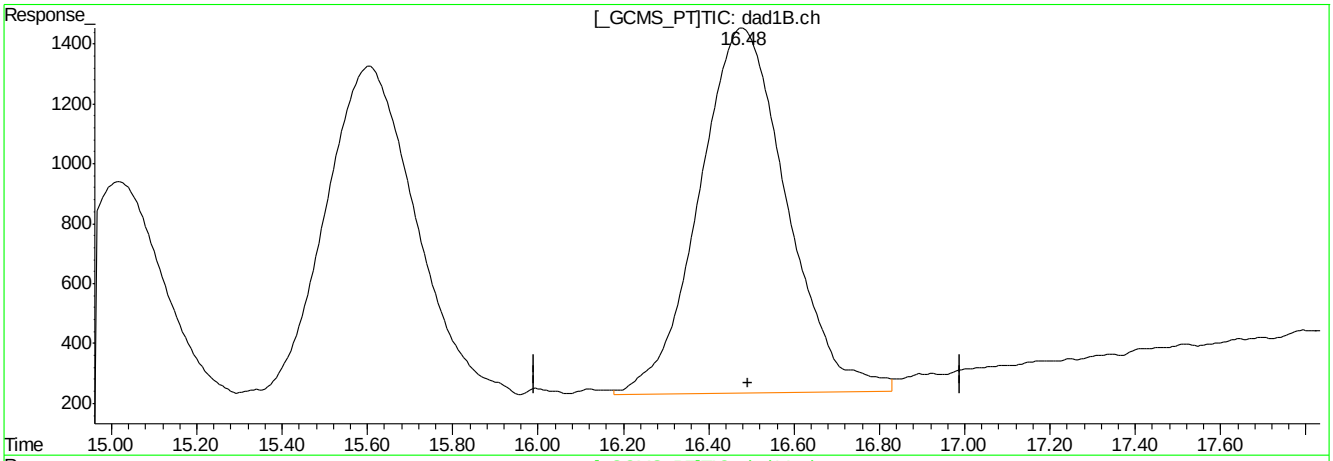
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:47:48 2021

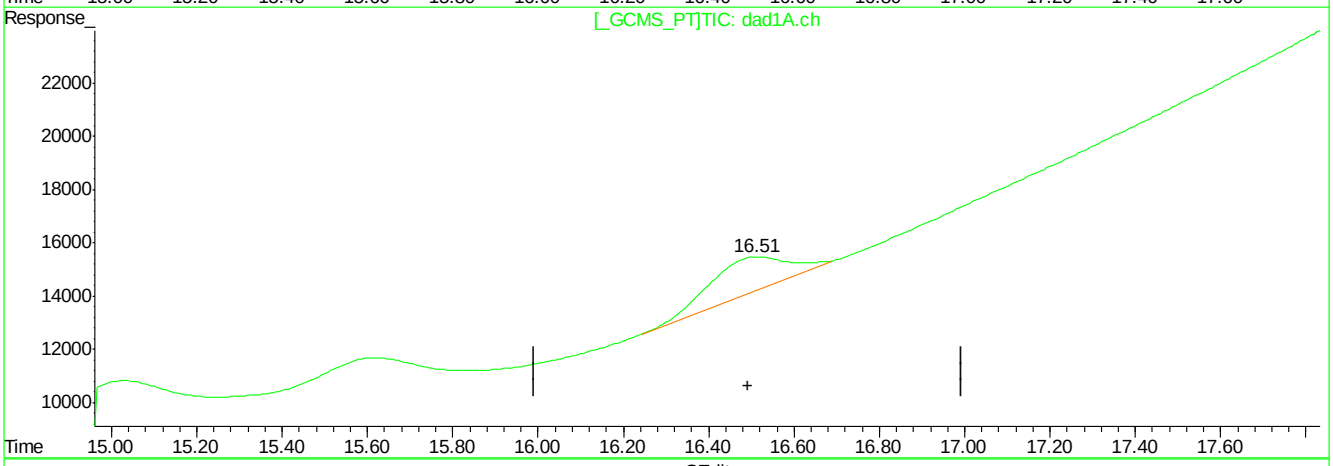
BB068881.D edits: m-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.48min 58.658ppb m

response 173982

(20) m-Nitrotoluene #2

16.51min 46.675ppb m

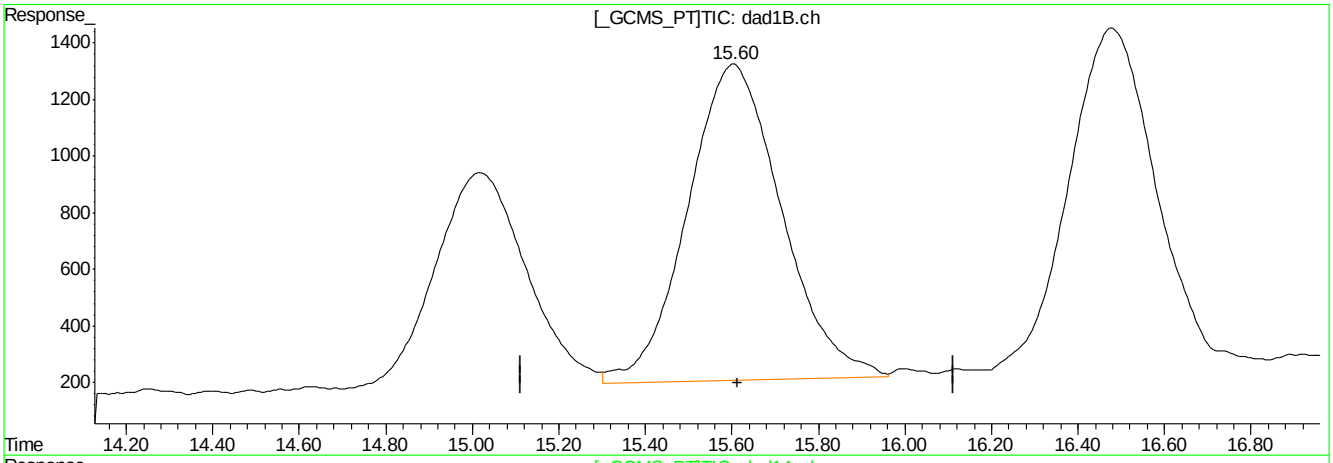
response 167740

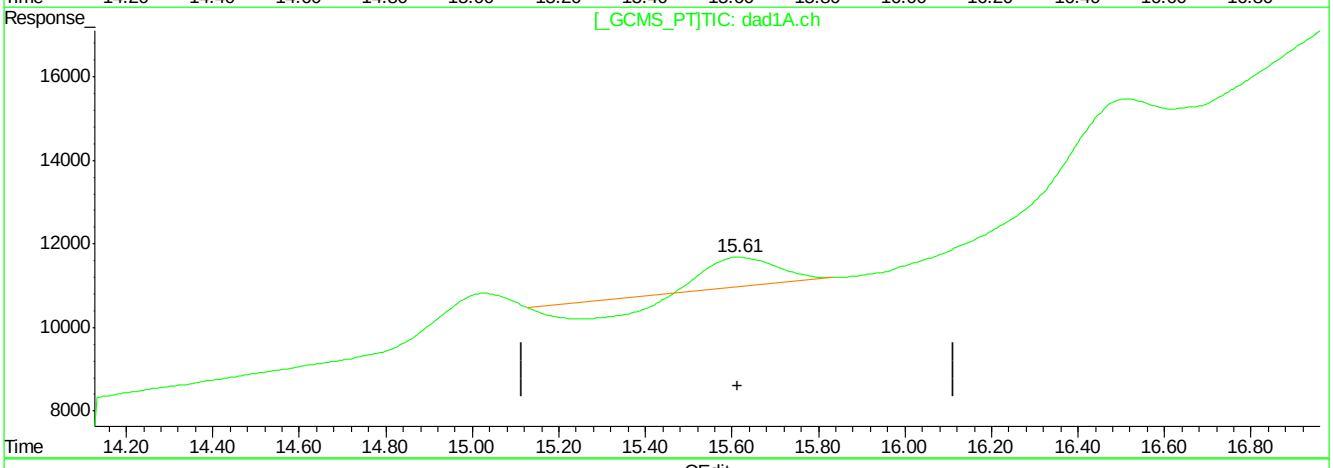
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:47:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.61min 54.991ppb

response 168956

(19) p-Nitrotoluene #2

15.62min 11.460ppb

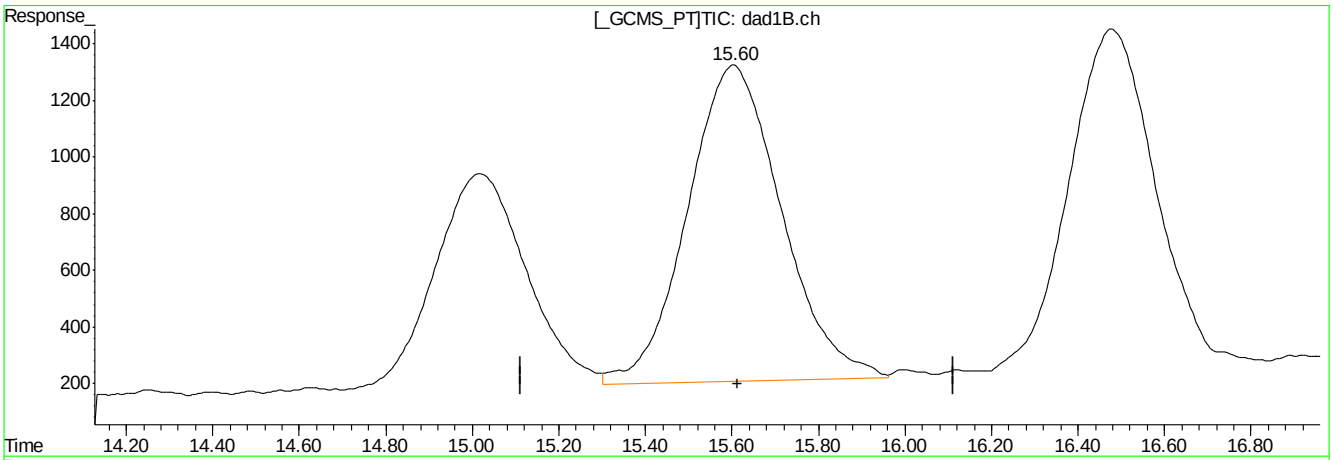
response 26344

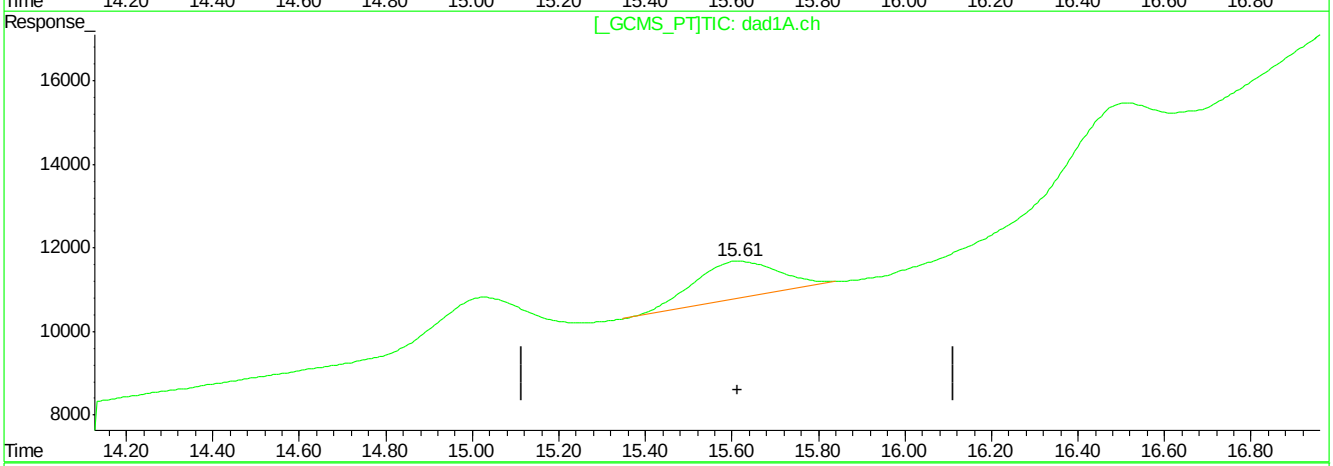
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:47:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.61min 54.991ppb

response 168956

(19) p-Nitrotoluene #2

15.61min 53.666ppb m

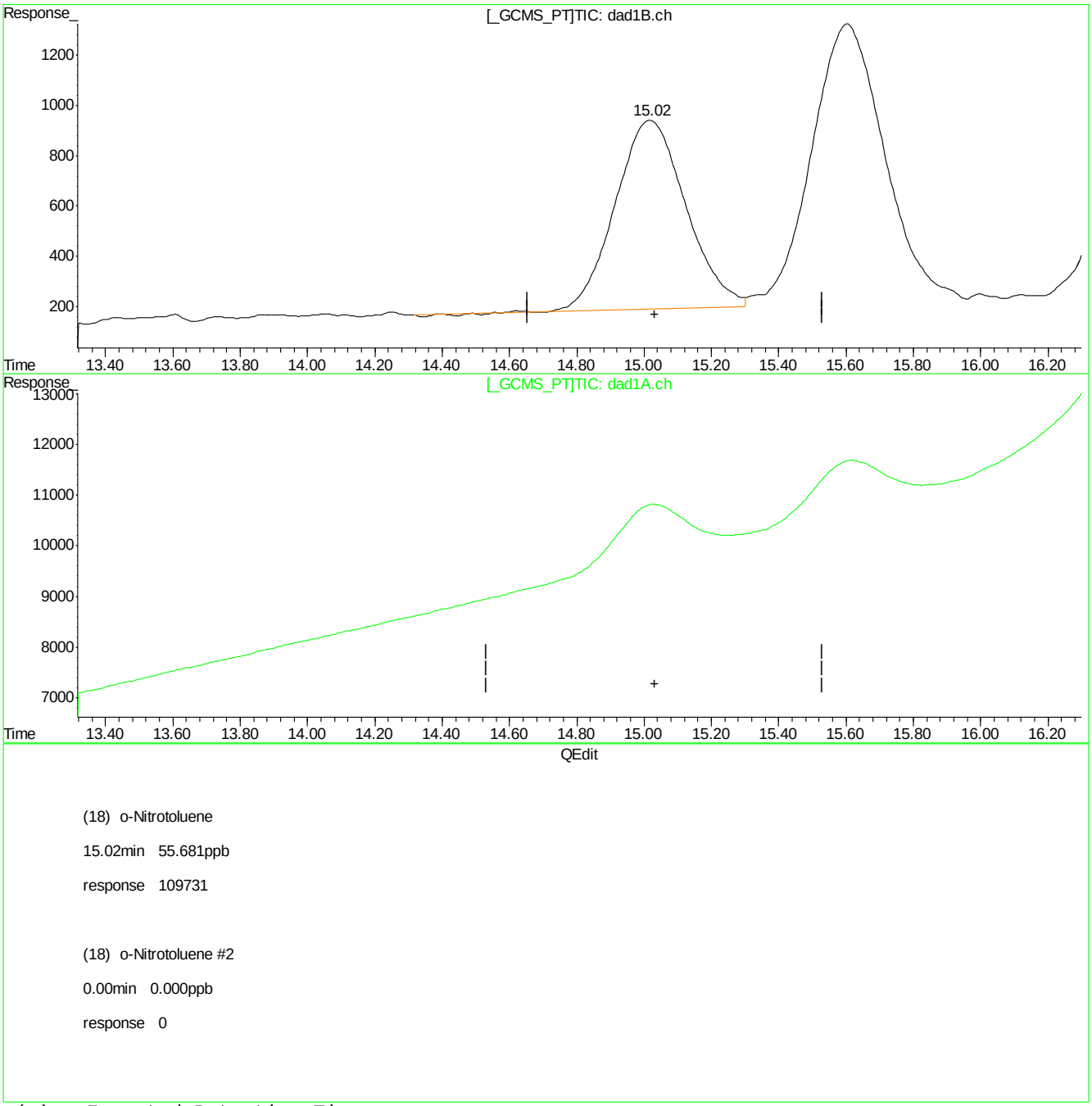
response 123609

(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:48:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration

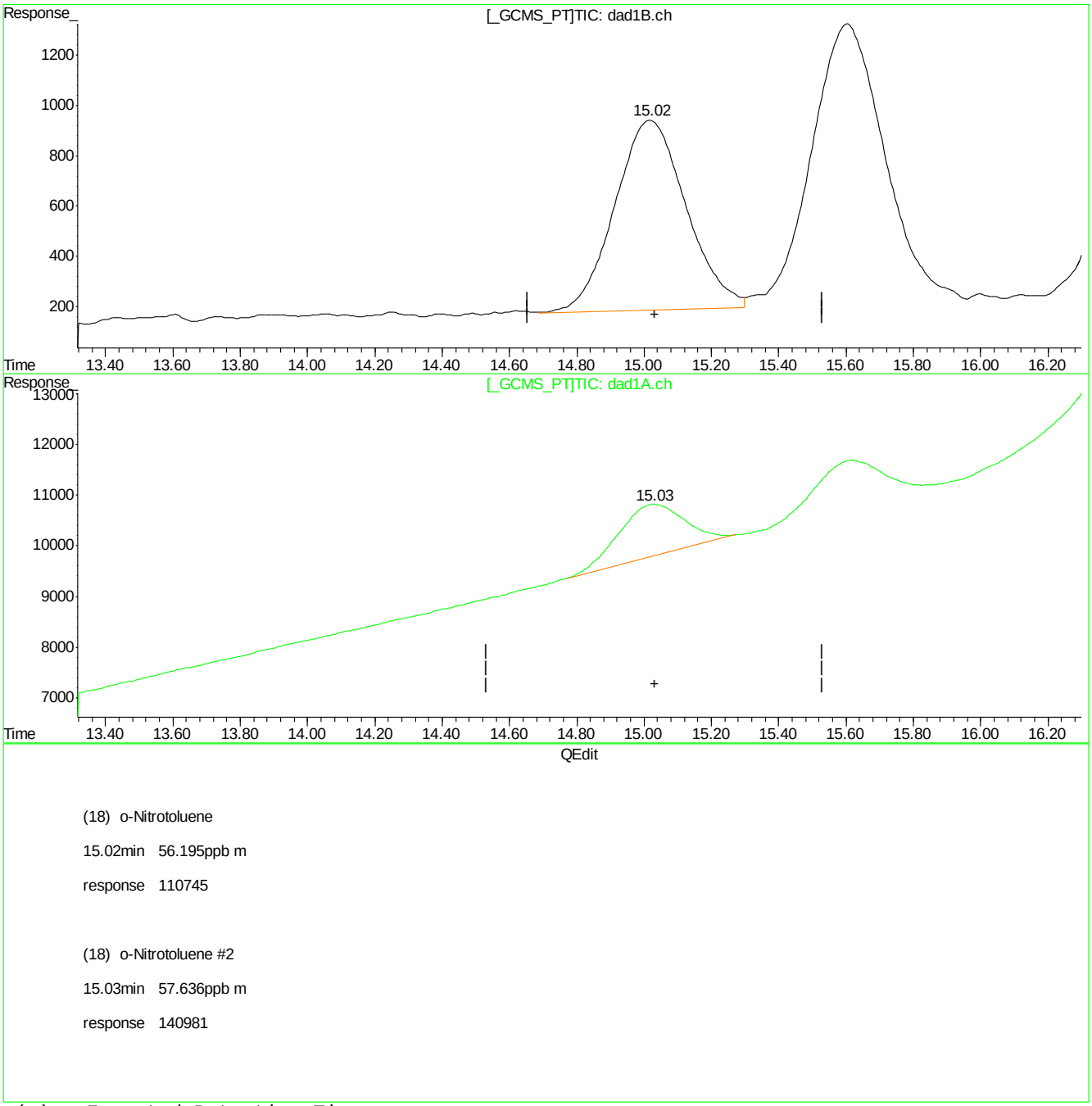


(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:48:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.02min 56.195ppb m

response 110745

(18) o-Nitrotoluene #2

15.03min 57.636ppb m

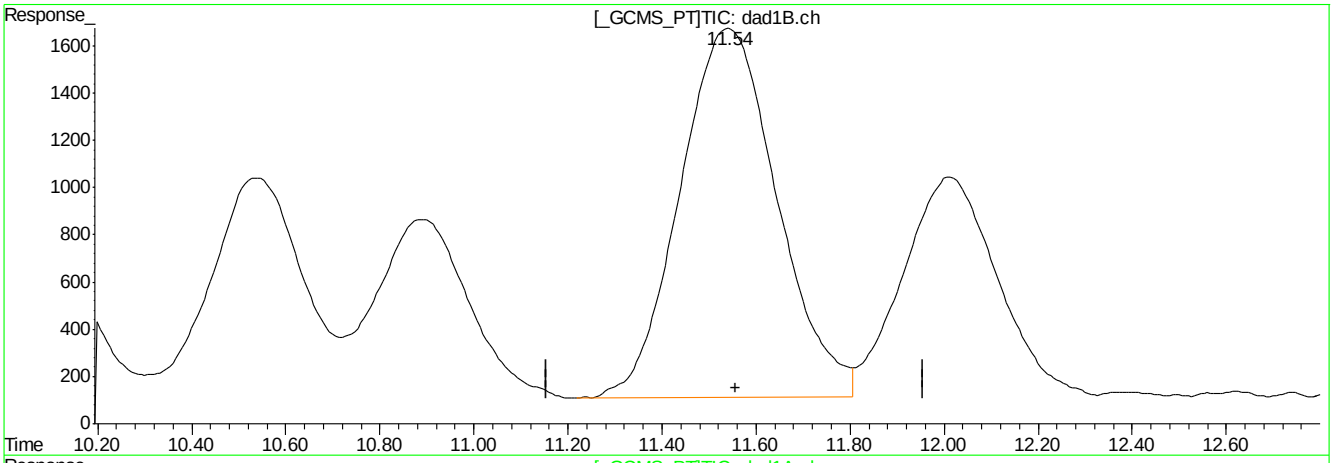
response 140981

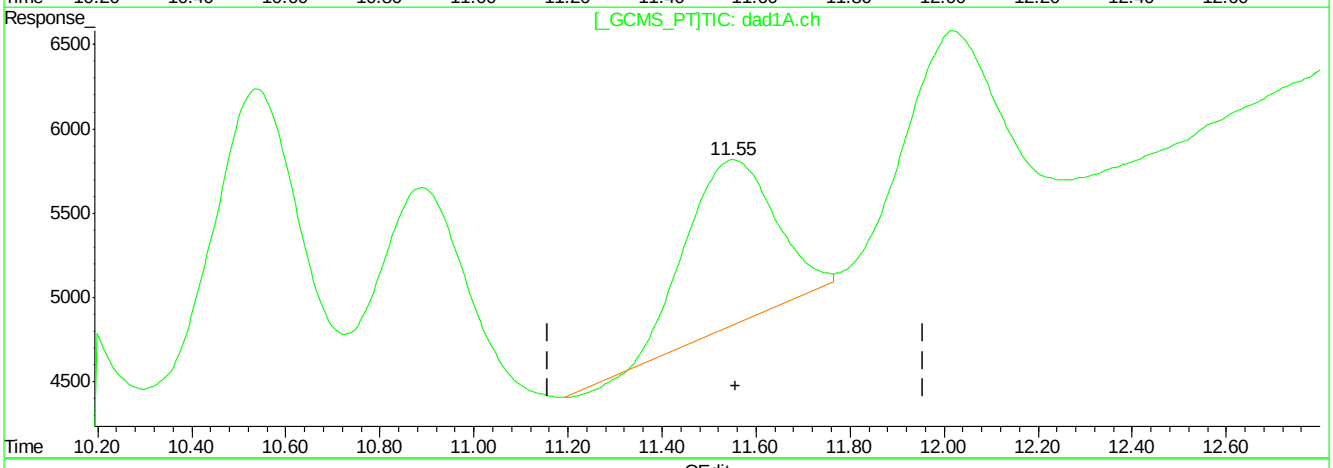
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:48:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.54min 49.071ppb

response 223645

(16) 2,4-Dinitrotoluene #2

11.55min 42.198ppb

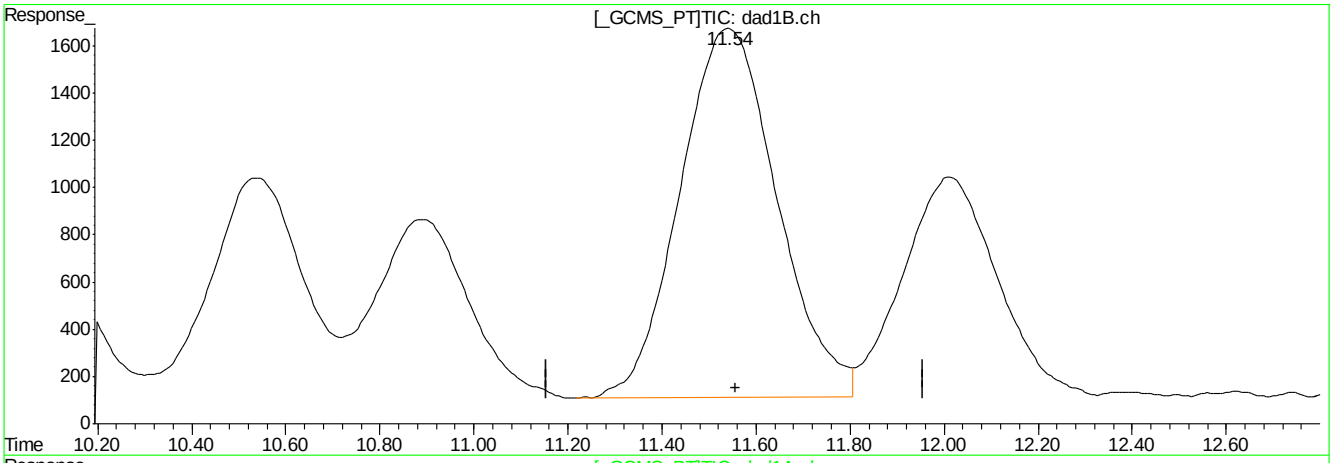
response 126853

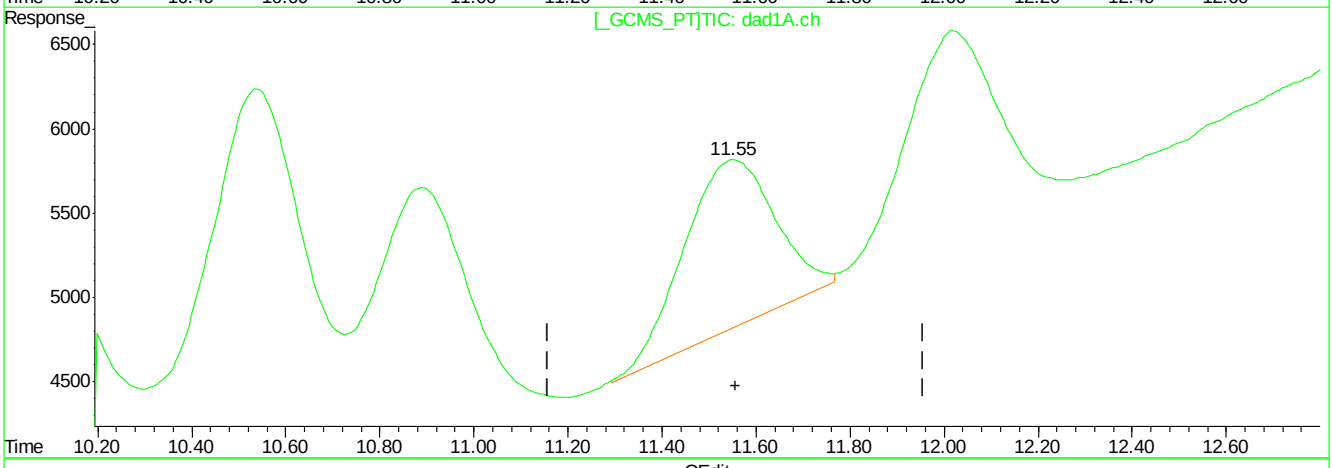
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:48:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.54min 49.071ppb

response 223645

(16) 2,4-Dinitrotoluene #2

11.55min 44.970ppb m

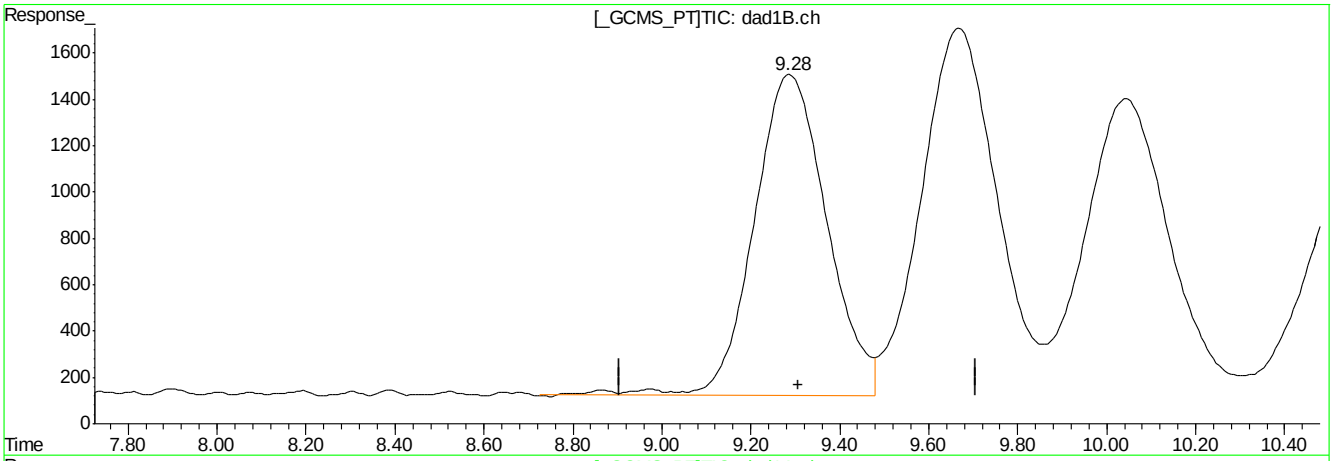
response 135186

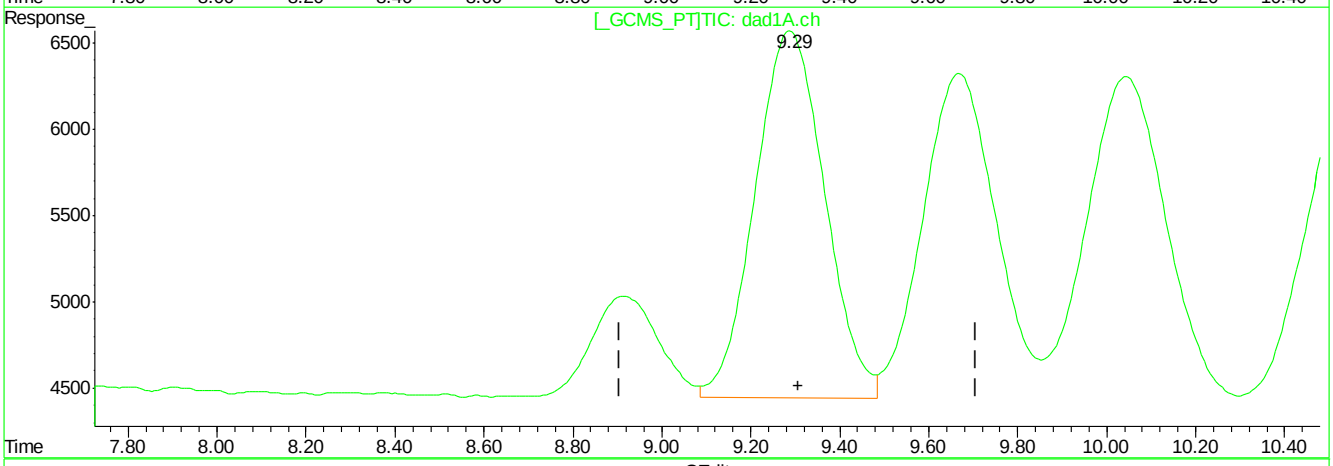
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:48:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.29min 69.534ppb

response 158264

(11) Tetryl #2

9.29min 85.756ppb

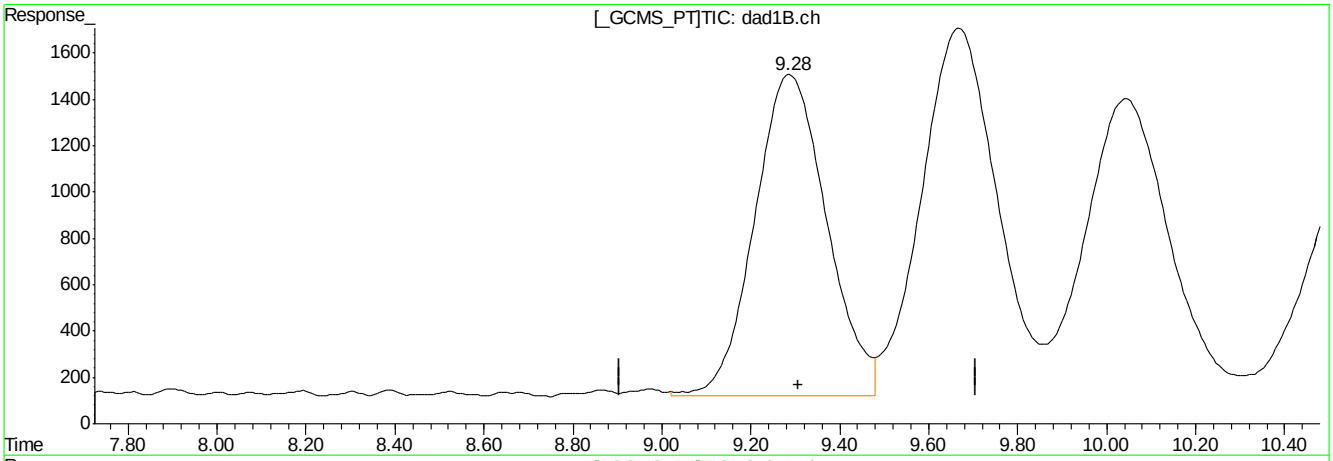
response 231235

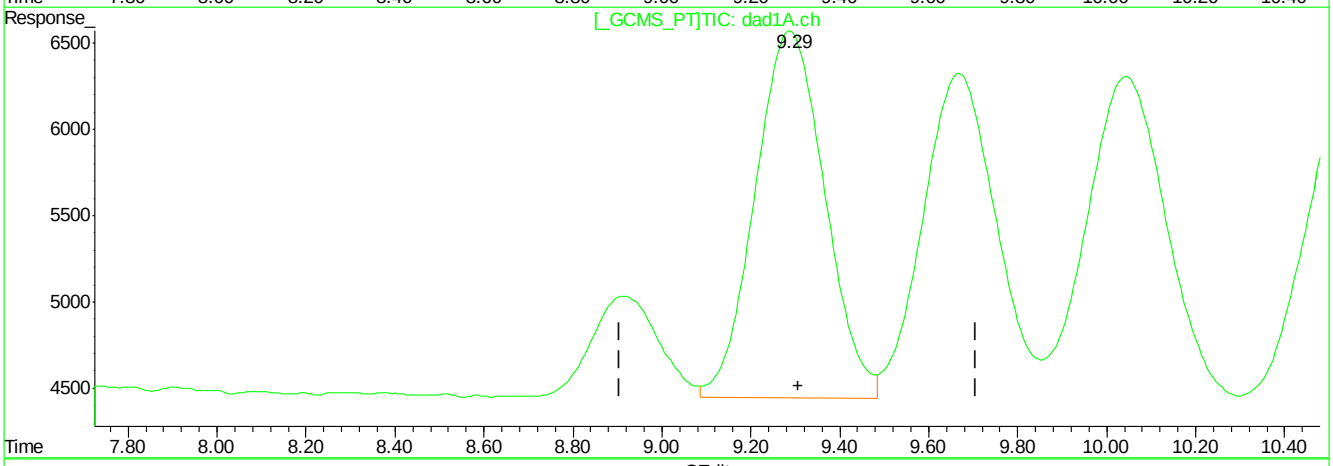
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:48:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.28min 69.010ppb m

response 157071

(11) Tetryl #2

9.29min 85.756ppb

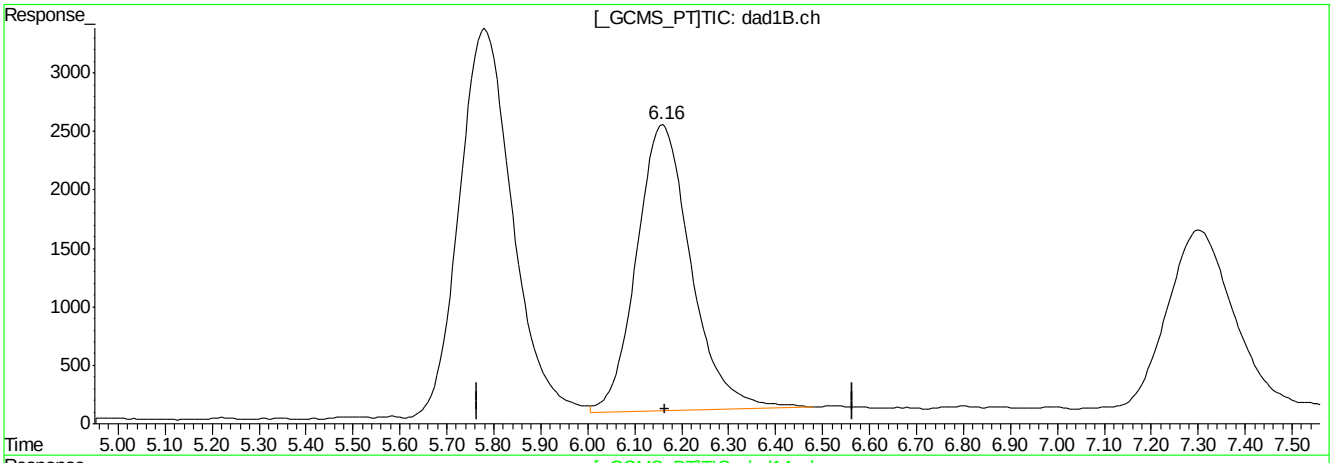
response 231235

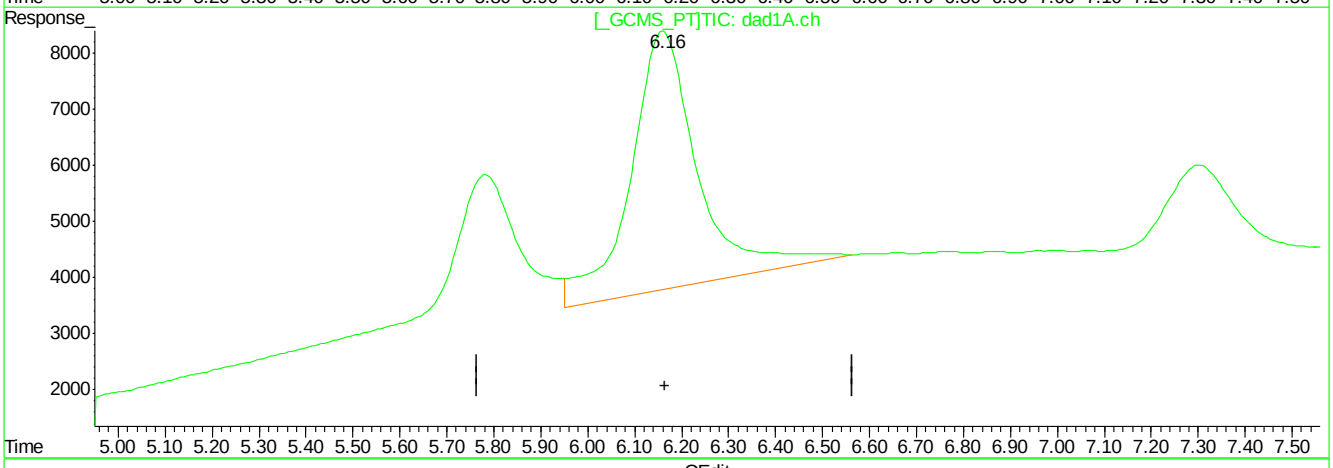
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:48:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.16min 50.168ppb

response 197290

(8) 3,5-Dinitroaniline #2

6.16min 67.759ppb

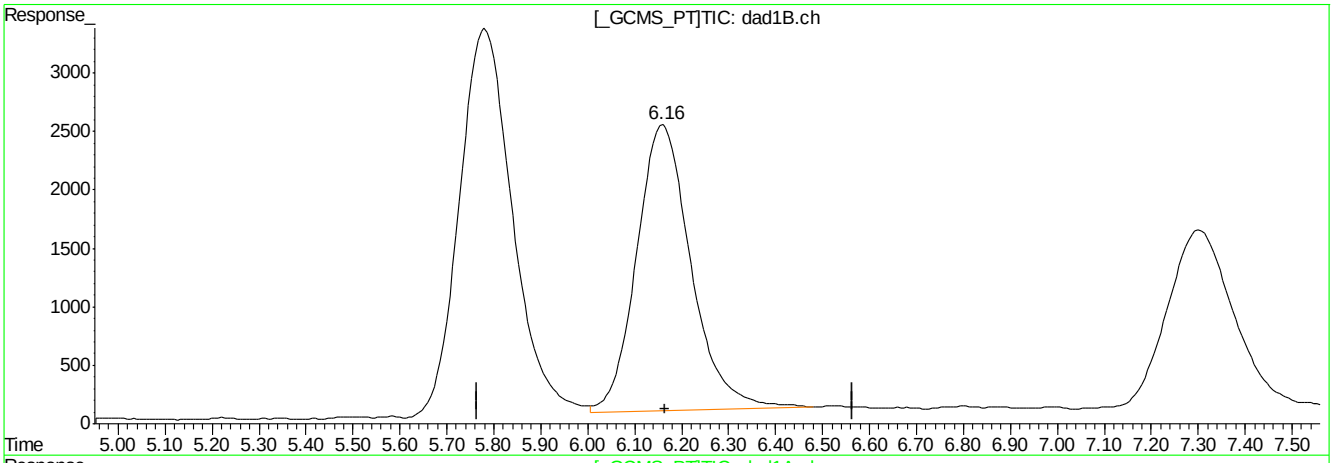
response 454653

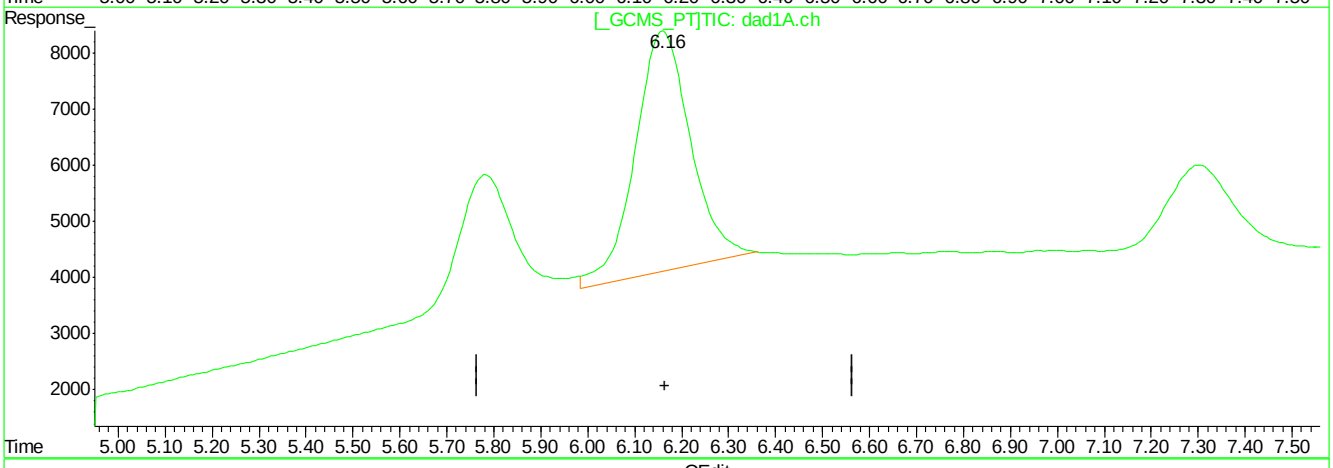
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:48:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.16min 50.168ppb

response 197290

(8) 3,5-Dinitroaniline #2

6.16min 52.227ppb m

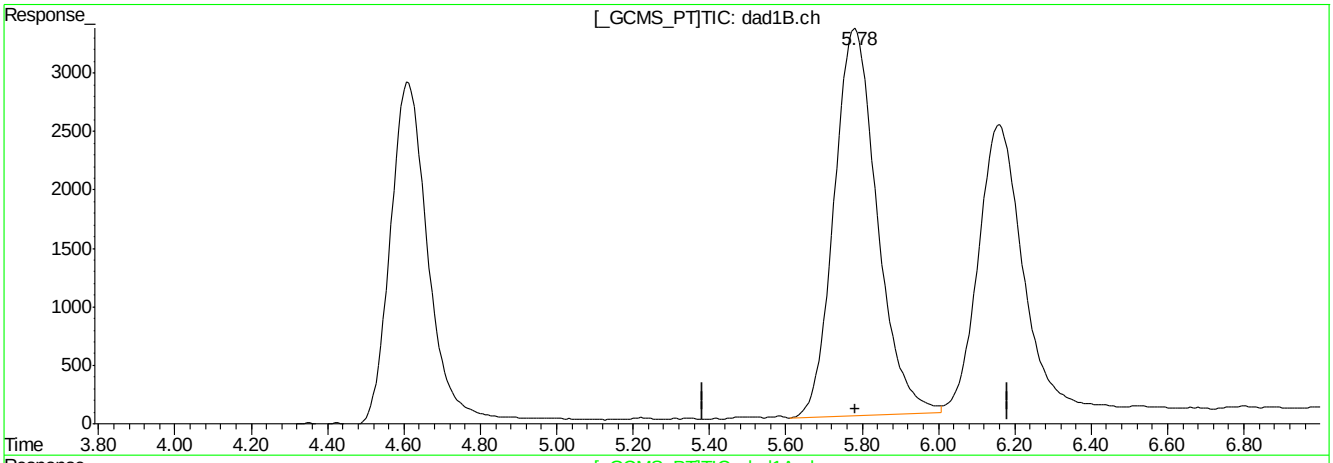
response 350434

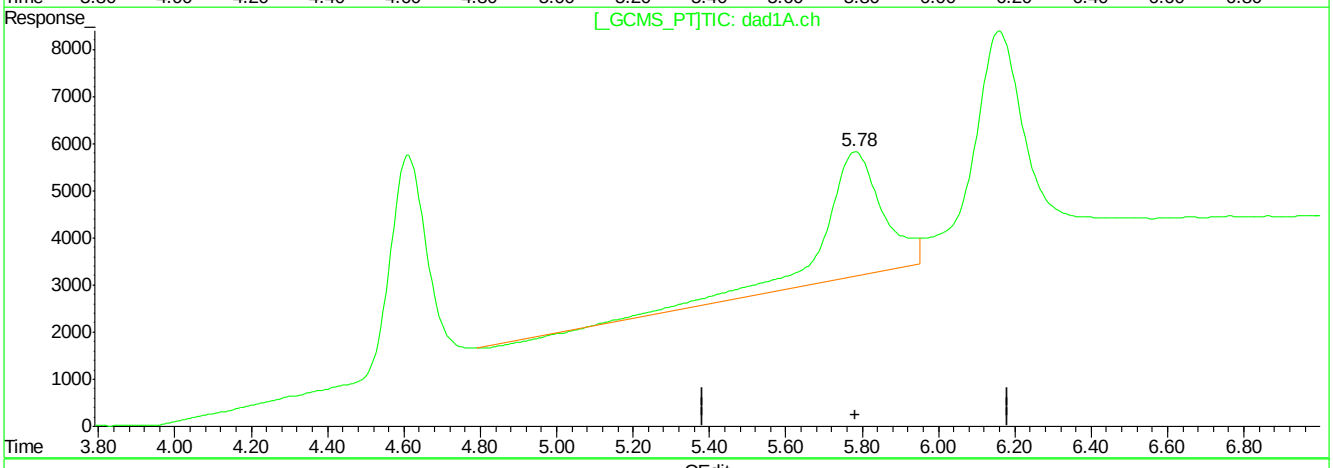
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:48:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.78min 49.971ppb

response 259417

(7) 1,3-Dinitrobenzene #2

5.78min 76.898ppb

response 282103

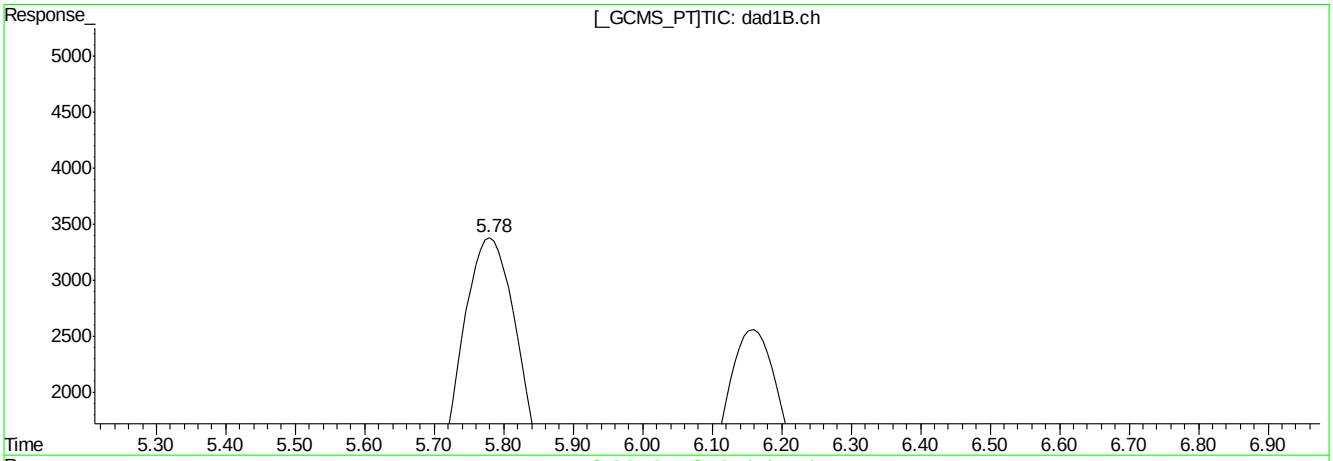
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:48:51 2021

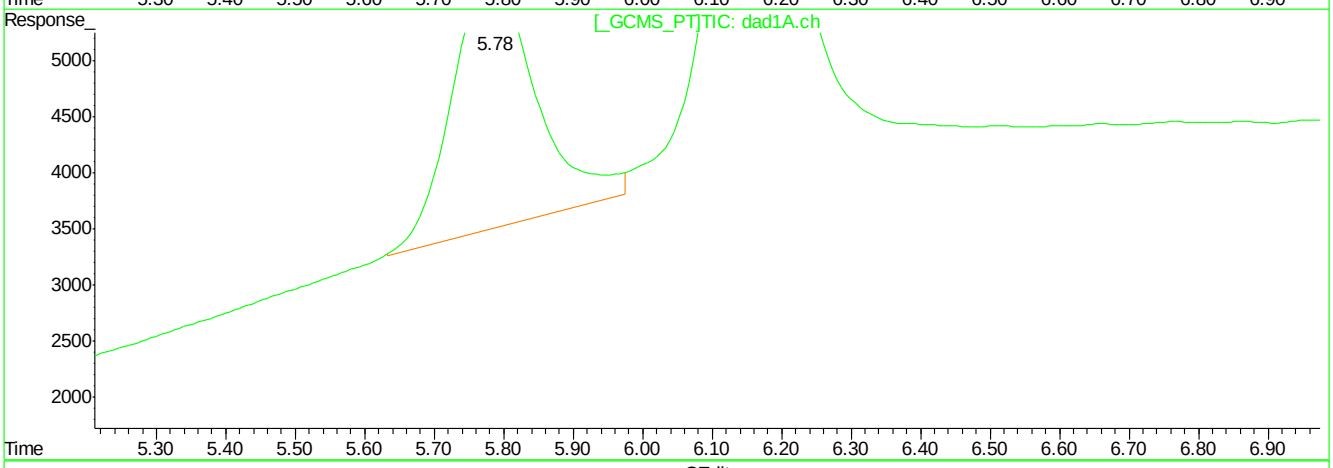
BB068881.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.78min 49.971ppb

response 259417

(7) 1,3-Dinitrobenzene #2

5.78min 52.120ppb m

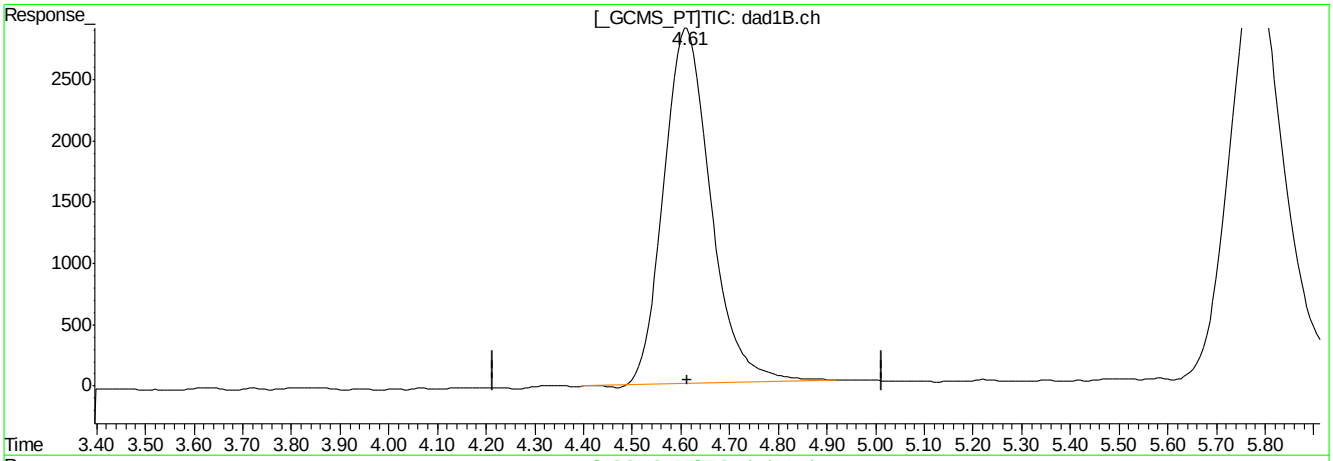
response 191205

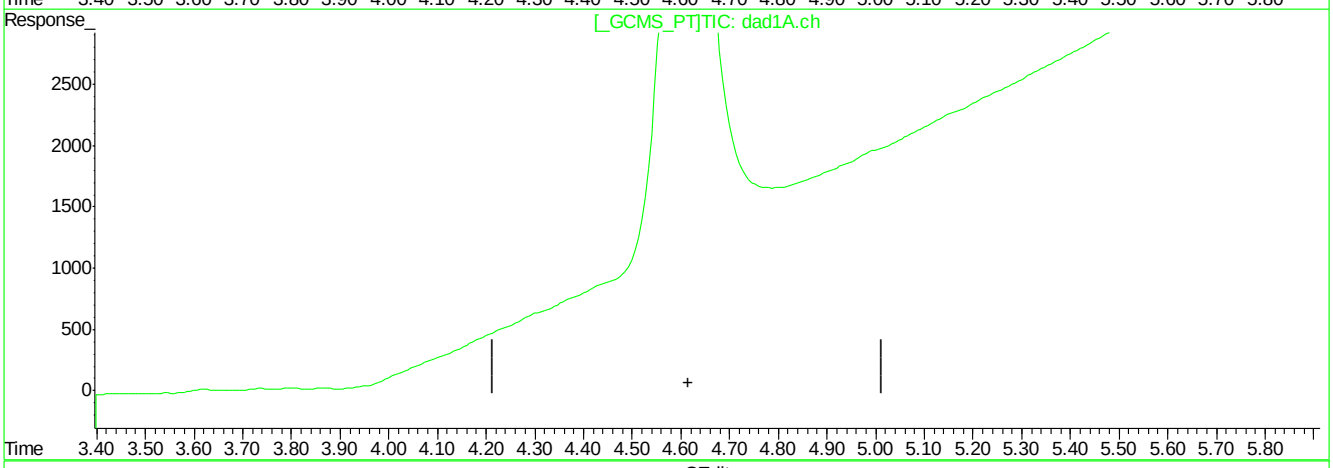
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:49:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.61min 49.266ppb

response 194160

(6) 1,3,5-Trinitrobenzene #2

0.00min 0.000ppb

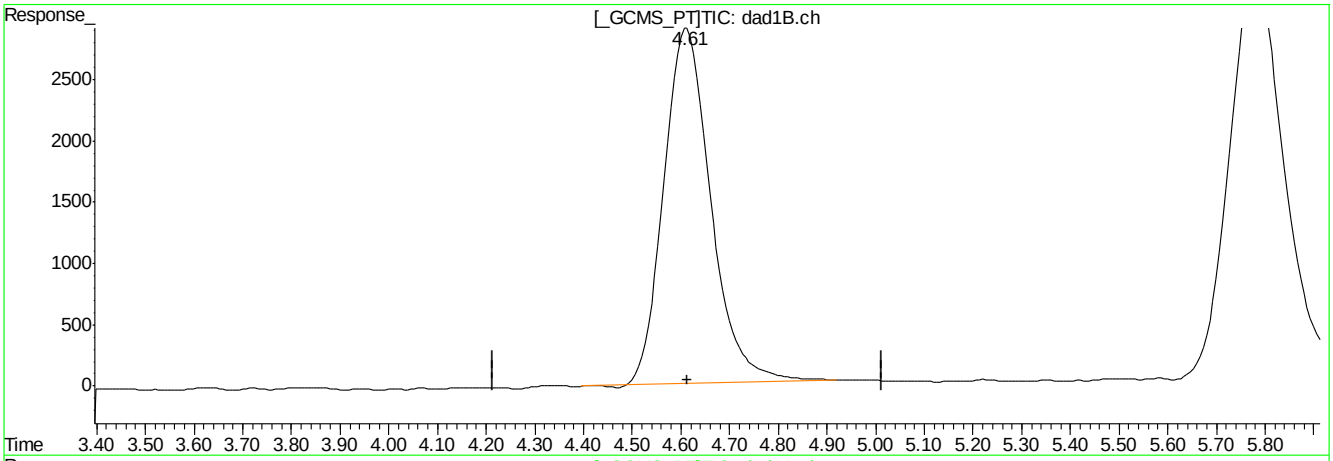
response 0

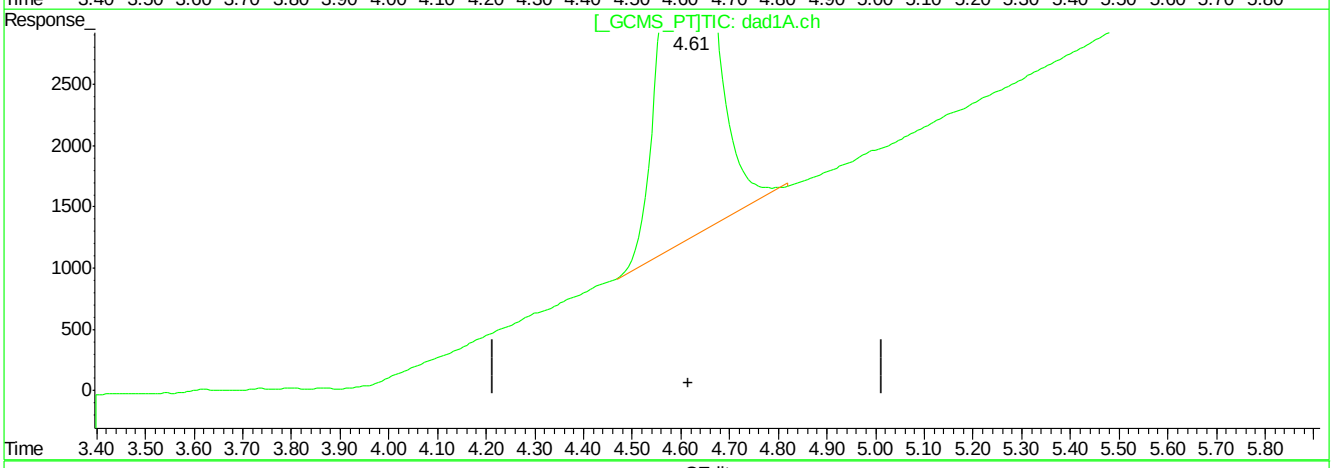
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:49:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.61min 49.266ppb

response 194160

(6) 1,3,5-Trinitrobenzene #2

4.61min 47.753ppb m

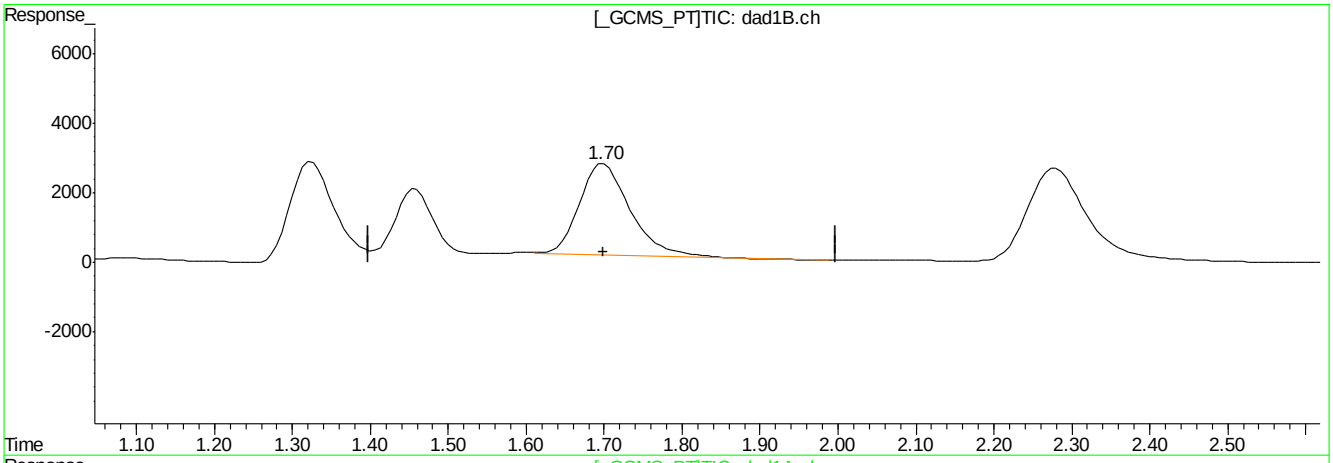
response 299033

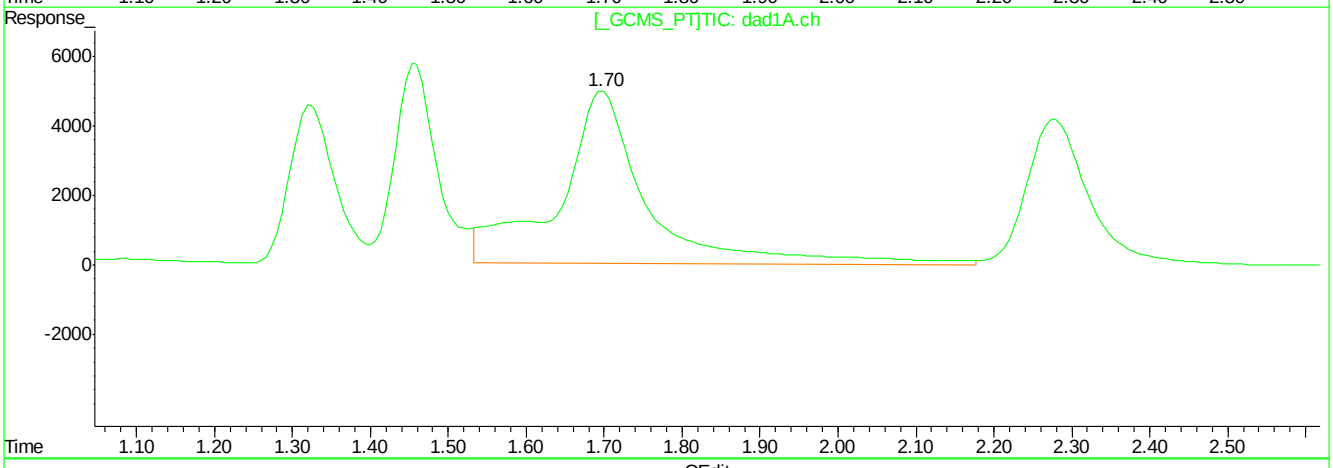
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:49:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.70min 47.027ppb

response 119161

(3) DNX #2

1.70min 105.541ppb

response 396960

(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:49:36 2021

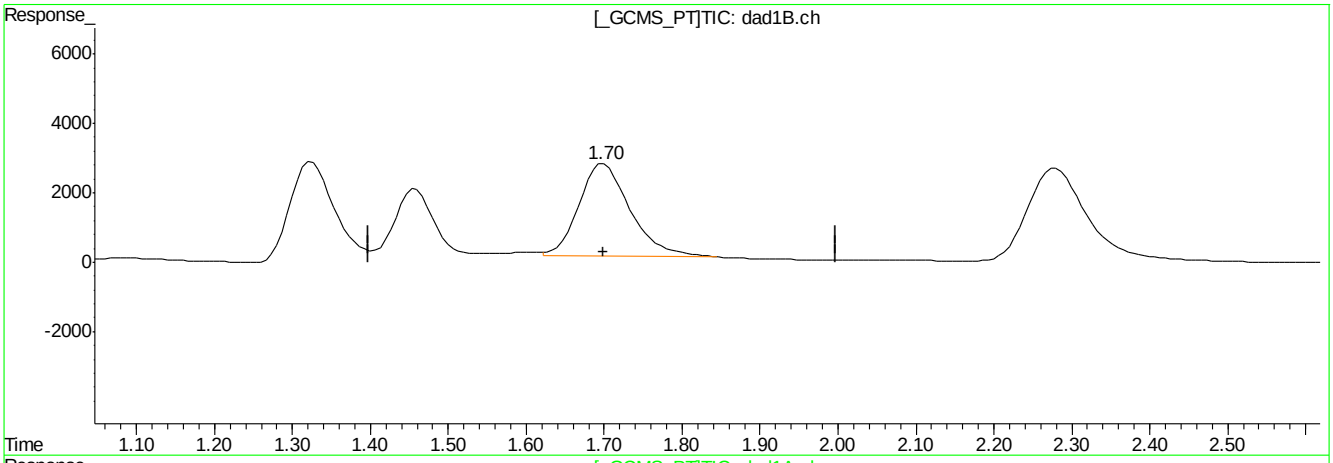
9.5.2.21

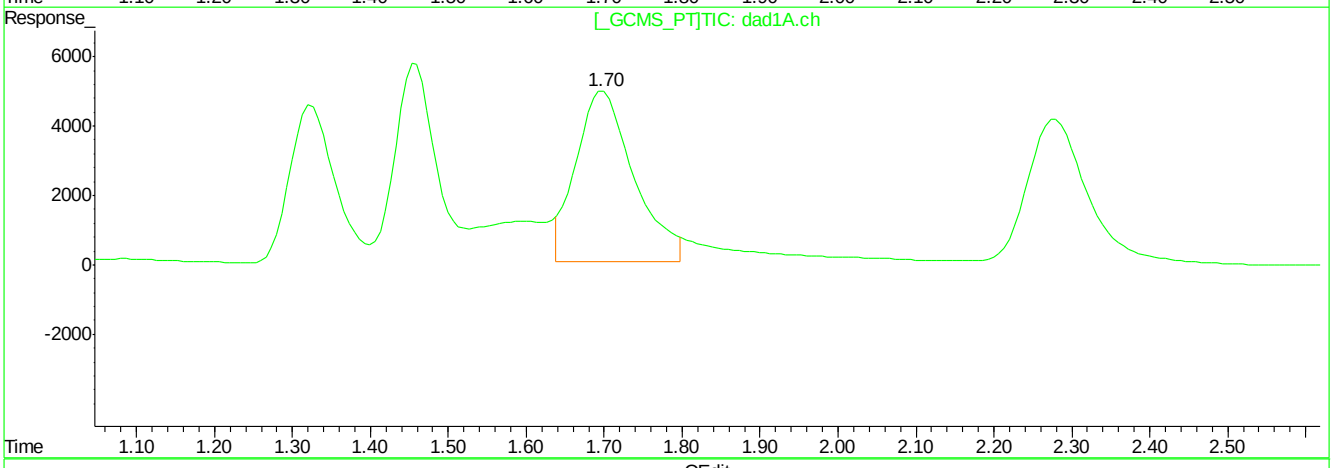
9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.70min 47.792ppb m

response 121100

(3) DNX #2

1.70min 67.583ppb m

response 254094

(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:49:53 2021

9.5.2.22

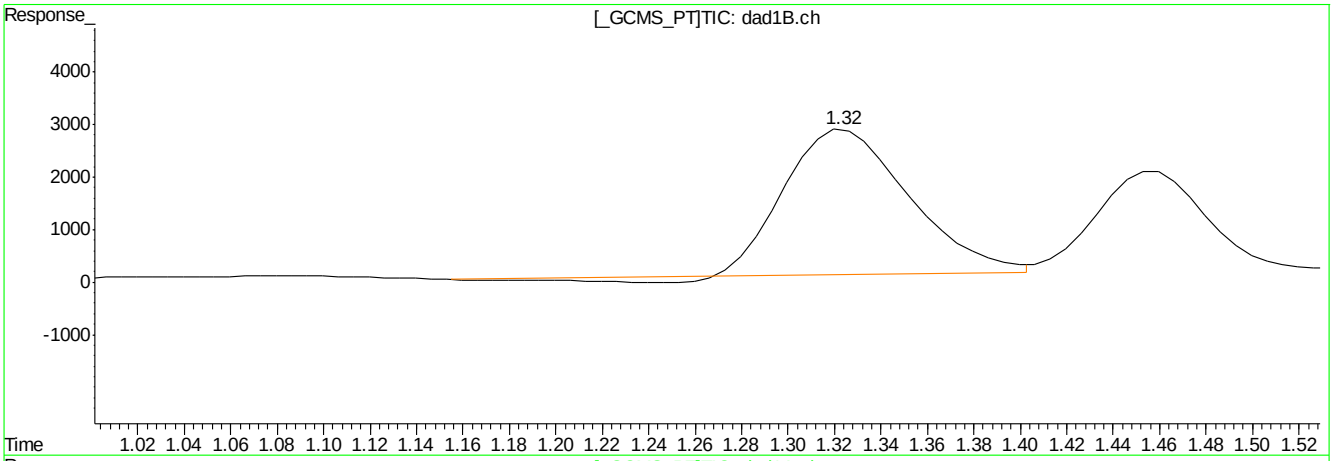
9

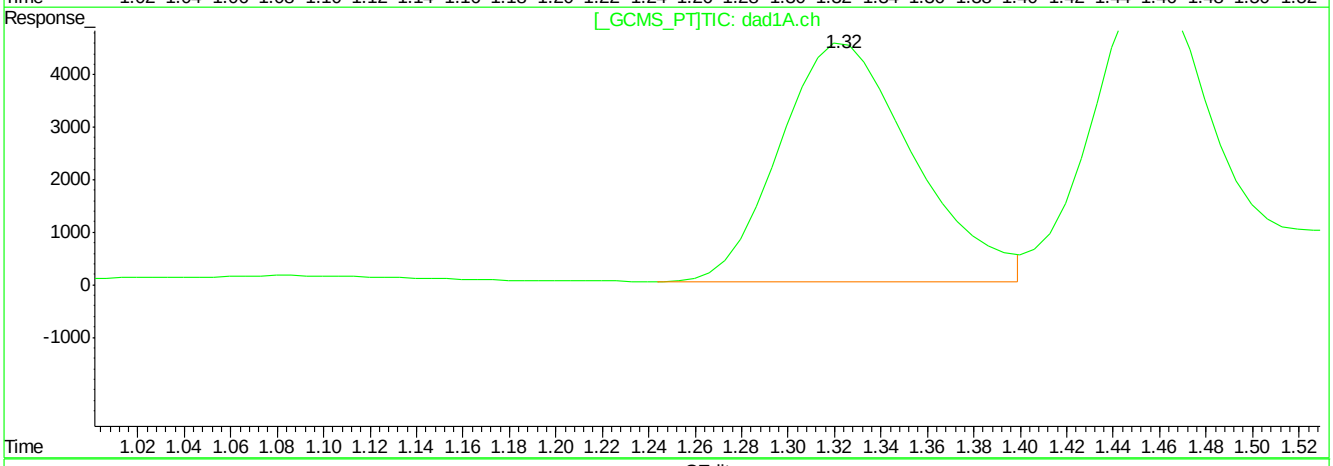
BB068881.D edits: DNX

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 33.603ppb

response 100026

(1) TNX #2

1.33min 40.383ppb

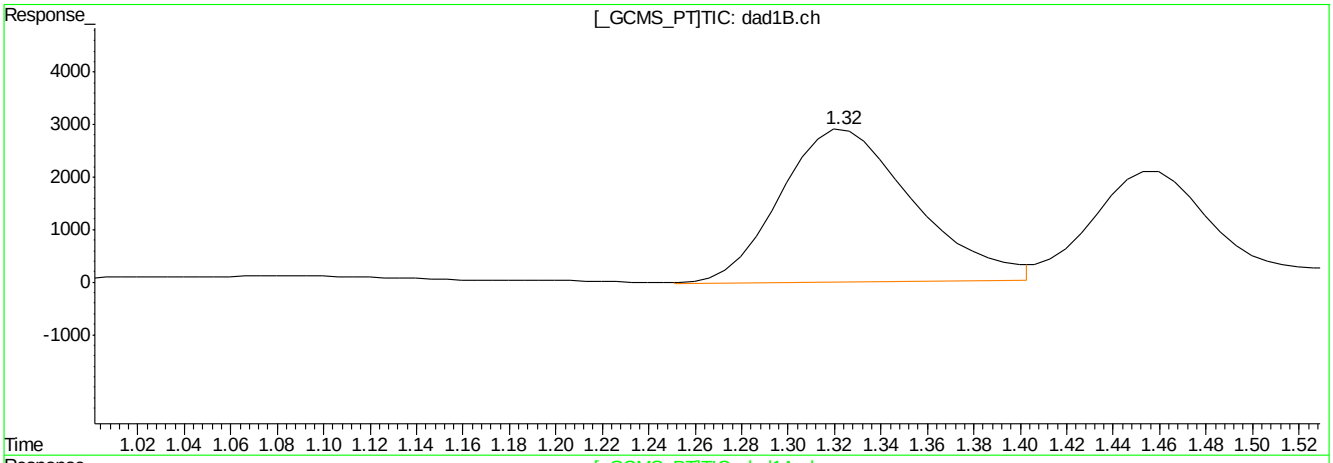
response 180467

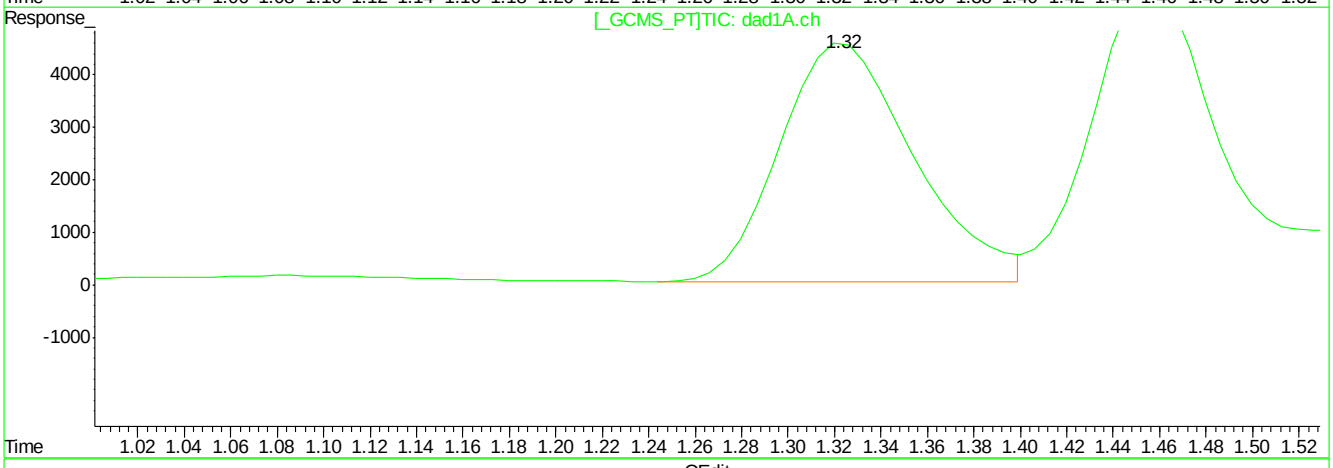
(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:50:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068881.D\dad1A.ch
Acq On : 22-Apr-2021, 13:34:23 Operator: jamesb
Sample : ic2026-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.32min 39.119ppb m

response 116445

(1) TNX #2

1.33min 40.383ppb

response 180467

(+) = Expected Retention Time
BB068881.D 8330B_042221_PLUS.M Fri Apr 23 08:50:16 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/23/21 11:35

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 08:34:19 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.90	10.90	208813	346301	103.941	96.141
	Spiked Amount 500.000	Range 70 - 136		Recovery =		20.79%#	19.23%#
	Target Compounds						
1)	TNX	1.33	1.33	238604	374545	80.158	83.812
2)	HMX	1.46	1.46	163121	460196	88.927	101.994
3)	DNX	1.70	1.70	265516	475270	104.786	126.335
4)	MNX	2.28	2.28	298367	464001	115.254	116.610
5)	RDX	2.89	2.89	192833	306155	105.863	101.764
6)	1,3,5-Trinitrobe	4.61	4.61	401032	624780	101.757	99.772m
7)	1,3-Dinitrobenze	5.78	5.78	531632	380544	102.408	103.731m
8)	3,5-Dinitroanili	6.16	6.16	401682	702827	102.143	104.746m
9)	Nitrobenzene	7.30	7.30	309074	301537	106.349	106.100
10)	Nitroglycerin	0.00	8.93	0	125835	N.D.	106.002 #
11)	Tetryl	9.30	9.30	308925	477218	135.728	174.826
12)	2,4,6-Trinitroto	9.68	9.68	373572	441424	101.626	110.627
13)	2-Amino-4,6-Dini	10.05	10.05	334456	492469	98.629	98.001
14)	4-Amino-2,6-Dini	10.55	10.55	250266	478433	106.131	97.516
16)	2,4-Dinitrotolue	11.55	11.55	463421	285526	101.681	94.982m
17)	2,6-Dinitrotolue	12.02	12.03	272376	320874	99.323	90.404
18)	o-Nitrotoluene	15.03	15.03	228430	294914	115.913m	120.567m
19)	p-Nitrotoluene	15.62	15.62	339519	267928	110.504	115.993m
20)	m-Nitrotoluene	16.49	16.50	314696	344705	106.100	95.918m
21)	PETN	0.00	18.47	0	130880	N.D.	101.953m#

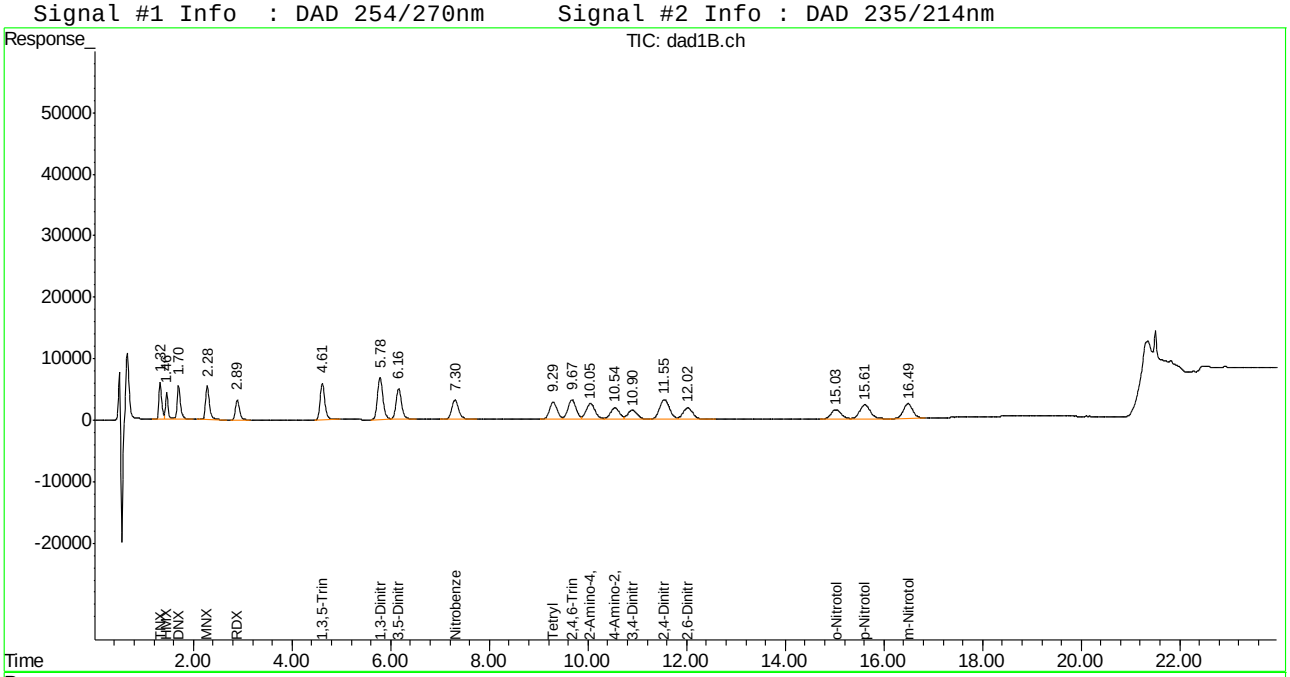
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:57:41 2021 Page 1

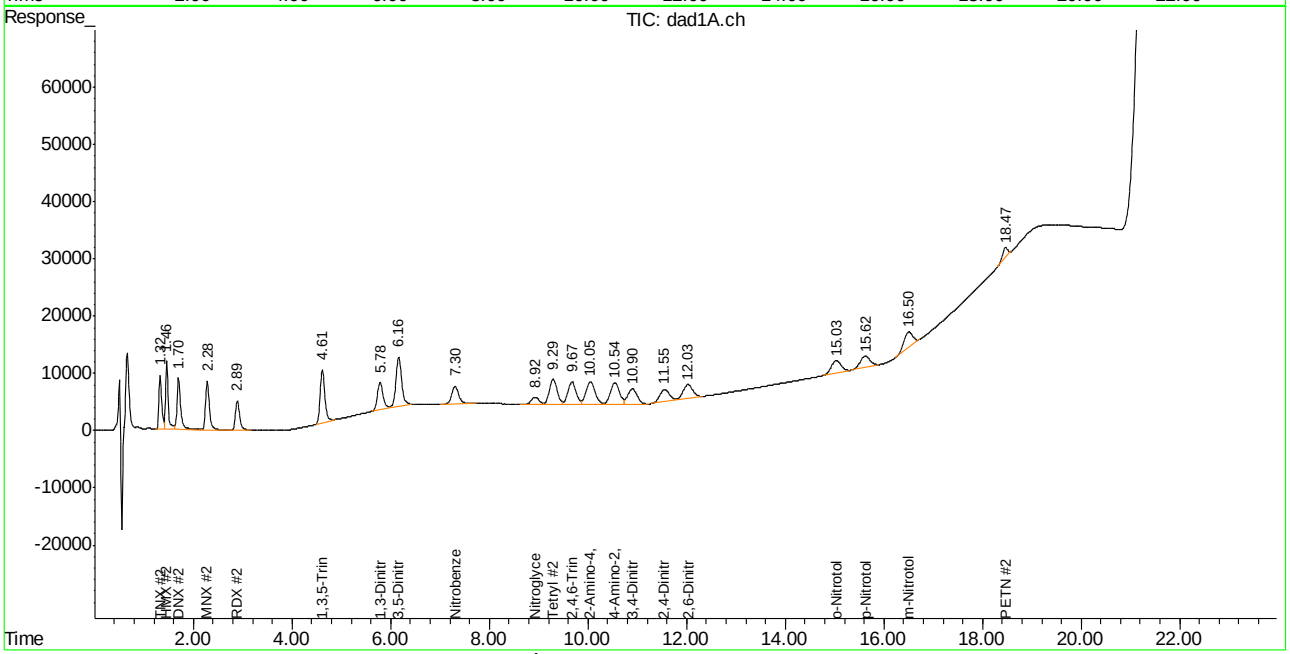
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:46 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

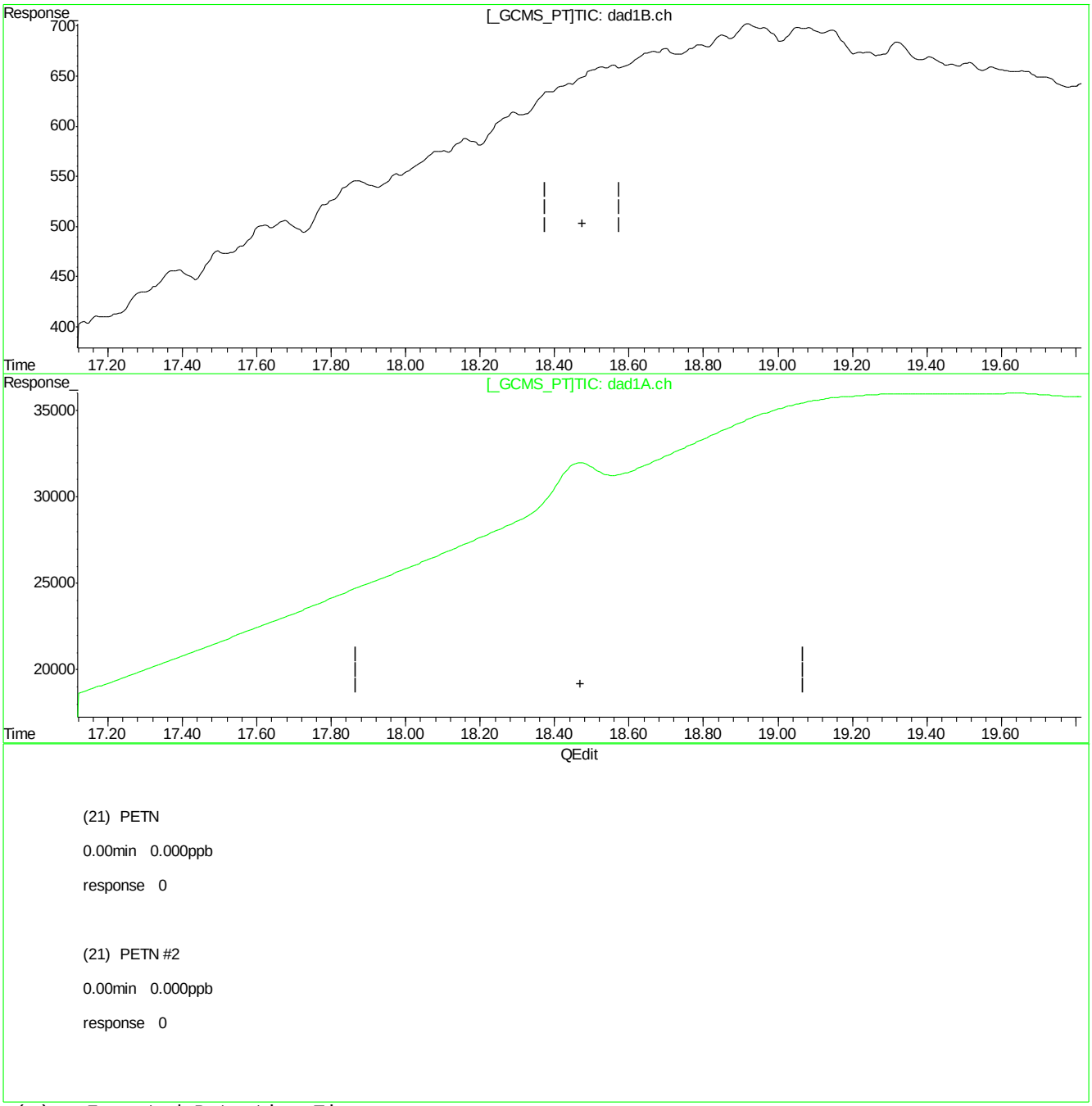
Sample Number: GBB2026-IC2026
Lab FileID: BB068882.D
Injection Time: 04/22/21 14:05
Method: SW846 8330A
Analyst approved: 04/23/21 08:56 James Boone
Supervisor approved: 04/23/21 11:35 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.61	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.78	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.16	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	11.55	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.03	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.03	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.62	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.50	Poor instrument integration
PETN	78-11-5	2	18.47	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration

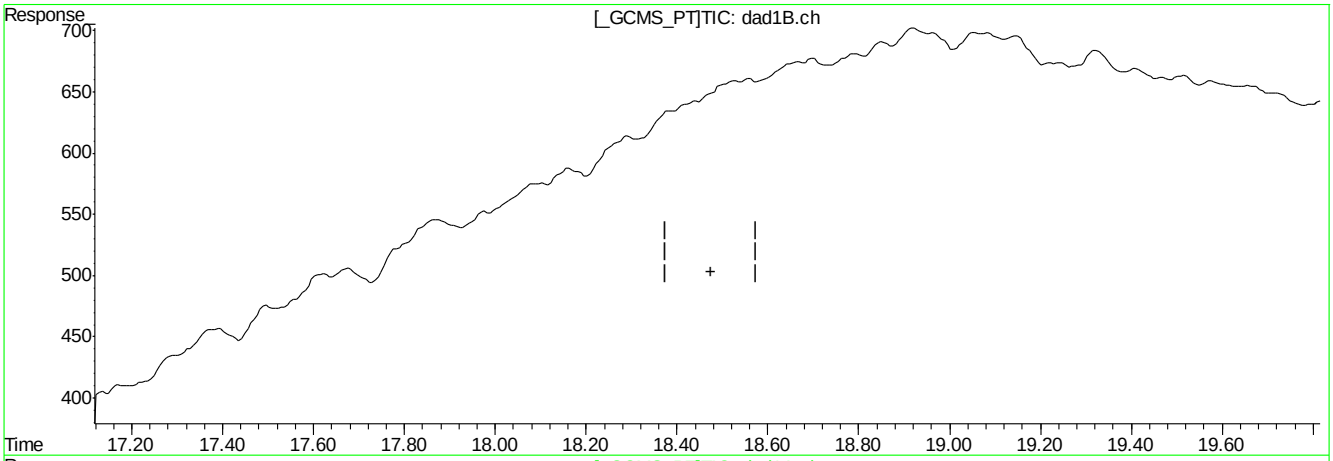


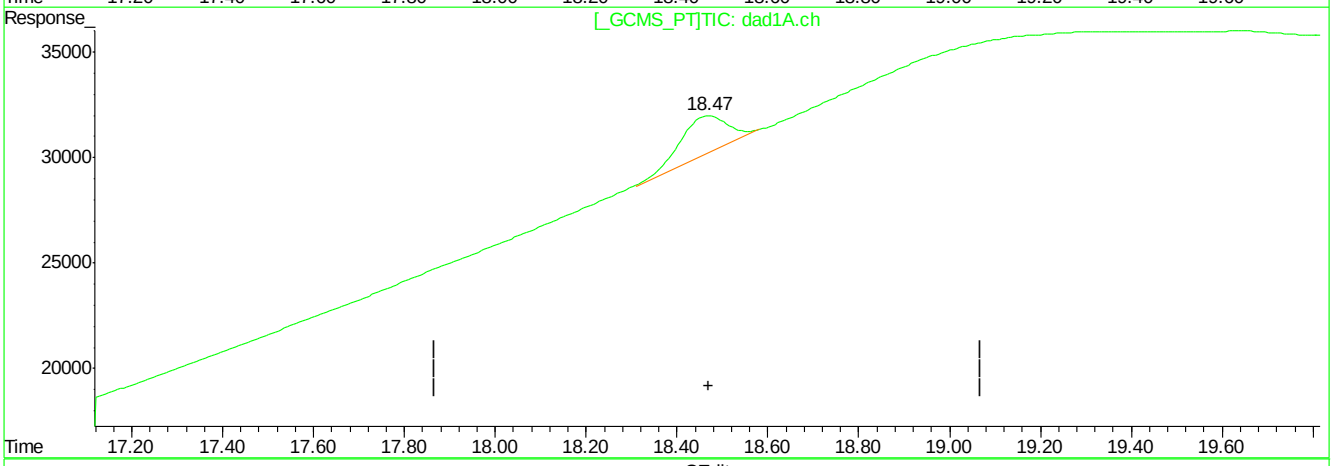
(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:45:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.47min 101.953ppb m

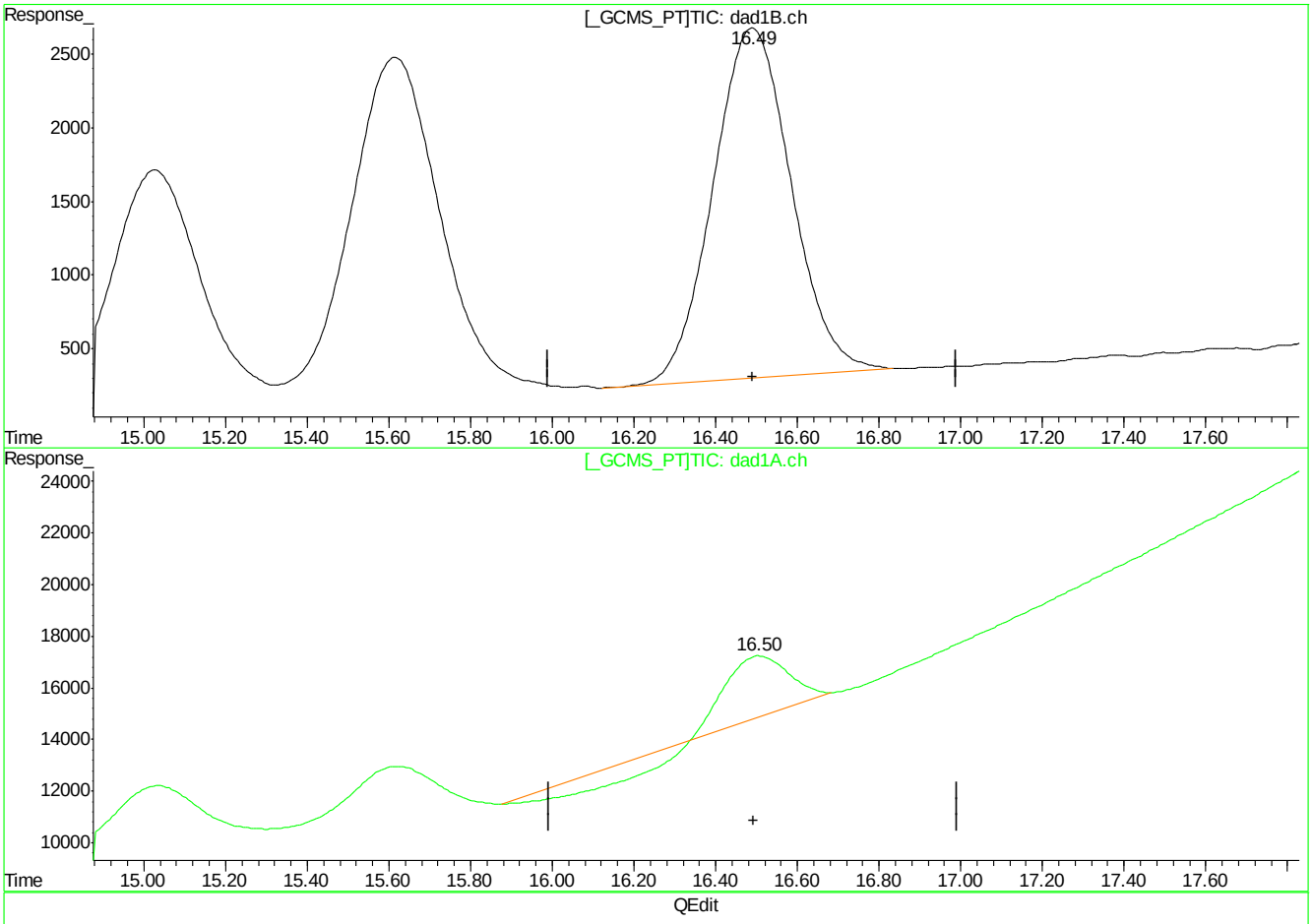
response 130880

(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:45:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.49min 106.100ppb

response 314696

(20) m-Nitrotoluene #2

16.51min 33.769ppb

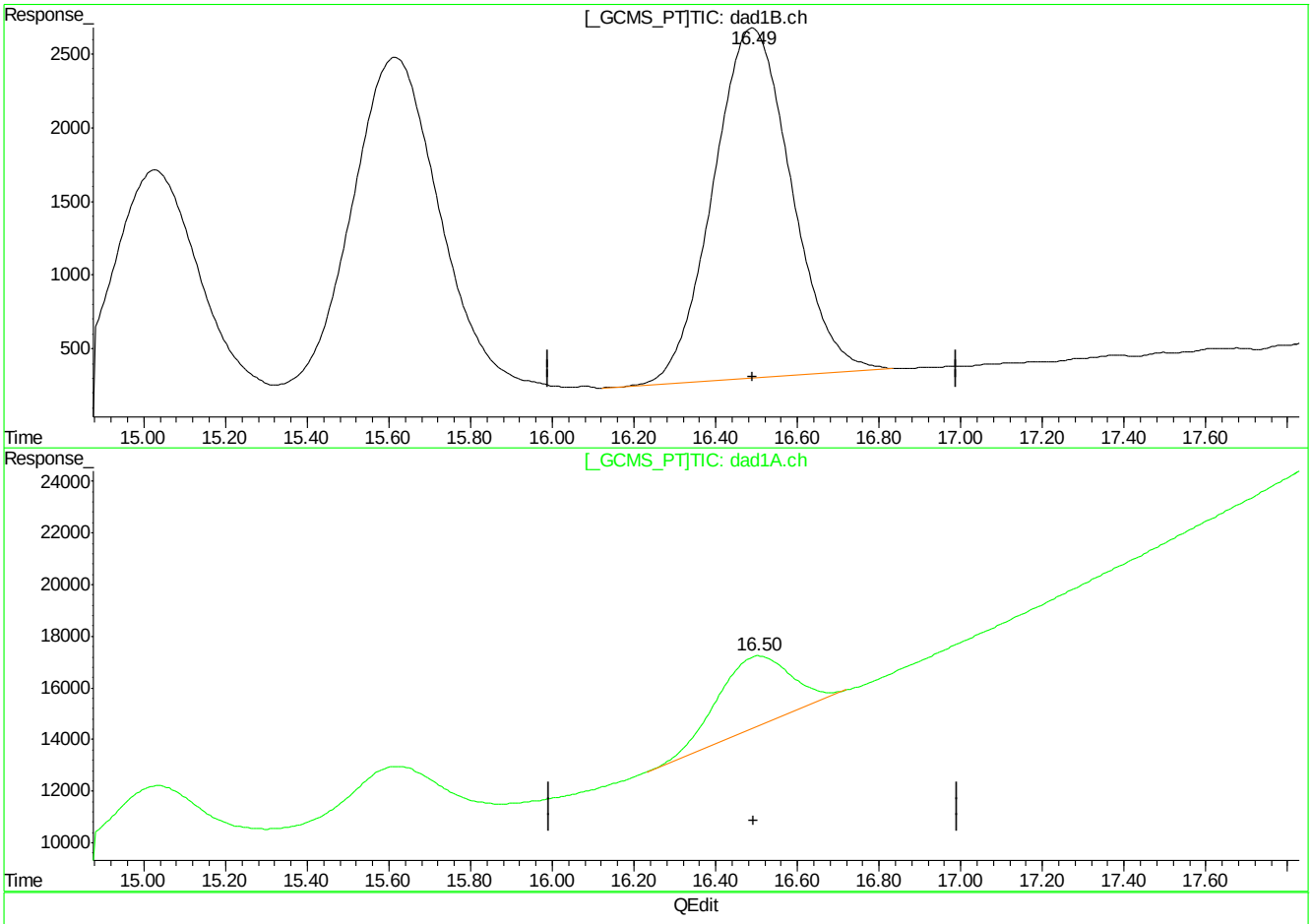
response 121358

(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:45:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.49min 106.100ppb

response 314696

(20) m-Nitrotoluene #2

16.50min 95.918ppb m

response 344705

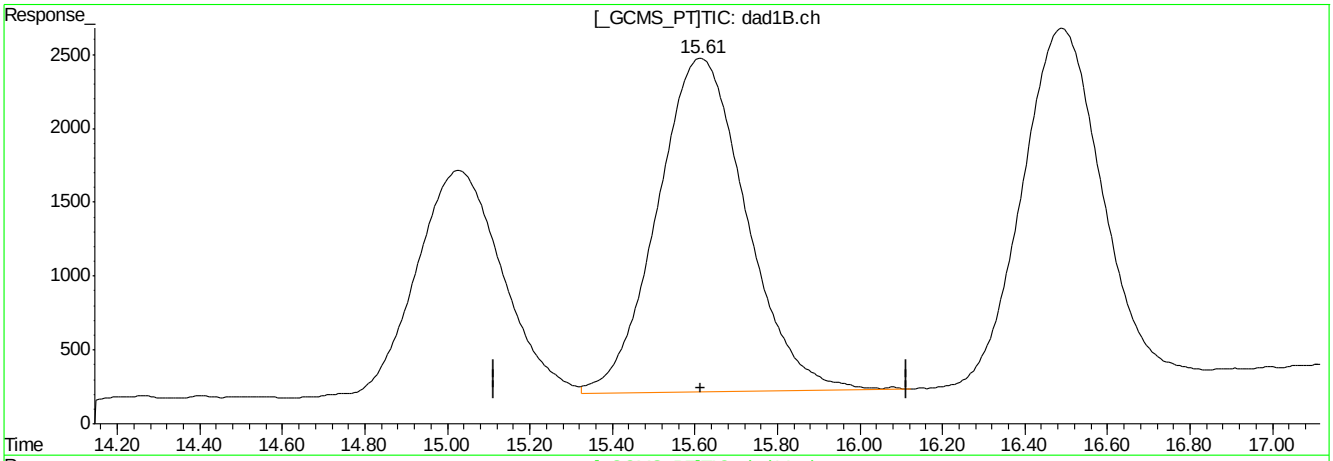
(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:45:37 2021

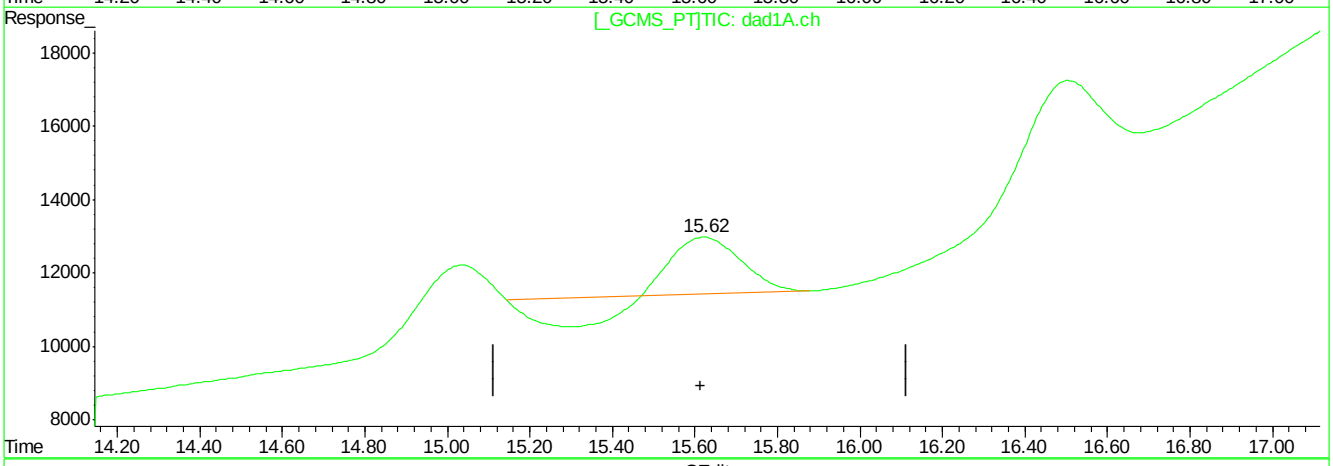
BB068882.D edits: m-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.62min 110.504ppb

response 339519

(19) p-Nitrotoluene #2

15.62min 40.983ppb

response 94341

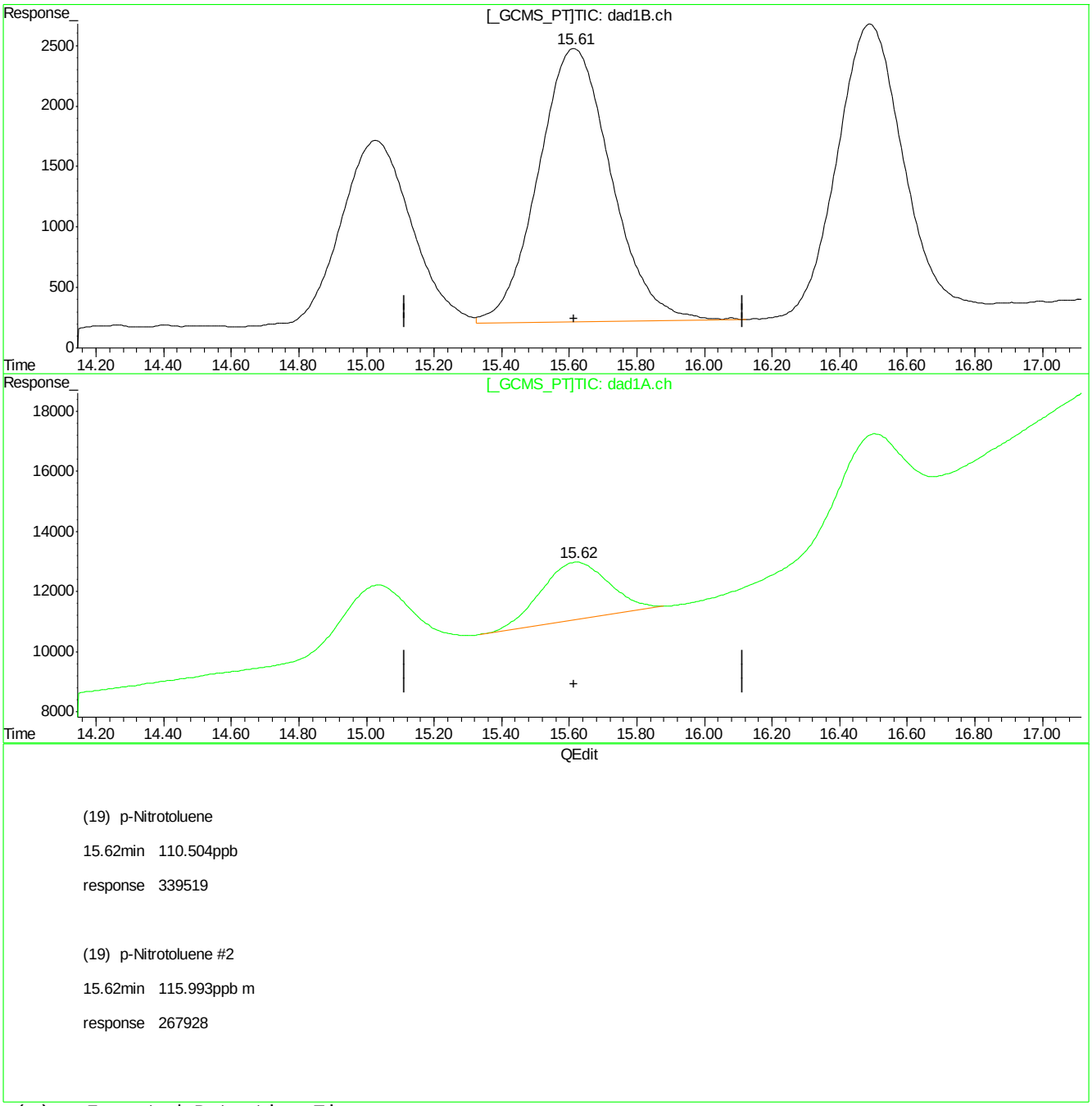
(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:45:40 2021

BB068882.D edits: p-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.62min 110.504ppb

response 339519

(19) p-Nitrotoluene #2

15.62min 115.993ppb m

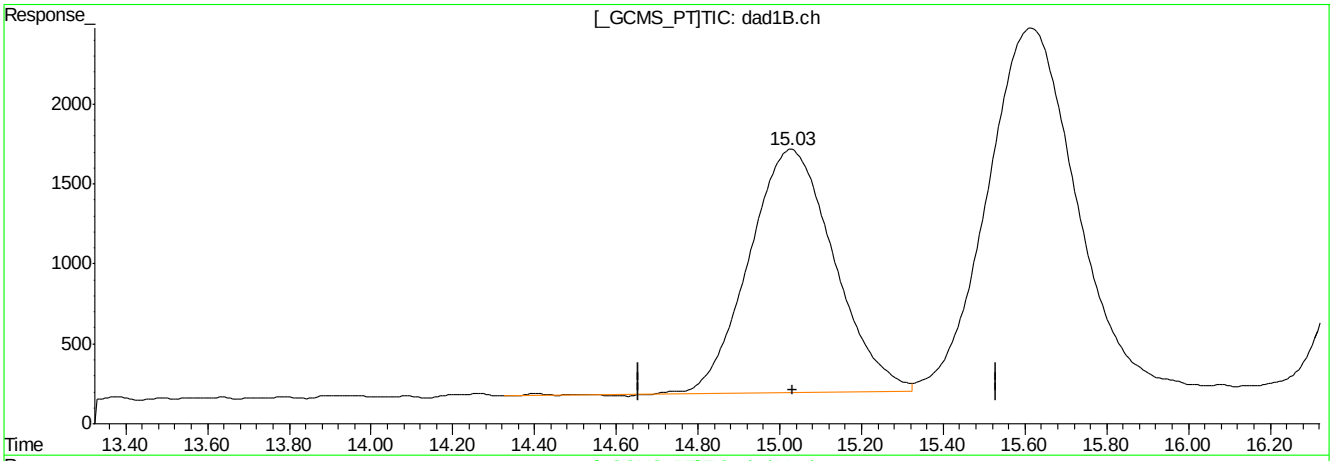
response 267928

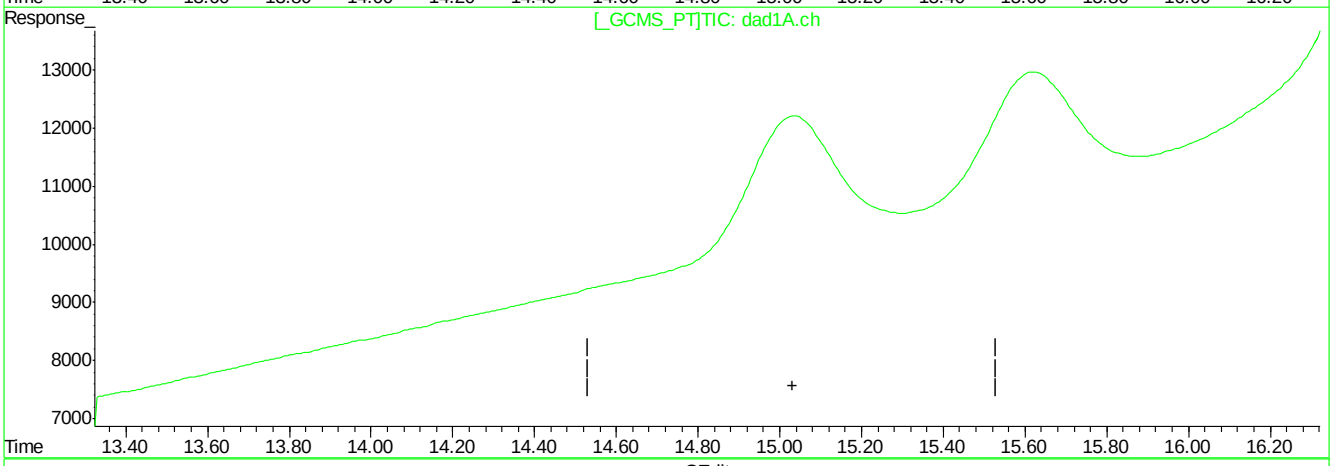
(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:45:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.03min 111.442ppb

response 219619

(18) o-Nitrotoluene #2

0.00min 0.000ppb

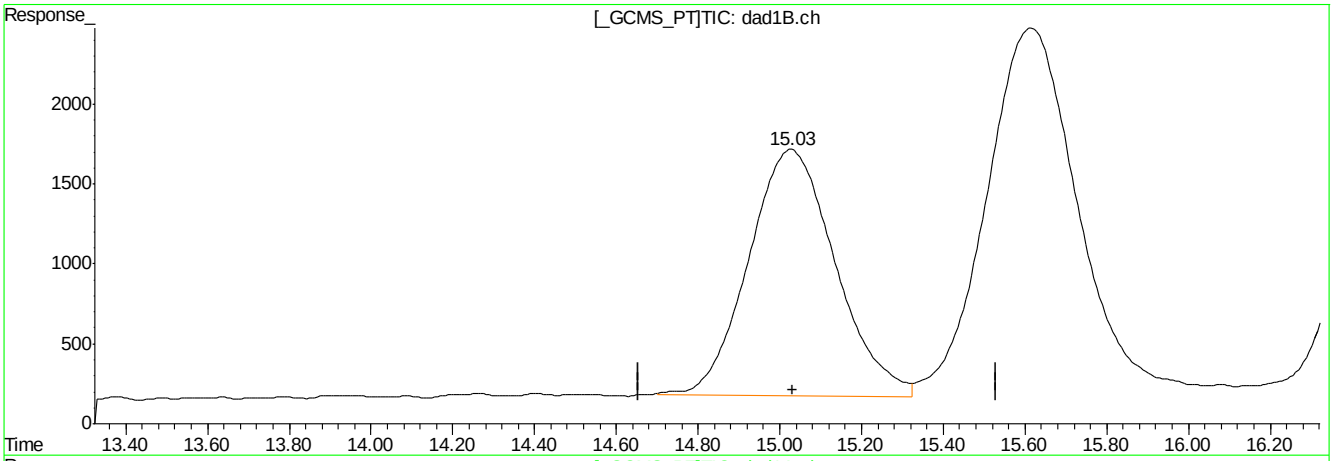
response 0

(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:45:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.03min 115.913ppb m

response 228430

(18) o-Nitrotoluene #2

15.03min 120.567ppb m

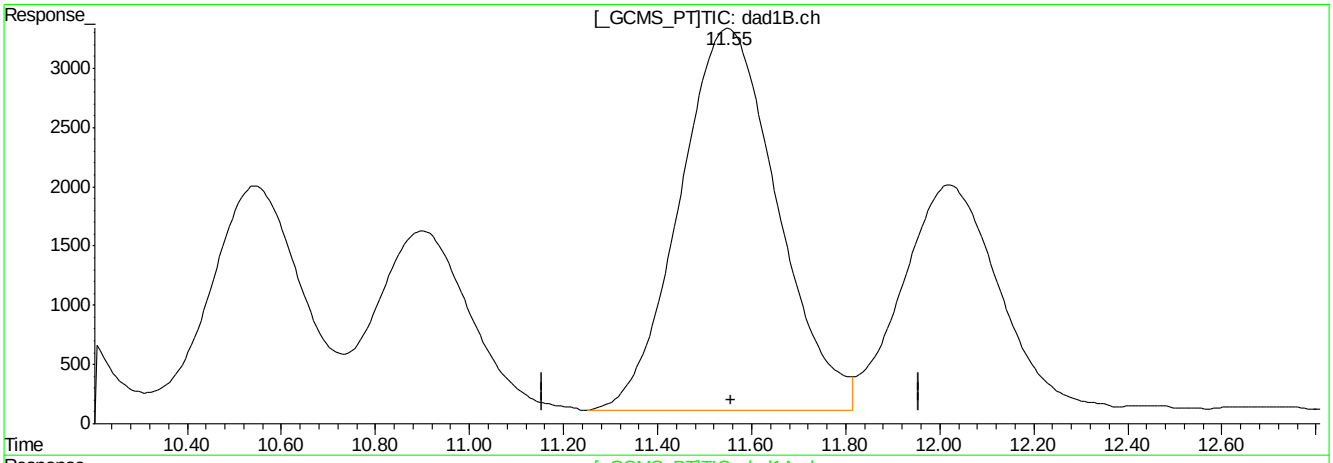
response 294914

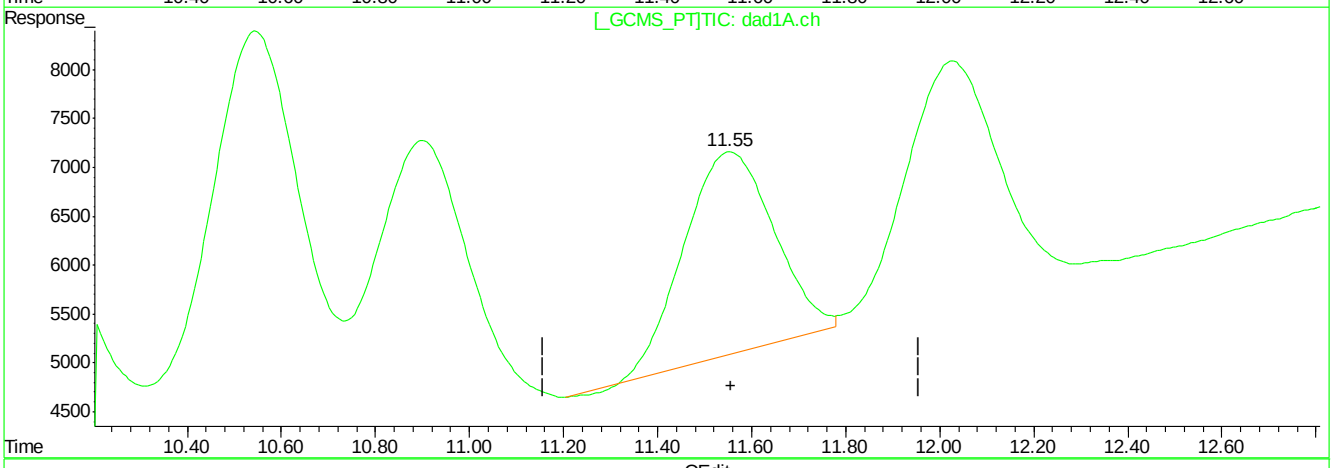
(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:46:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.55min 101.681ppb

response 463421

(16) 2,4-Dinitrotoluene #2

11.56min 91.332ppb

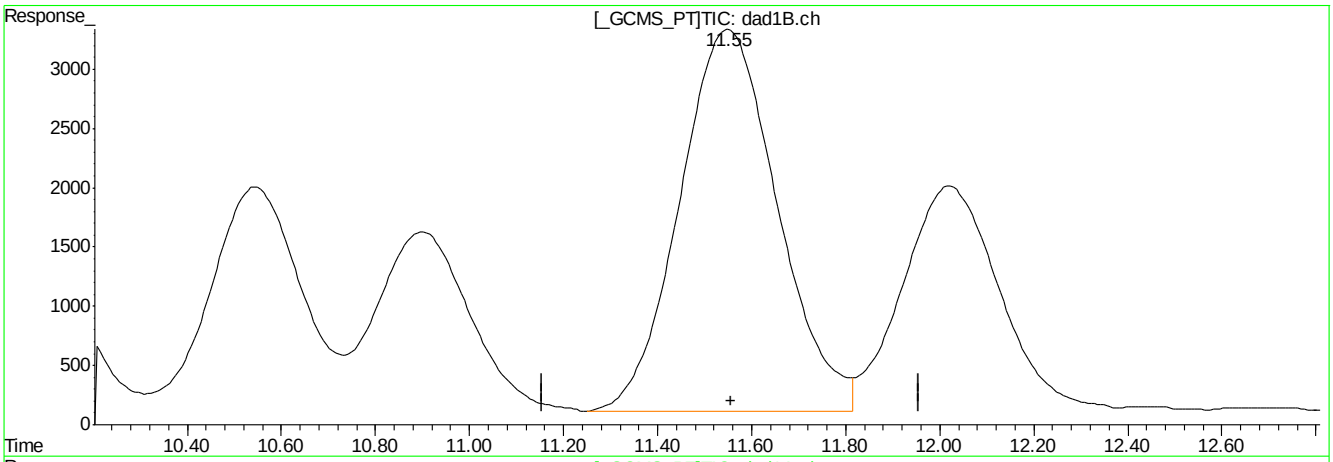
response 274554

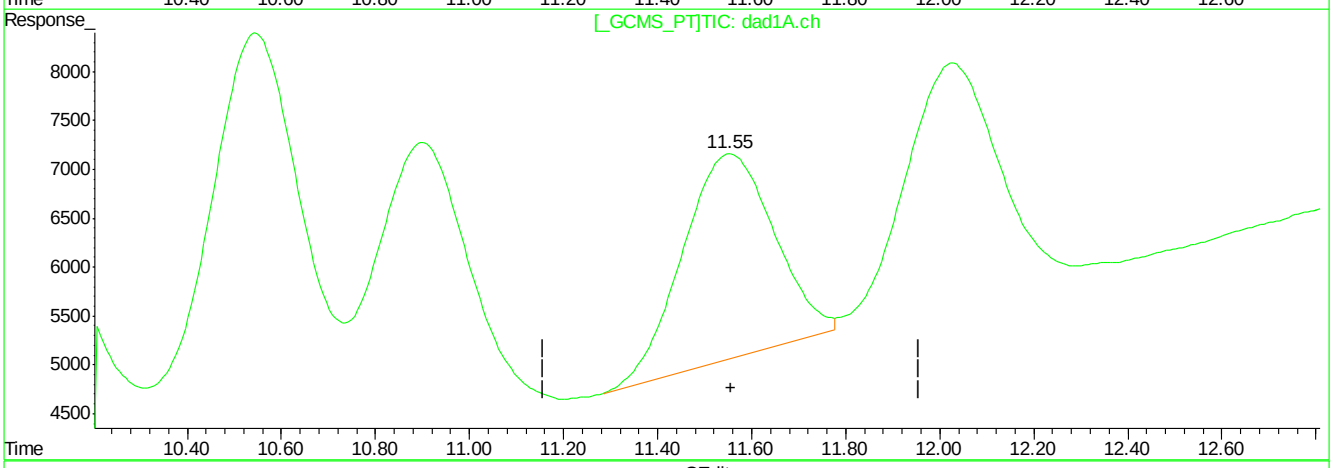
(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:46:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.55min 101.681ppb

response 463421

(16) 2,4-Dinitrotoluene #2

11.55min 94.982ppb m

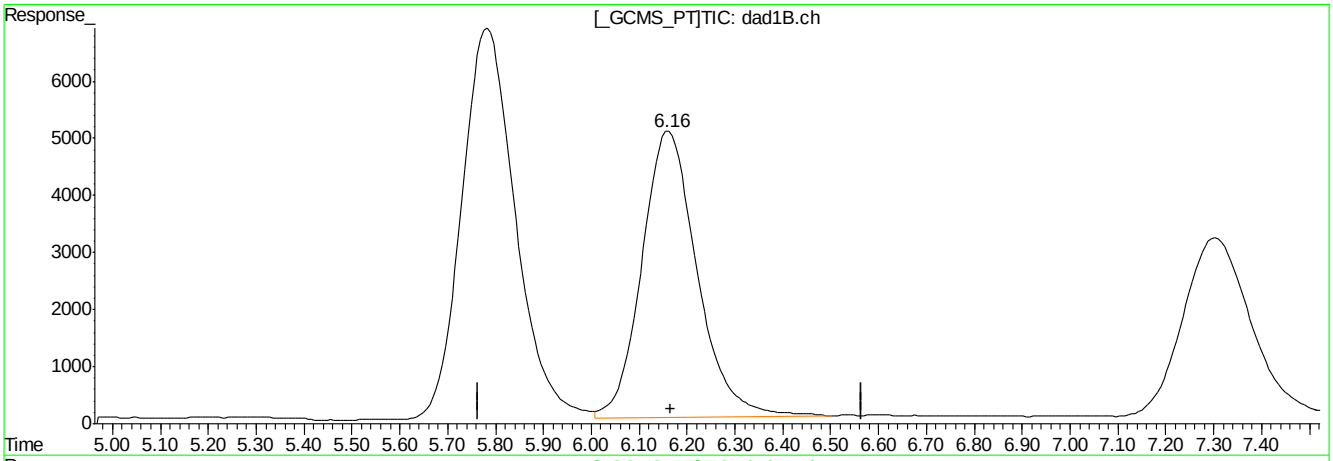
response 285526

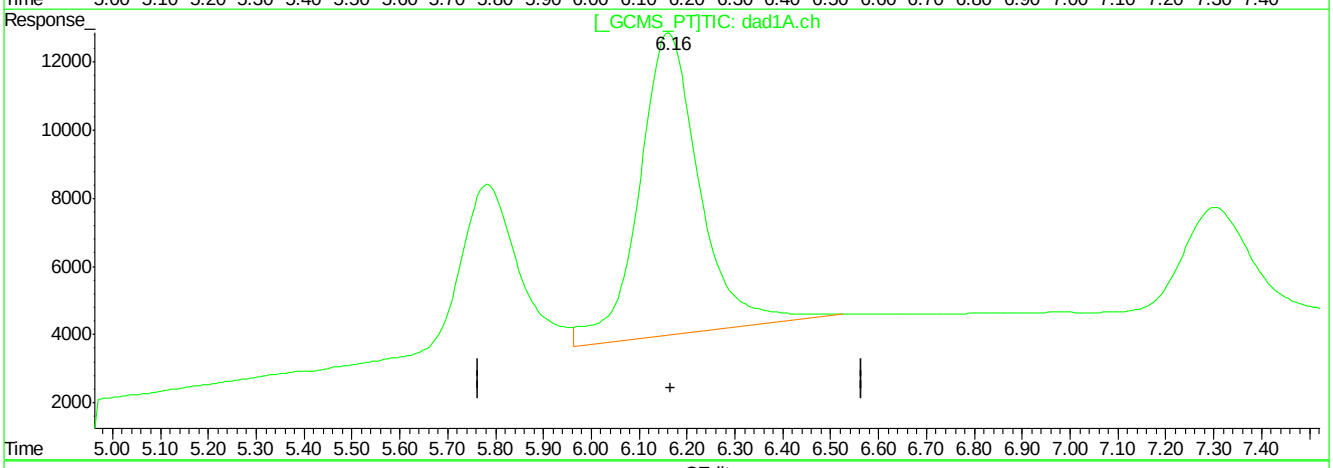
(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:46:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.16min 102.143ppb

response 401682

(8) 3,5-Dinitroaniline #2

6.16min 115.495ppb

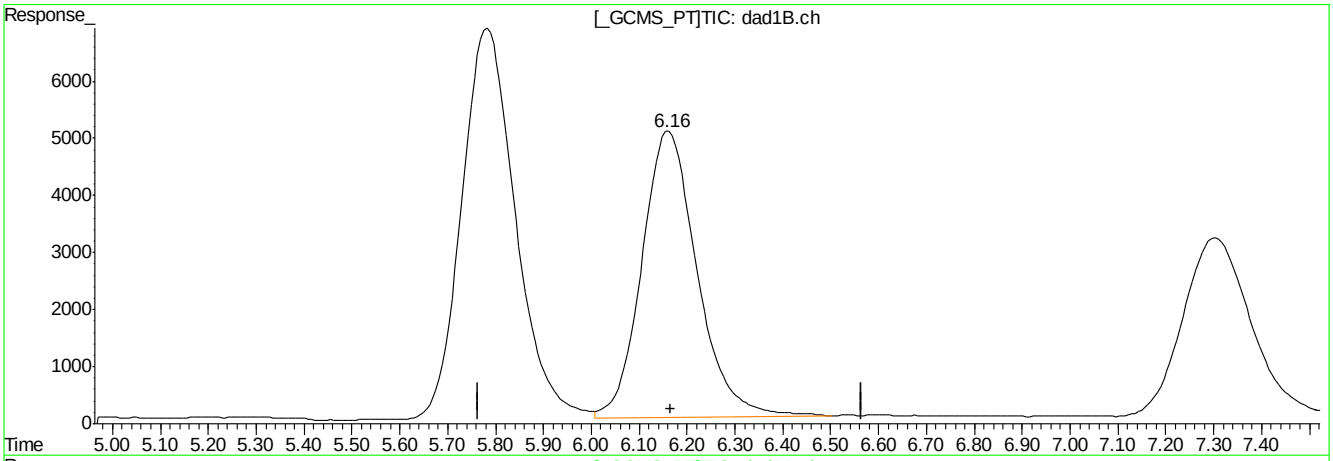
response 774951

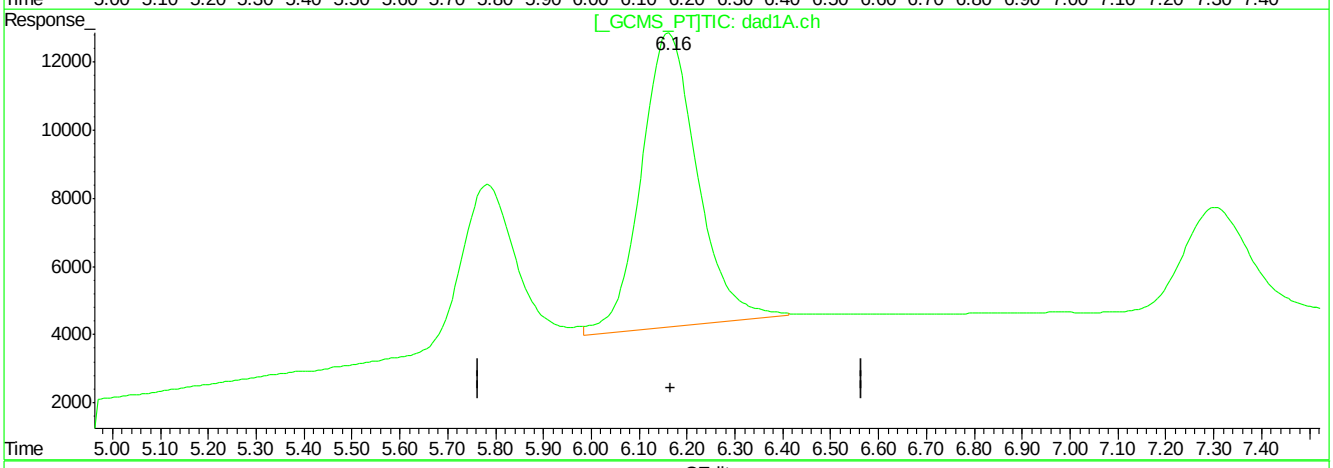
(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:46:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.16min 102.143ppb

response 401682

(8) 3,5-Dinitroaniline #2

6.16min 104.746ppb m

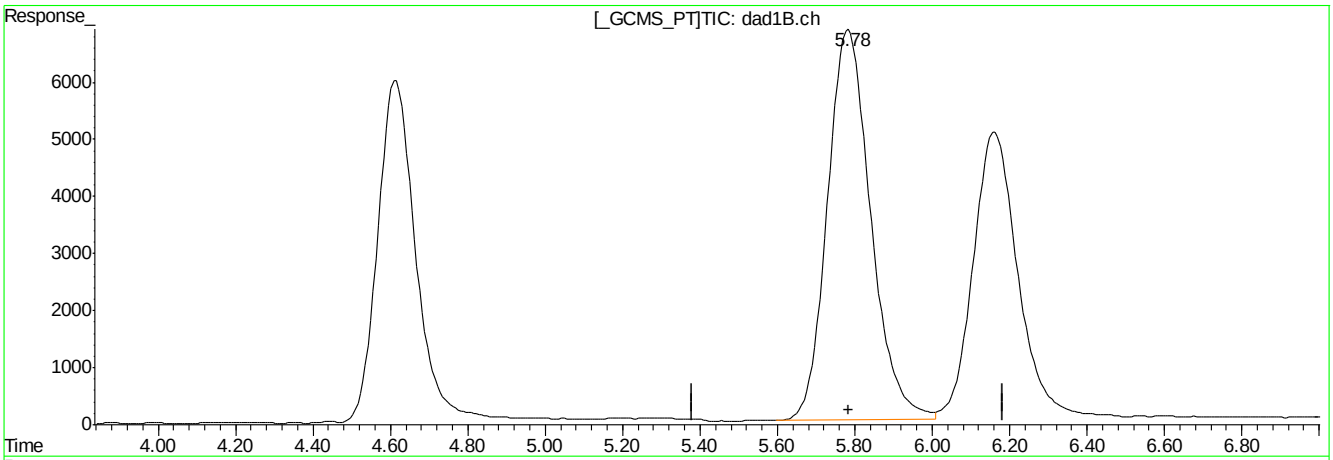
response 702827

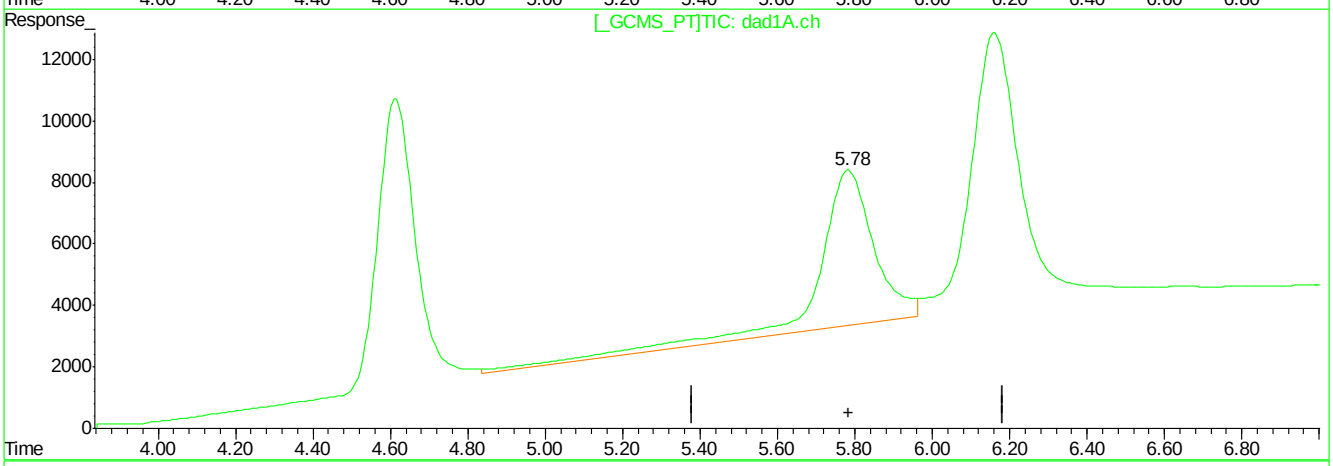
(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:46:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.78min 102.408ppb

response 531632

(7) 1,3-Dinitrobenzene #2

5.78min 137.855ppb

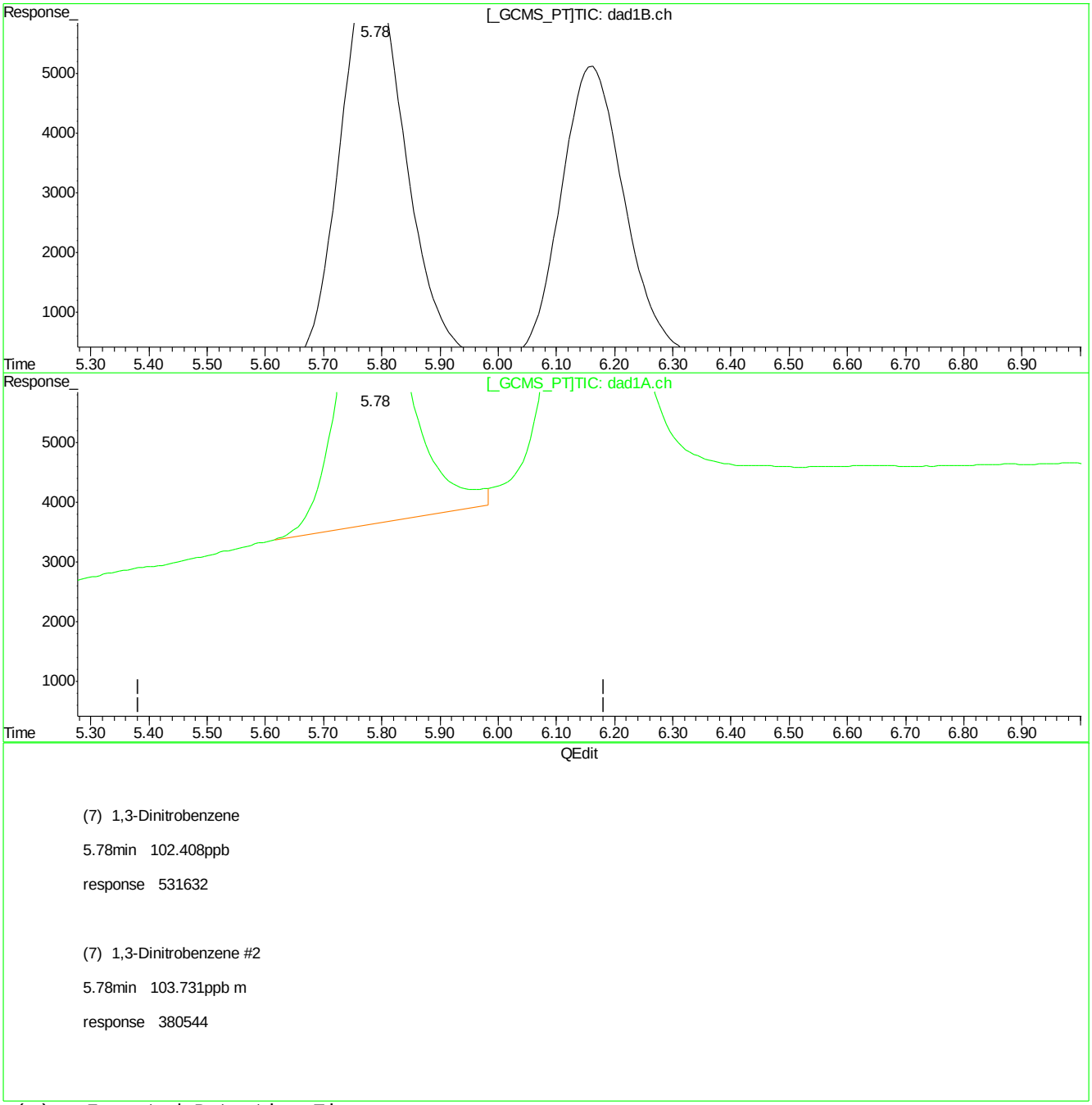
response 505727

(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:46:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.78min 102.408ppb

response 531632

(7) 1,3-Dinitrobenzene #2

5.78min 103.731ppb m

response 380544

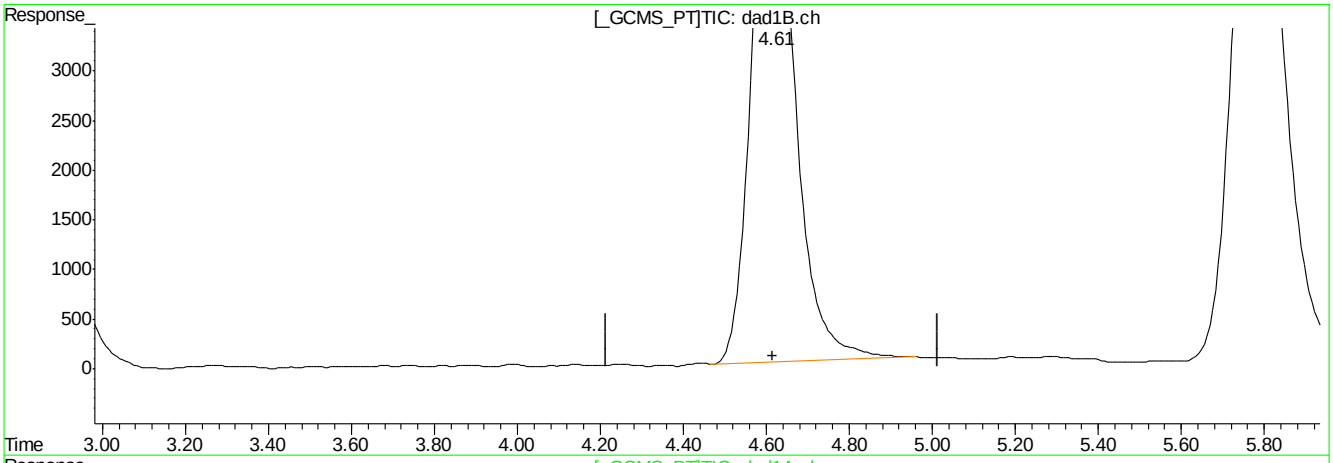
(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:46:45 2021

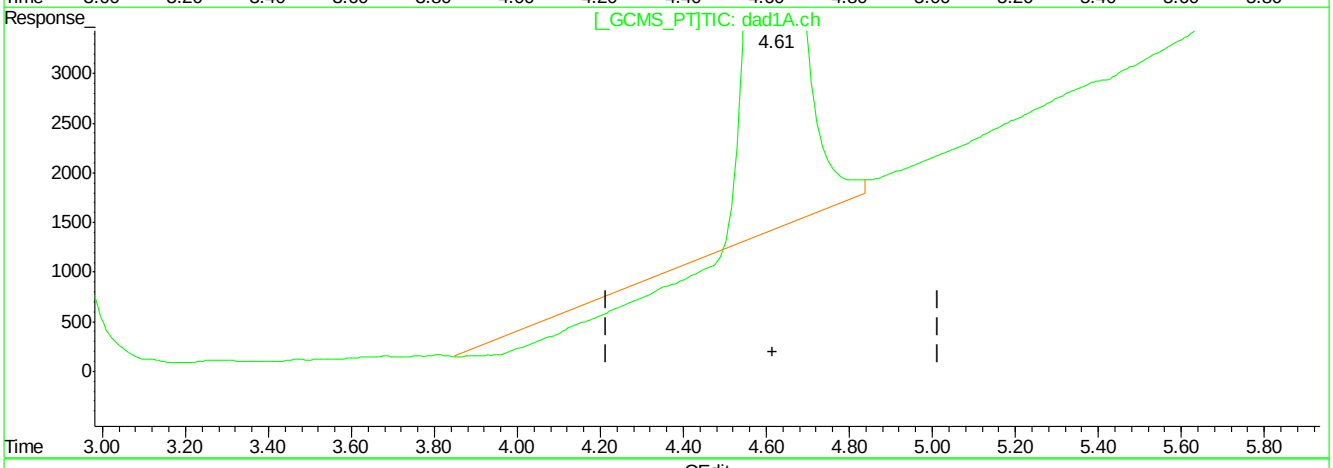
BB068882.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.61min 101.757ppb

response 401032

(6) 1,3,5-Trinitrobenzene #2

4.62min 89.058ppb

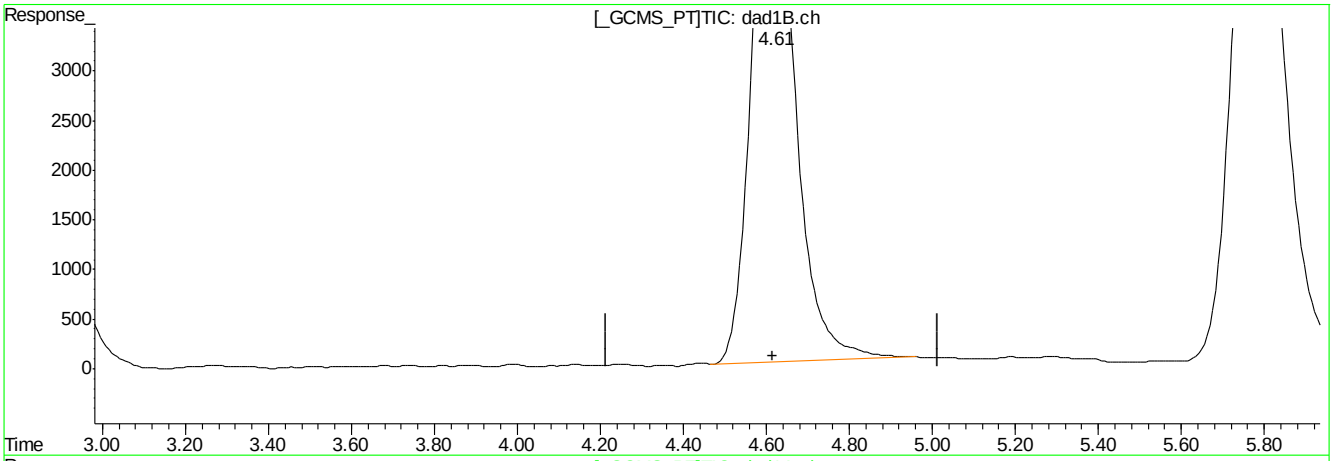
response 557693

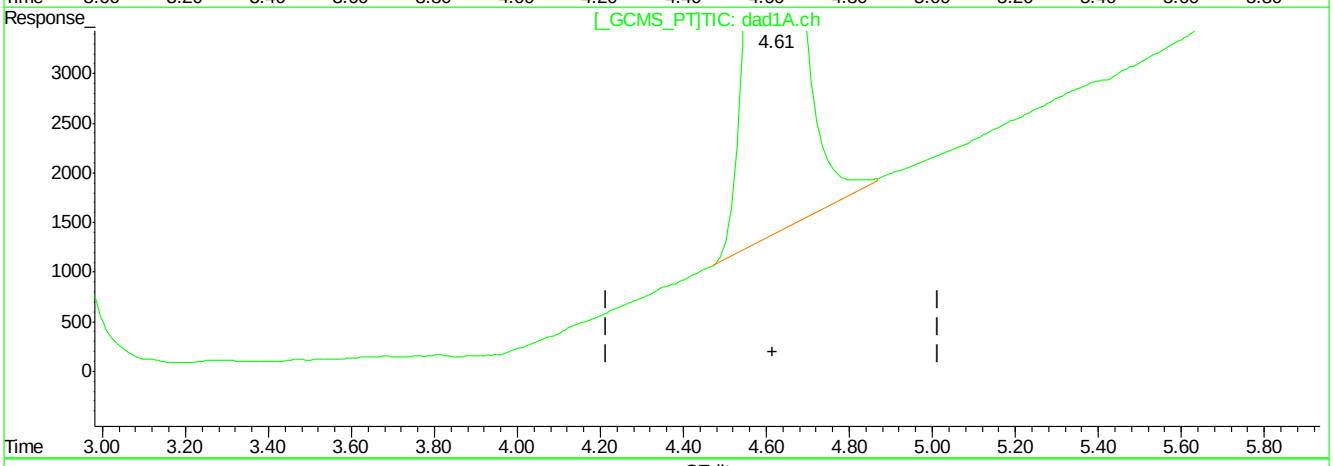
(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:46:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068882.D\dad1A.ch
Acq On : 22-Apr-2021, 14:05:23 Operator: jamesb
Sample : ic2026-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.61min 101.757ppb

response 401032

(6) 1,3,5-Trinitrobenzene #2

4.61min 99.772ppb m

response 624780

(+) = Expected Retention Time
BB068882.D 8330B_042221_PLUS.M Fri Apr 23 08:46:58 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/23/21 11:35

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 08:34:20 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.91	10.91	432843	746936	215.457	207.367
Spiked Amount	500.000	Range	70 - 136	Recovery	=	43.09%#	41.47%#
	Target Compounds						
1)	TNX	1.33	1.33	495828	762274	166.571	170.573
2)	HMX	1.46	1.46	347203	967133	189.829	214.621
3)	DNX	1.70	1.70	546825	975568	215.804	258.970
4)	MNX	2.28	2.28	602273	938871	232.647	235.951
5)	RDX	2.89	2.89	383720	617981	210.658	205.413
6)	1,3,5-Trinitrobe	4.62	4.61	821223	1285772	208.375	205.326m
7)	1,3-Dinitrobenze	5.79	5.78	1088228	762553	209.625	207.863m
8)	3,5-Dinitroanili	6.17	6.17	829192	1420456	210.854	211.698m
9)	Nitrobenzene	7.31	7.31	642499	635689	221.076	223.675
10)	Nitroglycerin	0.00	8.93	0	265154	N.D.	223.363 #
11)	Tetryl	9.30	9.30	639209	994906	280.839	355.678
12)	2,4,6-Trinitroto	9.68	9.68	770539	923303	209.617	231.393
13)	2-Amino-4,6-Dini	10.06	10.06	691049	1021280	203.786	203.235
14)	4-Amino-2,6-Dini	10.56	10.56	510228	1002037	216.374	204.239
16)	2,4-Dinitrotolue	11.56	11.56	952069	612195	208.898	203.651
17)	2,6-Dinitrotolue	12.03	12.04	552679	708505	201.537	199.617
18)	o-Nitrotoluene	15.04	15.04	453896	635925	230.321	259.979m
19)	p-Nitrotoluene	15.62	15.62	692601	576345	225.423	248.025m
20)	m-Nitrotoluene	16.50	16.50	653802	743888	220.430	206.995m
21)	PETN	0.00	18.47	0	282724	N.D.	220.237m#

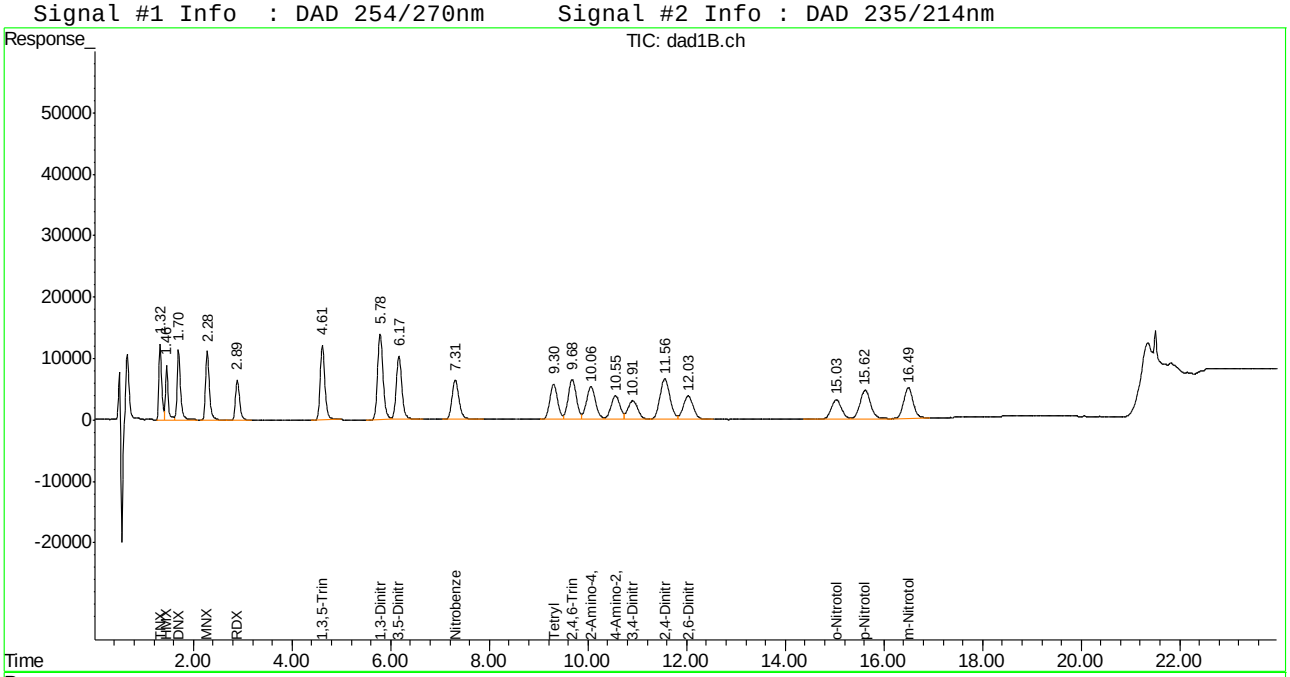
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:57:42 2021 Page 1

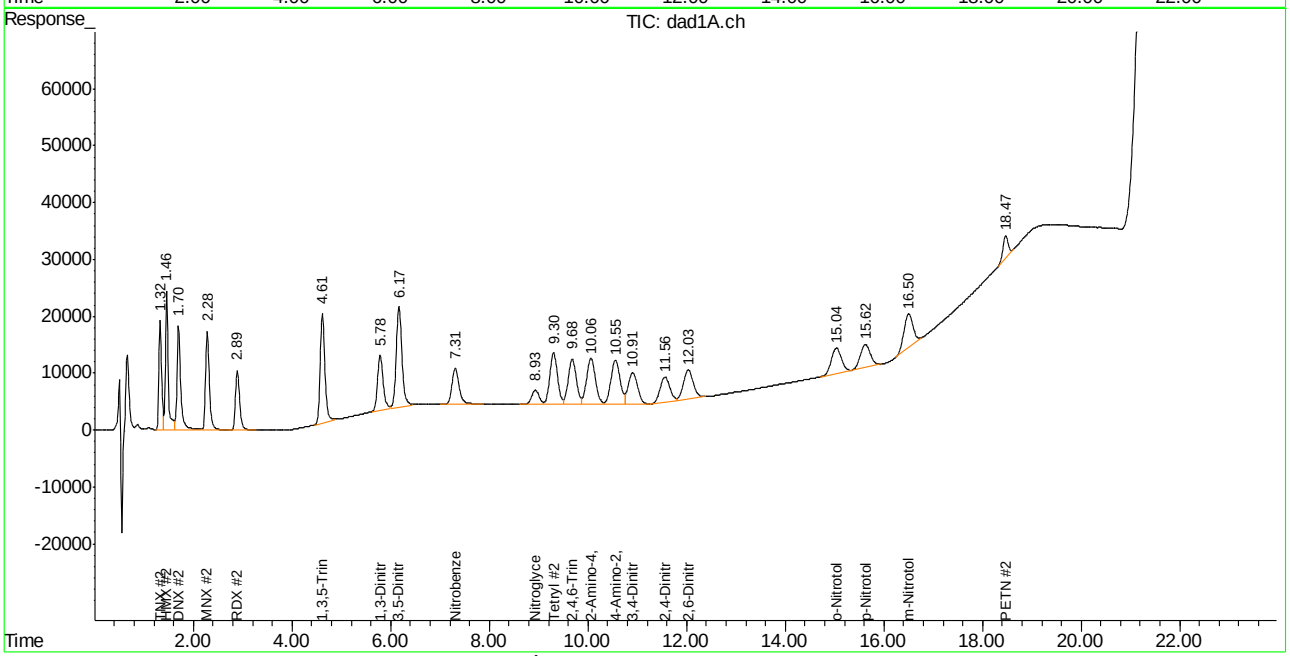
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:44 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

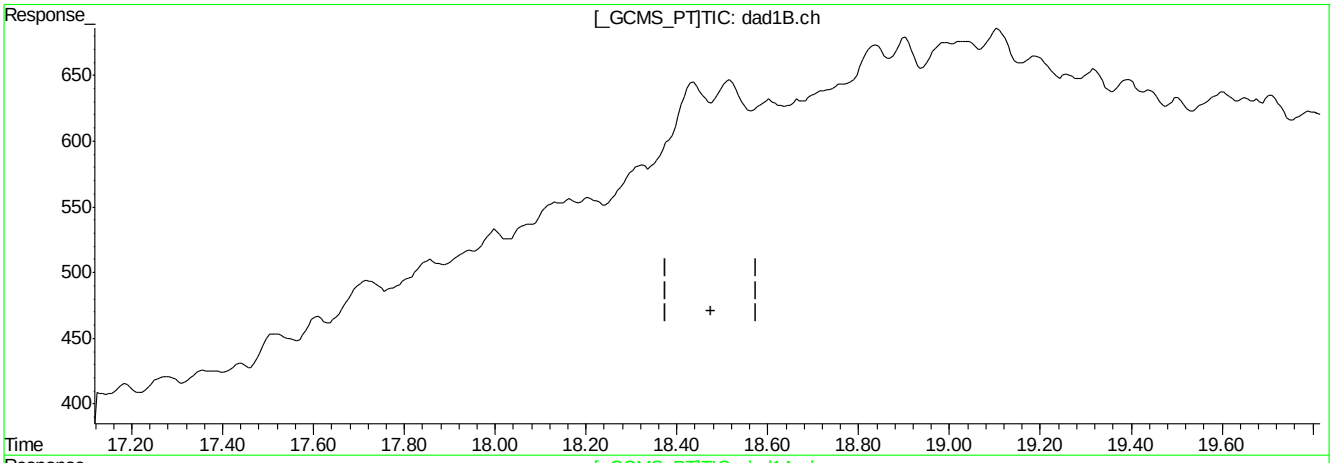
Sample Number: GBB2026-IC2026
Lab FileID: BB068883.D
Injection Time: 04/22/21 14:36
Method: SW846 8330A
Analyst approved: 04/23/21 08:56 James Boone
Supervisor approved: 04/23/21 11:35 Naresh Jiawan

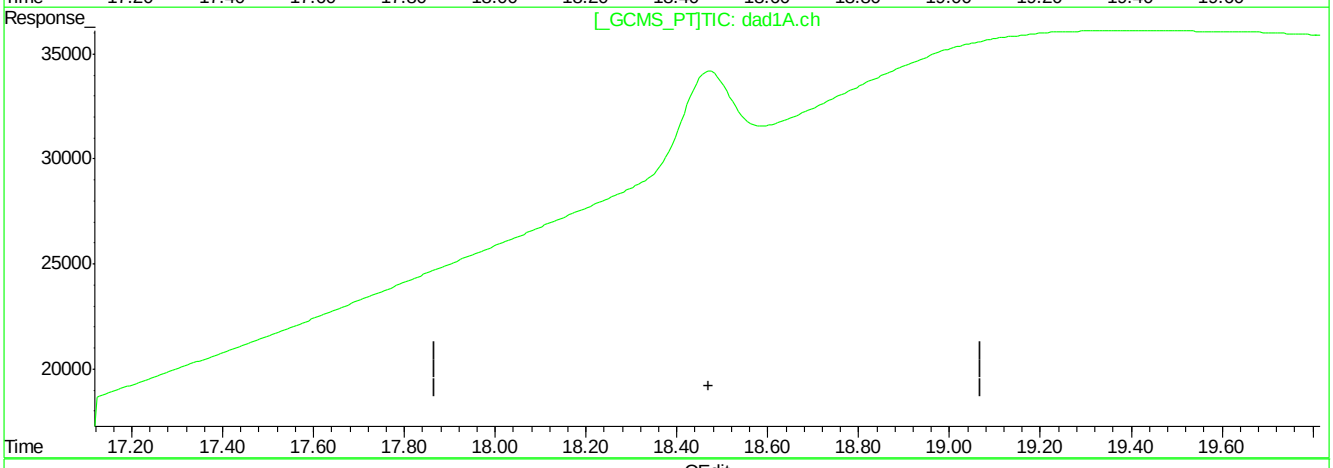
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.61	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.78	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.17	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.04	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.62	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.50	Poor instrument integration
PETN	78-11-5	2	18.47	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

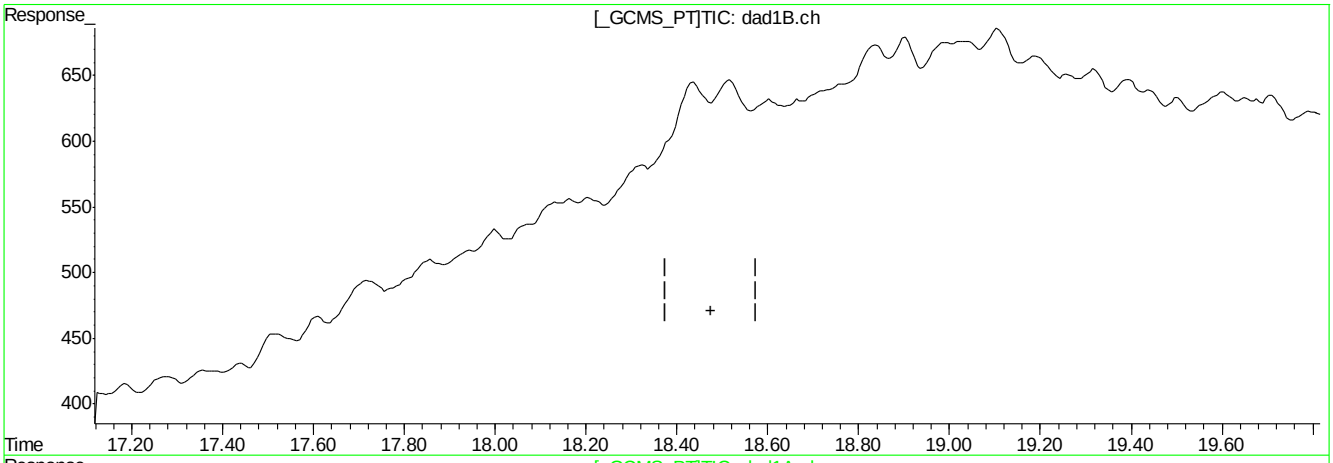
response 0

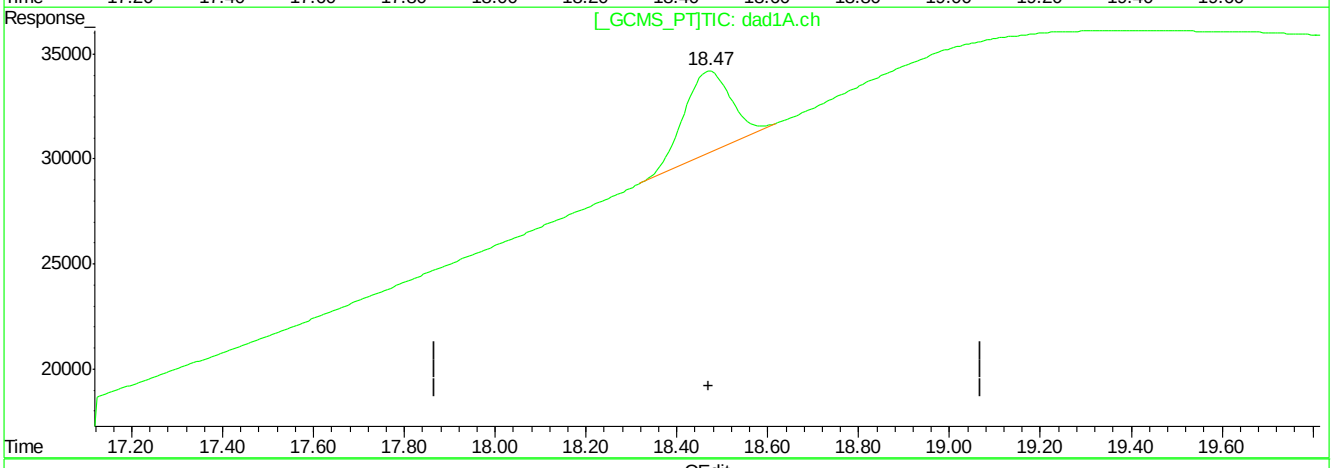
(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:43:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.47min 220.237ppb m

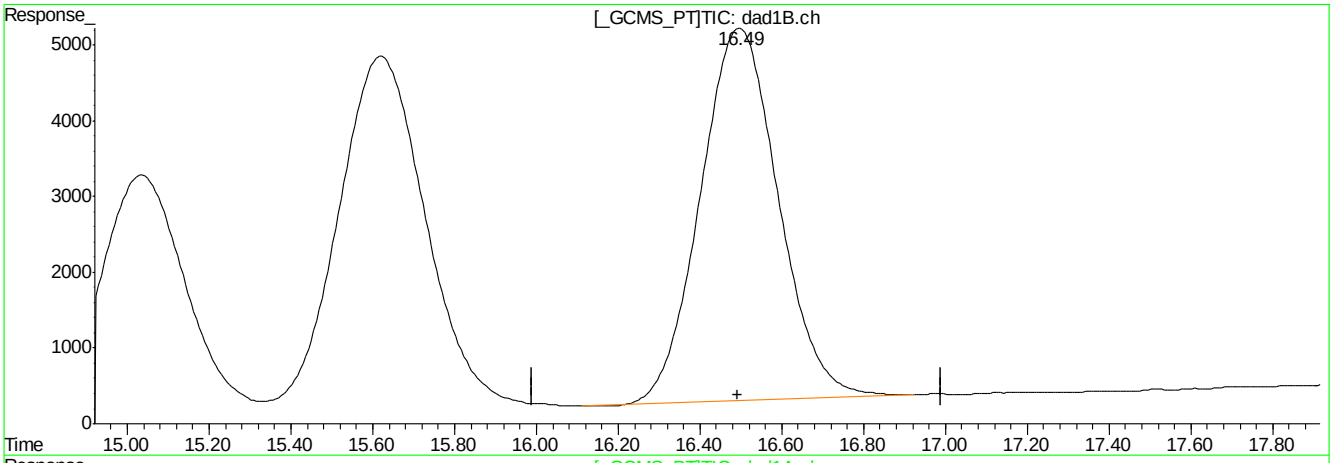
response 282724

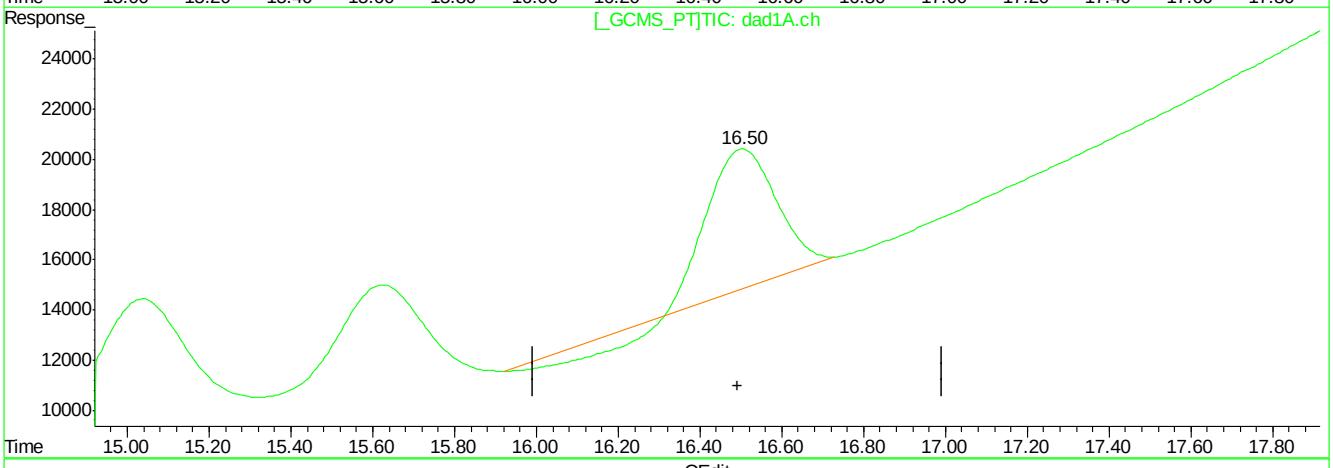
(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:43:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.50min 220.430ppb

response 653802

(20) m-Nitrotoluene #2

16.51min 155.224ppb

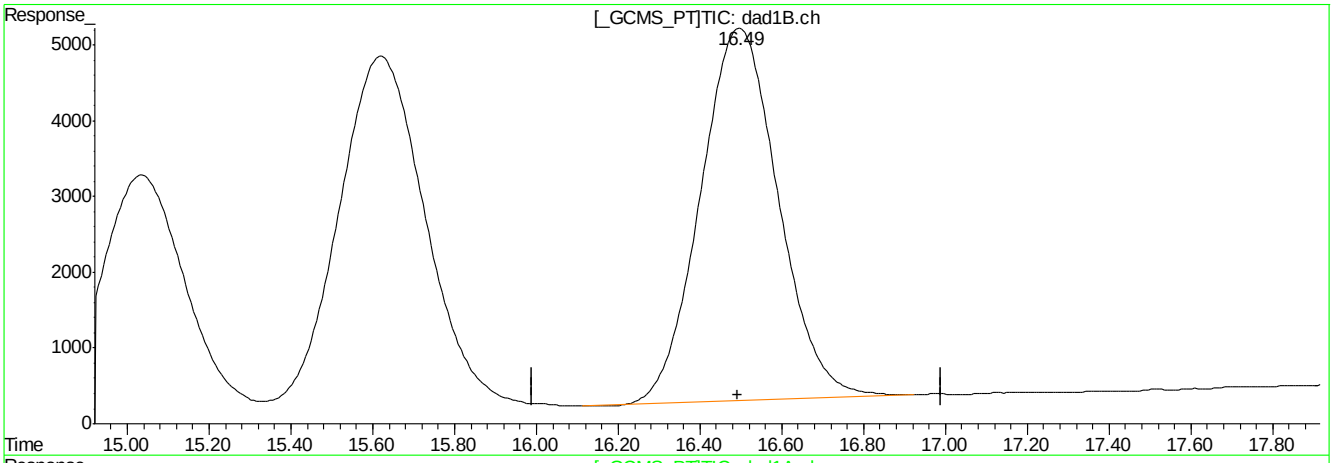
response 557837

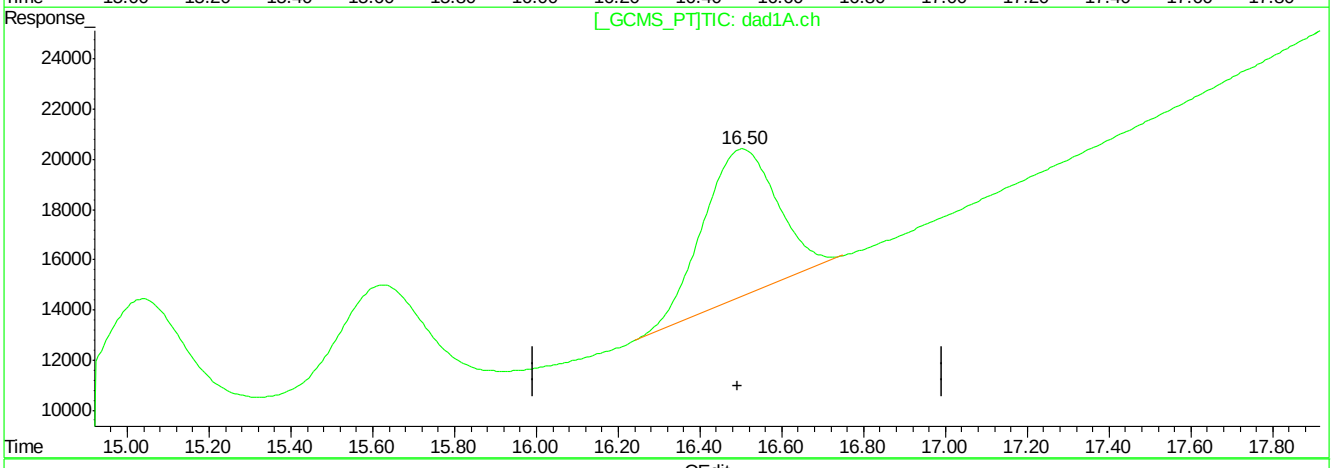
(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:43:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.50min 220.430ppb

response 653802

(20) m-Nitrotoluene #2

16.50min 206.995ppb m

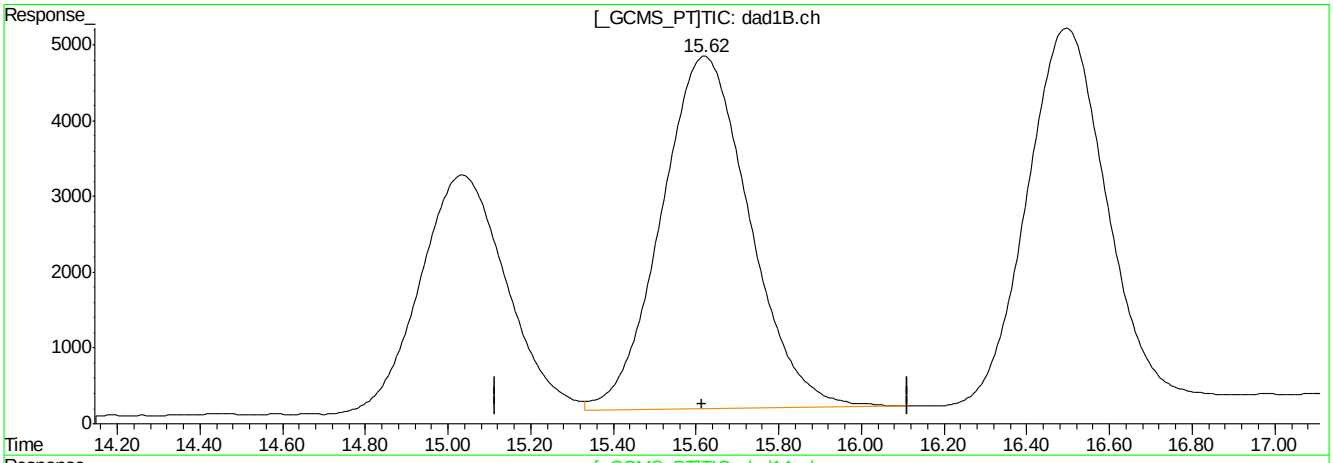
response 743888

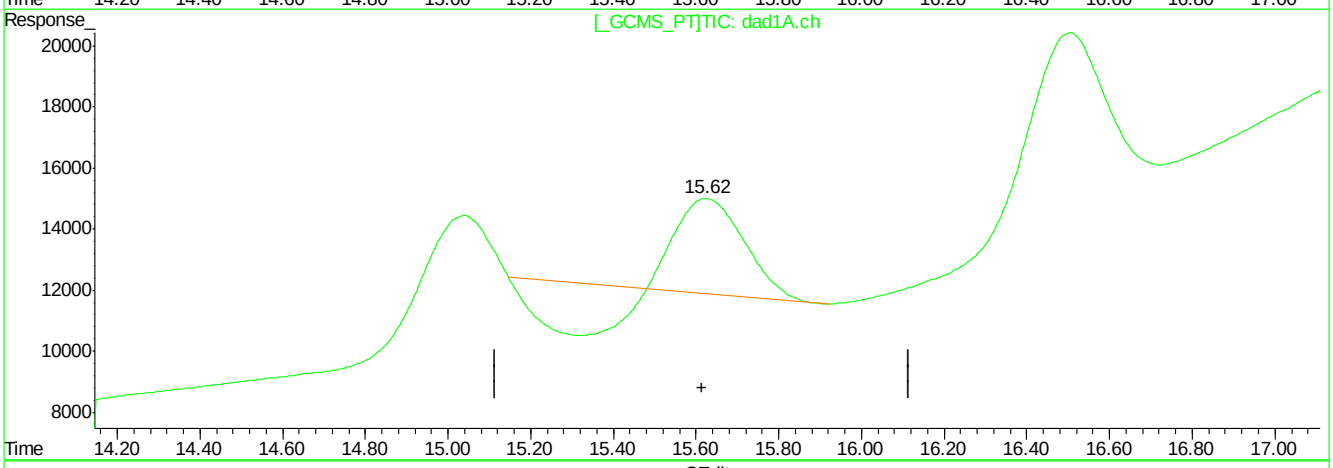
(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:43:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.62min 225.423ppb

response 692601

(19) p-Nitrotoluene #2

15.63min 69.605ppb

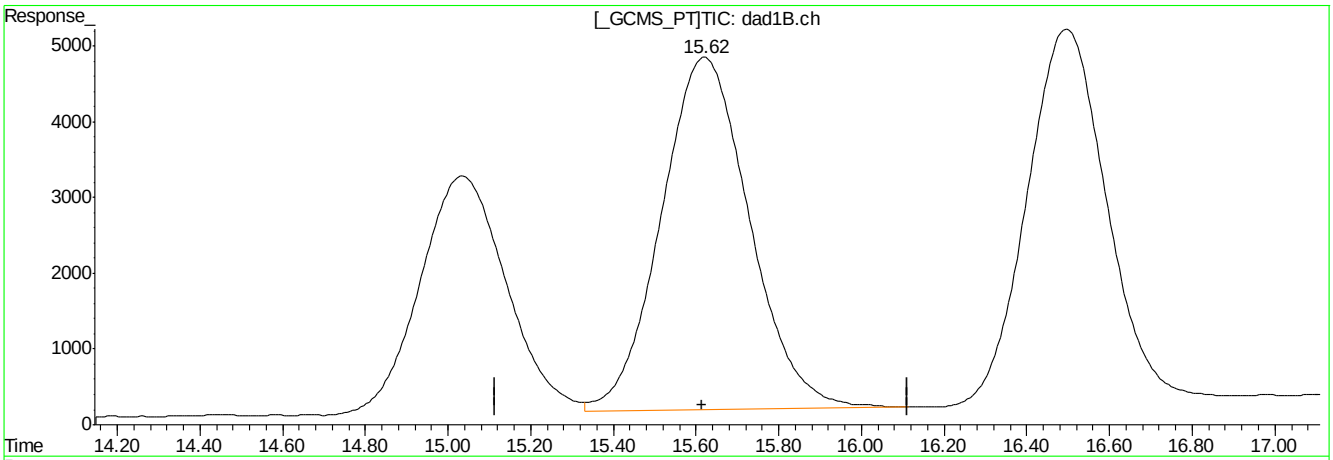
response 160438

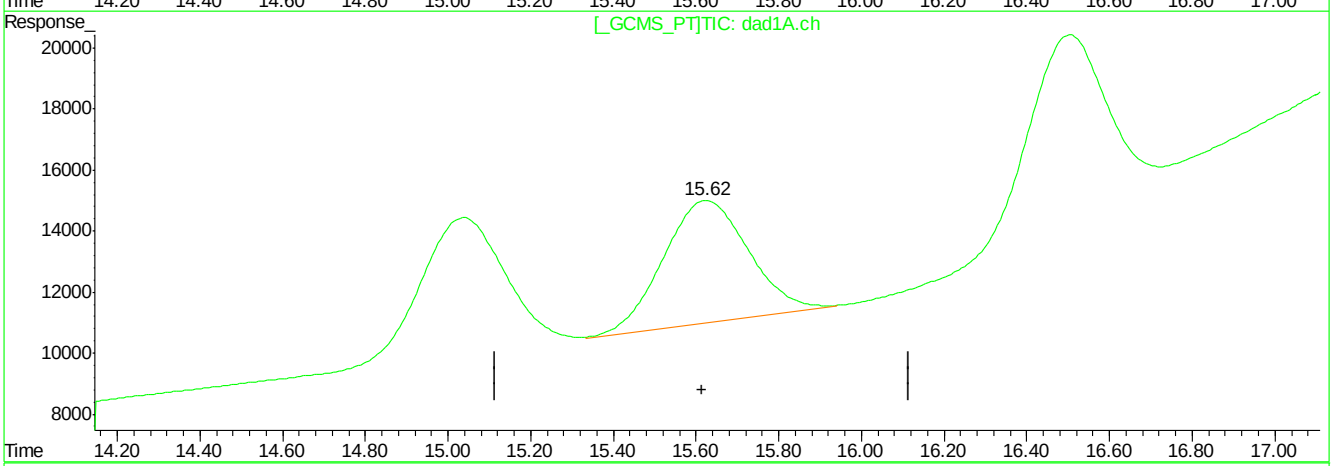
(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:43:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.62min 225.423ppb

response 692601

(19) p-Nitrotoluene #2

15.62min 248.025ppb m

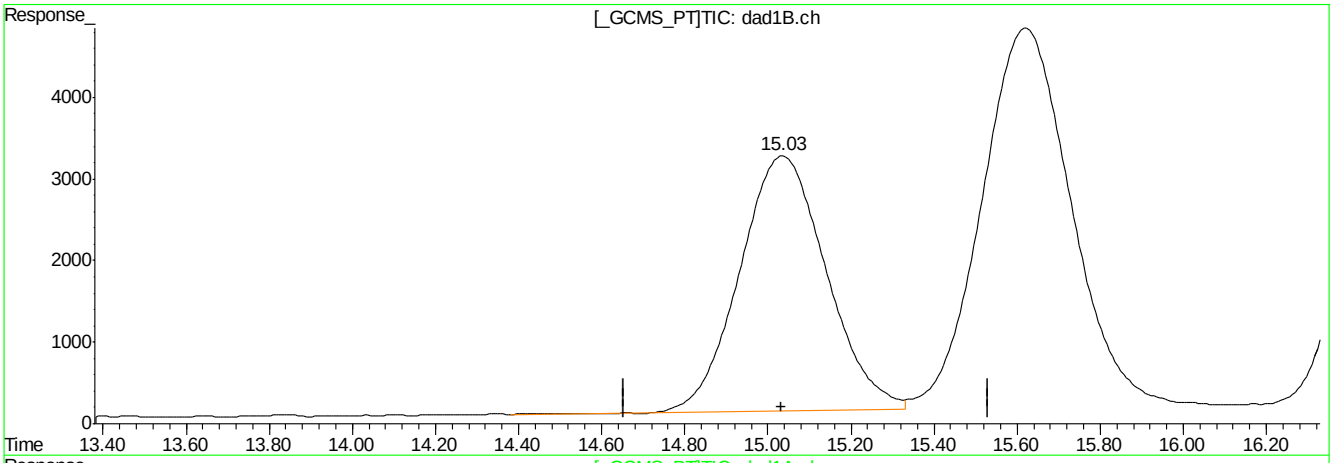
response 576345

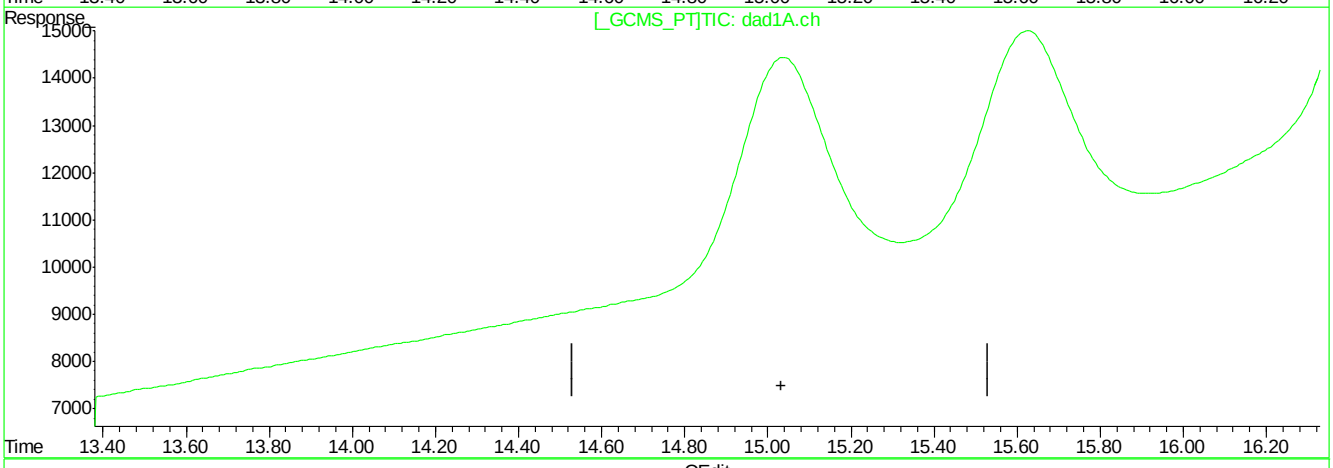
(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:43:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.04min 230.321ppb

response 453896

(18) o-Nitrotoluene #2

0.00min 0.000ppb

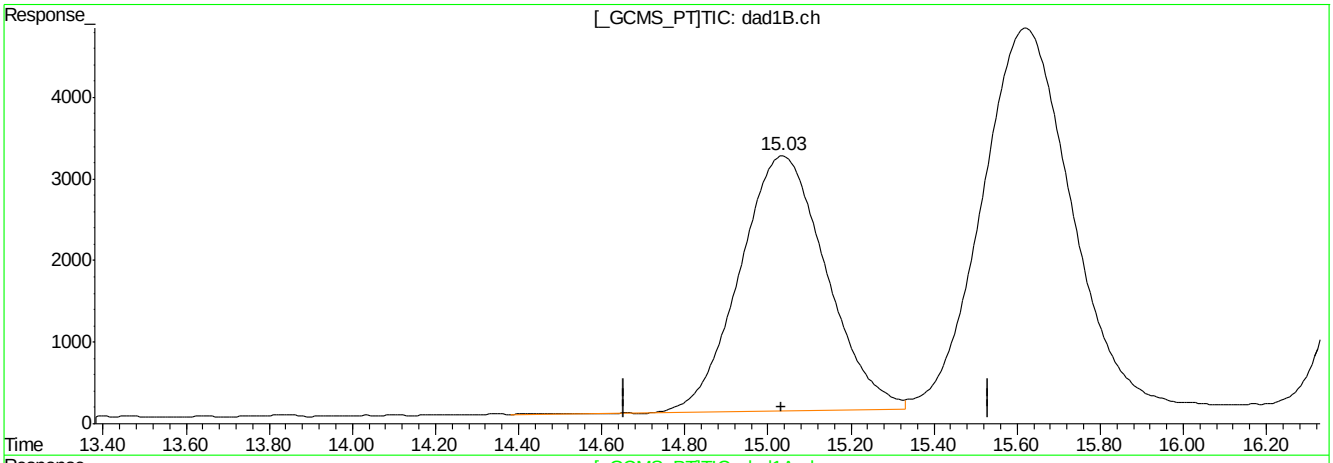
response 0

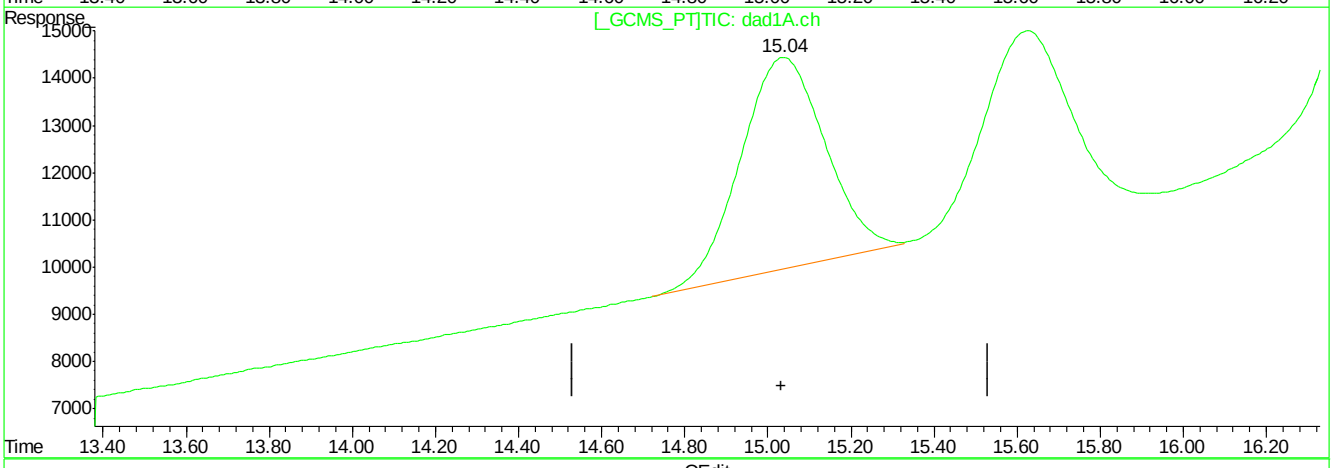
(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:43:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.04min 230.321ppb

response 453896

(18) o-Nitrotoluene #2

15.04min 259.979ppb m

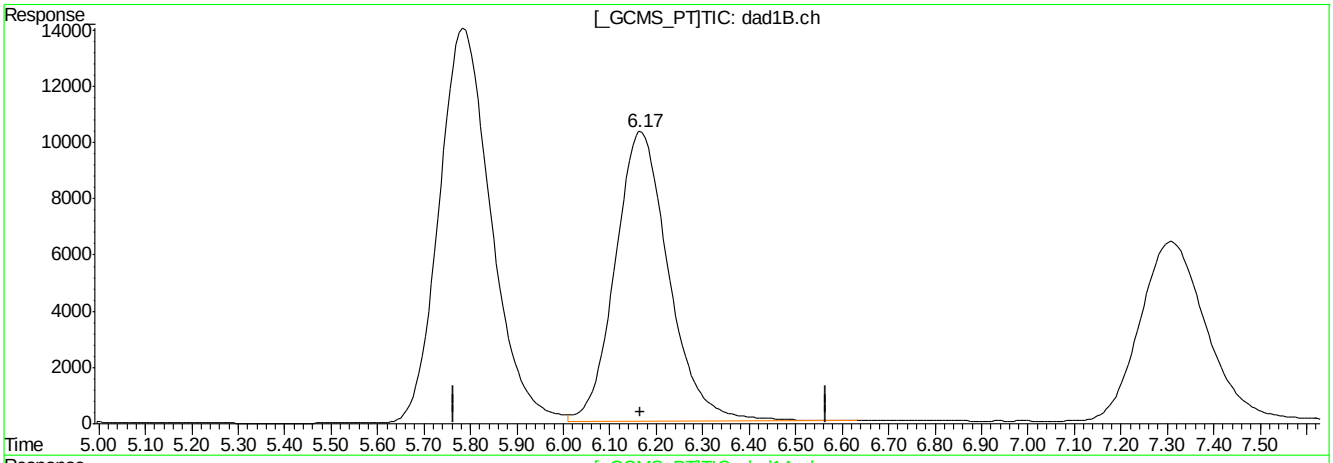
response 635925

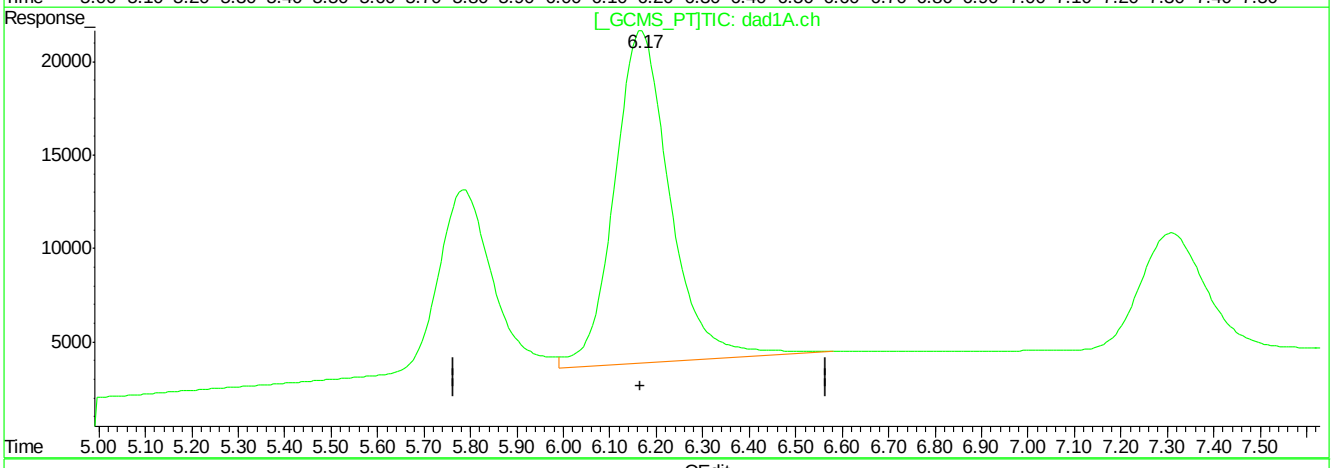
(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:43:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.17min 210.854ppb

response 829192

(8) 3,5-Dinitroaniline #2

6.17min 221.321ppb

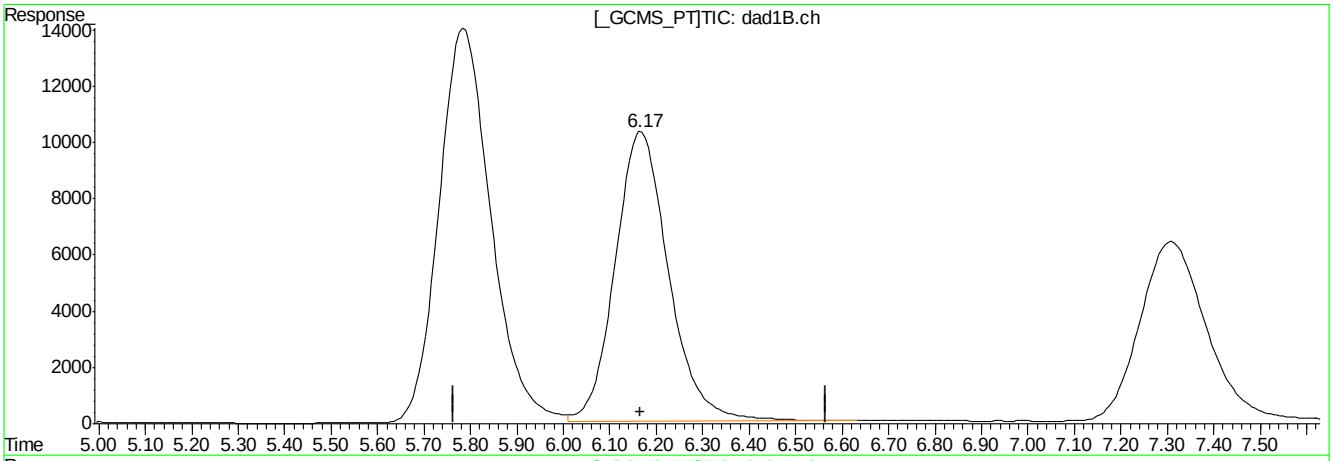
response 1485023

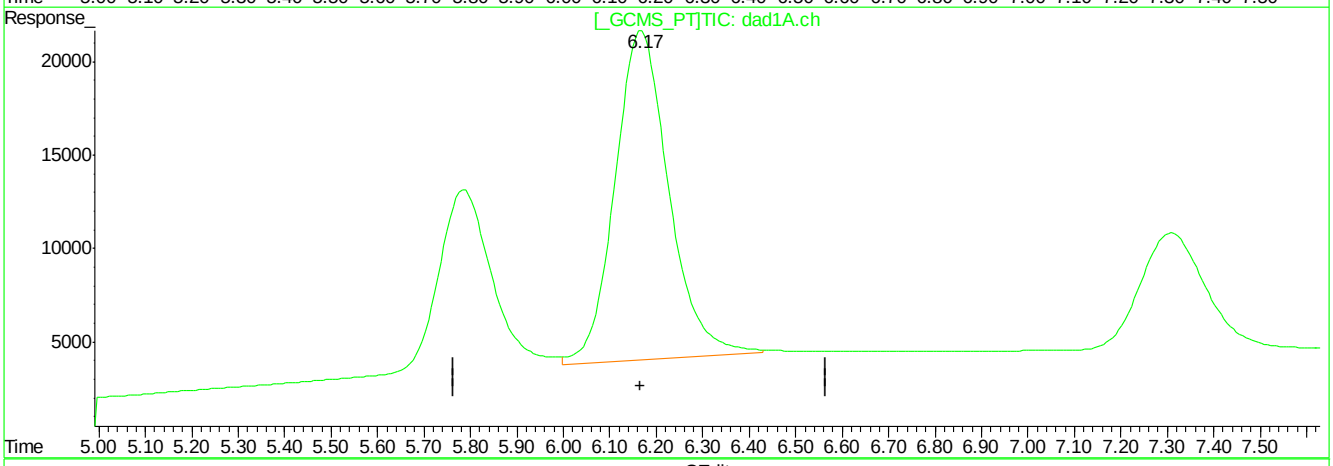
(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:44:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.17min 210.854ppb

response 829192

(8) 3,5-Dinitroaniline #2

6.17min 211.698ppb m

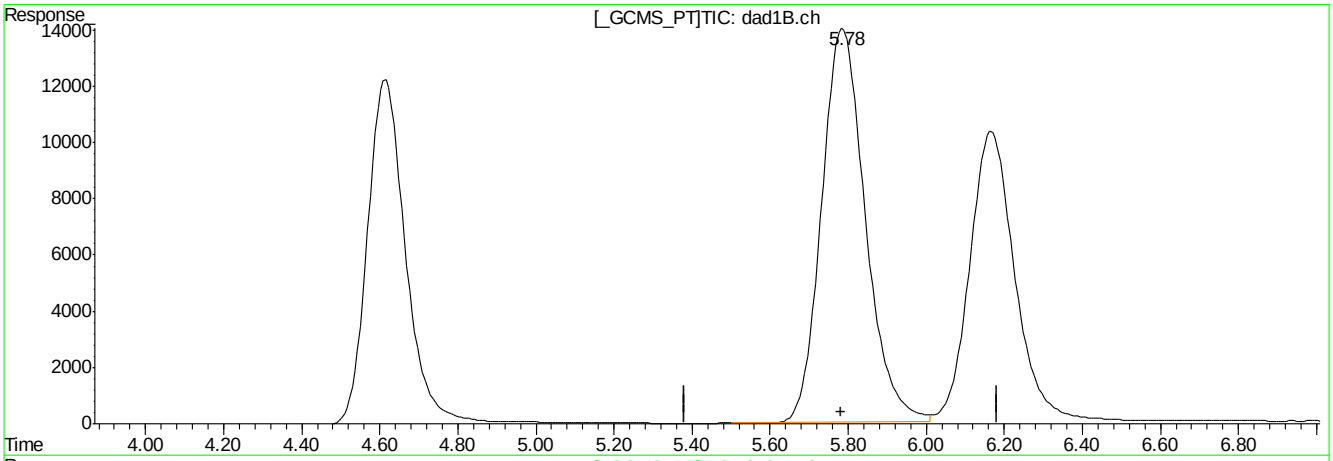
response 1420456

(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:44:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.79min 209.625ppb

response 1088228

(7) 1,3-Dinitrobenzene #2

5.79min 225.889ppb

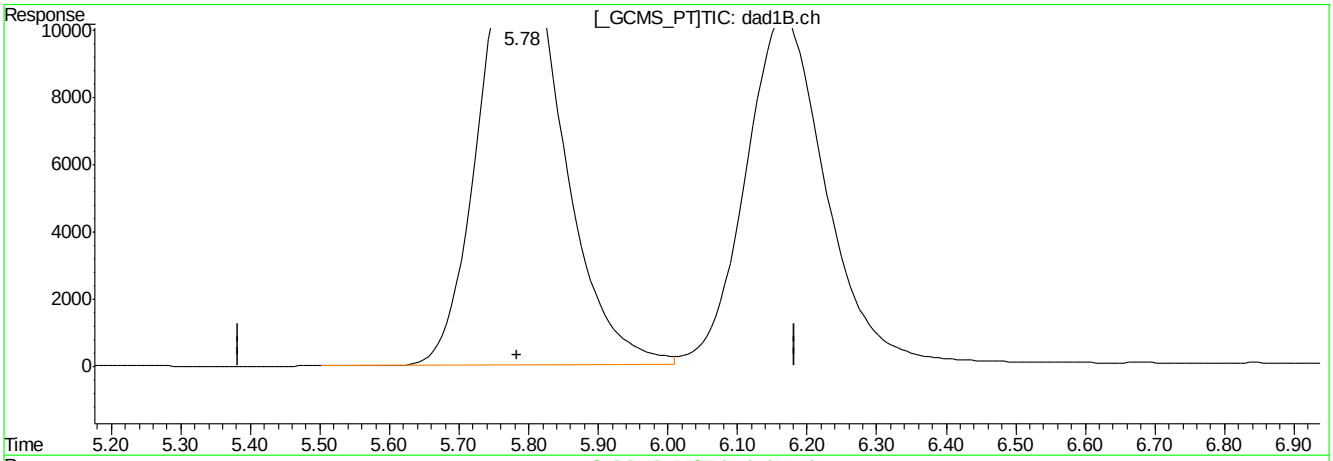
response 828686

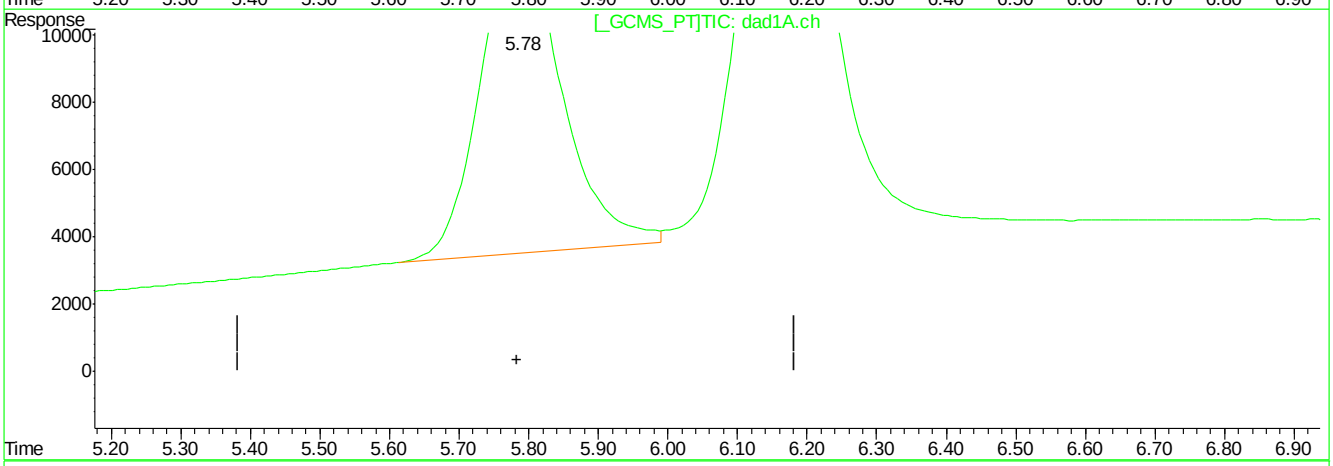
(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:44:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.79min 209.625ppb

response 1088228

(7) 1,3-Dinitrobenzene #2

5.78min 207.863ppb m

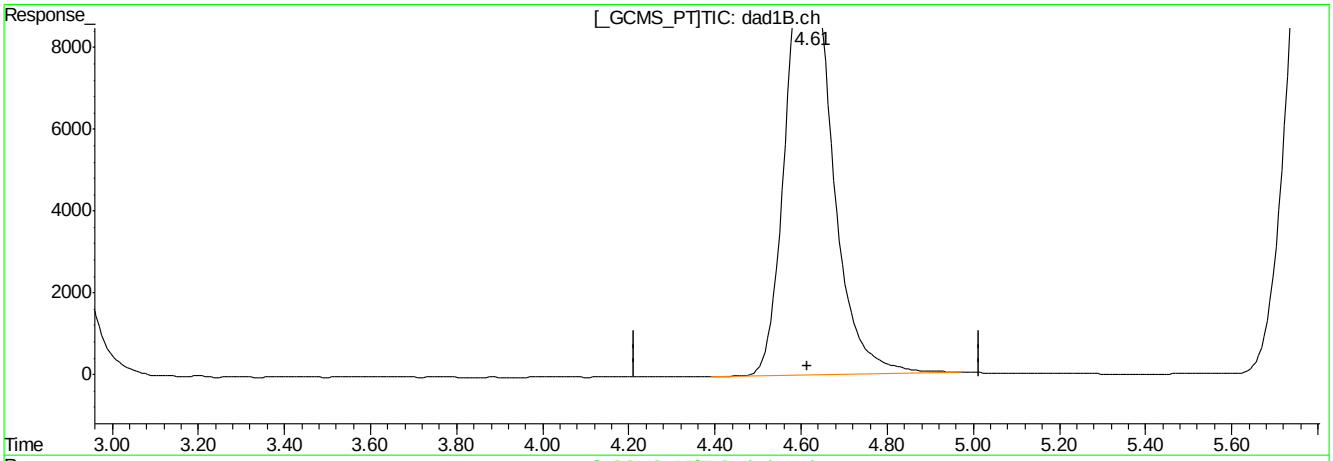
response 762553

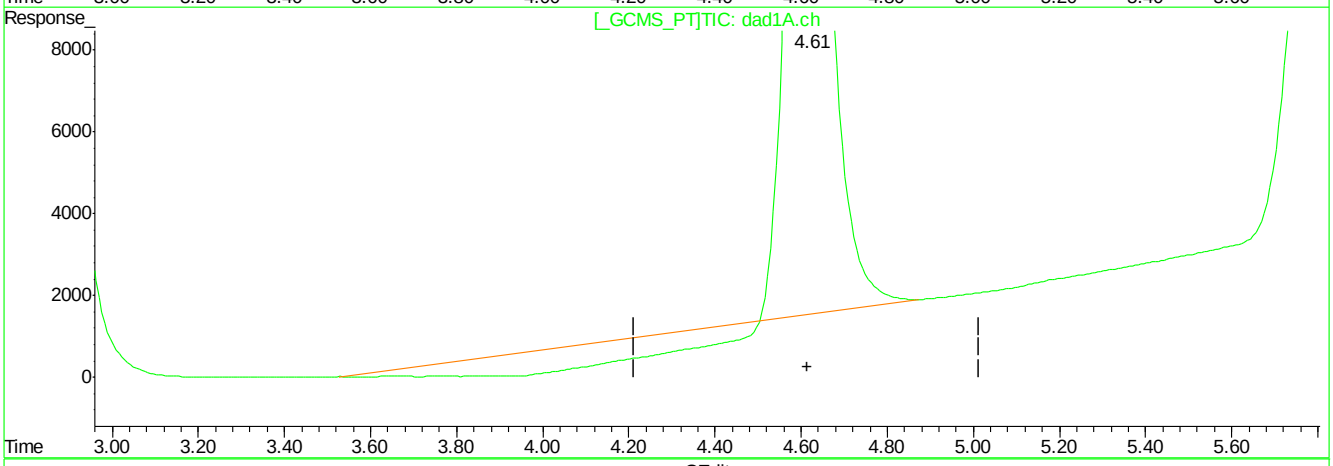
(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:44:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.62min 208.375ppb

response 821223

(6) 1,3,5-Trinitrobenzene #2

4.62min 159.448ppb

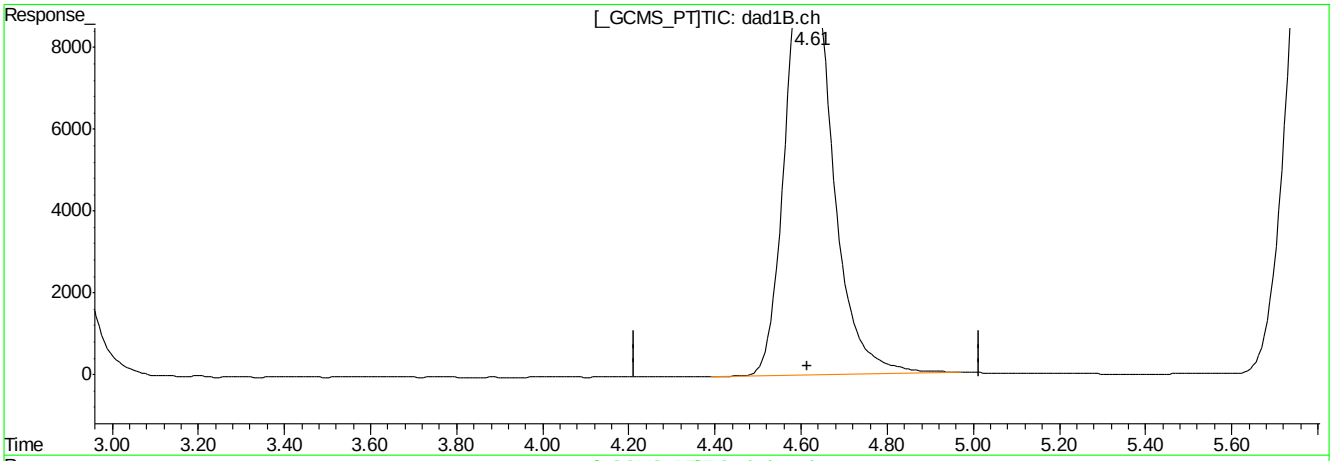
response 998482

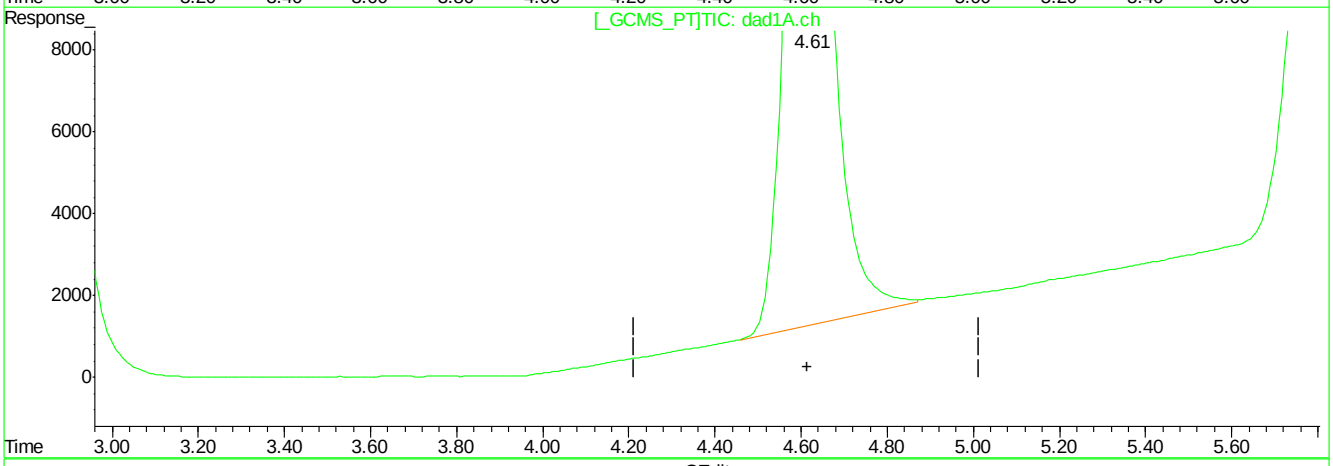
(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:44:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068883.D\dad1A.ch
Acq On : 22-Apr-2021, 14:36:22 Operator: jamesb
Sample : ic2026-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.62min 208.375ppb

response 821223

(6) 1,3,5-Trinitrobenzene #2

4.61min 205.326ppb m

response 1285772

(+) = Expected Retention Time
BB068883.D 8330B_042221_PLUS.M Fri Apr 23 08:44:48 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/23/21 11:35

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 08:34:21 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.91	10.91	1070782	1876381	533.004	520.927
Spiked Amount	500.000	Range	70 - 136	Recovery	=	106.60%	104.19%
	Target Compounds						
1)	TNX	1.33	1.33	1216506	1864100	408.680	417.128
2)	HMX	1.46	1.46	823571	2235942	453.703	497.783
3)	DNX	1.70	1.70	1304413	2090492	514.785	553.262
4)	MNX	2.28	2.28	1470152	2259987	567.893	567.966
5)	RDX	2.89	2.89	953277	1520293	523.339	505.335
6)	1,3,5-Trinitrobe	4.62	4.61	2050997	3253564	520.414	519.564m
7)	1,3-Dinitrobenze	5.79	5.78	2670367	1853519	514.391	505.246m
8)	3,5-Dinitroanili	6.17	6.17	2035027	3485911	517.484	519.524m
9)	Nitrobenzene	7.30	7.30	1593071	1560312	548.156m	549.016m
10)	Nitroglycerin	0.00	8.93	0	650562	N.D.	548.027 #
11)	Tetryl	9.30	9.30	1566913	2462944	688.430	828.250
12)	2,4,6-Trinitroto	9.68	9.68	1892491	2289452	514.833	573.770
13)	2-Amino-4,6-Dini	10.06	10.06	1700591	2543966	501.493	506.249
14)	4-Amino-2,6-Dini	10.55	10.55	1257121	2506410	533.111	510.867
16)	2,4-Dinitrotolue	11.56	11.56	2362393	1540687	518.343	512.520
17)	2,6-Dinitrotolue	12.03	12.03	1386159	1792820	505.469	505.115
18)	o-Nitrotoluene	15.03	15.03	1124604	1605210	570.659	656.244m
19)	p-Nitrotoluene	15.62	15.61	1707003	1453700	555.583	615.360m
20)	m-Nitrotoluene	16.49	16.49	1634124	1939943	550.946	539.810m
21)	PETN	0.00	18.46	0	713987	N.D. d	556.185m

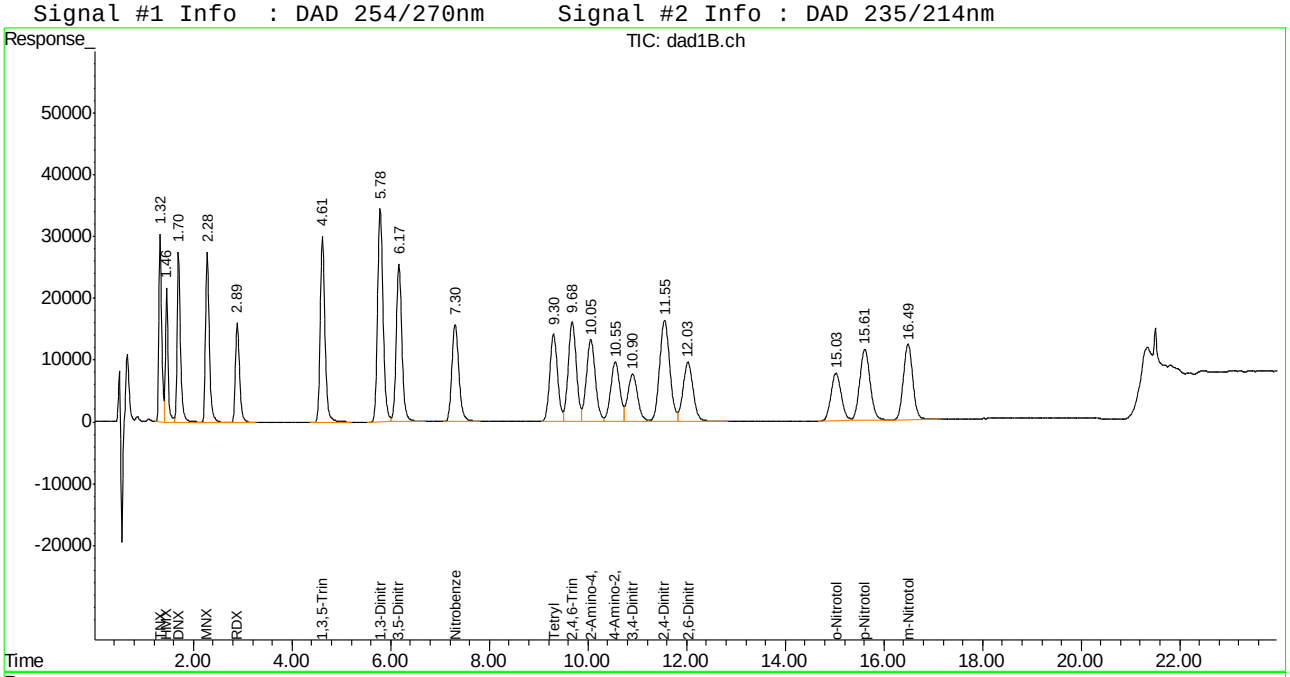
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

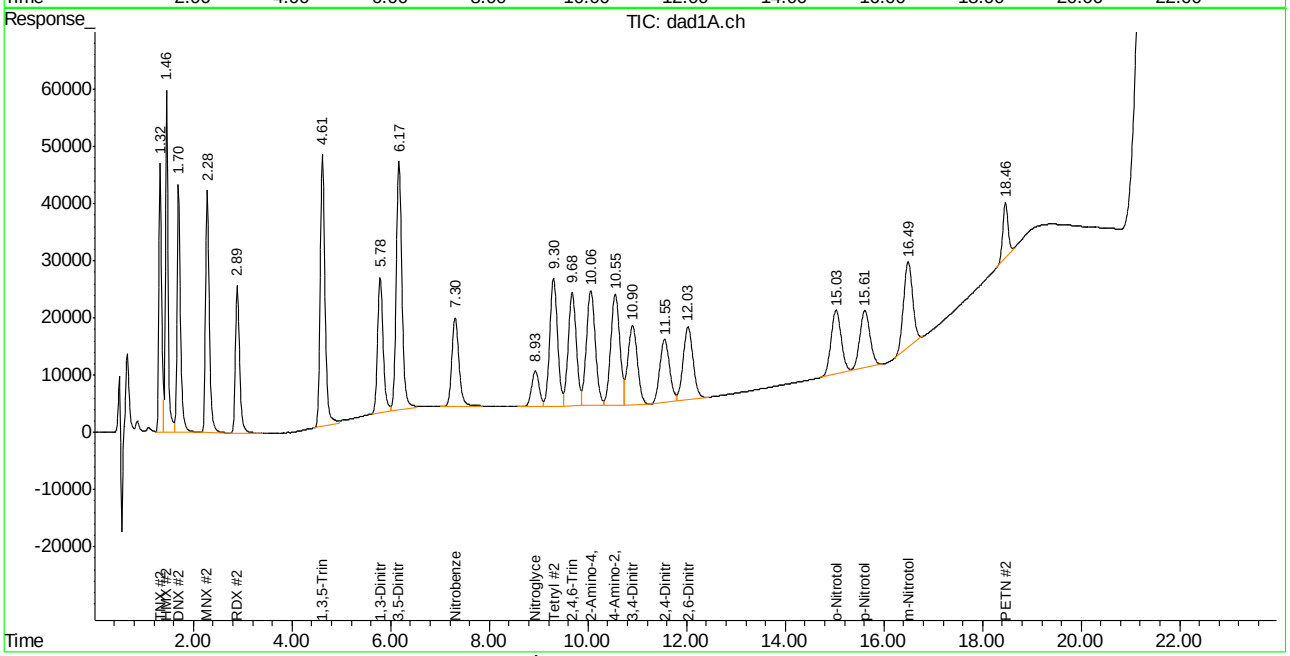
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:42 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

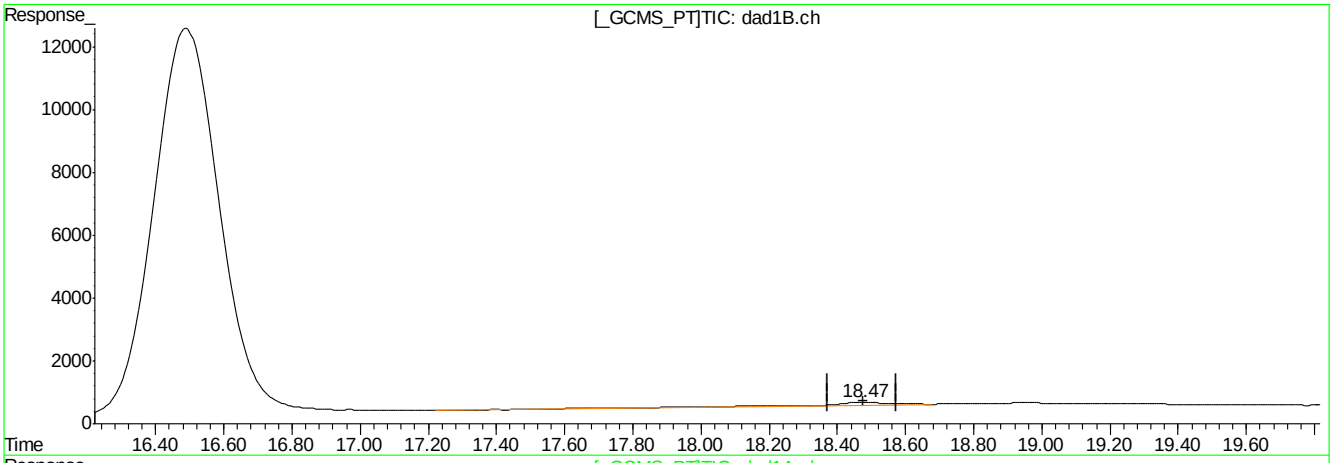
Sample Number: GBB2026-IC2026
Lab FileID: BB068884.D
Injection Time: 04/22/21 15:07
Method: SW846 8330A
Analyst approved: 04/23/21 08:56 James Boone
Supervisor approved: 04/23/21 11:35 Naresh Jiawan

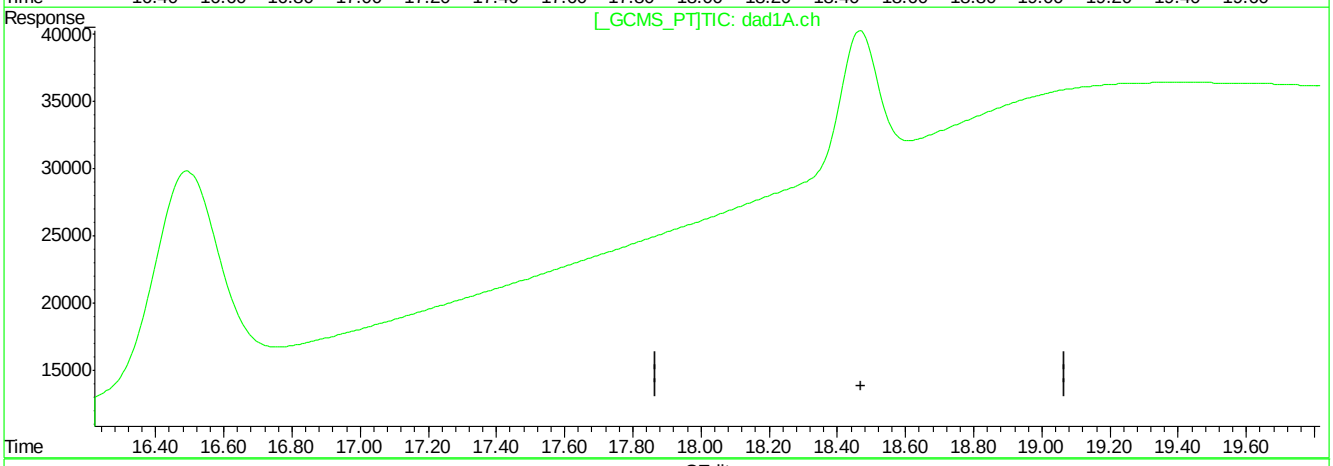
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.61	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.78	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.17	Poor instrument integration
Nitrobenzene	98-95-3	1	7.30	Poor instrument integration
Nitrobenzene	98-95-3	2	7.30	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.03	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.61	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.49	Poor instrument integration
PETN	78-11-5	2	18.46	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.48min 0.000ppb

response 11886

(21) PETN #2

0.00min 0.000ppb

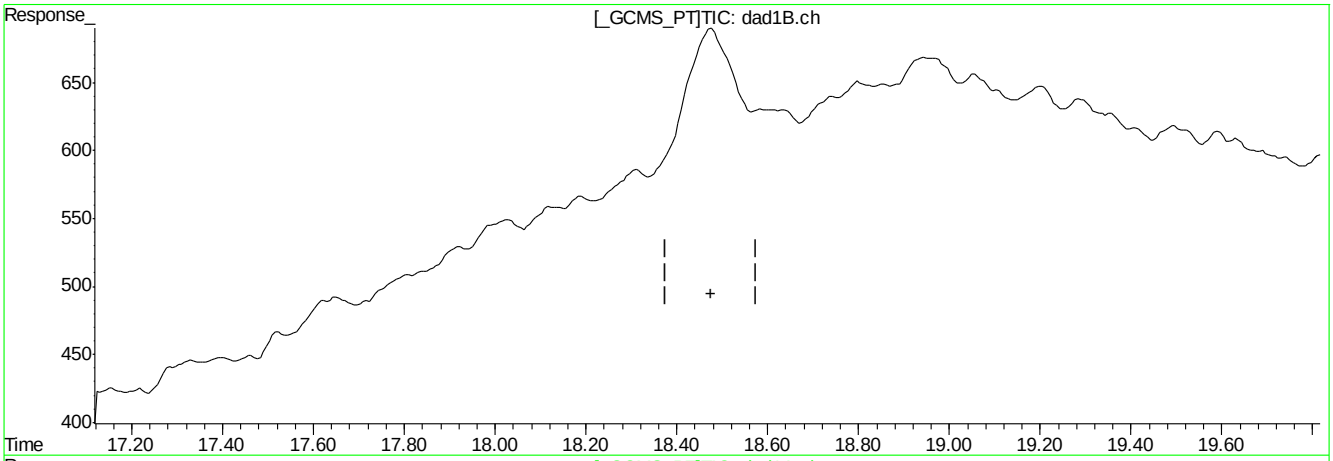
response 0

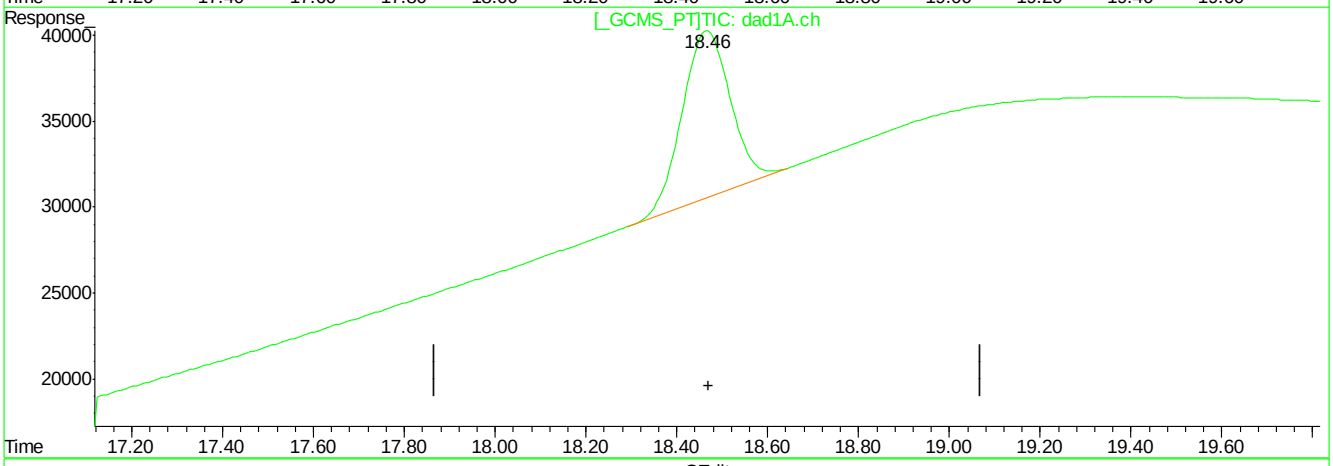
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:40:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.46min 556.185ppb m

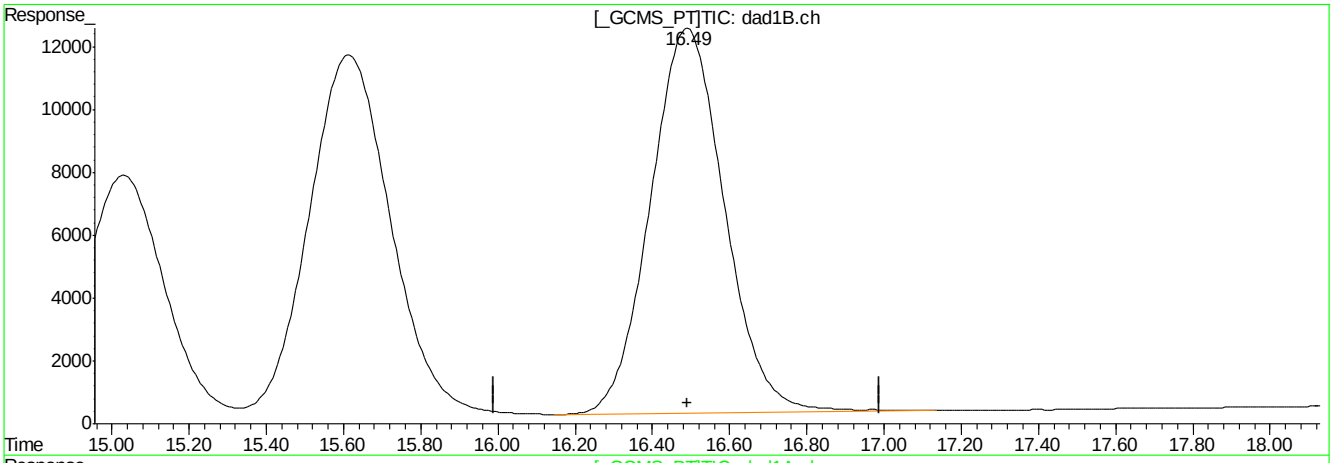
response 713987

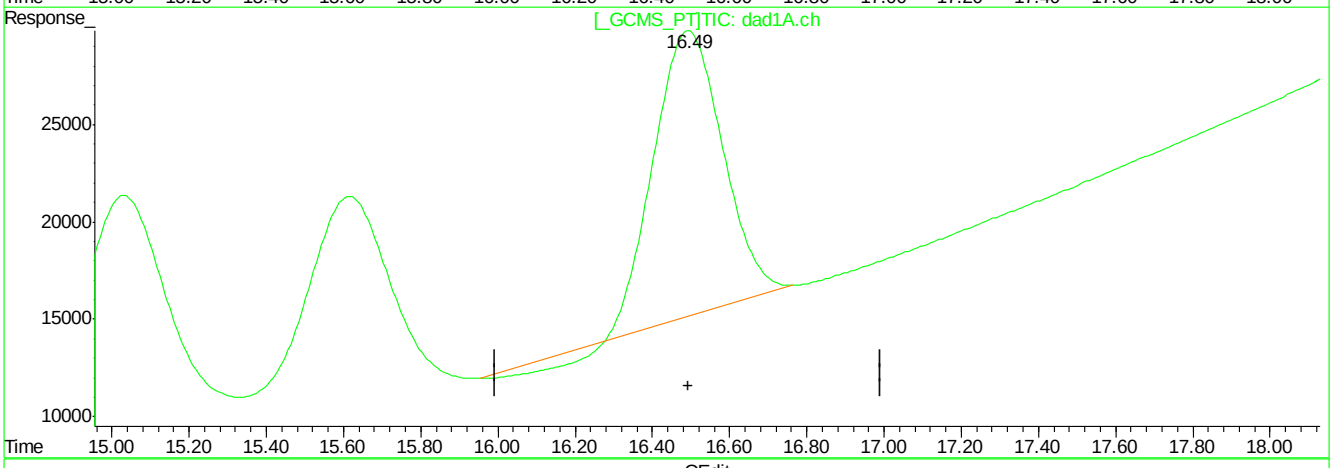
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:41:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.49min 550.946ppb

response 1634124

(20) m-Nitrotoluene #2

16.49min 489.118ppb

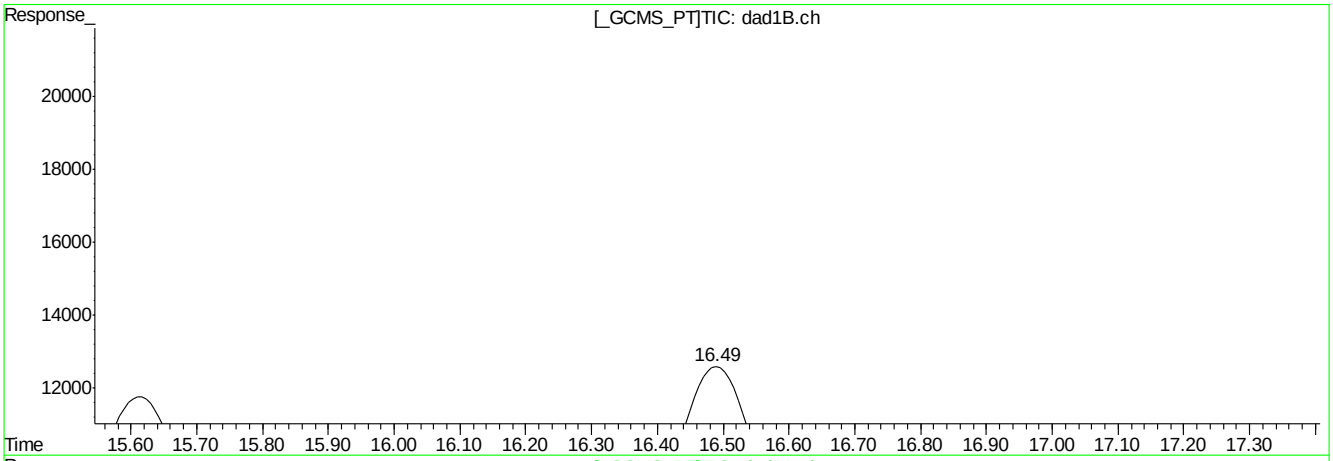
response 1757767

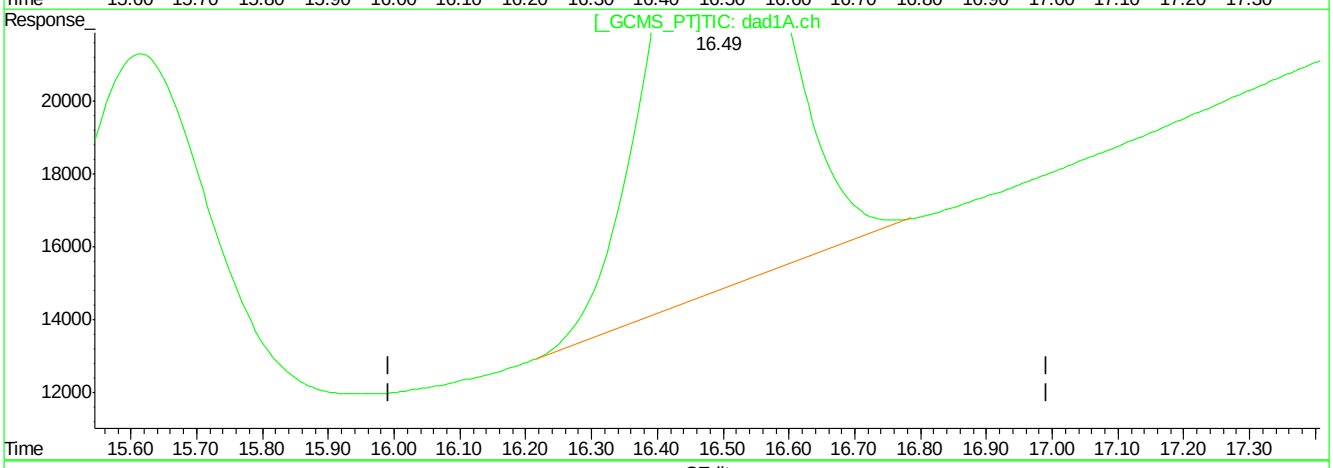
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:41:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.49min 550.946ppb

response 1634124

(20) m-Nitrotoluene #2

16.49min 539.810ppb m

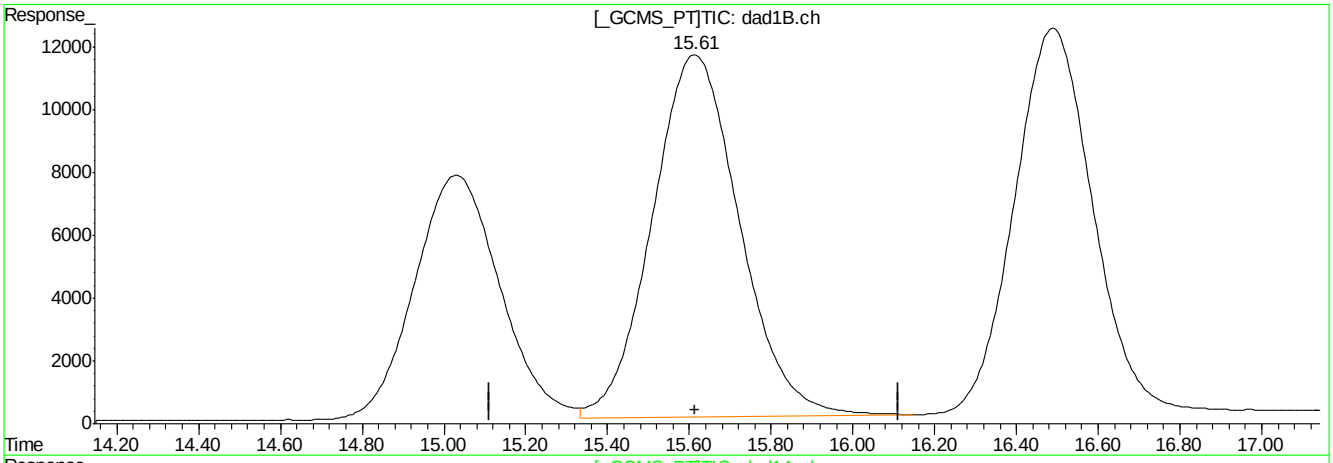
response 1939943

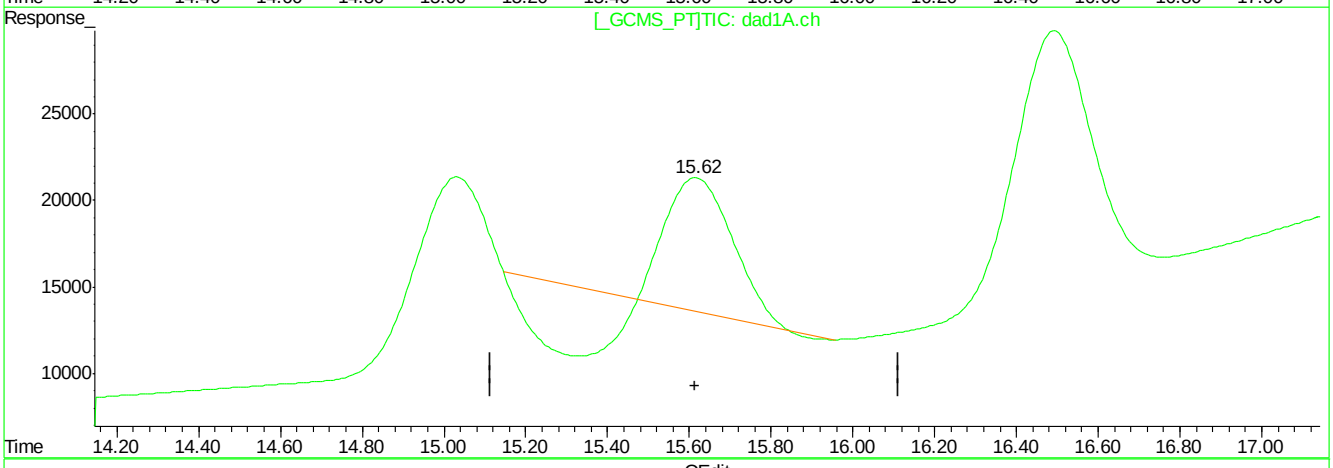
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:41:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.62min 555.583ppb

response 1707003

(19) p-Nitrotoluene #2

15.62min 183.167ppb

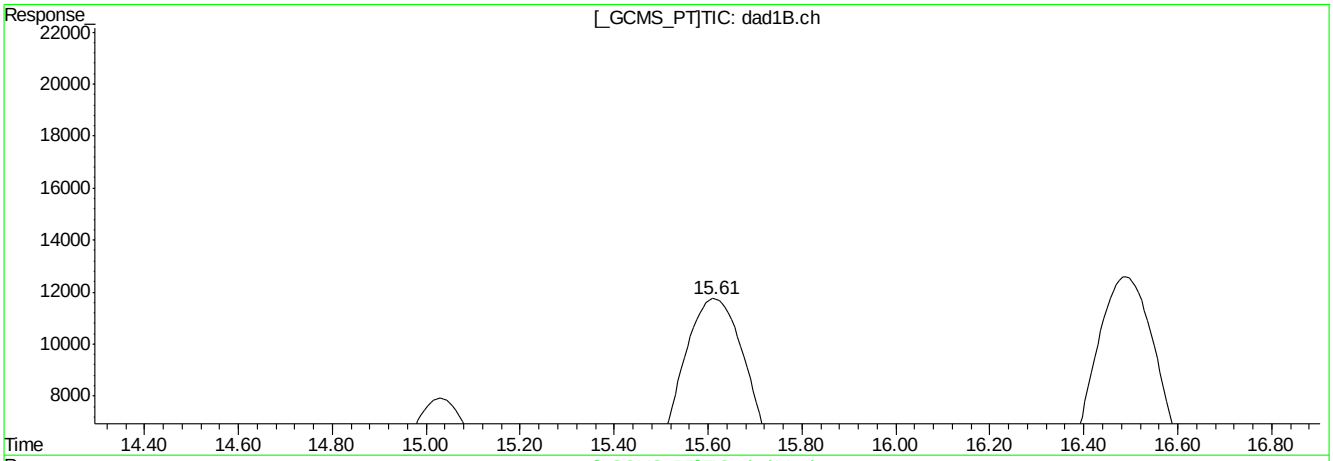
response 424384

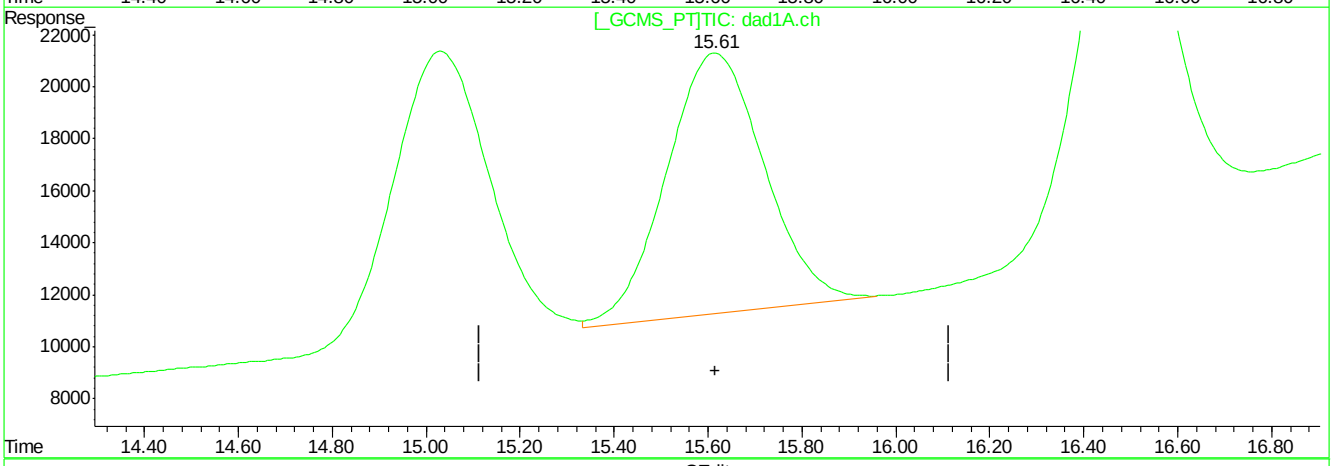
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:41:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.62min 555.583ppb

response 1707003

(19) p-Nitrotoluene #2

15.61min 615.360ppb m

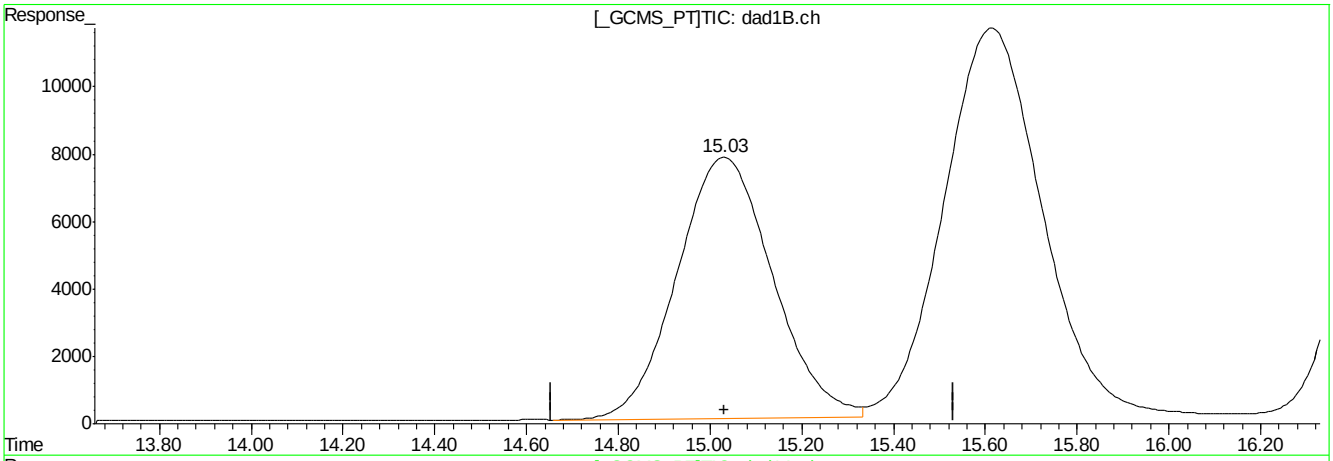
response 1453700

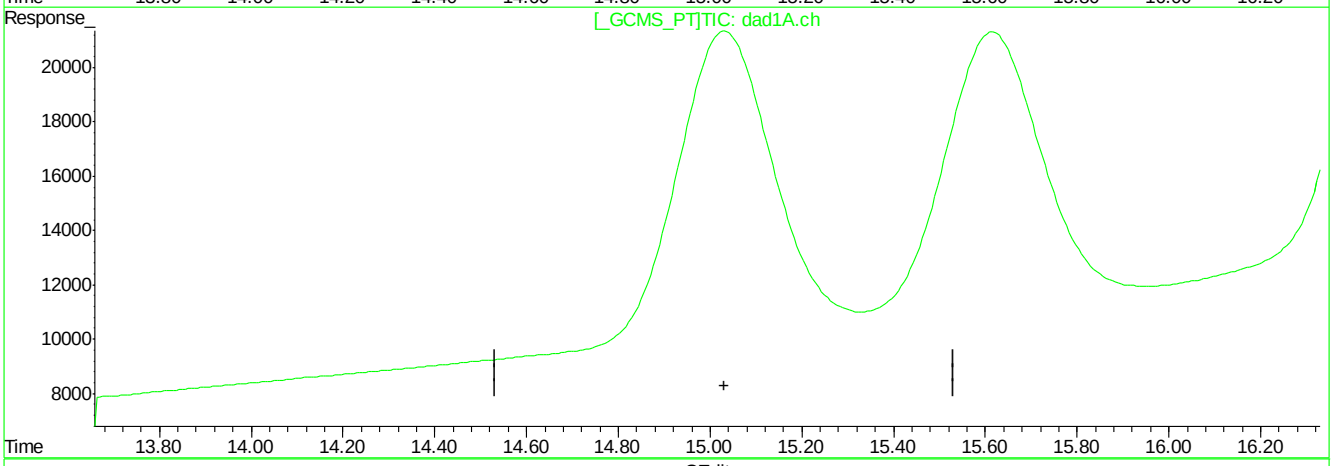
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:41:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.03min 570.659ppb

response 1124604

(18) o-Nitrotoluene #2

0.00min 0.000ppb

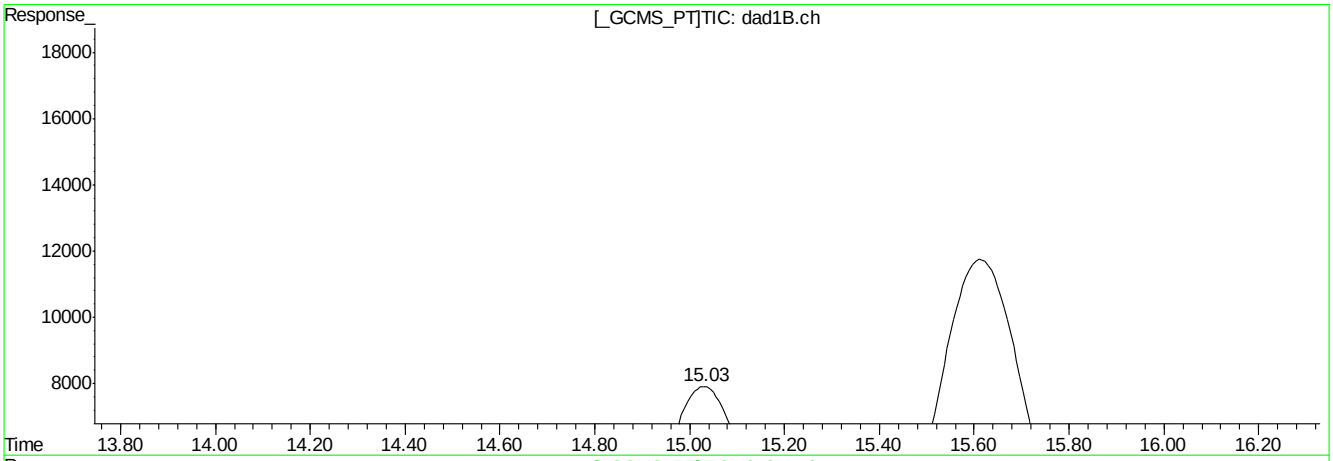
response 0

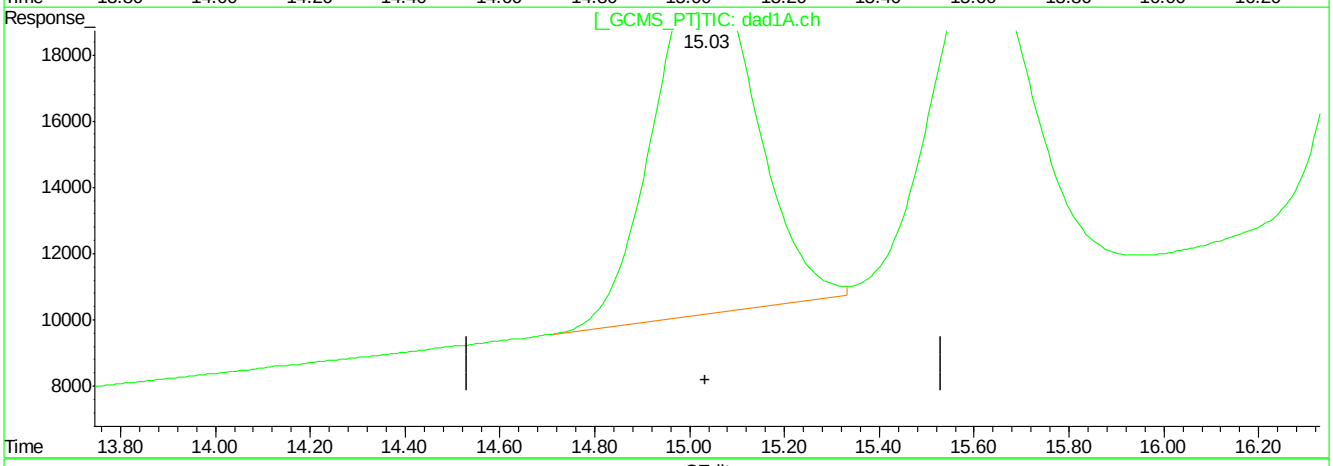
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:41:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.03min 570.659ppb

response 1124604

(18) o-Nitrotoluene #2

15.03min 656.244ppb m

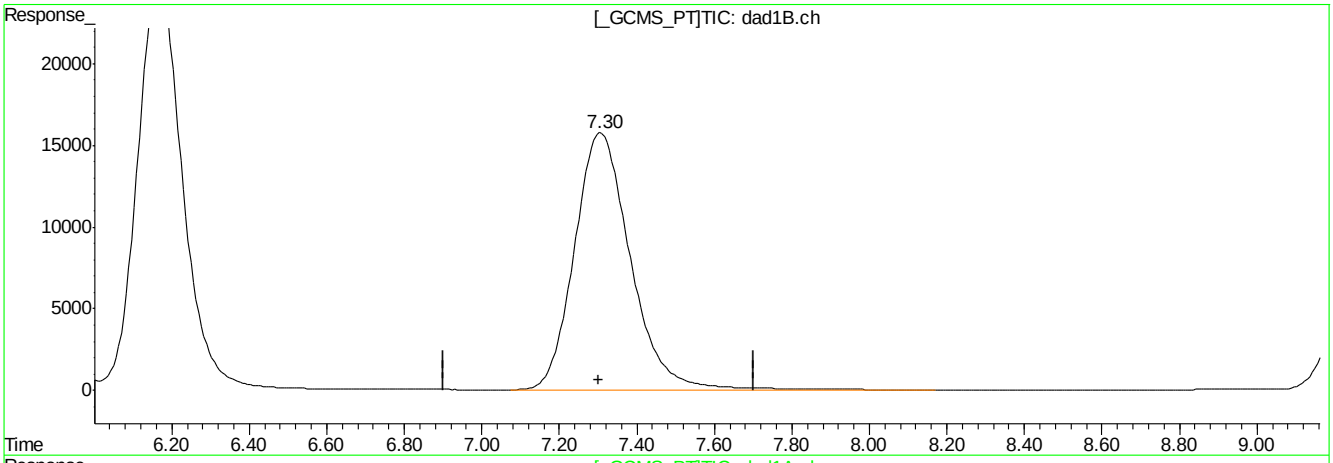
response 1605210

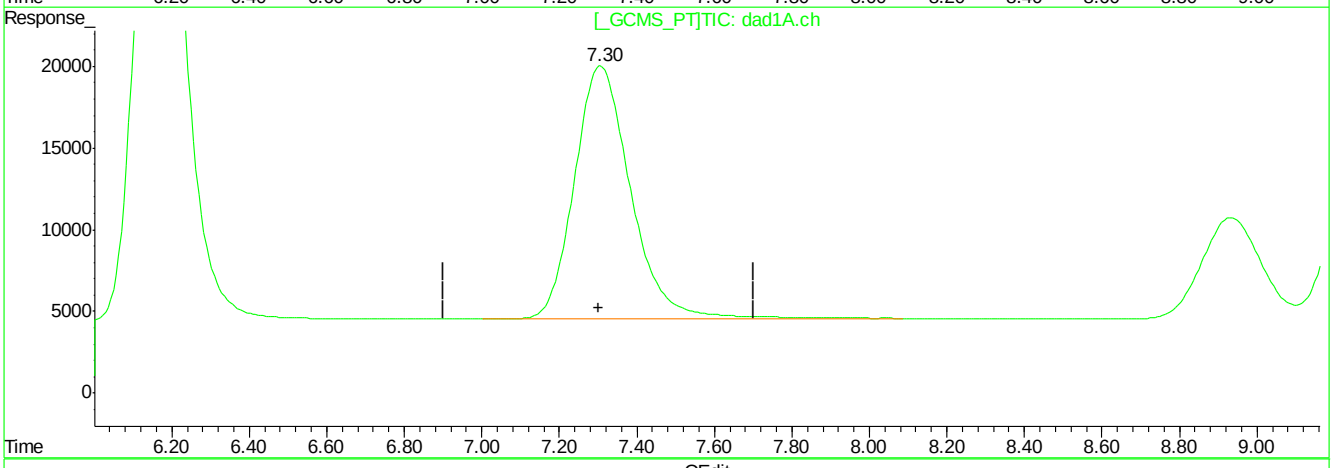
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:41:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.31min 545.000ppb

response 1583899

(9) Nitrobenzene #2

7.31min 548.553ppb

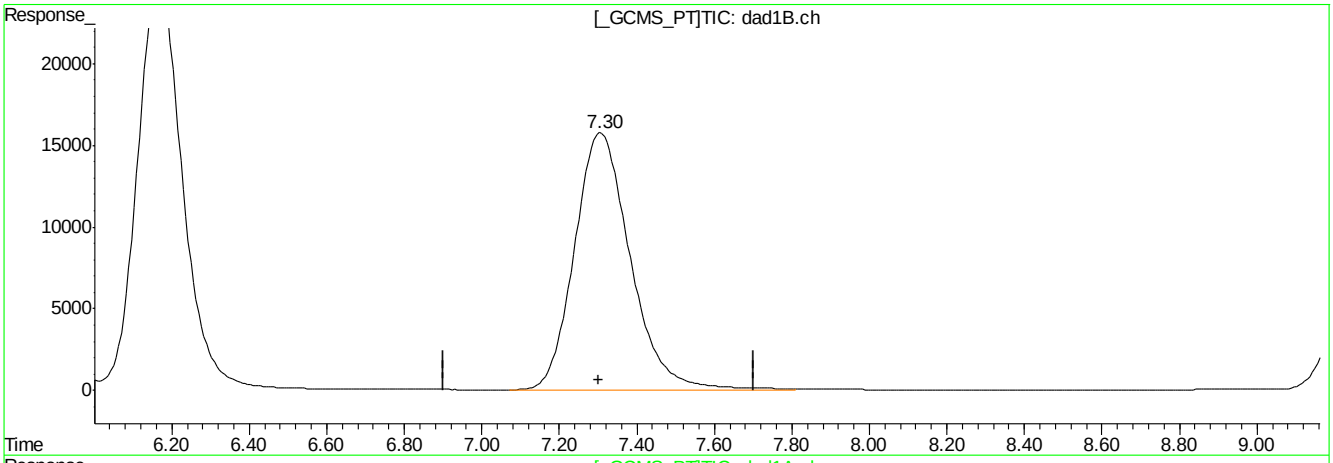
response 1558996

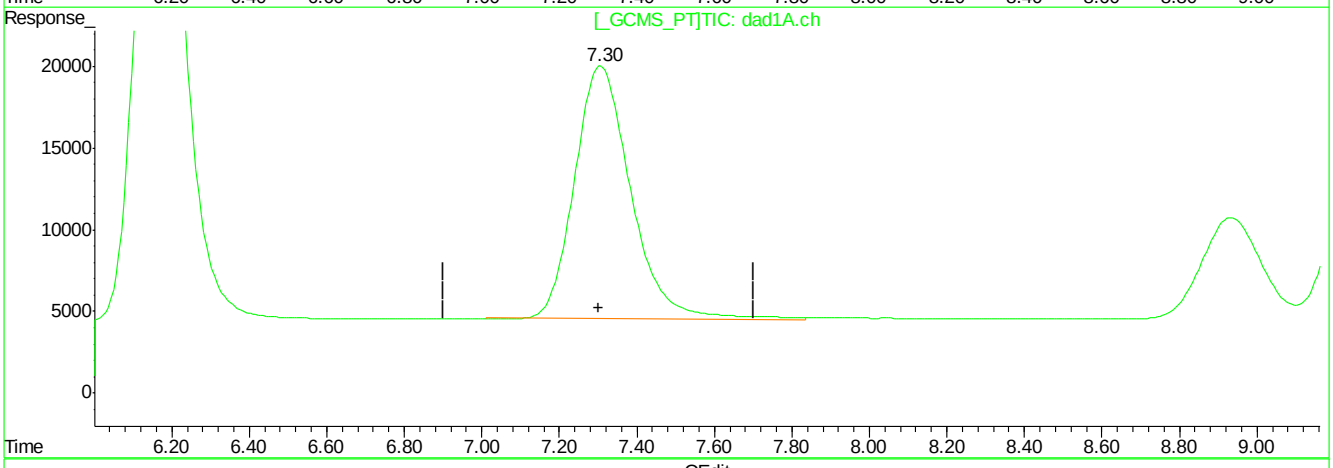
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:41:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.30min 548.156ppb m

response 1593071

(9) Nitrobenzene #2

7.30min 549.016ppb m

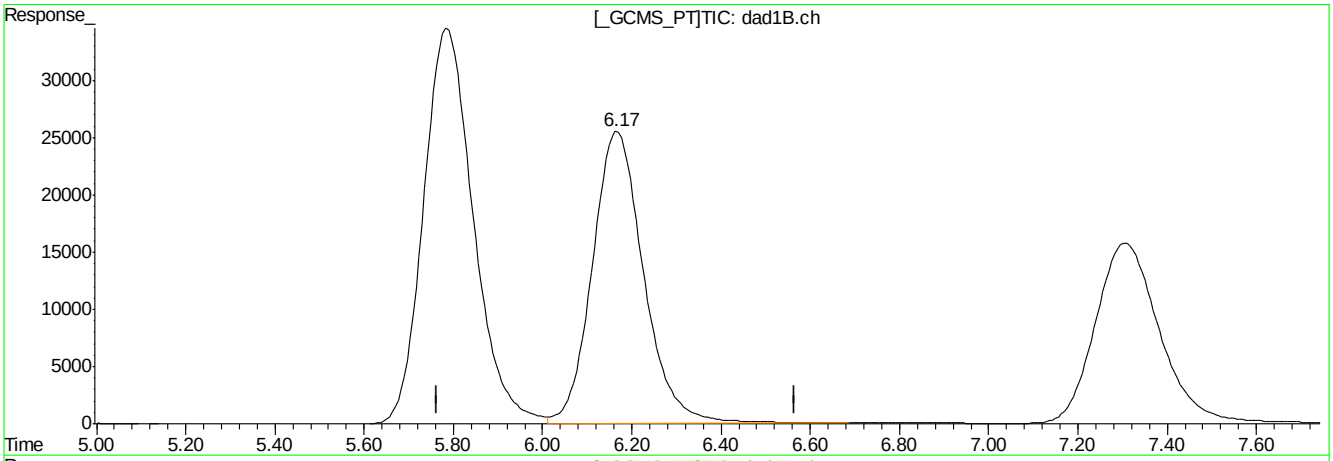
response 1560312

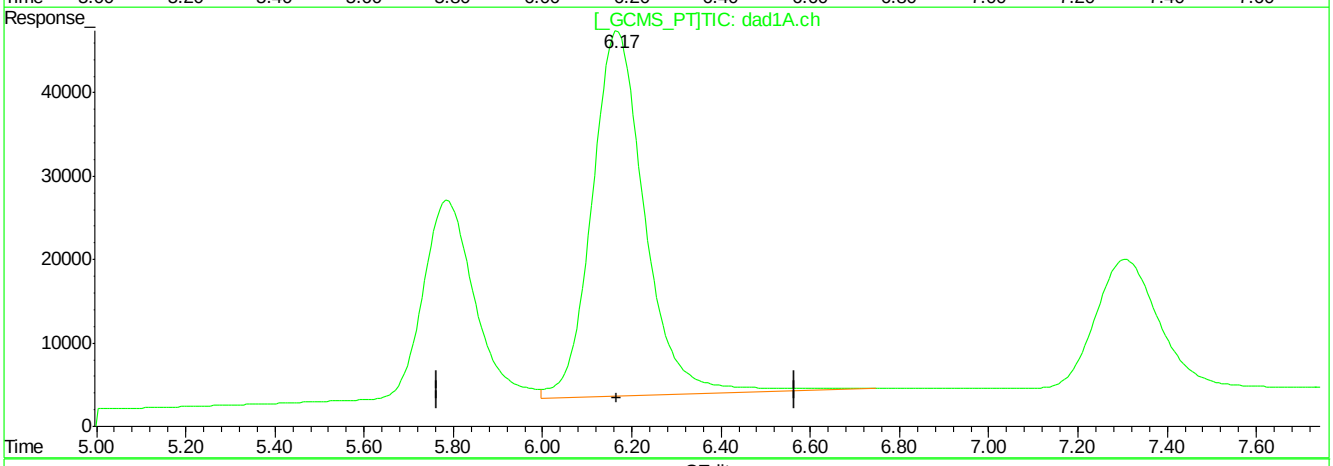
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:42:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.17min 517.484ppb

response 2035027

(8) 3,5-Dinitroaniline #2

6.17min 539.251ppb

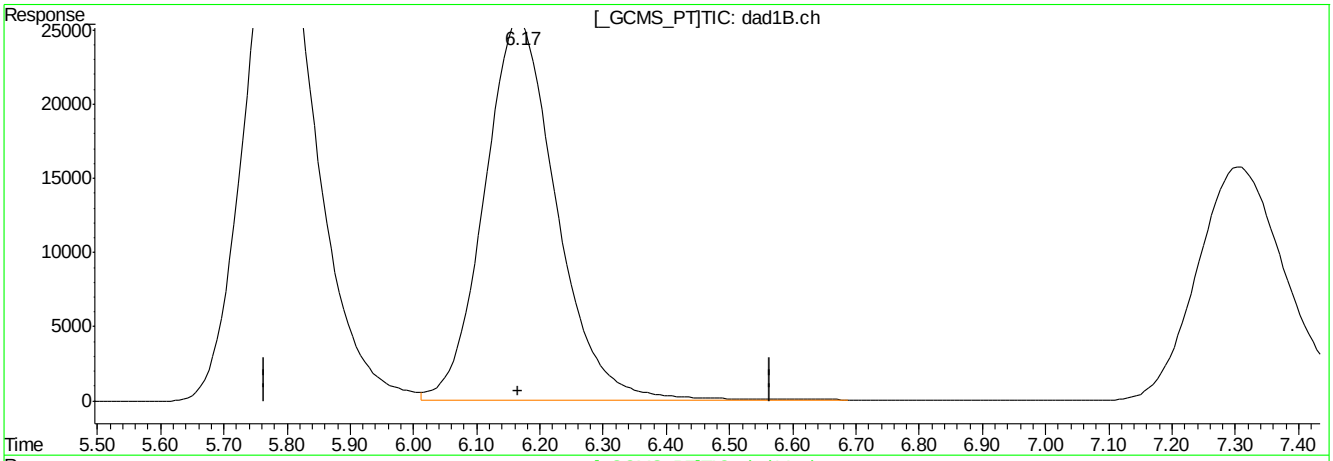
response 3618276

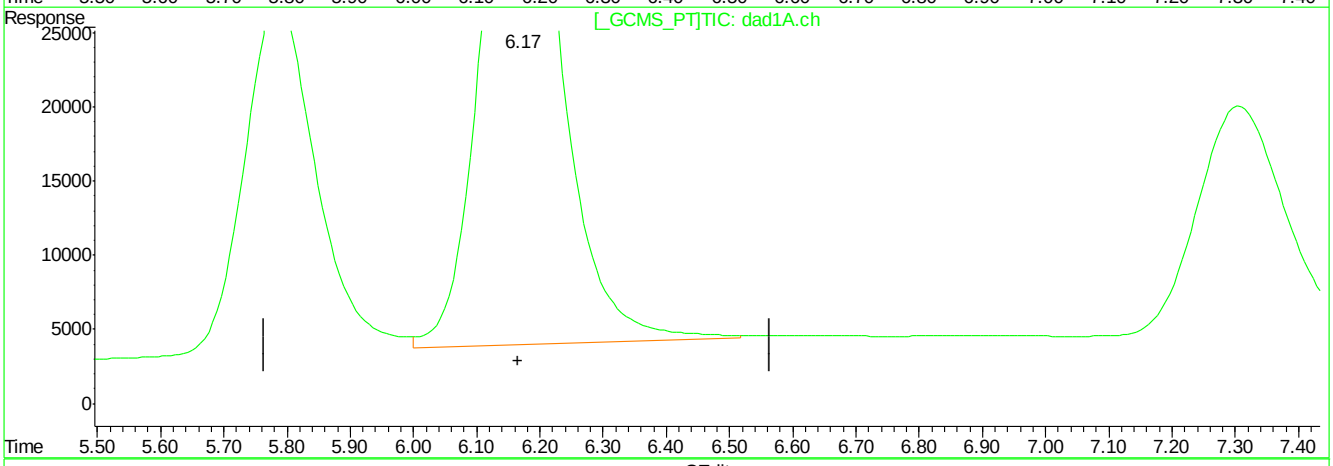
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:42:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.17min 517.484ppb

response 2035027

(8) 3,5-Dinitroaniline #2

6.17min 519.524ppb m

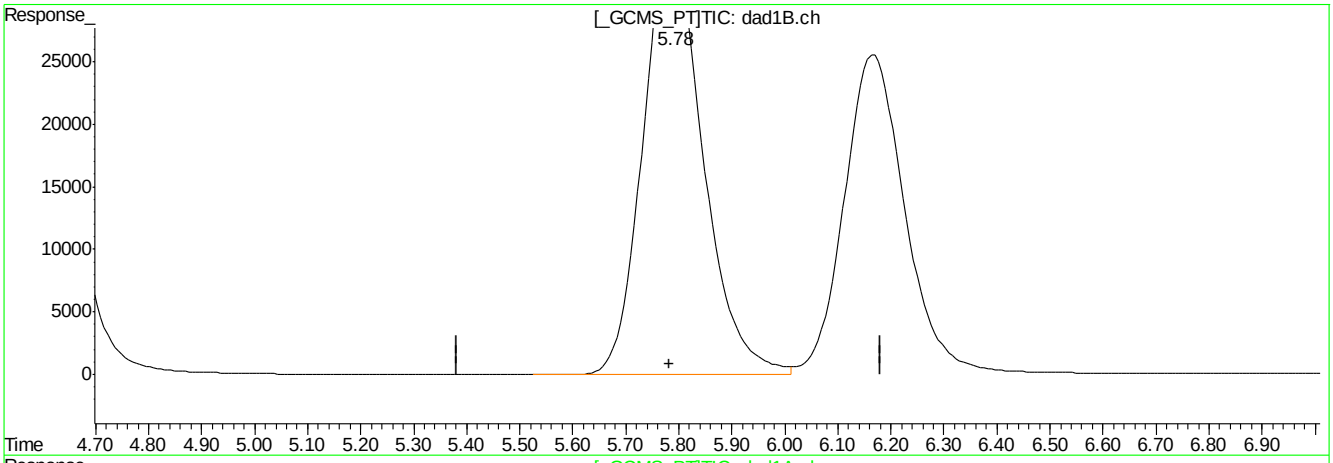
response 3485911

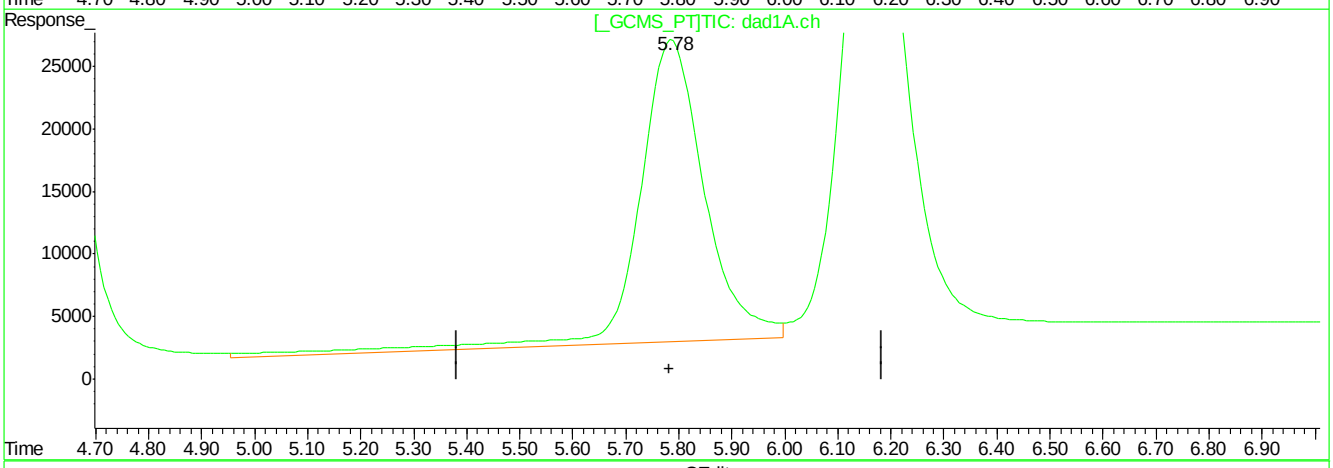
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:42:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.79min 514.391ppb

response 2670367

(7) 1,3-Dinitrobenzene #2

5.79min 571.889ppb

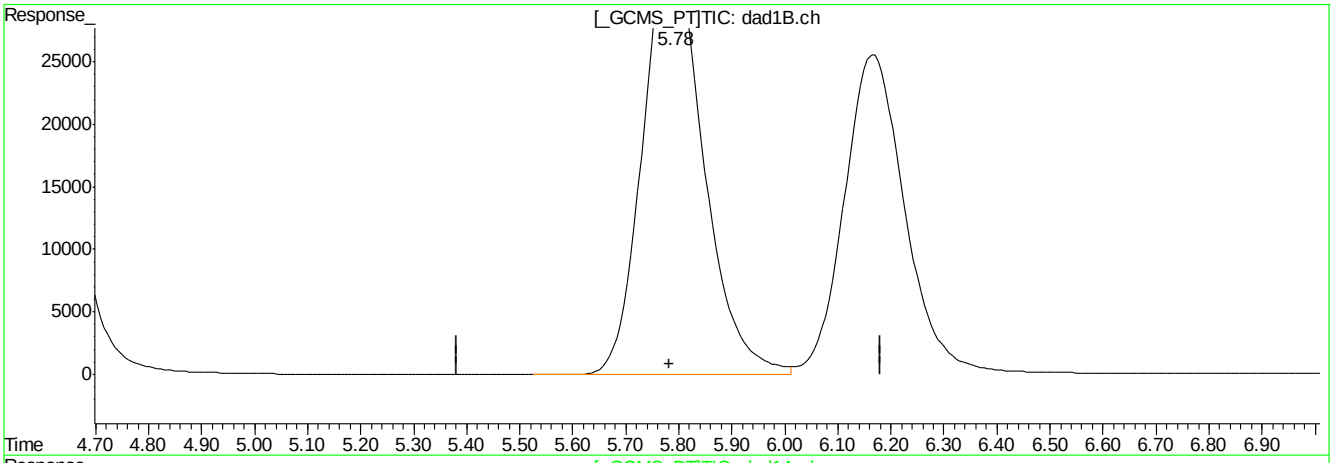
response 2098001

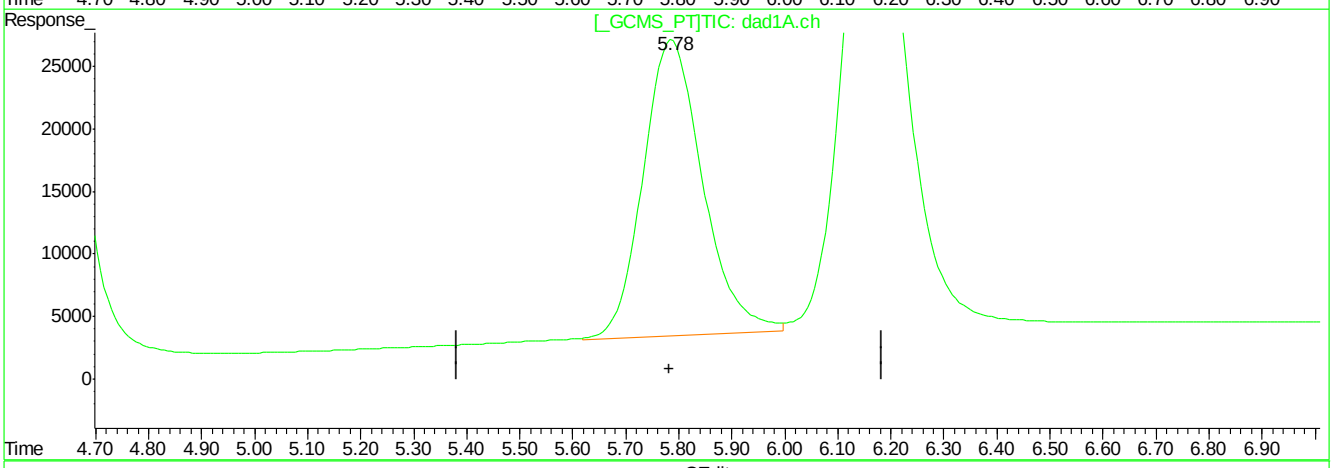
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:42:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.79min 514.391ppb

response 2670367

(7) 1,3-Dinitrobenzene #2

5.78min 505.246ppb m

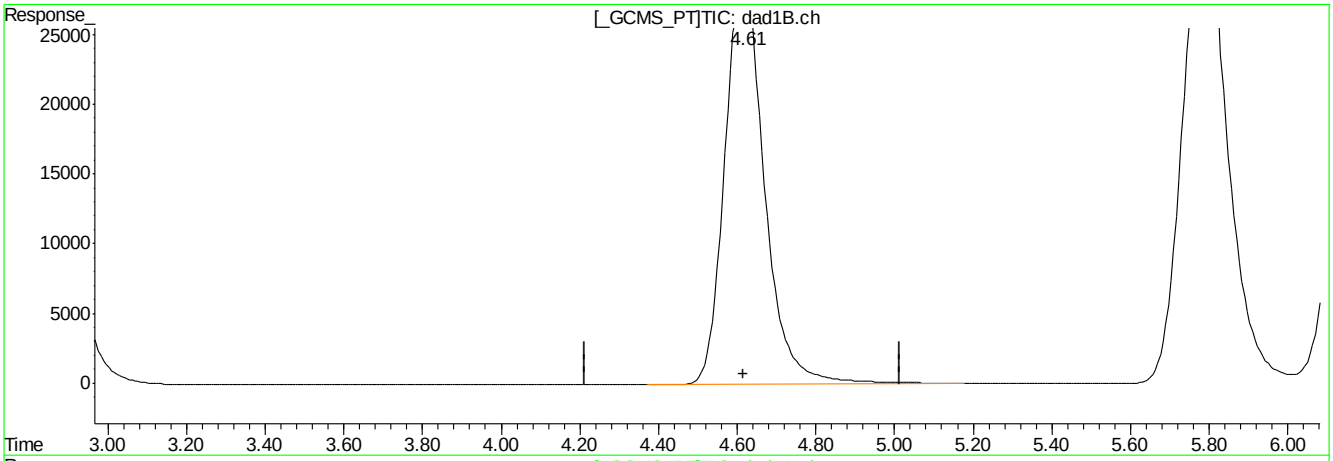
response 1853519

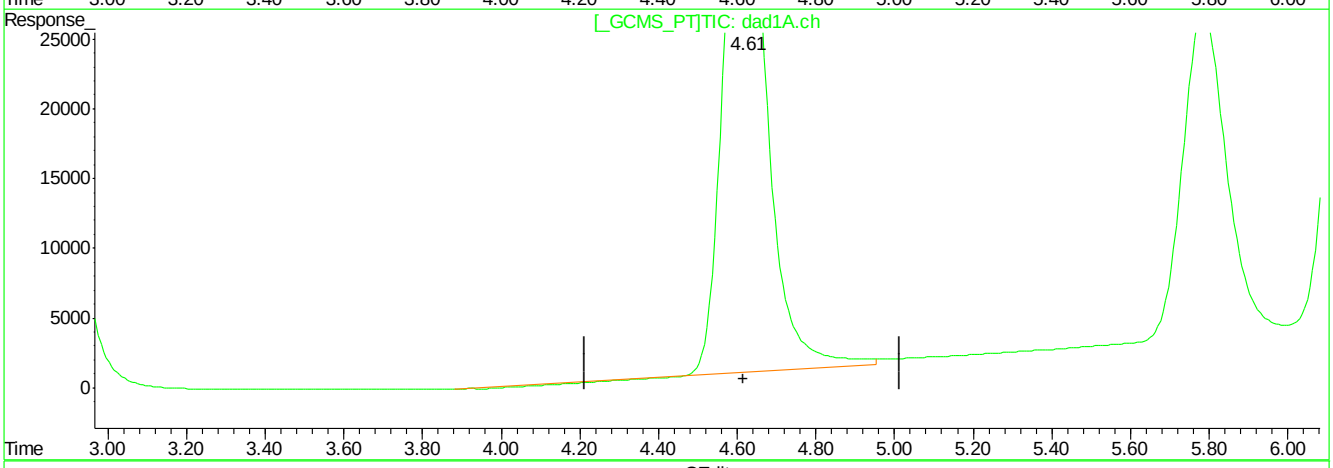
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:42:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.62min 520.414ppb

response 2050997

(6) 1,3,5-Trinitrobenzene #2

4.62min 511.303ppb

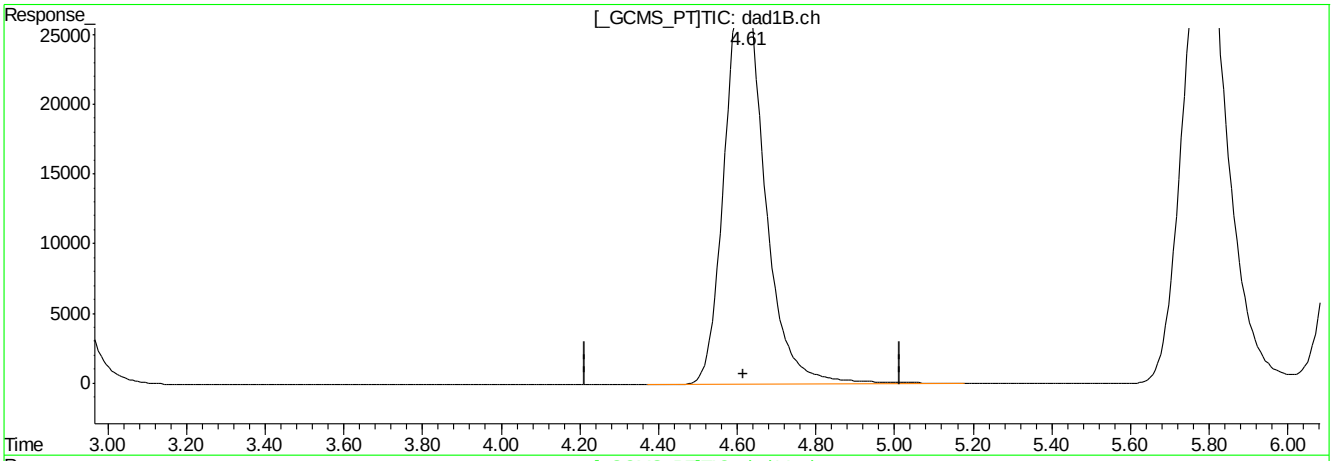
response 3201830

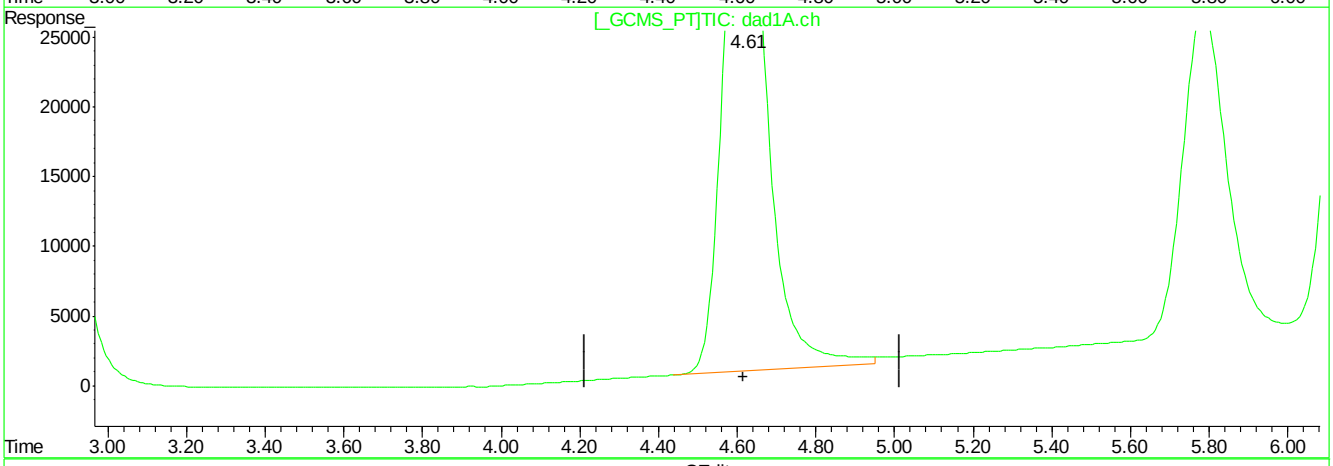
(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:42:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068884.D\dad1A.ch
Acq On : 22-Apr-2021, 15:07:32 Operator: jamesb
Sample : ic2026-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.62min 520.414ppb

response 2050997

(6) 1,3,5-Trinitrobenzene #2

4.61min 519.564ppb m

response 3253564

(+) = Expected Retention Time
BB068884.D 8330B_042221_PLUS.M Fri Apr 23 08:42:50 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/23/21 11:35

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 08:34:22 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.91	10.91	2123746	3753885	1057.139	1042.166
	Spiked Amount 500.000	Range 70 - 136		Recovery =		211.43%#	208.43%#
	Target Compounds						
1)	TNX	1.33	1.33	2404660	3681930	807.835	823.902
2)	HMX	1.46	1.46	1628787	4434527	909.238	992.831
3)	DNX	1.70	1.70	2569217	4147519	1013.939	1091.655
4)	MNX	2.28	2.28	2894573	4461185	1118.122	1121.158
5)	RDX	2.89	2.89	1884547	2996720	1034.596	996.090
6)	1,3,5-Trinitrobe	4.62	4.61	4067636	6439041	1032.110	1028.256m
7)	1,3-Dinitrobenze	5.79	5.78	5286826	3667243	1018.397	999.645m
8)	3,5-Dinitroanili	6.17	6.17	4026816	6910170	1023.973	1029.860
9)	Nitrobenzene	7.31	7.31	3127022	3070630	1075.969	1080.440
10)	Nitroglycerin	0.00	8.94	0	1281452	N.D.	1079.481 #
11)	Tetryl	9.31	9.31	3091977	4882552	1358.473	1512.083
12)	2,4,6-Trinitroto	9.69	9.69	3742838	4544950	1018.202	1139.030
13)	2-Amino-4,6-Dini	10.06	10.06	3367326	5060521	993.003	1007.044
14)	4-Amino-2,6-Dini	10.56	10.56	2482250	4979696	1052.655	1014.982
16)	2,4-Dinitrotolue	11.56	11.56	4679805	3081128	1026.816	1024.957
17)	2,6-Dinitrotolue	12.04	12.04	2744339	3557165	1000.734	1002.207
18)	o-Nitrotoluene	15.03	15.03	2200581	3193241	1116.642	1305.464m
19)	p-Nitrotoluene	15.62	15.61	3384759	2915972	1101.648	1202.895m
20)	m-Nitrotoluene	16.49	16.49	3250611	3937263	1095.945	1095.586m
21)	PETN	0.00	18.47	0	1421554	N.D. d	1107.369m

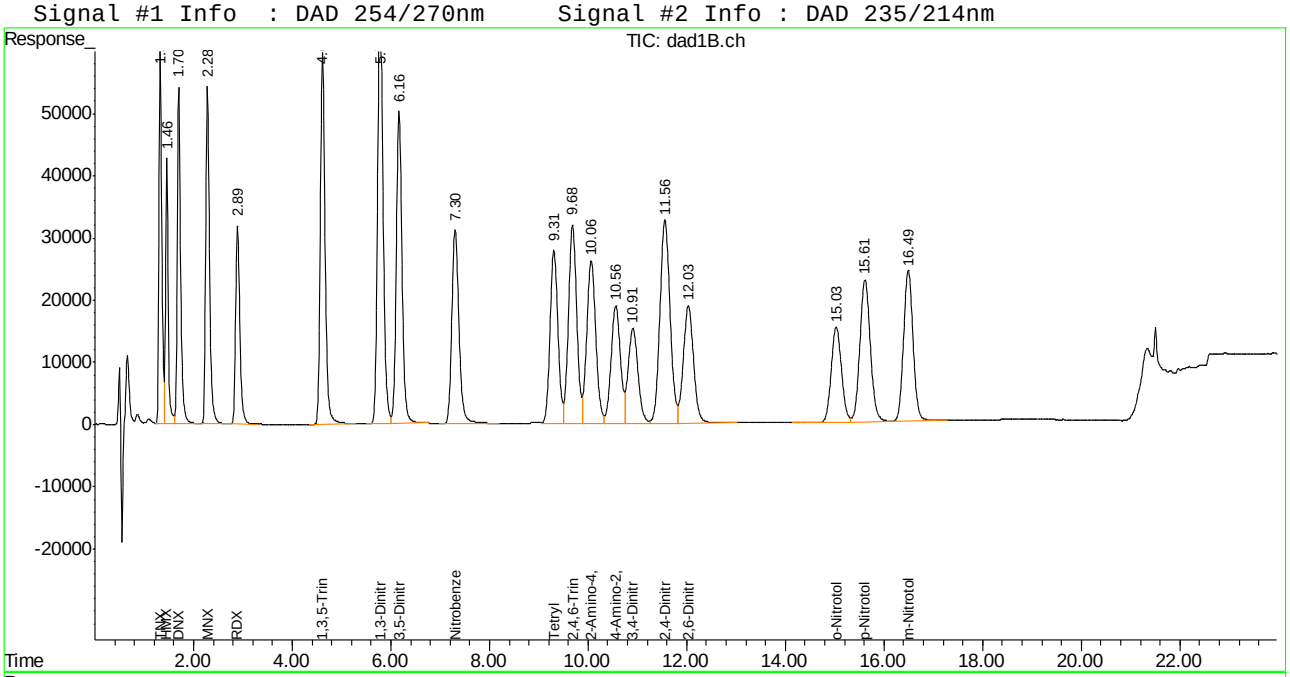
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:57:44 2021 Page 1

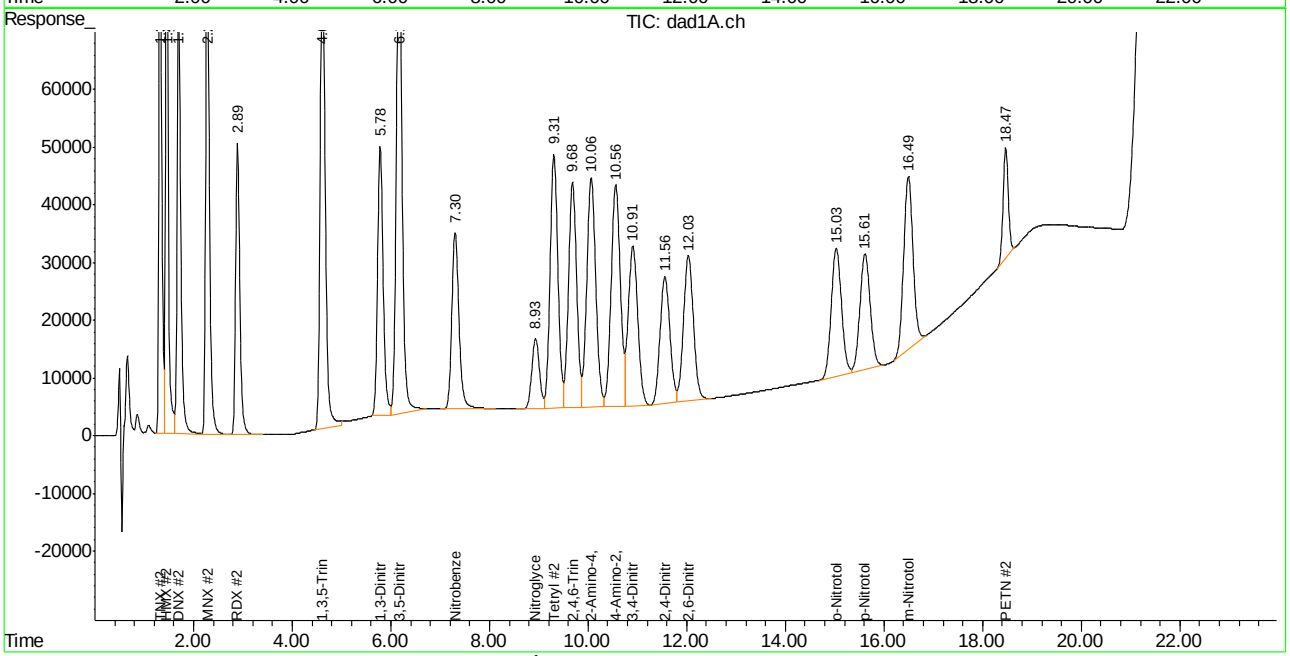
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:40 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

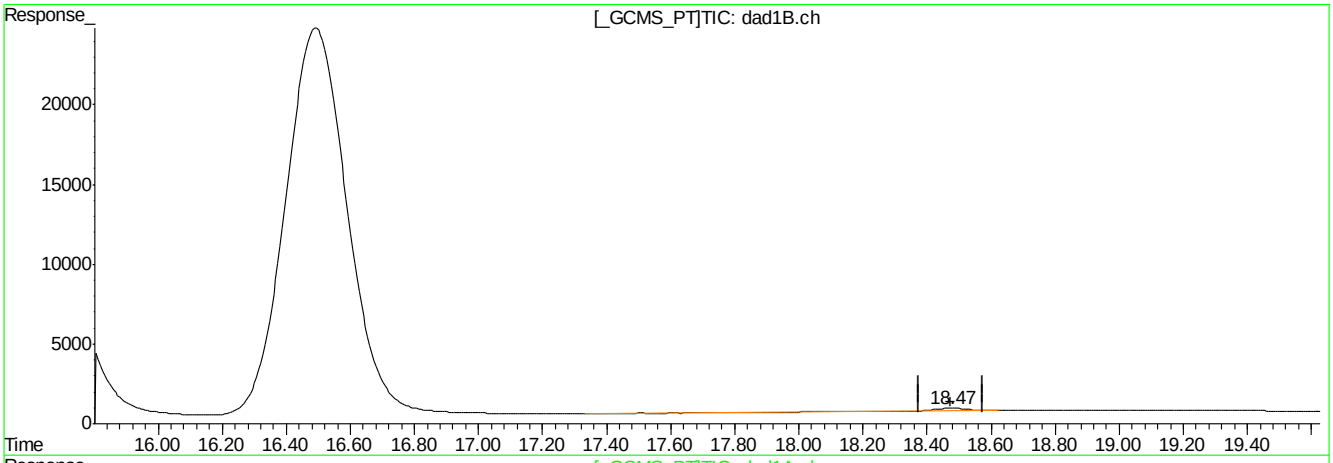
Sample Number: GBB2026-ICC2026 **Method:** SW846 8330A
Lab FileID: BB068885.D **Analyst approved:** 04/23/21 08:56 James Boone
Injection Time: 04/22/21 15:38 **Supervisor approved:** 04/23/21 11:35 Naresh Jiawan

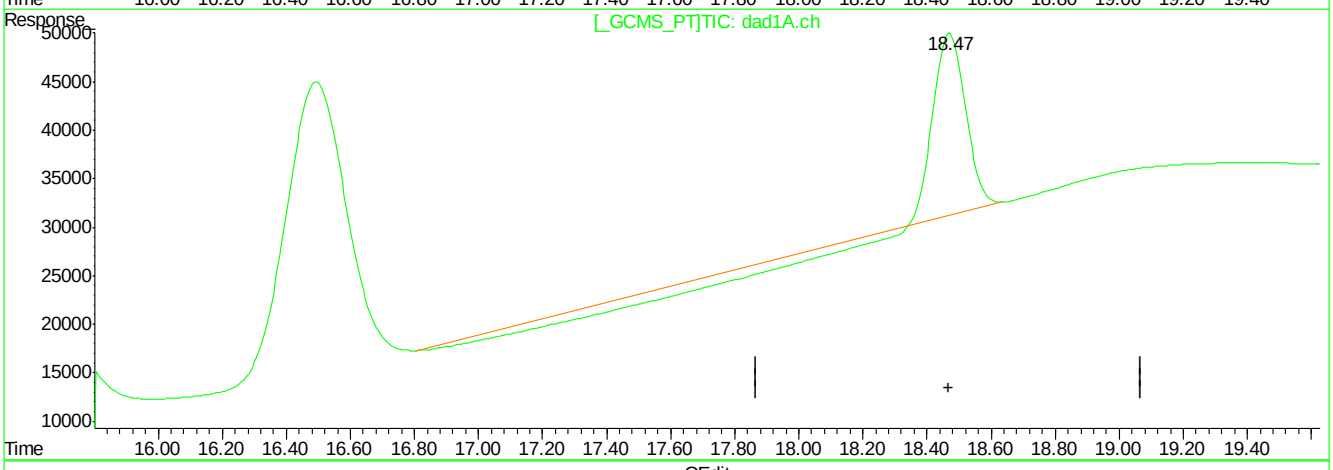
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.61	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.78	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.03	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.61	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.49	Poor instrument integration
PETN	78-11-5	2	18.47	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.48min 0.000ppb

response 8150

(21) PETN #2

18.47min 425.975ppb

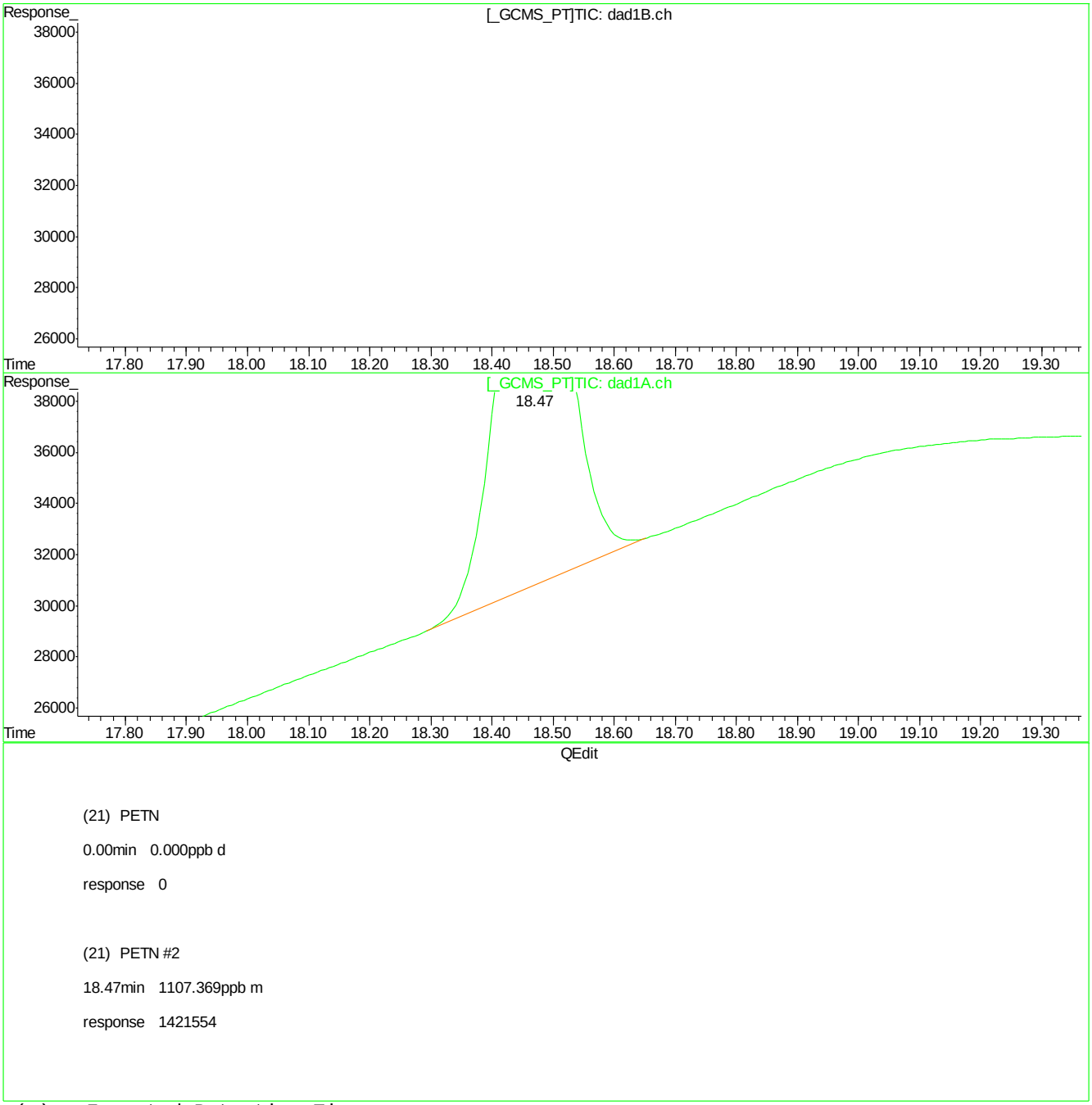
response 546833

(+) = Expected Retention Time
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:38:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration

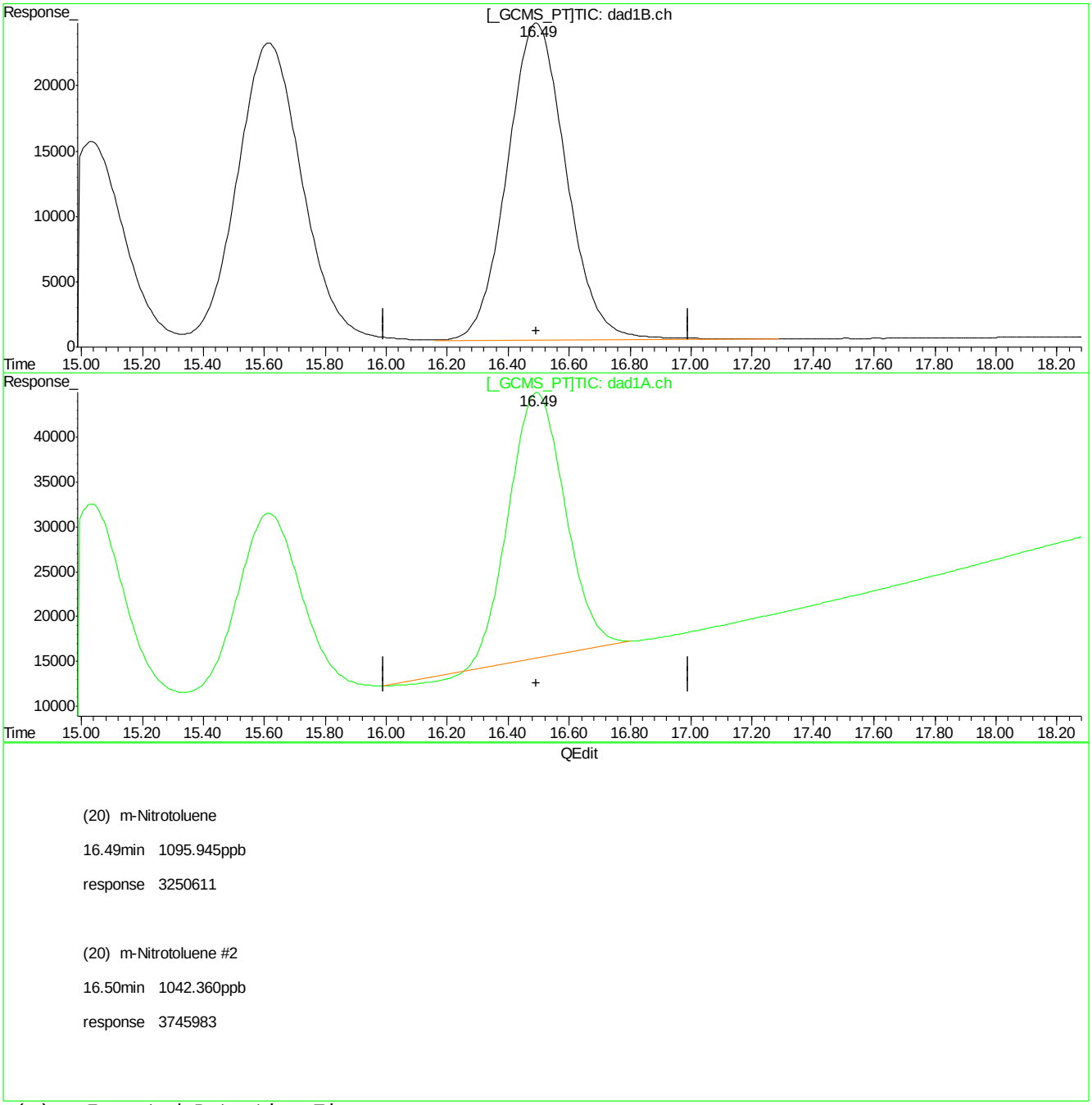


(+) = Expected Retention Time
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:38:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.49min 1095.945ppb

response 3250611

(20) m-Nitrotoluene #2

16.50min 1042.360ppb

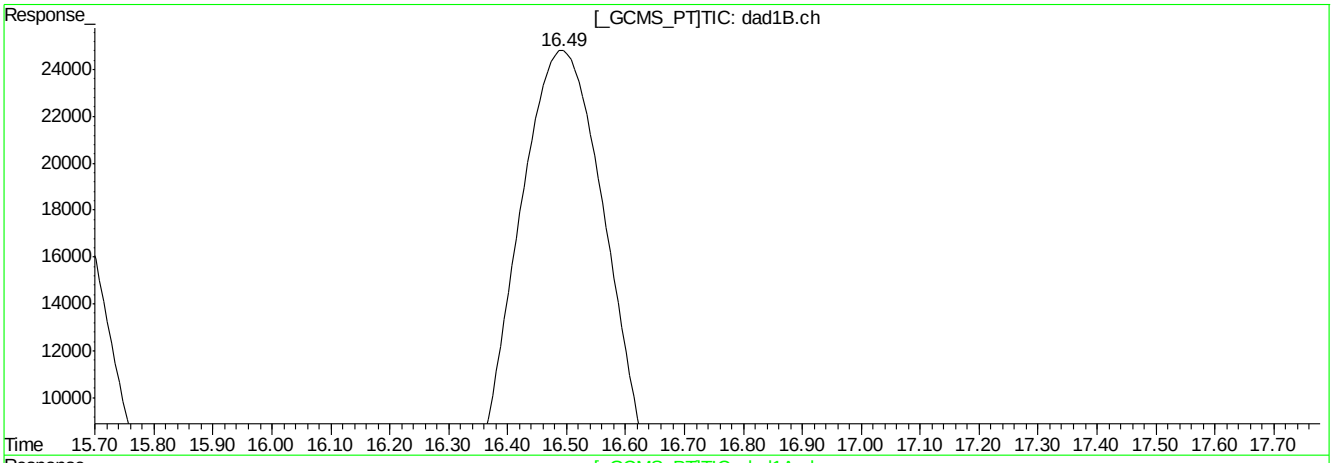
response 3745983

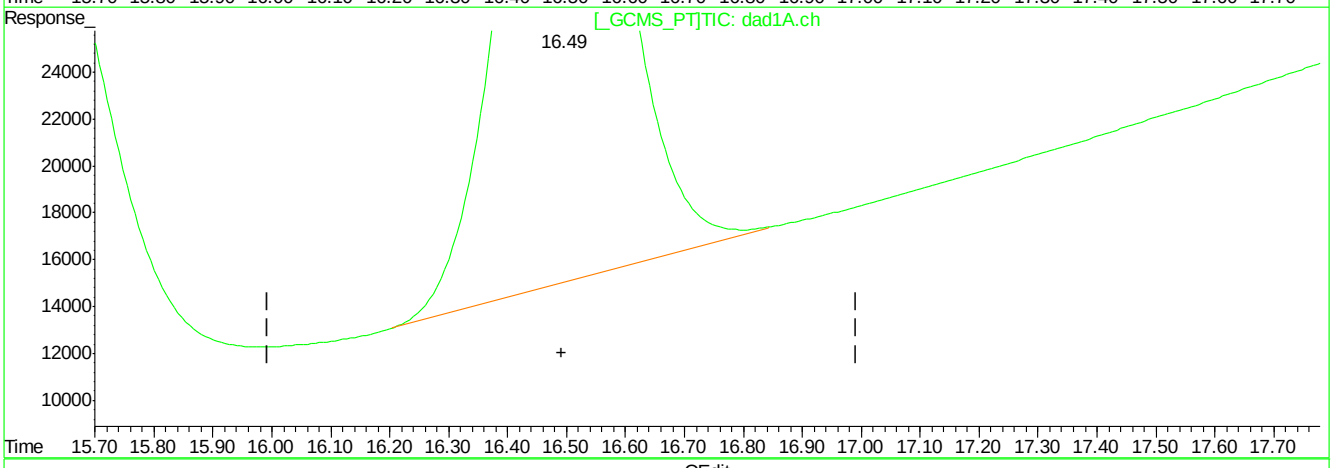
(+) = Expected Retention Time
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:39:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.49min 1095.945ppb

response 3250611

(20) m-Nitrotoluene #2

16.49min 1095.586ppb m

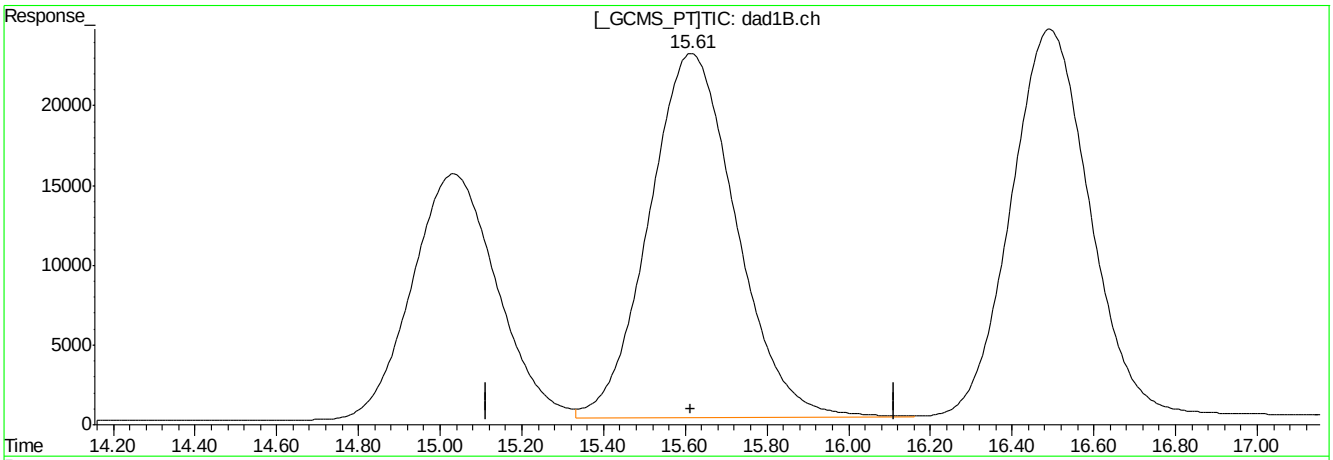
response 3937263

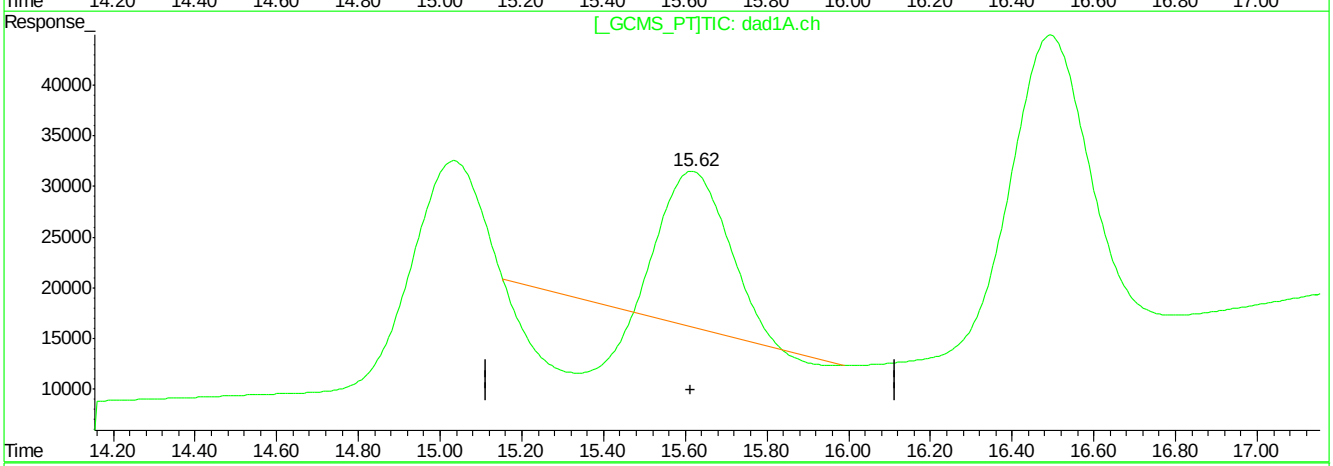
(+) = Expected Retention Time
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:39:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.62min 1101.648ppb

response 3384759

(19) p-Nitrotoluene #2

15.62min 396.122ppb

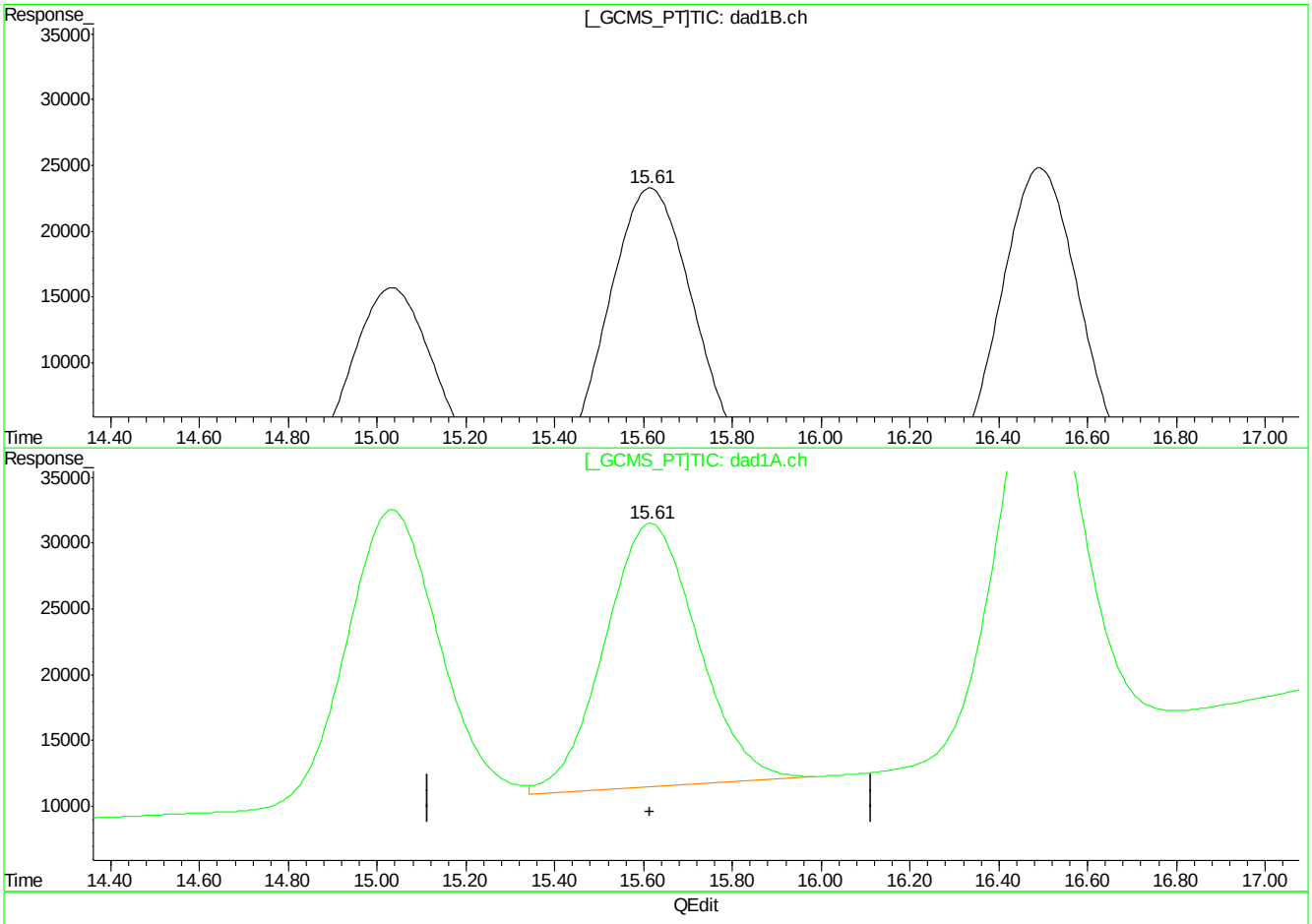
response 926653

(+) = Expected Retention Time
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:39:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.62min 1101.648ppb

response 3384759

(19) p-Nitrotoluene #2

15.61min 1202.895ppb m

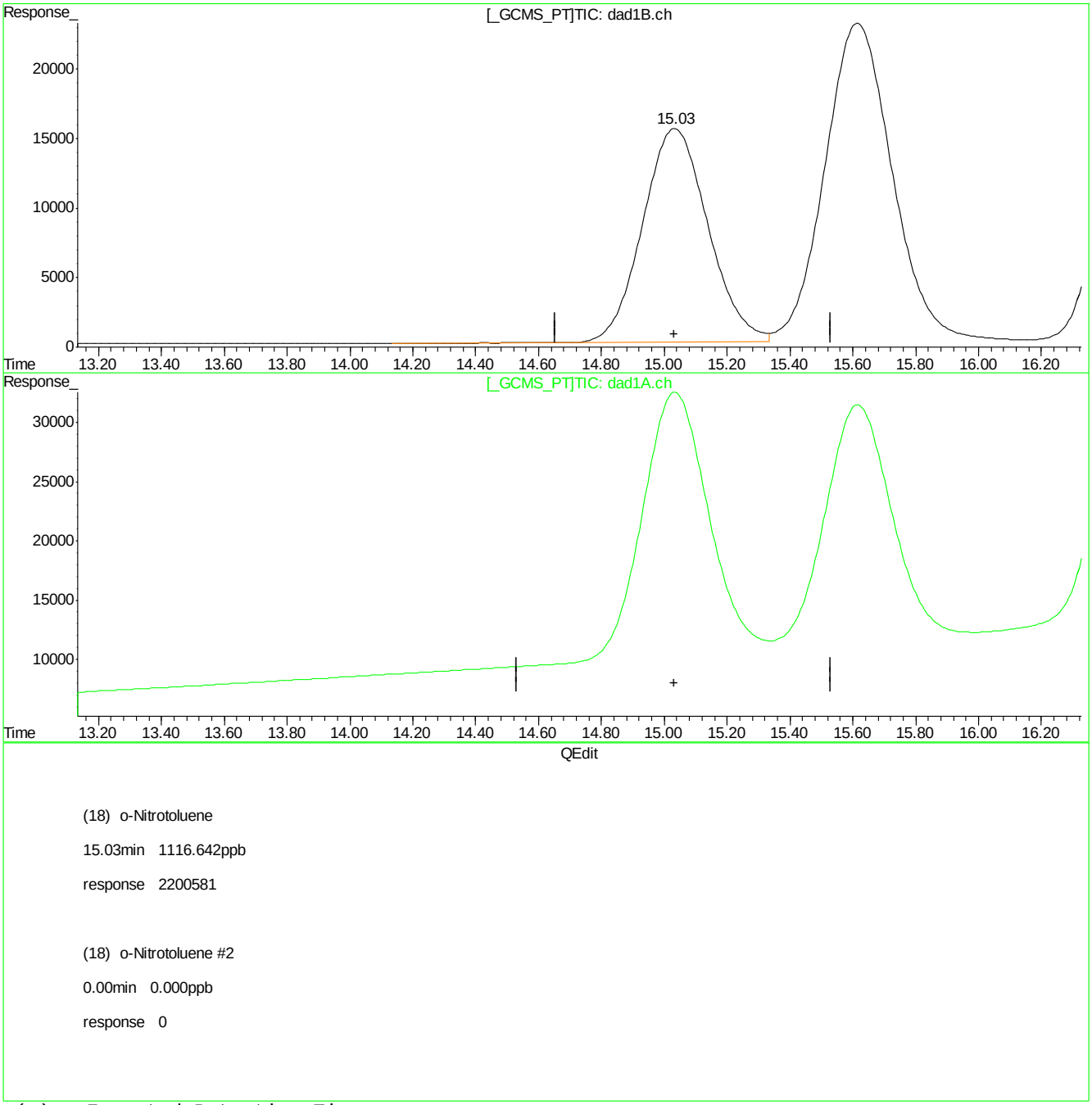
response 2915972

(+) = Expected Retention Time
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:39:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration

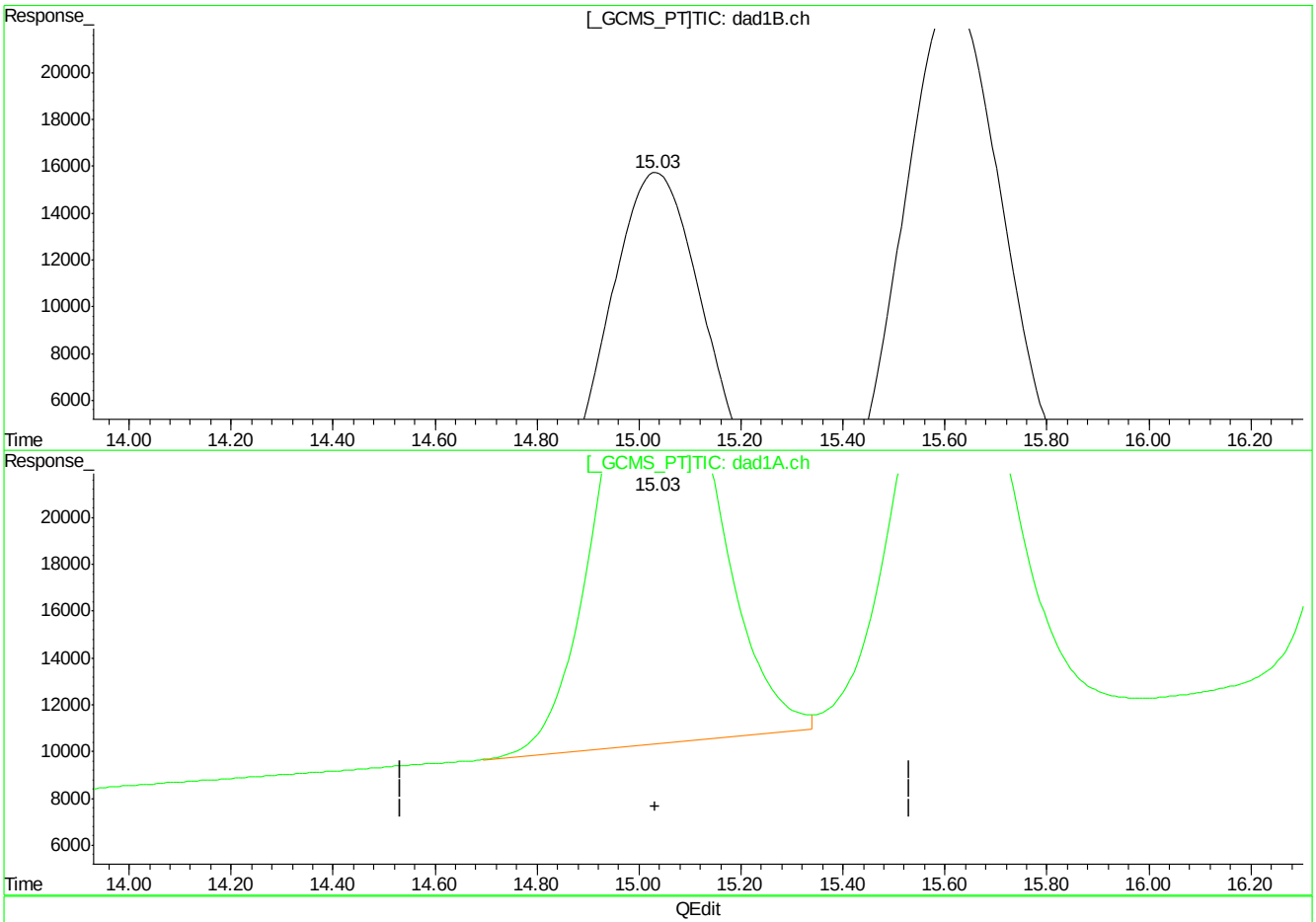


(+) = Expected Retention Time
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:39:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.03min 1116.642ppb

response 2200581

(18) o-Nitrotoluene #2

15.03min 1305.464ppb m

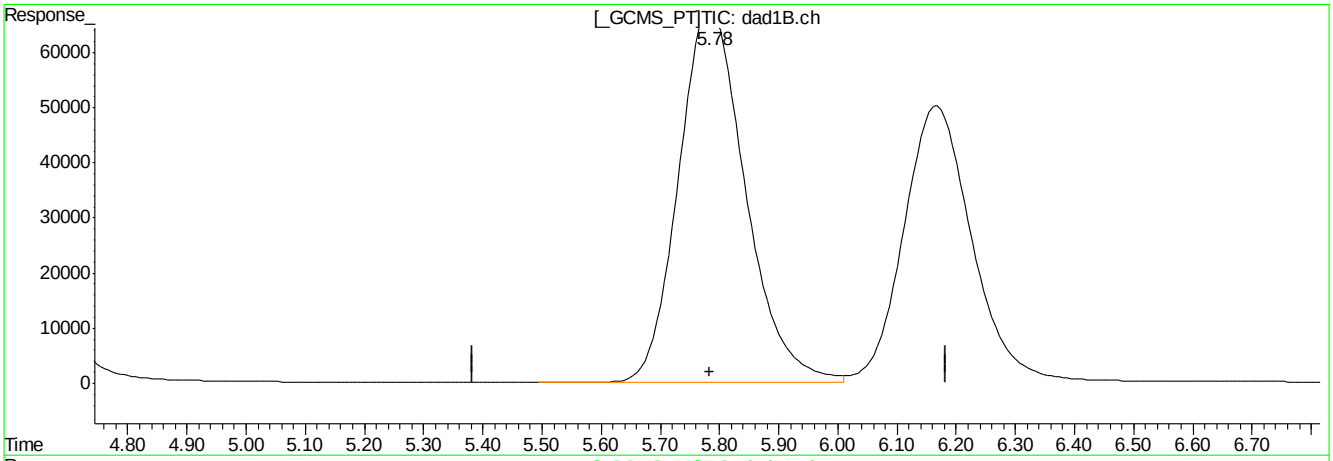
response 3193241

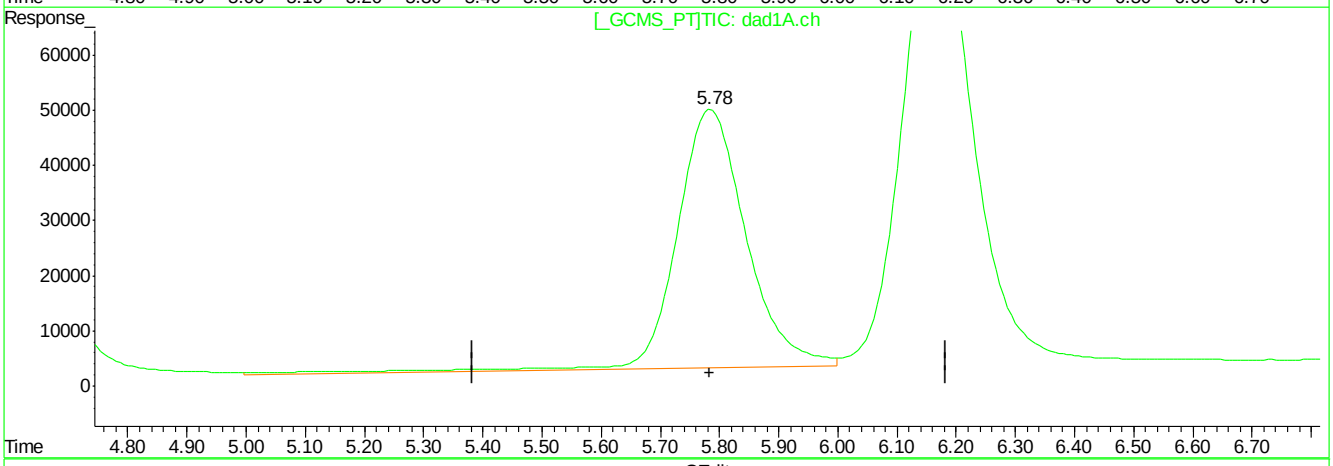
(+) = Expected Retention Time
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:39:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.79min 1018.397ppb

response 5286826

(7) 1,3-Dinitrobenzene #2

5.79min 1051.720ppb

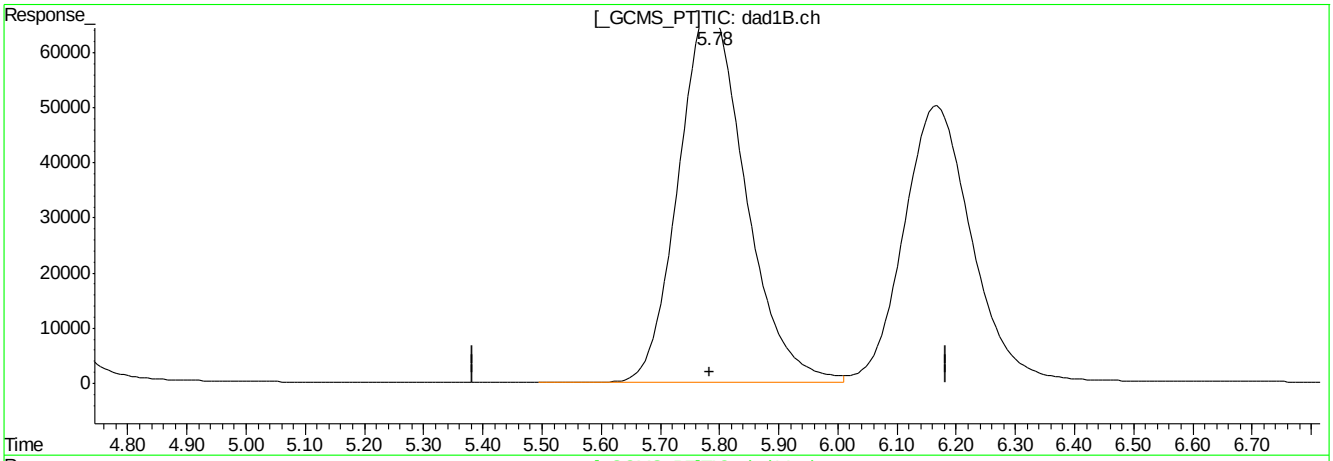
response 3858283

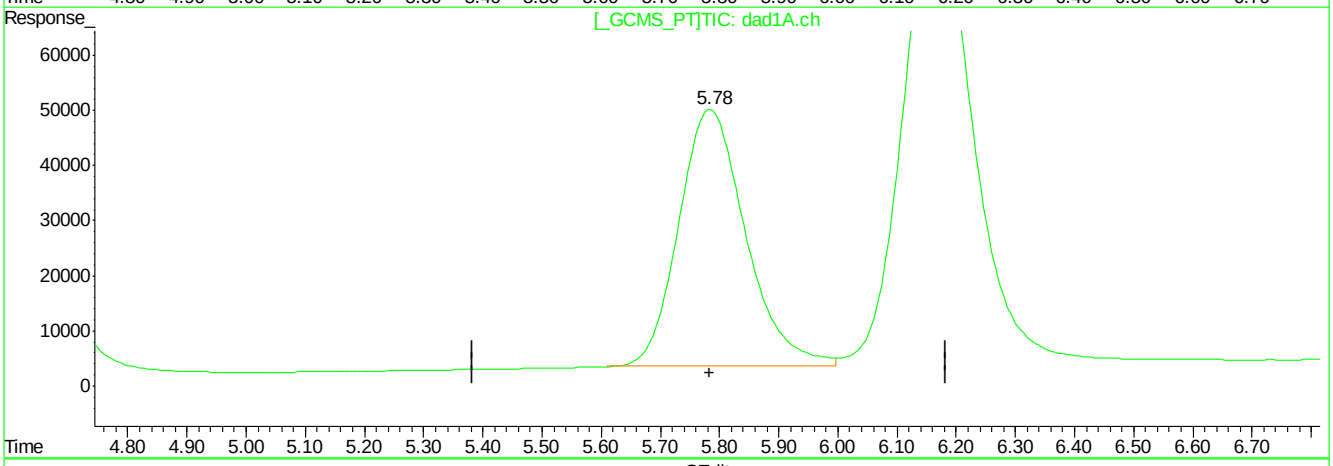
(+) = Expected Retention Time
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:39:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.79min 1018.397ppb

response 5286826

(7) 1,3-Dinitrobenzene #2

5.78min 999.645ppb m

response 3667243

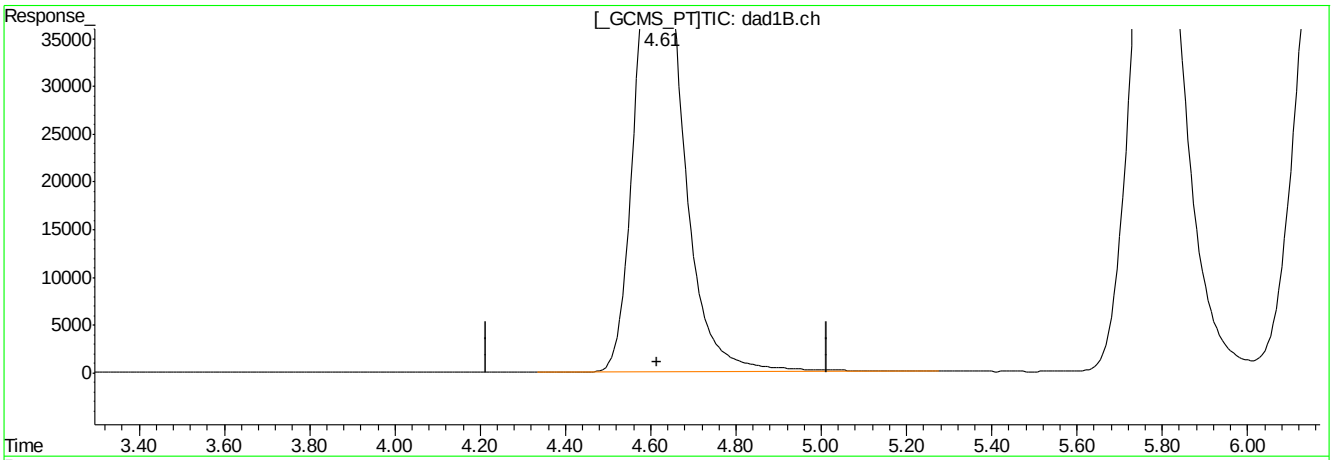
(+) = Expected Retention Time
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:40:02 2021

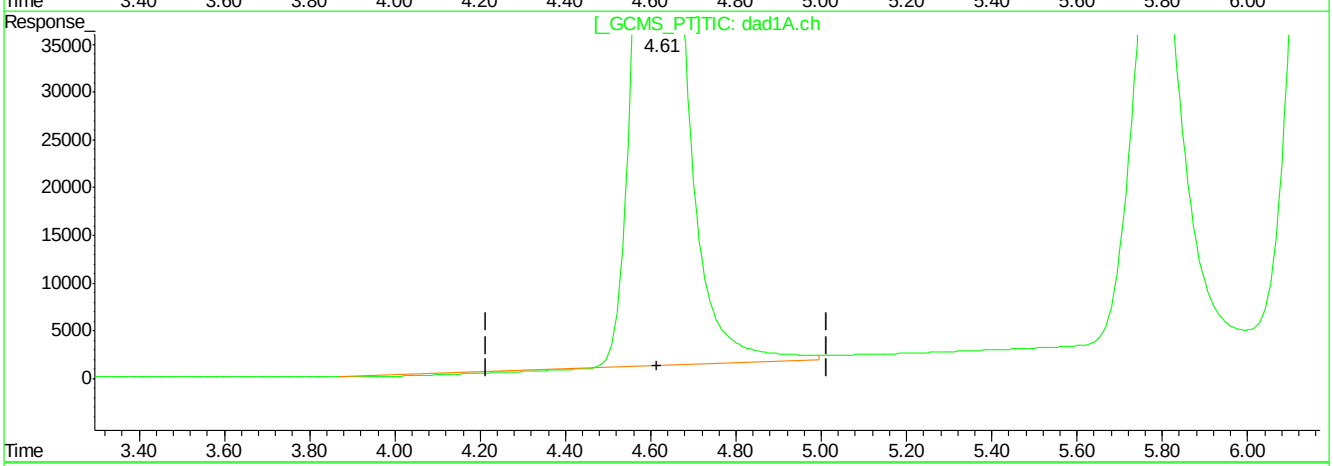
BB068885.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.62min 1032.110ppb

response 4067636

(6) 1,3,5-Trinitrobenzene #2

4.62min 1014.205ppb

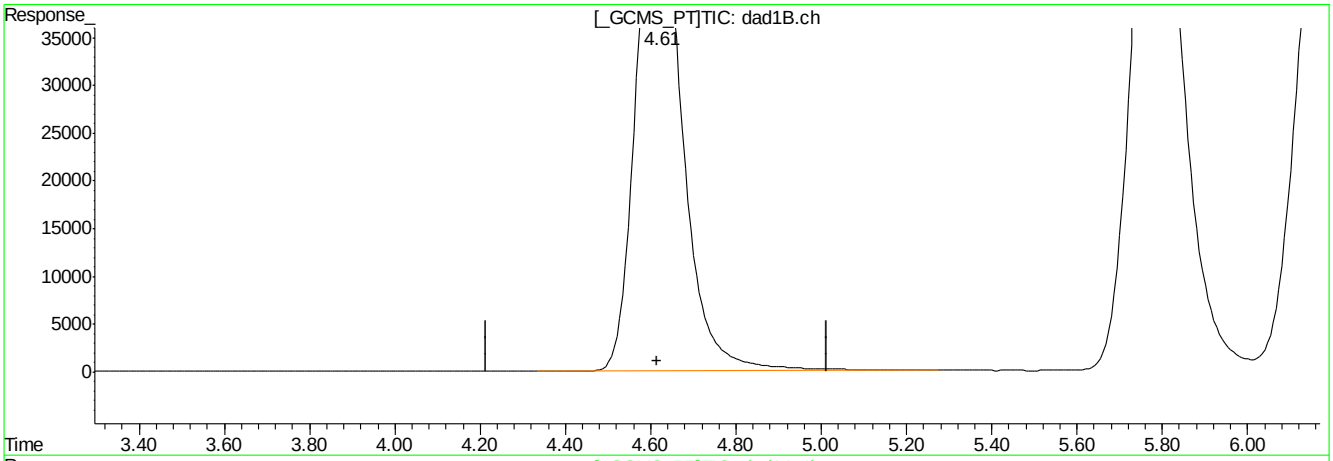
response 6351056

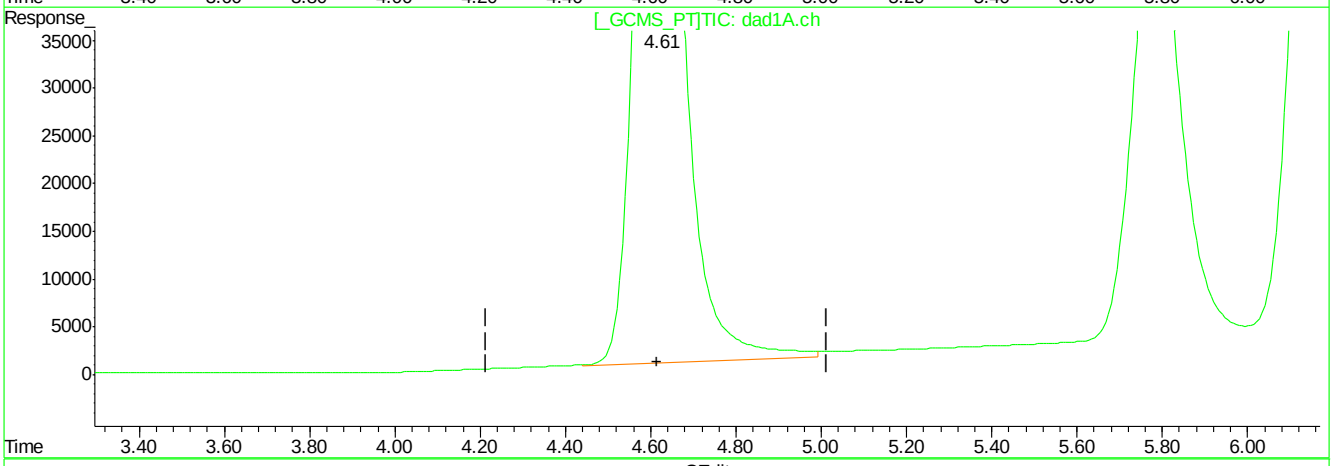
(+) = Expected Retention Time
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:40:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068885.D\dad1A.ch
Acq On : 22-Apr-2021, 15:38:33 Operator: jamesb
Sample : icc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.62min 1032.110ppb

response 4067636

(6) 1,3,5-Trinitrobenzene #2

4.61min 1028.256ppb m

response 6439041

(+) = Expected Retention Time
BB068885.D 8330B_042221_PLUS.M Fri Apr 23 08:40:19 2021

BB068886.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 04/23/21 11:35

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 08:34:23 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.90	10.90	5323327	9451722	2649.797	2624.018
	Spiked Amount 500.000	Range 70 - 136		Recovery =		529.96%#	524.80%#
	Target Compounds						
1)	TNX	1.33	1.33	5982882	9154790	2009.923	2048.560
2)	HMX	1.46	1.46	4025550	10924448	2345.637	2488.338
3)	DNX	1.70	1.70	6354713	10014742	2507.881	2596.208
4)	MNX	2.28	2.28	7197212	11053611	2780.154	2777.927
5)	RDX	2.89	2.89	4700330	7461272	2580.431	2480.076
6)	1,3,5-Trinitrobe	4.61	4.61	10168110	16067028	2580.025	2565.757
7)	1,3-Dinitrobenze	5.78	5.78	13197440	9397591	2542.213	2561.667
8)	3,5-Dinitroanili	6.16	6.16	10045397	17221596	2554.428	2566.628
9)	Nitrobenzene	7.29	7.29	7791163	7684774	2680.841	2703.986
10)	Nitroglycerin	0.00	8.93	0	3214143	N.D. d	2707.559
11)	Tetryl	9.30	9.30	7700082	12230679	3383.065	3176.389
12)	2,4,6-Trinitroto	9.68	9.68	9352951	11364850	2544.377	2848.196
13)	2-Amino-4,6-Dini	10.05	10.05	8406853	12659651	2479.127	2519.272
14)	4-Amino-2,6-Dini	10.55	10.55	6198587	12459007	2628.652	2539.446
16)	2,4-Dinitrotolue	11.55	11.55	11733907	7759989	2574.586	2581.411
17)	2,6-Dinitrotolue	12.03	12.03	6782919	8925202	2473.419m	2514.615
18)	o-Nitrotoluene	15.03	15.03	5558467	8043346	2820.536	3288.289m
19)	p-Nitrotoluene	15.61	15.61	8528863	7367008	2775.916	2837.814m
20)	m-Nitrotoluene	16.49	16.49	8128344	9946511	2740.475m	2767.723m
21)	PETN	0.00	18.47	0	3592883	N.D. d	2798.802m

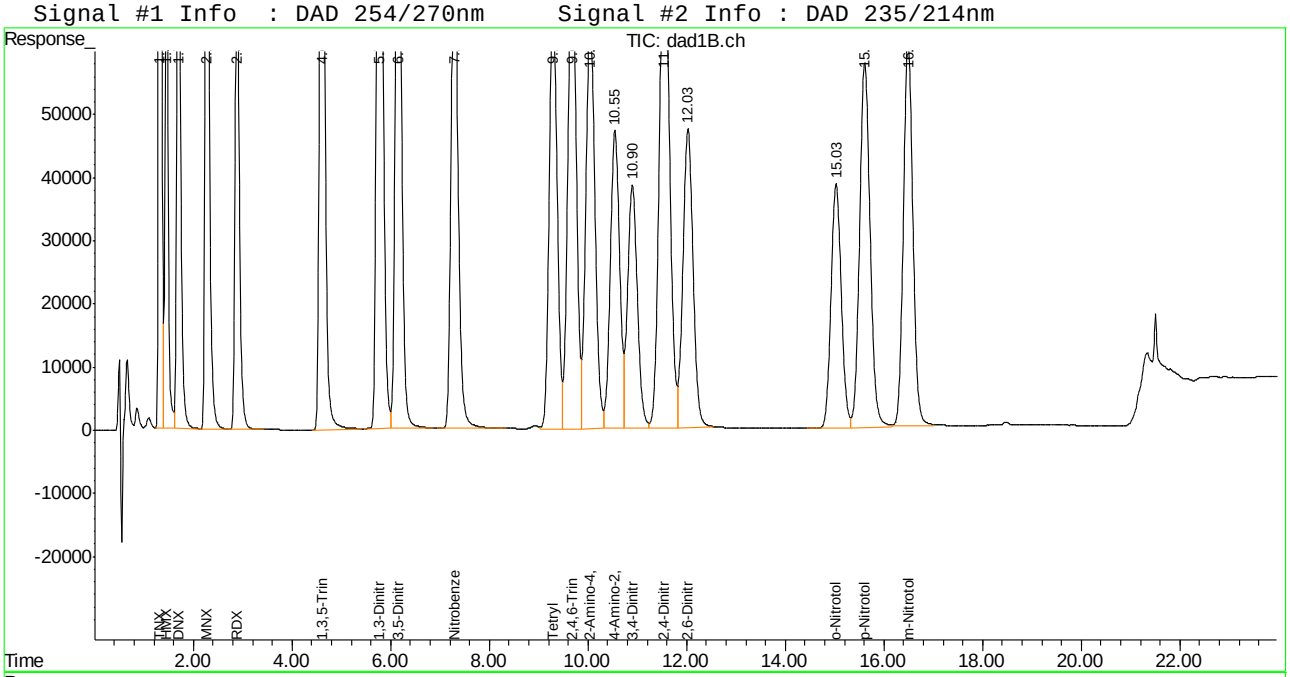
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

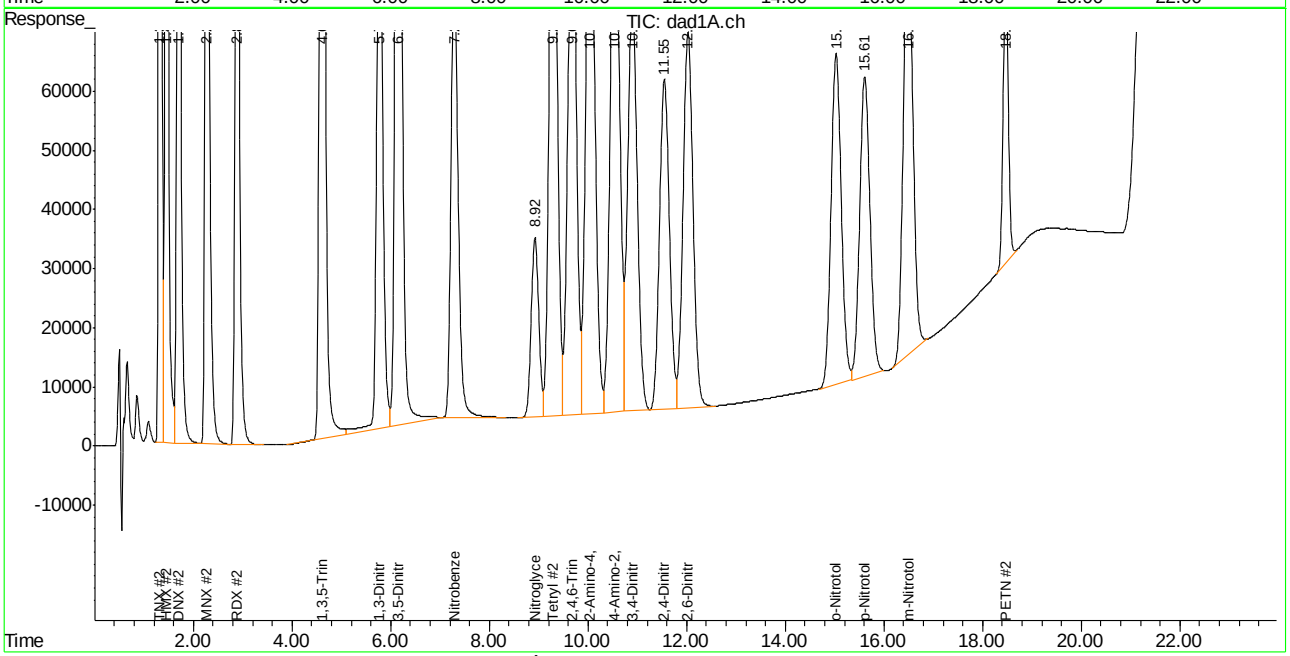
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:38 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

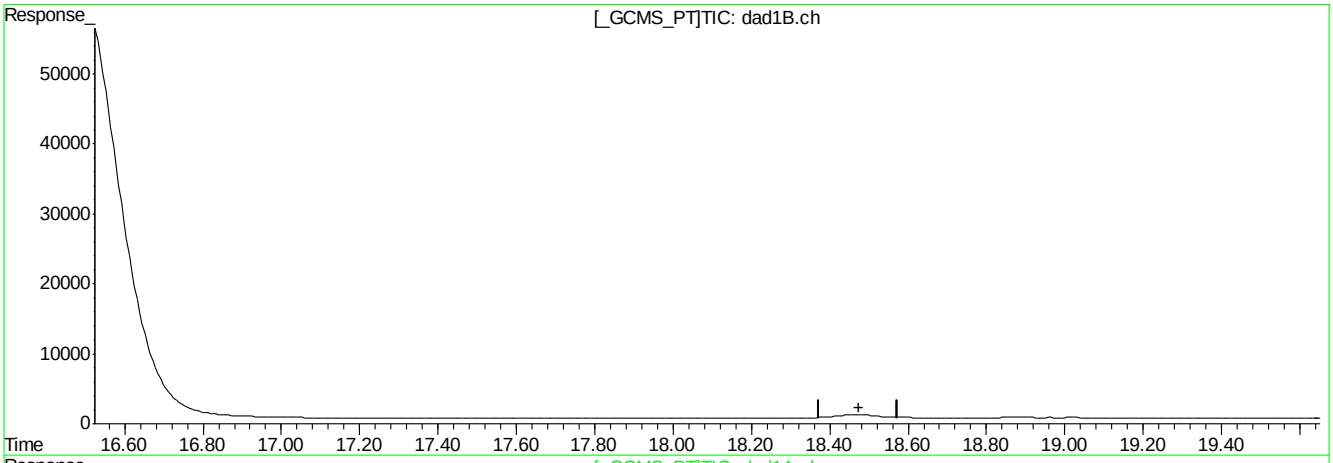
Sample Number: GBB2026-IC2026
Lab FileID: BB068886.D
Injection Time: 04/22/21 16:09
Method: SW846 8330A
Analyst approved: 04/23/21 08:56 James Boone
Supervisor approved: 04/23/21 11:35 Naresh Jiawan

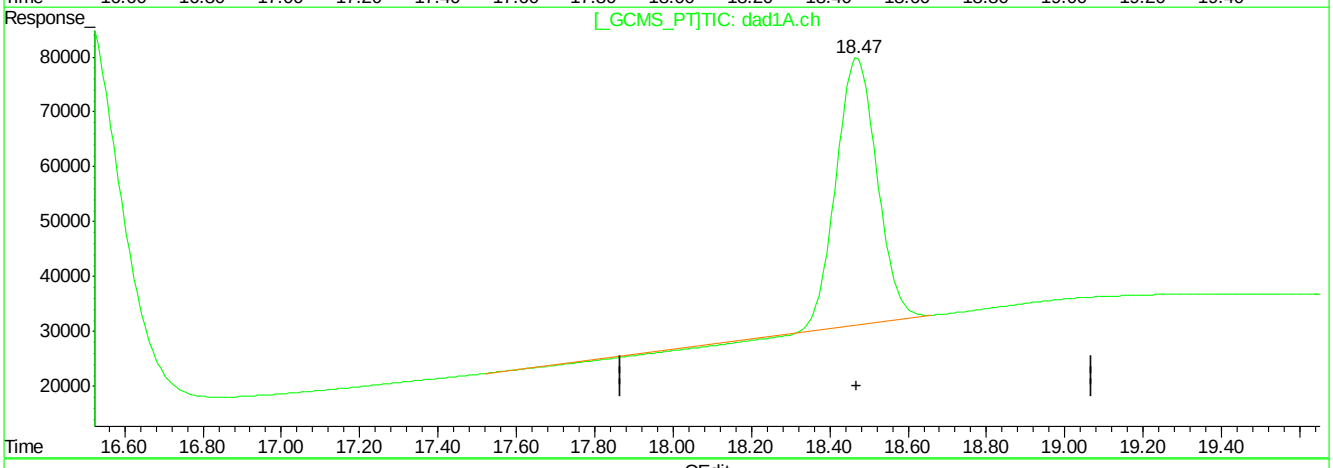
Parameter	CAS	Sig#	R.T. (min.)	Reason
2,6-Dinitrotoluene	606-20-2	1	12.03	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.03	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.61	Poor instrument integration
m-Nitrotoluene	99-08-1	1	16.49	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.49	Poor instrument integration
PETN	78-11-5	2	18.47	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.47min 2655.275ppb

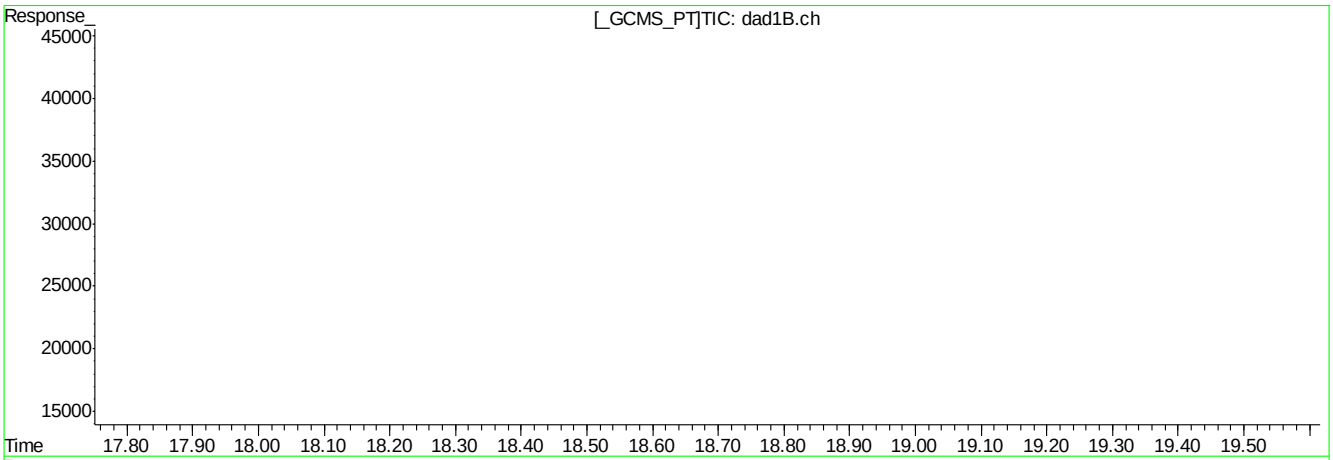
response 3408635

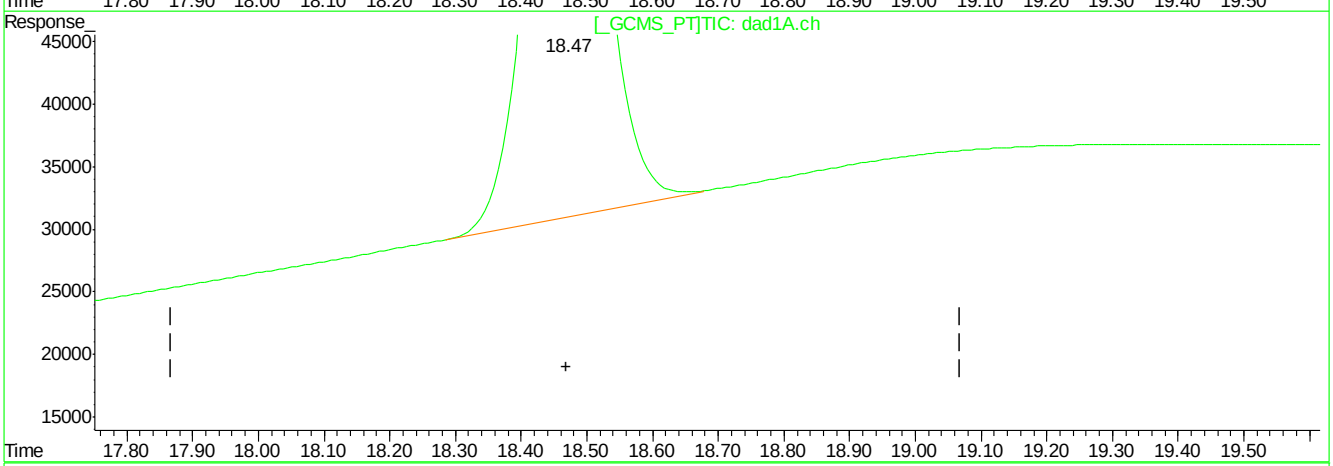
(+) = Expected Retention Time
BB068886.D 8330B_042221_PLUS.M Fri Apr 23 08:37:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.47min 2798.802ppb m

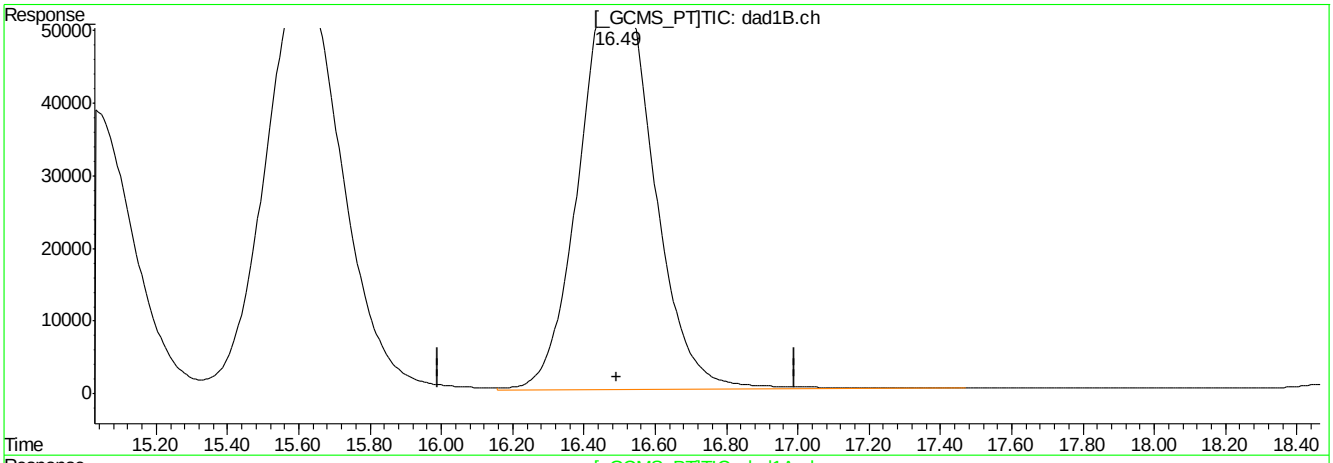
response 3592883

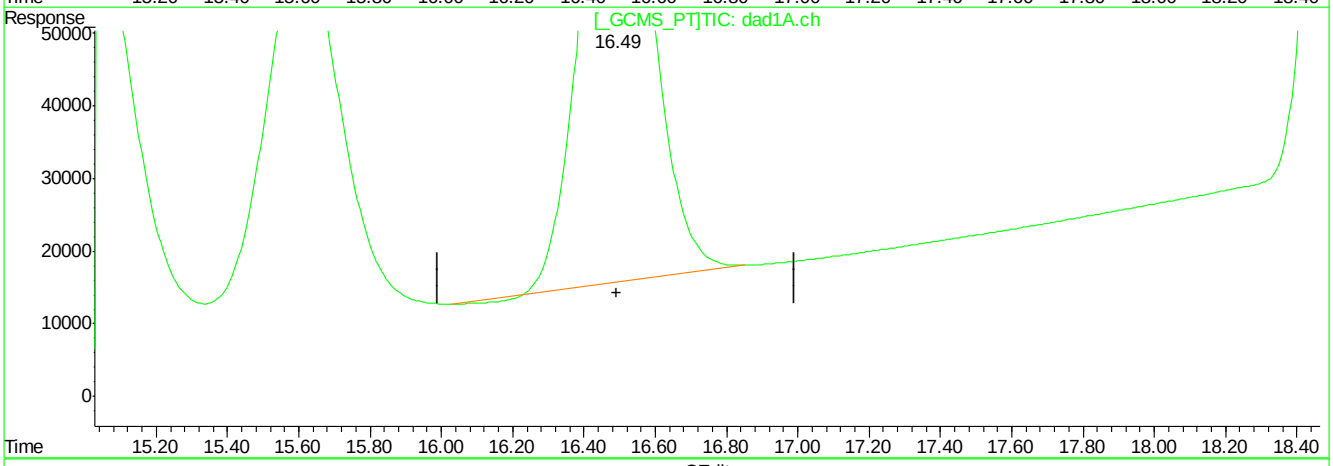
(+) = Expected Retention Time
BB068886.D 8330B_042221_PLUS.M Fri Apr 23 08:37:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.49min 2767.238ppb

response 8207725

(20) m-Nitrotoluene #2

16.49min 2713.335ppb

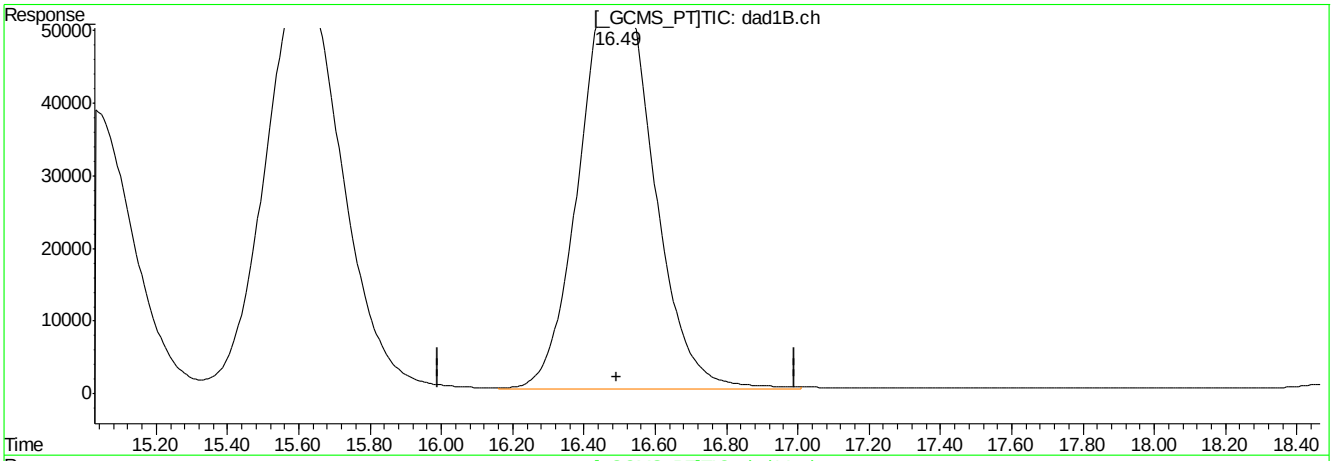
response 9751053

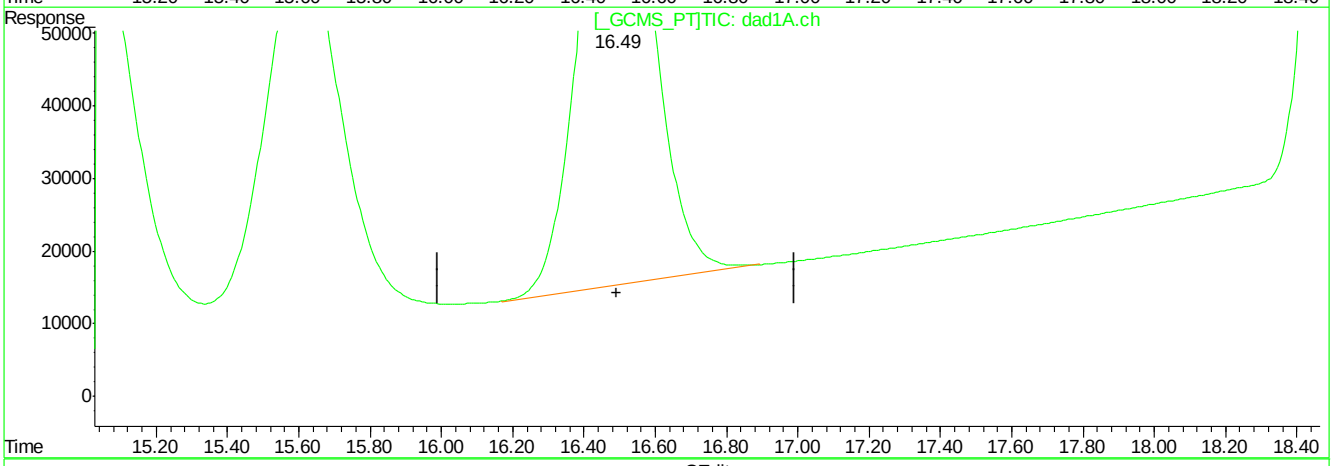
(+) = Expected Retention Time
BB068886.D 8330B_042221_PLUS.M Fri Apr 23 08:37:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.49min 2740.475ppb m

response 8128344

(20) m-Nitrotoluene #2

16.49min 2767.723ppb m

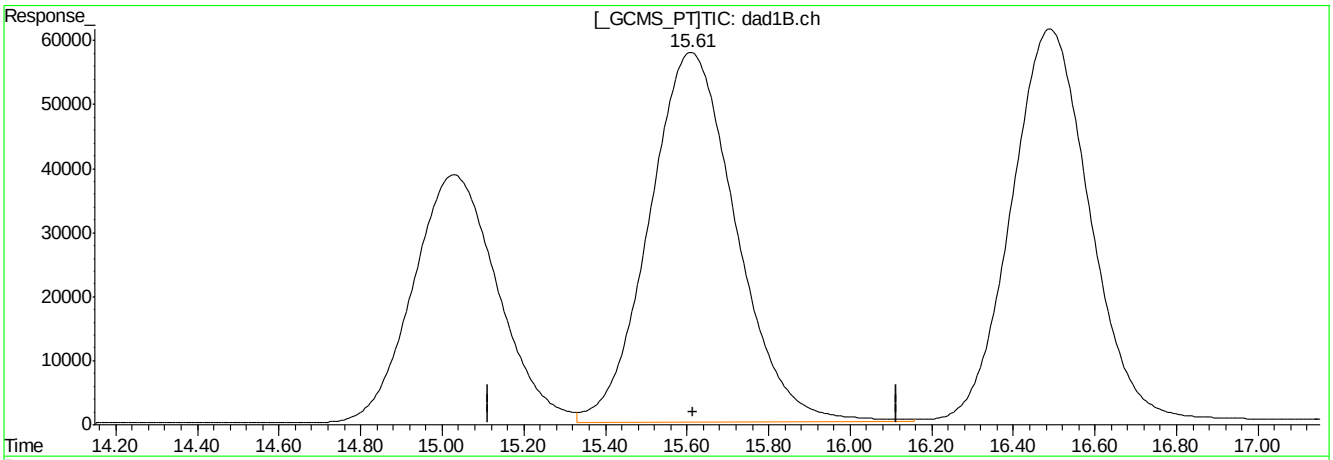
response 9946511

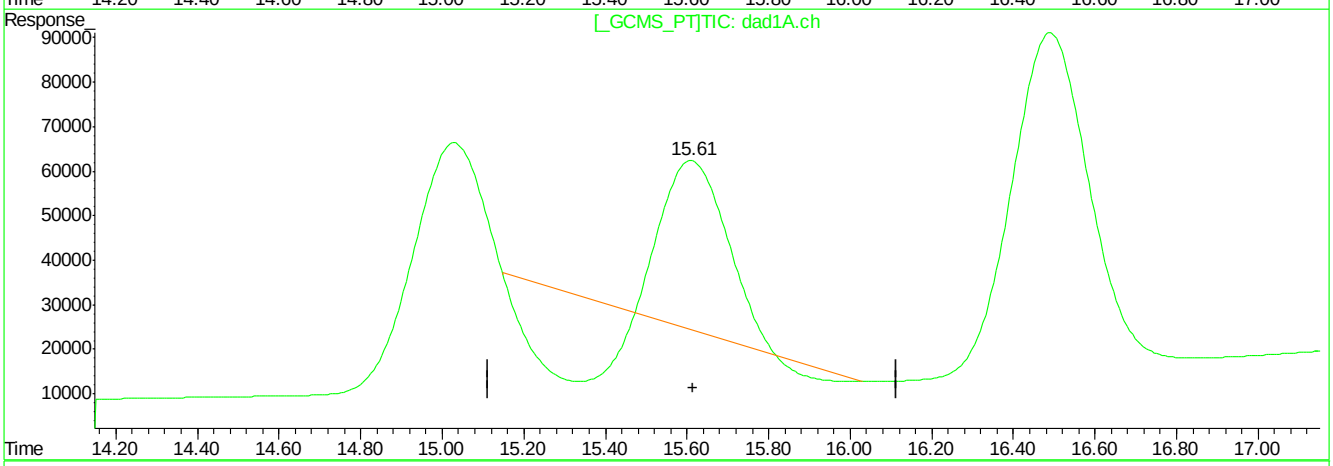
(+) = Expected Retention Time
BB068886.D 8330B_042221_PLUS.M Fri Apr 23 08:37:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.61min 2775.916ppb

response 8528863

(19) p-Nitrotoluene #2

15.61min 791.855ppb

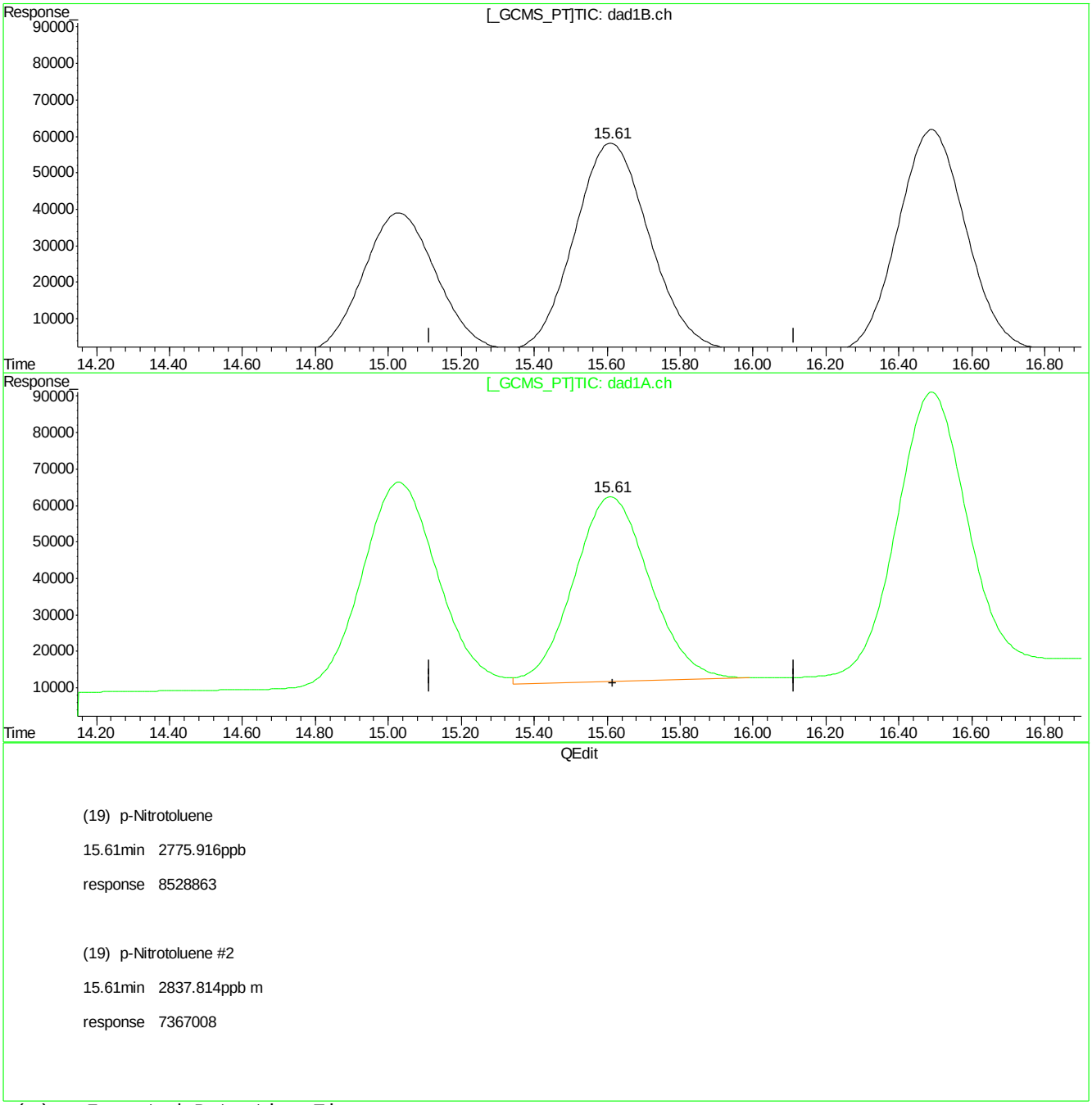
response 1885338

(+) = Expected Retention Time
BB068886.D 8330B_042221_PLUS.M Fri Apr 23 08:37:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.61min 2775.916ppb

response 8528863

(19) p-Nitrotoluene #2

15.61min 2837.814ppb m

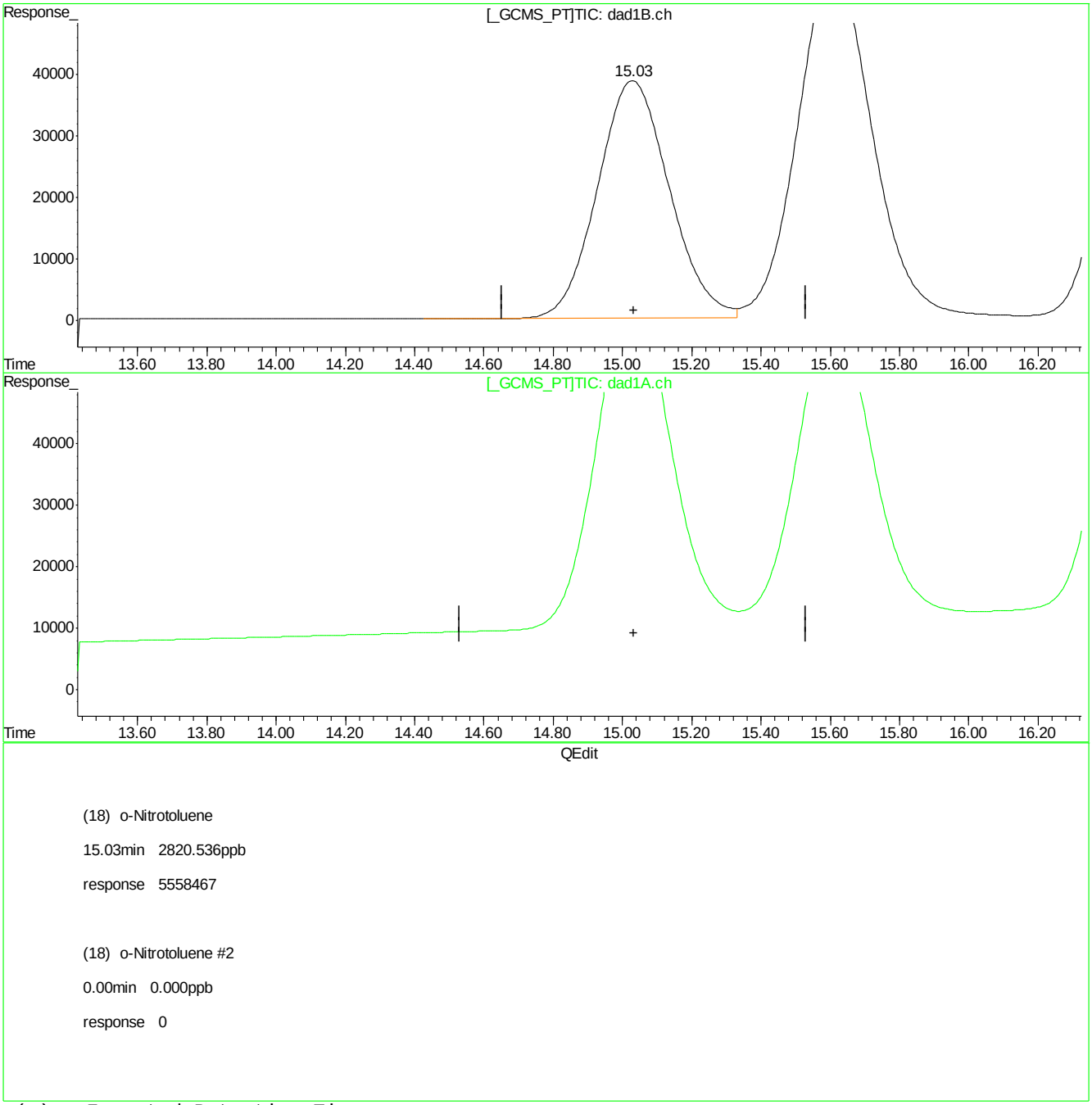
response 7367008

(+) = Expected Retention Time
BB068886.D 8330B_042221_PLUS.M Fri Apr 23 08:37:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.03min 2820.536ppb

response 5558467

(18) o-Nitrotoluene #2

0.00min 0.000ppb

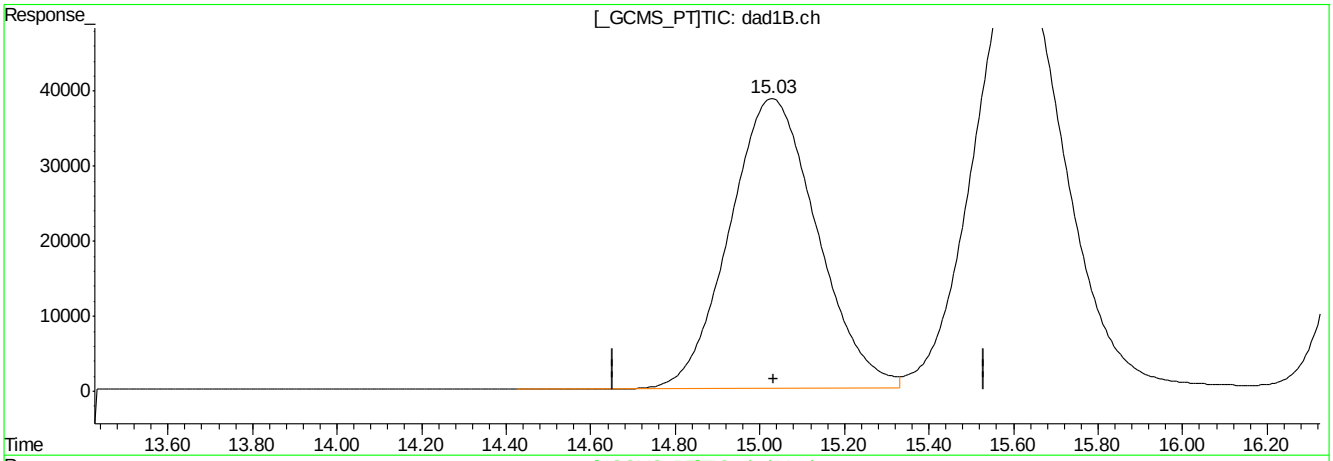
response 0

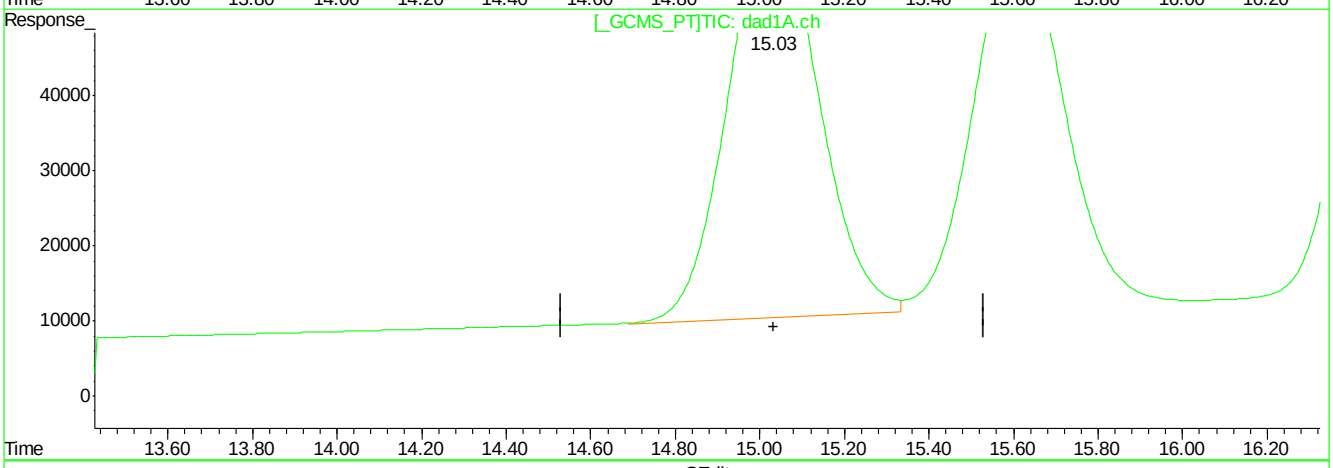
(+) = Expected Retention Time
BB068886.D 8330B_042221_PLUS.M Fri Apr 23 08:37:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.03min 2820.536ppb

response 5558467

(18) o-Nitrotoluene #2

15.03min 3288.289ppb m

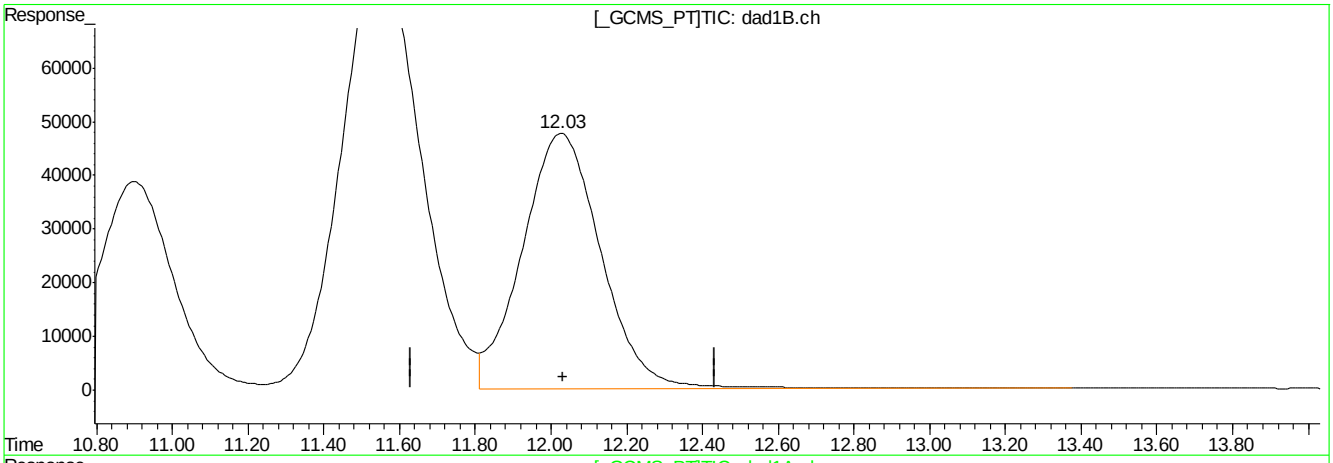
response 8043346

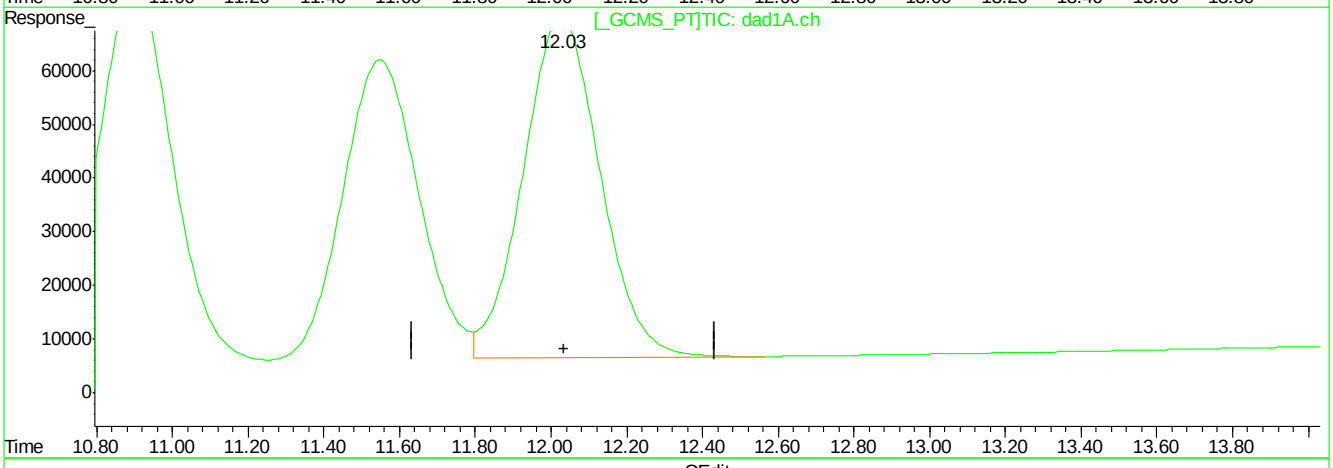
(+) = Expected Retention Time
BB068886.D 8330B_042221_PLUS.M Fri Apr 23 08:37:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.03min 2510.379ppb

response 6884277

(17) 2,6-Dinitrotoluene #2

12.03min 2514.615ppb

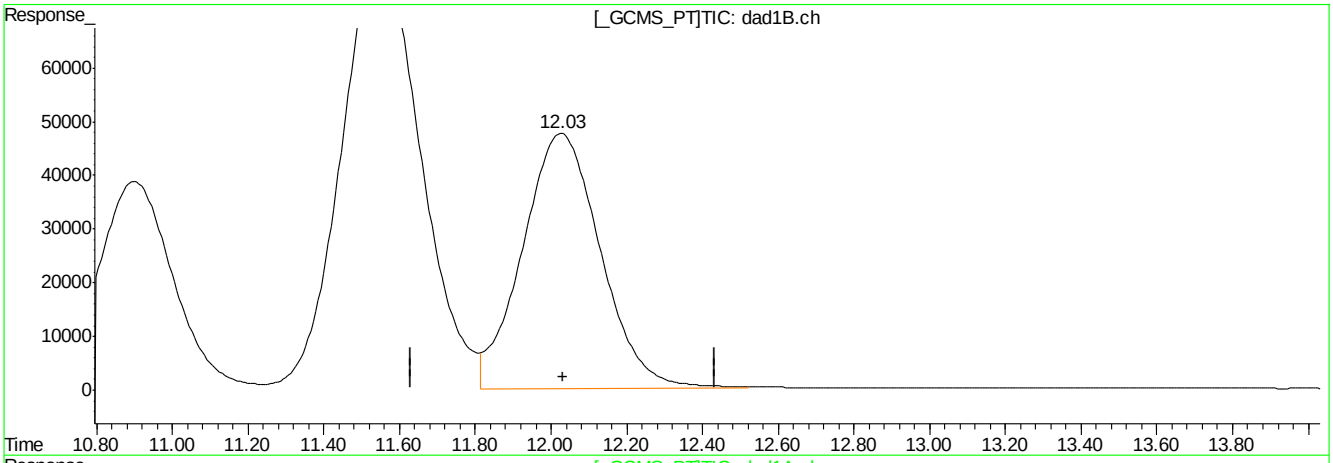
response 8925202

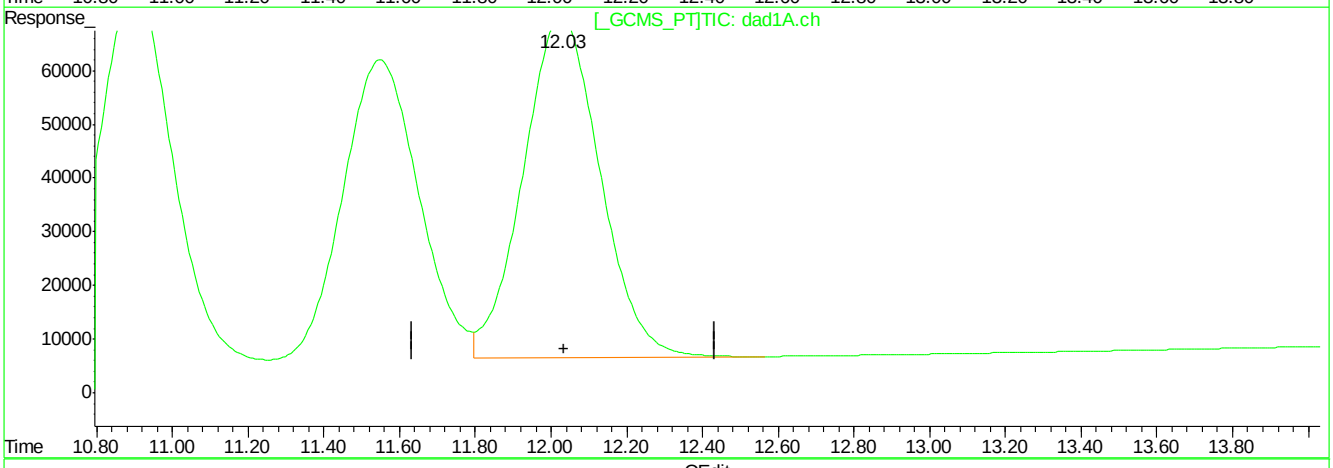
(+) = Expected Retention Time
BB068886.D 8330B_042221_PLUS.M Fri Apr 23 08:37:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.03min 2473.419ppb m

response 6782919

(17) 2,6-Dinitrotoluene #2

12.03min 2514.615ppb

response 8925202

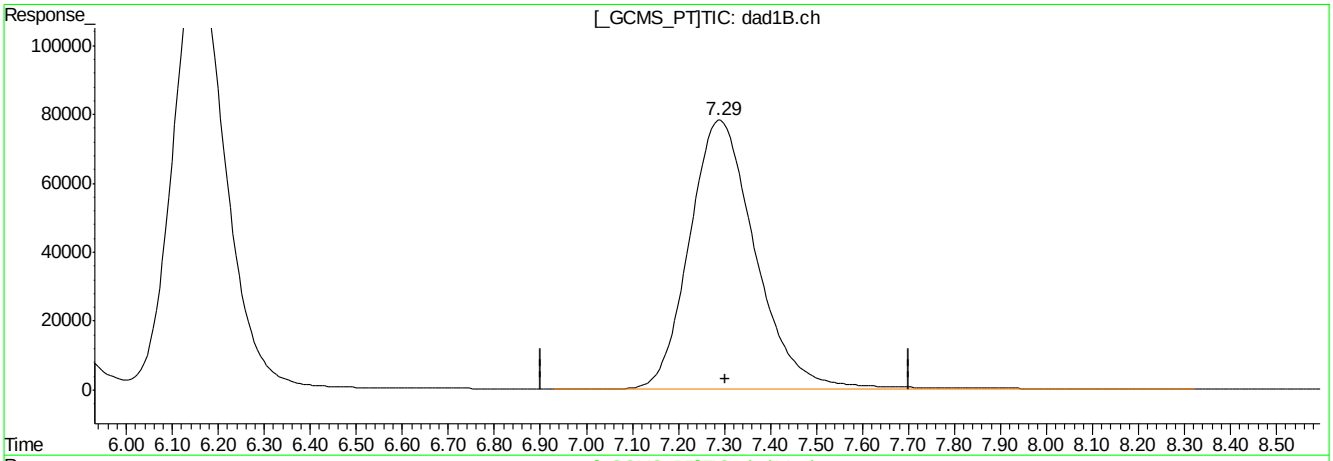
(+) = Expected Retention Time
BB068886.D 8330B_042221_PLUS.M Fri Apr 23 08:38:01 2021

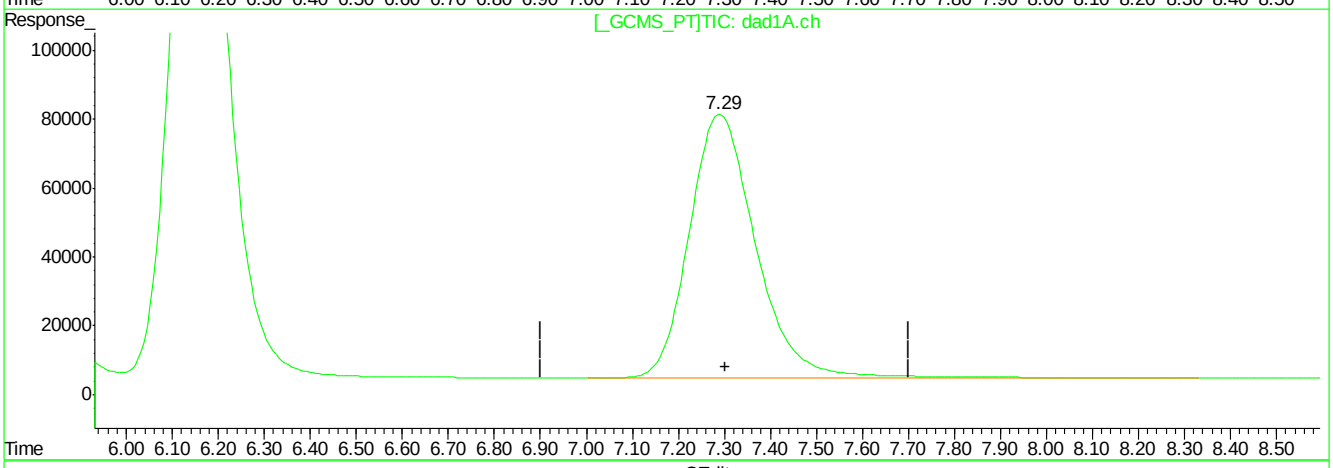
BB068886.D edits: 2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068886.D\dad1A.ch
Acq On : 22-Apr-2021, 16:09:30 Operator: jamesb
Sample : ic2026-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.29min 2680.841ppb

response 7791163

(9) Nitrobenzene #2

7.29min 2703.986ppb

response 7684774

(+) = Expected Retention Time
BB068886.D 8330B_042221_PLUS.M Fri Apr 23 08:38:11 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/23/21 11:35

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 08:34:24 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.90	10.90	10454172	18915467	5203.782	5251.373
	Spiked Amount 500.000	Range 70 - 136		Recovery =		1040.76%#	1050.27%#
	Target Compounds						
1)	TNX	1.32	1.32	11714601	17919609	3935.470	4009.856
2)	HMX	1.46	1.46	7891657	21471769	5004.141	5040.220
3)	DNX	1.70	1.70	12449996	19671926	4913.377	4980.719
4)	MNX	2.28	2.28	14086252	21657671	5441.267	5442.875
5)	RDX	2.88	2.88	9205777	14618444	5053.874	4859.072
6)	1,3,5-Trinitrobe	4.61	4.61	19986595	31500474	5071.338	5030.336
7)	1,3-Dinitrobenze	5.77	5.77	25971497	17748890	5002.871	4838.128m
8)	3,5-Dinitroanili	6.15	6.15	19828712	33341053	5042.212	4968.998
9)	Nitrobenzene	7.28	7.28	15148618	15043278	5212.448m	5293.170m
10)	Nitroglycerin	0.00	8.92	0	6337798	N.D. d	5338.893
11)	Tetryl	9.29	9.29	15081708	24203798	6626.214	5238.382
12)	2,4,6-Trinitroto	9.68	9.68	18345502	22408848	4990.711	5615.981
13)	2-Amino-4,6-Dini	10.03	10.03	16490222	25040294	4862.860	4983.022
14)	4-Amino-2,6-Dini	10.54	10.54	12143190	24653425	5149.597	5024.963
16)	2,4-Dinitrotolue	11.54	11.54	23053934	15528437	5058.361	5165.635
17)	2,6-Dinitrotolue	12.02	12.02	13351811	17650792	4868.792m	4972.991
18)	o-Nitrotoluene	15.02	15.01	10860478	15643617	5510.938	6395.439m
19)	p-Nitrotoluene	15.59	15.59	16693864	14524104	5433.404	5121.193m
20)	m-Nitrotoluene	16.48	16.48	16080456	19337403	5421.533	5380.840
21)	PETN	0.00	18.46	0	7049647	N.D. d	5491.568m

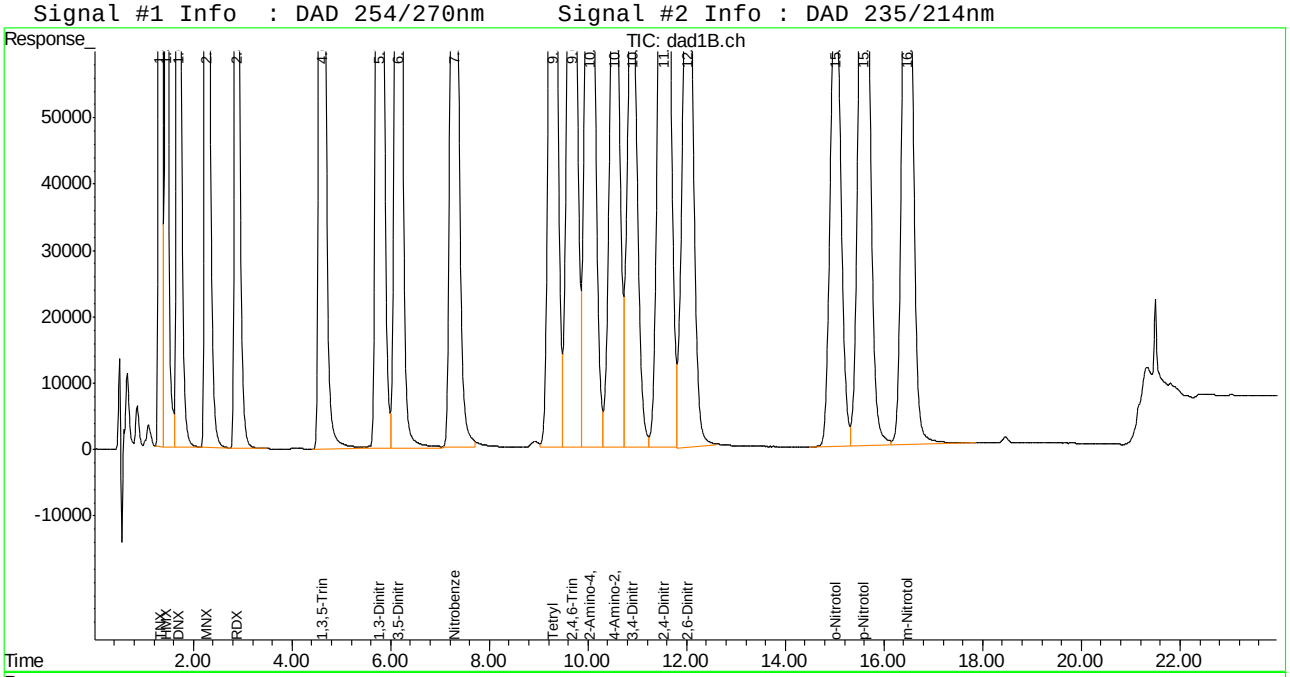
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068887.D 8330B_042221_PLUS.M Fri Apr 23 08:57:46 2021 Page 1

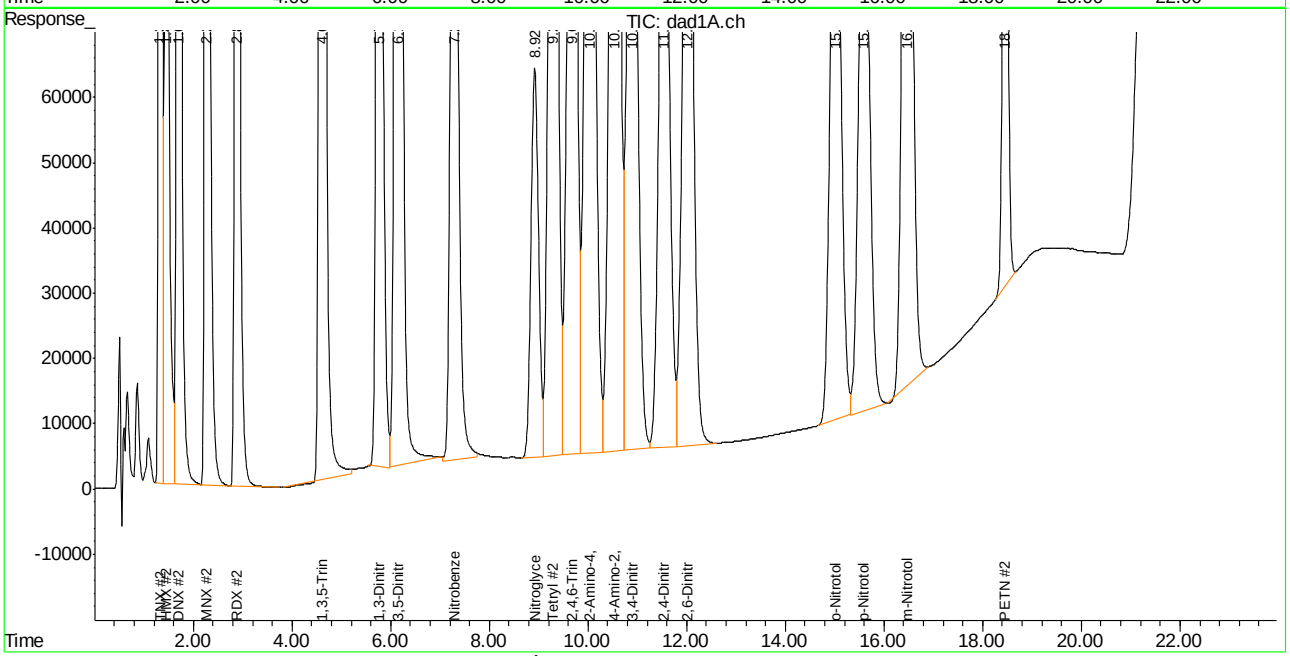
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:36 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

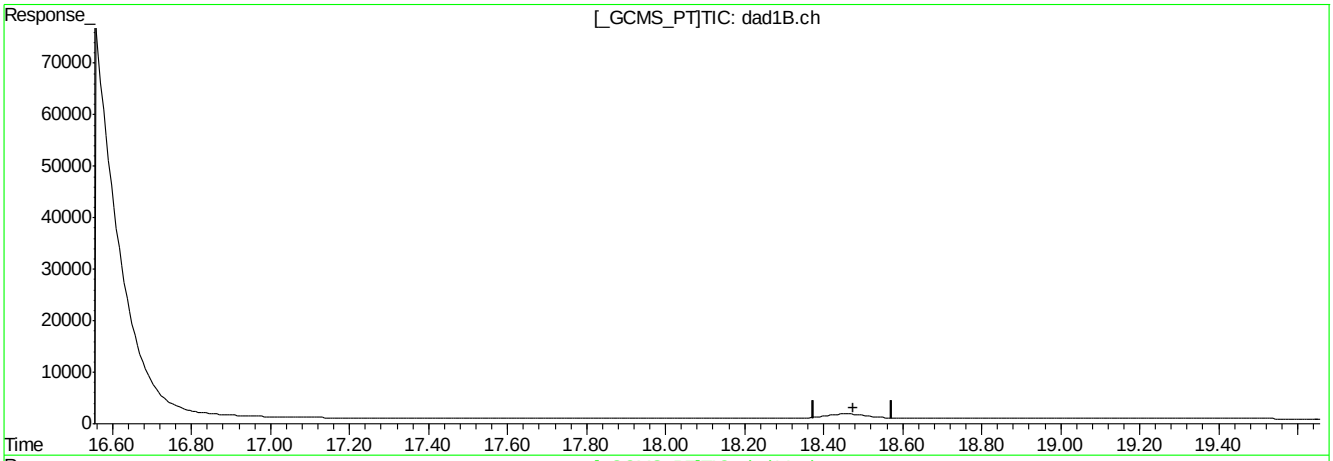
Sample Number: GBB2026-IC2026
Lab FileID: BB068887.D
Injection Time: 04/22/21 16:40
Method: SW846 8330A
Analyst approved: 04/23/21 08:56 James Boone
Supervisor approved: 04/23/21 11:35 Naresh Jiawan

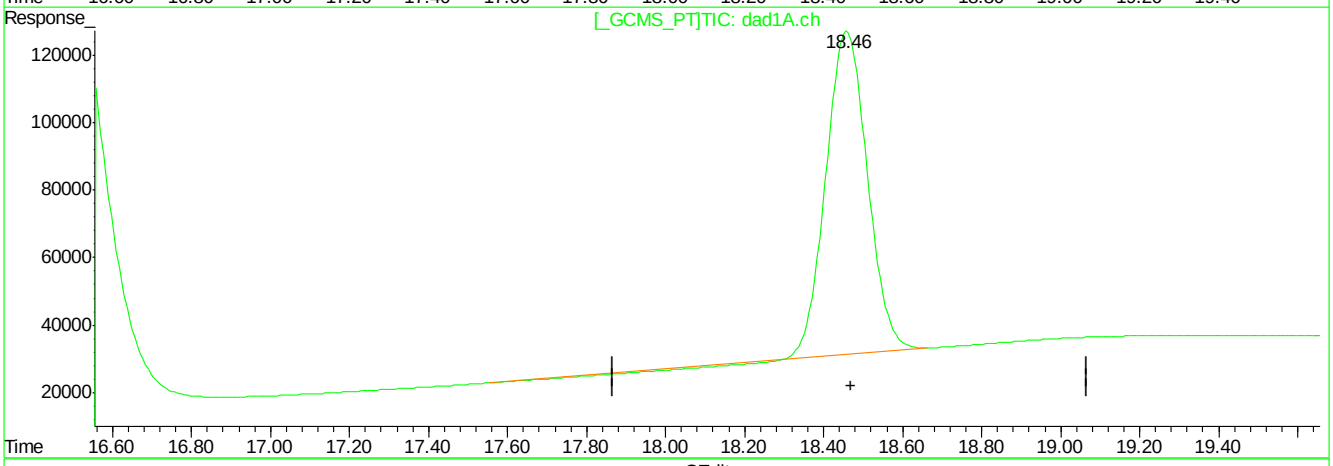
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	5.77	Poor instrument integration
Nitrobenzene	98-95-3	1	7.28	Poor instrument integration
Nitrobenzene	98-95-3	2	7.28	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.02	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.01	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.59	Poor instrument integration
PETN	78-11-5	2	18.46	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.46min 5343.001ppb

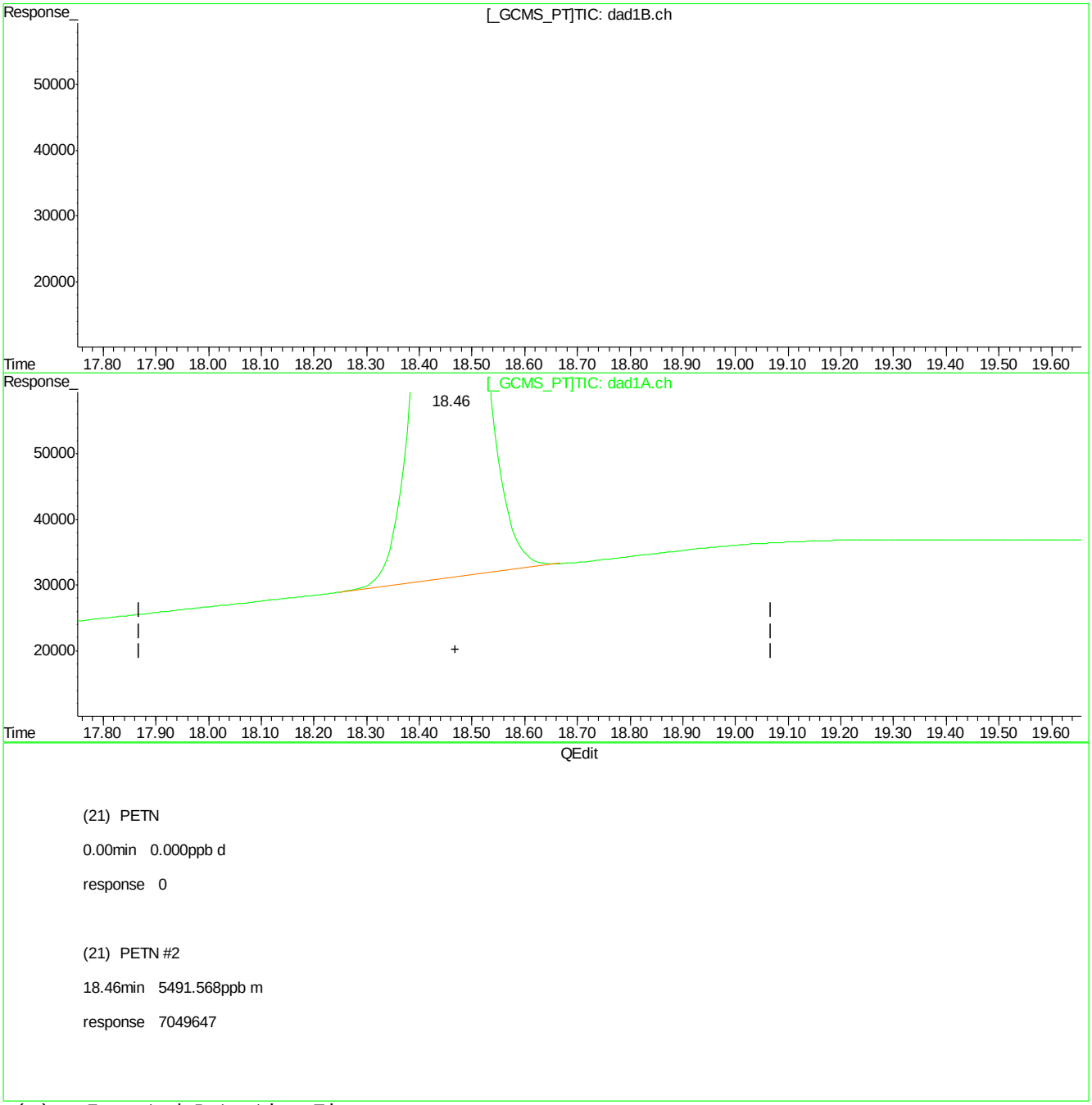
response 6858928

(+) = Expected Retention Time
BB068887.D 8330B_042221_PLUS.M Fri Apr 23 08:34:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration

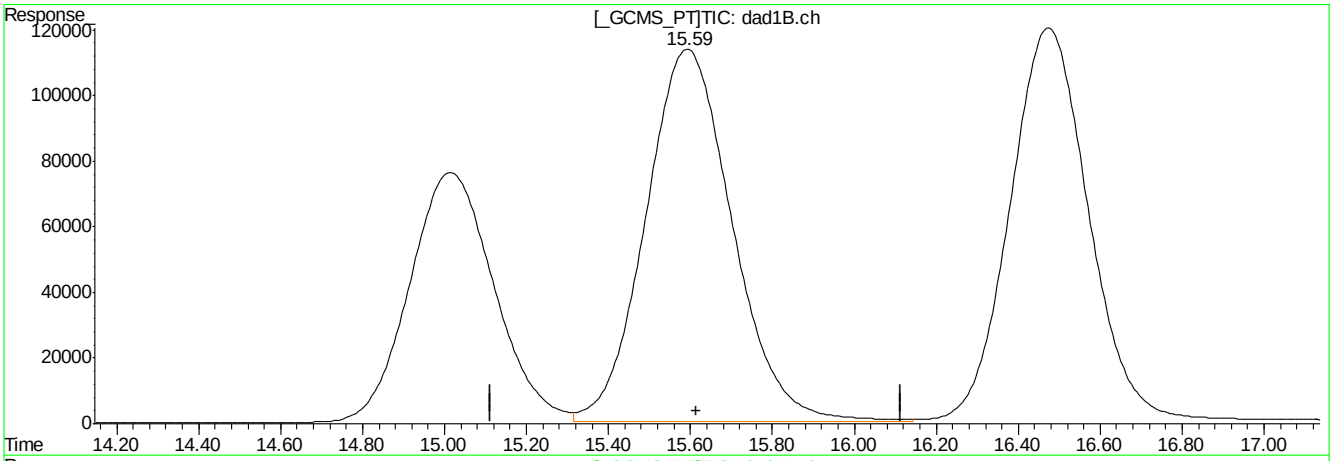


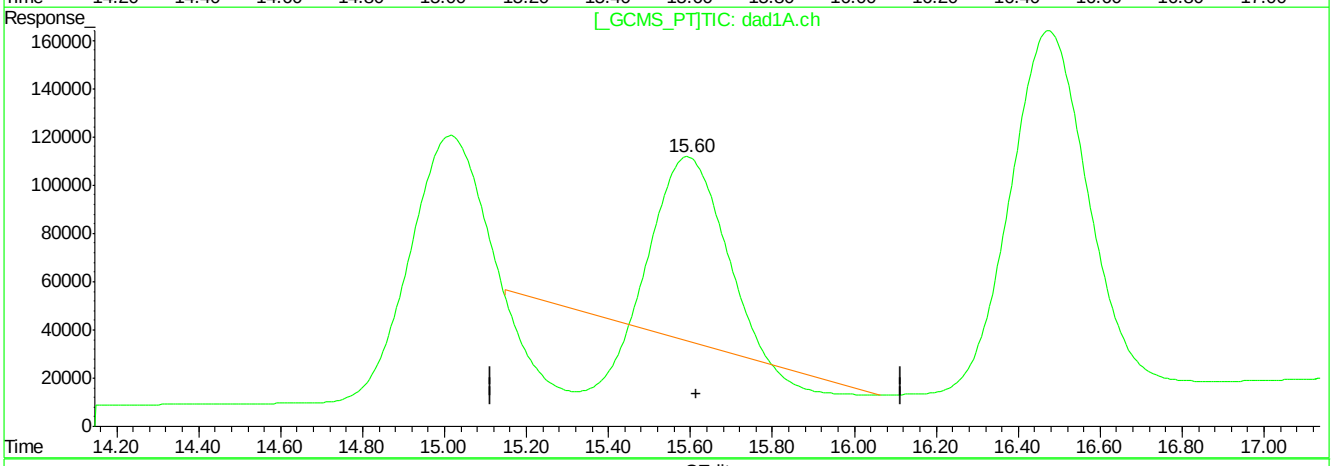
(+) = Expected Retention Time
BB068887.D 8330B_042221_PLUS.M Fri Apr 23 08:34:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.59min 5433.404ppb

response 16693864

(19) p-Nitrotoluene #2

15.59min 1829.506ppb

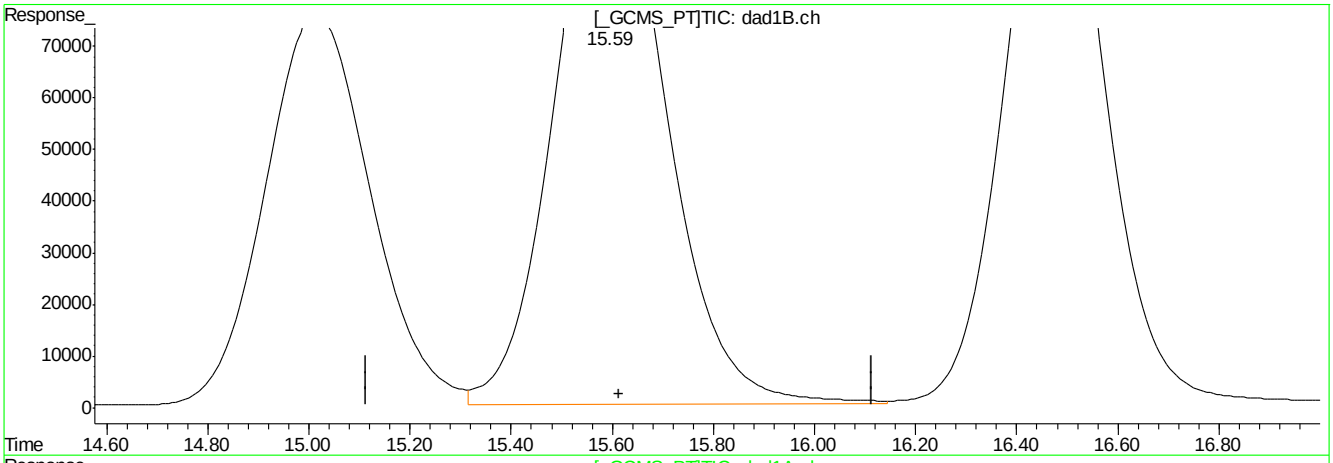
response 4555483

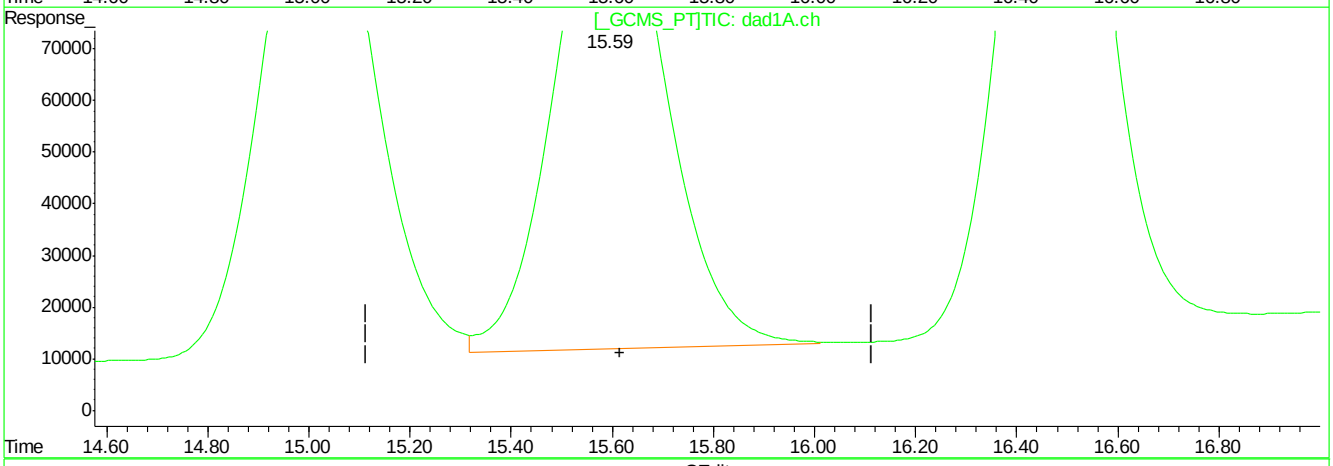
(+) = Expected Retention Time
BB068887.D 8330B_042221_PLUS.M Fri Apr 23 08:34:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.59min 5433.404ppb

response 16693864

(19) p-Nitrotoluene #2

15.59min 5121.193ppb m

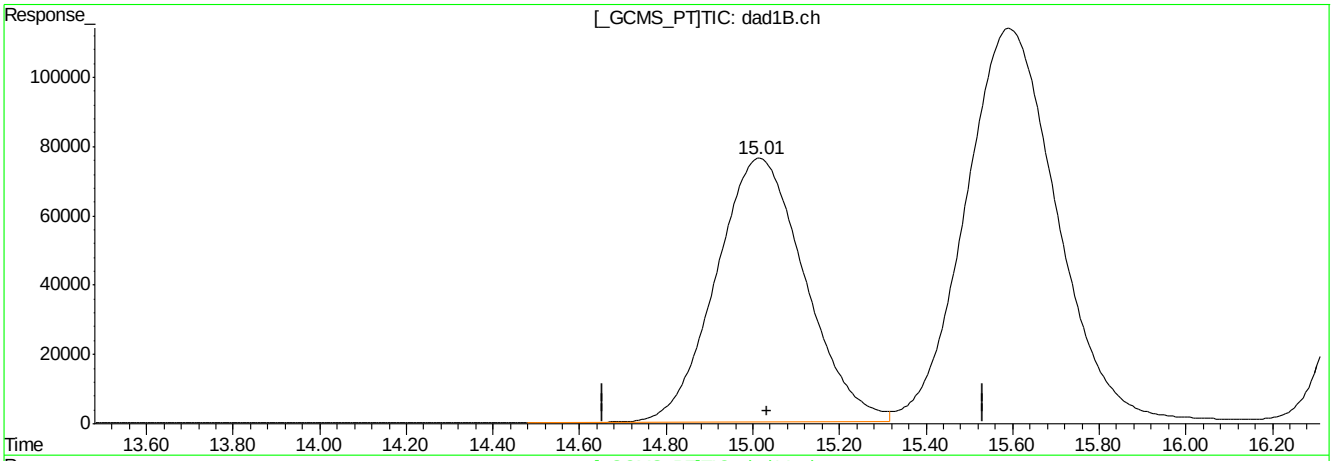
response 14524104

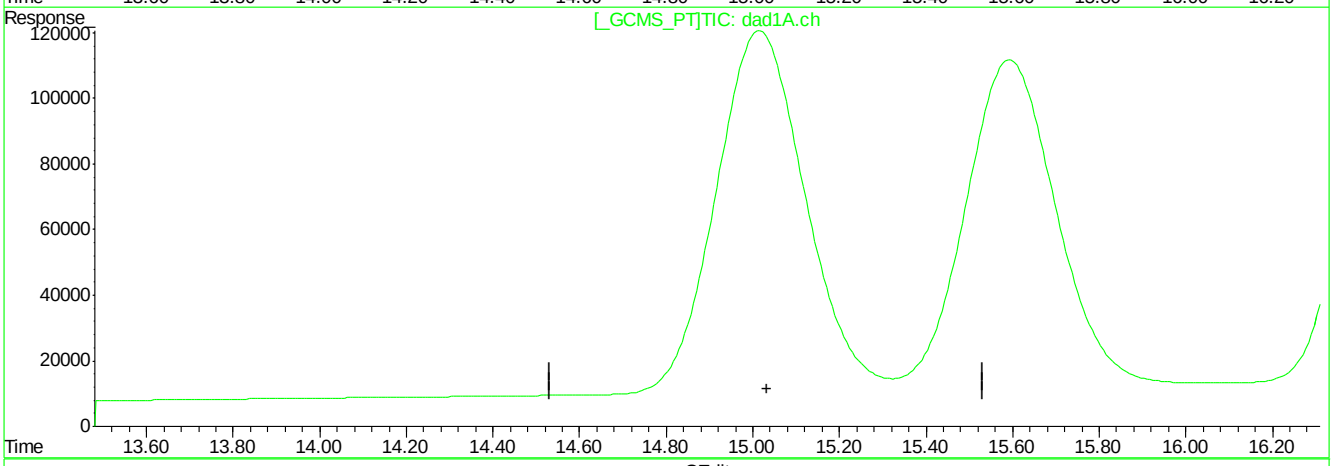
(+) = Expected Retention Time
BB068887.D 8330B_042221_PLUS.M Fri Apr 23 08:35:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.02min 5510.938ppb

response 10860478

(18) o-Nitrotoluene #2

0.00min 0.000ppb

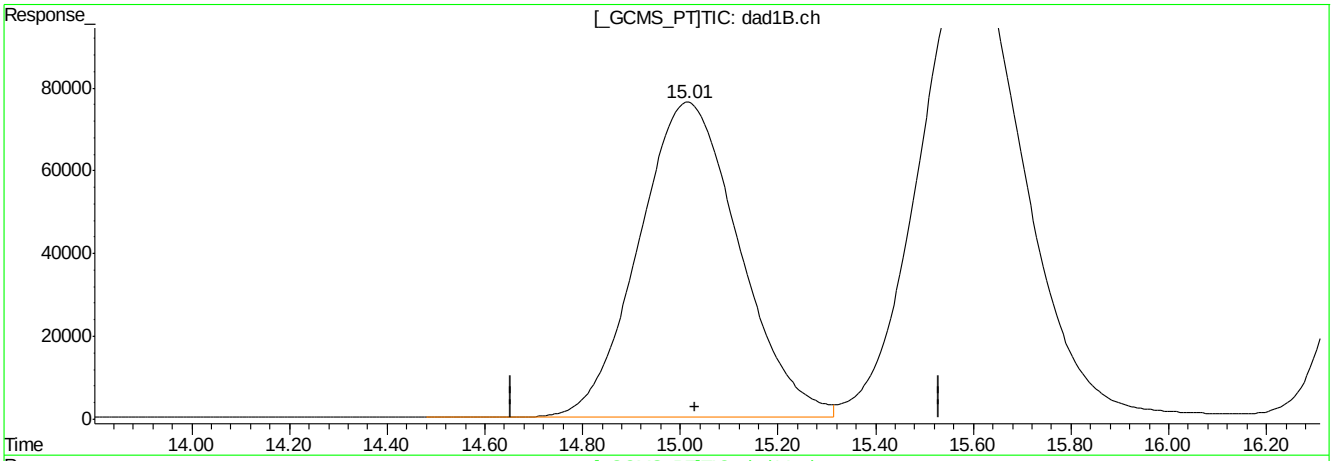
response 0

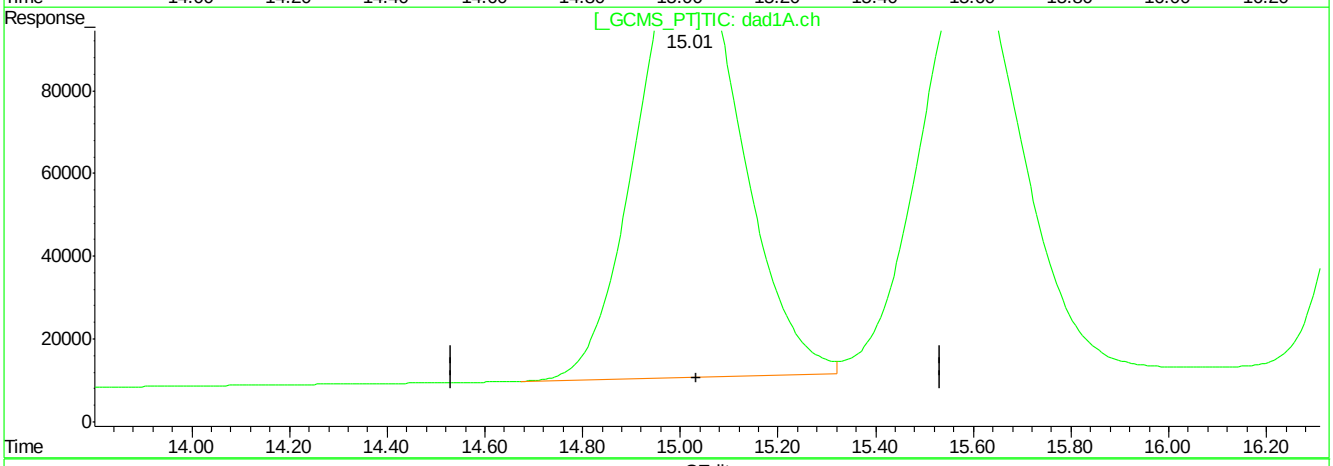
(+) = Expected Retention Time
BB068887.D 8330B_042221_PLUS.M Fri Apr 23 08:35:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.02min 5510.938ppb

response 10860478

(18) o-Nitrotoluene #2

15.01min 6395.439ppb m

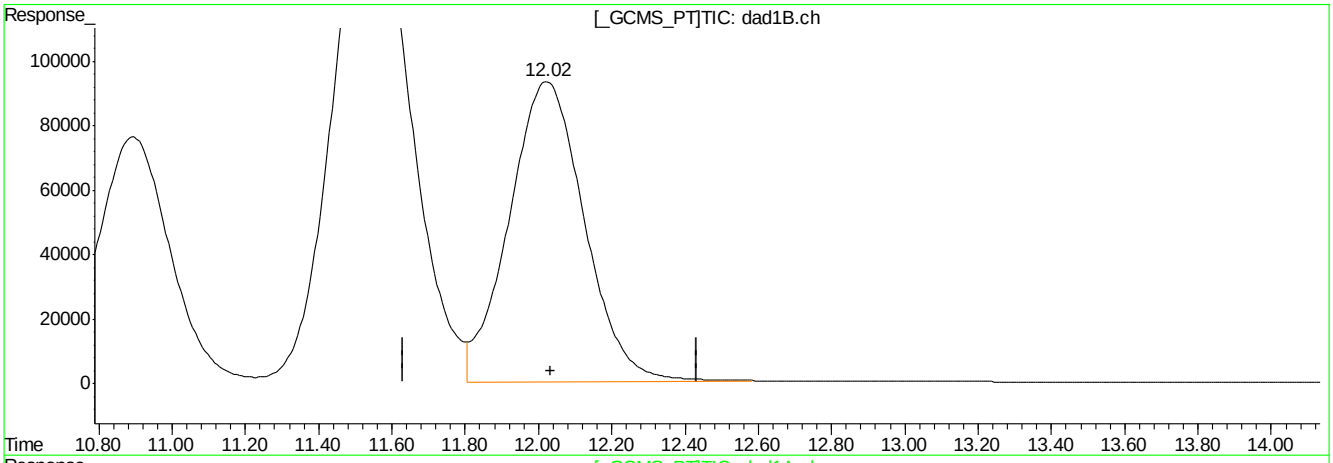
response 15643617

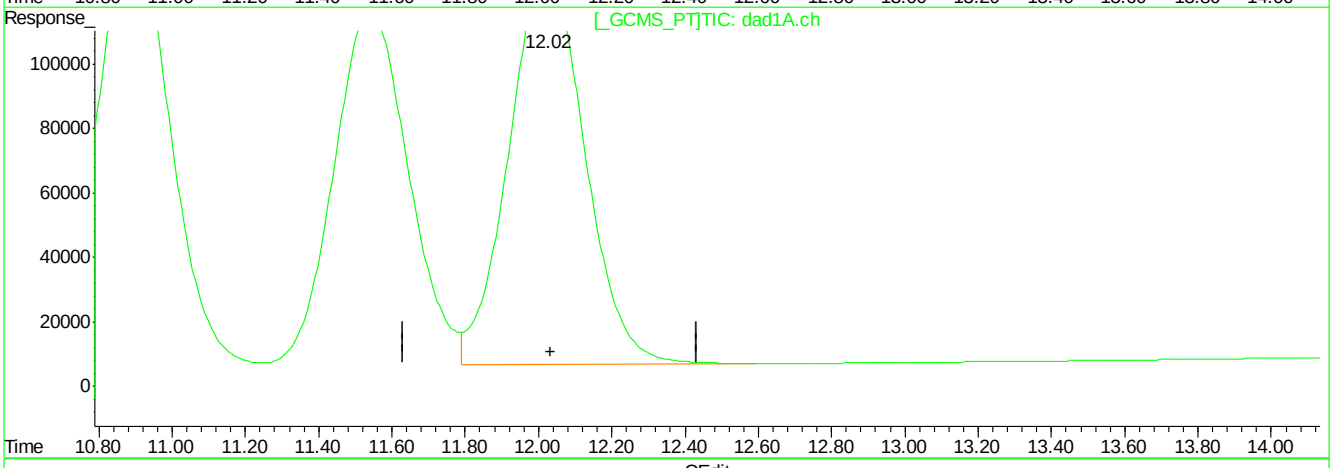
(+) = Expected Retention Time
BB068887.D 8330B_042221_PLUS.M Fri Apr 23 08:35:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.02min 4868.792ppb m

response 13351811

(17) 2,6-Dinitrotoluene #2

12.02min 4972.991ppb

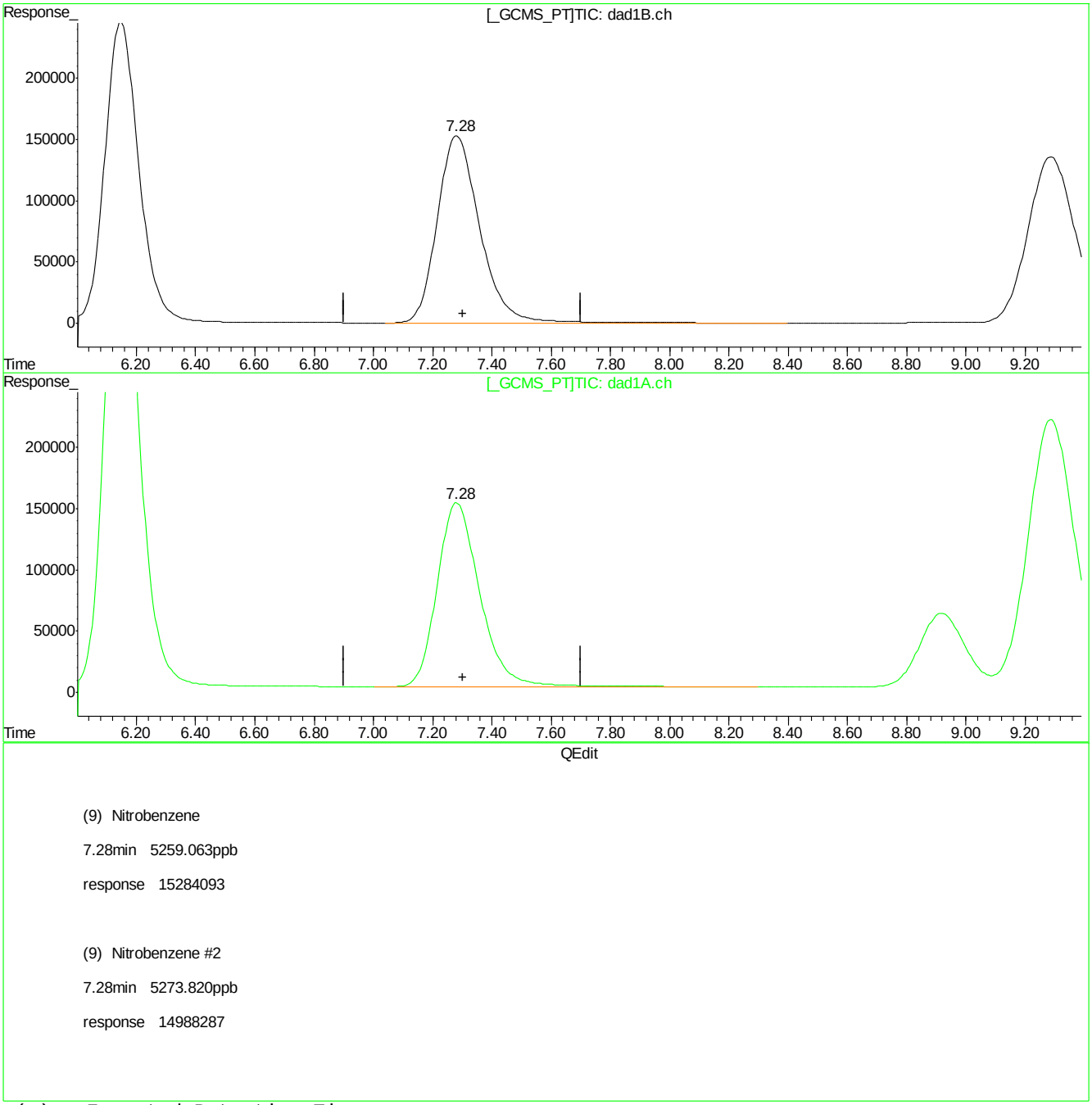
response 17650792

(+) = Expected Retention Time
BB068887.D 8330B_042221_PLUS.M Fri Apr 23 08:35:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.28min 5259.063ppb

response 15284093

(9) Nitrobenzene #2

7.28min 5273.820ppb

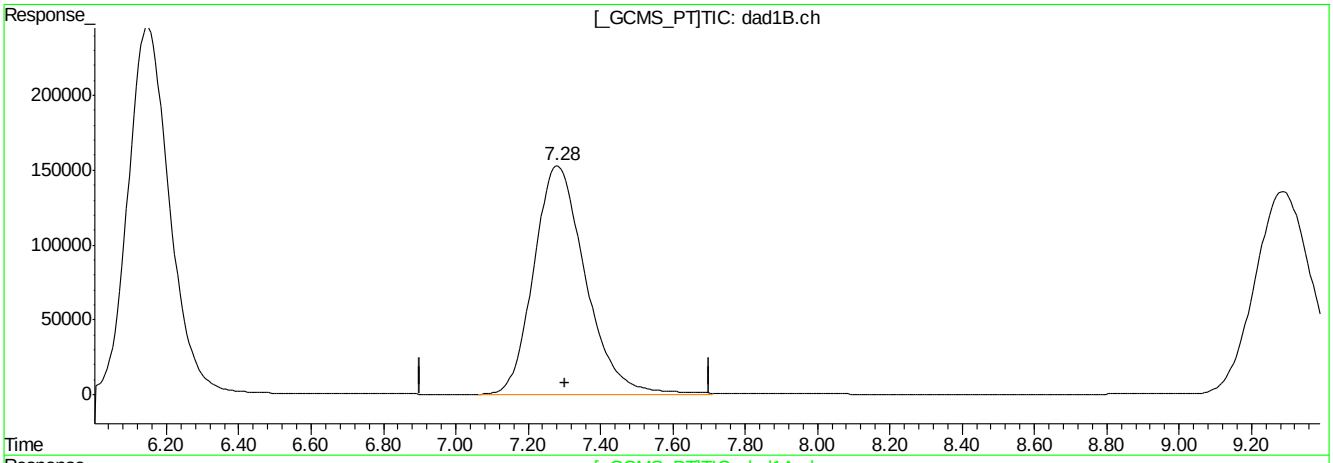
response 14988287

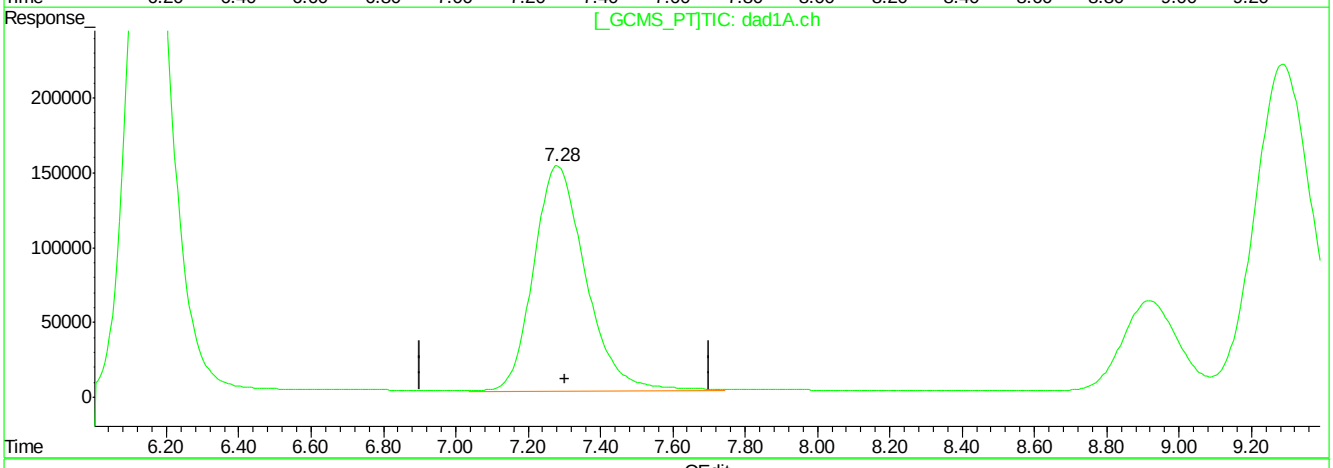
(+) = Expected Retention Time
BB068887.D 8330B_042221_PLUS.M Fri Apr 23 08:35:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.28min 5212.448ppb m

response 15148618

(9) Nitrobenzene #2

7.28min 5293.170ppb m

response 15043278

(+) = Expected Retention Time
BB068887.D 8330B_042221_PLUS.M Fri Apr 23 08:36:01 2021

9.5.8.10

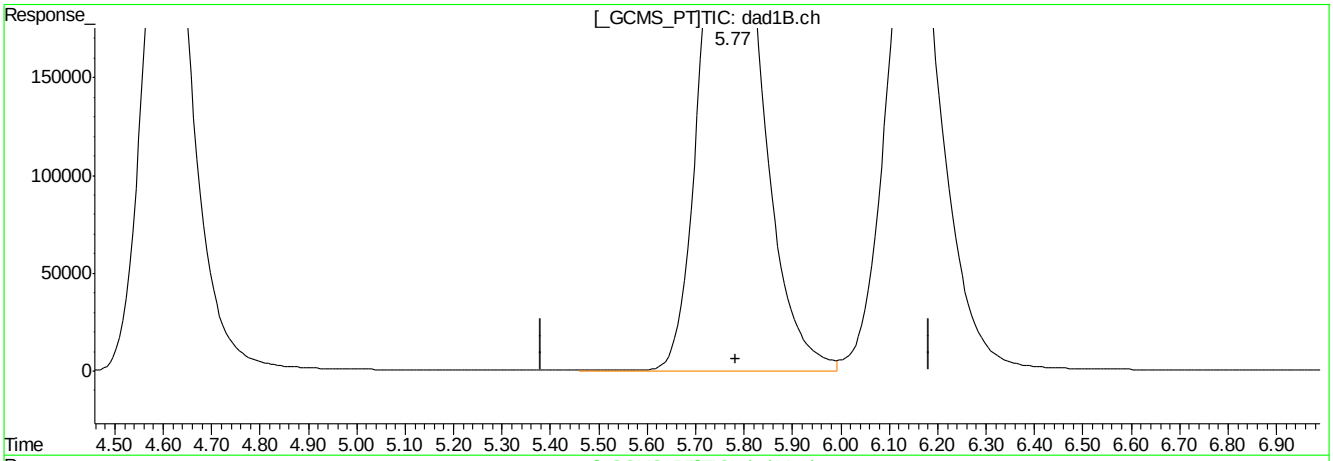
9

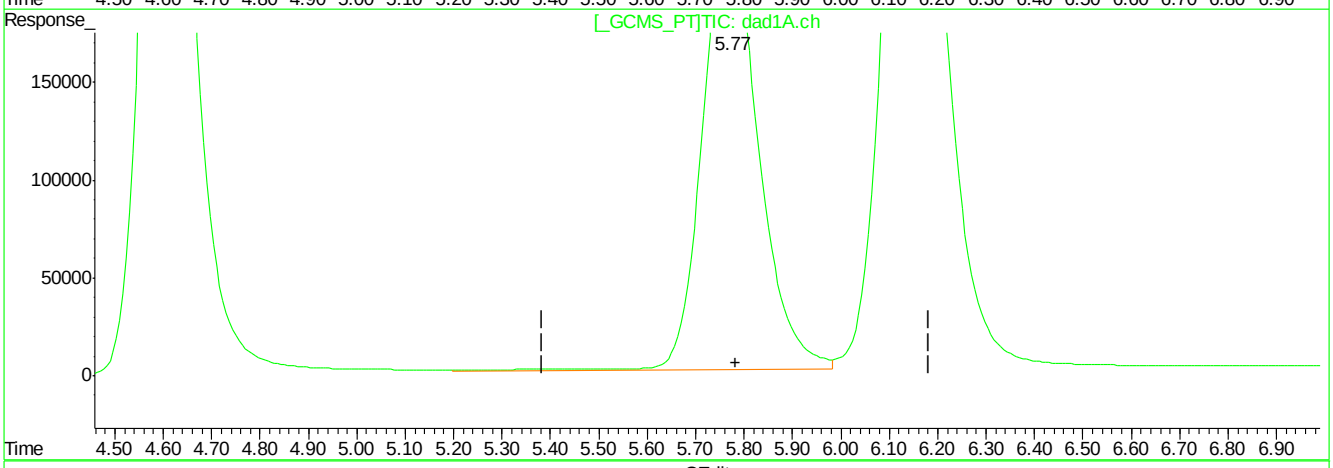
BB068887.D edits: Nitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.77min 5002.871ppb

response 25971497

(7) 1,3-Dinitrobenzene #2

5.77min 4904.863ppb

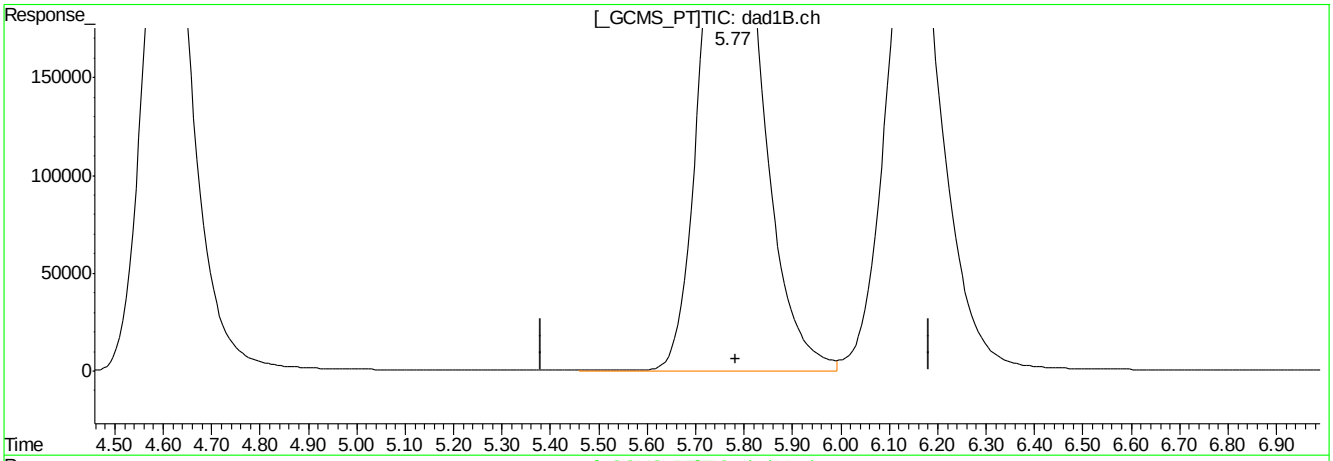
response 17993711

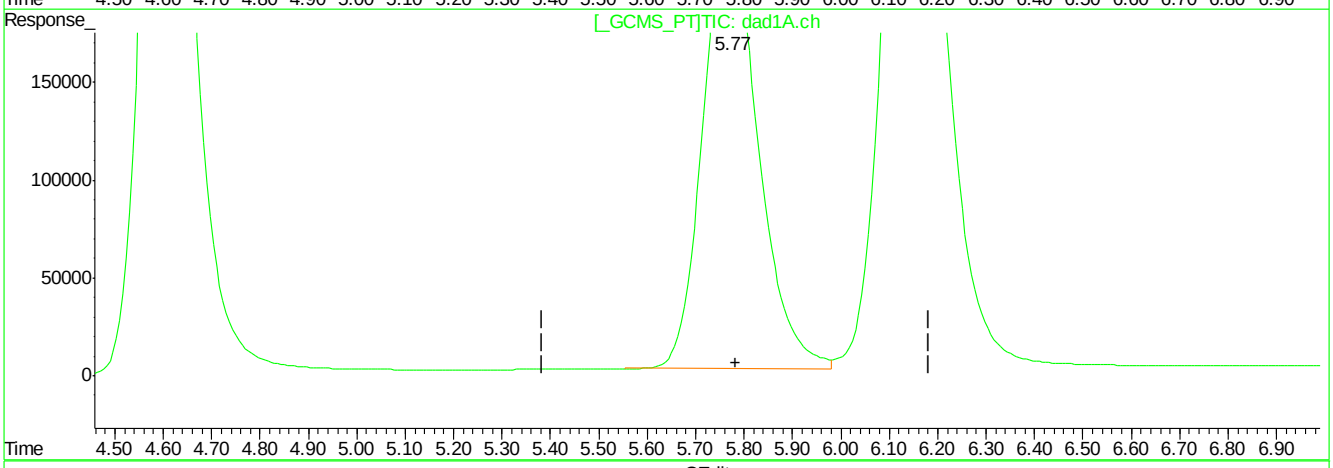
(+) = Expected Retention Time
BB068887.D 8330B_042221_PLUS.M Fri Apr 23 08:36:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068887.D\dad1A.ch
Acq On : 22-Apr-2021, 16:40:28 Operator: jamesb
Sample : ic2026-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:34 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:34:05 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.77min 5002.871ppb

response 25971497

(7) 1,3-Dinitrobenzene #2

5.77min 4838.128ppb m

response 17748890

(+) = Expected Retention Time
BB068887.D 8330B_042221_PLUS.M Fri Apr 23 08:36:20 2021

Manual Integrations APPROVED
(compounds with "m" flag)
Naresh Jiawan
04/23/21 11:35

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1A.ch
Acq On : 22-Apr-2021, 17:11:28 Operator: jamesb
Sample : icv2026-1000 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 08:54:56 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	1.32	1.32	2616157	3996415	1101.154	1088.215
2)	HMX	1.46	1.46	1589839	4296130	1037.745	972.639
3)	DNX	1.70	1.70	2708714	4277348	1071.140	994.284
4)	MNX	2.28	2.28	3072593	4721178	1046.961	1038.954
5)	RDX	2.89	2.89	1850478	2937306	992.250	988.427
6)	1,3,5-Trinitrobe	4.61	4.61	3994378	6017884	1002.783	965.231
7)	1,3-Dinitrobenze	5.78	5.78	5185222	3699312	987.520	1017.845
8)	3,5-Dinitroanili	6.16	6.16	4028684	6945976	1010.710	1008.250
9)	Nitrobenzene	7.30	7.30	3030763	2984601	981.839	979.320
10)	Nitroglycerin	0.00	8.93	0	1261117	N.D.	991.271 #
11)	Tetryl	9.30	9.30	3041182	4861239	983.267	1019.840
12)	2,4,6-Trinitroto	9.68	9.68	3656295	4490774	981.076	1020.657
13)	2-Amino-4,6-Dini	10.05	10.05	3372541	5139871	1001.356	1044.298
14)	4-Amino-2,6-Dini	10.55	10.55	2498252	5077075	999.768	1050.274
16)	2,4-Dinitrotolue	11.55	11.55	4573107	3092999	1004.888	1068.805
17)	2,6-Dinitrotolue	12.03	12.03	2683899	3541437	940.351	988.552
18)	o-Nitrotoluene	15.02	15.02	2161094	3112531	987.038	1023.155m
19)	p-Nitrotoluene	15.61	15.60	3376254	2856080	1020.264	1022.971m
20)	m-Nitrotoluene	16.48	16.48	3185620	3784097	970.233	1038.710m
21)	PETN	0.00	18.46	0	1471591	N.D. d	1127.756m

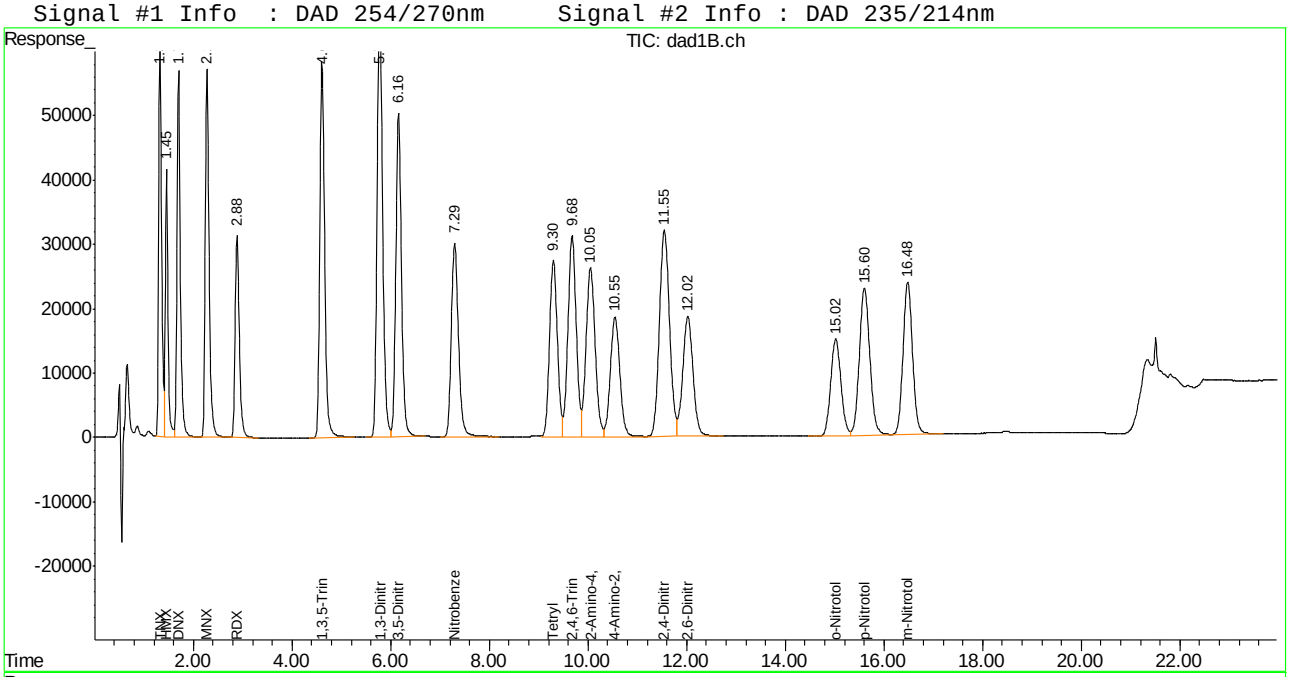
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068888.D 8330B_042221_PLUS.M Fri Apr 23 08:57:47 2021 Page 1

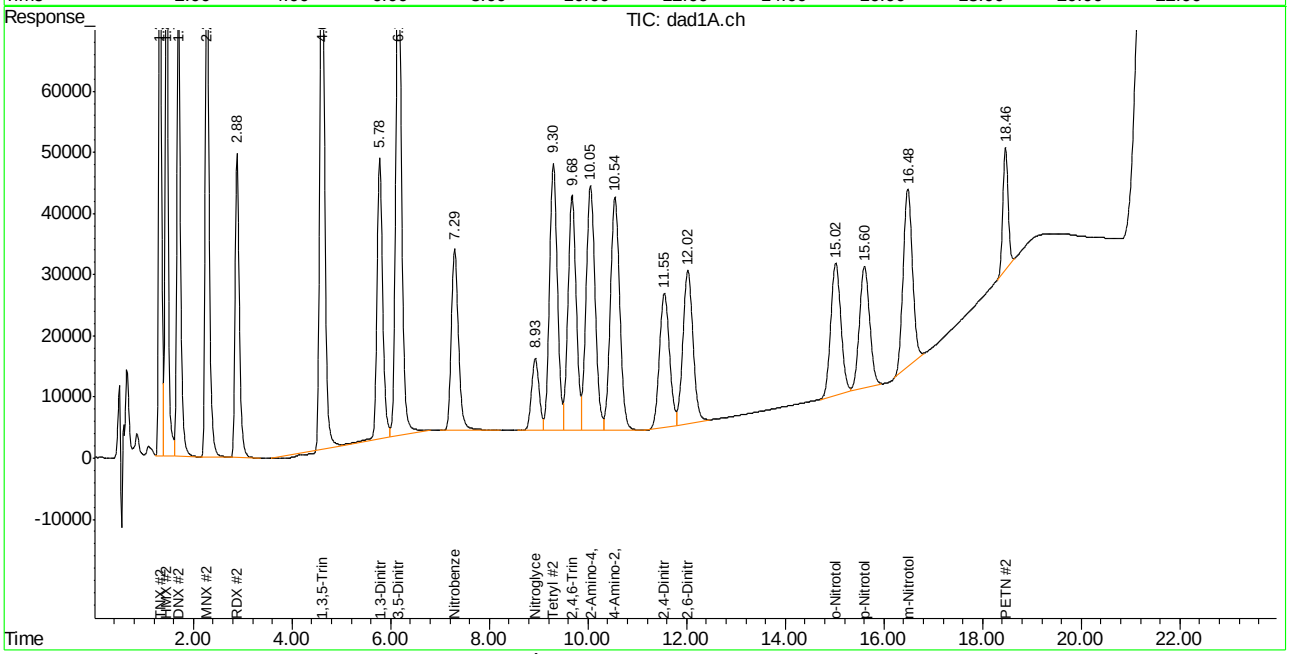
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1A.ch
Acq On : 22-Apr-2021, 17:11:28 Operator: jamesb
Sample : icv2026-1000 Inst : G1315B
Misc : op85043,GBB2026,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:55 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

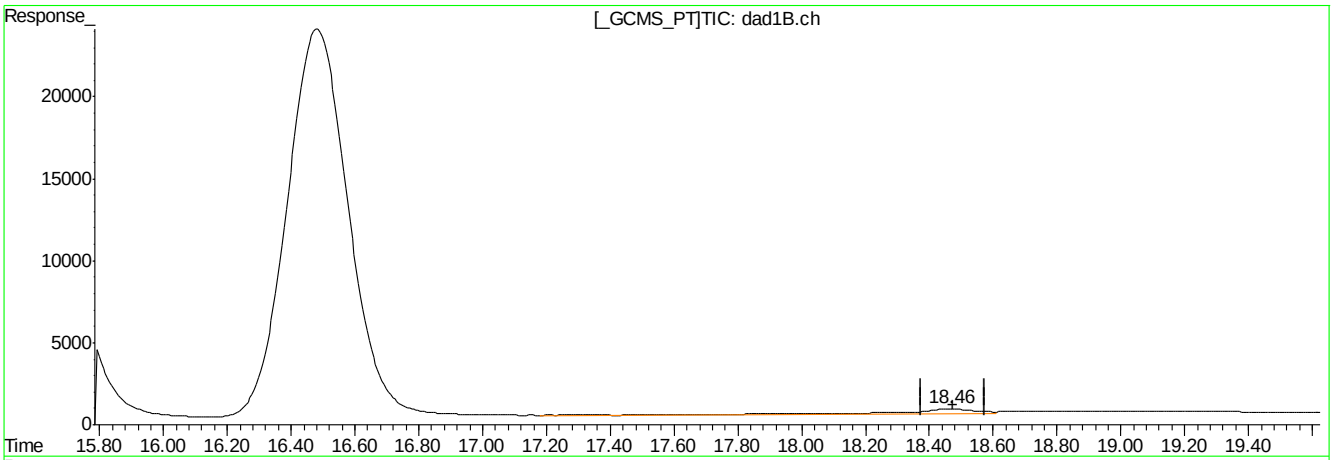
Sample Number: GBB2026-ICV2026 **Method:** SW846 8330A
Lab FileID: BB068888.D **Analyst approved:** 04/23/21 08:56 James Boone
Injection Time: 04/22/21 17:11 **Supervisor approved:** 04/23/21 11:35 Naresh Jiawan

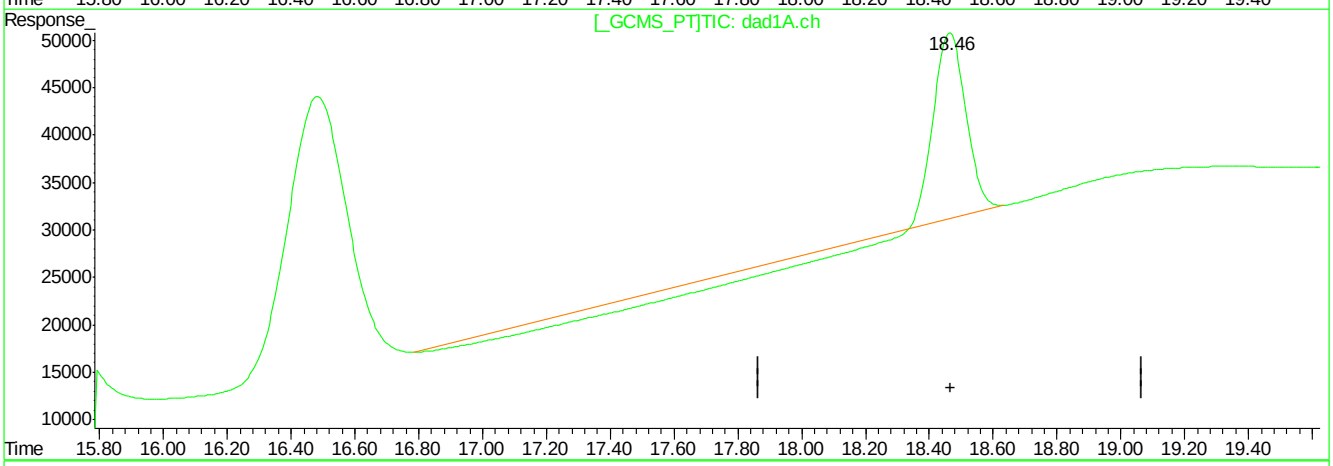
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.02	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.60	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.48	Poor instrument integration
PETN	78-11-5	2	18.46	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1A.ch
Acq On : 22-Apr-2021, 17:11:28 Operator: jamesb
Sample : icv2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:54 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.47min 0.000ppb

response 74154

(21) PETN #2

18.47min 453.395ppb

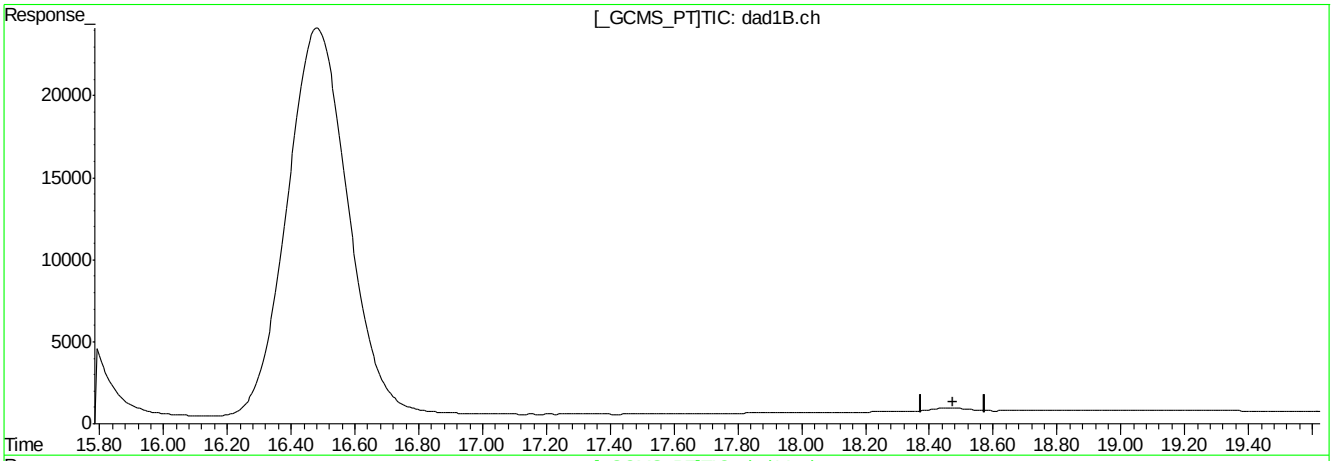
response 591628

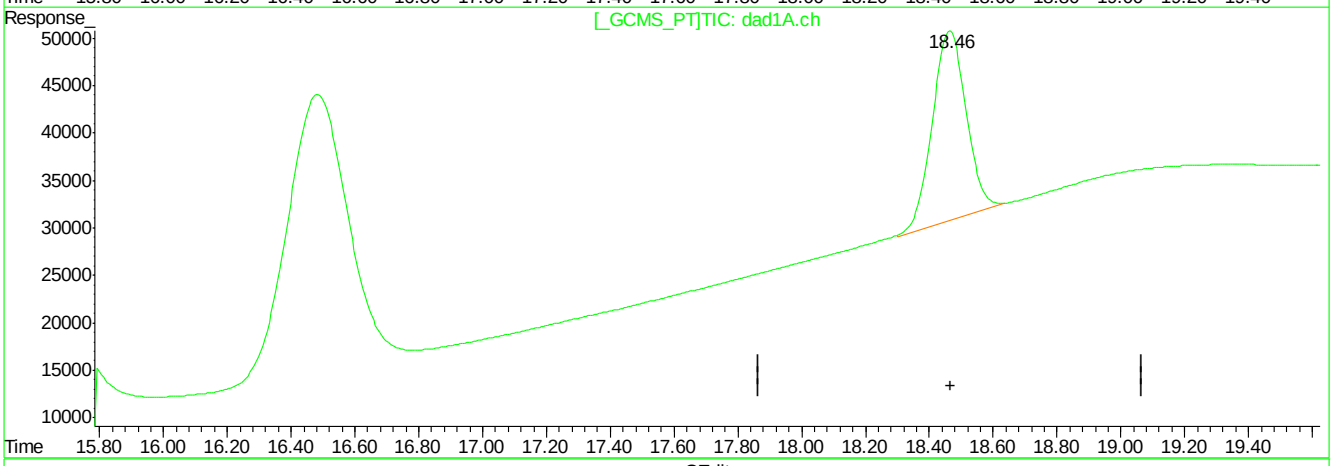
(+) = Expected Retention Time
BB068888.D 8330B_042221_PLUS.M Fri Apr 23 08:55:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1A.ch
Acq On : 22-Apr-2021, 17:11:28 Operator: jamesb
Sample : icv2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:54 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.46min 1127.756ppb m

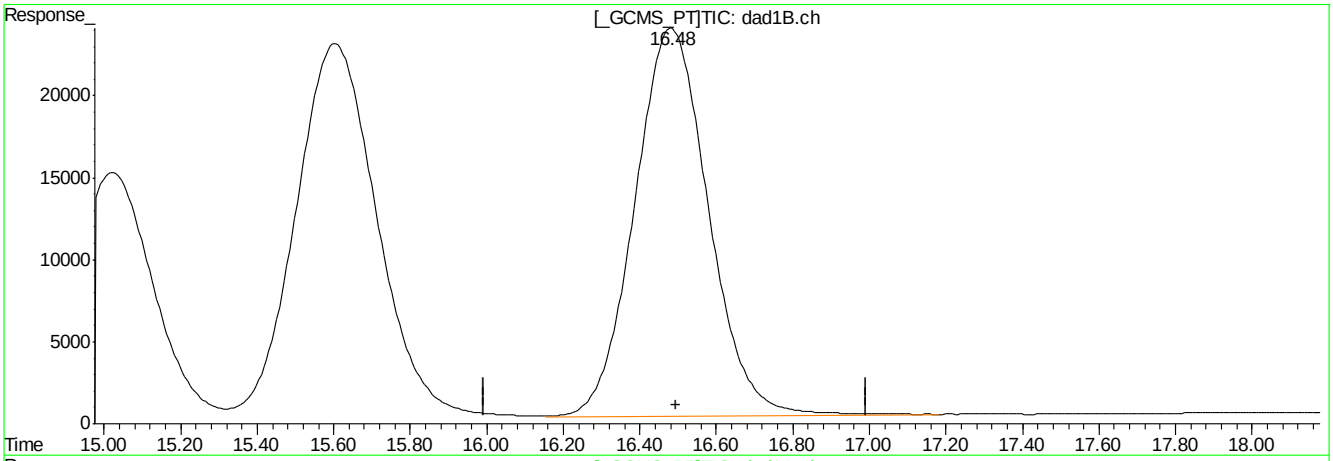
response 1471591

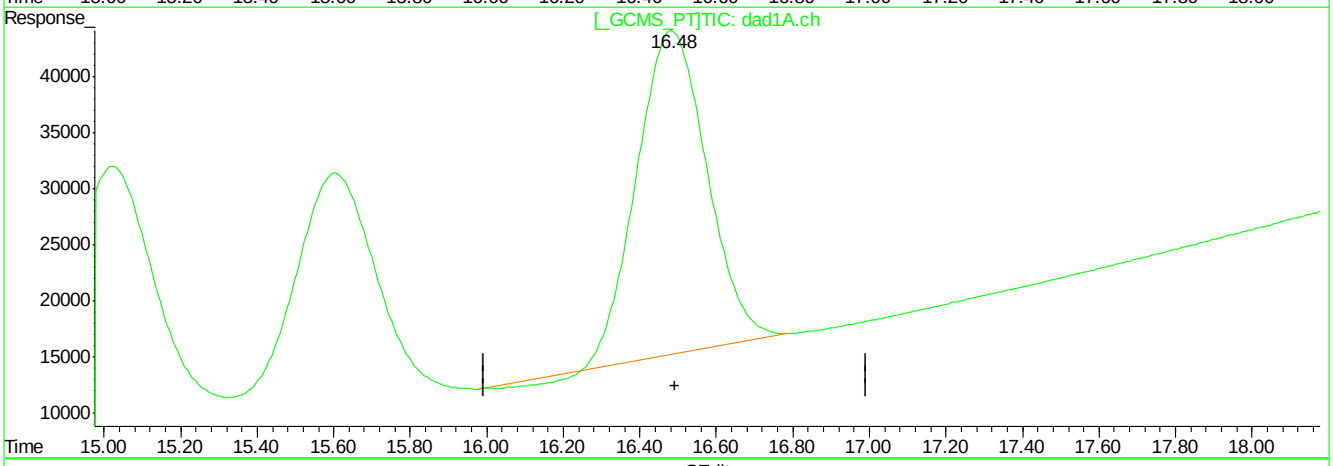
(+) = Expected Retention Time
BB068888.D 8330B_042221_PLUS.M Fri Apr 23 08:55:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1A.ch
Acq On : 22-Apr-2021, 17:11:28 Operator: jamesb
Sample : icv2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:54 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.48min 970.233ppb

response 3185620

(20) m-Nitrotoluene #2

16.48min 993.753ppb

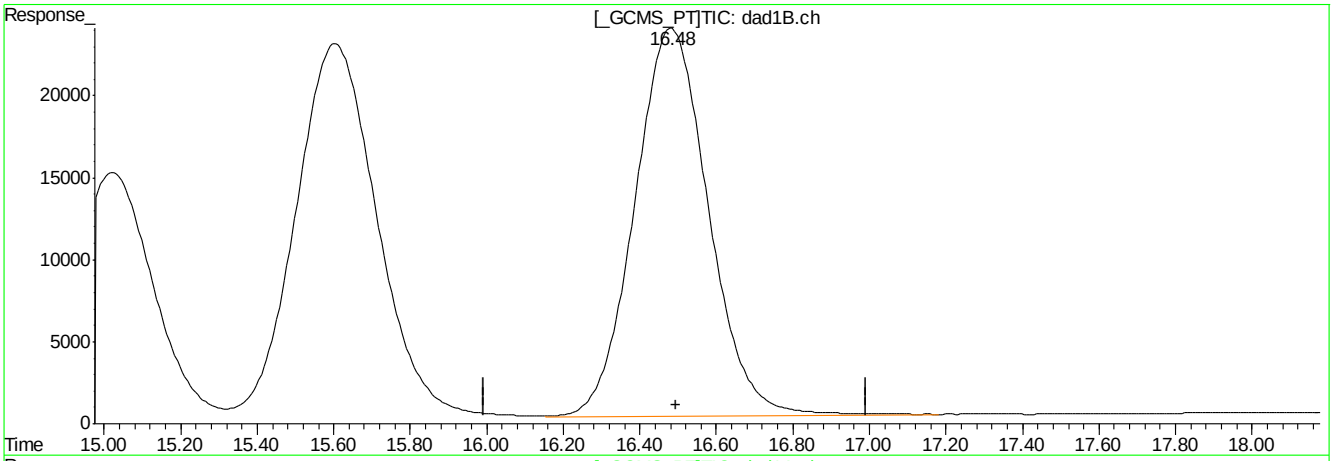
response 3620316

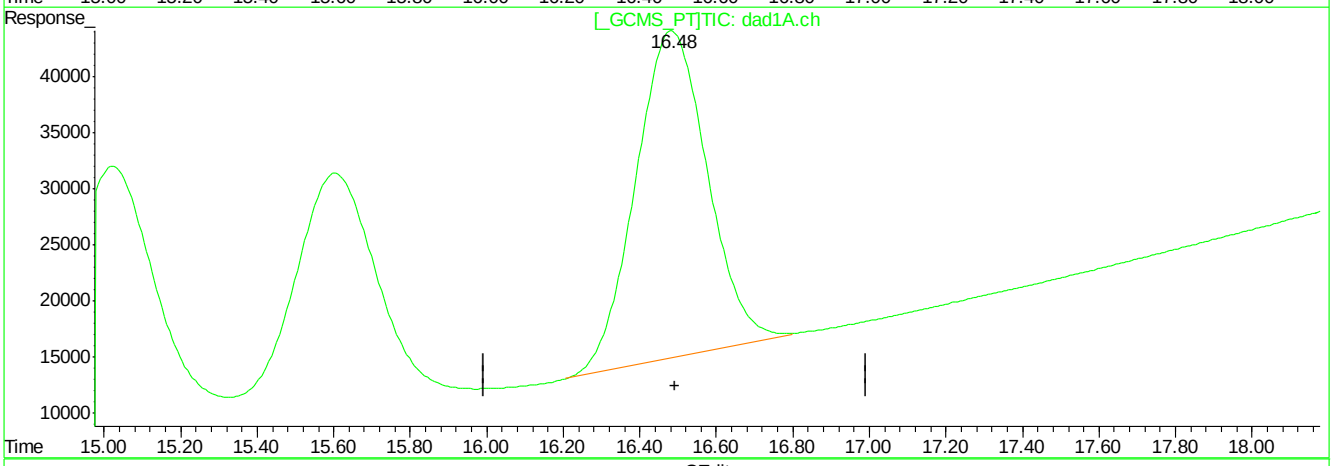
(+) = Expected Retention Time
BB068888.D 8330B_042221_PLUS.M Fri Apr 23 08:55:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1A.ch
Acq On : 22-Apr-2021, 17:11:28 Operator: jamesb
Sample : icv2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:54 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.48min 970.233ppb

response 3185620

(20) m-Nitrotoluene #2

16.48min 1038.710ppb m

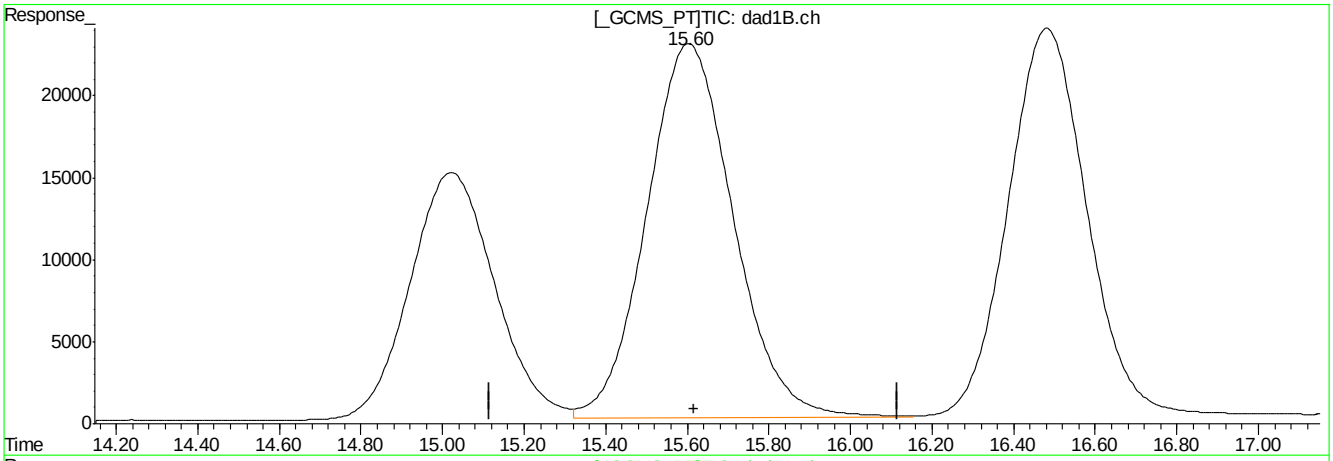
response 3784097

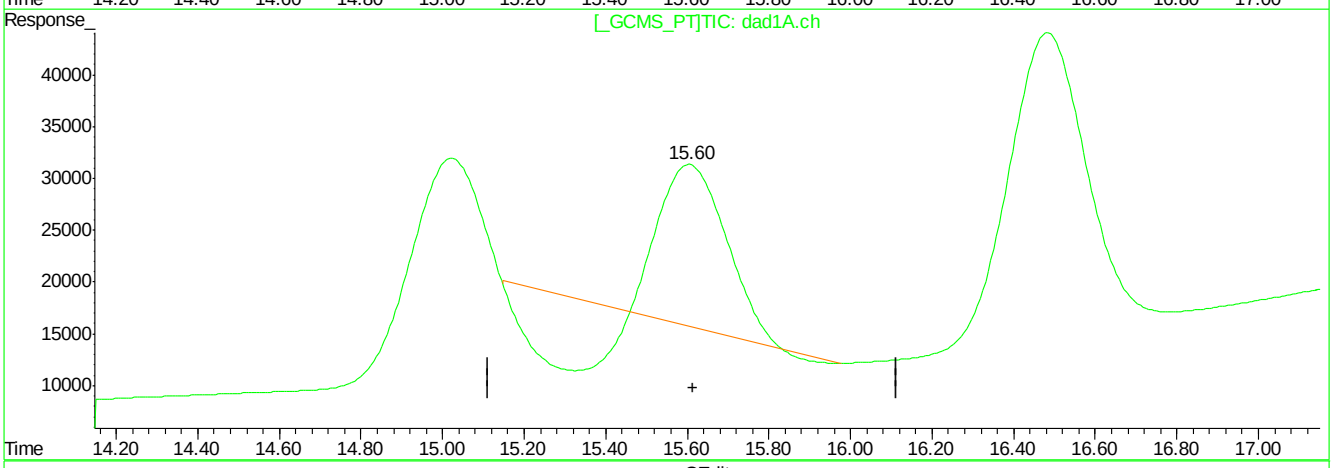
(+) = Expected Retention Time
BB068888.D 8330B_042221_PLUS.M Fri Apr 23 08:55:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1A.ch
Acq On : 22-Apr-2021, 17:11:28 Operator: jamesb
Sample : icv2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:54 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.61min 1020.264ppb

response 3376254

(19) p-Nitrotoluene #2

15.61min 374.946ppb

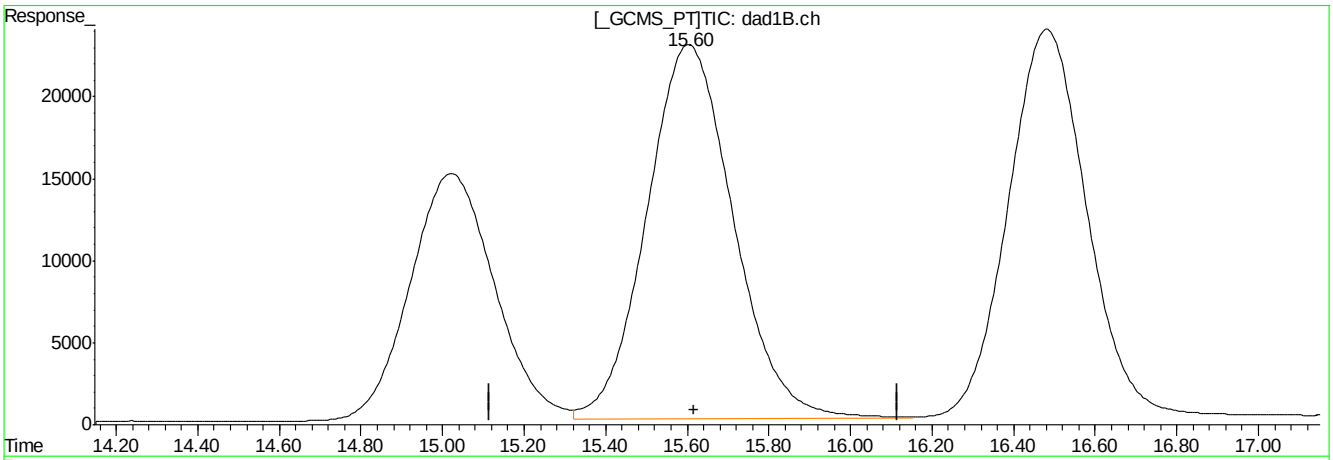
response 1046830

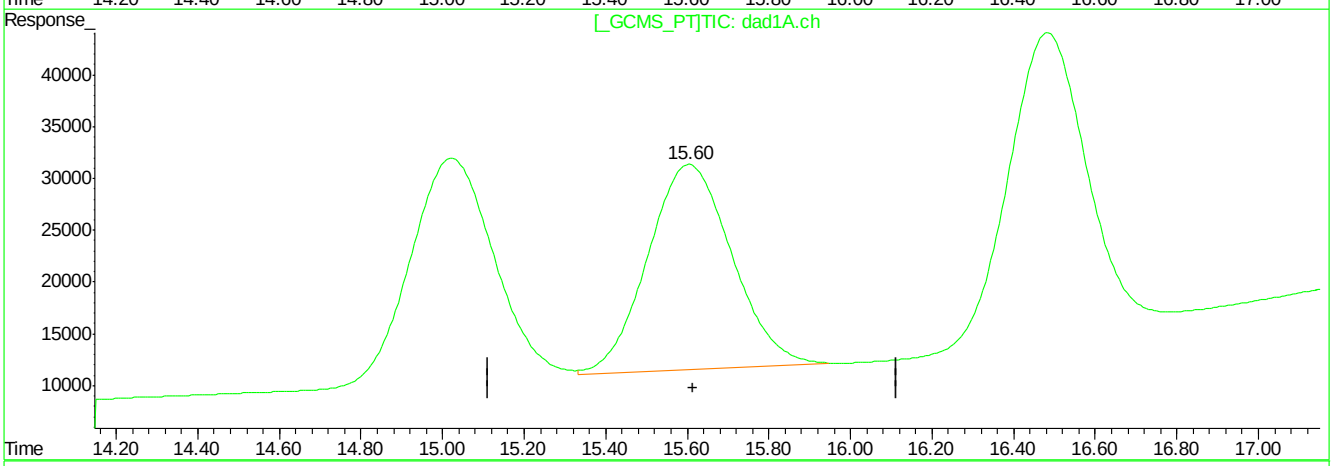
(+) = Expected Retention Time
BB068888.D 8330B_042221_PLUS.M Fri Apr 23 08:55:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1A.ch
Acq On : 22-Apr-2021, 17:11:28 Operator: jamesb
Sample : icv2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:54 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.61min 1020.264ppb

response 3376254

(19) p-Nitrotoluene #2

15.60min 1022.971ppb m

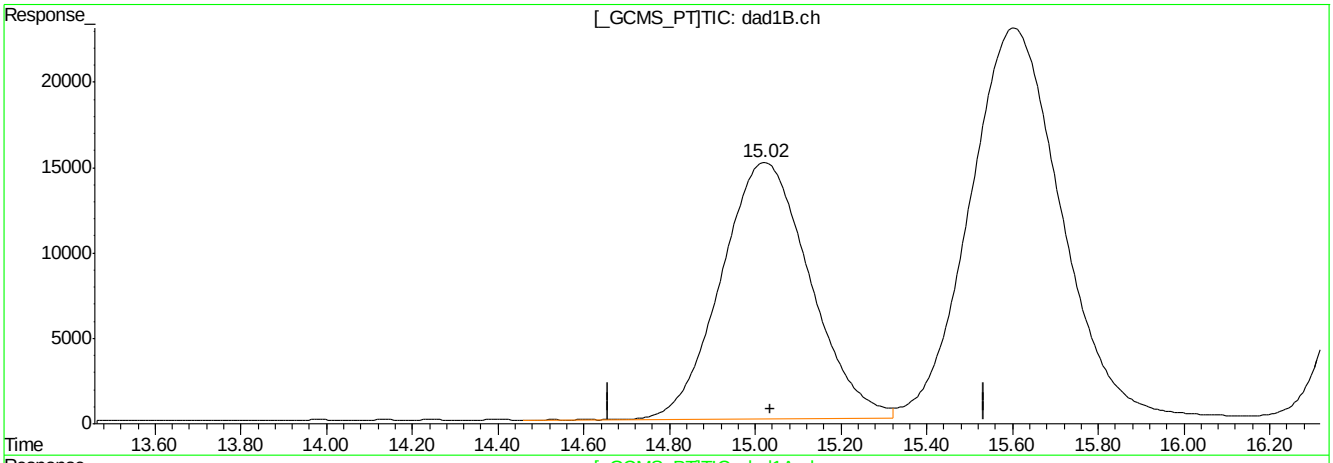
response 2856080

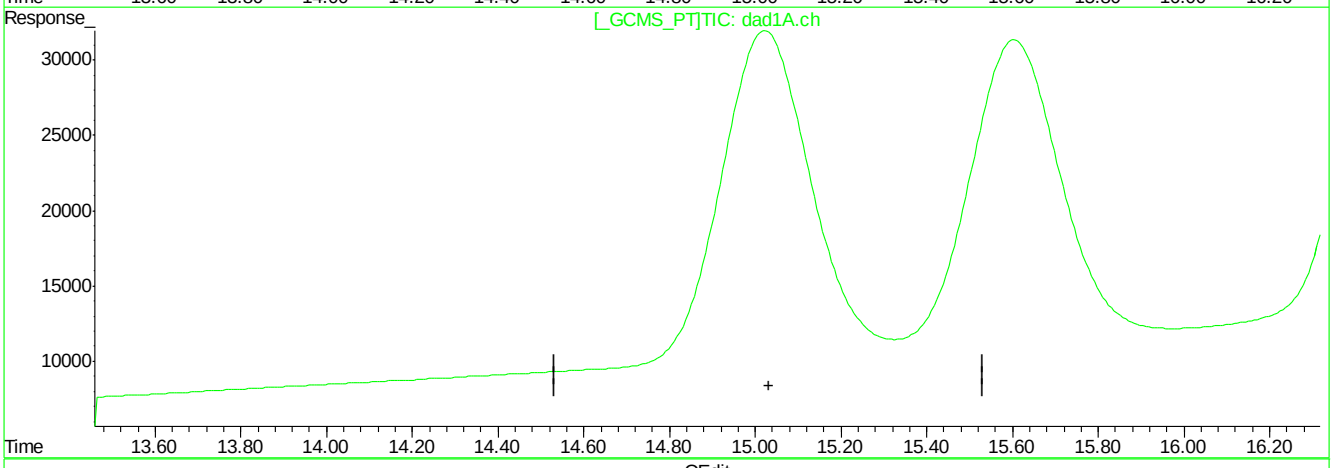
(+) = Expected Retention Time
BB068888.D 8330B_042221_PLUS.M Fri Apr 23 08:55:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1A.ch
Acq On : 22-Apr-2021, 17:11:28 Operator: jamesb
Sample : icv2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:54 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.02min 987.038ppb

response 2161094

(18) o-Nitrotoluene #2

0.00min 0.000ppb

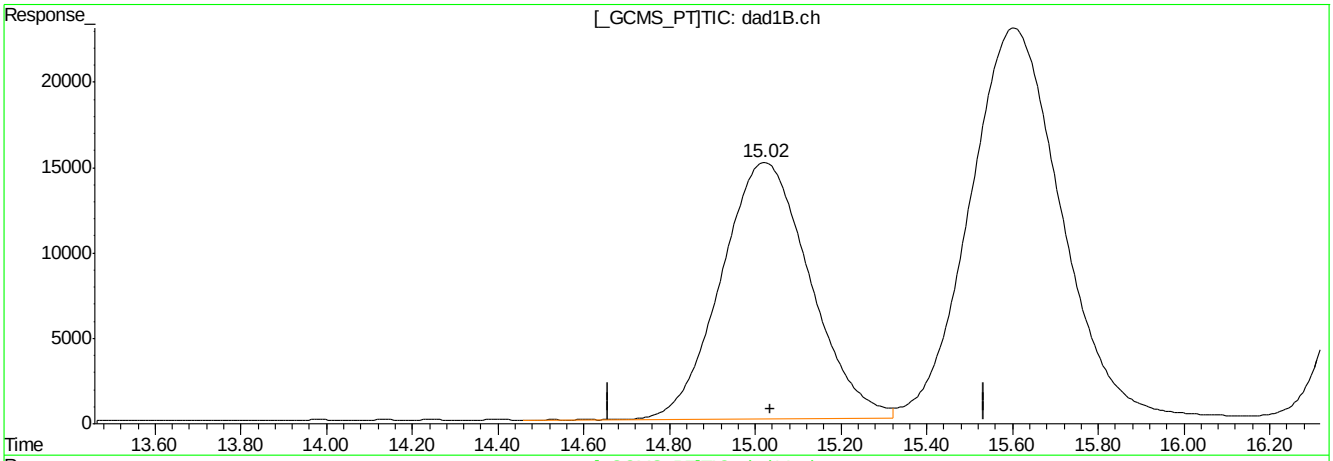
response 0

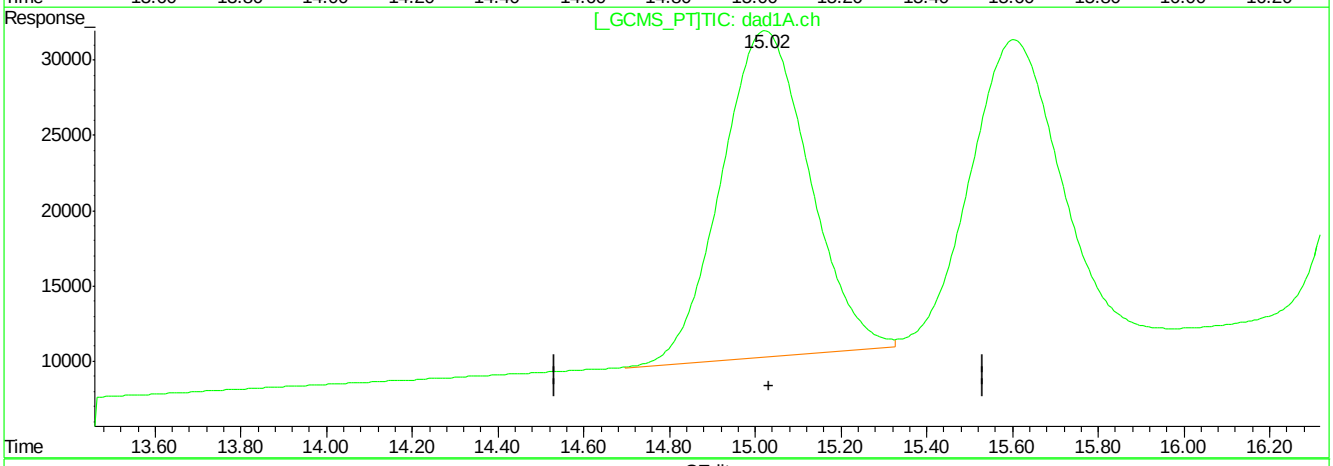
(+) = Expected Retention Time
BB068888.D 8330B_042221_PLUS.M Fri Apr 23 08:55:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\GBB2026\BB068888.D\dad1A.ch
Acq On : 22-Apr-2021, 17:11:28 Operator: jamesb
Sample : icv2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 8:54 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.02min 987.038ppb

response 2161094

(18) o-Nitrotoluene #2

15.02min 1023.155ppb m

response 3112531

(+) = Expected Retention Time
BB068888.D 8330B_042221_PLUS.M Fri Apr 23 08:55:47 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/26/21 15:43

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1A.ch
Acq On : 23-Apr-2021, 22:14:28 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : op85067,GBB2027,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:57:53 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.99	10.99	2106711	3732489	985.054	1058.194
	Spiked Amount 500.000	Range 70 - 136		Recovery =		197.01%#	211.64%#
	Target Compounds						
1)	TNX	1.34	1.34	2397310	3665935	1009.040	998.226
2)	HMX	1.47	1.47	1612938	4392966	1052.823	994.562
3)	DNX	1.71	1.71	2556747	4106444	1011.046	954.557
4)	MNX	2.30	2.30	2868150	4401643	977.299	968.637
5)	RDX	2.92	2.92	1864763	2964080	999.911	997.436
6)	1,3,5-Trinitrobe	4.66	4.66	4026522	6121836	1010.853	981.905
7)	1,3-Dinitrobenze	5.83	5.83	5267195	3850926	1003.132	1059.561
8)	3,5-Dinitroanili	6.22	6.22	3990202	6884650	1001.056	999.348
9)	Nitrobenzene	7.36	7.36	2982055	2976417	966.060	976.635
10)	Nitroglycerin	0.00	9.01	0	1272185	N.D.	999.971 #
11)	Tetryl	9.39	9.39	2995003	4795238	968.336	1005.994
12)	2,4,6-Trinitroto	9.76	9.76	3719650	4501868	998.075	1023.179
13)	2-Amino-4,6-Dini	10.14	10.14	3318065	4962250	985.182	1008.210
14)	4-Amino-2,6-Dini	10.64	10.64	2449205	4892244	980.140	1012.039
16)	2,4-Dinitrotolue	11.63	11.63	4650614	3067306	1021.919	1059.927
17)	2,6-Dinitrotolue	12.11	12.11	2710946	3519361	949.827	982.390
18)	o-Nitrotoluene	15.10	15.10	2112247	2983853	964.728	980.856m
19)	p-Nitrotoluene	15.68	15.69	3276518	2682441	990.125	960.778
20)	m-Nitrotoluene	16.56	16.56	3114804	3561977	948.664	977.739
21)	PETN	0.00	18.52	0	1409181	N.D. d	1079.928m

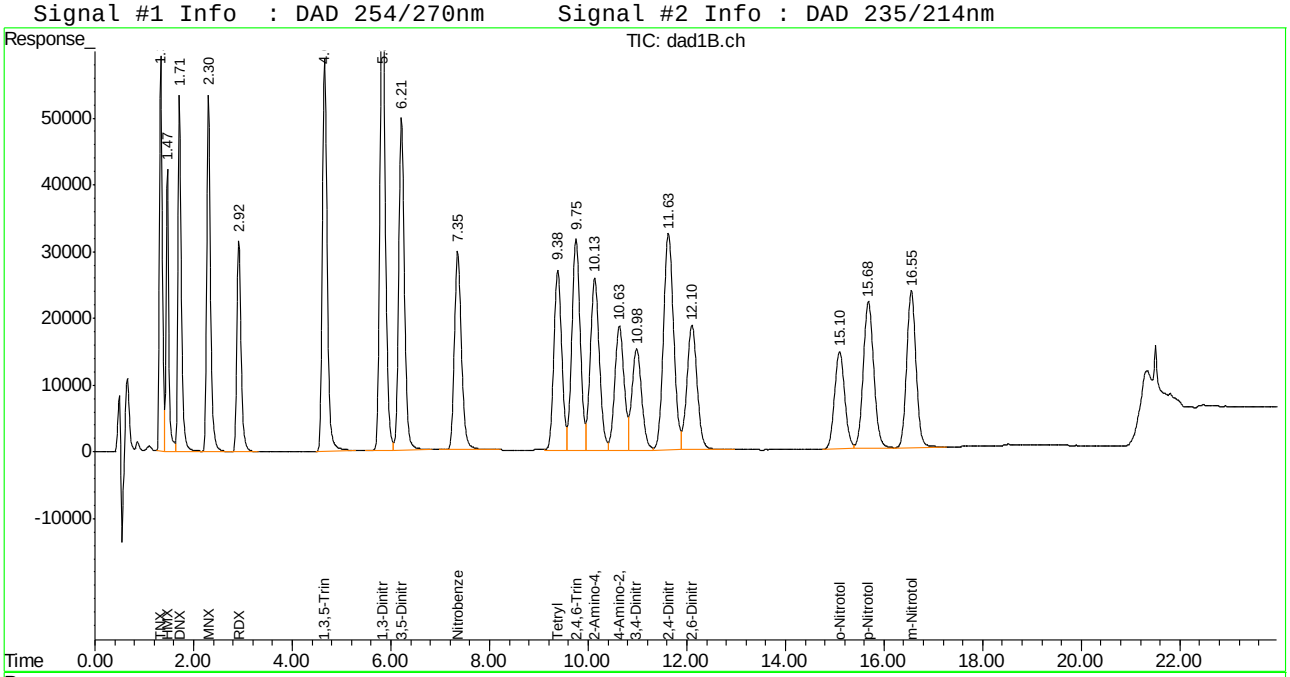
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068931.D 8330B_042221_PLUS.M Mon Apr 26 14:34:10 2021 Page 1

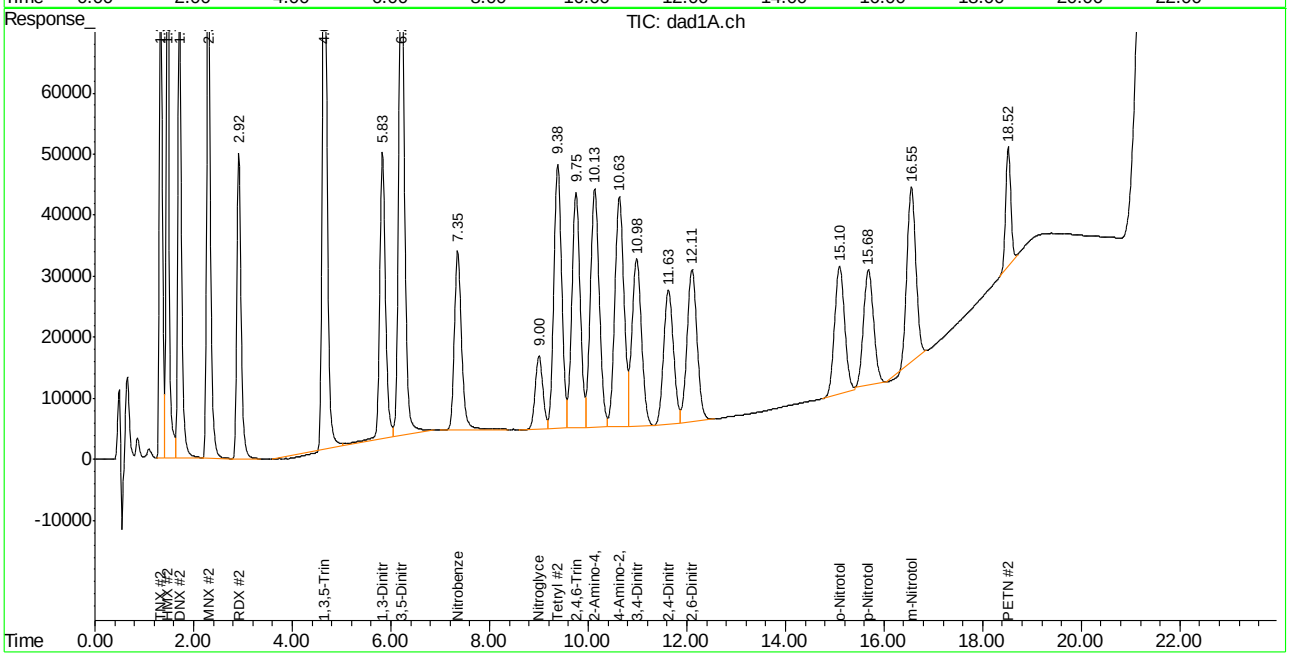
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1A.ch
Acq On : 23-Apr-2021, 22:14:28 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : op85067,GBB2027,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 11:04 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

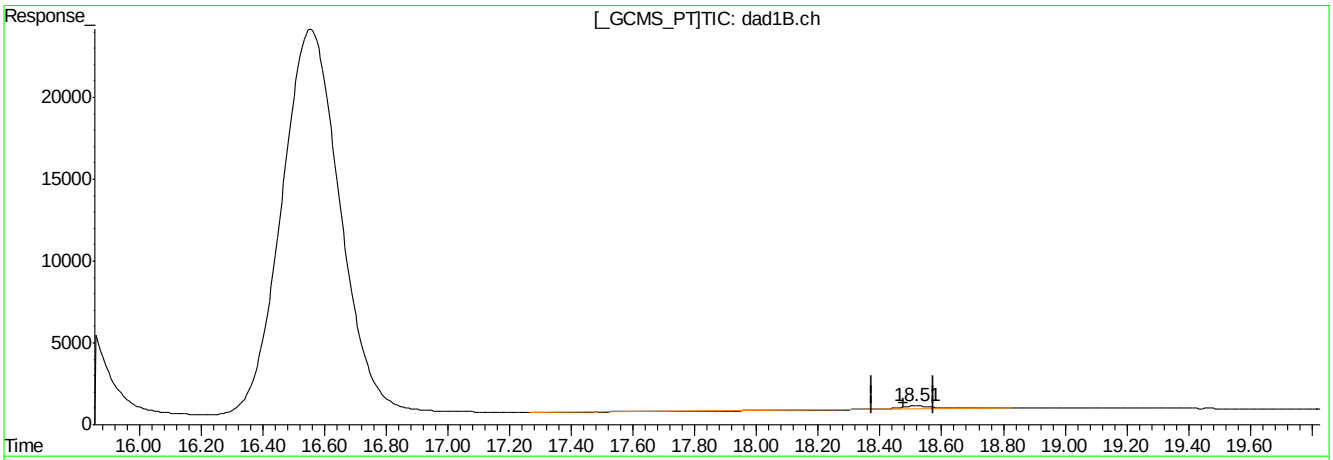
Sample Number: GBB2027-CC2026
Lab FileID: BB068931.D
Injection Time: 04/23/21 22:14
Method: SW846 8330A
Analyst approved: 04/26/21 14:39 James Boone
Supervisor approved: 04/26/21 15:43 Naresh Jiawan

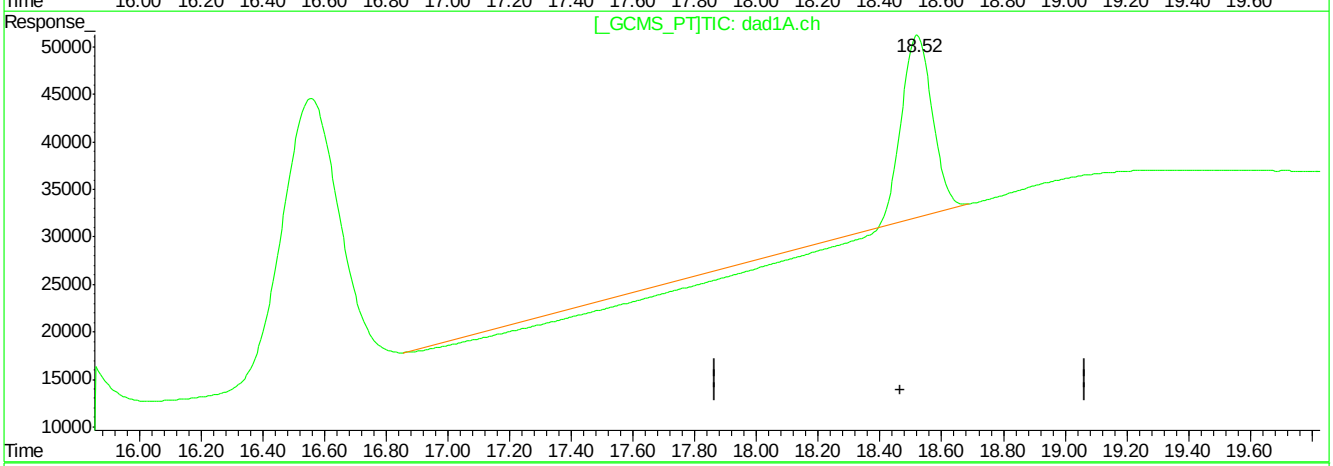
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.10	Poor instrument integration
PETN	78-11-5	2	18.52	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1A.ch
Acq On : 23-Apr-2021, 22:14:28 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:57 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.52min 0.000ppb

response 15321

(21) PETN #2

18.52min 446.890ppb

response 583140

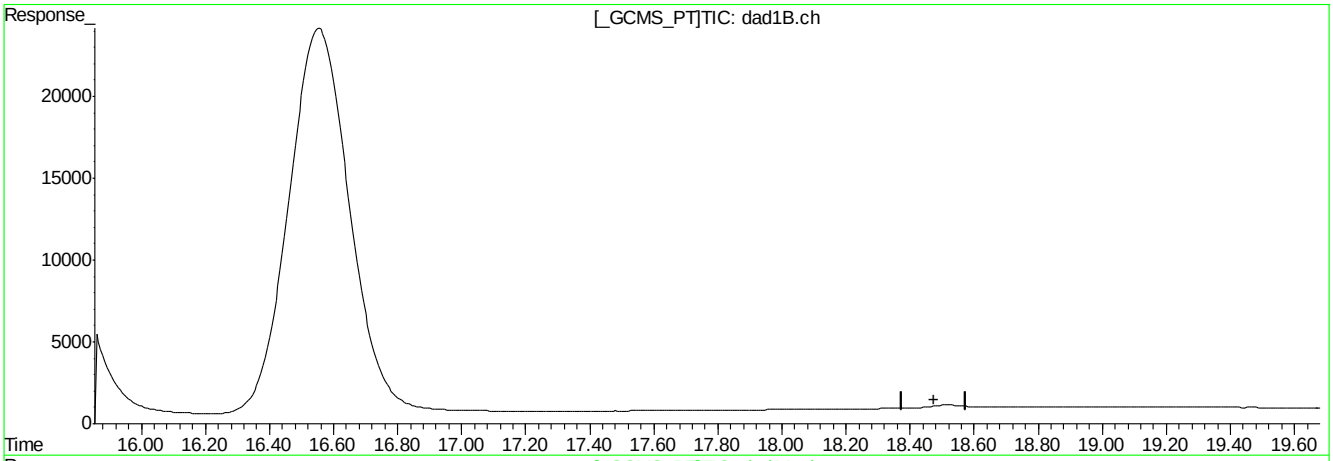
(+) = Expected Retention Time
BB068931.D 8330B_042221_PLUS.M Mon Apr 26 11:04:32 2021

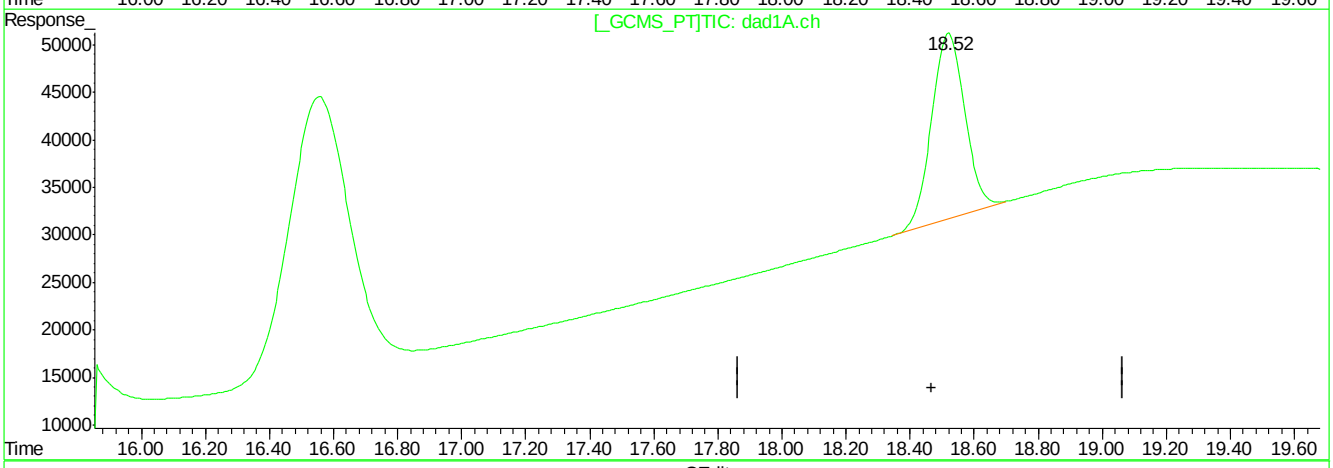
BB068931.D edits: PETN

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1A.ch
Acq On : 23-Apr-2021, 22:14:28 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:57 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.52min 1079.928ppb m

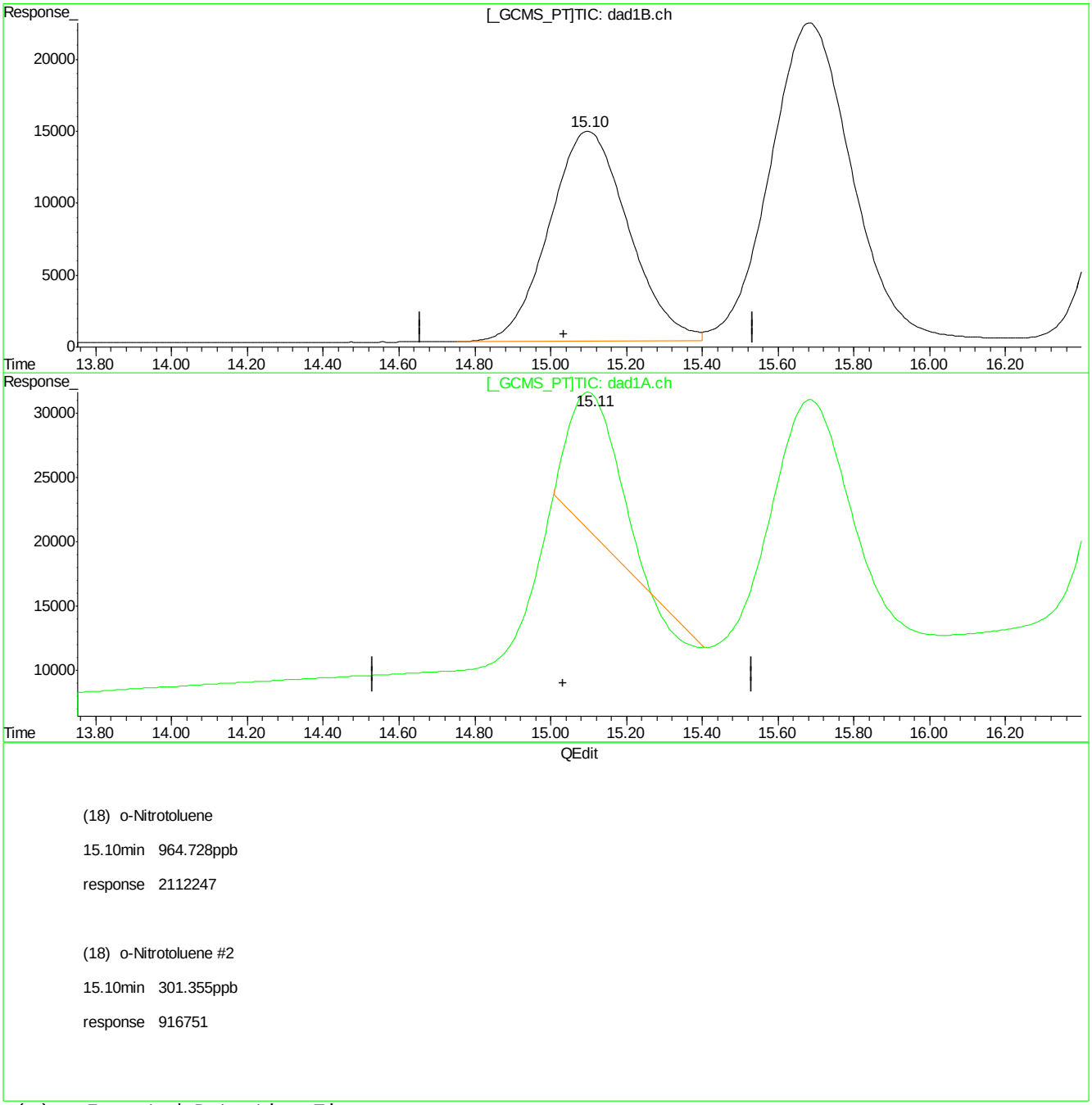
response 1409181

(+) = Expected Retention Time
BB068931.D 8330B_042221_PLUS.M Mon Apr 26 11:04:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1A.ch
Acq On : 23-Apr-2021, 22:14:28 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:57 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration

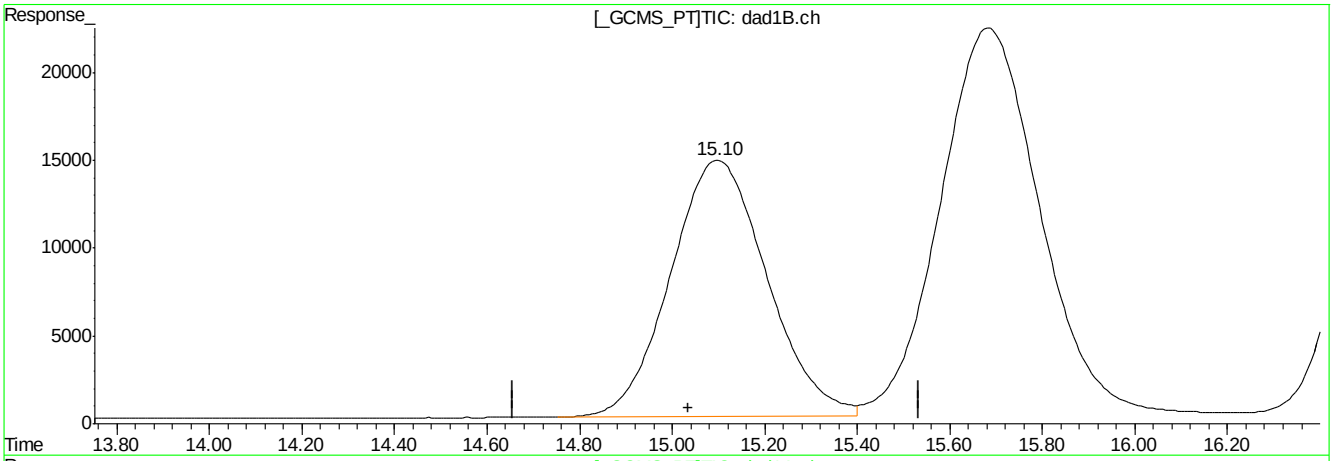


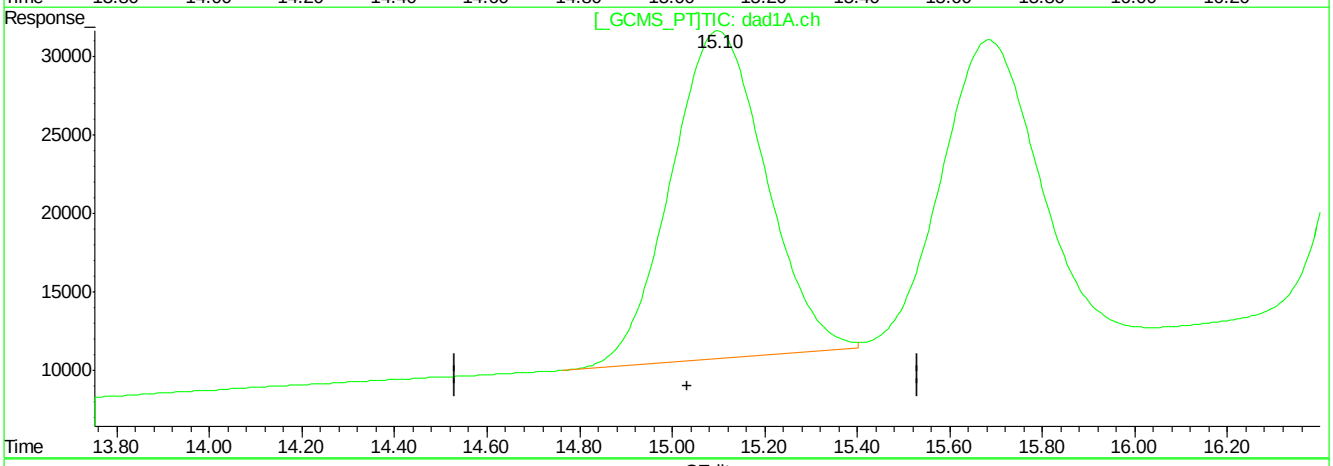
(+) = Expected Retention Time
BB068931.D 8330B_042221_PLUS.M Mon Apr 26 11:04:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068931.D\dad1A.ch
Acq On : 23-Apr-2021, 22:14:28 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:57 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.10min 964.728ppb

response 2112247

(18) o-Nitrotoluene #2

15.10min 980.856ppb m

response 2983853

(+) = Expected Retention Time
BB068931.D 8330B_042221_PLUS.M Mon Apr 26 11:05:02 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/26/21 15:43

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1A.ch
Acq On : 24-Apr-2021, 03:55:12 Operator: jamesb
Sample : ecc2026-1000 Inst : G1315B
Misc : op85067,GBB2027,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:58:04 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.92	10.92	2112353	3742408	987.692	1061.006
	Spiked Amount 500.000	Range 70 - 136		Recovery =		197.54%#	212.20%#
	Target Compounds						
1)	TNX	1.33	1.33	2398385	3662403	1009.492	997.264
2)	HMX	1.46	1.46	1617053	4359569	1055.509	987.001
3)	DNX	1.70	1.70	2536501	4031895	1003.039	937.228
4)	MNX	2.28	2.28	2855735	4384653	973.068	964.898
5)	RDX	2.89	2.89	1865439	2966302	1000.273	998.184
6)	1,3,5-Trinitrobe	4.62	4.62	4022972	6040873	1009.961	968.919
7)	1,3-Dinitrobenze	5.79	5.79	5260504	3802634	1001.857	1046.273
8)	3,5-Dinitroanili	6.17	6.17	3993356	6886107	1001.847	999.560
9)	Nitrobenzene	7.30	7.30	2894391	2860633	937.660	938.643
10)	Nitroglycerin	0.00	8.95	0	1278986	N.D.	1005.316 #
11)	Tetryl	9.32	9.32	2977424	4775594	962.653	1001.873
12)	2,4,6-Trinitroto	9.70	9.70	3728961	4520919	1000.574	1027.508
13)	2-Amino-4,6-Dini	10.08	10.08	3328958	4986238	988.416	1013.084
14)	4-Amino-2,6-Dini	10.57	10.57	2456601	4910426	983.100	1015.800
16)	2,4-Dinitrotolue	11.57	11.57	4657637	3060093	1023.463	1057.434
17)	2,6-Dinitrotolue	12.05	12.05	2716488	3534387	951.769	986.584
18)	o-Nitrotoluene	15.04	15.04	2043580	2922045	933.366	960.538m
19)	p-Nitrotoluene	15.62	15.62	3205017	2782580	968.518	996.645m
20)	m-Nitrotoluene	16.50	16.50	3025283	3472171	921.399	953.088
21)	PETN	0.00	18.48	0	1427753	N.D. d	1094.161m

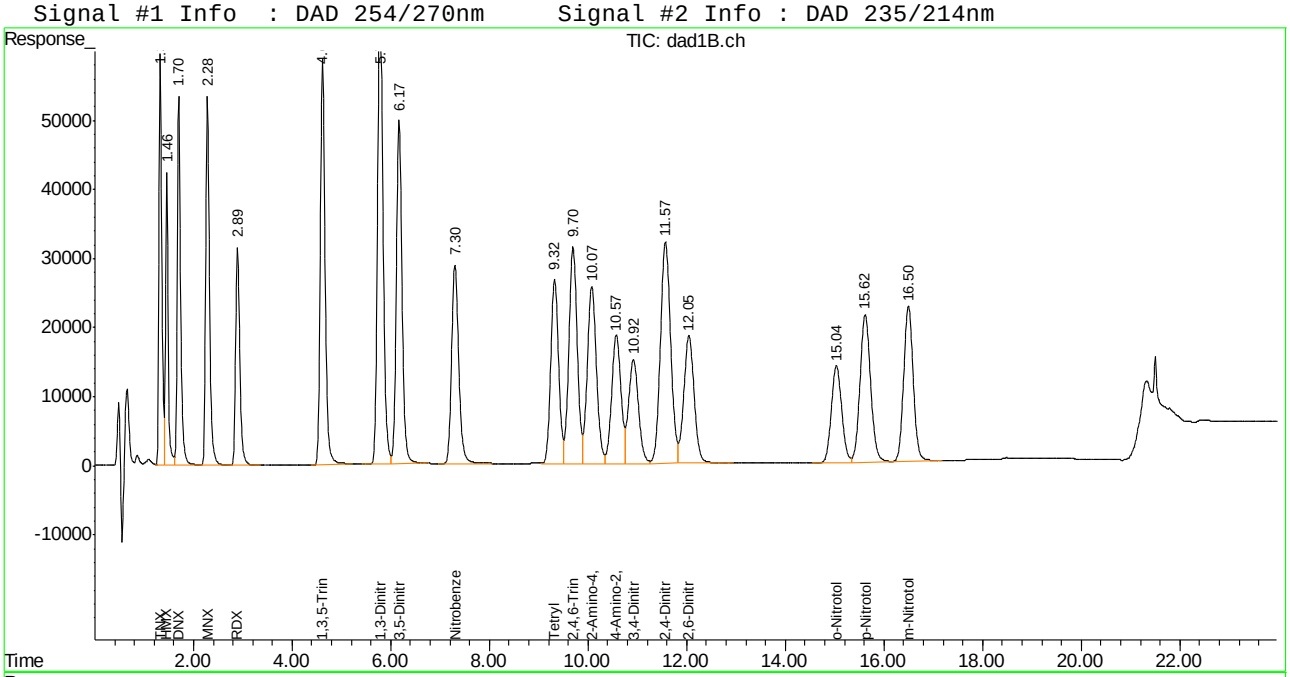
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068942.D 8330B_042221_PLUS.M Mon Apr 26 14:34:20 2021 Page 1

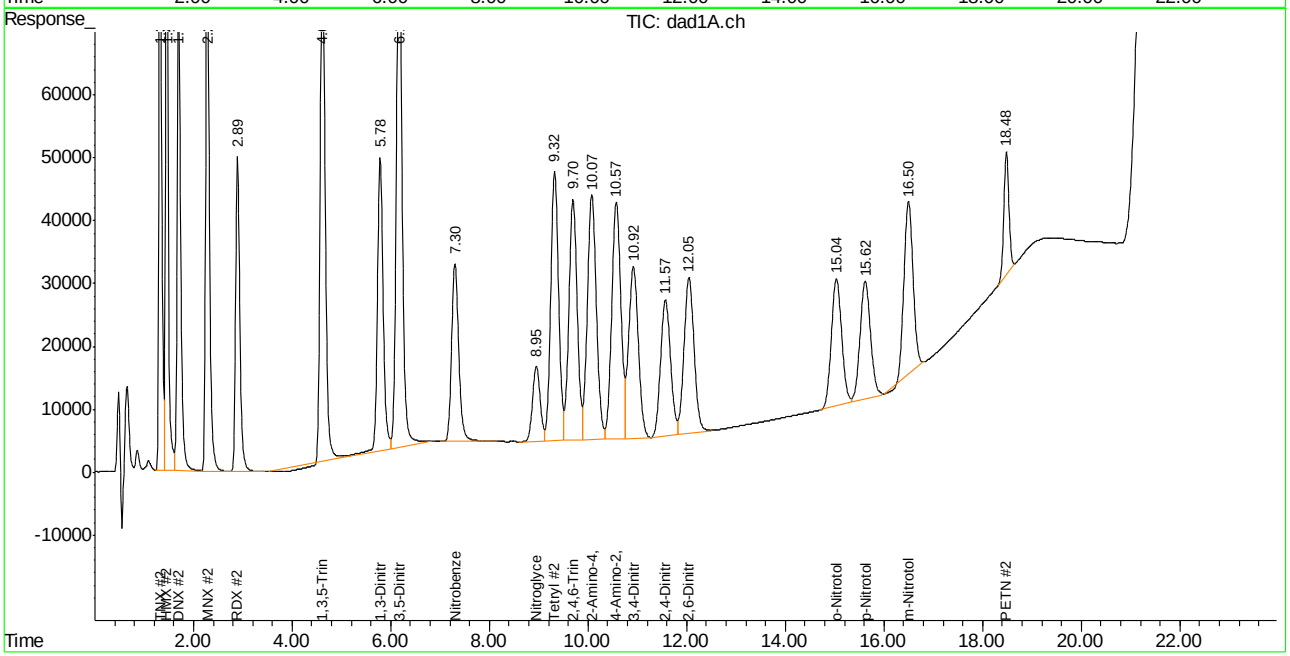
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1A.ch
Acq On : 24-Apr-2021, 03:55:12 Operator: jamesb
Sample : ecc2026-1000 Inst : G1315B
Misc : op85067,GBB2027,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 11:06 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

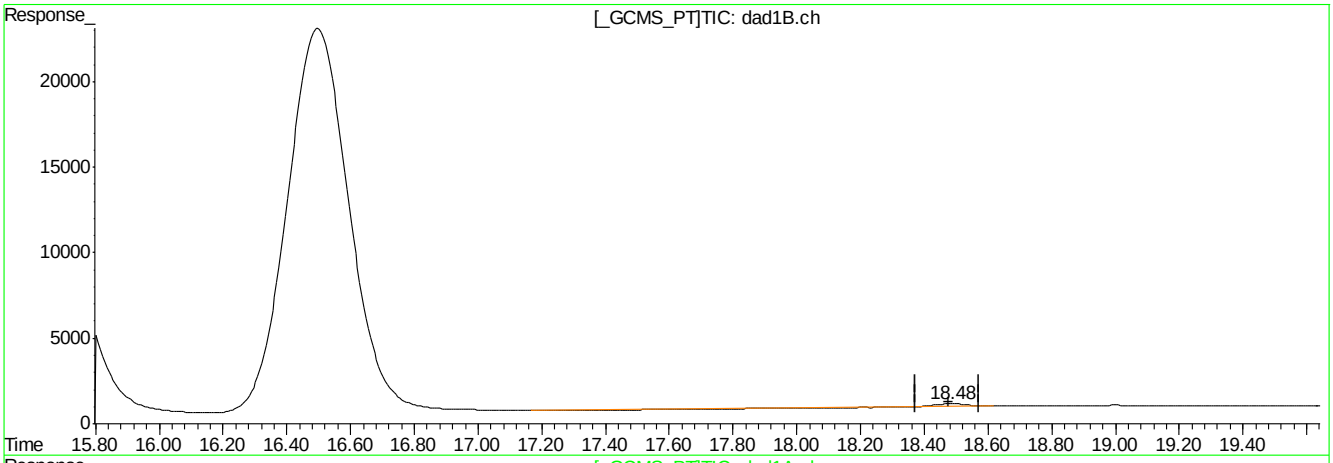
Sample Number: GBB2027-ECC2026
Lab FileID: BB068942.D
Injection Time: 04/24/21 03:55
Method: SW846 8330A
Analyst approved: 04/26/21 14:39 James Boone
Supervisor approved: 04/26/21 15:43 Naresh Jiawan

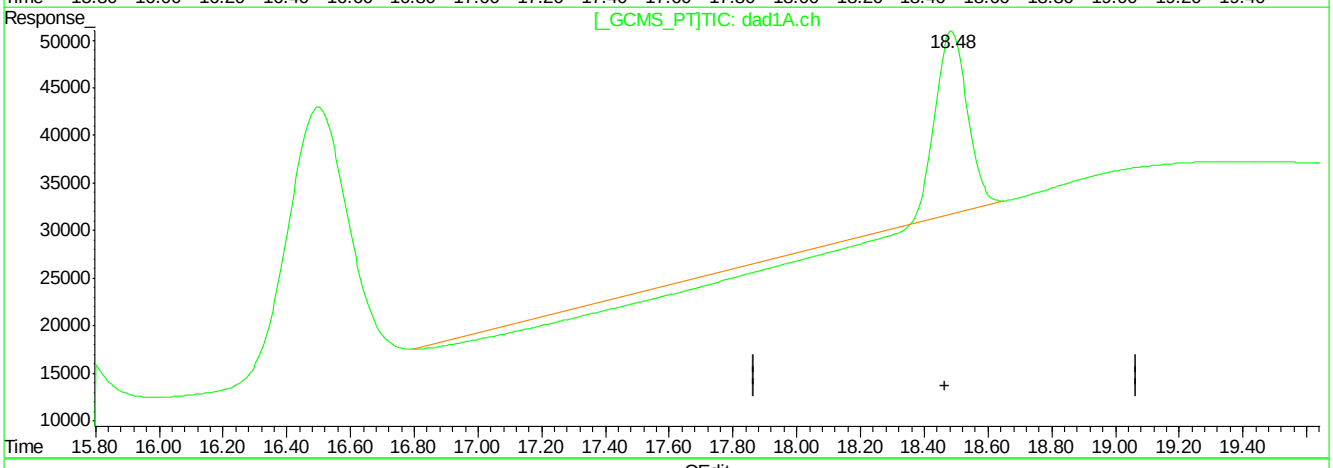
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.04	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.62	Poor instrument integration
PETN	78-11-5	2	18.48	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1A.ch
Acq On : 24-Apr-2021, 03:55:12 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:58 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.49min 0.000ppb

response 10462

(21) PETN #2

18.49min 433.643ppb

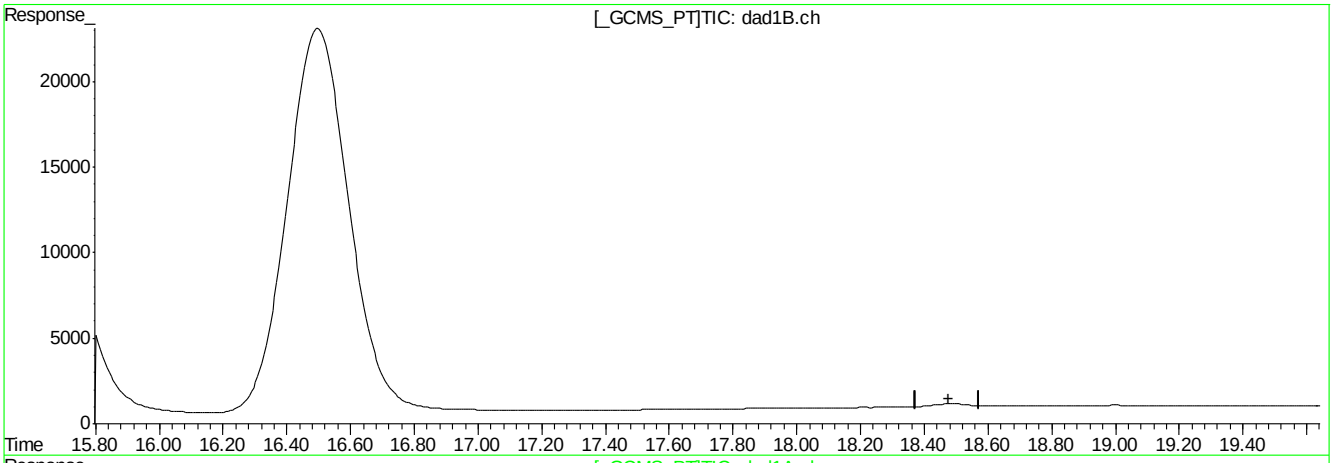
response 565854

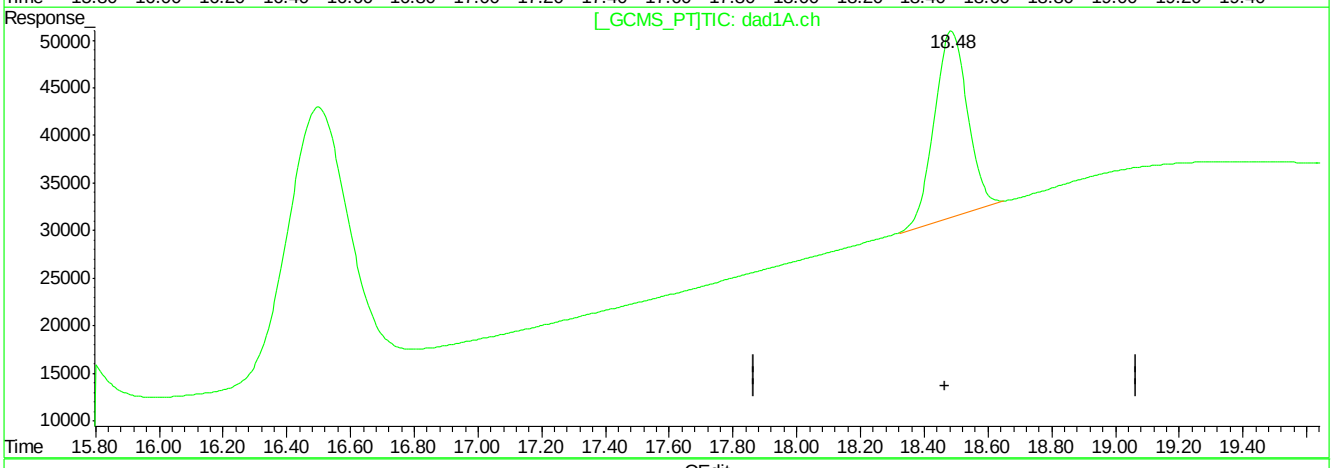
(+) = Expected Retention Time
BB068942.D 8330B_042221_PLUS.M Mon Apr 26 11:05:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1A.ch
Acq On : 24-Apr-2021, 03:55:12 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:58 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.48min 1094.161ppb m

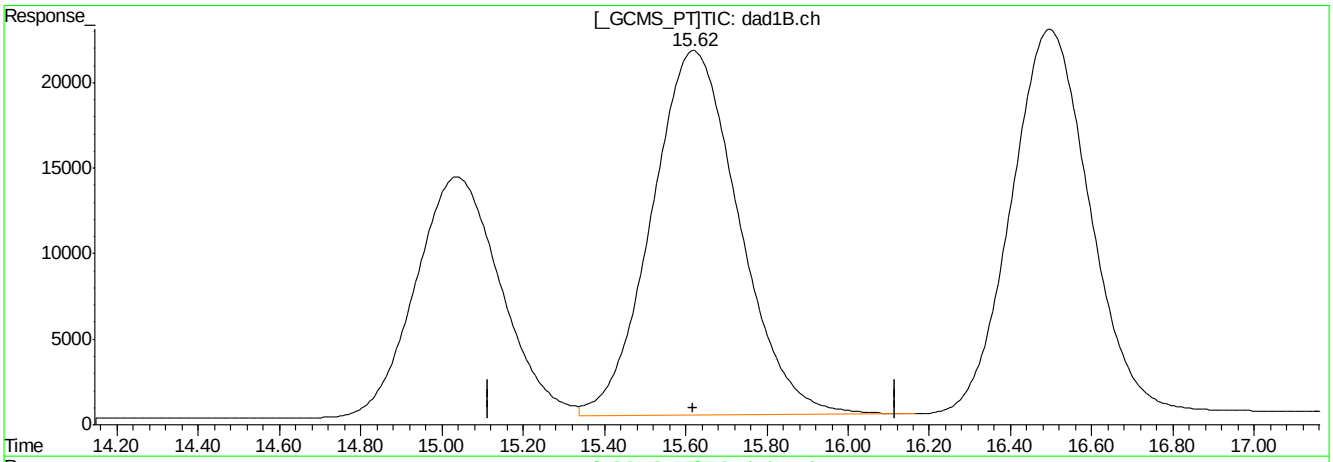
response 1427753

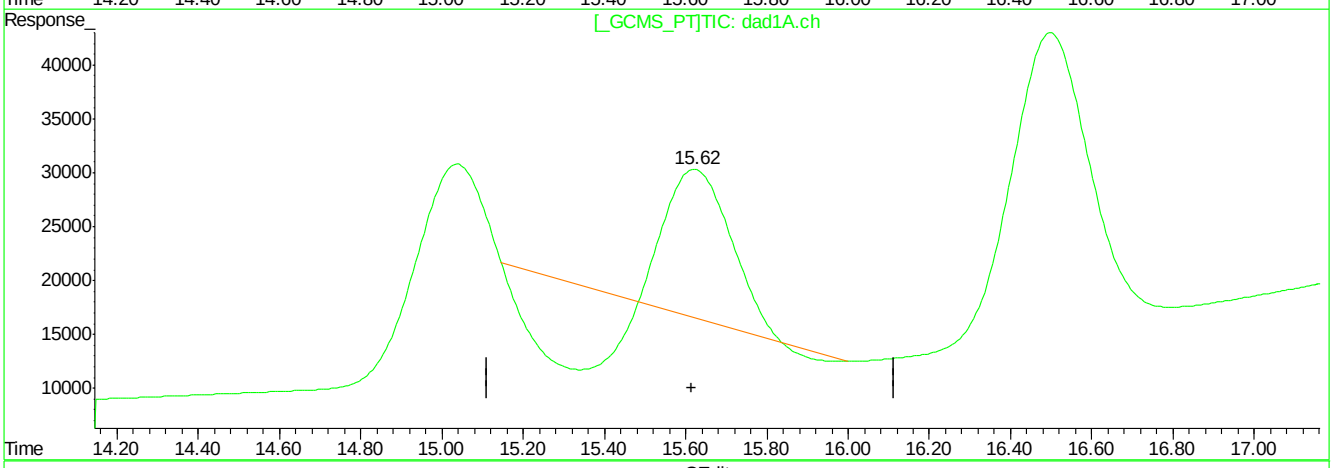
(+) = Expected Retention Time
BB068942.D 8330B_042221_PLUS.M Mon Apr 26 11:05:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1A.ch
Acq On : 24-Apr-2021, 03:55:12 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:58 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.62min 968.518ppb

response 3205017

(19) p-Nitrotoluene #2

15.62min 216.337ppb

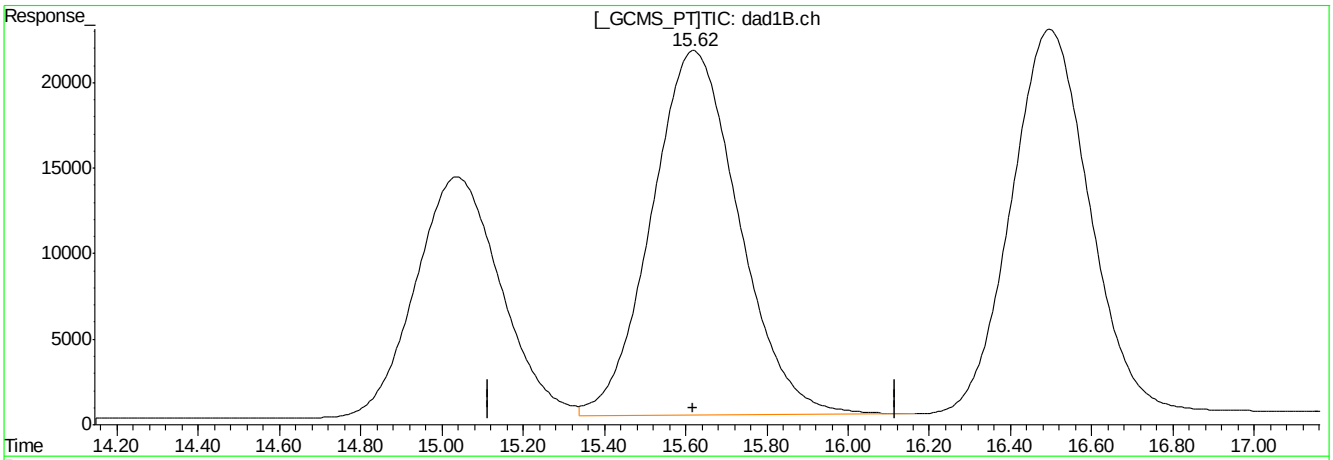
response 604000

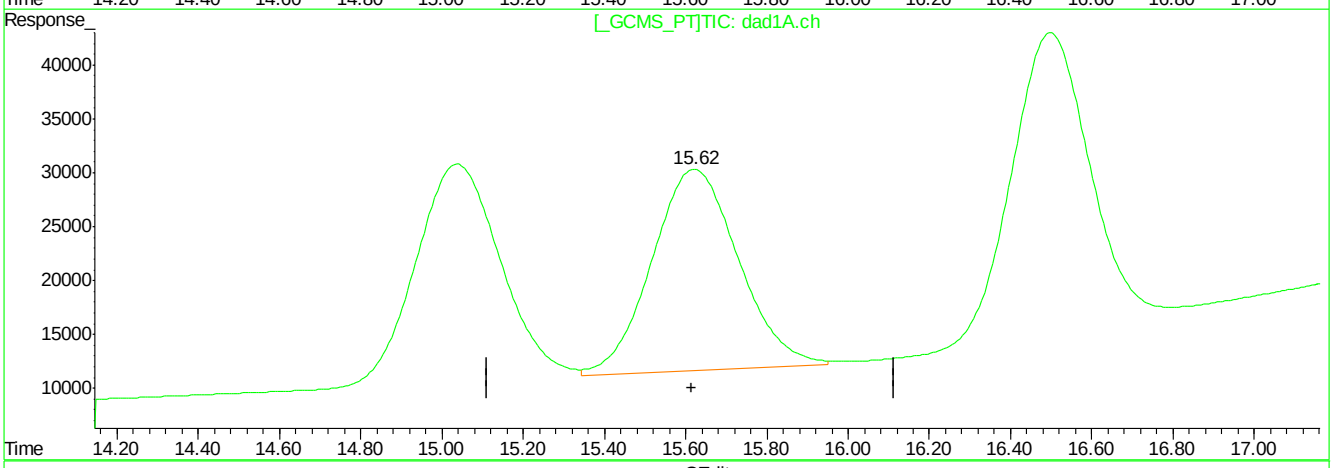
(+) = Expected Retention Time
BB068942.D 8330B_042221_PLUS.M Mon Apr 26 11:06:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1A.ch
Acq On : 24-Apr-2021, 03:55:12 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:58 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.62min 968.518ppb

response 3205017

(19) p-Nitrotoluene #2

15.62min 996.645ppb m

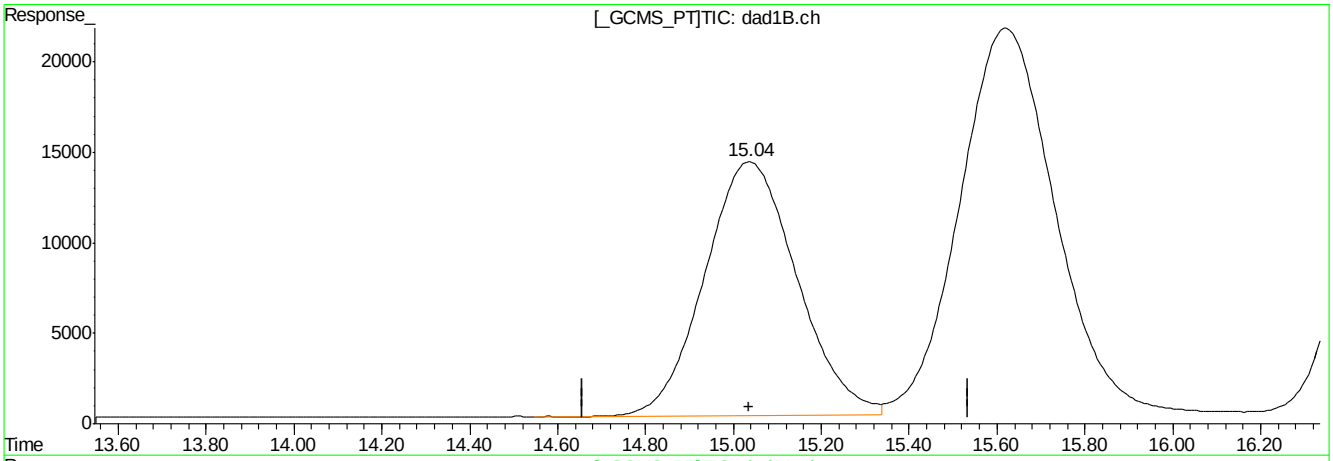
response 2782580

(+) = Expected Retention Time
BB068942.D 8330B_042221_PLUS.M Mon Apr 26 11:06:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1A.ch
Acq On : 24-Apr-2021, 03:55:12 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:58 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.04min 933.366ppb

response 2043580

(18) o-Nitrotoluene #2

0.00min 0.000ppb

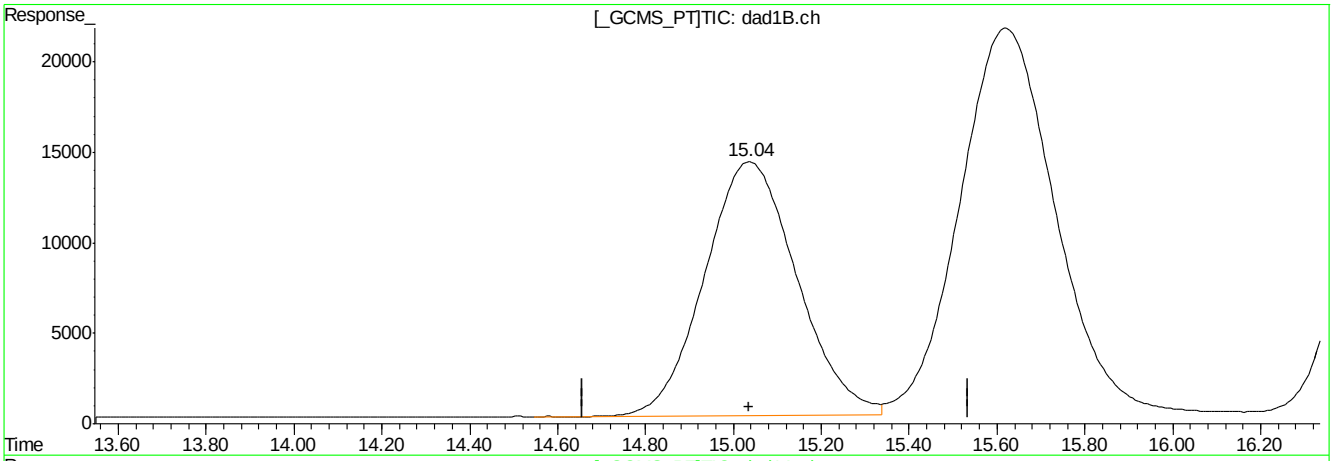
response 0

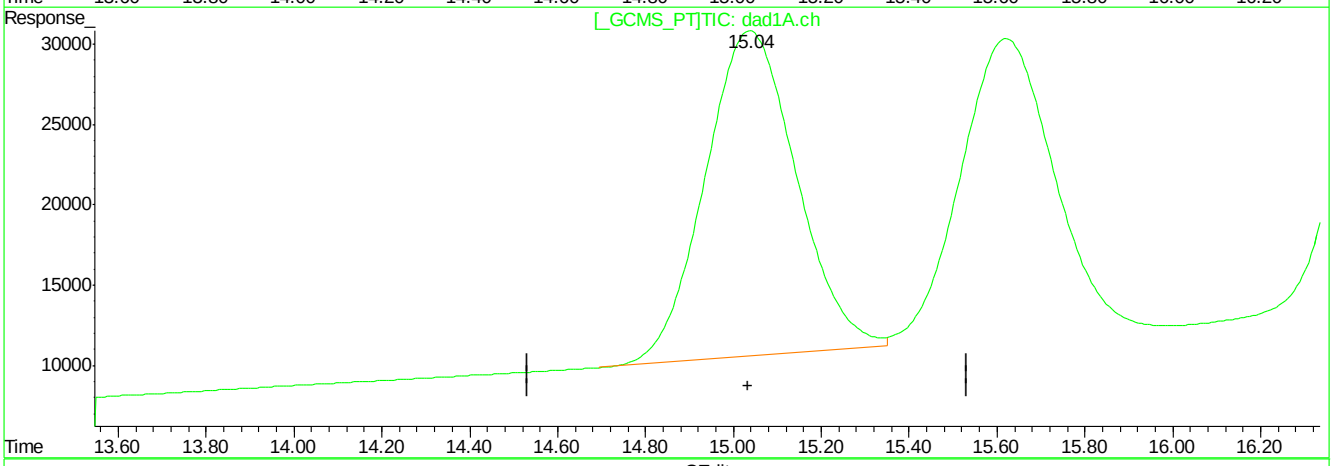
(+) = Expected Retention Time
BB068942.D 8330B_042221_PLUS.M Mon Apr 26 11:06:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GBB2027\BB068942.D\dad1A.ch
Acq On : 24-Apr-2021, 03:55:12 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 26 10:58 2021 Quant Results File: 8330B_042221_PLUS.RES

Method : C:\MSDCHEM\2\METHODS\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.04min 933.366ppb

response 2043580

(18) o-Nitrotoluene #2

15.04min 960.538ppb m

response 2922045

(+) = Expected Retention Time
BB068942.D 8330B_042221_PLUS.M Mon Apr 26 11:06:22 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/27/21 09:29

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2028\BB068963.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2028\BB068963.D\dad1A.ch
Acq On : 26-Apr-2021, 17:23:03 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : op85001,GBB2028,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 27 09:06:50 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.92	10.92	2020736	3584390	944.854	1016.206
	Spiked Amount 500.000	Range 70 - 136		Recovery =		188.97%#	203.24%#
	Target Compounds						
1)	TNX	1.33	1.33	2295660	3512596	966.255	956.472
2)	HMX	1.46	1.46	1550347	4201112	1011.967	951.127
3)	DNX	1.70	1.70	2444633	3888967	966.711	904.004
4)	MNX	2.29	2.29	2764292	4246452	941.910	934.485
5)	RDX	2.90	2.90	1802905	2861496	966.741	962.916
6)	1,3,5-Trinitrobe	4.62	4.62	3869290	6137557	971.380	984.426m
7)	1,3-Dinitrobenze	5.79	5.79	5035572	3653889	959.019	1005.347
8)	3,5-Dinitroanili	6.17	6.17	3850592	6665224	966.031	967.497
9)	Nitrobenzene	7.31	7.31	2936692	2900789	951.364	951.819
10)	Nitroglycerin	0.00	8.96	0	1225029	N.D.	962.905 #
11)	Tetryl	9.33	9.33	2874451	4637164	929.360	972.831
12)	2,4,6-Trinitroto	9.70	9.70	3573761	4337399	958.930	985.798
13)	2-Amino-4,6-Dini	10.08	10.08	3206617	4802923	952.091	975.838
14)	4-Amino-2,6-Dini	10.58	10.58	2363625	4721965	945.892	976.814
16)	2,4-Dinitrotolue	11.57	11.57	4449296	2925958	977.682	1011.083
17)	2,6-Dinitrotolue	12.05	12.05	2597109	3389626	909.942	946.176
18)	o-Nitrotoluene	15.04	15.04	2069534	2993722	945.219	984.100m
19)	p-Nitrotoluene	15.62	15.62	3183441	2773359	961.998	993.343m
20)	m-Nitrotoluene	16.50	16.50	3039695	3811616	925.789	1046.264m
21)	PETN	0.00	18.49	0	1347698	N.D. d	1032.810m

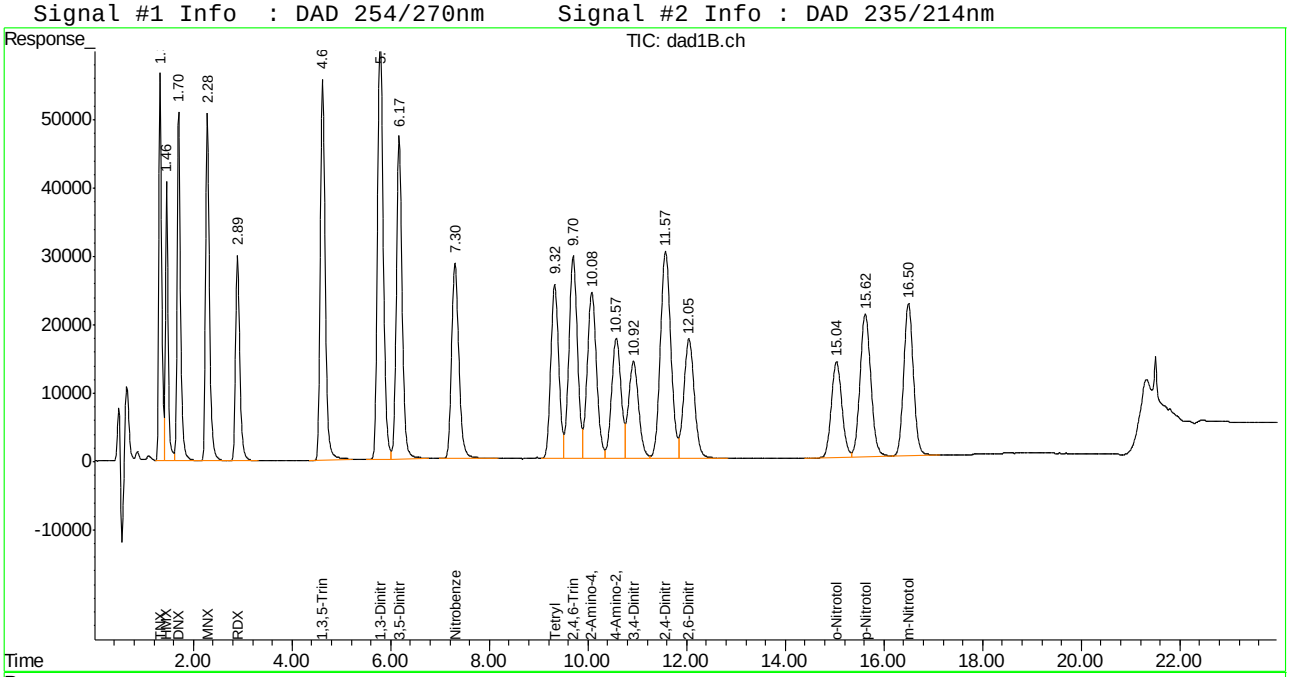
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068963.D 8330B_042221_PLUS.M Tue Apr 27 09:20:40 2021 Page 1

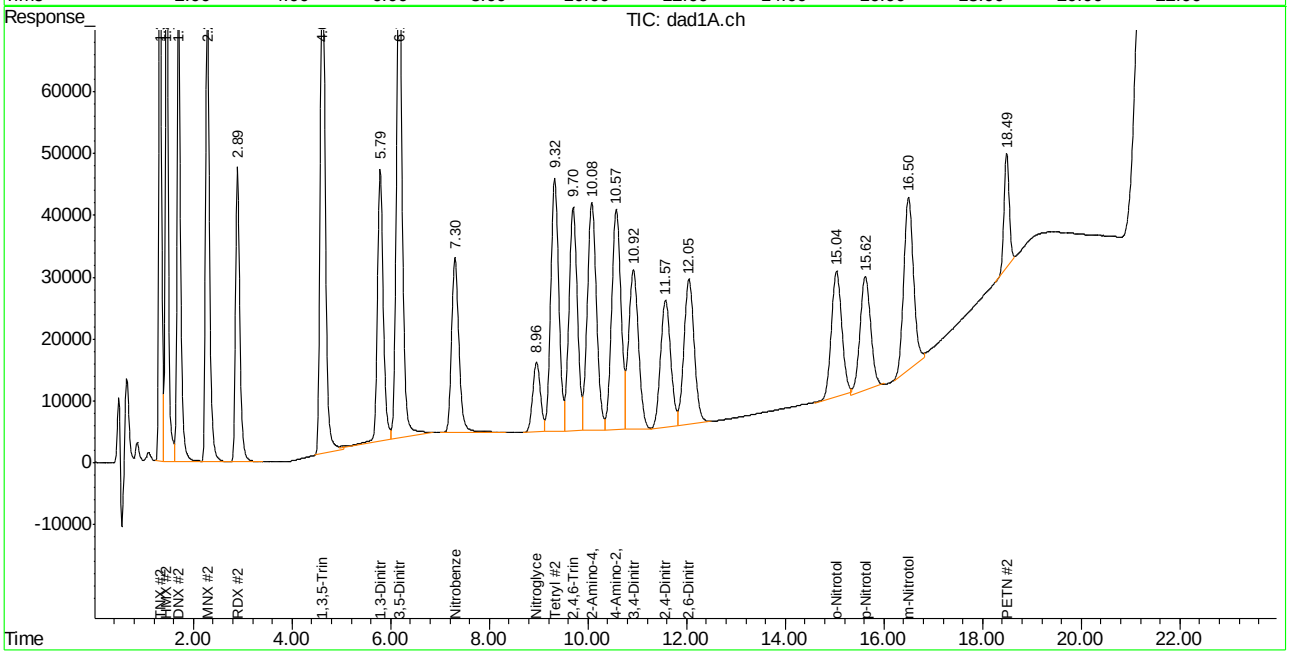
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2028\BB068963.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2028\BB068963.D\dad1A.ch
Acq On : 26-Apr-2021, 17:23:03 Operator: jamesb
Sample : cc2026-1000 Inst : G1315B
Misc : op85001,GBB2028,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 27 9:18 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number: GBB2028-CC2026
Lab FileID: BB068963.D
Injection Time: 04/26/21 17:23
Method: SW846 8330A
Analyst approved: 04/27/21 09:29 Naresh Jiawan
Supervisor approved: 04/27/21 09:29 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.62	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.04	Poorly defined baseline
p-Nitrotoluene	99-99-0	2	15.62	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.50	Poorly defined baseline
PETN	78-11-5	2	18.49	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/27/21 12:29

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2028\BB068974.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2028\BB068974.D\dad1A.ch
Acq On : 26-Apr-2021, 23:03:47 Operator: jamesb
Sample : ecc2026-1000 Inst : G1315B
Misc : op85042,GBB2028,1040,,,10,10,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 27 09:07:01 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.94	10.94	2014878	3567571	942.115	1011.438
	Spiked Amount 500.000	Range 70 - 136		Recovery =		188.42%#	202.29%#
	Target Compounds						
1)	TNX	1.33	1.33	2303060	3518209	969.370	958.001
2)	HMX	1.46	1.46	1563495	4247079	1020.550	961.533
3)	DNX	1.70	1.70	2467117	3964720	975.602	921.613
4)	MNX	2.29	2.29	2765097	4243541	942.184	933.844
5)	RDX	2.90	2.90	1801581	2857824	966.031	961.681
6)	1,3,5-Trinitrobe	4.62	4.62	3871130	6121791	971.842	981.898m
7)	1,3-Dinitrobenze	5.79	5.79	5038085	3764475	959.498	1035.774
8)	3,5-Dinitroanili	6.18	6.18	3852234	6748648	966.443	979.607
9)	Nitrobenzene	7.31	7.31	2829401	2820452	916.606	925.459
10)	Nitroglycerin	0.00	8.96	0	1216881	N.D.	956.500 #
11)	Tetryl	9.33	9.33	2860362	4600074	924.805	965.050
12)	2,4,6-Trinitroto	9.71	9.71	3579960	4331979	960.593	984.567
13)	2-Amino-4,6-Dini	10.09	10.09	3206654	4787363	952.102	972.677
14)	4-Amino-2,6-Dini	10.59	10.59	2362521	4709591	945.450	974.254
16)	2,4-Dinitrotolue	11.59	11.59	4447890	2917523	977.373	1008.169
17)	2,6-Dinitrotolue	12.07	12.07	2598466	3368850	910.418	940.376
18)	o-Nitrotoluene	15.06	15.06	1980497	2945405	904.553	968.217m
19)	p-Nitrotoluene	15.64	15.64	3089406	2651797	933.582	949.802m
20)	m-Nitrotoluene	16.52	16.52	2927937	3624822	891.751	994.990m
21)	PETN	0.00	18.50	0	1366548	N.D. d	1047.256m

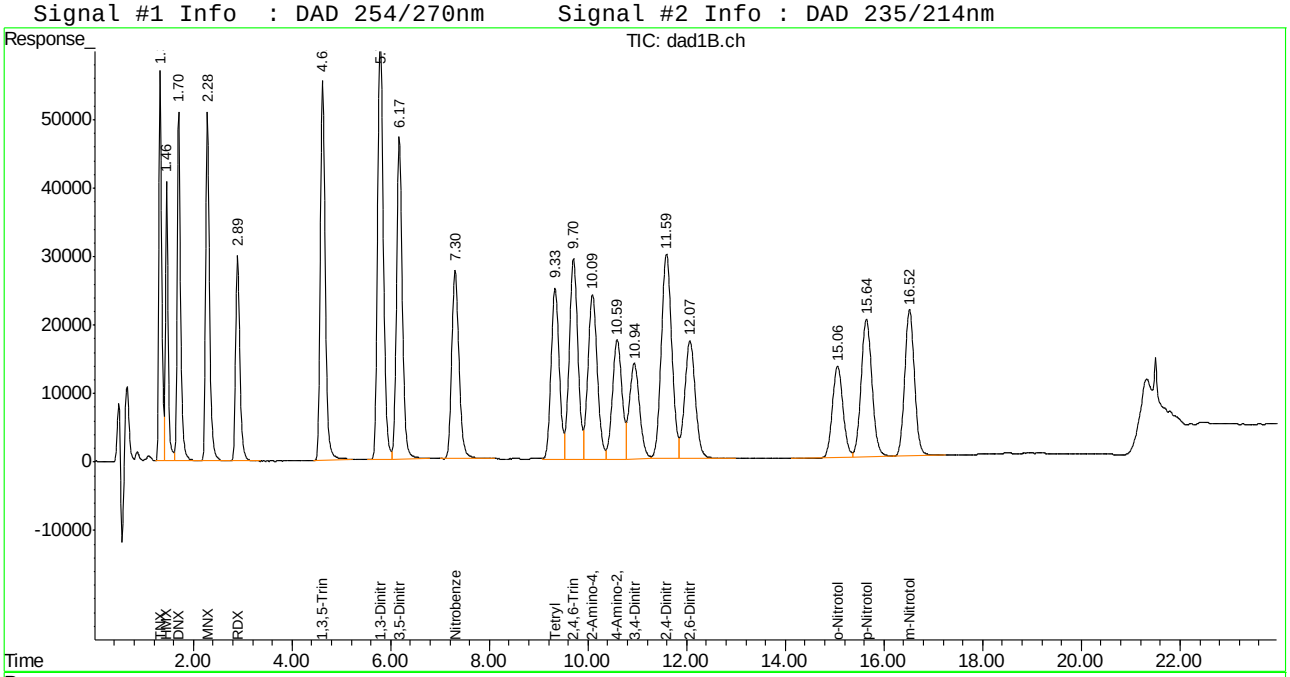
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB068974.D 8330B_042221_PLUS.M Tue Apr 27 10:18:06 2021 Page 1

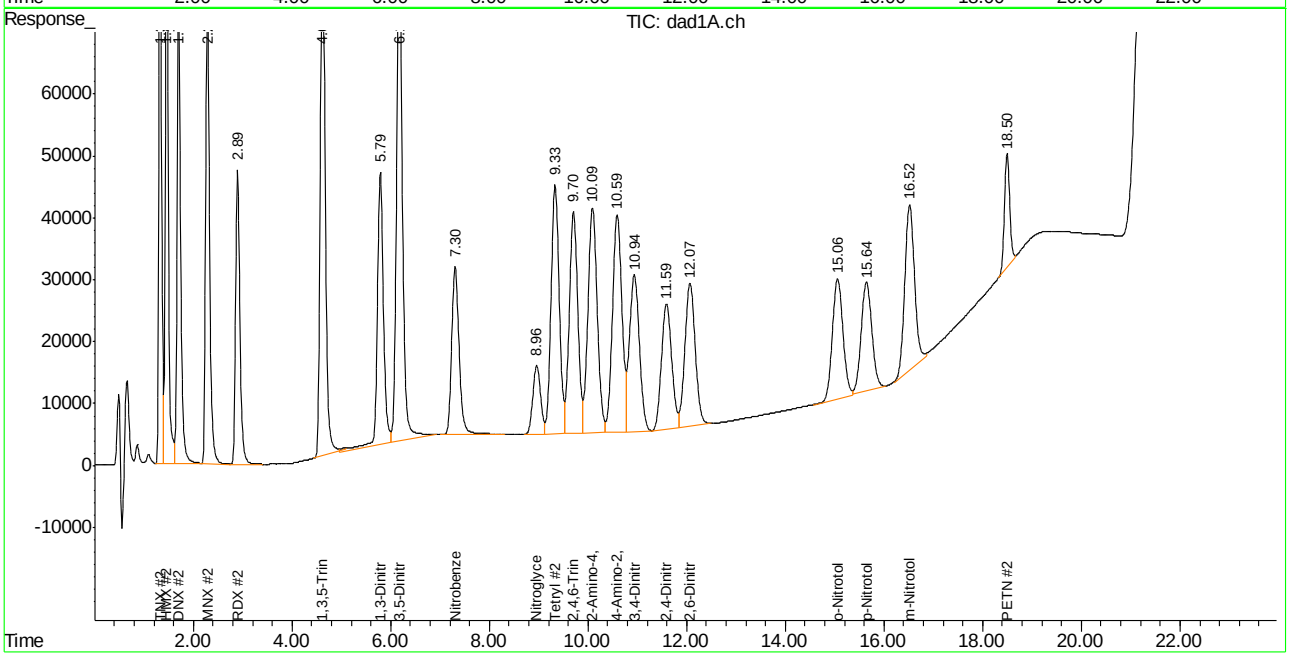
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GBB2028\BB068974.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GBB2028\BB068974.D\dad1A.ch
Acq On : 26-Apr-2021, 23:03:47 Operator: jamesb
Sample : ecc2026-1000 Inst : G1315B
Misc : op85042,GBB2028,1040,,,10,10,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Apr 27 10:04 2021 Quant Results File: 8330B_042221_PLUS.RES

Quant Method : C:\MSDCHEM\2...\8330B_042221_PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Apr 23 08:54:10 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number:	GBB2028-ECC2026	**Method:**	SW846 8330A
Lab FileID:	BB068974.D	**Analyst approved:**	04/27/21 10:32 Naresh Jiawan
Injection Time:	04/26/21 23:03	**Supervisor approved:**	04/27/21 12:29 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	2	4.62	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.06	Poorly defined baseline
p-Nitrotoluene	99-99-0	2	15.64	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.52	Poorly defined baseline
PETN	78-11-5	2	18.50	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
03/23/21 11:59

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : op84480,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 09:38:51 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.14	14.13	98886	290164	18.566m	26.630 #
	Spiked Amount 500.000	Range 70 - 136		Recovery =		3.71%#	5.33%#
	Target Compounds						
1)	TNX	4.84	4.84	142327	140909	18.050m	17.883m
2)	HMX	5.30	5.30	85558	82330	26.873m	25.859m
3)	DNX	5.47	5.47	166447	166447	24.135	24.135
4)	MNX	6.62	6.62	136314	136314	19.524	19.524
5)	1,3,5-Trinitrobe	7.59	7.59	191506	191751	19.521m	19.548m
6)	RDX	7.92	7.92	81048	84718	19.088	19.952
7)	1,3-Dinitrobenze	9.84	9.84	276260	330590	21.279	31.553m#
8)	Nitrobenzene	10.77	10.75	170294	202002	22.663	22.676m
9)	2,4,6-Trinitroto	11.76	11.75	193928	334282	21.362	27.440m
10)	Nitroglycerin	0.00	12.61	0	94859	N.D.	29.243 #
11)	Tetryl	13.10	13.09	130951	268407	18.674	20.510
13)	2,6-Dinitrotolue	14.43	14.42	125985	119768	20.055	12.585
14)	2,4-Dinitrotolue	15.07	15.05	235576	170114	20.182	19.677
15)	3,5-Dinitroanili	15.88	15.87	201040	338976	20.295	21.605
16)	o-Nitrotoluene	16.57	16.58	112422	148184	24.276	21.515
17)	p-Nitrotoluene	17.64	17.64	220974	264012	41.913	27.612m
18)	4-Amino-2,6-Dini	17.64	17.64	220974	269596	41.913	28.200m
19)	m-Nitrotoluene	18.80	18.85	123717	213980	23.448	24.454m
20)	2-Amino-4,6-Dini	19.52	19.83f	169711	179842	18.717	14.578m
21)	PETN	0.00	21.73	0	50155	N.D.	13.775m#

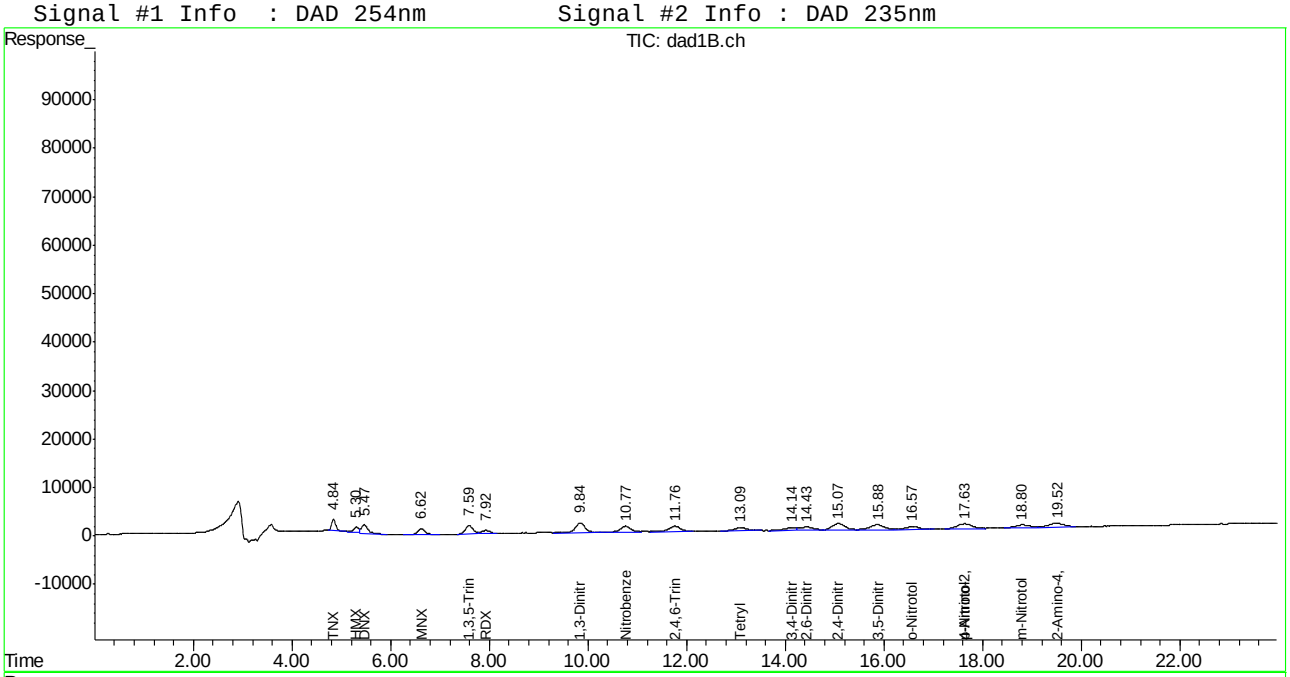
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

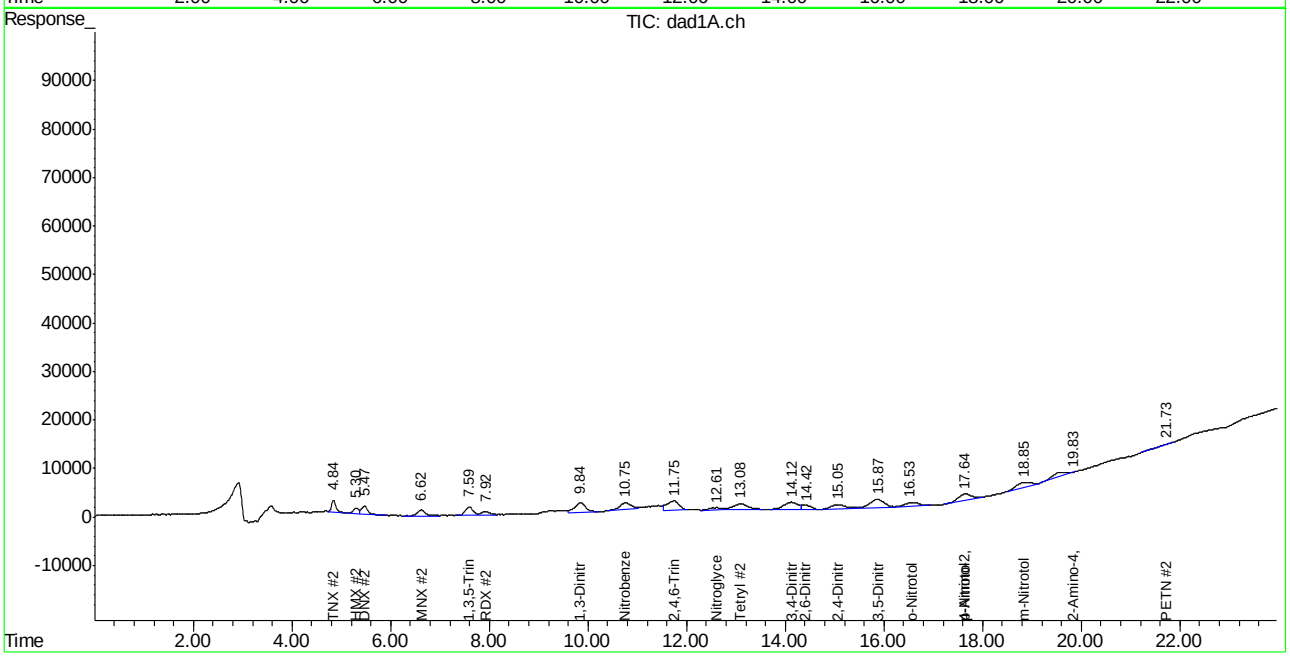
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : op84480,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 10:30 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

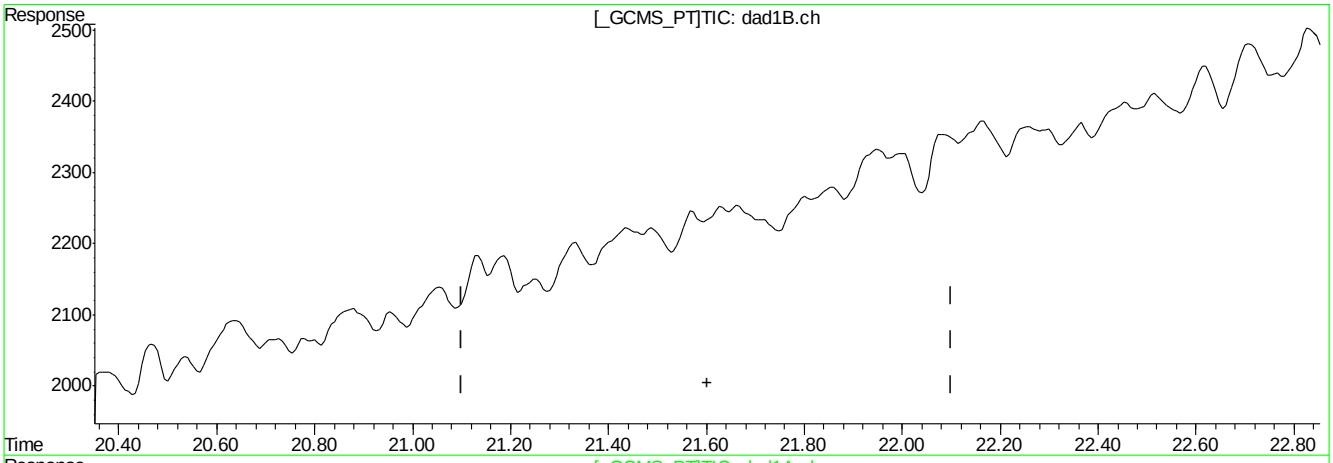
Sample Number: GGG2952-IC2952
Lab FileID: GG620953.D
Injection Time: 03/22/21 13:51
Method: SW846 8330A
Analyst approved: 03/23/21 11:47 James Boone
Supervisor approved: 03/23/21 11:59 Naresh Jiawan

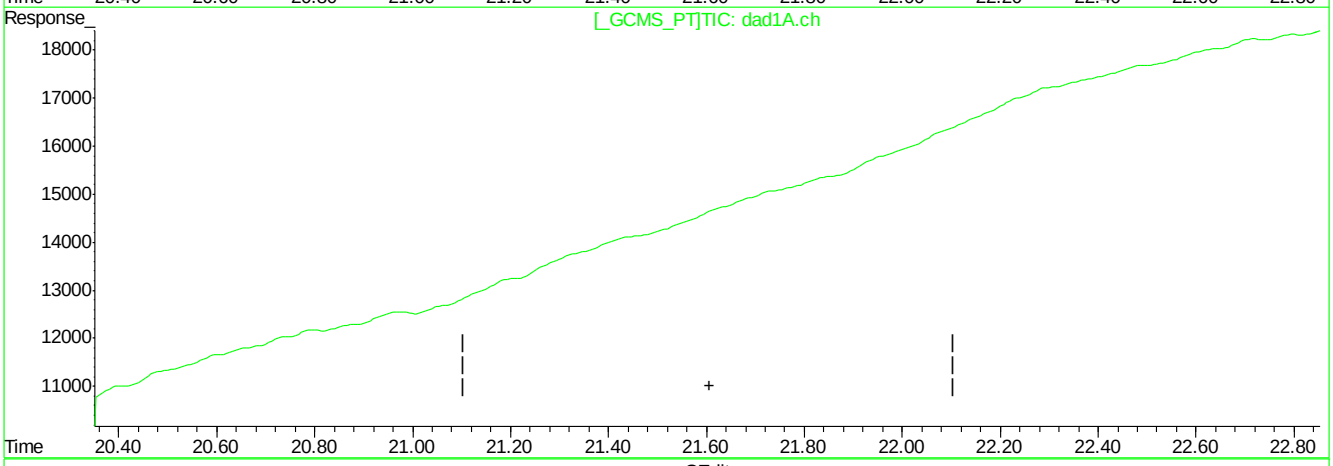
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	4.84	Poor instrument integration
TNX		2	4.84	Poor instrument integration
HMX	2691-41-0	1	5.30	Poor instrument integration
HMX	2691-41-0	2	5.30	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	7.59	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.59	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.84	Poor instrument integration
Nitrobenzene	98-95-3	2	10.75	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.75	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	14.14	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.64	Poor instrument integration
p-Nitrotoluene	99-99-0	2	17.64	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.85	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.83	Poor instrument integration
PETN	78-11-5	2	21.73	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

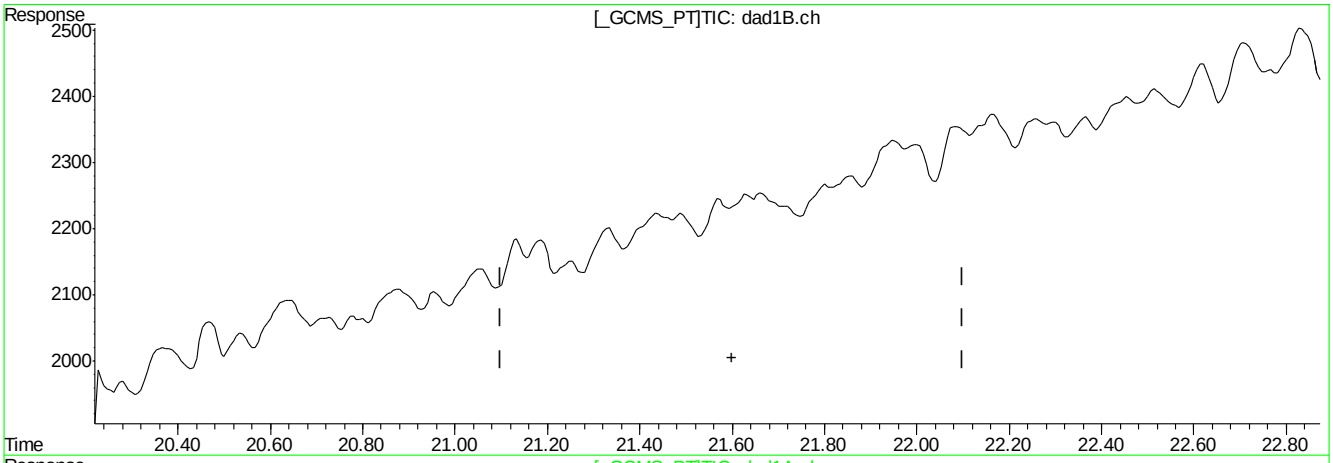
response 0

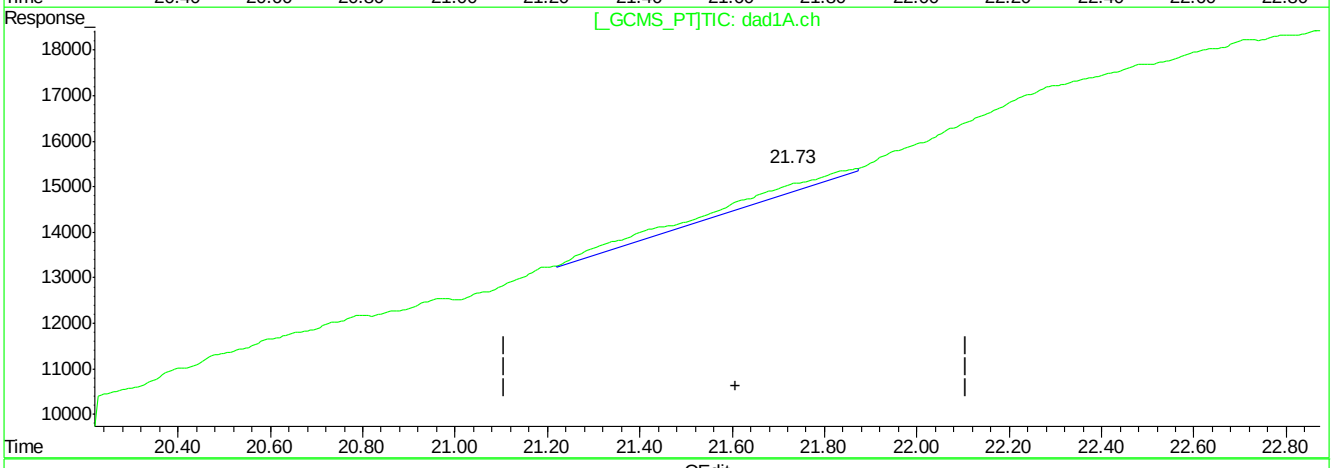
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 09:54:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.73min 13.775ppb m

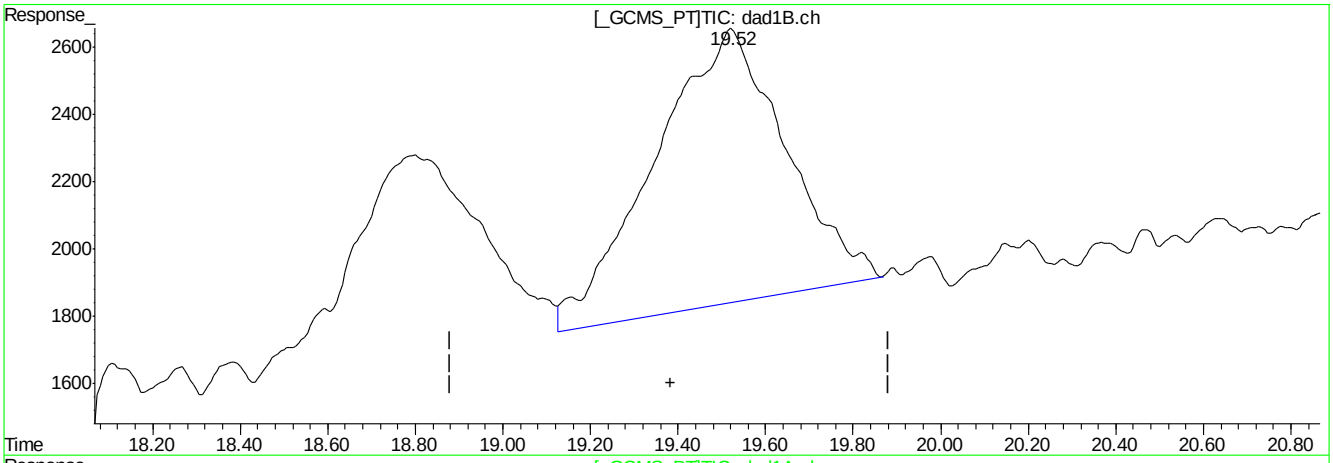
response 50155

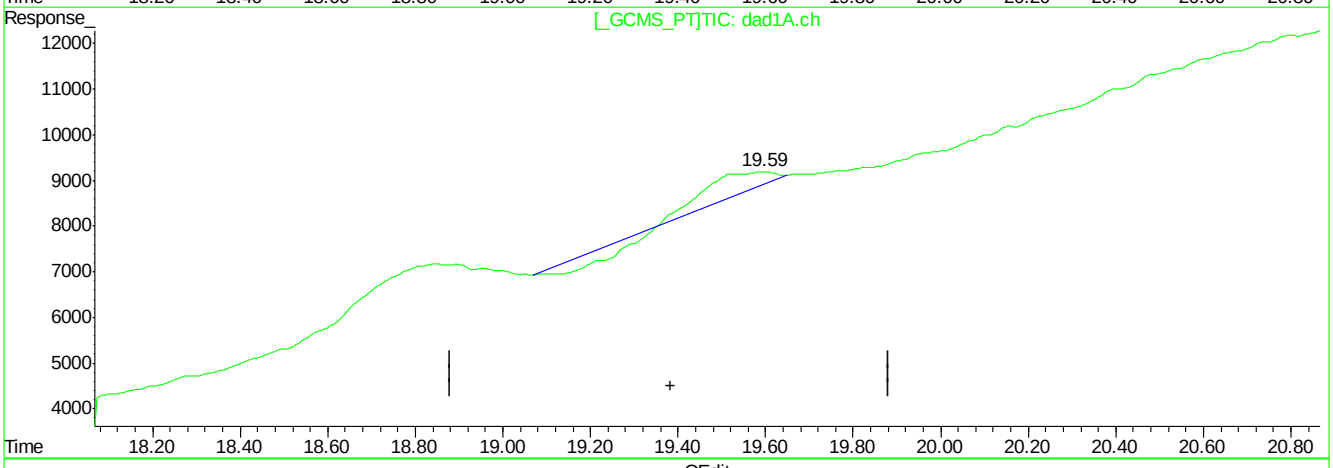
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 09:54:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.52min 18.717ppb

response 169711

(20) 2-Amino-4,6-Dinitrotoluene #2

19.60min 1.031ppb

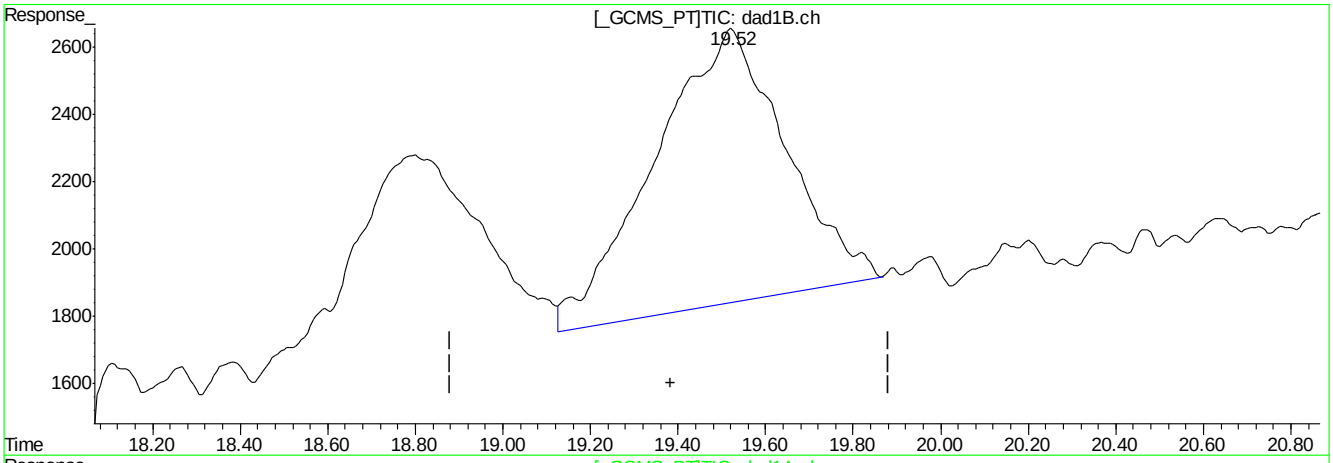
response 12715

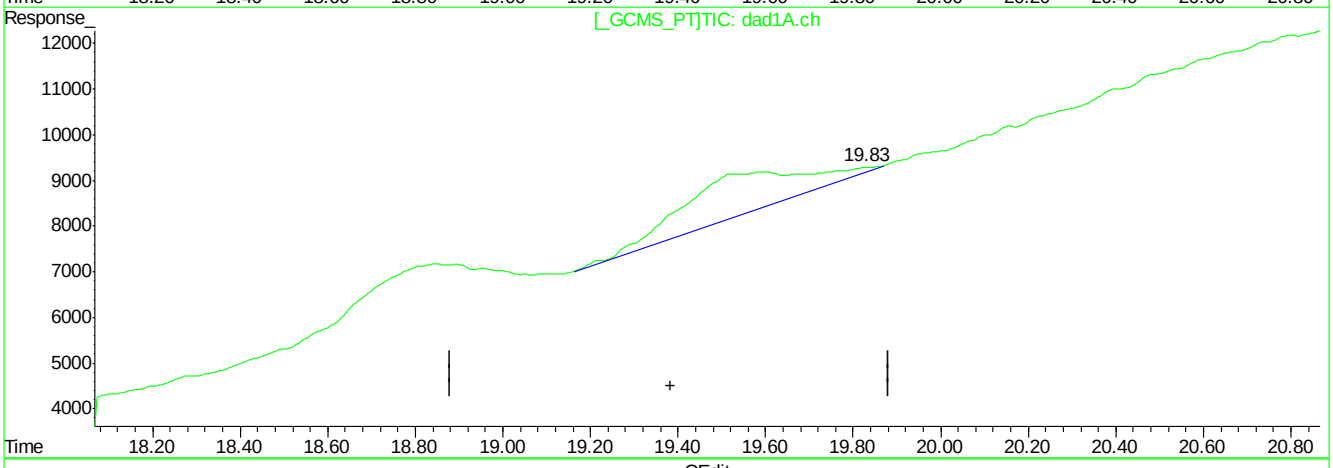
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 09:54:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.52min 18.717ppb

response 169711

(20) 2-Amino-4,6-Dinitrotoluene #2

19.83min 14.578ppb m

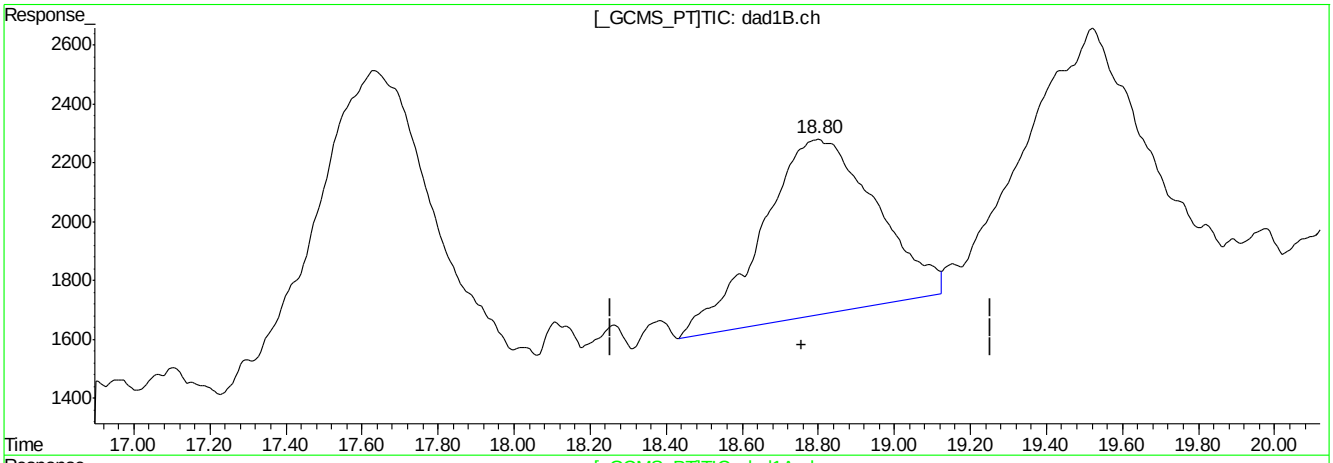
response 179842

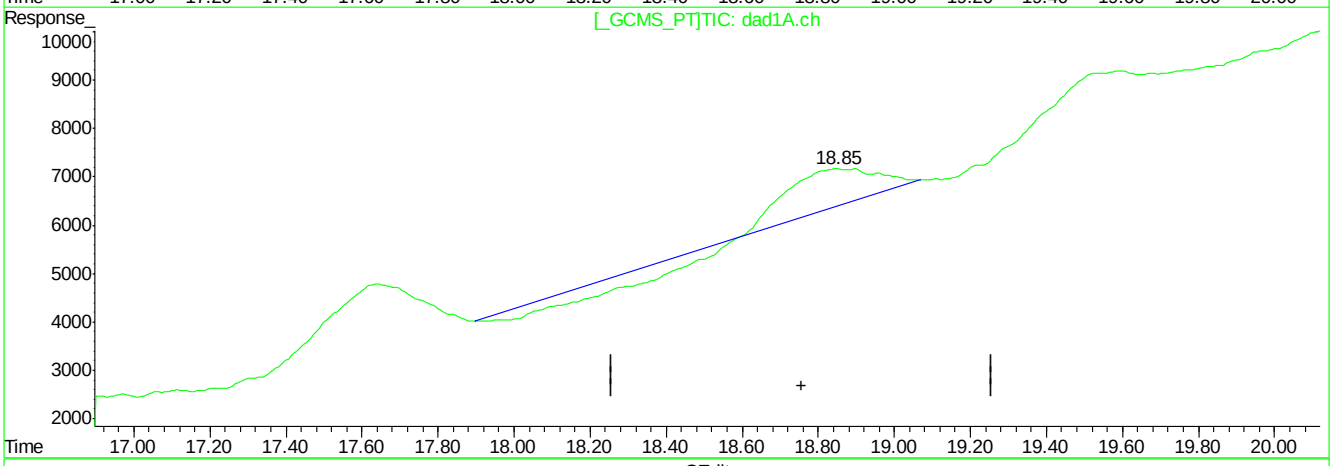
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 09:55:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.80min 23.448ppb

response 123717

(19) m-Nitrotoluene #2

18.86min 4.885ppb

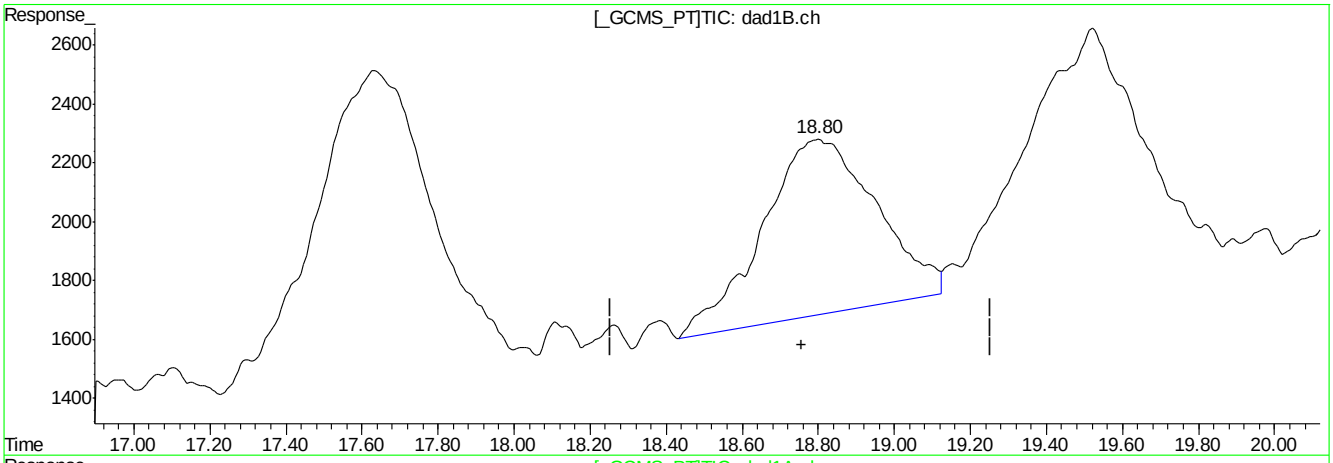
response 42742

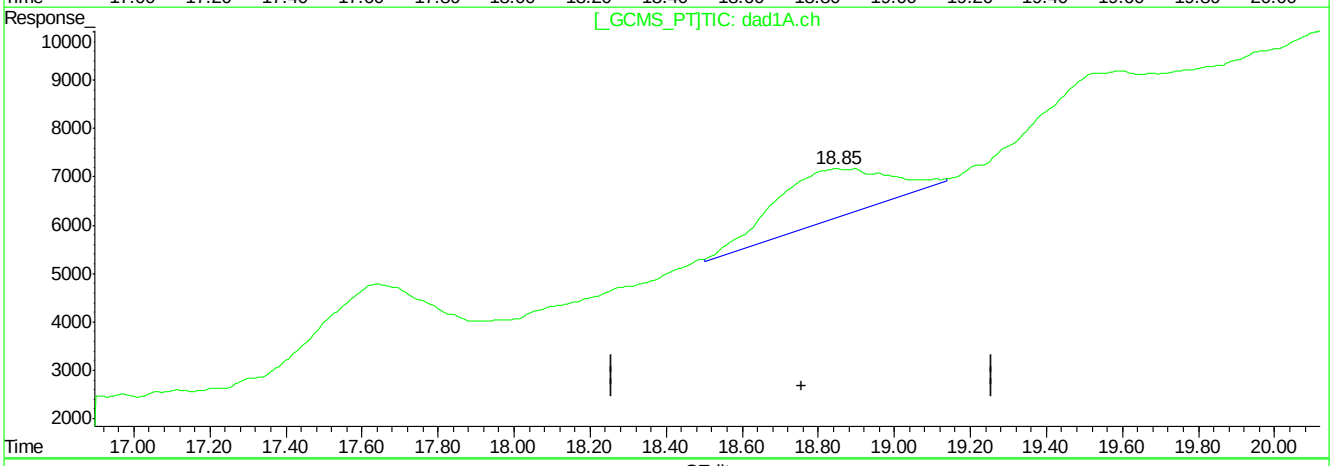
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 09:55:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.80min 23.448ppb

response 123717

(19) m-Nitrotoluene #2

18.85min 24.454ppb m

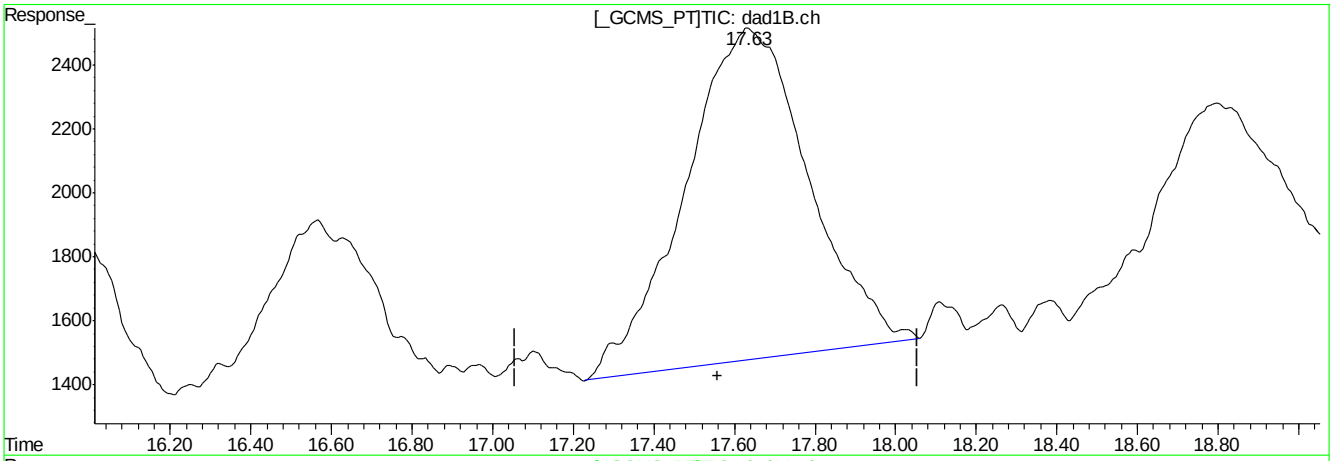
response 213980

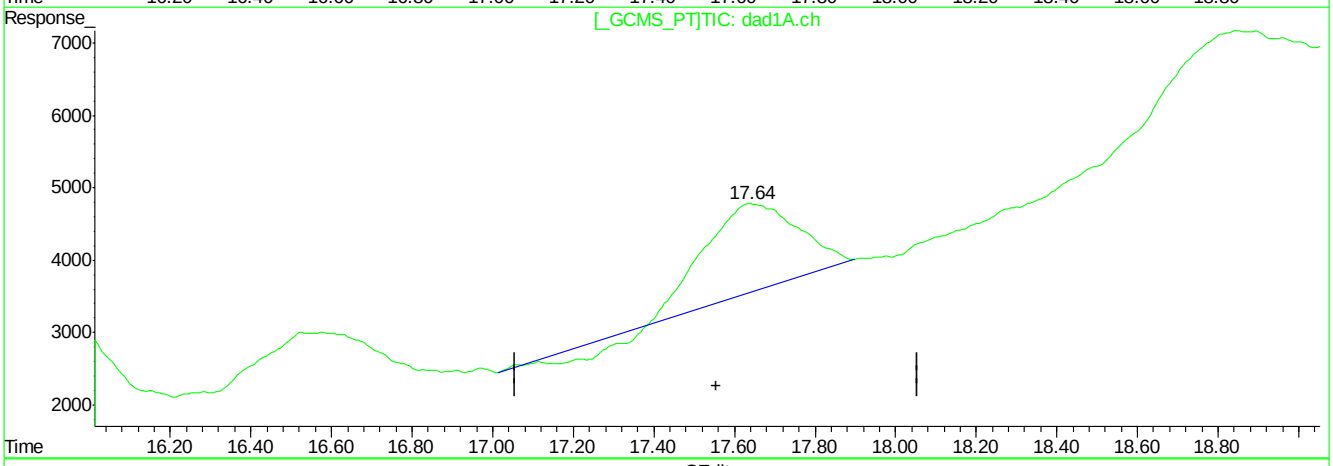
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 09:55:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.64min 41.913ppb

response 220974

(18) 4-Amino-2,6-Dinitrotoluene #2

17.64min 18.415ppb

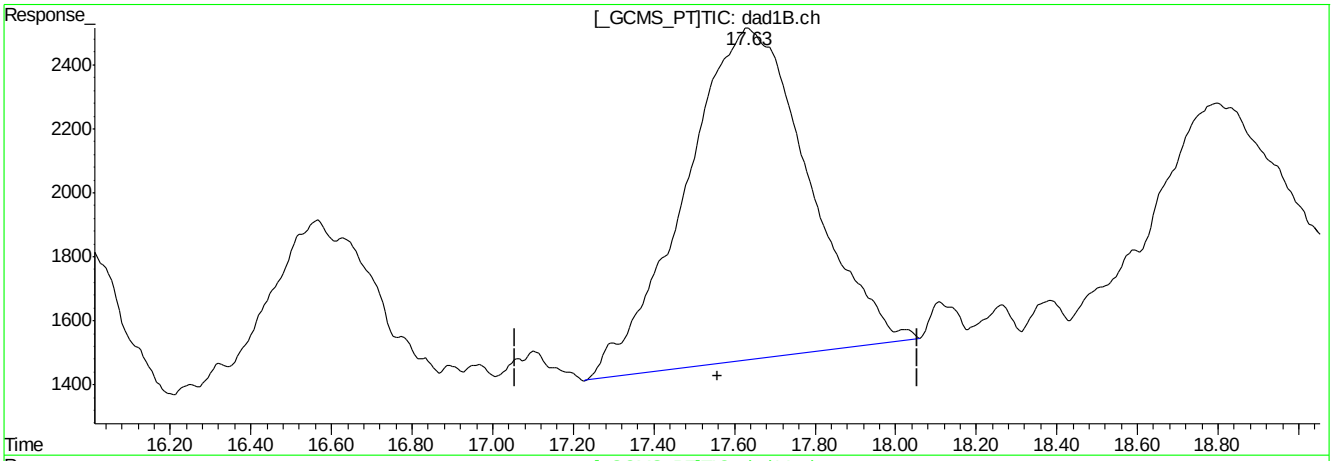
response 176056

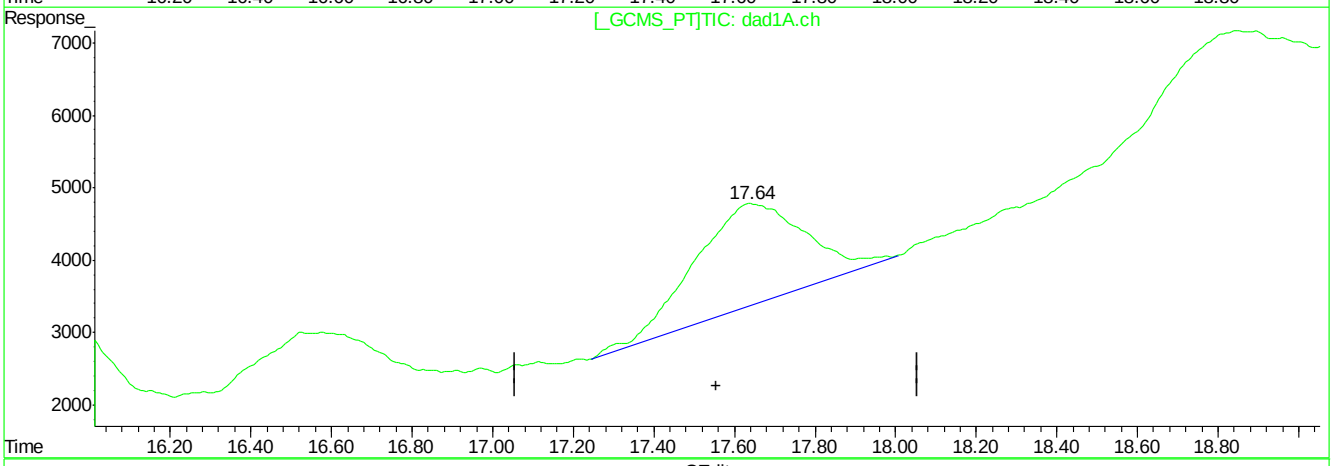
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 09:55:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.64min 41.913ppb

response 220974

(18) 4-Amino-2,6-Dinitrotoluene #2

17.64min 28.200ppb m

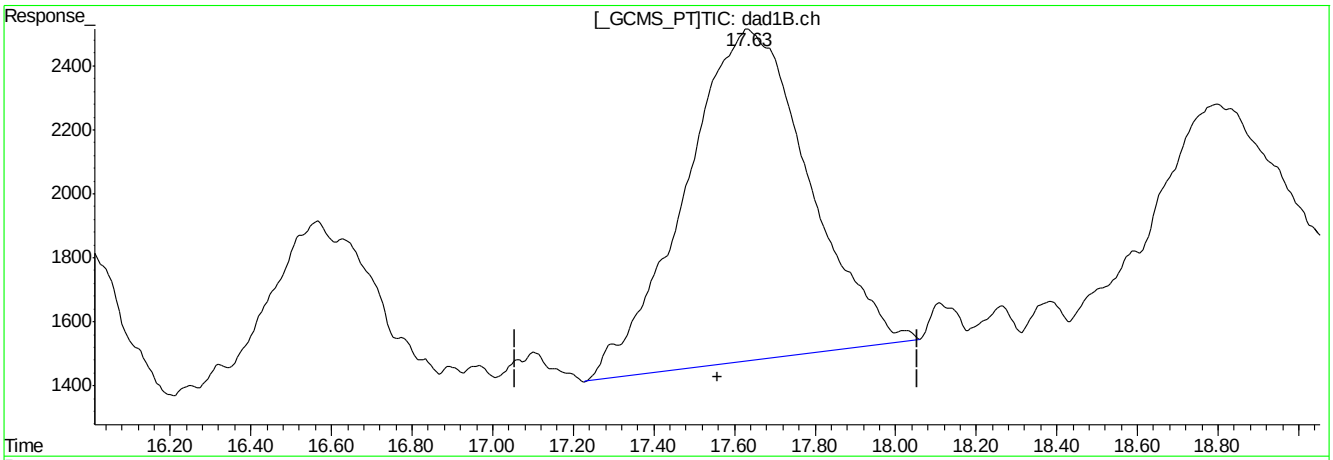
response 269596

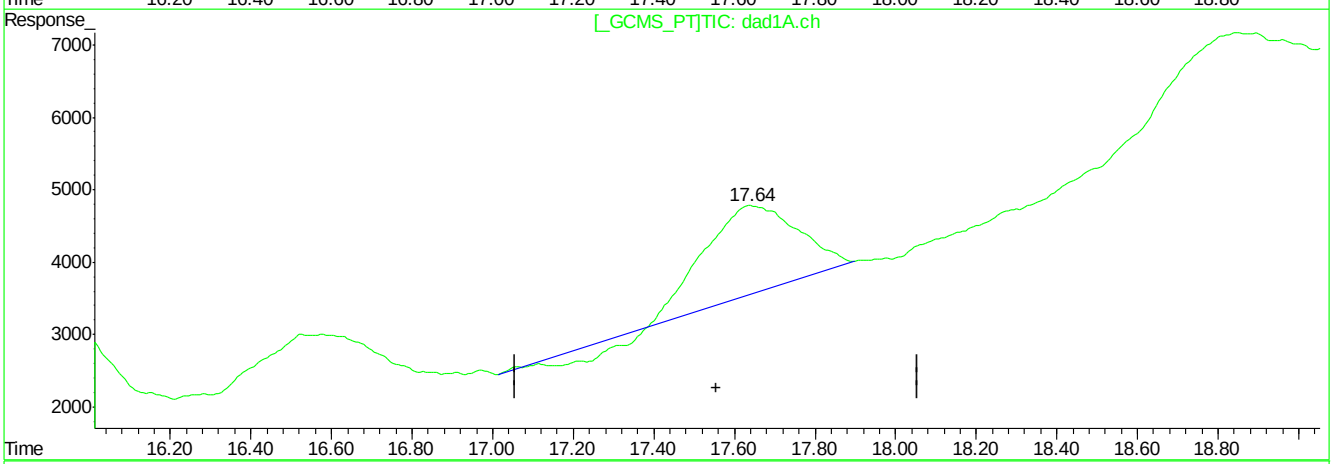
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 09:55:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.64min 41.913ppb

response 220974

(17) p-Nitrotoluene #2

17.64min 18.413ppb

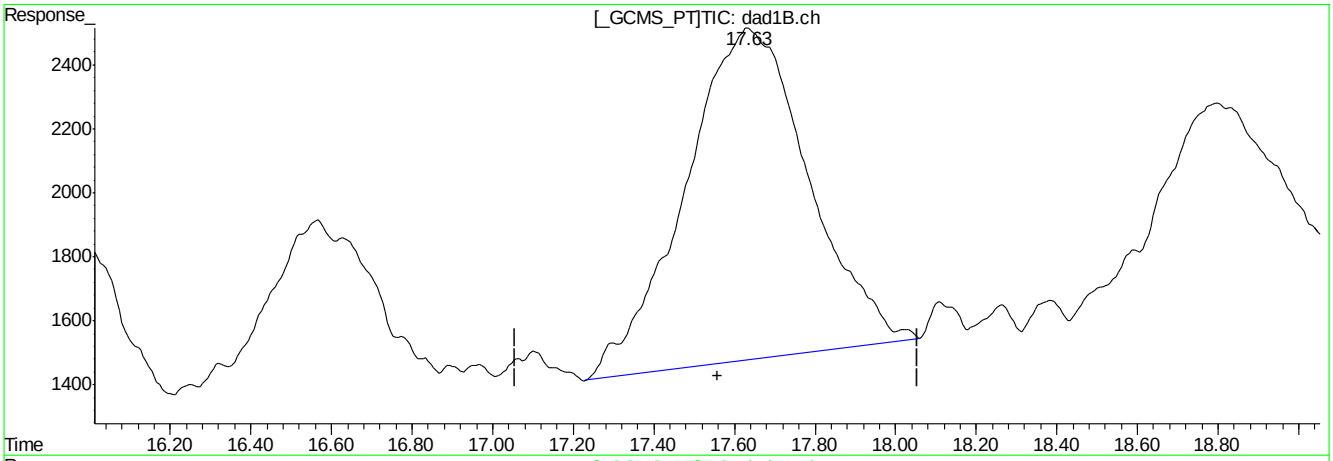
response 176056

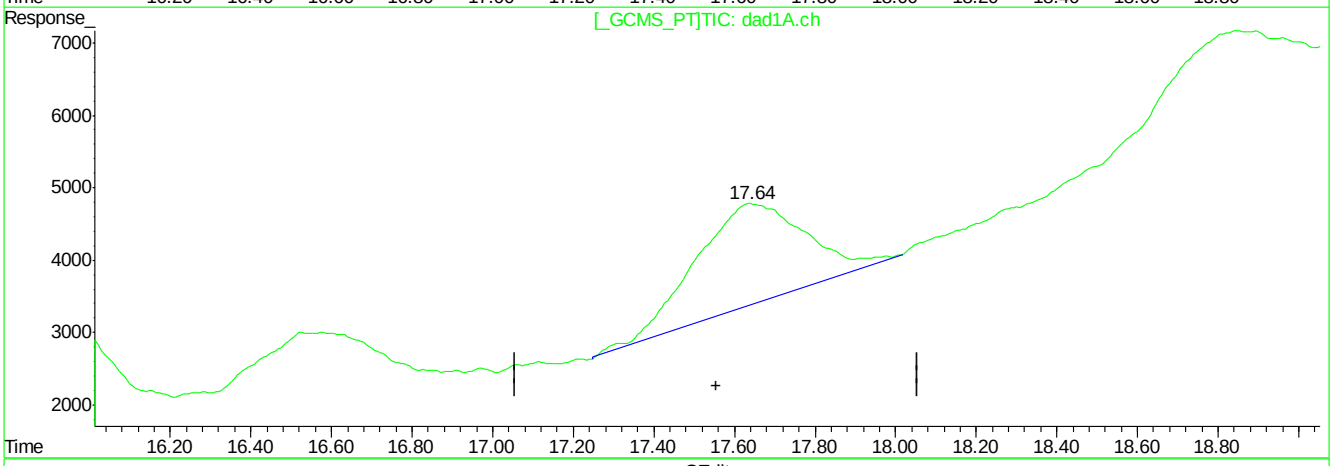
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:27:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.64min 41.913ppb

response 220974

(17) p-Nitrotoluene #2

17.64min 27.612ppb m

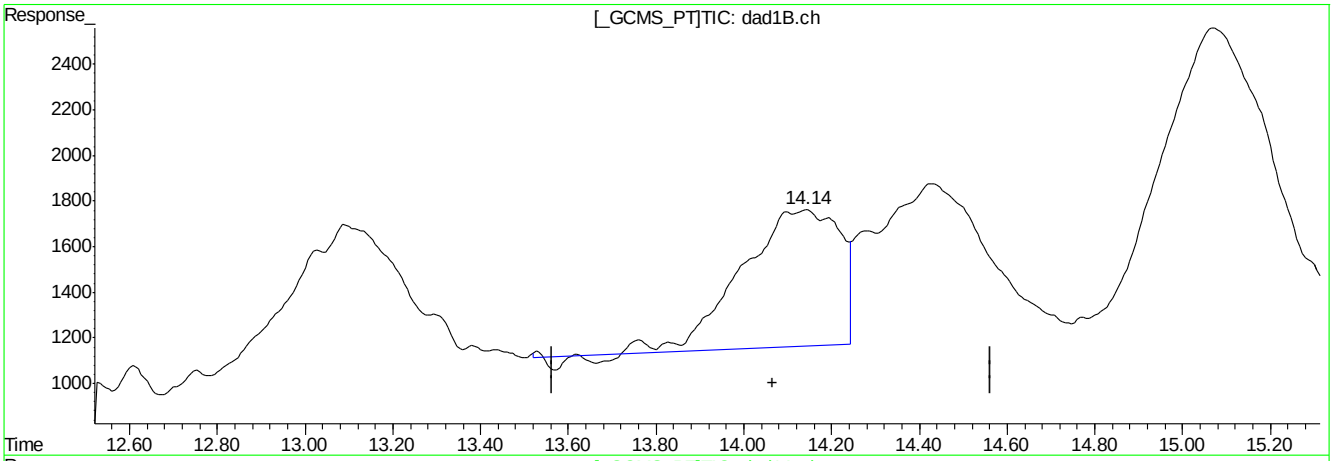
response 264012

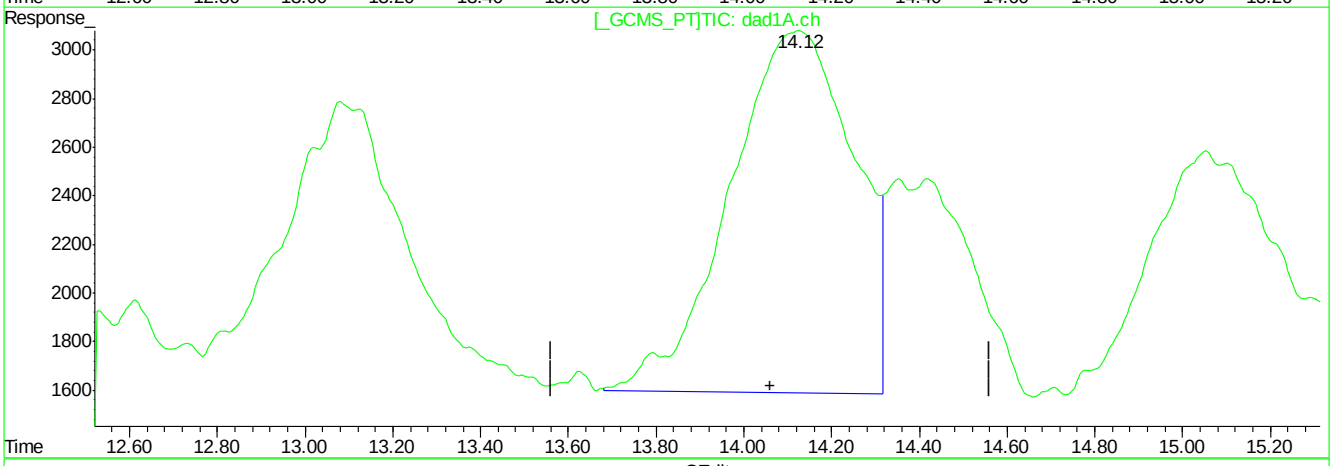
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:27:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

14.14min 17.239ppb

response 91818

(12) 3,4-Dinitrotoluene #2 (S)

14.13min 26.630ppb

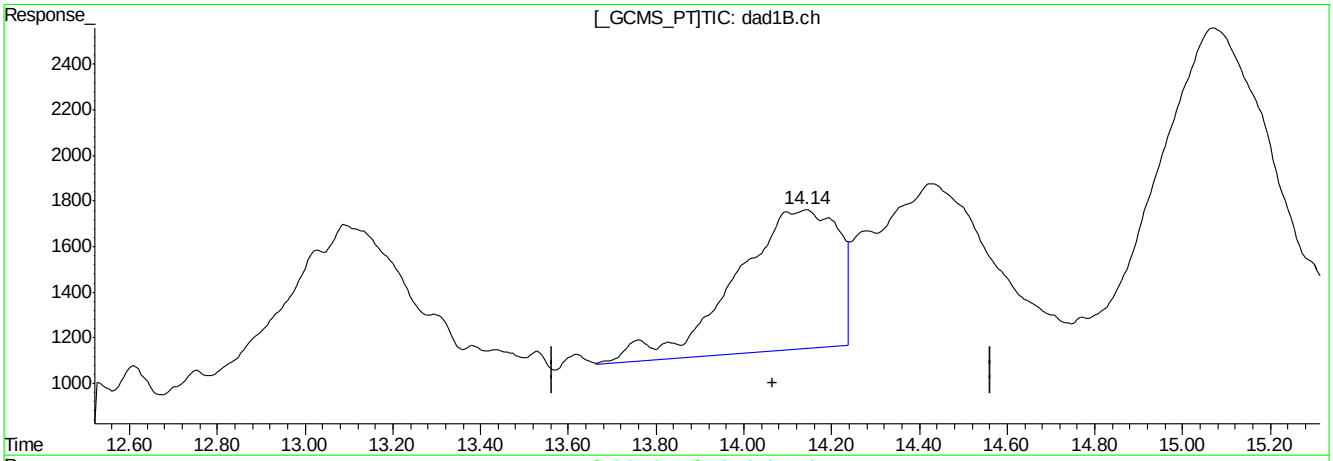
response 290164

(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:28:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration



(12) 3,4-Dinitrotoluene (S)

14.14min 18.566ppb m

response 98886

(12) 3,4-Dinitrotoluene #2 (S)

14.13min 26.630ppb

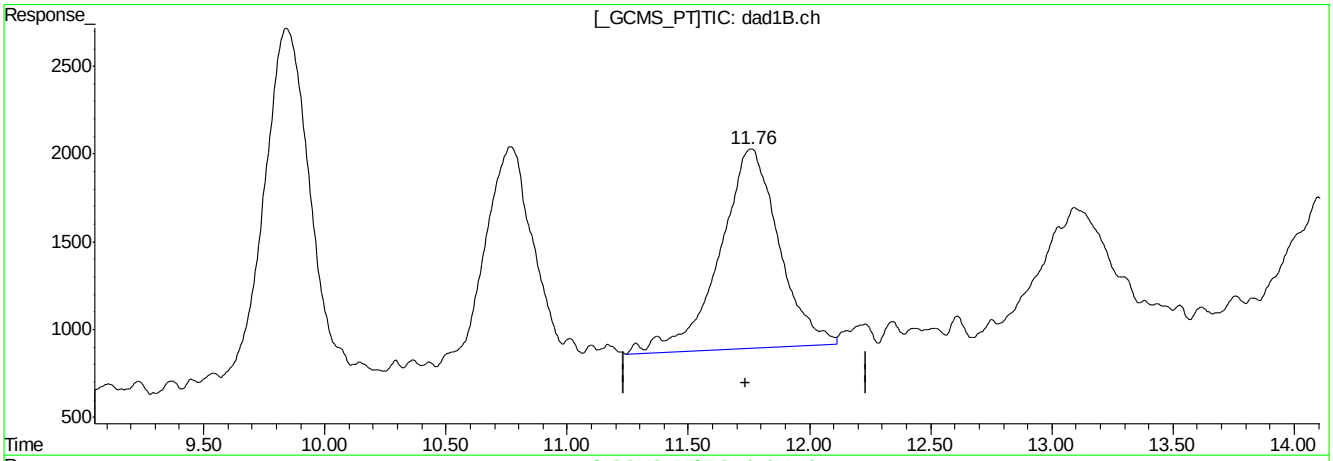
response 290164

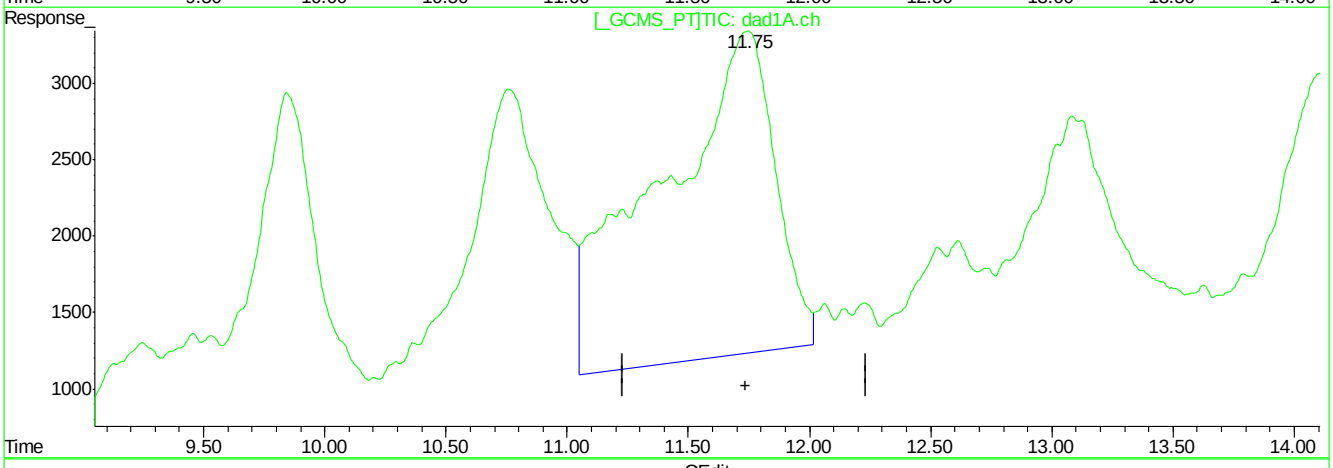
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:28:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.76min 21.362ppb

response 193928

(9) 2,4,6-Trinitrotoluene #2

11.75min 57.417ppb

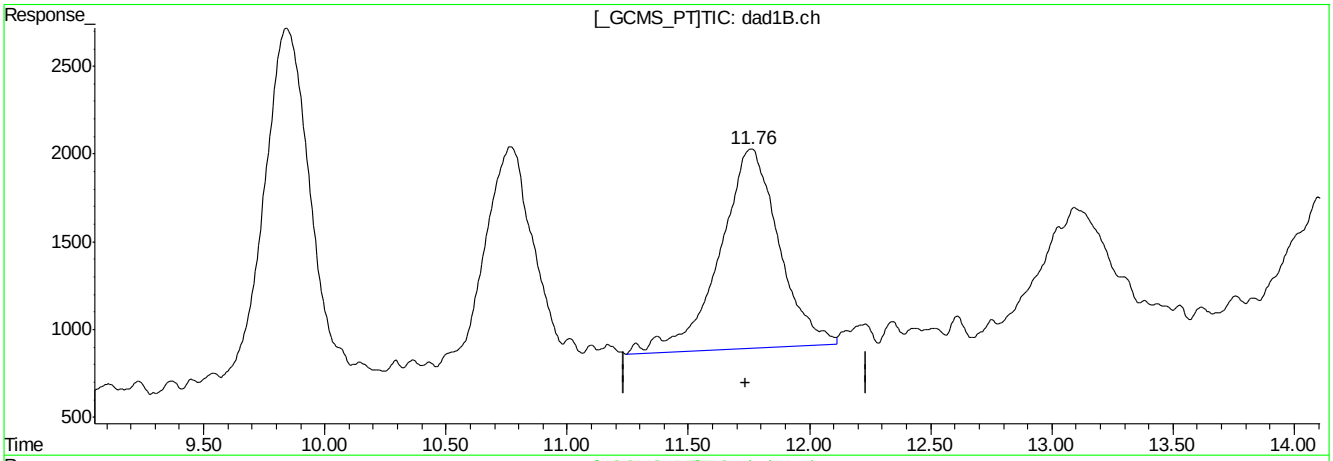
response 699468

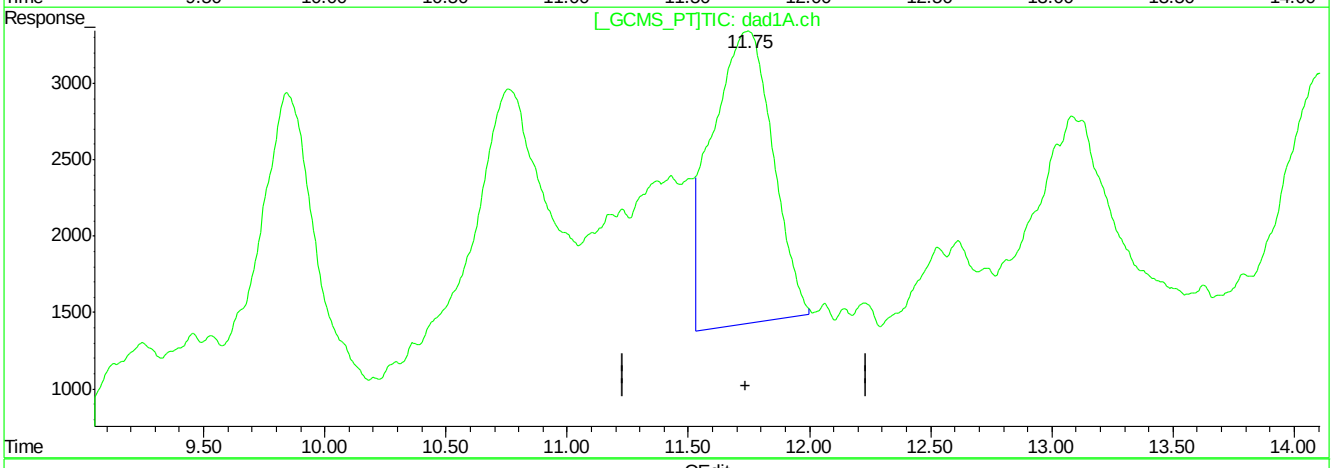
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:28:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.76min 21.362ppb

response 193928

(9) 2,4,6-Trinitrotoluene #2

11.75min 27.440ppb m

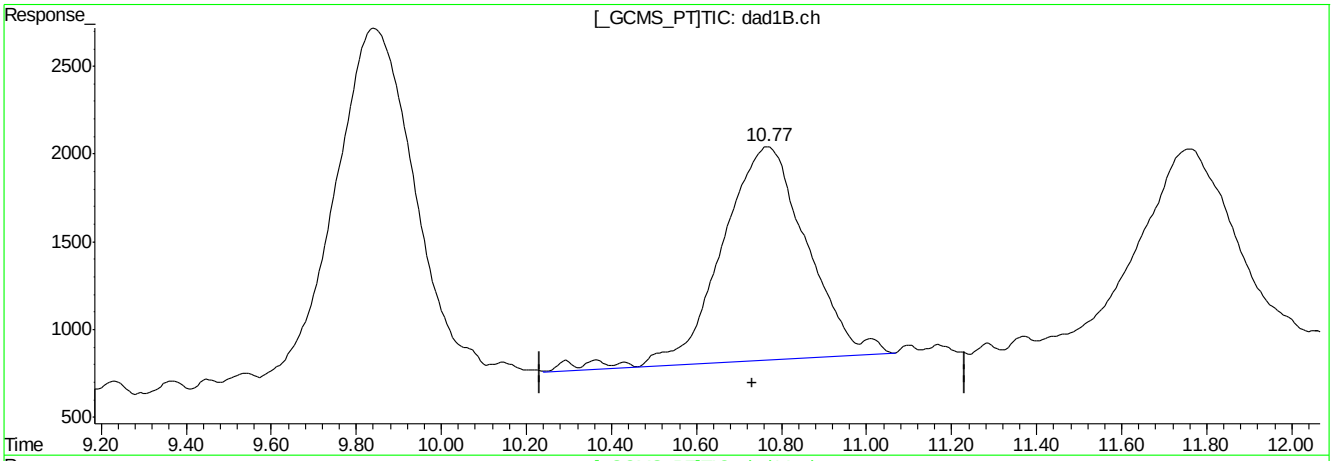
response 334282

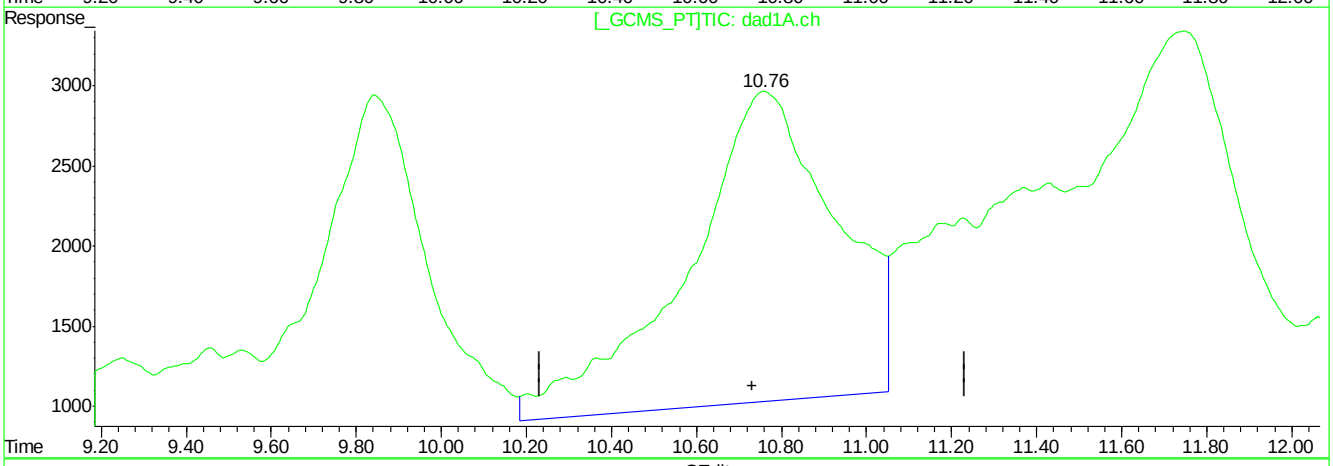
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:28:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.77min 22.663ppb

response 170294

(8) Nitrobenzene #2

10.76min 52.597ppb

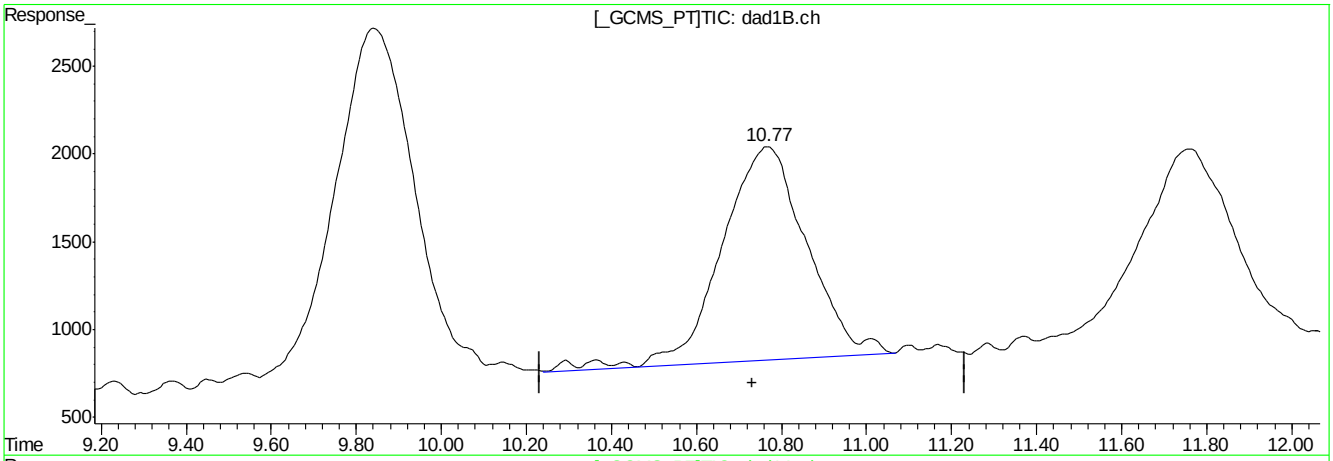
response 468530

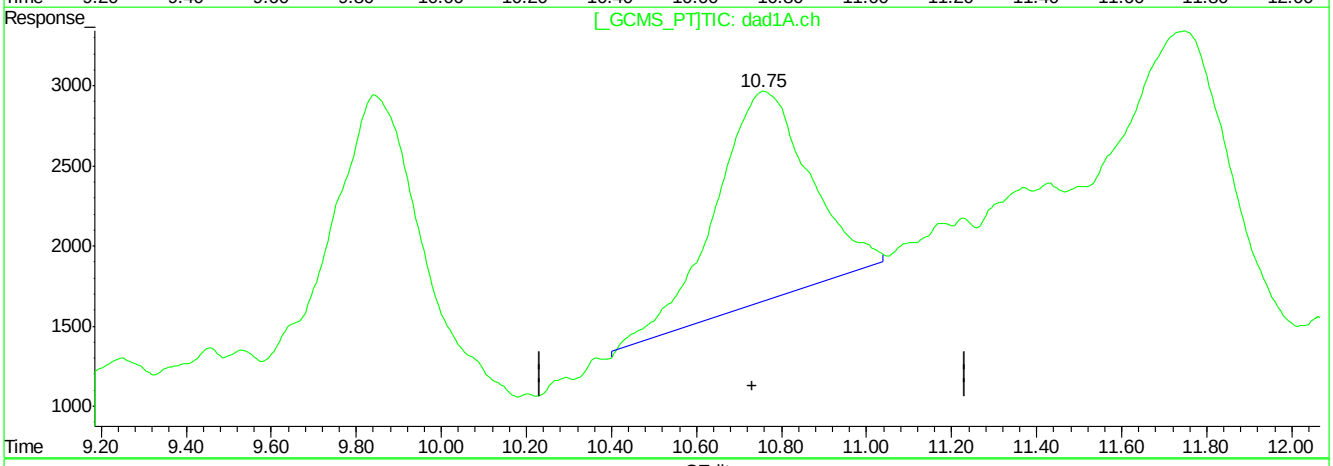
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:28:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.77min 22.663ppb

response 170294

(8) Nitrobenzene #2

10.75min 22.676ppb m

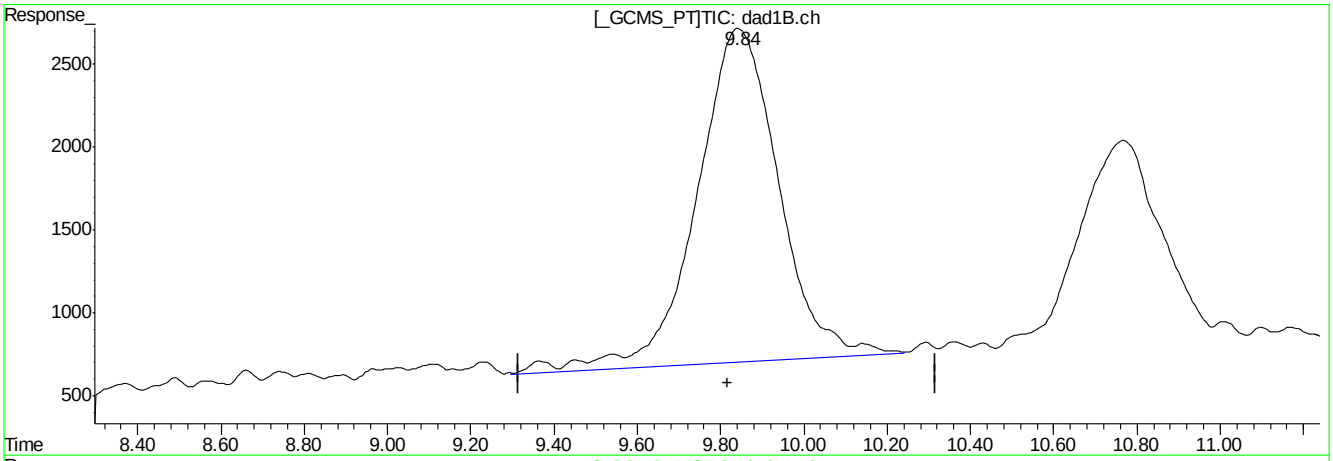
response 202002

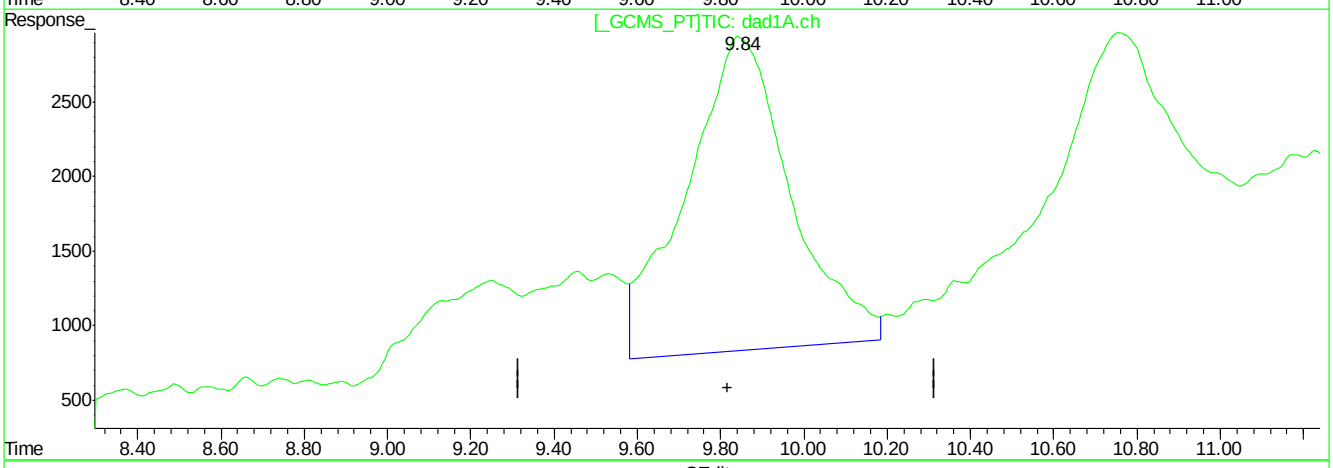
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:29:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.84min 21.279ppb

response 276260

(7) 1,3-Dinitrobenzene #2

9.85min 34.894ppb

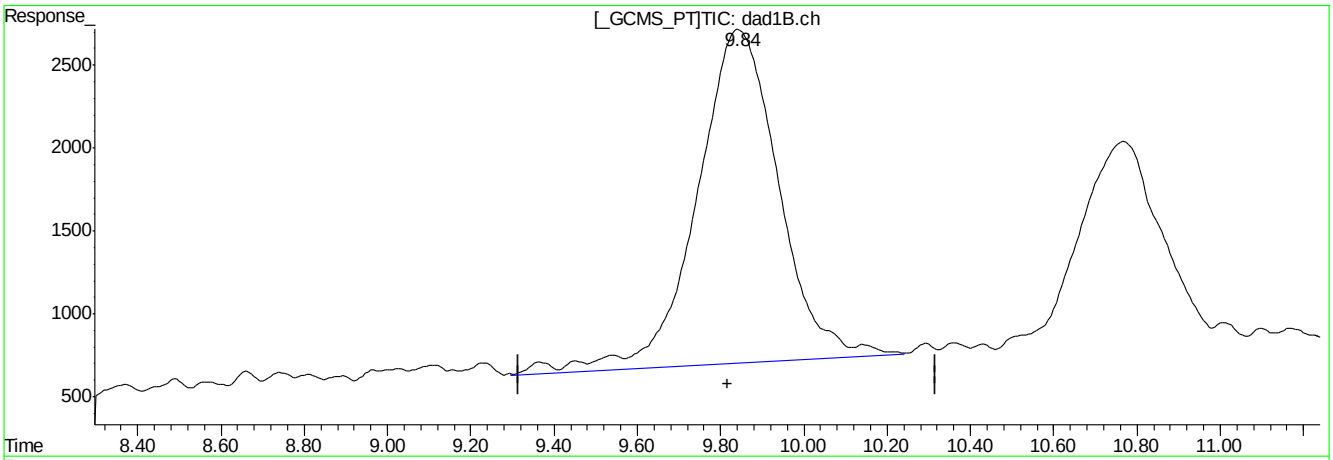
response 365602

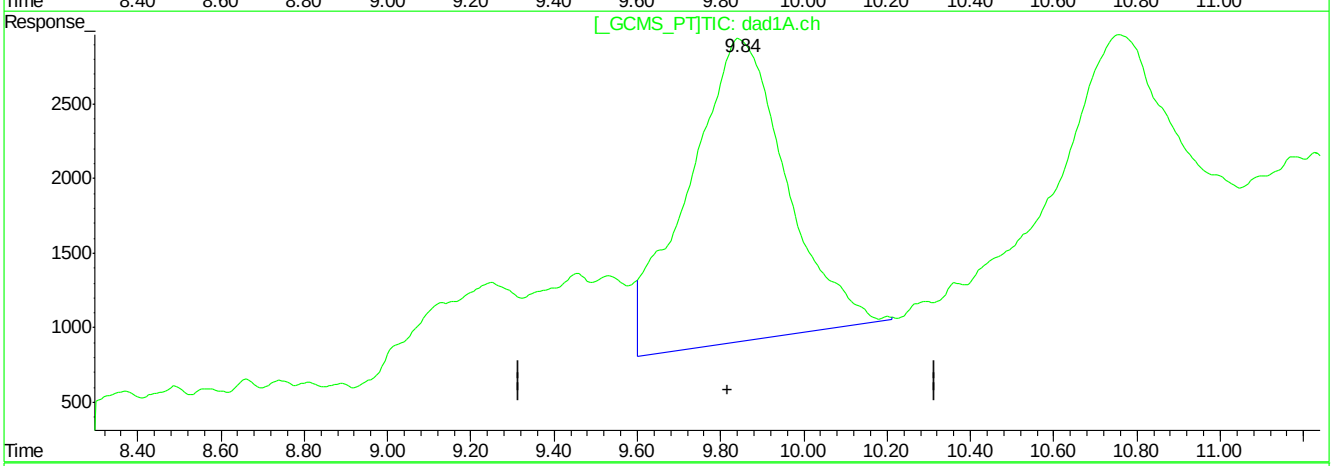
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:29:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.84min 21.279ppb

response 276260

(7) 1,3-Dinitrobenzene #2

9.84min 31.553ppb m

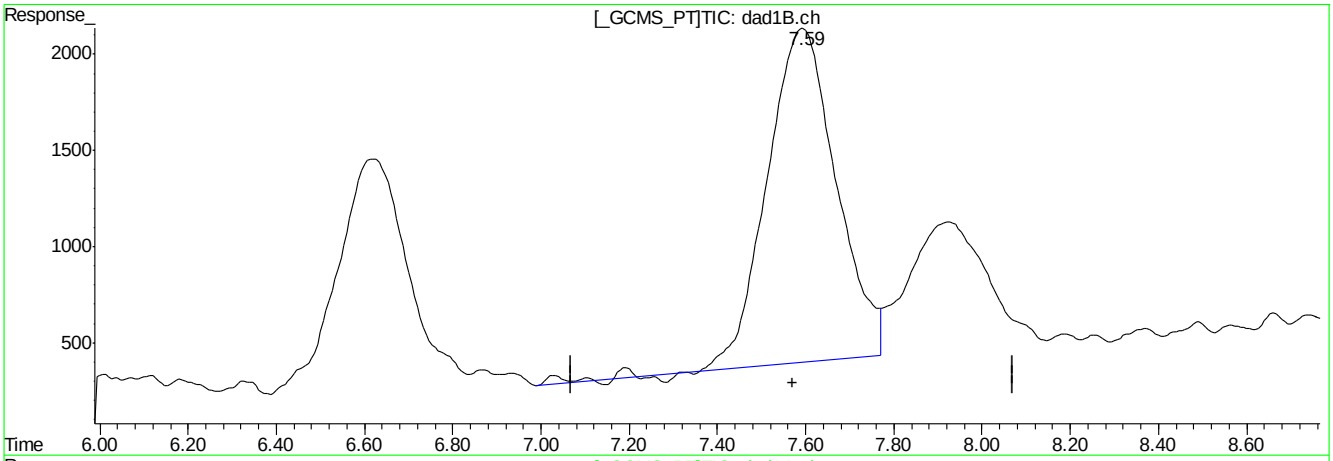
response 330590

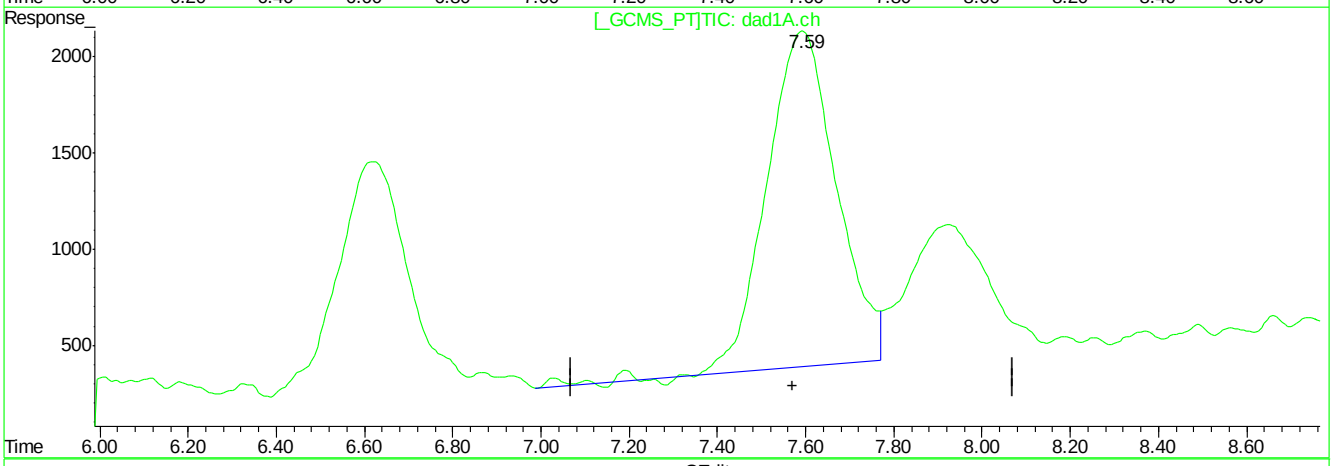
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:29:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.59min 19.249ppb

response 188832

(5) 1,3,5-Trinitrobenzene #2

7.59min 19.563ppb

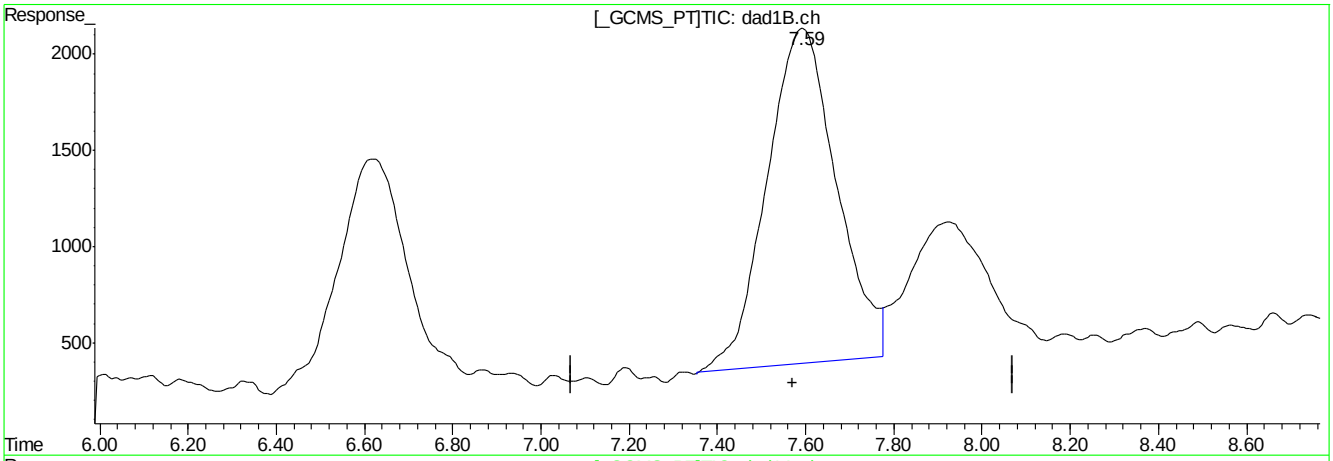
response 191897

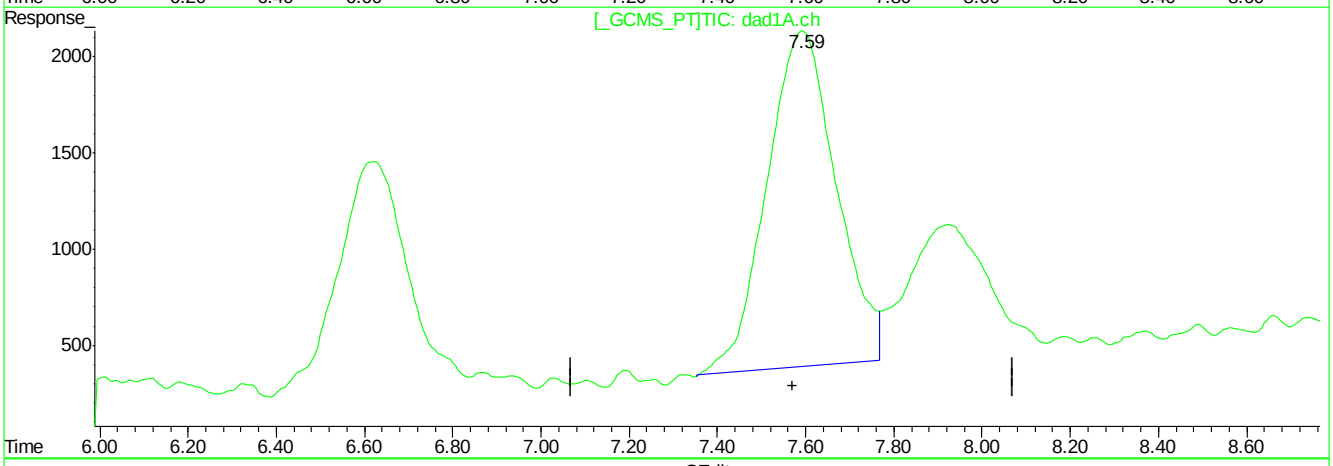
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:29:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.59min 19.521ppb m

response 191506

(5) 1,3,5-Trinitrobenzene #2

7.59min 19.548ppb m

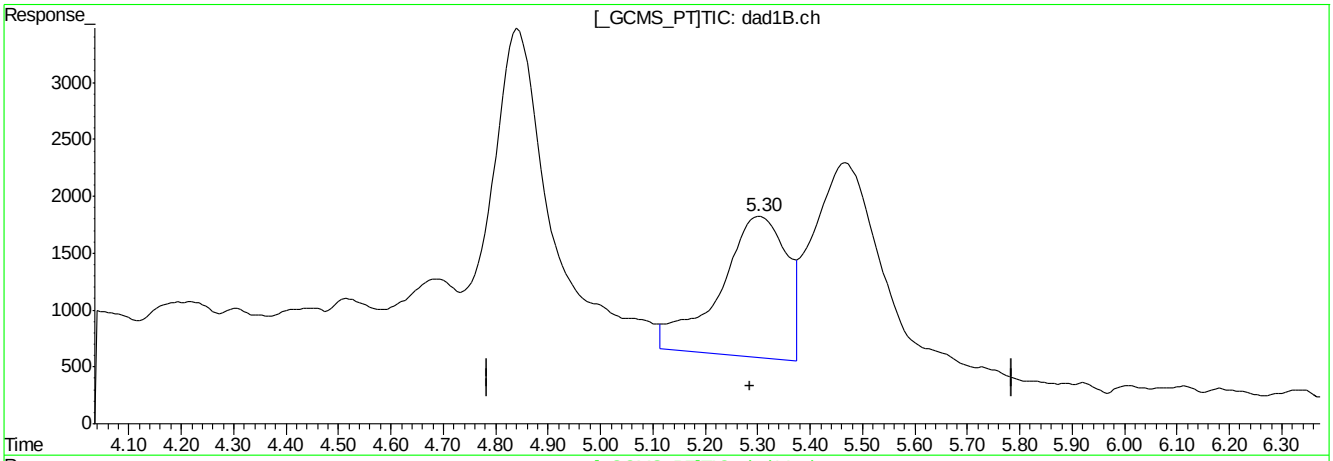
response 191751

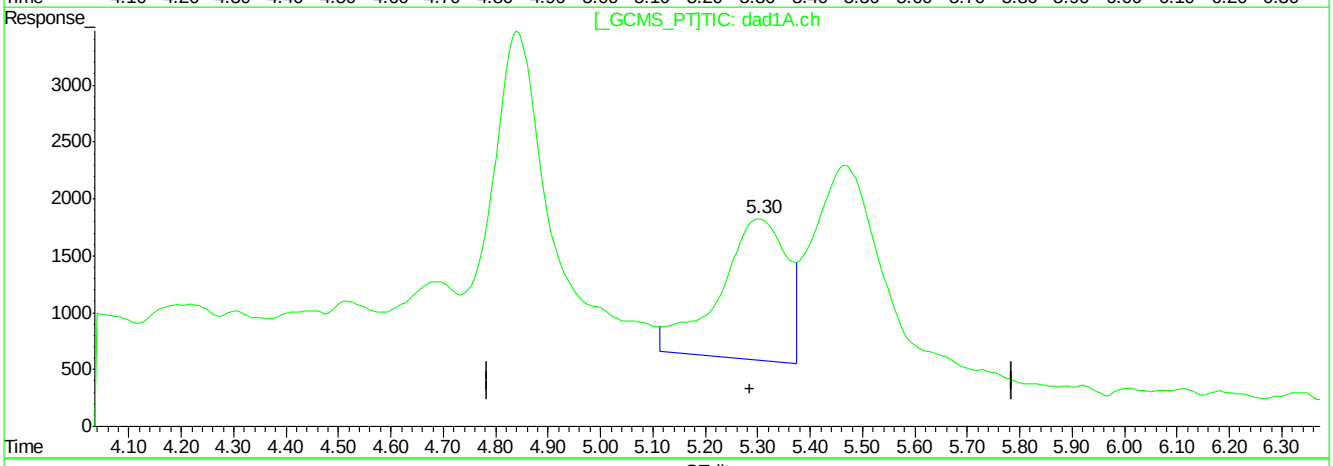
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:29:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.30min 34.292ppb

response 109181

(2) HMX #2

5.30min 34.292ppb

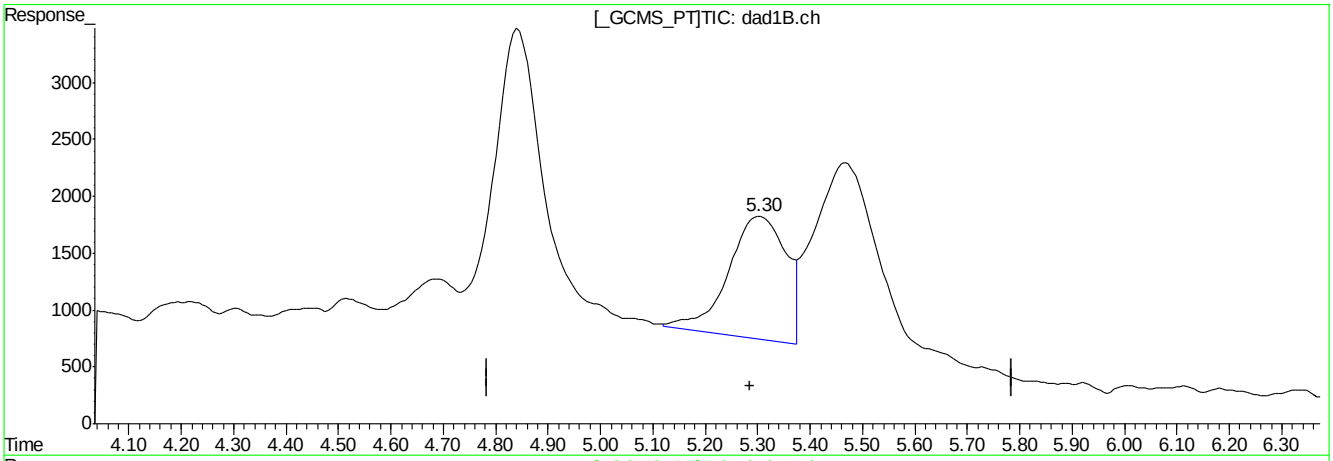
response 109181

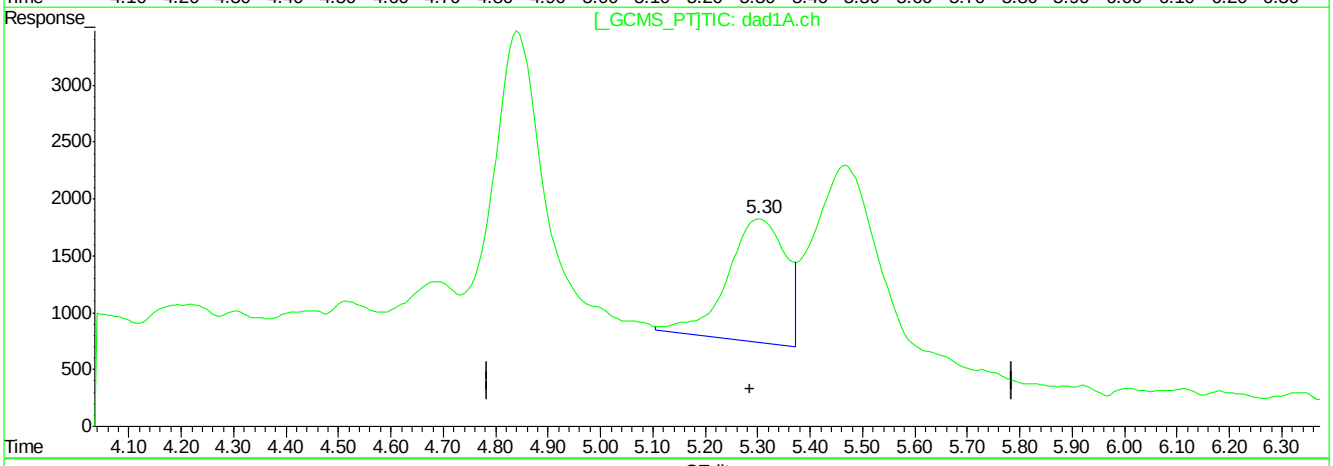
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:29:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

5.30min 26.873ppb m

response 85558

(2) HMX #2

5.30min 25.859ppb m

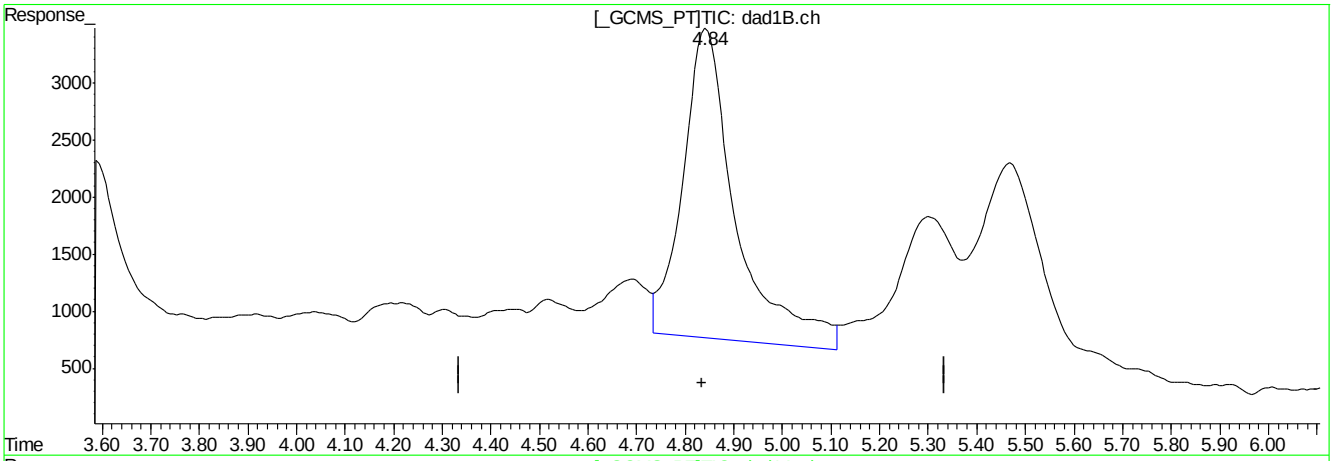
response 82330

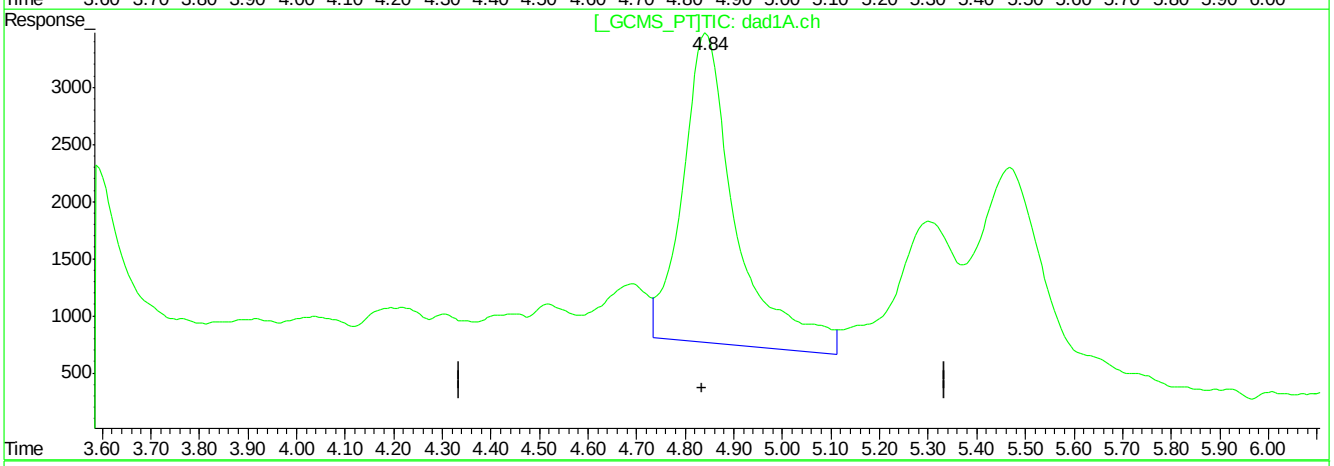
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:29:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

4.84min 26.309ppb

response 207451

(1) TNX #2

4.84min 26.328ppb

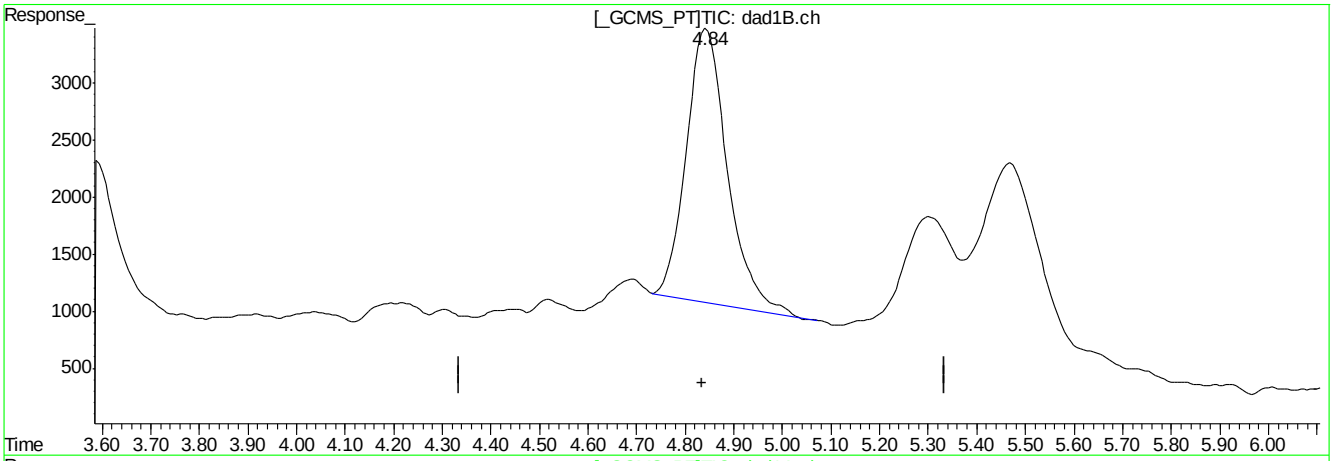
response 207451

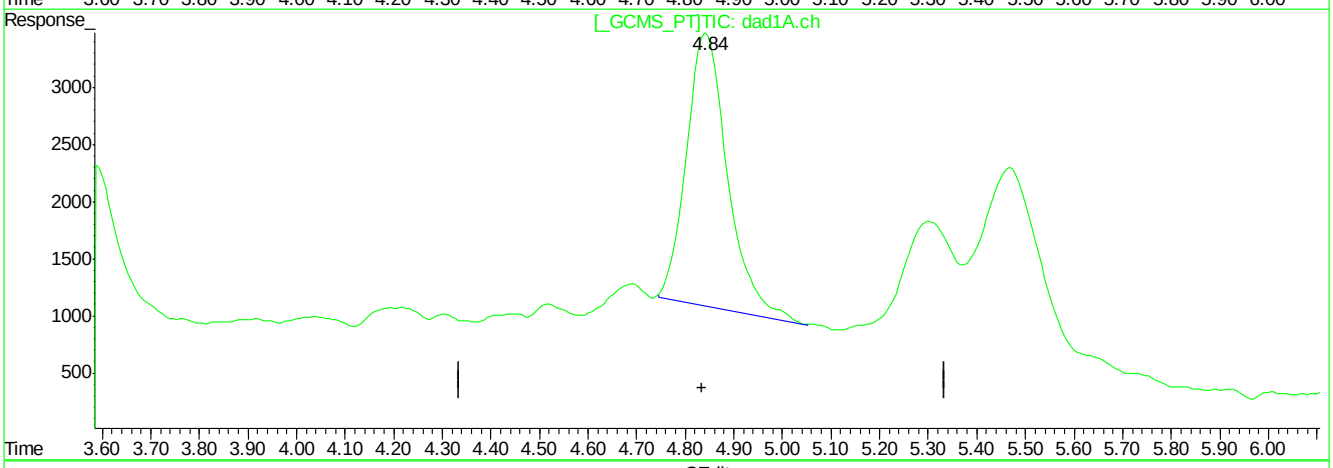
(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:29:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620953.D\dad1A.ch
Acq On : 22-Mar-2021, 13:51:35 Operator: jamesb
Sample : ic2952-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:55 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

4.84min 18.050ppb m

response 142327

(1) TNX #2

4.84min 17.883ppb m

response 140909

(+) = Expected Retention Time
GG620953.D GGG2952_032221.M Tue Mar 23 10:30:04 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
03/23/21 11:59

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : op84480,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 09:38:52 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.13	14.13	242315	521787	45.495	47.887
	Spiked Amount 500.000	Range 70 - 136		Recovery =		9.10%#	9.58%#
	Target Compounds						
1)	TNX	4.84	4.84	395914	395914	50.210	50.247
2)	HMX	5.31	5.31	199175	199175	62.558	62.558
3)	DNX	5.48	5.48	347828	347828	50.435	50.435
4)	MNX	6.62	6.62	308846	308846	44.237	44.237
5)	1,3,5-Trinitrobe	7.59	7.59	447425	447425	45.609	45.612
6)	RDX	7.92	7.92	200149	200149	47.137	47.137
7)	1,3-Dinitrobenze	9.85	9.85	651719	638178	50.198	60.910m
8)	Nitrobenzene	10.76	10.76	406687	467130	54.122	52.439m
9)	2,4,6-Trinitroto	11.77	11.76	400391	604770	44.105	49.644m
10)	Nitroglycerin	0.00	12.55	0	265106	N.D.	81.865m#
11)	Tetryl	13.11	13.10	291154	565113	41.519	43.210
13)	2,6-Dinitrotolue	14.44	14.44	312833	445092	49.800	46.803
14)	2,4-Dinitrotolue	15.09	15.10	566359	376268	48.519	43.541
15)	3,5-Dinitroanili	15.87	15.87	476065	853135	48.059	54.376
16)	o-Nitrotoluene	16.60	16.61	247310	333121	53.403	48.366
17)	p-Nitrotoluene	17.64	17.65	489955	728430	92.932	76.184m
18)	4-Amino-2,6-Dini	17.64	17.65	489955	729417	92.932	76.297m
19)	m-Nitrotoluene	18.81	18.82	287289	556072	54.450	63.549m
20)	2-Amino-4,6-Dini	19.51	19.51	408238	639826	45.023	51.864
21)	PETN	0.00	22.14f	0	222581	N.D.	61.197m#

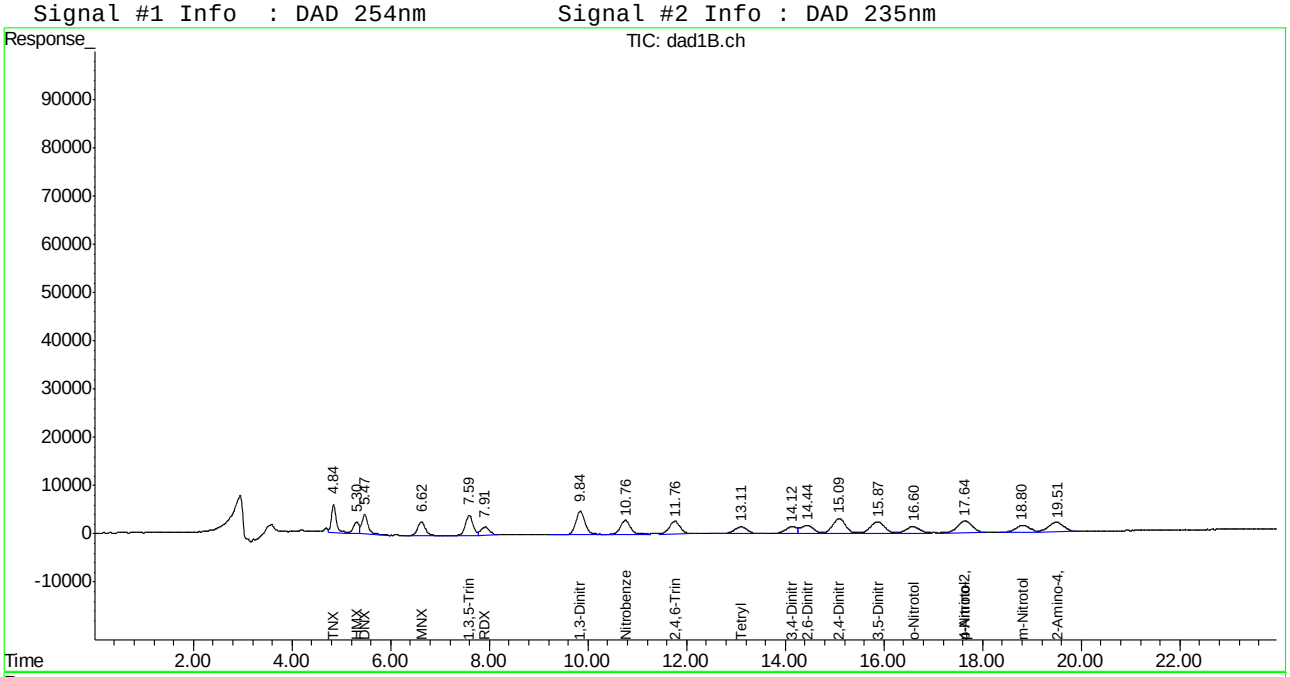
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620954.D GGG2952_032221.M Tue Mar 23 10:42:10 2021 Page 1

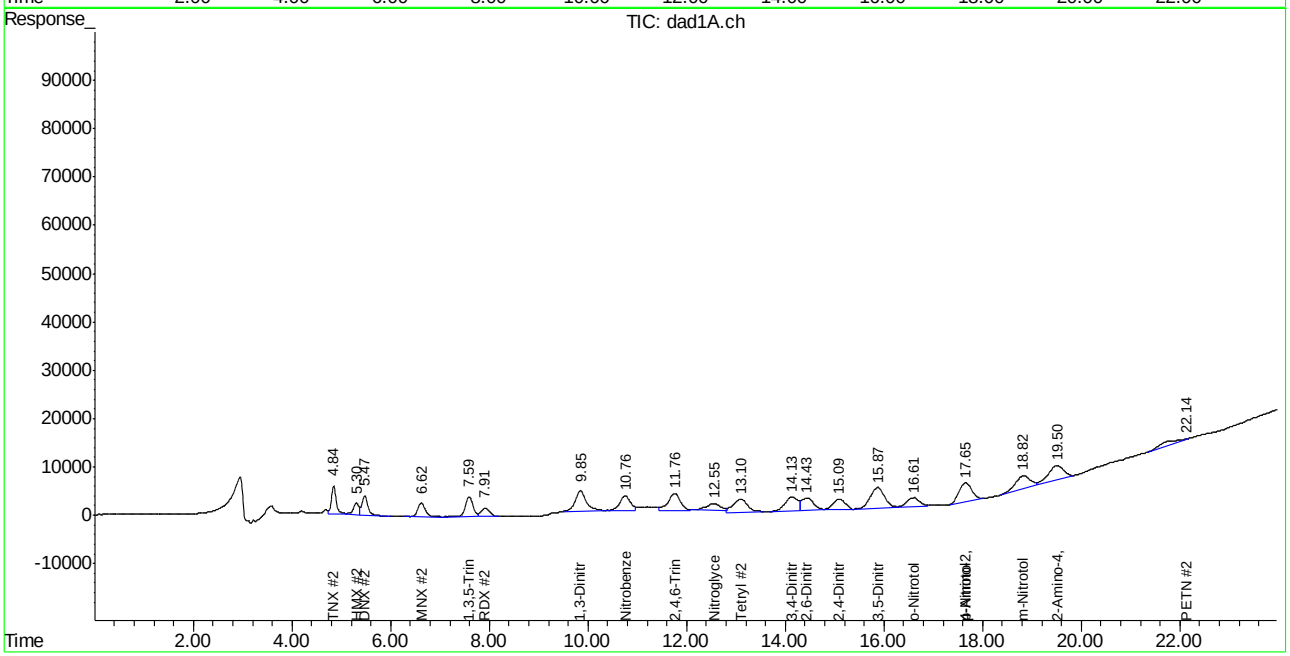
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : op84480,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:53 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

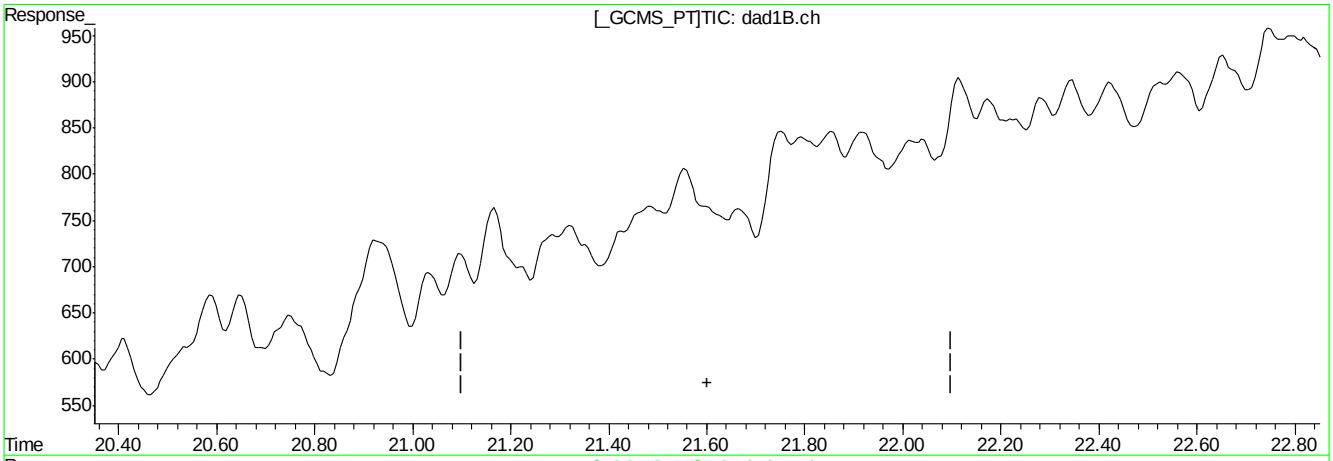
Sample Number: GGG2952-IC2952
Lab FileID: GG620954.D
Injection Time: 03/22/21 14:22
Method: SW846 8330A
Analyst approved: 03/23/21 11:47 James Boone
Supervisor approved: 03/23/21 11:59 Naresh Jiawan

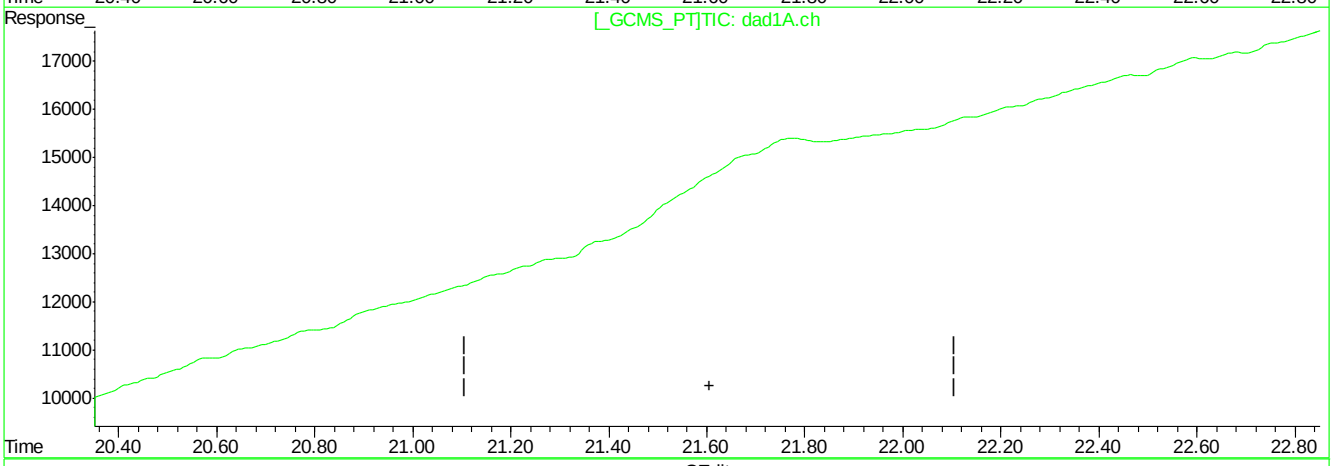
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	9.85	Poor instrument integration
Nitrobenzene	98-95-3	2	10.76	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.76	Poor instrument integration
Nitroglycerine	55-63-0	2	12.55	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.65	Poor instrument integration
p-Nitrotoluene	99-99-0	2	17.65	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.82	Poor instrument integration
PETN	78-11-5	2	22.14	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

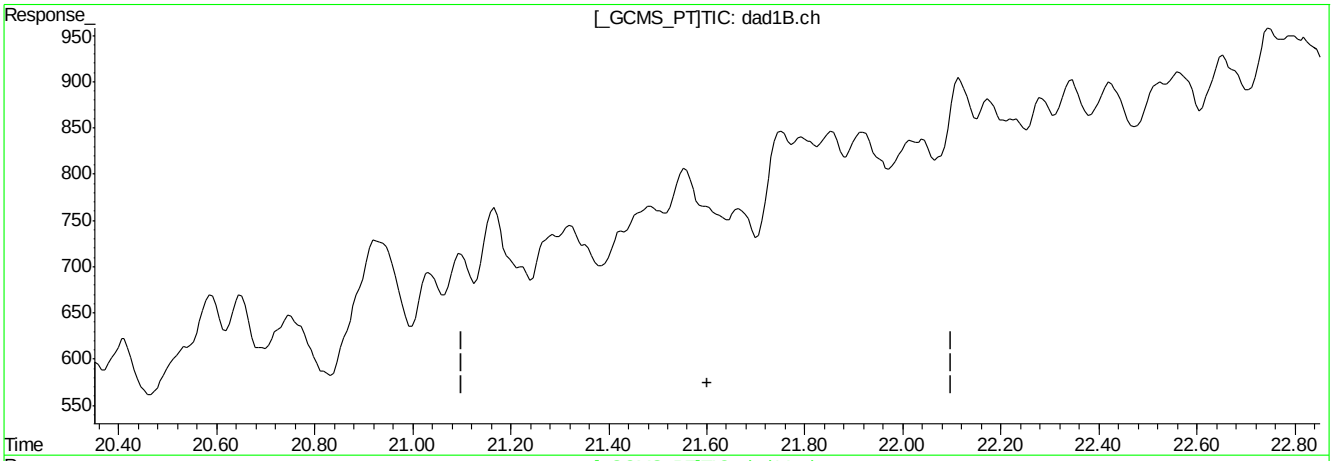
response 0

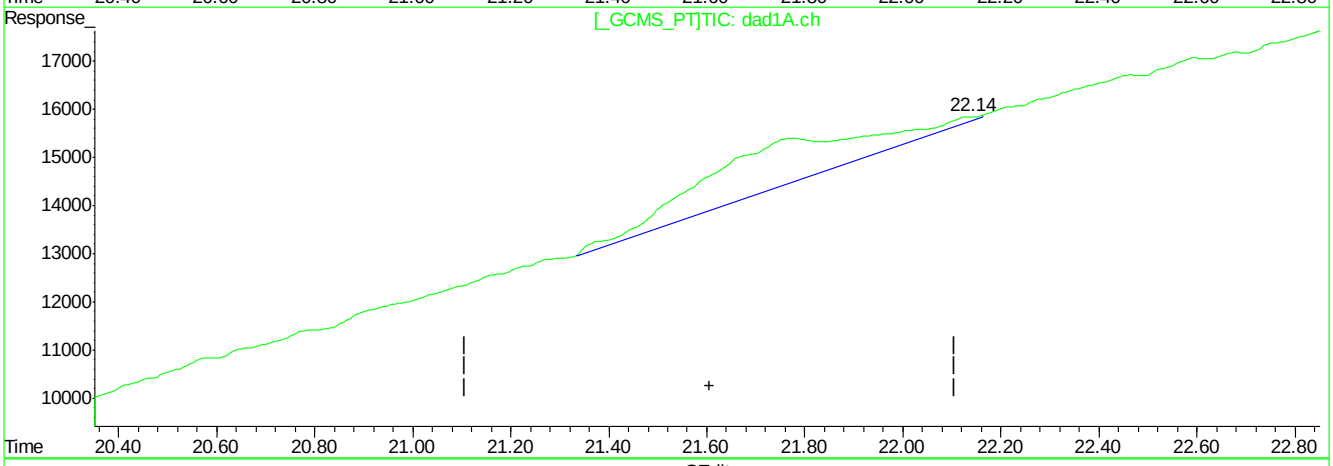
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:51:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

22.14min 61.197ppb m

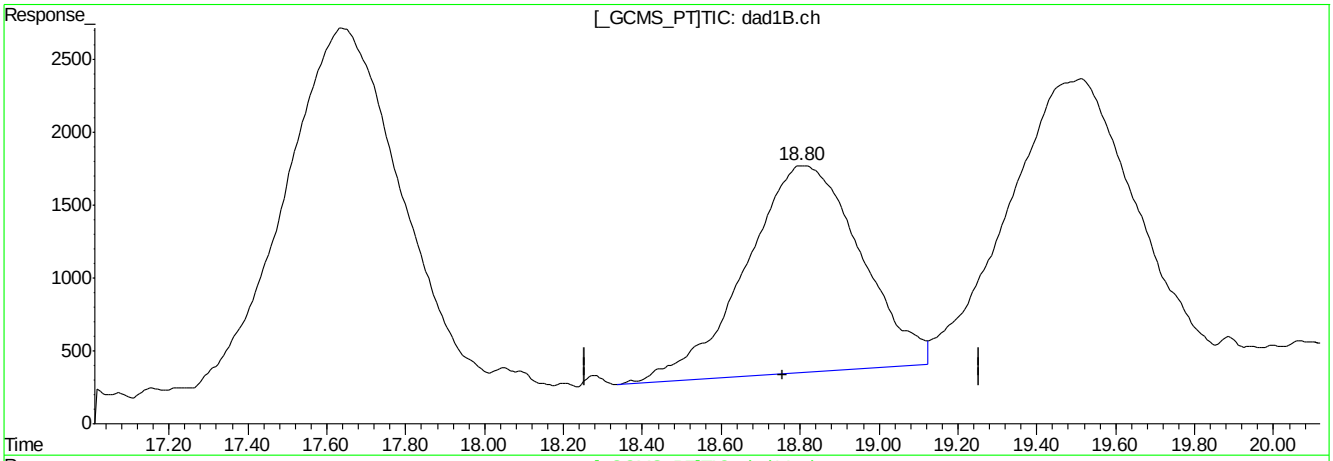
response 222581

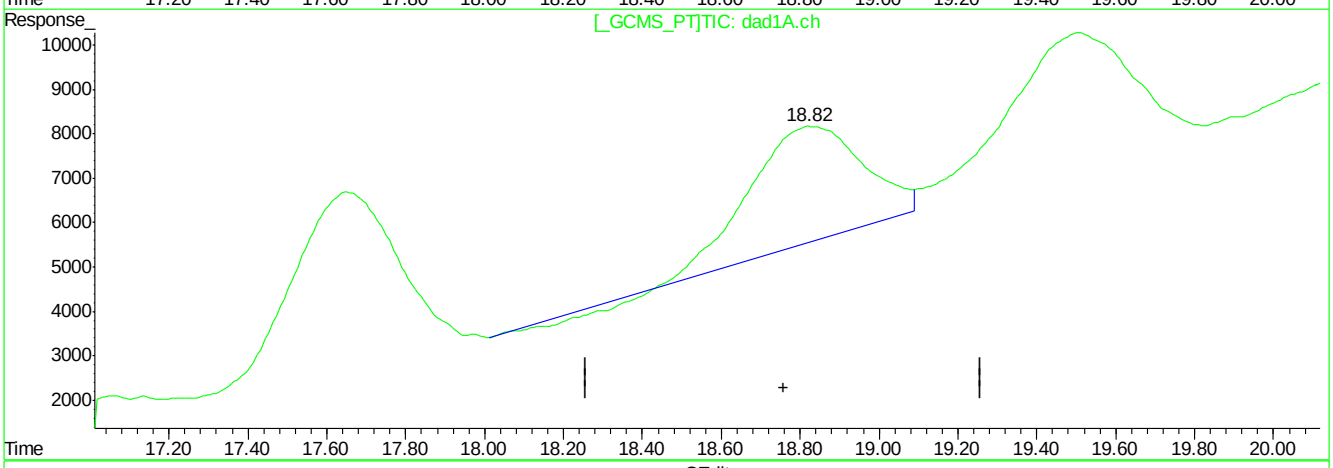
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:51:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.81min 54.450ppb

response 287289

(19) m-Nitrotoluene #2

18.83min 57.739ppb

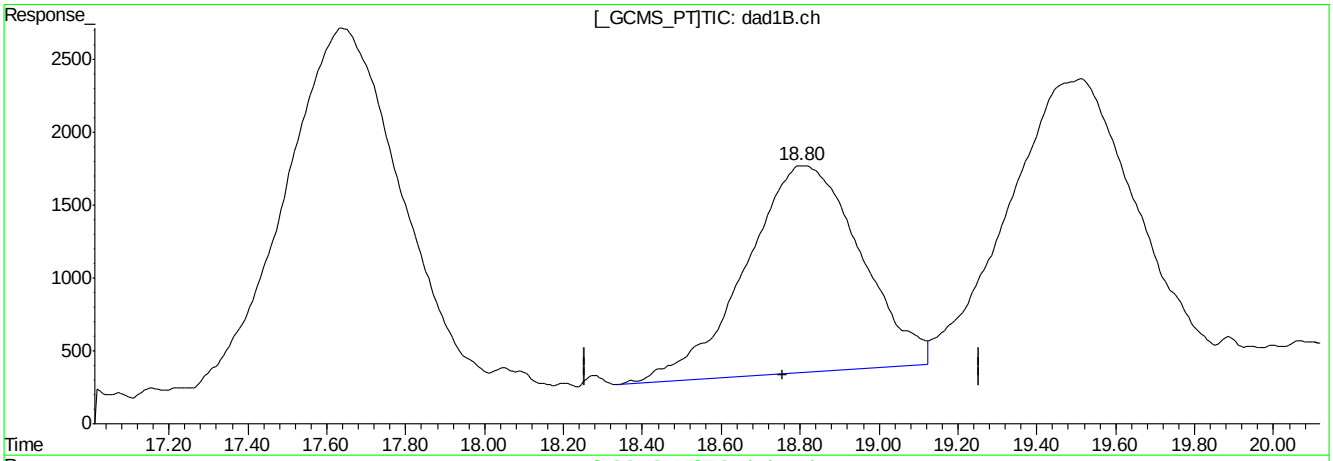
response 505226

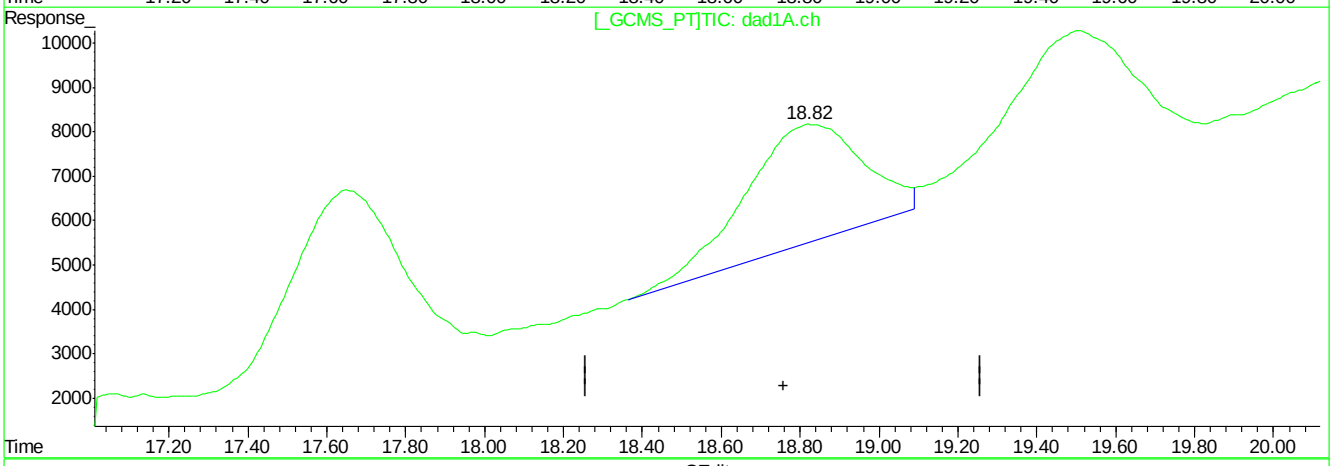
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:51:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.81min 54.450ppb

response 287289

(19) m-Nitrotoluene #2

18.82min 63.549ppb m

response 556072

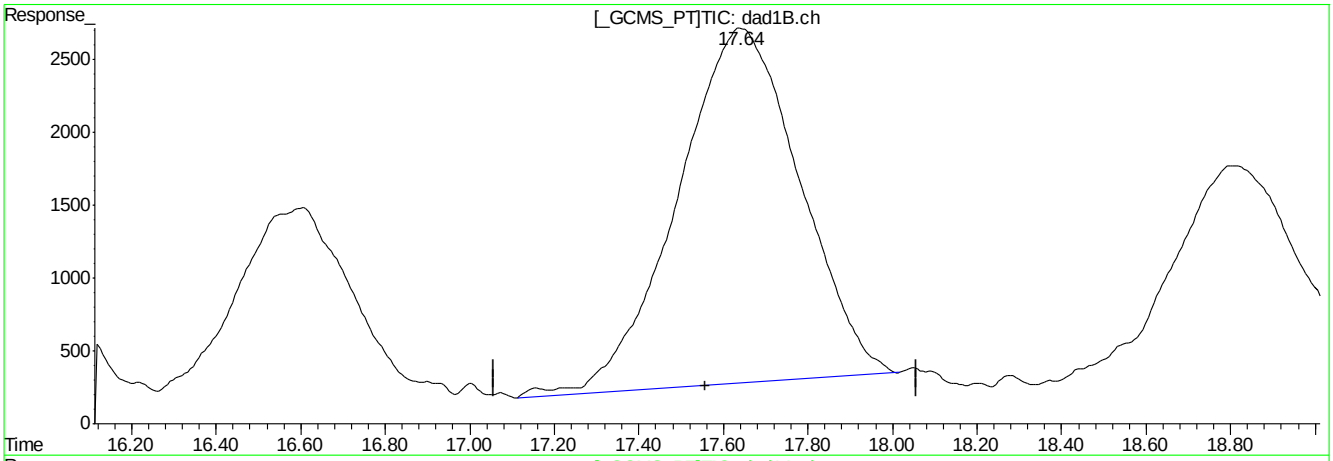
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:51:49 2021

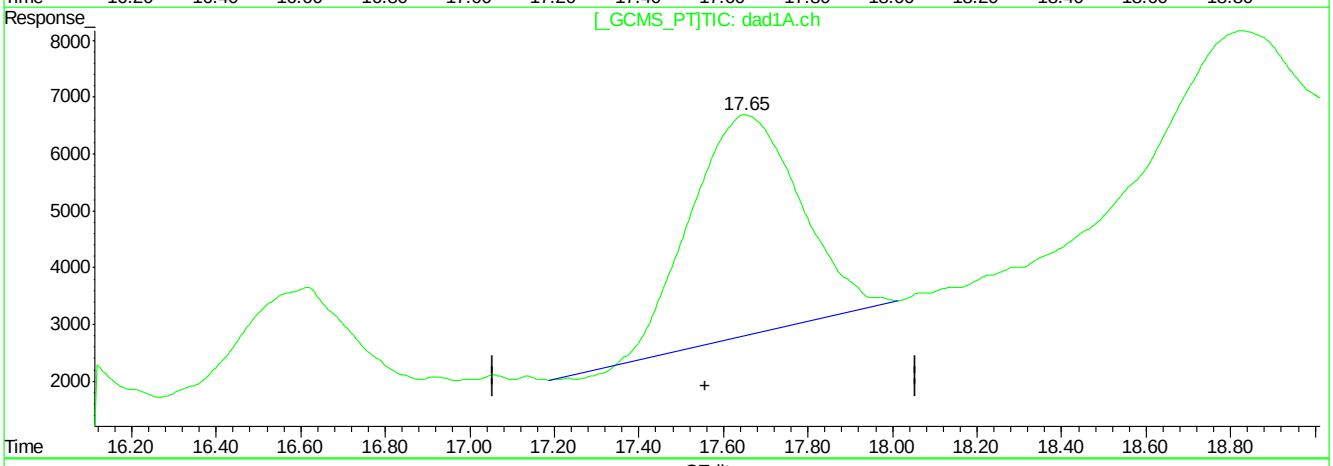
GG620954.D edits: m-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.64min 92.932ppb

response 489955

(18) 4-Amino-2,6-Dinitrotoluene #2

17.65min 72.825ppb

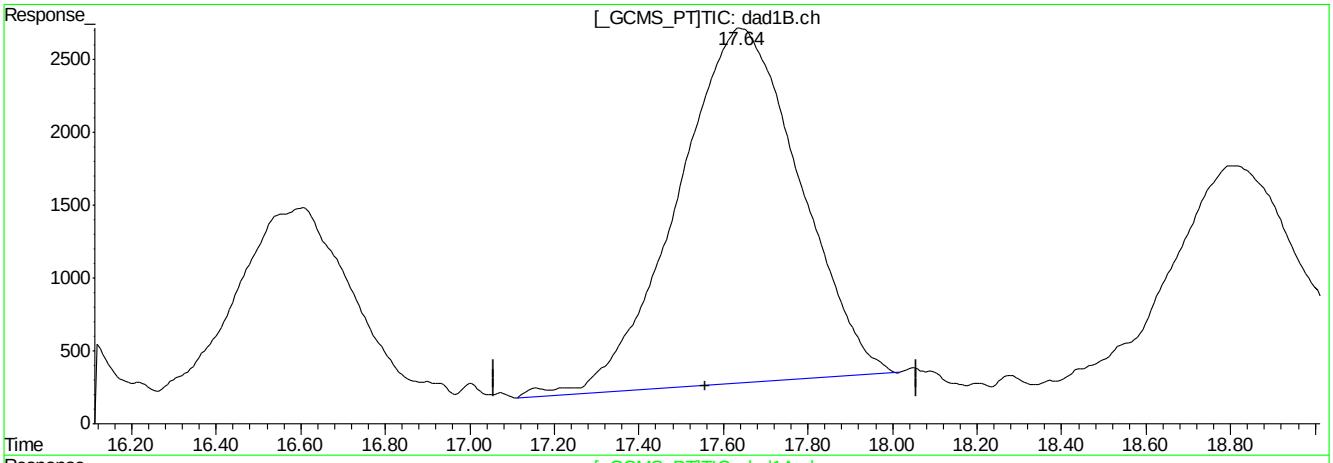
response 696223

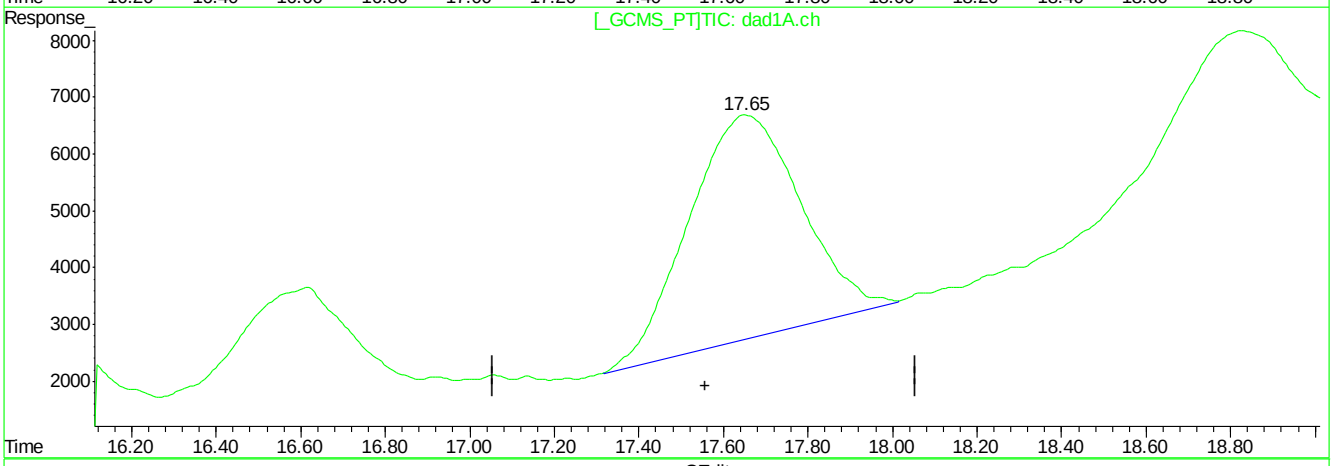
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:51:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.64min 92.932ppb

response 489955

(18) 4-Amino-2,6-Dinitrotoluene #2

17.65min 76.297ppb m

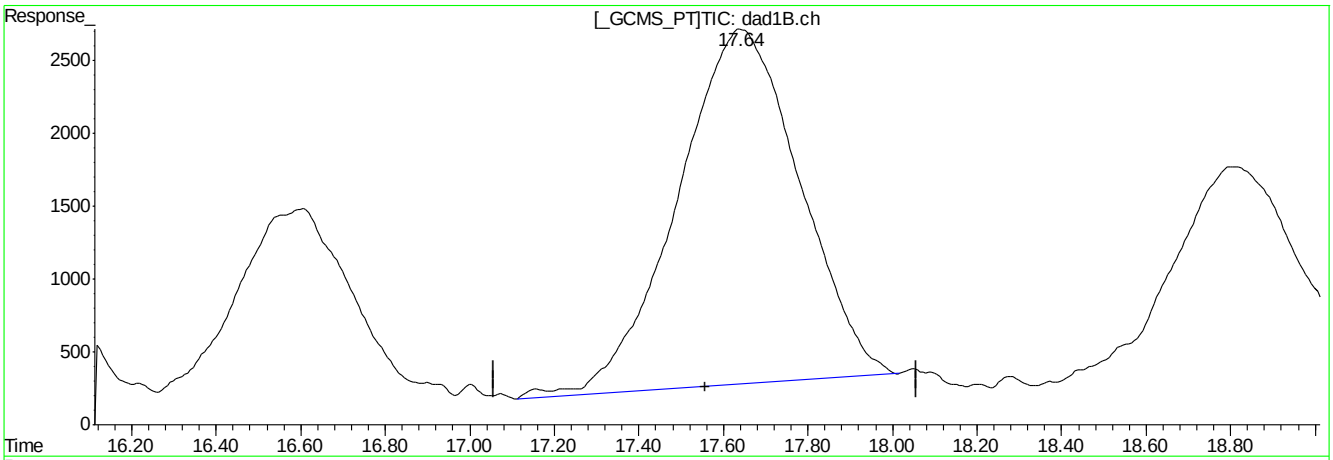
response 729417

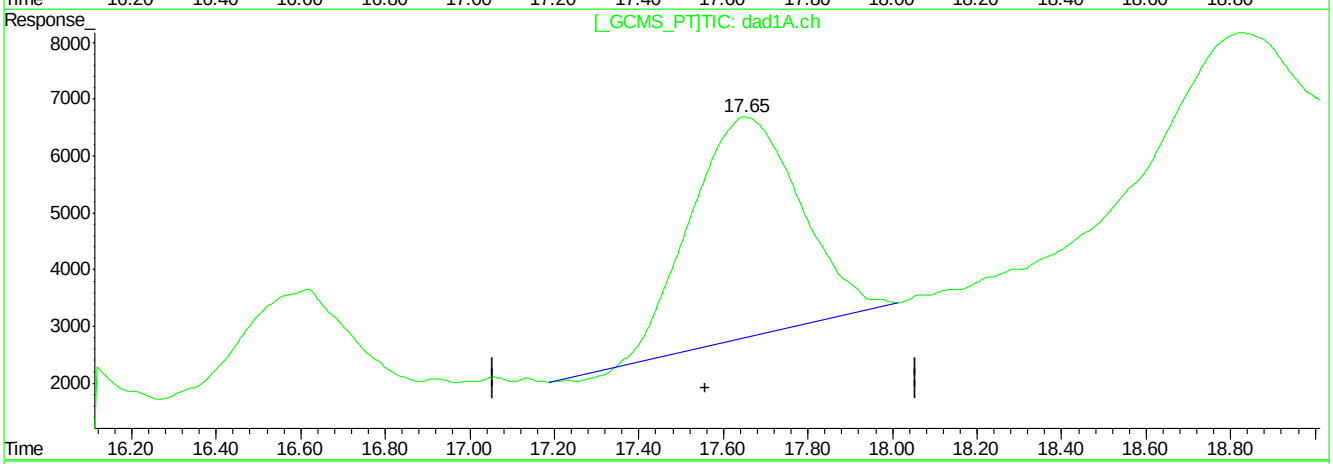
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:51:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.64min 92.932ppb

response 489955

(17) p-Nitrotoluene #2

17.65min 72.816ppb

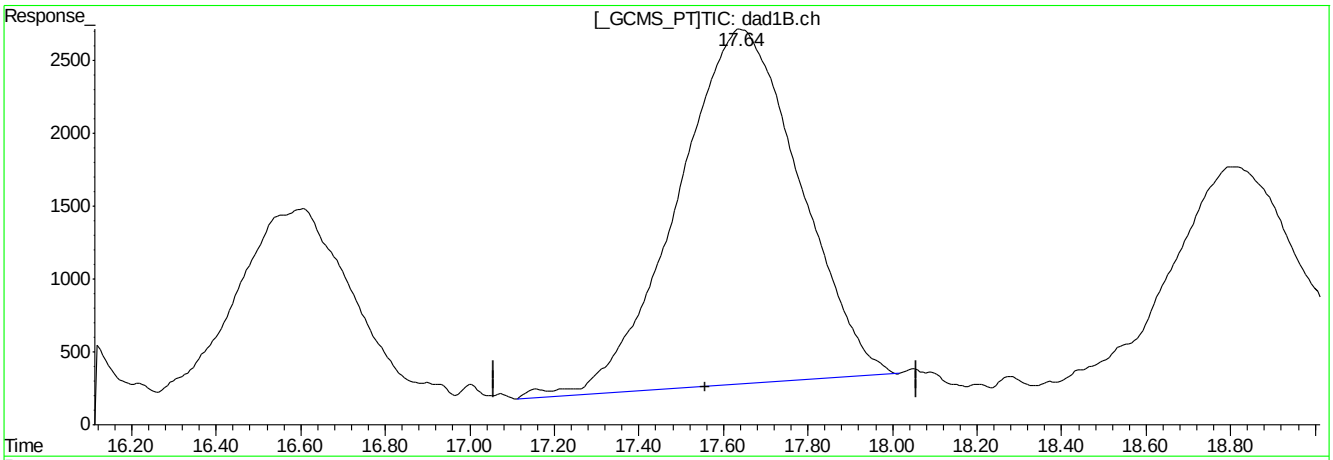
response 696223

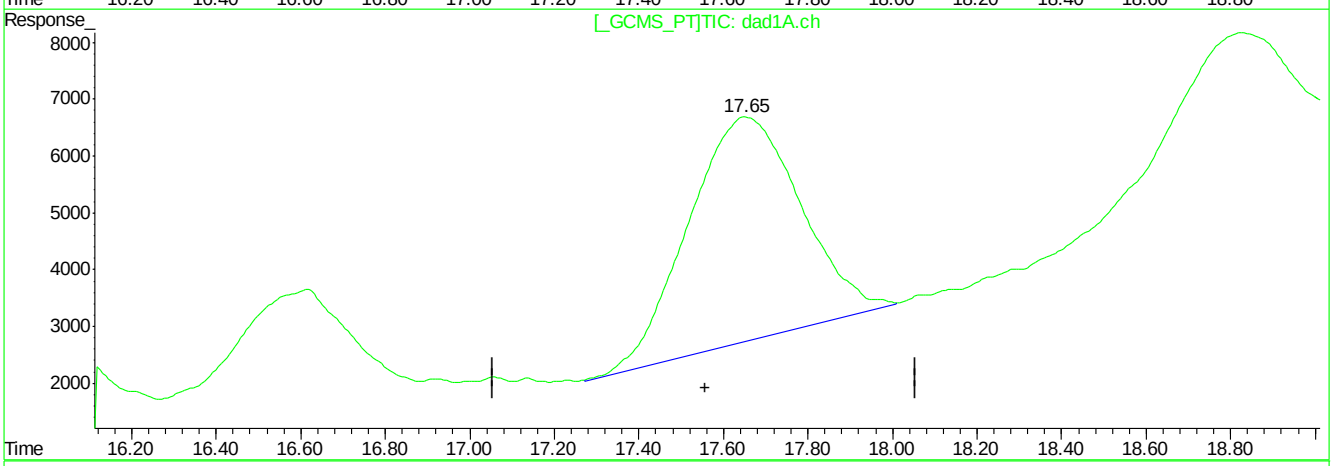
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:52:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.64min 92.932ppb

response 489955

(17) p-Nitrotoluene #2

17.65min 76.184ppb m

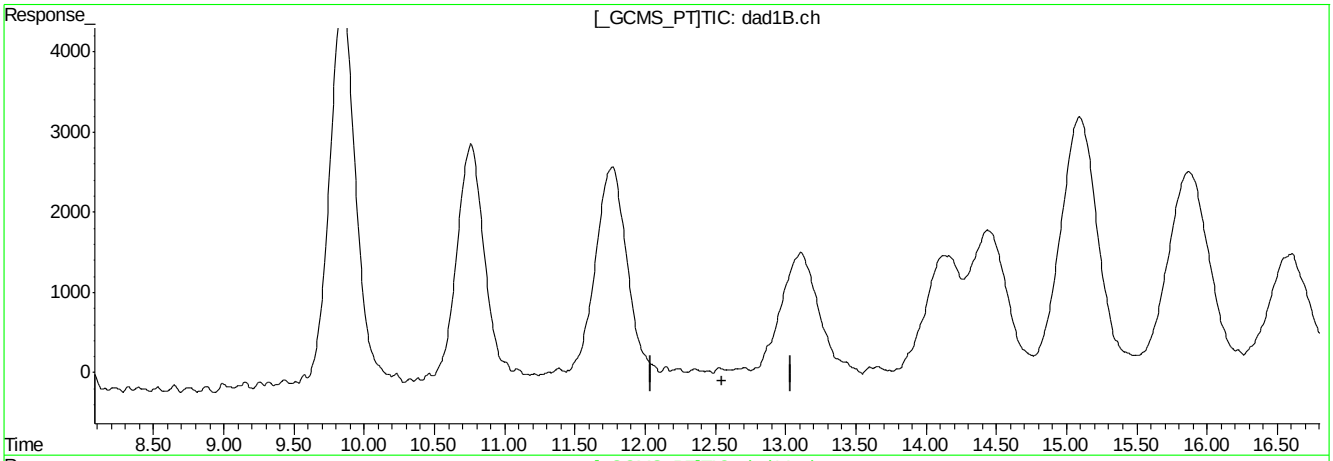
response 728430

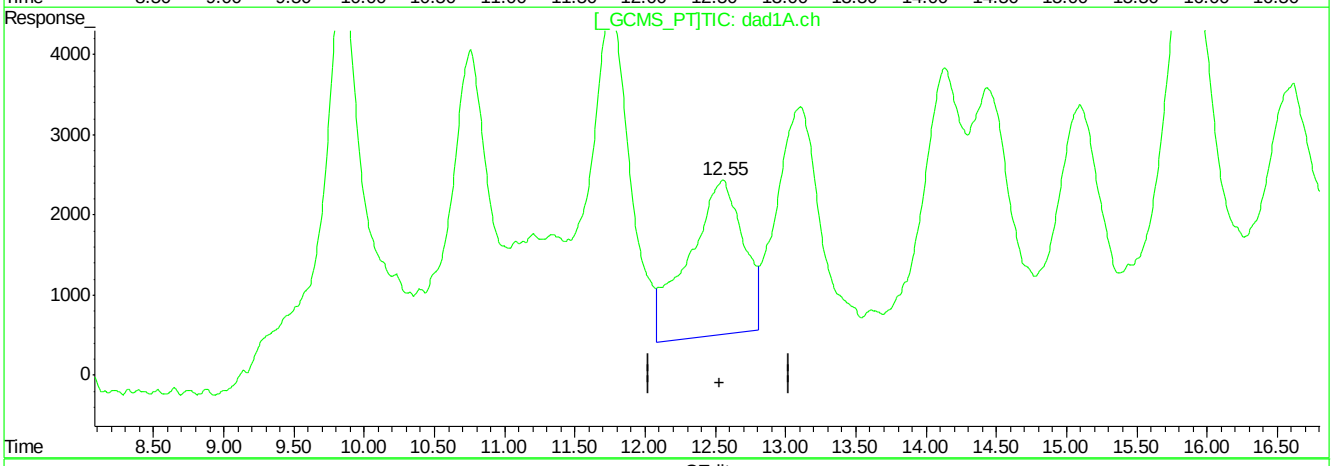
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:52:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.56min 161.074ppb

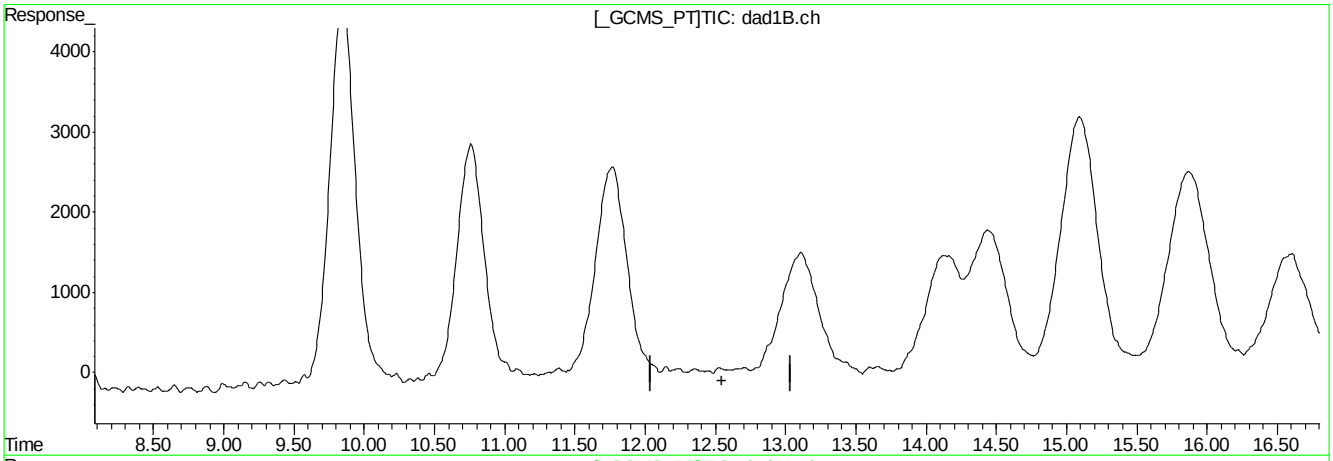
response 520287

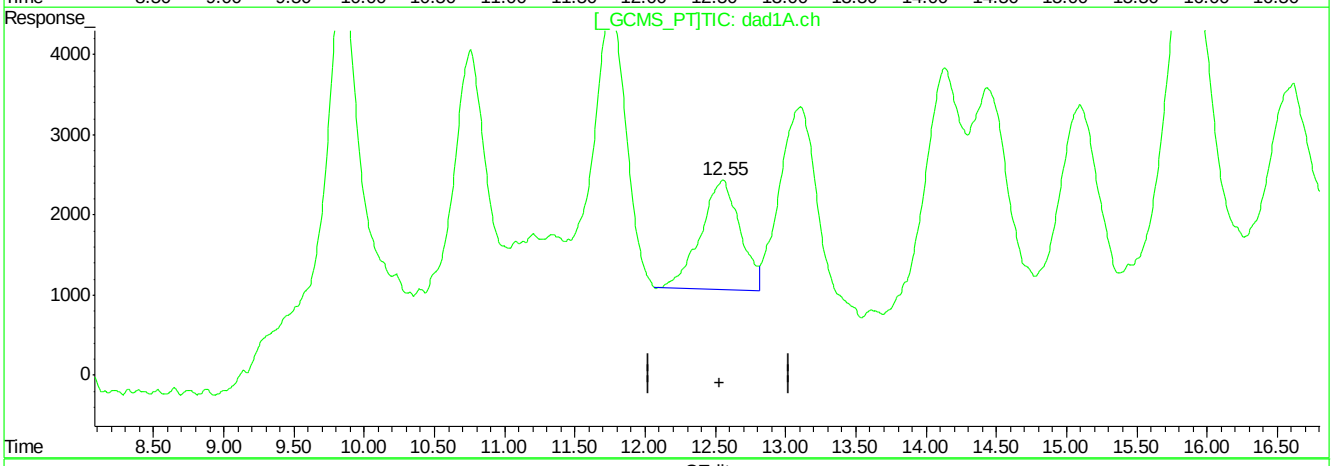
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:52:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.55min 81.865ppb m

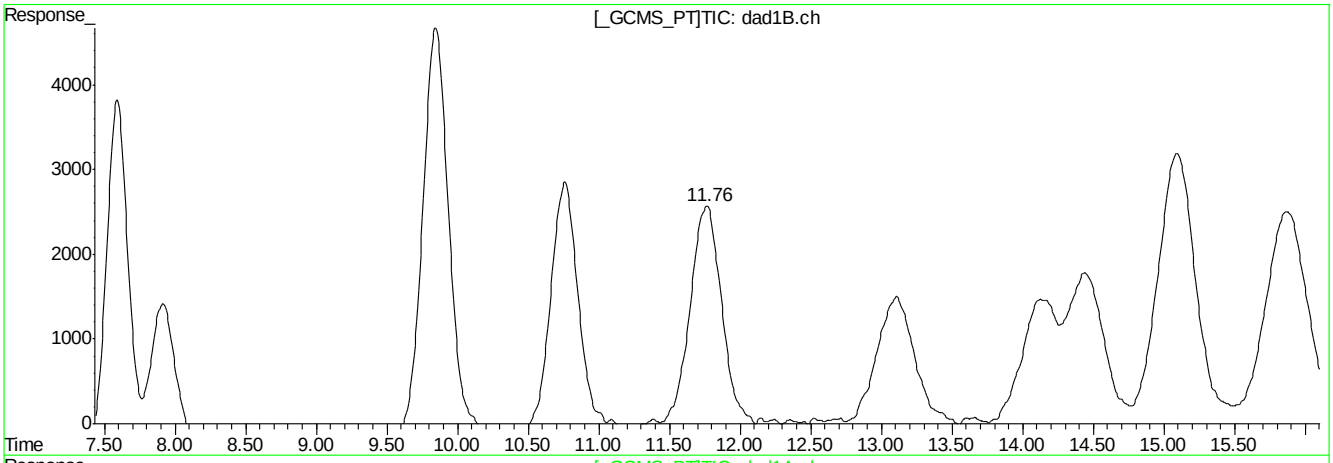
response 265106

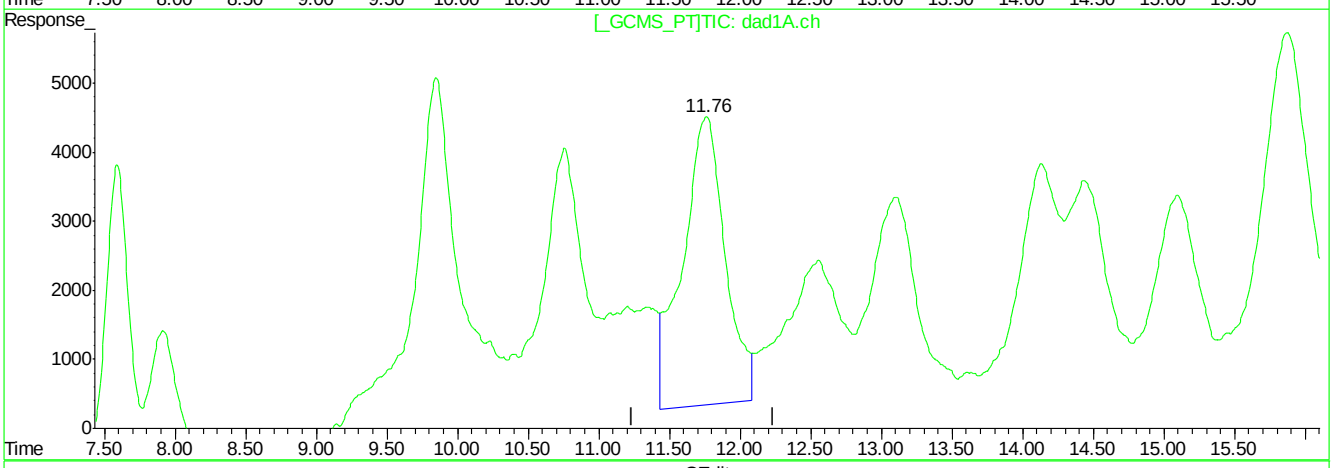
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:52:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.77min 44.105ppb

response 400391

(9) 2,4,6-Trinitrotoluene #2

11.76min 71.794ppb

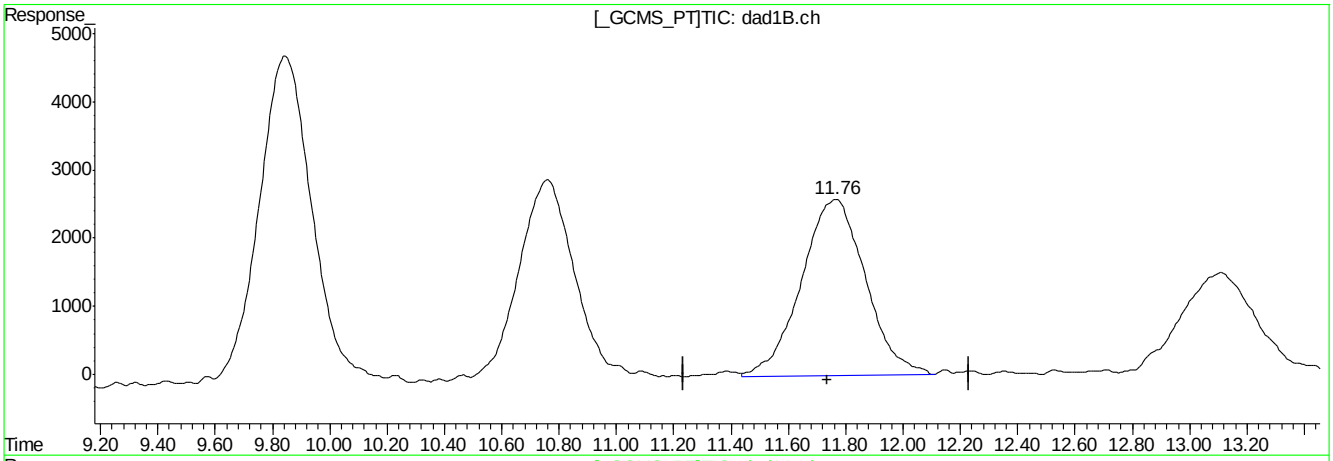
response 874614

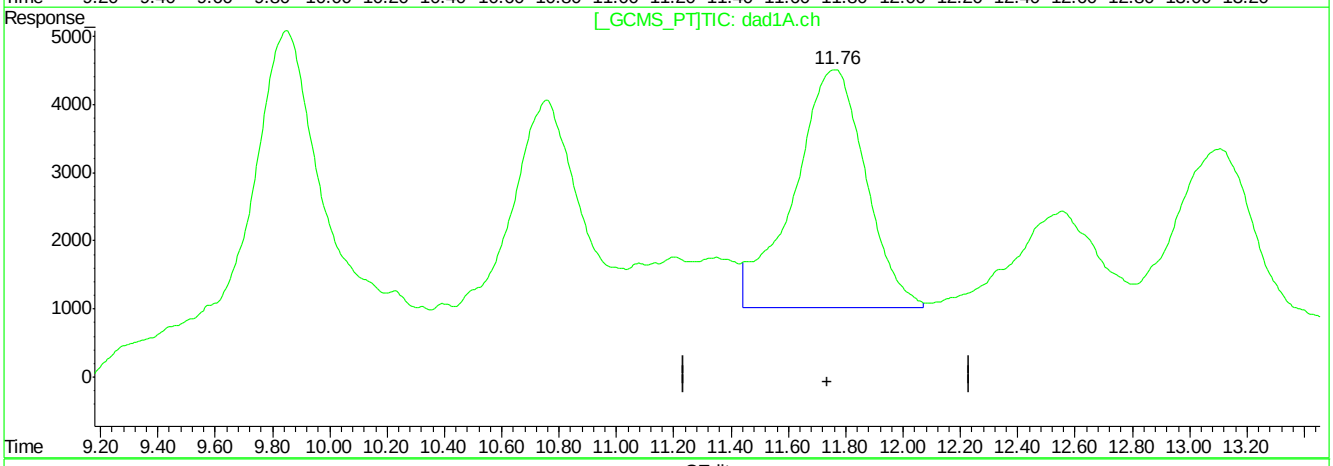
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:53:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.77min 44.105ppb

response 400391

(9) 2,4,6-Trinitrotoluene #2

11.76min 49.644ppb m

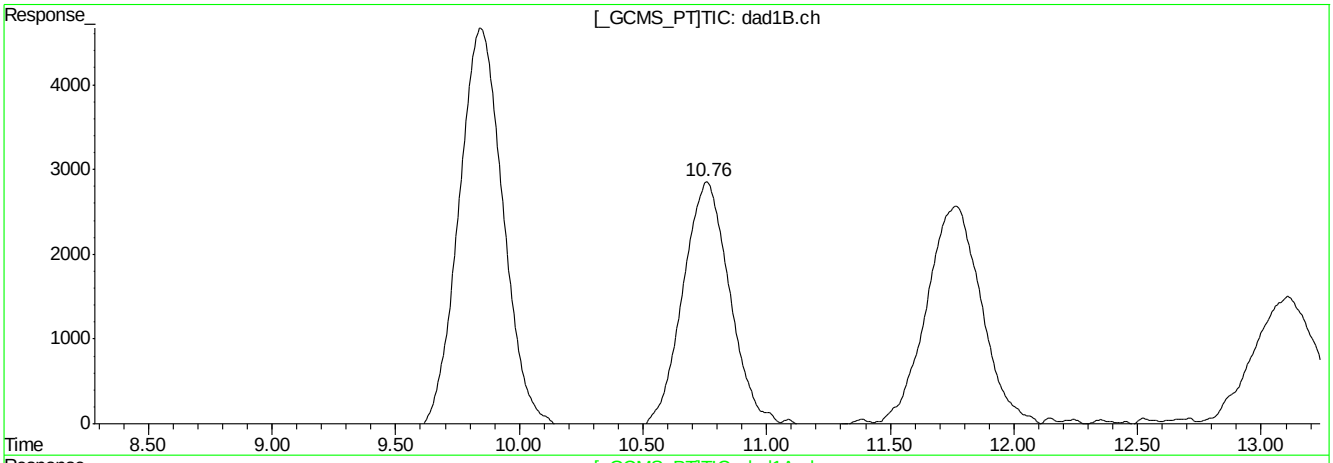
response 604770

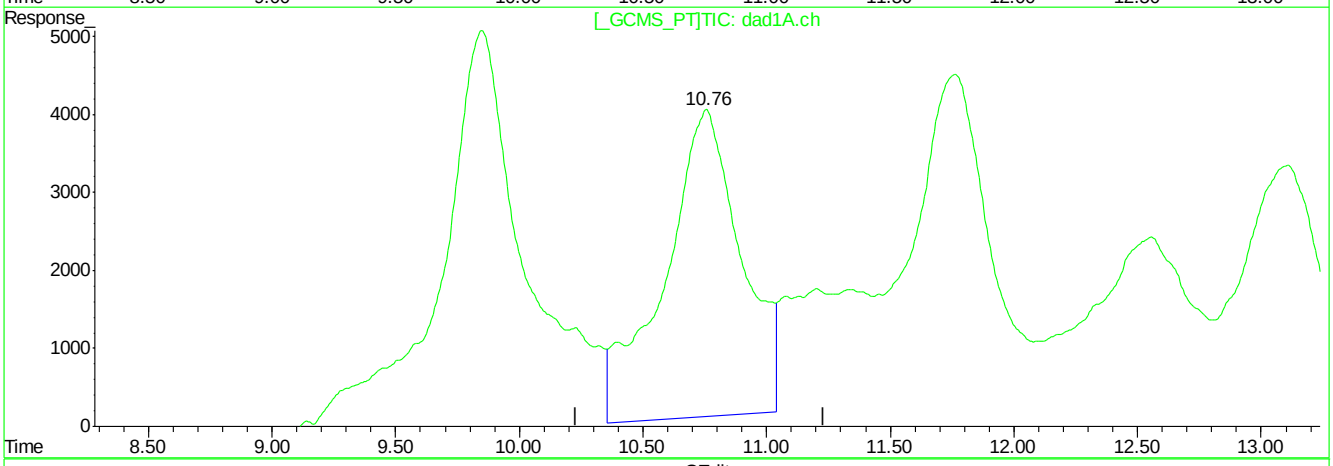
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:53:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.76min 54.122ppb

response 406687

(8) Nitrobenzene #2

10.76min 94.837ppb

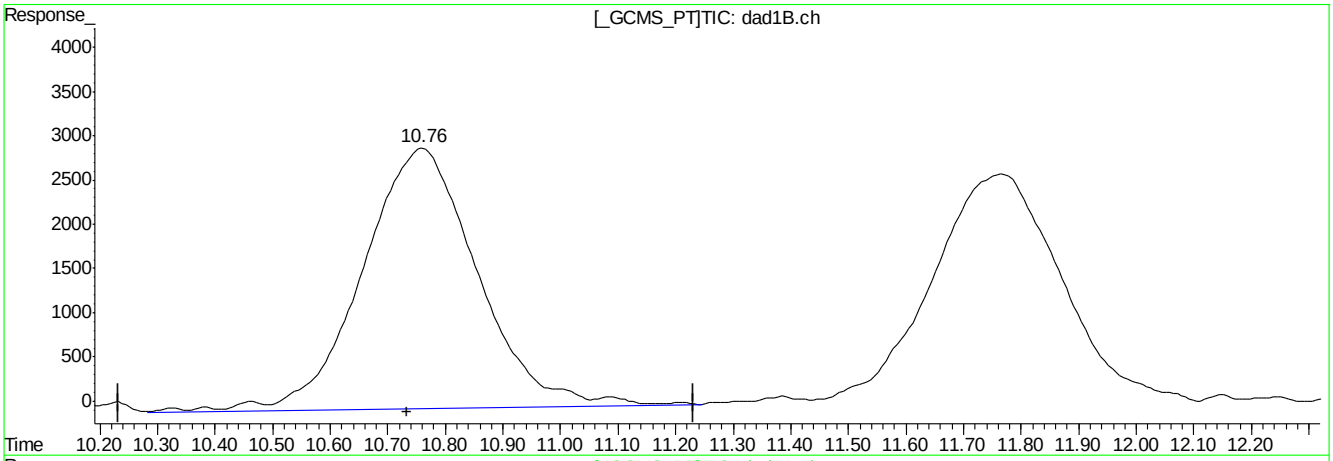
response 844811

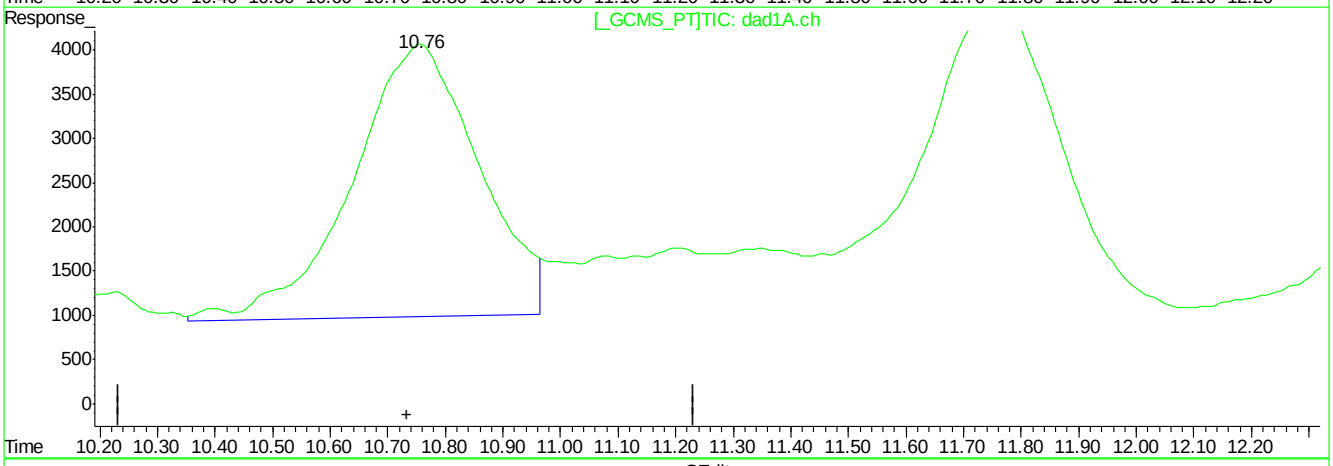
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:53:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.76min 54.122ppb

response 406687

(8) Nitrobenzene #2

10.76min 52.439ppb m

response 467130

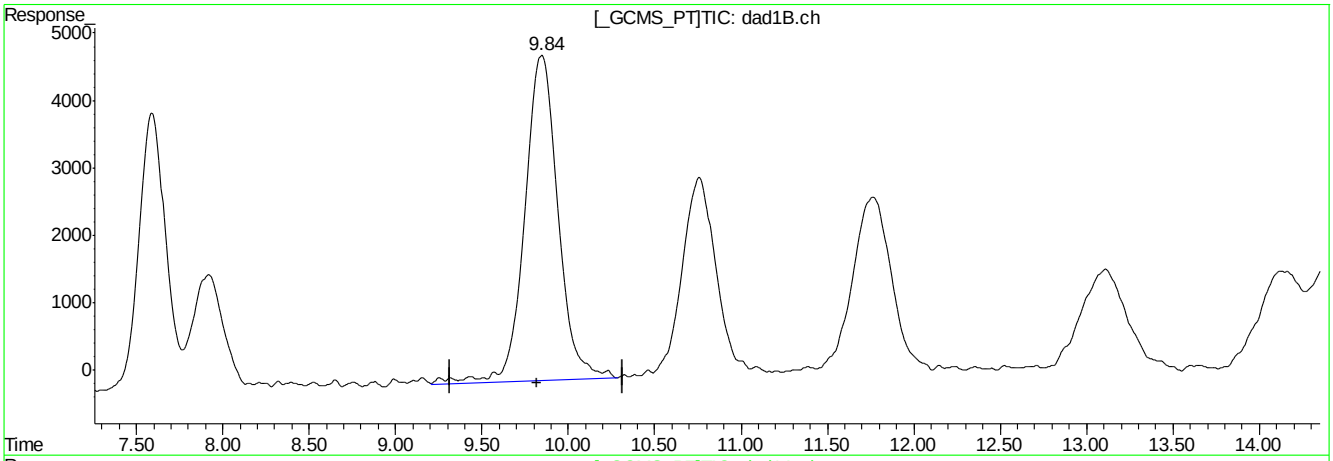
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:53:35 2021

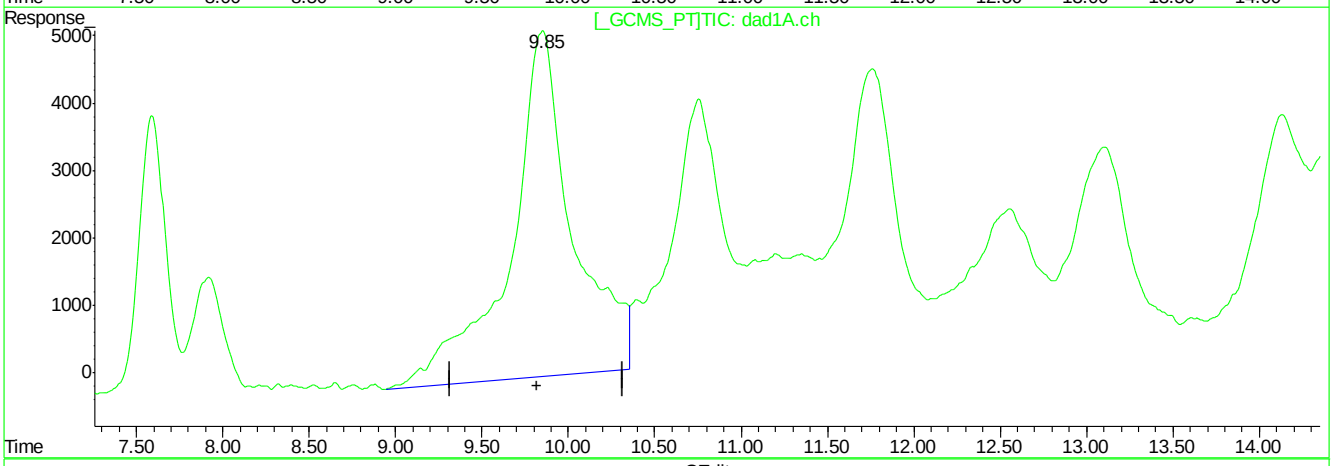
GG620954.D edits: Nitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.85min 50.198ppb

response 651719

(7) 1,3-Dinitrobenzene #2

9.85min 121.930ppb

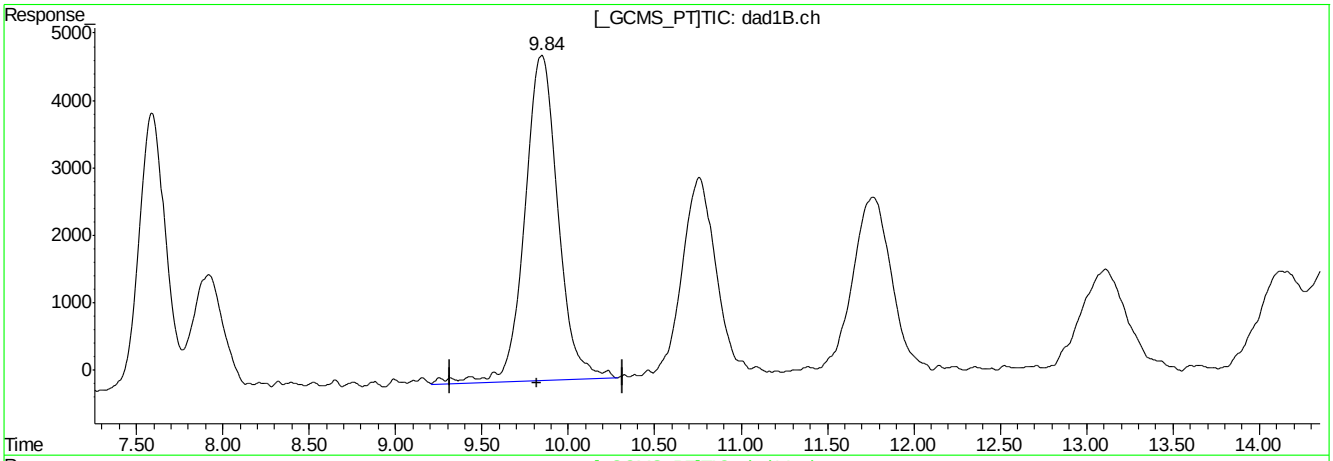
response 1277502

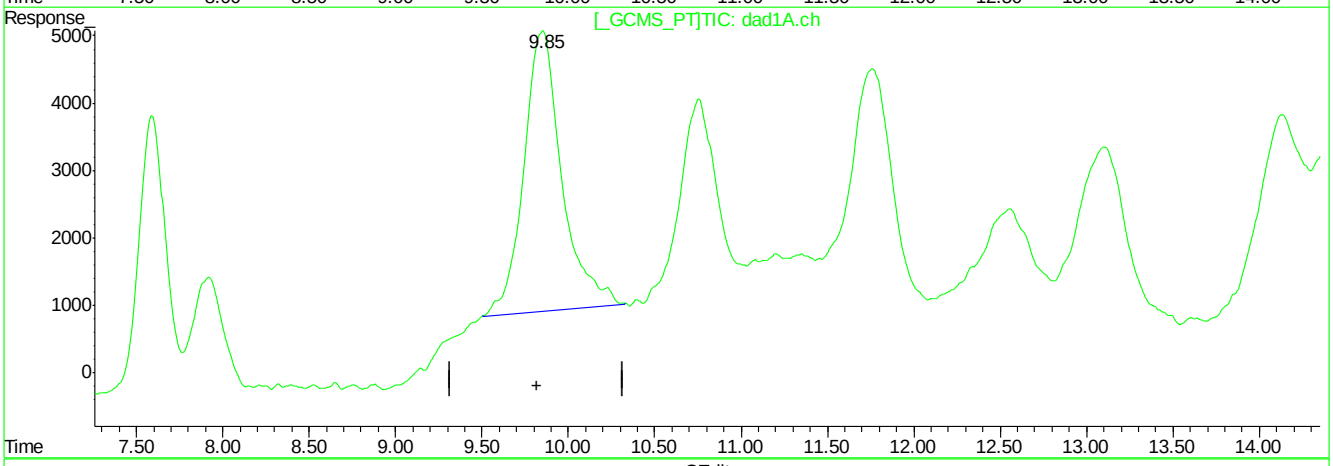
(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:53:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620954.D\dad1A.ch
Acq On : 22-Mar-2021, 14:22:59 Operator: jamesb
Sample : ic2952-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.85min 50.198ppb

response 651719

(7) 1,3-Dinitrobenzene #2

9.85min 60.910ppb m

response 638178

(+) = Expected Retention Time
GG620954.D GGG2952_032221.M Tue Mar 23 09:53:53 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
03/23/21 11:59

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : op84480,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 09:38:53 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.18	14.17	474550	895190	89.097	82.157
	Spiked Amount 500.000	Range 70 - 136		Recovery =		17.82%#	16.43%#
	Target Compounds						
1)	TNX	4.85	4.85	782629	782629	99.254	99.326
2)	HMX	5.32	5.32	343464	343464	107.878	107.878
3)	DNX	5.48	5.48	650344	650344	94.299	94.299
4)	MNX	6.63	6.63	596427	596427	85.427	85.427
5)	1,3,5-Trinitrobe	7.60	7.60	886424	886424	90.358	90.366
6)	RDX	7.94	7.94	413997	413997	97.501	97.501
7)	1,3-Dinitrobenze	9.87	9.86	1217461	876058	93.774	83.614m
8)	Nitrobenzene	10.78	10.78	793581	640223	105.610	71.870m
9)	2,4,6-Trinitroto	11.79	11.78	804358	942850	88.604	77.395m
10)	Nitroglycerin	0.00	12.57	0	253805	N.D.	78.366m#
11)	Tetryl	13.13	13.14	552729	960267	78.820	73.490m
13)	2,6-Dinitrotolue	14.48	14.49	608790	883788	96.913	93.019
14)	2,4-Dinitrotolue	15.13	15.12	1102727	842633	94.470	97.608
15)	3,5-Dinitroanili	15.92	15.92	941722	1552751	95.067	98.967
16)	o-Nitrotoluene	16.63	16.63	506560	755059	109.384	109.628
17)	p-Nitrotoluene	17.70	17.70	1022074	1701371	193.862	177.941
18)	4-Amino-2,6-Dini	17.70	17.70	1022074	1701371	193.862	177.963
19)	m-Nitrotoluene	18.87	18.87	541547	934286	102.639	106.773m
20)	2-Amino-4,6-Dini	19.57	19.58	808178	1199393	89.131	97.223
21)	PETN	0.00	21.76	0	339315	N.D.	93.361m#

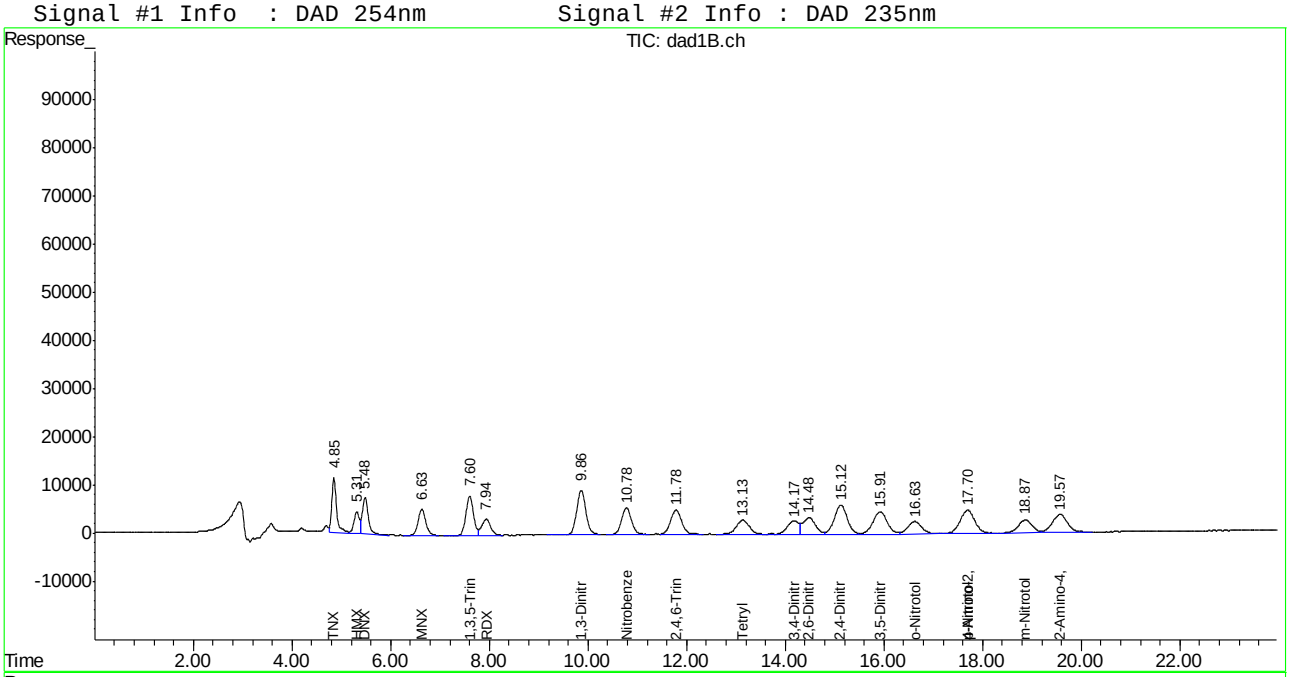
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620955.D GGG2952_032221.M Tue Mar 23 10:42:11 2021 Page 1

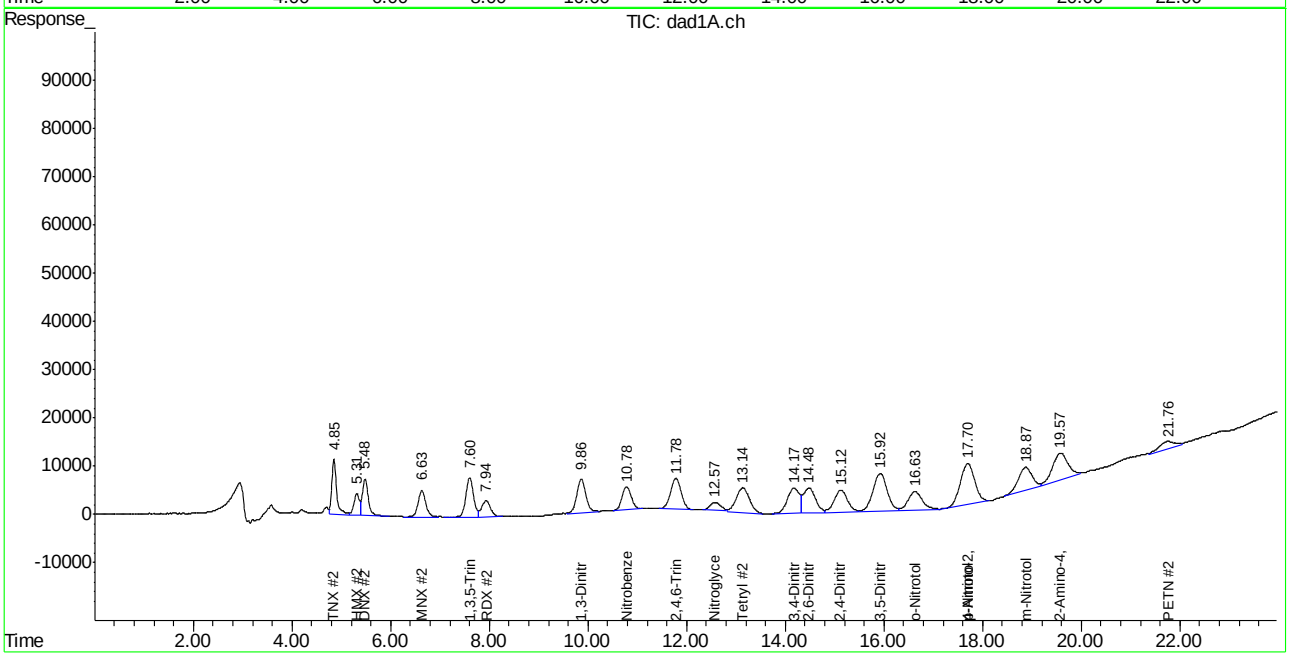
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : op84480,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:51 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

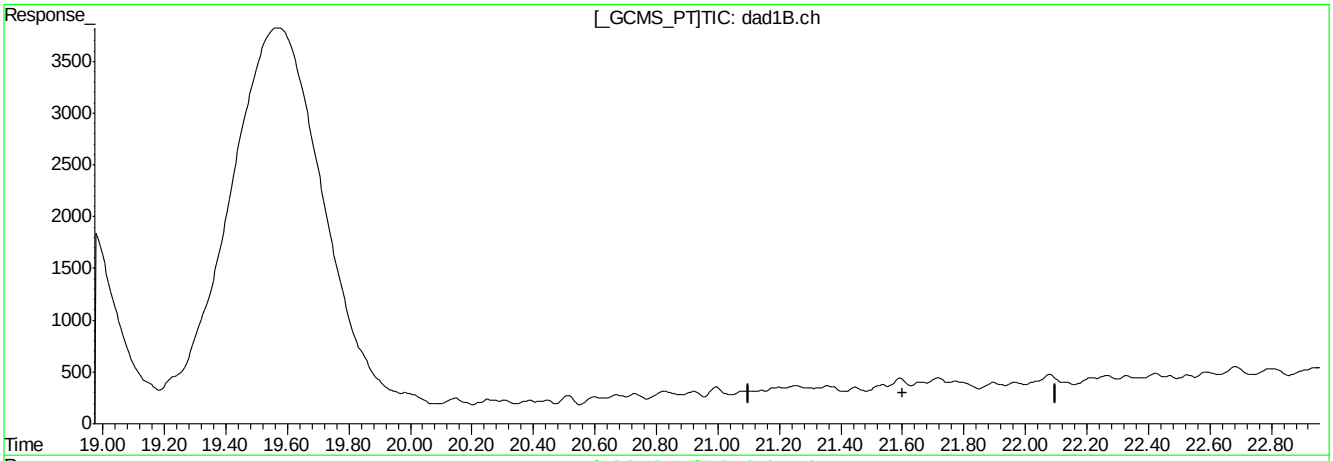
Sample Number: GGG2952-IC2952
Lab FileID: GG620955.D
Injection Time: 03/22/21 14:54
Method: SW846 8330A
Analyst approved: 03/23/21 11:47 James Boone
Supervisor approved: 03/23/21 11:59 Naresh Jiawan

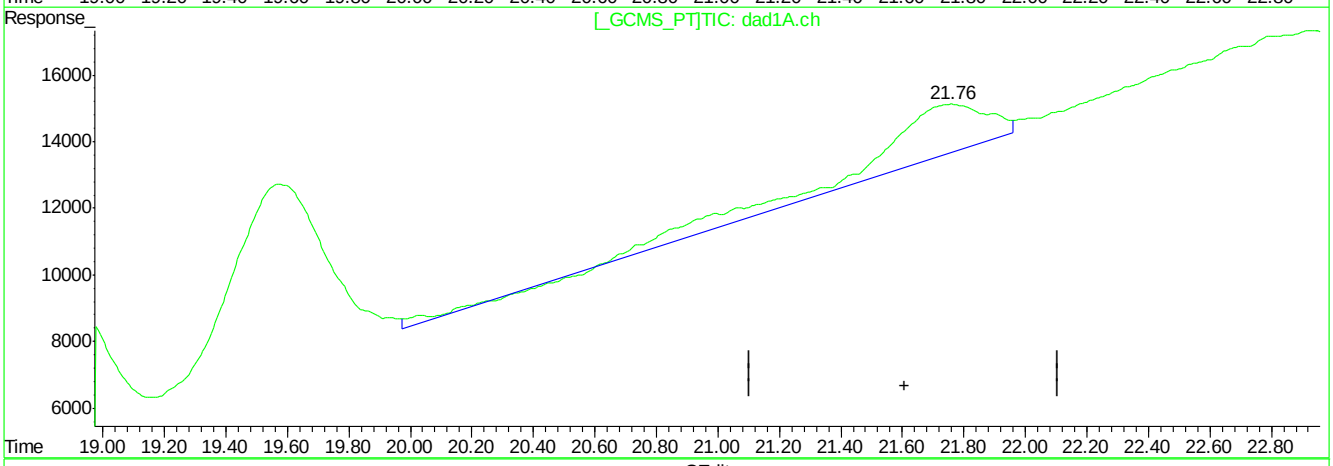
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	9.86	Poor instrument integration
Nitrobenzene	98-95-3	2	10.78	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.78	Poor instrument integration
Nitroglycerine	55-63-0	2	12.57	Poor instrument integration
Tetryl	479-45-8	2	13.14	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.87	Poor instrument integration
PETN	78-11-5	2	21.76	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.76min 120.114ppb

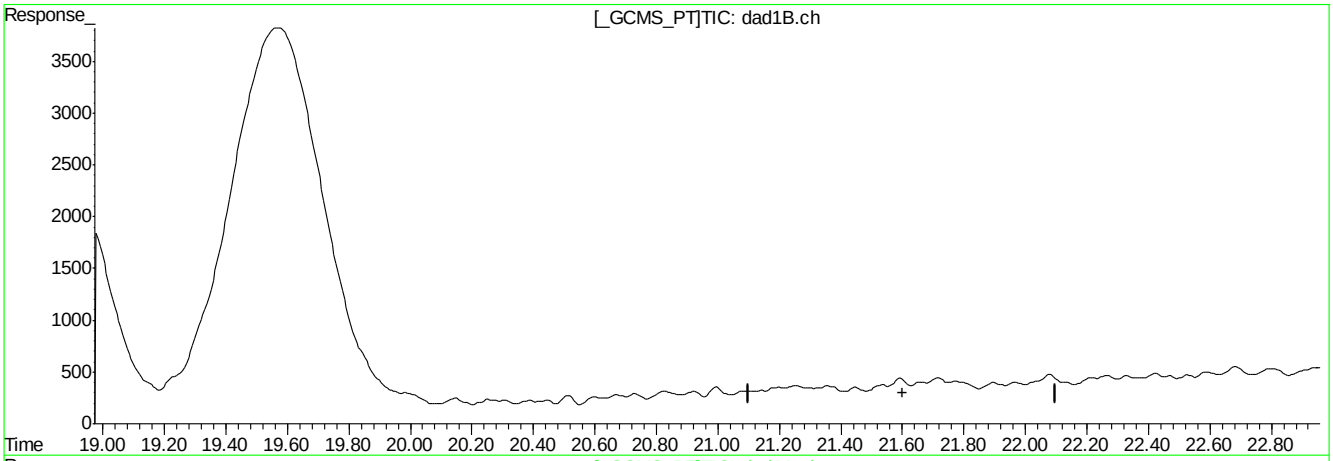
response 436275

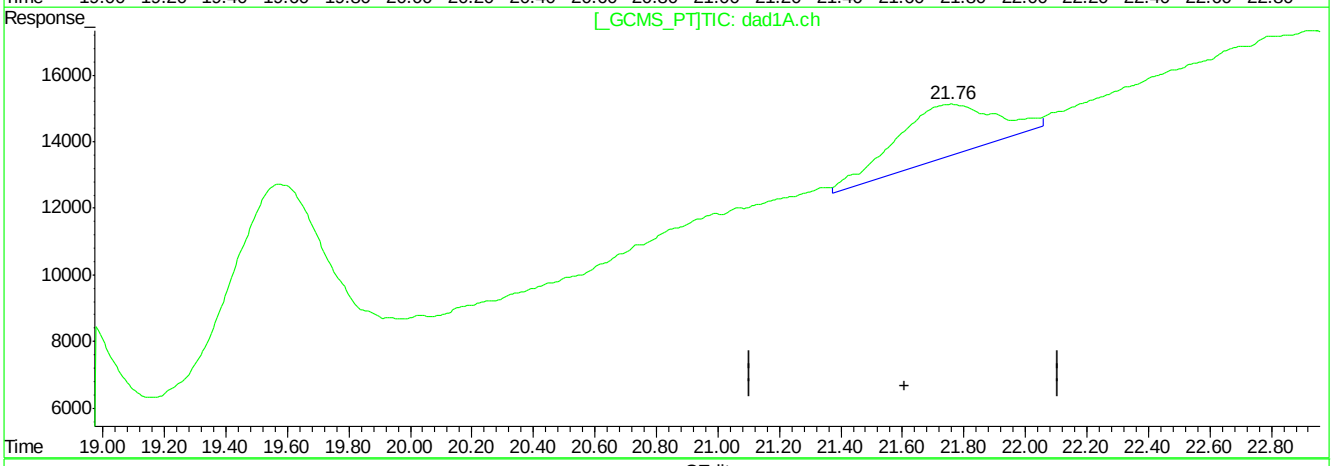
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:46:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.76min 97.692ppb m

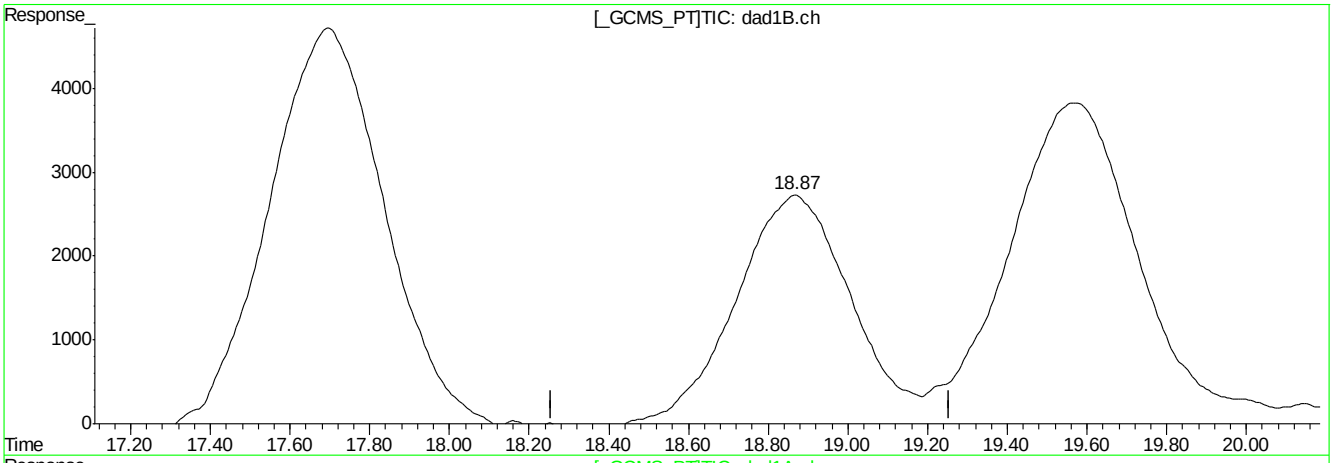
response 355021

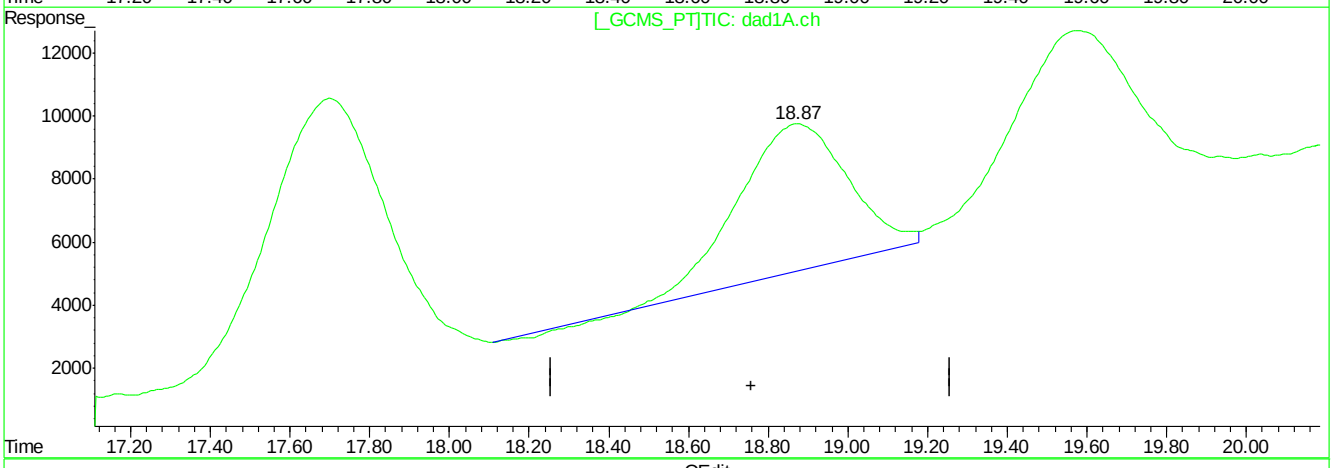
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:46:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.87min 102.639ppb

response 541547

(19) m-Nitrotoluene #2

18.87min 101.085ppb

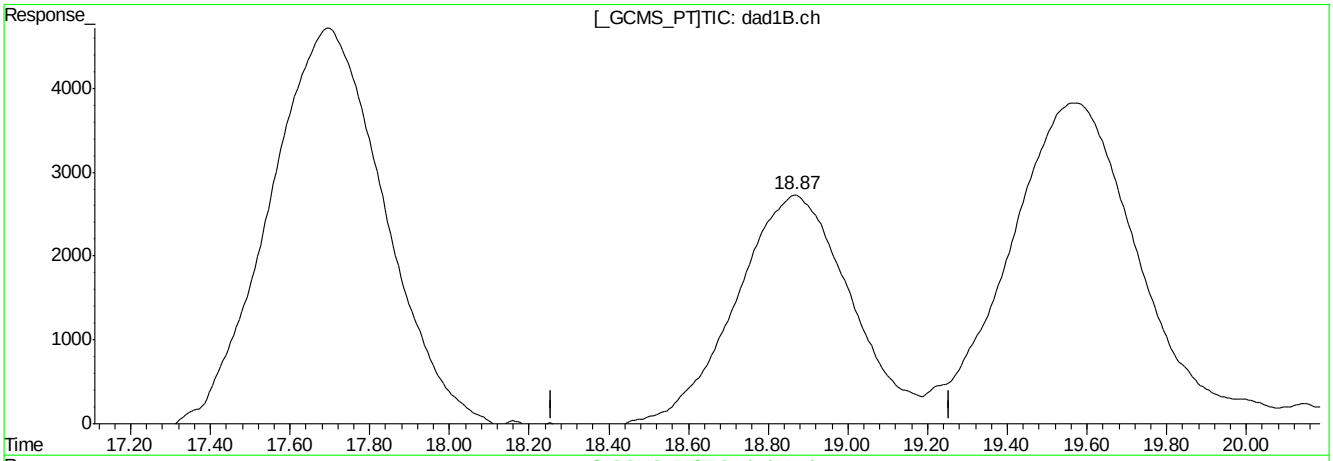
response 884521

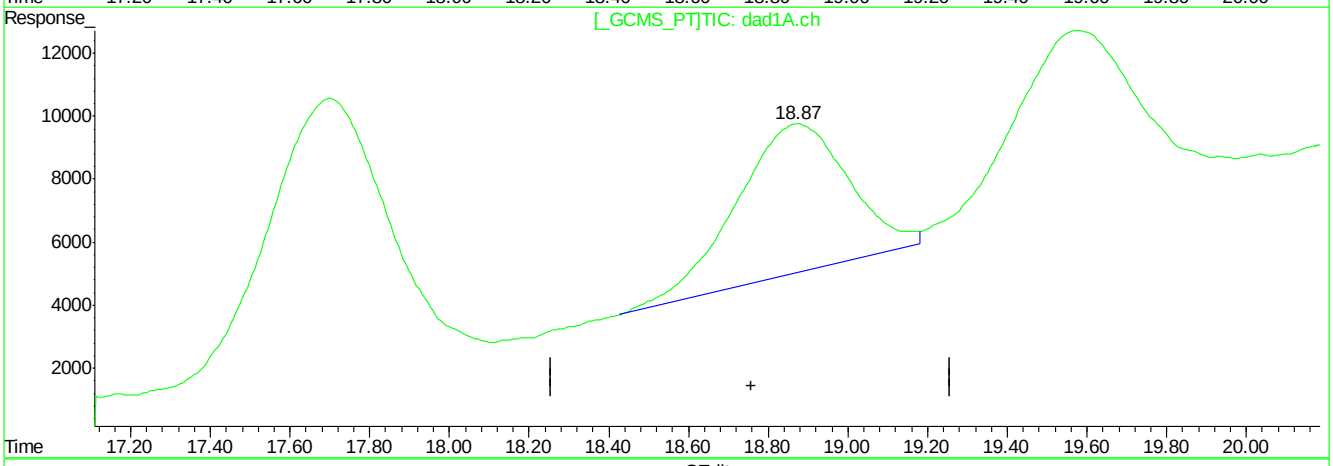
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:47:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.87min 102.639ppb

response 541547

(19) m-Nitrotoluene #2

18.87min 105.980ppb m

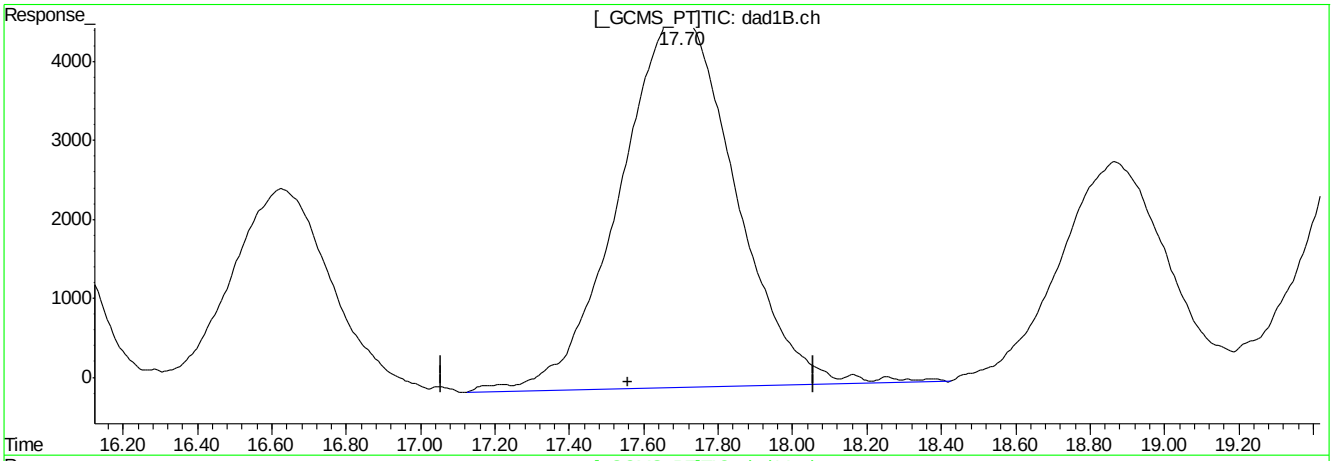
response 927349

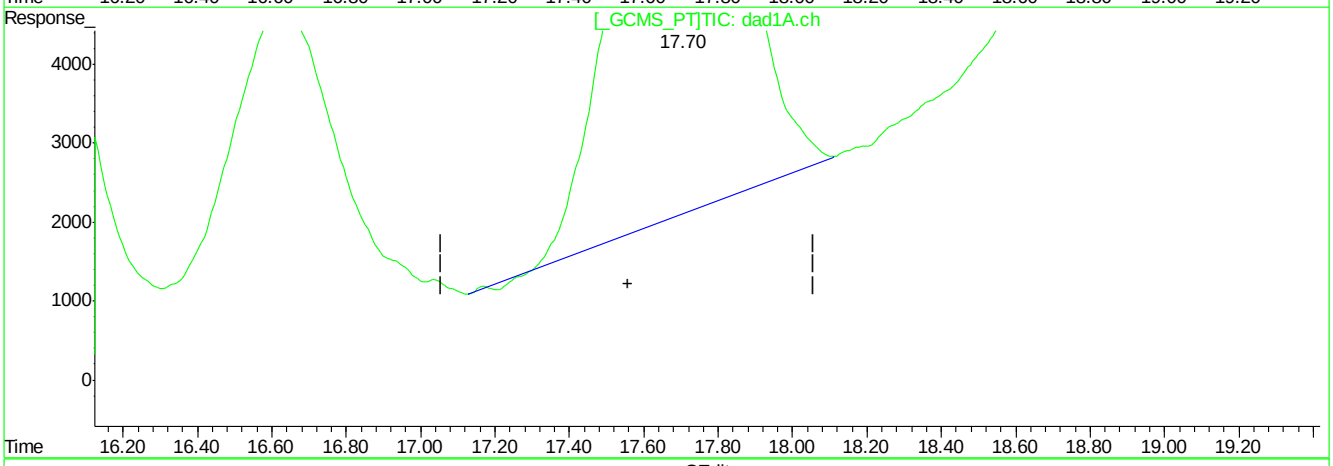
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:47:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.70min 193.862ppb

response 1022074

(18) 4-Amino-2,6-Dinitrotoluene #2

17.70min 177.963ppb

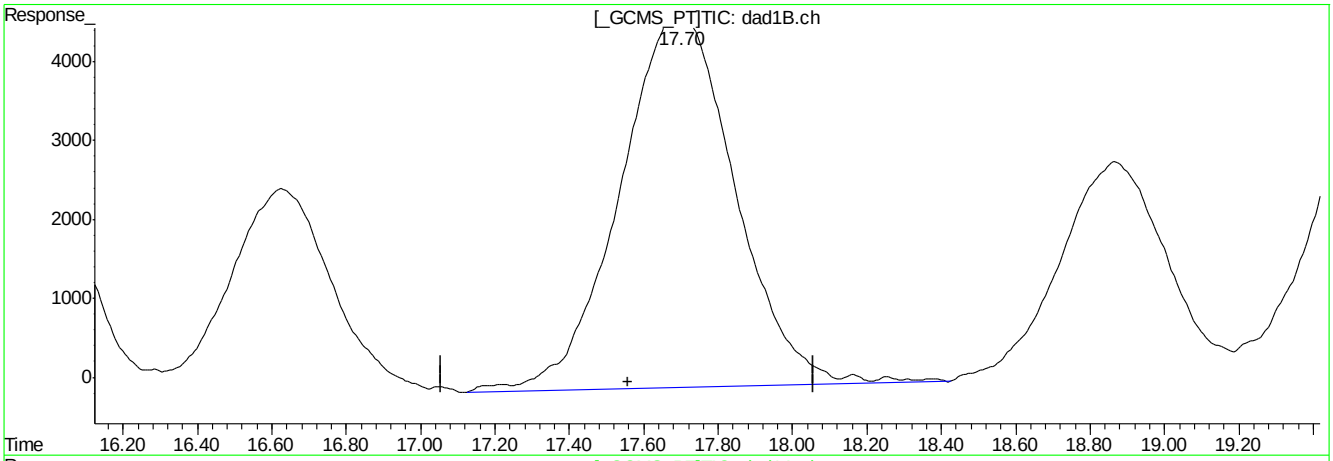
response 1701371

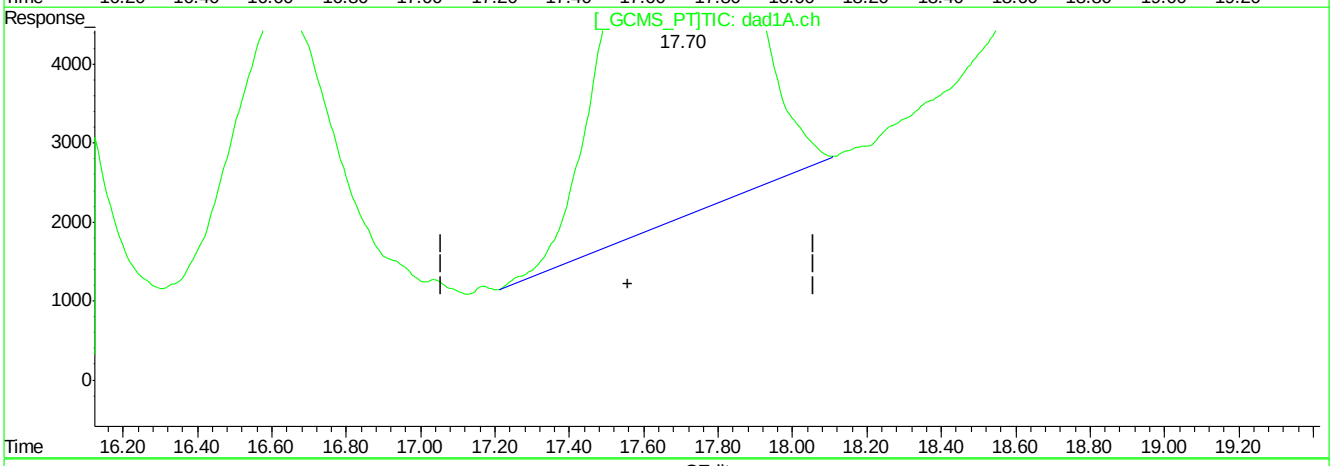
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:47:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.70min 193.862ppb

response 1022074

(18) 4-Amino-2,6-Dinitrotoluene #2

17.70min 181.018ppb m

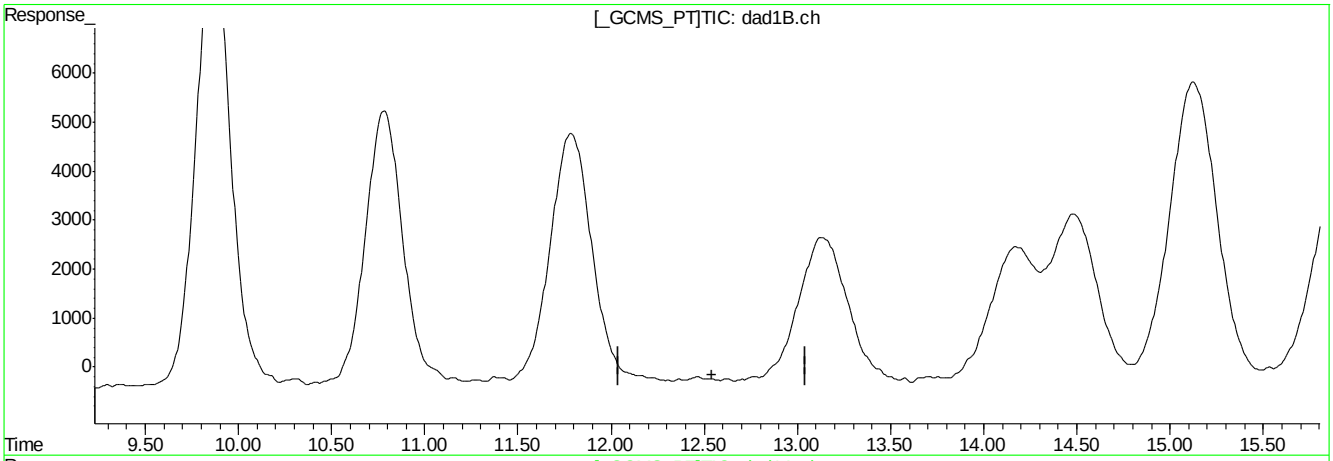
response 1730579

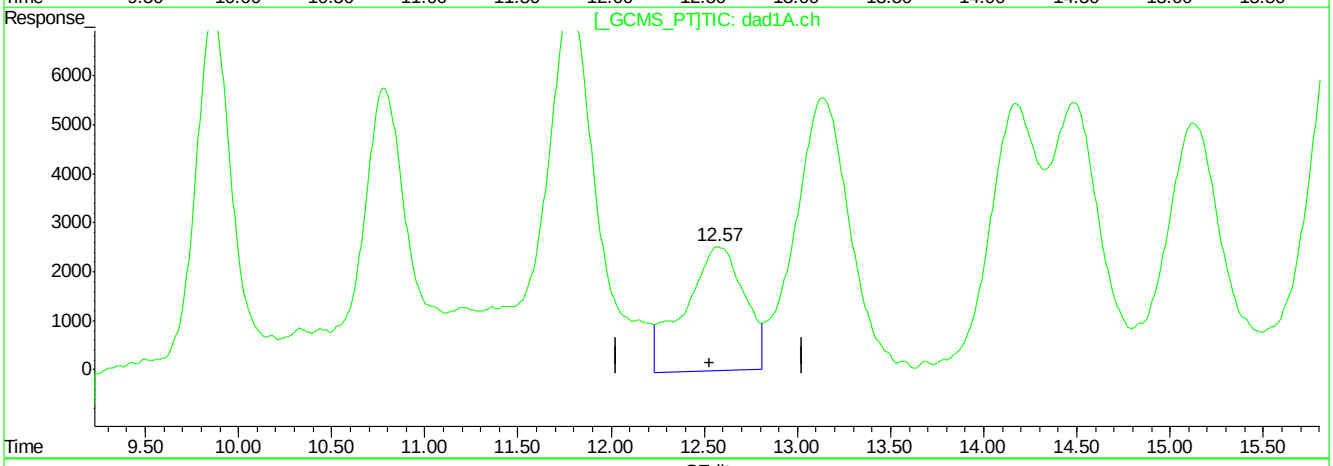
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:47:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.57min 174.998ppb

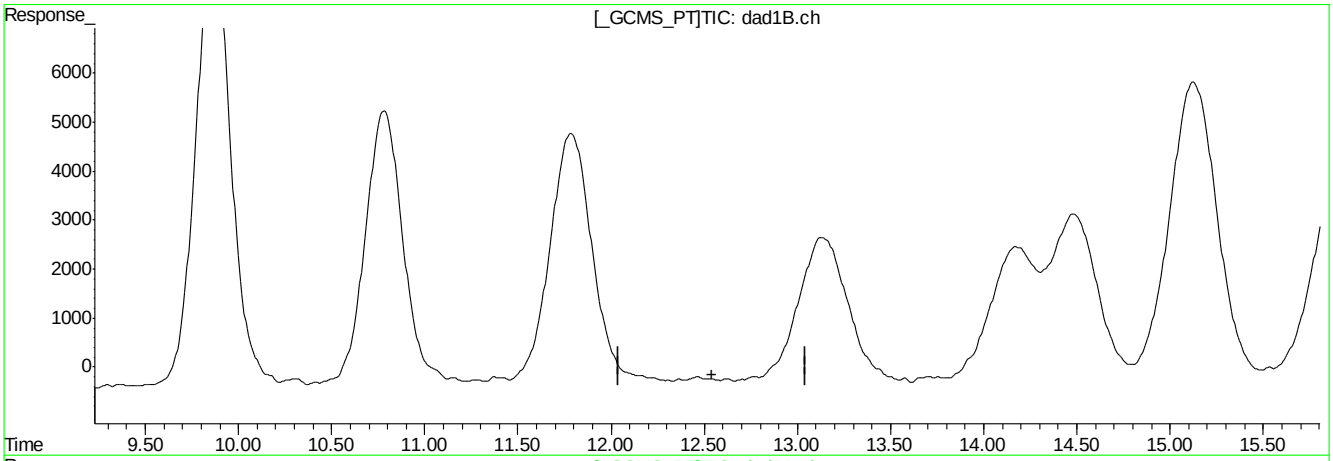
response 565009

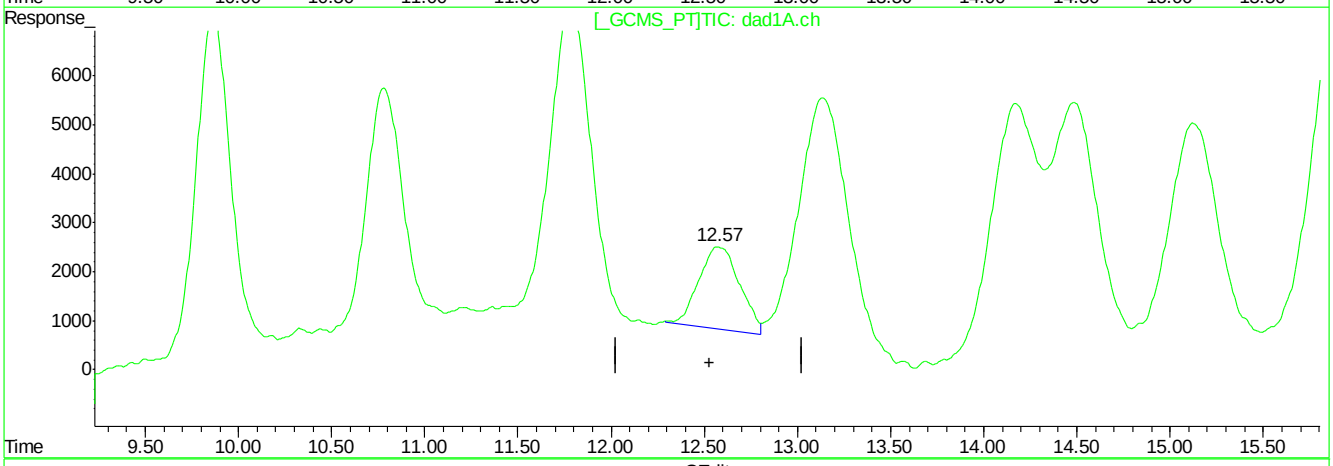
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:47:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.57min 79.739ppb m

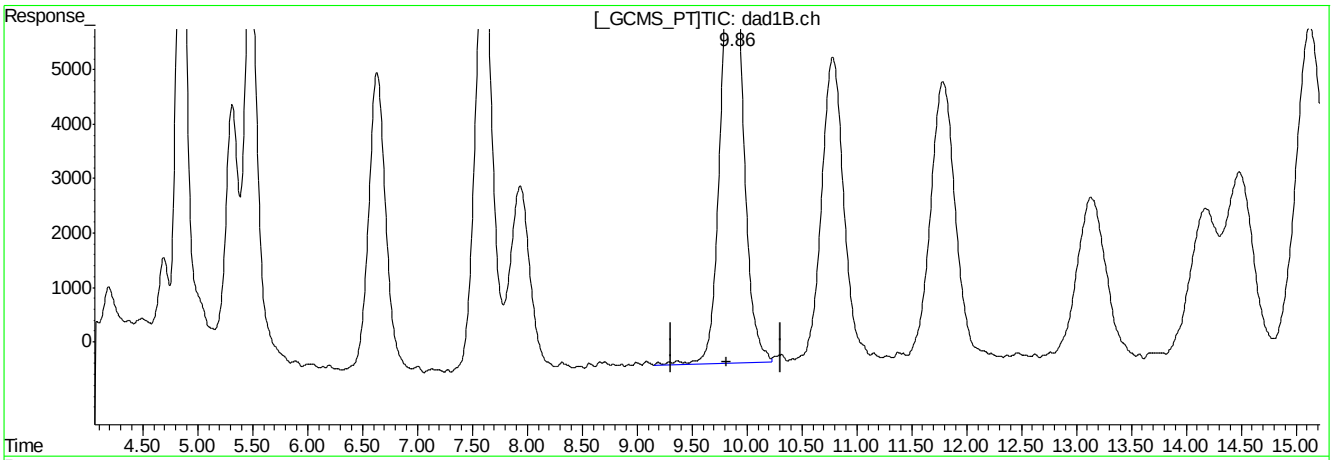
response 258241

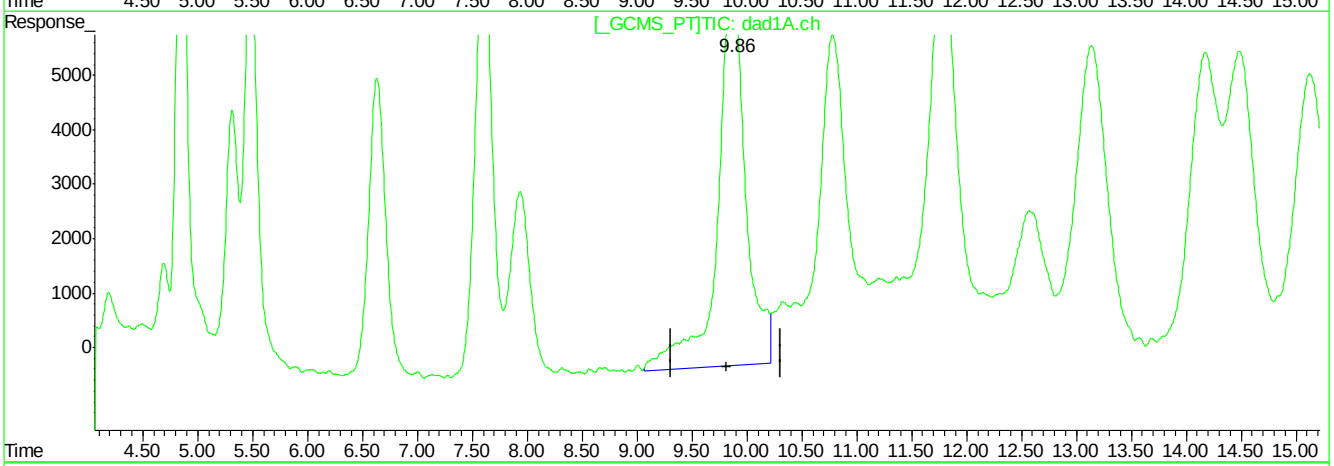
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:48:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.87min 93.774ppb

response 1217461

(7) 1,3-Dinitrobenzene #2

9.87min 121.719ppb

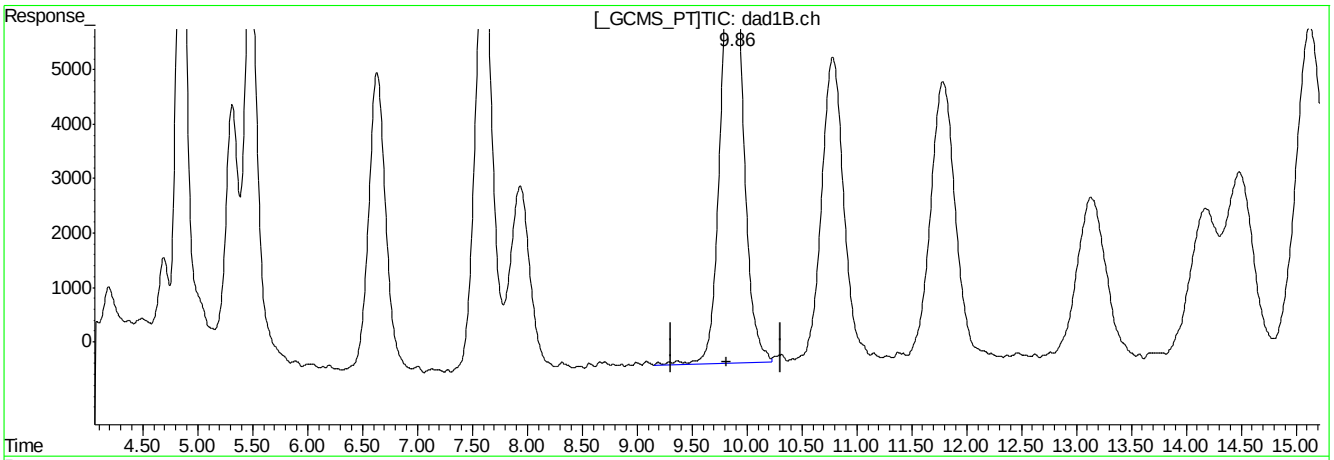
response 1275300

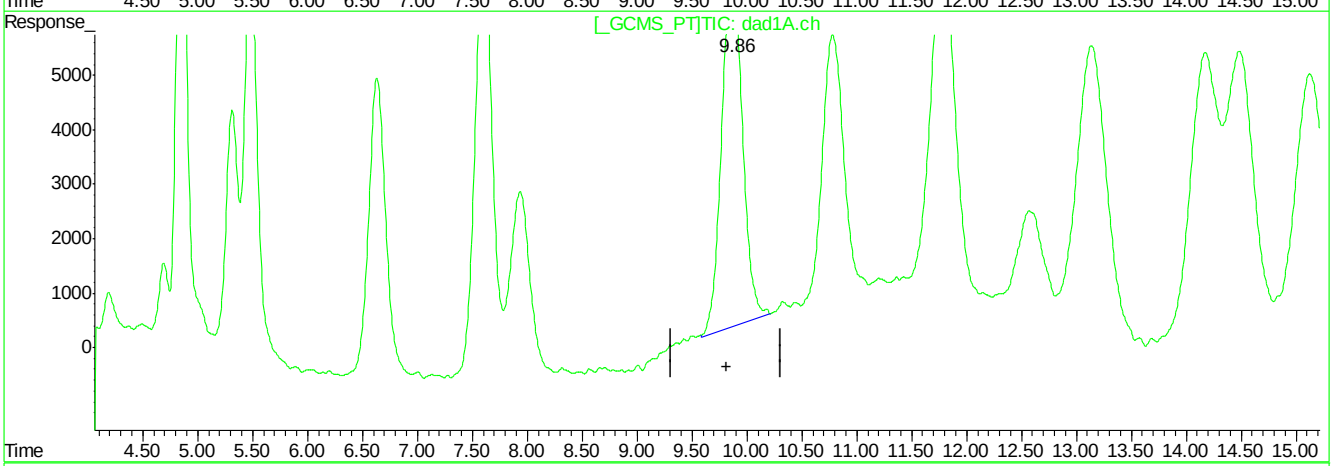
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:49:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.87min 93.774ppb

response 1217461

(7) 1,3-Dinitrobenzene #2

9.86min 83.614ppb m

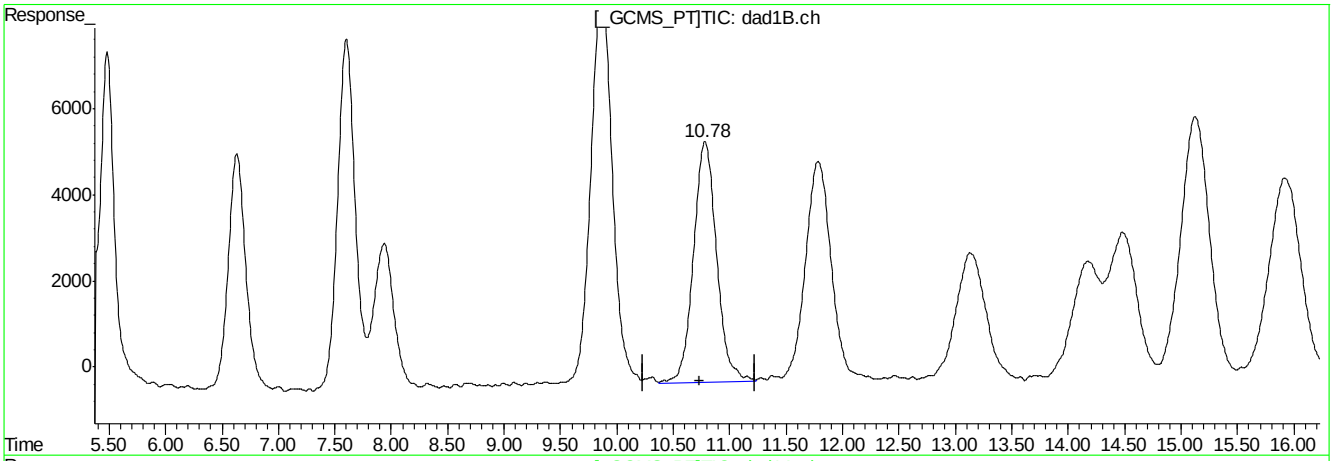
response 876058

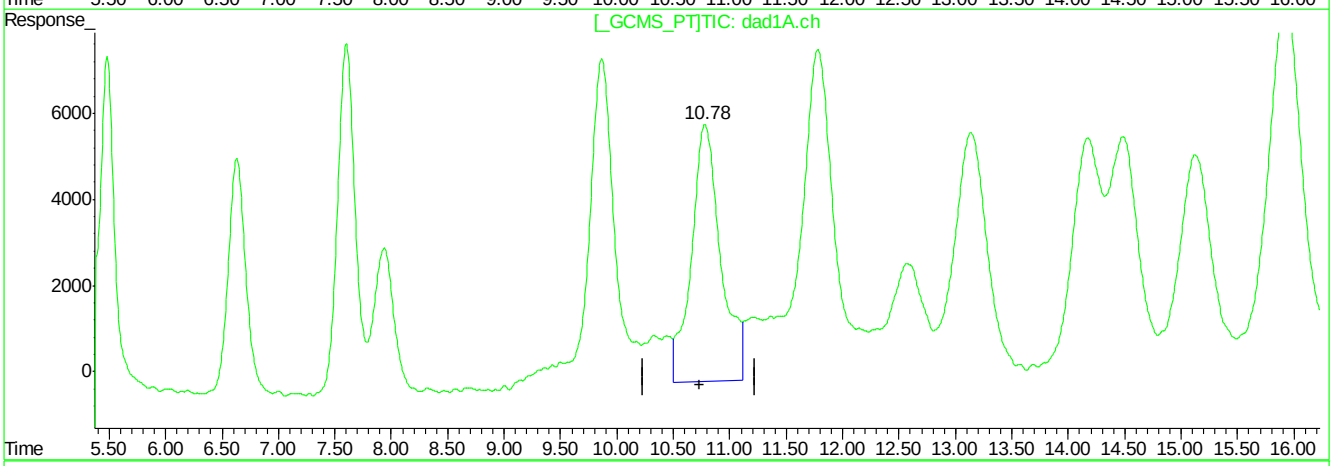
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:49:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.78min 105.610ppb

response 793581

(8) Nitrobenzene #2

10.78min 120.756ppb

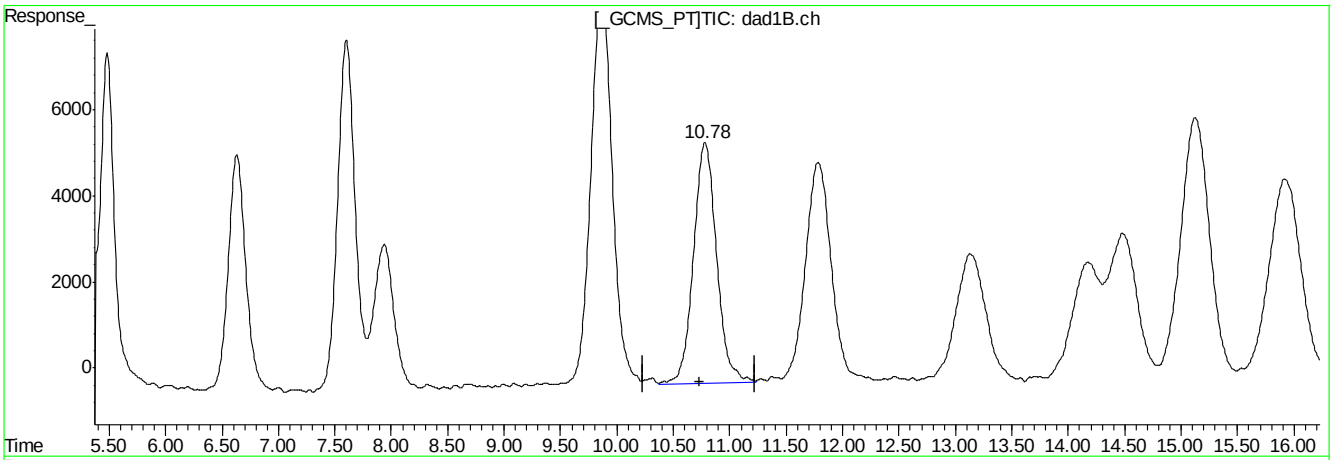
response 1075697

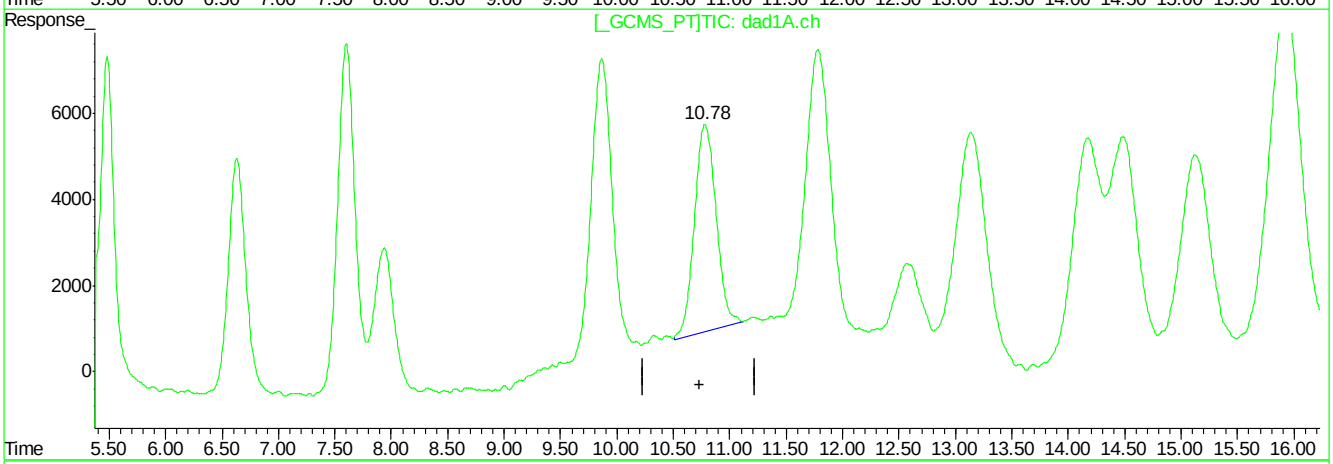
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:49:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.78min 105.610ppb

response 793581

(8) Nitrobenzene #2

10.78min 71.870ppb m

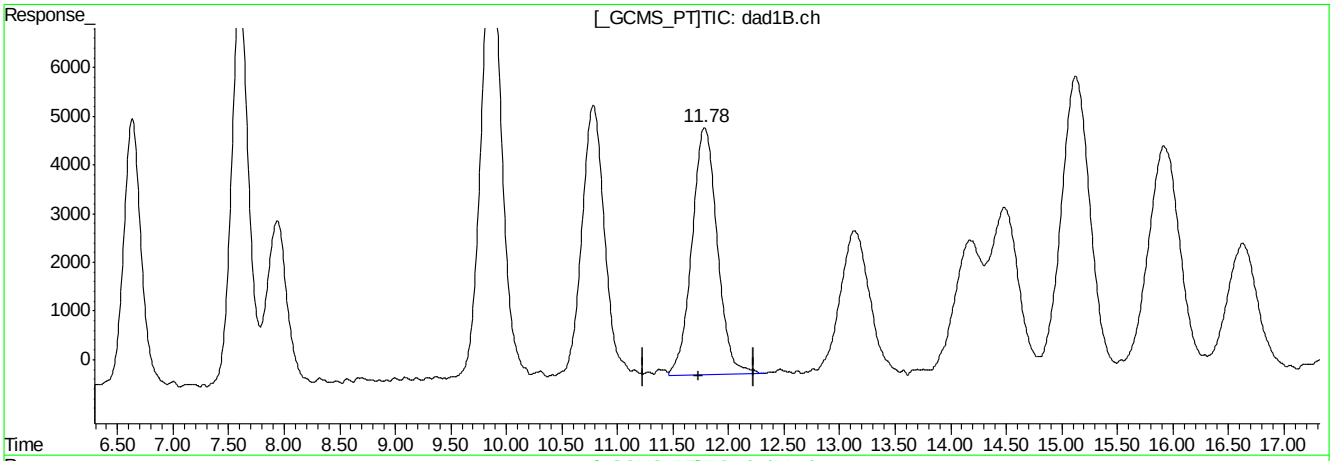
response 640223

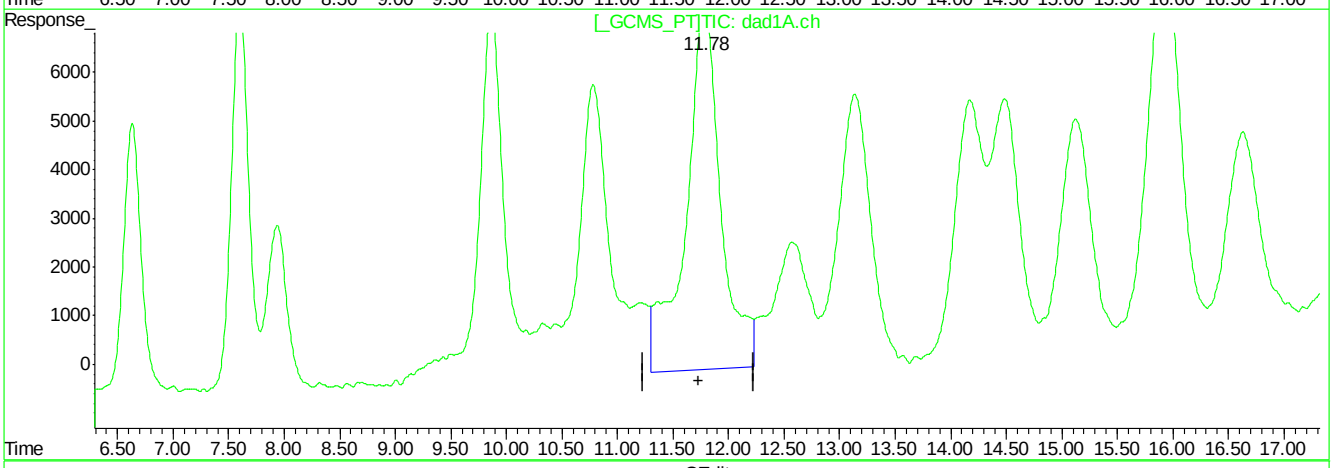
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:49:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.79min 88.604ppb

response 804358

(9) 2,4,6-Trinitrotoluene #2

11.78min 134.929ppb

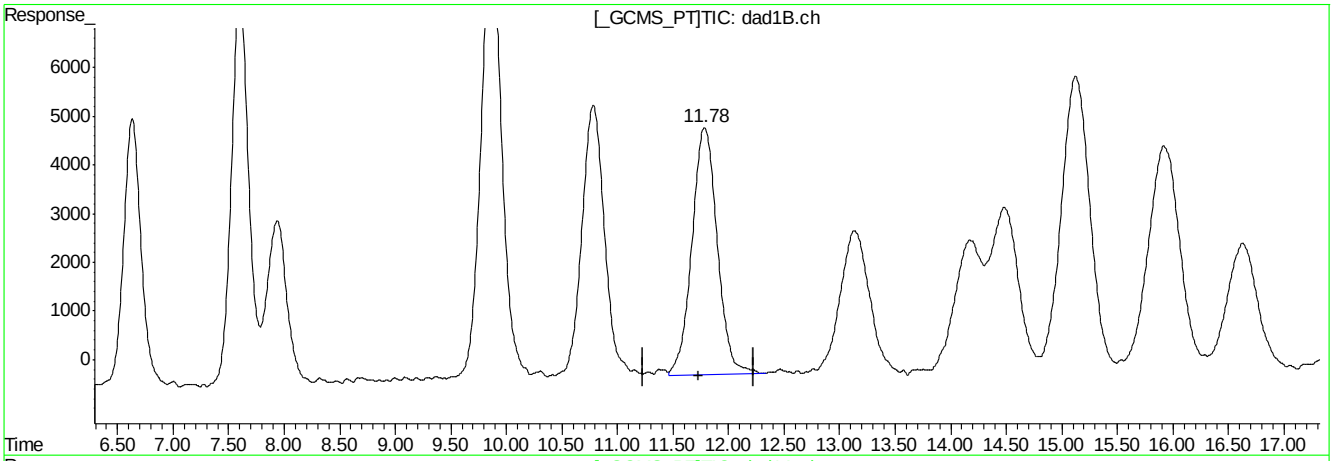
response 1643735

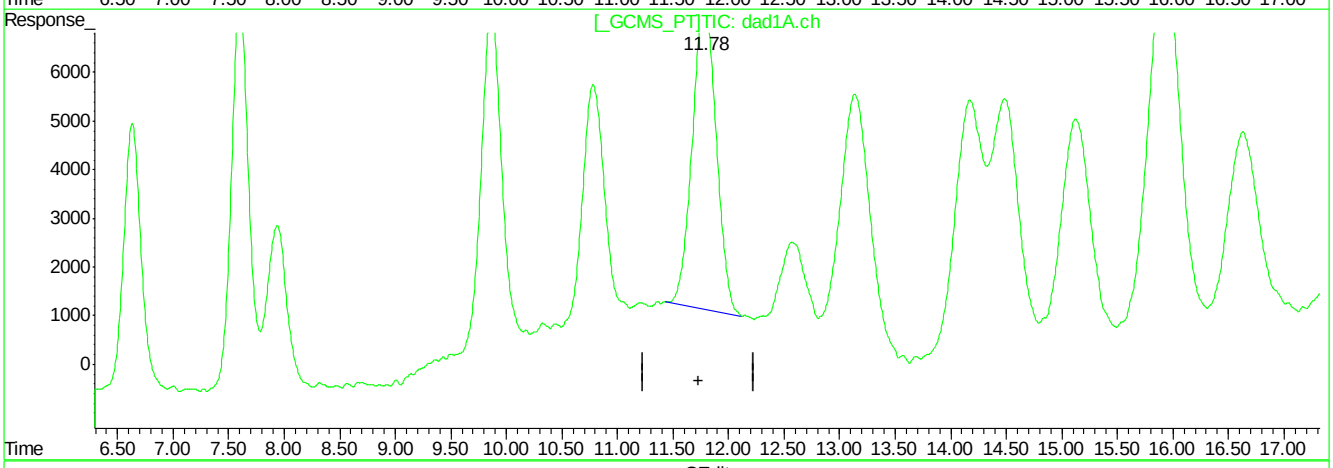
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:49:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.79min 88.604ppb

response 804358

(9) 2,4,6-Trinitrotoluene #2

11.78min 77.395ppb m

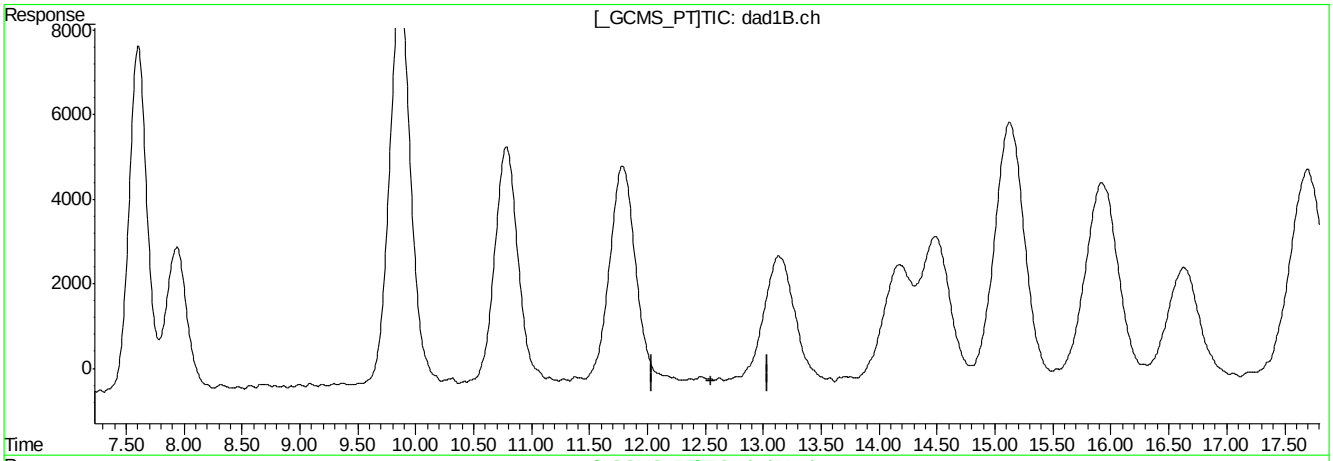
response 942850

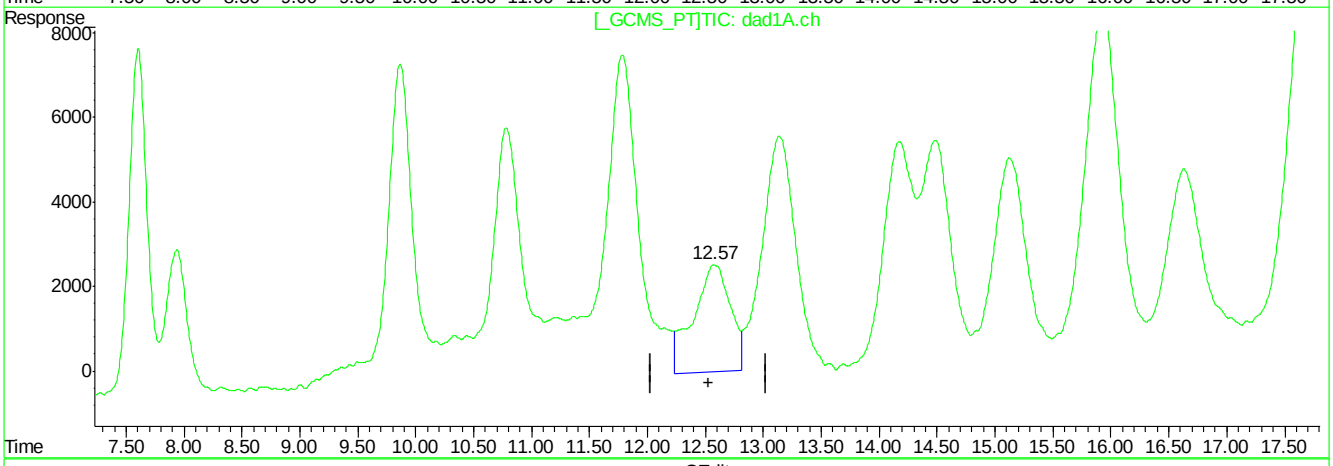
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:50:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.57min 174.998ppb

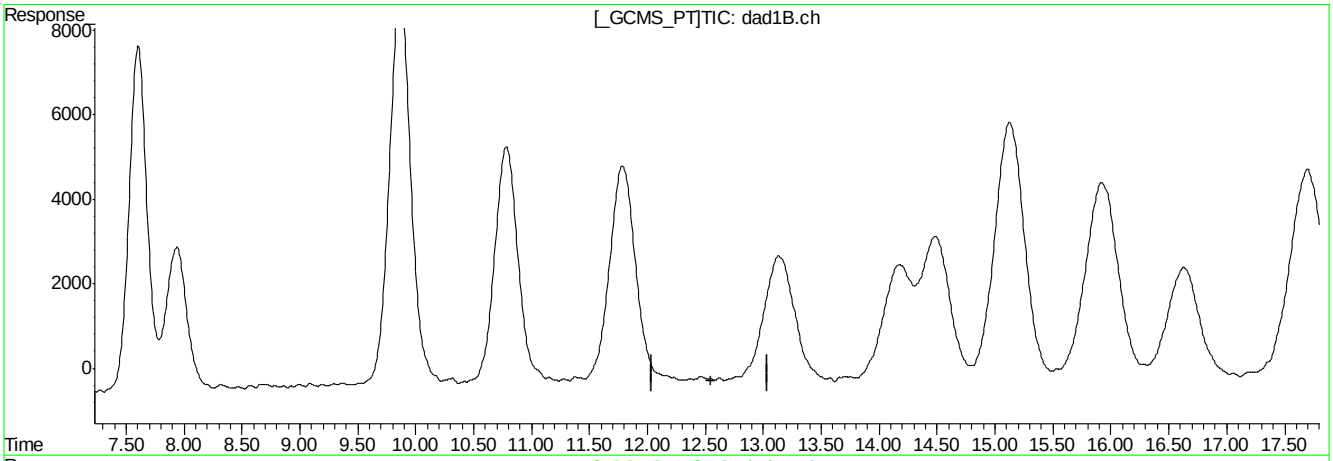
response 565009

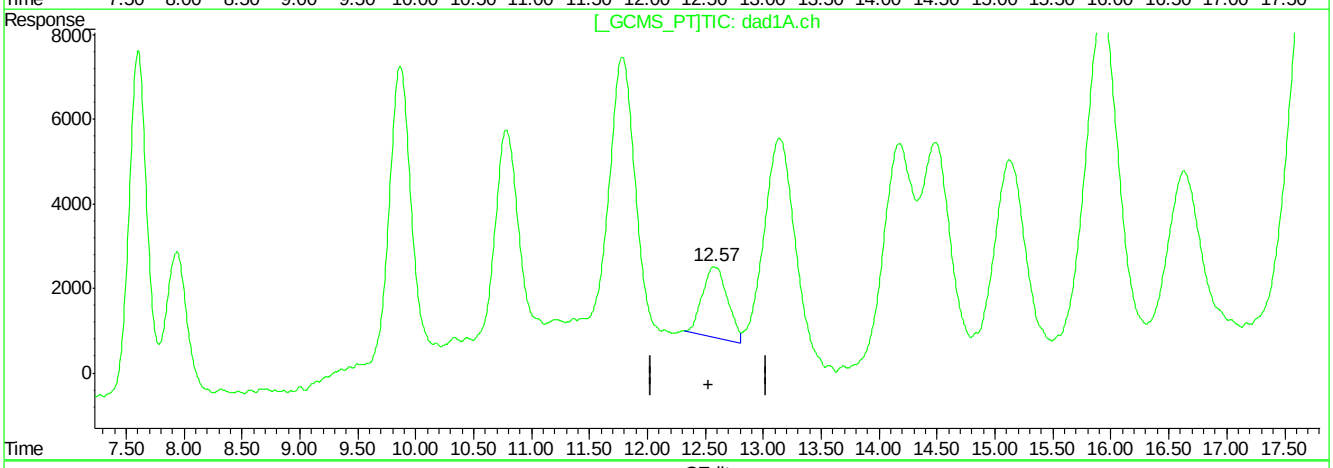
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:50:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.57min 78.366ppb m

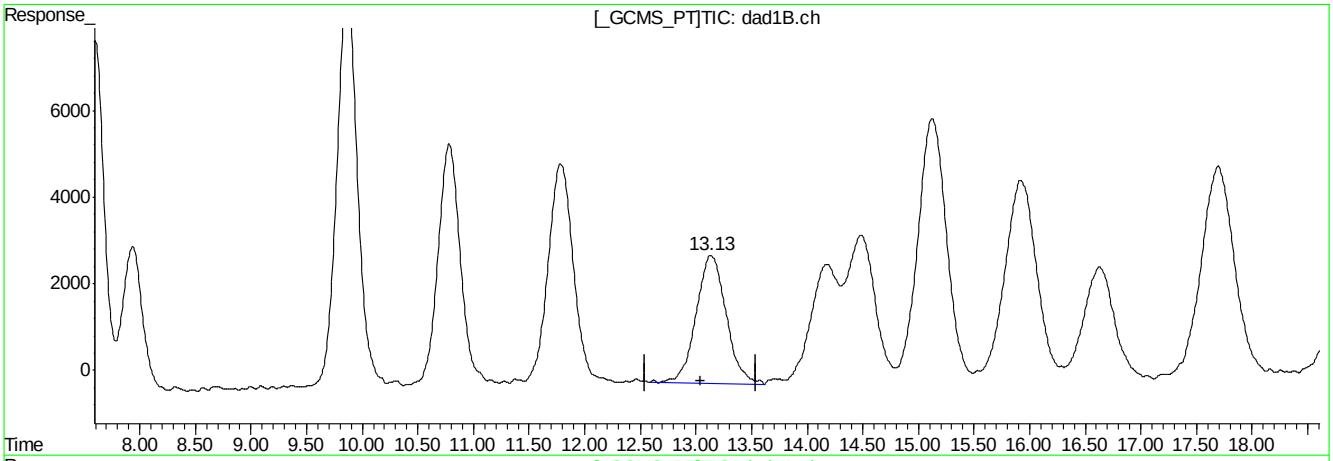
response 253805

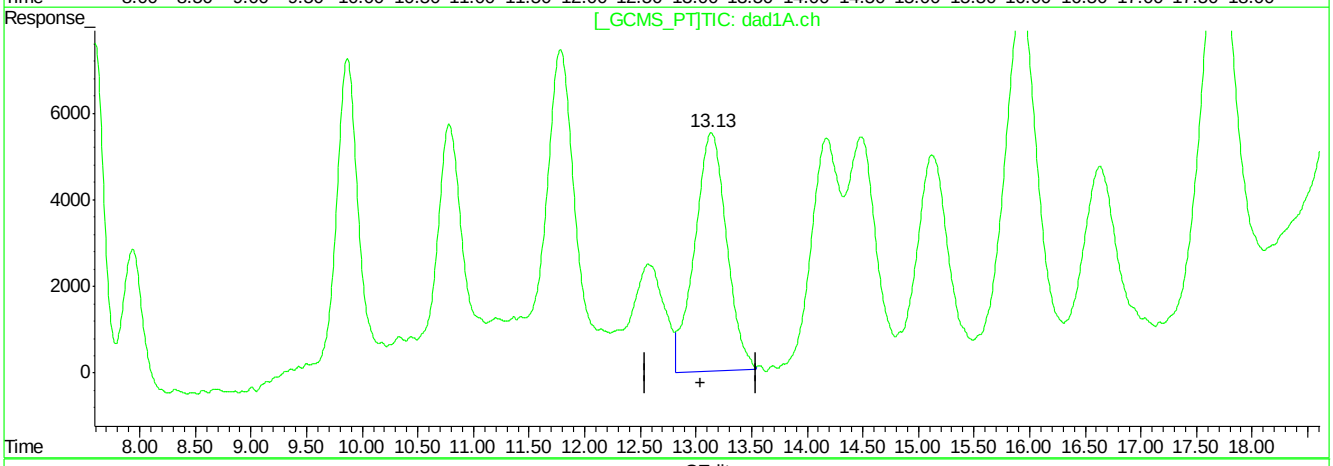
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:50:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

13.13min 78.820ppb

response 552729

(11) Tetryl #2

13.14min 84.597ppb

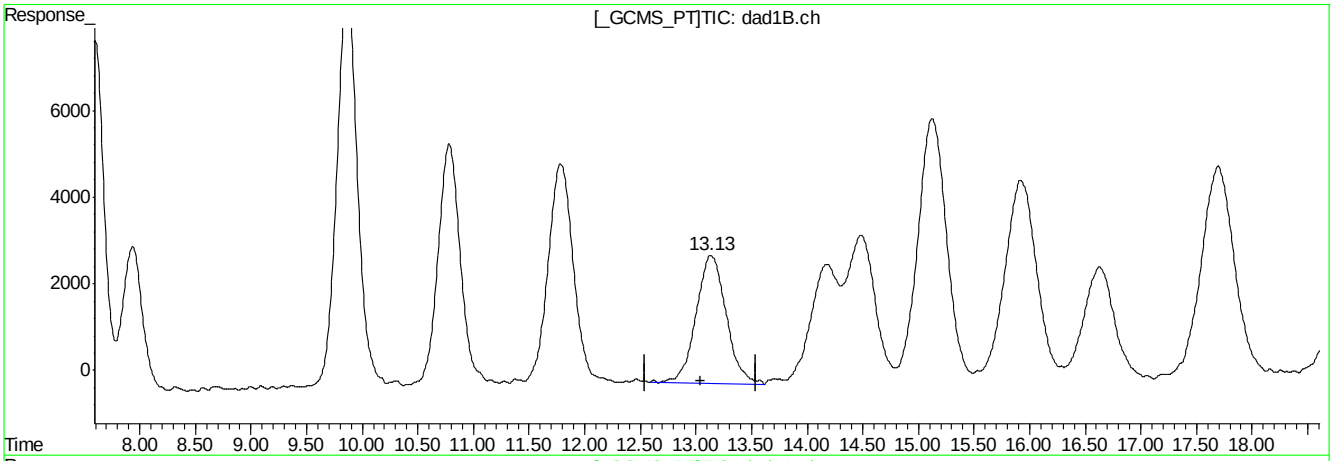
response 1105040

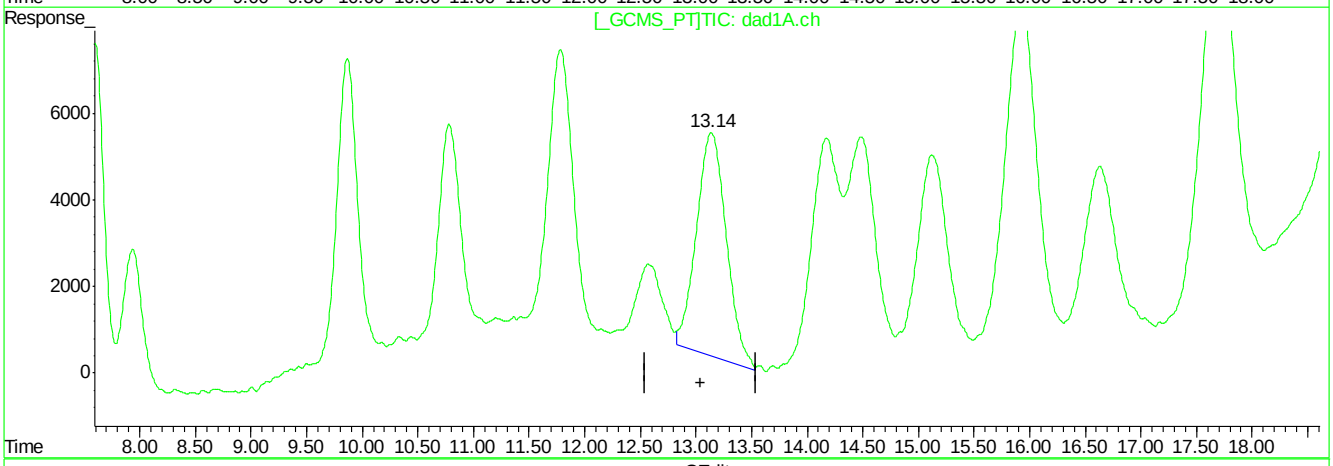
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:50:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

13.13min 78.820ppb

response 552729

(11) Tetryl #2

13.14min 73.490ppb m

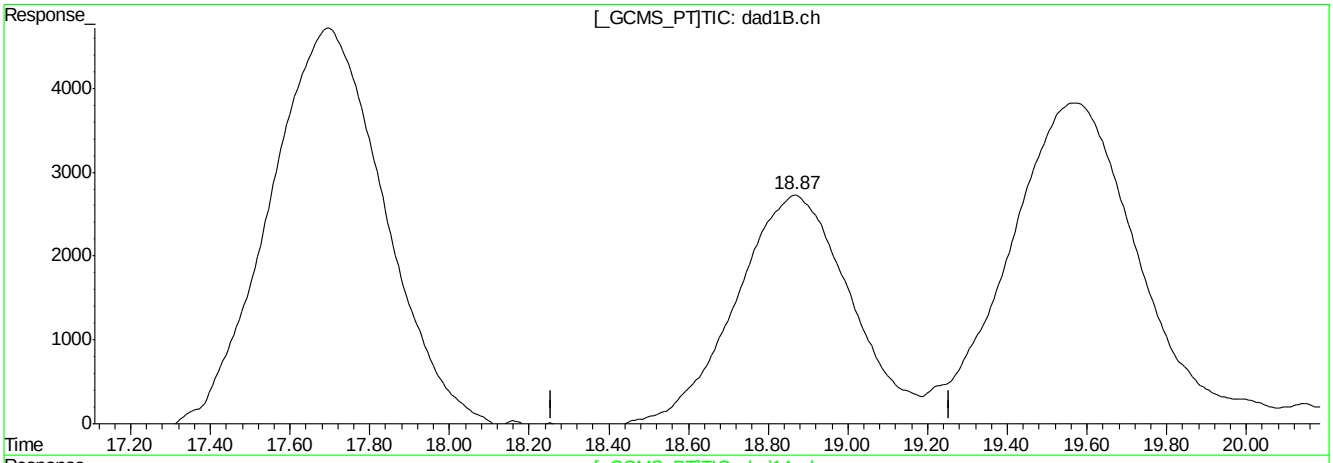
response 960267

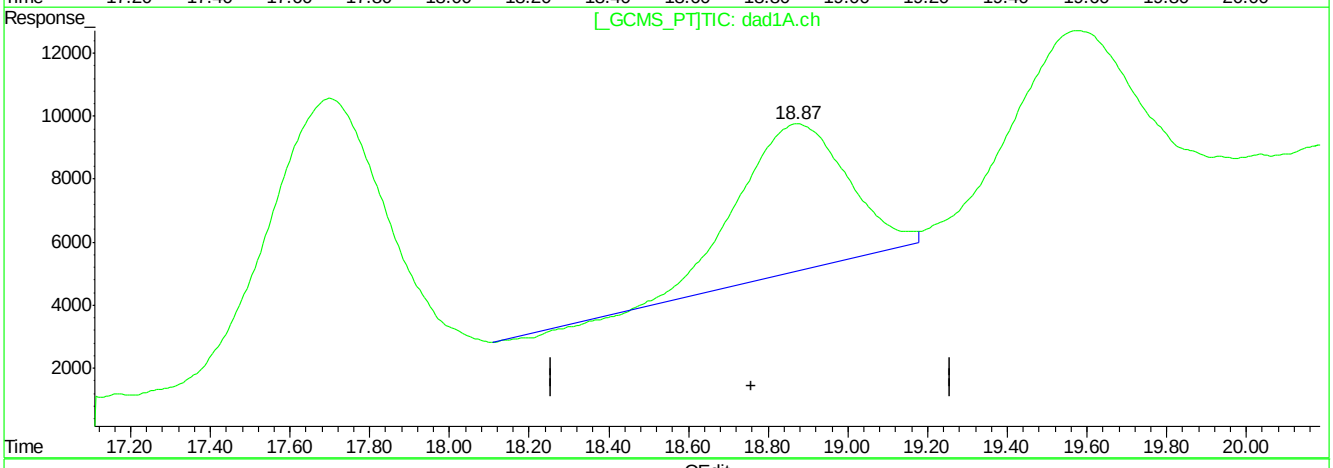
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:50:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.87min 102.639ppb

response 541547

(19) m-Nitrotoluene #2

18.87min 101.085ppb

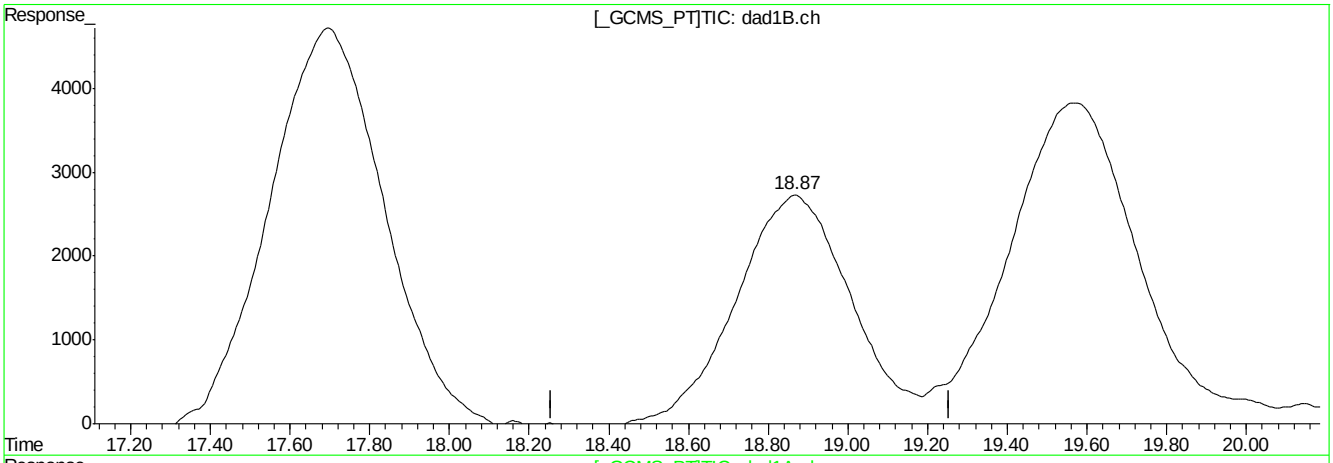
response 884521

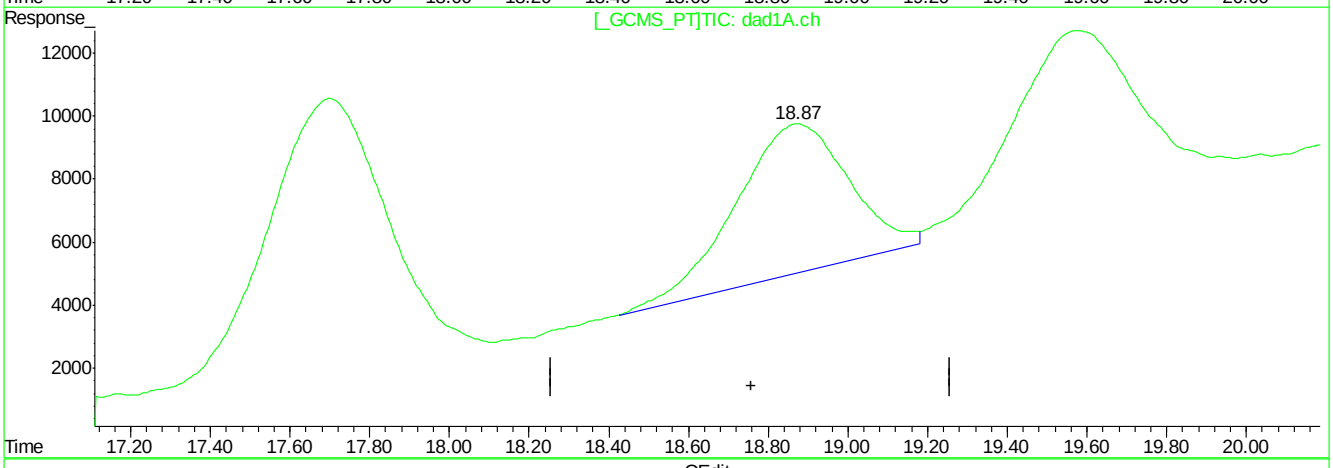
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:50:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.87min 102.639ppb

response 541547

(19) m-Nitrotoluene #2

18.87min 106.773ppb m

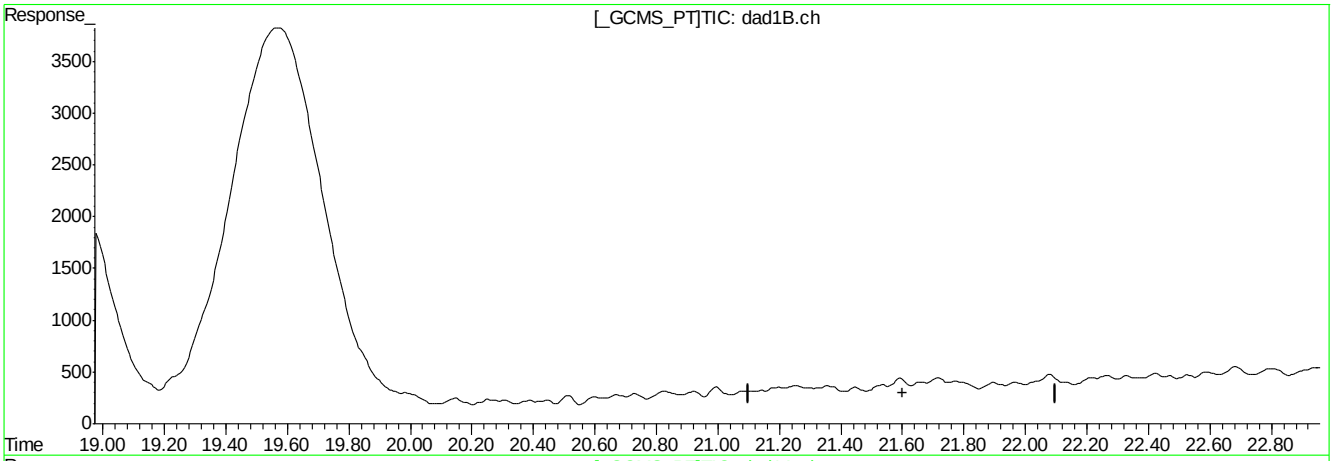
response 934286

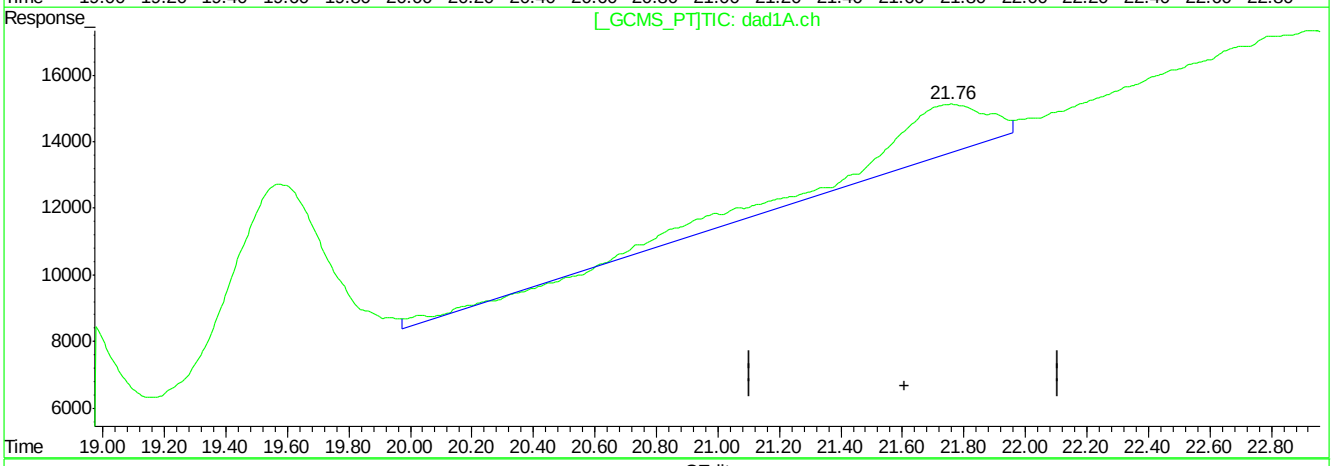
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:51:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.76min 120.114ppb

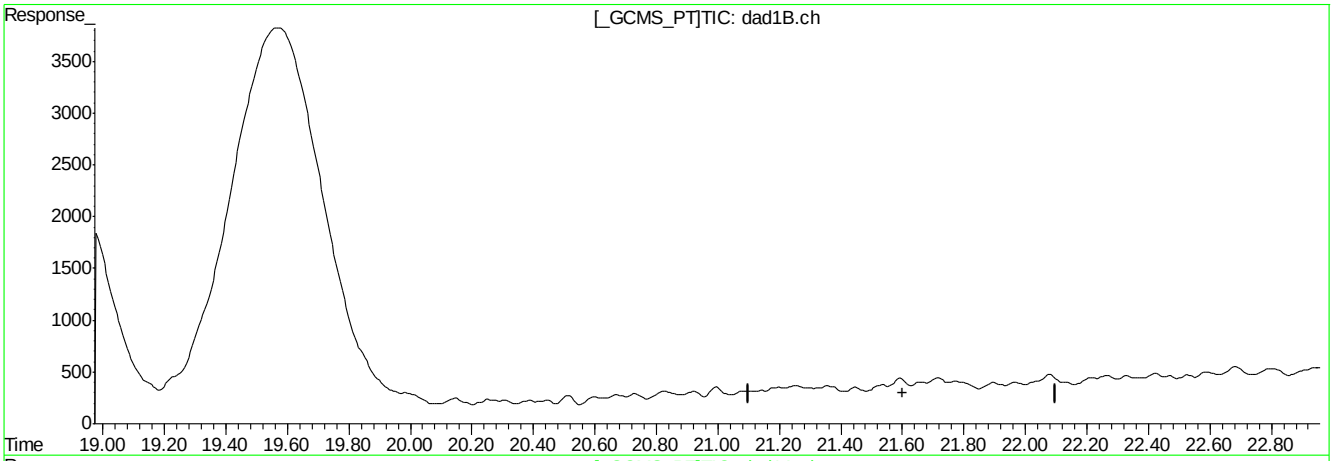
response 436275

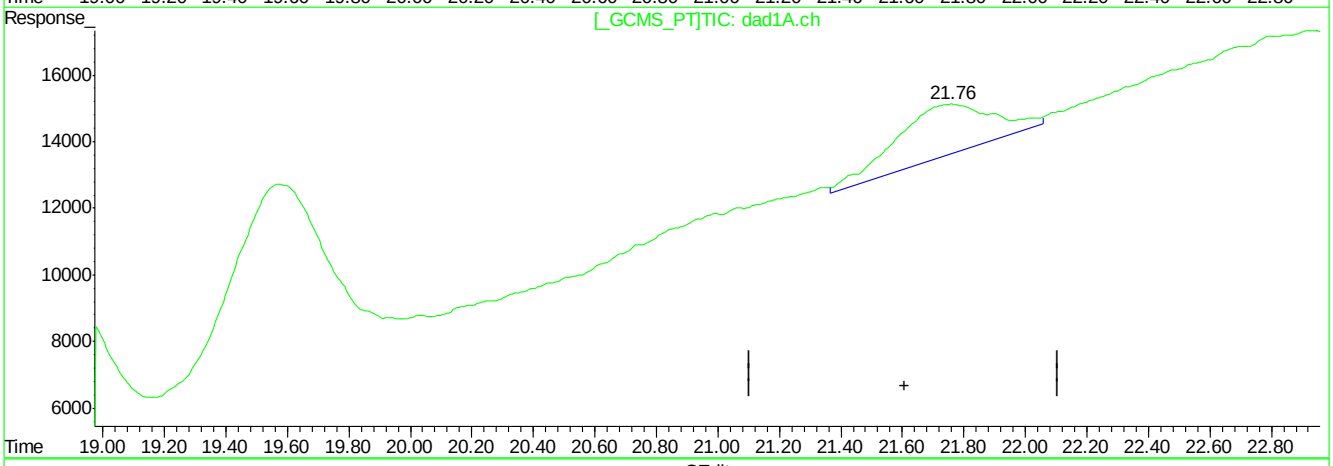
(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:51:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620955.D\dad1A.ch
Acq On : 22-Mar-2021, 14:54:25 Operator: jamesb
Sample : ic2952-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.76min 93.361ppb m

response 339315

(+) = Expected Retention Time
GG620955.D GGG2952_032221.M Tue Mar 23 09:51:15 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 03/23/21 11:59

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620956.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620956.D\dad1A.ch
Acq On : 22-Mar-2021, 15:25:51 Operator: jamesb
Sample : ic2952-200 Inst : G1315B
Misc : op84480,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 09:38:54 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.20	14.20	955192	1788995	179.337	164.186
	Spiked Amount 500.000	Range 70 - 136		Recovery =		35.87%#	32.84%#
	Target Compounds						
1)	TNX	4.85	4.85	1454484	1454484	184.459	184.593
2)	HMX	5.32	5.32	650983	650983	204.465	204.465
3)	DNX	5.49	5.49	1255869	1255869	182.099	182.099
4)	MNX	6.64	6.64	1237287	1237287	177.219	177.219
5)	1,3,5-Trinitrobe	7.62	7.62	1828950	1828950	186.435	186.451
6)	RDX	7.95	7.95	862304	862304	203.082	203.082
7)	1,3-Dinitrobenze	9.89	9.89	2487069	2267369	191.564	216.406
8)	Nitrobenzene	10.80	10.80	1575872	2028578	209.717	227.725
9)	2,4,6-Trinitroto	11.81	11.81	1654317	2651396	182.231	217.644
10)	Nitroglycerin	0.00	12.61	0	706152	N.D.	219.023 #
11)	Tetryl	13.17	13.17	1120562	1982147	159.793	152.045
13)	2,6-Dinitrotolue	14.51	14.51	1219589	1655849	194.146	174.562
14)	2,4-Dinitrotolue	15.15	15.16	2257288	1508074	193.380	174.945
15)	3,5-Dinitroanili	15.95	15.95	1900140	3155660	191.820	201.132
16)	o-Nitrotoluene	16.65	16.66	1007713	1400421	217.599	203.330
17)	p-Nitrotoluene	17.72	17.73	2092755	3675402	396.944	384.399
18)	4-Amino-2,6-Dini	17.72	17.73	2092755	3675402	396.944	384.446
19)	m-Nitrotoluene	18.90	18.90	1106072	1953487	209.633	223.250
20)	2-Amino-4,6-Dini	19.60	19.60	1687811	2474617	186.143	200.593
21)	PETN	0.00	21.75	0	641040	N.D.	176.721m#

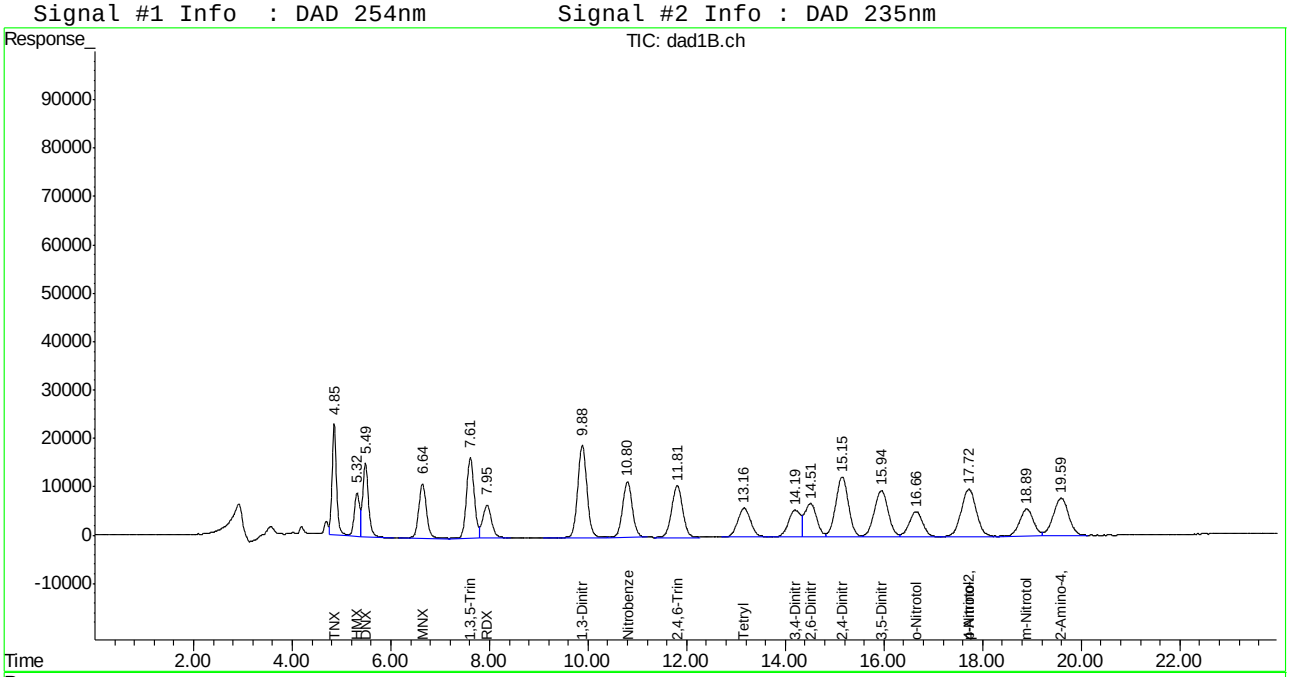
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620956.D GGG2952_032221.M Tue Mar 23 10:42:12 2021 Page 1

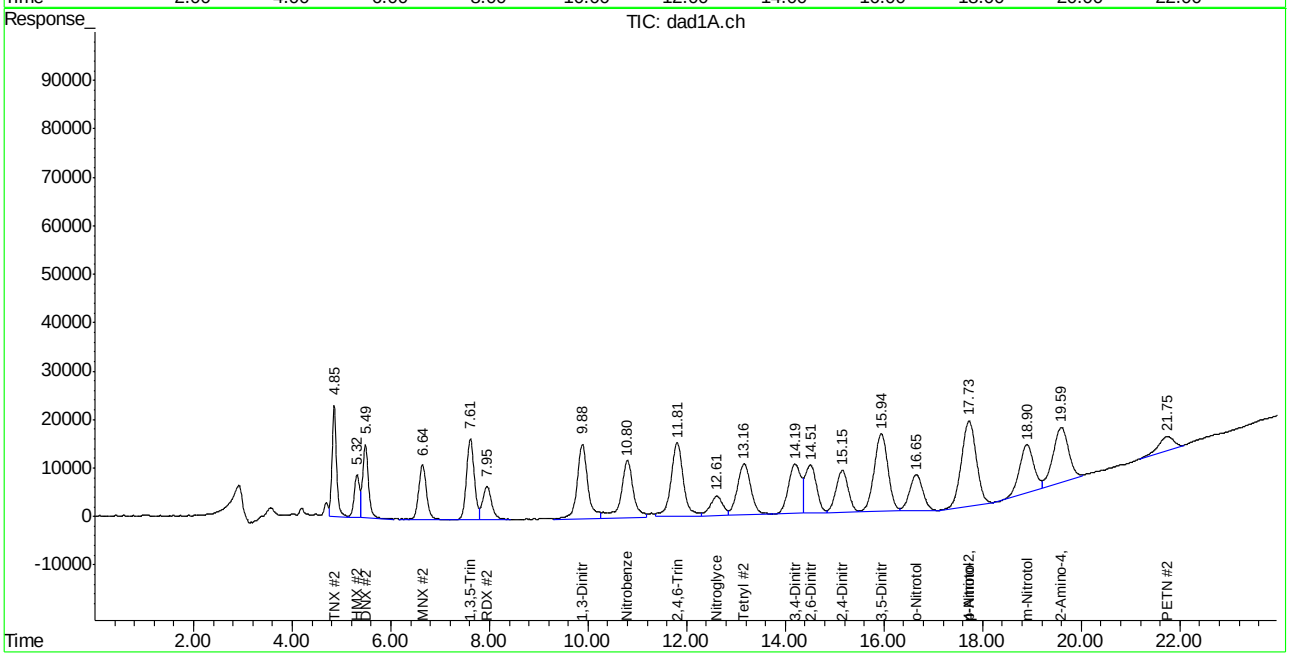
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620956.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620956.D\dad1A.ch
Acq On : 22-Mar-2021, 15:25:51 Operator: jamesb
Sample : ic2952-200 Inst : G1315B
Misc : op84480,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:45 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

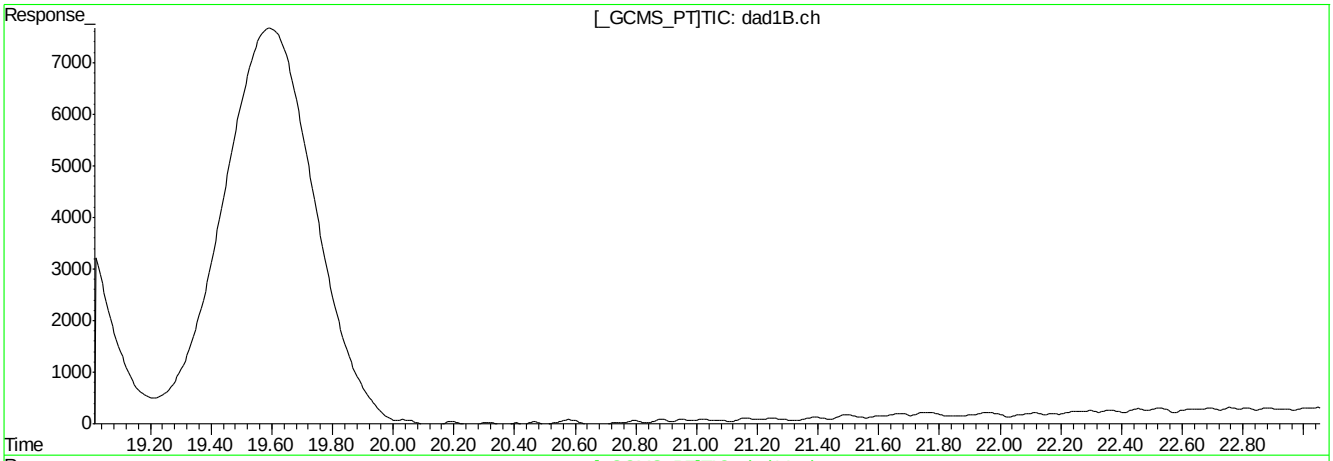
Sample Number: GGG2952-IC2952
Lab FileID: GG620956.D
Injection Time: 03/22/21 15:25
Method: SW846 8330A
Analyst approved: 03/23/21 11:47 James Boone
Supervisor approved: 03/23/21 11:59 Naresh Jiawan

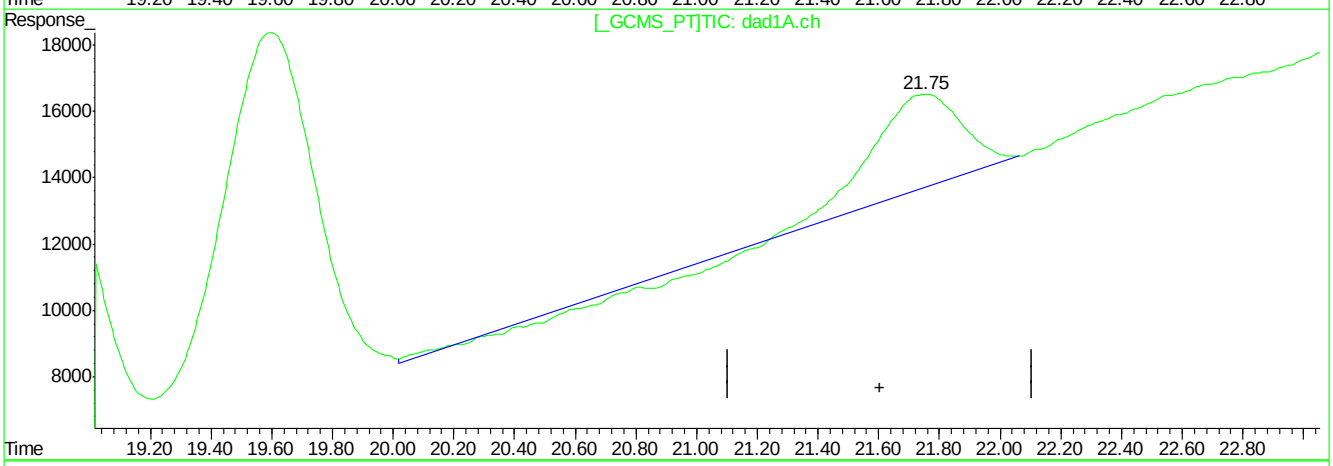
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.75	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620956.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620956.D\dad1A.ch
Acq On : 22-Mar-2021, 15:25:51 Operator: jamesb
Sample : ic2952-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.75min 135.287ppb

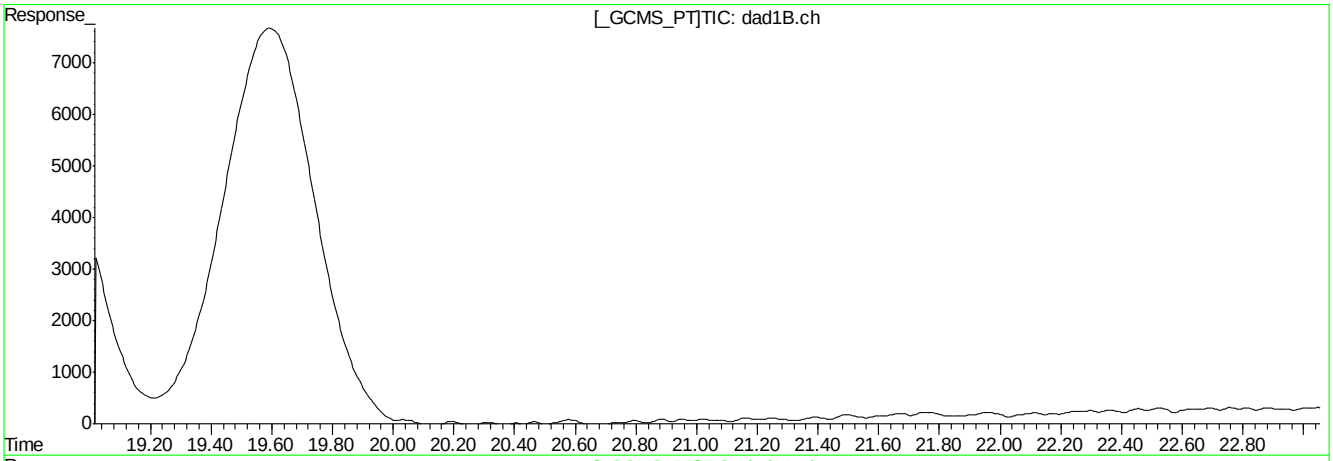
response 491213

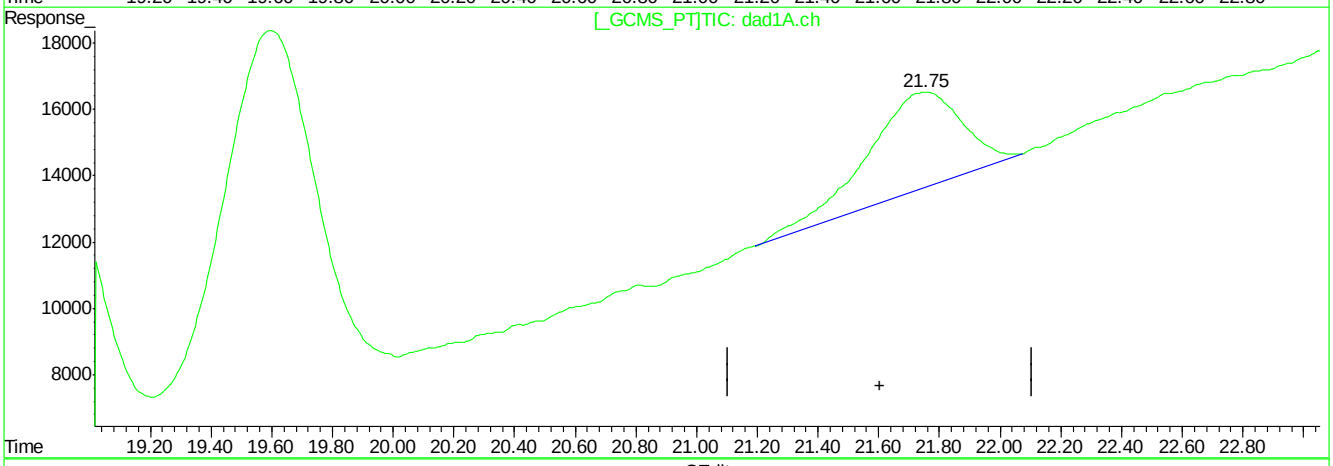
(+) = Expected Retention Time
GG620956.D GGG2952_032221.M Tue Mar 23 09:45:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620956.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620956.D\dad1A.ch
Acq On : 22-Mar-2021, 15:25:51 Operator: jamesb
Sample : ic2952-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.75min 176.721ppb m

response 641040

(+) = Expected Retention Time
GG620956.D GGG2952_032221.M Tue Mar 23 09:45:33 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 03/23/21 11:59

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620957.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620957.D\dad1A.ch
Acq On : 22-Mar-2021, 15:57:16 Operator: jamesb
Sample : ic2952-500 Inst : G1315B
Misc : op84480,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 09:38:55 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.20	14.20	2302129	4632548	432.224	425.156
	Spiked Amount 500.000	Range 70 - 136		Recovery =		86.44%	85.03%
	Target Compounds						
1)	TNX	4.85	4.85	3486385	3486385	442.147	442.467
2)	HMX	5.32	5.32	1542907	1542907	484.607	484.607
3)	DNX	5.49	5.49	2998648	2998648	434.799	434.799
4)	MNX	6.66	6.66	2978111	2978111	426.561	426.561
5)	1,3,5-Trinitrobe	7.62	7.62	4471551	4471551	455.810	455.849
6)	RDX	7.97	7.97	2101965	2101965	495.036	495.036
7)	1,3-Dinitrobenze	9.90	9.90	6075628	4970033	467.969	474.359
8)	Nitrobenzene	10.82	10.82	3915629	4139725	521.092	464.720
9)	2,4,6-Trinitroto	11.82	11.82	4056989	5697379	446.897	467.678
10)	Nitroglycerin	0.00	12.62	0	1496355	N.D.	467.864 #
11)	Tetryl	13.18	13.18	2779180	4714854	396.313	363.927
13)	2,6-Dinitrotolue	14.51	14.51	2975833	4297541	473.721	455.614
14)	2,4-Dinitrotolue	15.15	15.15	5473457	3830977	468.907	446.706
15)	3,5-Dinitroanili	15.94	15.94	4630302	7637798	467.432	486.809
16)	o-Nitrotoluene	16.65	16.65	2442002	3594979	527.311	521.962
17)	p-Nitrotoluene	17.72	17.72	5057667	9262057	959.313	968.691
18)	4-Amino-2,6-Dini	17.72	17.72	5057667	9262057	959.313	968.809
19)	m-Nitrotoluene	18.89	18.89	2680251	4552772	507.986	520.303
20)	2-Amino-4,6-Dini	19.59	19.59	4115210	5796534	453.854	469.869
21)	PETN	0.00	21.75	0	1547118	N.D.	429.019m#

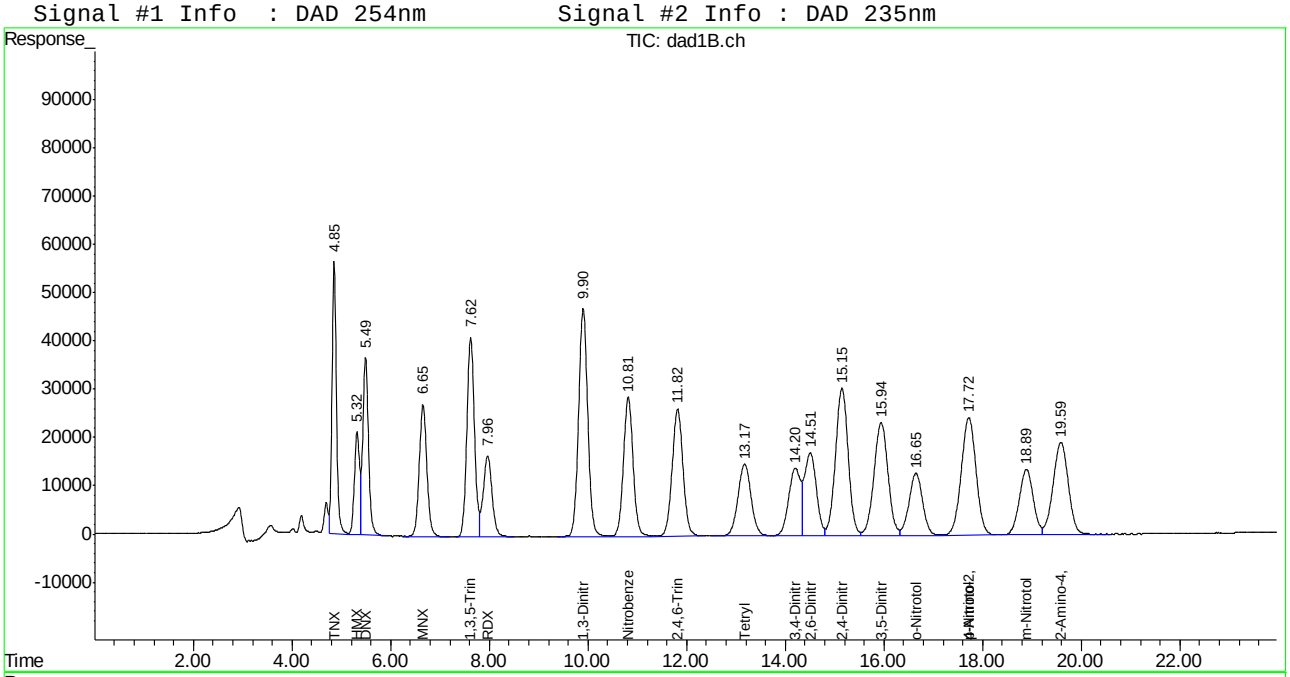
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620957.D GGG2952_032221.M Tue Mar 23 10:42:13 2021 Page 1

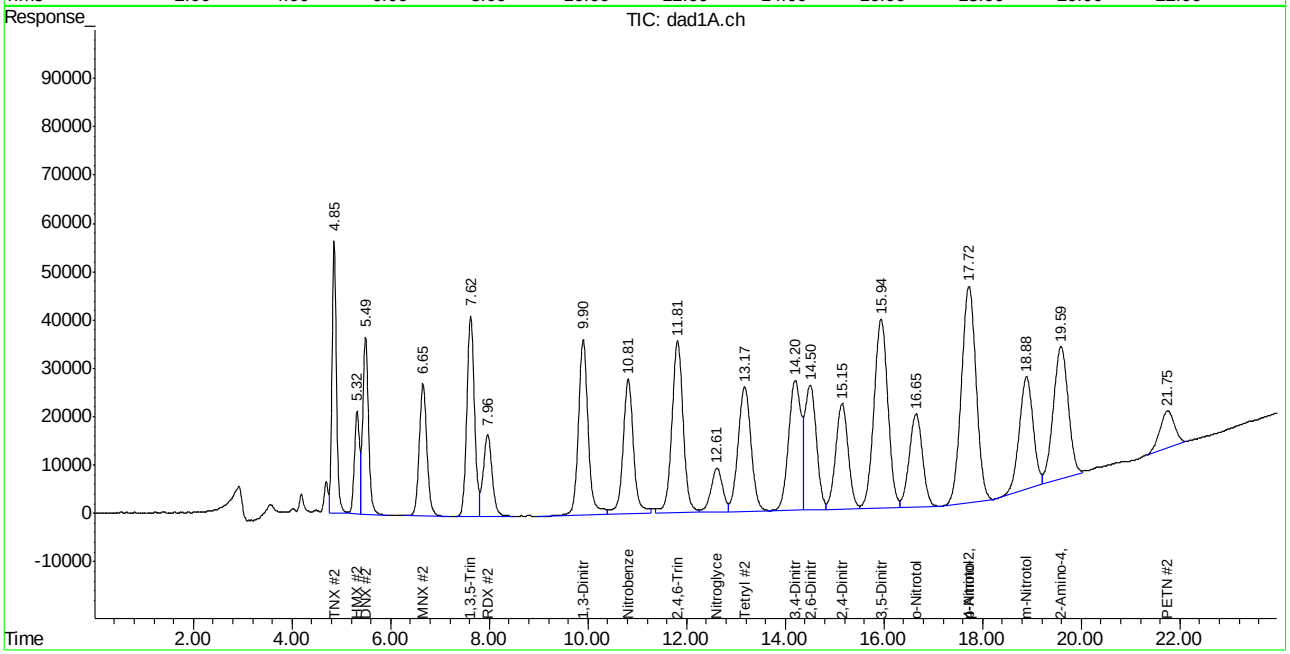
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620957.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620957.D\dad1A.ch
Acq On : 22-Mar-2021, 15:57:16 Operator: jamesb
Sample : ic2952-500 Inst : G1315B
Misc : op84480,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:44 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

Sample Number: GGG2952-IC2952
Lab FileID: GG620957.D
Injection Time: 03/22/21 15:57

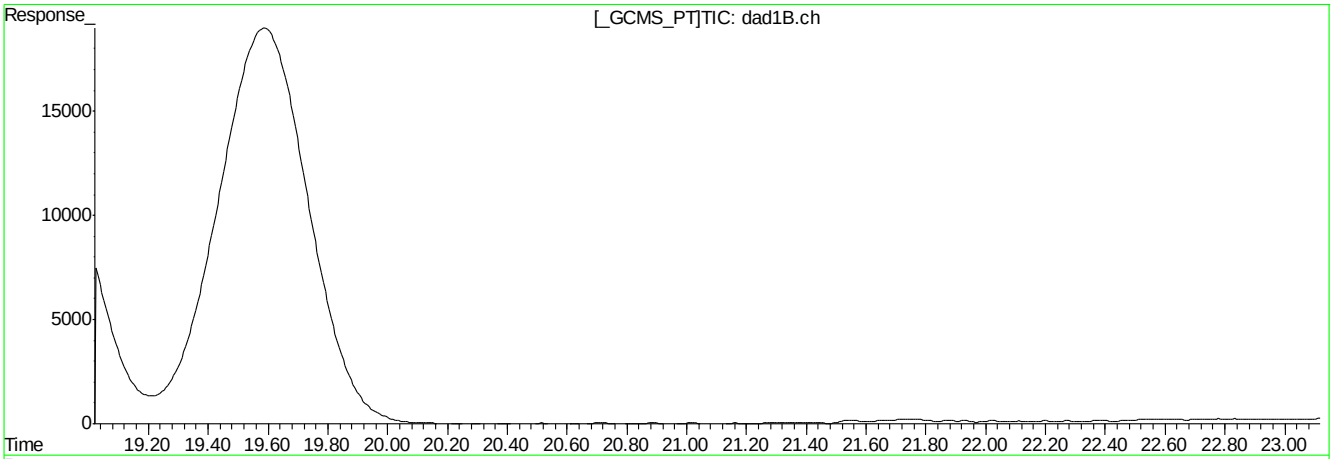
Method: SW846 8330A
Analyst approved: 03/23/21 11:47 James Boone
Supervisor approved: 03/23/21 11:59 Naresh Jiawan

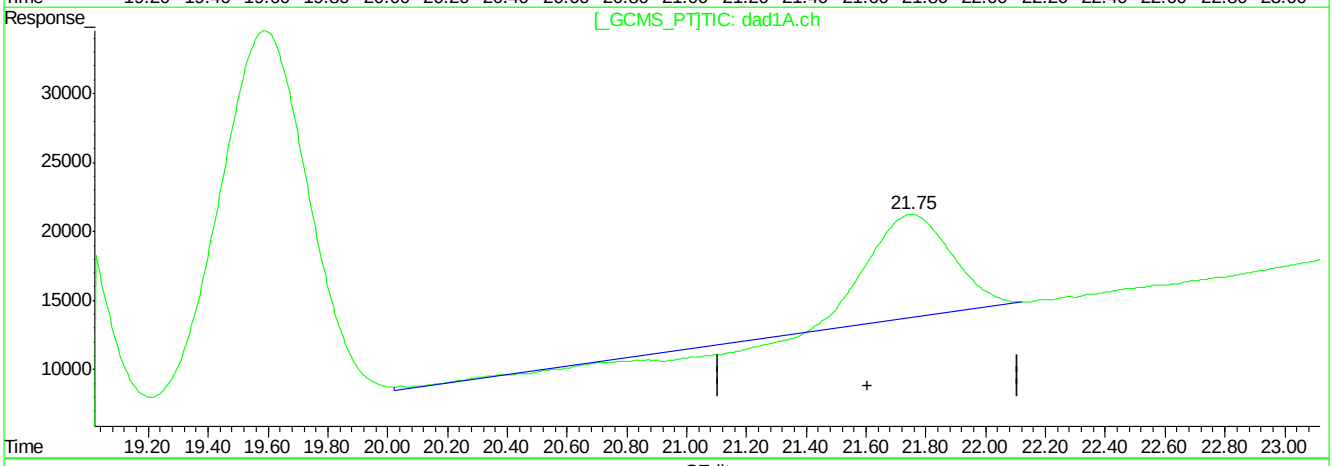
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.75	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620957.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620957.D\dad1A.ch
Acq On : 22-Mar-2021, 15:57:16 Operator: jamesb
Sample : ic2952-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.75min 358.273ppb

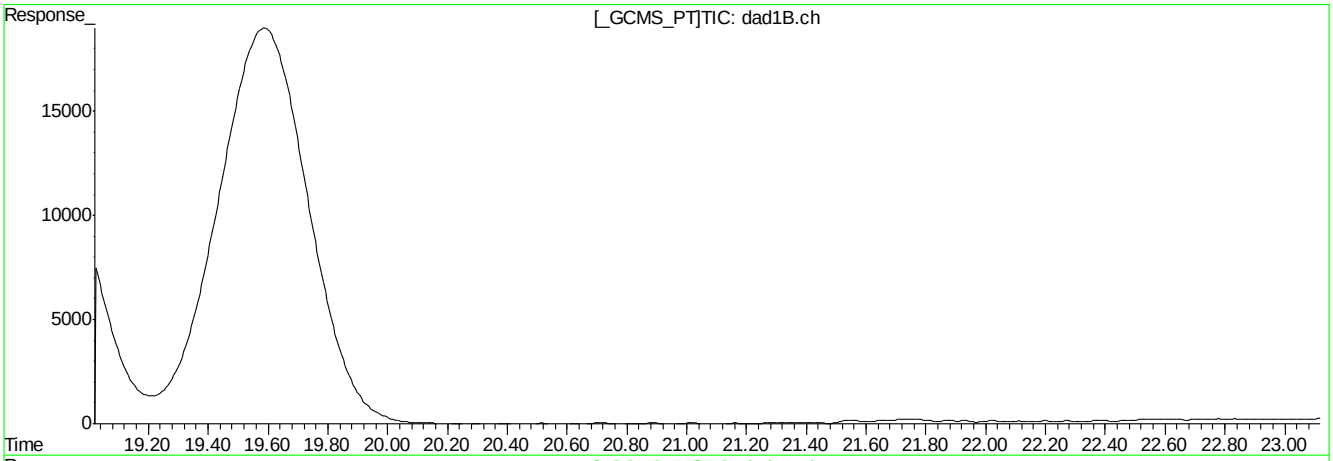
response 1294128

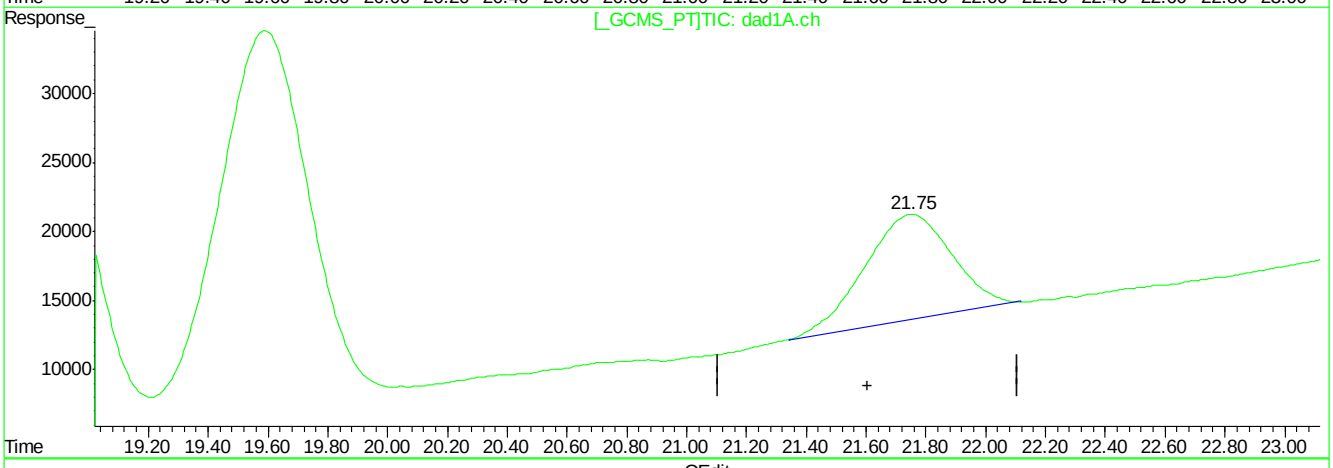
(+) = Expected Retention Time
GG620957.D GGG2952_032221.M Tue Mar 23 09:44:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620957.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620957.D\dad1A.ch
Acq On : 22-Mar-2021, 15:57:16 Operator: jamesb
Sample : ic2952-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.75min 429.019ppb m

response 1547118

(+) = Expected Retention Time
GG620957.D GGG2952_032221.M Tue Mar 23 09:44:16 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 03/23/21 11:59

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620958.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620958.D\dad1A.ch
Acq On : 22-Mar-2021, 16:28:41 Operator: jamesb
Sample : icc2952-1000 Inst : G1315B
Misc : op84480,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 09:38:56 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.22	14.22	4592922	9183690	862.319	842.840
Spiked Amount	500.000	Range	70 - 136	Recovery	=	172.46%#	168.57%#
	Target Compounds						
1)	TNX	4.86	4.86	6893866	6893866	874.287	874.920
2)	HMX	5.32	5.32	3014890	3014890	946.937	946.937
3)	DNX	5.49	5.49	5948244	5948244	862.487	862.487
4)	MNX	6.65	6.65	5930506	5930506	849.438	849.438
5)	1,3,5-Trinitrobe	7.62	7.62	8888441	8888441	906.047	906.125
6)	RDX	7.95	7.95	4202968	4202968	989.846	989.846
7)	1,3-Dinitrobenze	9.89	9.89	12119614	9728551	933.501	928.530
8)	Nitrobenzene	10.81	10.81	7845932	8173874	1044.136	917.587
9)	2,4,6-Trinitroto	11.82	11.82	8083943	10997210	890.485	902.723
10)	Nitroglycerin	0.00	12.63	0	3084697	N.D.	980.817 #
11)	Tetryl	13.18	13.18	5543103	9761238	790.450	762.417
13)	2,6-Dinitrotolue	14.52	14.52	5958854	8579315	948.586	918.093
14)	2,4-Dinitrotolue	15.17	15.17	10962652	7659771	939.161	900.916
15)	3,5-Dinitroanili	15.96	15.96	9259272	15421302	934.729	982.905
16)	o-Nitrotoluene	16.67	16.67	4923756	7392298	1063.206	1073.301
17)	p-Nitrotoluene	17.74	17.74	10140349	18455663	1923.372	1930.223
18)	4-Amino-2,6-Dini	17.74	17.74	10140349	18455663	1923.372	1930.458
19)	m-Nitrotoluene	18.91	18.91	5381229	9112290	1019.900	1041.376
20)	2-Amino-4,6-Dini	19.61	19.61	8172760	11777691	901.348	954.703
21)	PETN	0.00	21.77	0	3338888	N.D.	936.992m#

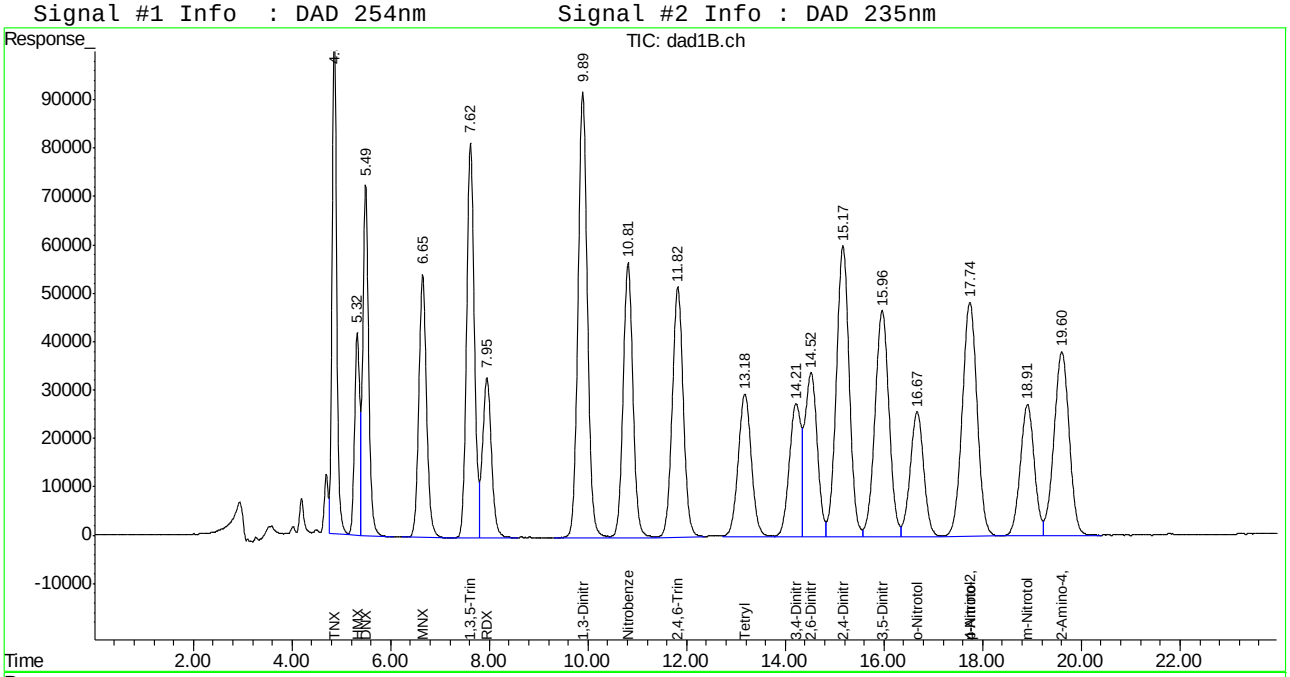
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620958.D GGG2952_032221.M Tue Mar 23 10:42:14 2021 Page 1

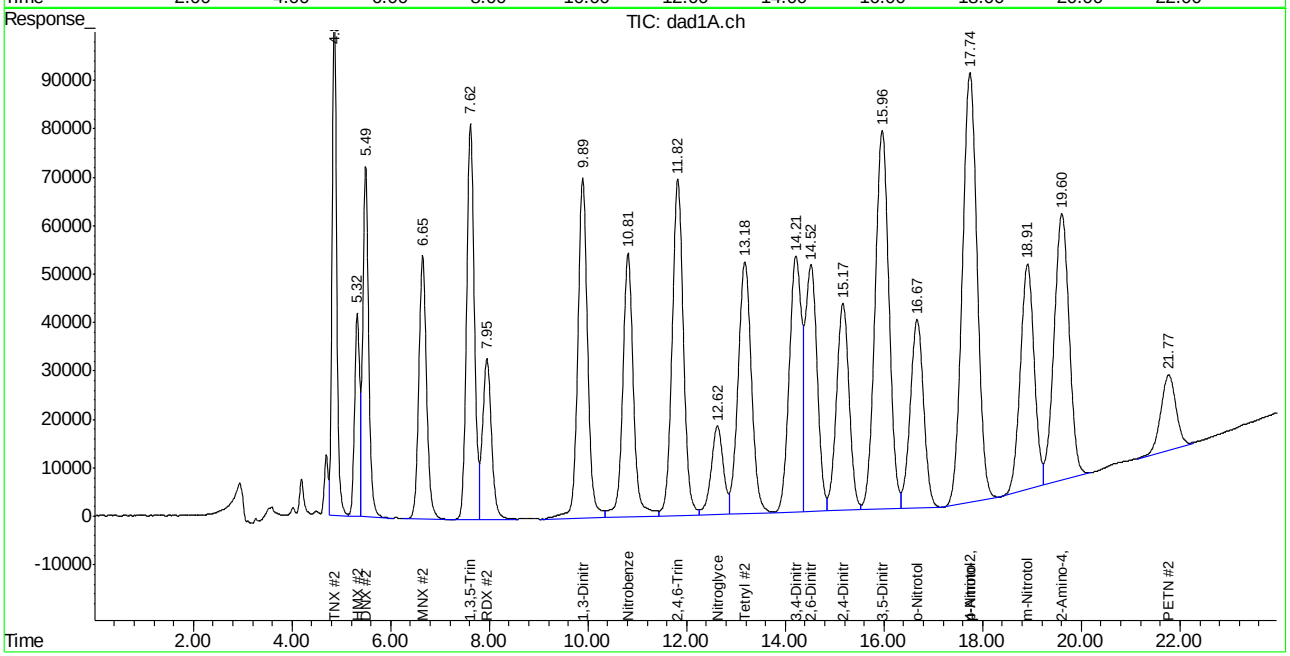
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620958.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620958.D\dad1A.ch
Acq On : 22-Mar-2021, 16:28:41 Operator: jamesb
Sample : icc2952-1000 Inst : G1315B
Misc : op84480,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:42 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

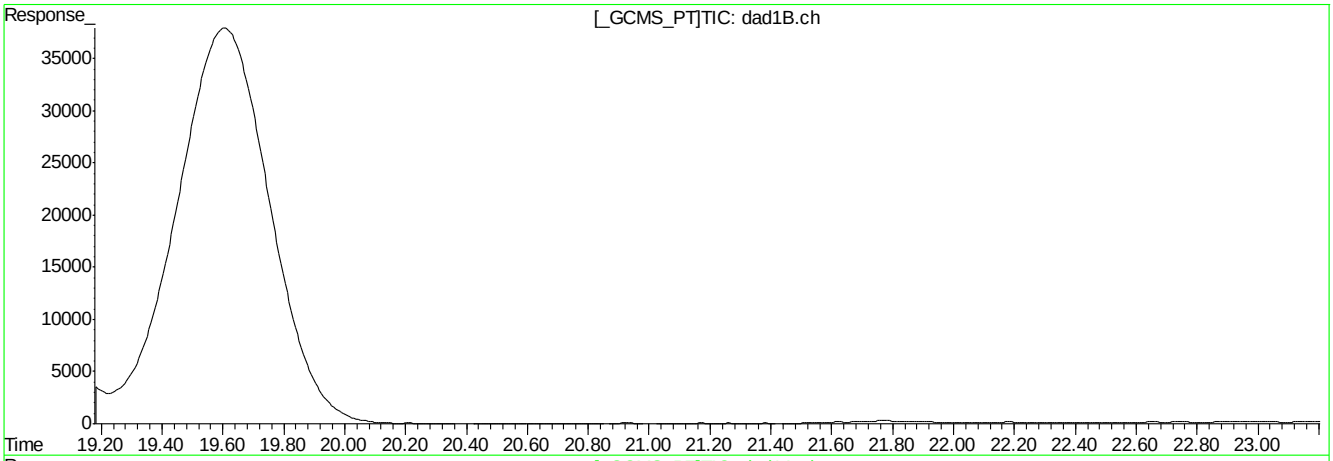
Sample Number: GGG2952-ICC2952
Lab FileID: GG620958.D
Injection Time: 03/22/21 16:28
Method: SW846 8330A
Analyst approved: 03/23/21 11:47 James Boone
Supervisor approved: 03/23/21 11:59 Naresh Jiawan

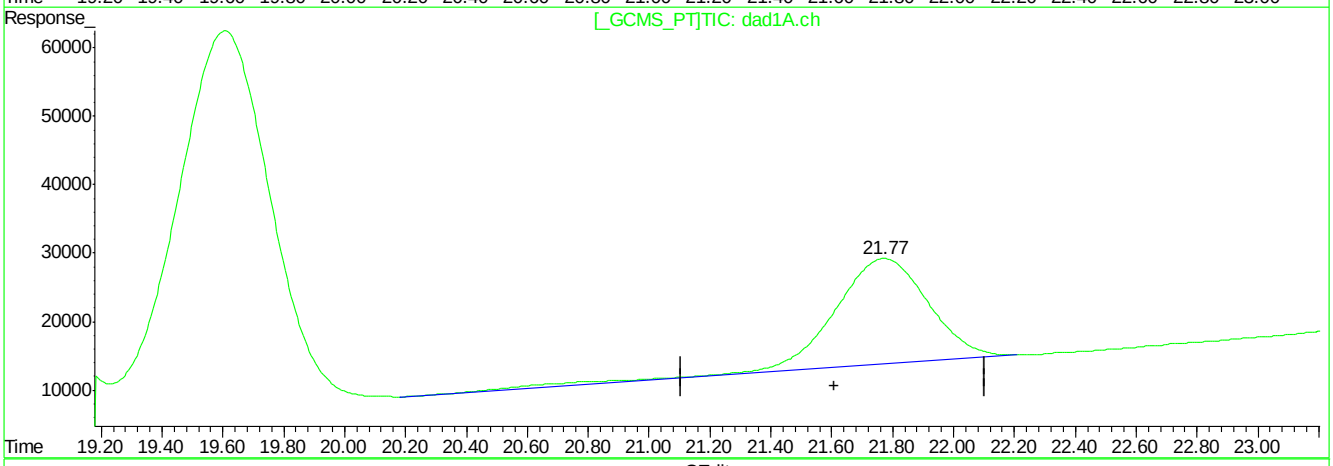
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.77	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620958.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620958.D\dad1A.ch
Acq On : 22-Mar-2021, 16:28:41 Operator: jamesb
Sample : icc2952-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.77min 939.168ppb

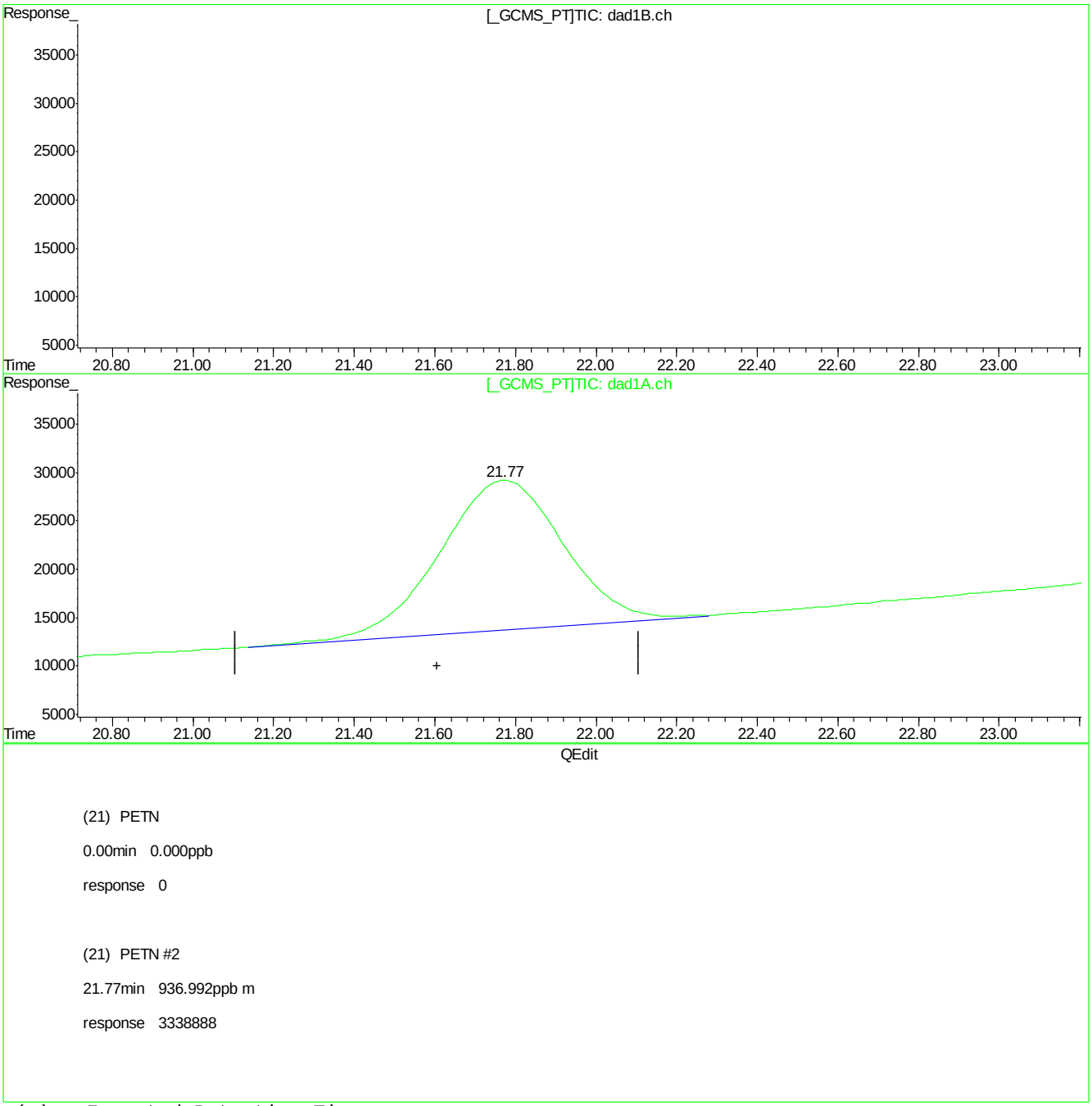
response 3346471

(+) = Expected Retention Time
GG620958.D GGG2952_032221.M Tue Mar 23 09:42:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620958.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620958.D\dad1A.ch
Acq On : 22-Mar-2021, 16:28:41 Operator: jamesb
Sample : icc2952-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
GG620958.D GGG2952_032221.M Tue Mar 23 09:42:55 2021

GG620959.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 03/23/21 11:59

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620959.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620959.D\dad1A.ch
Acq On : 22-Mar-2021, 17:00:06 Operator: jamesb
Sample : ic2952-2500 Inst : G1315B
Misc : op84497,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 09:38:57 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.21	14.20	11469014	22902018	2153.302	2101.851
	Spiked Amount 500.000	Range 70 - 136		Recovery =		430.66%#	420.37%#
	Target Compounds						
1)	TNX	4.86	4.86	16934161	16934161	2147.608	2149.163
2)	HMX	5.32	5.32	7392600	7392600	2321.917	2321.917
3)	DNX	5.49	5.49	14592964	14592964	2115.958	2115.958
4)	MNX	6.65	6.65	14645961	14645961	2097.770	2097.770
5)	1,3,5-Trinitrobe	7.63	7.63	21972803	21972803	2239.808	2240.001
6)	RDX	7.96	7.96	10316452	10316452	2429.640	2429.640
7)	1,3-Dinitrobenze	9.90	9.90	29844085	22449921	2298.711	2142.706
8)	Nitrobenzene	10.82	10.82	19301067	17843322	2568.585	2003.065
9)	2,4,6-Trinitroto	11.83	11.83	19940357	26307091	2196.526	2159.458
10)	Nitroglycerin	0.00	12.63	0	7036181	N.D. d	2342.511
11)	Tetryl	13.18	13.18	13718983	23610406	1956.336	1909.607
13)	2,6-Dinitrotolue	14.51	14.51	14683490	20995713	2337.455	2312.220
14)	2,4-Dinitrotolue	15.15	15.15	27162828	19263360	2327.017	2329.330
15)	3,5-Dinitroanili	15.93	15.93	22938713	37804109	2315.677	2409.515
16)	o-Nitrotoluene	16.66	16.66	12196249	17978480	2633.584	2610.328
17)	p-Nitrotoluene	17.72	17.72	25147664	46186201	4769.886	4830.477
18)	4-Amino-2,6-Dini	17.72	17.72	25147664	46186201	4769.886	4831.066
19)	m-Nitrotoluene	18.89	18.89	13362983	22949494	2532.676	2622.728
20)	2-Amino-4,6-Dini	19.58	19.58	20232185	29259298	2231.345	2371.767
21)	PETN	0.00	21.76	0	7913227	N.D. d	2294.252m

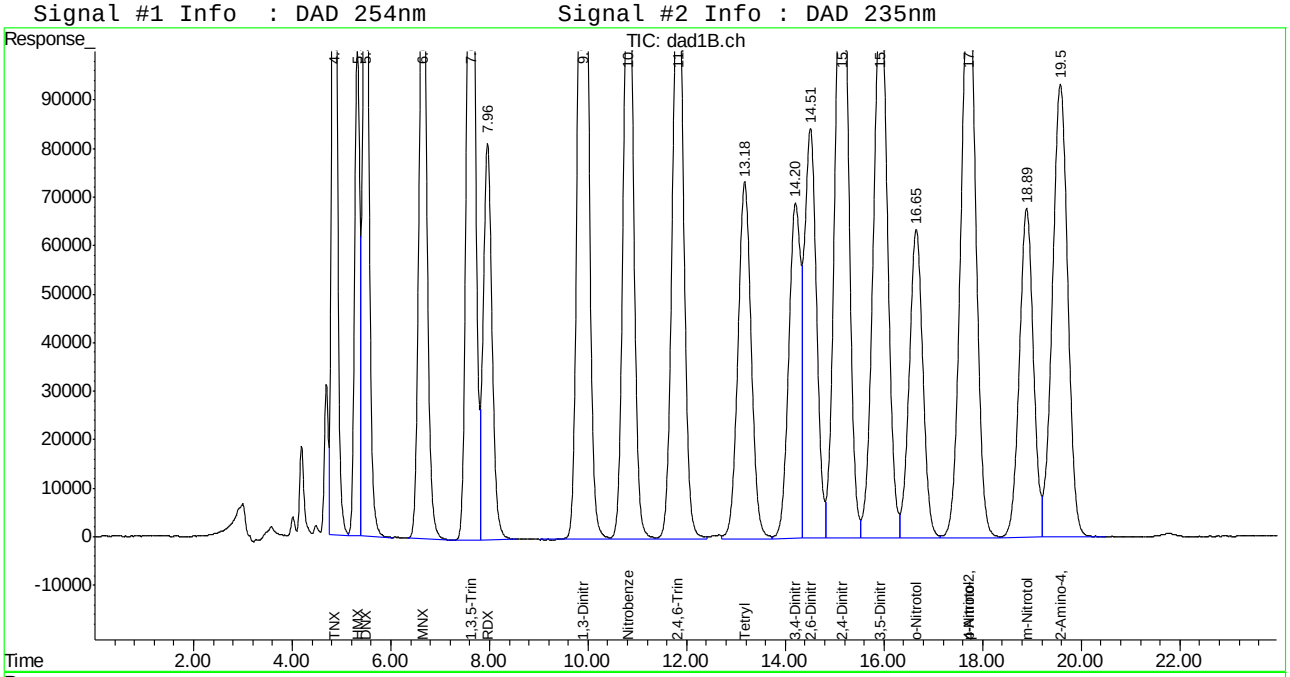
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

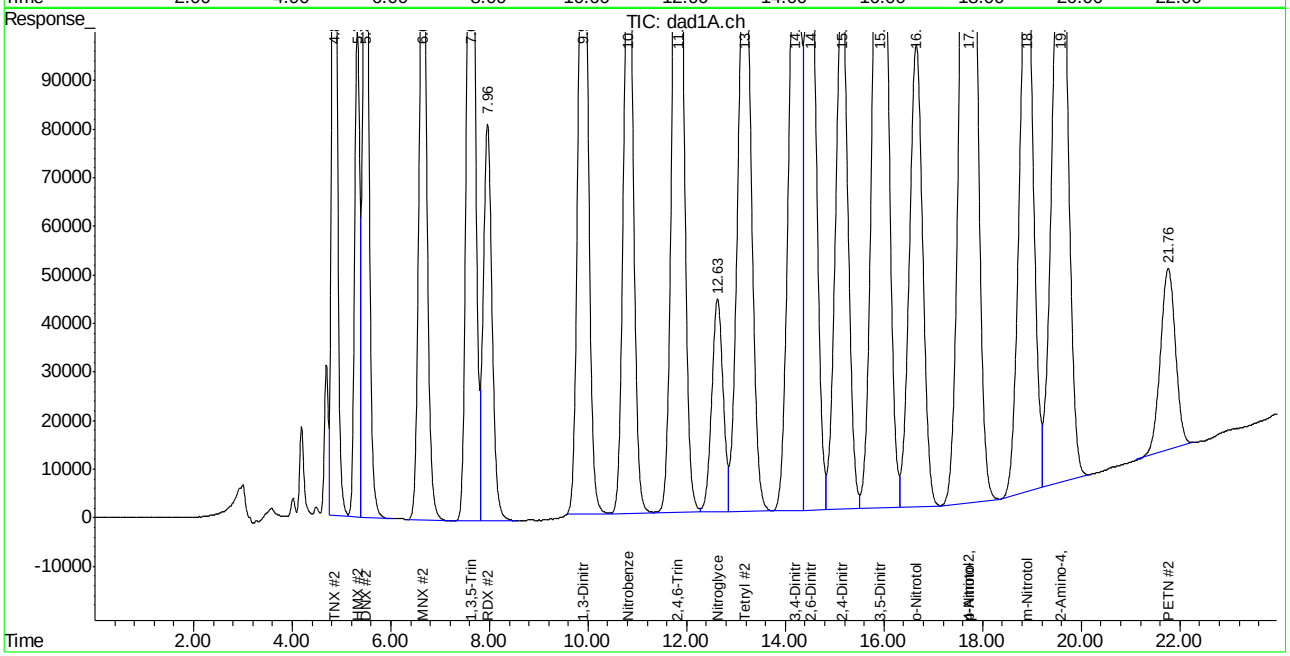
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620959.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620959.D\dad1A.ch
Acq On : 22-Mar-2021, 17:00:06 Operator: jamesb
Sample : ic2952-2500 Inst : G1315B
Misc : op84497,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:41 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

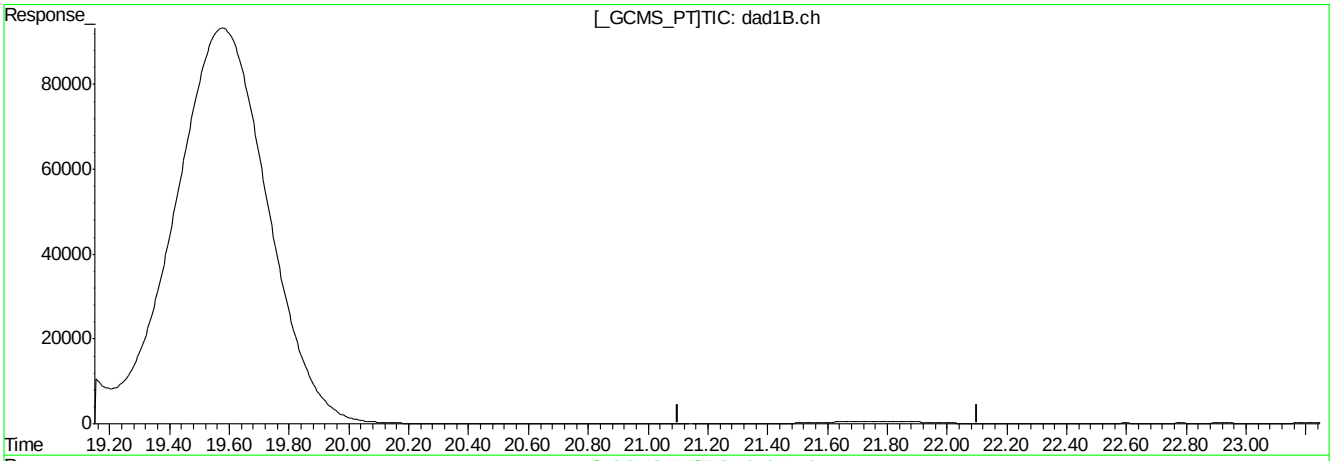
Sample Number: GGG2952-IC2952
Lab FileID: GG620959.D
Injection Time: 03/22/21 17:00
Method: SW846 8330A
Analyst approved: 03/23/21 11:47 James Boone
Supervisor approved: 03/23/21 11:59 Naresh Jiawan

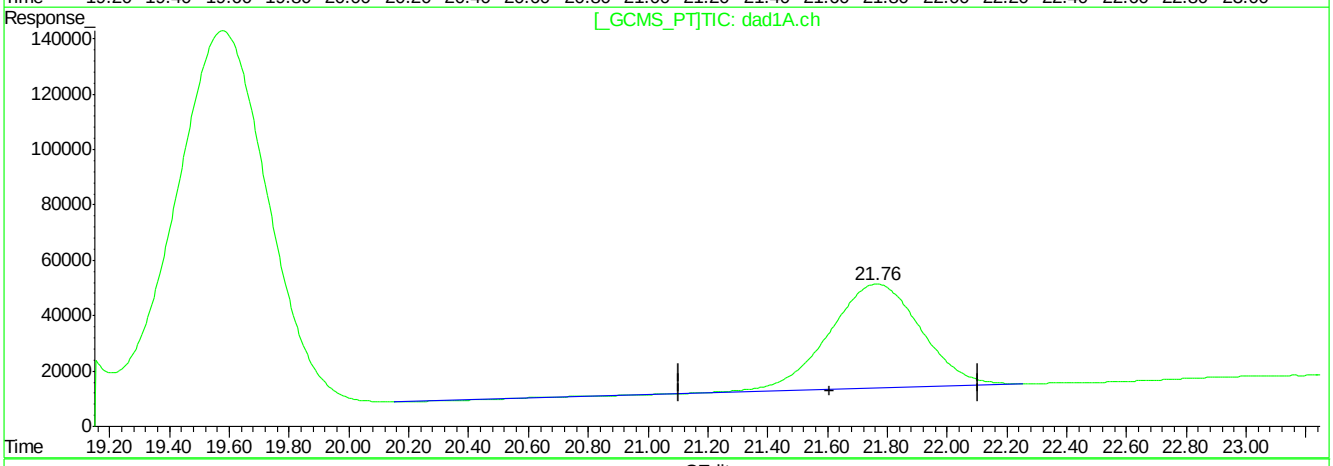
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.76	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620959.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620959.D\dad1A.ch
Acq On : 22-Mar-2021, 17:00:06 Operator: jamesb
Sample : ic2952-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.77min 2304.880ppb

response 7947823

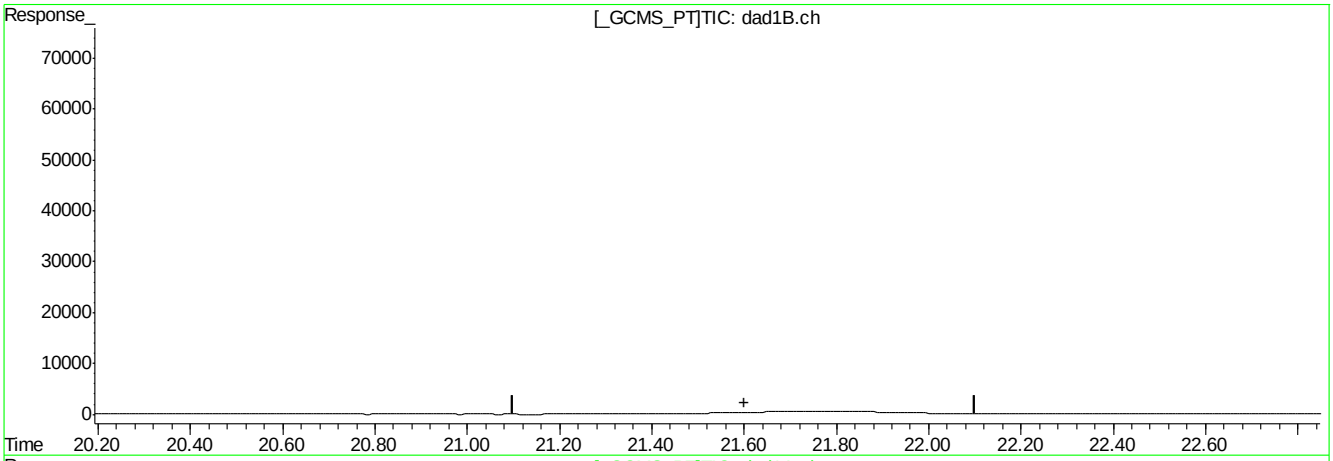
(+) = Expected Retention Time
GG620959.D GGG2952_032221.M Tue Mar 23 09:41:52 2021

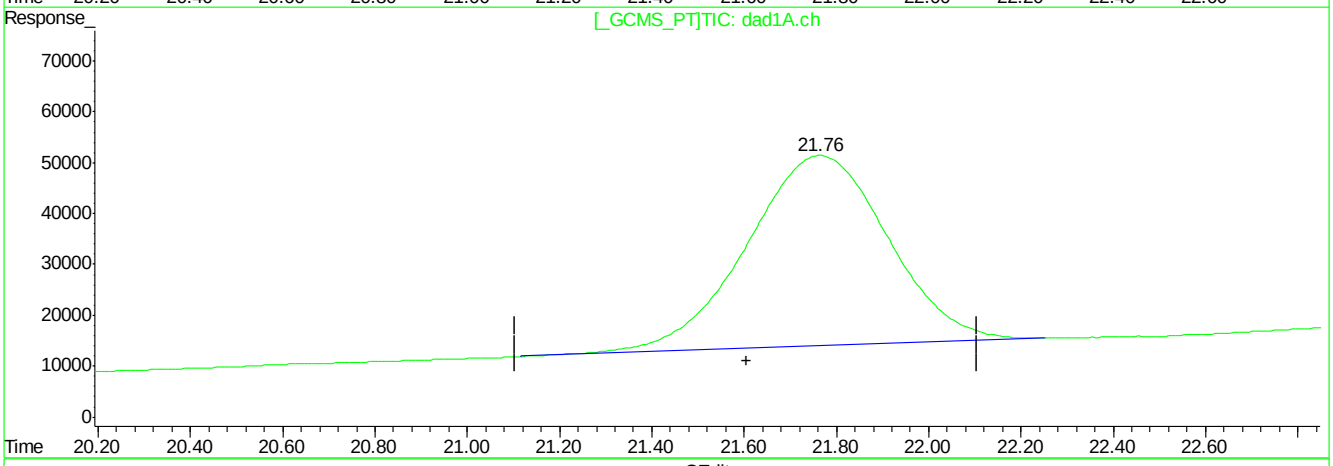
GG620959.D edits: PETN

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620959.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620959.D\dad1A.ch
Acq On : 22-Mar-2021, 17:00:06 Operator: jamesb
Sample : ic2952-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.76min 2294.252ppb m

response 7913227

(+) = Expected Retention Time
GG620959.D GGG2952_032221.M Tue Mar 23 09:42:01 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 03/23/21 11:59

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620960.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620960.D\dad1A.ch
Acq On : 22-Mar-2021, 17:31:31 Operator: jamesb
Sample : ic2952-5000 Inst : G1315B
Misc : op84497,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 09:38:58 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	14.20	14.19	22996845	46022663	4317.647	4223.766
	Spiked Amount 500.000	Range 70 - 136		Recovery =		863.53%#	844.75%#
	Target Compounds						
1)	TNX	4.86	4.86	33956120	33956120	4306.351	4309.468
2)	HMX	5.32	5.32	14740973	14740973	4629.943	4629.943
3)	DNX	5.49	5.49	29351135	29351135	4255.871	4255.871
4)	MNX	6.64	6.64	29425360	29425360	4214.653	4214.653
5)	1,3,5-Trinitrobe	7.62	7.62	44063292	44059523	4491.613	4491.615
6)	RDX	7.94	7.94	20825520	20803241	4904.644	4899.397
7)	1,3-Dinitrobenze	9.88	9.88	59978886	45314046	4619.814	4324.945
8)	Nitrobenzene	10.80	10.80	38720567	36143104	5152.930	4057.372
9)	2,4,6-Trinitroto	11.81	11.81	40147303	52937174	4422.417	4345.430
10)	Nitroglycerin	0.00	12.61	0	14351292	N.D. d	5327.373
11)	Tetryl	13.17	13.17	27859142	48055834	3972.732	4180.603
13)	2,6-Dinitrotolue	14.50	14.50	29584230	42303275	4709.493	4927.999
14)	2,4-Dinitrotolue	15.15	15.15	54653645	39151708	4682.133	4996.250
15)	3,5-Dinitroanili	15.93	15.93	46167451	76627250	4660.632	4883.980
16)	o-Nitrotoluene	16.65	16.65	24560825	36484213	5303.516	5297.208
17)	p-Nitrotoluene	17.71	17.71	50599427	92937936	9597.452	9720.102
18)	4-Amino-2,6-Dini	17.71	17.71	50599427	92937936	9597.452	9721.287
19)	m-Nitrotoluene	18.89	18.89	26806850	45684481	5080.682	5220.942
20)	2-Amino-4,6-Dini	19.58	19.58	40804448	58721388	4500.196	4759.973
21)	PETN	0.00	21.76	0	15652186	N.D. d	4838.422m

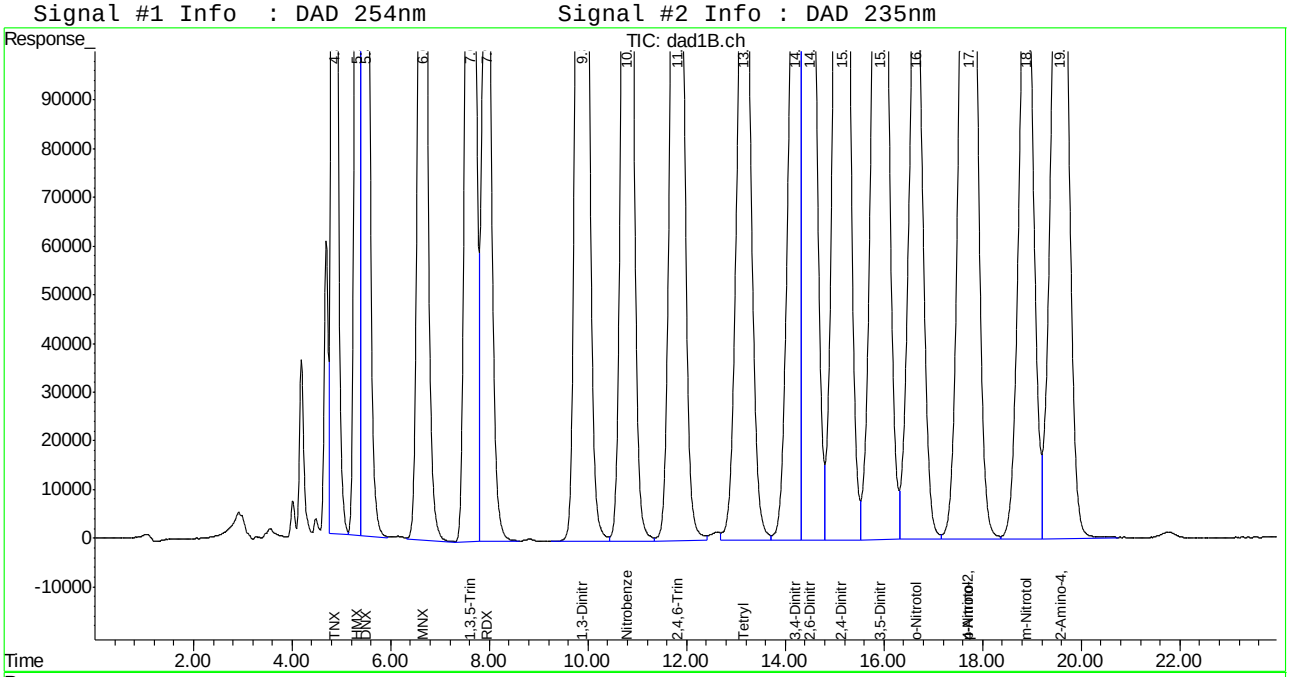
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG620960.D GGG2952_032221.M Tue Mar 23 10:42:16 2021 Page 1

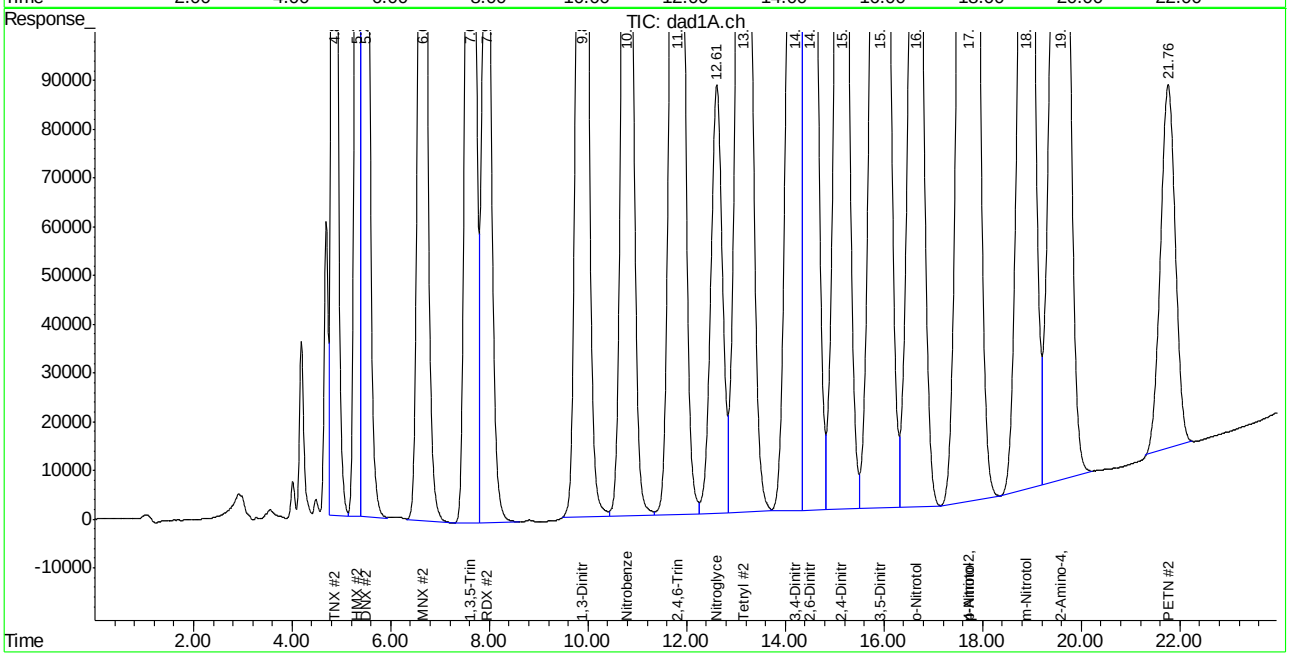
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620960.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620960.D\dad1A.ch
Acq On : 22-Mar-2021, 17:31:31 Operator: jamesb
Sample : ic2952-5000 Inst : G1315B
Misc : op84497,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:40 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

Sample Number: GGG2952-IC2952
Lab FileID: GG620960.D
Injection Time: 03/22/21 17:31

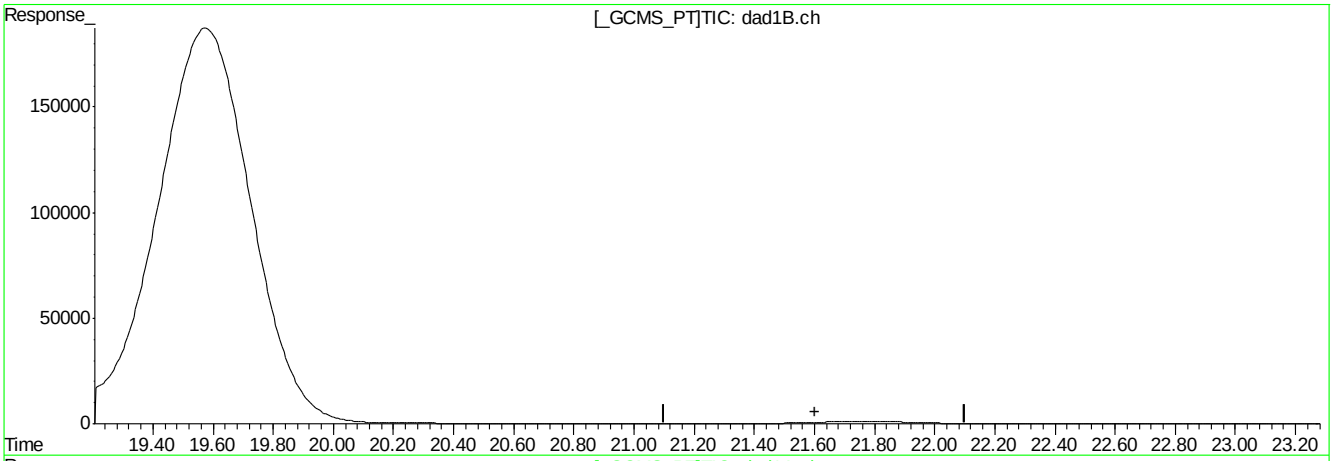
Method: SW846 8330A
Analyst approved: 03/23/21 11:47 James Boone
Supervisor approved: 03/23/21 11:59 Naresh Jiawan

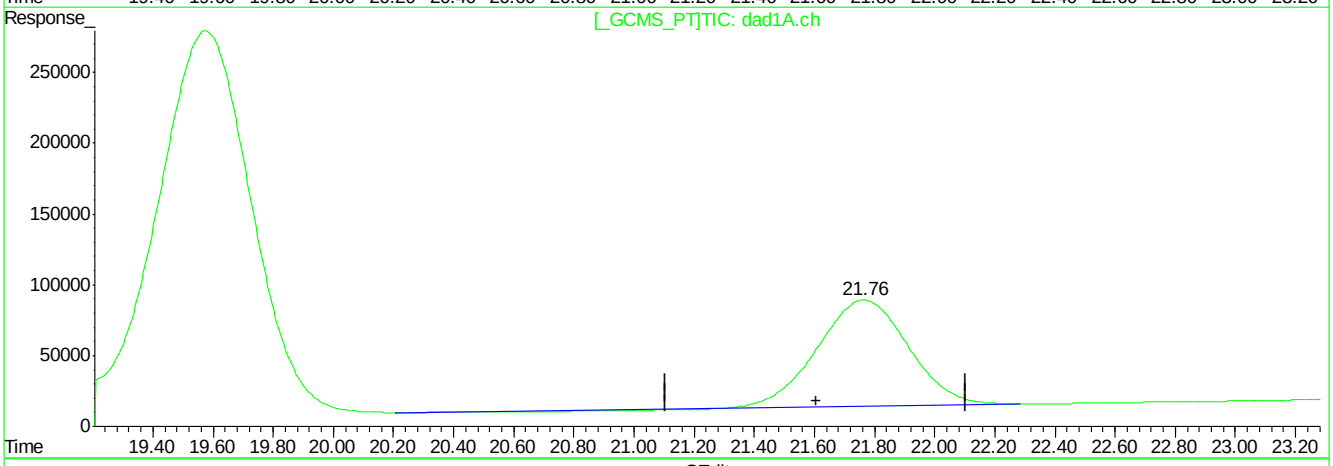
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.76	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620960.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620960.D\dad1A.ch
Acq On : 22-Mar-2021, 17:31:31 Operator: jamesb
Sample : ic2952-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.77min 4727.910ppb

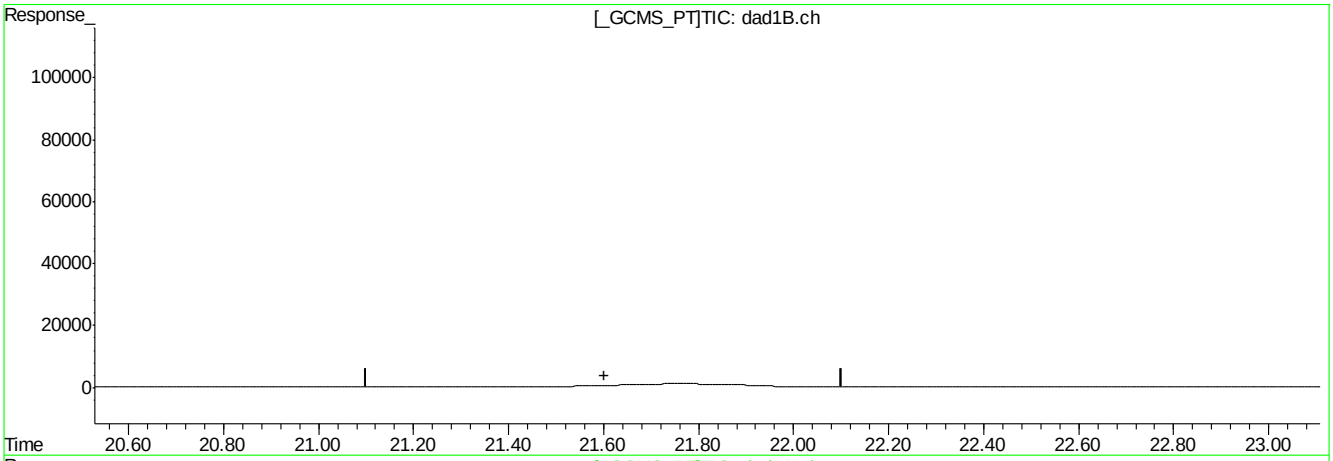
response 15338668

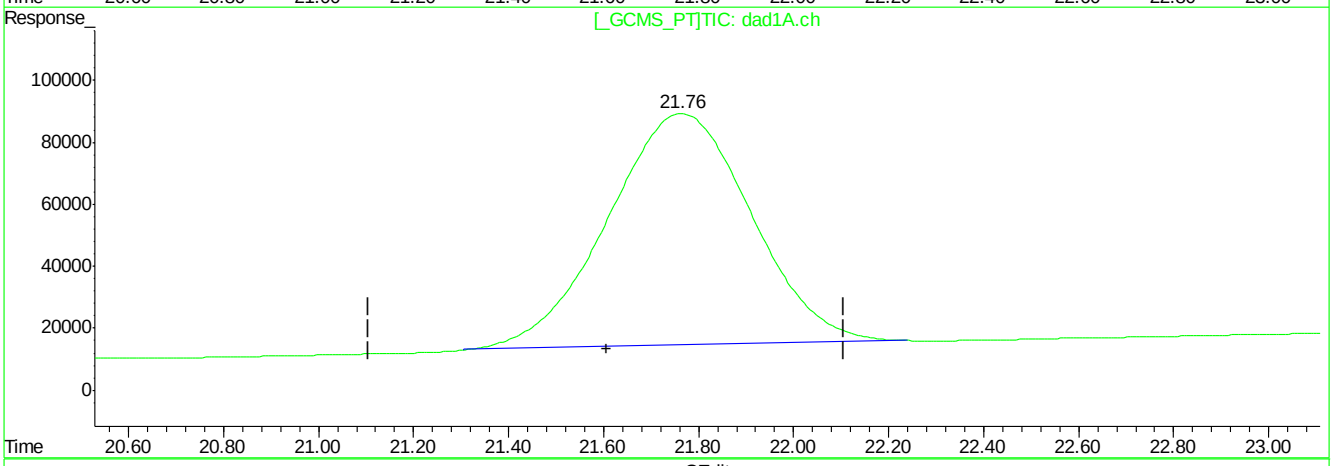
(+) = Expected Retention Time
GG620960.D GGG2952_032221.M Tue Mar 23 09:39:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620960.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620960.D\dad1A.ch
Acq On : 22-Mar-2021, 17:31:31 Operator: jamesb
Sample : ic2952-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 9:38 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Fri Mar 19 10:25:43 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.76min 4838.422ppb m

response 15652186

(+) = Expected Retention Time
GG620960.D GGG2952_032221.M Tue Mar 23 09:40:09 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
03/23/21 11:59

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1A.ch
Acq On : 22-Mar-2021, 18:02:59 Operator: jamesb
Sample : icv2952-1000 Inst : G1315B
Misc : op84497,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 10:35:37 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue Mar 23 10:33:40 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	4.86	4.86	6936624	6936624	964.008	965.197
2)	HMX	5.32	5.32	2962625	2962625	1003.049	884.514
3)	DNX	5.49	5.49	6591496	6591496	1019.672	1019.672
4)	MNX	6.65	6.65	6848164	6848164	1123.260	1123.260
5)	1,3,5-Trinitrobe	7.62	7.62	8821961	8821961	980.679	980.523
6)	RDX	7.95	7.95	4190908	4190908	1009.691	1004.277
7)	1,3-Dinitrobenze	9.89	9.89	12003714	9449777	963.558	1041.049
8)	Nitrobenzene	10.81	10.81	7734459	7906868	972.806	1090.343
9)	2,4,6-Trinitroto	11.82	11.82	8359818	11436262	1009.900	1079.205
10)	Nitroglycerin	0.00	12.62	0	3108070	N.D.	1083.708 #
11)	Tetryl	13.17	13.17	6541856	11594264	1146.146m	1209.896m
13)	2,6-Dinitrotolue	14.52	14.52	5762195	8487887	951.593	1028.201
14)	2,4-Dinitrotolue	15.16	15.16	10887287	7762816	977.259	988.026
15)	3,5-Dinitroanili	15.95	15.95	10477141	17503251	1111.337	1107.264
16)	o-Nitrotoluene	16.66	16.66	4888927	7283426	971.233	1009.925
17)	p-Nitrotoluene	17.73	17.73	10140978	18664834	1979.526	2176.629
18)	4-Amino-2,6-Dini	17.73	17.73	10140978	18664834	1979.526	2171.897
19)	m-Nitrotoluene	18.91	18.91	5325853	9207485	961.220	950.876
20)	2-Amino-4,6-Dini	19.59	19.60	8238970	11888802	1001.271	1022.974
21)	PETN	0.00	21.76	0	3455127	N.D.	1099.126m#

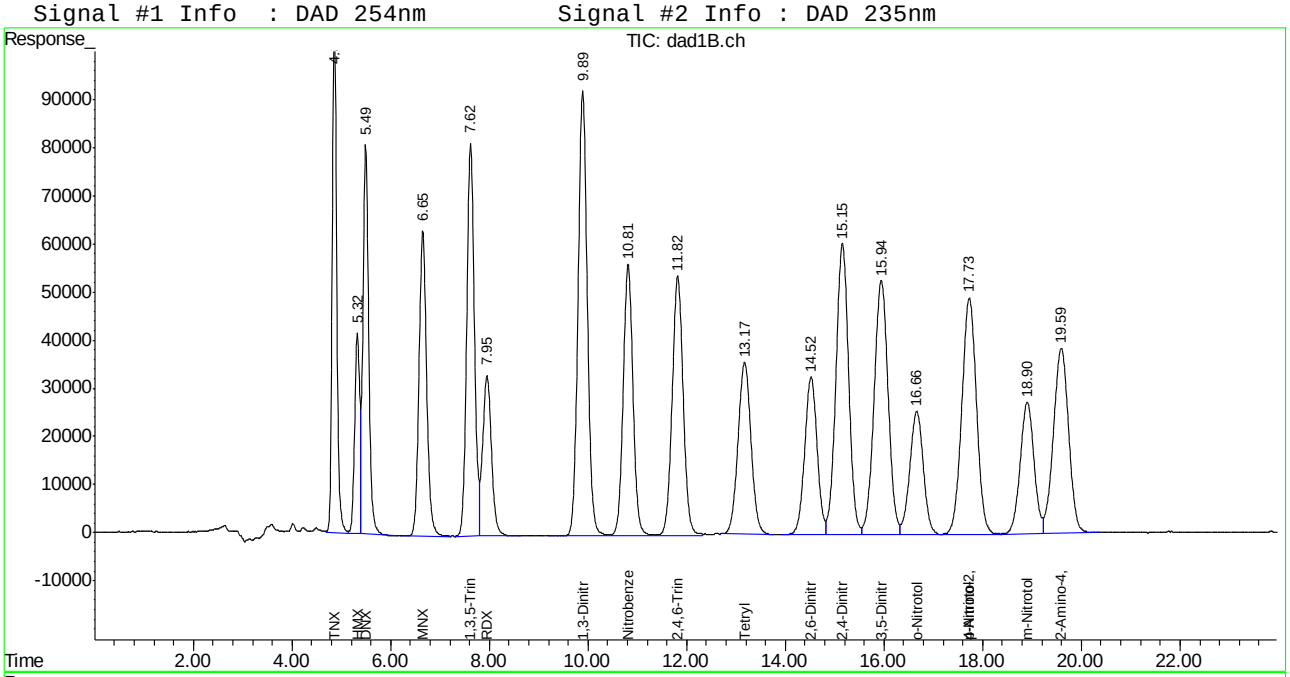
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

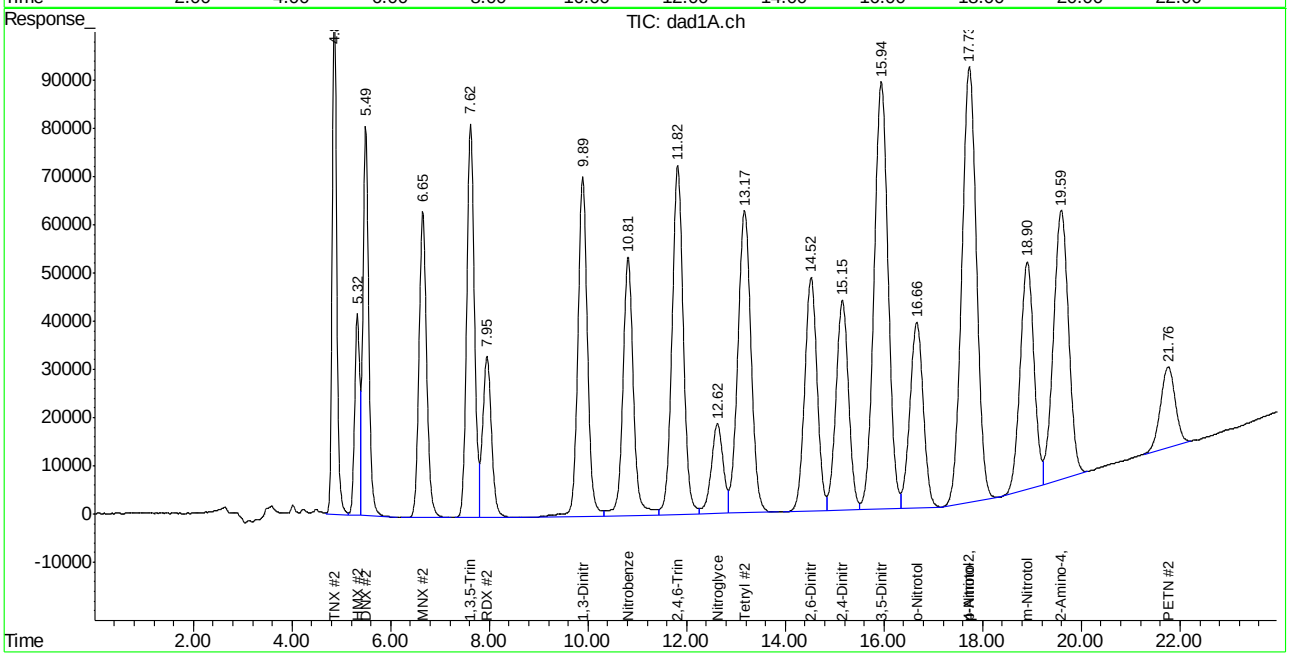
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1A.ch
Acq On : 22-Mar-2021, 18:02:59 Operator: jamesb
Sample : icv2952-1000 Inst : G1315B
Misc : op84497,GGG2952,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 10:40 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue Mar 23 10:33:40 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





GG620961.D GGG2952_032221.M Tue Mar 23 10:46:32 2021 Page 2

Manual Integration Approval Summary

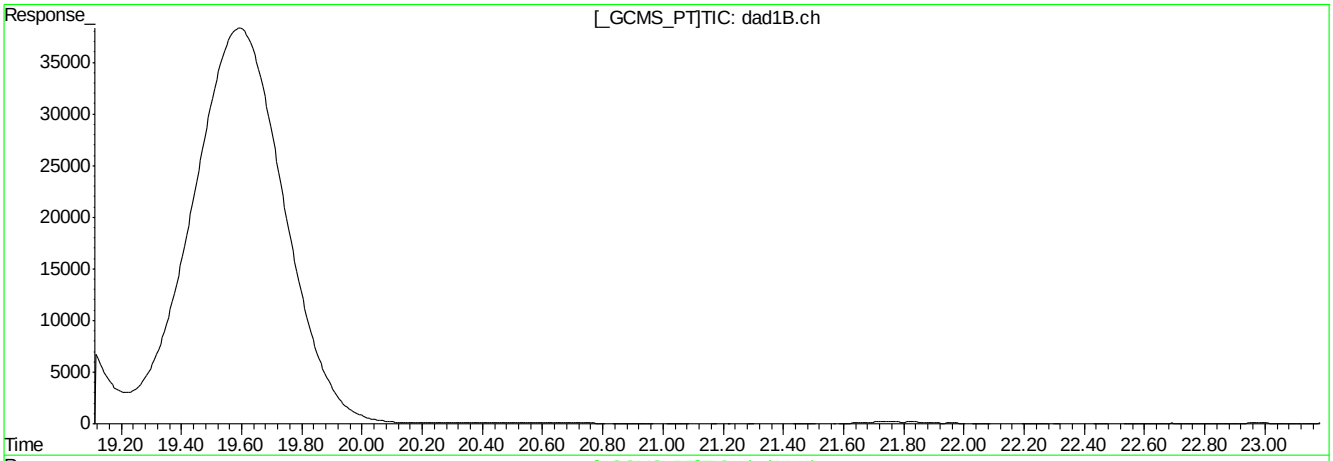
Sample Number: GGG2952-ICV2952
Lab FileID: GG620961.D
Injection Time: 03/22/21 18:02
Method: SW846 8330A
Analyst approved: 03/23/21 11:47 James Boone
Supervisor approved: 03/23/21 11:59 Naresh Jiawan

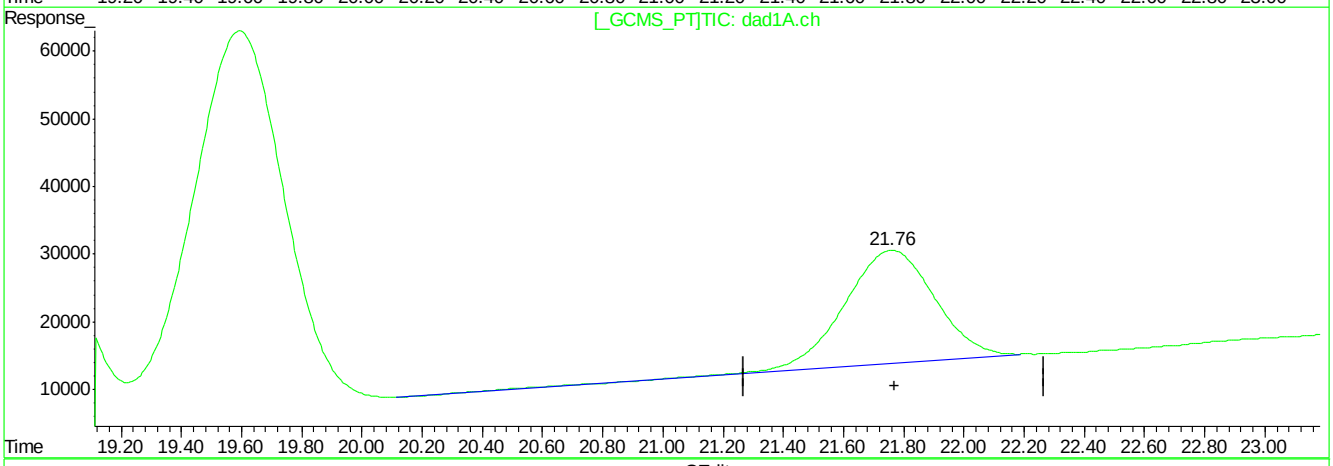
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetryl	479-45-8	1	13.17	Poor instrument integration
Tetryl	479-45-8	2	13.17	Poor instrument integration
PETN	78-11-5	2	21.76	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1A.ch
Acq On : 22-Mar-2021, 18:02:59 Operator: jamesb
Sample : icv2952-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 10:35 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue Mar 23 10:33:40 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.76min 1089.657ppb

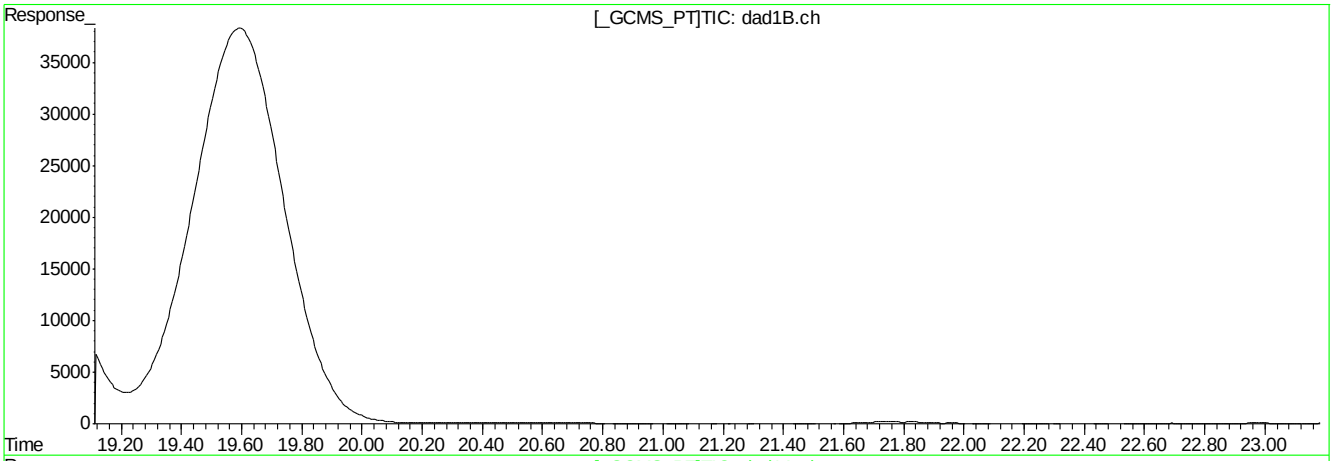
response 3425360

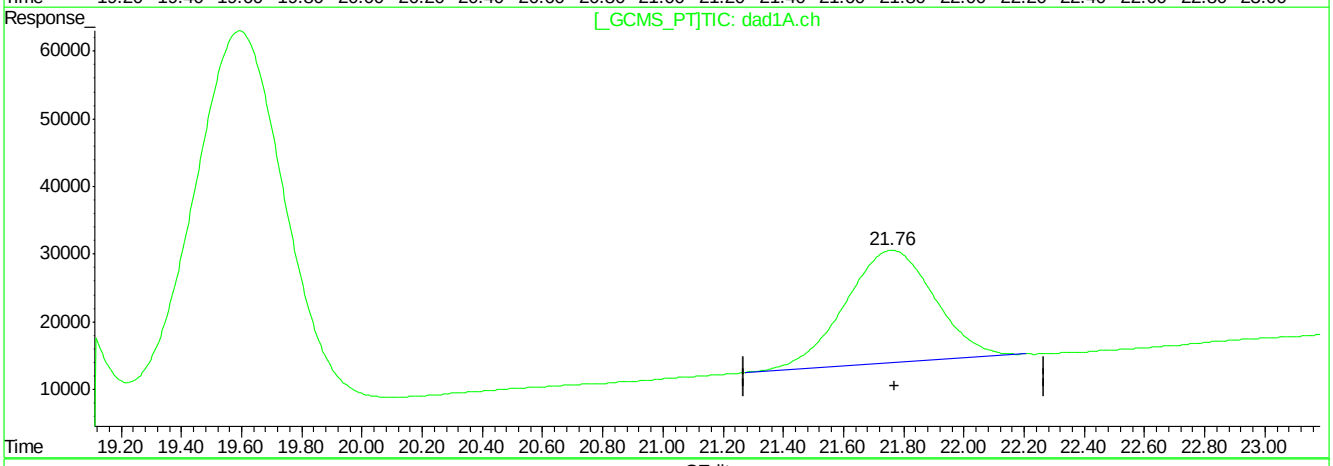
(+) = Expected Retention Time
GG620961.D GGG2952_032221.M Tue Mar 23 10:35:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1A.ch
Acq On : 22-Mar-2021, 18:02:59 Operator: jamesb
Sample : icv2952-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 10:35 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue Mar 23 10:33:40 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.76min 1099.126ppb m

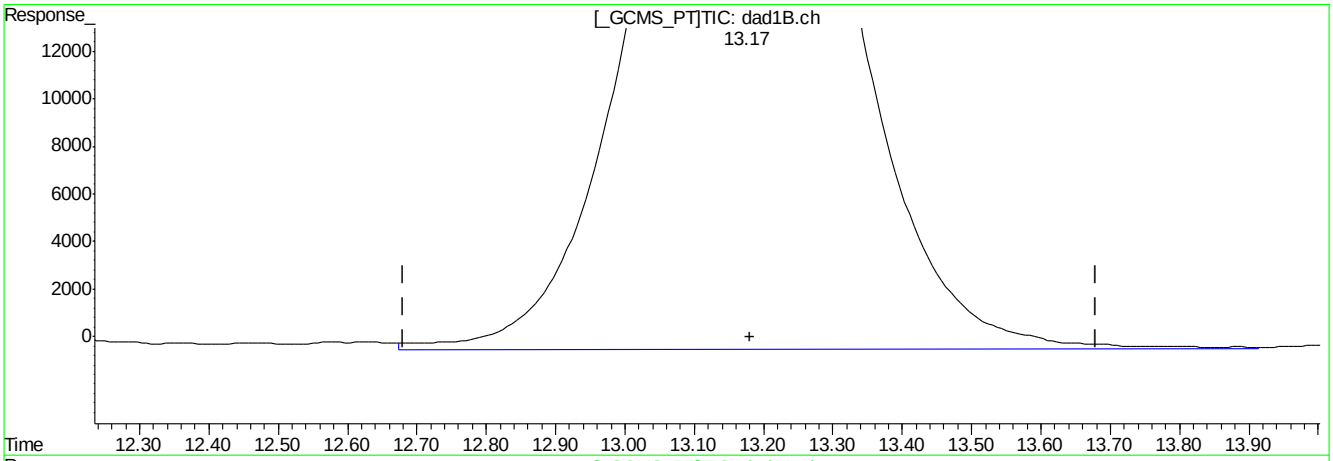
response 3455127

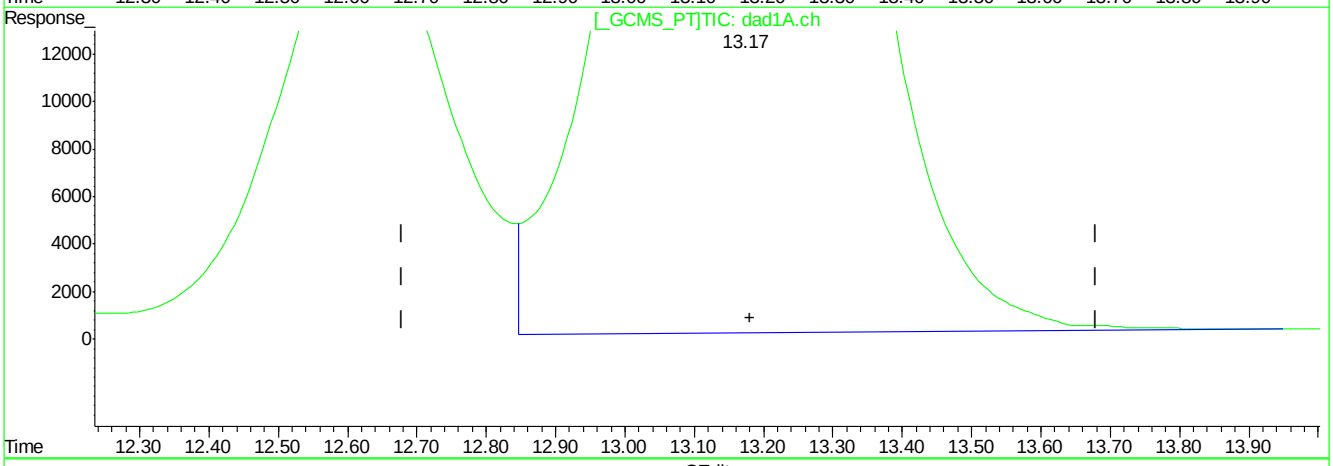
(+) = Expected Retention Time
GG620961.D GGG2952_032221.M Tue Mar 23 10:35:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1A.ch
Acq On : 22-Mar-2021, 18:02:59 Operator: jamesb
Sample : icv2952-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 10:35 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue Mar 23 10:33:40 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

13.17min 1166.802ppb

response 6659757

(11) Tetryl #2

13.17min 1215.025ppb

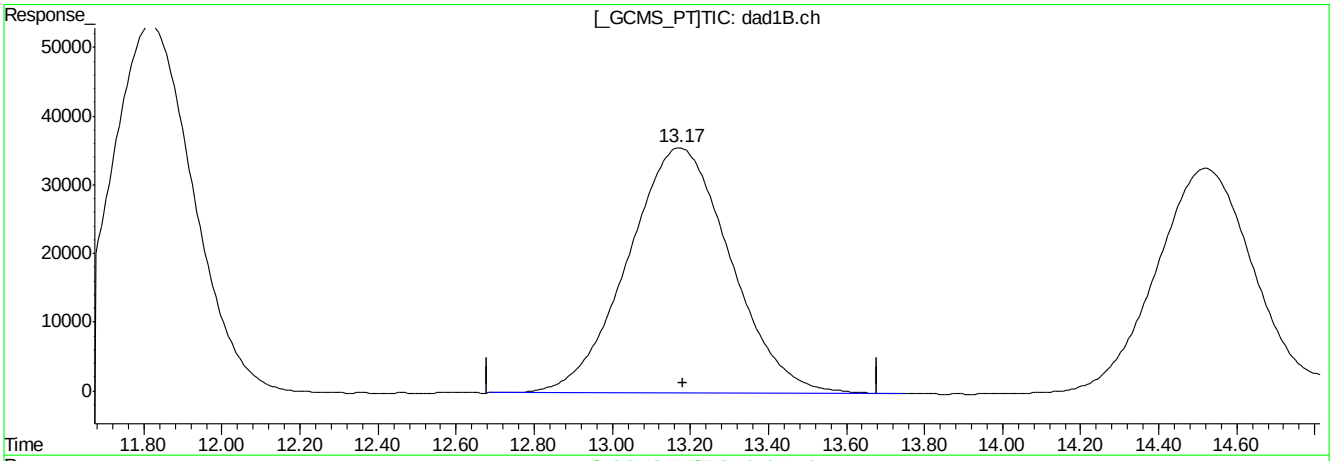
response 11643416

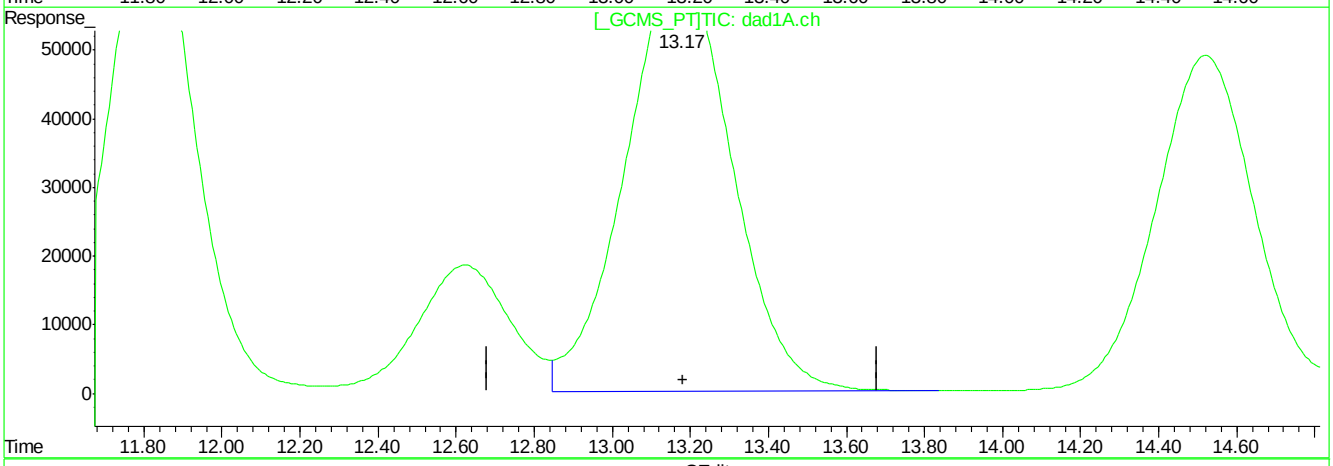
(+) = Expected Retention Time
GG620961.D GGG2952_032221.M Tue Mar 23 10:40:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG2952\GG620961.D\dad1A.ch
Acq On : 22-Mar-2021, 18:02:59 Operator: jamesb
Sample : icv2952-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Mar 23 10:35 2021 Quant Results File: GGG2952_032221.RES

Method : C:\MSDCHEM\1\METHODS\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Tue Mar 23 10:33:40 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

13.17min 1146.146ppb m

response 6541856

(11) Tetryl #2

13.17min 1209.896ppb m

response 11594264

(+) = Expected Retention Time
GG620961.D GGG2952_032221.M Tue Mar 23 10:40:35 2021

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621161.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621161.D\dad1A.ch
Acq On : 23-Apr-2021, 12:36:02 Operator: jamesb
Sample : cc2952-1000 Inst : G1315B
Misc : op84960,GGG2966,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50:00 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
12) S	3,4-Dinitrotolue	14.09	14.08	4890531	9794866	1037.883	1065.154	
	Spiked Amount 500.000	Range 70 - 136		Recovery =		207.58%#	213.03%#	
	Target Compounds							
1)	TNX	4.85	4.85	5873014	5873014	816.194	817.201	
2)	HMX	5.31	5.31	3074811	3074811	1041.031	918.008	
3)	DNX	5.48	5.48	6178389	6178389	955.766	955.766	
4)	MNX	6.61	6.61	6563658	6563658	1076.595	1076.595	
5)	1,3,5-Trinitrobe	7.56	7.56	9025591	9025591	1003.315	1003.155	
6)	RDX	7.90	7.90	4250591	4250591	1024.070	1018.579	
7)	1,3-Dinitrobenze	9.81	9.81	12249996	9647509	983.327	1062.832	
8)	Nitrobenzene	10.72	10.72	7947962	7806753	999.659	1076.537	
9)	2,4,6-Trinitroto	11.71	11.71	8619542	11616642	1041.276	1096.226	
10)	Nitroglycerin	0.00	12.51	0	3019061	N.D.	1052.673	#
11)	Tetryl	13.03	13.03	6854109	12019200	1200.853	1254.239	
13)	2,6-Dinitrotolue	14.39	14.39	5956280	8546958	983.645	1035.357	
14)	2,4-Dinitrotolue	15.02	15.02	11125843	8096615	998.672	1030.511	
15)	3,5-Dinitroanili	15.76	15.76	9406016	15636628	997.720	989.180	
16)	o-Nitrotoluene	16.50	16.50	4987369	7479624	990.789	1037.130	
17)	p-Nitrotoluene	17.54	17.54	10334884	18918331	2017.376	2206.191	
18)	4-Amino-2,6-Dini	17.54	17.54	10334884	18918331	2017.376	2201.395	
19)	m-Nitrotoluene	18.72	18.72	5510519	9519413	994.549	983.090	
20)	2-Amino-4,6-Dini	19.39	19.39	8320637	11997036	1011.196	1032.287	
21)	PETN	0.00	21.55	0	3118273	N.D.	991.968	#

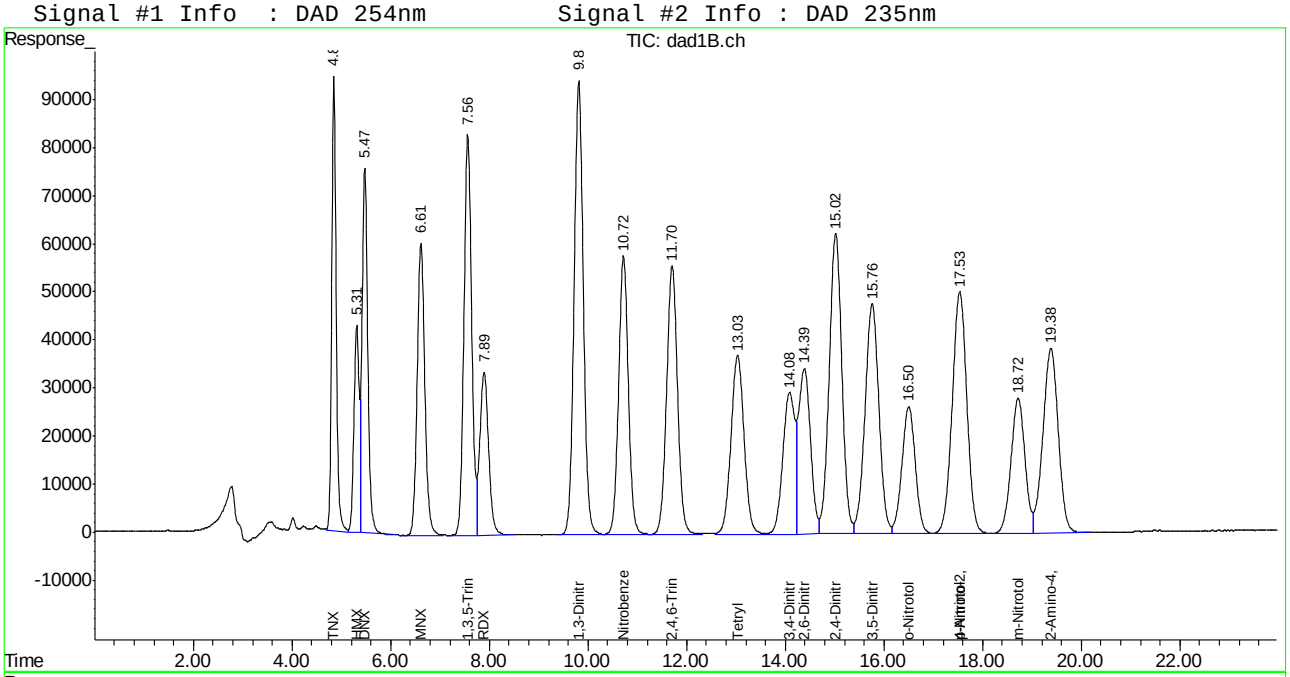
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG621161.D GGG2952_032221.M Mon Apr 26 14:12:19 2021 Page 1

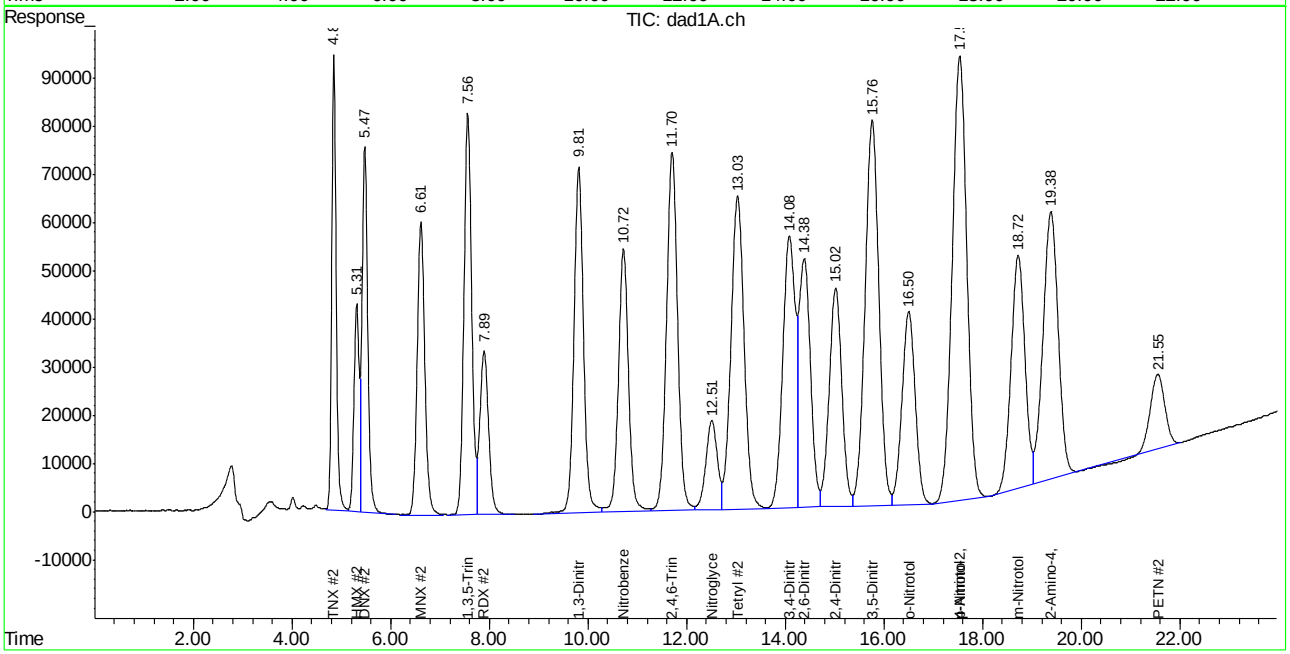
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621161.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621161.D\dad1A.ch
Acq On : 23-Apr-2021, 12:36:02 Operator: jamesb
Sample : cc2952-1000 Inst : G1315B
Misc : op84960,GGG2966,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621173.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621173.D\dad1A.ch
Acq On : 23-Apr-2021, 18:53:10 Operator: jamesb
Sample : cc2952-1000 Inst : G1315B
Misc : op84960,GGG2966,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 12:50:12 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
12)	S 3,4-Dinitrotolue	14.10	14.09	4918902	9849217	1043.904	1071.065	
	Spiked Amount 500.000	Range 70 - 136		Recovery =		208.78%#	214.21%#	
	Target Compounds							
1)	TNX	4.86	4.86	5893847	5893847	819.089	820.100	
2)	HMX	5.32	5.32	3071834	3071834	1040.023	917.119	
3)	DNX	5.49	5.49	6157395	6157395	952.519	952.519	
4)	MNX	6.63	6.63	6545115	6545115	1073.553	1073.553	
5)	1,3,5-Trinitrobe	7.57	7.57	9036538	9036538	1004.532	1004.372	
6)	RDX	7.91	7.91	4261956	4261956	1026.808	1021.302	
7)	1,3-Dinitrobenze	9.82	9.82	12256715	9447262	983.866	1040.772	
8)	Nitrobenzene	10.74	10.73	7861056	7656686	988.728	1055.843	
9)	2,4,6-Trinitroto	11.72	11.72	8602671	11871298	1039.238	1120.258	
10)	Nitroglycerin	0.00	12.51	0	3175779	N.D.	1107.317	#
11)	Tetryl	13.04	13.04	6792643	11941663	1190.084	1246.148	
13)	2,6-Dinitrotolue	14.40	14.40	5882287	8430053	971.426	1021.195	
14)	2,4-Dinitrotolue	15.05	15.05	11082106	7862867	994.746	1000.760	
15)	3,5-Dinitroanili	15.81	15.81	9394059	15678253	996.452	991.814	
16)	o-Nitrotoluene	16.55	16.55	4914814	7419798	976.376	1028.834	
17)	p-Nitrotoluene	17.61	17.61	10270234	18817381	2004.757	2194.418	
18)	4-Amino-2,6-Dini	17.61	17.61	10270234	18817381	2004.757	2189.648	
19)	m-Nitrotoluene	18.78	18.78	5425291	9300297	979.167	960.461	
20)	2-Amino-4,6-Dini	19.46	19.46	8304502	11978924	1009.235	1030.729	
21)	PETN	0.00	21.59	0	2942779	N.D. d	936.141	

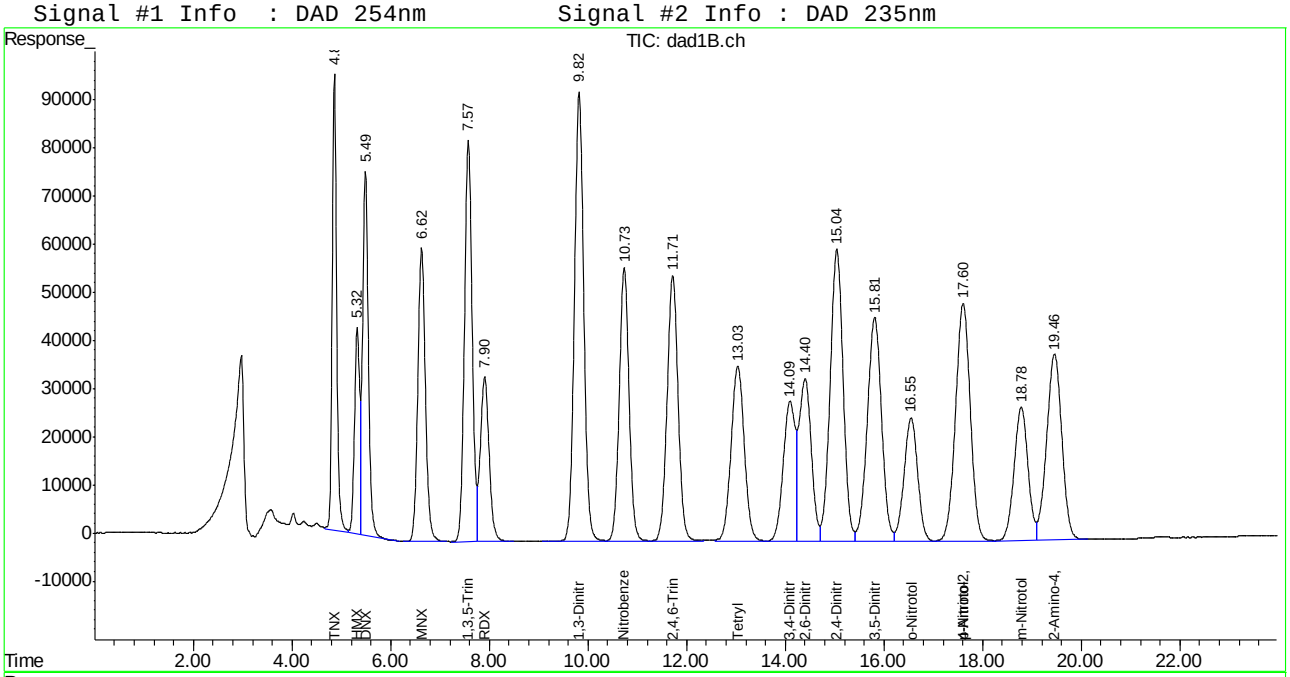
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG621173.D GGG2952_032221.M Mon Apr 26 14:12:30 2021 Page 1

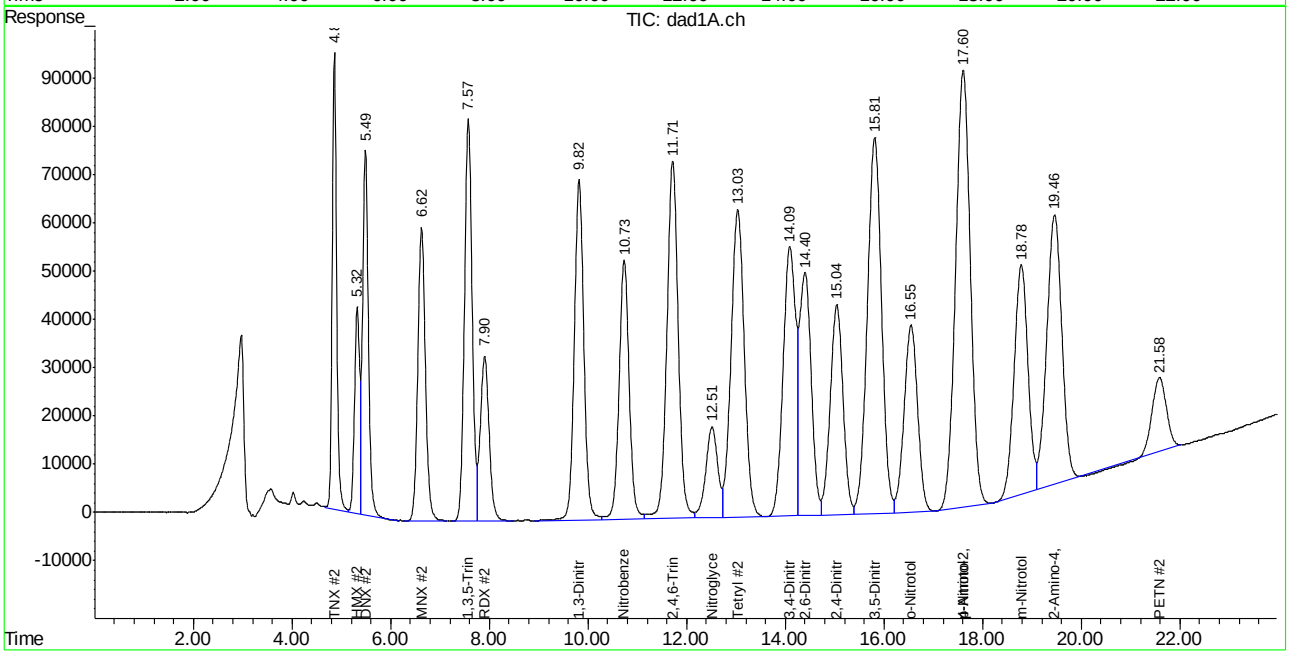
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG2966\GG621173.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG2966\GG621173.D\dad1A.ch
Acq On : 23-Apr-2021, 18:53:10 Operator: jamesb
Sample : cc2952-1000 Inst : G1315B
Misc : op84960,GGG2966,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 26 13:09 2021 Quant Results File: GGG2952_032221.RES

Quant Method : C:\MSDCHEM\1...\GGG2952_032221.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Apr 21 09:49:37 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
04/05/21 10:17

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 05 08:23:26 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.00f	11.06f	35657	41594	17.696m	12.887m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		3.54%#	2.58%#
	Target Compounds						
1)	TNX	1.31	1.31	44760	79235	14.419m	17.009m
2)	HMX	1.45	1.45	33442	96392	21.459m	22.679
3)	DNX	1.69	1.69	56515	129727	22.132m	34.728m#
4)	MNX	2.28	2.27	70097	97487	25.038m	23.444m
5)	RDX	2.87	2.88	43325	62288	22.754m	20.322m
6)	1,3,5-Trinitrobe	4.61	4.62	87711	173842	21.258m	22.372
7)	1,3-Dinitrobenze	5.81	5.82	128839	78985	23.922	22.050m
8)	3,5-Dinitroanili	6.21	6.20	95161	153097	23.642m	20.930m
9)	Nitrobenzene	7.35	7.34	72013	86798	23.921m	27.755
10)	Nitroglycerin	0.00	8.85	0	44228	N.D.	36.390 #
11)	Tetryl	9.38f	9.33f	68810	120565	29.170m	29.614m
12)	2,4,6-Trinitroto	9.72f	9.77	84725	114996	21.554m	26.182
13)	2-Amino-4,6-Dini	10.16f	10.22	74822	120963	21.863m	26.615
14)	4-Amino-2,6-Dini	10.75	10.71f	66983	100826	27.299m	22.955m
16)	2,4-Dinitrotolue	11.68	11.67	113061	63463	23.519m	21.151m
17)	2,6-Dinitrotolue	12.11	12.21	67909	58878	25.762m	16.615m
18)	o-Nitrotoluene	15.23	15.16	59896	47735	27.817m	16.511m#
19)	p-Nitrotoluene	15.80	15.75	86788	97158	25.375m	35.062m
20)	m-Nitrotoluene	16.63	16.80	79101	109819	23.615	29.647m
21)	PETN	0.00	18.41	0	29506	N.D.	22.861m#

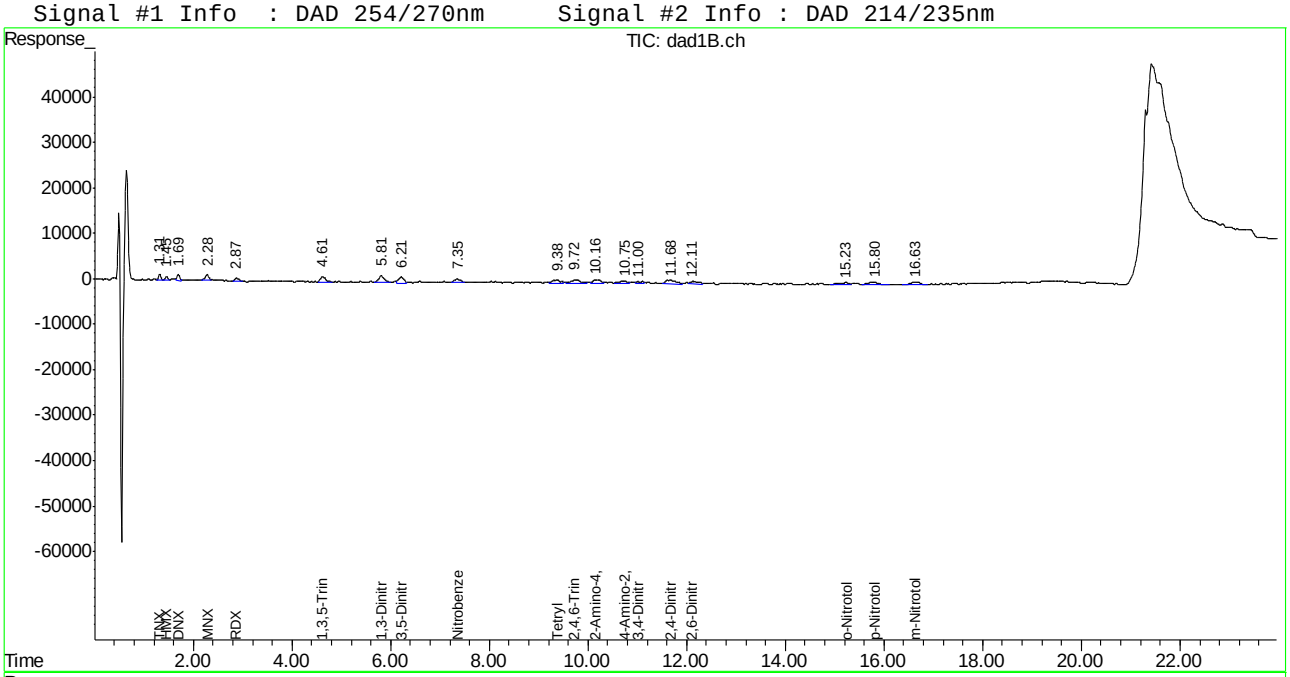
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP390446.D GPP2428_040221PRI.M Mon Apr 05 09:04:39 2021 Page 1

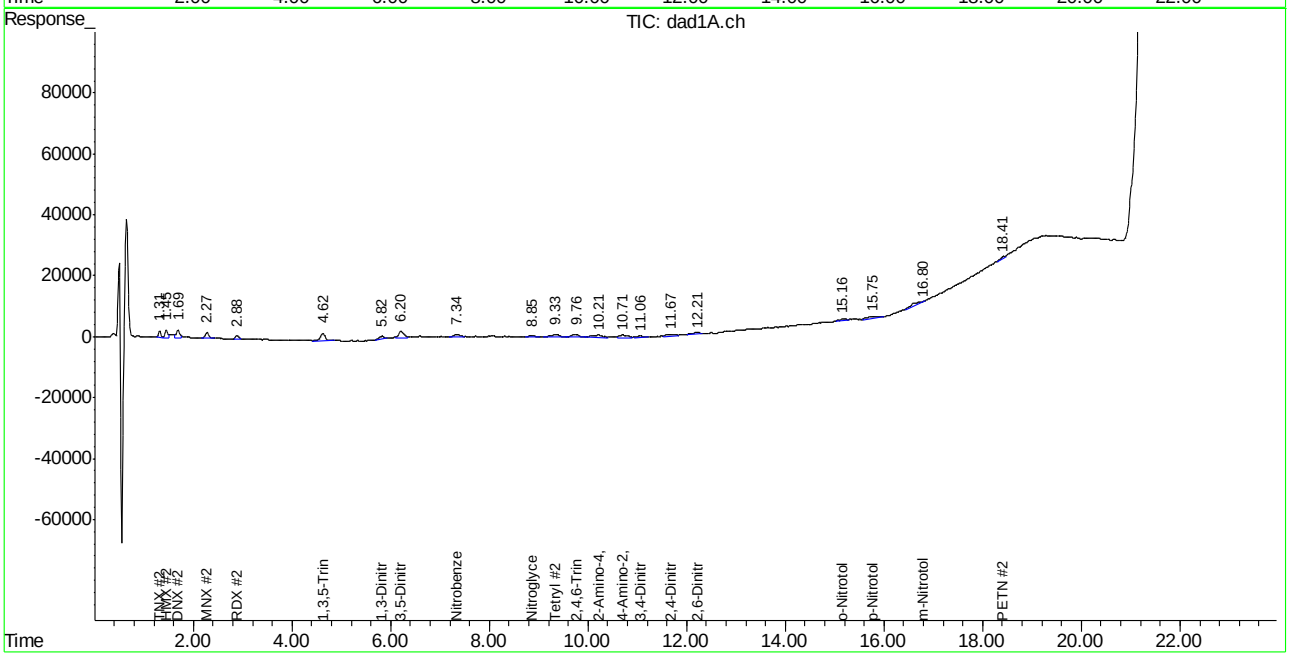
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:52 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

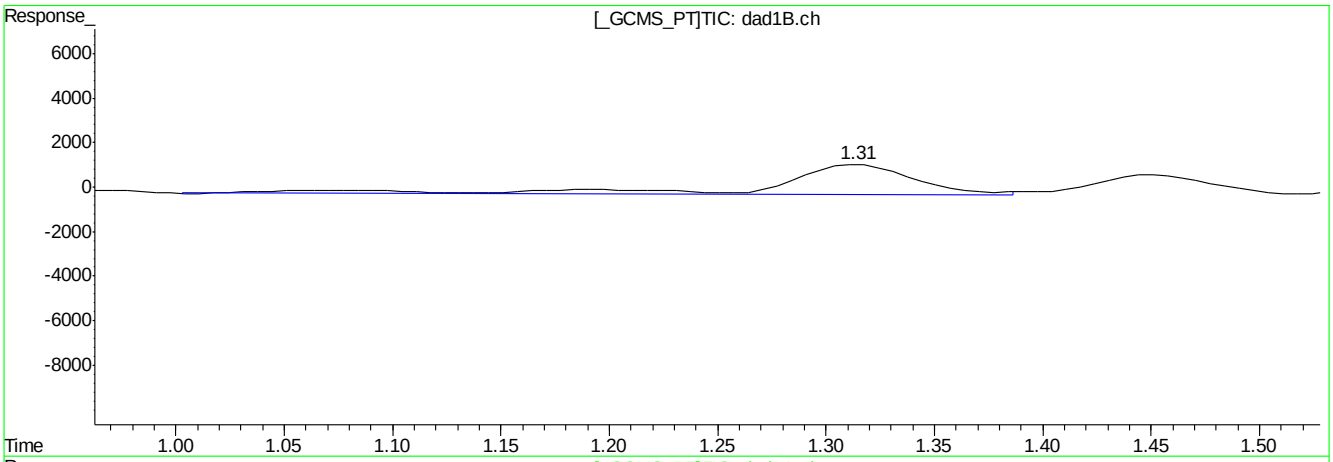
Sample Number: GPP2428-IC2428 **Method:** SW846 8330A
Lab FileID: PP390446.D **Analyst approved:** 04/05/21 09:06 James Boone
Injection Time: 04/02/21 08:10 **Supervisor approved:** 04/05/21 10:17 Naresh Jiawan

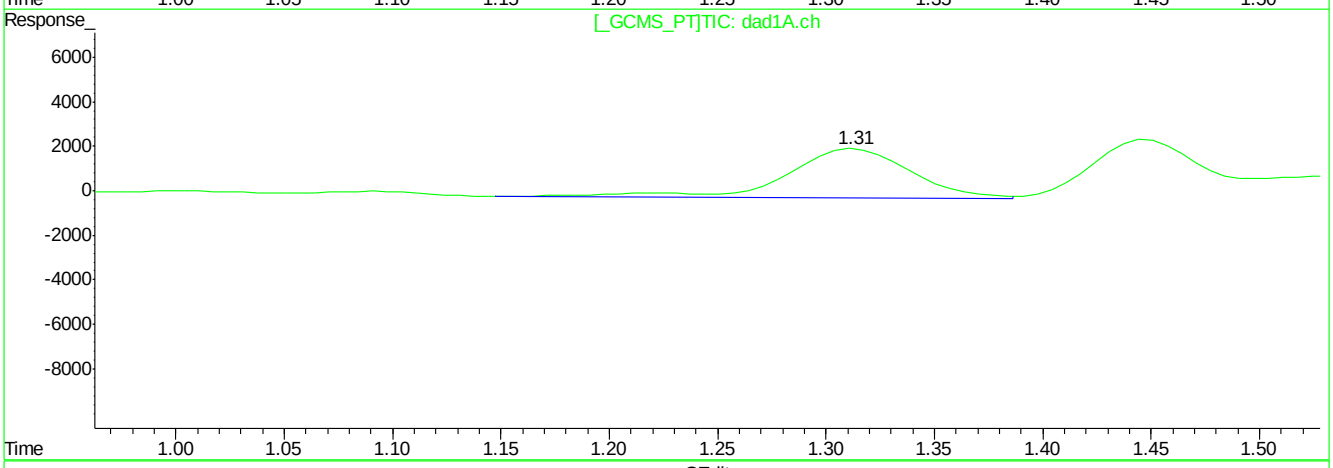
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.31	Poor instrument integration
TNX		2	1.31	Poor instrument integration
HMX	2691-41-0	1	1.45	Poor instrument integration
DNX		1	1.69	Poor instrument integration
DNX		2	1.69	Poor instrument integration
MNX		2	2.27	Poor instrument integration
MNX		1	2.28	Poor instrument integration
RDX	121-82-4	1	2.87	Poor instrument integration
RDX	121-82-4	2	2.88	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.61	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.82	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.20	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.21	Poor instrument integration
Nitrobenzene	98-95-3	1	7.35	Poor instrument integration
Tetryl	479-45-8	2	9.33	Poor instrument integration
Tetryl	479-45-8	1	9.38	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.72	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.16	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	10.71	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.75	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.00	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.06	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	11.67	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	11.68	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.11	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.21	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.16	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.23	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.75	Poor instrument integration
p-Nitrotoluene	99-99-0	1	15.80	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.80	Poor instrument integration
PETN	78-11-5	2	18.41	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.32min 20.458ppb

response 63508

(1) TNX #2

1.31min 18.590ppb

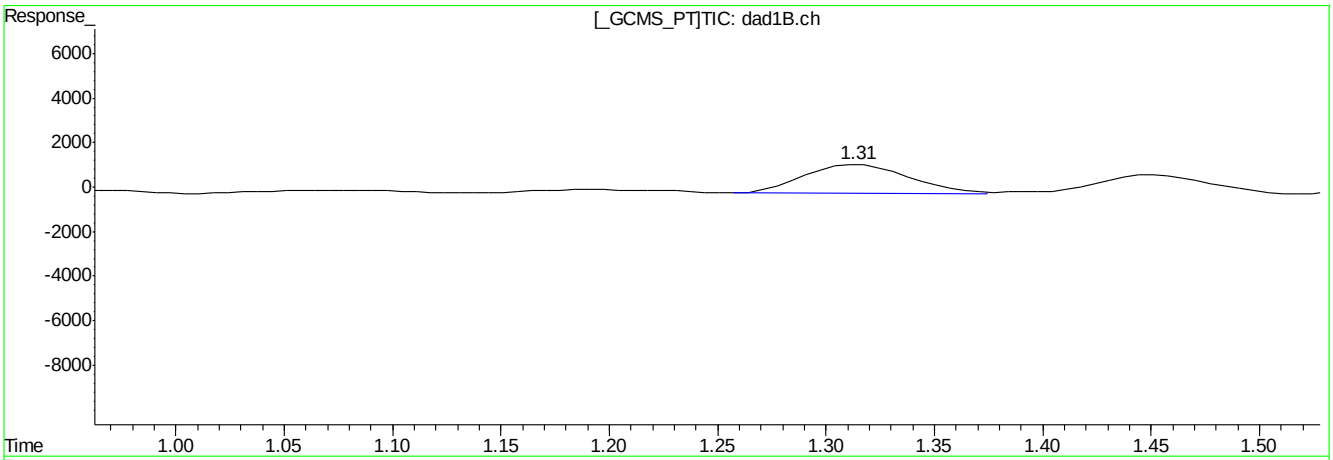
response 86600

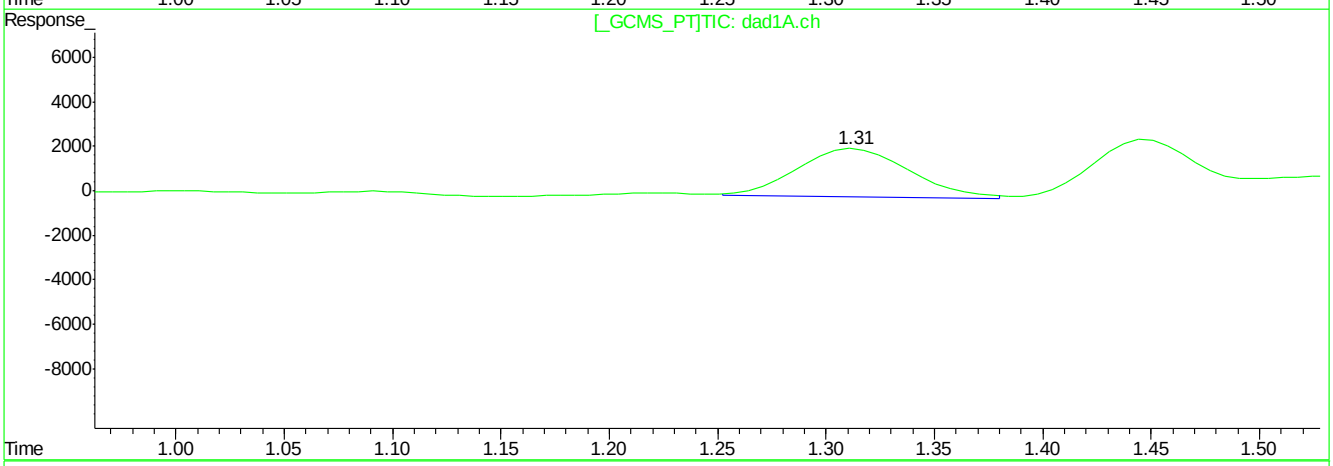
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:46:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 14.419ppb m

response 44760

(1) TNX #2

1.31min 17.009ppb m

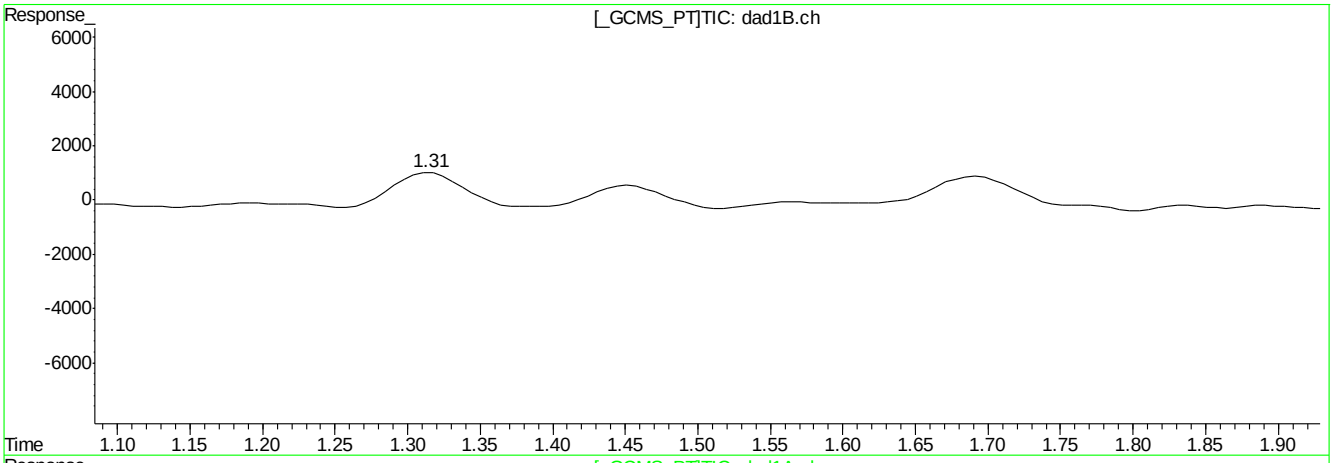
response 79235

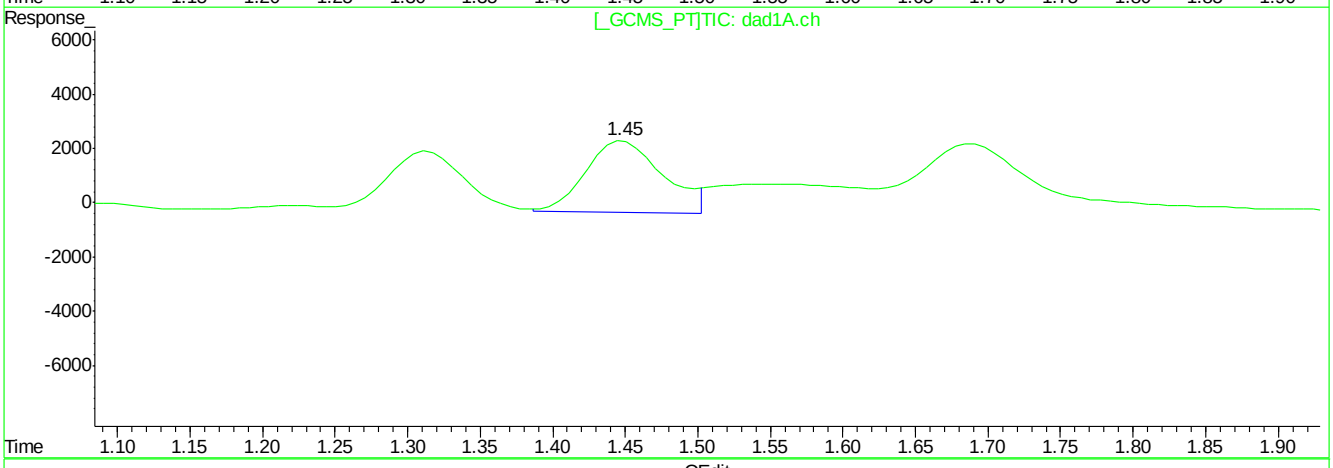
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:46:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.32min 40.751ppb

response 63508

(2) HMX #2

1.45min 22.679ppb

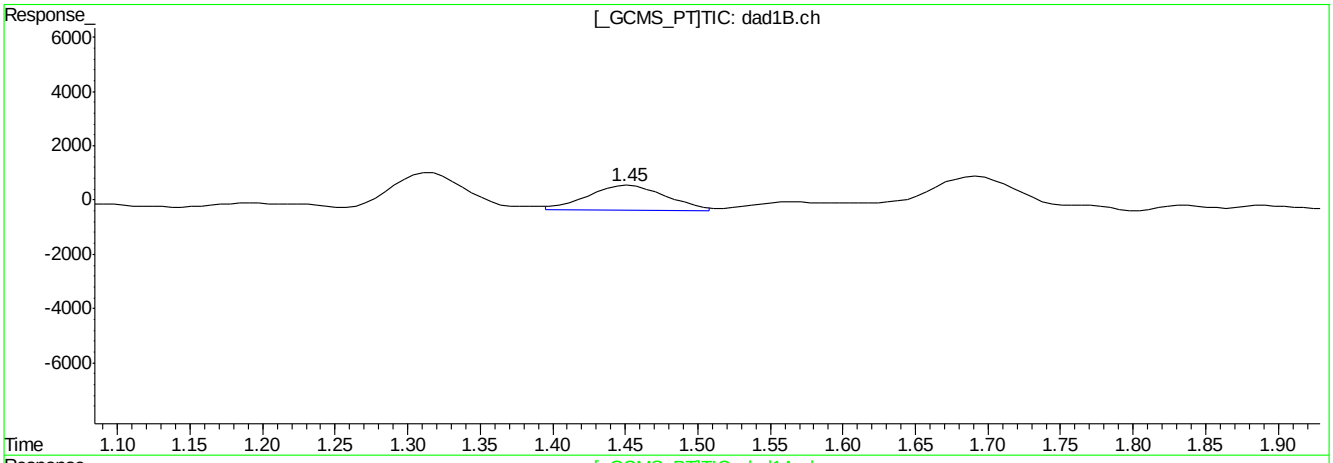
response 96392

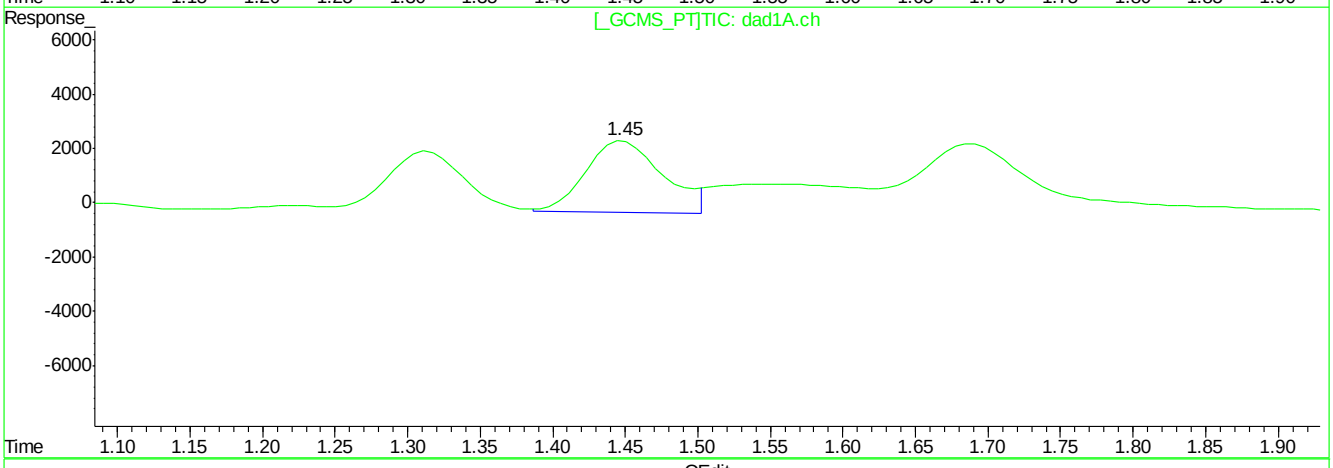
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:46:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.45min 21.459ppb m

response 33442

(2) HMX #2

1.45min 22.679ppb

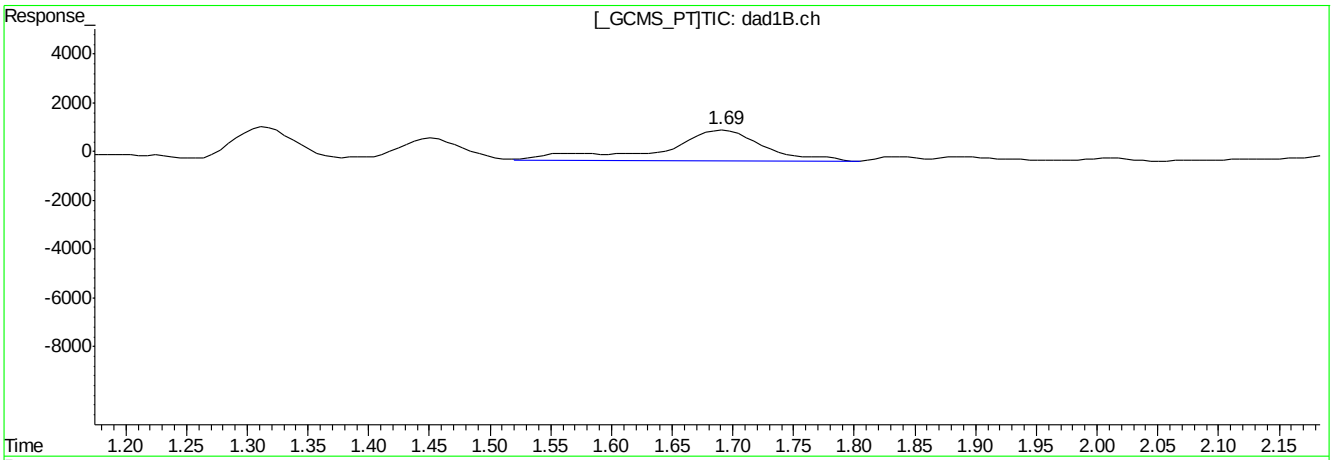
response 96392

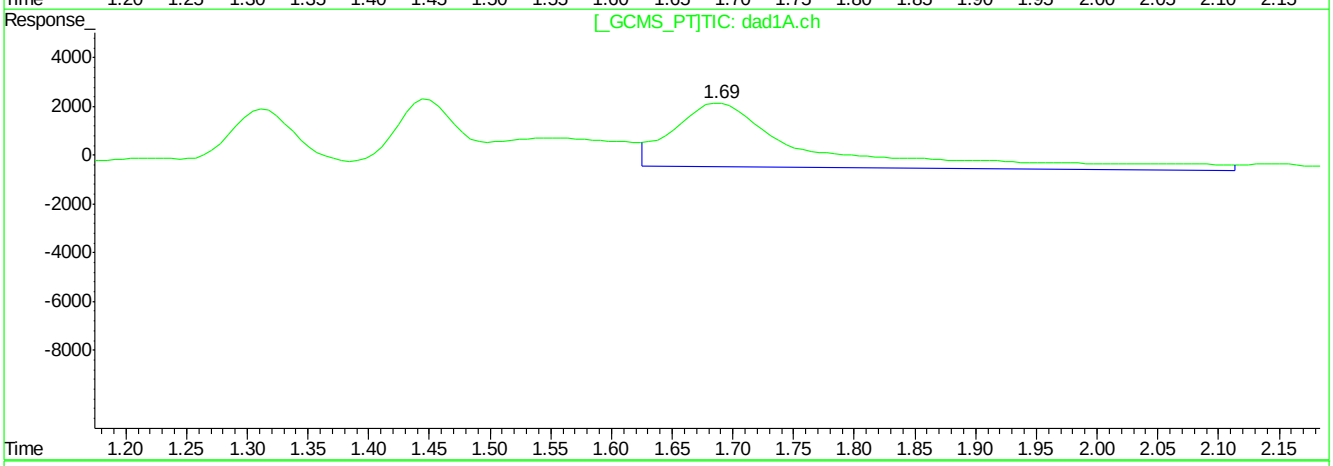
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:46:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.69min 29.141ppb

response 74411

(3) DNX #2

1.69min 54.812ppb

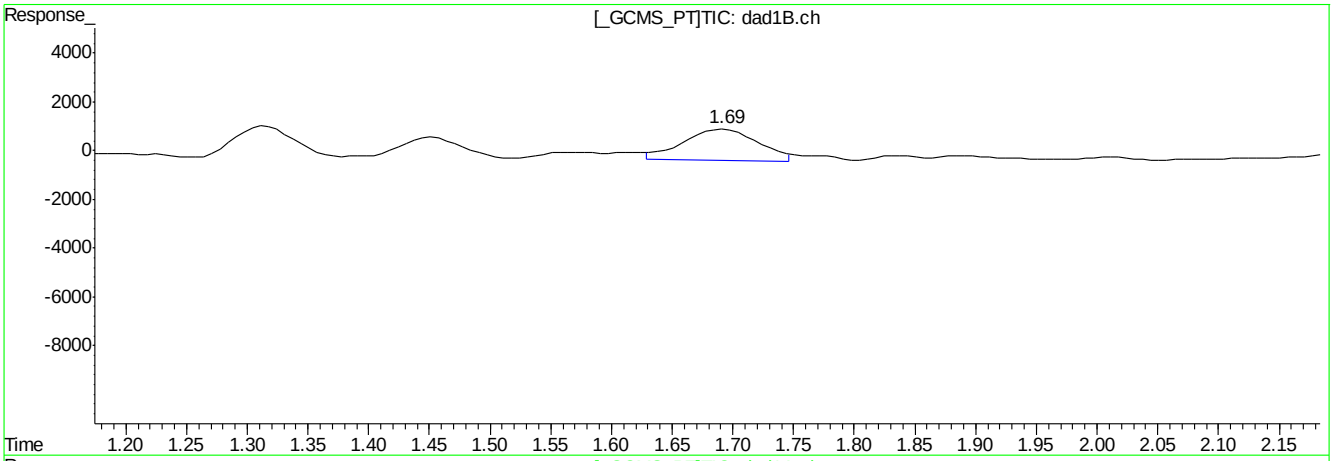
response 204753

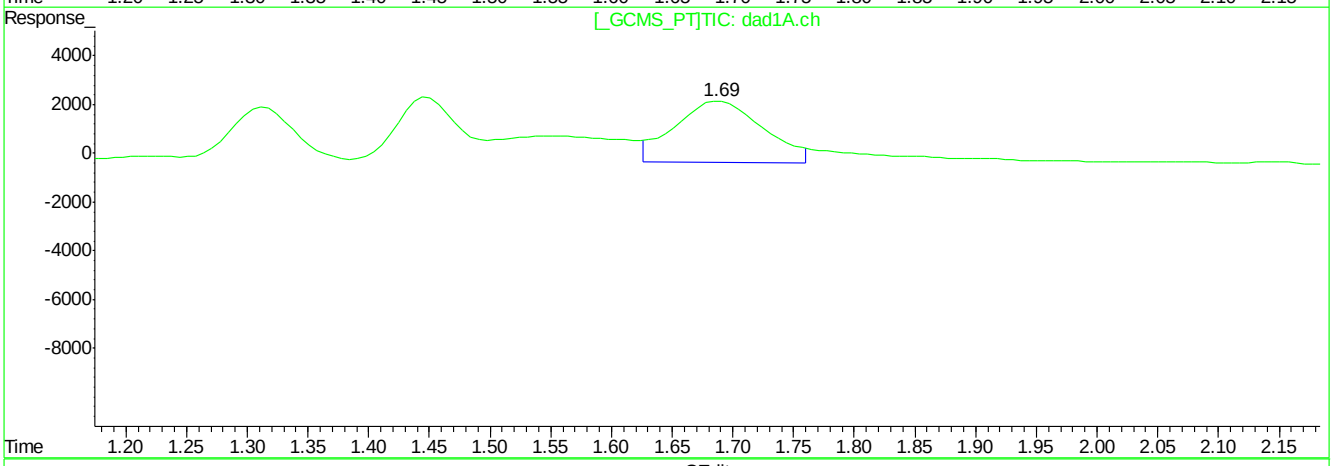
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:46:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.69min 22.132ppb m

response 56515

(3) DNX #2

1.69min 34.728ppb m

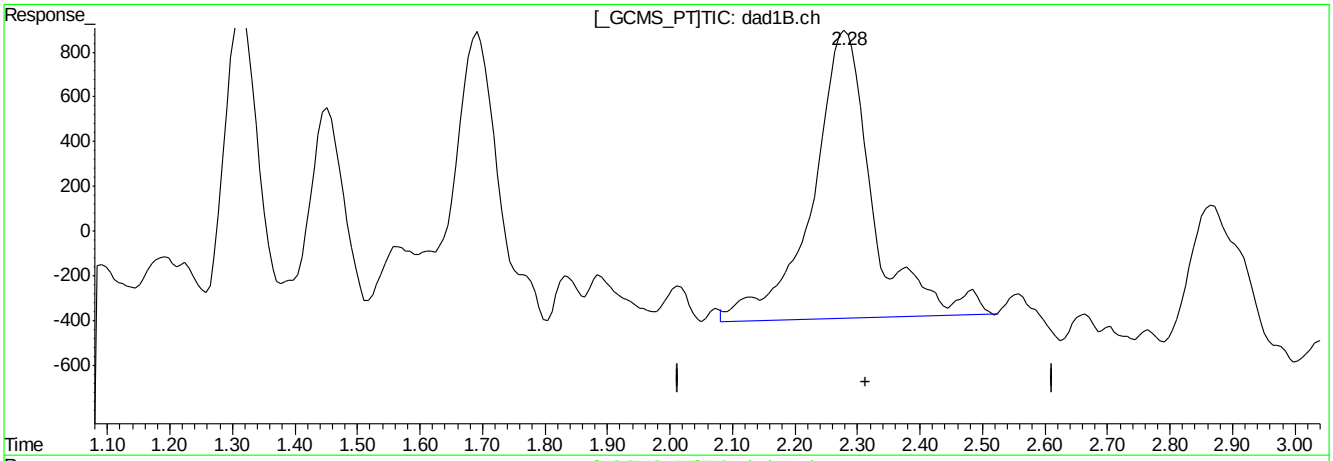
response 129727

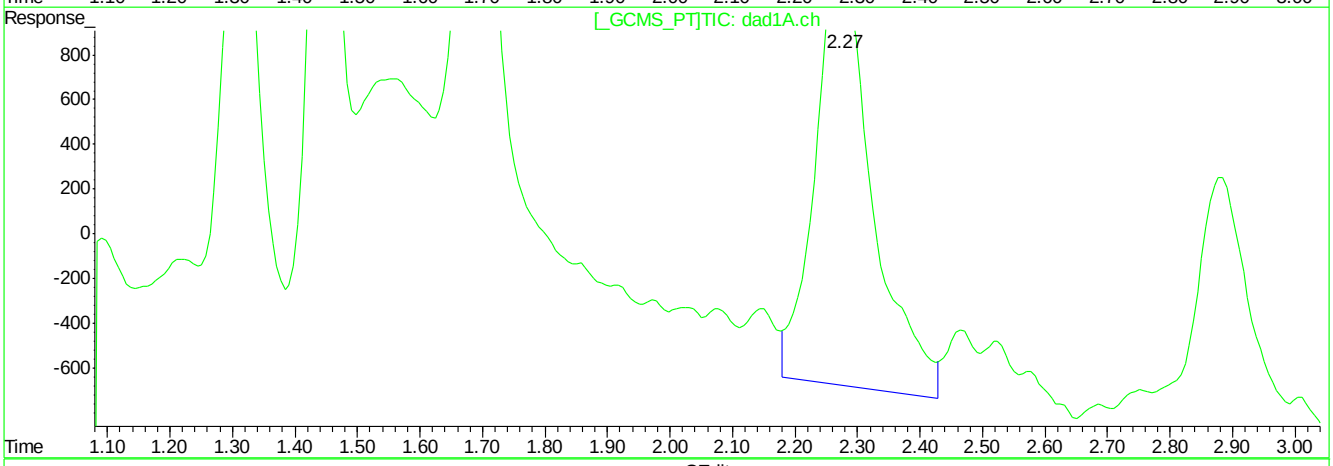
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:47:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.28min 30.692ppb

response 85925

(4) MNX #2

2.28min 29.408ppb

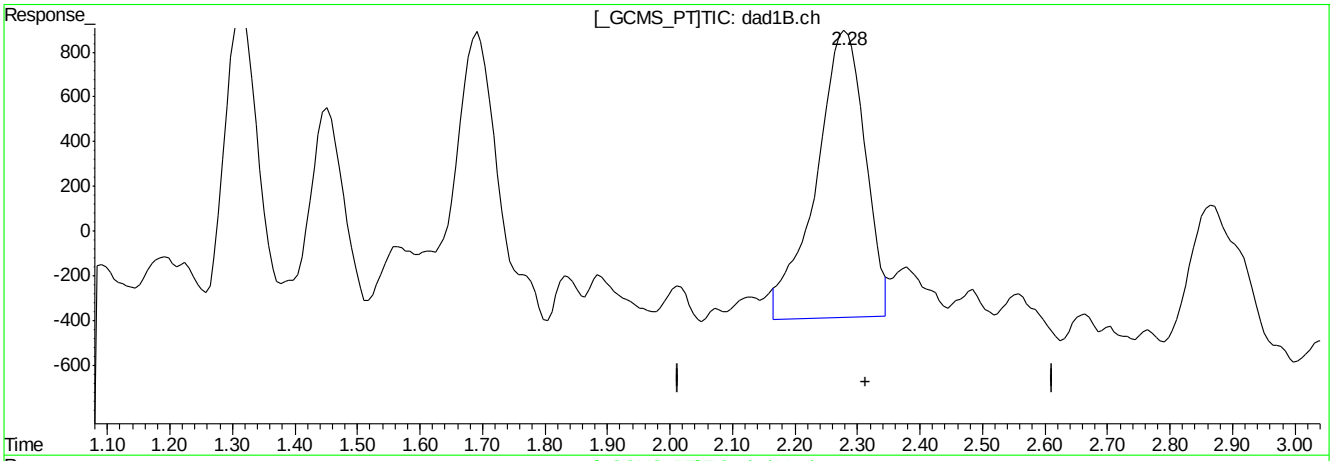
response 122290

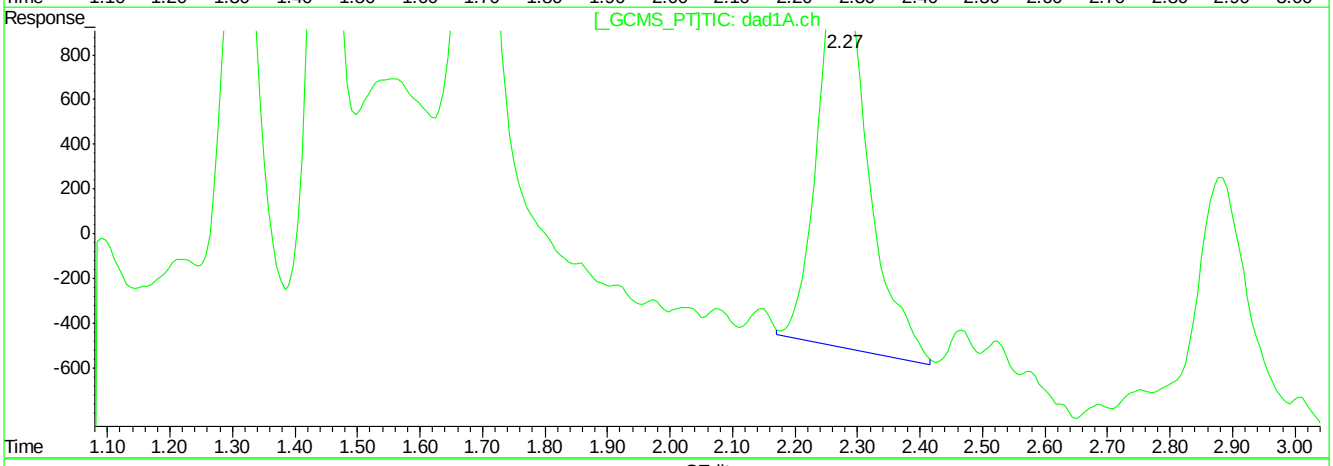
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:47:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.28min 25.038ppb m

response 70097

(4) MNX #2

2.27min 23.444ppb m

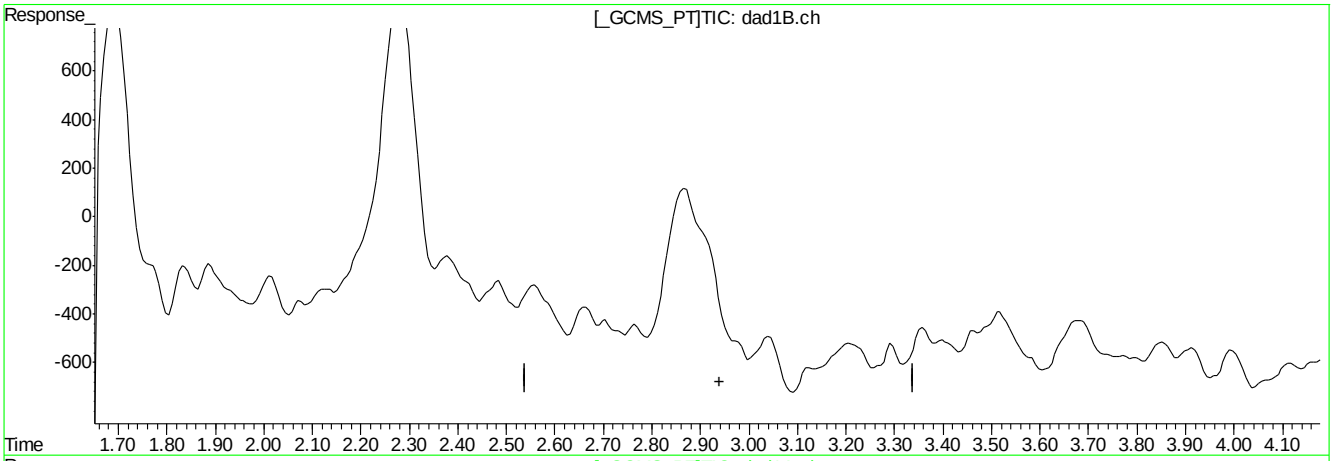
response 97487

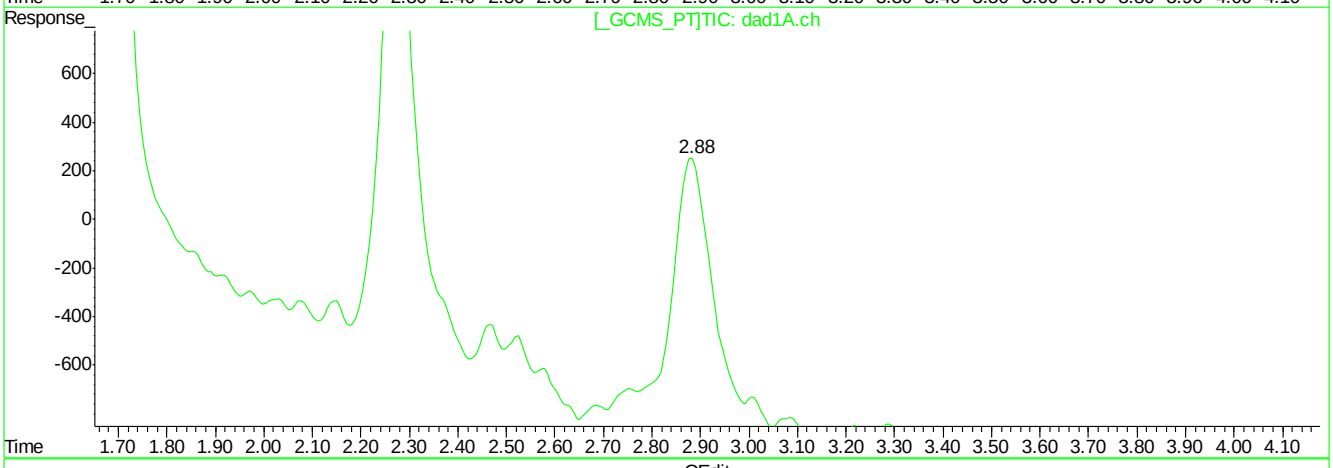
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:47:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

0.00min 0.000ppb

response 0

(5) RDX #2

2.88min 27.659ppb

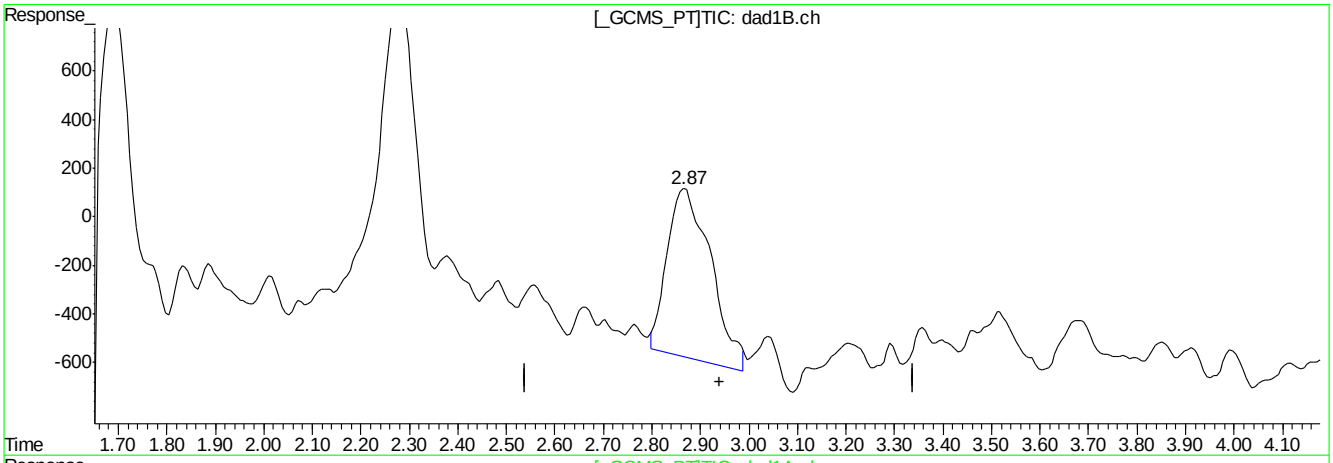
response 84773

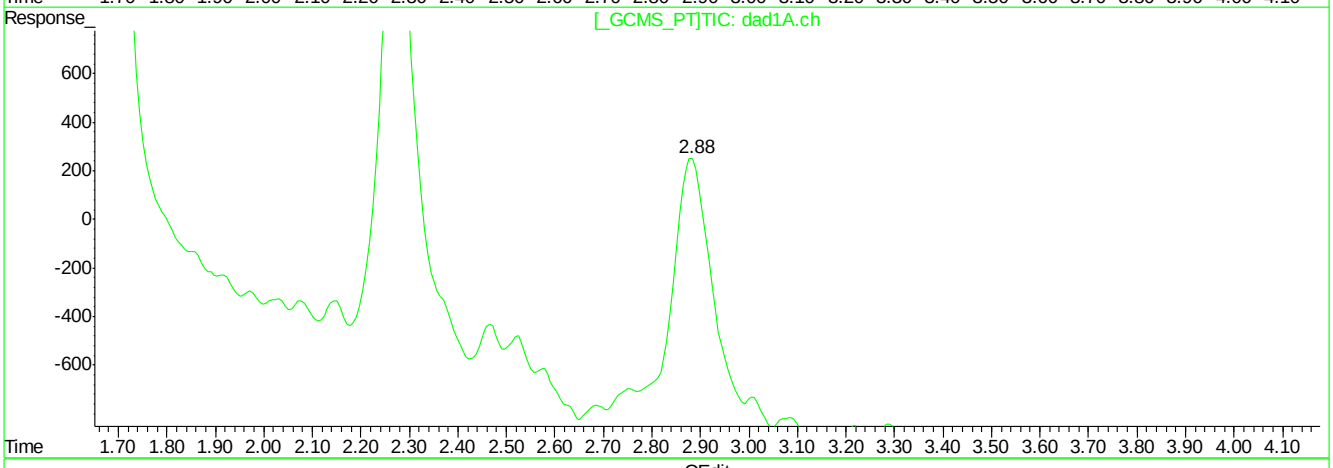
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:47:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.87min 22.754ppb m

response 43325

(5) RDX #2

2.88min 27.659ppb

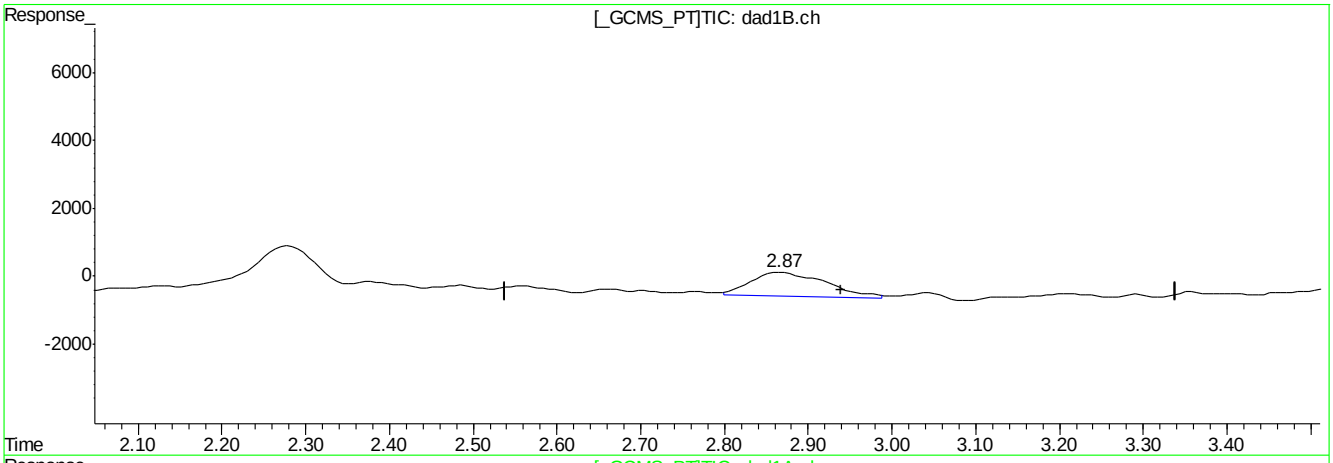
response 84773

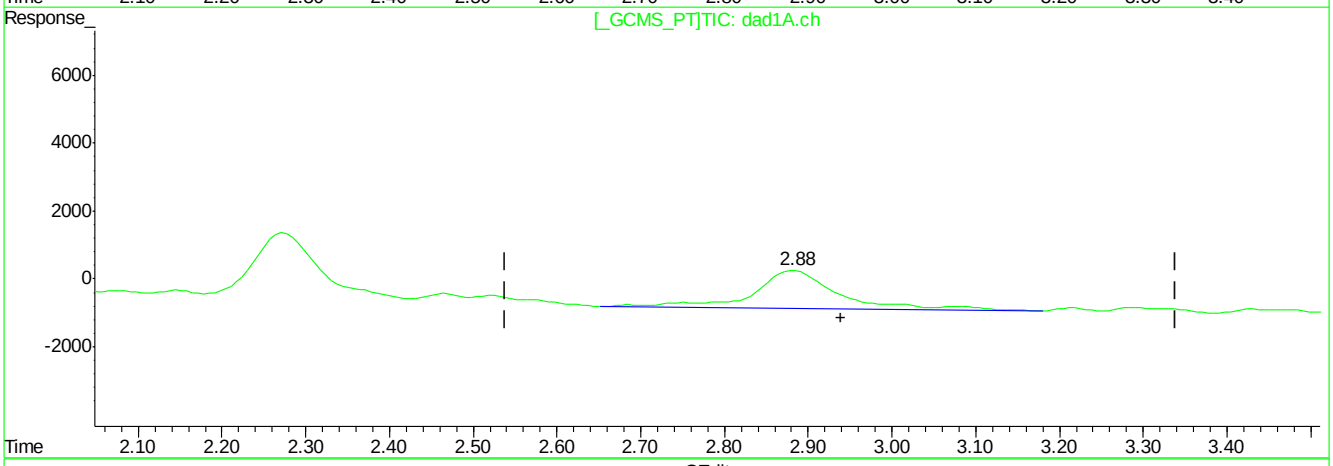
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:47:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.87min 22.754ppb m

response 43325

(5) RDX #2

2.88min 27.659ppb

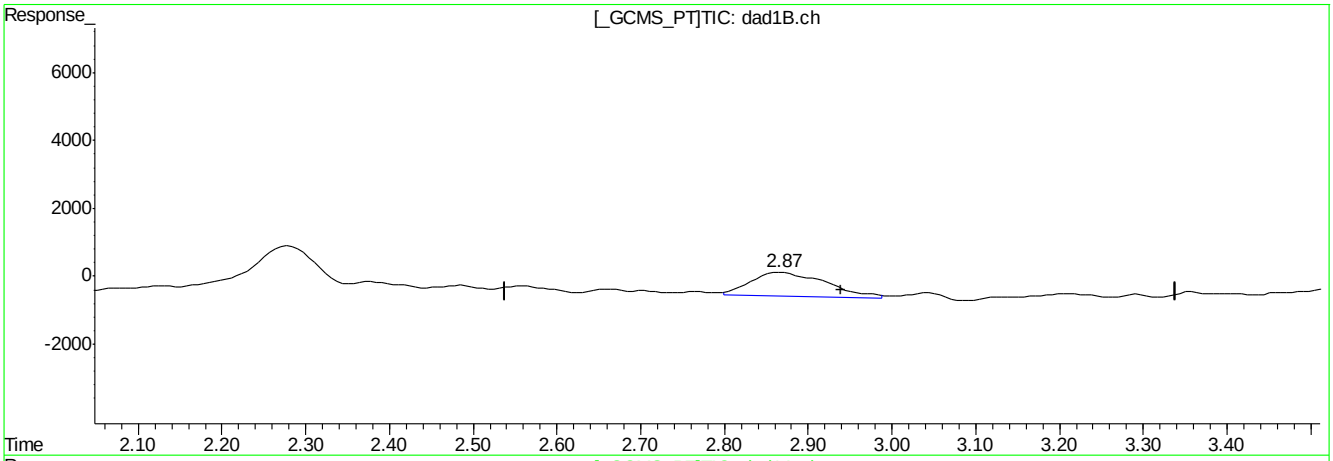
response 84773

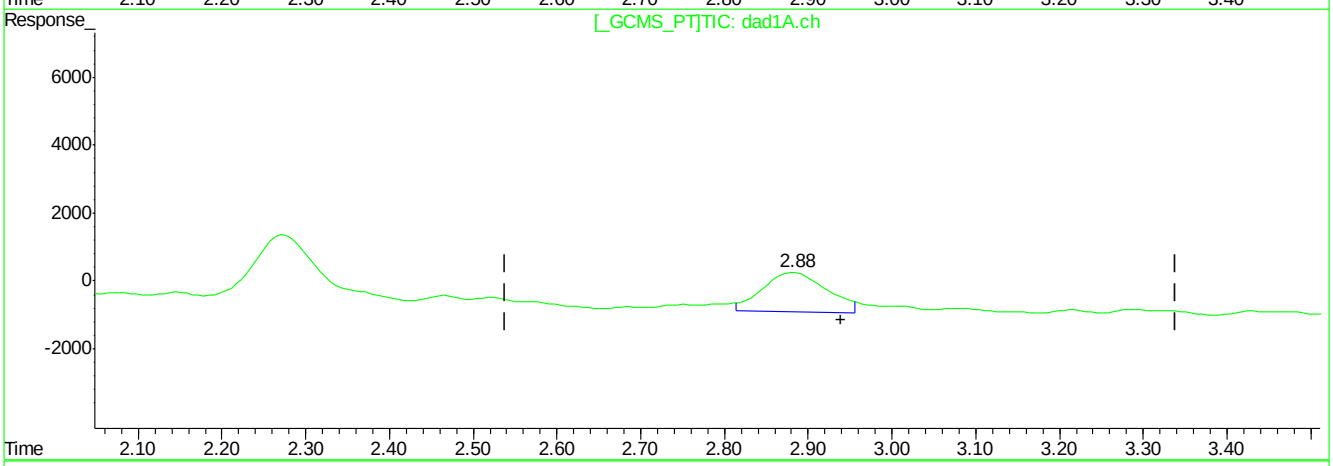
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:48:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.87min 22.754ppb m

response 43325

(5) RDX #2

2.88min 20.322ppb m

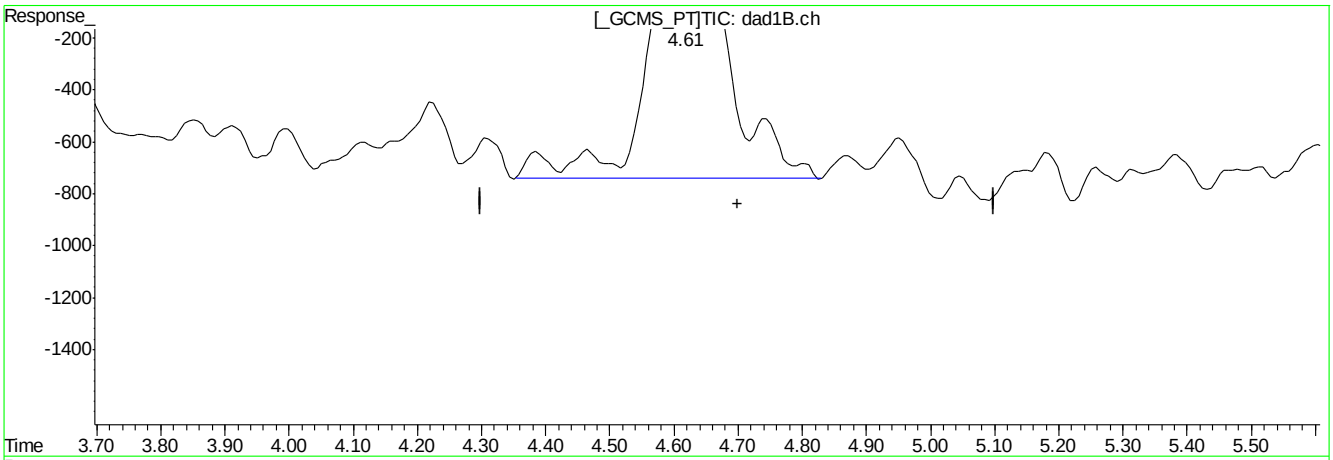
response 62288

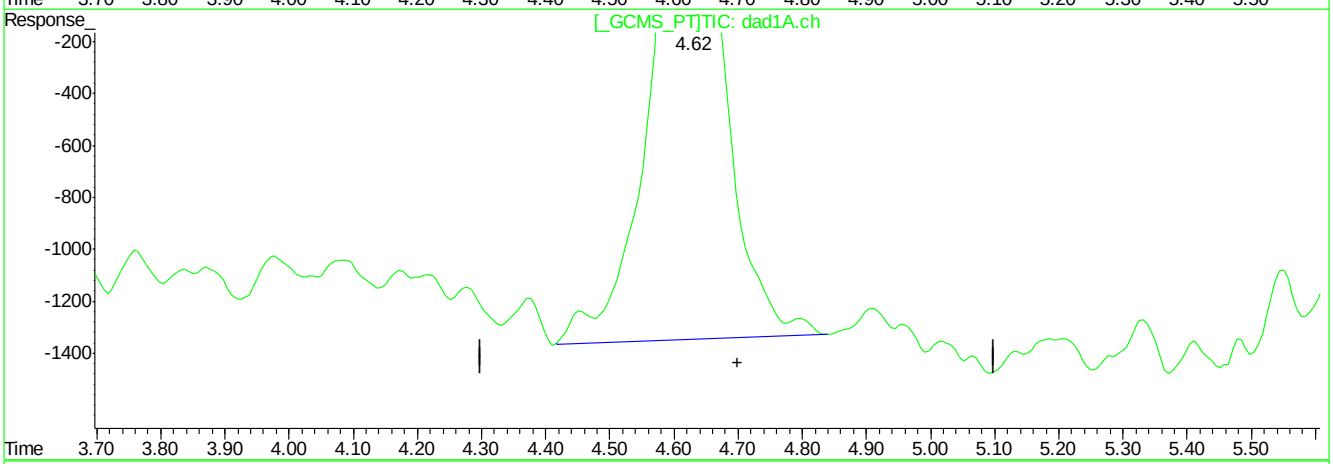
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:48:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.62min 22.599ppb

response 93244

(6) 1,3,5-Trinitrobenzene #2

4.62min 22.372ppb

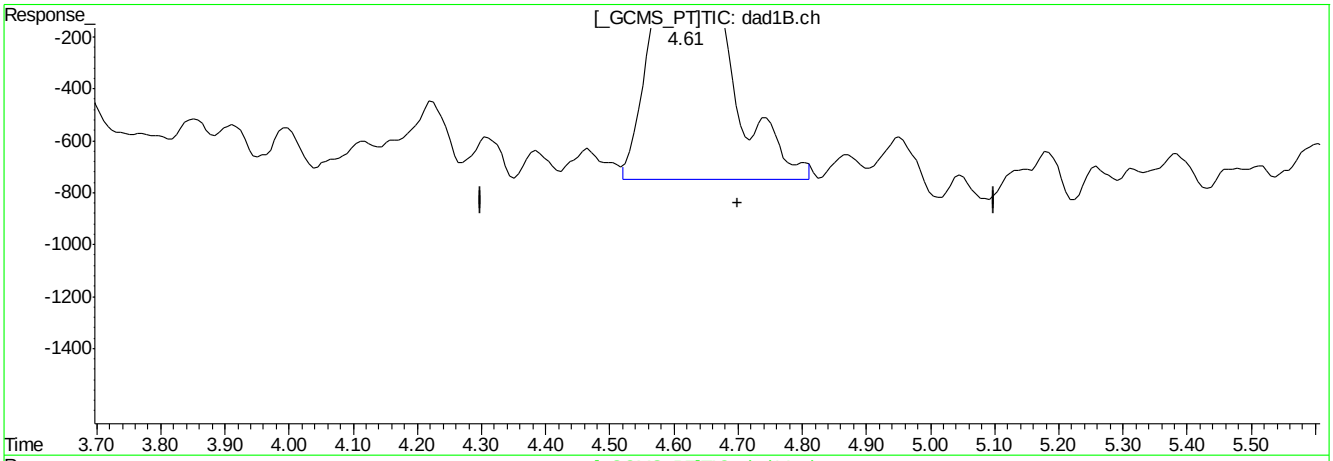
response 173842

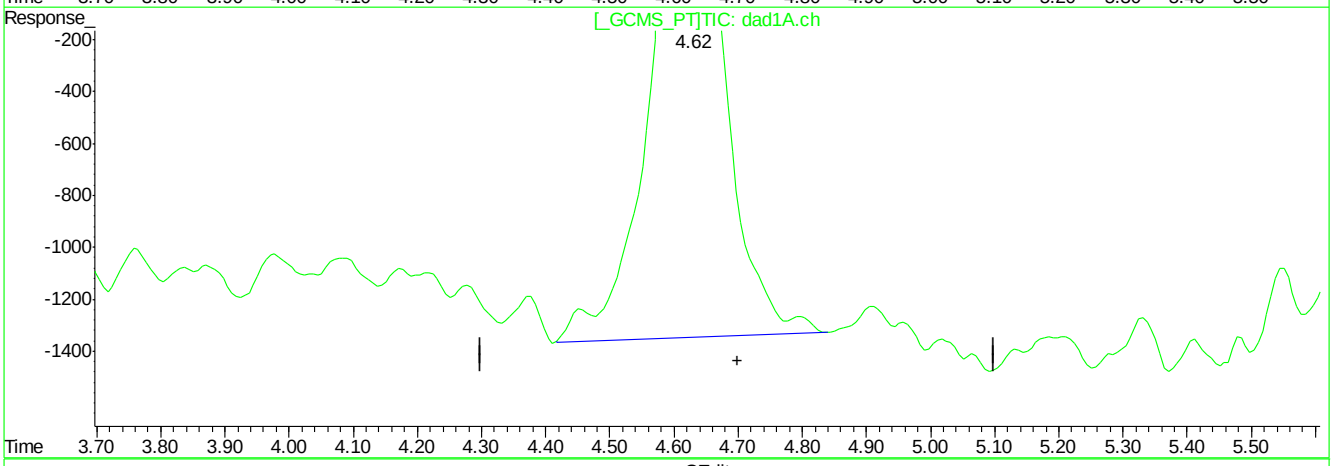
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:48:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.61min 21.258ppb m

response 87711

(6) 1,3,5-Trinitrobenzene #2

4.62min 22.372ppb

response 173842

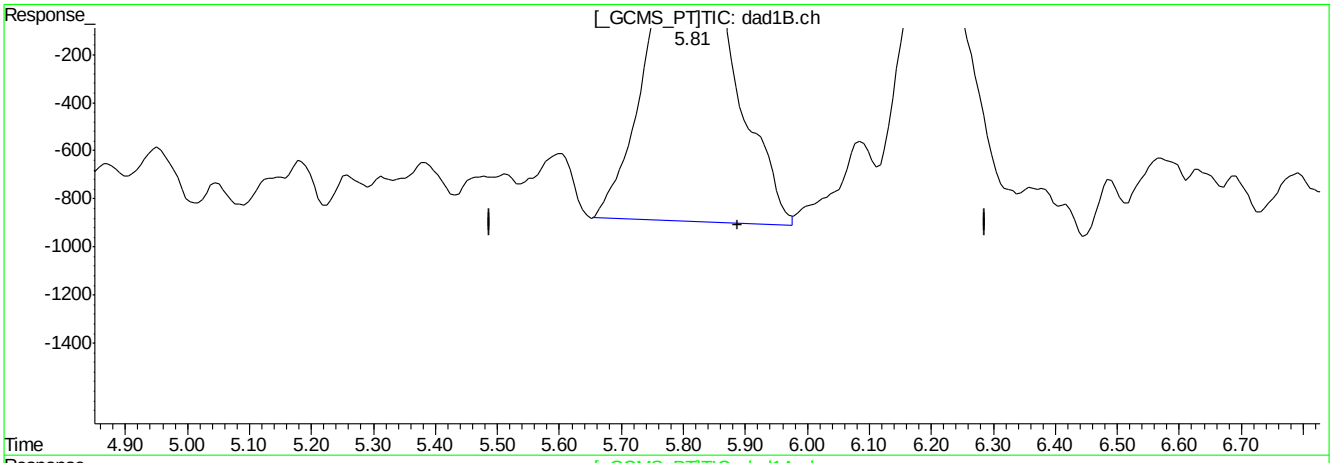
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:48:17 2021

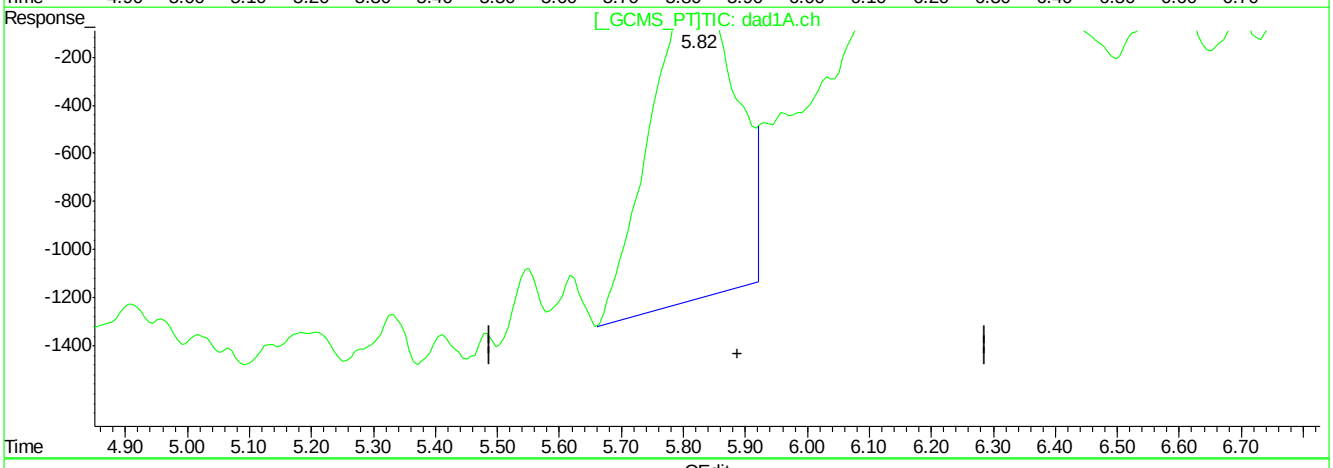
PP390446.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.81min 23.922ppb

response 128839

(7) 1,3-Dinitrobenzene #2

5.82min 34.628ppb

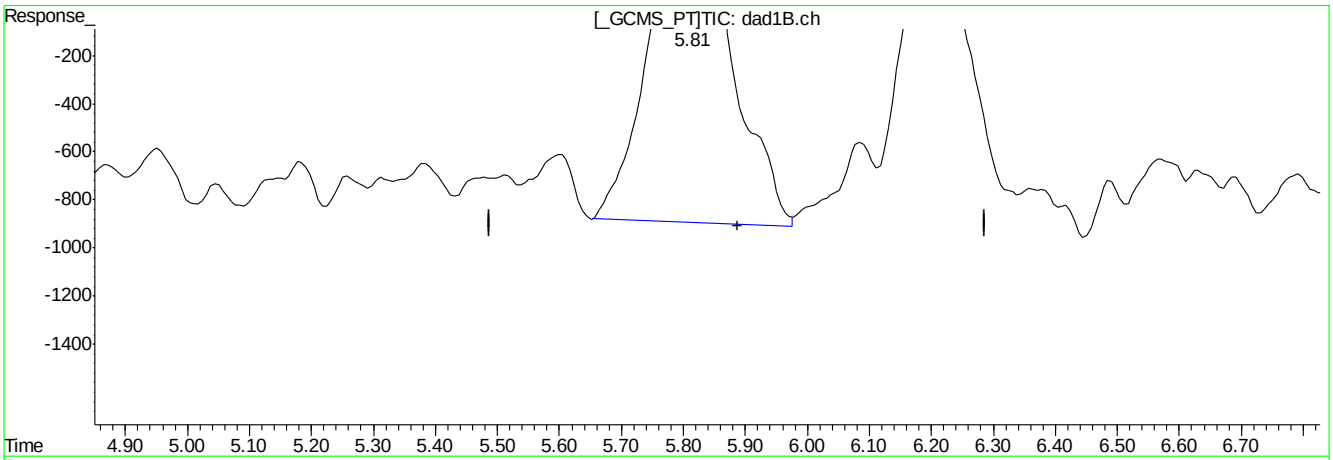
response 124042

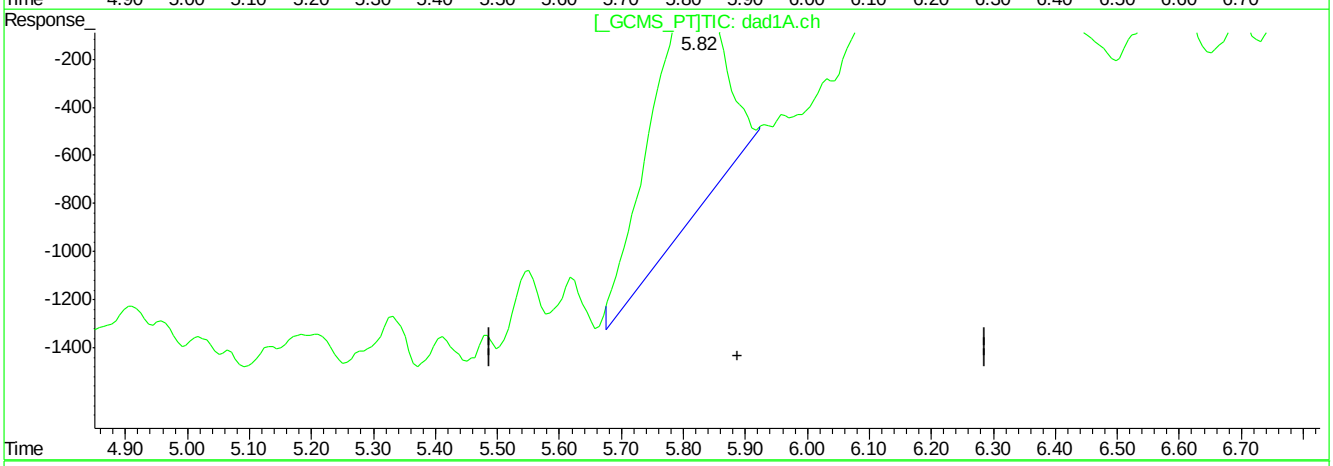
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:48:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.81min 23.922ppb

response 128839

(7) 1,3-Dinitrobenzene #2

5.82min 22.050ppb m

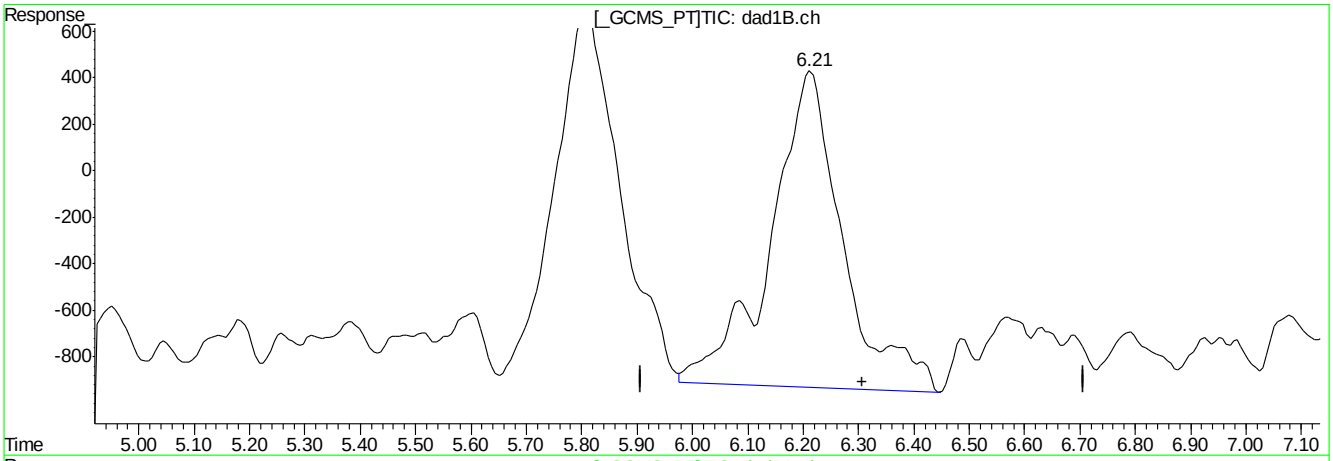
response 78985

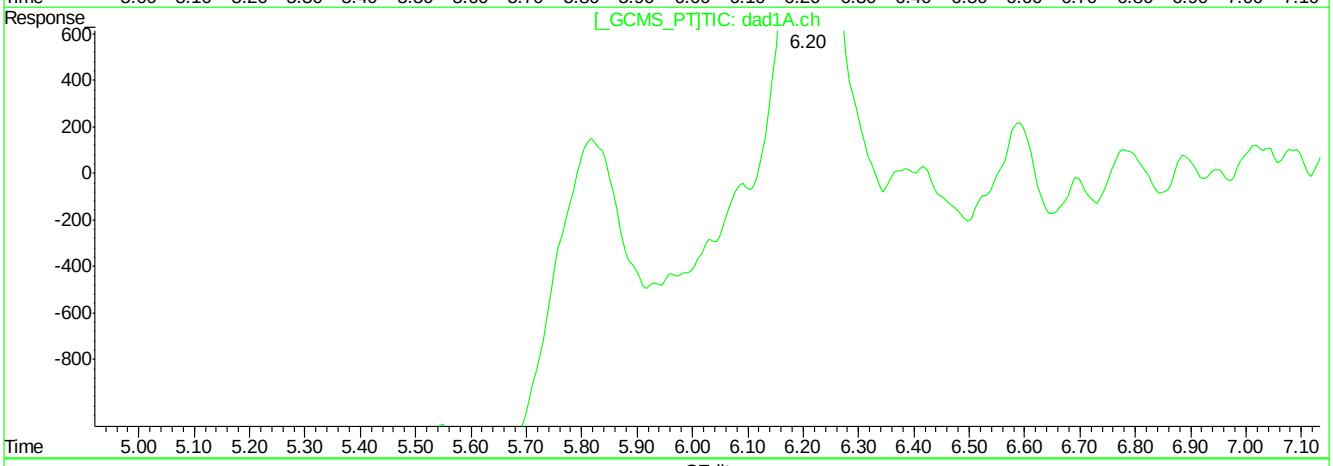
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:48:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.21min 30.614ppb

response 123227

(8) 3,5-Dinitroaniline #2

6.21min 43.981ppb

response 321699

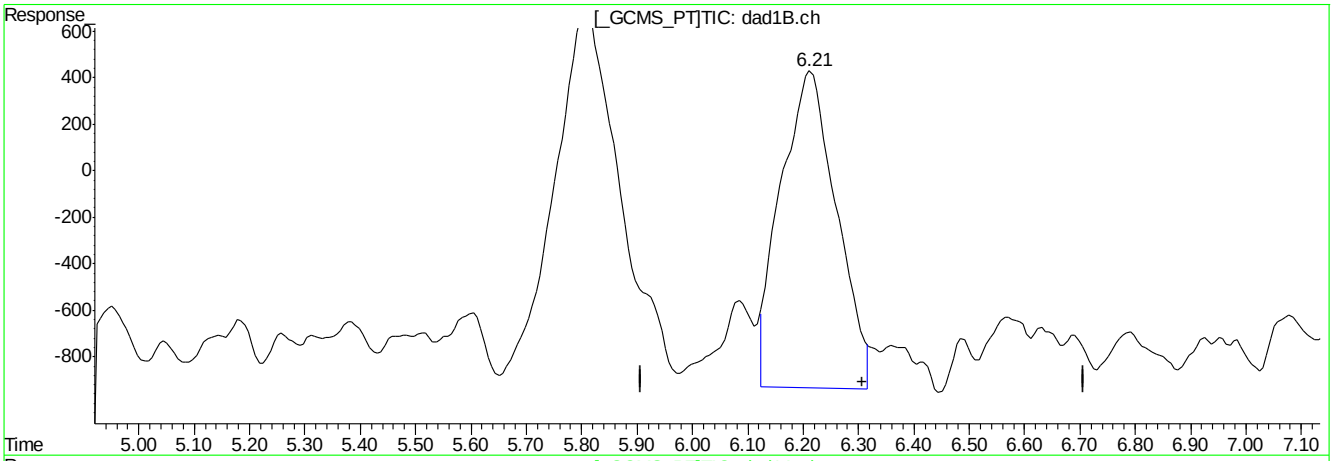
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:48:36 2021

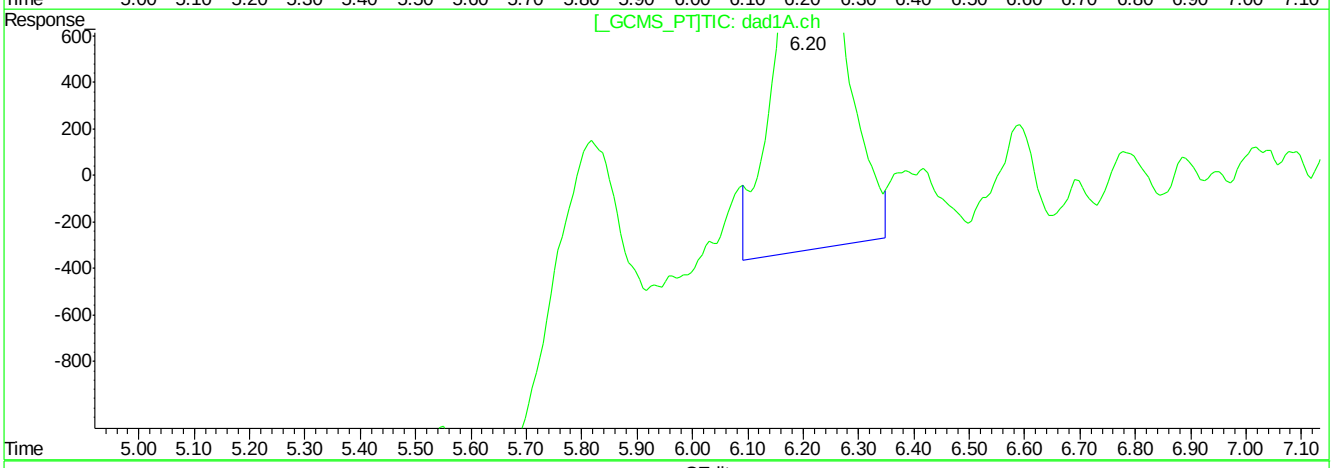
PP390446.D edits: 3,5-Dinitroaniline

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.21min 23.642ppb m

response 95161

(8) 3,5-Dinitroaniline #2

6.20min 20.930ppb m

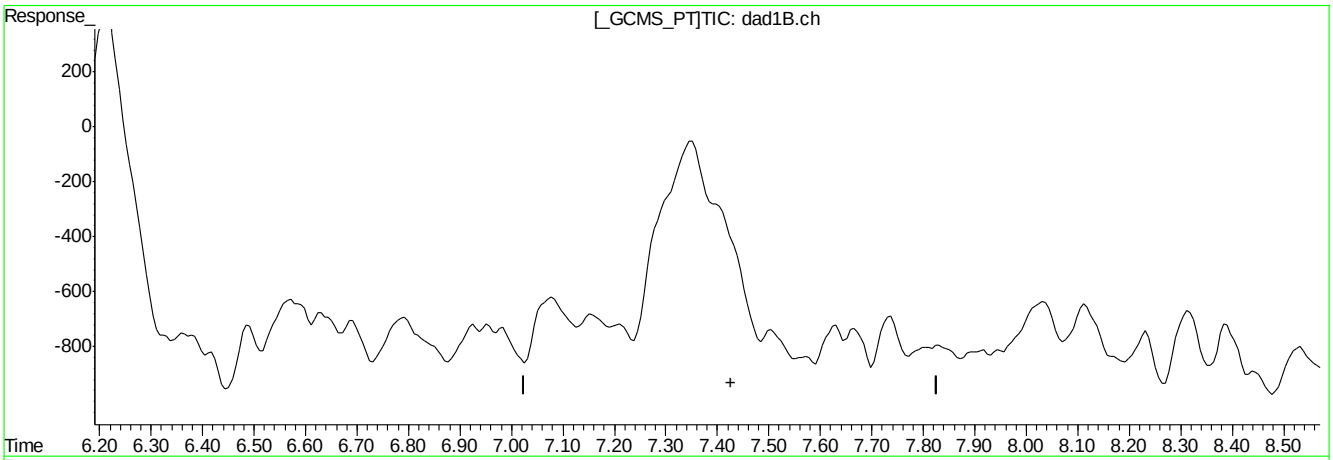
response 153097

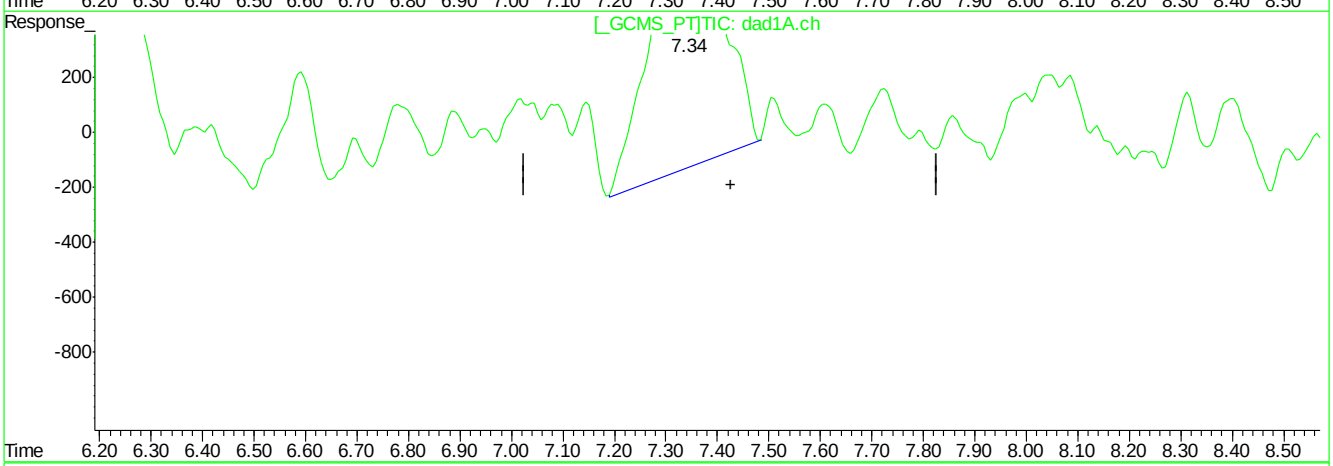
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:48:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

0.00min 0.000ppb

response 0

(9) Nitrobenzene #2

7.34min 27.755ppb

response 86798

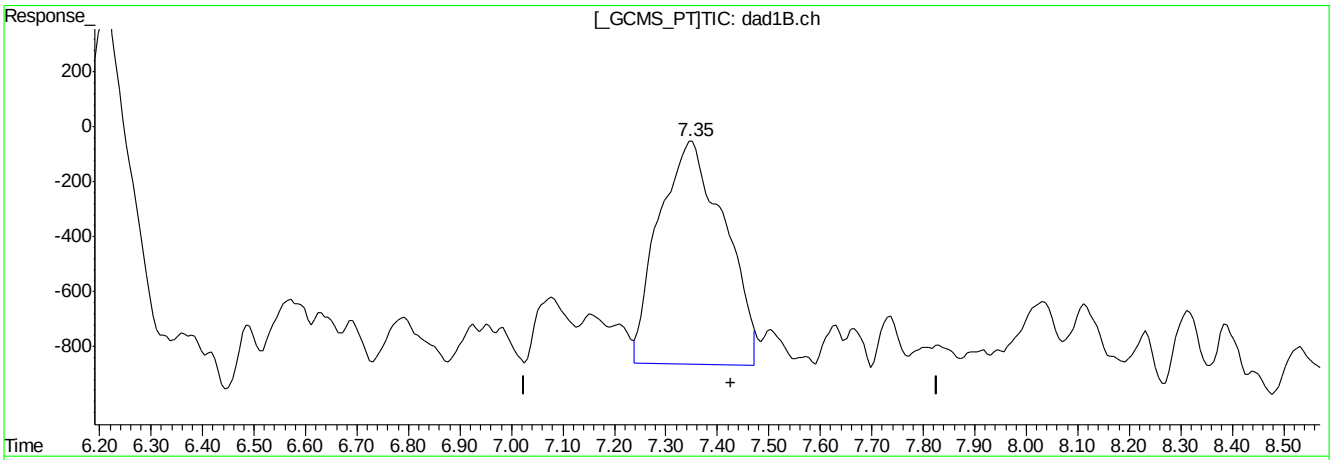
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:48:52 2021

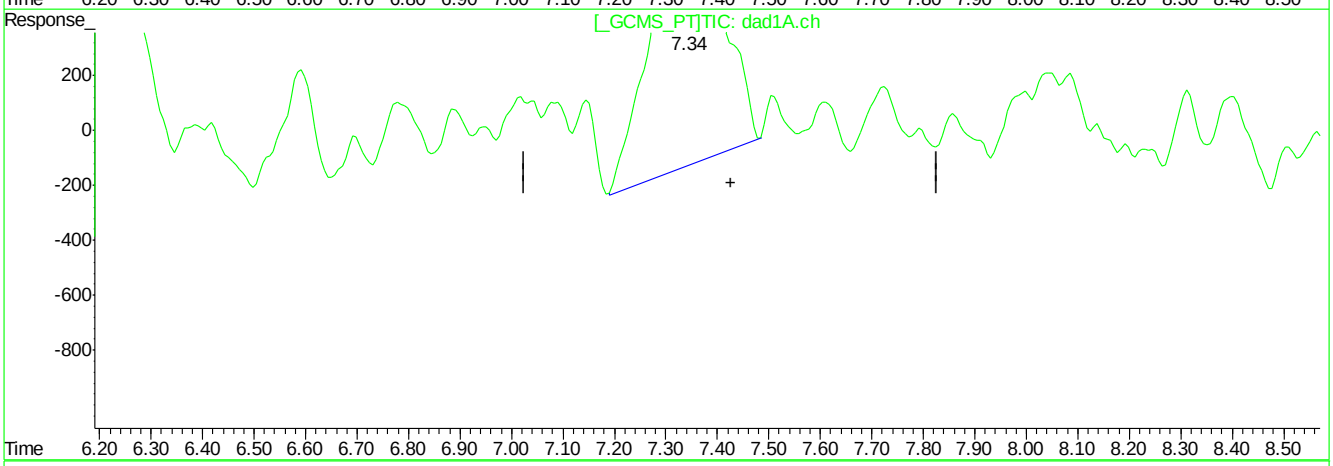
PP390446.D edits: Nitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.35min 23.921ppb m

response 72013

(9) Nitrobenzene #2

7.34min 27.755ppb

response 86798

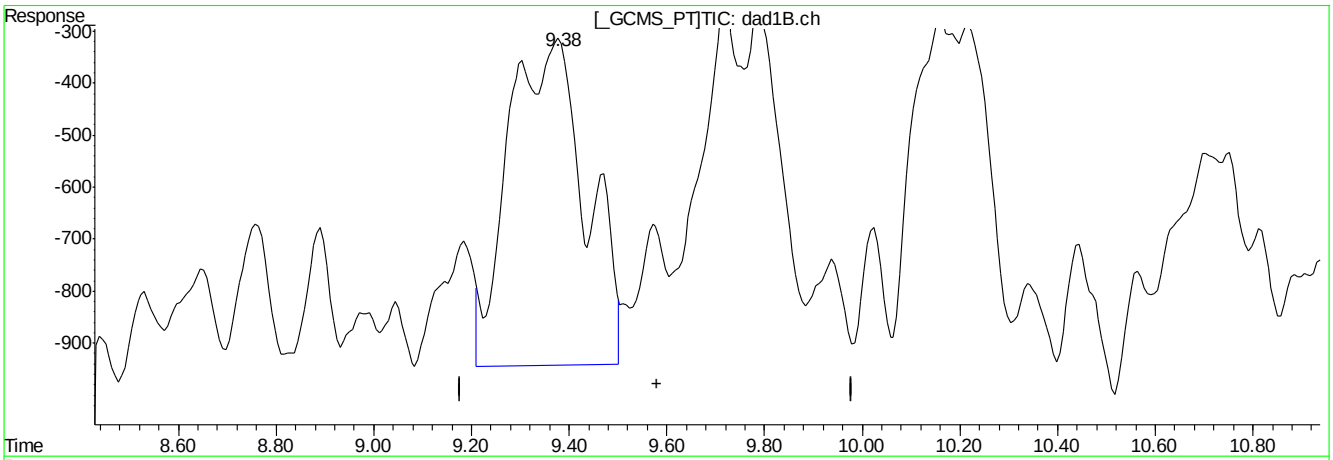
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:48:57 2021

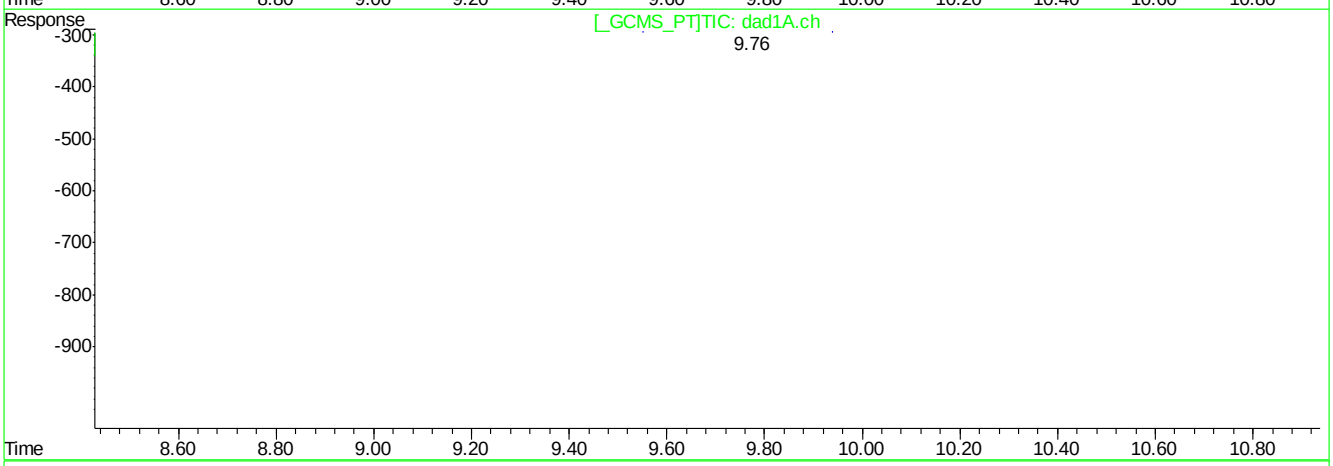
PP390446.D edits: Nitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.38min 29.170ppb m

response 68810

(11) Tetryl #2

9.77min 28.246ppb

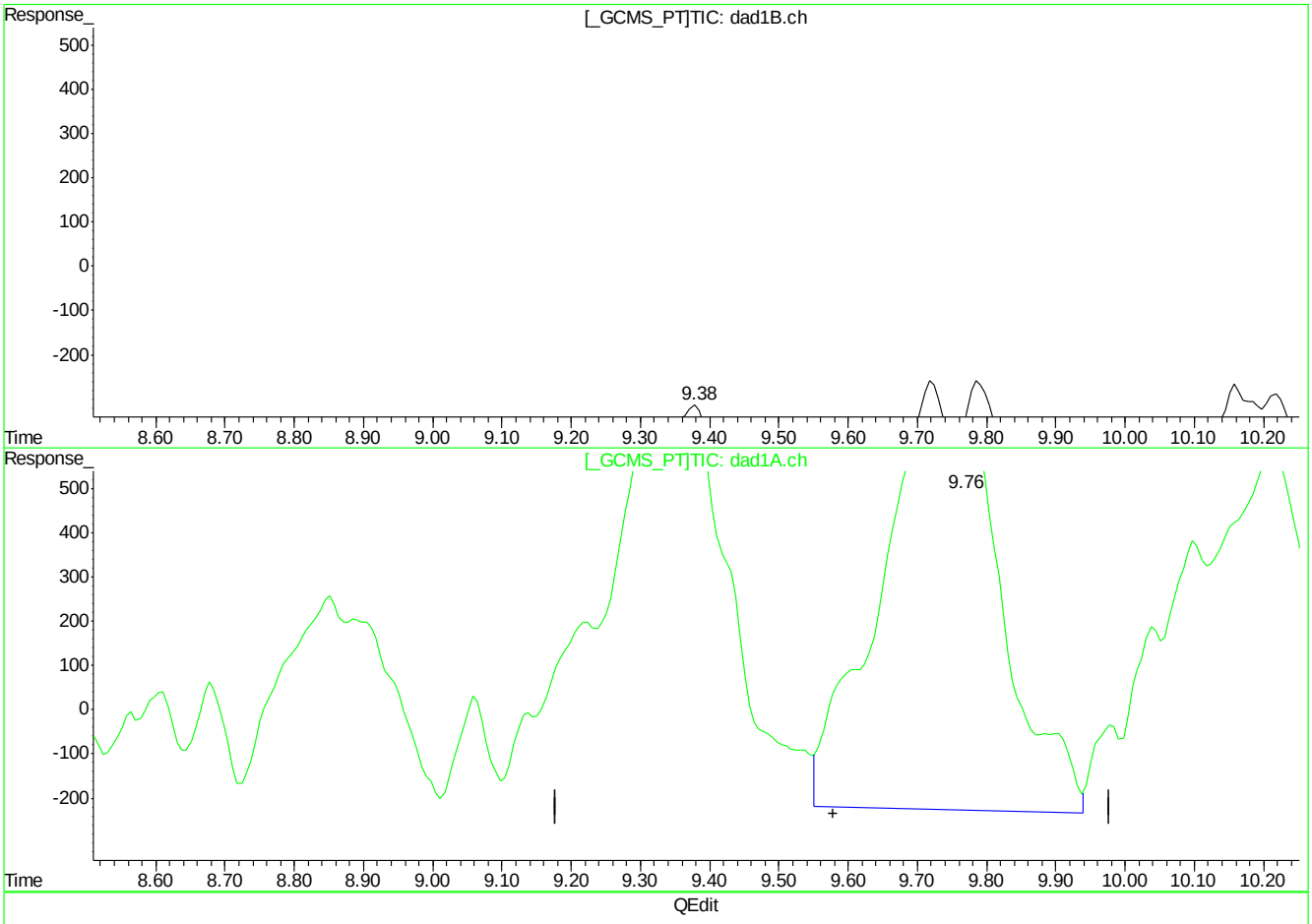
response 114996

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:49:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(11) Tetryl

9.38min 29.170ppb m

response 68810

(11) Tetryl #2

9.77min 28.246ppb

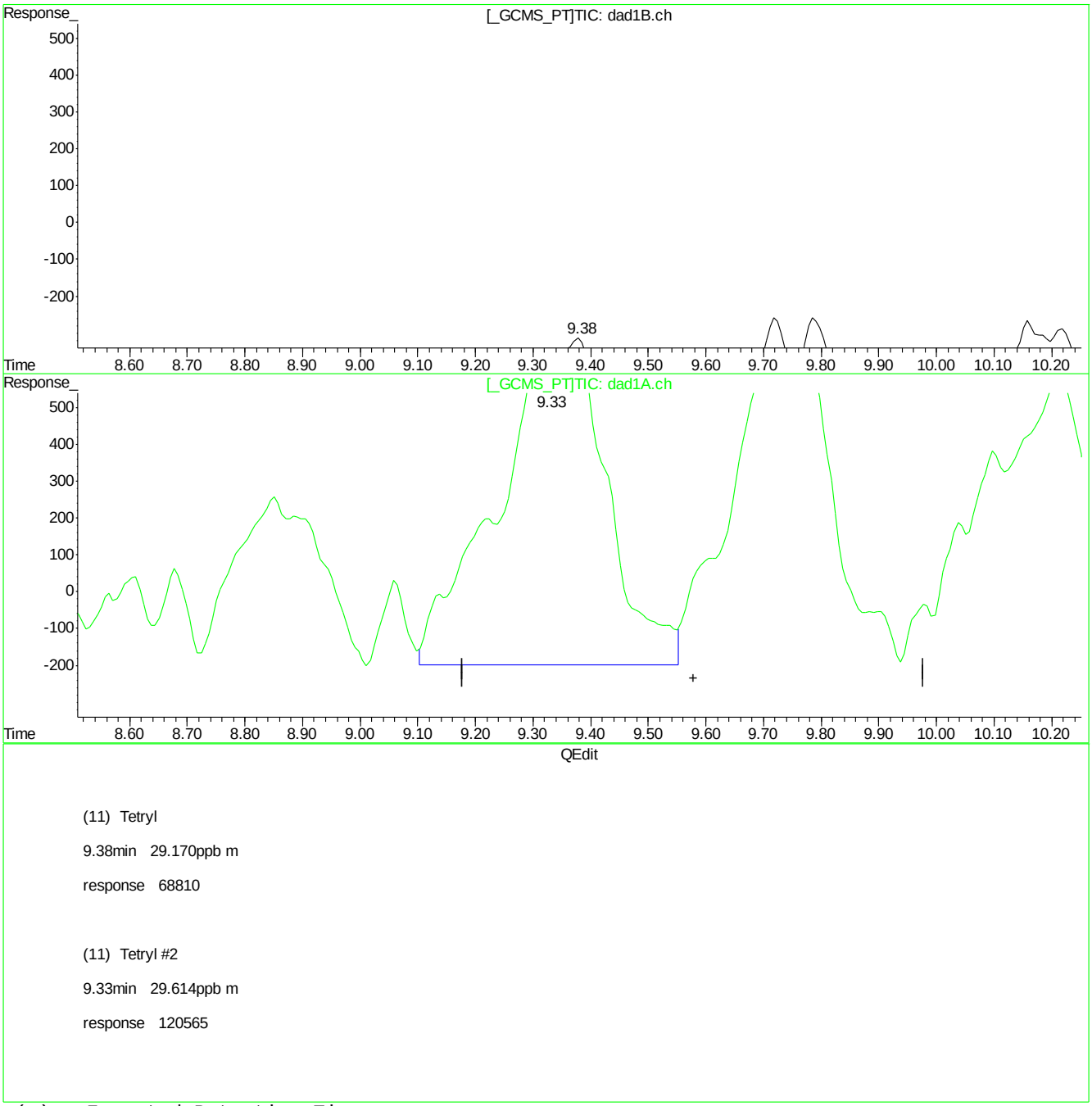
response 114996

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:49:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(11) Tetryl

9.38min 29.170ppb m

response 68810

(11) Tetryl #2

9.33min 29.614ppb m

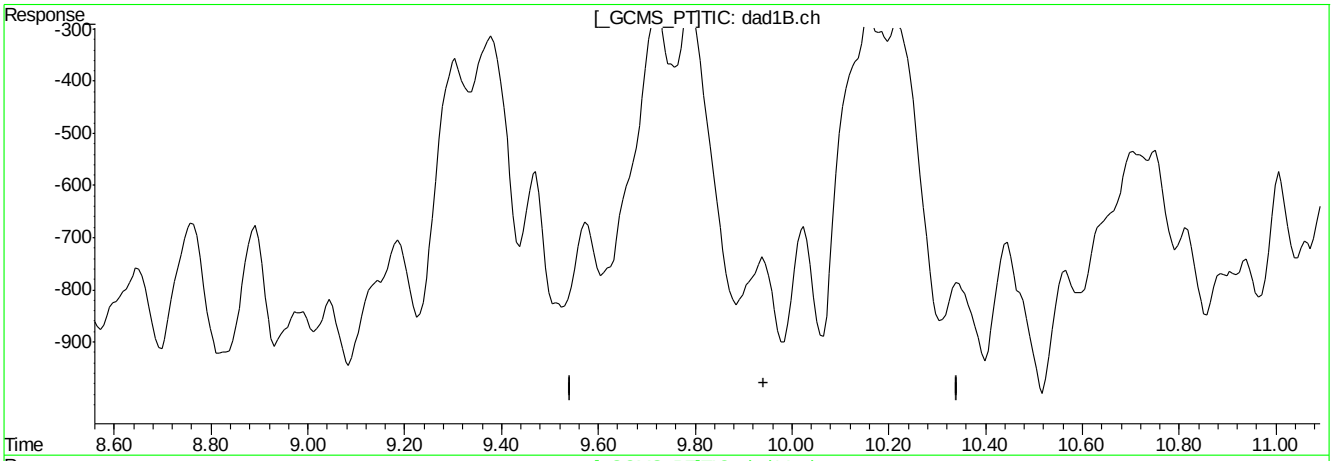
response 120565

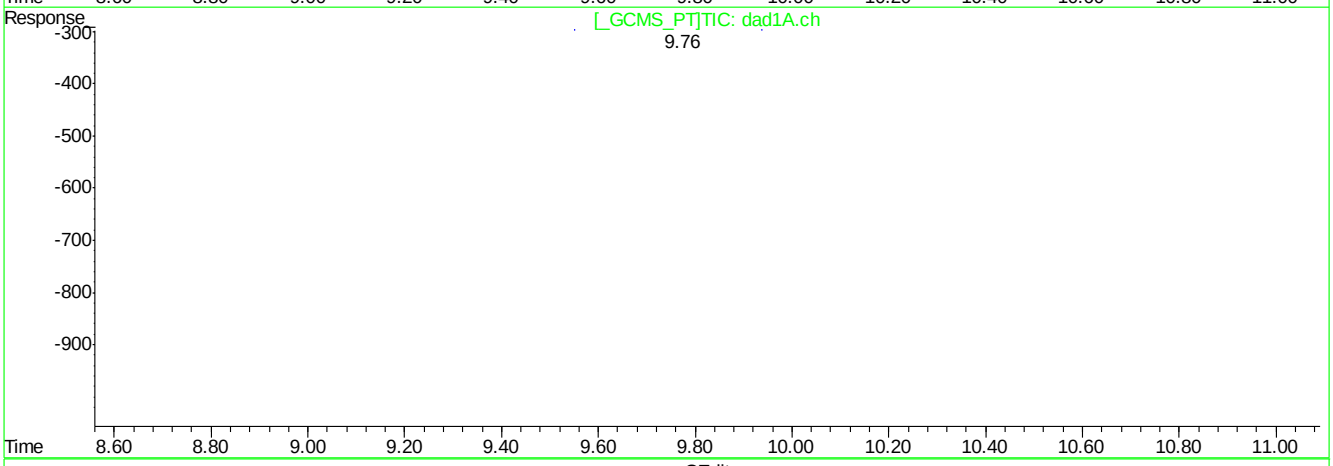
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:49:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

0.00min 0.000ppb

response 0

(12) 2,4,6-Trinitrotoluene #2

9.77min 26.182ppb

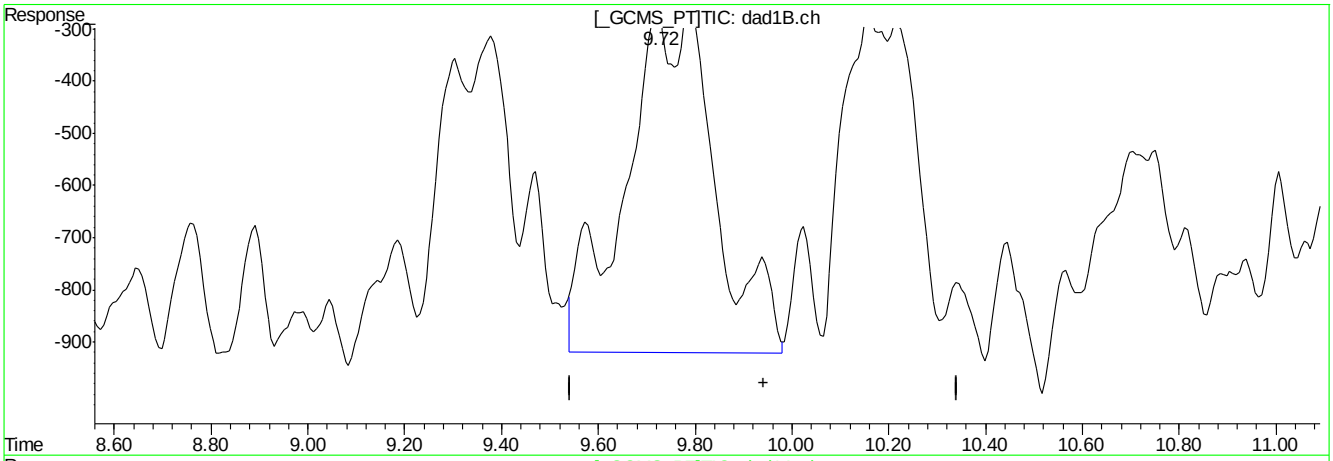
response 114996

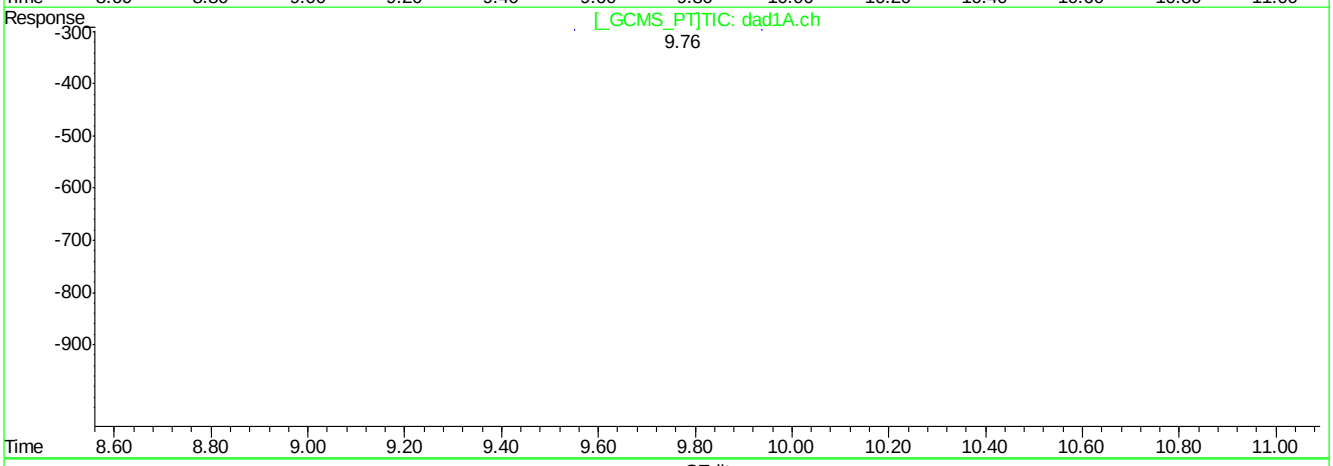
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:49:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.72min 21.554ppb m

response 84725

(12) 2,4,6-Trinitrotoluene #2

9.77min 26.182ppb

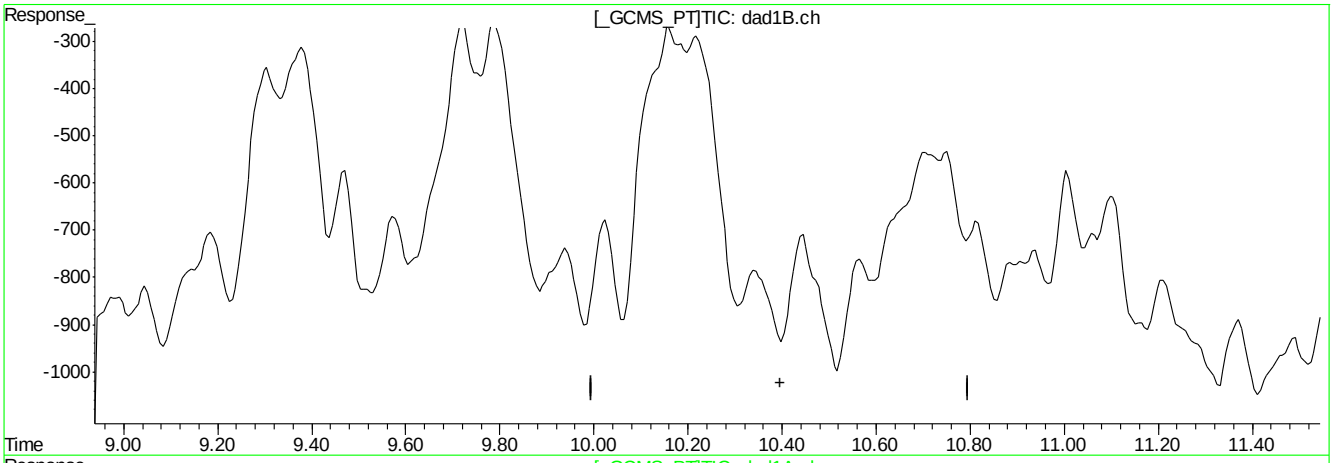
response 114996

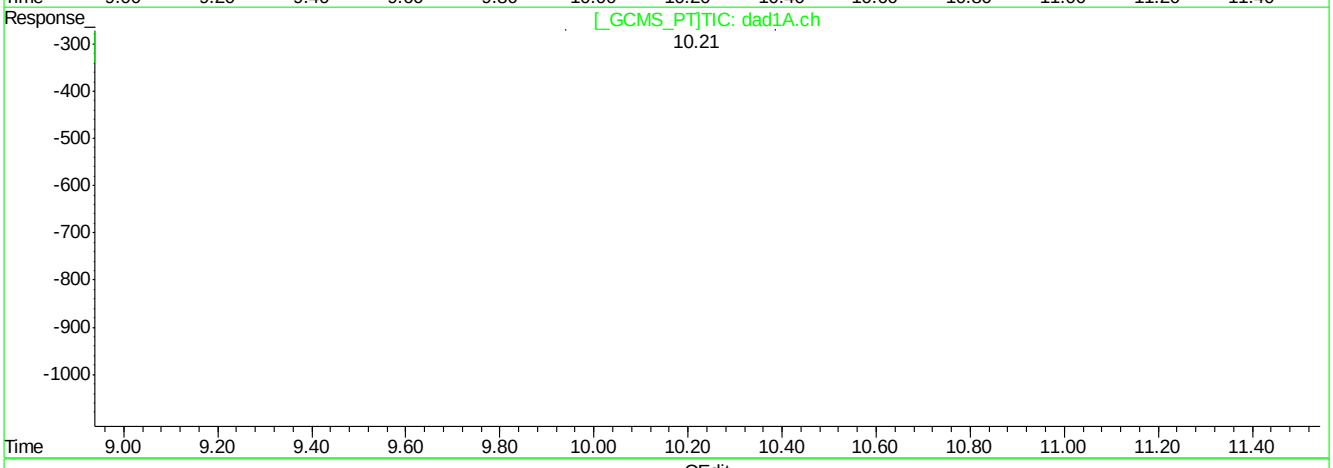
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:49:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(13) 2-Amino-4,6-Dinitrotoluene #2

10.22min 26.615ppb

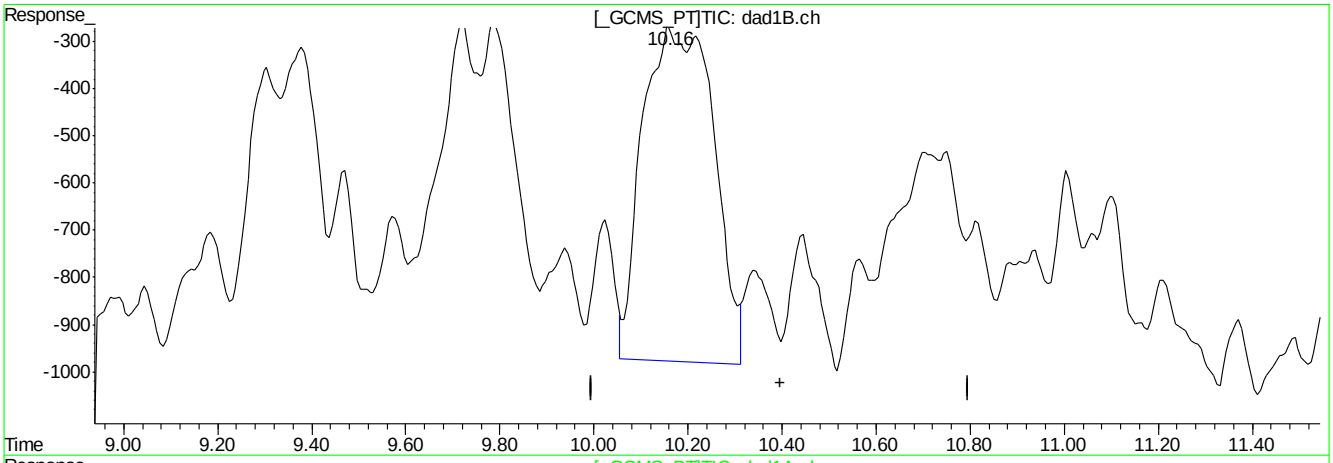
response 120963

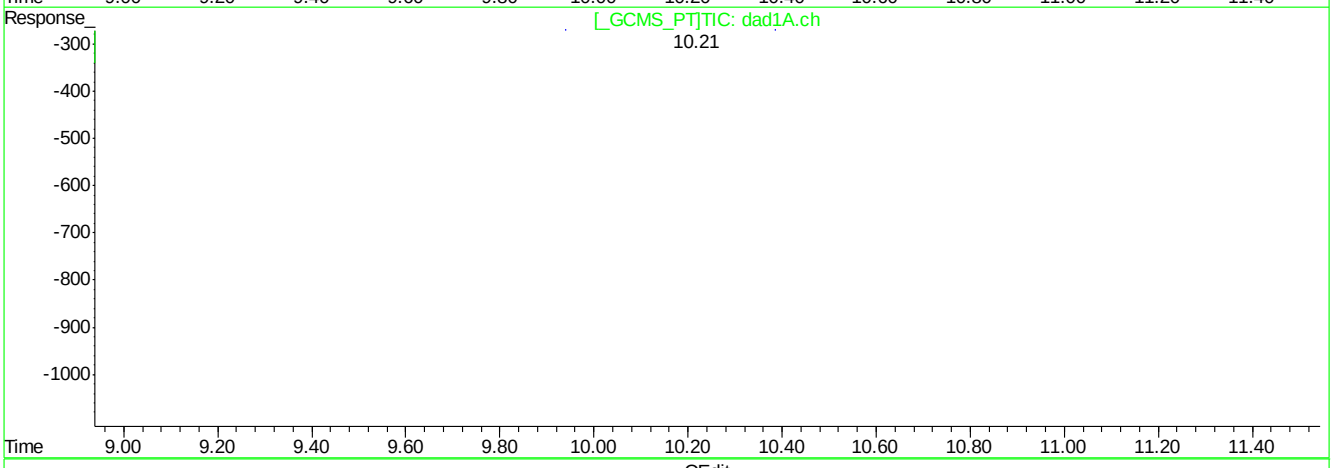
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:50:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.16min 21.863ppb m

response 74822

(13) 2-Amino-4,6-Dinitrotoluene #2

10.22min 26.615ppb

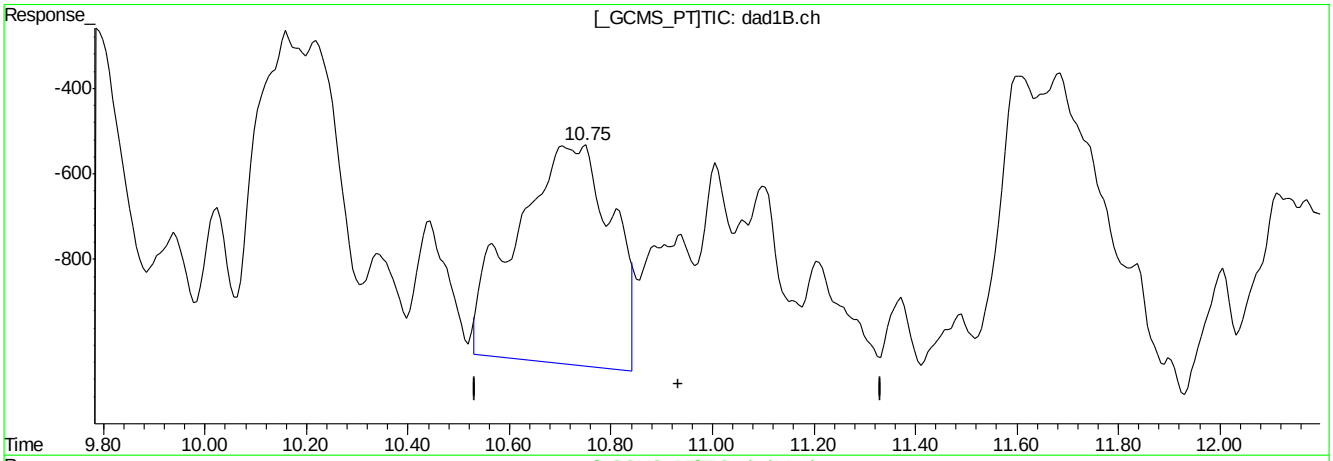
response 120963

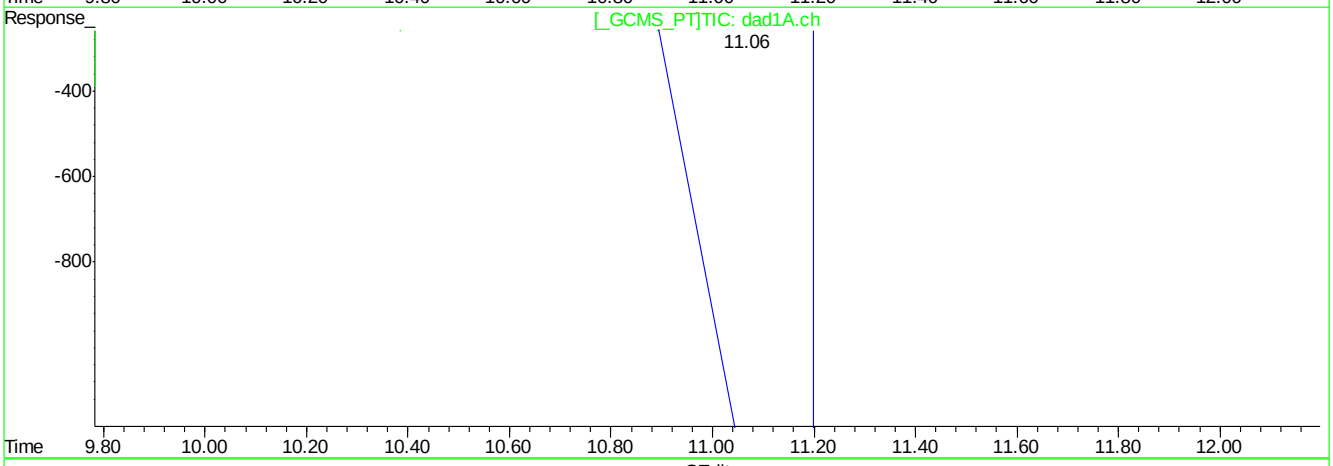
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:50:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.75min 27.299ppb m

response 66983

(14) 4-Amino-2,6-Dinitrotoluene #2

11.06min 7.575ppb

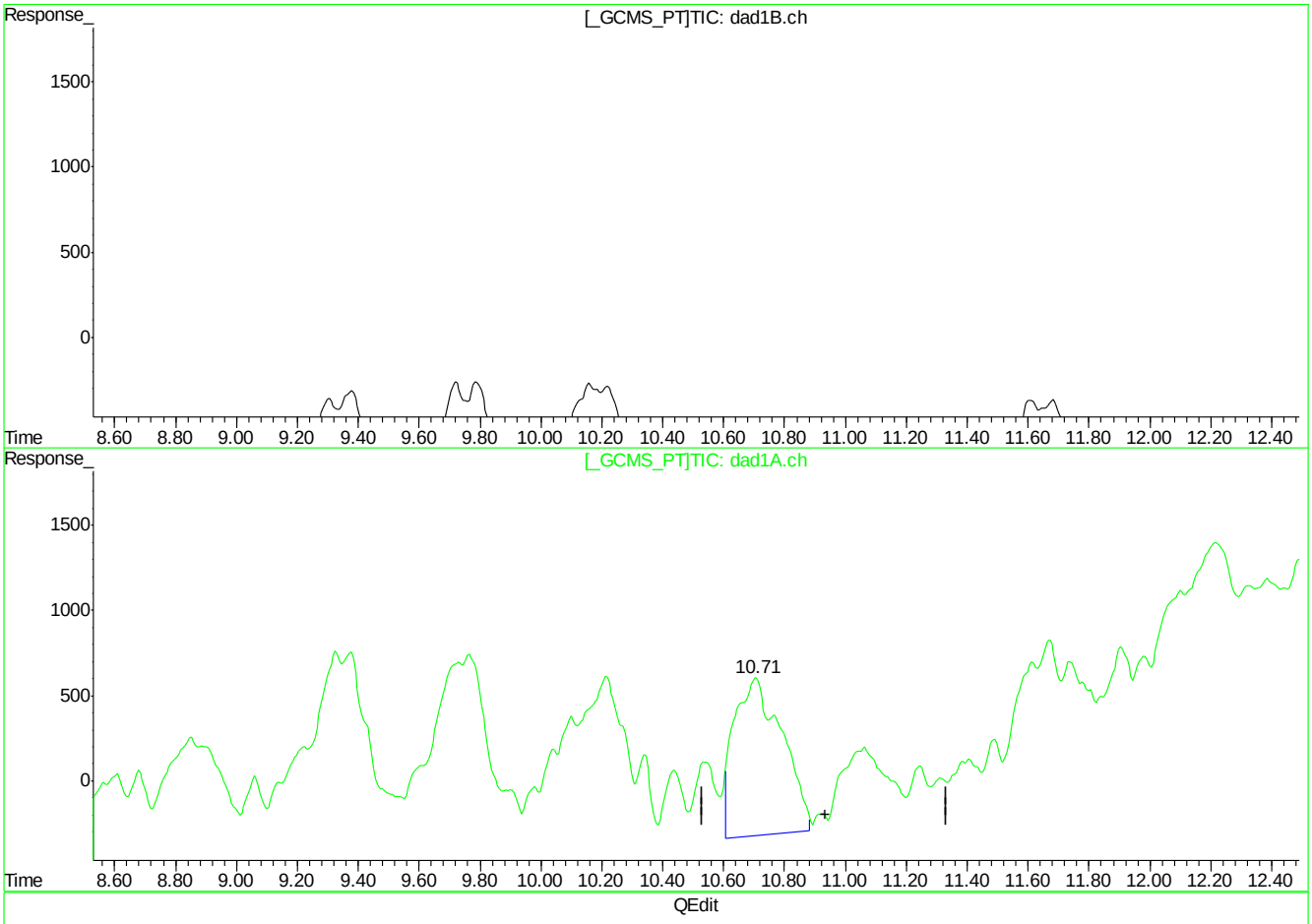
response 33270

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:50:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(14) 4-Amino-2,6-Dinitrotoluene

10.75min 27.299ppb m

response 66983

(14) 4-Amino-2,6-Dinitrotoluene #2

10.71min 22.955ppb m

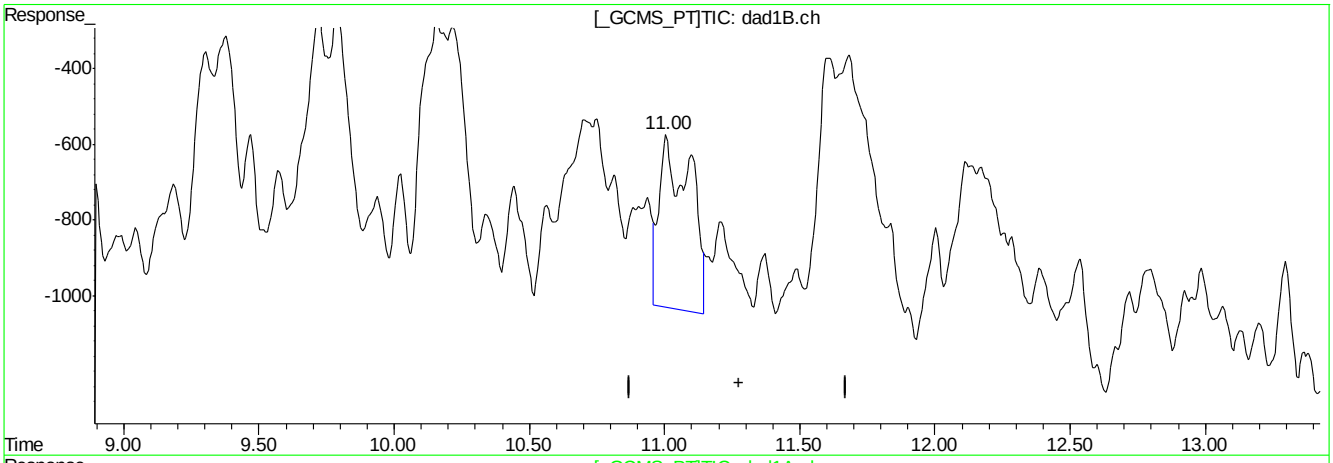
response 100826

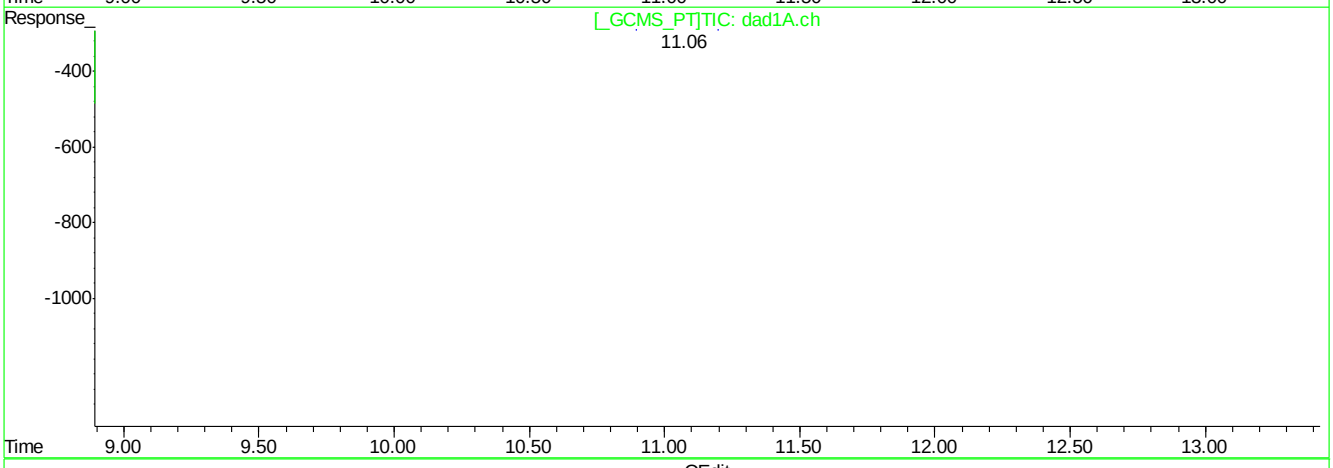
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:50:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.00min 17.696ppb m

response 35657

(15) 3,4-Dinitrotoluene #2 (S)

11.06min 10.308ppb

response 33270

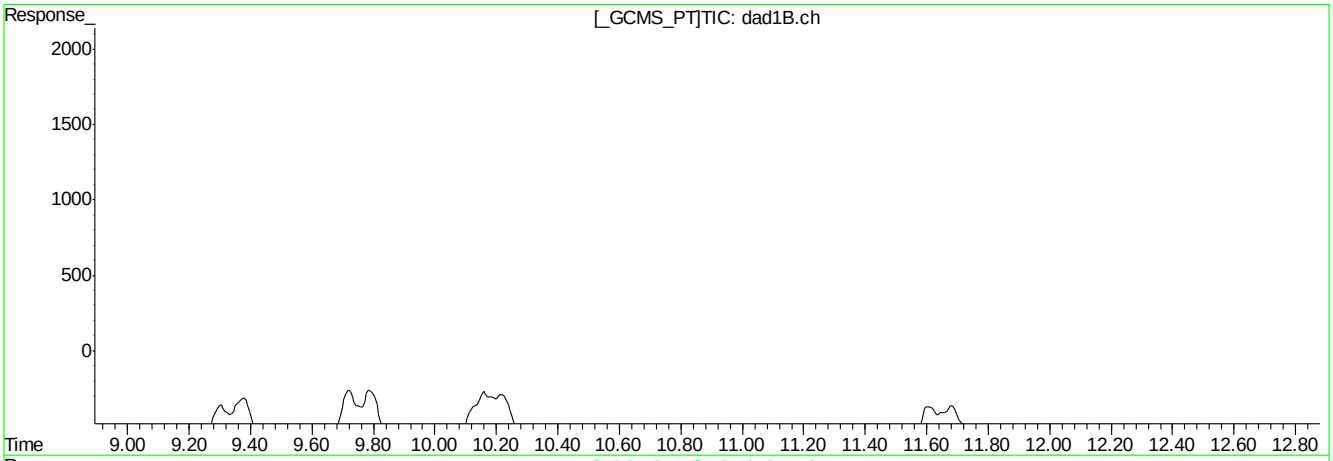
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:50:48 2021

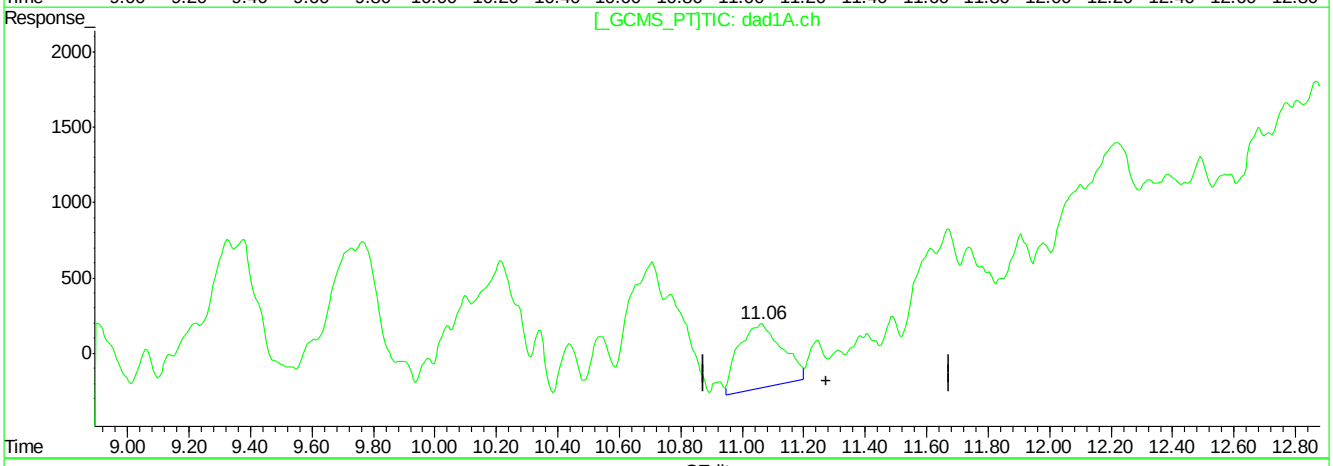
PP390446.D edits: 3,4-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.00min 17.696ppb m

response 35657

(15) 3,4-Dinitrotoluene #2 (S)

11.06min 12.887ppb m

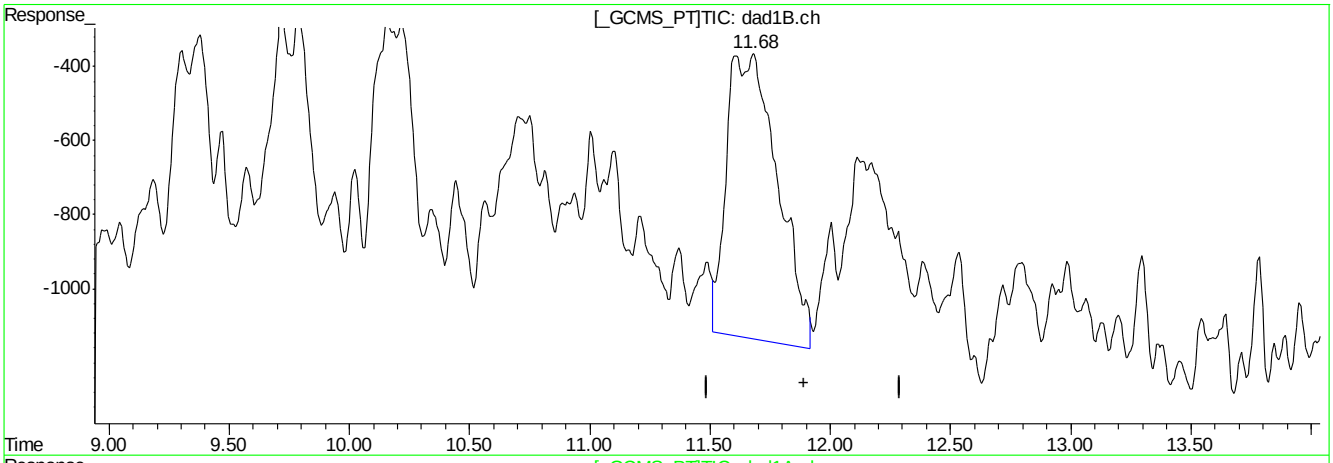
response 41594

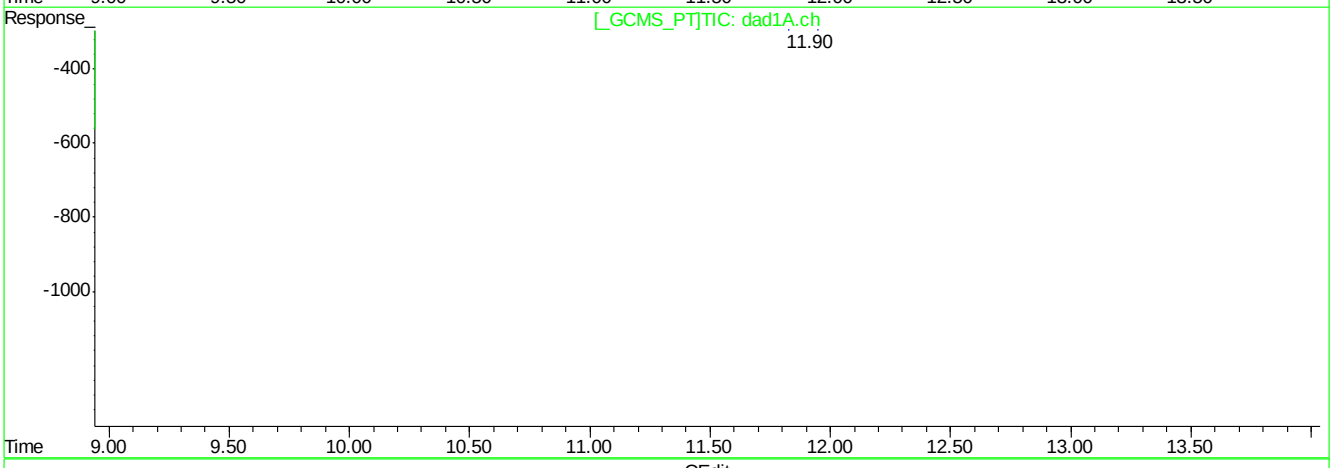
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:50:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.68min 23.519ppb m

response 113061

(16) 2,4-Dinitrotoluene #2

11.91min 3.169ppb

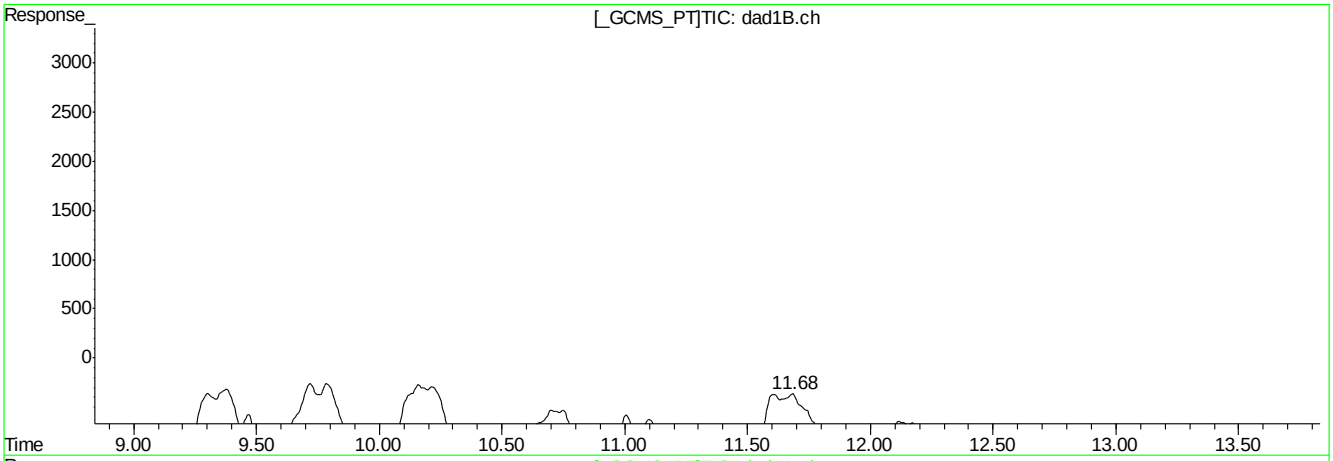
response 9508

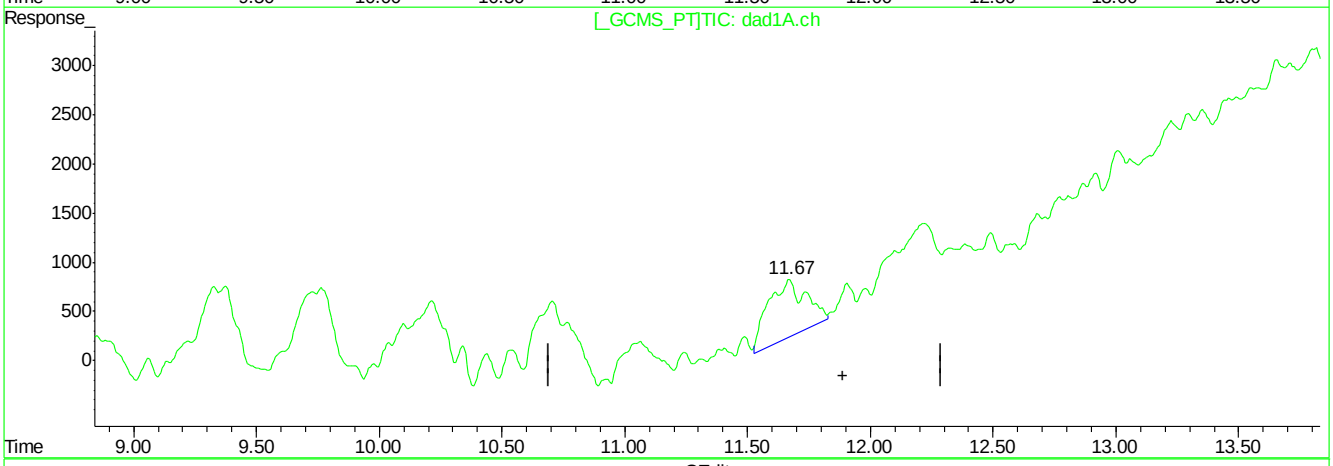
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:51:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

11.68min 23.519ppb m

response 113061

(16) 2,4-Dinitrotoluene #2

11.67min 21.151ppb m

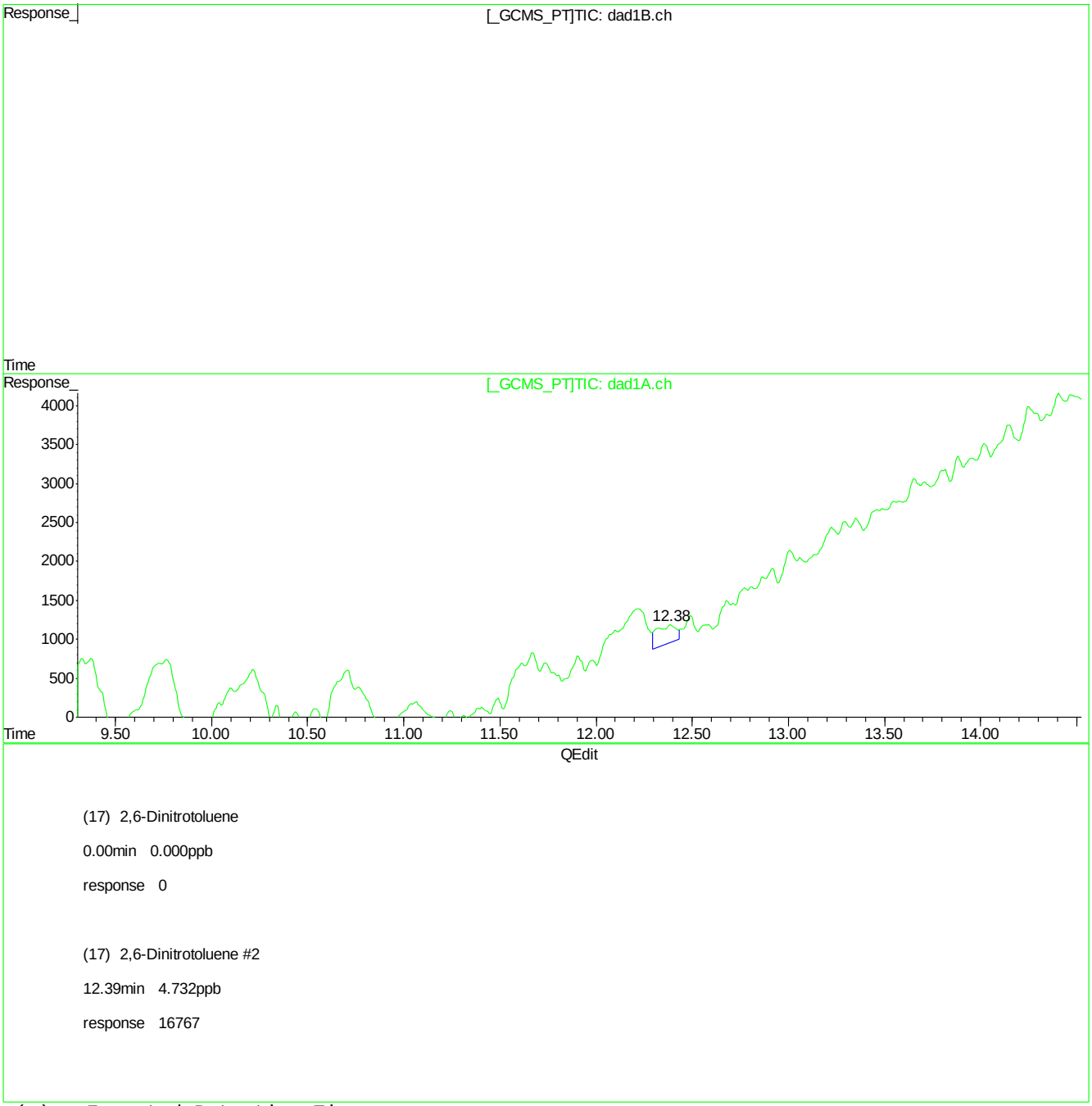
response 63463

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:51:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(17) 2,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(17) 2,6-Dinitrotoluene #2

12.39min 4.732ppb

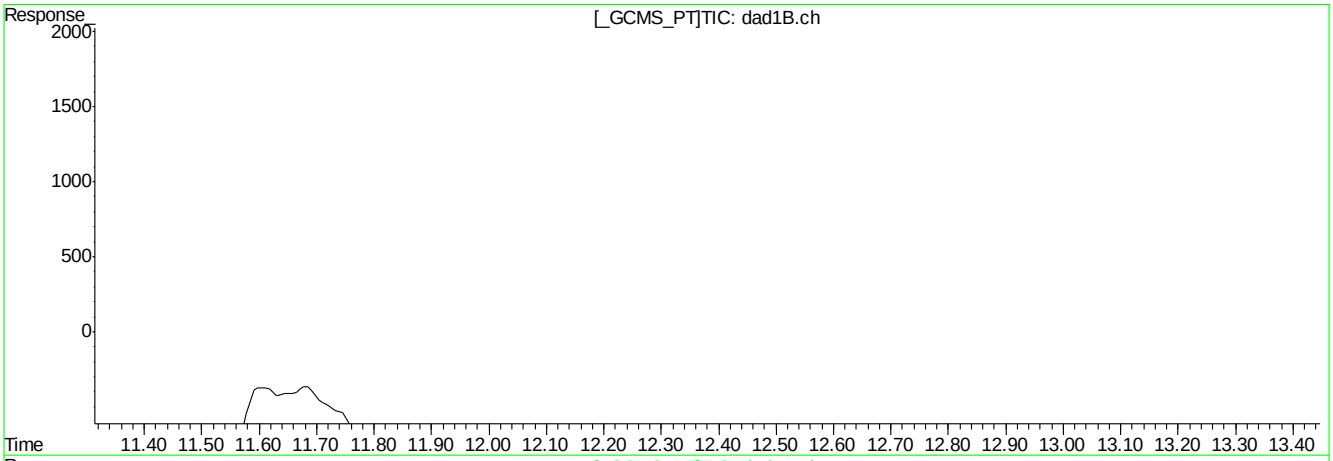
response 16767

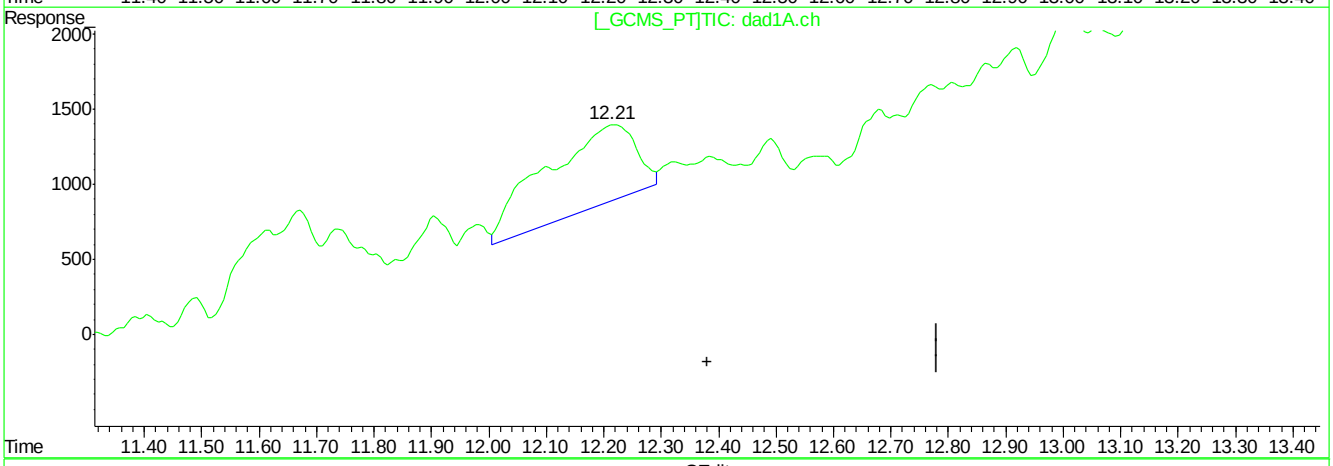
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:51:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(17) 2,6-Dinitrotoluene #2

12.21min 16.615ppb m

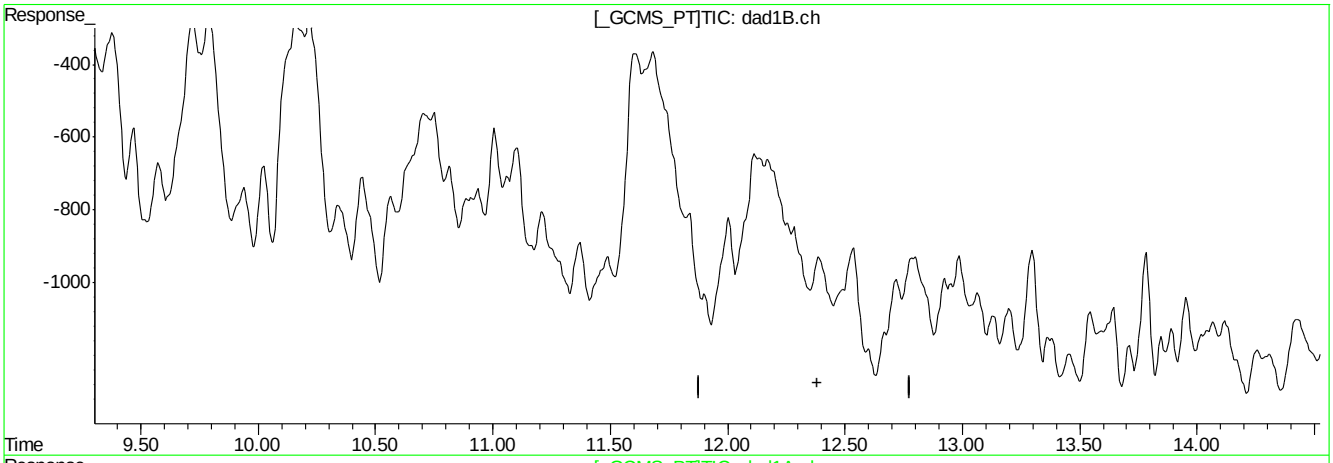
response 58878

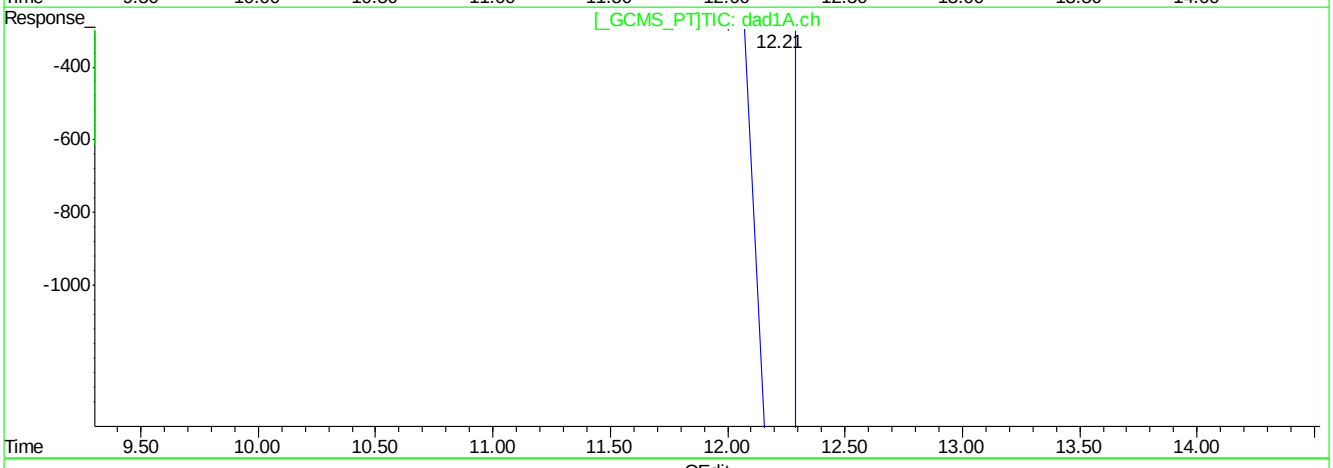
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:51:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(17) 2,6-Dinitrotoluene #2

12.21min 16.615ppb m

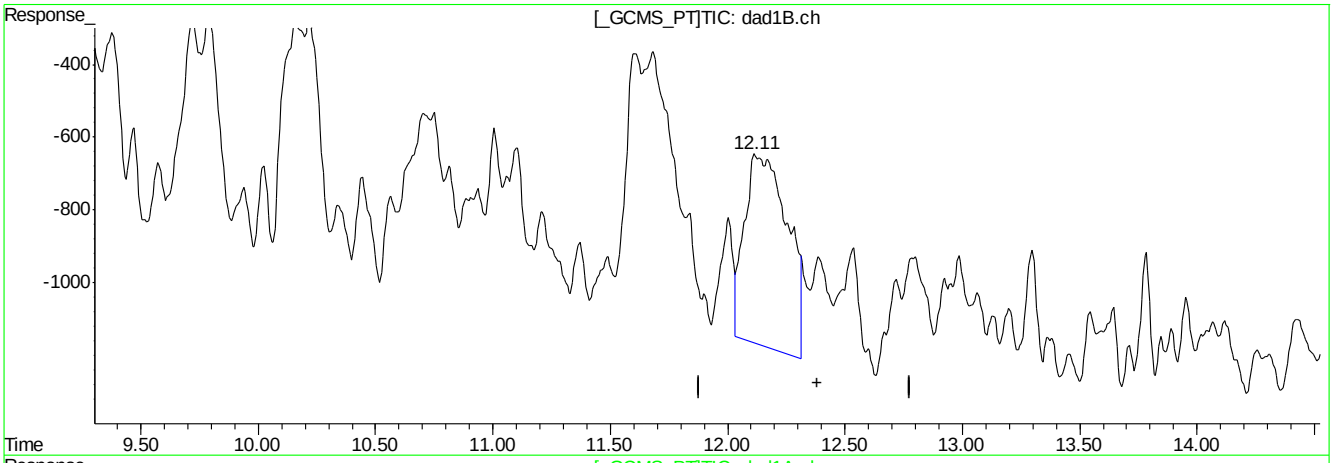
response 58878

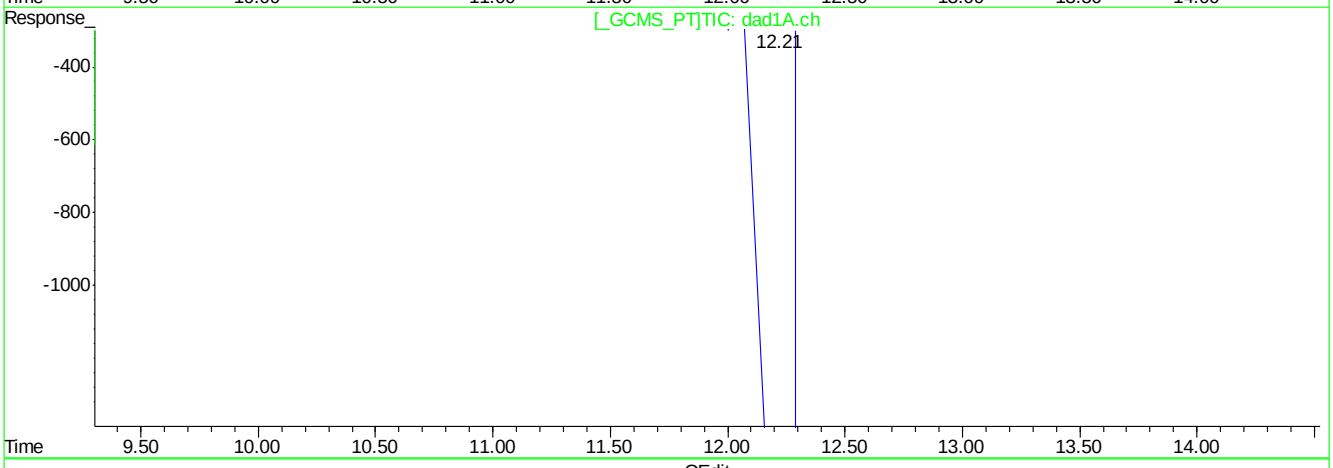
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:51:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.11min 25.762ppb m

response 67909

(17) 2,6-Dinitrotoluene #2

12.21min 16.615ppb m

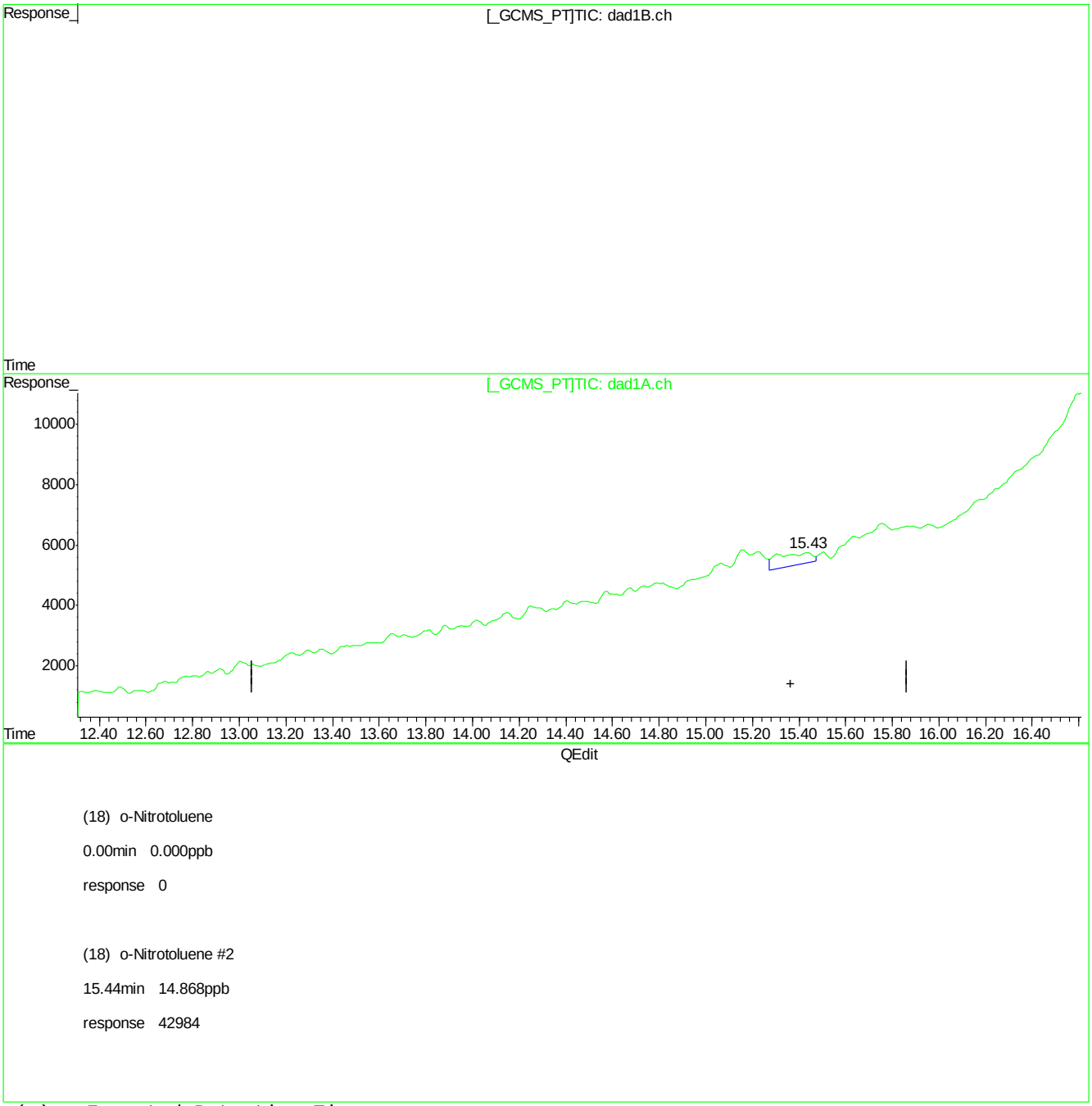
response 58878

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:51:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

0.00min 0.000ppb

response 0

(18) o-Nitrotoluene #2

15.44min 14.868ppb

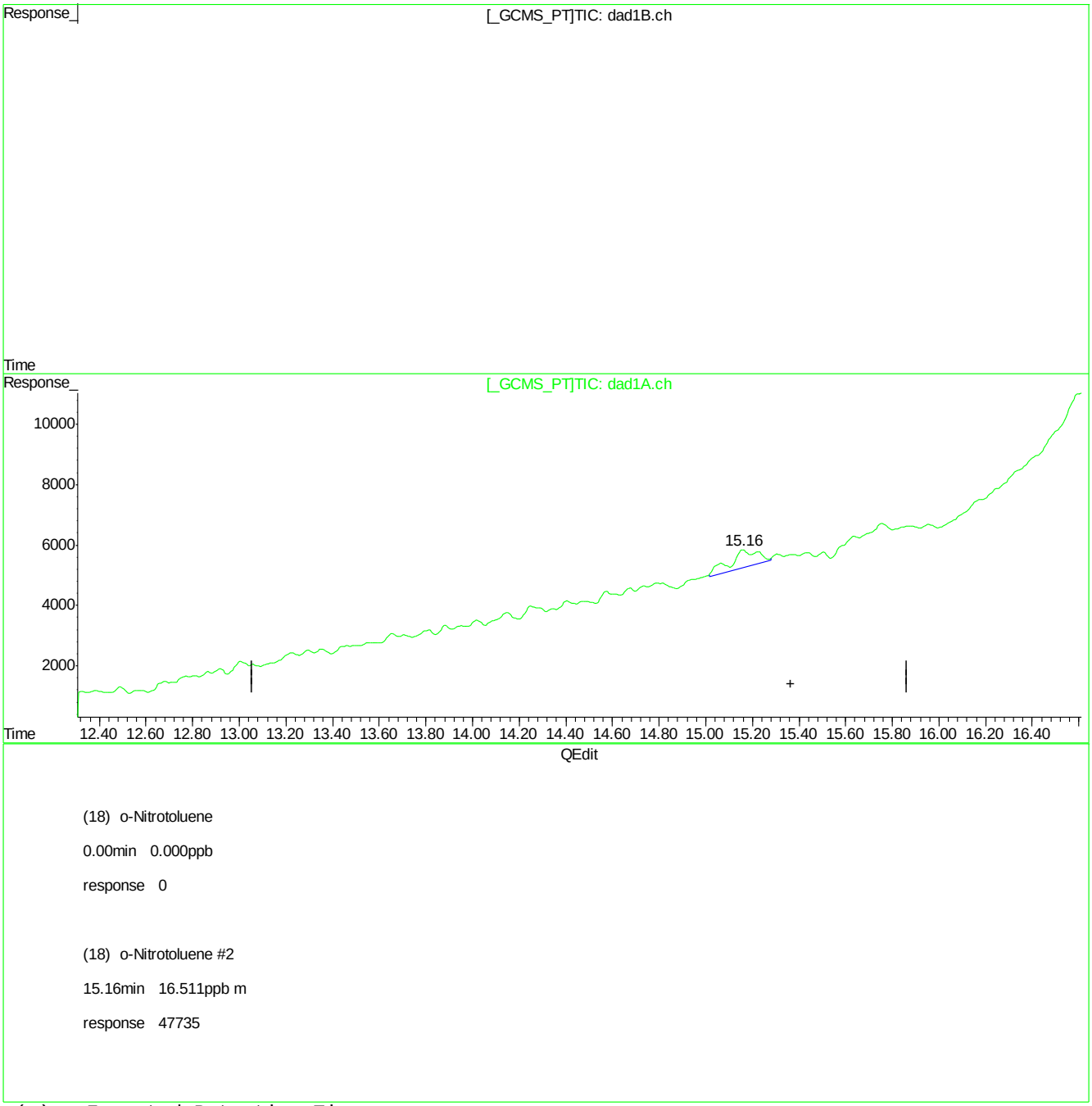
response 42984

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:51:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

0.00min 0.000ppb

response 0

(18) o-Nitrotoluene #2

15.16min 16.511ppb m

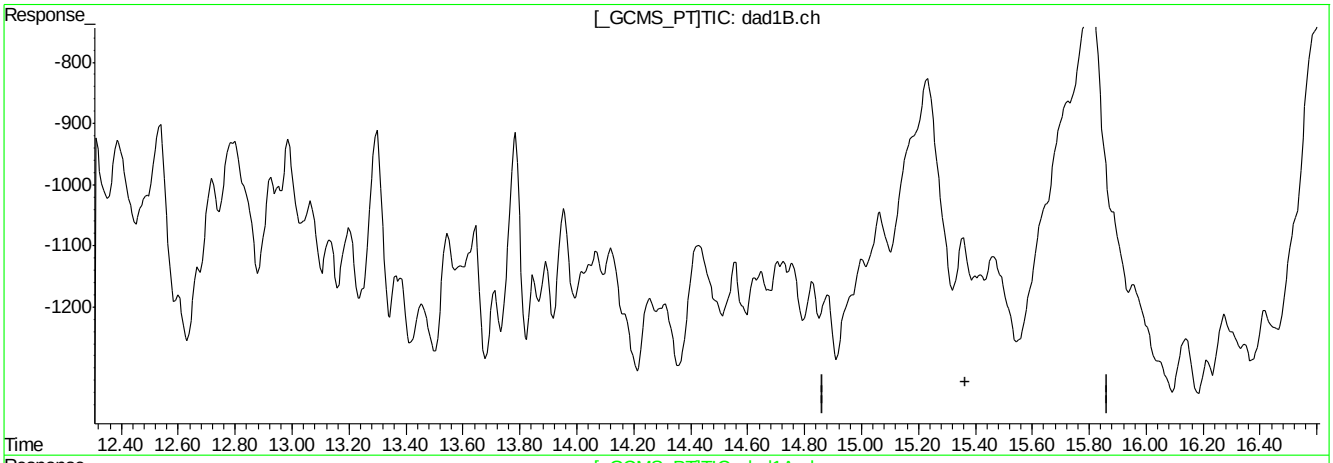
response 47735

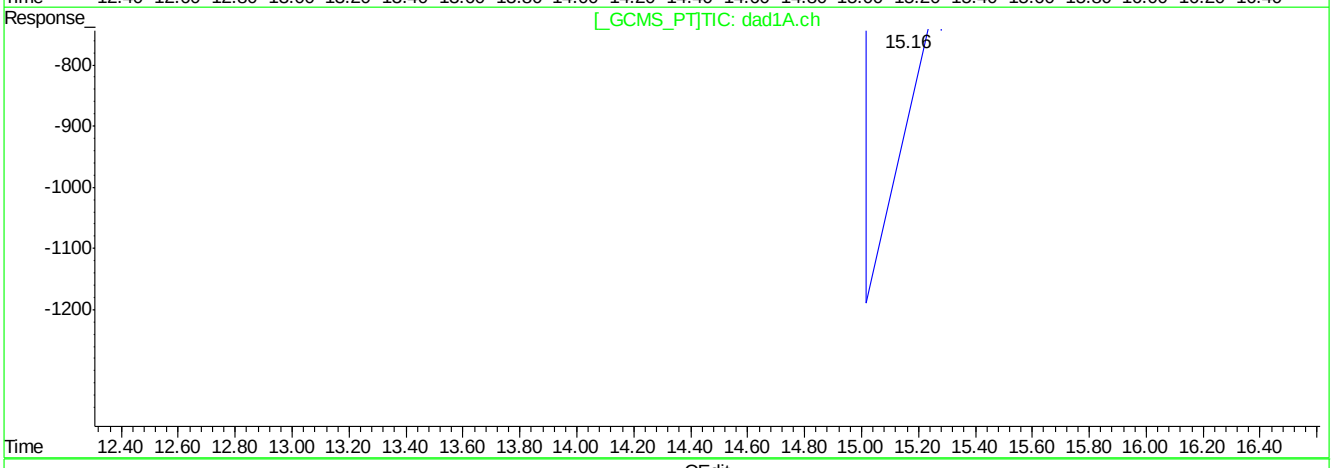
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:52:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

0.00min 0.000ppb

response 0

(18) o-Nitrotoluene #2

15.16min 16.511ppb m

response 47735

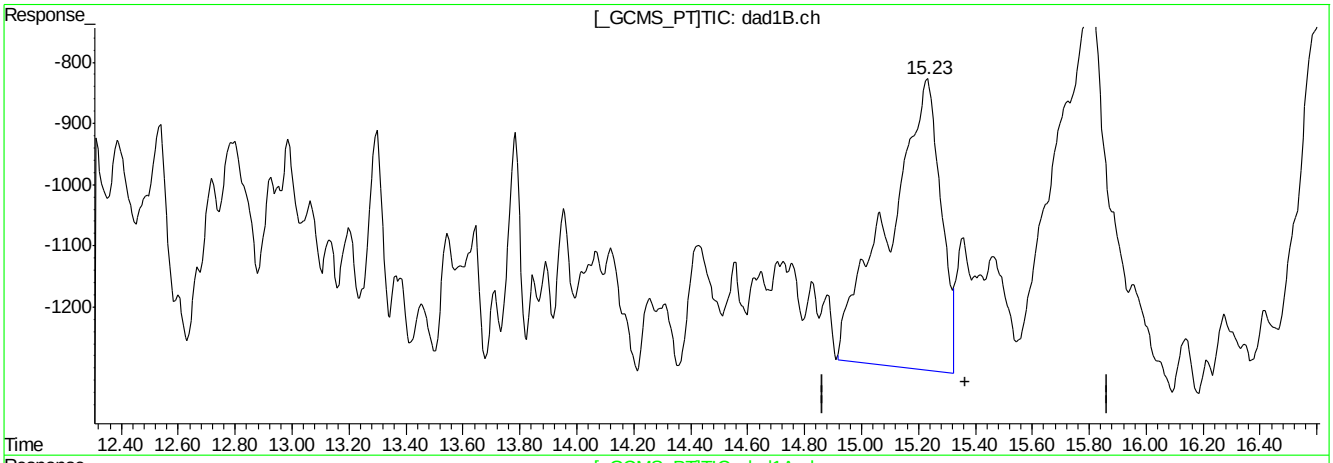
(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:52:10 2021

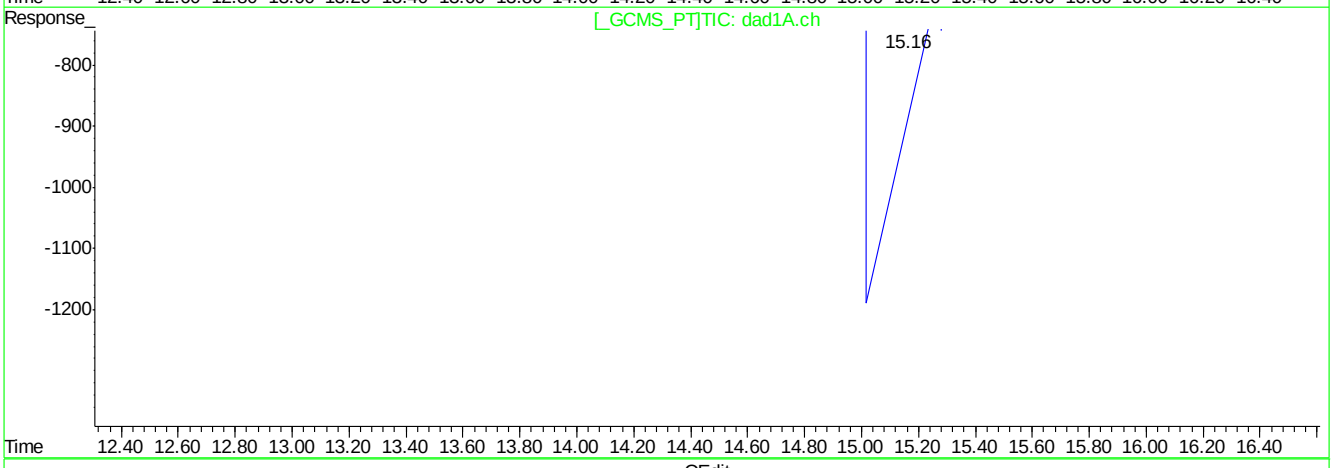
PP390446.D edits: o-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.23min 27.817ppb m

response 59896

(18) o-Nitrotoluene #2

15.16min 16.511ppb m

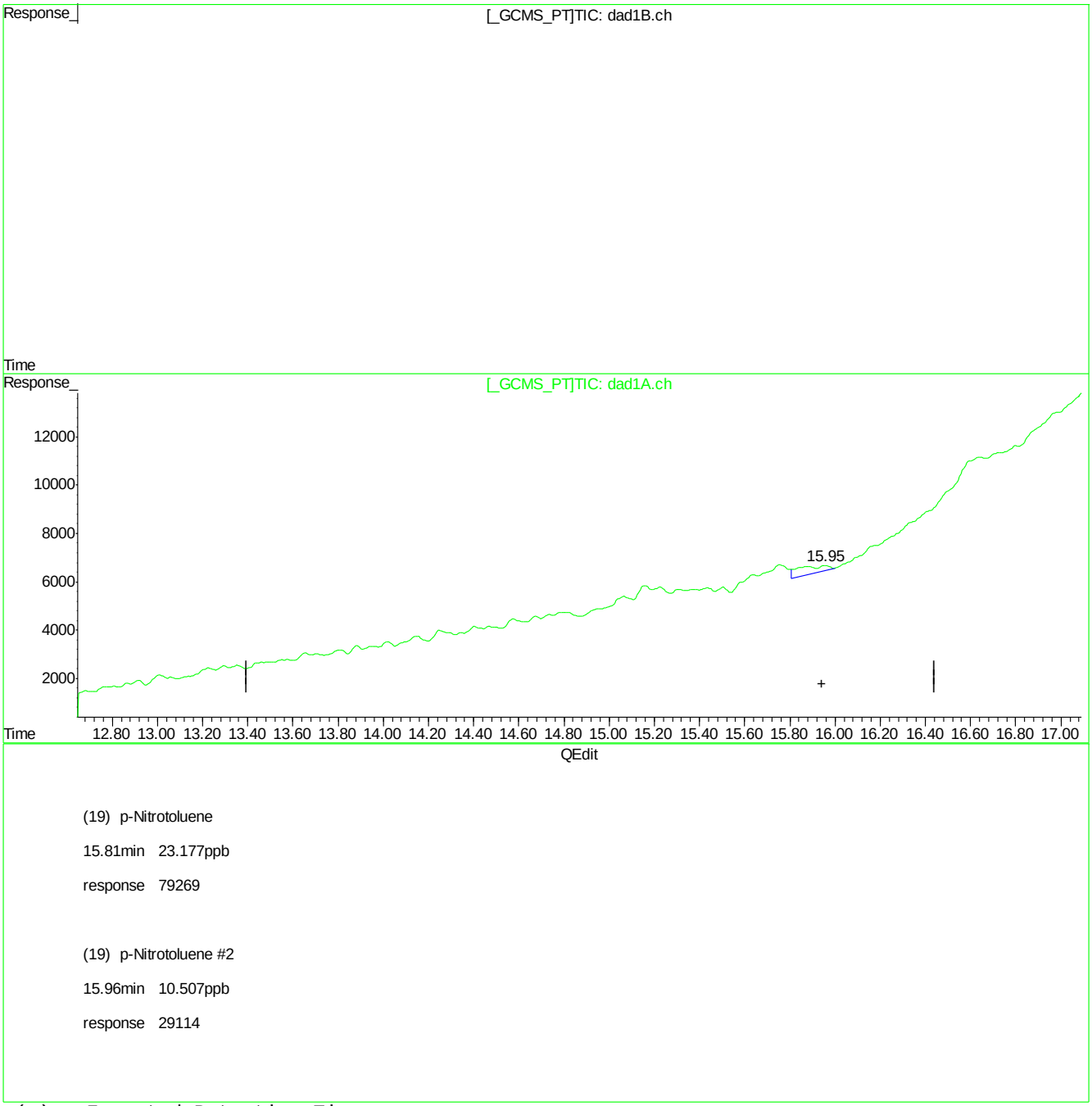
response 47735

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:52:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.81min 23.177ppb

response 79269

(19) p-Nitrotoluene #2

15.96min 10.507ppb

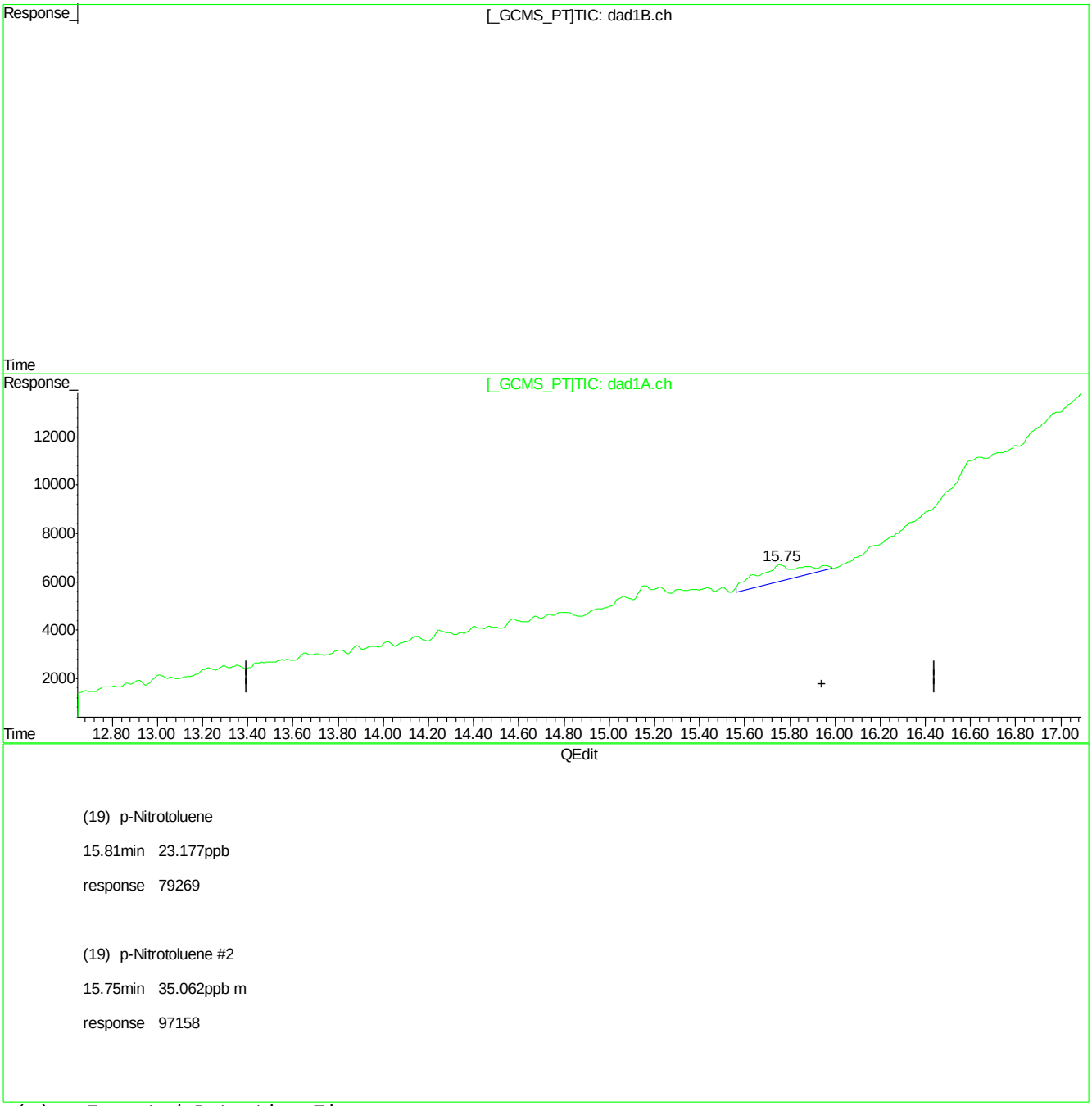
response 29114

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:52:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.81min 23.177ppb

response 79269

(19) p-Nitrotoluene #2

15.75min 35.062ppb m

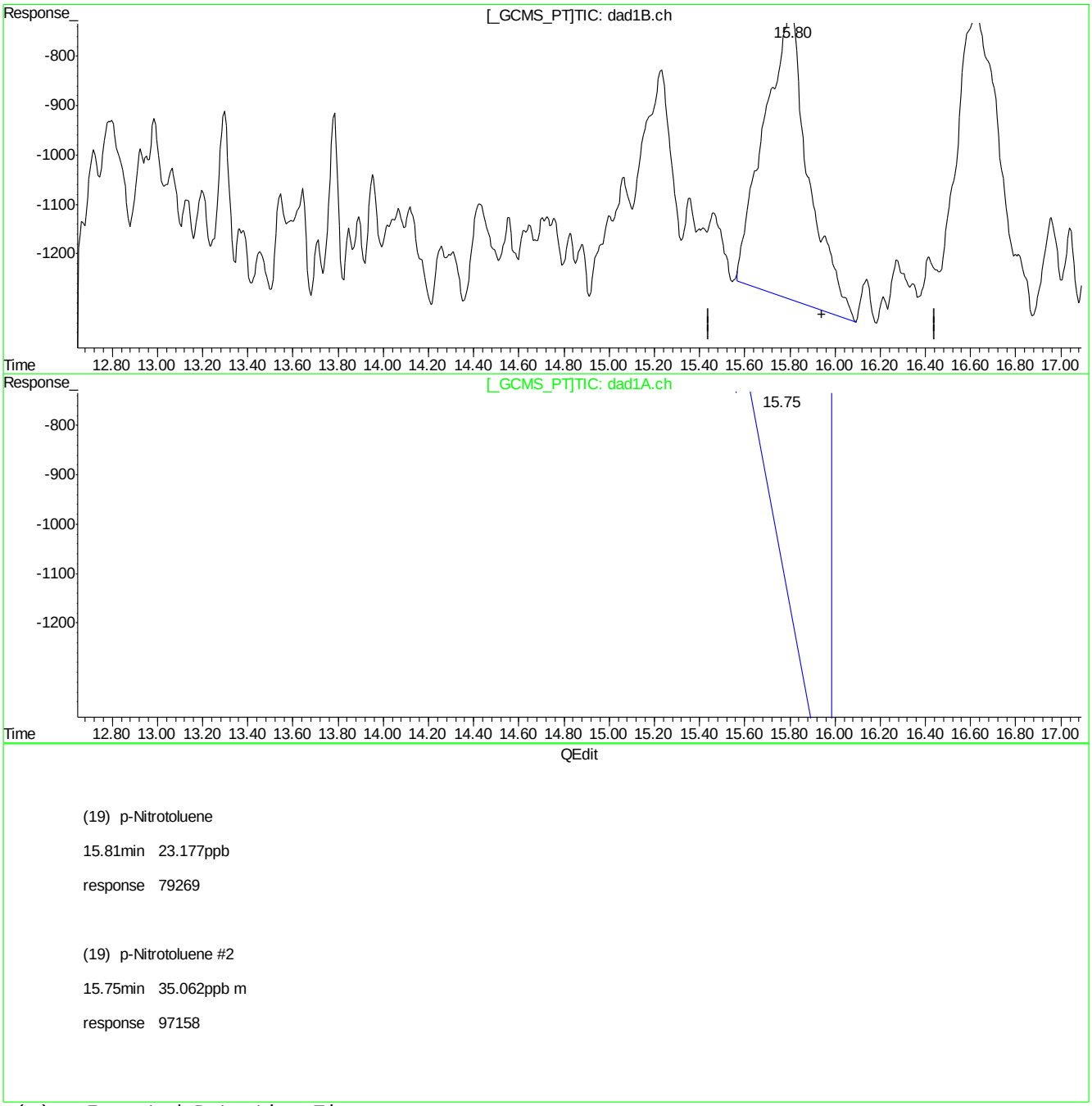
response 97158

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:52:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.81min 23.177ppb

response 79269

(19) p-Nitrotoluene #2

15.75min 35.062ppb m

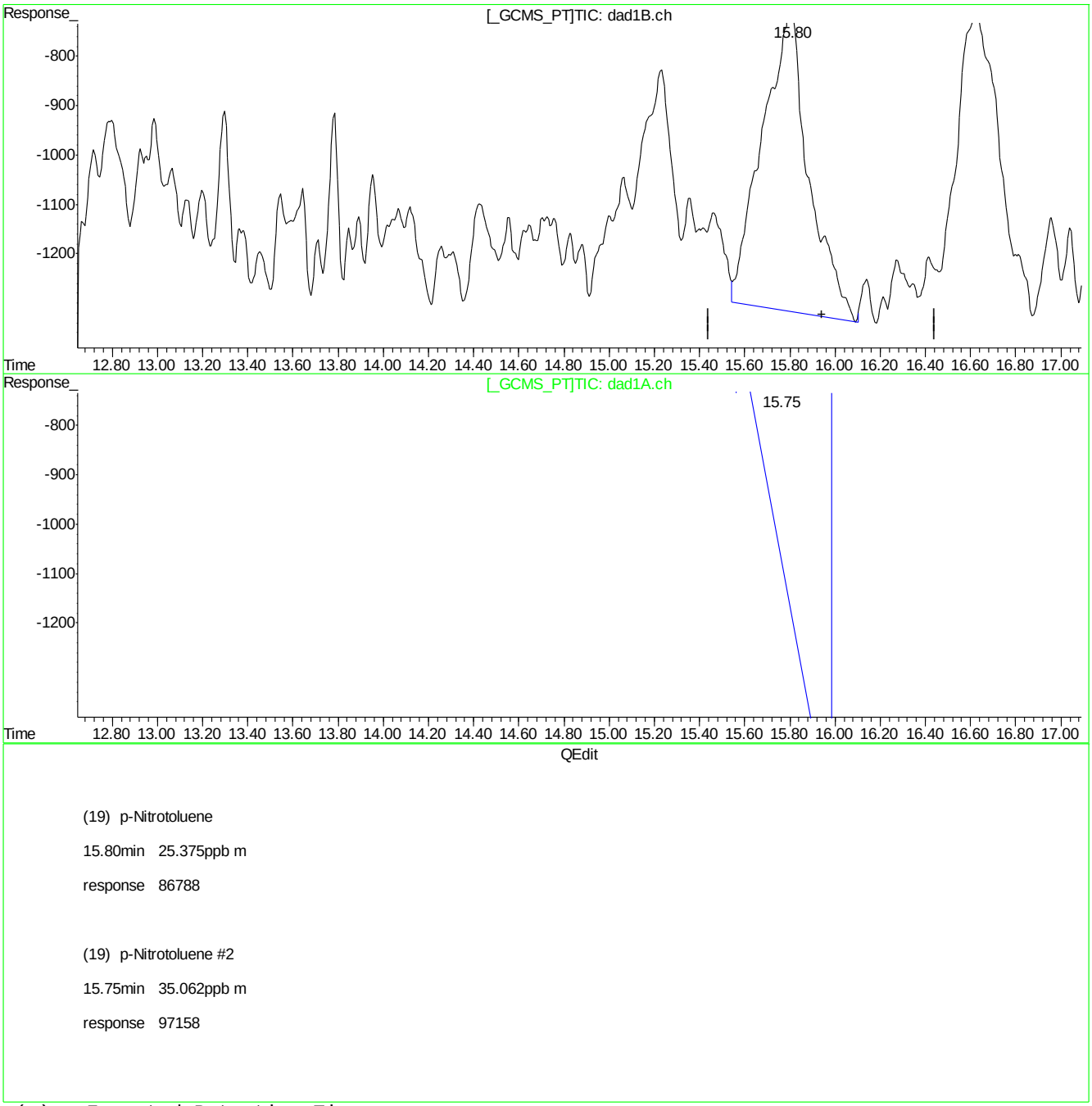
response 97158

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:52:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.80min 25.375ppb m

response 86788

(19) p-Nitrotoluene #2

15.75min 35.062ppb m

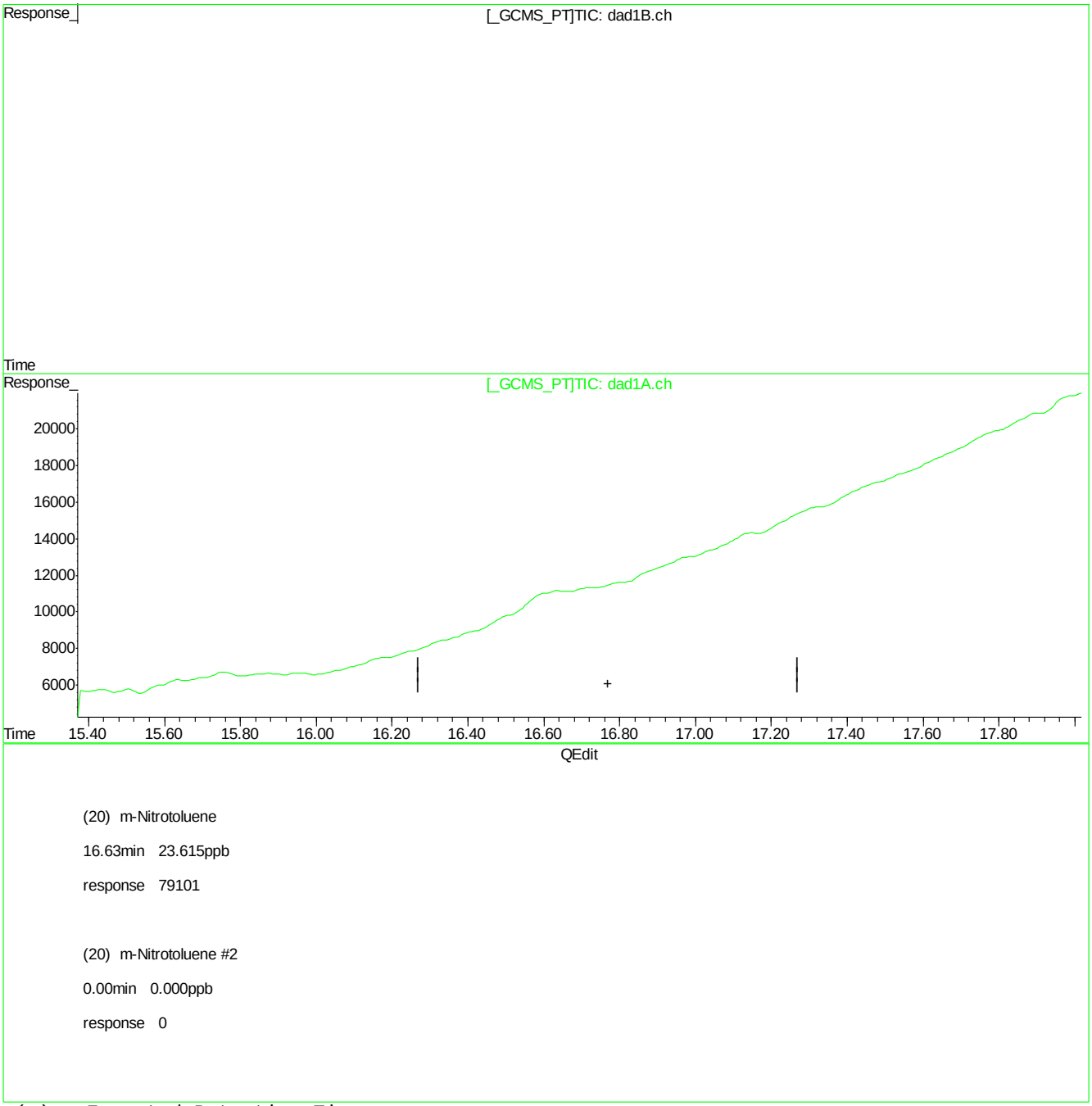
response 97158

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:52:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration

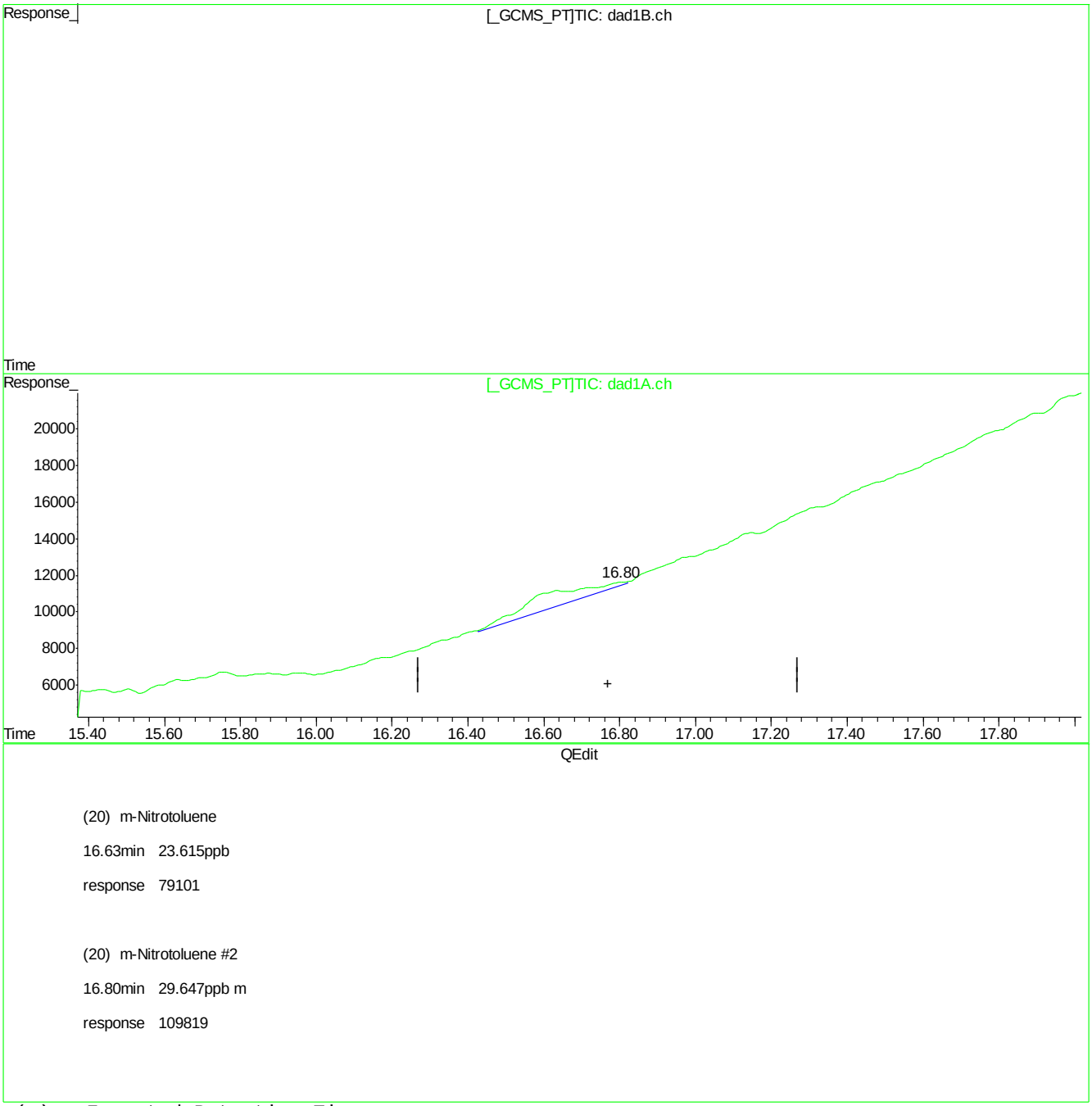


(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:52:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.63min 23.615ppb

response 79101

(20) m-Nitrotoluene #2

16.80min 29.647ppb m

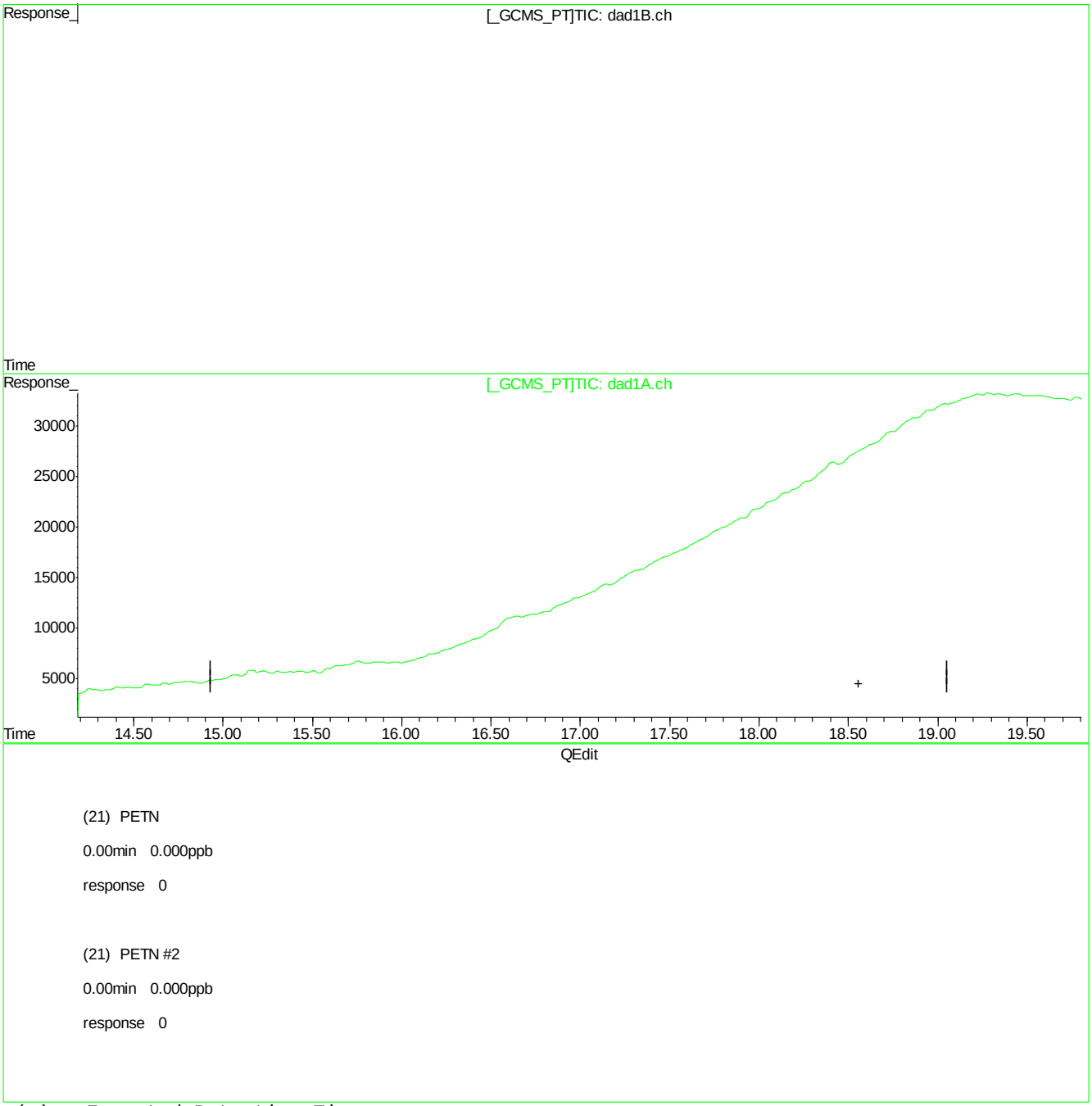
response 109819

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:52:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration

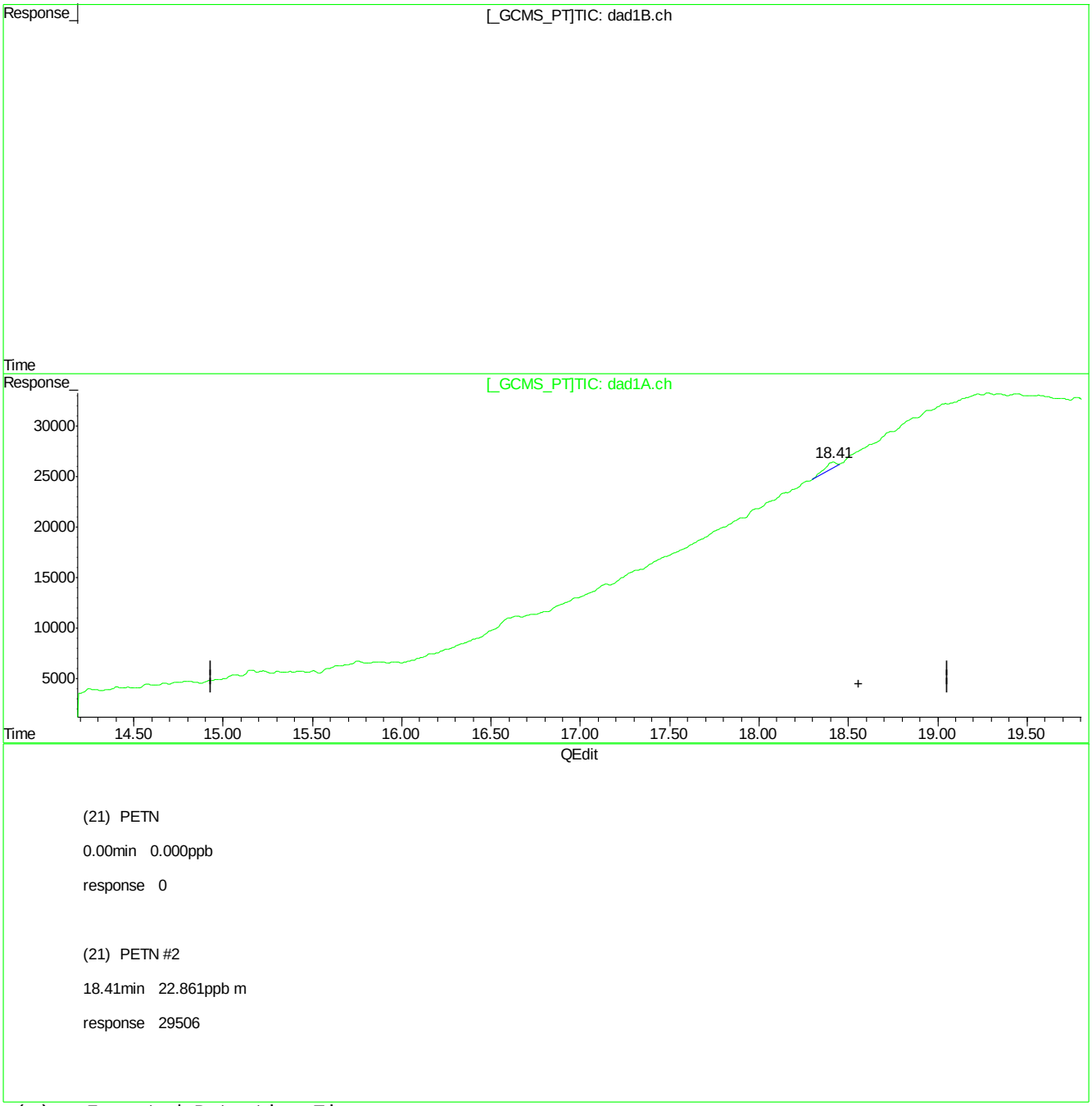


(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:52:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390446.D\dad1A.ch
Acq On : 02-Apr-2021, 08:10:20 Operator: jamesb
Sample : ic2428-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.41min 22.861ppb m

response 29506

(+) = Expected Retention Time
PP390446.D GPP2428_040221PRI.M Mon Apr 05 08:53:02 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/05/21 10:17

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 05 08:23:27 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.18	11.14	128602	155361	63.821m	48.135
Spiked Amount	500.000	Range	70 - 136	Recovery	=	12.76%#	9.63%#
	Target Compounds						
1)	TNX	1.33	1.32	116625	192514	37.569	41.326m
2)	HMX	1.46	1.46	75361	221577	48.357m	52.132m
3)	DNX	1.70	1.70	126985	240076	49.729m	64.268m
4)	MNX	2.29	2.29	149924	224866	53.552m	54.076m
5)	RDX	2.91	2.91	94486	153113	49.624m	49.955
6)	1,3,5-Trinitrobe	4.66	4.66	192101	379446	46.558	48.832
7)	1,3-Dinitrobenze	5.85	5.86	252164	180299	46.821	50.334m
8)	3,5-Dinitroanili	6.26	6.26	227279	335593	56.465	45.880m
9)	Nitrobenzene	7.36	7.40	173647	161378	57.680m	51.604m
10)	Nitroglycerin	0.00	8.97	0	90319	N.D.	74.312m#
11)	Tetryl	9.47	9.45	144185	251304	61.122	61.727
12)	2,4,6-Trinitroto	9.82	9.83	202124	244825	51.421	55.740
13)	2-Amino-4,6-Dini	10.29	10.27	183061	257478	53.491	56.653
14)	4-Amino-2,6-Dini	10.82	10.80	117740	214052	47.985m	48.733
16)	2,4-Dinitrotolue	11.78	11.78	233447	175301	48.562	58.424
17)	2,6-Dinitrotolue	12.28	12.26	160357	213696	60.833	60.304
18)	o-Nitrotoluene	15.28	15.29	116389	160624	54.053m	55.559m
19)	p-Nitrotoluene	15.86	15.82	180207	141680	52.689	51.129m
20)	m-Nitrotoluene	16.68	16.73	153163	160568	45.725	43.348m
21)	PETN	0.00	18.56	0	67837	N.D.	52.558m#

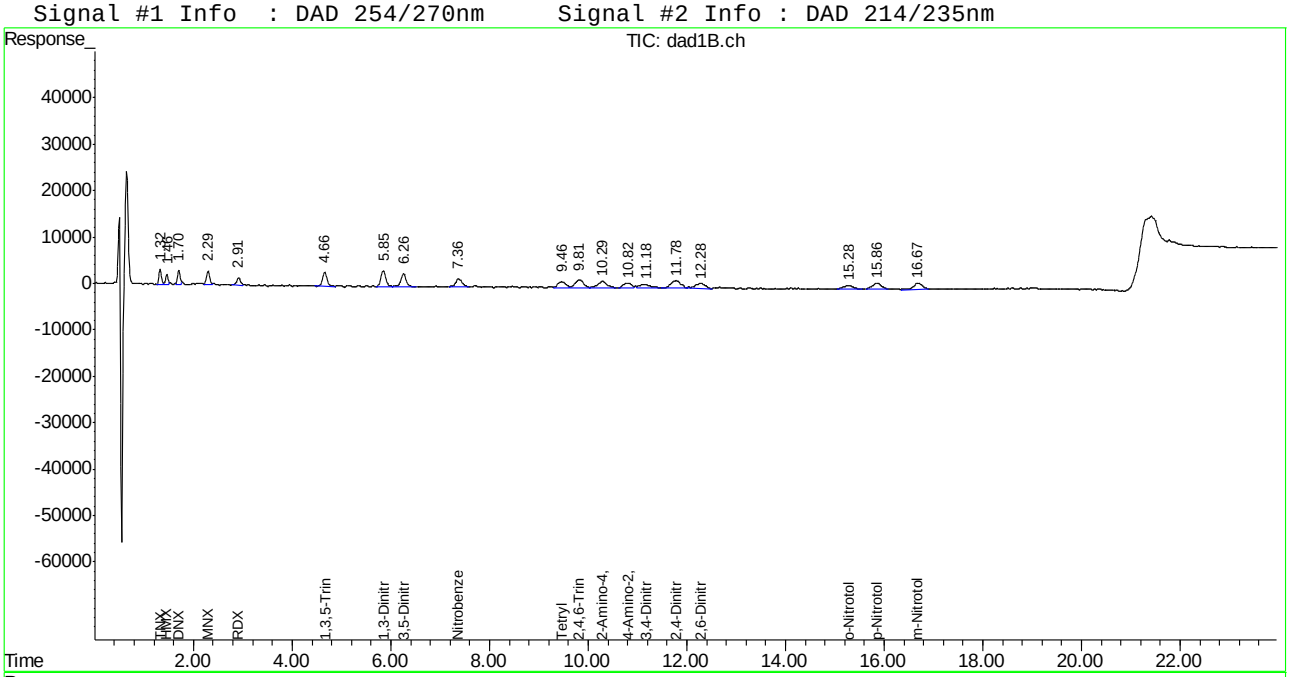
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP390447.D GPP2428_040221PRI.M Mon Apr 05 09:04:40 2021 Page 1

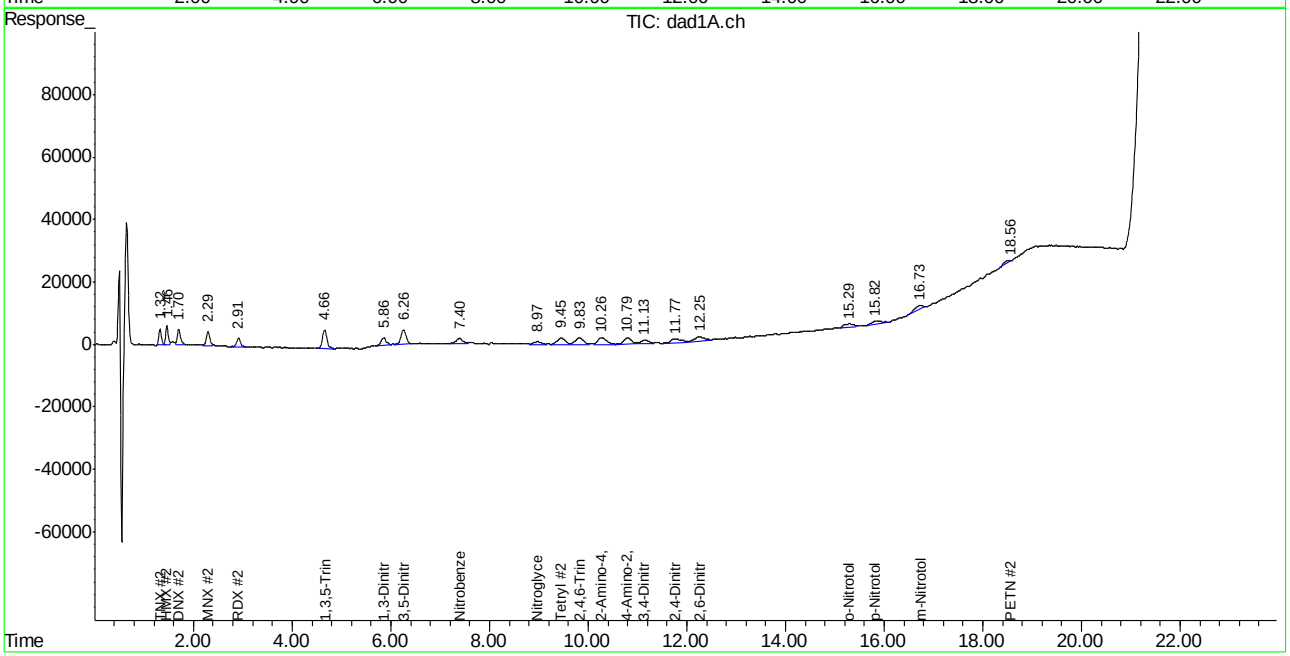
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:45 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

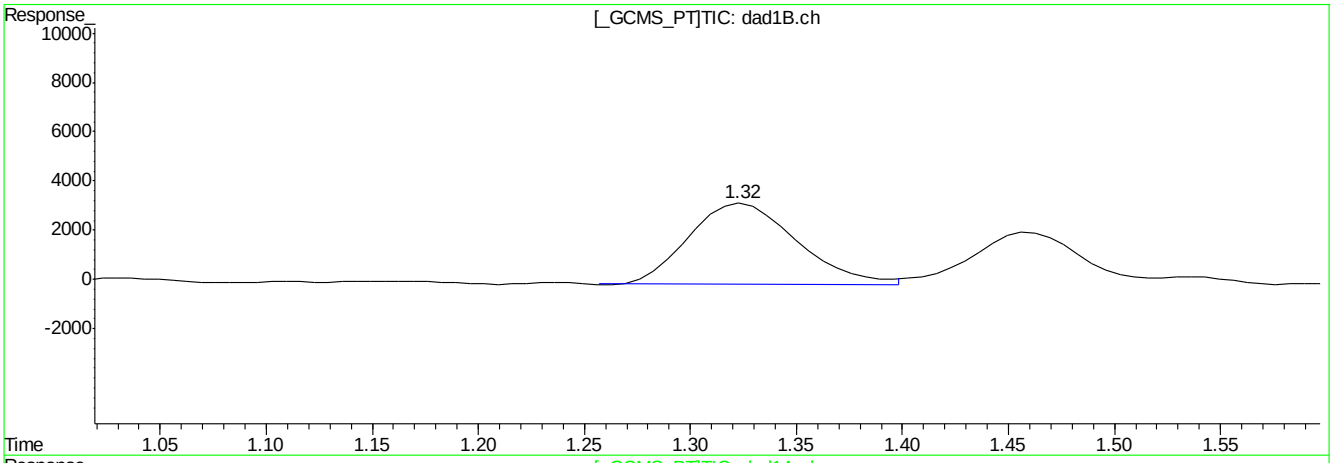
Sample Number: GPP2428-IC2428
Lab FileID: PP390447.D
Injection Time: 04/02/21 08:41
Method: SW846 8330A
Analyst approved: 04/05/21 09:06 James Boone
Supervisor approved: 04/05/21 10:17 Naresh Jiawan

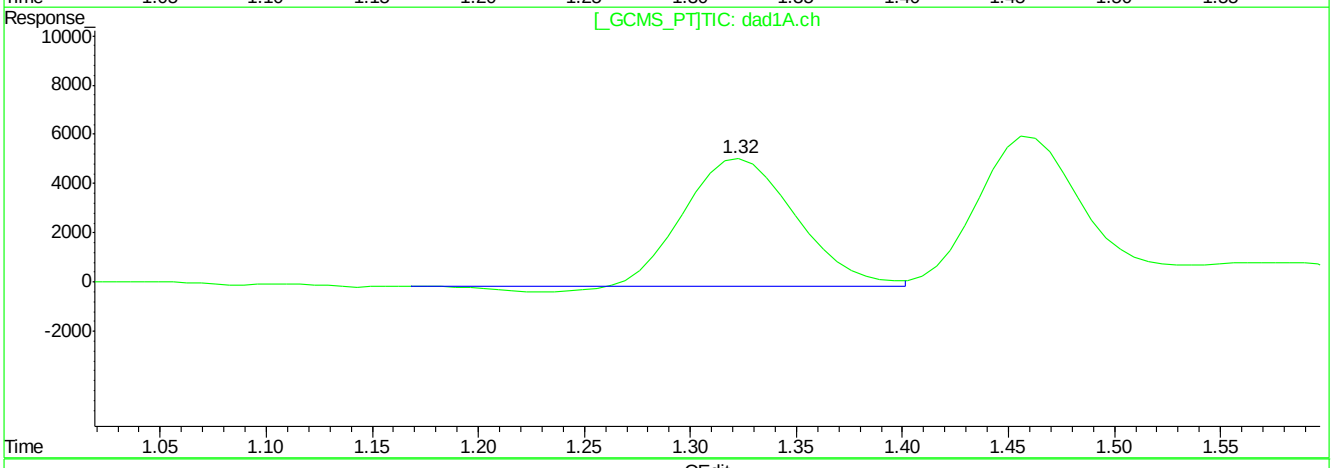
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		2	1.32	Poor instrument integration
HMX	2691-41-0	1	1.46	Poor instrument integration
HMX	2691-41-0	2	1.46	Poor instrument integration
DNX		1	1.70	Poor instrument integration
DNX		2	1.70	Poor instrument integration
MNX		1	2.29	Poor instrument integration
MNX		2	2.29	Poor instrument integration
RDX	121-82-4	1	2.91	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.86	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.26	Poor instrument integration
Nitrobenzene	98-95-3	1	7.36	Poor instrument integration
Nitrobenzene	98-95-3	2	7.40	Poor instrument integration
Nitroglycerine	55-63-0	2	8.97	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.82	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.18	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.28	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.29	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.82	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.73	Poor instrument integration
PETN	78-11-5	2	18.56	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 37.569ppb

response 116625

(1) TNX #2

1.32min 39.974ppb

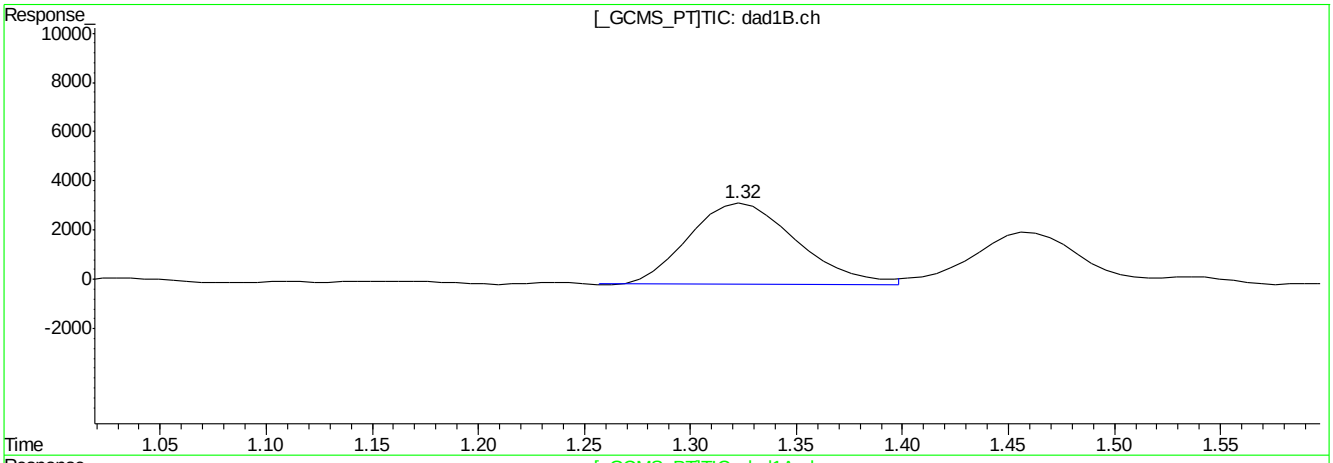
response 186214

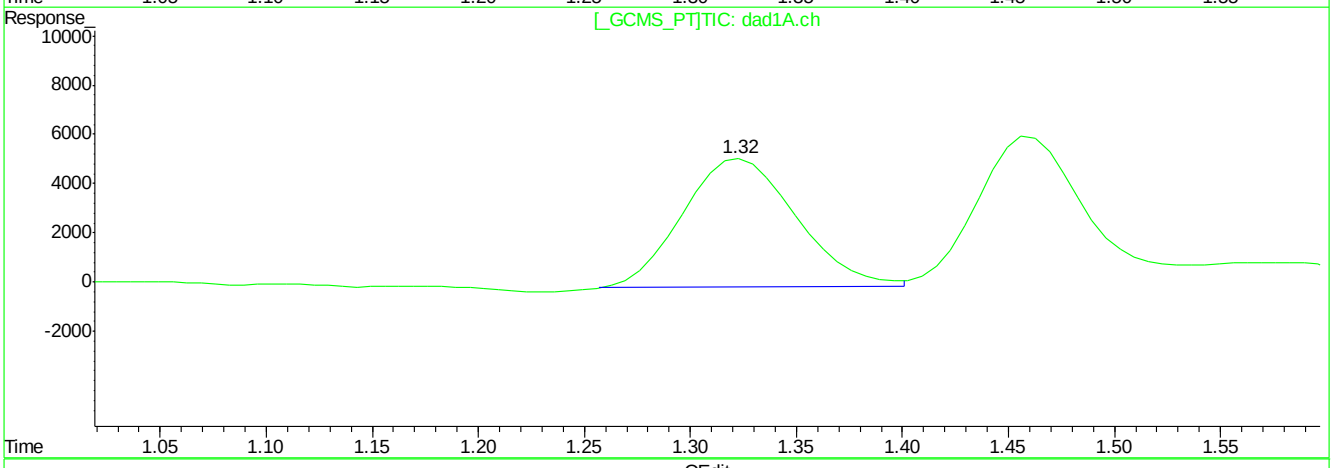
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:42:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 37.569ppb

response 116625

(1) TNX #2

1.32min 41.326ppb m

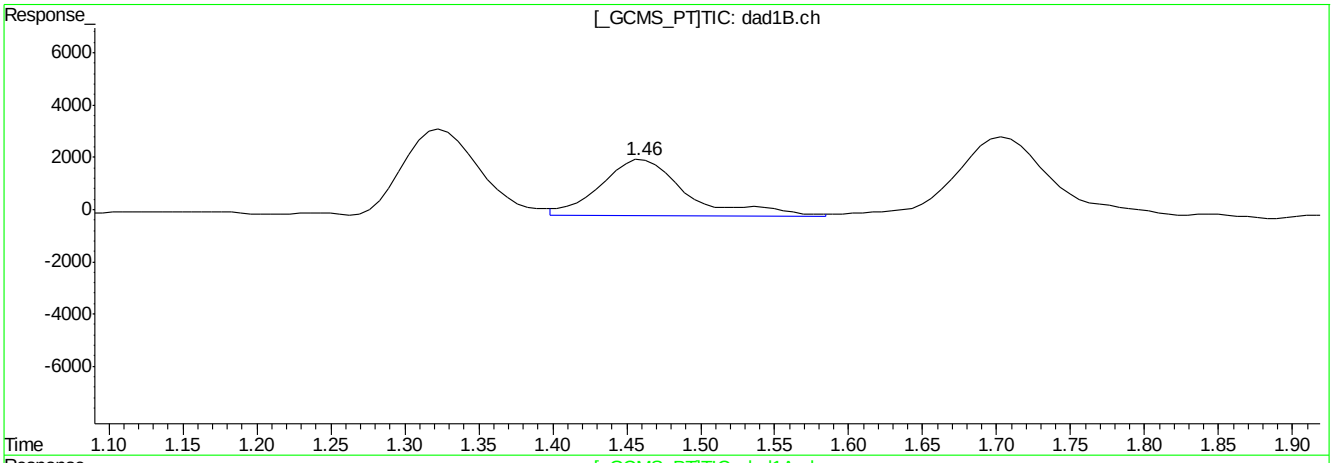
response 192514

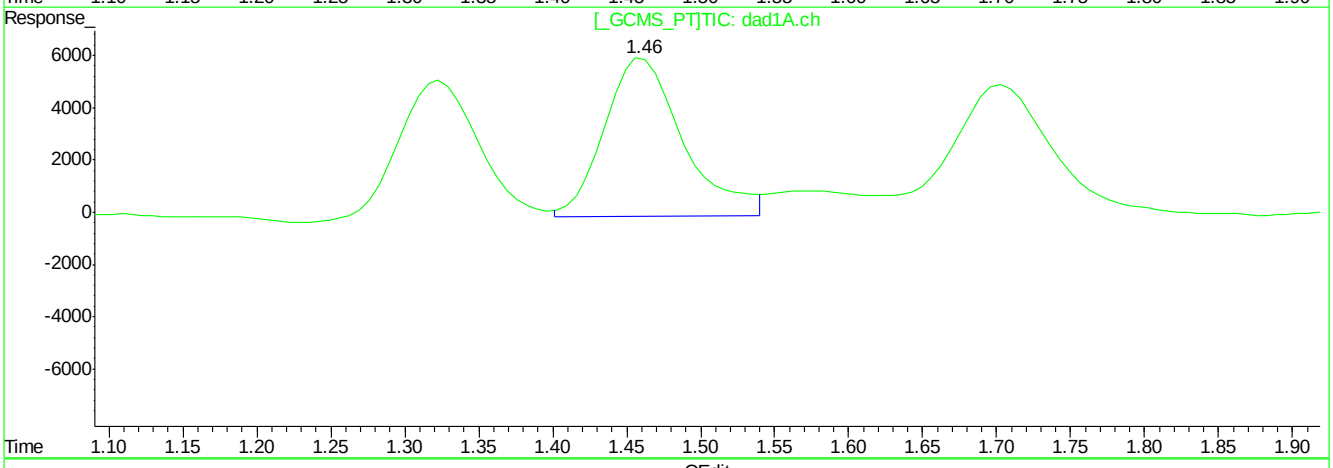
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:42:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.46min 56.309ppb

response 87753

(2) HMX #2

1.46min 52.429ppb

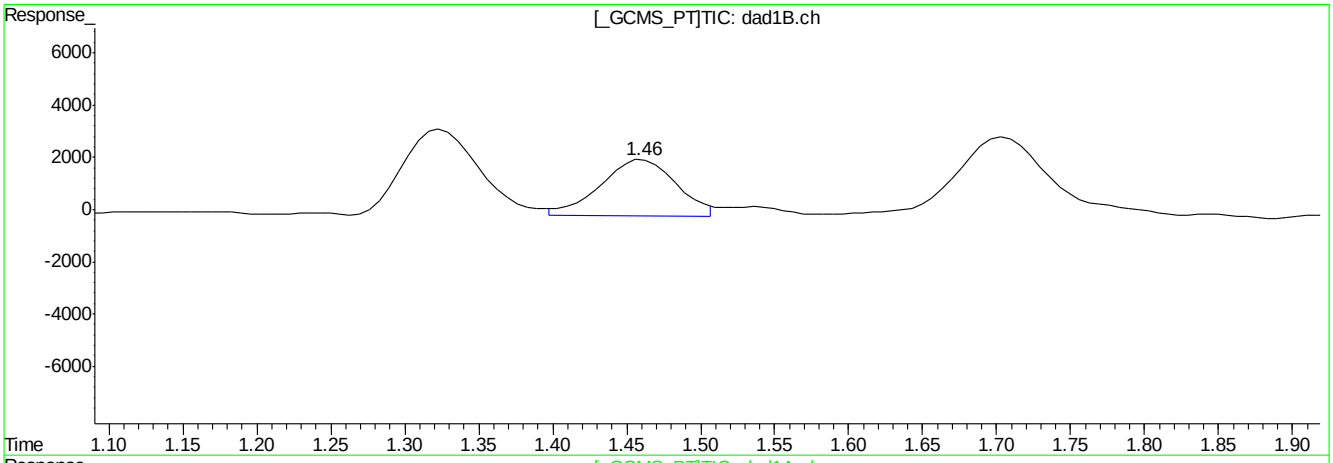
response 222838

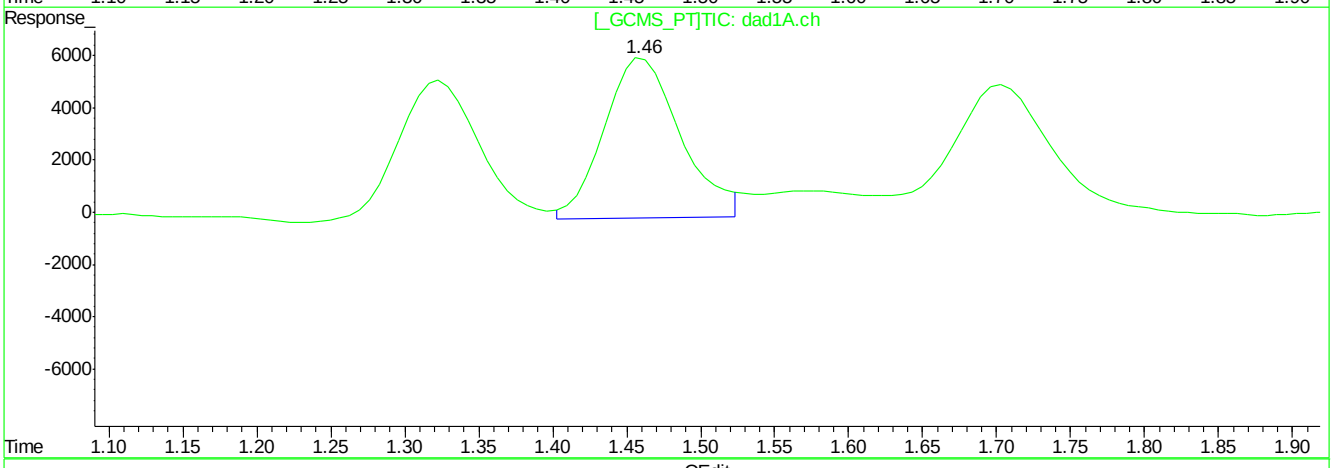
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:42:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.46min 48.357ppb m

response 75361

(2) HMX #2

1.46min 52.132ppb m

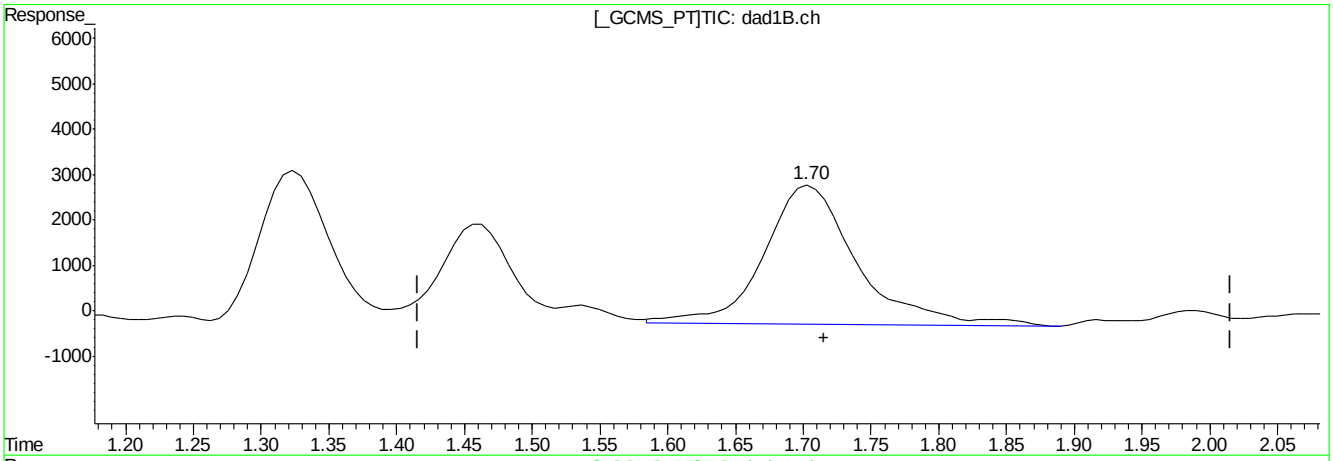
response 221577

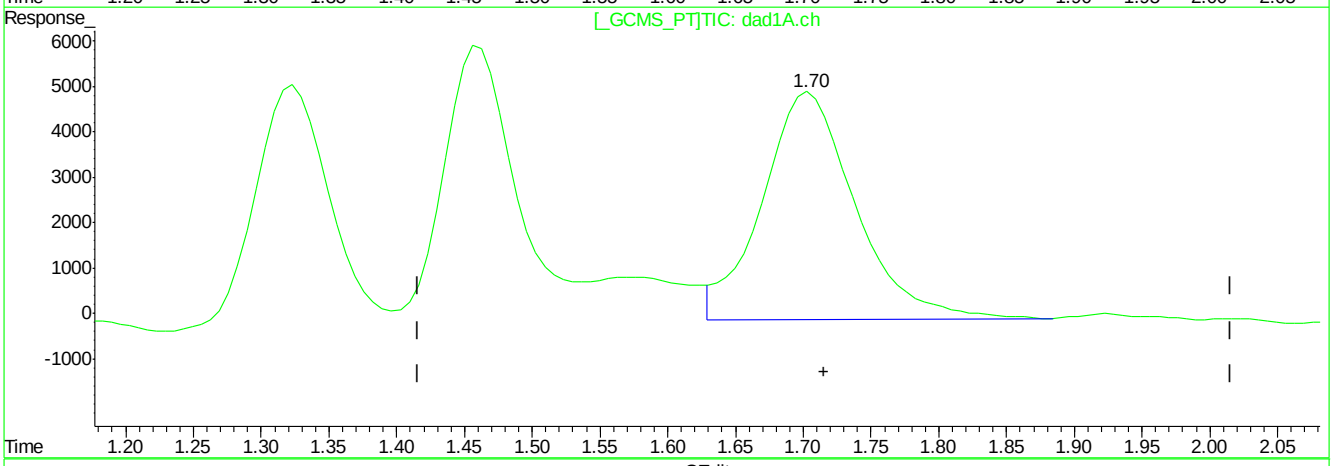
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:42:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.71min 57.806ppb

response 147610

(3) DNX #2

1.71min 64.822ppb

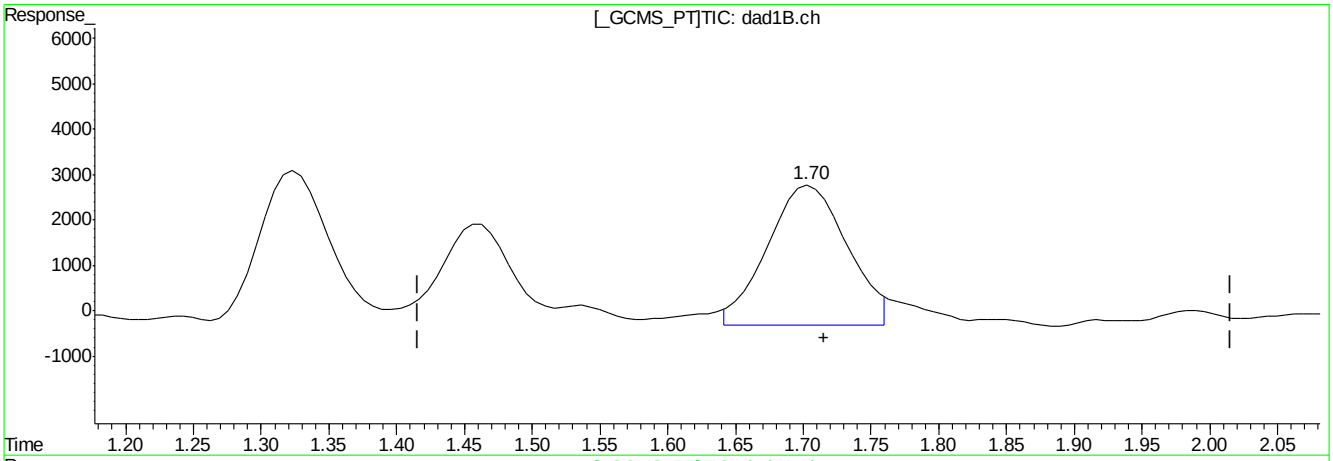
response 242145

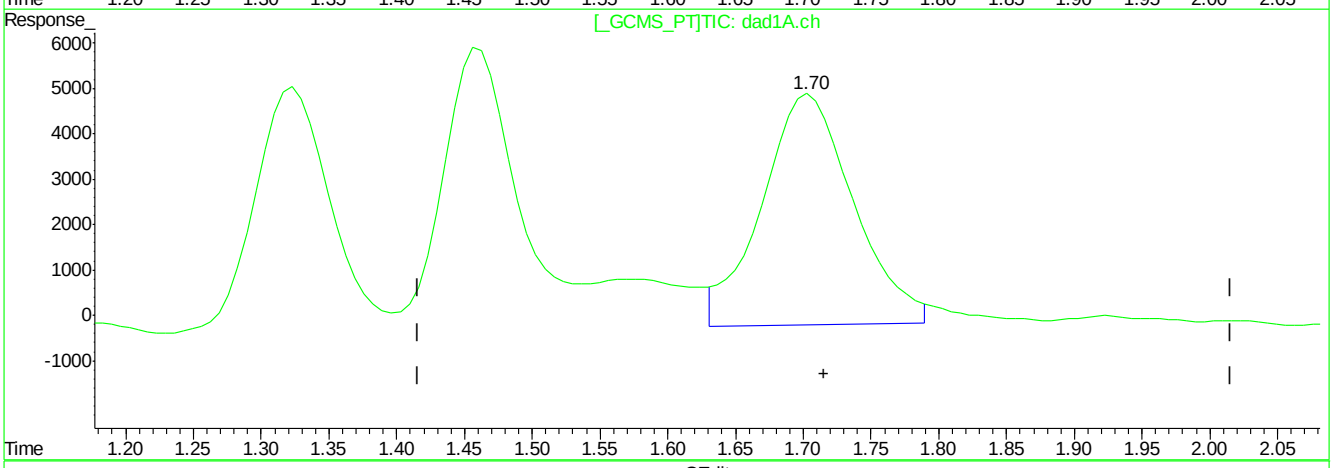
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:42:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.70min 49.729ppb m

response 126985

(3) DNX #2

1.70min 64.268ppb m

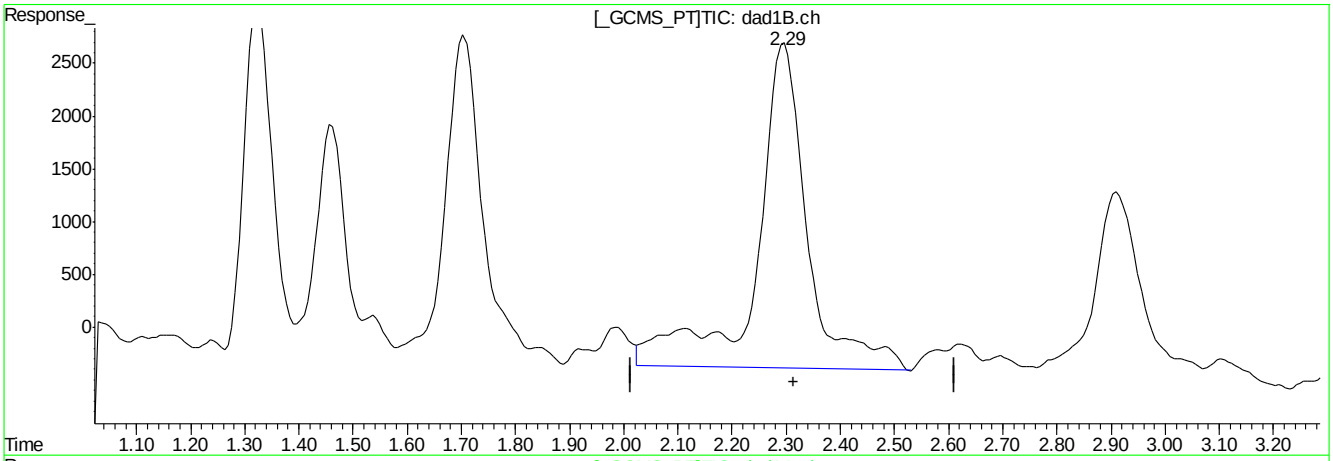
response 240076

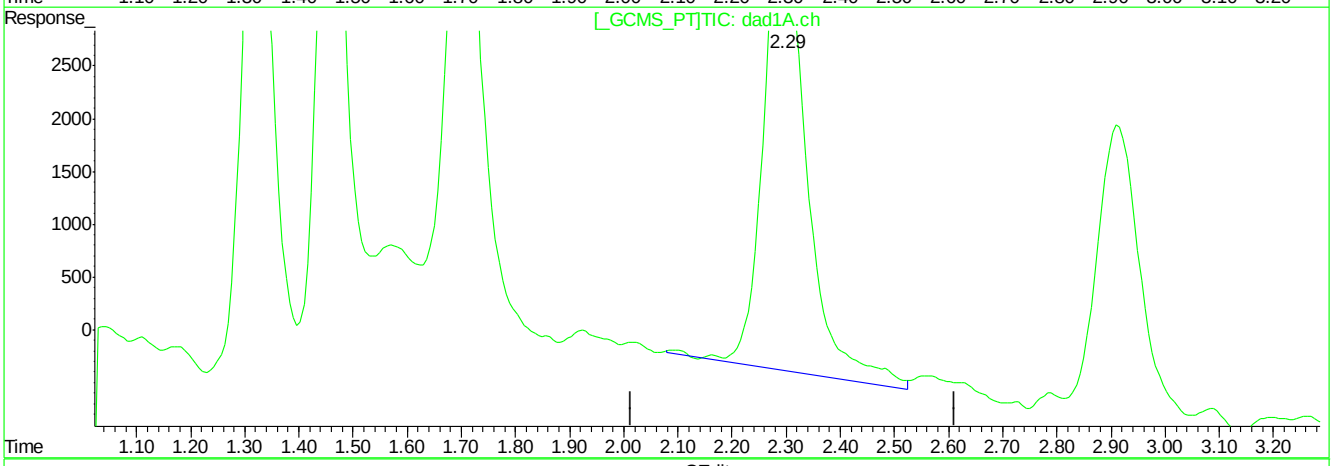
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:43:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.30min 72.274ppb

response 202338

(4) MNX #2

2.30min 57.442ppb

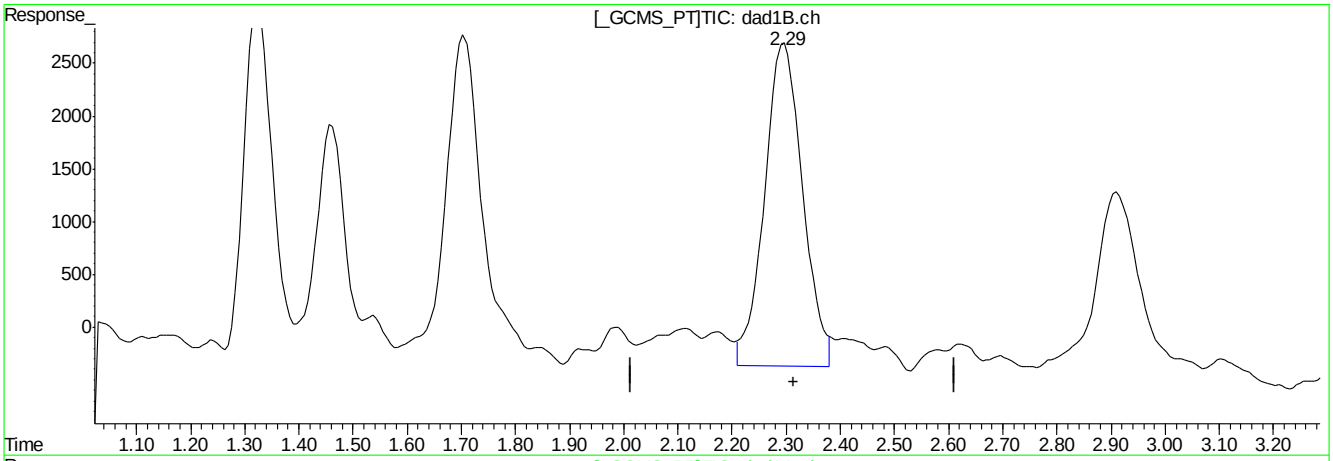
response 238865

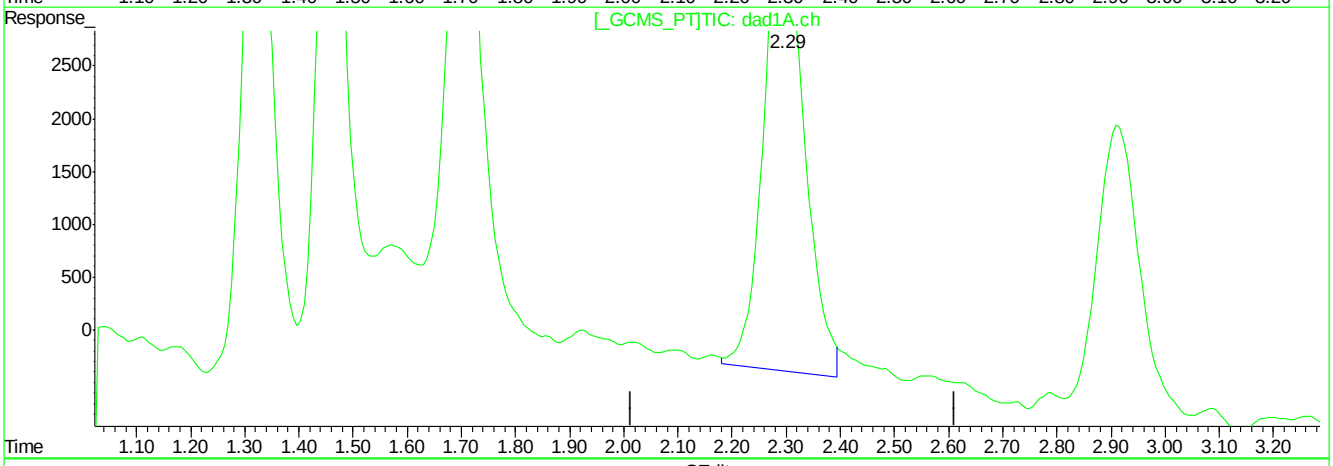
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:43:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.29min 53.552ppb m

response 149924

(4) MNX #2

2.29min 54.076ppb m

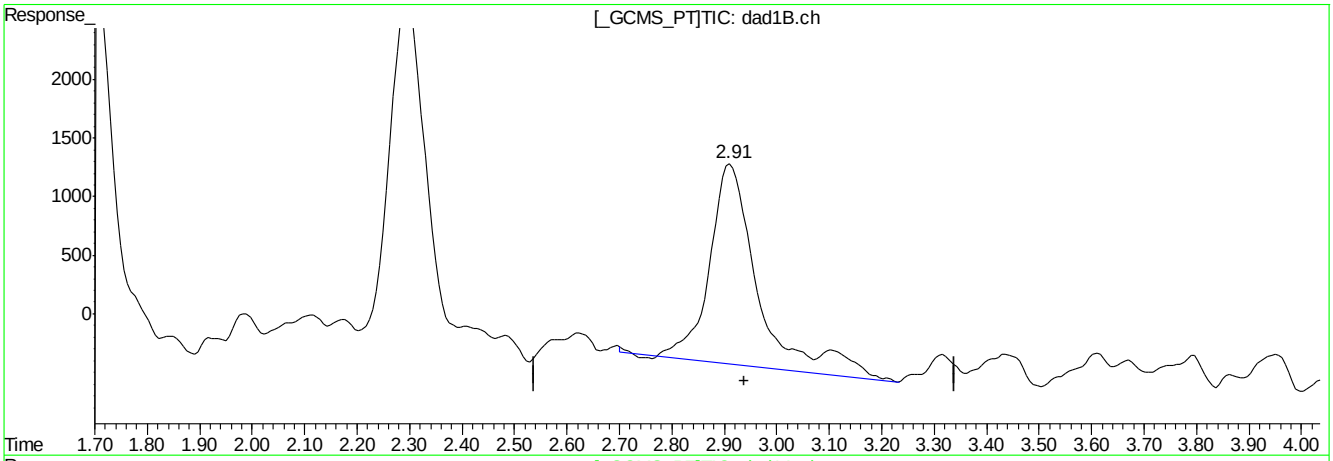
response 224866

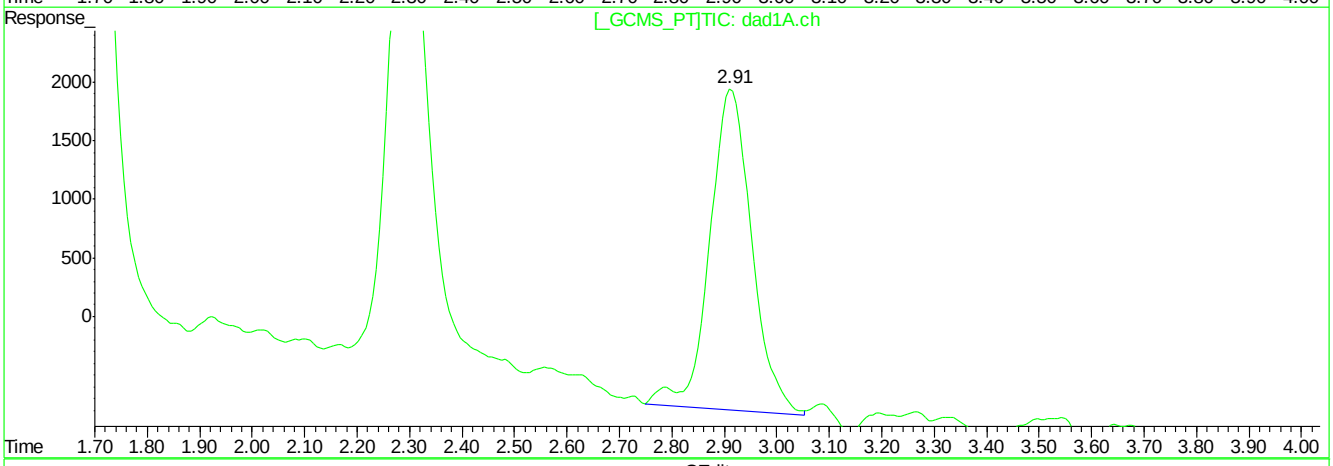
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:43:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.91min 58.634ppb

response 111643

(5) RDX #2

2.91min 49.955ppb

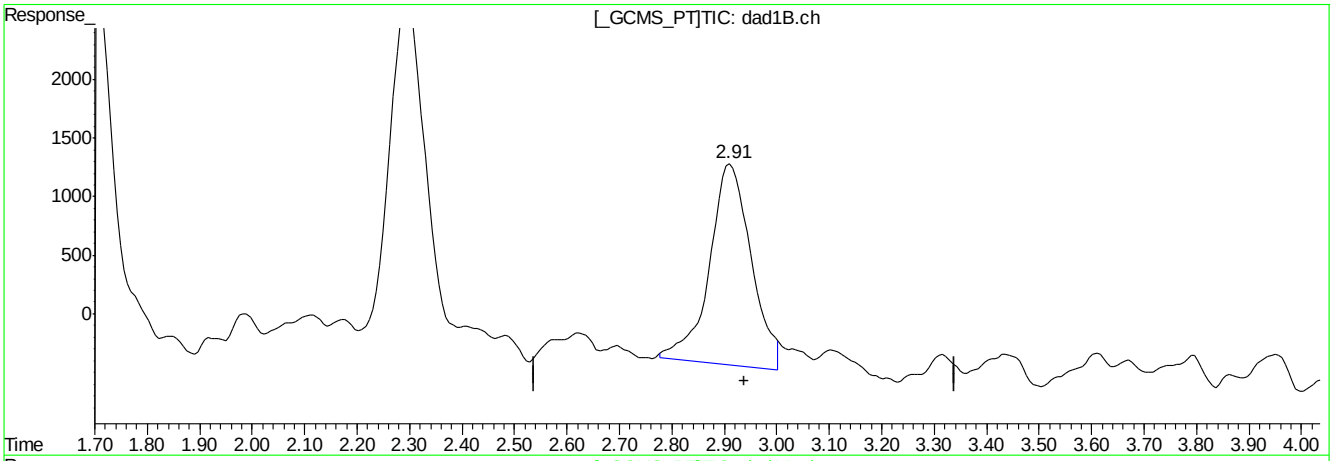
response 153113

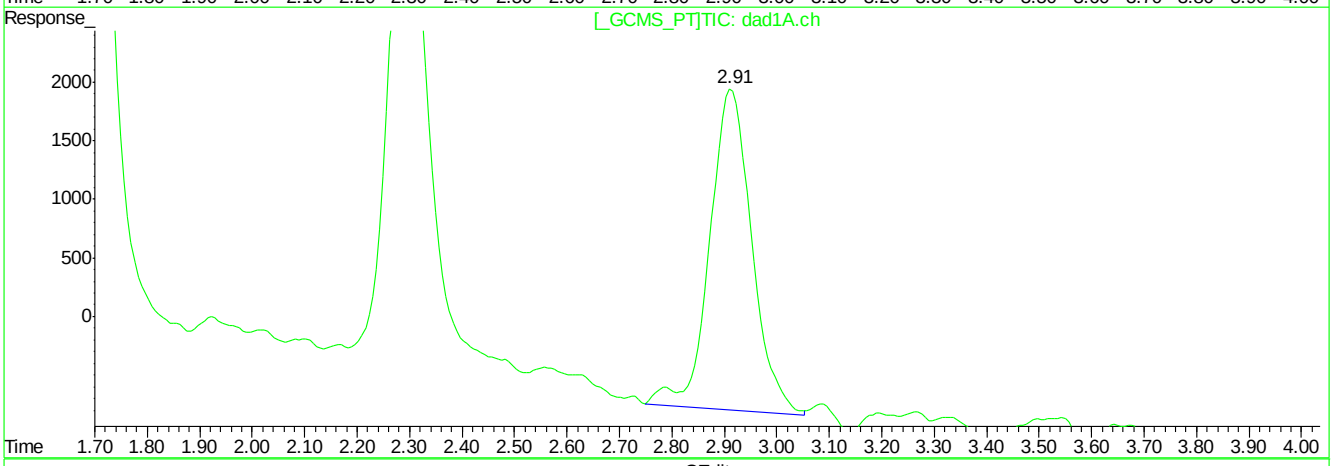
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:43:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.91min 49.624ppb m

response 94486

(5) RDX #2

2.91min 49.955ppb

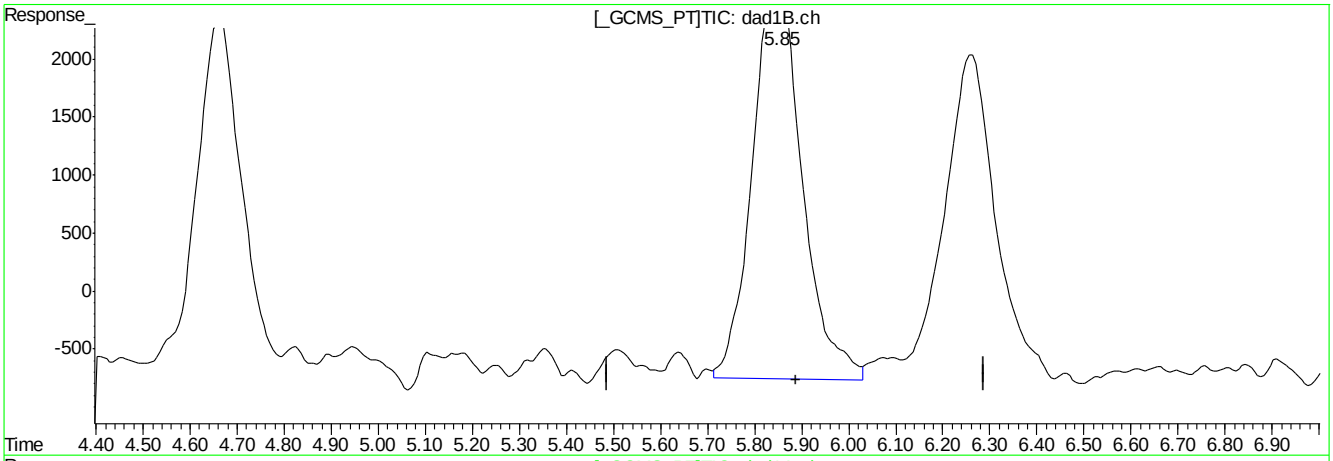
response 153113

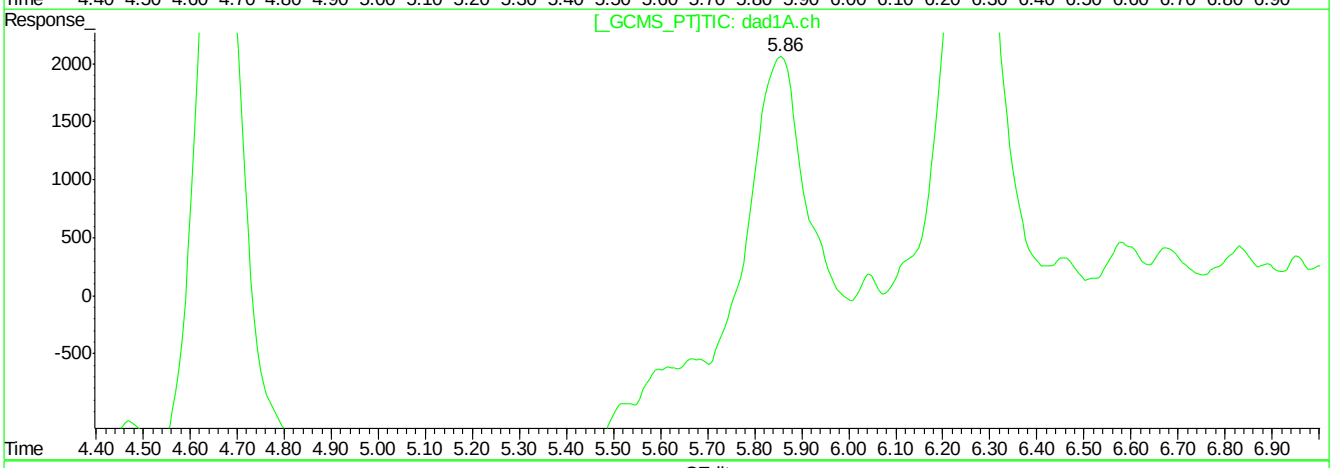
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:43:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 46.821ppb

response 252164

(7) 1,3-Dinitrobenzene #2

5.86min 115.797ppb

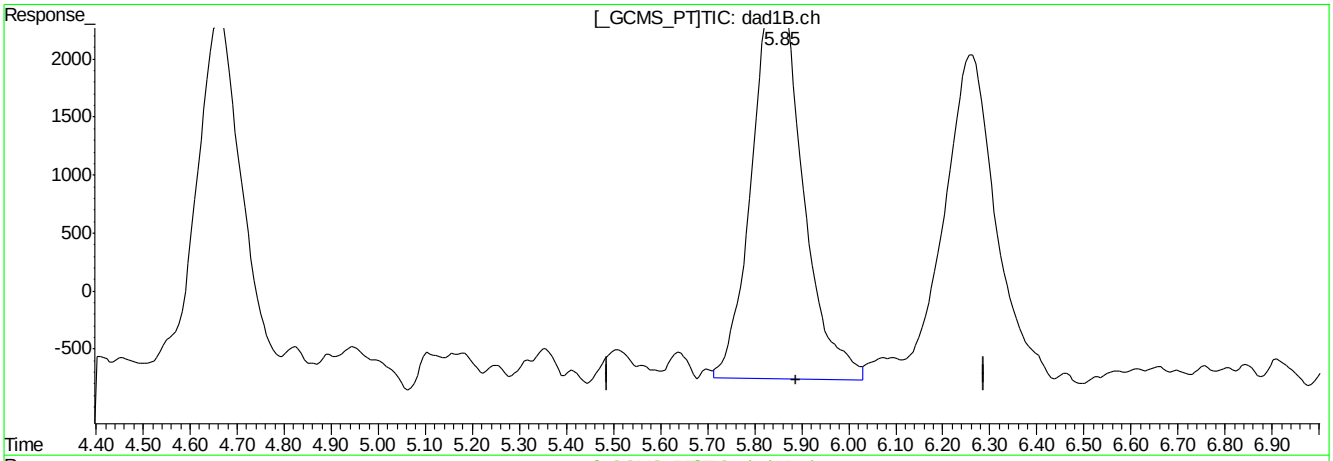
response 414795

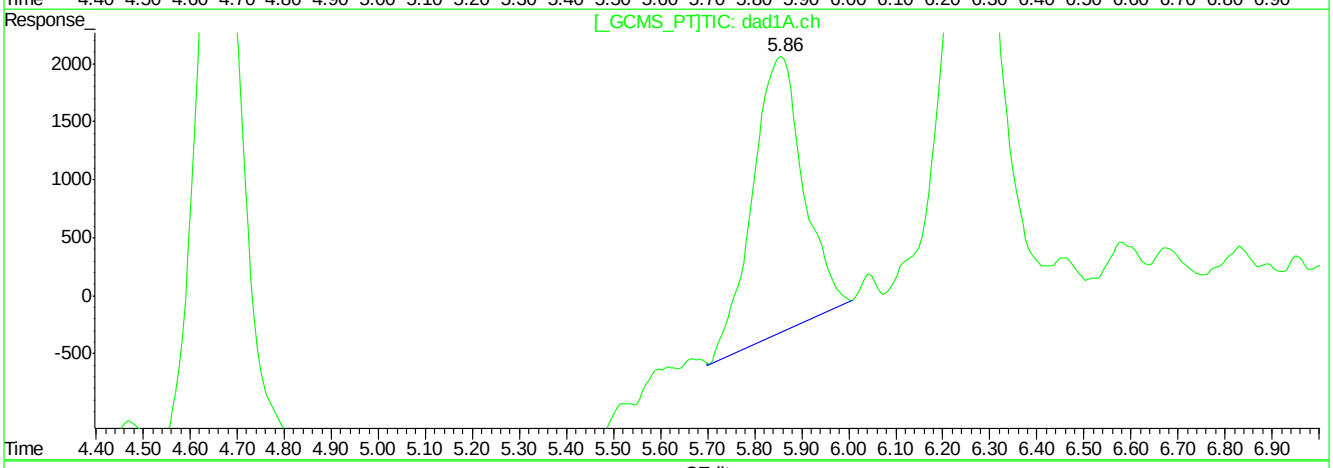
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:43:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 46.821ppb

response 252164

(7) 1,3-Dinitrobenzene #2

5.86min 50.334ppb m

response 180299

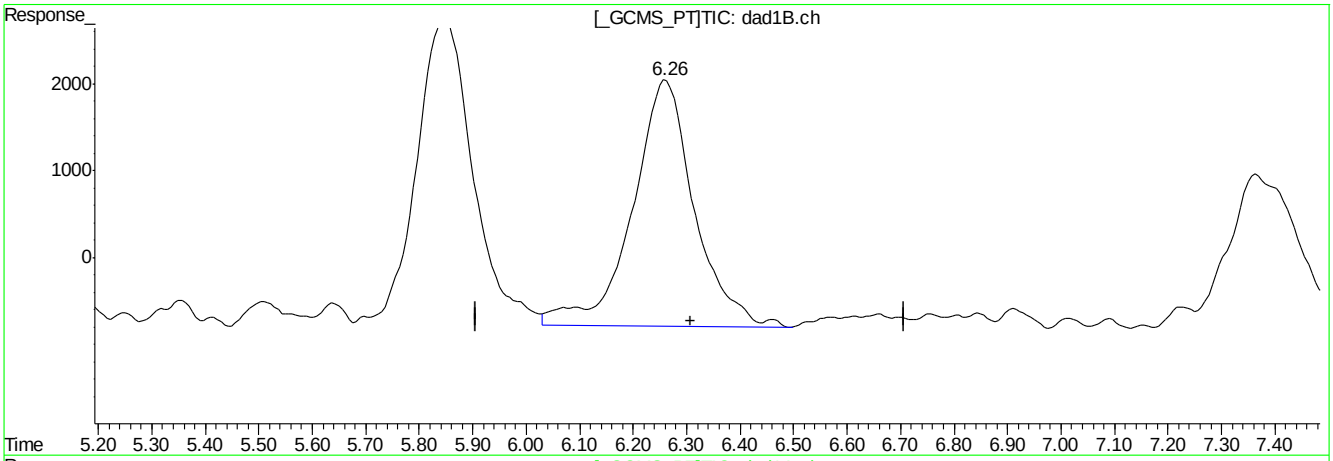
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:43:38 2021

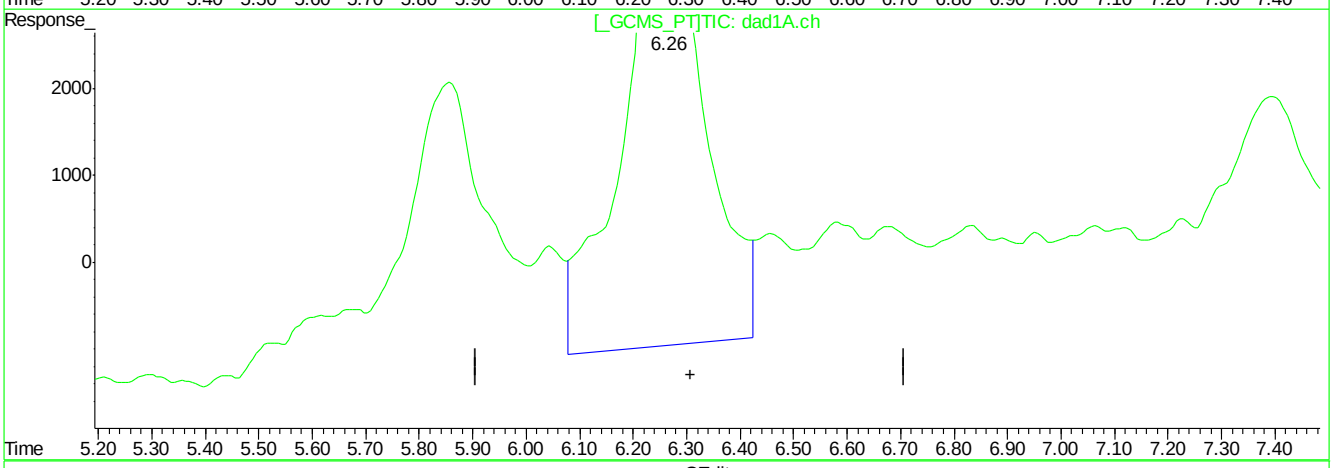
PP390447.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.26min 56.465ppb

response 227279

(8) 3,5-Dinitroaniline #2

6.26min 77.076ppb

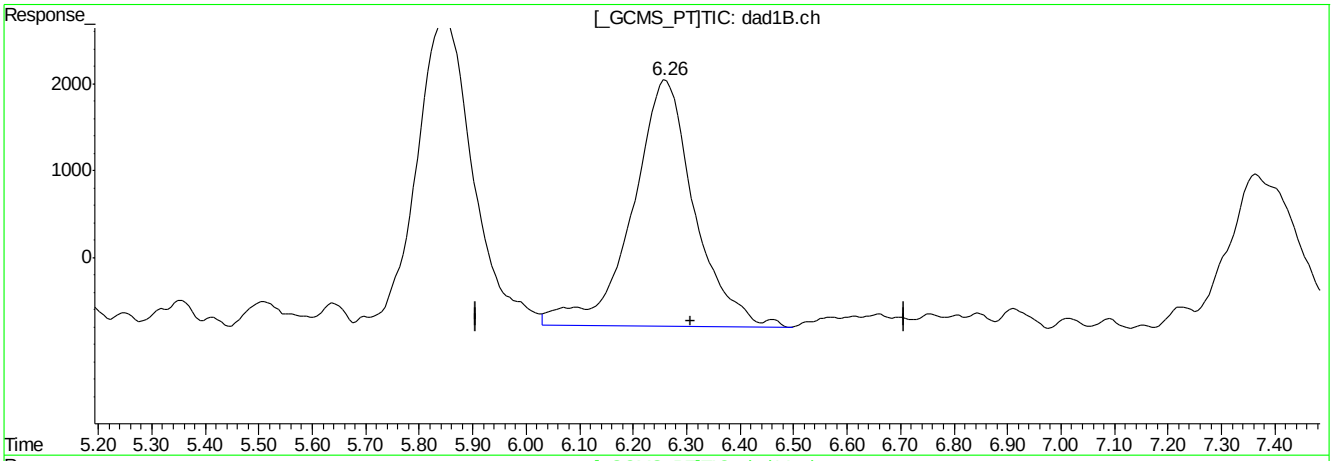
response 563779

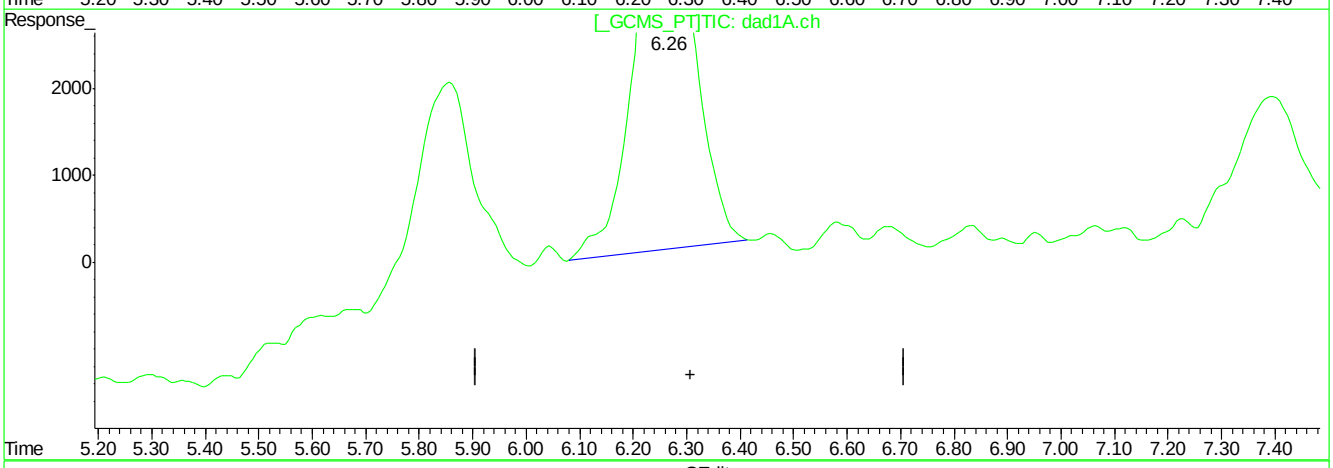
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:43:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.26min 56.465ppb

response 227279

(8) 3,5-Dinitroaniline #2

6.26min 45.880ppb m

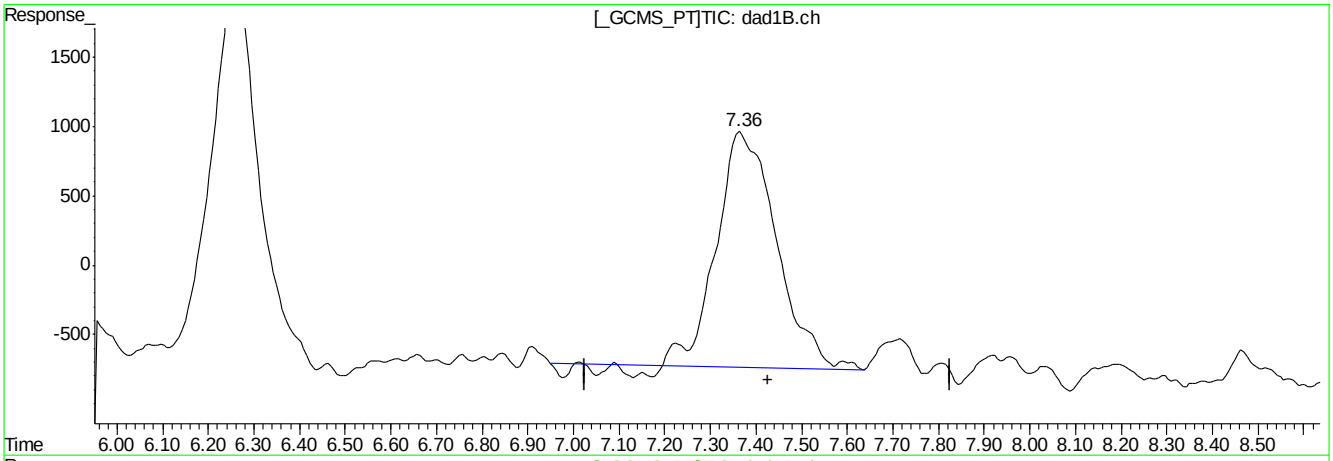
response 335593

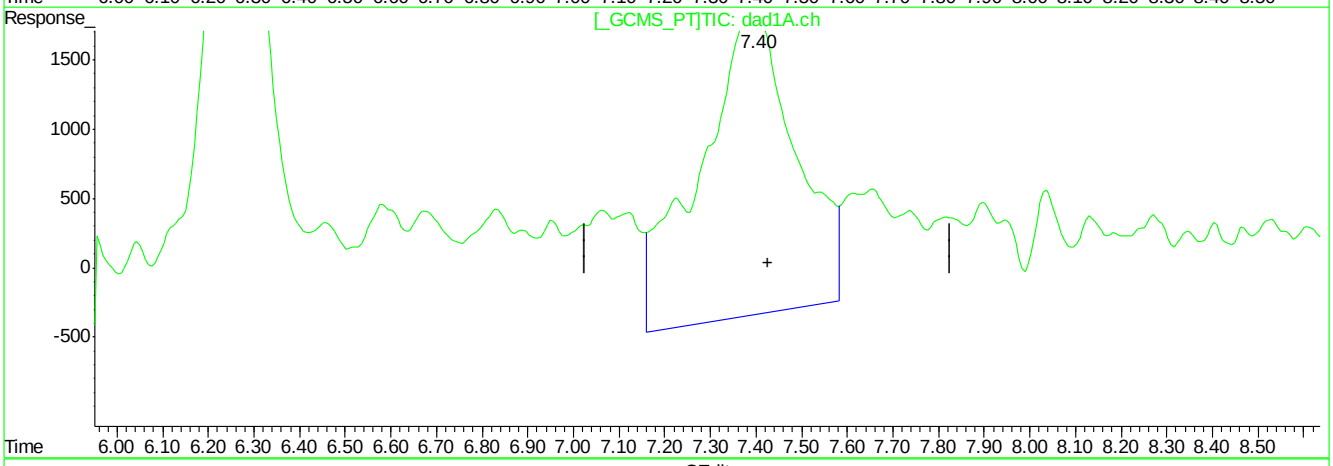
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:43:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.37min 49.440ppb

response 148840

(9) Nitrobenzene #2

7.40min 102.232ppb

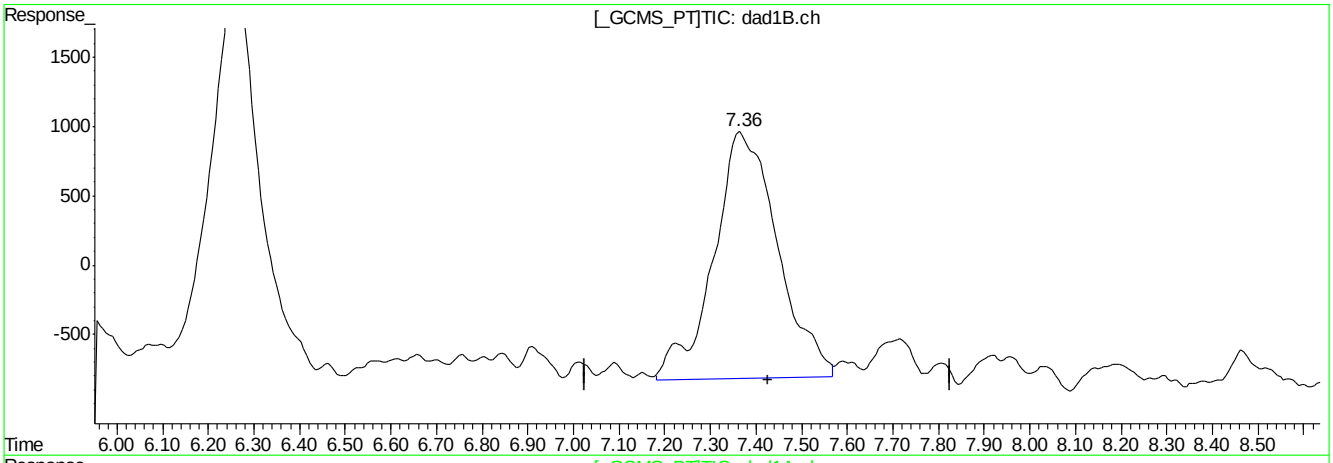
response 319708

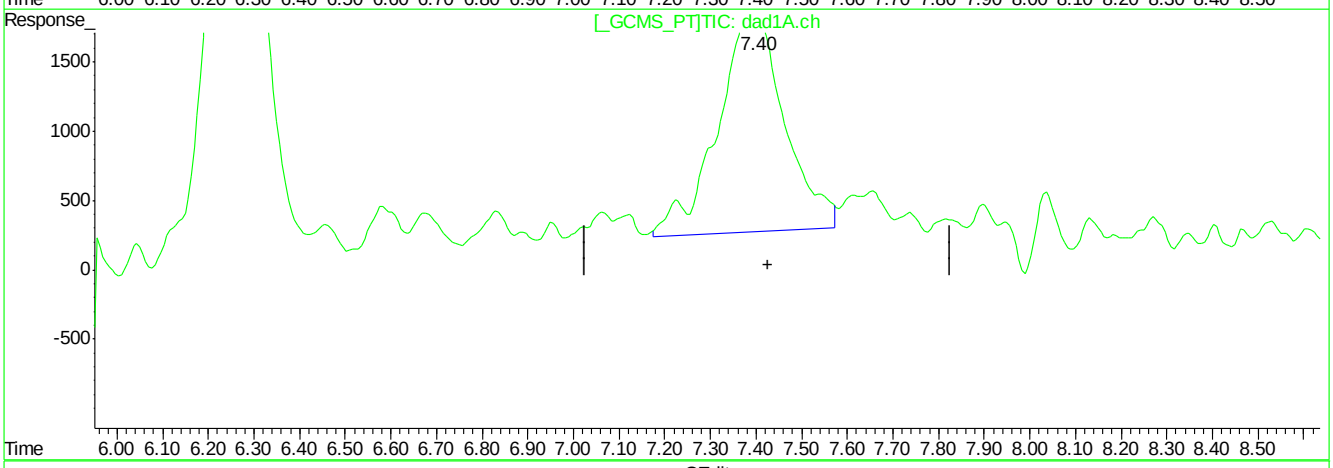
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:43:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.36min 57.680ppb m

response 173647

(9) Nitrobenzene #2

7.40min 51.604ppb m

response 161378

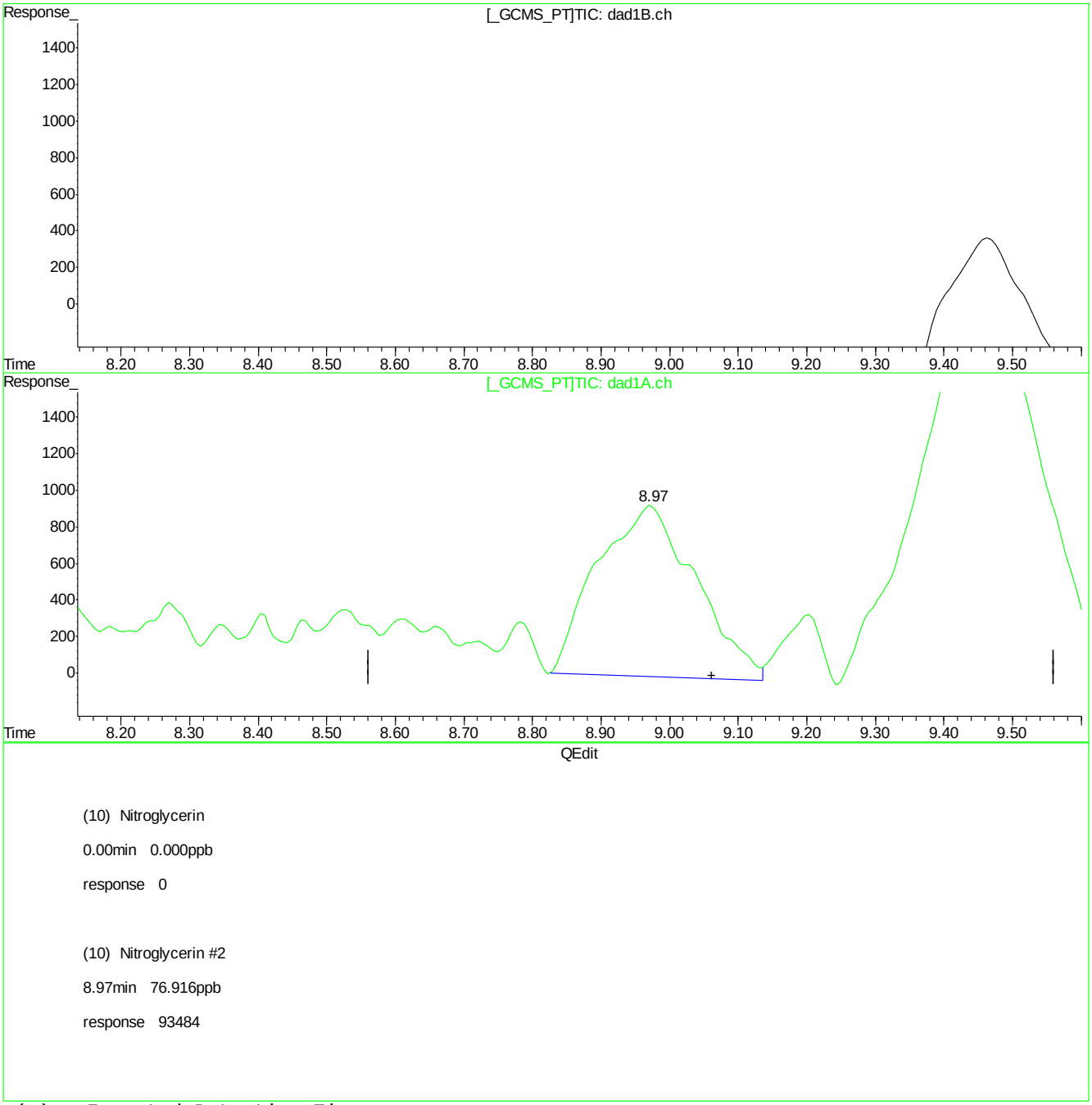
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:44:04 2021

PP390447.D edits: Nitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



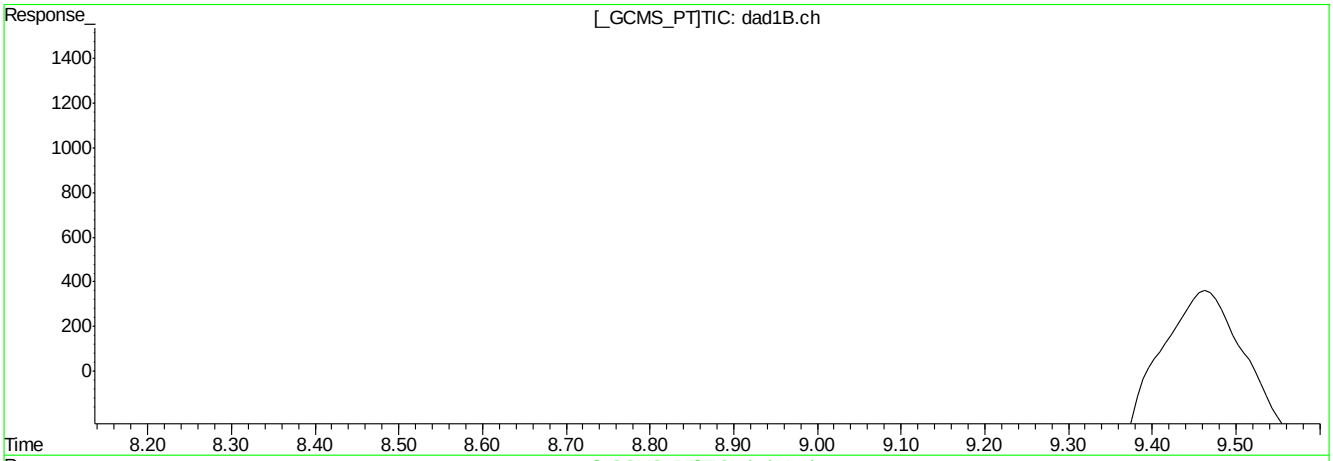
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:44:14 2021

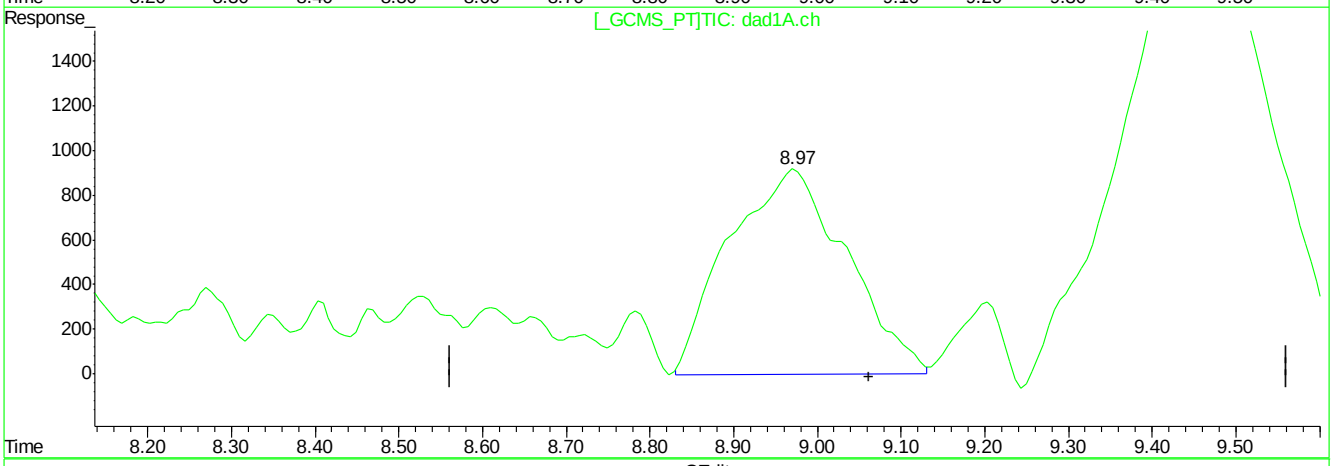
PP390447.D edits: Nitroglycerin

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

8.97min 74.312ppb m

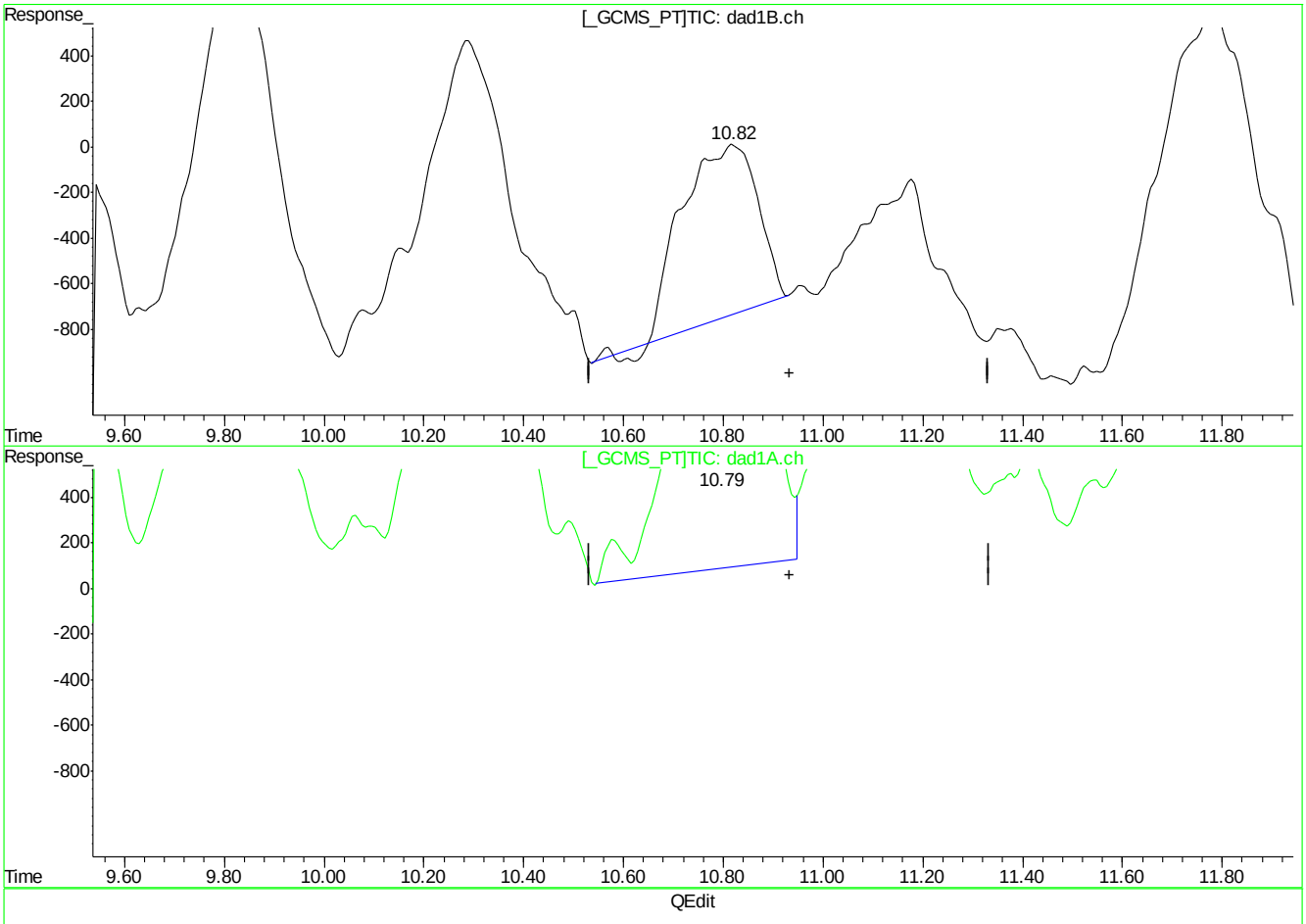
response 90319

(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:44:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(14) 4-Amino-2,6-Dinitrotoluene

10.82min 32.269ppb

response 79177

(14) 4-Amino-2,6-Dinitrotoluene #2

10.80min 48.733ppb

response 214052

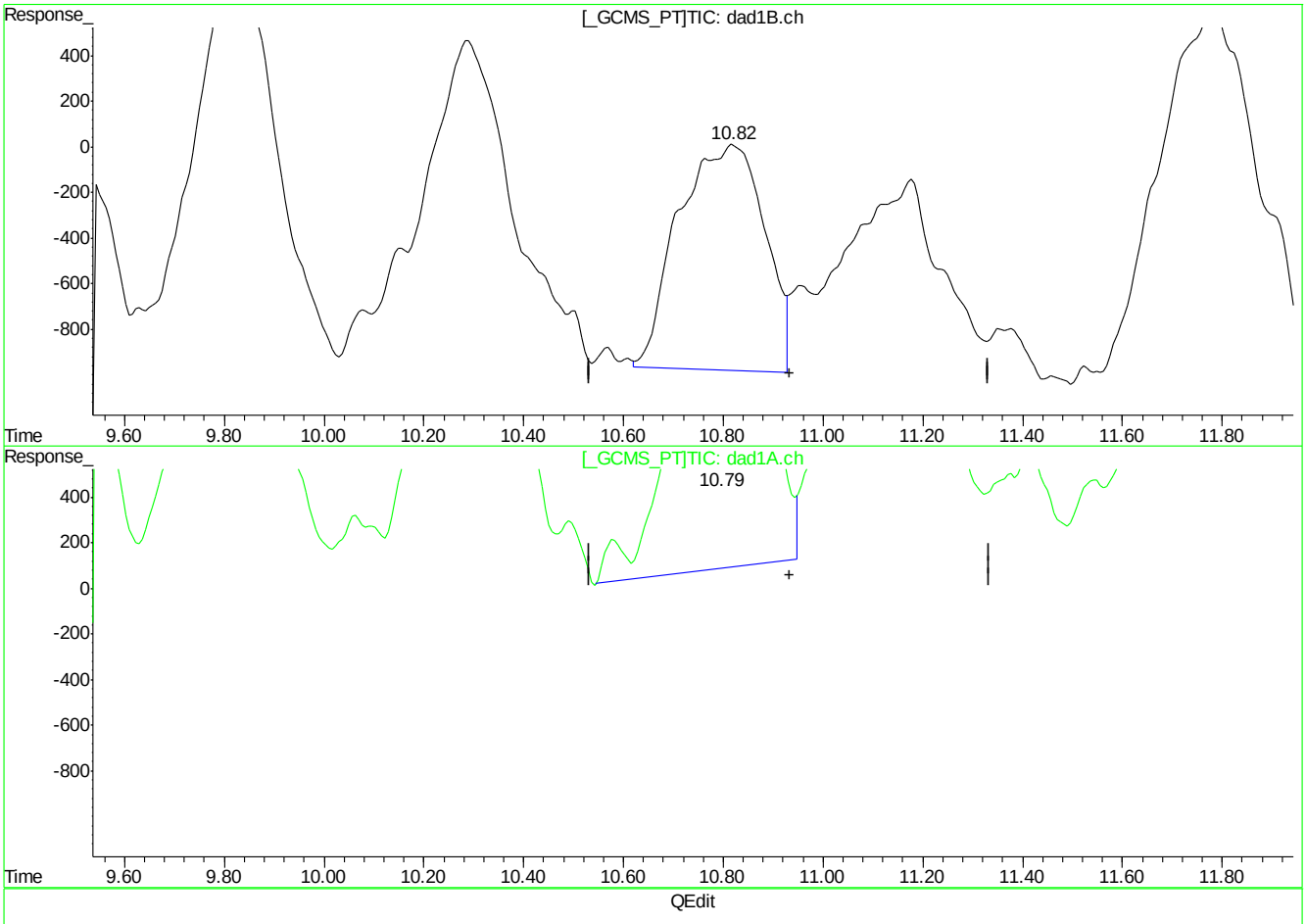
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:44:32 2021

PP390447.D edits: 4-Amino-2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(14) 4-Amino-2,6-Dinitrotoluene

10.82min 47.985ppb m

response 117740

(14) 4-Amino-2,6-Dinitrotoluene #2

10.80min 48.733ppb

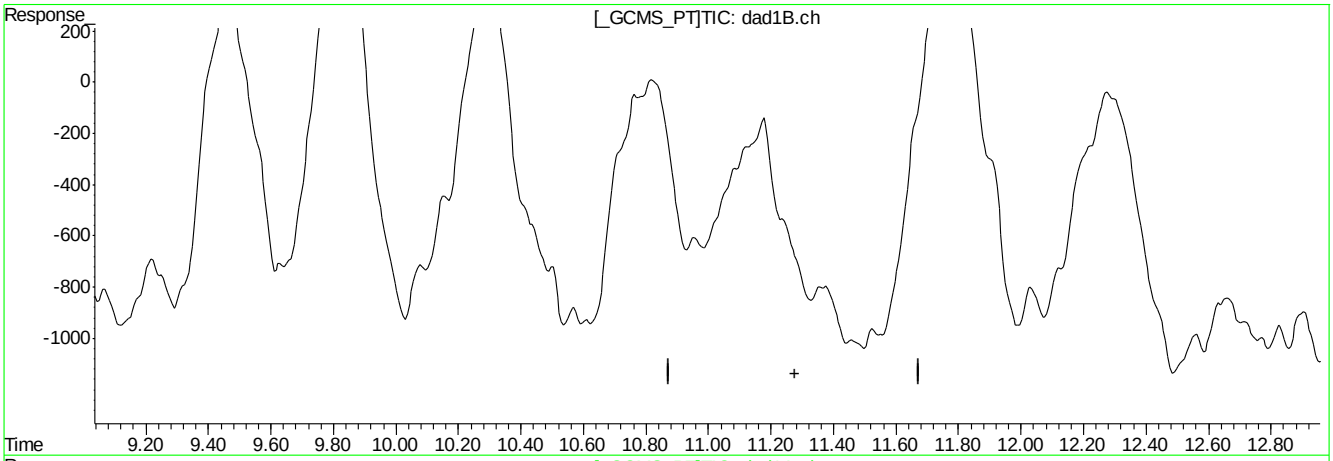
response 214052

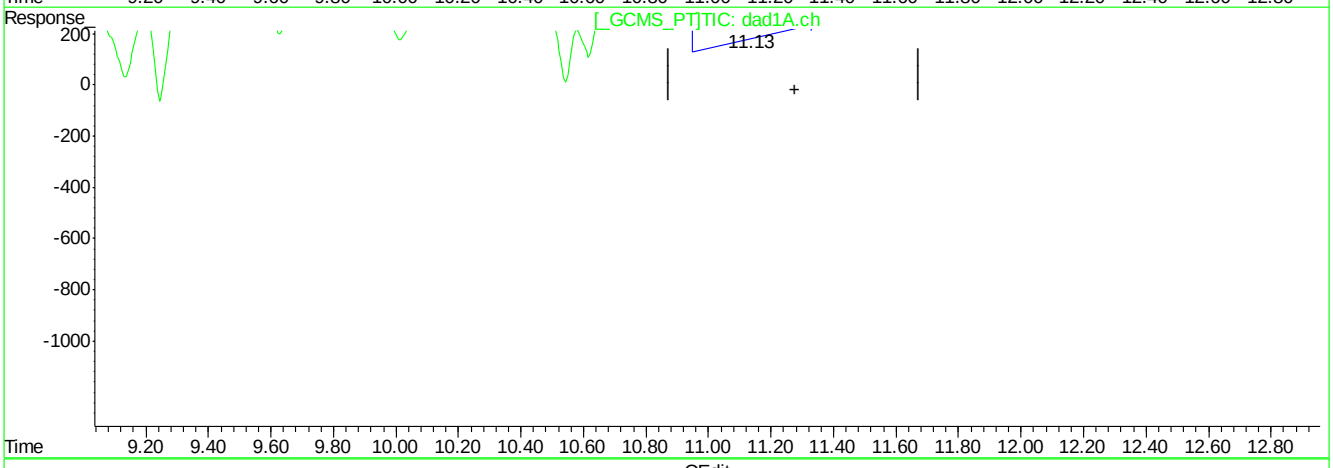
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:44:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

0.00min 0.000ppb

response 0

(15) 3,4-Dinitrotoluene #2 (S)

11.14min 48.135ppb

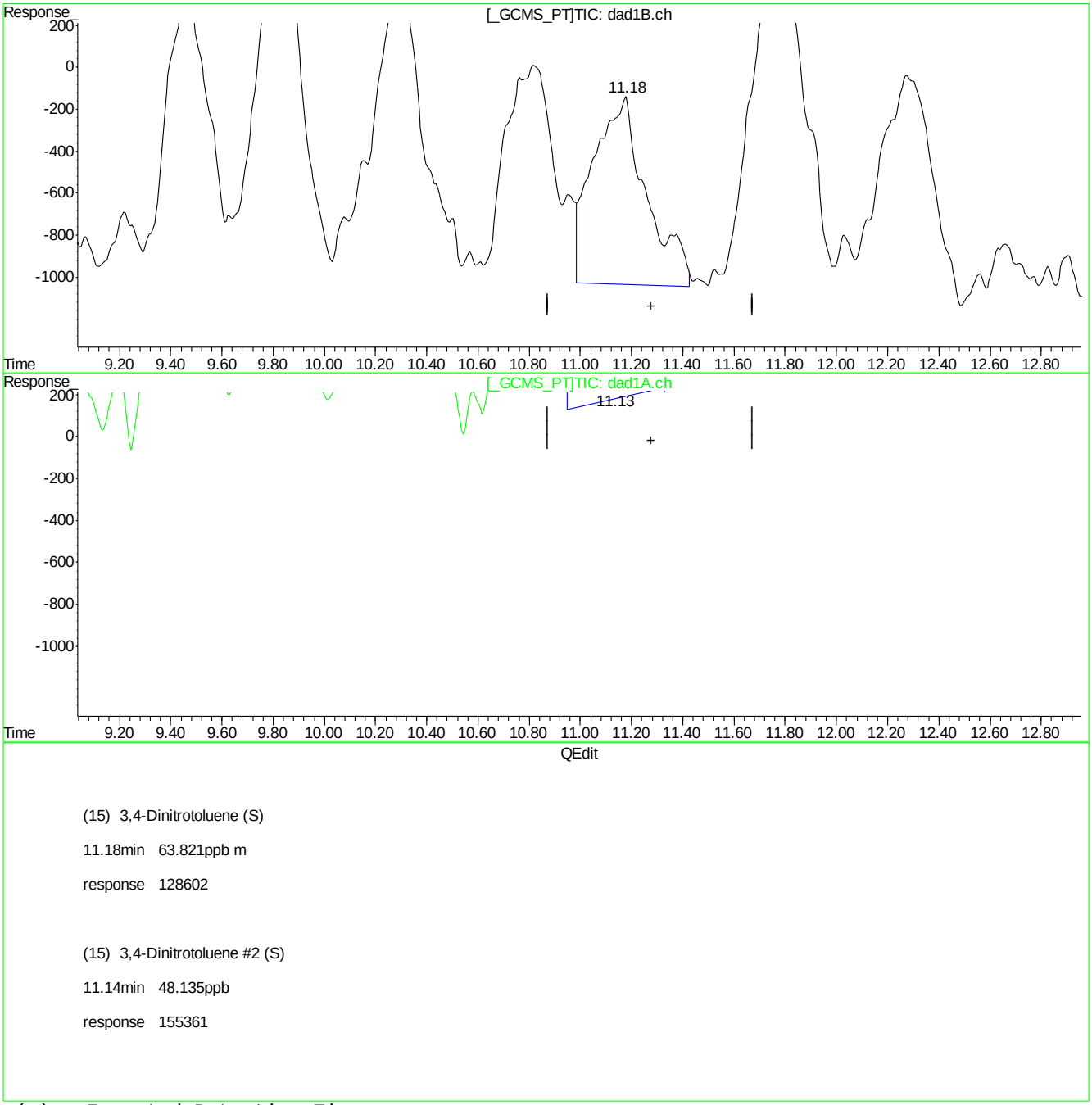
response 155361

(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:44:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(15) 3,4-Dinitrotoluene (S)

11.18min 63.821ppb m

response 128602

(15) 3,4-Dinitrotoluene #2 (S)

11.14min 48.135ppb

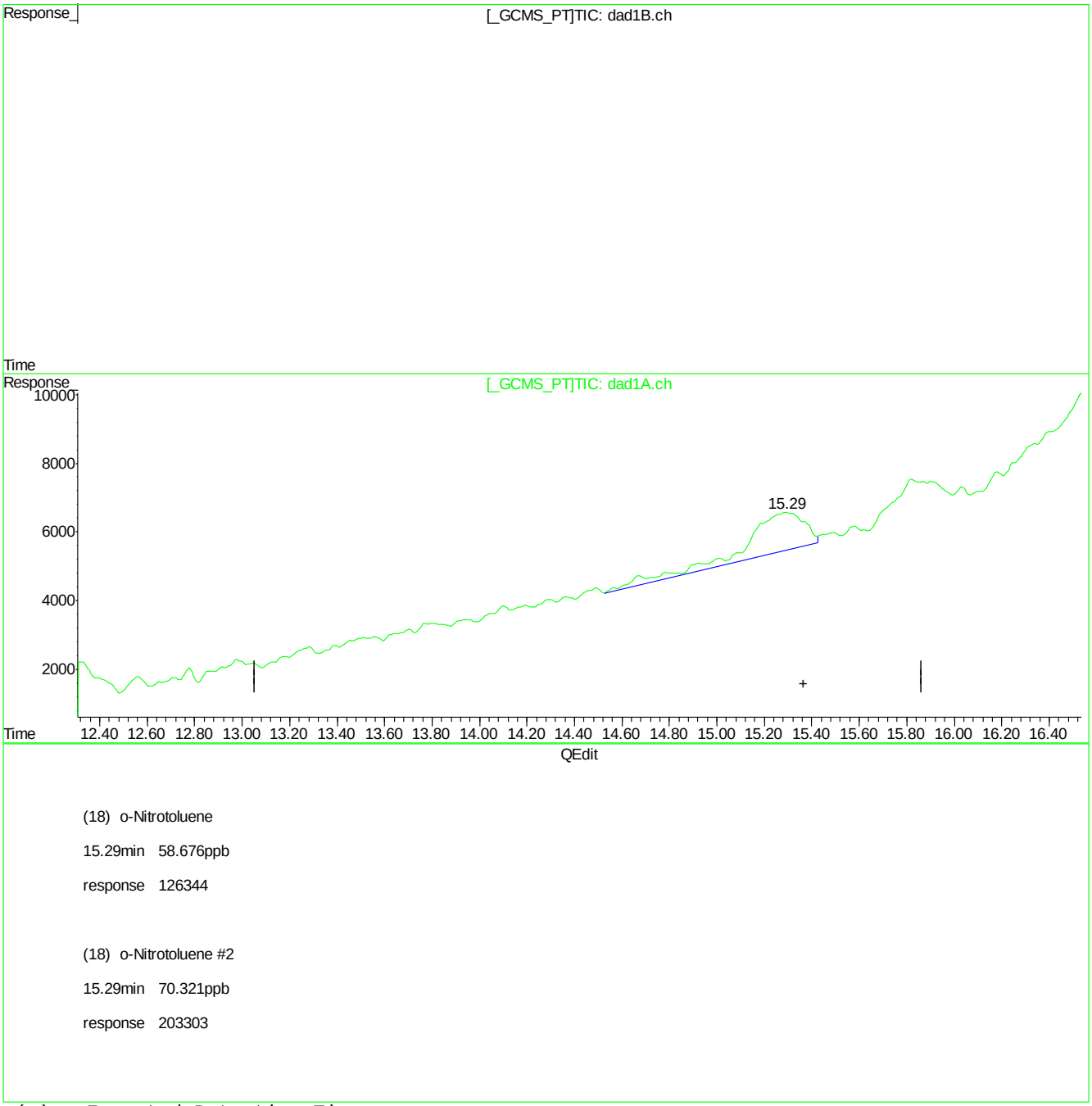
response 155361

(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:44:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.29min 58.676ppb

response 126344

(18) o-Nitrotoluene #2

15.29min 70.321ppb

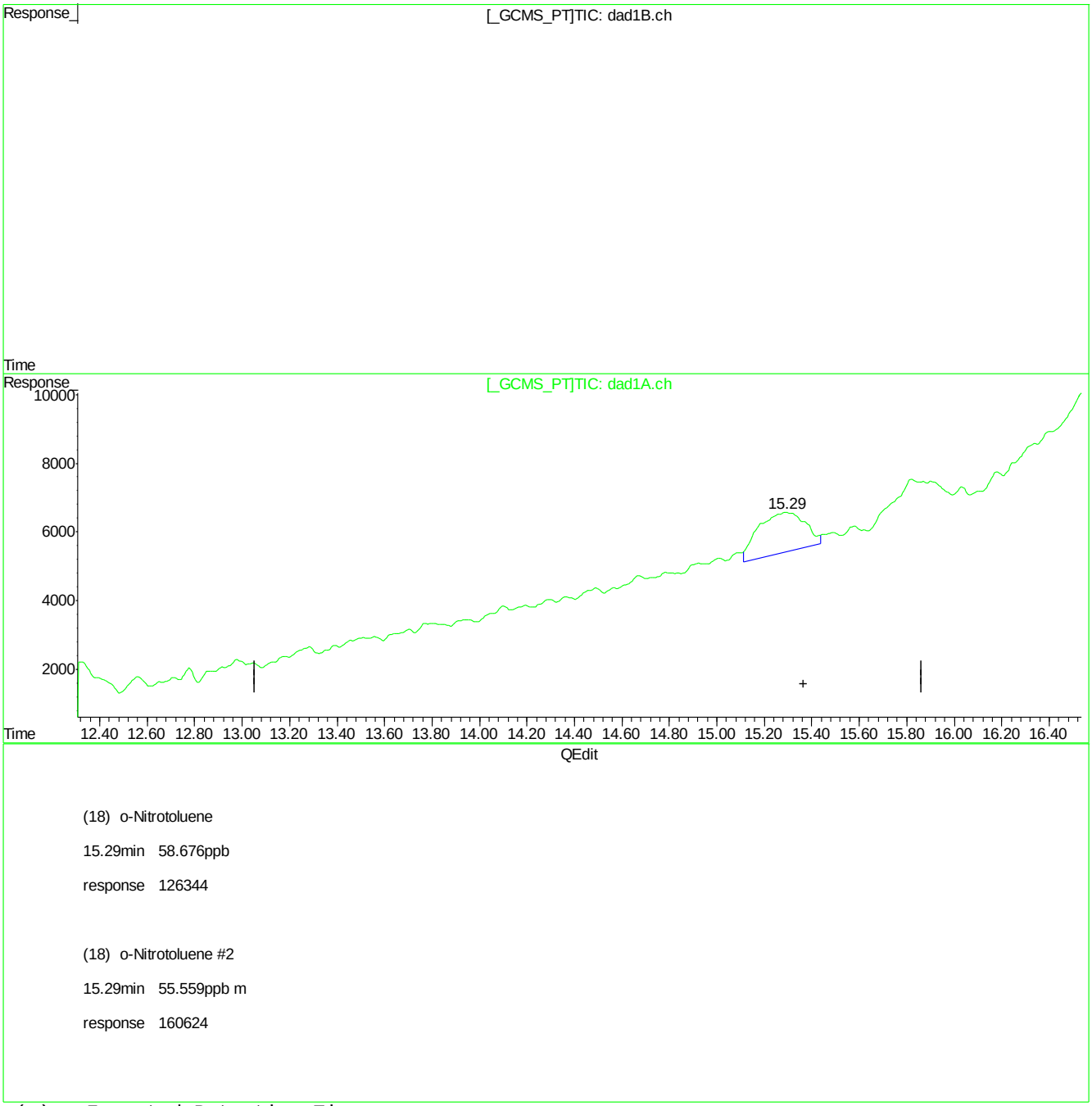
response 203303

(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:45:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.29min 58.676ppb

response 126344

(18) o-Nitrotoluene #2

15.29min 55.559ppb m

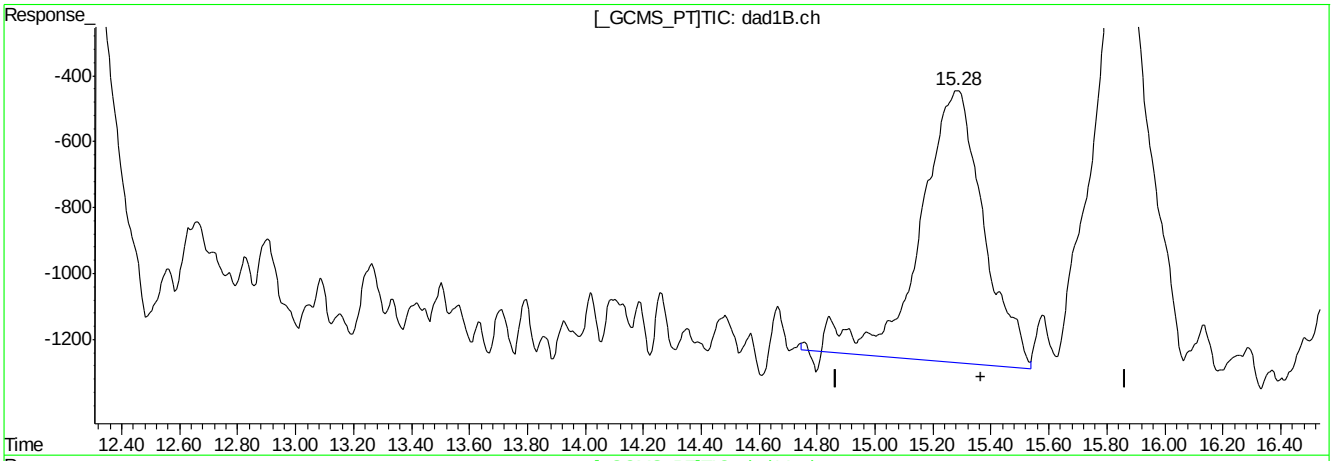
response 160624

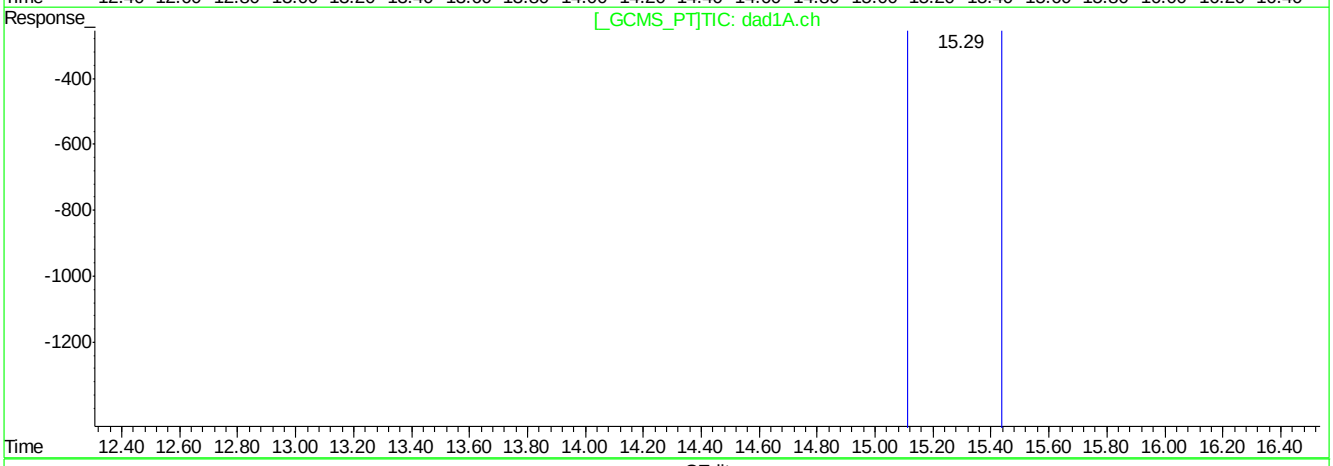
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:45:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.29min 58.676ppb

response 126344

(18) o-Nitrotoluene #2

15.29min 55.559ppb m

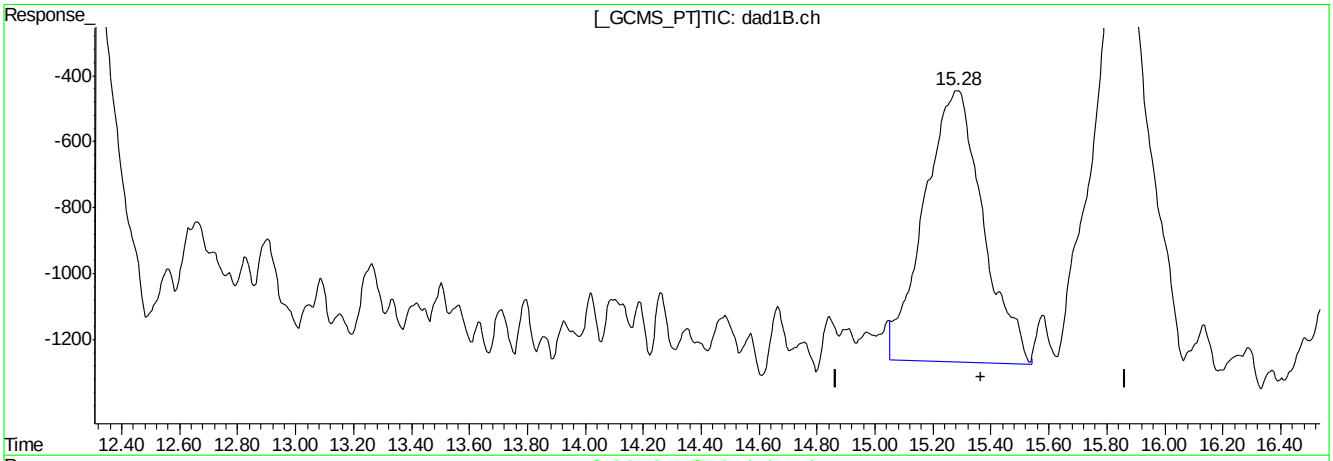
response 160624

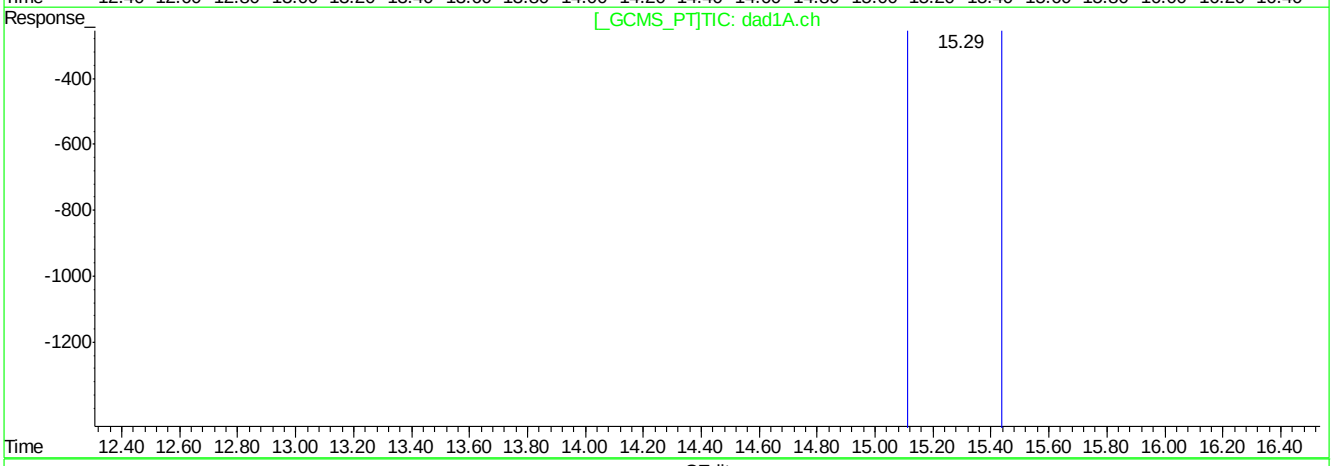
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:45:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.28min 54.053ppb m

response 116389

(18) o-Nitrotoluene #2

15.29min 55.559ppb m

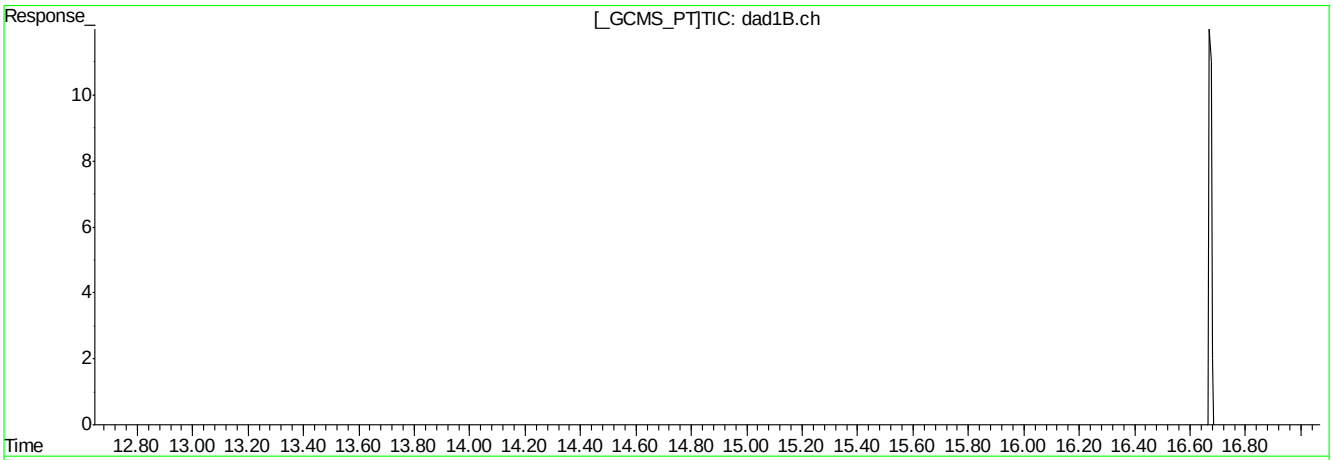
response 160624

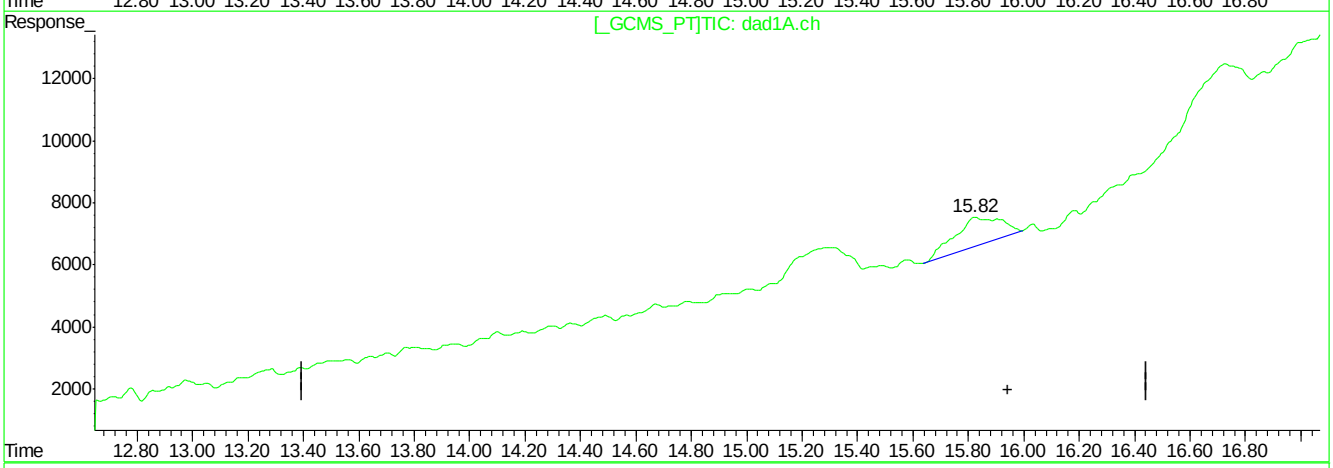
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:45:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.86min 52.689ppb

response 180207

(19) p-Nitrotoluene #2

15.83min 38.387ppb

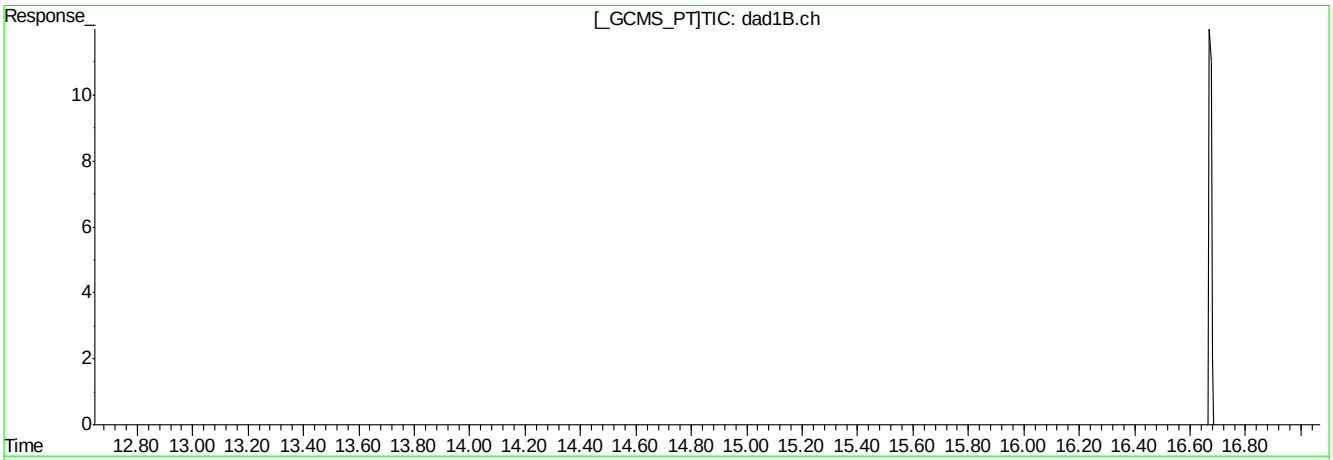
response 106371

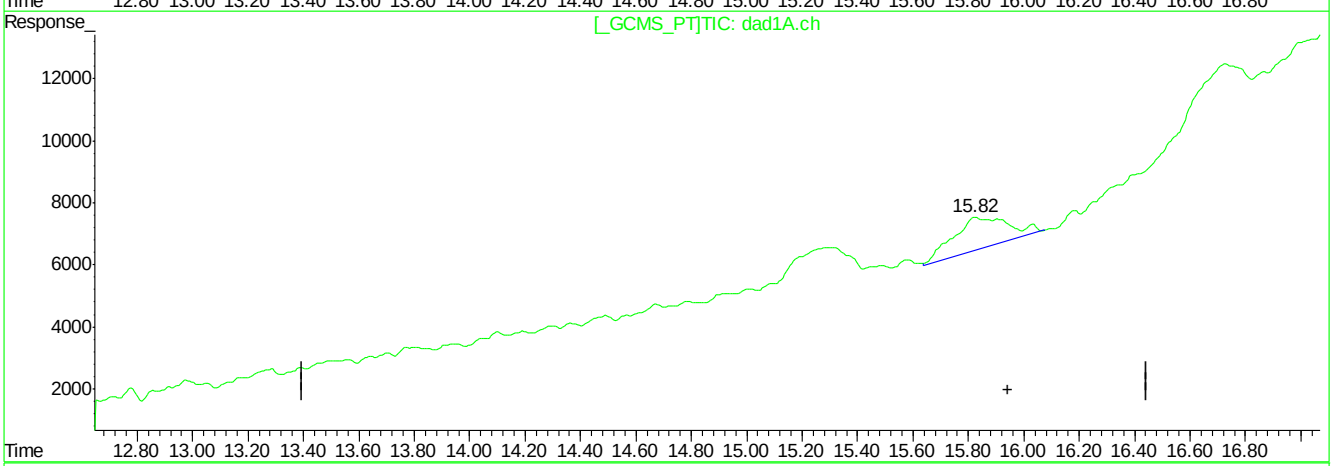
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:45:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.86min 52.689ppb

response 180207

(19) p-Nitrotoluene #2

15.82min 51.129ppb m

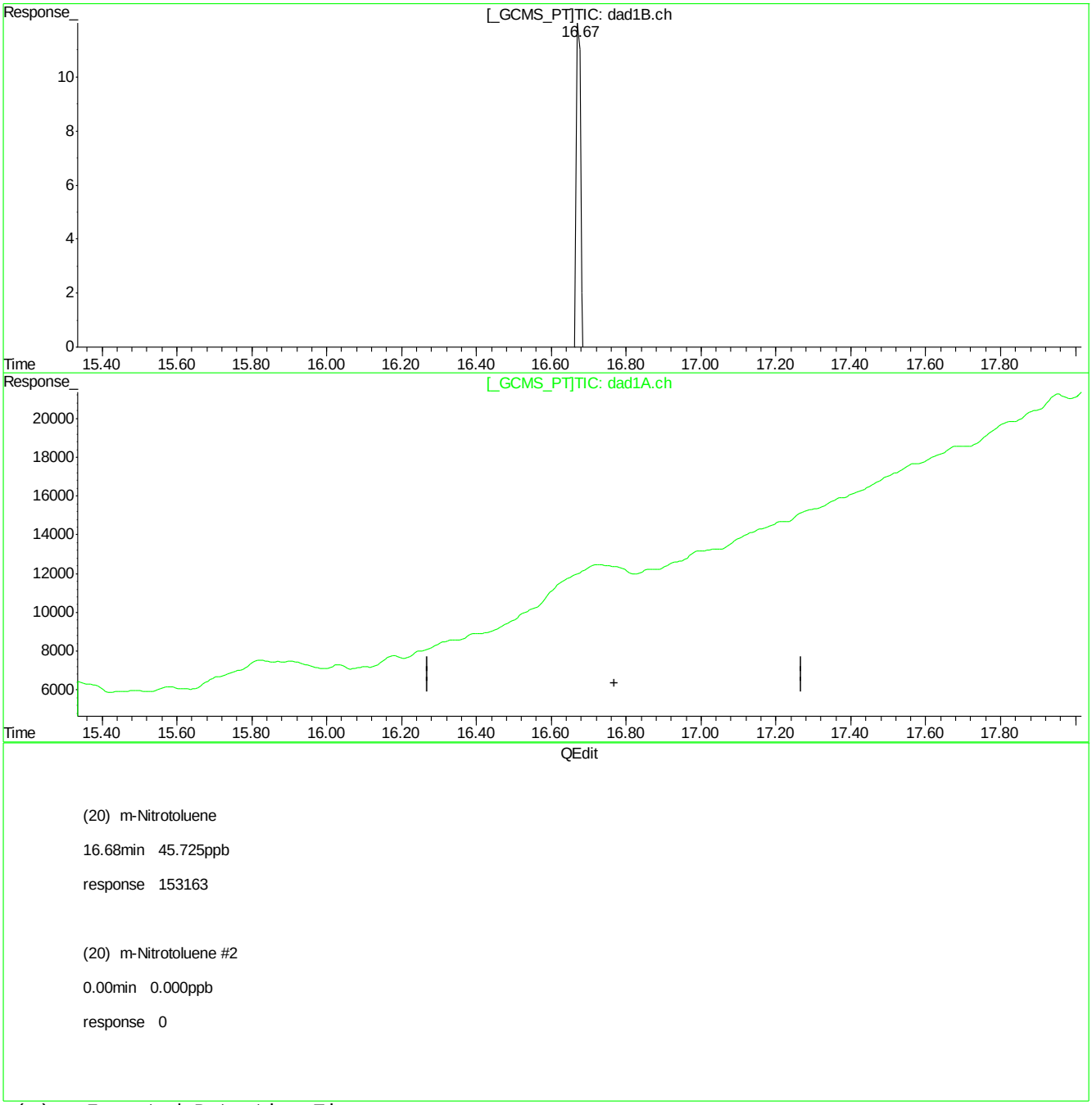
response 141680

(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:45:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration

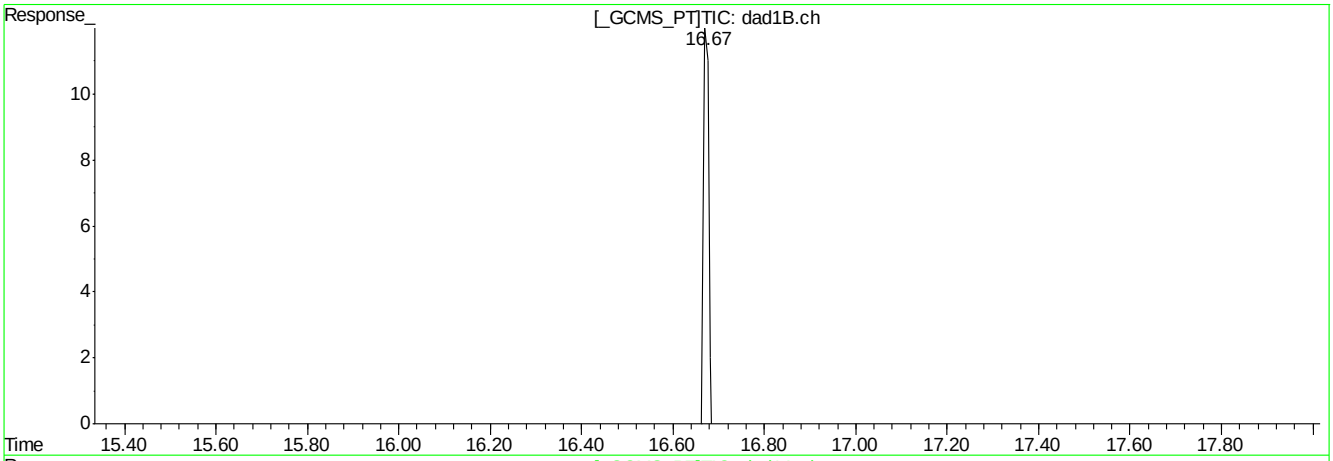


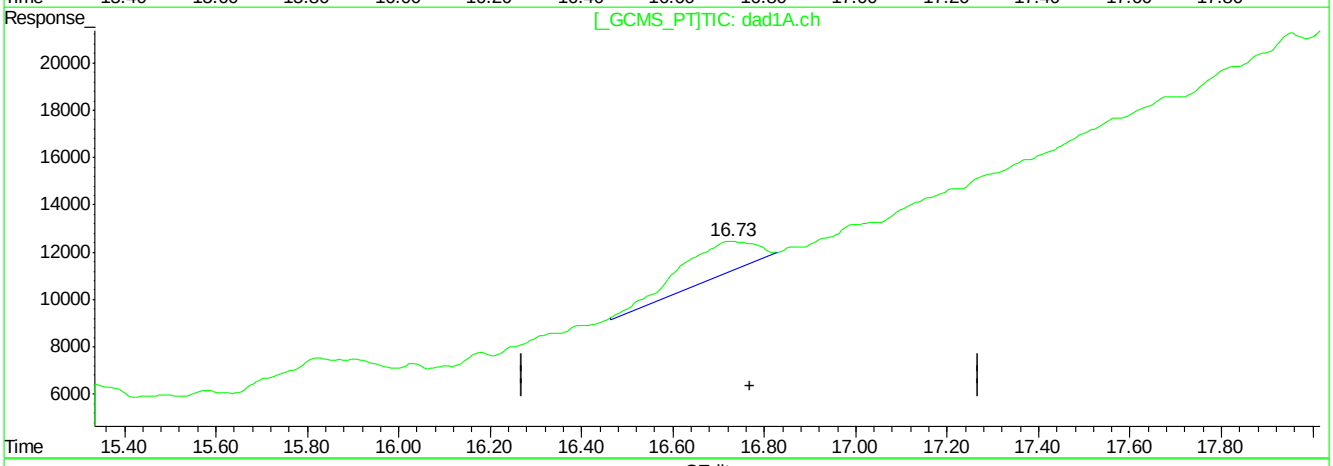
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:45:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.68min 45.725ppb

response 153163

(20) m-Nitrotoluene #2

16.73min 43.348ppb m

response 160568

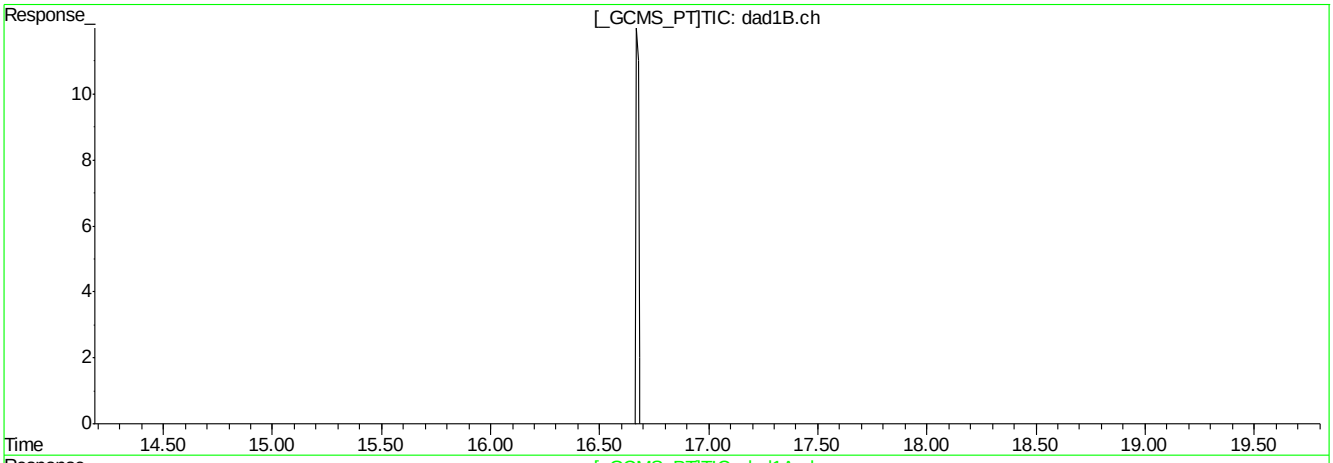
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:45:46 2021

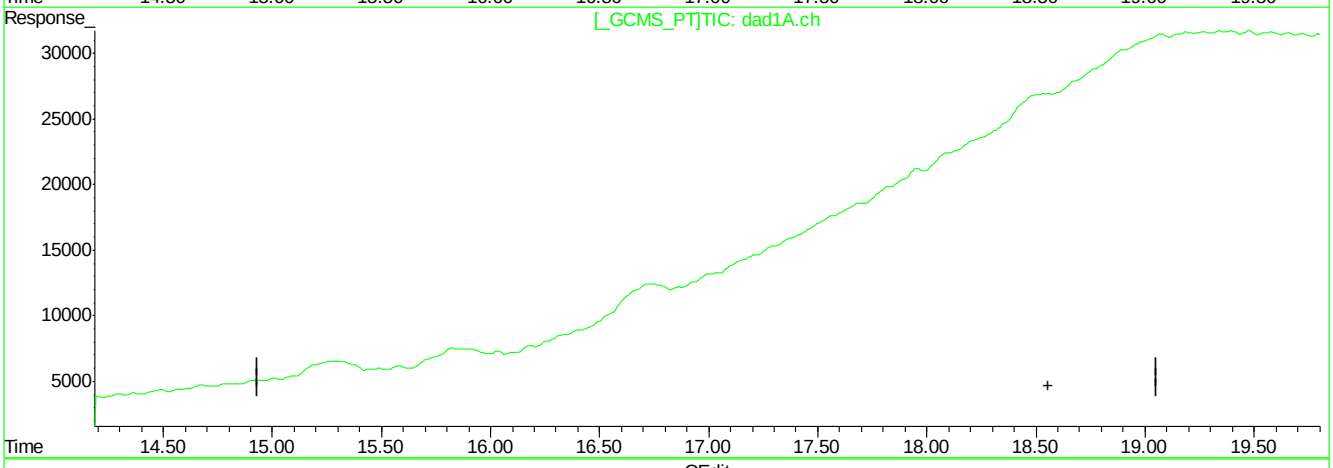
PP390447.D edits: m-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

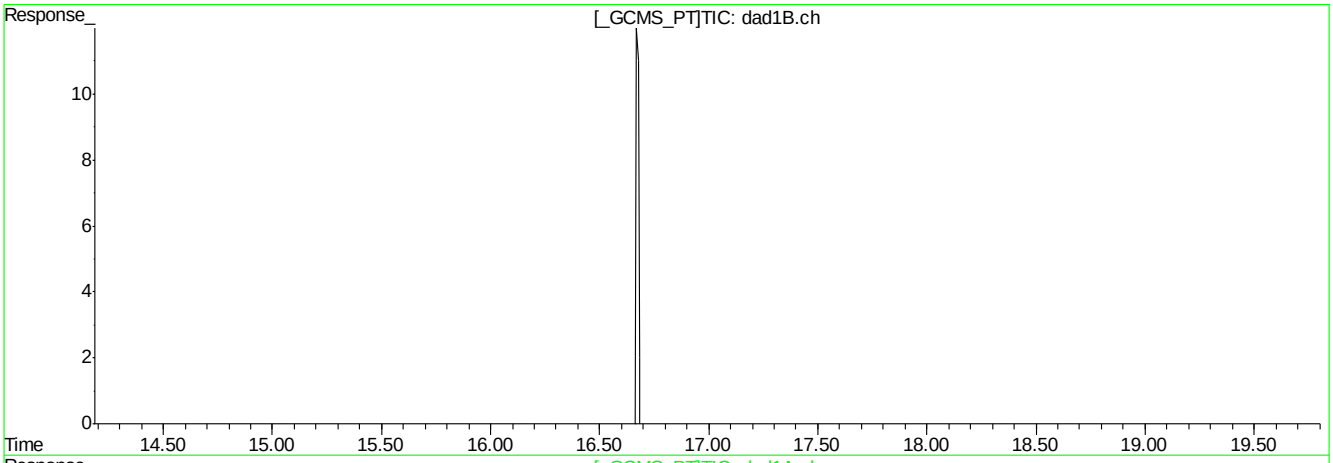
response 0

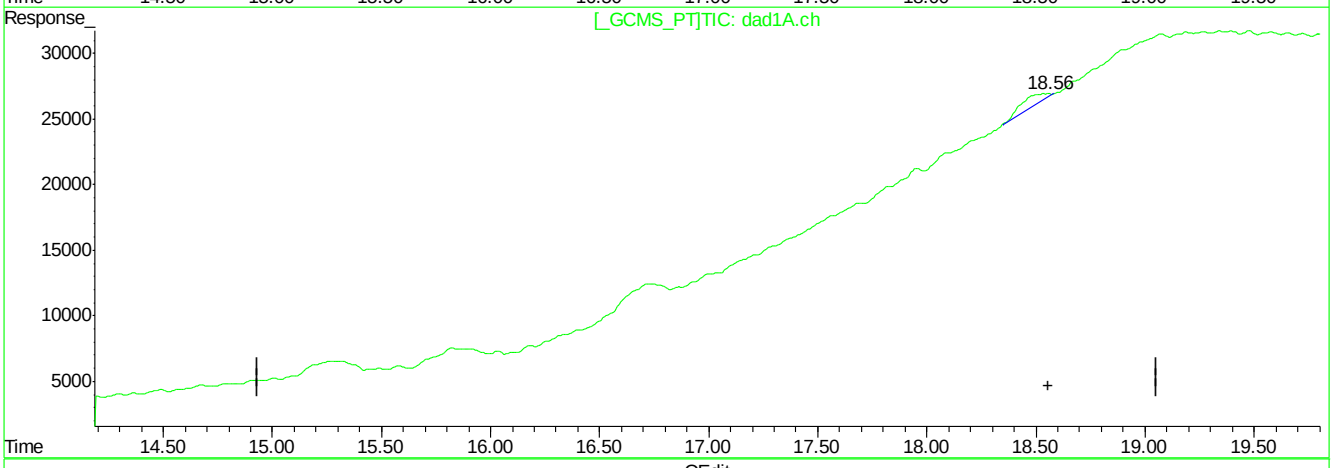
(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:45:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390447.D\dad1A.ch
Acq On : 02-Apr-2021, 08:41:17 Operator: jamesb
Sample : ic2428-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.56min 52.558ppb m

response 67837

(+) = Expected Retention Time
PP390447.D GPP2428_040221PRI.M Mon Apr 05 08:45:59 2021

PP390447.D edits: PETN

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/05/21 10:17

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 05 08:23:28 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.19	11.19	230730	364529	114.504	112.942
	Spiked Amount 500.000	Range 70 - 136		Recovery =		22.90%#	22.59%#
	Target Compounds						
1)	TNX	1.33	1.33	290864	450720	93.698	96.754
2)	HMX	1.46	1.46	167950	468214	107.770m	110.160m
3)	DNX	1.71	1.71	287864	504398	112.732m	135.026m
4)	MNX	2.30	2.31	297013	513952	106.092m	123.596
5)	RDX	2.93	2.93	213305	328778	112.026	107.269m
6)	1,3,5-Trinitrobe	4.68	4.68	447007	822321	108.337	105.827
7)	1,3-Dinitrobenze	5.87	5.87	554848	412158	103.022m	115.061m
8)	3,5-Dinitroanili	6.28	6.28	437894	739860	108.790	101.149m
9)	Nitrobenzene	7.40	7.41	327249	317010	108.702m	101.370m
10)	Nitroglycerin	0.00	8.97	0	137897	N.D.	113.458m#
11)	Tetryl	9.50	9.50	317982	484084	134.797m	118.903
12)	2,4,6-Trinitroto	9.88	9.87	417439	494881	106.197	112.672
13)	2-Amino-4,6-Dini	10.34	10.34	373058	558044	109.009	122.786
14)	4-Amino-2,6-Dini	10.88	10.87	273441	532970	111.441	121.341
16)	2,4-Dinitrotolue	11.82	11.82	509046	333130	105.893	111.024
17)	2,6-Dinitrotolue	12.31	12.32	269304	426817	102.164	120.445
18)	o-Nitrotoluene	15.33	15.32	238300	344766	110.671	119.253
19)	p-Nitrotoluene	15.89	15.90	354403	239177	103.621	86.314
20)	m-Nitrotoluene	16.72	16.73	342624	381585	102.287	103.014m
21)	PETN	0.00	18.51	0	126534	N.D.	98.036m#

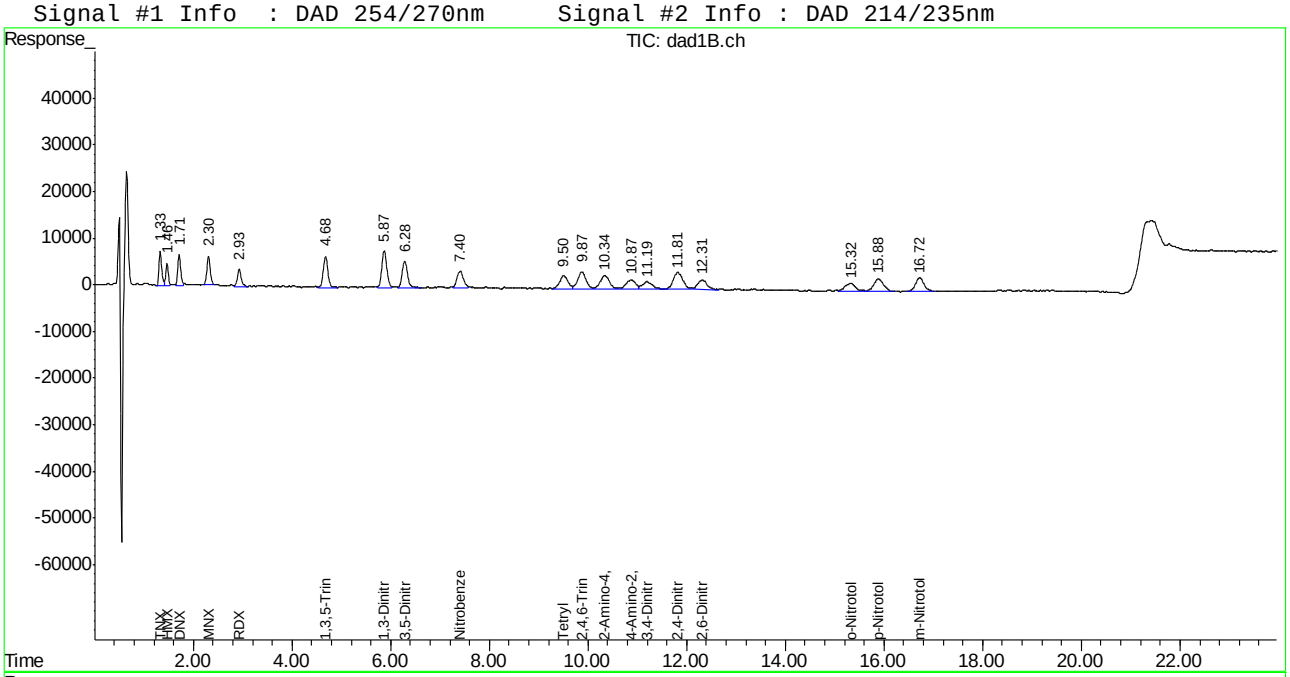
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP390448.D GPP2428_040221PRI.M Mon Apr 05 09:04:41 2021 Page 1

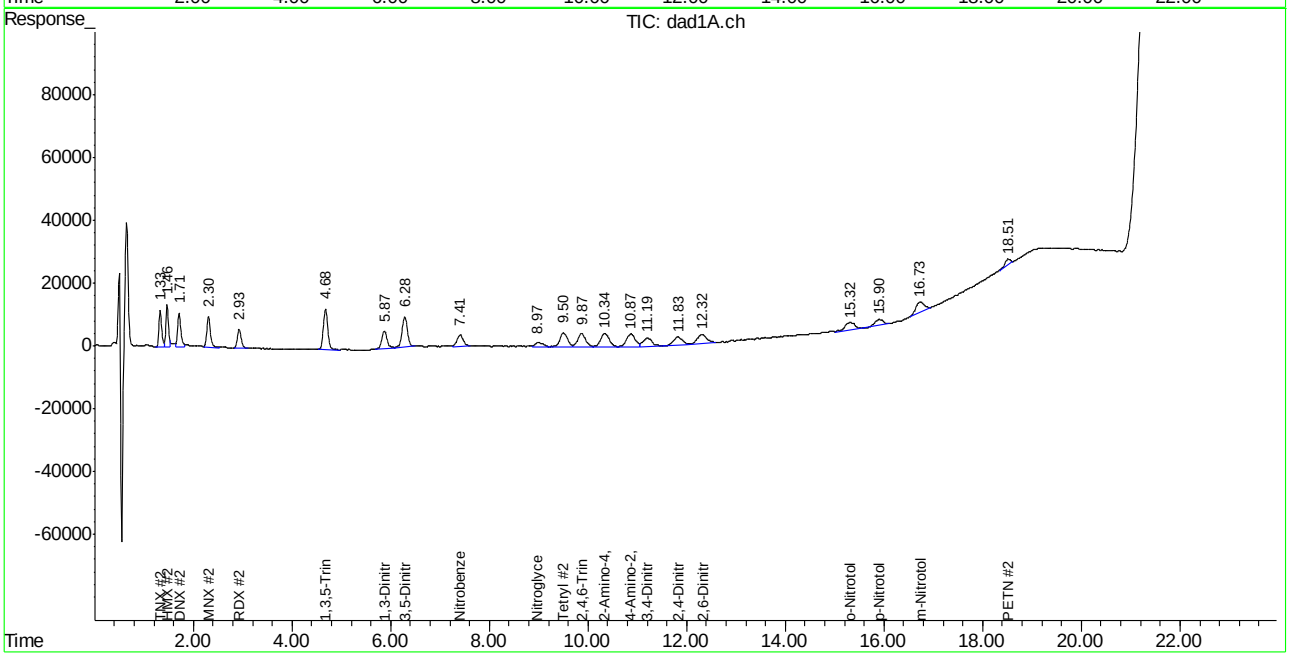
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:41 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

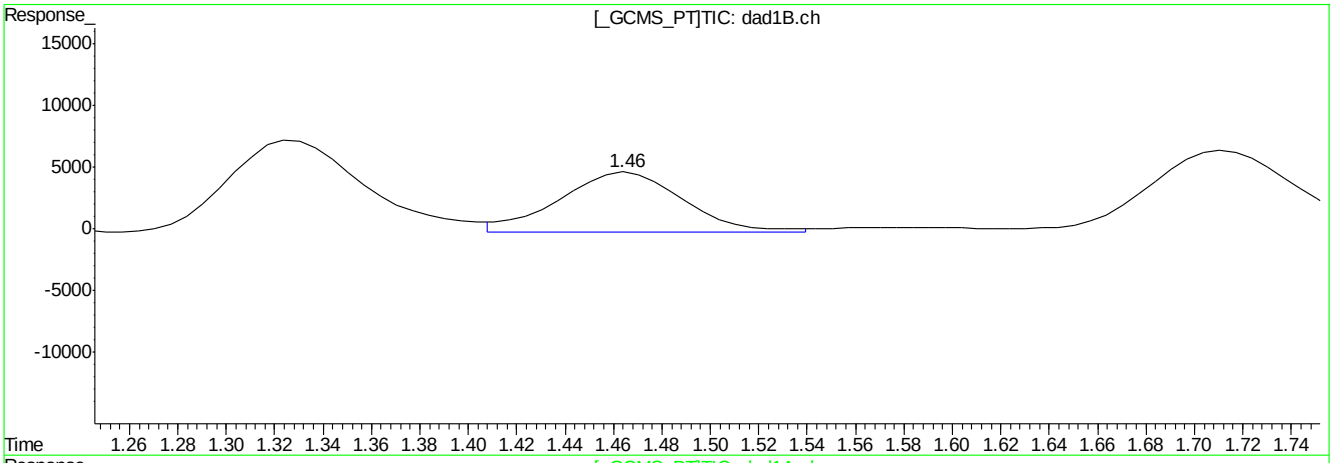
Sample Number: GPP2428-IC2428
Lab FileID: PP390448.D
Injection Time: 04/02/21 09:12
Method: SW846 8330A
Analyst approved: 04/05/21 09:06 James Boone
Supervisor approved: 04/05/21 10:17 Naresh Jiawan

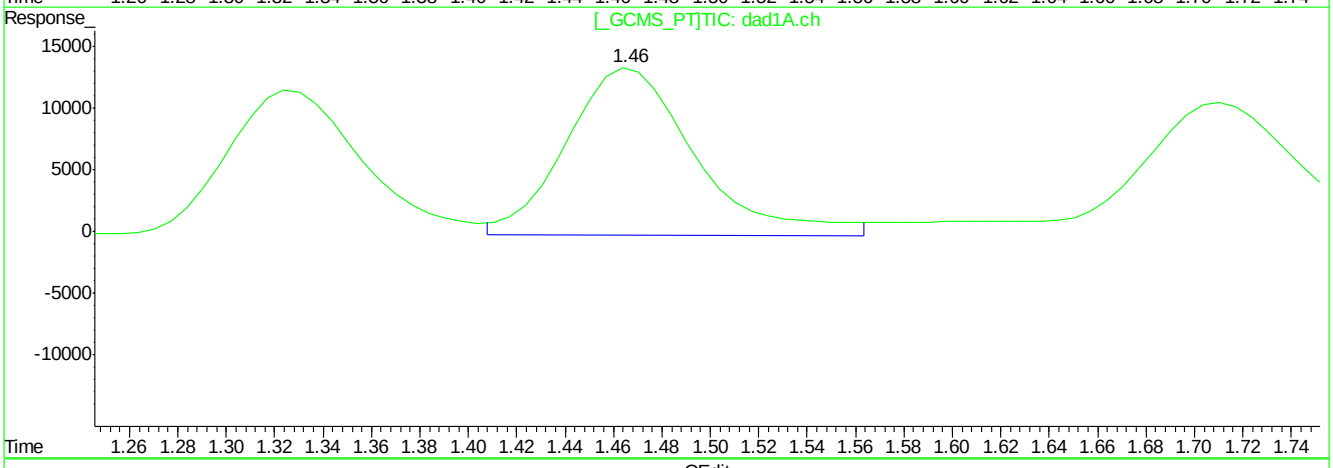
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.46	Poor instrument integration
HMX	2691-41-0	2	1.46	Poor instrument integration
DNX		1	1.71	Poor instrument integration
DNX		2	1.71	Poor instrument integration
MNX		1	2.30	Poor instrument integration
RDX	121-82-4	2	2.93	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	5.87	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.87	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.28	Poor instrument integration
Nitrobenzene	98-95-3	1	7.40	Poor instrument integration
Nitrobenzene	98-95-3	2	7.41	Poor instrument integration
Nitroglycerine	55-63-0	2	8.97	Poor instrument integration
Tetryl	479-45-8	1	9.50	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.73	Poor instrument integration
PETN	78-11-5	2	18.51	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.47min 111.679ppb

response 174043

(2) HMX #2

1.47min 117.693ppb

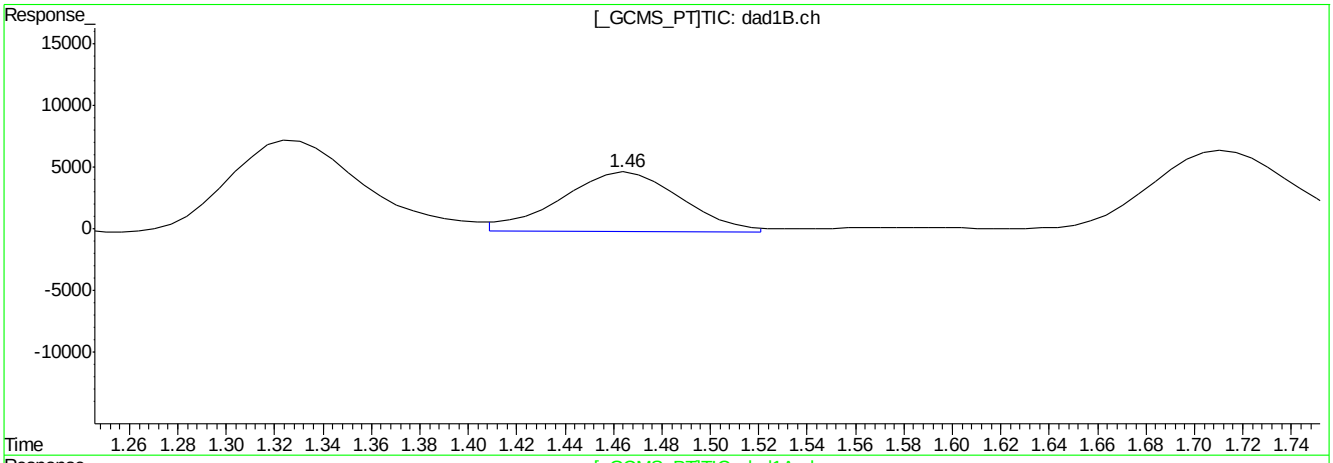
response 500234

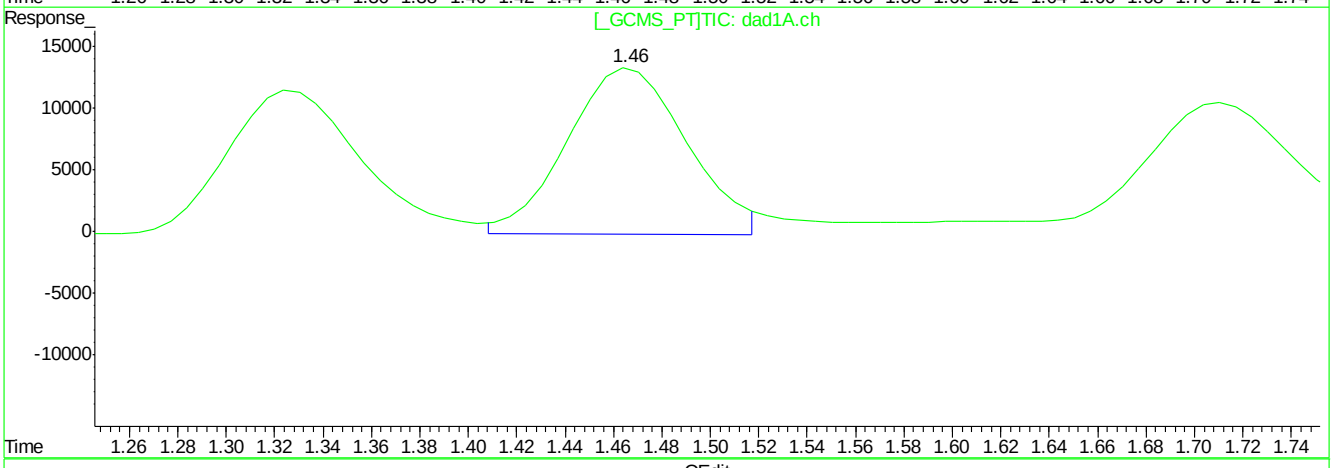
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:38:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.46min 107.770ppb m

response 167950

(2) HMX #2

1.46min 110.160ppb m

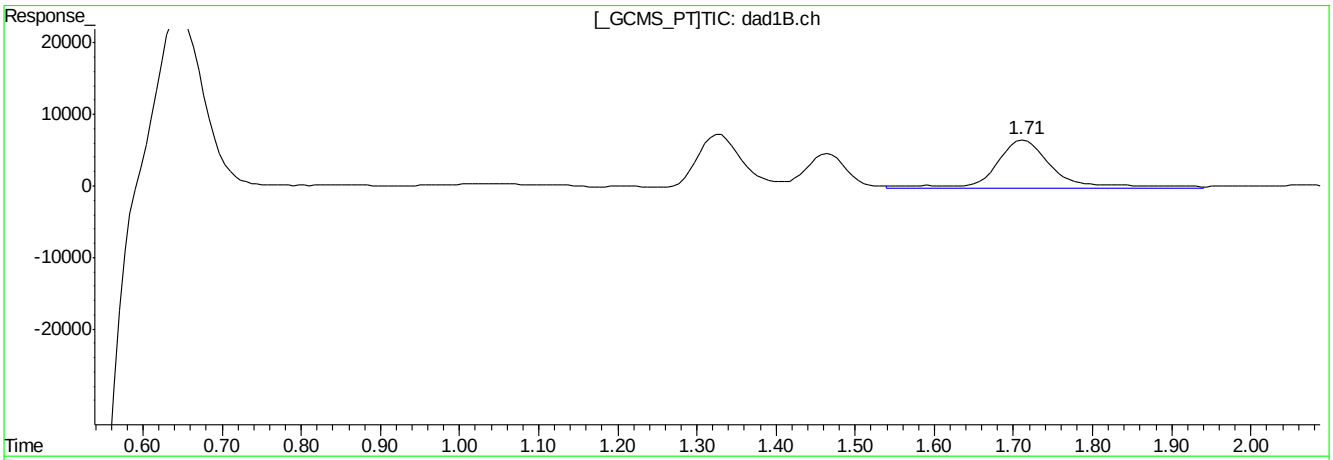
response 468214

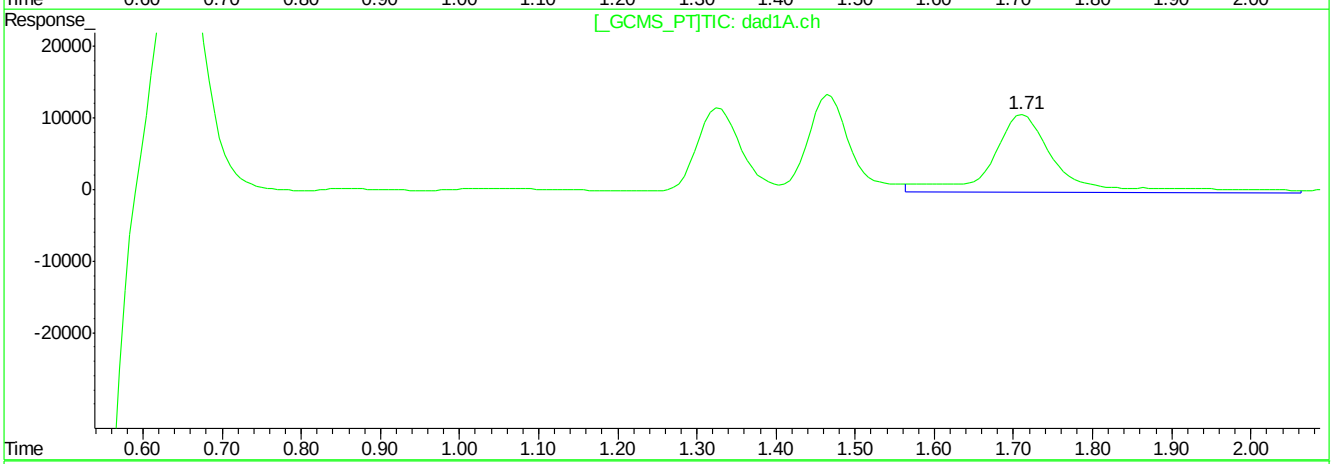
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:38:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.71min 133.551ppb

response 341028

(3) DNX #2

1.71min 170.483ppb

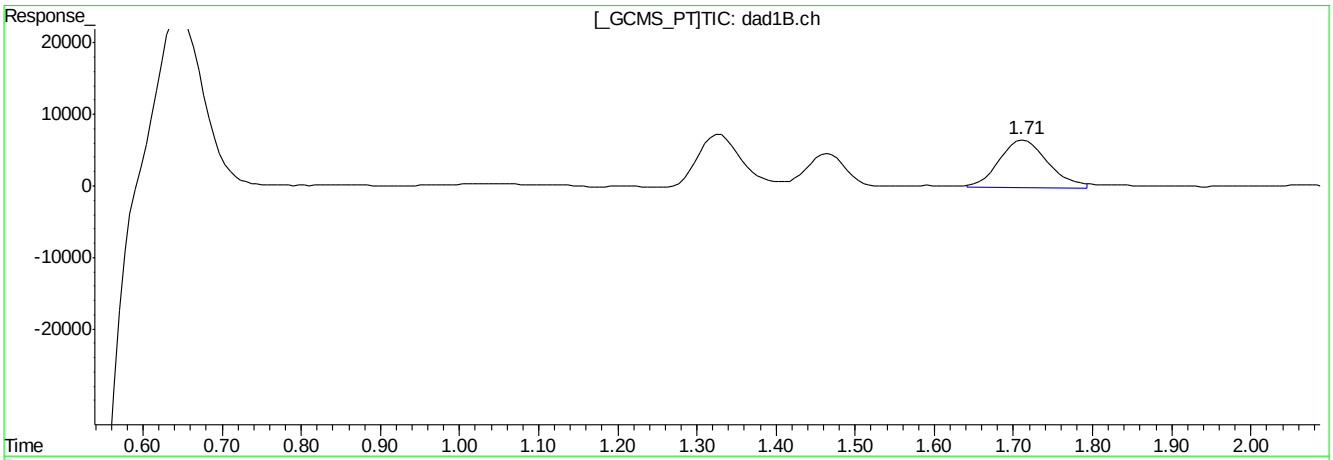
response 636850

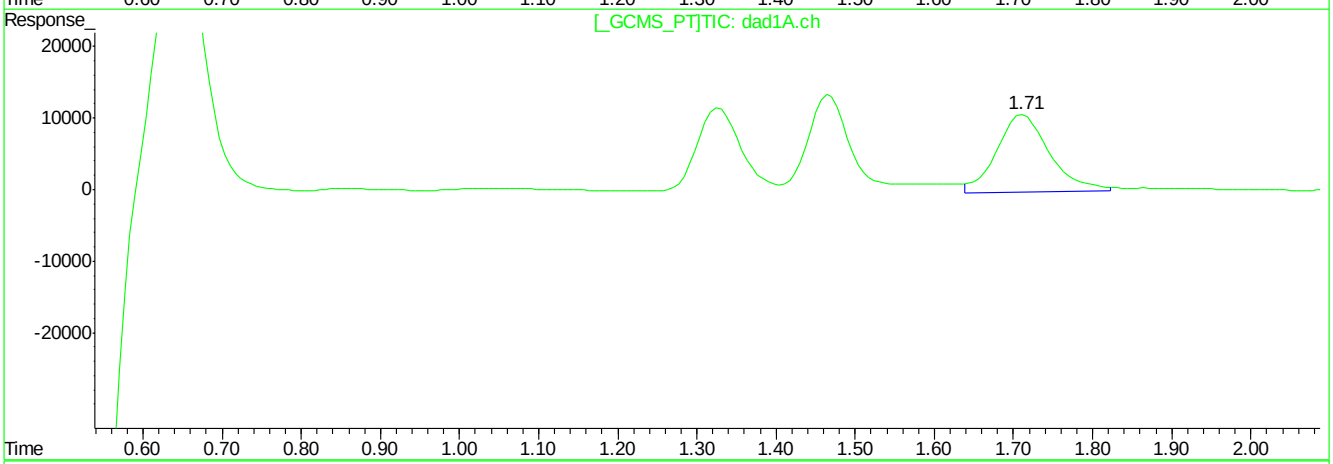
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:38:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.71min 112.732ppb m

response 287864

(3) DNX #2

1.71min 135.026ppb m

response 504398

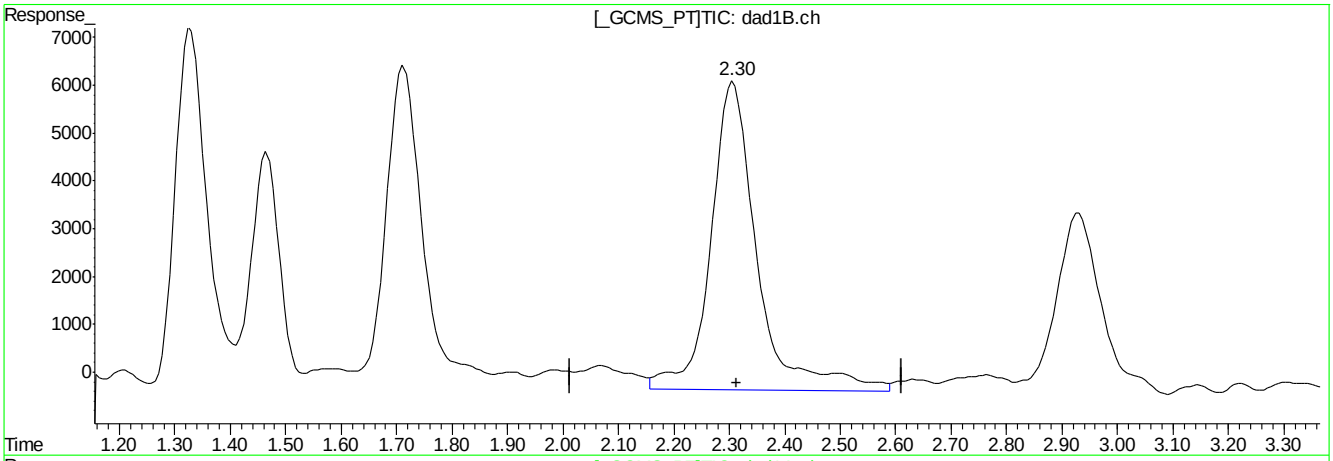
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:38:58 2021

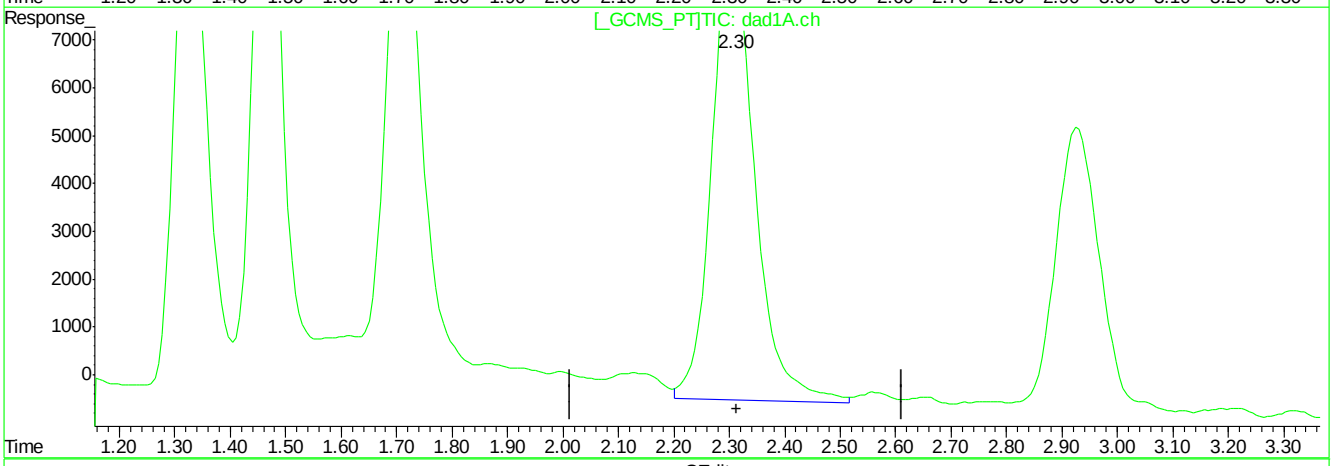
PP390448.D edits: DNX

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.31min 133.879ppb

response 374806

(4) MNX #2

2.31min 123.596ppb

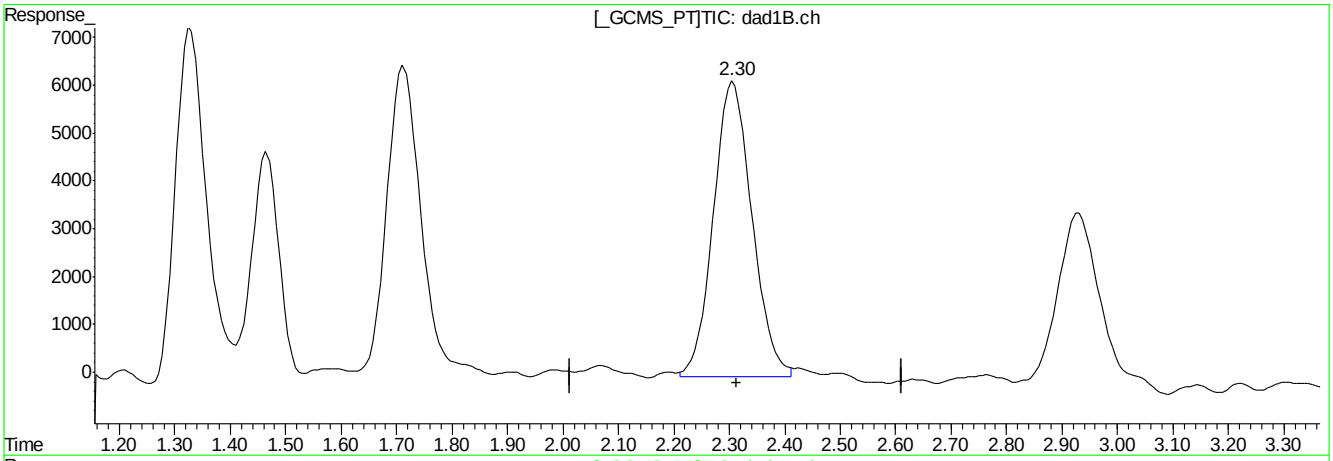
response 513952

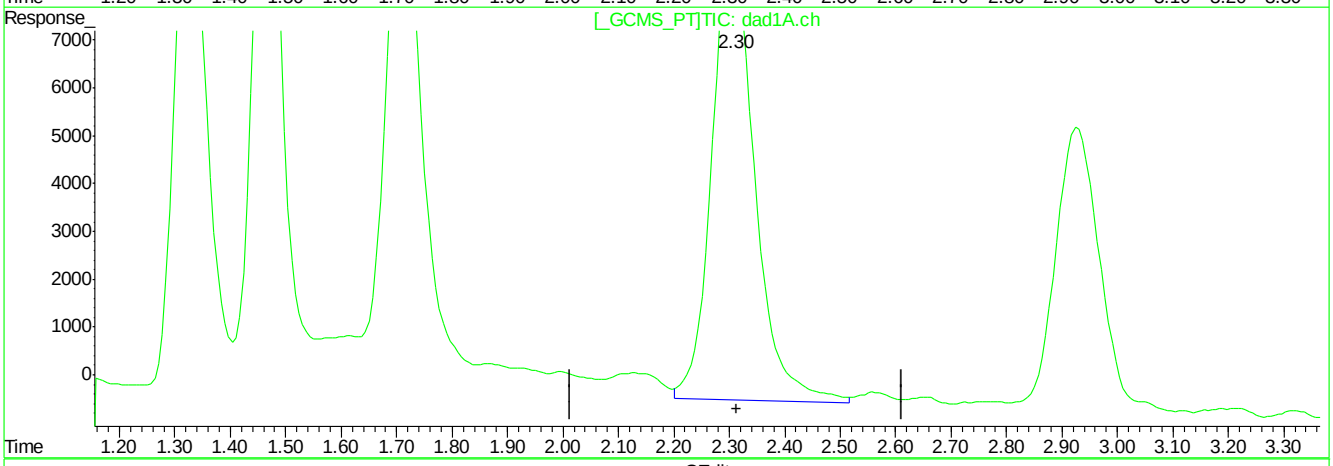
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:39:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.30min 106.092ppb m

response 297013

(4) MNX #2

2.31min 123.596ppb

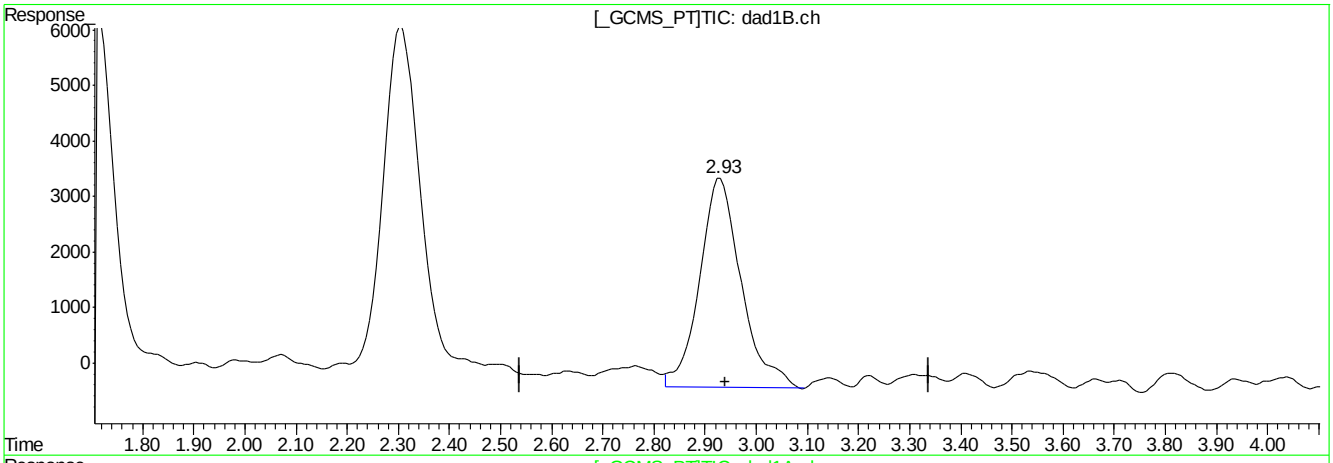
response 513952

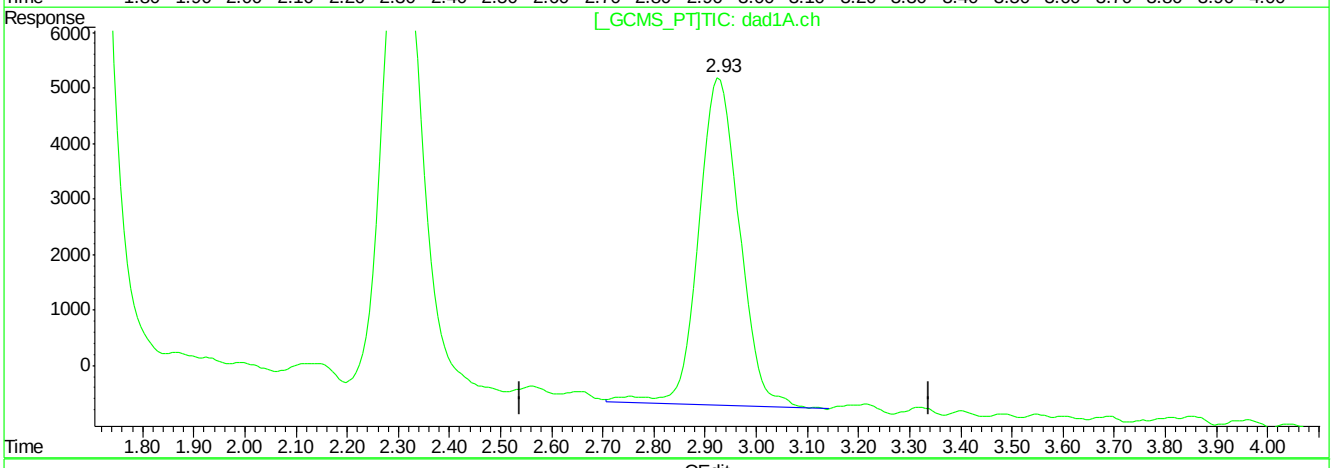
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:39:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.93min 112.026ppb

response 213305

(5) RDX #2

2.93min 107.568ppb

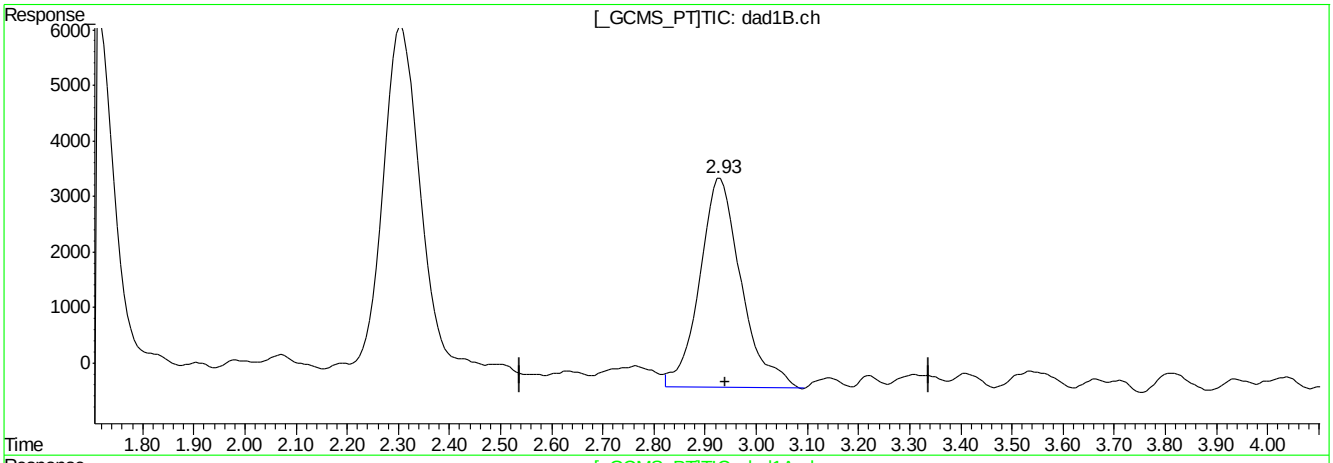
response 329695

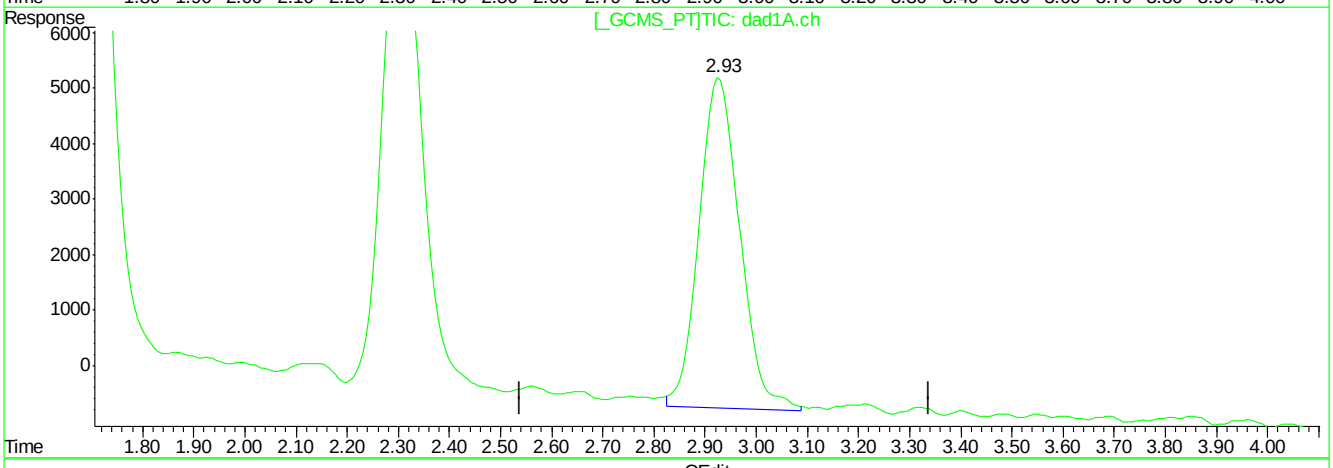
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:39:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.93min 112.026ppb

response 213305

(5) RDX #2

2.93min 107.269ppb m

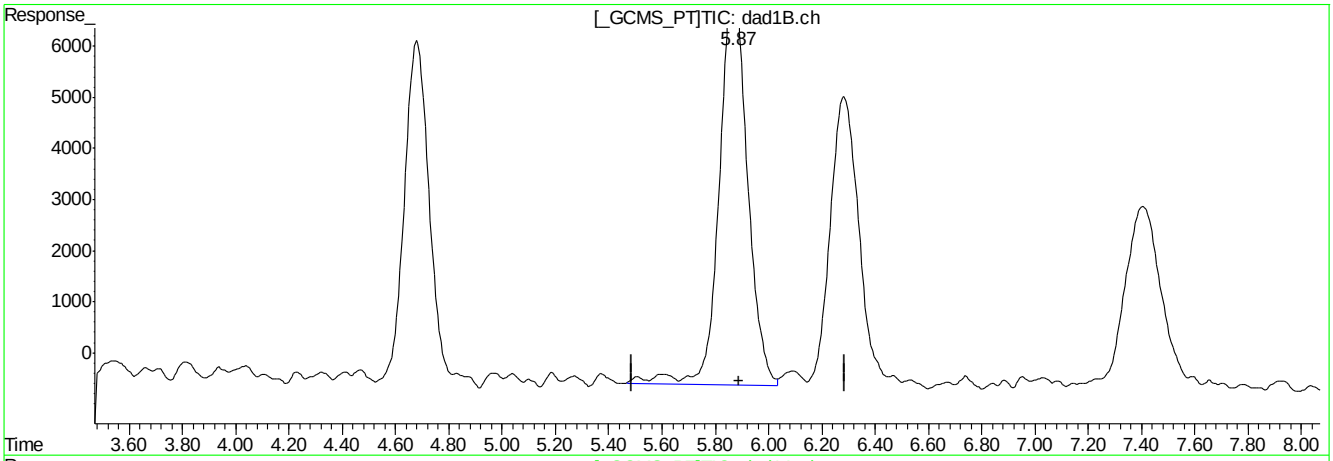
response 328778

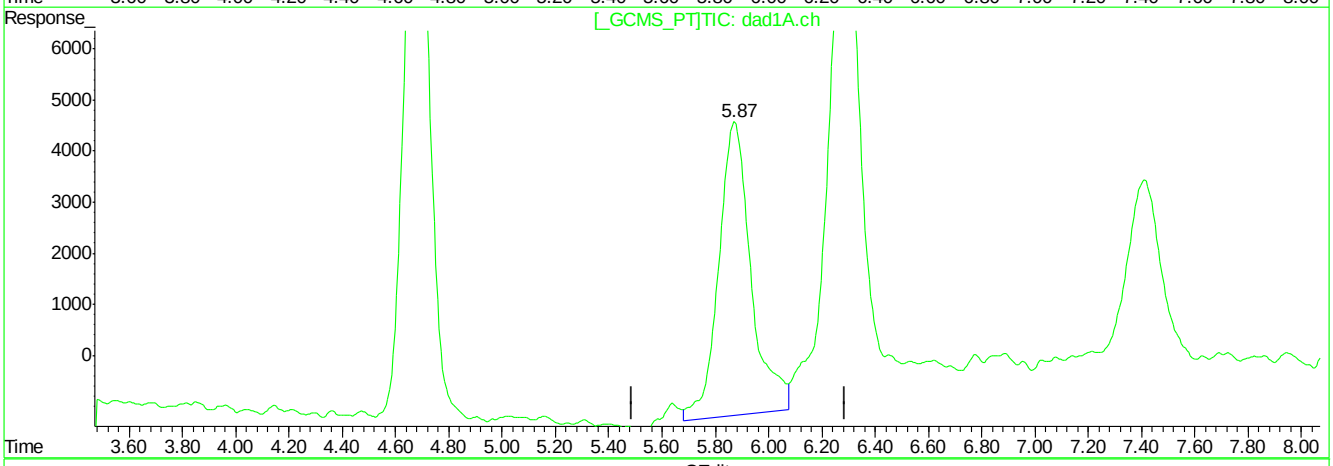
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:39:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.87min 107.043ppb

response 576506

(7) 1,3-Dinitrobenzene #2

5.87min 135.967ppb

response 487047

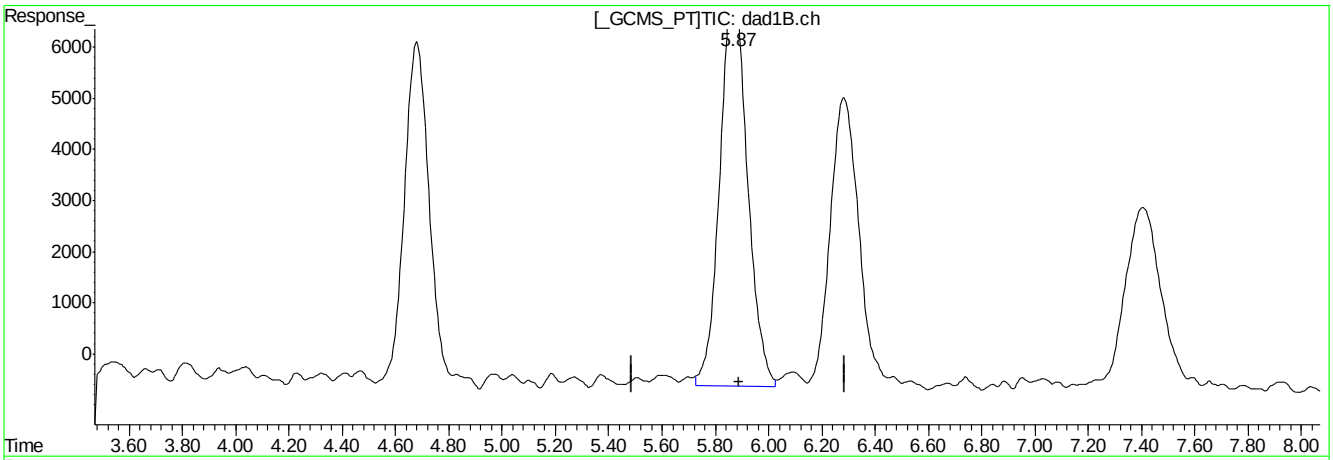
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:39:32 2021

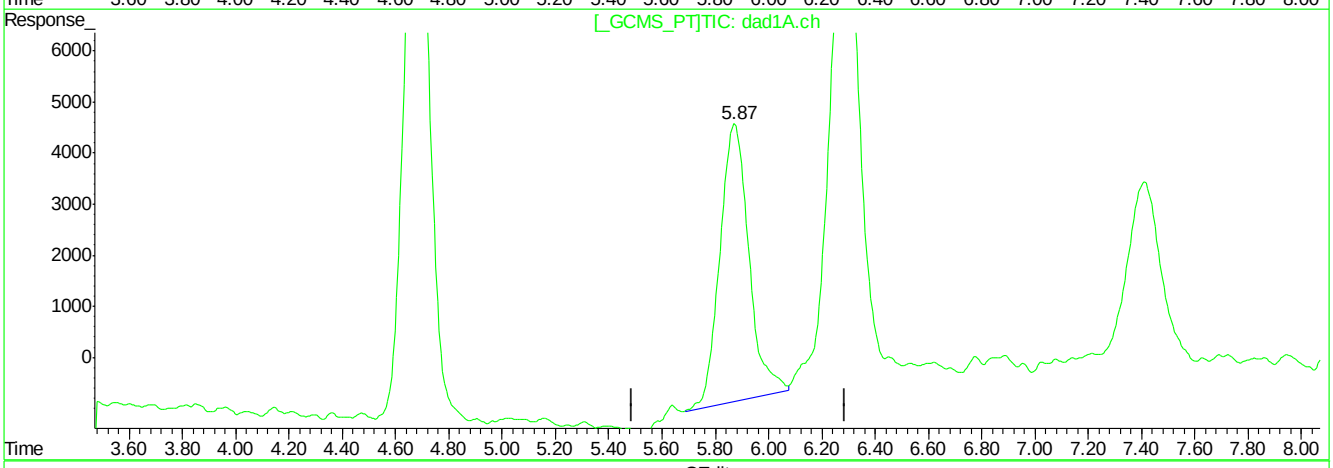
PP390448.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.87min 103.022ppb m

response 554848

(7) 1,3-Dinitrobenzene #2

5.87min 115.061ppb m

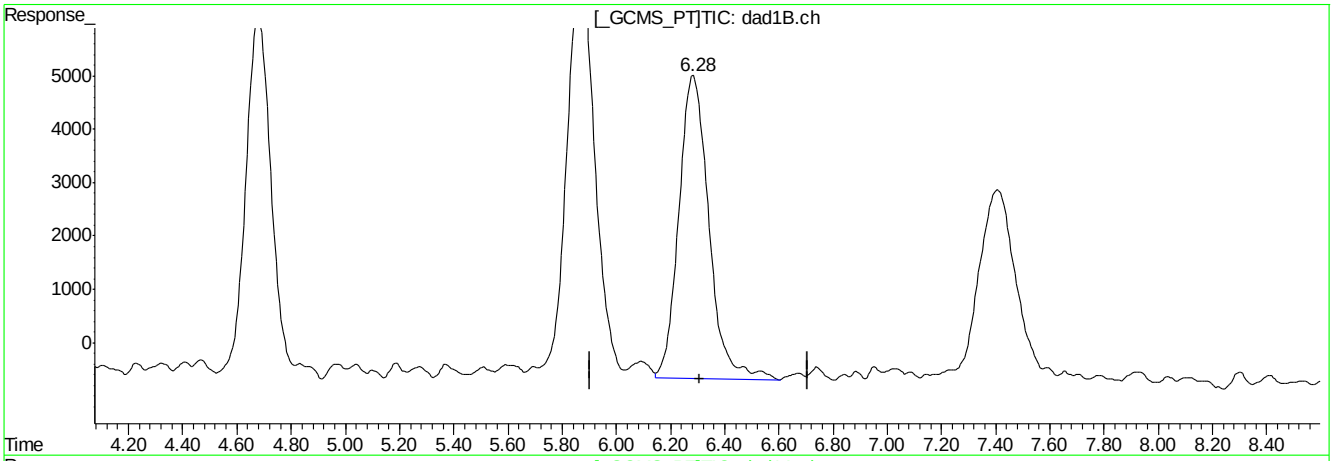
response 412158

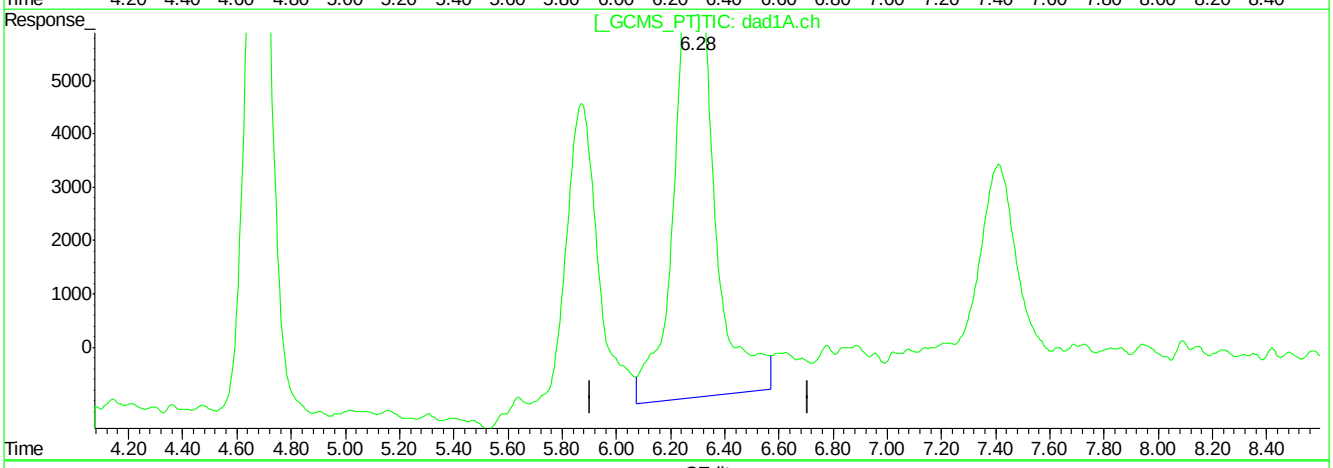
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:39:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.28min 108.790ppb

response 437894

(8) 3,5-Dinitroaniline #2

6.29min 125.141ppb

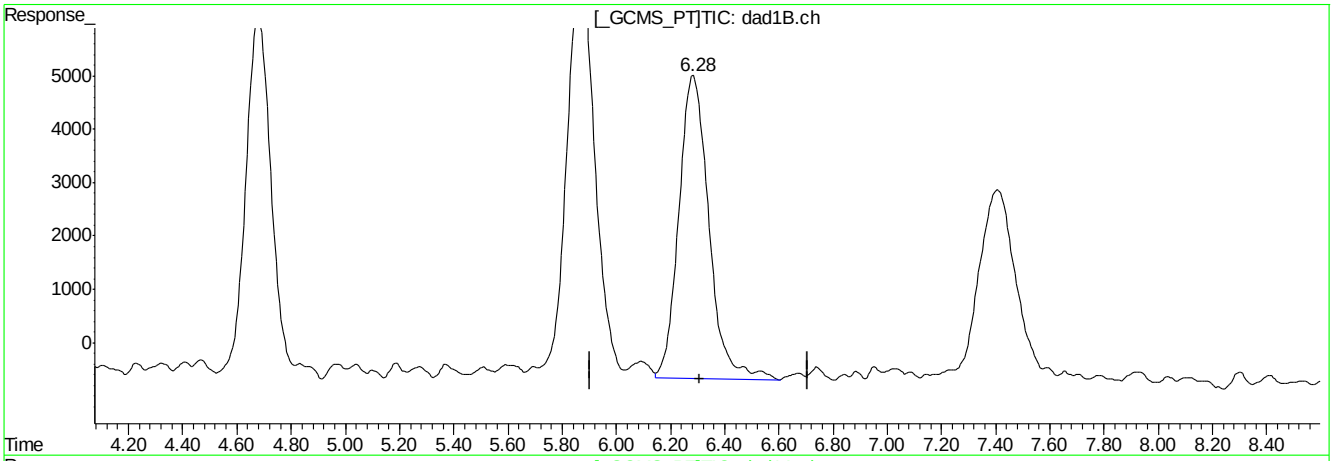
response 915349

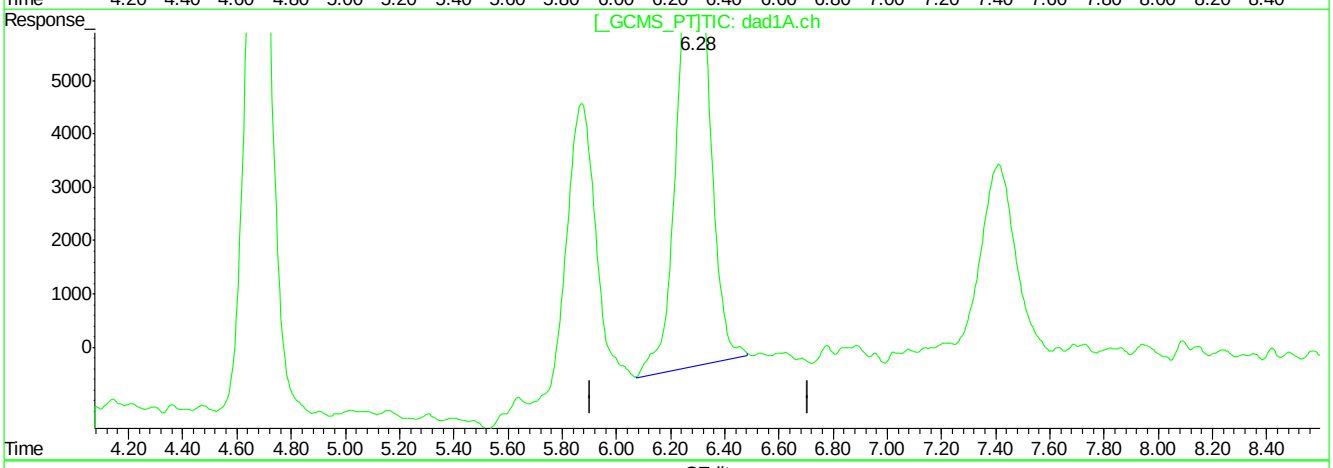
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:39:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.28min 108.790ppb

response 437894

(8) 3,5-Dinitroaniline #2

6.28min 101.149ppb m

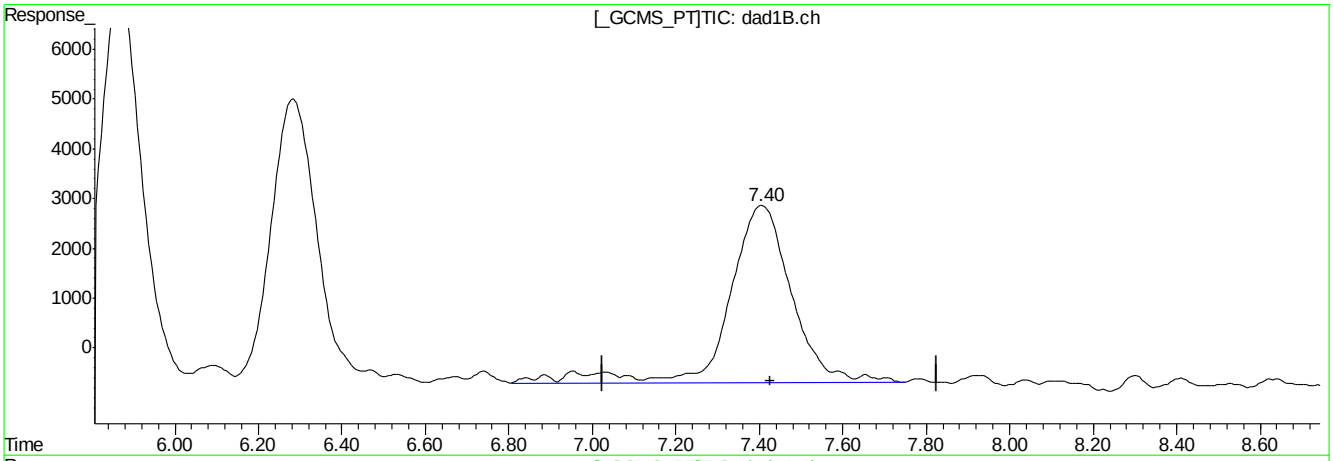
response 739860

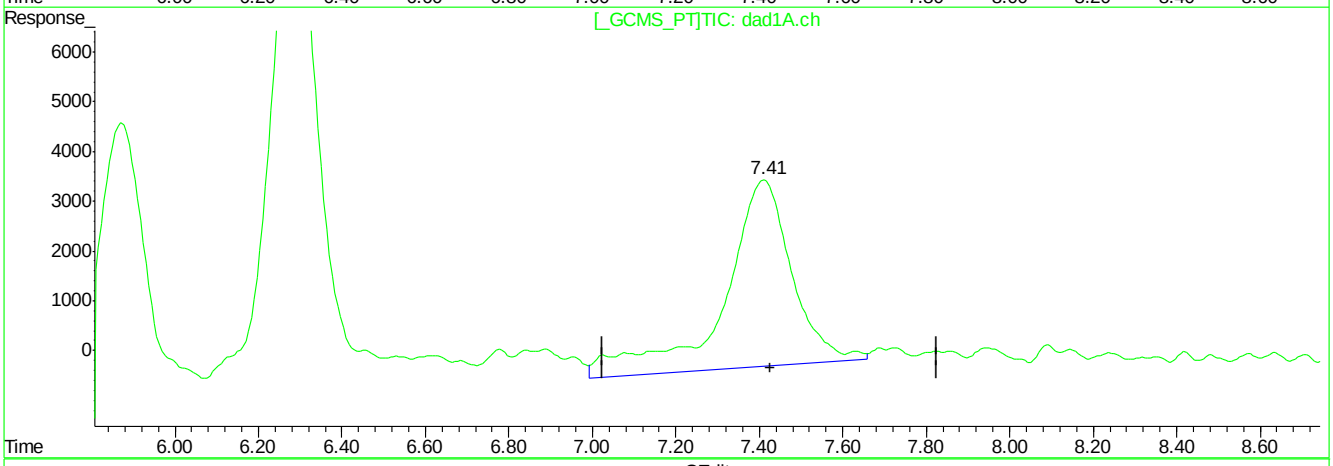
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:40:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.41min 125.149ppb

response 376761

(9) Nitrobenzene #2

7.41min 135.939ppb

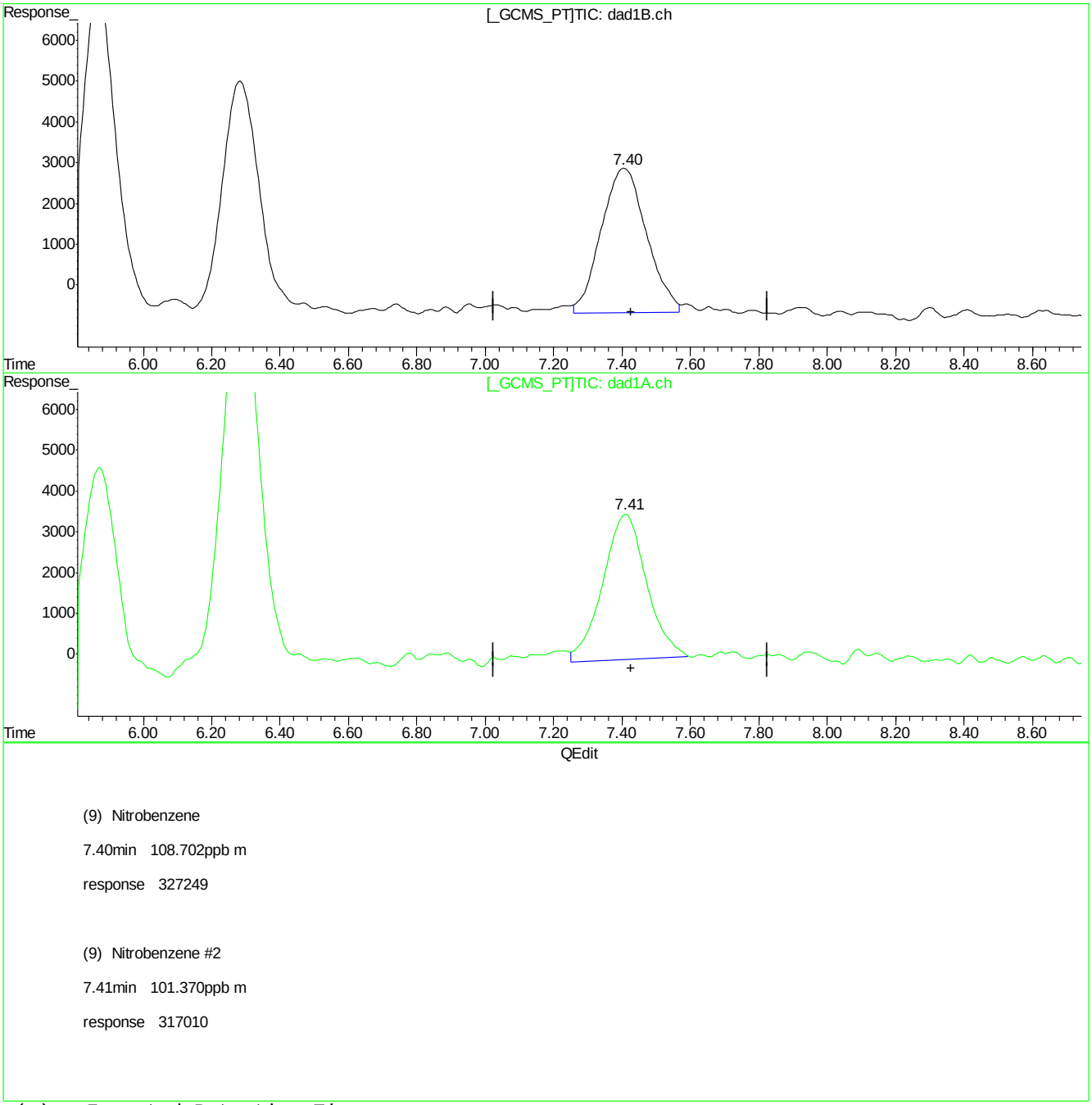
response 425117

(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:40:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.40min 108.702ppb m

response 327249

(9) Nitrobenzene #2

7.41min 101.370ppb m

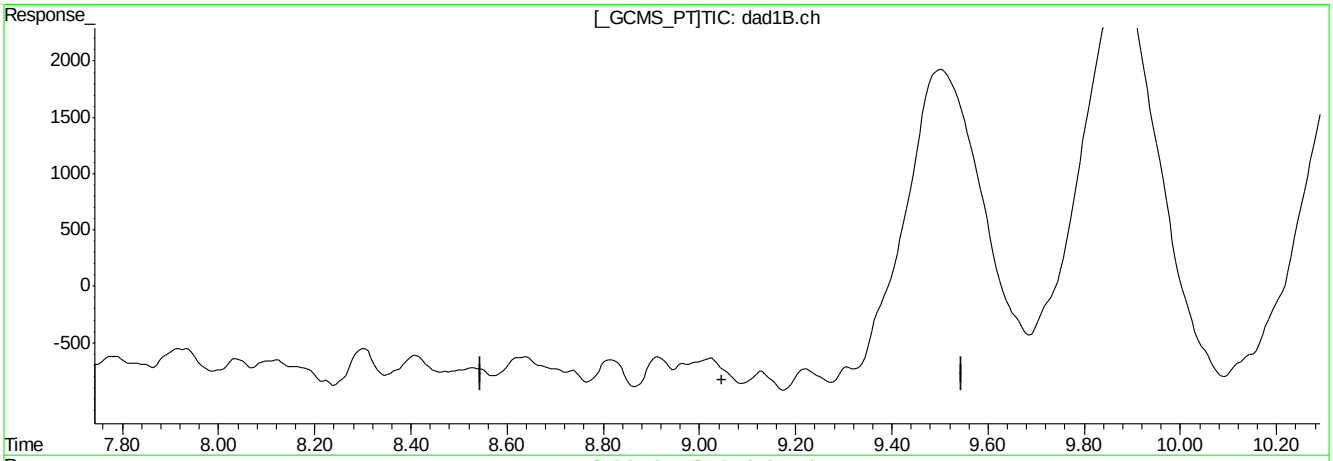
response 317010

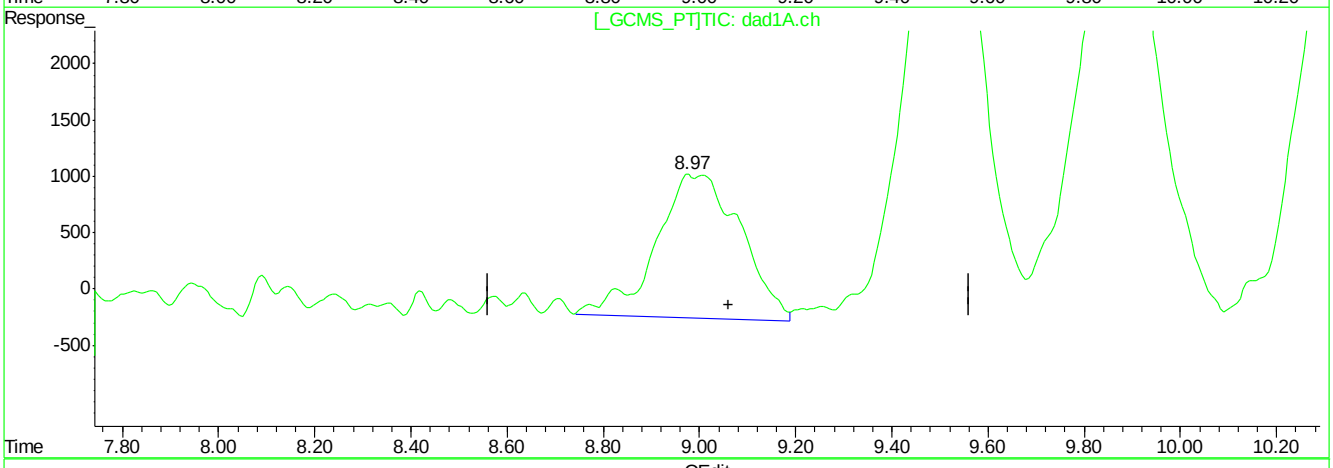
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:40:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.00min 128.618ppb

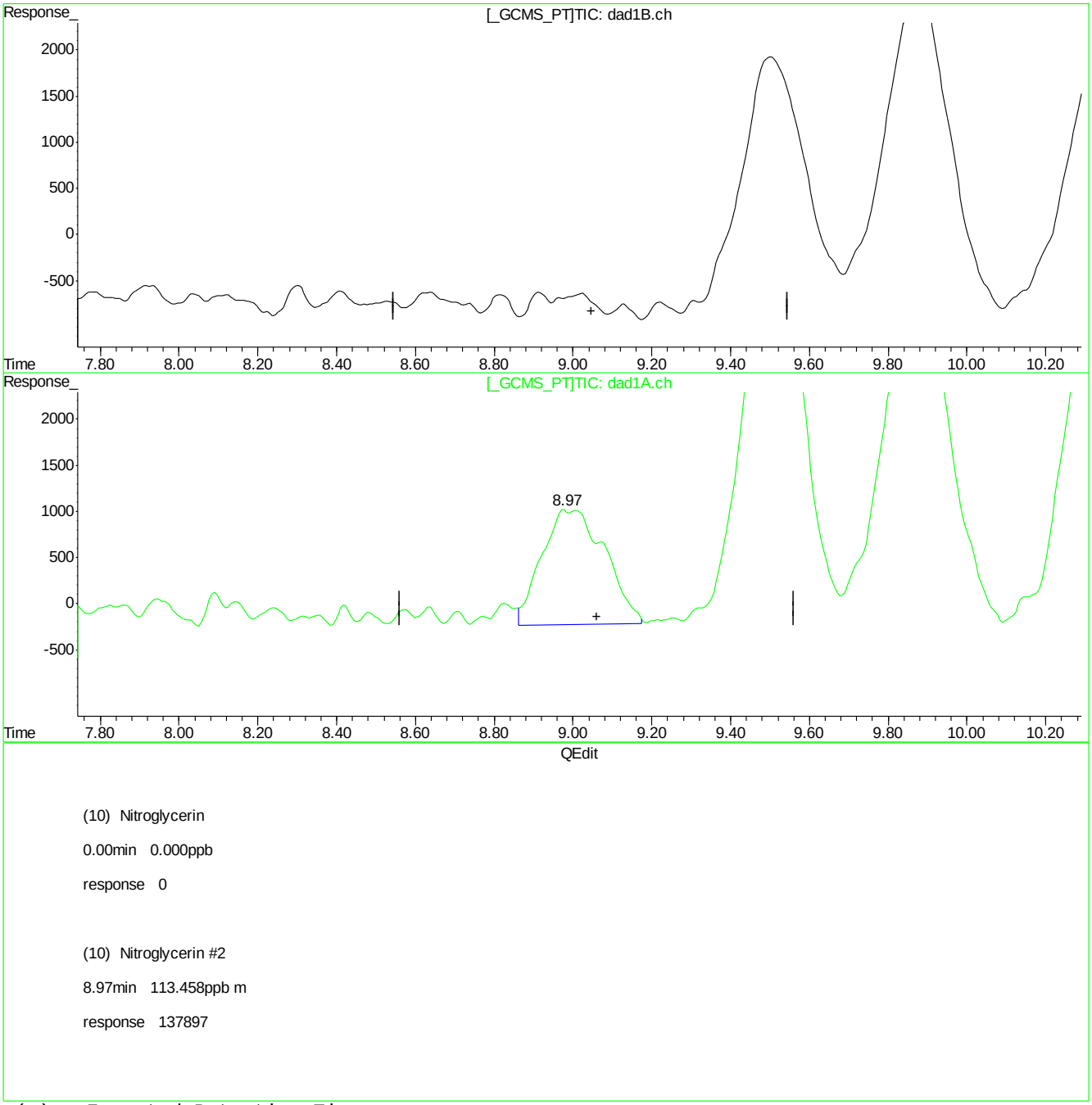
response 156323

(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:40:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration

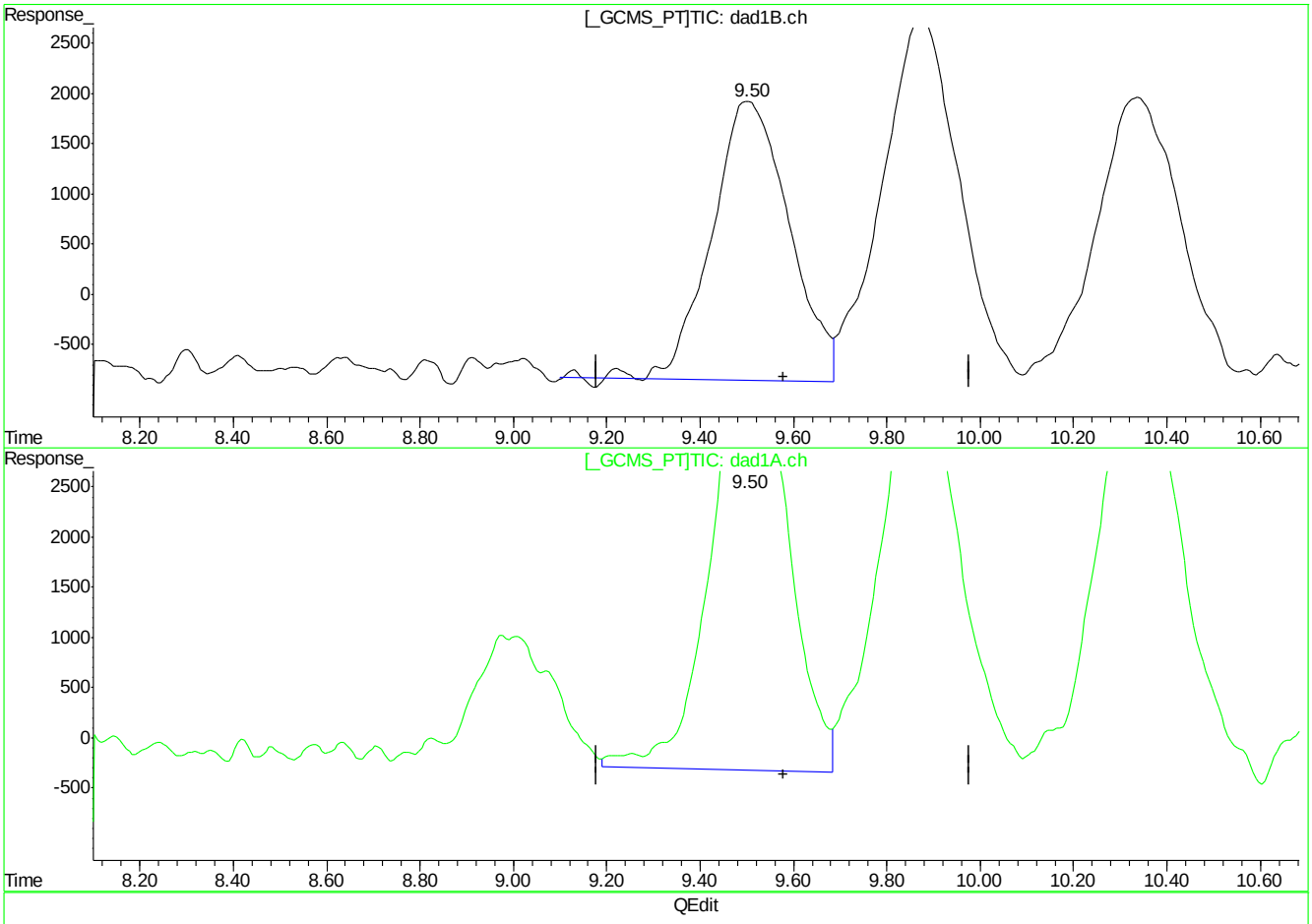


(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:40:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(11) Tetryl

9.50min 135.377ppb

response 319350

(11) Tetryl #2

9.50min 118.903ppb

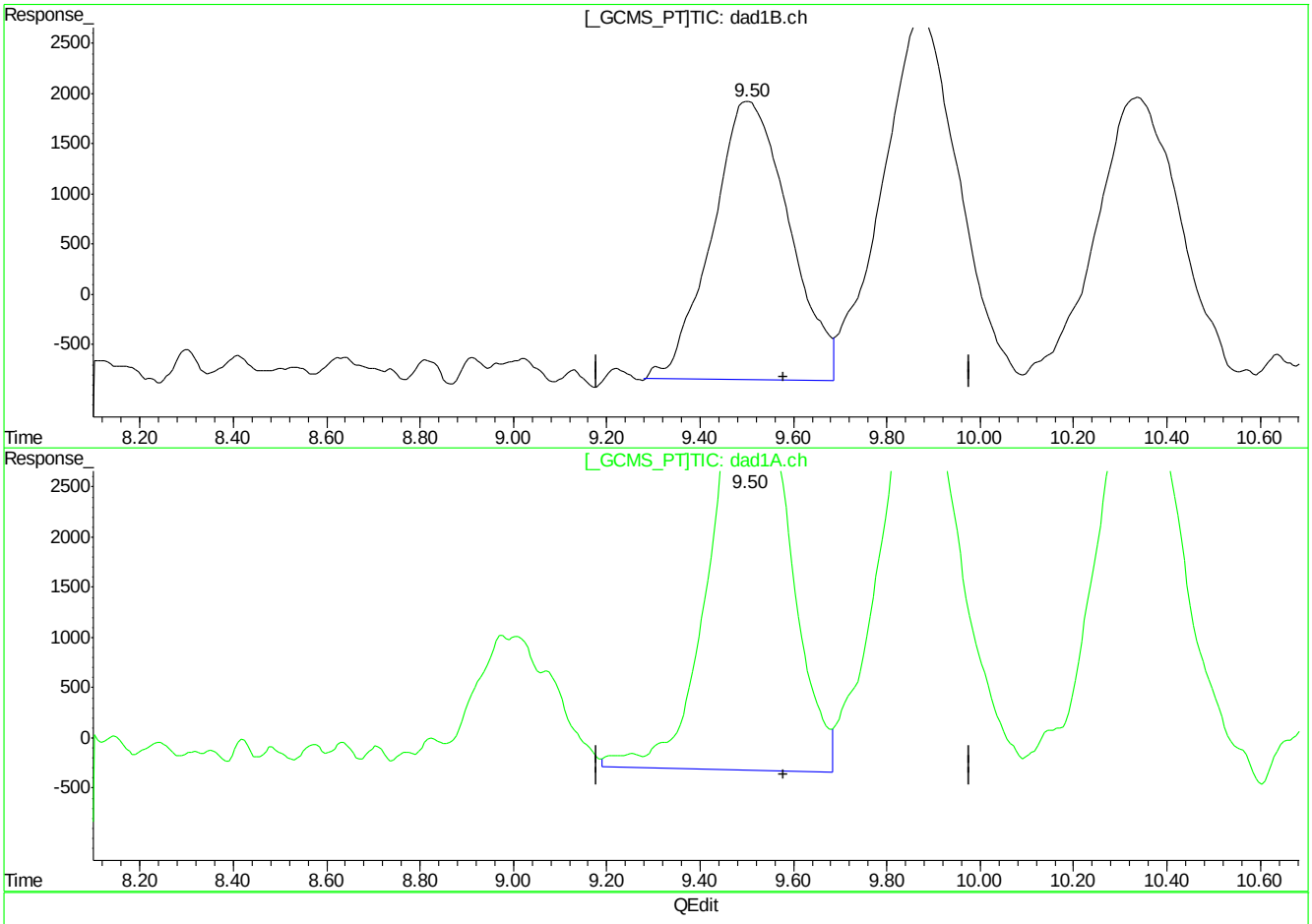
response 484084

(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:40:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(11) Tetryl

9.50min 134.797ppb m

response 317982

(11) Tetryl #2

9.50min 118.903ppb

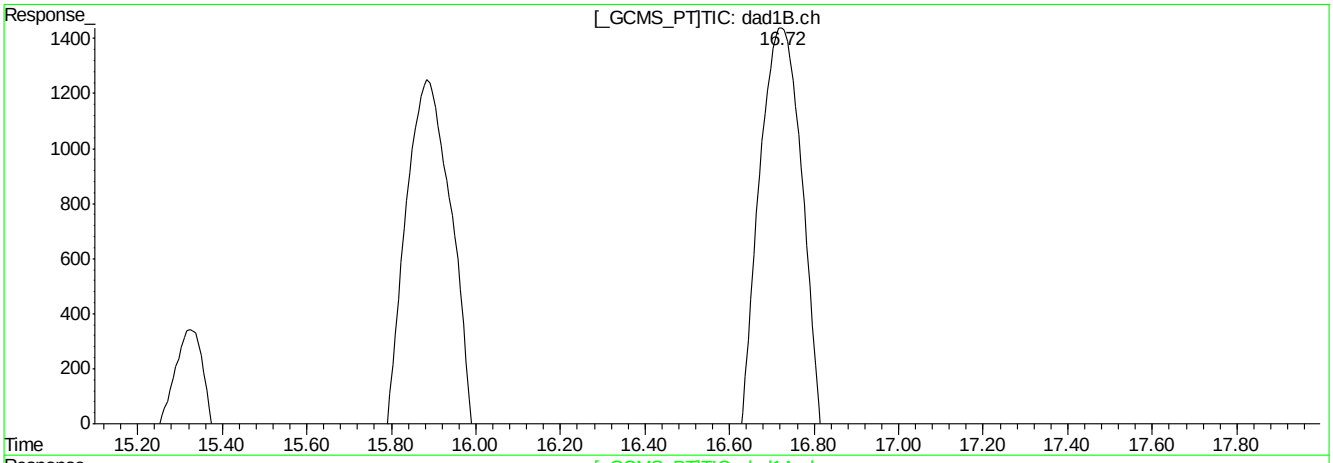
response 484084

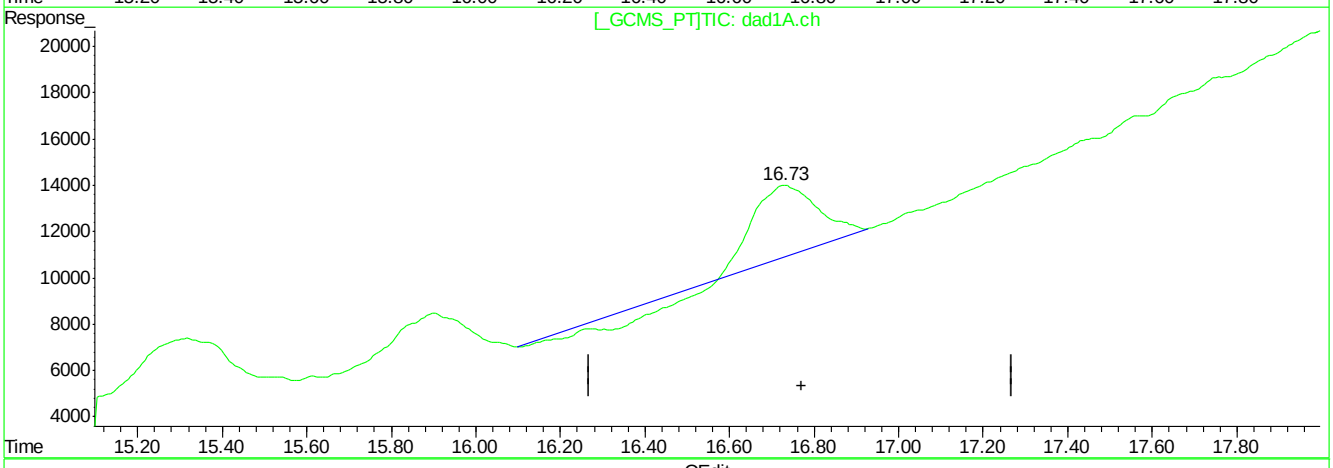
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:40:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.72min 102.287ppb

response 342624

(20) m-Nitrotoluene #2

16.73min 61.503ppb

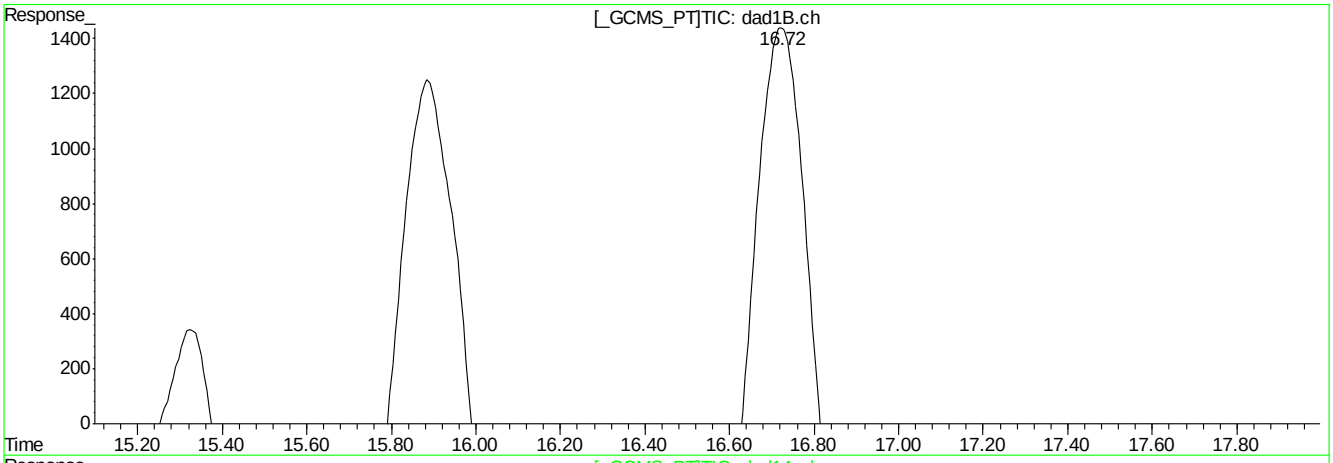
response 227819

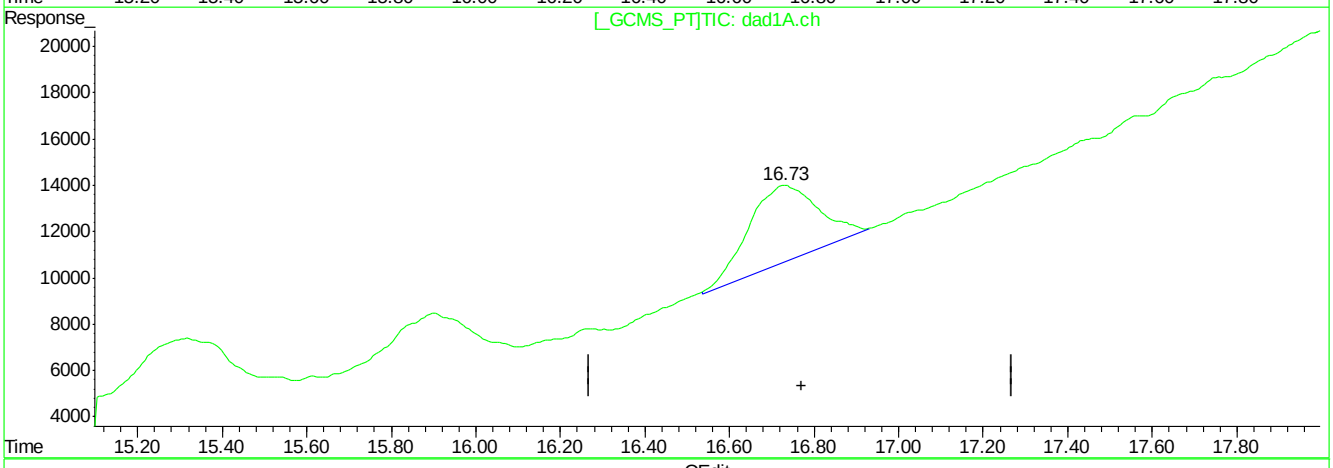
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:41:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.72min 102.287ppb

response 342624

(20) m-Nitrotoluene #2

16.73min 103.014ppb m

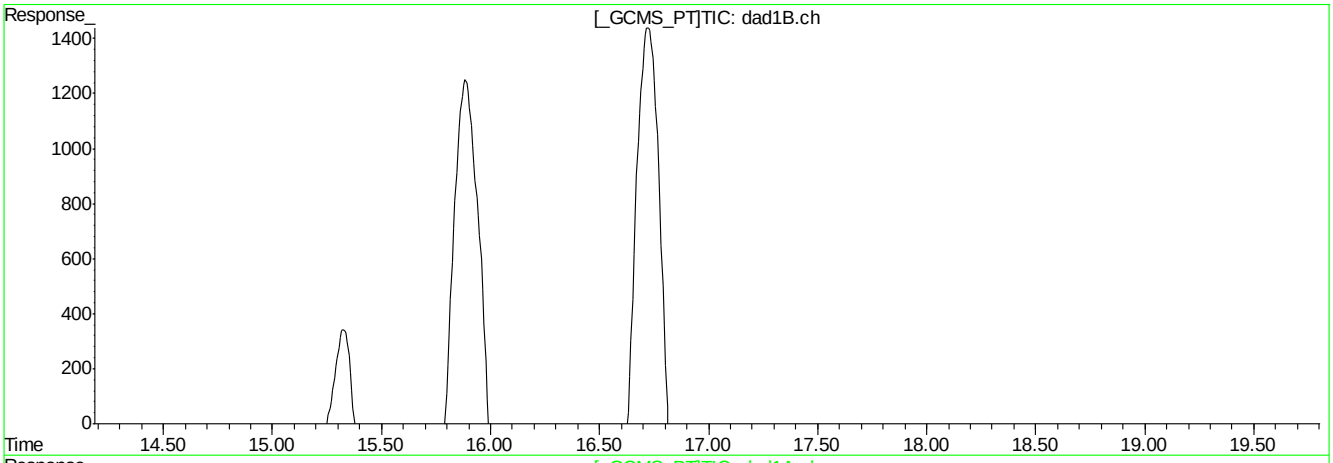
response 381585

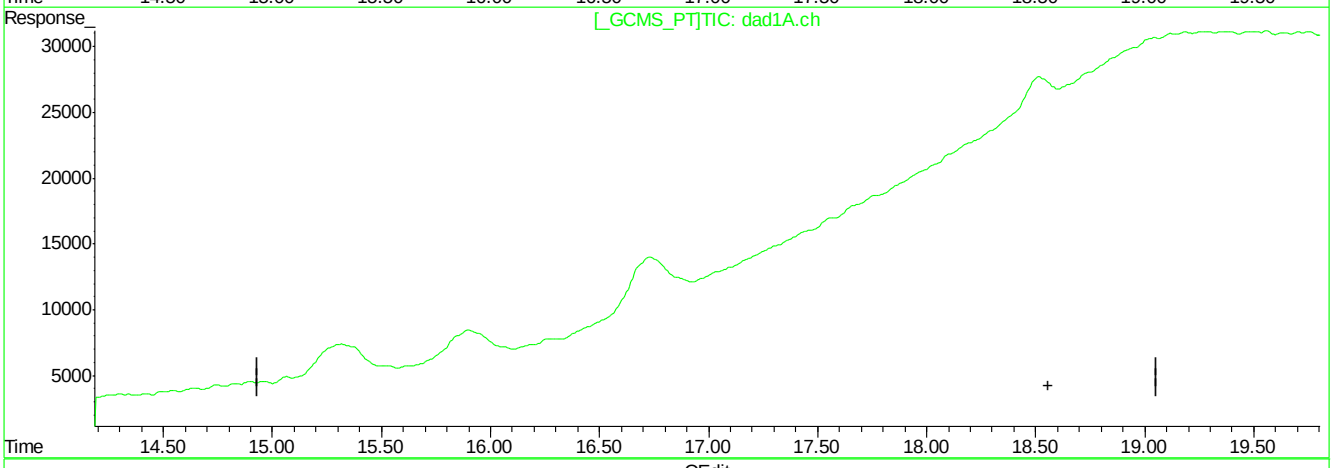
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:41:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

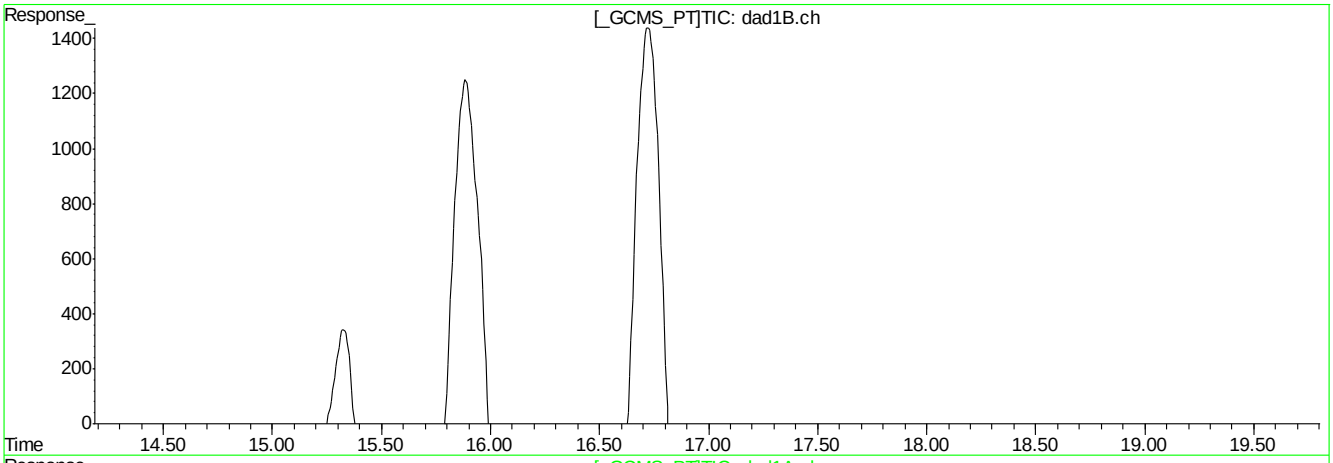
response 0

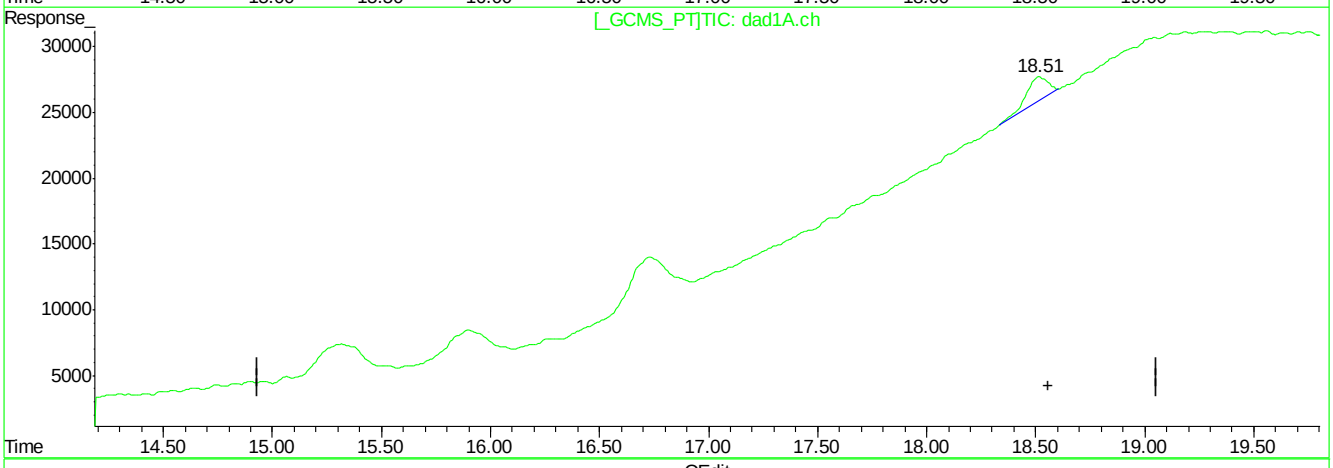
(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:41:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390448.D\dad1A.ch
Acq On : 02-Apr-2021, 09:12:18 Operator: jamesb
Sample : ic2428-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.51min 98.036ppb m

response 126534

(+) = Expected Retention Time
PP390448.D GPP2428_040221PRI.M Mon Apr 05 08:41:19 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/05/21 10:17

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 05 08:23:29 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.22	11.23	456745	686090	226.668m	212.571
	Spiked Amount 500.000	Range 70 - 136		Recovery =		45.33%#	42.51%#
	Target Compounds						
1)	TNX	1.33	1.33	525896	842621	169.410	180.881
2)	HMX	1.47	1.47	273463	908665	175.475m	213.787m
3)	DNX	1.72	1.71	512255	912701	200.607	244.327m
4)	MNX	2.31	2.31	550974	855776	196.806	205.798m
5)	RDX	2.93	2.93	349016	583642	183.301m	190.422m
6)	1,3,5-Trinitrobe	4.68	4.68	789788	1533850	191.413m	197.396m
7)	1,3-Dinitrobenze	5.88	5.88	1054564	732231	195.807	204.415m
8)	3,5-Dinitroanili	6.29	6.29	785583	1373019	195.169m	187.711m
9)	Nitrobenzene	7.42	7.42	629635	592766	209.146	189.548m
10)	Nitroglycerin	0.00	9.03	0	251046	N.D.	206.554m#
11)	Tetryl	9.54	9.54	560399	892081	237.562m	219.118
12)	2,4,6-Trinitroto	9.90	9.90	731890	912135	186.194m	207.669
13)	2-Amino-4,6-Dini	10.37	10.37	661367	990173	193.253m	217.867
14)	4-Amino-2,6-Dini	10.88	10.89	497511	952867	202.760m	216.939
16)	2,4-Dinitrotolue	11.85	11.85	961764	633122	200.069m	211.004
17)	2,6-Dinitrotolue	12.34	12.35	516380	725149	195.895m	204.633
18)	o-Nitrotoluene	15.34	15.35	404959	580852	188.070	200.913
19)	p-Nitrotoluene	15.92	15.93	659796	479161	192.912	172.919
20)	m-Nitrotoluene	16.75	16.74	670815	795150	200.265	214.662m
21)	PETN	0.00	18.53	0	256420	N.D.	198.668m#

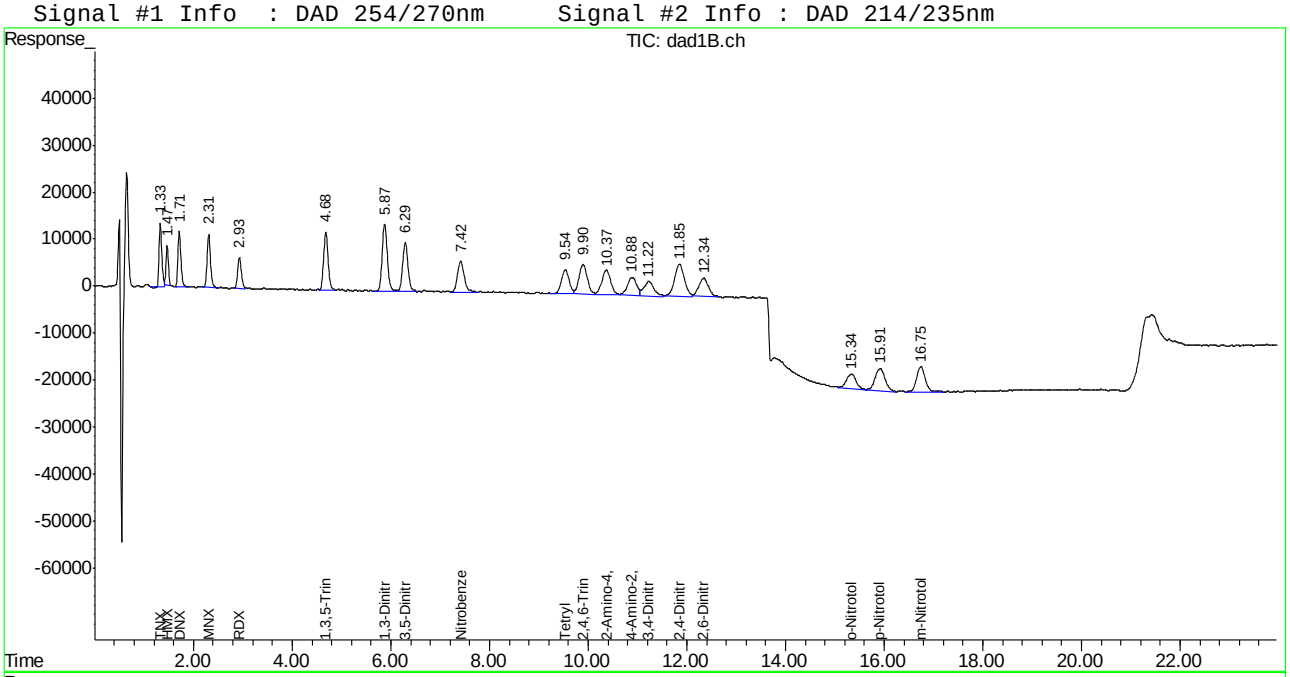
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP390449.D GPP2428_040221PRI.M Mon Apr 05 09:04:42 2021 Page 1

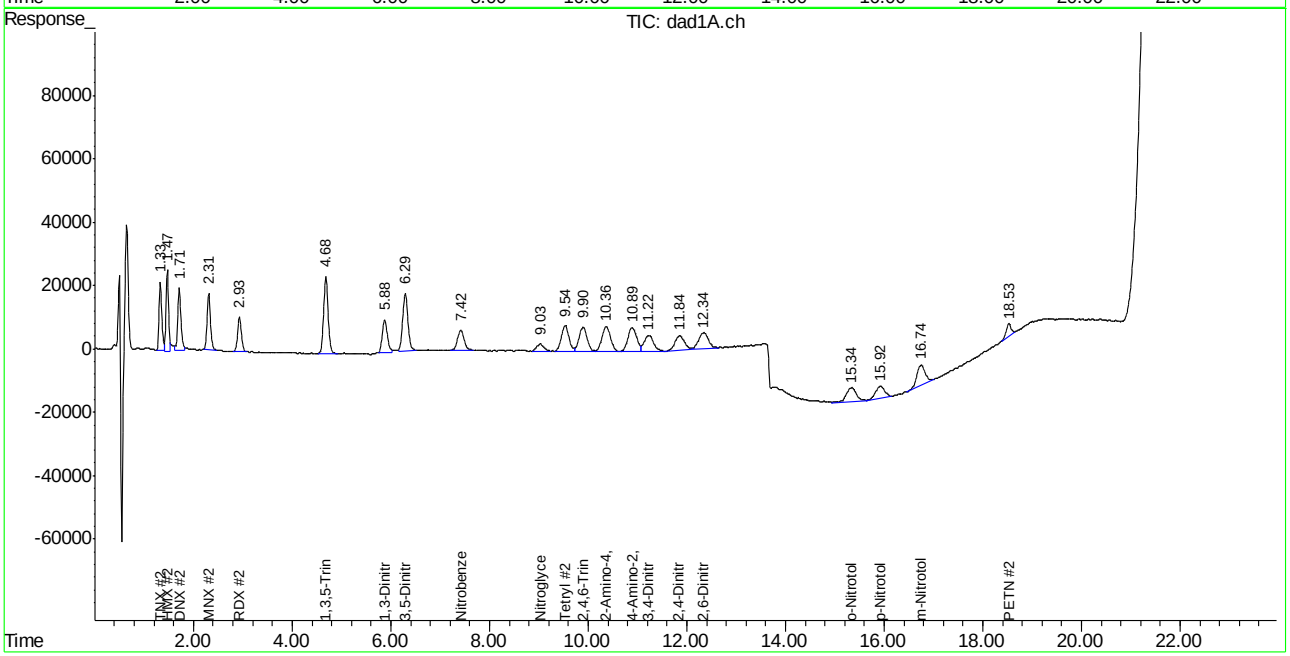
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:37 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





FA84640

Manual Integration Approval Summary

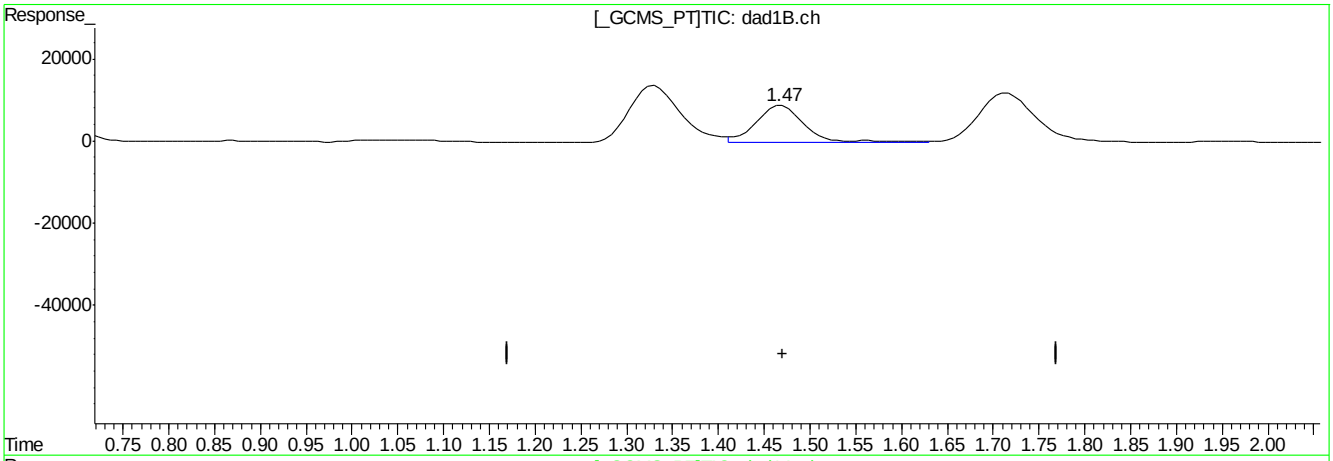
Sample Number: GPP2428-IC2428
Lab FileID: PP390449.D
Injection Time: 04/02/21 09:43
Method: SW846 8330A
Analyst approved: 04/05/21 09:06 James Boone
Supervisor approved: 04/05/21 10:17 Naresh Jiawan

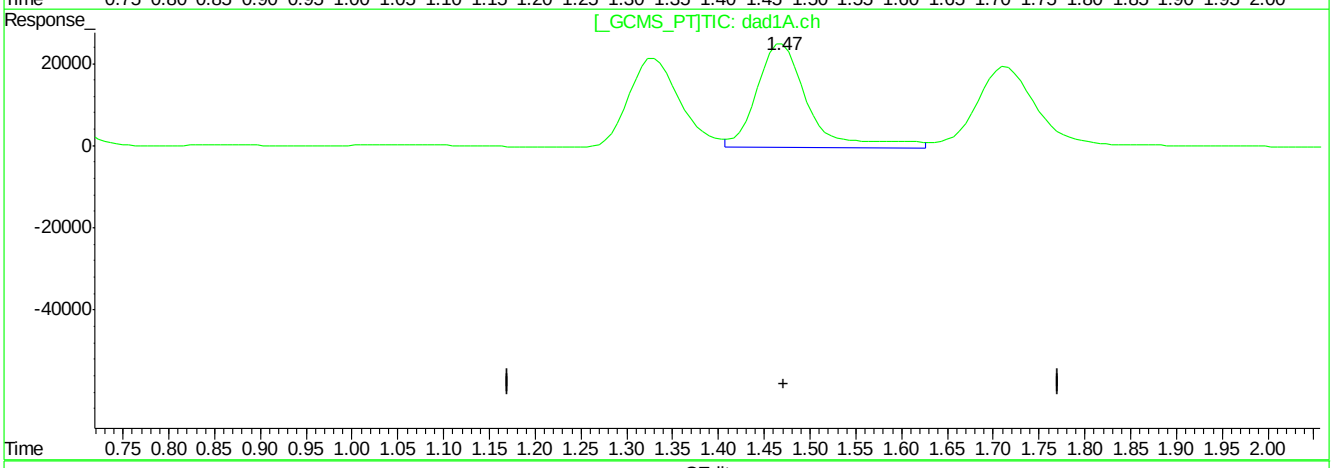
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.47	Poor instrument integration
HMX	2691-41-0	2	1.47	Poor instrument integration
DNX		2	1.71	Poor instrument integration
MNX		2	2.31	Poor instrument integration
RDX	121-82-4	1	2.93	Poor instrument integration
RDX	121-82-4	2	2.93	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.68	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.68	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.88	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.29	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.29	Poor instrument integration
Nitrobenzene	98-95-3	2	7.42	Poor instrument integration
Nitroglycerine	55-63-0	2	9.03	Poor instrument integration
Tetryl	479-45-8	1	9.54	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.90	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.37	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.88	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.22	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	11.85	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.34	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.74	Poor instrument integration
PETN	78-11-5	2	18.53	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.47min 204.603ppb

response 318856

(2) HMX #2

1.47min 230.737ppb

response 980706

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:31:15 2021

PP390449.D edits: HMX

FA84640

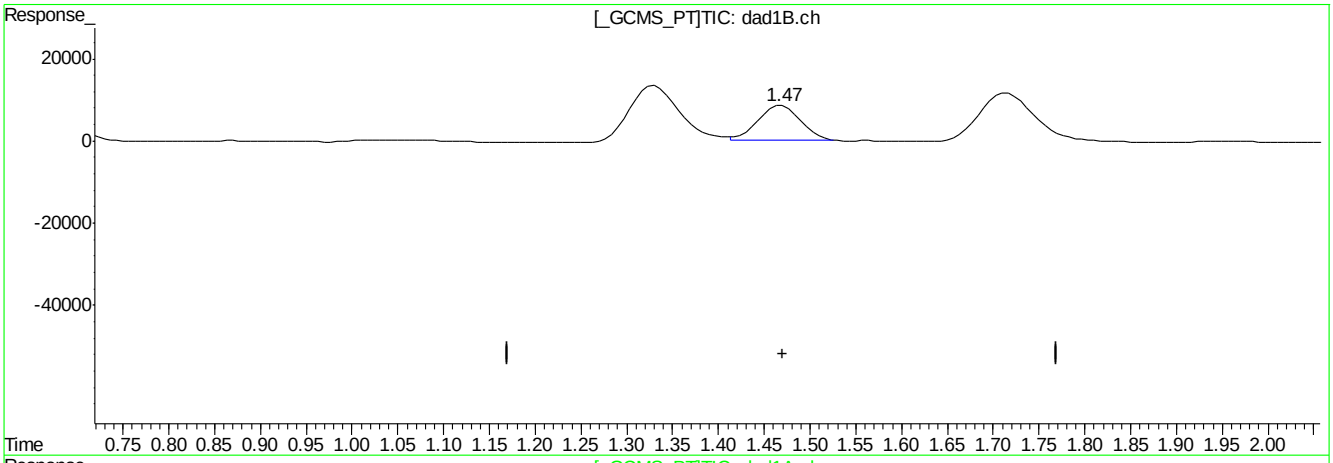
9.5.28.2

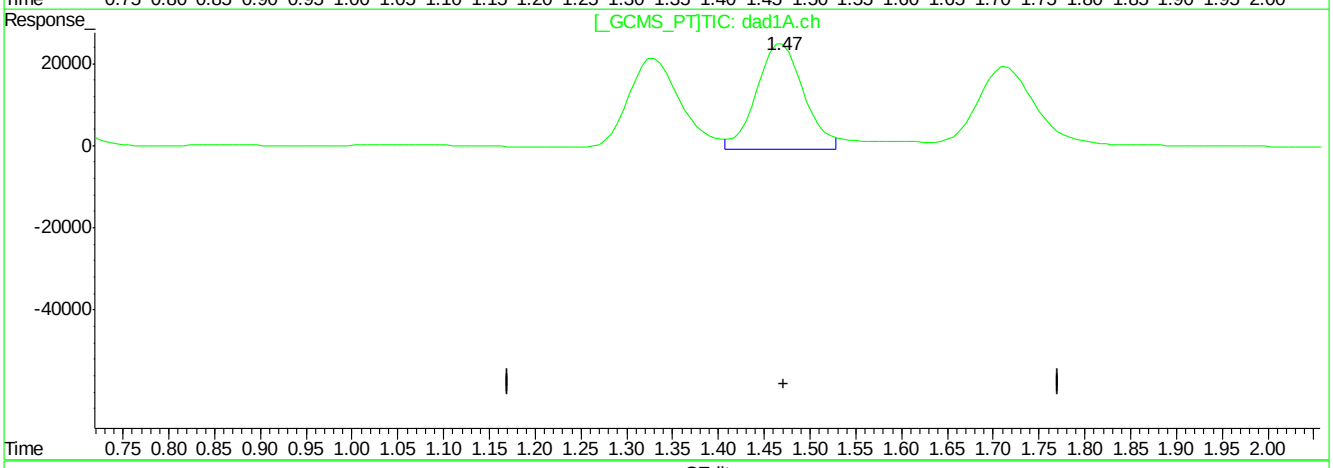
9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.47min 175.475ppb m

response 273463

(2) HMX #2

1.47min 213.787ppb m

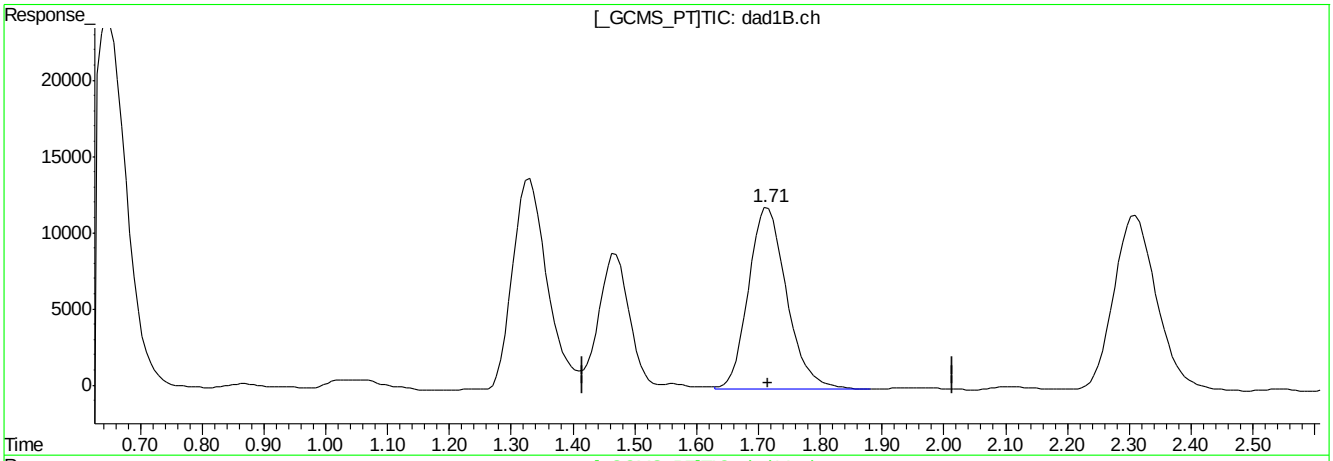
response 908665

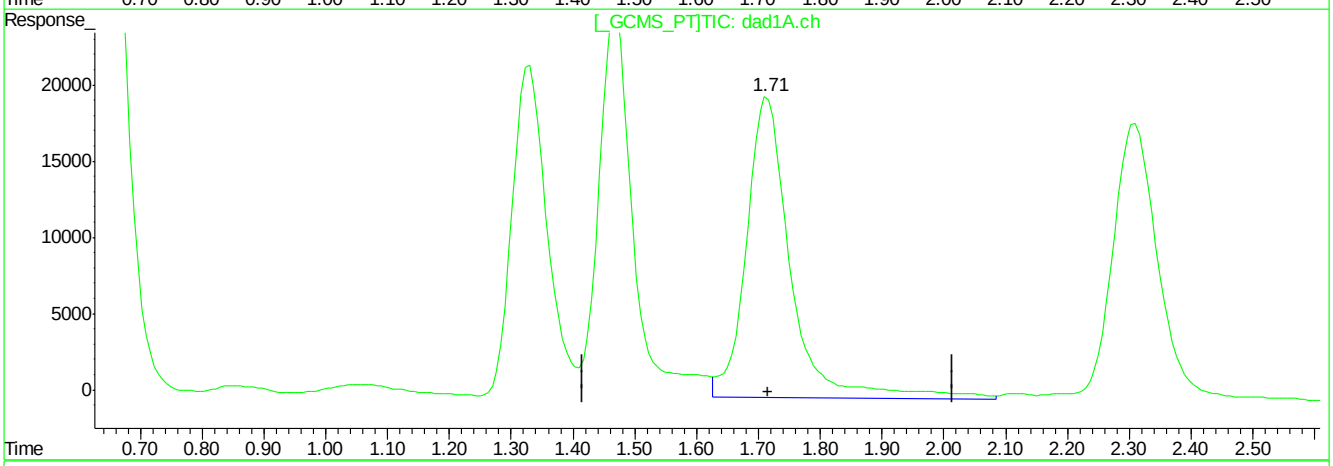
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:31:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.72min 200.607ppb

response 512255

(3) DNX #2

1.71min 267.122ppb

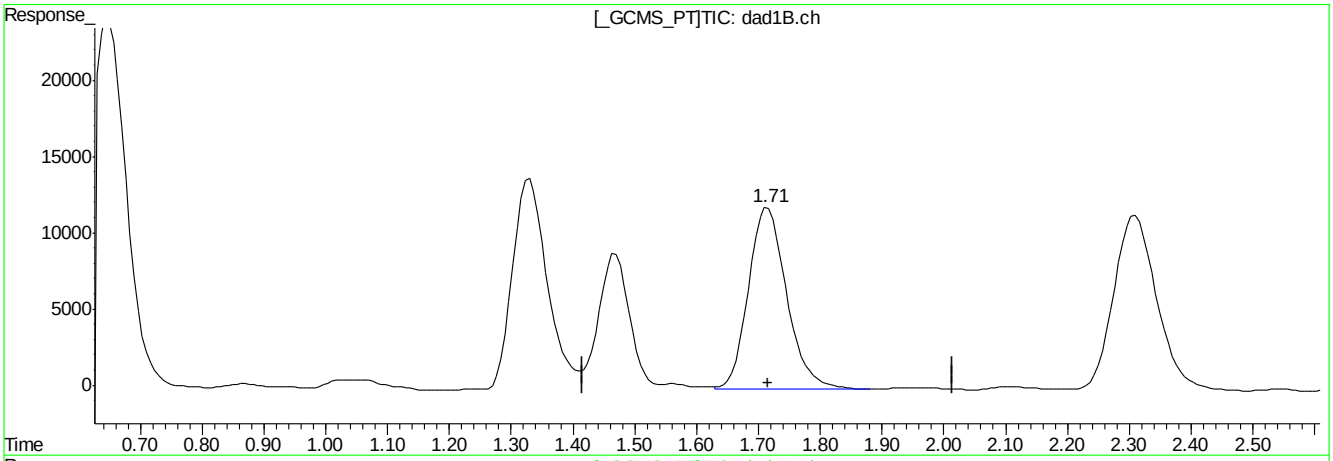
response 997851

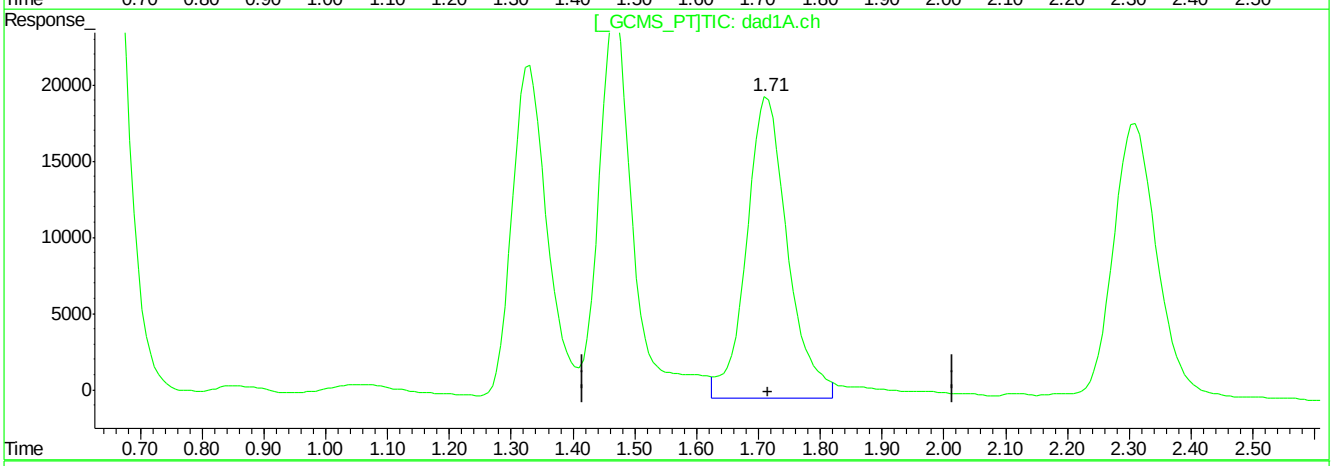
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:31:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.72min 200.607ppb

response 512255

(3) DNX #2

1.71min 244.327ppb m

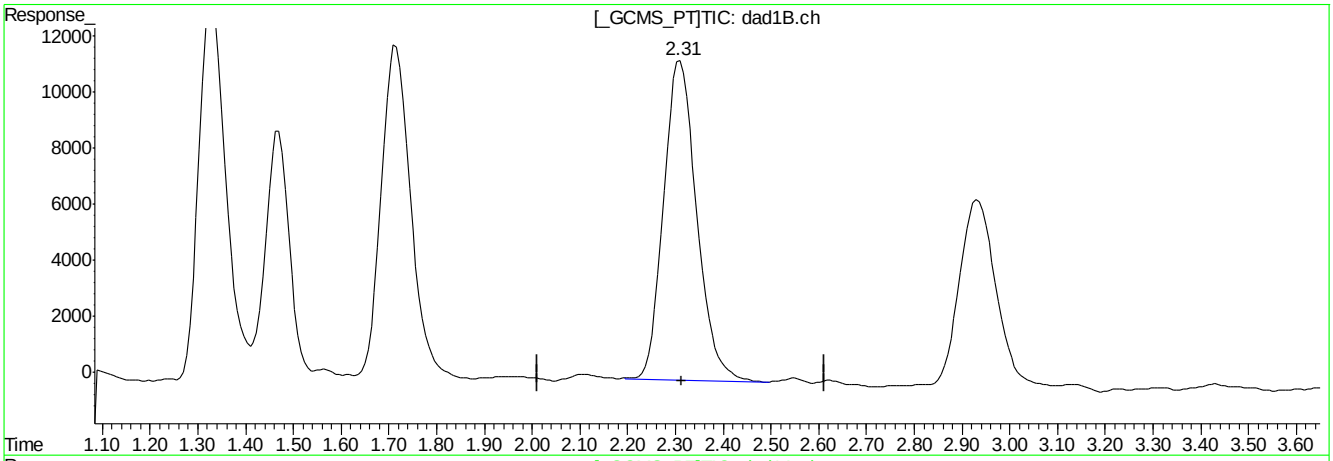
response 912701

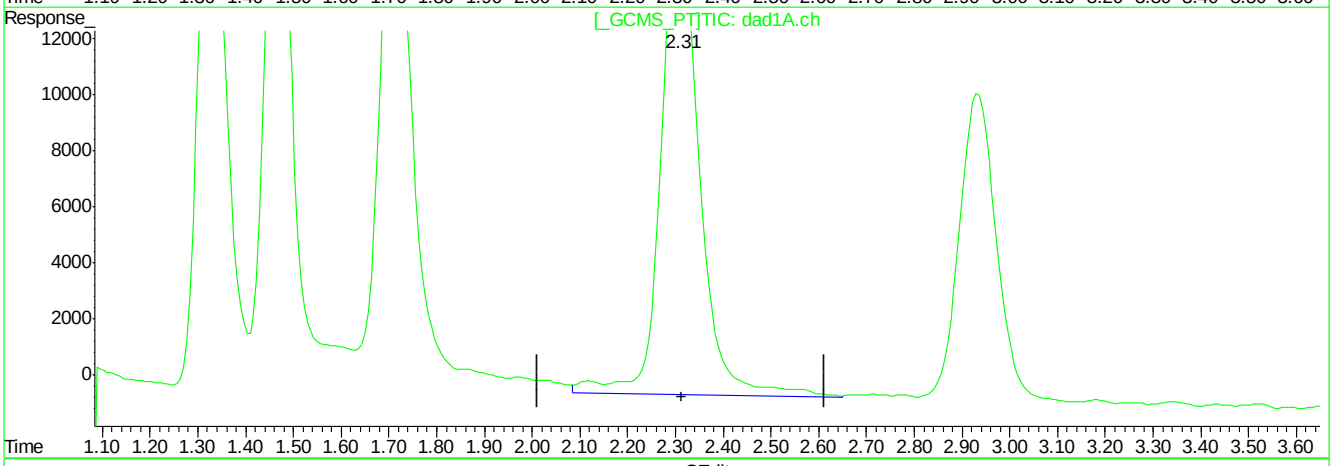
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:31:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.31min 196.806ppb

response 550974

(4) MNX #2

2.31min 234.055ppb

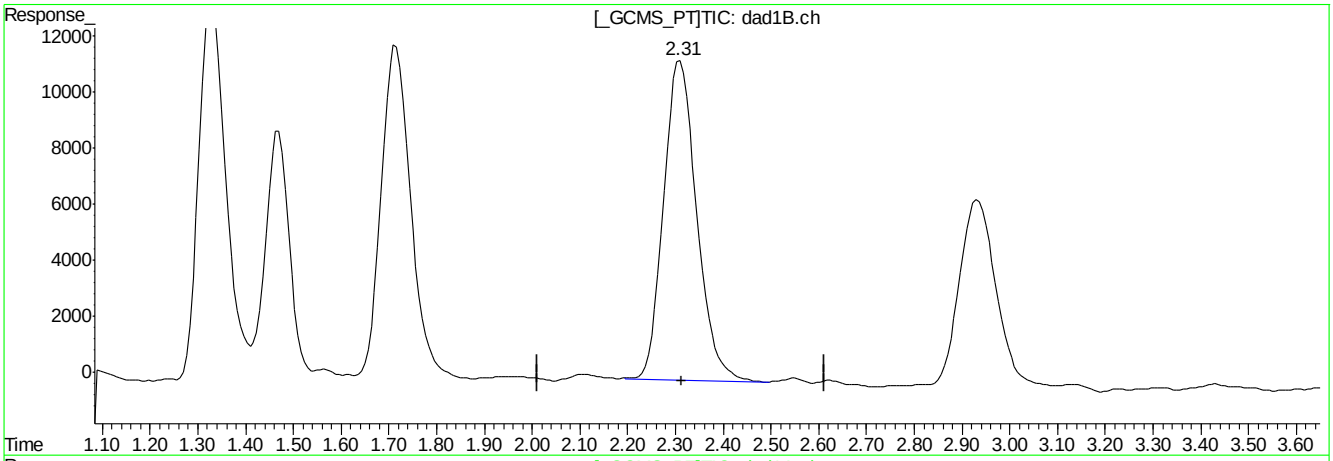
response 973278

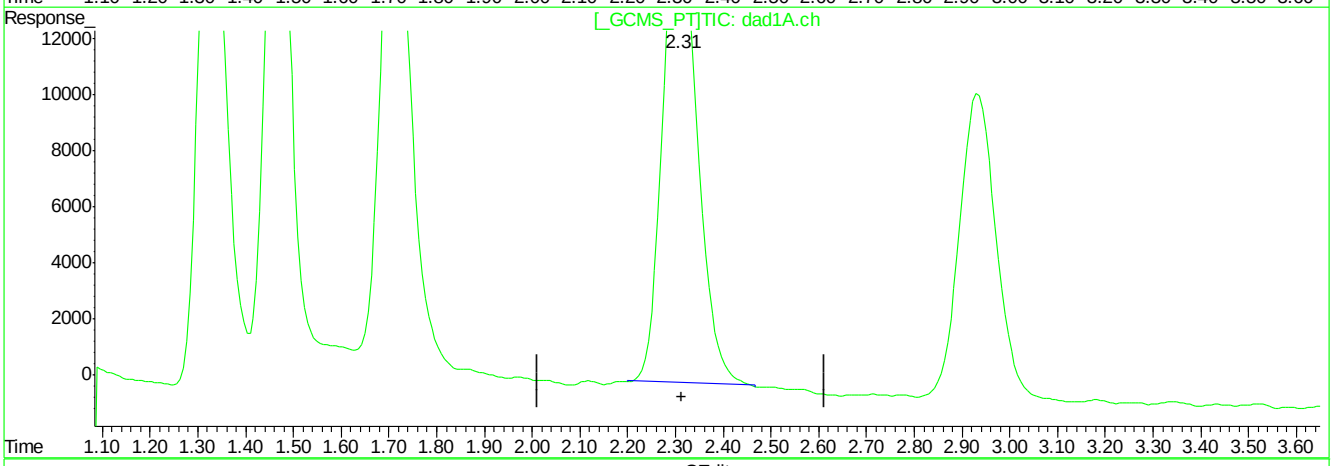
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:31:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.31min 196.806ppb

response 550974

(4) MNX #2

2.31min 205.798ppb m

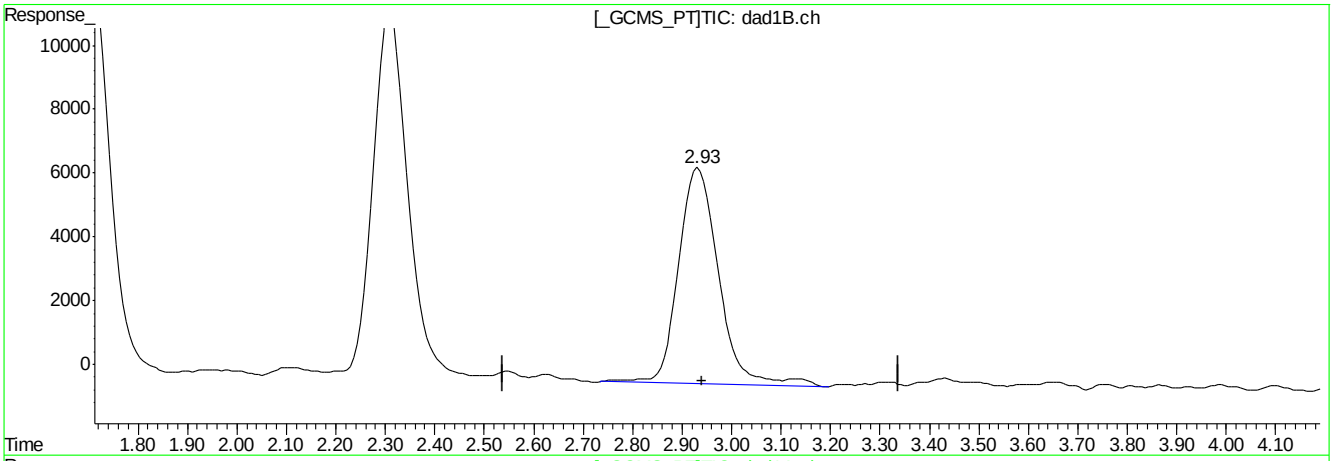
response 855776

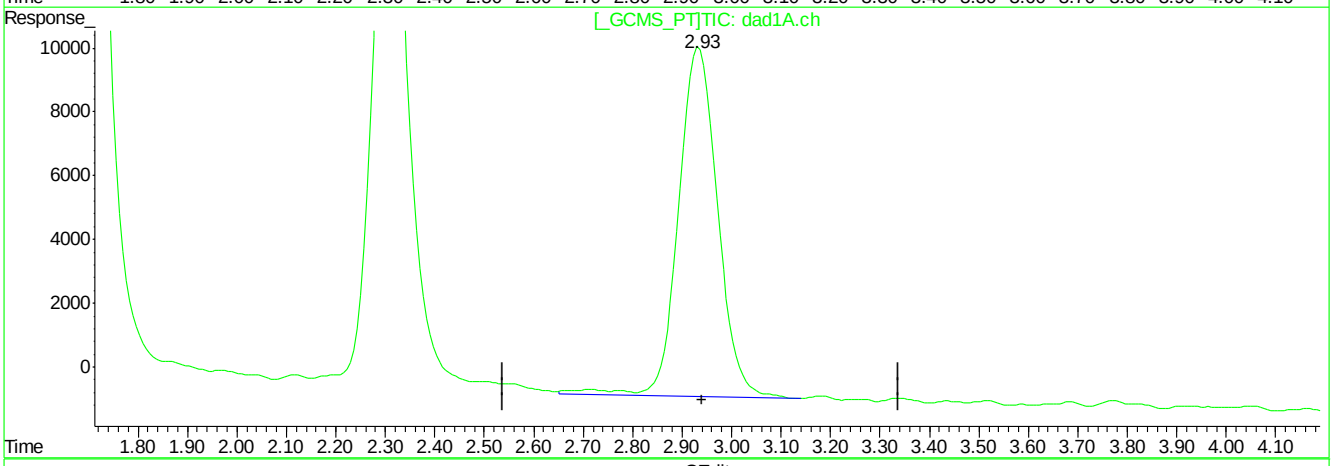
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:31:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.93min 200.701ppb

response 382147

(5) RDX #2

2.93min 196.239ppb

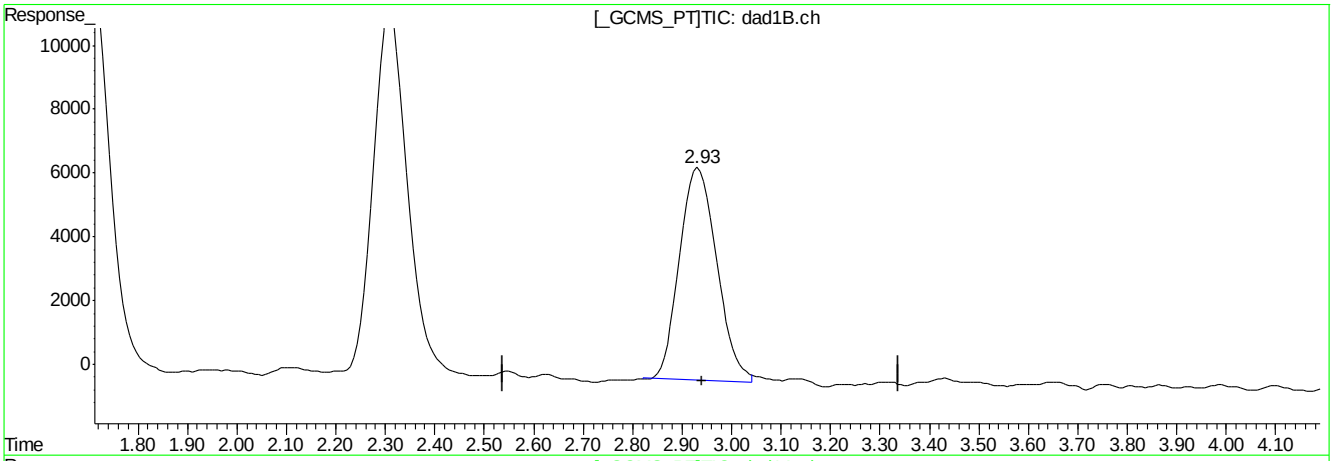
response 601472

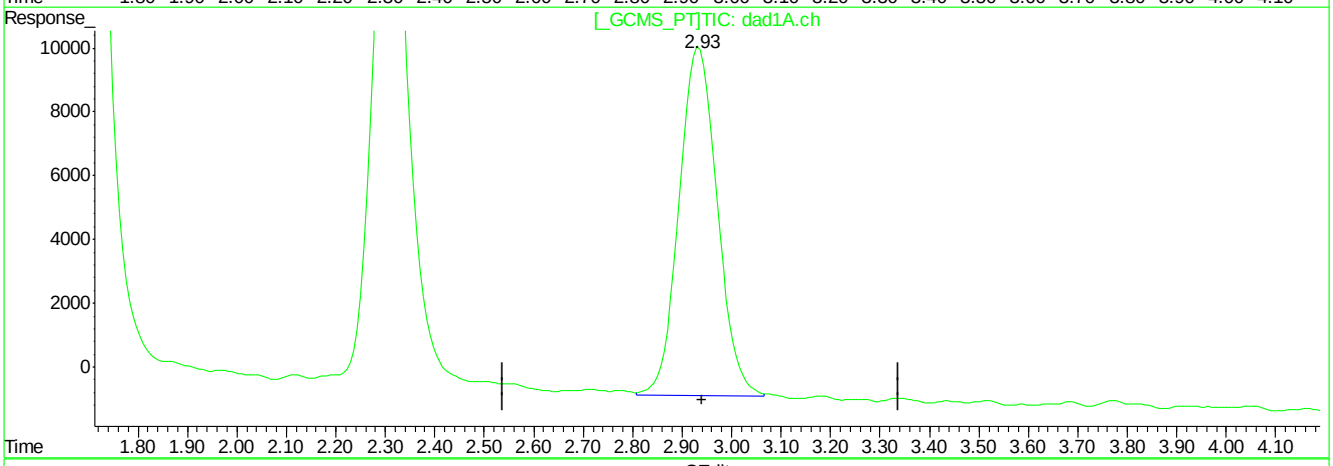
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:31:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.93min 183.301ppb m

response 349016

(5) RDX #2

2.93min 190.422ppb m

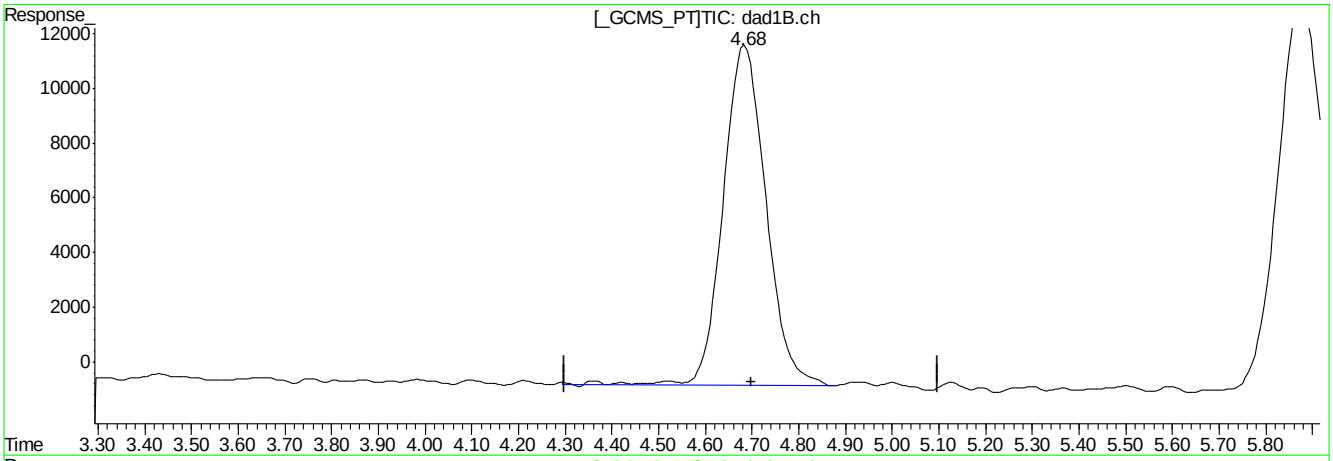
response 583642

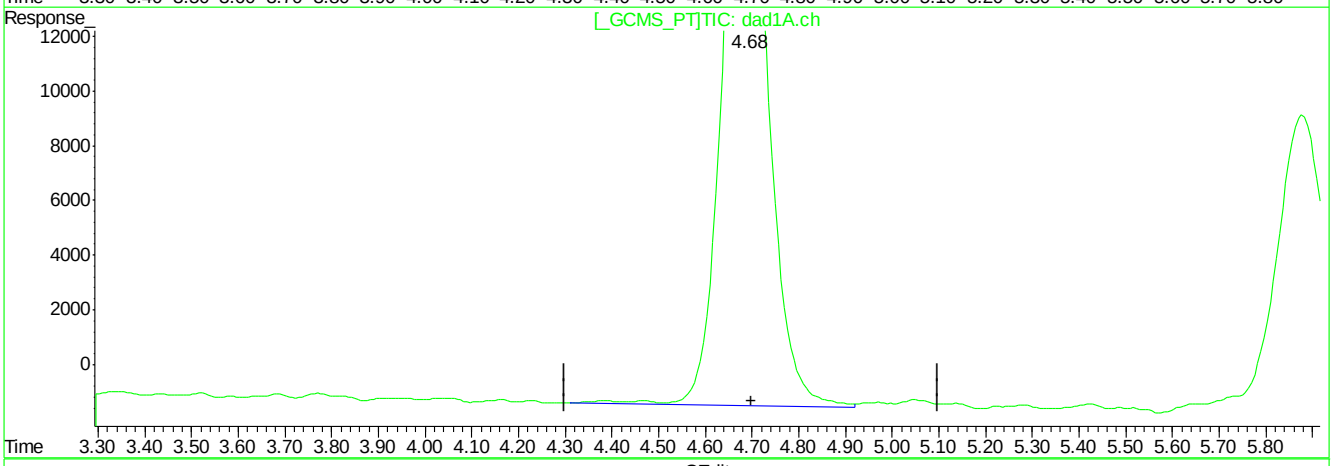
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:32:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.69min 193.312ppb

response 797624

(6) 1,3,5-Trinitrobenzene #2

4.69min 200.494ppb

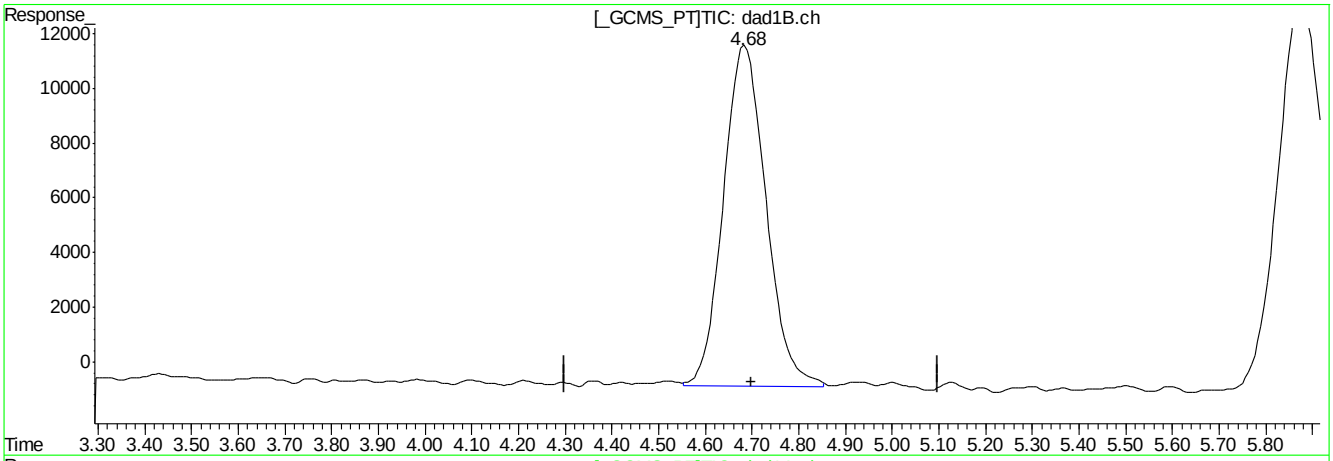
response 1557920

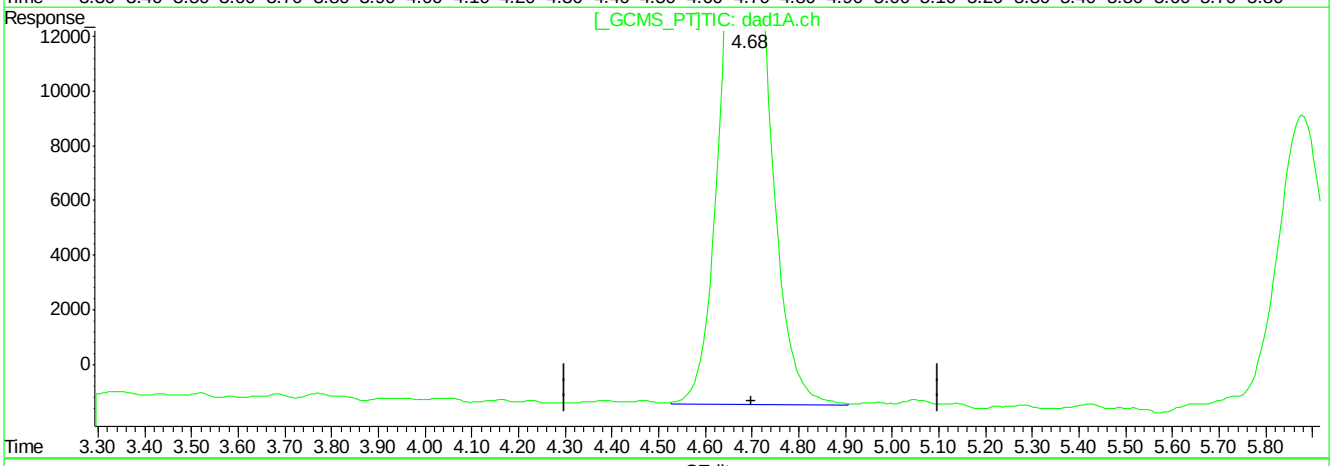
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:32:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.68min 191.413ppb m

response 789788

(6) 1,3,5-Trinitrobenzene #2

4.68min 197.396ppb m

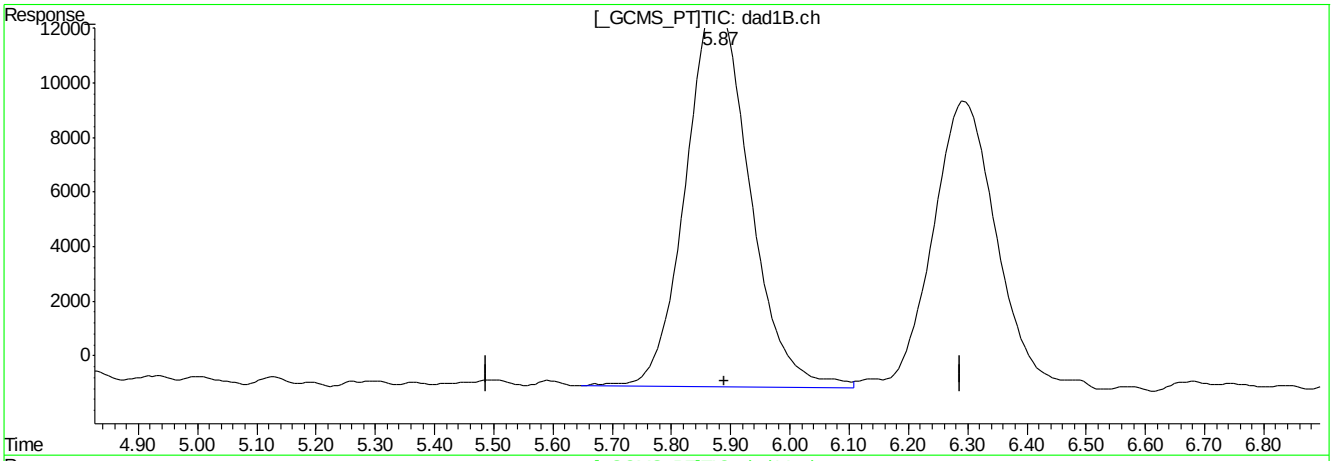
response 1533850

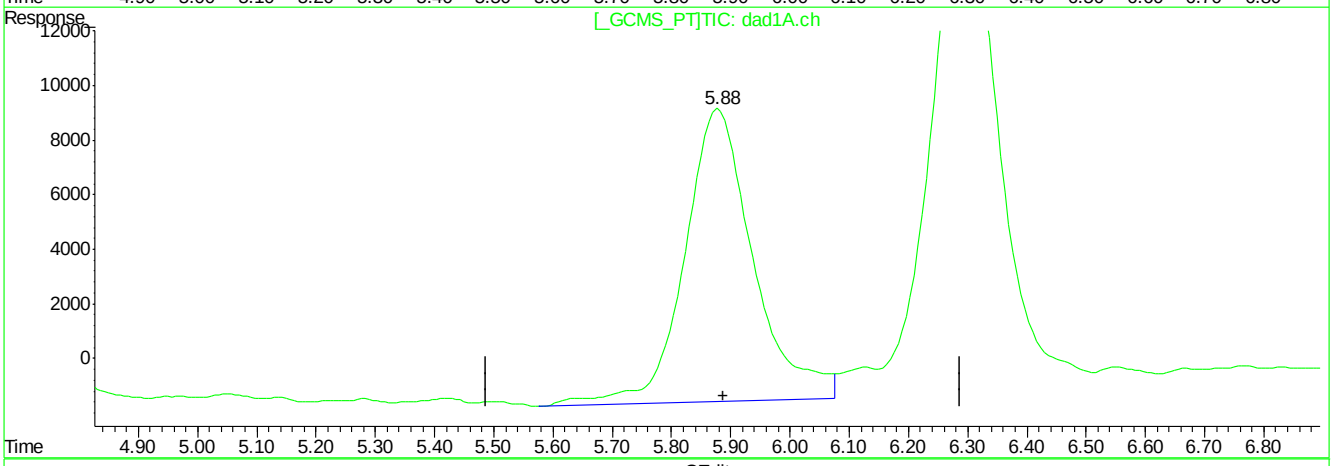
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:32:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.88min 195.807ppb

response 1054564

(7) 1,3-Dinitrobenzene #2

5.88min 241.767ppb

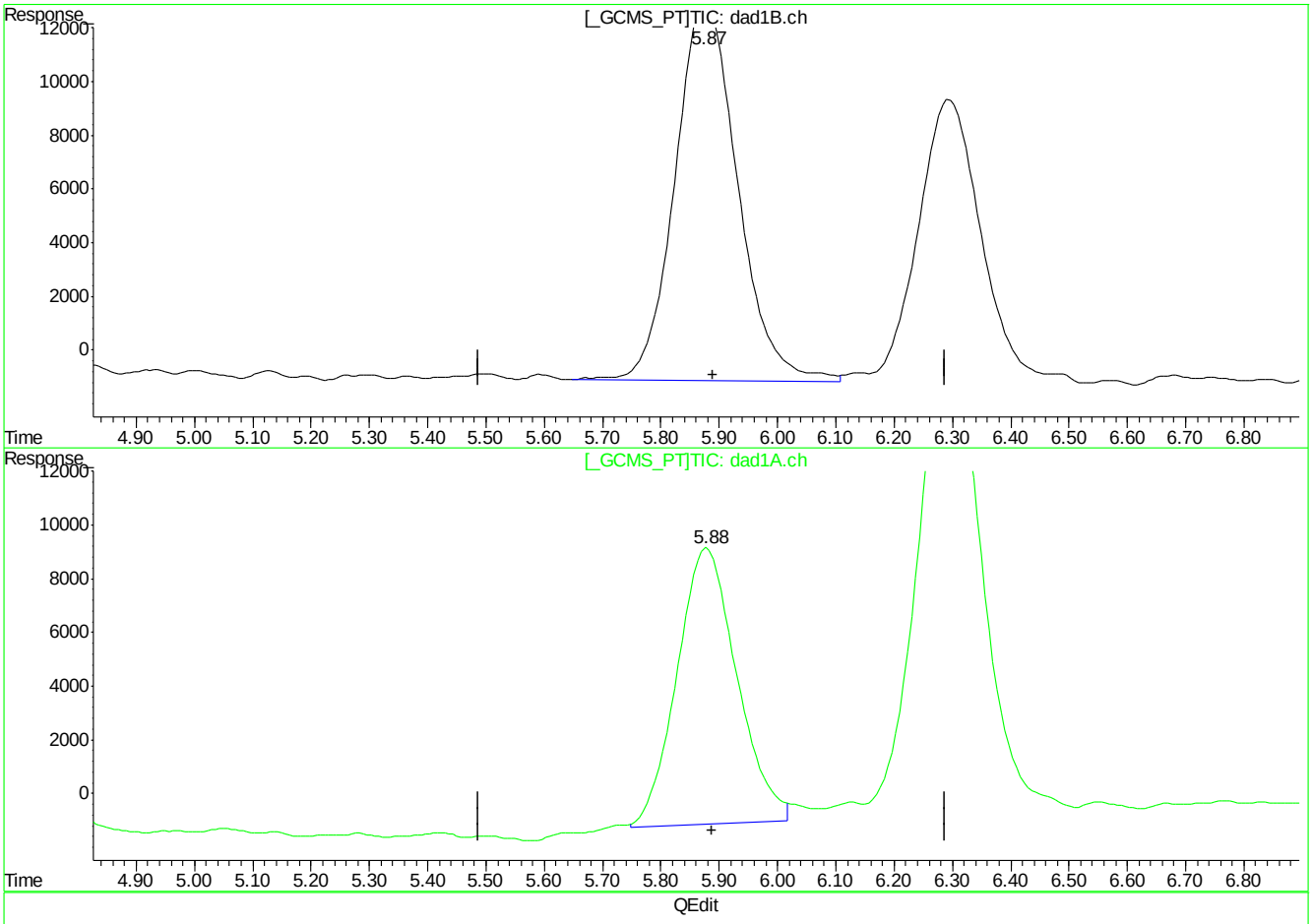
response 866029

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:32:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.88min 195.807ppb

response 1054564

(7) 1,3-Dinitrobenzene #2

5.88min 204.415ppb m

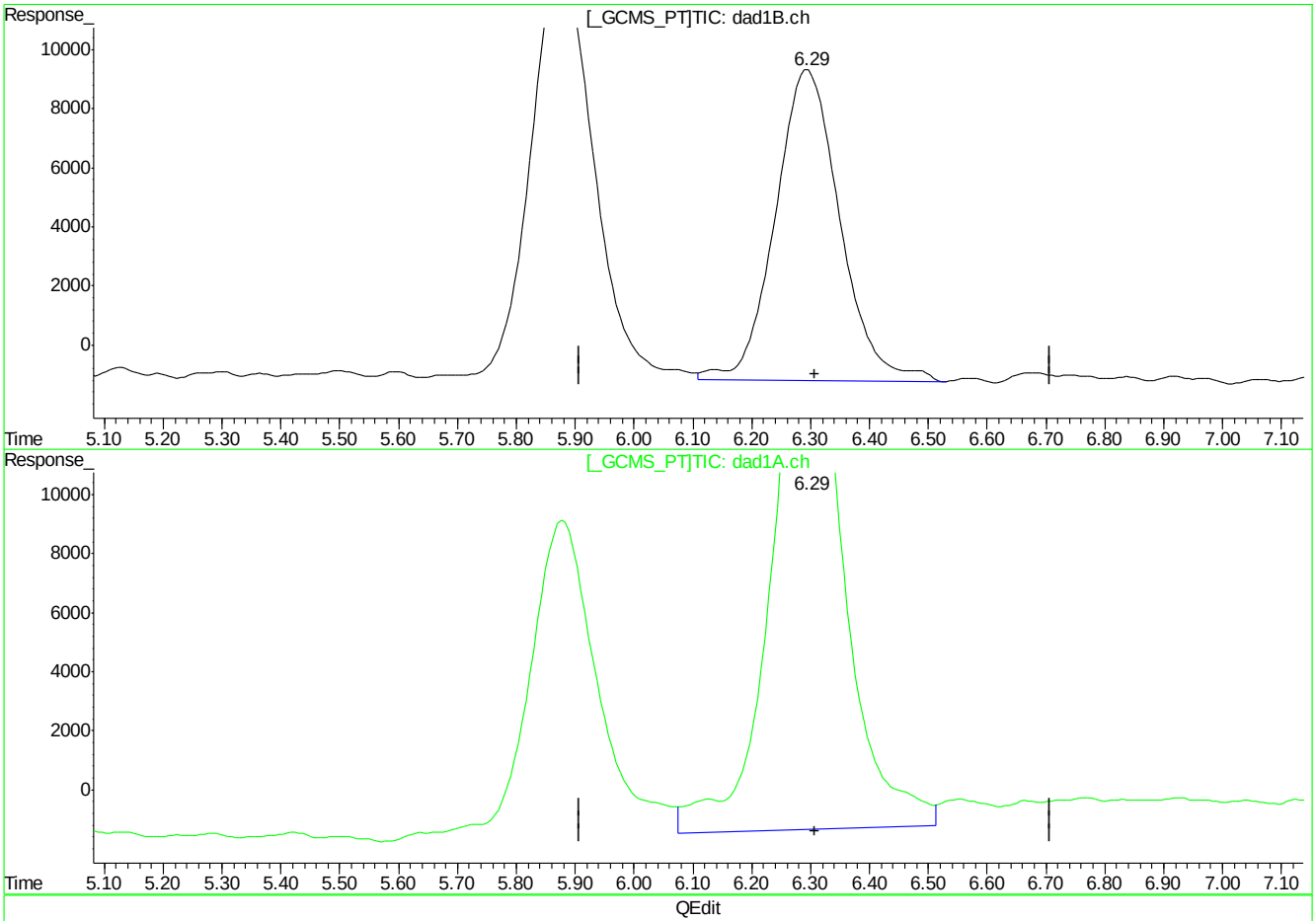
response 732231

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:32:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.30min 199.447ppb

response 802804

(8) 3,5-Dinitroaniline #2

6.30min 209.811ppb

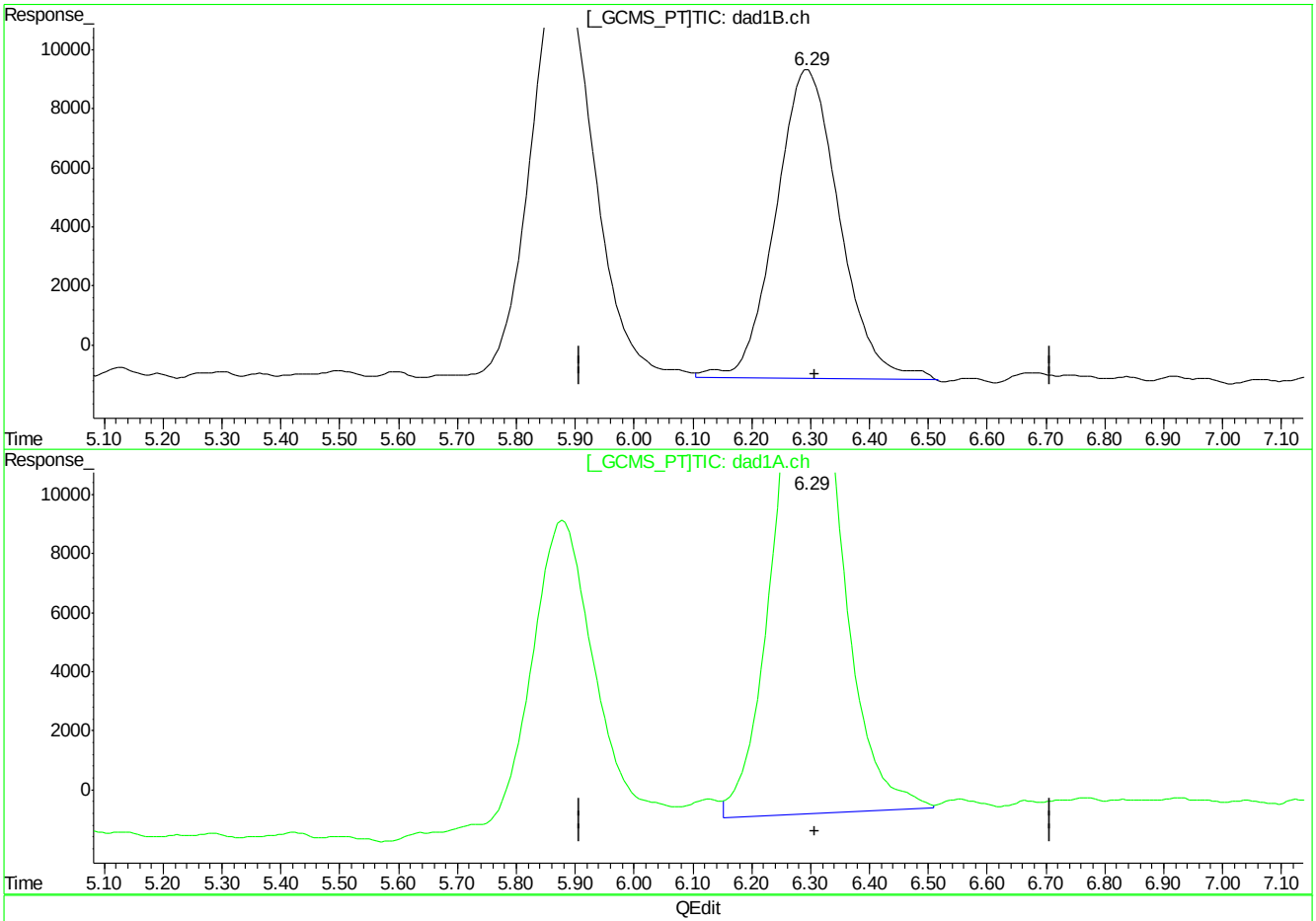
response 1534674

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:32:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.29min 195.169ppb m

response 785583

(8) 3,5-Dinitroaniline #2

6.29min 187.711ppb m

response 1373019

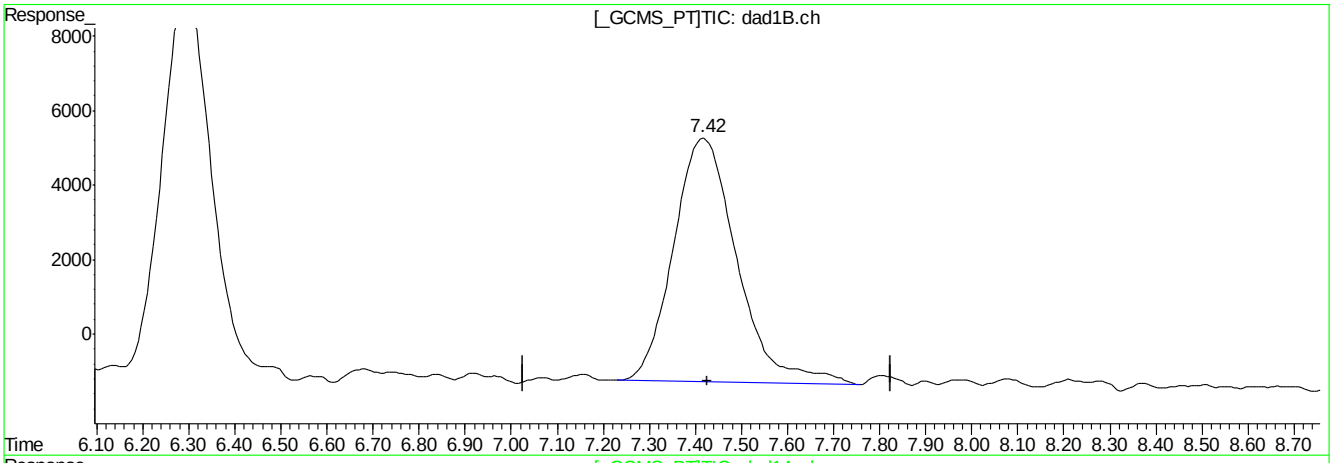
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:32:35 2021

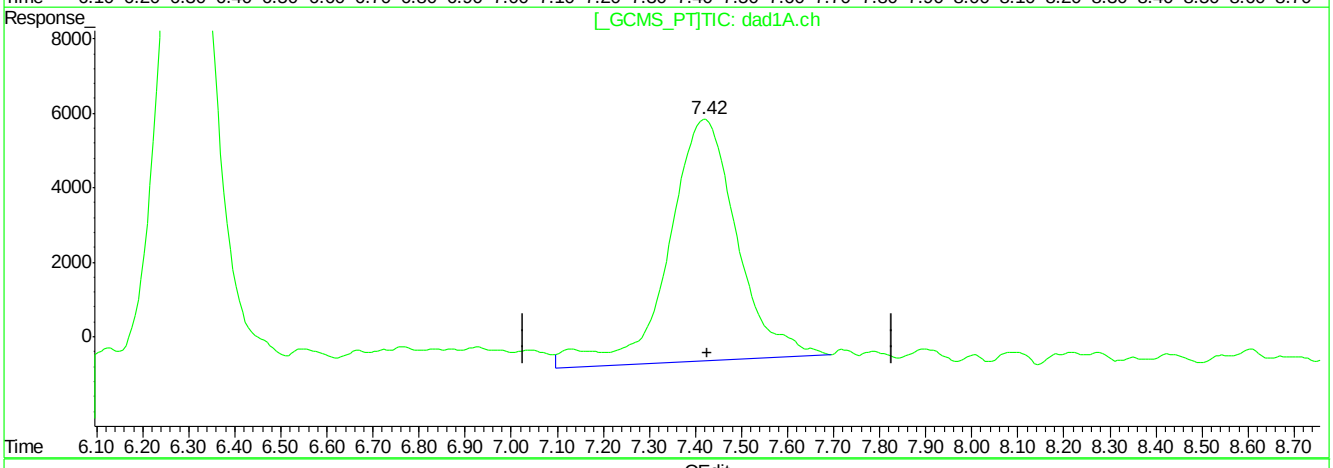
PP390449.D edits: 3,5-Dinitroaniline

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.42min 209.146ppb

response 629635

(9) Nitrobenzene #2

7.42min 216.108ppb

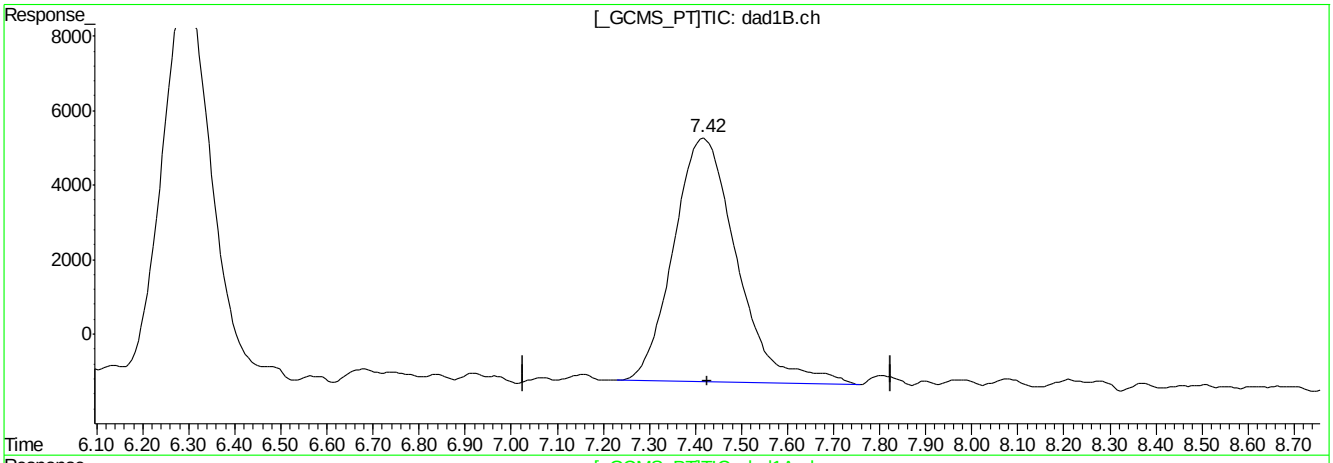
response 675827

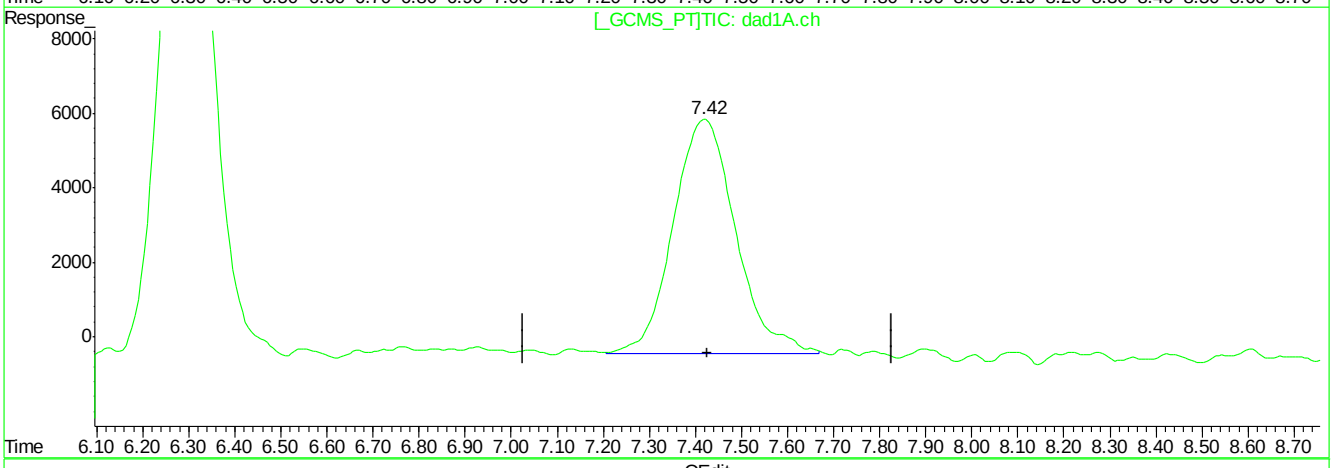
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:33:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.42min 209.146ppb

response 629635

(9) Nitrobenzene #2

7.42min 189.548ppb m

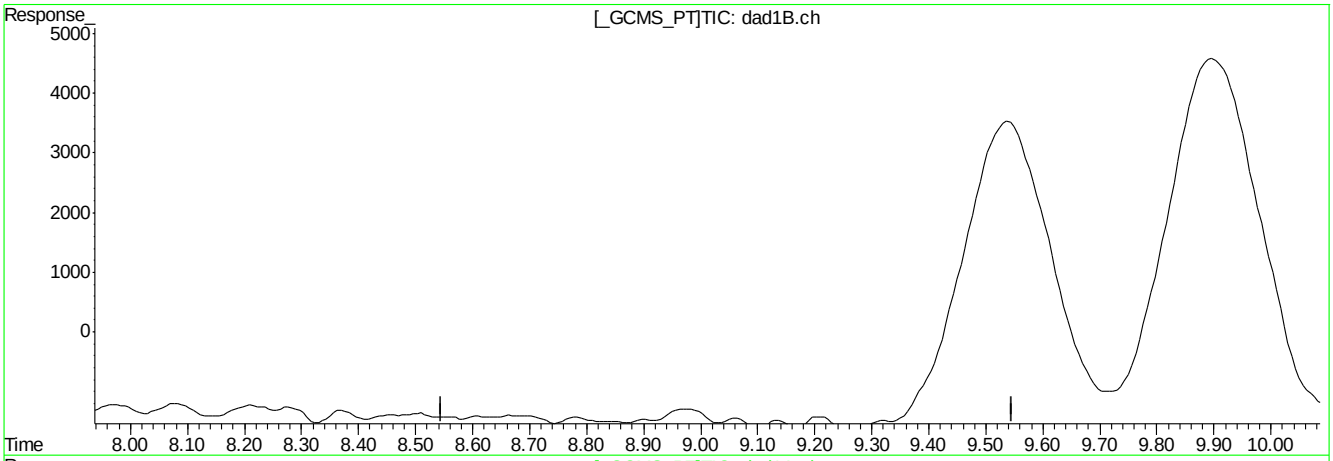
response 592766

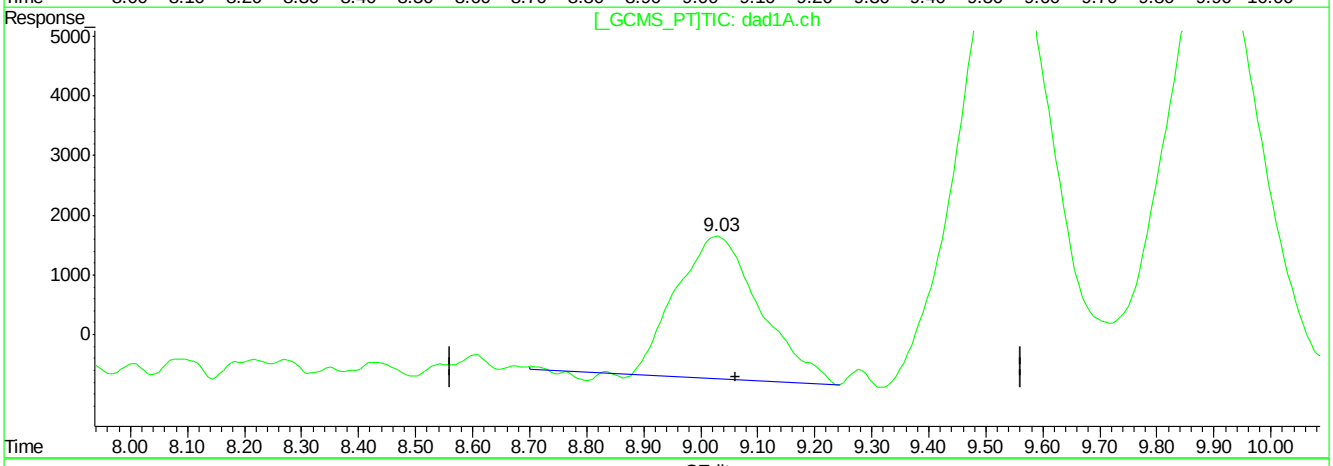
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:33:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.03min 198.293ppb

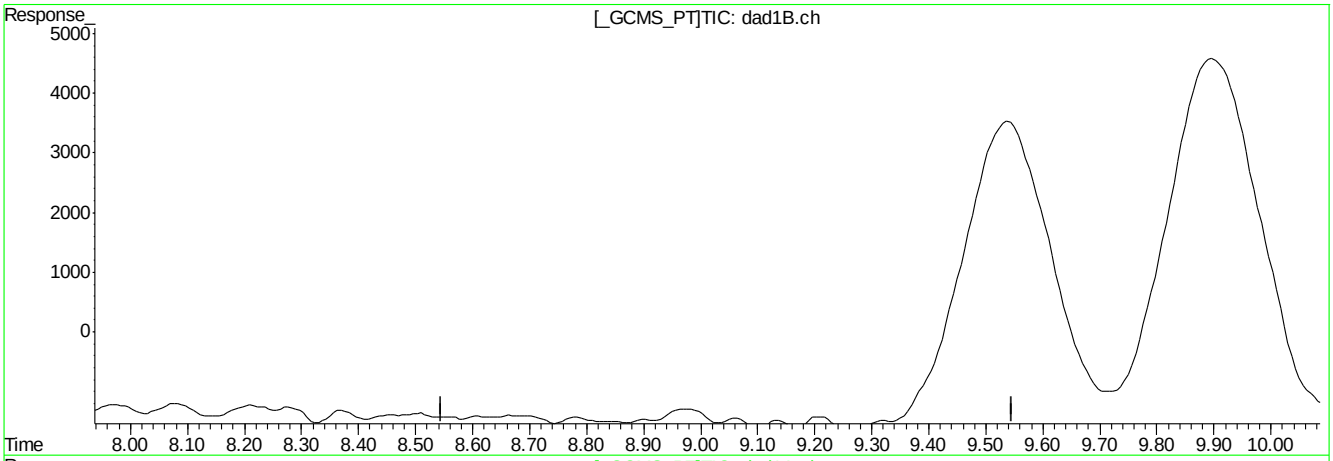
response 241007

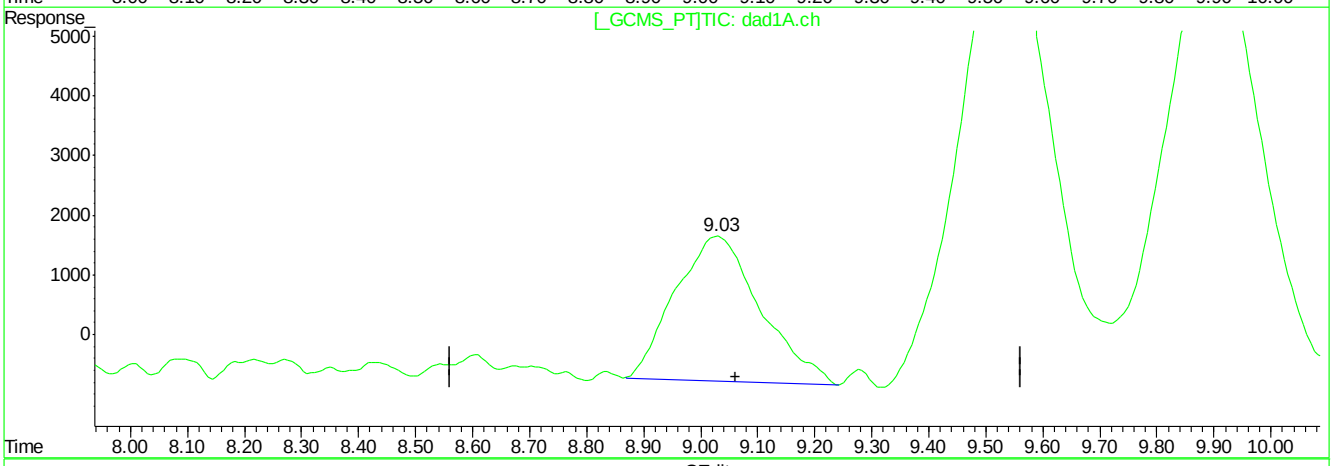
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:33:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.03min 206.554ppb m

response 251046

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:33:29 2021

9.5.28.19

9

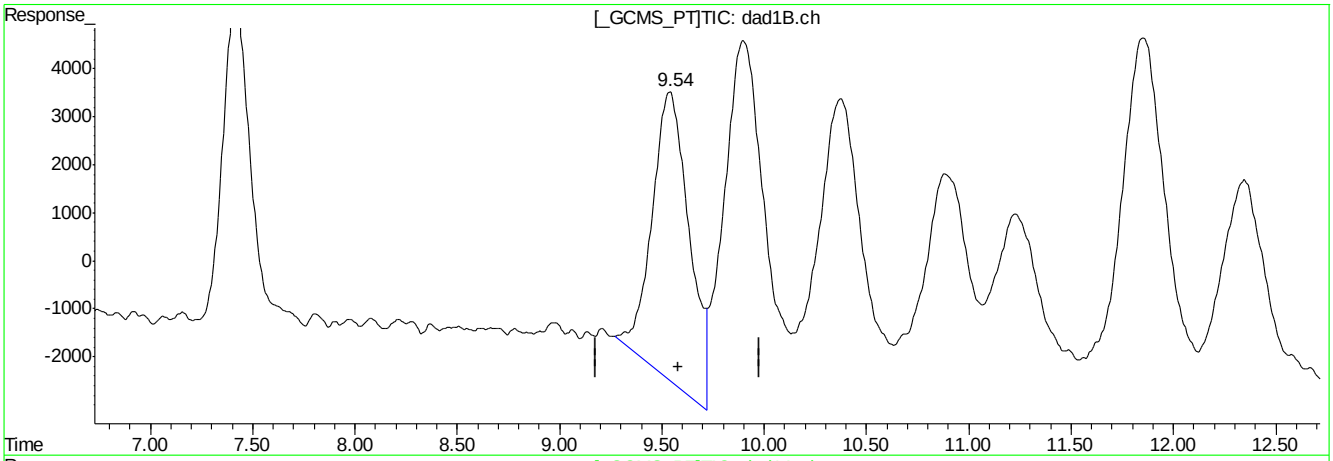
PP390449.D edits: Nitroglycerin

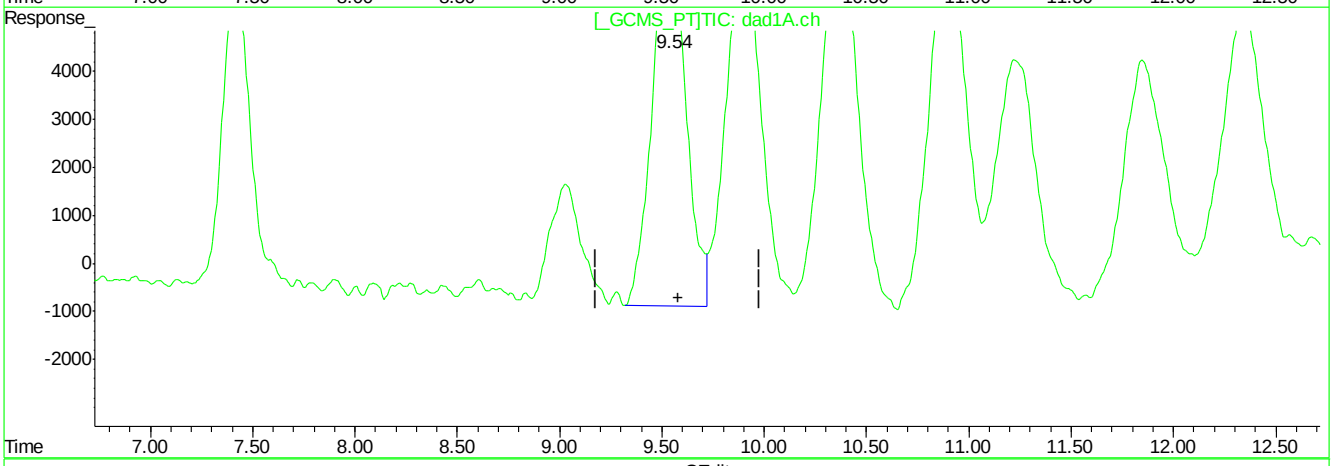
FA84640

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.54min 322.188ppb

response 760029

(11) Tetryl #2

9.54min 219.118ppb

response 892081

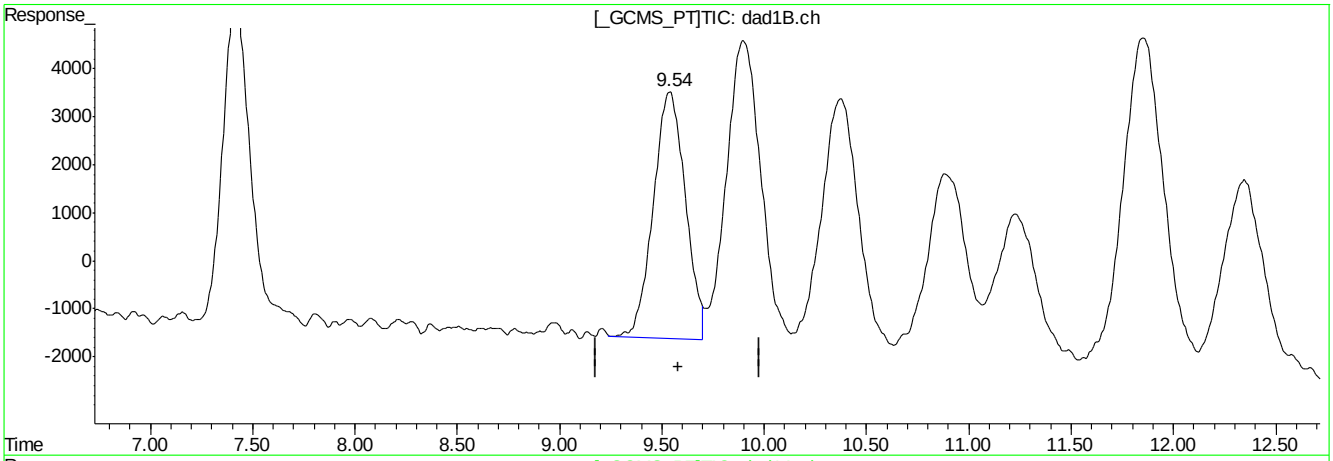
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:34:54 2021

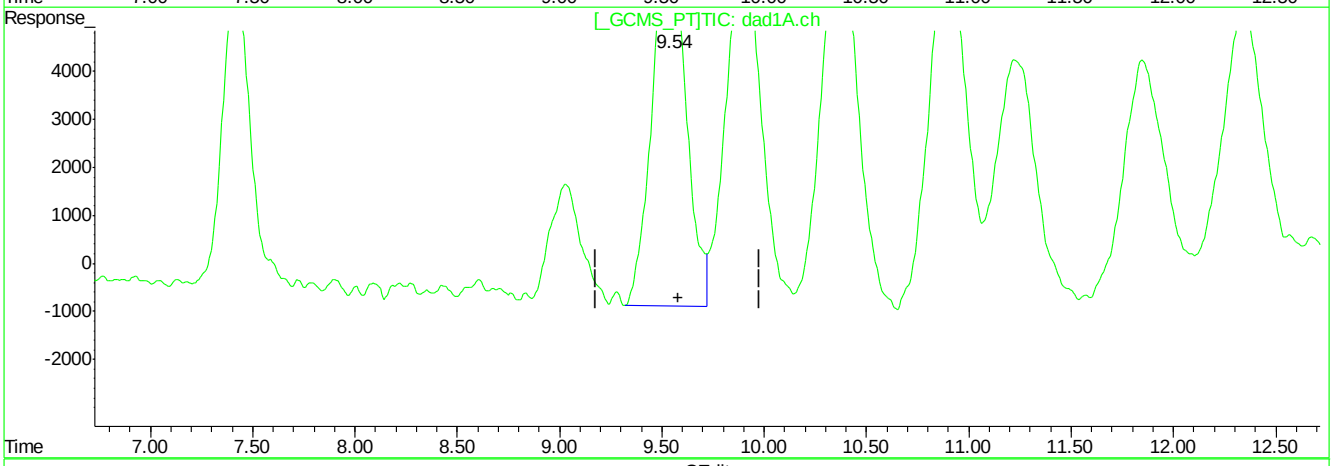
PP390449.D edits: Tetryl

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.54min 237.562ppb m

response 560399

(11) Tetryl #2

9.54min 219.118ppb

response 892081

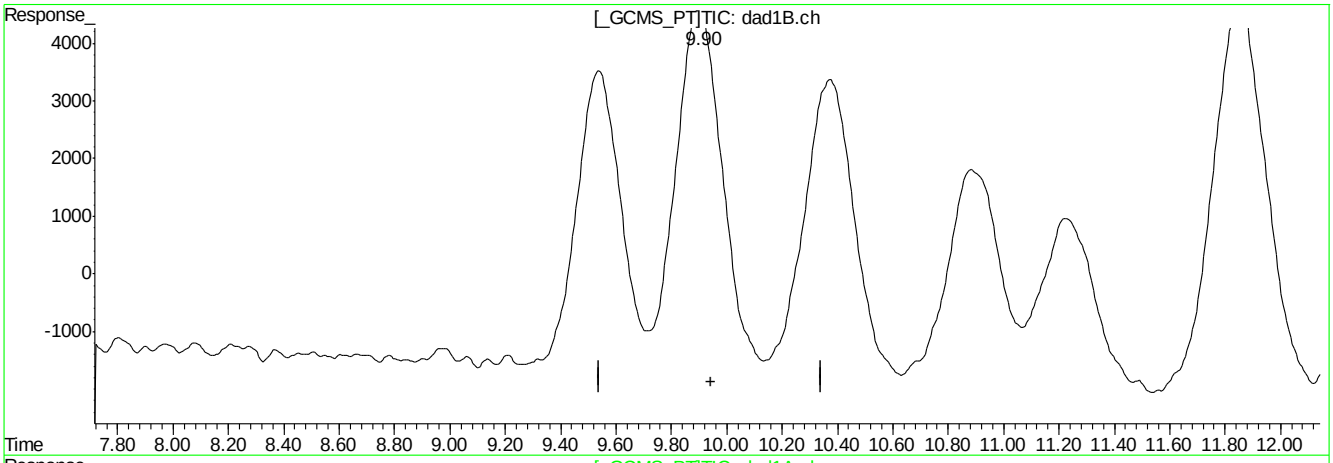
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:35:02 2021

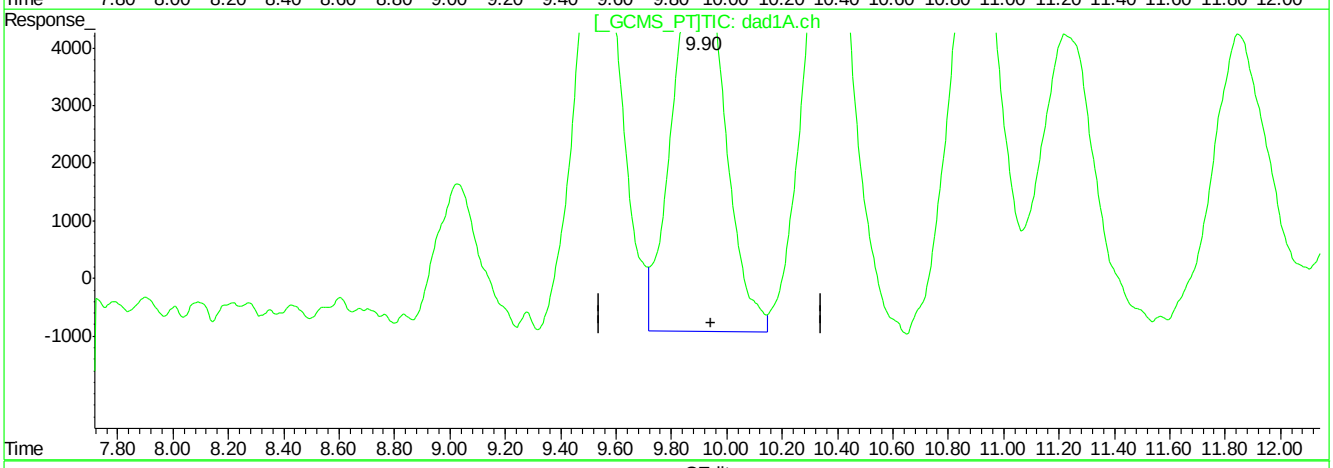
9.5.28.21
9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.90min 324.224ppb

response 1274458

(12) 2,4,6-Trinitrotoluene #2

9.90min 207.669ppb

response 912135

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:35:10 2021

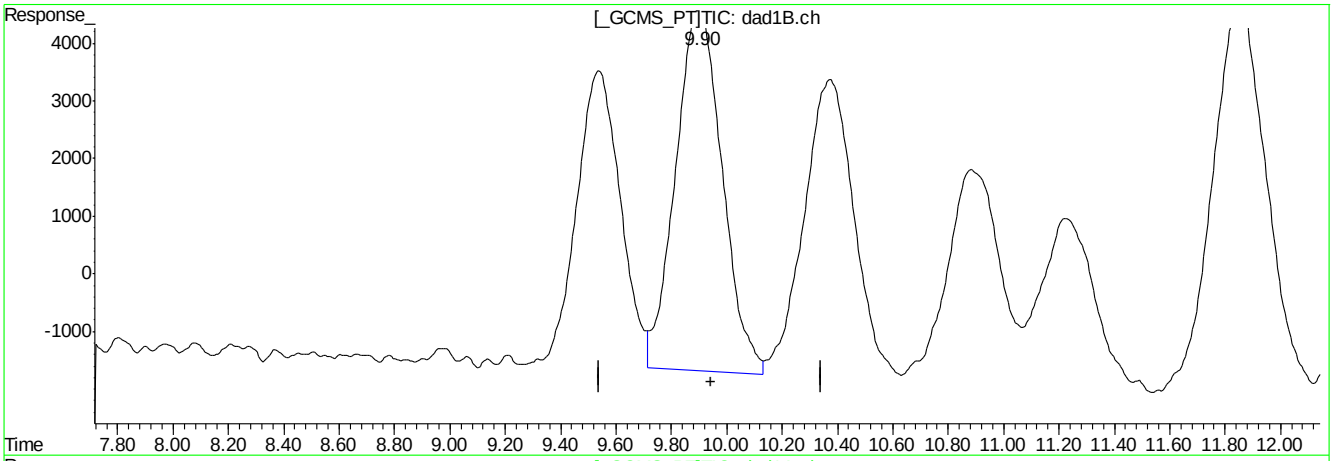
9.5.28.22

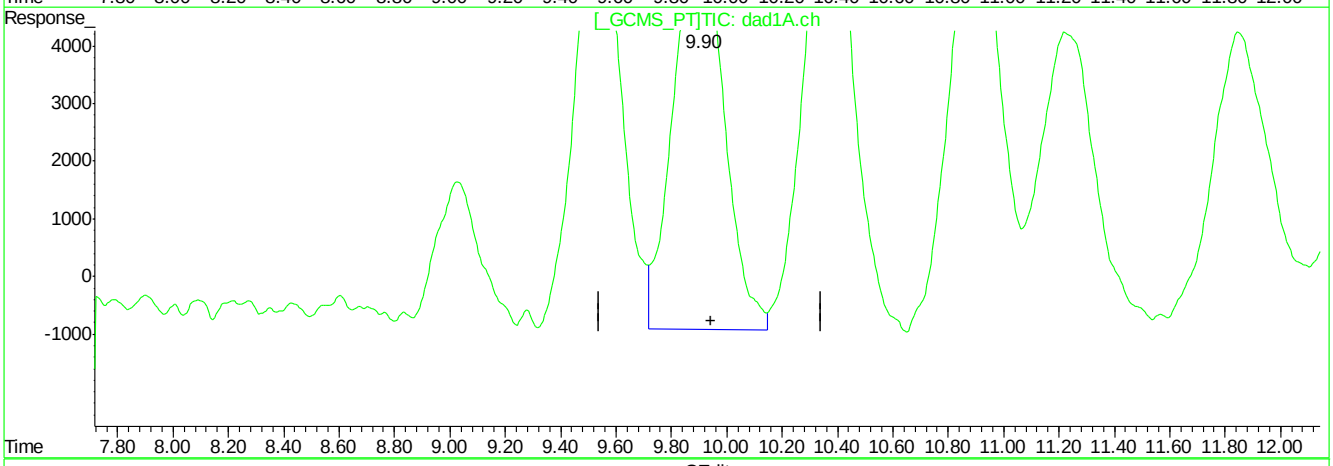
9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.90min 186.194ppb m

response 731890

(12) 2,4,6-Trinitrotoluene #2

9.90min 207.669ppb

response 912135

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:35:20 2021

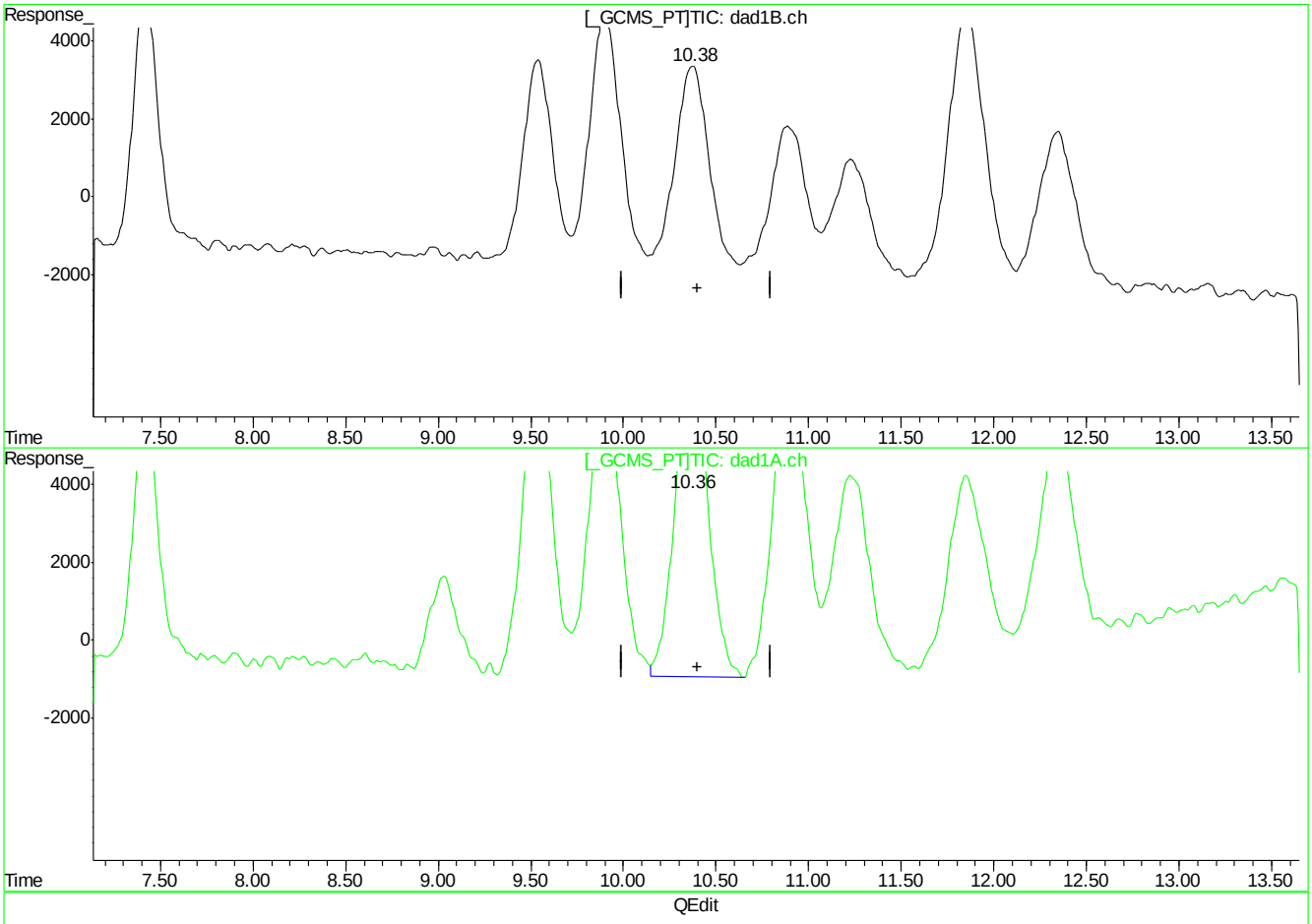
9.5.28.23

9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.37min 502.741ppb

response 1720522

(13) 2-Amino-4,6-Dinitrotoluene #2

10.37min 217.867ppb

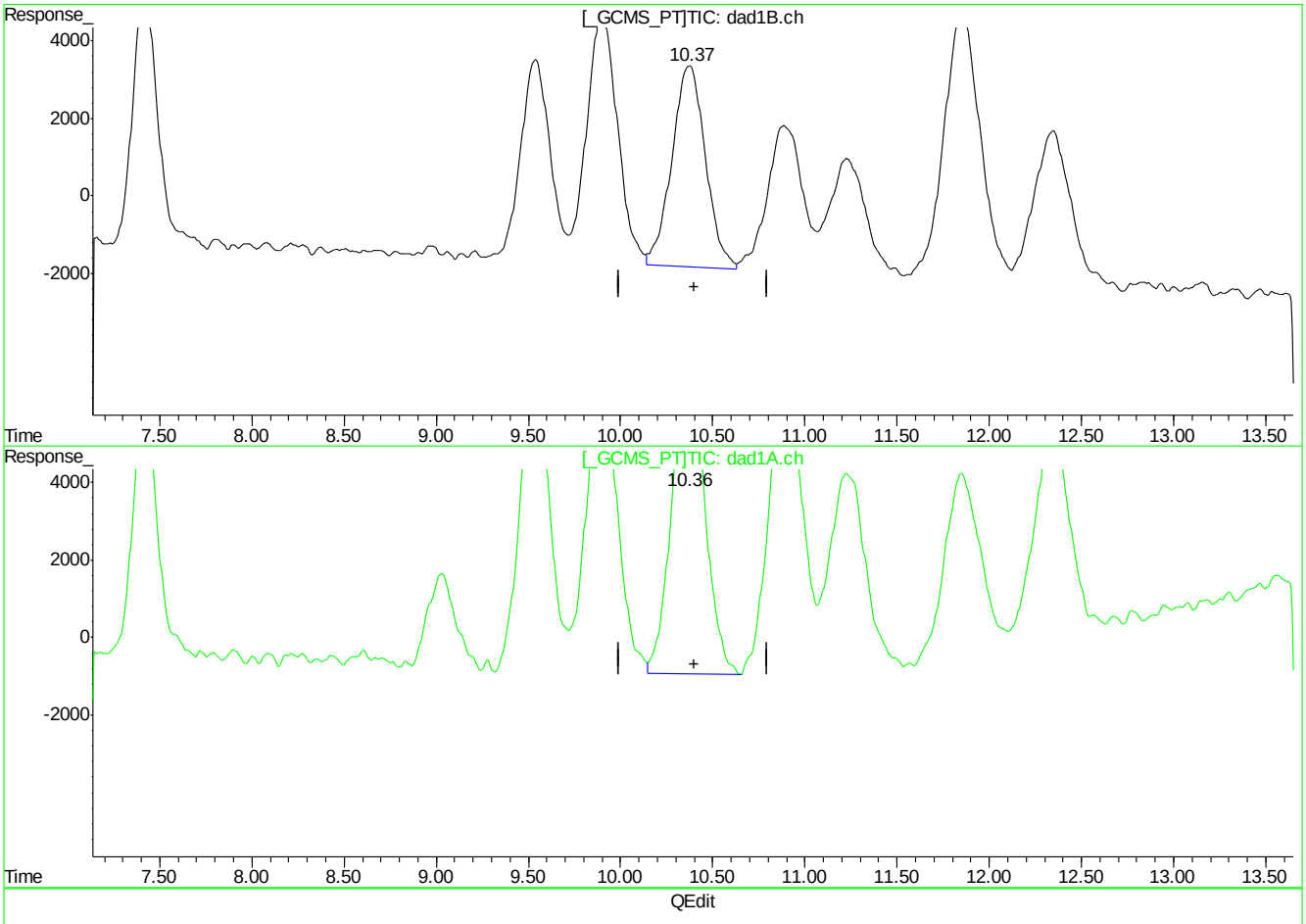
response 990173

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:35:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.37min 193.253ppb m

response 661367

(13) 2-Amino-4,6-Dinitrotoluene #2

10.37min 217.867ppb

response 990173

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:35:35 2021

9.5.28.25

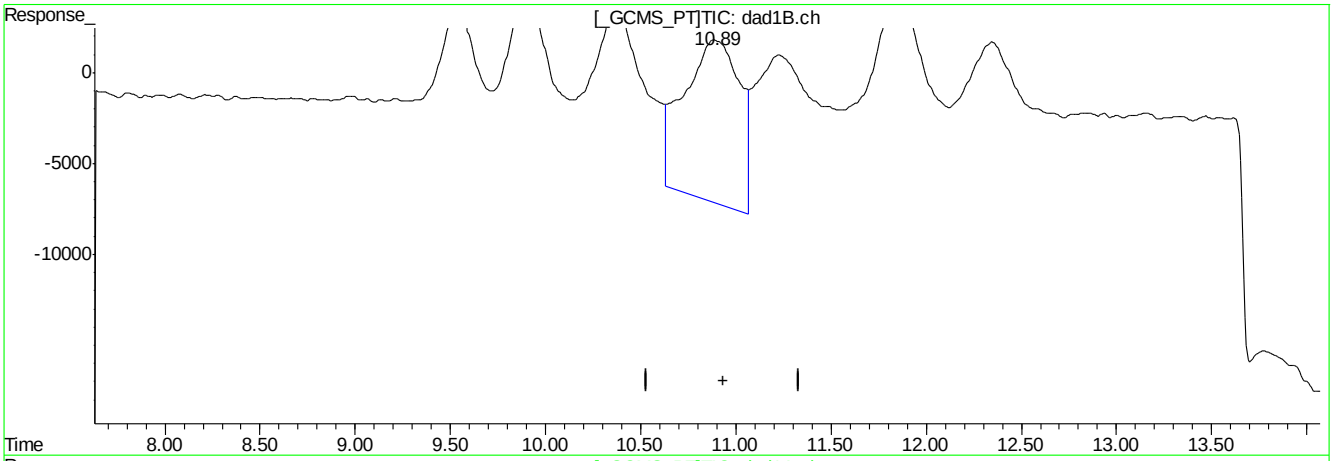
9

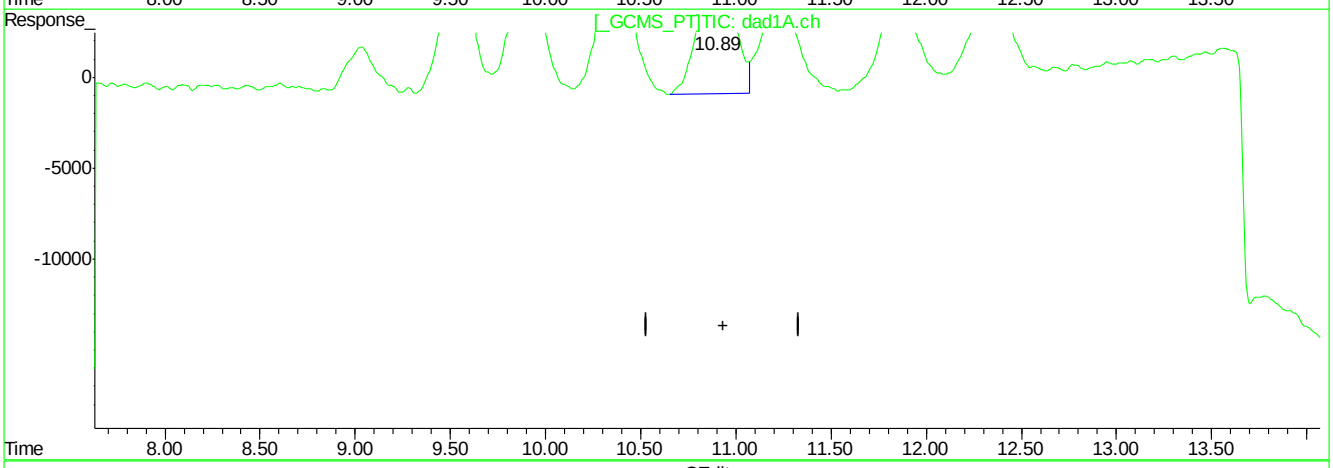
PP390449.D edits: 2-Amino-4,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.89min 745.660ppb

response 1829618

(14) 4-Amino-2,6-Dinitrotoluene #2

10.89min 216.939ppb

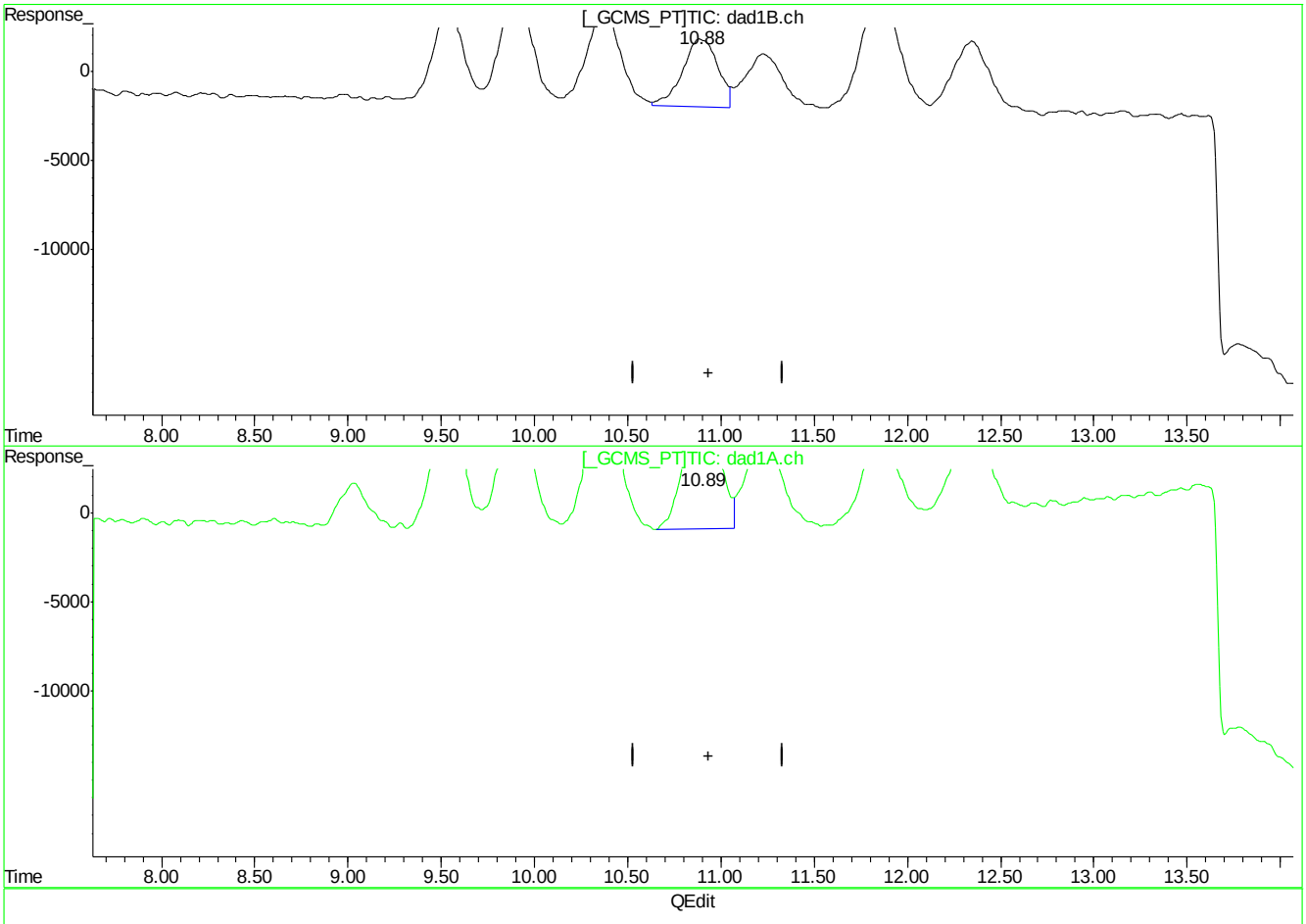
response 952867

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:35:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(14) 4-Amino-2,6-Dinitrotoluene

10.88min 202.760ppb m

response 497511

(14) 4-Amino-2,6-Dinitrotoluene #2

10.89min 216.939ppb

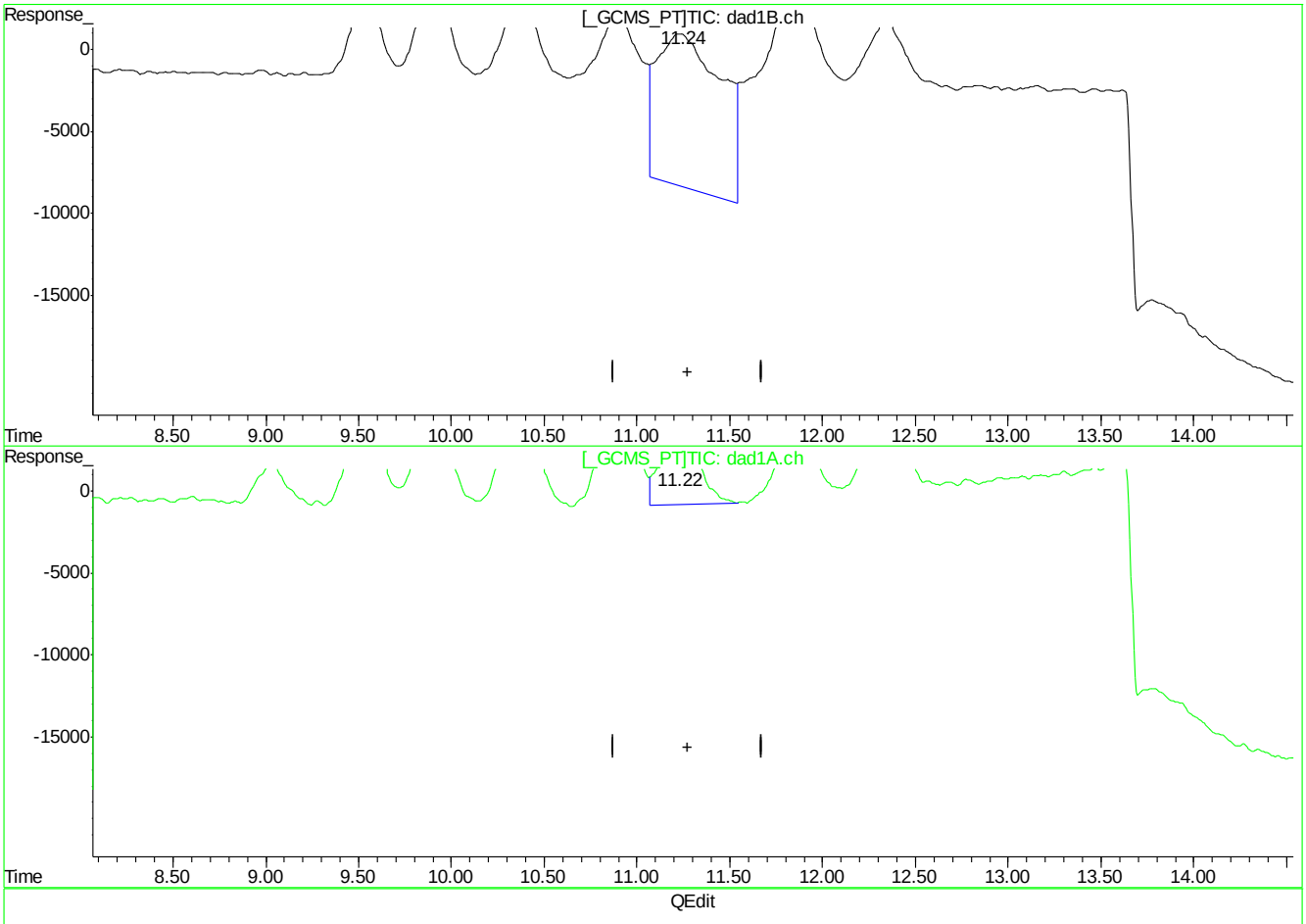
response 952867

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:35:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(15) 3,4-Dinitrotoluene (S)

11.23min 1124.106ppb

response 2265113

(15) 3,4-Dinitrotoluene #2 (S)

11.23min 212.571ppb

response 686090

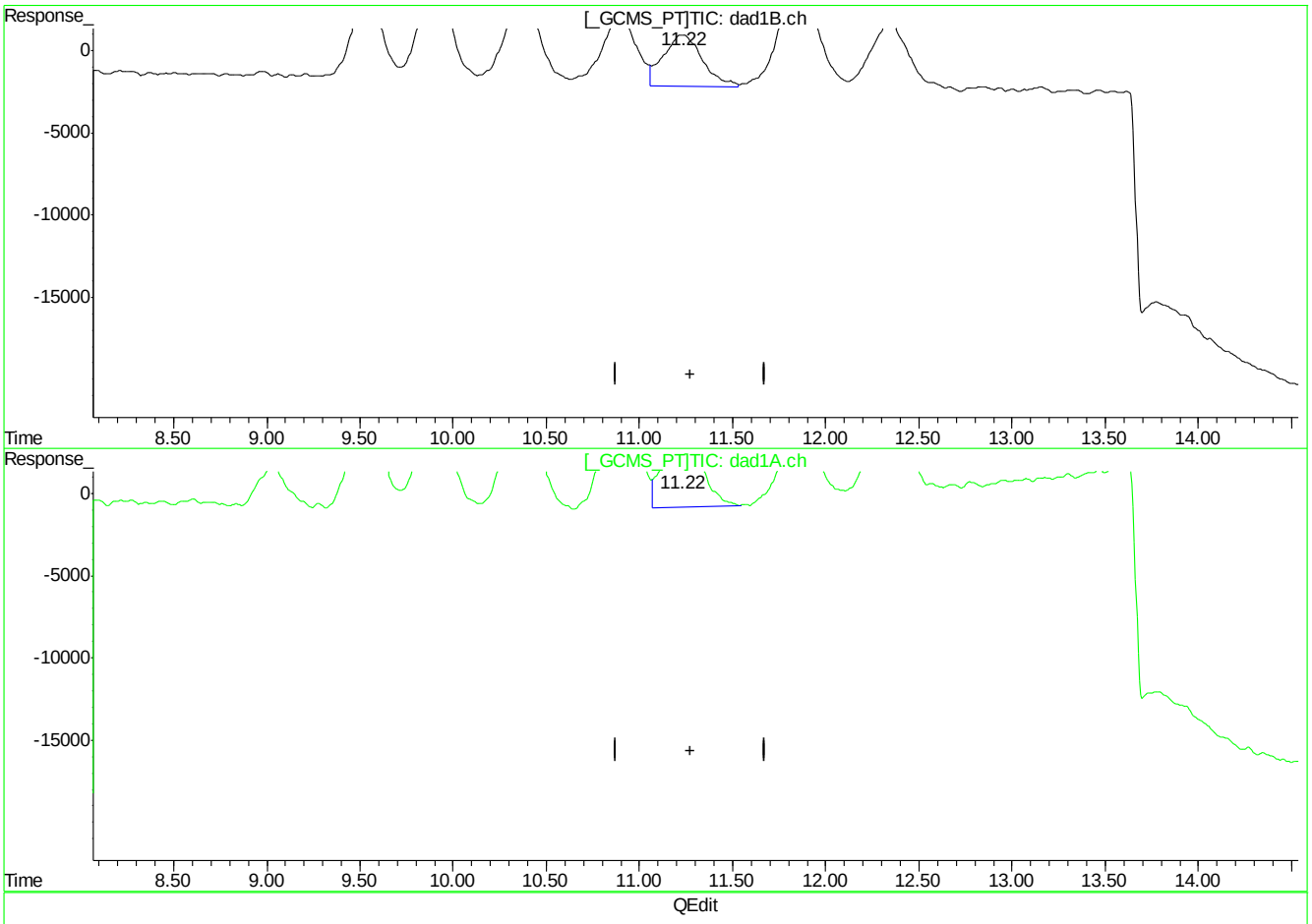
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:36:02 2021

PP390449.D edits: 3,4-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(15) 3,4-Dinitrotoluene (S)

11.22min 226.668ppb m

response 456745

(15) 3,4-Dinitrotoluene #2 (S)

11.23min 212.571ppb

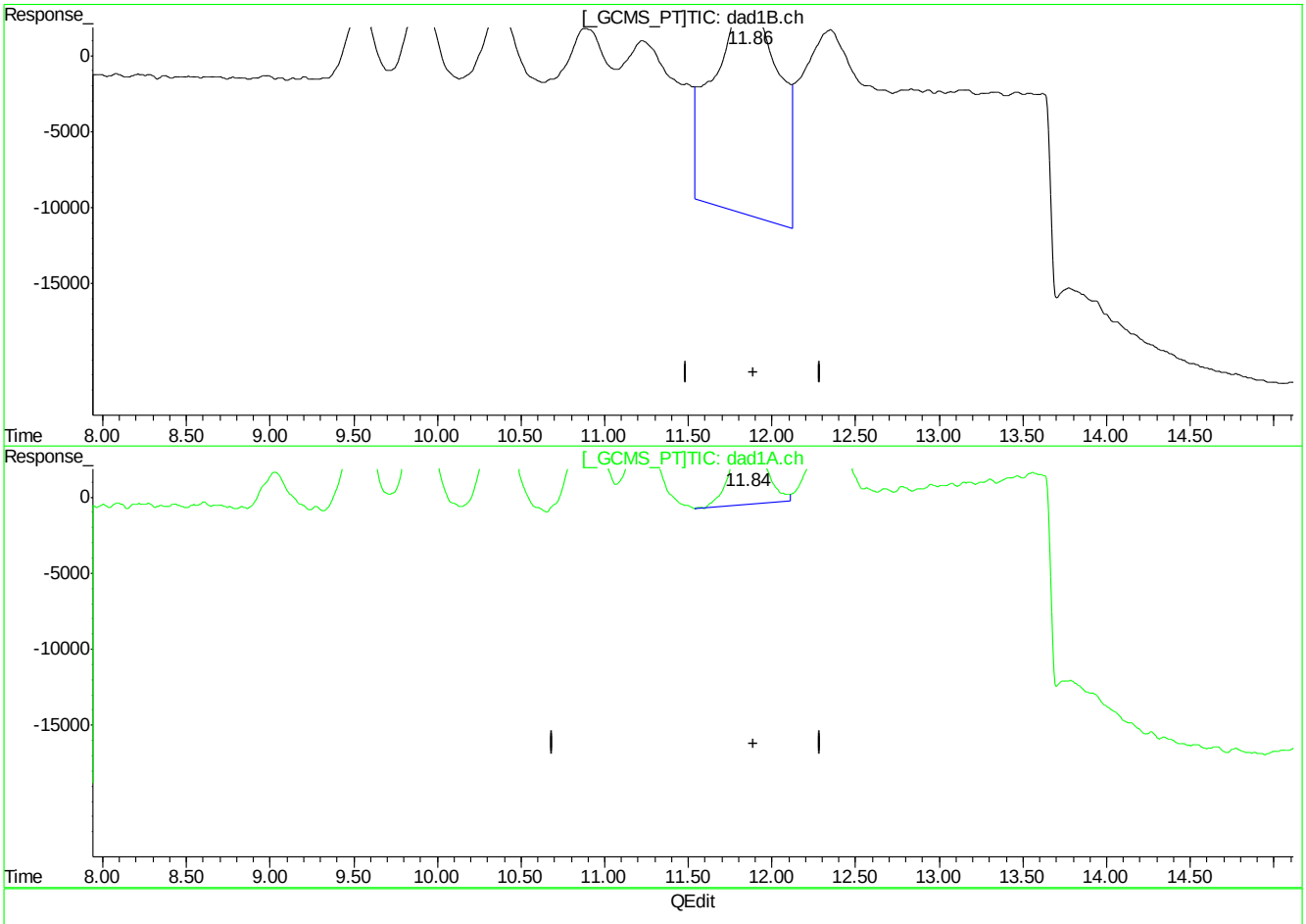
response 686090

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:36:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(16) 2,4-Dinitrotoluene

11.85min 794.151ppb

response 3817609

(16) 2,4-Dinitrotoluene #2

11.85min 211.004ppb

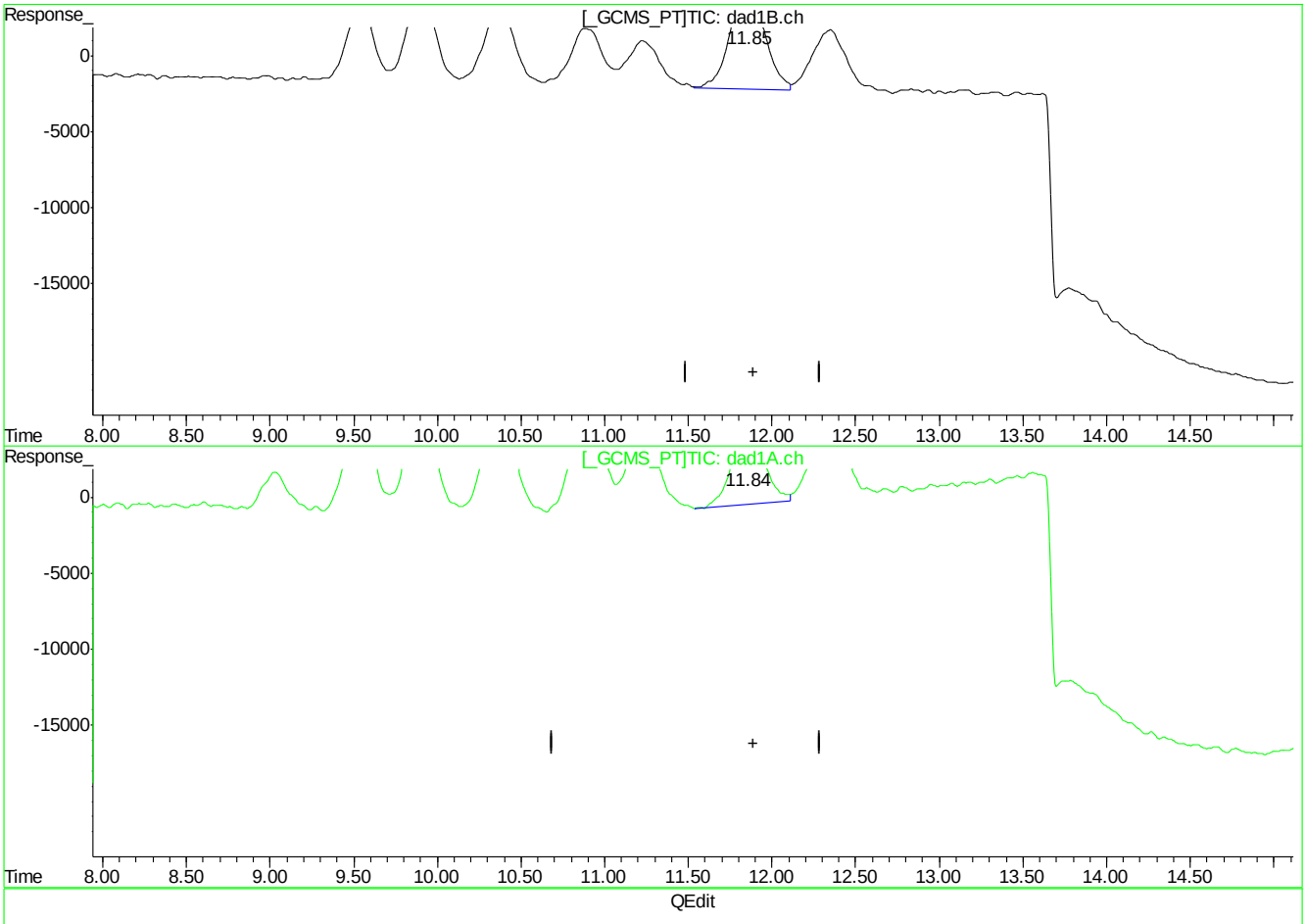
response 633122

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:36:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(16) 2,4-Dinitrotoluene

11.85min 200.069ppb m

response 961764

(16) 2,4-Dinitrotoluene #2

11.85min 211.004ppb

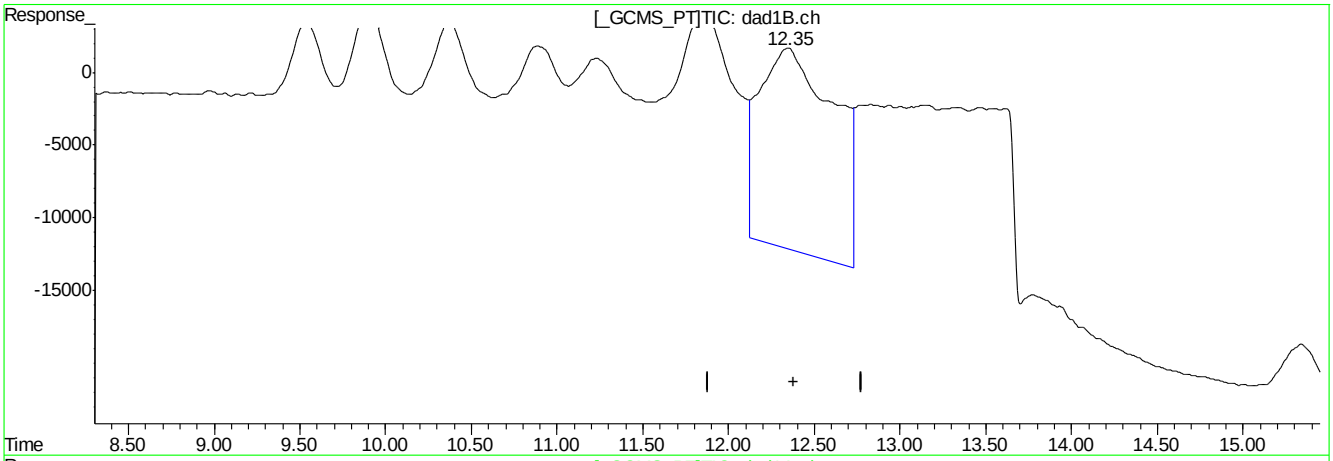
response 633122

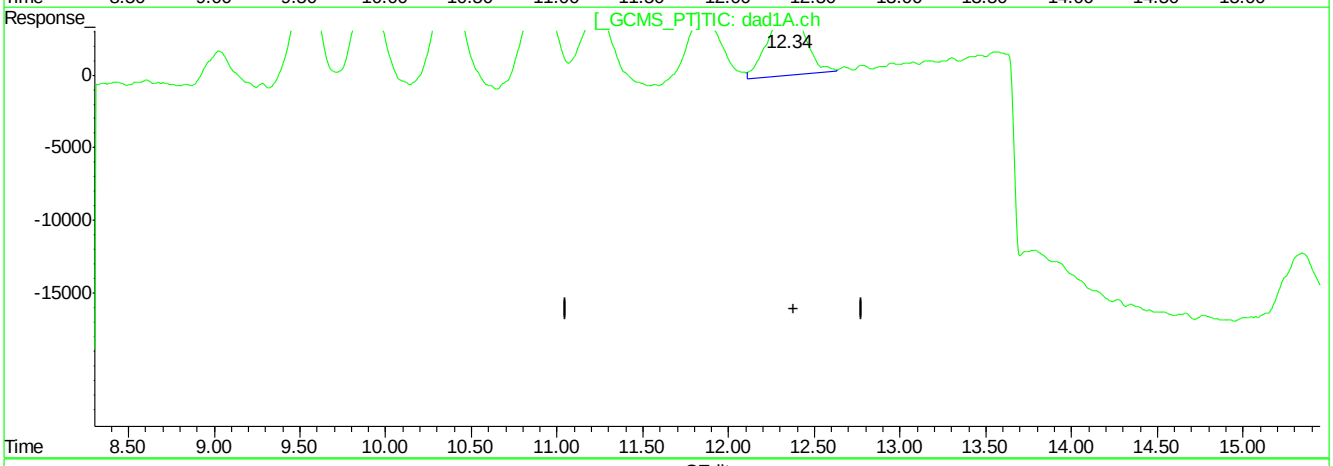
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:36:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.35min 1608.436ppb

response 4239849

(17) 2,6-Dinitrotoluene #2

12.35min 204.633ppb

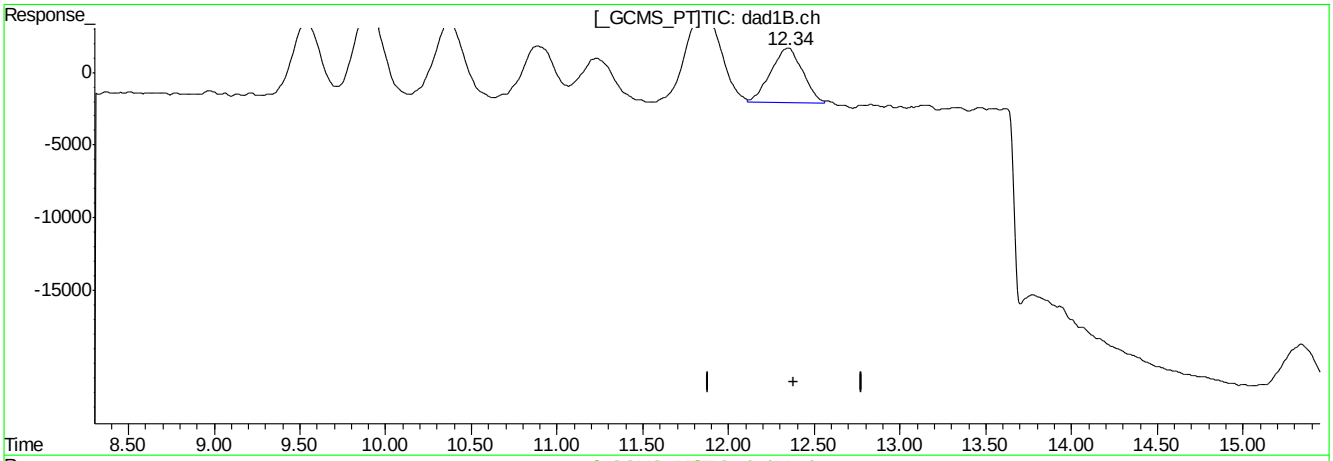
response 725149

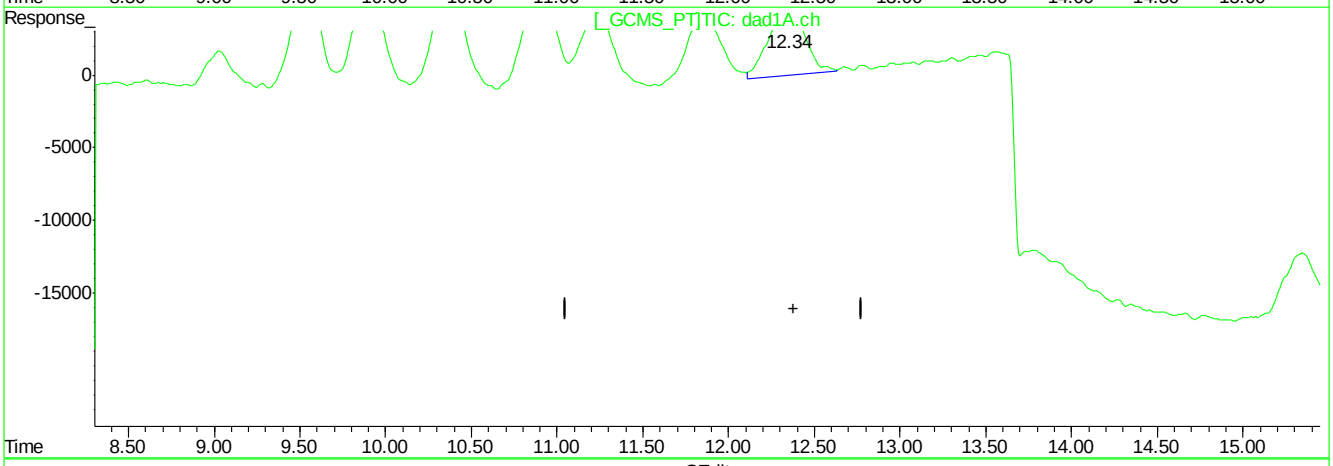
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:36:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.34min 183.944ppb m

response 484878

(17) 2,6-Dinitrotoluene #2

12.35min 204.633ppb

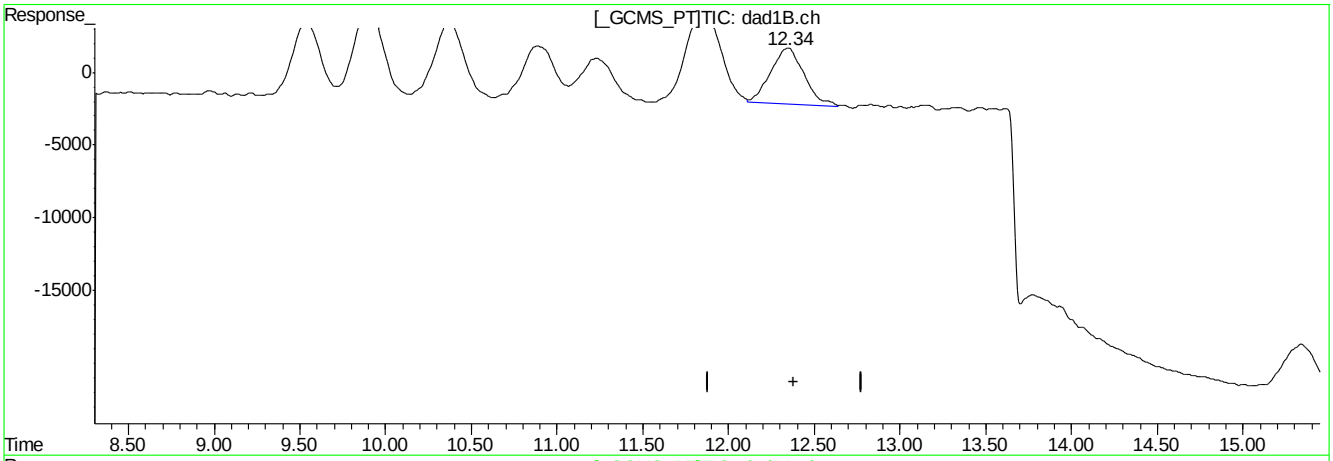
response 725149

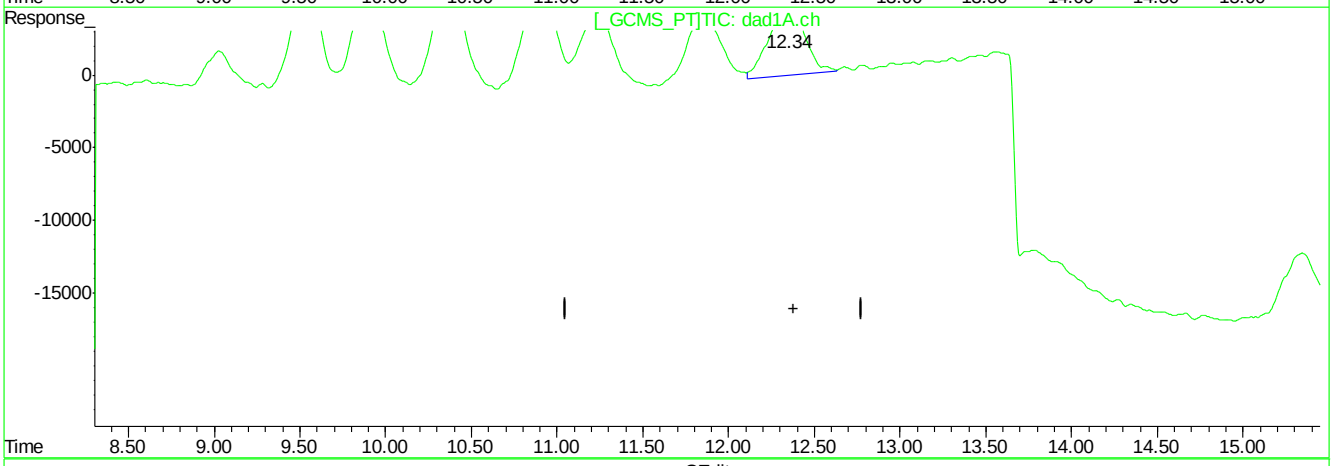
(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:36:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.34min 195.895ppb m

response 516380

(17) 2,6-Dinitrotoluene #2

12.35min 204.633ppb

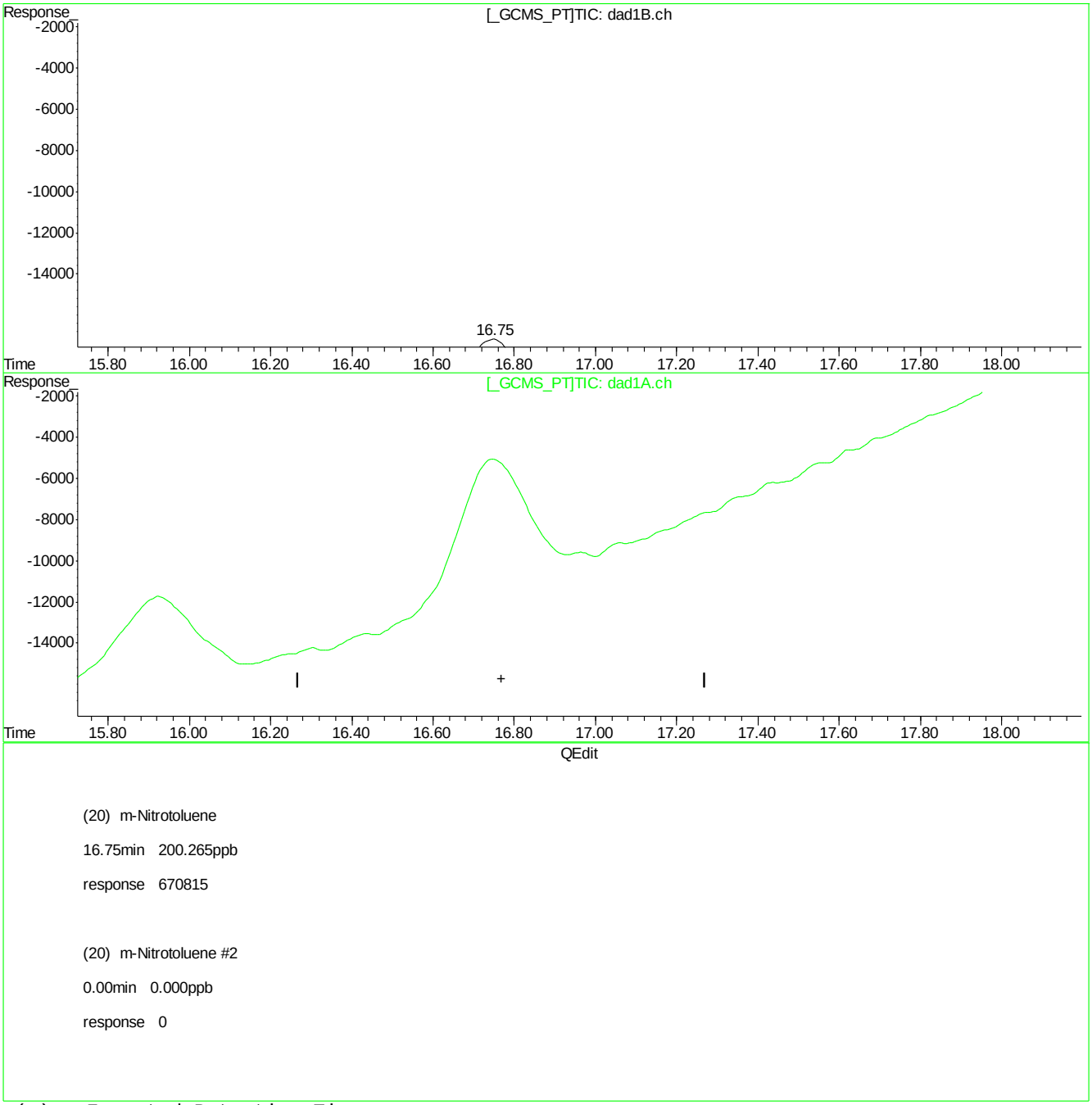
response 725149

(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:36:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration

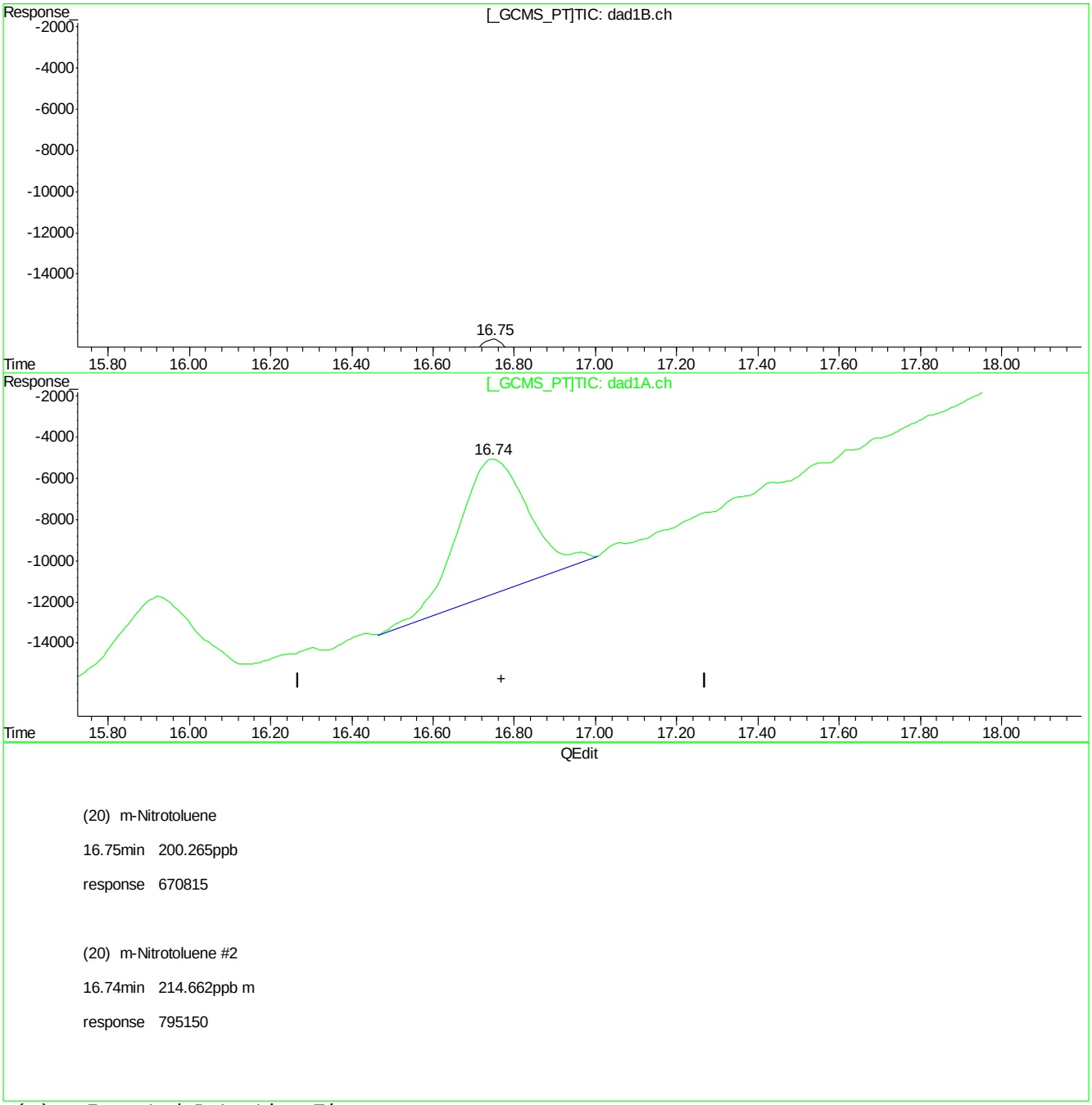


(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:37:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration

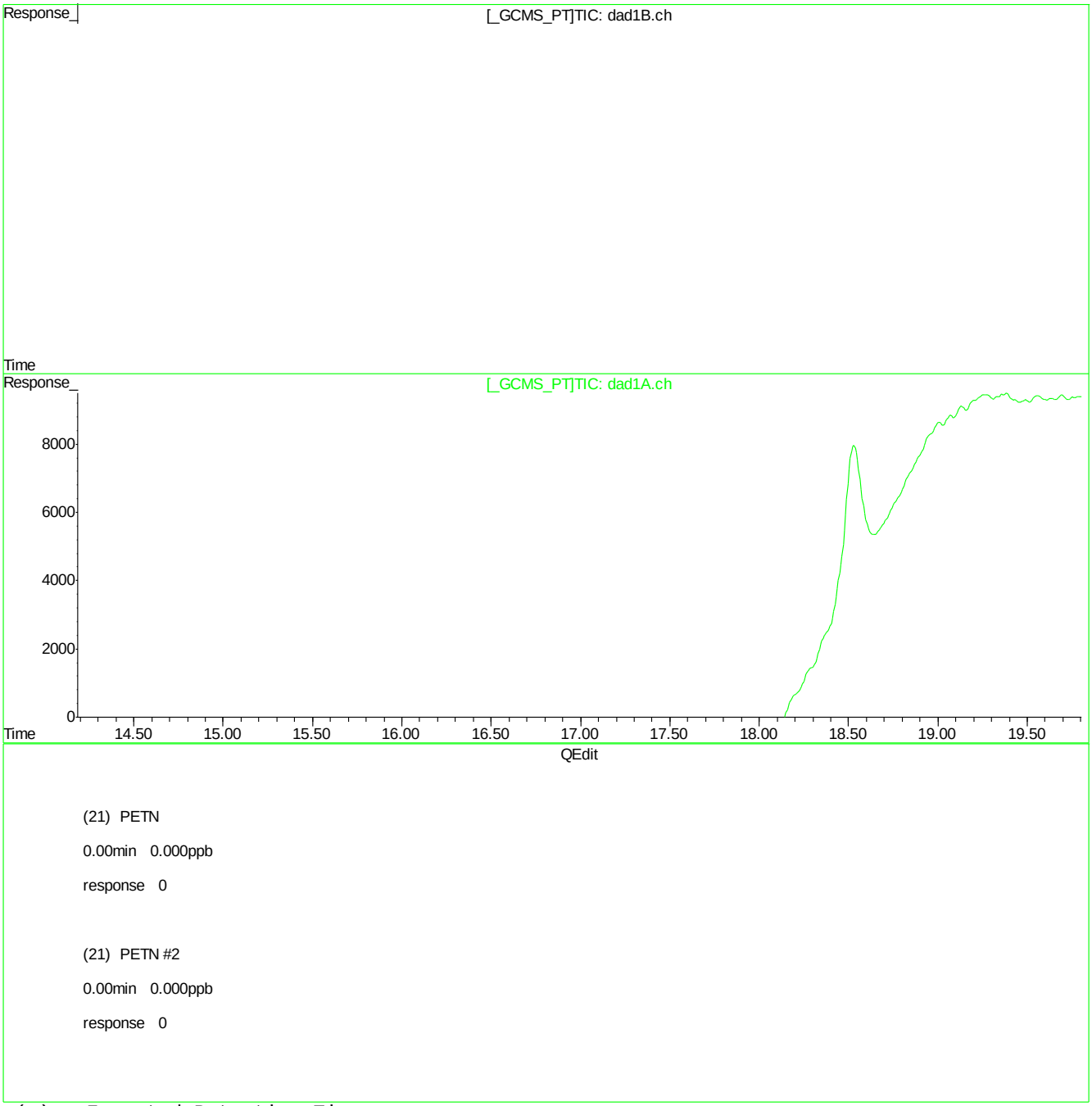


(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:37:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration

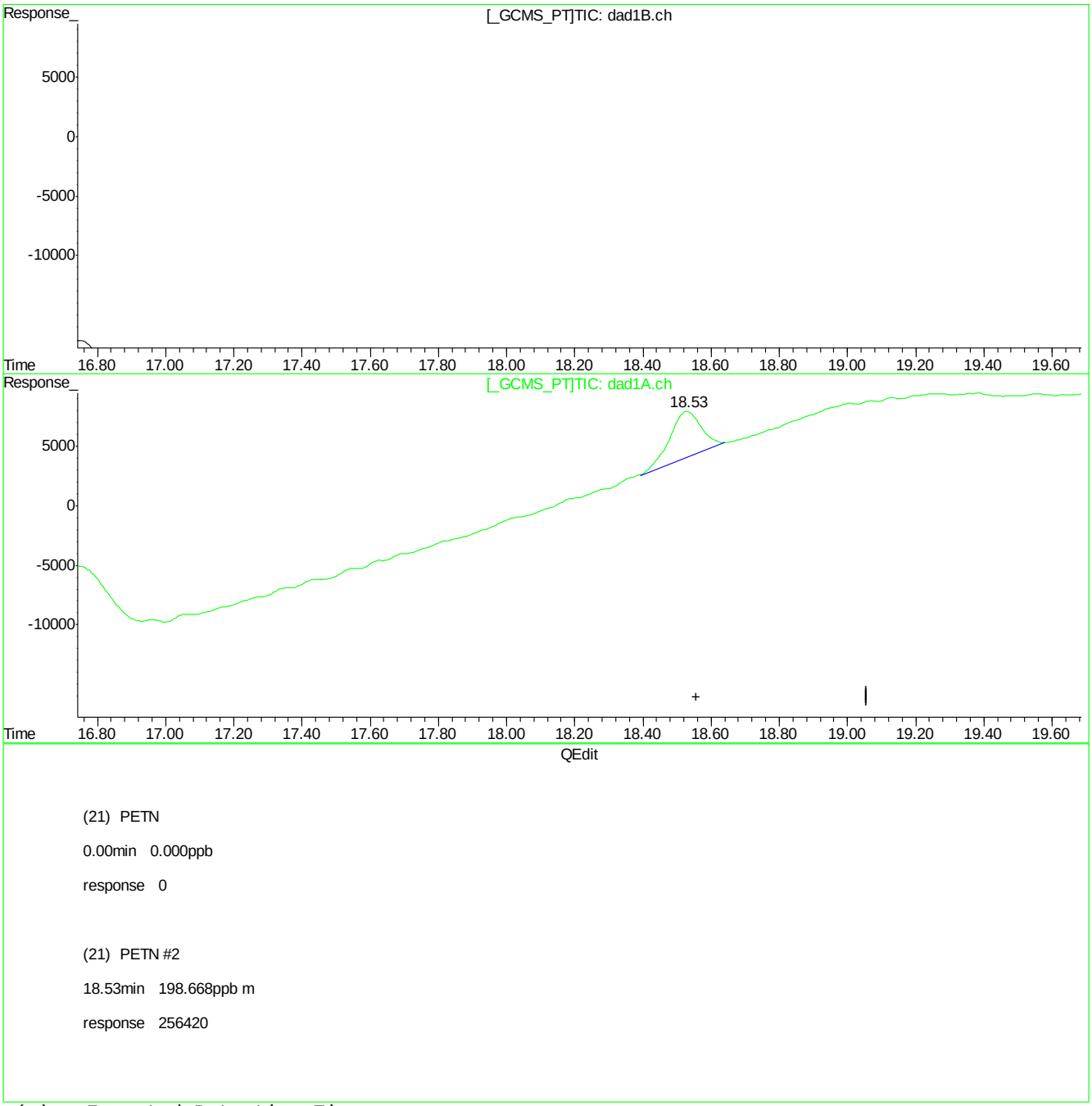


(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:37:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390449.D\dad1A.ch
Acq On : 02-Apr-2021, 09:43:18 Operator: jamesb
Sample : ic2428-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
PP390449.D GPP2428_040221PRI.M Mon Apr 05 08:37:24 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/05/21 10:17

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 05 08:23:30 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.26	11.26	947268	1635692	470.100	506.786
Spiked Amount	500.000	Range	70 - 136	Recovery	=	94.02%	101.36%
	Target Compounds						
1)	TNX	1.33	1.33	1365957	2064557	440.023m	443.188m
2)	HMX	1.47	1.47	754797	2113807	484.336	497.328
3)	DNX	1.72	1.72	1225132	2017798	479.779	540.158
4)	MNX	2.32	2.31	1368413	2126682	488.792	511.427m
5)	RDX	2.94	2.94	893274	1431538	469.141	467.060
6)	1,3,5-Trinitrobe	4.70	4.70	1915171	3762149	464.161	484.163
7)	1,3-Dinitrobenze	5.89	5.89	2520964	1773546	468.082m	495.116m
8)	3,5-Dinitroanili	6.31	6.31	1897320	3223260	471.366	440.665m
9)	Nitrobenzene	7.43	7.43	1494089	1433176	496.292	458.285m
10)	Nitroglycerin	0.00	9.05	0	596950	N.D.	491.153 #
11)	Tetryl	9.56	9.56	1375398	2151056	583.052	528.354
12)	2,4,6-Trinitroto	9.92	9.92	1811382	2153479	460.818	490.291
13)	2-Amino-4,6-Dini	10.40	10.40	1597804	2365079	466.883	520.385
14)	4-Amino-2,6-Dini	10.93	10.92	1172910	2346049	478.019	534.123
16)	2,4-Dinitrotolue	11.88	11.88	2245051	1484039	467.022	494.594
17)	2,6-Dinitrotolue	12.36	12.37	1267250	1684310	480.746	475.303
18)	o-Nitrotoluene	15.36	15.36	1095627	1459539	508.829	504.847
19)	p-Nitrotoluene	15.94	15.94	1644570	1311227	480.843	473.193
20)	m-Nitrotoluene	16.76	16.76	1557869	1838595	465.086	496.355m
21)	PETN	0.00	18.54	0	664241	N.D.	514.639m#

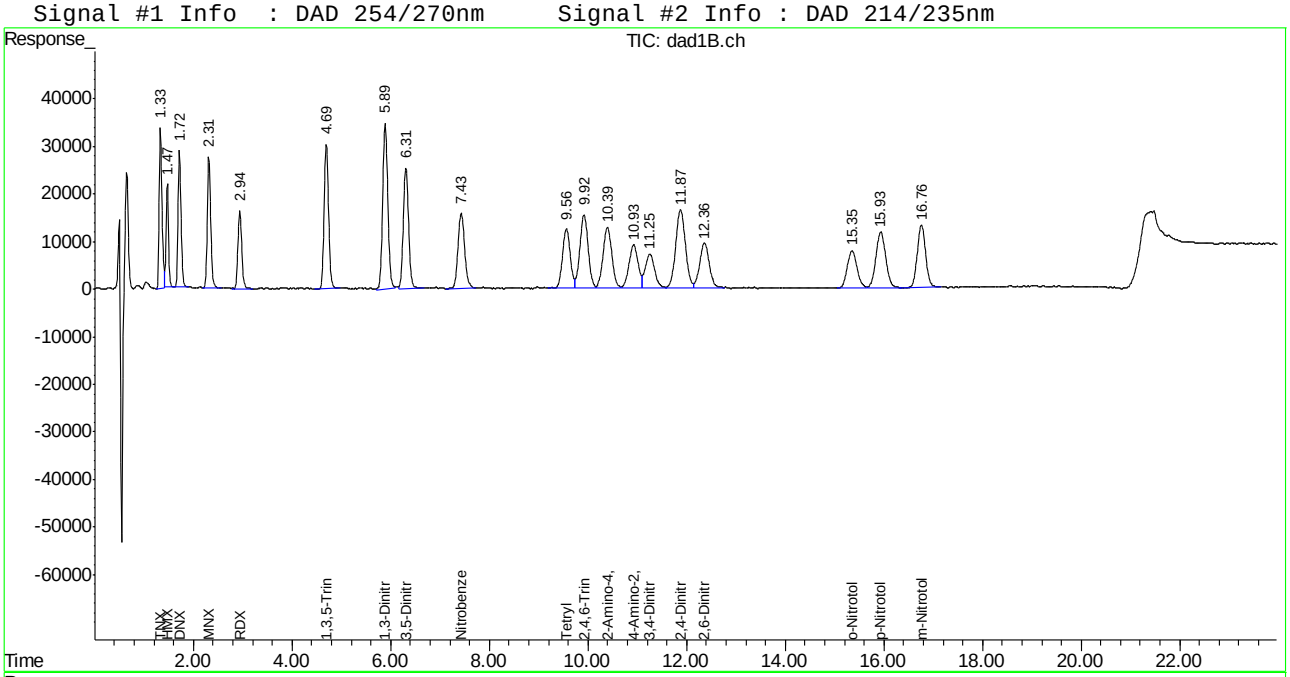
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

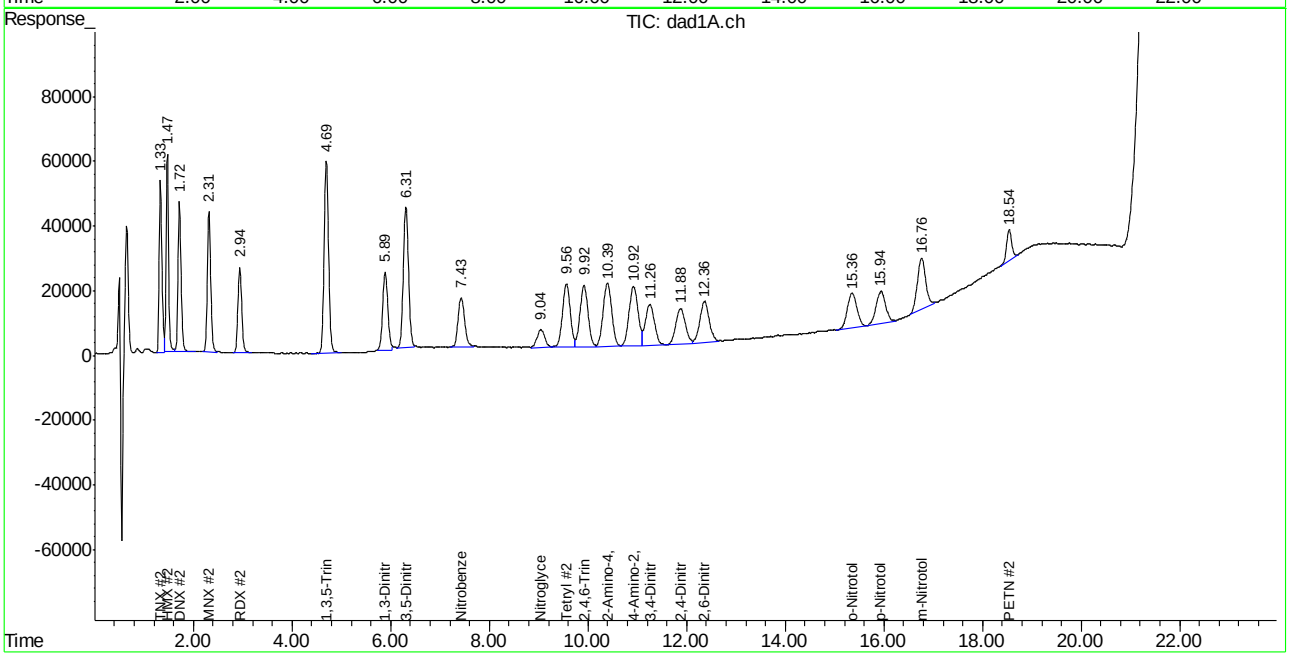
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:30 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





SGS FA84640

Manual Integration Approval Summary

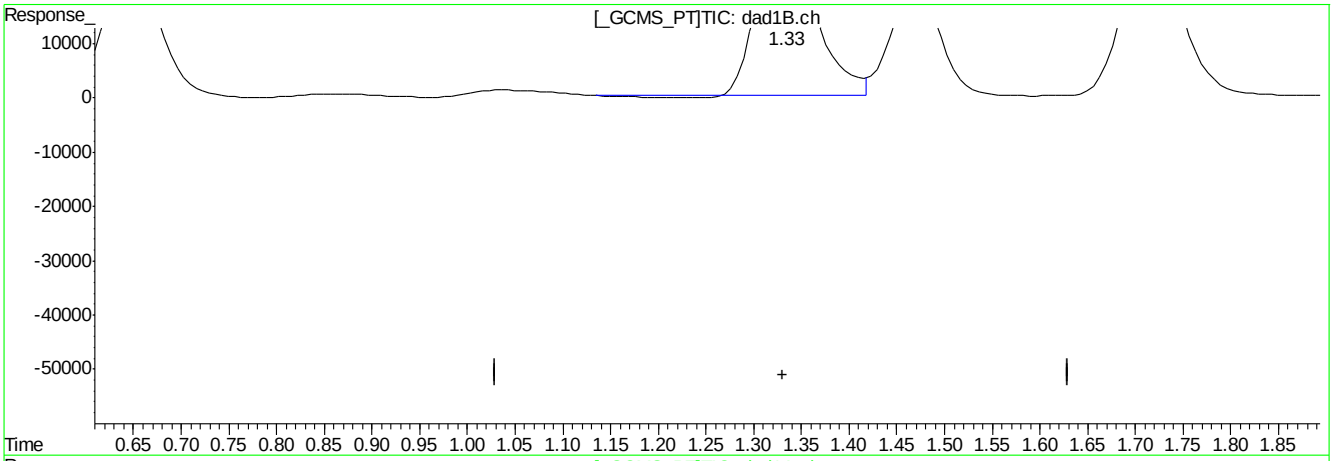
Sample Number: GPP2428-IC2428
Lab FileID: PP390450.D
Injection Time: 04/02/21 10:14
Method: SW846 8330A
Analyst approved: 04/05/21 09:06 James Boone
Supervisor approved: 04/05/21 10:17 Naresh Jiawan

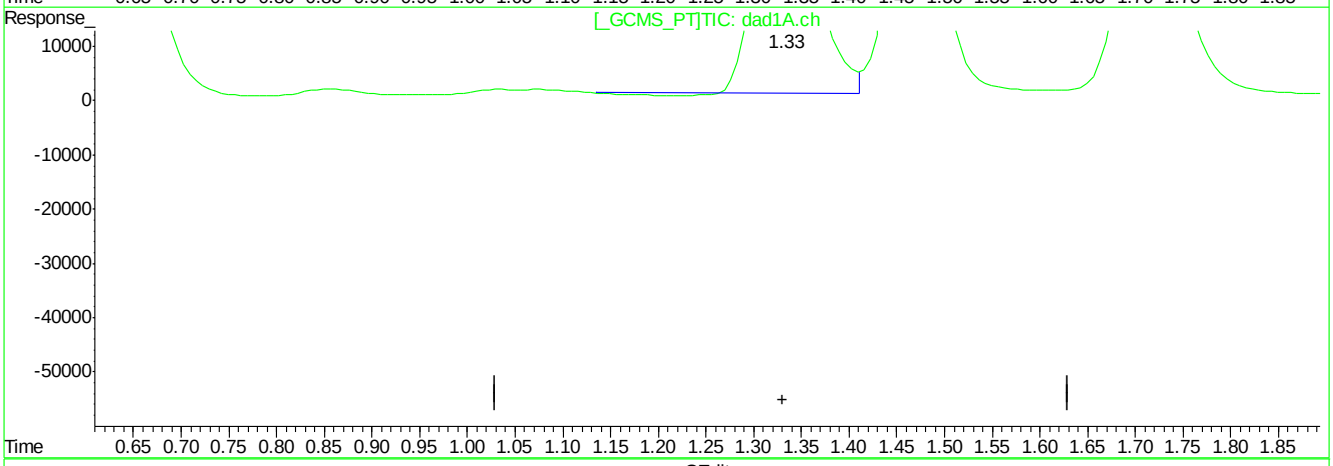
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.33	Poor instrument integration
TNX		2	1.33	Poor instrument integration
MNX		2	2.31	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	5.89	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.89	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.31	Poor instrument integration
Nitrobenzene	98-95-3	2	7.43	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.76	Poor instrument integration
PETN	78-11-5	2	18.54	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 422.043ppb

response 1310142

(1) TNX #2

1.33min 430.521ppb

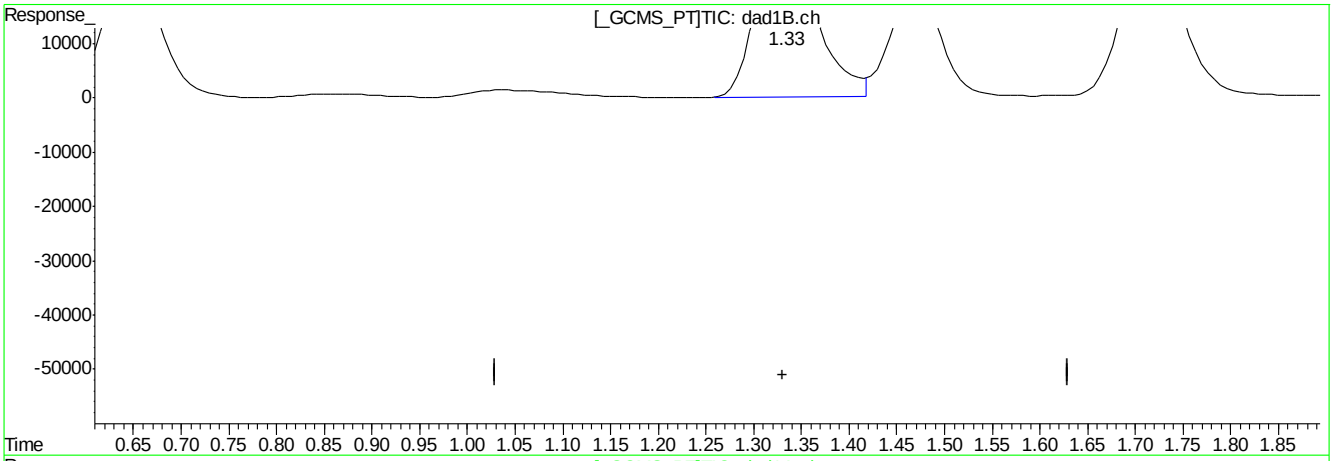
response 2005548

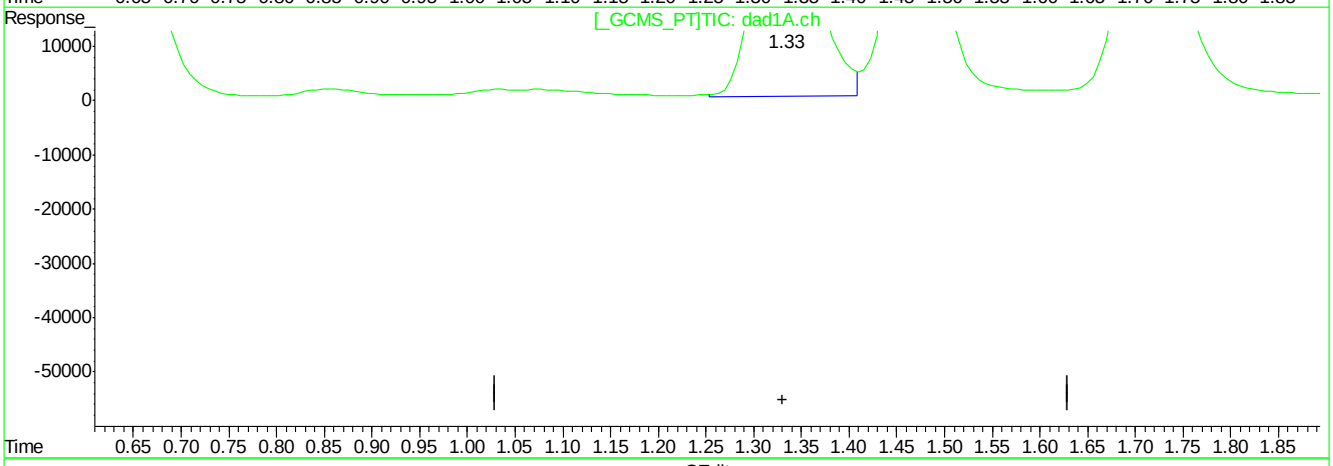
(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:29:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 440.023ppb m

response 1365957

(1) TNX #2

1.33min 443.188ppb m

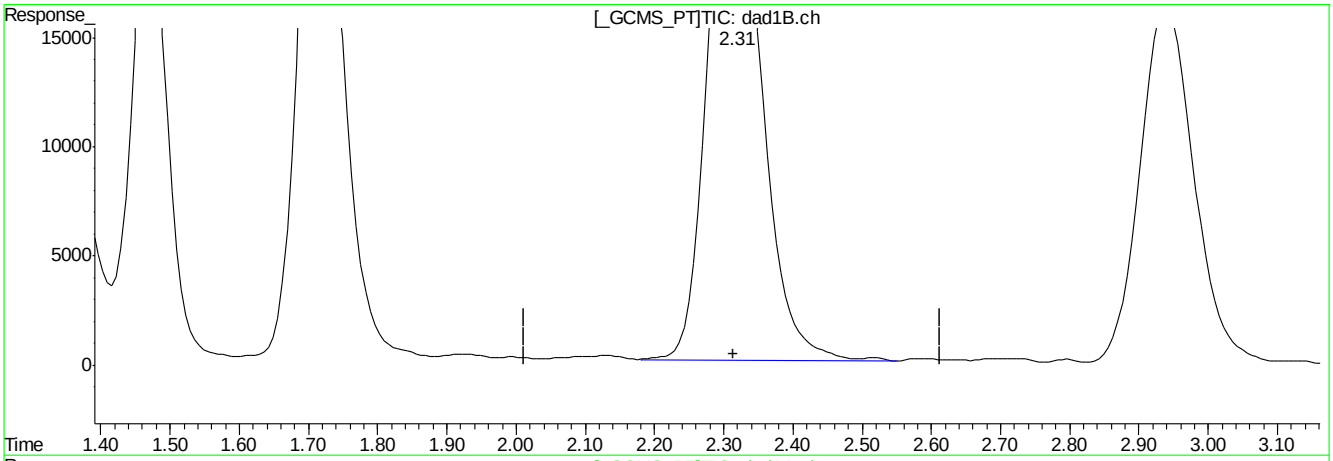
response 2064557

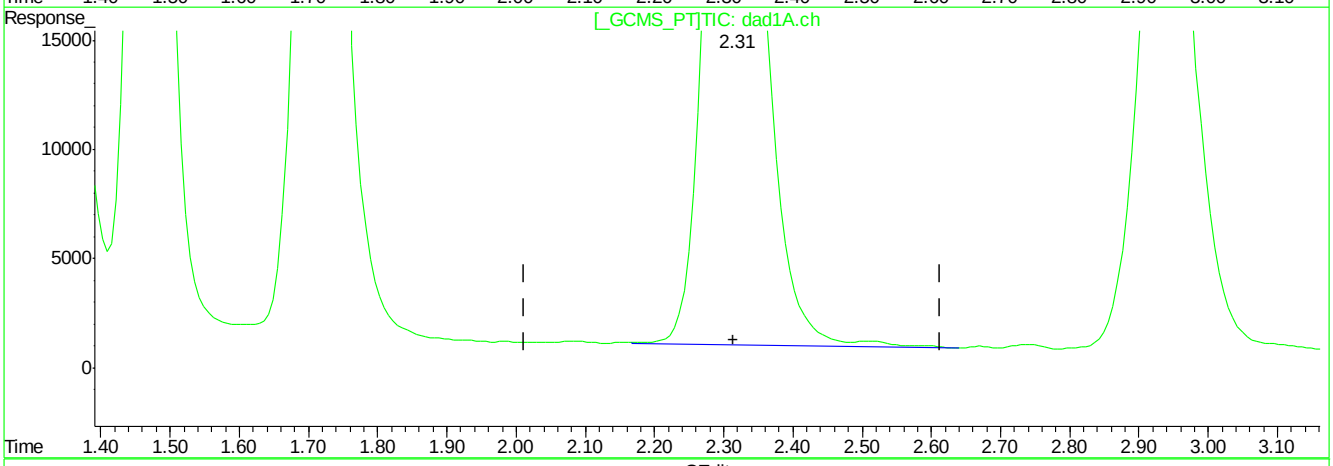
(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:29:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.32min 488.792ppb

response 1368413

(4) MNX #2

2.32min 516.349ppb

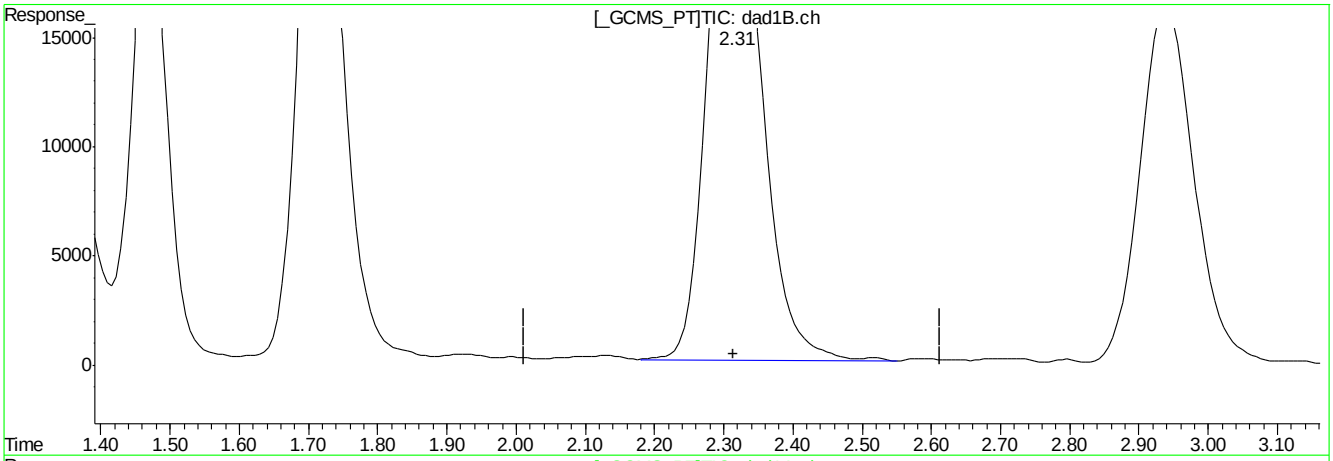
response 2147149

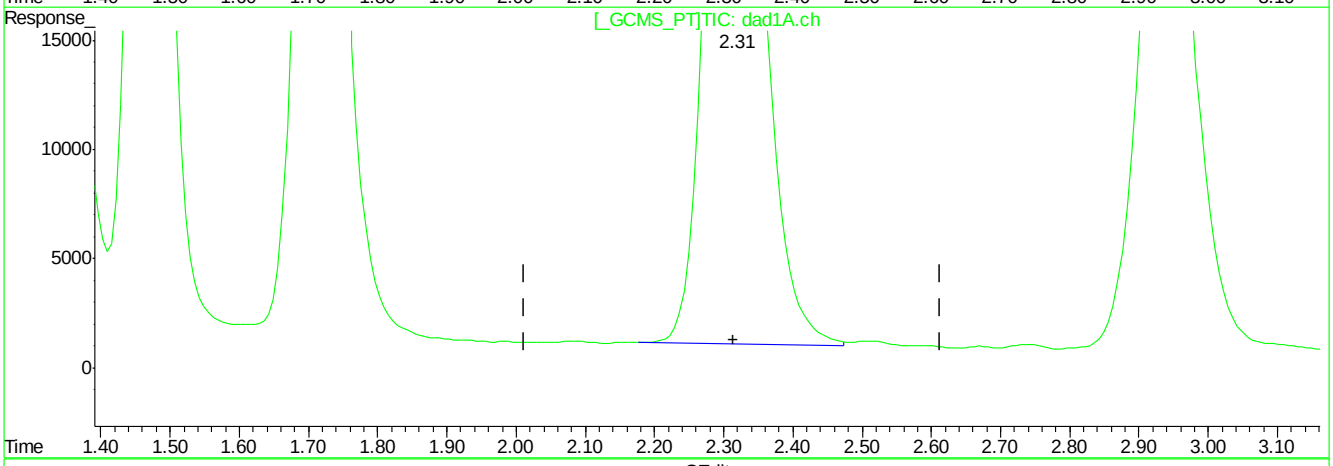
(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:29:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.32min 488.792ppb

response 1368413

(4) MNX #2

2.31min 511.427ppb m

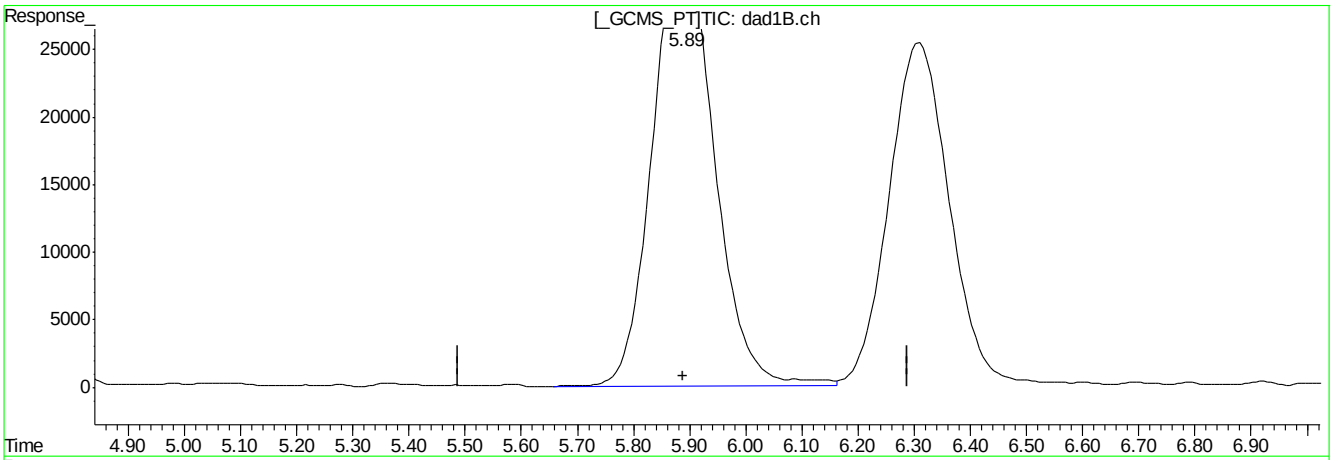
response 2126682

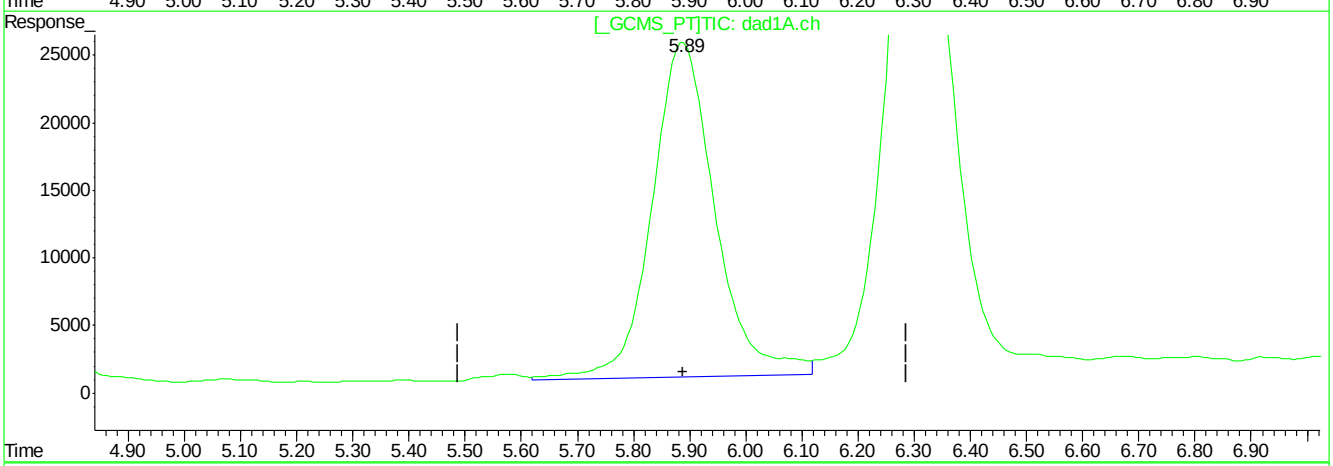
(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:29:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.89min 470.685ppb

response 2534983

(7) 1,3-Dinitrobenzene #2

5.89min 541.214ppb

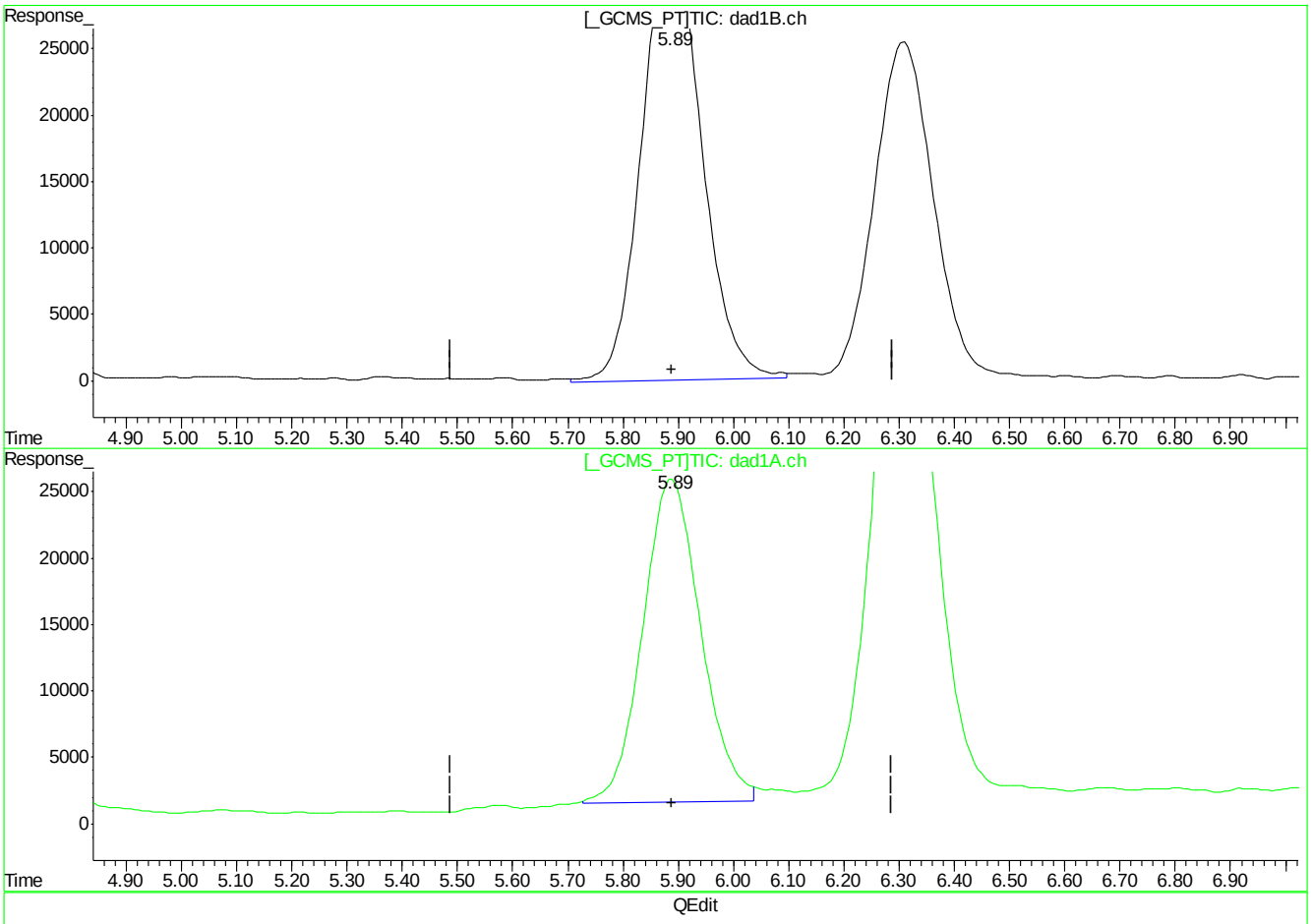
response 1938675

(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:29:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.89min 468.082ppb m

response 2520964

(7) 1,3-Dinitrobenzene #2

5.89min 495.116ppb m

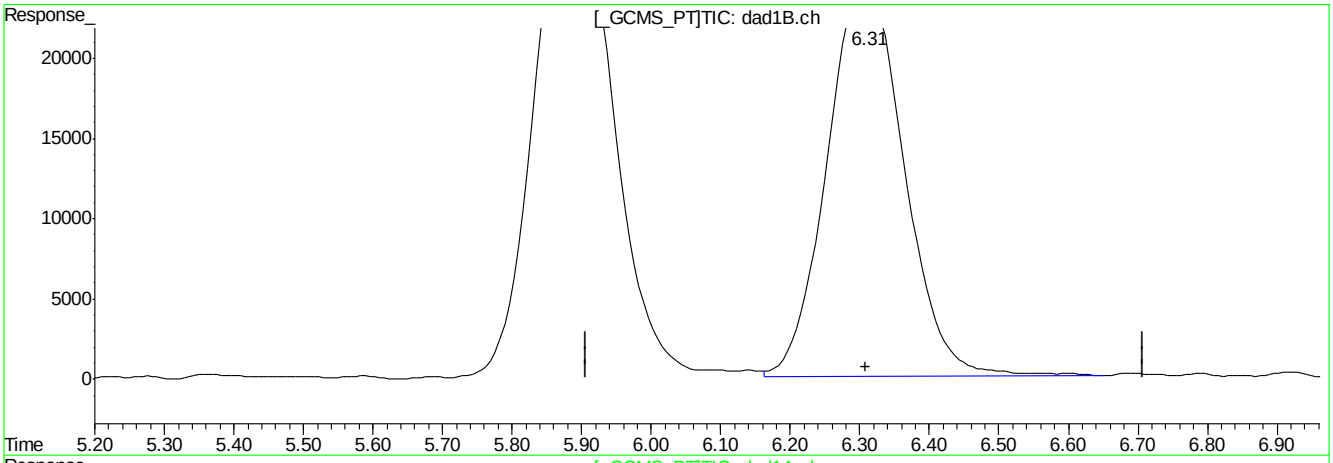
response 1773546

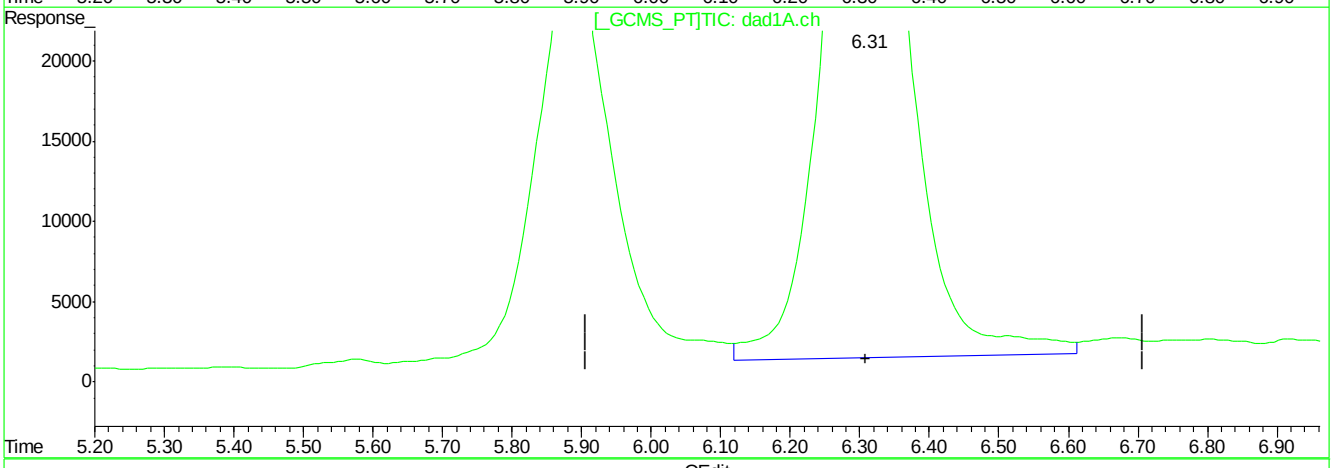
(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:30:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.31min 471.366ppb

response 1897320

(8) 3,5-Dinitroaniline #2

6.31min 477.573ppb

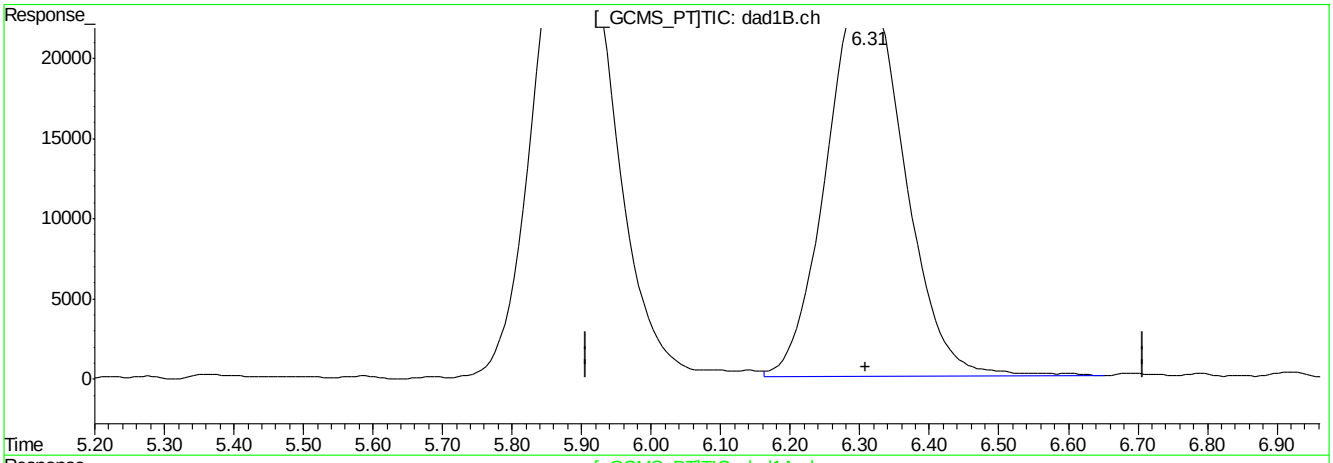
response 3493231

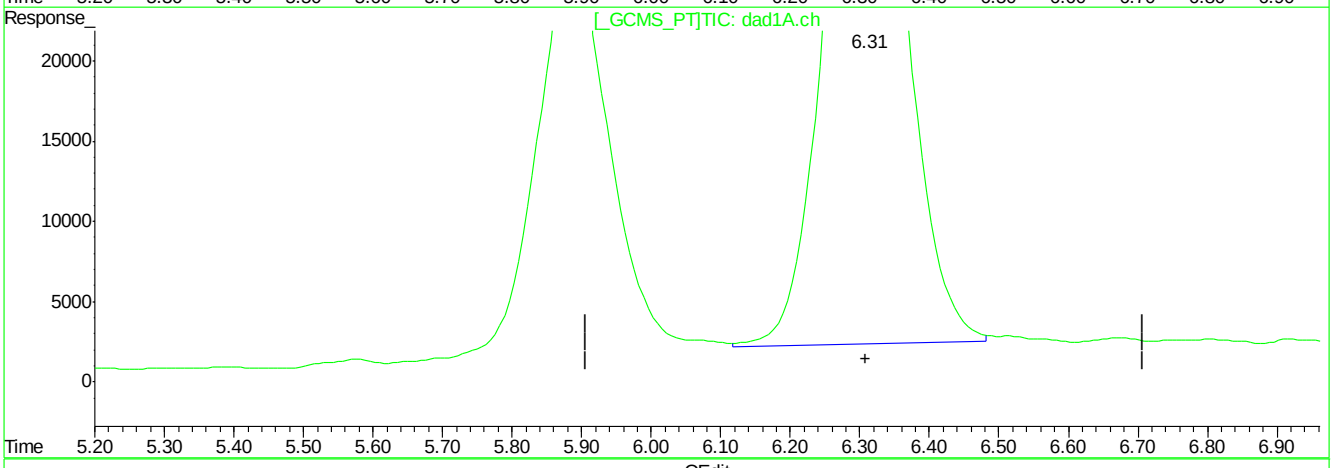
(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:30:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.31min 471.366ppb

response 1897320

(8) 3,5-Dinitroaniline #2

6.31min 440.665ppb m

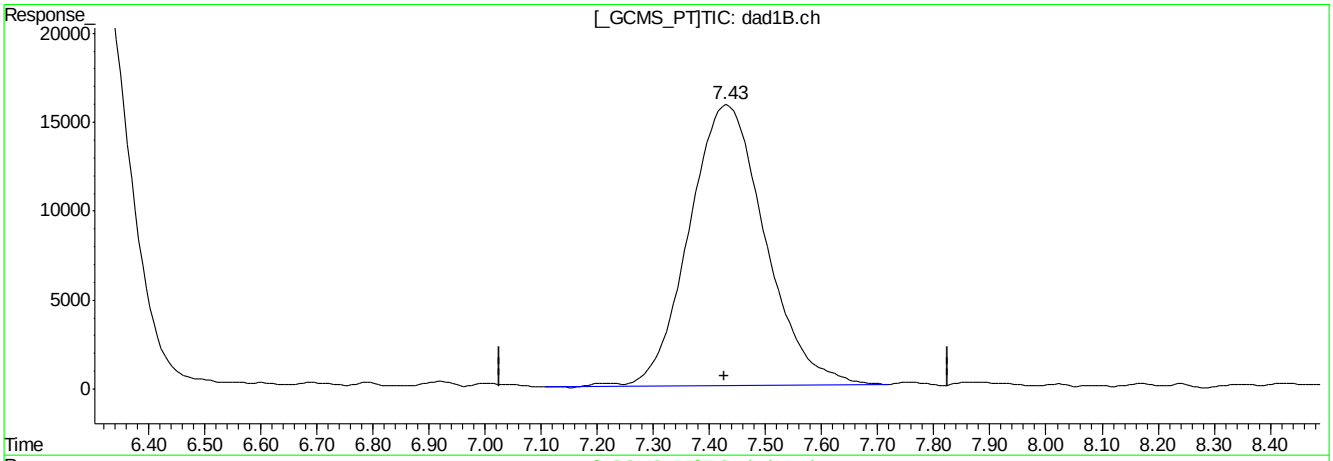
response 3223260

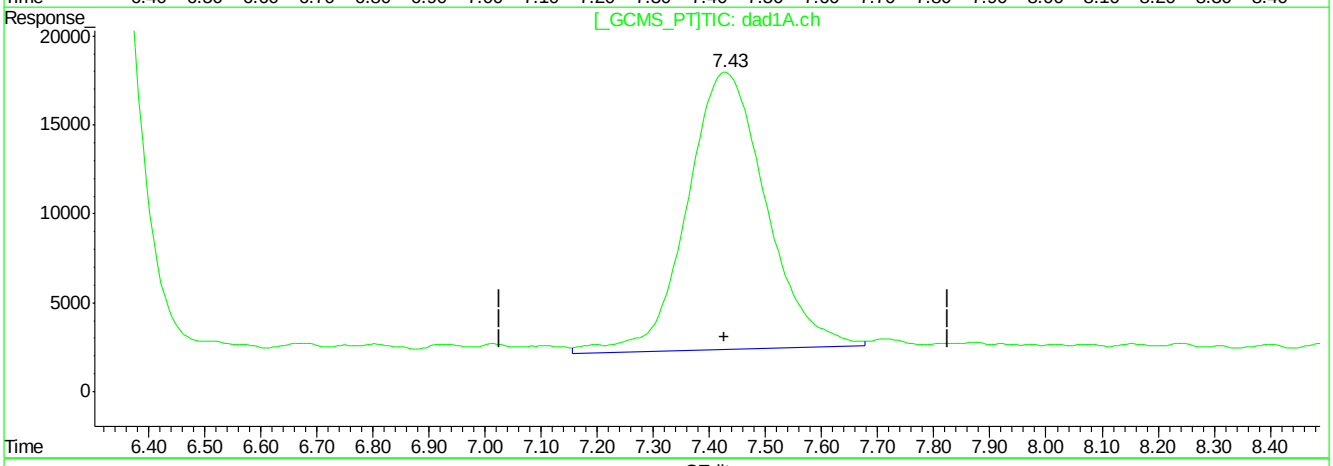
(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:30:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.43min 496.292ppb

response 1494089

(9) Nitrobenzene #2

7.43min 487.049ppb

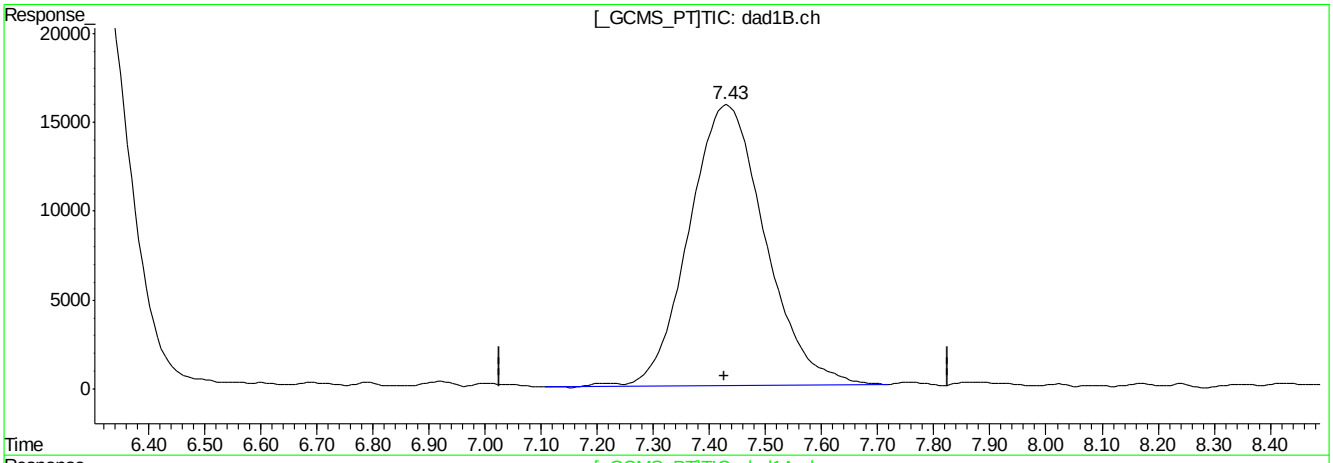
response 1523130

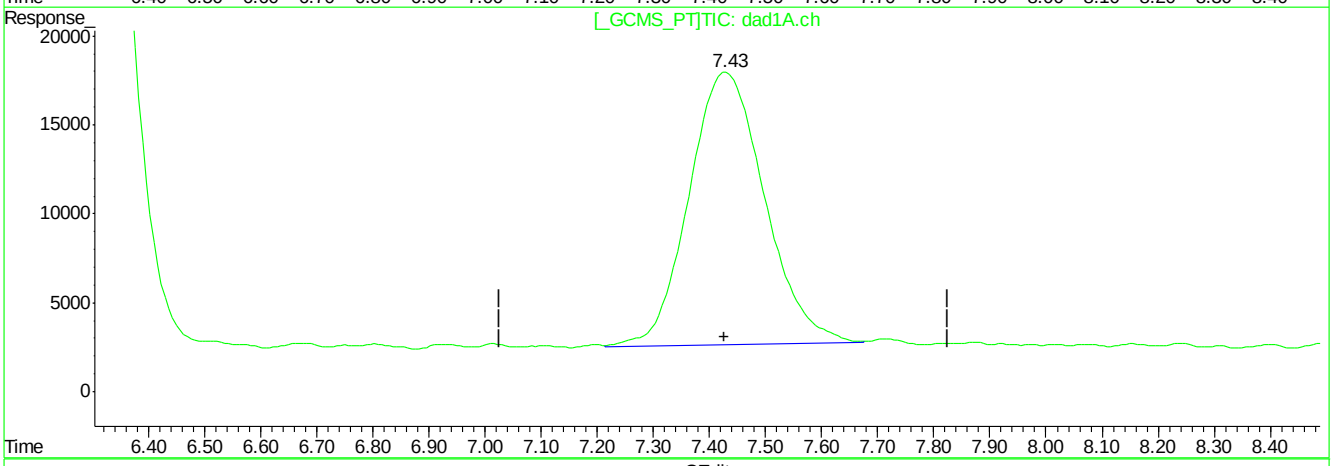
(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:30:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.43min 496.292ppb

response 1494089

(9) Nitrobenzene #2

7.43min 458.285ppb m

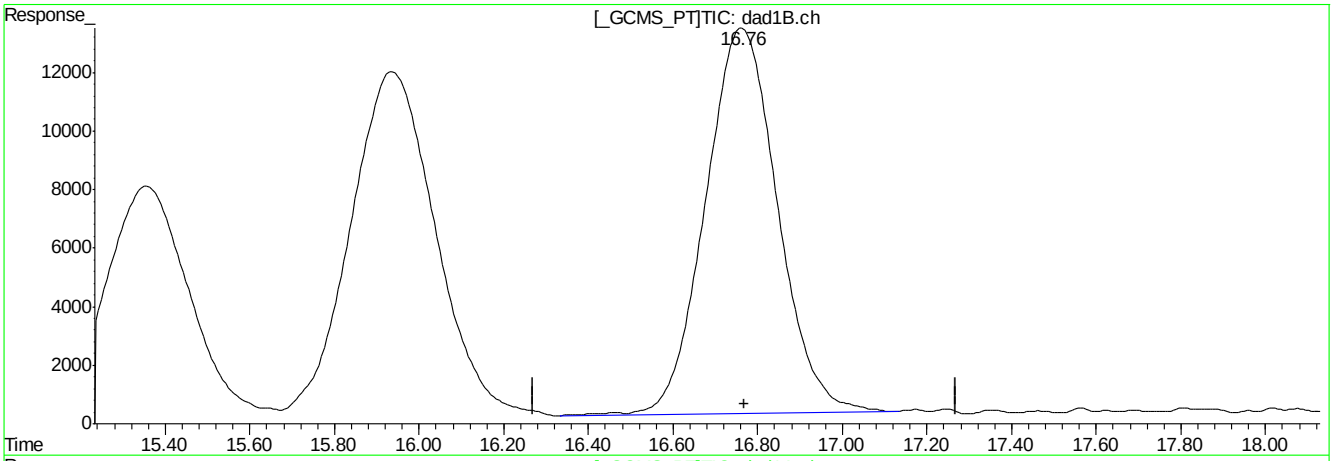
response 1433176

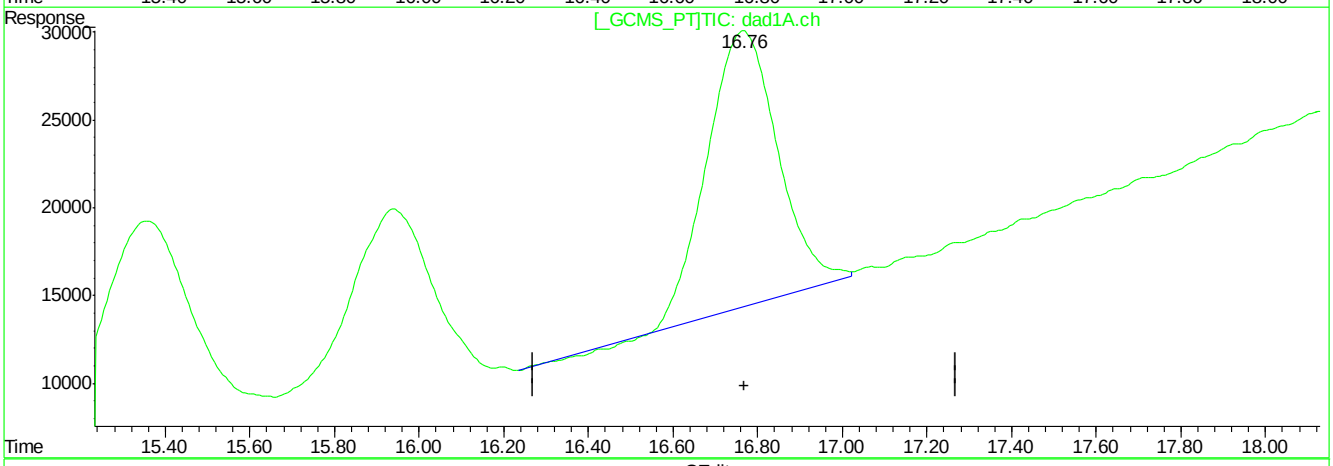
(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:30:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.76min 465.086ppb

response 1557869

(20) m-Nitrotoluene #2

16.77min 488.657ppb

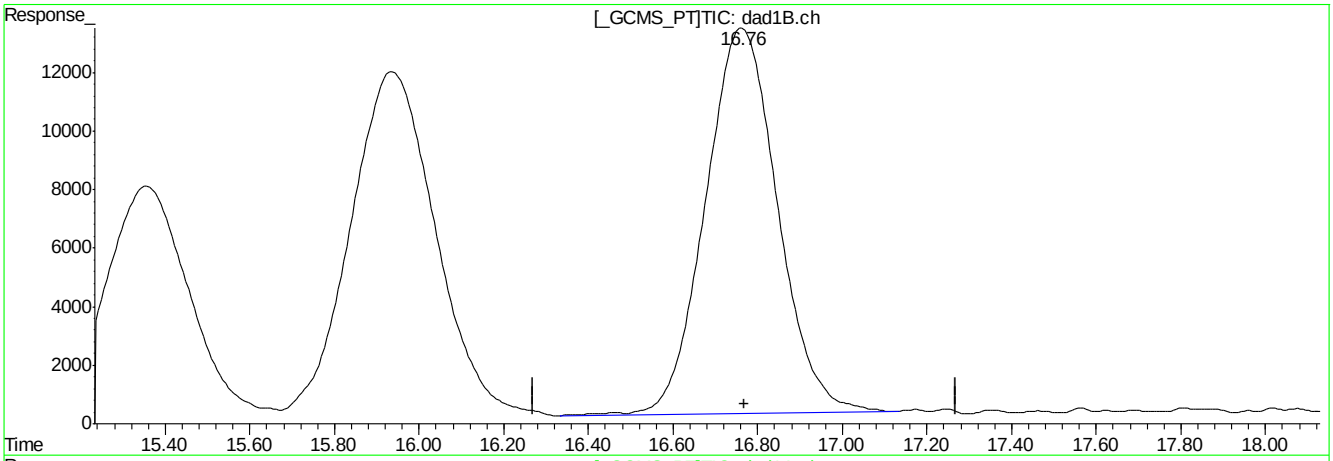
response 1810078

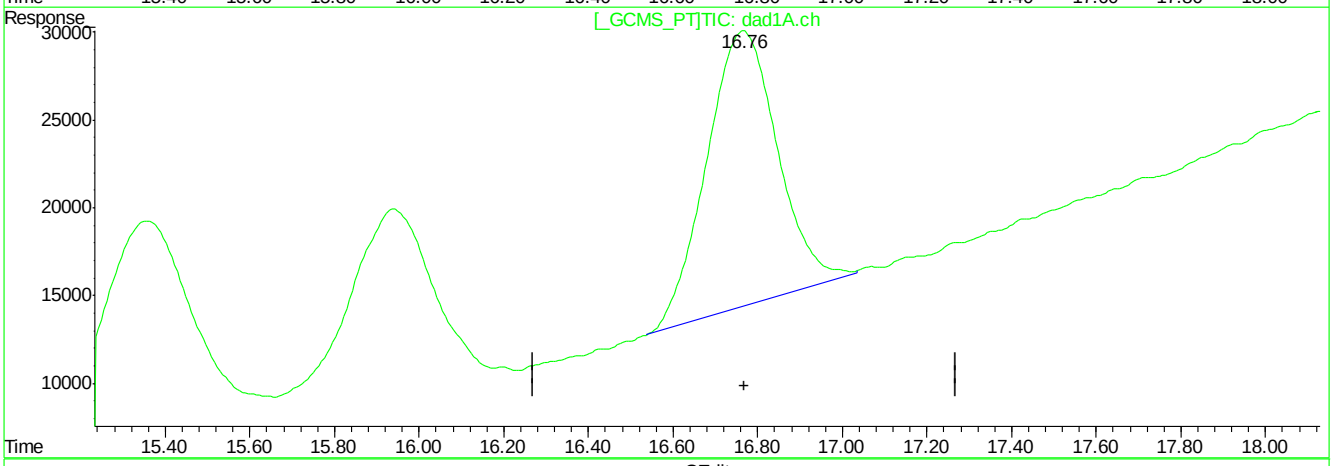
(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:30:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.76min 465.086ppb

response 1557869

(20) m-Nitrotoluene #2

16.76min 496.355ppb m

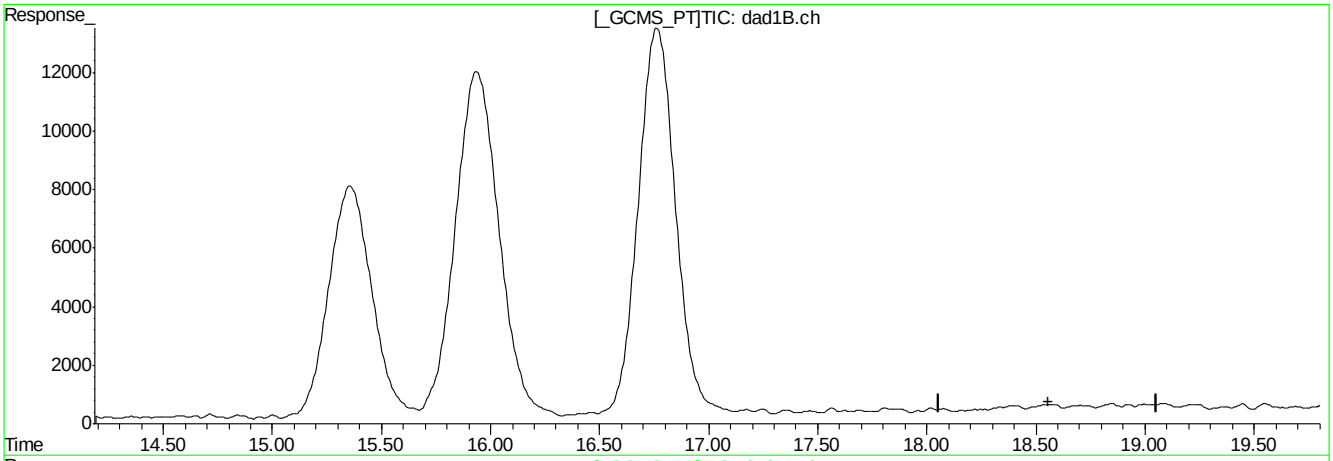
response 1838595

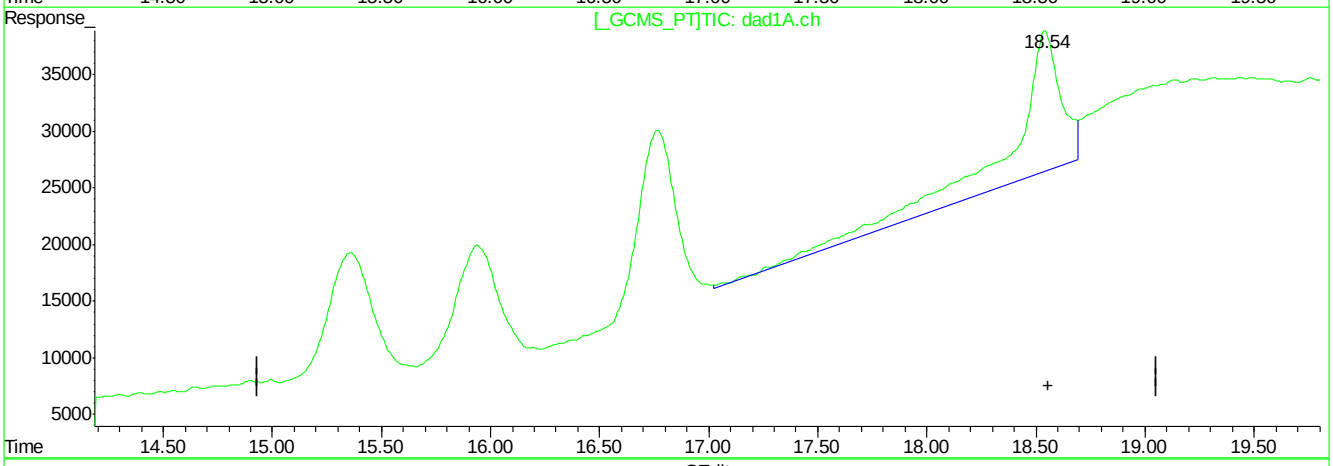
(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:30:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.54min 1533.707ppb

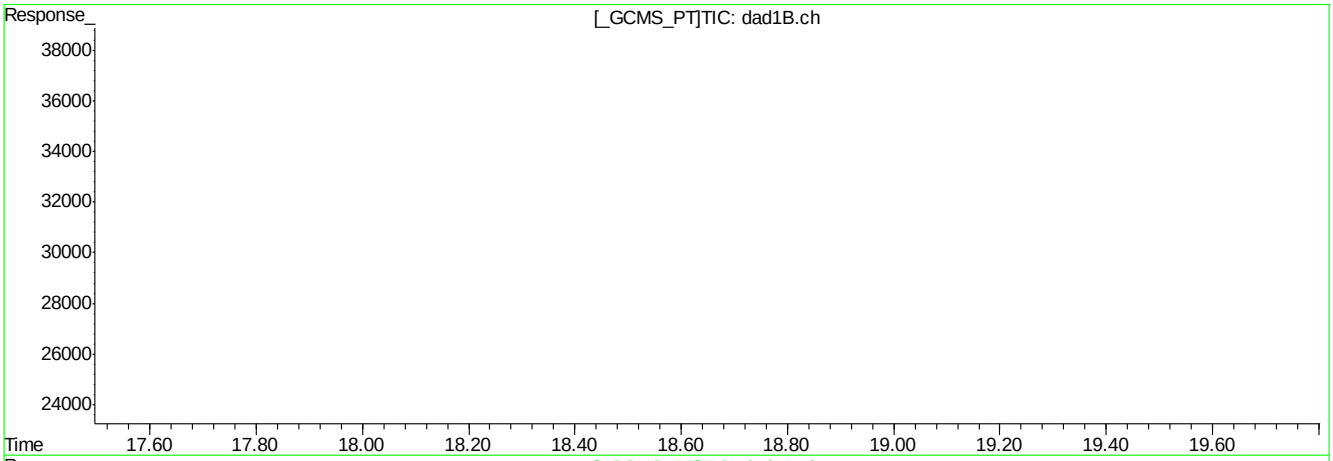
response 1979545

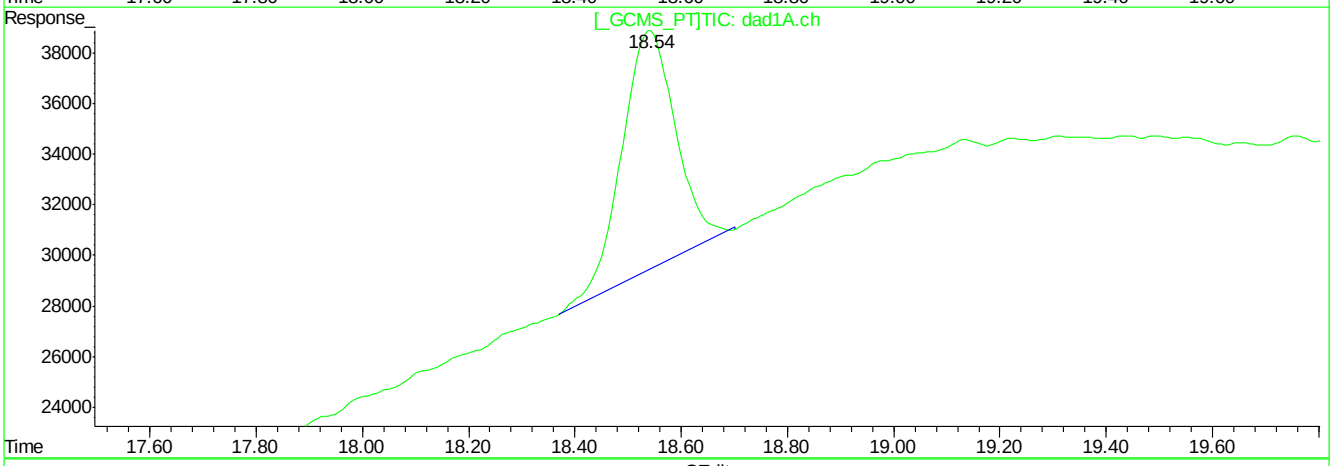
(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:30:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390450.D\dad1A.ch
Acq On : 02-Apr-2021, 10:14:22 Operator: jamesb
Sample : ic2428-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.54min 514.639ppb m

response 664241

(+) = Expected Retention Time
PP390450.D GPP2428_040221PRI.M Mon Apr 05 08:30:50 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/05/21 10:17

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 05 08:23:31 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.27	11.27	1831396	3255522	908.865	1008.657
	Spiked Amount 500.000	Range 70 - 136		Recovery =		181.77%#	201.73%#
	Target Compounds						
1)	TNX	1.33	1.33	2656037	4017485	855.603m	862.413
2)	HMX	1.47	1.47	1478173	4176478	948.511	982.626
3)	DNX	1.72	1.72	2423757	3920471	949.178	1049.498
4)	MNX	2.32	2.32	2657630	4195918	949.295	1009.039
5)	RDX	2.94	2.94	1736868	2813077	912.191	917.808
6)	1,3,5-Trinitrobe	4.70	4.70	3772163	7333423	914.222	943.762
7)	1,3-Dinitrobenze	5.89	5.89	4949168	3374827	918.940	942.141m
8)	3,5-Dinitroanili	6.31	6.31	3680425	6294101	914.357	860.491m
9)	Nitrobenzene	7.43	7.43	2936271	2797870	975.342	894.671m
10)	Nitroglycerin	0.00	9.06	0	1172798	N.D.	964.944 #
11)	Tetryl	9.57	9.58	2658448	4190843	1126.956	1029.378
12)	2,4,6-Trinitroto	9.93	9.93	3489485	4238555	887.729	965.008
13)	2-Amino-4,6-Dini	10.41	10.41	3086145	4685828	901.780	1031.016
14)	4-Amino-2,6-Dini	10.94	10.94	2259055	4621895	920.677	1052.264
16)	2,4-Dinitrotolue	11.89	11.89	4375139	2891067	910.130	963.522
17)	2,6-Dinitrotolue	12.38	12.38	2468010	3321128	936.269	937.204
18)	o-Nitrotoluene	15.37	15.37	2123193	2856638	986.049	988.095
19)	p-Nitrotoluene	15.95	15.95	3251588	2578185	950.705	930.411
20)	m-Nitrotoluene	16.77	16.77	3061587	3643923	914.006	983.730m
21)	PETN	0.00	18.55	0	1319283	N.D.	1022.151m#

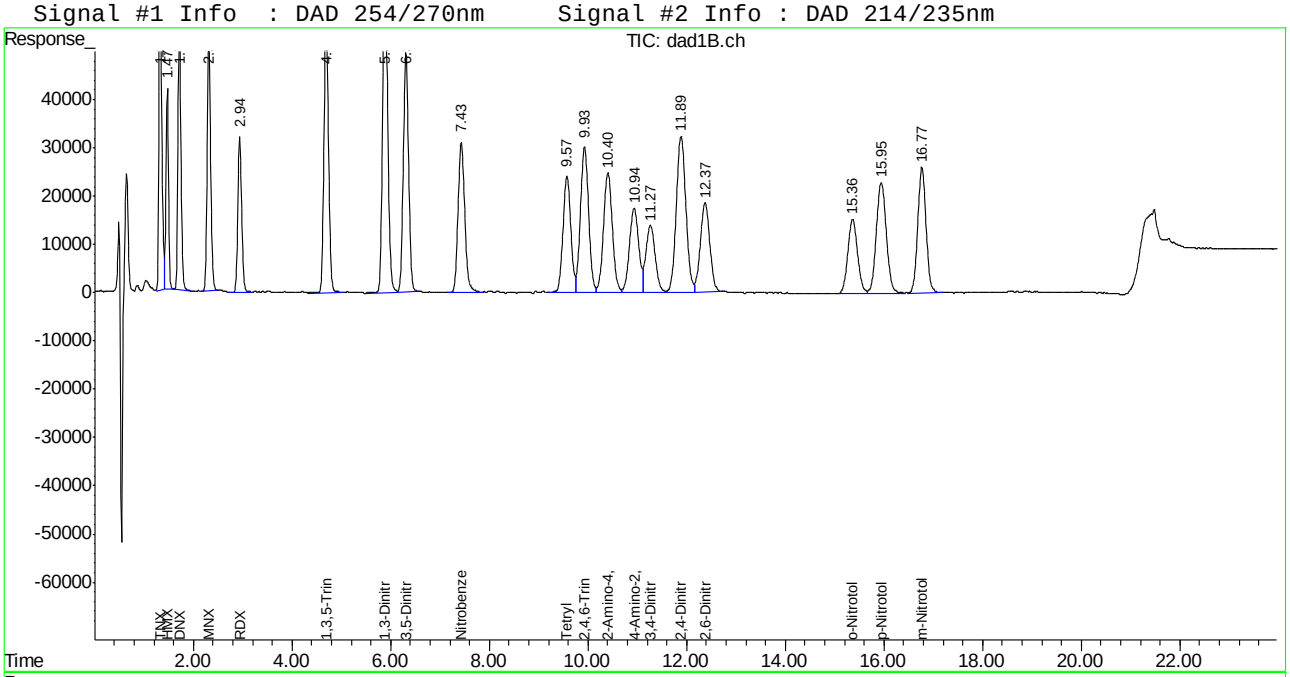
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP390451.D GPP2428_040221PRI.M Mon Apr 05 09:04:44 2021 Page 1

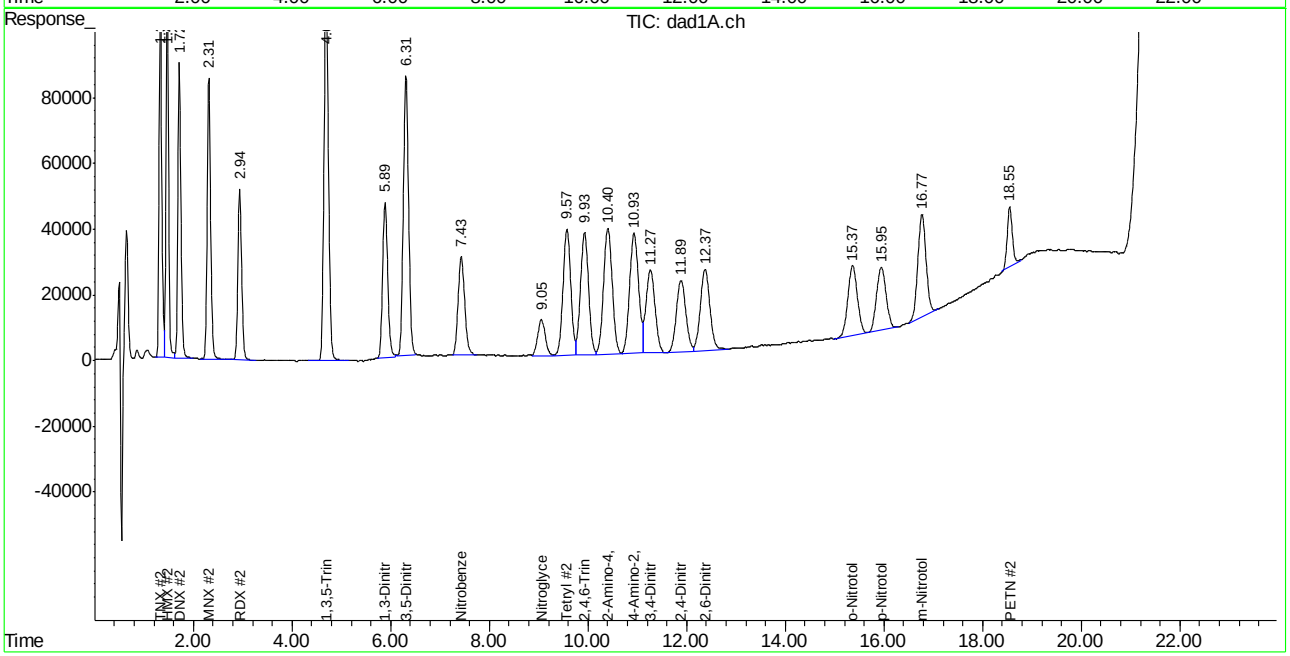
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:28 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

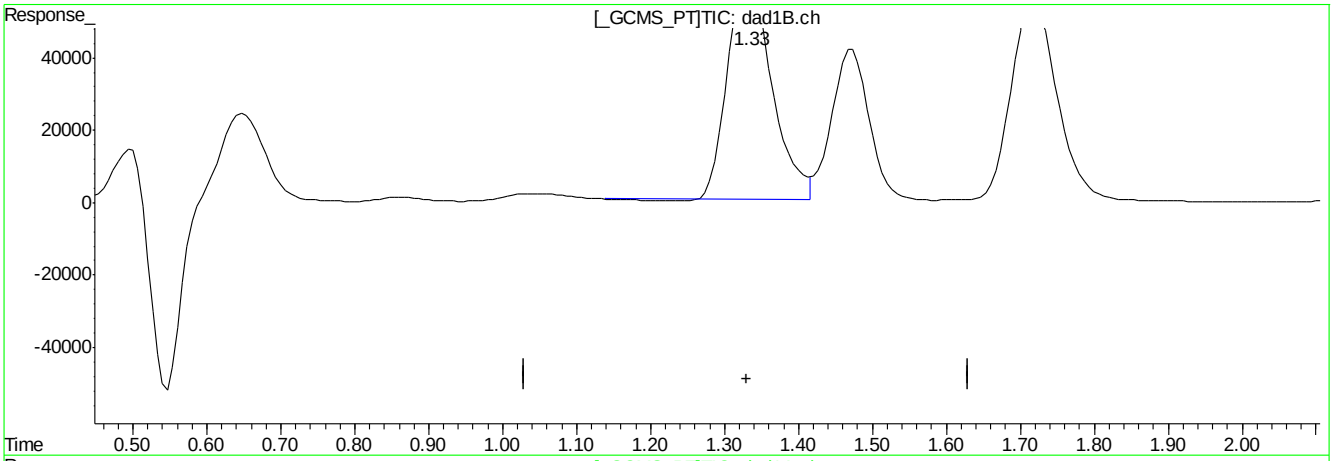
Sample Number: GPP2428-ICC2428 **Method:** SW846 8330A
Lab FileID: PP390451.D **Analyst approved:** 04/05/21 09:06 James Boone
Injection Time: 04/02/21 10:45 **Supervisor approved:** 04/05/21 10:17 Naresh Jiawan

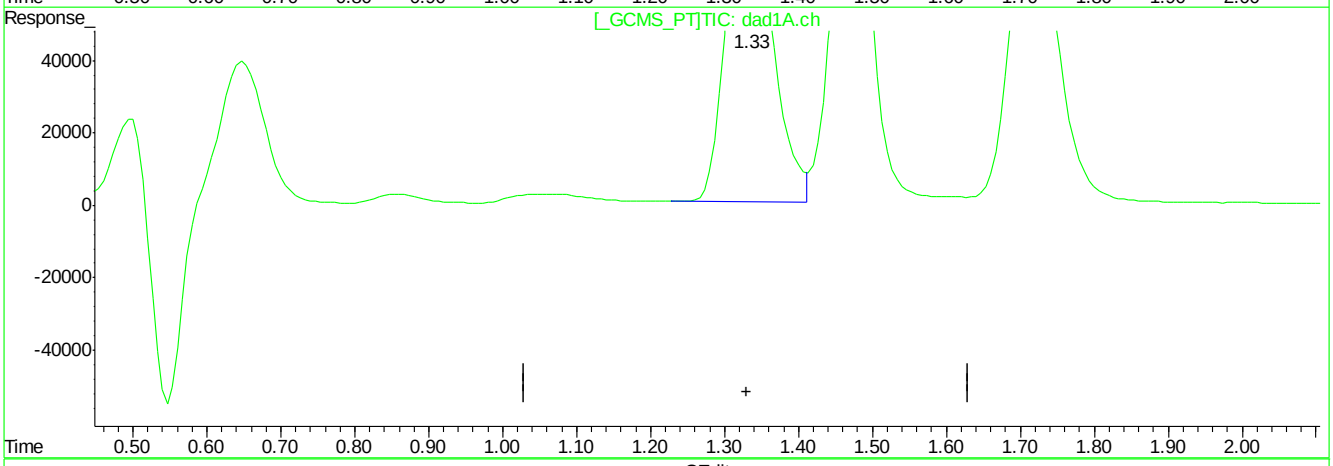
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.33	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.89	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.31	Poor instrument integration
Nitrobenzene	98-95-3	2	7.43	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.77	Poor instrument integration
PETN	78-11-5	2	18.55	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 831.889ppb

response 2582423

(1) TNX #2

1.33min 862.413ppb

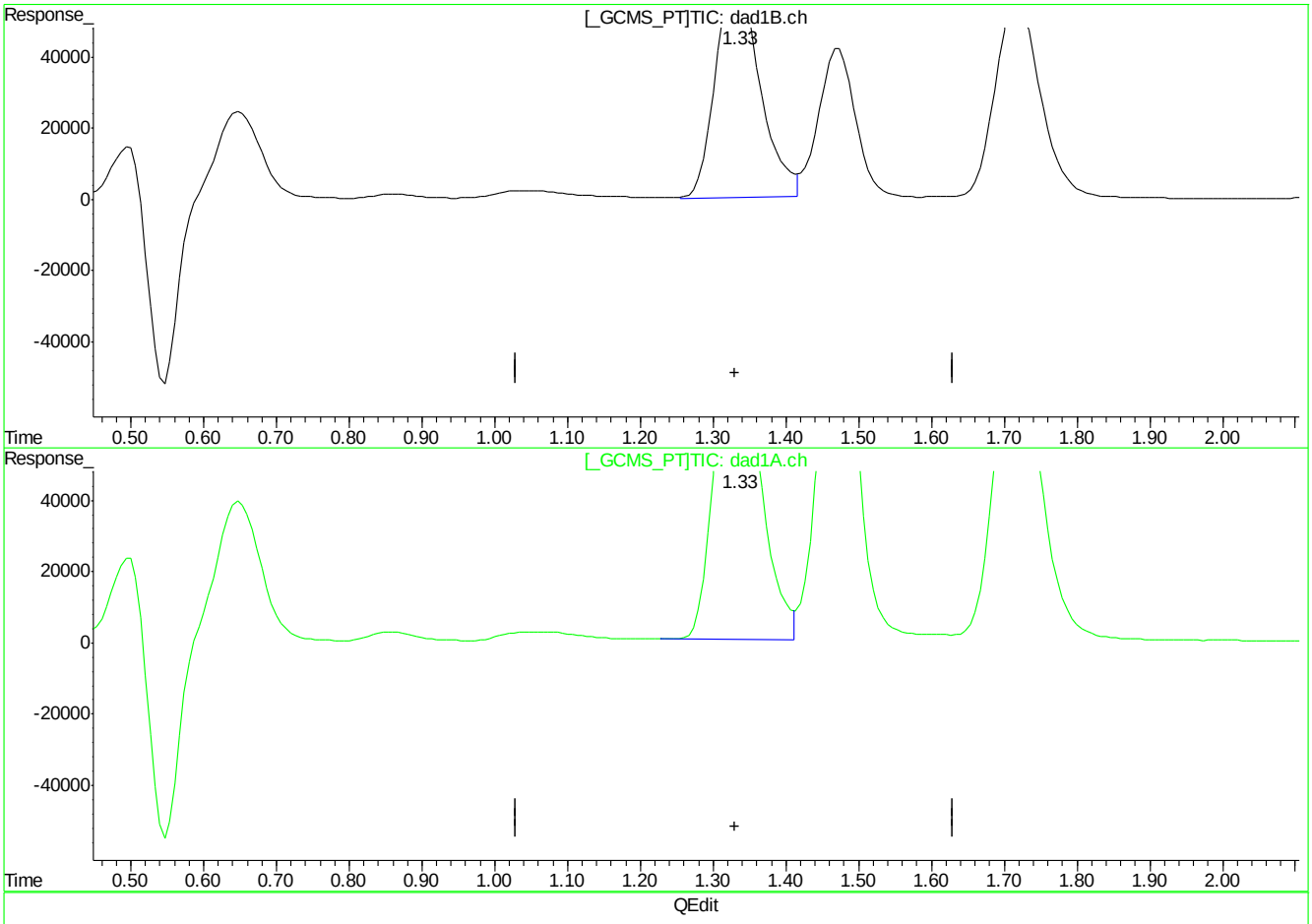
response 4017485

(+) = Expected Retention Time
PP390451.D GPP2428_040221PRI.M Mon Apr 05 08:27:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(1) TNX

1.33min 855.603ppb m

response 2656037

(1) TNX #2

1.33min 862.413ppb

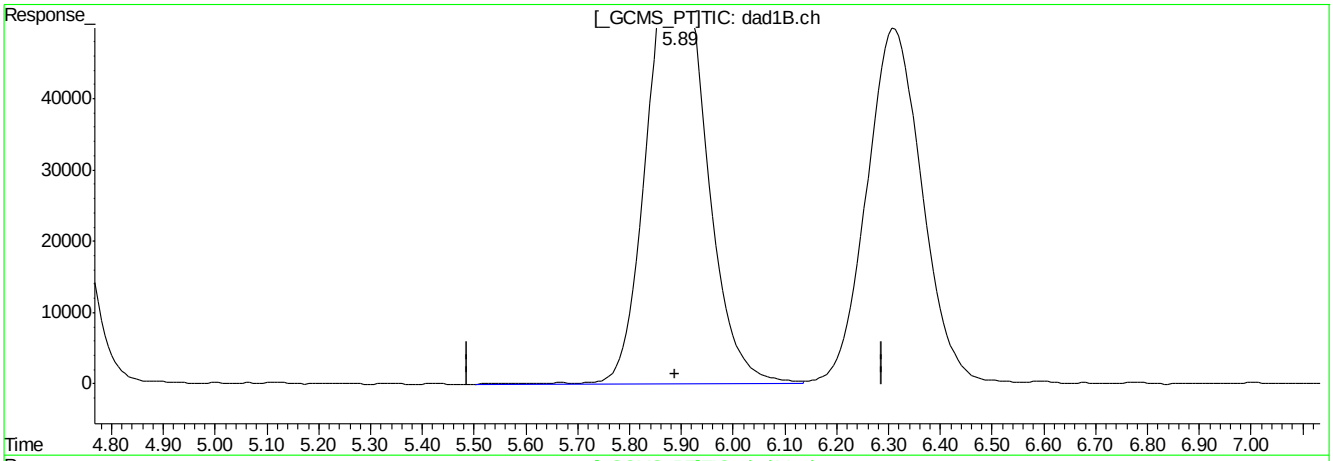
response 4017485

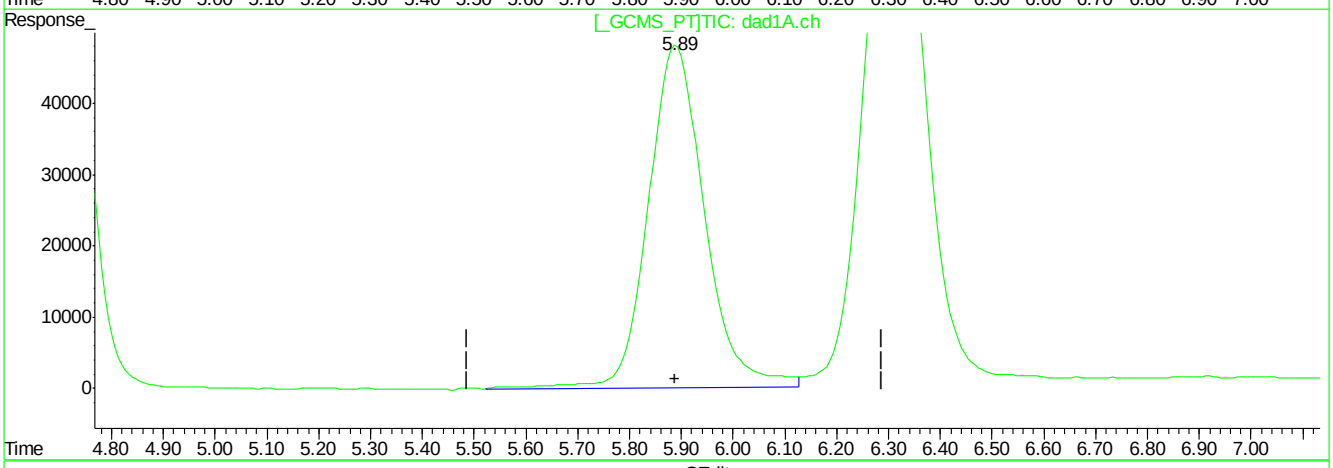
(+) = Expected Retention Time
PP390451.D GPP2428_040221PRI.M Mon Apr 05 08:27:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.89min 918.940ppb

response 4949168

(7) 1,3-Dinitrobenzene #2

5.89min 1010.385ppb

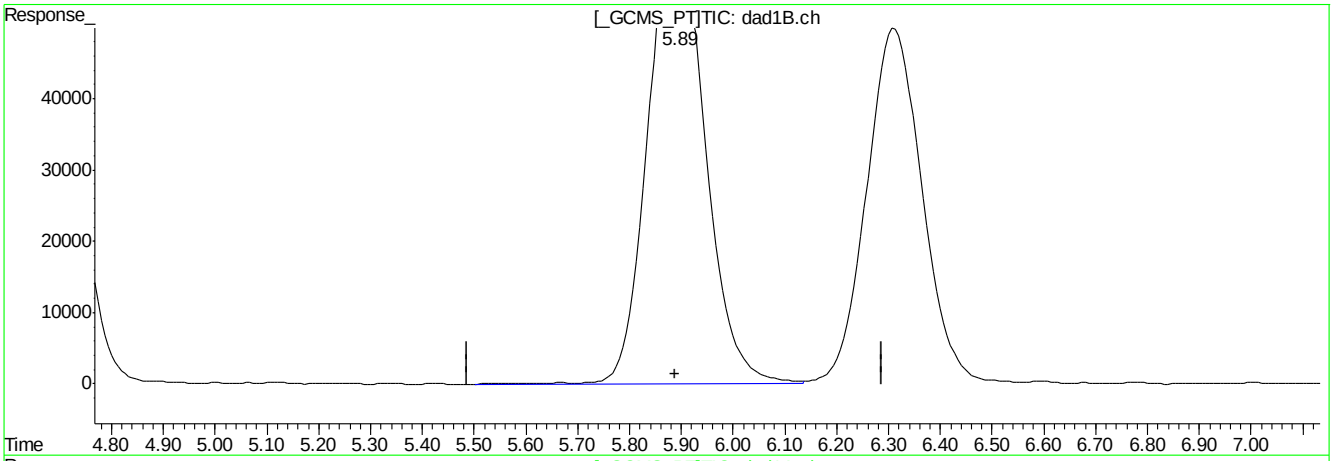
response 3619285

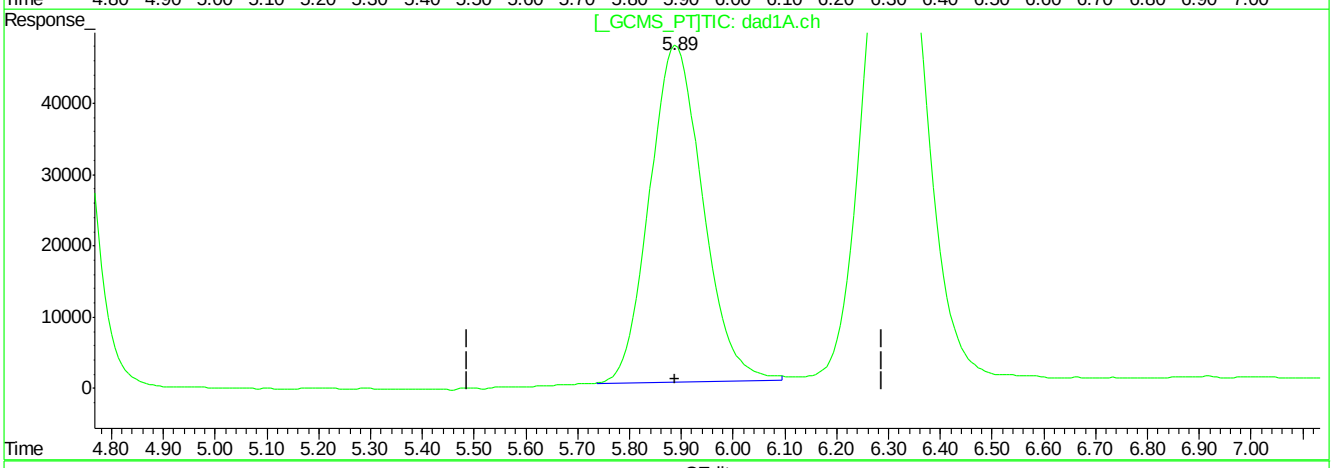
(+) = Expected Retention Time
PP390451.D GPP2428_040221PRI.M Mon Apr 05 08:27:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.89min 918.940ppb

response 4949168

(7) 1,3-Dinitrobenzene #2

5.89min 942.141ppb m

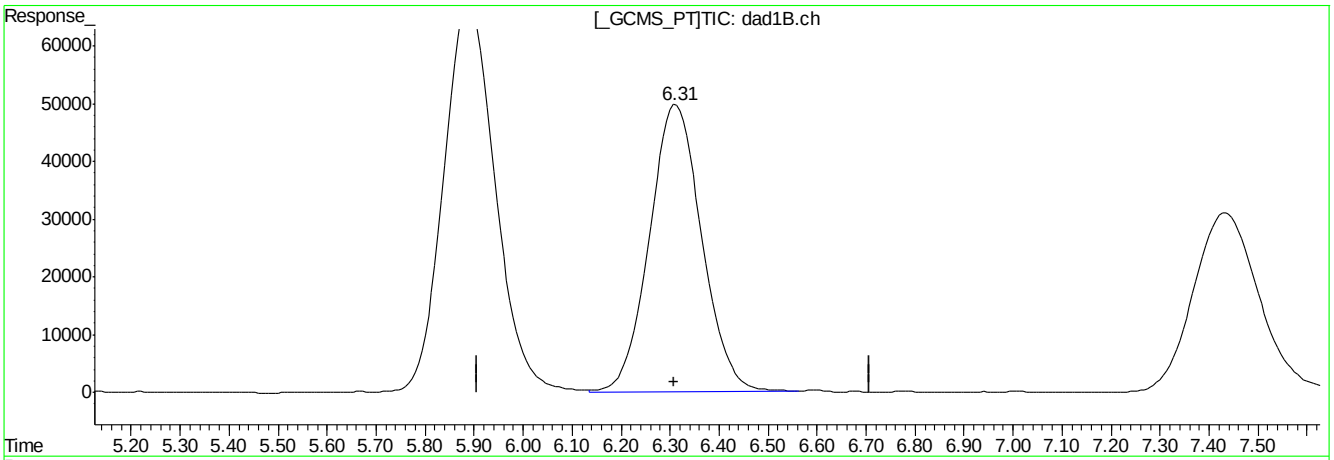
response 3374827

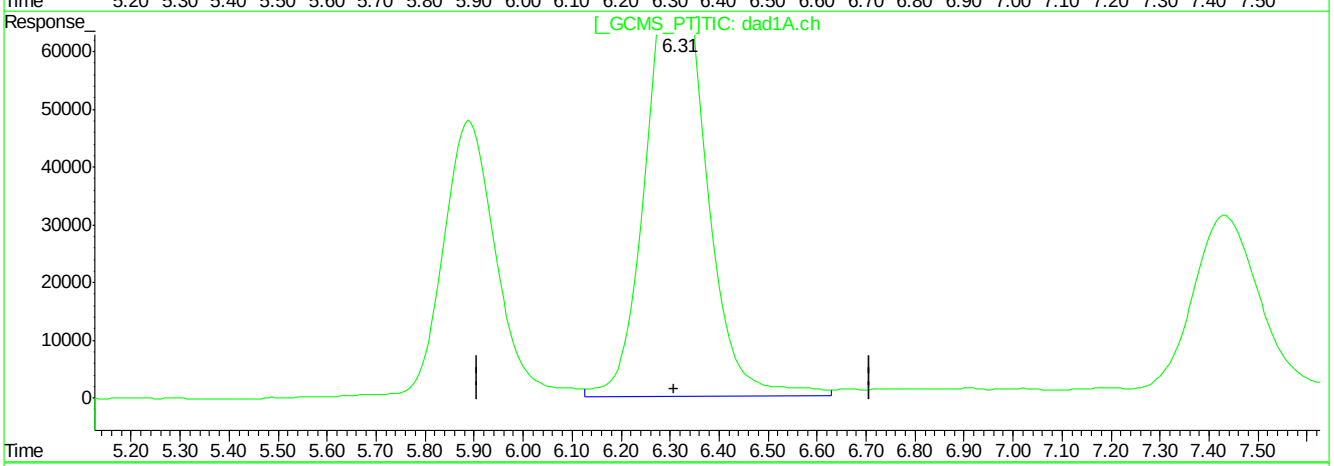
(+) = Expected Retention Time
PP390451.D GPP2428_040221PRI.M Mon Apr 05 08:27:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.31min 914.357ppb

response 3680425

(8) 3,5-Dinitroaniline #2

6.31min 913.610ppb

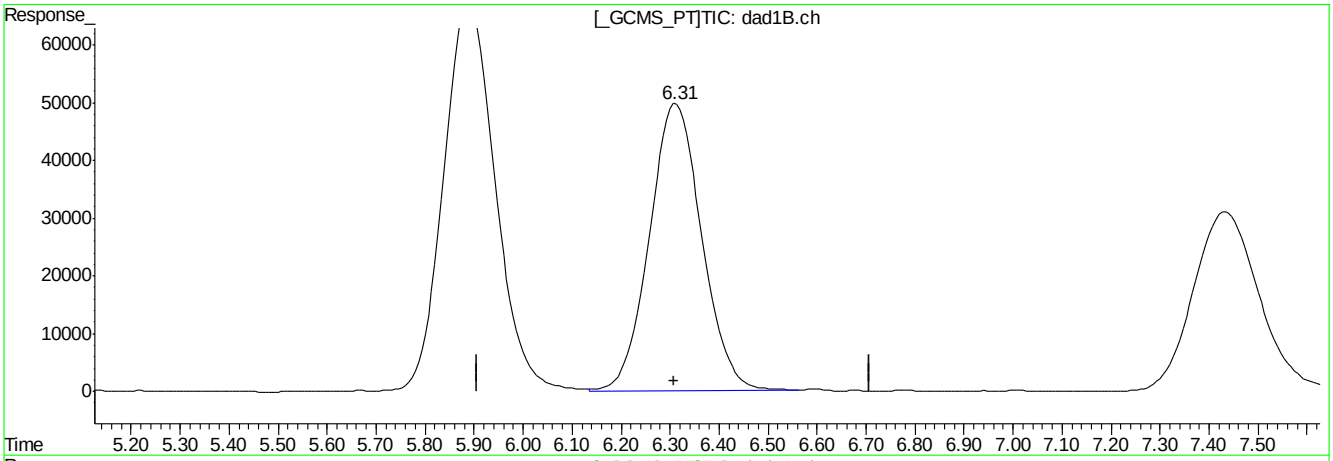
response 6682637

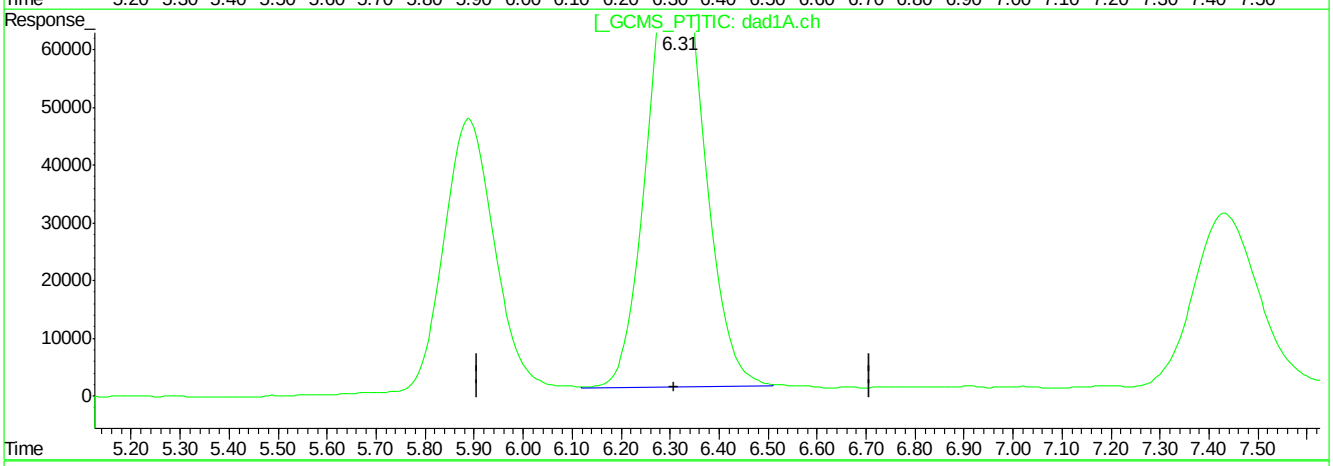
(+) = Expected Retention Time
PP390451.D GPP2428_040221PRI.M Mon Apr 05 08:28:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.31min 914.357ppb

response 3680425

(8) 3,5-Dinitroaniline #2

6.31min 860.491ppb m

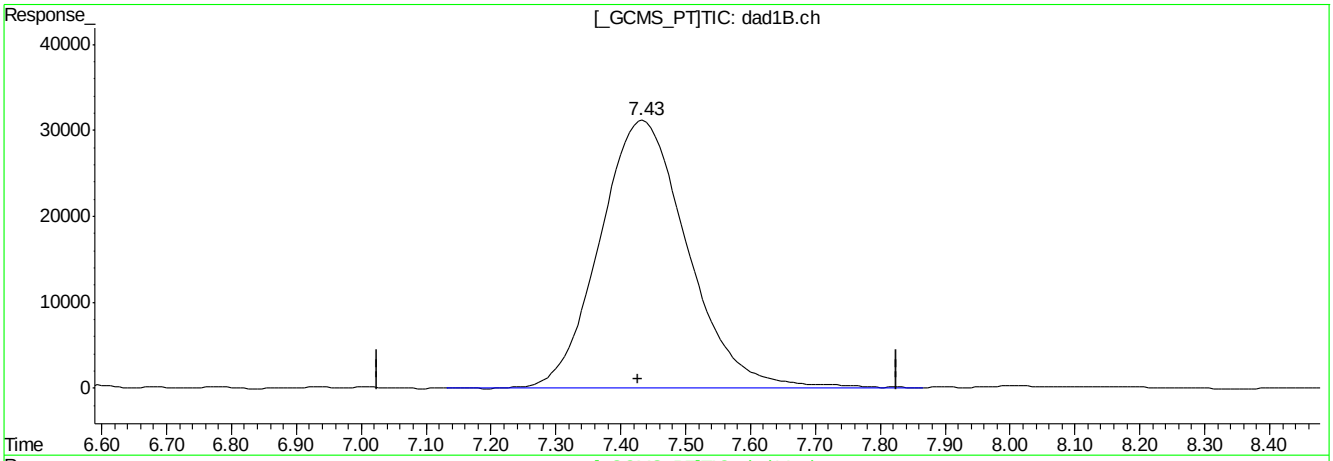
response 6294101

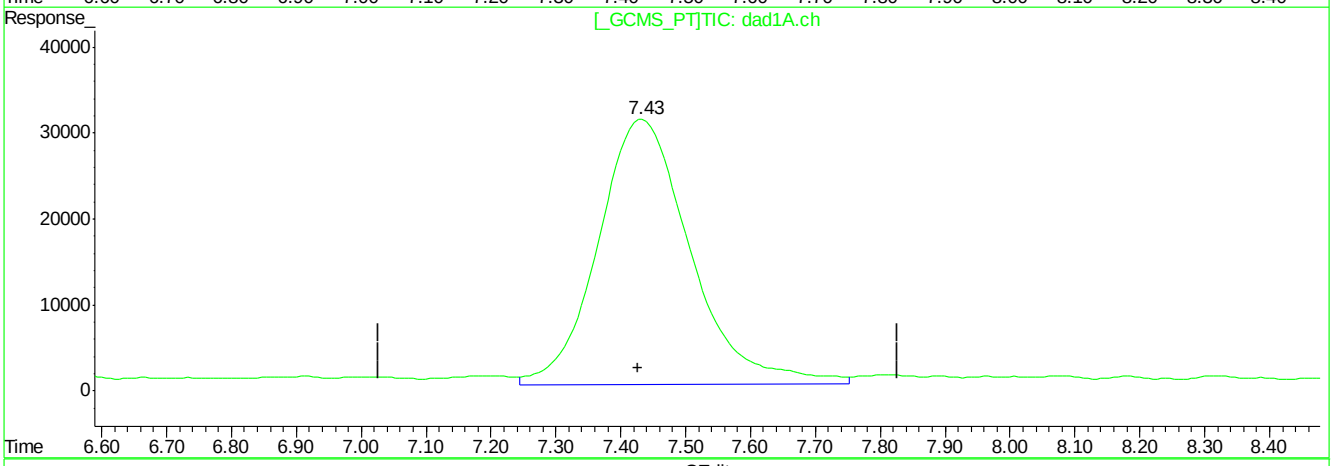
(+) = Expected Retention Time
PP390451.D GPP2428_040221PRI.M Mon Apr 05 08:28:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.43min 975.342ppb

response 2936271

(9) Nitrobenzene #2

7.43min 977.845ppb

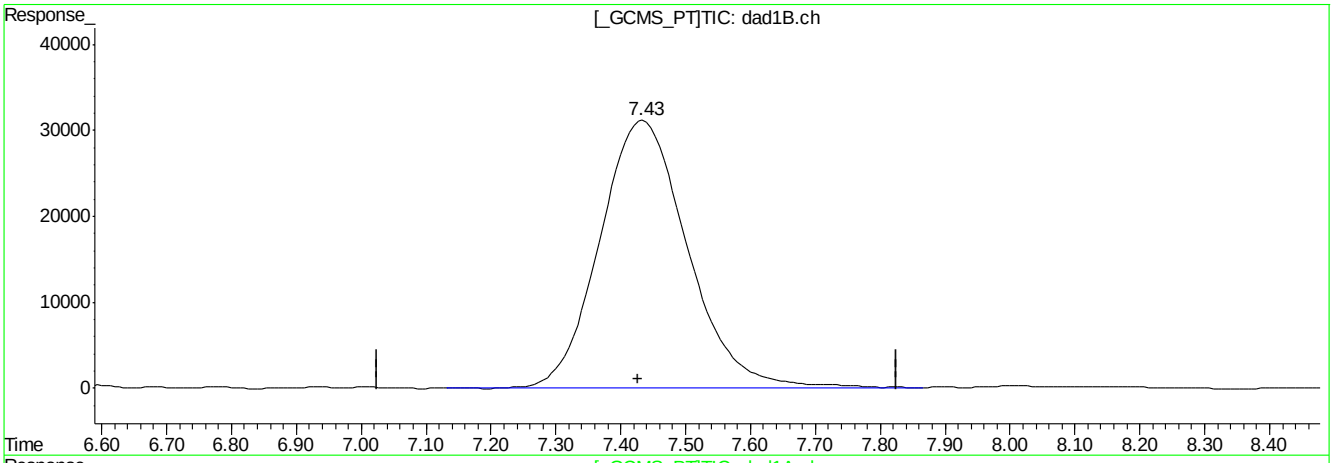
response 3057977

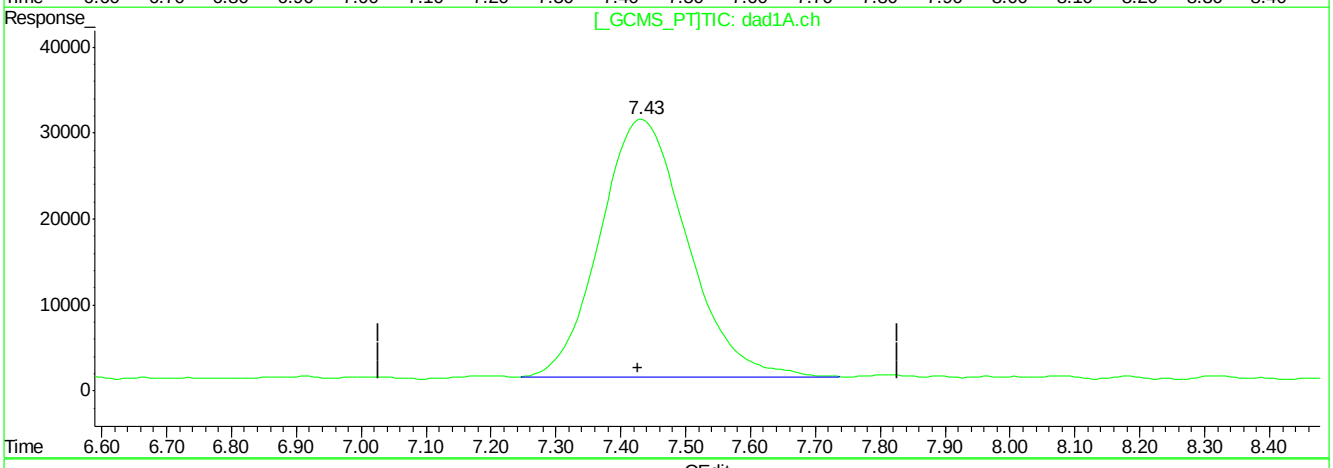
(+) = Expected Retention Time
PP390451.D GPP2428_040221PRI.M Mon Apr 05 08:28:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.43min 975.342ppb

response 2936271

(9) Nitrobenzene #2

7.43min 894.671ppb m

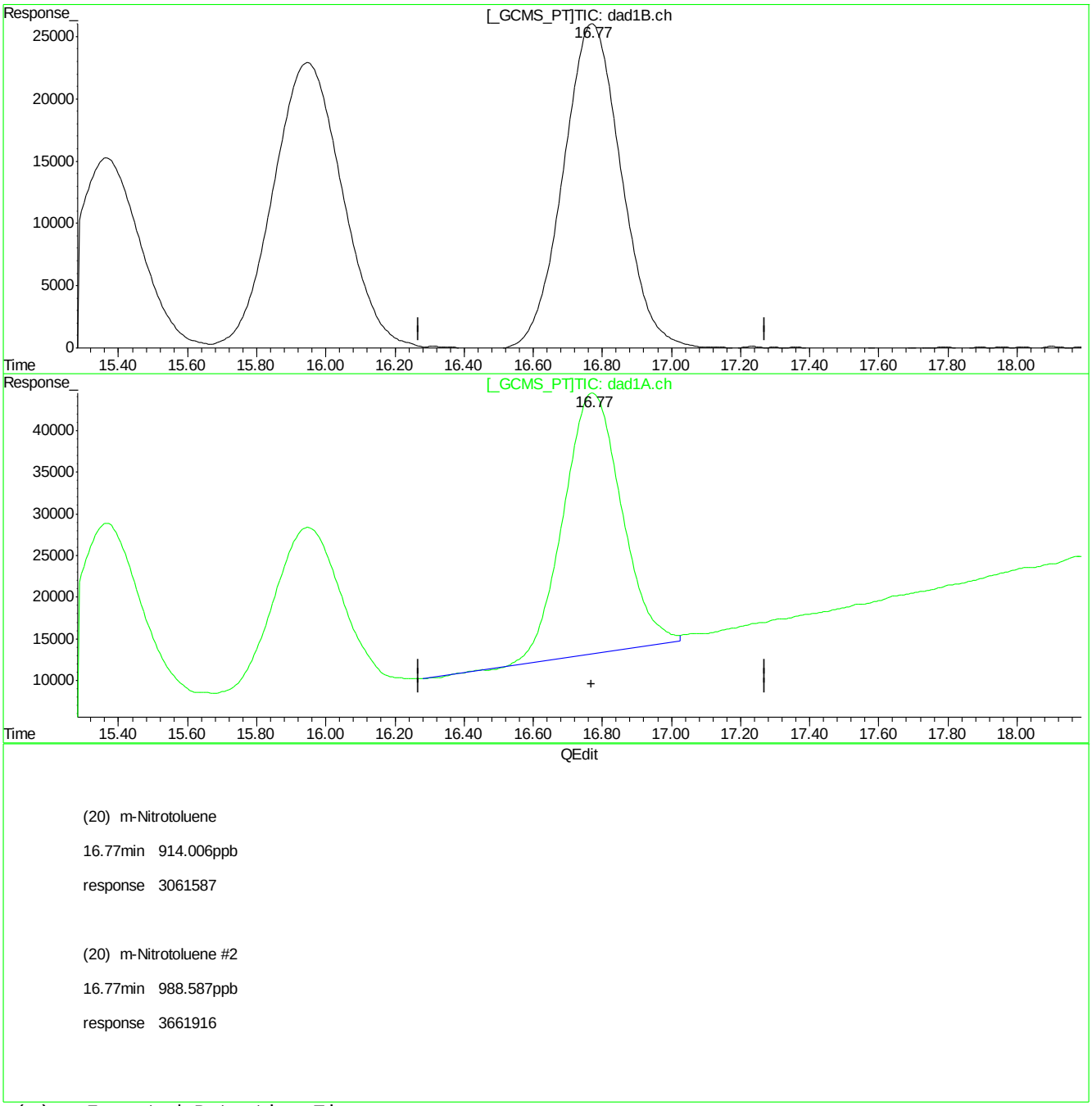
response 2797870

(+) = Expected Retention Time
PP390451.D GPP2428_040221PRI.M Mon Apr 05 08:28:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration

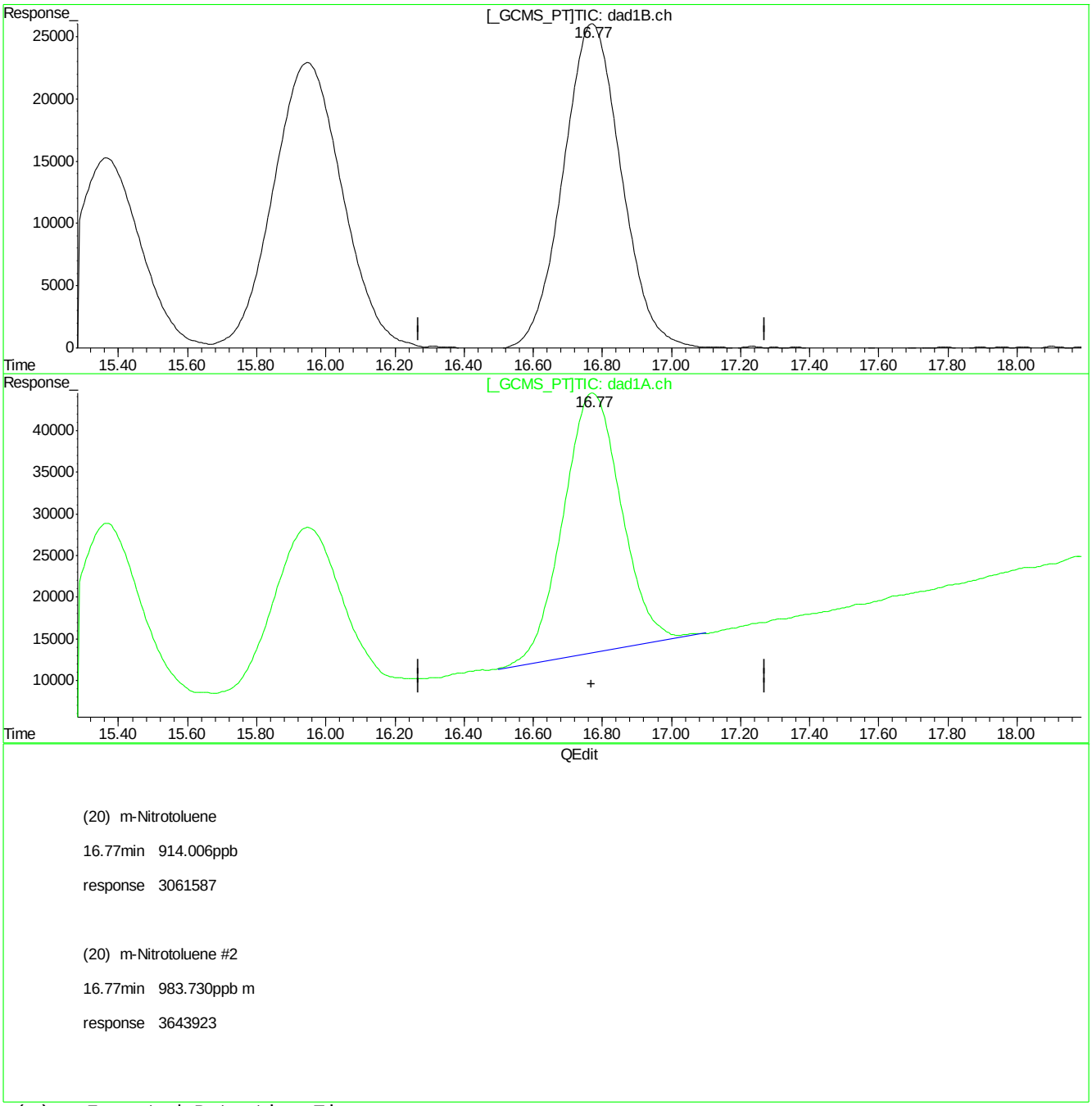


(+) = Expected Retention Time
PP390451.D GPP2428_040221PRI.M Mon Apr 05 08:28:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration

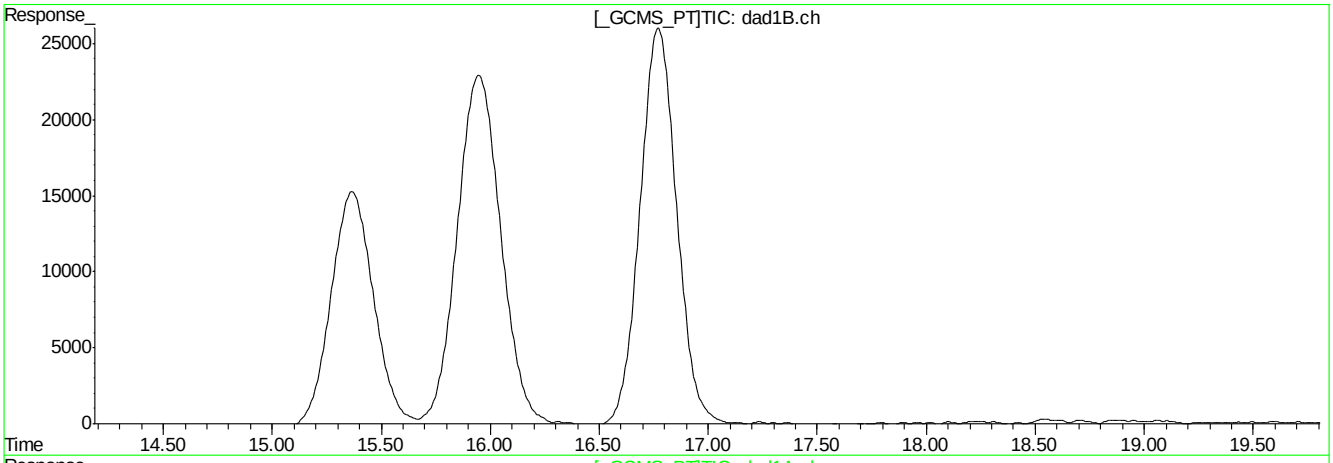


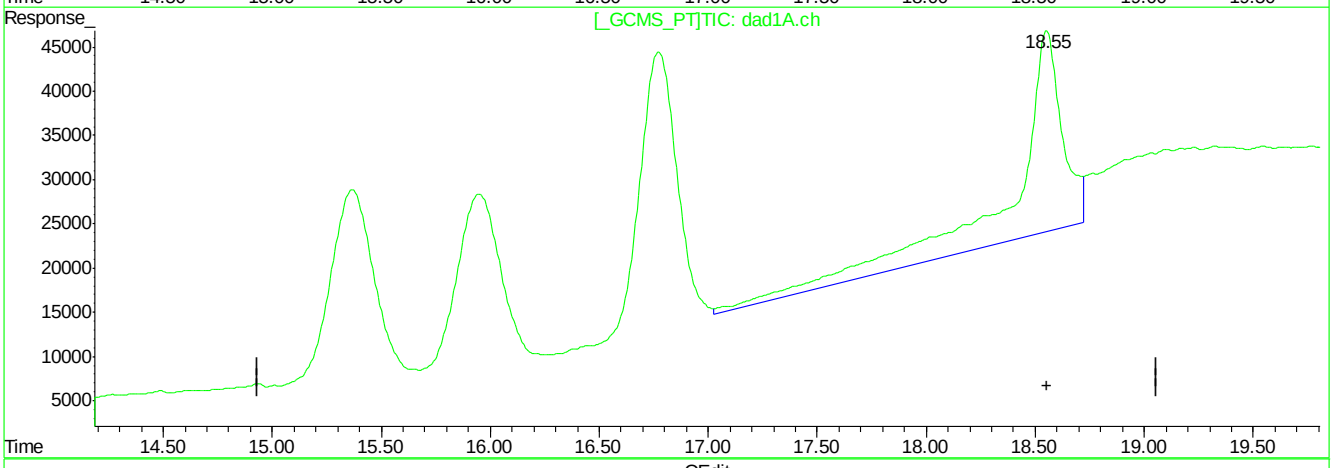
(+) = Expected Retention Time
PP390451.D GPP2428_040221PRI.M Mon Apr 05 08:28:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.55min 2796.421ppb

response 3609321

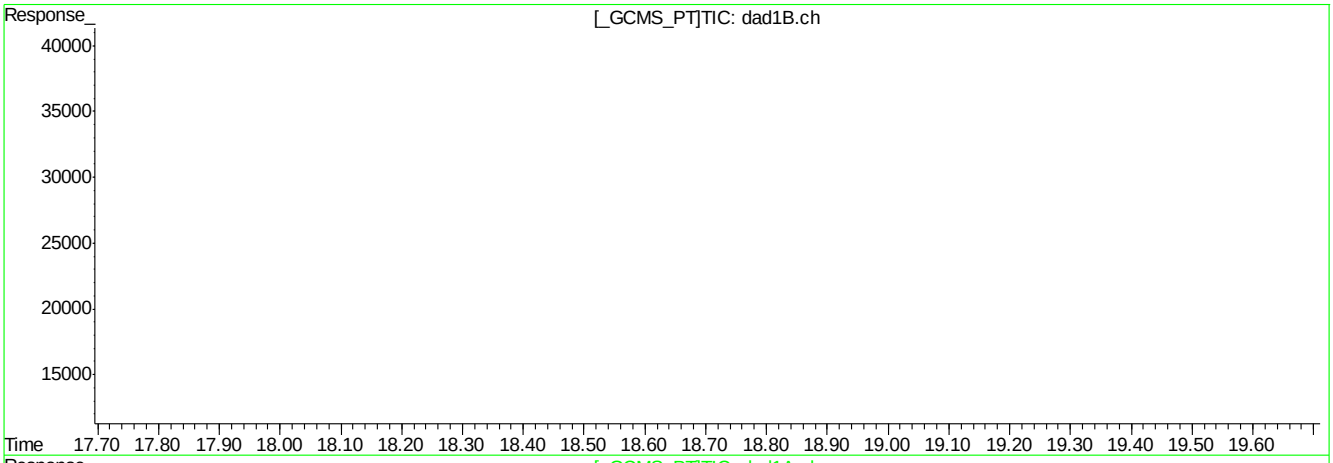
(+) = Expected Retention Time
PP390451.D GPP2428_040221PRI.M Mon Apr 05 08:28:46 2021

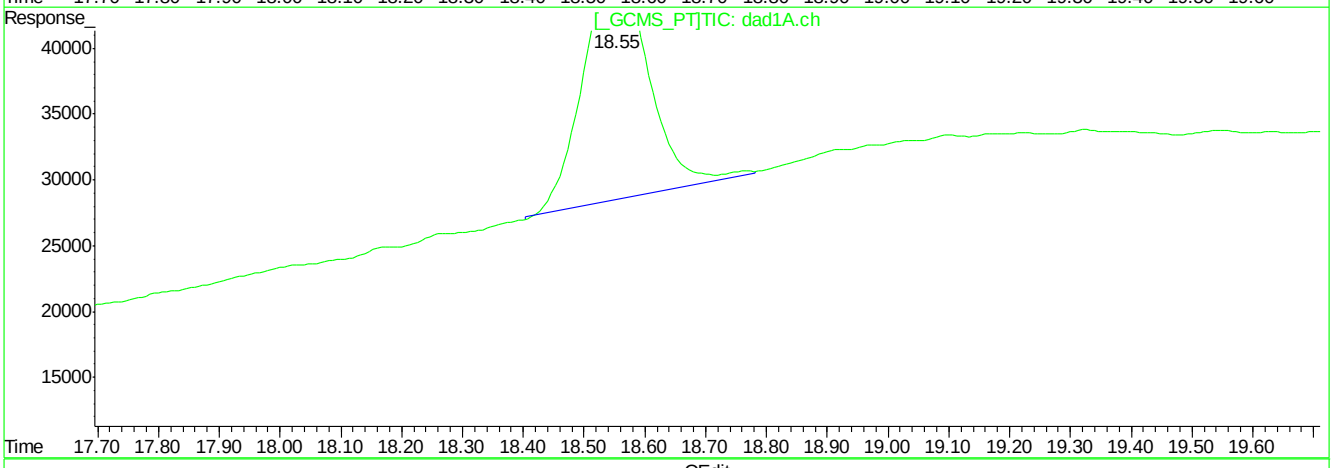
PP390451.D edits: PETN

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390451.D\dad1A.ch
Acq On : 02-Apr-2021, 10:45:24 Operator: jamesb
Sample : icc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.55min 1022.151ppb m

response 1319283

(+) = Expected Retention Time
PP390451.D GPP2428_040221PRI.M Mon Apr 05 08:28:53 2021

PP390452.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 04/05/21 10:17

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 05 08:23:32 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.27	11.27	4595773	8282253	2280.740	2566.086
	Spiked Amount 500.000	Range 70 - 136		Recovery =		456.15%#	513.22%#
	Target Compounds						
1)	TNX	1.33	1.33	6538792	10105759	2106.374m	2169.352m
2)	HMX	1.47	1.47	3645614	10257124	2339.310	2413.258
3)	DNX	1.72	1.72	5938172	9599875	2325.474	2569.857m
4)	MNX	2.32	2.32	6632680	10379242	2369.169	2496.011
5)	RDX	2.94	2.94	4303770	6952843	2260.310	2268.467
6)	1,3,5-Trinitrobe	4.70	4.70	9309317	18205613	2256.208	2342.939
7)	1,3-Dinitrobenze	5.89	5.89	12249374	8669299	2274.410	2420.183
8)	3,5-Dinitroanili	6.31	6.31	9172153	15693022	2278.710	2145.455m
9)	Nitrobenzene	7.43	7.43	7222650	7045533	2399.150	2252.941m
10)	Nitroglycerin	0.00	9.06	0	2902139	N.D.	2387.794 #
11)	Tetryl	9.58	9.58	6554421	10448372	2778.518	2566.386
12)	2,4,6-Trinitroto	9.94	9.94	8667947	10595928	2205.135	2412.416
13)	2-Amino-4,6-Dini	10.40	10.40	7705355	11824151	2251.526	2601.652
14)	4-Amino-2,6-Dini	10.94	10.94	5642358	11659556	2299.540	2654.524
16)	2,4-Dinitrotolue	11.89	11.89	10919156	7260281	2271.437	2419.673
17)	2,6-Dinitrotolue	12.38	12.38	6214363	8208429	2357.492	2316.374
18)	o-Nitrotoluene	15.36	15.36	5198833	7104167	2414.431	2457.292
19)	p-Nitrotoluene	15.94	15.94	8044514	6636750	2352.070	2395.059
20)	m-Nitrotoluene	16.77	16.77	7679574	9058389	2292.659	2445.444m
21)	PETN	0.00	18.55	0	3266026	N.D. d	2530.443m

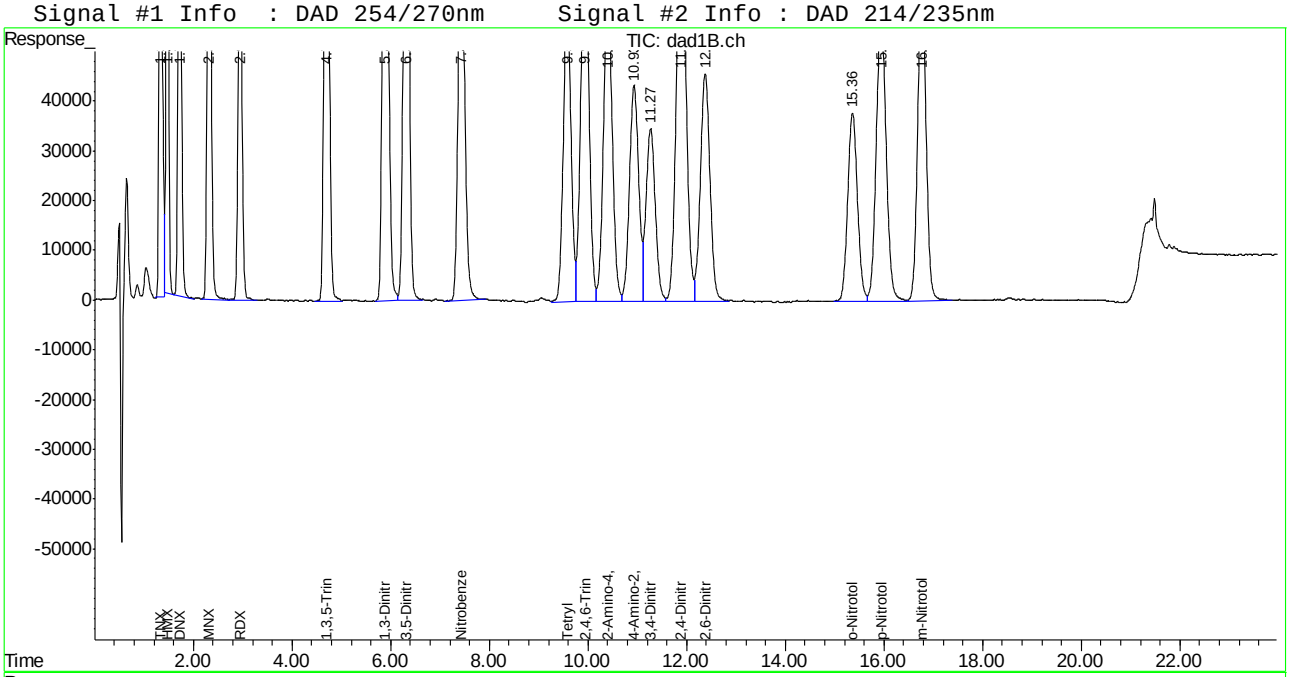
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

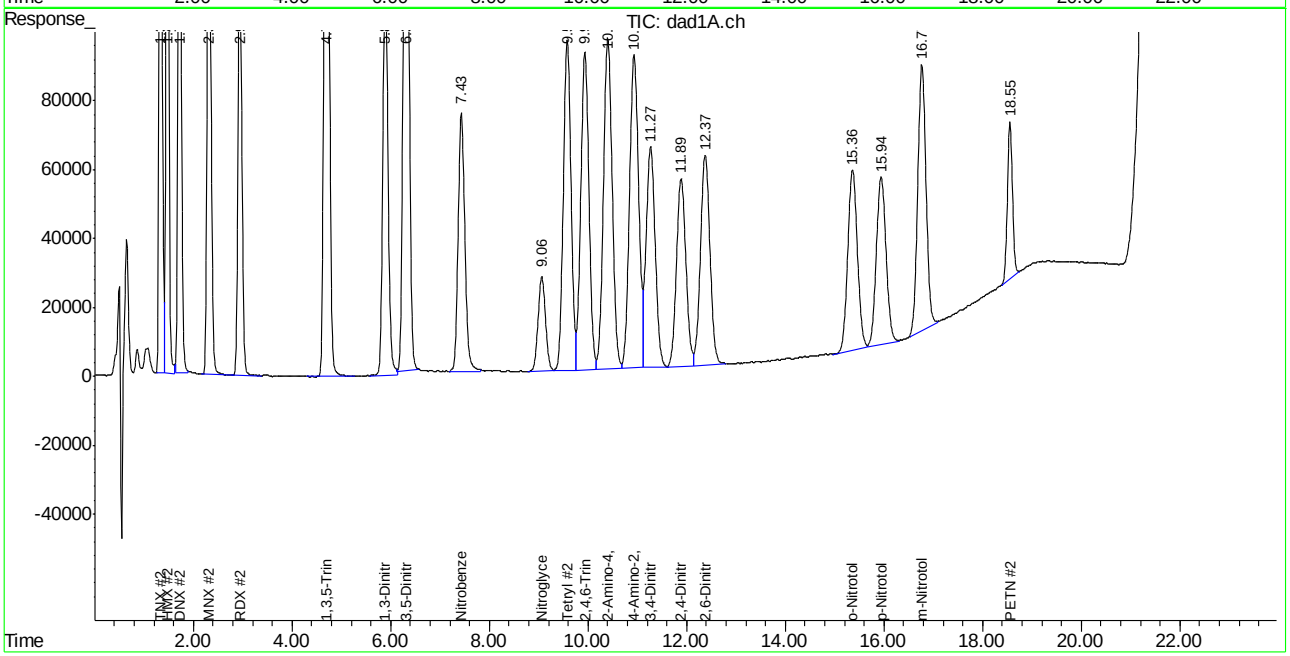
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:26 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

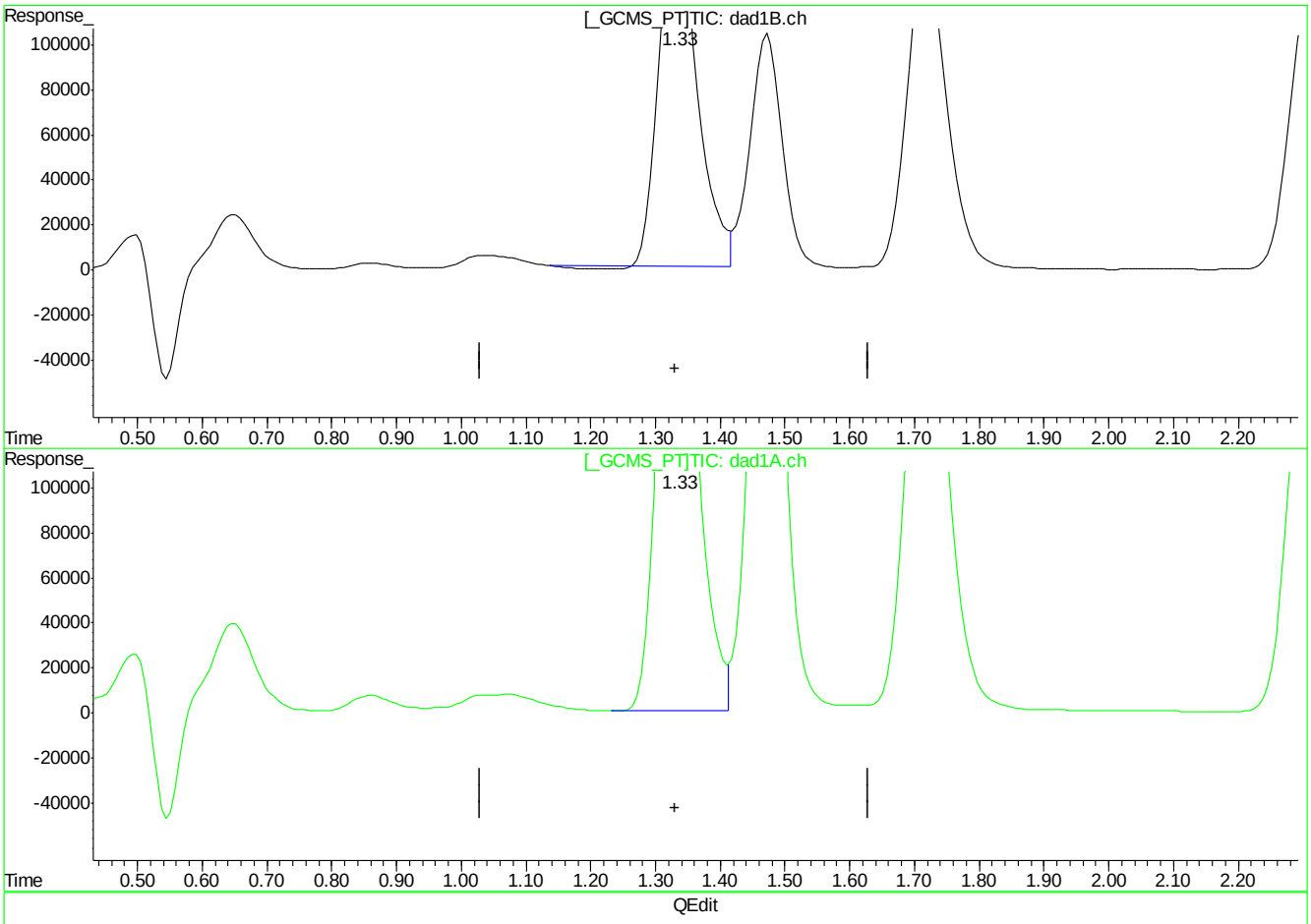
Sample Number: GPP2428-IC2428
Lab FileID: PP390452.D
Injection Time: 04/02/21 11:16
Method: SW846 8330A
Analyst approved: 04/05/21 09:06 James Boone
Supervisor approved: 04/05/21 10:17 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.33	Poor instrument integration
TNX		2	1.33	Poor instrument integration
DNX		2	1.72	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.31	Poor instrument integration
Nitrobenzene	98-95-3	2	7.43	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.77	Poor instrument integration
PETN	78-11-5	2	18.55	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(1) TNX

1.33min 2054.736ppb

response 6378492

(1) TNX #2

1.33min 2148.893ppb

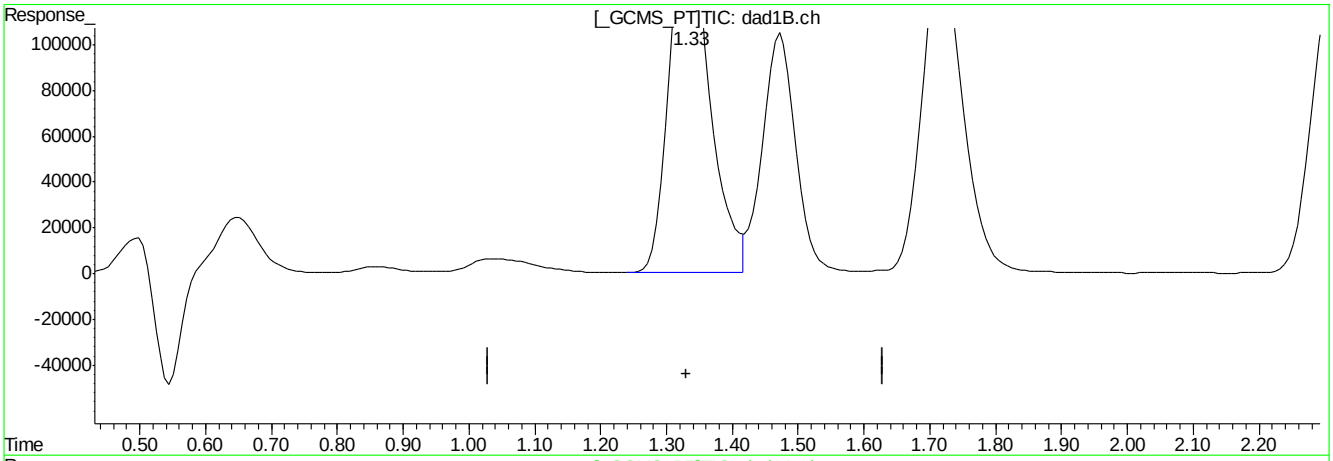
response 10010453

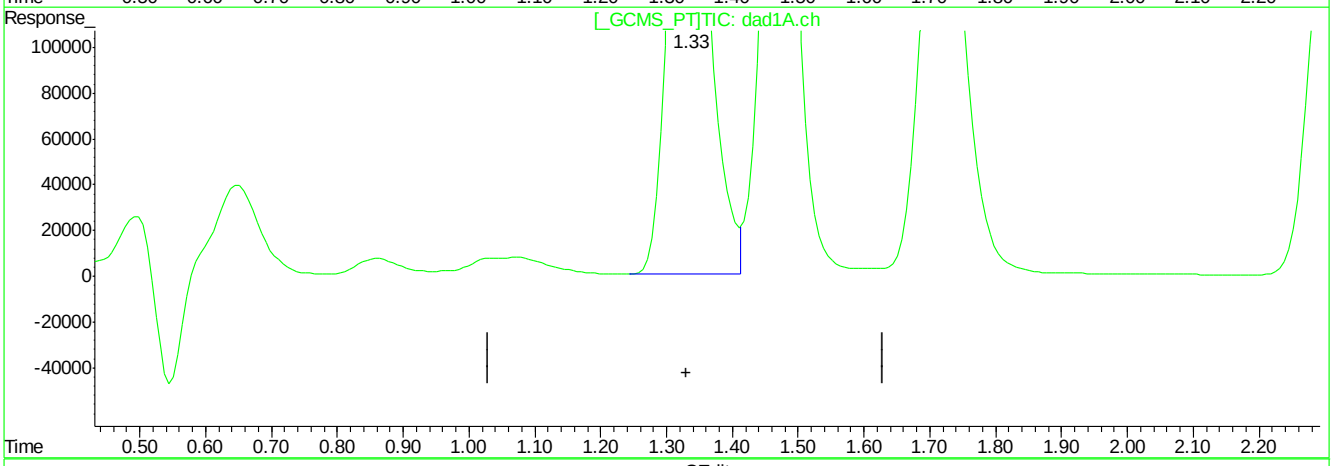
(+) = Expected Retention Time
PP390452.D GPP2428_040221PRI.M Mon Apr 05 08:25:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 2106.374ppb m

response 6538792

(1) TNX #2

1.33min 2169.352ppb m

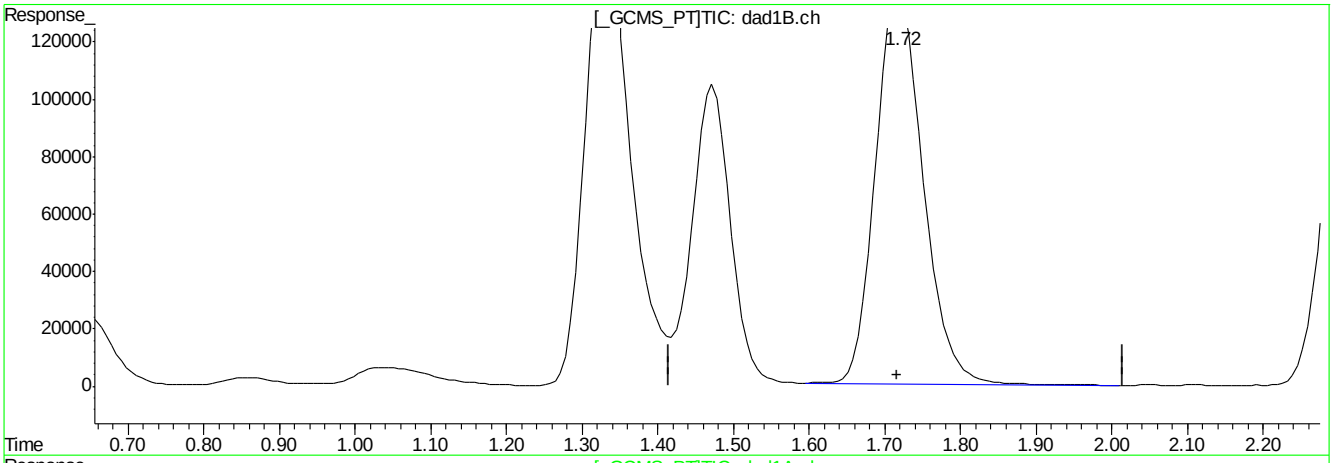
response 10105759

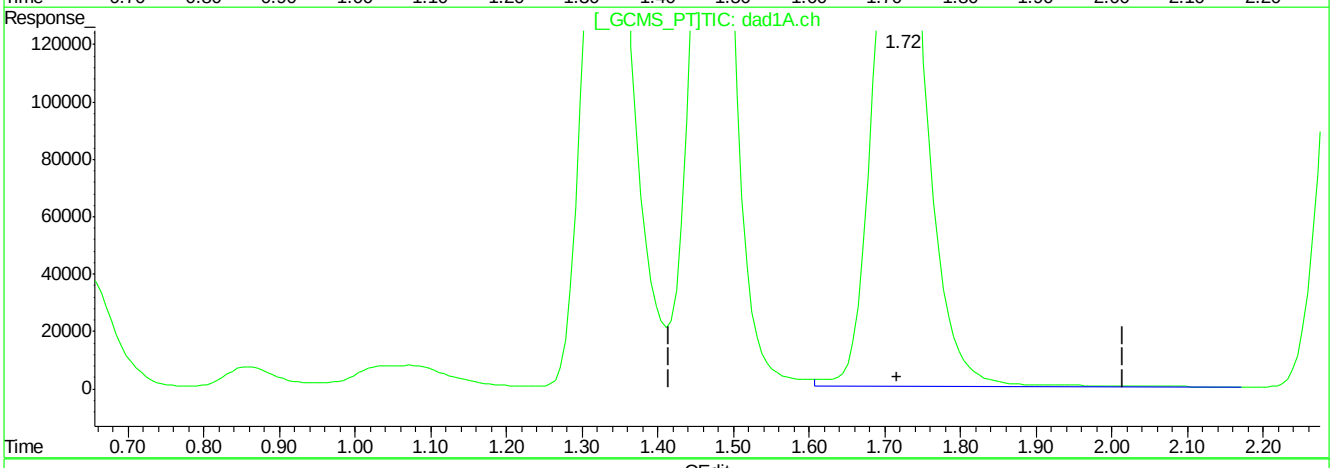
(+) = Expected Retention Time
PP390452.D GPP2428_040221PRI.M Mon Apr 05 08:25:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.72min 2325.474ppb

response 5938172

(3) DNX #2

1.72min 2603.038ppb

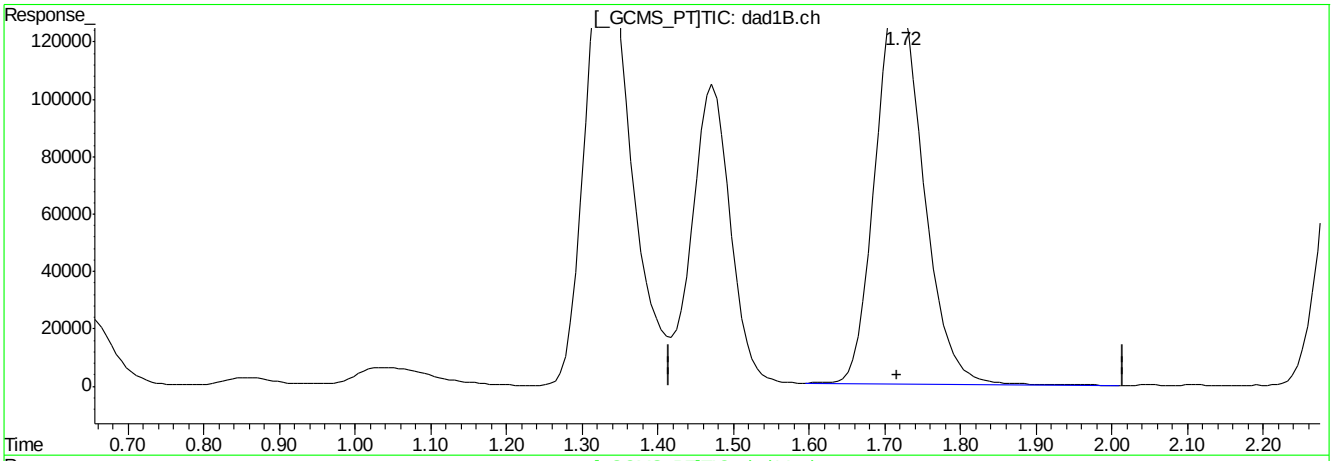
response 9723826

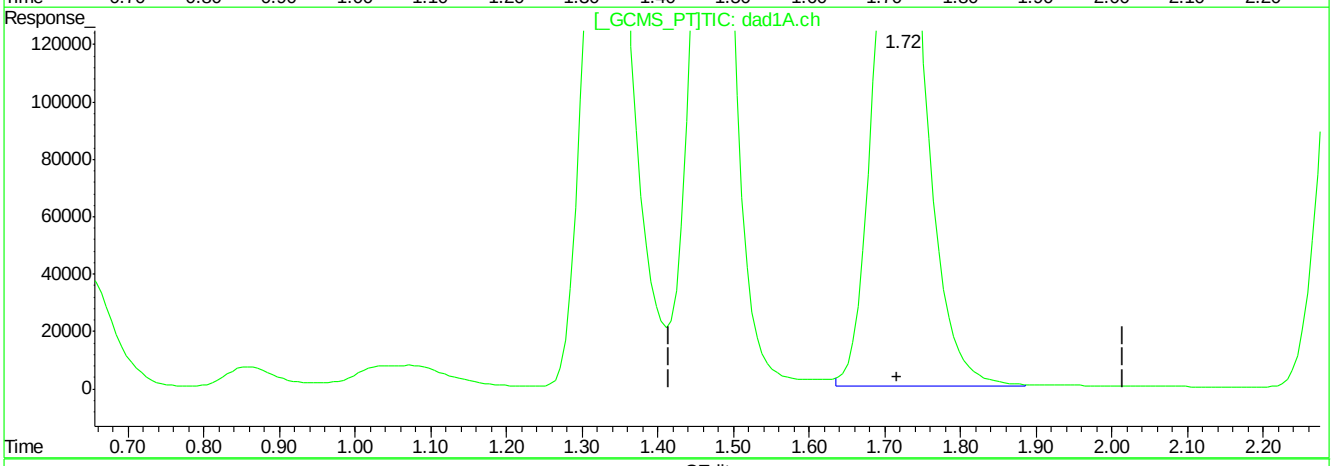
(+) = Expected Retention Time
PP390452.D GPP2428_040221PRI.M Mon Apr 05 08:25:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.72min 2325.474ppb

response 5938172

(3) DNX #2

1.72min 2569.857ppb m

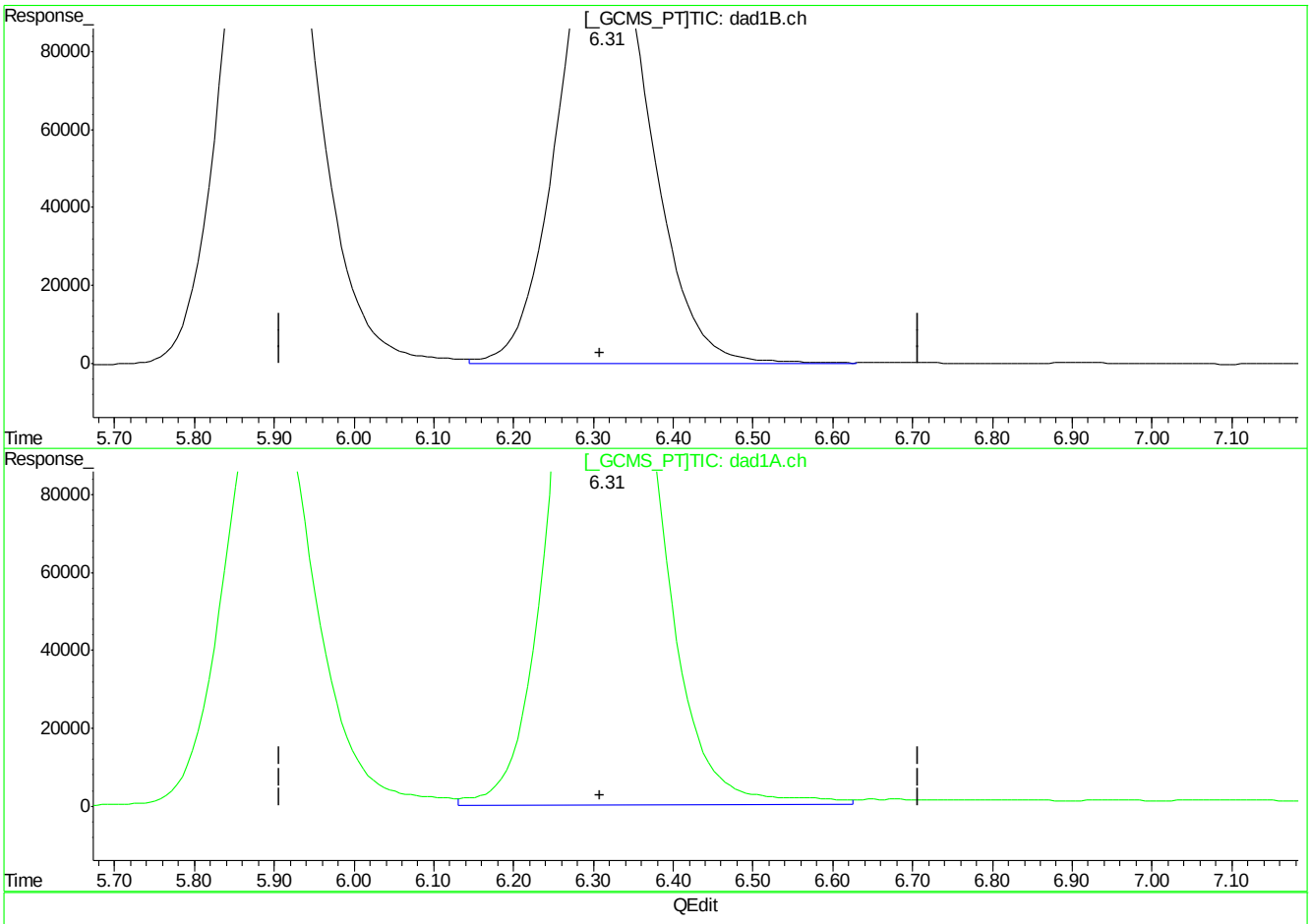
response 9599875

(+) = Expected Retention Time
PP390452.D GPP2428_040221PRI.M Mon Apr 05 08:25:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.31min 2278.710ppb

response 9172153

(8) 3,5-Dinitroaniline #2

6.31min 2197.440ppb

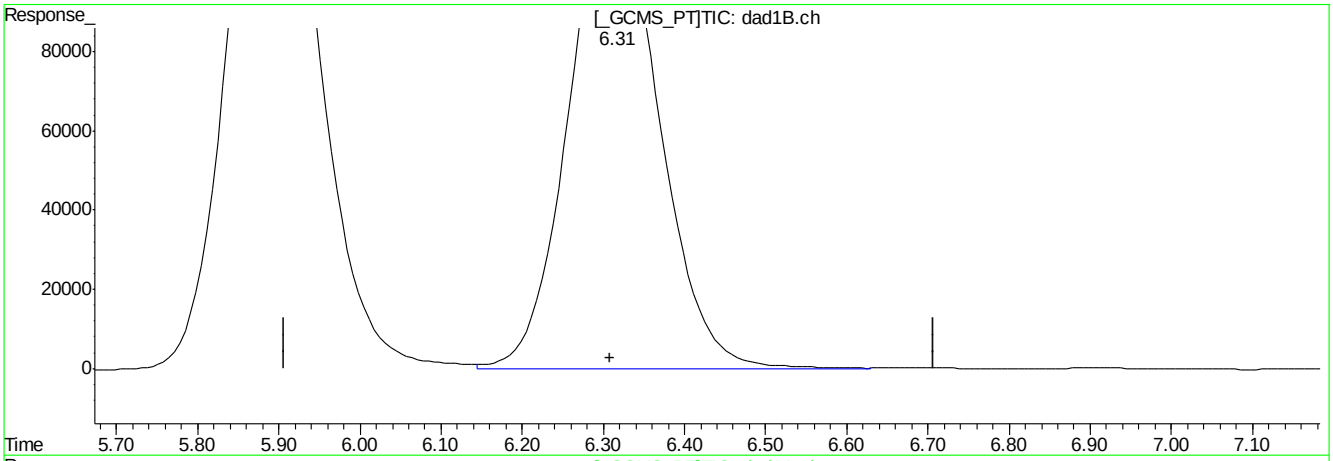
response 16073272

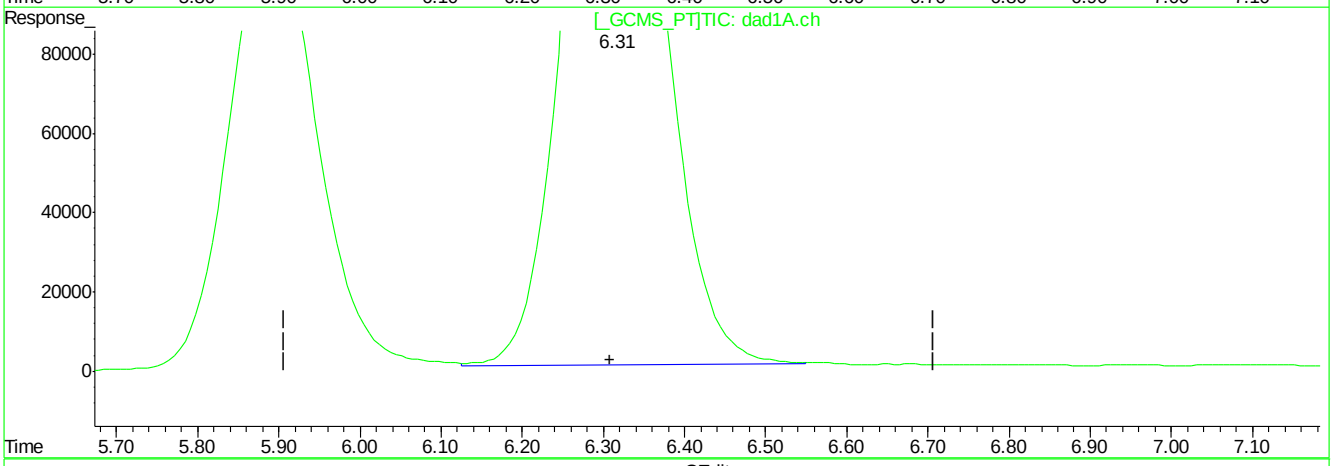
(+) = Expected Retention Time
PP390452.D GPP2428_040221PRI.M Mon Apr 05 08:25:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.31min 2278.710ppb

response 9172153

(8) 3,5-Dinitroaniline #2

6.31min 2145.455ppb m

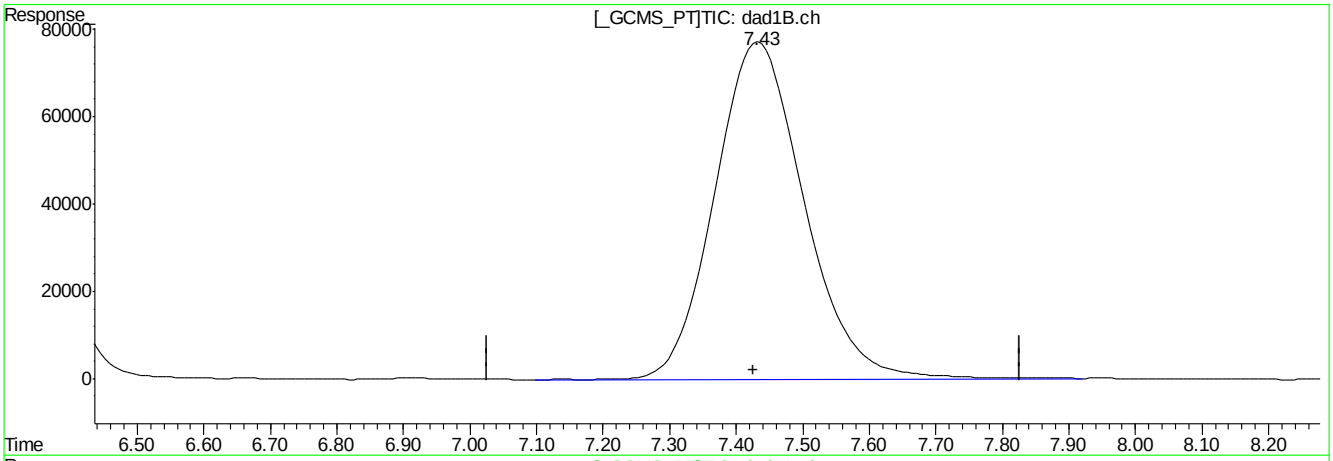
response 15693022

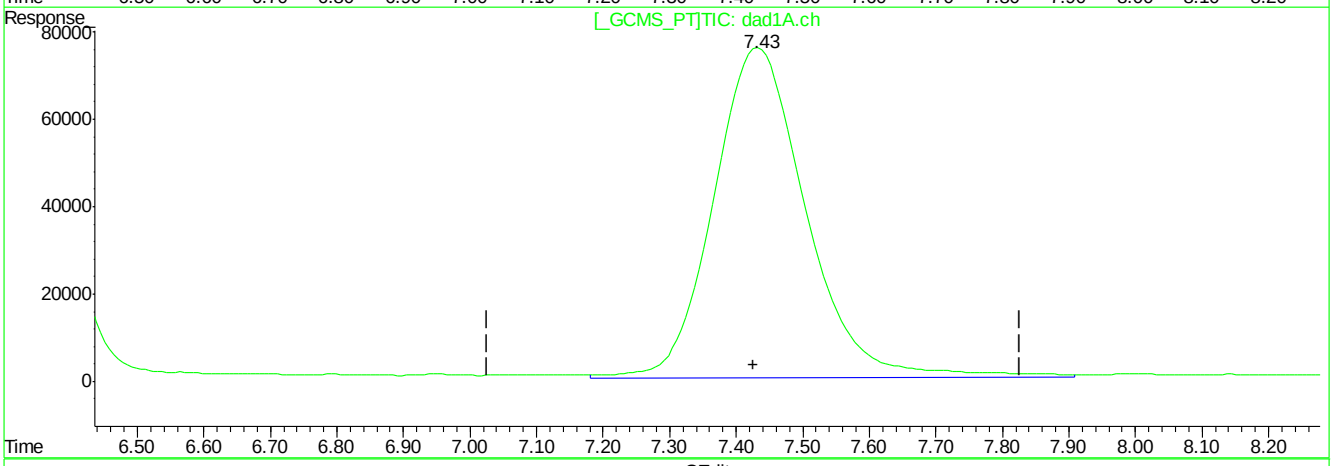
(+) = Expected Retention Time
PP390452.D GPP2428_040221PRI.M Mon Apr 05 08:26:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.43min 2399.150ppb

response 7222650

(9) Nitrobenzene #2

7.43min 2354.715ppb

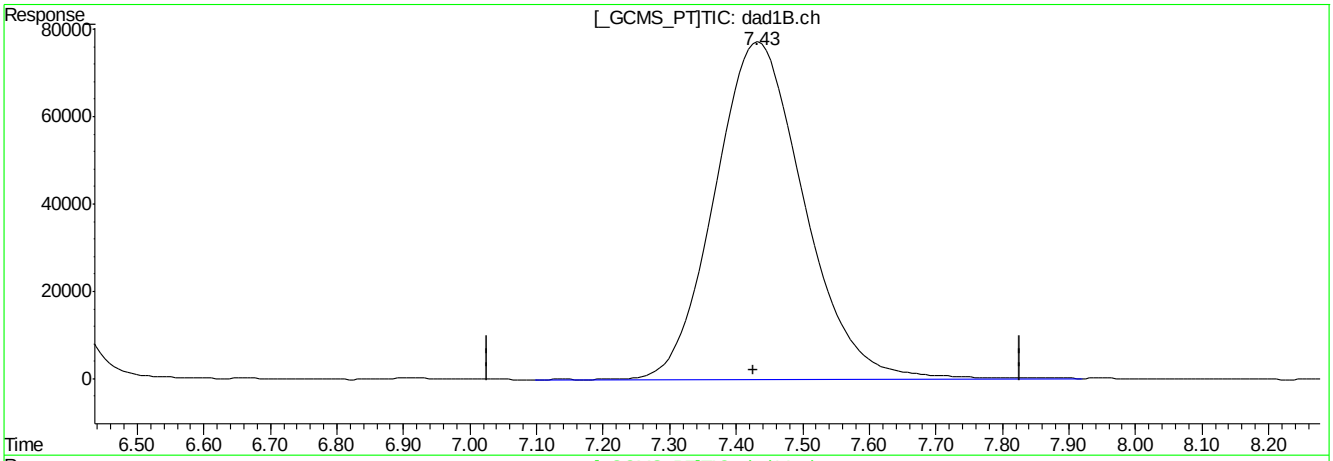
response 7363806

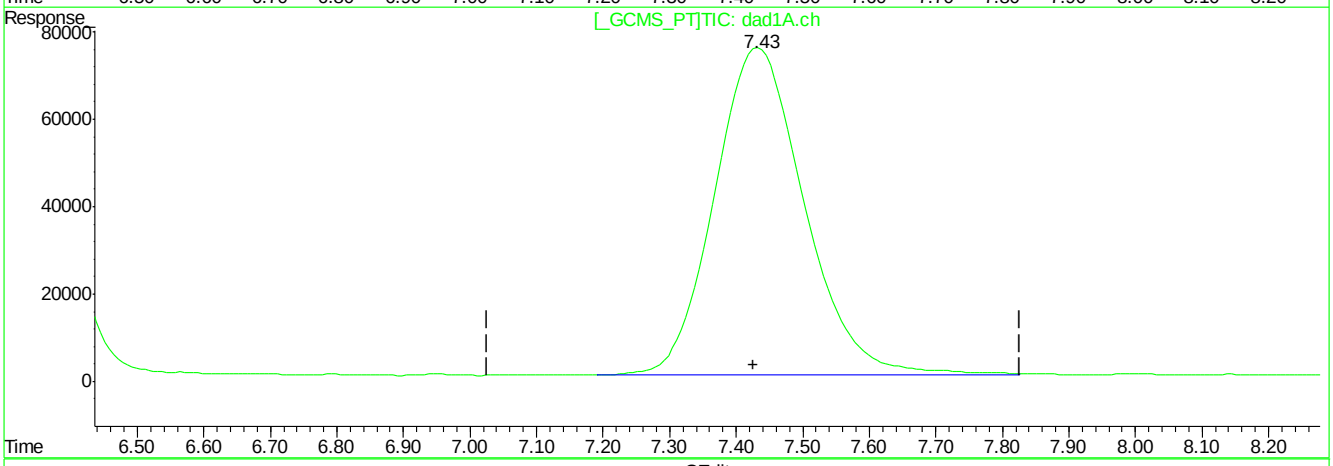
(+) = Expected Retention Time
PP390452.D GPP2428_040221PRI.M Mon Apr 05 08:26:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.43min 2399.150ppb

response 7222650

(9) Nitrobenzene #2

7.43min 2252.941ppb m

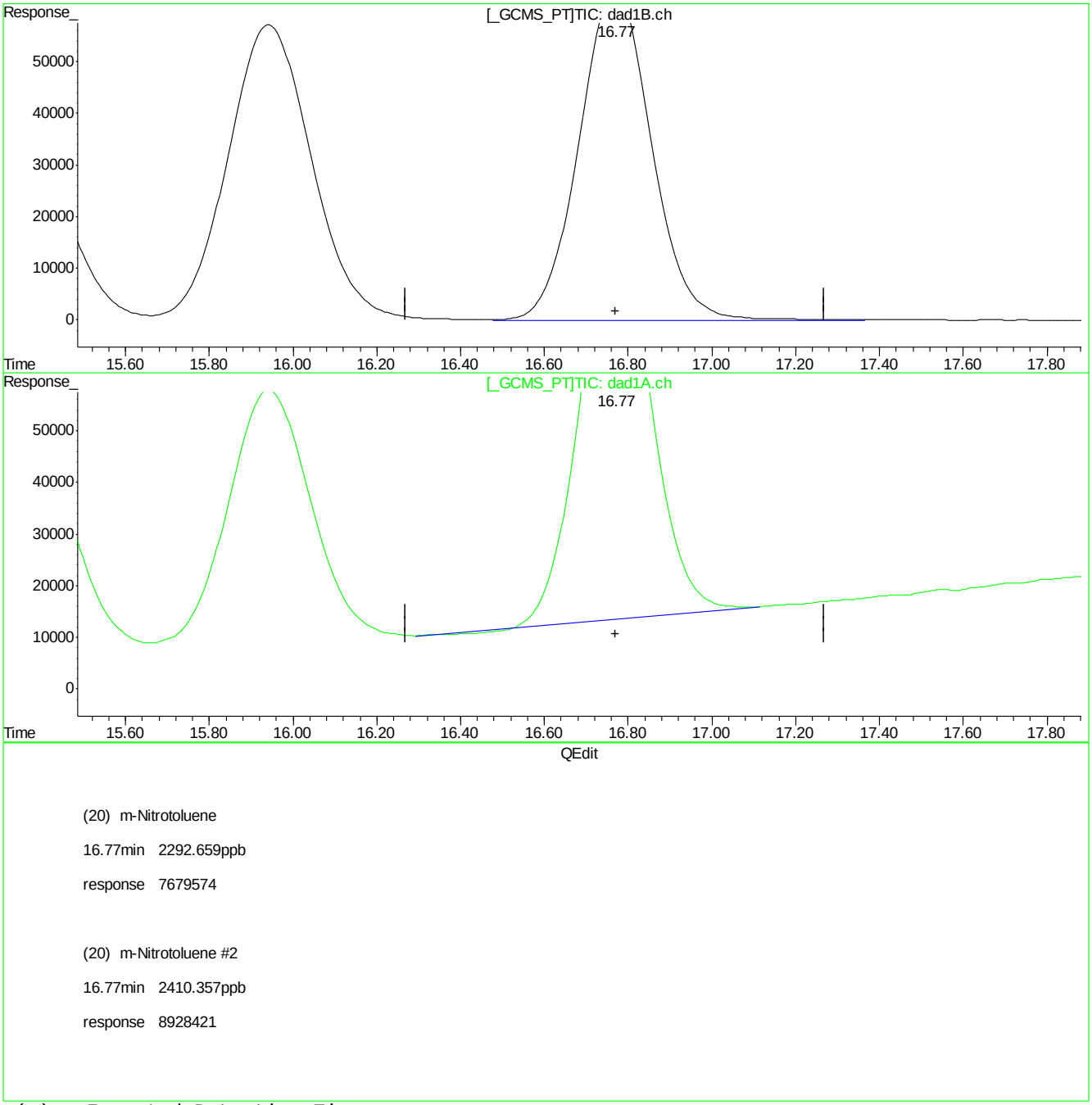
response 7045533

(+) = Expected Retention Time
PP390452.D GPP2428_040221PRI.M Mon Apr 05 08:26:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.77min 2292.659ppb

response 7679574

(20) m-Nitrotoluene #2

16.77min 2410.357ppb

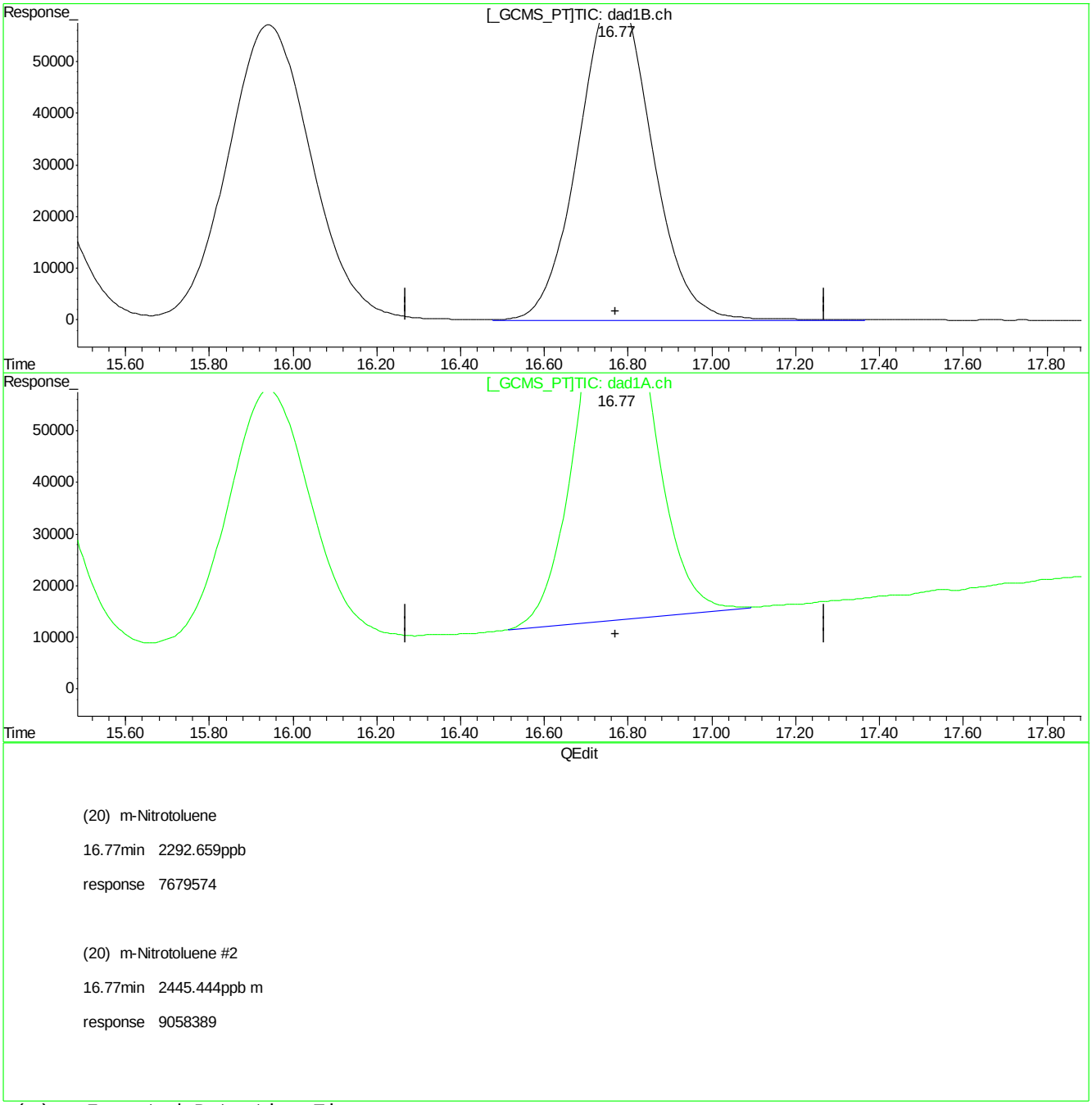
response 8928421

(+) = Expected Retention Time
PP390452.D GPP2428_040221PRI.M Mon Apr 05 08:26:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.77min 2292.659ppb

response 7679574

(20) m-Nitrotoluene #2

16.77min 2445.444ppb m

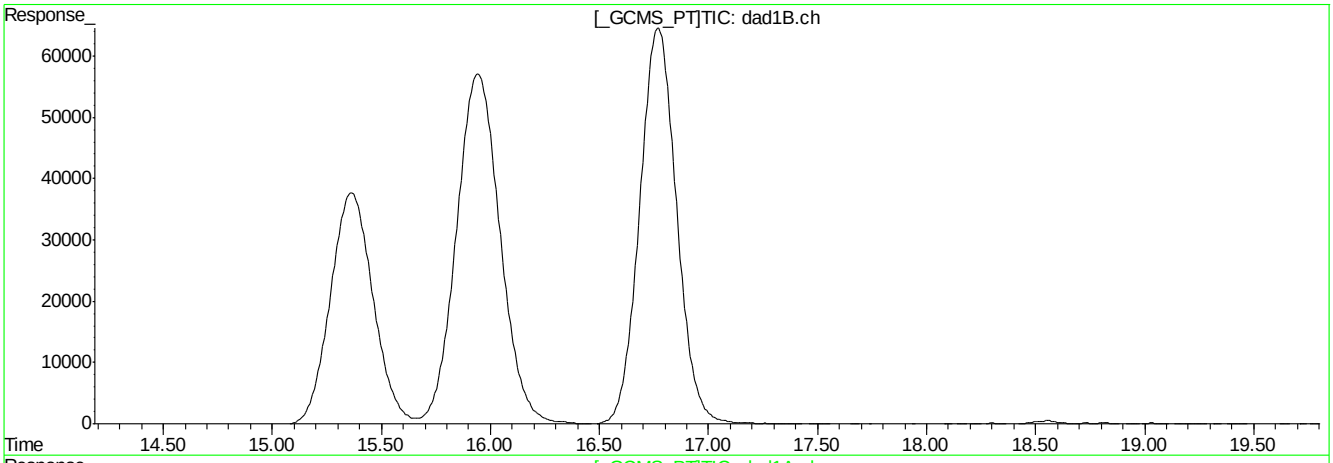
response 9058389

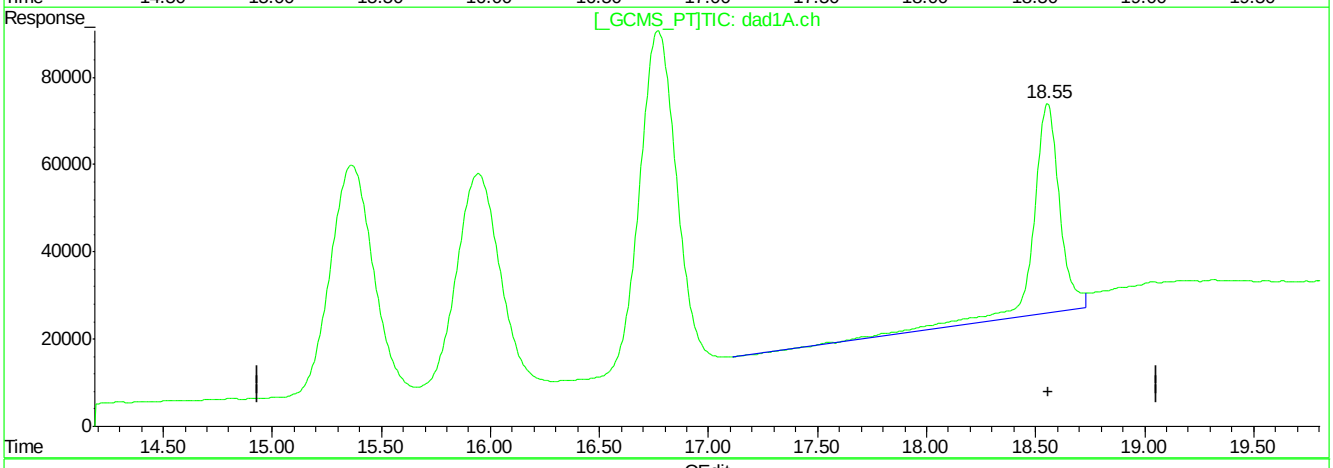
(+) = Expected Retention Time
PP390452.D GPP2428_040221PRI.M Mon Apr 05 08:26:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.56min 3185.370ppb

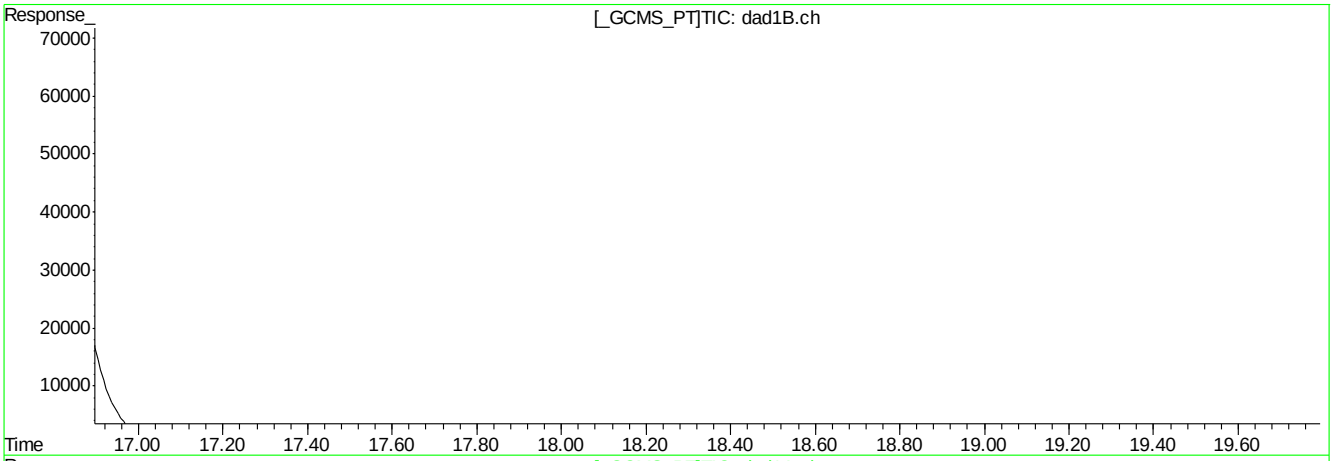
response 4111335

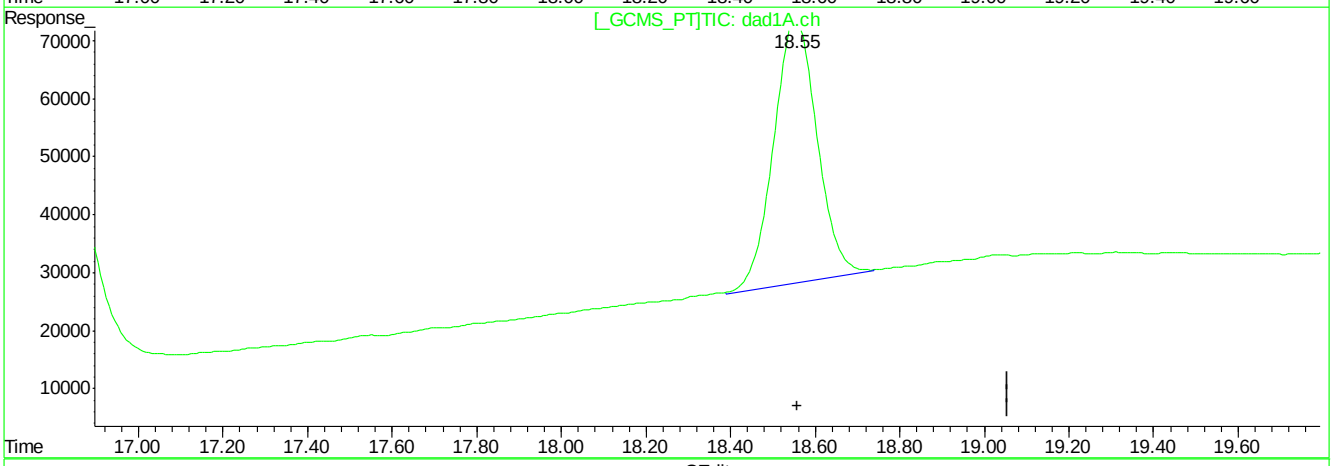
(+) = Expected Retention Time
PP390452.D GPP2428_040221PRI.M Mon Apr 05 08:26:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390452.D\dad1A.ch
Acq On : 02-Apr-2021, 11:16:20 Operator: jamesb
Sample : ic2428-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.55min 2530.443ppb m

response 3266026

(+) = Expected Retention Time
PP390452.D GPP2428_040221PRI.M Mon Apr 05 08:26:59 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/05/21 10:17

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1A.ch
Acq On : 02-Apr-2021, 11:47:18 Operator: jamesb
Sample : ic2428-5000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 05 08:23:33 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.28	11.28	9200732	16828096	4566.039	5213.841
	Spiked Amount 500.000	Range 70 - 136		Recovery =		913.21%#	1042.77%#
	Target Compounds						
1)	TNX	1.33	1.33	13085682	19939794	4215.357m	4280.375m
2)	HMX	1.47	1.47	7303822	19971896	4686.702	4698.913
3)	DNX	1.72	1.72	11885537	18774217	4654.549	5025.800
4)	MNX	2.32	2.32	13192825	20629775	4712.428	4961.070
5)	RDX	2.94	2.94	8523416	13836728	4476.439	4514.435
6)	1,3,5-Trinitrobe	4.70	4.70	18557617	36287648	4497.628	4669.975
7)	1,3-Dinitrobenze	5.89	5.89	24513817	17130584	4551.619	4782.296
8)	3,5-Dinitroanili	6.31	6.31	18478258	31927037	4590.699	4364.871
9)	Nitrobenzene	7.43	7.43	14447078	14376662	4798.890	4597.206
10)	Nitroglycerin	0.00	9.06	0	5774622	N.D. d	4751.188
11)	Tetryl	9.58	9.58	12992273	20949722	5507.621	5145.785
12)	2,4,6-Trinitroto	9.94	9.94	17299118	21349549	4400.914	4860.734
13)	2-Amino-4,6-Dini	10.40	10.40	15353288	23833616	4486.273	5244.078
14)	4-Amino-2,6-Dini	10.94	10.94	11248522	23543692	4584.330	5360.177
16)	2,4-Dinitrotolue	11.89	11.89	21842559	14777690	4543.757	4925.041
17)	2,6-Dinitrotolue	12.38	12.38	12420018	16590658	4711.679	4681.793
18)	o-Nitrotoluene	15.37	15.37	10403893	14280330	4831.754	4939.487
19)	p-Nitrotoluene	15.95	15.95	16140577	13457844	4719.211	4856.645
20)	m-Nitrotoluene	16.77	16.77	15468571	18137705	4617.984	4896.537
21)	PETN	0.00	18.56	0	6456051	N.D. d	5002.003m

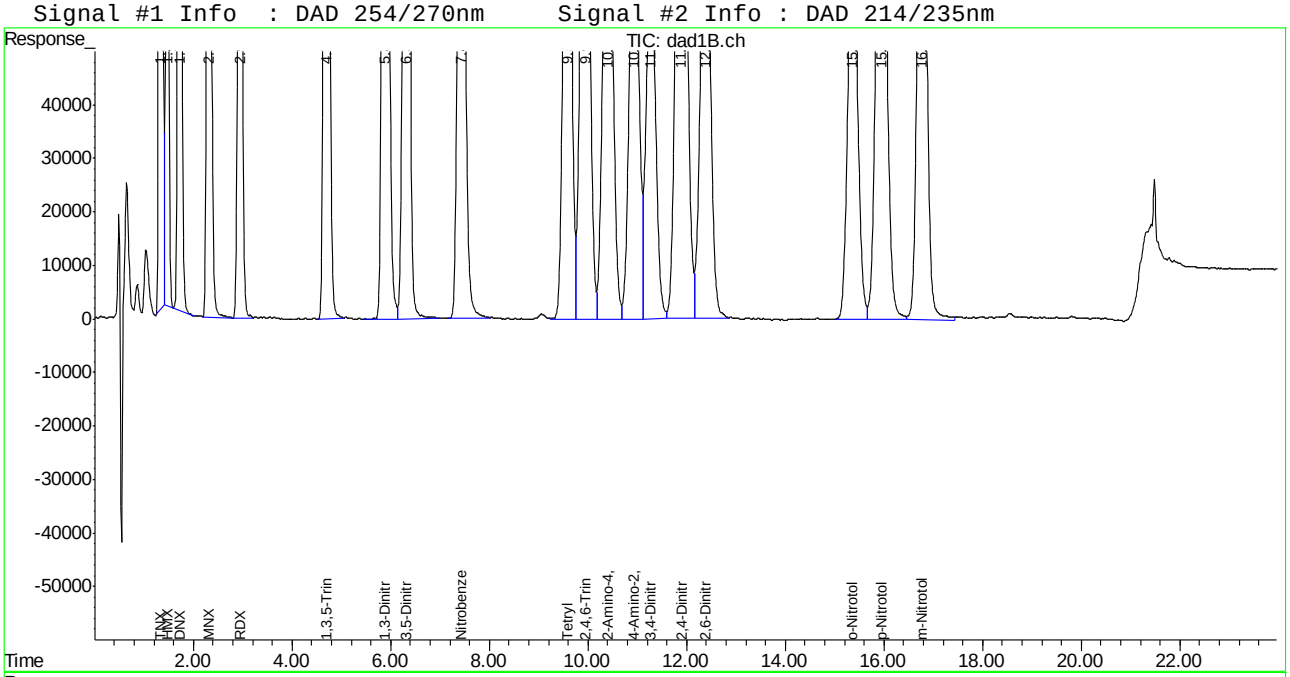
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP390453.D GPP2428_040221PRI.M Mon Apr 05 09:04:46 2021 Page 1

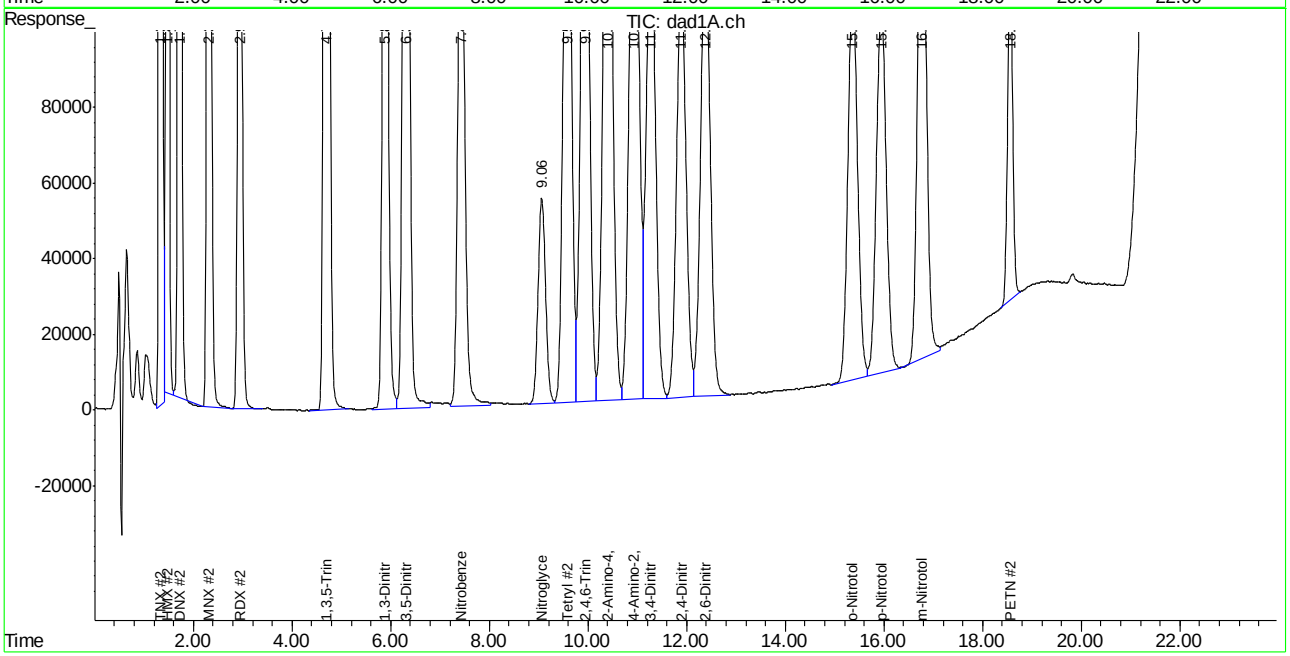
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1A.ch
Acq On : 02-Apr-2021, 11:47:18 Operator: jamesb
Sample : ic2428-5000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:24 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

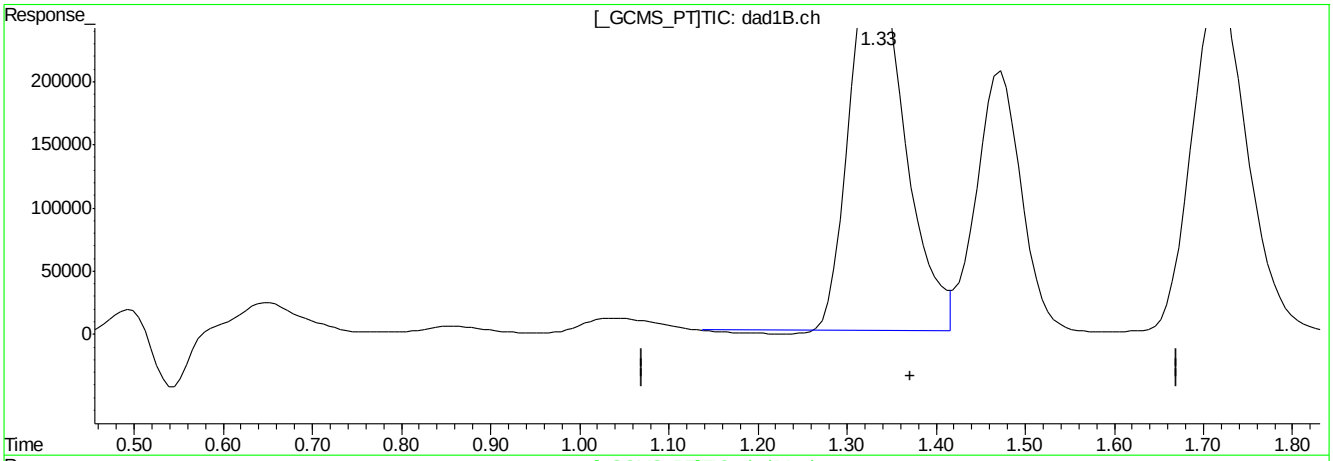
Sample Number: GPP2428-IC2428
Lab FileID: PP390453.D
Injection Time: 04/02/21 11:47
Method: SW846 8330A
Analyst approved: 04/05/21 09:06 James Boone
Supervisor approved: 04/05/21 10:17 Naresh Jiawan

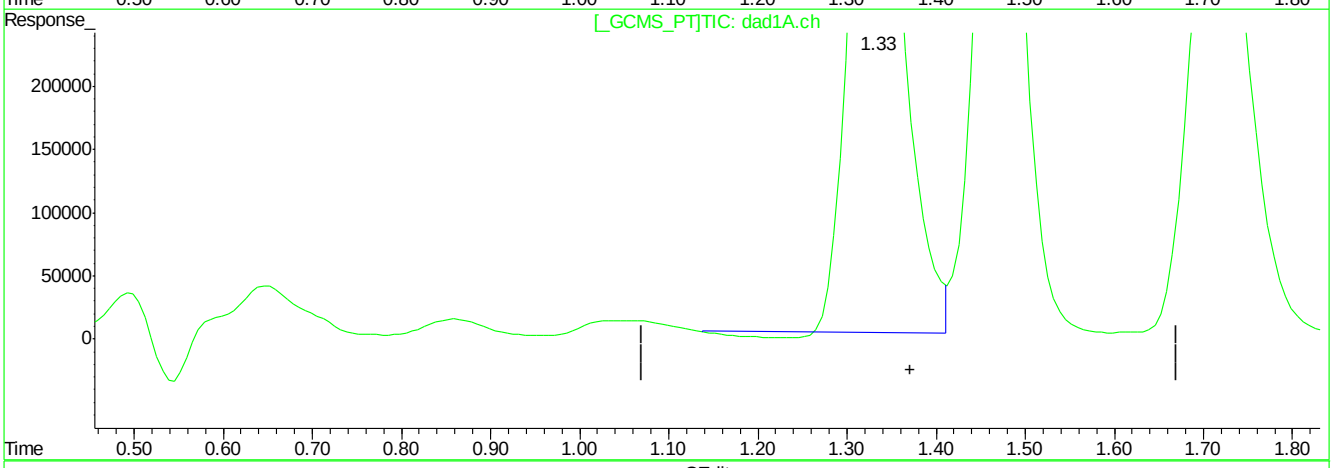
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.33	Poor instrument integration
TNX		2	1.33	Poor instrument integration
PETN	78-11-5	2	18.56	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1A.ch
Acq On : 02-Apr-2021, 11:47:18 Operator: jamesb
Sample : ic2428-5000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:20 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Apr 01 09:43:11 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 4125.288ppb

response 12806082

(1) TNX #2

1.33min 4169.187ppb

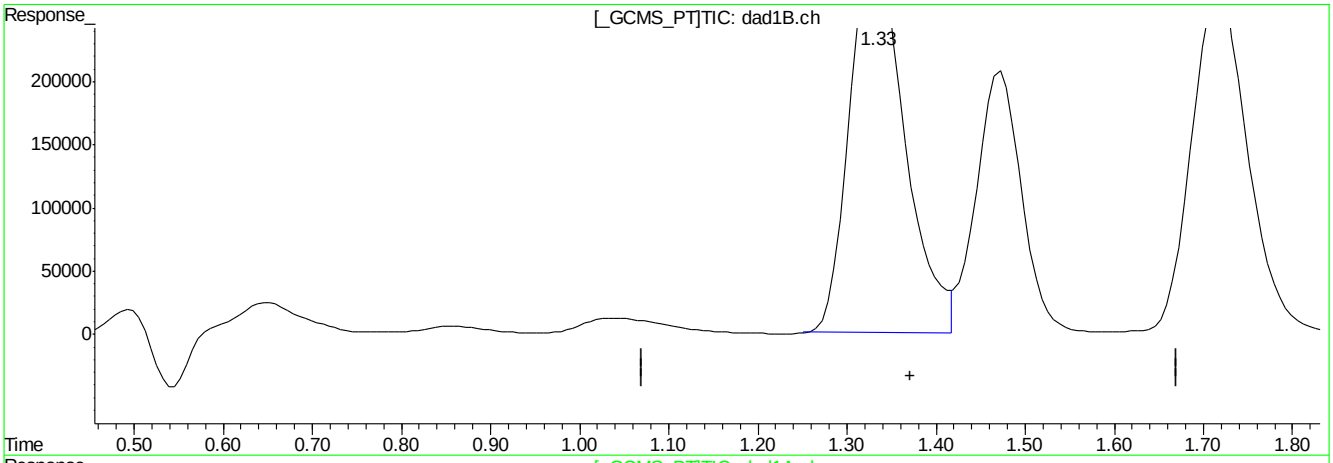
response 19421836

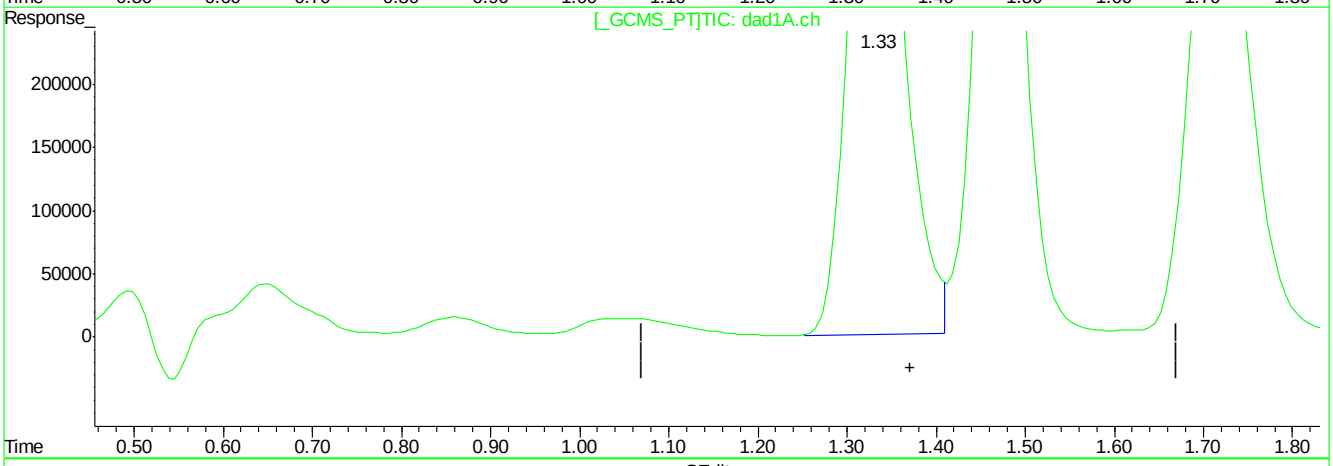
(+) = Expected Retention Time
PP390453.D GPP2428_040221PRI.M Mon Apr 05 08:21:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1A.ch
Acq On : 02-Apr-2021, 11:47:18 Operator: jamesb
Sample : ic2428-5000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:20 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Apr 01 09:43:11 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 4213.849ppb m

response 13081002

(1) TNX #2

1.33min 4265.892ppb m

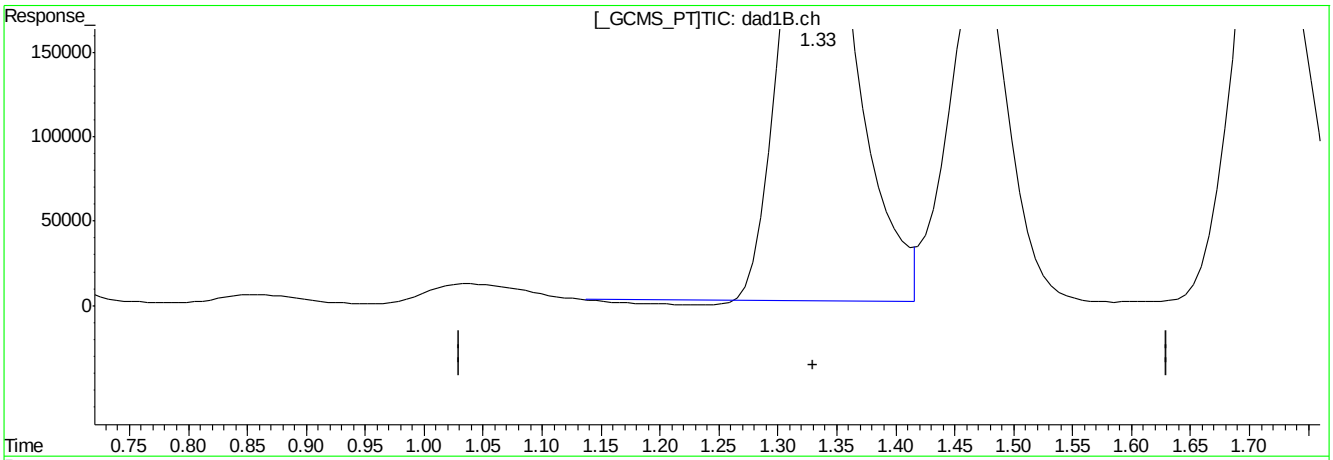
response 19872328

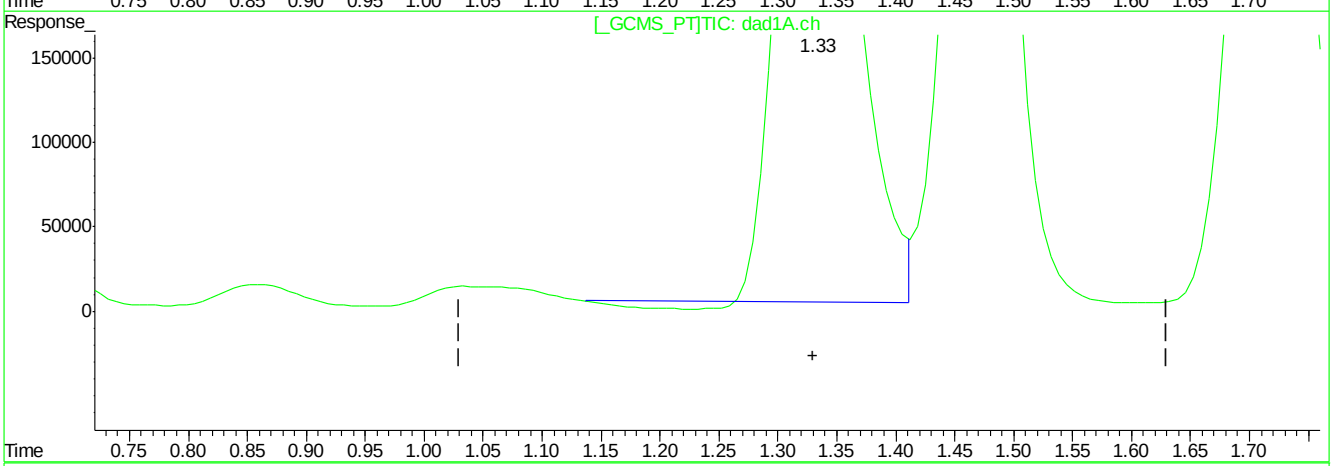
(+) = Expected Retention Time
PP390453.D GPP2428_040221PRI.M Mon Apr 05 08:21:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1A.ch
Acq On : 02-Apr-2021, 11:47:18 Operator: jamesb
Sample : ic2428-5000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 4125.288ppb

response 12806082

(1) TNX #2

1.33min 4169.187ppb

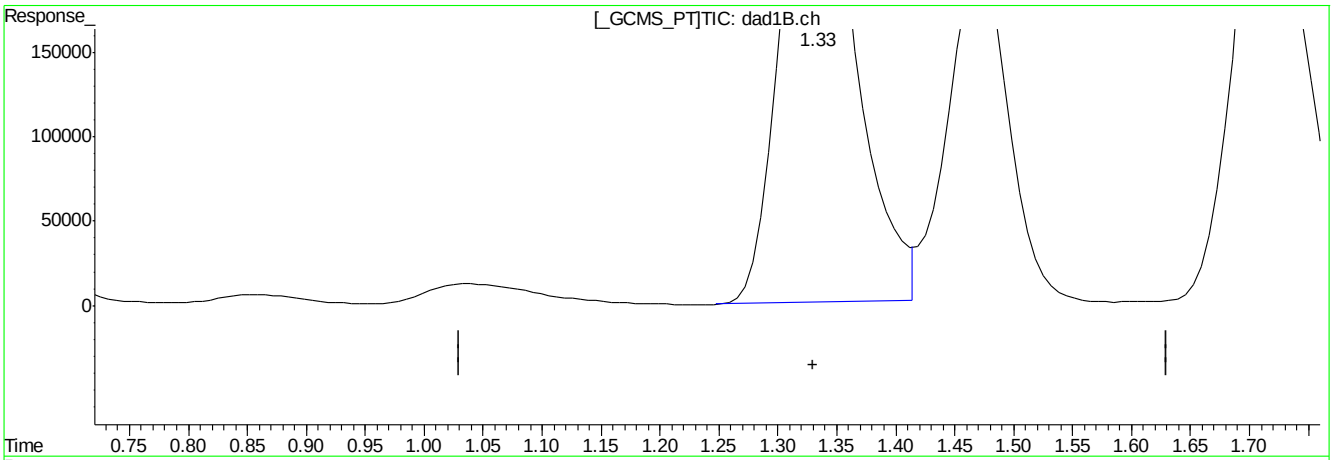
response 19421836

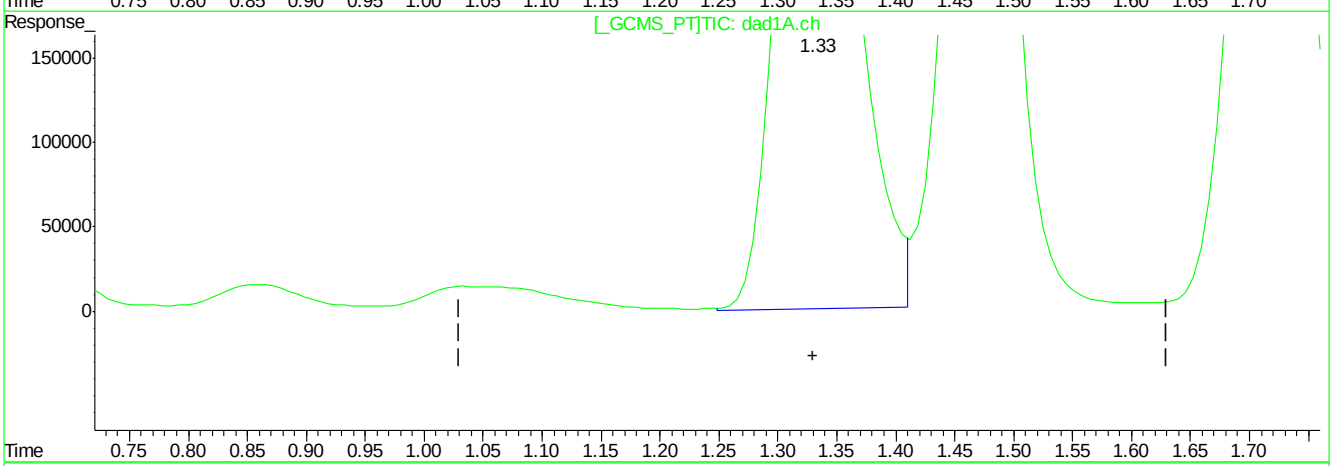
(+) = Expected Retention Time
PP390453.D GPP2428_040221PRI.M Mon Apr 05 08:23:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1A.ch
Acq On : 02-Apr-2021, 11:47:18 Operator: jamesb
Sample : ic2428-5000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.33min 4215.357ppb m

response 13085682

(1) TNX #2

1.33min 4280.375ppb m

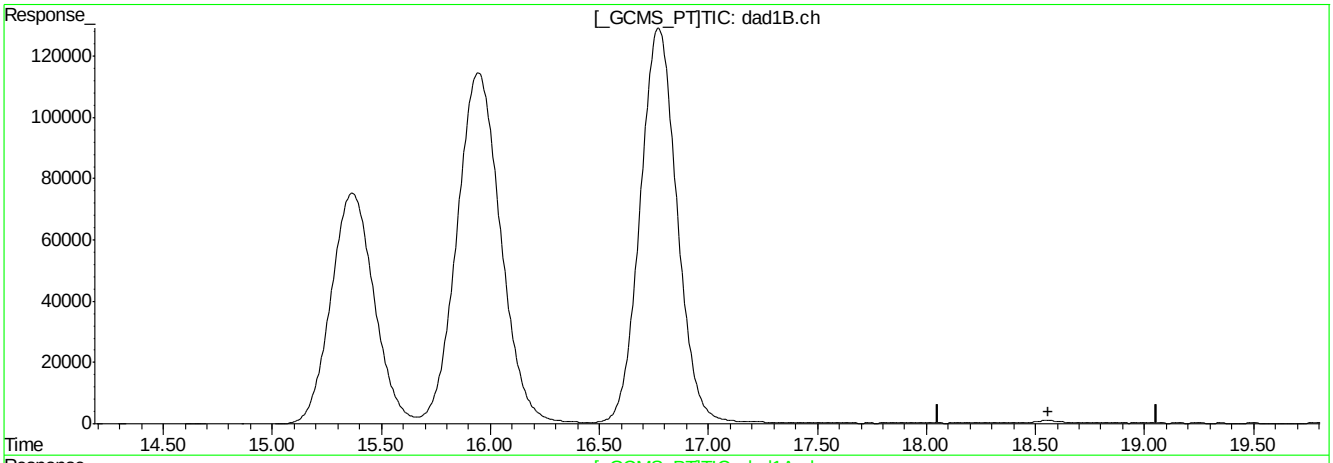
response 19939794

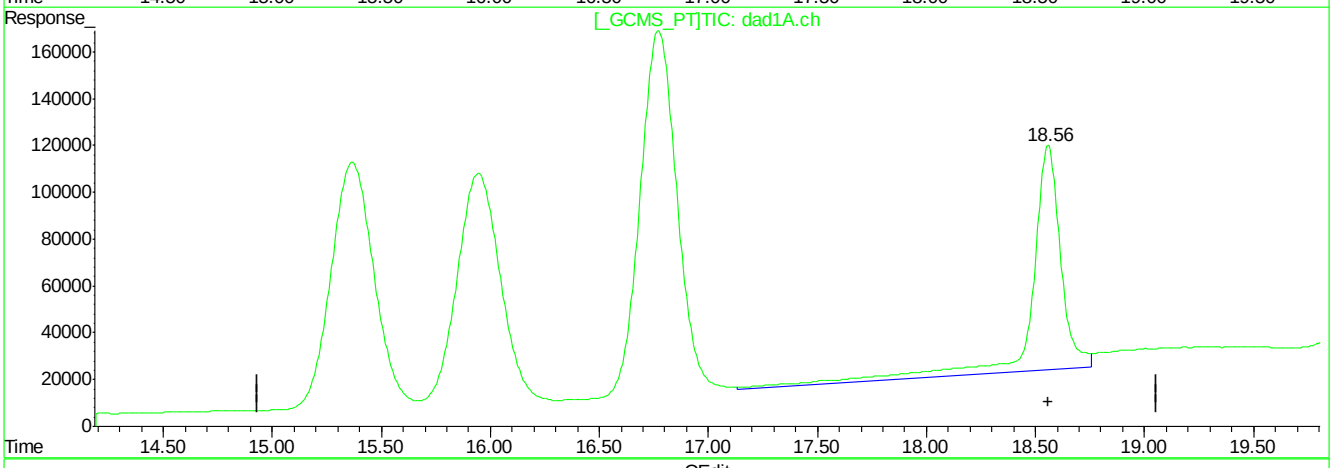
(+) = Expected Retention Time
PP390453.D GPP2428_040221PRI.M Mon Apr 05 08:23:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1A.ch
Acq On : 02-Apr-2021, 11:47:18 Operator: jamesb
Sample : ic2428-5000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.56min 6982.806ppb

response 9012660

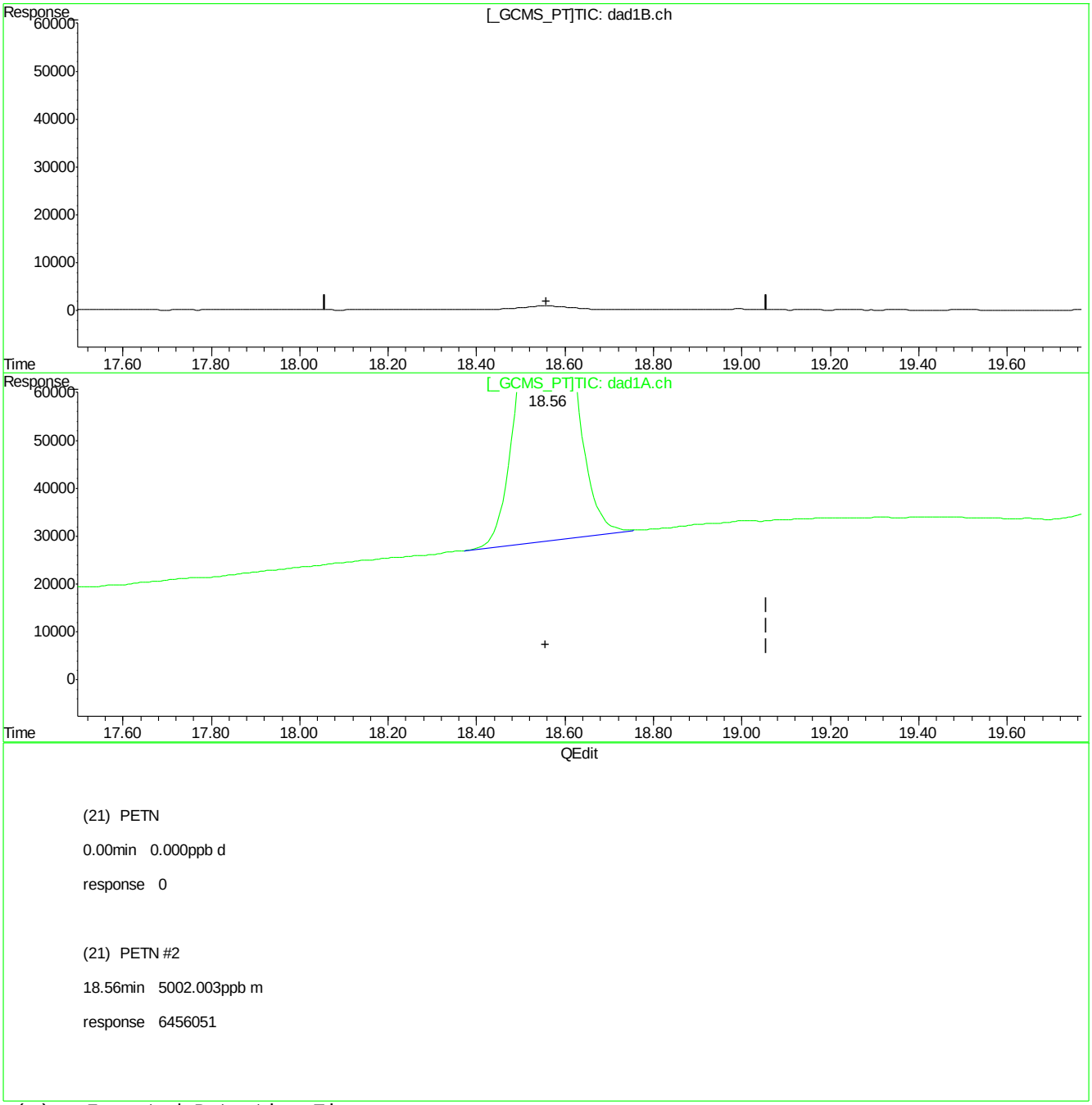
(+) = Expected Retention Time
PP390453.D GPP2428_040221PRI.M Mon Apr 05 08:24:53 2021

PP390453.D edits: PETN

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390453.D\dad1A.ch
Acq On : 02-Apr-2021, 11:47:18 Operator: jamesb
Sample : ic2428-5000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 8:23 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:23:13 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
PP390453.D GPP2428_040221PRI.M Mon Apr 05 08:25:01 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/05/21 10:17

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 05 09:01:00 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:59:15 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	1.33	1.33	2729755	4286485	1053.490	1048.387
2)	HMX	1.48	1.48	1588379	4541847	1047.321	1038.791
3)	DNX	1.72	1.72	2596862	4094581	1016.793m	1083.242m
4)	MNX	2.32	2.32	3023030	4743398	1055.416	1068.423
5)	RDX	2.95	2.95	1942013	3153711	1043.832	1068.724
6)	1,3,5-Trinitrobe	4.71	4.71	4188732	8239955	1057.615	1070.628
7)	1,3-Dinitrobenze	5.90	5.90	5518193	3896222	1048.584	1069.153
8)	3,5-Dinitroanili	6.32	6.32	4202738	7365301	1036.111	1090.476
9)	Nitrobenzene	7.44	7.44	3203824	3149598	1017.201	1100.426
10)	Nitroglycerin	0.00	9.08	0	1286919	N.D.	1112.130m#
11)	Tetryl	9.60	9.60	3246428	5195787	1132.369m	1116.838
12)	2,4,6-Trinitroto	9.95	9.95	3909167	4795047	1037.196	1030.927
13)	2-Amino-4,6-Dini	10.43	10.43	3537035	5466154	1052.913	1075.978
14)	4-Amino-2,6-Dini	10.96	10.96	2430585	5138485	1079.022m	1078.864m
16)	2,4-Dinitrotolue	11.91	11.91	4916391	3368767	1039.882	1082.557
17)	2,6-Dinitrotolue	12.40	12.40	2769137	3786270	1013.880	1066.442
18)	o-Nitrotoluene	15.39	15.39	2365066	3160434	1039.296	1079.356
19)	p-Nitrotoluene	15.97	15.97	3684087	2962482	1061.193	1105.379
20)	m-Nitrotoluene	16.79	16.78	3446402	4105032	1054.692	1131.455m
21)	PETN	0.00	18.57	0	1437756	N.D.	1082.560m#

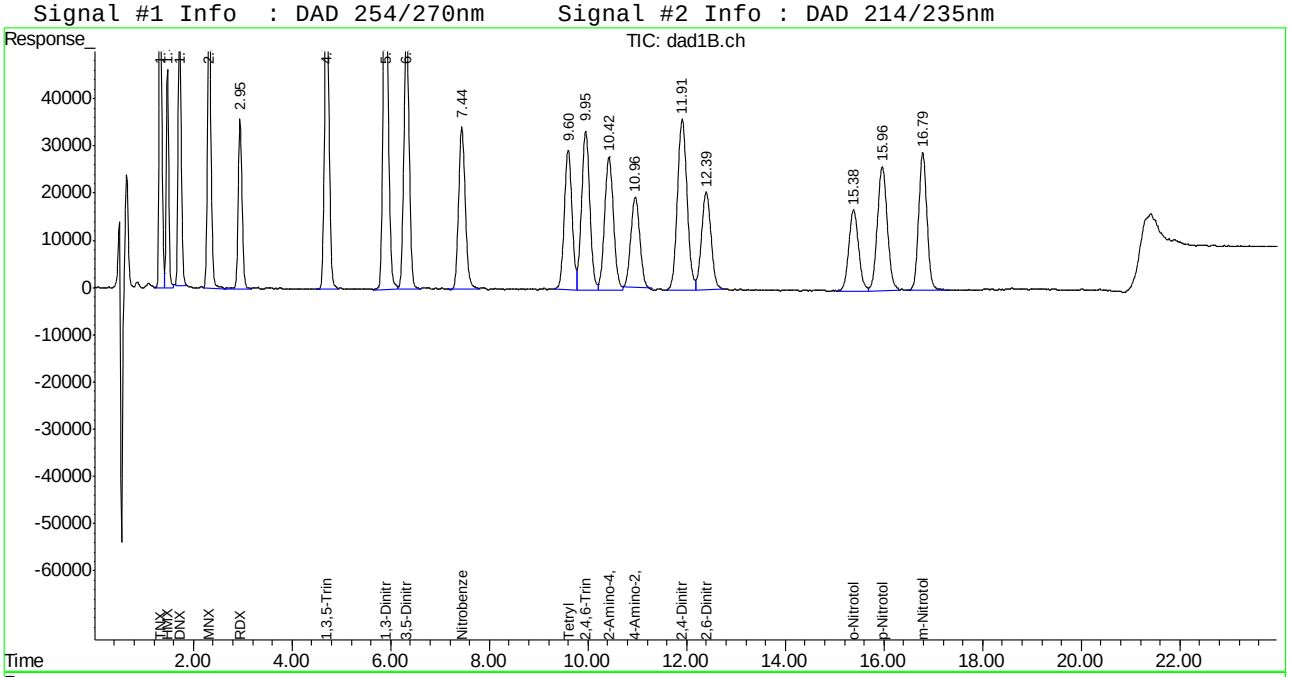
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

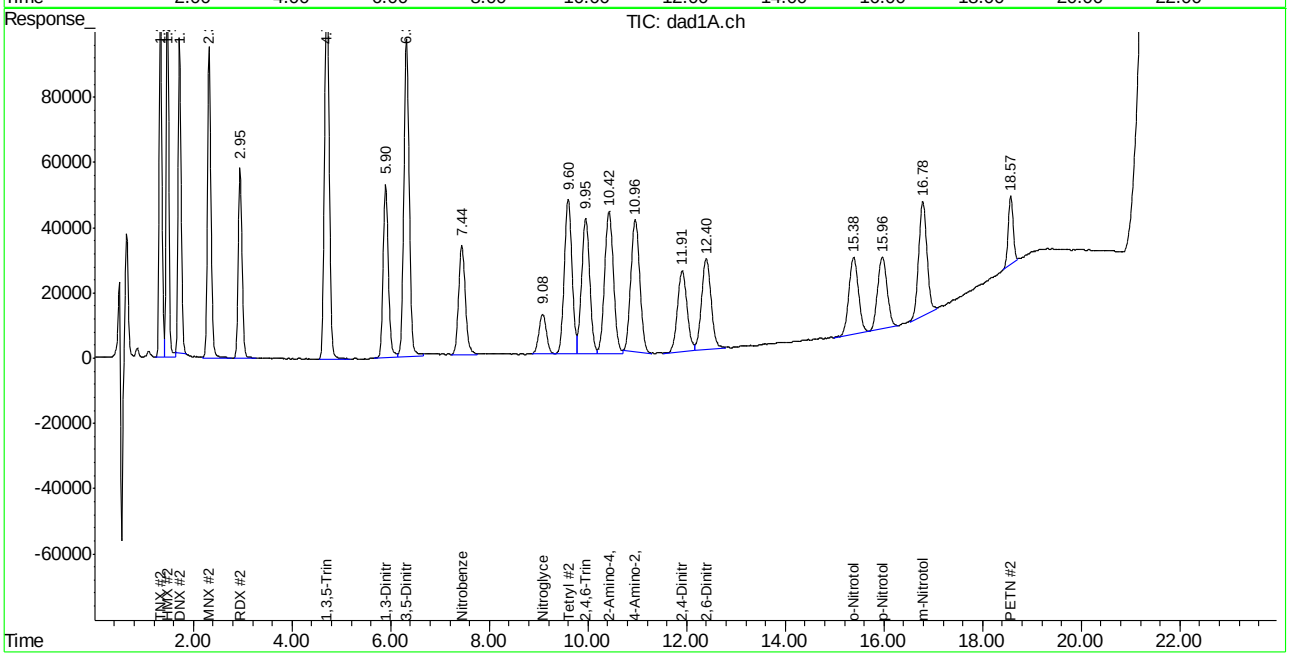
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : op84681,GPP2428,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 9:02 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 08:59:15 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

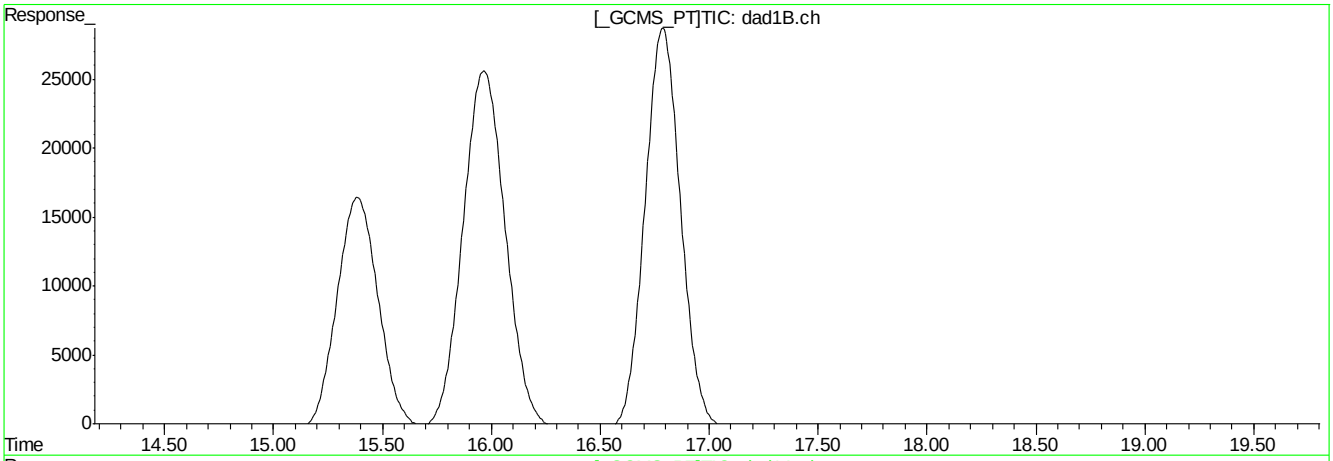
Sample Number: GPP2428-ICV2428 **Method:** SW846 8330A
Lab FileID: PP390454.D **Analyst approved:** 04/05/21 09:51 James Boone
Injection Time: 04/02/21 12:18 **Supervisor approved:** 04/05/21 10:17 Naresh Jiawan

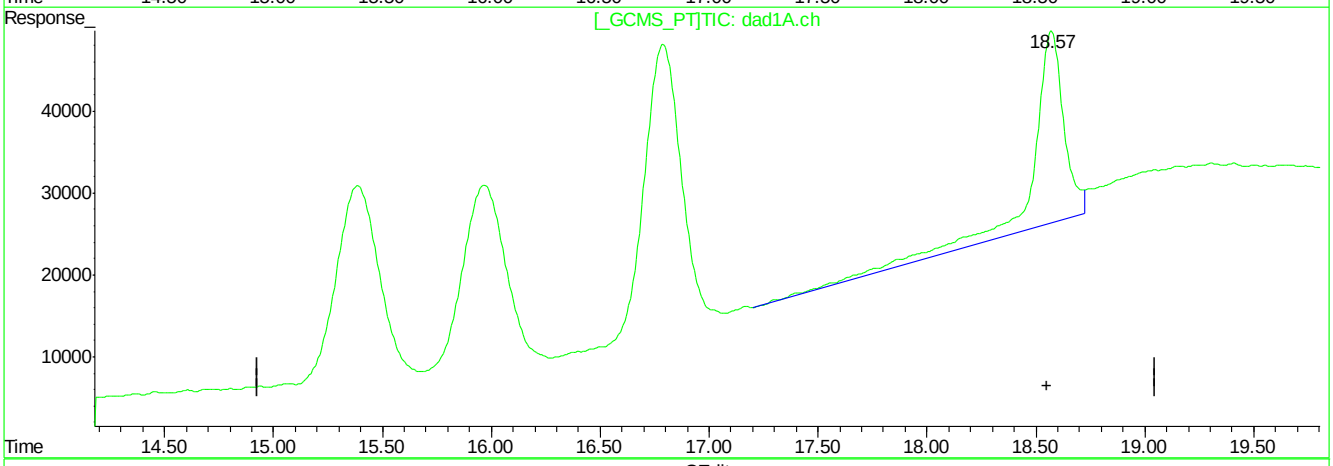
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	1.72	Poor instrument integration
DNX		2	1.72	Poor instrument integration
Nitroglycerine	55-63-0	2	9.08	Poor instrument integration
Tetryl	479-45-8	1	9.60	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.96	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	10.96	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.78	Poor instrument integration
PETN	78-11-5	2	18.57	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 9:01 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.57min 1768.670ppb

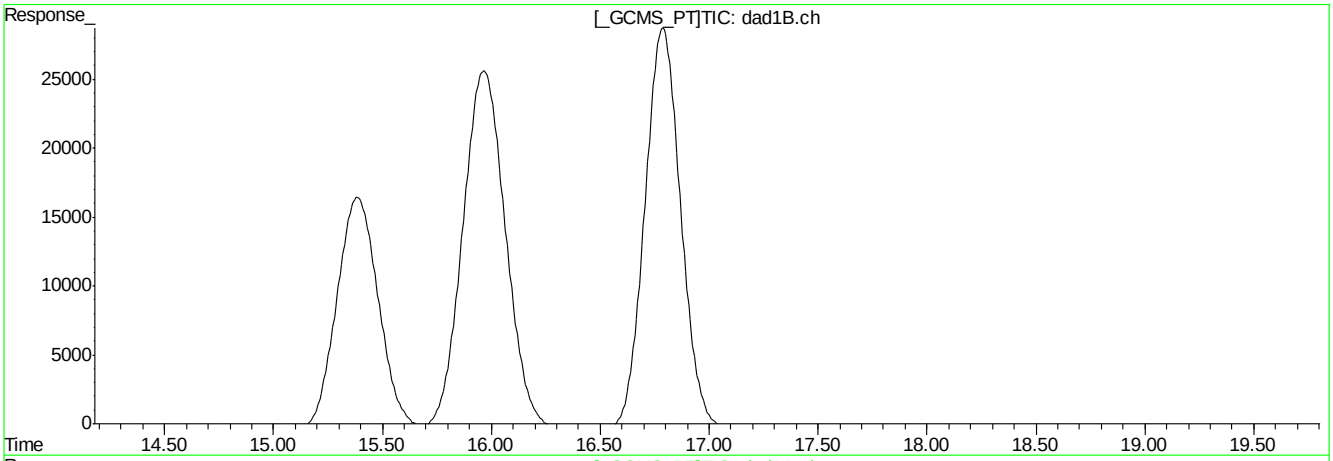
response 2348986

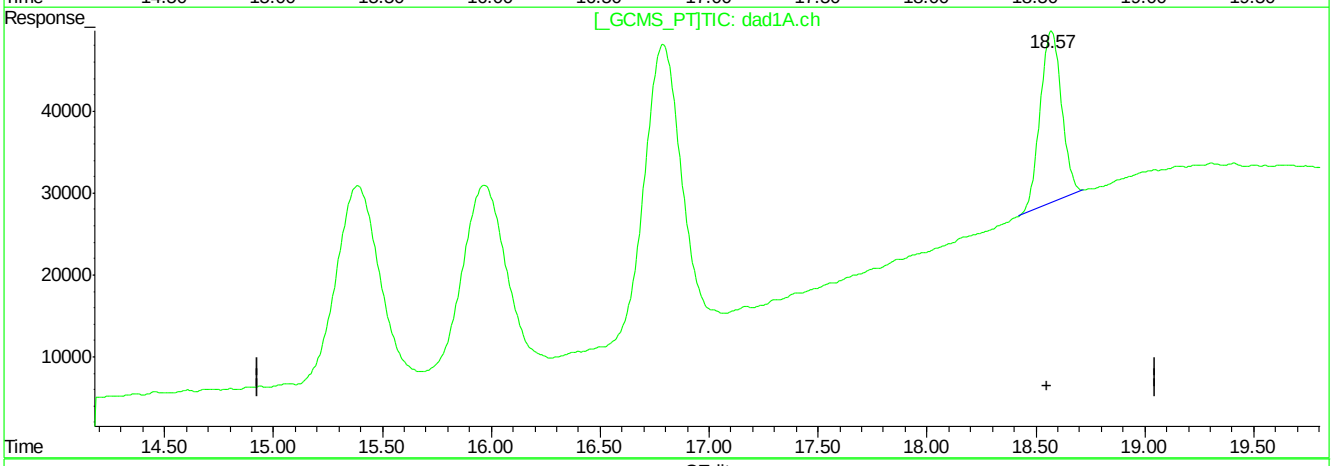
(+) = Expected Retention Time
PP390454.D GPP2428_040221PRI.M Mon Apr 05 09:01:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 9:01 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.57min 1082.560ppb m

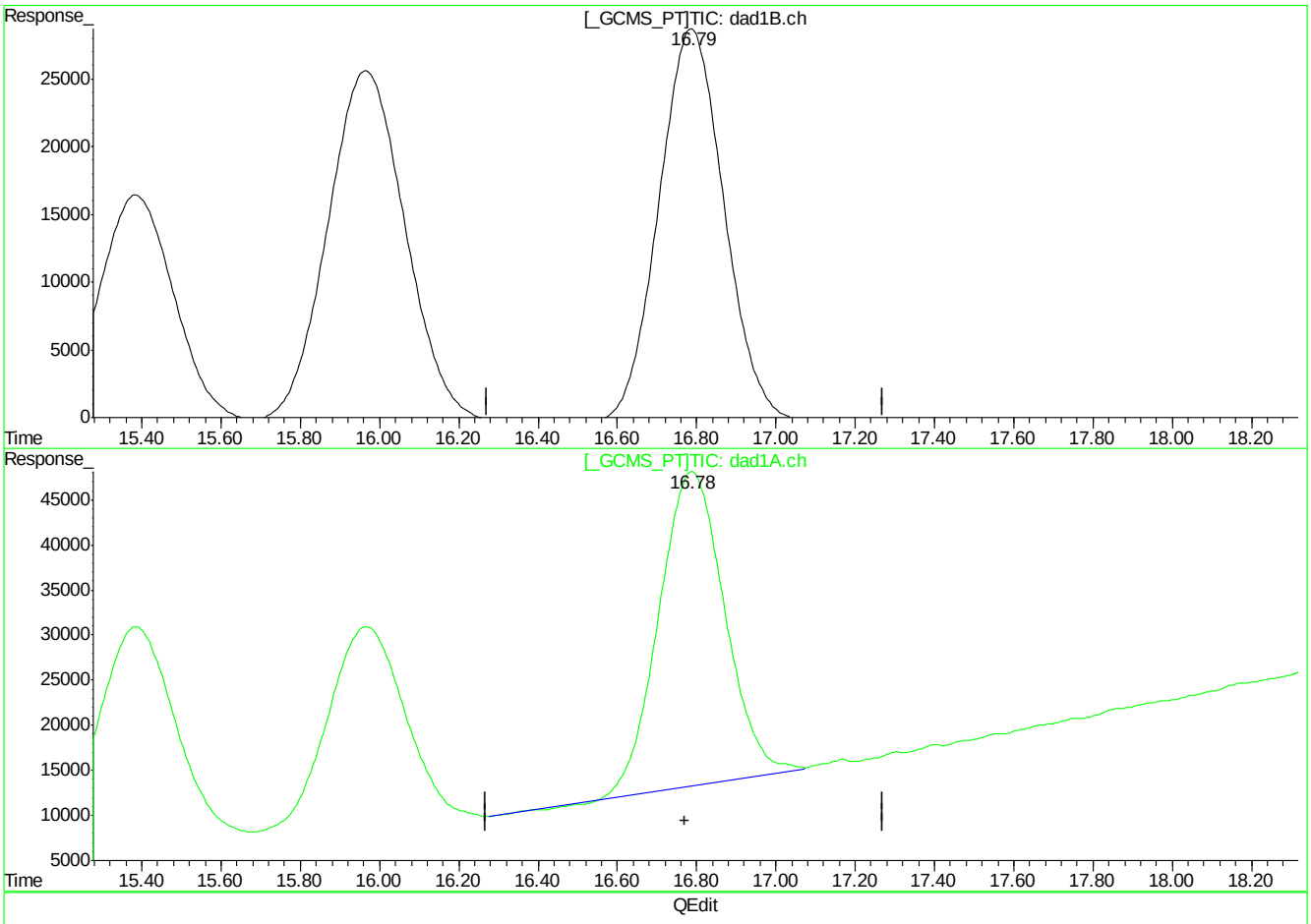
response 1437756

(+) = Expected Retention Time
PP390454.D GPP2428_040221PRI.M Mon Apr 05 09:01:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 9:01 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.79min 1054.692ppb

response 3446402

(20) m-Nitrotoluene #2

16.79min 1112.067ppb

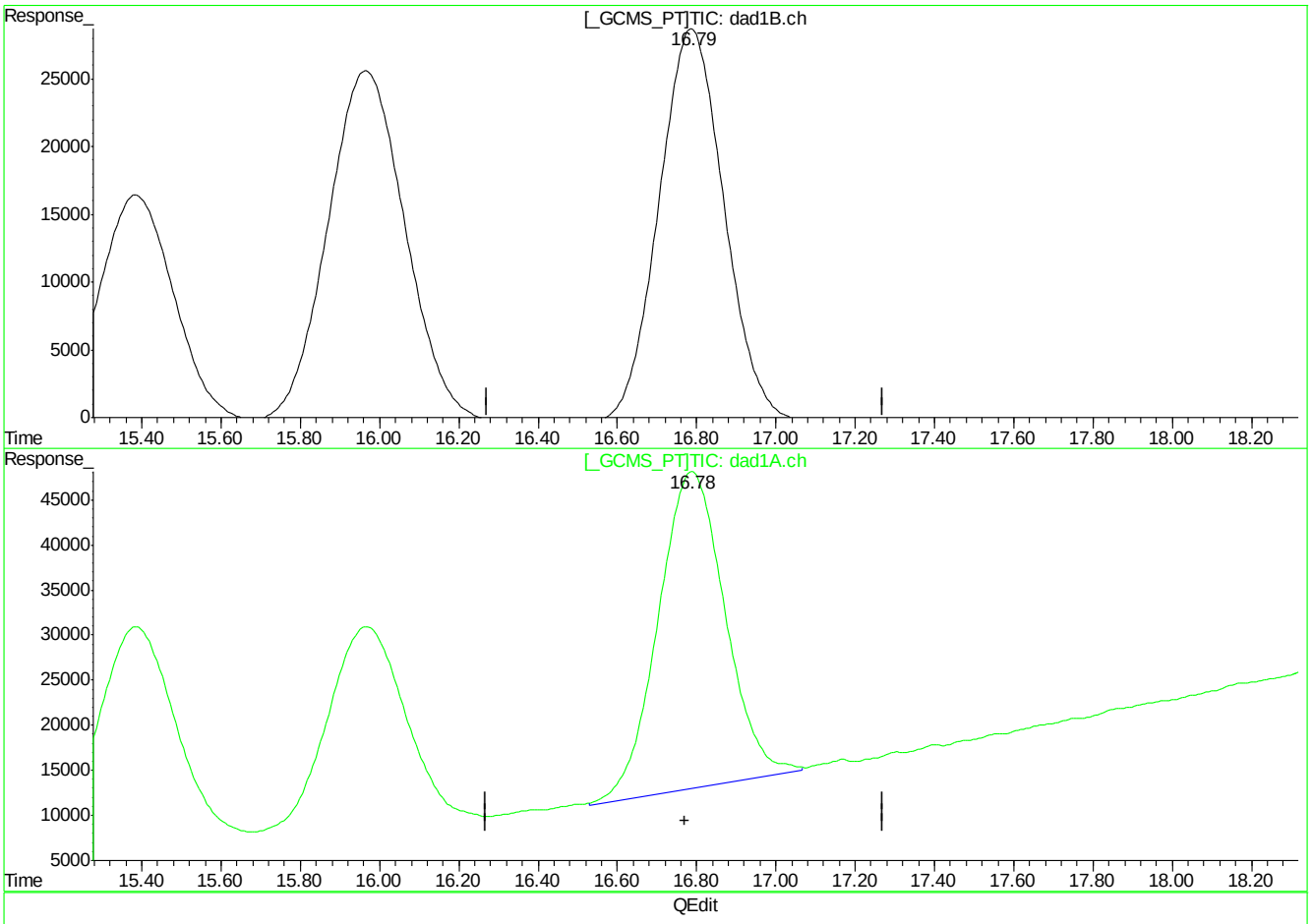
response 4034687

(+) = Expected Retention Time
PP390454.D GPP2428_040221PRI.M Mon Apr 05 09:01:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 9:01 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.79min 1054.692ppb

response 3446402

(20) m-Nitrotoluene #2

16.78min 1131.455ppb m

response 4105032

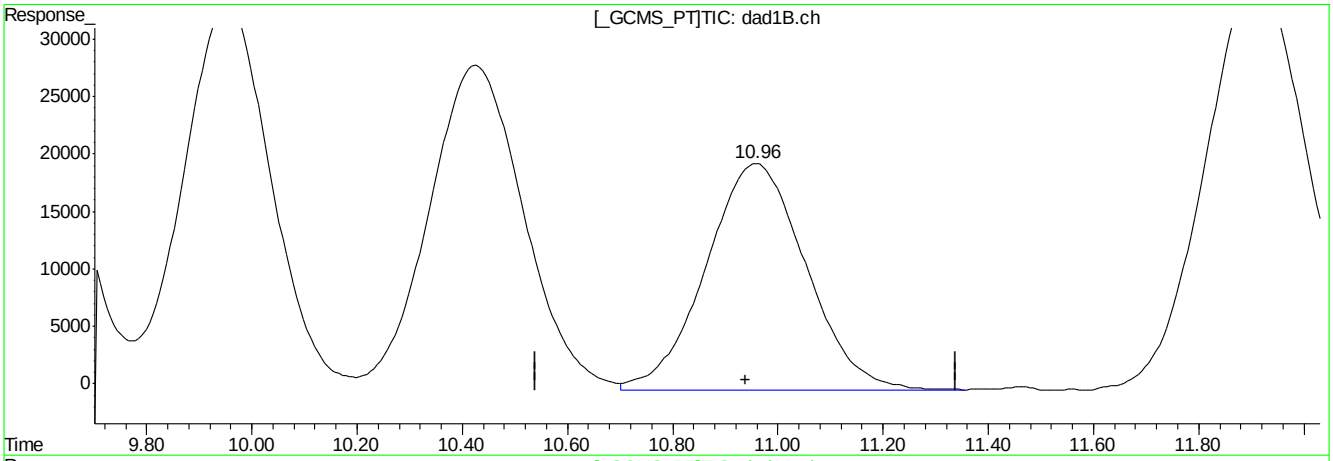
(+) = Expected Retention Time
PP390454.D GPP2428_040221PRI.M Mon Apr 05 09:01:22 2021

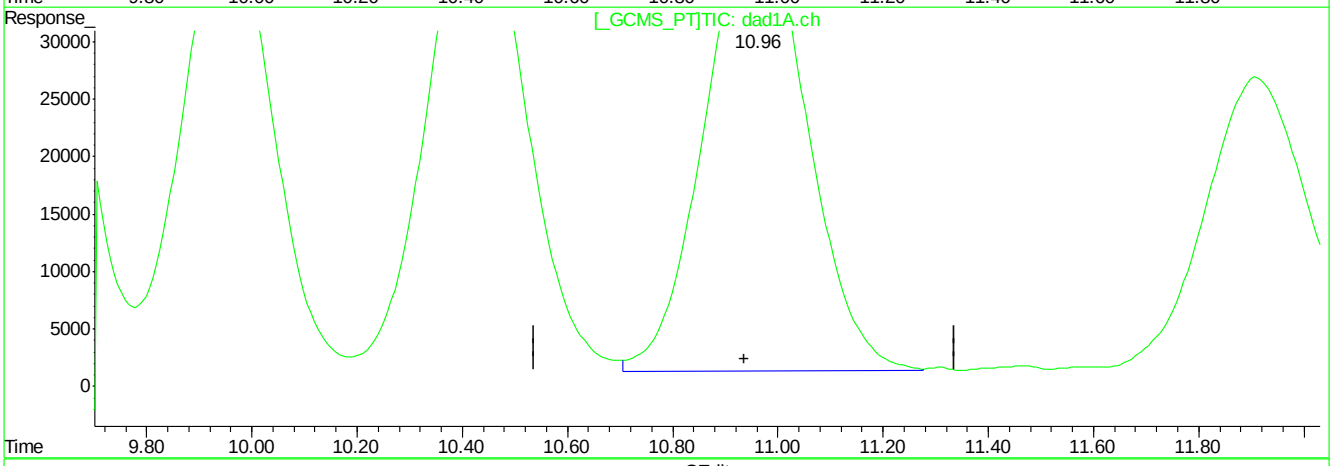
PP390454.D edits: m-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 9:01 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.96min 1158.037ppb

response 2608573

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 1114.759ppb

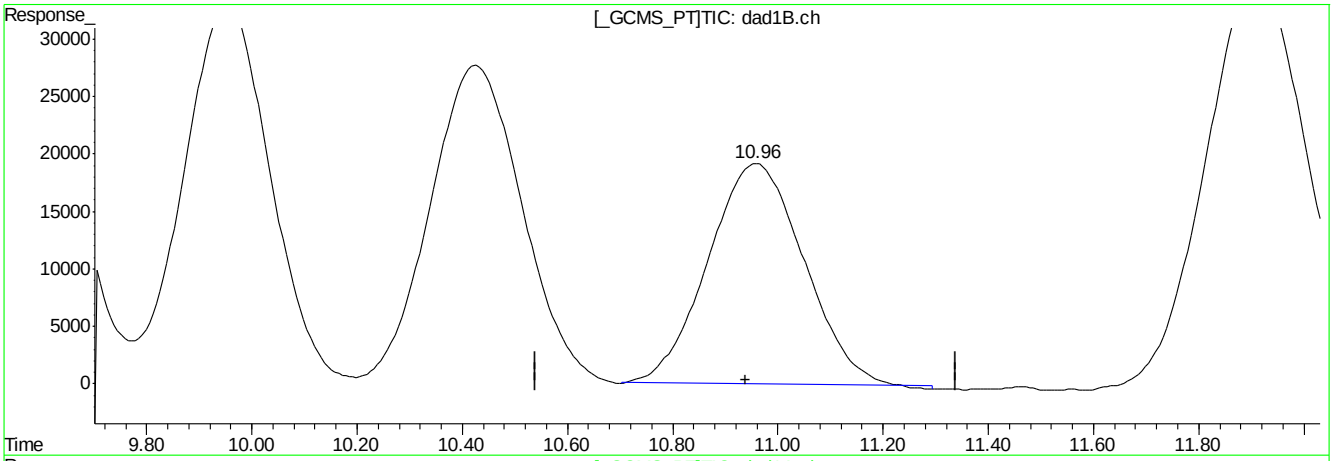
response 5309451

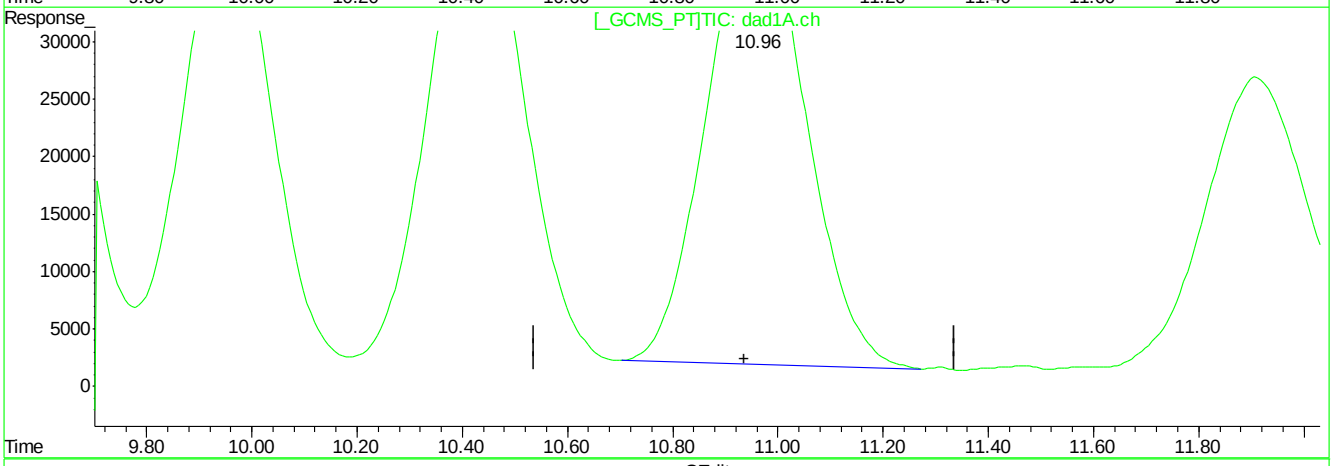
(+) = Expected Retention Time
PP390454.D GPP2428_040221PRI.M Mon Apr 05 09:01:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 9:01 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.96min 1079.022ppb m

response 2430585

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 1078.864ppb m

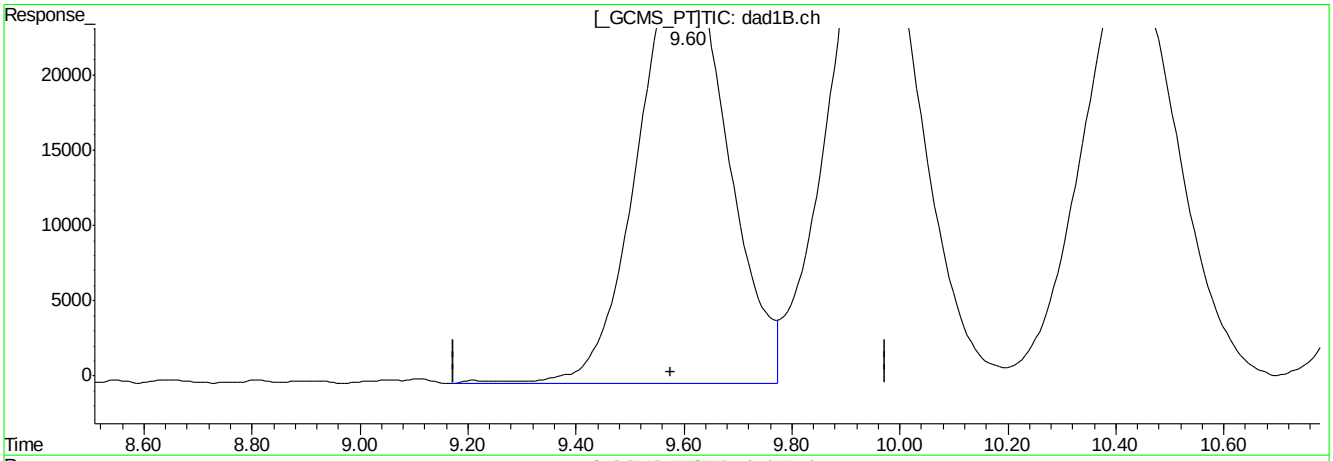
response 5138485

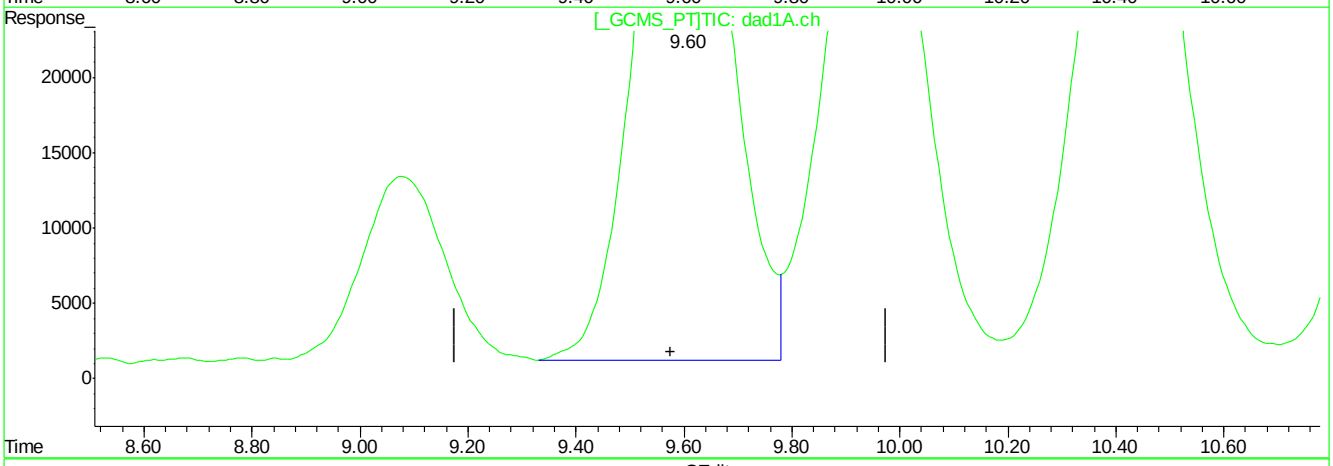
(+) = Expected Retention Time
PP390454.D GPP2428_040221PRI.M Mon Apr 05 09:01:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 9:01 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.60min 1140.336ppb

response 3269268

(11) Tetryl #2

9.60min 1116.838ppb

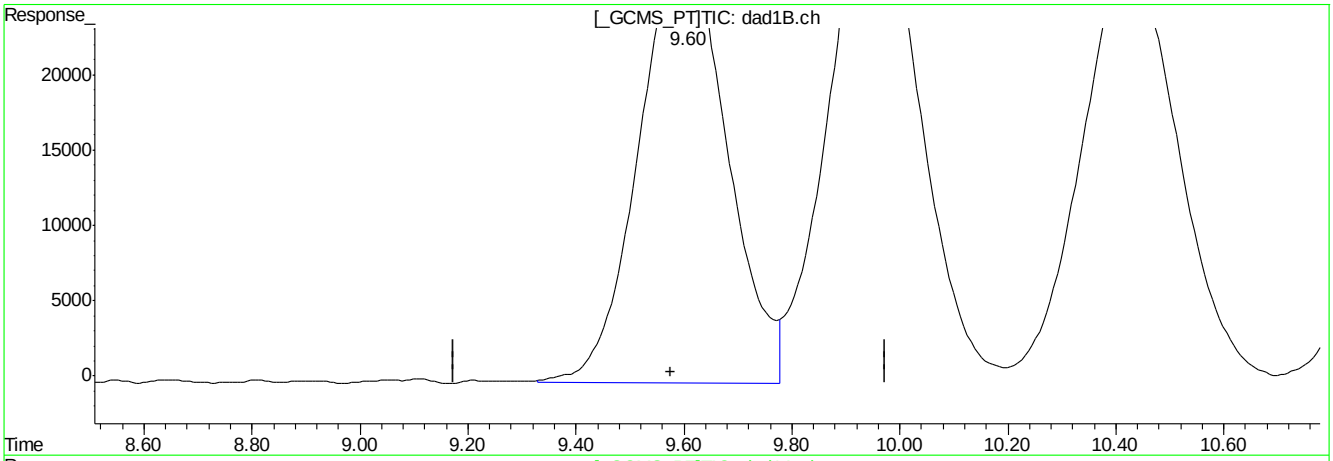
response 5195787

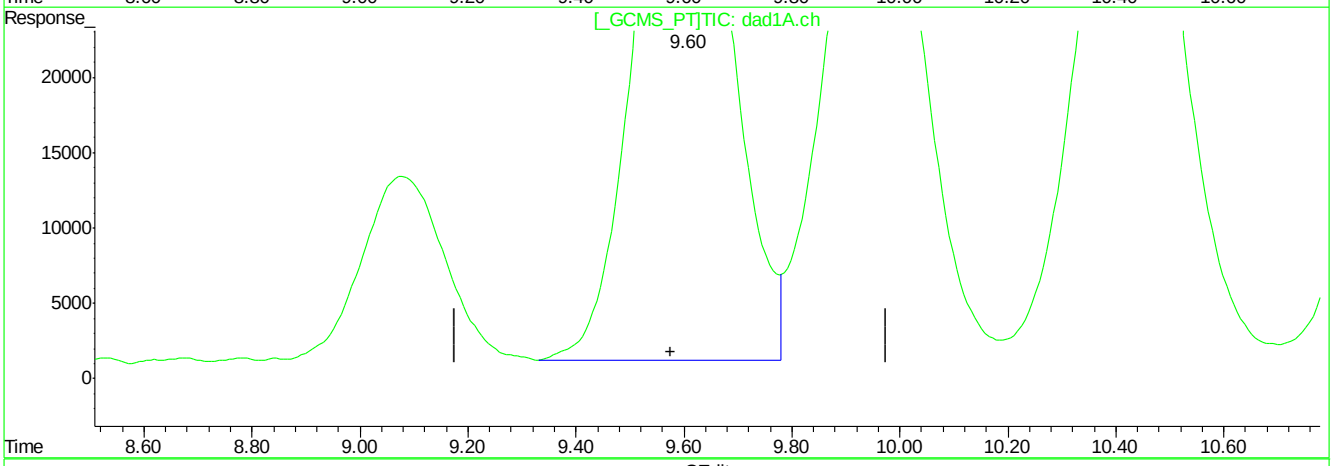
(+) = Expected Retention Time
PP390454.D GPP2428_040221PRI.M Mon Apr 05 09:02:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 9:01 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.60min 1132.369ppb m

response 3246428

(11) Tetryl #2

9.60min 1116.838ppb

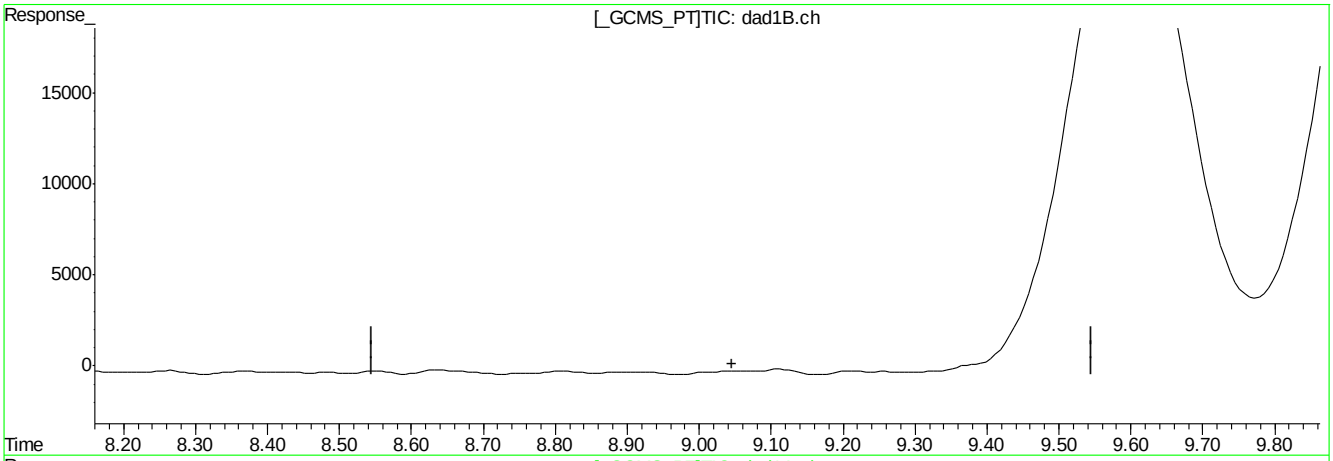
response 5195787

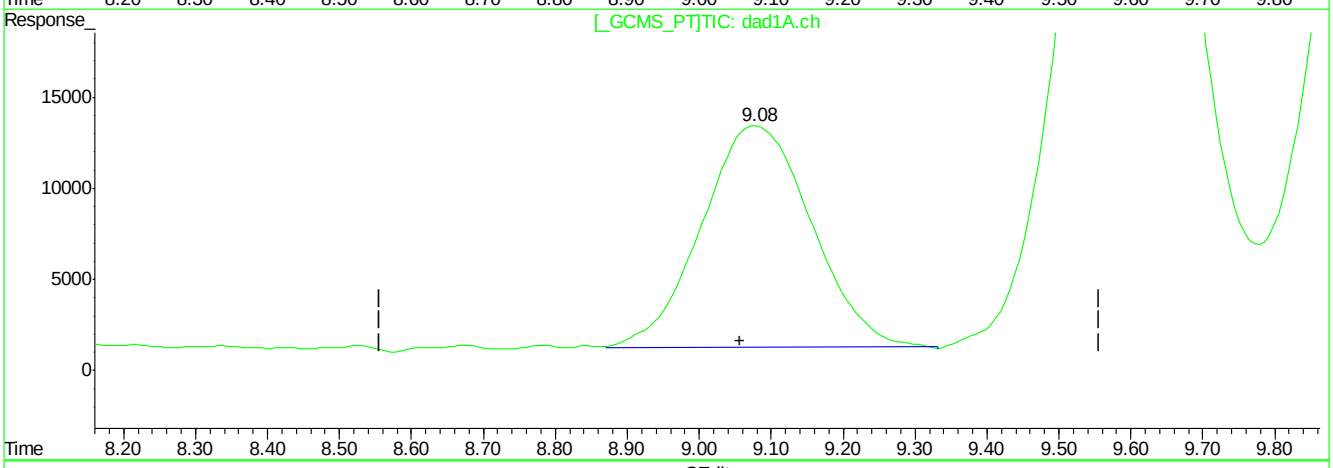
(+) = Expected Retention Time
PP390454.D GPP2428_040221PRI.M Mon Apr 05 09:02:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 9:01 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.08min 1112.130ppb m

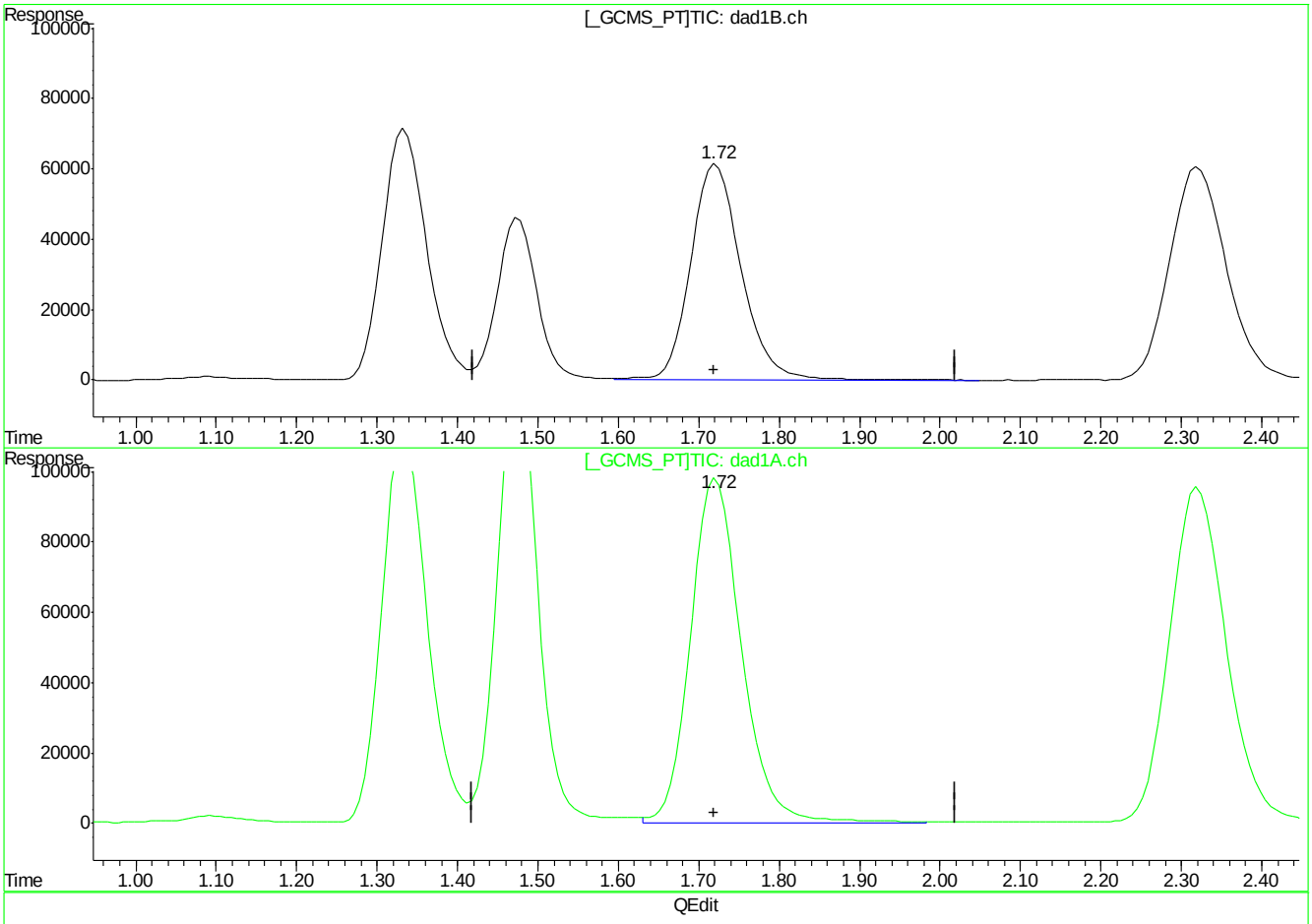
response 1286919

(+) = Expected Retention Time
PP390454.D GPP2428_040221PRI.M Mon Apr 05 09:02:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 9:01 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Multiple Level Calibration



(3) DNX

1.72min 1053.511ppb

response 2690639

(3) DNX #2

1.72min 1140.753ppb

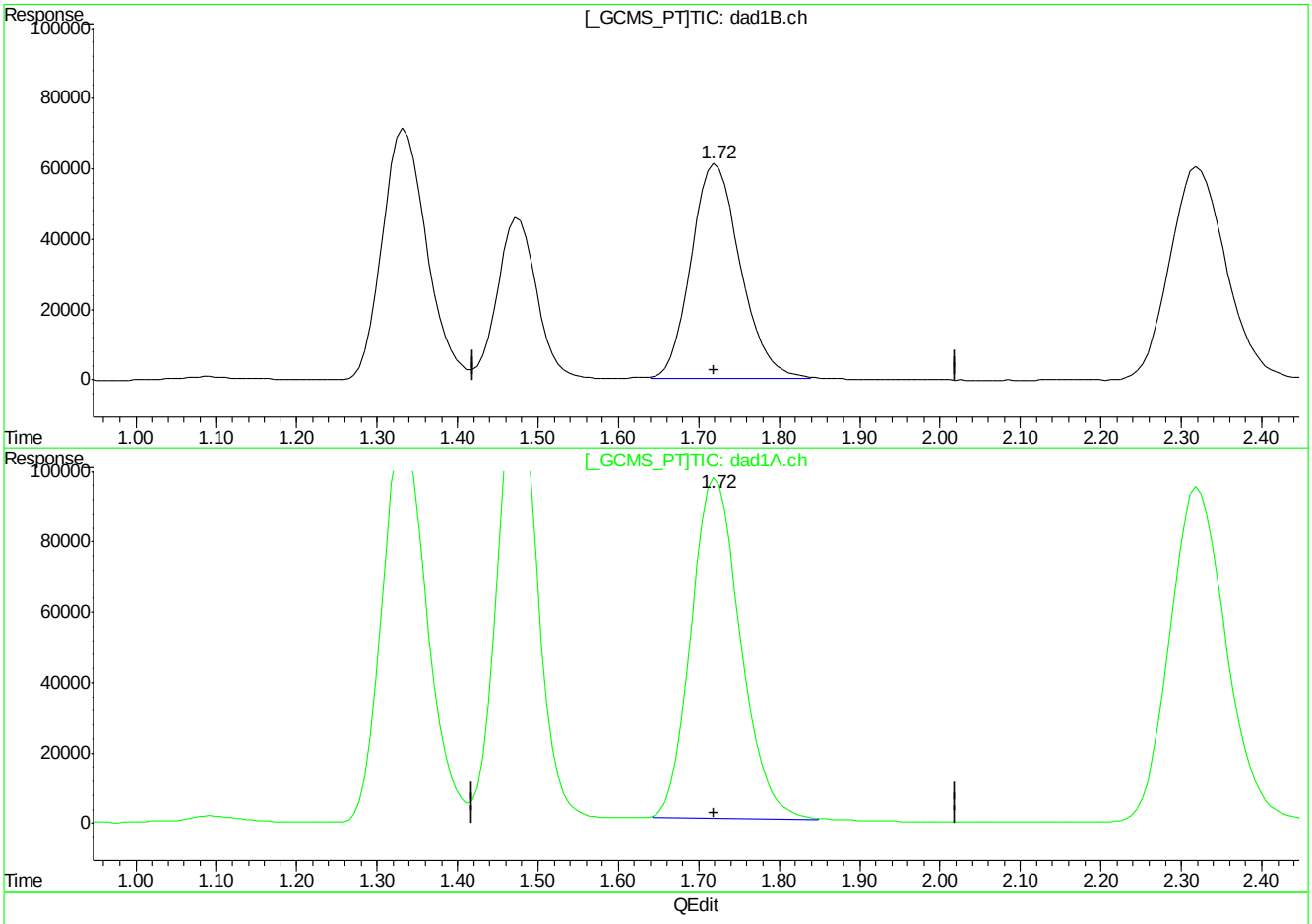
response 4311968

(+) = Expected Retention Time
PP390454.D GPP2428_040221PRI.M Mon Apr 05 09:02:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2428\PP390454.D\dad1A.ch
Acq On : 02-Apr-2021, 12:18:25 Operator: jamesb
Sample : icv2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 5 9:01 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Mon Apr 05 09:00:42 2021
Response via : Multiple Level Calibration



(3) DNX

1.72min 1016.793ppb m

response 2596862

(3) DNX #2

1.72min 1083.242ppb m

response 4094581

(+) = Expected Retention Time
PP390454.D GPP2428_040221PRI.M Mon Apr 05 09:02:42 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/22/21 12:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390597.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390597.D\dad1A.ch
Acq On : 22-Apr-2021, 09:06:04 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 10:17:34 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.52	11.52	1971206	3307127	964.485	1038.829
	Spiked Amount 500.000	Range 70 - 136		Recovery =		192.90%#	207.77%#
	Target Compounds						
1)	TNX	1.35	1.35	2508583	3801977	968.134	929.886
2)	HMX	1.50	1.50	1513145	4140734	997.715	947.050
3)	DNX	1.74	1.74	2329391	3800211	912.066	1005.365
4)	MNX	2.35	2.35	2575500	4046182	899.172	911.380
5)	RDX	2.99	2.99	1729522	2789763	929.619	945.390
6)	1,3,5-Trinitrobe	4.78	4.78	3725188	7309506	940.574	949.734
7)	1,3-Dinitrobenze	5.98	5.98	4936373	3552661	938.025	974.878
8)	3,5-Dinitroanili	6.40	6.40	3721447	6501388	917.457	962.569
9)	Nitrobenzene	7.54	7.54	2898801	2821223	920.358	985.697
10)	Nitroglycerin	0.00	9.26	0	1083798	N.D.	936.596 #
11)	Tetryl	9.80	9.80	2543053	4077894	887.028	876.546
12)	2,4,6-Trinitroto	10.15	10.15	3504678	4098469	929.875	881.164
13)	2-Amino-4,6-Dini	10.60	10.60	3106643	4492504	924.792	884.321
14)	4-Amino-2,6-Dini	11.15	11.15	2307100	4440720	1024.202	932.363
16)	2,4-Dinitrotolue	12.12	12.12	4413530	2718700	933.520	873.657
17)	2,6-Dinitrotolue	12.61	12.61	2540428	3213432	930.142	905.097
18)	o-Nitrotoluene	15.59	15.59	2073195	2764246	911.037	944.050m
19)	p-Nitrotoluene	16.17	16.18	3210572	2366920	924.798	883.160
20)	m-Nitrotoluene	16.96	16.97	3039989	3651311	930.319	1006.398
21)	PETN	0.00	18.75	0	1313729	N.D.	989.173m#

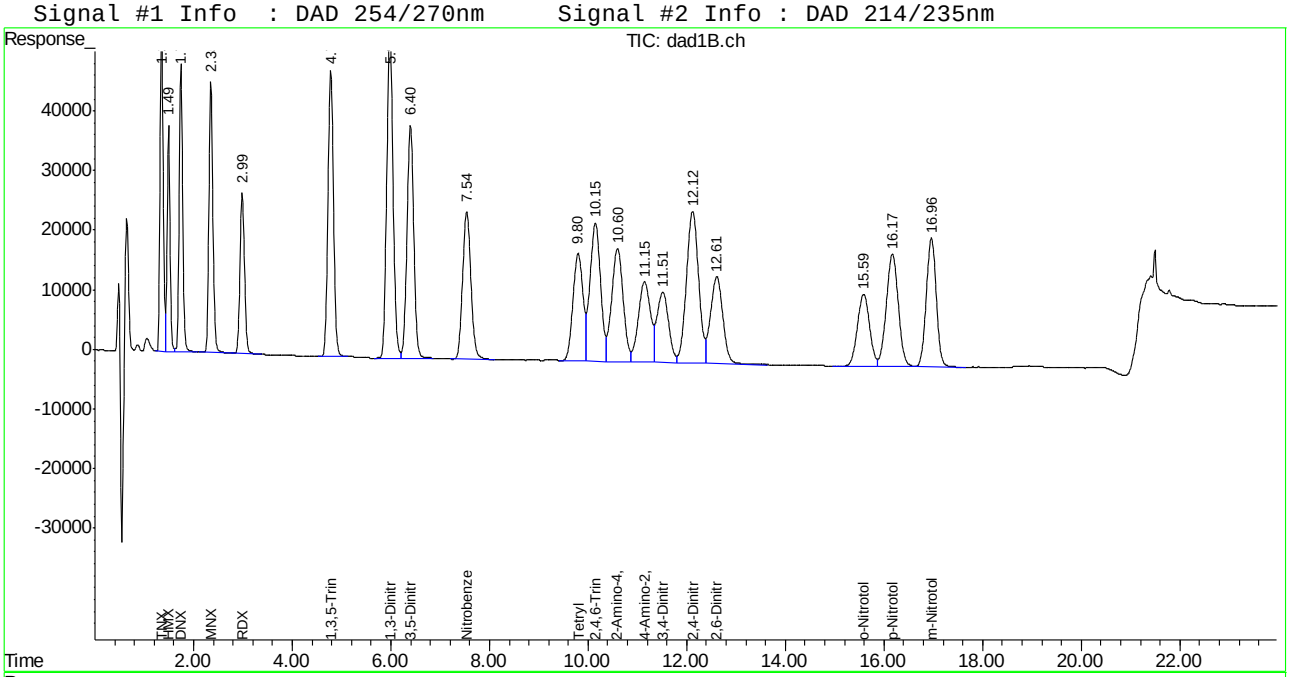
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

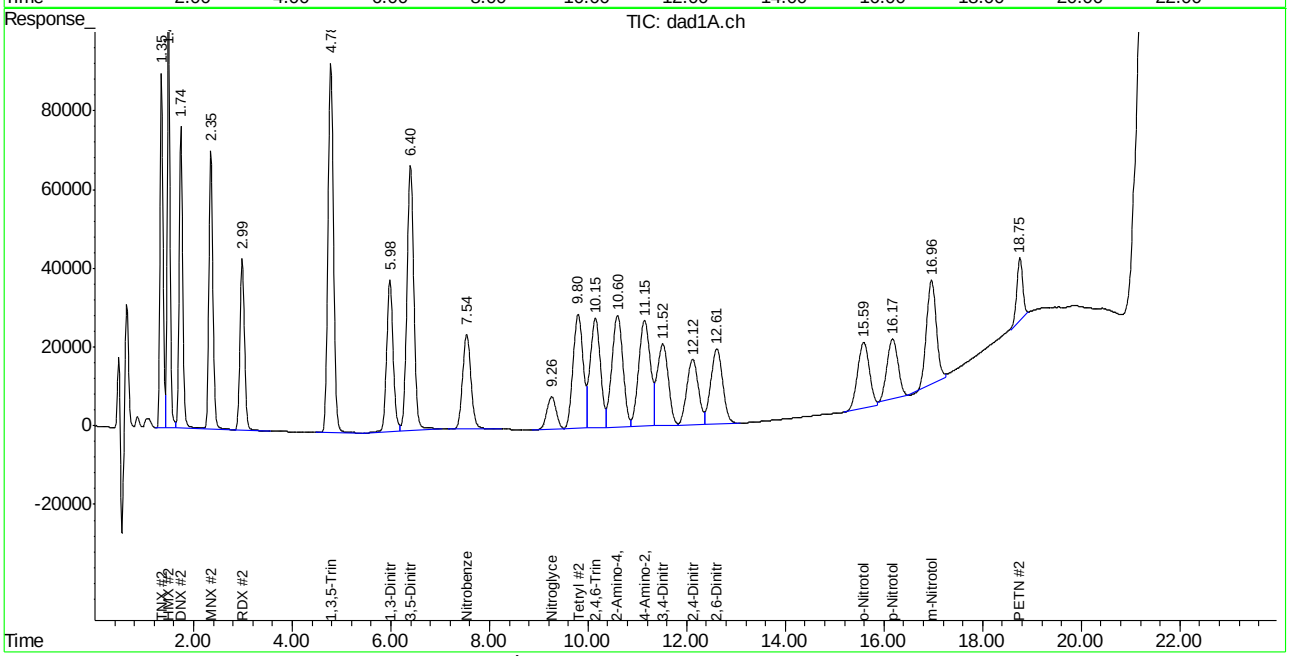
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390597.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390597.D\dad1A.ch
Acq On : 22-Apr-2021, 09:06:04 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 10:18 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

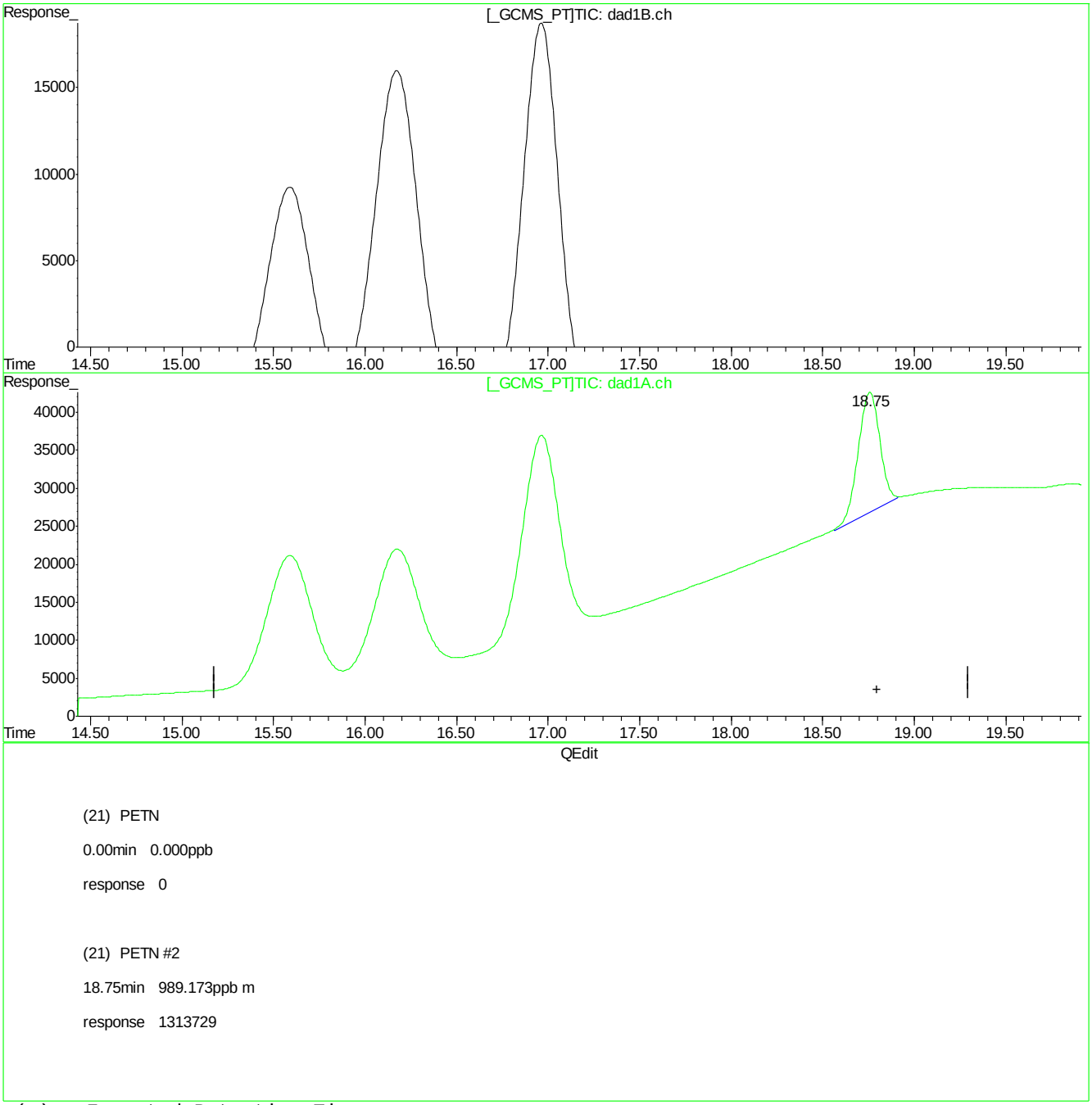
Sample Number: GPP2438-CC2428
Lab FileID: PP390597.D
Injection Time: 04/22/21 09:06
Method: SW846 8330B
Analyst approved: 04/22/21 11:52 James Boone
Supervisor approved: 04/22/21 12:15 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.59	Poor instrument integration
PETN	78-11-5	2	18.75	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390597.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390597.D\dad1A.ch
Acq On : 22-Apr-2021, 09:06:04 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 10:17 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration

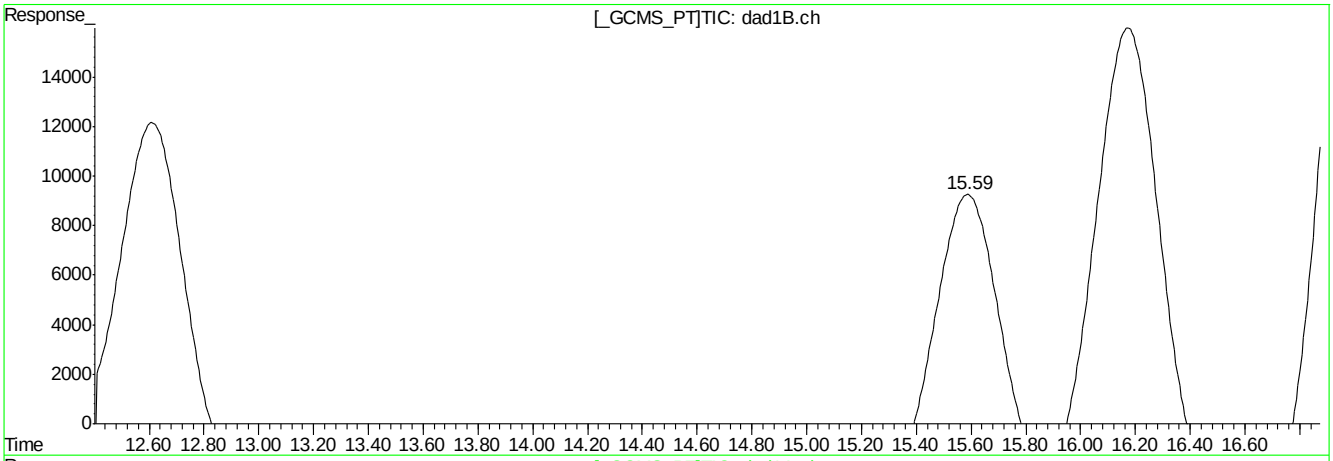


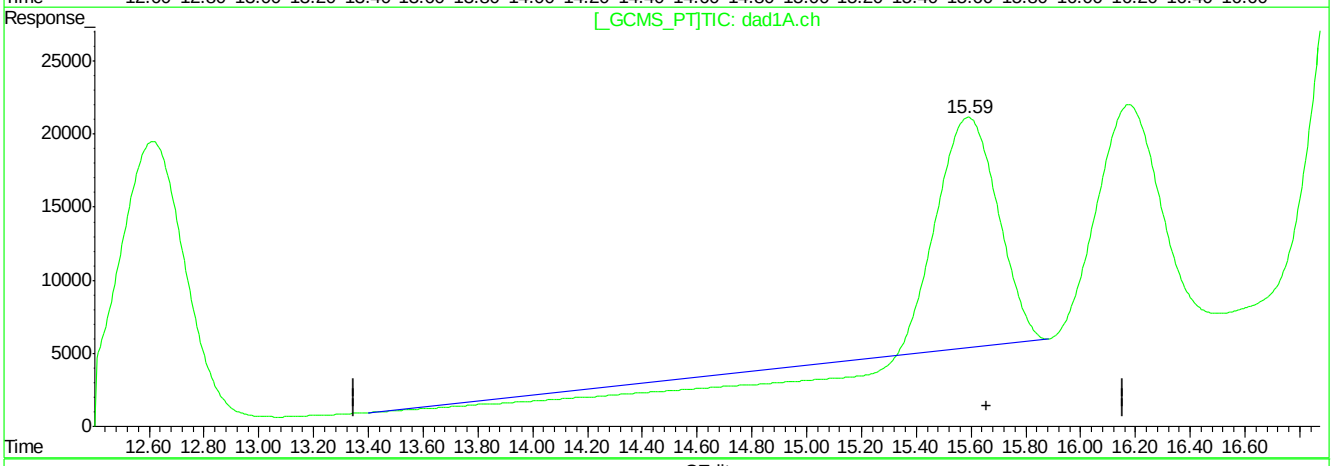
(+) = Expected Retention Time
PP390597.D GPP2428_040221PRI.M Thu Apr 22 10:17:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390597.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390597.D\dad1A.ch
Acq On : 22-Apr-2021, 09:06:04 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 10:17 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.59min 911.037ppb

response 2073195

(18) o-Nitrotoluene #2

15.59min 598.580ppb

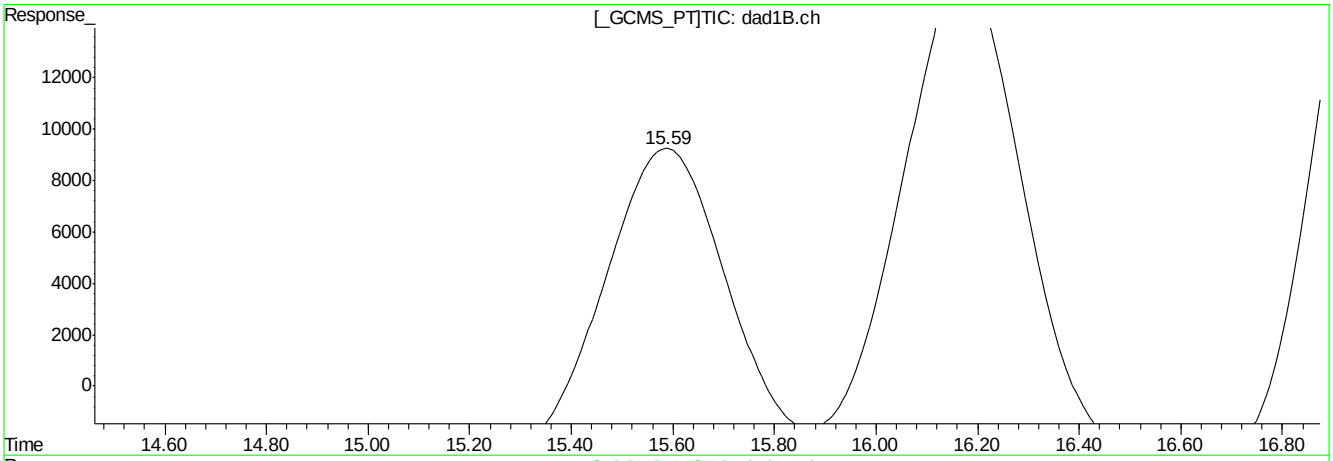
response 1752687

(+) = Expected Retention Time
PP390597.D GPP2428_040221PRI.M Thu Apr 22 10:17:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390597.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390597.D\dad1A.ch
Acq On : 22-Apr-2021, 09:06:04 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 10:17 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.59min 911.037ppb

response 2073195

(18) o-Nitrotoluene #2

15.59min 944.050ppb m

response 2764246

(+) = Expected Retention Time
PP390597.D GPP2428_040221PRI.M Thu Apr 22 10:18:02 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/22/21 12:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1A.ch
Acq On : 22-Apr-2021, 11:10:00 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 11:49:15 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.59	11.59	1974402	3335900	966.049	1047.868
	Spiked Amount 500.000	Range 70 - 136		Recovery =		193.21%#	209.57%#
	Target Compounds						
1)	TNX	1.35	1.35	2514214	3805157	970.307	930.664
2)	HMX	1.50	1.50	1518953	4150408	1001.544	949.263
3)	DNX	1.75	1.75	2332114	3813368	913.132	1008.846
4)	MNX	2.36	2.36	2579520	4062947	900.576	915.156
5)	RDX	3.00	3.00	1729023	2797740	929.350	948.093
6)	1,3,5-Trinitrobe	4.81	4.81	3724670	7242904	940.444	941.080
7)	1,3-Dinitrobenze	6.01	6.01	4940171	3573931	938.746	980.714
8)	3,5-Dinitroanili	6.43	6.43	3713851	6450774	915.585	955.075
9)	Nitrobenzene	7.58	7.58	2886947	2835543	916.594	990.700
10)	Nitroglycerin	0.00	9.31	0	1091663	N.D.	943.393 #
11)	Tetryl	9.86	9.86	2528057	4056563	881.798	871.961
12)	2,4,6-Trinitroto	10.21	10.21	3505124	4112748	929.993	884.234
13)	2-Amino-4,6-Dini	10.67	10.67	3110475	4493347	925.933	884.487
14)	4-Amino-2,6-Dini	11.22	11.22	2287751	4418231	1015.613	927.641
16)	2,4-Dinitrotolue	12.19	12.19	4388992	2721327	928.330	874.502
17)	2,6-Dinitrotolue	12.68	12.68	2535991	3212024	928.517	904.700
18)	o-Nitrotoluene	15.67	15.66	2070145	2705031	909.697	923.826m
19)	p-Nitrotoluene	16.25	16.25	3210953	2408219	924.908	898.569
20)	m-Nitrotoluene	17.03	17.03	3044885	3487944	931.817	961.370
21)	PETN	0.00	18.80	0	1285827	N.D.	968.164m#

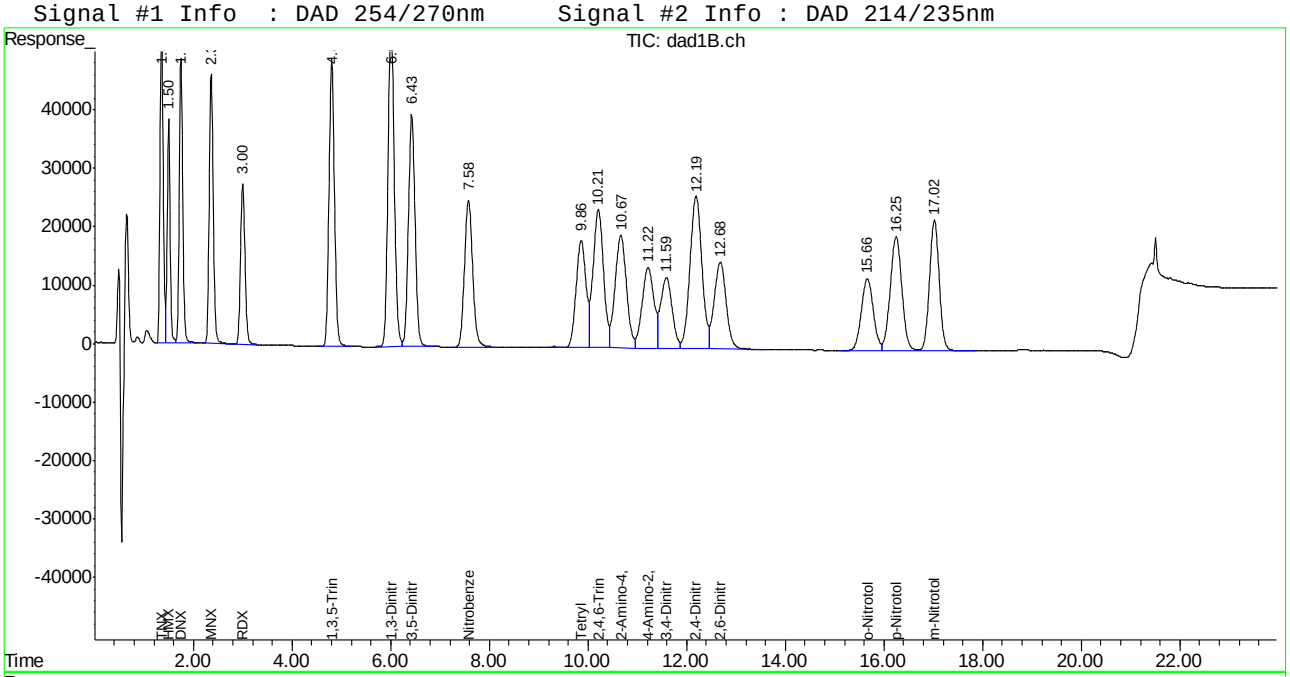
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP390601.D GPP2428_040221PRI.M Thu Apr 22 11:50:51 2021 Page 1

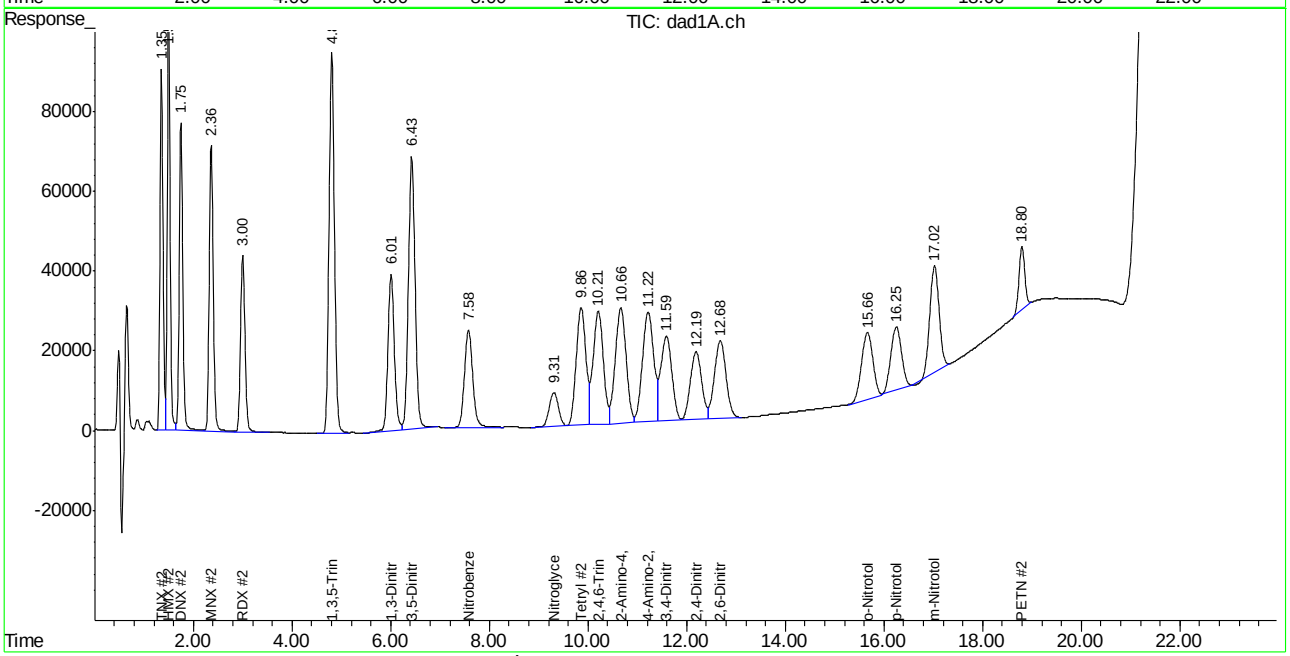
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1A.ch
Acq On : 22-Apr-2021, 11:10:00 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 11:49 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

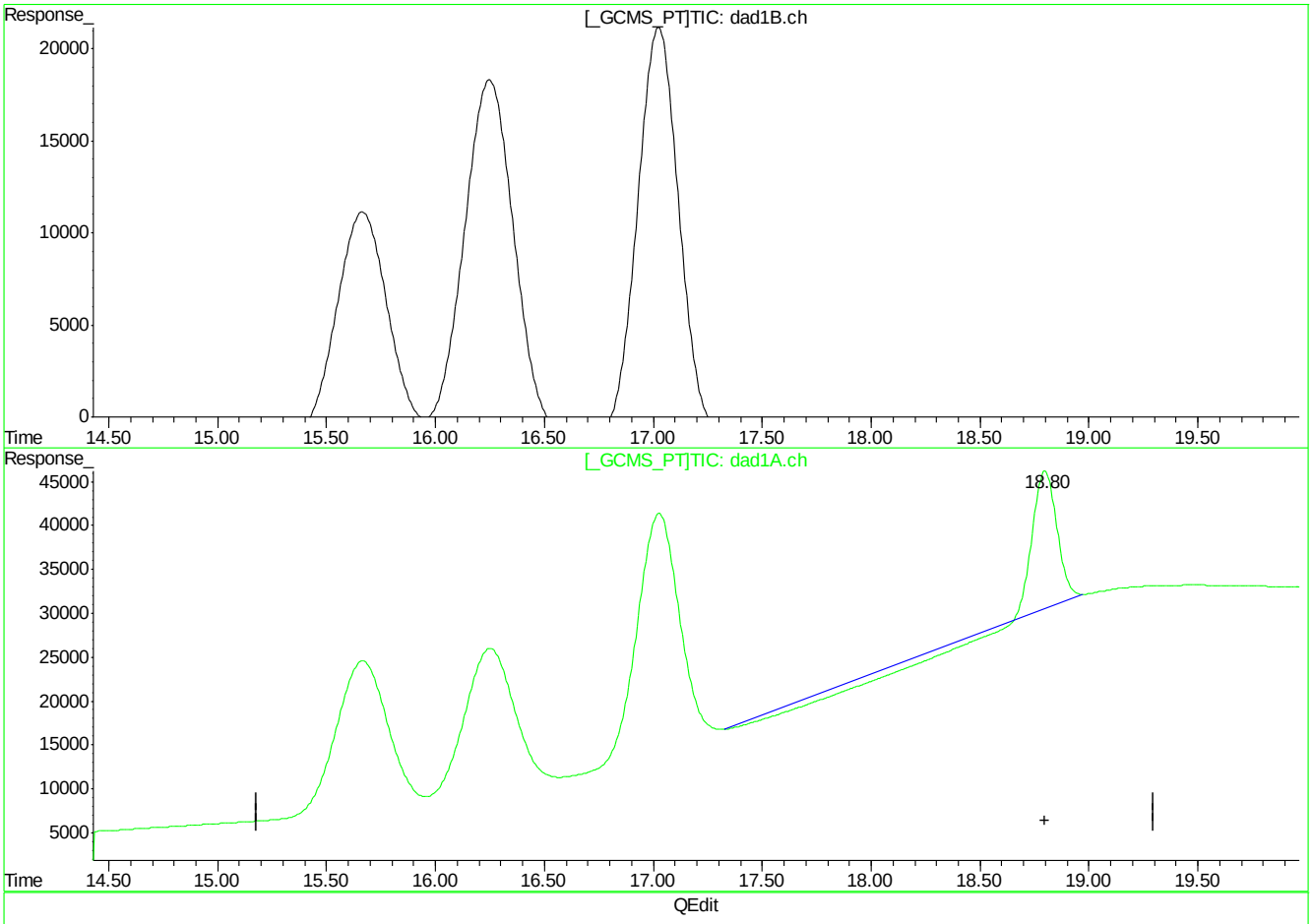
Sample Number: GPP2438-CC2428
Lab FileID: PP390601.D
Injection Time: 04/22/21 11:10
Method: SW846 8330B
Analyst approved: 04/22/21 11:52 James Boone
Supervisor approved: 04/22/21 12:15 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.66	Poor instrument integration
PETN	78-11-5	2	18.80	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1A.ch
Acq On : 22-Apr-2021, 11:10:00 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 11:49 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.80min 502.554ppb

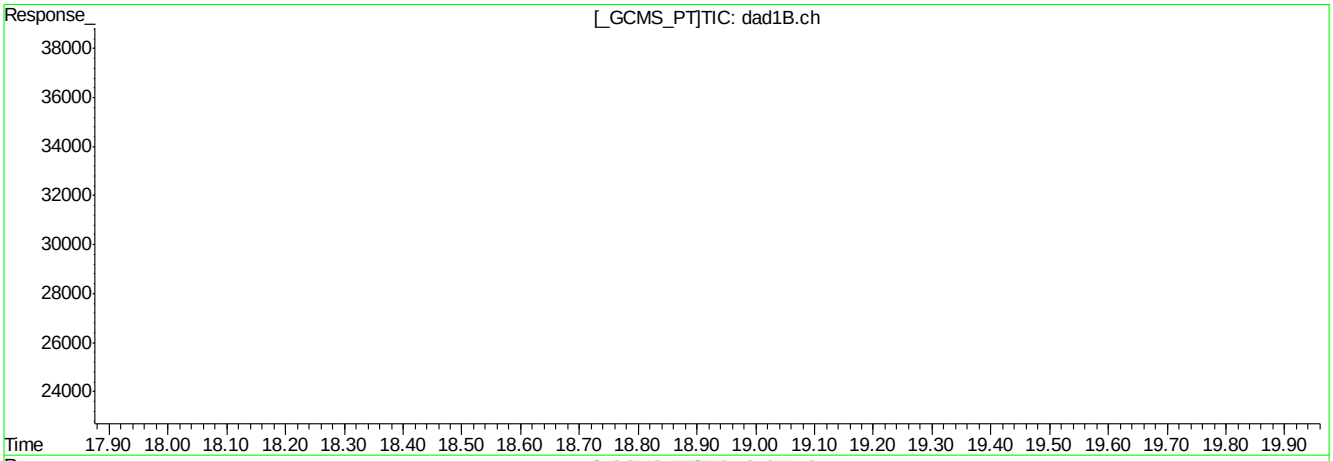
response 667446

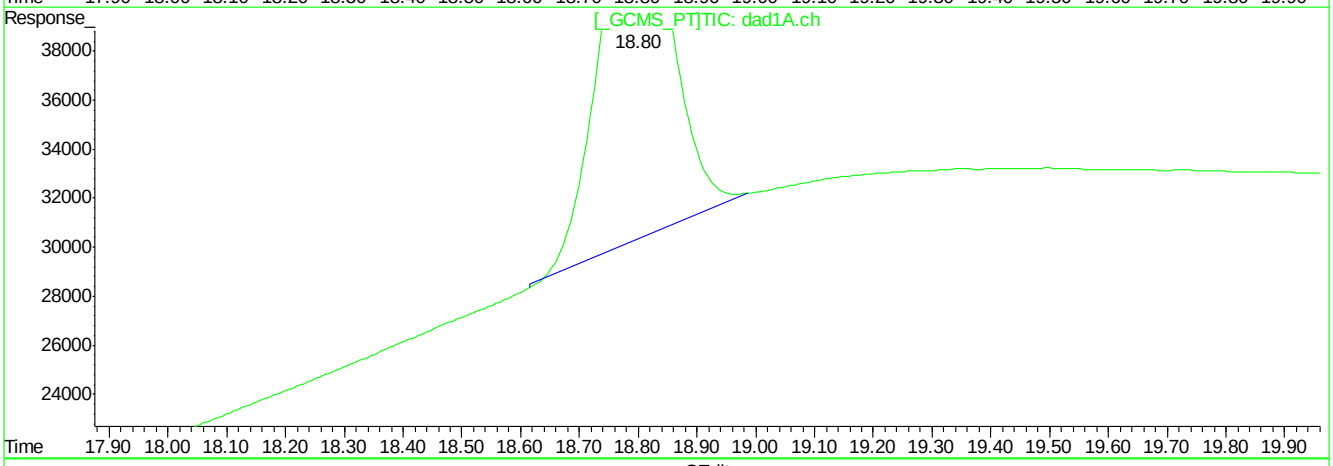
(+) = Expected Retention Time
PP390601.D GPP2428_040221PRI.M Thu Apr 22 11:49:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1A.ch
Acq On : 22-Apr-2021, 11:10:00 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 11:49 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.80min 968.164ppb m

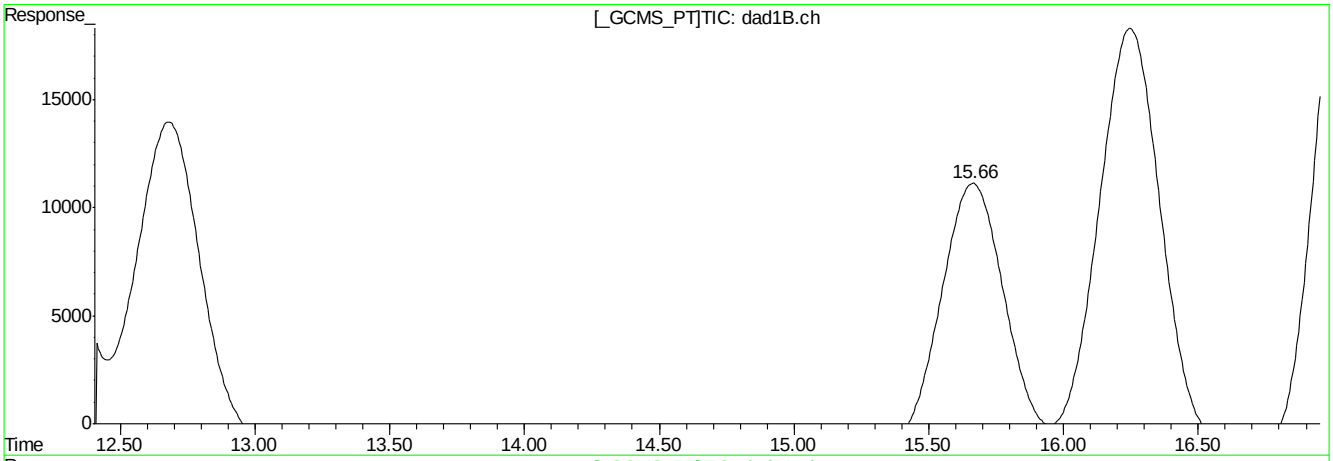
response 1285827

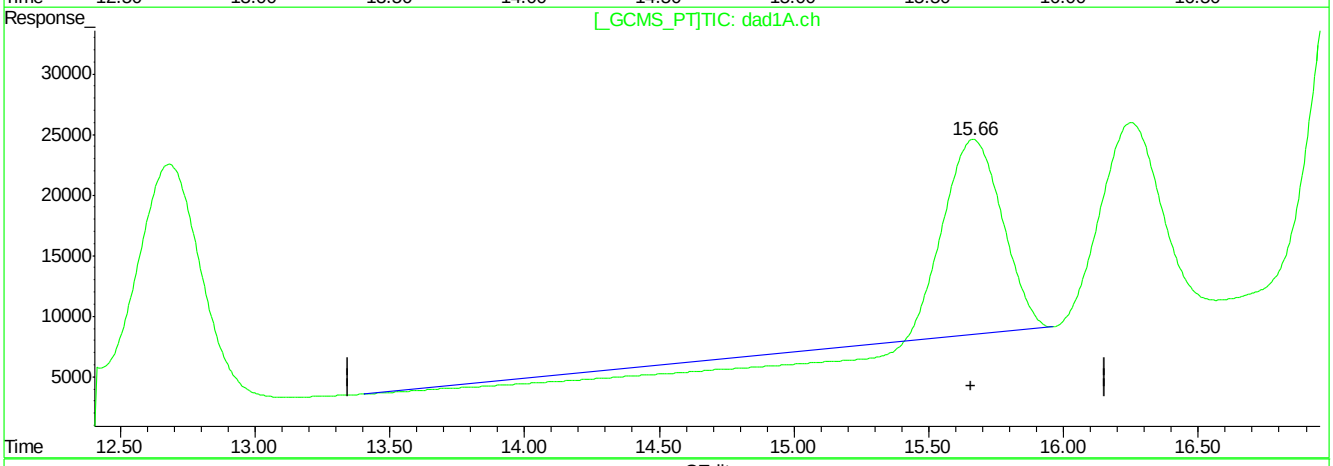
(+) = Expected Retention Time
PP390601.D GPP2428_040221PRI.M Thu Apr 22 11:49:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1A.ch
Acq On : 22-Apr-2021, 11:10:00 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 11:49 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.67min 909.697ppb

response 2070145

(18) o-Nitrotoluene #2

15.67min 579.458ppb

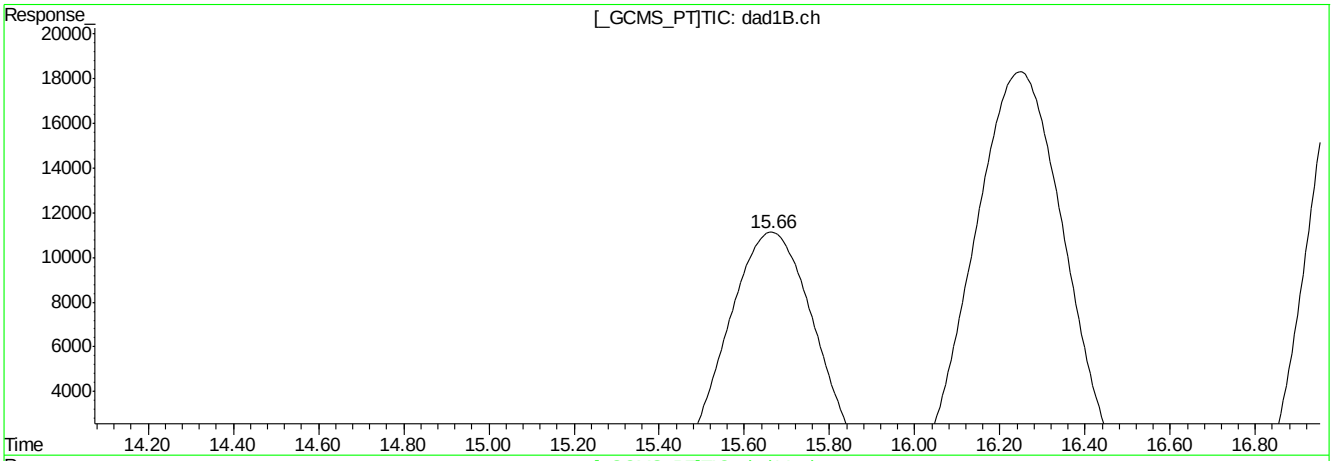
response 1696694

(+) = Expected Retention Time
PP390601.D GPP2428_040221PRI.M Thu Apr 22 11:49:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390601.D\dad1A.ch
Acq On : 22-Apr-2021, 11:10:00 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 22 11:49 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.67min 909.697ppb

response 2070145

(18) o-Nitrotoluene #2

15.66min 923.826ppb m

response 2705031

(+) = Expected Retention Time
PP390601.D GPP2428_040221PRI.M Thu Apr 22 11:49:41 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 04/26/21 15:18

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1A.ch
Acq On : 22-Apr-2021, 16:19:39 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 09:52:01 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.62	11.62	1966249	3339064	962.060	1048.861
	Spiked Amount 500.000	Range 70 - 136		Recovery =		192.41%#	209.77%#
	Target Compounds						
1)	TNX	1.35	1.35	2514137	3815344	970.277	933.156
2)	HMX	1.50	1.50	1510220	4158402	995.786	951.091
3)	DNX	1.75	1.75	2337224	3834624	915.133	1014.469
4)	MNX	2.36	2.36	2577630	4067228	899.916	916.120
5)	RDX	3.00	3.00	1725513	2795872	927.464	947.460
6)	1,3,5-Trinitrobe	4.81	4.81	3718617	7245200	938.915	941.378
7)	1,3-Dinitrobenze	6.02	6.02	4932905	3570137	937.365	979.673
8)	3,5-Dinitroanili	6.44	6.44	3701813	6469775	912.617	957.889
9)	Nitrobenzene	7.59	7.59	2869726	2796026	911.126	976.893
10)	Nitroglycerin	0.00	9.33	0	1098130	N.D.	948.982 #
11)	Tetryl	9.88	9.88	2531462	4075423	882.986	876.015
12)	2,4,6-Trinitroto	10.23	10.23	3503317	4122219	929.514	886.270
13)	2-Amino-4,6-Dini	10.69	10.69	3116221	4510033	927.644	887.771
14)	4-Amino-2,6-Dini	11.24	11.24	2292641	4437166	1017.784	931.617
16)	2,4-Dinitrotolue	12.21	12.22	4401939	2740216	931.068	880.571
17)	2,6-Dinitrotolue	12.70	12.71	2536726	3222093	928.787	907.536
18)	o-Nitrotoluene	15.69	15.69	2048674	2642686	900.262	902.534m
19)	p-Nitrotoluene	16.27	16.27	3185698	2402752	917.633	896.530
20)	m-Nitrotoluene	17.04	17.05	3011749	3447810	921.677	950.308
21)	PETN	0.00	18.81	0	1300094	N.D.	978.906m#

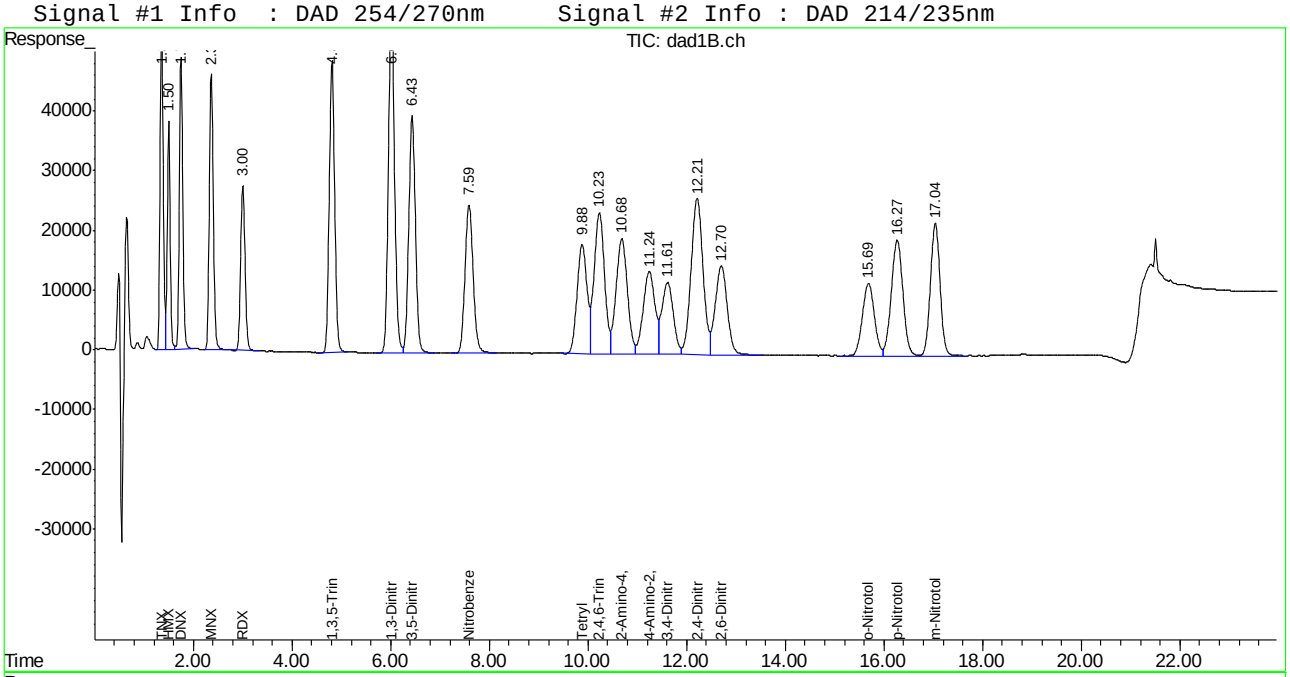
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

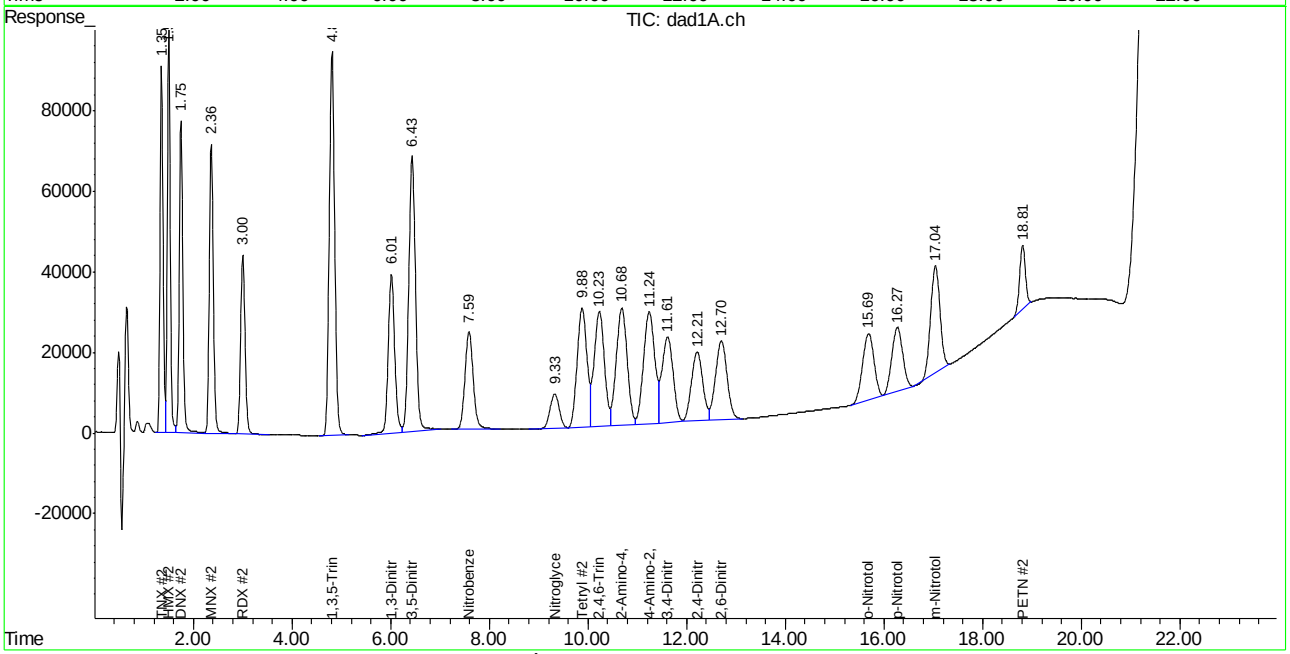
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1A.ch
Acq On : 22-Apr-2021, 16:19:39 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : op84960,GPP2438,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 10:14 2021 Quant Results File: GPP2428_040221PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

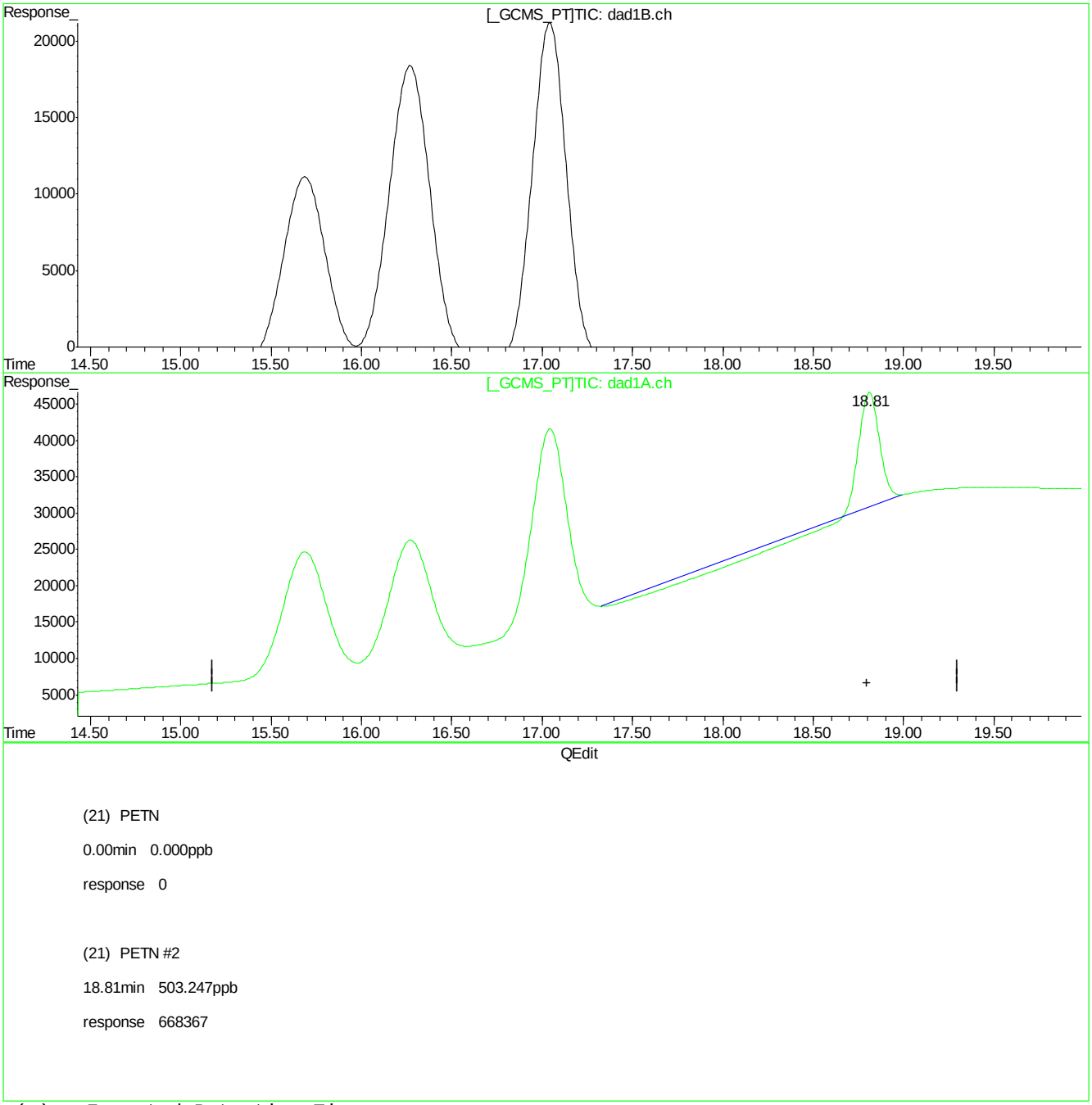
Sample Number: GPP2438-CC2428
Lab FileID: PP390611.D
Injection Time: 04/22/21 16:19
Method: SW846 8330B
Analyst approved: 04/23/21 14:30 James Boone
Supervisor approved: 04/26/21 15:18 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.69	Poor instrument integration
PETN	78-11-5	2	18.81	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1A.ch
Acq On : 22-Apr-2021, 16:19:39 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.81min 503.247ppb

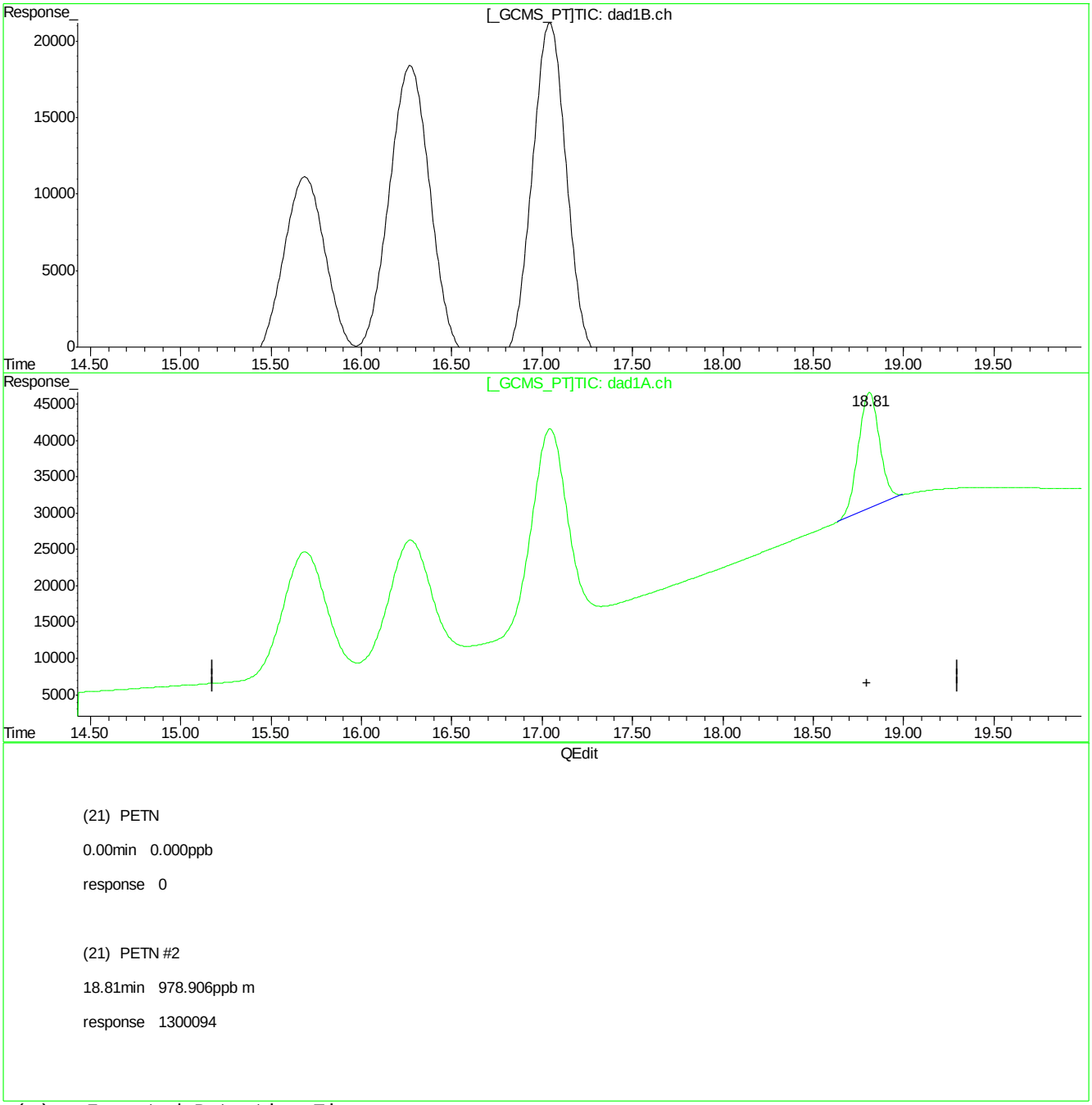
response 668367

(+) = Expected Retention Time
PP390611.D GPP2428_040221PRI.M Fri Apr 23 10:13:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1A.ch
Acq On : 22-Apr-2021, 16:19:39 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.81min 978.906ppb m

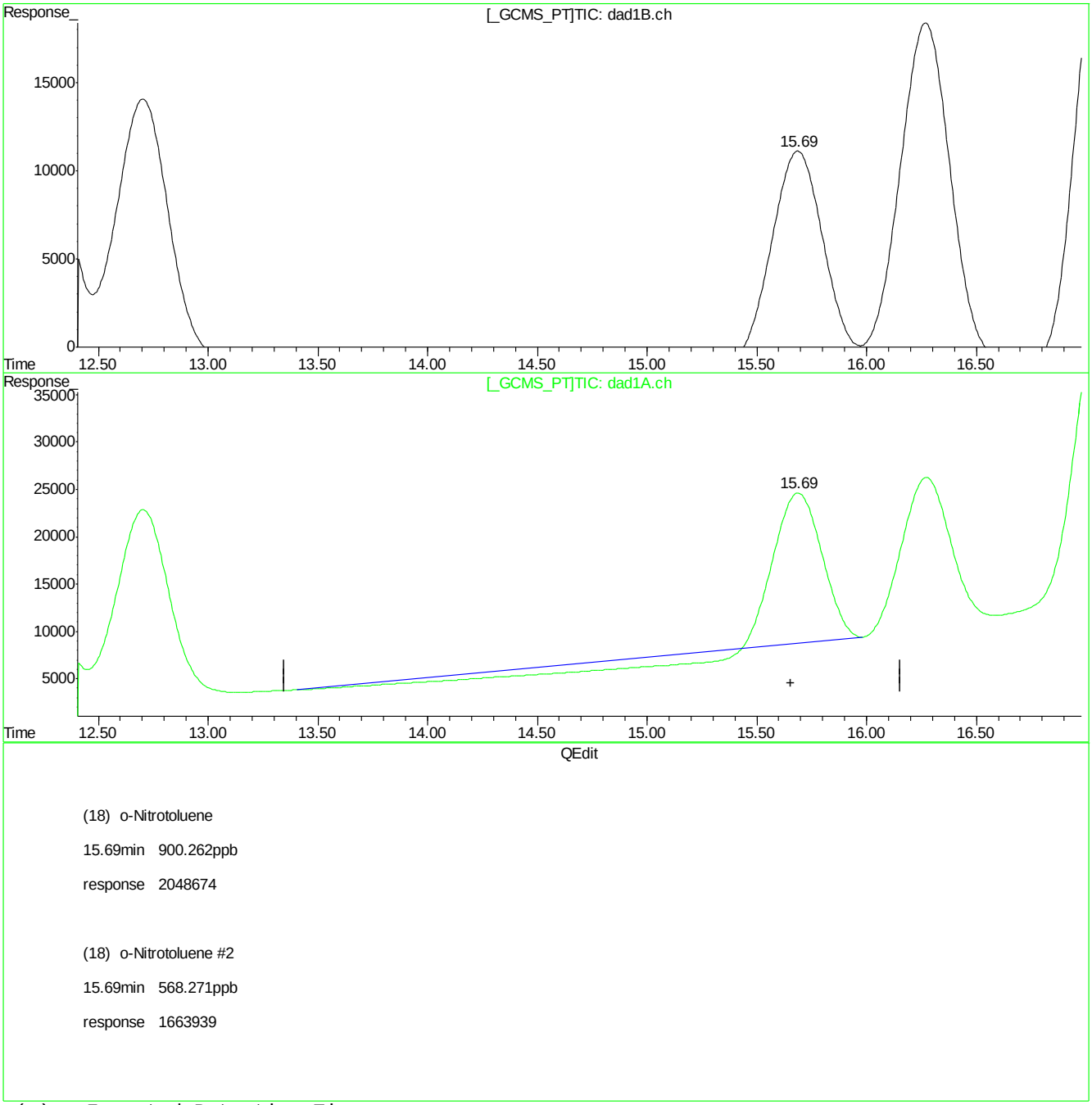
response 1300094

(+) = Expected Retention Time
PP390611.D GPP2428_040221PRI.M Fri Apr 23 10:13:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1A.ch
Acq On : 22-Apr-2021, 16:19:39 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.69min 900.262ppb

response 2048674

(18) o-Nitrotoluene #2

15.69min 568.271ppb

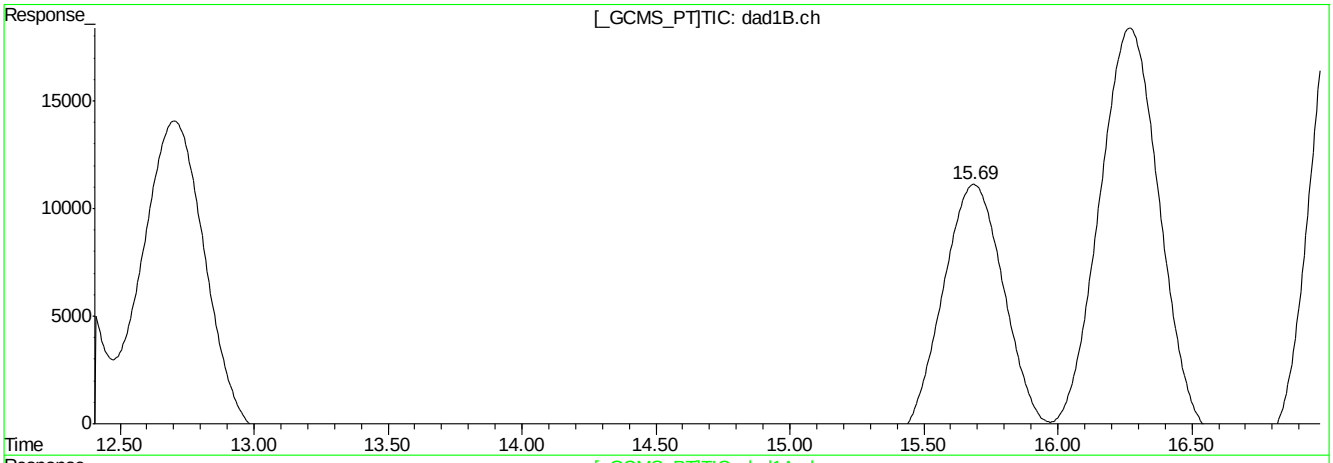
response 1663939

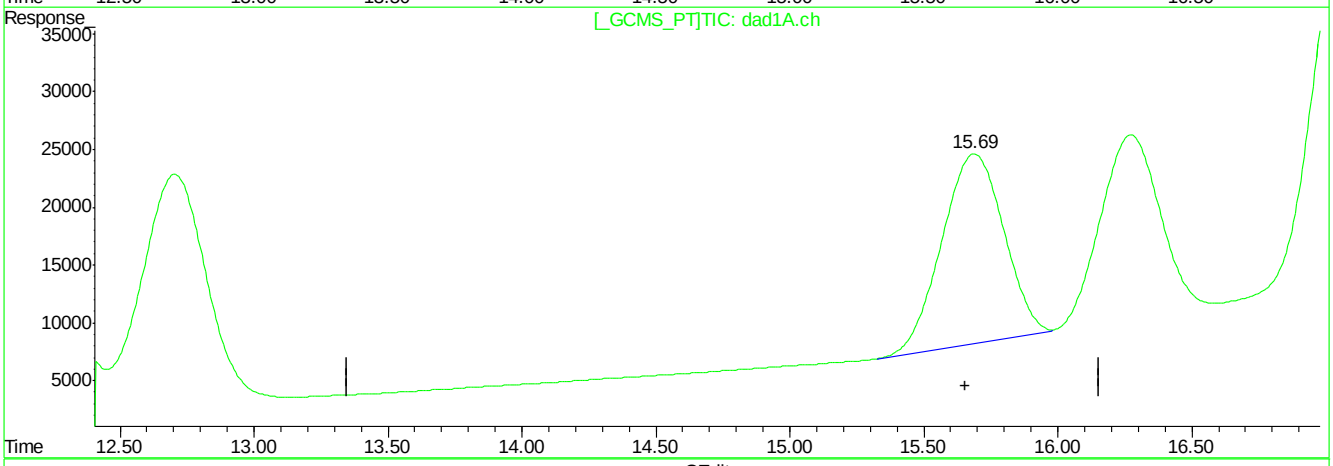
(+) = Expected Retention Time
PP390611.D GPP2428_040221PRI.M Fri Apr 23 10:14:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2438\PP390611.D\dad1A.ch
Acq On : 22-Apr-2021, 16:19:39 Operator: jamesb
Sample : cc2428-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Apr 23 9:52 2021 Quant Results File: GPP2428_040221PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2428_040221PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Wed Apr 21 09:02:30 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.69min 900.262ppb

response 2048674

(18) o-Nitrotoluene #2

15.69min 902.534ppb m

response 2642686

(+) = Expected Retention Time
PP390611.D GPP2428_040221PRI.M Fri Apr 23 10:14:08 2021

DATE	4/22/2021	METHODS	8330	IC/ICC STD LOT	LC1461
COLUMN TYPE	Extend C18	ACQ. METHOD	8330B	ICV STD LOT	LV1462
AMOUNT INJ	100 uL	PROC. METHOD	8330B_042221_PLUS.M	SOLVENT	204903
INSTRUMENT	HPLC5-BB	CALIB. DATE	4/22/2021	SOLVENT	204513
ANALYST	JB	RUN BATCH	GBB2026	HEAD PRESSURE	194

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
BB068880	2	ic2026-20	8330	2/500	op85043,GBB2026,1000,,,10,1,water	/
BB068881	3	ic2026-50	8330	5/500	op85043,GBB2026,1000,,,10,1,water	/
BB068882	4	ic2026-100	8330	10/500	op85043,GBB2026,1000,,,10,1,water	/
BB068883	5	ic2026-200	8330	20/500	op85043,GBB2026,1000,,,10,1,water	/
BB068884	6	ic2026-500	8330	50/500	op85043,GBB2026,1000,,,10,1,water	/
BB068885	7	icc2026-1000	8330	100/500	op85043,GBB2026,1000,,,10,1,water	/
BB068886	8	ic2026-2500	8330	250/500	op85043,GBB2026,1000,,,10,1,water	/
BB068887	9	ic2026-5000	8330	1	op85043,GBB2026,1000,,,10,1,water	/
BB068888	10	icv2026-1000	8330	1	op85043,GBB2026,1000,,,10,1,water	Pass
BB068889	1	ccb	8330	1	op85043,GBB2026,1000,,,10,1,water	/
BB068890	11	op85043-MB	8330	1	op85043,GBB2026,2,,,20,1,soil	/
BB068891	12	op85043-BS	8330	1	op85043,GBB2026,2,,,20,1,soil	Fail all cmpds
BB068892	13	FA84553-1	8330	1	op85043,GBB2026,2.16,,,20,1,soil	/RR
BB068893	14	FA84553-2	8330	1	op85043,GBB2026,2.15,,,20,1,soil	/RR
BB068894	15	FA84553-3	8330	1	op85043,GBB2026,2.3,,,20,1,soil	/RR
BB068895	16	FA84553-4	8330	1	op85043,GBB2026,2.21,,,20,1,soil	/RR
BB068896	17	FA84553-5	8330	1	op85043,GBB2026,2.14,,,20,1,soil	/RR
BB068897	18	FA84553-6	8330	1	op85043,GBB2026,2.15,,,20,1,soil	/RR
BB068898	19	FA84553-7	8330	1	op85043,GBB2026,2.2,,,20,1,soil	/RR
BB068899	20	FA84553-8	8330	1	op85043,GBB2026,2.15,,,20,1,soil	/RR
BB068900	91	cc2026-1000	8330	100/500	op85043,GBB2026,1000,,,10,1,water	Pass
BB068901	1	ccb	8330	1	op85043,GBB2026,1000,,,10,1,water	/RR
BB068902	21	FA84553-9	8330	1	op85043,GBB2026,2.1,,,20,1,soil	/RR
BB068903	22	op85043-MS	8330	1	op85043,GBB2026,2.55,,,20,1,soil	/RR
BB068904	23	op85043-MSD	8330	1	op85043,GBB2026,2.53,,,20,1,soil	/RR
BB068905	91	ecc2026-1000	8330	100/500	op85043,GBB2026,1000,,,10,1,water	Pass

DATE	4/23/2021	METHODS	8330	IC/ICC STD LOT	LC1461
COLUMN TYPE	Extend C18	ACQ. METHOD	8330B	ICV STD LOT	LV1462
AMOUNT INJ	100 uL	PROC. METHOD	8330B_042221_PLUS.M	SOLVENT	204903
INSTRUMENT	HPLC5-BB	CALIB. DATE	4/22/2021	SOLVENT	204513
ANALYST	JB	RUN BATCH	GBB2027	HEAD PRESSURE	194

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
BB068906	2	cc2026-1000	8330	100/500	op85067,GBB2027,1000,,,10,1,water	Pass
BB068907	1	ccb	8330	1	op85067,GBB2027,1000,,,10,1,water	/
BB068908	3	op85067-MB	8330	1	op85067,GBB2027,1000,,,10,1,water	/
BB068909	4	op85067-BS	8330	1	op85067,GBB2027,1000,,,10,1,water	Pass
BB068910	5	FA84755-6	8330	1	op85067,GBB2027,1020,,,10,1,water	10x-RDX cf-HMX DNX MNX TNT 2a 4a 24
BB068911	6	FA84755-7	8330	1	op85067,GBB2027,1040,,,10,1,water	0x-RDX cf-HMX DNX MNX RDX TNT 2a 4a 24 2
BB068912	7	FA84755-8	8330	1	op85067,GBB2027,1020,,,10,1,water	-RDX cf-HMX DNX MNX RDX TNT 2a 4a 24 PE
BB068913	8	FA84824-1	8330	1	op85067,GBB2027,1050,,,10,1,water	cf-RDX
BB068914	9	FA84875-1	8330	1	op85067,GBB2027,1020,,,10,1,water	cf-HMX RDX 135 13
BB068915	10	FA84875-2	8330	1	op85067,GBB2027,1020,,,10,1,water	cf-RDX 135
BB068916	11	op85067-MS	8330	1	op85067,GBB2027,520,,,10,1,water	/
BB068917	12	op85067-MSD	8330	1	op85067,GBB2027,520,,,10,1,water	/
BB068918	2	cc2026-1000	8330	100/500	op85067,GBB2027,1000,,,10,1,water	Pass
BB068919	1	ccb	8330	1	op85067,GBB2027,1000,,,10,1,water	/
BB068920	13	op85042-MB	8330	1	op85042,GBB2027,1000,,,10,1,water	/
BB068921	14	op85042-BS	8330	1	op85042,GBB2027,1000,,,10,1,water	Pass
BB068922	15	FA84757-3	8330	1	op85042,GBB2027,1050,,,10,1,water	cf-24
BB068923	16	FA84757-4	8330	1	op85042,GBB2027,1040,,,10,1,water	cf-24
BB068924	17	FA84757-5	8330	1	op85042,GBB2027,1050,,,10,1,water	cf-RDX PETN
BB068925	18	FA84757-6	8330	1	op85042,GBB2027,1060,,,10,1,water	cf-RDX 135
BB068926	19	FA84757-7	8330	1	op85042,GBB2027,1060,,,10,1,water	cf-RDX
BB068927	20	FA84757-8	8330	1	op85042,GBB2027,1050,,,10,1,water	/
BB068928	21	FA84757-9	8330	1	op85042,GBB2027,1050,,,10,1,water	cf-RDX
BB068929	22	FA84757-10	8330	1	op85042,GBB2027,1040,,,10,1,water	10x-RDX cf-HMX MNX
BB068930	92	op85001-MB	8330	1	op85001,GBB2027,1000,,,10,1,water	/
BB068931	2	cc2026-1000	8330	100/500	op85067,GBB2027,1000,,,10,1,water	Pass
BB068932	1	ccb	8330	1	op85067,GBB2027,1000,,,10,1,water	/
BB068933	23	FA84757-11	8330	1	op85042,GBB2027,1060,,,10,1,water	cf-RDX
BB068934	24	FA84757-12	8330	1	op85042,GBB2027,1030,,,10,1,water	/
BB068935	25	FA84757-13	8330	1	op85042,GBB2027,1020,,,10,1,water	cf-rdx
BB068936	26	FA84757-14	8330	1	op85042,GBB2027,1040,,,10,1,water	/
BB068937	27	FA84757-15	8330	1	op85042,GBB2027,1050,,,10,1,water	cf-HMX MNX RDX 2a 4a

BB068938	28	op85042-MS	8330	1	op85042,GBB2027,520,,,10,1,water	/
BB068939	29	op85042-MSD	8330	1	op85042,GBB2027,520,,,10,1,water	/
BB068940	30	FA84659-7	8330	1	op85001,GBB2027,1050,,,10,1,water	RDX TNT cf- TNX HMX DNX MNX 135 35 2a 4
BB068941	31	FA84640-3,10	8330	10	op84960,GBB2027,1040,,,10,10,wate	/
BB068942	2	ecc2026-1000	8330	100/500	op85067,GBB2027,1000,,,10,1,water	Pass
BB068943	32	FA84742-7	8330	1	op85001,GBB2027,1050,,,10,1,water	cf-Ont
BB068944	33	FA84742-8	8330	1	op85001,GBB2027,1060,,,10,1,water	/
BB068945	34	FA84742-9	8330	1	op85001,GBB2027,1040,,,10,1,water	cf-Ont
BB068946	35	FA84751-1	8330	1	op85001,GBB2027,1000,,,10,1,water	/
BB068947	36	FA84644-1	8330	1	op85001,GBB2027,1050,,,10,1,water	cf-RDX
BB068948	37	FA84644-3	8330	1	op85001,GBB2027,1060,,,10,1,water	cf-RDX
BB068949	38	FA84654-1	8330	1	op85001,GBB2027,1040,,,10,1,water	cf-RDX
BB068950	39	FA84654-2	8330	1	op85001,GBB2027,1060,,,10,1,water	cf-RDX
BB068951	40	op84960-MS	8330	1	op84960,GBB2027,520,,,10,1,water	/
BB068952	41	op84960-MSD	8330	1	op84960,GBB2027,520,,,10,1,water	/
BB068953	91	cc2026-1000	8330	100/500	op85067,GBB2027,1000,,,10,1,water	Pass
BB068954	42	FA84755-6,10	8330	10	op85067,GBB2027,1020,,,10,10,wate	/
BB068955	43	FA84755-7,10	8330	10	op85067,GBB2027,1040,,,10,10,wate	/
BB068956	44	FA84755-8,10	8330	10	op85067,GBB2027,1020,,,10,10,wate	/
BB068957	91	ecc2026-1000	8330	100/500	op85067,GBB2027,1000,,,10,1,water	DNR

DATE	4/26/2021	METHODS	8330	IC/ICC STD LOT	LC1461
COLUMN TYPE	Extend C18	ACQ. METHOD	8330B	ICV STD LOT	LV1462
AMOUNT INJ	100 uL	PROC. METHOD	8330B_042221_PLUS.M	SOLVENT	204903
INSTRUMENT	HPLC5-BB	CALIB. DATE	4/22/2021	SOLVENT	204513
ANALYST	JB	RUN BATCH	GBB2028	HEAD PRESSURE	194

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
BB068958	91	cc2026-1000	8330	100/500	op85067,GBB2028,1000,,,10,1,water	pass
BB068959	36	FA84644-1	8330	1	op85001,GBB2028,1050,,,10,1,water	ok
BB068960	37	FA84644-3	8330	1	op85001,GBB2028,1060,,,10,1,water	ok
BB068961	38	FA84654-1	8330	1	op85001,GBB2028,1040,,,10,1,water	ok
BB068962	39	FA84654-2	8330	1	op85001,GBB2028,1060,,,10,1,water	ok
BB068963	91	cc2026-1000	8330	100/500	op85067,GBB2028,1000,,,10,1,water	pass
BB068964	32	FA84742-7	8330	1	op85001,GBB2028,1050,,,10,1,water	ok
BB068965	33	FA84742-8	8330	1	op85001,GBB2028,1060,,,10,1,water	ok
BB068966	34	FA84742-9	8330	1	op85001,GBB2028,1040,,,10,1,water	ok
BB068967	35	FA84751-1	8330	1	op85001,GBB2028,1000,,,10,1,water	ok
BB068968	40	op84960-MS	8330	1	op84960,GBB2028,520,,,10,1,water	ok
BB068969	41	op84960-MSD	8330	1	op84960,GBB2028,520,,,10,1,water	ok
BB068971	42	FA84755-6,10	8330	10	op85067,GBB2028,1020,,,10,10,wate	ok
BB068972	43	FA84755-7,10	8330	10	op85067,GBB2028,1040,,,10,10,wate	ok
BB068973	44	FA84755-8,10	8330	10	op85067,GBB2028,1020,,,10,10,wate	ok
BB068974	45	FA84757-10,10	8330	10	op85042,GBB2028,1040,,,10,10,wate	pass
BB068975	91	ecc2026-1000	8330	100/500	op85067,GBB2028,1000,,,10,1,water	
BB068976	46	FA84755-2,10	8330	10	op85021,GBB2028,1050,,,10,10,wate	rr
BB068977	47	FA84755-3,10	8330	10	op85021,GBB2028,1040,,,10,10,wate	rr
BB068978	48	FA84755-4,10	8330	10	op85021,GBB2028,1050,,,10,10,wate	rr
BB068979	49	FA84759-7,10	8330	10	op85001,GBB2028,1050,,,10,10,wate	rr
BB068980	91	ecc2026-1000	8330	100/500	op85067,GBB2028,1000,,,10,1,water	no sample in vial

DATE	3/22/2021	**METHODS**	8330	**IC/ICC STD LOT**	**LC1444**
COLUMN TYPE	Bonus-RP	**ACQ. METHOD**	8330RPB3	**ICV STD LOT**	**LC1445**
AMOUNT INJ	100uL	**PROC. METHOD**	GGG2952_032221.M	**SOLVENT**	**204903**
INSTRUMENT	HPLC3-GG	**CALIB. DATE**	3/22/2021	**SOLVENT**	**204513**
ANALYST	JB	**RUN BATCH**	GGG2952	**HEAD PRESSURE**	**112**

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG620952	1	ccb	8330	1	op84480,GGG2952,1000,,,10,1,water	/
GG620953	91	ic2952-20	8330	2/500	op84480,GGG2952,1000,,,10,1,water	/
GG620954	92	ic2952-50	8330	5/500	op84480,GGG2952,1000,,,10,1,water	/
GG620955	93	ic2952-100	8330	10/500	op84480,GGG2952,1000,,,10,1,water	/
GG620956	94	ic2952-200	8330	20/500	op84480,GGG2952,1000,,,10,1,water	/
GG620957	95	ic2952-500	8330	50/500	op84480,GGG2952,1000,,,10,1,water	/
GG620958	96	icc2952-1000	8330	100/500	op84480,GGG2952,1000,,,10,1,water	/
GG620959	97	ic2952-2500	8330	250/500	op84497,GGG2952,1000,,,10,1,water	/
GG620960	98	ic2952-5000	8330	1	op84497,GGG2952,1000,,,10,1,water	/
GG620961	99	icv2952-1000	8330	1	op84497,GGG2952,1000,,,10,1,water	(Tetryl FHS2)

DATE	4/23/2021	METHODS	8330	IC/ICC STD LOT	LC1452
COLUMN TYPE	Bonus-RP	ACQ. METHOD	8330RPB3	ICV STD LOT	LC1445
AMOUNT INJ	100uL	PROC. METHOD	GGG2952_032221.M	SOLVENT	204903
INSTRUMENT	HPLC3-GG	CALIB. DATE	3/22/2021	SOLVENT	204513
ANALYST	JB	RUN BATCH	GGG2966	HEAD PRESSURE	112

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG621160	1	ccb	8330	1	op84690,GGG2966,1000,,,10,1,water	/
GG621161	2	cc2952-1000	8330	100/500	op84690,GGG2966,1000,,,10,1,water	(TNX FL Tetryl FH)
GG621162	1	ccb	8330	1	op84690,GGG2966,1000,,,10,1,water	/
GG621163	3	op84690-MB	8330	1	op84690,GGG2966,1000,,,10,1,water	/
GG621164	4	FA84640-1cf	8330	1	op84690,GGG2966,1040,,,10,1,water	X-PETN
GG621165	5	FA84640-2cf	8330	1	op84690,GGG2966,1050,,,10,1,water	X-PETN, 13
GG621166	6	FA84640-3cf	8330	1	op84690,GGG2966,1040,,,10,1,water	/
GG621167	7	FA84640-3cf,10	8330	10	op84690,GGG2966,1040,,,10,10,water	/
GG621168	8	FA84640-4cf	8330	1	op84690,GGG2966,1050,,,10,1,water	X-PETN
GG621169	9	FA84640-5cf	8330	1	op84690,GGG2966,1060,,,10,1,water	X-PETN dnr
GG621170	10	op85001-MB	8330	1	op85001,GGG2966,1000,,,10,1,water	/
GG621171	11	FA84644-1	8330	1	op85001,GGG2966,1050,,,10,1,water	/
GG621172	12	FA84644-3	8330	1	op85001,GGG2966,1060,,,10,1,water	/
GG621173	2	cc2952-1000	8330	100/500	op84690,GGG2966,1000,,,10,1,water	(TNX FL Tetryl FH)
GG621174	1	ccb	8330	1	op84690,GGG2966,1000,,,10,1,water	/
GG621175	13	FA84654-1	8330	1	op85001,GGG2966,1040,,,10,1,water	/
GG621176	14	FA84654-2	8330	1	op85001,GGG2966,1060,,,10,1,water	/
GG621177	15	FA84659-1	8330	1	op85001,GGG2966,1050,,,10,1,water	/
GG621178	16	FA84659-2	8330	1	op85001,GGG2966,1060,,,10,1,water	RR
GG621179	17	FA84659-3	8330	1	op85001,GGG2966,1060,,,10,1,water	/
GG621180	18	FA84659-5	8330	1	op85001,GGG2966,1040,,,10,1,water	/
GG621181	19	FA84659-6	8330	1	op85001,GGG2966,1060,,,10,1,water	RR
GG621182	20	FA84659-7	8330	1	op85001,GGG2966,1050,,,10,1,water	RR
GG621183	21	FA84742-7	8330	1	op85001,GGG2966,1050,,,10,1,water	/
GG621184	22	FA84742-9	8330	1	op85001,GGG2966,1040,,,10,1,water	/
GG621185	2	cc2952-1000	8330	100/500	op84690,GGG2966,1000,,,10,1,water	(Tetryl FH)(TNT 2A FHS2)
GG621186	23	op85067-MB	8330	1	op85067,GGG2966,1000,,,10,1,water	/
GG621187	24	FA84755-6cf	8330	1	op85067,GGG2966,1020,,,10,1,water	DNX Flag /
GG621188	25	FA84755-6cf,10	8330	10	op85067,GGG2966,1020,,,10,10,water	/
GG621189	26	FA84755-7cf	8330	1	op85067,GGG2966,1040,,,10,1,water	X-26
GG621190	27	FA84755-7cf,10	8330	10	op85067,GGG2966,1040,,,10,10,water	/
GG621191	28	FA84755-8cf	8330	1	op85067,GGG2966,1020,,,10,1,water	X-PETN dnx

GG621192	29	FA84755-8cf,10	8330	10	op85067,GGG2966,1020,,,10,10,water	/
GG621193	30	FA84824-1cf	8330	1	op85067,GGG2966,1050,,,10,1,water	/
GG621194	31	FA84875-1cf	8330	1	op85067,GGG2966,1020,,,10,1,water	X-13
GG621195	32	FA84875-2cf	8330	1	op85067,GGG2966,1020,,,10,1,water	/
GG621196	2	ecc2952-1000	8330	100/500	op84690,GGG2966,1000,,,10,1,water	(TNX FL Tetryl FH)

DATE	4/2/2021	**METHODS**	8330	**IC/ICC STD LOT**	**LC1449**
COLUMN TYPE	Extend C18	**ACQ. METHOD**	8330BPL	**ICV STD LOT**	**LC1445**
AMOUNT INJ	100uL	**PROC. METHOD**	GPP2428_040221PRI.M	**SOLVENT**	**205227**
INSTRUMENT	HPLC4-PP	**CALIB. DATE**	4/2/2021	**SOLVENT**	**203405**
ANALYST	JB	**RUN BATCH**	GPP2428	**HEAD PRESSURE**	**196**

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
PP390446	91	ic2428-20	8330	2/500	op84681,GPP2428,1000,,,10,1,water	/
PP390447	92	ic2428-50	8330	5/500	op84681,GPP2428,1000,,,10,1,water	/
PP390448	93	ic2428-100	8330	10/500	op84681,GPP2428,1000,,,10,1,water	/
PP390449	94	ic2428-200	8330	20/500	op84681,GPP2428,1000,,,10,1,water	/
PP390450	95	ic2428-500	8330	50/500	op84681,GPP2428,1000,,,10,1,water	/
PP390451	96	icc2428-1000	8330	100/500	op84681,GPP2428,1000,,,10,1,water	/
PP390452	97	ic2428-2500	8330	250/500	op84681,GPP2428,1000,,,10,1,water	/
PP390453	98	ic2428-5000	8330	1	op84681,GPP2428,1000,,,10,1,water	/
PP390454	99	icv2428-1000	8330	1	op84681,GPP2428,1000,,,10,1,water	Pass

DATE	4/22/2021	METHODS	8330	IC/ICC STD LOT	LC1456
COLUMN TYPE	Extend C18	ACQ. METHOD	8330BPL	ICV STD LOT	LC1445
AMOUNT INJ	100uL	PROC. METHOD	GPP2428_040221PRI.M	SOLVENT	205227
INSTRUMENT	HPLC4-PP	CALIB. DATE	4/2/2021	SOLVENT	203405
ANALYST	JB	RUN BATCH	GPP2438	HEAD PRESSURE	252

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
PP390597	2	cc2428-1000	8330	100/500	op84960,GPP2438,1000,,,10,1,water	Pass
PP390598	1	ccb	8330	1	op84960,GPP2438,1000,,,10,1,water	/
PP390599	3	op84960-MB	8330	1	op84960,GPP2438,1000,,,10,1,water	/
PP390600	12	FA84596-15,10	8330	10	op84948,GPP2438,1000,,,10,10,water	/
PP390601	2	cc2428-1000	8330	100/500	op84960,GPP2438,1000,,,10,1,water	Pass
PP390602	1	ccb	8330	1	op84960,GPP2438,1000,,,10,1,water	/
PP390603	4	op84960-BS	8330	1	op84960,GPP2438,1000,,,10,1,water	Pass
PP390604	5	FA84640-1	8330	1	op84960,GPP2438,1040,,,10,1,water	cf-HMX RDX 135 13 35 TNT 2a 4a PETN
PP390605	6	FA84640-2	8330	1	op84960,GPP2438,1050,,,10,1,water	cf-HMX RDX 135 13 35 TNT 2a 4a PETN
PP390606	7	FA84640-3	8330	1	op84960,GPP2438,1040,,,10,1,water	10x-TNT cf HMX RDX 135 35 TNT 2a 4a
PP390607	8	FA84640-4	8330	1	op84960,GPP2438,1050,,,10,1,water	cf-HMX RDX 135 35 TNT 2a 4a PETN
PP390608	9	FA84640-5	8330	1	op84960,GPP2438,1060,,,10,1,water	cf-PETN
PP390609	10	op84960-MS	8330	1	op84960,GPP2438,520,,,10,1,water	/
PP390610	11	op84960-MSD	8330	1	op84960,GPP2438,520,,,10,1,water	/
PP390611	2	cc2428-1000	8330	100/500	op84960,GPP2438,1000,,,10,1,water	Pass
PP390612	13	op85001-MB	8330	1	op85001,GPP2438,1000,,,10,1,water	/
PP390613	14	op85001-BS	8330	1	op85001,GPP2438,1000,,,10,1,water	Pass
PP390614	15	FA84659-1	8330	1	op85001,GPP2438,1050,,,10,1,water	cf-RDX
PP390615	16	FA84659-2	8330	1	op85001,GPP2438,1060,,,10,1,water	cf-TNX HMX DNX MNX RDX 135 13 35 TNT 2a 4a 24
PP390616	17	FA84659-3	8330	1	op85001,GPP2438,1060,,,10,1,water	cf-HMX RDX 135 35 TNT
PP390617	18	FA84659-4	8330	1	op85001,GPP2438,1050,,,10,1,water	/
PP390618	19	FA84659-5	8330	1	op85001,GPP2438,1040,,,10,1,water	cf-HMX RDX 135 TNT
PP390619	20	FA84659-6	8330	1	op85001,GPP2438,1060,,,10,1,water	cf-TNX HMX DNX MNX RDX 135 13 35 TNT 2a 4a 24
PP390620	21	FA84659-7	8330	1	op85001,GPP2438,1050,,,10,1,water	miss-inject RR
PP390621	2	ecc2428-1000	8330	100/500	op84960,GPP2438,1000,,,10,1,water	Pass
PP390622	1	ccb	8330	1	op85001,GPP2438,1000,,,10,1,water	/
PP390623	22	FA84742-7	8330	1	op85001,GPP2438,1050,,,10,1,water	cf- Ont
PP390624	23	FA84742-8	8330	1	op85001,GPP2438,1060,,,10,1,water	/
PP390625	24	FA84742-9	8330	1	op85001,GPP2438,1040,,,10,1,water	cf- Ont
PP390626	25	Fa84751-1	8330	1	op85001,GPP2438,1000,,,10,1,water	/
PP390627	26	FA84644-1	8330	1	op85001,GPP2438,1050,,,10,1,water	cf-RDX
PP390628	27	FA84644-3	8330	1	op85001,GPP2438,1060,,,10,1,water	cf-RDX

PP390629	28	FA84654-1	8330	1	op85001,GPP2438,1040,,,10,1,water	cf-RDX 135
PP390630	29	FA84654-2	8330	1	op85001,GPP2438,1060,,,10,1,water	cf-RDX 135
PP390631	30	op85001-MS	8330	1	op85001,GPP2438,520,,,10,1,water	/
PP390632	31	op85001-MSD	8330	1	op85001,GPP2438,520,,,10,1,water	/
PP390633	2	ecc2428-1000	8330	100/500	op84960,GPP2438,1000,,,10,1,water	All cmpds half conc

SGS - ORLANDO

SPE LIQUID SAMPLE PREP REPORT

Date/Time: Started 04/16/2021 0930 {mm/dd/yy 24:00}

Date/Time: Finished 04/16/2021 1600 {mm/dd/yy 24:00}

Prep Method: (3535A) or 537 or 537MOD (circle)

Analytical Method: 8330B

Batch#: OP84960 Ext. By: MB Conc. By: — Vialed By: MB

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP 84960 MB	X	1000	6	N/A	250ul		10ml	AT-1	
OP 84960 BS	X	1000				250ul			
FA84640-1	2	1040							
-2	2	1050							
-3	4	1040						AT-2	
-4	2	1050							
-5	2	1060							
FA84640-3MS	5	520	6	N/A	250ul	250ul	10ml	AT-1	
-3MSD	5	520							
DUP									

MB 04/16/2021

Comments:

Surr.1 ID: LC14548 Conc: 10ppm Exp. Date: 10/08/21 Inj. By: MB Ver. By MB

Spk.1 ID: LC1453 Conc: 20ppm Exp. Date: 10/08/21 Inj. By: MB Ver. By MB

Spk.2 ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

Spk.3 ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

TurboVap Temp (Therm ID): — N-Evap Temp (Therm ID): —

Observed Temp °C: — Corr. Temp °C: — Observed Temp °C: — Corr. Temp °C: —

Methanol Lot #: — SPE Lot #: 5214-0111 pH Paper #: 222420

Acetonitrile Lot #: 204566 Syringe filter Lot #: — Reagent #: —

Water Lot#: DI H2O Pre-filter Lot#: — Reagent #: —

Solvent#: — Carbon Lot#: — Other —

Relinquished By: MB Date: 04/16/2021

Accepted By: Date: 4/20/21

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718

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ANALYTICAL RESULTS FOR:

ANTHONY PACE
WESTON SOLUTIONS, INC.
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

PROJECT SITE:	RFAAP SWMU-49; RADFORD, VA
DOD CONTRACT #:	
PROJECT #:	
SDG:	***163390***
FOLDERS:	163390, 163449, 163492, 163509
PREPARED:	August 23, 2021
TOTAL # OF PAGES:	1619

The data contained in the following report have been reviewed by the appropriate CT Laboratories' LLC staff members. In addition, CT Laboratories LLC certifies that to the best of our knowledge that the analyses reported herein are true, complete and correct within the limits of the methods employed and that they follow the applicable requirements as specified by the project plan, state-specific, NELAC or DOD QSM requirements. The estimated uncertainty of measurement is only available upon request. The reported results relate only to the tested samples. This report shall not be reproduced, except in full, without written approval of CT Laboratories LLC.

APPROVED BY: Brett Szymanski
PROJECT MANAGER

Certifications: IL (NELAP 200073), KS (NELAP E-10368), WI (157066030), DOD ELAP (A2LA 3806.01), VA (NELAP 4602038), MD (WI 00061), LA (NELAP ACC20160002), ISO17025 (A2LA 3806.01), GA EDP Stipulation (Accreditor: LA NELAP, ACC#: ACC20160002, Scope: Non-potable water solid and chemical materials, biological tissue, Effective: 12/10/2014, Expires: annually)

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Case Narrative

Client: Weston Solutions
Project: RFAAP SWMU-49, Radford, VA
Sample Receipt Dates: 07/27/2021, 07/29/2021, 07/30/2021, 07/31/2021
SDG #: *163390* (Folder #'s 163390, 163449, 163492, 163509)

Sixteen water samples were received and analyzed for a variety of parameters, including: VOCs, Dissolved Gases, Metals, pH, COD, Anions, and TOC. Four Trip Blanks were included with the VOCs. The assigned sample ID number, date sampled, and date received are indicated in the attached Project Summary. The samples were received intact and at a temperature within method specified acceptance limits. A breakdown of sample receipt information can be found on the Sample Condition Report located in the last section of the data package and any exceptions are noted below. The analyses were performed following DOD QSM 5.3 requirements.

Manual integrations may have been performed on the data provided with this package. If manual integrations were performed, a Reason #(s) was included on the raw data that corresponds to the "Index Key for Manual Integration Rationale." The raw data includes a "Before" and "After" manual integration illustration. The manual integrations were initialed and dated by the analyst, as well as, by the person reviewing the data.

Sample Analysis and Quality Control

Volatile Analysis:

The samples were analyzed using US EPA Methods 8260C (VOC) and RSK-175 (Dissolved Gases). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Surrogate Recovery Data
Matrix Spike/Matrix Spike Duplicate Recovery Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log
Chromatograms

All analysis results met the method specified quality control criteria with the following exceptions:

Detailed reports were provided for the 8260 data for all detected compounds, as well as, for those compounds manually integrated (if applicable). Compounds not reported on the form 1's were either not detected or did not meet identification criteria so they were reported as non-detects.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

VOC (8260C) Water Analysis

Analytical Run # 193941

CCV2 (analyzed 07/28/2021 @ 07:57 on VMS3) had a low recovery outside of specified criteria for 1,4-dioxane. This compound was qualified with a "Z" flag in the associated samples.

Chlorobenzene was detected in the Method Blank (MB). This compound was not detected in the associated samples and was not qualified.

The Relative Percent Difference (RPD) limits between the Laboratory Control Sample (LCS) and the Laboratory Control Sample Duplicate (LCSD) were exceeded for 1,4-dioxane and for 2-butanone. These compounds were qualified with a "Y" flag in the associated samples.

Analytical Run # 194091

CCV1 (analyzed 08/05/2021 @ 09:13 on VMS3) had a low recovery outside of specified criteria for 1,2-dibromo-3-chloropropane. This compound was qualified with a "Z" flag in the associated samples.

Sample # 1031437 had a high surrogate standard (SSTD) recovery for $toluene_{d8}$. Surrogates with recoveries outside of the acceptable limits were qualified with an "S" flag.

Dissolved Gases (RSK-175) Analysis

Analytical Run # 194154 (Methane, Ethene, Ethane)

All analytical results for this run met the method/project specified quality control criteria.

Metals Analysis:

The samples were analyzed using US EPA Methods 6010C (ICP) and 7470A (Hg). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Initial and Continuing Calibration Verification
Blanks Summary
ICP Interference Check Data
Spike Sample Recovery
Duplicates Data
Laboratory Control Sample Data
Analysis Run Log

All analysis results met the method specified quality control criteria with the following exceptions:

ICP Metals (6010C) Water Analysis

Continuing Calibration Verification (CCV) standards were analyzed at two levels (CCV1 & CCV2) with potentially differing wavelengths. Data associated with CCV's were evaluated based on the concentration of the element in the samples and compared to the appropriate CCV level/wavelength.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Analytical Run # 194081

Beryllium was detected in the MB greater than the Method Detection Limit (MDL) but less than ½ the Reporting Limit (RL). The sample was reported and qualified with a "B" flag because the MB result was greater than 1/10th of the sample result.

The Duplicate (DUP) for sample # 102214 was not applicable for antimony, arsenic, beryllium, cadmium, cobalt, copper, lead, nickel, selenium, silver, thallium, and vanadium because the parent sample results were less than five times the Limit of Quantitation (LOQ). A Matrix Spike Duplicate (MSD) was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

The DUP for sample # 1032214 was not acceptable for aluminum because the result exceeded the RPD limit. The parent sample was reported and qualified with a "Y" flag for the failing element.

The Matrix Spike (MS) and MSD for sample # 1032214 had recoveries outside of the acceptable limits for aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, silver, vanadium, and zinc. A Serial Dilution (L) was analyzed and was not applicable for silver, arsenic, beryllium, cadmium, cobalt, chromium, copper, nickel, lead, antimony, vanadium, and zinc because the parent sample raw results were less than 50 times the LOQ. The L was not acceptable for aluminum, barium, calcium, iron, magnesium, and manganese because the results exceeded the RPD limit. A Post Digestion Spike (PDS) was analyzed and was unacceptable for iron and manganese. The parent sample was reported and qualified with an "M" flag for the failing elements.

ICP Sodium & Potassium (6010C) Water Analysis

Analytical Run # 194082

The MS and MSD for sample # 1032214 had recoveries outside of the acceptable limits for sodium and potassium. An L was analyzed and was not applicable for sodium and potassium because the parent sample raw results was less than 50 times the LOQ. A PDS was analyzed and was acceptable. The parent sample was reported and not qualified.

CVAA Mercury (7470A) Water Analysis

Analytical Run # 194190

The sample QC was performed on a sample from SDG # 163429.

All analytical results for this run met the method/project specified quality control criteria.

Inorganic Analysis:

The samples were analyzed using US EPA Methods 9060A (TOC), 9040C (pH), 410.4 (COD) and 9056A (Anions). All samples were analyzed within the holding time unless noted below. The following summaries of quality control procedures are included:

Duplicate Analysis Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Anions (9056A) Water Analysis

Analytical Run # 193948

The MS and the MSD for sample # 1030469 had a low recovery for sulfate. The parent sample result for this analyte was qualified with an "M" flag.

Analytical Run # 193993

The MS and the MSD for sample # 1031438 had a low recovery for sulfate. The parent sample result for this analyte was qualified with an "M" flag.

Analytical Run # 194031

The MS and the MSD for sample # 1031961 had a low recovery for sulfate. The parent sample result for this analyte was qualified with an "M" flag.

Analytical Run # 194052

All analytical results for this run met the method/project specified quality control criteria.

COD (410.4) Water Analysis

Analytical Run # 194113

All analytical results for this run met the method/project specified quality control criteria.

pH (9040C) Water Analysis

Analytical Run # 194093

All analytical results for this run met the method/project specified quality control criteria.

TOC (9060A) Water Analysis

Analytical Run # 194060

All analytical results for this run met the method/project specified quality control criteria.

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Data Qualifiers

Code	Description
A	Analyte averaged calibration criteria within acceptable limits.
B	Analyte detected in associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was not above the detection level.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Calibration criteria exceeded.

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MANUAL INTEGRATION REASON CODES

CTLaboratories has identified four general cases with valid reasons supporting the use of manual integration techniques. These codes are used on chromatograms in this data package to document the reasons for manual integrations per CTLaboratories' SOP SS-10 current revision.

#1: **Data system failed to select the correct peak or missed the peak entirely.**
In some cases the chromatography system selects and integrates the "wrong peak". In this case the analyst must correct the selection and force the system to integrate the proper peak. In other instances the system may miss the peak completely. In this case the analyst manually integrated the peak

#2: **Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.**
This phenomenon is common at low concentrations where the signal to noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low or high area counts for the target compound.

#3: Improperly Integrated Isomers and/or coeluting compounds.
For when the system fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations may be inaccurate, and they must be corrected by manual integration. Prime examples are compounds that are unresolved and integrated improperly when present at low concentrations in standards or samples.

#4: System Established Incorrect Baseline.
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and may be corrected via manual procedures.

#5: Miscellaneous.
Some situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the group supervisor. If the form of manual integration is not clearly covered by these four cases, then review and approval by the group supervisor or the *QA/QC* Supervisor will be required.

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Sample Delivery Group

163390

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMU-49
Project #:

	CT Sample #	Folder #	Client Sample #	Sample Description	Matrix	Date Sampled	Date Received
1	1030462	163390		13MW4	GROUND WATER	07/26/2021	07/27/2021
2	1030468	163390		13MW3	GROUND WATER	07/26/2021	07/27/2021
3	1030469	163390		13TW3	GROUND WATER	07/26/2021	07/27/2021
4	1030471	163390		TB-1	TRIP BLANK	07/26/2021	07/27/2021
5	1031437	163449		48MW6	GROUND WATER	07/28/2021	07/29/2021
6	1031438	163449		13MW2	GROUND WATER	07/28/2021	07/29/2021
7	1031440	163449		LAB TRIP BLANK-1	TRIP BLANK	06/17/2021	07/29/2021
8	1031957	163492		48MW1	GROUND WATER	07/29/2021	07/30/2021
9	1031958	163492		49EB1	GROUND WATER	07/29/2021	07/30/2021
10	1031959	163492		49MW1	GROUND WATER	07/29/2021	07/30/2021
11	1031960	163492		TB-49	TRIP BLANK	07/29/2021	07/30/2021
12	1031961	163492		50MW2	GROUND WATER	07/29/2021	07/30/2021
13	1032207	163509		49MW4	GROUND WATER	07/30/2021	07/31/2021
14	1032208	163509		48MW2	GROUND WATER	07/30/2021	07/31/2021
15	1032209	163509		LAB TRIP BLANK-2	TRIP BLANK	07/30/2021	07/31/2021
16	1032210	163509		48MW3	GROUND WATER	07/30/2021	07/31/2021
17	1032211	163509		48TW3	GROUND WATER	07/30/2021	07/31/2021
18	1032212	163509		48RB3	GROUND WATER	07/30/2021	07/31/2021
19	1032213	163509		49MW2	GROUND WATER	07/30/2021	07/31/2021
20	1032214	163509		IDW 48/49	GROUND WATER	07/30/2021	07/31/2021

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QC Batch Cross Reference Summary

WESTON SOLUTIONS, INC.
ANTHONY PACE
2 EATON STREET
SUITE 603
HAMPTON, VA 23669

Project Name: RADFORD AAP SWMU-49
Project #:
Report Date: 08/23/2021
Date Received: 07/31/2021
SDG #: 163390

Inorganic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1032214	pH	EPA 9040C	GROUND WATER		194093

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1032214	COD QSM	EPA 410.4	GROUND WATER	81979	194113

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1030462	Anions QSM 5.0	EPA 9056A	GROUND WATER		193948
1030468	Anions QSM 5.0	EPA 9056A	GROUND WATER		193948
1030469	Anions QSM 5.0	EPA 9056A	GROUND WATER		193948
1031437	Anions QSM 5.0	EPA 9056A	GROUND WATER		193993
1031438	Anions QSM 5.0	EPA 9056A	GROUND WATER		193993
1031957	Anions QSM 5.0	EPA 9056A	GROUND WATER		194031
1031958	Anions QSM 5.0	EPA 9056A	GROUND WATER		194031
1031959	Anions QSM 5.0	EPA 9056A	GROUND WATER		194031
1031961	Anions QSM 5.0	EPA 9056A	GROUND WATER		194031
1032207	Anions QSM 5.0	EPA 9056A	GROUND WATER		194052
1032208	Anions QSM 5.0	EPA 9056A	GROUND WATER		194052
1032210	Anions QSM 5.0	EPA 9056A	GROUND WATER		194052
1032211	Anions QSM 5.0	EPA 9056A	GROUND WATER		194052
1032212	Anions QSM 5.0	EPA 9056A	GROUND WATER		194052
1032213	Anions QSM 5.0	EPA 9056A	GROUND WATER		194052
1030468	Anions QSM 5.0	EPA 9056A	GROUND WATER		193948
1030469	Anions QSM 5.0	EPA 9056A	GROUND WATER		193948
1031437	Anions QSM 5.0	EPA 9056A	GROUND WATER		193993

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1030462	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1030468	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1030469	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060

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Project Name: RADFORD AAP SWMU-49
Project #:
SDG #: 163390

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1031437	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1031438	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1031957	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1031958	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1031959	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1031961	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1032207	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1032208	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1032210	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1032211	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1032212	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060
1032213	Organic Carbon, Total QSM 5.0	EPA 9060A	GROUND WATER		194060

Metal Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1032214	Potassium, Total QSM 5.0	EPA 6010C	GROUND WATER	81954	194082

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1032214	Sodium, Total QSM 5.0	EPA 6010C	GROUND WATER	81954	194082

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1032214	ICP Metals, Total QSM 5.0	EPA 6010C	GROUND WATER	81955	194081

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1032214	Mercury, Total QSM	EPA 7470A	GROUND WATER	81952	194190

Organic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1030462	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		193941
1030468	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		193941
1030469	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		193941
1030471	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		193941
1031437	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		194091
1031438	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		194091
1031440	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		194091
1031957	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		194091
1031958	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		194091

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Project Name: RADFORD AAP SWMU-49
Project #:
SDG #: 163390

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1031959	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		194091
1031960	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		194091
1031961	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		194091
1032207	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		194091
1032208	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		194091
1032209	VOC's by 8260 QSM 5x	EPA 8260C	TRIP BLANK		194091
1032210	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		194091
1032211	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		194091
1032212	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		194091
1032213	VOC's by 8260 QSM 5x	EPA 8260C	GROUND WATER		194091

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1030462	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1030468	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1030469	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1031437	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1031438	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1031957	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1031958	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1031959	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1031961	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1032207	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1032208	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1032210	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1032211	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1032212	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154
1032213	Dissolved Gases QSM 5.0	RSK 175	GROUND WATER	81994	194154

VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL SUMMARY
DOCUMENTS

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1031438
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 11:48	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031438
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 13:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031438
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 13:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031438
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 13:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1030468
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030468
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 15:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Y	34	50	100	100
78-93-3	2-Butanone	6.0	U Y	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030468
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 15:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	7.0		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.62	J	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030468
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 15:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.1		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1030462
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 11:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030462
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 15:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Y	34	50	100	100
78-93-3	2-Butanone	6.0	U Y	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030462
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 15:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.59	J	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030462
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 15:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.7		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1030469
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 11:37	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030469
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 16:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Y	34	50	100	100
78-93-3	2-Butanone	6.0	U Y	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030469
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 16:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	6.8		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.67	J	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030469
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 16:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.2		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1031957
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 14:05	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031957
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 14:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.46	J	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031957
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 14:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.33	J	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031957
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 14:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.96	J	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1032208
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032208
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 16:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032208
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 16:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	25		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	2.9		0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032208
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 16:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.4		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1032210
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032210
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	5
Date & Time Analyzed:	08/05/2021 / 17:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	3.0	U	1.5	3.0	5.0	5.0
79-00-5	1,1,2-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-34-3	1,1-Dichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-35-4	1,1-Dichloroethene	5.0	U	2.0	5.0	10	10
87-61-6	1,2,3-Trichlorobenzene	3.0	U	1.2	3.0	5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	3.0	U	1.4	3.0	5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	3.0	U Z	1.3	3.0	5.0	5.0
106-93-4	1,2-Dibromoethane	3.0	U	1.5	3.0	5.0	5.0
95-50-1	1,2-Dichlorobenzene	3.0	U	1.5	3.0	5.0	5.0
107-06-2	1,2-Dichloroethane	1.7	J	1.2	3.0	5.0	5.0
78-87-5	1,2-Dichloropropane	3.0	U	0.90	3.0	5.0	5.0
541-73-1	1,3-Dichlorobenzene	3.0	U	1.3	3.0	5.0	5.0
123-91-1	1,4-Dioxane	250	U	170	250	500	500
78-93-3	2-Butanone	30	U	13	30	50	50
591-78-6	2-Hexanone	30	U	15	30	50	50
108-10-1	4-Methyl-2-pentanone	30	U	11	30	50	50
67-64-1	Acetone	50	U	20	50	100	100
71-43-2	Benzene	5.0	U	2.0	5.0	10	10
74-97-5	Bromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-27-4	Bromodichloromethane	3.0	U	1.5	3.0	5.0	5.0
75-25-2	Bromoform	5.0	U	2.0	5.0	10	10
74-83-9	Bromomethane	10	U	4.5	10	20	20
75-15-0	Carbon disulfide	10	U	3.0	10	20	20

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032210
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	5
Date & Time Analyzed:	08/05/2021 / 17:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	100		1.5	3.0	5.0	5.0
108-90-7	Chlorobenzene	3.0	U	1.5	3.0	5.0	5.0
75-00-3	Chloroethane	5.0	U	2.5	5.0	10	10
67-66-3	Chloroform	20		1.5	3.0	5.0	5.0
74-87-3	Chloromethane	5.0	U	3.0	5.0	10	10
156-59-2	cis-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	1.5	U	0.80	1.5	3.0	3.0
110-82-7	Cyclohexane	3.0	U	1.5	3.0	5.0	5.0
124-48-1	Dibromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-71-8	Dichlorodifluoromethane	5.0	U	2.0	5.0	10	10
100-41-4	Ethylbenzene	3.0	U	1.5	3.0	5.0	5.0
76-13-1	Freon 113	10	U	3.5	10	20	20
98-82-8	Isopropylbenzene	3.0	U	1.5	3.0	5.0	5.0
179601-23-1	m & p-Xylene	6.0	U	3.5	6.0	10	10
79-20-9	Methyl Acetate	5.0	U	2.5	5.0	10	10
1634-04-4	Methyl tert-butyl ether	3.0	U	1.5	3.0	5.0	5.0
108-87-2	Methylcyclohexane	3.0	U	1.3	3.0	5.0	5.0
75-09-2	Methylene chloride	5.0	U	2.0	5.0	10	10
95-47-6	o-Xylene	3.0	U	1.3	3.0	5.0	5.0
100-42-5	Styrene	3.0	U	1.5	3.0	5.0	5.0
127-18-4	Tetrachloroethene	3.0	U	1.4	3.0	5.0	5.0
108-88-3	Toluene	3.0	U	1.1	3.0	5.0	5.0
156-60-5	trans-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	3.0	U	1.2	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032210
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	5
Date & Time Analyzed:	08/05/2021 / 17:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	20		1.5	3.0	5.0	5.0
75-69-4	Trichlorofluoromethane	5.0	U	2.0	5.0	10	10
75-01-4	Vinyl chloride	1.5	U	0.70	1.5	3.0	3.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1031437
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 11:42	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031437
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 13:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.43	J	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	2.9		0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	0.41	J	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031437
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 13:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	5.0		0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.45	J	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031437
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 13:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	3.1		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48RB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032212
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 12:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	2.9	J	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	13	J	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48RB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032212
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 12:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48RB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032212
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 12:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

48RB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1032212
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:46	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1032211
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:32	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032211
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	5
Date & Time Analyzed:	08/05/2021 / 17:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	3.0	U	1.5	3.0	5.0	5.0
79-00-5	1,1,2-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-34-3	1,1-Dichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-35-4	1,1-Dichloroethene	5.0	U	2.0	5.0	10	10
87-61-6	1,2,3-Trichlorobenzene	3.0	U	1.2	3.0	5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	3.0	U	1.4	3.0	5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	3.0	U Z	1.3	3.0	5.0	5.0
106-93-4	1,2-Dibromoethane	3.0	U	1.5	3.0	5.0	5.0
95-50-1	1,2-Dichlorobenzene	3.0	U	1.5	3.0	5.0	5.0
107-06-2	1,2-Dichloroethane	1.7	J	1.2	3.0	5.0	5.0
78-87-5	1,2-Dichloropropane	3.0	U	0.90	3.0	5.0	5.0
541-73-1	1,3-Dichlorobenzene	3.0	U	1.3	3.0	5.0	5.0
123-91-1	1,4-Dioxane	250	U	170	250	500	500
78-93-3	2-Butanone	30	U	13	30	50	50
591-78-6	2-Hexanone	30	U	15	30	50	50
108-10-1	4-Methyl-2-pentanone	30	U	11	30	50	50
67-64-1	Acetone	50	U	20	50	100	100
71-43-2	Benzene	5.0	U	2.0	5.0	10	10
74-97-5	Bromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-27-4	Bromodichloromethane	3.0	U	1.5	3.0	5.0	5.0
75-25-2	Bromoform	5.0	U	2.0	5.0	10	10
74-83-9	Bromomethane	10	U	4.5	10	20	20
75-15-0	Carbon disulfide	10	U	3.0	10	20	20

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032211
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	5
Date & Time Analyzed:	08/05/2021 / 17:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	99		1.5	3.0	5.0	5.0
108-90-7	Chlorobenzene	3.0	U	1.5	3.0	5.0	5.0
75-00-3	Chloroethane	5.0	U	2.5	5.0	10	10
67-66-3	Chloroform	20		1.5	3.0	5.0	5.0
74-87-3	Chloromethane	5.0	U	3.0	5.0	10	10
156-59-2	cis-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	1.5	U	0.80	1.5	3.0	3.0
110-82-7	Cyclohexane	3.0	U	1.5	3.0	5.0	5.0
124-48-1	Dibromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-71-8	Dichlorodifluoromethane	5.0	U	2.0	5.0	10	10
100-41-4	Ethylbenzene	3.0	U	1.5	3.0	5.0	5.0
76-13-1	Freon 113	10	U	3.5	10	20	20
98-82-8	Isopropylbenzene	3.0	U	1.5	3.0	5.0	5.0
179601-23-1	m & p-Xylene	6.0	U	3.5	6.0	10	10
79-20-9	Methyl Acetate	5.0	U	2.5	5.0	10	10
1634-04-4	Methyl tert-butyl ether	3.0	U	1.5	3.0	5.0	5.0
108-87-2	Methylcyclohexane	3.0	U	1.3	3.0	5.0	5.0
75-09-2	Methylene chloride	5.0	U	2.0	5.0	10	10
95-47-6	o-Xylene	3.0	U	1.3	3.0	5.0	5.0
100-42-5	Styrene	3.0	U	1.5	3.0	5.0	5.0
127-18-4	Tetrachloroethene	3.0	U	1.4	3.0	5.0	5.0
108-88-3	Toluene	3.0	U	1.1	3.0	5.0	5.0
156-60-5	trans-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	3.0	U	1.2	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032211
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	5
Date & Time Analyzed:	08/05/2021 / 17:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	23		1.5	3.0	5.0	5.0
75-69-4	Trichlorofluoromethane	5.0	U	2.0	5.0	10	10
75-01-4	Vinyl chloride	1.5	U	0.70	1.5	3.0	3.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49EB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031958
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 11:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	2.9	J	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	15	J	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49EB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031958
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 11:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49EB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031958
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 11:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49EB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1031958
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 14:09	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1031959
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 12:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031959
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 14:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031959
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 14:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	2.7		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.46	J	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	1.4	J	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031959
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 14:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1032213
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:54	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description: **49MW2**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032213
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 16:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032213
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 16:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.79	J	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032213
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 16:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1032207
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:08	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032207
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 15:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032207
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 15:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032207
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 15:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1031961
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:03	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031961
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 15:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031961
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 15:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.1		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.34	J	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031961
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 15:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.4		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	0.42	J	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

LAB TRIP BLANK-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031440
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 10:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

LAB TRIP BLANK-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031440
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 10:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

LAB TRIP BLANK-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031440
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 10:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

LAB TRIP BLANK-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032209
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 12:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

LAB TRIP BLANK-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032209
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 12:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

LAB TRIP BLANK-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032209
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 12:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030471
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 10:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U		0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U		0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U		0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U		0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U		0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U		0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U		0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U		0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U		0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U		0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U		0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U		0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U		0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	Z,Y	34	50	100	100
78-93-3	2-Butanone	3.0	J	Y	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U		3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U		2.2	6.0	10	10
67-64-1	Acetone	19	J		4.0	10	20	20
71-43-2	Benzene	1.0	U		0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U		0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U		0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U		0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U		0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U		0.6	2.0	4.0	4.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030471
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 10:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030471
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 10:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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1A

VOLATILE ORGANICS ANALYSIS

Sample Description

TB-49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031960
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 11:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	2.8	J	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	15	J	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031960
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 11:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031960
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 11:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032098
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	193941	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	07/28/2021	08:57	0.38	U	0.38	1.0	***0.50***
79-34-5	1,1,2,2-Tetrachloroethane	07/28/2021	08:57	0.36	U	0.36	1.0	***0.5***
79-00-5	1,1,2-Trichloroethane	07/28/2021	08:57	0.27	U	0.27	1.0	***0.50***
75-34-3	1,1-Dichloroethane	07/28/2021	08:57	0.28	U	0.28	1.0	***0.50***
75-35-4	1,1-Dichloroethene	07/28/2021	08:57	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	07/28/2021	08:57	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	07/28/2021	08:57	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	07/28/2021	08:57	0.50	U	0.50	2.0	***1.0***
106-93-4	1,2-Dibromoethane	07/28/2021	08:57	0.33	U	0.33	1.0	***0.50***
95-50-1	1,2-Dichlorobenzene	07/28/2021	08:57	0.35	U	0.35	1.0	***0.50***
107-06-2	1,2-Dichloroethane	07/28/2021	08:57	0.69	U	0.69	2.0	***1.0***
78-87-5	1,2-Dichloropropane	07/28/2021	08:57	0.37	U	0.37	1.0	***0.50***
541-73-1	1,3-Dichlorobenzene	07/28/2021	08:57	0.30	U	0.30	1.0	***0.50***
123-91-1	1,4-Dioxane	07/28/2021	08:57	34	U	34	100	***50***
78-93-3	2-Butanone	07/28/2021	08:57	2.9	U	2.9	10	***5.0***
591-78-6	2-Hexanone	07/28/2021	08:57	3.3	U	3.3	10	***5.0***
108-10-1	4-Methyl-2-pentanone	07/28/2021	08:57	3.7	U	3.7	10	***5.0***
67-64-1	Acetone	07/28/2021	08:57	4.1	U	4.1	20	***10***
71-43-2	Benzene	07/28/2021	08:57	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	07/28/2021	08:57	0.26	U	0.26	1.0	***0.50***
75-27-4	Bromodichloromethane	07/28/2021	08:57	0.29	U	0.29	1.0	***0.50***
75-25-2	Bromoform	07/28/2021	08:57	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	07/28/2021	08:57	0.49	U	0.49	2.0	***1.0***

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032098
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	193941	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
75-15-0	Carbon disulfide	07/28/2021	08:57	0.83	U	0.83	4.0	***2.0***
56-23-5	Carbon tetrachloride	07/28/2021	08:57	0.37	U	0.37	1.0	***0.50***
108-90-7	Chlorobenzene	07/28/2021	08:57	1.28	B	0.37	1.0	***0.50***
75-00-3	Chloroethane	07/28/2021	08:57	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	07/28/2021	08:57	0.46	U	0.46	1.0	***0.50***
74-87-3	Chloromethane	07/28/2021	08:57	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	07/28/2021	08:57	0.41	U	0.41	1.0	***0.50***
10061-01-5	cis-1,3-Dichloropropene	07/28/2021	08:57	0.34	U	0.34	1.0	***0.50***
110-82-7	Cyclohexane	07/28/2021	08:57	0.71	U	0.71	2.0	***1.0***
124-48-1	Dibromochloromethane	07/28/2021	08:57	0.35	U	0.35	1.0	***0.50***
75-71-8	Dichlorodifluoromethane	07/28/2021	08:57	0.63	U	0.63	2.0	***1.0***
100-41-4	Ethylbenzene	07/28/2021	08:57	0.42	U	0.42	1.0	***0.50***
76-13-1	Freon 113	07/28/2021	08:57	1.5	U	1.5	4.0	***2.0***
98-82-8	Isopropylbenzene	07/28/2021	08:57	0.39	U	0.39	1.0	***0.50***
179601-23-1	m & p-Xylene	07/28/2021	08:57	0.74	U	0.74	2.0	***1.0***
79-20-9	Methyl Acetate	07/28/2021	08:57	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	07/28/2021	08:57	0.28	U	0.28	1.0	***0.50***
108-87-2	Methylcyclohexane	07/28/2021	08:57	0.78	U	0.78	2.0	***1.0***
75-09-2	Methylene chloride	07/28/2021	08:57	1.2	U	1.2	4.0	***2.0***
95-47-6	o-Xylene	07/28/2021	08:57	0.72	U	0.72	2.0	***1.0***
100-42-5	Styrene	07/28/2021	08:57	0.33	U	0.33	1.0	***0.50***
127-18-4	Tetrachloroethene	07/28/2021	08:57	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	07/28/2021	08:57	0.27	U	0.27	1.0	***0.50***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032098
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	193941	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
156-60-5	trans-1,2-Dichloroethene	07/28/2021	08:57	0.35	U	0.35	1.0	***0.50***
10061-02-6	trans-1,3-Dichloropropene	07/28/2021	08:57	0.56	U	0.56	2.0	***1.0***
79-01-6	Trichloroethene	07/28/2021	08:57	0.39	U	0.39	1.0	***0.50***
75-69-4	Trichlorofluoromethane	07/28/2021	08:57	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	07/28/2021	08:57	0.14	U	0.14	0.60	***0.30***

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1033446
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
74-84-0	Ethane	08/04/2021	11:15	0.38	U	0.38	1.0	***0.4***
74-85-1	Ethene	08/04/2021	11:15	0.59	U	0.59	1.4	***0.6***
74-82-8	Methane	08/04/2021	11:15	0.45	U	0.45	1.0	***0.4***

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1034297
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	194091	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
71-55-6	1,1,1-Trichloroethane	08/05/2021	10:13	0.38	U	0.38	1.2	***0.60***
79-34-5	1,1,2,2-Tetrachloroethane	08/05/2021	10:13	0.36	U	0.36	1.1	***0.55***
79-00-5	1,1,2-Trichloroethane	08/05/2021	10:13	0.27	U	0.27	1.1	***0.55***
75-34-3	1,1-Dichloroethane	08/05/2021	10:13	0.28	U	0.28	1.1	***0.55***
75-35-4	1,1-Dichloroethene	08/05/2021	10:13	0.49	U	0.49	2.0	***1.0***
87-61-6	1,2,3-Trichlorobenzene	08/05/2021	10:13	0.43	U	0.43	2.0	***1.0***
120-82-1	1,2,4-Trichlorobenzene	08/05/2021	10:13	0.50	U	0.50	2.0	***1.0***
96-12-8	1,2-Dibromo-3-chloropropane	08/05/2021	10:13	0.35	U	0.35	2.0	***1.0***
106-93-4	1,2-Dibromoethane	08/05/2021	10:13	0.33	U	0.33	1.1	***0.55***
95-50-1	1,2-Dichlorobenzene	08/05/2021	10:13	0.35	U	0.35	1.1	***0.55***
107-06-2	1,2-Dichloroethane	08/05/2021	10:13	0.69	U	0.69	2.1	***1.05***
78-87-5	1,2-Dichloropropane	08/05/2021	10:13	0.37	U	0.37	1.2	***0.60***
541-73-1	1,3-Dichlorobenzene	08/05/2021	10:13	0.30	U	0.30	1.1	***0.55***
78-93-3	2-Butanone	08/05/2021	10:13	2.9	U	2.9	11	***5.5***
591-78-6	2-Hexanone	08/05/2021	10:13	3.3	U	3.3	11	***5.5***
108-10-1	4-Methyl-2-pentanone	08/05/2021	10:13	3.7	U	3.7	12	***6.0***
67-64-1	Acetone	08/05/2021	10:13	4.1	U	4.1	20	***10***
71-43-2	Benzene	08/05/2021	10:13	0.47	U	0.47	2.0	***1.0***
74-97-5	Bromochloromethane	08/05/2021	10:13	0.26	U	0.26	1.1	***0.55***
75-27-4	Bromodichloromethane	08/05/2021	10:13	0.080	U	0.080	0.50	***0.25***
75-25-2	Bromoform	08/05/2021	10:13	0.50	U	0.50	2.0	***1.0***
74-83-9	Bromomethane	08/05/2021	10:13	0.49	U	0.49	2.0	***1.0***
75-15-0	Carbon disulfide	08/05/2021	10:13	0.83	U	0.83	4.0	***2.0***

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1034297
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	194091	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
56-23-5	Carbon tetrachloride	08/05/2021	10:13	0.37	U	0.37	1.2	***0.60***
108-90-7	Chlorobenzene	08/05/2021	10:13	0.37	U	0.37	1.2	***0.60***
75-00-3	Chloroethane	08/05/2021	10:13	0.36	U	0.36	2.0	***1.0***
67-66-3	Chloroform	08/05/2021	10:13	0.46	U	0.46	1.4	***0.70***
74-87-3	Chloromethane	08/05/2021	10:13	0.39	U	0.39	2.0	***1.0***
156-59-2	cis-1,2-Dichloroethene	08/05/2021	10:13	0.41	U	0.41	1.3	***0.65***
10061-01-5	cis-1,3-Dichloropropene	08/05/2021	10:13	0.34	U	0.34	1.1	***0.55***
110-82-7	Cyclohexane	08/05/2021	10:13	0.71	U	0.71	2.2	***1.1***
124-48-1	Dibromochloromethane	08/05/2021	10:13	0.35	U	0.35	1.1	***0.55***
75-71-8	Dichlorodifluoromethane	08/05/2021	10:13	0.63	U	0.63	2.1	***1.05***
100-41-4	Ethylbenzene	08/05/2021	10:13	0.42	U	0.42	1.3	***0.65***
76-13-1	Freon 113	08/05/2021	10:13	1.5	U	1.5	4.5	***2.25***
98-82-8	Isopropylbenzene	08/05/2021	10:13	0.39	U	0.39	1.2	***0.60***
179601-23-1	m & p-Xylene	08/05/2021	10:13	0.74	U	0.74	2.3	***1.15***
79-20-9	Methyl Acetate	08/05/2021	10:13	0.34	U	0.34	2.0	***1.0***
1634-04-4	Methyl tert-butyl ether	08/05/2021	10:13	0.28	U	0.28	1.1	***0.55***
108-87-2	Methylcyclohexane	08/05/2021	10:13	0.78	U	0.78	2.4	***1.2***
75-09-2	Methylene chloride	08/05/2021	10:13	1.2	U	1.2	4.1	***2.05***
95-47-6	o-Xylene	08/05/2021	10:13	0.72	U	0.72	2.2	***1.1***
100-42-5	Styrene	08/05/2021	10:13	0.33	U	0.33	1.1	***0.55***
127-18-4	Tetrachloroethene	08/05/2021	10:13	0.54	U	0.54	2.0	***1.0***
108-88-3	Toluene	08/05/2021	10:13	0.27	U	0.27	1.1	***0.55***
156-60-5	trans-1,2-Dichloroethene	08/05/2021	10:13	0.35	U	0.35	1.1	***0.55***

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VOLATILE ORGANICS ANALYSIS (MB or CCB)

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:		SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1034297
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	194091	Dilution Factor:	1
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
10061-02-6	trans-1,3-Dichloropropene	08/05/2021	10:13	0.56	U	0.56	2.1	***1.05***
79-01-6	Trichloroethene	08/05/2021	10:13	0.39	U	0.39	1.2	***0.60***
75-69-4	Trichlorofluoromethane	08/05/2021	10:13	0.41	U	0.41	2.0	***1.0***
75-01-4	Vinyl chloride	08/05/2021	10:13	0.12	U	0.12	0.50	***0.25***

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	163390
Analytical Run #:	193941	ICAL Calibration #:	W071421.

CTLab #	1030462				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	100	80	119	

CTLab #	1030468				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	102	80	119	

CTLab #	1030469				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	100	80	119	

CTLab #	1030471				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	100	80	119	

CTLab #	1030729	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	70	120	
Bromofluorobenzene	100	96.0	70	120	
d8-Toluene	100	102	85	120	
Dibromofluoromethane	100	99.0	85	115	

CTLab #	1032097	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	50	150	
Bromofluorobenzene	100	98.0	50	150	
d8-Toluene	100	103	50	150	
Dibromofluoromethane	100	99.0	50	150	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	163390
Analytical Run #:	193941	ICAL Calibration #:	W071421.

CTLab #	1032098	Sample Type:	Method Blank		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	70	120	
Bromofluorobenzene	100	99.0	75	120	
d8-Toluene	100	100	85	120	
Dibromofluoromethane	100	101	85	115	

CTLab #	1032099	Sample Type:	Lab Control Spike		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	81	118	
Bromofluorobenzene	100	96.0	85	114	
d8-Toluene	100	102	89	112	
Dibromofluoromethane	100	99.0	80	119	

CTLab #	1032100	Sample Type:	Lab Control Spike Duplicate		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	103	89	112	
Dibromofluoromethane	100	99.0	80	119	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	163390
Analytical Run #:	194091	ICAL Calibration #:	W080421.

CTLab #	1031437				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	105	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	113	89	112	*FAIL*
Dibromofluoromethane	100	106	80	119	

CTLab #	1031438				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	112	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	106	89	112	
Dibromofluoromethane	100	107	80	119	

CTLab #	1031440				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	102	85	114	
d8-Toluene	100	99.0	89	112	
Dibromofluoromethane	100	101	80	119	

CTLab #	1031957				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	105	89	112	
Dibromofluoromethane	100	99.0	80	119	

CTLab #	1031958				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	107	89	112	
Dibromofluoromethane	100	102	80	119	

CTLab #	1031959				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	111	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	103	89	112	
Dibromofluoromethane	100	113	80	119	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	163390
Analytical Run #:	194091	ICAL Calibration #:	W080421.

CTLab #	1031960				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	104	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	107	89	112	
Dibromofluoromethane	100	103	80	119	
CTLab #	**1031961**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	99.0	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	99.0	89	112	
Dibromofluoromethane	100	99.0	80	119	
CTLab #	**1032207**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	100	80	119	
CTLab #	**1032208**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	104	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	102	80	119	
CTLab #	**1032209**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	81	118	
Bromofluorobenzene	100	101	85	114	
d8-Toluene	100	105	89	112	
Dibromofluoromethane	100	99.0	80	119	
CTLab #	**1032210**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	103	81	118	
Bromofluorobenzene	100	99.0	85	114	
d8-Toluene	100	99.0	89	112	
Dibromofluoromethane	100	101	80	119	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	163390
Analytical Run #:	194091	ICAL Calibration #:	W080421.

CTLab #	1032211				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	103	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	106	89	112	
Dibromofluoromethane	100	95.0	80	119	
CTLab #	**1032212**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	81	118	
Bromofluorobenzene	100	102	85	114	
d8-Toluene	100	101	89	112	
Dibromofluoromethane	100	94.0	80	119	
CTLab #	**1032213**				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	102	85	114	
d8-Toluene	100	99.0	89	112	
Dibromofluoromethane	100	99.0	80	119	
CTLab #	**1034198**	Sample Type:		Continuing Calibration Verification	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	70	120	
Bromofluorobenzene	100	101	70	120	
d8-Toluene	100	99.0	85	120	
Dibromofluoromethane	100	103	85	115	
CTLab #	**1034297**	Sample Type:		Method Blank	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	98.0	70	120	
Bromofluorobenzene	100	102	75	120	
d8-Toluene	100	100	85	120	
Dibromofluoromethane	100	101	85	115	
CTLab #	**1034610**	Sample Type:		Matrix Spike	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	81	118	
Bromofluorobenzene	100	97.0	85	114	
d8-Toluene	100	112	89	112	
Dibromofluoromethane	100	99.0	80	119	

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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Analytical Method:	EPA 8260C	SDG:	163390
Analytical Run #:	194091	ICAL Calibration #:	W080421.

CTLab #	1034611	Sample Type:	Matrix Spike Duplicate		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	103	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	101	80	119	

CTLab #	1034612	Sample Type:	Continuing Calibration Verification		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	50	150	
Bromofluorobenzene	100	98.0	50	150	
d8-Toluene	100	101	50	150	
Dibromofluoromethane	100	101	50	150	

CTLab #	1035081	Sample Type:	Lab Control Spike		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	81	118	
Bromofluorobenzene	100	101	85	114	
d8-Toluene	100	99.0	89	112	
Dibromofluoromethane	100	103	80	119	

CT LABORATORIES
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3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: GROUND WATER
SDG No.: 163390
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 194091
Sample No.: 1034610
Parent Sample No.: 1031438
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W080421.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1,1-Trichloroethane	08/05/2021	18:14	74-131	9.89	BDL	10.0	98.9
1,1,2,2-Tetrachloroethane	08/05/2021	18:14	71-121	9.55	BDL	10.0	95.5
1,1,2-Trichloroethane	08/05/2021	18:14	80-119	9.99	BDL	10.0	99.9
1,1-Dichloroethane	08/05/2021	18:14	77-125	9.20	BDL	10.0	92.0
1,1-Dichloroethene	08/05/2021	18:14	71-131	10.0	BDL	10.0	100
1,2,3-Trichlorobenzene	08/05/2021	18:14	69-129	9.38	BDL	10.0	93.8
1,2,4-Trichlorobenzene	08/05/2021	18:14	69-130	9.73	BDL	10.0	97.3
1,2-Dibromo-3-chloropropane	08/05/2021	18:14	62-128	9.33	BDL	10.0	93.3
1,2-Dibromoethane	08/05/2021	18:14	77-121	9.21	BDL	10.0	92.1
1,2-Dichlorobenzene	08/05/2021	18:14	80-119	9.41	BDL	10.0	94.1
1,2-Dichloroethane	08/05/2021	18:14	73-128	9.51	BDL	10.0	95.1
1,2-Dichloropropane	08/05/2021	18:14	78-122	10.1	BDL	10.0	101
1,3-Dichlorobenzene	08/05/2021	18:14	80-119	9.42	BDL	10.0	94.2
1,4-Dioxane	08/05/2021	18:14	59-139	527	BDL	500	105
2-Butanone	08/05/2021	18:14	56-143	90.1	BDL	100	90.1
2-Hexanone	08/05/2021	18:14	57-139	94.4	BDL	100	94.4
4-Methyl-2-pentanone	08/05/2021	18:14	67-130	105	BDL	100	105
Acetone	08/05/2021	18:14	39-160	78.3	BDL	100	78.3
Benzene	08/05/2021	18:14	79-120	9.45	BDL	10.0	94.5
Bromochloromethane	08/05/2021	18:14	78-123	8.86	BDL	10.0	88.6
Bromodichloromethane	08/05/2021	18:14	79-125	9.91	BDL	10.0	99.1
Bromoform	08/05/2021	18:14	66-130	8.62	BDL	10.0	86.2
Bromomethane	08/05/2021	18:14	53-141	13.6	BDL	10.0	136
Carbon disulfide	08/05/2021	18:14	64-133	20.2	BDL	20.0	101
Carbon tetrachloride	08/05/2021	18:14	72-136	10.2	BDL	10.0	102
Chlorobenzene	08/05/2021	18:14	82-118	9.55	BDL	10.0	95.5
Chloroethane	08/05/2021	18:14	60-138	11.6	1.6	10.0	100
Chloroform	08/05/2021	18:14	79-124	9.23	BDL	10.0	92.3
Chloromethane	08/05/2021	18:14	50-139	11.8	BDL	10.0	118
cis-1,2-Dichloroethene	08/05/2021	18:14	78-123	9.00	BDL	10.0	90.0
cis-1,3-Dichloropropene	08/05/2021	18:14	75-124	9.92	BDL	10.0	99.2

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: GROUND WATER
SDG No.: 163390
Analytical Method: EPA 8260C
Concentration Units: ug/L
Analytical Run #: 194091
Sample No.: 1034610
Parent Sample No.: 1031438
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
ICAL Calibration #: W080421.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Cyclohexane	08/05/2021	18:14	71-130	8.75	BDL	10.0	87.5
Dibromochloromethane	08/05/2021	18:14	74-126	8.84	BDL	10.0	88.4
Dichlorodifluoromethane	08/05/2021	18:14	32-152	11.4	BDL	10.0	114
Ethylbenzene	08/05/2021	18:14	79-121	9.79	BDL	10.0	97.9
Freon 113	08/05/2021	18:14	70-136	17.8	BDL	20.0	89.0
Isopropylbenzene	08/05/2021	18:14	72-131	9.93	BDL	10.0	99.3
m & p-Xylene	08/05/2021	18:14	80-121	19.9	BDL	20.0	99.5
Methyl Acetate	08/05/2021	18:14	56-136	8.69	BDL	10.0	86.9
Methyl tert-butyl ether	08/05/2021	18:14	71-124	8.77	BDL	10.0	87.7
Methylcyclohexane	08/05/2021	18:14	72-132	9.78	BDL	10.0	97.8
Methylene chloride	08/05/2021	18:14	74-124	8.32	BDL	10.0	83.2
o-Xylene	08/05/2021	18:14	78-122	9.46	BDL	10.0	94.6
Styrene	08/05/2021	18:14	78-123	9.31	BDL	10.0	93.1
Tetrachloroethene	08/05/2021	18:14	74-129	11.3	BDL	10.0	113
Toluene	08/05/2021	18:14	80-121	10.8	BDL	10.0	108
trans-1,2-Dichloroethene	08/05/2021	18:14	75-124	9.13	BDL	10.0	91.3
trans-1,3-Dichloropropene	08/05/2021	18:14	73-127	9.89	BDL	10.0	98.9
Trichloroethene	08/05/2021	18:14	79-123	9.68	BDL	10.0	96.8
Trichlorofluoromethane	08/05/2021	18:14	65-141	9.84	BDL	10.0	98.4
Vinyl chloride	08/05/2021	18:14	58-137	11.8	BDL	10.0	118

Spike Recovery: 0 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description

13MW2

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 163390

Analytical Method: RSK 175 Concentration Units: ug/L

Analytical Run #: 194154 Sample No.: 1033444 Parent Sample No.: 1031438

Analytical Prep Batch #: 81994 Analytical Preparation Date/Time: 08/04/2021 09:48

ICAL Calibration #: P4DG070121

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Ethane	08/04/2021	12:38	74-131	4.78	BDL	4.77	100
Ethene	08/04/2021	12:38	72-133	6.55	BDL	6.78	96.6
Methane	08/04/2021	12:38	73-125	2.29	BDL	2.29	100

Spike Recovery: 0 out of 3 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

13MW2

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 163390

Analytical Method: EPA 8260C Concentration Units: ug/L

Analytical Run #: 194091 Sample No.: 1034611 Parent Sample No.: 1034610

Analytical Prep Batch #: 0 Analytical Preparation Date/Time:

ICAL Calibration #: W080421.

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)
1,1,1-Trichloroethane	08/05/2021	18:44	11.2	10.0	112	12.2	74-131	20
1,1,2,2-Tetrachloroethane	08/05/2021	18:44	10.0	10.0	100	4.63	71-121	20
1,1,2-Trichloroethane	08/05/2021	18:44	9.88	10.0	98.8	1.15	80-119	20
1,1-Dichloroethane	08/05/2021	18:44	10.5	10.0	105	13.6	77-125	20
1,1-Dichloroethene	08/05/2021	18:44	11.7	10.0	117	15.4	71-131	20
1,2,3-Trichlorobenzene	08/05/2021	18:44	10.3	10.0	103	9.84	69-129	20
1,2,4-Trichlorobenzene	08/05/2021	18:44	10.6	10.0	106	8.68	69-130	20
1,2-Dibromo-3-chloropropane	08/05/2021	18:44	8.84	10.0	88.4	5.41	62-128	20
1,2-Dibromoethane	08/05/2021	18:44	9.93	10.0	99.3	7.45	77-121	20
1,2-Dichlorobenzene	08/05/2021	18:44	10.5	10.0	105	10.9	80-119	20
1,2-Dichloroethane	08/05/2021	18:44	10.1	10.0	101	6.01	73-128	20
1,2-Dichloropropane	08/05/2021	18:44	10.1	10.0	101	0.0109	78-122	20
1,3-Dichlorobenzene	08/05/2021	18:44	10.5	10.0	105	11.2	80-119	20
1,4-Dioxane	08/05/2021	18:44	471	500	94.2	11.2	59-139	20
2-Butanone	08/05/2021	18:44	95.0	100	95.0	5.34	56-143	20
2-Hexanone	08/05/2021	18:44	96.8	100	96.8	2.42	57-139	20
4-Methyl-2-pentanone	08/05/2021	18:44	97.2	100	97.2	7.56	67-130	20
Acetone	08/05/2021	18:44	81.5	100	81.5	3.95	39-160	20
Benzene	08/05/2021	18:44	10.6	10.0	106	11.6	79-120	20
Bromochloromethane	08/05/2021	18:44	10.3	10.0	103	15.5	78-123	20
Bromodichloromethane	08/05/2021	18:44	9.66	10.0	96.6	2.57	79-125	20
Bromoform	08/05/2021	18:44	9.20	10.0	92.0	6.57	66-130	20
Bromomethane	08/05/2021	18:44	12.9	10.0	129	5.99	53-141	20
Carbon disulfide	08/05/2021	18:44	22.9	20.0	115	12.3	64-133	20
Carbon tetrachloride	08/05/2021	18:44	11.5	10.0	115	12.8	72-136	20
Chlorobenzene	08/05/2021	18:44	10.7	10.0	107	10.9	82-118	20
Chloroethane	08/05/2021	18:44	11.2	10.0	96.0	3.82	60-138	20
Chloroform	08/05/2021	18:44	10.5	10.0	105	13.3	79-124	20
Chloromethane	08/05/2021	18:44	11.9	10.0	119	1.01	50-139	20
cis-1,2-Dichloroethene	08/05/2021	18:44	10.6	10.0	106	16.2	78-123	20
cis-1,3-Dichloropropene	08/05/2021	18:44	9.87	10.0	98.7	0.574	75-124	20

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

13MW2

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 163390

Analytical Method: EPA 8260C Concentration Units: ug/L

Analytical Run #: 194091 Sample No.: 1034611 Parent Sample No.: 1034610

Analytical Prep Batch #: 0 Analytical Preparation Date/Time:

ICAL Calibration #: W080421.

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)
Cyclohexane	08/05/2021	18:44	10.6	10.0	106	19.2	71-130	20
Dibromochloromethane	08/05/2021	18:44	9.57	10.0	95.7	7.88	74-126	20
Dichlorodifluoromethane	08/05/2021	18:44	12.0	10.0	120	5.03	32-152	20
Ethylbenzene	08/05/2021	18:44	11.1	10.0	111	12.2	79-121	20
Freon 113	08/05/2021	18:44	20.8	20.0	104	15.8	70-136	20
Isopropylbenzene	08/05/2021	18:44	11.3	10.0	113	12.6	72-131	20
m & p-Xylene	08/05/2021	18:44	22.0	20.0	110	10.0	80-121	20
Methyl Acetate	08/05/2021	18:44	9.20	10.0	92.0	5.76	56-136	20
Methyl tert-butyl ether	08/05/2021	18:44	9.81	10.0	98.1	11.2	71-124	20
Methylcyclohexane	08/05/2021	18:44	10.1	10.0	101	3.31	72-132	20
Methylene chloride	08/05/2021	18:44	9.74	10.0	97.4	15.7	74-124	20
o-Xylene	08/05/2021	18:44	10.5	10.0	105	10.7	78-122	20
Styrene	08/05/2021	18:44	10.5	10.0	105	12.5	78-123	20
Tetrachloroethene	08/05/2021	18:44	11.4	10.0	114	1.18	74-129	20
Toluene	08/05/2021	18:44	10.9	10.0	109	0.745	80-121	20
trans-1,2-Dichloroethene	08/05/2021	18:44	10.6	10.0	106	14.5	75-124	20
trans-1,3-Dichloropropene	08/05/2021	18:44	9.65	10.0	96.5	2.54	73-127	20
Trichloroethene	08/05/2021	18:44	10.5	10.0	105	8.01	79-123	20
Trichlorofluoromethane	08/05/2021	18:44	11.4	10.0	114	14.9	65-141	20
Vinyl chloride	08/05/2021	18:44	12.0	10.0	120	1.83	58-137	20

RPD or Spike Recovery: 0 out of 51 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

13MW2

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: GROUND WATER SDG No.: 163390

Analytical Method: RSK 175 Concentration Units: ug/L

Analytical Run #: 194154 Sample No.: 1033445 Parent Sample No.: 1033444

Analytical Prep Batch #: 81994 Analytical Preparation Date/Time: 08/04/2021 09:48

ICAL Calibration #: P4DG070121

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)
Ethane	08/04/2021	12:42	4.95	4.77	104	3.44	74-131	30
Ethene	08/04/2021	12:42	6.44	6.78	95.0	1.68	72-133	30
Methane	08/04/2021	12:42	2.15	2.29	93.9	6.32	73-125	30

RPD or Spike Recovery: 0 out of 3 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 1032099
SDG No.: 163390
Analytical Method: EPA 8260C
Concentration Units: ug/L

Sample No.: 1032099
Parent Sample No.: 0
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 193941
ICAL Calibration #: W071421.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1,1-Trichloroethane	07/28/2021	07:57	74-131	10.8		10.0	108
1,1,2,2-Tetrachloroethane	07/28/2021	07:57	71-121	8.97		10.0	89.7
1,1,2-Trichloroethane	07/28/2021	07:57	80-119	9.77		10.0	97.7
1,1-Dichloroethane	07/28/2021	07:57	77-125	10.5		10.0	105
1,1-Dichloroethene	07/28/2021	07:57	71-131	11.1		10.0	111
1,2,3-Trichlorobenzene	07/28/2021	07:57	69-129	9.42		10.0	94.2
1,2,4-Trichlorobenzene	07/28/2021	07:57	69-130	9.66		10.0	96.6
1,2-Dibromo-3-chloropropane	07/28/2021	07:57	62-128	8.37		10.0	83.7
1,2-Dibromoethane	07/28/2021	07:57	77-121	9.27		10.0	92.7
1,2-Dichlorobenzene	07/28/2021	07:57	80-119	9.84		10.0	98.4
1,2-Dichloroethane	07/28/2021	07:57	73-128	9.56		10.0	95.6
1,2-Dichloropropane	07/28/2021	07:57	78-122	10.3		10.0	103
1,3-Dichlorobenzene	07/28/2021	07:57	80-119	9.81		10.0	98.1
1,4-Dioxane	07/28/2021	07:57	59-139	377		500	75.4
2-Butanone	07/28/2021	07:57	56-143	86.2		100	86.2
2-Hexanone	07/28/2021	07:57	57-139	91.2		100	91.2
4-Methyl-2-pentanone	07/28/2021	07:57	67-130	94.6		100	94.6
Acetone	07/28/2021	07:57	39-160	94.2		100	94.2
Benzene	07/28/2021	07:57	79-120	10.6		10.0	106
Bromochloromethane	07/28/2021	07:57	78-123	10.0		10.0	100
Bromodichloromethane	07/28/2021	07:57	79-125	10.3		10.0	103
Bromoform	07/28/2021	07:57	66-130	9.09		10.0	90.9
Bromomethane	07/28/2021	07:57	53-141	9.34		10.0	93.4
Carbon disulfide	07/28/2021	07:57	64-133	22.7		20.0	114
Carbon tetrachloride	07/28/2021	07:57	72-136	10.3		10.0	103
Chlorobenzene	07/28/2021	07:57	82-118	10.3		10.0	103
Chloroethane	07/28/2021	07:57	60-138	10.4		10.0	104
Chloroform	07/28/2021	07:57	79-124	10.2		10.0	102

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Sample No.: 1032099 | SDG No.: 163390

Analytical Method: EPA 8260C | Concentration Units: ug/L

Sample No.: 1032099 | Parent Sample No.: 0

Analytical Prep Batch #: | Analytical Preparation Date/Time:

Analytical Run #: 193941 | ICAL Calibration #: W071421.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Chloromethane	07/28/2021	07:57	50-139	9.54		10.0	95.4
cis-1,2-Dichloroethene	07/28/2021	07:57	78-123	10.4		10.0	104
cis-1,3-Dichloropropene	07/28/2021	07:57	75-124	10.6		10.0	106
Cyclohexane	07/28/2021	07:57	71-130	10.1		10.0	101
Dibromochloromethane	07/28/2021	07:57	74-126	9.68		10.0	96.8
Dichlorodifluoromethane	07/28/2021	07:57	32-152	10.3		10.0	103
Ethylbenzene	07/28/2021	07:57	79-121	10.7		10.0	107
Freon 113	07/28/2021	07:57	70-136	21.1		20.0	106
Isopropylbenzene	07/28/2021	07:57	72-131	11.3		10.0	113
m & p-Xylene	07/28/2021	07:57	80-121	21.2		20.0	106
Methyl Acetate	07/28/2021	07:57	56-136	8.64		10.0	86.4
Methyl tert-butyl ether	07/28/2021	07:57	71-124	9.78		10.0	97.8
Methylcyclohexane	07/28/2021	07:57	72-132	10.7		10.0	107
Methylene chloride	07/28/2021	07:57	74-124	10.0		10.0	100
o-Xylene	07/28/2021	07:57	78-122	10.2		10.0	102
Styrene	07/28/2021	07:57	78-123	10.5		10.0	105
Tetrachloroethene	07/28/2021	07:57	74-129	10.7		10.0	107
Toluene	07/28/2021	07:57	80-121	10.5		10.0	105
trans-1,2-Dichloroethene	07/28/2021	07:57	75-124	10.4		10.0	104
trans-1,3-Dichloropropene	07/28/2021	07:57	73-127	10.6		10.0	106
Trichloroethene	07/28/2021	07:57	79-123	10.0		10.0	100
Trichlorofluoromethane	07/28/2021	07:57	65-141	10.4		10.0	104
Vinyl chloride	07/28/2021	07:57	58-137	10.5		10.0	105

Spike Recovery: 0 out of 51 outside limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

LCS

WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 1033447
SDG No.: 163390
Analytical Method: RSK 175
Concentration Units: ug/L

Sample No.: 1033447
Parent Sample No.: 0
Analytical Prep Batch #: 81994
Analytical Preparation Date/Time: 08/04/2021 09:48
Analytical Run #: 194154
ICAL Calibration #: P4DG070121

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Ethane	08/04/2021	11:03	74-131	4.47		4.77	93.7
Ethene	08/04/2021	11:03	72-133	6.53		6.78	96.3
Methane	08/04/2021	11:03	73-125	2.15		2.29	93.9

Spike Recovery: 0 out of 3 outside limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 1035081
SDG No.: 163390
Analytical Method: EPA 8260C
Concentration Units: ug/L

Sample No.: 1035081
Parent Sample No.: 0
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 194091
ICAL Calibration #: W080421.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1,1-Trichloroethane	08/05/2021	09:13	74-131	10.4		10.0	104
1,1,2,2-Tetrachloroethane	08/05/2021	09:13	71-121	9.18		10.0	91.8
1,1,2-Trichloroethane	08/05/2021	09:13	80-119	9.32		10.0	93.2
1,1-Dichloroethane	08/05/2021	09:13	77-125	9.73		10.0	97.3
1,1-Dichloroethene	08/05/2021	09:13	71-131	10.5		10.0	105
1,2,3-Trichlorobenzene	08/05/2021	09:13	69-129	9.09		10.0	90.9
1,2,4-Trichlorobenzene	08/05/2021	09:13	69-130	9.61		10.0	96.1
1,2-Dibromo-3-chloropropane	08/05/2021	09:13	62-128	7.74		10.0	77.4
1,2-Dibromoethane	08/05/2021	09:13	77-121	9.66		10.0	96.6
1,2-Dichlorobenzene	08/05/2021	09:13	80-119	9.85		10.0	98.5
1,2-Dichloroethane	08/05/2021	09:13	73-128	9.59		10.0	95.9
1,2-Dichloropropane	08/05/2021	09:13	78-122	9.65		10.0	96.5
1,3-Dichlorobenzene	08/05/2021	09:13	80-119	10.1		10.0	101
2-Butanone	08/05/2021	09:13	56-143	83.4		100	83.4
2-Hexanone	08/05/2021	09:13	57-139	87.4		100	87.4
4-Methyl-2-pentanone	08/05/2021	09:13	67-130	81.6		100	81.6
Acetone	08/05/2021	09:13	39-160	86.3		100	86.3
Benzene	08/05/2021	09:13	79-120	9.81		10.0	98.1
Bromochloromethane	08/05/2021	09:13	78-123	9.75		10.0	97.5
Bromodichloromethane	08/05/2021	09:13	79-125	9.46		10.0	94.6
Bromoform	08/05/2021	09:13	66-130	9.58		10.0	95.8
Bromomethane	08/05/2021	09:13	53-141	9.83		10.0	98.3
Carbon disulfide	08/05/2021	09:13	64-133	20.9		20.0	105
Carbon tetrachloride	08/05/2021	09:13	72-136	10.7		10.0	107
Chlorobenzene	08/05/2021	09:13	82-118	9.48		10.0	94.8
Chloroethane	08/05/2021	09:13	60-138	9.77		10.0	97.7
Chloroform	08/05/2021	09:13	79-124	9.81		10.0	98.1
Chloromethane	08/05/2021	09:13	50-139	9.84		10.0	98.4

CT LABORATORIES
delivering more than data from your environmental analyses

3A

Sample Description

WATER VOLATILE LAB CONTROL SAMPLE

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Sample No.: 1035081

SDG No.: 163390

Analytical Method: EPA 8260C

Concentration Units: ug/L

Sample No.: 1035081

Parent Sample No.: 0

Analytical Prep Batch #:

Analytical Preparation Date/Time:

Analytical Run #: 194091

ICAL Calibration #: W080421.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
cis-1,2-Dichloroethene	08/05/2021	09:13	78-123	9.48		10.0	94.8
cis-1,3-Dichloropropene	08/05/2021	09:13	75-124	9.70		10.0	97.0
Cyclohexane	08/05/2021	09:13	71-130	10.1		10.0	101
Dibromochloromethane	08/05/2021	09:13	74-126	10.3		10.0	103
Dichlorodifluoromethane	08/05/2021	09:13	32-152	10.2		10.0	102
Ethylbenzene	08/05/2021	09:13	79-121	10.3		10.0	103
Freon 113	08/05/2021	09:13	70-136	21.1		20.0	106
Isopropylbenzene	08/05/2021	09:13	72-131	11.1		10.0	111
m & p-Xylene	08/05/2021	09:13	80-121	20.0		20.0	100
Methyl Acetate	08/05/2021	09:13	56-136	8.14		10.0	81.4
Methyl tert-butyl ether	08/05/2021	09:13	71-124	9.11		10.0	91.1
Methylcyclohexane	08/05/2021	09:13	72-132	10.5		10.0	105
Methylene chloride	08/05/2021	09:13	74-124	9.24		10.0	92.4
o-Xylene	08/05/2021	09:13	78-122	10.5		10.0	105
Styrene	08/05/2021	09:13	78-123	10.5		10.0	105
Tetrachloroethene	08/05/2021	09:13	74-129	10.5		10.0	105
Toluene	08/05/2021	09:13	80-121	9.95		10.0	99.5
trans-1,2-Dichloroethene	08/05/2021	09:13	75-124	9.82		10.0	98.2
trans-1,3-Dichloropropene	08/05/2021	09:13	73-127	9.70		10.0	97.0
Trichloroethene	08/05/2021	09:13	79-123	9.84		10.0	98.4
Trichlorofluoromethane	08/05/2021	09:13	65-141	10.4		10.0	104
Vinyl chloride	08/05/2021	09:13	58-137	10.00		10.0	100

Spike Recovery: 0 out of 50 outside limits

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE LAB CONTROL SAMPLE

Sample Description: **LCSD**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 1032100
SDG No.: 163390
Analytical Method: EPA 8260C
Concentration Units: ug/L

Analytical Run #: 193941 Sample No.: 1032100 Parent Sample No.: 1032099
Analytical Prep Batch #: Analytical Preparation Date/Time:
ICAL Calibration #: W071421.

Analyte	Analysis Date/Time		Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)	
1,1,1-Trichloroethane	07/28/2021	17:58	10.9	10.8	10.0	109	0.922	74-131	20	
1,1,2,2-Tetrachloroethane	07/28/2021	17:58	9.71	8.97	10.0	97.1	7.92	71-121	20	
1,1,2-Trichloroethane	07/28/2021	17:58	10.0	9.77	10.0	100	2.33	80-119	20	
1,1-Dichloroethane	07/28/2021	17:58	10.6	10.5	10.0	106	0.948	77-125	20	
1,1-Dichloroethene	07/28/2021	17:58	11.2	11.1	10.0	112	0.897	71-131	20	
1,2,3-Trichlorobenzene	07/28/2021	17:58	9.67	9.42	10.0	96.7	2.62	69-129	20	
1,2,4-Trichlorobenzene	07/28/2021	17:58	9.59	9.66	10.0	95.9	0.727	69-130	20	
1,2-Dibromo-3-chloropropane	07/28/2021	17:58	9.40	8.37	10.0	94.0	11.6	62-128	20	
1,2-Dibromoethane	07/28/2021	17:58	10.2	9.27	10.0	102	9.55	77-121	20	
1,2-Dichlorobenzene	07/28/2021	17:58	9.86	9.84	10.0	98.6	0.203	80-119	20	
1,2-Dichloroethane	07/28/2021	17:58	10.00	9.56	10.0	100	4.50	73-128	20	
1,2-Dichloropropane	07/28/2021	17:58	11.0	10.3	10.0	110	6.57	78-122	20	
1,3-Dichlorobenzene	07/28/2021	17:58	10.0	9.81	10.0	100	1.92	80-119	20	
1,4-Dioxane	07/28/2021	17:58	534	377	500	107	34.5	59-139	20	*FAIL*
2-Butanone	07/28/2021	17:58	106	86.2	100	106	20.6	56-143	20	*FAIL*
2-Hexanone	07/28/2021	17:58	111	91.2	100	111	19.6	57-139	20	
4-Methyl-2-pentanone	07/28/2021	17:58	115	94.6	100	115	19.5	67-130	20	
Acetone	07/28/2021	17:58	110	94.2	100	110	15.5	39-160	20	
Benzene	07/28/2021	17:58	10.7	10.6	10.0	107	0.939	79-120	20	
Bromochloromethane	07/28/2021	17:58	10.0	10.0	10.0	100	0	78-123	20	
Bromodichloromethane	07/28/2021	17:58	10.3	10.3	10.0	103	0	79-125	20	
Bromoform	07/28/2021	17:58	9.25	9.09	10.0	92.5	1.74	66-130	20	
Bromomethane	07/28/2021	17:58	9.89	9.34	10.0	98.9	5.72	53-141	20	
Carbon disulfide	07/28/2021	17:58	22.7	22.7	20.0	114	0	64-133	20	
Carbon tetrachloride	07/28/2021	17:58	10.3	10.3	10.0	103	0	72-136	20	
Chlorobenzene	07/28/2021	17:58	10.3	10.3	10.0	103	0	82-118	20	
Chloroethane	07/28/2021	17:58	11.4	10.4	10.0	114	9.17	60-138	20	
Chloroform	07/28/2021	17:58	10.3	10.2	10.0	103	0.976	79-124	20	

CT LABORATORIES
delivering more than data from your environmental analyses

3A

WATER VOLATILE LAB CONTROL SAMPLE

Sample Description: **LCSD**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample No.: 1032100
SDG No.: 163390
Analytical Method: EPA 8260C
Concentration Units: ug/L

Analytical Run #: 193941 Sample No.: 1032100 Parent Sample No.: 1032099
Analytical Prep Batch #: Analytical Preparation Date/Time:
ICAL Calibration #: W071421.

Analyte	Analysis Date/Time		Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)
Chloromethane	07/28/2021	17:58	10.4	9.54	10.0	104	8.63	50-139	20
cis-1,2-Dichloroethene	07/28/2021	17:58	10.5	10.4	10.0	105	0.957	78-123	20
cis-1,3-Dichloropropene	07/28/2021	17:58	10.1	10.6	10.0	101	4.83	75-124	20
Cyclohexane	07/28/2021	17:58	10.3	10.1	10.0	103	1.96	71-130	20
Dibromochloromethane	07/28/2021	17:58	9.97	9.68	10.0	99.7	2.95	74-126	20
Dichlorodifluoromethane	07/28/2021	17:58	10.6	10.3	10.0	106	2.87	32-152	20
Ethylbenzene	07/28/2021	17:58	10.6	10.7	10.0	106	0.939	79-121	20
Freon 113	07/28/2021	17:58	20.7	21.1	20.0	104	1.91	70-136	20
Isopropylbenzene	07/28/2021	17:58	11.0	11.3	10.0	110	2.69	72-131	20
m & p-Xylene	07/28/2021	17:58	21.1	21.2	20.0	106	0.473	80-121	20
Methyl Acetate	07/28/2021	17:58	10.3	8.64	10.0	103	17.5	56-136	20
Methyl tert-butyl ether	07/28/2021	17:58	10.5	9.78	10.0	105	7.10	71-124	20
Methylcyclohexane	07/28/2021	17:58	10.4	10.7	10.0	104	2.84	72-132	20
Methylene chloride	07/28/2021	17:58	10.1	10.0	10.0	101	0.995	74-124	20
o-Xylene	07/28/2021	17:58	10.1	10.2	10.0	101	0.985	78-122	20
Styrene	07/28/2021	17:58	10.6	10.5	10.0	106	0.948	78-123	20
Tetrachloroethene	07/28/2021	17:58	10.8	10.7	10.0	108	0.930	74-129	20
Toluene	07/28/2021	17:58	10.8	10.5	10.0	108	2.82	80-121	20
trans-1,2-Dichloroethene	07/28/2021	17:58	10.8	10.4	10.0	108	3.77	75-124	20
trans-1,3-Dichloropropene	07/28/2021	17:58	10.3	10.6	10.0	103	2.87	73-127	20
Trichloroethene	07/28/2021	17:58	10.3	10.0	10.0	103	2.96	79-123	20
Trichlorofluoromethane	07/28/2021	17:58	10.4	10.4	10.0	104	0	65-141	20
Vinyl chloride	07/28/2021	17:58	11.1	10.5	10.0	111	5.56	58-137	20

RPD or Spike Recovery: 2 out of 51 outside QC limits

CT LABORATORIES
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4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	1032098	SDG No.:	163390
Matrix:	LIQUID	Date Extracted:	
Date Analyzed:	07/28/2021	Time Analyzed:	08:57
Analytical Method:	EPA 8260C	Extraction Method:	NONE
Analytical Run #:	193941	Extraction Batch #:	0
		ICAL Calibration #:	W071421.

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	BFB	1032096	07/28/2021 07:40	
2	CCV	1030729	07/28/2021 07:57	W071421.
3	LCSW	1032099	07/28/2021 07:57	W071421.
4	MBW	1032098	07/28/2021 08:57	W071421.
5	TB-1	1030471	07/28/2021 10:57	W071421.
6	13MW4	1030462	07/28/2021 15:28	W071421.
7	13MW3	1030468	07/28/2021 15:58	W071421.
8	13TW3	1030469	07/28/2021 16:28	W071421.
9	CCVF	1032097	07/28/2021 17:58	W071421.
10	LCSDW	1032100	07/28/2021 17:58	W071421.

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	1033446	SDG No.:	163390
Matrix:	LIQUID	Date Extracted:	08/04/2021
Date Analyzed:	08/04/2021	Time Analyzed:	11:15
Analytical Method:	RSK 175	Extraction Method:	METHOD
Analytical Run #:	194154	Extraction Batch #:	81994
		ICAL Calibration #:	P4DG070121

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	CCV	1035426	08/04/2021 10:38	P4DG070121
2	LCSW	1033447	08/04/2021 11:03	P4DG070121
3	MBW	1033446	08/04/2021 11:15	P4DG070121
4	13MW4	1030462	08/04/2021 11:30	P4DG070121
5	13TW3	1030469	08/04/2021 11:37	P4DG070121
6	48MW6	1031437	08/04/2021 11:42	P4DG070121
7	13MW2	1031438	08/04/2021 11:48	P4DG070121
8	13MW2MSW	1033444	08/04/2021 12:38	P4DG070121
9	13MW2MSDW	1033445	08/04/2021 12:42	P4DG070121
10	49MW1	1031959	08/04/2021 12:57	P4DG070121
11	50MW2	1031961	08/04/2021 13:03	P4DG070121
12	49MW4	1032207	08/04/2021 13:08	P4DG070121
13	CCV	1035427	08/04/2021 13:12	P4DG070121
14	48MW2	1032208	08/04/2021 13:25	P4DG070121
15	48MW3	1032210	08/04/2021 13:29	P4DG070121
16	48TW3	1032211	08/04/2021 13:32	P4DG070121
17	48RB3	1032212	08/04/2021 13:46	P4DG070121
18	49MW2	1032213	08/04/2021 13:54	P4DG070121
19	13MW3	1030468	08/04/2021 13:58	P4DG070121
20	48MW1	1031957	08/04/2021 14:05	P4DG070121
21	49EB1	1031958	08/04/2021 14:09	P4DG070121
22	CCV	1035428	08/04/2021 14:13	P4DG070121

CT LABORATORIES
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4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Sample ID:	1034297	SDG No.:	163390
Matrix:	LIQUID	Date Extracted:	
Date Analyzed:	08/05/2021	Time Analyzed:	10:13
Analytical Method:	EPA 8260C	Extraction Method:	NONE
Analytical Run #:	194091	Extraction Batch #:	0
		ICAL Calibration #:	W080421.

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	BFB	1035082	08/05/2021 08:57	
2	CCV	1034198	08/05/2021 09:13	W080421.
3	LCSW	1035081	08/05/2021 09:13	W080421.
4	MBW	1034297	08/05/2021 10:13	W080421.
5	LAB TRIP BLANK-1	1031440	08/05/2021 10:43	W080421.
6	49EB1	1031958	08/05/2021 11:13	W080421.
7	TB-49	1031960	08/05/2021 11:44	W080421.
8	LAB TRIP BLANK-2	1032209	08/05/2021 12:14	W080421.
9	48RB3	1032212	08/05/2021 12:44	W080421.
10	48MW6	1031437	08/05/2021 13:14	W080421.
11	13MW2	1031438	08/05/2021 13:43	W080421.
12	48MW1	1031957	08/05/2021 14:14	W080421.
13	49MW1	1031959	08/05/2021 14:44	W080421.
14	50MW2	1031961	08/05/2021 15:13	W080421.
15	49MW4	1032207	08/05/2021 15:43	W080421.
16	48MW2	1032208	08/05/2021 16:14	W080421.
17	49MW2	1032213	08/05/2021 16:44	W080421.
18	48MW3	1032210	08/05/2021 17:14	W080421.
19	48TW3	1032211	08/05/2021 17:44	W080421.
20	13MW2MSW	1034610	08/05/2021 18:14	W080421.
21	13MW2MSDW	1034611	08/05/2021 18:44	W080421.
22	CCVF	1034612	08/05/2021 19:14	W080421.

Data File : C:\Instarch\Data\JUL1421\BFB1.D Vial: 1
Acq On : 14 Jul 2021 10:39 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W071421.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.675 to 4.693 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.5	15000	PASS
75	95	30	60	53.2	35418	PASS
95	95	100	100	100.0	66628	PASS
96	95	5	9	6.2	4141	PASS
173	174	0.00	2	0.3	148	PASS
174	95	50	100	83.9	55906	PASS
175	174	5	9	7.7	4287	PASS
176	174	95	101	95.3	53294	PASS
177	176	5	9	5.9	3156	PASS

W071421.M Thu Jul 15 10:32:24 2021

BFB

Data File : C:\Instarch\Data\JUL1421\BFB2.D Vial: 19
Acq On : 15 Jul 2021 7:34 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W071421.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.687 to 4.687 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.6	22636	PASS
75	95	30	60	53.8	53764	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.8	6768	PASS
173	174	0.00	2	1.6	1416	PASS
174	95	50	100	88.7	88674	PASS
175	174	5	9	5.8	5129	PASS
176	174	95	101	95.9	85022	PASS
177	176	5	9	5.8	4903	PASS

W071421.M Thu Jul 15 10:33:24 2021

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Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W071421.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\JUL1421\BFB1.D
Injection Date : 14 Jul 2021 Log Time Period (hrs) : ALL
Injection Time : 10:39 Total files within period : 20
Sample Directory : C:\INSTARCH\DATA\JUL1421\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT1 0.5/5.0 ug/L, 5.0 mL	14 Jul 2021	11:52
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT2 1.00/10.00 ug/L, 5.0	14 Jul 2021	12:22
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT3 2.00/20.0 ug/L, 5.0	14 Jul 2021	12:51
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT4 5.00/50.0 ug/L, 5.0	14 Jul 2021	13:20
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT5 10.0/100.0 ug/L, 5.0	14 Jul 2021	13:49
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT6 20.0/200.0 ug/L, 5.0	14 Jul 2021	14:19
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT7 30.0/300.0 ug/L, 5.0	14 Jul 2021	14:48
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT8 40.0/400.0 ug/L, 5.0	14 Jul 2021	15:17
WCAL9	1.00	1.00	1.00	INITIAL CALIB. PT9 80.0/800.0 ug/L, 5.0	14 Jul 2021	15:47
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	14 Jul 2021	16:46
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF 30.0/300 ug/L, 5.0 m	14 Jul 2021	17:16
ICB1	1.00	1.00	1.00	INITIAL CALIB. BLANK pH<2,5.0 mL DI H20 P	14 Jul 2021	18:43
BFB2	1.00	1.00	1.00	BFB DIRECT INJ. 50 ng Inj.	15 Jul 2021	07:34
ICV1R	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	15 Jul 2021	08:19

Data File : C:\Instarch\Data\JUL2721\BFB2.D Vial: 25
Acq On : 28 Jul 2021 7:40 Operator: DGS-RLD
Sample : 193763,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W071421.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.650 to 4.681 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.1	22055	PASS
75	95	30	60	55.0	55001	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.9	6894	PASS
173	174	0.00	2	0.8	585	PASS
174	95	50	100	77.6	77606	PASS
175	174	5	9	7.4	5752	PASS
176	174	95	101	95.0	73758	PASS
177	176	5	9	7.8	5786	PASS

W071421.M Thu Jul 29 11:27:11 2021

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\JUL2721\BFB2.D
Injection Date : 28 Jul 2021 Log Time Period (hrs) : ALL
Injection Time : 07:40 Total files within period : 25
Sample Directory : C:\INSTARCH\DATA\JUL2721\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
CCV-LCS2	1.00	1.00	1.00	193763,LCSW, 10.0/100 ug/L, 5.0 mL Pur	28 Jul 2021	07:57
MB2-CCB1	1.00	1.00	1.00	193763,MBW, pH<2, 5.0 mL Purged + IS/	28 Jul 2021	08:57
1030471	1.00	1.00	1.00	193941,1030471, pH<2,5.0 mL Purged + IS/S	28 Jul 2021	10:57
1030462	1.00	1.00	1.00	193941,1030462, pH<2,5.0 mL Purged + IS/S	28 Jul 2021	15:28
1030468	1.00	1.00	1.00	193941,1030468, pH<2,5.0 mL Purged + IS/S	28 Jul 2021	15:58
1030469	1.00	1.00	1.00	193941,1030469, pH<2,5.0 mL Purged + IS/S	28 Jul 2021	16:28
CCVF2-~1	1.00	1.00	1.00	193761,CCVF, 10.0/100 ug/L, 5.0 mL Pur	28 Jul 2021	17:58

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : CT Laboratories, LLC Contract :
Project : Site : Location : Group :
Lab File ID (Standard): WCAL5.D Date Analyzed : 14 Jul 2021
Instrument ID : VMS3 Time Analyzed : 13:49
GC Column : DB-624UI ID : VMS3(mm) Heated Purge (Y:N) : N

	IS1		IS2		IS3	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	1501343	7.72	1144579	11.62	628996	14.93
UPPER LIMIT	3002686	8.22	2289158	12.12	1257992	15.43
LOWER LIMIT	750672	7.22	572290	11.12	314498	14.43
File ID Sample						
1030462 193941,10	1230638	7.72	971922	11.63	492795	14.93
1030468 193941,10	1222591	7.72	959489	11.63	491357	14.93
1030469 193941,10	1245661	7.72	980605	11.63	494904	14.93
1030471 193941,10	1241134	7.72	975264	11.63	496102	14.93
CCVF2-~1 193761,CC	1343124	7.72	1062333	11.63	587515	14.93
CCV-LCS2 193763,LC	1390788	7.72	1090004	11.63	613866	14.93
MB2-CCB1 193763,MB	1286099	7.72	1014476	11.63	518654	14.93

IS1 = FLUOROBENZENE**ISTD**
IS2 = d5-CHLOROBENZENE**ISTD**
IS3 = d4-1,4-DICHLOROBENZENE**IS

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

BFB

Data File : C:\Instarch\Data\AUG0421\BFB1.D Vial: 1
Acq On : 4 Aug 2021 7:26 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W080421.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.638 to 4.650 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.4	20417	PASS
75	95	30	60	54.7	54714	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	7.3	7312	PASS
173	174	0.00	2	0.7	481	PASS
174	95	50	100	69.5	69470	PASS
175	174	5	9	8.8	6083	PASS
176	174	95	101	97.5	67729	PASS
177	176	5	9	7.1	4791	PASS

W080421.M Thu Aug 05 09:41:42 2021

BFB

Data File : C:\Instarch\Data\AUG0421\BFB2.D Vial: 20
Acq On : 5 Aug 2021 7:12 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W080421.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.675 to 4.693 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.2	18246	PASS
75	95	30	60	51.4	51352	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.8	6803	PASS
173	174	0.00	2	0.8	682	PASS
174	95	50	100	87.5	87518	PASS
175	174	5	9	7.9	6933	PASS
176	174	95	101	98.7	86361	PASS
177	176	5	9	6.7	5781	PASS

W080421.M Thu Aug 05 09:42:54 2021

pl_ilog
Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W080421.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\AUG0421\BFB1.D
Injection Date : 4 Aug 2021 Log Time Period (hrs) : ALL
Injection Time : 07:26 Total files within period : 21
Sample Directory : C:\INSTARCH\DATA\AUG0421\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT1 0.5/5.0 ug/L, 5.0 mL	4 Aug 2021	09:12
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT2 1.00/10.00 ug/L, 5.0	4 Aug 2021	09:42
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT3 2.00/20.0 ug/L, 5.0	4 Aug 2021	10:13
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT4 5.00/50.0 ug/L, 5.0	4 Aug 2021	10:43
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT5 10.0/100.0 ug/L, 5.0	4 Aug 2021	11:12
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT6 20.0/200.0 ug/L, 5.0	4 Aug 2021	11:42
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT7 30.0/300.0 ug/L, 5.0	4 Aug 2021	12:13
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT8 40.0/400.0 ug/L, 5.0	4 Aug 2021	12:43
WCAL9	1.00	1.00	1.00	INITIAL CALIB. PT9 80.0/800.0 ug/L, 5.0	4 Aug 2021	13:13
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	4 Aug 2021	14:13
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF 30.0/300 ug/L, 5.0 m	4 Aug 2021	14:43
ICB1	1.00	1.00	1.00	INITIAL CALIB. BLANK pH<2,5.0 mL DI H20 P	4 Aug 2021	16:13
BFB2	1.00	1.00	1.00	BFB DIRECT INJ. 50 ng Inj.	5 Aug 2021	07:12
ICV1R	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	5 Aug 2021	07:58

BFB

Data File : C:\Instarch\Data\AUG0521\BFB1.D Vial: 1
Acq On : 5 Aug 2021 8:57 Operator: DGS-RLD
Sample : 194091,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W080421.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.657 to 4.663 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.0	21954	PASS
75	95	30	60	54.3	54254	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.7	6731	PASS
173	174	0.00	2	1.1	871	PASS
174	95	50	100	81.1	81114	PASS
175	174	5	9	7.8	6311	PASS
176	174	95	101	96.6	78369	PASS
177	176	5	9	8.3	6498	PASS

W080421.M Mon Aug 09 11:56:58 2021

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\AUG0521\BFB1.D
Injection Date : 5 Aug 2021 Log Time Period (hrs) : ALL
Injection Time : 08:57 Total files within period : 21
Sample Directory : C:\INSTARCH\DATA\AUG0521\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	194091,LCSW, 10.0/100 ug/L, 5.0 mL Pur	5 Aug 2021	09:13
MB1	1.00	1.00	1.00	194091,MBW, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	10:13
1031440	1.00	1.00	1.00	194091,1031440, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	10:43
1031958	1.00	1.00	1.00	194091,1031958, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	11:13
1031960	1.00	1.00	1.00	194091,1031960, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	11:44
1032209	1.00	1.00	1.00	194091,1032209, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	12:14
1032212	1.00	1.00	1.00	194091,1032212, pH 7,5.0 mL DI H20 Purged	5 Aug 2021	12:44
1031437	1.00	1.00	1.00	194091,1031437, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	13:14
1031438	1.00	1.00	1.00	194091,1031438, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	13:43
1031957	1.00	1.00	1.00	194091,1031957, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	14:14
1031959	1.00	1.00	1.00	194091,1031959, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	14:44
1031961	1.00	1.00	1.00	194091,1031961, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	15:13
1032207	1.00	1.00	1.00	194091,1032207, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	15:43
1032208	1.00	1.00	1.00	194091,1032208, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	16:14
1032213	1.00	1.00	1.00	194091,1032213, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	16:44
1032210	1.00	1.00	1.00	194091,1032210,5 pH<2,5.0 mL DI H20 Purged	5 Aug 2021	17:14
1032211	1.00	1.00	1.00	194091,1032211,5 pH<2,5.0 mL DI H20 Purged	5 Aug 2021	17:44
103143~1	1.00	1.00	1.00	194091,MSW1031438, 10.0/100 ug/L,pH<2,5.0 mL	5 Aug 2021	18:14
103143~2	1.00	1.00	1.00	194091,MSDW1031438, 10.0/100 ug/L,pH<2,5.0 mL	5 Aug 2021	18:44
CCVF1	1.00	1.00	1.00	194091,CCVF, 10.0/100 ug/L, 5.0 mL Pur	5 Aug 2021	19:14

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : CT Laboratories, LLC Contract :
Project : Site : Location : Group :
Lab File ID (Standard): WCAL5.D Date Analyzed : 4 Aug 2021
Instrument ID : VMS3 Time Analyzed : 11:12
GC Column : DB-624UI ID : VMS3(mm) Heated Purge (Y:N) : N

	IS1		IS2		IS3	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	1157597	7.70	914083	11.62	514197	14.91
UPPER LIMIT	2315194	8.20	1828166	12.12	1028394	15.41
LOWER LIMIT	578799	7.20	457042	11.12	257099	14.41
File ID Sample						
103143~1 194091,MS	980096	7.70	858081	11.62	490066	14.91
103143~2 194091,MS	1115381	7.70	880587	11.62	501110	14.91
1031437 194091,10	971265	7.70	855612	11.62	476518	14.91
1031438 194091,10	1019759	7.70	854714	11.62	471503	14.91
1031440 194091,10	1105989	7.70	805003	11.62	471545	14.91
1031957 194091,10	1022681	7.70	851431	11.62	469867	14.91
1031958 194091,10	1018417	7.70	857480	11.62	467798	14.91
1031959 194091,10	950545	7.70	837302	11.62	456364	14.91
1031960 194091,10	1017585	7.70	857127	11.62	473969	14.91
1031961 194091,10	1073815	7.70	849779	11.62	462696	14.92
1032207 194091,10	1088120	7.70	857990	11.62	467381	14.91
1032208 194091,10	1066257	7.70	832499	11.62	463521	14.91
1032209 194091,10	1052111	7.70	868940	11.62	473775	14.91
1032210 194091,10	1065889	7.70	843553	11.62	460571	14.91
1032211 194091,10	999693	7.71	837380	11.62	456005	14.91
1032212 194091,10	1068482	7.70	833035	11.62	455123	14.91
1032213 194091,10	1072502	7.70	836432	11.62	444339	14.91
CCVF1 194091,CC	1103160	7.71	869849	11.62	486919	14.91
CCV-LCS1 194091,LC	1168844	7.70	868463	11.62	507636	14.92
MB1 194091,MB	1110985	7.70	870359	11.62	471581	14.91

IS1 = FLUOROBENZENE**ISTD**
IS2 = d5-CHLOROBENZENE**ISTD**
IS3 = d4-1,4-DICHLOROBENZENE**IS

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

VOLATILE ORGANIC ANALYSIS
SAMPLE DATA
DOCUMENTS

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\1030471.D Vial: 32
Acq On : 28 Jul 2021 10:57 Operator: DGS-RLD
Sample : 193941,1030471, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 11:18:21 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1241134	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	975264	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	496102	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	317418	20.093	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.28	102	91479	20.277	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.72	98	1220959	20.078	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.26	95	461169	19.927	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.83	64	11372	0.8077	ug/L #	43
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	89632	18.7142	ug/L	94
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.28	76	4127	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.64	84	4948	Below Cal	#	62
21) tbutylalcohol	4.86	59	4482	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	6.31	72	6316	2.9817	ug/L	82
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.65	42	36806	6.8561	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\1030471.D Vial: 32
Acq On : 28 Jul 2021 10:57 Operator: DGS-RLD
Sample : 193941,1030471, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 11:18:21 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.63	91	2943	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.47	91	2766	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\1030471.D Vial: 32
Acq On : 28 Jul 2021 10:57 Operator: DGS-RLD
Sample : 193941,1030471, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 11:18:21 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

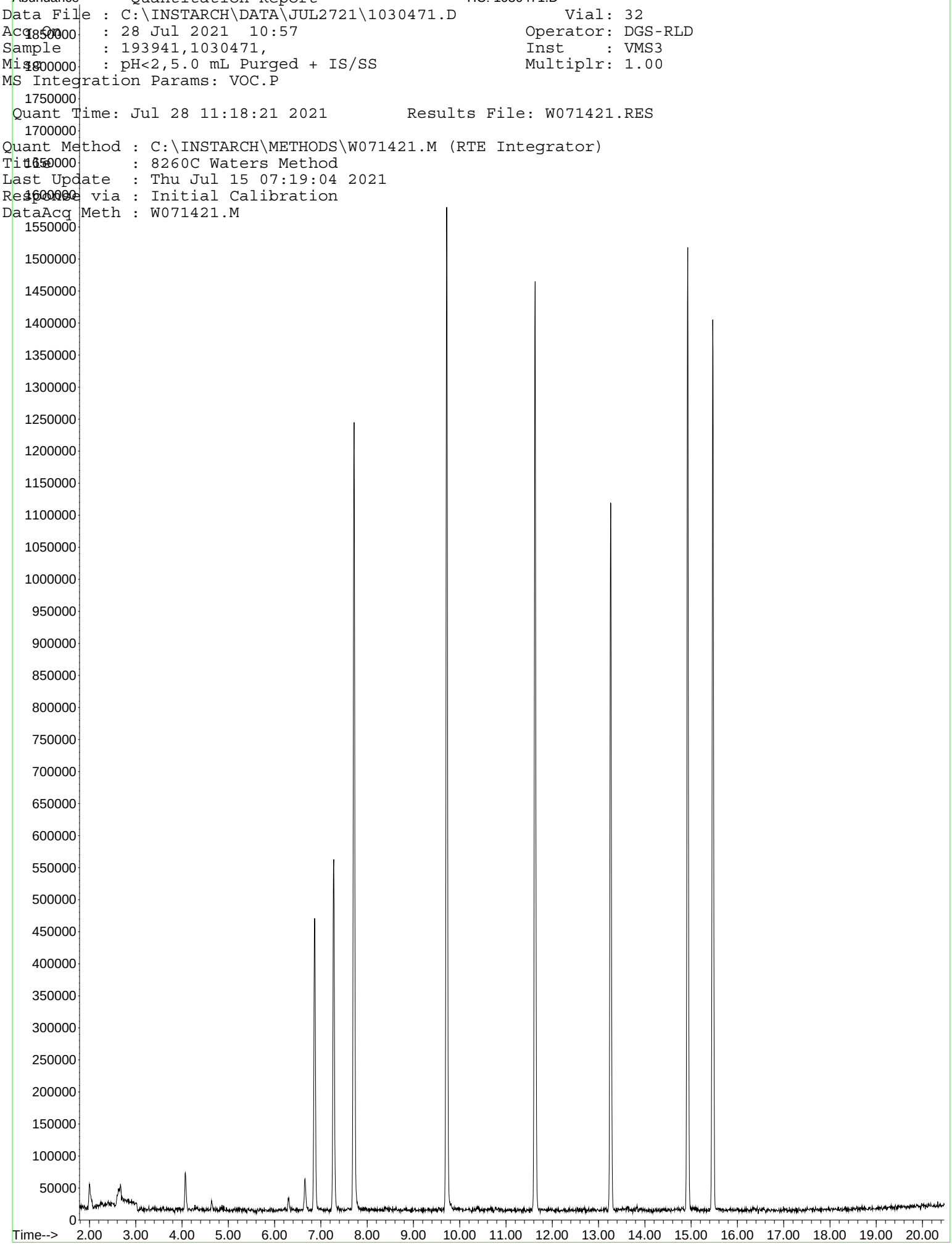
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

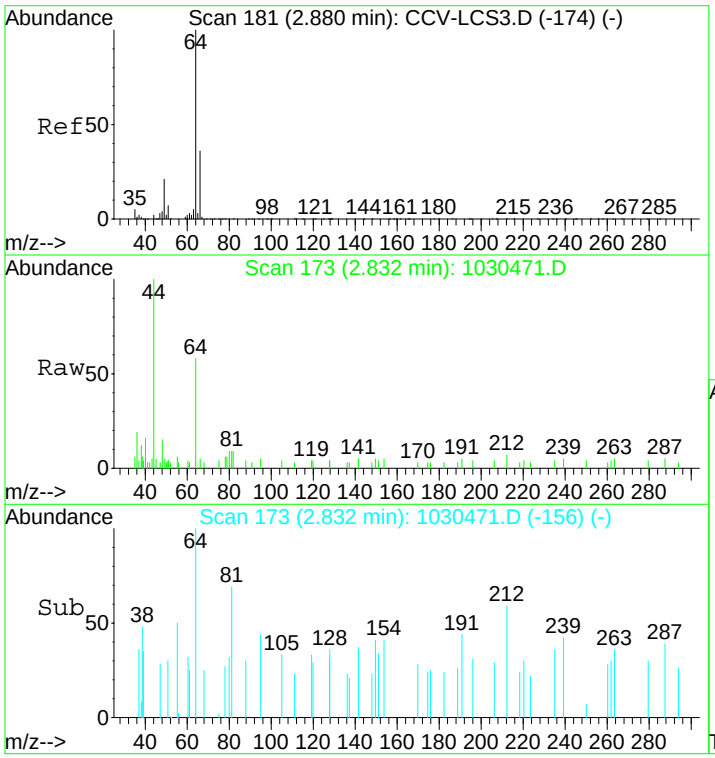
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\JUL2721\1030471.D Vial: 32
Acq On : 28 Jul 2021 10:57 Operator: DGS-RLD
Sample : 193941,1030471, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 11:18:21 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

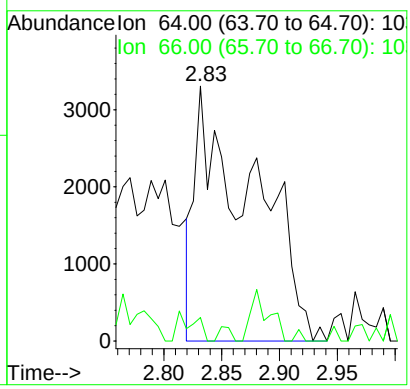




#6
Chloroethane
Concen: 0.81 ug/L
RT: 2.83 min Scan# 173
Delta R.T. -0.05 min
Lab File: 1030471.D
Acq: 28 Jul 2021 10:57

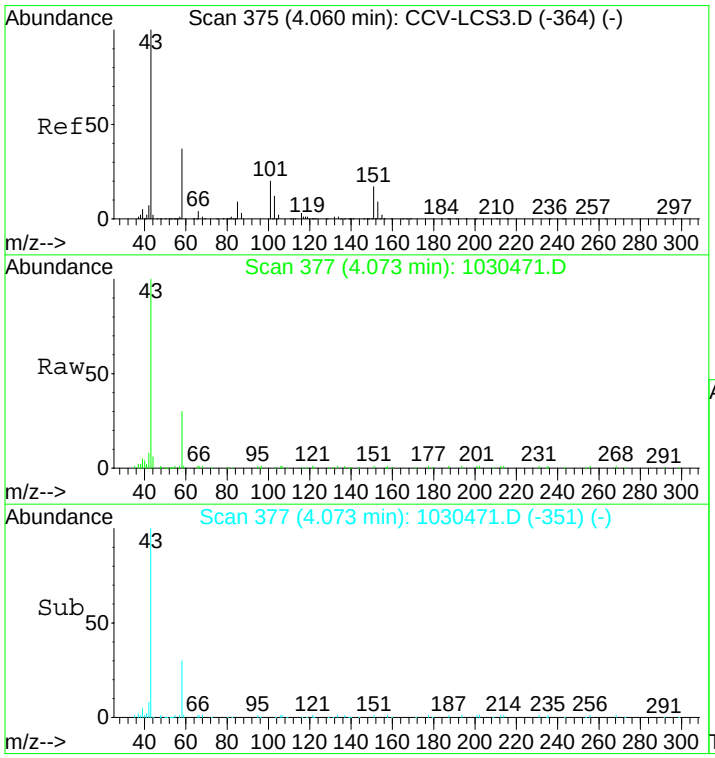
Tgt Ion: 64 Resp: 11372

Ion	Ratio	Lower	Upper
64	100		
66	0.0	11.2	51.2#



Negative Library Identification

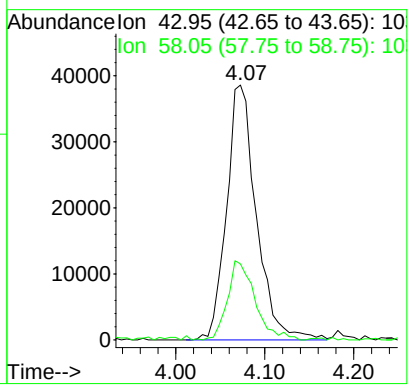
[redacted]

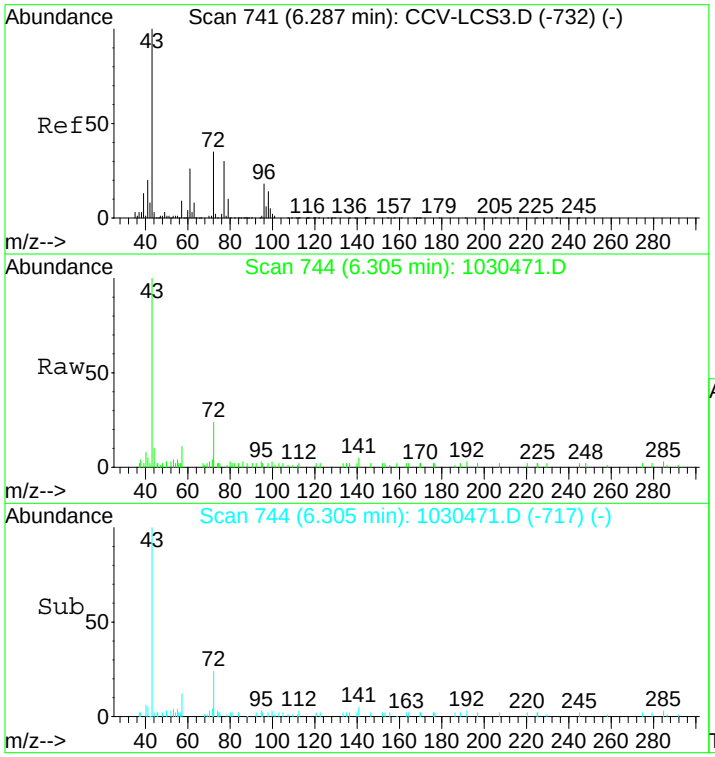


#15
Acetone
Concen: 18.71 ug/L
RT: 4.07 min Scan# 377
Delta R.T. 0.01 min
Lab File: 1030471.D
Acq: 28 Jul 2021 10:57

Tgt Ion: 43 Resp: 89632

Ion	Ratio	Lower	Upper
43	100		
58	28.7	11.9	51.9

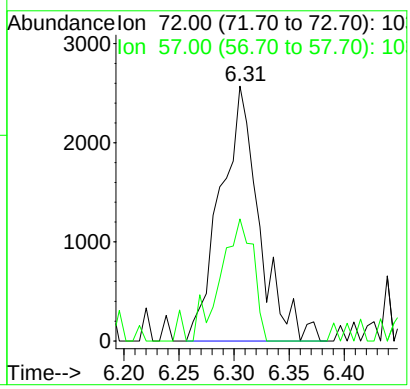




#33
2Butanone
Concen: 2.98 ug/L
RT: 6.31 min Scan# 744
Delta R.T. 0.01 min
Lab File: 1030471.D
Acq: 28 Jul 2021 10:57

Tgt Ion: 72 Resp: 6316

Ion	Ratio	Lower	Upper
72	100		
57	40.5	10.6	50.6



Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\1030462.D Vial: 41
Acq On : 28 Jul 2021 15:28 Operator: DGS-RLD
Sample : 193941,1030462, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 15:48:52 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1230638	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	971922	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	492795	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.86	113	314365	20.069 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %		
45) SURR12DCAd4	7.28	102	88306	19.740 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %		
61) SURRd8Tolule	9.72	98	1219299	20.221 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.26	95	457382	19.896 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	2.77	64	16577	1.1874 ug/L #	43
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.08	43	5672	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	3564	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\1030462.D Vial: 41
Acq On : 28 Jul 2021 15:28 Operator: DGS-RLD
Sample : 193941,1030462, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 15:48:52 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.13	119	3838	0.5894 ug/L #	43
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	8.17	95	26793	1.7426 ug/L	97
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	8.64	88	6357	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\1030462.D Vial: 41
Acq On : 28 Jul 2021 15:28 Operator: DGS-RLD
Sample : 193941,1030462, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 15:48:52 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

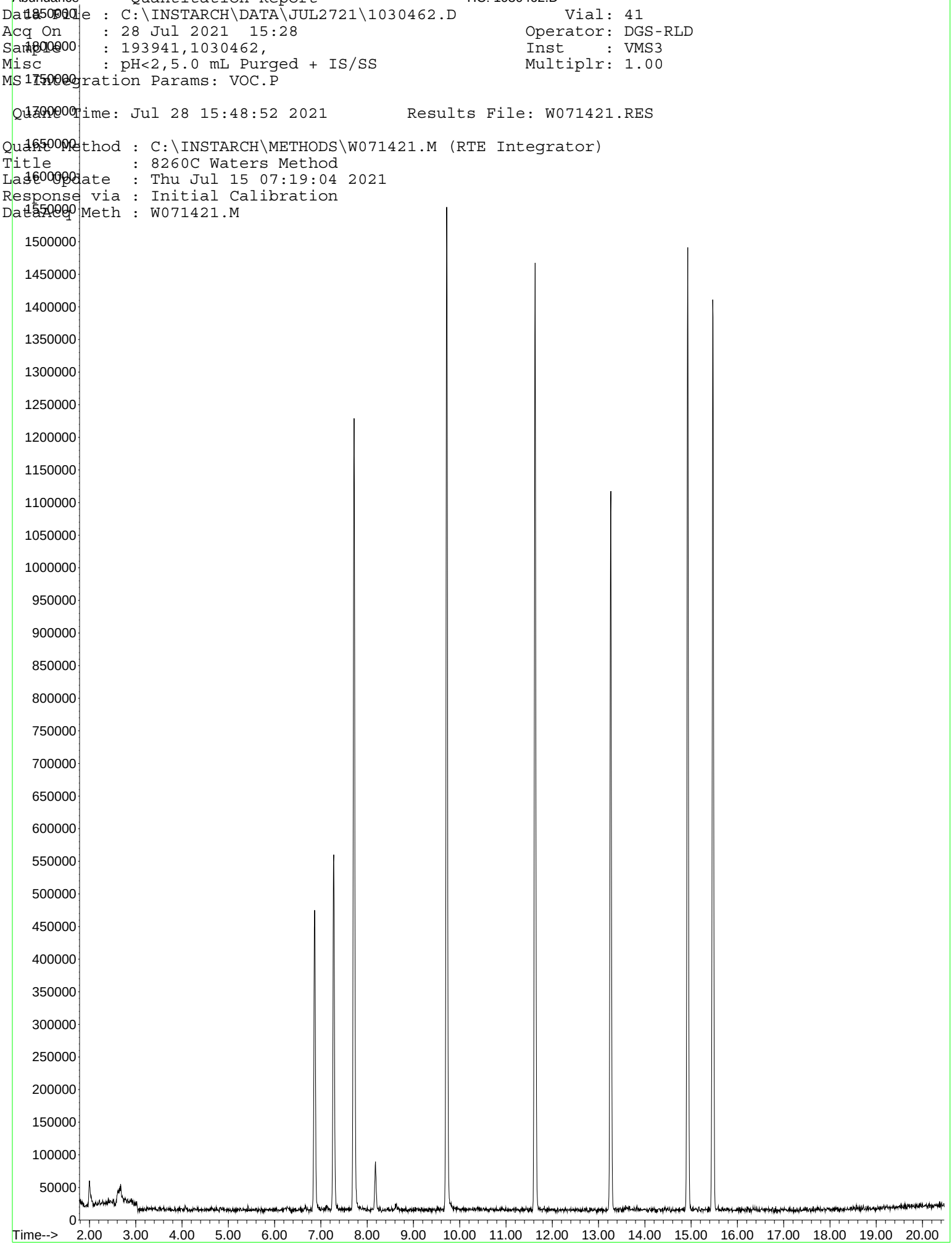
(#) = qualifier out of range (m) = manual integration

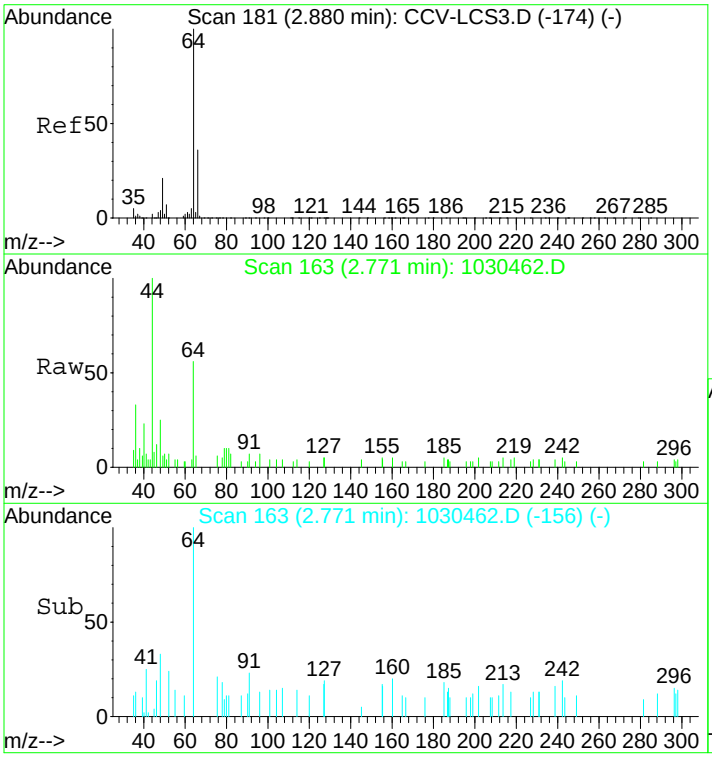
Abundance Quantitation Report TIC: 1030462.D

Data File : C:\INSTARCH\DATA\JUL2721\1030462.D Vial: 41
Acq On : 28 Jul 2021 15:28 Operator: DGS-RLD
Sample : 193941,1030462, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 15:48:52 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

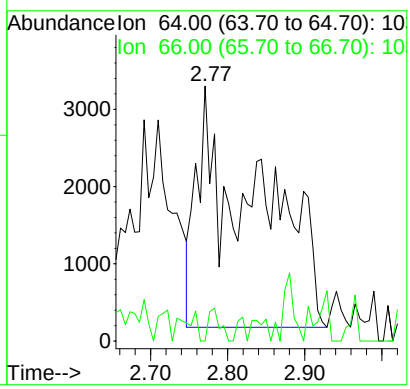




#6
Chloroethane
Concen: 1.19 ug/L
RT: 2.77 min Scan# 163
Delta R.T. -0.11 min
Lab File: 1030462.D
Acq: 28 Jul 2021 15:28

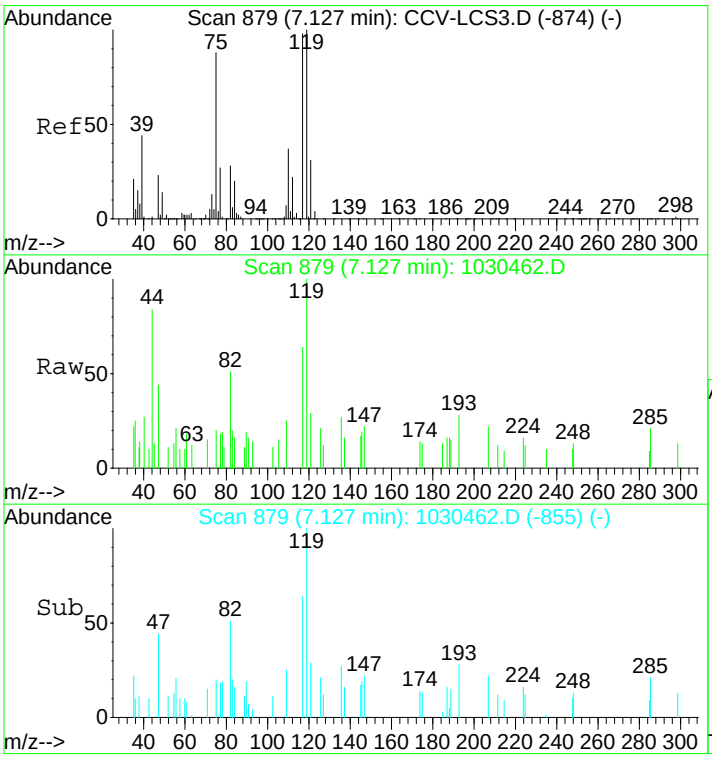
Tgt Ion: 64 Resp: 16577

Ion	Ratio	Lower	Upper
64	100		
66	0.0	11.2	51.2#



Negative Library Identification

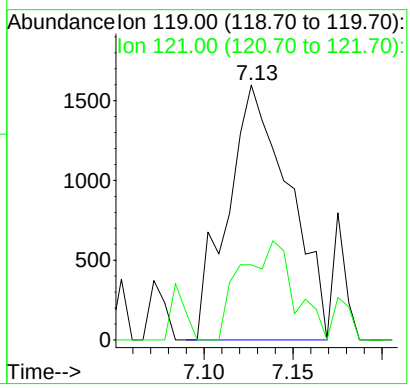
[redacted]

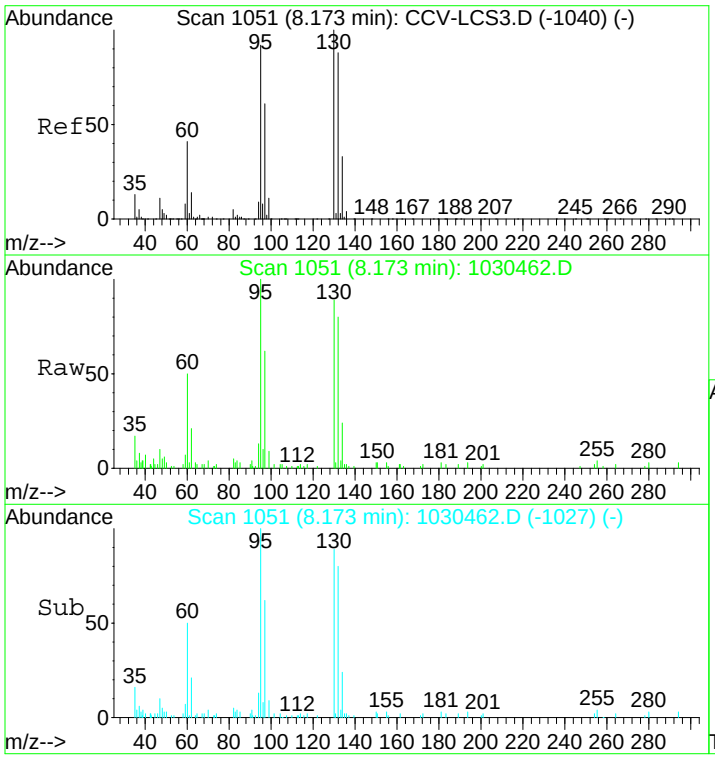


#43
Carbtetraclo
Concen: 0.59 ug/L
RT: 7.13 min Scan# 879
Delta R.T. -0.01 min
Lab File: 1030462.D
Acq: 28 Jul 2021 15:28

Tgt Ion:119 Resp: 3838

Ion	Ratio	Lower	Upper
119	100		
121	0.0	12.0	52.0#

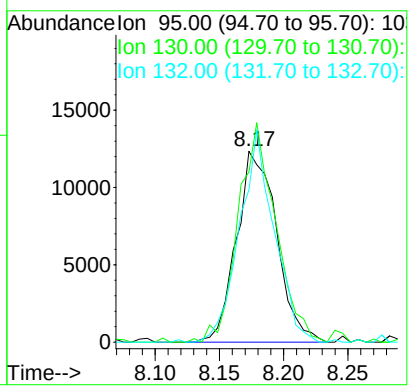




#49
trichloroete
Concen: 1.74 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. -0.01 min
Lab File: 1030462.D
Acq: 28 Jul 2021 15:28

Tgt Ion: 95 Resp: 26793

Ion	Ratio	Lower	Upper
95	100		
130	107.7	83.9	123.9
132	96.2	77.3	117.3



Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\1030468.D Vial: 42
Acq On : 28 Jul 2021 15:58 Operator: DGS-RLD
Sample : 193941,1030468, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 16:18:46 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1222591	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	959489	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	491357	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	317709	20.416	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.28	102	87366	19.659	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98	%		
61) SURRd8Tolule	9.72	98	1217734	20.328	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102	%		
83) SURR4BrFBenz	13.26	95	449474	19.609	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98	%		

Target Compounds				Qvalue
2) Dichlorodi	0.00	85	0	N.D.
3) Chloromethan	0.00	50	0	N.D.
4) VinylChlorid	0.00	62	0	N.D.
5) Bromomethane	0.00	94	0	N.D.
6) Chloroethane	2.88	64	5702	N.D.
7) Dichloroflmethane	0.00	67	0	N.D.
8) Trichlorofma	3.28	101	6342	N.D.
9) Ethylether	0.00	59	0	N.D.
10) dichlorotfluoroethan	0.00	67	0	N.D.
11) propyleneoxide	0.00	58	0	N.D.
12) Acrolein	0.00	56	0	N.D.
13) 11dichlorthe	0.00	96	0	N.D.
14) Trichlorotfluoroeth	0.00	101	0	N.D.
15) Acetone	4.08	43	5026	N.D.
16) Iodomethane	0.00	142	0	N.D.
17) Carbon Dislf	4.27	76	4091	N.D.
18) allylchloride	0.00	41	0	N.D.
19) methylacetate	0.00	74	0	N.D.
20) Methylchlorid	0.00	84	0	N.D.
21) tbutylalcohol	4.85	59	2742	N.D.
22) Acrylonitrile	0.00	53	0	N.D.
23) t12dichlorte	0.00	96	0	N.D.
24) MtBE	0.00	73	0	N.D.
25) Hexane	0.00	57	0	N.D.
26) 11dichlorota	5.54	63	2519	N.D.
27) Vinylacetate	0.00	43	0	N.D.
28) chloroprene	0.00	53	0	N.D.
29) Diisopether	0.00	45	0	N.D.
30) ETBE	0.00	59	0	N.D.
31) 22dichloropr	0.00	77	0	N.D.
32) c12dichlorte	0.00	96	0	N.D.
33) 2Butanone	0.00	72	0	N.D.
34) propionitrile	0.00	54	0	N.D.
35) Ethylacetate	0.00	88	0	N.D.
36) methacrylonitrile	0.00	67	0	N.D.
37) Bromochlorma	0.00	128	0	N.D.
38) Tetrahydofur	6.66	42	2926	N.D.

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\1030468.D Vial: 42
Acq On : 28 Jul 2021 15:58 Operator: DGS-RLD
Sample : 193941,1030468, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 16:18:46 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.68	83	16245	0.6173	ug/L	97
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.14	119	115680	6.9541	ug/L	96
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	16421	1.0751	ug/L	87
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	2819	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

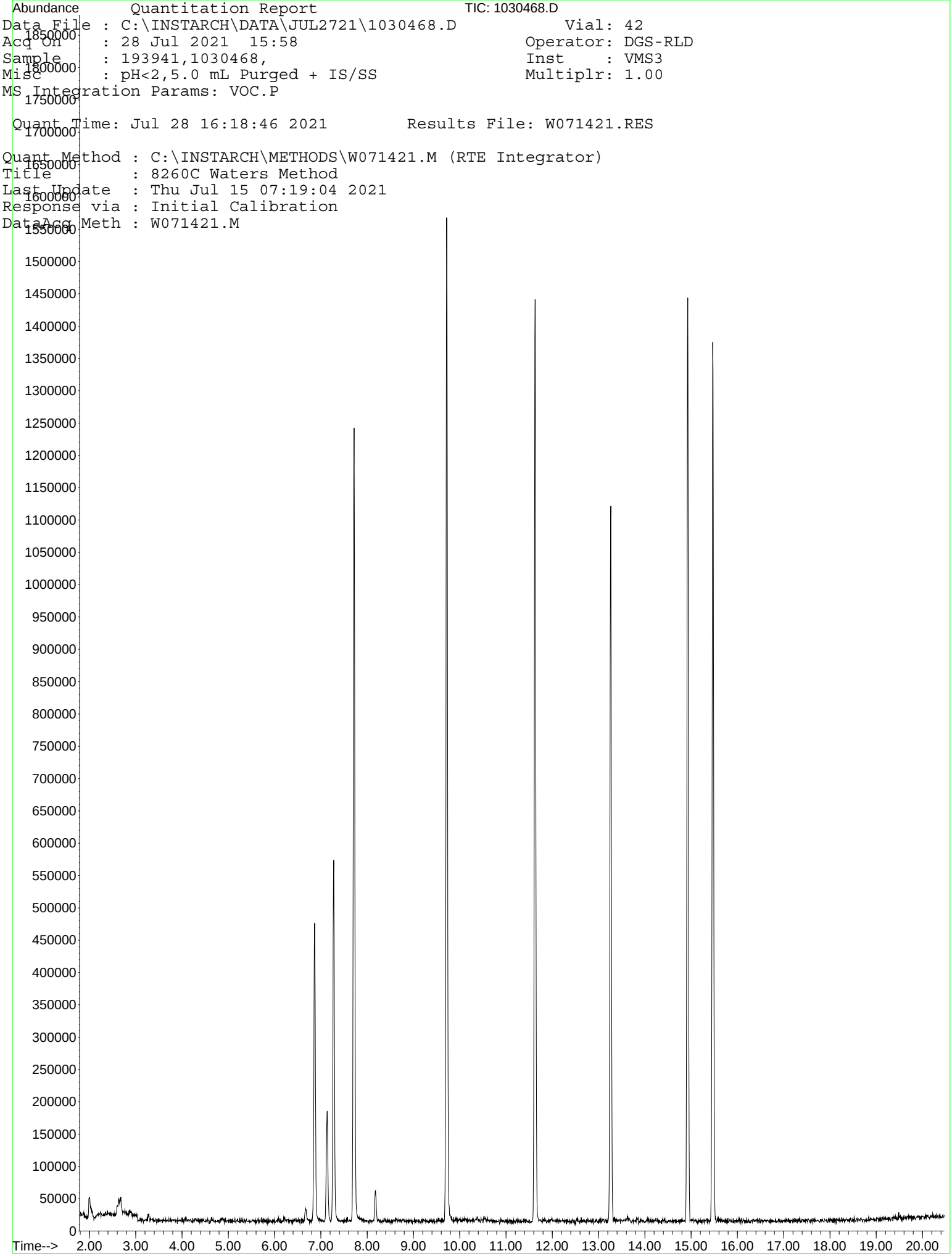
Data File : C:\INSTARCH\DATA\JUL2721\1030468.D Vial: 42
Acq On : 28 Jul 2021 15:58 Operator: DGS-RLD
Sample : 193941,1030468, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

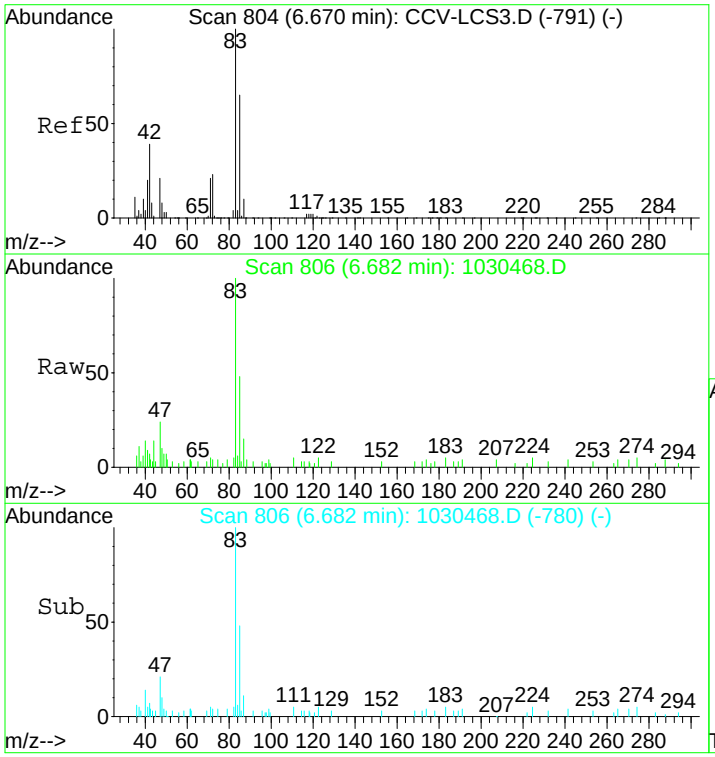
Quant Time: Jul 28 16:18:46 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

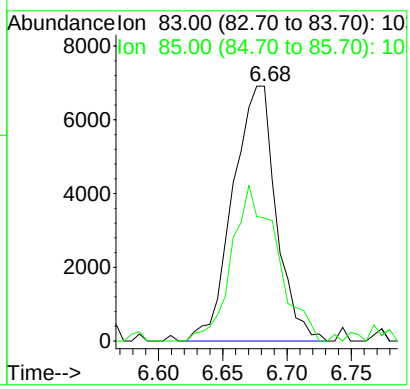

Abundance
Quantitation Report
TIC: 1030468.D
Data File : C:\INSTARCH\DATA\JUL2721\1030468.D
Vial: 42
Acq On : 28 Jul 2021 15:58
Operator: DGS-RLD
Sample : 193941,1030468,
Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Jul 28 16:18:46 2021
Results File: W071421.RES
Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
Time-->

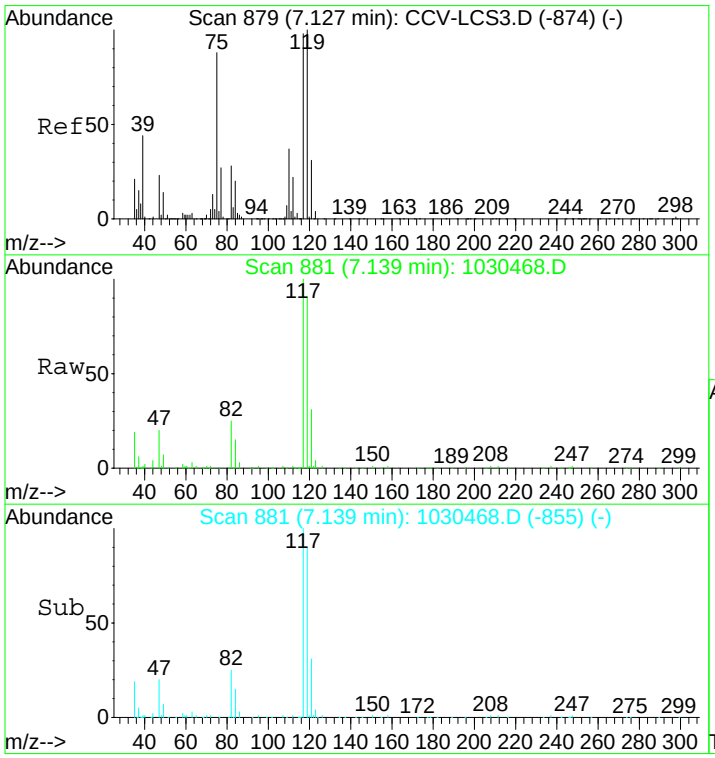


#39
Chloroform
Concen: 0.62 ug/L
RT: 6.68 min Scan# 806
Delta R.T. 0.01 min
Lab File: 1030468.D
Acq: 28 Jul 2021 15:58

Tgt Ion: 83 Resp: 16245

Ion	Ratio	Lower	Upper
83	100		
85	63.8	46.1	86.1

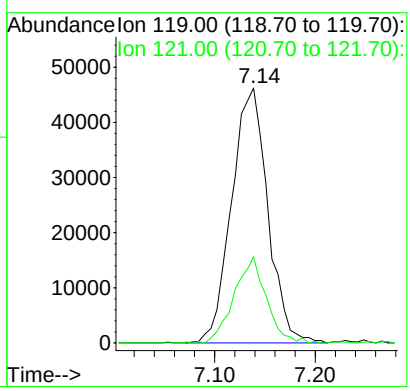


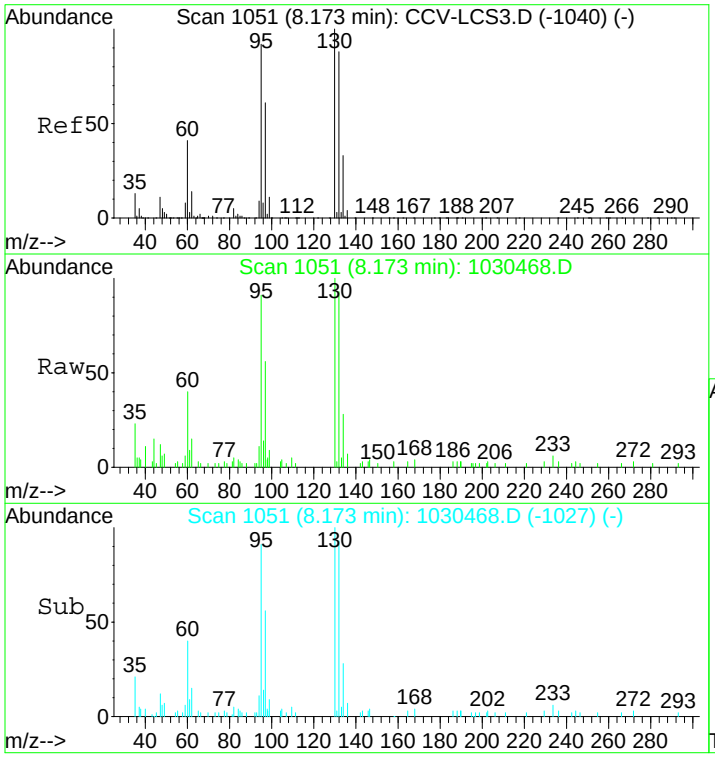


#43
Carbtetraclo
Concen: 6.95 ug/L
RT: 7.14 min Scan# 881
Delta R.T. 0.01 min
Lab File: 1030468.D
Acq: 28 Jul 2021 15:58

Tgt Ion:119 Resp: 115680

Ion	Ratio	Lower	Upper
119	100		
121	30.0	12.0	52.0

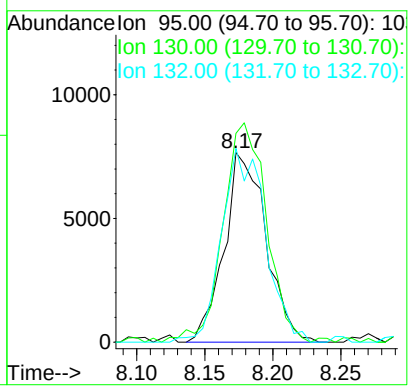




#49
trichloroete
Concen: 1.08 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. -0.01 min
Lab File: 1030468.D
Acq: 28 Jul 2021 15:58

Tgt Ion: 95 Resp: 16421

Ion	Ratio	Lower	Upper
95	100		
130	120.2	83.9	123.9
132	106.7	77.3	117.3



Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\1030469.D Vial: 43
Acq On : 28 Jul 2021 16:28 Operator: DGS-RLD
Sample : 193941,1030469, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 16:48:46 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1245661	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	980605	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	494904	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.87	113	315681	19.910 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %		
45) SURR12DCAd4	7.28	102	92516	20.432 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102 %		
61) SURRd8Tolule	9.72	98	1229074	20.137 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %		
83) SURR4BrFBenz	13.26	95	455244	19.719 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %		
Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	2.82	64	15538	1.0995 ug/L #	43
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	3.28	101	6066	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.08	43	5210	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	4236	N.D.	
18) allylchloride	0.00	41	0	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	0.00	84	0	N.D.	
21) tbutylalcohol	4.86	59	3010	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	5.55	63	3069	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	0.00	42	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\1030469.D Vial: 43
Acq On : 28 Jul 2021 16:28 Operator: DGS-RLD
Sample : 193941,1030469, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 16:48:46 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.68	83	18053	0.6733	ug/L	98
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	115493	6.8210	ug/L	96
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.18	95	17976	1.1551	ug/L	97
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	0.00	91	0	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\1030469.D Vial: 43
Acq On : 28 Jul 2021 16:28 Operator: DGS-RLD
Sample : 193941,1030469, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 16:48:46 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

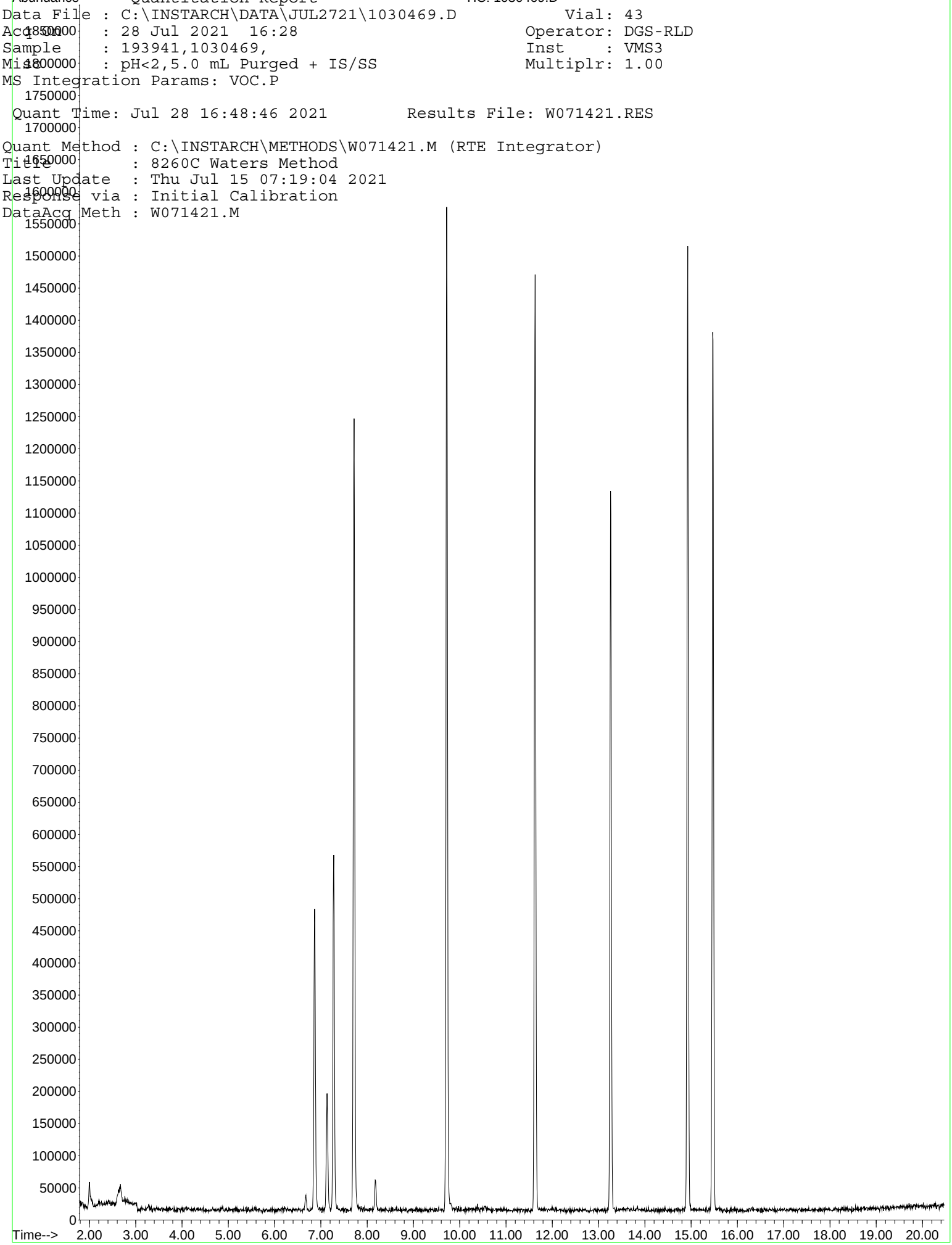
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

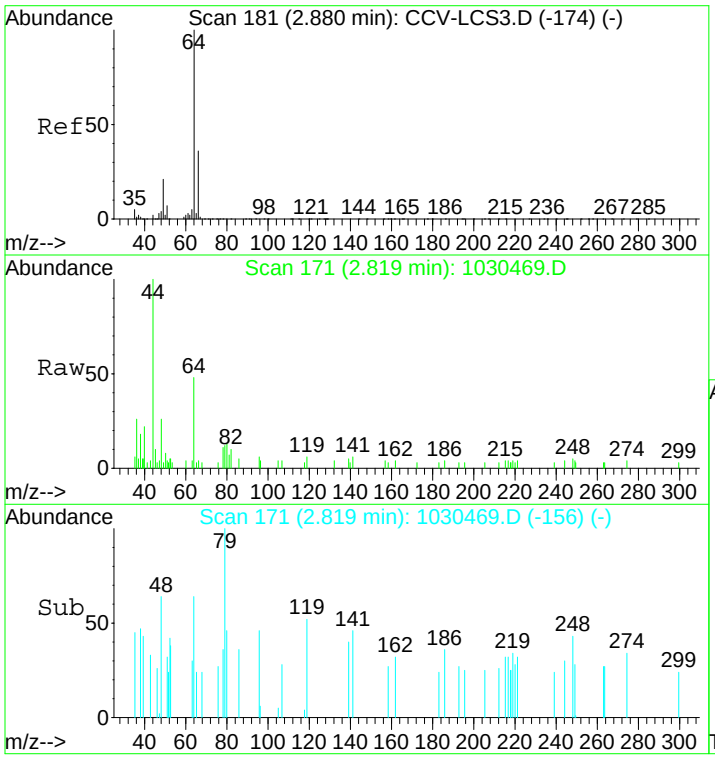
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\JUL2721\1030469.D Vial: 43
Acq On : 28 Jul 2021 16:28 Operator: DGS-RLD
Sample : 193941,1030469, Inst : VMS3
Misc : pH<2,5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 16:48:46 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

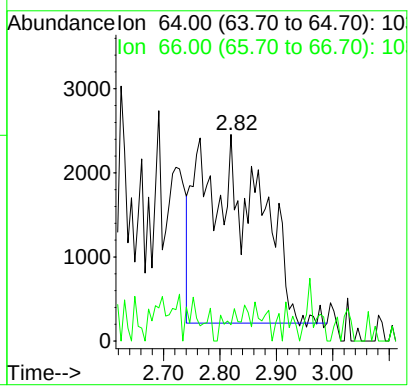




#6
Chloroethane
Concen: 1.10 ug/L
RT: 2.82 min Scan# 171
Delta R.T. -0.06 min
Lab File: 1030469.D
Acq: 28 Jul 2021 16:28

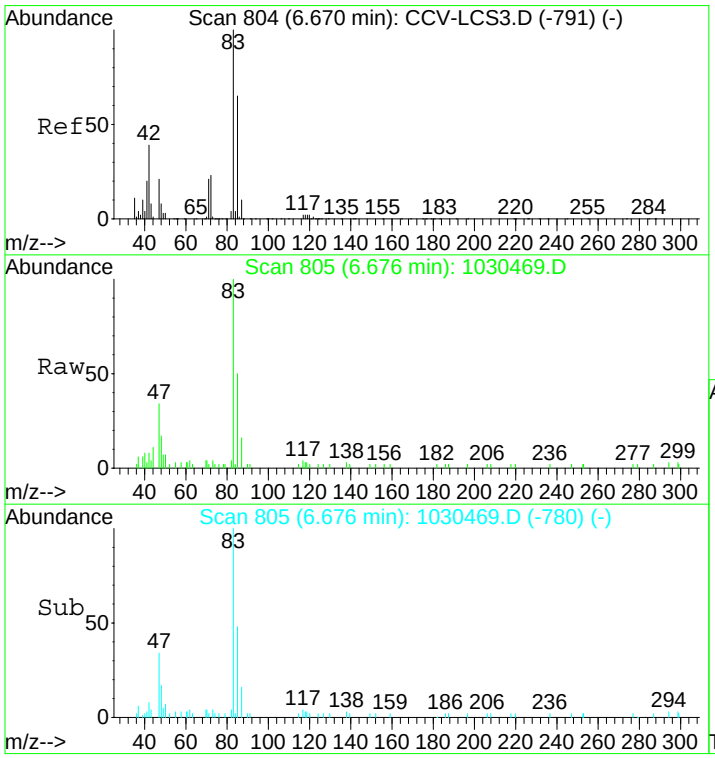
Tgt Ion: 64 Resp: 15538

Ion	Ratio	Lower	Upper
64	100		
66	0.0	11.2	51.2#



Negative Library Identification

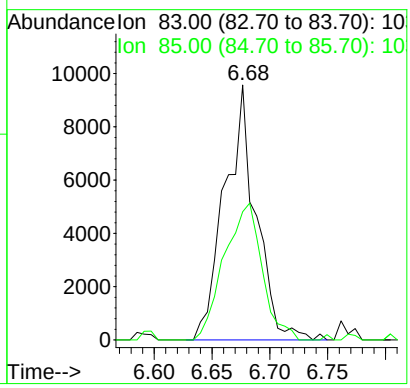
[redacted]

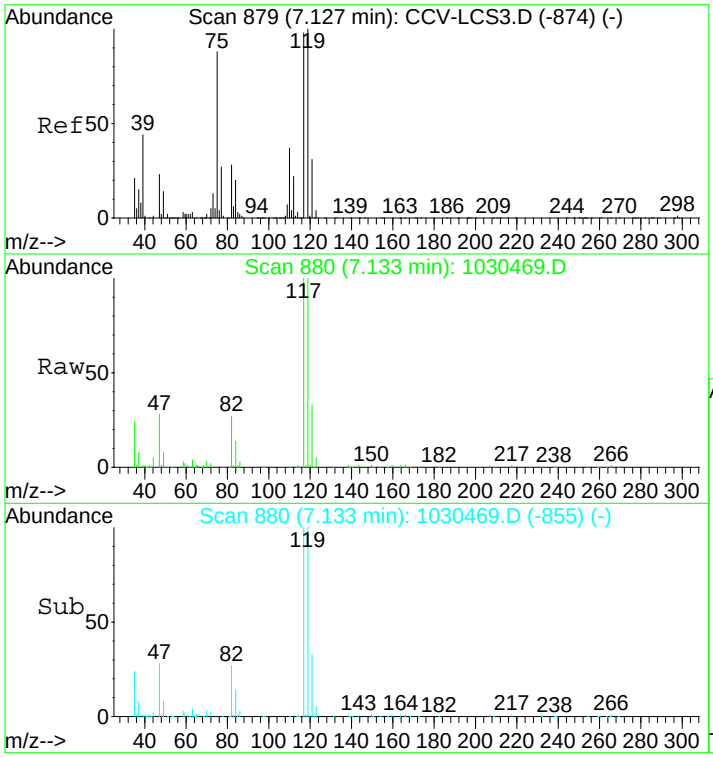


#39
Chloroform
Concen: 0.67 ug/L
RT: 6.68 min Scan# 805
Delta R.T. 0.00 min
Lab File: 1030469.D
Acq: 28 Jul 2021 16:28

Tgt Ion: 83 Resp: 18053

Ion	Ratio	Lower	Upper
83	100		
85	64.6	46.1	86.1

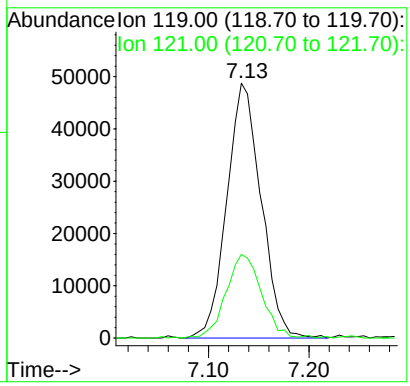


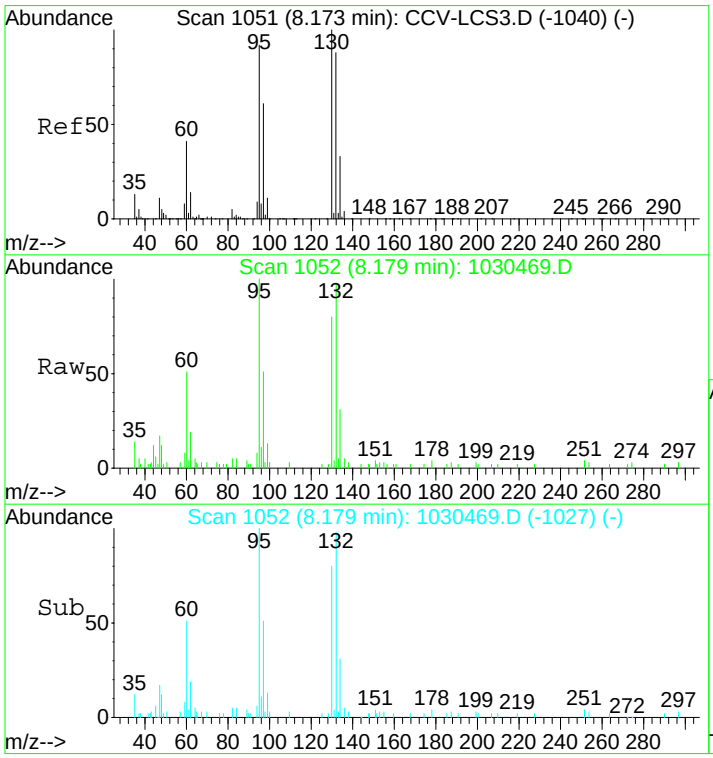


#43
Carbtetraclo
Concen: 6.82 ug/L
RT: 7.13 min Scan# 880
Delta R.T. 0.00 min
Lab File: 1030469.D
Acq: 28 Jul 2021 16:28

Tgt Ion:119 Resp: 115493

Ion	Ratio	Lower	Upper
119	100		
121	34.2	12.0	52.0

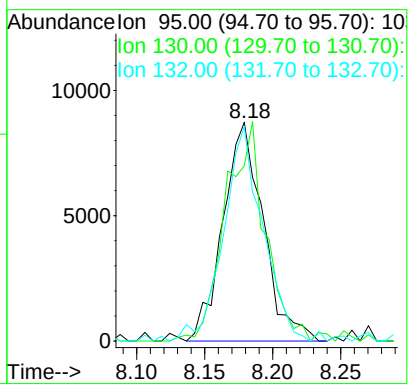




#49
trichloroete
Concen: 1.16 ug/L
RT: 8.18 min Scan# 1052
Delta R.T. 0.00 min
Lab File: 1030469.D
Acq: 28 Jul 2021 16:28

Tgt Ion: 95 Resp: 17976

Ion	Ratio	Lower	Upper
95	100		
130	100.6	83.9	123.9
132	95.5	77.3	117.3



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031440.D Vial: 5
Acq On : 5 Aug 2021 10:43 Operator: DGS-RLD
Sample : 194091,1031440, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 11:04:19 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1105989	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	805003	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	471545	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	283580	20.285	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.27	102	76709	20.110	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %			
61) SURRd8Tolule	9.71	98	1099883	19.868	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99 %			
83) SURR4BrFBenz	13.25	95	461268	20.358	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.79	64	13047	1.3318	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	10102	Below Cal		98
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	5499	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.85	59	6047	Below Cal	#	56
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.65	42	5071	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031440.D Vial: 5
Acq On : 5 Aug 2021 10:43 Operator: DGS-RLD
Sample : 194091,1031440, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 11:04:19 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	9.04	43	3176	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.55	43	3433	Below Cal #	38
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.64	43	5907	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	2662	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	13.06	105	2620	N.D.	
81)	cyclohexanone	13.15	55	2714	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.64	91	3638	N.D.	
89)	2chlorotolue	13.64	91	2990	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.42	105	3134	N.D.	
94)	sbutylbenzen	14.68	105	4136	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.91	119	3657	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.49	91	5610	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031440.D Vial: 5
Acq On : 5 Aug 2021 10:43 Operator: DGS-RLD
Sample : 194091,1031440, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 11:04:19 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

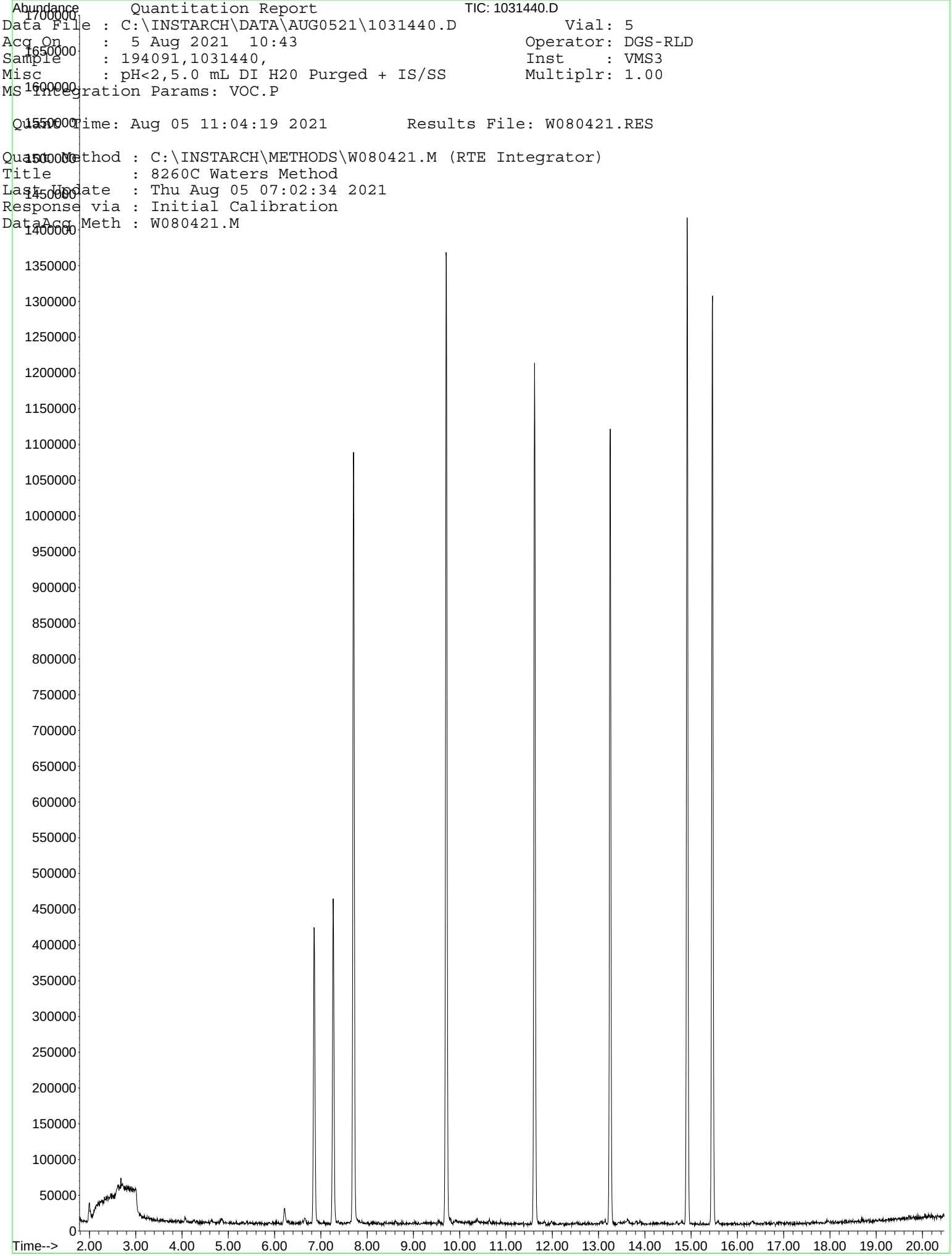
(#) = qualifier out of range (m) = manual integration

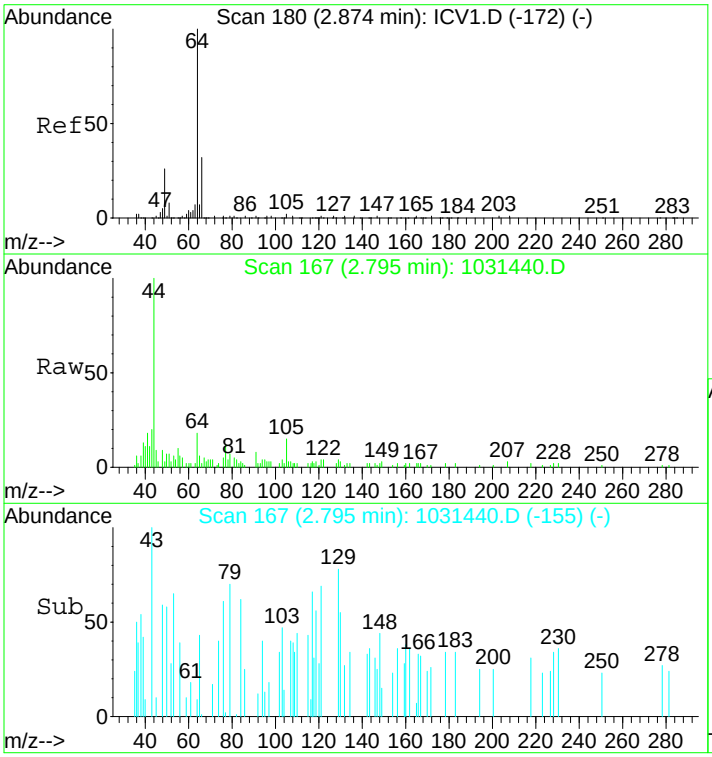
Abundance Quantitation Report TIC: 1031440.D

Data File : C:\INSTARCH\DATA\AUG0521\1031440.D Vial: 5
Acq On : 5 Aug 2021 10:43 Operator: DGS-RLD
Sample : 194091,1031440, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 11:04:19 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

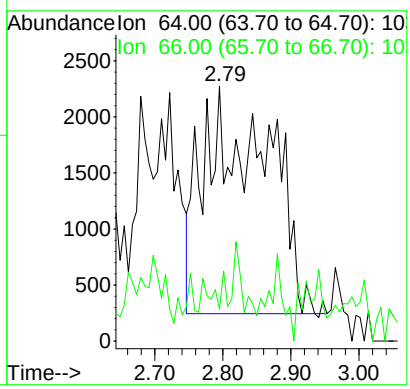




#6
Chloroethane
Concen: 1.33 ug/L
RT: 2.79 min Scan# 167
Delta R.T. -0.08 min
Lab File: 1031440.D
Acq: 5 Aug 2021 10:43

Tgt Ion: 64 Resp: 13047

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

[redacted]

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031958.D Vial: 6
Acq On : 5 Aug 2021 11:13 Operator: DGS-RLD
Sample : 194091,1031958, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 11:34:18 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1018417	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	857480	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	467798	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	262783	20.413	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102	%		
45) SURR12DCAd4	7.27	102	69515	19.791	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.71	98	1089263	21.368	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 107	%		
83) SURR4BrFBenz	13.25	95	444563	19.778	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.87	64	16076	1.7822	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	71916	15.4724	ug/L	98
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.25	76	5720	N.D.		
18) allylchloride	4.41	41	4143	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.64	84	4346	N.D.		
21) tbutylalcohol	4.85	59	11334	Below Cal		78
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	6.22	77	4921	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	6.29	72	5175	2.9372	ug/L	65
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.65	42	25637	6.0461	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031958.D Vial: 6
Acq On : 5 Aug 2021 11:13 Operator: DGS-RLD
Sample : 194091,1031958, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 11:34:18 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.54	43	5051	Below Cal #	38
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.63	43	3316	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	2916	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	13.06	105	2700	N.D.	
81)	cyclohexanone	13.14	55	4111	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.64	91	2851	N.D.	
89)	2chlorotolue	13.64	91	2756	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.43	105	2833	N.D.	
94)	sbutylbenzen	14.68	105	3568	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.91	119	3678	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.49	91	2902	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031958.D Vial: 6
Acq On : 5 Aug 2021 11:13 Operator: DGS-RLD
Sample : 194091,1031958, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 11:34:18 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

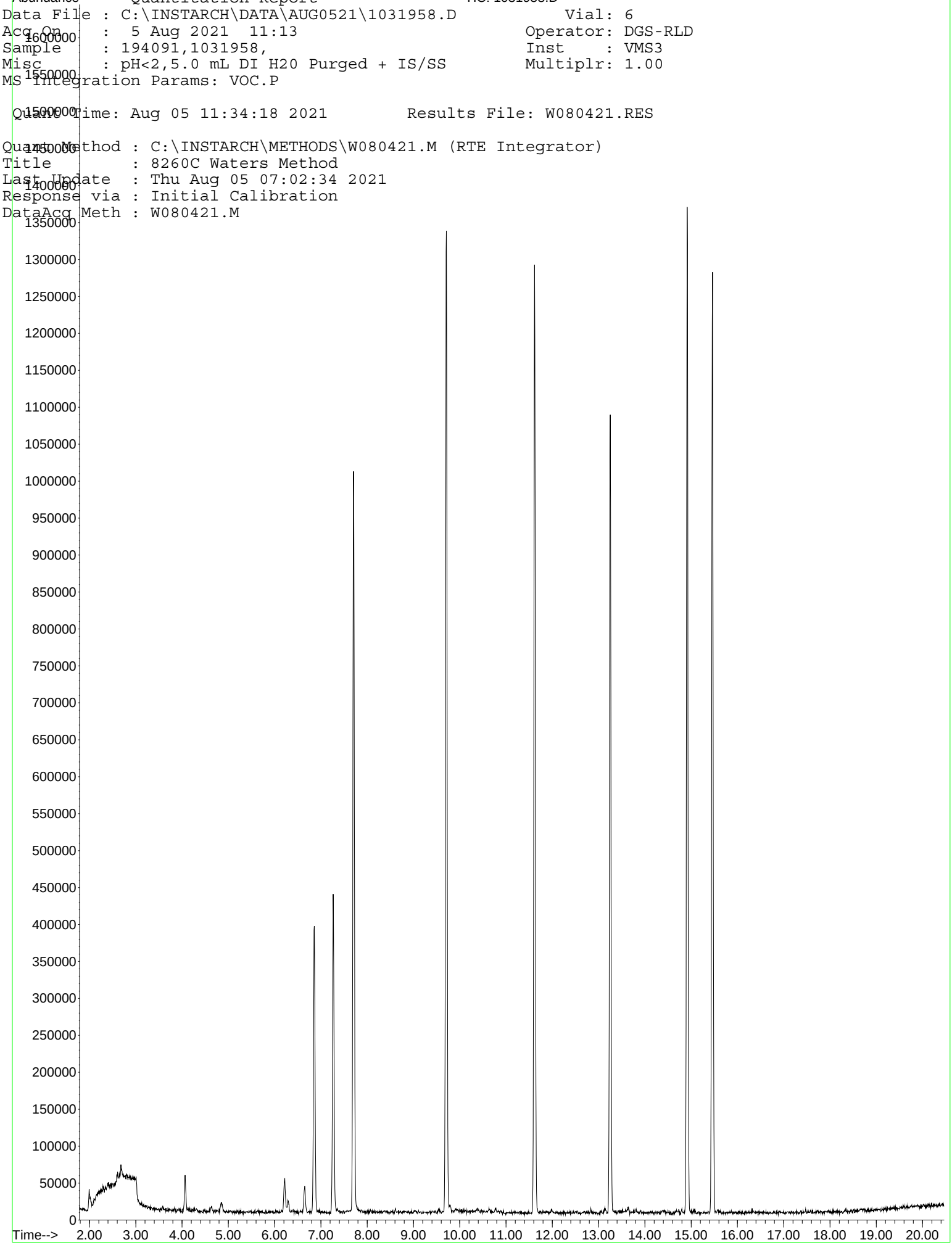
(#) = qualifier out of range (m) = manual integration

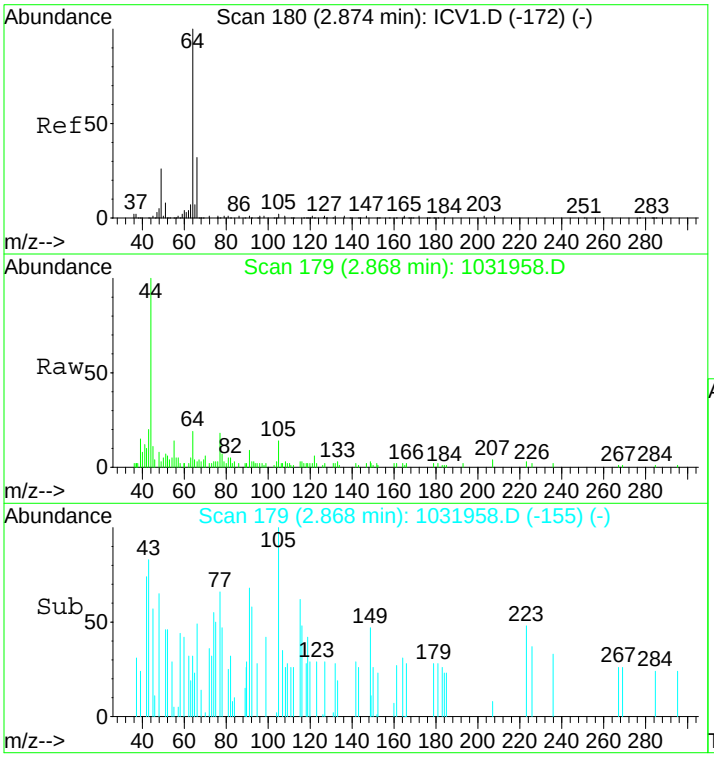
Abundance Quantitation Report TIC: 1031958.D

Data File : C:\INSTARCH\DATA\AUG0521\1031958.D Vial: 6
Acq On : 5 Aug 2021 11:13 Operator: DGS-RLD
Sample : 194091,1031958, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 11:34:18 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

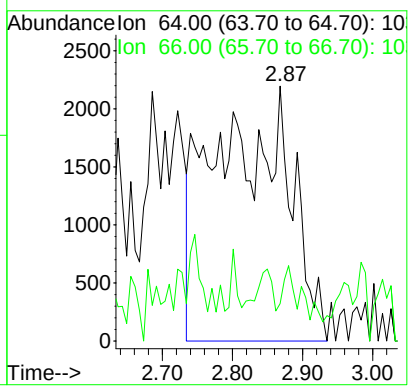




#6
Chloroethane
Concen: 1.78 ug/L
RT: 2.87 min Scan# 179
Delta R.T. -0.01 min
Lab File: 1031958.D
Acq: 5 Aug 2021 11:13

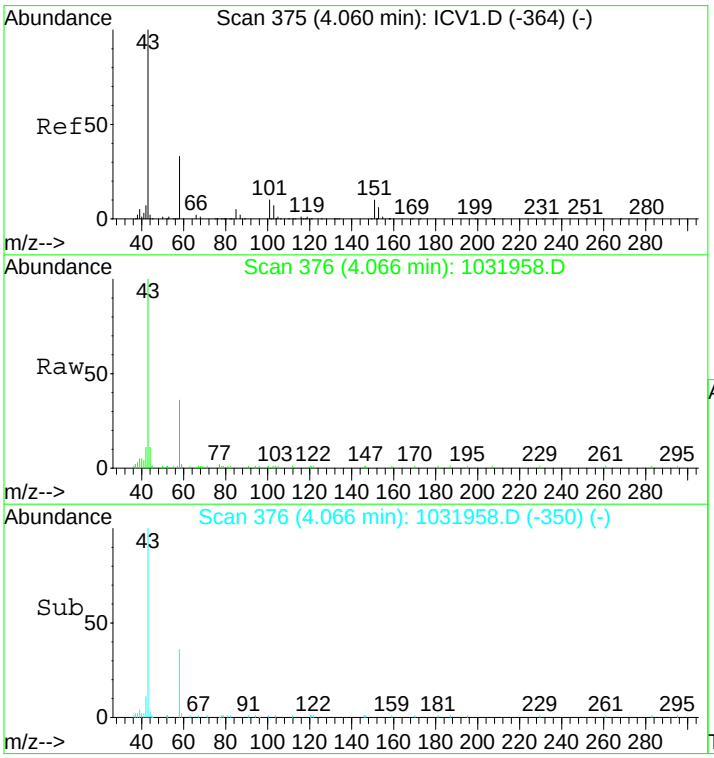
Tgt Ion: 64 Resp: 16076

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

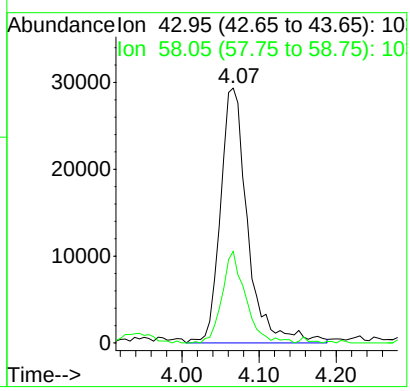
[redacted]

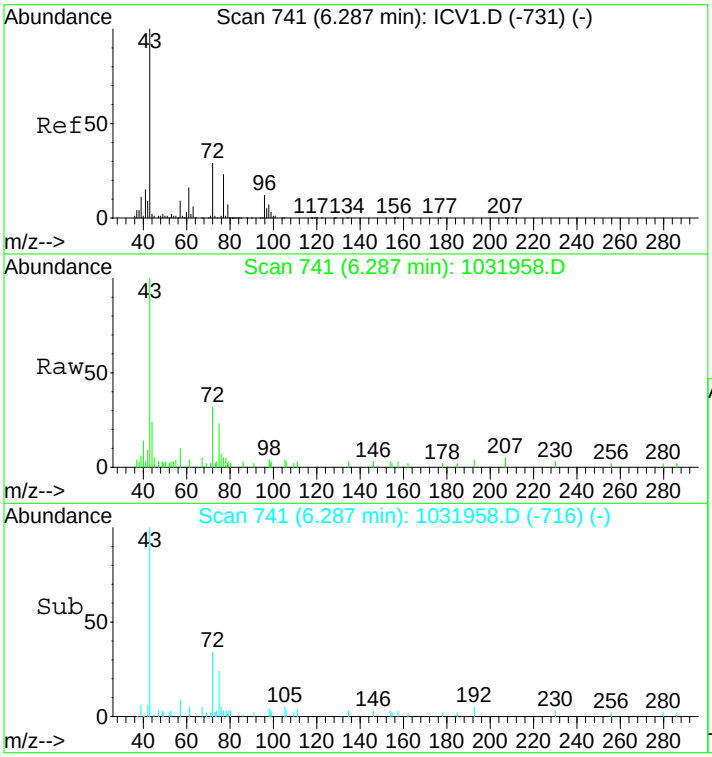


#15
Acetone
Concen: 15.47 ug/L
RT: 4.07 min Scan# 376
Delta R.T. 0.01 min
Lab File: 1031958.D
Acq: 5 Aug 2021 11:13

Tgt Ion: 43 Resp: 71916

Ion	Ratio	Lower	Upper
43	100		
58	31.0	12.4	52.4

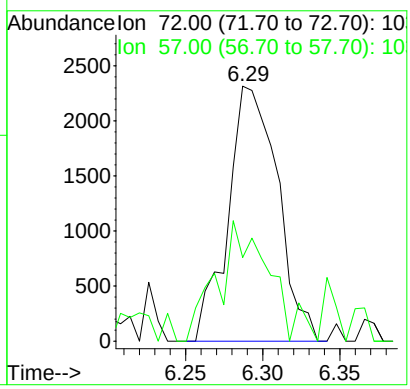




#33
2Butanone
Concen: 2.94 ug/L
RT: 6.29 min Scan# 741
Delta R.T. -0.00 min
Lab File: 1031958.D
Acq: 5 Aug 2021 11:13

Tgt Ion: 72 Resp: 5175

Ion	Ratio	Lower	Upper
72	100		
57	49.2	10.1	50.1



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031960.D Vial: 7
Acq On : 5 Aug 2021 11:44 Operator: DGS-RLD
Sample : 194091,1031960, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 12:04:58 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1017585	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	857127	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	473969	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	265525	20.643	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103	%		
45) SURR12DCAd4	7.27	102	72915	20.776	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 104	%		
61) SURRd8Tolule	9.71	98	1094414	21.487	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 107	%#		
83) SURR4BrFBenz	13.25	95	453170	19.899	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	2.21	50	3894	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.77	64	13371	1.4835	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	67956	14.5027	ug/L	100
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	4456	N.D.		
18) allylchloride	4.41	41	3204	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.63	84	4001	N.D.		
21) tbutylalcohol	4.84	59	5161	Below Cal	#	24
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	6.29	72	4896	2.7811	ug/L #	45
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.65	42	29345	6.9262	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031960.D Vial: 7
Acq On : 5 Aug 2021 11:44 Operator: DGS-RLD
Sample : 194091,1031960, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 12:04:58 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	8.64	88	2686	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.55	43	2958	Below Cal #	38
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.64	43	2733	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	13.13	55	4463	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	14.43	105	3166	N.D.	
94)	sbutylbenzen	14.67	105	3239	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.90	119	2632	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031960.D Vial: 7
Acq On : 5 Aug 2021 11:44 Operator: DGS-RLD
Sample : 194091,1031960, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 12:04:58 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

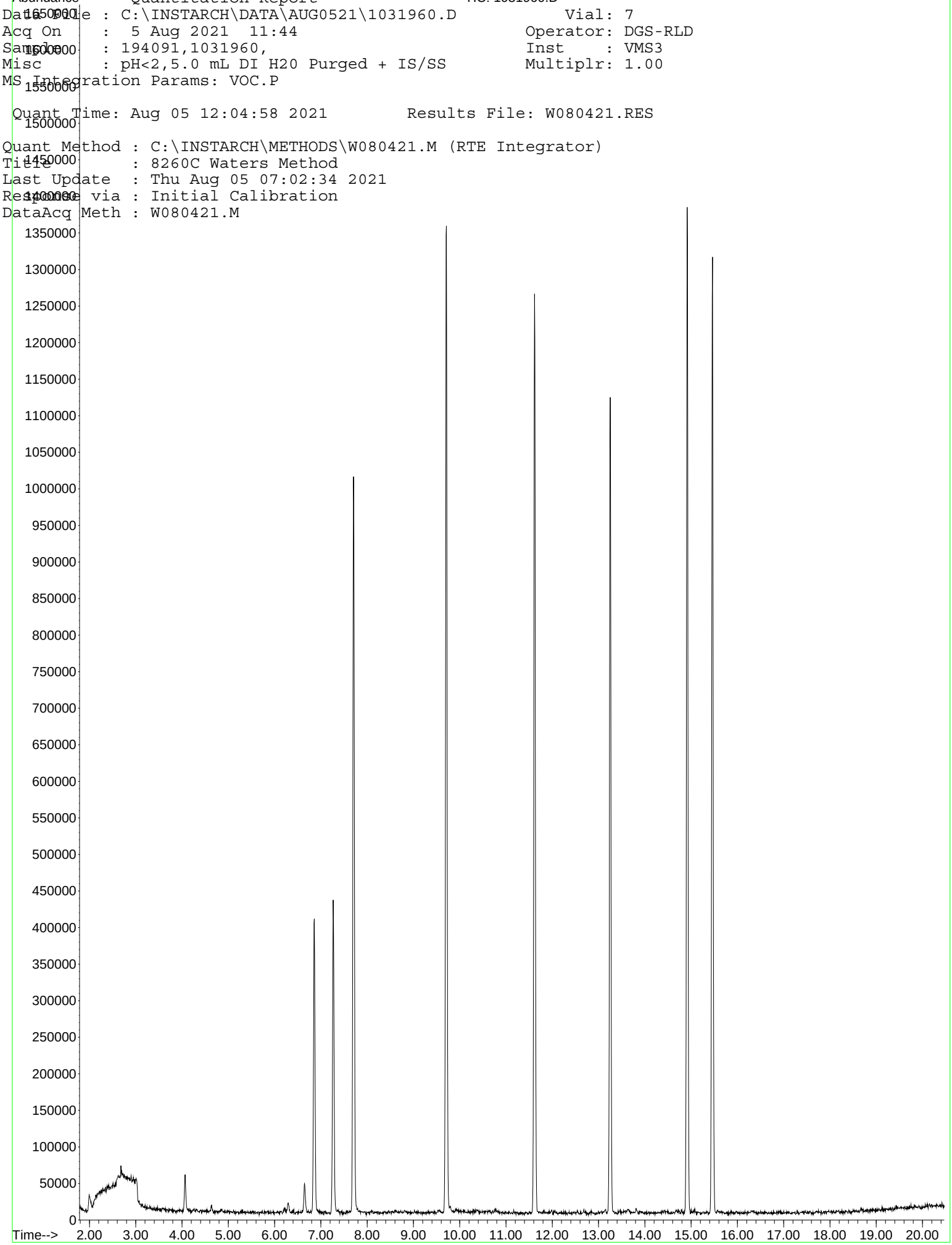
(#) = qualifier out of range (m) = manual integration

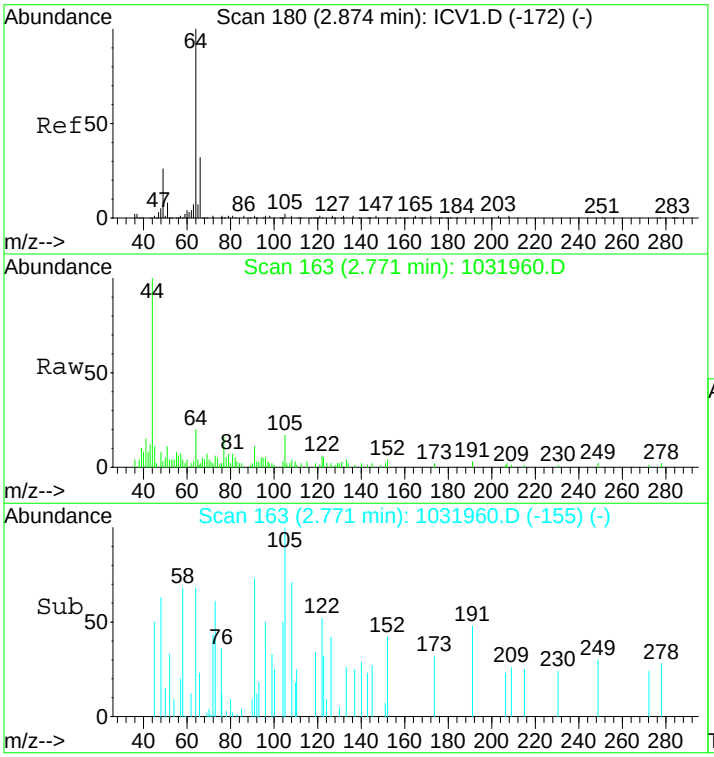
Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031960.D Vial: 7
Acq On : 5 Aug 2021 11:44 Operator: DGS-RLD
Sample : 194091,1031960, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 12:04:58 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

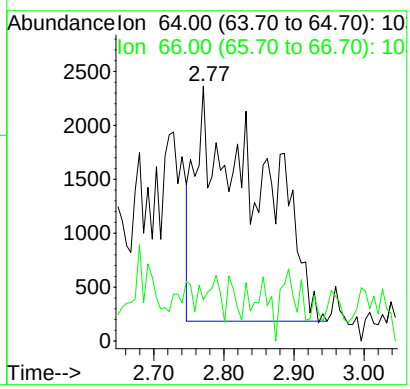




#6
Chloroethane
Concen: 1.48 ug/L
RT: 2.77 min Scan# 163
Delta R.T. -0.10 min
Lab File: 1031960.D
Acq: 5 Aug 2021 11:44

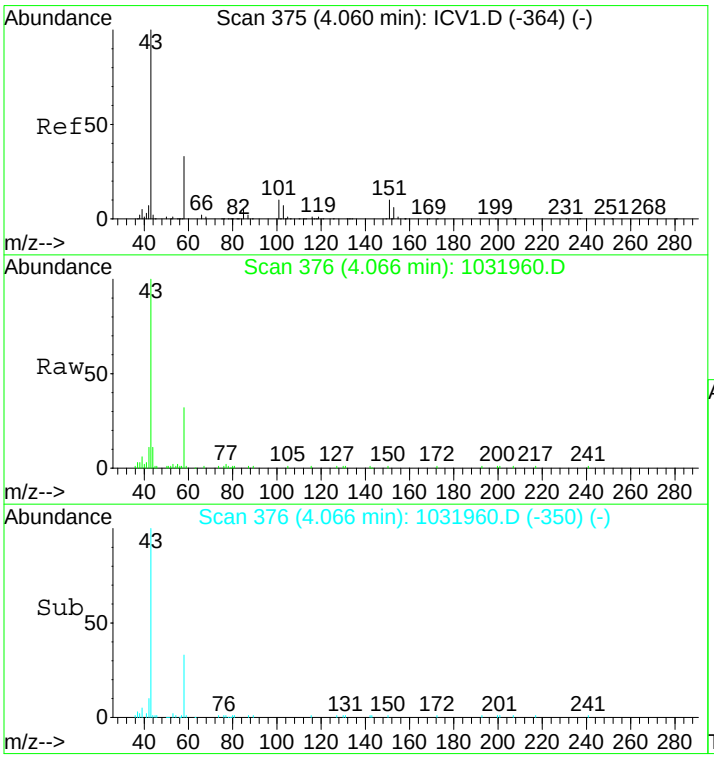
Tgt Ion: 64 Resp: 13371

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

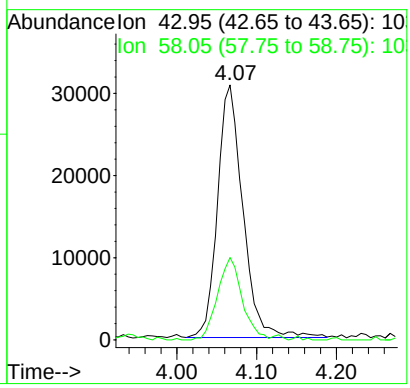
[redacted]



#15
Acetone
Concen: 14.50 ug/L
RT: 4.07 min Scan# 376
Delta R.T. 0.01 min
Lab File: 1031960.D
Acq: 5 Aug 2021 11:44

Tgt Ion: 43 Resp: 67956

Ion	Ratio	Lower	Upper
43	100		
58	32.2	12.4	52.4



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032209.D Vial: 8
Acq On : 5 Aug 2021 12:14 Operator: DGS-RLD
Sample : 194091,1032209, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 12:34:56 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1052111	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	868940	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	473775	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	262859	19.765	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	70525	19.436	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.71	98	1109278	21.064	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 105 %			
83) SURR4BrFBenz	13.25	95	458036	20.121	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	2.72	94	2680	N.D.		
6) Chloroethane	2.85	64	5356	0.5747	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	12186	N.D.		
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.25	76	4768	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.85	59	7597	Below Cal	#	56
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	6.21	77	3901	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.66	42	3674	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032209.D Vial: 8
Acq On : 5 Aug 2021 12:14 Operator: DGS-RLD
Sample : 194091,1032209, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 12:34:56 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	8.62	88	3811	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	9.04	43	3215	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.55	43	3451	Below Cal #	38
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	2711	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	14.69	105	2831	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.50	91	3533	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032209.D Vial: 8
Acq On : 5 Aug 2021 12:14 Operator: DGS-RLD
Sample : 194091,1032209, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 12:34:56 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

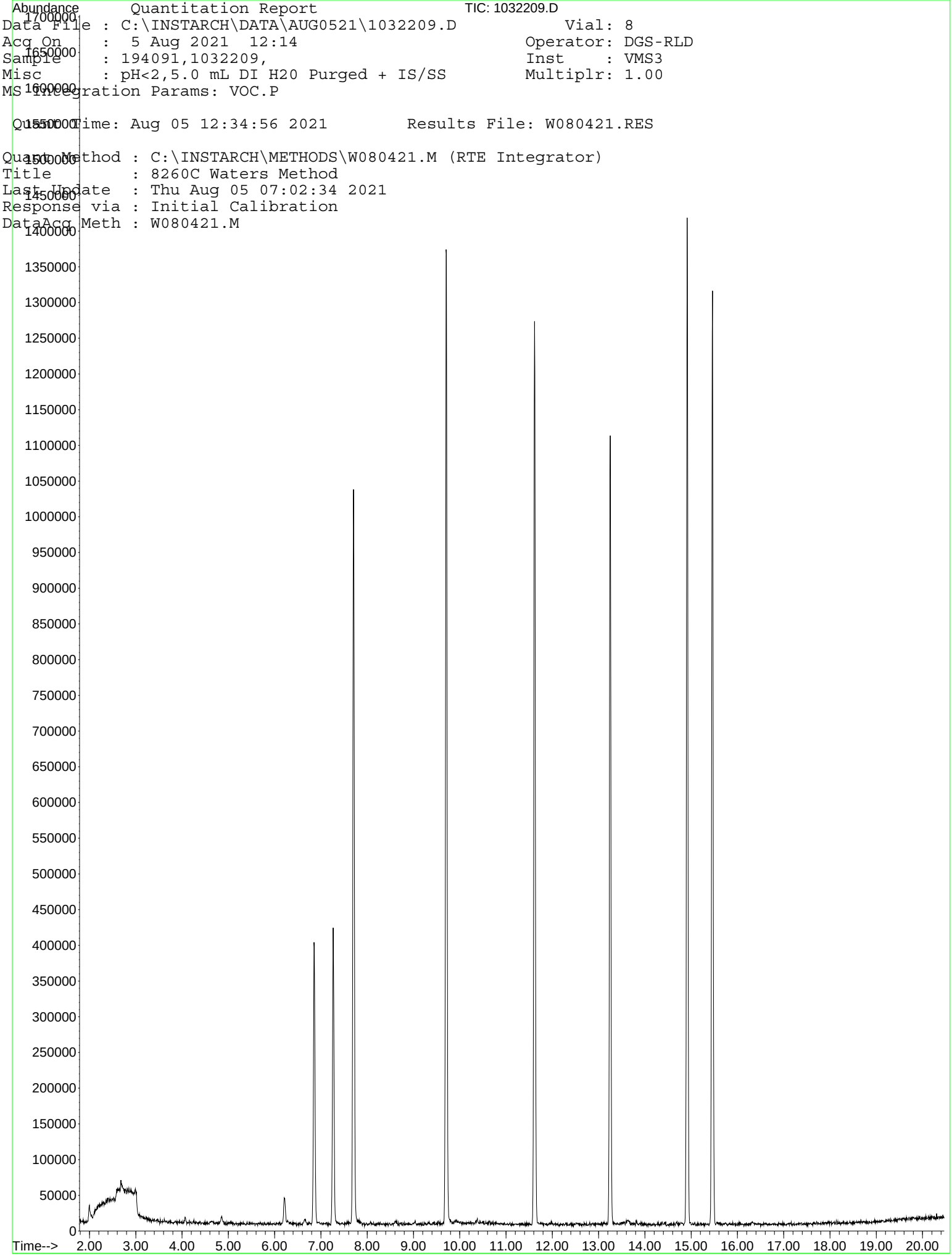
(#) = qualifier out of range (m) = manual integration

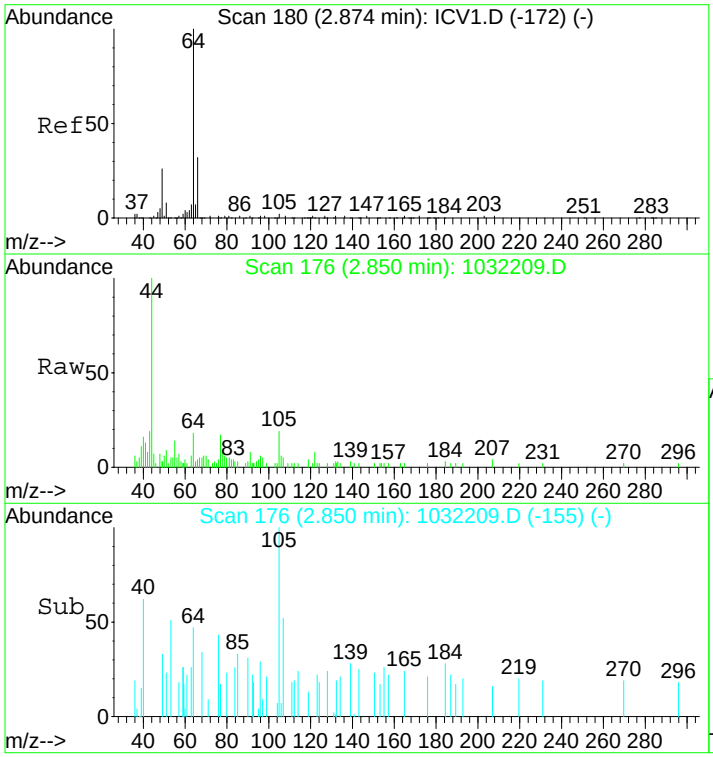
Abundance Quantitation Report TIC: 1032209.D

Data File : C:\INSTARCH\DATA\AUG0521\1032209.D Vial: 8
Acq On : 5 Aug 2021 12:14 Operator: DGS-RLD
Sample : 194091,1032209, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 12:34:56 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

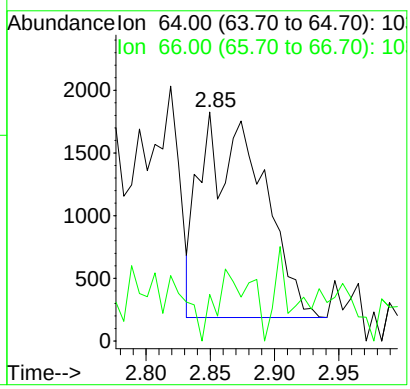




#6
Chloroethane
Concen: 0.57 ug/L
RT: 2.85 min Scan# 176
Delta R.T. -0.02 min
Lab File: 1032209.D
Acq: 5 Aug 2021 12:14

Tgt Ion: 64 Resp: 5356

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

[redacted]

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032212.D Vial: 9
Acq On : 5 Aug 2021 12:44 Operator: DGS-RLD
Sample : 194091,1032212, Inst : VMS3
Misc : pH 7,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 13:04:48 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1068482	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	833035	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	455123	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	254275	18.827	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 94 %			
45) SURR12DCAd4	7.27	102	71308	19.350	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.71	98	1075143	20.103	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.25	95	447024	20.442	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.87	64	12549	1.3260	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	66903	13.4495	ug/L	96
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	3941	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.64	84	3489	N.D.		
21) tbutylalcohol	4.85	59	5548	Below Cal	#	56
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	6.29	72	5271	2.8515	ug/L #	45
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.65	42	26845	6.0343	ug/L	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032212.D Vial: 9
Acq On : 5 Aug 2021 12:44 Operator: DGS-RLD
Sample : 194091,1032212, Inst : VMS3
Misc : pH 7,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 13:04:48 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	8.62	88	3598	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	9.04	43	3540	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.59	43	3358	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.63	91	2583	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032212.D Vial: 9
Acq On : 5 Aug 2021 12:44 Operator: DGS-RLD
Sample : 194091,1032212, Inst : VMS3
Misc : pH 7,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 13:04:48 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

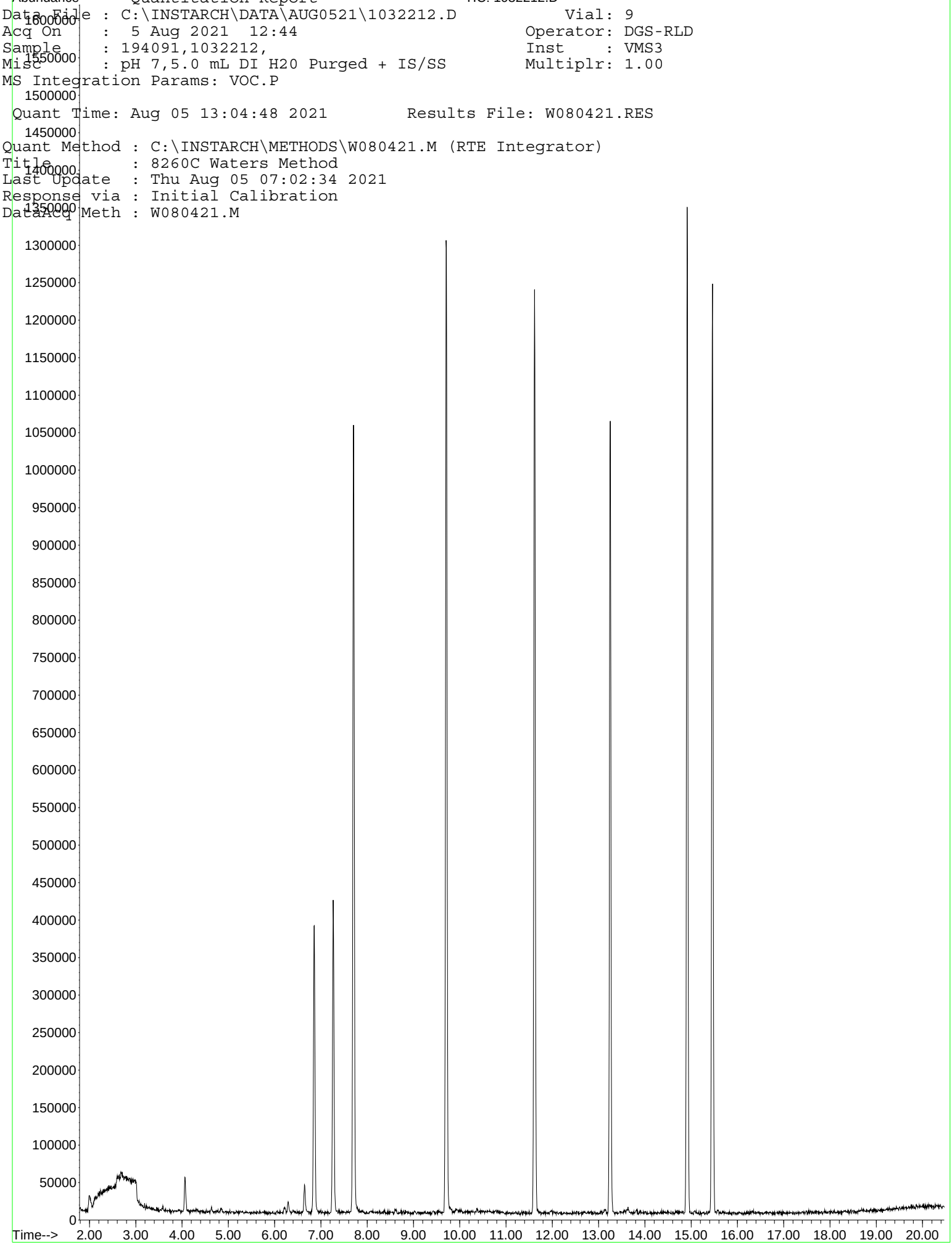
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

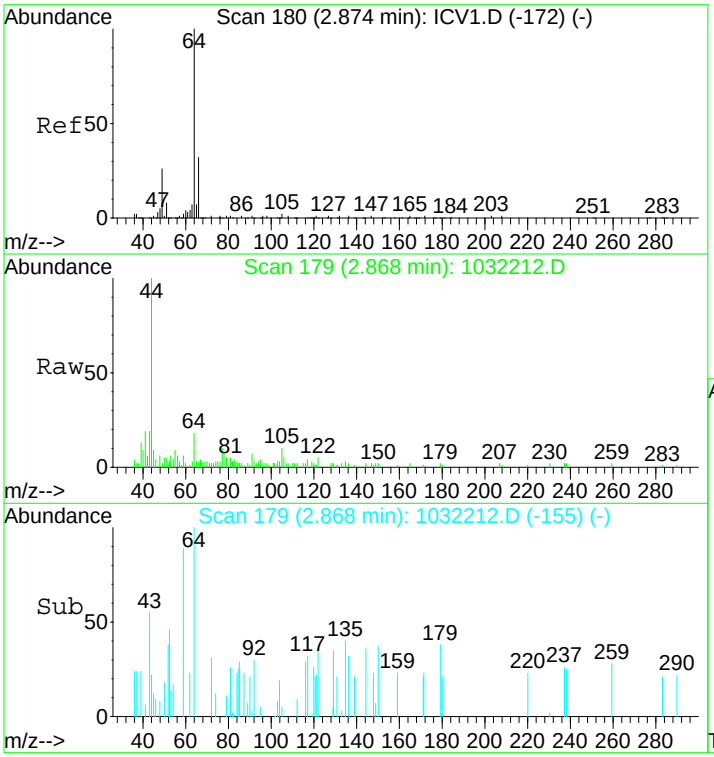
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\AUG0521\1032212.D Vial: 9
Acq On : 5 Aug 2021 12:44 Operator: DGS-RLD
Sample : 194091,1032212, Inst : VMS3
Misc : pH 7,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 13:04:48 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

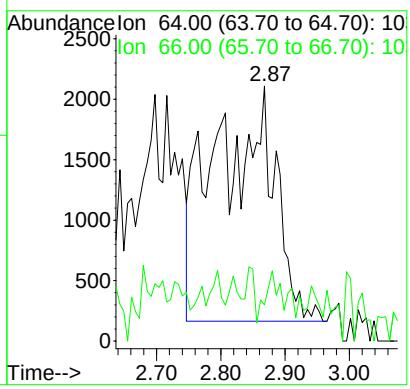




#6
Chloroethane
Concen: 1.33 ug/L
RT: 2.87 min Scan# 179
Delta R.T. -0.01 min
Lab File: 1032212.D
Acq: 5 Aug 2021 12:44

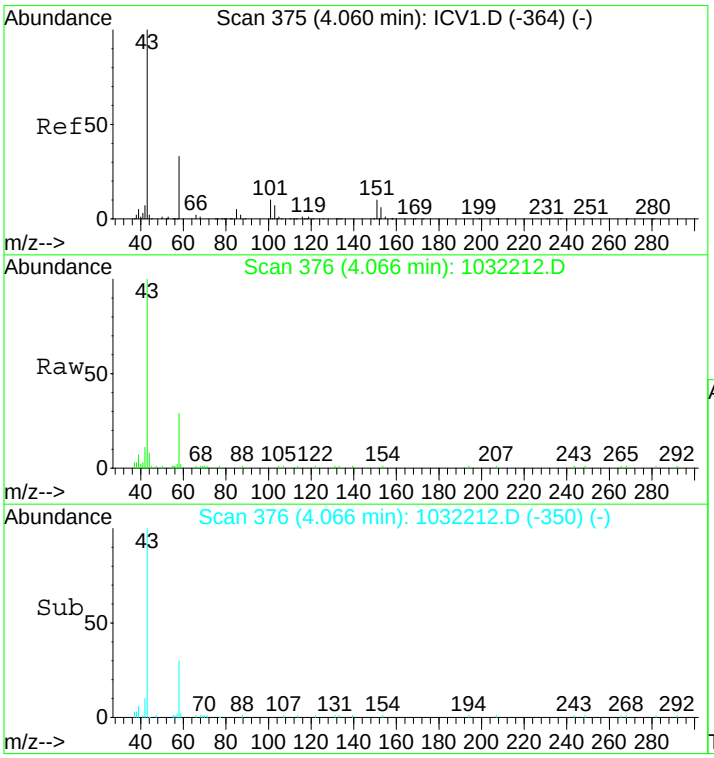
Tgt Ion: 64 Resp: 12549

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

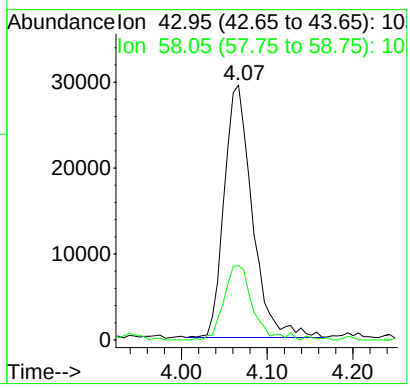
[redacted]

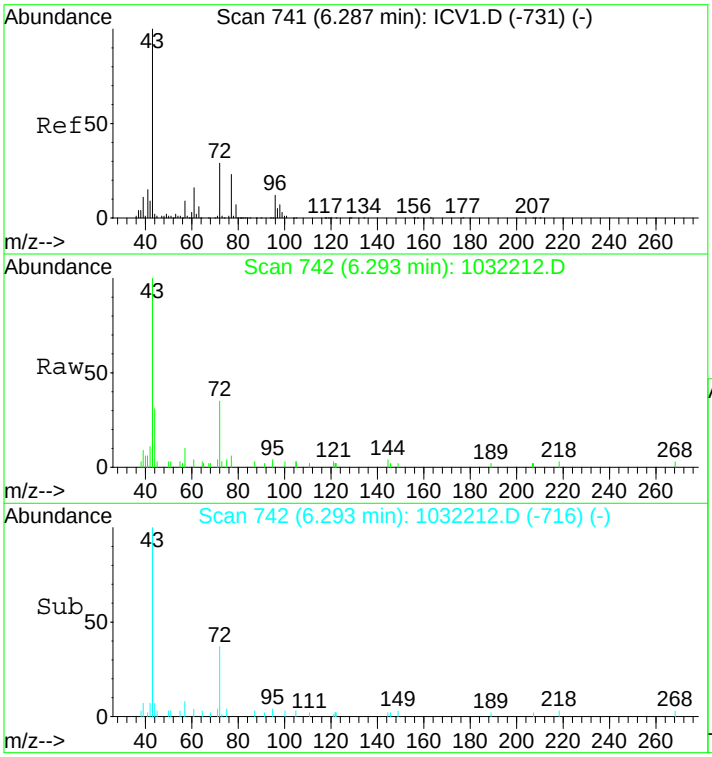


#15
Acetone
Concen: 13.45 ug/L
RT: 4.07 min Scan# 376
Delta R.T. 0.01 min
Lab File: 1032212.D
Acq: 5 Aug 2021 12:44

Tgt Ion: 43 Resp: 66903

Ion	Ratio	Lower	Upper
43	100		
58	30.1	12.4	52.4

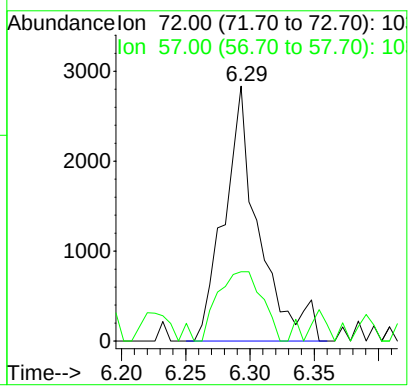




#33
2Butanone
Concen: 2.85 ug/L
RT: 6.29 min Scan# 742
Delta R.T. 0.01 min
Lab File: 1032212.D
Acq: 5 Aug 2021 12:44

Tgt Ion: 72 Resp: 5271

Ion	Ratio	Lower	Upper
72	100		
57	0.0	10.1	50.1#



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031437.D Vial: 10
Acq On : 5 Aug 2021 13:14 Operator: DGS-RLD
Sample : 194091,1031437, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 13:34:35 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	971265	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	855612	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	476518	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	260536	21.221	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 106	%		
45) SURR12DCAd4	7.27	102	70161	20.945	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 105	%		
61) SURRd8Tolule	9.71	98	1095131	22.526	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 113	%#		
83) SURR4BrFBenz	13.25	95	452465	19.762	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.84	64	14094	1.6383	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	3.73	67	4657	0.3988	ug/L #	62
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	11335	N.D.		
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	4339	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.85	59	3104	Below Cal	#	56
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.54	63	61502	2.9130	ug/L	98
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	6.27	96	69997	5.0474	ug/L #	87
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031437.D Vial: 10
Acq On : 5 Aug 2021 13:14 Operator: DGS-RLD
Sample : 194091,1031437, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 13:34:35 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	6.91	97	8303	0.4279	ug/L	94
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	7.36	78	20118	0.4130	ug/L	93
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.16	95	40569	3.0871	ug/L	100
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	9.56	43	3314	Below	Cal #	38
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	10.53	166	6120	0.4540	ug/L	96
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	10.64	43	3246	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.62	91	2559	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	13.08	55	3222	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	13.63	91	2627	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	14.43	105	4736	N.D.		
94)	sbutylbenzen	14.68	105	4093	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.48	91	3682	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031437.D Vial: 10
Acq On : 5 Aug 2021 13:14 Operator: DGS-RLD
Sample : 194091,1031437, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 13:34:35 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

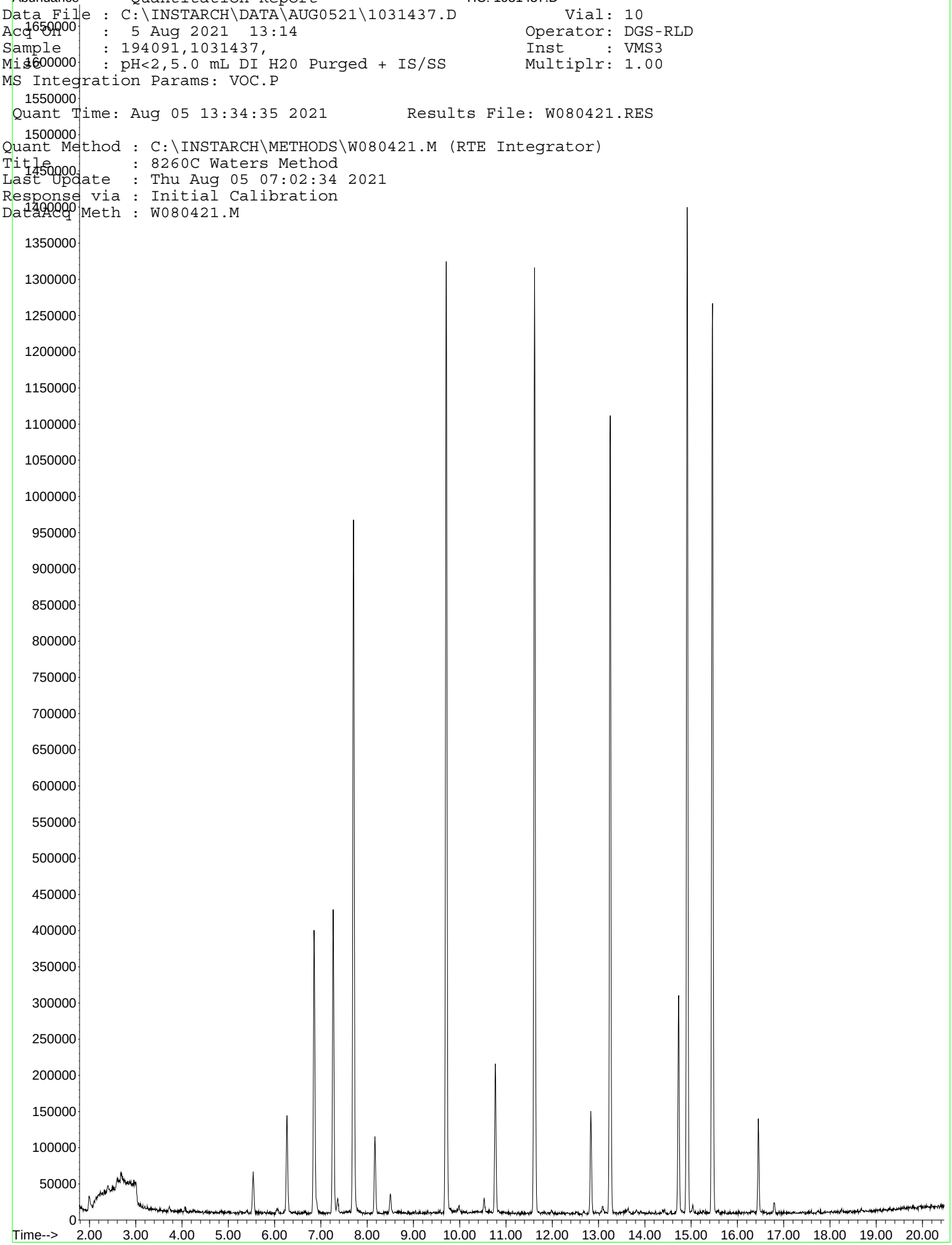
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

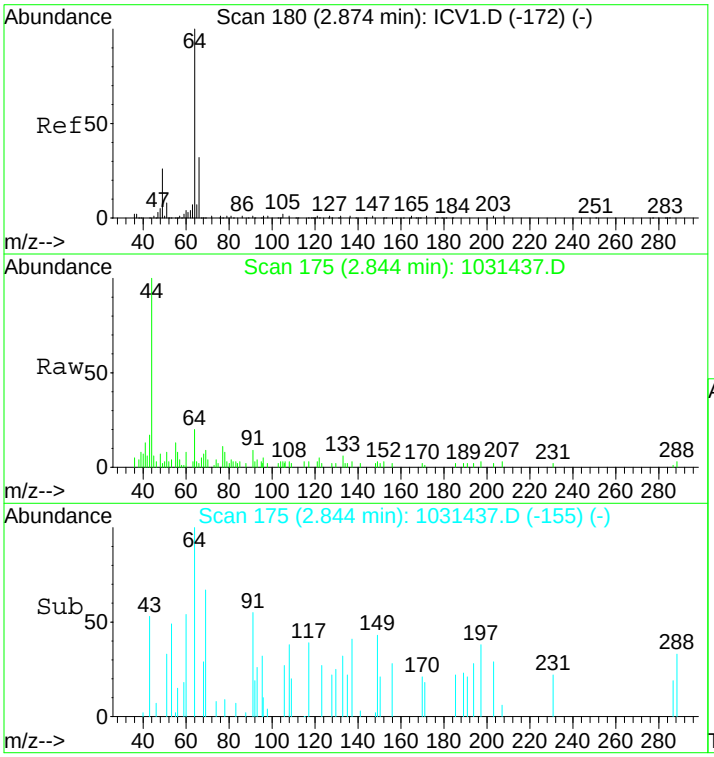
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\AUG0521\1031437.D Vial: 10
Acq On : 5 Aug 2021 13:14 Operator: DGS-RLD
Sample : 194091,1031437, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 13:34:35 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

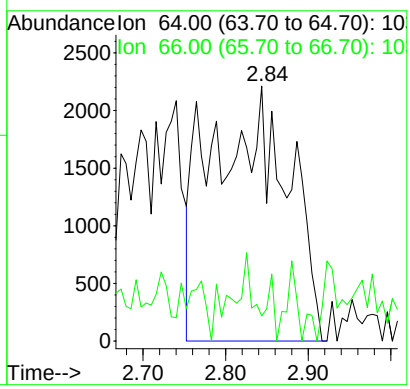




#6
Chloroethane
Concen: 1.64 ug/L
RT: 2.84 min Scan# 175
Delta R.T. -0.03 min
Lab File: 1031437.D
Acq: 5 Aug 2021 13:14

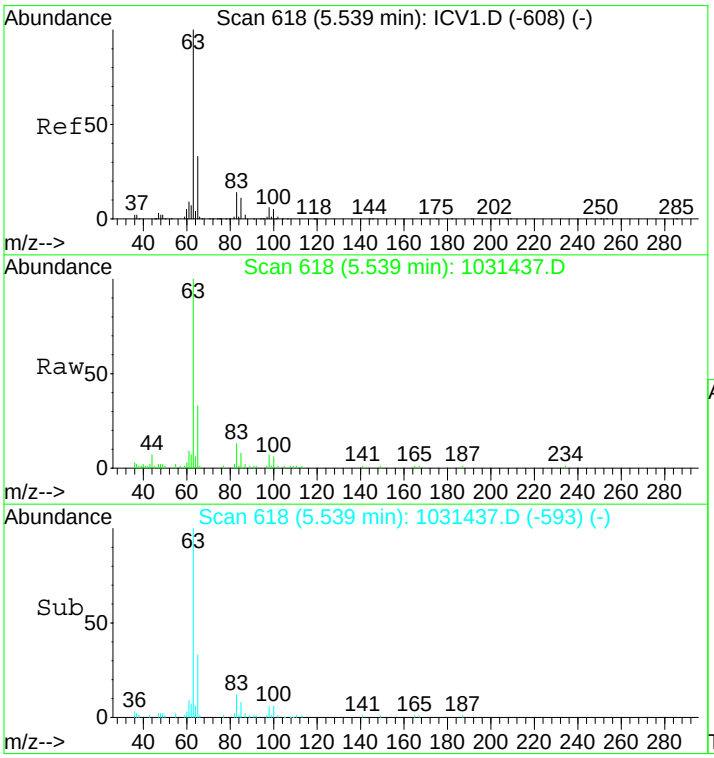
Tgt Ion: 64 Resp: 14094

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

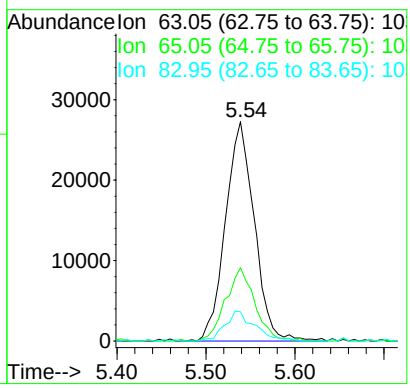
[redacted]

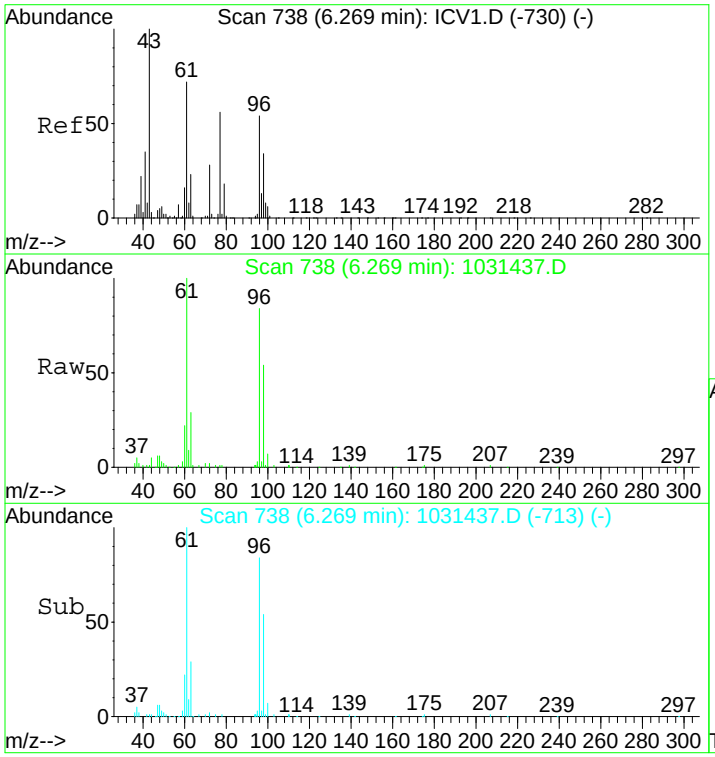


#26
11dichlorota
Concen: 2.91 ug/L
RT: 5.54 min Scan# 618
Delta R.T. -0.00 min
Lab File: 1031437.D
Acq: 5 Aug 2021 13:14

Tgt Ion: 63 Resp: 61502

Ion	Ratio	Lower	Upper
63	100		
65	33.8	12.5	52.5
83	14.1	0.0	35.1

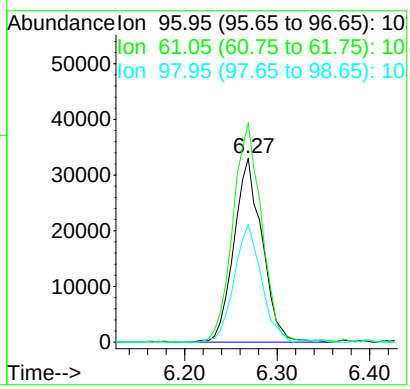


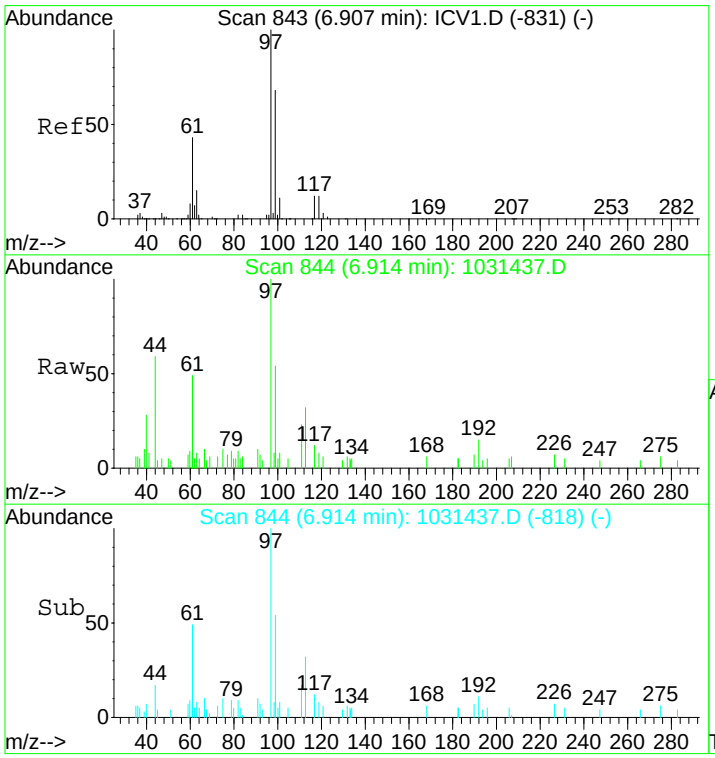


#32
c12dichlorte
Concen: 5.05 ug/L
RT: 6.27 min Scan# 738
Delta R.T. -0.00 min
Lab File: 1031437.D
Acq: 5 Aug 2021 13:14

Tgt Ion: 96 Resp: 69997

Ion	Ratio	Lower	Upper
96	100		
61	121.5	121.8	161.8#
98	61.8	46.4	86.4

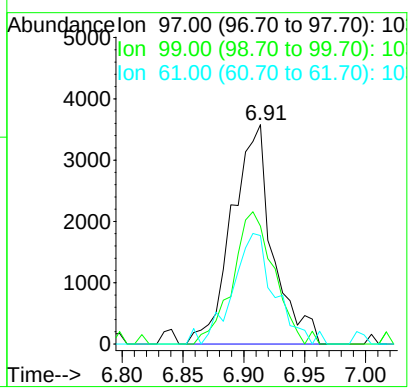


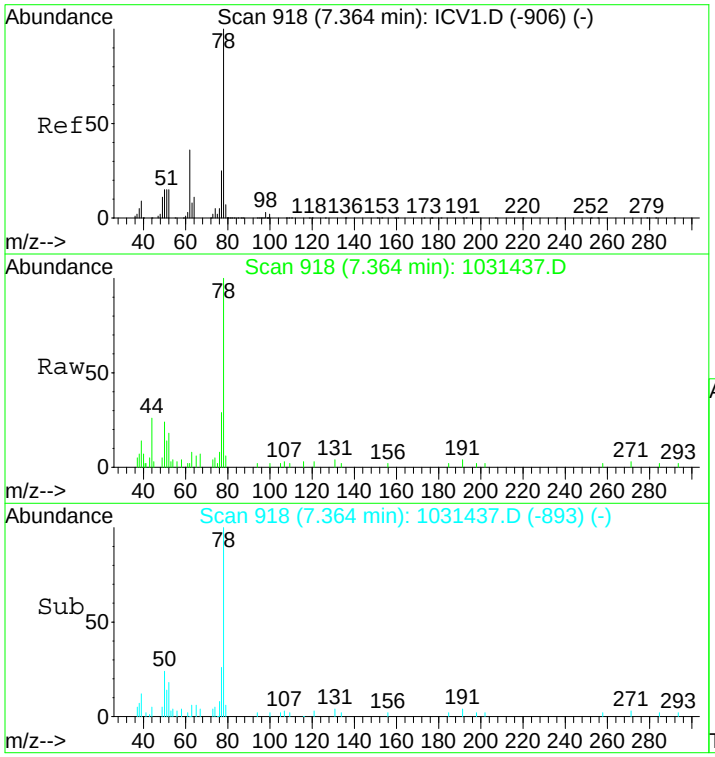


#40
111trichlota
Concen: 0.43 ug/L
RT: 6.91 min Scan# 844
Delta R.T. 0.01 min
Lab File: 1031437.D
Acq: 5 Aug 2021 13:14

Tgt Ion: 97 Resp: 8303

Ion	Ratio	Lower	Upper
97	100		
99	61.6	43.6	83.6
61	52.3	25.2	65.2

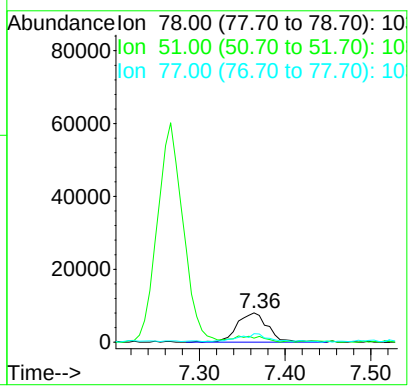


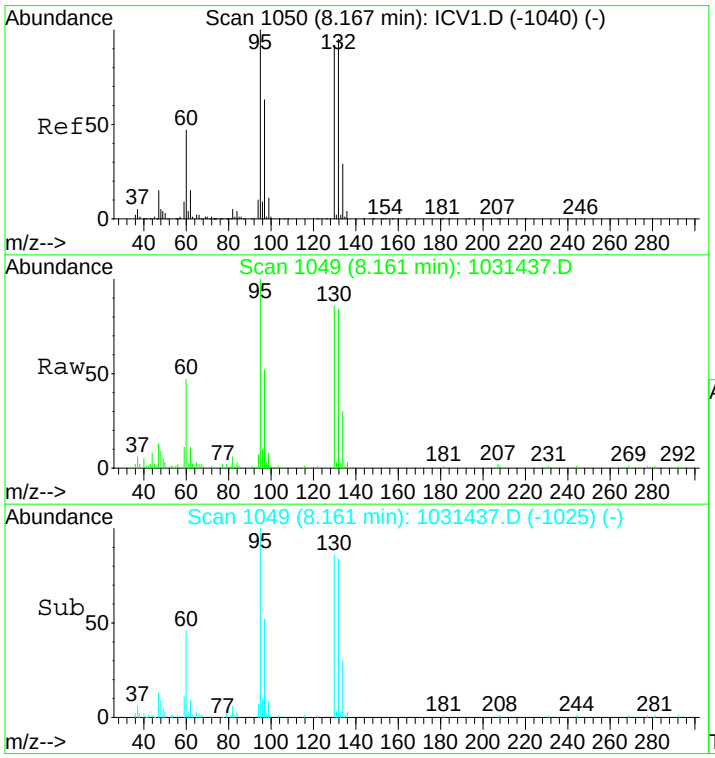


#46
Benzene
Concen: 0.41 ug/L
RT: 7.36 min Scan# 918
Delta R.T. -0.00 min
Lab File: 1031437.D
Acq: 5 Aug 2021 13:14

Tgt Ion: 78 Resp: 20118

Ion	Ratio	Lower	Upper
78	100		
51	20.3	0.0	39.9
77	29.9	4.3	44.3

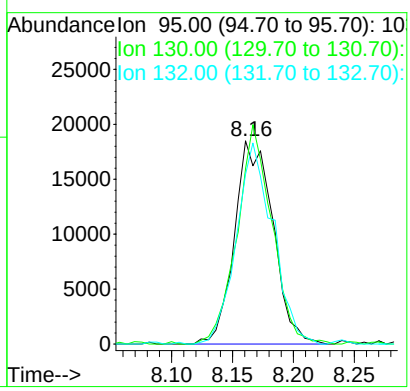


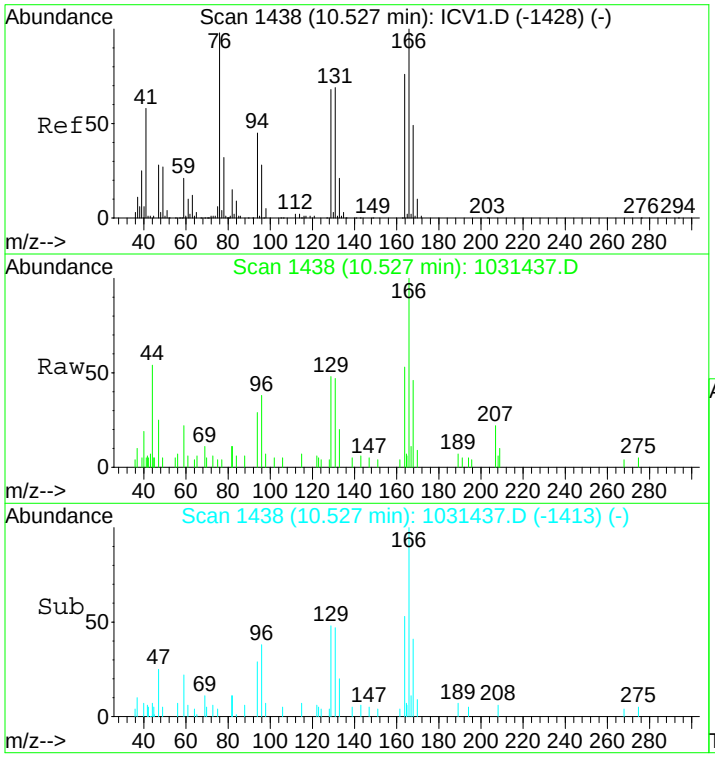


#49
trichloroete
Concen: 3.09 ug/L
RT: 8.16 min Scan# 1049
Delta R.T. -0.01 min
Lab File: 1031437.D
Acq: 5 Aug 2021 13:14

Tgt Ion: 95 Resp: 40569

Ion	Ratio	Lower	Upper
95	100		
130	98.1	78.1	118.1
132	94.4	74.6	114.6

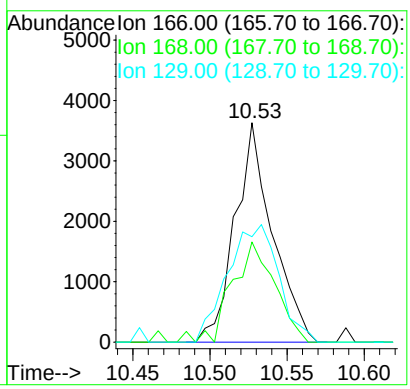




#66
Tetrachlorte
Concen: 0.45 ug/L
RT: 10.53 min Scan# 1438
Delta R.T. -0.00 min
Lab File: 1031437.D
Acq: 5 Aug 2021 13:14

Tgt Ion:166 Resp: 6120

Ion	Ratio	Lower	Upper
166	100		
168	51.4	29.1	69.1
129	73.1	49.0	89.0



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031438.D Vial: 11
Acq On : 5 Aug 2021 13:43 Operator: DGS-RLD
Sample : 194091,1031438, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 14:04:31 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1019759	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	854714	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	471503	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	276915	21.483	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 107	%		
45) SURR12DCAd4	7.27	102	78834	22.415	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 112	%#		
61) SURRd8Tolule	9.71	98	1087043	21.297	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 106	%		
83) SURR4BrFBenz	13.25	95	448135	19.781	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	2.66	94	3410	N.D.		
6) Chloroethane	2.86	64	14150	1.5666	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.08	43	6921	Below Cal	#	42
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.27	76	3743	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.85	59	2897	Below Cal	#	56
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031438.D Vial: 11
Acq On : 5 Aug 2021 13:43 Operator: DGS-RLD
Sample : 194091,1031438, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 14:04:31 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	9.06	43	3133	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.47	91	3826	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031438.D Vial: 11
Acq On : 5 Aug 2021 13:43 Operator: DGS-RLD
Sample : 194091,1031438, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 14:04:31 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

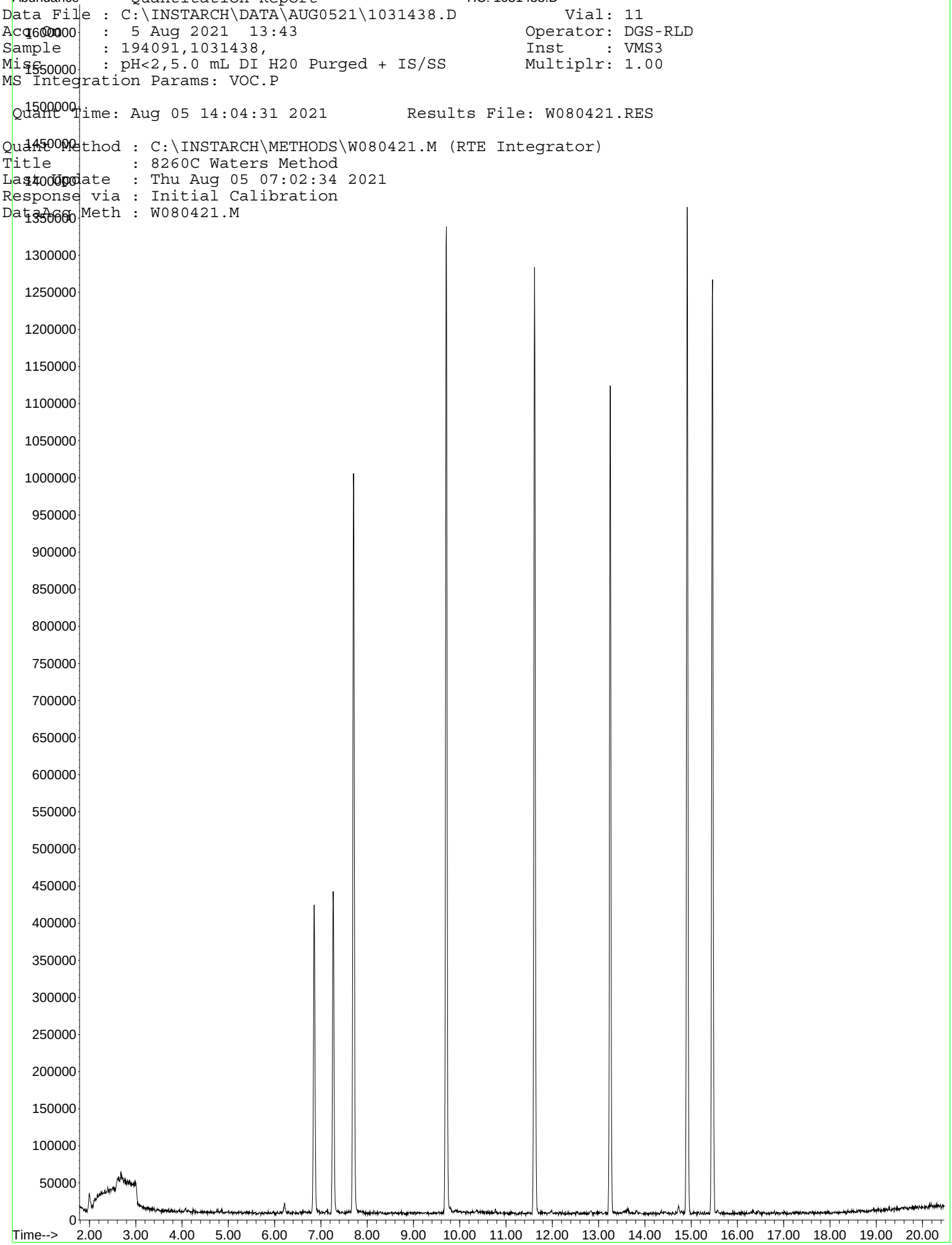
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

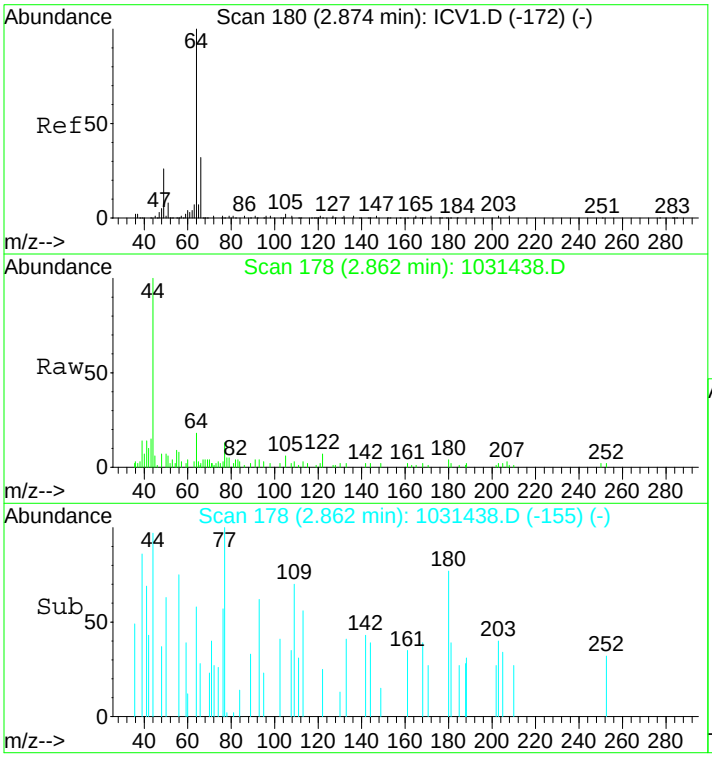
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\AUG0521\1031438.D Vial: 11
Acq On : 5 Aug 2021 13:43 Operator: DGS-RLD
Sample : 194091,1031438, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 14:04:31 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

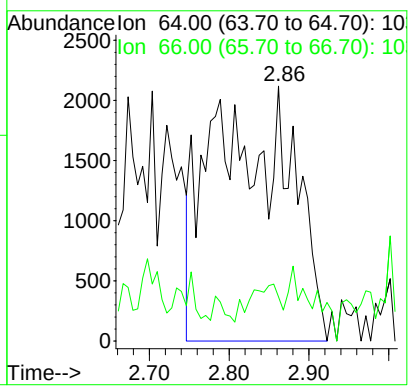




#6
Chloroethane
Concen: 1.57 ug/L
RT: 2.86 min Scan# 178
Delta R.T. -0.01 min
Lab File: 1031438.D
Acq: 5 Aug 2021 13:43

Tgt Ion: 64 Resp: 14150

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

[redacted]

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031957.D Vial: 12
Acq On : 5 Aug 2021 14:14 Operator: DGS-RLD
Sample : 194091,1031957, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 14:34:55 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1022681	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	851431	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	469867	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	255053	19.730	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	69872	19.810	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %			
61) SURRd8Tolule	9.71	98	1078263	21.064	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 105 %			
83) SURR4BrFBenz	13.25	95	441547	19.558	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.86	64	12663	1.3980	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	8104	Below Cal	#	42
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.25	76	4009	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.54	63	10150	0.4566	ug/L #	81
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	6.27	96	4841	0.3315	ug/L	90
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031957.D Vial: 12
Acq On : 5 Aug 2021 14:14 Operator: DGS-RLD
Sample : 194091,1031957, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 14:34:55 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	6.93	97	2628	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	13280	0.9597	ug/L	99
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	11.61	91	2544	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.49	91	3320	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031957.D Vial: 12
Acq On : 5 Aug 2021 14:14 Operator: DGS-RLD
Sample : 194091,1031957, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 14:34:55 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

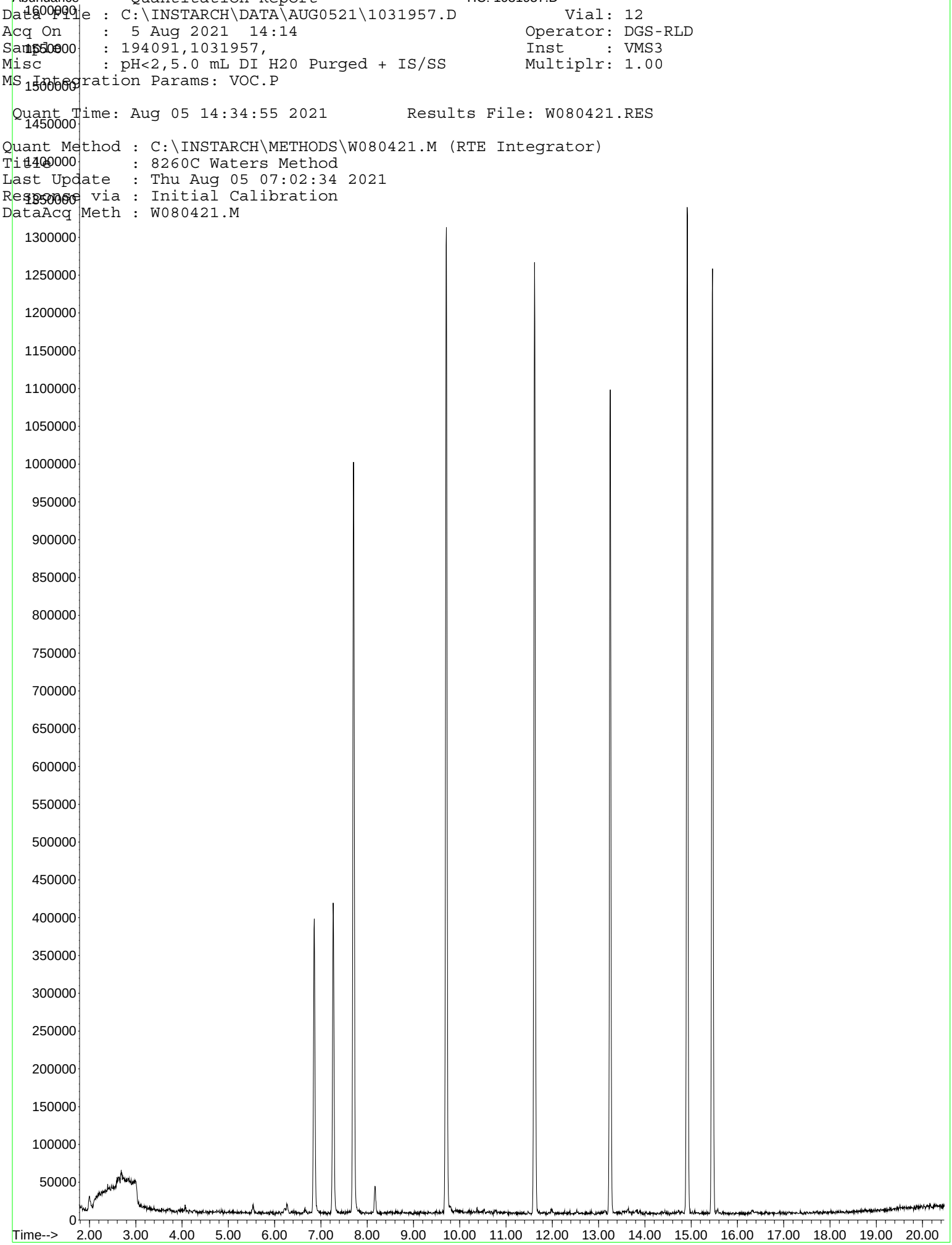
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

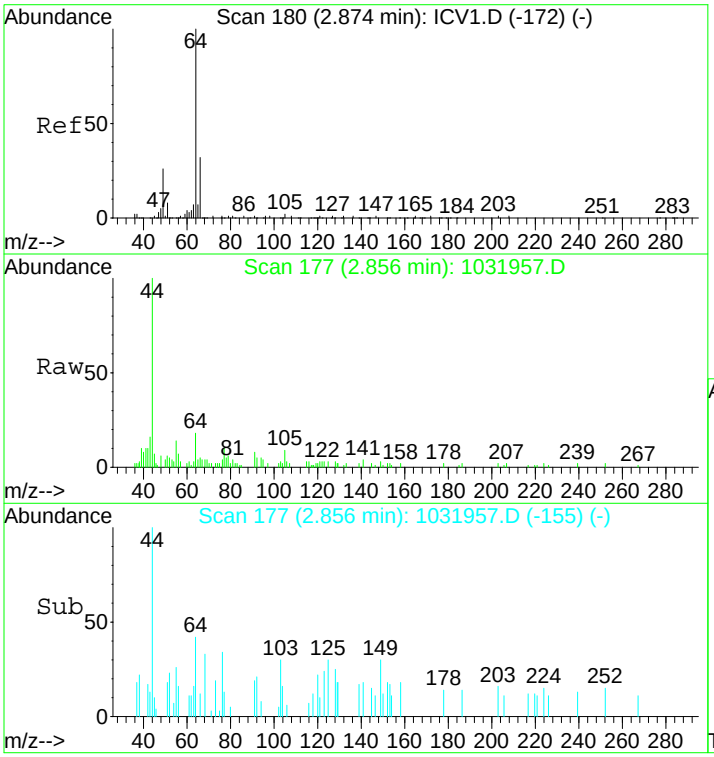
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\AUG0521\1031957.D Vial: 12
Acq On : 5 Aug 2021 14:14 Operator: DGS-RLD
Sample : 194091,1031957, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 14:34:55 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

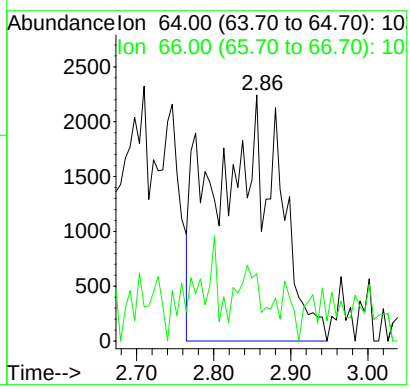




#6
Chloroethane
Concen: 1.40 ug/L
RT: 2.86 min Scan# 177
Delta R.T. -0.02 min
Lab File: 1031957.D
Acq: 5 Aug 2021 14:14

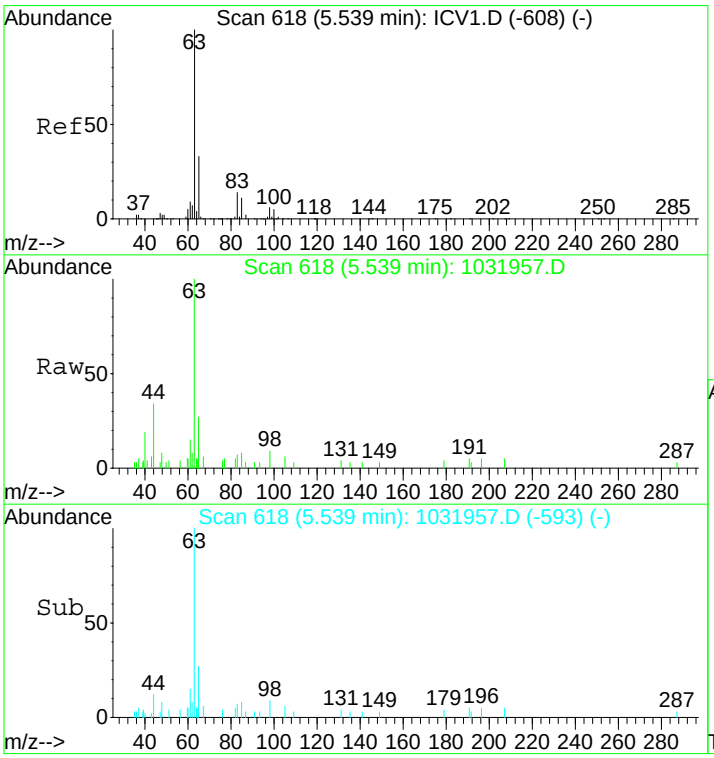
Tgt Ion: 64 Resp: 12663

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

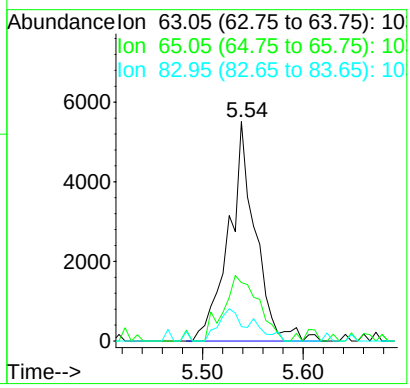
[redacted]

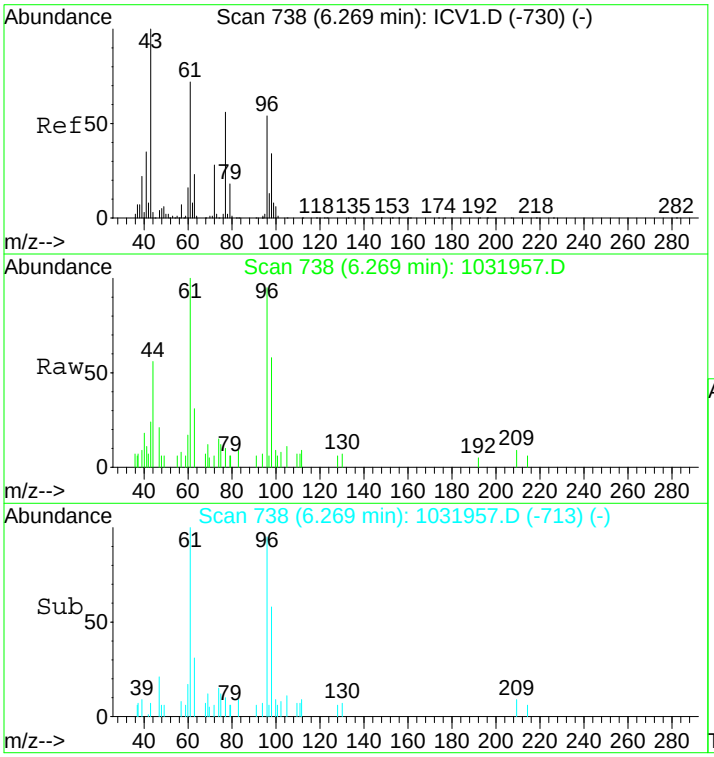


#26
11dichlorota
Concen: 0.46 ug/L
RT: 5.54 min Scan# 618
Delta R.T. -0.00 min
Lab File: 1031957.D
Acq: 5 Aug 2021 14:14

Tgt Ion: 63 Resp: 10150

Ion	Ratio	Lower	Upper
63	100		
65	38.9	12.5	52.5
83	0.0	0.0	35.1

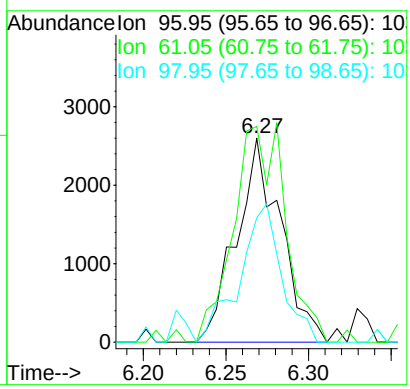


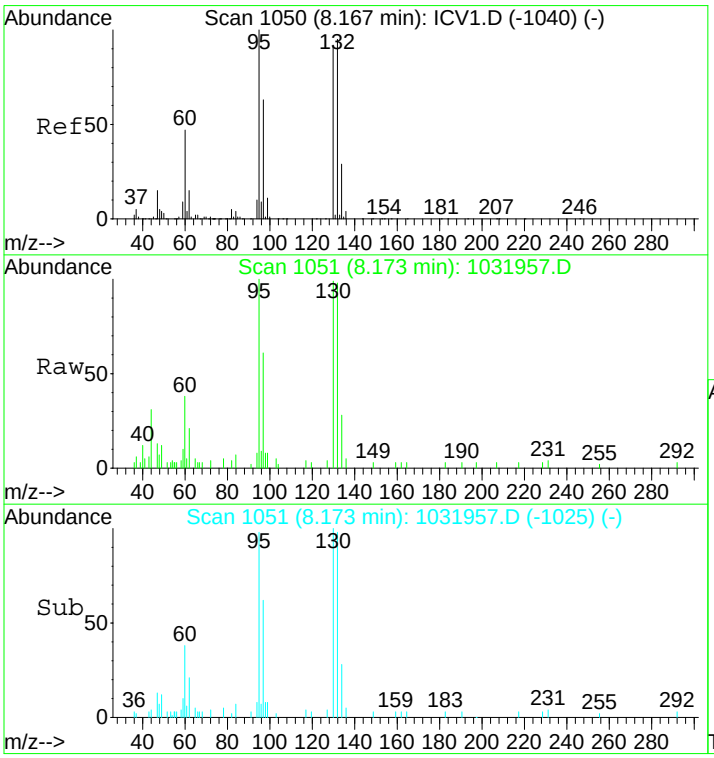


#32
c12dichlorte
Concen: 0.33 ug/L
RT: 6.27 min Scan# 738
Delta R.T. -0.00 min
Lab File: 1031957.D
Acq: 5 Aug 2021 14:14

Tgt Ion: 96 Resp: 4841

Ion	Ratio	Lower	Upper
96	100		
61	124.5	121.8	161.8
98	64.2	46.4	86.4

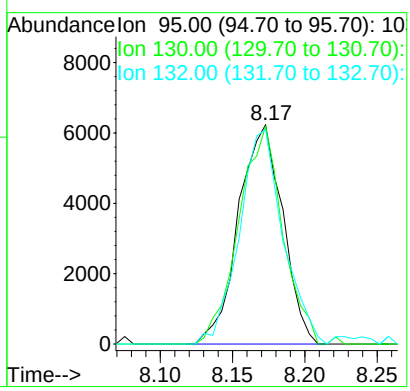




#49
trichloroete
Concen: 0.96 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. 0.01 min
Lab File: 1031957.D
Acq: 5 Aug 2021 14:14

Tgt Ion: 95 Resp: 13280

Ion	Ratio	Lower	Upper
95	100		
130	98.7	78.1	118.1
132	96.6	74.6	114.6



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031959.D Vial: 13
Acq On : 5 Aug 2021 14:44 Operator: DGS-RLD
Sample : 194091,1031959, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 15:04:52 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	950545	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	837302	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	456364	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	270799	22.538	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 113		%#	
45) SURR12DCAd4	7.27	102	72911	22.240	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 111		%#	
61) SURRd8Tolule	9.71	98	980753	20.613	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103		%	
83) SURR4BrFBenz	13.25	95	439275	20.033	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100		%	
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.84	64	13229	1.5713	ug/L	99
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	3.72	67	12275	1.0741	ug/L	99
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	4.04	101	6279	1.3691	ug/L	92
15) Acetone	4.08	43	6376	Below Cal #		42
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	3707	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031959.D Vial: 13
Acq On : 5 Aug 2021 14:44 Operator: DGS-RLD
Sample : 194091,1031959, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 15:04:52 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	9863	0.4603 ug/L	90
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.12	119	42948	2.7017 ug/L	96
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	9.78	92	3809	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	2965	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	12.55	104	2690	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	13.15	55	5054	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.49	91	2921	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031959.D Vial: 13
Acq On : 5 Aug 2021 14:44 Operator: DGS-RLD
Sample : 194091,1031959, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 15:04:52 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

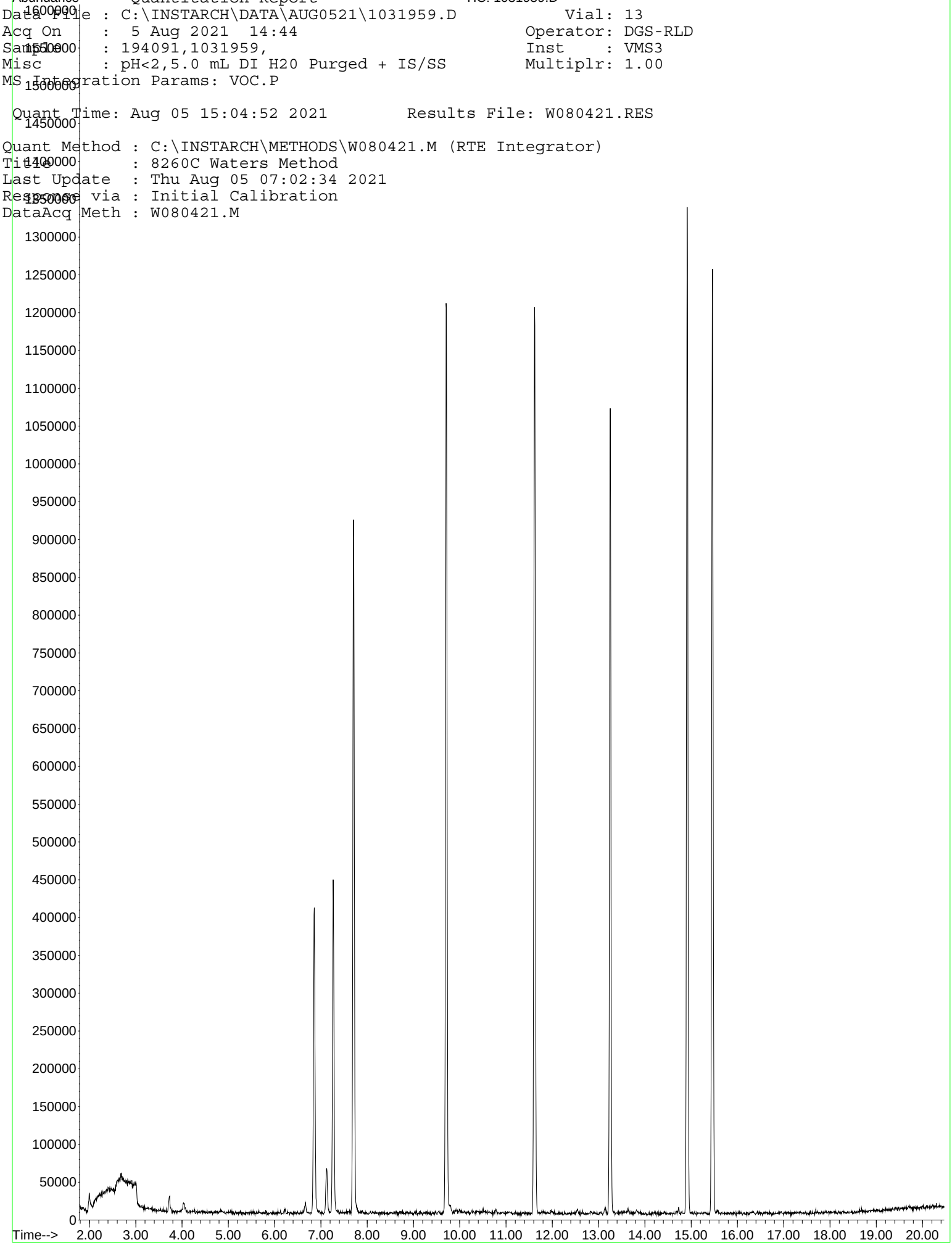
(#) = qualifier out of range (m) = manual integration

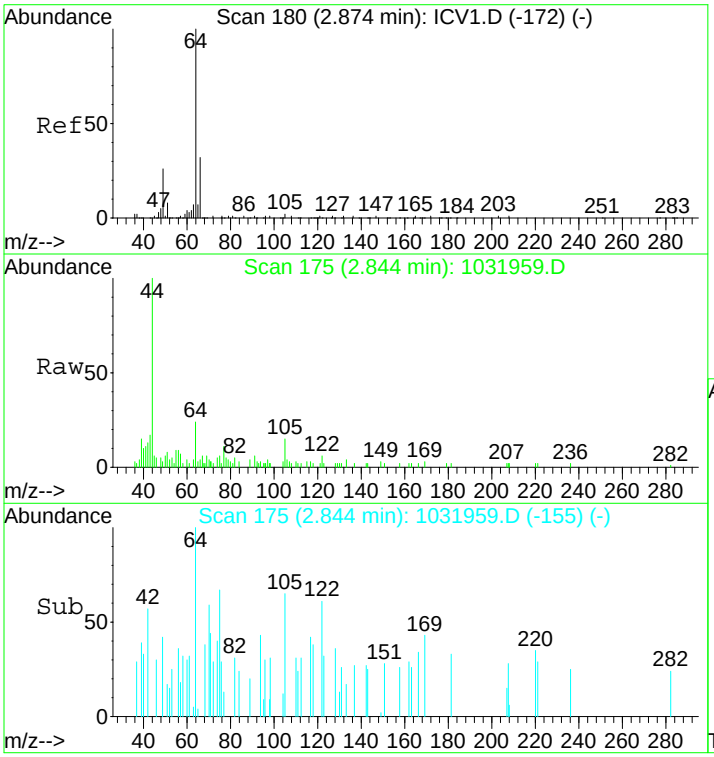
Abundance Quantitation Report TIC: 1031959.D

Data File : C:\INSTARCH\DATA\AUG0521\1031959.D Vial: 13
Acq On : 5 Aug 2021 14:44 Operator: DGS-RLD
Sample : 194091,1031959, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 15:04:52 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

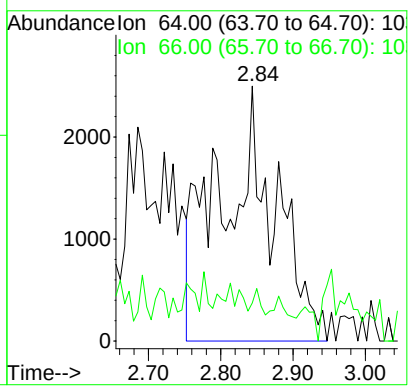




#6
Chloroethane
Concen: 1.57 ug/L
RT: 2.84 min Scan# 175
Delta R.T. -0.03 min
Lab File: 1031959.D
Acq: 5 Aug 2021 14:44

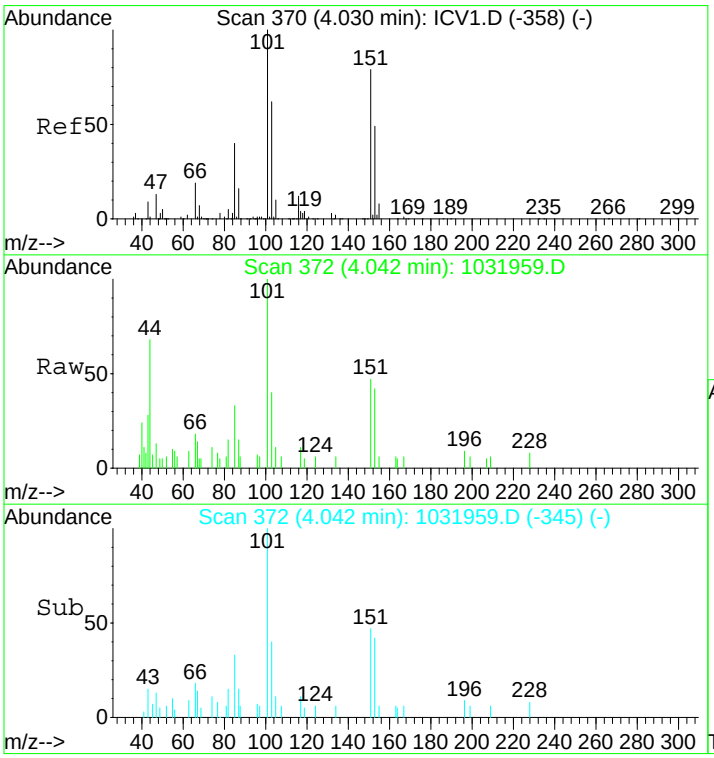
Tgt Ion: 64 Resp: 13229

Ion	Ratio	Lower	Upper
64	100		
66	32.2	12.8	52.8



Negative Library Identification

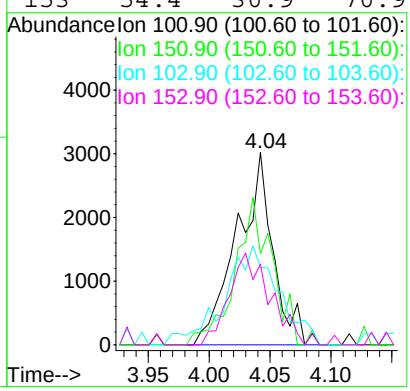
[redacted]

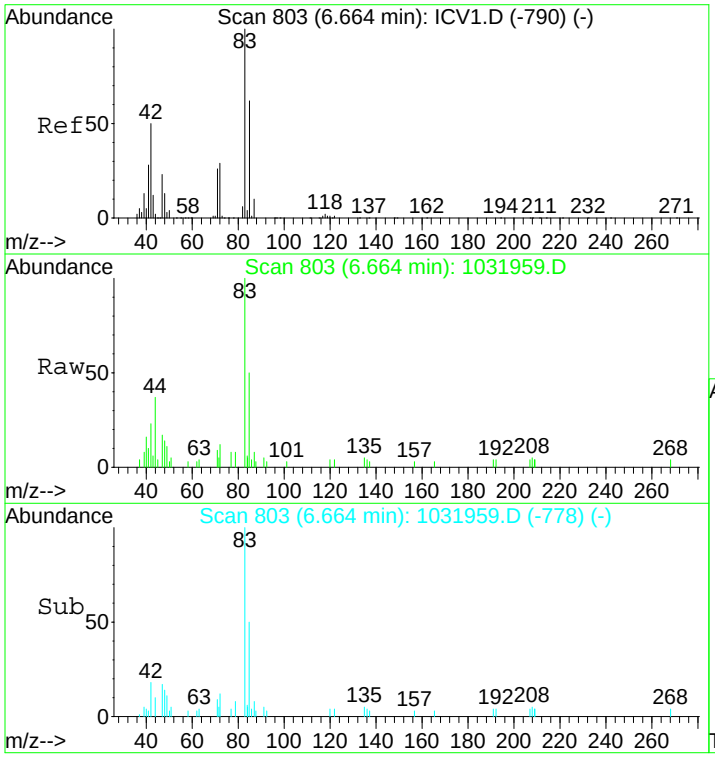


#14
Trichlorotfluoroeth
Concen: 1.37 ug/L
RT: 4.04 min Scan# 372
Delta R.T. 0.01 min
Lab File: 1031959.D
Acq: 5 Aug 2021 14:44

Tgt Ion:101 Resp: 6279

Ion	Ratio	Lower	Upper
101	100		
151	77.1	59.9	99.9
103	75.8	43.8	83.8
153	54.4	30.9	70.9

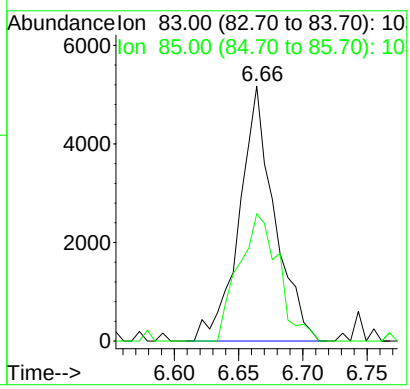


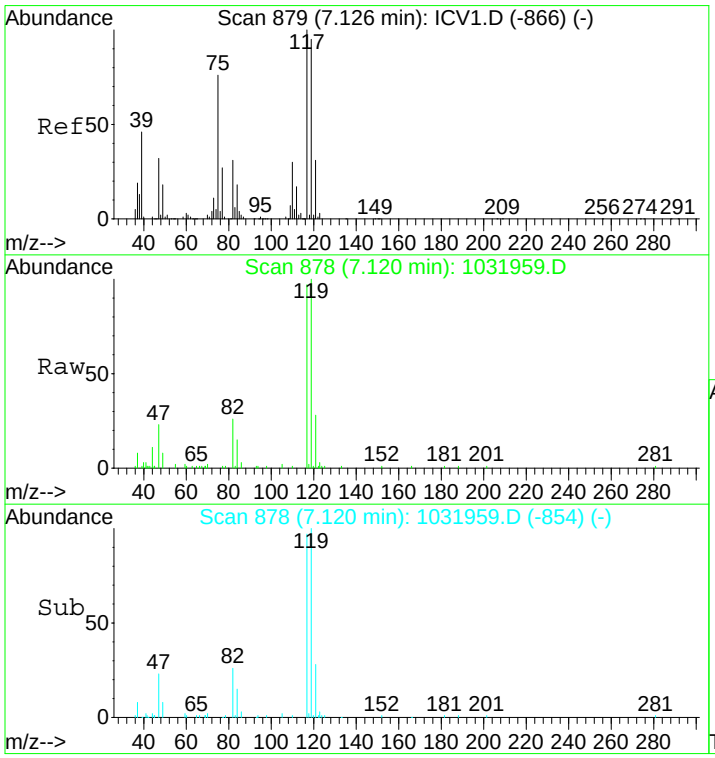


#39
Chloroform
Concen: 0.46 ug/L
RT: 6.66 min Scan# 803
Delta R.T. -0.00 min
Lab File: 1031959.D
Acq: 5 Aug 2021 14:44

Tgt Ion: 83 Resp: 9863

Ion	Ratio	Lower	Upper
83	100		
85	56.7	45.0	85.0

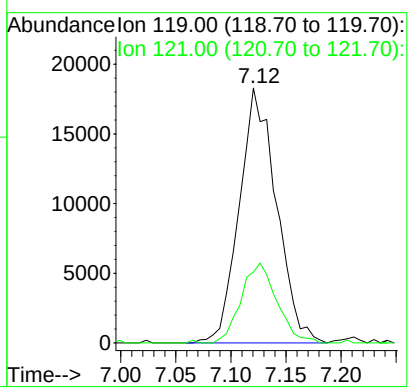




#43
Carbtetraclo
Concen: 2.70 ug/L
RT: 7.12 min Scan# 878
Delta R.T. -0.01 min
Lab File: 1031959.D
Acq: 5 Aug 2021 14:44

Tgt Ion:119 Resp: 42948

Ion	Ratio	Lower	Upper
119	100		
121	30.0	12.5	52.5



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031961.D Vial: 14
Acq On : 5 Aug 2021 15:13 Operator: DGS-RLD
Sample : 194091,1031961, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 15:34:32 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1073815	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	849779	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	462696	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	268717	19.797	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	72962	19.701	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99 %			
61) SURRd8Tolule	9.71	98	1067506	19.861	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99 %			
83) SURR4BrFBenz	13.25	95	444318	19.985	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.89	64	11909	1.2521	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	3.28	101	2641	0.4211	ug/L #	26
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	5239	Below Cal	#	42
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	3532	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	5.54	63	6127	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	6.27	96	5274	0.3440	ug/L	91
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031961.D Vial: 14
Acq On : 5 Aug 2021 15:13 Operator: DGS-RLD
Sample : 194091,1031961, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 15:34:32 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	4228	N.D.		
40)	111trichlota	6.91	97	4086	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.12	119	20439	1.1381	ug/L	100
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	19876	1.3680	ug/L	97
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	9.04	43	2648	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	10.52	166	2614	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	10.65	43	2802	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	0.00	91	0	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	12.53	104	3261	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	13.14	55	5061	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.46	91	3059	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031961.D Vial: 14
Acq On : 5 Aug 2021 15:13 Operator: DGS-RLD
Sample : 194091,1031961, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 15:34:32 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

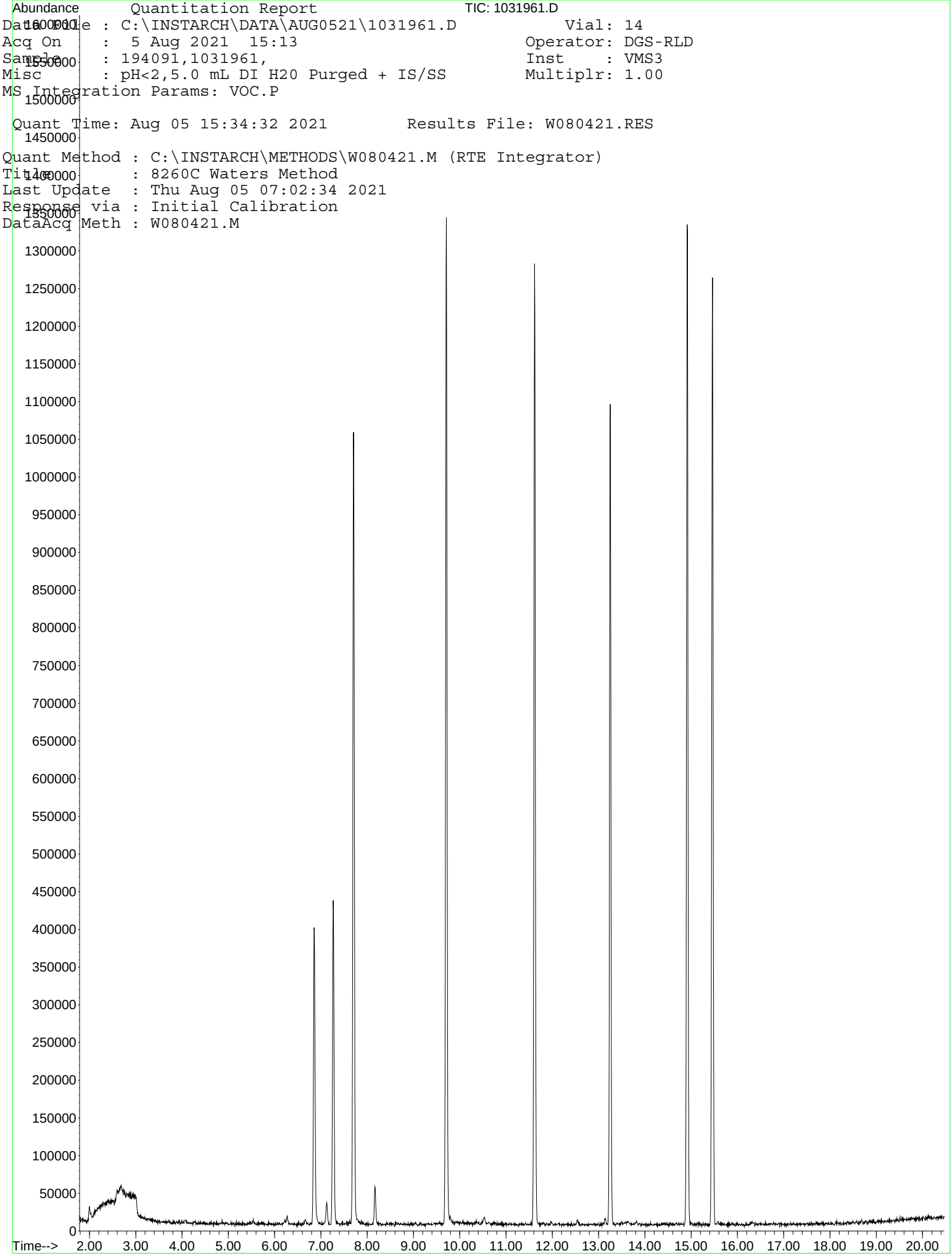
(#) = qualifier out of range (m) = manual integration

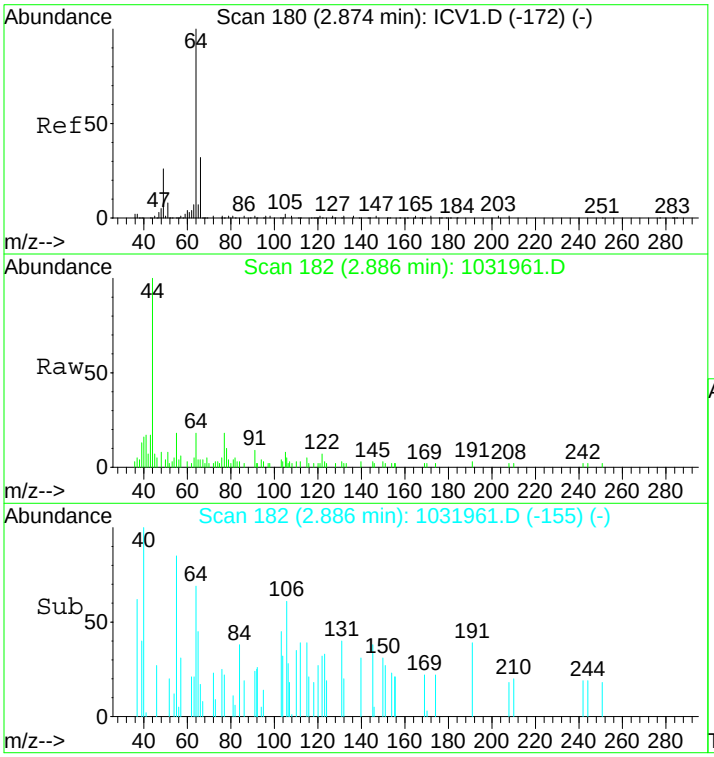
Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031961.D Vial: 14
Acq On : 5 Aug 2021 15:13 Operator: DGS-RLD
Sample : 194091,1031961, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 15:34:32 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

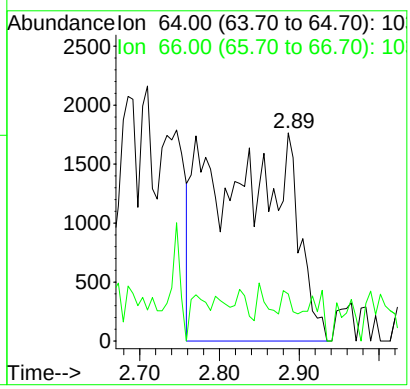




#6
Chloroethane
Concen: 1.25 ug/L
RT: 2.89 min Scan# 182
Delta R.T. 0.01 min
Lab File: 1031961.D
Acq: 5 Aug 2021 15:13

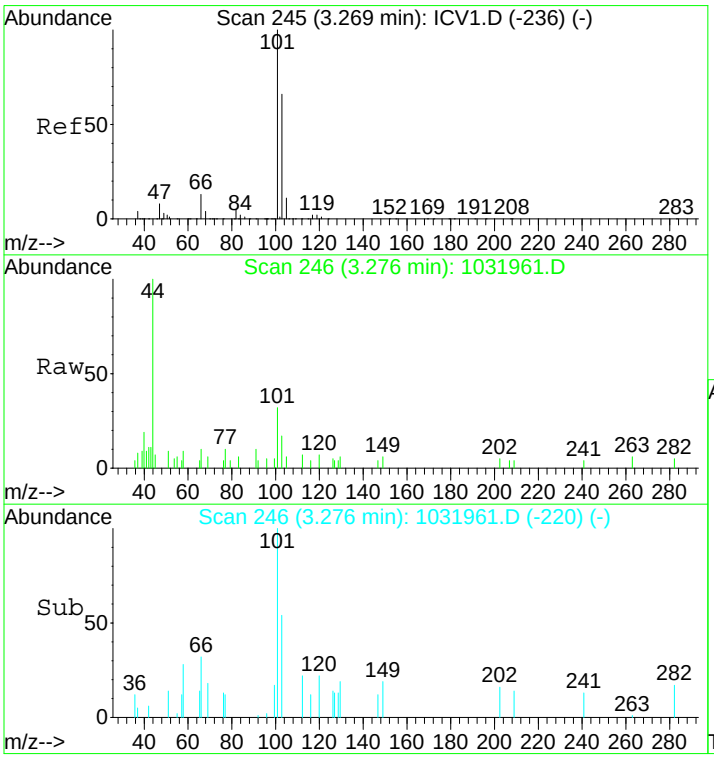
Tgt Ion: 64 Resp: 11909

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

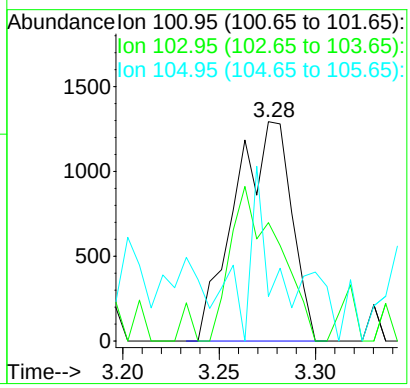
[redacted]

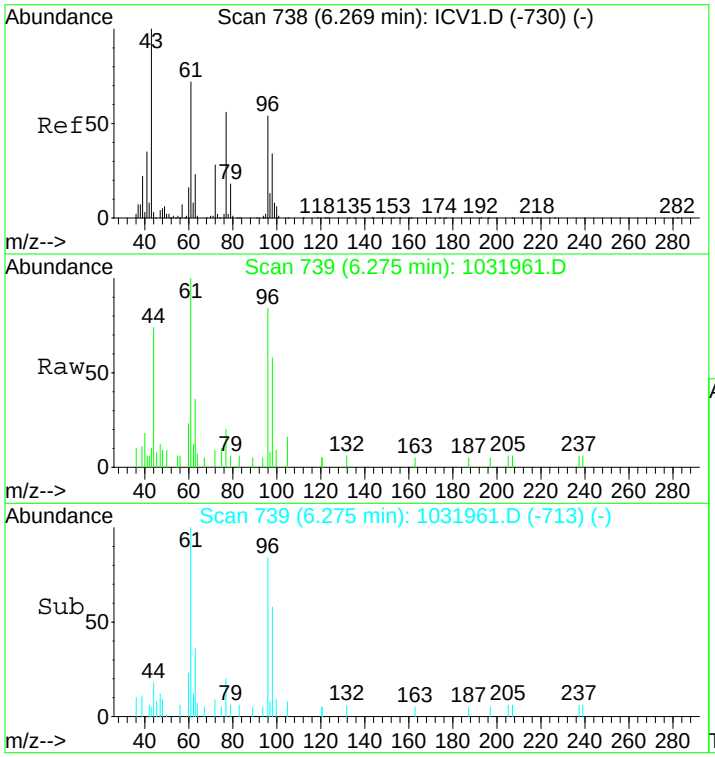


#8
Trichlorofma
Concen: 0.42 ug/L
RT: 3.28 min Scan# 246
Delta R.T. 0.01 min
Lab File: 1031961.D
Acq: 5 Aug 2021 15:13

Tgt Ion:101 Resp: 2641

Ion	Ratio	Lower	Upper
101	100		
103	0.0	44.2	84.2#
105	0.0	0.0	30.7

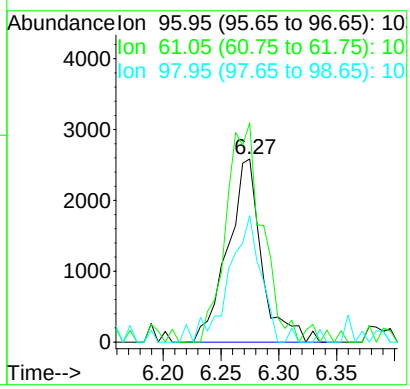


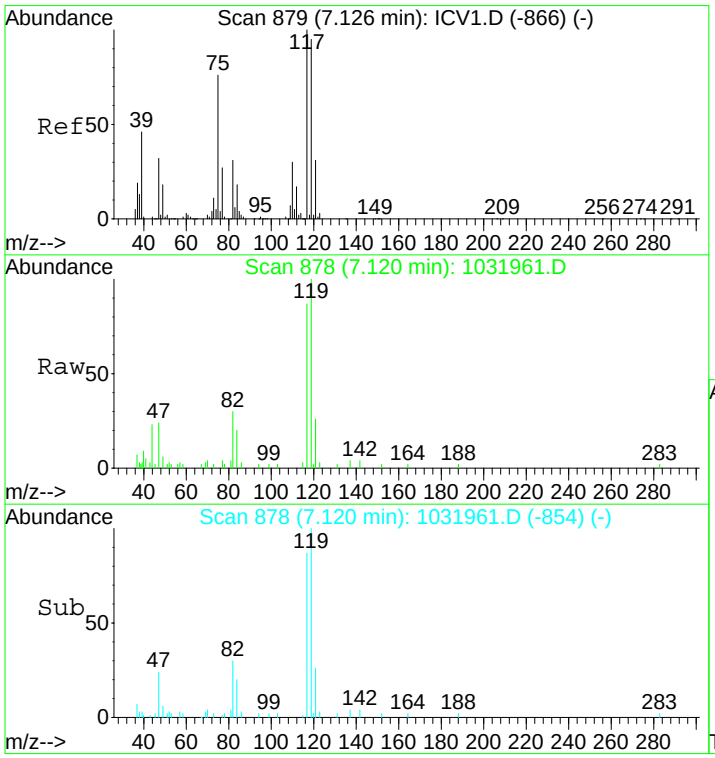


#32
c12dichlorte
Concen: 0.34 ug/L
RT: 6.27 min Scan# 739
Delta R.T. 0.01 min
Lab File: 1031961.D
Acq: 5 Aug 2021 15:13

Tgt Ion: 96 Resp: 5274

Ion	Ratio	Lower	Upper
96	100		
61	126.6	121.8	161.8
98	65.2	46.4	86.4

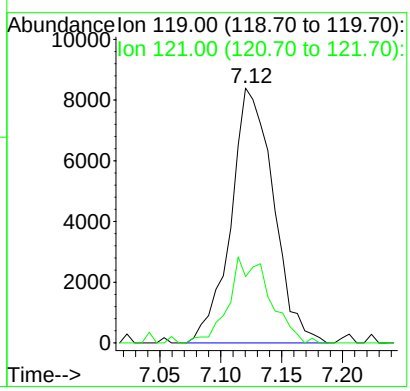


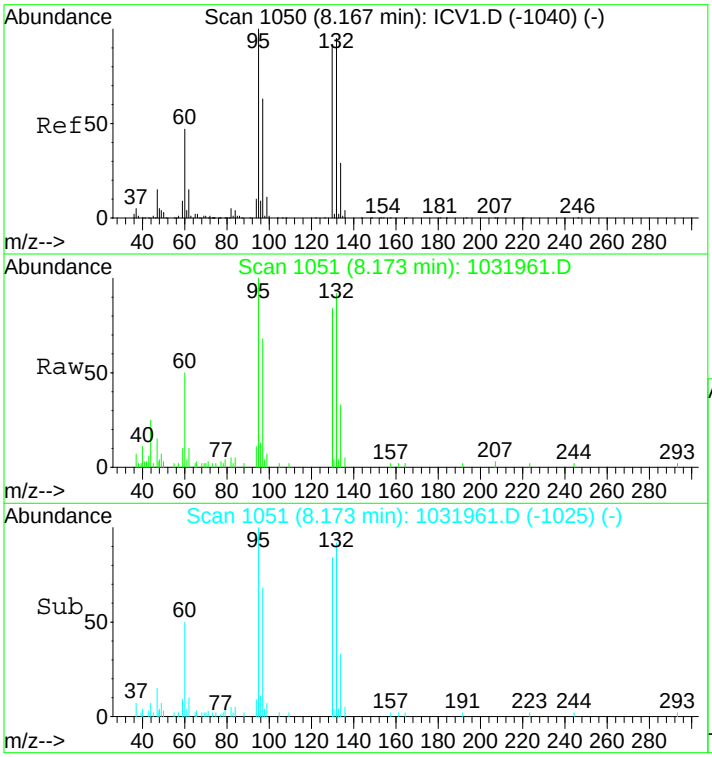


#43
Carbtetraclo
Concen: 1.14 ug/L
RT: 7.12 min Scan# 878
Delta R.T. -0.01 min
Lab File: 1031961.D
Acq: 5 Aug 2021 15:13

Tgt Ion:119 Resp: 20439

Ion	Ratio	Lower	Upper
119	100		
121	32.4	12.5	52.5

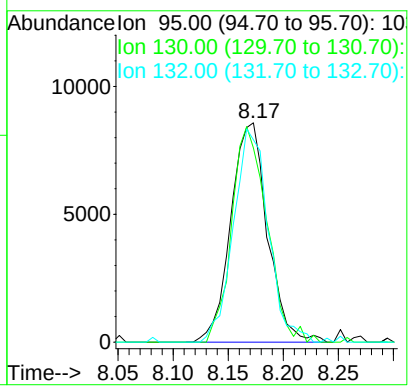




#49
trichloroete
Concen: 1.37 ug/L
RT: 8.17 min Scan# 1051
Delta R.T. 0.01 min
Lab File: 1031961.D
Acq: 5 Aug 2021 15:13

Tgt Ion: 95 Resp: 19876

Ion	Ratio	Lower	Upper
95	100		
130	94.4	78.1	118.1
132	92.5	74.6	114.6



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032207.D Vial: 15
Acq On : 5 Aug 2021 15:43 Operator: DGS-RLD
Sample : 194091,1032207, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 16:04:18 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1088120	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	857990	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	467381	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	275268	20.013	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	76111	20.281	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1085855	19.937	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.25	95	449263	20.005	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.87	64	12806	1.3287	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.06	43	5952	Below Cal	#	42
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	3761	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032207.D Vial: 15
Acq On : 5 Aug 2021 15:43 Operator: DGS-RLD
Sample : 194091,1032207, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 16:04:18 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	7.13	119	5340	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	0.00	91	0	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	0.00	91	0	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

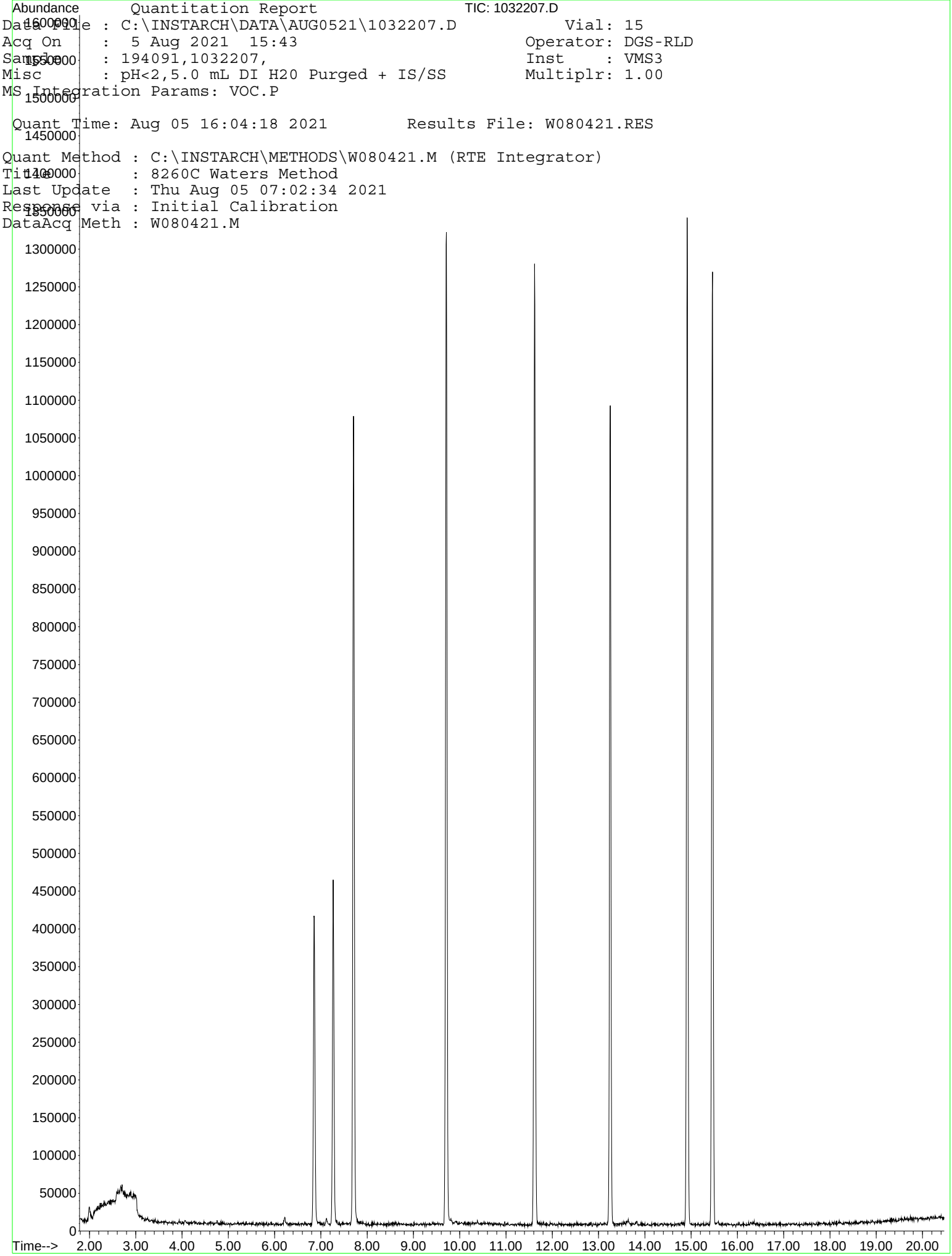
Data File : C:\INSTARCH\DATA\AUG0521\1032207.D Vial: 15
Acq On : 5 Aug 2021 15:43 Operator: DGS-RLD
Sample : 194091,1032207, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

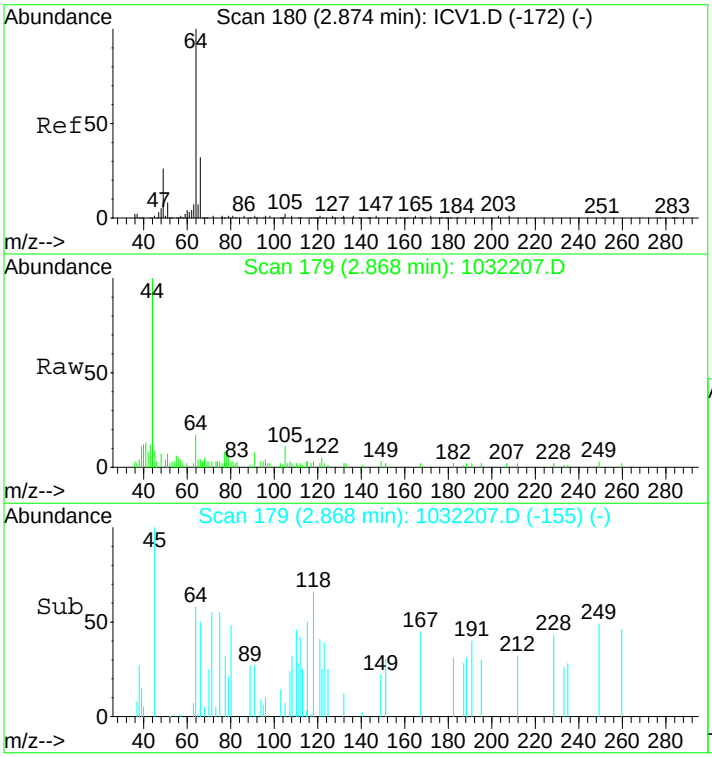
Quant Time: Aug 05 16:04:18 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

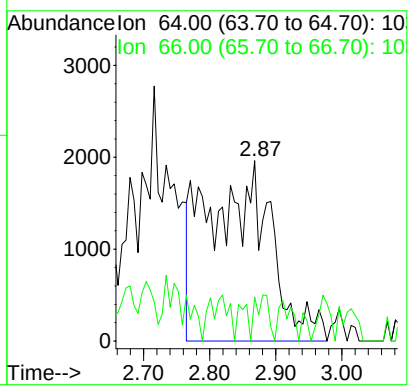

Abundance
Quantitation Report
TIC: 1032207.D
Data File : C:\INSTARCH\DATA\AUG0521\1032207.D
Vial: 15
Acq On : 5 Aug 2021 15:43
Operator: DGS-RLD
Sample : 194091,1032207,
Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Aug 05 16:04:18 2021
Results File: W080421.RES
Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
Time-->



#6
Chloroethane
Concen: 1.33 ug/L
RT: 2.87 min Scan# 179
Delta R.T. -0.01 min
Lab File: 1032207.D
Acq: 5 Aug 2021 15:43

Tgt Ion: 64 Resp: 12806

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

[redacted]

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032208.D Vial: 16
Acq On : 5 Aug 2021 16:14 Operator: DGS-RLD
Sample : 194091,1032208, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 16:34:51 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1066257	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	832499	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	463521	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	273643	20.303	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 102 %			
45) SURR12DCAd4	7.27	102	76294	20.747	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 104 %			
61) SURRd8Tolule	9.71	98	1063965	19.935	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %			
83) SURR4BrFBenz	13.25	95	442103	19.850	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.81	64	8487	0.8986	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	7633	Below Cal	#	42
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	3796	N.D.		
18) allylchloride	4.41	41	2503	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032208.D Vial: 16
Acq On : 5 Aug 2021 16:14 Operator: DGS-RLD
Sample : 194091,1032208, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 16:34:51 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	69750	2.9018	ug/L	100
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	437855	24.5546	ug/L	100
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	8.17	95	19622	1.3601	ug/L	93
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	9.79	92	2711	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	0.00	91	0	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	14.44	105	2592	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	0.00	91	0	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032208.D Vial: 16
Acq On : 5 Aug 2021 16:14 Operator: DGS-RLD
Sample : 194091,1032208, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 16:34:51 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

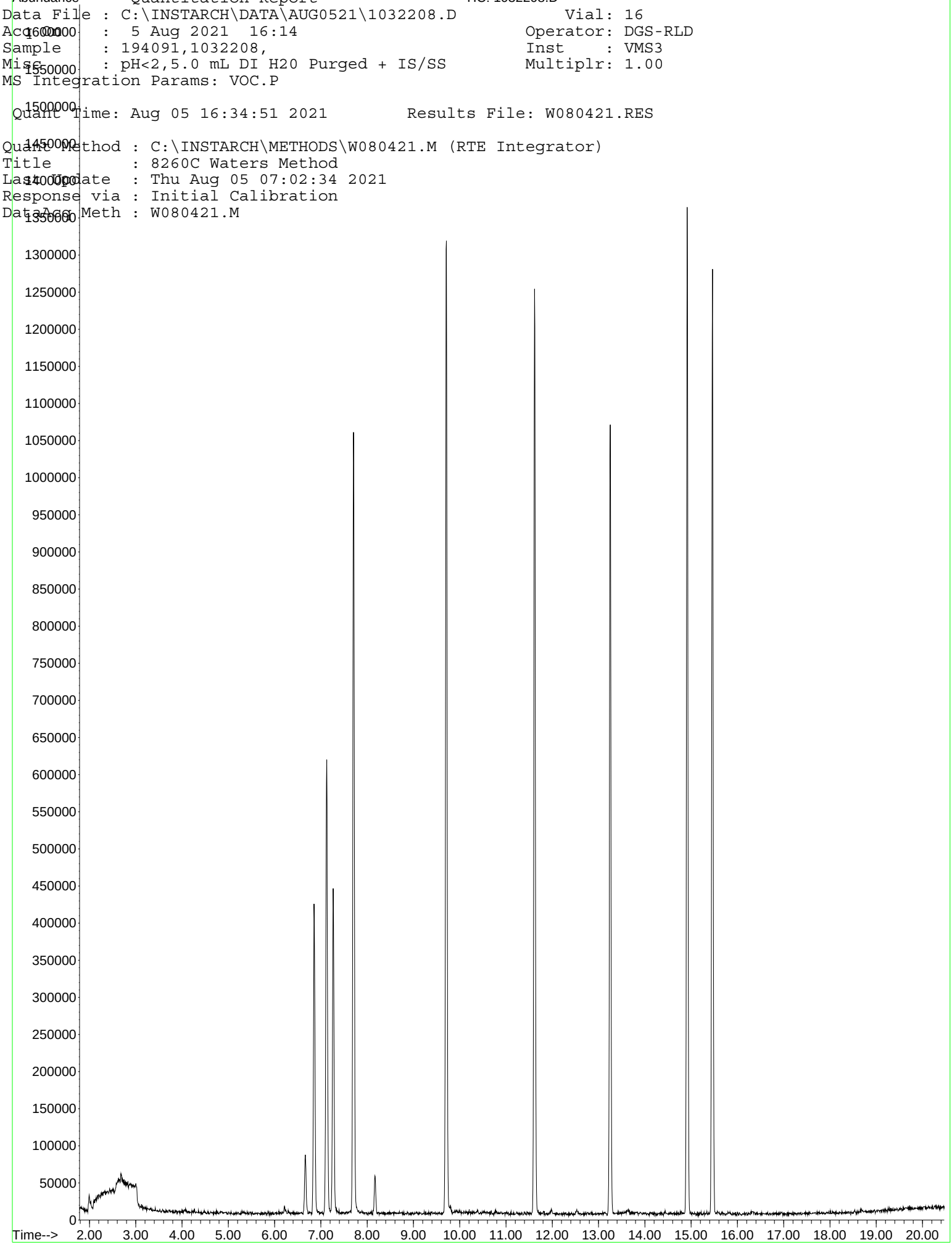
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

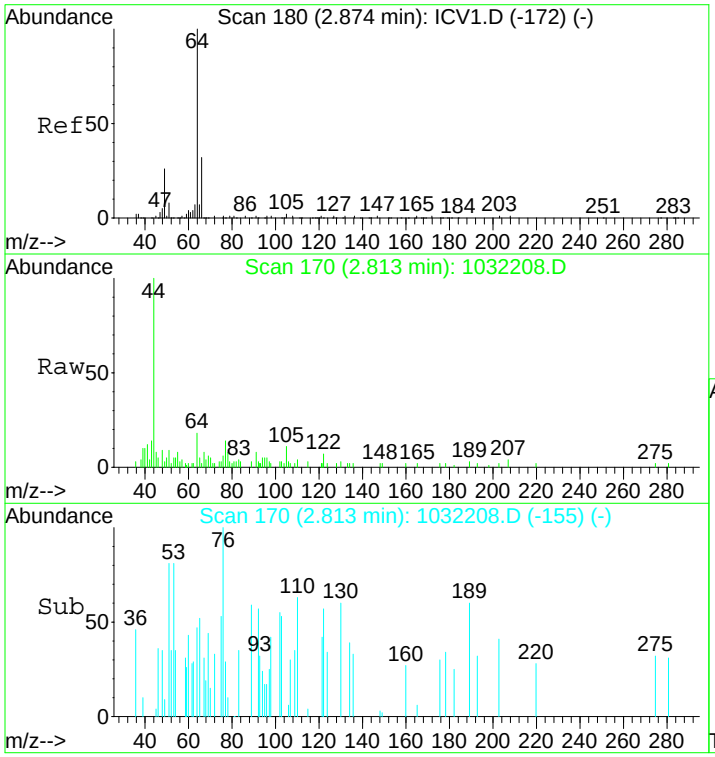
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\AUG0521\1032208.D Vial: 16
Acq On : 5 Aug 2021 16:14 Operator: DGS-RLD
Sample : 194091,1032208, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 16:34:51 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

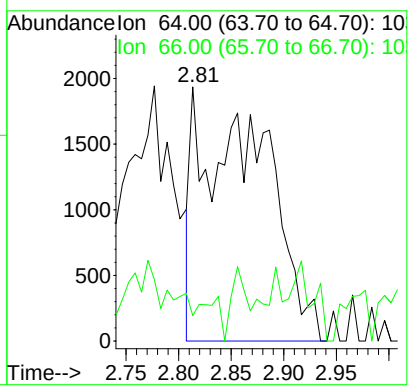




#6
Chloroethane
Concen: 0.90 ug/L
RT: 2.81 min Scan# 170
Delta R.T. -0.06 min
Lab File: 1032208.D
Acq: 5 Aug 2021 16:14

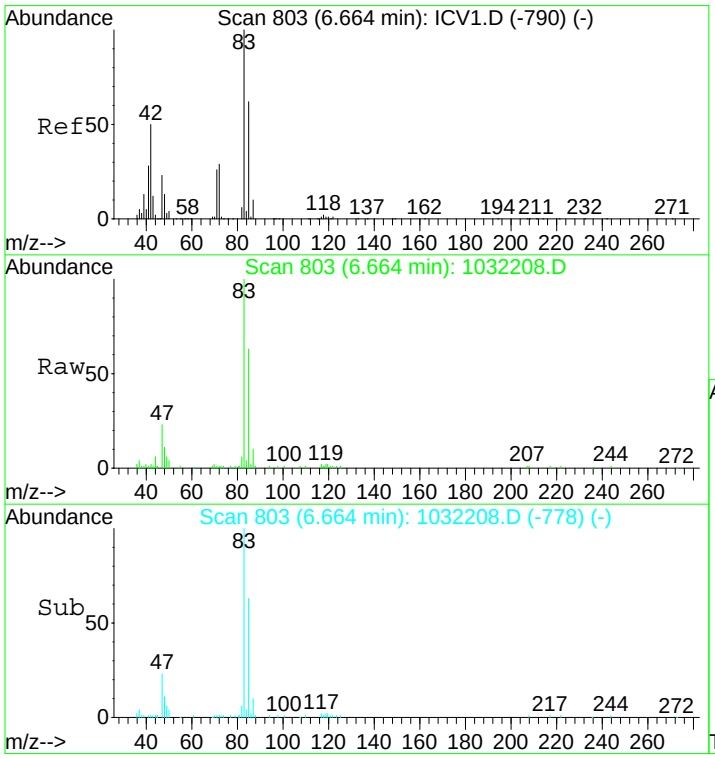
Tgt Ion: 64 Resp: 8487

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

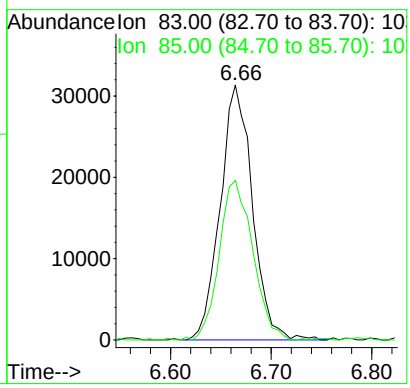
[redacted]

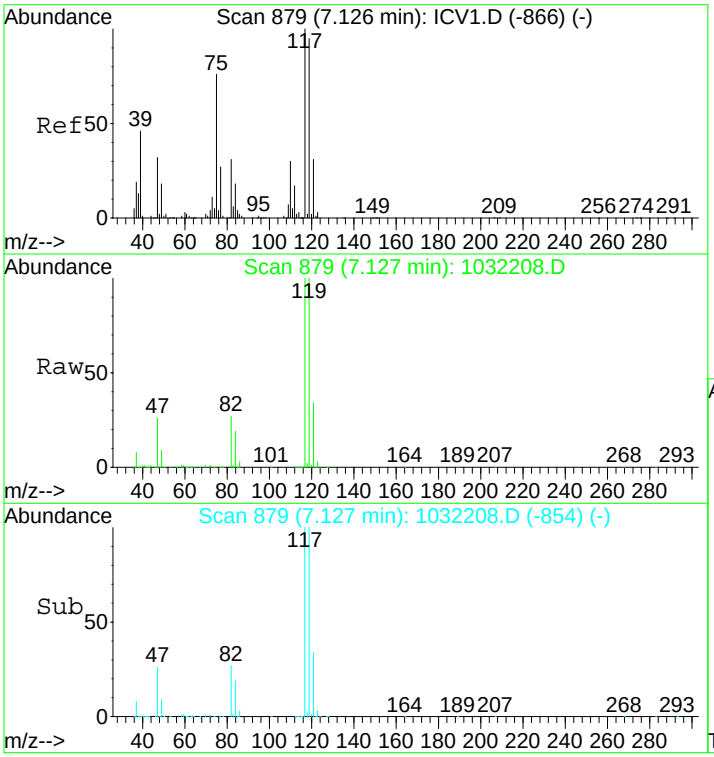


#39
Chloroform
Concen: 2.90 ug/L
RT: 6.66 min Scan# 803
Delta R.T. 0.00 min
Lab File: 1032208.D
Acq: 5 Aug 2021 16:14

Tgt Ion: 83 Resp: 69750

Ion	Ratio	Lower	Upper
83	100		
85	65.1	45.0	85.0

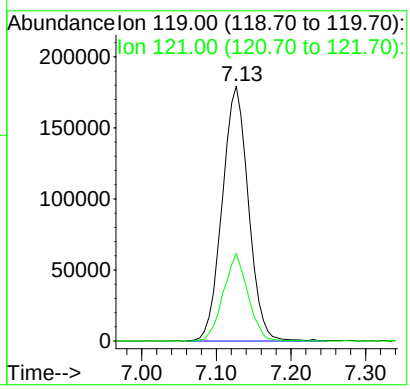


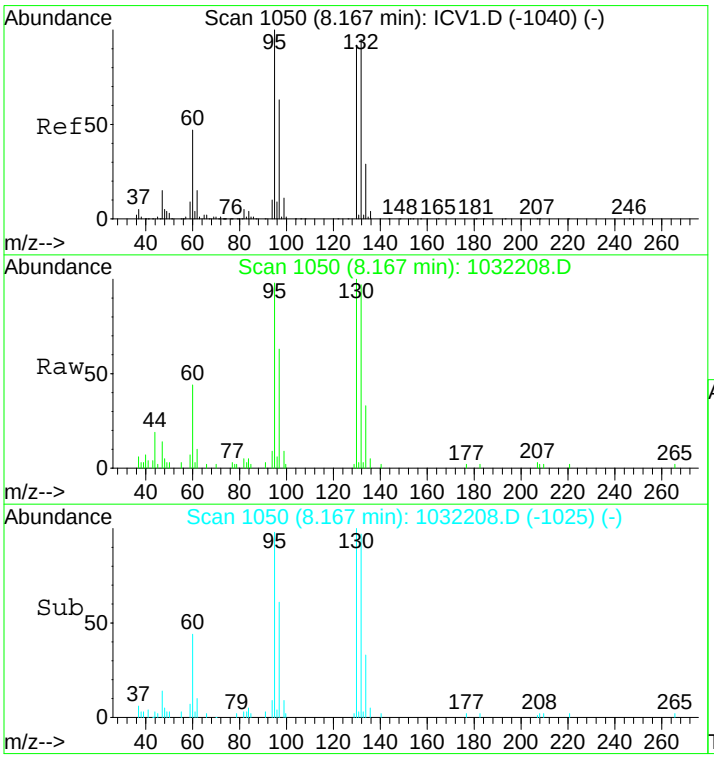


#43
Carbtetraclo
Concen: 24.55 ug/L
RT: 7.13 min Scan# 879
Delta R.T. 0.00 min
Lab File: 1032208.D
Acq: 5 Aug 2021 16:14

Tgt Ion:119 Resp: 437855

Ion	Ratio	Lower	Upper
119	100		
121	32.4	12.5	52.5

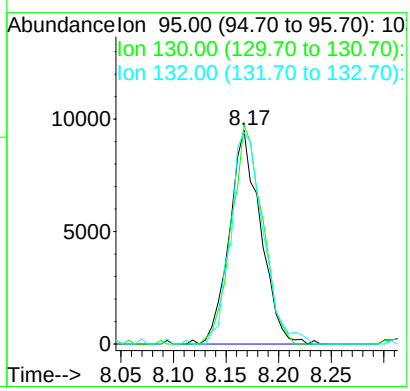




#49
trichloroete
Concen: 1.36 ug/L
RT: 8.17 min Scan# 1050
Delta R.T. 0.00 min
Lab File: 1032208.D
Acq: 5 Aug 2021 16:14

Tgt Ion: 95 Resp: 19622

Ion	Ratio	Lower	Upper
95	100		
130	102.0	78.1	118.1
132	103.7	74.6	114.6



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032213.D Vial: 17
Acq On : 5 Aug 2021 16:44 Operator: DGS-RLD
Sample : 194091,1032213, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 17:04:48 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1072502	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	836432	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	444339	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	269170	19.855	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	75298	20.357	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102 %			
61) SURRd8Tolule	9.71	98	1064052	19.821	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99 %			
83) SURR4BrFBenz	13.25	95	436747	20.456	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %			

Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.75	64	12594	1.3257	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	5626	Below Cal	#	42
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.25	76	4292	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	0.00	42	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032213.D Vial: 17
Acq On : 5 Aug 2021 16:44 Operator: DGS-RLD
Sample : 194091,1032213, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 17:04:48 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	4515	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	7.13	119	14242	0.7940	ug/L	97
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	0.00	43	0	N.D.		
62)	Toluene	0.00	92	0	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	0.00	43	0	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	0.00	112	0	N.D.		
73)	1Clhexane	0.00	91	0	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	13.15	55	3442	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	0.00	146	0	N.D.		
98)	12dichlorobe	0.00	146	0	N.D.		
99)	nButylbenzen	15.45	91	2786	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032213.D Vial: 17
Acq On : 5 Aug 2021 16:44 Operator: DGS-RLD
Sample : 194091,1032213, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 17:04:48 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

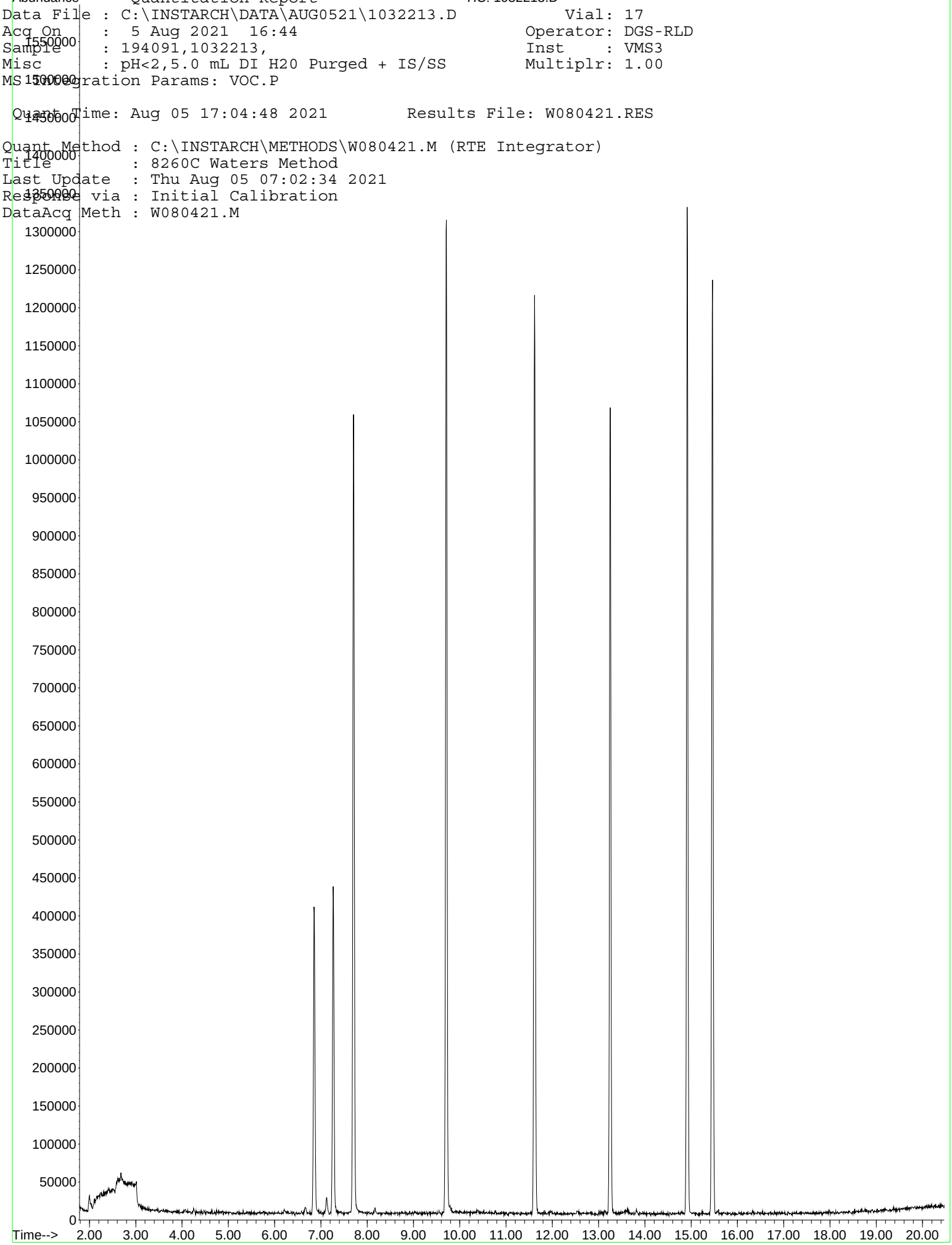
(#) = qualifier out of range (m) = manual integration

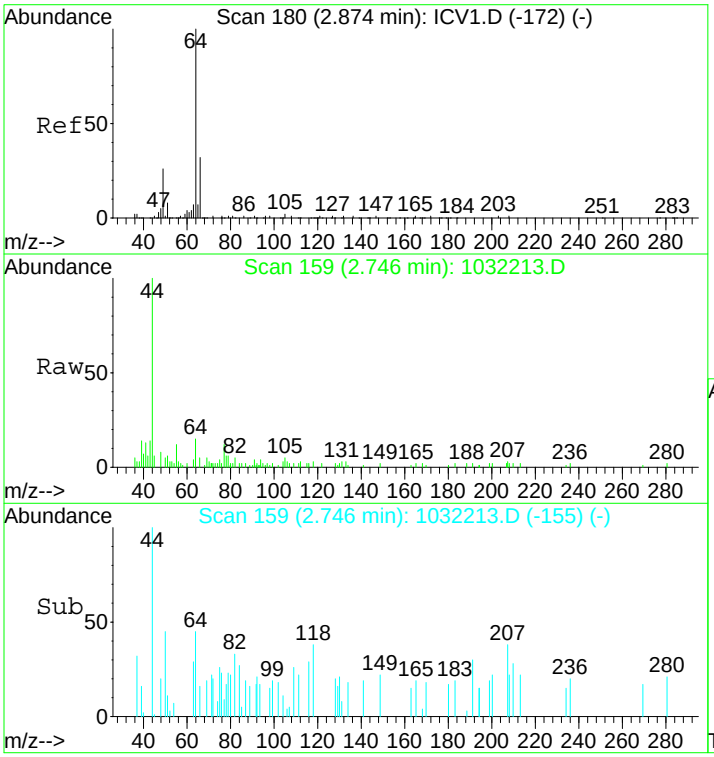
Abundance Quantitation Report TIC: 1032213.D

Data File : C:\INSTARCH\DATA\AUG0521\1032213.D Vial: 17
Acq On : 5 Aug 2021 16:44 Operator: DGS-RLD
Sample : 194091,1032213, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 17:04:48 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

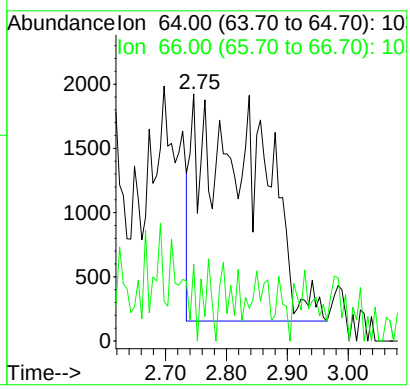




#6
Chloroethane
Concen: 1.33 ug/L
RT: 2.75 min Scan# 159
Delta R.T. -0.13 min
Lab File: 1032213.D
Acq: 5 Aug 2021 16:44

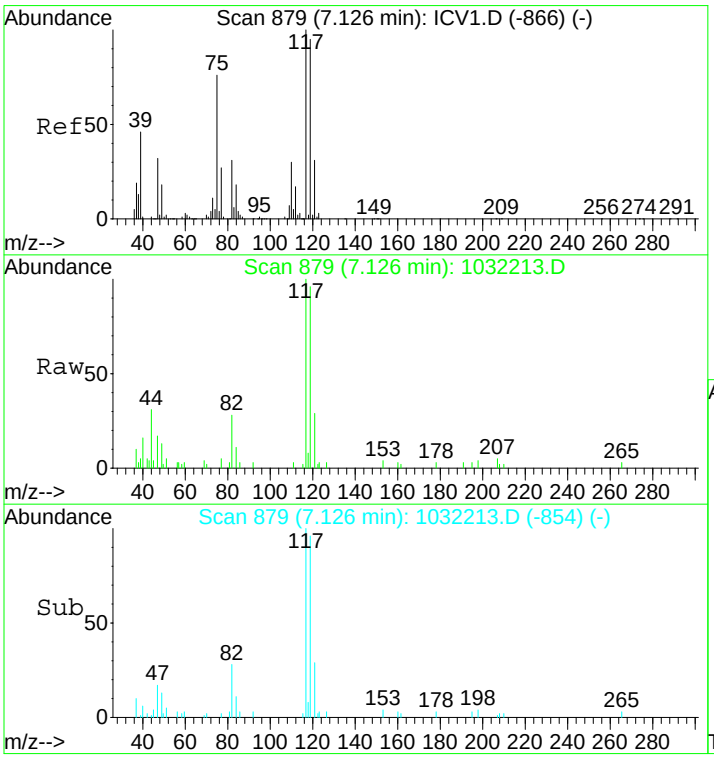
Tgt Ion: 64 Resp: 12594

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

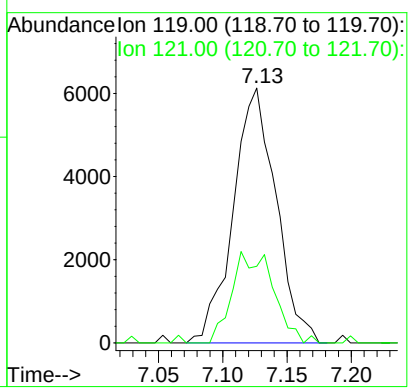
[redacted]



#43
Carbtetraclo
Concen: 0.79 ug/L
RT: 7.13 min Scan# 879
Delta R.T. -0.00 min
Lab File: 1032213.D
Acq: 5 Aug 2021 16:44

Tgt Ion:119 Resp: 14242

Ion	Ratio	Lower	Upper
119	100		
121	34.5	12.5	52.5



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032210.D Vial: 18
Acq On : 5 Aug 2021 17:14 Operator: DGS-RLD
Sample : 194091,1032210,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 17:35:12 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1065889	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	843553	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	460571	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	271022	20.116	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.27	102	76008	20.676	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103 %			
61) SURRd8Tolule	9.71	98	1056263	19.798	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99 %			
83) SURR4BrFBenz	13.25	95	438424	19.811	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	2.72	94	2601	N.D.		
6) Chloroethane	2.75	64	13434	1.4229	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.08	43	10010	N.D.		
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	4565	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.63	84	4774	N.D.		
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.65	42	4718	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032210.D Vial: 18
Acq On : 5 Aug 2021 17:14 Operator: DGS-RLD
Sample : 194091,1032210,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 17:35:12 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	94074	3.9151	ug/L		98
40)	111trichlota	0.00	97	0	N.D.			
42)	Cyclohexane	0.00	56	0	N.D.			
43)	Carbtetraclo	7.13	119	355306	19.9322	ug/L		100
44)	11dicloprope	0.00	110	0	N.D.			
46)	Benzene	0.00	78	0	N.D.			
47)	12dichlorota	7.36	62	6399	0.3387	ug/L	#	76
48)	TAME	0.00	73	0	N.D.			
49)	trichloroete	8.17	95	56425	3.9125	ug/L		96
50)	methylcyclohexane	0.00	83	0	N.D.			
51)	12dicloropra	0.00	63	0	N.D.			
52)	23Dicl1propene	0.00	75	0	N.D.			
53)	Dibromometha	0.00	93	0	N.D.			
54)	methylmethacrylate	0.00	69	0	N.D.			
55)	14dioxane	0.00	88	0	N.D.			
56)	Bromodiclrma	0.00	83	0	N.D.			
57)	2Nitropropane	0.00	43	0	N.D.			
58)	2CLEVE	0.00	63	0	N.D.			
59)	c13dicloproe	0.00	75	0	N.D.			
60)	4Meth2Pentan	9.54	43	2511	Below	Cal	#	38
62)	Toluene	0.00	92	0	N.D.			
63)	t13Dicloprop	0.00	75	0	N.D.			
64)	ethylmethacrylate	0.00	69	0	N.D.			
65)	112Triclotha	0.00	83	0	N.D.			
66)	Tetrachlorte	0.00	166	0	N.D.			
67)	13Diclorpropa	0.00	76	0	N.D.			
69)	2Hexanone	0.00	43	0	N.D.			
70)	Clorodibrmta	0.00	129	0	N.D.			
71)	12Dibrometha	0.00	107	0	N.D.			
72)	Chlorobenzen	0.00	112	0	N.D.			
73)	1Clhexane	0.00	91	0	N.D.			
74)	1112Tetclota	0.00	131	0	N.D.			
75)	Ethylbenzene	0.00	91	0	N.D.			
76)	m p-Xylene	0.00	106	0	N.D.			
77)	o-Xylene	0.00	106	0	N.D.			
78)	Styrene	0.00	104	0	N.D.			
79)	Bromoform	0.00	173	0	N.D.			
80)	Isopropylben	0.00	105	0	N.D.			
81)	cyclohexanone	0.00	55	0	N.D.			
84)	Bromobenzene	0.00	156	0	N.D.			
85)	1122Tetrclta	0.00	83	0	N.D.			
86)	123Triclproa	0.00	75	0	N.D.			
87)	14dichloro2butene	0.00	53	0	N.D.			
88)	n-Propylbenz	0.00	91	0	N.D.			
89)	2chlorotolue	0.00	91	0	N.D.			
90)	4chlorotolue	0.00	91	0	N.D.			
91)	135Trimebenz	0.00	105	0	N.D.			
92)	tbutylbenzen	0.00	119	0	N.D.			
93)	124Trimetben	0.00	105	0	N.D.			
94)	sbutylbenzen	0.00	105	0	N.D.			
95)	13Diclorbenz	0.00	146	0	N.D.			
96)	pIsopropylto	0.00	119	0	N.D.			
97)	14dichlorobe	0.00	146	0	N.D.			
98)	12dichlorobe	0.00	146	0	N.D.			
99)	nButylbenzen	15.45	91	2607	N.D.			
100)	12dibromo3cl	0.00	157	0	N.D.			
101)	135Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration

Quantitation Report

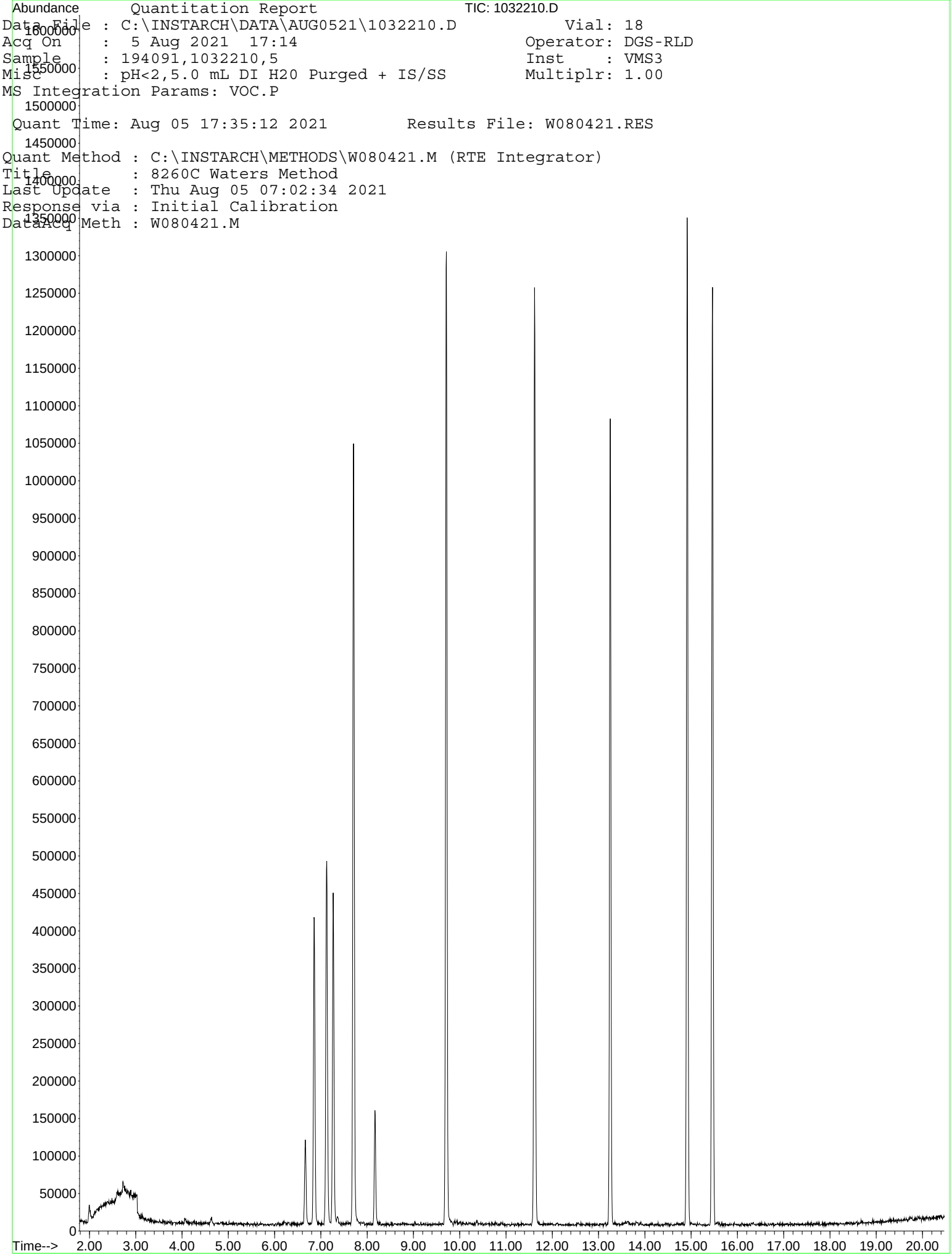
Data File : C:\INSTARCH\DATA\AUG0521\1032210.D Vial: 18
Acq On : 5 Aug 2021 17:14 Operator: DGS-RLD
Sample : 194091,1032210,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 17:35:12 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: 1032210.D
Data File : C:\INSTARCH\DATA\AUG0521\1032210.D Vial: 18
Acq On : 5 Aug 2021 17:14 Operator: DGS-RLD
Sample : 194091,1032210,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Aug 05 17:35:12 2021 Results File: W080421.RES
Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
1600000
1550000
1500000
1450000
1400000
1350000
1300000
1250000
1200000
1150000
1100000
1050000
1000000
950000
900000
850000
800000
750000
700000
650000
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
Time-->
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
13.00
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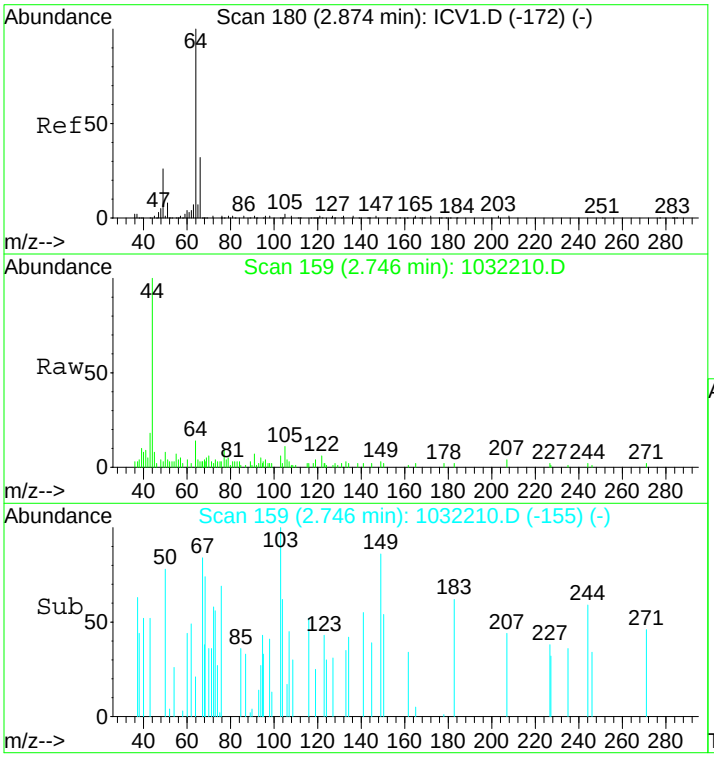
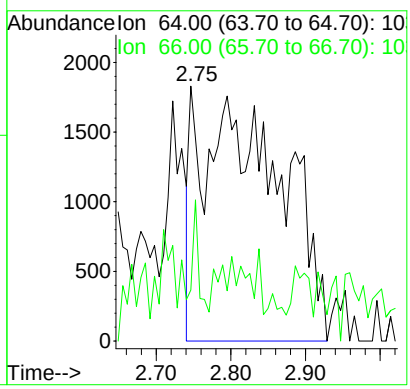
19.00
20.00



#6
Chloroethane
Concen: 1.42 ug/L
RT: 2.75 min Scan# 159
Delta R.T. -0.13 min
Lab File: 1032210.D
Acq: 5 Aug 2021 17:14

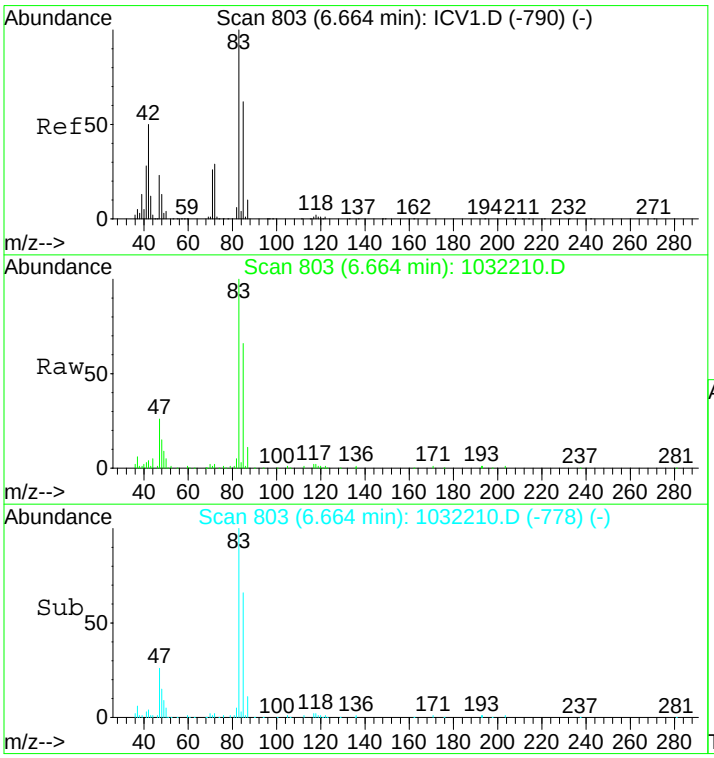
Tgt Ion: 64 Resp: 13434

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

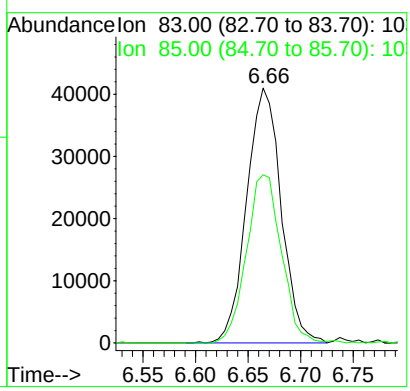
[redacted]

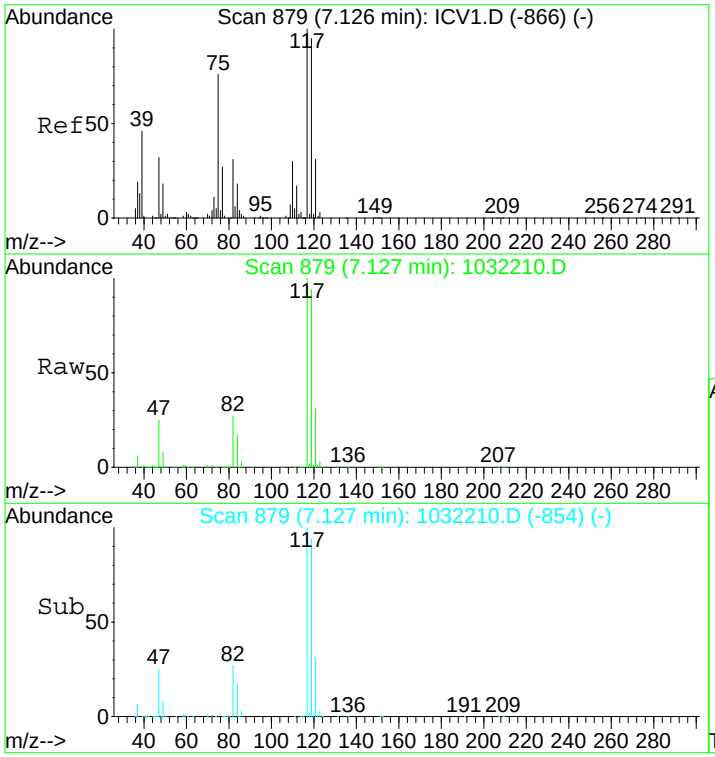


#39
Chloroform
Concen: 3.92 ug/L
RT: 6.66 min Scan# 803
Delta R.T. -0.00 min
Lab File: 1032210.D
Acq: 5 Aug 2021 17:14

Tgt Ion: 83 Resp: 94074

Ion	Ratio	Lower	Upper
83	100		
85	66.8	45.0	85.0

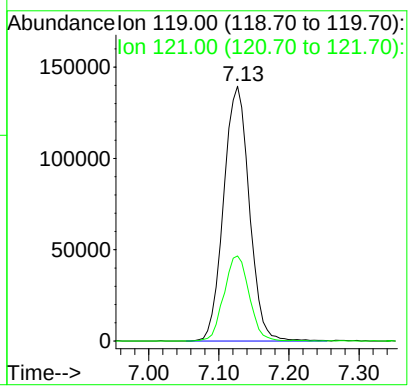


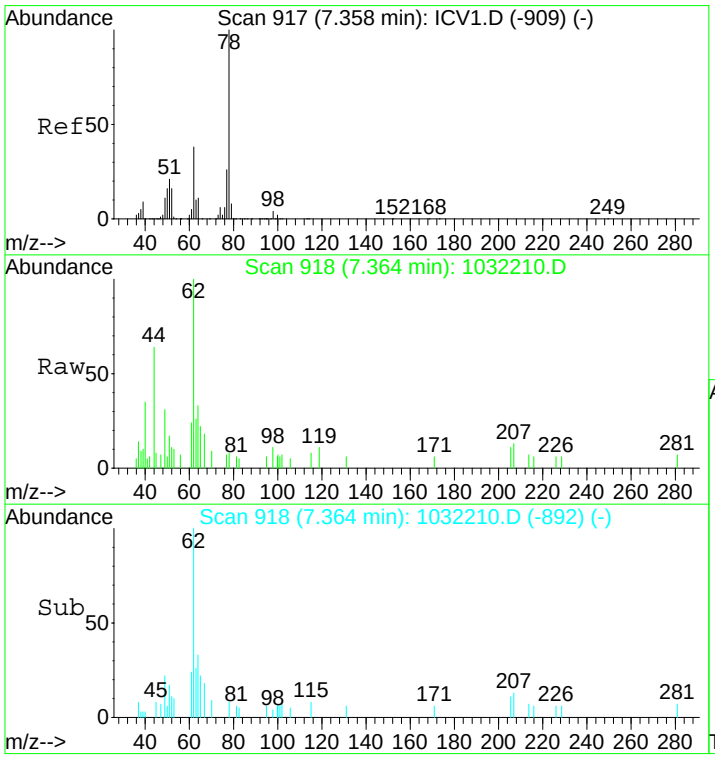


#43
Carbtetraclo
Concen: 19.93 ug/L
RT: 7.13 min Scan# 879
Delta R.T. -0.00 min
Lab File: 1032210.D
Acq: 5 Aug 2021 17:14

Tgt Ion:119 Resp: 355306

Ion	Ratio	Lower	Upper
119	100		
121	32.8	12.5	52.5

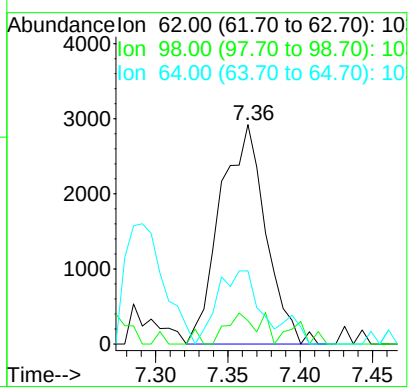


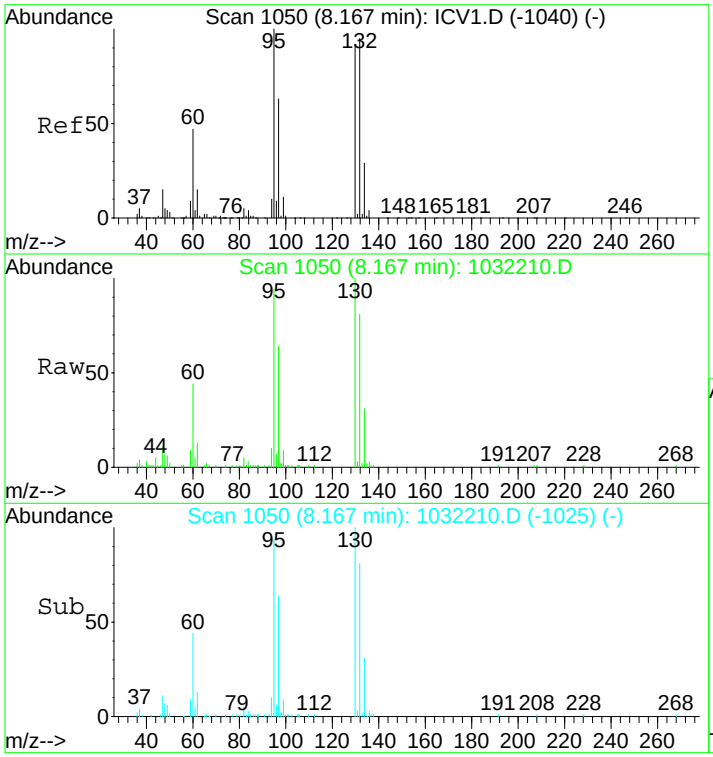


#47
12dichlorota
Concen: 0.34 ug/L
RT: 7.36 min Scan# 918
Delta R.T. 0.01 min
Lab File: 1032210.D
Acq: 5 Aug 2021 17:14

Tgt Ion: 62 Resp: 6399

Ion	Ratio	Lower	Upper
62	100		
98	0.0	0.0	29.5
64	46.0	13.0	53.0

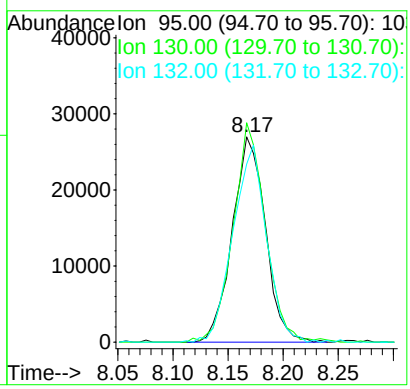




#49
trichloroete
Concen: 3.91 ug/L
RT: 8.17 min Scan# 1050
Delta R.T. -0.00 min
Lab File: 1032210.D
Acq: 5 Aug 2021 17:14

Tgt Ion: 95 Resp: 56425

Ion	Ratio	Lower	Upper
95	100		
130	104.1	78.1	118.1
132	97.3	74.6	114.6



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032211.D Vial: 19
Acq On : 5 Aug 2021 17:44 Operator: DGS-RLD
Sample : 194091,1032211,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 18:04:56 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	999693	20.00 ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	837380	20.00 ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	456005	20.00 ug/L	0.00 NA%
System Monitoring Compounds					
41) SURRDibrflma	6.85	113	240316	19.018 ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 95 %		
45) SURR12DCAd4	7.27	102	70723	20.512 ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103 %		
61) SURRd8Tolule	9.71	98	1060541	21.194 ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 106 %		
83) SURR4BrFBenz	13.25	95	436249	19.910 ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 100 %		

Target Compounds					Qvalue
2) Dichlorodi	0.00	85	0	N.D.	
3) Chloromethan	0.00	50	0	N.D.	
4) VinylChlorid	0.00	62	0	N.D.	
5) Bromomethane	0.00	94	0	N.D.	
6) Chloroethane	2.76	64	14390	1.6251 ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.	
8) Trichlorofma	0.00	101	0	N.D.	
9) Ethylether	0.00	59	0	N.D.	
10) dichlorotfluoroethan	0.00	67	0	N.D.	
11) propyleneoxide	0.00	58	0	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) 11dichlorthe	0.00	96	0	N.D.	
14) Trichlorotfluoroeth	0.00	101	0	N.D.	
15) Acetone	4.07	43	10156	N.D.	
16) Iodomethane	0.00	142	0	N.D.	
17) Carbon Dislf	4.26	76	4023	N.D.	
18) allylchloride	4.38	41	2740	N.D.	
19) methylacetate	0.00	74	0	N.D.	
20) Methylchlorid	4.63	84	4268	N.D.	
21) tbutylalcohol	0.00	59	0	N.D.	
22) Acrylonitrile	0.00	53	0	N.D.	
23) t12dichlorte	0.00	96	0	N.D.	
24) MtBE	0.00	73	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 11dichlorota	0.00	63	0	N.D.	
27) Vinylacetate	0.00	43	0	N.D.	
28) chloroprene	0.00	53	0	N.D.	
29) Diisopether	0.00	45	0	N.D.	
30) ETBE	0.00	59	0	N.D.	
31) 22dichloropr	0.00	77	0	N.D.	
32) c12dichlorte	0.00	96	0	N.D.	
33) 2Butanone	0.00	72	0	N.D.	
34) propionitrile	0.00	54	0	N.D.	
35) Ethylacetate	0.00	88	0	N.D.	
36) methacrylonitrile	0.00	67	0	N.D.	
37) Bromochlorma	0.00	128	0	N.D.	
38) Tetrahydofur	6.67	42	4228	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032211.D Vial: 19
Acq On : 5 Aug 2021 17:44 Operator: DGS-RLD
Sample : 194091,1032211,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 18:04:56 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	90317	4.0077	ug/L		98
40)	111trichlota	0.00	97	0	N.D.			
42)	Cyclohexane	0.00	56	0	N.D.			
43)	Carbtetraclo	7.13	119	332431	19.8838	ug/L		100
44)	11dicloprope	0.00	110	0	N.D.			
46)	Benzene	0.00	78	0	N.D.			
47)	12dichlorota	7.36	62	5892	0.3325	ug/L	#	49
48)	TAME	0.00	73	0	N.D.			
49)	trichloroete	8.17	95	62084	4.5899	ug/L		95
50)	methylcyclohexane	0.00	83	0	N.D.			
51)	12dicloropra	0.00	63	0	N.D.			
52)	23Dicl1propene	0.00	75	0	N.D.			
53)	Dibromometha	0.00	93	0	N.D.			
54)	methylmethacrylate	0.00	69	0	N.D.			
55)	14dioxane	0.00	88	0	N.D.			
56)	Bromodiclrma	0.00	83	0	N.D.			
57)	2Nitropropane	9.04	43	2608	N.D.			
58)	2CLEVE	0.00	63	0	N.D.			
59)	c13dicloproe	0.00	75	0	N.D.			
60)	4Meth2Pentan	0.00	43	0	N.D.			
62)	Toluene	0.00	92	0	N.D.			
63)	t13Dicloprop	0.00	75	0	N.D.			
64)	ethylmethacrylate	0.00	69	0	N.D.			
65)	112Triclotha	0.00	83	0	N.D.			
66)	Tetrachlorte	0.00	166	0	N.D.			
67)	13Diclorpropa	0.00	76	0	N.D.			
69)	2Hexanone	0.00	43	0	N.D.			
70)	Clorodibrmta	0.00	129	0	N.D.			
71)	12Dibrometha	0.00	107	0	N.D.			
72)	Chlorobenzen	0.00	112	0	N.D.			
73)	1Clhexane	11.62	91	2628	N.D.			
74)	1112Tetclota	0.00	131	0	N.D.			
75)	Ethylbenzene	0.00	91	0	N.D.			
76)	m p-Xylene	0.00	106	0	N.D.			
77)	o-Xylene	0.00	106	0	N.D.			
78)	Styrene	0.00	104	0	N.D.			
79)	Bromoform	0.00	173	0	N.D.			
80)	Isopropylben	0.00	105	0	N.D.			
81)	cyclohexanone	0.00	55	0	N.D.			
84)	Bromobenzene	0.00	156	0	N.D.			
85)	1122Tetrclta	0.00	83	0	N.D.			
86)	123Triclproa	0.00	75	0	N.D.			
87)	14dichloro2butene	0.00	53	0	N.D.			
88)	n-Propylbenz	0.00	91	0	N.D.			
89)	2chlorotolue	0.00	91	0	N.D.			
90)	4chlorotolue	0.00	91	0	N.D.			
91)	135Trimebenz	0.00	105	0	N.D.			
92)	tbutylbenzen	0.00	119	0	N.D.			
93)	124Trimetben	0.00	105	0	N.D.			
94)	sbutylbenzen	0.00	105	0	N.D.			
95)	13Diclorbenz	0.00	146	0	N.D.			
96)	pIsopropylto	0.00	119	0	N.D.			
97)	14dichlorobe	0.00	146	0	N.D.			
98)	12dichlorobe	0.00	146	0	N.D.			
99)	nButylbenzen	15.46	91	2627	N.D.			
100)	12dibromo3cl	0.00	157	0	N.D.			
101)	135Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1032211.D Vial: 19
Acq On : 5 Aug 2021 17:44 Operator: DGS-RLD
Sample : 194091,1032211,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 18:04:56 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

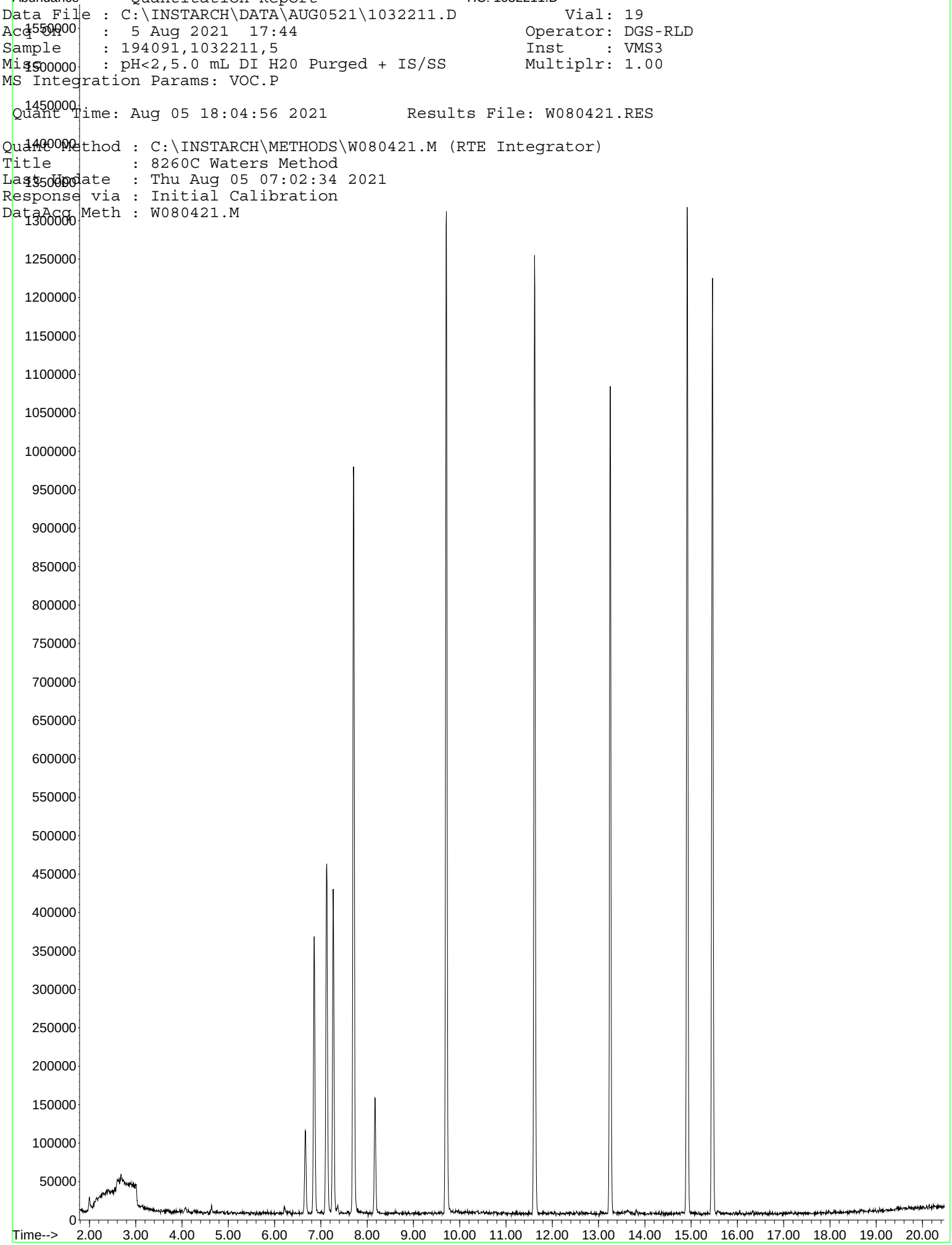
(#) = qualifier out of range (m) = manual integration

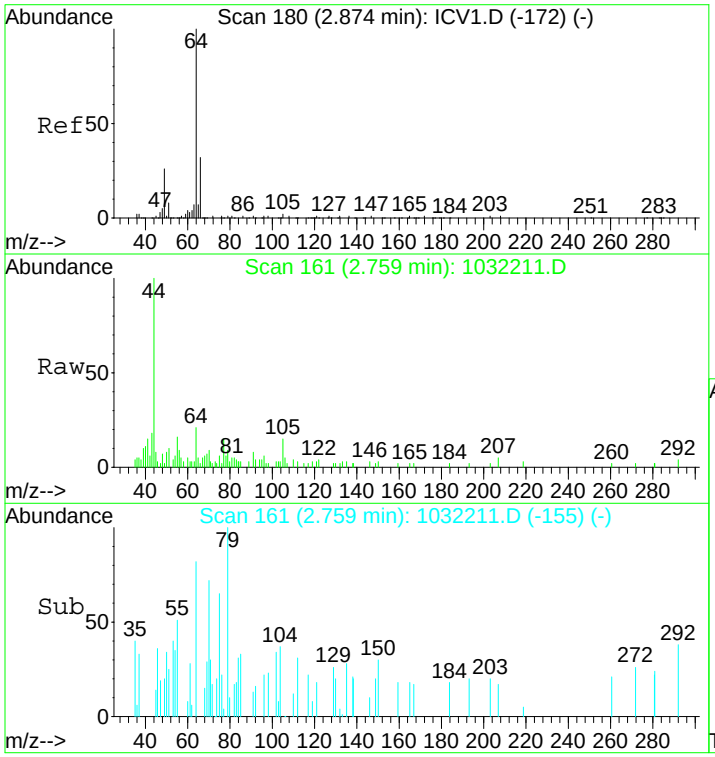
Abundance Quantitation Report TIC: 1032211.D

Data File : C:\INSTARCH\DATA\AUG0521\1032211.D Vial: 19
Acq On : 5 Aug 2021 17:44 Operator: DGS-RLD
Sample : 194091,1032211,5 Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 18:04:56 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

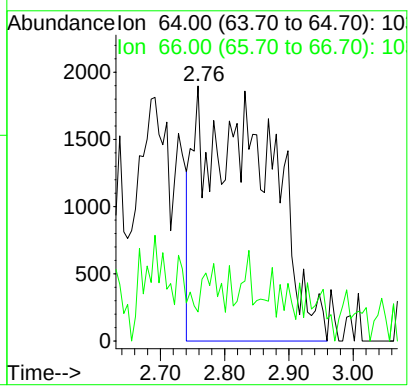




#6
Chloroethane
Concen: 1.63 ug/L
RT: 2.76 min Scan# 161
Delta R.T. -0.12 min
Lab File: 1032211.D
Acq: 5 Aug 2021 17:44

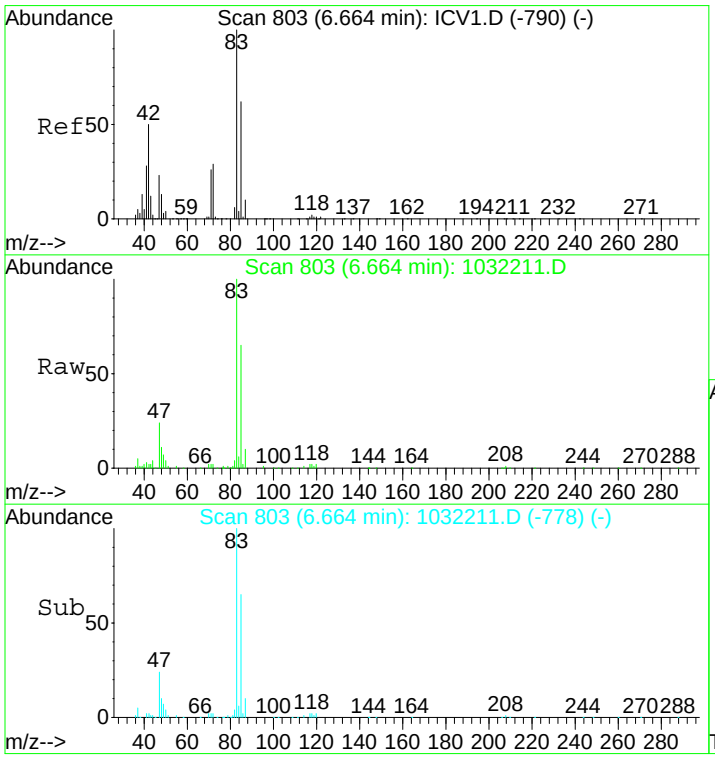
Tgt Ion: 64 Resp: 14390

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

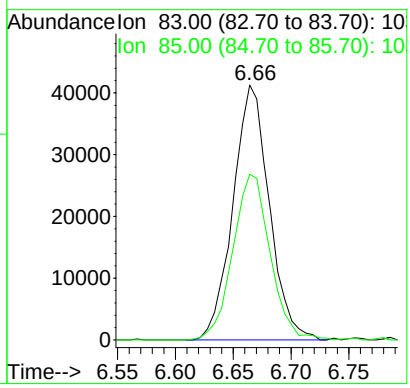
[redacted]

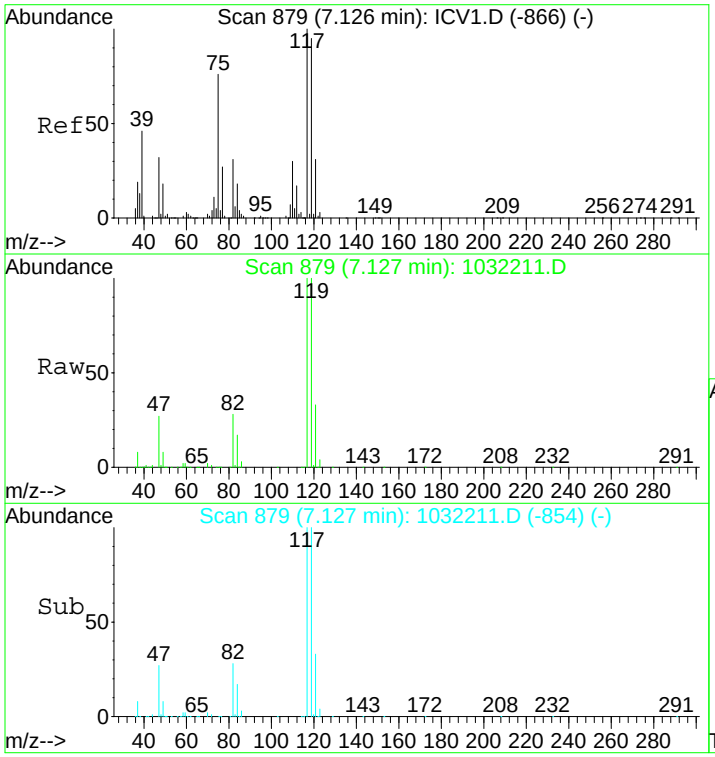


#39
Chloroform
Concen: 4.01 ug/L
RT: 6.66 min Scan# 803
Delta R.T. -0.00 min
Lab File: 1032211.D
Acq: 5 Aug 2021 17:44

Tgt Ion: 83 Resp: 90317

Ion	Ratio	Lower	Upper
83	100		
85	66.6	45.0	85.0

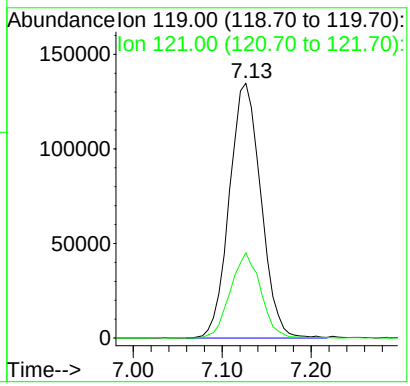


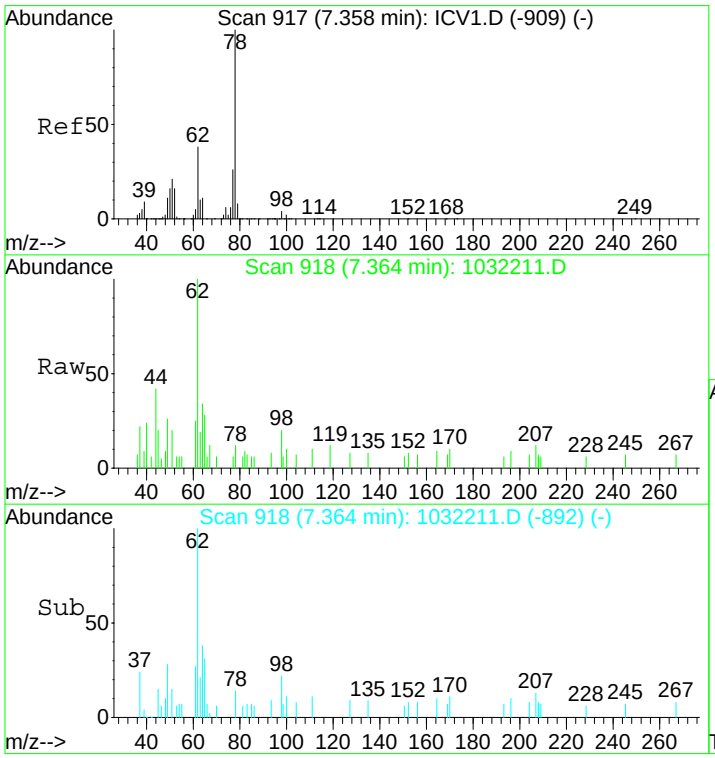


#43
Carbtetraclo
Concen: 19.88 ug/L
RT: 7.13 min Scan# 879
Delta R.T. -0.00 min
Lab File: 1032211.D
Acq: 5 Aug 2021 17:44

Tgt Ion:119 Resp: 332431

Ion	Ratio	Lower	Upper
119	100		
121	32.3	12.5	52.5

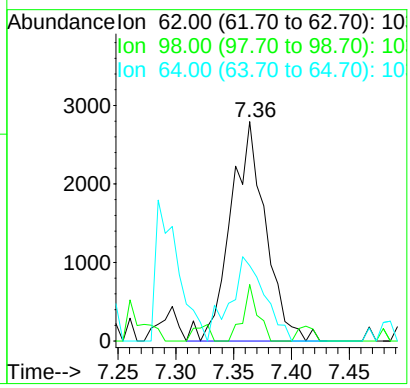


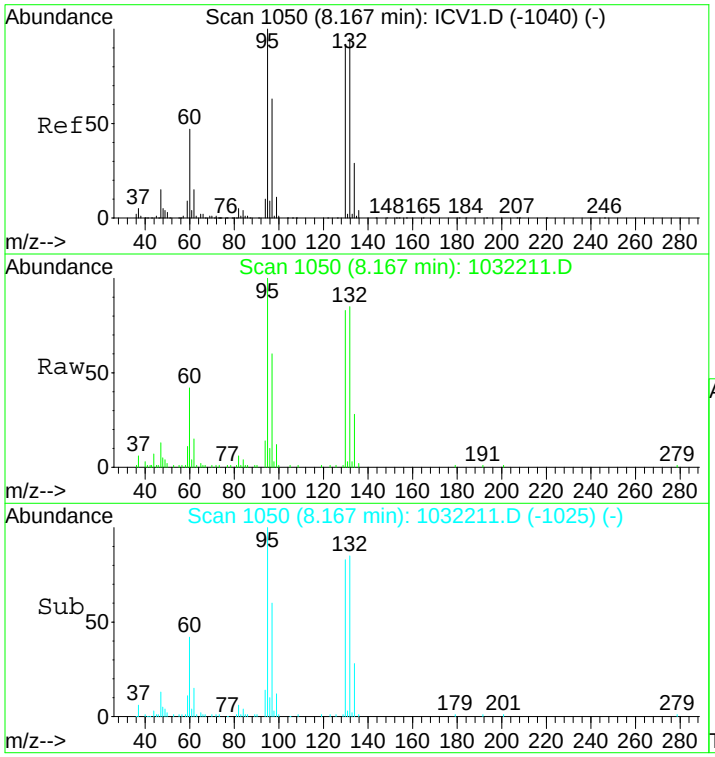


#47
12dichlorota
Concen: 0.33 ug/L
RT: 7.36 min Scan# 918
Delta R.T. 0.01 min
Lab File: 1032211.D
Acq: 5 Aug 2021 17:44

Tgt Ion: 62 Resp: 5892

Ion	Ratio	Lower	Upper
62	100		
98	0.0	0.0	29.5
64	0.0	13.0	53.0#

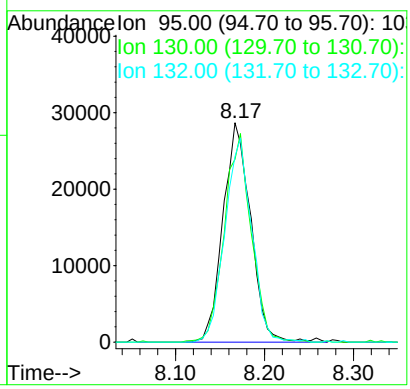




#49
trichloroete
Concen: 4.59 ug/L
RT: 8.17 min Scan# 1050
Delta R.T. -0.00 min
Lab File: 1032211.D
Acq: 5 Aug 2021 17:44

Tgt Ion: 95 Resp: 62084

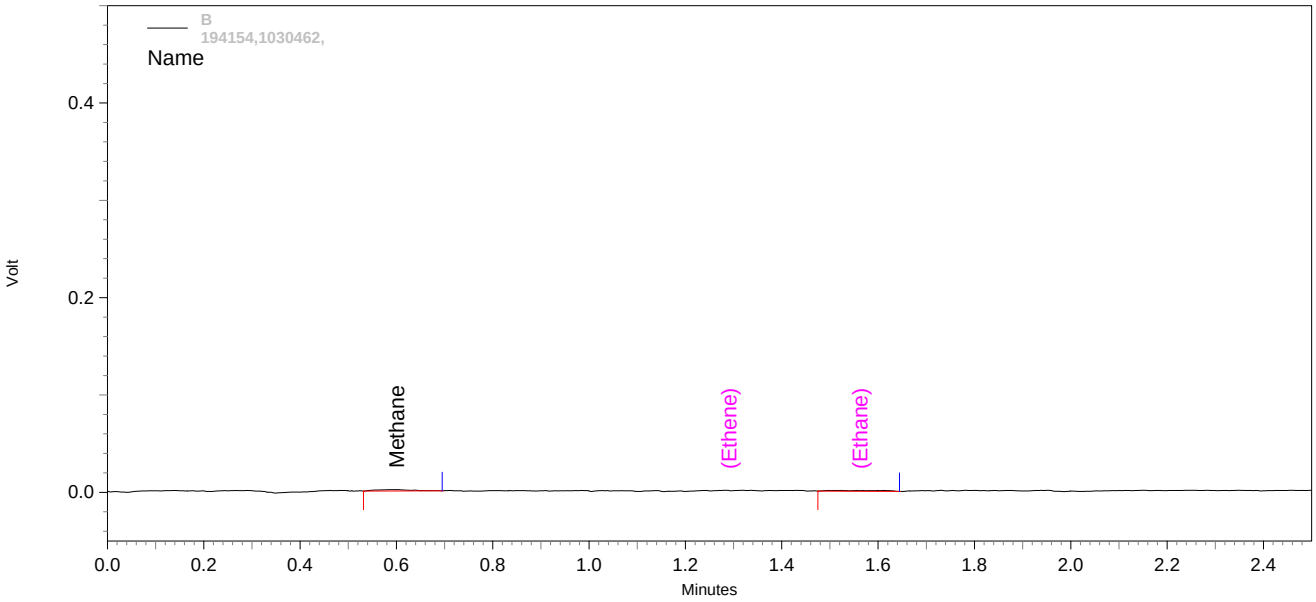
Ion	Ratio	Lower	Upper
95	100		
130	92.4	78.1	118.1
132	90.4	74.6	114.6



Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\005.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1030462,
Acquired: Aug 04, 2021 11:30:22
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



B Results

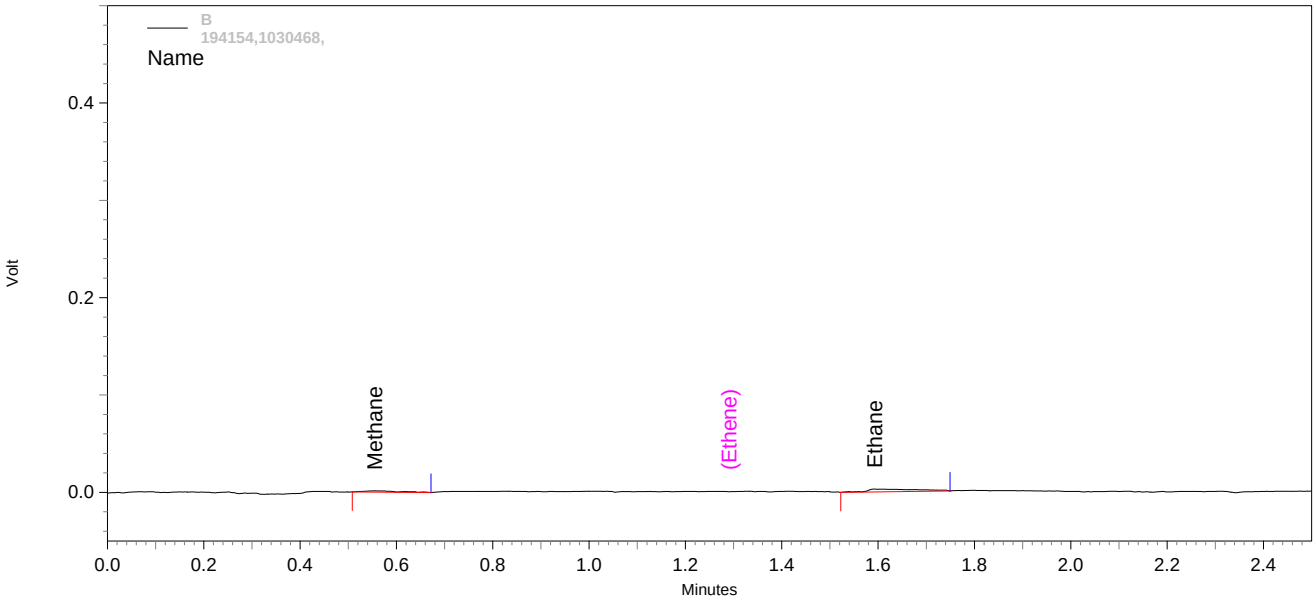
Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.601**	**0.579**	**6970**	**1.647**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
2		**1.509**	**0.000**	**6759**	**0.000**	
	Ethane		**1.563**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

NOT USED

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\006.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1030468,
Acquired: Aug 04, 2021 11:33:44
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



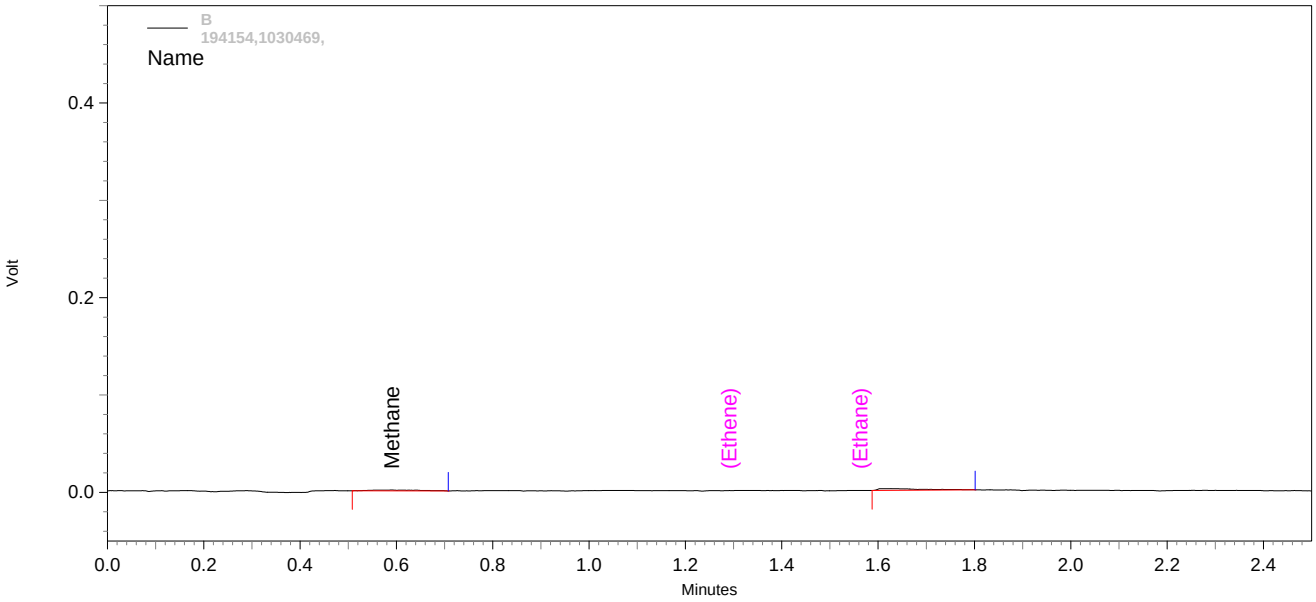
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.555**	**0.579**	**6324**	**1.480**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
2	**Ethane**	**1.593**	**1.563**	**20362**	**2.559**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\007.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1030469,
Acquired: Aug 04, 2021 11:37:30
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



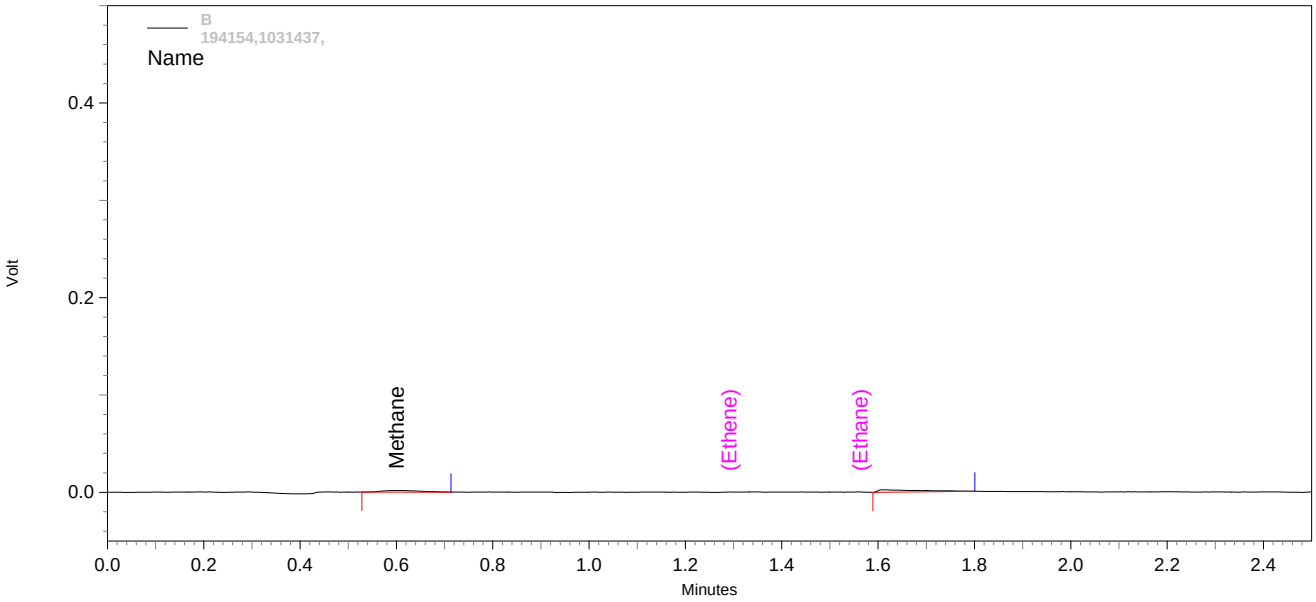
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.590**	**0.579**	**5469**	**1.259**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**
2		**1.627**	**0.000**	**11317**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\008.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1031437,
Acquired: Aug 04, 2021 11:42:01
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



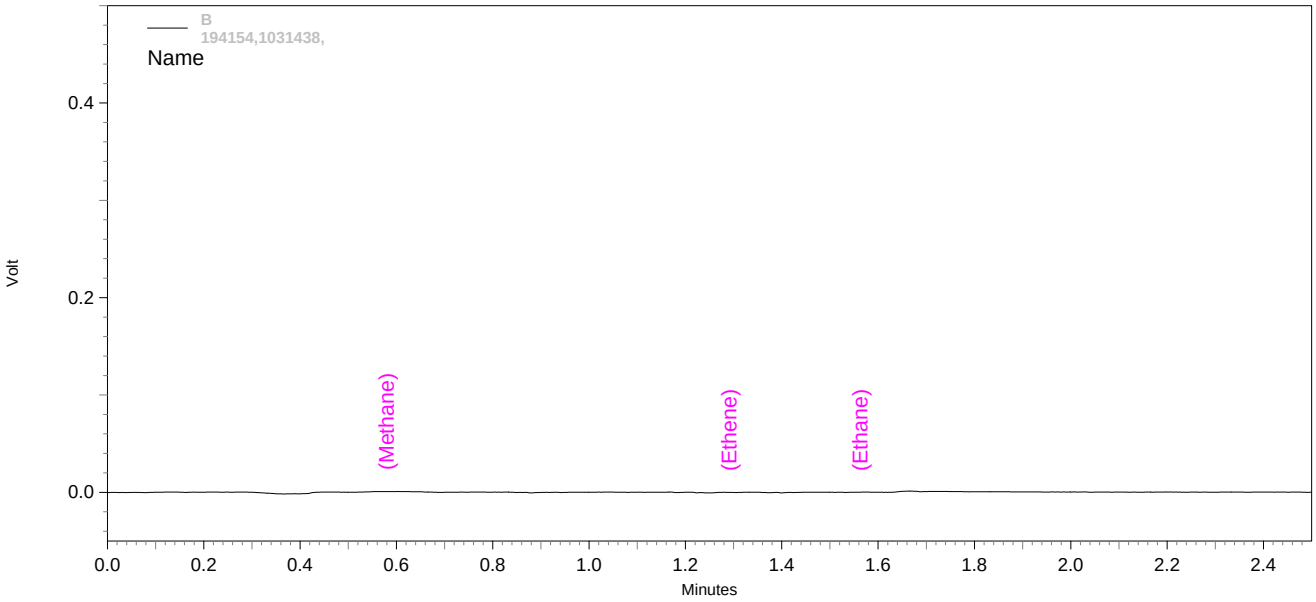
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.600**	**0.579**	**9354**	**2.264**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**
2		**1.608**	**0.000**	**14658**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\009.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1031438,
Acquired: Aug 04, 2021 11:48:43
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



B Results

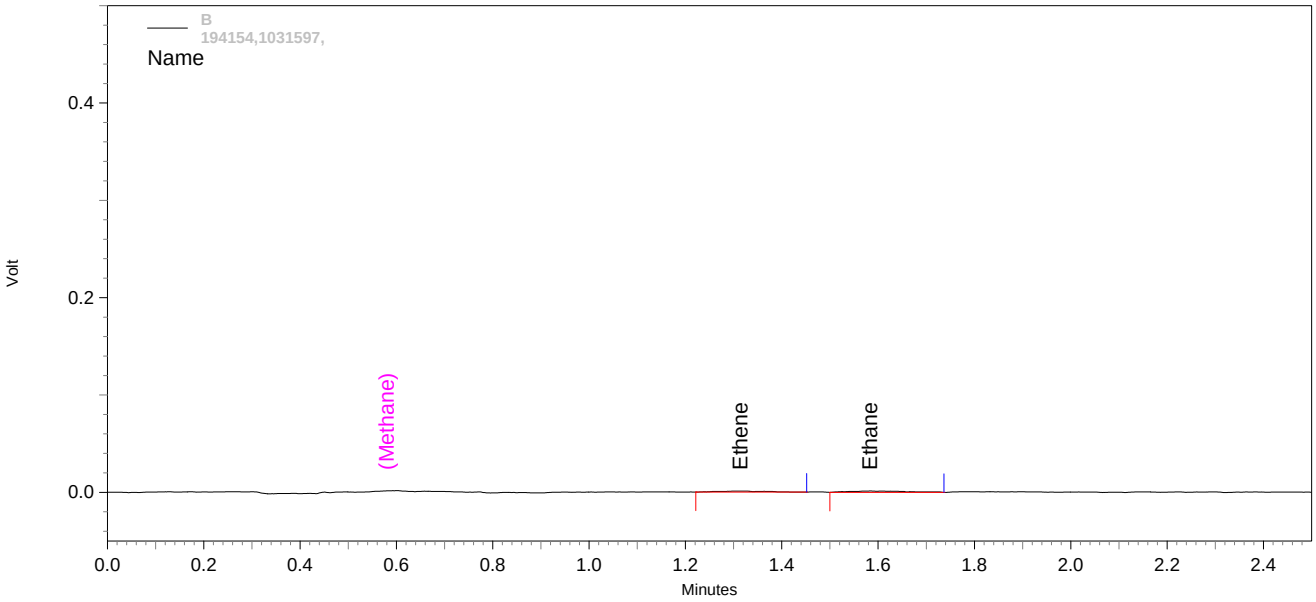
Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.579**		**0.000 BDL**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

NOT USED

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\012.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1031957,
Acquired: Aug 04, 2021 12:47:00
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



B Results

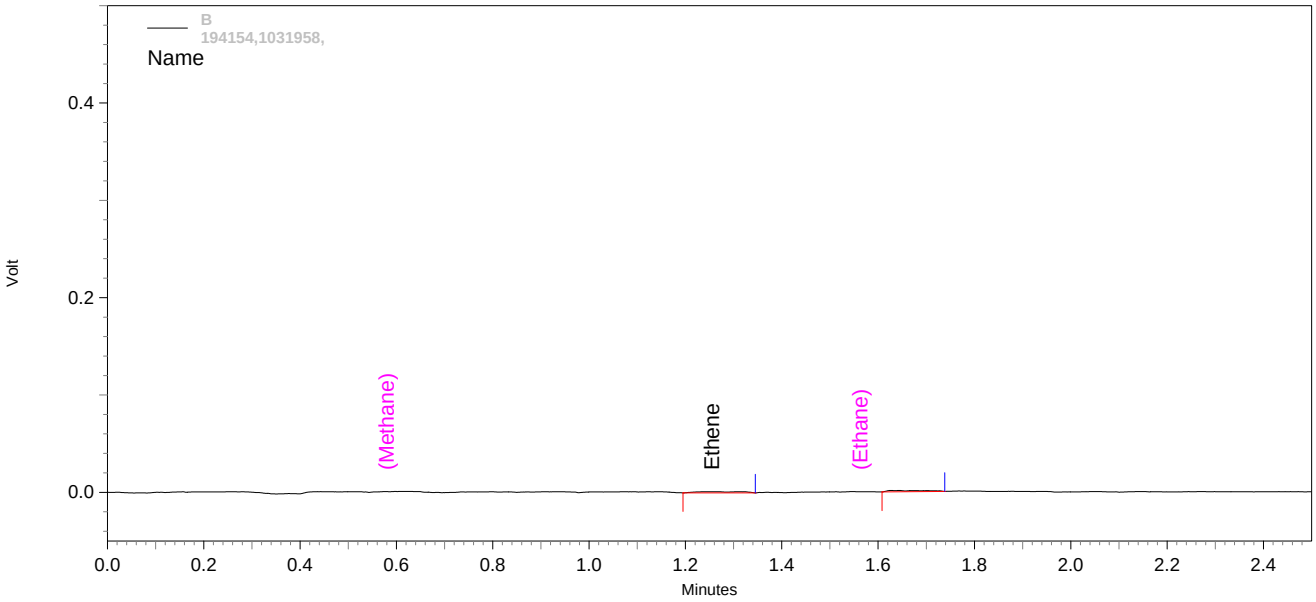
Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.579**		**0.000 BDL**	**ppmV**
1	**Ethene**	**1.313**	**1.291**	**7333**	**0.941**	**ppmV**
2	**Ethane**	**1.583**	**1.563**	**11391**	**1.291**	**ppmV**

Dissolved Gases External Standard Report

NOT USED

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\013.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1031958,
Acquired: Aug 04, 2021 12:51:41
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



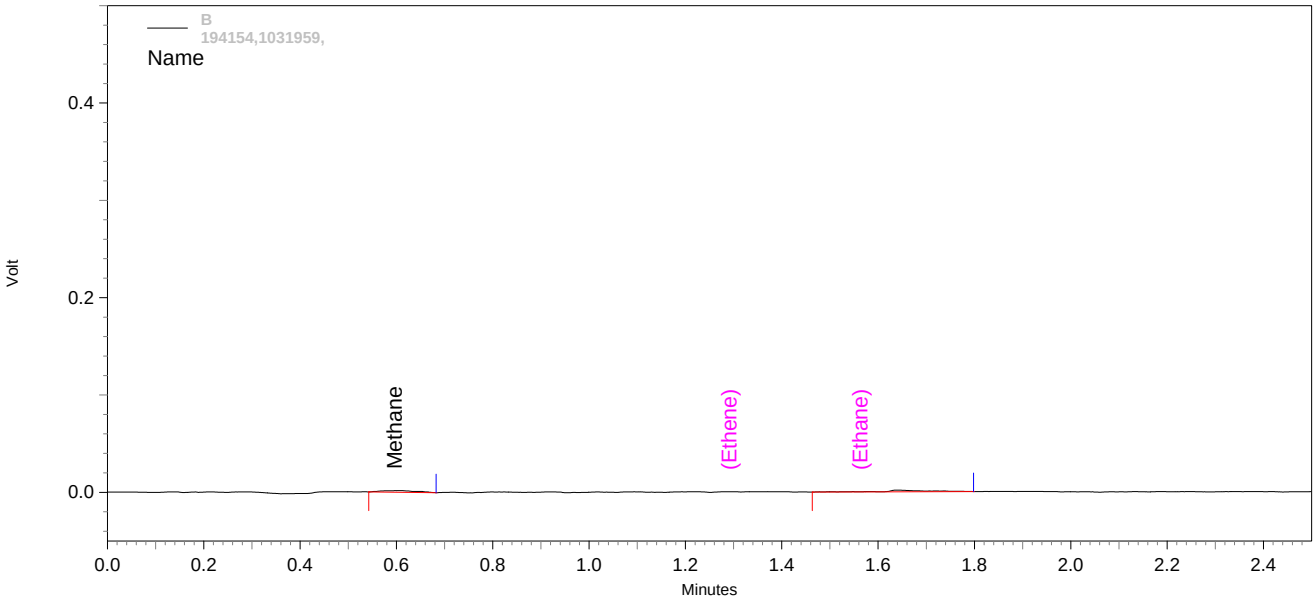
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.579**		**0.000 BDL**	**ppmV**
1	**Ethene**	**1.254**	**1.291**	**7764**	**1.002**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**
2		**1.645**	**0.000**	**6942**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\014.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1031959,
Acquired: Aug 04, 2021 12:57:26
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



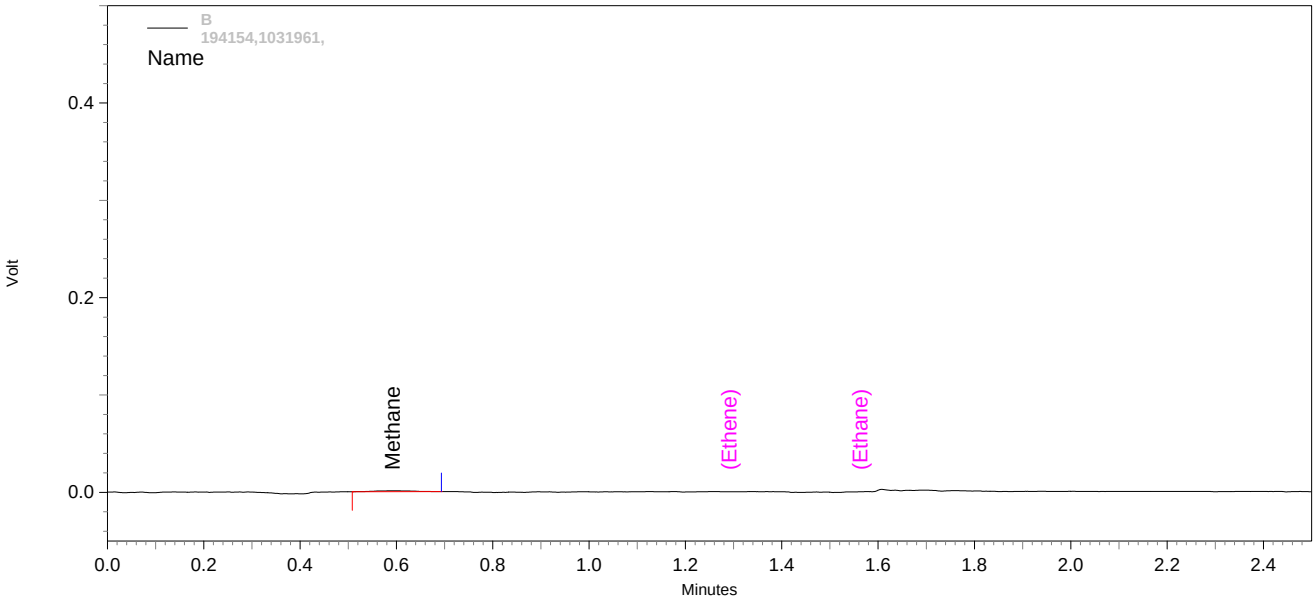
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.596**	**0.579**	**8822**	**2.127**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**
2		**1.639**	**0.000**	**11128**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\015.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1031961,
Acquired: Aug 04, 2021 13:03:51
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



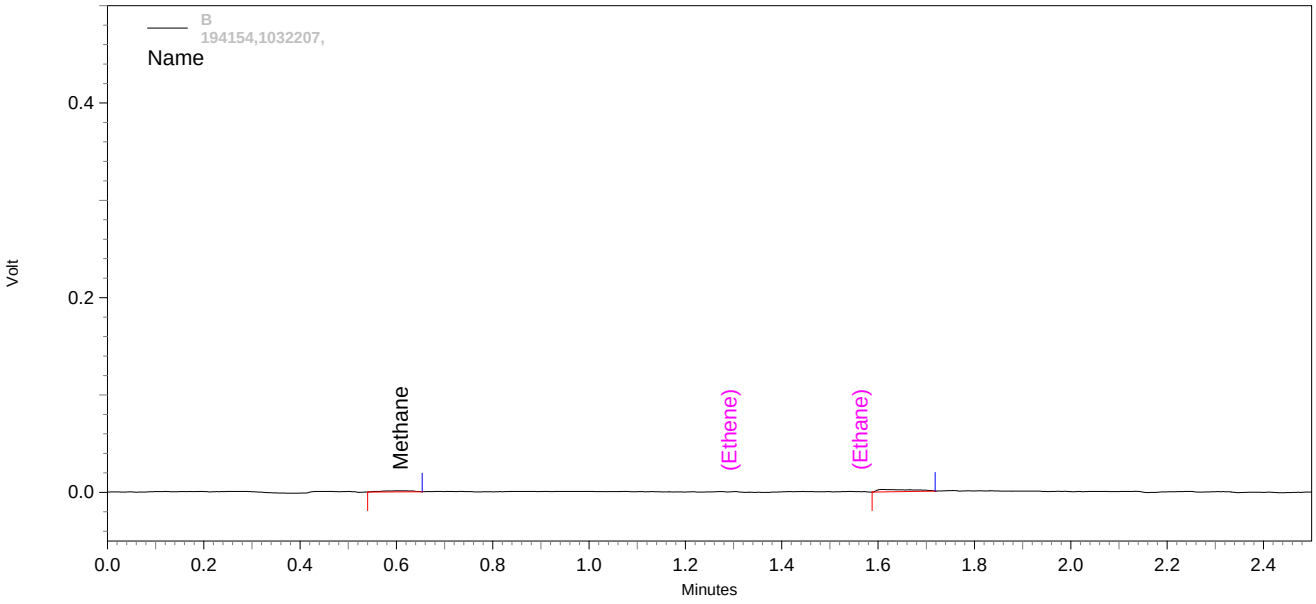
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.592**	**0.579**	**5501**	**1.267**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\016.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1032207,
Acquired: Aug 04, 2021 13:08:22
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



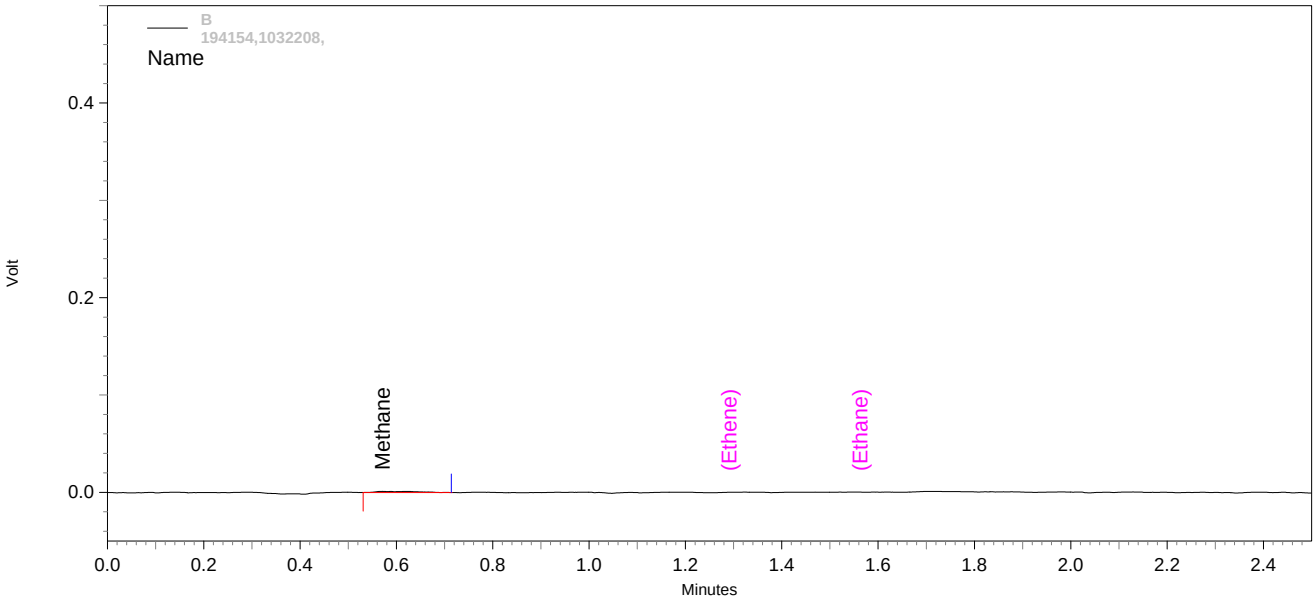
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.608**	**0.579**	**5083**	**1.159**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**
2		**1.608**	**0.000**	**12557**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\019.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1032208,
Acquired: Aug 04, 2021 13:25:21
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



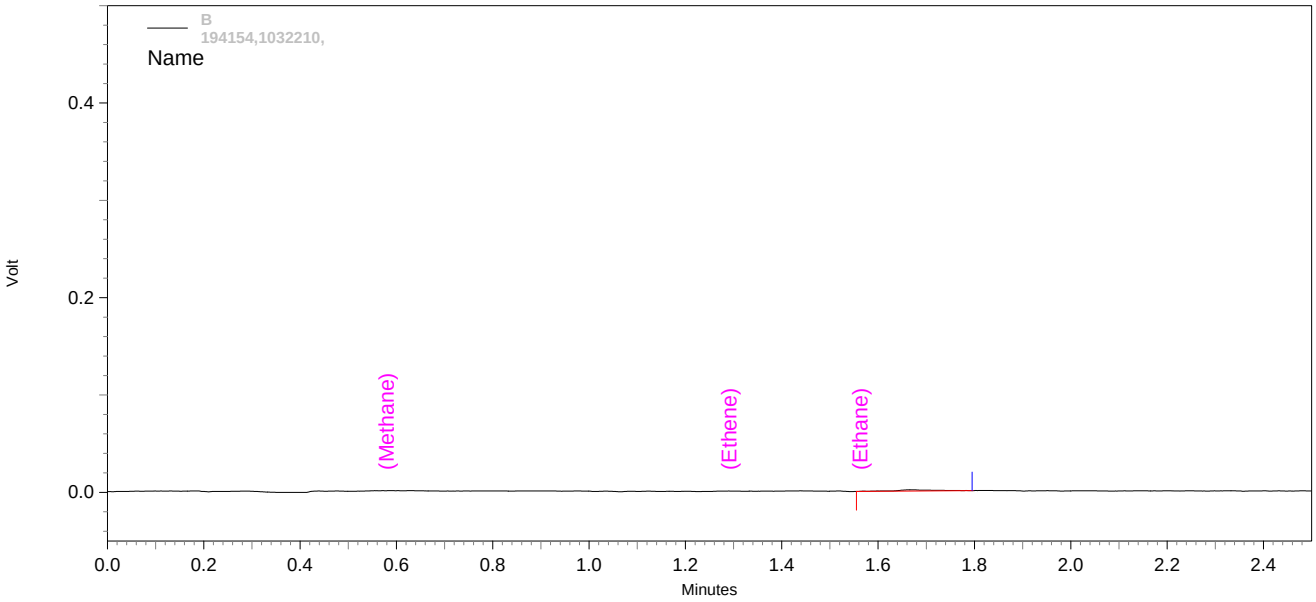
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.571**	**0.579**	**6821**	**1.609**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\020.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1032210,
Acquired: Aug 04, 2021 13:29:08
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



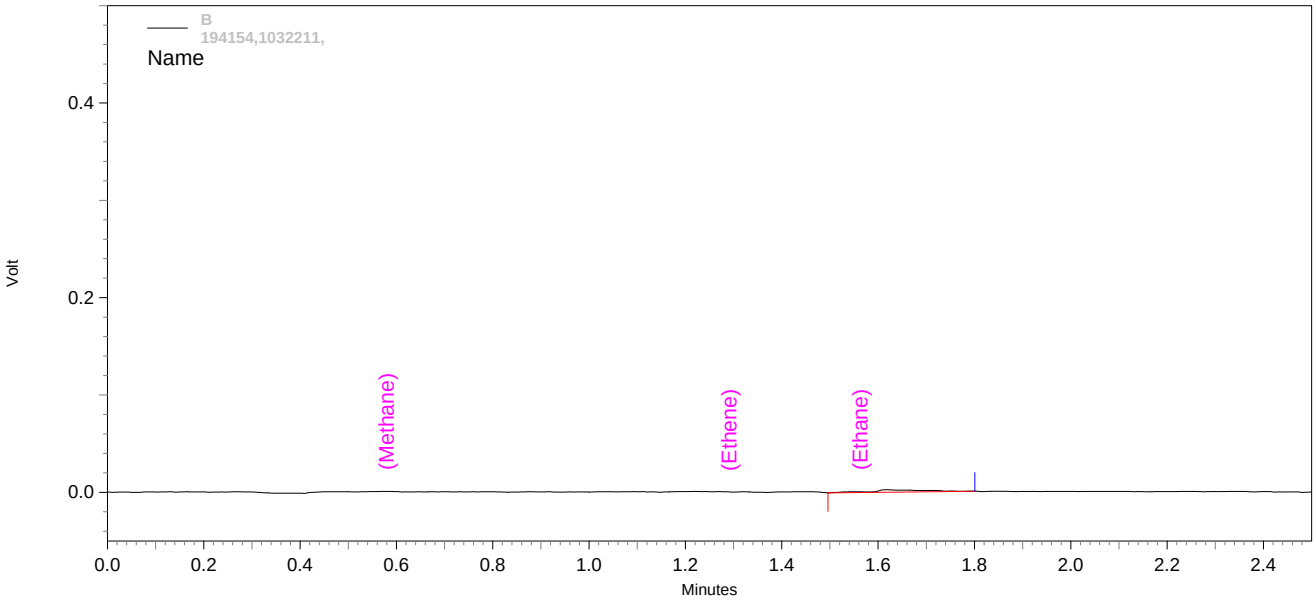
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.579**		**0.000 BDL**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**
1		**1.663**	**0.000**	**7520**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\021.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1032211,
Acquired: Aug 04, 2021 13:32:45
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



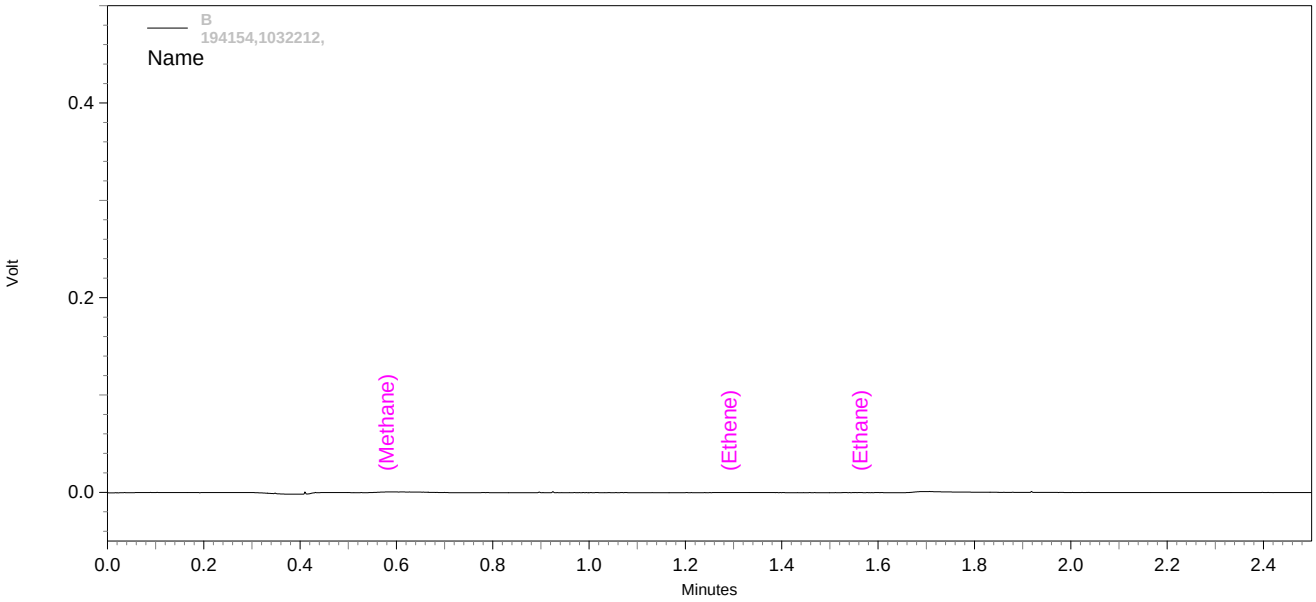
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.579**		**0.000 BDL**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**
1		**1.618**	**0.000**	**17553**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\022.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1032212,
Acquired: Aug 04, 2021 13:46:36
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



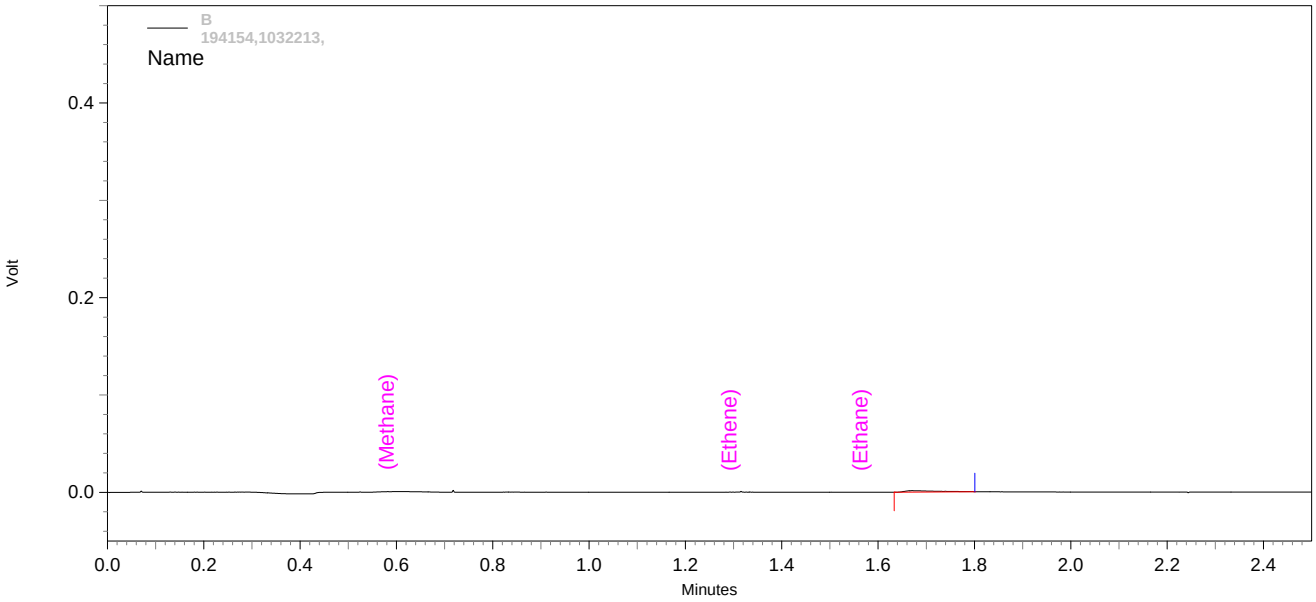
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.579**		**0.000 BDL**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\023.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1032213,
Acquired: Aug 04, 2021 13:54:47
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



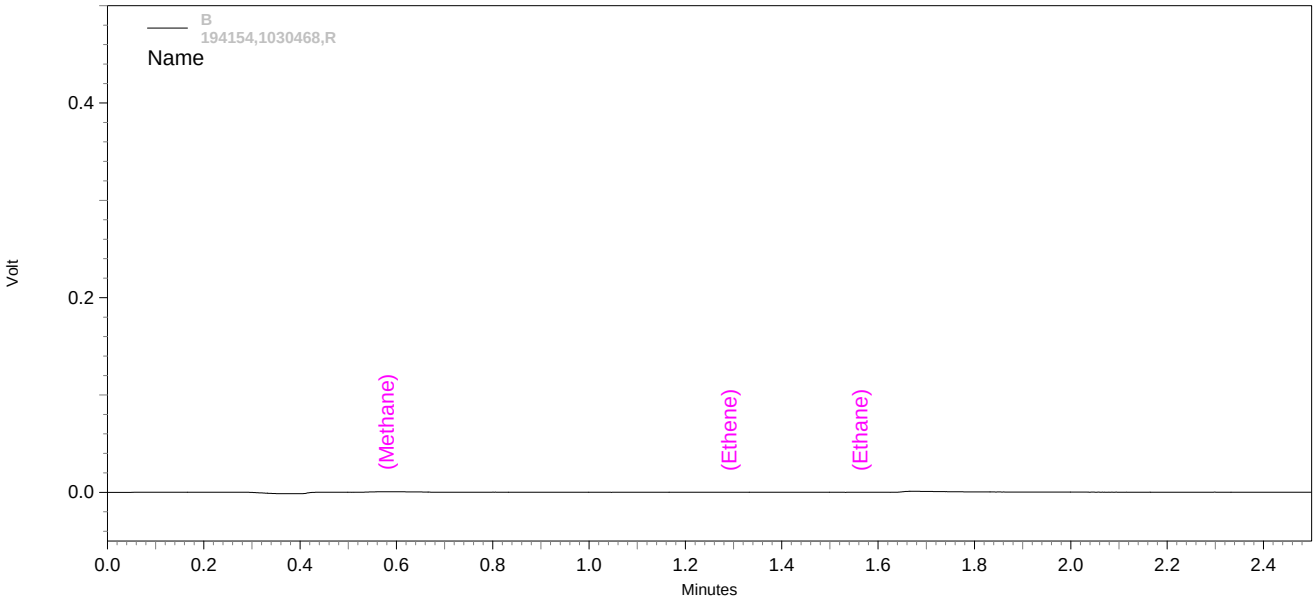
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.579**		**0.000 BDL**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**
1		**1.670**	**0.000**	**6691**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\024.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1030468,R
Acquired: Aug 04, 2021 13:58:42
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



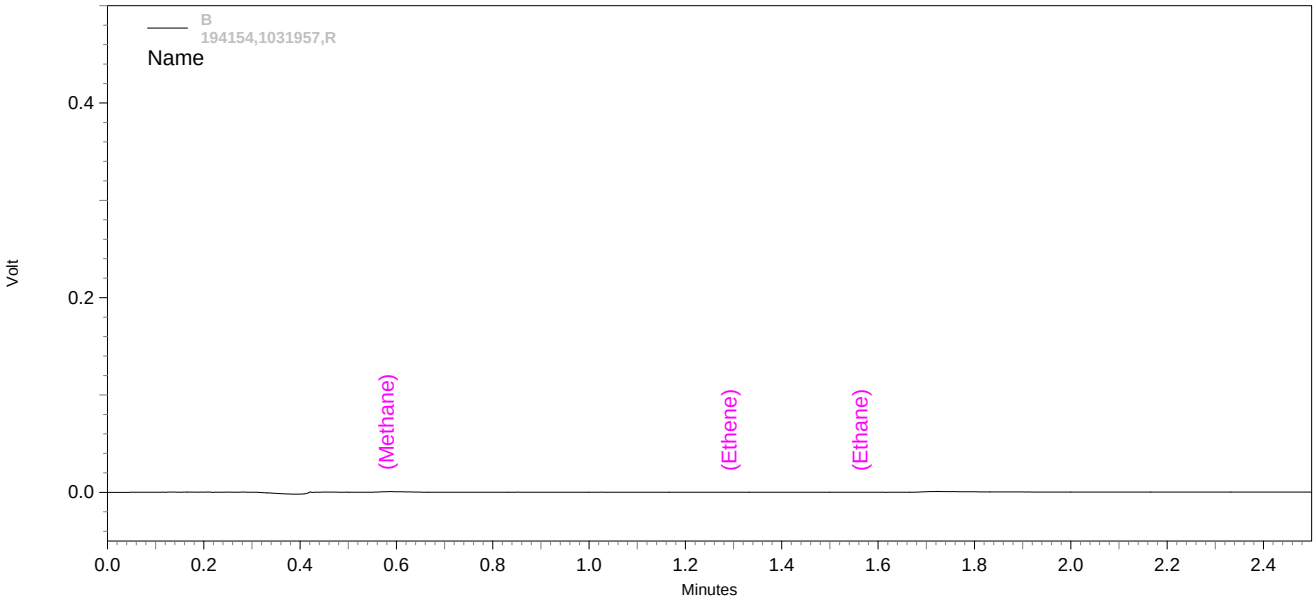
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.579**		**0.000 BDL**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\025.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1031957,R
Acquired: Aug 04, 2021 14:05:11
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



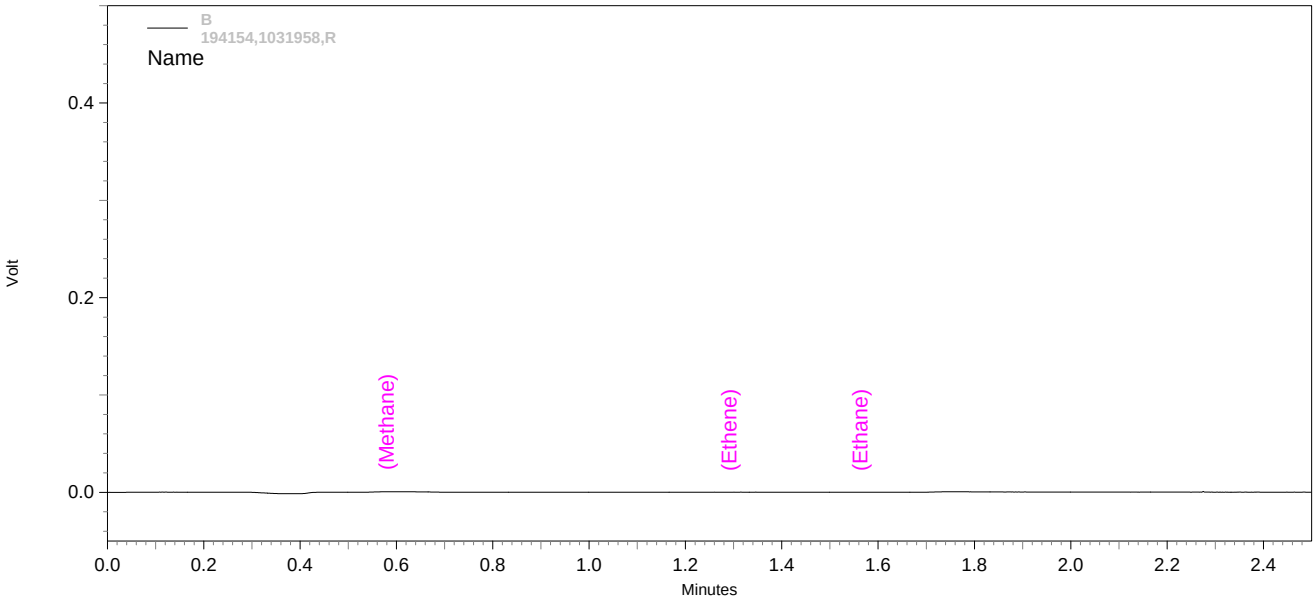
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.579**		**0.000 BDL**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\026.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,1031958,R
Acquired: Aug 04, 2021 14:09:04
File Desc. Field Sample - 1.0 mL Injection (Methane, Ethene, Ethane,)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.579**		**0.000 BDL**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**

VOLATILE ORGANIC ANALYSIS
INITIAL CALIBRATION
DOCUMENTS

Method Path : C:\INSTARCH\METHODS\
Method File : W071421.M
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response Via : Initial Calibration

RJ 07/22/2021

Calibration Files ug/L
1 0.5/5.0 =WCAL1.D 2 1.0/10.0 =WCAL2.D 3 2.0/20.0 =WCAL3.D
4 5.0/50.0 =WCAL4.D 5 10.0/100.0 =WCAL5.D 6 20.0/200.0 =WCAL6.D
7 30.0/300.0 =WCAL7.D 8 40.0/400.0 =WCAL8.D 9 80.0/800.0 =WCAL9.D

		Compound	1	2	3	4	5	6	7	Avg	%RSD
			8	9							
1)	I	FLUOROBENZENE**ISTD**	----------ISTD----------								
2)	PT	Dichlorodi	0.133	0.197	0.256	0.248	0.262	0.251	0.235	-----	
			0.215	0.197							
								Q	A= -0.014 R=0.999		
									B= 0.250		
									C= 0.002		
3)	PT	Chloromethan	0.357	0.371	0.348	0.339	0.342	0.322	0.303	0.324	12.22
			0.282	0.247							
4)	PT	VinylChlorid	0.271	0.345	0.388	0.377	0.372	0.349	0.329	0.332	13.79
			0.297	0.264							
5)	PT	Bromomethane		0.233	0.218	0.212	0.202	0.190	0.173	0.199	12.39
			0.164								
6)	PT	Chloroethane		0.248	0.253	0.243	0.238	0.230	0.214	0.227	10.33
			0.203	0.187							
7)	T	Dichloroflmetha	0.322	0.364	0.359	0.347	0.344	0.332	0.321	0.329	8.85
			0.300	0.273							
8)	PT	Trichlorofma	0.207	0.277	0.366	0.344	0.370	0.356	0.339	-----	
			0.323	0.299							
								Q	A= -0.016 R=1.000		
									B= 0.360		
									C= 0.000		
9)	T	Ethylether	0.205	0.178	0.211	0.210	0.205	0.204	0.208	0.202	5.06
			0.200	0.194							
10)	T	dichlorotfluoro	0.189	0.232	0.276	0.257	0.258	0.253	0.245	0.241	10.52
			0.234	0.221							
11)	T	propyleneoxide		0.057	0.058	0.057	0.057	0.055	0.056	0.055	7.12
			0.052	0.046							
12)	T	Acrolein		0.019	0.017	0.016	0.017	0.017	0.017	0.017#	4.66
			0.017	0.016							
13)	PT	11dichlorthe	0.156	0.186	0.223	0.207	0.221	0.216	0.215	0.203	10.45
			0.208	0.199							
14)	PT	Trichlorotfluor	0.114	0.145	0.215	0.211	0.224	0.220	0.209	-----	
			0.201	0.186							
								Q	A= -0.005 R=1.000		
									B= 0.223		
									C= -0.002		
15)	PT	Acetone	0.087	0.093	0.086	0.082	0.077	0.073	0.073	0.077#	14.44
			0.065	0.058							
16)	T	Iodomethane		0.229	0.241	0.258	0.280	0.278	0.272	0.257	7.52
			0.257	0.237							
17)	PT	Carbon Dislf	0.543	0.588	0.644	0.601	0.618	0.573	0.531	0.555	13.29
			0.491	0.402							
18)	T	allylchloride	0.338	0.379	0.374	0.356	0.366	0.362	0.347	0.349	8.18
			0.328	0.287							
19)	PT	methylacetate		0.081	0.066	0.064	0.070	0.068	0.072	0.070#	7.26
			0.070	0.069							
20)	PT	Methylchlorid	0.436	0.361	0.313	0.270	0.264	0.251	0.249	-----	
			0.236	0.225							
								Q	A= -0.007 R=1.000		
									B= 0.250		
									C= 0.006		
21)	T	tbutylalcohol	0.021	0.022	0.022	0.023	0.024	0.024	0.024	0.022#	7.96

```
                    0.022 0.018
22) T   Acrylonitrile       0.101 0.107 0.104 0.103 0.100 0.102 0.100   6.68
                    0.095 0.085
23) PT  t12dichlorte    0.217 0.216 0.245 0.243 0.252 0.250 0.241 0.235   5.99
                    0.233 0.222
24) PT  MtBE            0.611 0.638 0.637 0.621 0.636 0.630 0.628 0.616   4.98
                    0.595 0.543
25) T   Hexane          0.154 0.234 0.344 0.344 0.373 0.368 0.354 -----
                    0.341 0.289
                                                    Q  A= -0.014 R=1.000
                                                       B=  0.399
                                                       C= -0.015
26) PT  11dichlorota    0.398 0.461 0.454 0.439 0.449 0.437 0.418 0.425   7.30
                    0.399 0.368
27) T   Vinylacetate    0.442 0.491 0.461 0.460 0.438 0.363 0.303 -----
                    0.264
                                                    Q  A= -0.010 R=0.999
                                                       B=  0.458
                                                       C=  0.037
28) T   chloroprene     0.299 0.362 0.427 0.435 0.445 0.439 0.411 0.393  13.21
                    0.389 0.332
29) T   Diisopether     0.739 0.797 0.837 0.809 0.819 0.806 0.787 0.778   7.00
                    0.746 0.661
30) T   ETBE            0.561 0.604 0.650 0.626 0.627 0.636 0.625 0.609   5.48
                    0.602 0.551
31) T   22dichloropr    0.215 0.261 0.273 0.277 0.287 0.302 0.305 0.279  10.09
                    0.300 0.293
32) PT  c12dichlorte    0.252 0.292 0.274 0.274 0.271 0.273 0.270 0.268   4.95
                    0.260 0.248
33) PT  2Butanone           0.037 0.033 0.034 0.034 0.034 0.036 0.034#  4.66
                    0.033 0.032
34) T   propionitrile       0.044 0.044 0.045 0.044 0.045 0.045 0.044   4.87
                    0.043 0.039
35) T   Ethylacetate           0.012 0.011 0.011 0.012 0.012 0.012 0.012#  5.53
                    0.012 0.012
36) T   methacrylonitri       0.118 0.122 0.117 0.121 0.124 0.127 0.121   3.16
                    0.122 0.116
37) T   Bromochlorma    0.118 0.127 0.119 0.126 0.128 0.124 0.124 0.123   3.16
                    0.121 0.118
38) T   Tetrahydofur    0.095 0.099 0.092 0.088 0.089 0.085 0.085 0.087  11.22
                    0.079 0.066
39) PT  Chloroform      0.435 0.475 0.451 0.437 0.436 0.435 0.424 0.430   6.55
                    0.409 0.373
40) PT  111trichlota    0.286 0.292 0.327 0.330 0.347 0.352 0.349 0.326   7.33
                    0.337 0.317
41) S   SURRDibrflma    0.250 0.257 0.254 0.254 0.255 0.257 0.256 0.255   0.94
                    0.253 0.254
42) PT  Cyclohexane     0.201 0.280 0.391 0.413 0.442 0.444 0.431 -----
                    0.412 0.380
                                                    Q  A= -0.020 R=1.000
                                                       B=  0.461
                                                       C= -0.007
43) PT  Carbtetraclo    0.160 0.209 0.256 0.249 0.268 0.280 0.281 -----
                    0.276 0.268
                                                    Q  A= -0.005 R=1.000
                                                       B=  0.289
                                                       C= -0.005
44) T   11dicloprope        0.110 0.126 0.108 0.122 0.125 0.125 0.119   5.82
                    0.120 0.119
45) S   SURR12DCAd4     0.071 0.073 0.074 0.076 0.074 0.070 0.073 0.073   2.59
                    0.070 0.073
46) PT  Benzene         0.998 1.079 1.124 1.045 1.030 0.974 0.916 0.968  13.51
                    0.842 0.702
47) PT  12dichlorota    0.375 0.374 0.375 0.339 0.334 0.340 0.327 0.342   8.20
                    0.314 0.297
48) T   TAME            0.523 0.584 0.584 0.588 0.612 0.618 0.623 0.586   5.57
                    0.598 0.549
49) PT  trichloroete    0.230 0.260 0.273 0.255 0.254 0.252 0.253 0.250   5.67
                    0.242 0.229
50) PT  methylcyclohexa 0.223 0.289 0.471 0.465 0.520 0.520 0.508 -----
```

```
                    0.481 0.442
                                                          Q  A= -0.025 R=1.000
                                                             B=  0.544
                                                             C= -0.009
51) PT  12dicloropra    0.229 0.279 0.276 0.268 0.276 0.273 0.274 0.265   5.96
                    0.262 0.253
52) T   23Dicl1propene        0.369 0.364 0.380 0.386 0.387 0.383 0.373   3.74
                    0.368 0.346
53) T   Dibromometha         0.171 0.160 0.151 0.149 0.156 0.154 0.154   5.05
                    0.148 0.147
54) T   methylmethacryl      0.163 0.165 0.181 0.183 0.197 0.203 0.186   8.18
                    0.198 0.194
55) T   14dioxane            0.004 0.004 0.004 0.004 0.004 0.004 0.004#  4.43
                    0.004 0.004
56) PT  Bromodiclrma    0.307 0.318 0.308 0.311 0.310 0.320 0.311 0.309   2.91
                    0.302 0.289
57) T   2Nitropropane   0.052 0.054 0.056 0.059 0.067 0.072 0.075 0.063  13.45
                    0.071 0.063
58) T   2CLEVE              0.165 0.160 0.170 0.171 0.165 0.161 0.159   9.06
                    0.149 0.127
59) PT  c13dicloproe    0.323 0.356 0.343 0.369 0.378 0.380 0.384 0.361   5.54
                    0.367 0.349
60) PT  4Meth2Pentan    0.227 0.262 0.256 0.255 0.242 0.215 0.197 0.228  14.34
                    0.169
61) S   SURRd8Tolule    0.972 0.982 0.972 0.978 0.985 0.992 0.980 0.980   0.68
                    0.974 0.985
62) PT  Toluene         0.599 0.708 0.677 0.662 0.664 0.645 0.614 0.629   9.55
                    0.581 0.509
63) PT  t13Dicloprop    0.233 0.270 0.294 0.284 0.312 0.331 0.335 0.300  11.07
                    0.325 0.317
64) T   ethylmethacryla      0.277 0.279 0.310 0.321 0.337 0.336 0.307   8.20
                    0.315 0.280
65) PT  112Triclotha          0.230 0.204 0.194 0.190 0.195 0.193 0.197   7.34
                    0.189 0.183
66) PT  Tetrachlorte    0.213 0.242 0.276 0.266 0.275 0.276 0.273 0.259   8.20
                    0.263 0.250
67) T   13Diclorpropa   0.379 0.424 0.426 0.398 0.394 0.395 0.391 0.392   6.05
                    0.374 0.350

68) I   d5-CHLOROBENZENE**IST ----------------ISTD---------------------
69) PT  2Hexanone             0.236 0.242 0.249 0.242 0.220 0.209 0.226  10.42
                    0.183
70) PT  Clorodibrmta    0.263 0.268 0.281 0.295 0.287 0.304 0.313 0.291   5.97
                    0.304 0.303
71) PT  12Dibrometha    0.262 0.281 0.285 0.287 0.297 0.298 0.302 0.287   4.18
                    0.293 0.283
72) PT  Chlorobenzen    0.927 0.970 0.963 0.918 0.930 0.885 0.851 0.882   9.95
                    0.797 0.699
73) T   1Clhexane        0.365 0.397 0.437 0.437 0.452 0.464 0.457 0.430   7.58
                    0.450 0.413
74) T   1112Tetclota           0.234 0.264 0.250 0.267 0.277 0.283 0.267   6.60
                    0.284 0.280
75) PT  Ethylbenzene    1.380 1.554 1.565 1.564 1.557 1.464 1.377 1.416  13.02
                    1.273 1.012
76) PT  m p-Xylene      0.512 0.589 0.600 0.593 0.618 0.588 0.563 0.560   9.94
                    0.532 0.442
77) PT  o-Xylene        0.502 0.528 0.576 0.572 0.588 0.590 0.583 0.557   6.22
                    0.561 0.508
78) PT  Styrene         0.824 0.876 0.912 0.973 0.974 0.964 0.934 0.902   7.83
                    0.892 0.768
79) PT  Bromoform             0.174 0.171 0.167 0.182 0.197 0.206 0.189   9.41
                    0.204 0.213
80) PT  Isopropylben    1.122 1.247 1.400 1.459 1.453 1.402 1.336 1.295  12.35
                    1.242 0.989
81) T   cyclohexanone        0.016 0.016 0.018 0.017 0.019 0.020 0.018#  7.57
                    0.018 0.018

82) I   d4-1,4-DICHLOROBENZEN ----------------ISTD---------------------
83) S   SURR4BrFBenz    0.931 0.936 0.948 0.946 0.926 0.939 0.916 0.933   1.19
                    0.919 0.936
```

84)	T	Bromobenzene	0.666	0.739	0.726	0.683	0.668	0.671	0.639	0.668	6.82
			0.627	0.594							
85)	PT	1122Tetrclta	0.781	0.790	0.808	0.851	0.775	0.771	0.759	0.770	6.73
			0.726	0.665							
86)	T	123Triclproa		0.973	0.971	0.909	0.886	0.909	0.929	0.919	3.93
			0.901	0.876							
87)	T	14dichloro2bute		0.184	0.174	0.197	0.201	0.213	0.220	0.204	9.20
			0.221	0.225							
88)	T	n-Propylbenz	2.534	3.110	3.400	3.255	3.131	2.982	2.683	2.947	11.59
			2.483								
89)	T	2chlorotolue	1.731	2.017	2.052	1.994	1.902	1.856	1.742	1.811	12.01
			1.633	1.374							
90)	T	4chlorotolue	1.929	2.202	2.290	2.275	2.221	2.151	2.002	2.057	11.60
			1.881	1.561							
91)	T	135Trimebenz	1.889	2.122	2.251	2.268	2.234	2.184	2.017	2.047	11.39
			1.893	1.562							
92)	T	tbutylbenzen	1.353	1.694	1.910	1.926	1.937	1.890	1.764	1.727	12.87
			1.671	1.402							
93)	T	124Trimetben	1.676	2.026	2.196	2.219	2.191	2.133	1.987	1.981	12.30
			1.864	1.539							
94)	T	sbutylbenzen	1.794	2.267	2.786	2.755	2.755	2.667	2.437	2.465	14.08
			2.262								
95)	PT	13Diclorbenz	1.259	1.276	1.352	1.294	1.253	1.229	1.178	1.219	8.58
			1.133	0.998							
96)	T	pIsopropylto	1.673	2.034	2.336	2.346	2.336	2.282	2.124	2.080	13.73
			1.989	1.599							
97)	PT	14dichlorobe	1.331	1.452	1.390	1.348	1.295	1.261	1.203	1.273	10.22
			1.154	1.026							
98)	PT	12dichlorobe	1.235	1.292	1.271	1.235	1.204	1.160	1.113	1.169	9.40
			1.061	0.953							
99)	T	nButylbenzen	1.624	1.805	2.145	2.124	2.123	2.053	1.908	1.897	12.59
			1.814	1.476							
100)	PT	12dibromo3cl		0.126	0.088	0.118	0.119	0.128	0.136	0.124	13.42
			0.137	0.139							
101)	T	135Trichloroben	0.664	0.799	0.779	0.757	0.773	0.780	0.752	0.746	6.44
			0.738	0.670							
102)	PT	124Trichlobe	0.484	0.561	0.631	0.606	0.620	0.656	0.646	0.604	8.91
			0.639	0.588							
103)	T	Hexachlorobu	0.220	0.265	0.294	0.300	0.304	0.304	0.294	0.283	9.43
			0.291	0.278							
104)	T	Naphthalene	0.645	0.926	1.074	1.329	1.476	1.579	1.597	-----	
			1.525	1.293							
								Q	A= -0.121	R=1.000	
									B= 1.799		
									C= -0.073		
105)	T	123Trichlben	0.417	0.504	0.505	0.566	0.591	0.611	0.602	0.549	11.54
			0.593	0.549							

Total Average %RSD 8.27

L = Linear LO = Linear+Origin Q = Quad QO = Quad+Origin R = Corr. Coef
(#) = Out of Range

W071421.M Thu Jul 15 11:45:39 2021

BFB

Data File : C:\Instarch\Data\JUL1421\BFB1.D Vial: 1
Acq On : 14 Jul 2021 10:39 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W071421.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.675 to 4.693 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.5	15000	PASS
75	95	30	60	53.2	35418	PASS
95	95	100	100	100.0	66628	PASS
96	95	5	9	6.2	4141	PASS
173	174	0.00	2	0.3	148	PASS
174	95	50	100	83.9	55906	PASS
175	174	5	9	7.7	4287	PASS
176	174	95	101	95.3	53294	PASS
177	176	5	9	5.9	3156	PASS

W071421.M Thu Jul 15 10:32:24 2021

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL1.D Vial: 4
Acq On : 14 Jul 2021 11:52 Operator: DGS-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:09:23 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1433918	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1085810	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	563305	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	358153	19.606	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98 %			
45) SURR12DCAd4	7.28	102	102025	20.406	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102 %			
61) SURRd8Tolule	9.72	98	1393846	18.788	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 94 %			
83) SURR4BrFBenz	13.26	95	524507	20.788	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 104 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	4772	0.2811	ug/L #	41
3) Chloromethan	2.09	50	12788	0.6752	ug/L	99
4) VinylChlorid	2.25	62	9718	0.4111	ug/L	75
5) Bromomethane	2.70	94	9359	0.5773	ug/L	94
6) Chloroethane	2.88	64	13746	0.7607	ug/L	91
7) Dichloroflmethane	3.20	67	11539	0.3827	ug/L #	88
8) Trichlorofma	3.27	101	7419m	0.3092	ug/L	89
9) Ethylether	3.71	59	7351	0.5195	ug/L #	83
10) dichlorotfluoroethan	3.73	67	6786	0.3729	ug/L #	65
11) propyleneoxide	3.77	58	20185	5.6431	ug/L	87
12) Acrolein	3.85	56	3373	3.5750	ug/L	92
13) 11dichlorthe	3.99	96	5580	0.3608	ug/L	91
14) Trichlorotfluoroeth	4.04	101	8202	0.5970	ug/L	90
15) Acetone	4.07	43	31311m	3.5401	ug/L	96
16) Iodomethane	4.18	142	13769	0.7174	ug/L #	89
17) Carbon Dislf	4.27	76	38955	0.9731	ug/L	98
18) allylchloride	4.49	41	24267	1.1637	ug/L	89
19) methylacetate	4.55	74	2830	0.5980	ug/L #	42
20) Methylchlorid	4.64	84	15632m	0.5756	ug/L #	84
21) tbutylalcohol	4.85	59	37532	23.7074	ug/L	82
22) Acrylonitrile	4.95	53	17629	2.9325	ug/L	96
23) t12dichlorte	5.02	96	7763	0.4432	ug/L	84
24) MtBE	5.06	73	21890	0.4778	ug/L	83
25) Hexane	5.40	57	11015	1.4535	ug/L #	81
26) 11dichlorota	5.54	63	14262	0.4692	ug/L #	88
27) Vinylacetate	5.64	43	158456	5.8675	ug/L	91
28) chloroprene	5.67	53	21441	0.9180	ug/L	89
29) Diisopether	5.70	45	26476	0.5893	ug/L	87
30) ETBE	6.15	59	20125	0.4656	ug/L	94
31) 22dichloropr	6.29	77	7706	0.3630	ug/L #	77
32) c12dichlorte	6.28	96	9029	0.4576	ug/L	93
33) 2Butanone	6.30	72	10250	4.1062	ug/L	94
34) propionitrile	6.34	54	15985	6.0674	ug/L	95
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	6.54	67	8519	0.9867	ug/L	95
37) Bromochlorma	6.56	128	4219	0.4568	ug/L #	68
38) Tetrahydofur	6.66	42	34130	3.3879	ug/L	87

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL1.D Vial: 4
Acq On : 14 Jul 2021 11:52 Operator: DGS-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:09:23 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.68	83	15597	0.4965	ug/L		91
40)	111trichlota	6.92	97	10252	0.4260	ug/L		95
42)	Cyclohexane	7.02	56	7200	0.7481	ug/L		92
43)	Carbtetraclo	7.13	119	5737	0.3022	ug/L	#	43
44)	11dicloprope	7.13	110	3112	0.3572	ug/L		94
46)	Benzene	7.37	78	35775	0.4973	ug/L		94
47)	12dichlorota	7.36	62	13439	0.5634	ug/L	#	89
48)	TAME	7.53	73	18758	0.4174	ug/L	#	78
49)	trichloroete	8.18	95	8249	0.4569	ug/L		89
50)	methylcyclohexane	8.43	83	8004	0.7318	ug/L		88
51)	12dicloropra	8.43	63	8215	0.4335	ug/L	#	98
52)	23Dicl1propene	8.50	75	13325	0.4936	ug/L		99
53)	Dibromometha	8.57	93	5855	0.5217	ug/L		99
54)	methylmethacrylate	8.59	69	5631	0.4216	ug/L	#	45
55)	14dioxane	8.62	88	8001	31.4369	ug/L	#	80
56)	Bromodiclrma	8.77	83	11018	0.4824	ug/L	#	92
57)	2Nitropropane	9.05	43	18477	4.9616	ug/L		95
58)	2CLEVE	9.16	63	27017	2.3641	ug/L		97
59)	c13dicloproe	9.35	75	11594	0.4338	ug/L		93
60)	4Meth2Pentan	9.55	43	81538	5.9217	ug/L		88
62)	Toluene	9.80	92	21489	0.4661	ug/L		90
63)	t13Dicloprop	10.06	75	8361	0.3642	ug/L		80
64)	ethylmethacrylate	10.21	69	19341	0.8510	ug/L		89
65)	112Triclotha	10.30	83	7638	0.5436	ug/L		95
66)	Tetrachlorte	10.54	166	7632	0.4039	ug/L		93
67)	13Diclorpropa	10.52	76	13590	0.4647	ug/L		86
69)	2Hexanone	10.65	43	56932	5.7815	ug/L		86
70)	Clorodibrmta	10.83	129	7131	0.4375	ug/L	#	85
71)	12Dibrometha	10.97	107	7116	0.4492	ug/L		100
72)	Chlorobenzen	11.66	112	25169	0.5051	ug/L	#	57
73)	1Clhexane	11.65	91	9899	0.4299	ug/L	#	1
74)	1112Tetclota	11.77	131	6654	0.4488	ug/L		88
75)	Ethylbenzene	11.82	91	37462	0.4821	ug/L		89
76)	m p-Xylene	11.99	106	27804	0.8997	ug/L		93
77)	o-Xylene	12.53	106	13639	0.4414	ug/L		88
78)	Styrene	12.55	104	22372	0.4422	ug/L		94
79)	Bromoform	12.77	173	4303	0.4254	ug/L	#	28
80)	Isopropylben	13.06	105	30460	0.4135	ug/L		98
81)	cyclohexanone	13.15	55	8362	10.1276	ug/L	#	70
84)	Bromobenzene	13.48	156	9375	0.5169	ug/L		95
85)	1122Tetrclta	13.44	83	10995	0.5116	ug/L		91
86)	123Triclproa	13.51	75	11924	0.4783	ug/L		94
87)	14dichloro2butene	0.00	53	0	N.D.			
88)	n-Propylbenz	13.65	91	35688	0.4463	ug/L		98
89)	2chlorotolue	13.76	91	24370	0.4815	ug/L		99
90)	4chlorotolue	13.91	91	27164	0.4669	ug/L		98
91)	135Trimebenz	13.90	105	26599	0.4597	ug/L		97
92)	tbutylbenzen	14.37	119	19051	0.3875	ug/L		96
93)	124Trimetben	14.45	105	23605	0.4151	ug/L		99
94)	sbutylbenzen	14.69	105	25268	0.3662	ug/L		99
95)	13Diclorbenz	14.83	146	17732	0.5206	ug/L		98
96)	pIsopropylto	14.91	119	23562	0.3932	ug/L	#	92
97)	14dichlorobe	14.96	146	18746	0.5308	ug/L	#	62
98)	12dichlorobe	15.50	146	17393	0.5386	ug/L	#	67
99)	nButylbenzen	15.50	91	22868	0.4219	ug/L		95
100)	12dibromo3cl	0.00	157	0	N.D.			
101)	135Trichlorobenzene	16.91	180	9347	0.4530	ug/L	#	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL1.D Vial: 4
Acq On : 14 Jul 2021 11:52 Operator: DGS-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:09:23 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
102)	124Trichlobe	17.73	180	6820	0.3776	ug/L		81
103)	Hexachlorobu	17.97	225	3104	0.4183	ug/L	#	17
104)	Naphthalene	18.03	128	9079	0.2117	ug/L	#	74
105)	123Trichlben	18.34	180	5867	0.3537	ug/L		89

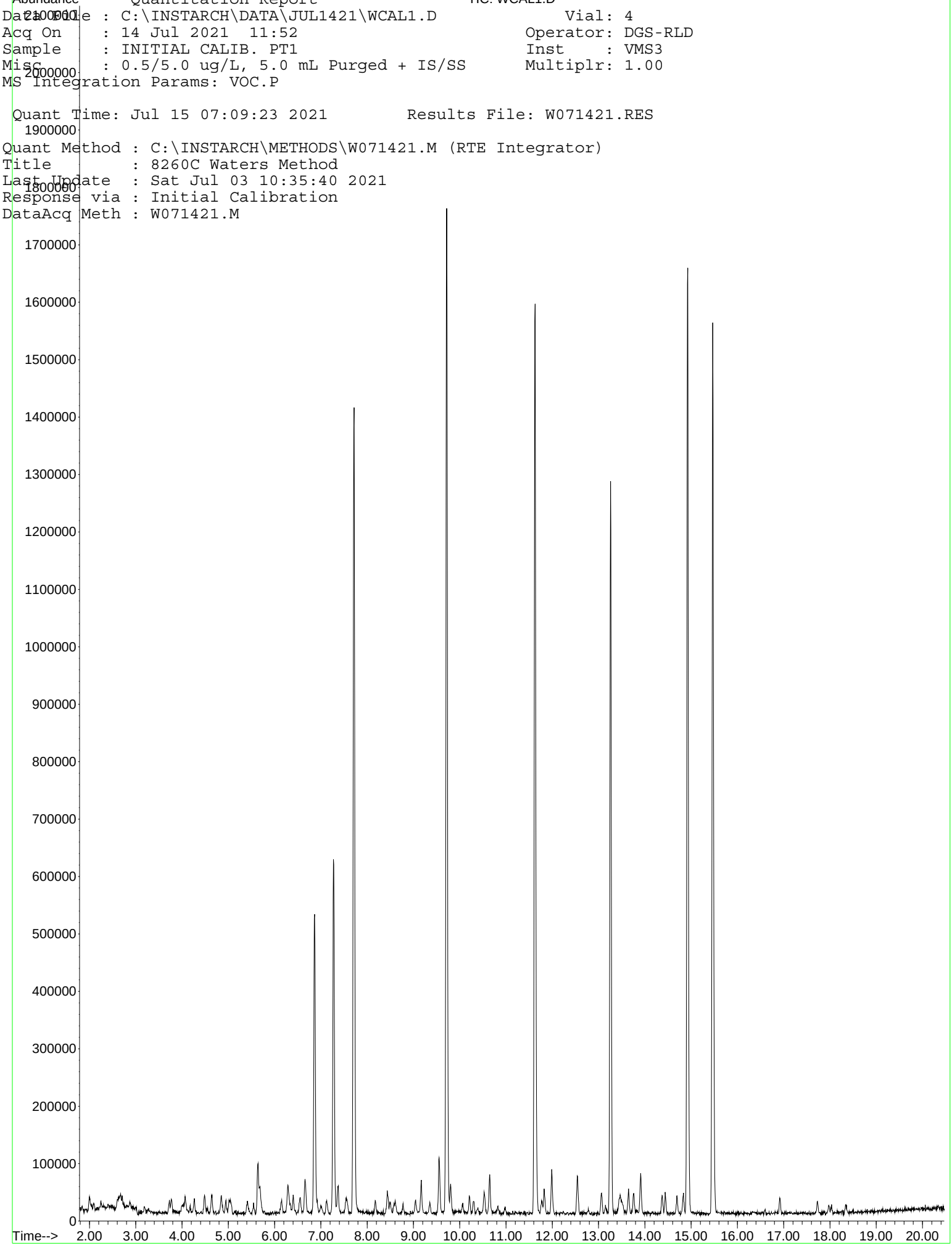
(#) = qualifier out of range (m) = manual integration

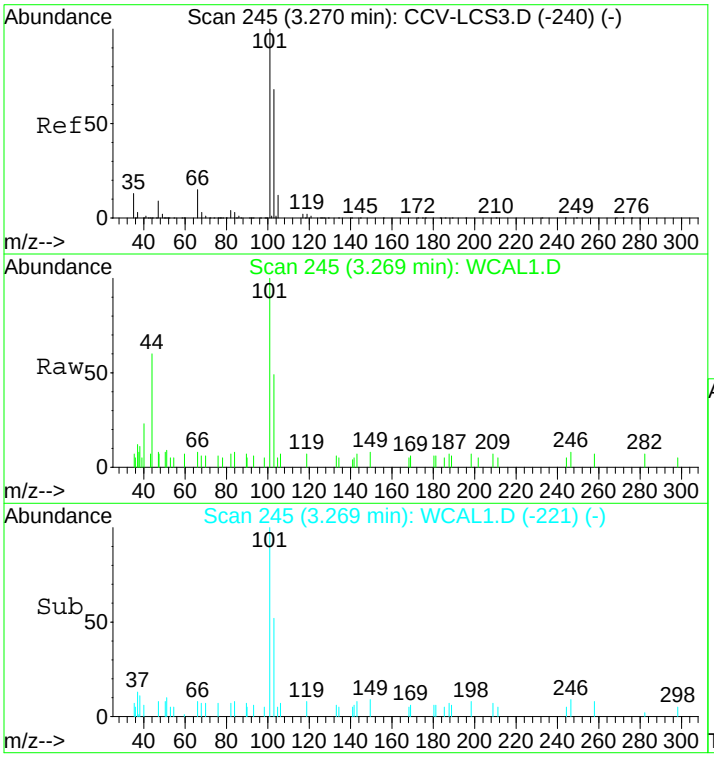
Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL1.D Vial: 4
Acq On : 14 Jul 2021 11:52 Operator: DGS-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
MiscC : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:09:23 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

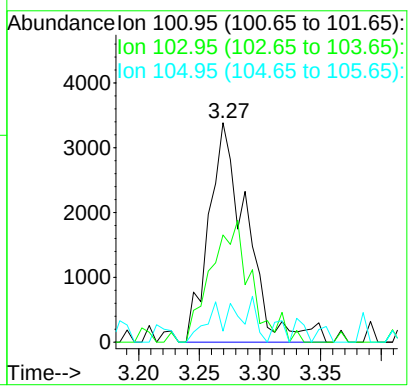




#8
Trichlorofma
Concen: 0.31 ug/L m
RT: 3.27 min Scan# 245
Delta R.T. -0.01 min
Lab File: WCAL1.D
Acq: 14 Jul 2021 11:52

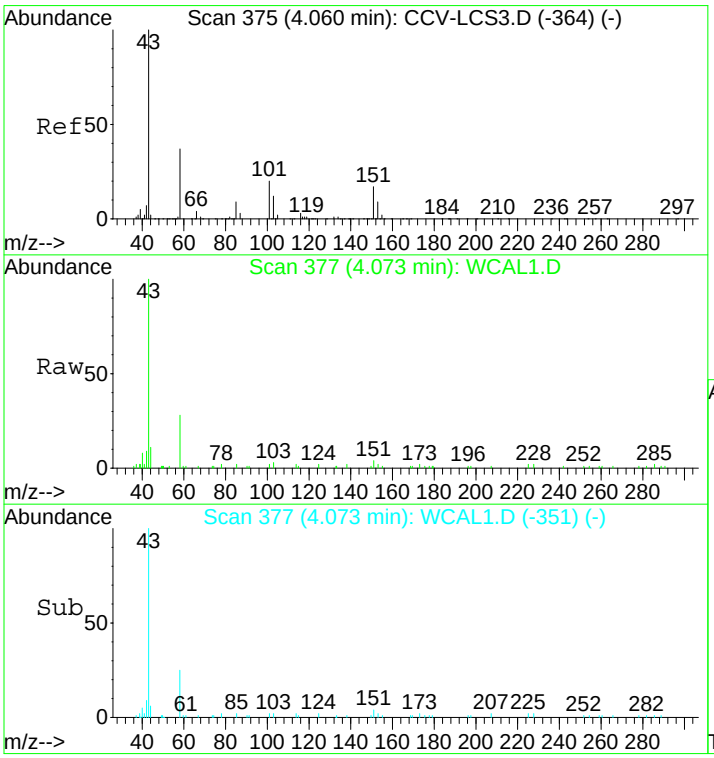
Tgt Ion:101 Resp: 7419

Ion	Ratio	Lower	Upper
101	100		
103	58.9	45.4	85.4
105	0.0	0.0	30.9



After Manual Integration

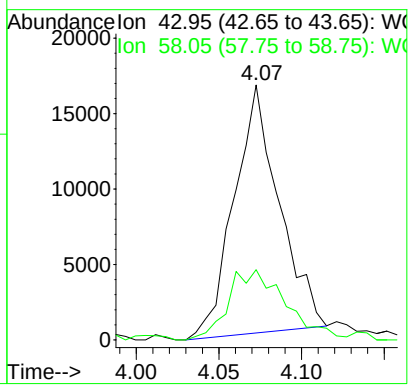
DGS 07/15/2021



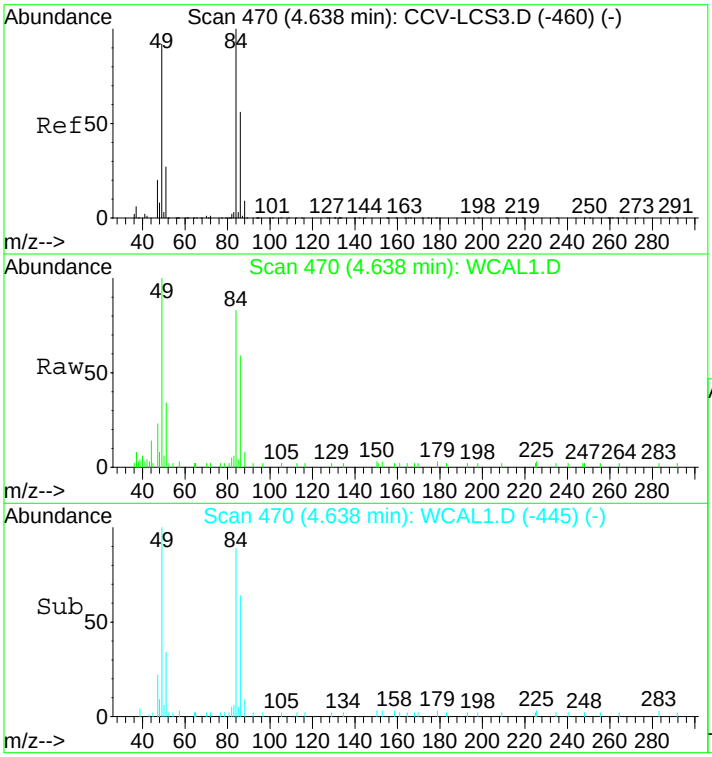
#15
Acetone
Concen: 3.54 ug/L m
RT: 4.07 min Scan# 377
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 14 Jul 2021 11:52

Tgt Ion: 43 Resp: 31311

Ion	Ratio	Lower	Upper
43	100		
58	35.9	14.2	54.2



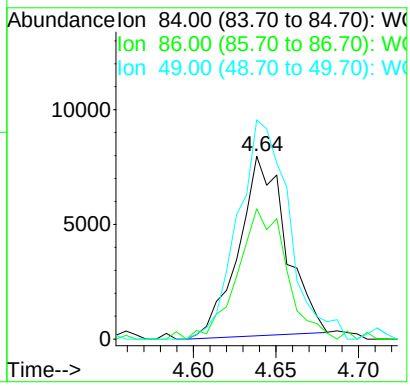
RJ 07/22/2021



#20
Methylchlorid
Concen: 0.58 ug/L m
RT: 4.64 min Scan# 470
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 14 Jul 2021 11:52

Tgt Ion: 84 Resp: 15632

Ion	Ratio	Lower	Upper
84	100		
86	74.9	47.1	87.1
49	131.3	79.3	119.3#



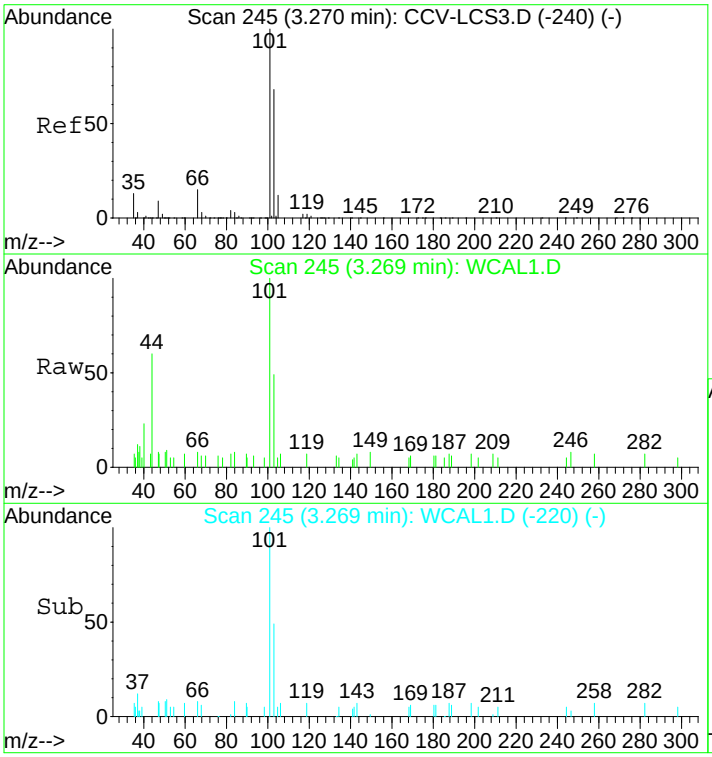
After Manual Integration

DGS 07/15/2021

RJ 07/22/2021

Before Manual Integration

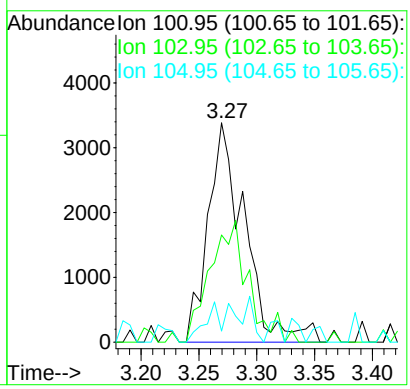
DGS 07/15/2021



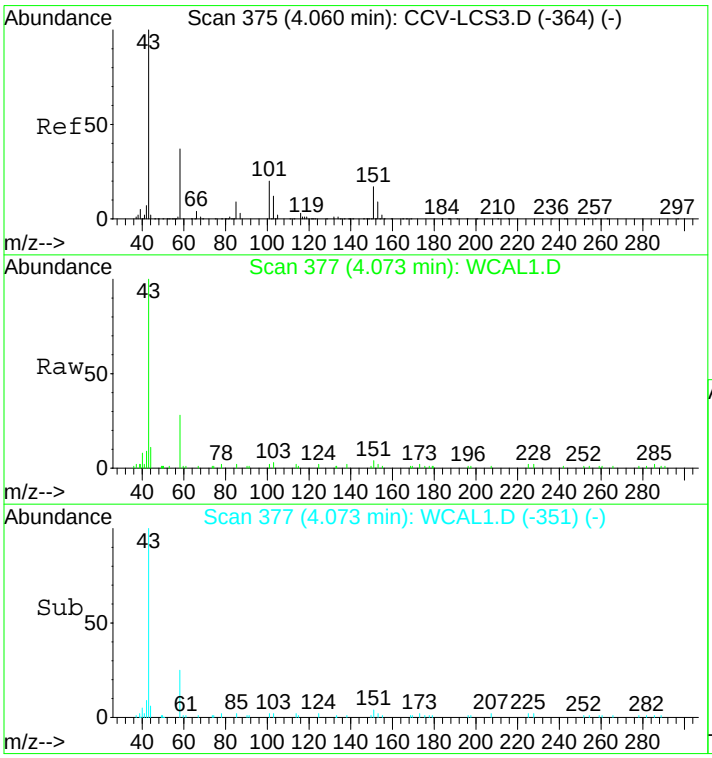
#8
Trichlorofma
Concen: 0.28 ug/L
RT: 3.27 min Scan# 245
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 14 Jul 2021 11:52

Tgt Ion:101 Resp: 7419

Ion	Ratio	Lower	Upper
101	100		
103	58.9	42.3	82.3
105	0.0	0.0	30.0



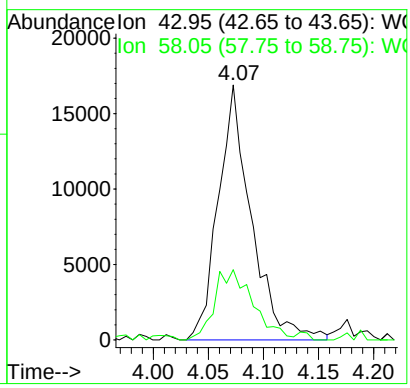
REASON # 2



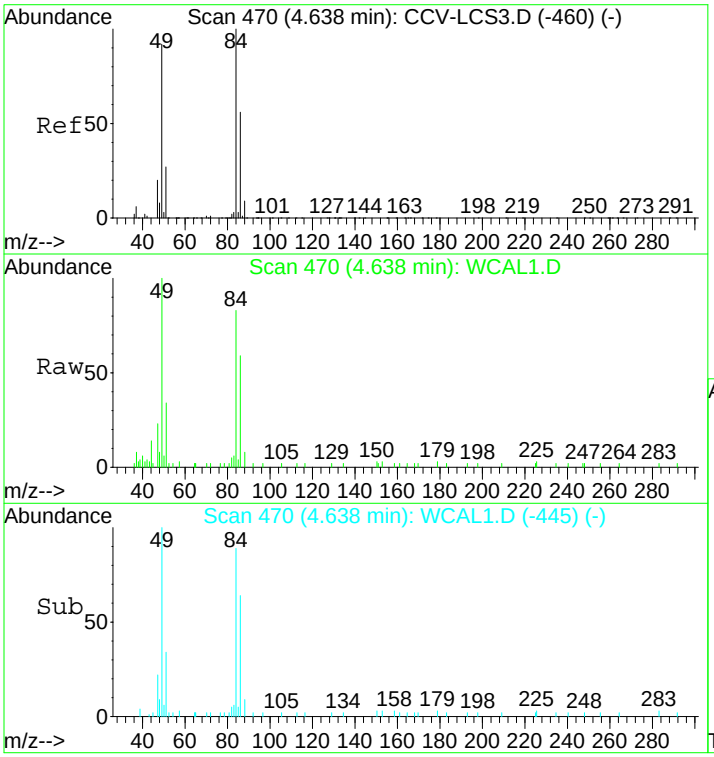
#15
Acetone
Concen: 6.40 ug/L
RT: 4.07 min Scan# 377
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 14 Jul 2021 11:52

Tgt Ion: 43 Resp: 35410

Ion	Ratio	Lower	Upper
43	100		
58	31.8	11.9	51.9



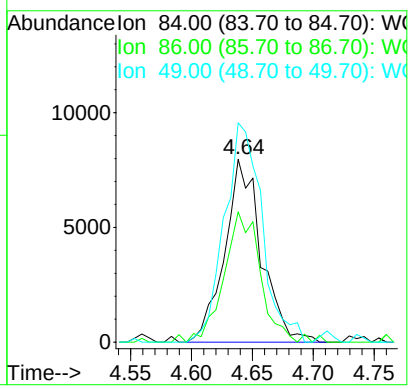
REASON # 2



#20
Methylchlorid
Concen: 0.43 ug/L
RT: 4.64 min Scan# 470
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 14 Jul 2021 11:52

Tgt Ion: 84 Resp: 16697

Ion	Ratio	Lower	Upper
84	100		
86	70.2	45.2	85.2
49	122.9	109.4	149.4



Before Manual Integration

DGS 07/15/2021

REASON # 2

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL2.D Vial: 5
Acq On : 14 Jul 2021 12:22 Operator: DGS-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:11:44 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1436158	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1093381	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	567379	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	369710	20.207	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.28	102	105470	21.062	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 105	%		
61) SURRd8Tolule	9.72	98	1410303	18.980	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 95	%		
83) SURR4BrFBenz	13.26	95	530886	20.890	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 104	%		
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	14141	0.8316	ug/L	93
3) Chloromethan	2.10	50	26657	1.4054	ug/L	100
4) VinylChlorid	2.25	62	24779	1.0466	ug/L	94
5) Bromomethane	2.71	94	16720m	1.0298	ug/L	92
6) Chloroethane	2.89	64	17787m	0.9828	ug/L	96
7) Dichloroflmethane	3.19	67	26119	0.8649	ug/L	97
8) Trichlorofma	3.27	101	19871	0.8268	ug/L #	90
9) Ethylether	3.71	59	12798	0.9030	ug/L #	81
10) dichlorotfluoroethan	3.73	67	16694	0.9160	ug/L	93
11) propyleneoxide	3.77	58	40902	11.4172	ug/L	88
12) Acrolein	3.85	56	6679	7.0679	ug/L	96
13) 11dichlorthe	3.99	96	13367	0.8630	ug/L	91
14) Trichlorotfluoroeth	4.04	101	20786	1.5106	ug/L	97
15) Acetone	4.07	43	66581	10.7684	ug/L	93
16) Iodomethane	4.18	142	32957	1.7144	ug/L	97
17) Carbon Dislf	4.27	76	84511	2.1078	ug/L	100
18) allylchloride	4.49	41	54491	2.6089	ug/L	88
19) methylacetate	4.53	74	5792	1.2219	ug/L #	42
20) Methylchlorid	4.64	84	25915m	1.1122	ug/L #	79
21) tbutylalcohol	4.85	59	79177	49.9348	ug/L	81
22) Acrylonitrile	4.94	53	36312	6.0309	ug/L	95
23) t12dichlorte	5.02	96	15534	0.8854	ug/L #	82
24) MtBE	5.05	73	45821	0.9985	ug/L	92
25) Hexane	5.42	57	33575	2.2942	ug/L	95
26) 11dichlorota	5.54	63	33082	1.0867	ug/L	97
27) Vinylacetate	5.64	43	352573	13.0351	ug/L	89
28) chloroprene	5.68	53	51984	2.2223	ug/L	87
29) Diisopether	5.70	45	57225	1.2718	ug/L	87
30) ETBE	6.15	59	43347	1.0014	ug/L	92
31) 22dichloropr	6.28	77	18710	0.8800	ug/L	97
32) c12dichlorte	6.27	96	20947	1.0600	ug/L	97
33) 2Butanone	6.30	72	26415	10.5654	ug/L	99
34) propionitrile	6.34	54	31835	12.0647	ug/L	91
35) Ethylacetate	6.40	88	4206	4.9998	ug/L #	83
36) methacrylonitrile	6.54	67	16907	1.9552	ug/L #	65
37) Bromochlorma	6.57	128	9122	0.9860	ug/L #	78
38) Tetrahydofur	6.65	42	71019	10.6269	ug/L	81

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL2.D Vial: 5
Acq On : 14 Jul 2021 12:22 Operator: DGS-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:11:44 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.68	83	34105	1.0840	ug/L		100
40)	111trichlota	6.91	97	21002	0.8712	ug/L		95
42)	Cyclohexane	7.00	56	20117	1.2028	ug/L		90
43)	Carbtetraclo	7.13	119	15038	0.7910	ug/L		98
44)	11dicloprope	7.12	110	7870	0.9020	ug/L		97
46)	Benzene	7.37	78	77467	1.0752	ug/L		95
47)	12dichlorota	7.37	62	26833	1.1231	ug/L	#	89
48)	TAME	7.55	73	41902	0.9308	ug/L		85
49)	trichloroete	8.18	95	18696	1.0338	ug/L		93
50)	methylcyclohexane	8.45	83	20768	1.0650	ug/L	#	84
51)	12dicloropra	8.43	63	20025	1.0551	ug/L		94
52)	23Dicl1propene	8.50	75	26487	0.9796	ug/L		92
53)	Dibromometha	8.57	93	12246	1.0894	ug/L		96
54)	methylmethacrylate	8.60	69	11714	0.8757	ug/L		96
55)	14dioxane	8.62	88	14462	56.7343	ug/L		88
56)	Bromodiclrma	8.78	83	22839	0.9985	ug/L		94
57)	2Nitropropane	9.04	43	38436	10.3051	ug/L		94
58)	2CLEVE	9.16	63	59262	5.1776	ug/L		100
59)	c13dicloproe	9.35	75	25576	0.9555	ug/L		99
60)	4Meth2Pentan	9.55	43	188233	13.6491	ug/L		85
62)	Toluene	9.80	92	50811	1.1005	ug/L		99
63)	t13Dicloprop	10.06	75	19416	0.8445	ug/L		99
64)	ethylmethacrylate	10.21	69	39714	1.7448	ug/L		89
65)	112Triclotha	10.30	83	16509	1.1731	ug/L		88
66)	Tetrachlorte	10.53	166	17346	0.9165	ug/L		96
67)	13Diclorpropa	10.52	76	30417	1.0384	ug/L		98
69)	2Hexanone	10.64	43	128811	12.9903	ug/L		88
70)	Clorodibrmta	10.82	129	14657	0.8930	ug/L		92
71)	12Dibrometha	10.98	107	15375	0.9639	ug/L		98
72)	Chlorobenzen	11.66	112	53018	1.0567	ug/L	#	75
73)	1Clhexane	11.65	91	21706	0.9362	ug/L	#	47
74)	1112Tetclota	11.77	131	12802	0.8575	ug/L		91
75)	Ethylbenzene	11.83	91	84934	1.0854	ug/L		97
76)	m p-Xylene	11.99	106	64450	2.0710	ug/L		97
77)	o-Xylene	12.54	106	28869	0.9278	ug/L		90
78)	Styrene	12.55	104	47904	0.9404	ug/L		94
79)	Bromoform	12.78	173	9507	0.9333	ug/L		98
80)	Isopropylben	13.06	105	68148	0.9188	ug/L		100
81)	cyclohexanone	13.15	55	17762	21.3633	ug/L	#	84
84)	Bromobenzene	13.47	156	20977	1.1482	ug/L		98
85)	1122Tetrclta	13.44	83	22400	1.0348	ug/L		91
86)	123Triclproa	13.50	75	27602	1.0992	ug/L		97
87)	14dichloro2butene	13.53	53	5215	1.0201	ug/L	#	26
88)	n-Propylbenz	13.65	91	88235	1.0956	ug/L		93
89)	2chlorotolue	13.76	91	57231	1.1226	ug/L		98
90)	4chlorotolue	13.91	91	62476	1.0661	ug/L		94
91)	135Trimebenz	13.90	105	60186	1.0327	ug/L		100
92)	tbutylbenzen	14.38	119	48045	0.9701	ug/L		98
93)	124Trimetben	14.44	105	57476	1.0034	ug/L		97
94)	sbutylbenzen	14.69	105	64317	0.9255	ug/L		98
95)	13Diclorbenz	14.83	146	36195	1.0550	ug/L		92
96)	pIsopropylto	14.91	119	57706	0.9560	ug/L	#	96
97)	14dichlorobe	14.96	146	41198	1.1581	ug/L		89
98)	12dichlorobe	15.50	146	36656	1.1270	ug/L		81
99)	nButylbenzen	15.50	91	51216	0.9382	ug/L		98
100)	12dibromo3cl	16.59	157	3572	0.9948	ug/L	#	10
101)	135Trichlorobenzene	16.92	180	22655	1.0901	ug/L		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL2.D Vial: 5
Acq On : 14 Jul 2021 12:22 Operator: DGS-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:11:44 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

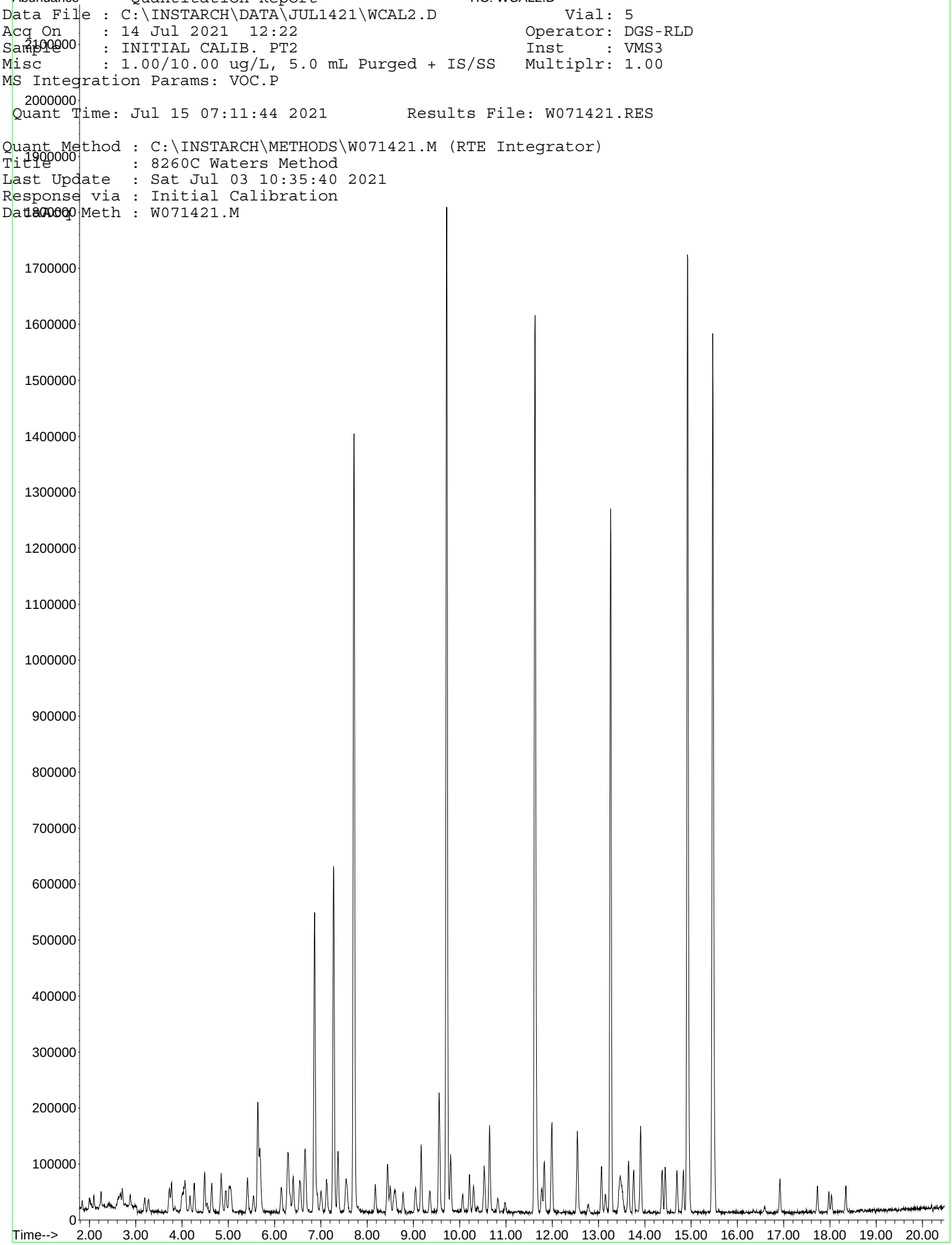
Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
102) 124Trichlobe	17.73	180	15929	0.8756	ug/L		94
103) Hexachlorobu	17.98	225	7514	1.0054	ug/L		93
104) Naphthalene	18.03	128	26272	0.6082	ug/L	#	92
105) 123Trichlben	18.34	180	14297	0.8558	ug/L		93

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\JUL1421\WCAL2.D Vial: 5
Acq On : 14 Jul 2021 12:22 Operator: DGS-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

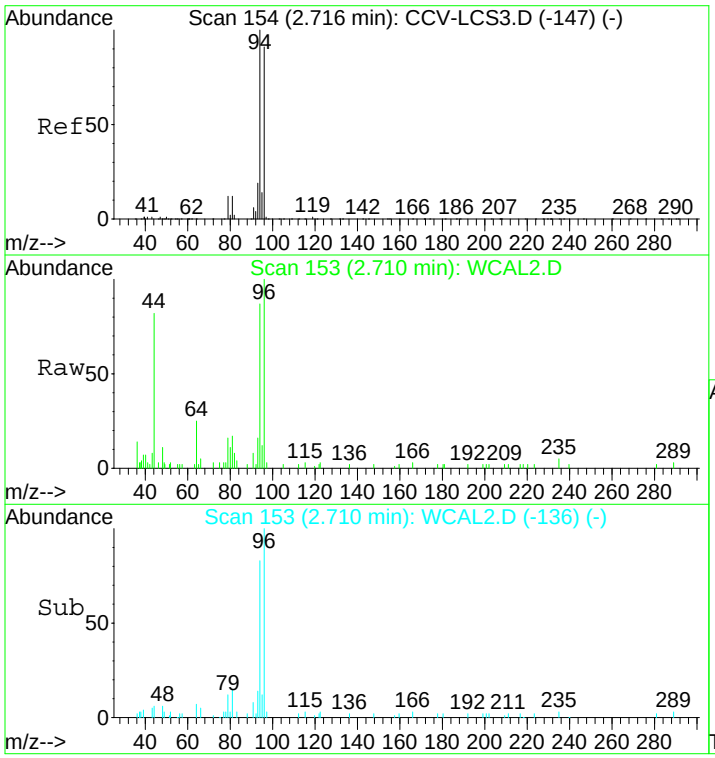
Quant Time: Jul 15 07:11:44 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



After Manual Integration

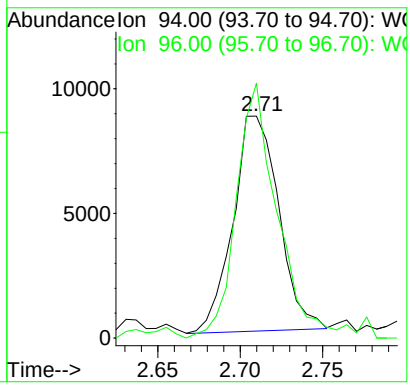
DGS 07/15/2021

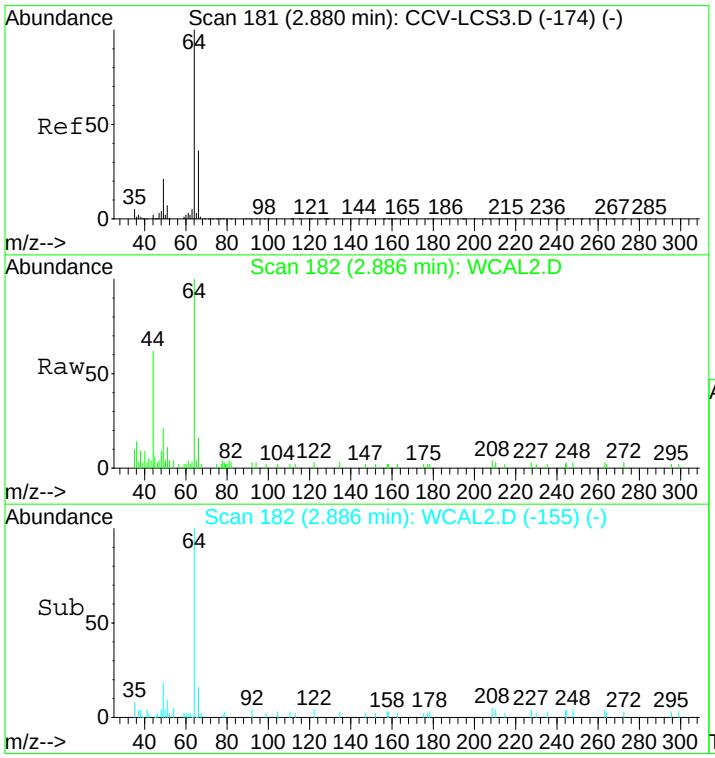


#5
Bromomethane
Concen: 1.03 ug/L m
RT: 2.71 min Scan# 153
Delta R.T. 0.00 min
Lab File: WCAL2.D
Acq: 14 Jul 2021 12:22

Tgt Ion: 94 Resp: 16720

Ion	Ratio	Lower	Upper
94	100		
96	108.1	74.7	114.7

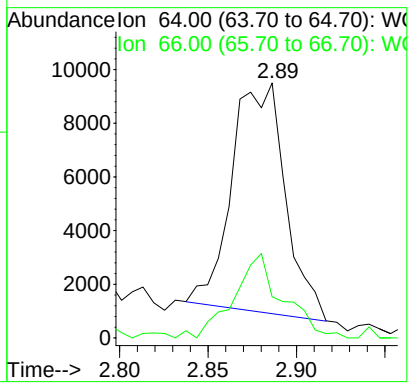




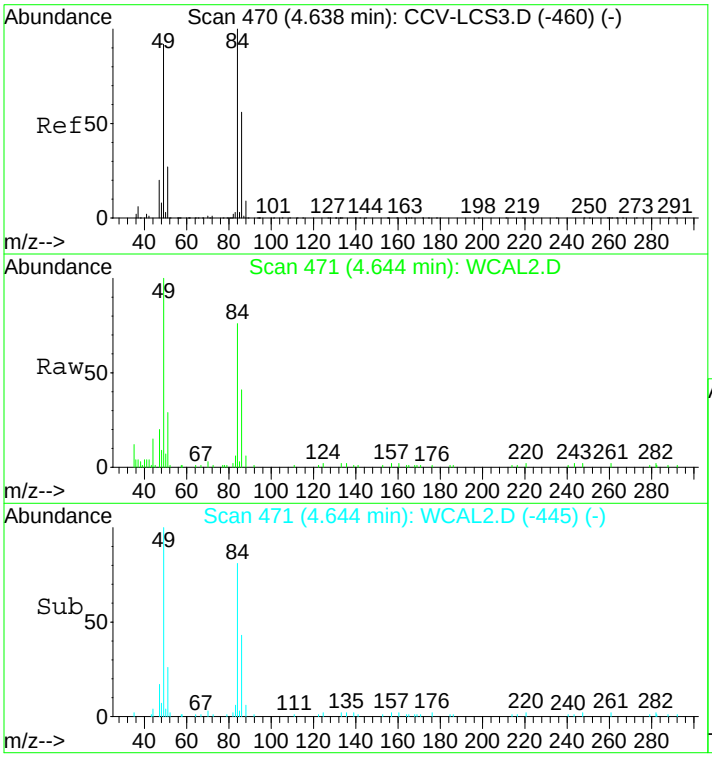
#6
Chloroethane
Concen: 0.98 ug/L m
RT: 2.89 min Scan# 182
Delta R.T. 0.01 min
Lab File: WCAL2.D
Acq: 14 Jul 2021 12:22

Tgt Ion: 64 Resp: 17787

Ion	Ratio	Lower	Upper
64	100		
66	34.0	9.3	49.3



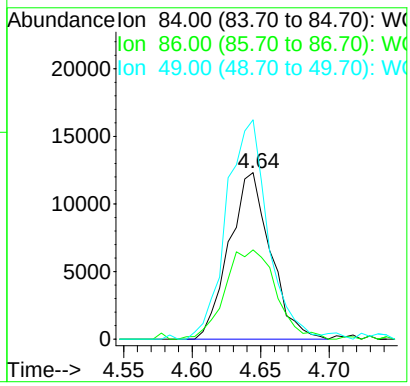
RJ 07/22/2021



#20
Methylchlorid
Concen: 1.11 ug/L m
RT: 4.64 min Scan# 471
Delta R.T. 0.01 min
Lab File: WCAL2.D
Acq: 14 Jul 2021 12:22

Tgt Ion: 84 Resp: 25915

Ion	Ratio	Lower	Upper
84	100		
86	65.9	47.1	87.1
49	133.3	79.3	119.3#



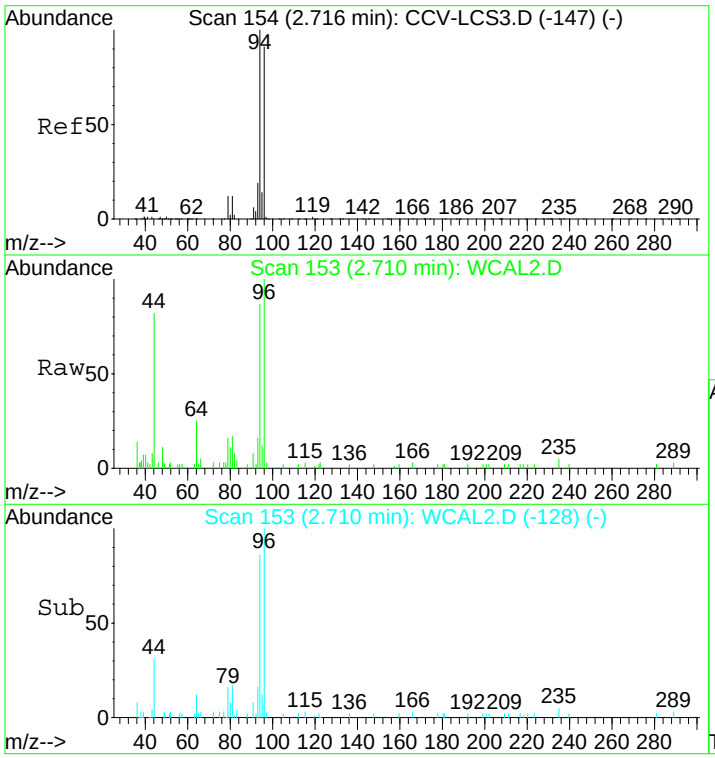
After Manual Integration

DGS 07/15/2021

RJ 07/22/2021

Before Manual Integration

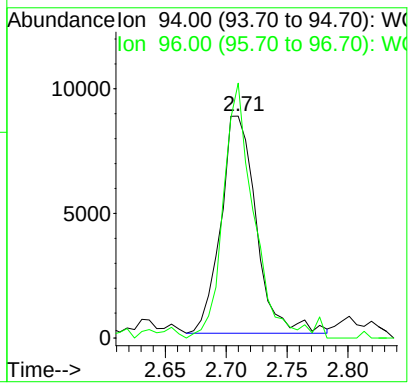
DGS 07/15/2021



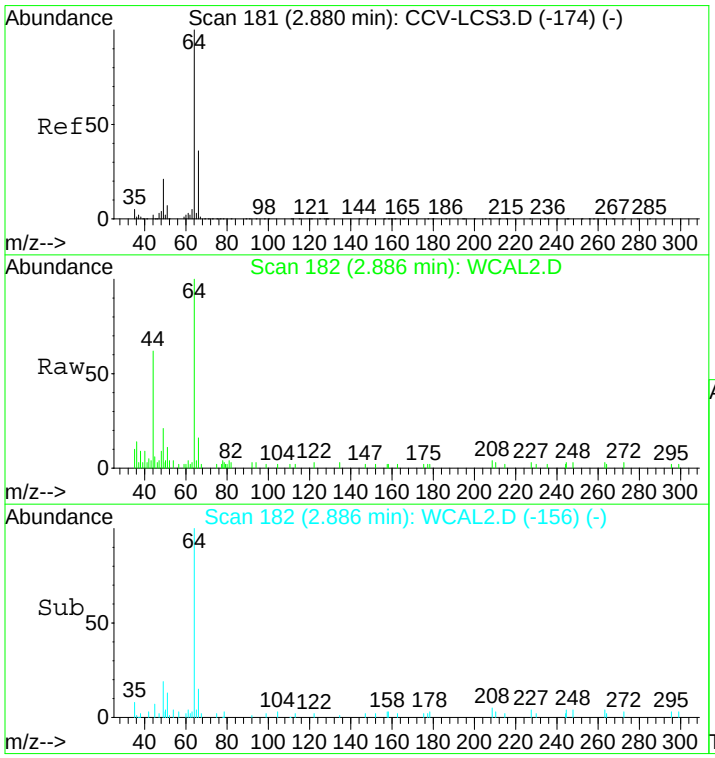
#5
Bromomethane
Concen: 1.24 ug/L
RT: 2.71 min Scan# 153
Delta R.T. 0.00 min
Lab File: WCAL2.D
Acq: 14 Jul 2021 12:22

Tgt Ion: 94 Resp: 17703

Ion	Ratio	Lower	Upper
94	100		
96	102.1	72.6	112.6



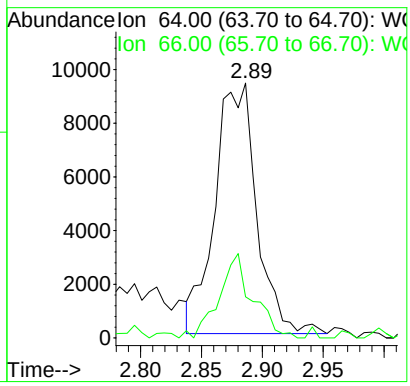
REASON # 2



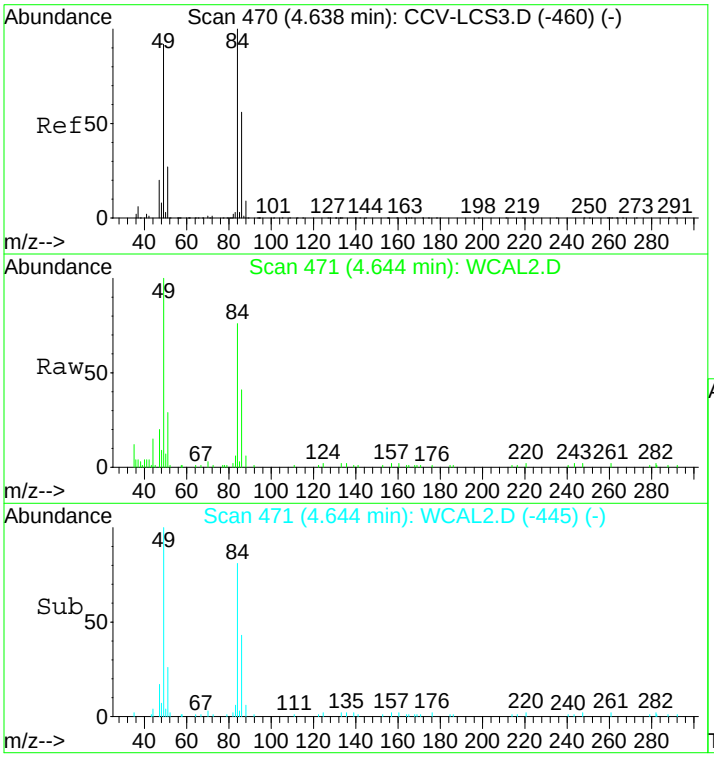
#6
Chloroethane
Concen: 1.36 ug/L
RT: 2.89 min Scan# 182
Delta R.T. 0.01 min
Lab File: WCAL2.D
Acq: 14 Jul 2021 12:22

Tgt Ion: 64 Resp: 22206

Ion	Ratio	Lower	Upper
64	100		
66	27.2	11.2	51.2



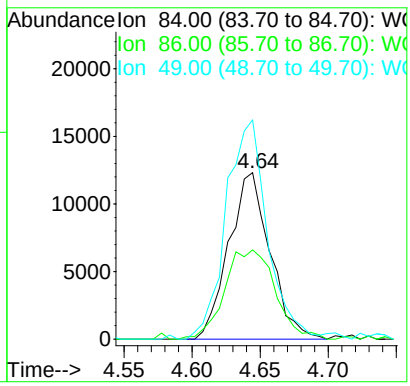
REASON # 2



#20
Methylchlorid
Concen: 0.94 ug/L
RT: 4.64 min Scan# 471
Delta R.T. 0.01 min
Lab File: WCAL2.D
Acq: 14 Jul 2021 12:22

Tgt Ion: 84 Resp: 25915

Ion	Ratio	Lower	Upper
84	100		
86	65.9	45.2	85.2
49	133.3	109.4	149.4



Before Manual Integration

DGS 07/15/2021

REASON # 2

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL3.D Vial: 6
Acq On : 14 Jul 2021 12:51 Operator: DGS-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:13:06 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1431638	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1095086	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	560888	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	363105	19.908	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.28	102	106656	21.366	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 107	%		
61) SURRd8Tolule	9.72	98	1392153	18.795	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 94	%		
83) SURR4BrFBenz	13.26	95	531920	21.173	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 106	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	36626	2.1607	ug/L	95
3) Chloromethan	2.09	50	49845	2.6362	ug/L	93
4) VinylChlorid	2.25	62	55588	2.3554	ug/L	97
5) Bromomethane	2.71	94	31187m	1.9269	ug/L	90
6) Chloroethane	2.88	64	36182m	2.0056	ug/L	99
7) Dichloroflmethane	3.19	67	51441	1.7087	ug/L	92
8) Trichlorofma	3.27	101	52441	2.1890	ug/L	96
9) Ethylether	3.71	59	30265	2.1422	ug/L	86
10) dichlorotfluoroethan	3.74	67	39481	2.1732	ug/L	98
11) propyleneoxide	3.77	58	82784	23.1809	ug/L	84
12) Acrolein	3.85	56	11995	12.7336	ug/L	96
13) 11dichlorthe	4.00	96	31954	2.0695	ug/L	98
14) Trichlorotfluoroeth	4.04	101	61514	4.4845	ug/L	97
15) Acetone	4.07	43	122847	22.4574	ug/L	98
16) Iodomethane	4.17	142	69001	3.6007	ug/L	99
17) Carbon Dislf	4.26	76	184256	4.6101	ug/L	99
18) allylchloride	4.49	41	107177	5.1476	ug/L	92
19) methylacetate	4.54	74	9399	1.9891	ug/L	90
20) Methylchlorid	4.64	84	44783	2.1087	ug/L #	79
21) tbutylalcohol	4.85	59	156764	99.1790	ug/L	80
22) Acrylonitrile	4.94	53	76441	12.7358	ug/L	97
23) t12dichlorte	5.02	96	35124	2.0083	ug/L	93
24) MtBE	5.05	73	91219	1.9940	ug/L	89
25) Hexane	5.41	57	98499	4.7367	ug/L	94
26) 11dichlorota	5.54	63	64969	2.1410	ug/L	97
27) Vinylacetate	5.64	43	659624	24.4641	ug/L	91
28) chloroprene	5.68	53	122285	5.2441	ug/L	87
29) Diisopether	5.70	45	119872	2.6726	ug/L	88
30) ETBE	6.15	59	93003	2.1553	ug/L	96
31) 22dichloropr	6.29	77	39142	1.8469	ug/L	99
32) c12dichlorte	6.28	96	39200	1.9900	ug/L	90
33) 2Butanone	6.30	72	47787	19.1741	ug/L	95
34) propionitrile	6.34	54	62508	23.7639	ug/L	96
35) Ethylacetate	6.41	88	7698	9.1798	ug/L #	86
36) methacrylonitrile	6.54	67	34957	4.0553	ug/L #	79
37) Bromochlorma	6.56	128	17057	1.8496	ug/L #	67
38) Tetrahydofur	6.65	42	131422	22.6253	ug/L	83

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL3.D Vial: 6
Acq On : 14 Jul 2021 12:51 Operator: DGS-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:13:06 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.67	83	64594	2.0596	ug/L		100
40)	111trichlota	6.92	97	46845	1.9494	ug/L		97
42)	Cyclohexane	7.00	56	56038	2.4766	ug/L		89
43)	Carbtetraclo	7.13	119	36688	1.9359	ug/L		93
44)	11dicloprope	7.13	110	18057	2.0760	ug/L		94
46)	Benzene	7.37	78	160945	2.2408	ug/L		94
47)	12dichlorota	7.36	62	53682	2.2540	ug/L		98
48)	TAME	7.54	73	83581	1.8626	ug/L		86
49)	trichloroete	8.18	95	39098	2.1688	ug/L		93
50)	methylcyclohexane	8.44	83	67422	2.2921	ug/L		91
51)	12dicloropra	8.43	63	39455	2.0854	ug/L	#	89
52)	23Dicl1propene	8.50	75	52178	1.9359	ug/L		96
53)	Dibromometha	8.57	93	22904	2.0440	ug/L		94
54)	methylmethacrylate	8.60	69	23627	1.7719	ug/L		92
55)	14dioxane	8.62	88	25516	100.4150	ug/L		78
56)	Bromodiclrma	8.78	83	44096	1.9339	ug/L		99
57)	2Nitropropane	9.04	43	80205	21.5718	ug/L		96
58)	2CLEVE	9.16	63	114767	10.0587	ug/L		97
59)	c13dicloproe	9.35	75	49128	1.8411	ug/L		95
60)	4Meth2Pentan	9.55	43	367214	26.7115	ug/L		90
62)	Toluene	9.81	92	96944	2.1063	ug/L		91
63)	t13Dicloprop	10.06	75	42105	1.8372	ug/L		99
64)	ethylmethacrylate	10.21	69	79937	3.5230	ug/L		86
65)	112Triclotha	10.30	83	29269	2.0864	ug/L		96
66)	Tetrachlorte	10.53	166	39542	2.0957	ug/L		94
67)	13Diclorpropa	10.52	76	61033	2.0901	ug/L		98
69)	2Hexanone	10.64	43	264715	26.6543	ug/L		86
70)	Clorodibrmta	10.83	129	30747	1.8705	ug/L		95
71)	12Dibrometha	10.98	107	31184	1.9519	ug/L		97
72)	Chlorobenzen	11.66	112	105423	2.0979	ug/L		89
73)	1Clhexane	11.65	91	47895	2.0624	ug/L	#	72
74)	1112Tetclota	11.77	131	28963	1.9369	ug/L		98
75)	Ethylbenzene	11.82	91	171429	2.1873	ug/L		95
76)	m p-Xylene	11.99	106	131313	4.2131	ug/L		96
77)	o-Xylene	12.53	106	63070	2.0239	ug/L		97
78)	Styrene	12.55	104	99894	1.9579	ug/L		93
79)	Bromoform	12.78	173	18722	1.8350	ug/L		98
80)	Isopropylben	13.06	105	153291	2.0635	ug/L		99
81)	cyclohexanone	13.15	55	35284	42.3719	ug/L		85
84)	Bromobenzene	13.47	156	40707	2.2539	ug/L		97
85)	1122Tetrclta	13.44	83	45347	2.1190	ug/L		95
86)	123Triclproa	13.50	75	54440	2.1930	ug/L		99
87)	14dichloro2butene	13.53	53	9741	1.9275	ug/L		90
88)	n-Propylbenz	13.65	91	190695	2.3953	ug/L		95
89)	2chlorotolue	13.76	91	115079	2.2835	ug/L		98
90)	4chlorotolue	13.91	91	128437	2.2170	ug/L		99
91)	135Trimebenz	13.90	105	126256	2.1915	ug/L		100
92)	tbutylbenzen	14.37	119	107148	2.1886	ug/L		99
93)	124Trimetben	14.45	105	123177	2.1753	ug/L		94
94)	sbutylbenzen	14.69	105	156285	2.2749	ug/L		100
95)	13Diclorbenz	14.83	146	75836	2.2360	ug/L		98
96)	pIsopropylto	14.91	119	131040	2.1961	ug/L		97
97)	14dichlorobe	14.96	146	77957	2.2168	ug/L		90
98)	12dichlorobe	15.49	146	71271	2.2166	ug/L		87
99)	nButylbenzen	15.51	91	120317	2.2295	ug/L		97
100)	12dibromo3cl	16.59	157	4923	1.3870	ug/L	#	57
101)	135Trichlorobenzene	16.92	180	43682	2.1262	ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL3.D Vial: 6
Acq On : 14 Jul 2021 12:51 Operator: DGS-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:13:06 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	35410	1.9690	ug/L	94
103) Hexachlorobu	17.98	225	16463	2.2282	ug/L	97
104) Naphthalene	18.03	128	60216	1.4101	ug/L	96
105) 123Trichlben	18.34	180	28328	1.7154	ug/L	97

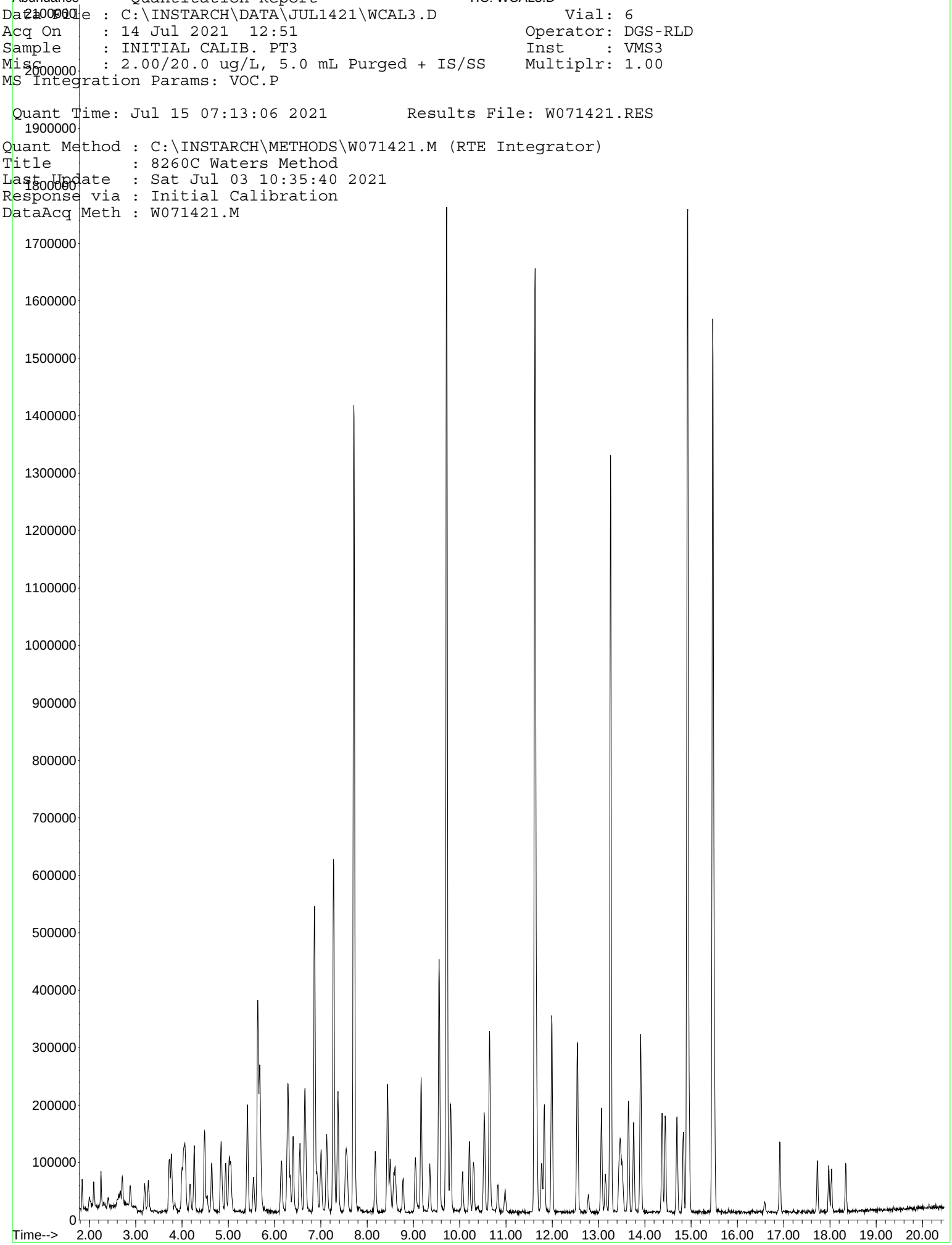
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL3.D

Data File : C:\INSTARCH\DATA\JUL1421\WCAL3.D Vial: 6
Acq On : 14 Jul 2021 12:51 Operator: DGS-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

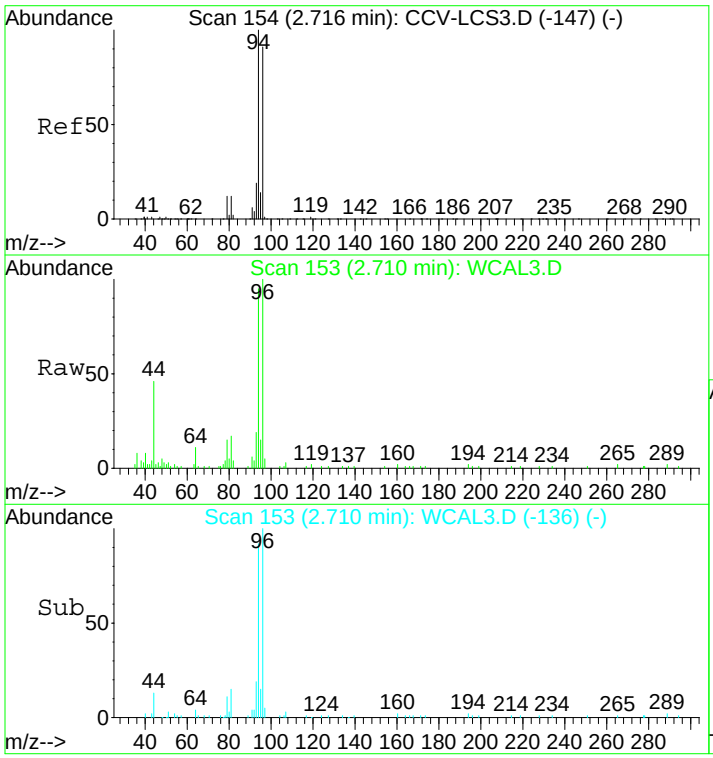
Quant Time: Jul 15 07:13:06 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



After Manual Integration

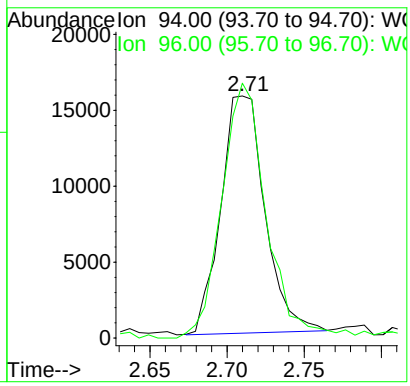
DGS 07/15/2021

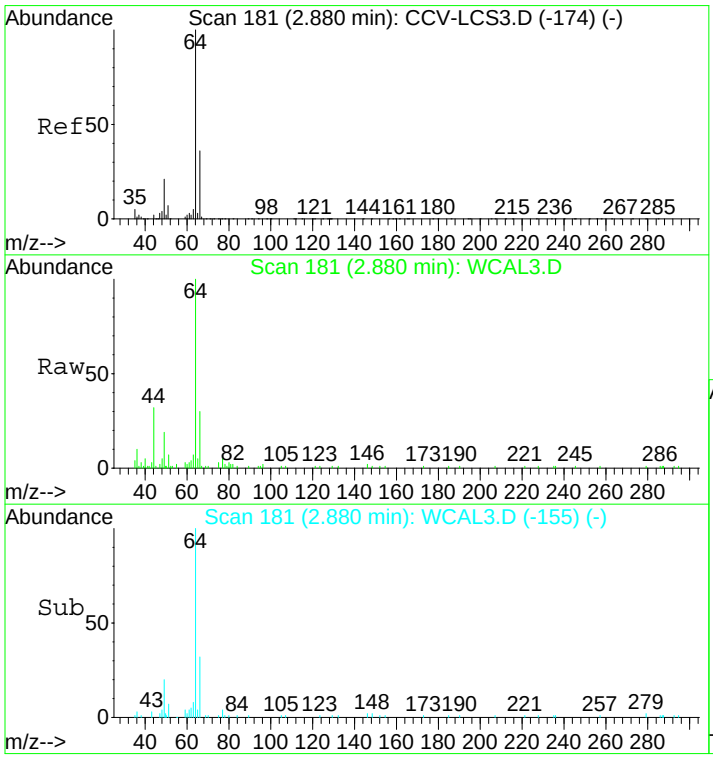


#5
Bromomethane
Concen: 1.93 ug/L m
RT: 2.71 min Scan# 153
Delta R.T. 0.00 min
Lab File: WCAL3.D
Acq: 14 Jul 2021 12:51

Tgt Ion: 94 Resp: 31187

Ion	Ratio	Lower	Upper
94	100		
96	108.3	74.7	114.7

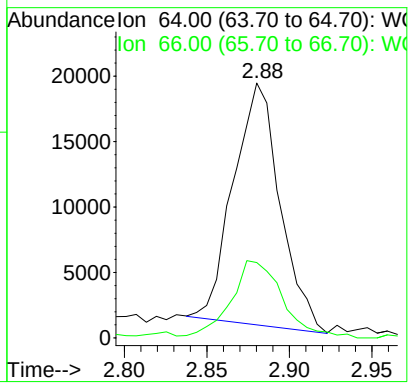




#6
Chloroethane
Concen: 2.01 ug/L m
RT: 2.88 min Scan# 181
Delta R.T. 0.01 min
Lab File: WCAL3.D
Acq: 14 Jul 2021 12:51

Tgt Ion: 64 Resp: 36182

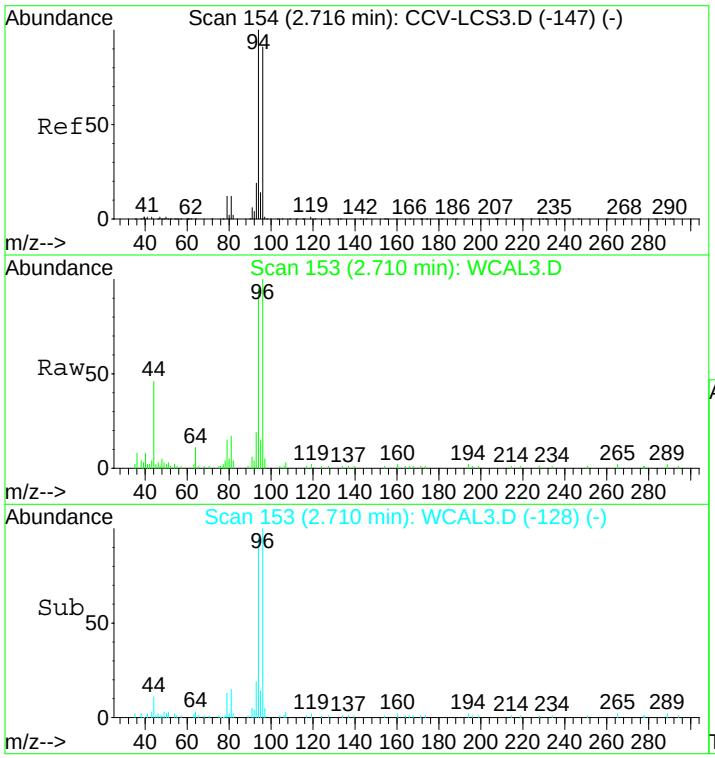
Ion	Ratio	Lower	Upper
64	100		
66	35.8	9.3	49.3



RJ 07/22/2021

Before Manual Integration

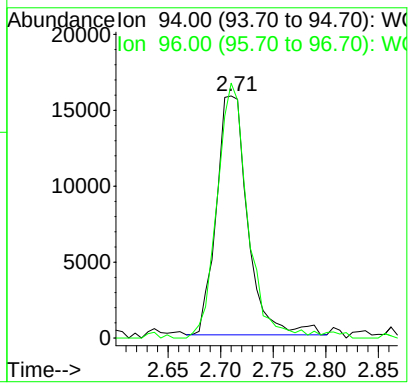
DGS 07/15/2021



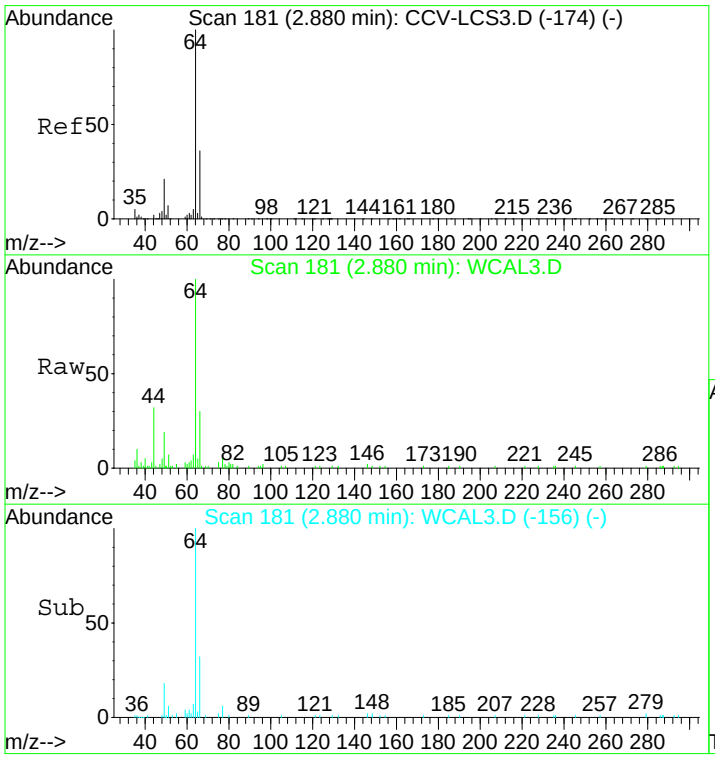
#5
Bromomethane
Concen: 2.30 ug/L
RT: 2.71 min Scan# 153
Delta R.T. 0.00 min
Lab File: WCAL3.D
Acq: 14 Jul 2021 12:51

Tgt Ion: 94 Resp: 32739

Ion	Ratio	Lower	Upper
94	100		
96	105.5	72.6	112.6



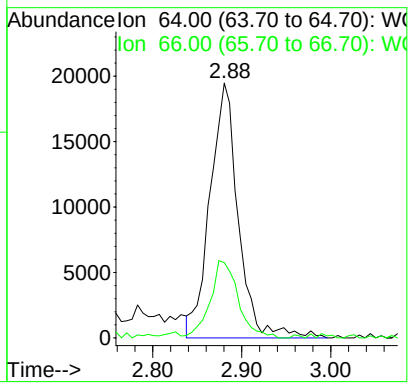
REASON # 2



#6
Chloroethane
Concen: 2.65 ug/L
RT: 2.88 min Scan# 181
Delta R.T. 0.00 min
Lab File: WCAL3.D
Acq: 14 Jul 2021 12:51

Tgt Ion: 64 Resp: 43143

Ion	Ratio	Lower	Upper
64	100		
66	30.0	11.2	51.2



REASON # 2

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL4.D Vial: 7
Acq On : 14 Jul 2021 13:20 Operator: DGS-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 13:41:23 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1504285	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1137289	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	597426	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.87	113	382726	19.971	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	113673	21.672	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 108	%		
61) SURRd8Tolule	9.72	98	1471640	18.909	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 95	%		
83) SURR4BrFBenz	13.26	95	565120	21.119	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 106	%		
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	93313	5.2389	ug/L	97
3) Chloromethan	2.10	50	127429	6.4139	ug/L	96
4) VinylChlorid	2.25	62	141679	5.7133	ug/L	96
5) Bromomethane	2.71	94	79855	4.6956	ug/L	97
6) Chloroethane	2.88	64	91331	4.8180	ug/L	97
7) Dichloroflmethane	3.19	67	130374	4.1215	ug/L	98
8) Trichlorofma	3.27	101	129192	5.1323	ug/L	99
9) Ethylether	3.72	59	78810	5.3089	ug/L	91
10) dichlorotfluoroethan	3.73	67	96578	5.0594	ug/L	97
11) propyleneoxide	3.77	58	215279	57.3705	ug/L	87
12) Acrolein	3.85	56	30905	31.2235	ug/L	95
13) 11dichlorthe	3.99	96	77867	4.7994	ug/L	90
14) Trichlorotfluoroeth	4.04	101	158769	11.0157	ug/L	96
15) Acetone	4.07	43	309546	58.4895	ug/L	94
16) Iodomethane	4.18	142	193827	9.6260	ug/L	99
17) Carbon Dislf	4.27	76	452065	10.7645	ug/L	99
18) allylchloride	4.49	41	268113	12.2554	ug/L	94
19) methylacetate	4.54	74	23956	4.8249	ug/L	87
20) Methylchlorid	4.64	84	101675	4.8577	ug/L #	77
21) tbutylalcohol	4.85	59	433831	261.2144	ug/L	87
22) Acrylonitrile	4.95	53	195662	31.0247	ug/L	99
23) t12dichlorte	5.02	96	91263	4.9661	ug/L	92
24) MtBE	5.05	73	233603	4.8599	ug/L	90
25) Hexane	5.41	57	258710	10.3396	ug/L	96
26) 11dichlorota	5.54	63	165089	5.1776	ug/L	99
27) Vinylacetate	5.64	43	1730950	61.0971	ug/L	93
28) chloroprene	5.68	53	327032	13.3472	ug/L	84
29) Diisopether	5.70	45	304232	6.4553	ug/L	84
30) ETBE	6.15	59	235564	5.1954	ug/L	98
31) 22dichloropr	6.28	77	104307	4.6839	ug/L	98
32) c12dichlorte	6.27	96	103017	4.9771	ug/L	95
33) 2Butanone	6.29	72	128956	49.2436	ug/L	95
34) propionitrile	6.34	54	169437	61.3046	ug/L	97
35) Ethylacetate	6.40	88	20118	22.8319	ug/L #	79
36) methacrylonitrile	6.54	67	88245	9.7428	ug/L #	67
37) Bromochlorma	6.56	128	47354	4.8868	ug/L #	79
38) Tetrahydofur	6.65	42	332758	59.6579	ug/L	84

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL4.D Vial: 7
Acq On : 14 Jul 2021 13:20 Operator: DGS-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 13:41:23 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.67	83	164517	4.9924	ug/L		98
40)	111trichlota	6.91	97	124093	4.9147	ug/L		98
42)	Cyclohexane	7.00	56	155457	5.7456	ug/L		84
43)	Carbtetraclo	7.13	119	93748	4.7078	ug/L		99
44)	11dicloprope	7.13	110	40682	4.4513	ug/L	#	85
46)	Benzene	7.37	78	393024	5.2077	ug/L		95
47)	12dichlorota	7.37	62	127603	5.0992	ug/L		100
48)	TAME	7.54	73	221264	4.6927	ug/L		88
49)	trichloroete	8.18	95	95776	5.0563	ug/L		94
50)	methylcyclohexane	8.44	83	174698	4.9011	ug/L		92
51)	12dicloropra	8.43	63	100608	5.0609	ug/L		99
52)	23Dicl1propene	8.50	75	142755	5.0406	ug/L		99
53)	Dibromometha	8.57	93	56632	4.8100	ug/L		92
54)	methylmethacrylate	8.60	69	68175	4.8659	ug/L		97
55)	14dioxane	8.62	88	68502	256.5620	ug/L		94
56)	Bromodiclrma	8.78	83	116931	4.8805	ug/L		97
57)	2Nitropropane	9.04	43	222940	57.0657	ug/L		100
58)	2CLEVE	9.17	63	318815	26.5928	ug/L		96
59)	c13dicloproe	9.35	75	138715	4.9474	ug/L		97
60)	4Meth2Pentan	9.55	43	957876	66.3118	ug/L		92
62)	Toluene	9.80	92	248778	5.1441	ug/L		99
63)	t13Dicloprop	10.06	75	106746	4.4328	ug/L		97
64)	ethylmethacrylate	10.21	69	233221	9.7821	ug/L		88
65)	112Triclotha	10.30	83	73033	4.9547	ug/L		99
66)	Tetrachlorte	10.53	166	99880	5.0380	ug/L		98
67)	13Diclorpropa	10.53	76	149722	4.8797	ug/L		99
69)	2Hexanone	10.64	43	706947	68.5413	ug/L		91
70)	Clorodibrmta	10.83	129	83734	4.9048	ug/L		95
71)	12Dibrometha	10.98	107	81476	4.9105	ug/L		100
72)	Chlorobenzen	11.66	112	261134	5.0037	ug/L		93
73)	1Clhexane	11.65	91	124169	5.1485	ug/L		86
74)	1112Tetclota	11.77	131	71160	4.5822	ug/L		94
75)	Ethylbenzene	11.83	91	444777	5.4645	ug/L		96
76)	m p-Xylene	11.99	106	337475	10.4258	ug/L		97
77)	o-Xylene	12.54	106	162610	5.0244	ug/L		92
78)	Styrene	12.55	104	276787	5.2237	ug/L		98
79)	Bromoform	12.78	173	47514	4.4842	ug/L		94
80)	Isopropylben	13.06	105	414911	5.3781	ug/L		96
81)	cyclohexanone	13.15	55	100269	115.9428	ug/L		86
84)	Bromobenzene	13.47	156	102027	5.3036	ug/L		98
85)	1122Tetrclta	13.45	83	127042	5.5735	ug/L		95
86)	123Triclproa	13.50	75	135792	5.1355	ug/L		98
87)	14dichloro2butene	13.53	53	29444	5.4700	ug/L		87
88)	n-Propylbenz	13.65	91	486139	5.7329	ug/L		99
89)	2chlorotolue	13.76	91	297815	5.5481	ug/L		98
90)	4chlorotolue	13.92	91	339768	5.5062	ug/L		98
91)	135Trimebenz	13.90	105	338771	5.5205	ug/L		99
92)	tbutylbenzen	14.37	119	287593	5.5151	ug/L		99
93)	124Trimetben	14.44	105	331479	5.4959	ug/L		97
94)	sbutylbenzen	14.69	105	411417	5.6222	ug/L		98
95)	13Diclorbenz	14.83	146	193332	5.3516	ug/L		93
96)	pIsopropylto	14.91	119	350378	5.5128	ug/L		97
97)	14dichlorobe	14.96	146	201334	5.3751	ug/L		95
98)	12dichlorobe	15.50	146	184419	5.3849	ug/L		98
99)	nButylbenzen	15.50	91	317270	5.5194	ug/L		97
100)	12dibromo3cl	16.59	157	17569	4.6470	ug/L		90
101)	135Trichlorobenzene	16.92	180	113050	5.1661	ug/L		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL4.D Vial: 7
Acq On : 14 Jul 2021 13:20 Operator: DGS-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 13:41:23 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

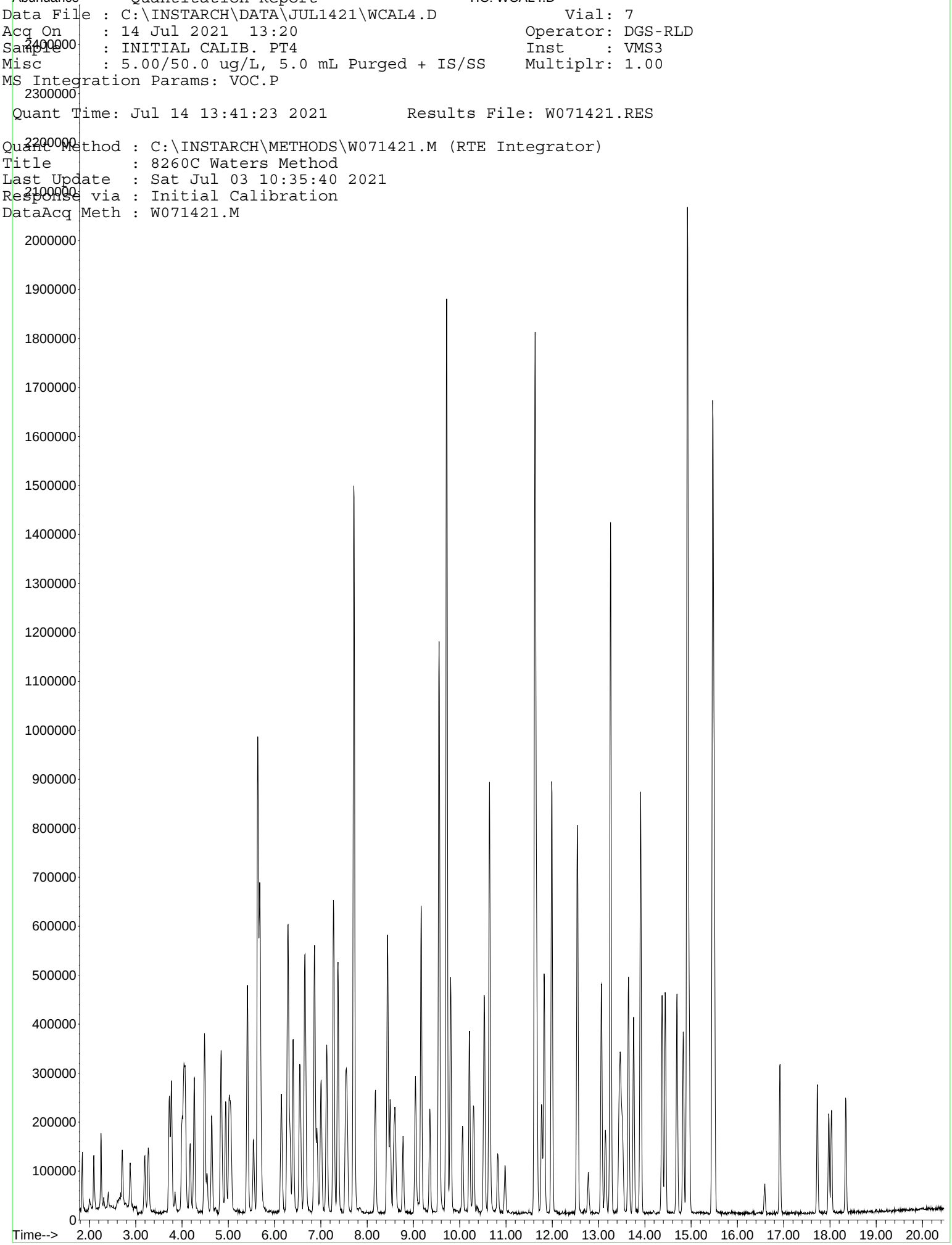
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	90443	4.7215	ug/L	99
103)	Hexachlorobu	17.97	225	44799	5.6925	ug/L	97
104)	Naphthalene	18.03	128	198541	4.3648	ug/L	98
105)	123Trichlben	18.34	180	84561	4.8073	ug/L	100

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\JUL1421\WCAL4.D Vial: 7
Acq On : 14 Jul 2021 13:20 Operator: DGS-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 13:41:23 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL5.D Vial: 8
Acq On : 14 Jul 2021 13:49 Operator: DGS-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 14:10:30 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1501343	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1144579	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	628996	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	383573	20.054	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100 %			
45) SURR12DCAd4	7.28	102	110450	21.099	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 105 %			
61) SURRd8Tolule	9.72	98	1479008	19.041	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 95 %			
83) SURR4BrFBenz	13.26	95	582280	20.668	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	196423	11.0494	ug/L	100
3) Chloromethan	2.09	50	257101	12.9660	ug/L	99
4) VinylChlorid	2.25	62	279148	11.2789	ug/L	96
5) Bromomethane	2.71	94	151506	8.9263	ug/L	98
6) Chloroethane	2.88	64	178794	9.4504	ug/L	97
7) Dichloroflmethane	3.19	67	258235	8.1795	ug/L	96
8) Trichlorofma	3.27	101	277783	11.0568	ug/L	96
9) Ethylether	3.71	59	153666	10.3718	ug/L	88
10) dichlorotfluoroethan	3.73	67	193912	10.1783	ug/L	99
11) propyleneoxide	3.77	58	430800	115.0304	ug/L	90
12) Acrolein	3.85	56	63985	64.7711	ug/L	90
13) 11dichlorthe	4.00	96	165742	10.2357	ug/L	93
14) Trichlorotfluoroeth	4.04	101	336132	23.3672	ug/L	96
15) Acetone	4.07	43	577551	113.6636	ug/L	96
16) Iodomethane	4.18	142	420508	20.9246	ug/L	100
17) Carbon Dislf	4.27	76	927284	22.1236	ug/L	99
18) allylchloride	4.49	41	548912	25.1398	ug/L	94
19) methylacetate	4.54	74	52469	10.5883	ug/L	98
20) Methylchlorid	4.64	84	198215	9.7928	ug/L #	81
21) tbutylalcohol	4.84	59	890218	537.0604	ug/L	87
22) Acrylonitrile	4.94	53	387455	61.5564	ug/L	98
23) t12dichlorte	5.02	96	189396	10.3262	ug/L	94
24) MtBE	5.05	73	477547	9.9545	ug/L	92
25) Hexane	5.41	57	559702	21.4729	ug/L	97
26) 11dichlorota	5.54	63	336751	10.5820	ug/L	99
27) Vinylacetate	5.64	43	3288614	116.3053	ug/L	95
28) chloroprene	5.67	53	668848	27.3512	ug/L	87
29) Diisopether	5.69	45	614704	13.0686	ug/L	88
30) ETBE	6.15	59	470711	10.4019	ug/L	97
31) 22dichloropr	6.29	77	215117	9.6788	ug/L	97
32) c12dichlorte	6.27	96	203084	9.8310	ug/L	92
33) 2Butanone	6.29	72	256249	98.0439	ug/L	97
34) propionitrile	6.33	54	328889	119.2296	ug/L	97
35) Ethylacetate	6.40	88	44357	50.4393	ug/L #	84
36) methacrylonitrile	6.54	67	181447	20.0721	ug/L #	71
37) Bromochlorma	6.56	128	95724	9.8979	ug/L #	80
38) Tetrahydofur	6.65	42	670746	125.5915	ug/L	83

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL5.D Vial: 8
Acq On : 14 Jul 2021 13:49 Operator: DGS-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 14:10:30 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.68	83	326932	9.9405	ug/L	98
40)	111trichlota	6.91	97	260114	10.3220	ug/L	97
42)	Cyclohexane	7.00	56	332091	11.8046	ug/L	87
43)	Carbtetraclo	7.13	119	201218	10.1245	ug/L	100
44)	11dicloprope	7.12	110	91626	10.0450	ug/L	97
46)	Benzene	7.37	78	773454	10.2687	ug/L	95
47)	12dichlorota	7.37	62	250763	10.0404	ug/L	96
48)	TAME	7.54	73	459070	9.7553	ug/L	91
49)	trichloroete	8.18	95	190691	10.0868	ug/L	96
50)	methylcyclohexane	8.44	83	390608	10.4024	ug/L	91
51)	12dicloropra	8.43	63	206944	10.4304	ug/L	98
52)	23Dicl1propene	8.50	75	289848	10.2544	ug/L	99
53)	Dibromometha	8.57	93	112035	9.5342	ug/L	95
54)	methylmethacrylate	8.60	69	137569	9.8380	ug/L	98
55)	14dioxane	8.61	88	139084	521.9350	ug/L	91
56)	Bromodiclrma	8.78	83	232850	9.7377	ug/L	99
57)	2Nitropropane	9.04	43	500545	128.3751	ug/L	95
58)	2CLEVE	9.16	63	641898	53.6466	ug/L	97
59)	c13dicloproe	9.35	75	283579	10.1340	ug/L	99
60)	4Meth2Pentan	9.55	43	1817226	126.0494	ug/L	94
62)	Toluene	9.80	92	498775	10.3336	ug/L	99
63)	t13Dicloprop	10.06	75	234213	9.7452	ug/L	98
64)	ethylmethacrylate	10.21	69	481982	20.2556	ug/L	90
65)	112Triclotha	10.30	83	142340	9.6756	ug/L	98
66)	Tetrachlorte	10.53	166	206540	10.4385	ug/L	98
67)	13Diclorpropa	10.53	76	295858	9.6614	ug/L	98
69)	2Hexanone	10.64	43	1382717	133.2061	ug/L	92
70)	Clorodibrmta	10.82	129	164139	9.5534	ug/L	99
71)	12Dibrometha	10.98	107	169891	10.1740	ug/L	95
72)	Chlorobenzen	11.66	112	532226	10.1332	ug/L	95
73)	1Clhexane	11.65	91	258443	10.6478	ug/L	89
74)	1112Tetclota	11.77	131	152720	9.7715	ug/L	96
75)	Ethylbenzene	11.83	91	890992	10.8769	ug/L	98
76)	m p-Xylene	11.99	106	707364	21.7138	ug/L	97
77)	o-Xylene	12.54	106	336749	10.3388	ug/L	98
78)	Styrene	12.55	104	557172	10.4483	ug/L	96
79)	Bromoform	12.78	173	104333	9.7838	ug/L	96
80)	Isopropylben	13.06	105	831774	10.7128	ug/L	100
81)	cyclohexanone	13.15	55	200028	229.8228	ug/L	88
84)	Bromobenzene	13.47	156	210025	10.3697	ug/L	98
85)	1122Tetrclta	13.44	83	243885	10.1626	ug/L	99
86)	123Triclproa	13.51	75	278646	10.0093	ug/L	99
87)	14dichloro2butene	13.53	53	63112	11.1363	ug/L	91
88)	n-Propylbenz	13.65	91	984648	11.0288	ug/L	99
89)	2chlorotolue	13.76	91	598033	10.5819	ug/L	100
90)	4chlorotolue	13.91	91	698590	10.7529	ug/L	100
91)	135Trimebenz	13.90	105	702547	10.8739	ug/L	98
92)	tbutylbenzen	14.37	119	609146	11.0951	ug/L	99
93)	124Trimetben	14.44	105	689212	10.8535	ug/L	98
94)	sbutylbenzen	14.69	105	866510	11.2470	ug/L	99
95)	13Diclorbenz	14.83	146	394176	10.3635	ug/L	96
96)	pIsopropylto	14.91	119	734690	10.9792	ug/L	99
97)	14dichlorobe	14.96	146	407358	10.3295	ug/L	98
98)	12dichlorobe	15.49	146	378806	10.5058	ug/L	99
99)	nButylbenzen	15.50	91	667659	11.0321	ug/L	100
100)	12dibromo3cl	16.59	157	37471	9.4137	ug/L	93
101)	135Trichlorobenzene	16.92	180	243004	10.5474	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

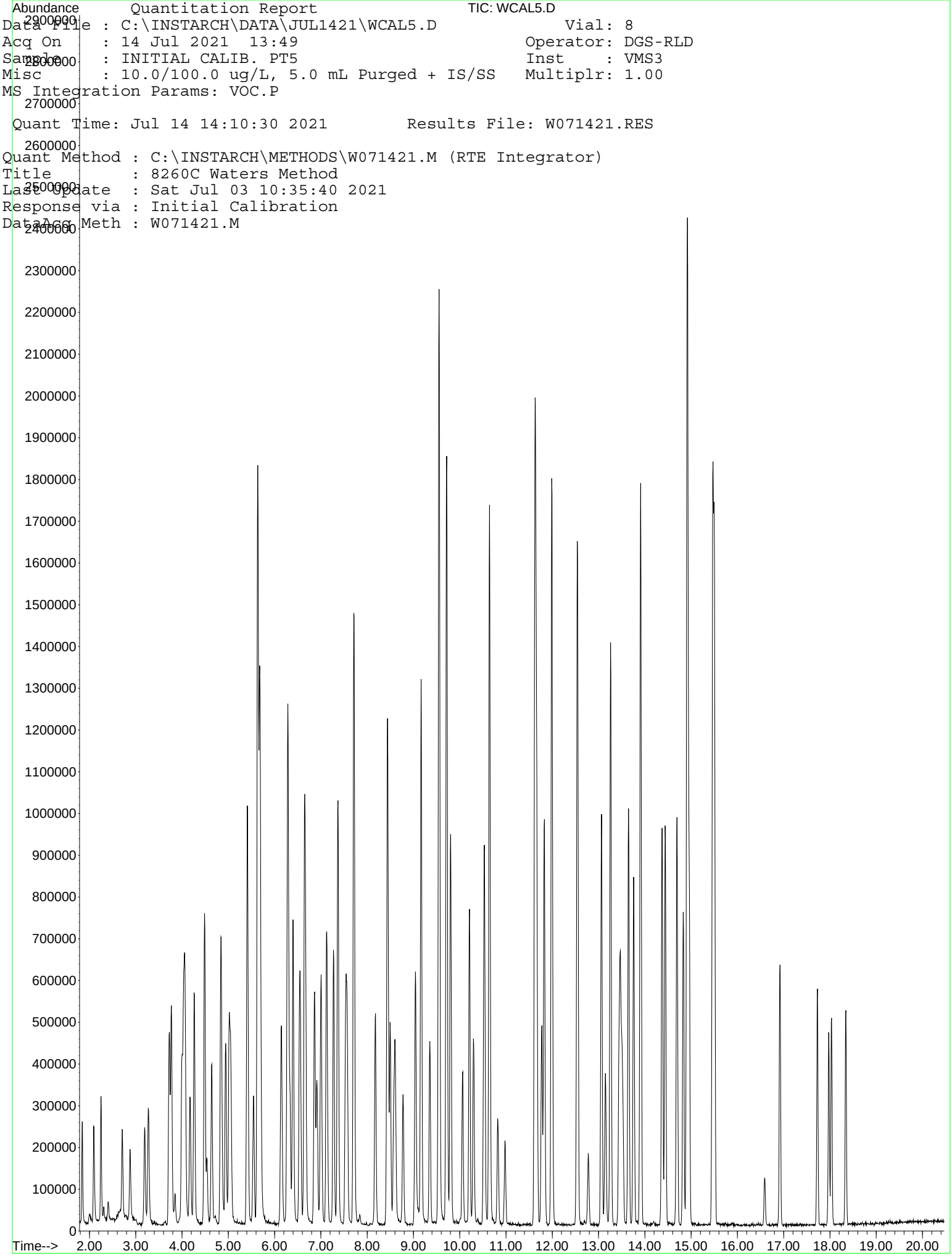
Data File : C:\INSTARCH\DATA\JUL1421\WCAL5.D Vial: 8
Acq On : 14 Jul 2021 13:49 Operator: DGS-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 14:10:30 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	194996	9.6687	ug/L	97
103)	Hexachlorobu	17.97	225	95539	11.5307	ug/L	96
104)	Naphthalene	18.03	128	464087	9.6907	ug/L	98
105)	123Trichlben	18.34	180	185857	10.0356	ug/L	96

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: WCAL5.D
Data File : C:\INSTARCH\DATA\JUL1421\WCAL5.D Vial: 8
Acq On : 14 Jul 2021 13:49 Operator: DGS-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Jul 14 14:10:30 2021 Results File: W071421.RES
Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
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Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL6.D Vial: 9
Acq On : 14 Jul 2021 14:19 Operator: DGS-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 14:40:02 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1607991	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1227744	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	669565	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	413341	20.177	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.28	102	112873	20.131	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %			
61) SURRd8Tolule	9.72	98	1594591	19.167	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 96 %			
83) SURR4BrFBenz	13.26	95	628439	20.955	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 105 %			
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	404350	21.2374	ug/L	99
3) Chloromethan	2.09	50	517412	24.3633	ug/L	100
4) VinylChlorid	2.25	62	561127	21.1684	ug/L	99
5) Bromomethane	2.70	94	305407	16.8003	ug/L	96
6) Chloroethane	2.87	64	369604	18.2402	ug/L	95
7) Dichloroflmethane	3.19	67	534562	15.8091	ug/L	96
8) Trichlorofma	3.27	101	572355	21.2709	ug/L	98
9) Ethylether	3.72	59	327642	20.6476	ug/L	91
10) dichlorotfluoroethan	3.73	67	407059	19.9492	ug/L	99
11) propyleneoxide	3.77	58	890301	221.9577	ug/L	86
12) Acrolein	3.85	56	133856	126.5137	ug/L	89
13) 11dichlorthe	3.99	96	347013	20.0090	ug/L	93
14) Trichlorotfluoroeth	4.04	101	707171	45.9004	ug/L	97
15) Acetone	4.07	43	1176182	226.1323	ug/L	96
16) Iodomethane	4.18	142	892916	41.4848	ug/L	97
17) Carbon Dislf	4.26	76	1843065	41.0564	ug/L	97
18) allylchloride	4.49	41	1164594	49.8000	ug/L	94
19) methylacetate	4.53	74	109030	20.5431	ug/L	97
20) Methylchlorid	4.64	84	404273	19.1395	ug/L #	81
21) tbutylalcohol	4.85	59	1904230	1072.6115	ug/L	89
22) Acrylonitrile	4.94	53	806828	119.6821	ug/L	97
23) t12dichlorte	5.02	96	401500	20.4387	ug/L	95
24) MtBE	5.05	73	1013807	19.7312	ug/L	91
25) Hexane	5.41	57	1182685	42.4217	ug/L	96
26) 11dichlorota	5.54	63	702801	20.6199	ug/L	99
27) Vinylacetate	5.64	43	5836434	192.7216	ug/L	97
28) chloroprene	5.67	53	1411536	53.8936	ug/L	88
29) Diisopether	5.69	45	1296368	25.7328	ug/L	87
30) ETBE	6.15	59	1022201	21.0908	ug/L	97
31) 22dichloropr	6.28	77	485516	20.3962	ug/L	99
32) c12dichlorte	6.27	96	439615	19.8696	ug/L	94
33) 2Butanone	6.29	72	548183	195.8306	ug/L	94
34) propionitrile	6.34	54	718961	243.3528	ug/L	97
35) Ethylacetate	6.40	88	98811	104.9079	ug/L #	89
36) methacrylonitrile	6.54	67	400359	41.3514	ug/L #	75
37) Bromochlorma	6.56	128	200006	19.3090	ug/L #	79
38) Tetrahydofur	6.65	42	1367334	248.3961	ug/L	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL6.D Vial: 9
Acq On : 14 Jul 2021 14:19 Operator: DGS-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 14:40:02 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	699139	19.8476	ug/L	98
40)	111trichlota	6.91	97	565883	20.9663	ug/L	98
42)	Cyclohexane	7.00	56	713743	23.4673	ug/L	87
43)	Carbtetraclo	7.13	119	449438	21.1141	ug/L	97
44)	11dicloprope	7.12	110	200486	20.5216	ug/L	99
46)	Benzene	7.37	78	1565846	19.4100	ug/L	93
47)	12dichlorota	7.37	62	546682	20.4371	ug/L	99
48)	TAME	7.54	73	994050	19.7227	ug/L	92
49)	trichloroete	8.18	95	405628	20.0330	ug/L	97
50)	methylcyclohexane	8.44	83	835600	20.5210	ug/L	91
51)	12dicloropra	8.44	63	438685	20.6441	ug/L	95
52)	23Dicl1propene	8.50	75	622948	20.5773	ug/L	99
53)	Dibromometha	8.57	93	250153	19.8762	ug/L	96
54)	methylmethacrylate	8.60	69	317026	21.1679	ug/L	99
55)	14dioxane	8.62	88	292310	1024.1870	ug/L	91
56)	Bromodiclrma	8.78	83	513929	20.0669	ug/L	100
57)	2Nitropropane	9.04	43	1149738	275.3169	ug/L	96
58)	2CLEVE	9.16	63	1324040	103.3174	ug/L	98
59)	c13dicloproe	9.35	75	611547	20.4048	ug/L	99
60)	4Meth2Pentan	9.55	43	3456595	223.8600	ug/L	99
62)	Toluene	9.80	92	1036867	20.0571	ug/L	95
63)	t13Dicloprop	10.06	75	531912	20.6640	ug/L	99
64)	ethylmethacrylate	10.21	69	1083143	42.5007	ug/L	89
65)	112Triclotha	10.30	83	313903	19.9224	ug/L	98
66)	Tetrachlorte	10.54	166	444027	20.9526	ug/L	98
67)	13Diclorpropa	10.52	76	635327	19.3710	ug/L	98
69)	2Hexanone	10.64	43	2696516	242.1763	ug/L	96
70)	Clorodibrmta	10.83	129	373614	20.2725	ug/L	97
71)	12Dibrometha	10.98	107	365262	20.3923	ug/L	97
72)	Chlorobenzen	11.66	112	1086334	19.2819	ug/L	95
73)	1Clhexane	11.65	91	569404	21.8703	ug/L	93
74)	1112Tetclota	11.77	131	340141	20.2891	ug/L	95
75)	Ethylbenzene	11.83	91	1797125	20.4526	ug/L	98
76)	m p-Xylene	11.99	106	1443895	41.3206	ug/L	92
77)	o-Xylene	12.54	106	724909	20.7484	ug/L	97
78)	Styrene	12.55	104	1183556	20.6910	ug/L	95
79)	Bromoform	12.78	173	242072	21.1626	ug/L	99
80)	Isopropylben	13.06	105	1721146	20.6659	ug/L	97
81)	cyclohexanone	13.15	55	454599	486.9325	ug/L	88
84)	Bromobenzene	13.47	156	449429	20.8455	ug/L	99
85)	1122Tetrclta	13.44	83	516217	20.2073	ug/L	99
86)	123Triclproa	13.51	75	608948	20.5487	ug/L	100
87)	14dichloro2butene	13.53	53	142764	23.6647	ug/L	95
88)	n-Propylbenz	13.65	91	1996903	21.0116	ug/L	95
89)	2chlorotolue	13.76	91	1242382	20.6513	ug/L	98
90)	4chlorotolue	13.91	91	1439901	20.8205	ug/L	98
91)	135Trimebenz	13.90	105	1462079	21.2587	ug/L	98
92)	tbutylbenzen	14.37	119	1265660	21.6562	ug/L	96
93)	124Trimetben	14.44	105	1428134	21.1271	ug/L	100
94)	sbutylbenzen	14.69	105	1785755	21.7741	ug/L	97
95)	13Diclorbenz	14.83	146	822963	20.3259	ug/L	96
96)	pIsopropylto	14.91	119	1527867	21.4491	ug/L	99
97)	14dichlorobe	14.96	146	844590	20.1190	ug/L	97
98)	12dichlorobe	15.50	146	776725	20.2364	ug/L	98
99)	nButylbenzen	15.50	91	1374692	21.3385	ug/L	97
100)	12dibromo3cl	16.59	157	86026	20.3025	ug/L	99
101)	135Trichlorobenzene	16.92	180	522530	21.3058	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL6.D Vial: 9
Acq On : 14 Jul 2021 14:19 Operator: DGS-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 14:40:02 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	439389	20.4666	ug/L	98
103)	Hexachlorobu	17.97	225	203647	23.0891	ug/L	99
104)	Naphthalene	18.03	128	1056969	20.7335	ug/L	97
105)	123Trichlben	18.34	180	408858	20.7393	ug/L	98

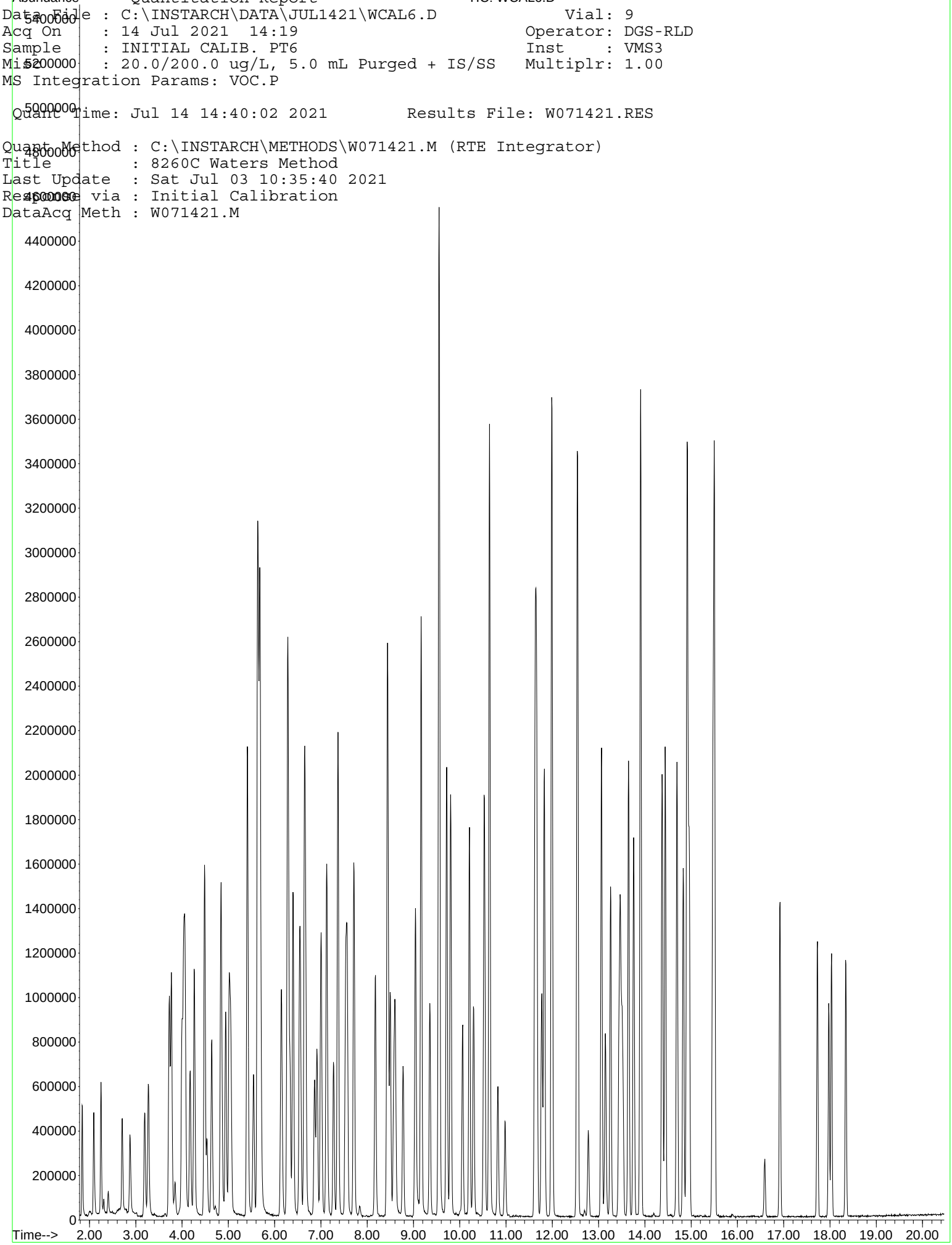
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL6.D

Data File : C:\INSTARCH\DATA\JUL1421\WCAL6.D Vial: 9
Acq On : 14 Jul 2021 14:19 Operator: DGS-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 14:40:02 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL7.D Vial: 10
Acq On : 14 Jul 2021 14:48 Operator: DGS-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 15:09:20 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1643247	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1249458	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	709099	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	421464	20.132	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.28	102	120350	21.004	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 105	%		
61) SURRd8Tolule	9.72	98	1609829	18.935	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 95	%		
83) SURR4BrFBenz	13.26	95	649434	20.448	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	578858	29.7507	ug/L	100
3) Chloromethan	2.10	50	745727	34.3605	ug/L	97
4) VinylChlorid	2.25	62	811777	29.9671	ug/L	99
5) Bromomethane	2.71	94	427593	23.0171	ug/L	98
6) Chloroethane	2.87	64	527889	25.4927	ug/L	93
7) Dichloroflmethane	3.19	67	790363	22.8726	ug/L	96
8) Trichlorofma	3.28	101	835479	30.3834	ug/L	99
9) Ethylether	3.72	59	511563	31.5465	ug/L	91
10) dichlorotfluoroethan	3.73	67	603256	28.9302	ug/L	99
11) propyleneoxide	3.77	58	1373441	335.0612	ug/L	86
12) Acrolein	3.85	56	210334	194.5314	ug/L	92
13) 11dichlorthe	4.00	96	529280	29.8639	ug/L	95
14) Trichlorotfluoroeth	4.04	101	1029655	65.3981	ug/L	99
15) Acetone	4.07	43	1804781	354.6657	ug/L	99
16) Iodomethane	4.18	142	1341562	60.9916	ug/L	95
17) Carbon Dislf	4.27	76	2619019	57.0899	ug/L	95
18) allylchloride	4.49	41	1709853	71.5475	ug/L	95
19) methylacetate	4.53	74	176334	32.5115	ug/L	96
20) Methylchlorid	4.64	84	613157	28.9605	ug/L #	82
21) tbutylalcohol	4.85	59	2994441	1650.5154	ug/L	88
22) Acrylonitrile	4.94	53	1250928	181.5772	ug/L	98
23) t12dichlorte	5.02	96	593505	29.5647	ug/L	94
24) MtBE	5.05	73	1547748	29.4767	ug/L	89
25) Hexane	5.41	57	1745238	62.3442	ug/L	97
26) 11dichlorota	5.54	63	1029494	29.5569	ug/L	99
27) Vinylacetate	5.64	43	7475543	241.5497	ug/L	93
28) chloroprene	5.67	53	2025726	75.6845	ug/L	91
29) Diisopether	5.69	45	1938840	37.6601	ug/L	86
30) ETBE	6.15	59	1539336	31.0792	ug/L	97
31) 22dichloropr	6.28	77	750639	30.8572	ug/L	99
32) c12dichlorte	6.27	96	666459	29.4761	ug/L	96
33) 2Butanone	6.29	72	878839	307.2168	ug/L	95
34) propionitrile	6.34	54	1120652	371.1783	ug/L	98
35) Ethylacetate	6.40	88	149138	154.9431	ug/L #	87
36) methacrylonitrile	6.54	67	627947	63.4664	ug/L #	75
37) Bromochlorma	6.56	128	305032	28.8166	ug/L #	80
38) Tetrahydofur	6.65	42	2098428	386.0081	ug/L	88

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL7.D Vial: 10
Acq On : 14 Jul 2021 14:48 Operator: DGS-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 15:09:20 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	1044359	29.0119	ug/L	97
40)	111trichlota	6.91	97	860209	31.1874	ug/L	98
42)	Cyclohexane	7.00	56	1061825	34.3215	ug/L	87
43)	Carbtetraclo	7.13	119	691955	31.8098	ug/L	98
44)	11dicloprope	7.13	110	308945	30.9449	ug/L	97
46)	Benzene	7.37	78	2257171	27.3793	ug/L	91
47)	12dichlorota	7.37	62	806268	29.4947	ug/L	97
48)	TAME	7.54	73	1535775	29.8172	ug/L	93
49)	trichloroete	8.18	95	624762	30.1935	ug/L	95
50)	methylcyclohexane	8.44	83	1251908	30.2241	ug/L	92
51)	12dicloropra	8.44	63	674349	31.0533	ug/L	99
52)	23Dicl1propene	8.50	75	943221	30.4881	ug/L	98
53)	Dibromometha	8.57	93	379428	29.5011	ug/L	96
54)	methylmethacrylate	8.60	69	500539	32.7041	ug/L	98
55)	14dioxane	8.62	88	474666	1627.4381	ug/L	91
56)	Bromodiclrma	8.78	83	767759	29.3348	ug/L	99
57)	2Nitropropane	9.04	43	1843687	432.0181	ug/L	95
58)	2CLEVE	9.16	63	1985634	151.6185	ug/L	98
59)	c13dicloproe	9.35	75	947336	30.9305	ug/L	99
60)	4Meth2Pentan	9.55	43	4863898	308.2430	ug/L	94
62)	Toluene	9.80	92	1512519	28.6304	ug/L	94
63)	t13Dicloprop	10.06	75	825306	31.3740	ug/L	99
64)	ethylmethacrylate	10.21	69	1658336	63.6743	ug/L	87
65)	112Triclotha	10.30	83	475677	29.5419	ug/L	98
66)	Tetrachlorte	10.54	166	673583	31.1029	ug/L	97
67)	13Diclorpropa	10.52	76	962683	28.7222	ug/L	98
69)	2Hexanone	10.64	43	3914915	345.4914	ug/L	97
70)	Clorodibrmta	10.83	129	585829	31.2350	ug/L	98
71)	12Dibrometha	10.98	107	566903	31.0997	ug/L	96
72)	Chlorobenzen	11.66	112	1595160	27.8213	ug/L	93
73)	1Clhexane	11.65	91	857215	32.3526	ug/L	94
74)	1112Tetclota	11.77	131	530074	31.0689	ug/L	95
75)	Ethylbenzene	11.83	91	2581652	28.8704	ug/L	95
76)	m p-Xylene	11.99	106	2108534	59.2922	ug/L	88
77)	o-Xylene	12.54	106	1093526	30.7550	ug/L	93
78)	Styrene	12.55	104	1751129	30.0814	ug/L	93
79)	Bromoform	12.78	173	386787	33.2263	ug/L	99
80)	Isopropylben	13.06	105	2504042	29.5437	ug/L	95
81)	cyclohexanone	13.15	55	761887	801.8941	ug/L	91
84)	Bromobenzene	13.47	156	679929	29.7783	ug/L	98
85)	1122Tetrclta	13.44	83	807399	29.8435	ug/L	100
86)	123Triclproa	13.51	75	988439	31.4949	ug/L	98
87)	14dichloro2butene	13.53	53	233927	36.6142	ug/L	99
88)	n-Propylbenz	13.65	91	2853700	28.3528	ug/L	93
89)	2chlorotolue	13.76	91	1853343	29.0894	ug/L	97
90)	4chlorotolue	13.91	91	2129350	29.0731	ug/L	96
91)	135Trimebenz	13.90	105	2145874	29.4616	ug/L	95
92)	tbutylbenzen	14.37	119	1876006	30.3100	ug/L	94
93)	124Trimetben	14.44	105	2113607	29.5244	ug/L	98
94)	sbutylbenzen	14.69	105	2591667	29.8390	ug/L	94
95)	13Diclorbenz	14.83	146	1252604	29.2126	ug/L	94
96)	pIsopropylto	14.91	119	2258788	29.9423	ug/L	97
97)	14dichlorobe	14.96	146	1279104	28.7708	ug/L	97
98)	12dichlorobe	15.50	146	1184118	29.1304	ug/L	98
99)	nButylbenzen	15.50	91	2029585	29.7475	ug/L	94
100)	12dibromo3cl	16.59	157	144896	32.2896	ug/L	99
101)	135Trichlorobenzene	16.92	180	800049	30.8027	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL7.D Vial: 10
Acq On : 14 Jul 2021 14:48 Operator: DGS-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 15:09:20 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	687424	30.2347	ug/L	99
103) Hexachlorobu	17.97	225	312241	33.4276	ug/L	99
104) Naphthalene	18.03	128	1698910	31.4678	ug/L	95
105) 123Trichlben	18.34	180	640192	30.6632	ug/L	98

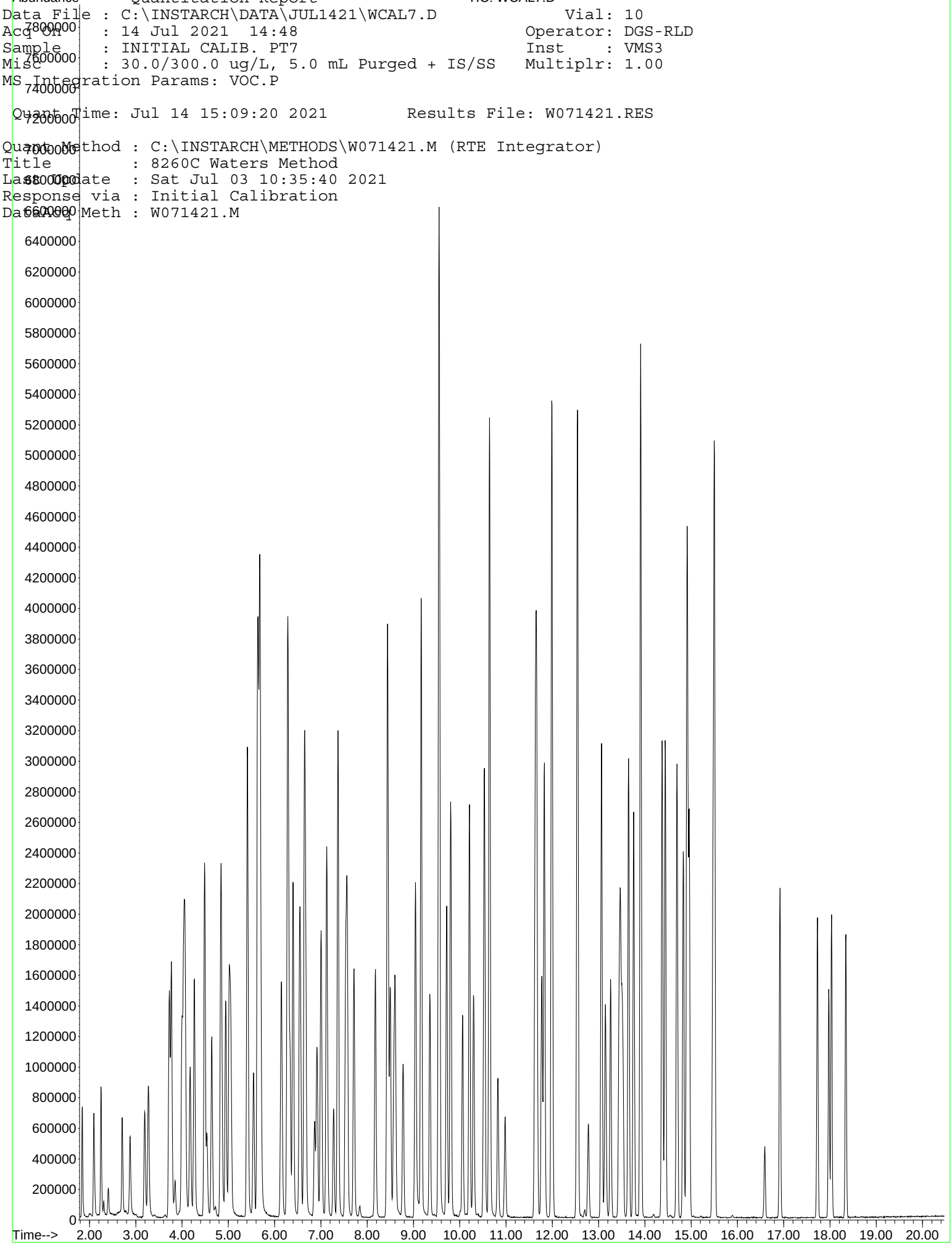
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL7.D

Data File : C:\INSTARCH\DATA\JUL1421\WCAL7.D Vial: 10
Acq On : 14 Jul 2021 14:48 Operator: DGS-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 15:09:20 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL8.D Vial: 11
Acq On : 14 Jul 2021 15:17 Operator: DGS-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 15:38:27 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1717778	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1295238	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	734596	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	434599	19.859	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	120498	20.118	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101 %			
61) SURRd8Tolule	9.72	98	1672575	18.820	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 94 %			
83) SURR4BrFBenz	13.26	95	675227	20.522	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	738961	36.3314	ug/L	97
3) Chloromethan	2.10	50	970384	42.7720	ug/L	98
4) VinylChlorid	2.25	62	1020386	36.0337	ug/L	98
5) Bromomethane	2.70	94	563412	29.0122	ug/L	99
6) Chloroethane	2.87	64	697315	32.2135	ug/L	92
7) Dichloroflmethane	3.19	67	1029205	28.4922	ug/L	94
8) Trichlorofma	3.27	101	1108803	38.5736	ug/L	99
9) Ethylether	3.72	59	687091	40.5323	ug/L	90
10) dichlorotfluoroethan	3.73	67	802489	36.8150	ug/L	98
11) propyleneoxide	3.77	58	1782826	416.0629	ug/L	85
12) Acrolein	3.85	56	283529	250.8497	ug/L	94
13) 11dichlorthe	3.99	96	716260	38.6605	ug/L	96
14) Trichlorotfluoroeth	4.04	101	1380929	83.9036	ug/L	98
15) Acetone	4.07	43	2243795	432.9069	ug/L	99
16) Iodomethane	4.18	142	1766099	76.8086	ug/L	94
17) Carbon Dislf	4.26	76	3373258	70.3406	ug/L	94
18) allylchloride	4.49	41	2255326	90.2778	ug/L	96
19) methylacetate	4.54	74	241953	42.6744	ug/L	98
20) Methylchlorid	4.64	84	811059	37.1868	ug/L #	82
21) tbutylalcohol	4.85	59	3846643	2028.2501	ug/L	87
22) Acrylonitrile	4.94	53	1636961	227.3019	ug/L	96
23) t12dichlorte	5.02	96	799163	38.0820	ug/L	95
24) MtBE	5.05	73	2044313	37.2445	ug/L	87
25) Hexane	5.41	57	2342104	81.7841	ug/L	96
26) 11dichlorota	5.54	63	1370079	37.6285	ug/L	98
27) Vinylacetate	5.64	43	9084266	280.7950	ug/L	85
28) chloroprene	5.67	53	2675717	95.6318	ug/L	93
29) Diisopether	5.69	45	2563373	47.6307	ug/L	88
30) ETBE	6.15	59	2068177	39.9448	ug/L	97
31) 22dichloropr	6.28	77	1030309	40.5163	ug/L	99
32) c12dichlorte	6.27	96	891689	37.7265	ug/L	96
33) 2Butanone	6.29	72	1141592	381.7529	ug/L	94
34) propionitrile	6.33	54	1469630	465.6458	ug/L	97
35) Ethylacetate	6.40	88	209925	208.6334	ug/L #	90
36) methacrylonitrile	6.54	67	841602	81.3699	ug/L #	78
37) Bromochlorma	6.57	128	414255	37.4370	ug/L #	81
38) Tetrahydofur	6.65	42	2699609	486.5242	ug/L	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL8.D Vial: 11
Acq On : 14 Jul 2021 15:17 Operator: DGS-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 15:38:27 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.67	83	1404738	37.3299	ug/L		97
40)	111trichlota	6.91	97	1159186	40.2035	ug/L		98
42)	Cyclohexane	7.00	56	1413809	44.0275	ug/L		88
43)	Carbtetraclo	7.13	119	949419	41.7520	ug/L		96
44)	11dicloprope	7.13	110	413070	39.5792	ug/L		98
46)	Benzene	7.37	78	2891836	33.5558	ug/L		89
47)	12dichlorota	7.37	62	1077938	37.7220	ug/L		97
48)	TAME	7.54	73	2053401	38.1372	ug/L		92
49)	trichloroete	8.18	95	831482	38.4404	ug/L		95
50)	methylcyclohexane	8.45	83	1653147	38.4618	ug/L		90
51)	12dicloropra	8.43	63	901519	39.7131	ug/L		98
52)	23Dicl1propene	8.50	75	1263618	39.0723	ug/L		96
53)	Dibromometha	8.57	93	508109	37.7921	ug/L		93
54)	methylmethacrylate	8.60	69	679183	42.4509	ug/L		96
55)	14dioxane	8.61	88	623515	2045.0271	ug/L		90
56)	Bromodiclrma	8.78	83	1036283	37.8768	ug/L		98
57)	2Nitropropane	9.04	43	2446519	548.4021	ug/L		95
58)	2CLEVE	9.16	63	2567577	187.5480	ug/L		96
59)	c13dicloproe	9.35	75	1259419	39.3359	ug/L		97
60)	4Meth2Pentan	9.55	43	5804619	351.8992	ug/L		89
62)	Toluene	9.80	92	1995773	36.1387	ug/L		91
63)	t13Dicloprop	10.06	75	1116044	40.5856	ug/L		98
64)	ethylmethacrylate	10.21	69	2164124	79.4895	ug/L		85
65)	112Triclotha	10.30	83	648604	38.5338	ug/L		98
66)	Tetrachlorte	10.54	166	904721	39.9632	ug/L		98
67)	13Diclorpropa	10.53	76	1286598	36.7209	ug/L		96
69)	2Hexanone	10.64	43	4728997	402.5835	ug/L		95
70)	Clorodibrmta	10.83	129	786954	40.4755	ug/L		99
71)	12Dibrometha	10.98	107	759111	40.1721	ug/L		97
72)	Chlorobenzen	11.66	112	2065709	34.7547	ug/L		91
73)	1Clhexane	11.65	91	1165354	42.4277	ug/L		94
74)	1112Tetclota	11.77	131	736237	41.6274	ug/L		97
75)	Ethylbenzene	11.83	91	3297497	35.5723	ug/L		92
76)	m p-Xylene	11.99	106	2755951	74.7585	ug/L	#	83
77)	o-Xylene	12.53	106	1453921	39.4457	ug/L		89
78)	Styrene	12.55	104	2311180	38.2988	ug/L		91
79)	Bromoform	12.78	173	527664	43.7260	ug/L		97
80)	Isopropylben	13.06	105	3218079	36.6262	ug/L		91
81)	cyclohexanone	13.15	55	951203	965.7656	ug/L		91
84)	Bromobenzene	13.47	156	921805	38.9703	ug/L		99
85)	1122Tetrclta	13.44	83	1066950	38.0683	ug/L		99
86)	123Triclproa	13.50	75	1323873	40.7188	ug/L		99
87)	14dichloro2butene	13.53	53	324943	49.0947	ug/L		99
88)	n-Propylbenz	13.65	91	3647689	34.9836	ug/L		90
89)	2chlorotolue	13.76	91	2398458	36.3387	ug/L		95
90)	4chlorotolue	13.91	91	2762834	36.4131	ug/L		95
91)	135Trimebenz	13.90	105	2780959	36.8557	ug/L		93
92)	tbutylbenzen	14.37	119	2454555	38.2809	ug/L		94
93)	124Trimetben	14.44	105	2738875	36.9307	ug/L		96
94)	sbutylbenzen	14.69	105	3322638	36.9272	ug/L		92
95)	13Diclorbenz	14.83	146	1664172	37.4639	ug/L		94
96)	pIsopropylto	14.91	119	2922517	37.3959	ug/L		95
97)	14dichlorobe	14.96	146	1695779	36.8191	ug/L		96
98)	12dichlorobe	15.50	146	1559015	37.0221	ug/L		98
99)	nButylbenzen	15.50	91	2665570	37.7131	ug/L		93
100)	12dibromo3cl	16.59	157	201147	43.2692	ug/L		99
101)	135Trichlorobenzene	16.92	180	1084686	40.3121	ug/L		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL8.D Vial: 11
Acq On : 14 Jul 2021 15:17 Operator: DGS-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 15:38:27 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

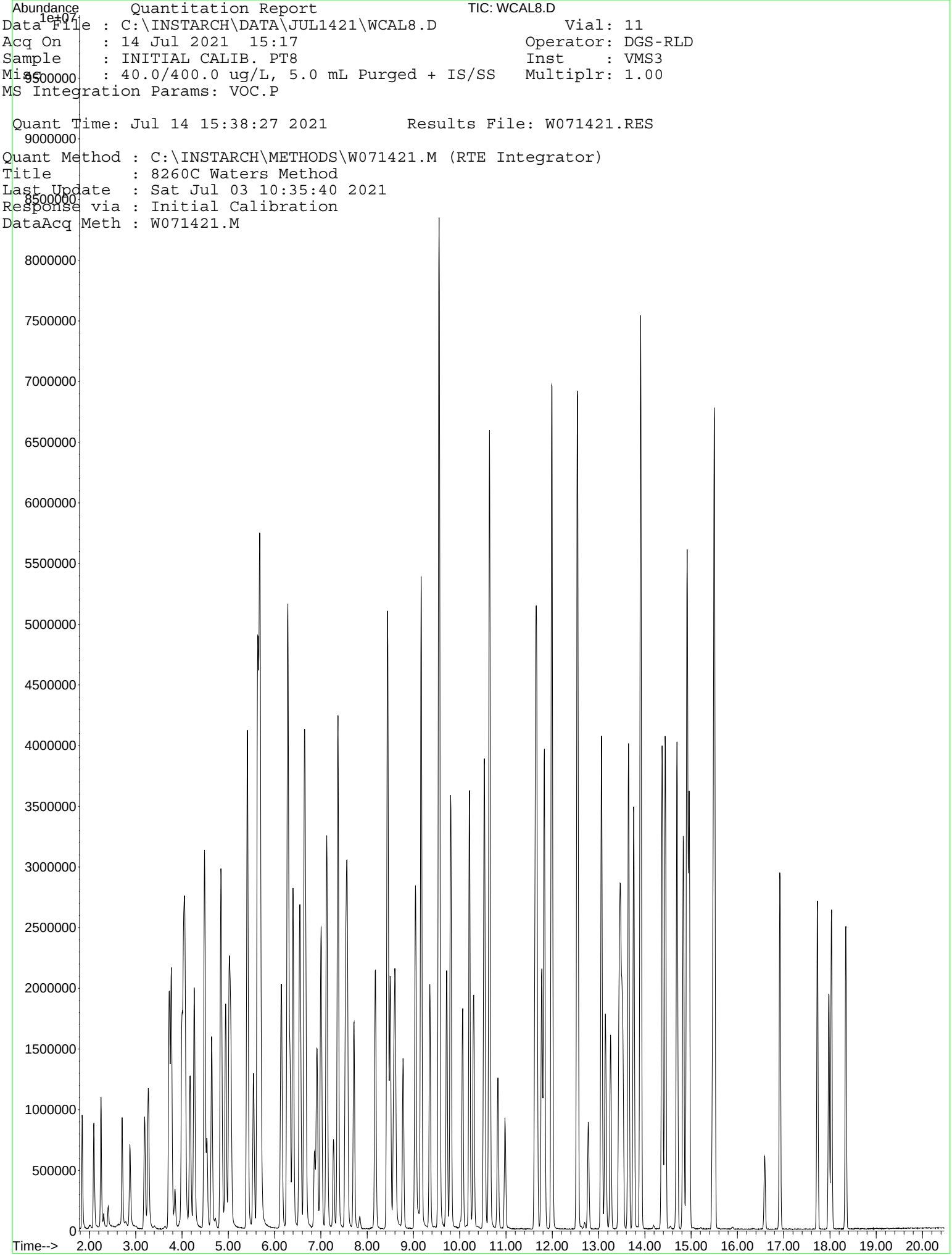
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	938722	39.8545	ug/L	98
103) Hexachlorobu	17.98	225	426847	44.1109	ug/L	98
104) Naphthalene	18.03	128	2240624	40.0611	ug/L	93
105) 123Trichlben	18.34	180	871105	40.2751	ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\JUL1421\WCAL8.D Vial: 11
Acq On : 14 Jul 2021 15:17 Operator: DGS-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 15:38:27 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL9.D Vial: 12
Acq On : 14 Jul 2021 15:47 Operator: DGS-RLD
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 16:08:18 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1776245	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1353932	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	771978	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	450849	19.923	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	128780	20.793	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 104	%		
61) SURRd8Tolule	9.72	98	1748918	19.031	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 95	%		
83) SURR4BrFBenz	13.26	95	722862	20.906	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 105	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	1400637	66.5964	ug/L	96
3) Chloromethan	2.09	50	1757472	74.9150	ug/L	94
4) VinylChlorid	2.25	62	1874064	64.0019	ug/L	96
5) Bromomethane	2.70	94	755380	37.6170	ug/L	98
6) Chloroethane	2.87	64	1326374	59.2569	ug/L	91
7) Dichloroflmethane	3.19	67	1940239	51.9450	ug/L	91
8) Trichlorofma	3.27	101	2123759	71.4505	ug/L	96
9) Ethylether	3.71	59	1376119	78.5069	ug/L	91
10) dichlorotfluoroethan	3.73	67	1568851	69.6035	ug/L	97
11) propyleneoxide	3.77	58	3296013	743.8804	ug/L	82
12) Acrolein	3.85	56	566145	484.4043	ug/L	95
13) 11dichlorthe	3.99	96	1413161	73.7654	ug/L	98
14) Trichlorotfluoroeth	4.04	101	2647254	155.5496	ug/L	97
15) Acetone	4.07	43	4108106	904.4934	ug/L	93
16) Iodomethane	4.18	142	3366810	141.6047	ug/L	90
17) Carbon Dislf	4.26	76	5715928	115.2677	ug/L	86
18) allylchloride	4.49	41	4072481	157.6504	ug/L	97
19) methylacetate	4.53	74	491759	83.8790	ug/L	92
20) Methylchlorid	4.64	84	1600537	75.7949	ug/L #	84
21) tbutylalcohol	4.85	59	6565597	3347.9427	ug/L	79
22) Acrylonitrile	4.94	53	3035038	407.5615	ug/L	96
23) t12dichlorte	5.02	96	1573853	72.5292	ug/L	96
24) MtBE	5.05	73	3857985	67.9735	ug/L	82
25) Hexane	5.41	57	4111996	152.4222	ug/L	90
26) 11dichlorota	5.54	63	2616995	69.5086	ug/L	95
27) Vinylacetate	5.64	43	12284390	367.2123	ug/L	73
28) chloroprene	5.68	53	4718357	163.0861	ug/L	97
29) Diisopether	5.69	45	4692954	84.3308	ug/L	95
30) ETBE	6.15	59	3917310	73.1686	ug/L	92
31) 22dichloropr	6.28	77	2081179	79.1472	ug/L	97
32) c12dichlorte	6.27	96	1761283	72.0653	ug/L	96
33) 2Butanone	6.29	72	2238302	723.8596	ug/L	90
34) propionitrile	6.34	54	2753495	843.7157	ug/L	93
35) Ethylacetate	6.40	88	433584	416.7322	ug/L #	90
36) methacrylonitrile	6.54	67	1652752	154.5357	ug/L #	80
37) Bromochlorma	6.57	128	838480	73.2809	ug/L #	82
38) Tetrahydofur	6.65	42	4695040	905.1176	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL9.D Vial: 12
Acq On : 14 Jul 2021 15:47 Operator: DGS-RLD
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 16:08:18 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.67	83	2648964	68.0773	ug/L		94
40)	111trichlota	6.91	97	2251164	75.5062	ug/L		96
42)	Cyclohexane	7.00	56	2698620	84.4841	ug/L		90
43)	Carbtetraclo	7.13	119	1907281	81.1144	ug/L		93
44)	11dicloprope	7.13	110	846940	78.4802	ug/L		91
46)	Benzene	7.37	78	4988236	55.9764	ug/L		81
47)	12dichlorota	7.37	62	2111262	71.4508	ug/L		95
48)	TAME	7.54	73	3898577	70.0237	ug/L		89
49)	trichloroete	8.18	95	1625810	72.6891	ug/L		94
50)	methylcyclohexane	8.44	83	3143758	73.8174	ug/L		88
51)	12dicloropra	8.43	63	1796123	76.5172	ug/L		96
52)	23Dicl1propene	8.50	75	2458652	73.5215	ug/L		93
53)	Dibromometha	8.57	93	1047006	75.3109	ug/L		95
54)	methylmethacrylate	8.60	69	1381215	83.4882	ug/L		95
55)	14dioxane	8.61	88	1256055	3984.0519	ug/L		89
56)	Bromodiclrma	8.78	83	2056513	72.6926	ug/L		97
57)	2Nitropropane	9.04	43	4491431	973.6423	ug/L		96
58)	2CLEVE	9.17	63	4511026	318.6606	ug/L		88
59)	c13dicloproe	9.35	75	2476331	74.7982	ug/L		93
60)	4Meth2Pentan	9.55	43	8325314	488.1007	ug/L		72
62)	Toluene	9.80	92	3617264	63.3441	ug/L	#	83
63)	t13Dicloprop	10.06	75	2248869	79.0896	ug/L		95
64)	ethylmethacrylate	10.21	69	3984285	141.5279	ug/L		80
65)	112Triclotha	10.30	83	1303376	74.8852	ug/L		97
66)	Tetrachlorte	10.54	166	1777946	75.9502	ug/L		96
67)	13Diclorpropa	10.52	76	2483221	68.5410	ug/L		92
69)	2Hexanone	10.64	43	7111657	579.1759	ug/L		83
70)	Clorodibrmta	10.83	129	1641501	80.7676	ug/L		98
71)	12Dibrometha	10.98	107	1531015	77.5089	ug/L		96
72)	Chlorobenzen	11.66	112	3783145	60.8906	ug/L		86
73)	1Clhexane	11.65	91	2236083	77.8812	ug/L		92
74)	1112Tetclota	11.77	131	1517056	82.0571	ug/L		95
75)	Ethylbenzene	11.83	91	5478755	56.5409	ug/L		82
76)	m p-Xylene	11.99	106	4786123	124.2011	ug/L	#	70
77)	o-Xylene	12.54	106	2752453	71.4384	ug/L	#	80
78)	Styrene	12.55	104	4160717	65.9588	ug/L		83
79)	Bromoform	12.78	173	1151398	91.2768	ug/L		97
80)	Isopropylben	13.06	105	5358524	58.3435	ug/L		82
81)	cyclohexanone	13.15	55	1978691	1921.8931	ug/L		93
84)	Bromobenzene	13.47	156	1834704	73.8081	ug/L		98
85)	1122Tetrclta	13.44	83	2054580	69.7568	ug/L		96
86)	123Triclproa	13.51	75	2704783	79.1634	ug/L		100
87)	14dichloro2butene	13.53	53	696185	100.0911	ug/L		92
88)	n-Propylbenz	13.65	91	5857374	53.4555	ug/L		77
89)	2chlorotolue	13.76	91	4242842	61.1699	ug/L		88
90)	4chlorotolue	13.91	91	4819237	60.4400	ug/L		85
91)	135Trimebenz	13.90	105	4823883	60.8347	ug/L		86
92)	tbutylbenzen	14.37	119	4328097	64.2318	ug/L		88
93)	124Trimetben	14.44	105	4750798	60.9573	ug/L		89
94)	sbutylbenzen	14.69	105	5514843	58.3230	ug/L		82
95)	13Diclorbenz	14.83	146	3081629	66.0144	ug/L		89
96)	pIsopropylto	14.91	119	4936735	60.1106	ug/L		85
97)	14dichlorobe	14.96	146	3167539	65.4440	ug/L		91
98)	12dichlorobe	15.50	146	2943980	66.5256	ug/L		95
99)	nButylbenzen	15.50	91	4557013	61.3516	ug/L		85
100)	12dibromo3cl	16.59	157	428553	87.7229	ug/L		97
101)	135Trichlorobenzene	16.92	180	2069589	73.1912	ug/L		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\WCAL9.D Vial: 12
Acq On : 14 Jul 2021 15:47 Operator: DGS-RLD
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 16:08:18 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	1814696	73.3141	ug/L	97
103) Hexachlorobu	17.98	225	859442	84.5150	ug/L	99
104) Naphthalene	18.03	128	3993514	67.9443	ug/L	87
105) 123Trichlben	18.34	180	1696800	74.6517	ug/L	98

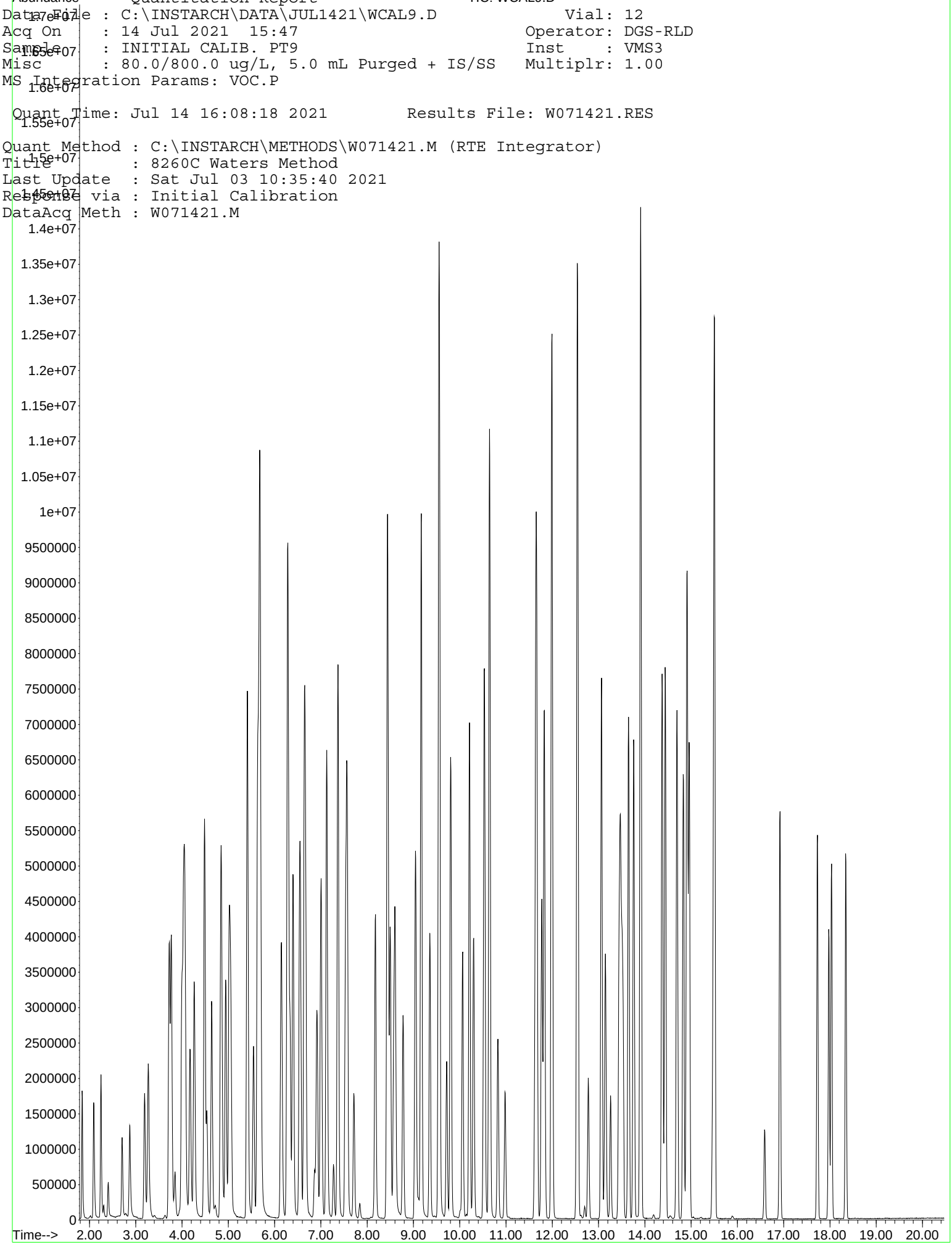
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL9.D

Data File : C:\INSTARCH\DATA\JUL1421\WCAL9.D Vial: 12
Acq On : 14 Jul 2021 15:47 Operator: DGS-RLD
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 16:08:18 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\JUL1421\ICV1.D Vial: 14
Acq On : 14 Jul 2021 16:46 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Jul 15 07:20:01 2021

Quant Method : C:\INSTARCH\METHODS\W071421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W071421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	105	0.00
2	PT	Dichlorodi	0.2216	0.2608	-17.69	105	0.00
3	PT	Chloromethan	0.3235	0.3338	-3.18	103	0.00
4	PT	VinylChlorid	0.3325	0.3605	-8.42	102	0.00
5	PT	Bromomethane	0.1989	0.2352	-18.25	123	0.00
6	PT	Chloroethane	0.2269	0.2457	-8.29	109	0.00
7	T	Dichloroflmethane	0.3290	0.3364	-2.25	103	0.00
8	PT	Trichlorofma	0.3200	0.3863	-20.72#	110	0.00
9	T	Ethylether	0.2015	0.2255	-11.91	116	0.00
10	T	dichlorotfluoroethan	0.2406	0.2562	-6.48	104	0.00
11	T	propyleneoxide	0.0548	0.0590	-7.66	108	0.00
12	T	Acrolein	0.0169	0.0183#	-8.28	113	0.00
13	PT	11dichlorthe	0.2034	0.2215	-8.90	106	0.00
14	PT	Trichlorotfluoroeth	0.1917	0.2211	-15.34	104	0.00
15	PT	Acetone	0.0772	0.0787#	-1.94	108	0.00
16	T	Iodomethane	0.2565	0.2441	4.83	92	0.00
17	PT	Carbon Dislf	0.5546	0.6181	-11.45	105	0.00
18	T	allylchloride	0.3487	0.3659	-4.93	105	0.00
19	PT	methylacetate	0.0699	0.0696#	0.43	105	0.00
20	PT	Methylchlorid	0.2895	0.2716	6.18	108	0.00
21	T	tbutylalcohol	0.0223	0.0278#	-24.66#	123	0.00
22	T	Acrylonitrile	0.0997	0.1083	-8.63	111	0.00
23	PT	t12dichlorte	0.2353	0.2529	-7.48	106	0.00
24	PT	MtBE	0.6155	0.6893	-11.99	114	0.00
25	T	Hexane	0.3111	0.3675	-18.13	104	0.00
26	PT	11dichlorota	0.4246	0.4523	-6.52	106	0.00
27	T	Vinylacetate	0.4028	0.4586	-13.85	110	0.00
28	T	chloroprene	0.3933	0.4433	-12.71	105	0.00
29	T	Diisopether	0.7778	0.8476	-8.97	109	0.00
30	T	ETBE	0.6091	0.6817	-11.92	115	0.00
31	T	22dichloropr	0.2791	0.2982	-6.84	110	0.00
32	PT	c12dichlorte	0.2681	0.2817	-5.07	110	0.00
33	PT	2Butanone	0.0341	0.0359#	-5.28	111	0.00
34	T	propionitrile	0.0436	0.0470	-7.80	113	0.00
35	T	Ethylacetate	0.0117	0.0129#	-10.26	115	0.00
36	T	methacrylonitrile	0.1211	0.1311	-8.26	114	0.00
37	T	Bromochlorma	0.1227	0.1253	-2.12	104	0.00
38	T	Tetrahydofur	0.0865	0.0924	-6.82	109	0.00
39	PT	Chloroform	0.4305	0.4563	-5.99	110	0.00
40	PT	111trichlota	0.3264	0.3618	-10.85	110	0.00
41	S	SURRDibrflma	0.2546	0.2522	0.94	104	0.00
42	PT	Cyclohexane	0.3771	0.4436	-17.63	106	0.00
43	PT	Carbtetraclo	0.2498	0.2841	-13.73	112	0.00
44	T	11dicloprope	0.1194	0.1316	-10.22	114	0.00
45	S	SURR12DCAd4	0.0727	0.0724	0.41	104	0.00
46	PT	Benzene	0.9677	1.0477	-8.27	107	0.00
47	PT	12dichlorota	0.3417	0.3535	-3.45	111	0.00
48	T	TAME	0.5865	0.6591	-12.38	114	0.00

49	PT	trichloroete	0.2499	0.2669	-6.80	111	0.00
50	PT	methylcyclohexane	0.4355	0.5129	-17.77	104	0.00
51	PT	12dicloropra	0.2654	0.2825	-6.44	108	0.00
52	T	23Dicl1propene	0.3729	0.3973	-6.54	108	0.00
53	T	Dibromometha	0.1544	0.1580	-2.33	112	0.00
54	T	methylmethacrylate	0.1856	0.2023	-9.00	116	0.00
55	T	14dioxane	0.0037	0.0039#	-5.41	111	0.00
56	PT	Bromodiclrma	0.3085	0.3217	-4.28	109	0.00
57	T	2Nitropropane	0.0631	0.0686	-8.72	108	0.00
58	T	2CLEVE	0.1585	0.1771	-11.74	109	0.00
59	PT	c13dicloproe	0.3610	0.3979	-10.22	111	0.00
60	PT	4Meth2Pentan	0.2280	0.2569	-12.68	112	0.00
61	S	SURRd8Tolule	0.9799	0.9897	-1.00	106	0.00
62	PT	Toluene	0.6287	0.6783	-7.89	108	0.00
63	PT	t13Dicloprop	0.3001	0.3339	-11.26	113	0.00
64	T	ethylmethacrylate	0.3069	0.3491	-13.75	115	0.00
65	PT	112Triclotha	0.1973	0.2009	-1.82	112	0.00
66	PT	Tetrachlorte	0.2594	0.2787	-7.44	107	0.00
67	T	13Diclorpropa	0.3923	0.4345	-10.76	116	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	107	0.00
69	PT	2Hexanone	0.2255	0.2555	-13.30	113	0.00
70	PT	Clorodibrmta	0.2907	0.3084	-6.09	115	0.00
71	PT	12Dibrometha	0.2875	0.3068	-6.71	110	0.00
72	PT	Chlorobenzen	0.8822	0.9388	-6.42	108	0.00
73	T	1Clhexane	0.4301	0.4813	-11.90	114	0.00
74	T	1112Tetclota	0.2675	0.2806	-4.90	112	0.00
75	PT	Ethylbenzene	1.4162	1.5844	-11.88	109	0.00
76	PT	m p-Xylene	0.5597	0.6287	-12.33	108	0.00
77	PT	o-Xylene	0.5567	0.5982	-7.45	108	0.00
78	PT	Styrene	0.9021	0.9948	-10.28	109	0.00
79	PT	Bromoform	0.1893	0.1899	-0.32	111	0.00
80	PT	Isopropylben	1.2945	1.5192	-17.36	111	0.00
81	T	cyclohexanone	0.0179	0.0190#	-6.15	116	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	102	0.00
83	S	SURR4BrFBenz	0.9330	0.9610	-3.00	106	0.00
84	T	Bromobenzene	0.6682	0.7184	-7.51	110	0.00
85	PT	1122Tetrclta	0.7696	0.8299	-7.84	109	0.00
86	T	123Triclproa	0.9193	0.9859	-7.24	114	0.00
87	T	14dichloro2butene	0.2044	0.2175	-6.41	111	0.00
88	T	n-Propylbenz	2.9473	3.4239	-16.17	112	0.00
89	T	2chlorotolue	1.8111	2.0216	-11.62	109	0.00
90	T	4chlorotolue	2.0568	2.3457	-14.05	108	0.00
91	T	135Trimebenz	2.0466	2.4036	-17.44	110	0.00
92	T	tbutylbenzen	1.7273	2.0950	-21.29#	111	0.00
93	T	124Trimetben	1.9813	2.3581	-19.02	110	0.00
94	T	sbutylbenzen	2.4653	2.9588	-20.02#	110	0.00
95	PT	13Diclorbenz	1.2191	1.3204	-8.31	108	0.00
96	T	pIsopropylto	2.0799	2.5164	-20.99#	110	0.00
97	PT	14dichlorobe	1.2734	1.3578	-6.63	107	0.00
98	PT	12dichlorobe	1.1694	1.2415	-6.17	105	0.00
99	T	nButylbenzen	1.8970	2.3261	-22.62#	112	0.00
100	PT	12dibromo3cl	0.1239	0.1364	-10.09	117	0.00
101	T	135Trichlorobenzene	0.7458	0.8207	-10.04	109	0.00
102	PT	124Trichlobe	0.6035	0.6929	-14.81	114	0.00
103	T	Hexachlorobu	0.2832	0.3164	-11.72	107	0.00
104	T	Naphthalene	1.2715	1.6865	-32.64#	117	0.00
105	T	123Trichlben	0.5486	0.6362	-15.97	110	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W071421.M Thu Jul 15 10:35:03 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\JUL1421\ICV1.D Vial: 14
Acq On : 14 Jul 2021 16:46 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Jul 15 07:20:01 2021

Quant Method : C:\INSTARCH\METHODS\W071421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W071421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	105	0.00
2	PT	Dichlorodi	10.0000	10.5939	-5.94	105	0.00
3	PT	Chloromethan	10.0000	10.3181	-3.18	103	0.00
4	PT	VinylChlorid	10.0000	10.8444	-8.44	102	0.00
5	PT	Bromomethane	10.0000	11.8249	-18.25	123	0.00
6	PT	Chloroethane	10.0000	10.8296	-8.30	109	0.00
7	T	Dichloroflmethane	10.0000	10.2227	-2.23	103	0.00
8	PT	Trichlorofma	10.0000	10.9702	-9.70	110	0.00
9	T	Ethylether	10.0000	11.1876	-11.88	116	0.00
10	T	dichlorotfluoroethan	10.0000	10.6518	-6.52	104	0.00
11	T	propyleneoxide	100.0000	107.5748	-7.57	108	0.00
12	T	Acrolein	50.0000	54.3617	-8.72	113	0.00
13	PT	11dichlorthe	10.0000	10.8871	-8.87	106	0.00
14	PT	Trichlorotfluoroeth	20.0000	20.4336	-2.17	104	0.00
15	PT	Acetone	100.0000	102.0326	-2.03	108	0.00
16	T	Iodomethane	20.0000	19.0297	4.85	92	0.00
17	PT	Carbon Dislf	20.0000	22.2904	-11.45	105	0.00
18	T	allylchloride	20.0000	20.9901	-4.95	105	0.00
19	PT	methylacetate	10.0000	9.9569	0.43	105	0.00
20	PT	Methylchlorid	10.0000	10.4963	-4.96	108	0.00
21	T	tbutylalcohol	500.0000	623.6067	-24.72#	123	0.00
22	T	Acrylonitrile	50.0000	54.3184	-8.64	111	0.00
23	PT	t12dichlorte	10.0000	10.7478	-7.48	106	0.00
24	PT	MtBE	10.0000	11.1991	-11.99	114	0.00
25	T	Hexane	20.0000	19.8041	0.98	104	0.00
26	PT	11dichlorota	10.0000	10.6503	-6.50	106	0.00
27	T	Vinylacetate	100.0000	112.1267	-12.13	110	0.00
28	T	chloroprene	20.0000	22.5447	-12.72	105	0.00
29	T	Diisopether	10.0000	10.8980	-8.98	109	0.00
30	T	ETBE	10.0000	11.1925	-11.93	115	0.00
31	T	22dichloropr	10.0000	10.6823	-6.82	110	0.00
32	PT	c12dichlorte	10.0000	10.5047	-5.05	110	0.00
33	PT	2Butanone	100.0000	105.2769	-5.28	111	0.00
34	T	propionitrile	100.0000	107.9205	-7.92	113	0.00
35	T	Ethylacetate	50.0000	55.0510	-10.10	115	0.00
36	T	methacrylonitrile	20.0000	21.6489	-8.24	114	0.00
37	T	Bromochlorma	10.0000	10.2148	-2.15	104	0.00
38	T	Tetrahydofur	100.0000	106.7757	-6.78	109	0.00
39	PT	Chloroform	10.0000	10.5998	-6.00	110	0.00
40	PT	111trichlota	10.0000	11.0841	-10.84	110	0.00
41	S	SURRDibrflma	20.0000	19.8123	0.94	104	0.00
42	PT	Cyclohexane	10.0000	10.1259	-1.26	106	0.00
43	PT	Carbtetraclo	10.0000	10.2818	-2.82	112	0.00
44	T	11dicloprope	10.0000	11.0199	-10.20	114	0.00
45	S	SURR12DCAd4	20.0000	19.9078	0.46	104	0.00
46	PT	Benzene	10.0000	10.8258	-8.26	107	0.00
47	PT	12dichlorota	10.0000	10.3474	-3.47	111	0.00
48	T	TAME	10.0000	11.2394	-12.39	114	0.00

49	PT	trichloroete	10.0000	10.6812	-6.81	111	0.00
50	PT	methylcyclohexane	10.0000	9.9923	0.08	104	0.00
51	PT	12dicloropra	10.0000	10.6464	-6.46	108	0.00
52	T	23Dicl1propene	10.0000	10.6553	-6.55	108	0.00
53	T	Dibromometha	10.0000	10.2367	-2.37	112	0.00
54	T	methylmethacrylate	10.0000	10.9003	-9.00	116	0.00
55	T	14dioxane	500.0000	525.4833	-5.10	111	0.00
56	PT	Bromodiclrma	10.0000	10.4269	-4.27	109	0.00
57	T	2Nitropropane	100.0000	108.7637	-8.76	108	0.00
58	T	2CLEVE	50.0000	55.8623	-11.72	109	0.00
59	PT	c13dicloproe	10.0000	11.0222	-10.22	111	0.00
60	PT	4Meth2Pentan	100.0000	112.6856	-12.69	112	0.00
61	S	SURRd8Tolule	20.0000	20.1982	-0.99	106	0.00
62	PT	Toluene	10.0000	10.7890	-7.89	108	0.00
63	PT	t13Dicloprop	10.0000	11.1290	-11.29	113	0.00
64	T	ethylmethacrylate	20.0000	22.7475	-13.74	115	0.00
65	PT	112Triclotha	10.0000	10.1814	-1.81	112	0.00
66	PT	Tetrachlorte	10.0000	10.7467	-7.47	107	0.00
67	T	13Diclorpropa	10.0000	11.0738	-10.74	116	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	107	0.00
69	PT	2Hexanone	100.0000	113.2838	-13.28	113	0.00
70	PT	Clorodibrmta	10.0000	10.6088	-6.09	115	0.00
71	PT	12Dibrometha	10.0000	10.6737	-6.74	110	0.00
72	PT	Chlorobenzen	10.0000	10.6414	-6.41	108	0.00
73	T	1Clhexane	10.0000	11.1888	-11.89	114	0.00
74	T	1112Tetclota	10.0000	10.4892	-4.89	112	0.00
75	PT	Ethylbenzene	10.0000	11.1872	-11.87	109	0.00
76	PT	m p-Xylene	20.0000	22.4662	-12.33	108	0.00
77	PT	o-Xylene	10.0000	10.7454	-7.45	108	0.00
78	PT	Styrene	10.0000	11.0283	-10.28	109	0.00
79	PT	Bromoform	10.0000	10.0347	-0.35	111	0.00
80	PT	Isopropylben	10.0000	11.7357	-17.36	111	0.00
81	T	cyclohexanone	200.0000	213.0765	-6.54	116	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	102	0.00
83	S	SURR4BrFBenz	20.0000	20.6009	-3.00	106	0.00
84	T	Bromobenzene	10.0000	10.7504	-7.50	110	0.00
85	PT	1122Tetrclta	10.0000	10.7839	-7.84	109	0.00
86	T	123Triclproa	10.0000	10.7242	-7.24	114	0.00
87	T	14dichloro2butene	10.0000	10.6441	-6.44	111	0.00
88	T	n-Propylbenz	10.0000	11.6173	-16.17	112	0.00
89	T	2chlorotolue	10.0000	11.1625	-11.62	109	0.00
90	T	4chlorotolue	10.0000	11.4049	-14.05	108	0.00
91	T	135Trimebenz	10.0000	11.7445	-17.45	110	0.00
92	T	tbutylbenzen	10.0000	12.1287	-21.29#	111	0.00
93	T	124Trimetben	10.0000	11.9018	-19.02	110	0.00
94	T	sbutylbenzen	10.0000	12.0017	-20.02#	110	0.00
95	PT	13Diclorbenz	10.0000	10.8306	-8.31	108	0.00
96	T	pIsopropylto	10.0000	12.0990	-20.99#	110	0.00
97	PT	14dichlorobe	10.0000	10.6625	-6.62	107	0.00
98	PT	12dichlorobe	10.0000	10.6166	-6.17	105	0.00
99	T	nButylbenzen	10.0000	12.2623	-22.62#	112	0.00
100	PT	12dibromo3cl	10.0000	11.0150	-10.15	117	0.00
101	T	135Trichlorobenzene	10.0000	11.0047	-10.05	109	0.00
102	PT	124Trichlobe	10.0000	11.4806	-14.81	114	0.00
103	T	Hexachlorobu	10.0000	11.1727	-11.73	107	0.00
104	T	Naphthalene	10.0000	10.5581	-5.58	117	0.00
105	T	123Trichlben	10.0000	11.5956	-15.96	110	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W071421.M Thu Jul 15 10:35:27 2021

Quantitation Report

Data File : C:\Instarch\Data\JUL1421\ICV1.D Vial: 14
Acq On : 14 Jul 2021 16:46 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:20:01 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1581680	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1220338	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	643090	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	398864	19.812	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	114459	19.908	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100 %			
61) SURRd8Tolule	9.72	98	1565323	20.198	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.26	95	618016	20.601	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 103 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	206273	10.5939	ug/L	98
3) Chloromethan	2.09	50	263984	10.3181	ug/L	98
4) VinylChlorid	2.25	62	285121	10.8444	ug/L	95
5) Bromomethane	2.70	94	185997	11.8249	ug/L	98
6) Chloroethane	2.87	64	194321	10.8296	ug/L	99
7) Dichloroflmethane	3.19	67	266013	10.2227	ug/L	99
8) Trichlorofma	3.27	101	305476	10.9702	ug/L	97
9) Ethylether	3.71	59	178322	11.1876	ug/L	98
10) dichlorotfluoroethan	3.73	67	202638	10.6518	ug/L	98
11) propyleneoxide	3.77	58	466622	107.5748	ug/L	98
12) Acrolein	3.85	56	72548	54.3617	ug/L	97
13) 11dichlorthe	3.99	96	175142	10.8871	ug/L	96
14) Trichlorotfluoroeth	4.04	101	349750	20.4336	ug/L	98
15) Acetone	4.07	43	622776	102.0326	ug/L	99
16) Iodomethane	4.17	142	386019	19.0297	ug/L	96
17) Carbon Dislf	4.26	76	977681	22.2904	ug/L	100
18) allylchloride	4.49	41	578797	20.9901	ug/L	99
19) methylacetate	4.53	74	55011	9.9569	ug/L	93
20) Methylchlorid	4.64	84	214823	10.4963	ug/L	100
21) tbutylalcohol	4.84	59	1098888	623.6067	ug/L	97
22) Acrylonitrile	4.94	53	428386	54.3184	ug/L	98
23) t12dichlorte	5.02	96	200009	10.7478	ug/L	97
24) MtBE	5.05	73	545147	11.1991	ug/L	99
25) Hexane	5.41	57	581331	19.8041	ug/L	99
26) 11dichlorota	5.54	63	357665	10.6503	ug/L	99
27) Vinylacetate	5.64	43	3626672	112.1267	ug/L	98
28) chloroprene	5.67	53	701223	22.5447	ug/L	100
29) Diisopether	5.69	45	670342	10.8980	ug/L	96
30) ETBE	6.15	59	539120	11.1925	ug/L	99
31) 22dichloropr	6.28	77	235807	10.6823	ug/L	99
32) c12dichlorte	6.27	96	222741	10.5047	ug/L	98
33) 2Butanone	6.29	72	284187	105.2769	ug/L	99
34) propionitrile	6.33	54	371872	107.9205	ug/L	97
35) Ethylacetate	6.40	88	51048	55.0510	ug/L	93
36) methacrylonitrile	6.54	67	207302	21.6489	ug/L	95
37) Bromochlorma	6.56	128	99096	10.2148	ug/L	93
38) Tetrahydofur	6.65	42	730493	106.7757	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL1421\ICV1.D Vial: 14
Acq On : 14 Jul 2021 16:46 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:20:01 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	360869	10.5998	ug/L	98
40)	111trichlota	6.91	97	286087	11.0841	ug/L	99
42)	Cyclohexane	7.00	56	350781	10.1259	ug/L	98
43)	Carbtetraclo	7.13	119	224701	10.2818	ug/L	98
44)	11dicloprope	7.13	110	104081	11.0199	ug/L	97
46)	Benzene	7.37	78	828535	10.8258	ug/L	99
47)	12dichlorota	7.36	62	279581	10.3474	ug/L	97
48)	TAME	7.54	73	521281	11.2394	ug/L	95
49)	trichloroete	8.17	95	211069	10.6812	ug/L	97
50)	methylcyclohexane	8.44	83	405625	9.9923	ug/L	99
51)	12dicloropra	8.44	63	223440	10.6464	ug/L	99
52)	23Dicl1propene	8.50	75	314205	10.6553	ug/L	100
53)	Dibromometha	8.57	93	124988	10.2367	ug/L	97
54)	methylmethacrylate	8.60	69	160019	10.9003	ug/L	98
55)	14dioxane	8.62	88	153730	525.4833	ug/L	98
56)	Bromodiclrma	8.78	83	254409	10.4269	ug/L	100
57)	2Nitropropane	9.04	43	542638	108.7637	ug/L	98
58)	2CLEVE	9.16	63	700338	55.8623	ug/L	100
59)	c13dicloproe	9.35	75	314691	11.0222	ug/L	99
60)	4Meth2Pentan	9.55	43	2031989	112.6856	ug/L	98
62)	Toluene	9.80	92	536464	10.7890	ug/L	99
63)	t13Dicloprop	10.06	75	264094	11.1290	ug/L	99
64)	ethylmethacrylate	10.21	69	552138	22.7475	ug/L	99
65)	112Triclotha	10.30	83	158883	10.1814	ug/L	98
66)	Tetrachlorte	10.54	166	220442	10.7467	ug/L	99
67)	13Diclorpropa	10.52	76	343581	11.0738	ug/L	98
69)	2Hexanone	10.64	43	1558879	113.2838	ug/L	99
70)	Clorodibrmta	10.82	129	188201	10.6088	ug/L	99
71)	12Dibrometha	10.98	107	187227	10.6737	ug/L	99
72)	Chlorobenzen	11.66	112	572834	10.6414	ug/L	99
73)	1Clhexane	11.65	91	293663	11.1888	ug/L	97
74)	1112Tetclota	11.77	131	171205	10.4892	ug/L	98
75)	Ethylbenzene	11.83	91	966735	11.1872	ug/L	98
76)	m p-Xylene	11.99	106	767198	22.4662	ug/L	99
77)	o-Xylene	12.54	106	364994	10.7454	ug/L	98
78)	Styrene	12.55	104	607002	11.0283	ug/L	100
79)	Bromoform	12.78	173	115885	10.0347	ug/L	97
80)	Isopropylben	13.06	105	926990	11.7357	ug/L	100
81)	cyclohexanone	13.15	55	232286	213.0765	ug/L	99
84)	Bromobenzene	13.47	156	230983	10.7504	ug/L	99
85)	1122Tetrclta	13.44	83	266864	10.7839	ug/L	99
86)	123Triclproa	13.50	75	317008	10.7242	ug/L	100
87)	14dichloro2butene	13.53	53	69952	10.6441	ug/L	98
88)	n-Propylbenz	13.65	91	1100954	11.6173	ug/L	99
89)	2chlorotolue	13.76	91	650034	11.1625	ug/L	100
90)	4chlorotolue	13.91	91	754255	11.4049	ug/L	99
91)	135Trimebenz	13.90	105	772877	11.7445	ug/L	99
92)	tbutylbenzen	14.37	119	673624	12.1287	ug/L	98
93)	124Trimetben	14.44	105	758243	11.9018	ug/L	100
94)	sbutylbenzen	14.69	105	951398	12.0017	ug/L	100
95)	13Diclorbenz	14.83	146	424570	10.8306	ug/L	100
96)	pIsopropylto	14.91	119	809151	12.0990	ug/L	99
97)	14dichlorobe	14.96	146	436579	10.6625	ug/L	99
98)	12dichlorobe	15.50	146	399212	10.6166	ug/L	98
99)	nButylbenzen	15.50	91	747954	12.2623	ug/L	99
100)	12dibromo3cl	16.59	157	43868	11.0150	ug/L	97
101)	135Trichlorobenzene	16.92	180	263885	11.0047	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

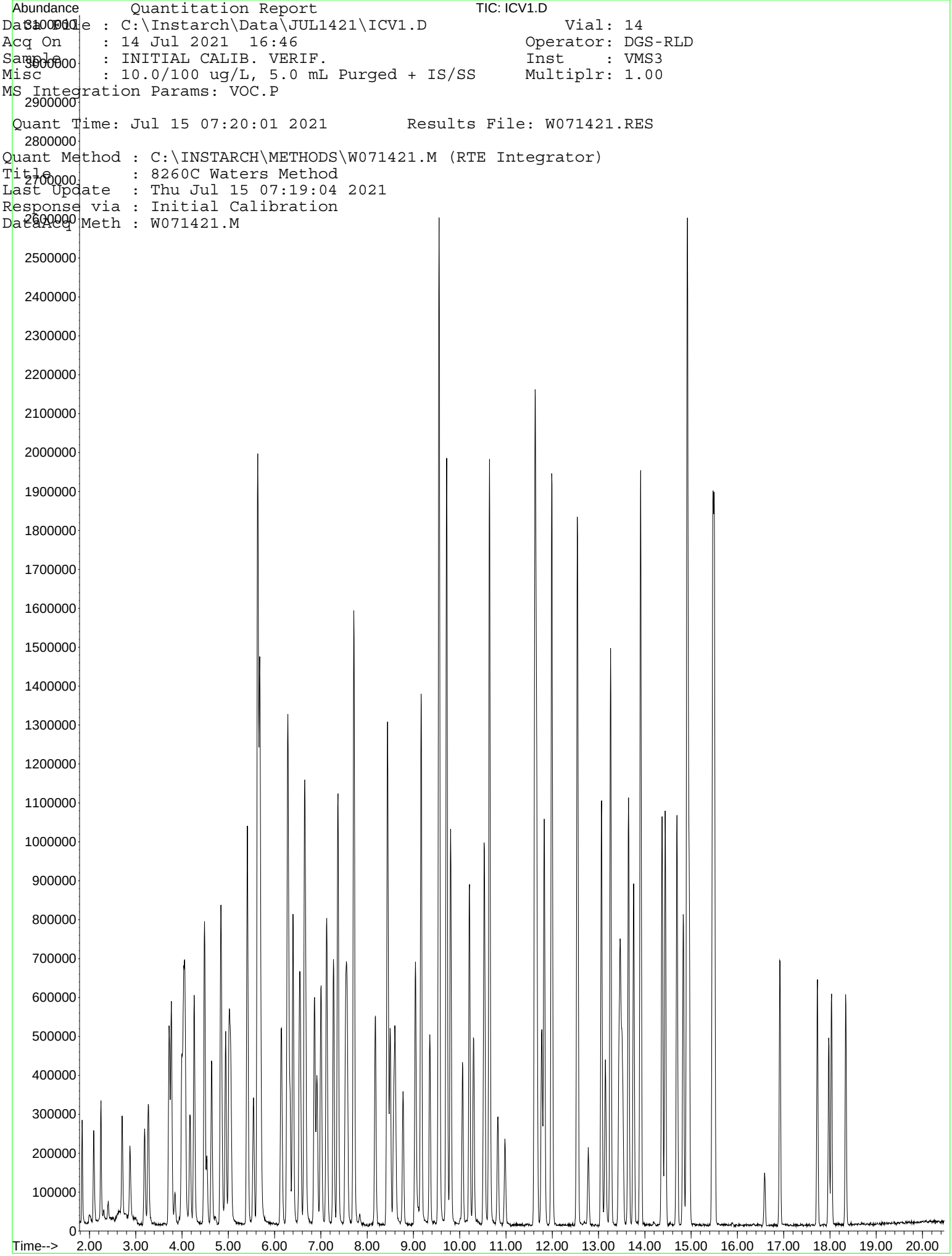
Data File : C:\Instarch\Data\JUL1421\ICV1.D Vial: 14
Acq On : 14 Jul 2021 16:46 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:20:01 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	222796	11.4806	ug/L	98
103) Hexachlorobu	17.97	225	101752	11.1727	ug/L	95
104) Naphthalene	18.03	128	542291	10.5581	ug/L	98
105) 123Trichlben	18.34	180	204559	11.5956	ug/L	94

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: ICV1.D
Data File : C:\Instarch\Data\JUL1421\ICV1.D
Vial: 14
Acq On : 14 Jul 2021 16:46
Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF.
Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Jul 15 07:20:01 2021
Results File: W071421.RES
Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
Time-->

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\JUL1421\ICV2.D Vial: 15
Acq On : 14 Jul 2021 17:16 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Jul 15 07:22:42 2021

Quant Method : C:\INSTARCH\METHODS\W071421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W071421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	102	0.00
2	PT	Dichlorodi	30.0000	32.4514	-8.17	108	0.00
3	PT	Chloromethan	30.0000	28.6804	4.40	105	0.00
4	PT	VinylChlorid	30.0000	29.8525	0.49	103	0.00
5	PT	Bromomethane	30.0000	27.8705	7.10	109	0.00
6	PT	Chloroethane	30.0000	29.7666	0.78	108	0.00
7	T	Dichloroflmethane	30.0000	27.9691	6.77	98	0.00
8	PT	Trichlorofma	30.0000	32.7285	-9.09	110	0.00
9	T	Ethylether	30.0000	30.6591	-2.20	102	0.00
10	T	dichlorotfluoroethan	30.0000	30.6697	-2.23	103	0.00
11	T	propyleneoxide	300.0000	293.6295	2.12	99	0.00
12	T	Acrolein	150.0000	155.6208	-3.75	105	0.00
13	PT	11dichlorthe	30.0000	32.8621	-9.54	106	0.00
14	PT	Trichlorotfluoroeth	60.0000	62.0183	-3.36	106	0.00
15	PT	Acetone	300.0000	262.2066	12.60	94	0.00
16	T	Iodomethane	60.0000	61.8186	-3.03	99	0.00
17	PT	Carbon Dislf	60.0000	58.6315	2.28	105	0.00
18	T	allylchloride	60.0000	58.6128	2.31	101	0.00
19	PT	methylacetate	30.0000	30.9443	-3.15	103	0.00
20	PT	Methylchlorid	30.0000	30.4878	-1.63	102	0.00
21	T	tbutylalcohol	1500.0000	1627.4530	-8.50	102	0.00
22	T	Acrylonitrile	150.0000	146.1762	2.55	98	0.00
23	PT	t12dichlorte	30.0000	31.1590	-3.86	104	0.00
24	PT	MtBE	30.0000	30.6782	-2.26	103	0.00
25	T	Hexane	60.0000	60.4859	-0.81	103	0.00
26	PT	11dichlorota	30.0000	30.0137	-0.05	104	0.00
27	T	Vinylacetate	300.0000	297.4095	0.86	105	0.00
28	T	chloroprene	60.0000	63.8856	-6.48	104	0.00
29	T	Diisopether	30.0000	30.2259	-0.75	102	0.00
30	T	ETBE	30.0000	31.4503	-4.83	105	0.00
31	T	22dichloropr	30.0000	32.9602	-9.87	103	0.00
32	PT	c12dichlorte	30.0000	30.0827	-0.28	102	0.00
33	PT	2Butanone	300.0000	301.4627	-0.49	99	0.00
34	T	propionitrile	300.0000	302.2463	-0.75	99	0.00
35	T	Ethylacetate	150.0000	160.5331	-7.02	106	0.00
36	T	methacrylonitrile	60.0000	61.4012	-2.34	100	0.00
37	T	Bromochlorma	30.0000	29.9335	0.22	101	0.00
38	T	Tetrahydofur	300.0000	285.0168	4.99	99	0.00
39	PT	Chloroform	30.0000	29.6739	1.09	103	0.00
40	PT	111trichlota	30.0000	33.3404	-11.13	106	0.00
41	S	SURRDibrflma	20.0000	19.9422	0.29	101	0.00
42	PT	Cyclohexane	30.0000	31.6959	-5.65	107	0.00
43	PT	Carbtetraclo	30.0000	31.3412	-4.47	106	0.00
44	T	11dicloprope	30.0000	32.8294	-9.43	107	0.00
45	S	SURR12DCAd4	20.0000	19.7889	1.06	101	0.00
46	PT	Benzene	30.0000	28.3687	5.44	102	0.00
47	PT	12dichlorota	30.0000	29.0256	3.25	104	0.00
48	T	TAME	30.0000	32.1457	-7.15	103	0.00

49	PT	trichloroete	30.0000	30.7640	-2.55	104	0.00
50	PT	methylcyclohexane	30.0000	31.5224	-5.07	106	0.00
51	PT	12dicloropra	30.0000	30.8795	-2.93	102	0.00
52	T	23Dicl1propene	30.0000	30.4131	-1.38	101	0.00
53	T	Dibromometha	30.0000	29.9344	0.22	103	0.00
54	T	methylmethacrylate	30.0000	33.2584	-10.86	104	0.00
55	T	14dioxane	1500.0000	1474.3407	1.71	97	0.00
56	PT	Bromodiclrma	30.0000	30.8975	-2.99	105	0.00
57	T	2Nitropropane	300.0000	344.0126	-14.67	99	0.00
58	T	2CLEVE	150.0000	149.1006	0.60	100	0.00
59	PT	c13dicloproe	30.0000	32.4795	-8.27	104	0.00
60	PT	4Meth2Pentan	300.0000	251.7957	16.07	99	0.00
61	S	SURRd8Tolule	20.0000	20.0091	-0.05	103	0.00
62	PT	Toluene	30.0000	29.7280	0.91	104	0.00
63	PT	t13Dicloprop	30.0000	33.5826	-11.94	103	0.00
64	T	ethylmethacrylate	60.0000	64.3922	-7.32	100	0.00
65	PT	112Triclotha	30.0000	29.6175	1.28	103	0.00
66	PT	Tetrachlorte	30.0000	32.6899	-8.97	106	0.00
67	T	13Diclorpropa	30.0000	30.5258	-1.75	105	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	102	0.00
69	PT	2Hexanone	300.0000	272.6625	9.11	100	0.00
70	PT	Clorodibrmta	30.0000	32.7147	-9.05	103	0.00
71	PT	12Dibrometha	30.0000	32.1832	-7.28	104	0.00
72	PT	Chlorobenzen	30.0000	29.2528	2.49	103	0.00
73	T	1Clhexane	30.0000	33.2258	-10.75	106	0.00
74	T	1112Tetclota	30.0000	32.3807	-7.94	104	0.00
75	PT	Ethylbenzene	30.0000	29.7514	0.83	104	0.00
76	PT	m p-Xylene	60.0000	61.4583	-2.43	104	0.00
77	PT	o-Xylene	30.0000	31.7064	-5.69	103	0.00
78	PT	Styrene	30.0000	31.3873	-4.62	103	0.00
79	PT	Bromoform	30.0000	32.4024	-8.01	101	0.00
80	PT	Isopropylben	30.0000	31.7295	-5.77	104	0.00
81	T	cyclohexanone	600.0000	572.5979	4.57	85	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	101	0.00
83	S	SURR4BrFBenz	20.0000	19.5955	2.02	101	0.00
84	T	Bromobenzene	30.0000	29.5888	1.37	104	0.00
85	PT	1122Tetrclta	30.0000	29.8100	0.63	102	0.00
86	T	123Triclproa	30.0000	30.1665	-0.55	101	0.00
87	T	14dichloro2butene	30.0000	31.8640	-6.21	100	0.00
88	T	n-Propylbenz	30.0000	28.2731	5.76	105	0.00
89	T	2chlorotolue	30.0000	29.2086	2.64	102	0.00
90	T	4chlorotolue	30.0000	29.6364	1.21	103	0.00
91	T	135Trimebenz	30.0000	30.5312	-1.77	104	0.00
92	T	tbutylbenzen	30.0000	31.7610	-5.87	105	0.00
93	T	124Trimetben	30.0000	30.8681	-2.89	104	0.00
94	T	sbutylbenzen	30.0000	30.4133	-1.38	104	0.00
95	PT	13Diclorbenz	30.0000	29.2699	2.43	102	0.00
96	T	pIsopropylto	30.0000	31.4070	-4.69	104	0.00
97	PT	14dichlorobe	30.0000	28.6383	4.54	102	0.00
98	PT	12dichlorobe	30.0000	28.4106	5.30	101	0.00
99	T	nButylbenzen	30.0000	31.6797	-5.60	106	0.00
100	PT	12dibromo3cl	30.0000	34.2161	-14.05	105	0.00
101	T	135Trichlorobenzene	30.0000	30.5968	-1.99	102	0.00
102	PT	124Trichlobe	30.0000	32.7414	-9.14	103	0.00
103	T	Hexachlorobu	30.0000	32.9820	-9.94	107	0.00
104	T	Naphthalene	30.0000	30.7332	-2.44	101	0.00
105	T	123Trichlben	30.0000	33.4930	-11.64	103	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W071421.M Thu Jul 15 10:37:57 2021

Quantitation Report

Data File : C:\Instarch\Data\JUL1421\ICV2.D Vial: 15
Acq On : 14 Jul 2021 17:16 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:22:42 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1683438	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1272379	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	716450	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.87	113	427309	19.942	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.28	102	121095	19.789	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 99	%		
61) SURRd8Tolule	9.72	98	1650430	20.009	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.26	95	654913	19.595	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	626243	32.4514	ug/L	99
3) Chloromethan	2.09	50	780981	28.6804	ug/L	100
4) VinylChlorid	2.25	62	835379	29.8525	ug/L	97
5) Bromomethane	2.70	94	466586	27.8705	ug/L	98
6) Chloroethane	2.87	64	568481	29.7666	ug/L	97
7) Dichloroflmethane	3.19	67	774632	27.9691	ug/L	99
8) Trichlorofma	3.27	101	923103	32.7285	ug/L	96
9) Ethylether	3.72	59	520121	30.6591	ug/L	97
10) dichlorotfluoroethan	3.73	67	620991	30.6697	ug/L	99
11) propyleneoxide	3.77	58	1355604	293.6295	ug/L	96
12) Acrolein	3.85	56	221044	155.6208	ug/L	98
13) 11dichlorthe	3.99	96	562670	32.8621	ug/L	97
14) Trichlorotfluoroeth	4.04	101	1087180	62.0183	ug/L	97
15) Acetone	4.07	43	1703394	262.2066	ug/L	98
16) Iodomethane	4.18	142	1334672	61.8186	ug/L	95
17) Carbon Dislf	4.26	76	2737085	58.6315	ug/L	96
18) allylchloride	4.49	41	1720212	58.6128	ug/L	98
19) methylacetate	4.53	74	181964	30.9443	ug/L	96
20) Methylchlorid	4.64	84	626695	30.4878	ug/L	100
21) tbutylalcohol	4.84	59	3052317	1627.4530	ug/L	98
22) Acrylonitrile	4.94	53	1226996	146.1762	ug/L	99
23) t12dichlorte	5.02	96	617155	31.1590	ug/L	98
24) MtBE	5.05	73	1589420	30.6782	ug/L	97
25) Hexane	5.41	57	1800575	60.4859	ug/L	97
26) 11dichlorota	5.54	63	1072785	30.0137	ug/L	98
27) Vinylacetate	5.64	43	7832911	297.4095	ug/L	85
28) chloroprene	5.67	53	2114917	63.8856	ug/L	95
29) Diisopether	5.69	45	1978819	30.2259	ug/L	100
30) ETBE	6.15	59	1612357	31.4503	ug/L	97
31) 22dichloropr	6.28	77	774388	32.9602	ug/L	98
32) c12dichlorte	6.27	96	678910	30.0827	ug/L	98
33) 2Butanone	6.29	72	866130	301.4627	ug/L	97
34) propionitrile	6.33	54	1108483	302.2463	ug/L	98
35) Ethylacetate	6.40	88	158437	160.5331	ug/L	95
36) methacrylonitrile	6.54	67	625783	61.4012	ug/L	96
37) Bromochlorma	6.56	128	309074	29.9335	ug/L	94
38) Tetrahydofur	6.65	42	2075355	285.0168	ug/L	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL1421\ICV2.D Vial: 15
Acq On : 14 Jul 2021 17:16 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:22:42 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	1075239	29.6739	ug/L	98
40)	111trichlota	6.92	97	915894	33.3404	ug/L	97
42)	Cyclohexane	7.00	56	1134542	31.6959	ug/L	98
43)	Carbtetraclo	7.13	119	734078	31.3412	ug/L	96
44)	11dicloprope	7.12	110	330015	32.8294	ug/L	96
46)	Benzene	7.37	78	2310834	28.3687	ug/L	96
47)	12dichlorota	7.37	62	834709	29.0256	ug/L	98
48)	TAME	7.54	73	1586833	32.1457	ug/L	94
49)	trichloroete	8.17	95	647034	30.7640	ug/L	98
50)	methylcyclohexane	8.44	83	1324018	31.5224	ug/L	98
51)	12dicloropra	8.43	63	689776	30.8795	ug/L	100
52)	23Dicl1propene	8.50	75	954522	30.4131	ug/L	98
53)	Dibromometha	8.57	93	389007	29.9344	ug/L	99
54)	methylmethacrylate	8.60	69	519652	33.2584	ug/L	100
55)	14dioxane	8.61	88	459067	1474.3407	ug/L	96
56)	Bromodiclrma	8.78	83	802378	30.8975	ug/L	99
57)	2Nitropropane	9.04	43	1826750	344.0126	ug/L	98
58)	2CLEVE	9.16	63	1989512	149.1006	ug/L	94
59)	c13dicloproe	9.35	75	986968	32.4795	ug/L	97
60)	4Meth2Pentan	9.55	43	4832588	251.7957	ug/L	86
62)	Toluene	9.80	92	1573268	29.7280	ug/L	94
63)	t13Dicloprop	10.06	75	848191	33.5826	ug/L	97
64)	ethylmethacrylate	10.21	69	1663510	64.3922	ug/L	98
65)	112Triclotha	10.30	83	491923	29.6175	ug/L	97
66)	Tetrachlorte	10.53	166	713691	32.6899	ug/L	99
67)	13Diclorpropa	10.52	76	1008043	30.5258	ug/L	99
69)	2Hexanone	10.64	43	3912069	272.6625	ug/L	90
70)	Clorodibrmta	10.83	129	605110	32.7147	ug/L	98
71)	12Dibrometha	10.98	107	588599	32.1832	ug/L	100
72)	Chlorobenzen	11.66	112	1641853	29.2528	ug/L	99
73)	1Clhexane	11.65	91	909235	33.2258	ug/L	95
74)	1112Tetclota	11.77	131	551055	32.3807	ug/L	99
75)	Ethylbenzene	11.83	91	2680592	29.7514	ug/L	92
76)	m p-Xylene	11.99	106	2188244	61.4583	ug/L	90
77)	o-Xylene	12.53	106	1122910	31.7064	ug/L	91
78)	Styrene	12.55	104	1801250	31.3873	ug/L	97
79)	Bromoform	12.78	173	390154	32.4024	ug/L	98
80)	Isopropylben	13.06	105	2613153	31.7295	ug/L	94
81)	cyclohexanone	13.14	55	650839	572.5979	ug/L	97
84)	Bromobenzene	13.47	156	708265	29.5888	ug/L	99
85)	1122Tetrclta	13.44	83	821849	29.8100	ug/L	98
86)	123Triclproa	13.50	75	993450	30.1665	ug/L	99
87)	14dichloro2butene	13.53	53	233296	31.8640	ug/L	90
88)	n-Propylbenz	13.65	91	2985042	28.2731	ug/L	93
89)	2chlorotolue	13.76	91	1894968	29.2086	ug/L	97
90)	4chlorotolue	13.91	91	2183561	29.6364	ug/L	97
91)	135Trimebenz	13.90	105	2238389	30.5312	ug/L	97
92)	tbutylbenzen	14.37	119	1965223	31.7610	ug/L	94
93)	124Trimetben	14.44	105	2190898	30.8681	ug/L	96
94)	sbutylbenzen	14.69	105	2685948	30.4133	ug/L	95
95)	13Diclorbenz	14.83	146	1278296	29.2699	ug/L	98
96)	pIsopropylto	14.91	119	2340028	31.4070	ug/L	95
97)	14dichlorobe	14.96	146	1306365	28.6383	ug/L	98
98)	12dichlorobe	15.50	146	1190181	28.4106	ug/L	97
99)	nButylbenzen	15.50	91	2152778	31.6797	ug/L	94
100)	12dibromo3cl	16.59	157	151813	34.2161	ug/L	97
101)	135Trichlorobenzene	16.92	180	817386	30.5968	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL1421\ICV2.D Vial: 15
Acq On : 14 Jul 2021 17:16 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:22:42 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	707873	32.7414	ug/L	99
103)	Hexachlorobu	17.98	225	334638	32.9820	ug/L	97
104)	Naphthalene	18.03	128	1722990	30.7332	ug/L	97
105)	123Trichlben	18.34	180	658251	33.4930	ug/L	96

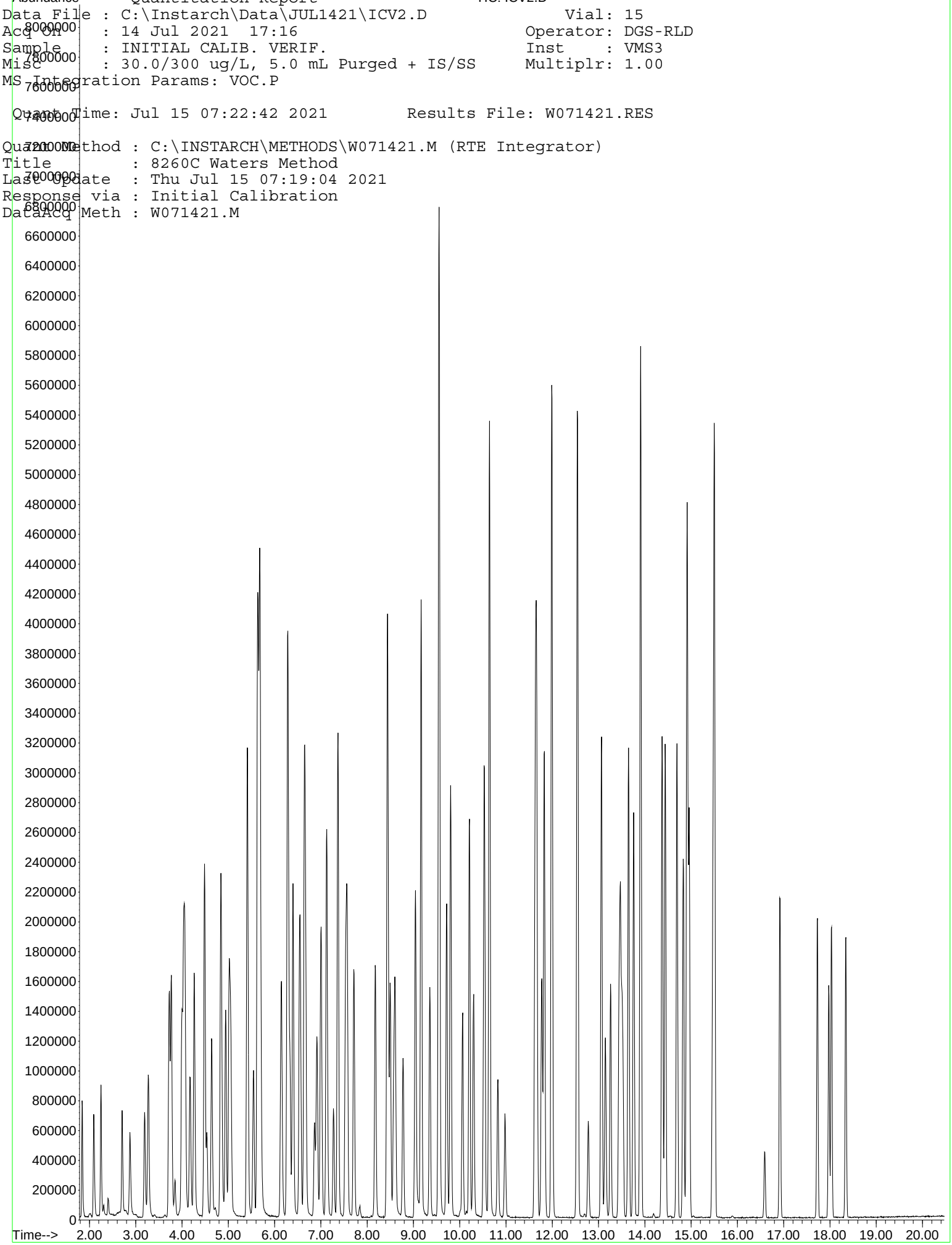
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: ICV2.D

Data File : C:\Instarch\Data\JUL1421\ICV2.D Vial: 15
Acq On : 14 Jul 2021 17:16 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 07:22:42 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\ICB1.D Vial: 18
Acq On : 14 Jul 2021 18:43 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 19:04:31 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1504341	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	1141414	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	576012	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	376629	19.652	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 98	%		
45) SURR12DCAd4	7.27	102	107180	20.433	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102	%		
61) SURRd8Tolule	9.72	98	1434223	18.427	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 92	%#		
83) SURR4BrFBenz	13.26	95	557894	21.624	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 108	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.86	64	6931	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	19859	N.D.		
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.25	76	5757	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.64	84	3477	Below	Cal #	53
21) tbutylalcohol	4.85	59	7179	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	5.64	43	2874	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.66	42	17241	Below	Cal	82

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\ICB1.D Vial: 18
Acq On : 14 Jul 2021 18:43 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 19:04:31 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.56	43	10298	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.65	43	12733	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	4835	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	11.83	91	4681	N.D.	
76)	m p-Xylene	12.00	106	3632	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	13.06	105	7728	N.D.	
81)	cyclohexanone	13.14	55	4206	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.65	91	9683	N.D.	
89)	2chlorotolue	13.75	91	3067	N.D.	
90)	4chlorotolue	13.91	91	3754	N.D.	
91)	135Trimebenz	13.91	105	4659	N.D.	
92)	tbutylbenzen	14.38	119	7085	N.D.	
93)	124Trimetben	14.45	105	5176	N.D.	
94)	sbutylbenzen	14.69	105	11293	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.91	119	10105	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.51	91	14302	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL1421\ICB1.D Vial: 18
Acq On : 14 Jul 2021 18:43 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 19:04:31 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	0.00	180	0	N.D.		
103)	Hexachlorobu	0.00	225	0	N.D.		
104)	Naphthalene	18.03	128	5463	N.D.		
105)	123Trichlben	18.34	180	2832	N.D.		

(#) = qualifier out of range (m) = manual integration

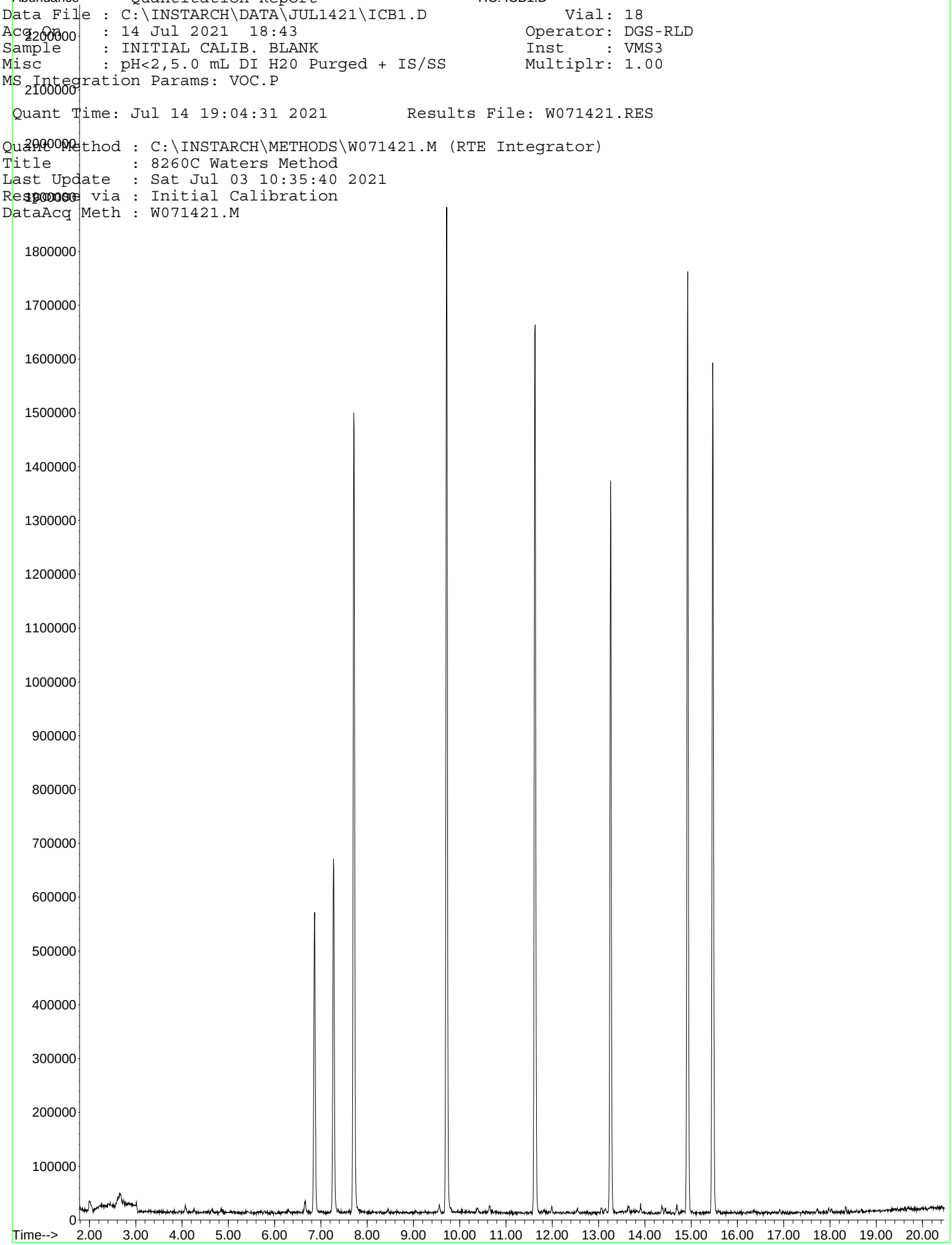
Quantitation Report

TIC: ICB1.D

Data File : C:\INSTARCH\DATA\JUL1421\ICB1.D Vial: 18
Acq On : 14 Jul 2021 18:43 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 14 19:04:31 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sat Jul 03 10:35:40 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



Data File : C:\Instarch\Data\JUL1421\BFB2.D Vial: 19
Acq On : 15 Jul 2021 7:34 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W071421.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.687 to 4.687 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.6	22636	PASS
75	95	30	60	53.8	53764	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.8	6768	PASS
173	174	0.00	2	1.6	1416	PASS
174	95	50	100	88.7	88674	PASS
175	174	5	9	5.8	5129	PASS
176	174	95	101	95.9	85022	PASS
177	176	5	9	5.8	4903	PASS

W071421.M Thu Jul 15 10:33:24 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\JUL1421\ICV1R.D Vial: 21
Acq On : 15 Jul 2021 8:19 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Jul 15 08:40:24 2021

Quant Method : C:\INSTARCH\METHODS\W071421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W071421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	104	0.00
2	PT	Dichlorodi	0.2216	0.2569	-15.93	102	0.00
3	PT	Chloromethan	0.3235	0.3003	7.17	91	0.00
4	PT	VinylChlorid	0.3325	0.3436	-3.34	96	0.00
5	PT	Bromomethane	0.1989	0.2159	-8.55	111	0.00
6	PT	Chloroethane	0.2269	0.2247	0.97	98	0.00
7	T	Dichloroflmethane	0.3290	0.2980	9.42	90	0.00
8	PT	Trichlorofma	0.3200	0.3553	-11.03	100	0.00
9	T	Ethylether	0.2015	0.1851	8.14	94	0.00
10	T	dichlorotfluoroethan	0.2406	0.2351	2.29	95	0.00
11	T	propyleneoxide	0.0548	0.0519	5.29	94	0.00
12	T	Acrolein	0.0169	0.0151#	10.65	92	0.00
13	PT	11dichlorthe	0.2034	0.2054	-0.98	97	0.00
14	PT	Trichlorotfluoroeth	0.1917	0.2103	-9.70	98	0.00
15	PT	Acetone	0.0772	0.0701#	9.20	95	0.00
16	T	Iodomethane	0.2565	0.2156	15.95	80	0.00
17	PT	Carbon Dislf	0.5546	0.5701	-2.79	96	0.00
18	T	allylchloride	0.3487	0.3341	4.19	95	0.00
19	PT	methylacetate	0.0699	0.0612#	12.45	91	0.00
20	PT	Methylchlorid	0.2895	0.2428	16.13	96	0.00
21	T	tbutylalcohol	0.0223	0.0222#	0.45	97	0.00
22	T	Acrylonitrile	0.0997	0.0936	6.12	94	0.00
23	PT	t12dichlorte	0.2353	0.2246	4.55	93	0.00
24	PT	MtBE	0.6155	0.5906	4.05	97	0.00
25	T	Hexane	0.3111	0.3790	-21.83#	106	0.00
26	PT	11dichlorota	0.4246	0.4041	4.83	94	0.00
27	T	Vinylacetate	0.4028	0.4124	-2.38	98	0.00
28	T	chloroprene	0.3933	0.4084	-3.84	95	0.00
29	T	Diisopether	0.7778	0.7055	9.30	90	0.00
30	T	ETBE	0.6091	0.5861	3.78	97	0.00
31	T	22dichloropr	0.2791	0.2944	-5.48	107	0.00
32	PT	c12dichlorte	0.2681	0.2551	4.85	98	0.00
33	PT	2Butanone	0.0341	0.0320#	6.16	98	0.00
34	T	propionitrile	0.0436	0.0419	3.90	99	0.00
35	T	Ethylacetate	0.0117	0.0108#	7.69	95	0.00
36	T	methacrylonitrile	0.1211	0.1125	7.10	97	0.00
37	T	Bromochlorma	0.1227	0.1142	6.93	93	0.00
38	T	Tetrahydofur	0.0865	0.0825	4.62	96	0.00
39	PT	Chloroform	0.4305	0.4026	6.48	96	0.00
40	PT	111trichlota	0.3264	0.3342	-2.39	100	0.00
41	S	SURRDibrflma	0.2546	0.2540	0.24	103	0.00
42	PT	Cyclohexane	0.3771	0.4094	-8.57	96	0.00
43	PT	Carbtetraclo	0.2498	0.2600	-4.08	101	0.00
44	T	11dicloprope	0.1194	0.1176	1.51	100	0.00
45	S	SURR12DCAd4	0.0727	0.0727	0.00	103	0.00
46	PT	Benzene	0.9677	0.9424	2.61	95	0.00
47	PT	12dichlorota	0.3417	0.3135	8.25	98	0.00
48	T	TAME	0.5865	0.5787	1.33	98	0.00

49	PT	trichloroete	0.2499	0.2381	4.72	97	0.00
50	PT	methylcyclohexane	0.4355	0.4914	-12.84	98	0.00
51	PT	12dicloropra	0.2654	0.2533	4.56	96	0.00
52	T	23Dicl1propene	0.3729	0.3467	7.03	93	0.00
53	T	Dibromometha	0.1544	0.1404	9.07	98	0.00
54	T	methylmethacrylate	0.1856	0.1745	5.98	99	0.00
55	T	14dioxane	0.0037	0.0034#	8.11	96	0.00
56	PT	Bromodiclrma	0.3085	0.2944	4.57	99	0.00
57	T	2Nitropropane	0.0631	0.0643	-1.90	100	0.00
58	T	2CLEVE	0.1585	0.1584	0.06	96	0.00
59	PT	c13dicloproe	0.3610	0.3668	-1.61	101	0.00
60	PT	4Meth2Pentan	0.2280	0.2275	0.22	98	0.00
61	S	SURRd8Tolule	0.9799	0.9661	1.41	102	0.00
62	PT	Toluene	0.6287	0.6188	1.57	97	0.00
63	PT	t13Dicloprop	0.3001	0.2983	0.60	99	0.00
64	T	ethylmethacrylate	0.3069	0.3022	1.53	98	0.00
65	PT	112Triclotha	0.1973	0.1798	8.87	99	0.00
66	PT	Tetrachlorte	0.2594	0.2581	0.50	98	0.00
67	T	13Diclorpropa	0.3923	0.3823	2.55	101	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	103	0.00
69	PT	2Hexanone	0.2255	0.2241	0.62	96	0.00
70	PT	Clorodibrmta	0.2907	0.2862	1.55	103	0.00
71	PT	12Dibrometha	0.2875	0.2791	2.92	97	0.00
72	PT	Chlorobenzen	0.8822	0.8492	3.74	94	0.00
73	T	1Clhexane	0.4301	0.4558	-5.98	104	0.00
74	T	1112Tetclota	0.2675	0.2602	2.73	101	0.00
75	PT	Ethylbenzene	1.4162	1.4531	-2.61	96	0.00
76	PT	m p-Xylene	0.5597	0.5763	-2.97	96	0.00
77	PT	o-Xylene	0.5567	0.5558	0.16	98	0.00
78	PT	Styrene	0.9021	0.9134	-1.25	97	0.00
79	PT	Bromoform	0.1893	0.1726	8.82	98	0.00
80	PT	Isopropylben	1.2945	1.3845	-6.95	98	0.00
81	T	cyclohexanone	0.0179	0.0158#	11.73	93	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	103	0.00
83	S	SURR4BrFBenz	0.9330	0.9205	1.34	103	0.00
84	T	Bromobenzene	0.6682	0.6293	5.82	98	0.00
85	PT	1122Tetrclta	0.7696	0.7326	4.81	98	0.00
86	T	123Triclproa	0.9193	0.8769	4.61	102	0.00
87	T	14dichloro2butene	0.2044	0.1992	2.54	103	0.00
88	T	n-Propylbenz	2.9473	2.9804	-1.12	99	0.00
89	T	2chlorotolue	1.8111	1.7761	1.93	97	0.00
90	T	4chlorotolue	2.0568	2.1040	-2.29	98	0.00
91	T	135Trimebenz	2.0466	2.1095	-3.07	98	0.00
92	T	tbutylbenzen	1.7273	1.7909	-3.68	96	0.00
93	T	124Trimetben	1.9813	2.0426	-3.09	96	0.00
94	T	sbutylbenzen	2.4653	2.6150	-6.07	98	0.00
95	PT	13Diclorbenz	1.2191	1.1656	4.39	96	0.00
96	T	pIsopropylto	2.0799	2.2564	-8.49	100	0.00
97	PT	14dichlorobe	1.2734	1.1993	5.82	96	0.00
98	PT	12dichlorobe	1.1694	1.0997	5.96	94	0.00
99	T	nButylbenzen	1.8970	2.0672	-8.97	101	0.00
100	PT	12dibromo3cl	0.1239	0.1121	9.52	97	0.00
101	T	135Trichlorobenzene	0.7458	0.7095	4.87	95	0.00
102	PT	124Trichlobe	0.6035	0.5976	0.98	100	0.00
103	T	Hexachlorobu	0.2832	0.2936	-3.67	100	0.00
104	T	Naphthalene	1.2715	1.3730	-7.98	96	0.00
105	T	123Trichlben	0.5486	0.5331	2.83	93	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W071421.M Thu Jul 15 10:36:19 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\JUL1421\ICV1R.D Vial: 21
Acq On : 15 Jul 2021 8:19 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Jul 15 08:40:24 2021

Quant Method : C:\INSTARCH\METHODS\W071421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W071421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	104	0.00
2	PT	Dichlorodi	10.0000	10.4274	-4.27	102	0.00
3	PT	Chloromethan	10.0000	9.2822	7.18	91	0.00
4	PT	VinylChlorid	10.0000	10.3351	-3.35	96	0.00
5	PT	Bromomethane	10.0000	10.8542	-8.54	111	0.00
6	PT	Chloroethane	10.0000	9.9023	0.98	98	0.00
7	T	Dichloroflmethane	10.0000	9.0580	9.42	90	0.00
8	PT	Trichlorofma	10.0000	10.0707	-0.71	100	0.00
9	T	Ethylether	10.0000	9.1820	8.18	94	0.00
10	T	dichlorotfluoroethan	10.0000	9.7722	2.28	95	0.00
11	T	propyleneoxide	100.0000	94.6011	5.40	94	0.00
12	T	Acrolein	50.0000	44.6196	10.76	92	0.00
13	PT	11dichlorthe	10.0000	10.0993	-0.99	97	0.00
14	PT	Trichlorotfluoroeth	20.0000	19.4258	2.87	98	0.00
15	PT	Acetone	100.0000	90.8852	9.11	95	0.00
16	T	Iodomethane	20.0000	16.8100	15.95	80	0.00
17	PT	Carbon Dislf	20.0000	20.5582	-2.79	96	0.00
18	T	allylchloride	20.0000	19.1639	4.18	95	0.00
19	PT	methylacetate	10.0000	8.7590	12.41	91	0.00
20	PT	Methylchlorid	10.0000	9.3142	6.86	96	0.00
21	T	tbutylalcohol	500.0000	497.4659	0.51	97	0.00
22	T	Acrylonitrile	50.0000	46.9482	6.10	94	0.00
23	PT	t12dichlorte	10.0000	9.5453	4.55	93	0.00
24	PT	MtBE	10.0000	9.5957	4.04	97	0.00
25	T	Hexane	20.0000	20.4178	-2.09	106	0.00
26	PT	11dichlorota	10.0000	9.5169	4.83	94	0.00
27	T	Vinylacetate	100.0000	99.0503	0.95	98	0.00
28	T	chloroprene	20.0000	20.7665	-3.83	95	0.00
29	T	Diisopether	10.0000	9.0704	9.30	90	0.00
30	T	ETBE	10.0000	9.6236	3.76	97	0.00
31	T	22dichloropr	10.0000	10.5457	-5.46	107	0.00
32	PT	c12dichlorte	10.0000	9.5138	4.86	98	0.00
33	PT	2Butanone	100.0000	93.8094	6.19	98	0.00
34	T	propionitrile	100.0000	96.0817	3.92	99	0.00
35	T	Ethylacetate	50.0000	46.1907	7.62	95	0.00
36	T	methacrylonitrile	20.0000	18.5876	7.06	97	0.00
37	T	Bromochlorma	10.0000	9.3135	6.87	93	0.00
38	T	Tetrahydofur	100.0000	95.3854	4.61	96	0.00
39	PT	Chloroform	10.0000	9.3523	6.48	96	0.00
40	PT	111trichlota	10.0000	10.2407	-2.41	100	0.00
41	S	SURRDibrflma	20.0000	19.9549	0.23	103	0.00
42	PT	Cyclohexane	10.0000	9.3517	6.48	96	0.00
43	PT	Carbtetraclo	10.0000	9.4342	5.66	101	0.00
44	T	11dicloprope	10.0000	9.8444	1.56	100	0.00
45	S	SURR12DCAd4	20.0000	20.0037	-0.02	103	0.00
46	PT	Benzene	10.0000	9.7377	2.62	95	0.00
47	PT	12dichlorota	10.0000	9.1747	8.25	98	0.00
48	T	TAME	10.0000	9.8673	1.33	98	0.00

49	PT	trichloroete	10.0000	9.5274	4.73	97	0.00
50	PT	methylcyclohexane	10.0000	9.5780	4.22	98	0.00
51	PT	12dicloropra	10.0000	9.5462	4.54	96	0.00
52	T	23Dicl1propene	10.0000	9.2974	7.03	93	0.00
53	T	Dibromometha	10.0000	9.0922	9.08	98	0.00
54	T	methylmethacrylate	10.0000	9.4028	5.97	99	0.00
55	T	14dioxane	500.0000	461.0946	7.78	96	0.00
56	PT	Bromodiclrma	10.0000	9.5421	4.58	99	0.00
57	T	2Nitropropane	100.0000	101.8541	-1.85	100	0.00
58	T	2CLEVE	50.0000	49.9514	0.10	96	0.00
59	PT	c13dicloproe	10.0000	10.1592	-1.59	101	0.00
60	PT	4Meth2Pentan	100.0000	99.7664	0.23	98	0.00
61	S	SURRd8Tolule	20.0000	19.7173	1.41	102	0.00
62	PT	Toluene	10.0000	9.8425	1.58	97	0.00
63	PT	t13Dicloprop	10.0000	9.9401	0.60	99	0.00
64	T	ethylmethacrylate	20.0000	19.6931	1.53	98	0.00
65	PT	112Triclotha	10.0000	9.1101	8.90	99	0.00
66	PT	Tetrachlorte	10.0000	9.9525	0.47	98	0.00
67	T	13Diclorpropa	10.0000	9.7444	2.56	101	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	103	0.00
69	PT	2Hexanone	100.0000	99.3751	0.62	96	0.00
70	PT	Clorodibrmta	10.0000	9.8448	1.55	103	0.00
71	PT	12Dibrometha	10.0000	9.7076	2.92	97	0.00
72	PT	Chlorobenzen	10.0000	9.6258	3.74	94	0.00
73	T	1Clhexane	10.0000	10.5972	-5.97	104	0.00
74	T	1112Tetclota	10.0000	9.7259	2.74	101	0.00
75	PT	Ethylbenzene	10.0000	10.2605	-2.61	96	0.00
76	PT	m p-Xylene	20.0000	20.5941	-2.97	96	0.00
77	PT	o-Xylene	10.0000	9.9833	0.17	98	0.00
78	PT	Styrene	10.0000	10.1259	-1.26	97	0.00
79	PT	Bromoform	10.0000	9.1195	8.80	98	0.00
80	PT	Isopropylben	10.0000	10.6952	-6.95	98	0.00
81	T	cyclohexanone	200.0000	176.7127	11.64	93	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	103	0.00
83	S	SURR4BrFBenz	20.0000	19.7318	1.34	103	0.00
84	T	Bromobenzene	10.0000	9.4184	5.82	98	0.00
85	PT	1122Tetrclta	10.0000	9.5189	4.81	98	0.00
86	T	123Triclproa	10.0000	9.5383	4.62	102	0.00
87	T	14dichloro2butene	10.0000	9.7444	2.56	103	0.00
88	T	n-Propylbenz	10.0000	10.1126	-1.13	99	0.00
89	T	2chlorotolue	10.0000	9.8069	1.93	97	0.00
90	T	4chlorotolue	10.0000	10.2298	-2.30	98	0.00
91	T	135Trimebenz	10.0000	10.3073	-3.07	98	0.00
92	T	tbutylbenzen	10.0000	10.3685	-3.68	96	0.00
93	T	124Trimetben	10.0000	10.3092	-3.09	96	0.00
94	T	sbutylbenzen	10.0000	10.6070	-6.07	98	0.00
95	PT	13Diclorbenz	10.0000	9.5607	4.39	96	0.00
96	T	pIsopropylto	10.0000	10.8487	-8.49	100	0.00
97	PT	14dichlorobe	10.0000	9.4181	5.82	96	0.00
98	PT	12dichlorobe	10.0000	9.4036	5.96	94	0.00
99	T	nButylbenzen	10.0000	10.8971	-8.97	101	0.00
100	PT	12dibromo3cl	10.0000	9.0539	9.46	97	0.00
101	T	135Trichlorobenzene	10.0000	9.5134	4.87	95	0.00
102	PT	124Trichlobe	10.0000	9.9011	0.99	100	0.00
103	T	Hexachlorobu	10.0000	10.3650	-3.65	100	0.00
104	T	Naphthalene	10.0000	8.6939	13.06	96	0.00
105	T	123Trichlben	10.0000	9.7172	2.83	93	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W071421.M Thu Jul 15 10:36:58 2021

Quantitation Report

Data File : C:\Instarch\Data\JUL1421\ICV1R.D Vial: 21
Acq On : 15 Jul 2021 8:19 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 08:40:24 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1561816	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1183243	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	650955	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	396690	19.955	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.28	102	113566	20.004	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100	%		
61) SURRd8Tolule	9.72	98	1508863	19.717	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99	%		
83) SURR4BrFBenz	13.26	95	599182	19.732	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	200616	10.4274	ug/L	99
3) Chloromethan	2.10	50	234497	9.2822	ug/L	100
4) VinylChlorid	2.25	62	268319	10.3351	ug/L	96
5) Bromomethane	2.71	94	168584	10.8542	ug/L	98
6) Chloroethane	2.88	64	175451	9.9023	ug/L	100
7) Dichloroflmethane	3.19	67	232746	9.0580	ug/L	99
8) Trichlorofma	3.27	101	277470	10.0707	ug/L	98
9) Ethylether	3.72	59	144516	9.1820	ug/L	97
10) dichlorotfluoroethan	3.73	67	183569	9.7722	ug/L	98
11) propyleneoxide	3.77	58	405193	94.6011	ug/L	98
12) Acrolein	3.85	56	58799	44.6196	ug/L	98
13) 11dichlorthe	3.99	96	160428	10.0993	ug/L	99
14) Trichlorotfluoroeth	4.04	101	328506	19.4258	ug/L	99
15) Acetone	4.07	43	547769	90.8852	ug/L	100
16) Iodomethane	4.18	142	336711	16.8100	ug/L	98
17) Carbon Dislf	4.26	76	890378	20.5582	ug/L	100
18) allylchloride	4.49	41	521803	19.1639	ug/L	99
19) methylacetate	4.54	74	47785	8.7590	ug/L	97
20) Methylchlorid	4.64	84	189632	9.3142	ug/L	99
21) tbutylalcohol	4.85	59	865600	497.4659	ug/L	97
22) Acrylonitrile	4.94	53	365610	46.9482	ug/L	98
23) t12dichlorte	5.02	96	175402	9.5453	ug/L	97
24) MtBE	5.05	73	461233	9.5957	ug/L	99
25) Hexane	5.41	57	591873	20.4178	ug/L	98
26) 11dichlorota	5.54	63	315587	9.5169	ug/L	99
27) Vinylacetate	5.64	43	3220484	99.0503	ug/L	100
28) chloroprene	5.68	53	637804	20.7665	ug/L	100
29) Diisopether	5.70	45	550915	9.0704	ug/L	99
30) ETBE	6.15	59	457726	9.6236	ug/L	100
31) 22dichloropr	6.28	77	229868	10.5457	ug/L	98
32) c12dichlorte	6.27	96	199197	9.5138	ug/L	97
33) 2Butanone	6.29	72	250051	93.8094	ug/L	98
34) propionitrile	6.34	54	326920	96.0817	ug/L	97
35) Ethylacetate	6.40	88	42294	46.1907	ug/L	94
36) methacrylonitrile	6.54	67	175753	18.5876	ug/L	97
37) Bromochlorma	6.56	128	89218	9.3135	ug/L	95
38) Tetrahydofur	6.65	42	644372	95.3854	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL1421\ICV1R.D Vial: 21
Acq On : 15 Jul 2021 8:19 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 08:40:24 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.68	83	314398	9.3523 ug/L	99
40)	111trichlota	6.92	97	260999	10.2407 ug/L	99
42)	Cyclohexane	7.00	56	319678	9.3517 ug/L	99
43)	Carbtetraclo	7.13	119	203045	9.4342 ug/L	99
44)	11dicloprope	7.13	110	91811	9.8444 ug/L	97
46)	Benzene	7.37	78	735904	9.7377 ug/L	99
47)	12dichlorota	7.37	62	244780	9.1747 ug/L	97
48)	TAME	7.54	73	451895	9.8673 ug/L	95
49)	trichloroete	8.18	95	185905	9.5274 ug/L	99
50)	methylcyclohexane	8.45	83	383712	9.5780 ug/L	99
51)	12dicloropra	8.44	63	197833	9.5462 ug/L	100
52)	23Dicl1propene	8.50	75	270720	9.2974 ug/L	99
53)	Dibromometha	8.57	93	109619	9.0922 ug/L	99
54)	methylmethacrylate	8.60	69	136302	9.4028 ug/L	99
55)	14dioxane	8.62	88	133199	461.0946 ug/L	99
56)	Bromodiclrma	8.77	83	229896	9.5421 ug/L	100
57)	2Nitropropane	9.04	43	501783	101.8541 ug/L	98
58)	2CLEVE	9.16	63	618369	49.9514 ug/L	99
59)	c13dicloproe	9.35	75	286409	10.1592 ug/L	100
60)	4Meth2Pentan	9.55	43	1776432	99.7664 ug/L	99
62)	Toluene	9.80	92	483252	9.8425 ug/L	100
63)	t13Dicloprop	10.06	75	232919	9.9401 ug/L	99
64)	ethylmethacrylate	10.21	69	471997	19.6931 ug/L	99
65)	112Triclotha	10.30	83	140380	9.1101 ug/L	96
66)	Tetrachlorte	10.54	166	201587	9.9525 ug/L	98
67)	13Diclorpropa	10.52	76	298539	9.7444 ug/L	97
69)	2Hexanone	10.64	43	1325917	99.3751 ug/L	98
70)	Clorodibrmta	10.83	129	169339	9.8448 ug/L	98
71)	12Dibrometha	10.98	107	165104	9.7076 ug/L	98
72)	Chlorobenzen	11.66	112	502413	9.6258 ug/L	99
73)	1Clhexane	11.65	91	269681	10.5972 ug/L	96
74)	1112Tetclota	11.77	131	153921	9.7259 ug/L	99
75)	Ethylbenzene	11.83	91	859701	10.2605 ug/L	99
76)	m p-Xylene	11.99	106	681890	20.5941 ug/L	98
77)	o-Xylene	12.54	106	328798	9.9833 ug/L	100
78)	Styrene	12.55	104	540392	10.1259 ug/L	100
79)	Bromoform	12.78	173	102114	9.1195 ug/L	99
80)	Isopropylben	13.06	105	819120	10.6952 ug/L	99
81)	cyclohexanone	13.15	55	186788	176.7127 ug/L	95
84)	Bromobenzene	13.47	156	204837	9.4184 ug/L	98
85)	1122Tetrclta	13.44	83	238442	9.5189 ug/L	99
86)	123Triclproa	13.50	75	285402	9.5383 ug/L	99
87)	14dichloro2butene	13.53	53	64823	9.7444 ug/L	97
88)	n-Propylbenz	13.65	91	970068	10.1126 ug/L	99
89)	2chlorotolue	13.76	91	578080	9.8069 ug/L	98
90)	4chlorotolue	13.91	91	684813	10.2298 ug/L	99
91)	135Trimebenz	13.90	105	686600	10.3073 ug/L	99
92)	tbutylbenzen	14.38	119	582906	10.3685 ug/L	97
93)	124Trimetben	14.44	105	664815	10.3092 ug/L	99
94)	sbutylbenzen	14.69	105	851122	10.6070 ug/L	98
95)	13Diclorbenz	14.83	146	379372	9.5607 ug/L	99
96)	pIsopropylto	14.91	119	734411	10.8487 ug/L	99
97)	14dichlorobe	14.96	146	390343	9.4181 ug/L	98
98)	12dichlorobe	15.49	146	357925	9.4036 ug/L	98
99)	nButylbenzen	15.50	91	672815	10.8971 ug/L	98
100)	12dibromo3cl	16.59	157	36499	9.0539 ug/L	92
101)	135Trichlorobenzene	16.92	180	230915	9.5134 ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL1421\ICV1R.D Vial: 21
Acq On : 15 Jul 2021 8:19 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 08:40:24 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

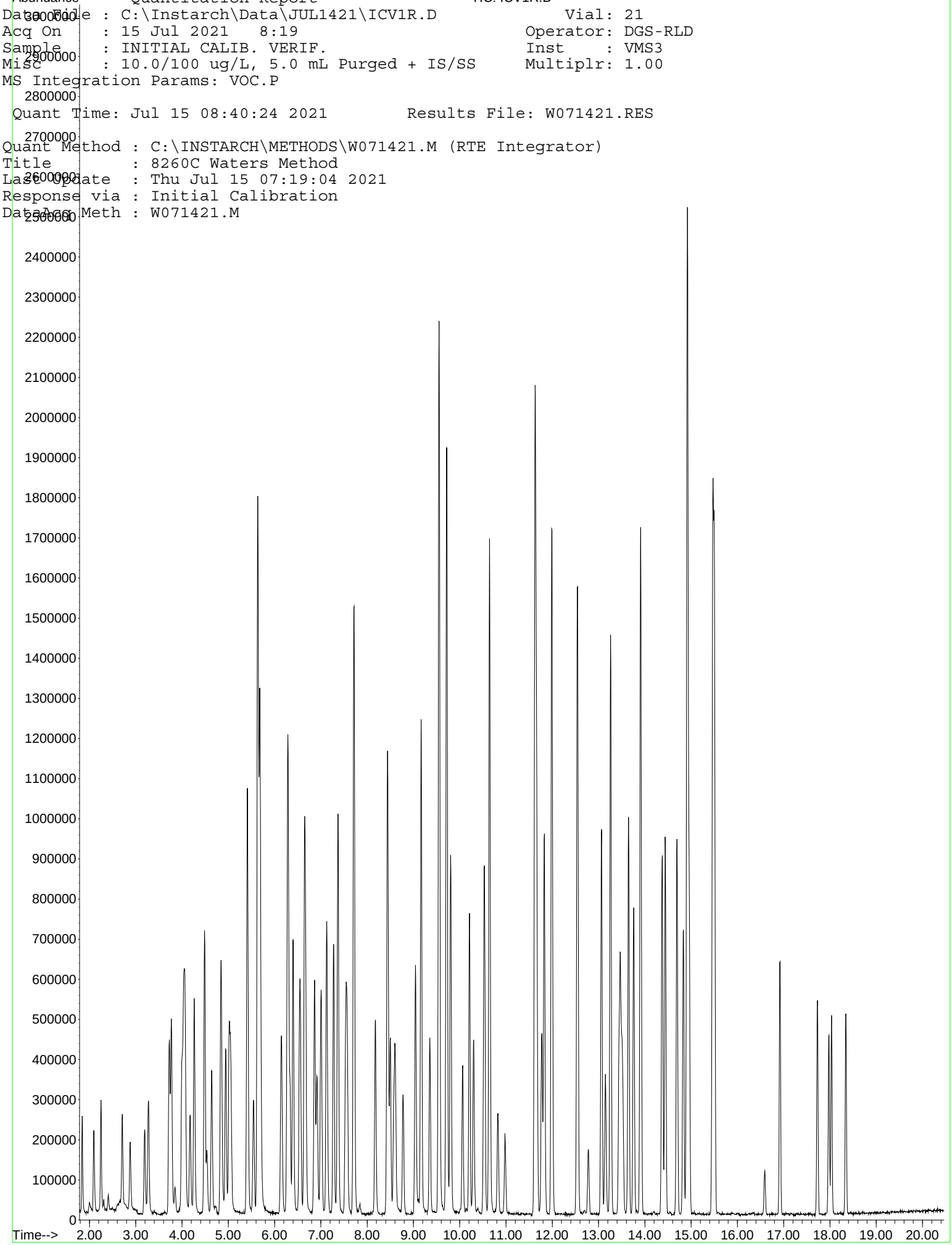
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.73	180	194494	9.9011	ug/L	99
103) Hexachlorobu	17.97	225	95550	10.3650	ug/L	96
104) Naphthalene	18.03	128	446869	8.6939	ug/L	99
105) 123Trichlben	18.34	180	173517	9.7172	ug/L	94

(#) = qualifier out of range (m) = manual integration

Data File : C:\Instarch\Data\JUL1421\ICV1R.D Vial: 21
Acq On : 15 Jul 2021 8:19 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 15 08:40:24 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



Method Path : C:\INSTARCH\METHODS\
Method File : W080421.M
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response Via : Initial Calibration

RJ 08/18/2021

Calibration Files ug/L
1 0.5/5.0 =WCAL1.D 2 1.0/10.0 =WCAL2.D 3 2.0/20.0 =WCAL3.D
4 5.0/50.0 =WCAL4.D 5 10.0/100.0 =WCAL5.D 6 20.0/200.0 =WCAL6.D
7 30.0/300.0 =WCAL7.D 8 40.0/400.0 =WCAL8.D 9 80.0/800.0 =WCAL9.D

	Compound	1	2	3	4	5	6	7	Avg	%RSD
		8	9							
1) I	FLUOROBENZENE**ISTD**	----------ISTD----------								
2) PT	Dichlorodi	0.297	0.140	0.230	0.256	0.261	0.260	0.266	-----	
		0.254	0.230							
							Q	A= -0.013 R=1.000		
								B= 0.284		
								C= -0.005		
3) PT	Chloromethan	0.330	0.284	0.287	0.277	0.255	0.253	0.251	0.266	12.45
		0.240	0.215							
4) PT	VinylChlorid	0.297	0.216	0.270	0.279	0.271	0.269	0.269	0.263	9.05
		0.258	0.236							
5) PT	Bromomethane		0.195	0.188	0.197	0.174	0.162	0.160	-----	
		0.148	0.104							
							Q	A= -0.022 R=1.000		
								B= 0.190		
								C= -0.000		
6) PT	Chloroethane		0.161	0.195	0.205	0.179	0.177	0.175	0.177	9.15
		0.168	0.157							
7) T	Dichloroflmetha	0.363	0.309	0.376	0.340	0.328	0.327	0.330	0.331	8.10
		0.315	0.288							
8) PT	Trichlorofma	0.374	0.205	0.350	0.385	0.392	0.386	0.392	-----	
		0.376	0.346							
							Q	A= -0.017 R=1.000		
								B= 0.414		
								C= -0.006		
9) T	Ethylether	0.222	0.231	0.226	0.219	0.196	0.199	0.197	0.207	8.76
		0.193	0.178							
10) T	dichlorotfluoro	0.257	0.187	0.267	0.241	0.244	0.248	0.256	0.240	9.77
		0.239	0.224							
11) T	propyleneoxide		0.047	0.050	0.047	0.043	0.045	0.045	0.045	6.44
		0.044	0.040							
12) T	Acrolein		0.036	0.033	0.026	0.028	0.029	0.028	0.029#	11.04
		0.027	0.027							
13) PT	11dichlorthe	0.247	0.191	0.215	0.225	0.228	0.224	0.232	0.222	6.99
		0.225	0.209							
14) PT	Trichlorotfluor	0.195	0.101	0.179	0.207	0.214	0.214	0.219	-----	
		0.209	0.195							
							Q	A= -0.004 R=1.000		
								B= 0.230		
								C= -0.009		
15) PT	Acetone	0.124	0.097	0.095	0.084	0.074	0.077	0.073	----- #	
		0.069	0.058							
							Q	A= -0.001 R=1.000		
								B= 0.080		
								C= 0.009		
16) T	Iodomethane		0.153	0.165	0.192	0.217	0.248	0.261	-----	
		0.255	0.234							
							Q	A= -0.006 R=0.999		
								B= 0.284		
								C= -0.034		
17) PT	Carbon Dislf	0.747	0.542	0.633	0.605	0.586	0.564	0.553	0.577	14.57
		0.525	0.440							
18) T	allylchloride	0.398	0.363	0.379	0.380	0.351	0.348	0.344	0.352	10.01

0.323 0.279
19) PT methylacetate 0.083 0.096 0.070 0.068 0.074 0.073 0.076# 12.24
0.072 0.070
20) PT Methylchlorid 0.349 0.325 0.290 0.280 0.251 0.253 0.257 0.275 14.63
0.247 0.225
21) T tbutylalcohol 0.043 0.036 0.038 0.034 0.030 0.031 0.028 -----
0.027 0.022
Q A= -0.000 R=1.000
B= 0.032
C= 0.022
22) T Acrylonitrile 0.097 0.102 0.097 0.089 0.092 0.091 0.092 7.54
0.088 0.079
23) PT t12dichlorte 0.293 0.254 0.264 0.266 0.252 0.253 0.258 0.257 6.76
0.245 0.229
24) PT MtBE 0.860 0.838 0.776 0.754 0.691 0.704 0.692 0.729 11.92
0.662 0.585
25) T Hexane 0.307 0.146 0.279 0.325 0.331 0.332 0.330 -----
0.313 0.280
Q A= -0.010 R=1.000
B= 0.358
C= -0.013
26) PT 11dichlorota 0.480 0.424 0.476 0.457 0.428 0.429 0.436 0.435 7.64
0.411 0.373
27) T Vinylacetate 0.536 0.582 0.555 0.486 0.436 0.356 0.316 -----
0.275
Q A= -0.009 R=0.999
B= 0.439
C= 0.103
28) T chloroprene 0.413 0.326 0.402 0.419 0.405 0.410 0.406 0.389 8.98
0.383 0.333
29) T Diisopether 0.881 0.765 0.761 0.779 0.724 0.730 0.722 0.739 9.99
0.682 0.609
30) T ETBE 0.784 0.775 0.777 0.754 0.700 0.700 0.686 0.712 9.55
0.657 0.578
31) T 22dichloropr 0.429 0.335 0.402 0.402 0.382 0.391 0.391 0.383 7.76
0.369 0.343
32) PT c12dichlorte 0.336 0.276 0.308 0.293 0.277 0.279 0.281 0.286 8.58
0.270 0.250
33) PT 2Butanone 0.037 0.038 0.036 0.033 0.035 0.034 0.035# 7.21
0.033 0.031
34) T propionitrile 0.045 0.046 0.043 0.039 0.041 0.040 0.041 8.29
0.039 0.036
35) T Ethylacetate 0.014 0.012 0.013 0.011 0.012 0.012 0.012# 5.77
0.013 0.012
36) T methacrylonitri 0.138 0.140 0.125 0.119 0.124 0.121 0.125 7.52
0.122 0.113
37) T Bromochlorma 0.132 0.140 0.129 0.124 0.119 0.120 0.121 0.123 7.54
0.116 0.109
38) T Tetrahydofur 0.104 0.091 0.091 0.083 0.075 0.077 0.073 0.083 13.87
0.070
39) PT Chloroform 0.436 0.491 0.494 0.479 0.440 0.453 0.448 0.451 7.40
0.428 0.389
40) PT 111trichlota 0.450 0.328 0.410 0.409 0.406 0.413 0.416 0.400 8.59
0.397 0.367
41) S SURRDibrflma 0.254 0.254 0.250 0.259 0.251 0.252 0.251 0.253 1.03
0.252 0.253
42) PT Cyclohexane 0.341 0.202 0.346 0.392 0.399 0.408 0.413 -----
0.396 0.368
Q A= -0.016 R=1.000
B= 0.436
C= -0.009
43) PT Carbtetraclo 0.380 0.237 0.329 0.342 0.343 0.355 0.357 0.334 11.99
0.344 0.322
44) T 11dicloprope 0.103 0.122 0.129 0.126 0.132 0.133 0.125 7.78
0.130 0.126
45) S SURR12DCAd4 0.070 0.068 0.068 0.071 0.068 0.069 0.068 0.069 1.67
0.068 0.070
46) PT Benzene 1.186 1.070 1.088 1.084 1.000 0.980 0.962 1.003 12.49
0.902 0.755
47) PT 12dichlorota 0.396 0.370 0.384 0.364 0.338 0.342 0.352 0.354 7.69

```
                    0.336 0.308
48) T   TAME            0.854 0.804 0.816 0.770 0.714 0.721 0.712 0.740  10.73
                    0.675 0.596
49) PT  trichloroete    0.316 0.251 0.274 0.280 0.262 0.273 0.273 0.271   7.72
                    0.264 0.242
50) PT  methylcyclohexa 0.428 0.268 0.440 0.498 0.513 0.518 0.525 -----
                    0.504 0.457
                                                    Q  A= -0.026 R=1.000
                                                       B=  0.563
                                                       C= -0.012
51) PT  12dicloropra    0.303 0.276 0.283 0.283 0.257 0.264 0.269 0.270   6.75
                    0.258 0.240
52) T   23Dicl1propene        0.428 0.455 0.422 0.392 0.403 0.405 0.406   7.51
                    0.386 0.353
53) T   Dibromometha         0.175 0.173 0.170 0.155 0.160 0.160 0.162   5.80
                    0.157 0.149
54) T   methylmethacryl      0.242 0.249 0.217 0.195 0.209 0.204 0.213  10.05
                    0.199 0.191
55) T   14dioxane            0.004 0.004 0.004 0.004 0.004 0.004 0.004#  6.88
                    0.004 0.004
56) PT  Bromodiclrma    0.382 0.406 0.386 0.373 0.347 0.352 0.353 0.361   8.02
                    0.341 0.308
57) T   2Nitropropane   0.117 0.110 0.108 0.104 0.094 0.095 0.091 0.098  13.52
                    0.087 0.074
58) T   2CLEVE             0.166 0.173 0.166 0.156 0.157 0.151 0.154  10.07
                    0.144 0.123
59) PT  c13dicloproe    0.480 0.462 0.469 0.452 0.420 0.426 0.422 0.434   8.24
                    0.404 0.367
60) PT  4Meth2Pentan    0.299 0.270 0.273 0.249 0.224 0.214 0.194 -----
                    0.175
                                                    Q  A= -0.004 R=1.000
                                                       B=  0.247
                                                       C=  0.016
61) S   SURRd8Tolule    1.002 1.009 0.998 1.011 0.994 1.006 0.996 1.001   0.65
                    0.994 0.999
62) PT  Toluene         0.741 0.666 0.678 0.687 0.646 0.646 0.645 0.650   8.69
                    0.609 0.535
63) PT  t13Dicloprop    0.460 0.406 0.429 0.411 0.378 0.390 0.386 0.397   8.90
                    0.370 0.339
64) T   ethylmethacryla      0.392 0.393 0.390 0.354 0.363 0.351 0.359   9.83
                    0.337 0.289
65) PT  112Triclotha         0.215 0.213 0.208 0.194 0.199 0.197 0.200   5.59
                    0.192 0.182
66) PT  Tetrachlorte    0.297 0.202 0.287 0.289 0.286 0.288 0.295 0.278  10.56
                    0.285 0.268
67) T   13Diclorpropa   0.508 0.435 0.453 0.432 0.400 0.404 0.399 0.419  10.64
                    0.388 0.352

68) I   d5-CHLOROBENZENE**IST ----------------ISTD--------------------
69) PT  2Hexanone             0.255 0.260 0.241 0.214 0.211 0.195 0.223  13.38
                    0.183
70) PT  Clorodibrmta    0.354 0.341 0.342 0.324 0.320 0.334 0.334 0.332   3.94
                    0.328 0.311
71) PT  12Dibrometha    0.349 0.343 0.323 0.312 0.298 0.306 0.309 0.315   6.39
                    0.306 0.288
72) PT  Chlorobenzen    0.966 0.918 0.971 0.922 0.865 0.849 0.856 0.875   9.15
                    0.813 0.717
73) T   1Clhexane       0.558 0.353 0.436 0.458 0.462 0.465 0.463 0.453  11.71
                    0.459 0.424
74) T   1112Tetclota          0.321 0.338 0.325 0.315 0.318 0.326 0.320   3.52
                    0.316 0.298
75) PT  Ethylbenzene    1.748 1.543 1.640 1.614 1.516 1.476 1.443 1.494  12.27
                    1.353 1.116
76) PT  m p-Xylene      0.635 0.565 0.633 0.617 0.586 0.585 0.583 0.581   8.70
                    0.552 0.470
77) PT  o-Xylene        0.623 0.566 0.624 0.617 0.580 0.586 0.593 0.587   5.70
                    0.574 0.519
78) PT  Styrene         1.026 1.030 1.052 1.015 0.979 0.971 0.968 0.976   7.59
                    0.933 0.805
79) PT  Bromoform             0.241 0.243 0.241 0.232 0.242 0.246 0.240   1.95
```

			0.242	0.234							
80)	PT	Isopropylben	1.691	1.387	1.601	1.543	1.488	1.453	1.432	1.449	11.61
			1.336	1.106							
81)	T	cyclohexanone		0.022	0.023	0.020	0.018	0.020	0.020	0.020#	8.43
			0.020	0.018							
82)	I	d4-1,4-DICHLOROBENZEN	----------ISTD----------								
83)	S	SURR4BrFBenz	0.980	0.978	0.969	0.956	0.972	0.953	0.947	0.961	1.46
			0.949	0.944							
84)	T	Bromobenzene	0.724	0.686	0.699	0.687	0.664	0.654	0.652	0.666	5.85
			0.642	0.589							
85)	PT	1122Tetrclta	0.772	0.789	0.855	0.755	0.716	0.726	0.711	0.741	8.09
			0.695	0.648							
86)	T	123Triclproa		1.031	1.064	0.967	0.941	0.973	0.954	0.970	5.72
			0.946	0.885							
87)	T	14dichloro2bute		0.292	0.254	0.238	0.233	0.227	0.227	0.240	9.60
			0.227	0.224							
88)	T	n-Propylbenz	3.339	2.675	3.180	3.168	3.073	2.909	2.800	2.865	13.76
			2.588	2.050							
89)	T	2chlorotolue	2.223	1.858	1.994	1.959	1.871	1.818	1.773	1.844	12.05
			1.680	1.418							
90)	T	4chlorotolue	2.427	2.170	2.391	2.291	2.175	2.088	2.062	2.129	11.64
			1.945	1.616							
91)	T	135Trimebenz	2.485	2.130	2.387	2.265	2.243	2.154	2.113	2.153	11.53
			1.968	1.633							
92)	T	tbutylbenzen	1.952	1.597	1.966	1.944	1.927	1.885	1.843	1.813	9.83
			1.735	1.463							
93)	T	124Trimetben	2.385	2.040	2.323	2.276	2.228	2.134	2.083	2.115	11.03
			1.953	1.617							
94)	T	sbutylbenzen	2.788	2.105	2.776	2.744	2.712	2.621	2.531	2.505	12.67
			2.358	1.907							
95)	PT	13Diclorbenz	1.382	1.284	1.331	1.275	1.226	1.207	1.215	1.233	8.54
			1.158	1.019							
96)	T	pIsopropylto	2.498	1.857	2.339	2.322	2.304	2.229	2.200	2.167	11.70
			2.057	1.699							
97)	PT	14dichlorobe	1.321	1.245	1.355	1.307	1.260	1.233	1.244	1.244	7.28
			1.181	1.047							
98)	PT	12dichlorobe	1.289	1.269	1.206	1.211	1.129	1.150	1.135	1.162	8.37
			1.097	0.969							
99)	T	nButylbenzen	2.405	1.693	2.076	2.061	2.051	2.040	2.002	1.975	12.26
			1.881	1.565							
100)	PT	12dibromo3cl		0.150	0.172	0.154	0.150	0.160	0.160	0.158	4.52
			0.160	0.155							
101)	T	135Trichloroben	0.852	0.714	0.847	0.859	0.850	0.851	0.863	0.823	6.58
			0.826	0.747							
102)	PT	124Trichlobe	0.569	0.551	0.630	0.677	0.678	0.718	0.740	0.660	9.88
			0.712	0.666							
103)	T	Hexachlorobu	0.335	0.217	0.324	0.328	0.356	0.349	0.362	0.329	13.34
			0.353	0.337							
104)	T	Naphthalene	0.778	0.725	1.082	1.266	1.342	1.547	1.573	-----	
			1.544	1.355							
								Q	A= -0.093	R=0.999	
									B= 1.748		
									C= -0.081		
105)	T	123Trichlben	0.548	0.449	0.579	0.598	0.611	0.649	0.675	0.599	11.57
			0.662	0.619							

Total Average %RSD 8.79

L = Linear LO = Linear+Origin Q = Quad QO = Quad+Origin R = Corr. Coef
(#) = Out of Range

W080421.M Wed Aug 18 08:35:10 2021

Data File : C:\Instarch\Data\AUG0421\BFB1.D Vial: 1
Acq On : 4 Aug 2021 7:26 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W080421.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.638 to 4.650 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.4	20417	PASS
75	95	30	60	54.7	54714	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	7.3	7312	PASS
173	174	0.00	2	0.7	481	PASS
174	95	50	100	69.5	69470	PASS
175	174	5	9	8.8	6083	PASS
176	174	95	101	97.5	67729	PASS
177	176	5	9	7.1	4791	PASS

W080421.M Thu Aug 05 09:41:42 2021

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL1.D Vial: 5
Acq On : 4 Aug 2021 9:12 Operator: DGS-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:48:18 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1174597	20.00	ug/L	-0.01 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	941399	20.00	ug/L	-0.01 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	525073	20.00	ug/L	-0.01 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	298399	18.938	ug/L	-0.01
Spiked Amount 20.000	Range 90 - 110		Recovery = 95 %			
45) SURR12DCAd4	7.27	102	82764	19.117	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 96 %			
61) SURRd8Tolule	9.71	98	1177183	19.813	ug/L	-0.01
Spiked Amount 20.000	Range 93 - 107		Recovery = 99 %			
83) SURR4BrFBenz	13.25	95	514815	24.218	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 121 %#			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	8711	0.8131	ug/L	99
3) Chloromethan	2.09	50	9687	0.4376	ug/L	79
4) VinylChlorid	2.25	62	8722	0.4180	ug/L	97
5) Bromomethane	2.71	94	10373	Below Cal		85
6) Chloroethane	2.88	64	11045	Below Cal	#	45
7) Dichloroflmethane	3.18	67	10652	0.5116	ug/L #	84
8) Trichlorofma	3.27	101	10980	0.6065	ug/L #	72
9) Ethylether	3.71	59	6528	0.5002	ug/L	88
10) dichlorotfluoroethan	3.72	67	7538	0.5115	ug/L #	82
11) propyleneoxide	3.77	58	14712	4.9218	ug/L #	90
12) Acrolein	3.84	56	5926	2.9637	ug/L	78
13) 11dichlorthe	3.99	96	7246	0.5389	ug/L	94
14) Trichlorotfluoroeth	4.04	101	11441	1.2867	ug/L	97
15) Acetone	4.06	43	36555	1.4208	ug/L	98
16) Iodomethane	4.17	142	9352	3.0679	ug/L #	78
17) Carbon Dislf	4.26	76	43888	1.2381	ug/L	95
18) allylchloride	4.48	41	23385	0.9831	ug/L	96
19) methylacetate	4.53	74	2551	0.5580	ug/L #	40
20) Methylchlorid	4.64	84	10261	0.0533	ug/L #	85
21) tbutylalcohol	4.85	59	62652	42.7732	ug/L	80
22) Acrylonitrile	4.94	53	13846	2.1250	ug/L	82
23) t12dichlorte	5.02	96	8618	0.5641	ug/L	95
24) MtBE	5.05	73	25250	0.6297	ug/L	96
25) Hexane	5.40	57	18024	1.5444	ug/L #	79
26) 11dichlorota	5.54	63	14089	0.5076	ug/L	76
27) Vinylacetate	5.63	43	157279	2.1543	ug/L	97
28) chloroprene	5.67	53	24270	0.9775	ug/L	98
29) Diisopether	5.68	45	25879	0.5129	ug/L	99
30) ETBE	6.13	59	23016	0.5846	ug/L	93
31) 22dichloropr	6.27	77	12599	0.6956	ug/L	88
32) c12dichlorte	6.26	96	9863	0.5602	ug/L	92
33) 2Butanone	6.29	72	11619	5.1964	ug/L #	64
34) propionitrile	6.33	54	14899	5.1033	ug/L	90
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	6.52	67	9352	1.2100	ug/L #	76
37) Bromochlorma	6.55	128	3890	0.4554	ug/L	86
38) Tetrahydofur	6.64	42	30616	Below Cal		88

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL1.D Vial: 5
Acq On : 4 Aug 2021 9:12 Operator: DGS-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:48:18 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	12803	0.4602	ug/L		92
40)	111trichlota	6.91	97	13210	0.6030	ug/L		94
42)	Cyclohexane	7.00	56	10007m	0.8347	ug/L	#	79
43)	Carbtetraclo	7.13	119	11173	0.6088	ug/L		97
44)	11dicloprope	7.11	110	3850	0.4923	ug/L	#	86
46)	Benzene	7.37	78	34838	0.5617	ug/L		97
47)	12dichlorota	7.35	62	11639	0.5344	ug/L	#	93
48)	TAME	7.53	73	25067	0.6725	ug/L		88
49)	trichloroete	8.17	95	9288	0.5826	ug/L	#	82
50)	methylcyclohexane	8.43	83	12573	0.8519	ug/L		79
51)	12dicloropra	8.43	63	8886	0.5059	ug/L	#	90
52)	23Dicl1propene	8.50	75	14144	0.5987	ug/L		98
53)	Dibromometha	8.56	93	5493	0.5475	ug/L		87
54)	methylmethacrylate	8.59	69	6980	0.5889	ug/L	#	83
55)	14dioxane	8.61	88	8020	34.0913	ug/L	#	73
56)	Bromodiclrma	8.78	83	11207	0.5407	ug/L	#	95
57)	2Nitropropane	9.04	43	34281	6.8448	ug/L		94
58)	2CLEVE	9.16	63	25827	2.7004	ug/L		91
59)	c13dicloproe	9.34	75	14094	0.5699	ug/L		100
60)	4Meth2Pentan	9.55	43	87837	5.7745	ug/L		99
62)	Toluene	9.80	92	21757	0.5369	ug/L		94
63)	t13Dicloprop	10.05	75	13521	0.6471	ug/L		96
64)	ethylmethacrylate	10.20	69	25601	1.3297	ug/L		95
65)	112Triclotha	10.28	83	6893	0.5538	ug/L		94
66)	Tetrachlorte	10.53	166	8726	0.4837	ug/L		94
67)	13Diclorpropa	10.52	76	14910	0.5830	ug/L		89
69)	2Hexanone	10.64	43	69419	6.3379	ug/L		99
70)	Clorodibrmta	10.82	129	8342	0.5294	ug/L	#	88
71)	12Dibrometha	10.97	107	8218	0.5709	ug/L		96
72)	Chlorobenzen	11.66	112	22729	0.5276	ug/L	#	51
73)	1Clhexane	11.63	91	13121	0.6554	ug/L	#	52
74)	1112Tetclota	11.77	131	7612	0.5275	ug/L		83
75)	Ethylbenzene	11.82	91	41146	0.6188	ug/L		95
76)	m p-Xylene	11.98	106	29910	1.1051	ug/L	#	84
77)	o-Xylene	12.52	106	14652	0.5371	ug/L		88
78)	Styrene	12.55	104	24146	0.5514	ug/L		86
79)	Bromoform	12.77	173	5666	0.5498	ug/L		96
80)	Isopropylben	13.05	105	39800	0.6458	ug/L		92
81)	cyclohexanone	13.14	55	13877	15.9596	ug/L		85
84)	Bromobenzene	13.47	156	9502	0.5446	ug/L		94
85)	1122Tetrclta	13.44	83	10132	0.5541	ug/L		90
86)	123Triclproa	13.50	75	15035	0.6884	ug/L		93
87)	14dichloro2butene	13.52	53	4569	0.8708	ug/L	#	67
88)	n-Propylbenz	13.64	91	43824	0.6195	ug/L		97
89)	2chlorotolue	13.75	91	29182	0.6797	ug/L		84
90)	4chlorotolue	13.90	91	31863	0.6401	ug/L		94
91)	135Trimebenz	13.90	105	32626	0.6568	ug/L		88
92)	tbutylbenzen	14.37	119	25623	0.5996	ug/L		88
93)	124Trimetben	14.43	105	31309	0.6346	ug/L		96
94)	sbutylbenzen	14.69	105	36592	0.6156	ug/L		98
95)	13Diclorbenz	14.82	146	18143	0.5550	ug/L		97
96)	pIsopropylto	14.90	119	32793	0.6278	ug/L	#	96
97)	14dichlorobe	14.95	146	17343	0.5173	ug/L	#	54
98)	12dichlorobe	15.49	146	16922	0.5370	ug/L	#	55
99)	nButylbenzen	15.50	91	31564	0.6752	ug/L		93
100)	12dibromo3cl	0.00	157	0	N.D.			
101)	135Trichlorobenzene	16.91	180	11179	0.5523	ug/L		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL1.D Vial: 5
Acq On : 4 Aug 2021 9:12 Operator: DGS-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:48:18 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
102) 124Trichlobe	17.72	180	7472	0.4678	ug/L		87
103) Hexachlorobu	17.97	225	4398	0.5632	ug/L		83
104) Naphthalene	18.03	128	10217	1.3036	ug/L	#	73
105) 123Trichlben	18.33	180	7189	0.5065	ug/L		91

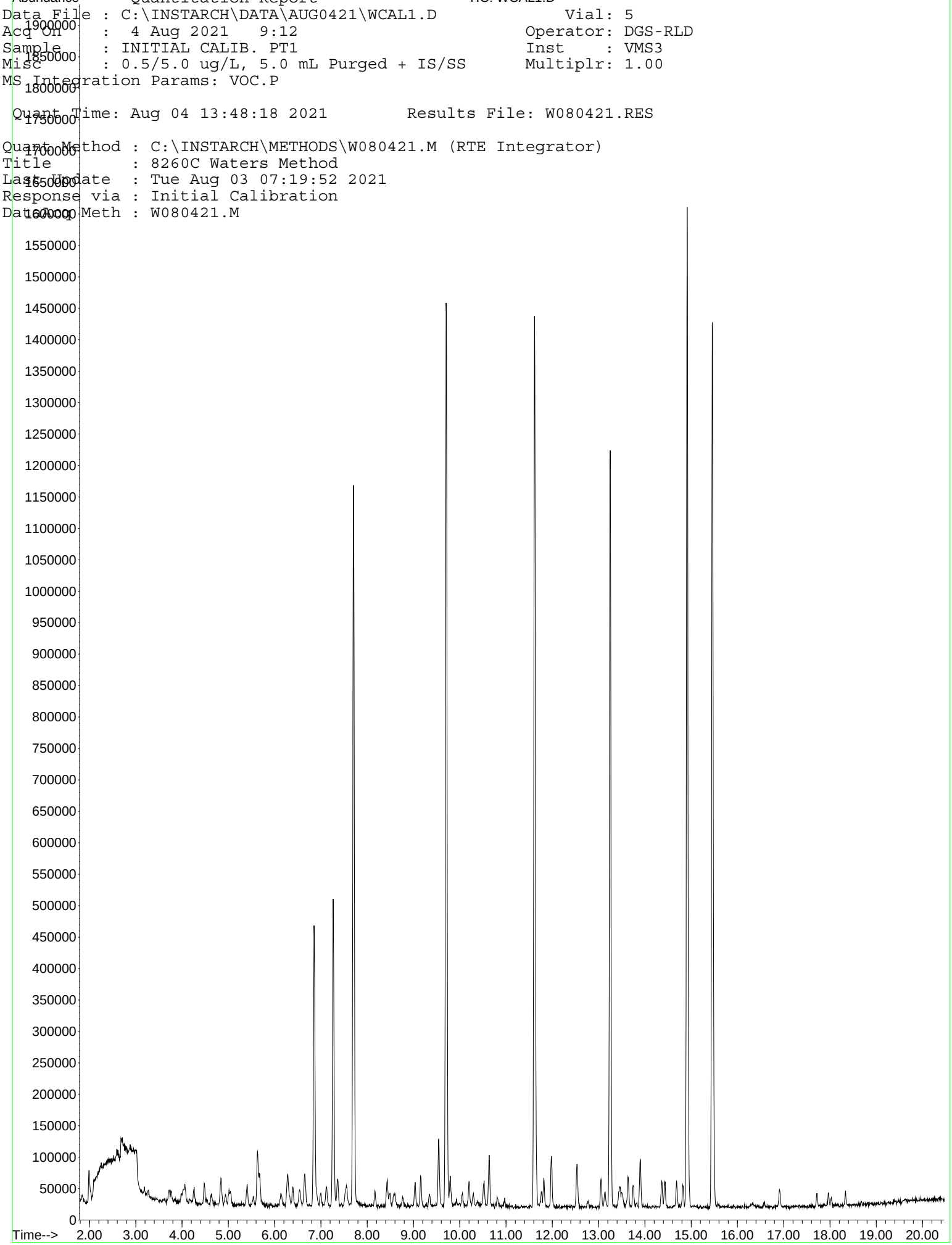
(#) = qualifier out of range (m) = manual integration

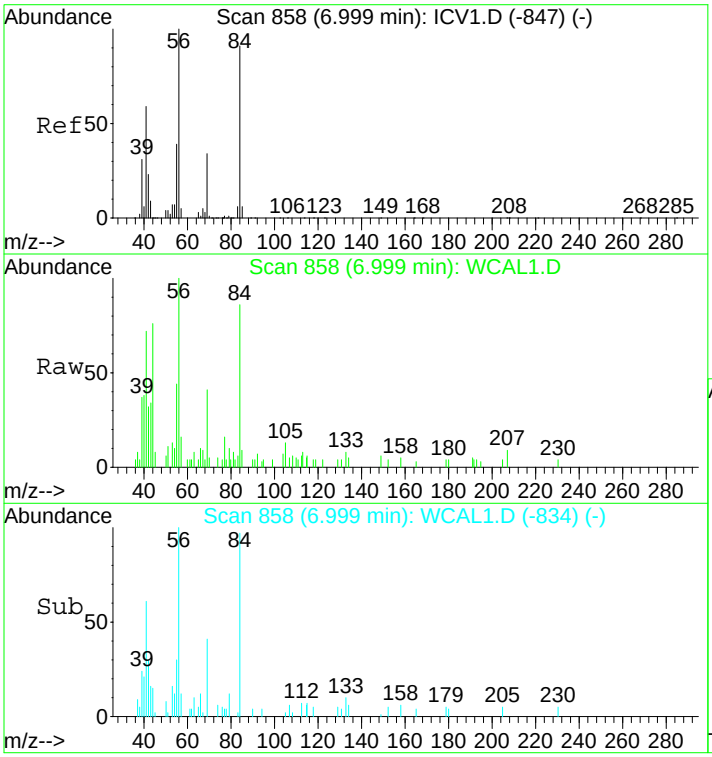
Abundance Quantitation Report TIC: WCAL1.D

Data File : C:\INSTARCH\DATA\AUG0421\WCAL1.D Vial: 5
Acq On : 4 Aug 2021 9:12 Operator: DGS-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.5/5.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:48:18 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
Data Path Meth : W080421.M

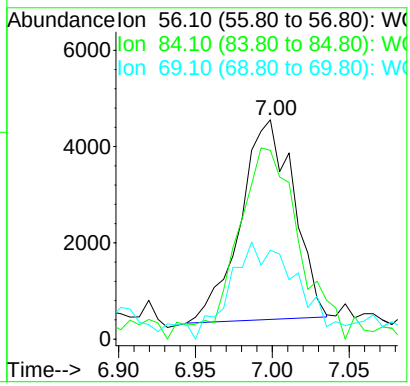




#42
Cyclohexane
Concen: 0.83 ug/L m
RT: 7.00 min Scan# 858
Delta R.T. -0.01 min
Lab File: WCAL1.D
Acq: 4 Aug 2021 9:12

Tgt Ion: 56 Resp: 10007

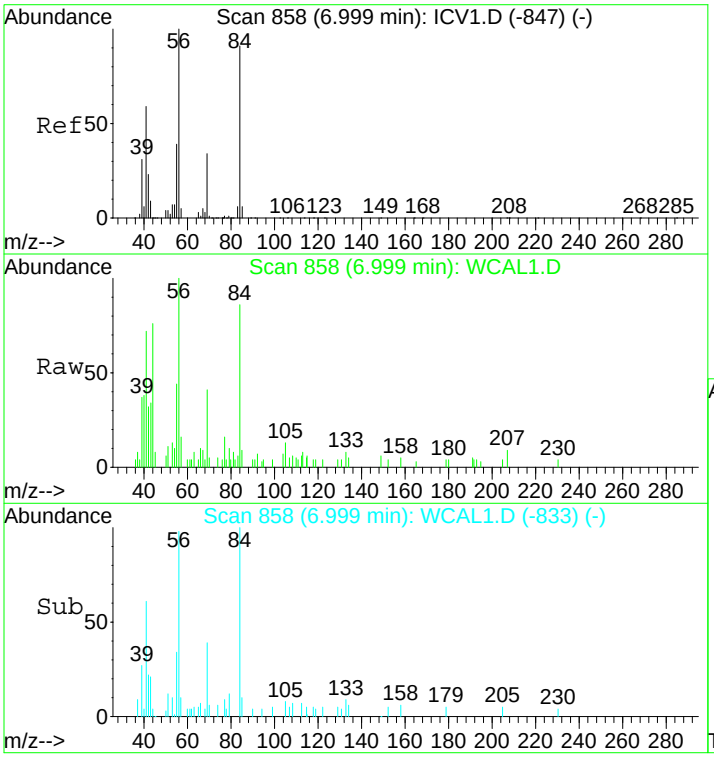
Ion	Ratio	Lower	Upper
56	100		
84	111.6	63.0	103.0#
69	77.1	10.9	50.9#



After Manual Integration

DGS 08/05/2021

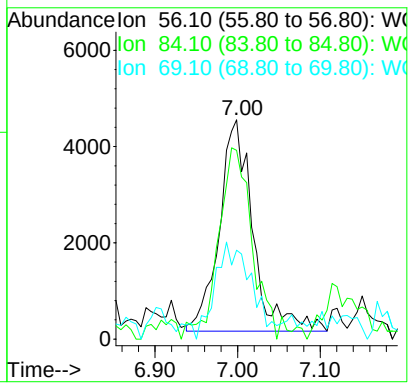
RJ 08/05/2021



#42
Cyclohexane
Concen: 0.89 ug/L
RT: 7.00 min Scan# 858
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 4 Aug 2021 9:12

Tgt Ion: 56 Resp: 12428

Ion	Ratio	Lower	Upper
56	100		
84	89.8	70.7	110.7
69	62.1	13.3	53.3#



Before Manual Integration

DGS 08/05/2021

REASON # 2

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL2.D Vial: 6
Acq On : 4 Aug 2021 9:42 Operator: DGS-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:49:13 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1155727	20.00	ug/L	-0.01 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	925273	20.00	ug/L	-0.01 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	516111	20.00	ug/L	-0.01 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	293065	18.903	ug/L	-0.01
Spiked Amount 20.000	Range 90 - 110		Recovery = 95	%		
45) SURR12DCAd4	7.27	102	79074	18.563	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 93	%		
61) SURRd8Tolule	9.71	98	1165884	19.943	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.25	95	504840	24.162	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 121	%#		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	8091	0.7857	ug/L	91
3) Chloromethan	2.09	50	16405	0.7532	ug/L	88
4) VinylChlorid	2.25	62	12498	0.6087	ug/L	88
5) Bromomethane	2.71	94	11281	0.0339	ug/L	94
6) Chloroethane	2.87	64	9323	Below Cal	#	92
7) Dichloroflmethane	3.18	67	17839	0.8707	ug/L #	88
8) Trichlorofma	3.28	101	11823	0.6479	ug/L	85
9) Ethylether	3.71	59	13338	1.0387	ug/L	94
10) dichlorotfluoroethan	3.72	67	10831	0.7470	ug/L	97
11) propyleneoxide	3.77	58	27033	9.1913	ug/L	86
12) Acrolein	3.84	56	10296	5.2333	ug/L	99
13) 11dichlorthe	3.99	96	11065	0.8364	ug/L #	86
14) Trichlorotfluoroeth	4.03	101	11722	1.3189	ug/L	96
15) Acetone	4.07	43	56065	5.0740	ug/L	96
16) Iodomethane	4.16	142	17648	3.5567	ug/L	97
17) Carbon Dislf	4.25	76	62627	1.7955	ug/L	100
18) allylchloride	4.48	41	41932	1.7916	ug/L	97
19) methylacetate	4.53	74	4777	1.0620	ug/L #	40
20) Methylchlorid	4.64	84	18763	0.6008	ug/L #	80
21) tbutylalcohol	4.84	59	103764	71.9975	ug/L	82
22) Acrylonitrile	4.94	53	28090	4.3815	ug/L	92
23) t12dichlorte	5.01	96	14668	0.9757	ug/L	93
24) MtBE	5.05	73	48401	1.2268	ug/L	96
25) Hexane	5.40	57	16816	1.5082	ug/L #	95
26) 11dichlorota	5.54	63	24492	0.8968	ug/L	89
27) Vinylacetate	5.63	43	336202	8.6657	ug/L	99
28) chloroprene	5.67	53	37702	1.5432	ug/L	96
29) Diisopether	5.69	45	44180	0.8900	ug/L	91
30) ETBE	6.14	59	44799	1.1564	ug/L	99
31) 22dichloropr	6.28	77	19354	1.0860	ug/L	84
32) c12dichlorte	6.27	96	15966	0.9216	ug/L	97
33) 2Butanone	6.29	72	21384	9.7198	ug/L	100
34) propionitrile	6.33	54	26098	9.0853	ug/L	94
35) Ethylacetate	6.39	88	3965	5.4969	ug/L #	88
36) methacrylonitrile	6.54	67	15974	2.1005	ug/L #	82
37) Bromochlorma	6.55	128	8062	0.9591	ug/L #	88
38) Tetrahydofur	6.65	42	52858	Below Cal		90

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL2.D Vial: 6
Acq On : 4 Aug 2021 9:42 Operator: DGS-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:49:13 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.66	83	28390	1.0372 ug/L		90
40)	111trichlota	6.91	97	18939	0.8786 ug/L		95
42)	Cyclohexane	6.99	56	11681	0.8963 ug/L	#	82
43)	Carbtetraclo	7.13	119	13717	0.7597 ug/L		95
44)	11dicloprope	7.12	110	5927	0.7703 ug/L		90
46)	Benzene	7.36	78	61819	1.0130 ug/L		97
47)	12dichlorota	7.36	62	21409	0.9991 ug/L		96
48)	TAME	7.53	73	46459	1.2668 ug/L		88
49)	trichloroete	8.17	95	14512	0.9251 ug/L	#	84
50)	methylcyclohexane	8.43	83	15499	0.9429 ug/L		99
51)	12dicloropra	8.43	63	15952	0.9229 ug/L	#	69
52)	23Dicl1propene	8.50	75	24746	1.0646 ug/L		99
53)	Dibromometha	8.57	93	10116	1.0248 ug/L		88
54)	methylmethacrylate	8.59	69	13958	1.1968 ug/L	#	77
55)	14dioxane	8.61	88	12076	52.1706 ug/L		92
56)	Bromodiclrma	8.78	83	23441	1.1493 ug/L		99
57)	2Nitropropane	9.03	43	63798	12.9463 ug/L		99
58)	2CLEVE	9.16	63	47982	5.0988 ug/L		91
59)	c13dicloproe	9.35	75	26702	1.0974 ug/L		99
60)	4Meth2Pentan	9.55	43	155782	10.4084 ug/L		98
62)	Toluene	9.79	92	38460	0.9646 ug/L		97
63)	t13Dicloprop	10.05	75	23473	1.1417 ug/L		85
64)	ethylmethacrylate	10.20	69	45273	2.3899 ug/L		95
65)	112Triclotha	10.29	83	12406	1.0131 ug/L		94
66)	Tetrachlorte	10.53	166	11701	0.6592 ug/L		98
67)	13Diclorpropa	10.51	76	25165	1.0000 ug/L		95
69)	2Hexanone	10.64	43	118123	10.9725 ug/L		100
70)	Clorodibrmta	10.81	129	15764	1.0179 ug/L		99
71)	12Dibrometha	10.97	107	15865	1.1213 ug/L		97
72)	Chlorobenzen	11.65	112	42465	1.0029 ug/L	#	72
73)	1Clhexane	11.63	91	16312	0.8289 ug/L	#	59
74)	1112Tetclota	11.76	131	14863	1.0479 ug/L		96
75)	Ethylbenzene	11.82	91	71362	1.0919 ug/L		91
76)	m p-Xylene	11.99	106	52274	1.9650 ug/L		90
77)	o-Xylene	12.53	106	26197	0.9770 ug/L	#	86
78)	Styrene	12.54	104	47646	1.1071 ug/L		99
79)	Bromoform	12.77	173	11157	1.1015 ug/L		93
80)	Isopropylben	13.05	105	64157	1.0591 ug/L		91
81)	cyclohexanone	13.14	55	20240	23.6832 ug/L	#	89
84)	Bromobenzene	13.46	156	17693	1.0318 ug/L	#	88
85)	1122Tetrclta	13.44	83	20350	1.1322 ug/L		98
86)	123Triclproa	13.50	75	26609	1.2395 ug/L		91
87)	14dichloro2butene	13.51	53	7537	1.4615 ug/L		89
88)	n-Propylbenz	13.64	91	69039	0.9928 ug/L		95
89)	2chlorotolue	13.75	91	47954	1.1363 ug/L		94
90)	4chlorotolue	13.90	91	55998	1.1444 ug/L		93
91)	135Trimebenz	13.90	105	54967	1.1257 ug/L		93
92)	tbutylbenzen	14.37	119	41212	0.9811 ug/L		95
93)	124Trimetben	14.43	105	52633	1.0854 ug/L		98
94)	sbutylbenzen	14.68	105	54331	0.9299 ug/L		90
95)	13Diclorbenz	14.82	146	33126	1.0308 ug/L		96
96)	pIsopropylto	14.90	119	47917	0.9332 ug/L	#	97
97)	14dichlorobe	14.95	146	32122	0.9748 ug/L	#	79
98)	12dichlorobe	15.49	146	32755	1.0575 ug/L	#	83
99)	nButylbenzen	15.49	91	43694	0.9508 ug/L		92
100)	12dibromo3cl	16.57	157	3863	1.0790 ug/L		97
101)	135Trichlorobenzene	16.91	180	18423	0.9260 ug/L		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL2.D Vial: 6
Acq On : 4 Aug 2021 9:42 Operator: DGS-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:49:13 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
102)	124Trichlobe	17.72	180	14221	0.9058	ug/L		97
103)	Hexachlorobu	17.97	225	5603	0.7299	ug/L		94
104)	Naphthalene	18.02	128	18718	1.5124	ug/L	#	88
105)	123Trichlben	18.33	180	11583	0.8302	ug/L		89

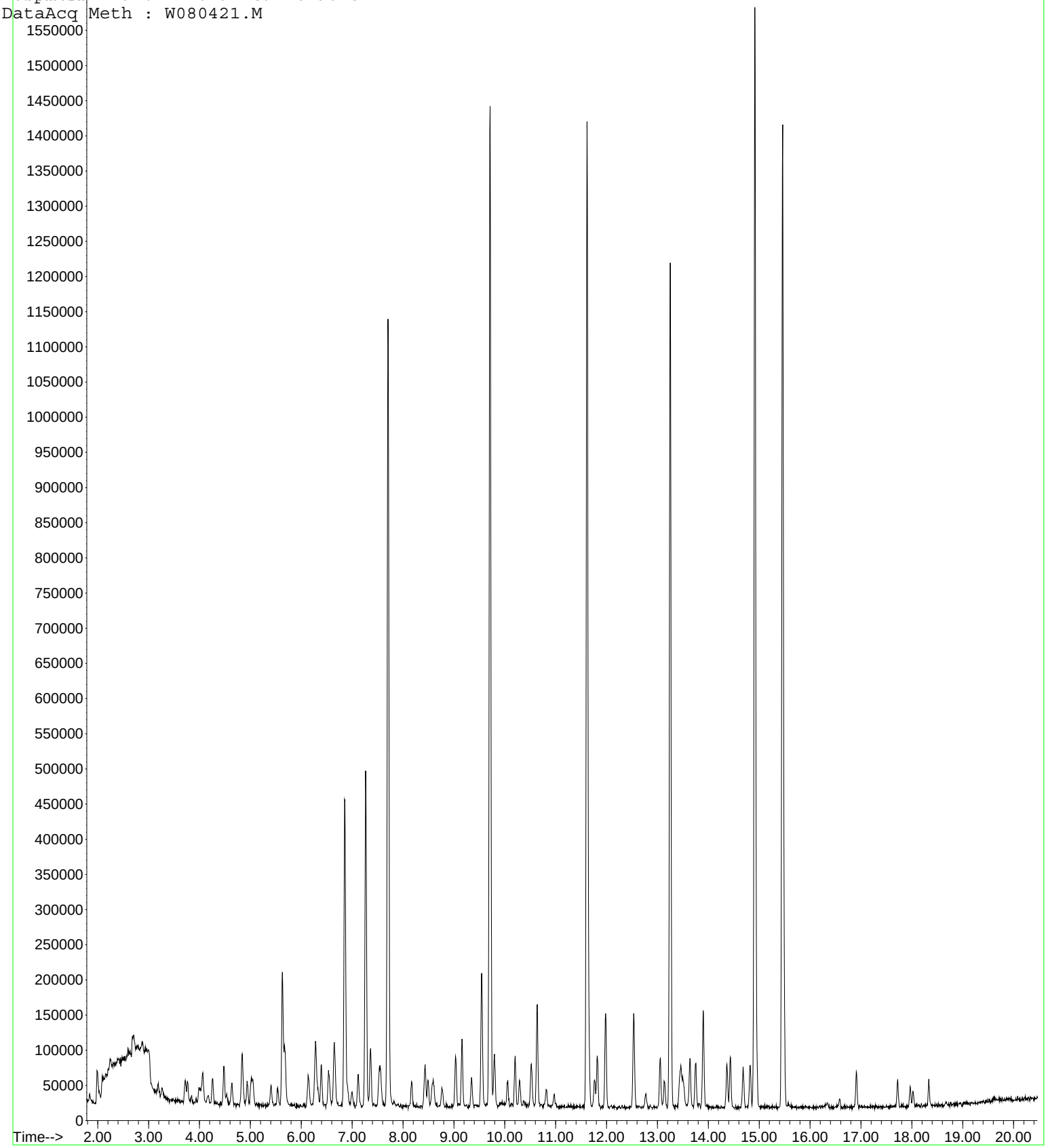
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL2.D

Data File : C:\INSTARCH\DATA\AUG0421\WCAL2.D Vial: 6
Acq On : 4 Aug 2021 9:42 Operator: DGS-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 1.00/10.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:49:13 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL3.D Vial: 7
Acq On : 4 Aug 2021 10:13 Operator: DGS-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:50:19 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1122288	20.00	ug/L	-0.01 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	888357	20.00	ug/L	-0.01 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	500506	20.00	ug/L	-0.01 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	280630	18.640	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 93 %			
45) SURR12DCAd4	7.27	102	76832	18.574	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 93 %			
61) SURRd8Tolule	9.71	98	1119939	19.728	ug/L	-0.01
Spiked Amount 20.000	Range 93 - 107		Recovery = 99 %			
83) SURR4BrFBenz	13.25	95	485224	23.947	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 120 %#			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	25847	1.8454	ug/L	100
3) Chloromethan	2.09	50	32156	1.5204	ug/L	92
4) VinylChlorid	2.24	62	30285	1.5190	ug/L	91
5) Bromomethane	2.71	94	21134m	0.7509	ug/L	92
6) Chloroethane	2.87	64	21889m	0.7493	ug/L	86
7) Dichloroflmethane	3.19	67	42174	2.1199	ug/L	97
8) Trichlorofma	3.26	101	39228	1.8095	ug/L	94
9) Ethylether	3.71	59	25375	2.0350	ug/L	96
10) dichlorotfluoroethan	3.73	67	30016	2.1318	ug/L	91
11) propyleneoxide	3.77	58	56334	19.7245	ug/L	88
12) Acrolein	3.85	56	18350	9.6049	ug/L	91
13) 11dichlorthe	3.99	96	24159	1.8807	ug/L	99
14) Trichlorotfluoroeth	4.02	101	40288	3.3845	ug/L	98
15) Acetone	4.07	43	106907	14.9550	ug/L	99
16) Iodomethane	4.17	142	37044	4.7448	ug/L	92
17) Carbon Dislf	4.25	76	142029	4.1933	ug/L	99
18) allylchloride	4.48	41	85014	3.7406	ug/L	96
19) methylacetate	4.53	74	10746	2.4602	ug/L	93
20) Methylchlorid	4.63	84	32585	1.5373	ug/L	91
21) tbutylalcohol	4.84	59	211317	150.9926	ug/L	77
22) Acrylonitrile	4.94	53	56958	9.1490	ug/L	94
23) t12dichlorte	5.01	96	29621	2.0291	ug/L	98
24) MtBE	5.05	73	87145	2.2747	ug/L	98
25) Hexane	5.41	57	62523	3.3897	ug/L	96
26) 11dichlorota	5.54	63	53413	2.0141	ug/L	97
27) Vinylacetate	5.63	43	622704	19.8123	ug/L	99
28) chloroprene	5.67	53	90233	3.8035	ug/L	98
29) Diisopether	5.68	45	85361	1.7708	ug/L	90
30) ETBE	6.14	59	87176	2.3173	ug/L	97
31) 22dichloropr	6.27	77	45065	2.6040	ug/L	96
32) c12dichlorte	6.27	96	34583	2.0557	ug/L	98
33) 2Butanone	6.29	72	42924	20.0917	ug/L	100
34) propionitrile	6.32	54	51805	18.5718	ug/L	96
35) Ethylacetate	6.40	88	6684	9.5424	ug/L	96
36) methacrylonitrile	6.53	67	31525	4.2689	ug/L #	82
37) Bromochlorma	6.55	128	14489	1.7751	ug/L	94
38) Tetrahydofur	6.65	42	102278	6.3447	ug/L	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL3.D Vial: 7
Acq On : 4 Aug 2021 10:13 Operator: DGS-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:50:19 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	55390	2.0840	ug/L		96
40)	111trichlota	6.91	97	46062	2.2005	ug/L		93
42)	Cyclohexane	6.99	56	38841	1.8489	ug/L		88
43)	Carbtetraclo	7.13	119	36977	2.1088	ug/L		98
44)	11dicloprope	7.13	110	13674	1.8300	ug/L		93
46)	Benzene	7.36	78	122102	2.0604	ug/L		96
47)	12dichlorota	7.36	62	43090	2.0707	ug/L		97
48)	TAME	7.53	73	91593	2.5718	ug/L		87
49)	trichloroete	8.17	95	30716	2.0165	ug/L		91
50)	methylcyclohexane	8.43	83	49357	1.9733	ug/L		99
51)	12dicloropra	8.43	63	31758	1.8921	ug/L	#	72
52)	23Dicl1propene	8.49	75	51034	2.2609	ug/L		97
53)	Dibromometha	8.57	93	19433	2.0273	ug/L		94
54)	methylmethacrylate	8.59	69	27890	2.4626	ug/L		90
55)	14dioxane	8.61	88	24393	108.5223	ug/L		97
56)	Bromodiclrma	8.77	83	43293	2.1859	ug/L		98
57)	2Nitropropane	9.04	43	121584	25.4078	ug/L		99
58)	2CLEVE	9.15	63	96926	10.6068	ug/L		95
59)	c13dicloproe	9.35	75	52587	2.2256	ug/L		98
60)	4Meth2Pentan	9.55	43	306729	21.1044	ug/L		98
62)	Toluene	9.80	92	76140	1.9665	ug/L		94
63)	t13Dicloprop	10.05	75	48167	2.4126	ug/L		97
64)	ethylmethacrylate	10.20	69	88145	4.7917	ug/L		96
65)	112Triclotha	10.29	83	23868	2.0072	ug/L		97
66)	Tetrachlorte	10.53	166	32179	1.8668	ug/L		93
67)	13Diclorpropa	10.51	76	50804	2.0790	ug/L		100
69)	2Hexanone	10.64	43	230738	22.3240	ug/L		98
70)	Clorodibrmta	10.82	129	30409	2.0452	ug/L		99
71)	12Dibrometha	10.97	107	28656	2.1095	ug/L		100
72)	Chlorobenzen	11.66	112	86256	2.1217	ug/L		88
73)	1Clhexane	11.63	91	38761	2.0516	ug/L		90
74)	1112Tetclota	11.77	131	30034	2.2056	ug/L		93
75)	Ethylbenzene	11.82	91	145650	2.3211	ug/L		94
76)	m p-Xylene	11.99	106	112397	4.4007	ug/L	#	85
77)	o-Xylene	12.53	106	55452	2.1540	ug/L		92
78)	Styrene	12.54	104	93489	2.2625	ug/L		92
79)	Bromoform	12.77	173	21572	2.2183	ug/L		99
80)	Isopropylben	13.05	105	142182	2.4447	ug/L		95
81)	cyclohexanone	13.14	55	40413	49.2530	ug/L		94
84)	Bromobenzene	13.47	156	35005	2.1049	ug/L	#	86
85)	1122Tetrclta	13.43	83	42781	2.4543	ug/L		90
86)	123Triclproa	13.50	75	53249	2.5577	ug/L		95
87)	14dichloro2butene	13.51	53	12712	2.5418	ug/L		76
88)	n-Propylbenz	13.64	91	159181	2.3606	ug/L		93
89)	2chlorotolue	13.75	91	99797	2.4384	ug/L		97
90)	4chlorotolue	13.91	91	119652	2.5216	ug/L		93
91)	135Trimebenz	13.90	105	119486	2.5234	ug/L		93
92)	tbutylbenzen	14.36	119	98384	2.4151	ug/L		94
93)	124Trimetben	14.43	105	116254	2.4722	ug/L		97
94)	sbutylbenzen	14.69	105	138935	2.4522	ug/L		92
95)	13Diclorbenz	14.82	146	66600	2.1371	ug/L		98
96)	pIsopropylto	14.90	119	117066	2.3510	ug/L		96
97)	14dichlorobe	14.95	146	67796	2.1215	ug/L		90
98)	12dichlorobe	15.49	146	60379	2.0101	ug/L		86
99)	nButylbenzen	15.50	91	103891	2.3313	ug/L		95
100)	12dibromo3cl	16.58	157	8609	2.4796	ug/L		98
101)	135Trichlorobenzene	16.91	180	42395	2.1973	ug/L		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL3.D Vial: 7
Acq On : 4 Aug 2021 10:13 Operator: DGS-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:50:19 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	31536	2.0713	ug/L	94
103)	Hexachlorobu	17.97	225	16241	2.1817	ug/L	95
104)	Naphthalene	18.02	128	54169	2.4090	ug/L	98
105)	123Trichlben	18.33	180	28998	2.1432	ug/L	97

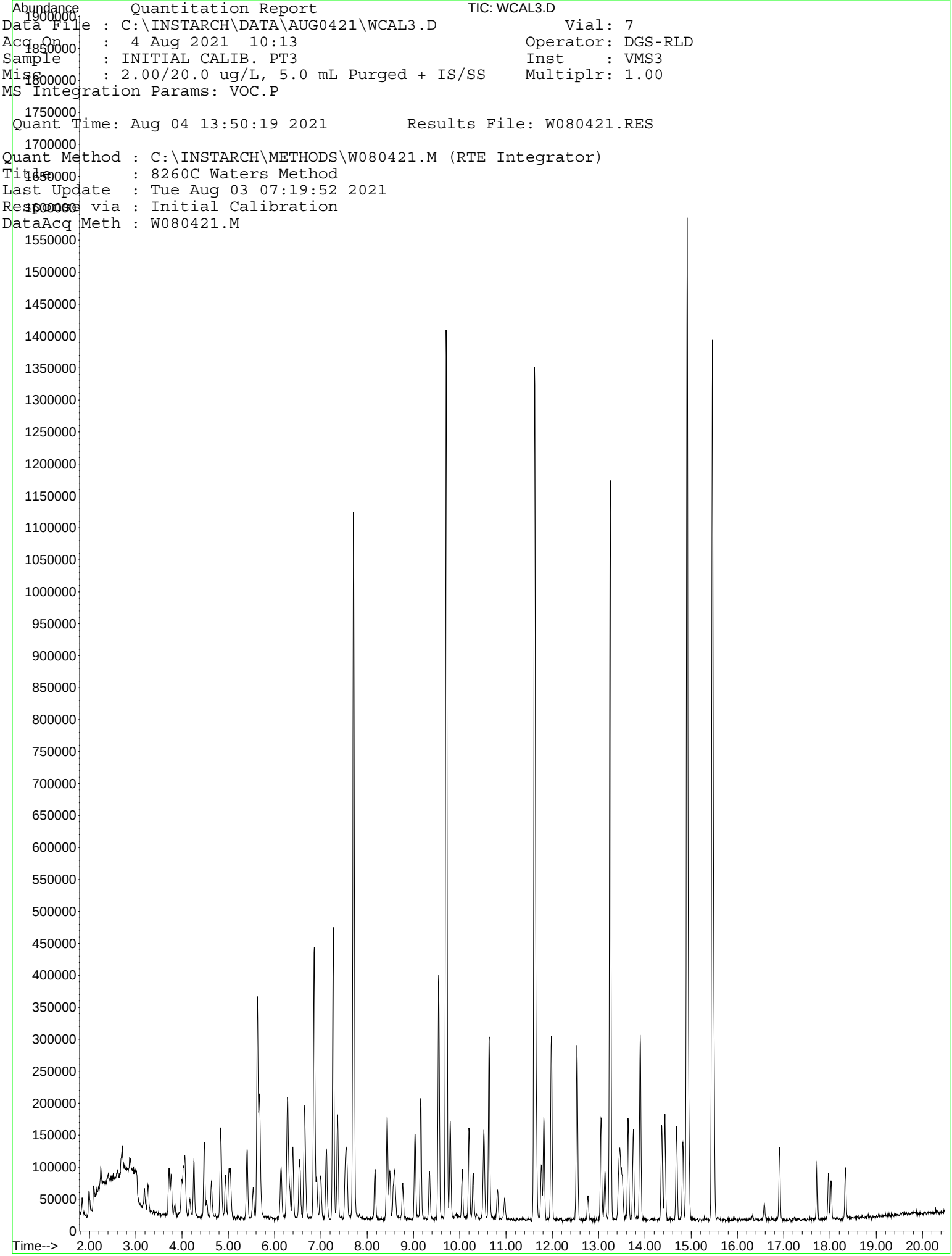
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL3.D

Data File : C:\INSTARCH\DATA\AUG0421\WCAL3.D Vial: 7
Acq On : 4 Aug 2021 10:13 Operator: DGS-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

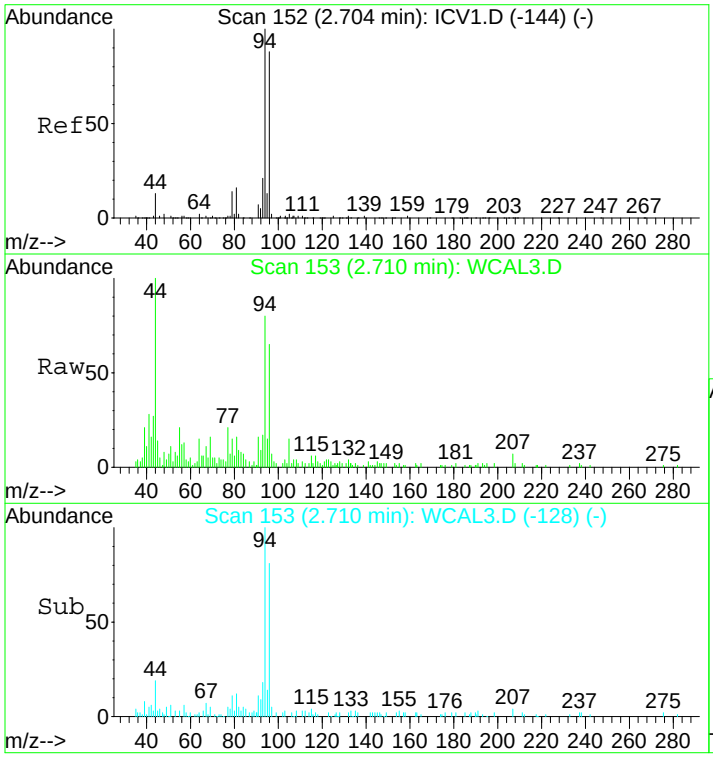
Quant Time: Aug 04 13:50:19 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



After Manual Integration

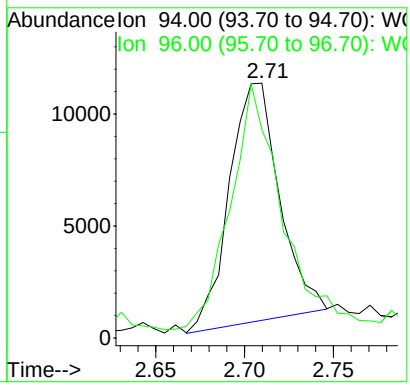
DGS 08/05/2021

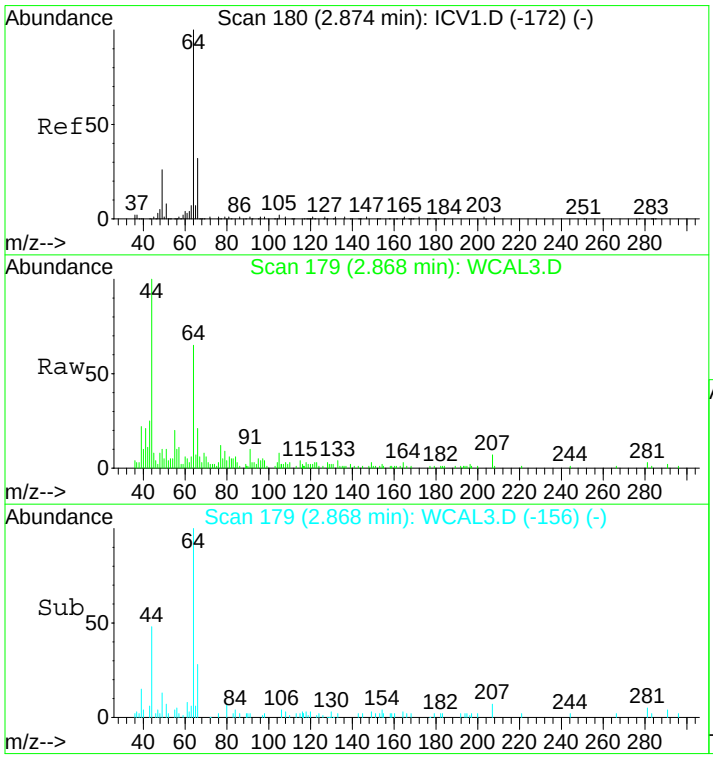


#5
Bromomethane
Concen: 0.75 ug/L m
RT: 2.71 min Scan# 153
Delta R.T. 0.00 min
Lab File: WCAL3.D
Acq: 4 Aug 2021 10:13

Tgt Ion: 94 Resp: 21134

Ion	Ratio	Lower	Upper
94	100		
96	107.2	73.4	113.4

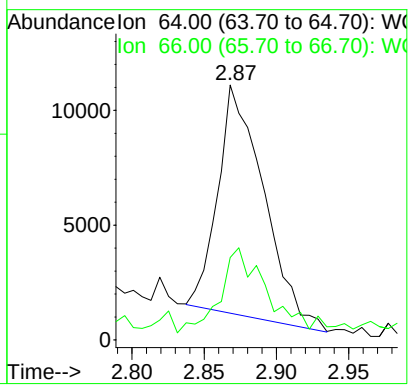




#6
Chloroethane
Concen: 0.75 ug/L m
RT: 2.87 min Scan# 179
Delta R.T. -0.01 min
Lab File: WCAL3.D
Acq: 4 Aug 2021 10:13

Tgt Ion: 64 Resp: 21889

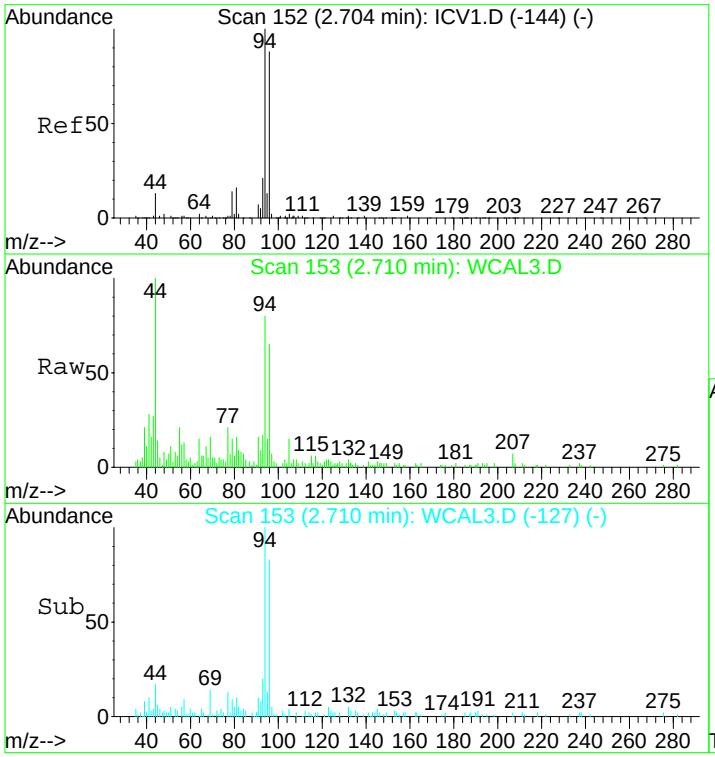
Ion	Ratio	Lower	Upper
64	100		
66	46.0	9.7	49.7



RJ 08/05/2021

Before Manual Integration

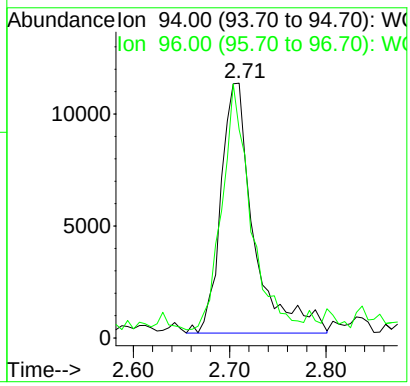
DGS 08/05/2021



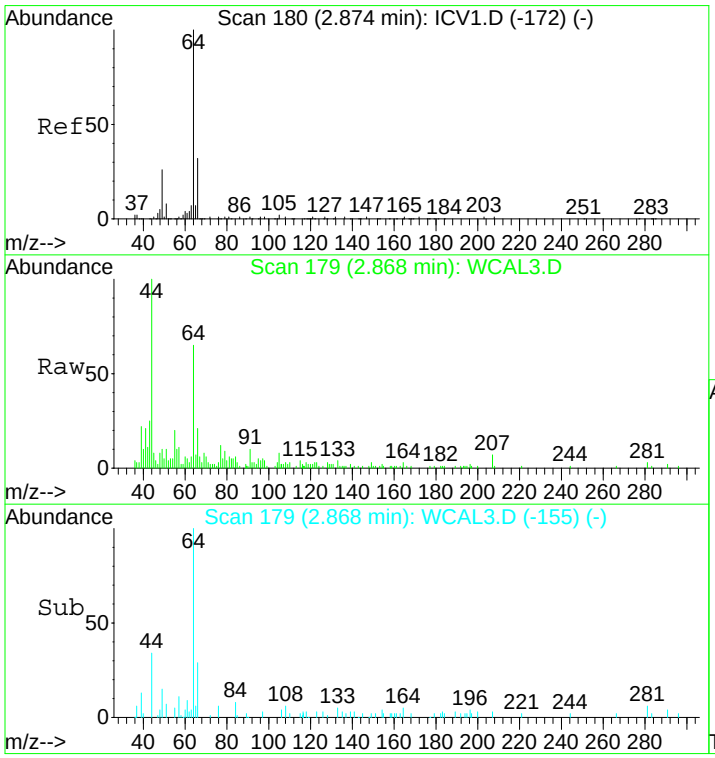
#5
Bromomethane
Concen: 2.54 ug/L
RT: 2.71 min Scan# 153
Delta R.T. 0.01 min
Lab File: WCAL3.D
Acq: 4 Aug 2021 10:13

Tgt Ion: 94 Resp: 26545

Ion	Ratio	Lower	Upper
94	100		
96	87.5	74.7	114.7



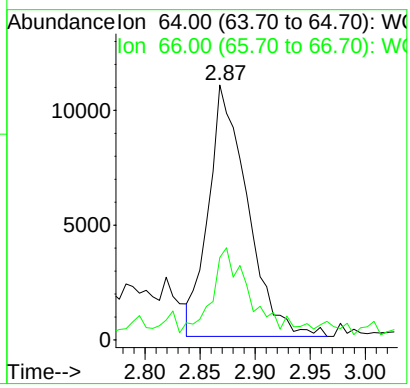
REASON # 2



#6
Chloroethane
Concen: 2.71 ug/L
RT: 2.87 min Scan# 179
Delta R.T. -0.01 min
Lab File: WCAL3.D
Acq: 4 Aug 2021 10:13

Tgt Ion: 64 Resp: 26923

Ion	Ratio	Lower	Upper
64	100		
66	37.4	12.8	52.8



REASON # 2

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL4.D Vial: 8
Acq On : 4 Aug 2021 10:43 Operator: DGS-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 11:03:34 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1124720	20.00	ug/L	-0.01 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	894785	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	508184	20.00	ug/L	-0.01 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	291135	19.296	ug/L	-0.01
Spiked Amount 20.000	Range 90 - 110		Recovery = 96 %			
45) SURR12DCAd4	7.27	102	79819	19.255	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 96 %			
61) SURRd8Tolule	9.71	98	1137628	19.996	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %			
83) SURR4BrFBenz	13.25	95	486074	23.626	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 118 %#			

Target Compounds						Qvalue
2) Dichlorodi	1.84	85	72084	4.5863	ug/L	99
3) Chloromethan	2.09	50	77974	3.6789	ug/L	94
4) VinylChlorid	2.25	62	78515	3.9297	ug/L	98
5) Bromomethane	2.70	94	55465	3.1889	ug/L	94
6) Chloroethane	2.88	64	57551	3.1208	ug/L	96
7) Dichloroflmethane	3.20	67	95672	4.7985	ug/L	98
8) Trichlorofma	3.27	101	108380	4.7221	ug/L	99
9) Ethylether	3.71	59	61671	4.9352	ug/L	93
10) dichlorotfluoroethan	3.72	67	67810	4.8055	ug/L	98
11) propyleneoxide	3.76	58	131267	45.8618	ug/L	90
12) Acrolein	3.84	56	37120	19.3877	ug/L	93
13) 11dichlorthe	3.99	96	63338	4.9199	ug/L	96
14) Trichlorotfluoroeth	4.03	101	116271	8.8373	ug/L	98
15) Acetone	4.06	43	237457	39.8361	ug/L	100
16) Iodomethane	4.17	142	107734	8.9705	ug/L	97
17) Carbon Dislf	4.26	76	340430	10.0292	ug/L	99
18) allylchloride	4.48	41	213456	9.3717	ug/L	98
19) methylacetate	4.53	74	19698	4.4999	ug/L	91
20) Methylchlorid	4.63	84	78613	4.5447	ug/L #	88
21) tbutylalcohol	4.84	59	479727	342.0388	ug/L	79
22) Acrylonitrile	4.94	53	136396	21.8615	ug/L	97
23) t12dichlorte	5.01	96	74699	5.1060	ug/L	98
24) MtBE	5.05	73	212061	5.5233	ug/L	97
25) Hexane	5.40	57	182568	8.3191	ug/L	96
26) 11dichlorota	5.54	63	128405	4.8315	ug/L	98
27) Vinylacetate	5.63	43	1366650	48.9021	ug/L	99
28) chloroprene	5.67	53	235721	9.9146	ug/L	98
29) Diisopether	5.69	45	218911	4.5314	ug/L	93
30) ETBE	6.14	59	212102	5.6259	ug/L	96
31) 22dichloropr	6.27	77	113022	6.5166	ug/L	97
32) c12dichlorte	6.27	96	82299	4.8814	ug/L	98
33) 2Butanone	6.29	72	102251	47.7579	ug/L	97
34) propionitrile	6.33	54	120010	42.9298	ug/L	99
35) Ethylacetate	6.40	88	17855	25.4356	ug/L #	79
36) methacrylonitrile	6.53	67	70278	9.4959	ug/L #	86
37) Bromochlorma	6.55	128	34840	4.2591	ug/L	93
38) Tetrahydofur	6.64	42	233458	29.2319	ug/L	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL4.D Vial: 8
Acq On : 4 Aug 2021 10:43 Operator: DGS-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 11:03:34 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	134731	5.0581	ug/L		97
40)	111trichlota	6.91	97	115063	5.4850	ug/L		97
42)	Cyclohexane	6.99	56	110125	4.3297	ug/L		94
43)	Carbtetraclo	7.12	119	96058	5.4665	ug/L		98
44)	11dicloprope	7.11	110	36158	4.8287	ug/L		95
46)	Benzene	7.36	78	304885	5.1337	ug/L		96
47)	12dichlorota	7.36	62	102396	4.9101	ug/L		97
48)	TAME	7.53	73	216395	6.0629	ug/L		86
49)	trichloroete	8.17	95	78862	5.1661	ug/L		87
50)	methylcyclohexane	8.43	83	140043	4.7119	ug/L		94
51)	12dicloropra	8.43	63	79585	4.7314	ug/L		82
52)	23Dicl1propene	8.49	75	118535	5.2399	ug/L		98
53)	Dibromometha	8.57	93	47802	4.9761	ug/L		94
54)	methylmethacrylate	8.59	69	60964	5.3713	ug/L		93
55)	14dioxane	8.61	88	54139	240.3388	ug/L		99
56)	Bromodiclrma	8.76	83	104788	5.2794	ug/L		97
57)	2Nitropropane	9.03	43	292701	61.0345	ug/L		99
58)	2CLEVE	9.16	63	233320	25.4774	ug/L		94
59)	c13dicloproe	9.35	75	127165	5.3703	ug/L		100
60)	4Meth2Pentan	9.55	43	700225	48.0746	ug/L		98
62)	Toluene	9.80	92	193120	4.9771	ug/L		99
63)	t13Dicloprop	10.05	75	115547	5.7750	ug/L		96
64)	ethylmethacrylate	10.20	69	219523	11.9078	ug/L		92
65)	112Triclotha	10.29	83	58516	4.9102	ug/L		96
66)	Tetrachlorte	10.53	166	81379	4.7108	ug/L		98
67)	13Diclorpropa	10.51	76	121337	4.9545	ug/L		99
69)	2Hexanone	10.64	43	538742	51.7491	ug/L		99
70)	Clorodibrmta	10.81	129	72439	4.8369	ug/L		99
71)	12Dibrometha	10.97	107	69781	5.1000	ug/L		97
72)	Chlorobenzen	11.66	112	206321	5.0387	ug/L		94
73)	1Clhexane	11.64	91	102411	5.3816	ug/L		96
74)	1112Tetclota	11.76	131	72610	5.2938	ug/L		99
75)	Ethylbenzene	11.82	91	361114	5.7135	ug/L		95
76)	m p-Xylene	11.98	106	276132	10.7338	ug/L		89
77)	o-Xylene	12.53	106	138119	5.3266	ug/L		95
78)	Styrene	12.54	104	227053	5.4555	ug/L		95
79)	Bromoform	12.77	173	53879	5.5006	ug/L		98
80)	Isopropylben	13.06	105	345145	5.8918	ug/L		97
81)	cyclohexanone	13.14	55	90486	109.4868	ug/L		92
84)	Bromobenzene	13.47	156	87231	5.1661	ug/L	#	87
85)	1122Tetrclta	13.44	83	95896	5.4183	ug/L		97
86)	123Triclproa	13.50	75	122817	5.8101	ug/L		96
87)	14dichloro2butene	13.52	53	30255	5.9582	ug/L		88
88)	n-Propylbenz	13.64	91	402513	5.8788	ug/L		96
89)	2chlorotolue	13.75	91	248891	5.9894	ug/L		92
90)	4chlorotolue	13.90	91	291079	6.0415	ug/L		93
91)	135Trimebenz	13.90	105	287731	5.9846	ug/L		95
92)	tbutylbenzen	14.37	119	247020	5.9722	ug/L		95
93)	124Trimetben	14.43	105	289168	6.0563	ug/L		96
94)	sbutylbenzen	14.69	105	348554	6.0590	ug/L		93
95)	13Diclorbenz	14.82	146	162038	5.1211	ug/L		97
96)	pIsopropylto	14.90	119	295053	5.8359	ug/L		95
97)	14dichlorobe	14.95	146	166006	5.1163	ug/L		97
98)	12dichlorobe	15.49	146	153791	5.0425	ug/L		97
99)	nButylbenzen	15.50	91	261844	5.7870	ug/L		97
100)	12dibromo3cl	16.59	157	19627	5.5676	ug/L		98
101)	135Trichlorobenzene	16.91	180	109136	5.5710	ug/L		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL4.D Vial: 8
Acq On : 4 Aug 2021 10:43 Operator: DGS-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 11:03:34 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	86003	5.5633	ug/L	96
103)	Hexachlorobu	17.97	225	41719	5.5196	ug/L	98
104)	Naphthalene	18.02	128	160867	5.0341	ug/L	99
105)	123Trichlben	18.33	180	75918	5.5263	ug/L	96

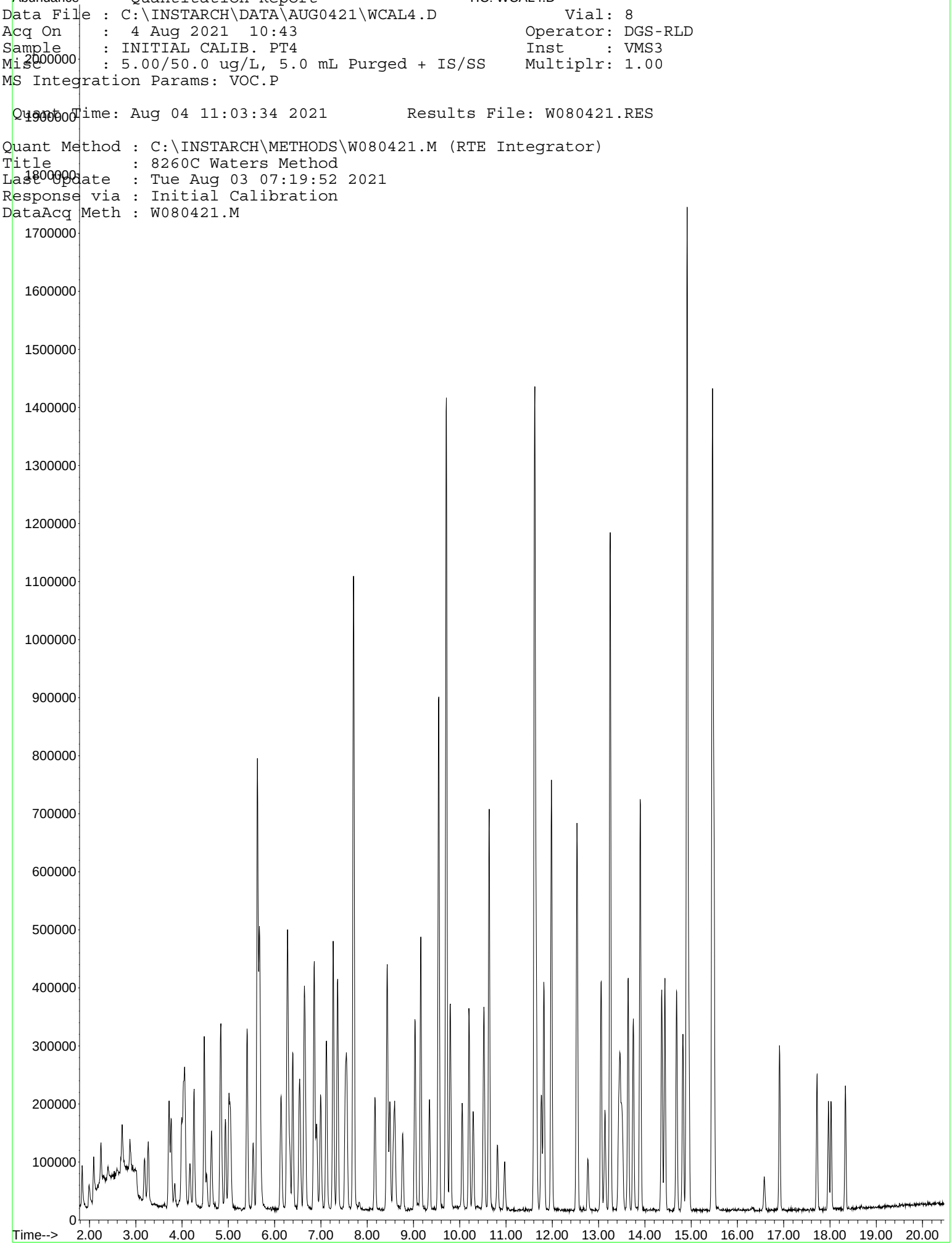
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL4.D

Data File : C:\INSTARCH\DATA\AUG0421\WCAL4.D Vial: 8
Acq On : 4 Aug 2021 10:43 Operator: DGS-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 11:03:34 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL5.D Vial: 9
Acq On : 4 Aug 2021 11:12 Operator: DGS-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 11:33:23 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1157597	20.00	ug/L	-0.01 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	914083	20.00	ug/L	-0.01 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	514197	20.00	ug/L	-0.01 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	290210	18.689	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 93 %			
45) SURR12DCAd4	7.27	102	79186	18.559	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 93 %			
61) SURRd8Tolule	9.71	98	1150243	19.644	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 98 %			
83) SURR4BrFBenz	13.25	95	499551	23.997	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 120 %#			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	150904	9.0947	ug/L	99
3) Chloromethan	2.09	50	147627	6.7674	ug/L	97
4) VinylChlorid	2.25	62	156841	7.6269	ug/L	89
5) Bromomethane	2.70	94	100675	6.2636	ug/L	99
6) Chloroethane	2.87	64	103832	6.0398	ug/L	94
7) Dichloroflmethane	3.19	67	190024	9.2602	ug/L	97
8) Trichlorofma	3.27	101	226712	9.5271	ug/L	99
9) Ethylether	3.71	59	113727	8.8426	ug/L	90
10) dichlorotfluoroethan	3.72	67	141367	9.7338	ug/L	99
11) propyleneoxide	3.76	58	250810	85.1388	ug/L	89
12) Acrolein	3.85	56	81701	41.4604	ug/L	98
13) 11dichlorthe	3.99	96	131948	9.9582	ug/L	99
14) Trichlorotfluoroeth	4.03	101	248285	17.9486	ug/L	98
15) Acetone	4.06	43	426102	74.4886	ug/L	98
16) Iodomethane	4.16	142	251241	17.2242	ug/L	95
17) Carbon Dislf	4.26	76	678927	19.4334	ug/L	100
18) allylchloride	4.48	41	406848	17.3552	ug/L	96
19) methylacetate	4.54	74	39225	8.7063	ug/L	98
20) Methylchlorid	4.64	84	145315	8.6845	ug/L	91
21) tbutylalcohol	4.83	59	880683	610.0815	ug/L	80
22) Acrylonitrile	4.94	53	258226	40.2128	ug/L	97
23) t12dichlorte	5.01	96	146086	9.7019	ug/L	99
24) MtBE	5.04	73	400017	10.1229	ug/L	97
25) Hexane	5.40	57	382796	16.2764	ug/L	98
26) 11dichlorota	5.54	63	247790	9.0588	ug/L	99
27) Vinylacetate	5.63	43	2521481	95.0760	ug/L	97
28) chloroprene	5.67	53	469403	19.1828	ug/L	97
29) Diisopether	5.68	45	419294	8.4328	ug/L	94
30) ETBE	6.14	59	404878	10.4343	ug/L	95
31) 22dichloropr	6.27	77	221322	12.3984	ug/L	99
32) c12dichlorte	6.27	96	160482	9.2483	ug/L	98
33) 2Butanone	6.29	72	191006	86.6785	ug/L	96
34) propionitrile	6.32	54	224711	78.1003	ug/L	98
35) Ethylacetate	6.39	88	32512	45.0000	ug/L #	87
36) methacrylonitrile	6.53	67	137999	18.1168	ug/L #	83
37) Bromochlorma	6.55	128	69091	8.2064	ug/L	95
38) Tetrahydofur	6.64	42	436088	63.2487	ug/L	89

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL5.D Vial: 9
Acq On : 4 Aug 2021 11:12 Operator: DGS-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 11:33:23 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	254523	9.2840	ug/L	95
40)	111trichlota	6.91	97	234993	10.8839	ug/L	96
42)	Cyclohexane	7.00	56	231072	8.3765	ug/L	93
43)	Carbtetraclo	7.13	119	198803	10.9922	ug/L	99
44)	11dicloprope	7.12	110	73204	9.4983	ug/L	95
46)	Benzene	7.36	78	578794	9.4690	ug/L	96
47)	12dichlorota	7.36	62	195502	9.1085	ug/L	99
48)	TAME	7.53	73	413053	11.2442	ug/L	84
49)	trichloroete	8.17	95	151480	9.6413	ug/L	89
50)	methylcyclohexane	8.43	83	296956	9.2794	ug/L	97
51)	12dicloropra	8.43	63	148981	8.6055	ug/L	80
52)	23Dicl1propene	8.49	75	226825	9.7421	ug/L	99
53)	Dibromometha	8.57	93	89547	9.0569	ug/L	98
54)	methylmethacrylate	8.59	69	112868	9.6619	ug/L	98
55)	14dioxane	8.61	88	102609	442.5742	ug/L	98
56)	Bromodiclrma	8.77	83	200642	9.8216	ug/L	99
57)	2Nitropropane	9.03	43	546086	110.6366	ug/L	99
58)	2CLEVE	9.16	63	451059	47.8546	ug/L	97
59)	c13dicloproe	9.35	75	242952	9.9687	ug/L	99
60)	4Meth2Pentan	9.54	43	1294069	86.3223	ug/L	95
62)	Toluene	9.80	92	374120	9.3680	ug/L	99
63)	t13Dicloprop	10.05	75	218819	10.6258	ug/L	96
64)	ethylmethacrylate	10.20	69	409851	21.6005	ug/L	93
65)	112Triclotha	10.29	83	112566	9.1774	ug/L	98
66)	Tetrachlorte	10.53	166	165465	9.3063	ug/L	98
67)	13Diclorpropa	10.52	76	231447	9.1822	ug/L	98
69)	2Hexanone	10.64	43	977113	91.8756	ug/L	96
70)	Clorodibrmta	10.81	129	146084	9.5484	ug/L	100
71)	12Dibrometha	10.97	107	136088	9.7361	ug/L	96
72)	Chlorobenzen	11.65	112	395172	9.4470	ug/L	96
73)	1Clhexane	11.64	91	211245	10.8664	ug/L	92
74)	1112Tetclota	11.76	131	143970	10.2749	ug/L	99
75)	Ethylbenzene	11.82	91	692884	10.7312	ug/L	97
76)	m p-Xylene	11.98	106	535696	20.3839	ug/L	92
77)	o-Xylene	12.53	106	265273	10.0143	ug/L	97
78)	Styrene	12.54	104	447504	10.5253	ug/L	94
79)	Bromoform	12.77	173	106012	10.5944	ug/L	97
80)	Isopropylben	13.05	105	679889	11.3609	ug/L	96
81)	cyclohexanone	13.14	55	165371	195.8722	ug/L	92
84)	Bromobenzene	13.47	156	170823	9.9985	ug/L	91
85)	1122Tetrclta	13.44	83	184022	10.2760	ug/L	98
86)	123Triclproa	13.50	75	241929	11.3110	ug/L	93
87)	14dichloro2butene	13.52	53	59978	11.6735	ug/L	83
88)	n-Propylbenz	13.64	91	790049	11.4040	ug/L	98
89)	2chlorotolue	13.75	91	481002	11.4396	ug/L	95
90)	4chlorotolue	13.90	91	559180	11.4704	ug/L	94
91)	135Trimebenz	13.90	105	576615	11.8530	ug/L	96
92)	tbutylbenzen	14.36	119	495478	11.8390	ug/L	92
93)	124Trimetben	14.43	105	572751	11.8554	ug/L	96
94)	sbutylbenzen	14.68	105	697308	11.9797	ug/L	96
95)	13Diclorbenz	14.82	146	315319	9.8489	ug/L	98
96)	pIsopropylto	14.90	119	592355	11.5793	ug/L	96
97)	14dichlorobe	14.95	146	323954	9.8676	ug/L	98
98)	12dichlorobe	15.49	146	290278	9.4062	ug/L	96
99)	nButylbenzen	15.49	91	527236	11.5161	ug/L	98
100)	12dibromo3cl	16.59	157	38632	10.8307	ug/L	95
101)	135Trichlorobenzene	16.92	180	218662	11.0314	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL5.D Vial: 9
Acq On : 4 Aug 2021 11:12 Operator: DGS-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 11:33:23 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	174361	11.1470	ug/L	97
103)	Hexachlorobu	17.97	225	91408	11.9522	ug/L	99
104)	Naphthalene	18.02	128	344928	9.6034	ug/L	99
105)	123Trichlben	18.33	180	157042	11.2979	ug/L	96

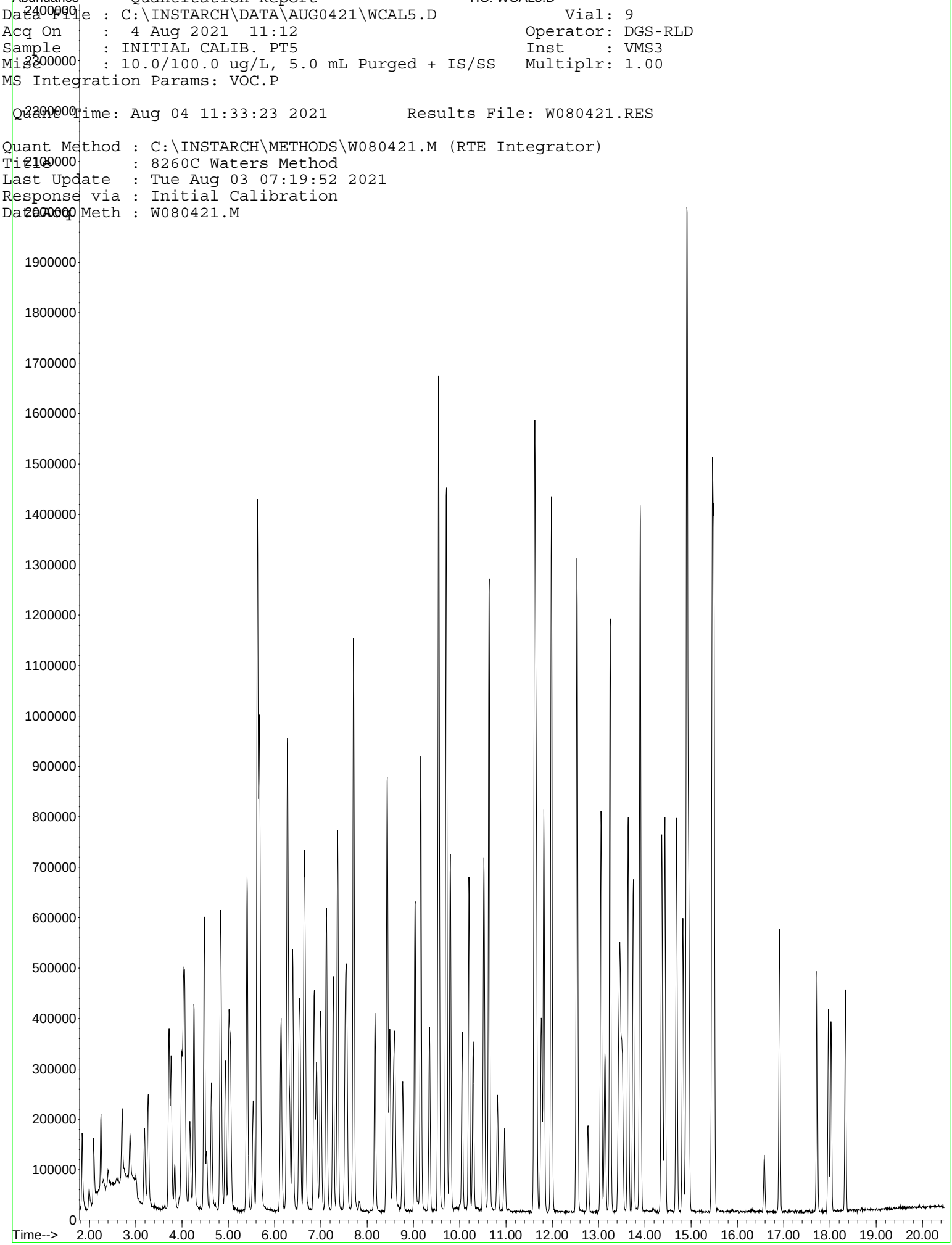
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL5.D

Data File : C:\INSTARCH\DATA\AUG0421\WCAL5.D Vial: 9
Acq On : 4 Aug 2021 11:12 Operator: DGS-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 10.0/100.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 11:33:23 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL6.D Vial: 10
Acq On : 4 Aug 2021 11:42 Operator: DGS-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 12:03:32 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1155647	20.00	ug/L	-0.01 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	916963	20.00	ug/L	-0.01 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	526838	20.00	ug/L	-0.01 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	291683	18.815	ug/L	-0.01
Spiked Amount 20.000	Range 90 - 110		Recovery = 94 %			
45) SURR12DCAd4	7.27	102	79576	18.682	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 93 %			
61) SURRd8Tolule	9.71	98	1163126	19.897	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99 %			
83) SURR4BrFBenz	13.25	95	501933	23.533	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 118 %#			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	300850	18.2672	ug/L	99
3) Chloromethan	2.09	50	292439	13.4283	ug/L	95
4) VinylChlorid	2.24	62	311408	15.1688	ug/L	91
5) Bromomethane	2.70	94	187467	12.6371	ug/L	99
6) Chloroethane	2.87	64	204250	12.7771	ug/L	95
7) Dichloroflmethane	3.19	67	377688	18.4364	ug/L	97
8) Trichlorofma	3.27	101	446029	19.0315	ug/L	97
9) Ethylether	3.71	59	229965	17.9105	ug/L	91
10) dichlorotfluoroethan	3.73	67	287075	19.7999	ug/L	99
11) propyleneoxide	3.76	58	523890	178.1374	ug/L	91
12) Acrolein	3.84	56	166029	84.3960	ug/L	98
13) 11dichlorthe	3.99	96	259181	19.5936	ug/L	99
14) Trichlorotfluoroeth	4.03	101	494727	35.9647	ug/L	99
15) Acetone	4.06	43	885061	167.9443	ug/L	97
16) Iodomethane	4.17	142	574039	36.7550	ug/L	94
17) Carbon Dislf	4.26	76	1303700	37.3797	ug/L	99
18) allylchloride	4.48	41	803215	34.3211	ug/L	94
19) methylacetate	4.53	74	84999	18.8980	ug/L	98
20) Methylchlorid	4.64	84	292165	18.3600	ug/L	92
21) tbutylalcohol	4.83	59	1765526	1225.1086	ug/L	82
22) Acrylonitrile	4.94	53	533345	83.1965	ug/L	97
23) t12dichlorte	5.01	96	292352	19.4486	ug/L	99
24) MtBE	5.04	73	813036	20.6096	ug/L	98
25) Hexane	5.40	57	768177	32.7590	ug/L	98
26) 11dichlorota	5.54	63	495857	18.1582	ug/L	97
27) Vinylacetate	5.63	43	4118723	172.7941	ug/L	93
28) chloroprene	5.67	53	946847	38.7595	ug/L	96
29) Diisopether	5.68	45	843347	16.9899	ug/L	91
30) ETBE	6.13	59	809065	20.8859	ug/L	96
31) 22dichloropr	6.27	77	452038	25.3658	ug/L	97
32) c12dichlorte	6.27	96	322167	18.5972	ug/L	99
33) 2Butanone	6.29	72	400184	181.9099	ug/L	96
34) propionitrile	6.32	54	473011	164.6766	ug/L	97
35) Ethylacetate	6.39	88	72048	99.8903	ug/L #	79
36) methacrylonitrile	6.53	67	285744	37.5764	ug/L #	82
37) Bromochlorma	6.55	128	138209	16.4437	ug/L	95
38) Tetrahydofur	6.64	42	891544	146.6080	ug/L	88

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL6.D Vial: 10
Acq On : 4 Aug 2021 11:42 Operator: DGS-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 12:03:32 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	523001	19.1091	ug/L		96
40)	111trichlota	6.91	97	476976	22.1289	ug/L		96
42)	Cyclohexane	6.99	56	471464	16.9198	ug/L		92
43)	Carbtetraclo	7.13	119	410724	22.7480	ug/L		98
44)	11dicloprope	7.11	110	152226	19.7848	ug/L		97
46)	Benzene	7.36	78	1132707	18.5622	ug/L		97
47)	12dichlorota	7.36	62	395303	18.4483	ug/L		99
48)	TAME	7.53	73	833081	22.7165	ug/L		85
49)	trichloroete	8.17	95	315266	20.0998	ug/L		90
50)	methylcyclohexane	8.43	83	598761	18.6413	ug/L		96
51)	12dicloropra	8.43	63	305248	17.6617	ug/L		85
52)	23Dicl1propene	8.49	75	465963	20.0467	ug/L		98
53)	Dibromometha	8.56	93	185413	18.7846	ug/L		95
54)	methylmethacrylate	8.59	69	241676	20.7232	ug/L		99
55)	14dioxane	8.60	88	220466	952.5209	ug/L		96
56)	Bromodiclrma	8.77	83	406583	19.9361	ug/L		99
57)	2Nitropropane	9.03	43	1098258	222.8817	ug/L		99
58)	2CLEVE	9.16	63	905963	96.2794	ug/L		95
59)	c13dicloproe	9.35	75	492571	20.2451	ug/L		99
60)	4Meth2Pentan	9.54	43	2475473	165.4077	ug/L		92
62)	Toluene	9.80	92	746373	18.7207	ug/L		99
63)	t13Dicloprop	10.05	75	450840	21.9297	ug/L		98
64)	ethylmethacrylate	10.20	69	838940	44.2895	ug/L		93
65)	112Triclotha	10.29	83	229995	18.7829	ug/L		98
66)	Tetrachlorte	10.53	166	332593	18.7378	ug/L		97
67)	13Diclorpropa	10.51	76	466398	18.5346	ug/L		99
69)	2Hexanone	10.63	43	1934855	181.3583	ug/L		94
70)	Clorodibrmta	10.82	129	306641	19.9799	ug/L		100
71)	12Dibrometha	10.97	107	280395	19.9971	ug/L		97
72)	Chlorobenzen	11.66	112	778661	18.5562	ug/L		96
73)	1Clhexane	11.63	91	425960	21.8424	ug/L		90
74)	1112Tetclota	11.76	131	291487	20.7377	ug/L		100
75)	Ethylbenzene	11.82	91	1353211	20.8924	ug/L		100
76)	m p-Xylene	11.98	106	1072732	40.6906	ug/L		98
77)	o-Xylene	12.53	106	537002	20.2087	ug/L		99
78)	Styrene	12.54	104	890532	20.8795	ug/L		92
79)	Bromoform	12.77	173	221658	22.0821	ug/L		97
80)	Isopropylben	13.05	105	1332695	22.1994	ug/L		98
81)	cyclohexanone	13.14	55	368194	434.7344	ug/L		92
84)	Bromobenzene	13.46	156	344667	19.6897	ug/L	#	89
85)	1122Tetrclta	13.44	83	382389	20.8408	ug/L		97
86)	123Triclproa	13.50	75	512526	23.3874	ug/L		93
87)	14dichloro2butene	13.52	53	119654	22.7295	ug/L	#	74
88)	n-Propylbenz	13.64	91	1532795	21.5943	ug/L		99
89)	2chlorotolue	13.75	91	957989	22.2370	ug/L		96
90)	4chlorotolue	13.90	91	1099865	22.0202	ug/L		95
91)	135Trimebenz	13.90	105	1134618	22.7637	ug/L		98
92)	tbutylbenzen	14.37	119	993167	23.1615	ug/L		93
93)	124Trimetben	14.43	105	1124435	22.7163	ug/L		99
94)	sbutylbenzen	14.68	105	1380951	23.1555	ug/L		97
95)	13Diclorbenz	14.82	146	635776	19.3818	ug/L		97
96)	pIsopropylto	14.90	119	1174371	22.4056	ug/L		98
97)	14dichlorobe	14.95	146	649713	19.3153	ug/L		97
98)	12dichlorobe	15.49	146	605897	19.1626	ug/L		97
99)	nButylbenzen	15.50	91	1074826	22.9135	ug/L		98
100)	12dibromo3cl	16.58	157	84277	23.0605	ug/L		97
101)	135Trichlorobenzene	16.91	180	448274	22.0725	ug/L		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

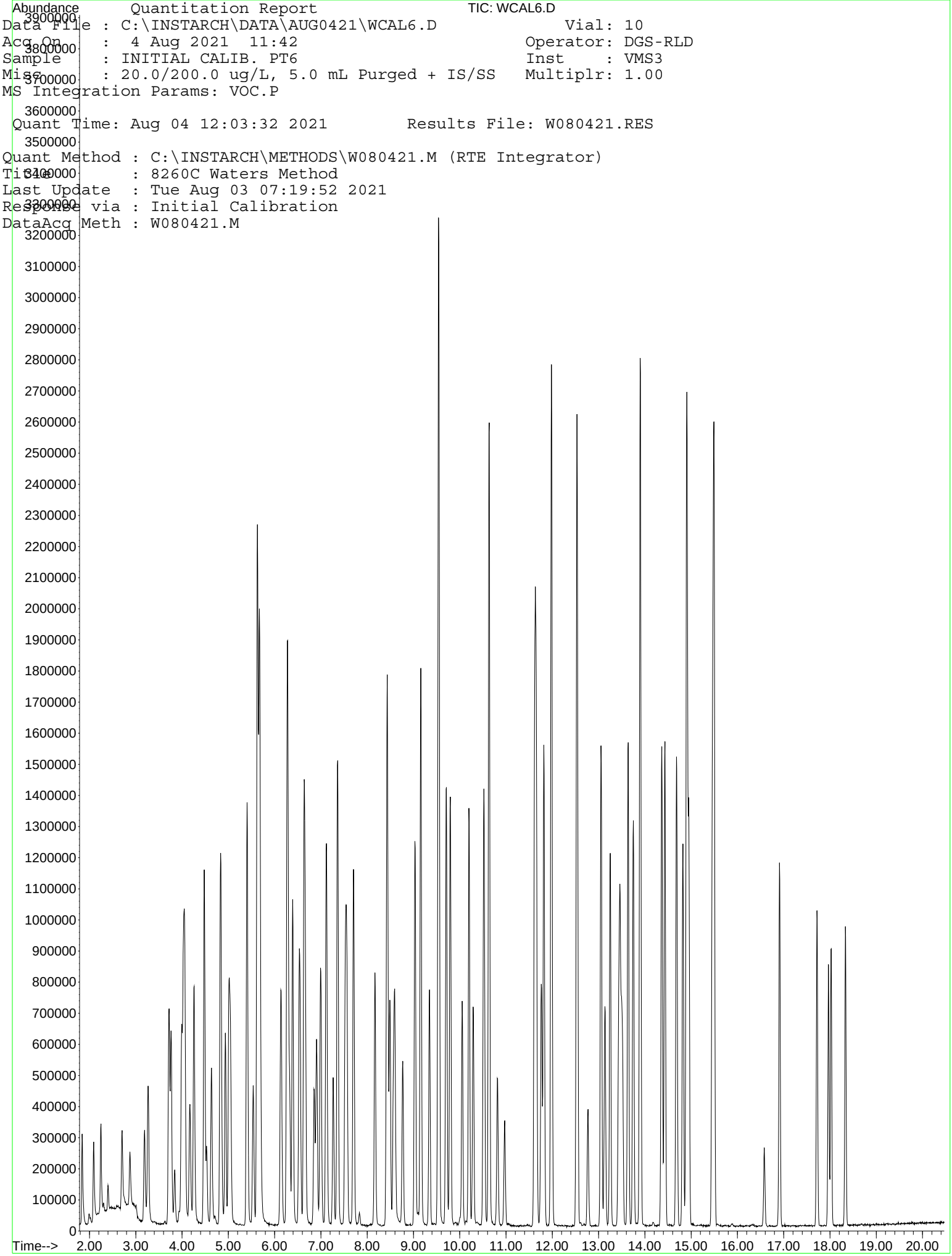
Data File : C:\INSTARCH\DATA\AUG0421\WCAL6.D Vial: 10
Acq On : 4 Aug 2021 11:42 Operator: DGS-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 12:03:32 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	378117	23.5932	ug/L	97
103)	Hexachlorobu	17.97	225	184097	23.4942	ug/L	99
104)	Naphthalene	18.03	128	814802	21.5464	ug/L	99
105)	123Trichlben	18.34	180	341730	23.9948	ug/L	94

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: WCAL6.D
Data File : C:\INSTARCH\DATA\AUG0421\WCAL6.D Vial: 10
Acq On : 4 Aug 2021 11:42 Operator: DGS-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 20.0/200.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Aug 04 12:03:32 2021 Results File: W080421.RES
Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
Time-->

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL7.D Vial: 11
Acq On : 4 Aug 2021 12:13 Operator: DGS-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 12:33:58 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1159171	20.00	ug/L	-0.01 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	908990	20.00	ug/L	-0.01 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	529921	20.00	ug/L	-0.01 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	291331	18.735	ug/L	-0.01
Spiked Amount 20.000	Range 90 - 110		Recovery = 94 %			
45) SURR12DCAd4	7.27	102	78463	18.365	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 92 %			
61) SURRd8Tolule	9.71	98	1154700	19.693	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 98 %			
83) SURR4BrFBenz	13.25	95	501809	23.391	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 117 %#			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	463043	28.6401	ug/L	99
3) Chloromethan	2.09	50	436263	19.9716	ug/L	96
4) VinylChlorid	2.25	62	467970	22.7258	ug/L	93
5) Bromomethane	2.70	94	277907	19.5673	ug/L	99
6) Chloroethane	2.87	64	304996	19.6731	ug/L	94
7) Dichloroflmethane	3.19	67	572983	27.8845	ug/L	98
8) Trichlorofma	3.26	101	680857	29.6233	ug/L	96
9) Ethylether	3.71	59	342302	26.5787	ug/L	91
10) dichlorotfluoroethan	3.73	67	445260	30.6167	ug/L	98
11) propyleneoxide	3.77	58	779799	264.3476	ug/L	91
12) Acrolein	3.84	56	243306	123.3015	ug/L	98
13) 11dichlorthe	3.99	96	404097	30.4561	ug/L	98
14) Trichlorotfluoroeth	4.04	101	761330	56.0557	ug/L	99
15) Acetone	4.06	43	1261633	251.0904	ug/L	96
16) Iodomethane	4.17	142	906718	57.4658	ug/L	94
17) Carbon Dislf	4.26	76	1923989	54.9970	ug/L	98
18) allylchloride	4.48	41	1195862	50.9434	ug/L	94
19) methylacetate	4.53	74	127725	28.3110	ug/L	100
20) Methylchlorid	4.64	84	446998	28.7827	ug/L	90
21) tbutylalcohol	4.84	59	2473064	1710.8562	ug/L	83
22) Acrylonitrile	4.94	53	788088	122.5602	ug/L	96
23) t12dichlorte	5.02	96	449429	29.8071	ug/L	98
24) MtBE	5.04	73	1202779	30.3965	ug/L	98
25) Hexane	5.40	57	1147923	49.8584	ug/L	96
26) 11dichlorota	5.54	63	757390	27.6512	ug/L	97
27) Vinylacetate	5.63	43	5492972	257.5395	ug/L	89
28) chloroprene	5.67	53	1411687	57.6122	ug/L	94
29) Diisopether	5.68	45	1255328	25.2127	ug/L	90
30) ETBE	6.14	59	1192924	30.7016	ug/L	96
31) 22dichloropr	6.27	77	680180	38.0519	ug/L	98
32) c12dichlorte	6.27	96	488042	28.0867	ug/L	98
33) 2Butanone	6.29	72	585347	265.2698	ug/L	95
34) propionitrile	6.32	54	694886	241.1859	ug/L	98
35) Ethylacetate	6.39	88	107564	148.6777	ug/L #	78
36) methacrylonitrile	6.53	67	422446	55.3843	ug/L #	84
37) Bromochlorma	6.55	128	210312	24.9462	ug/L	94
38) Tetrahydofur	6.64	42	1276123	221.1960	ug/L	87

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL7.D Vial: 11
Acq On : 4 Aug 2021 12:13 Operator: DGS-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 12:33:58 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Chloroform	6.66	83	779214	28.3839 ug/L		97
40)	111trichlota	6.91	97	722799	33.4317 ug/L		97
42)	Cyclohexane	7.00	56	717588	25.9605 ug/L		91
43)	Carbtetraclo	7.13	119	620208	34.2458 ug/L		98
44)	11dicloprope	7.12	110	230958	29.9263 ug/L		93
46)	Benzene	7.36	78	1671988	27.3163 ug/L		97
47)	12dichlorota	7.36	62	611895	28.4695 ug/L		97
48)	TAME	7.53	73	1238700	33.6742 ug/L		85
49)	trichloroete	8.17	95	474227	30.1424 ug/L		90
50)	methylcyclohexane	8.44	83	913034	28.7754 ug/L		97
51)	12dicloropra	8.43	63	468000	26.9962 ug/L		93
52)	23Dicl1propene	8.49	75	704835	30.2313 ug/L		100
53)	Dibromometha	8.57	93	277807	28.0597 ug/L		97
54)	methylmethacrylate	8.59	69	354920	30.3411 ug/L		98
55)	14dioxane	8.61	88	329944	1421.1856 ug/L		97
56)	Bromodiclrma	8.77	83	613975	30.0137 ug/L		99
57)	2Nitropropane	9.04	43	1583012	320.2816 ug/L		100
58)	2CLEVE	9.16	63	1314726	139.2950 ug/L		92
59)	c13dicloproe	9.35	75	733920	30.0730 ug/L		100
60)	4Meth2Pentan	9.55	43	3367083	224.2999 ug/L		88
62)	Toluene	9.80	92	1121824	28.0523 ug/L		96
63)	t13Dicloprop	10.06	75	670867	32.5331 ug/L		97
64)	ethylmethacrylate	10.20	69	1220565	64.2405 ug/L		93
65)	112Triclotha	10.29	83	341738	27.8237 ug/L		99
66)	Tetrachlorte	10.53	166	513787	28.8579 ug/L		97
67)	13Diclorpropa	10.51	76	694162	27.5020 ug/L		97
69)	2Hexanone	10.63	43	2658359	251.3596 ug/L		91
70)	Clorodibrmta	10.82	129	455991	29.9718 ug/L		98
71)	12Dibrometha	10.97	107	421704	30.3387 ug/L		96
72)	Chlorobenzen	11.66	112	1167300	28.0618 ug/L		96
73)	1Clhexane	11.64	91	630834	32.6317 ug/L		90
74)	1112Tetclota	11.77	131	443868	31.8557 ug/L		100
75)	Ethylbenzene	11.82	91	1967049	30.6358 ug/L		98
76)	m p-Xylene	11.98	106	1589016	60.8028 ug/L		97
77)	o-Xylene	12.53	106	808178	30.6806 ug/L		99
78)	Styrene	12.54	104	1319761	31.2147 ug/L		90
79)	Bromoform	12.77	173	334998	33.6660 ug/L		99
80)	Isopropylben	13.06	105	1953028	32.8179 ug/L		100
81)	cyclohexanone	13.14	55	544393	648.4142 ug/L		91
84)	Bromobenzene	13.47	156	518040	29.4218 ug/L	#	89
85)	1122Tetrclta	13.44	83	565556	30.6443 ug/L		98
86)	123Triclproa	13.50	75	758231	34.3981 ug/L		93
87)	14dichloro2butene	13.52	53	180336	34.0573 ug/L	#	73
88)	n-Propylbenz	13.64	91	2225458	31.1702 ug/L		99
89)	2chlorotolue	13.75	91	1409261	32.5217 ug/L		98
90)	4chlorotolue	13.90	91	1639318	32.6295 ug/L		98
91)	135Trimebenz	13.90	105	1679913	33.5078 ug/L		99
92)	tbutylbenzen	14.37	119	1464623	33.9575 ug/L		92
93)	124Trimetben	14.43	105	1655920	33.2590 ug/L		99
94)	sbutylbenzen	14.68	105	2011451	33.5313 ug/L		100
95)	13Diclorbenz	14.82	146	965983	29.2769 ug/L		96
96)	pIsopropylto	14.90	119	1749023	33.1752 ug/L		100
97)	14dichlorobe	14.95	146	988871	29.2271 ug/L		96
98)	12dichlorobe	15.49	146	901855	28.3568 ug/L		97
99)	nButylbenzen	15.50	91	1591097	33.7223 ug/L		98
100)	12dibromo3cl	16.58	157	127263	34.6201 ug/L		97
101)	135Trichlorobenzene	16.91	180	685605	33.5620 ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

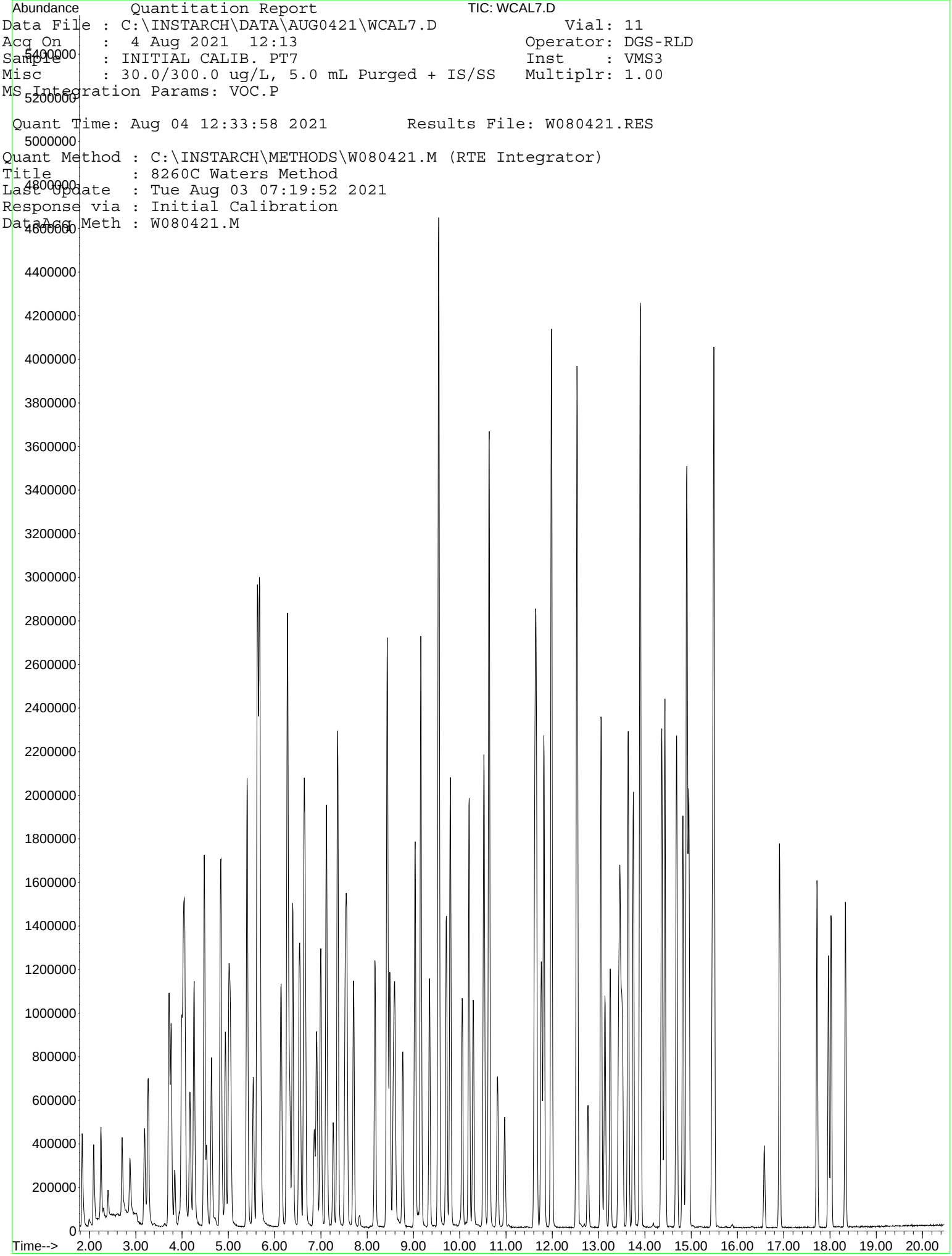
Data File : C:\INSTARCH\DATA\AUG0421\WCAL7.D Vial: 11
Acq On : 4 Aug 2021 12:13 Operator: DGS-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 12:33:58 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	587838	36.4657	ug/L	97
103)	Hexachlorobu	17.97	225	287767	36.5108	ug/L	98
104)	Naphthalene	18.02	128	1250216	33.6361	ug/L	98
105)	123Trichlben	18.34	180	536622	37.4601	ug/L	96

(#) = qualifier out of range (m) = manual integration


Abundance
Quantitation Report
TIC: WCAL7.D
Data File : C:\INSTARCH\DATA\AUG0421\WCAL7.D
Vial: 11
Acq On : 4 Aug 2021 12:13
Operator: DGS-RLD
Sample : INITIAL CALIB. PT7
Inst : VMS3
Misc : 30.0/300.0 ug/L, 5.0 mL Purged + IS/SS
Multiplr: 1.00
MS Integration Params: VOC.P
Quant Time: Aug 04 12:33:58 2021
Results File: W080421.RES
Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
5400000
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Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL8.D Vial: 12
Acq On : 4 Aug 2021 12:43 Operator: DGS-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:04:03 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1198731	20.00	ug/L	-0.01 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	929212	20.00	ug/L	-0.01 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	545612	20.00	ug/L	-0.01 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	301520	18.751	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 94 %			
45) SURR12DCAd4	7.27	102	81301	18.401	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 92 %			
61) SURRd8Tolule	9.71	98	1191522	19.650	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 98 %			
83) SURR4BrFBenz	13.25	95	517979	23.450	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 117 %#			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	607869	37.1269	ug/L	99
3) Chloromethan	2.09	50	574430	25.4289	ug/L	97
4) VinylChlorid	2.25	62	618971	29.0667	ug/L	93
5) Bromomethane	2.70	94	354018	24.8006	ug/L	98
6) Chloroethane	2.87	64	402267	25.6353	ug/L	94
7) Dichloroflmethane	3.19	67	755674	35.5616	ug/L	98
8) Trichlorofma	3.26	101	900677	38.7090	ug/L	97
9) Ethylether	3.71	59	463535	34.8043	ug/L	91
10) dichlorotfluoroethan	3.73	67	573082	38.1054	ug/L	100
11) propyleneoxide	3.76	58	1055012	345.8405	ug/L	90
12) Acrolein	3.84	56	328658	161.0592	ug/L	98
13) 11dichlorthe	3.99	96	540107	39.3636	ug/L	97
14) Trichlorotfluoroeth	4.03	101	1002078	72.4487	ug/L	99
15) Acetone	4.06	43	1662295	335.8237	ug/L	95
16) Iodomethane	4.17	142	1224635	75.5085	ug/L	94
17) Carbon Dislf	4.26	76	2515970	69.5453	ug/L	97
18) allylchloride	4.48	41	1548557	63.7910	ug/L	94
19) methylacetate	4.53	74	171500	36.7595	ug/L	96
20) Methylchlorid	4.64	84	592902	37.6108	ug/L	89
21) tbutylalcohol	4.83	59	3232862	2162.6742	ug/L	84
22) Acrylonitrile	4.94	53	1057850	159.0833	ug/L	95
23) t12dichlorte	5.01	96	587012	37.6471	ug/L	98
24) MtBE	5.04	73	1587926	38.8055	ug/L	98
25) Hexane	5.40	57	1502841	64.5906	ug/L #	96
26) 11dichlorota	5.54	63	985899	34.8059	ug/L	96
27) Vinylacetate	5.63	43	6589947	334.0020	ug/L	85
28) chloroprene	5.67	53	1837894	72.5307	ug/L	93
29) Diisopether	5.68	45	1634385	31.7426	ug/L	89
30) ETBE	6.13	59	1575520	39.2100	ug/L	95
31) 22dichloropr	6.27	77	884638	47.8568	ug/L	97
32) c12dichlorte	6.27	96	647408	36.0286	ug/L	97
33) 2Butanone	6.29	72	799298	350.2748	ug/L	97
34) propionitrile	6.32	54	935981	314.1457	ug/L	98
35) Ethylacetate	6.39	88	150877	201.6637	ug/L #	74
36) methacrylonitrile	6.53	67	583131	73.9277	ug/L #	82
37) Bromochlorma	6.55	128	277412	31.8193	ug/L	94
38) Tetrahydofur	6.64	42	1687780	295.8142	ug/L	84

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL8.D Vial: 12
Acq On : 4 Aug 2021 12:43 Operator: DGS-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:04:03 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	1025703	36.1296	ug/L		98
40)	111trichlota	6.91	97	951586	42.5612	ug/L		97
42)	Cyclohexane	7.00	56	948338	33.6559	ug/L		91
43)	Carbtetraclo	7.13	119	824158	44.0054	ug/L		100
44)	11dicloprope	7.12	110	312189	39.1168	ug/L		98
46)	Benzene	7.36	78	2162784	34.1687	ug/L		97
47)	12dichlorota	7.36	62	805243	36.2290	ug/L		99
48)	TAME	7.53	73	1617801	42.5287	ug/L		85
49)	trichloroete	8.17	95	633246	38.9215	ug/L		89
50)	methylcyclohexane	8.43	83	1207535	37.4587	ug/L		96
51)	12dicloropra	8.43	63	618526	34.5017	ug/L		90
52)	23Dicl1propene	8.49	75	925304	38.3778	ug/L		100
53)	Dibromometha	8.56	93	377239	36.8453	ug/L		97
54)	methylmethacrylate	8.59	69	476725	39.4090	ug/L		99
55)	14dioxane	8.60	88	450036	1874.4920	ug/L		97
56)	Bromodiclrma	8.77	83	818425	38.6878	ug/L		100
57)	2Nitropropane	9.04	43	2081587	407.2566	ug/L		100
58)	2CLEVE	9.16	63	1724105	176.6403	ug/L		92
59)	c13dicloproe	9.35	75	967950	38.3537	ug/L		98
60)	4Meth2Pentan	9.54	43	4194017	270.1663	ug/L		84
62)	Toluene	9.80	92	1460639	35.3193	ug/L		93
63)	t13Dicloprop	10.05	75	886980	41.5938	ug/L		95
64)	ethylmethacrylate	10.20	69	1613640	82.1259	ug/L		92
65)	112Triclotha	10.29	83	459806	36.2011	ug/L		98
66)	Tetrachlorte	10.53	166	682692	37.0794	ug/L		98
67)	13Diclorpropa	10.51	76	930928	35.6653	ug/L		97
69)	2Hexanone	10.64	43	3401483	314.6258	ug/L		88
70)	Clorodibrmta	10.81	129	609449	39.1866	ug/L		97
71)	12Dibrometha	10.97	107	568103	39.9817	ug/L		97
72)	Chlorobenzen	11.66	112	1510848	35.5302	ug/L		94
73)	1Clhexane	11.64	91	852146	43.1205	ug/L		89
74)	1112Tetclota	11.76	131	587547	41.2497	ug/L		98
75)	Ethylbenzene	11.82	91	2515162	38.3199	ug/L		96
76)	m p-Xylene	11.98	106	2053002	76.8474	ug/L		94
77)	o-Xylene	12.53	106	1066688	39.6130	ug/L		95
78)	Styrene	12.54	104	1734214	40.1246	ug/L		90
79)	Bromoform	12.77	173	449063	44.1469	ug/L		98
80)	Isopropylben	13.06	105	2482894	40.8136	ug/L		97
81)	cyclohexanone	13.14	55	739868	862.0621	ug/L		90
84)	Bromobenzene	13.47	156	700954	38.6654	ug/L		92
85)	1122Tetrclta	13.44	83	758921	39.9391	ug/L		99
86)	123Triclproa	13.50	75	1032093	45.4756	ug/L		94
87)	14dichloro2butene	13.52	53	247953	45.4804	ug/L	#	73
88)	n-Propylbenz	13.64	91	2824071	38.4170	ug/L		96
89)	2chlorotolue	13.75	91	1832744	41.0782	ug/L		99
90)	4chlorotolue	13.90	91	2122272	41.0275	ug/L		99
91)	135Trimebenz	13.90	105	2147356	41.5998	ug/L		99
92)	tbutylbenzen	14.37	119	1893508	42.6387	ug/L		93
93)	124Trimetben	14.43	105	2131078	41.5716	ug/L		97
94)	sbutylbenzen	14.68	105	2573211	41.6623	ug/L		98
95)	13Diclorbenz	14.82	146	1263643	37.1970	ug/L		96
96)	pIsopropylto	14.90	119	2244777	41.3541	ug/L		98
97)	14dichlorobe	14.95	146	1288344	36.9832	ug/L		95
98)	12dichlorobe	15.49	146	1197240	36.5619	ug/L		96
99)	nButylbenzen	15.50	91	2053105	42.2628	ug/L		97
100)	12dibromo3cl	16.58	157	174558	46.1204	ug/L		99
101)	135Trichlorobenzene	16.91	180	901384	42.8560	ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL8.D Vial: 12
Acq On : 4 Aug 2021 12:43 Operator: DGS-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:04:03 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	777034	46.8160	ug/L	97
103)	Hexachlorobu	17.97	225	385159	47.4622	ug/L	98
104)	Naphthalene	18.02	128	1684966	45.5647	ug/L	97
105)	123Trichlben	18.34	180	722782	49.0044	ug/L	95

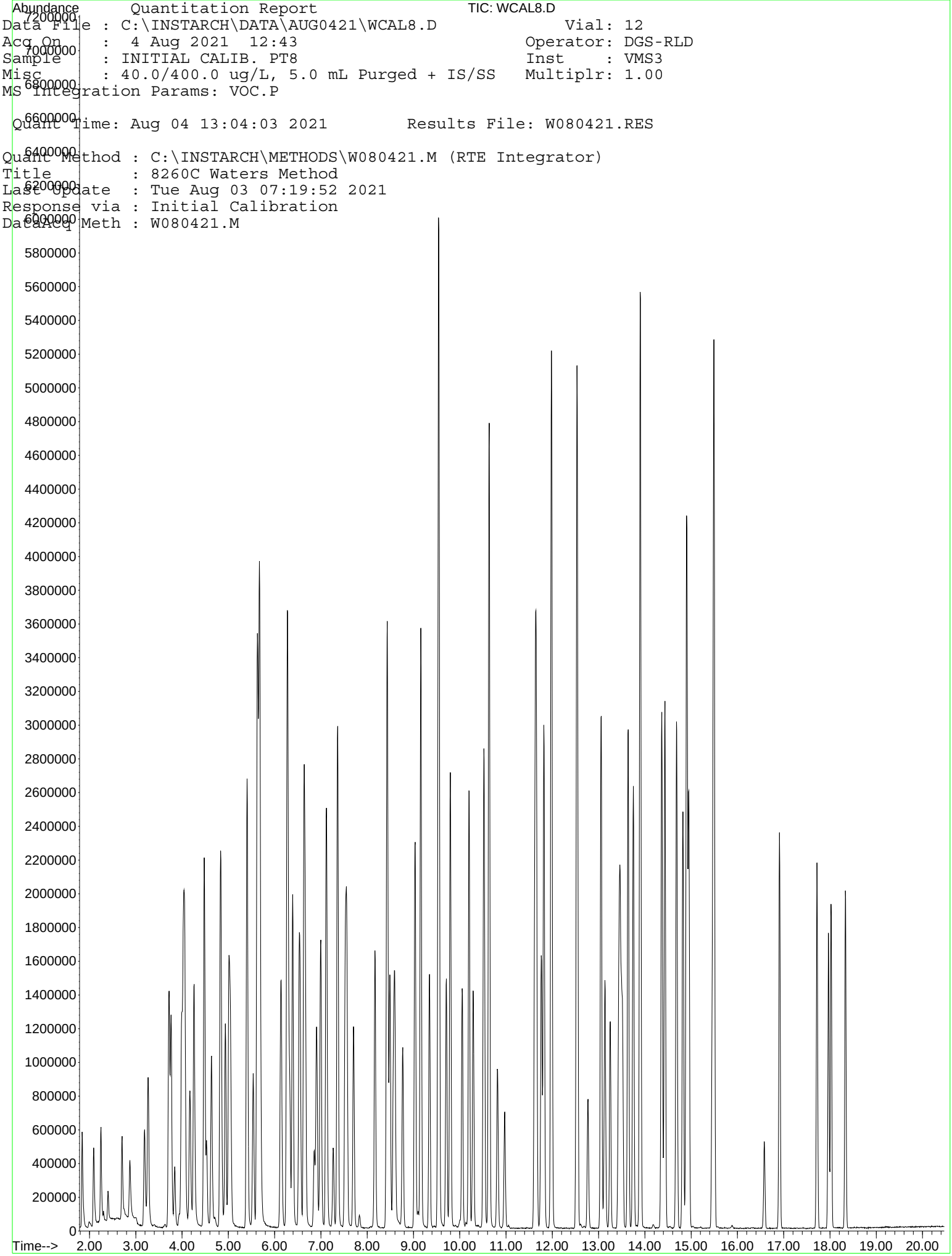
(#) = qualifier out of range (m) = manual integration

Quantitation Report (TIC: WCAL8.D)

Data File : C:\INSTARCH\DATA\AUG0421\WCAL8.D Vial: 12
Acq On : 4 Aug 2021 12:43 Operator: DGS-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 40.0/400.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:04:03 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL9.D Vial: 13
Acq On : 4 Aug 2021 13:13 Operator: DGS-RLD
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:33:55 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1254143	20.00	ug/L	-0.01 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	964735	20.00	ug/L	-0.01 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	572631	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	317028	18.844	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 94 %			
45) SURR12DCAd4	7.27	102	87433	18.915	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 95 %			
61) SURRd8Tolule	9.71	98	1253021	19.751	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99 %			
83) SURR4BrFBenz	13.25	95	540400	23.311	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 117 %#			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	1153076	74.9979	ug/L	98
3) Chloromethan	2.09	50	1079234	45.6647	ug/L	94
4) VinylChlorid	2.25	62	1185572	53.2143	ug/L	95
5) Bromomethane	2.70	94	520116	36.9707	ug/L	99
6) Chloroethane	2.87	64	786574	51.6015	ug/L	94
7) Dichloroflmethane	3.19	67	1443888	64.9464	ug/L	100
8) Trichlorofma	3.27	101	1736757	79.2849	ug/L	97
9) Ethylether	3.71	59	892593	64.0587	ug/L	91
10) dichlorotfluoroethan	3.73	67	1121711	71.2895	ug/L	99
11) propyleneoxide	3.76	58	2018624	632.4826	ug/L	88
12) Acrolein	3.84	56	672806	315.1418	ug/L	96
13) 11dichlorthe	3.99	96	1049293	73.0948	ug/L	96
14) Trichlorotfluoroeth	4.03	101	1953387	146.0028	ug/L	98
15) Acetone	4.06	43	2927491	708.1743	ug/L	92
16) Iodomethane	4.17	142	2350128	146.0078	ug/L	91
17) Carbon Dislf	4.26	76	4411098	116.5423	ug/L	92
18) allylchloride	4.48	41	2803679	110.3915	ug/L	91
19) methylacetate	4.53	74	353202	72.3607	ug/L	99
20) Methylchlorid	4.64	84	1126556	72.9014	ug/L	91
21) tbutylalcohol	4.84	59	5604768	3583.7380	ug/L	89
22) Acrylonitrile	4.94	53	1980579	284.6868	ug/L	96
23) t12dichlorte	5.01	96	1150214	70.5080	ug/L	98
24) MtBE	5.04	73	2935996	68.5794	ug/L	95
25) Hexane	5.40	57	2808387	130.5916	ug/L #	92
26) 11dichlorota	5.54	63	1868809	63.0609	ug/L	93
27) Vinylacetate	5.63	43	9969678	Below	Cal	68
28) chloroprene	5.67	53	3342095	126.0651	ug/L	89
29) Diisopether	5.68	45	3056791	56.7451	ug/L	85
30) ETBE	6.14	59	2900147	68.9871	ug/L	91
31) 22dichloropr	6.27	77	1720887	88.9825	ug/L	95
32) c12dichlorte	6.27	96	1255642	66.7898	ug/L	95
33) 2Butanone	6.29	72	1532624	641.9637	ug/L	99
34) propionitrile	6.33	54	1806742	579.6087	ug/L	97
35) Ethylacetate	6.39	88	303256	387.4261	ug/L #	73
36) methacrylonitrile	6.53	67	1131756	137.1413	ug/L #	81
37) Bromochlorma	6.55	128	544522	59.6975	ug/L	93
38) Tetrahydofur	6.63	42	3095444	615.1636	ug/L	79

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL9.D Vial: 13
Acq On : 4 Aug 2021 13:13 Operator: DGS-RLD
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:33:55 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.66	83	1953839	65.7817	ug/L		100
40)	111trichlota	6.91	97	1842299	78.7591	ug/L		97
42)	Cyclohexane	7.00	56	1846941	67.9414	ug/L		91
43)	Carbtetraclo	7.13	119	1615265	82.4355	ug/L		98
44)	11dicloprope	7.11	110	630264	75.4820	ug/L		97
46)	Benzene	7.36	78	3789745	57.2268	ug/L		93
47)	12dichlorota	7.36	62	1544027	66.3985	ug/L		97
48)	TAME	7.53	73	2990197	75.1332	ug/L		85
49)	trichloroete	8.17	95	1216460	71.4645	ug/L		90
50)	methylcyclohexane	8.43	83	2292118	74.4985	ug/L		96
51)	12dicloropra	8.43	63	1204644	64.2268	ug/L		80
52)	23Dicl1propene	8.49	75	1772397	70.2637	ug/L		97
53)	Dibromometha	8.56	93	745341	69.5817	ug/L		98
54)	methylmethacrylate	8.59	69	956466	75.5738	ug/L		99
55)	14dioxane	8.61	88	917405	3652.3477	ug/L		96
56)	Bromodiclrma	8.77	83	1546025	69.8531	ug/L		98
57)	2Nitropropane	9.04	43	3732471	697.9827	ug/L		97
58)	2CLEVE	9.16	63	3096057	303.1865	ug/L		86
59)	c13dicloproe	9.35	75	1841917	69.7588	ug/L		96
60)	4Meth2Pentan	9.55	43	6449546	397.1045	ug/L		71
62)	Toluene	9.80	92	2684734	62.0505	ug/L		87
63)	t13Dicloprop	10.05	75	1700892	76.2370	ug/L		93
64)	ethylmethacrylate	10.20	69	2899206	141.0351	ug/L		93
65)	112Triclotha	10.29	83	913269	68.7259	ug/L		99
66)	Tetrachlorte	10.53	166	1346664	69.9104	ug/L		97
67)	13Diclorpropa	10.52	76	1764772	64.6238	ug/L		94
69)	2Hexanone	10.64	43	5412727	482.2242	ug/L		79
70)	Clorodibrmta	10.82	129	1200758	74.3640	ug/L		97
71)	12Dibrometha	10.97	107	1111905	75.3717	ug/L		96
72)	Chlorobenzen	11.66	112	2768569	62.7104	ug/L		91
73)	1Clhexane	11.63	91	1634531	79.6653	ug/L		90
74)	1112Tetclota	11.77	131	1151816	77.8875	ug/L		98
75)	Ethylbenzene	11.82	91	4306557	63.1969	ug/L		89
76)	m p-Xylene	11.98	106	3625929	130.7272	ug/L	#	83
77)	o-Xylene	12.53	106	2001132	71.5786	ug/L	#	87
78)	Styrene	12.54	104	3107316	69.2469	ug/L		85
79)	Bromoform	12.77	173	901450	85.3575	ug/L		97
80)	Isopropylben	13.06	105	4268346	67.5793	ug/L		91
81)	cyclohexanone	13.14	55	1365312	1532.2266	ug/L		89
84)	Bromobenzene	13.47	156	1348221	70.8603	ug/L		92
85)	1122Tetrclta	13.44	83	1485212	74.4731	ug/L		100
86)	123Triclproa	13.50	75	2026589	85.0814	ug/L		95
87)	14dichloro2butene	13.52	53	512361	89.5448	ug/L	#	72
88)	n-Propylbenz	13.64	91	4695398	60.8596	ug/L		87
89)	2chlorotolue	13.75	91	3247477	69.3529	ug/L		95
90)	4chlorotolue	13.90	91	3700472	68.1617	ug/L		94
91)	135Trimebenz	13.90	105	3739732	69.0298	ug/L		94
92)	tbutylbenzen	14.37	119	3352133	71.9229	ug/L		88
93)	124Trimetben	14.43	105	3704219	68.8498	ug/L		91
94)	sbutylbenzen	14.69	105	4368224	67.3879	ug/L		92
95)	13Diclorbenz	14.82	146	2333709	65.4544	ug/L		92
96)	pIsopropylto	14.90	119	3890615	68.2924	ug/L		92
97)	14dichlorobe	14.95	146	2397099	65.5643	ug/L		92
98)	12dichlorobe	15.49	146	2218523	64.5537	ug/L		95
99)	nButylbenzen	15.50	91	3584621	70.3072	ug/L		91
100)	12dibromo3cl	16.58	157	356160	89.6618	ug/L		98
101)	135Trichlorobenzene	16.91	180	1711322	77.5251	ug/L		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\WCAL9.D Vial: 13
Acq On : 4 Aug 2021 13:13 Operator: DGS-RLD
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:33:55 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	1525006	87.5457	ug/L	96
103) Hexachlorobu	17.97	225	771786	90.6179	ug/L	98
104) Naphthalene	18.02	128	3103695	97.5477	ug/L	93
105) 123Trichlben	18.33	180	1417802	91.5909	ug/L	95

(#) = qualifier out of range (m) = manual integration

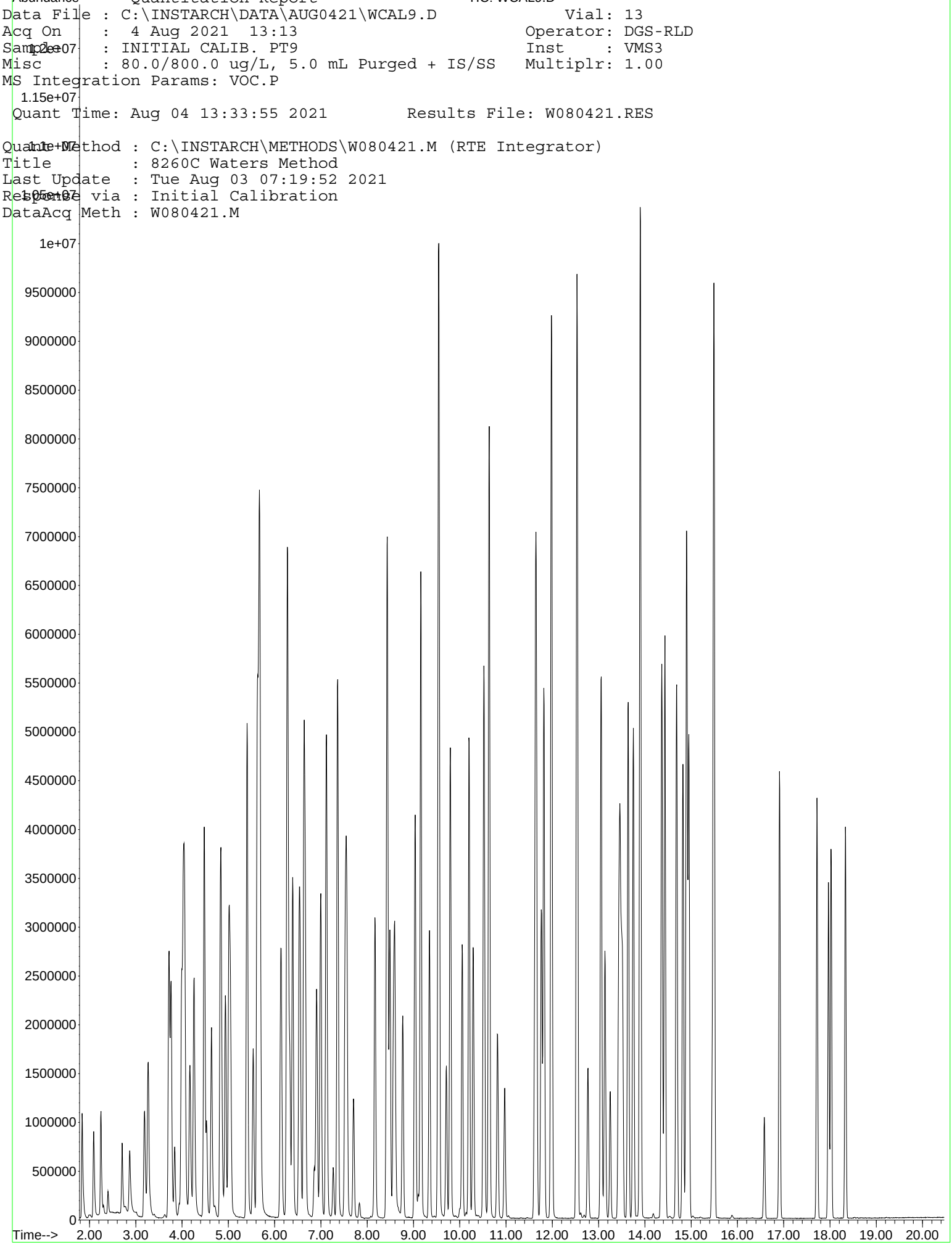
Quantitation Report

TIC: WCAL9.D

Data File : C:\INSTARCH\DATA\AUG0421\WCAL9.D Vial: 13
Acq On : 4 Aug 2021 13:13 Operator: DGS-RLD
Sample : INITIAL CALIB. PT9 Inst : VMS3
Misc : 80.0/800.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 13:33:55 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Tue Aug 03 07:19:52 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\AUG0421\ICV1.D Vial: 15
Acq On : 4 Aug 2021 14:13 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Aug 05 07:01:19 2021

Quant Method : C:\INSTARCH\METHODS\W080421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W080421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	100	0.00
2	PT	Dichlorodi	0.2438	0.3391	-39.09#	130	0.00
3	PT	Chloromethan	0.2657	0.2966	-11.63	116	0.00
4	PT	VinylChlorid	0.2629	0.3062	-16.47	113	0.00
5	PT	Bromomethane	0.1660	0.2031	-22.35#	116	0.00
6	PT	Chloroethane	0.1771	0.2037	-15.02	113	0.00
7	T	Dichloroflmethane	0.3306	0.3495	-5.72	106	0.00
8	PT	Trichlorofma	0.3561	0.4273	-19.99	109	0.00
9	T	Ethylether	0.2069	0.2088	-0.92	106	0.00
10	T	dichlorotfluoroethan	0.2405	0.2612	-8.61	107	0.00
11	T	propyleneoxide	0.0452	0.0467	-3.32	108	0.00
12	T	Acrolein	0.0292	0.0276#	5.48	98	0.00
13	PT	11dichlorthe	0.2220	0.2477	-11.58	108	0.00
14	PT	Trichlorotfluoroeth	0.1926	0.2311	-19.99	107	0.00
15	PT	Acetone	0.0835	0.0803#	3.83	109	0.00
16	T	Iodomethane	0.2156	0.2391	-10.90	110	0.00
17	PT	Carbon Dislf	0.5773	0.6439	-11.54	109	0.00
18	T	allylchloride	0.3516	0.3675	-4.52	104	0.00
19	PT	methylacetate	0.0756	0.0691#	8.60	102	0.00
20	PT	Methylchlorid	0.2752	0.2662	3.27	106	0.00
21	T	tbutylalcohol	0.0321	0.0327	-1.87	107	0.00
22	T	Acrylonitrile	0.0919	0.0952	-3.59	106	0.00
23	PT	t12dichlorte	0.2572	0.2691	-4.63	106	0.00
24	PT	MtBE	0.7291	0.7503	-2.91	108	0.00
25	T	Hexane	0.2936	0.3459	-17.81	104	0.00
26	PT	11dichlorota	0.4348	0.4560	-4.88	106	0.00
27	T	Vinylacetate	0.4426	0.4096	7.46	94	0.00
28	T	chloroprene	0.3887	0.4329	-11.37	106	0.00
29	T	Diisopether	0.7391	0.7237	2.08	100	0.00
30	T	ETBE	0.7123	0.7375	-3.54	105	0.00
31	T	22dichloropr	0.3827	0.3905	-2.04	102	0.00
32	PT	c12dichlorte	0.2856	0.2932	-2.66	105	0.00
33	PT	2Butanone	0.0346	0.0345#	0.29	104	0.00
34	T	propionitrile	0.0411	0.0409	0.49	105	0.00
35	T	Ethylacetate	0.0124	0.0126#	-1.61	112	0.00
36	T	methacrylonitrile	0.1253	0.1244	0.72	104	0.00
37	T	Bromochlorma	0.1232	0.1270	-3.08	106	0.00
38	T	Tetrahydofur	0.0833	0.0779	6.48	103	0.00
39	PT	Chloroform	0.4509	0.4763	-5.63	108	0.00
40	PT	111trichlota	0.3995	0.4335	-8.51	106	0.00
41	S	SURRDibrflma	0.2528	0.2519	0.36	100	0.00
42	PT	Cyclohexane	0.3627	0.4367	-20.40#	109	0.00
43	PT	Carbtetraclo	0.3345	0.3738	-11.75	108	0.00
44	T	11dicloprope	0.1250	0.1329	-6.32	105	0.00
45	S	SURR12DCAd4	0.0690	0.0696	-0.87	101	0.00
46	PT	Benzene	1.0031	1.0727	-6.94	107	0.00
47	PT	12dichlorota	0.3545	0.3719	-4.91	110	0.00
48	T	TAME	0.7401	0.7499	-1.32	105	0.00

49	PT	trichloroete	0.2706	0.2889	-6.76	110	0.00
50	PT	methylcyclohexane	0.4612	0.5450	-18.17	106	0.00
51	PT	12dicloropra	0.2704	0.2808	-3.85	109	0.00
52	T	23Dicl1propene	0.4055	0.4273	-5.38	109	0.00
53	T	Dibromometha	0.1624	0.1663	-2.40	107	0.00
54	T	methylmethacrylate	0.2131	0.2116	0.70	108	0.00
55	T	14dioxane	0.0039	0.0038#	2.56	107	0.00
56	PT	Bromodiclrma	0.3608	0.3675	-1.86	106	0.00
57	T	2Nitropropane	0.0979	0.0979	0.00	103	0.00
58	T	2CLEVE	0.1545	0.1627	-5.31	104	0.00
59	PT	c13dicloproe	0.4335	0.4437	-2.35	105	0.00
60	PT	4Meth2Pentan	0.2372	0.2378	-0.25	106	0.00
61	S	SURRd8Tolule	1.0011	1.0003	0.08	100	0.00
62	PT	Toluene	0.6504	0.6931	-6.57	107	0.00
63	PT	t13Dicloprop	0.3966	0.4024	-1.46	106	0.00
64	T	ethylmethacrylate	0.3585	0.3801	-6.03	107	0.00
65	PT	112Triclotha	0.1999	0.2100	-5.05	108	0.00
66	PT	Tetrachlorte	0.2776	0.3089	-11.28	108	0.00
67	T	13Diclorpropa	0.4189	0.4255	-1.58	106	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	99	0.00
69	PT	2Hexanone	0.2227	0.2334	-4.80	108	0.00
70	PT	Clorodibrmta	0.3321	0.3435	-3.43	107	0.00
71	PT	12Dibrometha	0.3148	0.3166	-0.57	105	0.00
72	PT	Chlorobenzen	0.8753	0.9289	-6.12	106	0.00
73	T	1Clhexane	0.4529	0.4865	-7.42	104	0.00
74	T	1112Tetclota	0.3196	0.3312	-3.63	104	0.00
75	PT	Ethylbenzene	1.4943	1.6251	-8.75	106	0.00
76	PT	m p-Xylene	0.5807	0.6315	-8.75	107	0.00
77	PT	o-Xylene	0.5869	0.6368	-8.50	109	0.00
78	PT	Styrene	0.9755	1.0421	-6.83	105	0.00
79	PT	Bromoform	0.2399	0.2372	1.13	101	0.00
80	PT	Isopropylben	1.4485	1.6079	-11.00	107	0.00
81	T	cyclohexanone	0.0201	0.0210#	-4.48	115	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	100	0.00
83	S	SURR4BrFBenz	0.9610	0.9514	1.00	98	0.00
84	T	Bromobenzene	0.6663	0.7004	-5.12	105	0.00
85	PT	1122Tetrclta	0.7408	0.7573	-2.23	106	0.00
86	T	123Triclproa	0.9700	0.9924	-2.31	105	0.00
87	T	14dichloro2butene	0.2403	0.2310	3.87	99	0.00
88	T	n-Propylbenz	2.8647	3.2962	-15.06	107	0.00
89	T	2chlorotolue	1.8438	1.9591	-6.25	105	0.00
90	T	4chlorotolue	2.1294	2.3312	-9.48	107	0.00
91	T	135Trimebenz	2.1531	2.4043	-11.67	107	0.00
92	T	tbutylbenzen	1.8125	2.0693	-14.17	107	0.00
93	T	124Trimetben	2.1154	2.3747	-12.26	107	0.00
94	T	sbutylbenzen	2.5046	2.9407	-17.41	108	0.00
95	PT	13Diclorbenz	1.2330	1.3185	-6.93	107	0.00
96	T	pIsopropylto	2.1673	2.5036	-15.52	109	0.00
97	PT	14dichlorobe	1.2435	1.3542	-8.90	107	0.00
98	PT	12dichlorobe	1.1616	1.2469	-7.34	110	0.00
99	T	nButylbenzen	1.9748	2.2433	-13.60	109	0.00
100	PT	12dibromo3cl	0.1577	0.1684	-6.79	112	0.00
101	T	135Trichlorobenzene	0.8232	0.8818	-7.12	104	0.00
102	PT	124Trichlobe	0.6601	0.7424	-12.47	109	0.00
103	T	Hexachlorobu	0.3291	0.3850	-16.99	108	0.00
104	T	Naphthalene	1.2458	1.5735	-26.30#	117	0.00
105	T	123Trichlben	0.5988	0.6887	-15.01	113	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W080421.M Thu Aug 05 09:47:36 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\AUG0421\ICV1.D Vial: 15
Acq On : 4 Aug 2021 14:13 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Aug 05 07:01:19 2021

Quant Method : C:\INSTARCH\METHODS\W080421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W080421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	100	0.00
2	PT	Dichlorodi	10.0000	12.6870	-26.87#	130	0.00
3	PT	Chloromethan	10.0000	11.1643	-11.64	116	0.00
4	PT	VinylChlorid	10.0000	11.6441	-16.44	113	0.00
5	PT	Bromomethane	10.0000	11.4526	-14.53	116	0.00
6	PT	Chloroethane	10.0000	11.4963	-14.96	113	0.00
7	T	Dichloroflmethane	10.0000	10.5736	-5.74	106	0.00
8	PT	Trichlorofma	10.0000	10.8514	-8.51	109	0.00
9	T	Ethylether	10.0000	10.0928	-0.93	106	0.00
10	T	dichlorotfluoroethan	10.0000	10.8622	-8.62	107	0.00
11	T	propyleneoxide	100.0000	103.4322	-3.43	108	0.00
12	T	Acrolein	50.0000	47.2577	5.48	98	0.00
13	PT	11dichlorthe	10.0000	11.1565	-11.56	108	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.2925	-6.46	107	0.00
15	PT	Acetone	100.0000	101.7303	-1.73	109	0.00
16	T	Iodomethane	20.0000	19.6141	1.93	110	0.00
17	PT	Carbon Dislf	20.0000	22.3094	-11.55	109	0.00
18	T	allylchloride	20.0000	20.9051	-4.53	104	0.00
19	PT	methylacetate	10.0000	9.1362	8.64	102	0.00
20	PT	Methylchlorid	10.0000	9.6734	3.27	106	0.00
21	T	tbutylalcohol	500.0000	521.5836	-4.32	107	0.00
22	T	Acrylonitrile	50.0000	51.8166	-3.63	106	0.00
23	PT	t12dichlorte	10.0000	10.4635	-4.63	106	0.00
24	PT	MtBE	10.0000	10.2906	-2.91	108	0.00
25	T	Hexane	20.0000	20.6329	-3.16	104	0.00
26	PT	11dichlorota	10.0000	10.4893	-4.89	106	0.00
27	T	Vinylacetate	100.0000	97.9453	2.05	94	0.00
28	T	chloroprene	20.0000	22.2749	-11.37	106	0.00
29	T	Diisopether	10.0000	9.7918	2.08	100	0.00
30	T	ETBE	10.0000	10.3533	-3.53	105	0.00
31	T	22dichloropr	10.0000	10.2032	-2.03	102	0.00
32	PT	c12dichlorte	10.0000	10.2678	-2.68	105	0.00
33	PT	2Butanone	100.0000	99.7253	0.27	104	0.00
34	T	propionitrile	100.0000	99.6383	0.36	105	0.00
35	T	Ethylacetate	50.0000	50.7840	-1.57	112	0.00
36	T	methacrylonitrile	20.0000	19.8520	0.74	104	0.00
37	T	Bromochlorma	10.0000	10.3032	-3.03	106	0.00
38	T	Tetrahydofur	100.0000	93.6072	6.39	103	0.00
39	PT	Chloroform	10.0000	10.5643	-5.64	108	0.00
40	PT	111trichlota	10.0000	10.8504	-8.50	106	0.00
41	S	SURRDibrflma	20.0000	19.9303	0.35	100	0.00
42	PT	Cyclohexane	10.0000	10.6420	-6.42	109	0.00
43	PT	Carbtetraclo	10.0000	11.1751	-11.75	108	0.00
44	T	11dicloprope	10.0000	10.6365	-6.36	105	0.00
45	S	SURR12DCAd4	20.0000	20.1716	-0.86	101	0.00
46	PT	Benzene	10.0000	10.6937	-6.94	107	0.00
47	PT	12dichlorota	10.0000	10.4902	-4.90	110	0.00
48	T	TAME	10.0000	10.1325	-1.33	105	0.00

49	PT	trichloroete	10.0000	10.6748	-6.75	110	0.00
50	PT	methylcyclohexane	10.0000	10.3574	-3.57	106	0.00
51	PT	12dicloropra	10.0000	10.3867	-3.87	109	0.00
52	T	23Dicl1propene	10.0000	10.5361	-5.36	109	0.00
53	T	Dibromometha	10.0000	10.2391	-2.39	107	0.00
54	T	methylmethacrylate	10.0000	9.9308	0.69	108	0.00
55	T	14dioxane	500.0000	490.6786	1.86	107	0.00
56	PT	Bromodiclrma	10.0000	10.1860	-1.86	106	0.00
57	T	2Nitropropane	100.0000	99.9567	0.04	103	0.00
58	T	2CLEVE	50.0000	52.6627	-5.33	104	0.00
59	PT	c13dicloproe	10.0000	10.2343	-2.34	105	0.00
60	PT	4Meth2Pentan	100.0000	102.8786	-2.88	106	0.00
61	S	SURRd8Tolule	20.0000	19.9848	0.08	100	0.00
62	PT	Toluene	10.0000	10.6572	-6.57	107	0.00
63	PT	t13Dicloprop	10.0000	10.1459	-1.46	106	0.00
64	T	ethylmethacrylate	20.0000	21.2029	-6.01	107	0.00
65	PT	112Triclotha	10.0000	10.5034	-5.03	108	0.00
66	PT	Tetrachlorte	10.0000	11.1287	-11.29	108	0.00
67	T	13Diclorpropa	10.0000	10.1563	-1.56	106	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	99	0.00
69	PT	2Hexanone	100.0000	104.7970	-4.80	108	0.00
70	PT	Clorodibrmta	10.0000	10.3445	-3.45	107	0.00
71	PT	12Dibrometha	10.0000	10.0560	-0.56	105	0.00
72	PT	Chlorobenzen	10.0000	10.6126	-6.13	106	0.00
73	T	1Clhexane	10.0000	10.7426	-7.43	104	0.00
74	T	1112Tetclota	10.0000	10.3621	-3.62	104	0.00
75	PT	Ethylbenzene	10.0000	10.8758	-8.76	106	0.00
76	PT	m p-Xylene	20.0000	21.7490	-8.74	107	0.00
77	PT	o-Xylene	10.0000	10.8511	-8.51	109	0.00
78	PT	Styrene	10.0000	10.6823	-6.82	105	0.00
79	PT	Bromoform	10.0000	9.8867	1.13	101	0.00
80	PT	Isopropylben	10.0000	11.1000	-11.00	107	0.00
81	T	cyclohexanone	200.0000	208.8890	-4.44	115	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	100	0.00
83	S	SURR4BrFBenz	20.0000	19.8013	0.99	98	0.00
84	T	Bromobenzene	10.0000	10.5110	-5.11	105	0.00
85	PT	1122Tetrclta	10.0000	10.2232	-2.23	106	0.00
86	T	123Triclproa	10.0000	10.2306	-2.31	105	0.00
87	T	14dichloro2butene	10.0000	9.6114	3.89	99	0.00
88	T	n-Propylbenz	10.0000	11.5063	-15.06	107	0.00
89	T	2chlorotolue	10.0000	10.6257	-6.26	105	0.00
90	T	4chlorotolue	10.0000	10.9479	-9.48	107	0.00
91	T	135Trimebenz	10.0000	11.1666	-11.67	107	0.00
92	T	tbutylbenzen	10.0000	11.4170	-14.17	107	0.00
93	T	124Trimetben	10.0000	11.2255	-12.26	107	0.00
94	T	sbutylbenzen	10.0000	11.7410	-17.41	108	0.00
95	PT	13Diclorbenz	10.0000	10.6933	-6.93	107	0.00
96	T	pIsopropylto	10.0000	11.5517	-15.52	109	0.00
97	PT	14dichlorobe	10.0000	10.8904	-8.90	107	0.00
98	PT	12dichlorobe	10.0000	10.7344	-7.34	110	0.00
99	T	nButylbenzen	10.0000	11.3597	-13.60	109	0.00
100	PT	12dibromo3cl	10.0000	10.6774	-6.77	112	0.00
101	T	135Trichlorobenzene	10.0000	10.7125	-7.13	104	0.00
102	PT	124Trichlobe	10.0000	11.2473	-12.47	109	0.00
103	T	Hexachlorobu	10.0000	11.6979	-16.98	108	0.00
104	T	Naphthalene	10.0000	10.2038	-2.04	117	0.00
105	T	123Trichlben	10.0000	11.5014	-15.01	113	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W080421.M Thu Aug 05 09:48:28 2021

Quantitation Report

Data File : C:\Instarch\Data\AUG0421\ICV1.D Vial: 15
Acq On : 4 Aug 2021 14:13 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 07:01:19 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:01:07 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1154113	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	905911	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	513960	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	290751	19.930	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 100	%		
45) SURR12DCAd4	7.27	102	80291	20.172	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 101	%		
61) SURRd8Tolule	9.71	98	1154484	19.985	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.25	95	488999	19.801	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	195690	12.6870	ug/L	99
3) Chloromethan	2.09	50	171179	11.1643	ug/L	100
4) VinylChlorid	2.25	62	176679	11.6441	ug/L	98
5) Bromomethane	2.70	94	117226	11.4526	ug/L	99
6) Chloroethane	2.87	64	117520	11.4963	ug/L	97
7) Dichloroflmethane	3.19	67	201703	10.5736	ug/L	99
8) Trichlorofma	3.27	101	246567	10.8514	ug/L	99
9) Ethylether	3.71	59	120505	10.0928	ug/L	97
10) dichlorotfluoroethan	3.72	67	150722	10.8622	ug/L	99
11) propyleneoxide	3.77	58	269647	103.4322	ug/L	97
12) Acrolein	3.84	56	79742	47.2577	ug/L	98
13) 11dichlorthe	3.99	96	142912	11.1565	ug/L	99
14) Trichlorotfluoroeth	4.03	101	266737	21.2925	ug/L	99
15) Acetone	4.06	43	463263	101.7303	ug/L	99
16) Iodomethane	4.17	142	275952	19.6141	ug/L	100
17) Carbon Dislf	4.26	76	743172	22.3094	ug/L	100
18) allylchloride	4.48	41	424175	20.9051	ug/L	99
19) methylacetate	4.53	74	39883	9.1362	ug/L	92
20) Methylchlorid	4.63	84	153625	9.6734	ug/L	96
21) tbutylalcohol	4.83	59	942813	521.5836	ug/L	100
22) Acrylonitrile	4.94	53	274765	51.8166	ug/L	98
23) t12dichlorte	5.01	96	155304	10.4635	ug/L	96
24) MtBE	5.04	73	432974	10.2906	ug/L	98
25) Hexane	5.40	57	399182	20.6329	ug/L	97
26) 11dichlorota	5.54	63	263151	10.4893	ug/L	98
27) Vinylacetate	5.63	43	2363791	97.9453	ug/L	100
28) chloroprene	5.67	53	499608	22.2749	ug/L	99
29) Diisopether	5.69	45	417639	9.7918	ug/L	97
30) ETBE	6.14	59	425588	10.3533	ug/L	98
31) 22dichloropr	6.27	77	225322	10.2032	ug/L	99
32) c12dichlorte	6.27	96	169200	10.2678	ug/L	97
33) 2Butanone	6.29	72	199114	99.7253	ug/L	99
34) propionitrile	6.32	54	236297	99.6383	ug/L	99
35) Ethylacetate	6.40	88	36297	50.7840	ug/L #	92
36) methacrylonitrile	6.53	67	143536	19.8520	ug/L	98
37) Bromochlorma	6.55	128	73273	10.3032	ug/L	96
38) Tetrahydofur	6.64	42	449807	93.6072	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\AUG0421\ICV1.D Vial: 15
Acq On : 4 Aug 2021 14:13 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 07:01:19 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:01:07 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	274854	10.5643	ug/L	99
40)	111trichlota	6.91	97	250163	10.8504	ug/L	99
42)	Cyclohexane	7.00	56	252011	10.6420	ug/L	98
43)	Carbtetraclo	7.13	119	215692	11.1751	ug/L	98
44)	11dicloprope	7.11	110	76714	10.6365	ug/L	95
46)	Benzene	7.36	78	618990	10.6937	ug/L	99
47)	12dichlorota	7.36	62	214586	10.4902	ug/L	99
48)	TAME	7.53	73	432752	10.1325	ug/L	98
49)	trichloroete	8.17	95	166693	10.6748	ug/L	99
50)	methylcyclohexane	8.43	83	314476	10.3574	ug/L	99
51)	12dicloropra	8.43	63	162063	10.3867	ug/L	90
52)	23Dicl1propene	8.49	75	246560	10.5361	ug/L	99
53)	Dibromometha	8.57	93	95945	10.2391	ug/L	97
54)	methylmethacrylate	8.59	69	122107	9.9308	ug/L	98
55)	14dioxane	8.60	88	109527	490.6786	ug/L	99
56)	Bromodiclrma	8.76	83	212052	10.1860	ug/L	99
57)	2Nitropropane	9.04	43	564777	99.9567	ug/L	99
58)	2CLEVE	9.16	63	469474	52.6627	ug/L	99
59)	c13dicloproe	9.35	75	256037	10.2343	ug/L	99
60)	4Meth2Pentan	9.54	43	1372246	102.8786	ug/L	100
62)	Toluene	9.80	92	399982	10.6572	ug/L	99
63)	t13Dicloprop	10.05	75	232225	10.1459	ug/L	98
64)	ethylmethacrylate	10.20	69	438680	21.2029	ug/L	98
65)	112Triclotha	10.29	83	121172	10.5034	ug/L	98
66)	Tetrachlorte	10.53	166	178254	11.1287	ug/L	98
67)	13Diclorpropa	10.51	76	245514	10.1563	ug/L	99
69)	2Hexanone	10.64	43	1056981	104.7970	ug/L	100
70)	Clorodibrmta	10.82	129	155608	10.3445	ug/L	99
71)	12Dibrometha	10.97	107	143393	10.0560	ug/L	100
72)	Chlorobenzen	11.66	112	420737	10.6126	ug/L	99
73)	1Clhexane	11.63	91	220358	10.7426	ug/L	99
74)	1112Tetclota	11.77	131	150019	10.3621	ug/L	97
75)	Ethylbenzene	11.82	91	736116	10.8758	ug/L	99
76)	m p-Xylene	11.98	106	572039	21.7490	ug/L	99
77)	o-Xylene	12.53	106	288448	10.8511	ug/L	98
78)	Styrene	12.54	104	472026	10.6823	ug/L	99
79)	Bromoform	12.77	173	107448	9.8867	ug/L	99
80)	Isopropylben	13.05	105	728290	11.1000	ug/L	100
81)	cyclohexanone	13.14	55	189913	208.8890	ug/L	98
84)	Bromobenzene	13.47	156	179979	10.5110	ug/L	98
85)	1122Tetrclta	13.44	83	194613	10.2232	ug/L	100
86)	123Triclproa	13.50	75	255020	10.2306	ug/L	99
87)	14dichloro2butene	13.52	53	59352	9.6114	ug/L	96
88)	n-Propylbenz	13.64	91	847067	11.5063	ug/L	99
89)	2chlorotolue	13.75	91	503458	10.6257	ug/L	98
90)	4chlorotolue	13.90	91	599081	10.9479	ug/L	99
91)	135Trimebenz	13.90	105	617855	11.1666	ug/L	100
92)	tbutylbenzen	14.37	119	531780	11.4170	ug/L	99
93)	124Trimetben	14.43	105	610247	11.2255	ug/L	99
94)	sbutylbenzen	14.68	105	755693	11.7410	ug/L	99
95)	13Diclorbenz	14.82	146	338832	10.6933	ug/L	99
96)	pIsopropylto	14.90	119	643369	11.5517	ug/L	98
97)	14dichlorobe	14.95	146	348013	10.8904	ug/L	99
98)	12dichlorobe	15.49	146	320440	10.7344	ug/L	97
99)	nButylbenzen	15.50	91	576496	11.3597	ug/L	100
100)	12dibromo3cl	16.58	157	43284	10.6774	ug/L	96
101)	135Trichlorobenzene	16.91	180	226615	10.7125	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\AUG0421\ICV1.D Vial: 15
Acq On : 4 Aug 2021 14:13 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 07:01:19 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:01:07 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

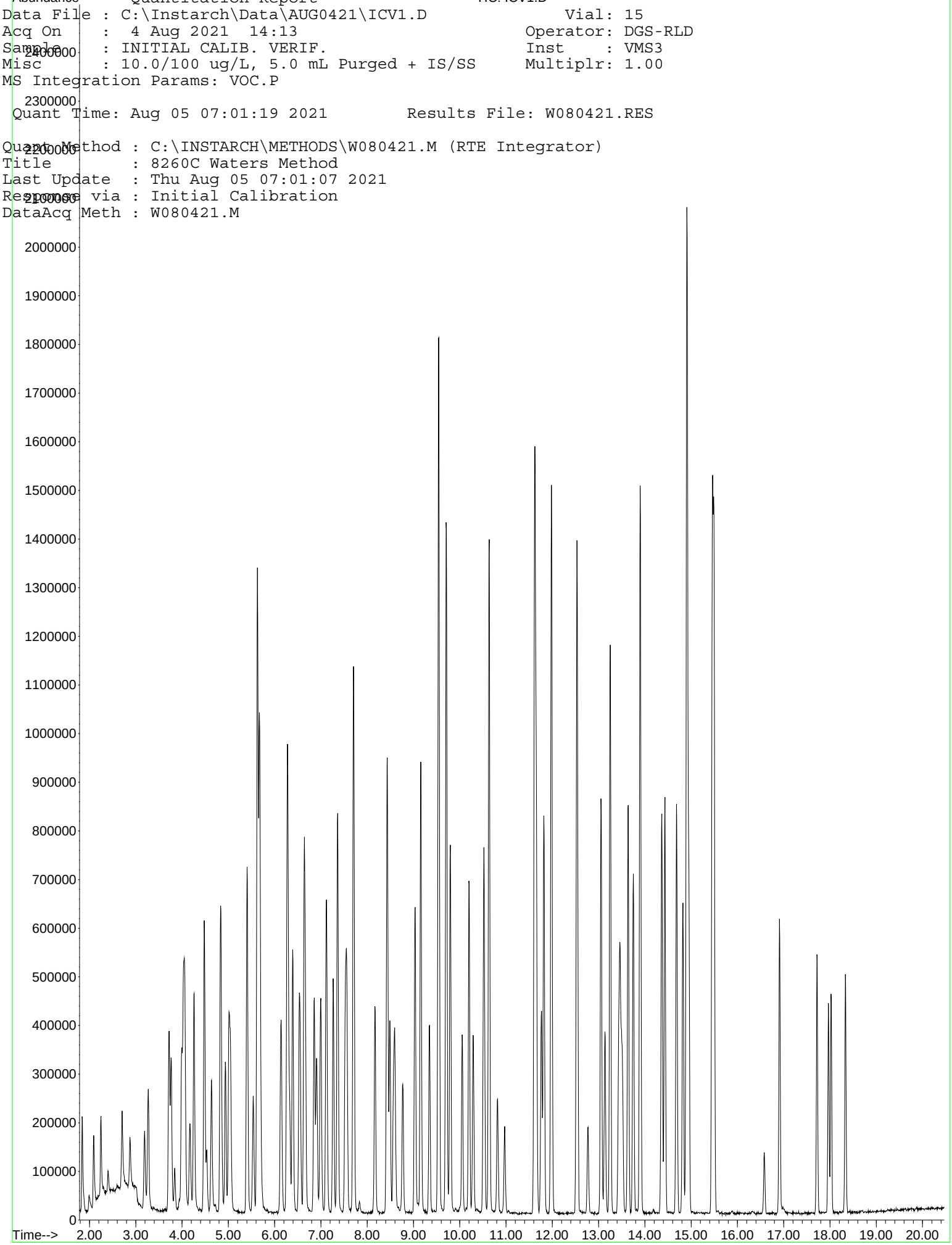
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	190781	11.2473	ug/L	98
103) Hexachlorobu	17.97	225	98933	11.6979	ug/L	99
104) Naphthalene	18.03	128	404358	10.2038	ug/L	99
105) 123Trichlben	18.34	180	176988	11.5014	ug/L	99

(#) = qualifier out of range (m) = manual integration

Data File : C:\Instarch\Data\AUG0421\ICV1.D Vial: 15
Acq On : 4 Aug 2021 14:13 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 07:01:19 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:01:07 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\AUG0421\ICV2.D Vial: 16
Acq On : 4 Aug 2021 14:43 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Aug 05 06:59:02 2021

Quant Method : C:\INSTARCH\METHODS\W080421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W080421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	101	0.00
2	PT	Dichlorodi	30.0000	38.0998	-27.00#	123	0.00
3	PT	Chloromethan	30.0000	31.1605	-3.87	111	0.00
4	PT	VinylChlorid	30.0000	33.6134	-12.04	110	0.00
5	PT	Bromomethane	30.0000	33.8474	-12.82	109	0.00
6	PT	Chloroethane	30.0000	31.7830	-5.94	108	0.00
7	T	Dichloroflmethane	30.0000	29.5248	1.58	99	0.00
8	PT	Trichlorofma	30.0000	32.0173	-6.72	105	0.00
9	T	Ethylether	30.0000	28.6860	4.38	101	0.00
10	T	dichlorotfluoroethan	30.0000	31.2755	-4.25	99	0.00
11	T	propyleneoxide	300.0000	301.0410	-0.35	102	0.00
12	T	Acrolein	150.0000	144.6862	3.54	101	0.00
13	PT	11dichlorthe	30.0000	32.0798	-6.93	103	0.00
14	PT	Trichlorotfluoroeth	60.0000	63.2605	-5.43	104	0.00
15	PT	Acetone	300.0000	298.4556	0.51	100	0.00
16	T	Iodomethane	60.0000	63.1104	-5.18	104	0.00
17	PT	Carbon Dislf	60.0000	60.2512	-0.42	105	0.00
18	T	allylchloride	60.0000	57.4657	4.22	99	0.00
19	PT	methylacetate	30.0000	29.7952	0.68	103	0.00
20	PT	Methylchlorid	30.0000	27.9573	6.81	100	0.00
21	T	tbutylalcohol	1500.0000	1520.7378	-1.38	102	0.00
22	T	Acrylonitrile	150.0000	149.4157	0.39	102	0.00
23	PT	t12dichlorte	30.0000	30.2359	-0.79	101	0.00
24	PT	MtBE	30.0000	28.6498	4.50	101	0.00
25	T	Hexane	60.0000	63.8178	-6.36	105	0.00
26	PT	11dichlorota	30.0000	29.8689	0.44	100	0.00
27	T	Vinylacetate	300.0000	314.1995	-4.73	104	0.00
28	T	chloroprene	60.0000	62.7619	-4.60	101	0.00
29	T	Diisopether	30.0000	29.3092	2.30	101	0.00
30	T	ETBE	30.0000	29.0075	3.31	101	0.00
31	T	22dichloropr	30.0000	29.4286	1.90	97	0.00
32	PT	c12dichlorte	30.0000	29.3110	2.30	100	0.00
33	PT	2Butanone	300.0000	300.4142	-0.14	104	0.00
34	T	propionitrile	300.0000	291.0178	2.99	100	0.00
35	T	Ethylacetate	150.0000	153.9223	-2.61	103	0.00
36	T	methacrylonitrile	60.0000	59.5490	0.75	103	0.00
37	T	Bromochlorma	30.0000	30.0277	-0.09	103	0.00
38	T	Tetrahydofur	300.0000	267.5325	10.82	102	0.00
39	PT	Chloroform	30.0000	30.3373	-1.12	102	0.00
40	PT	111trichlota	30.0000	31.8112	-6.04	103	0.00
41	S	SURRDibrflma	20.0000	20.2053	-1.03	102	0.00
42	PT	Cyclohexane	30.0000	31.2011	-4.00	103	0.00
43	PT	Carbtetraclo	30.0000	32.6038	-8.68	103	0.00
44	T	11dicloprope	30.0000	32.7215	-9.07	103	0.00
45	S	SURR12DCAd4	20.0000	20.3955	-1.98	105	0.00
46	PT	Benzene	30.0000	29.1486	2.84	102	0.00
47	PT	12dichlorota	30.0000	30.0248	-0.08	101	0.00
48	T	TAME	30.0000	28.8304	3.90	101	0.00

49	PT	trichloroete	30.0000	30.7395	-2.46	102	0.00
50	PT	methylcyclohexane	30.0000	31.0358	-3.45	102	0.00
51	PT	12dicloropra	30.0000	29.9473	0.18	101	0.00
52	T	23Dicl1propene	30.0000	29.6382	1.21	99	0.00
53	T	Dibromometha	30.0000	30.2989	-1.00	103	0.00
54	T	methylmethacrylate	30.0000	29.7568	0.81	104	0.00
55	T	14dioxane	1500.0000	1470.6264	1.96	101	0.00
56	PT	Bromodiclrma	30.0000	29.0378	3.21	100	0.00
57	T	2Nitropropane	300.0000	282.5469	5.82	102	0.00
58	T	2CLEVE	150.0000	146.4413	2.37	100	0.00
59	PT	c13dicloproe	30.0000	29.1664	2.78	101	0.00
60	PT	4Meth2Pentan	300.0000	308.0773	-2.69	102	0.00
61	S	SURRd8Tolule	20.0000	19.9540	0.23	101	0.00
62	PT	Toluene	30.0000	30.1747	-0.58	102	0.00
63	PT	t13Dicloprop	30.0000	29.4597	1.80	102	0.00
64	T	ethylmethacrylate	60.0000	58.7513	2.08	101	0.00
65	PT	112Triclotha	30.0000	29.9876	0.04	102	0.00
66	PT	Tetrachlorte	30.0000	32.7919	-9.31	103	0.00
67	T	13Diclorpropa	30.0000	29.0763	3.08	102	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	100	0.00
69	PT	2Hexanone	300.0000	269.1754	10.27	103	0.00
70	PT	Clorodibrmta	30.0000	30.9586	-3.20	103	0.00
71	PT	12Dibrometha	30.0000	30.2213	-0.74	103	0.00
72	PT	Chlorobenzen	30.0000	29.4254	1.92	100	0.00
73	T	1Clhexane	30.0000	31.6709	-5.57	103	0.00
74	T	1112Tetclota	30.0000	31.1650	-3.88	102	0.00
75	PT	Ethylbenzene	30.0000	29.1942	2.69	101	0.00
76	PT	m p-Xylene	60.0000	60.6771	-1.13	101	0.00
77	PT	o-Xylene	30.0000	30.6326	-2.11	101	0.00
78	PT	Styrene	30.0000	30.2625	-0.87	102	0.00
79	PT	Bromoform	30.0000	31.0319	-3.44	101	0.00
80	PT	Isopropylben	30.0000	30.0119	-0.04	101	0.00
81	T	cyclohexanone	600.0000	589.1385	1.81	99	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	100	0.00
83	S	SURR4BrFBenz	20.0000	19.6435	1.78	100	0.00
84	T	Bromobenzene	30.0000	29.9719	0.09	102	0.00
85	PT	1122Tetrclta	30.0000	29.4444	1.85	102	0.00
86	T	123Triclproa	30.0000	30.2162	-0.72	103	0.00
87	T	14dichloro2butene	30.0000	28.6982	4.34	101	0.00
88	T	n-Propylbenz	30.0000	29.6741	1.09	101	0.00
89	T	2chlorotolue	30.0000	29.2308	2.56	101	0.00
90	T	4chlorotolue	30.0000	29.2130	2.62	101	0.00
91	T	135Trimebenz	30.0000	29.7254	0.92	101	0.00
92	T	tbutylbenzen	30.0000	30.8216	-2.74	101	0.00
93	T	124Trimetben	30.0000	29.5442	1.52	100	0.00
94	T	sbutylbenzen	30.0000	30.7916	-2.64	102	0.00
95	PT	13Diclorbenz	30.0000	29.9321	0.23	101	0.00
96	T	pIsopropylto	30.0000	30.9725	-3.24	102	0.00
97	PT	14dichlorobe	30.0000	30.2043	-0.68	101	0.00
98	PT	12dichlorobe	30.0000	29.5509	1.50	101	0.00
99	T	nButylbenzen	30.0000	30.7883	-2.63	101	0.00
100	PT	12dibromo3cl	30.0000	31.0951	-3.65	102	0.00
101	T	135Trichlorobenzene	30.0000	31.6583	-5.53	101	0.00
102	PT	124Trichlobe	30.0000	33.7736	-12.58	101	0.00
103	T	Hexachlorobu	30.0000	33.3587	-11.20	101	0.00
104	T	Naphthalene	30.0000	30.5971	-1.99	101	0.00
105	T	123Trichlben	30.0000	34.1674	-13.89	101	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W080421.M Thu Aug 05 09:50:50 2021

Quantitation Report

Data File : C:\Instarch\Data\AUG0421\ICV2.D Vial: 16
Acq On : 4 Aug 2021 14:43 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 06:59:02 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Aug 04 14:42:14 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1166888	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	909653	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	530537	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	298026	20.205	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.27	102	82081	20.396	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102	%		
61) SURRd8Tolule	9.71	98	1165465	19.954	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.25	95	500748	19.643	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	569065	38.0998	ug/L	99
3) Chloromethan	2.09	50	483064	31.1605	ug/L	99
4) VinylChlorid	2.25	62	515669	33.6134	ug/L	99
5) Bromomethane	2.70	94	303030	33.8474	ug/L	99
6) Chloroethane	2.87	64	328495	31.7830	ug/L	100
7) Dichloroflmethane	3.19	67	569451	29.5248	ug/L	99
8) Trichlorofma	3.26	101	716884	32.0173	ug/L	98
9) Ethylether	3.71	59	346295	28.6860	ug/L	99
10) dichlorotfluoroethan	3.73	67	438775	31.2755	ug/L	99
11) propyleneoxide	3.76	58	793499	301.0410	ug/L	99
12) Acrolein	3.84	56	246844	144.6862	ug/L	98
13) 11dichlorthe	3.99	96	415483	32.0798	ug/L	98
14) Trichlorotfluoroeth	4.03	101	788917	63.2605	ug/L	98
15) Acetone	4.06	43	1260396	298.4556	ug/L	99
16) Iodomethane	4.17	142	940727	63.1104	ug/L	100
17) Carbon Dislf	4.26	76	2029308	60.2512	ug/L	96
18) allylchloride	4.48	41	1178913	57.4657	ug/L	97
19) methylacetate	4.53	74	131507	29.7952	ug/L	97
20) Methylchlorid	4.64	84	448908	27.9573	ug/L	98
21) tbutylalcohol	4.83	59	2519365	1520.7378	ug/L	97
22) Acrylonitrile	4.94	53	801068	149.4157	ug/L	99
23) t12dichlorte	5.01	96	453742	30.2359	ug/L	98
24) MtBE	5.04	73	1218771	28.6498	ug/L	99
25) Hexane	5.40	57	1204030	63.8178	ug/L	97
26) 11dichlorota	5.54	63	757632	29.8689	ug/L	99
27) Vinylacetate	5.63	43	5710045	314.1995	ug/L	91
28) chloroprene	5.67	53	1423281	62.7619	ug/L	97
29) Diisopether	5.68	45	1263935	29.3092	ug/L	97
30) ETBE	6.13	59	1205592	29.0075	ug/L	97
31) 22dichloropr	6.27	77	657080	29.4286	ug/L	98
32) c12dichlorte	6.27	96	488352	29.3110	ug/L	100
33) 2Butanone	6.29	72	606454	300.4142	ug/L	99
34) propionitrile	6.32	54	697802	291.0178	ug/L	99
35) Ethylacetate	6.39	88	111231	153.9223	ug/L #	90
36) methacrylonitrile	6.53	67	435324	59.5490	ug/L	98
37) Bromochlorma	6.55	128	215912	30.0277	ug/L	98
38) Tetrahydofur	6.63	42	1299793	267.5325	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\AUG0421\ICV2.D Vial: 16
Acq On : 4 Aug 2021 14:43 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 06:59:02 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Aug 04 14:42:14 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	798031	30.3373	ug/L	98
40)	111trichlota	6.91	97	741543	31.8112	ug/L	99
42)	Cyclohexane	7.00	56	736363	31.2011	ug/L	97
43)	Carbtetraclo	7.13	119	636259	32.6038	ug/L	100
44)	11dicloprope	7.11	110	238612	32.7215	ug/L	98
46)	Benzene	7.36	78	1705902	29.1486	ug/L	96
47)	12dichlorota	7.36	62	620979	30.0248	ug/L	100
48)	TAME	7.53	73	1244960	28.8304	ug/L	98
49)	trichloroete	8.17	95	485328	30.7395	ug/L	99
50)	methylcyclohexane	8.43	83	933144	31.0358	ug/L	99
51)	12dicloropra	8.43	63	472437	29.9473	ug/L	98
52)	23Dicl1propene	8.49	75	701253	29.6382	ug/L	99
53)	Dibromometha	8.56	93	287057	30.2989	ug/L	98
54)	methylmethacrylate	8.59	69	369935	29.7568	ug/L	99
55)	14dioxane	8.60	88	331900	1470.6264	ug/L	98
56)	Bromodiclrma	8.77	83	611202	29.0378	ug/L	99
57)	2Nitropropane	9.03	43	1614123	282.5469	ug/L	99
58)	2CLEVE	9.16	63	1319935	146.4413	ug/L	96
59)	c13dicloproe	9.35	75	737752	29.1664	ug/L	99
60)	4Meth2Pentan	9.54	43	3451256	308.0773	ug/L	92
62)	Toluene	9.80	92	1145035	30.1747	ug/L	94
63)	t13Dicloprop	10.05	75	681757	29.4597	ug/L	99
64)	ethylmethacrylate	10.20	69	1228997	58.7513	ug/L	99
65)	112Triclotha	10.29	83	349779	29.9876	ug/L	99
66)	Tetrachlorte	10.53	166	531059	32.7919	ug/L	100
67)	13Diclorpropa	10.52	76	710661	29.0763	ug/L	99
69)	2Hexanone	10.64	43	2726114	269.1754	ug/L	95
70)	Clorodibrmta	10.81	129	467623	30.9586	ug/L	100
71)	12Dibrometha	10.97	107	432719	30.2213	ug/L	100
72)	Chlorobenzen	11.66	112	1171388	29.4254	ug/L	98
73)	1Clhexane	11.64	91	652333	31.6709	ug/L	98
74)	1112Tetclota	11.76	131	453059	31.1650	ug/L	99
75)	Ethylbenzene	11.82	91	1984142	29.1942	ug/L	95
76)	m p-Xylene	11.98	106	1602516	60.6771	ug/L	90
77)	o-Xylene	12.53	106	817650	30.6326	ug/L	94
78)	Styrene	12.54	104	1342750	30.2625	ug/L	97
79)	Bromoform	12.77	173	338644	31.0319	ug/L	99
80)	Isopropylben	13.06	105	1977274	30.0119	ug/L	95
81)	cyclohexanone	13.14	55	537832	589.1385	ug/L	99
84)	Bromobenzene	13.46	156	529759	29.9719	ug/L	99
85)	1122Tetrclta	13.44	83	578597	29.4444	ug/L	100
86)	123Triclproa	13.50	75	777500	30.2162	ug/L	99
87)	14dichloro2butene	13.52	53	182932	28.6982	ug/L	92
88)	n-Propylbenz	13.64	91	2254994	29.6741	ug/L	96
89)	2chlorotolue	13.75	91	1429653	29.2308	ug/L	97
90)	4chlorotolue	13.90	91	1650124	29.2130	ug/L	96
91)	135Trimebenz	13.90	105	1697771	29.7254	ug/L	96
92)	tbutylbenzen	14.37	119	1481910	30.8216	ug/L	99
93)	124Trimetben	14.43	105	1657899	29.5442	ug/L	94
94)	sbutylbenzen	14.69	105	2045775	30.7916	ug/L	96
95)	13Diclorbenz	14.82	146	979028	29.9321	ug/L	99
96)	pIsopropylto	14.90	119	1780644	30.9725	ug/L	97
97)	14dichlorobe	14.95	146	996338	30.2043	ug/L	99
98)	12dichlorobe	15.49	146	910597	29.5509	ug/L	99
99)	nButylbenzen	15.50	91	1612876	30.7883	ug/L	96
100)	12dibromo3cl	16.58	157	130119	31.0951	ug/L	97
101)	135Trichlorobenzene	16.91	180	691307	31.6583	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\AUG0421\ICV2.D Vial: 16
Acq On : 4 Aug 2021 14:43 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 06:59:02 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Aug 04 14:42:14 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	591361	33.7736	ug/L	99
103)	Hexachlorobu	17.97	225	291225	33.3587	ug/L	98
104)	Naphthalene	18.02	128	1260959	30.5971	ug/L	98
105)	123Trichlben	18.34	180	542741	34.1674	ug/L	100

(#) = qualifier out of range (m) = manual integration

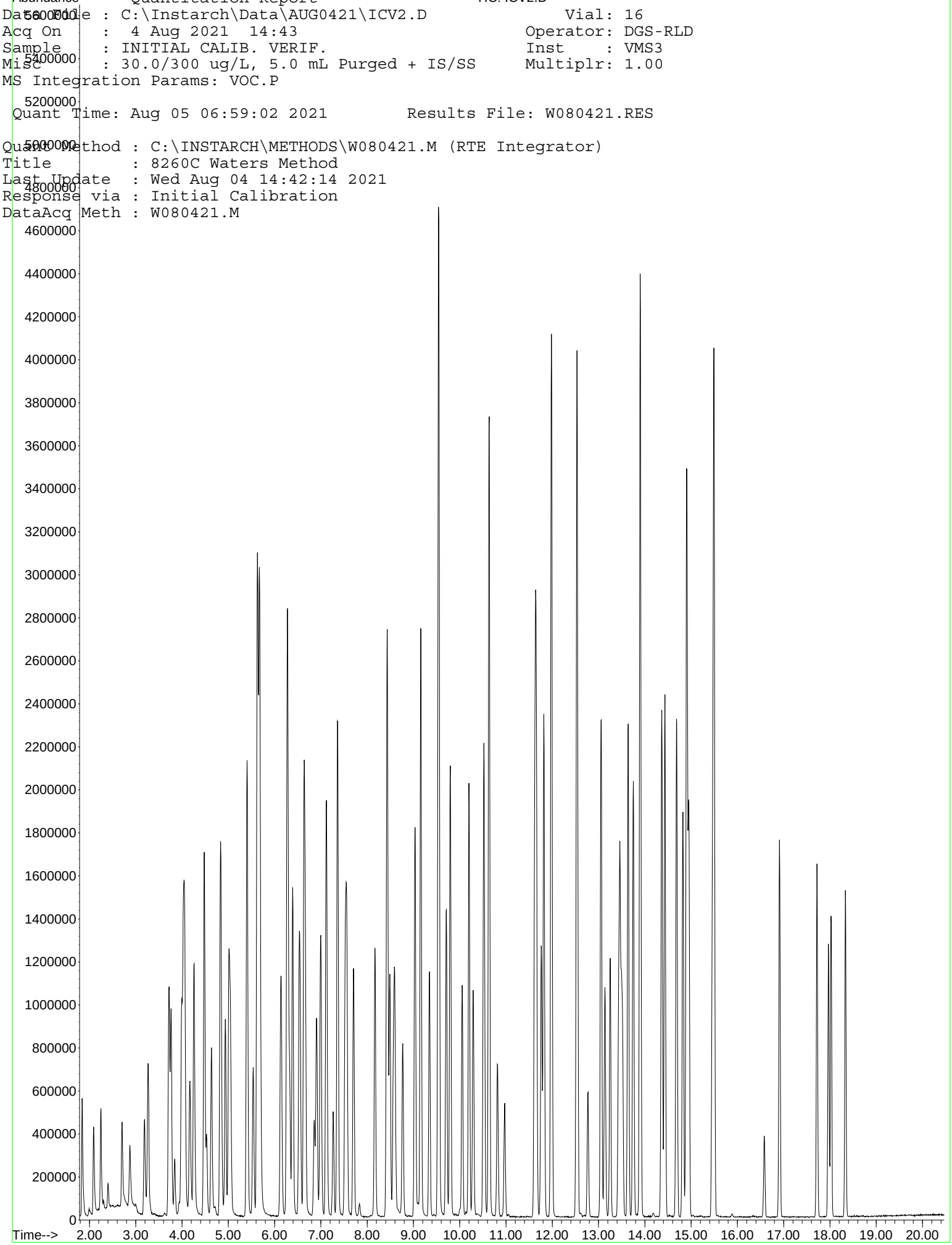
Quantitation Report

TIC: ICV2.D

Data File : C:\Instarch\Data\AUG0421\ICV2.D Vial: 16
Acq On : 4 Aug 2021 14:43 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.0/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 06:59:02 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Aug 04 14:42:14 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\ICB1.D Vial: 19
Acq On : 4 Aug 2021 16:13 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 16:34:27 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Aug 04 14:42:14 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1095814	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	871433	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	477914	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	274985	19.852	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	76984	20.370	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102 %			
61) SURRd8Tolule	9.71	98	1094003	19.945	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %			
83) SURR4BrFBenz	13.25	95	461917	20.115	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.83	64	14078	1.4504	ug/L	79
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	23225	N.D.		
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	5709	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.85	59	7327	Below	Cal	63
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.65	42	5810	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\ICB1.D Vial: 19
Acq On : 4 Aug 2021 16:13 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 16:34:27 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Aug 04 14:42:14 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.54	43	7606	Below Cal	# 77
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.64	43	12388	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	11.66	112	2533	N.D.	
73)	1Clhexane	11.61	91	4116	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	11.82	91	4583	N.D.	
76)	m p-Xylene	11.98	106	3194	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	12.54	104	2616	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	13.06	105	6076	N.D.	
81)	cyclohexanone	13.14	55	4481	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.64	91	7877	N.D.	
89)	2chlorotolue	13.75	91	2743	N.D.	
90)	4chlorotolue	13.90	91	4286	N.D.	
91)	135Trimebenz	13.90	105	4630	N.D.	
92)	tbutylbenzen	14.37	119	5403	N.D.	
93)	124Trimetben	14.43	105	5299	N.D.	
94)	sbutylbenzen	14.68	105	9164	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.90	119	8346	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.49	91	9512	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0421\ICB1.D Vial: 19
Acq On : 4 Aug 2021 16:13 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 16:34:27 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Aug 04 14:42:14 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

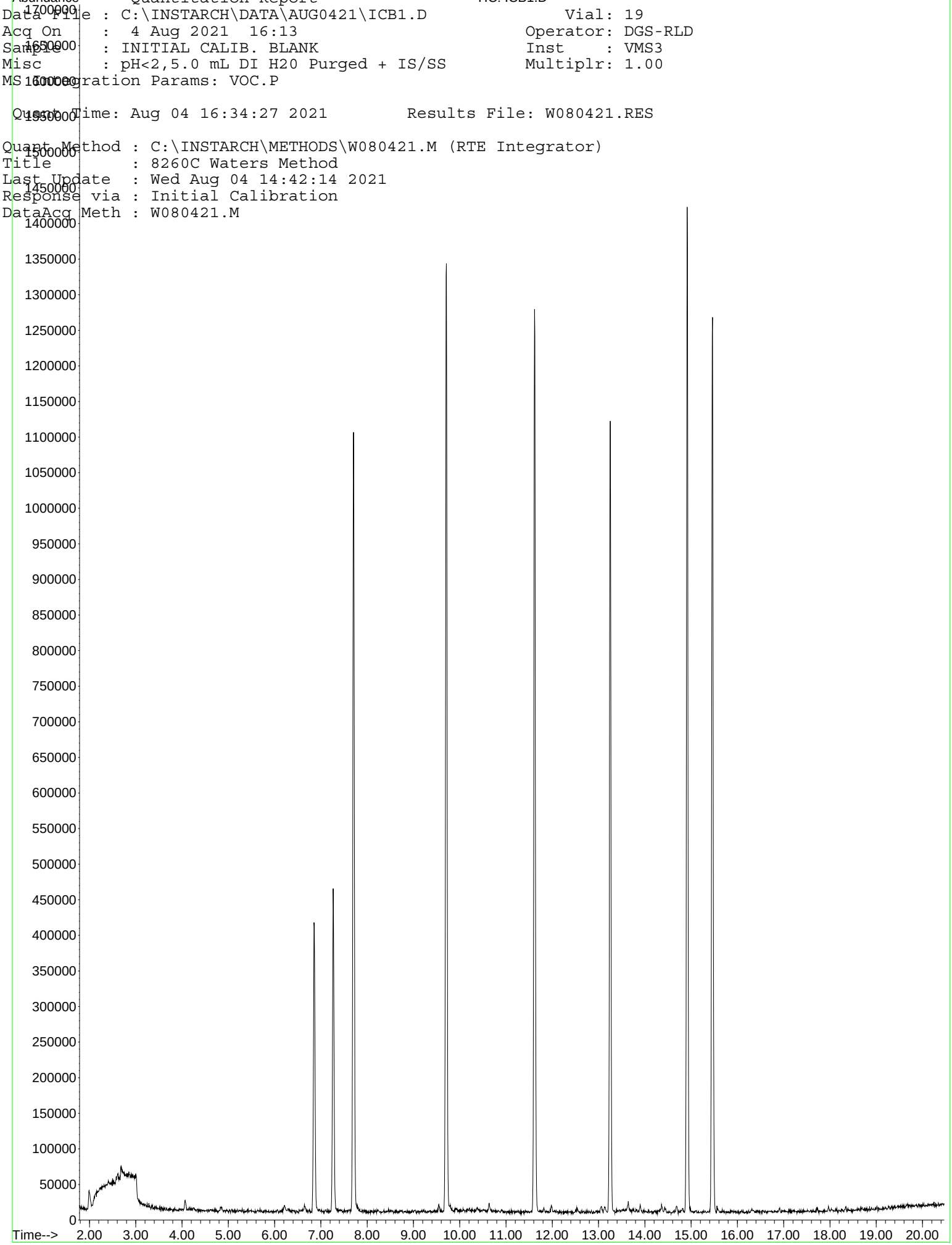
(#) = qualifier out of range (m) = manual integration

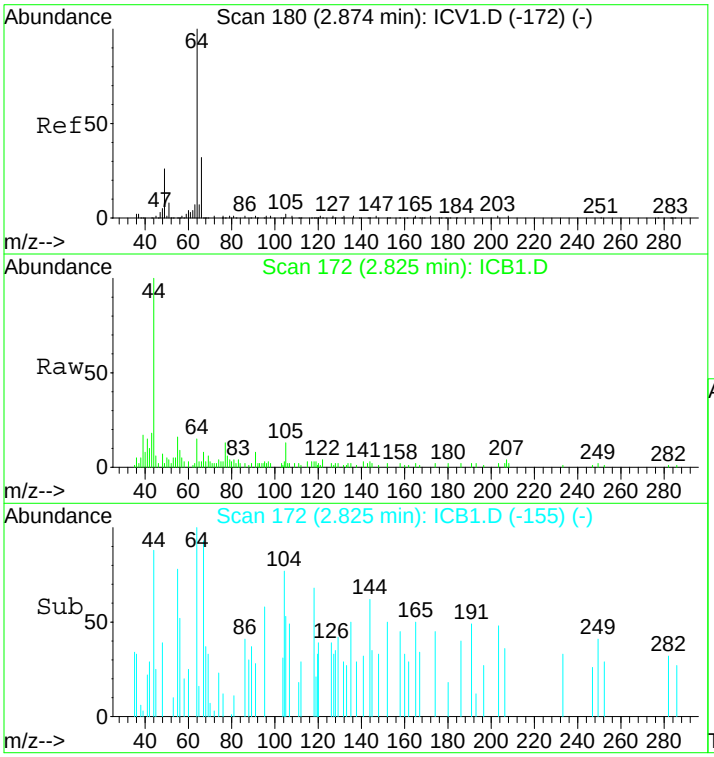
Abundance Quantitation Report TIC: ICB1.D

Data File : C:\INSTARCH\DATA\AUG0421\ICB1.D Vial: 19
Acq On : 4 Aug 2021 16:13 Operator: DGS-RLD
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 04 16:34:27 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Aug 04 14:42:14 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

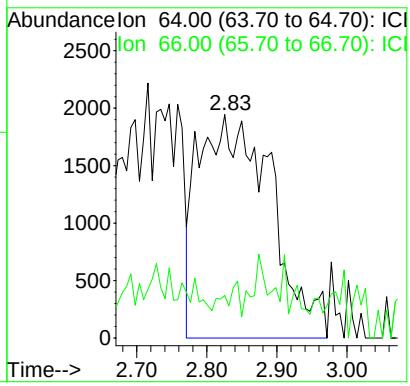




#6
Chloroethane
Concen: 1.45 ug/L
RT: 2.83 min Scan# 172
Delta R.T. -0.05 min
Lab File: ICB1.D
Acq: 4 Aug 2021 16:13

Tgt Ion: 64 Resp: 14078

Ion	Ratio	Lower	Upper
64	100		
66	21.1	12.8	52.8



Negative Library Identification

[redacted]

BFB

Data File : C:\Instarch\Data\AUG0421\BFB2.D Vial: 20
Acq On : 5 Aug 2021 7:12 Operator: DGS-RLD
Sample : BFB DIRECT INJ. Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W080421.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.675 to 4.693 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.2	18246	PASS
75	95	30	60	51.4	51352	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.8	6803	PASS
173	174	0.00	2	0.8	682	PASS
174	95	50	100	87.5	87518	PASS
175	174	5	9	7.9	6933	PASS
176	174	95	101	98.7	86361	PASS
177	176	5	9	6.7	5781	PASS

W080421.M Thu Aug 05 09:42:54 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\AUG0421\ICV1R.D Vial: 22
Acq On : 5 Aug 2021 7:58 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Aug 05 08:19:11 2021

Quant Method : C:\INSTARCH\METHODS\W080421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W080421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	101	0.00
2	PT	Dichlorodi	0.2438	0.2980	-22.23#	115	0.00
3	PT	Chloromethan	0.2657	0.2588	2.60	102	0.00
4	PT	VinylChlorid	0.2629	0.2611	0.68	97	0.00
5	PT	Bromomethane	0.1660	0.1781	-7.29	103	0.00
6	PT	Chloroethane	0.1771	0.1747	1.36	98	0.00
7	T	Dichloroflmethane	0.3306	0.2994	9.44	92	0.00
8	PT	Trichlorofma	0.3561	0.3813	-7.08	98	0.00
9	T	Ethylether	0.2069	0.1847	10.73	95	0.00
10	T	dichlorotfluoroethan	0.2405	0.2280	5.20	94	0.00
11	T	propyleneoxide	0.0452	0.0425	5.97	99	0.00
12	T	Acrolein	0.0292	0.0264#	9.59	94	0.00
13	PT	11dichlorthe	0.2220	0.2190	1.35	97	0.00
14	PT	Trichlorotfluoroeth	0.1926	0.2065	-7.22	97	0.00
15	PT	Acetone	0.0835	0.0746#	10.66	102	0.00
16	T	Iodomethane	0.2156	0.1884	12.62	88	0.00
17	PT	Carbon Dislf	0.5773	0.5702	1.23	98	0.00
18	T	allylchloride	0.3516	0.3260	7.28	94	0.00
19	PT	methylacetate	0.0756	0.0656#	13.23	98	0.00
20	PT	Methylchlorid	0.2752	0.2386	13.30	96	0.00
21	T	tbutylalcohol	0.0321	0.0281#	12.46	93	0.00
22	T	Acrylonitrile	0.0919	0.0836	9.03	95	0.00
23	PT	t12dichlorte	0.2572	0.2348	8.71	94	0.00
24	PT	MtBE	0.7291	0.6465	11.33	94	0.00
25	T	Hexane	0.2936	0.3501	-19.24	107	0.00
26	PT	11dichlorota	0.4348	0.3880	10.76	92	0.00
27	T	Vinylacetate	0.4426	0.4153	6.17	96	0.00
28	T	chloroprene	0.3887	0.3760	3.27	94	0.00
29	T	Diisopether	0.7391	0.6584	10.92	92	0.00
30	T	ETBE	0.7123	0.6388	10.32	92	0.00
31	T	22dichloropr	0.3827	0.4030	-5.30	106	0.00
32	PT	c12dichlorte	0.2856	0.2527	11.52	92	0.00
33	PT	2Butanone	0.0346	0.0320#	7.51	98	0.00
34	T	propionitrile	0.0411	0.0358	12.90	93	0.00
35	T	Ethylacetate	0.0124	0.0110#	11.29	99	0.00
36	T	methacrylonitrile	0.1253	0.1123	10.38	95	0.00
37	T	Bromochlorma	0.1232	0.1073	12.91	91	0.00
38	T	Tetrahydofur	0.0833	0.0696	16.45	93	0.00
39	PT	Chloroform	0.4509	0.4086	9.38	94	0.00
40	PT	111trichlota	0.3995	0.3886	2.73	97	0.00
41	S	SURRDibrflma	0.2528	0.2562	-1.34	103	0.00
42	PT	Cyclohexane	0.3627	0.3787	-4.41	96	0.00
43	PT	Carbtetraclo	0.3345	0.3288	1.70	97	0.00
44	T	11dicloprope	0.1250	0.1201	3.92	96	0.00
45	S	SURR12DCAd4	0.0690	0.0700	-1.45	103	0.00
46	PT	Benzene	1.0031	0.9349	6.80	94	0.00
47	PT	12dichlorota	0.3545	0.3216	9.28	96	0.00
48	T	TAME	0.7401	0.6514	11.98	92	0.00

49	PT	trichloroete	0.2706	0.2407	11.05	93	0.00
50	PT	methylcyclohexane	0.4612	0.4847	-5.10	95	0.00
51	PT	12dicloropra	0.2704	0.2419	10.54	95	0.00
52	T	23Dicl1propene	0.4055	0.3704	8.66	95	0.00
53	T	Dibromometha	0.1624	0.1461	10.04	95	0.00
54	T	methylmethacrylate	0.2131	0.1842	13.56	95	0.00
55	T	14dioxane	0.0039	0.0034#	12.82	97	0.00
56	PT	Bromodiclrma	0.3608	0.3172	12.08	92	0.00
57	T	2Nitropropane	0.0979	0.0881	10.01	94	0.00
58	T	2CLEVE	0.1545	0.1418	8.22	92	0.00
59	PT	c13dicloproe	0.4335	0.3942	9.07	95	0.00
60	PT	4Meth2Pentan	0.2372	0.2081	12.27	94	0.00
61	S	SURRd8Tolule	1.0011	1.0047	-0.36	102	0.00
62	PT	Toluene	0.6504	0.6091	6.35	95	0.00
63	PT	t13Dicloprop	0.3966	0.3584	9.63	96	0.00
64	T	ethylmethacrylate	0.3585	0.3263	8.98	93	0.00
65	PT	112Triclotha	0.1999	0.1801	9.90	94	0.00
66	PT	Tetrachlorte	0.2776	0.2673	3.71	94	0.00
67	T	13Diclorpropa	0.4189	0.3696	11.77	93	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	100	0.00
69	PT	2Hexanone	0.2227	0.2054	7.77	96	0.00
70	PT	Clorodibrmta	0.3321	0.2976	10.39	93	0.00
71	PT	12Dibrometha	0.3148	0.2845	9.63	95	0.00
72	PT	Chlorobenzen	0.8753	0.8122	7.21	94	0.00
73	T	1Clhexane	0.4529	0.4362	3.69	94	0.00
74	T	1112Tetclota	0.3196	0.2923	8.54	93	0.00
75	PT	Ethylbenzene	1.4943	1.4344	4.01	94	0.00
76	PT	m p-Xylene	0.5807	0.5604	3.50	95	0.00
77	PT	o-Xylene	0.5869	0.5401	7.97	93	0.00
78	PT	Styrene	0.9755	0.9140	6.30	93	0.00
79	PT	Bromoform	0.2399	0.2147	10.50	92	0.00
80	PT	Isopropylben	1.4485	1.3969	3.56	94	0.00
81	T	cyclohexanone	0.0201	0.0180#	10.45	99	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	101	0.00
83	S	SURR4BrFBenz	0.9610	0.9558	0.54	99	0.00
84	T	Bromobenzene	0.6663	0.6166	7.46	93	0.00
85	PT	1122Tetrclta	0.7408	0.6913	6.68	97	0.00
86	T	123Triclproa	0.9700	0.8861	8.65	95	0.00
87	T	14dichloro2butene	0.2403	0.2190	8.86	95	0.00
88	T	n-Propylbenz	2.8647	2.9046	-1.39	95	0.00
89	T	2chlorotolue	1.8438	1.7294	6.20	93	0.00
90	T	4chlorotolue	2.1294	2.0400	4.20	94	0.00
91	T	135Trimebenz	2.1531	2.0881	3.02	94	0.00
92	T	tbutylbenzen	1.8125	1.7742	2.11	93	0.00
93	T	124Trimetben	2.1154	2.0408	3.53	92	0.00
94	T	sbutylbenzen	2.5046	2.5696	-2.60	95	0.00
95	PT	13Diclorbenz	1.2330	1.1514	6.62	95	0.00
96	T	pIsopropylto	2.1673	2.1835	-0.75	95	0.00
97	PT	14dichlorobe	1.2435	1.1535	7.24	92	0.00
98	PT	12dichlorobe	1.1616	1.0871	6.41	97	0.00
99	T	nButylbenzen	1.9748	2.0025	-1.40	98	0.00
100	PT	12dibromo3cl	0.1577	0.1422	9.83	95	0.00
101	T	135Trichlorobenzene	0.8232	0.7850	4.64	93	0.00
102	PT	124Trichlobe	0.6601	0.6431	2.58	96	0.00
103	T	Hexachlorobu	0.3291	0.3480	-5.74	99	0.00
104	T	Naphthalene	1.2458	1.2667	-1.68	95	0.00
105	T	123Trichlben	0.5988	0.5758	3.84	95	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W080421.M Thu Aug 05 09:49:27 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\AUG0421\ICV1R.D Vial: 22
Acq On : 5 Aug 2021 7:58 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Aug 05 08:19:11 2021

Quant Method : C:\INSTARCH\METHODS\W080421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W080421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	101	0.00
2	PT	Dichlorodi	10.0000	11.1524	-11.52	115	0.00
3	PT	Chloromethan	10.0000	9.7402	2.60	102	0.00
4	PT	VinylChlorid	10.0000	9.9303	0.70	97	0.00
5	PT	Bromomethane	10.0000	9.9535	0.46	103	0.00
6	PT	Chloroethane	10.0000	9.8617	1.38	98	0.00
7	T	Dichloroflmethane	10.0000	9.0571	9.43	92	0.00
8	PT	Trichlorofma	10.0000	9.6945	3.06	98	0.00
9	T	Ethylether	10.0000	8.9268	10.73	95	0.00
10	T	dichlorotfluoroethan	10.0000	9.4833	5.17	94	0.00
11	T	propyleneoxide	100.0000	94.0964	5.90	99	0.00
12	T	Acrolein	50.0000	45.1160	9.77	94	0.00
13	PT	11dichlorthe	10.0000	9.8651	1.35	97	0.00
14	PT	Trichlorotfluoroeth	20.0000	19.0729	4.64	97	0.00
15	PT	Acetone	100.0000	94.0829	5.92	102	0.00
16	T	Iodomethane	20.0000	15.9108	20.45#	88	0.00
17	PT	Carbon Dislf	20.0000	19.7553	1.22	98	0.00
18	T	allylchloride	20.0000	18.5431	7.28	94	0.00
19	PT	methylacetate	10.0000	8.6665	13.34	98	0.00
20	PT	Methylchlorid	10.0000	8.6689	13.31	96	0.00
21	T	tbutylalcohol	500.0000	443.2270	11.35	93	0.00
22	T	Acrylonitrile	50.0000	45.5053	8.99	95	0.00
23	PT	t12dichlorte	10.0000	9.1296	8.70	94	0.00
24	PT	MtBE	10.0000	8.8673	11.33	94	0.00
25	T	Hexane	20.0000	20.8826	-4.41	107	0.00
26	PT	11dichlorota	10.0000	8.9250	10.75	92	0.00
27	T	Vinylacetate	100.0000	99.5305	0.47	96	0.00
28	T	chloroprene	20.0000	19.3495	3.25	94	0.00
29	T	Diisopether	10.0000	8.9075	10.92	92	0.00
30	T	ETBE	10.0000	8.9681	10.32	92	0.00
31	T	22dichloropr	10.0000	10.5294	-5.29	106	0.00
32	PT	c12dichlorte	10.0000	8.8505	11.49	92	0.00
33	PT	2Butanone	100.0000	92.5008	7.50	98	0.00
34	T	propionitrile	100.0000	87.0317	12.97	93	0.00
35	T	Ethylacetate	50.0000	44.4578	11.08	99	0.00
36	T	methacrylonitrile	20.0000	17.9210	10.40	95	0.00
37	T	Bromochlorma	10.0000	8.7059	12.94	91	0.00
38	T	Tetrahydofur	100.0000	83.5459	16.45	93	0.00
39	PT	Chloroform	10.0000	9.0636	9.36	94	0.00
40	PT	111trichlota	10.0000	9.7259	2.74	97	0.00
41	S	SURRDibrflma	20.0000	20.2696	-1.35	103	0.00
42	PT	Cyclohexane	10.0000	9.2581	7.42	96	0.00
43	PT	Carbtetraclo	10.0000	9.8303	1.70	97	0.00
44	T	11dicloprope	10.0000	9.6059	3.94	96	0.00
45	S	SURR12DCAd4	20.0000	20.2999	-1.50	103	0.00
46	PT	Benzene	10.0000	9.3200	6.80	94	0.00
47	PT	12dichlorota	10.0000	9.0728	9.27	96	0.00
48	T	TAME	10.0000	8.8013	11.99	92	0.00

49	PT	trichloroete	10.0000	8.8935	11.07	93	0.00
50	PT	methylcyclohexane	10.0000	9.2377	7.62	95	0.00
51	PT	12dicloropra	10.0000	8.9454	10.55	95	0.00
52	T	23Dicl1propene	10.0000	9.1342	8.66	95	0.00
53	T	Dibromometha	10.0000	8.9960	10.04	95	0.00
54	T	methylmethacrylate	10.0000	8.6449	13.55	95	0.00
55	T	14dioxane	500.0000	441.3225	11.74	97	0.00
56	PT	Bromodiclrma	10.0000	8.7930	12.07	92	0.00
57	T	2Nitropropane	100.0000	90.0062	9.99	94	0.00
58	T	2CLEVE	50.0000	45.8839	8.23	92	0.00
59	PT	c13dicloproe	10.0000	9.0923	9.08	95	0.00
60	PT	4Meth2Pentan	100.0000	88.8642	11.14	94	0.00
61	S	SURRd8Tolule	20.0000	20.0725	-0.36	102	0.00
62	PT	Toluene	10.0000	9.3649	6.35	95	0.00
63	PT	t13Dicloprop	10.0000	9.0369	9.63	96	0.00
64	T	ethylmethacrylate	20.0000	18.2003	9.00	93	0.00
65	PT	112Triclotha	10.0000	9.0104	9.90	94	0.00
66	PT	Tetrachlorte	10.0000	9.6308	3.69	94	0.00
67	T	13Diclorpropa	10.0000	8.8233	11.77	93	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	100	0.00
69	PT	2Hexanone	100.0000	92.2411	7.76	96	0.00
70	PT	Clorodibrmta	10.0000	8.9606	10.39	93	0.00
71	PT	12Dibrometha	10.0000	9.0386	9.61	95	0.00
72	PT	Chlorobenzen	10.0000	9.2793	7.21	94	0.00
73	T	1Clhexane	10.0000	9.6325	3.67	94	0.00
74	T	1112Tetclota	10.0000	9.1446	8.55	93	0.00
75	PT	Ethylbenzene	10.0000	9.5995	4.00	94	0.00
76	PT	m p-Xylene	20.0000	19.3029	3.49	95	0.00
77	PT	o-Xylene	10.0000	9.2026	7.97	93	0.00
78	PT	Styrene	10.0000	9.3696	6.30	93	0.00
79	PT	Bromoform	10.0000	8.9472	10.53	92	0.00
80	PT	Isopropylben	10.0000	9.6434	3.57	94	0.00
81	T	cyclohexanone	200.0000	179.0931	10.45	99	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	101	0.00
83	S	SURR4BrFBenz	20.0000	19.8927	0.54	99	0.00
84	T	Bromobenzene	10.0000	9.2541	7.46	93	0.00
85	PT	1122Tetrclta	10.0000	9.3323	6.68	97	0.00
86	T	123Triclproa	10.0000	9.1353	8.65	95	0.00
87	T	14dichloro2butene	10.0000	9.1149	8.85	95	0.00
88	T	n-Propylbenz	10.0000	10.1391	-1.39	95	0.00
89	T	2chlorotolue	10.0000	9.3798	6.20	93	0.00
90	T	4chlorotolue	10.0000	9.5801	4.20	94	0.00
91	T	135Trimebenz	10.0000	9.6981	3.02	94	0.00
92	T	tbutylbenzen	10.0000	9.7887	2.11	93	0.00
93	T	124Trimetben	10.0000	9.6472	3.53	92	0.00
94	T	sbutylbenzen	10.0000	10.2593	-2.59	95	0.00
95	PT	13Diclorbenz	10.0000	9.3383	6.62	95	0.00
96	T	pIsopropylto	10.0000	10.0747	-0.75	95	0.00
97	PT	14dichlorobe	10.0000	9.2764	7.24	92	0.00
98	PT	12dichlorobe	10.0000	9.3585	6.42	97	0.00
99	T	nButylbenzen	10.0000	10.1402	-1.40	98	0.00
100	PT	12dibromo3cl	10.0000	9.0156	9.84	95	0.00
101	T	135Trichlorobenzene	10.0000	9.5358	4.64	93	0.00
102	PT	124Trichlobe	10.0000	9.7432	2.57	96	0.00
103	T	Hexachlorobu	10.0000	10.5749	-5.75	99	0.00
104	T	Naphthalene	10.0000	8.3579	16.42	95	0.00
105	T	123Trichlben	10.0000	9.6152	3.85	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W080421.M Thu Aug 05 09:49:53 2021

Quantitation Report

Data File : C:\Instarch\Data\AUG0421\ICV1R.D Vial: 22
Acq On : 5 Aug 2021 7:58 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 08:19:11 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Aug 04 14:42:14 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1168770	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	912661	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	517850	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	299456	20.270	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.27	102	81828	20.300	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 102 %			
61) SURRd8Tolule	9.71	98	1174274	20.072	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %			
83) SURR4BrFBenz	13.25	95	494976	19.893	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	174137	11.1524	ug/L	100
3) Chloromethan	2.09	50	151241	9.7402	ug/L	99
4) VinylChlorid	2.25	62	152589	9.9303	ug/L	97
5) Bromomethane	2.70	94	104090	9.9535	ug/L	99
6) Chloroethane	2.87	64	102091	9.8617	ug/L	99
7) Dichloroflmethane	3.19	67	174968	9.0571	ug/L	99
8) Trichlorofma	3.27	101	222843	9.6945	ug/L	99
9) Ethylether	3.71	59	107937	8.9268	ug/L	96
10) dichlorotfluoroethan	3.73	67	133259	9.4833	ug/L	96
11) propyleneoxide	3.77	58	248424	94.0964	ug/L	100
12) Acrolein	3.84	56	77095	45.1160	ug/L	92
13) 11dichlorthe	3.99	96	127974	9.8651	ug/L	99
14) Trichlorotfluoroeth	4.03	101	241386	19.0729	ug/L	98
15) Acetone	4.06	43	435825	94.0829	ug/L	98
16) Iodomethane	4.17	142	220138	15.9108	ug/L	99
17) Carbon Dislf	4.26	76	666449	19.7553	ug/L	98
18) allylchloride	4.48	41	381027	18.5431	ug/L	99
19) methylacetate	4.53	74	38313	8.6665	ug/L	95
20) Methylchlorid	4.64	84	139421	8.6689	ug/L	100
21) tbutylalcohol	4.83	59	820055	443.2270	ug/L	99
22) Acrylonitrile	4.94	53	244363	45.5053	ug/L	99
23) t12dichlorte	5.01	96	137226	9.1296	ug/L	97
24) MtBE	5.04	73	377825	8.8673	ug/L	99
25) Hexane	5.40	57	409187	20.8826	ug/L	98
26) 11dichlorota	5.53	63	226750	8.9250	ug/L	99
27) Vinylacetate	5.63	43	2426677	99.5305	ug/L	99
28) chloroprene	5.67	53	439505	19.3495	ug/L	99
29) Diisopether	5.69	45	384746	8.9075	ug/L	92
30) ETBE	6.13	59	373329	8.9681	ug/L	98
31) 22dichloropr	6.27	77	235478	10.5294	ug/L	99
32) c12dichlorte	6.27	96	147697	8.8505	ug/L	99
33) 2Butanone	6.29	72	187035	92.5008	ug/L	99
34) propionitrile	6.32	54	209021	87.0317	ug/L	99
35) Ethylacetate	6.39	88	32179	44.4578	ug/L #	90
36) methacrylonitrile	6.54	67	131220	17.9210	ug/L	95
37) Bromochlorma	6.55	128	62700	8.7059	ug/L	94
38) Tetrahydofur	6.64	42	406558	83.5459	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\AUG0421\ICV1R.D Vial: 22
Acq On : 5 Aug 2021 7:58 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 08:19:11 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Aug 04 14:42:14 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	238804	9.0636	ug/L	99
40)	111trichlota	6.91	97	227084	9.7259	ug/L	98
42)	Cyclohexane	7.00	56	221295	9.2581	ug/L	99
43)	Carbtetraclo	7.12	119	192147	9.8303	ug/L	99
44)	11dicloprope	7.11	110	70161	9.6059	ug/L	96
46)	Benzene	7.36	78	546324	9.3200	ug/L	99
47)	12dichlorota	7.36	62	187948	9.0728	ug/L	99
48)	TAME	7.53	73	380671	8.8013	ug/L	99
49)	trichloroete	8.17	95	140641	8.8935	ug/L	96
50)	methylcyclohexane	8.43	83	283265	9.2377	ug/L	99
51)	12dicloropra	8.43	63	141347	8.9454	ug/L	90
52)	23Dicl1propene	8.49	75	216469	9.1342	ug/L	97
53)	Dibromometha	8.56	93	85367	8.9960	ug/L	97
54)	methylmethacrylate	8.59	69	107646	8.6449	ug/L	100
55)	14dioxane	8.61	88	99761	441.3225	ug/L	97
56)	Bromodiclrma	8.77	83	185377	8.7930	ug/L	99
57)	2Nitropropane	9.03	43	515013	90.0062	ug/L	98
58)	2CLEVE	9.16	63	414237	45.8839	ug/L	98
59)	c13dicloproe	9.34	75	230356	9.0923	ug/L	97
60)	4Meth2Pentan	9.54	43	1216019	88.8642	ug/L	100
62)	Toluene	9.80	92	355944	9.3649	ug/L	99
63)	t13Dicloprop	10.05	75	209469	9.0369	ug/L	99
64)	ethylmethacrylate	10.20	69	381340	18.2003	ug/L	99
65)	112Triclotha	10.29	83	105268	9.0104	ug/L	99
66)	Tetrachlorte	10.53	166	156220	9.6308	ug/L	98
67)	13Diclorpropa	10.52	76	216001	8.8233	ug/L	99
69)	2Hexanone	10.64	43	937275	92.2411	ug/L	99
70)	Clorodibrmta	10.81	129	135796	8.9606	ug/L	97
71)	12Dibrometha	10.97	107	129846	9.0386	ug/L	97
72)	Chlorobenzen	11.66	112	370618	9.2793	ug/L	99
73)	1Clhexane	11.63	91	199059	9.6325	ug/L	98
74)	1112Tetclota	11.76	131	133378	9.1446	ug/L	98
75)	Ethylbenzene	11.82	91	654570	9.5995	ug/L	99
76)	m p-Xylene	11.98	106	511485	19.3029	ug/L	97
77)	o-Xylene	12.53	106	246451	9.2026	ug/L	98
78)	Styrene	12.54	104	417107	9.3696	ug/L	99
79)	Bromoform	12.77	173	97962	8.9472	ug/L	97
80)	Isopropylben	13.05	105	637437	9.6434	ug/L	100
81)	cyclohexanone	13.14	55	164037	179.0931	ug/L	99
84)	Bromobenzene	13.47	156	159657	9.2541	ug/L	98
85)	1122Tetrclta	13.44	83	178998	9.3323	ug/L	98
86)	123Triclproa	13.50	75	229441	9.1353	ug/L	100
87)	14dichloro2butene	13.52	53	56712	9.1149	ug/L	96
88)	n-Propylbenz	13.64	91	752063	10.1391	ug/L	99
89)	2chlorotolue	13.75	91	447789	9.3798	ug/L	100
90)	4chlorotolue	13.90	91	528201	9.5801	ug/L	99
91)	135Trimebenz	13.90	105	540663	9.6981	ug/L	99
92)	tbutylbenzen	14.37	119	459386	9.7887	ug/L	100
93)	124Trimetben	14.43	105	528416	9.6472	ug/L	98
94)	sbutylbenzen	14.68	105	665321	10.2593	ug/L	100
95)	13Diclorbenz	14.82	146	298136	9.3383	ug/L	99
96)	pIsopropylto	14.90	119	565354	10.0747	ug/L	99
97)	14dichlorobe	14.95	146	298680	9.2764	ug/L	98
98)	12dichlorobe	15.49	146	281482	9.3585	ug/L	98
99)	nButylbenzen	15.49	91	518502	10.1402	ug/L	100
100)	12dibromo3cl	16.58	157	36824	9.0156	ug/L	98
101)	135Trichlorobenzene	16.91	180	203250	9.5358	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\AUG0421\ICV1R.D Vial: 22
Acq On : 5 Aug 2021 7:58 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 08:19:11 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Aug 04 14:42:14 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

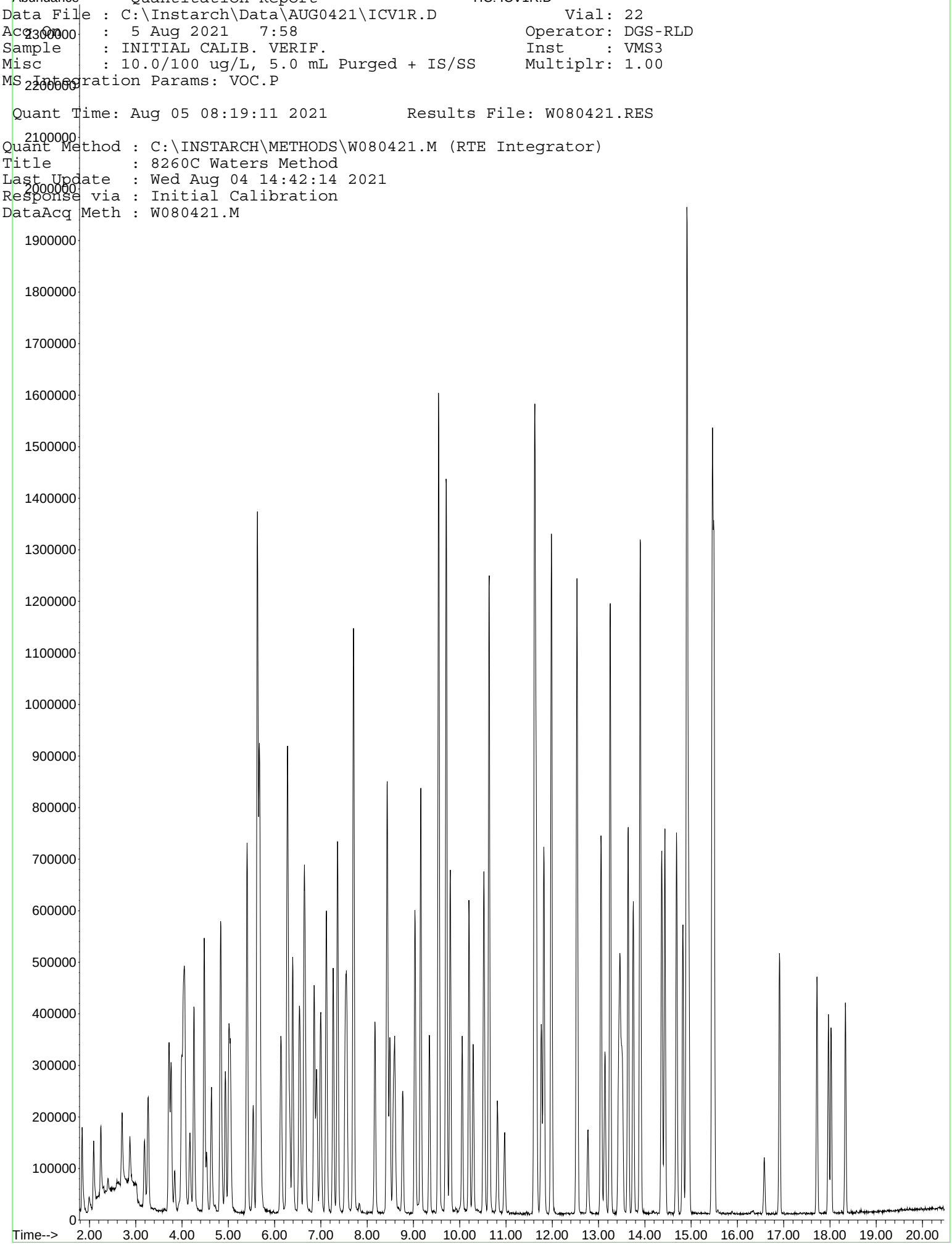
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	166519	9.7432	ug/L	99
103)	Hexachlorobu	17.97	225	90112	10.5749	ug/L	98
104)	Naphthalene	18.02	128	327972	8.3579	ug/L	99
105)	123Trichlben	18.34	180	149083	9.6152	ug/L	99

(#) = qualifier out of range (m) = manual integration

Data File : C:\Instarch\Data\AUG0421\ICV1R.D Vial: 22
Acq On : 5 Aug 2021 7:58 Operator: DGS-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 08:19:11 2021 Results File: W080421.RES

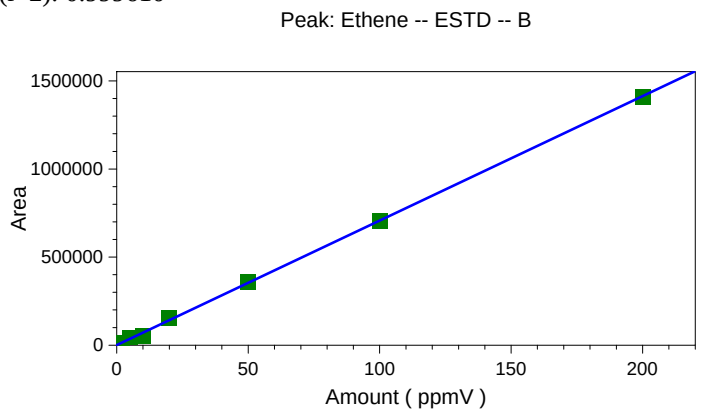
Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Aug 04 14:42:14 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG070121.met
Print Time: Jul 01, 2021 10:15:01
User: KMT
Instrument: PVOC4

Ethene (B)
Average RF: 6995.06 RF StDev: 840.320 RF %RSD: 12.0131
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 7067.11x + 680.644
Goodness of fit (r^2): 0.999610



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	14156	37706	52014	156179	359851
RF	7078	7541.2	5201.4	7808.95	7197.02
Last Area					
Residual	0.0932302	-0.239107	2.7363	-2.0031	-0.822788
Rep StDev					
Rep %RSD					
Rep 1 Area	14156	37706	52014	156179	359851
Rep 1 User	TMG	TMG	TMG	RLD	TMG
Rep 1 Data File	C:\Instarch\PVOC4\Data\070121icdg\001.dat	C:\Instarch\PVOC4\Data\070121icdg\002.dat	C:\Instarch\PVOC4\Data\070121icdg\003.dat	C:\Instarch\PVOC4\Data\070121icdg\008.dat	C:\Instarch\PVOC4\Data\070121icdg\005.dat
Rep 1 Sample ID	MEE PT1 - 2 ppmV	MEE PT2 - 5 ppmV	MEE PT3 - 10 ppmV	MEE PT4 - 20 ppmV	MEE PT5 - 50 ppmV
Rep 1 Calib. Time	Jul 01, 2021 09:52:15	Jul 01, 2021 09:52:48	Jul 01, 2021 09:53:03	Jul 01, 2021 10:02:51	Jul 01, 2021 09:54:05

	Level 6	Level 7
Amount	100	200
Area	707940	1411891
RF	7079.4	7059.455

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG070121.met
Print Time: Jul 01, 2021 10:15:01
User: KMT
Instrument: PVOC4

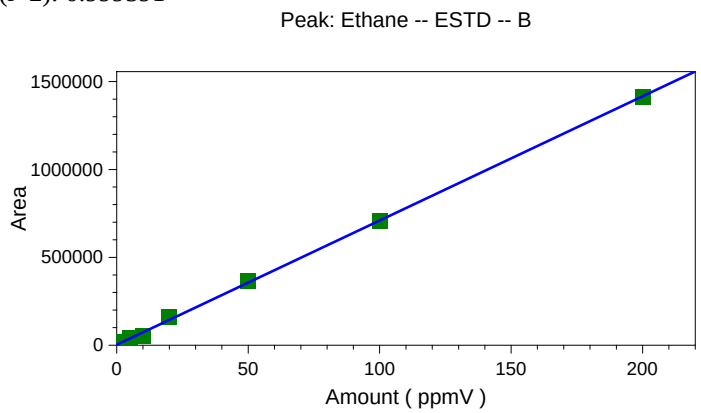
Last Area Residual	-0.0775589	0.313016
Rep StDev		
Rep %RSD		
Rep 1 Area	707940	1411891
Rep 1 User	TMG	RLD
Rep 1 Data File	C:\Instarch\PVOC4\Data\070121icdg\006.dat	C:\Instarch\PVOC4\Data\070121icdg\009.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Jul 01, 2021 09:53:49	Jul 01, 2021 10:08:25

RJ 07/12/2021

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG070121.met
Print Time: Jul 01, 2021 10:15:53
User: KMT
Instrument: PVOC4

Ethane (B)
Average RF: 7151.52 RF StDev: 875.473 RF %RSD: 12.2418
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 7073.40x + 2261.66
Goodness of fit (r^2): 0.999591



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	14561	40290	53831	158690	362395
RF	7280.5	8058	5383.1	7934.5	7247.9
Last Area					
Residual	0.261184	-0.376247	2.7094	-2.11502	-0.913761
Rep StDev					
Rep %RSD					
Rep 1 Area	14561	40290	53831	158690	362395
Rep 1 User	TMG	TMG	TMG	RLD	TMG
Rep 1 Data File	C:\Instarch\PVOC4\Data\070121icdg\001.dat	C:\Instarch\PVOC4\Data\070121icdg\002.dat	C:\Instarch\PVOC4\Data\070121icdg\003.dat	C:\Instarch\PVOC4\Data\070121icdg\008.dat	C:\Instarch\PVOC4\Data\070121icdg\005.dat
Rep 1 Sample ID	MEE PT1 - 2 ppmV	MEE PT2 - 5 ppmV	MEE PT3 - 10 ppmV	MEE PT4 - 20 ppmV	MEE PT5 - 50 ppmV
Rep 1 Calib. Time	Jul 01, 2021 09:52:15	Jul 01, 2021 09:52:48	Jul 01, 2021 09:53:03	Jul 01, 2021 10:02:51	Jul 01, 2021 09:54:05

	Level 6	Level 7
Amount	100	200
Area	707859	1415611
RF	7078.59	7078.055

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG070121.met
Print Time: Jul 01, 2021 10:15:53
User: KMT
Instrument: PVOC4

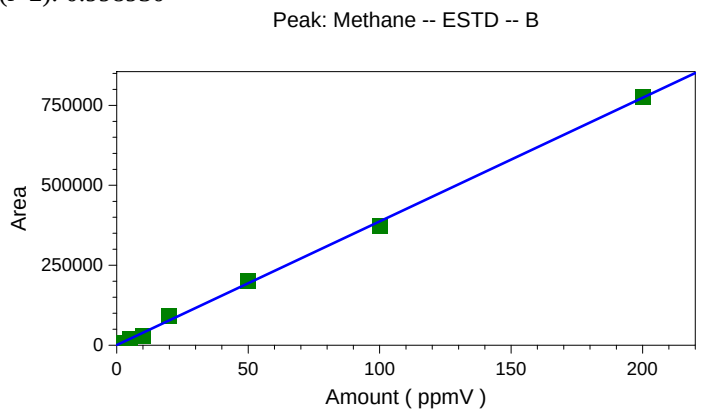
Last Area		
Residual	0.246352	0.18809
Rep StDev		
Rep %RSD		
Rep 1 Area	707859	1415611
Rep 1 User	TMG	RLD
Rep 1 Data File	C:\Instarch\PVOC4\Data\070121icdg\006.dat	C:\Instarch\PVOC4\Data\070121icdg\009.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Jul 01, 2021 09:53:49	Jul 01, 2021 10:08:25

RJ 07/12/2021

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG070121.met
Print Time: Jul 01, 2021 10:14:11
User: KMT
Instrument: PVOC4

Methane (B)
Average RF: 3810.66 RF StDev: 470.853 RF %RSD: 12.3562
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
y = 3864.77x + 603.445
Goodness of fit (r^2): 0.998930



	Level 1	Level 2	Level 3	Level 4	Level 5
Amount	2	5	10	20	50
Area	7052	19674	30219	91189	200412
RF	3526	3934.8	3021.9	4559.45	4008.24
Last Area					
Residual	0.331453	0.0655425	2.33705	-3.43878	-1.69996
Rep StDev					
Rep %RSD					
Rep 1 Area	7052	19674	30219	91189	200412
Rep 1 User	TMG	TMG	TMG	RLD	TMG
Rep 1 Data File	C:\Instarch\PVOC4\Data\070121icdg\001.dat	C:\Instarch\PVOC4\Data\070121icdg\002.dat	C:\Instarch\PVOC4\Data\070121icdg\003.dat	C:\Instarch\PVOC4\Data\070121icdg\008.dat	C:\Instarch\PVOC4\Data\070121icdg\005.dat
Rep 1 Sample ID	MEE PT1 - 2 ppmV	MEE PT2 - 5 ppmV	MEE PT3 - 10 ppmV	MEE PT4 - 20 ppmV	MEE PT5 - 50 ppmV
Rep 1 Calib. Time	Jul 01, 2021 09:52:15	Jul 01, 2021 09:52:48	Jul 01, 2021 09:53:03	Jul 01, 2021 10:02:51	Jul 01, 2021 09:54:05

	Level 6	Level 7
Amount	100	200
Area	373495	777850
RF	3734.95	3889.25

Calibration Report

Method: C:\Instarch\PVOC4\Methods\P4DG070121.met
Print Time: Jul 01, 2021 10:14:11
User: KMT
Instrument: PVOC4

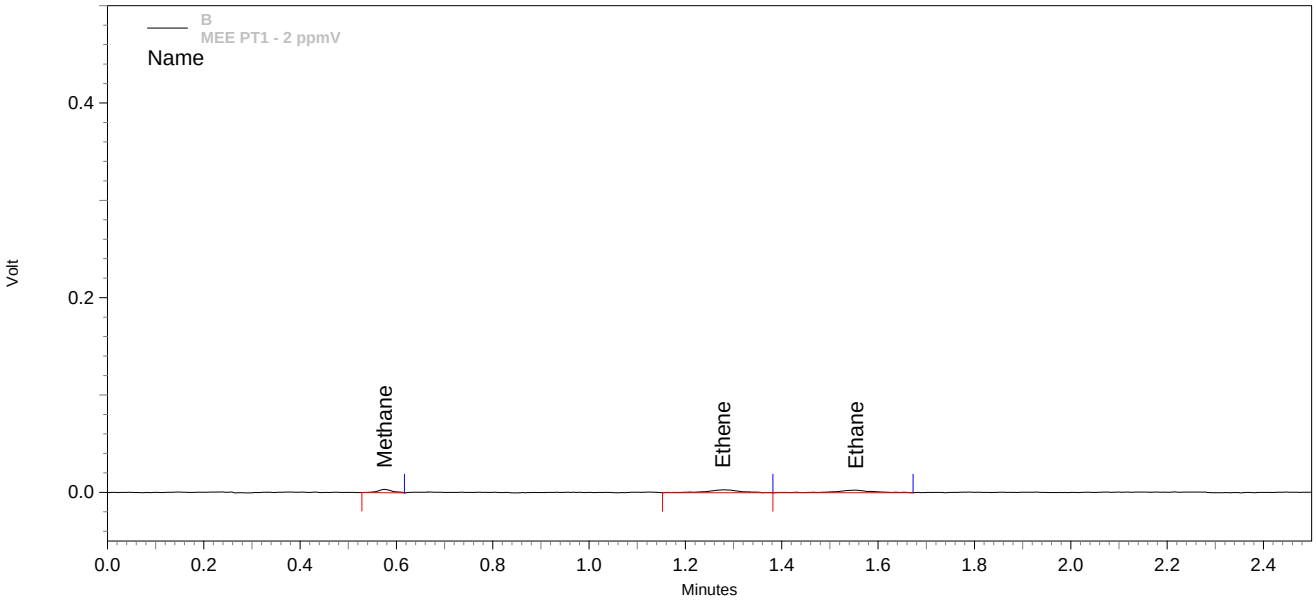
Last Area		
Residual	3.51526	-1.11057
Rep StDev		
Rep %RSD		
Rep 1 Area	373495	777850
Rep 1 User	TMG	RLD
Rep 1 Data File	C:\Instarch\PVOC4\Data\070121icdg\006.dat	C:\Instarch\PVOC4\Data\070121icdg\009.dat
Rep 1 Sample ID	MEE PT6 - 100 ppmV	MEE PT7 - 200 ppmV
Rep 1 Calib. Time	Jul 01, 2021 09:53:49	Jul 01, 2021 10:08:25

RJ 07/12/2021

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\001.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT1 - 2 ppmV
Acquired: Jul 01, 2021 09:09:22
File Desc. 0.01 mL injection (Methane, Ethene, Ethane)



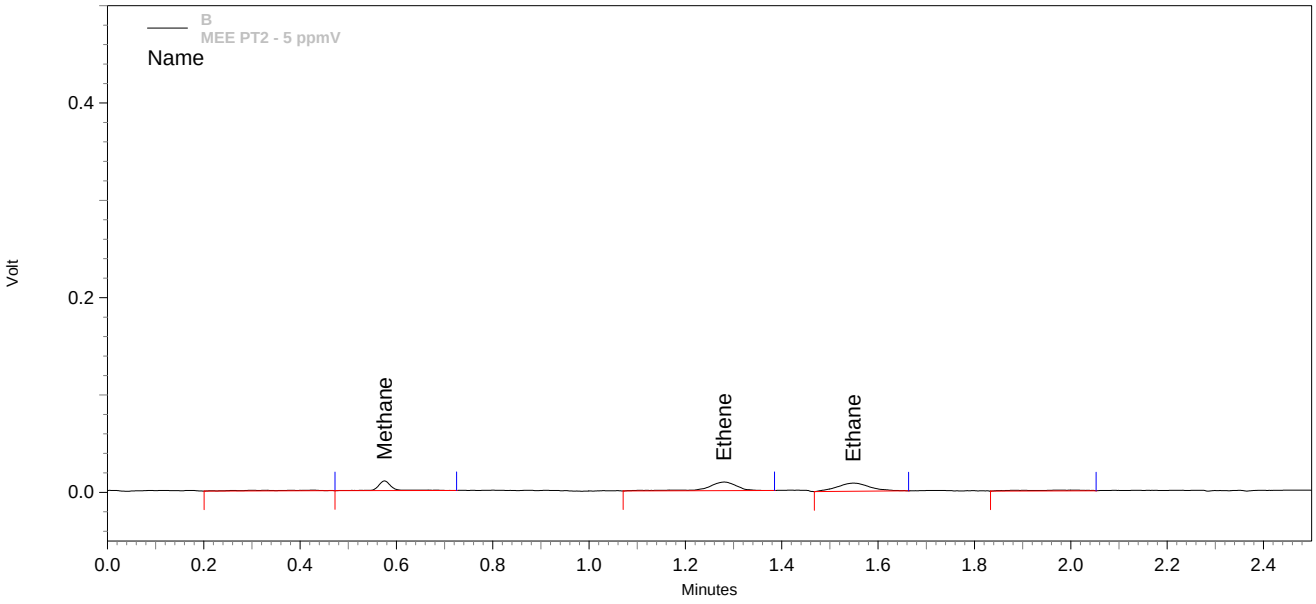
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.575**	**0.580**	**7052**	**2.000 CAL**	**ppmV**
2	**Ethene**	**1.278**	**1.300**	**14156**	**2.000 CAL**	**ppmV**
3	**Ethane**	**1.554**	**1.600**	**14561**	**2.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\002.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT2 - 5 ppmV
Acquired: Jul 01, 2021 09:19:07
File Desc. 0.025 mL injection (Methane, Ethene, Ethane)



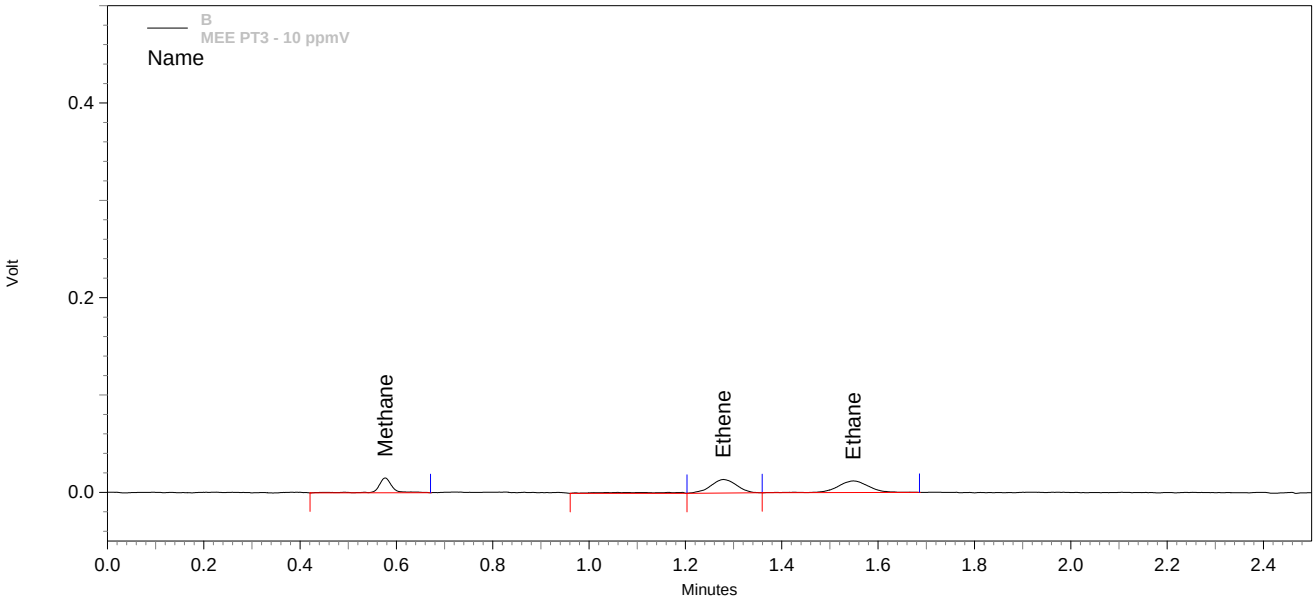
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1		**0.303**	**0.000**	**6196**	**0.000**	
2	**Methane**	**0.575**	**0.580**	**19674**	**5.000 CAL**	**ppmV**
3	**Ethene**	**1.280**	**1.300**	**37706**	**5.000 CAL**	**ppmV**
4	**Ethane**	**1.548**	**1.600**	**40290**	**5.000 CAL**	**ppmV**
5		**1.976**	**0.000**	**6841**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\003.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT3 - 10 ppmV
Acquired: Jul 01, 2021 09:24:05
File Desc. 0.05 mL injection (Methane, Ethene, Ethane)



B Results

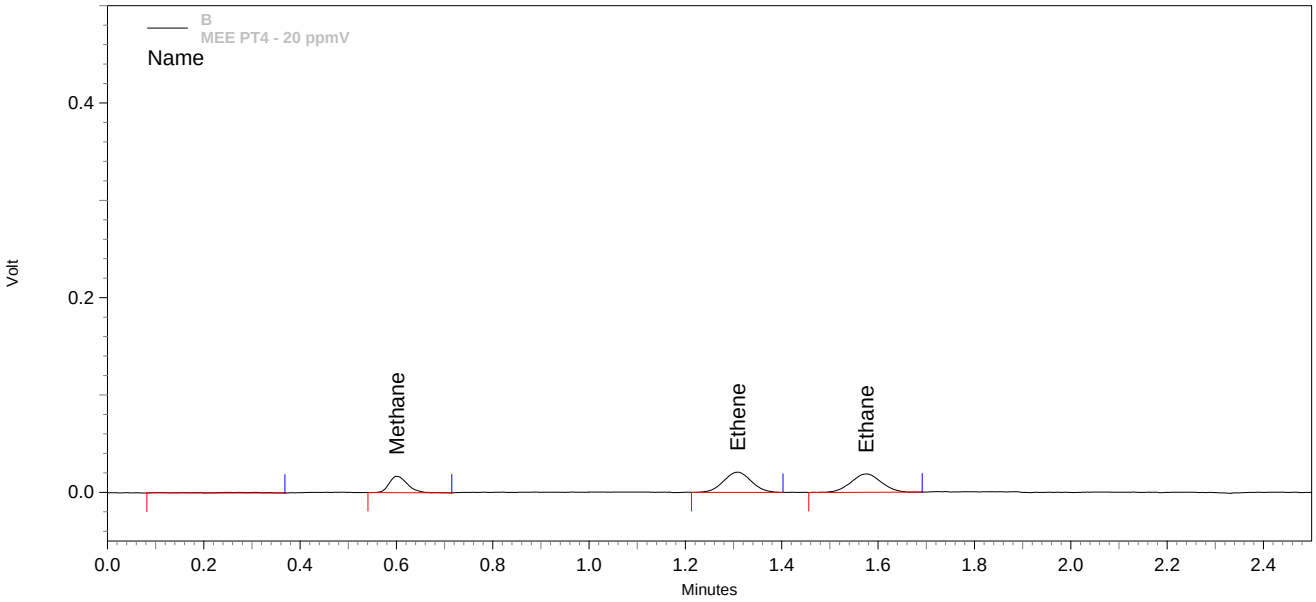
Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.577**	**0.580**	**30219**	**10.000 CAL**	**ppmV**
2		**1.060**	**0.000**	**9781**	**0.000**	
3	**Ethene**	**1.278**	**1.300**	**52014**	**10.000 CAL**	**ppmV**
4	**Ethane**	**1.548**	**1.600**	**53831**	**10.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

NOT USED

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\004.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT4 - 20 ppmV
Acquired: Jul 01, 2021 09:38:00
File Desc. 0.1 mL injection (Methane, Ethene, Ethane)



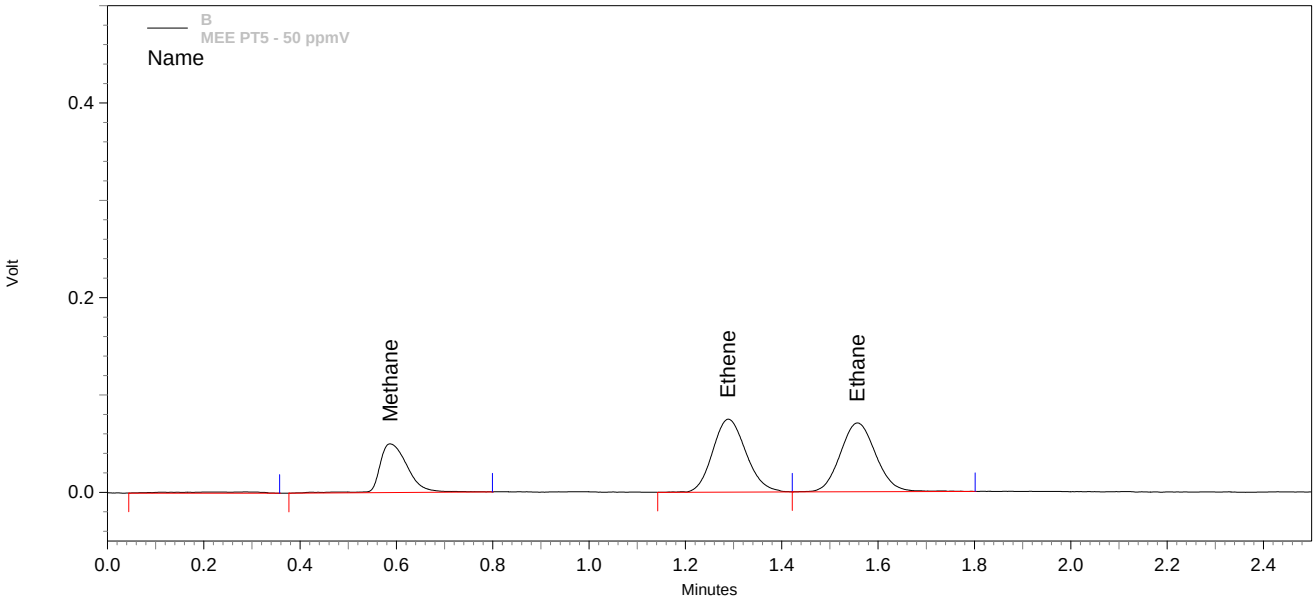
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1		**0.253**	**0.000**	**7117**	**0.000**	
2	**Methane**	**0.601**	**0.580**	**44488**	**20.000 CAL**	**ppmV**
3	**Ethene**	**1.308**	**1.300**	**83515**	**20.000 CAL**	**ppmV**
4	**Ethane**	**1.575**	**1.600**	**82881**	**20.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\005.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT5 - 50 ppmV
Acquired: Jul 01, 2021 09:41:21
File Desc. 0.25 mL injection (Methane, Ethene, Ethane)



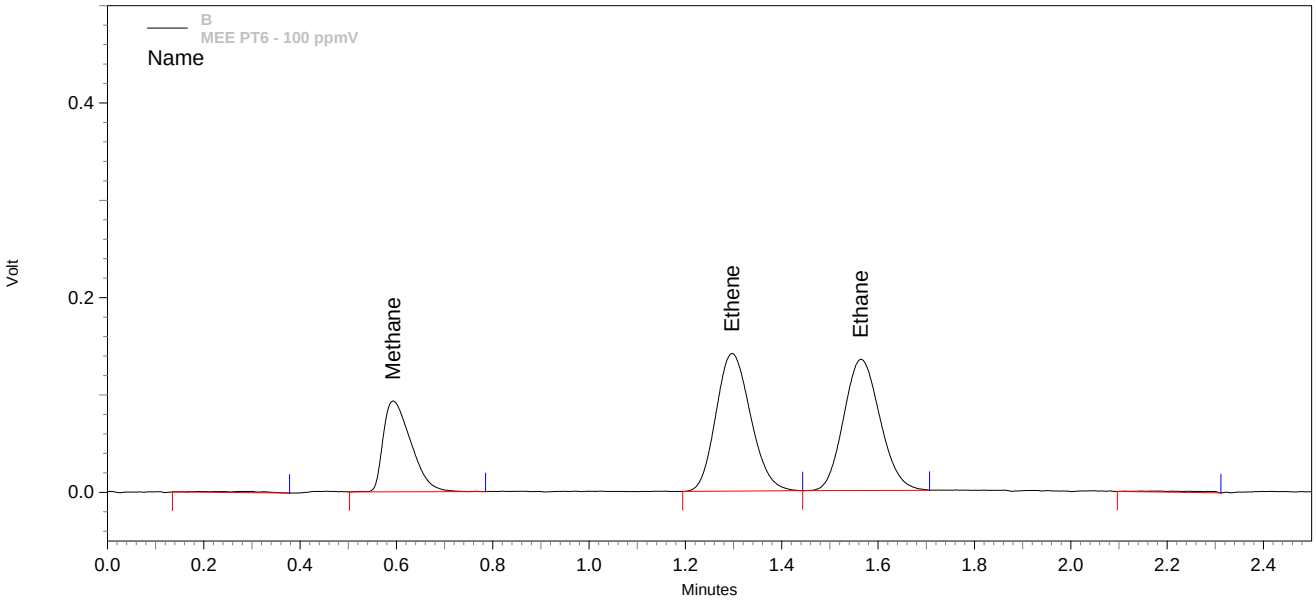
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1		**0.218**	**0.000**	**16192**	**0.000**	
2	**Methane**	**0.587**	**0.580**	**200412**	**50.000 CAL**	**ppmV**
3	**Ethene**	**1.288**	**1.300**	**359851**	**50.000 CAL**	**ppmV**
4	**Ethane**	**1.557**	**1.600**	**362395**	**50.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\006.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT6 - 100 ppmV
Acquired: Jul 01, 2021 09:45:28
File Desc. 0.5 mL injection (Methane, Ethene, Ethane)



B Results

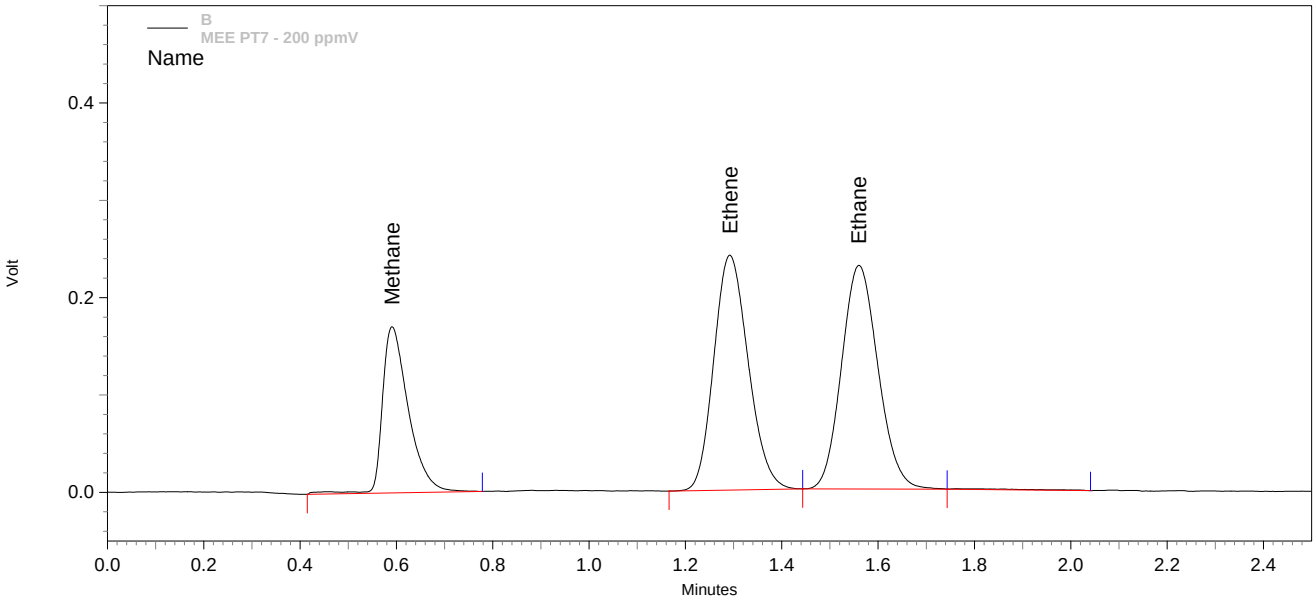
Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1		**0.298**	**0.000**	**9802**	**0.000**	
2	**Methane**	**0.592**	**0.580**	**373495**	**100.000 CAL**	**ppmV**
3	**Ethene**	**1.297**	**1.300**	**707940**	**100.000 CAL**	**ppmV**
4	**Ethane**	**1.563**	**1.600**	**707859**	**100.000 CAL**	**ppmV**
5		**2.175**	**0.000**	**10216**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

NOT USED

Data File: C:\Instarch\PVOC4\Data\070121icdg\007.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT7 - 200 ppmV
Acquired: Jul 01, 2021 09:48:59
File Desc. 1.0 mL injection (Methane, Ethene, Ethane)



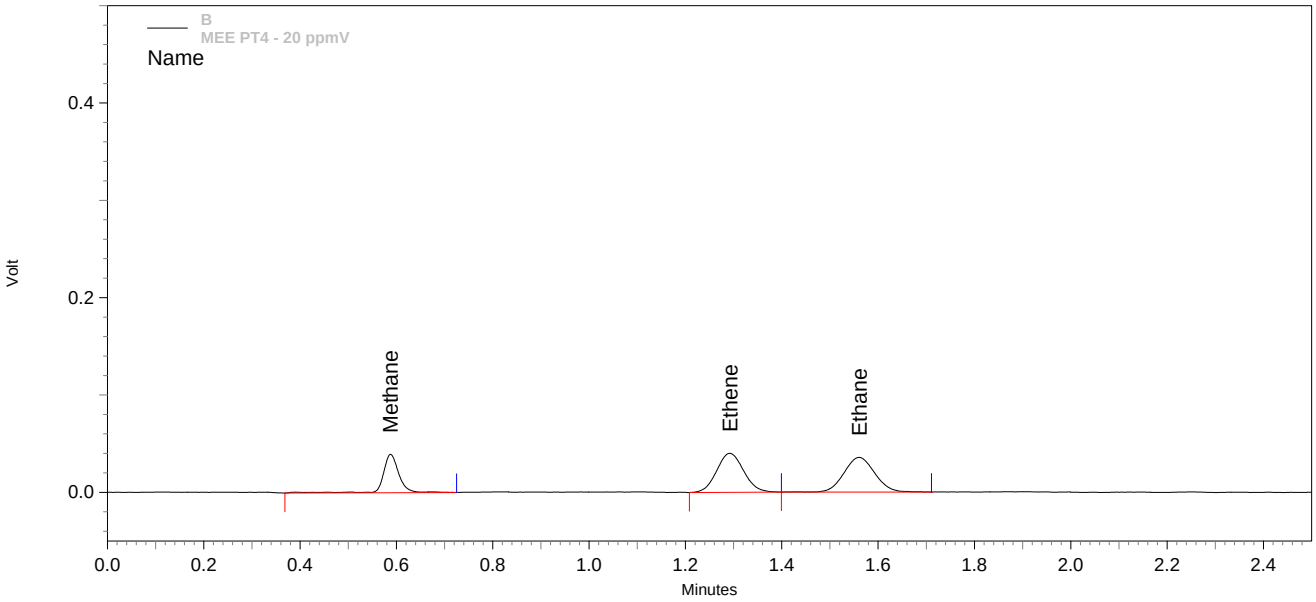
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.591**	**0.580**	**641532**	**200.000 CAL**	**ppmV**
2	**Ethene**	**1.293**	**1.300**	**1198307**	**200.000 CAL**	**ppmV**
3	**Ethane**	**1.560**	**1.600**	**1209201**	**200.000 CAL**	**ppmV**
4		**1.764**	**0.000**	**8808**	**0.000**	

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\008.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT4 - 20 ppmV
Acquired: Jul 01, 2021 09:59:16
File Desc. 0.1 mL injection (Methane, Ethene, Ethane)



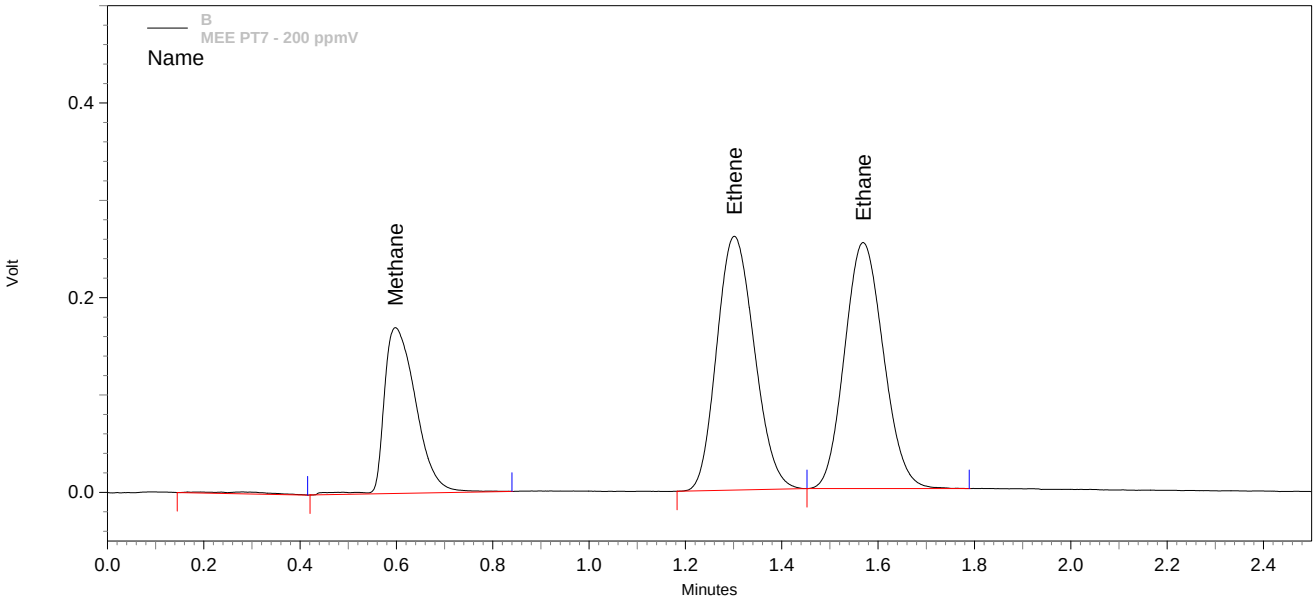
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.588**	**0.580**	**91189**	**20.000 CAL**	**ppmV**
2	**Ethene**	**1.293**	**1.300**	**156179**	**20.000 CAL**	**ppmV**
3	**Ethane**	**1.561**	**1.600**	**158690**	**20.000 CAL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\009.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: MEE PT7 - 200 ppmV
Acquired: Jul 01, 2021 10:04:41
File Desc. 1.0 mL injection (Methane, Ethene, Ethane)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1		**0.281**	**0.000**	**16527**	**0.000**	
2	**Methane**	**0.598**	**0.580**	**777850**	**200.000 CAL**	**ppmV**
3	**Ethene**	**1.302**	**1.300**	**1411891**	**200.000 CAL**	**ppmV**
4	**Ethane**	**1.569**	**1.600**	**1415611**	**200.000 CAL**	**ppmV**

QC Check Standard Report

Sequence : C:\INSTARCH\PVOC4\Sequence\070121 - MEE ICAL.seq
User : RLD
Printed : Jul 08, 2021 10:58:25

File	Sample ID	Acquired
C:\Instarch\PVOC4\Data\070121icdg\010.dat	ICV - 50 ppmV	Jul 08, 2021 10:58:25

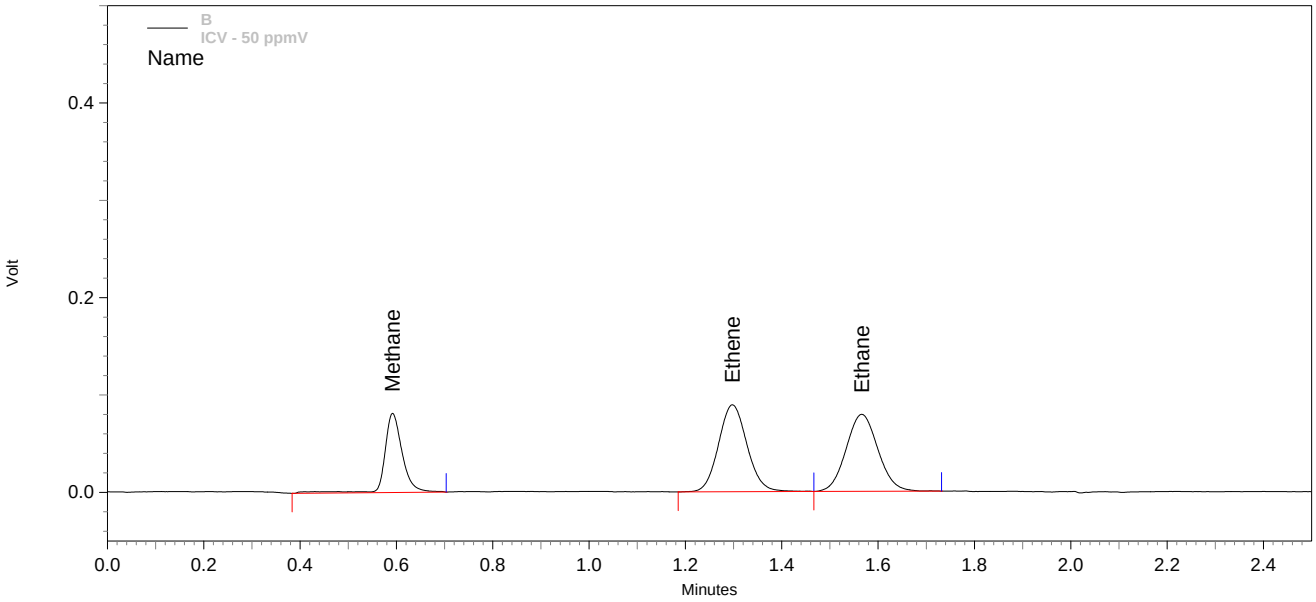
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	53.365	6.731	15.000	**Passed**
Ethene	50.000	51.970	3.941	15.000	**Passed**
Ethane	50.000	51.025	2.051	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\010.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: ICV - 50 ppmV
Acquired: Jul 01, 2021 10:24:08
File Desc. INITIAL CALIB. VERIF. - 0.25 mL injection (Methane, Ethene, Ethane)



B Results

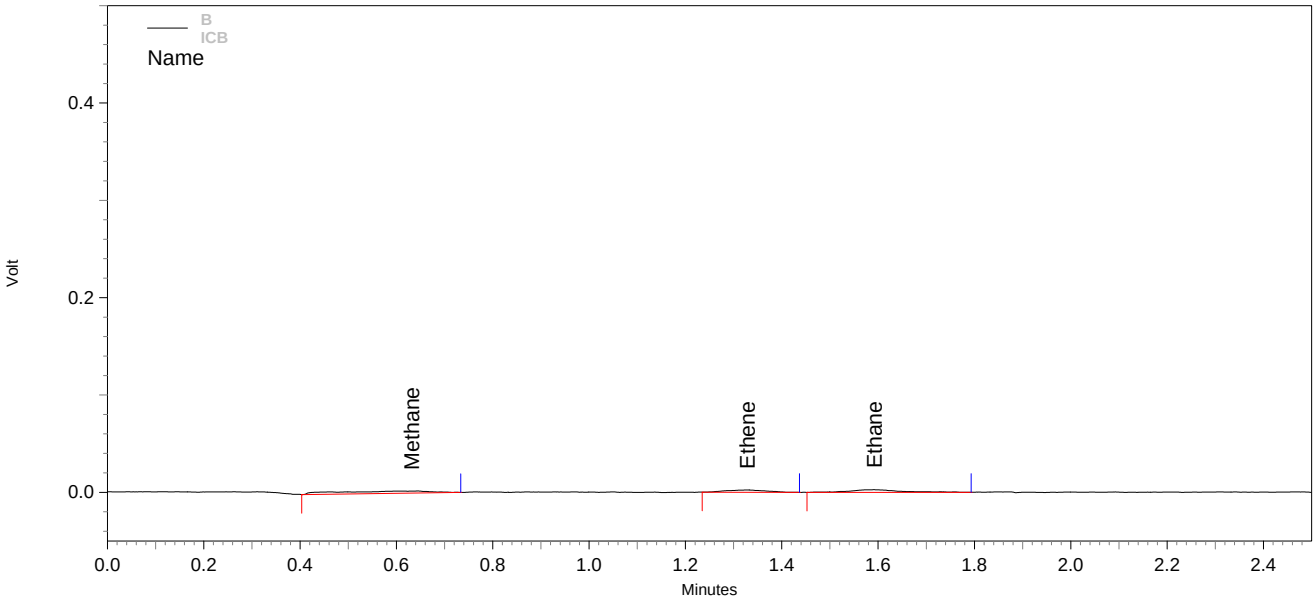
Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.592**	**0.580**	**206848**	**53.365**	**ppmV**
2	**Ethene**	**1.297**	**1.300**	**367962**	**51.970**	**ppmV**
3	**Ethane**	**1.566**	**1.600**	**363184**	**51.025**	**ppmV**

Dissolved Gases External Standard Report

NOT USED

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\011.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: ICB
Acquired: Jul 01, 2021 10:29:15
File Desc. INITIAL CALIB. BLANK - 1.0 mL injection (Methane, Ethene, Ethane)



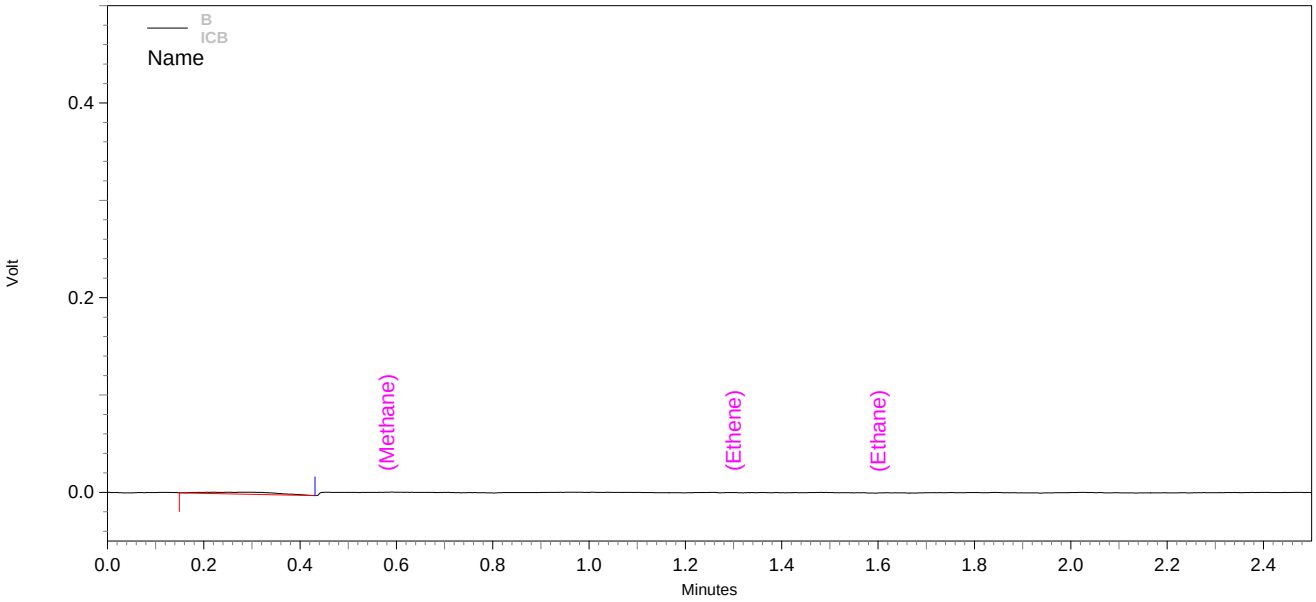
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.632**	**0.580**	**32868**	**8.348**	**ppmV**
2	**Ethene**	**1.329**	**1.300**	**13422**	**1.803**	**ppmV**
3	**Ethane**	**1.593**	**1.600**	**19513**	**2.439**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\Instarch\PVOC4\Data\070121icdg\012.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: ICB
Acquired: Jul 01, 2021 11:06:20
File Desc. INITIAL CALIB. BLANK - 1.0 mL injection (Methane, Ethene, Ethane)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1		**0.217**	**0.000**	**19676**	**0.000**	
	Methane		**0.580**		**0.000 BDL**	**ppmV**
	Ethene		**1.300**		**0.000 BDL**	**ppmV**
	Ethane		**1.600**		**0.000 BDL**	**ppmV**

VOLATILE ORGANIC ANALYSIS
CONTINUING CALIBRATION
DOCUMENTS

BFB

Data File : C:\Instarch\Data\JUL2721\BFB2.D Vial: 25
Acq On : 28 Jul 2021 7:40 Operator: DGS-RLD
Sample : 193763,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W071421.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.650 to 4.681 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.1	22055	PASS
75	95	30	60	55.0	55001	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.9	6894	PASS
173	174	0.00	2	0.8	585	PASS
174	95	50	100	77.6	77606	PASS
175	174	5	9	7.4	5752	PASS
176	174	95	101	95.0	73758	PASS
177	176	5	9	7.8	5786	PASS

W071421.M Thu Jul 29 11:27:11 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\JUL2721\CCV-LCS2.D Vial: 26
Acq On : 28 Jul 2021 7:57 Operator: DGS-RLD
Sample : 193763,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Jul 28 08:17:58 2021

Quant Method : C:\INSTARCH\METHODS\W071421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W071421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	93	0.00
2	PT	Dichlorodi	0.2216	0.2542	-14.71	90	0.00
3	PT	Chloromethan	0.3235	0.3086	4.61	83	0.00
4	PT	VinylChlorid	0.3325	0.3498	-5.20	87	0.00
5	PT	Bromomethane	0.1989	0.1858	6.59	85	0.00
6	PT	Chloroethane	0.2269	0.2360	-4.01	92	0.00
7	T	Dichloroflmethane	0.3290	0.3387	-2.95	91	0.00
8	PT	Trichlorofma	0.3200	0.3683	-15.09	92	0.01
9	T	Ethylether	0.2015	0.2078	-3.13	94	0.00
10	T	dichlorotfluoroethan	0.2406	0.2624	-9.06	94	0.00
11	T	propyleneoxide	0.0548	0.0525	4.20	85	0.00
12	T	Acrolein	0.0169	0.0125#	26.04#	68	0.00
13	PT	11dichlorthe	0.2034	0.2264	-11.31	95	0.00
14	PT	Trichlorotfluoroeth	0.1917	0.2286	-19.25	95	0.00
15	PT	Acetone	0.0772	0.0727#	5.83	88	0.00
16	T	Iodomethane	0.2565	0.1585	38.21#	52	0.00
17	PT	Carbon Dislf	0.5546	0.6297	-13.54	94	0.00
18	T	allylchloride	0.3487	0.3887	-11.47	98	0.00
19	PT	methylacetate	0.0699	0.0604#	13.59	80	0.00
20	PT	Methylchlorid	0.2895	0.2604	10.05	91	0.00
21	T	tbutylalcohol	0.0223	0.0187#	16.14	73	0.00
22	T	Acrylonitrile	0.0997	0.0925	7.22	83	0.00
23	PT	t12dichlorte	0.2353	0.2443	-3.82	90	0.00
24	PT	MtBE	0.6155	0.6018	2.23	88	0.00
25	T	Hexane	0.3111	0.4298	-38.15#	107	0.00
26	PT	11dichlorota	0.4246	0.4454	-4.90	92	0.00
27	T	Vinylacetate	0.4028	0.4350	-7.99	92	0.00
28	T	chloroprene	0.3933	0.4412	-12.18	92	0.00
29	T	Diisopether	0.7778	0.8213	-5.59	93	0.00
30	T	ETBE	0.6091	0.6183	-1.51	91	0.00
31	T	22dichloropr	0.2791	0.3322	-19.03	107	0.00
32	PT	c12dichlorte	0.2681	0.2775	-3.51	95	0.00
33	PT	2Butanone	0.0341	0.0294#	13.78	80	0.00
34	T	propionitrile	0.0436	0.0388	11.01	82	0.00
35	T	Ethylacetate	0.0117	0.0104#	11.11	81	0.00
36	T	methacrylonitrile	0.1211	0.1121	7.43	86	0.00
37	T	Bromochlorma	0.1227	0.1230	-0.24	89	0.00
38	T	Tetrahydofur	0.0865	0.0765	11.56	79	0.00
39	PT	Chloroform	0.4305	0.4376	-1.65	93	0.00
40	PT	111trichlota	0.3264	0.3509	-7.51	94	0.00
41	S	SURRDibrflma	0.2546	0.2516	1.18	91	0.00
42	PT	Cyclohexane	0.3771	0.4436	-17.63	93	0.00
43	PT	Carbtetraclo	0.2498	0.2849	-14.05	98	0.00
44	T	11dicloprope	0.1194	0.1243	-4.10	94	0.00
45	S	SURR12DCAd4	0.0727	0.0706	2.89	89	0.00
46	PT	Benzene	0.9677	1.0217	-5.58	92	0.00
47	PT	12dichlorota	0.3417	0.3265	4.45	91	0.00
48	T	TAME	0.5865	0.5991	-2.15	91	0.00

49	PT	trichloroete	0.2499	0.2505	-0.24	91	0.00
50	PT	methylcyclohexane	0.4355	0.5494	-26.15#	98	0.00
51	PT	12dicloropra	0.2654	0.2745	-3.43	92	0.00
52	T	23Dicl1propene	0.3729	0.3844	-3.08	92	0.00
53	T	Dibromometha	0.1544	0.1457	5.63	90	0.00
54	T	methylmethacrylate	0.1856	0.1667	10.18	84	0.00
55	T	14dioxane	0.0037	0.0028#	24.32#	70	0.00
56	PT	Bromodiclrma	0.3085	0.3181	-3.11	95	0.00
57	T	2Nitropropane	0.0631	0.0651	-3.17	90	0.00
58	T	2CLEVE	0.1585	0.1663	-4.92	90	0.00
59	PT	c13dicloproe	0.3610	0.3821	-5.84	94	0.00
60	PT	4Meth2Pentan	0.2280	0.2157	5.39	83	0.00
61	S	SURRd8Tolule	0.9799	0.9997	-2.02	94	0.00
62	PT	Toluene	0.6287	0.6585	-4.74	92	0.00
63	PT	t13Dicloprop	0.3001	0.3182	-6.03	94	0.00
64	T	ethylmethacrylate	0.3069	0.3010	1.92	87	0.00
65	PT	112Triclotha	0.1973	0.1928	2.28	94	0.00
66	PT	Tetrachlorte	0.2594	0.2780	-7.17	94	0.00
67	T	13Diclorpropa	0.3923	0.3949	-0.66	93	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	95	0.00
69	PT	2Hexanone	0.2255	0.2058	8.74	81	0.00
70	PT	Clorodibrmta	0.2907	0.2815	3.16	93	0.00
71	PT	12Dibrometha	0.2875	0.2666	7.27	86	0.00
72	PT	Chlorobenzen	0.8822	0.9096	-3.11	93	0.00
73	T	1Clhexane	0.4301	0.4714	-9.60	99	0.00
74	T	1112Tetclota	0.2675	0.2713	-1.42	97	0.00
75	PT	Ethylbenzene	1.4162	1.5088	-6.54	92	0.00
76	PT	m p-Xylene	0.5597	0.5923	-5.82	91	0.00
77	PT	o-Xylene	0.5567	0.5676	-1.96	92	0.00
78	PT	Styrene	0.9021	0.9445	-4.70	92	0.00
79	PT	Bromoform	0.1893	0.1719	9.19	90	0.00
80	PT	Isopropylben	1.2945	1.4631	-13.02	96	0.00
81	T	cyclohexanone	0.0179	0.0140#	21.79#	76	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	98	0.00
83	S	SURR4BrFBenz	0.9330	0.8968	3.88	95	0.00
84	T	Bromobenzene	0.6682	0.6072	9.13	89	0.00
85	PT	1122Tetrclta	0.7696	0.6901	10.33	87	0.00
86	T	123Triclproa	0.9193	0.7584	17.50	84	0.00
87	T	14dichloro2butene	0.2044	0.1517	25.78#	74	0.00
88	T	n-Propylbenz	2.9473	3.0600	-3.82	95	0.00
89	T	2chlorotolue	1.8111	1.8256	-0.80	94	0.00
90	T	4chlorotolue	2.0568	2.1255	-3.34	93	0.00
91	T	135Trimebenz	2.0466	2.1028	-2.75	92	0.00
92	T	tbutylbenzen	1.7273	1.7958	-3.97	90	0.00
93	T	124Trimetben	1.9813	2.1182	-6.91	94	0.00
94	T	sbutylbenzen	2.4653	2.7095	-9.91	96	0.00
95	PT	13Diclorbenz	1.2191	1.1958	1.91	93	0.00
96	T	pIsopropylto	2.0799	2.3194	-11.51	97	0.00
97	PT	14dichlorobe	1.2734	1.2643	0.71	95	0.00
98	PT	12dichlorobe	1.1694	1.1512	1.56	93	0.00
99	T	nButylbenzen	1.8970	2.1935	-15.63	101	0.00
100	PT	12dibromo3cl	0.1239	0.1036	16.38	85	0.00
101	T	135Trichlorobenzene	0.7458	0.7796	-4.53	98	0.00
102	PT	124Trichlobe	0.6035	0.5828	3.43	92	0.00
103	T	Hexachlorobu	0.2832	0.3192	-12.71	103	0.00
104	T	Naphthalene	1.2715	1.1726	7.78	78	0.00
105	T	123Trichlben	0.5486	0.5169	5.78	85	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W071421.M Thu Jul 29 11:30:21 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\JUL2721\CCV-LCS2.D Vial: 26
Acq On : 28 Jul 2021 7:57 Operator: DGS-RLD
Sample : 193763,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Jul 28 08:17:58 2021

Quant Method : C:\INSTARCH\METHODS\W071421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W071421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	93	0.00
2	PT	Dichlorodi	10.0000	10.3119	-3.12	90	0.00
3	PT	Chloromethan	10.0000	9.5403	4.60	83	0.00
4	PT	VinylChlorid	10.0000	10.5207	-5.21	87	0.00
5	PT	Bromomethane	10.0000	9.3437	6.56	85	0.00
6	PT	Chloroethane	10.0000	10.4026	-4.03	92	0.00
7	T	Dichloroflmethane	10.0000	10.2946	-2.95	91	0.00
8	PT	Trichlorofma	10.0000	10.4471	-4.47	92	0.01
9	T	Ethylether	10.0000	10.3106	-3.11	94	0.00
10	T	dichlorotfluoroethan	10.0000	10.9073	-9.07	94	0.00
11	T	propyleneoxide	100.0000	95.7125	4.29	85	0.00
12	T	Acrolein	50.0000	37.1750	25.65#	68	0.00
13	PT	11dichlorthe	10.0000	11.1279	-11.28	95	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.1369	-5.68	95	0.00
15	PT	Acetone	100.0000	94.1798	5.82	88	0.00
16	T	Iodomethane	20.0000	12.3618	38.19#	52	0.00
17	PT	Carbon Dislf	20.0000	22.7073	-13.54	94	0.00
18	T	allylchloride	20.0000	22.2933	-11.47	98	0.00
19	PT	methylacetate	10.0000	8.6435	13.57	80	0.00
20	PT	Methylchlorid	10.0000	10.0359	-0.36	91	0.00
21	T	tbutylalcohol	500.0000	419.5423	16.09	73	0.00
22	T	Acrylonitrile	50.0000	46.3595	7.28	83	0.00
23	PT	t12dichlorte	10.0000	10.3805	-3.80	90	0.00
24	PT	MtBE	10.0000	9.7779	2.22	88	0.00
25	T	Hexane	20.0000	23.1653	-15.83	107	0.00
26	PT	11dichlorota	10.0000	10.4887	-4.89	92	0.00
27	T	Vinylacetate	100.0000	105.3927	-5.39	92	0.00
28	T	chloroprene	20.0000	22.4372	-12.19	92	0.00
29	T	Diisopether	10.0000	10.5591	-5.59	93	0.00
30	T	ETBE	10.0000	10.1512	-1.51	91	0.00
31	T	22dichloropr	10.0000	11.9017	-19.02	107	0.00
32	PT	c12dichlorte	10.0000	10.3507	-3.51	95	0.00
33	PT	2Butanone	100.0000	86.1570	13.84	80	0.00
34	T	propionitrile	100.0000	89.1177	10.88	82	0.00
35	T	Ethylacetate	50.0000	44.1946	11.61	81	0.00
36	T	methacrylonitrile	20.0000	18.5102	7.45	86	0.00
37	T	Bromochlorma	10.0000	10.0246	-0.25	89	0.00
38	T	Tetrahydofur	100.0000	88.4249	11.58	79	0.00
39	PT	Chloroform	10.0000	10.1641	-1.64	93	0.00
40	PT	111trichlota	10.0000	10.7525	-7.52	94	0.00
41	S	SURRDibrflma	20.0000	19.7701	1.15	91	0.00
42	PT	Cyclohexane	10.0000	10.1265	-1.27	93	0.00
43	PT	Carbtetraclo	10.0000	10.3092	-3.09	98	0.00
44	T	11dicloprope	10.0000	10.4108	-4.11	94	0.00
45	S	SURR12DCAd4	20.0000	19.4198	2.90	89	0.00
46	PT	Benzene	10.0000	10.5580	-5.58	92	0.00
47	PT	12dichlorota	10.0000	9.5551	4.45	91	0.00
48	T	TAME	10.0000	10.2148	-2.15	91	0.00

49	PT	trichloroete	10.0000	10.0261	-0.26	91	0.00
50	PT	methylcyclohexane	10.0000	10.6962	-6.96	98	0.00
51	PT	12dicloropra	10.0000	10.3449	-3.45	92	0.00
52	T	23Dicl1propene	10.0000	10.3099	-3.10	92	0.00
53	T	Dibromometha	10.0000	9.4350	5.65	90	0.00
54	T	methylmethacrylate	10.0000	8.9782	10.22	84	0.00
55	T	14dioxane	500.0000	377.3255	24.53#	70	0.00
56	PT	Bromodiclrma	10.0000	10.3109	-3.11	95	0.00
57	T	2Nitropropane	100.0000	103.2462	-3.25	90	0.00
58	T	2CLEVE	50.0000	52.4412	-4.88	90	0.00
59	PT	c13dicloproe	10.0000	10.5848	-5.85	94	0.00
60	PT	4Meth2Pentan	100.0000	94.6088	5.39	83	0.00
61	S	SURRd8Tolule	20.0000	20.4035	-2.02	94	0.00
62	PT	Toluene	10.0000	10.4734	-4.73	92	0.00
63	PT	t13Dicloprop	10.0000	10.6046	-6.05	94	0.00
64	T	ethylmethacrylate	20.0000	19.6138	1.93	87	0.00
65	PT	112Triclotha	10.0000	9.7689	2.31	94	0.00
66	PT	Tetrachlorte	10.0000	10.7176	-7.18	94	0.00
67	T	13Diclorpropa	10.0000	10.0669	-0.67	93	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	95	0.00
69	PT	2Hexanone	100.0000	91.2402	8.76	81	0.00
70	PT	Clorodibrmta	10.0000	9.6824	3.18	93	0.00
71	PT	12Dibrometha	10.0000	9.2723	7.28	86	0.00
72	PT	Chlorobenzen	10.0000	10.3108	-3.11	93	0.00
73	T	1Clhexane	10.0000	10.9583	-9.58	99	0.00
74	T	1112Tetclota	10.0000	10.1419	-1.42	97	0.00
75	PT	Ethylbenzene	10.0000	10.6535	-6.53	92	0.00
76	PT	m p-Xylene	20.0000	21.1647	-5.82	91	0.00
77	PT	o-Xylene	10.0000	10.1968	-1.97	92	0.00
78	PT	Styrene	10.0000	10.4703	-4.70	92	0.00
79	PT	Bromoform	10.0000	9.0850	9.15	90	0.00
80	PT	Isopropylben	10.0000	11.3017	-13.02	96	0.00
81	T	cyclohexanone	200.0000	157.1094	21.45#	76	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	98	0.00
83	S	SURR4BrFBenz	20.0000	19.2249	3.88	95	0.00
84	T	Bromobenzene	10.0000	9.0869	9.13	89	0.00
85	PT	1122Tetrclta	10.0000	8.9662	10.34	87	0.00
86	T	123Triclproa	10.0000	8.2494	17.51	84	0.00
87	T	14dichloro2butene	10.0000	7.4207	25.79#	74	0.00
88	T	n-Propylbenz	10.0000	10.3824	-3.82	95	0.00
89	T	2chlorotolue	10.0000	10.0804	-0.80	94	0.00
90	T	4chlorotolue	10.0000	10.3341	-3.34	93	0.00
91	T	135Trimebenz	10.0000	10.2744	-2.74	92	0.00
92	T	tbutylbenzen	10.0000	10.3966	-3.97	90	0.00
93	T	124Trimetben	10.0000	10.6907	-6.91	94	0.00
94	T	sbutylbenzen	10.0000	10.9902	-9.90	96	0.00
95	PT	13Diclorbenz	10.0000	9.8088	1.91	93	0.00
96	T	pIsopropylto	10.0000	11.1516	-11.52	97	0.00
97	PT	14dichlorobe	10.0000	9.9283	0.72	95	0.00
98	PT	12dichlorobe	10.0000	9.8443	1.56	93	0.00
99	T	nButylbenzen	10.0000	11.5632	-15.63	101	0.00
100	PT	12dibromo3cl	10.0000	8.3665	16.33	85	0.00
101	T	135Trichlorobenzene	10.0000	10.4534	-4.53	98	0.00
102	PT	124Trichlobe	10.0000	9.6558	3.44	92	0.00
103	T	Hexachlorobu	10.0000	11.2692	-12.69	103	0.00
104	T	Naphthalene	10.0000	7.5156	24.84#	78	0.00
105	T	123Trichlben	10.0000	9.4220	5.78	85	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W071421.M Thu Jul 29 11:30:50 2021

Quantitation Report

Data File : C:\Instarch\Data\JUL2721\CCV-LCS2.D Vial: 26
Acq On : 28 Jul 2021 7:57 Operator: DGS-RLD
Sample : 193763,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 08:17:58 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1390788	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1090004	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	613866	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.87	113	349978	19.770	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.28	102	98178	19.420	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.72	98	1390397	20.404	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.26	95	550528	19.225	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 96 %			
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	176750	10.3119	ug/L	100
3) Chloromethan	2.10	50	214624	9.5403	ug/L	99
4) VinylChlorid	2.25	62	243226	10.5207	ug/L	97
5) Bromomethane	2.72	94	129232	9.3437	ug/L	97
6) Chloroethane	2.88	64	164132	10.4026	ug/L	98
7) Dichloroflmethane	3.20	67	235554	10.2946	ug/L	99
8) Trichlorofma	3.28	101	256103	10.4471	ug/L	98
9) Ethylether	3.72	59	144509	10.3106	ug/L	98
10) dichlorotfluoroethan	3.73	67	182455	10.9073	ug/L	99
11) propyleneoxide	3.77	58	365061	95.7125	ug/L	98
12) Acrolein	3.85	56	43624	37.1750	ug/L	96
13) 11dichlorthe	4.00	96	157411	11.1279	ug/L	97
14) Trichlorotfluoroeth	4.04	101	317991	21.1369	ug/L	100
15) Acetone	4.07	43	505467	94.1798	ug/L	97
16) Iodomethane	4.18	142	220497	12.3618	ug/L	97
17) Carbon Dislf	4.27	76	875763	22.7073	ug/L	100
18) allylchloride	4.49	41	540540	22.2933	ug/L	98
19) methylacetate	4.53	74	41991	8.6435	ug/L	98
20) Methylchlorid	4.64	84	181102	10.0359	ug/L	99
21) tbutylalcohol	4.85	59	650071	419.5423	ug/L	100
22) Acrylonitrile	4.95	53	321491	46.3595	ug/L	98
23) t12dichlorte	5.02	96	169861	10.3805	ug/L	95
24) MtBE	5.05	73	418521	9.7779	ug/L	100
25) Hexane	5.41	57	597748	23.1653	ug/L	99
26) 11dichlorota	5.54	63	309727	10.4887	ug/L	98
27) Vinylacetate	5.64	43	3025060	105.3927	ug/L	100
28) chloroprene	5.68	53	613654	22.4372	ug/L	99
29) Diisopether	5.70	45	571107	10.5591	ug/L	95
30) ETBE	6.15	59	429948	10.1512	ug/L	99
31) 22dichloropr	6.29	77	231015	11.9017	ug/L	100
32) c12dichlorte	6.28	96	192988	10.3507	ug/L	96
33) 2Butanone	6.30	72	204505	86.1570	ug/L	98
34) propionitrile	6.34	54	270020	89.1177	ug/L	99
35) Ethylacetate	6.40	88	36035	44.1946	ug/L	96
36) methacrylonitrile	6.54	67	155855	18.5102	ug/L	99
37) Bromochlorma	6.57	128	85514	10.0246	ug/L	95
38) Tetrahydofur	6.65	42	531937	88.4249	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL2721\CCV-LCS2.D Vial: 26
Acq On : 28 Jul 2021 7:57 Operator: DGS-RLD
Sample : 193763,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 08:17:58 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.68	83	304274	10.1641 ug/L	98
40)	111trichlota	6.92	97	244032	10.7525 ug/L	98
42)	Cyclohexane	7.00	56	308464	10.1265 ug/L	98
43)	Carbtetraclo	7.13	119	198125	10.3092 ug/L	99
44)	11dicloprope	7.13	110	86461	10.4108 ug/L	98
46)	Benzene	7.37	78	710516	10.5580 ug/L	99
47)	12dichlorota	7.37	62	227014	9.5551 ug/L	97
48)	TAME	7.54	73	416582	10.2148 ug/L	98
49)	trichloroete	8.18	95	174213	10.0261 ug/L	98
50)	methylcyclohexane	8.44	83	382047	10.6962 ug/L	97
51)	12dicloropra	8.43	63	190909	10.3449 ug/L	91
52)	23Dicl1propene	8.50	75	267326	10.3099 ug/L	97
53)	Dibromometha	8.57	93	101296	9.4350 ug/L	98
54)	methylmethacrylate	8.60	69	115895	8.9782 ug/L	99
55)	14dioxane	8.62	88	97064	377.3255 ug/L	95
56)	Bromodiclrma	8.78	83	221215	10.3109 ug/L	99
57)	2Nitropropane	9.04	43	452942	103.2462 ug/L	99
58)	2CLEVE	9.16	63	578101	52.4412 ug/L	99
59)	c13dicloproe	9.35	75	265730	10.5848 ug/L	99
60)	4Meth2Pentan	9.55	43	1500123	94.6088 ug/L	99
62)	Toluene	9.80	92	457918	10.4734 ug/L	100
63)	t13Dicloprop	10.06	75	221277	10.6046 ug/L	100
64)	ethylmethacrylate	10.21	69	418617	19.6138 ug/L	99
65)	112Triclotha	10.30	83	134048	9.7689 ug/L	97
66)	Tetrachlorte	10.54	166	193311	10.7176 ug/L	99
67)	13Diclorpropa	10.53	76	274644	10.0669 ug/L	97
69)	2Hexanone	10.64	43	1121448	91.2402 ug/L	99
70)	Clorodibrmta	10.83	129	153421	9.6824 ug/L	97
71)	12Dibrometha	10.98	107	145275	9.2723 ug/L	99
72)	Chlorobenzen	11.66	112	495761	10.3108 ug/L	99
73)	1Clhexane	11.65	91	256894	10.9583 ug/L	98
74)	1112Tetclota	11.77	131	147857	10.1419 ug/L	98
75)	Ethylbenzene	11.83	91	822294	10.6535 ug/L	99
76)	m p-Xylene	11.99	106	645562	21.1647 ug/L	97
77)	o-Xylene	12.54	106	309368	10.1968 ug/L	98
78)	Styrene	12.55	104	514741	10.4703 ug/L	100
79)	Bromoform	12.78	173	93712	9.0850 ug/L	97
80)	Isopropylben	13.06	105	797367	11.3017 ug/L	99
81)	cyclohexanone	13.15	55	152981	157.1094 ug/L	99
84)	Bromobenzene	13.47	156	186369	9.0869 ug/L	98
85)	1122Tetrclta	13.44	83	211800	8.9662 ug/L	99
86)	123Triclproa	13.51	75	232773	8.2494 ug/L	99
87)	14dichloro2butene	13.53	53	46552	7.4207 ug/L	96
88)	n-Propylbenz	13.65	91	939207	10.3824 ug/L	99
89)	2chlorotolue	13.76	91	560344	10.0804 ug/L	98
90)	4chlorotolue	13.91	91	652376	10.3341 ug/L	99
91)	135Trimebenz	13.90	105	645412	10.2744 ug/L	99
92)	tbutylbenzen	14.37	119	551186	10.3966 ug/L	96
93)	124Trimetben	14.44	105	650139	10.6907 ug/L	97
94)	sbutylbenzen	14.69	105	831628	10.9902 ug/L	99
95)	13Diclorbenz	14.83	146	367039	9.8088 ug/L	99
96)	pIsopropylto	14.91	119	711905	11.1516 ug/L	99
97)	14dichlorobe	14.96	146	388044	9.9283 ug/L	99
98)	12dichlorobe	15.50	146	353349	9.8443 ug/L	98
99)	nButylbenzen	15.50	91	673261	11.5632 ug/L	100
100)	12dibromo3cl	16.59	157	31806	8.3665 ug/L	91
101)	135Trichlorobenzene	16.92	180	239274	10.4534 ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL2721\CCV-LCS2.D Vial: 26
Acq On : 28 Jul 2021 7:57 Operator: DGS-RLD
Sample : 193763,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 08:17:58 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	178869	9.6558	ug/L	99
103)	Hexachlorobu	17.98	225	97967	11.2692	ug/L	97
104)	Naphthalene	18.03	128	359909	7.5156	ug/L	99
105)	123Trichlben	18.34	180	158660	9.4220	ug/L	94

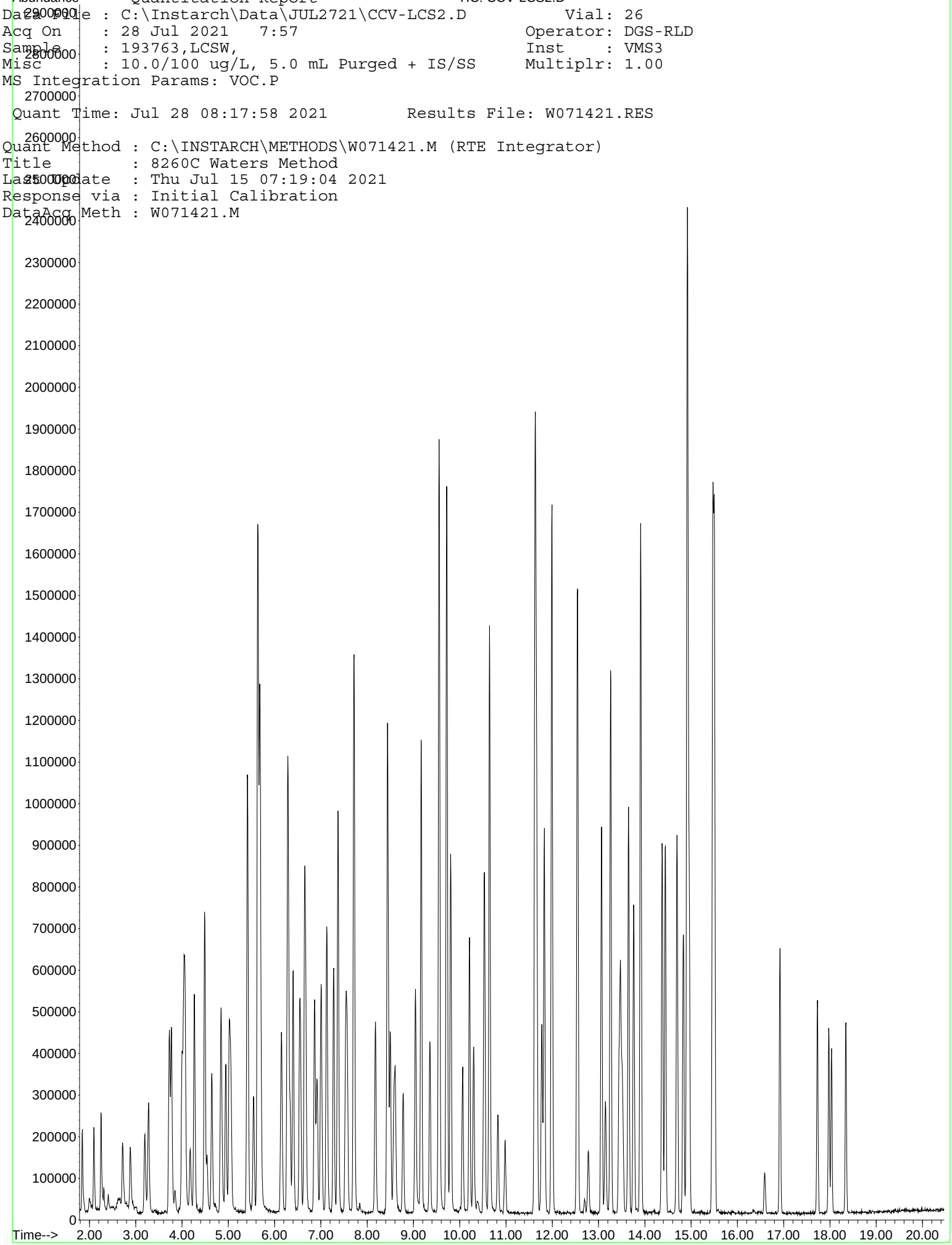
(#) = qualifier out of range (m) = manual integration

Quantitation Report (TIC: CCV-LCS2.D)

Data File : C:\Instarch\Data\JUL2721\CCV-LCS2.D Vial: 26
Acq On : 28 Jul 2021 7:57 Operator: DGS-RLD
Sample : 193763,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 08:17:58 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\JUL2721\CCVF2-LCSD1.D Vial: 46
Acq On : 28 Jul 2021 17:58 Operator: DGS-RLD
Sample : 193761,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Jul 28 18:19:17 2021

Quant Method : C:\INSTARCH\METHODS\W071421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W071421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	89	0.00
2	PT	Dichlorodi	0.2216	0.2600	-17.33	89	0.00
3	PT	Chloromethan	0.3235	0.3362	-3.93	88	0.00
4	PT	VinylChlorid	0.3325	0.3688	-10.92	89	0.00
5	PT	Bromomethane	0.1989	0.1968	1.06	87	0.00
6	PT	Chloroethane	0.2269	0.2588	-14.06	97	0.00
7	T	Dichloroflmethane	0.3290	0.3563	-8.30	93	0.00
8	PT	Trichlorofma	0.3200	0.3677	-14.91	89	0.00
9	T	Ethylether	0.2015	0.2136	-6.00	93	0.00
10	T	dichlorotfluoroethan	0.2406	0.2715	-12.84	94	0.00
11	T	propyleneoxide	0.0548	0.0584	-6.57	91	0.00
12	T	Acrolein	0.0169	0.0229#	-35.50	120	0.00
13	PT	11dichlorthe	0.2034	0.2286	-12.39	93	0.00
14	PT	Trichlorotfluoroeth	0.1917	0.2239	-16.80	89	0.00
15	PT	Acetone	0.0772	0.0850#	-10.10	99	0.00
16	T	Iodomethane	0.2565	0.1936	24.52	62	0.00
17	PT	Carbon Dislf	0.5546	0.6301	-13.61	91	0.00
18	T	allylchloride	0.3487	0.3662	-5.02	90	0.00
19	PT	methylacetate	0.0699	0.0718#	-2.72	92	0.00
20	PT	Methylchlorid	0.2895	0.2623	9.40	89	0.00
21	T	tbutylalcohol	0.0223	0.0270#	-21.08	102	0.00
22	T	Acrylonitrile	0.0997	0.1108	-11.13	96	0.00
23	PT	t12dichlorte	0.2353	0.2546	-8.20	90	0.00
24	PT	MtBE	0.6155	0.6466	-5.05	91	0.00
25	T	Hexane	0.3111	0.3753	-20.64	90	0.00
26	PT	11dichlorota	0.4246	0.4521	-6.48	90	0.00
27	T	Vinylacetate	0.4028	0.4384	-8.84	90	0.00
28	T	chloroprene	0.3933	0.4511	-14.70	91	0.00
29	T	Diisopether	0.7778	0.7988	-2.70	87	0.00
30	T	ETBE	0.6091	0.6493	-6.60	93	0.00
31	T	22dichloropr	0.2791	0.2606	6.63	81	0.00
32	PT	c12dichlorte	0.2681	0.2825	-5.37	93	0.00
33	PT	2Butanone	0.0341	0.0361#	-5.87	95	0.00
34	T	propionitrile	0.0436	0.0481	-10.32	98	0.00
35	T	Ethylacetate	0.0117	0.0118#	-0.85	89	0.00
36	T	methacrylonitrile	0.1211	0.1317	-8.75	97	0.00
37	T	Bromochlorma	0.1227	0.1233	-0.49	86	0.00
38	T	Tetrahydofur	0.0865	0.0938	-8.44	94	0.00
39	PT	Chloroform	0.4305	0.4424	-2.76	91	0.00
40	PT	111trichlota	0.3264	0.3544	-8.58	91	0.00
41	S	SURRDibrflma	0.2546	0.2521	0.98	88	0.00
42	PT	Cyclohexane	0.3771	0.4504	-19.44	91	0.00
43	PT	Carbtetraclo	0.2498	0.2833	-13.41	95	0.00
44	T	11dicloprope	0.1194	0.1200	-0.50	88	0.00
45	S	SURR12DCAd4	0.0727	0.0703	3.30	86	0.00
46	PT	Benzene	0.9677	1.0381	-7.27	90	0.00
47	PT	12dichlorota	0.3417	0.3415	0.06	91	0.00
48	T	TAME	0.5865	0.6199	-5.69	91	0.00

49	PT	trichloroete	0.2499	0.2569	-2.80	90	0.00
50	PT	methylcyclohexane	0.4355	0.5318	-22.11	91	0.00
51	PT	12dicloropra	0.2654	0.2917	-9.91	95	0.00
52	T	23Dicl1propene	0.3729	0.3861	-3.54	89	0.00
53	T	Dibromometha	0.1544	0.1535	0.58	92	0.00
54	T	methylmethacrylate	0.1856	0.1903	-2.53	93	0.00
55	T	14dioxane	0.0037	0.0040#	-8.11	95	0.00
56	PT	Bromodiclrma	0.3085	0.3177	-2.98	92	0.00
57	T	2Nitropropane	0.0631	0.0685	-8.56	92	0.00
58	T	2CLEVE	0.1585	0.1712	-8.01	90	0.00
59	PT	c13dicloproe	0.3610	0.3642	-0.89	86	0.00
60	PT	4Meth2Pentan	0.2280	0.2616	-14.74	97	0.00
61	S	SURRd8Tolule	0.9799	1.0110	-3.17	92	0.00
62	PT	Toluene	0.6287	0.6783	-7.89	91	0.00
63	PT	t13Dicloprop	0.3001	0.3085	-2.80	88	0.00
64	T	ethylmethacrylate	0.3069	0.3401	-10.82	95	0.00
65	PT	112Triclotha	0.1973	0.1980	-0.35	93	0.00
66	PT	Tetrachlorte	0.2594	0.2804	-8.10	91	0.00
67	T	13Diclorpropa	0.3923	0.4189	-6.78	95	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	93	0.00
69	PT	2Hexanone	0.2255	0.2510	-11.31	96	0.00
70	PT	Clorodibrmta	0.2907	0.2899	0.28	94	0.00
71	PT	12Dibrometha	0.2875	0.2926	-1.77	91	0.00
72	PT	Chlorobenzen	0.8822	0.9120	-3.38	91	0.00
73	T	1Clhexane	0.4301	0.4563	-6.09	94	0.00
74	T	1112Tetclota	0.2675	0.2586	3.33	90	0.00
75	PT	Ethylbenzene	1.4162	1.5054	-6.30	90	0.00
76	PT	m p-Xylene	0.5597	0.5917	-5.72	89	0.00
77	PT	o-Xylene	0.5567	0.5614	-0.84	89	0.00
78	PT	Styrene	0.9021	0.9586	-6.26	91	0.00
79	PT	Bromoform	0.1893	0.1751	7.50	89	0.00
80	PT	Isopropylben	1.2945	1.4177	-9.52	91	0.00
81	T	cyclohexanone	0.0179	0.0159#	11.17	85	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	93	0.00
83	S	SURR4BrFBenz	0.9330	0.9158	1.84	92	0.00
84	T	Bromobenzene	0.6682	0.6493	2.83	91	0.00
85	PT	1122Tetrclta	0.7696	0.7469	2.95	90	0.00
86	T	123Triclproa	0.9193	0.8368	8.97	88	0.00
87	T	14dichloro2butene	0.2044	0.1626	20.45	76	0.00
88	T	n-Propylbenz	2.9473	3.0995	-5.16	92	0.00
89	T	2chlorotolue	1.8111	1.8538	-2.36	91	0.00
90	T	4chlorotolue	2.0568	2.1393	-4.01	90	0.00
91	T	135Trimebenz	2.0466	2.1472	-4.92	90	0.00
92	T	tbutylbenzen	1.7273	1.8764	-8.63	90	0.00
93	T	124Trimetben	1.9813	2.1559	-8.81	92	0.00
94	T	sbutylbenzen	2.4653	2.6942	-9.28	91	0.00
95	PT	13Diclorbenz	1.2191	1.2214	-0.19	91	0.00
96	T	pIsopropylto	2.0799	2.2430	-7.84	90	0.00
97	PT	14dichlorobe	1.2734	1.2531	1.59	90	0.00
98	PT	12dichlorobe	1.1694	1.1527	1.43	89	0.00
99	T	nButylbenzen	1.8970	2.0271	-6.86	89	0.00
100	PT	12dibromo3cl	0.1239	0.1165	5.97	91	0.00
101	T	135Trichlorobenzene	0.7458	0.7255	2.72	88	0.00
102	PT	124Trichlobe	0.6035	0.5785	4.14	87	0.00
103	T	Hexachlorobu	0.2832	0.3006	-6.14	92	0.00
104	T	Naphthalene	1.2715	1.2726	-0.09	81	0.00
105	T	123Trichlben	0.5486	0.5303	3.34	84	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W071421.M Thu Jul 29 11:33:48 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\JUL2721\CCVF2-LCSD1.D Vial: 46
Acq On : 28 Jul 2021 17:58 Operator: DGS-RLD
Sample : 193761,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Jul 28 18:19:17 2021

Quant Method : C:\INSTARCH\METHODS\W071421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W071421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	89	0.00
2	PT	Dichlorodi	10.0000	10.5593	-5.59	89	0.00
3	PT	Chloromethan	10.0000	10.3909	-3.91	88	0.00
4	PT	VinylChlorid	10.0000	11.0918	-10.92	89	0.00
5	PT	Bromomethane	10.0000	9.8935	1.07	87	0.00
6	PT	Chloroethane	10.0000	11.4045	-14.05	97	0.00
7	T	Dichloroflmethane	10.0000	10.8278	-8.28	93	0.00
8	PT	Trichlorofma	10.0000	10.4295	-4.30	89	0.00
9	T	Ethylether	10.0000	10.5991	-5.99	93	0.00
10	T	dichlorotfluoroethan	10.0000	11.2861	-12.86	94	0.00
11	T	propyleneoxide	100.0000	106.5624	-6.56	91	0.00
12	T	Acrolein	50.0000	67.8996	-35.80	120	0.00
13	PT	11dichlorthe	10.0000	11.2364	-12.36	93	0.00
14	PT	Trichlorotfluoroeth	20.0000	20.6936	-3.47	89	0.00
15	PT	Acetone	100.0000	110.1024	-10.10	99	0.00
16	T	Iodomethane	20.0000	15.0946	24.53	62	0.00
17	PT	Carbon Dislf	20.0000	22.7218	-13.61	91	0.00
18	T	allylchloride	20.0000	21.0079	-5.04	90	0.00
19	PT	methylacetate	10.0000	10.2717	-2.72	92	0.00
20	PT	Methylchlorid	10.0000	10.1137	-1.14	89	0.00
21	T	tbutylalcohol	500.0000	606.9826	-21.40	102	0.00
22	T	Acrylonitrile	50.0000	55.5363	-11.07	96	0.00
23	PT	t12dichlorte	10.0000	10.8193	-8.19	90	0.00
24	PT	MtBE	10.0000	10.5051	-5.05	91	0.00
25	T	Hexane	20.0000	20.2207	-1.10	90	0.00
26	PT	11dichlorota	10.0000	10.6459	-6.46	90	0.00
27	T	Vinylacetate	100.0000	106.3413	-6.34	90	0.00
28	T	chloroprene	20.0000	22.9399	-14.70	91	0.00
29	T	Diisopether	10.0000	10.2707	-2.71	87	0.00
30	T	ETBE	10.0000	10.6604	-6.60	93	0.00
31	T	22dichloropr	10.0000	9.3352	6.65	81	0.00
32	PT	c12dichlorte	10.0000	10.5374	-5.37	93	0.00
33	PT	2Butanone	100.0000	105.7988	-5.80	95	0.00
34	T	propionitrile	100.0000	110.3204	-10.32	98	0.00
35	T	Ethylacetate	50.0000	50.1722	-0.34	89	0.00
36	T	methacrylonitrile	20.0000	21.7465	-8.73	97	0.00
37	T	Bromochlorma	10.0000	10.0487	-0.49	86	0.00
38	T	Tetrahydofur	100.0000	108.4585	-8.46	94	0.00
39	PT	Chloroform	10.0000	10.2755	-2.75	91	0.00
40	PT	111trichlota	10.0000	10.8579	-8.58	91	0.00
41	S	SURRDibrflma	20.0000	19.8076	0.96	88	0.00
42	PT	Cyclohexane	10.0000	10.2811	-2.81	91	0.00
43	PT	Carbtetraclo	10.0000	10.2534	-2.53	95	0.00
44	T	11dicloprope	10.0000	10.0448	-0.45	88	0.00
45	S	SURR12DCAd4	20.0000	19.3464	3.27	86	0.00
46	PT	Benzene	10.0000	10.7271	-7.27	90	0.00
47	PT	12dichlorota	10.0000	9.9951	0.05	91	0.00
48	T	TAME	10.0000	10.5694	-5.69	91	0.00

49	PT	trichloroete	10.0000	10.2827	-2.83	90	0.00
50	PT	methylcyclohexane	10.0000	10.3557	-3.56	91	0.00
51	PT	12dicloropra	10.0000	10.9905	-9.91	95	0.00
52	T	23Dicl1propene	10.0000	10.3535	-3.54	89	0.00
53	T	Dibromometha	10.0000	9.9407	0.59	92	0.00
54	T	methylmethacrylate	10.0000	10.2492	-2.49	93	0.00
55	T	14dioxane	500.0000	534.3923	-6.88	95	0.00
56	PT	Bromodiclrma	10.0000	10.2969	-2.97	92	0.00
57	T	2Nitropropane	100.0000	108.5319	-8.53	92	0.00
58	T	2CLEVE	50.0000	53.9846	-7.97	90	0.00
59	PT	c13dicloproe	10.0000	10.0884	-0.88	86	0.00
60	PT	4Meth2Pentan	100.0000	114.7469	-14.75	97	0.00
61	S	SURRd8Tolule	20.0000	20.6340	-3.17	92	0.00
62	PT	Toluene	10.0000	10.7877	-7.88	91	0.00
63	PT	t13Dicloprop	10.0000	10.2797	-2.80	88	0.00
64	T	ethylmethacrylate	20.0000	22.1616	-10.81	95	0.00
65	PT	112Triclotha	10.0000	10.0327	-0.33	93	0.00
66	PT	Tetrachlorte	10.0000	10.8094	-8.09	91	0.00
67	T	13Diclorpropa	10.0000	10.6784	-6.78	95	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	93	0.00
69	PT	2Hexanone	100.0000	111.3021	-11.30	96	0.00
70	PT	Clorodibrmta	10.0000	9.9710	0.29	94	0.00
71	PT	12Dibrometha	10.0000	10.1798	-1.80	91	0.00
72	PT	Chlorobenzen	10.0000	10.3375	-3.38	91	0.00
73	T	1Clhexane	10.0000	10.6085	-6.08	94	0.00
74	T	1112Tetclota	10.0000	9.6671	3.33	90	0.00
75	PT	Ethylbenzene	10.0000	10.6293	-6.29	90	0.00
76	PT	m p-Xylene	20.0000	21.1452	-5.73	89	0.00
77	PT	o-Xylene	10.0000	10.0851	-0.85	89	0.00
78	PT	Styrene	10.0000	10.6272	-6.27	91	0.00
79	PT	Bromoform	10.0000	9.2491	7.51	89	0.00
80	PT	Isopropylben	10.0000	10.9514	-9.51	91	0.00
81	T	cyclohexanone	200.0000	178.2616	10.87	85	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	93	0.00
83	S	SURR4BrFBenz	20.0000	19.6308	1.85	92	0.00
84	T	Bromobenzene	10.0000	9.7165	2.84	91	0.00
85	PT	1122Tetrclta	10.0000	9.7054	2.95	90	0.00
86	T	123Triclproa	10.0000	9.1024	8.98	88	0.00
87	T	14dichloro2butene	10.0000	7.9577	20.42	76	0.00
88	T	n-Propylbenz	10.0000	10.5166	-5.17	92	0.00
89	T	2chlorotolue	10.0000	10.2361	-2.36	91	0.00
90	T	4chlorotolue	10.0000	10.4012	-4.01	90	0.00
91	T	135Trimebenz	10.0000	10.4913	-4.91	90	0.00
92	T	tbutylbenzen	10.0000	10.8631	-8.63	90	0.00
93	T	124Trimetben	10.0000	10.8813	-8.81	92	0.00
94	T	sbutylbenzen	10.0000	10.9282	-9.28	91	0.00
95	PT	13Diclorbenz	10.0000	10.0182	-0.18	91	0.00
96	T	pIsopropylto	10.0000	10.7844	-7.84	90	0.00
97	PT	14dichlorobe	10.0000	9.8409	1.59	90	0.00
98	PT	12dichlorobe	10.0000	9.8570	1.43	89	0.00
99	T	nButylbenzen	10.0000	10.6858	-6.86	89	0.00
100	PT	12dibromo3cl	10.0000	9.4041	5.96	91	0.00
101	T	135Trichlorobenzene	10.0000	9.7282	2.72	88	0.00
102	PT	124Trichlobe	10.0000	9.5852	4.15	87	0.00
103	T	Hexachlorobu	10.0000	10.6121	-6.12	92	0.00
104	T	Naphthalene	10.0000	8.1025	18.98	81	0.00
105	T	123Trichlben	10.0000	9.6662	3.34	84	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W071421.M Thu Jul 29 11:34:14 2021

Quantitation Report

Data File : C:\Instarch\Data\JUL2721\CCVF2-LCSD1.D Vial: 46
Acq On : 28 Jul 2021 17:58 Operator: DGS-RLD
Sample : 193761,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 18:19:17 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1343124	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1062333	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	587515	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	338626	19.808	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.28	102	94455	19.346	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.72	98	1357912	20.634	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103 %			
83) SURR4BrFBenz	13.26	95	538019	19.631	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	174614	10.5593	ug/L	99
3) Chloromethan	2.10	50	225749	10.3909	ug/L	98
4) VinylChlorid	2.25	62	247643	11.0918	ug/L	96
5) Bromomethane	2.70	94	132146	9.8935	ug/L	96
6) Chloroethane	2.88	64	173773	11.4045	ug/L	99
7) Dichloroflmethane	3.20	67	239263	10.8278	ug/L	99
8) Trichlorofma	3.27	101	246919	10.4295	ug/L	98
9) Ethylether	3.72	59	143461	10.5991	ug/L	98
10) dichlorotfluoroethan	3.73	67	182322	11.2861	ug/L	97
11) propyleneoxide	3.77	58	392515	106.5624	ug/L	99
12) Acrolein	3.85	56	76948	67.8996	ug/L	100
13) 11dichlorthe	4.00	96	153498	11.2364	ug/L	96
14) Trichlorotfluoroeth	4.04	101	300732	20.6936	ug/L	97
15) Acetone	4.07	43	570673	110.1024	ug/L	98
16) Iodomethane	4.18	142	260013	15.0946	ug/L	100
17) Carbon Dislf	4.27	76	846290	22.7218	ug/L	99
18) allylchloride	4.49	41	491917	21.0079	ug/L	99
19) methylacetate	4.54	74	48191	10.2717	ug/L	96
20) Methylchlorid	4.64	84	176169	10.1137	ug/L	98
21) tbutylalcohol	4.85	59	908273	606.9826	ug/L	100
22) Acrylonitrile	4.95	53	371931	55.5363	ug/L	98
23) t12dichlorte	5.02	96	170974	10.8193	ug/L	98
24) MtBE	5.05	73	434239	10.5051	ug/L	99
25) Hexane	5.42	57	504072	20.2207	ug/L	99
26) 11dichlorota	5.55	63	303596	10.6459	ug/L	99
27) Vinylacetate	5.64	43	2943870	106.3413	ug/L	99
28) chloroprene	5.68	53	605900	22.9399	ug/L	99
29) Diisopether	5.69	45	536470	10.2707	ug/L	97
30) ETBE	6.15	59	436044	10.6604	ug/L	99
31) 22dichloropr	6.28	77	174989	9.3352	ug/L	98
32) c12dichlorte	6.28	96	189735	10.5374	ug/L	94
33) 2Butanone	6.29	72	242521	105.7988	ug/L	98
34) propionitrile	6.34	54	322807	110.3204	ug/L	99
35) Ethylacetate	6.40	88	39507	50.1722	ug/L	96
36) methacrylonitrile	6.54	67	176830	21.7465	ug/L	93
37) Bromochlorma	6.57	128	82782	10.0487	ug/L	92
38) Tetrahydofur	6.65	42	630093	108.4585	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL2721\CCVF2-LCSD1.D Vial: 46
Acq On : 28 Jul 2021 17:58 Operator: DGS-RLD
Sample : 193761,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 18:19:17 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	297066	10.2755	ug/L	99
40)	111trichlota	6.92	97	237979	10.8579	ug/L	99
42)	Cyclohexane	7.00	56	302469	10.2811	ug/L	99
43)	Carbtetraclo	7.13	119	190268	10.2534	ug/L	99
44)	11dicloprope	7.13	110	80562	10.0448	ug/L	95
46)	Benzene	7.38	78	697158	10.7271	ug/L	100
47)	12dichlorota	7.38	62	229329	9.9951	ug/L	97
48)	TAME	7.54	73	416272	10.5694	ug/L	96
49)	trichloroete	8.18	95	172549	10.2827	ug/L	99
50)	methylcyclohexane	8.45	83	357108	10.3557	ug/L	98
51)	12dicloropra	8.44	63	195873	10.9905	ug/L	93
52)	23Dicl1propene	8.50	75	259258	10.3535	ug/L	98
53)	Dibromometha	8.57	93	103068	9.9407	ug/L	99
54)	methylmethacrylate	8.60	69	127767	10.2492	ug/L	100
55)	14dioxane	8.62	88	132757	534.3923	ug/L	98
56)	Bromodiclrma	8.78	83	213344	10.2969	ug/L	99
57)	2Nitropropane	9.05	43	459813	108.5319	ug/L	95
58)	2CLEVE	9.17	63	574720	53.9846	ug/L	99
59)	c13dicloproe	9.35	75	244588	10.0884	ug/L	97
60)	4Meth2Pentan	9.55	43	1757079	114.7469	ug/L	99
62)	Toluene	9.80	92	455494	10.7877	ug/L	99
63)	t13Dicloprop	10.06	75	207147	10.2797	ug/L	98
64)	ethylmethacrylate	10.21	69	456786	22.1616	ug/L	100
65)	112Triclotha	10.30	83	132949	10.0327	ug/L	99
66)	Tetrachlorte	10.54	166	188286	10.8094	ug/L	99
67)	13Diclorpropa	10.53	76	281345	10.6784	ug/L	98
69)	2Hexanone	10.64	43	1333302	111.3021	ug/L	100
70)	Clorodibrmta	10.83	129	153983	9.9710	ug/L	98
71)	12Dibrometha	10.98	107	155443	10.1798	ug/L	100
72)	Chlorobenzen	11.66	112	484426	10.3375	ug/L	98
73)	1Clhexane	11.65	91	242380	10.6085	ug/L	97
74)	1112Tetclota	11.77	131	137357	9.6671	ug/L	98
75)	Ethylbenzene	11.83	91	799597	10.6293	ug/L	99
76)	m p-Xylene	11.99	106	628595	21.1452	ug/L	99
77)	o-Xylene	12.54	106	298211	10.0851	ug/L	99
78)	Styrene	12.55	104	509195	10.6272	ug/L	100
79)	Bromoform	12.78	173	92983	9.2491	ug/L	96
80)	Isopropylben	13.06	105	753036	10.9514	ug/L	100
81)	cyclohexanone	13.15	55	169171	178.2616	ug/L	99
84)	Bromobenzene	13.47	156	190727	9.7165	ug/L	99
85)	1122Tetrclta	13.45	83	219419	9.7054	ug/L	98
86)	123Triclproa	13.51	75	245816	9.1024	ug/L	97
87)	14dichloro2butene	13.53	53	47778	7.9577	ug/L	98
88)	n-Propylbenz	13.65	91	910507	10.5166	ug/L	98
89)	2chlorotolue	13.76	91	544575	10.2361	ug/L	99
90)	4chlorotolue	13.92	91	628427	10.4012	ug/L	99
91)	135Trimebenz	13.91	105	630743	10.4913	ug/L	100
92)	tbutylbenzen	14.38	119	551194	10.8631	ug/L	99
93)	124Trimetben	14.44	105	633323	10.8813	ug/L	98
94)	sbutylbenzen	14.69	105	791434	10.9282	ug/L	99
95)	13Diclorbenz	14.83	146	358786	10.0182	ug/L	99
96)	pIsopropylto	14.91	119	658910	10.7844	ug/L	99
97)	14dichlorobe	14.96	146	368116	9.8409	ug/L	99
98)	12dichlorobe	15.50	146	338619	9.8570	ug/L	99
99)	nButylbenzen	15.50	91	595467	10.6858	ug/L	99
100)	12dibromo3cl	16.59	157	34216	9.4041	ug/L	97
101)	135Trichlorobenzene	16.92	180	213117	9.7282	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL2721\CCVF2-LCSD1.D Vial: 46
Acq On : 28 Jul 2021 17:58 Operator: DGS-RLD
Sample : 193761,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 18:19:17 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

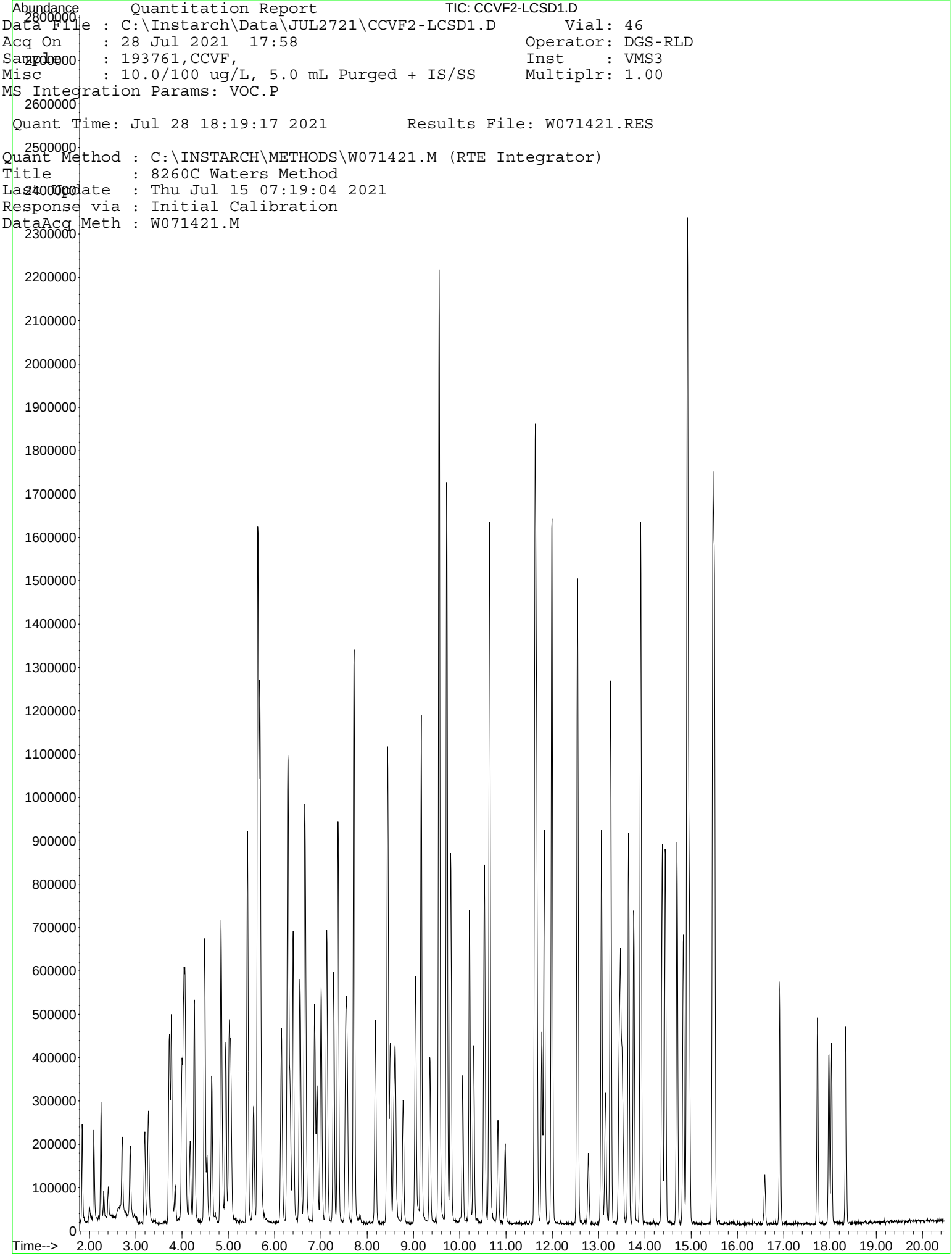
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.74	180	169939	9.5852	ug/L	96
103)	Hexachlorobu	17.98	225	88294	10.6121	ug/L	95
104)	Naphthalene	18.03	128	373839	8.1025	ug/L	99
105)	123Trichlben	18.34	180	155785	9.6662	ug/L	95

(#) = qualifier out of range (m) = manual integration

Data File : C:\Instarch\Data\JUL2721\CCVF2-LCSD1.D Vial: 46
Acq On : 28 Jul 2021 17:58 Operator: DGS-RLD
Sample : 193761,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 18:19:17 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



BFB

Data File : C:\Instarch\Data\AUG0521\BFB1.D Vial: 1
Acq On : 5 Aug 2021 8:57 Operator: DGS-RLD
Sample : 194091,BFB, Inst : VMS3
Misc : 50 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W080421.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.657 to 4.663 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.0	21954	PASS
75	95	30	60	54.3	54254	PASS
95	95	100	100	100.0	100000	PASS
96	95	5	9	6.7	6731	PASS
173	174	0.00	2	1.1	871	PASS
174	95	50	100	81.1	81114	PASS
175	174	5	9	7.8	6311	PASS
176	174	95	101	96.6	78369	PASS
177	176	5	9	8.3	6498	PASS

W080421.M Mon Aug 09 11:56:58 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\AUG0521\CCV-LCS1.D Vial: 2
Acq On : 5 Aug 2021 9:13 Operator: DGS-RLD
Sample : 194091,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Aug 05 09:33:44 2021

Quant Method : C:\INSTARCH\METHODS\W080421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W080421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	101	0.00
2	PT	Dichlorodi	0.2438	0.2729	-11.94	106	0.00
3	PT	Chloromethan	0.2657	0.2614	1.62	103	0.00
4	PT	VinylChlorid	0.2629	0.2629	0.00	98	0.00
5	PT	Bromomethane	0.1660	0.1761	-6.08	102	0.00
6	PT	Chloroethane	0.1771	0.1730	2.32	97	0.00
7	T	Dichloroflmethane	0.3306	0.3303	0.09	102	0.00
8	PT	Trichlorofma	0.3561	0.4106	-15.30	106	0.00
9	T	Ethylether	0.2069	0.1897	8.31	97	0.00
10	T	dichlorotfluoroethan	0.2405	0.2556	-6.28	106	0.00
11	T	propyleneoxide	0.0452	0.0393	13.05	92	0.00
12	T	Acrolein	0.0292	0.0231#	20.89#	83	0.00
13	PT	11dichlorthe	0.2220	0.2328	-4.86	103	0.00
14	PT	Trichlorotfluoroeth	0.1926	0.2289	-18.85	108	0.00
15	PT	Acetone	0.0835	0.0688#	17.60	94	0.00
16	T	Iodomethane	0.2156	0.2330	-8.07	108	0.00
17	PT	Carbon Dislf	0.5773	0.6024	-4.35	104	0.00
18	T	allylchloride	0.3516	0.3513	0.09	101	0.00
19	PT	methylacetate	0.0756	0.0616#	18.52	92	0.00
20	PT	Methylchlorid	0.2752	0.2544	7.56	102	0.00
21	T	tbutylalcohol	0.0321	0.0243#	24.30#	81	0.00
22	T	Acrylonitrile	0.0919	0.0795	13.49	90	0.00
23	PT	t12dichlorte	0.2572	0.2526	1.79	101	0.00
24	PT	MtBE	0.7291	0.6642	8.90	97	0.00
25	T	Hexane	0.2936	0.3845	-30.96#	117	0.00
26	PT	11dichlorota	0.4348	0.4231	2.69	100	0.00
27	T	Vinylacetate	0.4426	0.4323	2.33	100	0.00
28	T	chloroprene	0.3887	0.4119	-5.97	103	0.00
29	T	Diisopether	0.7391	0.7092	4.05	99	0.00
30	T	ETBE	0.7123	0.6806	4.45	98	0.00
31	T	22dichloropr	0.3827	0.4282	-11.89	113	0.00
32	PT	c12dichlorte	0.2856	0.2708	5.18	99	0.00
33	PT	2Butanone	0.0346	0.0288#	16.76	88	0.00
34	T	propionitrile	0.0411	0.0341	17.03	89	0.00
35	T	Ethylacetate	0.0124	0.0103#	16.94	92	0.00
36	T	methacrylonitrile	0.1253	0.1067	14.84	90	0.00
37	T	Bromochlorma	0.1232	0.1202	2.44	102	0.00
38	T	Tetrahydofur	0.0833	0.0661	20.65#	89	0.00
39	PT	Chloroform	0.4509	0.4421	1.95	102	0.00
40	PT	111trichlota	0.3995	0.4141	-3.65	103	0.00
41	S	SURRDibrflma	0.2528	0.2598	-2.77	105	0.00
42	PT	Cyclohexane	0.3627	0.4140	-14.14	105	0.00
43	PT	Carbtetraclo	0.3345	0.3575	-6.88	105	0.00
44	T	11dicloprope	0.1250	0.1357	-8.56	108	0.00
45	S	SURR12DCAd4	0.0690	0.0690	0.00	102	0.00
46	PT	Benzene	1.0031	0.9844	1.86	99	0.00
47	PT	12dichlorota	0.3545	0.3399	4.12	102	0.00
48	T	TAME	0.7401	0.6909	6.65	98	0.00

49	PT	trichloroete	0.2706	0.2663	1.59	103	0.00
50	PT	methylcyclohexane	0.4612	0.5521	-19.71	109	0.00
51	PT	12dicloropra	0.2704	0.2610	3.48	102	0.00
52	T	23Dicl1propene	0.4055	0.3946	2.69	102	0.00
53	T	Dibromometha	0.1624	0.1518	6.53	99	0.00
54	T	methylmethacrylate	0.2131	0.1813	14.92	94	0.00
55	T	14dioxane	0.0039	0.0032#	17.95	90	0.00
56	PT	Bromodiclrma	0.3608	0.3413	5.40	99	0.00
57	T	2Nitropropane	0.0979	0.0855	12.67	92	0.00
58	T	2CLEVE	0.1545	0.1476	4.47	96	0.00
59	PT	c13dicloproe	0.4335	0.4206	2.98	101	0.00
60	PT	4Meth2Pentan	0.2372	0.1925	18.84	87	0.00
61	S	SURRd8Tolule	1.0011	0.9931	0.80	101	0.00
62	PT	Toluene	0.6504	0.6473	0.48	101	0.00
63	PT	t13Dicloprop	0.3966	0.3848	2.98	103	0.00
64	T	ethylmethacrylate	0.3585	0.3275	8.65	93	0.00
65	PT	112Triclotha	0.1999	0.1864	6.75	97	0.00
66	PT	Tetrachlorte	0.2776	0.2902	-4.54	103	0.00
67	T	13Diclorpropa	0.4189	0.3896	6.99	98	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	95	0.00
69	PT	2Hexanone	0.2227	0.1946	12.62	86	0.00
70	PT	Clorodibrmta	0.3321	0.3404	-2.50	101	0.00
71	PT	12Dibrometha	0.3148	0.3040	3.43	97	0.00
72	PT	Chlorobenzen	0.8753	0.8301	5.16	91	0.00
73	T	1Clhexane	0.4529	0.4669	-3.09	96	0.00
74	T	1112Tetclota	0.3196	0.3067	4.04	93	0.00
75	PT	Ethylbenzene	1.4943	1.5434	-3.29	97	0.00
76	PT	m p-Xylene	0.5807	0.5813	-0.10	94	0.00
77	PT	o-Xylene	0.5869	0.6174	-5.20	101	0.00
78	PT	Styrene	0.9755	1.0247	-5.04	99	0.00
79	PT	Bromoform	0.2399	0.2299	4.17	94	0.00
80	PT	Isopropylben	1.4485	1.6057	-10.85	103	0.00
81	T	cyclohexanone	0.0201	0.0168#	16.42	88	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	99	0.00
83	S	SURR4BrFBenz	0.9610	0.9684	-0.77	98	0.00
84	T	Bromobenzene	0.6663	0.6577	1.29	98	0.00
85	PT	1122Tetrclta	0.7408	0.6797	8.25	94	0.00
86	T	123Triclproa	0.9700	0.8736	9.94	92	0.00
87	T	14dichloro2butene	0.2403	0.1961	18.39	83	0.00
88	T	n-Propylbenz	2.8647	3.1810	-11.04	102	0.00
89	T	2chlorotolue	1.8438	1.8813	-2.03	99	0.00
90	T	4chlorotolue	2.1294	2.2098	-3.78	100	0.00
91	T	135Trimebenz	2.1531	2.2577	-4.86	99	0.00
92	T	tbutylbenzen	1.8125	2.0079	-10.78	103	0.00
93	T	124Trimetben	2.1154	2.2173	-4.82	98	0.00
94	T	sbutylbenzen	2.5046	2.8521	-13.87	104	0.00
95	PT	13Diclorbenz	1.2330	1.2427	-0.79	100	0.00
96	T	pIsopropylto	2.1673	2.3893	-10.24	102	0.00
97	PT	14dichlorobe	1.2435	1.2410	0.20	97	0.00
98	PT	12dichlorobe	1.1616	1.1448	1.45	100	0.00
99	T	nButylbenzen	1.9748	2.1826	-10.52	105	0.00
100	PT	12dibromo3cl	0.1577	0.1222	22.51#	80	0.00
101	T	135Trichlorobenzene	0.8232	0.8449	-2.64	98	0.00
102	PT	124Trichlobe	0.6601	0.6346	3.86	92	0.00
103	T	Hexachlorobu	0.3291	0.3644	-10.73	101	0.00
104	T	Naphthalene	1.2458	1.0357	16.86	76	0.00
105	T	123Trichlben	0.5988	0.5445	9.07	88	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W080421.M Mon Aug 09 11:58:56 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\AUG0521\CCV-LCS1.D Vial: 2
Acq On : 5 Aug 2021 9:13 Operator: DGS-RLD
Sample : 194091,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Aug 05 09:33:44 2021

Quant Method : C:\INSTARCH\METHODS\W080421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W080421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	101	0.00
2	PT	Dichlorodi	10.0000	10.2224	-2.22	106	0.00
3	PT	Chloromethan	10.0000	9.8388	1.61	103	0.00
4	PT	VinylChlorid	10.0000	9.9997	0.00	98	0.00
5	PT	Bromomethane	10.0000	9.8337	1.66	102	0.00
6	PT	Chloroethane	10.0000	9.7661	2.34	97	0.00
7	T	Dichloroflmethane	10.0000	9.9927	0.07	102	0.00
8	PT	Trichlorofma	10.0000	10.4316	-4.32	106	0.00
9	T	Ethylether	10.0000	9.1673	8.33	97	0.00
10	T	dichlorotfluoroethan	10.0000	10.6312	-6.31	106	0.00
11	T	propyleneoxide	100.0000	86.9643	13.04	92	0.00
12	T	Acrolein	50.0000	39.5483	20.90#	83	0.00
13	PT	11dichlorthe	10.0000	10.4871	-4.87	103	0.00
14	PT	Trichlorotfluoroeth	20.0000	21.0928	-5.46	108	0.00
15	PT	Acetone	100.0000	86.3224	13.68	94	0.00
16	T	Iodomethane	20.0000	19.1667	4.17	108	0.00
17	PT	Carbon Dislf	20.0000	20.8706	-4.35	104	0.00
18	T	allylchloride	20.0000	19.9834	0.08	101	0.00
19	PT	methylacetate	10.0000	8.1383	18.62	92	0.00
20	PT	Methylchlorid	10.0000	9.2436	7.56	102	0.00
21	T	tbutylalcohol	500.0000	379.6909	24.06#	81	0.00
22	T	Acrylonitrile	50.0000	43.2834	13.43	90	0.00
23	PT	t12dichlorte	10.0000	9.8206	1.79	101	0.00
24	PT	MtBE	10.0000	9.1092	8.91	97	0.00
25	T	Hexane	20.0000	22.9232	-14.62	117	0.00
26	PT	11dichlorota	10.0000	9.7316	2.68	100	0.00
27	T	Vinylacetate	100.0000	104.3773	-4.38	100	0.00
28	T	chloroprene	20.0000	21.1937	-5.97	103	0.00
29	T	Diisopether	10.0000	9.5948	4.05	99	0.00
30	T	ETBE	10.0000	9.5547	4.45	98	0.00
31	T	22dichloropr	10.0000	11.1886	-11.89	113	0.00
32	PT	c12dichlorte	10.0000	9.4824	5.18	99	0.00
33	PT	2Butanone	100.0000	83.3792	16.62	88	0.00
34	T	propionitrile	100.0000	82.9888	17.01	89	0.00
35	T	Ethylacetate	50.0000	41.4489	17.10	92	0.00
36	T	methacrylonitrile	20.0000	17.0336	14.83	90	0.00
37	T	Bromochlorma	10.0000	9.7529	2.47	102	0.00
38	T	Tetrahydofur	100.0000	79.3549	20.65#	89	0.00
39	PT	Chloroform	10.0000	9.8061	1.94	102	0.00
40	PT	111trichlota	10.0000	10.3641	-3.64	103	0.00
41	S	SURRDibrflma	20.0000	20.5567	-2.78	105	0.00
42	PT	Cyclohexane	10.0000	10.0983	-0.98	105	0.00
43	PT	Carbtetraclo	10.0000	10.6877	-6.88	105	0.00
44	T	11dicloprope	10.0000	10.8605	-8.61	108	0.00
45	S	SURR12DCAd4	20.0000	20.0148	-0.07	102	0.00
46	PT	Benzene	10.0000	9.8137	1.86	99	0.00
47	PT	12dichlorota	10.0000	9.5895	4.11	102	0.00
48	T	TAME	10.0000	9.3346	6.65	98	0.00

49	PT	trichloroete	10.0000	9.8413	1.59	103	0.00
50	PT	methylcyclohexane	10.0000	10.4913	-4.91	109	0.00
51	PT	12dicloropra	10.0000	9.6521	3.48	102	0.00
52	T	23Dicl1propene	10.0000	9.7302	2.70	102	0.00
53	T	Dibromometha	10.0000	9.3457	6.54	99	0.00
54	T	methylmethacrylate	10.0000	8.5071	14.93	94	0.00
55	T	14dioxane	500.0000	409.9716	18.01	90	0.00
56	PT	Bromodiclrma	10.0000	9.4605	5.40	99	0.00
57	T	2Nitropropane	100.0000	87.3543	12.65	92	0.00
58	T	2CLEVE	50.0000	47.7836	4.43	96	0.00
59	PT	c13dicloproe	10.0000	9.7019	2.98	101	0.00
60	PT	4Meth2Pentan	100.0000	81.6243	18.38	87	0.00
61	S	SURRd8Tolule	20.0000	19.8400	0.80	101	0.00
62	PT	Toluene	10.0000	9.9525	0.47	101	0.00
63	PT	t13Dicloprop	10.0000	9.7019	2.98	103	0.00
64	T	ethylmethacrylate	20.0000	18.2708	8.65	93	0.00
65	PT	112Triclotha	10.0000	9.3233	6.77	97	0.00
66	PT	Tetrachlorte	10.0000	10.4553	-4.55	103	0.00
67	T	13Diclorpropa	10.0000	9.2993	7.01	98	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	95	0.00
69	PT	2Hexanone	100.0000	87.3959	12.60	86	0.00
70	PT	Clorodibrmta	10.0000	10.2513	-2.51	101	0.00
71	PT	12Dibrometha	10.0000	9.6562	3.44	97	0.00
72	PT	Chlorobenzen	10.0000	9.4836	5.16	91	0.00
73	T	1Clhexane	10.0000	10.3091	-3.09	96	0.00
74	T	1112Tetclota	10.0000	9.5963	4.04	93	0.00
75	PT	Ethylbenzene	10.0000	10.3286	-3.29	97	0.00
76	PT	m p-Xylene	20.0000	20.0206	-0.10	94	0.00
77	PT	o-Xylene	10.0000	10.5208	-5.21	101	0.00
78	PT	Styrene	10.0000	10.5040	-5.04	99	0.00
79	PT	Bromoform	10.0000	9.5830	4.17	94	0.00
80	PT	Isopropylben	10.0000	11.0853	-10.85	103	0.00
81	T	cyclohexanone	200.0000	167.0814	16.46	88	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	99	0.00
83	S	SURR4BrFBenz	20.0000	20.1553	-0.78	98	0.00
84	T	Bromobenzene	10.0000	9.8707	1.29	98	0.00
85	PT	1122Tetrclta	10.0000	9.1757	8.24	94	0.00
86	T	123Triclproa	10.0000	9.0059	9.94	92	0.00
87	T	14dichloro2butene	10.0000	8.1616	18.38	83	0.00
88	T	n-Propylbenz	10.0000	11.1042	-11.04	102	0.00
89	T	2chlorotolue	10.0000	10.2036	-2.04	99	0.00
90	T	4chlorotolue	10.0000	10.3775	-3.77	100	0.00
91	T	135Trimebenz	10.0000	10.4860	-4.86	99	0.00
92	T	tbutylbenzen	10.0000	11.0777	-10.78	103	0.00
93	T	124Trimetben	10.0000	10.4817	-4.82	98	0.00
94	T	sbutylbenzen	10.0000	11.3875	-13.87	104	0.00
95	PT	13Diclorbenz	10.0000	10.0785	-0.79	100	0.00
96	T	pIsopropylto	10.0000	11.0243	-10.24	102	0.00
97	PT	14dichlorobe	10.0000	9.9799	0.20	97	0.00
98	PT	12dichlorobe	10.0000	9.8549	1.45	100	0.00
99	T	nButylbenzen	10.0000	11.0523	-10.52	105	0.00
100	PT	12dibromo3cl	10.0000	7.7447	22.55#	80	0.00
101	T	135Trichlorobenzene	10.0000	10.2640	-2.64	98	0.00
102	PT	124Trichlobe	10.0000	9.6145	3.86	92	0.00
103	T	Hexachlorobu	10.0000	11.0732	-10.73	101	0.00
104	T	Naphthalene	10.0000	6.9809	30.19#	76	0.00
105	T	123Trichlben	10.0000	9.0928	9.07	88	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W080421.M Mon Aug 09 11:59:29 2021

Quantitation Report

Data File : C:\Instarch\Data\AUG0521\CCV-LCS1.D Vial: 2
Acq On : 5 Aug 2021 9:13 Operator: DGS-RLD
Sample : 194091,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 09:33:44 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1168844	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	868463	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	507636	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	303718	20.557	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103	%		
45) SURR12DCAd4	7.27	102	80684	20.015	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100	%		
61) SURRd8Tolule	9.71	98	1160744	19.840	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99	%		
83) SURR4BrFBenz	13.25	95	491617	20.155	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	159491	10.2224	ug/L	98
3) Chloromethan	2.09	50	152781	9.8388	ug/L	100
4) VinylChlorid	2.25	62	153665	9.9997	ug/L	98
5) Bromomethane	2.70	94	102915	9.8337	ug/L	99
6) Chloroethane	2.87	64	101107	9.7661	ug/L	96
7) Dichloroflmethane	3.19	67	193054	9.9927	ug/L	100
8) Trichlorofma	3.27	101	239983	10.4316	ug/L	99
9) Ethylether	3.71	59	110852	9.1673	ug/L	98
10) dichlorotfluoroethan	3.73	67	149399	10.6312	ug/L	98
11) propyleneoxide	3.77	58	229609	86.9643	ug/L	96
12) Acrolein	3.84	56	67585	39.5483	ug/L	94
13) 11dichlorthe	3.99	96	136052	10.4871	ug/L	97
14) Trichlorotfluoroeth	4.03	101	267561	21.0928	ug/L	100
15) Acetone	4.06	43	401847	86.3224	ug/L	98
16) Iodomethane	4.17	142	272331	19.1667	ug/L	99
17) Carbon Dislf	4.26	76	704116	20.8706	ug/L	99
18) allylchloride	4.48	41	410648	19.9834	ug/L	98
19) methylacetate	4.53	74	35980	8.1383	ug/L	99
20) Methylchlorid	4.63	84	148673	9.2436	ug/L	99
21) tbutylalcohol	4.83	59	709601	379.6909	ug/L	99
22) Acrylonitrile	4.94	53	232446	43.2834	ug/L	98
23) t12dichlorte	5.01	96	147622	9.8206	ug/L	98
24) MtBE	5.05	73	388158	9.1092	ug/L	100
25) Hexane	5.40	57	449422	22.9232	ug/L	100
26) 11dichlorota	5.54	63	247259	9.7316	ug/L	99
27) Vinylacetate	5.63	43	2526546	104.3773	ug/L	99
28) chloroprene	5.67	53	481426	21.1937	ug/L	99
29) Diisopether	5.68	45	414460	9.5948	ug/L	99
30) ETBE	6.14	59	397774	9.5547	ug/L	99
31) 22dichloropr	6.27	77	250237	11.1886	ug/L	99
32) c12dichlorte	6.27	96	158251	9.4824	ug/L	99
33) 2Butanone	6.29	72	168602	83.3792	ug/L	99
34) propionitrile	6.32	54	199324	82.9888	ug/L	98
35) Ethylacetate	6.39	88	30003	41.4489	ug/L	99
36) methacrylonitrile	6.53	67	124730	17.0336	ug/L	99
37) Bromochlorma	6.55	128	70245	9.7529	ug/L	96
38) Tetrahydofur	6.64	42	386188	79.3549	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\AUG0521\CCV-LCS1.D Vial: 2
Acq On : 5 Aug 2021 9:13 Operator: DGS-RLD
Sample : 194091,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 09:33:44 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	6.66	83	258385	9.8061 ug/L	99
40)	111trichlota	6.91	97	242001	10.3641 ug/L	99
42)	Cyclohexane	7.00	56	241923	10.0983 ug/L	98
43)	Carbtetraclo	7.13	119	208918	10.6877 ug/L	100
44)	11dicloprope	7.11	110	79330	10.8605 ug/L	97
46)	Benzene	7.36	78	575301	9.8137 ug/L	99
47)	12dichlorota	7.36	62	198665	9.5895 ug/L	100
48)	TAME	7.53	73	403765	9.3346 ug/L	99
49)	trichloroete	8.17	95	155639	9.8413 ug/L	99
50)	methylcyclohexane	8.43	83	322686	10.4913 ug/L	99
51)	12dicloropra	8.43	63	152523	9.6521 ug/L	96
52)	23Dicl1propene	8.49	75	230606	9.7302 ug/L	97
53)	Dibromometha	8.57	93	88691	9.3457 ug/L	96
54)	methylmethacrylate	8.59	69	105937	8.5071 ug/L	100
55)	14dioxane	8.61	88	92680	409.9716 ug/L	94
56)	Bromodiclrma	8.77	83	199464	9.4605 ug/L	99
57)	2Nitropropane	9.04	43	499871	87.3543 ug/L	100
58)	2CLEVE	9.16	63	431415	47.7836 ug/L	99
59)	c13dicloproe	9.35	75	245817	9.7019 ug/L	98
60)	4Meth2Pentan	9.54	43	1124753	81.6243 ug/L	99
62)	Toluene	9.80	92	378300	9.9525 ug/L	98
63)	t13Dicloprop	10.05	75	224897	9.7019 ug/L	98
64)	ethylmethacrylate	10.20	69	382841	18.2708 ug/L	100
65)	112Triclotha	10.29	83	108930	9.3233 ug/L	100
66)	Tetrachlorte	10.53	166	169606	10.4553 ug/L	98
67)	13Diclorpropa	10.52	76	227668	9.2993 ug/L	97
69)	2Hexanone	10.64	43	845036	87.3959 ug/L	100
70)	Clorodibrmta	10.82	129	147832	10.2513 ug/L	99
71)	12Dibrometha	10.97	107	132001	9.6562 ug/L	99
72)	Chlorobenzen	11.66	112	360434	9.4836 ug/L	99
73)	1Clhexane	11.63	91	202724	10.3091 ug/L	98
74)	1112Tetclota	11.77	131	133189	9.5963 ug/L	97
75)	Ethylbenzene	11.82	91	670181	10.3286 ug/L	99
76)	m p-Xylene	11.98	106	504813	20.0206 ug/L	97
77)	o-Xylene	12.53	106	268107	10.5208 ug/L	100
78)	Styrene	12.54	104	444962	10.5040 ug/L	100
79)	Bromoform	12.77	173	99842	9.5830 ug/L	97
80)	Isopropylben	13.05	105	697264	11.0853 ug/L	99
81)	cyclohexanone	13.14	55	145624	167.0814 ug/L	97
84)	Bromobenzene	13.46	156	166936	9.8707 ug/L	99
85)	1122Tetrclta	13.44	83	172523	9.1757 ug/L	99
86)	123Triclproa	13.50	75	221730	9.0059 ug/L	100
87)	14dichloro2butene	13.52	53	49779	8.1616 ug/L	92
88)	n-Propylbenz	13.64	91	807407	11.1042 ug/L	99
89)	2chlorotolue	13.75	91	477508	10.2036 ug/L	99
90)	4chlorotolue	13.90	91	560878	10.3775 ug/L	99
91)	135Trimebenz	13.90	105	573054	10.4860 ug/L	100
92)	tbutylbenzen	14.37	119	509629	11.0777 ug/L	98
93)	124Trimetben	14.43	105	562798	10.4817 ug/L	99
94)	sbutylbenzen	14.68	105	723918	11.3875 ug/L	99
95)	13Diclorbenz	14.82	146	315422	10.0785 ug/L	99
96)	pIsopropylto	14.90	119	606442	11.0243 ug/L	100
97)	14dichlorobe	14.95	146	314993	9.9799 ug/L	99
98)	12dichlorobe	15.49	146	290565	9.8549 ug/L	98
99)	nButylbenzen	15.50	91	553995	11.0523 ug/L	99
100)	12dibromo3cl	16.58	157	31009	7.7447 ug/L	98
101)	135Trichlorobenzene	16.91	180	214455	10.2640 ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\AUG0521\CCV-LCS1.D Vial: 2
Acq On : 5 Aug 2021 9:13 Operator: DGS-RLD
Sample : 194091,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 09:33:44 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	161078	9.6145	ug/L	98
103)	Hexachlorobu	17.97	225	92497	11.0732	ug/L	98
104)	Naphthalene	18.02	128	262888	6.9809	ug/L	100
105)	123Trichlben	18.33	180	138202	9.0928	ug/L	99

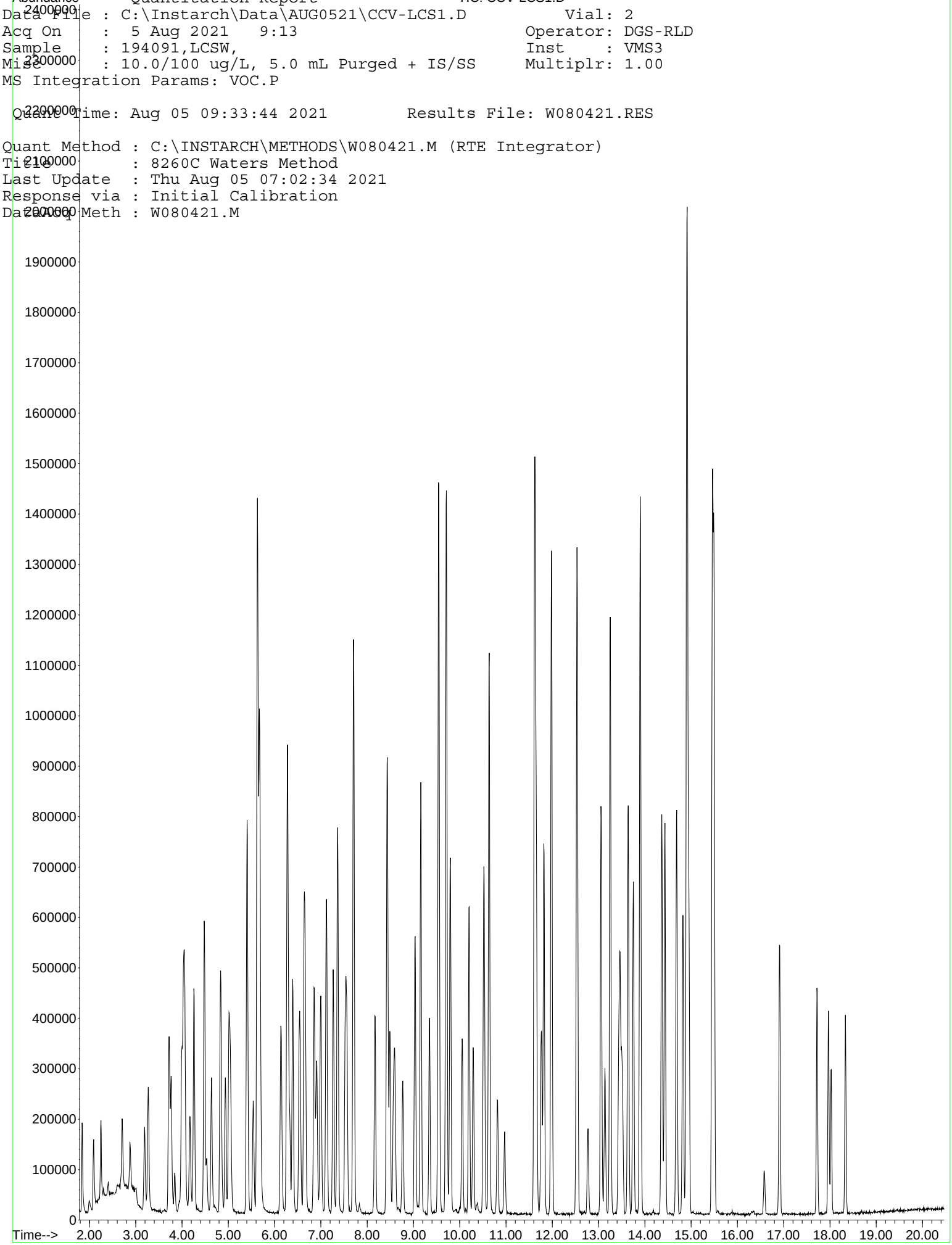
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCV-LCS1.D

Data File : C:\Instarch\Data\AUG0521\CCV-LCS1.D Vial: 2
Acq On : 5 Aug 2021 9:13 Operator: DGS-RLD
Sample : 194091,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 09:33:44 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\AUG0521\CCVF1.D Vial: 22
Acq On : 5 Aug 2021 19:14 Operator: DGS-RLD
Sample : 194091,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Aug 05 19:35:11 2021

Quant Method : C:\INSTARCH\METHODS\W080421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W080421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	95	0.00
2	PT	Dichlorodi	0.2438	0.2532	-3.86	93	0.00
3	PT	Chloromethan	0.2657	0.2469	7.08	92	0.00
4	PT	VinylChlorid	0.2629	0.2611	0.68	92	0.00
5	PT	Bromomethane	0.1660	0.1834	-10.48	100	0.00
6	PT	Chloroethane	0.1771	0.1750	1.19	93	0.00
7	T	Dichloroflmethane	0.3306	0.3158	4.48	92	0.00
8	PT	Trichlorofma	0.3561	0.3917	-10.00	95	0.00
9	T	Ethylether	0.2069	0.1860	10.10	90	0.00
10	T	dichlorotfluoroethan	0.2405	0.2447	-1.75	95	0.00
11	T	propyleneoxide	0.0452	0.0443	1.99	97	0.00
12	T	Acrolein	0.0292	0.0258#	11.64	87	0.00
13	PT	11dichlorthe	0.2220	0.2187	1.49	91	0.00
14	PT	Trichlorotfluoroeth	0.1926	0.2176	-12.98	97	0.00
15	PT	Acetone	0.0835	0.0691#	17.25	89	0.00
16	T	Iodomethane	0.2156	0.2126	1.39	93	0.00
17	PT	Carbon Dislf	0.5773	0.5667	1.84	92	0.00
18	T	allylchloride	0.3516	0.3177	9.64	86	0.00
19	PT	methylacetate	0.0756	0.0689#	8.86	97	0.00
20	PT	Methylchlorid	0.2752	0.2463	10.50	94	0.00
21	T	tbutylalcohol	0.0321	0.0307	4.36	96	0.00
22	T	Acrylonitrile	0.0919	0.0901	1.96	96	0.00
23	PT	t12dichlorte	0.2572	0.2381	7.43	90	0.00
24	PT	MtBE	0.7291	0.6731	7.68	93	0.00
25	T	Hexane	0.2936	0.3239	-10.32	93	0.00
26	PT	11dichlorota	0.4348	0.4120	5.24	92	0.00
27	T	Vinylacetate	0.4426	0.4280	3.30	94	0.00
28	T	chloroprene	0.3887	0.3967	-2.06	93	0.00
29	T	Diisopether	0.7391	0.6533	11.61	86	0.00
30	T	ETBE	0.7123	0.6639	6.79	90	0.00
31	T	22dichloropr	0.3827	0.3239	15.36	81	0.00
32	PT	c12dichlorte	0.2856	0.2668	6.58	92	0.00
33	PT	2Butanone	0.0346	0.0331#	4.34	95	0.00
34	T	propionitrile	0.0411	0.0391	4.87	96	0.00
35	T	Ethylacetate	0.0124	0.0124#	0.00	105	0.00
36	T	methacrylonitrile	0.1253	0.1188	5.19	95	0.00
37	T	Bromochlorma	0.1232	0.1210	1.79	97	0.00
38	T	Tetrahydofur	0.0833	0.0776	6.84	98	0.00
39	PT	Chloroform	0.4509	0.4373	3.02	95	0.00
40	PT	111trichlota	0.3995	0.3968	0.68	93	0.00
41	S	SURRDibrflma	0.2528	0.2565	-1.46	97	0.00
42	PT	Cyclohexane	0.3627	0.3944	-8.74	94	0.00
43	PT	Carbtetraclo	0.3345	0.3372	-0.81	94	0.00
44	T	11dicloprope	0.1250	0.1247	0.24	94	-0.01
45	S	SURR12DCAd4	0.0690	0.0691	-0.14	96	0.00
46	PT	Benzene	1.0031	0.9673	3.57	92	0.00
47	PT	12dichlorota	0.3545	0.3236	8.72	91	0.00
48	T	TAME	0.7401	0.6969	5.84	93	0.00

49	PT	trichloroete	0.2706	0.2569	5.06	94	0.00
50	PT	methylcyclohexane	0.4612	0.5183	-12.38	96	0.00
51	PT	12dicloropra	0.2704	0.2534	6.29	94	0.00
52	T	23Dicl1propene	0.4055	0.3807	6.12	93	0.00
53	T	Dibromometha	0.1624	0.1525	6.10	94	0.00
54	T	methylmethacrylate	0.2131	0.1909	10.42	93	0.00
55	T	14dioxane	0.0039	0.0038#	2.56	103	0.00
56	PT	Bromodiclrma	0.3608	0.3299	8.56	91	0.00
57	T	2Nitropropane	0.0979	0.0900	8.07	91	0.00
58	T	2CLEVE	0.1545	0.1542	0.19	94	0.00
59	PT	c13dicloproe	0.4335	0.3909	9.83	89	0.00
60	PT	4Meth2Pentan	0.2372	0.2219	6.45	95	0.00
61	S	SURRd8Tolule	1.0011	1.0139	-1.28	97	0.00
62	PT	Toluene	0.6504	0.6378	1.94	94	0.00
63	PT	t13Dicloprop	0.3966	0.3569	10.01	90	0.00
64	T	ethylmethacrylate	0.3585	0.3517	1.90	95	0.00
65	PT	112Triclotha	0.1999	0.1923	3.80	94	0.00
66	PT	Tetrachlorte	0.2776	0.2813	-1.33	94	0.00
67	T	13Diclorpropa	0.4189	0.3995	4.63	95	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	95	0.00
69	PT	2Hexanone	0.2227	0.2153	3.32	96	0.00
70	PT	Clorodibrmta	0.3321	0.3138	5.51	93	0.00
71	PT	12Dibrometha	0.3148	0.2944	6.48	94	0.00
72	PT	Chlorobenzen	0.8753	0.8528	2.57	94	0.00
73	T	1Clhexane	0.4529	0.4482	1.04	92	0.00
74	T	1112Tetclota	0.3196	0.3005	5.98	91	0.00
75	PT	Ethylbenzene	1.4943	1.4947	-0.03	94	0.00
76	PT	m p-Xylene	0.5807	0.5760	0.81	94	0.00
77	PT	o-Xylene	0.5869	0.5678	3.25	93	0.00
78	PT	Styrene	0.9755	0.9452	3.11	92	0.00
79	PT	Bromoform	0.2399	0.2168	9.63	89	0.00
80	PT	Isopropylben	1.4485	1.4674	-1.30	94	0.00
81	T	cyclohexanone	0.0201	0.0153#	23.88	80	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	95	0.00
83	S	SURR4BrFBenz	0.9610	0.9454	1.62	92	0.00
84	T	Bromobenzene	0.6663	0.6492	2.57	93	0.00
85	PT	1122Tetrclta	0.7408	0.7291	1.58	96	0.00
86	T	123Triclproa	0.9700	0.9368	3.42	94	-0.01
87	T	14dichloro2butene	0.2403	0.1985	17.39	81	0.00
88	T	n-Propylbenz	2.8647	3.0096	-5.06	93	0.00
89	T	2chlorotolue	1.8438	1.8098	1.84	92	0.00
90	T	4chlorotolue	2.1294	2.1056	1.12	92	0.00
91	T	135Trimebenz	2.1531	2.1755	-1.04	92	0.00
92	T	tbutylbenzen	1.8125	1.8960	-4.61	93	0.00
93	T	124Trimetben	2.1154	2.1863	-3.35	93	0.00
94	T	sbutylbenzen	2.5046	2.7236	-8.74	95	0.00
95	PT	13Diclorbenz	1.2330	1.2247	0.67	95	0.00
96	T	pIsopropylto	2.1673	2.3039	-6.30	95	0.00
97	PT	14dichlorobe	1.2435	1.2281	1.24	92	0.00
98	PT	12dichlorobe	1.1616	1.1635	-0.16	98	0.00
99	T	nButylbenzen	1.9748	2.0555	-4.09	95	0.00
100	PT	12dibromo3cl	0.1577	0.1442	8.56	91	0.00
101	T	135Trichlorobenzene	0.8232	0.8348	-1.41	93	0.00
102	PT	124Trichlobe	0.6601	0.7044	-6.71	98	0.00
103	T	Hexachlorobu	0.3291	0.3477	-5.65	93	0.00
104	T	Naphthalene	1.2458	1.4468	-16.13	102	0.00
105	T	123Trichlben	0.5988	0.6414	-7.11	99	0.00

(#) = Out of Range SPCC's out = 3 CCC's out = 0

W080421.M Mon Aug 09 12:00:36 2021

Evaluate Continuing Calibration Report

Data File : C:\Instarch\Data\AUG0521\CCVF1.D Vial: 22
Acq On : 5 Aug 2021 19:14 Operator: DGS-RLD
Sample : 194091,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Aug 05 19:35:11 2021

Quant Method : C:\INSTARCH\METHODS\W080421.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W080421.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	95	0.00
2	PT	Dichlorodi	10.0000	9.4944	5.06	93	0.00
3	PT	Chloromethan	10.0000	9.2919	7.08	92	0.00
4	PT	VinylChlorid	10.0000	9.9298	0.70	92	0.00
5	PT	Bromomethane	10.0000	10.2678	-2.68	100	0.00
6	PT	Chloroethane	10.0000	9.8809	1.19	93	0.00
7	T	Dichloroflmethane	10.0000	9.5544	4.46	92	0.00
8	PT	Trichlorofma	10.0000	9.9560	0.44	95	0.00
9	T	Ethylether	10.0000	8.9879	10.12	90	0.00
10	T	dichlorotfluoroethan	10.0000	10.1749	-1.75	95	0.00
11	T	propyleneoxide	100.0000	98.1128	1.89	97	0.00
12	T	Acrolein	50.0000	44.0774	11.85	87	0.00
13	PT	11dichlorthe	10.0000	9.8525	1.48	91	0.00
14	PT	Trichlorotfluoroeth	20.0000	20.0695	-0.35	97	0.00
15	PT	Acetone	100.0000	86.8265	13.17	89	0.00
16	T	Iodomethane	20.0000	17.6769	11.62	93	0.00
17	PT	Carbon Dislf	20.0000	19.6348	1.83	92	0.00
18	T	allylchloride	20.0000	18.0693	9.65	86	0.00
19	PT	methylacetate	10.0000	9.1055	8.95	97	0.00
20	PT	Methylchlorid	10.0000	8.9509	10.49	94	0.00
21	T	tbutylalcohol	500.0000	487.4786	2.50	96	0.00
22	T	Acrylonitrile	50.0000	49.0463	1.91	96	0.00
23	PT	t12dichlorte	10.0000	9.2566	7.43	90	0.00
24	PT	MtBE	10.0000	9.2317	7.68	93	0.00
25	T	Hexane	20.0000	19.3367	3.32	93	0.00
26	PT	11dichlorota	10.0000	9.4765	5.24	92	0.00
27	T	Vinylacetate	100.0000	103.1535	-3.15	94	0.00
28	T	chloroprene	20.0000	20.4126	-2.06	93	0.00
29	T	Diisopether	10.0000	8.8385	11.62	86	0.00
30	T	ETBE	10.0000	9.3194	6.81	90	0.00
31	T	22dichloropr	10.0000	8.4642	15.36	81	0.00
32	PT	c12dichlorte	10.0000	9.3414	6.59	92	0.00
33	PT	2Butanone	100.0000	95.5354	4.46	95	0.00
34	T	propionitrile	100.0000	95.2037	4.80	96	0.00
35	T	Ethylacetate	50.0000	49.9167	0.17	105	0.00
36	T	methacrylonitrile	20.0000	18.9650	5.18	95	0.00
37	T	Bromochlorma	10.0000	9.8161	1.84	97	0.00
38	T	Tetrahydofur	100.0000	93.1425	6.86	98	0.00
39	PT	Chloroform	10.0000	9.6999	3.00	95	0.00
40	PT	111trichlota	10.0000	9.9309	0.69	93	0.00
41	S	SURRDibrflma	20.0000	20.2904	-1.45	97	0.00
42	PT	Cyclohexane	10.0000	9.6327	3.67	94	0.00
43	PT	Carbtetraclo	10.0000	10.0800	-0.80	94	0.00
44	T	11dicloprope	10.0000	9.9795	0.21	94	-0.01
45	S	SURR12DCAd4	20.0000	20.0277	-0.14	96	0.00
46	PT	Benzene	10.0000	9.6435	3.57	92	0.00
47	PT	12dichlorota	10.0000	9.1289	8.71	91	0.00
48	T	TAME	10.0000	9.4155	5.85	93	0.00

49	PT	trichloroete	10.0000	9.4950	5.05	94	0.00
50	PT	methylcyclohexane	10.0000	9.8608	1.39	96	0.00
51	PT	12dicloropra	10.0000	9.3718	6.28	94	0.00
52	T	23Dicl1propene	10.0000	9.3875	6.13	93	0.00
53	T	Dibromometha	10.0000	9.3940	6.06	94	0.00
54	T	methylmethacrylate	10.0000	8.9585	10.41	93	0.00
55	T	14dioxane	500.0000	495.5835	0.88	103	0.00
56	PT	Bromodiclrma	10.0000	9.1443	8.56	91	0.00
57	T	2Nitropropane	100.0000	91.9414	8.06	91	0.00
58	T	2CLEVE	50.0000	49.8921	0.22	94	0.00
59	PT	c13dicloproe	10.0000	9.0175	9.82	89	0.00
60	PT	4Meth2Pentan	100.0000	95.3237	4.68	95	0.00
61	S	SURRd8Tolule	20.0000	20.2552	-1.28	97	0.00
62	PT	Toluene	10.0000	9.8071	1.93	94	0.00
63	PT	t13Dicloprop	10.0000	8.9971	10.03	90	0.00
64	T	ethylmethacrylate	20.0000	19.6168	1.92	95	0.00
65	PT	112Triclotha	10.0000	9.6175	3.83	94	0.00
66	PT	Tetrachlorte	10.0000	10.1361	-1.36	94	0.00
67	T	13Diclorpropa	10.0000	9.5357	4.64	95	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	95	0.00
69	PT	2Hexanone	100.0000	96.6735	3.33	96	0.00
70	PT	Clorodibrmta	10.0000	9.4505	5.50	93	0.00
71	PT	12Dibrometha	10.0000	9.3519	6.48	94	0.00
72	PT	Chlorobenzen	10.0000	9.7439	2.56	94	0.00
73	T	1Clhexane	10.0000	9.8970	1.03	92	0.00
74	T	1112Tetclota	10.0000	9.4023	5.98	91	0.00
75	PT	Ethylbenzene	10.0000	10.0030	-0.03	94	0.00
76	PT	m p-Xylene	20.0000	19.8397	0.80	94	0.00
77	PT	o-Xylene	10.0000	9.6751	3.25	93	0.00
78	PT	Styrene	10.0000	9.6888	3.11	92	0.00
79	PT	Bromoform	10.0000	9.0368	9.63	89	0.00
80	PT	Isopropylben	10.0000	10.1302	-1.30	94	0.00
81	T	cyclohexanone	200.0000	152.1273	23.94	80	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	95	0.00
83	S	SURR4BrFBenz	20.0000	19.6762	1.62	92	0.00
84	T	Bromobenzene	10.0000	9.7433	2.57	93	0.00
85	PT	1122Tetrclta	10.0000	9.8428	1.57	96	0.00
86	T	123Triclproa	10.0000	9.6574	3.43	94	-0.01
87	T	14dichloro2butene	10.0000	8.2625	17.38	81	0.00
88	T	n-Propylbenz	10.0000	10.5056	-5.06	93	0.00
89	T	2chlorotolue	10.0000	9.8156	1.84	92	0.00
90	T	4chlorotolue	10.0000	9.8881	1.12	92	0.00
91	T	135Trimebenz	10.0000	10.1041	-1.04	92	0.00
92	T	tbutylbenzen	10.0000	10.4604	-4.60	93	0.00
93	T	124Trimetben	10.0000	10.3351	-3.35	93	0.00
94	T	sbutylbenzen	10.0000	10.8745	-8.74	95	0.00
95	PT	13Diclorbenz	10.0000	9.9326	0.67	95	0.00
96	T	pIsopropylto	10.0000	10.6303	-6.30	95	0.00
97	PT	14dichlorobe	10.0000	9.8756	1.24	92	0.00
98	PT	12dichlorobe	10.0000	10.0159	-0.16	98	0.00
99	T	nButylbenzen	10.0000	10.4083	-4.08	95	0.00
100	PT	12dibromo3cl	10.0000	9.1394	8.61	91	0.00
101	T	135Trichlorobenzene	10.0000	10.1406	-1.41	93	0.00
102	PT	124Trichlobe	10.0000	10.6719	-6.72	98	0.00
103	T	Hexachlorobu	10.0000	10.5636	-5.64	93	0.00
104	T	Naphthalene	10.0000	9.4395	5.60	102	0.00
105	T	123Trichlben	10.0000	10.7103	-7.10	99	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

W080421.M Mon Aug 09 12:01:08 2021

Quantitation Report

Data File : C:\Instarch\Data\AUG0521\CCVF1.D Vial: 22
Acq On : 5 Aug 2021 19:14 Operator: DGS-RLD
Sample : 194091,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 19:35:11 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.71	96	1103160	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	869849	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	486919	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	282936	20.290	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.27	102	76199	20.028	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100 %			
61) SURRd8Tolule	9.71	98	1118443	20.255	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 101 %			
83) SURR4BrFBenz	13.25	95	460345	19.676	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	139655	9.4944	ug/L	100
3) Chloromethan	2.10	50	136181	9.2919	ug/L	100
4) VinylChlorid	2.25	62	144015	9.9298	ug/L	92
5) Bromomethane	2.70	94	101163	10.2678	ug/L	98
6) Chloroethane	2.88	64	96547	9.8809	ug/L	95
7) Dichloroflmethane	3.19	67	174213	9.5544	ug/L	99
8) Trichlorofma	3.27	101	216073	9.9560	ug/L	99
9) Ethylether	3.71	59	102576	8.9879	ug/L	97
10) dichlorotfluoroethan	3.72	67	134951	10.1749	ug/L	97
11) propyleneoxide	3.77	58	244487	98.1128	ug/L	98
12) Acrolein	3.84	56	71092	44.0774	ug/L	96
13) 11dichlorthe	3.99	96	120636	9.8525	ug/L	98
14) Trichlorotfluoroeth	4.03	101	240029	20.0695	ug/L	99
15) Acetone	4.06	43	381355	86.8265	ug/L	98
16) Iodomethane	4.17	142	234534	17.6769	ug/L	99
17) Carbon Dislf	4.26	76	625200	19.6348	ug/L	100
18) allylchloride	4.48	41	350448	18.0693	ug/L	99
19) methylacetate	4.53	74	37994	9.1055	ug/L	98
20) Methylchlorid	4.63	84	135875	8.9509	ug/L	99
21) tbutylalcohol	4.83	59	846036	487.4786	ug/L	100
22) Acrylonitrile	4.94	53	248593	49.0463	ug/L	100
23) t12dichlorte	5.02	96	131325	9.2566	ug/L	98
24) MtBE	5.04	73	371270	9.2317	ug/L	99
25) Hexane	5.40	57	357320	19.3367	ug/L	99
26) 11dichlorota	5.54	63	227245	9.4765	ug/L	98
27) Vinylacetate	5.63	43	2360907	103.1535	ug/L	99
28) chloroprene	5.67	53	437626	20.4126	ug/L	99
29) Diisopether	5.68	45	360337	8.8385	ug/L	95
30) ETBE	6.14	59	366174	9.3194	ug/L	99
31) 22dichloropr	6.27	77	178666	8.4642	ug/L	99
32) c12dichlorte	6.27	96	147138	9.3414	ug/L	95
33) 2Butanone	6.29	72	182327	95.5354	ug/L	97
34) propionitrile	6.33	54	215812	95.2037	ug/L	99
35) Ethylacetate	6.40	88	34102	49.9167	ug/L #	84
36) methacrylonitrile	6.53	67	131069	18.9650	ug/L	99
37) Bromochlorma	6.55	128	66727	9.8161	ug/L	96
38) Tetrahydofur	6.64	42	427814	93.1425	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\AUG0521\CCVF1.D Vial: 22
Acq On : 5 Aug 2021 19:14 Operator: DGS-RLD
Sample : 194091,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 19:35:11 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	241223	9.6999	ug/L	98
40)	111trichlota	6.91	97	218853	9.9309	ug/L	99
42)	Cyclohexane	7.00	56	217556	9.6327	ug/L	98
43)	Carbtetraclo	7.13	119	185966	10.0800	ug/L	99
44)	11dicloprope	7.11	110	68798	9.9795	ug/L	99
46)	Benzene	7.36	78	533555	9.6435	ug/L	98
47)	12dichlorota	7.36	62	178494	9.1289	ug/L	99
48)	TAME	7.53	73	384376	9.4155	ug/L	99
49)	trichloroete	8.17	95	141724	9.4950	ug/L	98
50)	methylcyclohexane	8.43	83	285877	9.8608	ug/L	98
51)	12dicloropra	8.43	63	139772	9.3718	ug/L	97
52)	23Dicl1propene	8.49	75	209983	9.3875	ug/L	99
53)	Dibromometha	8.56	93	84140	9.3940	ug/L	98
54)	methylmethacrylate	8.59	69	105289	8.9585	ug/L	97
55)	14dioxane	8.61	88	105738	495.5835	ug/L	96
56)	Bromodiclrma	8.77	83	181963	9.1443	ug/L	99
57)	2Nitropropane	9.04	43	496554	91.9414	ug/L	97
58)	2CLEVE	9.16	63	425138	49.8921	ug/L	99
59)	c13dicloproe	9.35	75	215636	9.0175	ug/L	98
60)	4Meth2Pentan	9.55	43	1223791	95.3237	ug/L	100
62)	Toluene	9.80	92	351825	9.8071	ug/L	100
63)	t13Dicloprop	10.05	75	196839	8.9971	ug/L	100
64)	ethylmethacrylate	10.20	69	387945	19.6168	ug/L	98
65)	112Triclotha	10.29	83	106053	9.6175	ug/L	99
66)	Tetrachlorte	10.53	166	155187	10.1361	ug/L	98
67)	13Diclorpropa	10.52	76	220336	9.5357	ug/L	99
69)	2Hexanone	10.64	43	936233	96.6735	ug/L	100
70)	Clorodibrmta	10.82	129	136501	9.4505	ug/L	99
71)	12Dibrometha	10.97	107	128044	9.3519	ug/L	99
72)	Chlorobenzen	11.66	112	370919	9.7439	ug/L	100
73)	1Clhexane	11.64	91	194930	9.8970	ug/L	99
74)	1112Tetclota	11.77	131	130704	9.4023	ug/L	98
75)	Ethylbenzene	11.82	91	650094	10.0030	ug/L	100
76)	m p-Xylene	11.98	106	501049	19.8397	ug/L	100
77)	o-Xylene	12.53	106	246949	9.6751	ug/L	99
78)	Styrene	12.54	104	411083	9.6888	ug/L	99
79)	Bromoform	12.77	173	94301	9.0368	ug/L	98
80)	Isopropylben	13.06	105	638203	10.1302	ug/L	100
81)	cyclohexanone	13.14	55	132802	152.1273	ug/L	98
84)	Bromobenzene	13.47	156	158056	9.7433	ug/L	98
85)	1122Tetrclta	13.44	83	177514	9.8428	ug/L	100
86)	123Triclproa	13.49	75	228066	9.6574	ug/L	98
87)	14dichloro2butene	13.52	53	48338	8.2625	ug/L	98
88)	n-Propylbenz	13.64	91	732709	10.5056	ug/L	99
89)	2chlorotolue	13.75	91	440602	9.8156	ug/L	100
90)	4chlorotolue	13.90	91	512617	9.8881	ug/L	99
91)	135Trimebenz	13.90	105	529649	10.1041	ug/L	100
92)	tbutylbenzen	14.37	119	461589	10.4604	ug/L	99
93)	124Trimetben	14.43	105	532281	10.3351	ug/L	99
94)	sbutylbenzen	14.68	105	663098	10.8745	ug/L	99
95)	13Diclorbenz	14.82	146	298170	9.9326	ug/L	99
96)	pIsopropylto	14.90	119	560901	10.6303	ug/L	99
97)	14dichlorobe	14.95	146	298981	9.8756	ug/L	98
98)	12dichlorobe	15.49	146	283261	10.0159	ug/L	98
99)	nButylbenzen	15.50	91	500421	10.4083	ug/L	99
100)	12dibromo3cl	16.59	157	35100	9.1394	ug/L	91
101)	135Trichlorobenzene	16.91	180	203230	10.1406	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\AUG0521\CCVF1.D Vial: 22
Acq On : 5 Aug 2021 19:14 Operator: DGS-RLD
Sample : 194091,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 19:35:11 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.72	180	171498	10.6719	ug/L	97
103)	Hexachlorobu	17.97	225	84639	10.5636	ug/L	96
104)	Naphthalene	18.02	128	352245	9.4395	ug/L	100
105)	123Trichlben	18.34	180	156143	10.7103	ug/L	99

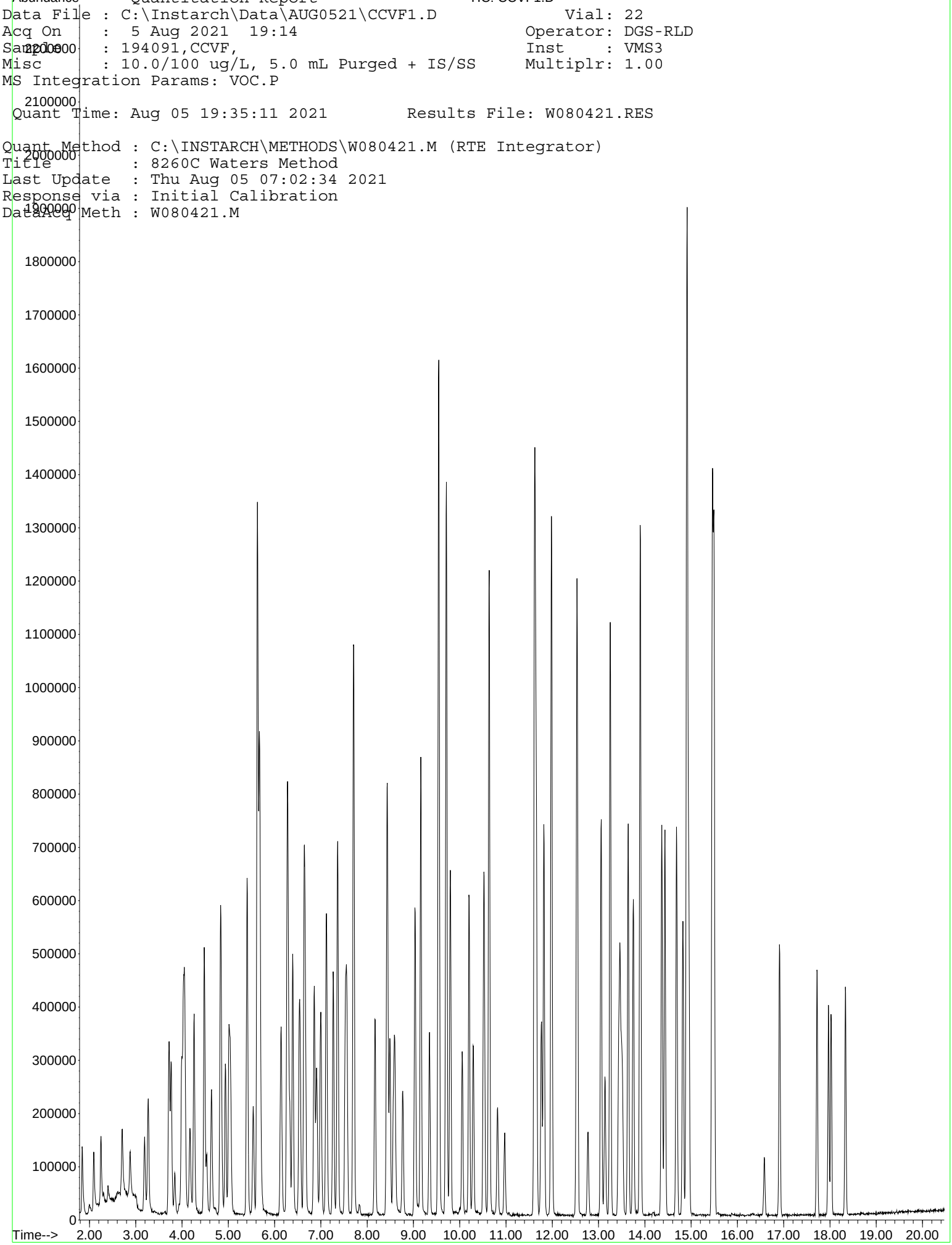
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCVF1.D

Data File : C:\Instarch\Data\AUG0521\CCVF1.D Vial: 22
Acq On : 5 Aug 2021 19:14 Operator: DGS-RLD
Sample : 194091,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 19:35:11 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



QC Check Standard Report

Sequence : C:\INSTARCH\PVOC4\Sequence\080421 - 194154.seq
User : **KMT**
Printed : Aug 10, 2021 08:52:32

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\080421 -\002.dat	194154,CCV,	Aug 10, 2021 08:52:31

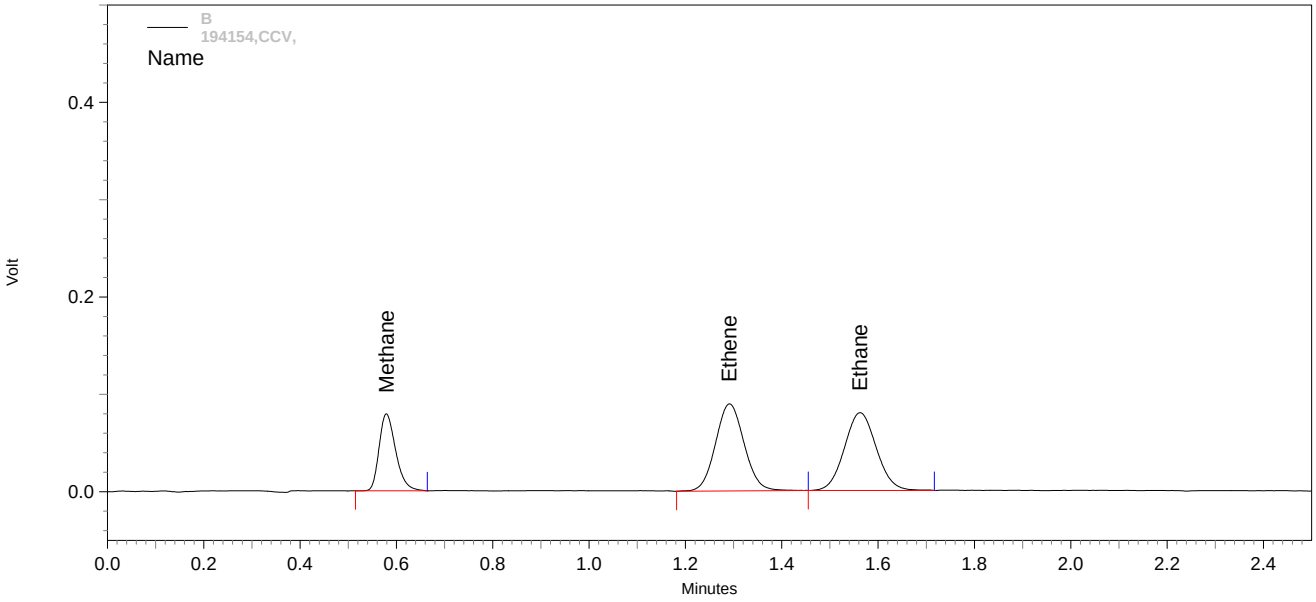
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	48.865	2.271	15.000	**Passed**
Ethene	50.000	52.142	4.284	15.000	**Passed**
Ethane	50.000	51.735	3.470	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\002.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,CCV,
Acquired: Aug 04, 2021 10:38:42
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.579**	**0.579**	**189454**	**48.865**	**ppmV**
2	**Ethene**	**1.291**	**1.291**	**369173**	**52.142**	**ppmV**
3	**Ethane**	**1.563**	**1.563**	**368203**	**51.735**	**ppmV**

QC Check Standard Report

Sequence : C:\INSTARCH\PVOC4\Sequence\080421 - 194154.seq
User : **KMT**
Printed : Aug 10, 2021 08:53:35

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\080421 -\017.dat	194154,CCV,	Aug 10, 2021 08:53:34

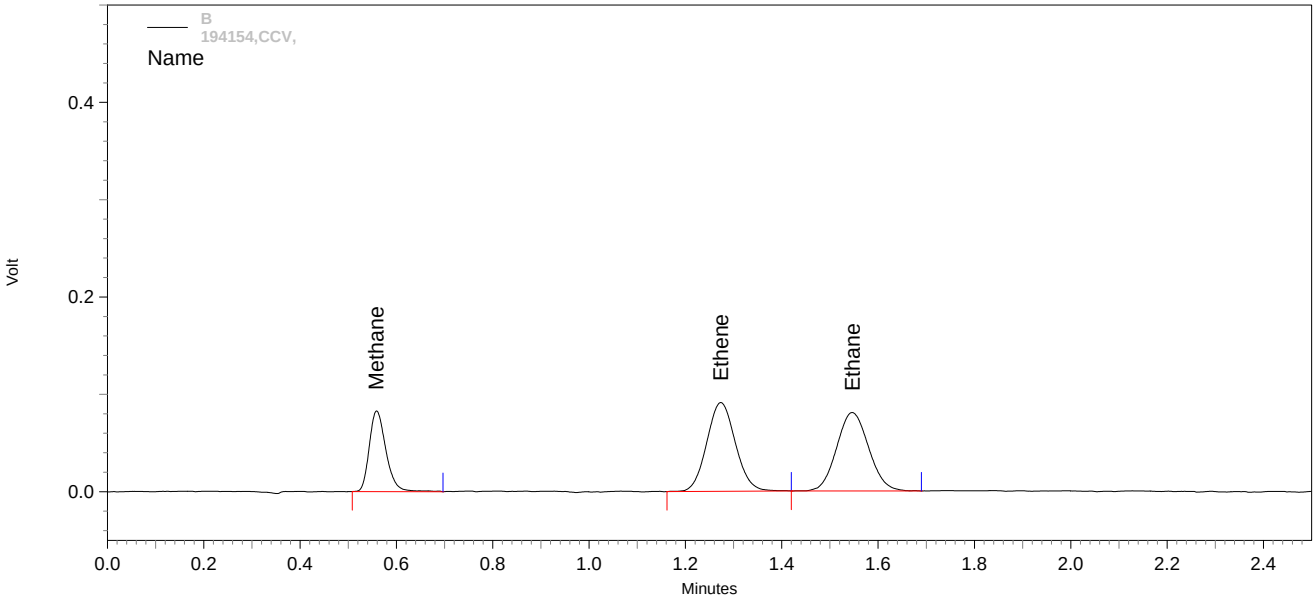
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	51.450	2.899	15.000	**Passed**
Ethene	50.000	53.263	6.526	15.000	**Passed**
Ethane	50.000	52.452	4.904	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\017.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,CCV,
Acquired: Aug 04, 2021 13:12:13
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



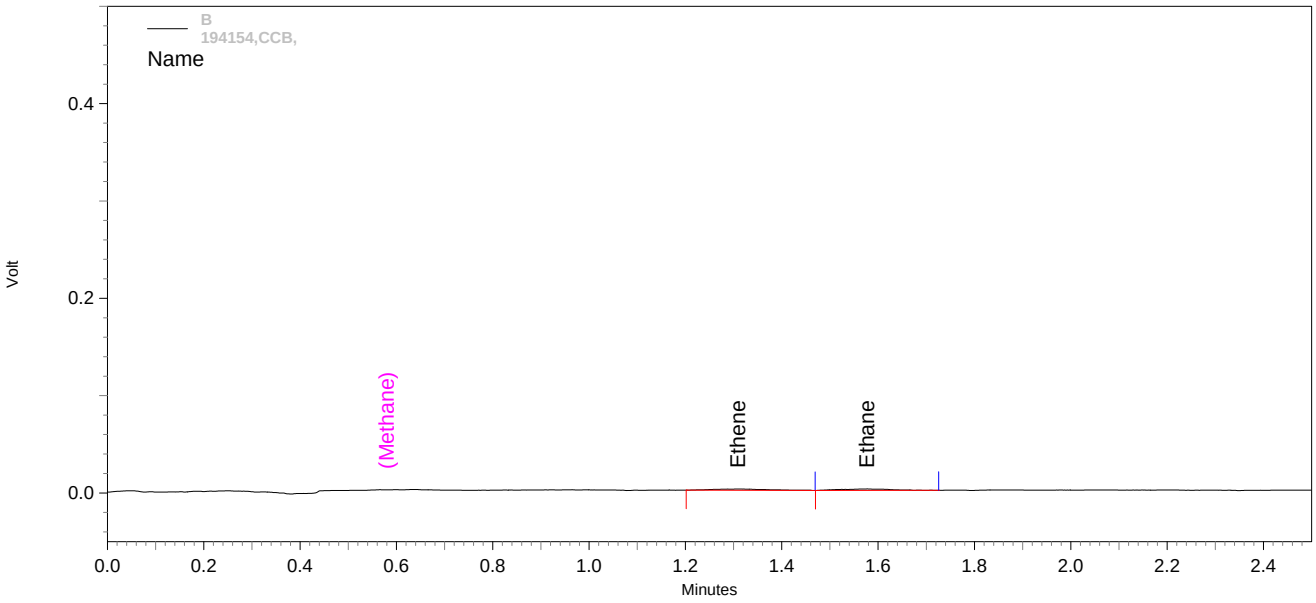
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.558**	**0.579**	**199445**	**51.450**	**ppmV**
2	**Ethene**	**1.273**	**1.291**	**377098**	**53.263**	**ppmV**
3	**Ethane**	**1.547**	**1.563**	**373277**	**52.452**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\018.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,CCB,
Acquired: Aug 04, 2021 13:15:46
File Desc. MEE Continuing Calibration BLANK - 1 mL Helium



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
	Methane		**0.579**		**0.000 BDL**	**ppmV**
1	**Ethene**	**1.308**	**1.291**	**10370**	**1.371**	**ppmV**
2	**Ethane**	**1.577**	**1.563**	**11271**	**1.274**	**ppmV**

QC Check Standard Report

Sequence : C:\INSTARCH\PVOC4\Sequence\080421 - 194154.seq
User : **KMT**
Printed : Aug 10, 2021 08:54:20

File	Sample ID	Acquired
C:\InStarch\PVOC4\Data\080421 -\027.dat	194154,CCV,	Aug 10, 2021 08:54:19

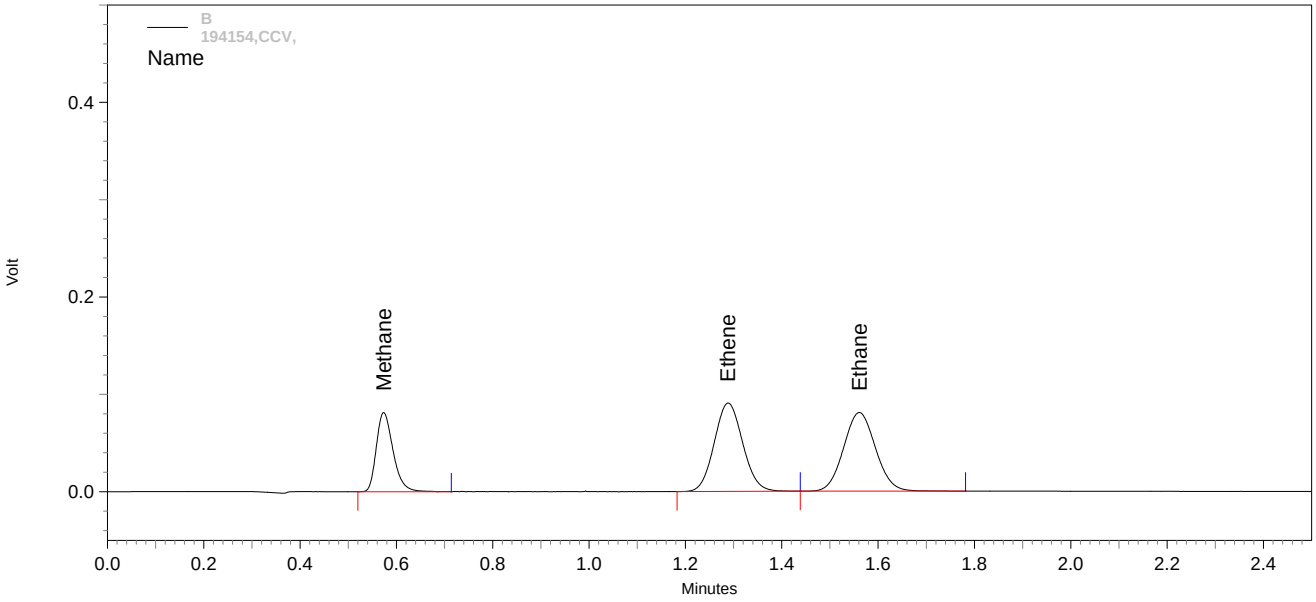
B

Compound	Expected Conc.	Actual Conc.	%RD Actual	%RD Limit	Status
Methane	50.000	50.909	1.817	15.000	**Passed**
Ethene	50.000	52.665	5.330	15.000	**Passed**
Ethane	50.000	52.362	4.725	15.000	**Passed**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\027.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,CCV,
Acquired: Aug 04, 2021 14:13:58
File Desc. MEE Continuing Calibration Verification - 50 ppmV - 250 uL of 200 ppmV Methane/Ethene/Ethane Gas Std Injected



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.573**	**0.579**	**197354**	**50.909**	**ppmV**
2	**Ethene**	**1.288**	**1.291**	**372869**	**52.665**	**ppmV**
3	**Ethane**	**1.561**	**1.563**	**372642**	**52.362**	**ppmV**

VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL
DOCUMENTS

Quantitation Report

Data File : C:\Instarch\Data\JUL2721\CCV-LCS2.D Vial: 26
Acq On : 28 Jul 2021 7:57 Operator: DGS-RLD
Sample : 193763,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 08:17:58 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1390788	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1090004	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	613866	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.87	113	349978	19.770	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.28	102	98178	19.420	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.72	98	1390397	20.404	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 102 %			
83) SURR4BrFBenz	13.26	95	550528	19.225	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 96 %			
Target Compounds						Qvalue
2) Dichlorodi	1.85	85	176750	10.3119	ug/L	100
3) Chloromethan	2.10	50	214624	9.5403	ug/L	99
4) VinylChlorid	2.25	62	243226	10.5207	ug/L	97
5) Bromomethane	2.72	94	129232	9.3437	ug/L	97
6) Chloroethane	2.88	64	164132	10.4026	ug/L	98
7) Dichloroflmethane	3.20	67	235554	10.2946	ug/L	99
8) Trichlorofma	3.28	101	256103	10.4471	ug/L	98
9) Ethylether	3.72	59	144509	10.3106	ug/L	98
10) dichlorotfluoroethan	3.73	67	182455	10.9073	ug/L	99
11) propyleneoxide	3.77	58	365061	95.7125	ug/L	98
12) Acrolein	3.85	56	43624	37.1750	ug/L	96
13) 11dichlorthe	4.00	96	157411	11.1279	ug/L	97
14) Trichlorotfluoroeth	4.04	101	317991	21.1369	ug/L	100
15) Acetone	4.07	43	505467	94.1798	ug/L	97
16) Iodomethane	4.18	142	220497	12.3618	ug/L	97
17) Carbon Dislf	4.27	76	875763	22.7073	ug/L	100
18) allylchloride	4.49	41	540540	22.2933	ug/L	98
19) methylacetate	4.53	74	41991	8.6435	ug/L	98
20) Methylchlorid	4.64	84	181102	10.0359	ug/L	99
21) tbutylalcohol	4.85	59	650071	419.5423	ug/L	100
22) Acrylonitrile	4.95	53	321491	46.3595	ug/L	98
23) t12dichlorte	5.02	96	169861	10.3805	ug/L	95
24) MtBE	5.05	73	418521	9.7779	ug/L	100
25) Hexane	5.41	57	597748	23.1653	ug/L	99
26) 11dichlorota	5.54	63	309727	10.4887	ug/L	98
27) Vinylacetate	5.64	43	3025060	105.3927	ug/L	100
28) chloroprene	5.68	53	613654	22.4372	ug/L	99
29) Diisopether	5.70	45	571107	10.5591	ug/L	95
30) ETBE	6.15	59	429948	10.1512	ug/L	99
31) 22dichloropr	6.29	77	231015	11.9017	ug/L	100
32) c12dichlorte	6.28	96	192988	10.3507	ug/L	96
33) 2Butanone	6.30	72	204505	86.1570	ug/L	98
34) propionitrile	6.34	54	270020	89.1177	ug/L	99
35) Ethylacetate	6.40	88	36035	44.1946	ug/L	96
36) methacrylonitrile	6.54	67	155855	18.5102	ug/L	99
37) Bromochlorma	6.57	128	85514	10.0246	ug/L	95
38) Tetrahydofur	6.65	42	531937	88.4249	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL2721\CCV-LCS2.D Vial: 26
Acq On : 28 Jul 2021 7:57 Operator: DGS-RLD
Sample : 193763,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 08:17:58 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.68	83	304274	10.1641	ug/L	98
40)	111trichlota	6.92	97	244032	10.7525	ug/L	98
42)	Cyclohexane	7.00	56	308464	10.1265	ug/L	98
43)	Carbtetraclo	7.13	119	198125	10.3092	ug/L	99
44)	11dicloprope	7.13	110	86461	10.4108	ug/L	98
46)	Benzene	7.37	78	710516	10.5580	ug/L	99
47)	12dichlorota	7.37	62	227014	9.5551	ug/L	97
48)	TAME	7.54	73	416582	10.2148	ug/L	98
49)	trichloroete	8.18	95	174213	10.0261	ug/L	98
50)	methylcyclohexane	8.44	83	382047	10.6962	ug/L	97
51)	12dicloropra	8.43	63	190909	10.3449	ug/L	91
52)	23Dicl1propene	8.50	75	267326	10.3099	ug/L	97
53)	Dibromometha	8.57	93	101296	9.4350	ug/L	98
54)	methylmethacrylate	8.60	69	115895	8.9782	ug/L	99
55)	14dioxane	8.62	88	97064	377.3255	ug/L	95
56)	Bromodiclrma	8.78	83	221215	10.3109	ug/L	99
57)	2Nitropropane	9.04	43	452942	103.2462	ug/L	99
58)	2CLEVE	9.16	63	578101	52.4412	ug/L	99
59)	c13dicloproe	9.35	75	265730	10.5848	ug/L	99
60)	4Meth2Pentan	9.55	43	1500123	94.6088	ug/L	99
62)	Toluene	9.80	92	457918	10.4734	ug/L	100
63)	t13Dicloprop	10.06	75	221277	10.6046	ug/L	100
64)	ethylmethacrylate	10.21	69	418617	19.6138	ug/L	99
65)	112Triclotha	10.30	83	134048	9.7689	ug/L	97
66)	Tetrachlorte	10.54	166	193311	10.7176	ug/L	99
67)	13Diclorpropa	10.53	76	274644	10.0669	ug/L	97
69)	2Hexanone	10.64	43	1121448	91.2402	ug/L	99
70)	Clorodibrmta	10.83	129	153421	9.6824	ug/L	97
71)	12Dibrometha	10.98	107	145275	9.2723	ug/L	99
72)	Chlorobenzen	11.66	112	495761	10.3108	ug/L	99
73)	1Clhexane	11.65	91	256894	10.9583	ug/L	98
74)	1112Tetclota	11.77	131	147857	10.1419	ug/L	98
75)	Ethylbenzene	11.83	91	822294	10.6535	ug/L	99
76)	m p-Xylene	11.99	106	645562	21.1647	ug/L	97
77)	o-Xylene	12.54	106	309368	10.1968	ug/L	98
78)	Styrene	12.55	104	514741	10.4703	ug/L	100
79)	Bromoform	12.78	173	93712	9.0850	ug/L	97
80)	Isopropylben	13.06	105	797367	11.3017	ug/L	99
81)	cyclohexanone	13.15	55	152981	157.1094	ug/L	99
84)	Bromobenzene	13.47	156	186369	9.0869	ug/L	98
85)	1122Tetrclta	13.44	83	211800	8.9662	ug/L	99
86)	123Triclproa	13.51	75	232773	8.2494	ug/L	99
87)	14dichloro2butene	13.53	53	46552	7.4207	ug/L	96
88)	n-Propylbenz	13.65	91	939207	10.3824	ug/L	99
89)	2chlorotolue	13.76	91	560344	10.0804	ug/L	98
90)	4chlorotolue	13.91	91	652376	10.3341	ug/L	99
91)	135Trimebenz	13.90	105	645412	10.2744	ug/L	99
92)	tbutylbenzen	14.37	119	551186	10.3966	ug/L	96
93)	124Trimetben	14.44	105	650139	10.6907	ug/L	97
94)	sbutylbenzen	14.69	105	831628	10.9902	ug/L	99
95)	13Diclorbenz	14.83	146	367039	9.8088	ug/L	99
96)	pIsopropylto	14.91	119	711905	11.1516	ug/L	99
97)	14dichlorobe	14.96	146	388044	9.9283	ug/L	99
98)	12dichlorobe	15.50	146	353349	9.8443	ug/L	98
99)	nButylbenzen	15.50	91	673261	11.5632	ug/L	100
100)	12dibromo3cl	16.59	157	31806	8.3665	ug/L	91
101)	135Trichlorobenzene	16.92	180	239274	10.4534	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL2721\CCV-LCS2.D Vial: 26
Acq On : 28 Jul 2021 7:57 Operator: DGS-RLD
Sample : 193763,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 08:17:58 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

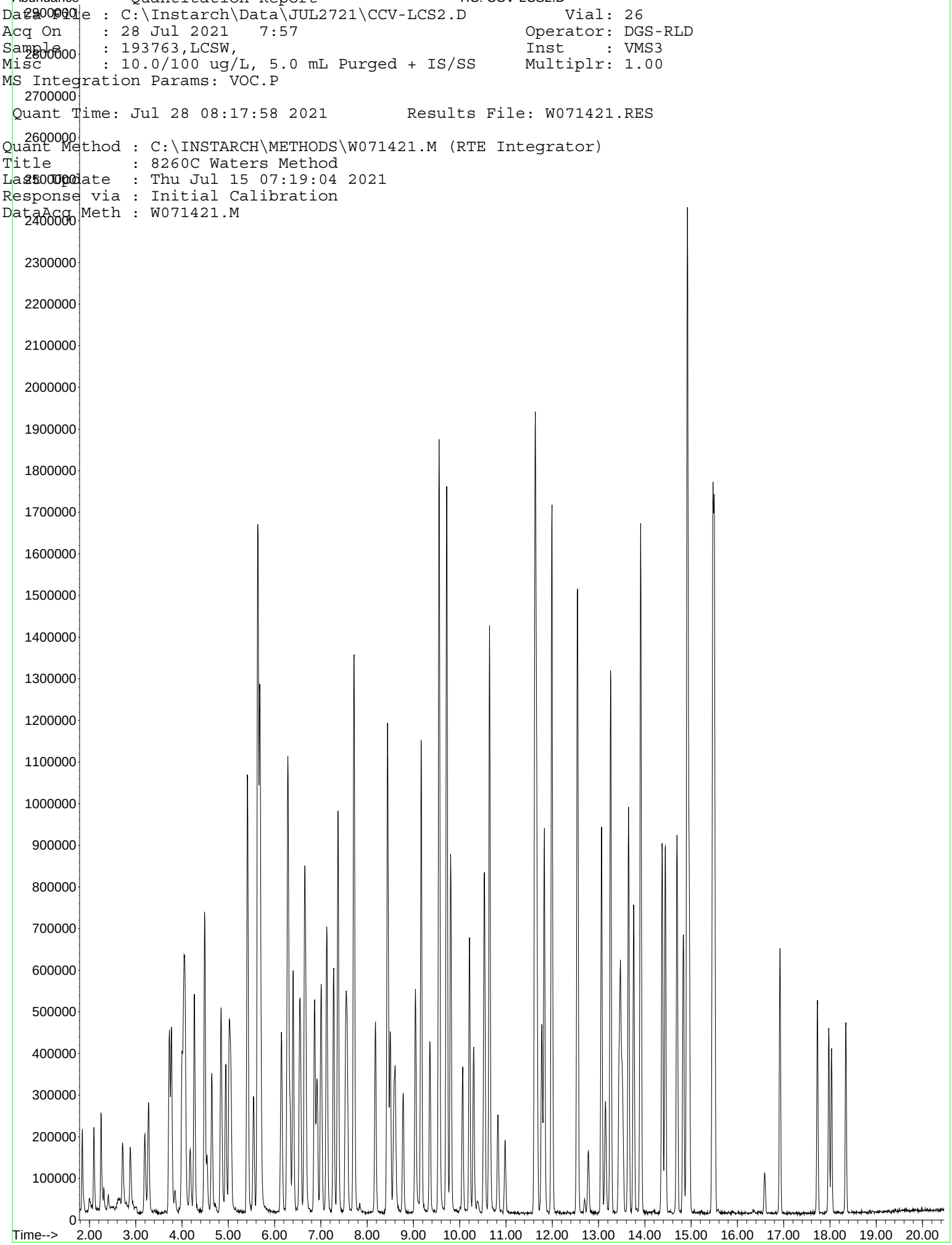
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.73	180	178869	9.6558	ug/L	99
103)	Hexachlorobu	17.98	225	97967	11.2692	ug/L	97
104)	Naphthalene	18.03	128	359909	7.5156	ug/L	99
105)	123Trichlben	18.34	180	158660	9.4220	ug/L	94

(#) = qualifier out of range (m) = manual integration

Data File : C:\Instarch\Data\JUL2721\CCV-LCS2.D Vial: 26
Acq On : 28 Jul 2021 7:57 Operator: DGS-RLD
Sample : 193763,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 08:17:58 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\MB2-CCB1.D Vial: 28
Acq On : 28 Jul 2021 8:57 Operator: DGS-RLD
Sample : 193763,MBW, Inst : VMS3
Misc : pH<2, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 09:17:47 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1286099	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1014476	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	518654	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	330400	20.183	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.28	102	91259	19.521	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98 %			
61) SURRd8Tolule	9.72	98	1265771	20.087	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %			
83) SURR4BrFBenz	13.26	95	480333	19.853	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 99 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.86	64	12352	0.8466	ug/L #	43
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	12780	N.D.		
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.27	76	5843	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.86	59	3475	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.67	42	7136	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\MB2-CCB1.D Vial: 28
Acq On : 28 Jul 2021 8:57 Operator: DGS-RLD
Sample : 193763,MBW, Inst : VMS3
Misc : pH<2, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 09:17:47 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.		
40)	111trichlota	0.00	97	0	N.D.		
42)	Cyclohexane	0.00	56	0	N.D.		
43)	Carbtetraclo	0.00	119	0	N.D.		
44)	11dicloprope	0.00	110	0	N.D.		
46)	Benzene	0.00	78	0	N.D.		
47)	12dichlorota	0.00	62	0	N.D.		
48)	TAME	0.00	73	0	N.D.		
49)	trichloroete	0.00	95	0	N.D.		
50)	methylcyclohexane	0.00	83	0	N.D.		
51)	12dicloropra	0.00	63	0	N.D.		
52)	23Dicl1propene	0.00	75	0	N.D.		
53)	Dibromometha	0.00	93	0	N.D.		
54)	methylmethacrylate	0.00	69	0	N.D.		
55)	14dioxane	0.00	88	0	N.D.		
56)	Bromodiclrma	0.00	83	0	N.D.		
57)	2Nitropropane	0.00	43	0	N.D.		
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	0.00	75	0	N.D.		
60)	4Meth2Pentan	9.56	43	2996	N.D.		
62)	Toluene	9.81	92	6098	N.D.		
63)	t13Dicloprop	0.00	75	0	N.D.		
64)	ethylmethacrylate	0.00	69	0	N.D.		
65)	112Triclotha	0.00	83	0	N.D.		
66)	Tetrachlorte	0.00	166	0	N.D.		
67)	13Diclorpropa	0.00	76	0	N.D.		
69)	2Hexanone	10.64	43	2654	N.D.		
70)	Clorodibrmta	0.00	129	0	N.D.		
71)	12Dibrometha	0.00	107	0	N.D.		
72)	Chlorobenzen	11.66	112	57191	1.2780	ug/L	84
73)	1Clhexane	11.63	91	2717	N.D.		
74)	1112Tetclota	0.00	131	0	N.D.		
75)	Ethylbenzene	0.00	91	0	N.D.		
76)	m p-Xylene	0.00	106	0	N.D.		
77)	o-Xylene	0.00	106	0	N.D.		
78)	Styrene	0.00	104	0	N.D.		
79)	Bromoform	0.00	173	0	N.D.		
80)	Isopropylben	0.00	105	0	N.D.		
81)	cyclohexanone	0.00	55	0	N.D.		
84)	Bromobenzene	0.00	156	0	N.D.		
85)	1122Tetrclta	0.00	83	0	N.D.		
86)	123Triclproa	0.00	75	0	N.D.		
87)	14dichloro2butene	0.00	53	0	N.D.		
88)	n-Propylbenz	0.00	91	0	N.D.		
89)	2chlorotolue	0.00	91	0	N.D.		
90)	4chlorotolue	0.00	91	0	N.D.		
91)	135Trimebenz	0.00	105	0	N.D.		
92)	tbutylbenzen	0.00	119	0	N.D.		
93)	124Trimetben	0.00	105	0	N.D.		
94)	sbutylbenzen	0.00	105	0	N.D.		
95)	13Diclorbenz	0.00	146	0	N.D.		
96)	pIsopropylto	0.00	119	0	N.D.		
97)	14dichlorobe	14.95	146	4909	N.D.		
98)	12dichlorobe	15.47	146	3443	N.D.		
99)	nButylbenzen	15.50	91	2536	N.D.		
100)	12dibromo3cl	0.00	157	0	N.D.		
101)	135Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\JUL2721\MB2-CCB1.D Vial: 28
Acq On : 28 Jul 2021 8:57 Operator: DGS-RLD
Sample : 193763,MBW, Inst : VMS3
Misc : pH<2, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 09:17:47 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

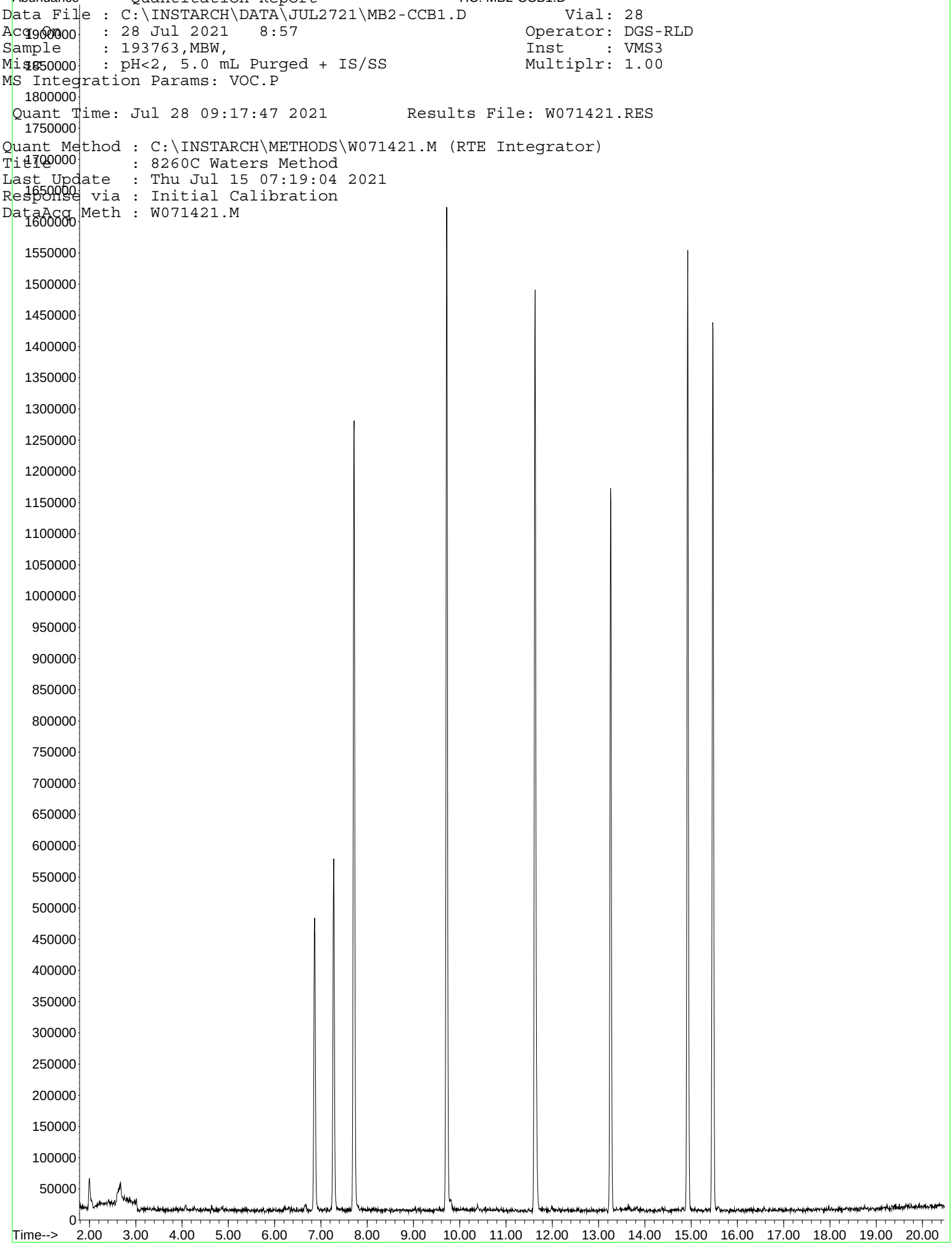
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.	
103) Hexachlorobu	0.00	225	0	N.D.	
104) Naphthalene	0.00	128	0	N.D.	
105) 123Trichlben	0.00	180	0	N.D.	

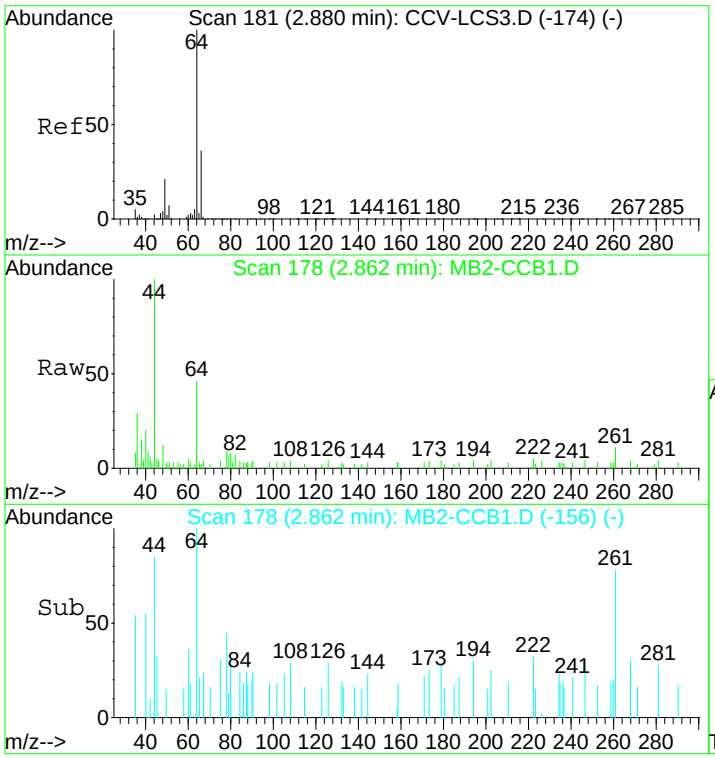
(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\JUL2721\MB2-CCB1.D Vial: 28
Acq On : 28 Jul 2021 8:57 Operator: DGS-RLD
Sample : 193763,MBW, Inst : VMS3
Misc : pH<2, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 09:17:47 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

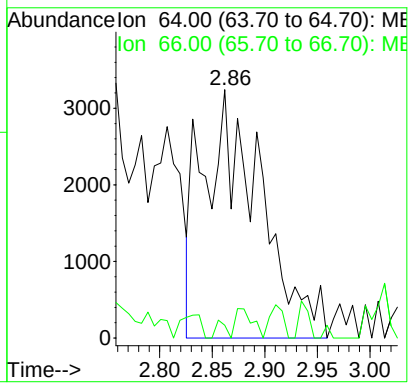




#6
Chloroethane
Concen: 0.85 ug/L
RT: 2.86 min Scan# 178
Delta R.T. -0.02 min
Lab File: MB2-CCB1.D
Acq: 28 Jul 2021 8:57

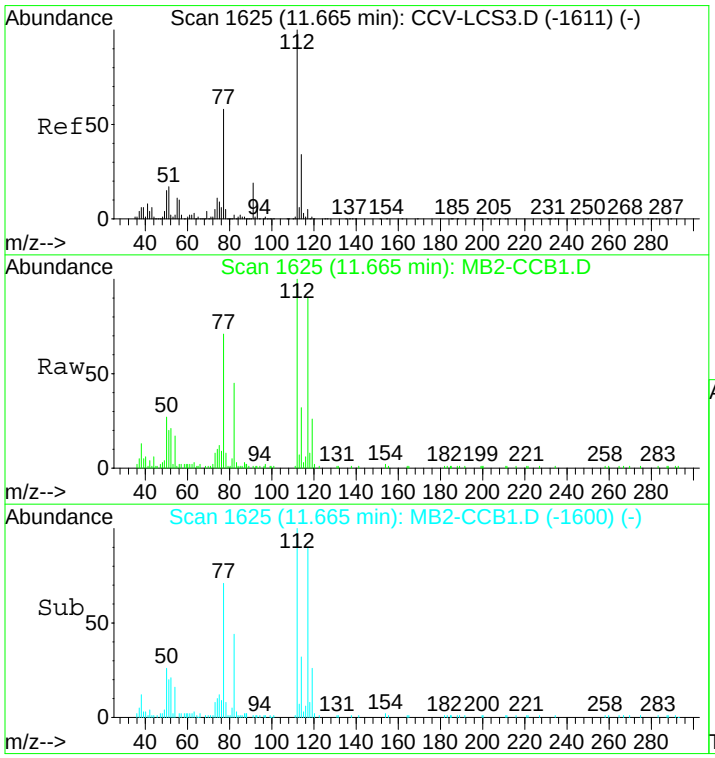
Tgt Ion: 64 Resp: 12352

Ion	Ratio	Lower	Upper
64	100		
66	0.0	11.2	51.2#



Negative Library Identification

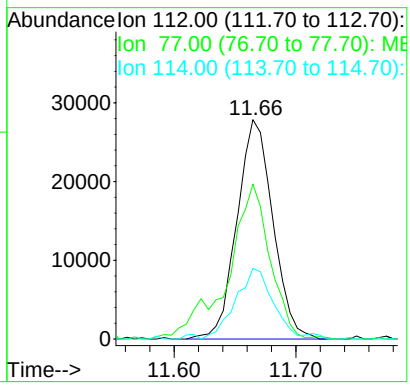
[redacted]



#72
Chlorobenzen
Concen: 1.28 ug/L
RT: 11.66 min Scan# 1625
Delta R.T. -0.00 min
Lab File: MB2-CCB1.D
Acq: 28 Jul 2021 8:57

Tgt Ion:112 Resp: 57191

Ion	Ratio	Lower	Upper
112	100		
77	83.1	44.2	84.2
114	34.2	14.2	54.2



Quantitation Report

Data File : C:\Instarch\Data\JUL2721\CCVF2-LCSD1.D Vial: 46
Acq On : 28 Jul 2021 17:58 Operator: DGS-RLD
Sample : 193761,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 18:19:17 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.72	96	1343124	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.63	117	1062333	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.93	152	587515	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	338626	19.808	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.28	102	94455	19.346	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 97 %			
61) SURRd8Tolule	9.72	98	1357912	20.634	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 103 %			
83) SURR4BrFBenz	13.26	95	538019	19.631	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	174614	10.5593	ug/L	99
3) Chloromethan	2.10	50	225749	10.3909	ug/L	98
4) VinylChlorid	2.25	62	247643	11.0918	ug/L	96
5) Bromomethane	2.70	94	132146	9.8935	ug/L	96
6) Chloroethane	2.88	64	173773	11.4045	ug/L	99
7) Dichloroflmethane	3.20	67	239263	10.8278	ug/L	99
8) Trichlorofma	3.27	101	246919	10.4295	ug/L	98
9) Ethylether	3.72	59	143461	10.5991	ug/L	98
10) dichlorotfluoroethan	3.73	67	182322	11.2861	ug/L	97
11) propyleneoxide	3.77	58	392515	106.5624	ug/L	99
12) Acrolein	3.85	56	76948	67.8996	ug/L	100
13) 11dichlorthe	4.00	96	153498	11.2364	ug/L	96
14) Trichlorotfluoroeth	4.04	101	300732	20.6936	ug/L	97
15) Acetone	4.07	43	570673	110.1024	ug/L	98
16) Iodomethane	4.18	142	260013	15.0946	ug/L	100
17) Carbon Dislf	4.27	76	846290	22.7218	ug/L	99
18) allylchloride	4.49	41	491917	21.0079	ug/L	99
19) methylacetate	4.54	74	48191	10.2717	ug/L	96
20) Methylchlorid	4.64	84	176169	10.1137	ug/L	98
21) tbutylalcohol	4.85	59	908273	606.9826	ug/L	100
22) Acrylonitrile	4.95	53	371931	55.5363	ug/L	98
23) t12dichlorte	5.02	96	170974	10.8193	ug/L	98
24) MtBE	5.05	73	434239	10.5051	ug/L	99
25) Hexane	5.42	57	504072	20.2207	ug/L	99
26) 11dichlorota	5.55	63	303596	10.6459	ug/L	99
27) Vinylacetate	5.64	43	2943870	106.3413	ug/L	99
28) chloroprene	5.68	53	605900	22.9399	ug/L	99
29) Diisopether	5.69	45	536470	10.2707	ug/L	97
30) ETBE	6.15	59	436044	10.6604	ug/L	99
31) 22dichloropr	6.28	77	174989	9.3352	ug/L	98
32) c12dichlorte	6.28	96	189735	10.5374	ug/L	94
33) 2Butanone	6.29	72	242521	105.7988	ug/L	98
34) propionitrile	6.34	54	322807	110.3204	ug/L	99
35) Ethylacetate	6.40	88	39507	50.1722	ug/L	96
36) methacrylonitrile	6.54	67	176830	21.7465	ug/L	93
37) Bromochlorma	6.57	128	82782	10.0487	ug/L	92
38) Tetrahydofur	6.65	42	630093	108.4585	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL2721\CCVF2-LCSD1.D Vial: 46
Acq On : 28 Jul 2021 17:58 Operator: DGS-RLD
Sample : 193761,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 18:19:17 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.67	83	297066	10.2755	ug/L	99
40)	111trichlota	6.92	97	237979	10.8579	ug/L	99
42)	Cyclohexane	7.00	56	302469	10.2811	ug/L	99
43)	Carbtetraclo	7.13	119	190268	10.2534	ug/L	99
44)	11dicloprope	7.13	110	80562	10.0448	ug/L	95
46)	Benzene	7.38	78	697158	10.7271	ug/L	100
47)	12dichlorota	7.38	62	229329	9.9951	ug/L	97
48)	TAME	7.54	73	416272	10.5694	ug/L	96
49)	trichloroete	8.18	95	172549	10.2827	ug/L	99
50)	methylcyclohexane	8.45	83	357108	10.3557	ug/L	98
51)	12dicloropra	8.44	63	195873	10.9905	ug/L	93
52)	23Dicl1propene	8.50	75	259258	10.3535	ug/L	98
53)	Dibromometha	8.57	93	103068	9.9407	ug/L	99
54)	methylmethacrylate	8.60	69	127767	10.2492	ug/L	100
55)	14dioxane	8.62	88	132757	534.3923	ug/L	98
56)	Bromodiclrma	8.78	83	213344	10.2969	ug/L	99
57)	2Nitropropane	9.05	43	459813	108.5319	ug/L	95
58)	2CLEVE	9.17	63	574720	53.9846	ug/L	99
59)	c13dicloproe	9.35	75	244588	10.0884	ug/L	97
60)	4Meth2Pentan	9.55	43	1757079	114.7469	ug/L	99
62)	Toluene	9.80	92	455494	10.7877	ug/L	99
63)	t13Dicloprop	10.06	75	207147	10.2797	ug/L	98
64)	ethylmethacrylate	10.21	69	456786	22.1616	ug/L	100
65)	112Triclotha	10.30	83	132949	10.0327	ug/L	99
66)	Tetrachlorte	10.54	166	188286	10.8094	ug/L	99
67)	13Diclorpropa	10.53	76	281345	10.6784	ug/L	98
69)	2Hexanone	10.64	43	1333302	111.3021	ug/L	100
70)	Clorodibrmta	10.83	129	153983	9.9710	ug/L	98
71)	12Dibrometha	10.98	107	155443	10.1798	ug/L	100
72)	Chlorobenzen	11.66	112	484426	10.3375	ug/L	98
73)	1Clhexane	11.65	91	242380	10.6085	ug/L	97
74)	1112Tetclota	11.77	131	137357	9.6671	ug/L	98
75)	Ethylbenzene	11.83	91	799597	10.6293	ug/L	99
76)	m p-Xylene	11.99	106	628595	21.1452	ug/L	99
77)	o-Xylene	12.54	106	298211	10.0851	ug/L	99
78)	Styrene	12.55	104	509195	10.6272	ug/L	100
79)	Bromoform	12.78	173	92983	9.2491	ug/L	96
80)	Isopropylben	13.06	105	753036	10.9514	ug/L	100
81)	cyclohexanone	13.15	55	169171	178.2616	ug/L	99
84)	Bromobenzene	13.47	156	190727	9.7165	ug/L	99
85)	1122Tetrclta	13.45	83	219419	9.7054	ug/L	98
86)	123Triclproa	13.51	75	245816	9.1024	ug/L	97
87)	14dichloro2butene	13.53	53	47778	7.9577	ug/L	98
88)	n-Propylbenz	13.65	91	910507	10.5166	ug/L	98
89)	2chlorotolue	13.76	91	544575	10.2361	ug/L	99
90)	4chlorotolue	13.92	91	628427	10.4012	ug/L	99
91)	135Trimebenz	13.91	105	630743	10.4913	ug/L	100
92)	tbutylbenzen	14.38	119	551194	10.8631	ug/L	99
93)	124Trimetben	14.44	105	633323	10.8813	ug/L	98
94)	sbutylbenzen	14.69	105	791434	10.9282	ug/L	99
95)	13Diclorbenz	14.83	146	358786	10.0182	ug/L	99
96)	pIsopropylto	14.91	119	658910	10.7844	ug/L	99
97)	14dichlorobe	14.96	146	368116	9.8409	ug/L	99
98)	12dichlorobe	15.50	146	338619	9.8570	ug/L	99
99)	nButylbenzen	15.50	91	595467	10.6858	ug/L	99
100)	12dibromo3cl	16.59	157	34216	9.4041	ug/L	97
101)	135Trichlorobenzene	16.92	180	213117	9.7282	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\JUL2721\CCVF2-LCSD1.D Vial: 46
Acq On : 28 Jul 2021 17:58 Operator: DGS-RLD
Sample : 193761,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 18:19:17 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	124Trichlobe	17.74	180	169939	9.5852	ug/L	96
103)	Hexachlorobu	17.98	225	88294	10.6121	ug/L	95
104)	Naphthalene	18.03	128	373839	8.1025	ug/L	99
105)	123Trichlben	18.34	180	155785	9.6662	ug/L	95

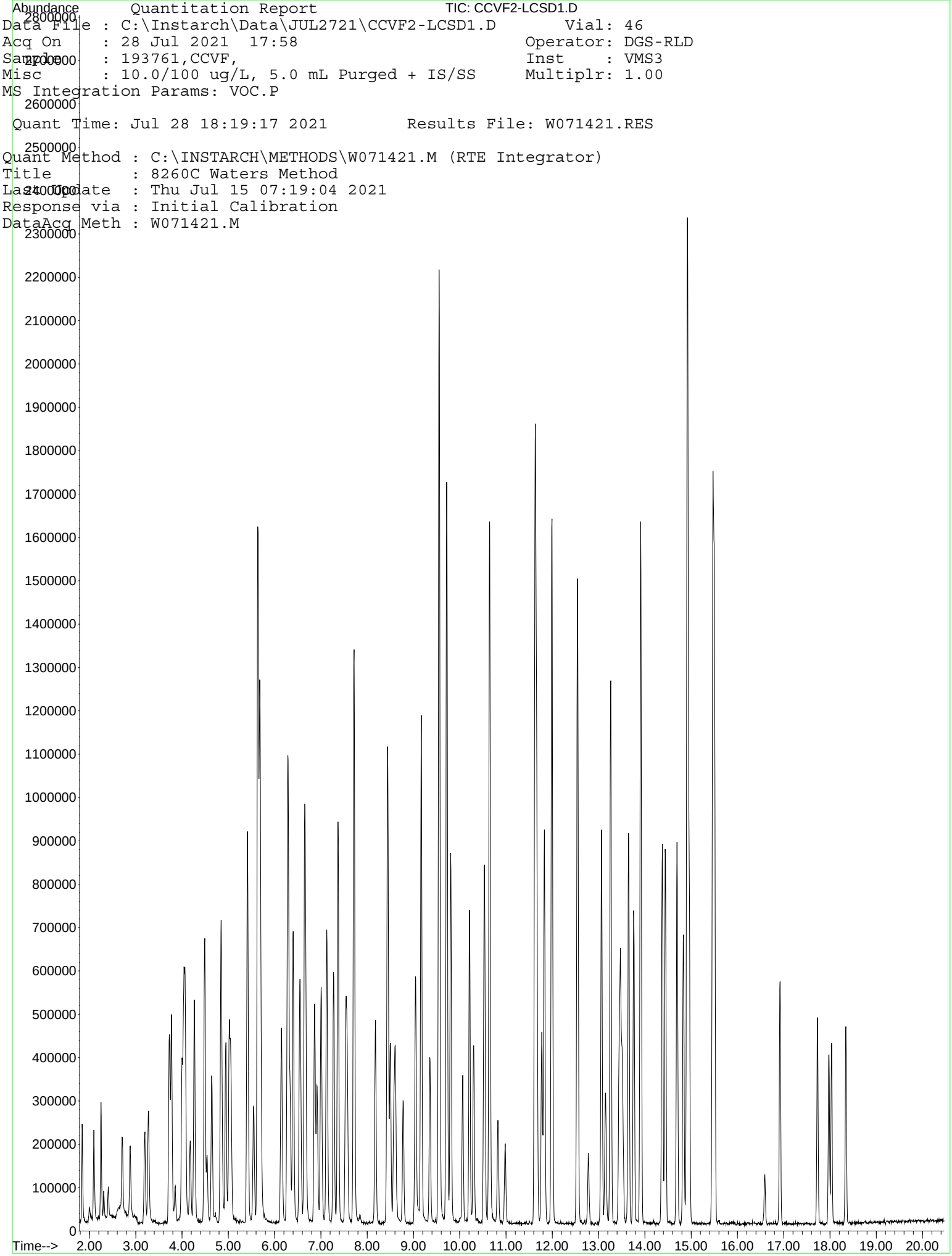
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCVF2-LCSD1.D

Data File : C:\Instarch\Data\JUL2721\CCVF2-LCSD1.D Vial: 46
Acq On : 28 Jul 2021 17:58 Operator: DGS-RLD
Sample : 193761,CCVF, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Jul 28 18:19:17 2021 Results File: W071421.RES

Quant Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Jul 15 07:19:04 2021
Response via : Initial Calibration
DataAcq Meth : W071421.M



Quantitation Report

Data File : C:\Instarch\Data\AUG0521\CCV-LCS1.D Vial: 2
Acq On : 5 Aug 2021 9:13 Operator: DGS-RLD
Sample : 194091,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 09:33:44 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1168844	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	868463	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.92	152	507636	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	303718	20.557	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 103	%		
45) SURR12DCAd4	7.27	102	80684	20.015	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100	%		
61) SURRd8Tolule	9.71	98	1160744	19.840	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 99	%		
83) SURR4BrFBenz	13.25	95	491617	20.155	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 101	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	159491	10.2224	ug/L	98
3) Chloromethan	2.09	50	152781	9.8388	ug/L	100
4) VinylChlorid	2.25	62	153665	9.9997	ug/L	98
5) Bromomethane	2.70	94	102915	9.8337	ug/L	99
6) Chloroethane	2.87	64	101107	9.7661	ug/L	96
7) Dichloroflmethane	3.19	67	193054	9.9927	ug/L	100
8) Trichlorofma	3.27	101	239983	10.4316	ug/L	99
9) Ethylether	3.71	59	110852	9.1673	ug/L	98
10) dichlorotfluoroethan	3.73	67	149399	10.6312	ug/L	98
11) propyleneoxide	3.77	58	229609	86.9643	ug/L	96
12) Acrolein	3.84	56	67585	39.5483	ug/L	94
13) 11dichlorthe	3.99	96	136052	10.4871	ug/L	97
14) Trichlorotfluoroeth	4.03	101	267561	21.0928	ug/L	100
15) Acetone	4.06	43	401847	86.3224	ug/L	98
16) Iodomethane	4.17	142	272331	19.1667	ug/L	99
17) Carbon Dislf	4.26	76	704116	20.8706	ug/L	99
18) allylchloride	4.48	41	410648	19.9834	ug/L	98
19) methylacetate	4.53	74	35980	8.1383	ug/L	99
20) Methylchlorid	4.63	84	148673	9.2436	ug/L	99
21) tbutylalcohol	4.83	59	709601	379.6909	ug/L	99
22) Acrylonitrile	4.94	53	232446	43.2834	ug/L	98
23) t12dichlorte	5.01	96	147622	9.8206	ug/L	98
24) MtBE	5.05	73	388158	9.1092	ug/L	100
25) Hexane	5.40	57	449422	22.9232	ug/L	100
26) 11dichlorota	5.54	63	247259	9.7316	ug/L	99
27) Vinylacetate	5.63	43	2526546	104.3773	ug/L	99
28) chloroprene	5.67	53	481426	21.1937	ug/L	99
29) Diisopether	5.68	45	414460	9.5948	ug/L	99
30) ETBE	6.14	59	397774	9.5547	ug/L	99
31) 22dichloropr	6.27	77	250237	11.1886	ug/L	99
32) c12dichlorte	6.27	96	158251	9.4824	ug/L	99
33) 2Butanone	6.29	72	168602	83.3792	ug/L	99
34) propionitrile	6.32	54	199324	82.9888	ug/L	98
35) Ethylacetate	6.39	88	30003	41.4489	ug/L	99
36) methacrylonitrile	6.53	67	124730	17.0336	ug/L	99
37) Bromochlorma	6.55	128	70245	9.7529	ug/L	96
38) Tetrahydofur	6.64	42	386188	79.3549	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\AUG0521\CCV-LCS1.D Vial: 2
Acq On : 5 Aug 2021 9:13 Operator: DGS-RLD
Sample : 194091,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 09:33:44 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	258385	9.8061	ug/L	99
40)	111trichlota	6.91	97	242001	10.3641	ug/L	99
42)	Cyclohexane	7.00	56	241923	10.0983	ug/L	98
43)	Carbtetraclo	7.13	119	208918	10.6877	ug/L	100
44)	11dicloprope	7.11	110	79330	10.8605	ug/L	97
46)	Benzene	7.36	78	575301	9.8137	ug/L	99
47)	12dichlorota	7.36	62	198665	9.5895	ug/L	100
48)	TAME	7.53	73	403765	9.3346	ug/L	99
49)	trichloroete	8.17	95	155639	9.8413	ug/L	99
50)	methylcyclohexane	8.43	83	322686	10.4913	ug/L	99
51)	12dicloropra	8.43	63	152523	9.6521	ug/L	96
52)	23Dicl1propene	8.49	75	230606	9.7302	ug/L	97
53)	Dibromometha	8.57	93	88691	9.3457	ug/L	96
54)	methylmethacrylate	8.59	69	105937	8.5071	ug/L	100
55)	14dioxane	8.61	88	92680	409.9716	ug/L	94
56)	Bromodiclrma	8.77	83	199464	9.4605	ug/L	99
57)	2Nitropropane	9.04	43	499871	87.3543	ug/L	100
58)	2CLEVE	9.16	63	431415	47.7836	ug/L	99
59)	c13dicloproe	9.35	75	245817	9.7019	ug/L	98
60)	4Meth2Pentan	9.54	43	1124753	81.6243	ug/L	99
62)	Toluene	9.80	92	378300	9.9525	ug/L	98
63)	t13Dicloprop	10.05	75	224897	9.7019	ug/L	98
64)	ethylmethacrylate	10.20	69	382841	18.2708	ug/L	100
65)	112Triclotha	10.29	83	108930	9.3233	ug/L	100
66)	Tetrachlorte	10.53	166	169606	10.4553	ug/L	98
67)	13Diclorpropa	10.52	76	227668	9.2993	ug/L	97
69)	2Hexanone	10.64	43	845036	87.3959	ug/L	100
70)	Clorodibrmta	10.82	129	147832	10.2513	ug/L	99
71)	12Dibrometha	10.97	107	132001	9.6562	ug/L	99
72)	Chlorobenzen	11.66	112	360434	9.4836	ug/L	99
73)	1Clhexane	11.63	91	202724	10.3091	ug/L	98
74)	1112Tetclota	11.77	131	133189	9.5963	ug/L	97
75)	Ethylbenzene	11.82	91	670181	10.3286	ug/L	99
76)	m p-Xylene	11.98	106	504813	20.0206	ug/L	97
77)	o-Xylene	12.53	106	268107	10.5208	ug/L	100
78)	Styrene	12.54	104	444962	10.5040	ug/L	100
79)	Bromoform	12.77	173	99842	9.5830	ug/L	97
80)	Isopropylben	13.05	105	697264	11.0853	ug/L	99
81)	cyclohexanone	13.14	55	145624	167.0814	ug/L	97
84)	Bromobenzene	13.46	156	166936	9.8707	ug/L	99
85)	1122Tetrclta	13.44	83	172523	9.1757	ug/L	99
86)	123Triclproa	13.50	75	221730	9.0059	ug/L	100
87)	14dichloro2butene	13.52	53	49779	8.1616	ug/L	92
88)	n-Propylbenz	13.64	91	807407	11.1042	ug/L	99
89)	2chlorotolue	13.75	91	477508	10.2036	ug/L	99
90)	4chlorotolue	13.90	91	560878	10.3775	ug/L	99
91)	135Trimebenz	13.90	105	573054	10.4860	ug/L	100
92)	tbutylbenzen	14.37	119	509629	11.0777	ug/L	98
93)	124Trimetben	14.43	105	562798	10.4817	ug/L	99
94)	sbutylbenzen	14.68	105	723918	11.3875	ug/L	99
95)	13Diclorbenz	14.82	146	315422	10.0785	ug/L	99
96)	pIsopropylto	14.90	119	606442	11.0243	ug/L	100
97)	14dichlorobe	14.95	146	314993	9.9799	ug/L	99
98)	12dichlorobe	15.49	146	290565	9.8549	ug/L	98
99)	nButylbenzen	15.50	91	553995	11.0523	ug/L	99
100)	12dibromo3cl	16.58	157	31009	7.7447	ug/L	98
101)	135Trichlorobenzene	16.91	180	214455	10.2640	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\Instarch\Data\AUG0521\CCV-LCS1.D Vial: 2
Acq On : 5 Aug 2021 9:13 Operator: DGS-RLD
Sample : 194091,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 09:33:44 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	161078	9.6145	ug/L	98
103) Hexachlorobu	17.97	225	92497	11.0732	ug/L	98
104) Naphthalene	18.02	128	262888	6.9809	ug/L	100
105) 123Trichlben	18.33	180	138202	9.0928	ug/L	99

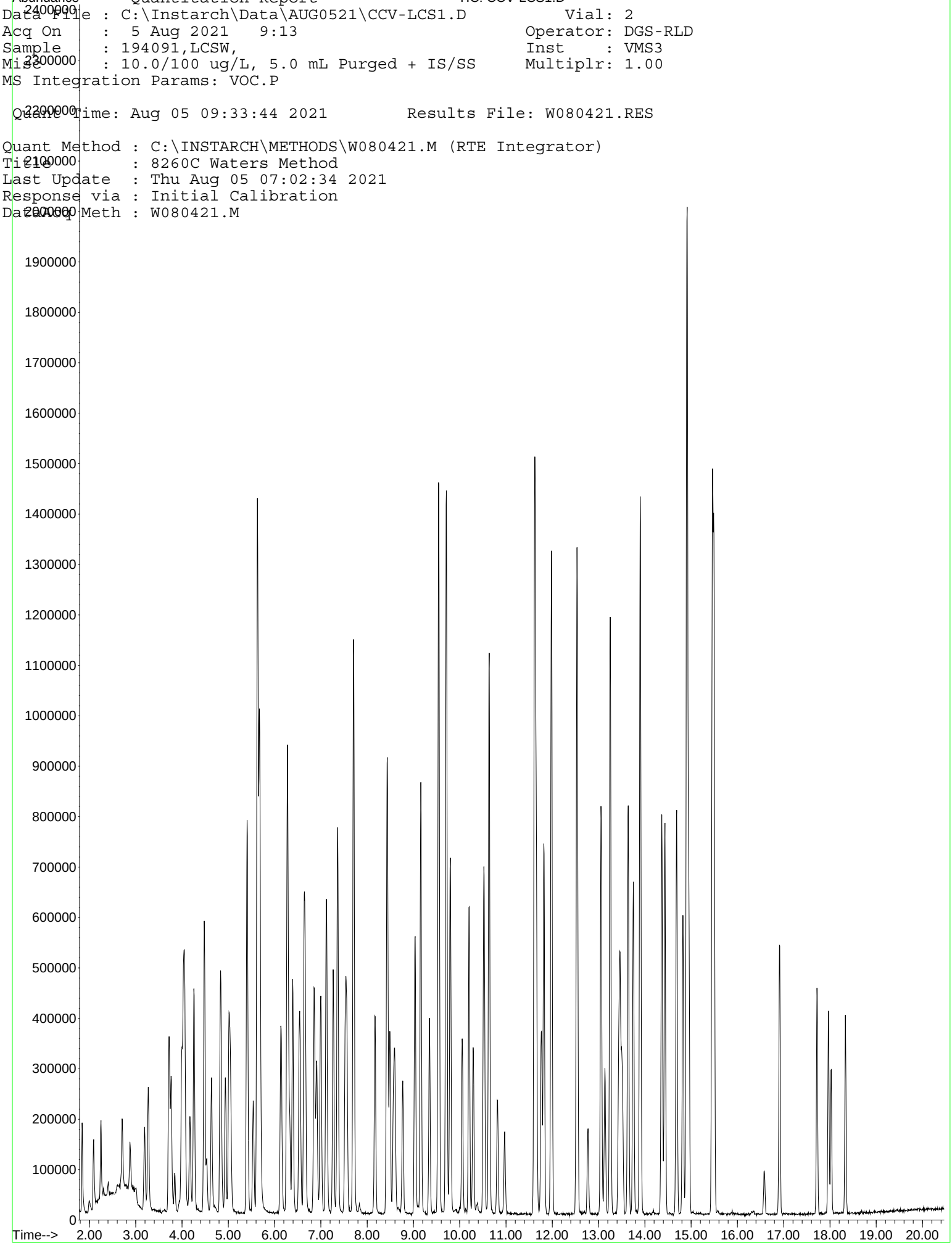
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: CCV-LCS1.D

Data File : C:\Instarch\Data\AUG0521\CCV-LCS1.D Vial: 2
Acq On : 5 Aug 2021 9:13 Operator: DGS-RLD
Sample : 194091,LCSW, Inst : VMS3
Misc : 10.0/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 09:33:44 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\MB1.D Vial: 4
Acq On : 5 Aug 2021 10:13 Operator: DGS-RLD
Sample : 194091,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 10:34:13 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1110985	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	870359	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	471581	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	283991	20.223	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101 %			
45) SURR12DCAd4	7.27	102	74768	19.513	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 98 %			
61) SURRd8Tolule	9.71	98	1109533	19.952	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100 %			
83) SURR4BrFBenz	13.25	95	463265	20.445	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 102 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	0.00	50	0	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	2.88	64	15628	1.5881	ug/L #	42
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	4.07	43	16571	N.D.		
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.26	76	5163	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.84	59	6785	Below Cal	#	56
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.65	42	6024	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\MB1.D Vial: 4
Acq On : 5 Aug 2021 10:13 Operator: DGS-RLD
Sample : 194091,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 10:34:13 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	9.56	43	6024	Below Cal #	38
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	10.64	43	8194	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.62	91	3065	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	11.82	91	2637	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	13.04	105	3755	N.D.	
81)	cyclohexanone	13.14	55	4523	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	13.64	91	5453	N.D.	
89)	2chlorotolue	13.64	91	5246	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	13.90	105	3001	N.D.	
92)	tbutylbenzen	14.37	119	3632	N.D.	
93)	124Trimetben	14.44	105	3257	N.D.	
94)	sbutylbenzen	14.68	105	5804	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	14.90	119	4787	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.50	91	6913	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\MB1.D Vial: 4
Acq On : 5 Aug 2021 10:13 Operator: DGS-RLD
Sample : 194091,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 10:34:13 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

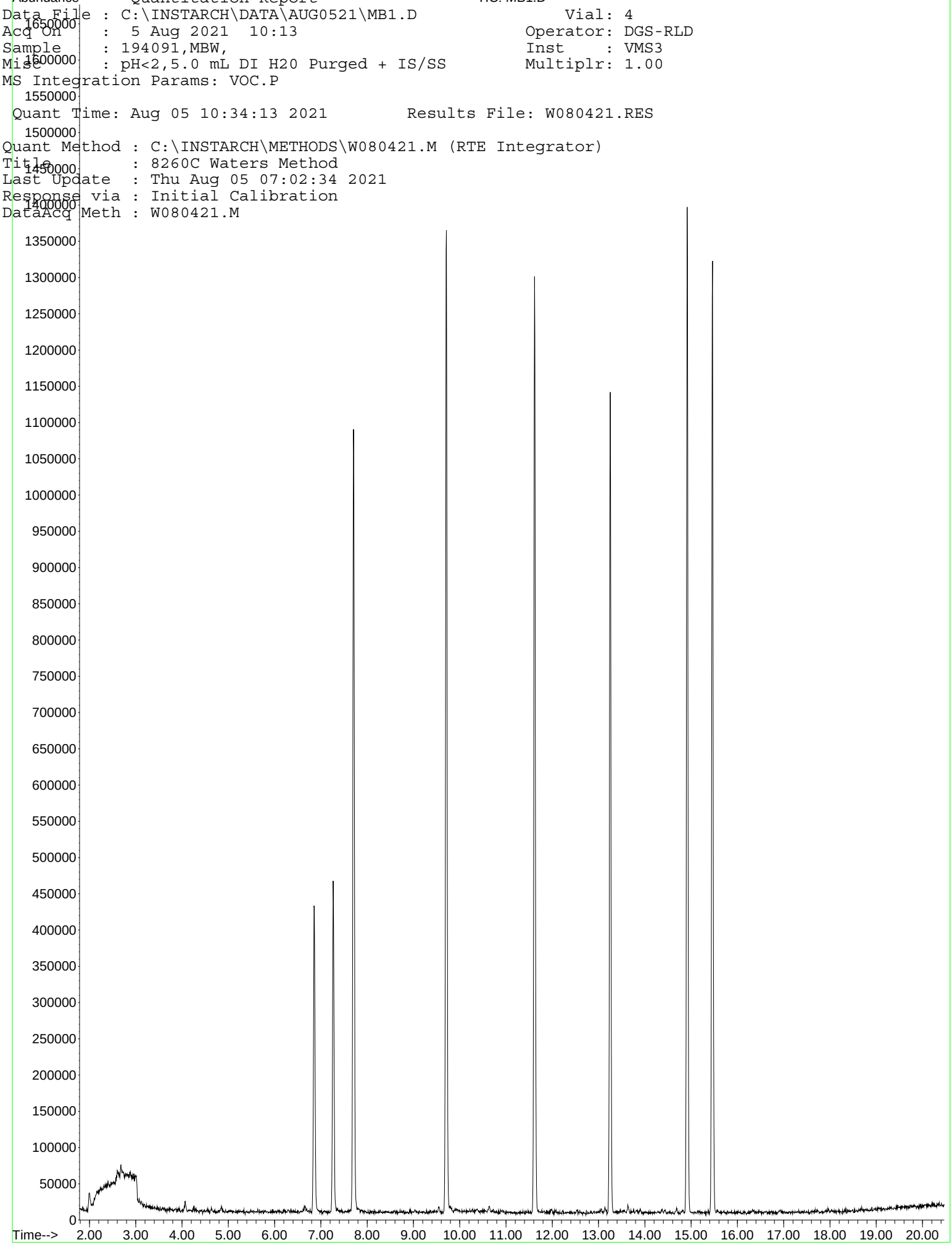
(#) = qualifier out of range (m) = manual integration

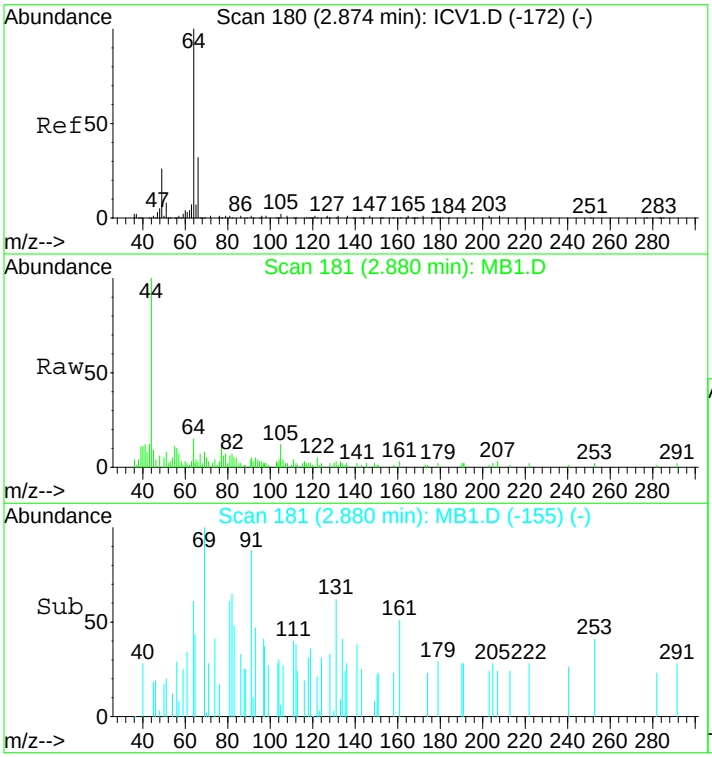
Abundance Quantitation Report TIC: MB1.D

Data File : C:\INSTARCH\DATA\AUG0521\MB1.D Vial: 4
Acq On : 5 Aug 2021 10:13 Operator: DGS-RLD
Sample : 194091,MBW, Inst : VMS3
Misc : pH<2,5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 10:34:13 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

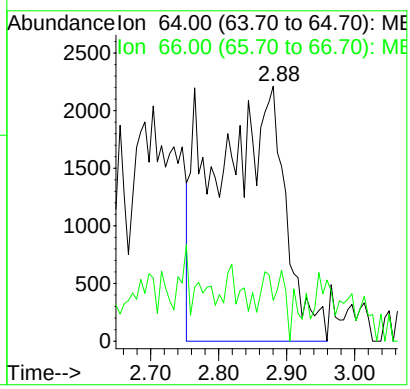




#6
Chloroethane
Concen: 1.59 ug/L
RT: 2.88 min Scan# 181
Delta R.T. 0.01 min
Lab File: MB1.D
Acq: 5 Aug 2021 10:13

Tgt Ion: 64 Resp: 15628

Ion	Ratio	Lower	Upper
64	100		
66	0.0	12.8	52.8#



Negative Library Identification

[redacted]

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031438MS.D Vial: 20
Acq On : 5 Aug 2021 18:14 Operator: DGS-RLD
Sample : 194091,MSW1031438, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 18:35:22 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	980096	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	858081	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	490066	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.86	113	246512	19.898	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 99 %			
45) SURR12DCAd4	7.27	102	67529	19.978	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 100 %			
61) SURRd8Tolule	9.71	98	1097426	22.370	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 112 %#			
83) SURR4BrFBenz	13.25	95	458769	19.483	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 97 %			
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	149221	11.3949	ug/L	99
3) Chloromethan	2.09	50	154000	11.8272	ug/L	96
4) VinylChlorid	2.25	62	151846	11.7843	ug/L	90
5) Bromomethane	2.70	94	117097	13.6498	ug/L	96
6) Chloroethane	2.87	64	101071	11.6427	ug/L	98
7) Dichloroflmethane	3.18	67	153879	9.4988	ug/L	99
8) Trichlorofma	3.27	101	189739	9.8416	ug/L	98
9) Ethylether	3.71	59	78948	7.7862	ug/L	90
10) dichlorotfluoroethan	3.72	67	115354	9.7894	ug/L	97
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.84	56	95783	66.8426	ug/L	98
13) 11dichlorthe	3.99	96	108806	10.0021	ug/L	98
14) Trichlorotfluoroeth	4.03	101	188080	17.7568	ug/L	100
15) Acetone	4.06	43	307436	78.3340	ug/L	98
16) Iodomethane	4.17	142	176045	15.2767	ug/L	98
17) Carbon Dislf	4.26	76	572277	20.2295	ug/L	99
18) allylchloride	4.48	41	298867	17.3446	ug/L	93
19) methylacetate	4.53	74	32200	8.6859	ug/L	99
20) Methylchlorid	4.64	84	112225	8.3212	ug/L	97
21) tbutylalcohol	4.84	59	722912	467.5597	ug/L	100
22) Acrylonitrile	4.94	53	205025	45.5296	ug/L	99
23) t12dichlorte	5.01	96	115074	9.1296	ug/L	98
24) MtBE	5.05	73	313325	8.7691	ug/L	99
25) Hexane	5.40	57	275871	16.8466	ug/L	100
26) 11dichlorota	5.54	63	196052	9.2022	ug/L	99
27) Vinylacetate	5.63	43	2017844	98.5465	ug/L	99
28) chloroprene	5.67	53	384442	20.1835	ug/L	99
29) Diisopether	5.68	45	301019	8.3106	ug/L	94
30) ETBE	6.14	59	308680	8.8426	ug/L	99
31) 22dichloropr	6.27	77	180416	9.6203	ug/L	99
32) c12dichlorte	6.27	96	125974	9.0020	ug/L	99
33) 2Butanone	6.29	72	152763	90.0951	ug/L	98
34) propionitrile	6.32	54	179680	89.2170	ug/L	98
35) Ethylacetate	6.39	88	27409	45.1575	ug/L #	88
36) methacrylonitrile	6.53	67	110332	17.9690	ug/L	97
37) Bromochlorma	6.55	128	53508	8.8598	ug/L	97
38) Tetrahydofur	6.64	42	351203	86.0639	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031438MS.D Vial: 20
Acq On : 5 Aug 2021 18:14 Operator: DGS-RLD
Sample : 194091,MSW1031438, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 18:35:22 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	203835	9.2257	ug/L	97
40)	111trichlota	6.91	97	193591	9.8876	ug/L	98
42)	Cyclohexane	6.99	56	175024	8.7467	ug/L	96
43)	Carbtetraclo	7.13	119	166405	10.1522	ug/L	99
44)	11dicloprope	7.11	110	60813	9.9288	ug/L	98
46)	Benzene	7.36	78	464508	9.4497	ug/L	99
47)	12dichlorota	7.36	62	165217	9.5108	ug/L	99
48)	TAME	7.53	73	321004	8.8505	ug/L	92
49)	trichloroete	8.17	95	128372	9.6804	ug/L	97
50)	methylcyclohexane	8.43	83	251921	9.7825	ug/L	98
51)	12dicloropra	8.43	63	134023	10.1147	ug/L	91
52)	23Dicl1propene	8.49	75	198966	10.0119	ug/L	99
53)	Dibromometha	8.57	93	79409	9.9790	ug/L	97
54)	methylmethacrylate	8.59	69	103273	9.8903	ug/L	98
55)	14dioxane	8.61	88	99812	526.5486	ug/L	97
56)	Bromodiclrma	8.77	83	175132	9.9062	ug/L	100
57)	2Nitropropane	9.04	43	480631	100.1674	ug/L	98
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.35	75	210809	9.9225	ug/L	99
60)	4Meth2Pentan	9.55	43	1185684	104.8636	ug/L	100
62)	Toluene	9.80	92	344263	10.8013	ug/L	99
63)	t13Dicloprop	10.05	75	192332	9.8949	ug/L	98
64)	ethylmethacrylate	10.20	69	361623	20.5818	ug/L	99
65)	112Triclotha	10.30	83	97910	9.9939	ug/L	97
66)	Tetrachlorte	10.53	166	153751	11.3032	ug/L	98
67)	13Diclorpropa	10.52	76	209539	10.2071	ug/L	97
69)	2Hexanone	10.64	43	902284	94.4457	ug/L	100
70)	Clorodibrmta	10.81	129	125961	8.8403	ug/L	98
71)	12Dibrometha	10.97	107	124424	9.2121	ug/L	98
72)	Chlorobenzen	11.66	112	358768	9.5539	ug/L	99
73)	1Clhexane	11.64	91	192693	9.9176	ug/L	100
74)	1112Tetclota	11.77	131	126007	9.1887	ug/L	99
75)	Ethylbenzene	11.82	91	627863	9.7935	ug/L	100
76)	m p-Xylene	11.98	106	495344	19.8828	ug/L	98
77)	o-Xylene	12.53	106	238242	9.4620	ug/L	98
78)	Styrene	12.54	104	389566	9.3076	ug/L	99
79)	Bromoform	12.77	173	88723	8.6188	ug/L	98
80)	Isopropylben	13.06	105	617049	9.9287	ug/L	99
81)	cyclohexanone	13.14	55	106710	123.9148	ug/L	100
84)	Bromobenzene	13.46	156	152294	9.3278	ug/L	98
85)	1122Tetrclta	13.44	83	173350	9.5502	ug/L	98
86)	123Triclproa	13.50	75	219231	9.2236	ug/L	98
87)	14dichloro2butene	13.52	53	45561	7.7378	ug/L	90
88)	n-Propylbenz	13.64	91	714668	10.1812	ug/L	100
89)	2chlorotolue	13.75	91	427609	9.4649	ug/L	98
90)	4chlorotolue	13.90	91	496183	9.5096	ug/L	98
91)	135Trimebenz	13.90	105	511079	9.6872	ug/L	99
92)	tbutylbenzen	14.37	119	450172	10.1362	ug/L	98
93)	124Trimetben	14.43	105	503669	9.7167	ug/L	99
94)	sbutylbenzen	14.68	105	639366	10.4180	ug/L	100
95)	13Diclorbenz	14.82	146	284463	9.4152	ug/L	98
96)	pIsopropylto	14.90	119	542578	10.2170	ug/L	100
97)	14dichlorobe	14.95	146	292374	9.5954	ug/L	99
98)	12dichlorobe	15.49	146	267928	9.4129	ug/L	98
99)	nButylbenzen	15.50	91	487666	10.0779	ug/L	98
100)	12dibromo3cl	16.59	157	36059	9.3288	ug/L	99
101)	135Trichlorobenzene	16.92	180	188340	9.3373	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\AUG0521\1031438MS.D Vial: 20
Acq On : 5 Aug 2021 18:14 Operator: DGS-RLD
Sample : 194091,MSW1031438, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 18:35:22 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

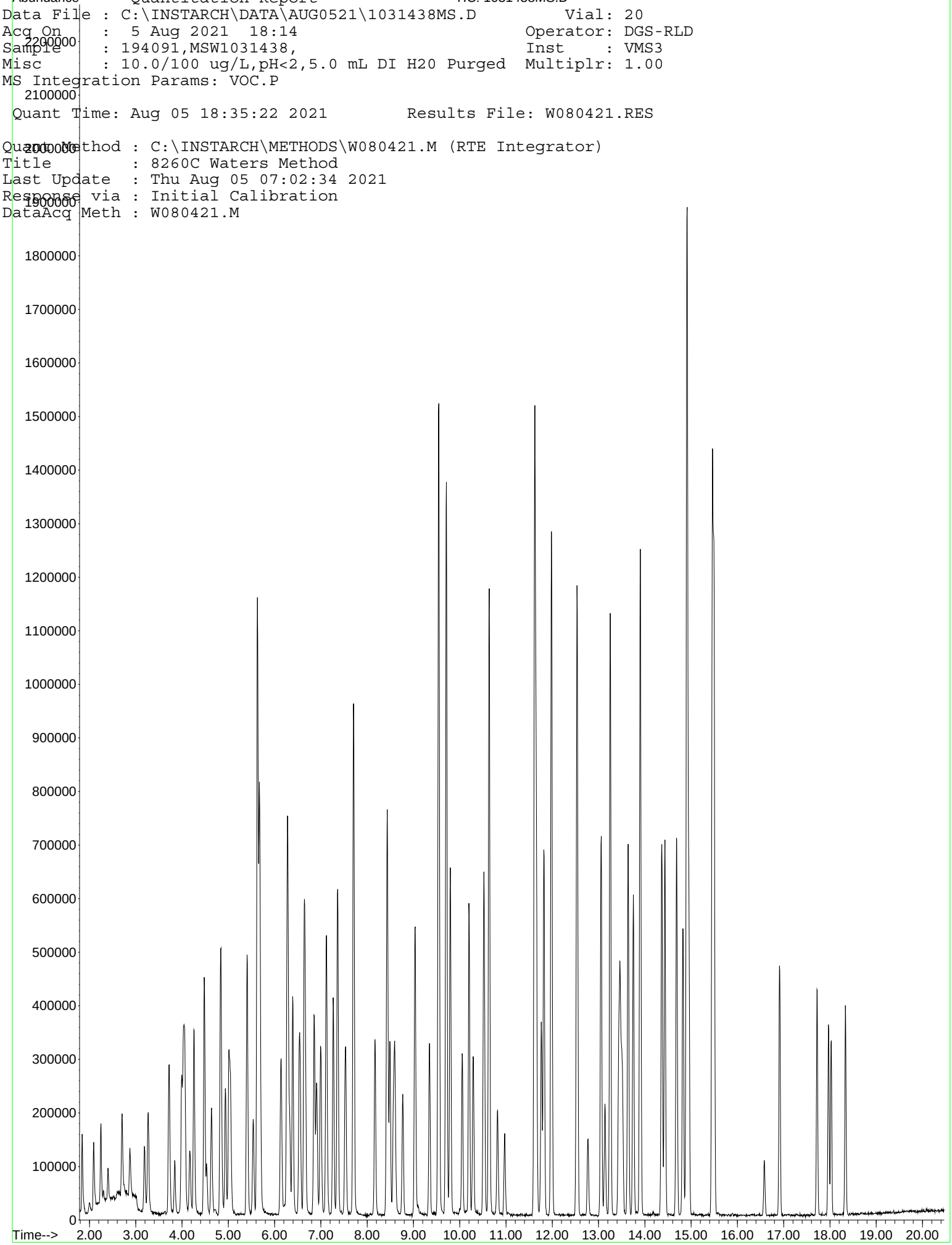
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	157313	9.7264	ug/L	97
103) Hexachlorobu	17.97	225	84297	10.4533	ug/L	98
104) Naphthalene	18.03	128	298262	8.0623	ug/L	100
105) 123Trichlben	18.34	180	137596	9.3775	ug/L	99

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\DATA\AUG0521\1031438MS.D Vial: 20
Acq On : 5 Aug 2021 18:14 Operator: DGS-RLD
Sample : 194091,MSW1031438, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 18:35:22 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M



Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031438SD.D Vial: 21
Acq On : 5 Aug 2021 18:44 Operator: DGS-RLD
Sample : 194091,MSDW1031438, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 19:05:22 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.70	96	1115381	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.62	117	880587	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.91	152	501110	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.85	113	283683	20.121	ug/L	0.00
Spiked Amount 20.000	Range 90 - 110		Recovery = 101	%		
45) SURR12DCAd4	7.27	102	79368	20.632	ug/L	0.00
Spiked Amount 20.000	Range 89 - 111		Recovery = 103	%		
61) SURRd8Tolule	9.71	98	1116652	20.001	ug/L	0.00
Spiked Amount 20.000	Range 93 - 107		Recovery = 100	%		
83) SURR4BrFBenz	13.25	95	469825	19.513	ug/L	0.00
Spiked Amount 20.000	Range 83 - 111		Recovery = 98	%		
Target Compounds						Qvalue
2) Dichlorodi	1.84	85	178612	11.9824	ug/L	98
3) Chloromethan	2.09	50	177037	11.9473	ug/L	98
4) VinylChlorid	2.25	62	175998	12.0020	ug/L	95
5) Bromomethane	2.70	94	126114	12.8561	ug/L	98
6) Chloroethane	2.87	64	110713	11.2065	ug/L	98
7) Dichloroflmethane	3.19	67	197515	10.7136	ug/L	98
8) Trichlorofma	3.26	101	250937	11.4243	ug/L	99
9) Ethylether	3.71	59	103188	8.9425	ug/L	92
10) dichlorotfluoroethan	3.73	67	152873	11.3998	ug/L	97
11) propyleneoxide	0.00	58	0	N.D.		
12) Acrolein	3.84	56	114256	70.0631	ug/L	96
13) 11dichlorthe	3.99	96	144538	11.6753	ug/L	97
14) Trichlorotfluoroeth	4.04	101	251737	20.8022	ug/L	99
15) Acetone	4.06	43	363163	81.4889	ug/L	100
16) Iodomethane	4.17	142	273059	20.0324	ug/L	99
17) Carbon Dislf	4.26	76	736292	22.8704	ug/L	100
18) allylchloride	4.48	41	403743	20.5891	ug/L	98
19) methylacetate	4.53	74	38817	9.2008	ug/L	98
20) Methylchlorid	4.63	84	149449	9.7373	ug/L	99
21) tbutylalcohol	4.83	59	843550	480.2502	ug/L	99
22) Acrylonitrile	4.94	53	245856	47.9748	ug/L	99
23) t12dichlorte	5.01	96	151492	10.5611	ug/L	96
24) MtBE	5.04	73	398756	9.8065	ug/L	99
25) Hexane	5.40	57	368030	19.6933	ug/L	99
26) 11dichlorota	5.54	63	255555	10.5403	ug/L	99
27) Vinylacetate	5.63	43	2441870	105.9630	ug/L	99
28) chloroprene	5.67	53	499367	23.0373	ug/L	99
29) Diisopether	5.68	45	411175	9.9750	ug/L	92
30) ETBE	6.14	59	392280	9.8744	ug/L	99
31) 22dichloropr	6.27	77	229295	10.7436	ug/L	98
32) c12dichlorte	6.27	96	168646	10.5896	ug/L	96
33) 2Butanone	6.29	72	183386	95.0374	ug/L	98
34) propionitrile	6.33	54	212337	92.6444	ug/L	98
35) Ethylacetate	6.39	88	33309	48.2218	ug/L #	90
36) methacrylonitrile	6.54	67	131577	18.8299	ug/L	98
37) Bromochlorma	6.55	128	71107	10.3458	ug/L	95
38) Tetrahydofur	6.64	42	418911	90.2049	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031438SD.D Vial: 21
Acq On : 5 Aug 2021 18:44 Operator: DGS-RLD
Sample : 194091,MSDW1031438, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 19:05:22 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.66	83	264983	10.5386	ug/L	98
40)	111trichlota	6.91	97	248900	11.1705	ug/L	98
42)	Cyclohexane	6.99	56	242563	10.5995	ug/L	100
43)	Carbtetraclo	7.13	119	215350	11.5448	ug/L	99
44)	11dicloprope	7.11	110	78750	11.2979	ug/L	96
46)	Benzene	7.36	78	593720	10.6133	ug/L	99
47)	12dichlorota	7.36	62	199666	10.0998	ug/L	98
48)	TAME	7.53	73	399172	9.6708	ug/L	92
49)	trichloroete	8.17	95	158288	10.4885	ug/L	97
50)	methylcyclohexane	8.43	83	296560	10.1115	ug/L	98
51)	12dicloropra	8.43	63	152538	10.1158	ug/L	90
52)	23Dicl1propene	8.49	75	229418	10.1440	ug/L	100
53)	Dibromometha	8.57	93	90200	9.9603	ug/L	97
54)	methylmethacrylate	8.59	69	110525	9.3009	ug/L	99
55)	14dioxane	8.61	88	101536	470.6750	ug/L	99
56)	Bromodiclrma	8.77	83	194258	9.6553	ug/L	98
57)	2Nitropropane	9.04	43	503343	92.1773	ug/L	98
58)	2CLEVE	0.00	63	0	N.D.		
59)	c13dicloproe	9.35	75	238533	9.8657	ug/L	98
60)	4Meth2Pentan	9.55	43	1259823	97.2256	ug/L	100
62)	Toluene	9.80	92	394715	10.8821	ug/L	99
63)	t13Dicloprop	10.05	75	213393	9.6468	ug/L	99
64)	ethylmethacrylate	10.20	69	397482	19.8788	ug/L	97
65)	112Triclotha	10.30	83	110149	9.8795	ug/L	98
66)	Tetrachlorte	10.53	166	177053	11.4376	ug/L	99
67)	13Diclorpropa	10.52	76	235088	10.0627	ug/L	99
69)	2Hexanone	10.64	43	948609	96.7569	ug/L	100
70)	Clorodibrmta	10.82	129	139864	9.5652	ug/L	98
71)	12Dibrometha	10.97	107	137569	9.9250	ug/L	98
72)	Chlorobenzen	11.65	112	410629	10.6555	ug/L	99
73)	1Clhexane	11.63	91	219987	11.0329	ug/L	100
74)	1112Tetclota	11.77	131	141958	10.0873	ug/L	98
75)	Ethylbenzene	11.82	91	727699	11.0606	ug/L	100
76)	m p-Xylene	11.98	106	562116	21.9863	ug/L	99
77)	o-Xylene	12.53	106	272219	10.5351	ug/L	99
78)	Styrene	12.54	104	452992	10.5464	ug/L	99
79)	Bromoform	12.77	173	97235	9.2043	ug/L	98
80)	Isopropylben	13.05	105	718266	11.2620	ug/L	99
81)	cyclohexanone	13.14	55	113796	128.7660	ug/L	100
84)	Bromobenzene	13.47	156	173832	10.4123	ug/L	98
85)	1122Tetrclta	13.43	83	185655	10.0027	ug/L	99
86)	123Triclproa	13.50	75	236639	9.7366	ug/L	99
87)	14dichloro2butene	13.52	53	50067	8.3157	ug/L	93
88)	n-Propylbenz	13.64	91	829709	11.5595	ug/L	99
89)	2chlorotolue	13.75	91	486718	10.5359	ug/L	99
90)	4chlorotolue	13.90	91	570081	10.6851	ug/L	99
91)	135Trimebenz	13.90	105	595347	11.0358	ug/L	100
92)	tbutylbenzen	14.37	119	514928	11.3387	ug/L	100
93)	124Trimetben	14.43	105	586918	11.0732	ug/L	99
94)	sbutylbenzen	14.69	105	746856	11.9013	ug/L	100
95)	13Diclorbenz	14.82	146	325243	10.5277	ug/L	99
96)	pIsopropylto	14.90	119	620034	11.4182	ug/L	99
97)	14dichlorobe	14.95	146	327540	10.5126	ug/L	99
98)	12dichlorobe	15.49	146	305679	10.5025	ug/L	97
99)	nButylbenzen	15.50	91	561015	11.3381	ug/L	99
100)	12dibromo3cl	16.58	157	34930	8.8376	ug/L	96
101)	135Trichlorobenzene	16.91	180	221909	10.7591	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\AUG0521\1031438SD.D Vial: 21
Acq On : 5 Aug 2021 18:44 Operator: DGS-RLD
Sample : 194091,MSDW1031438, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 19:05:22 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.72	180	175453	10.6089	ug/L	97
103) Hexachlorobu	17.97	225	92831	11.2579	ug/L	95
104) Naphthalene	18.02	128	341963	8.9464	ug/L	99
105) 123Trichlben	18.33	180	155251	10.3475	ug/L	100

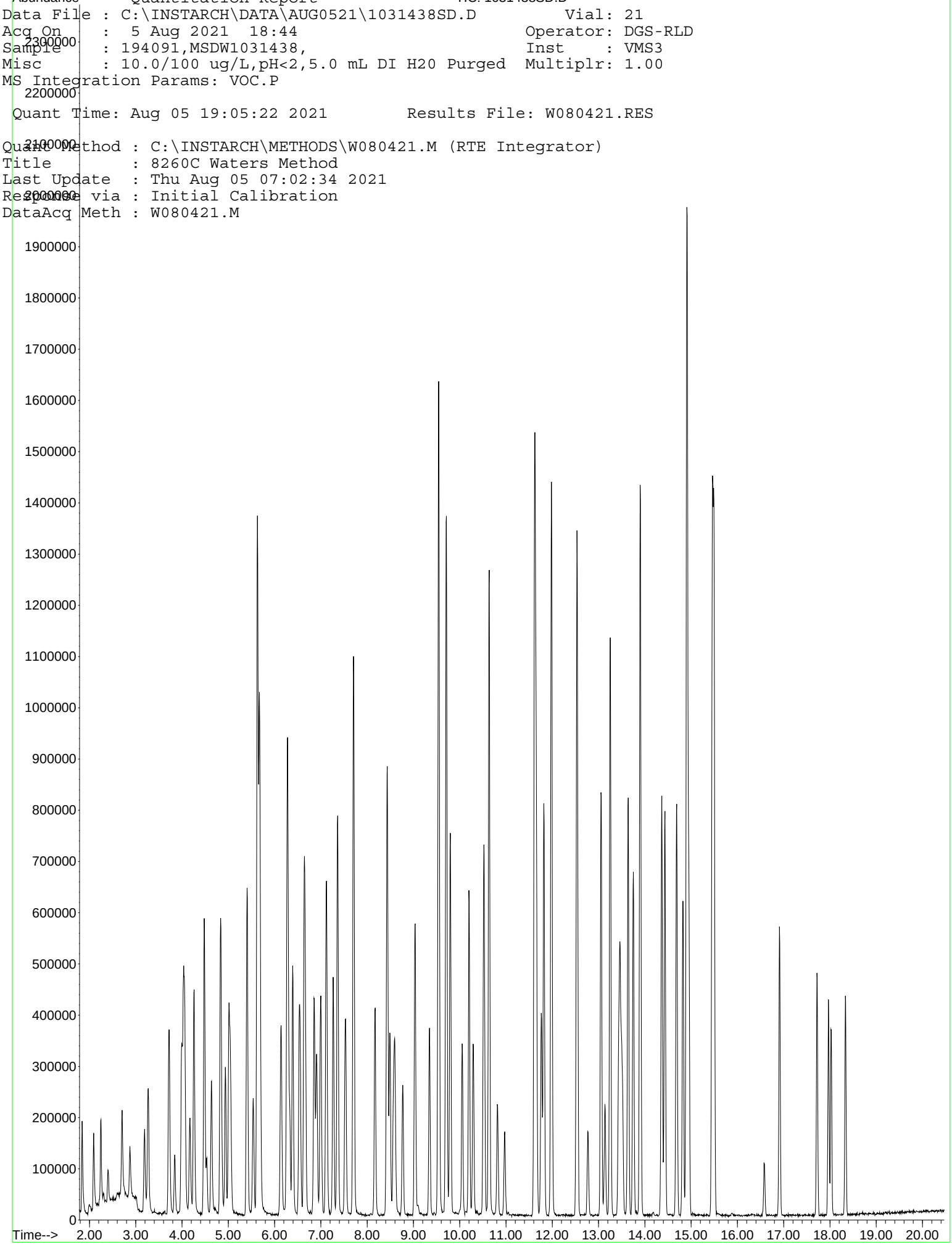
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 1031438SD.D

Data File : C:\INSTARCH\DATA\AUG0521\1031438SD.D Vial: 21
Acq On : 5 Aug 2021 18:44 Operator: DGS-RLD
Sample : 194091,MSDW1031438, Inst : VMS3
Misc : 10.0/100 ug/L,pH<2,5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Aug 05 19:05:22 2021 Results File: W080421.RES

Quant Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Thu Aug 05 07:02:34 2021
Response via : Initial Calibration
DataAcq Meth : W080421.M

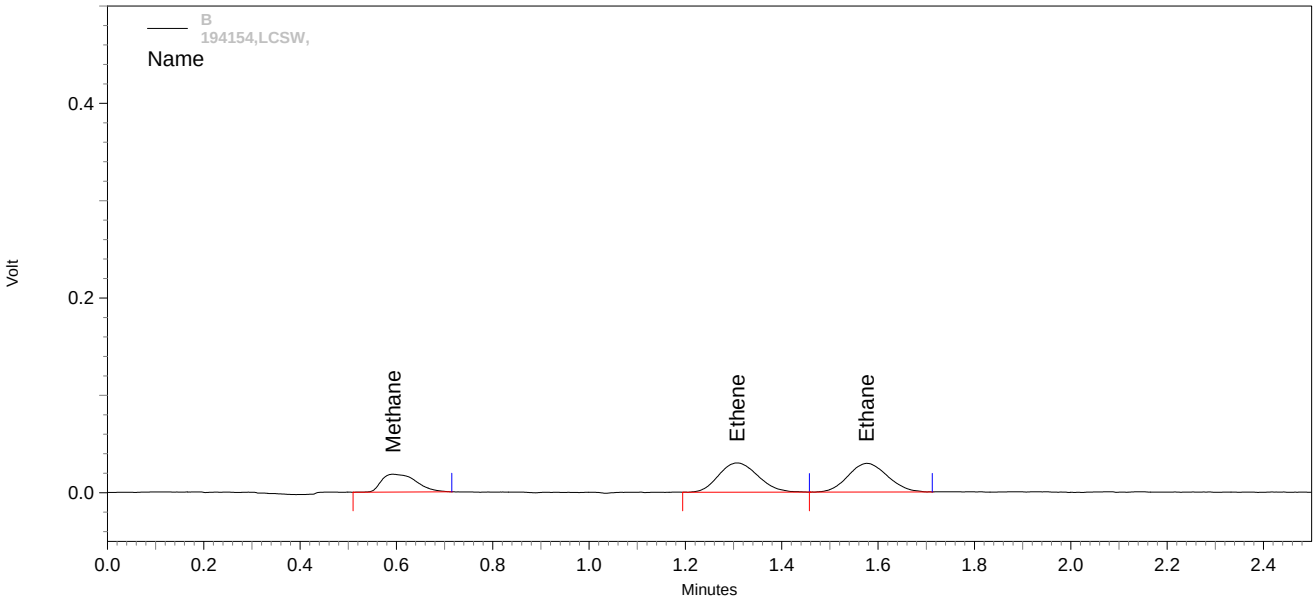


Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\003.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,LCSW,
Acquired: Aug 04, 2021 11:03:47
File Desc. Laboratory Control Sample - 25 ppmV -

500 uL of the 200 ppmV MEE Std. into 4 mL of headspace. 1.0 mL injection (Methane, Ethene, Ethane,)



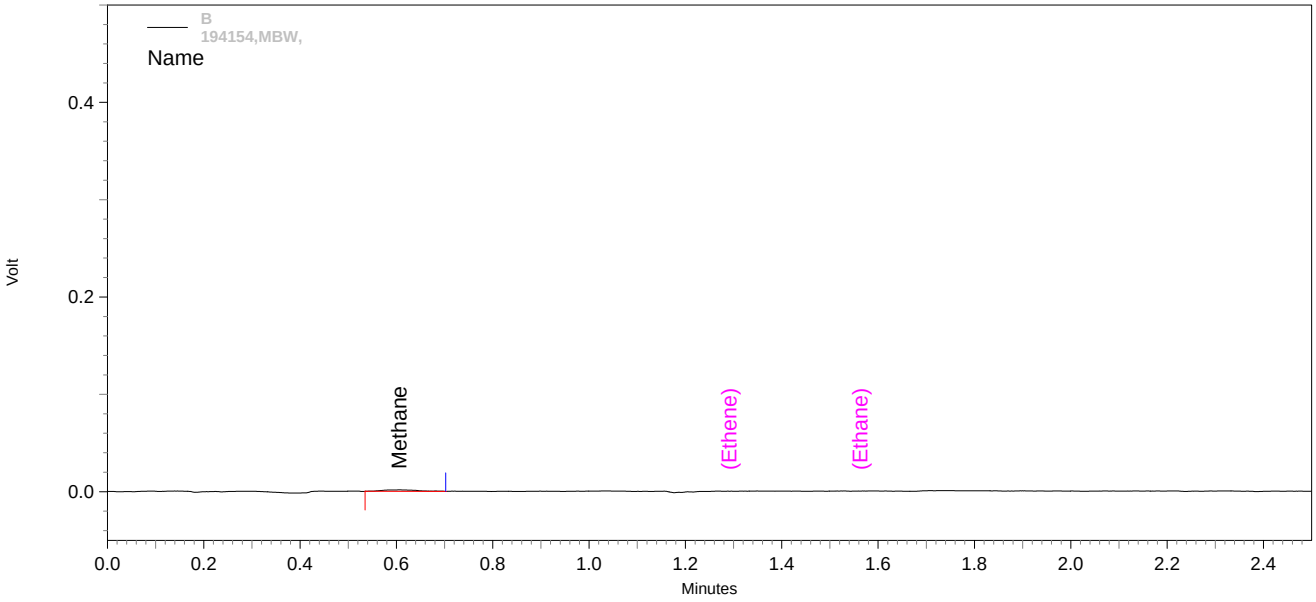
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.593**	**0.579**	**91250**	**23.455**	**ppmV**
2	**Ethene**	**1.308**	**1.291**	**170901**	**24.086**	**ppmV**
3	**Ethane**	**1.576**	**1.563**	**167918**	**23.420**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\004.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,MBW,
Acquired: Aug 04, 2021 11:15:18
File Desc. Method Blank
1.0 mL injection (Methane, Ethene, Ethane)



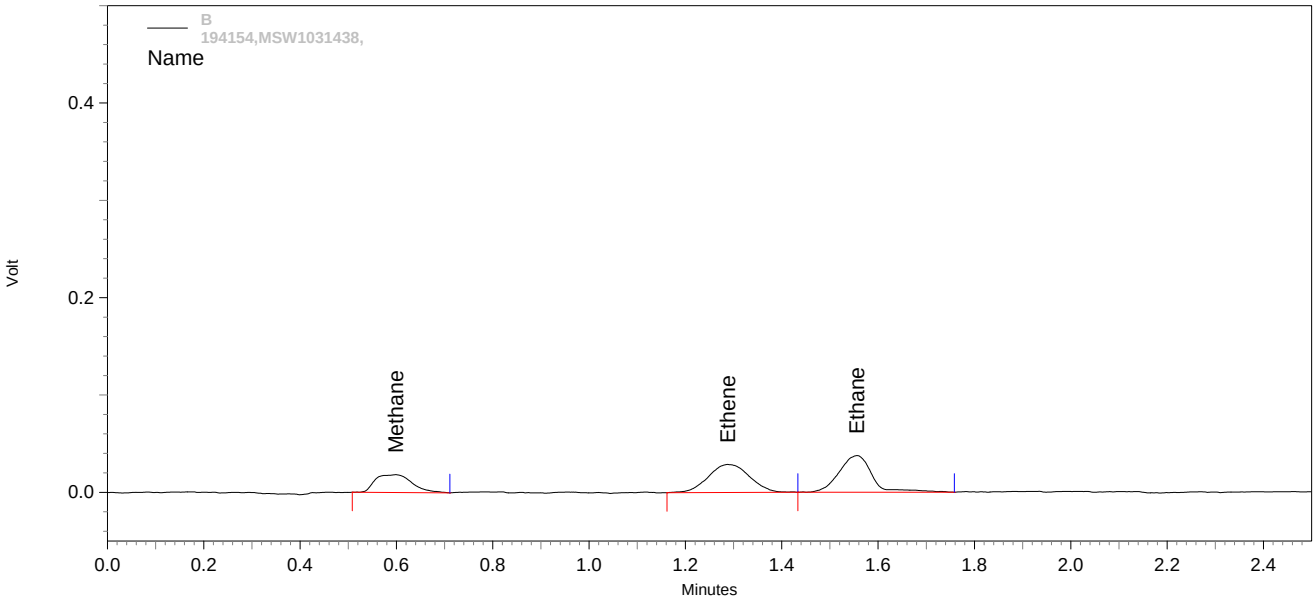
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.606**	**0.579**	**7828**	**1.869**	**ppmV**
	Ethene		**1.291**		**0.000 BDL**	**ppmV**
	Ethane		**1.563**		**0.000 BDL**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\010.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,MSW1031438,
Acquired: Aug 04, 2021 12:38:47
File Desc. MATRIX SPIKE 1mL injection (Methane, Ethene, Ethane)



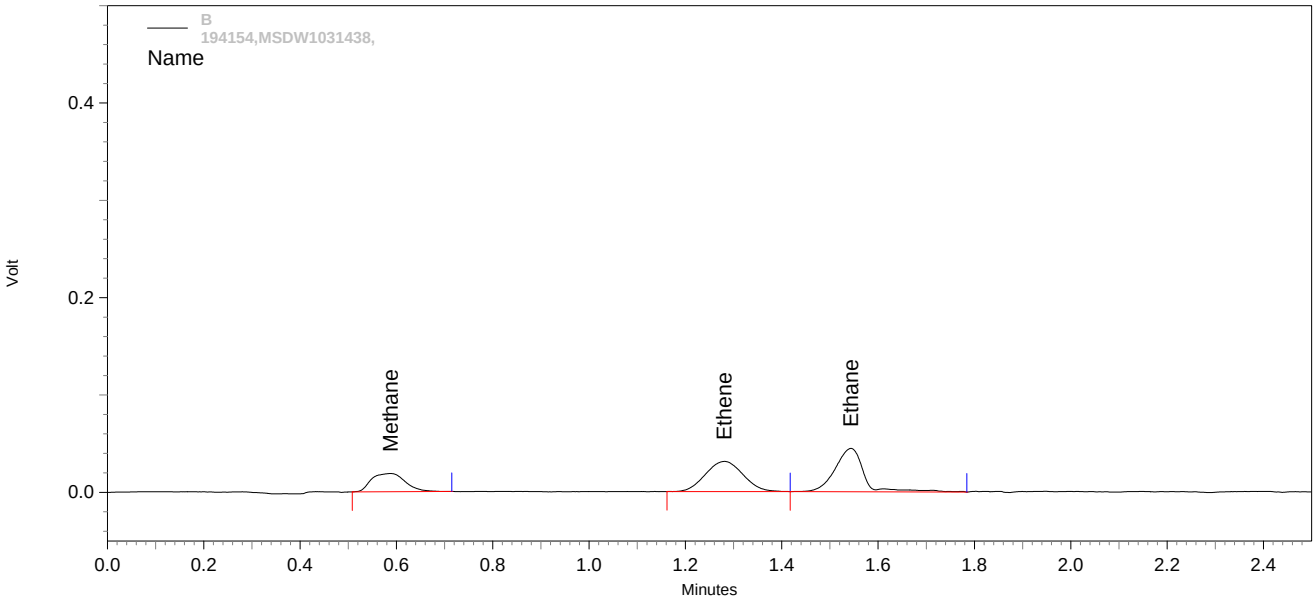
B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.598**	**0.579**	**97069**	**24.960**	**ppmV**
2	**Ethene**	**1.288**	**1.291**	**171203**	**24.129**	**ppmV**
3	**Ethane**	**1.556**	**1.563**	**179607**	**25.072**	**ppmV**

Dissolved Gases External Standard Report

PVOC4

Data File: C:\InStarch\PVOC4\Data\080421 -\011.dat
Method Name: C:\Instarch\PVOC4\Methods\P4DG070121.met
Sample ID: 194154,MSDW1031438,
Acquired: Aug 04, 2021 12:42:49
File Desc. MATRIX SPIKE DUPLICATE 1mL injection (Methane, Ethene, Ethane)



B Results

Pk #	*Name*	*Retention Time*	*Expected RT*	*Area*	*Concentration*	*Units*
1	**Methane**	**0.588**	**0.579**	**91154**	**23.430**	**ppmV**
2	**Ethene**	**1.281**	**1.291**	**168364**	**23.727**	**ppmV**
3	**Ethane**	**1.543**	**1.563**	**185816**	**25.950**	**ppmV**

VOLATILE ORGANIC ANALYSIS
LOGBOOK
DOCUMENTS

VOC 8260 QSM WATER 5.0 Analytical Run
193941 on 7/30/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1032096							VOC 8260 QSM WATER 5.0				
					BFB				0			
	1030729							VOC 8260 QSM WATER 5.0				
					CCV				0			
	1032099							VOC 8260 QSM WATER 5.0				
					LCSW							
	1032098							VOC 8260 QSM WATER 5.0				
					MBW				0			
163390	1030471		7/26/2021	16:25		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	**4**	
		TB-1										
163390	1030462		7/26/2021	13:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		13MW4										
163390	1030468		7/26/2021	15:20		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		13MW3										
163390	1030469		7/26/2021	15:20		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		13TW3										
	1032097							VOC 8260 QSM WATER 5.0				
					CCVF				0			
	1032100							VOC 8260 QSM WATER 5.0				
					LCSDW 1032099							

10 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\JUL2721\BFB1.D
Injection Date : 27 Jul 2021 Log Time Period (hrs) : ALL
Injection Time : 11:36 Total files within period : 45
Sample Directory : C:\INSTARCH\DATA\JUL2721\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	193761,LCSW, 10.0/100 ug/L, 5.0 mL Pur	27 Jul 2021	11:51
IB2	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged + IS	27 Jul 2021	12:20
MB1	1.00	1.00	1.00	193761,MBW, pH<2, 5.0 mL Purged + IS/	27 Jul 2021	12:50
1027889	1.00	1.00	1.00	193761,1027889, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	13:20
1027902	1.00	1.00	1.00	193761,1027902, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	13:50
1027873	1.00	1.00	1.00	193761,1027873, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	14:19
1027875	1.00	1.00	1.00	193761,1027875, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	14:49
1027877	1.00	1.00	1.00	193761,1027877, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	15:19
1027879	1.00	1.00	1.00	193761,1027879, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	15:48
1027890	1.00	1.00	1.00	193761,1027890, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	16:18
1027896	1.00	1.00	1.00	193761,1027896, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	16:48
1027898	1.00	1.00	1.00	193761,1027898, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	17:18
1027900	1.00	1.00	1.00	193761,1027900, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	17:47
1027903	1.00	1.00	1.00	193761,1027903, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	18:17
1027905	1.00	1.00	1.00	193761,1027905, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	18:46
1027916	1.00	1.00	1.00	193761,1027916, pH<2,5.0 mL Purged + IS/S	27 Jul 2021	19:16
1027882	1.00	1.00	1.00	193761,1027882,10 pH<2,5.0 mL Purged + IS/S	27 Jul 2021	19:45
1027887	1.00	1.00	1.00	193761,1027887,10 pH<2,5.0 mL Purged + IS/S	27 Jul 2021	20:15
1027892	1.00	1.00	1.00	193761,1027892,10 pH<2,5.0 mL Purged + IS/S	27 Jul 2021	20:44
1027894	1.00	1.00	1.00	193761,1027894,5 pH<2,5.0 mL Purged + IS/S	27 Jul 2021	21:14
102791~1	1.00	1.00	1.00	193761,MSW1027916, pH<2,10.0/100 ug/L,5.0 mL	27 Jul 2021	21:43
102791~2	1.00	1.00	1.00	193761,MSDW1027916, pH<2,10.0/100 ug/L,5.0 mL	27 Jul 2021	22:12

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W071421.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\JUL2721\BFB2.D
Injection Date : 28 Jul 2021 Log Time Period (hrs) : ALL
Injection Time : 07:40 Total files within period : 25
Sample Directory : C:\INSTARCH\DATA\JUL2721\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
CCV-LCS2	1.00	1.00	1.00	193763,LCSW, 10.0/100 ug/L, 5.0 mL Pur	28 Jul 2021	07:57
IB3	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged + IS	28 Jul 2021	08:27
MB2-CCB1	1.00	1.00	1.00	193763,MBW, pH<2, 5.0 mL Purged + IS/	28 Jul 2021	08:57
1030471	1.00	1.00	1.00	193941,1030471, pH<2,5.0 mL Purged + IS/S	28 Jul 2021	10:57
1030462	1.00	1.00	1.00	193941,1030462, pH<2,5.0 mL Purged + IS/S	28 Jul 2021	15:28
1030468	1.00	1.00	1.00	193941,1030468, pH<2,5.0 mL Purged + IS/S	28 Jul 2021	15:58
1030469	1.00	1.00	1.00	193941,1030469, pH<2,5.0 mL Purged + IS/S	28 Jul 2021	16:28
CCVF2-~1	1.00	1.00	1.00	193761,CCVF, 10.0/100 ug/L, 5.0 mL Pur	28 Jul 2021	17:58

8260 ISTD/SSTD 20ug/ml VOC0864
8260 BFB STD. 50ug/ml VOC0863
8260 ICV STD. 100ug/ml VOC0865
8260 CCV/CALIB. 100ug/ml VOC0866

pl_ilog
Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W071421.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\JUL1421\BFB1.D
Injection Date : 14 Jul 2021 Log Time Period (hrs) : ALL
Injection Time : 10:39 Total files within period : 20
Sample Directory : C:\INSTARCH\DATA\JUL1421\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT1 0.5/5.0 ug/L, 5.0 mL	14 Jul 2021	11:52
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT2 1.00/10.00 ug/L, 5.0	14 Jul 2021	12:22
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT3 2.00/20.0 ug/L, 5.0	14 Jul 2021	12:51
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT4 5.00/50.0 ug/L, 5.0	14 Jul 2021	13:20
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT5 10.0/100.0 ug/L, 5.0	14 Jul 2021	13:49
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT6 20.0/200.0 ug/L, 5.0	14 Jul 2021	14:19
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT7 30.0/300.0 ug/L, 5.0	14 Jul 2021	14:48
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT8 40.0/400.0 ug/L, 5.0	14 Jul 2021	15:17
WCAL9	1.00	1.00	1.00	INITIAL CALIB. PT9 80.0/800.0 ug/L, 5.0	14 Jul 2021	15:47
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	14 Jul 2021	16:46
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF 30.0/300 ug/L, 5.0 m	14 Jul 2021	17:16
ICB1	1.00	1.00	1.00	INITIAL CALIB. BLANK pH<2,5.0 mL DI H20 P	14 Jul 2021	18:43
BFB2	1.00	1.00	1.00	BFB DIRECT INJ. 50 ng Inj.	15 Jul 2021	07:34
ICV1R	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	15 Jul 2021	08:19

8260 ISTD/SSTD 20ug/ml VOC0864
8260 BFB STD. 50ug/ml VOC0863
8260 ICV STD. 100ug/ml VOC0865
8260 CCV/CALIB. 100ug/ml VOC0866

FVO4-01 Data Review Checklist

INDEPENDENT DATA REVIEW CHECKLIST			Method: GCMS (EPA SW-846 8260C)					
Analysis Date	**LIMS Run #(s):**	**Analyst/Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved?**			**Instrument**
					Yes	No		
07/27/2021	193941 193763 193762 193761 193760	DGS	RLD	07/30/2021	Yes			VMS3

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	
I. BFB Tune Check						
Was a BFB tune check analyzed with acceptable results?	Relative abundance criteria met?	Yes		Yes		
II. Initial Calibration Verification (ICV)						
Was initial calibration performed using a minimum of five standard concentration levels (minimum of 6 levels for quadratic curves)?	Lowest standard at or below RL?	Yes		Yes		
Were the Average Relative Response Factors (ARRF) acceptable?	ARRF<or= specified limits (<15%D.)see SOP)	Yes		Yes		
Was a second-source ICV(s) analyzed (for Quadratic Curve)?	Required before sample analyses.	Yes		Yes		
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		
Was Initial Calibration Blank (ICB) analyzed?	Required before sample analyses.	Yes		Yes		
Were the ICB results for all target analytes less than the limit of detection (LOD).	<LOD or < project/program specific limits	Yes		Yes		
III. Continuing Calibration Verification (CCV)						
Was an acceptable BFB tune check run at the beginning of every twelve hour shift?	Relative abundance criteria met?	Yes		Yes		
Was a CCV analyzed after every 12 hour tune check?	Required before sample analyses.	Yes		Yes		
Was a second CCV (CCV2) for compounds calibrated using quadratic curves analyzed after every 12 hour tune check?	Required before analyses of WI samples (above the inflection point of the curve).					
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific		No		No	Affected compounds were Z flagged
If necessary, were the results for outlying compounds qualified?		Yes		Yes		

IV. Blanks						
Was a Method Blank (MB) analyzed prior to analysis of samples?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MB results for all target analytes less than the limit of detection (LOD)?	*All target analytes <LOD or < project/program specific limits (<1/2 RL for DoD-QSM)		No		No	Affected compounds were B flagged
If analytes were detected in the MB with no associated positives in the samples, no further action is needed. If the analyte detects in the MB were greater than the acceptance criteria and there were detects in the samples, was the data qualified.?		Yes		Yes		
V. Laboratory Control Spike (LCS)						
Was a LCS (and LCSD if needed) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the LCS (LCSD) recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.	Yes		Yes		
If applicable, were associated sample detects (and non-detects for low recoveries) qualified?						
Is the relative percent difference (RPD) for each analyte between the LCS and LSCD (if applicable) acceptable?	Default 20%, or see internally generated limits, or client specific limits.		No		No	Affected compounds were Y flagged
VI. Matrix Spike/Matrix Spike Duplicate (MS/MSD)						
Was a Martrix Spike (MS) and a Matrix Spike Duplicate (MSD) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MS/MSD recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.	Yes		Yes		
Is the relative percent difference (RPD) for each analyte between the MS and MSD acceptable?	Default 20%, or see internally generated limits, or client specific limits.	Yes		Yes		
VII. Sample Analyses						
Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
Were surrogate recoveries for all samples and QC within acceptance criteria?	Default 70-130%, or see internally generated program limits, or client specified limits.	Yes		Yes		
If possible, were the affected samples reanalyzed?						
**Were reported sample results with failing surrogate recoveries qualified?						
Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed? If not qualify (X).	Target upper middle range of calibration curve.	Yes		Yes		
Did all samples meet hold time and preservation criteria as defined by method/program?	H2O sample: pH < 2 = 14 days, pH >2 = 7 days. Soil samples: 14 days (other criteria may apply)	Yes		Yes		
Were all samples and QC injected within 12 hours of BFB tune check?		Yes		Yes		
Were internal standard recoveries acceptable relevant to associated ICAL?	Response = -50 to +200%; Ret. time = +/- 30 sec.	Yes		Yes		

VIII. Records and Reporting						
Is sequence file / injection log present in the data package?		Yes		Yes		
Were all data, calculations, and values verified in LIMS (including removal of non-detections) upon completion of data capture?		Yes		Yes		
Were manual integrations performed correctly?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms.	Yes		Yes		
Was the rational for the manual integration verified?		Yes		Yes		
Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

ᵏNon-Applicable Yes/No Cells Are Left Blank*

Comments:

VOC 8260 QSM WATER 5.0 Analytical Run
194091 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1035082						VOC 8260 QSM WATER 5.0				
				BFB				0			
	1034198						VOC 8260 QSM WATER 5.0				
				CCV				0			
	1035081						VOC 8260 QSM WATER 5.0				
				LCSW							
	1034297						VOC 8260 QSM WATER 5.0				
				MBW				0			
163449	1031440		6/17/2021 12:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	4	
		LAB TRIP BLANK-1									
163492	1031958		7/29/2021 14:40		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		49EB1									
163492	1031960		7/29/2021 15:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	4	
		TB-49									
163509	1032209		7/30/2021 12:30		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		M	4	
		LAB TRIP BLANK-2									
163509	1032212		7/30/2021 10:30		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		48RB3									
163449	1031437		7/28/2021 11:30		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		48MW6									
163449	1031438		7/28/2021 16:26		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		13MW2		Designated MS/MSD							
163492	1031957		7/29/2021 13:42		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		48MW1									
163492	1031959		7/29/2021 15:23		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		49MW1									
163492	1031961		7/29/2021 17:45		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		50MW2									
163509	1032207		7/30/2021 08:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		49MW4									
163509	1032208		7/30/2021 09:27		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	4	
		48MW2									

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: Volatiles C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpCB42.tmp Page 1 of 1

VOC 8260 QSM WATER 5.0 Analytical Run
194091 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
163509	1032213		7/30/2021	13:00			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		49MW2											
163509	1032210		7/30/2021	11:11			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		48MW3											
163509	1032211		7/30/2021	11:11			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	VOC 8260 QSM 5.0		GW	**4**	
		48TW3											
	1034610		7/28/2021	16:26					VOC 8260 QSM 5.0				
		13MW2			MSW	1031438				0			
	1034611		7/28/2021	16:26					VOC 8260 QSM 5.0				
		13MW2			MSDW	1034610				0			
	1034612								VOC 8260 QSM WATER 5.0				
					CCVF					0			

22 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpCB42.tmp Page 1 of 1

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W080421.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\AUG0521\BFB1.D
Injection Date : 5 Aug 2021 Log Time Period (hrs) : ALL
Injection Time : 08:57 Total files within period : 21
Sample Directory : C:\INSTARCH\DATA\AUG0521\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
CCV-LCS1	1.00	1.00	1.00	194091,LCSW, 10.0/100 ug/L, 5.0 mL Pur	5 Aug 2021	09:13
IB1	1.00	1.00	1.00	INSTRUMENT BLANK 5.0 mL DI H20 Purged + IS	5 Aug 2021	09:43
MB1	1.00	1.00	1.00	194091,MBW, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	10:13
1031440	1.00	1.00	1.00	194091,1031440, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	10:43
1031958	1.00	1.00	1.00	194091,1031958, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	11:13
1031960	1.00	1.00	1.00	194091,1031960, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	11:44
1032209	1.00	1.00	1.00	194091,1032209, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	12:14
1032212	1.00	1.00	1.00	194091,1032212, pH 7,5.0 mL DI H20 Purged	5 Aug 2021	12:44
1031437	1.00	1.00	1.00	194091,1031437, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	13:14
1031438	1.00	1.00	1.00	194091,1031438, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	13:43
1031957	1.00	1.00	1.00	194091,1031957, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	14:14
1031959	1.00	1.00	1.00	194091,1031959, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	14:44
1031961	1.00	1.00	1.00	194091,1031961, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	15:13
1032207	1.00	1.00	1.00	194091,1032207, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	15:43
1032208	1.00	1.00	1.00	194091,1032208, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	16:14
1032213	1.00	1.00	1.00	194091,1032213, pH<2,5.0 mL DI H20 Purged	5 Aug 2021	16:44
1032210	1.00	1.00	1.00	194091,1032210,5 pH<2,5.0 mL DI H20 Purged	5 Aug 2021	17:14
1032211	1.00	1.00	1.00	194091,1032211,5 pH<2,5.0 mL DI H20 Purged	5 Aug 2021	17:44
103143~1	1.00	1.00	1.00	194091,MSW1031438, 10.0/100 ug/L,pH<2,5.0 mL	5 Aug 2021	18:14
103143~2	1.00	1.00	1.00	194091,MSDW1031438, 10.0/100 ug/L,pH<2,5.0 mL	5 Aug 2021	18:44
CCVF1	1.00	1.00	1.00	194091,CCVF, 10.0/100 ug/L, 5.0 mL Pur	5 Aug 2021	19:14

8260 ISTD/SSTD 20ug/ml VOC0864
8260 BFB STD. 50ug/ml VOC0863
8260 ICV STD. 100ug/ml VOC0868
8260 CCV/CALIB. 100ug/ml VOC0869

pl_ilog
Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W080421.M
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\AUG0421\BFB1.D
Injection Date : 4 Aug 2021 Log Time Period (hrs) : ALL
Injection Time : 07:26 Total files within period : 21
Sample Directory : C:\INSTARCH\DATA\AUG0421\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT1 0.5/5.0 ug/L, 5.0 mL	4 Aug 2021	09:12
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT2 1.00/10.00 ug/L, 5.0	4 Aug 2021	09:42
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT3 2.00/20.0 ug/L, 5.0	4 Aug 2021	10:13
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT4 5.00/50.0 ug/L, 5.0	4 Aug 2021	10:43
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT5 10.0/100.0 ug/L, 5.0	4 Aug 2021	11:12
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT6 20.0/200.0 ug/L, 5.0	4 Aug 2021	11:42
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT7 30.0/300.0 ug/L, 5.0	4 Aug 2021	12:13
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT8 40.0/400.0 ug/L, 5.0	4 Aug 2021	12:43
WCAL9	1.00	1.00	1.00	INITIAL CALIB. PT9 80.0/800.0 ug/L, 5.0	4 Aug 2021	13:13
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	4 Aug 2021	14:13
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF 30.0/300 ug/L, 5.0 m	4 Aug 2021	14:43
ICB1	1.00	1.00	1.00	INITIAL CALIB. BLANK pH<2,5.0 mL DI H20 P	4 Aug 2021	16:13
BFB2	1.00	1.00	1.00	BFB DIRECT INJ. 50 ng Inj.	5 Aug 2021	07:12
ICV1R	1.00	1.00	1.00	INITIAL CALIB. VERIF 10.0/100 ug/L, 5.0 m	5 Aug 2021	07:58

8260 ISTD/SSTD 20ug/ml VOC0864
8260 BFB STD. 50ug/ml VOC0863
8260 ICV STD. 100ug/ml VOC0868
8260 CCV/CALIB. 100ug/ml VOC0869

FVO4-01 Data Review Checklist

FORM #: FVO4-01
Rev. #: 2.2
Effective Date: 08/05/19

INDEPENDENT DATA REVIEW CHECKLIST			Method: GCMS (EPA SW-846 8260C)					
Analysis Date	**LIMS Run #(s):**	**Analyst/Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved?**			**Instrument**
					Yes	No		
08/05/2021	194091	DGS	RLD	08/10/2021	Yes			VMS3

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	
I. BFB Tune Check						
Was a BFB tune check analyzed with acceptable results?	Relative abundance criteria met?	Yes		Yes		
II. Initial Calibration Verification (ICV)						
Was initial calibration performed using a minimum of five standard concentration levels (minimum of 6 levels for quadratic curves)?	Lowest standard at or below RL?	Yes		Yes		
Were the Average Relative Response Factors (ARRF) acceptable?	ARRF<or= specified limits (<15%D.)see SOP)	Yes		Yes		
Was a second-source ICV(s) analyzed (for Quadratic Curve)?	Required before sample analyses.	Yes		Yes		
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		
Was Initial Calibration Blank (ICB) analyzed?	Required before sample analyses.	Yes		Yes		
Were the ICB results for all target analytes less than the limit of detection (LOD).	<LOD or < project/program specific limits	Yes		Yes		
III. Continuing Calibration Verification (CCV)						
Was an acceptable BFB tune check run at the beginning of every twelve hour shift?	Relative abundance criteria met?	Yes		Yes		
Was a CCV analyzed after every 12 hour tune check?	Required before sample analyses.	Yes		Yes		
Was a second CCV (CCV2) for compounds calibrated using quadratic curves analyzed after every 12 hour tune check?	Required before analyses of WI samples (above the inflection point of the curve).					
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific		No		No	Affected compounds were Z flagged
If necessary, were the results for outlying compounds qualified?		Yes		Yes		

IV. Blanks						
Was a Method Blank (MB) analyzed prior to analysis of samples?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MB results for all target analytes less than the limit of detection (LOD)?	*All target analytes <LOD or < project/program specific limits (<1/2 RL for DoD-QSM)	Yes		Yes		
If analytes were detected in the MB with no associated positives in the samples, no further action is needed. If the analyte detects in the MB were greater than the acceptance criteria and there were detects in the samples, was the data qualified.?						
V. Laboratory Control Spike (LCS)						
Was a LCS (and LCSD if needed) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the LCS (LCSD) recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.	Yes		Yes		
If applicable, were associated sample detects (and non-detects for low recoveries) qualified?						
Is the relative percent difference (RPD) for each analyte between the LCS and LSCD (if applicable) acceptable?	Default 20%, or see internally generated limits, or client specific limits.					
VI. Matrix Spike/Matrix Spike Duplicate (MS/MSD)						
Was a Martrix Spike (MS) and a Matrix Spike Duplicate (MSD) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		
Were the MS/MSD recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.	Yes		Yes		
Is the relative percent difference (RPD) for each analyte between the MS and MSD acceptable?	Default 20%, or see internally generated limits, or client specific limits.	Yes		Yes		
VII. Sample Analyses						
Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
Were surrogate recoveries for all samples and QC within acceptance criteria?	Default 70-130%, or see internally generated program limits, or client specified limits.		No		No	
If possible, were the affected samples reanalyzed?			No		No	
**Were reported sample results with failing surrogate recoveries qualified?		Yes		Yes		
Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed? If not qualify (X).	Target upper middle range of calibration curve.	Yes		Yes		
Did all samples meet hold time and preservation criteria as defined by method/program?	H2O sample: pH < 2 = 14 days, pH >2 = 7 days. Soil samples: 14 days (other criteria may apply)		No		No	Sample #1032212 was unpreserved, but was run within 7 days, therefore no flags
Were all samples and QC injected within 12 hours of BFB tune check?		Yes		Yes		
Were internal standard recoveries acceptable relevant to associated ICAL?	Response = -50 to +200%; Ret. time = +/- 30 sec.	Yes		Yes		

VIII. Records and Reporting						
Is sequence file / injection log present in the data package?		Yes		Yes		
Were all data, calculations, and values verified in LIMS (including removal of non-detections) upon completion of data capture?		Yes		Yes		
Were manual integrations performed correctly?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms.	Yes		Yes		
Was the rational for the manual integration verified?		Yes		Yes		
Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

ᵏNon-Applicable Yes/No Cells Are Left Blank*

Comments:

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0868	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0988, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0989, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0992 into 2250uL of MeOH.	MeOH / B&J / DZ644-U	100 ug/mL	07/28/2021	08/04/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0869	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0987, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0990, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0993 into 2250uL of MeOH.	MeOH / B&J / DZ644-U	100 ug/mL	07/28/2021	07/04/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0863	8260 BFB Std.	75uL of 2,000 ug/mL 4-Bromofluorobenzene Std. V0984 into 2925uL of MeOH.	MeOH / B&J / DZ644-U	50 ug/mL	07/13/2021	08/13/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0864	8260 ISTD/SSTD	200uL of 2,500 ug/mL 8260 Istd./Sstd. Mix V0949 and 250uL of 2000 ug/mL 1,2-Dichlorobenzene-$_{d4}$ Std. V0978 into 25mL of MeOH.	MeOH / B&J / DZ644-U	20 ug/mL	07/13/2021	08/13/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0865	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0988, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0989, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0992 into 2250uL of MeOH.	MeOH / B&J / DZ644-U	100 ug/mL	07/13/2021	07/20/2021	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0866	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0987, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0990, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0993 into 2250uL of MeOH.	MeOH / B&J / DZ644-U	100 ug/mL	07/13/2021	07/20/2021	RLD

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0991	8260 ISTD/SSTD Mix	Agilent	STM-540	0006595713
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,500 ug/mL	MeOH	04/30/2024	05/24/2021	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 IS/SS standard mix preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0992	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	CP210513005
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	11/09/2021	05/28/2021	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0993	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA210513017
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	11/09/2021	05/28/2021	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0988	8260 VOC Mix	AccuStandard	M-502-10X-PAK	220121048
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	12/08/2023	04/28/2021	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 ICV/Spiking Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0987	8260 VOC Mix	Agilent	DWM-588-1	0006585945
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	03/31/2024	04/16/2021	RLD
# of Ampules/Units:	4	Comments:	Used to prepare 8260 CCV/Calib. Standard.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0985	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	CP210319014
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	09/15/2021	03/29/2021	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0986	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA210310006
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	09/06/2021	03/29/2021	RLD
# of Ampules/Units:	1	Comments:	Used for 8260 ICV/Spiking Standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0982	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	AA210309012
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	06/07/2021	03/17/2021	RLD
# of Ampules/Units:	2	Comments:	Used to prepare 8260 ICV standard.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0983	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	CP210309007
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	06/07/2021	03/17/2021	RLD
# of Ampules/Units:	2	Comments:	Used to prepare 8260 CCV standard.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0984	4-Bromofluorobenzene	Agilent	STS-110N	0006476760
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,000 ug/mL	MeOH	07/31/2022	03/18/2021	RLD
# of Ampules/Units:	4	Comments:	Used to prepare 8260 tuning standard and 8021 surrogate standard.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0978	1,2-Dichlorobenzene-$_{d4}$	Agilent	STS-210-1	0006552847
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	09/30/2024	01/14/2021	RLD
# of Ampules/Units:	4	Comments:	Used for 8015/8260 SSTD preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0973	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA201211006
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	06/09/2021	12/15/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0974	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	AA201210008
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 50,000 ug/mL	MeOH	06/08/2020	12/15/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0971	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	CP201210001
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	03/10/2021	12/14/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0972	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	AA20120002
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
1,000 - 10,000 ug/mL	MeOH	03/10/2021	12/14/2020	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Std. preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0970	8260 VOC Mix	Agilent	DWM-588-1	0006518400
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	04/30/2023	11/10/2020	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 CCV/Calib. standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0969	8260 VOC Mix	AccuStandard	M-502-10X-PAK	220091206
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	09/21/2023	11/25/2020	RLD
# of Ampules/Units:	5	Comments:	Used for 8260 ICV/Spiking standard preparation.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0964	4-Bromofluorobenzene	Agilent	STS-110N	0006476760
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	07/31/2022	09/17/2020	RLD
# of Ampules/Units:	4	Comments:	Used for 8021/8260 ISTD and SSTD mixes.	

V METH, ETH, ETHENE QSM 5.0 Analytical Run
194154 on 8/10/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1035426						V METH, ETH, ETHENE QSM 5.0				
				CCV				0			
	1033447						METH,ETH,ETHE QSM 5.0				
				LCSW				81994			
	1033446						METH,ETH,ETHE QSM 5.0				
				MBW				81994			
163390	1030462		7/26/2021 13:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	4	
		13MW4						81994			
163390	1030469		7/26/2021 15:20		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	4	
		13TW3						81994			
163449	1031437		7/28/2021 11:30		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	4	
		48MW6						81994			
163449	1031438		7/28/2021 16:26		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	4	
		13MW2		Designated MS/MSD				81994			
	1033444		7/28/2021 16:26				METH,ETH,ETHE QSM 5.0				
		13MW2		MSW 1031438				81994			
	1033445		7/28/2021 16:26				METH,ETH,ETHE QSM 5.0				
		13MW2		MSDW 1033444				81994			
163492	1031959		7/29/2021 15:23		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	4	
		49MW1						81994			
163492	1031961		7/29/2021 17:45		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	4	
		50MW2						81994			
163509	1032207		7/30/2021 08:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	4	
		49MW4						81994			
	1035427						V METH, ETH, ETHENE QSM 5.0				
				CCV				0			
163509	1032208		7/30/2021 09:27		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	4	
		48MW2						81994			
163509	1032210		7/30/2021 11:11		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	4	
		48MW3						81994			
163509	1032211		7/30/2021 11:11		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	4	
		48TW3						81994			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: Volatiles C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpFD4C.tmp

V METH, ETH, ETHENE QSM 5.0 Analytical Run
194154 on 8/10/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
163509	1032212		7/30/2021 10:30		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48RB3						81994			
163509	1032213		7/30/2021 13:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49MW2						81994			
163390	1030468		7/26/2021 15:20		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		13MW3						81994			
163492	1031957		7/29/2021 13:42		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		48MW1						81994			
163492	1031958		7/29/2021 14:40		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	METH,ETH,ETHE QSM 5.0		GW	**4**	
		49EB1						81994			
	1035428						V METH, ETH, ETHENE QSM 5.0				
				CCV				0			

22 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpFD4C.tmp

PREP WORKSHEET
on 8/10/2021

Prep Batch **81,994** Date Prepped: 8/4/2021 Prepped By:: KMT

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	1033446	MBW		METH,ETH,ETHE QSM 5.0	LIQUID	21.3				
	1033447	LCSW		METH,ETH,ETHE QSM 5.0	LIQUID	21.3				
163390	1030462			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
	1030468			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
	1030469			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
163449	1031437			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
	1031438	sample designated for QC		METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
163492	1031957			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
	1031958			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
	1031959			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
	1031961			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
163509	1032207			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
	1032208			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
	1032210			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
	1032211			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
	1032212			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
	1032213			METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3			4	
	1033444	MSW	1031438	METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3				
	1033445	MSDW	1033444	METH,ETH,ETHE QSM 5.0	GROUND WATER	21.3				

Notes:_____

PREP WORKSHEET 2
on 8/10/2021

Prep Batch: **81994**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	1033446	MBW	0	METH,ETH,ETHE QSM 5.0			LIQUID			
	1033447	LCSW	0	METH,ETH,ETHE QSM 5.0			LIQUID			
163390	1030462			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	13MW4	GROUND WATER	7/26/21 13:00	8/8/21	4
	1030468			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	13MW3	GROUND WATER	7/26/21 15:20	8/8/21	4
	1030469			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	13TW3	GROUND WATER	7/26/21 15:20	8/8/21	4
163449	1031437			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	48MW6	GROUND WATER	7/28/21 11:30	8/10/21	4
	1031438	*		METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	13MW2	GROUND WATER	7/28/21 16:26	8/10/21	4
163492	1031957			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	48MW1	GROUND WATER	7/29/21 13:42	8/11/21	4
	1031958			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	49EB1	GROUND WATER	7/29/21 14:40	8/11/21	4
	1031959			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	49MW1	GROUND WATER	7/29/21 15:23	8/11/21	4
	1031961			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	50MW2	GROUND WATER	7/29/21 17:45	8/11/21	4
163509	1032207			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	49MW4	GROUND WATER	7/30/21 08:00	8/12/21	4
	1032208			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	48MW2	GROUND WATER	7/30/21 09:27	8/12/21	4
	1032210			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	48MW3	GROUND WATER	7/30/21 11:11	8/12/21	4
	1032211			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	48TW3	GROUND WATER	7/30/21 11:11	8/12/21	4
	1032212			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	48RB3	GROUND WATER	7/30/21 10:30	8/12/21	4
	1032213			METH,ETH,ETHE QSM 5.0	WESTON SOLUTIONS, INC.	49MW2	GROUND WATER	7/30/21 13:00	8/12/21	4

PREP WORKSHEET 2
on 8/10/2021

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	1033444	MSW	1031438	METH,ETH,ETHE QSM 5.0		13MW2	GROUND WATER	7/28/21 16:26		
	1033445	MSDW	1033444	METH,ETH,ETHE QSM 5.0		13MW2	GROUND WATER	7/28/21 16:26		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 8/4/2021 Instrument: FVOC4

Calibration Date: 7/1/2021 Analyst: KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol (ml)	Sample Temp. (°C)	pH
1	PS	0.25	43	①	
2	CCV	0.25	43		
3	LCSW	1	43	21.3	①
4	MBW	1	43	21.3	
5	1030462	1	43	21.3	LZ
6	1030468	1	43	21.3	LZ
7	1030469	1	43	21.3	LZ
8	1031437	1	43	21.3	LZ
9	1031438	1	43	21.3	LZ
10	MSW1031438	1	43	21.3	LZ
11	MSDW1031438	1	43	21.3	LZ
12	~~1031597~~ ②	1	43	21.3	LZ
13	1031958	1	43	21.3	LZ
14	1031959	1	43	21.3	LZ
15	1031961	1	43	21.3	LZ
16	1032207	1	43	21.3	LZ
17	CCV	0.25	43	①	
18	CCB	1	43		
19	1032208	1	43	21.3	LZ
20	1032210	1	43	21.3	LZ
21	1032211	1	43	21.3	LZ
22	1032212	1	43	21.3	7
23	1032213	1	43	21.3	LZ
24	1030468R	1	43	21.3	LZ
25	1031957R	1	43	21.3	LZ

Calibration Standard Ref. #: VOC 0845

Second Source Ref. #: VOC 0846

①NIH KMT 8/4/21

②1031957 KMT 8/4/21

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 8/4/2021 **Instrument:** PVOC4

Calibration Date: 7/1/2021 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
1	1031958 R	1	43	21.3	6.2
2	CCV	0.25	43	"	
3			43		
4			43		
5			43		
6			43		
7			43		
8			43		
9			43		
10			43		
11			43		
12			43		
13			43		
14			43		
15			43		
16			43		
17			43		
18			43		
19			43		
20			43		
21			43		
22			43		
23			43		
24			43		
25			43		
26			43		
27			43		
28			43		
29			43		
30			43		

Calibration Standard Ref. #: VOC 0845

Second Source Ref. #: VOC 0846

(1) NIA KMT 8/4/21

Sequence Summary Report

Sequence Filename: C:\INSTARCH\PVOC4\Sequence\080421 - 194154.seq
Instrument: PVOC4
Processing Date: Aug 04, 2021 14:13:58

'Run Number	Sample ID	Data Filename	Method Filename	Run Time
2	194154,CCV,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 10:38:42
3	194154,LCSW,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 11:03:47
4	194154,MBW,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 11:15:18
5	194154,1030462,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 11:30:22
6	194154,1030468,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 11:33:44
7	194154,1030469,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 11:37:30
8	194154,1031437,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 11:42:01
9	194154,1031438,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 11:48:43
10	194154,MSW1031438,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 12:38:47
11	194154,MSDW1031438,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 12:42:49
12	194154,1031597,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 12:47:00
13	194154,1031958,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 12:51:41
14	194154,1031959,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 12:57:26
15	194154,1031961,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 13:03:51
16	194154,1032207,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 13:08:22
17	194154,CCV,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 13:12:13
18	194154,CCB,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 13:15:46
19	194154,1032208,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 13:25:21
20	194154,1032210,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 13:29:08
21	194154,1032211,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 13:32:45
22	194154,1032212,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 13:46:36
23	194154,1032213,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 13:54:47
24	194154,1030468,R	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 13:58:42
25	194154,1031957,R	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 14:05:11
26	194154,1031958,R	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 14:09:04
27	194154,CCV,	C:\InStarch\PVOC4\Data\080421 ...	C:\Instarch\PVOC4\Methods\P4...	Aug 04, 2021 14:13:58

FVO1-01 Data Review Checklist

	FVO1-01 Method: Dissolved Gases (EPA SW-846 8015 / RSK 175 Modified)					
LIMS Run #(s)	**Analysis Date (s)**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**	**Instrument**
194154	08/04/2021	KMT	RLD	08/10/2021	Yes	PVOC4

Instructions: Complete one checklist per *analytical sequence*. Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
1. INITIAL CALIBRATION (ICAL)		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
a. Was the initial calibration performed using a minimum of five concentration levels?	Lowest standard at or below RL	Yes		Yes		
b. For each analyte/component is the variation between calibration response factors for all concentration levels <20% RSD or is $r^2 \geq .99$ or $r \geq .995$ for the regression line?	RSD <20% or $r^2 \geq .99$ or $r \geq .995$ or program/project specific	Yes		Yes		
c. Are the identification and date of the ICAL listed on the printout (or PDF) of the analytical run and in the method file?	ID# and date of ICAL listed	Yes		Yes		
d. Was an Initial Calibration Verification (ICV) analyzed after the ICAL?	Analyzed prior to sample analyses	Yes		Yes		
e. Were the recoveries for each analyte in the ICV within required limits?	Recoveries 85 - 115% or within program/project specific limits	Yes		Yes		
f. Was an Initial Calibration Blank (ICB) analyzed?		Yes		Yes		
g. Were the ICB results for all target analytes/components less than the reporting limit (RL)?	<RL or < program/project specific	Yes		Yes		
2. CONTINUING CALIBRATION VERIFICATION (CCV)						
a . Was a CCV analyzed at the beginning and end of a sequential analysis run, as well as after ever 10 samples?		Yes		Yes		
b. Were the recoveries for each analyte/component in the CCV within acceptance criteria?	Recoveries 85 - 115% or within program/project specific limits	Yes		Yes		
3. METHOD BLANKS (MB)						
a. Was a method blank (MB) analyzed?	1 / 20 or program/project specific	Yes		Yes		
b. Were the MB results for all analytes/components less than reporting limit?	All target analytes/components <RL or within program/project specific limits (DoD-QSM: <1/2 the RL)	Yes		Yes		
4. LABORATORY CONTROL SAMPLE (LCS)						
a. Was a LCS analyzed at the required frequency?	1 / 20 or program/project specific	Yes		Yes		
b. Were LCS recoveries for all analytes within the acceptance criteria?	Default = 70-130%, or within In-house generated or program/project specific limits	Yes		Yes		
c. If LCS recoveries exceed acceptance criteria, was the LCS reanalyzed in an effort to eliminate the possibility of a preparation error?		Yes		Yes		

5. MATRIX SPIKE (MS)/ MATRIX SPIKE DUPLICATES (MSD) and DUPLICATE						
a. Was a MS, MSD, and/or Duplicate (if valid) Vial analyzed with each batch of 20 samples (or program-specified frequency)?	1 / 20 or program/project specific frequency (QSM samples, duplicate only valid if sample result ≥ 5x the LOQ)	Yes		Yes		
b. Were MS/MSD recoveries for all analytes within acceptance criteria?	Default =70-130%, or within In-house generated or program/project specific limits	Yes		Yes		
6. PRECISION						
a. Is the relative percent difference (RPD) for each analyte between duplicate QC samples (i.e. parent sample / Duplicate vial), or for each MS/MSD within the acceptance criteria?	Default = 20 % RPD, or within In-house generated or program/project specific limits	Yes		Yes		
7. SAMPLES (INCLUDING BLANKS, STANDARDS, AND QC SAMPLES)						
a. Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		
b. Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed or reanalyzed using a smaller sample aliquot? Affected analyte detects should remain above the limit of quantitation (LOQ) after reanalysis.		Yes		Yes		
c. Was the correct ambient temperature recorded on sample spreadsheets?		Yes		Yes		
d. Were all samples adequately preserved and analyzed within holding time?	CO_2 samples received unpreserved (analyze within 7 days or program/project specific) Methane, Ethene, Ethane samples received preserved to <2 (analyze within 14 days or program/project specific)	Yes		Yes		Unpreserved sample analyzed within hold time
8. RECORDS AND REPORTING						
a. Is a sequence run file present in the raw data file?		Yes		Yes		
b. Is the data initialed and dated by analyst?	Analysis Run sheet is initialed & dated by the analyst processing the raw data.	Yes		Yes		
c. Do all values, units, etc. listed match the raw data and associated calculations and records?		Yes		Yes		
e. Has the data been electronically transferred to the LIMS and were the applicable qualifiers assigned?		Yes		Yes		
f. Were manual integrations addressed properly and were the audit trails turned on (where applicable)?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms. Audit trail must be on (if available).	Yes		Yes		
g. Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier in LIMS and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		

* Non-Applicable Yes/No Cells Are Left Blank*

Comments: _____

Sequence Summary Report

Sequence Filename: C:\INSTARCH\PVOC4\Sequence\070121 - MEE ICAL.seq
Instrument: PVOC4
Processing Date: Jul 01, 2021 11:06:20

'Run Number	Sample ID	Data Filename	Method Filename	Run Time
1	MEE PT1 - 2 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:09:22
2	MEE PT2 - 5 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:19:07
3	MEE PT3 - 10 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:24:05
4	MEE PT4 - 20 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:38:00
5	MEE PT5 - 50 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:41:21
6	MEE PT6 - 100 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:45:28
7	MEE PT7 - 200 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\INSTARCH\PVOC4\Method...	Jul 01, 2021 09:48:59
8	MEE PT4 - 20 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 09:59:16
9	MEE PT7 - 200 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 10:04:41
10	ICV - 50 ppmV	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 10:24:08
11	ICB	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 10:29:15
12	ICB	C:\Instarch\PVOC4\Data\070121i...	C:\Instarch\PVOC4\Methods\P4...	Jul 01, 2021 11:06:20

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 7/1/2021 **Instrument:** PVOC4

Calibration Date: 7/1/2021 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
1	PT 1	0.01	43		
2	PT 2	0.025	43		
3	PT 3	0.05	43		
4	PT 4	0.1	43		
5	PT 5	0.25	43		
6	PT 6	0.5	43		
7	PT 7	1.0	43		
8	PT 4	0.1	43		
9	PT 7	1.0	43		
10	ICV	0.25	43		
11	ICB	1.0	43	20.1	
12	ICB	1.0	43	20.1	
13			43	~~20.1~~ KMT 7/1/21	
14			43		
15			43		
16			43		
17			43		
18			43		
19			43		
20			43		
21			43		
22			43		
23			43		
24			43		
25			43		

N/A KMT 7/1/21

Calibration Standard Ref. #: VOC 0845

Second Source Ref. #: VOC 0846

① N/A KMT 7/1/21

Dissolved Gases (Injection)

(Sequence Log)

Sequence Date: 5/19/2021 **Instrument:** PVOC4

Calibration Date: 5/19/2021 **Analyst:** KMT

Injection #	Sample #	Injection Vol. (ml)	Sample Vol. (ml)	Sample Temp. (°C)	pH
1	PS	0.25	43	①	
2	CCV	0.25	43		
3	LCSW	1	43	23.6	①
4	MBW	1	43	23.6	
5	RECERT 1	0.25	43		
6	RECERT 2	0.25	43		
7	RECERT 3	0.25	43	①	
8	RECERT 4	0.25	43		
9	CCV	0.25	43		
10			43		
11			43		
12			43		
13			43		
14			43		
15		①	43		
16			43		
17			43		
18			43		
19			43		
20			43		
21			43		
22			43		
23			43		
24			43		
25			43		

Calibration Standard Ref. #: VOC0845

Second Source Ref. #: VOC0846

① N/A KMT 5/19/21

Page 1

LSVO1-01
Volatiles Standards Logbook
Logbook Created: 12/08/2015

NOTEBOOK VIEW: LTN_LSVO1_01_VOC_Default, NOTEBOOK: LSVO1_01_VOC, PAGE: 64
Page is Locked
Author: rdigmann on: 5/25/2018 7:47:52 AM
Witness: akurth on: 7/31/2018 9:54:19 AM
Project: Unassigned
Page Title: 05/24/18

Standard Log #:	VO886	Standard/Reagent:	Methane Ethene Ethane STI
Analyst:	AGK	Final Concentration:	200.0 PPM
Prep Date:	05/24/18	Expiration Date:	05/17/21
Prep:	Airgas Methane, Ethene, Ethane Standard Received 05/24/18 LOT# 54-401204472-1 REF# 54-401204472-1 Cylinder # P180959		

Standard Log #:	VOC0845	Standard/Reagent:	MEE GAS STANDARD
Analyst:	KMT	Final Concentration:	200 ppmV
Prep Date:	05/19/2021	Expiration Date:	04/14/2024
Prep:	AIRGAS PART: X04HE99C353Q80 LOT: 54-402075924-1		

Standard Log #:	VOC0846	Standard/Reagent:	MEE RECERTIFICATION O
Analyst:	KMT	Final Concentration:	N/A
Prep Date:	05/19/2021	Expiration Date:	05/19/2022
Prep:	Recertification of methane, ethane, ethane tank (V0886). Ran 4 consecutive CCV's with acceptable recoveries.		

Airgas
an Air Liquide company

Recert VOC0846 5/19/2022 EXP: 5/19/2022 KMT

Expires 5/17/21 VO 886 AGK 5/24/18

Airgas Specialty Gases
Airgas USA, LLC
12722 S. Wentworth Ave.
Chicago, IL 60628
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04HE99C353Q80	Reference Number:	54-401204472-1
Cylinder Number:	P180959	Cylinder Volume:	31.6 CF
Laboratory:	124 - Chicago (SAP) - IL	Cylinder Pressure:	2013 PSIG
Analysis Date:	May 17, 2018	Valve Outlet:	350
Lot Number:	54-401204472-1		

Expiration Date: May 17, 2021

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
ETHANE	200.0 PPM	198.9 PPM	+/- 2%
ETHYLENE	200.0 PPM	198.3 PPM	+/- 2%
METHANE	200.0 PPM	198.3 PPM	+/- 2%
HELIUM	Balance		

Approved for Release

VOC0845 Expires: 7/17/2024
KMT
5/19/2021

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA, LLC
12722 S. Wentworth Ave.
Chicago, IL 60628
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04HE99C353Q80	Reference Number:	54-402075924-1
Cylinder Number:	N698768	Cylinder Volume:	31.6 CF
Laboratory:	124 - Chicago (SAP) - IL	Cylinder Pressure:	2013 PSIG
Analysis Date:	Apr 14, 2021	Valve Outlet:	350
Lot Number:	54-402075924-1		

Expiration Date: Apr 14, 2024

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
ETHANE	200.0 PPM	199.8 PPM	+/- 2%
ETHYLENE	200.0 PPM	207.3 PPM	+/- 2%
METHANE	200.0 PPM	200.2 PPM	+/- 2%
HELIUM	Balance		

Approved for Release

METALS
CLP FORMS
DOCUMENTS

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW 48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032214
Analytical Method:	EPA 7470A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194190	Analysis Date/Time	08/04/2021 13:49
Analytical Prep Batch #:	81952	Prep. Date/Time:	08/03/2021 14:20
ICAL Calibration #:	08042021	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	0.020	0.080	0.12	0.12

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW 48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032214
Analytical Method:	EPA 6010C	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194081	Analysis Date/Time	08/03/2021 22:45
Analytical Prep Batch #:	81955	Prep. Date/Time:	08/02/2021 09:56
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	4860		Y	10	20	40	40
7440-36-0	Total Antimony	10	U		4.7	10	20	20
7440-38-2	Total Arsenic	25	U		12	25	50	50
7440-39-3	Total Barium	191			0.82	2.0	4.0	4.0
7440-41-7	Total Beryllium	0.28	J	B	0.10	0.30	0.60	0.60
7440-43-9	Total Cadmium	1.0	U		0.42	1.0	2.0	2.0
7440-70-2	Total Calcium	83300			19	50	100	100
7440-47-3	Total Chromium	21.2			1.6	3.5	5.0	5.0
7440-48-4	Total Cobalt	4.2			0.60	2.5	4.0	4.0
7440-50-8	Total Copper	28.0	J		11	25	50	50
7439-89-6	Total Iron	8180		M	33	70	100	100
7439-92-1	Total Lead	17.2			1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	43900			10	25	40	40
7439-96-5	Total Manganese	566		M	1.5	3.0	5.0	5.0
7440-02-0	Total Nickel	15.2			1.4	3.0	5.0	5.0
7440-09-7	Total Potassium	5300			120	250	500	500
7782-49-2	Total Selenium	20	U		9.9	20	40	40
7440-22-4	Total Silver	2.0	U		0.70	2.0	4.0	4.0
7440-23-5	Total Sodium	47400			180	500	500	500
7440-28-0	Total Thallium	12	U		5.9	12	20	20
7440-62-2	Total Vanadium	8.5			1.1	2.5	5.0	5.0
7440-66-6	Total Zinc	190			5.0	10	20	20

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194190

Lab Sample ID: 1034237

ICAL Calibration #: 08042021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	8/4/21	11:26	3.0	3.13	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082

Lab Sample ID: 1034044

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	8/3/21	10:51	5000	5040	101	90	110
Sodium	8/3/21	10:51	5000	4730	94.6	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082

Lab Sample ID: 1034045

ICAL Calibration #:

Concentration Units:

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	8/3/21	10:58	15000	14000	93.3	80	120
Sodium	8/3/21	10:58	3000	2960	98.7	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1034060

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	8/3/21	10:51	12000	12300	103	90	110
Antimony	8/3/21	10:51	500.0	508.0	102	90	110
Arsenic	8/3/21	10:51	2000	2040	102	90	110
Barium	8/3/21	10:51	2000	1800	90.0	90	110
Beryllium	8/3/21	10:51	50.0	49.90	99.8	90	110
Cadmium	8/3/21	10:51	50.0	50.80	102	90	110
Calcium	8/3/21	10:51	10000	10400	104	90	110
Chromium	8/3/21	10:51	200.0	202.0	101	90	110
Cobalt	8/3/21	10:51	500.0	506.0	101	90	110
Copper	8/3/21	10:51	250.0	251.0	100	90	110
Iron	8/3/21	10:51	5000	5520	110	90	110
Lead	8/3/21	10:51	500.0	509.0	102	90	110
Magnesium	8/3/21	10:51	10000	10400	104	90	110
Manganese	8/3/21	10:51	500.0	474.0	94.8	90	110
Nickel	8/3/21	10:51	500.0	509.0	102	90	110
Selenium	8/3/21	10:51	2000	2140	107	90	110
Silver	8/3/21	10:51	50.0	47.10	94.2	90	110
Thallium	8/3/21	10:51	2000	2050	103	90	110
Vanadium	8/3/21	10:51	500.0	506.0	101	90	110
Zinc	8/3/21	10:51	500.0	529.0	106	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1034061

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	8/3/21	10:58	1200	1210	101	80	120
Antimony	8/3/21	10:58	60.0	65.50	109	80	120
Arsenic	8/3/21	10:58	60.0	64.60	108	80	120
Barium	8/3/21	10:58	30.0	31.60	105	80	120
Beryllium	8/3/21	10:58	12.00	13.10	109	80	120
Cadmium	8/3/21	10:58	15.00	16.40	109	80	120
Calcium	8/3/21	10:58	1500	1510	101	80	120
Chromium	8/3/21	10:58	30.0	32.20	107	80	120
Cobalt	8/3/21	10:58	30.0	30.60	102	80	120
Copper	8/3/21	10:58	30.0	33.00	110	80	120
Iron	8/3/21	10:58	900.0	972.0	108	80	120
Lead	8/3/21	10:58	30.0	32.50	108	80	120
Magnesium	8/3/21	10:58	1500	1600	107	80	120
Manganese	8/3/21	10:58	30.0	29.70	99.0	80	120
Nickel	8/3/21	10:58	30.0	31.40	105	80	120
Selenium	8/3/21	10:58	60.0	61.90	103	80	120
Thallium	8/3/21	10:58	60.0	60.80	101	80	120
Vanadium	8/3/21	10:58	30.0	32.10	107	80	120
Zinc	8/3/21	10:58	30.0	33.10	110	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081

Lab Sample ID: 1034065

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Silver	8/3/21	11:54	10.0	9.76	97.6	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082 Lab Sample ID: 1034050

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	8/3/21	21:36	50000	48500	97.0	90	110
Sodium	8/3/21	21:36	50000	49400	98.8	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082

Lab Sample ID: 1034051

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	8/3/21	21:43	5000	5220	104	90	110
Sodium	8/3/21	21:43	5000	4980	99.6	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082 Lab Sample ID: 1034053

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	8/3/21	23:17	50000	48000	96.0	90	110
Sodium	8/3/21	23:17	50000	49100	98.2	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082 Lab Sample ID: 1034054

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	8/3/21	23:24	5000	5110	102	90	110
Sodium	8/3/21	23:24	5000	4930	98.6	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082 Lab Sample ID: 1034057

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	8/4/21	00:55	50000	48000	96.0	90	110
Sodium	8/4/21	00:55	50000	49200	98.4	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082 Lab Sample ID: 1034058

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Potassium	8/4/21	01:02	5000	5300	106	90	110
Sodium	8/4/21	01:02	5000	5030	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1034066

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	8/3/21	21:36	5000	5100	102	90	110
Antimony	8/3/21	21:36	5000	5060	101	90	110
Arsenic	8/3/21	21:36	5000	5340	107	90	110
Barium	8/3/21	21:36	5000	4690	93.8	90	110
Beryllium	8/3/21	21:36	500.0	533.0	107	90	110
Cadmium	8/3/21	21:36	500.0	540.0	108	90	110
Calcium	8/3/21	21:36	5000	4940	98.8	90	110
Chromium	8/3/21	21:36	5000	5150	103	90	110
Cobalt	8/3/21	21:36	5000	5310	106	90	110
Copper	8/3/21	21:36	5000	4920	98.4	90	110
Iron	8/3/21	21:36	5000	5200	104	90	110
Lead	8/3/21	21:36	5000	4970	99.4	90	110
Magnesium	8/3/21	21:36	5000	4890	97.8	90	110
Manganese	8/3/21	21:36	5000	5100	102	90	110
Nickel	8/3/21	21:36	5000	5150	103	90	110
Selenium	8/3/21	21:36	5000	5220	104	90	110
Silver	8/3/21	21:36	500.0	512.0	102	90	110
Thallium	8/3/21	21:36	5000	5230	105	90	110
Vanadium	8/3/21	21:36	5000	5200	104	90	110
Zinc	8/3/21	21:36	5000	5160	103	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1034067

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	8/3/21	21:43	500.0	525.0	105	90	110
Antimony	8/3/21	21:43	500.0	537.0	107	90	110
Arsenic	8/3/21	21:43	500.0	540.0	108	90	110
Barium	8/3/21	21:43	500.0	528.0	106	90	110
Beryllium	8/3/21	21:43	50.0	49.10	98.2	90	110
Cadmium	8/3/21	21:43	50.0	50.30	101	90	110
Calcium	8/3/21	21:43	500.0	512.0	102	90	110
Chromium	8/3/21	21:43	500.0	532.0	106	90	110
Cobalt	8/3/21	21:43	500.0	532.0	106	90	110
Copper	8/3/21	21:43	500.0	526.0	105	90	110
Iron	8/3/21	21:43	500.0	536.0	107	90	110
Lead	8/3/21	21:43	500.0	532.0	106	90	110
Magnesium	8/3/21	21:43	500.0	545.0	109	90	110
Manganese	8/3/21	21:43	500.0	503.0	101	90	110
Nickel	8/3/21	21:43	500.0	539.0	108	90	110
Selenium	8/3/21	21:43	500.0	542.0	108	90	110
Silver	8/3/21	21:43	50.0	47.00	94.0	90	110
Thallium	8/3/21	21:43	500.0	539.0	108	90	110
Vanadium	8/3/21	21:43	500.0	532.0	106	90	110
Zinc	8/3/21	21:43	500.0	541.0	108	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1034069

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	8/3/21	23:17	5000	5100	102	90	110
Antimony	8/3/21	23:17	5000	5180	104	90	110
Arsenic	8/3/21	23:17	5000	5310	106	90	110
Barium	8/3/21	23:17	5000	4690	93.8	90	110
Beryllium	8/3/21	23:17	500.0	534.0	107	90	110
Cadmium	8/3/21	23:17	500.0	540.0	108	90	110
Calcium	8/3/21	23:17	5000	4930	98.6	90	110
Chromium	8/3/21	23:17	5000	5200	104	90	110
Cobalt	8/3/21	23:17	5000	5290	106	90	110
Copper	8/3/21	23:17	5000	4930	98.6	90	110
Iron	8/3/21	23:17	5000	5170	103	90	110
Lead	8/3/21	23:17	5000	4950	99.0	90	110
Magnesium	8/3/21	23:17	5000	4850	97.0	90	110
Manganese	8/3/21	23:17	5000	5100	102	90	110
Nickel	8/3/21	23:17	5000	5150	103	90	110
Selenium	8/3/21	23:17	5000	5300	106	90	110
Silver	8/3/21	23:17	500.0	516.0	103	90	110
Thallium	8/3/21	23:17	5000	5220	104	90	110
Vanadium	8/3/21	23:17	5000	5200	104	90	110
Zinc	8/3/21	23:17	5000	5170	103	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1034070

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	8/3/21	23:24	500.0	526.0	105	90	110
Antimony	8/3/21	23:24	500.0	535.0	107	90	110
Arsenic	8/3/21	23:24	500.0	535.0	107	90	110
Barium	8/3/21	23:24	500.0	528.0	106	90	110
Beryllium	8/3/21	23:24	50.0	49.10	98.2	90	110
Cadmium	8/3/21	23:24	50.0	50.20	100	90	110
Calcium	8/3/21	23:24	500.0	500.0	100	90	110
Chromium	8/3/21	23:24	500.0	531.0	106	90	110
Cobalt	8/3/21	23:24	500.0	532.0	106	90	110
Copper	8/3/21	23:24	500.0	527.0	105	90	110
Iron	8/3/21	23:24	500.0	538.0	108	90	110
Lead	8/3/21	23:24	500.0	533.0	107	90	110
Magnesium	8/3/21	23:24	500.0	544.0	109	90	110
Manganese	8/3/21	23:24	500.0	501.0	100	90	110
Nickel	8/3/21	23:24	500.0	538.0	108	90	110
Selenium	8/3/21	23:24	500.0	543.0	109	90	110
Silver	8/3/21	23:24	50.0	46.50	93.0	90	110
Thallium	8/3/21	23:24	500.0	541.0	108	90	110
Vanadium	8/3/21	23:24	500.0	530.0	106	90	110
Zinc	8/3/21	23:24	500.0	543.0	109	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1034073

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	8/4/21	00:55	5000	5130	103	90	110
Antimony	8/4/21	00:55	5000	5270	105	90	110
Arsenic	8/4/21	00:55	5000	5310	106	90	110
Barium	8/4/21	00:55	5000	4670	93.4	90	110
Beryllium	8/4/21	00:55	500.0	540.0	108	90	110
Cadmium	8/4/21	00:55	500.0	546.0	109	90	110
Calcium	8/4/21	00:55	5000	4910	98.2	90	110
Chromium	8/4/21	00:55	5000	5270	105	90	110
Cobalt	8/4/21	00:55	5000	5340	107	90	110
Copper	8/4/21	00:55	5000	4990	99.8	90	110
Iron	8/4/21	00:55	5000	5220	104	90	110
Lead	8/4/21	00:55	5000	4960	99.2	90	110
Magnesium	8/4/21	00:55	5000	4930	98.6	90	110
Manganese	8/4/21	00:55	5000	5150	103	90	110
Nickel	8/4/21	00:55	5000	5210	104	90	110
Selenium	8/4/21	00:55	5000	5370	107	90	110
Silver	8/4/21	00:55	500.0	514.0	103	90	110
Thallium	8/4/21	00:55	5000	5260	105	90	110
Vanadium	8/4/21	00:55	5000	5160	103	90	110
Zinc	8/4/21	00:55	5000	5240	105	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1034074

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	8/4/21	01:02	500.0	533.0	107	90	110
Antimony	8/4/21	01:02	500.0	539.0	108	90	110
Arsenic	8/4/21	01:02	500.0	542.0	108	90	110
Barium	8/4/21	01:02	500.0	534.0	107	90	110
Beryllium	8/4/21	01:02	50.0	50.10	100	90	110
Cadmium	8/4/21	01:02	50.0	50.90	102	90	110
Calcium	8/4/21	01:02	500.0	508.0	102	90	110
Chromium	8/4/21	01:02	500.0	540.0	108	90	110
Cobalt	8/4/21	01:02	500.0	538.0	108	90	110
Copper	8/4/21	01:02	500.0	532.0	106	90	110
Iron	8/4/21	01:02	500.0	540.0	108	90	110
Lead	8/4/21	01:02	500.0	543.0	109	90	110
Magnesium	8/4/21	01:02	500.0	552.0	110	90	110
Manganese	8/4/21	01:02	500.0	508.0	102	90	110
Nickel	8/4/21	01:02	500.0	541.0	108	90	110
Selenium	8/4/21	01:02	500.0	543.0	109	90	110
Silver	8/4/21	01:02	50.0	47.20	94.4	90	110
Thallium	8/4/21	01:02	500.0	543.0	109	90	110
Vanadium	8/4/21	01:02	500.0	533.0	107	90	110
Zinc	8/4/21	01:02	500.0	548.0	110	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194190 Lab Sample ID: 1034239

ICAL Calibration #: 08042021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	8/4/21 12:48	3.0	3.20	107	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194190 Lab Sample ID: 1034241

ICAL Calibration #: 08042021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	8/4/21	13:30	3.0	3.25	108	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194190 Lab Sample ID: 1034243

ICAL Calibration #: 08042021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	8/4/21 14:11	3.0	3.10	103	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194190 Lab Sample ID: 1034238

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 08042021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	08/04/2021 11:33	-0.012	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
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Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082

Lab Sample ID: 1034046

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	08/03/2021 11:14	22.00	U	120	250
Sodium	08/03/2021 11:14	-9.00	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1034062

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	08/03/2021 11:14	6.56	U	10	20
Antimony	08/03/2021 11:14	0.261	U	4.7	10
Arsenic	08/03/2021 11:14	-3.31	U	12	25
Barium	08/03/2021 11:14	0.049	U	0.82	2.0
Beryllium	08/03/2021 11:14	-0.039	U	0.10	0.30
Cadmium	08/03/2021 11:14	-0.012	U	0.42	1.0
Calcium	08/03/2021 11:14	-3.12	U	19	50
Chromium	08/03/2021 11:14	-0.243	U	1.6	2.5
Cobalt	08/03/2021 11:14	-1.23	U	0.6	2.0
Copper	08/03/2021 11:14	-1.34	U	11	25
Iron	08/03/2021 11:14	0.008	U	33	50
Lead	08/03/2021 11:14	-0.935	U	1.4	2.0
Magnesium	08/03/2021 11:14	0.333	U	10	20
Manganese	08/03/2021 11:14	-0.80	U	1.5	2.5
Nickel	08/03/2021 11:14	-0.275	U	1.4	2.5
Selenium	08/03/2021 11:14	-4.27	U	9.9	20
Silver	08/03/2021 11:14	0.662	U	0.7	2.0
Thallium	08/03/2021 11:14	0.99	U	5.9	10
Vanadium	08/03/2021 11:14	0.031	U	1.1	2.5
Zinc	08/03/2021 11:14	-0.362	U	5.0	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194190

Lab Sample ID: 1034240

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: 08042021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	08/04/2021 12:55	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194190 Lab Sample ID: 1034242

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 08042021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	08/04/2021 13:36	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194190

Lab Sample ID: 1034244

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: 08042021

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	08/04/2021 14:17	0	U	0.020	0.080

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082

Lab Sample ID: 1034052

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	08/03/2021 21:50	53.00	U	120	250
Sodium	08/03/2021 21:50	33.00	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082 Lab Sample ID: 1034055

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	08/03/2021 23:31	30.00	U	120	250
Sodium	08/03/2021 23:31	33.00	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082 Lab Sample ID: 1034059

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Potassium	08/04/2021 01:09	62.00	U	120	250
Sodium	08/04/2021 01:09	30.00	U	180	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1034068

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	08/03/2021 21:50	-3.98	U	10	20
Antimony	08/03/2021 21:50	-0.868	U	4.7	10
Arsenic	08/03/2021 21:50	2.10	U	12	25
Barium	08/03/2021 21:50	0.384	U	0.82	2.0
Beryllium	08/03/2021 21:50	-0.057	U	0.10	0.30
Cadmium	08/03/2021 21:50	0.064	U	0.42	1.0
Calcium	08/03/2021 21:50	-7.14	U	19	50
Chromium	08/03/2021 21:50	0.215	U	1.6	2.5
Cobalt	08/03/2021 21:50	-0.999	U	0.6	2.0
Copper	08/03/2021 21:50	0.63	U	11	25
Iron	08/03/2021 21:50	-1.06	U	33	50
Lead	08/03/2021 21:50	-1.38	U	1.4	2.0
Magnesium	08/03/2021 21:50	0.239	U	10	20
Manganese	08/03/2021 21:50	-0.644	U	1.5	2.5
Nickel	08/03/2021 21:50	-1.03	U	1.4	2.5
Selenium	08/03/2021 21:50	-2.36	U	9.9	20
Silver	08/03/2021 21:50	-0.34	U	0.7	2.0
Thallium	08/03/2021 21:50	0.956	U	5.9	10
Vanadium	08/03/2021 21:50	0.137	U	1.1	2.5
Zinc	08/03/2021 21:50	0.011	U	5.0	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1034071

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	08/03/2021 23:31	1.68	U	10	20
Antimony	08/03/2021 23:31	-2.65	U	4.7	10
Arsenic	08/03/2021 23:31	1.30	U	12	25
Barium	08/03/2021 23:31	0.304	U	0.82	2.0
Beryllium	08/03/2021 23:31	0.006	U	0.10	0.30
Cadmium	08/03/2021 23:31	-0.02	U	0.42	1.0
Calcium	08/03/2021 23:31	-3.19	U	19	50
Chromium	08/03/2021 23:31	-0.086	U	1.6	2.5
Cobalt	08/03/2021 23:31	-0.854	U	0.6	2.0
Copper	08/03/2021 23:31	0.394	U	11	25
Iron	08/03/2021 23:31	-1.04	U	33	50
Lead	08/03/2021 23:31	-1.07	U	1.4	2.0
Magnesium	08/03/2021 23:31	0.449	U	10	20
Manganese	08/03/2021 23:31	-0.541	U	1.5	2.5
Nickel	08/03/2021 23:31	-0.104	U	1.4	2.5
Selenium	08/03/2021 23:31	-0.544	U	9.9	20
Silver	08/03/2021 23:31	-0.259	U	0.7	2.0
Thallium	08/03/2021 23:31	0.714	U	5.9	10
Vanadium	08/03/2021 23:31	0.226	U	1.1	2.5
Zinc	08/03/2021 23:31	0.184	U	5.0	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1034075

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	08/04/2021 01:09	0.262	U	10	20
Antimony	08/04/2021 01:09	-0.918	U	4.7	10
Arsenic	08/04/2021 01:09	3.95	U	12	25
Barium	08/04/2021 01:09	-0.105	U	0.82	2.0
Beryllium	08/04/2021 01:09	0.012	U	0.10	0.30
Cadmium	08/04/2021 01:09	-0.026	U	0.42	1.0
Calcium	08/04/2021 01:09	-3.14	U	19	50
Chromium	08/04/2021 01:09	-0.247	U	1.6	2.5
Cobalt	08/04/2021 01:09	-1.11	U	0.6	2.0
Copper	08/04/2021 01:09	0.501	U	11	25
Iron	08/04/2021 01:09	-0.236	U	33	50
Lead	08/04/2021 01:09	-0.94	U	1.4	2.0
Magnesium	08/04/2021 01:09	-0.389	U	10	20
Manganese	08/04/2021 01:09	-0.708	U	1.5	2.5
Nickel	08/04/2021 01:09	-0.732	U	1.4	2.5
Selenium	08/04/2021 01:09	0.78	U	9.9	20
Silver	08/04/2021 01:09	-0.575	U	0.7	2.0
Thallium	08/04/2021 01:09	2.88	U	5.9	10
Vanadium	08/04/2021 01:09	-0.353	U	1.1	2.5
Zinc	08/04/2021 01:09	-0.23	U	5.0	10

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194190 Lab Sample ID: 1032179

Analytical Prep Batch # 81952 Preparation Date/Time: 08/03/2021 14:20

ICAL Calibration #: 08042021 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Mercury	08/04/2021 13:17	-0.00400	U	0.020	0.06

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082 Lab Sample ID: 1032226

Analytical Prep Batch # 81954 Preparation Date/Time: 08/02/2021 09:56

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Potassium	08/03/2021 22:38	-2.00	U	123	250
Total Sodium	08/03/2021 22:38	39.00	U	183	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194082 Lab Sample ID: 1032226

Analytical Prep Batch # 81954 Preparation Date/Time: 08/02/2021 09:56

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Potassium	08/03/2021 22:38	-2.00	U	123	250
Total Sodium	08/03/2021 22:38	39.00	U	183	250

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194081 Lab Sample ID: 1032231

Analytical Prep Batch # 81955 Preparation Date/Time: 08/02/2021 09:56

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit	
Total Aluminum	08/03/2021 22:38	8.45	U	10	20	
Total Antimony	08/03/2021 22:38	2.59	U	4.7	10	
Total Arsenic	08/03/2021 22:38	4.40	U	12	25	
Total Barium	08/03/2021 22:38	0.266	U	0.82	2.0	
Total Beryllium	08/03/2021 22:38	0.107		0.10	0.30	FAIL
Total Cadmium	08/03/2021 22:38	0.0550	U	0.42	1.0	
Total Calcium	08/03/2021 22:38	-1.11	U	19	50	
Total Chromium	08/03/2021 22:38	0.274	U	1.6	2.5	
Total Cobalt	08/03/2021 22:38	-1.30	U	0.6	2.0	
Total Copper	08/03/2021 22:38	0.475	U	11	25	
Total Iron	08/03/2021 22:38	2.09	U	33	50	
Total Lead	08/03/2021 22:38	-1.09	U	1.4	2.0	
Total Magnesium	08/03/2021 22:38	-0.785	U	10	20	
Total Manganese	08/03/2021 22:38	-0.706	U	1.5	2.5	
Total Nickel	08/03/2021 22:38	-1.40	U	1.4	2.5	
Total Selenium	08/03/2021 22:38	-1.51	U	9.9	20	
Total Silver	08/03/2021 22:38	-0.282	U	0.7	2.0	
Total Thallium	08/03/2021 22:38	0.469	U	5.9	10	
Total Vanadium	08/03/2021 22:38	-0.263	U	1.1	2.5	
Total Zinc	08/03/2021 22:38	-0.125	U	5.0	10	

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 163390
ICS Source: SPEX

Analytical Run #: 194082
Lab Sample ID: 1034047
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	08/03/2021 11:29	500000	528000	106	80	120
Calcium	08/03/2021 11:29	500000	491000	98.2	80	120
Iron	08/03/2021 11:29	500000	485000	97.0	80	120
Magnesium	08/03/2021 11:29	500000	533000	107	80	120
Potassium	08/03/2021 11:29	0	139.0	0	-170	170
Sodium	08/03/2021 11:29	0	0	0	-140	140

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 163390
ICS Source: SPEX

Analytical Run #: 194081
Lab Sample ID: 1034063
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	08/03/2021 11:29	500000	528000	106	80	120
Antimony	08/03/2021 11:29	0	2.02	0	-10	10
Arsenic	08/03/2021 11:29	0	-18.6	0	-20	20
Barium	08/03/2021 11:29	0	-0.618	0	-1.7	1.7
Beryllium	08/03/2021 11:29	0	-0.039	0	-.7	.7
Cadmium	08/03/2021 11:29	0	0	0	-1.3	1.3
Calcium	08/03/2021 11:29	500000	491000	98.2	80	120
Chromium	08/03/2021 11:29	0	-0.595	0	-13	13
Cobalt	08/03/2021 11:29	0	-1.10	0	-2	2
Copper	08/03/2021 11:29	0	7.10	0	-7.3	7.3
Iron	08/03/2021 11:29	500000	485000	97.0	80	120
Lead	08/03/2021 11:29	0	-0.37	0	-4.7	4.7
Magnesium	08/03/2021 11:29	500000	533000	107	80	120
Manganese	08/03/2021 11:29	0	1.79	0	-7.3	7.3
Nickel	08/03/2021 11:29	0	-0.681	0	-7	7
Selenium	08/03/2021 11:29	0	9.49	0	-13	13
Silver	08/03/2021 11:29	0	-1.76	0	-7.3	7.3
Thallium	08/03/2021 11:29	0	-0.936	0	-7.3	7.3
Vanadium	08/03/2021 11:29	10000	11100	0	8000	12000
Zinc	08/03/2021 11:29	0	2.52	0	-20	20

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Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 163390
ICS Source: SPEX, Ultra

Analytical Run #: 194082
Lab Sample ID: 1034048
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	08/03/2021 11:38	500000	533000	107	80	120
Calcium	08/03/2021 11:38	500000	493000	98.6	80	120
Iron	08/03/2021 11:38	500000	504000	101	80	120
Magnesium	08/03/2021 11:38	500000	537000	107	80	120
Potassium	08/03/2021 11:38	50000	53800	108	80	120
Sodium	08/03/2021 11:38	50000	54400	109	80	120

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
ICP ID Number: TJA 6000
SDG No.: 163390
ICS Source: SPEX, Ultra

Analytical Run #: 194081
Lab Sample ID: 1034064
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	08/03/2021 11:38	500000	533000	107	80	120
Antimony	08/03/2021 11:38	500.0	589.0	118	80	120
Arsenic	08/03/2021 11:38	500.0	541.0	108	80	120
Barium	08/03/2021 11:38	500.0	574.0	115	80	120
Beryllium	08/03/2021 11:38	500.0	522.0	104	80	120
Cadmium	08/03/2021 11:38	500.0	523.0	105	80	120
Calcium	08/03/2021 11:38	500000	493000	98.6	80	120
Chromium	08/03/2021 11:38	500.0	551.0	110	80	120
Cobalt	08/03/2021 11:38	500.0	564.0	113	80	120
Copper	08/03/2021 11:38	500.0	548.0	110	80	120
Iron	08/03/2021 11:38	500000	504000	101	80	120
Lead	08/03/2021 11:38	500.0	551.0	110	80	120
Magnesium	08/03/2021 11:38	500000	537000	107	80	120
Manganese	08/03/2021 11:38	500.0	524.0	105	80	120
Nickel	08/03/2021 11:38	500.0	553.0	111	80	120
Selenium	08/03/2021 11:38	500.0	584.0	117	80	120
Silver	08/03/2021 11:38	500.0	533.0	107	80	120
Thallium	08/03/2021 11:38	500.0	571.0	114	80	120
Vanadium	08/03/2021 11:38	500.0	562.0	112	80	120
Zinc	08/03/2021 11:38	500.0	586.0	117	80	120

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5A

SPIKE SAMPLE RECOVERY

Sample Description

IDW 48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1032229	Parent Sample No.:	1032214
Analytical Prep Batch #	81954	Analytical Preparation Date/Time:	08/02/2021 09:56
Analytical Run #:	194082	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	08/03/2021	Analysis Time: --------	23:09

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Potassium	86-114	74600		5300		100000	69.3		P	*FAIL*
Total Sodium	87-115	109000		47400		100000	61.6		P	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5A

SPIKE SAMPLE RECOVERY

Sample Description: **IDW 48/49**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1032234	Parent Sample No.:	1032214
Analytical Prep Batch #	81955	Analytical Preparation Date/Time:	08/02/2021 09:56
Analytical Run #:	194081	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 08/03/2021 Analysis Time: -------- 23:09

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Aluminum	86-115	5020		4860		800	20.0		P	*FAIL*
Total Antimony	88-113	172		BDL	U	200	86.0		P	*FAIL*
Total Arsenic	87-113	692		BDL	U	800	86.5		P	*FAIL*
Total Barium	88-113	802		191		800	76.4		P	*FAIL*
Total Beryllium	89-112	17.1		0.28	J	20.0	84.1		P	*FAIL*
Total Cadmium	88-113	16.2		BDL	U	20.0	81.0		P	*FAIL*
Total Calcium	87-113	208000		83300		200000	62.4		P	*FAIL*
Total Chromium	90-113	83.3		21.2		80.0	77.6		P	*FAIL*
Total Cobalt	89-114	170		4.2		200	82.9		P	*FAIL*
Total Copper	86-114	109		28.0	J	100	81.0		P	*FAIL*
Total Iron	87-115	6700		8180		400	0		P	*FAIL*
Total Lead	86-113	181		17.2		200	81.9		P	*FAIL*
Total Magnesium	85-113	108000		43900		100000	64.1		P	*FAIL*
Total Manganese	90-114	618		566		200	26.0		P	*FAIL*
Total Nickel	88-113	177		15.2		200	80.9		P	*FAIL*
Total Selenium	83-114	701		BDL	U	800	87.6		P	
Total Silver	84-115	16.3		BDL	U	20.0	81.5		P	*FAIL*
Total Thallium	85-114	693		BDL	U	800	86.6		P	
Total Vanadium	90-111	172		8.5		200	81.8		P	*FAIL*
Total Zinc	87-115	335		190		200	72.5		P	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **IDW 48/49**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solids for Sample:
Concentration Units: ug/L
Sample No: 1034072
Parent Sample No.: 1032214
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 194081
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 08/03/2021 Analysis Time: -------- 23:46

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Aluminum	80-120	8350		4860		4000	87.3		P	
Antimony	80-120	1080		BDL	U	1000	108		P	
Arsenic	80-120	4310		BDL	U	4000	108		P	
Barium	80-120	3980		191		4000	94.7		P	
Beryllium	80-120	103		0.28	J	100	103		P	
Cadmium	80-120	98.6		BDL	U	100	98.6		P	
Calcium	80-120	448000		83300		400000	91.2		P	
Chromium	80-120	415		21.2		400	98.5		P	
Cobalt	80-120	1000		4.2		1000	99.6		P	
Copper	80-120	535		28.0	J	500	101		P	
Iron	80-120	9570		8180		2000	69.5		P	*FAIL*
Lead	80-120	1030		17.2		1000	101		P	
Magnesium	80-120	236000		43900		200000	96.1		P	
Manganese	80-120	1320		566		1000	75.4		P	*FAIL*
Nickel	80-120	1010		15.2		1000	99.5		P	
Silver	80-120	97.0		BDL	U	100	97.0		P	
Vanadium	80-120	1050		8.5		1000	104		P	
Zinc	80-120	1260		190		1000	107		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **IDW 48/49**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solids for Sample:
Concentration Units: ug/L
Sample No: 1035207
Parent Sample No.: 1032214
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 194082
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 08/03/2021 Analysis Time: -------- 23:46

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Potassium	80-120.	95800		5300		100000	90.5		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **IDW 48/49**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solids for Sample:
Concentration Units: ug/L
Sample No: 1035208
Parent Sample No.: 1032214
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 194082
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 08/03/2021 Analysis Time: -------- 23:46

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Sodium	80-120.	241000		47400		200000	96.8		P

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

IDW 48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	ug/L
Sample No	1032230	Parent Sample No.:	1032229
Analytical Prep Batch #	81954	Analytical Preparation Date/Time:	08/02/2021 09:56
Analytical Run #:	194082	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	08/03/2021	Analysis Time: --------	23:38

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Potassium	86-114	78400		5300		100000	73.1		P	*FAIL*
Total Sodium	87-115	111000		47400		100000	63.6		P	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **IDW 48/49**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solids for Sample:
Concentration Units: ug/L
Sample No: 1032235
Parent Sample No.: 1032234
Analytical Prep Batch #: 81955
Analytical Preparation Date/Time: 08/02/2021 09:56
Analytical Run #: 194081
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 08/03/2021 Analysis Time: -------- 23:38

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Total Aluminum	86-115	4970		4860		800	13.8		P	*FAIL*
Total Antimony	88-113	173		BDL	U	200	86.5		P	*FAIL*
Total Arsenic	87-113	707		BDL	U	800	88.4		P	
Total Barium	88-113	808		191		800	77.1		P	*FAIL*
Total Beryllium	89-112	17.1		0.28	J	20.0	84.1		P	*FAIL*
Total Cadmium	88-113	16.3		BDL	U	20.0	81.5		P	*FAIL*
Total Calcium	87-113	208000		83300		200000	62.4		P	*FAIL*
Total Chromium	90-113	84.2		21.2		80.0	78.8		P	*FAIL*
Total Cobalt	89-114	170		4.2		200	82.9		P	*FAIL*
Total Copper	86-114	114		28.0	J	100	86.0		P	
Total Iron	87-115	6860		8180		400	0		P	*FAIL*
Total Lead	86-113	185		17.2		200	83.9		P	*FAIL*
Total Magnesium	85-113	108000		43900		100000	64.1		P	*FAIL*
Total Manganese	90-114	636		566		200	35.0		P	*FAIL*
Total Nickel	88-113	180		15.2		200	82.4		P	*FAIL*
Total Selenium	83-114	702		BDL	U	800	87.8		P	
Total Silver	84-115	16.3		BDL	U	20.0	81.5		P	*FAIL*
Total Thallium	85-114	692		BDL	U	800	86.5		P	
Total Vanadium	90-111	173		8.5		200	82.3		P	*FAIL*
Total Zinc	87-115	343		190		200	76.5		P	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

IDW 48/49

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 163390

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 81954

Analytical Run #: 194082

ICAL Calibration #:

Sample #: 1032228

Parent Sample #: 1032214

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	08/03/2021	23:01	20	5300		4850		8.87		P
Total Sodium	08/03/2021	23:01	20	47400		47300		0.211		P

CT LABORATORIES
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6

DUPLICATES

Sample Description

IDW 48/49

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 163390

% Solid for Sample:

Concentration Units: ug/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 81955

Analytical Run #: 194081

ICAL Calibration #:

Sample #: 1032233

Parent Sample #: 1032214

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M	
Total Aluminum	08/03/2021	23:01	20	4860		3940		20.9		P	*FAIL*
Total Antimony	08/03/2021	23:01	20	4.7	U	4.7	U	0		P	
Total Arsenic	08/03/2021	23:01	20	12	U	12	U	0		P	
Total Barium	08/03/2021	23:01	20	191		181		5.38		P	
Total Beryllium	08/03/2021	23:01	20	0.28	J	0.33	J	16.4		P	
Total Cadmium	08/03/2021	23:01	20	0.42	U	0.42	U	0		P	
Total Calcium	08/03/2021	23:01	20	83300		83200		0.120		P	
Total Chromium	08/03/2021	23:01	20	21.2		20.0		5.83		P	
Total Cobalt	08/03/2021	23:01	20	4.2		3.7	J	12.7		P	
Total Copper	08/03/2021	23:01	20	28.0	J	25.9	J	7.79		P	
Total Iron	08/03/2021	23:01	20	8180		7800		4.76		P	
Total Lead	08/03/2021	23:01	20	17.2		17.4		1.16		P	
Total Magnesium	08/03/2021	23:01	20	43900		43800		0.228		P	
Total Manganese	08/03/2021	23:01	20	566		566		0		P	
Total Nickel	08/03/2021	23:01	20	15.2		14.5		4.71		P	
Total Selenium	08/03/2021	23:01	20	9.9	U	9.9	U	0		P	
Total Silver	08/03/2021	23:01	20	0.70	U	0.70	U	0		P	
Total Thallium	08/03/2021	23:01	20	5.9	U	5.9	U	0		P	
Total Vanadium	08/03/2021	23:01	20	8.5		7.0		19.4		P	
Total Zinc	08/03/2021	23:01	20	190		189		0.528		P	

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description

IDW 48/49

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID
SDG No.: 163390

% Solid for Sample:
Concentration Units: ug/L

Analytical Prep Batch # 81954
Analytical Preparation Date/Time 08/02/2021 09:56

Analytical Run #: 194082
ICAL Calibration #:

Sample #: 1032230
Parent Sample #: 1032229

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Potassium	08/03/2021	23:38	20	74600		78400		4.97		P
Total Sodium	08/03/2021	23:38	20	109000		111000		1.82		P

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **IDW 48/49**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solid for Sample:
Concentration Units: ug/L
Analytical Prep Batch #: 81955
Analytical Preparation Date/Time: 08/02/2021 09:56
Analytical Run #: 194081
ICAL Calibration #:
Sample #: 1032235
Parent Sample #: 1032234

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Aluminum	08/03/2021	23:38	20	5020		4970		1.00		P
Total Antimony	08/03/2021	23:38	20	172		173		0.580		P
Total Arsenic	08/03/2021	23:38	20	692		707		2.14		P
Total Barium	08/03/2021	23:38	20	802		808		0.745		P
Total Beryllium	08/03/2021	23:38	20	17.1		17.1		0		P
Total Cadmium	08/03/2021	23:38	20	16.2		16.3		0.615		P
Total Calcium	08/03/2021	23:38	20	208000		208000		0		P
Total Chromium	08/03/2021	23:38	20	83.3		84.2		1.07		P
Total Cobalt	08/03/2021	23:38	20	170		170		0		P
Total Copper	08/03/2021	23:38	20	109		114		4.48		P
Total Iron	08/03/2021	23:38	20	6700		6860		2.36		P
Total Lead	08/03/2021	23:38	20	181		185		2.19		P
Total Magnesium	08/03/2021	23:38	20	108000		108000		0		P
Total Manganese	08/03/2021	23:38	20	618		636		2.87		P
Total Nickel	08/03/2021	23:38	20	177		180		1.68		P
Total Selenium	08/03/2021	23:38	20	701		702		0.143		P
Total Silver	08/03/2021	23:38	20	16.3		16.3		0		P
Total Thallium	08/03/2021	23:38	20	693		692		0.144		P
Total Vanadium	08/03/2021	23:38	20	172		173		0.580		P
Total Zinc	08/03/2021	23:38	20	335		343		2.36		P

CT LABORATORIES
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7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 163390

Concentration Units: ug/L

Analytical Run #: 194190

Sample No.:#: 1032180

Analytical Prep Batch #: 81952

Preparation Date/Time: 08/03/2021 14:20

ICAL Calibration #: 08042021

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Mercury	08/04/2021 13:11	82-119	2.19		2.00	110		CV

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 163390

Concentration Units: ug/L

Analytical Run #: 194082 Sample No.:#: 1032227

Analytical Prep Batch #: 81954 Preparation Date/Time: 08/02/2021 09:56

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Potassium	08/03/2021 22:30	86-114	88500		100000	88.5		P
Total Sodium	08/03/2021 22:30	87-115	94400		100000	94.4		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 163390

Concentration Units: ug/L

Analytical Run #: 194081 Sample No.:#: 1032232

Analytical Prep Batch #: 81955 Preparation Date/Time: 08/02/2021 09:56

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Aluminum	08/03/2021 22:30	86-115	884.0		800.0	111		P
Total Antimony	08/03/2021 22:30	88-113	213.0		200.0	107		P
Total Arsenic	08/03/2021 22:30	87-113	853.0		800.0	107		P
Total Barium	08/03/2021 22:30	88-113	818.0		800.0	102		P
Total Beryllium	08/03/2021 22:30	89-112	20.80		20.0	104		P
Total Cadmium	08/03/2021 22:30	88-113	20.70		20.0	104		P
Total Calcium	08/03/2021 22:30	87-113	193000		200000	96.5		P
Total Chromium	08/03/2021 22:30	90-113	84.80		80.0	106		P
Total Cobalt	08/03/2021 22:30	89-114	207.0		200.0	104		P
Total Copper	08/03/2021 22:30	86-114	112.0		100.0	112		P
Total Iron	08/03/2021 22:30	87-115	419.0		400.0	105		P
Total Lead	08/03/2021 22:30	86-113	207.0		200.0	104		P
Total Magnesium	08/03/2021 22:30	85-113	97300		100000	97.3		P
Total Manganese	08/03/2021 22:30	90-114	194.0		200.0	97.0		P
Total Nickel	08/03/2021 22:30	88-113	207.0		200.0	104		P
Total Selenium	08/03/2021 22:30	83-114	860.0		800.0	108		P
Total Silver	08/03/2021 22:30	84-115	19.80		20.0	99.0		P
Total Thallium	08/03/2021 22:30	85-114	844.0		800.0	106		P
Total Vanadium	08/03/2021 22:30	90-111	207.0		200.0	104		P
Total Zinc	08/03/2021 22:30	87-115	221.0		200.0	111		P

CT LABORATORIES
delivering more than data from your environmental analyses

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ICP SERIAL DILUTION

Sample Description

IDW 48/49

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID SDG No.: 163390

Concentration Units: mg/L

Sample No.: 1035205 Parent Sample No.: 1032214

LIMS Run #: 194082 ICAL Calibration #:.:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Potassium	08/03/2021 22:53	5.30	U	615	U	100		P	*INVALID*

CT LABORATORIES
delivering more than data from your environmental analyses

9

ICP SERIAL DILUTION

Sample Description

IDW 48/49

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID SDG No.: 163390

Concentration Units: mg/L

Sample No.: 1035206 Parent Sample No.: 1032214

LIMS Run #: 194082 ICAL Calibration #:.:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Sodium	08/03/2021 22:53	47.4	U	915	U	100		P	*INVALID*

CT LABORATORIES
delivering more than data from your environmental analyses

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ICP SERIAL DILUTION

Sample Description

IDW 48/49

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID SDG No.: 163390

Concentration Units: ug/L

Sample No.: 1035212 Parent Sample No.: 1032214

LIMS Run #: 194081 ICAL Calibration #:.:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Aluminum	08/03/2021 22:53	4860		9050		86.2		P	*FAIL*
Antimony	08/03/2021 22:53	BDL	U	23.5	U	0		P	*INVALID*
Arsenic	08/03/2021 22:53	BDL	U	60	U	0		P	*INVALID*
Barium	08/03/2021 22:53	191		220		15.2		P	*FAIL*
Beryllium	08/03/2021 22:53	.284	U	0.5	U	100		P	*INVALID*
Cadmium	08/03/2021 22:53	BDL	U	2.1	U	0		P	*INVALID*
Calcium	08/03/2021 22:53	83300		170000		104		P	*FAIL*
Chromium	08/03/2021 22:53	21.2	J	33.75		59.2		P	*INVALID*
Cobalt	08/03/2021 22:53	4.19	J	3	U	100		P	*INVALID*
Copper	08/03/2021 22:53	28.0	U	55	U	100		P	*INVALID*
Iron	08/03/2021 22:53	8180		12900		57.7		P	*FAIL*
Lead	08/03/2021 22:53	17.2	J	12.8	J	25.6		P	*INVALID*
Magnesium	08/03/2021 22:53	43900		88500		102		P	*FAIL*
Manganese	08/03/2021 22:53	566		955		68.7		P	*FAIL*
Nickel	08/03/2021 22:53	15.2	J	12.35	J	18.8		P	*INVALID*
Silver	08/03/2021 22:53	BDL	U	3.5	U	0		P	*INVALID*
Vanadium	08/03/2021 22:53	8.46	J	12.15	J	43.6		P	*INVALID*
Zinc	08/03/2021 22:53	190		223.5		17.6		P	*INVALID*

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	Fe	0.000006	0.000000	No
			Ce	0.000000	0.000000	No
Ag 338.289 {100}	☒	1	Fe	0.000906	0.000000	No
Al 167.079 {501}	☒	None				
Al 308.215 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	1	Al	0.001713	0.000000	No
As 197.262 {471}	☒	1	Al	-0.000113	0.000000	No
Ba 233.527 {445}	☒	3	Fe	-0.000038	0.000000	No
			V	0.000180	0.000000	No
			Al	0.000000	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000002	0.000000	No
Ba 493.409 { 68}	☒	1	Fe	0.000029	0.000000	No
Be 313.042 {108}	☒	1	Fe	0.000000	0.000000	No
Be 234.861 {144}	☒	1	Fe	-0.000016	0.000000	No
Ca 315.887 {107}	☒	None				
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	1	Cu	0.000000	0.000000	No
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	2	Fe	0.000090	0.000000	No
			Al	0.000000	0.000000	No
Cd 228.802 {147}	☒	None				
Co 228.616 {447}	☒	5	Fe	0.000009	0.000000	No
			Ti	0.003000	0.000000	No
			Ba	-0.001300	0.000000	No
			Ni	0.000040	0.000000	No
			Al	0.000001	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000188	0.000000	No
Cr 205.560 {464}	☒	1	Fe	-0.000004	0.000000	No
Cr 267.716 {126}	☒	1	Fe	-0.000014	0.000000	No
Cu 224.700 {450}	☒	5	Fe	0.000274	0.000000	No
			Mo	0.001320	0.000000	No
			Ni	-0.006000	0.000000	No
			Pb	0.003030	0.000000	No
			Al	0.000000	0.000000	No
Cu 324.754 {104}	☒	1	Fe	-0.000136	0.000000	No
Cu 327.396 {103}	☒	1	Fe	0.000069	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	-0.000086	0.000000	No

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mn 259.373 {130}	☒	1	Mg	0.001339	0.000000	No
Mo 202.030 {466}	☒	1	Fe	-0.000011	0.000000	No
Mo 203.844 {465}	☒	1	Fe	-0.000020	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000036	0.000000	No
Ni 221.647 {452}	☒	1	Ca	0.000021	0.000000	No
Ni 231.604 {445}	☒	3	Fe	0.000012	0.000000	No
			Co	0.000000	0.000000	No
			Mo	0.000000	0.000000	No
Pb 216.999 {455}	☒	2	Al	0.001241	0.000000	No
			Na	0.000000	0.000000	No
Pb 220.353 {453}	☒	3	Si	0.000000	0.000000	No
			Al	0.000001	0.000000	No
			Fe	0.000018	0.000000	No
Pb 220.353 {153}	☒	1	Al	-0.000040	0.000000	No
Sb 206.833 {463}	☒	1	Fe	0.000009	0.000000	No
Sb 217.581 {455}	☒	3	Fe	-0.000069	0.000000	No
			V	0.002070	0.000000	No
			Pb	-0.001040	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000360	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.001308	0.000000	No
Tl 190.856 {476}	☒	5	Fe	0.000024	0.000000	No
			Be	-0.000013	0.000000	No
			Ti	0.000050	0.000000	No
			Cr	0.000251	0.000000	No
			V	-0.003800	0.000000	No
Tl 190.856 {477}	☒	1	Fe	-0.000048	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000073	0.000000	No
V 292.402 {115}	☒	3	Fe	0.000020	0.000000	No
			Cr	-0.000400	0.000000	No
			Al	0.000000	0.000000	No
Zn 202.548 {466}	☒	1	Fe	-0.000239	0.000000	No
Zn 206.200 {463}	☒	1	Fe	-0.000003	0.000000	No
Zn 213.856 {457}	☒	2	Fe	0.000167	0.000000	No
			Cu	0.007413	0.000000	No
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Y 224.306 {451}*	☒	None				
Na 588.995 { 57}	☒	1	Fe	0.000106	0.000000	No
Si 251.611 {134}	☒	2	Fe	-0.000105	0.000000	No
			Mo	0.005400	0.000000	No
Ti 323.452 {104}	☒	1	Fe	0.000036	0.000000	No
Ti 334.941 {101}	☒	1	Fe	0.000052	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000014	0.000000	No
Sr 421.552 { 80}	☒	1	Fe	0.000014	0.000000	No

ICP INTERELEMENT CORRECTION FACTORS (ANNUAL)
ICP ID NUMBER: TA ICAP6000 / ICAP6500

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Sn 189.989 {477}	☒	1	Fe	0.000013	0.000000	No
B 249.678 {135}	☒	2	Fe	0.000001	0.000000	No
			Co	0.003970	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000357	0.000000	No
Li 670.784 { 50}	☒	1	Fe	0.000011	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000216	0.000000	No
P 213.618 {457}	☒	1	Fe	-0.000079	0.000000	No
S 182.034 {485}	☒	1	Mg	0.000100	0.000000	No
Hg 184.950 {482}	☒	1	Fe	0.000001	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

ICP LINEAR RANGES (QUARTERLY)

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

ICP ID Number: TA SDG No.: 163390

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	15.00	1000000	P
Antimony	15.00	10000	P
Arsenic	15.00	10000	P
Barium	15.00	10000	P
Beryllium	15.00	1000	P
Boron	15.00	1000	P
Cadmium	15.00	1000	P
Calcium	15.00	1000000	P
Chromium	15.00	100000	P
Cobalt	15.00	10000	P
Copper	15.00	100000	P
Iron	15.00	1000000	P
Lead	15.00	100000	P
Lithium	15.00	10000	P
Magnesium	15.00	1000000	P
Manganese	15.00	100000	P
Molybdenum	15.00	10000	P
Nickel	15.00	10000	P
Potassium	15.00	200000	P
Selenium	15.00	10000	P
Silicon	15.00	1000	P
Silver	15.00	100	P
Sodium	15.00	200000	P
Strontium	15.00	10000	P
Thallium	15.00	10000	P
Tin	15.00	10000	P
Titanium	15.00	1000	P
Tungsten	15.00	10000	P
Vanadium	15.00	10000	P
Zinc	15.00	100000	P

CT LABORATORIES
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PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Method: EPA 7470A

SDG No.: 163390

Preparation Batch #: 81952

Preparation Date/Time: 08/03/2021 / 14:20

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
1030878	Normal Sample	IDW-54	GROUND WATER	
1032179	Method Blank		LIQUID	
1032180	Lab Control Spike		LIQUID	
1032181	Lab Duplicate	IDW-54	GROUND WATER	
1032182	Matrix Spike	IDW-54	GROUND WATER	
1032183	Matrix Spike Duplicate	IDW-54	GROUND WATER	
1032214	Normal Sample	IDW 48/49	GROUND WATER	

CT LABORATORIES
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PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Method: EPA 3010A

SDG No.: 163390

Preparation Batch #: 81954

Preparation Date/Time: 08/02/2021 / 09:56

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
1032214	Normal Sample	IDW 48/49	GROUND WATER	
1032226	Method Blank		LIQUID	
1032227	Lab Control Spike		LIQUID	
1032228	Lab Duplicate	IDW 48/49	GROUND WATER	
1032229	Matrix Spike	IDW 48/49	GROUND WATER	
1032230	Matrix Spike Duplicate	IDW 48/49	GROUND WATER	

CT LABORATORIES
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PREPARATION LOG

Lab Name: CT Laboratories

Project: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Method: EPA 3010A

SDG No.: 163390

Preparation Batch #: 81955

Preparation Date/Time: 08/02/2021 / 09:56

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
1032214	Normal Sample	IDW 48/49	GROUND WATER	
1032231	Method Blank		LIQUID	
1032232	Lab Control Spike		LIQUID	
1032233	Lab Duplicate	IDW 48/49	GROUND WATER	
1032234	Matrix Spike	IDW 48/49	GROUND WATER	50.0
1032235	Matrix Spike Duplicate	IDW 48/49	GROUND WATER	

CT LABORATORIES
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ANALYSIS RUN LOG

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Lab Code: CTL

SDG No.: 163390

Instrument ID Number: CETAC

Method Number: CV

Start & End Date: 08/04/2021 to 08/04/2021

Analytical Run #: 194190

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1034237	ICV	1	8/04 11:26																X													
1034238	ICB	1	8/04 11:33																X													
1034239	CCV	1	8/04 12:48																X													
1034240	CCB	1	8/04 12:55																X													
1032180	LCSW	1	8/04 13:11																X													
1032179	MBW	1	8/04 13:17																X													
1034241	CCV	1	8/04 13:30																X													
1034242	CCB	1	8/04 13:36																X													
1030878	Initial	1	8/04 13:42																X													
1032181	DUP	1	8/04 13:45																X													
1032214	Initial	1	8/04 13:49																X													
1032182	MSW	1	8/04 13:58																X													
1032183	MSDW	1	8/04 14:01																X													
1034243	CCV	1	8/04 14:11																X													
1034244	CCB	1	8/04 14:17																X													

CT LABORATORIES
delivering more than data from your environmental analyses

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ANALYSIS RUN LOG

Lab Name: CT Laboratories | Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Lab Code: CTL | SDG No.: 163390

Instrument ID Number: TJA | Method Number: P

Start & End Date: 08/03/2021 to 08/04/2021 | Analytical Run #: 194081

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1034060	ICV	1	8/03 10:51	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034061	ICVLL	1	8/03 10:58	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X					X			X	X
1034062	ICB	1	8/03 11:14	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034063	ICSA	1	8/03 11:29	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034064	ICSAB	1	8/03 11:38	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034065	ICVLL	1	8/03 11:54																							X							
1034066	CCV1	1	8/03 21:36	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034067	CCV2	1	8/03 21:43	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034068	CCB	1	8/03 21:50	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1032232	LCSW	1	8/03 22:30	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1032231	MBW	1	8/03 22:38	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1032214	Initial	1	8/03 22:45	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1035212	L	5	8/03 22:53	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1032233	DUP	1	8/03 23:01	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1032234	MSW	1	8/03 23:09	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034069	CCV1	1	8/03 23:17	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034070	CCV2	1	8/03 23:24	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034071	CCB	1	8/03 23:31	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1032235	MSDW	1	8/03 23:38	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034072	PDSW	1	8/03 23:46	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034073	CCV1	1	8/04 00:55	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034074	CCV2	1	8/04 01:02	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1034075	CCB	1	8/04 01:09	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X

CT LABORATORIES
delivering more than data from your environmental analyses

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ANALYSIS RUN LOG

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Lab Code: CTL
SDG No.: 163390

Instrument ID Number: TJA
Method Number: P

Start & End Date: 08/03/2021 to 08/04/2021
Analytical Run #: 194082

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1034044	ICV	1	8/03 10:51																				X				X						
1034045	ICVLL	1	8/03 10:58																				X				X						
1034046	ICB	1	8/03 11:14																				X				X						
1034047	ICSA	1	8/03 11:29	X							X				X		X						X				X						
1034048	ICSAB	1	8/03 11:38	X							X				X		X						X				X						
1034050	CCV1	1	8/03 21:36																				X				X						
1034051	CCV2	1	8/03 21:43																				X				X						
1034052	CCB	1	8/03 21:50																				X				X						
1032227	LCSW	1	8/03 22:30																				X				X						
1032226	MBW	1	8/03 22:38																				X				X						
1032214	Initial	1	8/03 22:45																				X				X						
1035205	L	5	8/03 22:53																				X										
1035206	L	5	8/03 22:53																								X						
1032228	DUP	1	8/03 23:01																				X				X						
1032229	MSW	1	8/03 23:09																				X				X						
1034053	CCV1	1	8/03 23:17																				X				X						
1034054	CCV2	1	8/03 23:24																				X				X						
1034055	CCB	1	8/03 23:31																				X				X						
1032230	MSDW	1	8/03 23:38																				X				X						
1035207	PDSW	1	8/03 23:46																				X										
1035208	PDSW	1	8/03 23:46																								X						
1034057	CCV1	1	8/04 00:55																				X				X						
1034058	CCV2	1	8/04 01:02																				X				X						
1034059	CCB	1	8/04 01:09																				X				X						

METALS
RAW DATA
DOCUMENTS

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
Ag 328.068 {103}	08/04/2021 13:41:02	08/03/2021 09:36:50	Linear	1/Conc	0.000006	0.000002	0.000000	1.000000	0.999110	0.000000	0.579734	1.932447
Ag 338.289 {100}	08/04/2021 13:41:02	08/03/2021 10:35:21	Linear	1/Var	4.740261	0.430903	0.000000	1.000000	0.999960	0.217620	4.361087	14.536956
Al 167.079 {501}	08/04/2021 13:41:02	08/03/2021 09:43:48	Linear	1/Conc	0.000011	0.000004	0.000000	1.000000	0.999415	0.000001	0.445361	1.484536
Al 308.215 {109}	08/04/2021 13:41:02	08/03/2021 10:08:08	Linear	1/Var	0.000047	0.000000	0.000000	1.000000	0.999878	0.000033	18.464156	61.547188
Al 396.152 { 85}	08/04/2021 13:41:02	08/03/2021 10:27:15	Linear	1/Conc	-0.000015	0.000002	0.000000	1.000000	0.999654	0.000073	5.824984	19.416613
As 193.759 {474}	08/04/2021 13:41:02	08/03/2021 09:43:49	Linear	1/Conc	0.000004	0.000001	0.000000	1.000000	0.999759	0.000000	5.364282	17.880941
As 197.262 {471}	08/04/2021 13:41:02	08/03/2021 09:51:38	Linear	1/Var	-0.000001	0.000001	0.000000	1.000000	0.999977	0.000002	6.977499	23.258330
Ba 233.527 {445}	08/04/2021 13:41:02	08/03/2021 09:43:49	Linear	1/Conc	-0.000000	0.000007	0.000000	1.000000	0.999692	0.000000	0.492014	1.640046
Ba 455.403 { 74}	08/04/2021 13:41:02	08/03/2021 09:51:38	Linear	1/Conc	0.000054	0.000044	0.000000	1.000000	0.999749	0.000004	0.179078	0.596927
Ba 493.409 { 68}	08/04/2021 13:41:02	08/03/2021 10:35:21	Linear	1/Conc	0.007282	0.000039	0.000000	1.000000	0.998664	0.000206	0.553992	1.846639
Be 313.042 {108}	08/04/2021 13:41:02	08/03/2021 09:43:49	Linear	1/Conc	0.000043	0.000056	0.000000	1.000000	0.999871	0.000001	0.022967	0.076557
Be 313.107 {108}	08/04/2021 13:41:02	08/03/2021 09:43:49	Linear	1/Conc	-0.000002	0.000026	0.000000	1.000000	0.999819	0.000000	0.150420	0.501401
Be 234.861 {144}	08/04/2021 13:41:02	08/03/2021 09:43:50	Linear	1/Var	0.000001	0.000005	0.000000	1.000000	0.999902	0.000003	0.380658	1.268861
Ca 315.887 {107}	08/04/2021 13:41:02	08/03/2021 10:27:15	Curvili	1/Var	0.000069	0.000000	0.000000	1.000000	0.999837	0.000016	5.452324	18.174412
Ca 317.933 {106}	08/04/2021 13:41:02	08/03/2021 10:27:15	Linear	1/Conc	0.001639	0.000000	0.000000	1.000000	0.998503	0.000035	6.066127	20.220423
Ca 393.366 { 86}	08/04/2021 13:41:02	08/03/2021 09:43:50	Linear	1/Conc	0.000766	0.000415	0.000000	1.000000	0.999998	0.000016	0.016612	0.055373
Ca 396.847 { 85}	08/04/2021 13:41:02	08/03/2021 09:51:39	Linear	1/Conc	0.000176	0.000021	0.000000	1.000000	0.962408	0.000285	0.266708	0.889027
Cd 226.502 {449}	08/04/2021 13:41:02	08/03/2021 09:43:50	Linear	1/Conc	0.000002	0.000021	0.000000	1.000000	0.999867	0.000000	0.243582	0.811940
Cd 228.802 {447}	08/04/2021 13:41:02	08/03/2021 09:43:50	Linear	1/Conc	0.000023	0.000042	0.000000	1.000000	0.999471	0.000001	0.174392	0.581306
Co 228.616 {447}	08/04/2021 13:41:02	08/03/2021 09:51:39	Linear	1/Var	0.000020	0.000021	0.000000	1.000000	0.999538	0.000040	0.307690	1.025632
Co 238.892 {141}	08/04/2021 13:41:02	08/03/2021 09:51:39	Linear	1/Conc	0.000002	0.000002	0.000000	1.000000	0.999995	0.000000	0.505748	1.685825
Cr 205.560 {464}	08/04/2021 13:41:02	08/03/2021 10:00:09	Linear	1/Var	0.000005	0.000014	0.000000	1.000000	0.999780	0.000021	0.313747	1.045824
Cr 267.716 {126}	08/04/2021 13:41:02	08/03/2021 09:51:39	Linear	1/Conc	0.000001	0.000003	0.000000	1.000000	0.999924	0.000000	0.432587	1.441958
Cu 223.008 {451}	08/04/2021 13:41:02	08/03/2021 09:51:39	Linear	1/Conc	0.000007	0.000005	0.000000	1.000000	0.999876	0.000001	1.170080	3.900266
Cu 224.700 {450}	08/04/2021 13:41:02	08/03/2021 10:00:09	Linear	None	-0.001463	0.000008	0.000000	1.000000	0.999960	0.002965	0.465699	1.552329
Cu 324.754 {104}	08/04/2021 13:41:02	08/03/2021 10:00:09	Linear	1/Var	0.000417	0.000002	0.000000	1.000000	0.998783	0.000030	2.795264	9.317546
Cu 327.396 {103}	08/04/2021 13:41:02	08/03/2021 10:00:09	Linear	1/Var	0.000022	0.000002	0.000000	1.000000	0.998817	0.000015	3.700128	12.333762
Fe 234.349 {144}	08/04/2021 13:41:02	08/03/2021 10:08:08	Linear	1/Var	0.000014	0.000000	0.000000	1.000000	0.999999	0.000001	0.903825	3.012750
Fe 239.562 {140}	08/04/2021 13:41:02	08/03/2021 10:27:15	Linear	1/Var	0.000003	0.000001	0.000000	1.000000	0.998713	0.000031	2.730651	9.102169
Fe 259.940 {129}	08/04/2021 13:41:02	08/03/2021 10:16:37	Linear	1/Var	0.000003	0.000001	0.000000	1.000000	0.998738	0.000012	1.890722	6.302405
Mg 202.582 {466}	08/04/2021 13:41:02	08/03/2021 10:27:15	Linear	1/Conc	-0.000001	0.000000	0.000000	1.000000	0.996651	0.000016	4.246907	14.156358
Mg 279.079 {121}	08/04/2021 13:41:02	08/03/2021 10:27:16	Linear	1/Conc	0.000001	0.000000	0.000000	1.000000	0.999292	0.000005	19.517962	65.059874
Mg 280.270 {120}	08/04/2021 13:41:02	08/03/2021 09:51:41	Linear	1/Conc	0.000100	0.000044	0.000000	1.000000	1.000000	0.000000	0.019687	0.065622
Mn 257.610 {131}	08/04/2021 13:41:02	08/03/2021 09:51:41	Linear	1/Var	0.000006	0.000009	0.000000	1.000000	0.997730	0.000015	0.067529	0.225096
Mn 259.373 {130}	08/04/2021 13:41:02	08/03/2021 10:00:09	Linear	1/Var	0.000002	0.000009	0.000000	1.000000	0.999473	0.000029	0.346400	1.154667
Mo 202.030 {466}	08/04/2021 13:41:02	08/03/2021 09:51:41	Linear	1/Conc	0.000006	0.000006	0.000000	1.000000	0.999932	0.000001	0.603213	2.010709
Mo 202.030 {467}	08/04/2021 13:41:02	08/03/2021 09:51:41	Linear	None	0.000030	0.000007	0.000000	1.000000	0.999999	0.000035	0.575475	1.918249
Mo 204.598 {464}	08/04/2021 13:41:02	08/03/2021 09:51:41	Linear	1/Var	0.000012	0.000004	0.000000	1.000000	0.999875	0.000010	1.069534	3.565114
Ni 221.647 {452}	08/04/2021 13:41:02	08/03/2021 09:51:42	Linear	1/Var	-0.000007	0.000011	0.000000	1.000000	0.999926	0.000056	0.621518	2.071725
Ni 231.604 {445}	08/04/2021 13:41:02	08/03/2021 09:51:42	Linear	1/Var	-0.000018	0.000014	0.000000	1.000000	0.999635	0.000037	0.541231	1.804102
Pb 216.999 {455}	08/04/2021 13:41:02	08/03/2021 10:00:09	Linear	1/Var	0.000000	0.000001	0.000000	1.000000	0.998476	0.000108	5.579334	18.597781
Pb 216.999 {456}	08/04/2021 13:41:02	08/03/2021 10:00:10	Linear	1/Var	-0.000002	0.000000	0.000000	1.000000	0.999199	0.000016	17.931541	59.771803
Pb 220.353 {153}	08/04/2021 13:41:02	08/03/2021 10:00:10	Linear	1/Var	0.000003	0.000002	0.000000	1.000000	0.999083	0.000048	2.700416	9.001386
Pb 220.353 {453}	08/04/2021 13:41:02	08/03/2021 09:51:42	Linear	1/Var	0.000027	0.000003	0.000000	1.000000	0.999940	0.000013	2.772027	9.240090

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	OK.	1.000000	0.000000	1	0
	Ag 338.289 {100}	OK.	1.000000	0.000000	1	0
	Al 167.079 {501}	OK.	1.000000	0.000000	1	0
	Al 308.215 {109}	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	OK.	1.000000	0.000000	1	0
	As 193.759 {474}	OK.	1.000000	0.000000	1	0
	As 197.262 {471}	OK.	1.000000	0.000000	1	0
	Ba 233.527 {445}	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	OK.	1.000000	0.000000	1	0
	Ba 493.409 { 68}	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	OK.	1.000000	0.000000	1	0
	Be 313.107 {108}	OK.	1.000000	0.000000	1	0
	Be 234.861 {144}	OK.	1.000000	0.000000	1	0
	Ca 315.887 {107}	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	OK.	1.000000	0.000000	1	0
	Ca 393.366 { 86}	OK.	1.000000	0.000000	1	0
	Ca 396.847 { 85}	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	OK.	1.000000	0.000000	1	0
	Cd 228.802 {447}	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	OK.	1.000000	0.000000	1	0
	Co 238.892 {141}	OK.	1.000000	0.000000	1	0
	Cr 205.560 {464}	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	OK.	1.000000	0.000000	1	0
	Cu 223.008 {451}	OK.	1.000000	0.000000	1	0
	Cu 224.700 {450}	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	OK.	1.000000	0.000000	1	0
	Cu 327.396 {103}	OK.	1.000000	0.000000	1	0
	Fe 234.349 {144}	OK.	1.000000	0.000000	1	0
	Fe 239.562 {140}	OK.	1.000000	0.000000	1	0
	Fe 259.940 {129}	OK.	1.000000	0.000000	1	0
	Mg 202.582 {466}	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	OK.	1.000000	0.000000	1	0
	Mg 280.270 {120}	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	OK.	1.000000	0.000000	1	0
	Mn 259.373 {130}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {466}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	OK.	1.000000	0.000000	1	0
	Mo 204.598 {464}	OK.	1.000000	0.000000	1	0
	Ni 221.647 {452}	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {455}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {456}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {153}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	OK.	1.000000	0.000000	1	0

	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
	Sb 206.833 {463}	08/04/2021 13:41:02	08/03/2021 09:51:43	Linear	1/Var	-0.000001	0.000001	0.000000	1.000000	0.999962	0.000007	3.414647	11.382156
	Sb 217.581 {455}	08/04/2021 13:41:02	08/03/2021 09:51:43	Linear	1/Var	0.000005	0.000001	0.000000	1.000000	0.999943	0.000004	3.766436	12.554787
	Se 196.090 {472}	08/04/2021 13:41:02	08/03/2021 09:51:43	Linear	1/Var	0.000004	0.000001	0.000000	1.000000	0.999826	0.000008	4.382116	14.607052
	Se 203.985 {465}	08/04/2021 13:41:02	08/03/2021 09:51:43	Linear	1/Var	-0.000006	0.000001	0.000000	1.000000	0.999831	0.000003	8.328232	27.760773
	Se 206.279 {463}	08/04/2021 13:41:02	08/03/2021 09:51:43	Linear	1/Conc	0.000002	0.000000	0.000000	1.000000	0.999960	0.000000	29.925186	99.750620
	Tl 190.856 {476}	08/04/2021 13:41:02	08/03/2021 09:51:43	Linear	1/Conc	0.000007	0.000002	0.000000	1.000000	0.999977	0.000000	2.555638	8.518794
	Tl 190.856 {477}	08/04/2021 13:41:02	08/03/2021 09:51:43	Linear	1/Var	0.000000	0.000001	0.000000	1.000000	0.999943	0.000004	4.484615	14.948715
	V 290.882 {116}	08/04/2021 13:41:02	08/03/2021 09:51:44	Linear	None	0.000022	0.000002	0.000000	1.000000	0.999999	0.000017	2.475593	8.251976
	V 292.402 {115}	08/04/2021 13:41:02	08/03/2021 09:51:44	Linear	1/Conc	-0.000007	0.000006	0.000000	1.000000	0.999951	0.000001	0.415157	1.383855
	Zn 206.200 {463}	08/04/2021 13:41:02	08/03/2021 10:00:10	Curvili	1/Conc	0.000014	0.000018	-0.000000	1.000000	0.999993	0.000003	0.269164	0.897215
	Zn 213.856 {457}	08/04/2021 13:41:02	08/03/2021 09:51:44	Linear	1/Var	0.000043	0.000034	0.000000	1.000000	0.999554	0.000046	0.146694	0.488979
	Y 224.306 {450}*	08/04/2021 13:41:02	08/03/2021 08:42:35	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 324.228 {104}*	08/04/2021 13:41:02	08/03/2021 08:42:35	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Y 371.030 { 91}*	08/04/2021 13:41:02	08/03/2021 08:42:35	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
	Na 588.995 { 57}	08/04/2021 13:41:02	08/03/2021 10:08:09	Linear	1/Var	0.003912	0.006346	0.000000	1.000000	0.999853	0.000175	0.004225	0.014083
	Na 589.592 { 57}	08/04/2021 13:41:02	08/03/2021 10:27:16	Curvili	1/Var	0.000068	0.002290	-0.000000	1.000000	0.999995	0.000019	0.006968	0.023226
	Si 251.611 {134}	08/04/2021 13:41:02	08/03/2021 10:27:16	Linear	1/Var	0.000010	0.000001	0.000000	1.000000	0.999648	0.000009	4.980543	16.601810
	Ti 323.452 {104}	08/04/2021 13:41:02	08/03/2021 09:51:45	Linear	1/Conc	0.000241	0.000007	0.000000	1.000000	0.999820	0.000001	0.878289	2.927631
	Ti 334.941 {101}	08/04/2021 13:41:02	08/03/2021 09:51:45	Linear	1/Conc	0.000004	0.000005	0.000000	1.000000	0.999938	0.000000	0.859310	2.864368
	Sr 407.771 { 83}	08/04/2021 13:41:02	08/03/2021 09:51:45	Linear	1/Conc	0.000013	0.000089	0.000000	1.000000	0.999932	0.000004	0.094908	0.316361
	Sr 421.552 { 80}	08/04/2021 13:41:02	08/03/2021 09:51:45	Linear	1/Conc	0.000012	0.000082	0.000000	1.000000	0.999977	0.000002	0.095204	0.317345
	Sn 189.989 {477}	08/04/2021 13:41:02	08/03/2021 09:51:45	Linear	1/Conc	0.000002	0.000004	0.000000	1.000000	0.999950	0.000000	1.023461	3.411537
	B 249.678 {135}	08/04/2021 13:41:02	08/03/2021 09:51:45	Linear	1/Var	0.000010	0.000002	0.000000	1.000000	0.999899	0.000003	0.737928	2.459759
	B 249.773 {135}	08/04/2021 13:41:02	08/03/2021 09:51:46	Linear	1/Var	0.000011	0.000003	0.000000	1.000000	0.999978	0.000004	0.395388	1.317959
	Li 670.784 { 50}	08/04/2021 13:41:02	08/03/2021 09:51:46	Linear	1/Conc	-0.000007	0.000020	0.000000	1.000000	0.999976	0.000002	0.958377	3.194591
	K 766.490 { 44}	08/04/2021 13:41:02	08/03/2021 10:27:16	Linear	1/Conc	0.000037	0.000561	0.000000	1.000000	0.999840	0.000014	0.031268	0.104228
	K 769.896 { 44}	08/04/2021 13:41:02	08/03/2021 10:27:16	Linear	1/Var	0.000062	0.000253	0.000000	1.000000	0.997744	0.000063	0.056816	0.189387
	P 177.495 {489}	08/04/2021 13:41:02	08/03/2021 10:27:16	Linear	1/Conc	-0.000508	0.000001	0.000000	1.000000	0.999978	0.000002	6.241147	20.803825
	P 213.618 {457}	08/04/2021 13:41:02	08/03/2021 10:27:16	Linear	1/Conc	-0.000016	0.000001	0.000000	1.000000	0.999973	0.000004	5.117409	17.058030
	S 182.034 {485}	08/04/2021 13:41:02	08/03/2021 10:27:17	Linear	1/Var	0.000011	0.000001	0.000000	1.000000	0.997788	0.000311	4.582289	15.274296
	Hg 184.950 {482}	08/04/2021 13:41:02	08/03/2021 09:43:58	Linear	1/Conc	-0.000000	0.000000	0.000000	1.000000	0.999997	0.000000	1.070182	3.567275
	Hg 194.227 {473}	08/04/2021 13:41:02	08/03/2021 09:43:58	Linear	1/Conc	-0.000000	0.000003	0.000000	1.000000	0.999983	0.000000	0.982104	3.273681
	Ce 404.076 { 83}	08/04/2021 13:41:02	08/03/2021 09:43:58	Linear	1/Conc	0.000025	0.000000	0.000000	1.000000	1.000000	0.000000	16.213498	54.044995

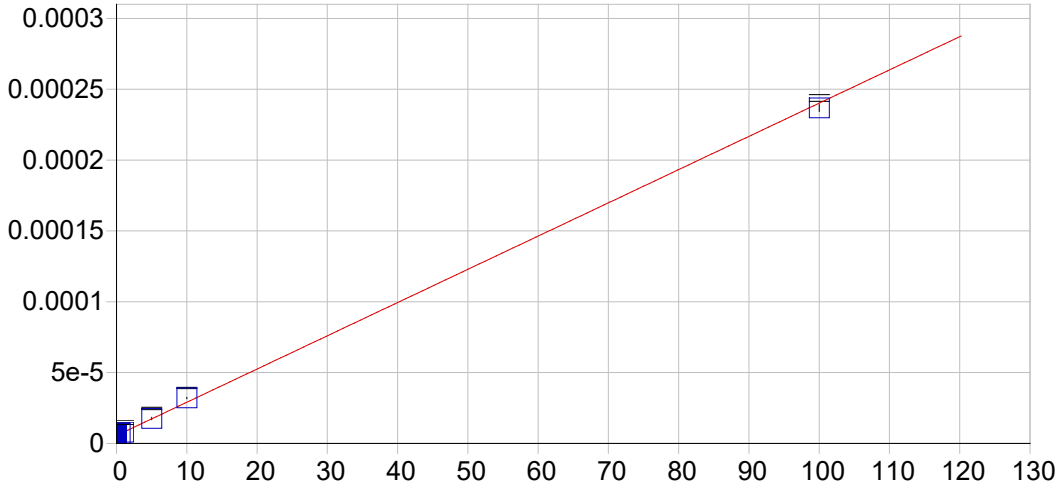
	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Sb 206.833 {463}	OK.	1.000000	0.000000	1	0
	Sb 217.581 {455}	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	OK.	1.000000	0.000000	1	0
	Se 203.985 {465}	OK.	1.000000	0.000000	1	0
	Se 206.279 {463}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {476}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	OK.	1.000000	0.000000	1	0
	V 290.882 {116}	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	OK.	1.000000	0.000000	1	0
	Zn 206.200 {463}	OK.	1.000000	0.000000	1	0
	Zn 213.856 {457}	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	Warnin	1.000000	0.000000	1	0
	Y 324.228 {104}*	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	Warnin	1.000000	0.000000	1	0
	Na 588.995 { 57}	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	OK.	1.000000	0.000000	1	0
	Si 251.611 {134}	OK.	1.000000	0.000000	1	0
	Ti 323.452 {104}	OK.	1.000000	0.000000	1	0
	Ti 334.941 {101}	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	OK.	1.000000	0.000000	1	0
	Sr 421.552 { 80}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	OK.	1.000000	0.000000	1	0
	B 249.678 {135}	OK.	1.000000	0.000000	1	0
	B 249.773 {135}	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	OK.	1.000000	0.000000	1	0
	K 769.896 { 44}	OK.	1.000000	0.000000	1	0
	P 177.495 {489}	OK.	1.000000	0.000000	1	0
	P 213.618 {457}	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	OK.	1.000000	0.000000	1	0
	Hg 184.950 {482}	OK.	1.000000	0.000000	1	0
	Hg 194.227 {473}	OK.	1.000000	0.000000	1	0
	Ce 404.076 { 83}	OK.	1.000000	0.000000	1	0

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	1	Ce	-0.003317	0.000000	No
Ag 338.289 {100}	☒	1	Fe	-0.000007	0.000000	No
Al 167.079 {501}	☒	None				
Al 308.215 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	4	Al	0.001590	0.000000	No
			Mn	-0.000003	0.000000	No
			Ni	-0.000722	0.000000	No
			Cr	0.000734	0.000000	No
As 197.262 {471}	☒	1	Al	0.000112	0.000000	No
Ba 233.527 {445}	☒	2	Fe	0.000010	0.000000	No
			Cu	0.000233	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000002	0.000000	No
Ba 493.409 { 68}	☒	1	Fe	0.000009	0.000000	No
Be 313.042 {108}	☒	3	Fe	0.000002	0.000000	No
			Ni	0.000000	0.000000	No
			Ti	-0.001998	0.000000	No
Be 313.107 {108}	☒	1	Fe	0.000005	0.000000	No
Be 234.861 {144}	☒	1	Fe	-0.000013	0.000000	No
Ca 315.887 {107}	☒	1	Fe	0.000000	0.000000	No
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	1	Ce	0.001430	0.000000	No
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	1	Fe	0.000157	0.000000	No
Cd 228.802 {447}	☒	1	Fe	-0.000005	0.000000	No
Co 228.616 {447}	☒	4	Fe	-0.000023	0.000000	No
			Ba	-0.001175	0.000000	No
			Ti	0.002165	0.000000	No
			Ce	-0.000069	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000226	0.000000	No
Cr 205.560 {464}	☒	1	Fe	0.000000	0.000000	No
Cr 267.716 {126}	☒	4	Fe	0.000005	0.000000	No
			Mn	0.000157	0.000000	No
			Ti	0.000100	0.000000	No
			V	-0.000002	0.000000	No
Cu 223.008 {451}	☒	3	Fe	0.000000	0.000000	No
			Mo	0.008000	0.000000	No
			Ce	-0.000729	0.000000	No
Cu 224.700 {450}	☒	2	Fe	0.003134	0.000000	No
			Ni	-0.007040	0.000000	No
Cu 324.754 {104}	☒	1	Fe	-0.000081	0.000000	No
Cu 327.396 {103}	☒	2	Fe	-0.000009	0.000000	No
			Mo	-0.000319	0.000000	No
Fe 234.349 {144}	☒	None				

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	3	Al	-0.000002	0.000000	No
			K	0.000100	0.000000	No
			Ce	-0.000166	0.000000	No
Mn 259.373 {130}	☒	1	Mg	0.001114	0.000000	No
Mo 202.030 {466}	☒	2	Fe	-0.000013	0.000000	No
			Ti	0.000527	0.000000	No
Mo 202.030 {467}	☒	1	Fe	-0.000009	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000052	0.000000	No
Ni 221.647 {452}	☒	2	Ca	-0.000003	0.000000	No
			Mg	-0.000003	0.000000	No
Ni 231.604 {445}	☒	6	Fe	-0.000059	0.000000	No
			Co	-0.000134	0.000000	No
			Mo	0.000840	0.000000	No
			Al	0.000003	0.000000	No
			Mn	0.000019	0.000000	No
			Be	-0.001918	0.000000	No
Pb 216.999 {455}	☒	3	Al	0.001866	0.000000	No
			Na	0.000000	0.000000	No
			Fe	0.002996	0.000000	No
Pb 216.999 {456}	☒	1	Al	0.003022	0.000000	No
Pb 220.353 {153}	☒	1	Fe	-0.000011	0.000000	No
Pb 220.353 {453}	☒	7	Si	0.000000	0.000000	No
			Al	0.000019	0.000000	No
			Ni	0.000106	0.000000	No
			Mo	-0.001644	0.000000	No
			V	-0.000018	0.000000	No
			Cu	-0.000444	0.000000	No
			Co	0.002100	0.000000	No
Sb 206.833 {463}	☒	3	Fe	-0.000097	0.000000	No
			Cr	0.000000	0.000000	No
			Ce	0.005500	0.000000	No
Sb 217.581 {455}	☒	2	Fe	-0.000035	0.000000	No
			Ni	0.000133	0.000000	No
Se 196.090 {472}	☒	2	Fe	-0.000073	0.000000	No
			Ce	0.000369	0.000000	No
Se 203.985 {465}	☒	1	Fe	-0.000160	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.000965	0.000000	No
Tl 190.856 {476}	☒	8	Fe	-0.000039	0.000000	No
			Be	-0.000013	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Ti	0.000000	0.000000	No
			Mn	0.000000	0.000000	No
			Ni	0.000000	0.000000	No
			Co	0.002495	0.000000	No
			Cr	0.000220	0.000000	No
			Cu	0.001535	0.000000	No
Tl 190.856 {477}	☒	3	Fe	-0.000026	0.000000	No
			Cr	0.000000	0.000000	No
			Ce	0.000980	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000207	0.000000	No
V 292.402 {115}	☒	6	Fe	0.000045	0.000000	No
			Cr	-0.000051	0.000000	No
			Al	0.000000	0.000000	No
			Ti	0.000420	0.000000	No
			Mo	-0.000481	0.000000	No
			Cu	-0.003767	0.000000	No
Zn 206.200 {463}	☒	1	Fe	0.000032	0.000000	No
Zn 213.856 {457}	☒	5	Fe	0.000129	0.000000	No
			Mn	0.000094	0.000000	No
			Ni	0.004500	0.000000	No
			Ti	-0.000307	0.000000	No
			Mo	0.000034	0.000000	No
Y 224.306 {450}*	☒	None				
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				
Na 588.995 { 57}	☒	1	Fe	-0.000000	0.000000	No
Na 589.592 { 57}	☒	1	Fe	0.000000	0.000000	No
Si 251.611 {134}	☒	1	Fe	0.000007	0.000000	No
Ti 323.452 {104}	☒	2	Fe	0.000029	0.000000	No
			Ce	0.000123	0.000000	No
Ti 334.941 {101}	☒	1	Fe	0.000106	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000015	0.000000	No
Sr 421.552 { 80}	☒	1	Ca	0.000013	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000017	0.000000	No
B 249.678 {135}	☒	1	Fe	-0.000028	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000464	0.000000	No
Li 670.784 { 50}	☒	1	Fe	0.000016	0.000000	No
K 766.490 { 44}	☒	2	Fe	0.000000	0.000000	No
			Cu	0.000000	0.000000	No
K 769.896 { 44}	☒	1	Fe	0.000001	0.000000	No
P 177.495 {489}	☒	None				
P 213.618 {457}	☒	1	Fe	-0.000069	0.000000	No
S 182.034 {485}	☒	2	Mn	0.002145	0.000000	No
			Fe	-0.000035	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
	Hg 184.950 {482}	☒	1	Fe	-0.000000	0.000000	No
	Hg 194.227 {473}	☒	None				
	Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

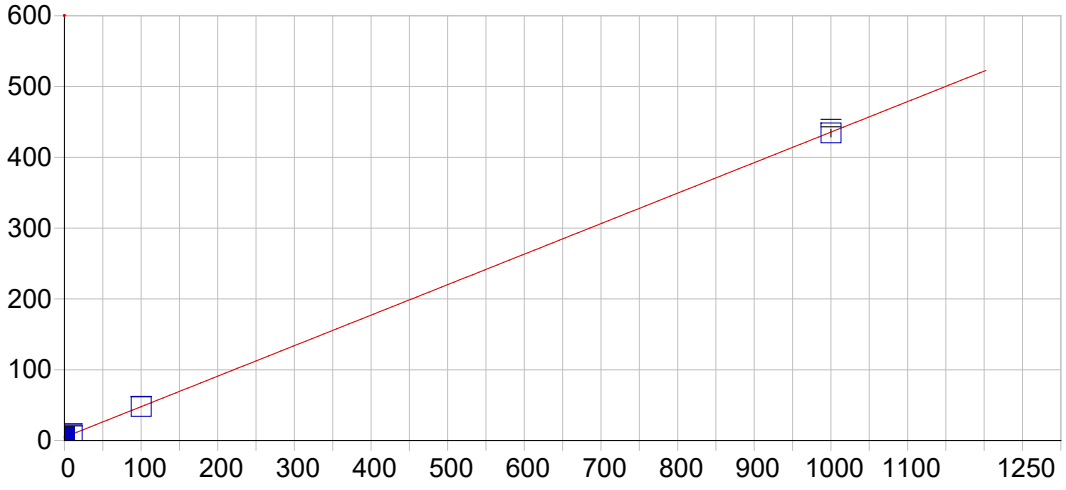


Ag 328.068 {103}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999110	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.579734		
Predicted MQL:	1.932447		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00014	-.000	.000	.00001	.000	1
CalStd8=100	100.00	98.530	-1.47	-1.47	.00024	.000	1
CalStd3=1	1.0000	.97445	-.026	-2.56	.00001	.000	1
CalStd4=5	5.0000	5.1146	.115	2.29	.00002	.000	1
CalStd5=10	10.000	11.292	1.29	12.9	.00003	.000	1
CalStd2=0.5	.50000	.58862	.089	17.7	.00001	.000	1

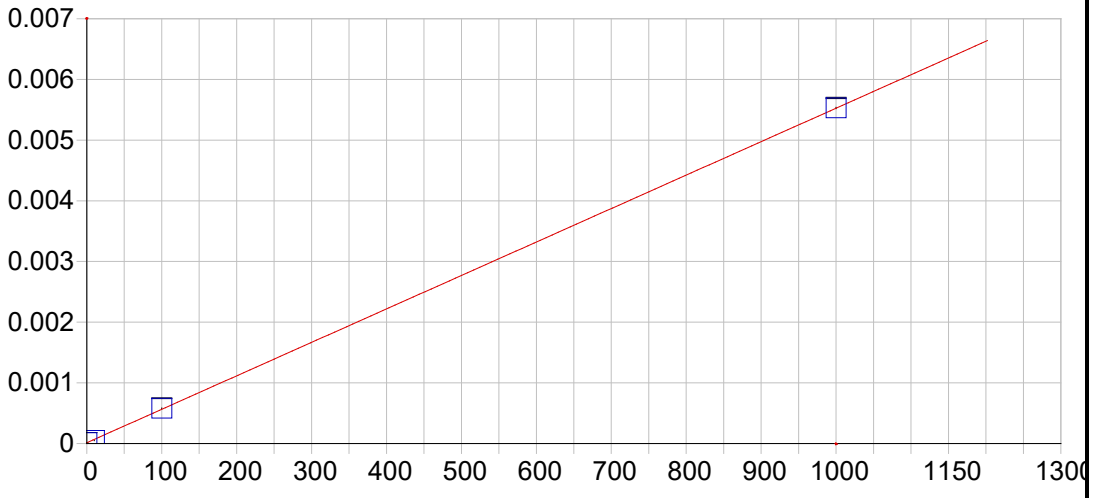


Ag 338.289 {100}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	4.740261	Re-Slope:	1.000000
A1 (Gain):	0.430903	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999960	Status:	OK.
Std Error of Est:	0.217620		
Predicted MDL:	4.361087		
Predicted MQL:	14.536956		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.11203	-.112	.000	4.6920	1.62	1
CalStd8=100	100.00	100.06	.057	.057	47.855	.216	1
Ag Ba 1000,	1000.0	996.76	-3.24	-.324	434.25	5.39	1
CalStd5=10	10.000	7.7437	-2.26	-22.6	8.0771	1.45	1

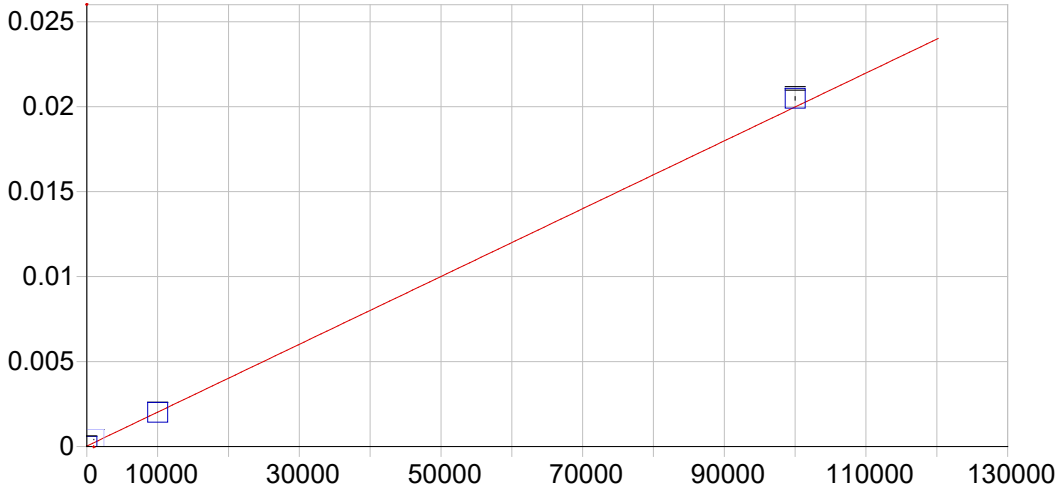


Al 167.079 {501}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000013	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999407	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.445892		
Predicted MQL:	1.486306		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00321	.003	.000	.00001	.000	1
CalStd9=100	1000.0	1000.6	.558	.056	.00553	.000	1
CalStd5=10	10.000	6.4936	-3.51	-35.1	.00005	.000	1
CalStd8=100	100.00	102.95	2.95	2.95	.00058	.000	1

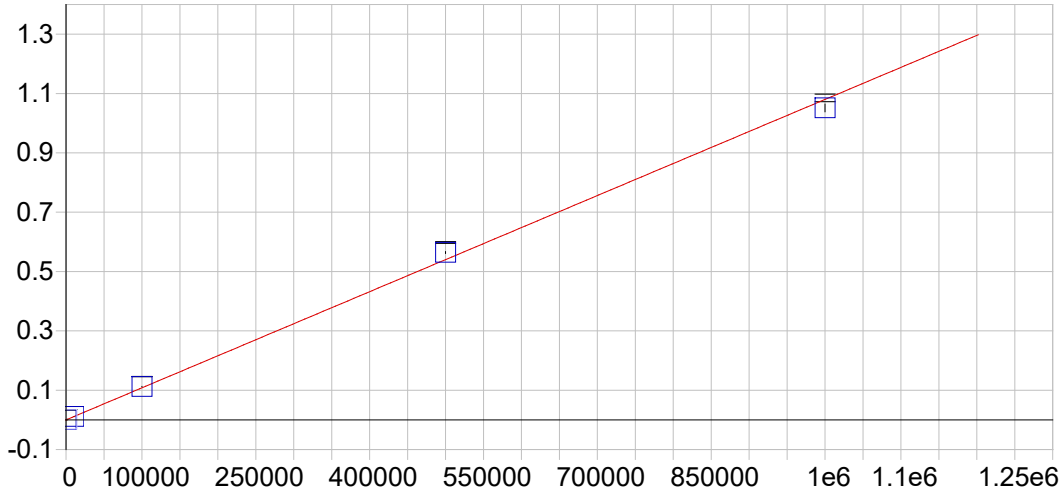


Al 308.215 {109}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000029	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999897	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	18.611924		
Predicted MQL:	62.039746		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	13.652	13.7	.000	.00003	.000	1
CalStd10=10	10000.	9933.8	-66.2	-.662	.00201	.000	1
CalStd9=100	1000.0	1924.5	924.	92.4	.00041	.000	0
CalStd13=10	100000.	102530.	2530.	2.53	.02049	.000	1

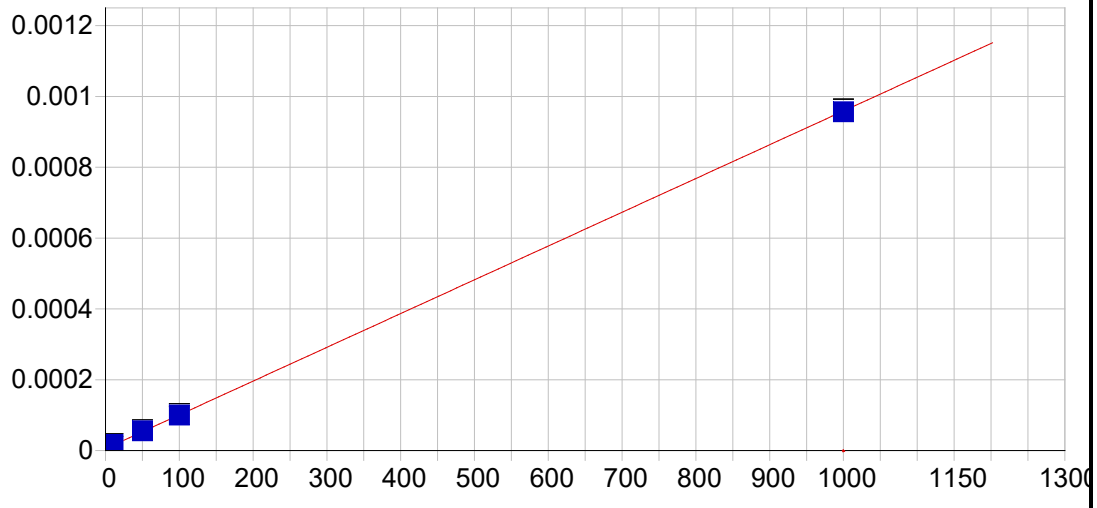


Al 396.152 { 85}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000009	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999425	Status:	OK.
Std Error of Est:	0.000060		
Predicted MDL:	5.816232		
Predicted MQL:	19.387441		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.08650	-.086	.000	-.00001	.000	1
CalStd14=50	500000.	522300.	22300.	4.46	.56411	.003	1
CalStd13=10	100000.	103860.	3860.	3.86	.11217	.001	1
CalStd10=10	10000.	10297.	297.	2.97	.01111	.000	1
CalStd9=100	1000.0	1961.0	961.	96.1	.00211	.000	0
CalibStd15=	1000000.	973540.	-26500.	-2.65	1.0515	.013	1

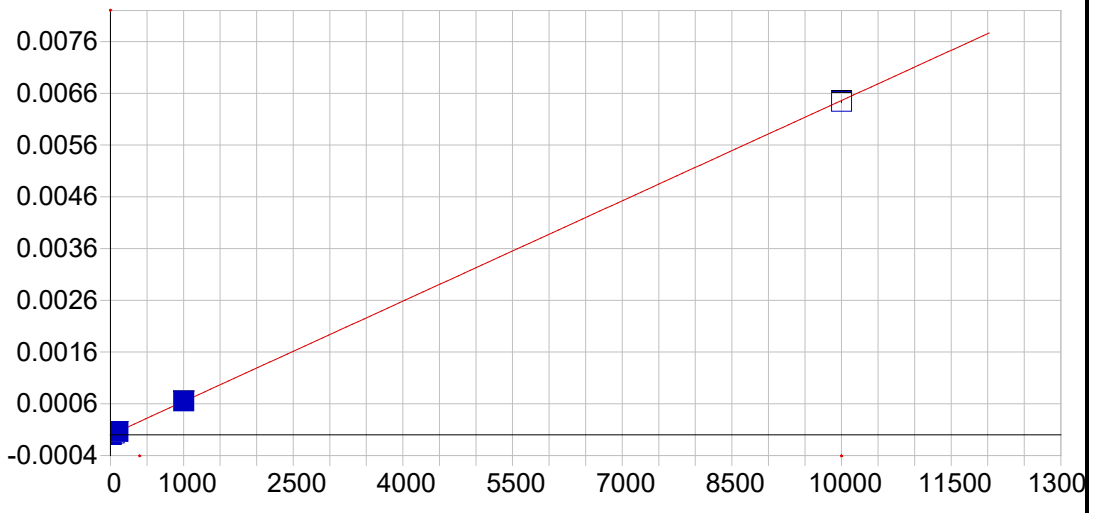


As 193.759 {474}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999784	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	5.371823		
Predicted MQL:	17.906076		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00226	-.002	.000	.00001	.000	1
CalStd9=100	1000.0	996.94	-3.06	-.306	.00096	.000	1
CalStd7=50	50.000	52.200	2.20	4.40	.00006	.000	1
CalStd5=10	10.000	11.960	1.96	19.6	.00002	.000	1
CalStd8=100	100.00	98.897	-1.10	-1.10	.00010	.000	1

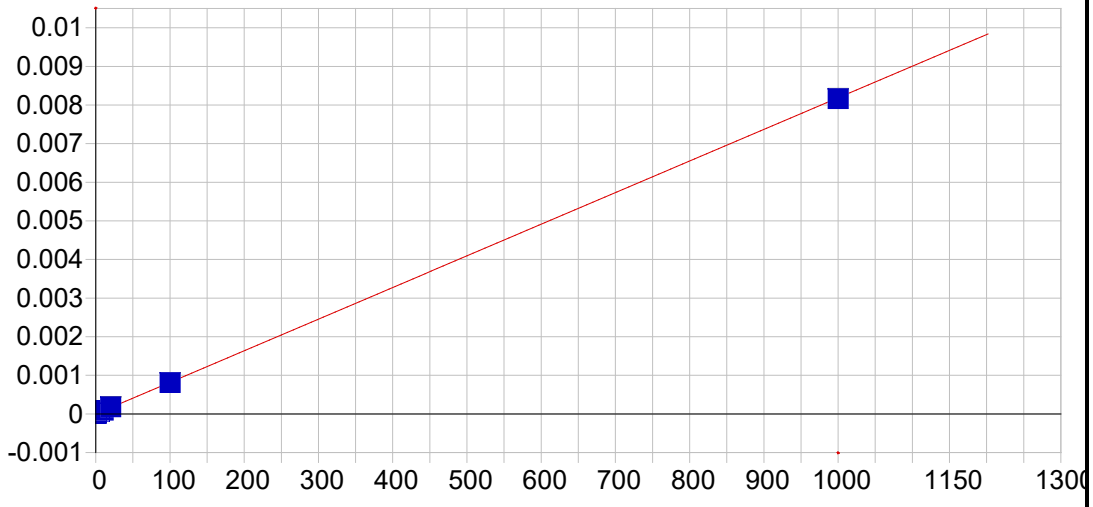


As 197.262 {471}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999979	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	6.985104		
Predicted MQL:	23.283679		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.99955	-1.000	.000	-.00000	.000	1
CalStd9=100	1000.0	1011.7	11.7	1.17	.00065	.000	1
CalStd7=50	50.000	51.147	1.15	2.29	.00003	.000	1
CalStd5=10	10.000	9.1383	-.862	-8.62	.00000	.000	1
CalStd8=100	100.00	98.639	-1.36	-1.36	.00006	.000	1
CalStd10=10	10000.	9969.2	-30.8	-.308	.00644	.000	1

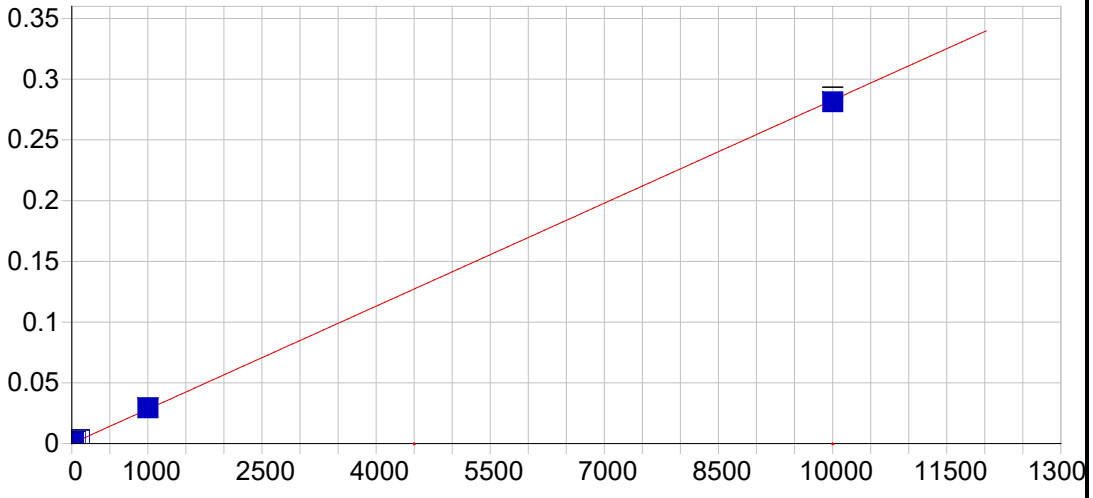


Ba 233.527 {445}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999709	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.492635		
Predicted MQL:	1.642116		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00053	-.001	.000	-.00000	.000	1
CalStd5=10	10.000	11.389	1.39	13.9	.00009	.000	1
CalStd6=20	20.000	22.186	2.19	10.9	.00018	.000	1
CalStd8=100	100.00	98.599	-1.40	-1.40	.00081	.000	1
CalStd4=5	5.0000	5.9707	.971	19.4	.00005	.000	1
CalStd9=100	1000.0	996.75	-3.25	-.325	.00816	.000	1
CalStd3=1	1.0000	1.1083	.108	10.8	.00001	.000	1

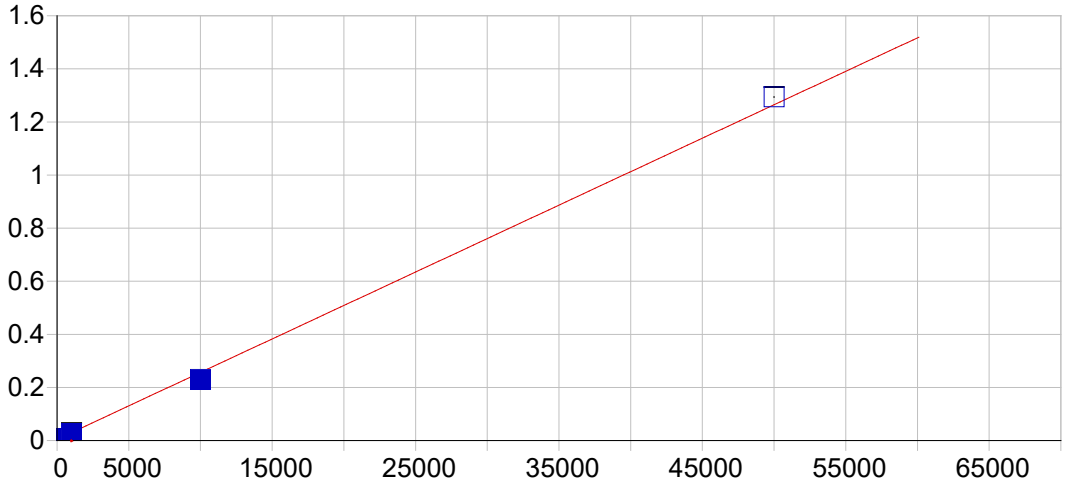


Ba 455.403 { 74}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000034	Re-Slope:	1.000000
A1 (Gain):	0.000028	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999821	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.177545		
Predicted MQL:	0.591816		

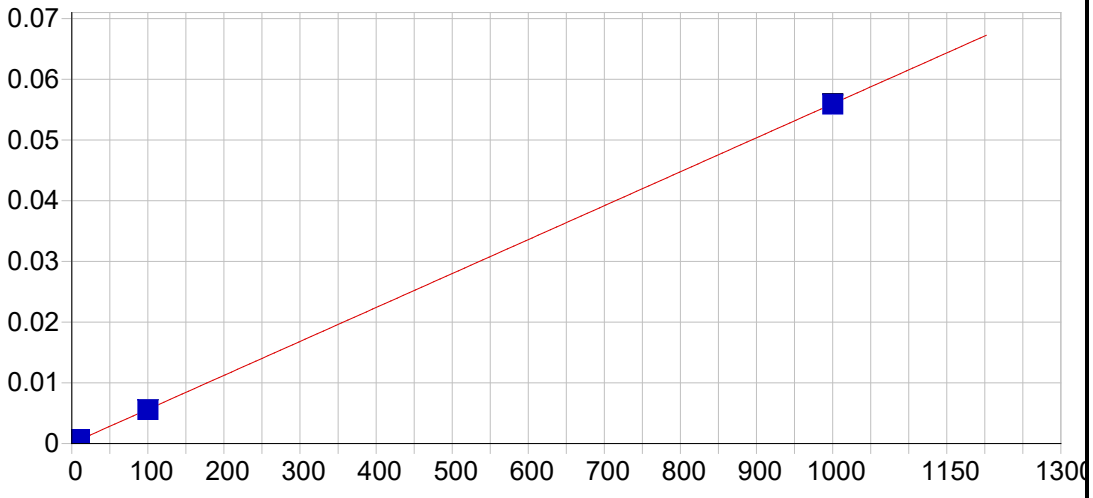
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00103	-.001	.000	.00003	.000	1
CalStd7=50	50.000	58.394	8.39	16.8	.00168	.000	1
CalStd5=10	10.000	11.685	1.69	16.9	.00036	.000	1
CalStd6=20	20.000	23.511	3.51	17.6	.00070	.000	1
CalStd8=100	100.00	103.26	3.26	3.26	.00295	.000	1
CalStd4=5	5.0000	6.0627	1.06	21.3	.00021	.000	1
CalStd9=100	1000.0	1032.4	32.4	3.24	.02922	.000	1
CalStd3=1	1.0000	1.2466	.247	24.7	.00007	.000	1
CalStd10=10	10000.	9949.5	-50.5	-.505	.28128	.004	1



Ba 493.409 { 68}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.004635		Re-Slope:	1.000000	
A1 (Gain):	0.000025		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998775		Status:	OK.	
Std Error of Est:	0.000126				
Predicted MDL:	0.551791				
Predicted MQL:	1.839305				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.01695	.017	.000	.00464	.000	1
CalStd9=100	1000.0	925.41	-74.6	-7.46	.02796	.000	1
CalStd8=100	100.00	99.030	-.970	-.970	.00713	.000	1
Ag Ba 1000,	50000.	51159.	1160.	2.32	1.2939	.002	1
CalStd10=10	10000.	8916.1	-1080.	-10.8	.22934	.001	1

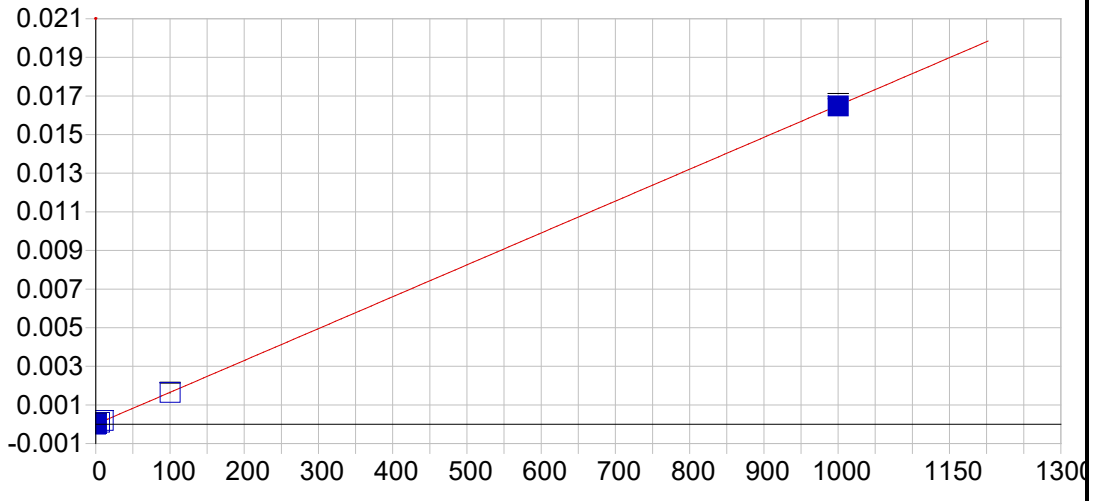


Be 313.042 {108}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000043	Re-Slope:	1.000000
A1 (Gain):	0.000056	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999871	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.022967		
Predicted MQL:	0.076557		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00024	-.000	.000	.00004	.000	1
CalStd5=10	10.000	11.324	1.32	13.2	.00068	.000	1
CalStd8=100	100.00	98.878	-1.12	-1.12	.00556	.000	1
CalStd2=0.5	.50000	.55554	.056	11.1	.00007	.000	1
CalStd4=5	5.0000	5.6051	.605	12.1	.00036	.000	1
CalStd9=100	1000.0	999.00	-1.00	-.100	.05579	.000	1
CalStd3=1	1.0000	1.1373	.137	13.7	.00011	.000	1

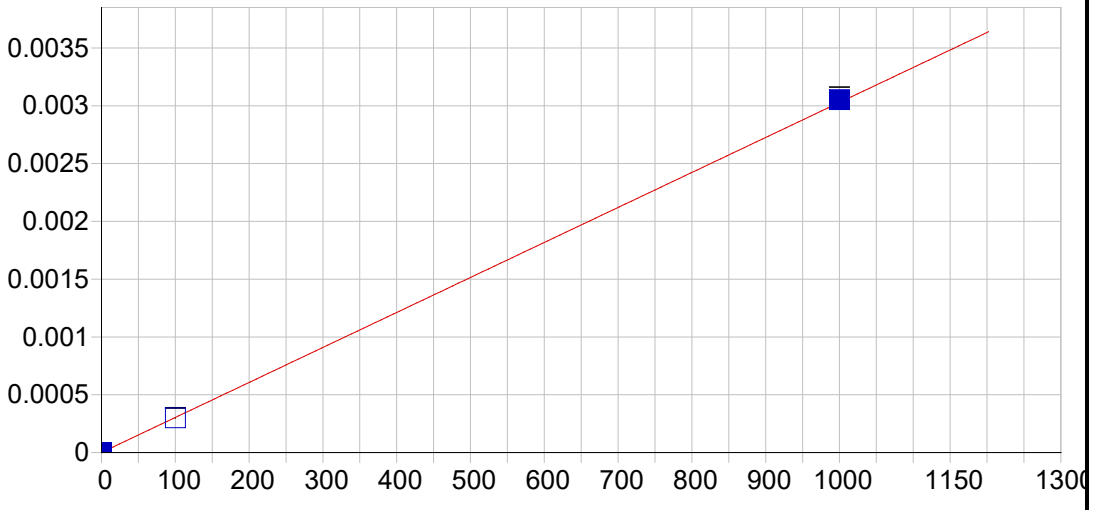


Be 313.107 {108}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000017	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999805	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.150981		
Predicted MQL:	0.503269		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00033	-.000	.000	-.00000	.000	1
CalStd5=10	10.000	11.569	1.57	15.7	.00019	.000	1
CalStd8=100	100.00	99.354	-.646	-.646	.00164	.000	1
CalStd2=0.5	.50000	.57870	.079	15.7	.00001	.000	1
CalStd4=5	5.0000	5.8214	.821	16.4	.00009	.000	1
CalStd9=100	1000.0	997.99	-2.01	-.201	.01648	.000	1
CalStd3=1	1.0000	1.1853	.185	18.5	.00002	.000	1

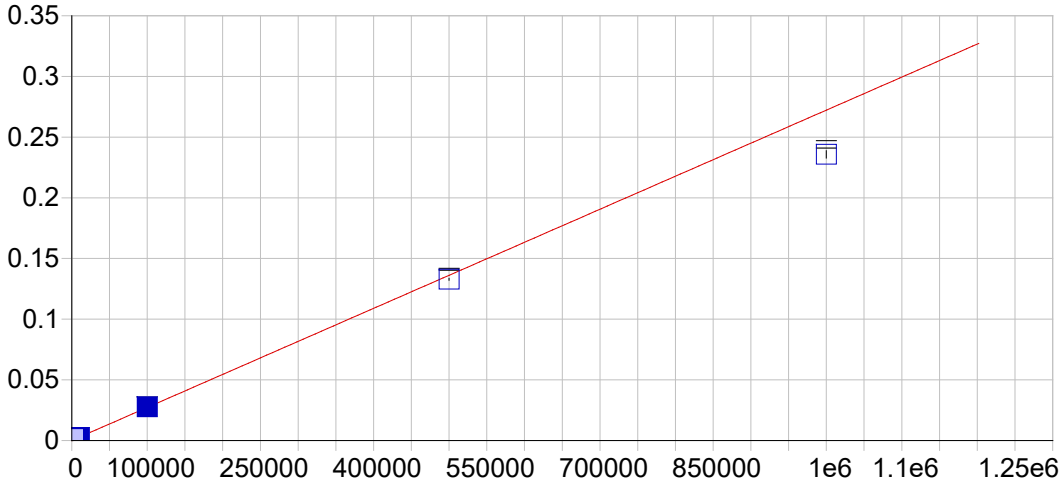


Be 234.861 {144}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999948	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.378503		
Predicted MQL:	1.261676		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.02993	.030	.000	.00000	.000	1
CalStd9=100	1000.0	1007.5	7.49	.749	.00305	.000	1
CalStd8=100	100.00	98.655	-1.34	-1.34	.00030	.000	1

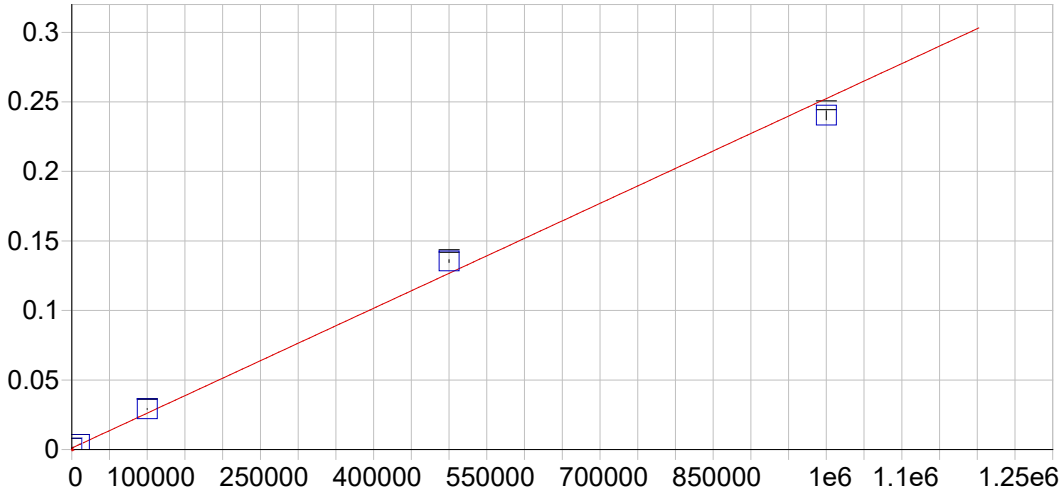


Ca 315.887 {107}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000044	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999791	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	5.500441		
Predicted MQL:	18.334802		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	1.0818	1.08	.000	.00004	.000	1
CalStd10=10	10000.	9876.1	-124.	-1.24	.00273	.000	1
CalStd13=10	100000.	101620.	1620.	1.62	.02770	.000	1
CalStd14=50	500000.	487900.	-12100.	-2.42	.13284	.001	1
CalStd9=100	1000.0	1891.0	891.	89.1	.00056	.000	0
CalibStd15=	1000000.	866220.	-134000.	-13.4	.23581	.003	1

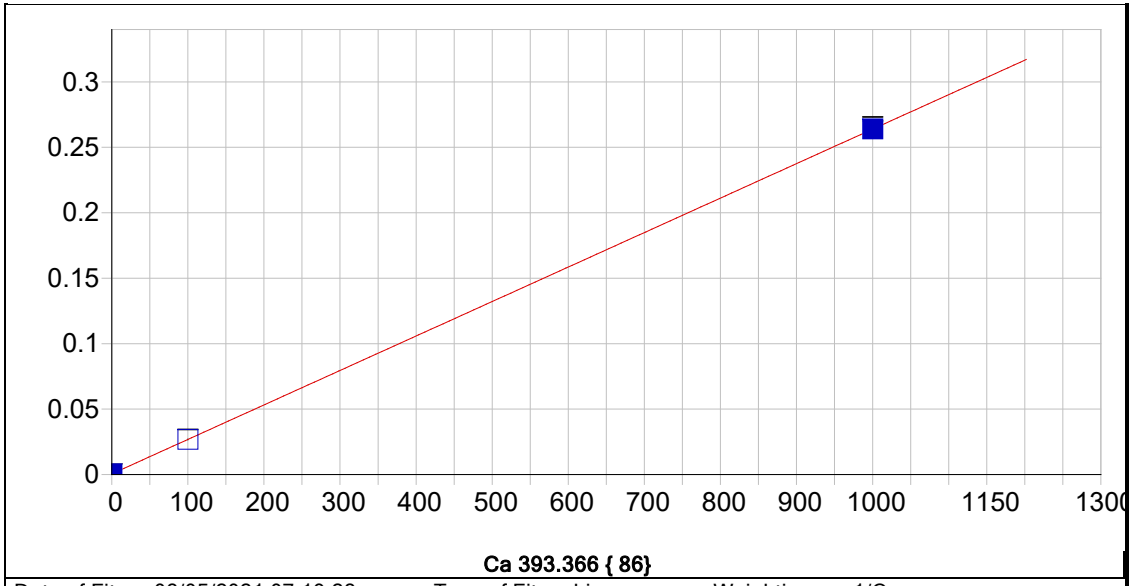


Ca 317.933 {106}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001043	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998070	Status:	OK.
Std Error of Est:	0.000026		
Predicted MDL:	6.055295		
Predicted MQL:	20.184318		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.22423	-.224	.000	.00104	.000	1
CalStd10=10	10000.	10830.	830.	8.30	.00377	.000	1
CalStd13=10	100000.	111880.	11900.	11.9	.02916	.000	1
CalStd14=50	500000.	535110.	35100.	7.02	.13553	.001	1
CalStd9=100	1000.0	2086.8	1090.	109.	.00157	.000	0
CalibStd15=	1000000.	952180.	-47800.	-4.78	.24036	.003	1

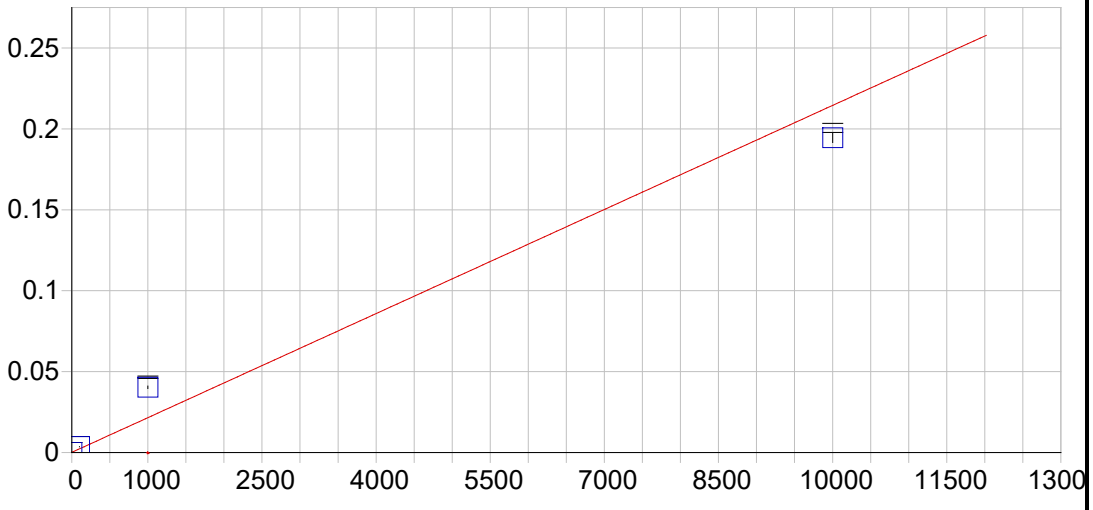


Ca 393.366 { 86}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000488	Re-Slope:	1.000000
A1 (Gain):	0.000263	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.016676		
Predicted MQL:	0.055586		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00001	-.000	.000	.00049	.000	1
CalStd9=100	1000.0	999.99	-.007	-.001	.26425	.002	1
CalStd8=100	100.00	100.01	.007	.007	.02683	.000	1

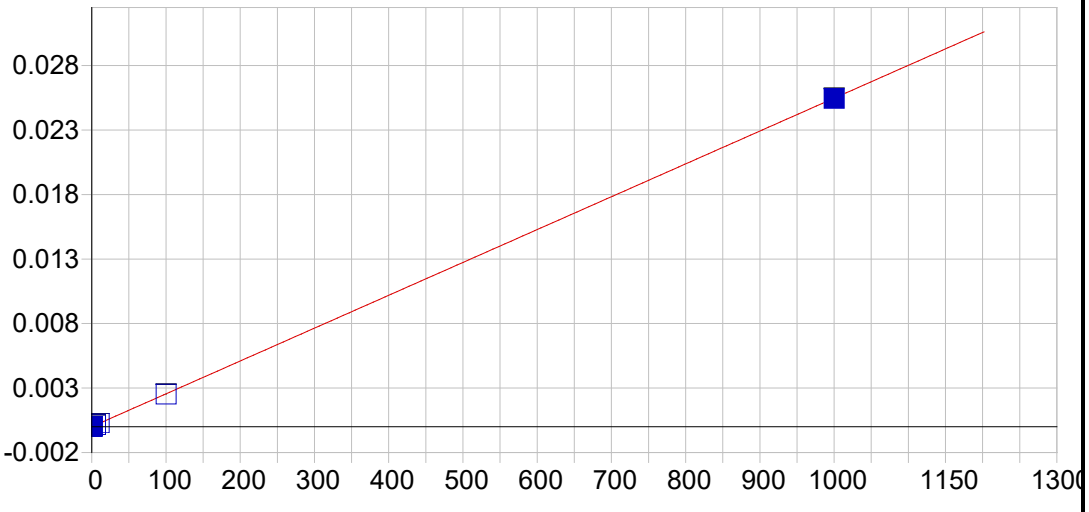


Ca 396.847 { 85}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000113	Re-Slope:	1.000000
A1 (Gain):	0.000021	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.962138	Status:	OK.
Std Error of Est:	0.000286		
Predicted MDL:	0.169728		
Predicted MQL:	0.565759		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.14056	-.141	.000	.00011	.000	1
CalStd10=10	10000.	9063.5	-936.	-9.36	.19444	.003	1
CalStd8=100	100.00	162.54	62.5	62.5	.00360	.000	1
CalStd9=100	1000.0	1873.9	874.	87.4	.04029	.001	1

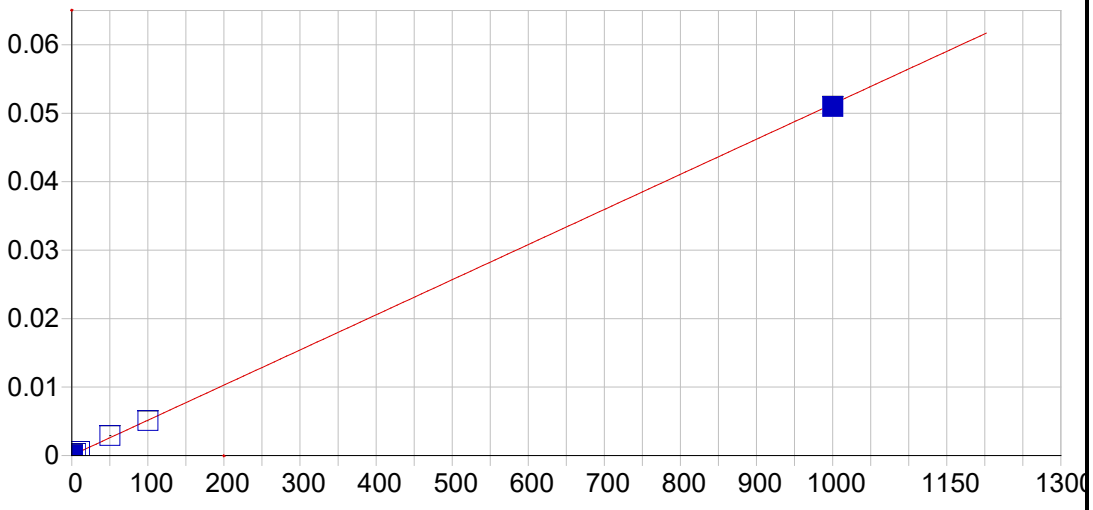


Cd 226.502 {449}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000025	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999874	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.243870		
Predicted MQL:	0.812902		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00017	-.000	.000	.00000	.000	1
CalStd3=1	1.0000	1.1947	.195	19.5	.00003	.000	1
CalStd2=0.5	.50000	.45334	-.047	-9.33	.00001	.000	1
CalStd4=5	5.0000	5.6108	.611	12.2	.00015	.000	1
CalStd8=100	100.00	99.024	-.976	-.976	.00252	.000	1
CalStd5=10	10.000	11.239	1.24	12.4	.00029	.000	1
CalStd9=100	1000.0	998.98	-1.02	-.102	.02545	.000	1

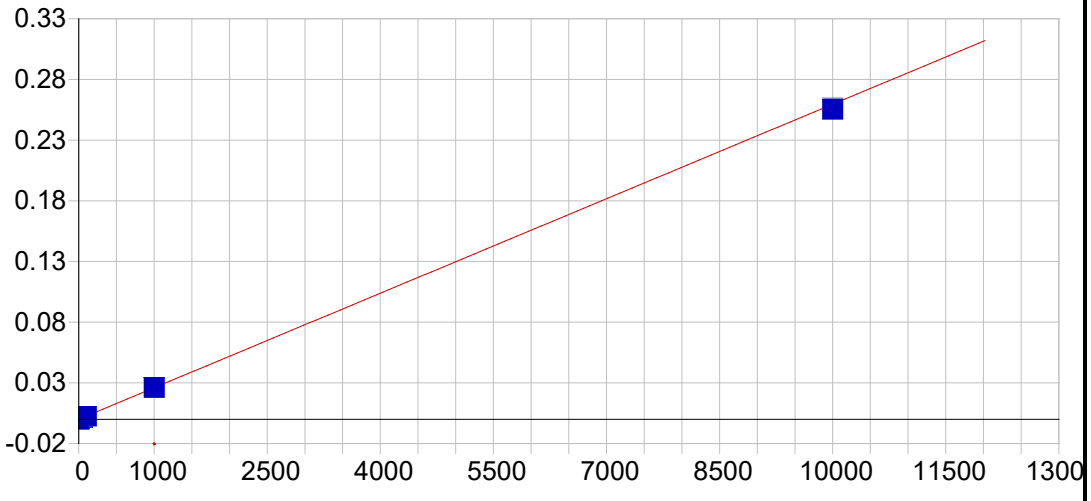


Cd 228.802 {447}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000028	Re-Slope:	1.000000
A1 (Gain):	0.000051	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999496	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.174624		
Predicted MQL:	0.582078		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00041	-.000	.000	.00003	.000	1
CalStd7=50	50.000	56.171	6.17	12.3	.00291	.000	1
CalStd3=1	1.0000	1.1319	.132	13.2	.00009	.000	1
CalStd2=0.5	.50000	.65072	.151	30.1	.00006	.000	1
CalStd4=5	5.0000	5.7962	.796	15.9	.00033	.000	1
CalStd8=100	100.00	98.581	-1.42	-1.42	.00509	.000	1
CalStd5=10	10.000	11.244	1.24	12.4	.00061	.000	1
CalStd9=100	1000.0	992.93	-7.07	-.707	.05097	.000	1

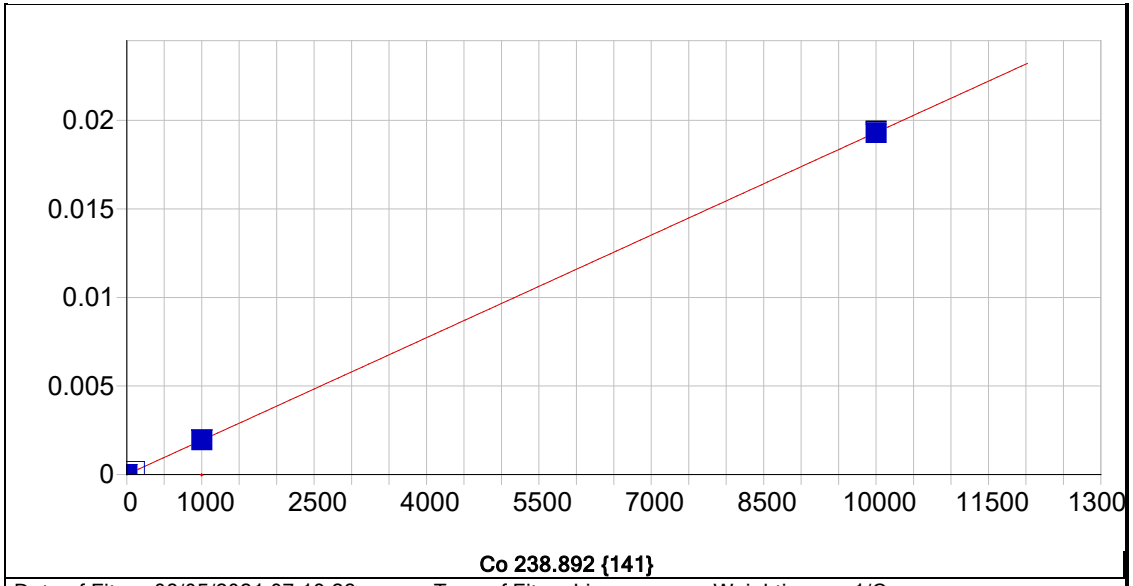


Co 228.616 {447}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000027	Re-Slope:	1.000000
A1 (Gain):	0.000026	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999774	Status:	OK.
Std Error of Est:	0.000056		
Predicted MDL:	0.309311		
Predicted MQL:	1.031035		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.97772	-.978	.000	.00000	.000	1
CalStd7=50	50.000	54.941	4.94	9.88	.00146	.000	1
CalStd5=10	10.000	9.8068	-.193	-1.93	.00028	.000	1
CalStd4=5	5.0000	4.5189	-.481	-9.62	.00014	.000	1
CalStd8=100	100.00	98.711	-1.29	-1.29	.00259	.000	1
CalStd9=100	1000.0	1004.3	4.33	.433	.02612	.000	1
CalStd3=1	1.0000	-.00455	-1.00	-100.	.00003	.000	1
CalStd10=10	10000.	9834.0	-166.	-1.66	.25581	.000	1

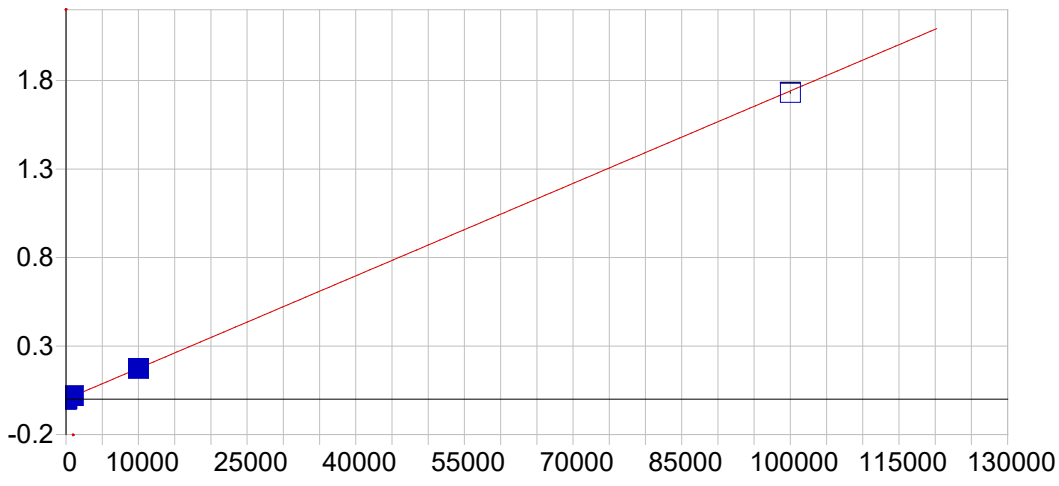


Co 238.892 {141}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.505748		
Predicted MQL:	1.685825		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00162	-.002	.000	.00000	.000	1
CalStd9=100	1000.0	1009.7	9.66	.966	.00195	.000	1
CalStd10=10	10000.	9989.6	-10.4	-.104	.01930	.000	1
CalStd8=100	100.00	100.76	.762	.762	.00020	.000	1

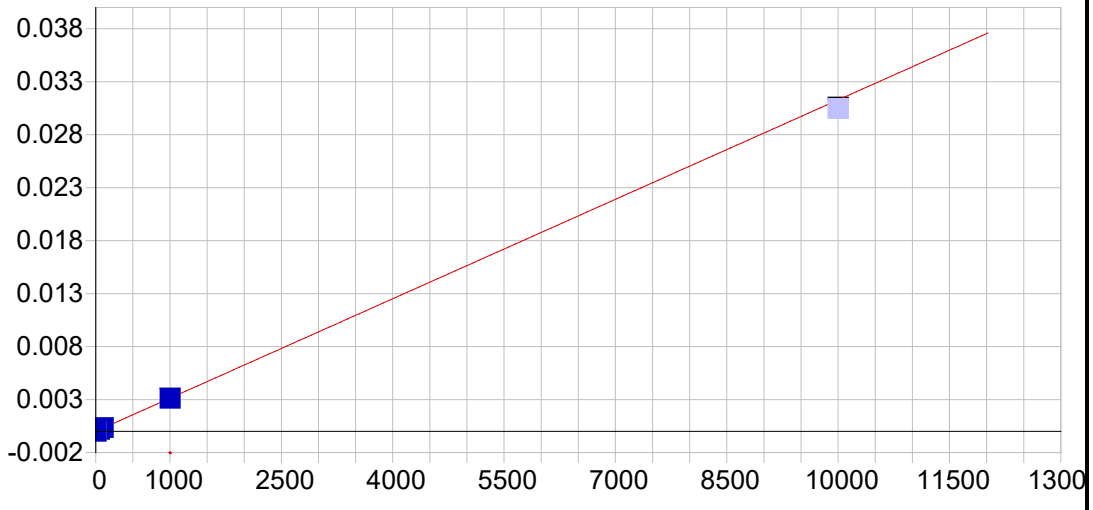


Cr 205.560 {464}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000017	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999861	Status:	OK.
Std Error of Est:	0.000027		
Predicted MDL:	0.315351		
Predicted MQL:	1.051169		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.75433	-.754	.000	-.00001	.000	1
CalStd5=10	10.000	10.561	.561	5.61	.00019	.000	1
CalStd7=50	50.000	56.462	6.46	12.9	.00099	.000	1
CalStd9=100	1000.0	1023.2	23.2	2.32	.01782	.000	1
CalStd8=100	100.00	100.82	.816	.816	.00176	.000	1
CalStd4=5	5.0000	4.7352	-.265	-5.30	.00009	.000	1
CalStd3=1	1.0000	.62593	-.374	-37.4	.00001	.000	1
CalStd10=10	10000.	9898.4	-102.	-1.02	.17237	.000	1
CalStd12=10	100000.	99435.	-565.	-.565	1.7315	.002	1

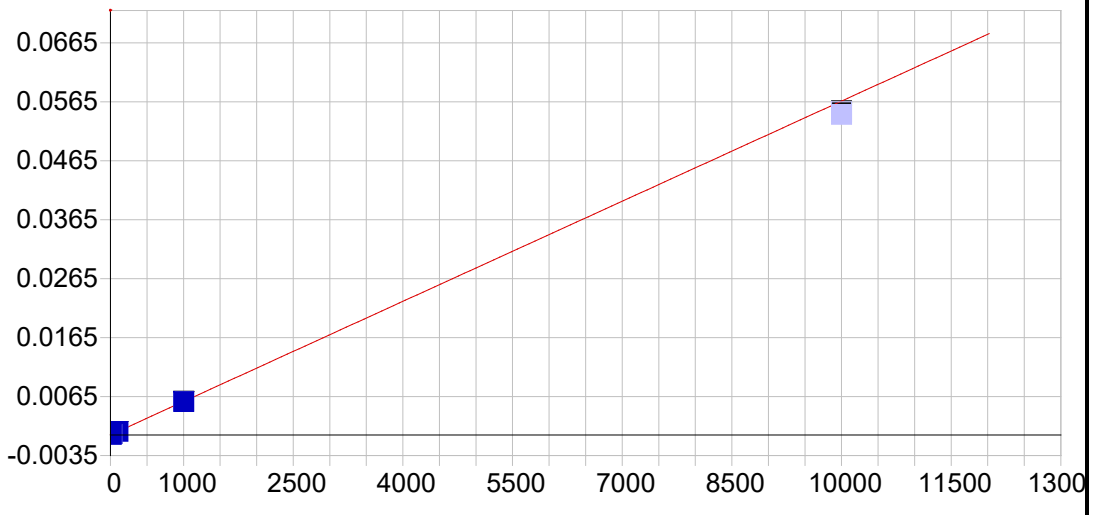


Cr 267.716 {126}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999616	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.422417		
Predicted MQL:	1.408057		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00150	-.001	.000	.00000	.000	1
CalStd5=10	10.000	11.103	1.10	11.0	.00004	.000	1
CalStd7=50	50.000	55.862	5.86	11.7	.00018	.000	1
CalStd9=100	1000.0	993.31	-6.69	-.669	.00311	.000	1
CalStd8=100	100.00	99.298	-.702	-.702	.00031	.000	1
CalStd4=5	5.0000	5.4265	.427	8.53	.00002	.000	1
CalStd10=10	10000.	9737.4	-263.	-2.63	.03047	.000	0

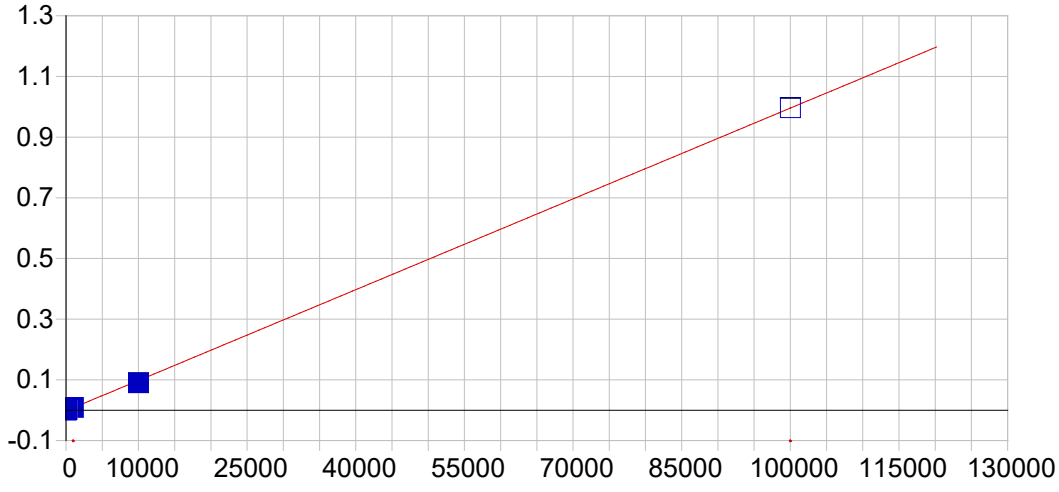


Cu 223.008 {451}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999640	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.279661		
Predicted MQL:	4.265537		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00272	-.003	.000	.00001	.000	1
CalStd9=100	1000.0	995.63	-4.37	-.437	.00568	.000	1
CalStd8=100	100.00	99.664	-.336	-.336	.00057	.000	1
CalStd6=20	20.000	23.809	3.81	19.0	.00014	.000	1
CalStd5=10	10.000	10.894	.894	8.94	.00007	.000	1
CalStd10=10	10000.	9598.5	-401.	-4.01	.05482	.000	0

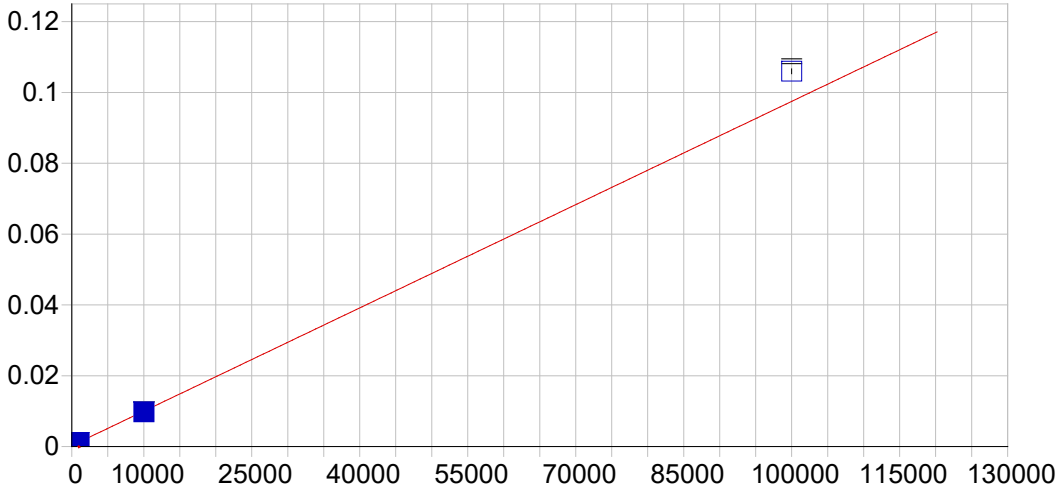


Cu 224.700 {450}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.001849	Re-Slope:	1.000000
A1 (Gain):	0.000010	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999957	Status:	OK.
Std Error of Est:	0.003760		
Predicted MDL:	0.464766		
Predicted MQL:	1.549221		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	185.99	186.	.000	.00001	.000	1
CalStd9=100	1000.0	1072.5	72.5	7.25	.00881	.000	1
CalStd7=50	50.000	195.65	146.	291.	.00010	.000	1
CalStd8=100	100.00	223.76	124.	124.	.00038	.000	1
CalStd6=20	20.000	190.08	170.	850.	.00005	.000	1
CalStd12=10	100000.	100080.	76.2	.076	.99639	.001	1
CalStd10=10	10000.	9225.9	-774.	-7.74	.08979	.000	1

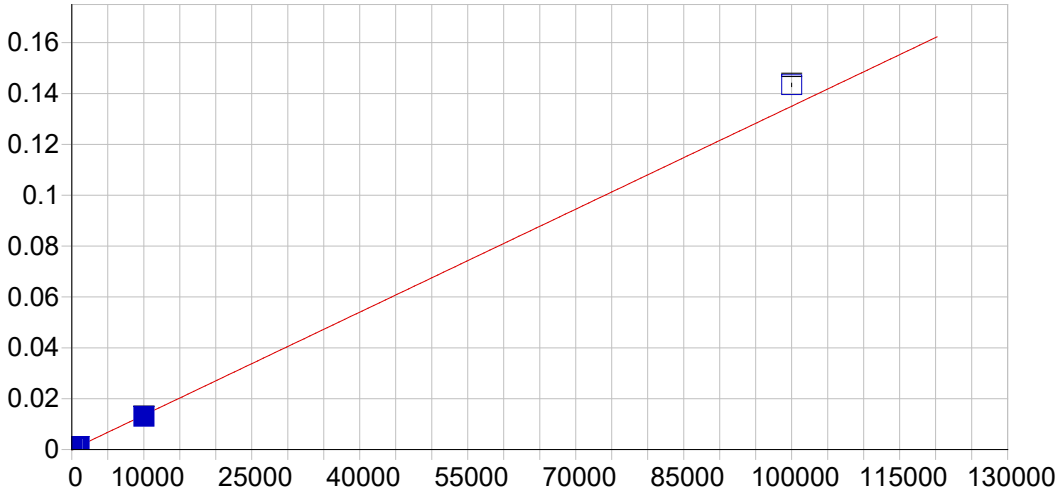


Cu 324.754 {104}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000267	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999074	Status:	OK.
Std Error of Est:	0.000027		
Predicted MDL:	2.811037		
Predicted MQL:	9.370123		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-5.7516	-5.75	.000	.00026	.000	1
CalStd9=100	1000.0	1004.0	4.02	.402	.00124	.000	1
CalStd8=100	100.00	97.239	-2.76	-2.76	.00036	.000	1
CalStd10=10	10000.	9761.8	-238.	-2.38	.00976	.000	1
CalStd12=10	100000.	108720.	8720.	8.72	.10595	.001	1
CalStd5=10	10.000	8.1744	-1.83	-18.3	.00027	.000	1
CalStd6=20	20.000	22.983	2.98	14.9	.00029	.000	1
CalStd7=50	50.000	57.309	7.31	14.6	.00032	.000	1

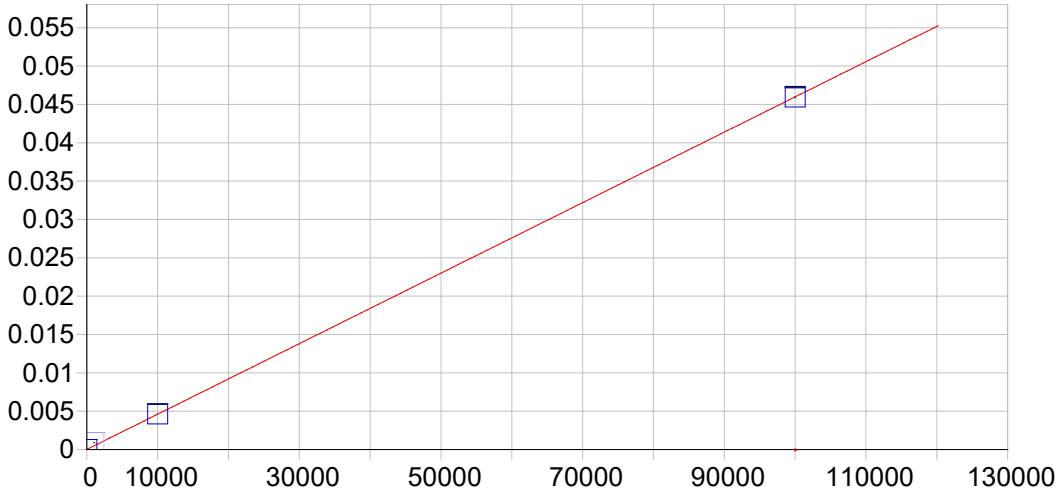


Cu 327.396 {103}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000014	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998947	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	3.683702		
Predicted MQL:	12.279006		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-4.8602	-4.86	.000	.00001	.000	1
CalStd6=20	20.000	20.268	.268	1.34	.00004	.000	1
CalStd7=50	50.000	53.273	3.27	6.55	.00009	.000	1
CalStd8=100	100.00	96.113	-3.89	-3.89	.00014	.000	1
CalStd9=100	1000.0	994.08	-5.92	-.592	.00136	.000	1
CalStd10=10	10000.	9647.1	-353.	-3.53	.01303	.000	1
CalStd4=5	5.0000	3.1952	-1.80	-36.1	.00002	.000	1
CalStd5=10	10.000	8.6458	-1.35	-13.5	.00003	.000	1
CalStd12=10	100000.	106200.	6200.	6.20	.14340	.001	1

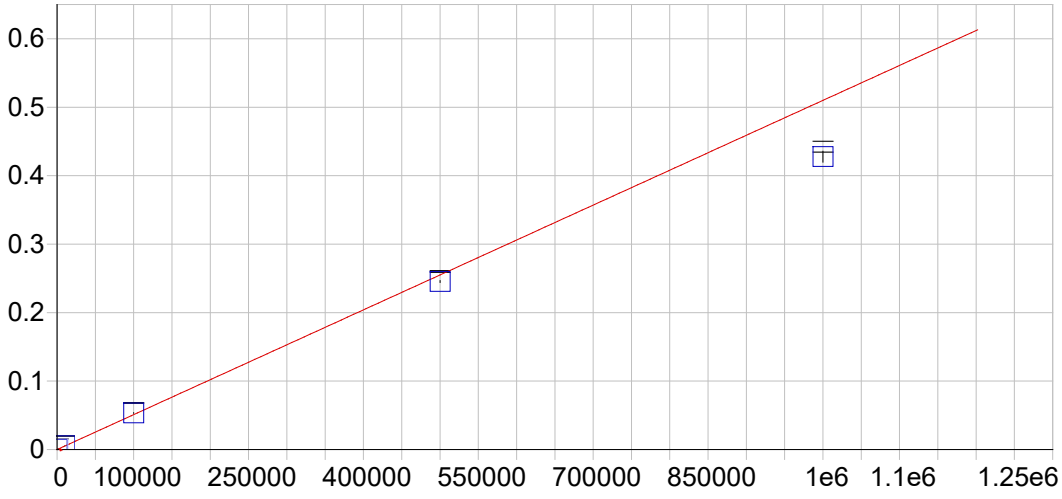


Fe 234.349 {144}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000014	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.903825		
Predicted MQL:	3.012750		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.03055	-.031	.000	.00001	.000	1
CalStd10=10	10000.	10016.	16.3	.163	.00462	.000	1
CalStd13=10	100000.	99914.	-85.6	-.086	.04594	.000	1
CalStd9=100	1000.0	1922.0	922.	92.2	.00090	.000	0

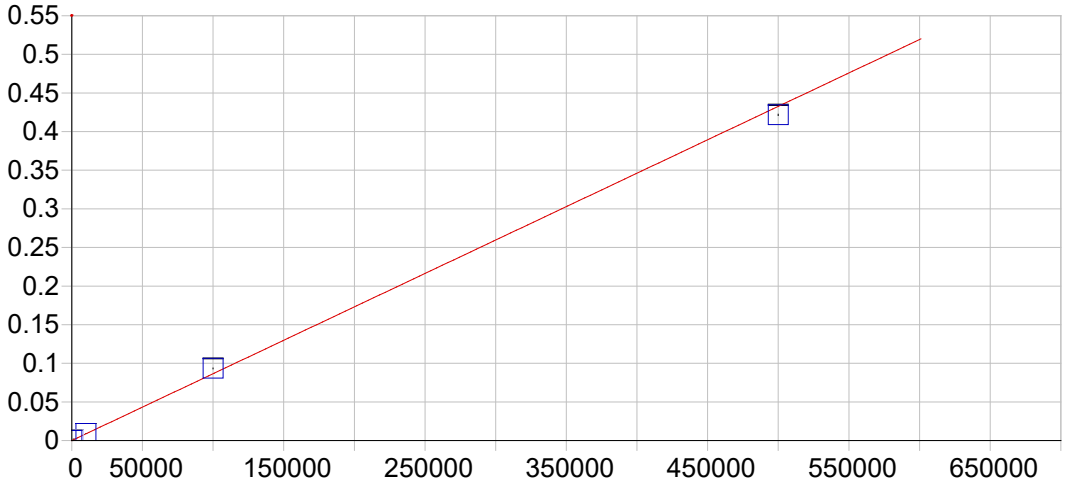


Fe 239.562 {140}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998837	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	2.704978		
Predicted MQL:	9.016592		

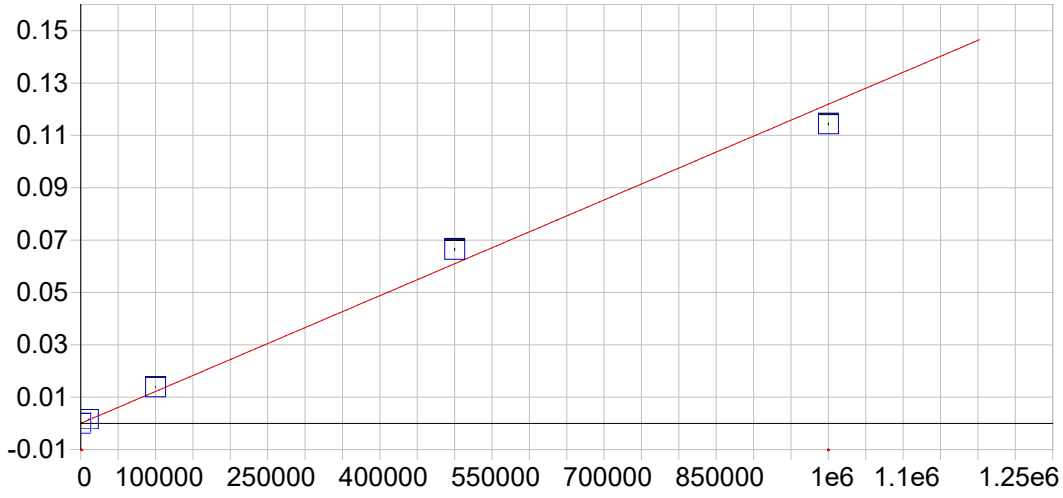
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.39705	-.397	.000	.00000	.000	1
CalStd10=10	10000.	10284.	284.	2.84	.00525	.000	1
CalStd13=10	100000.	104520.	4520.	4.52	.05330	.000	1
CalStd14=50	500000.	481140.	-18900.	-3.77	.24538	.001	1
CalStd9=100	1000.0	1988.2	988.	98.8	.00102	.000	0
CalibStd15=	1000000.	838570.	-161000.	-16.1	.42767	.008	1



Fe 259.940 {129}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999165		Status:	OK.	
Std Error of Est:	0.000010				
Predicted MDL:	1.930573				
Predicted MQL:	6.435242				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.03943	-.039	.000	.00000	.000	1
CalStd10=10	10000.	10564.	564.	5.64	.00914	.000	1
CalStd13=10	100000.	107900.	7900.	7.90	.09337	.000	1
CalStd14=50	500000.	487250.	-12700.	-2.55	.42162	.001	1
CalStd9=100	1000.0	2055.9	1060.	106.	.00178	.000	0

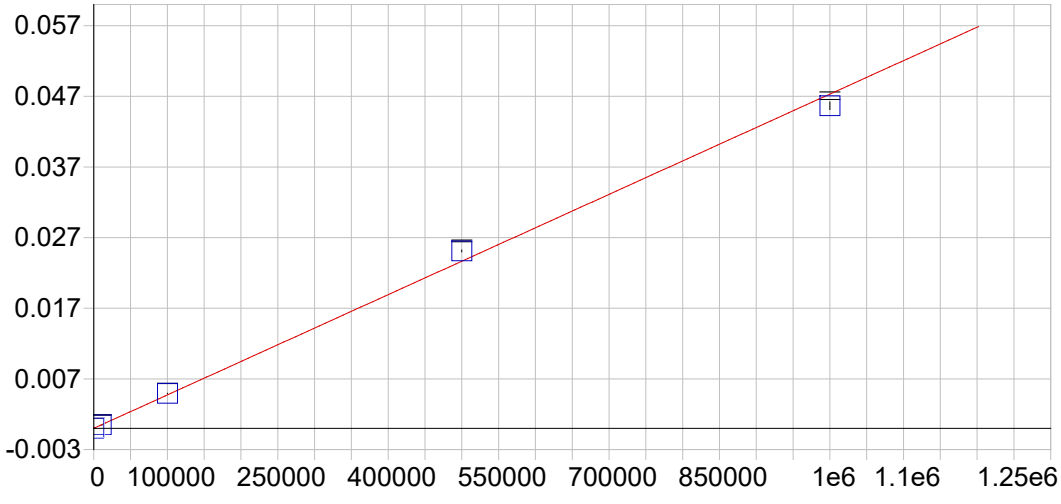


Mg 202.582 {466}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996651	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	4.246907		
Predicted MQL:	14.156358		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.49971	-.500	.000	-.00000	.000	1
CalStd13=10	100000.	113760.	13800.	13.8	.01387	.000	1
CalStd10=10	10000.	13345.	3340.	33.4	.00163	.000	1
CalStd14=50	500000.	544730.	44700.	8.95	.06641	.000	1
CalStd9=100	1000.0	2276.4	1280.	128.	.00028	.000	0
CalibStd15=	1000000.	938160.	-61800.	-6.18	.11438	.000	1

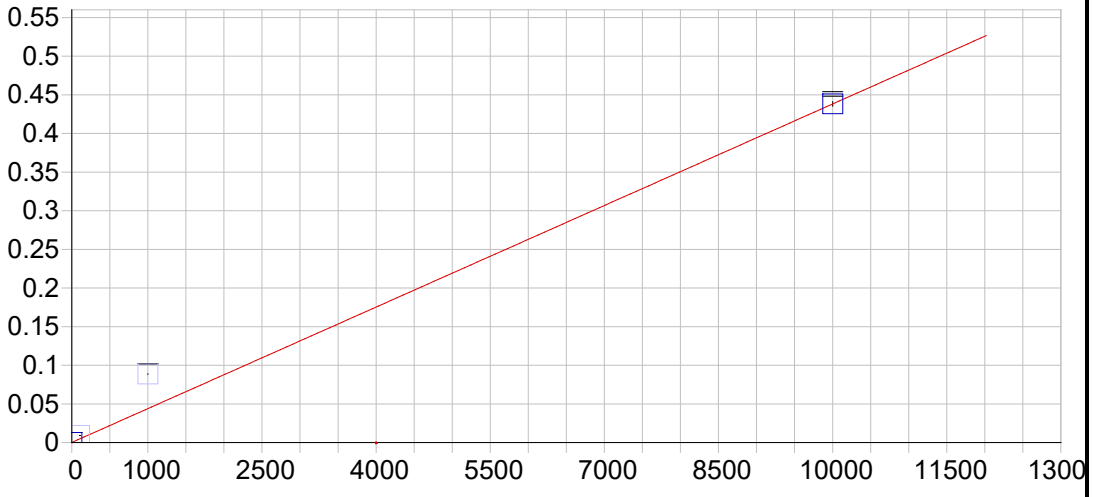


Mg 279.079 {121}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998976	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	19.486740		
Predicted MQL:	64.955800		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.06875	-.069	.000	.00000	.000	1
CalStd13=10	100000.	104330.	4330.	4.33	.00494	.000	1
CalStd10=10	10000.	9990.9	-9.06	-.091	.00047	.000	1
CalStd14=50	500000.	530710.	30700.	6.14	.02511	.000	1
CalStd9=100	1000.0	1880.8	881.	88.1	.00009	.000	0
CalibStd15=	1000000.	964970.	-35000.	-3.50	.04566	.001	1

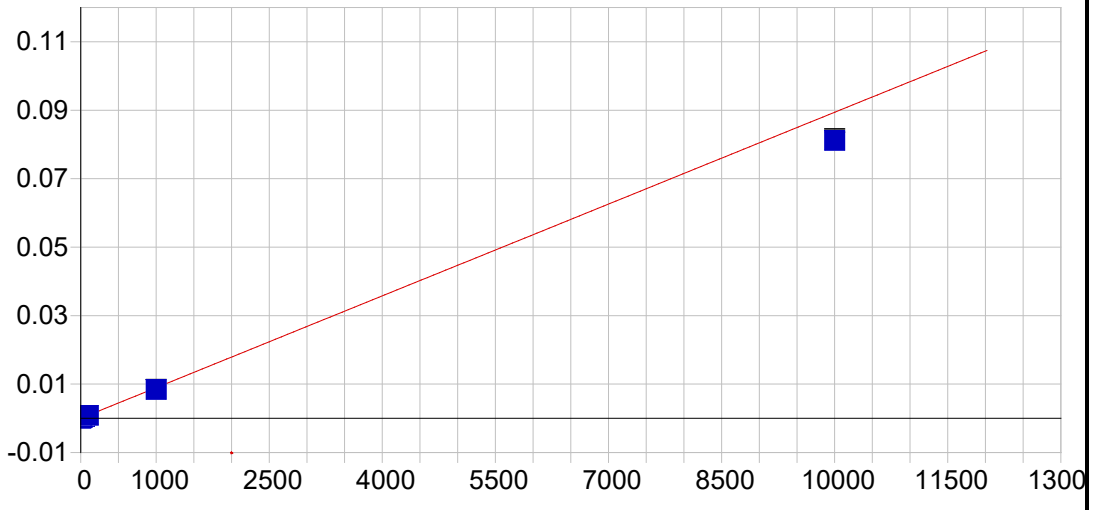


Mg 280.270 {120}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000100	Re-Slope:	1.000000
A1 (Gain):	0.000044	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.019687		
Predicted MQL:	0.065622		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00010	.000	1
CalStd9=100	1000.0	2018.2	1020.	102.	.08850	.000	0
CalStd10=10	10000.	10000.	.000	.000	.43811	.003	1
CalStd8=100	100.00	203.90	104.	104.	.00903	.000	0

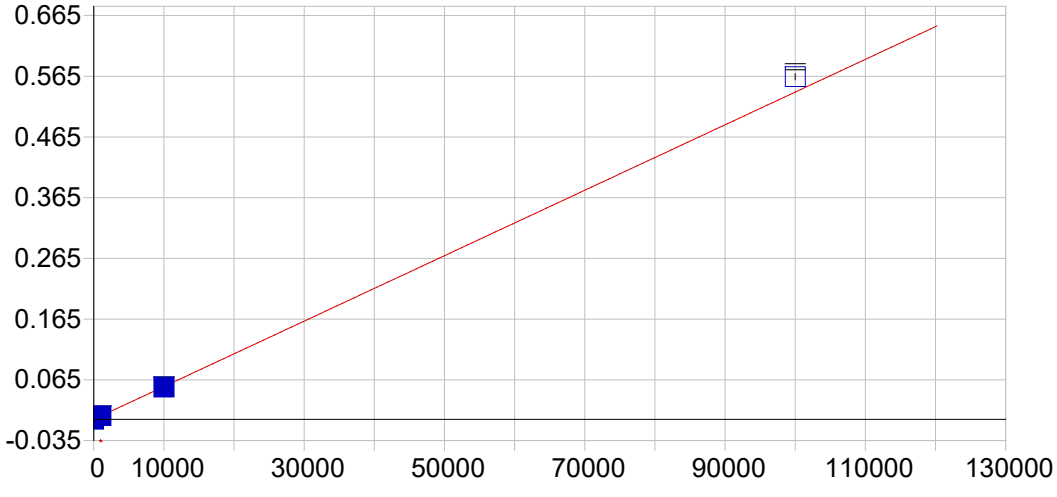


Mn 257.610 {131}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000009	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997730	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	0.067529		
Predicted MQL:	0.225096		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.83581	-.836	.000	-.00000	.000	1
CalStd5=10	10.000	9.8875	-.113	-1.13	.00009	.000	1
CalStd7=50	50.000	52.603	2.60	5.21	.00048	.000	1
CalStd6=20	20.000	20.718	.718	3.59	.00019	.000	1
CalStd8=100	100.00	93.606	-6.39	-6.39	.00084	.000	1
CalStd4=5	5.0000	4.6770	-.323	-6.46	.00005	.000	1
CalStd9=100	1000.0	938.16	-61.8	-6.18	.00839	.000	1
CalStd10=10	10000.	9073.5	-926.	-9.26	.08112	.000	1

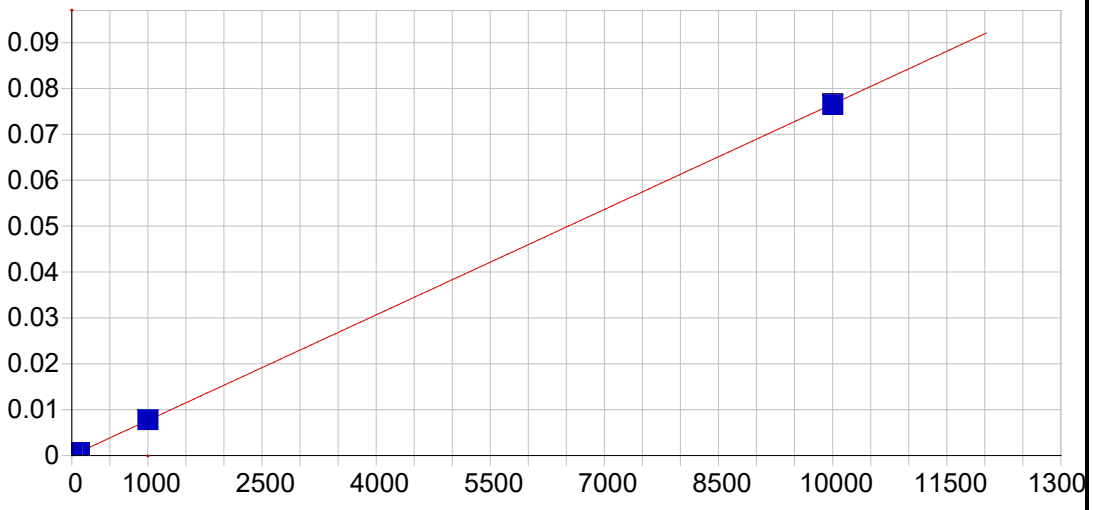


Mn 259.373 {130}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999678	Status:	OK.
Std Error of Est:	0.000020		
Predicted MDL:	0.350088		
Predicted MQL:	1.166959		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.03093	-.031	.000	.00000	.000	1
CalStd10=10	10000.	9812.8	-187.	-1.87	.05294	.000	1
CalStd9=100	1000.0	1018.6	18.6	1.86	.00550	.000	1
CalStd12=10	100000.	104700.	4700.	4.70	.56417	.005	1

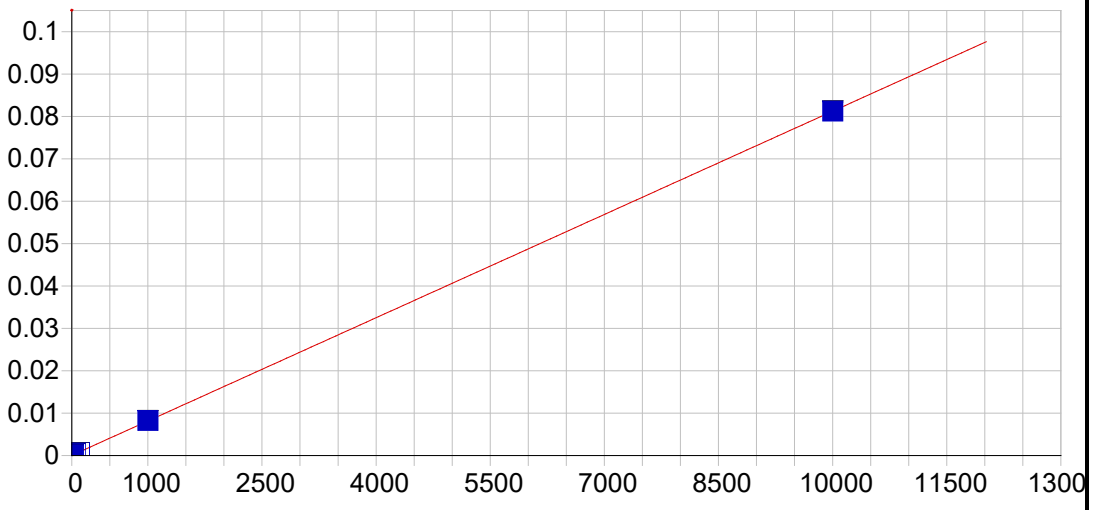


Mo 202.030 {466}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999936	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.603646		
Predicted MQL:	2.012154		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00225	-.002	.000	.00001	.000	1
CalStd7=50	50.000	56.035	6.04	12.1	.00044	.000	1
CalStd6=20	20.000	22.654	2.65	13.3	.00018	.000	1
CalStd5=10	10.000	10.861	.861	8.61	.00009	.000	1
CalStd8=100	100.00	98.865	-1.14	-1.14	.00076	.000	1
CalStd4=5	5.0000	5.5540	.554	11.1	.00005	.000	1
CalStd9=100	1000.0	1012.4	12.4	1.24	.00777	.000	1
CalStd10=10	10000.	9978.7	-21.3	-.213	.07650	.000	1

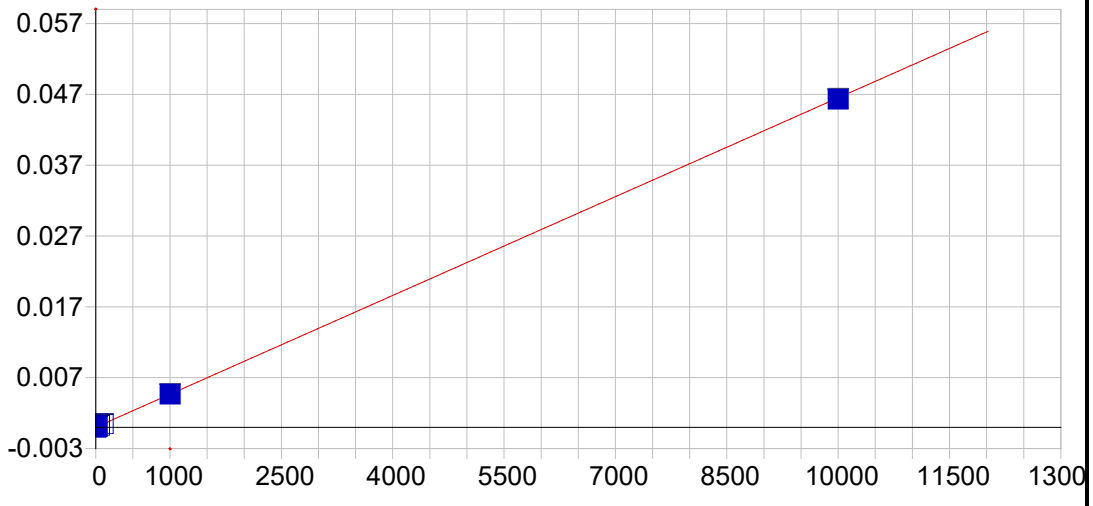


Mo 202.030 {467}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000036	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000043		
Predicted MDL:	0.575834		
Predicted MQL:	1.919447		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.3803	-3.38	.000	.00001	.000	1
CalStd7=50	50.000	52.009	2.01	4.02	.00046	.000	1
CalStd6=20	20.000	19.127	-.873	-4.37	.00019	.000	1
CalStd5=10	10.000	7.9095	-2.09	-20.9	.00010	.000	1
CalStd8=100	100.00	96.647	-3.35	-3.35	.00082	.000	1
CalStd4=5	5.0000	2.4348	-2.57	-51.3	.00006	.000	1
CalStd9=100	1000.0	1011.4	11.4	1.14	.00825	.000	1
CalStd10=10	10000.	9998.9	-1.11	-.011	.08123	.000	1

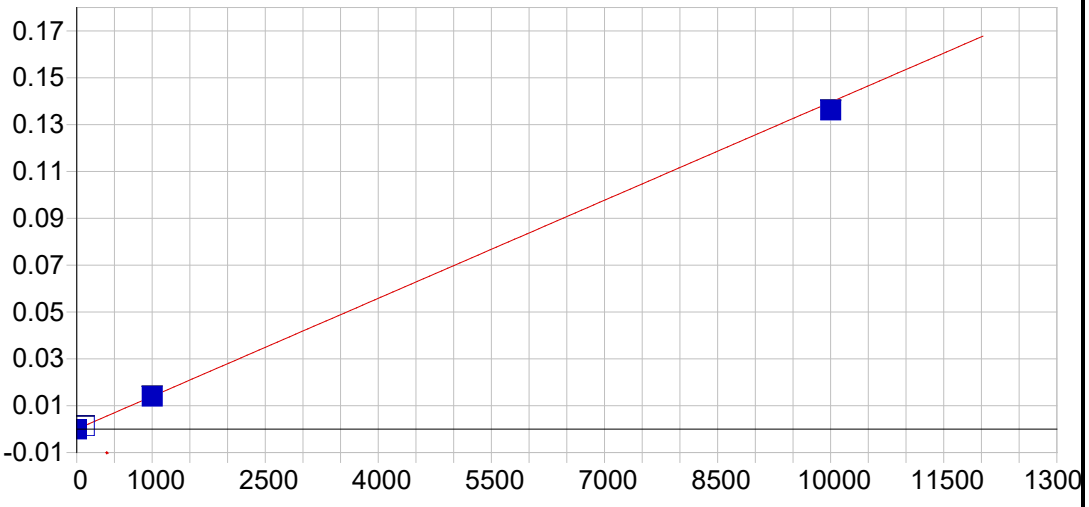


Mo 204.598 {464}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000015	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999928	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	1.070928		
Predicted MQL:	3.569759		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-2.4535	-2.45	.000	.00000	.000	1
CalStd7=50	50.000	51.241	1.24	2.48	.00025	.000	1
CalStd6=20	20.000	18.461	-1.54	-7.69	.00010	.000	1
CalStd5=10	10.000	6.8916	-3.11	-31.1	.00005	.000	1
CalStd8=100	100.00	94.892	-5.11	-5.11	.00046	.000	1
CalStd4=5	5.0000	1.1238	-3.88	-77.5	.00002	.000	1
CalStd9=100	1000.0	1001.1	1.05	.105	.00467	.000	1
CalStd10=10	10000.	9958.3	-41.7	-.417	.04632	.000	1

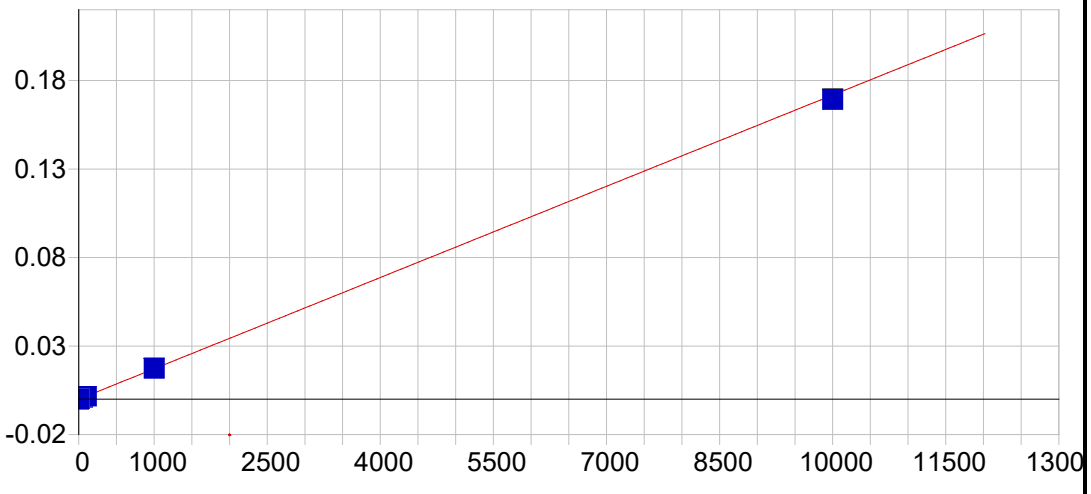


Ni 221.647 {452}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000014	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999953	Status:	OK.
Std Error of Est:	0.000100		
Predicted MDL:	0.619847		
Predicted MQL:	2.066156		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.6667	-1.67	.000	-.00002	.000	1
CalStd10=10	10000.	9756.1	-244.	-2.44	.13618	.000	1
CalStd8=100	100.00	97.806	-2.19	-2.19	.00137	.000	1
CalStd9=100	1000.0	1001.8	1.77	.177	.01399	.000	1

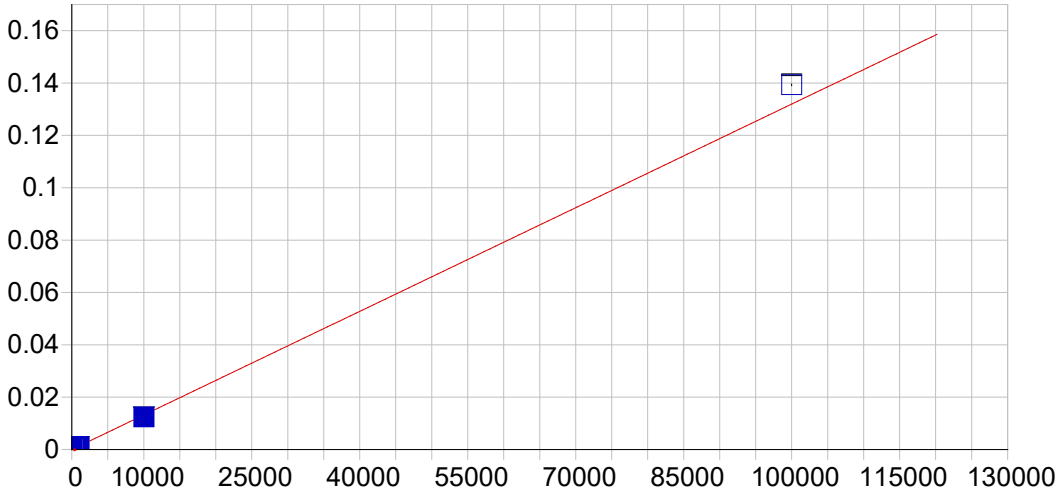


Ni 231.604 {445}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000025	Re-Slope:	1.000000
A1 (Gain):	0.000017	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999808	Status:	OK.
Std Error of Est:	0.000058		
Predicted MDL:	0.540121		
Predicted MQL:	1.800402		

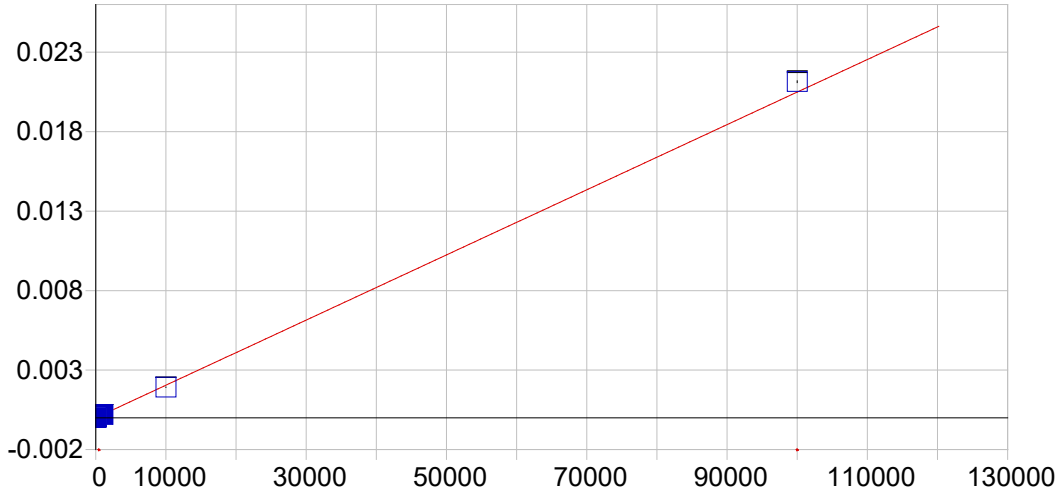
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.58489	-.585	.000	-.00004	.000	1
CalStd7=50	50.000	55.702	5.70	11.4	.00093	.000	1
CalStd5=10	10.000	9.8530	-.147	-1.47	.00014	.000	1
CalStd8=100	100.00	98.710	-1.29	-1.29	.00167	.000	1
CalStd4=5	5.0000	4.5017	-.498	-9.97	.00005	.000	1
CalStd9=100	1000.0	1012.7	12.7	1.27	.01736	.000	1
CalStd3=1	1.0000	.27148	-.729	-72.9	-.00002	.000	1
CalStd10=10	10000.	9851.8	-148.	-1.48	.16937	.000	1



Pb 216.999 {455}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998358		Status:	OK.	
Std Error of Est:	0.000111				
Predicted MDL:	5.613629				
Predicted MQL:	18.712098				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	14.280	14.3	.000	.00002	.000	1
CalStd9=100	1000.0	961.11	-38.9	-3.89	.00128	.000	1
CalStd10=10	10000.	9412.7	-587.	-5.87	.01246	.000	1
CalStd8=100	100.00	106.25	6.25	6.25	.00014	.000	1
CalStd5=10	10.000	26.785	16.8	168.	.00004	.000	1
CalStd12=10	100000.	105570.	5570.	5.57	.13931	.000	1

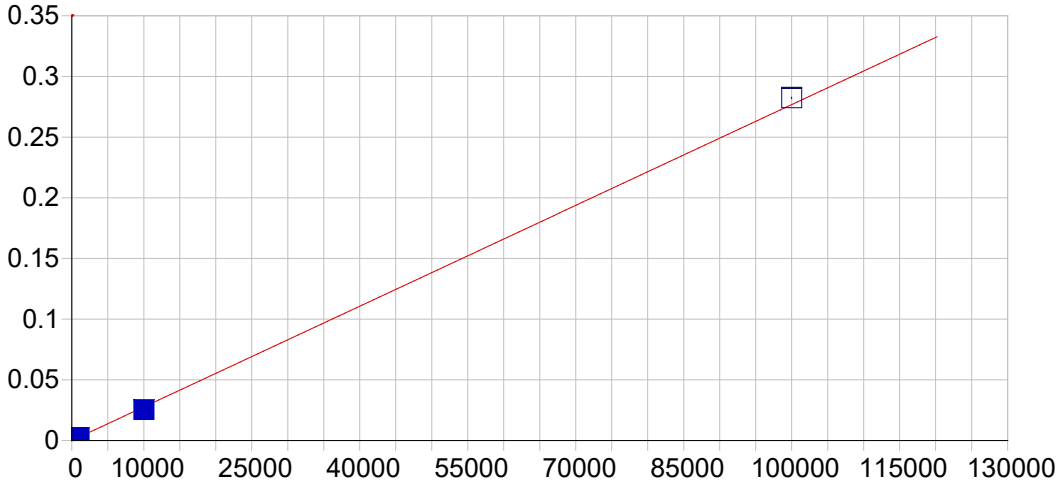


Pb 216.999 {456}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998941	Status:	OK.
Std Error of Est:	0.000020		
Predicted MDL:	18.071229		
Predicted MQL:	60.237430		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	18.870	18.9	.000	.00000	.000	1
CalStd9=100	1000.0	951.34	-48.7	-4.87	.00019	.000	1
CalStd10=10	10000.	9369.2	-631.	-6.31	.00192	.000	1
CalStd8=100	100.00	111.01	11.0	11.0	.00002	.000	1
CalStd5=10	10.000	32.216	22.2	222.	.00000	.000	1
CalStd12=10	100000.	103200.	3200.	3.20	.02115	.000	1

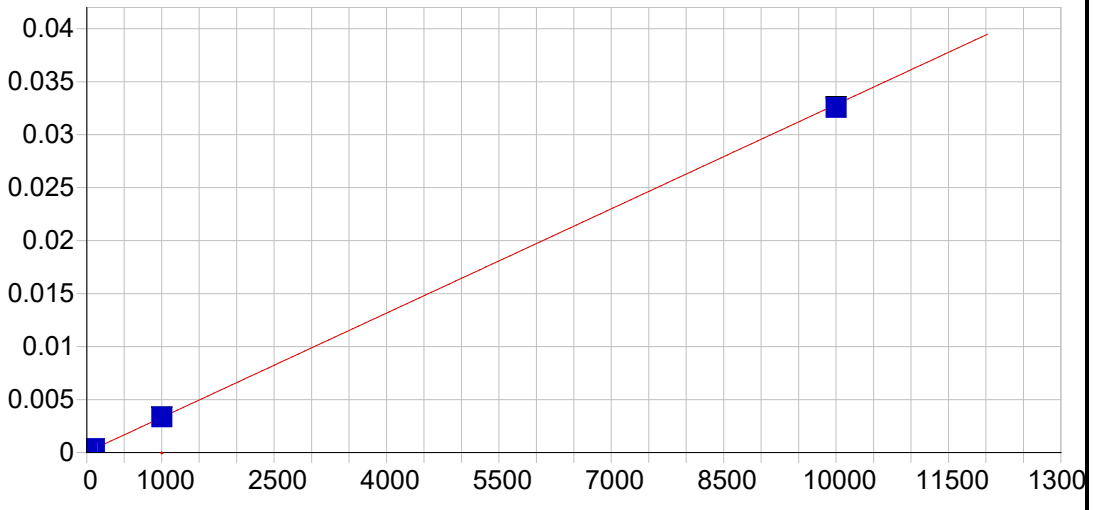


Pb 220.353 {153}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999256	Status:	OK.
Std Error of Est:	0.000073		
Predicted MDL:	2.668083		
Predicted MQL:	8.893609		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	2.5256	2.53	.000	.00001	.000	1
CalStd9=100	1000.0	940.06	-59.9	-5.99	.00260	.000	1
CalStd10=10	10000.	9169.8	-830.	-8.30	.02538	.000	1
CalStd8=100	100.00	97.045	-2.95	-2.95	.00027	.000	1
CalStd12=10	100000.	102000.	2000.	2.00	.28230	.000	1

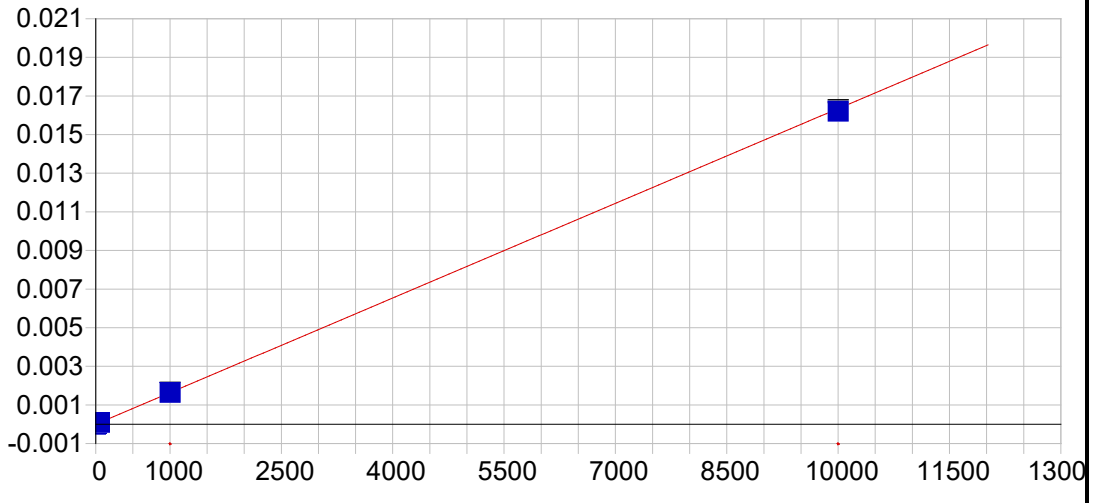


Pb 220.353 {453}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000034	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999942	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	2.779171		
Predicted MQL:	9.263903		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-2.4546	-2.45	.000	.00003	.000	1
CalStd5=10	10.000	10.897	.897	8.97	.00007	.000	1
CalStd8=100	100.00	97.739	-2.26	-2.26	.00035	.000	1
CalStd4=5	5.0000	5.5211	.521	10.4	.00005	.000	1
CalStd9=100	1000.0	1010.3	10.3	1.03	.00335	.000	1
CalStd10=10	10000.	9912.9	-87.1	-.871	.03256	.000	1

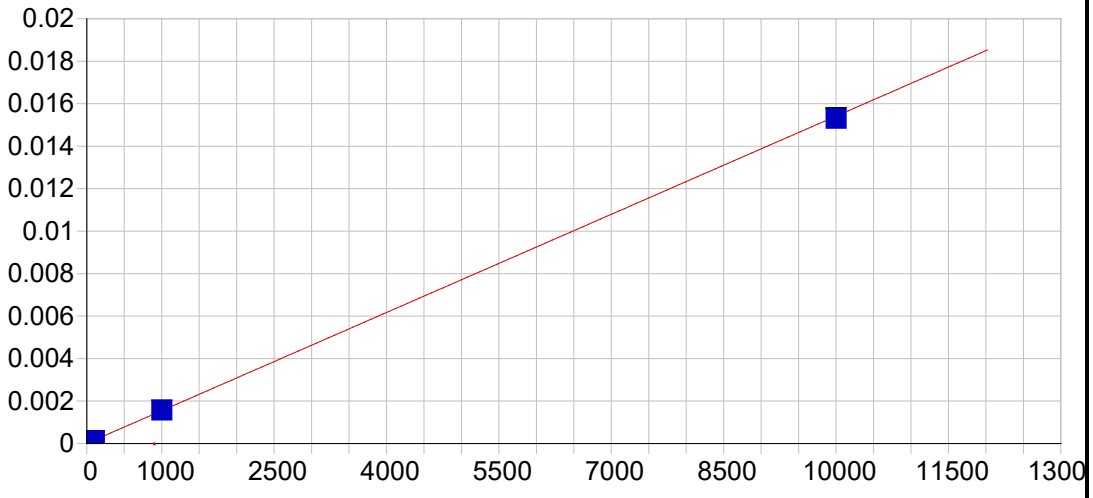


Sb 206.833 {463}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	3.417854		
Predicted MQL:	11.392846		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-4.9750	-4.98	.000	-.00001	.000	1
CalStd9=100	1000.0	1003.9	3.88	.388	.00165	.000	1
CalStd5=10	10.000	10.334	.334	3.34	.00002	.000	1
CalStd7=50	50.000	52.618	2.62	5.24	.00009	.000	1
CalStd10=10	10000.	9916.4	-83.6	-.836	.01621	.000	1

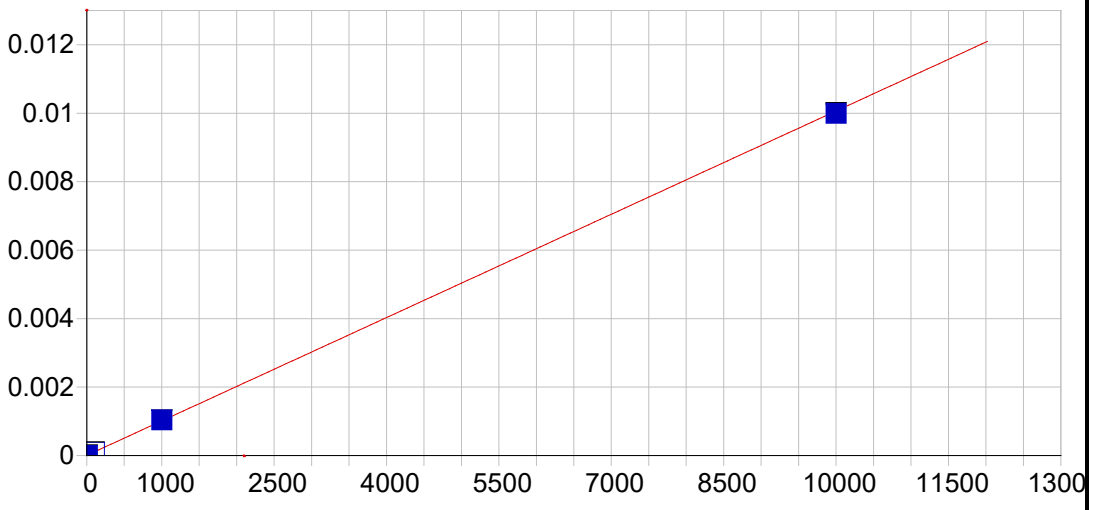


Sb 217.581 {455}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999940	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	3.765392		
Predicted MQL:	12.551306		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.72222	-.722	.000	.00000	.000	1
CalStd9=100	1000.0	1011.9	11.9	1.19	.00157	.000	1
CalStd6=20	20.000	24.509	4.51	22.5	.00004	.000	1
CalStd5=10	10.000	9.9836	-.016	-.164	.00002	.000	1
CalStd8=100	100.00	96.540	-3.46	-3.46	.00015	.000	1
CalStd4=5	5.0000	5.1533	.153	3.07	.00001	.000	1
CalStd10=10	10000.	9927.4	-72.6	-.726	.01530	.000	1

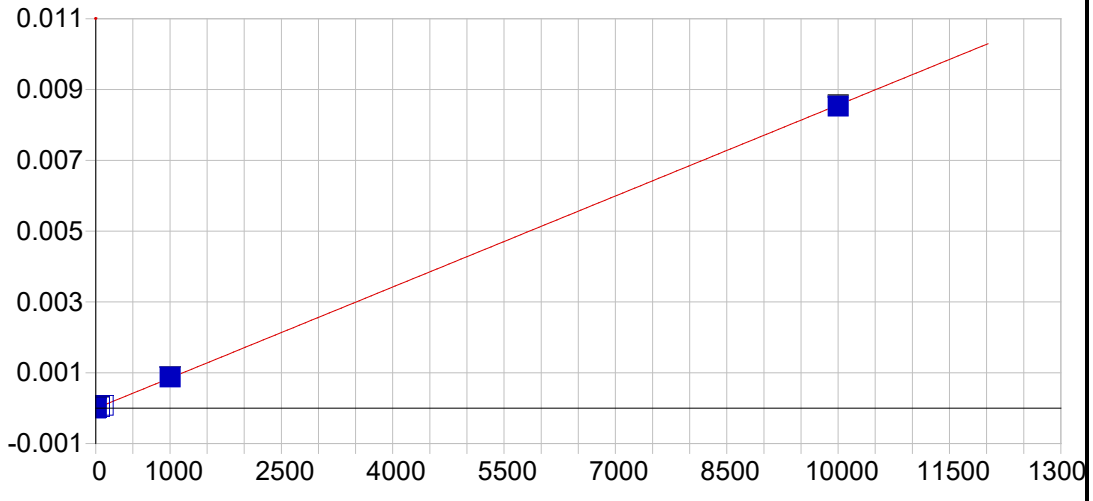


Se 196.090 {472}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999881	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	4.414511		
Predicted MQL:	14.715035		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.9397	-1.94	.000	.00000	.000	1
CalStd9=100	1000.0	1027.7	27.7	2.77	.00104	.000	1
CalStd5=10	10.000	8.6194	-1.38	-13.8	.00001	.000	1
CalStd8=100	100.00	98.023	-1.98	-1.98	.00010	.000	1
CalStd10=10	10000.	9926.3	-73.7	-.737	.00999	.000	1

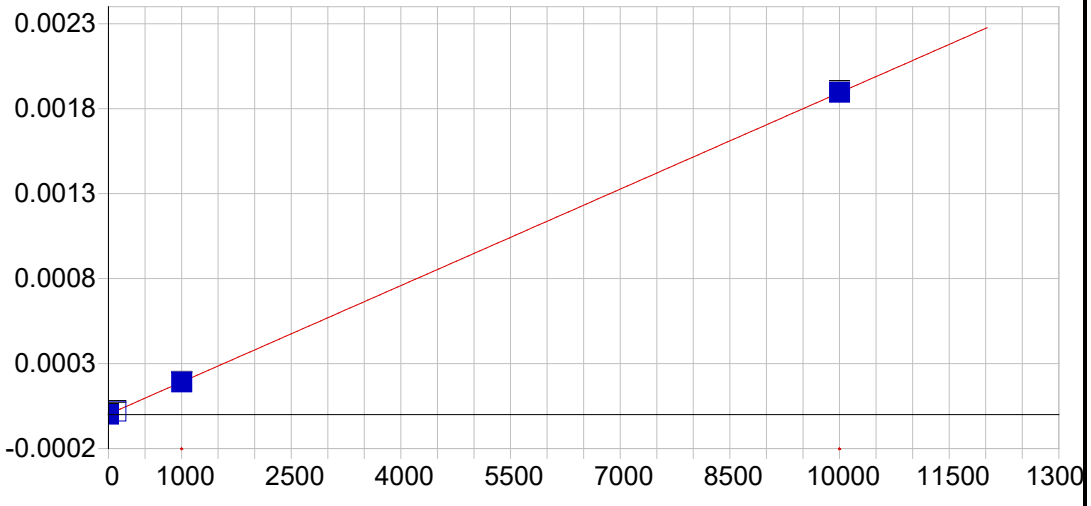


Se 203.985 {465}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999867	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	8.336828		
Predicted MQL:	27.789427		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	9.3201	9.32	.000	.00000	.000	1
CalStd7=50	50.000	55.361	5.36	10.7	.00004	.000	1
CalStd9=100	1000.0	1032.9	32.9	3.29	.00088	.000	1
CalStd5=10	10.000	16.662	6.66	66.6	.00001	.000	1
CalStd8=100	100.00	98.872	-1.13	-1.13	.00008	.000	1
CalStd10=10	10000.	9959.6	-40.4	-.404	.00853	.000	1

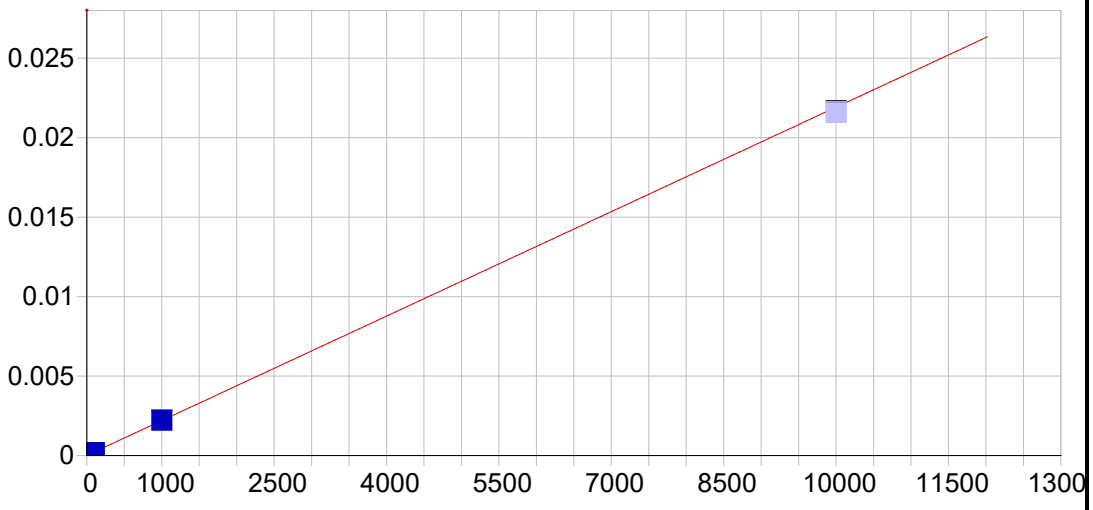


Se 206.279 {463}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999957	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	29.945873		
Predicted MQL:	99.819577		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00955	.010	.000	.00000	.000	1
CalStd9=100	1000.0	1001.2	1.23	.123	.00019	.000	1
CalStd10=10	10000.	10009.	8.52	.085	.00190	.000	1
CalStd8=100	100.00	90.240	-9.76	-9.76	.00002	.000	1

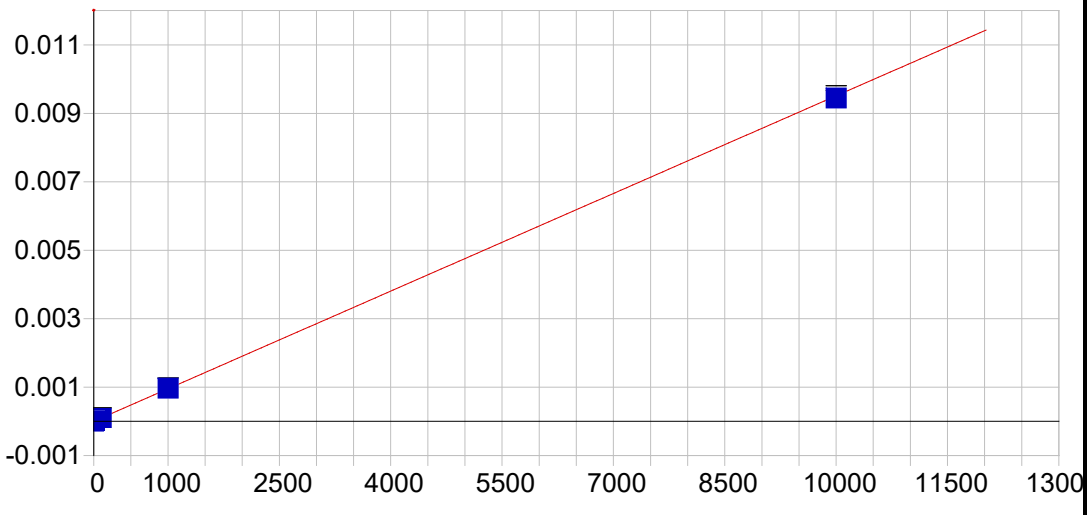


Tl 190.856 {476}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999888	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.520695		
Predicted MQL:	8.402315		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00002	.000	.000	.00001	.000	1
CalStd9=100	1000.0	1004.2	4.24	.424	.00222	.000	1
CalStd8=100	100.00	95.357	-4.64	-4.64	.00022	.000	1
CalStd5=10	10.000	10.406	.406	4.06	.00003	.000	1
CalStd10=10	10000.	9839.8	-160.	-1.60	.02166	.000	0

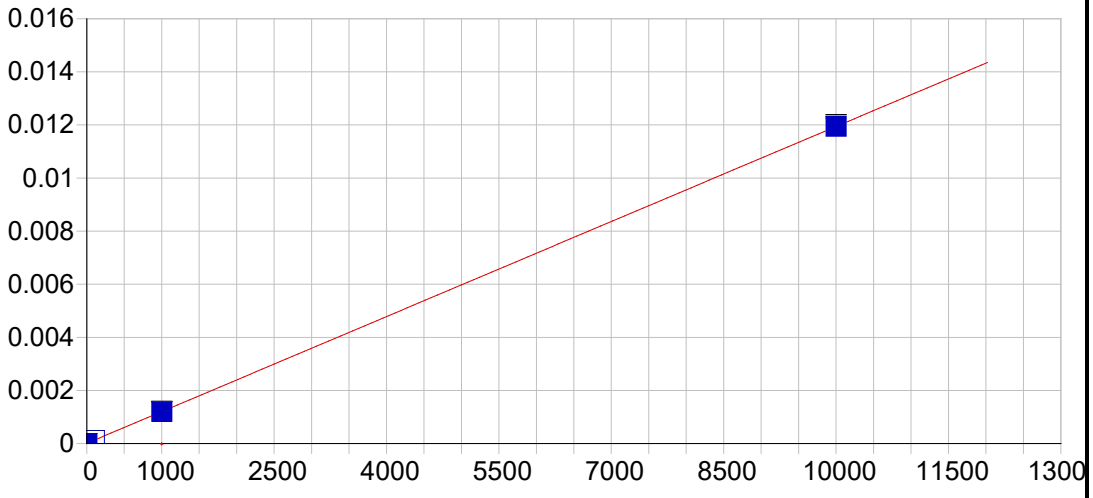


Tl 190.856 {477}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999938	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	4.484442		
Predicted MQL:	14.948139		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.63215	-.632	.000	-.00000	.000	1
CalStd9=100	1000.0	1015.6	15.6	1.56	.00097	.000	1
CalStd8=100	100.00	97.853	-2.15	-2.15	.00009	.000	1
CalStd5=10	10.000	10.125	.125	1.25	.00001	.000	1
CalStd10=10	10000.	9930.2	-69.8	-.698	.00945	.000	1

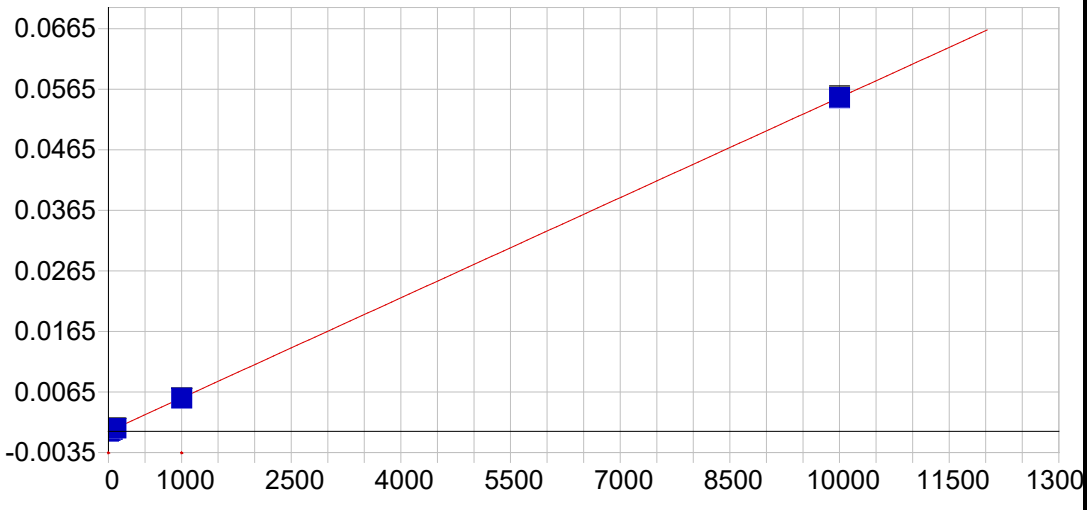


V 290.882 {116}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	2.449651		
Predicted MQL:	8.165504		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.97864	-.979	.000	.00001	.000	1
CalStd9=100	1000.0	1000.4	.413	.041	.00120	.000	1
CalStd10=10	10000.	10000.0	-.047	-.000	.01194	.000	1
CalStd8=100	100.00	100.61	.613	.613	.00013	.000	1

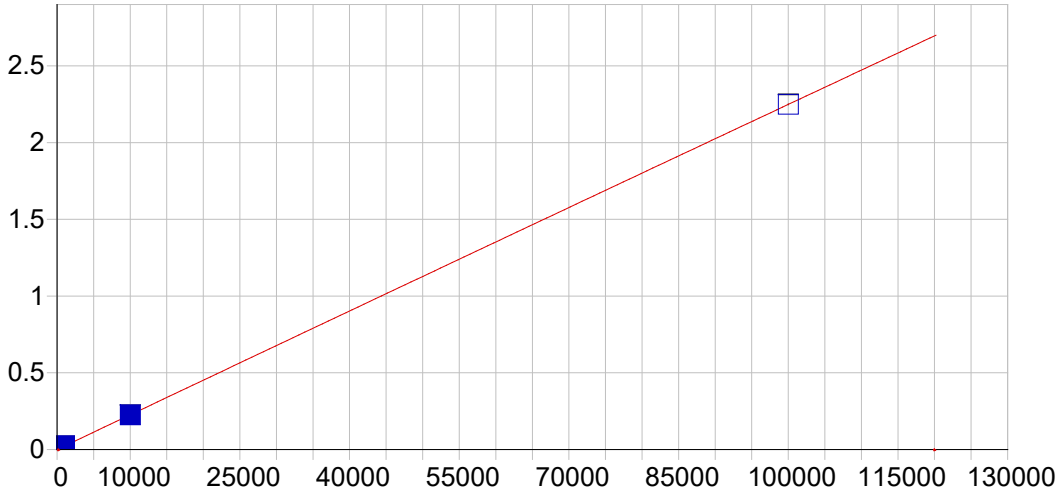


V 292.402 {115}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.415157		
Predicted MQL:	1.383855		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00318	-.003	.000	-.00001	.000	1
CalStd7=50	50.000	55.586	5.59	11.2	.00030	.000	1
CalStd9=100	1000.0	993.31	-6.69	-.669	.00545	.000	1
CalStd6=20	20.000	22.411	2.41	12.1	.00012	.000	1
CalStd5=10	10.000	11.051	1.05	10.5	.00005	.000	1
CalStd8=100	100.00	98.747	-1.25	-1.25	.00054	.000	1
CalStd10=10	10000.	9998.9	-1.13	-.011	.05492	.000	1

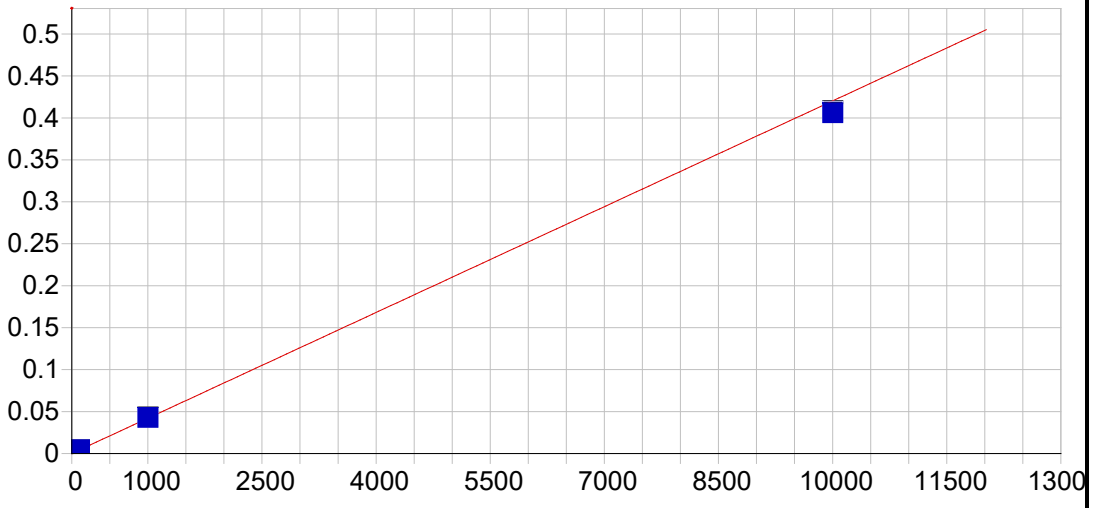


Zn 206.200 {463}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000017	Re-Slope:	1.000000
A1 (Gain):	0.000023	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999993	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.269423		
Predicted MQL:	0.898077		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CalStd10=10	10000.	9958.0	-42.0	-.420	.22515	.000	1
Blank	.00000	-.00181	-.002	.000	.00002	.000	1
CalStd9=100	1000.0	1034.2	34.2	3.42	.02341	.000	1
CalStd12=10	100000.	100000.	3.89	.004	2.2490	.002	1
CalStd5=10	10.000	11.248	1.25	12.5	.00027	.000	1
CalStd8=100	100.00	102.60	2.60	2.60	.00234	.000	1

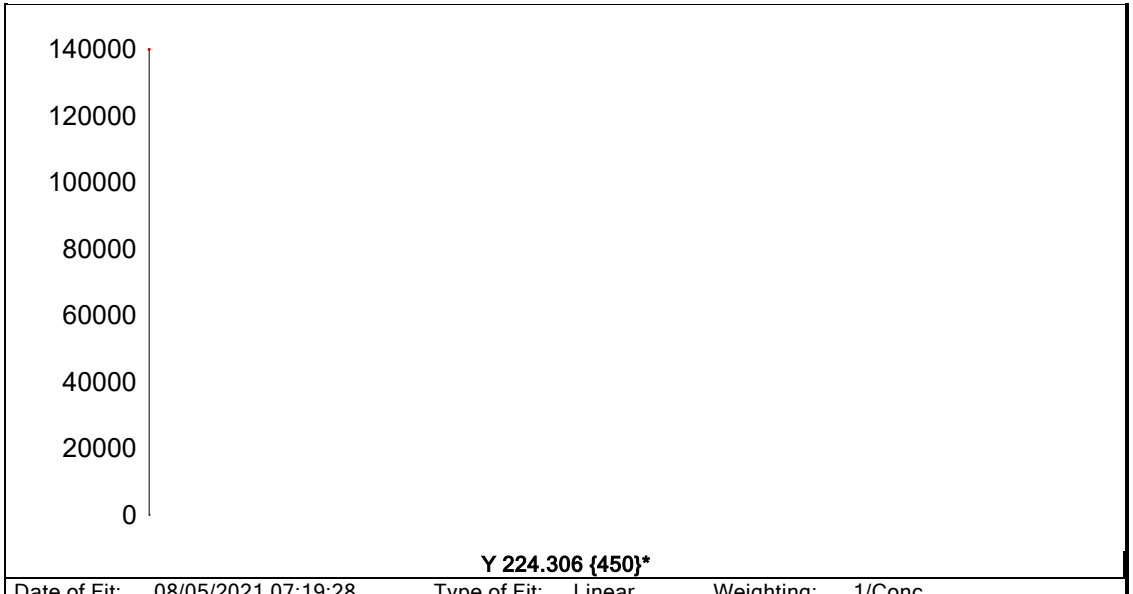


Zn 213.856 {457}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

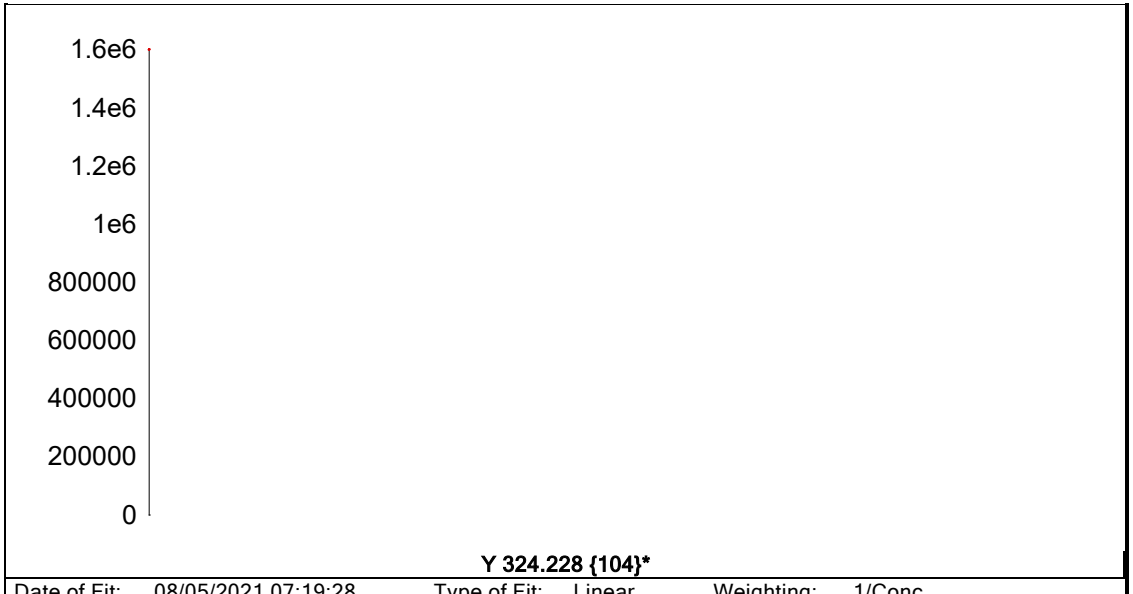
A0 (Offset):	0.000052	Re-Slope:	1.000000
A1 (Gain):	0.000042	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999596	Status:	OK.
Std Error of Est:	0.000078		
Predicted MDL:	0.147408		
Predicted MQL:	0.491360		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.25082	-.251	.000	.00004	.000	1
CalStd9=100	1000.0	1021.9	21.9	2.19	.04318	.000	1
CalStd5=10	10.000	11.299	1.30	13.0	.00053	.000	1
CalStd8=100	100.00	101.63	1.63	1.63	.00434	.000	1
CalStd10=10	10000.	9659.2	-341.	-3.41	.40780	.001	1



Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

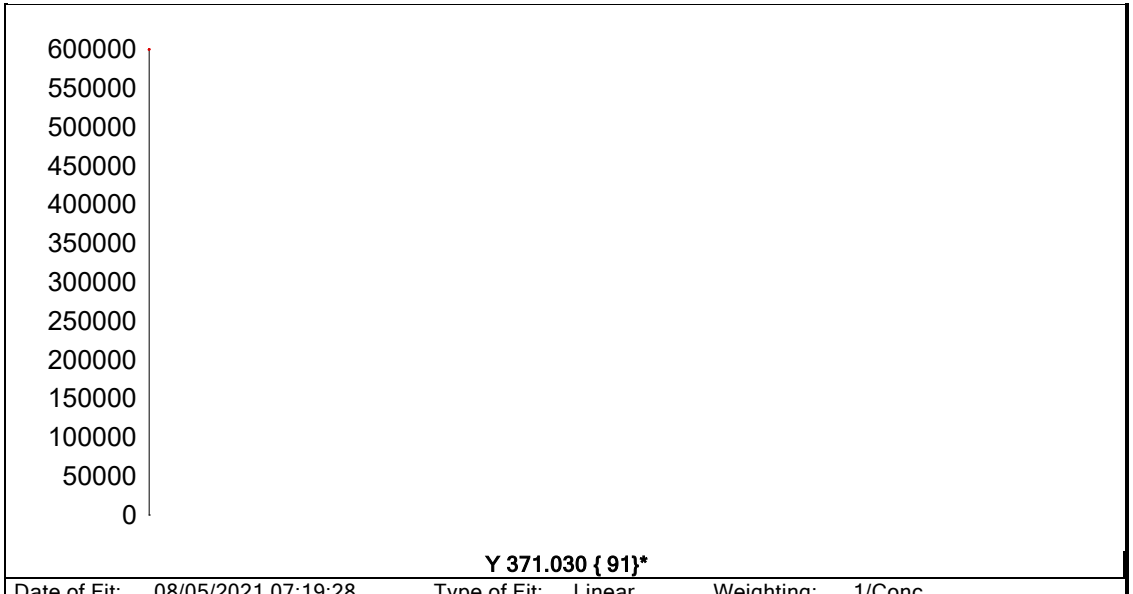
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	125600.	129.	1



Y 324.228 {104}*

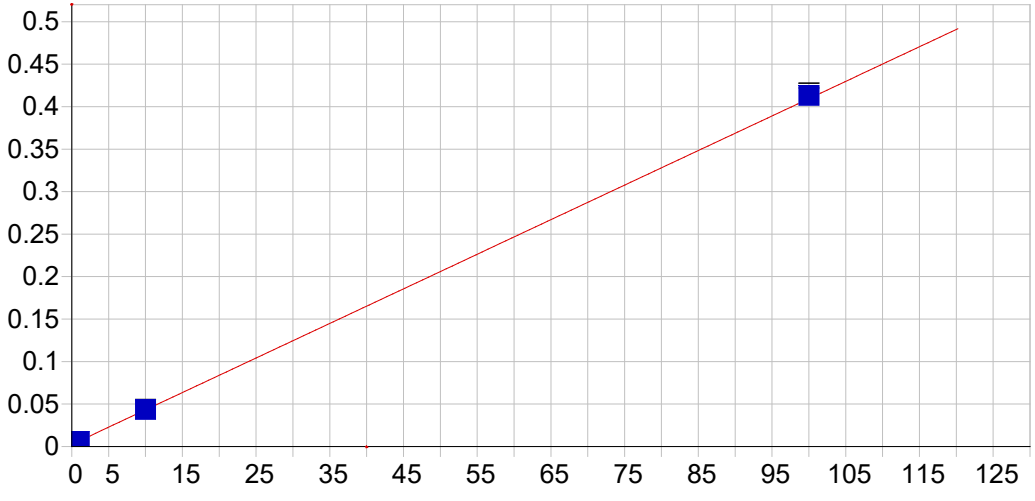
Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	1423800.	7600.	1



Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000000		Re-Slope:	1.000000		
A1 (Gain):	0.000000		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	558520.	1290.	1

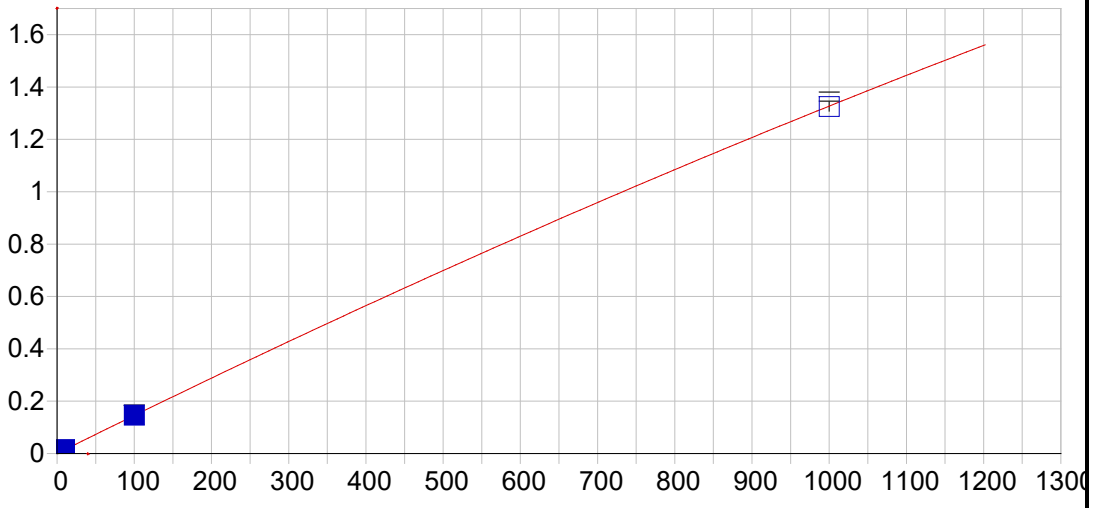


Na 588.995 { 57}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.002431	Re-Slope:	1.000000
A1 (Gain):	0.004070	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999725	Status:	OK.
Std Error of Est:	0.000163		
Predicted MDL:	0.004195		
Predicted MQL:	0.013984		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.02642	.026	.000	.00254	.000	1
CalStd9=100	1.0000	.97460	-.025	-2.54	.00640	.000	1
CalStd10=10	10.000	10.105	.105	1.05	.04357	.000	1
CalStd13=10	100.00	100.89	.889	.889	.41313	.003	1

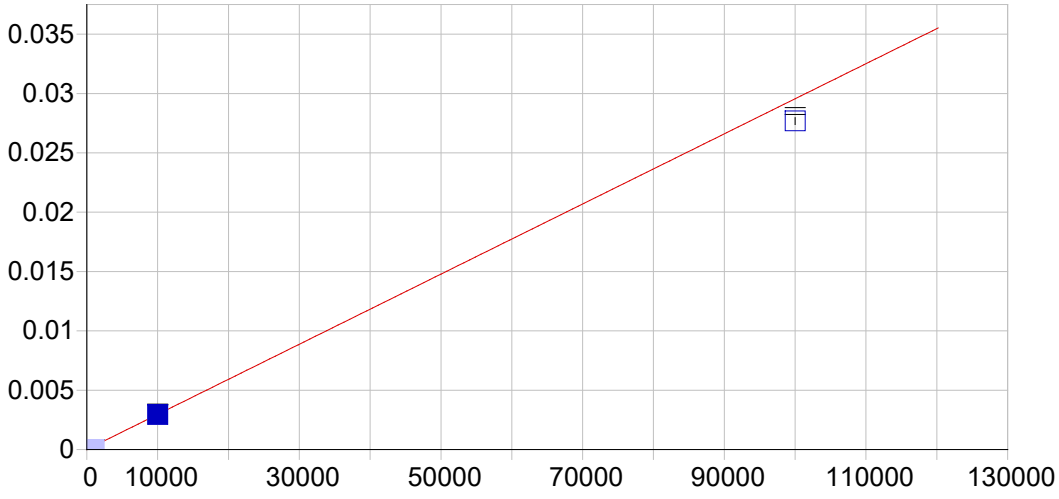


Na 589.592 { 57}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000039	Re-Slope:	1.000000
A1 (Gain):	0.001469	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999984	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.006917		
Predicted MQL:	0.023058		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00526	.005	.000	.00005	.000	1
CalStd9=100	1.0000	.98236	-.018	-1.76	.00148	.000	1
CalStd10=10	10.000	10.009	.009	.087	.01473	.000	1
CalibStd15=	1000.0	998.30	-1.70	-.170	1.3253	.017	1
CalStd13=10	100.00	100.32	.317	.317	.14599	.001	1

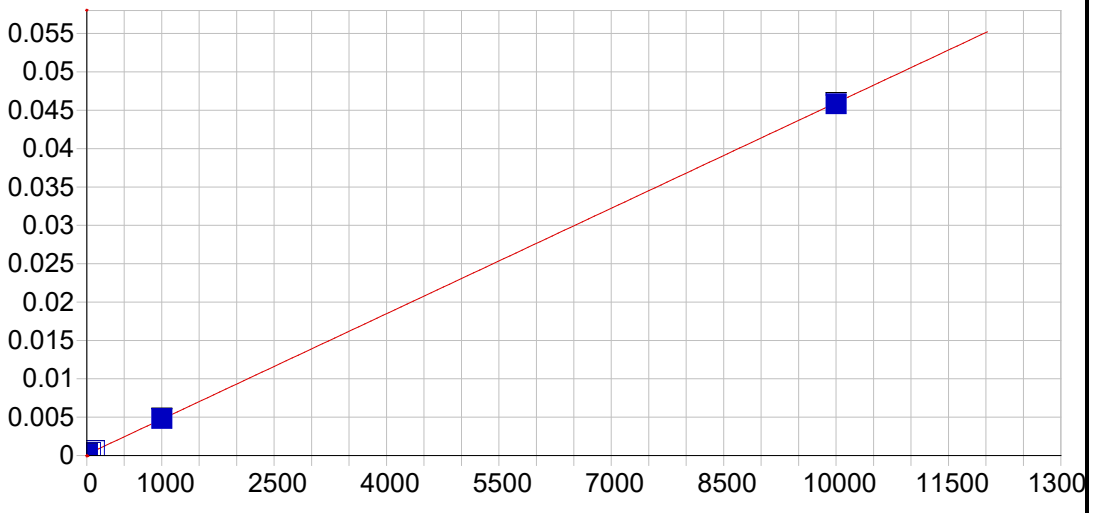


Si 251.611 {134}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Curvilinear	Weighting:	None

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	5.449561		
Predicted MQL:	18.165204		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00000	-.000	.000	.00001	.000	1
CalStd9=100	1000.0	40.143	-960.	-96.0	.00002	.000	0
CalibStd15=	100000.	93645.	-6350.	-6.35	.02768	.000	1
CalStd10=10	10000.	9936.5	-63.5	-.635	.00294	.000	1

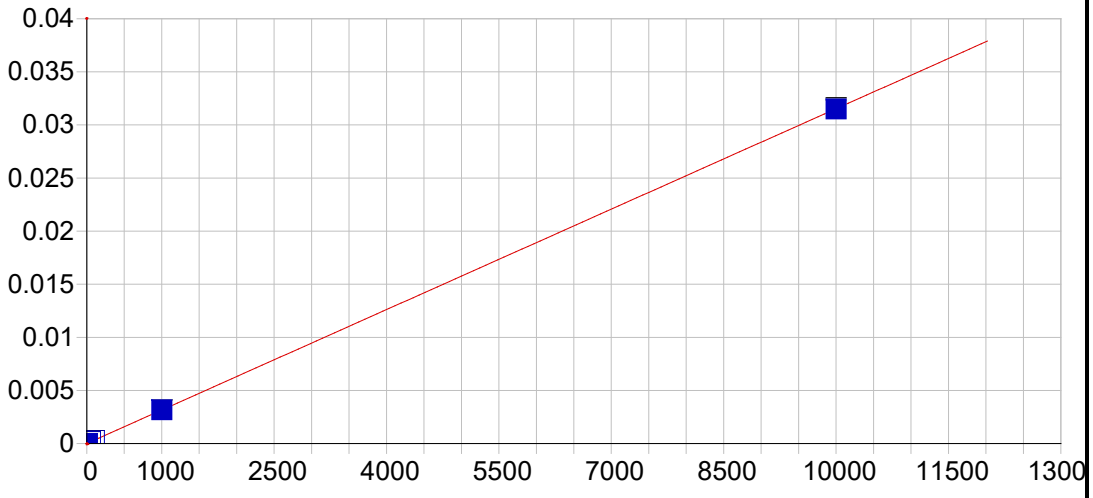


Ti 323.452 {104}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000153	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999872	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.870721		
Predicted MQL:	2.902403		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00352	-.004	.000	.00015	.000	1
CalStd5=10	10.000	12.357	2.36	23.6	.00021	.000	1
CalStd8=100	100.00	101.91	1.91	1.91	.00062	.000	1
CalStd9=100	1000.0	1018.4	18.4	1.84	.00482	.000	1
CalStd10=10	10000.	9967.4	-32.6	-.326	.04583	.000	1
CalStd7=50	50.000	58.594	8.59	17.2	.00042	.000	1
CalStd4=5	5.0000	6.3143	1.31	26.3	.00018	.000	1

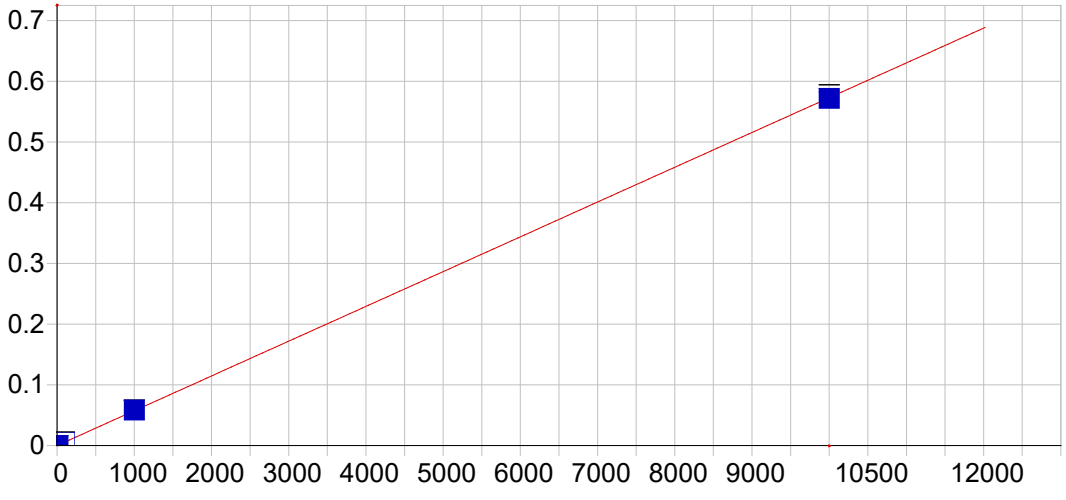


Ti 334.941 {101}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999961	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.851905		
Predicted MQL:	2.839683		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00155	-.002	.000	.00000	.000	1
CalStd5=10	10.000	10.746	.746	7.46	.00004	.000	1
CalStd8=100	100.00	99.849	-.151	-.151	.00032	.000	1
CalStd9=100	1000.0	1002.6	2.56	.256	.00316	.000	1
CalStd10=10	10000.	9990.2	-9.81	-.098	.03150	.000	1
CalStd7=50	50.000	56.083	6.08	12.2	.00018	.000	1
CalStd4=5	5.0000	5.5650	.565	11.3	.00002	.000	1

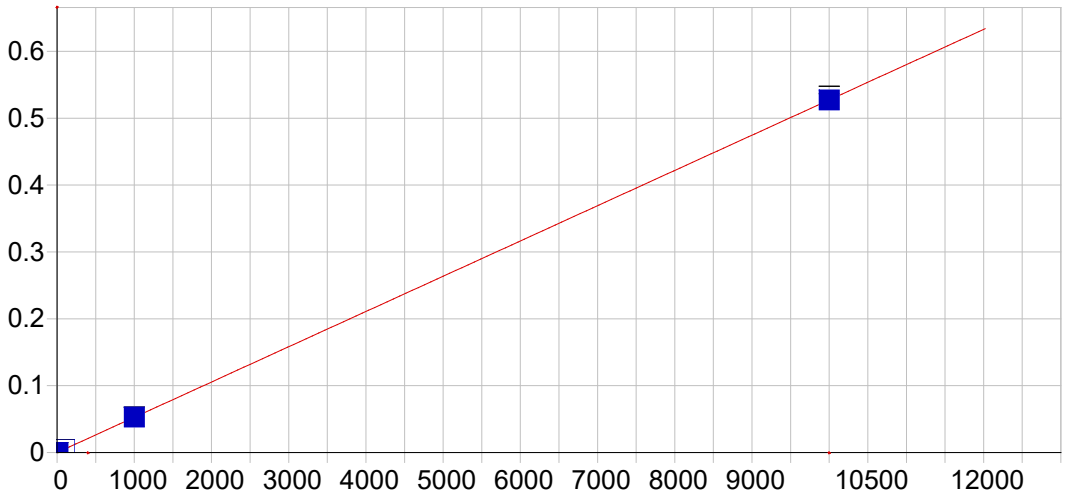


Sr 407.771 { 83}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000057	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.094083		
Predicted MQL:	0.313611		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00047	-.000	.000	.00001	.000	1
CalStd3=1	1.0000	1.1284	.128	12.8	.00007	.000	1
CalStd4=5	5.0000	5.7482	.748	15.0	.00034	.000	1
CalStd5=10	10.000	11.553	1.55	15.5	.00067	.000	1
CalStd8=100	100.00	102.05	2.05	2.05	.00586	.000	1
CalStd9=100	1000.0	1016.7	16.7	1.67	.05827	.000	1
CalStd10=10	10000.	9978.8	-21.2	-.212	.57184	.006	1

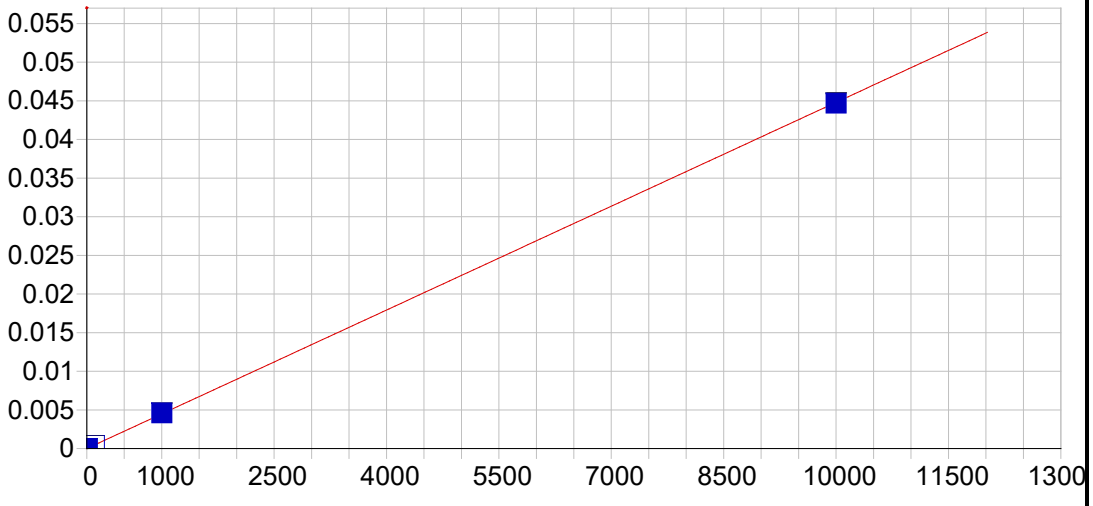


Sr 421.552 { 80}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000053	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999990	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.094378		
Predicted MQL:	0.314594		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00021	-.000	.000	.00001	.000	1
CalStd3=1	1.0000	.97514	-.025	-2.49	.00006	.000	1
CalStd4=5	5.0000	5.5551	.555	11.1	.00030	.000	1
CalStd5=10	10.000	11.223	1.22	12.2	.00060	.000	1
CalStd8=100	100.00	100.21	.214	.214	.00529	.000	1
CalStd9=100	1000.0	1002.1	2.13	.213	.05285	.000	1
CalStd10=10	10000.	9995.9	-4.09	-.041	.52712	.006	1

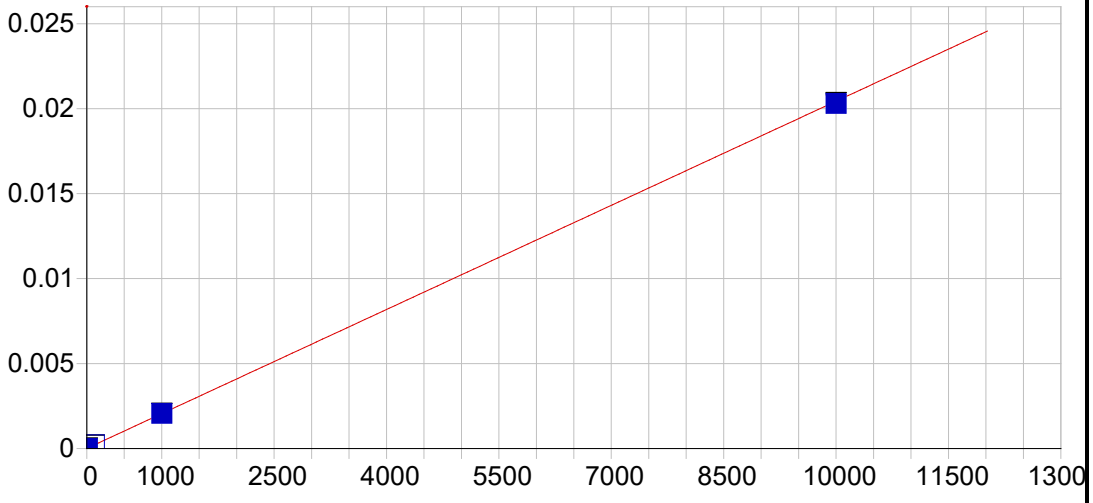


Sn 189.989 {477}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999952	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.024170		
Predicted MQL:	3.413899		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00226	-.002	.000	.00000	.000	1
CalStd10=10	10000.	9972.8	-27.2	-.272	.04469	.000	1
CalStd9=100	1000.0	1024.4	24.4	2.44	.00459	.000	1
CalStd8=100	100.00	100.86	.862	.862	.00045	.000	1
CalStd5=10	10.000	11.959	1.96	19.6	.00006	.000	1

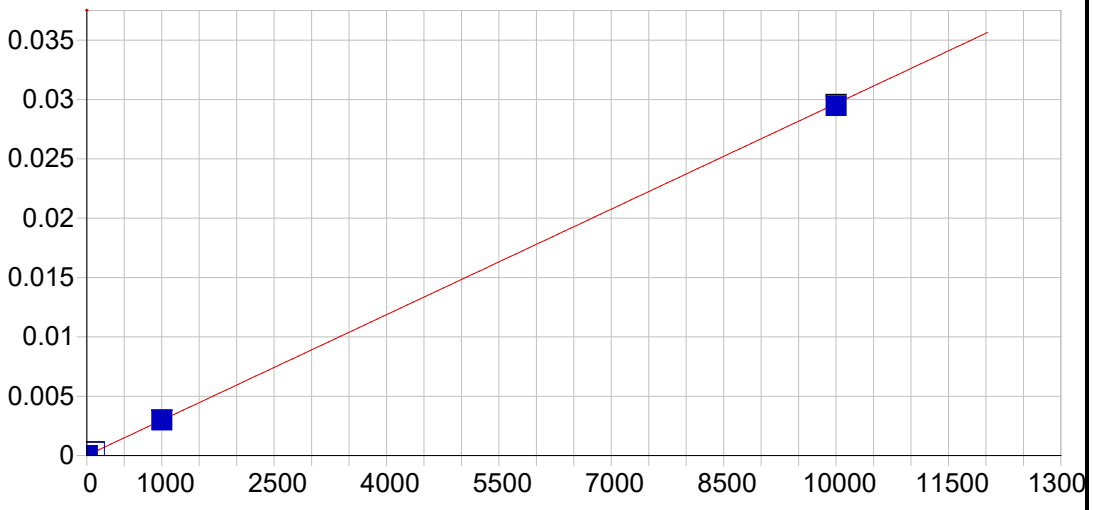


B 249.678 {135}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000010	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999899	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.737928		
Predicted MQL:	2.459759		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.1419	-1.14	.000	.00001	.000	1
CalStd8=100	100.00	98.659	-1.34	-1.34	.00021	.000	1
CalStd5=10	10.000	11.138	1.14	11.4	.00003	.000	1
CalStd9=100	1000.0	1005.9	5.93	.593	.00206	.000	1
CalStd10=10	10000.	9930.5	-69.5	-.695	.02030	.000	1

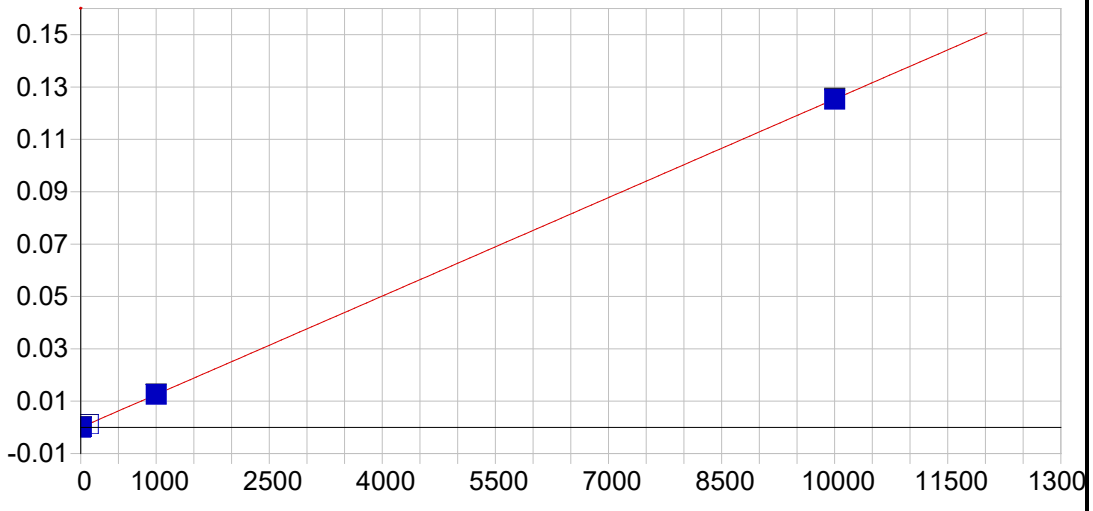


B 249.773 {135}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000011	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999978	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.395388		
Predicted MQL:	1.317959		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.47413	-.474	.000	.00001	.000	1
CalStd8=100	100.00	98.529	-1.47	-1.47	.00030	.000	1
CalStd5=10	10.000	11.129	1.13	11.3	.00004	.000	1
CalStd9=100	1000.0	1002.3	2.35	.235	.00298	.000	1
CalStd10=10	10000.	9936.0	-64.0	-.640	.02948	.000	1

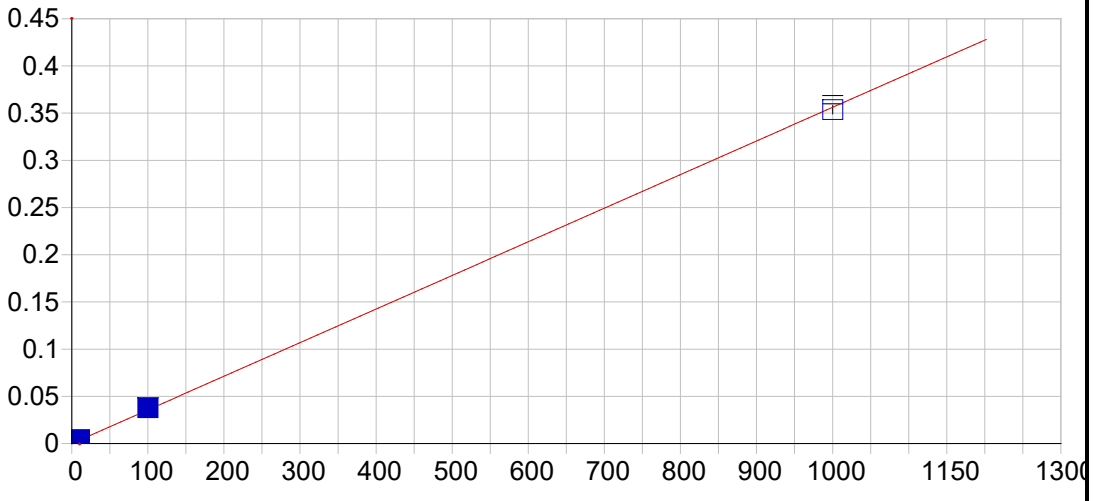


Li 670.784 { 50}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000013	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999992	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.950050		
Predicted MQL:	3.166833		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00137	-.001	.000	-.00000	.000	1
CalStd5=10	10.000	11.174	1.17	11.7	.00014	.000	1
CalStd8=100	100.00	101.67	1.67	1.67	.00127	.000	1
CalStd9=100	1000.0	1003.8	3.81	.381	.01258	.000	1
CalStd10=10	10000.	9993.3	-6.66	-.067	.12531	.000	1

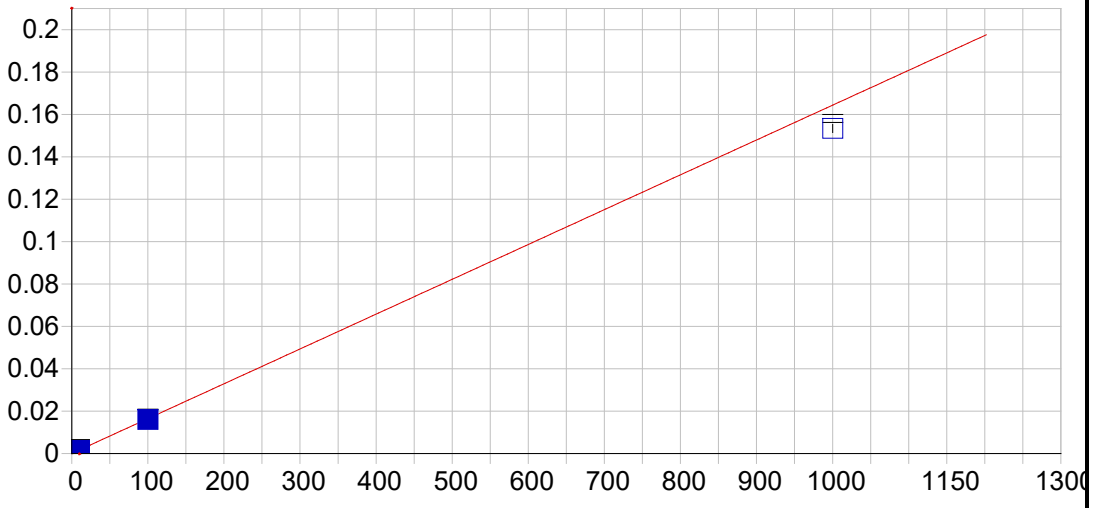


K 766.490 { 44}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000024	Re-Slope:	1.000000
A1 (Gain):	0.000356	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999765	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	0.031369		
Predicted MQL:	0.104564		

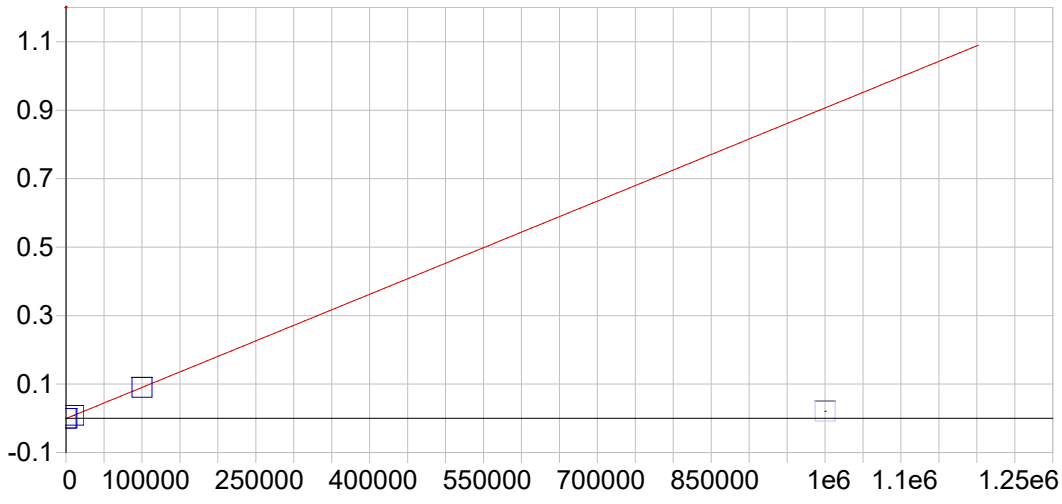
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00026	-.000	.000	.00002	.000	1
CalStd9=100	1.0000	1.1095	.109	10.9	.00042	.000	1
CalStd10=10	10.000	10.948	.948	9.48	.00392	.000	1
CalibStd15=	1000.0	992.86	-7.14	-.714	.35362	.004	1
CalStd13=10	100.00	106.09	6.09	6.09	.03781	.000	1



K 769.896 { 44}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000036		Re-Slope:	1.000000	
A1 (Gain):	0.000164		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998792		Status:	OK.	
Std Error of Est:	0.000038				
Predicted MDL:	0.055726				
Predicted MQL:	0.185755				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.19736	-.197	.000	.00000	.000	1
CalStd9=100	1.0000	1.1443	.144	14.4	.00022	.000	1
CalStd10=10	10.000	10.052	.052	.524	.00169	.000	1
CalibStd15=	1000.0	932.99	-67.0	-6.70	.15338	.002	1
CalStd13=10	100.00	97.035	-2.96	-2.96	.01600	.000	1

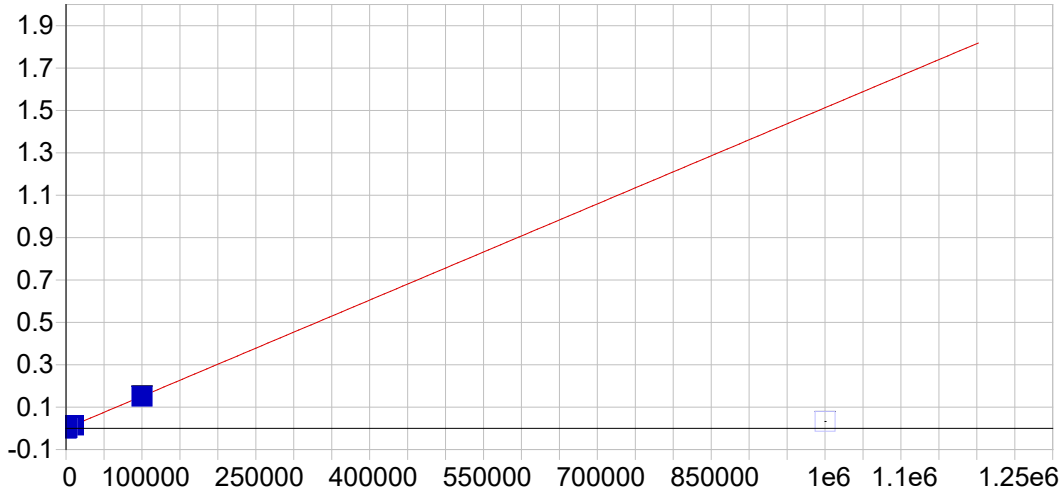


P 177.495 {489}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000626	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999978	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	6.267878		
Predicted MQL:	20.892928		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.05374	.054	.000	-.00063	.000	1
CalStd10=10	10000.	10095.	94.9	.949	.00853	.000	1
CalStd9=100	1000.0	937.09	-62.9	-6.29	.00022	.000	1
CalibStd15=	1000000.	23289.	-977000.	-97.7	.02050	.000	0
CalStd13=10	100000.	99968.	-32.0	-.032	.09007	.000	1

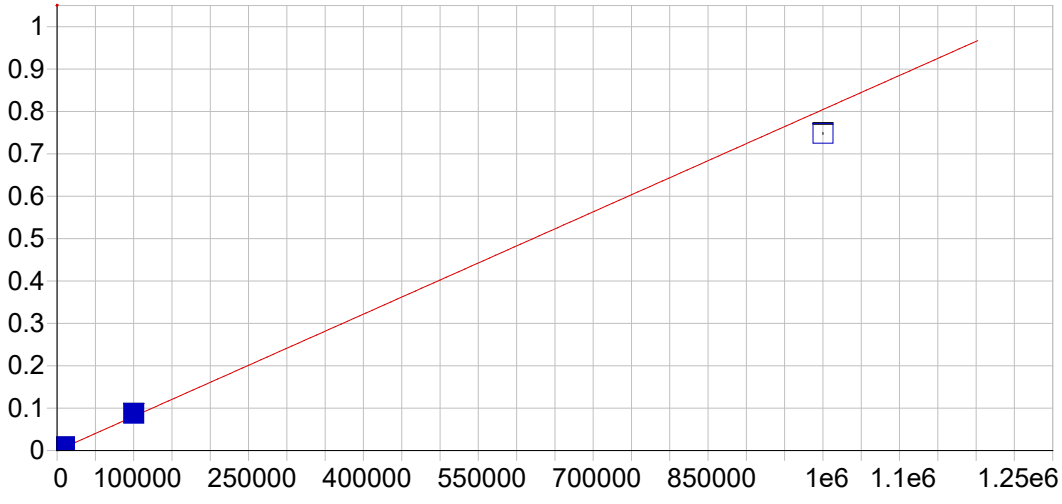


P 213.618 {457}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000019	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999978	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	5.139602		
Predicted MQL:	17.132007		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.07031	.070	.000	-.00002	.000	1
CalStd10=10	10000.	9943.3	-56.7	-.567	.01502	.000	1
CalStd9=100	1000.0	934.14	-65.9	-6.59	.00139	.000	1
CalibStd15=	1000000.	21354.	-979000.	-97.9	.03229	.000	0
CalStd13=10	100000.	100120.	123.	.123	.15145	.001	1

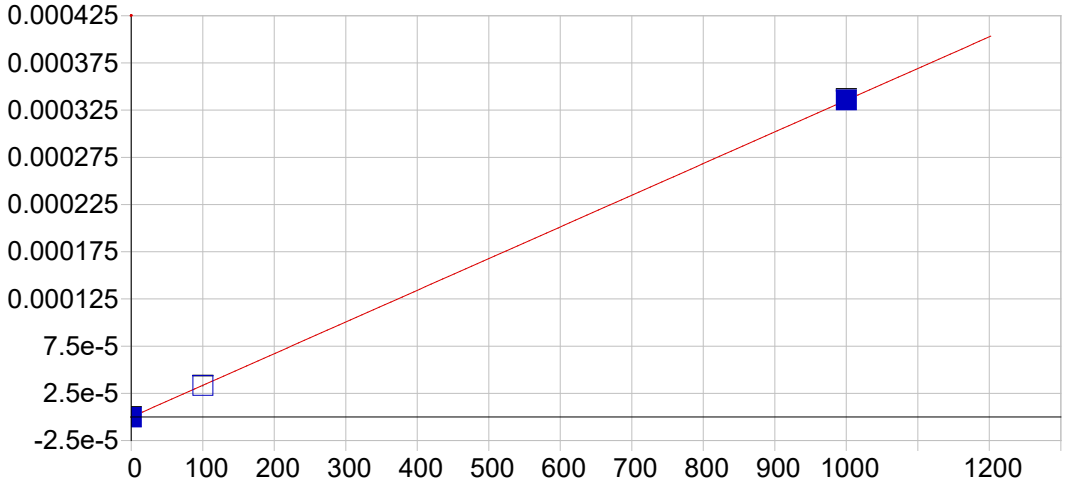


S 182.034 {485}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000017	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997616	Status:	OK.
Std Error of Est:	0.000138		
Predicted MDL:	4.808412		
Predicted MQL:	16.028040		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-4.5999	-4.60	.000	.00001	.000	1
CalStd9=100	1000.0	982.82	-17.2	-1.72	.00081	.000	1
CalStd10=10	10000.	10514.	514.	5.14	.00849	.000	1
CalibStd15=	1000000.	929840.	-70200.	-7.02	.74812	.002	1
CalStd13=10	100000.	108710.	8710.	8.71	.08748	.000	1

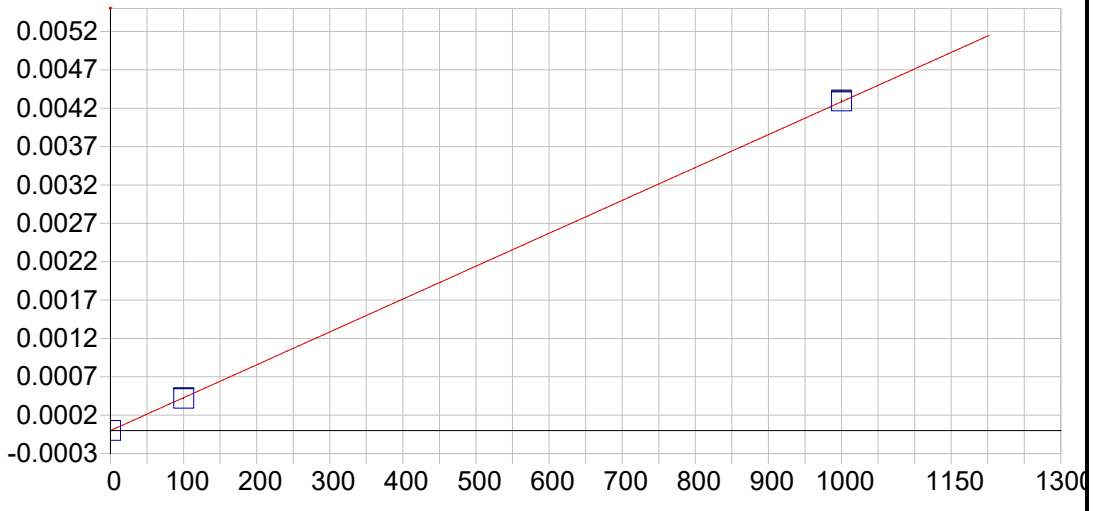


Hg 184.950 {482}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.070182		
Predicted MQL:	3.567275		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00065	.001	.000	-.00000	.000	1
CalStd8=100	100.00	99.275	-.725	-.725	.00003	.000	1
CalStd9=100	1000.0	1000.7	.725	.072	.00034	.000	1

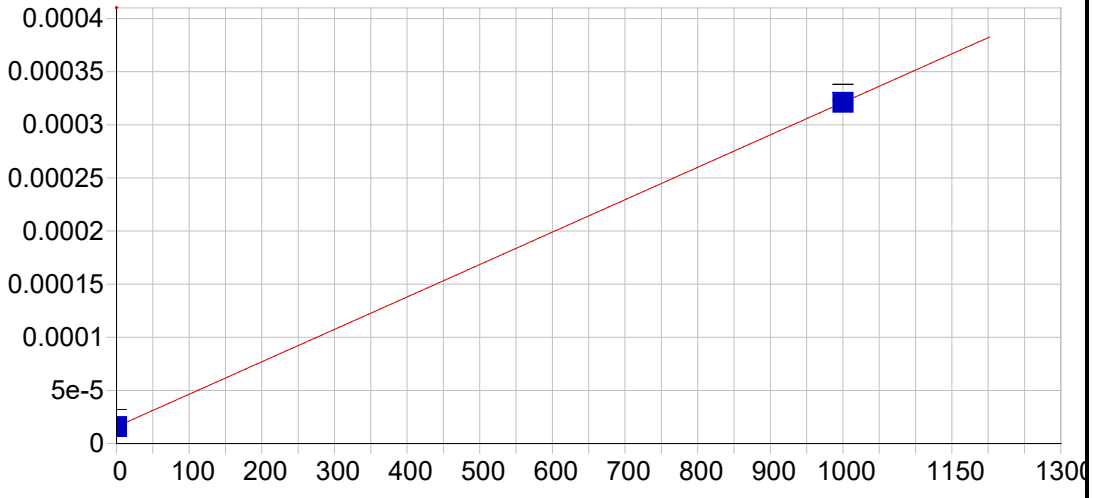


Hg 194.227 {473}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999977	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.983191		
Predicted MQL:	3.277303		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00194	.002	.000	-.00000	.000	1
CalStd8=100	100.00	97.846	-2.15	-2.15	.00042	.000	1
CalStd9=100	1000.0	1002.2	2.15	.215	.00429	.000	1



Ce 404.076 { 83}

Date of Fit:	08/05/2021 07:19:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000016	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	16.290472		
Predicted MQL:	54.301574		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00002	.000	1
CalStd9=100	1000.0	1000.00	.000	.000	.00032	.000	1

Sample Name: Blank Acquired: 08/03/2021 08:34:50 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1972	Ba2335	Ba4934	Be3131	Ca3158	Cd2265	Co2286	Co2388	Cr2055
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**-.000**	**.000**	**-.000**	**-.000**	**.005**	**-.000**	**.000**	**.000**	**.000**	**.000**	**-.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	25.4	30.7	69.4	110.	3820.	.198	149.	2.43	157.	380.	33.7	88.6

Elem	Cr2677	Cu2230	Cu2247	Fe2343	Fe2599	Mg2790	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**.000**	**-.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	101.	107.	26.5	4.14	15.7	190.	2.64	37.3	202.	65.1	109.	37.2

Elem	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**-.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**-.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	15.3	24.7	29.6	56.3	87.8	71.6	285.	31.0	14.9	27.7	27.4	7.45

Elem	Na5889	Na5895	Si2516	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.003**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000
%RSD	.949	18.8	14.3	17.6	97.9

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**125600.**	**1423800.**	**558520.**
Stddev	129.	7602.	1290.
%RSD	.10296	.53390	.23092

Sample Name: CalStd2=0.5 Acquired: 08/03/2021 08:42:40 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Be3131	Cd2265
Units	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**
Stddev	.000	.000	.000
%RSD	6.85	14.3	50.3

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**121900.**	**1400800.**	**545370.**
Stddev	230.	3364.	4366.
%RSD	.18835	.24014	.80064

Sample Name: CalStd3=1 Acquired: 08/03/2021 08:50:26 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Ba2335	Be3131	Cd2265	Co2286	Cr2055	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**-.000**
Stddev	.000	.000	.000	.000	.000	.000	.000
%RSD	19.4	34.8	10.4	23.0	27.0	14.5	17.9

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**122130.**	**1392100.**	**543570.**
Stddev	120.	3390.	5721.
%RSD	.09797	.24353	1.0525

Sample Name: CalStd4=5 Acquired: 08/03/2021 08:58:14 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Ba2335	Be3131	Cd2265	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Mo2045	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	4.62	4.52	1.72	1.96	1.57	2.82	5.48	.752	8.54	20.5	13.9	13.4

Elem	Sb2175
Units	Cts/S
Avg	**.000**
Stddev	.000
%RSD	8.88

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**121650.**	**1401800.**	**547110.**
Stddev	247.	6173.	5399.
%RSD	.20297	.44037	.98679

Sample Name: CalStd5=10 Acquired: 08/03/2021 09:06:04 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	As1937	As1972	Ba2335	Be3131	Cd2265	Co2286	Cr2055	Cr2677	Cu2230	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.43	24.2	33.1	2.69	2.66	.454	2.42	3.72	3.68	13.3	.578	5.69

Elem	Mo2045	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.001**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	10.9	6.05	11.7	9.71	30.2	22.3	29.5	15.4	1.000	1.66	1.67

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**121970.**	**1393000.**	**537360.**
Stddev	92.	4789.	5564.
%RSD	.07550	.34380	1.0355

Sample Name: CalStd6=20 Acquired: 08/03/2021 09:13:56 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba2335	Cu2230	Cu2247	Mn2576	Mo2020	Mo2045	Sb2175	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.26	6.51	6.96	.516	2.33	3.98	14.9	1.10

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**122030.**	**1393100.**	**539680.**
Stddev	43.	2632.	4521.
%RSD	.03545	.18891	.83764

Sample Name: CalStd7=50 Acquired: 08/03/2021 09:21:41 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	As1937	As1972	Co2286	Cr2055	Cr2677	Cu2247	Mn2576	Mo2020	Mo2045	Ni2316	Sb2068	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.001**	**.001**	**.000**	**.000**	**.000**	**.000**	**.000**	**.001**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	5.33	15.4	.410	.923	.182	3.41	.148	1.41	.482	.605	8.45	.496

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**122290.**	**1401400.**	**539260.**
Stddev	172.	4185.	5939.
%RSD	.14091	.29862	1.1013

Sample Name: CalStd8=100 Acquired: 08/03/2021 09:29:23 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	As1937	As1972	Ba2335	Ba4934	Be3131	Cd2265	Co2286	Co2388	Cr2055	Cr2677	Cu2230
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.001**	**.007**	**.002**	**.003**	**.003**	**.000**	**.002**	**.000**	**.001**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.01	4.08	3.27	.743	.975	1.28	.344	.399	.474	.264	.082	.795

Elem	Cu2247	Mg2802	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Se2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.009**	**.001**	**.001**	**.000**	**.001**	**.002**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.00	.423	.613	.706	.980	.714	.188	5.69	1.29	1.57	1.41	26.4

Elem	Tl1908	V_2908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.001**	**.002**	**.004**
Stddev	.000	.000	.000	.000	.000
%RSD	1.73	2.26	.452	.384	.366

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**122510.**	**1399500.**	**542130.**
Stddev	76.	5067.	5121.
%RSD	.06182	.36207	.94466

Sample Name: CalStd9=1000 Acquired: 08/03/2021 09:37:02 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	As1937	As1972	Ba2335	Ba4934	Be3131	Ca3158	Cd2265	Co2286	Co2388	Cr2055	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.002**	**.001**	**.001**	**.008**	**.028**	**.016**	**.001**	**.025**	**.026**	**.002**	**.018**	**.003**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.717	.745	.537	.101	.622	.841	.628	.087	.101	.337	.292	.180

Elem	Cu2230	Cu2247	Fe2343	Fe2599	Mg2790	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.006**	**.009**	**.001**	**.002**	**.000**	**.089**	**.008**	**.005**	**.008**	**.005**	**.014**	**.017**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.373	.225	.245	.470	.240	.307	.213	.774	.131	.141	.034	.100

Elem	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2908	V_2924	Zn2062	Zn2138	Na5889
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.001**	**.003**	**.002**	**.002**	**.001**	**.000**	**.002**	**.001**	**.005**	**.023**	**.043**	**.006**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.441	.265	.311	.323	.427	1.87	.256	.805	.266	.146	.190	.354

Elem	Na5895	Si2516	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.001**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000
%RSD	1.05	4.09	1.78	1.28

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**122280.**	**1407300.**	**548040.**
Stddev	77.	2143.	2213.
%RSD	.06287	.15229	.40377

Sample Name: CalStd10=10000 Acquired: 08/03/2021 09:44:02 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	As1972	Ba4934	Ca3158	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Cu2247	Fe2343	Fe2599
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.011**	**.006**	**.229**	**.003**	**.256**	**.019**	**.172**	**.030**	**.055**	**.090**	**.005**	**.009**
Stddev	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.336	.284	.282	.388	.149	.453	.268	.371	.283	.286	.282	.355

Elem	Mg2790	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.438**	**.081**	**.053**	**.076**	**.046**	**.136**	**.169**	**.012**	**.033**	**.016**	**.015**
Stddev	.000	.003	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.348	.671	.570	.480	.176	.232	.132	.116	.282	.262	.459	.276

Elem	Se1960	Se2062	Tl1908	V_2908	V_2924	Zn2062	Zn2138	Na5889	Na5895	Si2516	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.010**	**.002**	**.022**	**.012**	**.055**	**.225**	**.408**	**.044**	**.015**	**.003**	**.004**	**.002**
Stddev	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000
%RSD	.237	.411	.198	.539	.496	.126	.224	.380	.349	.760	.456	.329

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**120870.**	**1373200.**	**543450.**
Stddev	179.	5919.	3075.
%RSD	.14801	.43107	.56590

Sample Name: CalStd12=100K Acquired: 08/03/2021 09:51:51 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Cr2055	Cu2247	Mn2593	Pb2169	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.73**	**.996**	**.564**	**.139**	**2.25**
Stddev	.00	.001	.005	.000	.00
%RSD	.129	.090	.886	.219	.093

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**121130.**	**550140.**
Stddev	57.	3026.
%RSD	.04669	.55003

Sample Name: CalStd13=100000 Acquired: 08/03/2021 10:00:14 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2343	Fe2599	Mg2790	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.112**	**.028**	**.046**	**.093**	**.005**	**.413**	**.146**	**.038**	**.016**
Stddev	.001	.000	.000	.000	.000	.003	.001	.000	.000
%RSD	.592	.710	.206	.477	.455	.688	.576	.626	.856

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**116660.**	**1350000.**	**544660.**
Stddev	106.	3018.	3555.
%RSD	.09116	.22355	.65267

Sample Name: CalStd14=500000 Acquired: 08/03/2021 10:08:14 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2599	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.564**	**.133**	**.422**	**.025**
Stddev	.003	.001	.001	.000
%RSD	.514	.582	.196	.499

Int. Std.	Y_3242	Y_3710
Units	Cts/S	Cts/S
Avg	**1274300.**	**531330.**
Stddev	5821.	2045.
%RSD	.45675	.38491

Sample Name: CalibStd15=1000k Acquired: 08/03/2021 10:16:42 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Mg2790	Na5895	Si2516	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.05**	**.236**	**.046**	**1.33**	**.028**	**.354**	**.153**
Stddev	.01	.003	.001	.02	.000	.004	.002
%RSD	1.22	1.29	1.16	1.30	1.05	1.23	1.23

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**101760.**	**1203500.**	**499910.**
Stddev	89.	3448.	5723.
%RSD	.08742	.28647	1.1449

Sample Name: Ag Ba 1000, 50000 Acquired: 08/03/2021 10:27:20 Type: Cal
Method: DOD Calibration Updated 060614(v4435) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ba4934
Units	Cts/S
Avg	**1.29**
Stddev	.00
%RSD	.130

Int. Std.	Y_3710
Units	Cts/S
Avg	**560740.**
Stddev	2669.
%RSD	.47593

Sample Name: icv Acquired: 08/03/2021 10:51:18 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**47.1**	**12300.**	**2040.**	**1800.**	**49.9**	**10400.**	**50.8**	**506.**	**202.**	**251.**	**5230.**	**5520.**
Stddev	.3	61.	17.	13.	.5	75.	.2	1.	1.	1.	30.	39.
%RSD	.729	.495	.856	.734	.956	.716	.444	.172	.493	.468	.570	.704
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mg2790	Mn2576	Mo2020	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Se2062	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**10400.**	**474.**	**532.**	**503.**	**509.**	**476.**	**509.**	**508.**	**2090.**	**2140.**	**2050.**	**506.**
Stddev	98.	3.	1.	1.	1.	4.	1.	5.	7.	17.	5.	3.
%RSD	.942	.660	.271	.201	.129	.815	.289	.907	.338	.793	.260	.533
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Zn2062	Zn2138	Na5889	Si2516	K_7664
Units	ug/L	ug/L	mg/L	ug/L	mg/L
Avg	**530.**	**529.**	**4.73**	**543.**	**5.04**
Stddev	1.	1.	.04	4.	.03
%RSD	.122	.187	.786	.686	.540
Check ?	None	None	None	None	None
Value					
Range					

Sample Name: icv Acquired: 08/03/2021 10:51:18 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**120840.**	**1384200.**	**551040.**
Stddev	157.	10746.	4301.
%RSD	.12966	.77636	.78046

Sample Name: ICVLL Acquired: 08/03/2021 10:58:45 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	F **34.5**	**1210.**	**64.6**	**31.6**	**13.1**	**1510.**	**16.4**	**30.6**	**32.2**	**33.0**	**925.**	**972.**
Stddev	.4	12.	2.7	.5	.1	4.	.2	.4	.4	1.2	3.	5.
%RSD	1.24	.999	4.23	1.46	.784	.293	1.43	1.22	1.32	3.57	.376	.489
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	60.0											
Range	-30.0%											

Elem	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**1490.**	**1600.**	**29.7**	**33.8**	**31.4**	**32.5**	**65.5**	**61.9**	**60.8**	**32.1**	**33.1**	**2.96**
Stddev	11.	3.	.2	.7	.3	2.4	4.8	2.1	.6	.1	.2	.03
%RSD	.756	.207	.550	1.95	1.09	7.44	7.32	3.42	1.05	.452	.608	.857
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Si2516	K_7698
Units	ug/L	mg/L
Avg	**292.**	**14.0**
Stddev	4.	.1
%RSD	1.48	.706
Check ?	Chk Pass	Chk Pass
Value		
Range		

Sample Name: ICVLL Acquired: 08/03/2021 10:58:45 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**121470.**	**1378600.**	**543700.**
Stddev	108.	1919.	2771.
%RSD	.08867	.13918	.50961

Sample Name: icb Acquired: 08/03/2021 11:14:08 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.662**	**6.56**	**-3.31**	**.049**	**-.039**	**-3.12**	**-.012**	**-1.23**	**-.243**	**-1.34**	**-.372**	**.008**
Stddev	.136	3.04	4.54	.390	.170	5.96	.221	.16	.257	.56	1.33	1.29
%RSD	20.6	46.3	137.	793.	438.	191.	1860.	13.1	106.	41.4	359.	16900.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**-.589**	**.333**	**-.800**	**-1.33**	**-.275**	**-.935**	**.261**	**-4.27**	**.990**	**.031**	**-.362**	**-.009**
Stddev	7.39	.074	.061	.16	.287	1.83	.872	3.05	2.13	.257	.011	.007
%RSD	1250.	22.2	7.65	12.1	104.	196.	335.	71.4	215.	832.	3.14	77.0
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Si2516	K_7664
Units	ug/L	mg/L
Avg	**-4.45**	**.022**
Stddev	5.89	.006
%RSD	132.	25.3
Check ?	None	None
Value		
Range		

Sample Name: icb Acquired: 08/03/2021 11:14:08 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**125060.**	**1428300.**	**566170.**
Stddev	93.	5663.	4908.
%RSD	.07437	.39647	.86681

Sample Name: MRL/LLOQ Acquired: 08/03/2021 11:21:57 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	F **12.8**	**411.**	**23.3**	**11.0**	**4.36**	**501.**	**5.62**	**9.51**	**10.5**	**11.5**	**321.**	**338.**
Stddev	.5	6.	2.7	.5	.14	5.	.14	.15	.1	1.8	2.	4.
%RSD	4.08	1.47	11.7	4.66	3.18	.988	2.56	1.59	1.26	15.4	.496	1.19
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	20.0											
Range	-30.0%											

Elem	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**497.**	**541.**	**9.56**	**11.6**	**9.95**	**9.99**	**20.0**	**22.8**	**20.6**	**10.8**	**11.0**	**1.01**
Stddev	7.	2.	.01	.3	.30	2.16	.9	5.5	.3	.4	.2	.01
%RSD	1.32	.340	.106	2.93	3.02	21.6	4.68	24.2	1.22	3.75	1.83	1.29
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Si2516	K_7664
Units	ug/L	mg/L
Avg	**93.6**	**5.16**
Stddev	4.9	.05
%RSD	5.24	1.01
Check ?	Chk Pass	Chk Pass
Value		
Range		

Sample Name: MRL/LLOQ Acquired: 08/03/2021 11:21:57 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**121140.**	**1385600.**	**545480.**
Stddev	141.	4318.	3245.
%RSD	.11651	.31163	.59483

Sample Name: ICSA Acquired: 08/03/2021 11:29:40 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-1.76**	**528000.**	**-18.6**	**-.618**	**.466**	**491000.**	**-.000**	**-1.10**	**-.595**	**7.10**	**485000.**
Stddev	.28	1370.	9.2	.518	.090	1370.	.258	.53	.477	1.33	4460.
%RSD	16.0	.259	49.7	83.8	19.3	.280	100000.	47.8	80.1	18.7	.920
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2908	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**533000.**	**1.79**	**-2.80**	**-.681**	**-.370**	**2.02**	**9.49**	**-.936**	**11100.**	**2.52**	**.000**
Stddev	1510.	.04	.64	.901	2.86	2.20	4.65	2.45	19.	.42	.009
%RSD	.284	1.99	22.8	132.	772.	109.	49.0	261.	.174	16.7	38400.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Si2516	K_7664
Units	ug/L	mg/L
Avg	**-47.3**	**.139**
Stddev	3.7	.010
%RSD	7.76	7.52
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Sample Name: ICSA Acquired: 08/03/2021 11:29:40 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**109190.**	**1276600.**	**522000.**
Stddev	94.	5678.	1963.
%RSD	.08616	.44478	.37606

Sample Name: ICSAB Acquired: 08/03/2021 11:38:05 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1972	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**533.**	**533000.**	**592.**	**541.**	**574.**	**522.**	**493000.**	**523.**	**564.**	**551.**	**548.**
Stddev	3.	2840.	8.	4.	1.	3.	2810.	1.	2.	4.	2.
%RSD	.634	.533	1.41	.749	.170	.560	.571	.142	.334	.685	.400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Fe2599	Mg2790	Mn2576	Mo2020	Ni2216	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**504000.**	**537000.**	**524.**	**591.**	**556.**	**553.**	**551.**	**589.**	**584.**	**571.**	**562.**
Stddev	3470.	2950.	2.	1.	2.	1.	3.	7.	12.	5.	2.
%RSD	.689	.550	.457	.237	.274	.267	.544	1.11	1.97	.792	.397
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Zn2062	Zn2138	Na5895	Si2516	K_7698
Units	ug/L	ug/L	mg/L	ug/L	mg/L
Avg	**530.**	**586.**	**54.4**	**5340.**	**53.8**
Stddev	.	.	.3	21.	.4
%RSD	.039	.070	.630	.399	.674
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Sample Name: ICSAB Acquired: 08/03/2021 11:38:05 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**108800.**	**1278500.**	**530020.**
Stddev	82.	5666.	2986.
%RSD	.07573	.44316	.56331

Sample Name: ICVLL ag Acquired: 08/03/2021 11:54:03 Type: Unk
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**9.76**	**13.6**	**-.146**	**.357**	**.086**	**-3.48**	**-.122**	**-1.01**	**.015**	**.305**	**25.2**	**75.2**
Stddev	.74	4.5	3.40	.683	.145	5.24	.422	.22	.174	1.66	5.4	43.3
%RSD	7.55	32.7	2330.	192.	169.	151.	345.	21.9	1150.	543.	21.4	57.5

Elem	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**-.128**	**-.230**	**-.760**	**-.383**	**-.626**	**-3.40**	**.077**	**-.349**	**-1.60**	**-.084**	**-.511**	**.020**
Stddev	13.0	.024	.028	.235	.368	4.14	3.08	6.58	.84	.498	.090	.010
%RSD	10200.	10.6	3.67	61.4	58.8	122.	3990.	1890.	52.7	594.	17.6	48.8

Elem	Si2516	K_7664
Units	ug/L	mg/L
Avg	**-4.44**	**.033**
Stddev	1.37	.030
%RSD	30.9	91.5

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**121880.**	**1388100.**	**544770.**
Stddev	91.	6433.	4155.
%RSD	.07432	.46346	.76275

Sample Name: ccv1 Acquired: 08/03/2021 21:36:52 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3131	Ca3158	Cd2265	Co2388	Cr2055	Cu2230	Cu2247	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**512.**	**5100.**	**5340.**	**4690.**	**533.**	**4940.**	**540.**	**5310.**	**5150.**	**5070.**	**4920.**	**4970.**
Stddev	4.	34.	21.	35.	3.	39.	1.	30.	13.	3.	8.	19.
%RSD	.718	.669	.397	.738	.580	.783	.212	.559	.248	.067	.170	.390
Check ?	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	Mg2790	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2908	Zn2062	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**5200.**	**4890.**	**5100.**	**5210.**	**5150.**	**4970.**	**5060.**	**5220.**	**5230.**	**5200.**	**5370.**	**5160.**
Stddev	47.	56.	37.	8.	4.	11.	26.	28.	5.	32.	8.	7.
%RSD	.908	1.16	.723	.150	.070	.212	.517	.545	.103	.624	.155	.139
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Na5895	Si2516	K_7698
Units	mg/L	ug/L	mg/L
Avg	**49.4**	**5360.**	**48.5**
Stddev	.4	55.	.5
%RSD	.761	1.03	1.05
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv1 Acquired: 08/03/2021 21:36:52 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**121340.**	**1373100.**	**537810.**
Stddev	63.	5801.	4270.
%RSD	.05199	.42247	.79404

Sample Name: ccv2 Acquired: 08/03/2021 21:43:41 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1972	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**47.0**	**525.**	**532.**	**540.**	**528.**	**49.1**	**512.**	**50.3**	**532.**	**532.**	**526.**	**520.**
Stddev	.7	6.	3.	5.	1.	.3	10.	.1	1.	2.	.	1.
%RSD	1.59	1.22	.600	.966	.099	.626	2.03	.258	.171	.411	.071	.267
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	Mg2790	Mg2802	Mn2576	Mo2020	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**536.**	**511.**	**545.**	**503.**	**541.**	**531.**	**539.**	**515.**	**532.**	**537.**	**542.**	**539.**
Stddev	2.	6.	2.	2.	.	1.	1.	2.	4.	3.	2.	2.
%RSD	.435	1.15	.423	.353	.079	.230	.207	.422	.731	.493	.295	.319
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	V_2924	Zn2138	Na5889	Si2516	K_7664
Units	ug/L	ug/L	mg/L	ug/L	mg/L
Avg	**532.**	**541.**	**4.98**	**528.**	**5.22**
Stddev	2.	.	.03	11.	.05
%RSD	.398	.088	.573	2.08	.879
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Sample Name: ccv2 Acquired: 08/03/2021 21:43:41 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**122830.**	**1389600.**	**540840.**
Stddev	67.	5831.	2308.
%RSD	.05470	.41964	.42672

Sample Name: ccb Acquired: 08/03/2021 21:50:47 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.340**	**-3.98**	**2.10**	**.384**	**-.057**	**-7.14**	**.064**	**-.999**	**.215**	**.630**	**-.653**	**-1.06**
Stddev	.184	2.12	4.36	.224	.130	2.20	.134	.244	.665	.684	1.11	1.20
%RSD	54.3	53.2	207.	58.4	230.	30.8	211.	24.4	309.	109.	170.	113.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**-2.35**	**.239**	**-.644**	**.945**	**-1.03**	**-1.38**	**-.868**	**-2.36**	**.956**	**.137**	**.011**	**.033**
Stddev	17.3	.017	.010	.540	.20	1.83	2.58	1.13	.460	.122	.131	.005
%RSD	735.	7.26	1.52	57.2	19.5	132.	297.	47.9	48.1	89.5	1150.	16.7
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Si2516	K_7664
Units	ug/L	mg/L
Avg	**-9.54**	**.053**
Stddev	4.41	.026
%RSD	46.2	49.2
Check ?	None	None
Value		
Range		

Sample Name: ccb Acquired: 08/03/2021 21:50:47 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**126740.**	**1422400.**	**557300.**
Stddev	66.	4386.	3609.
%RSD	.05200	.30833	.64761

Sample Name: lcsw81954 Acquired: 08/03/2021 22:30:34 Type: Unk
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1972	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**19.8**	**884.**	**850.**	**853.**	**818.**	**20.8**	**193000.**	**20.7**	**207.**	**84.8**	**112.**
Stddev	.6	1.	5.	8.	1.	.3	1230.	.4	.	.4	2.
%RSD	3.03	.154	.605	.962	.170	1.29	.638	1.91	.149	.441	1.66

Elem	Fe2343	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**397.**	**419.**	**97300.**	**194.**	**2090.**	**207.**	**207.**	**213.**	**860.**	**844.**	**207.**
Stddev	2.	1.	580.	1.	3.	1.	2.	2.	4.	3.	1.
%RSD	.392	.303	.597	.318	.131	.293	1.05	.897	.434	.409	.510

Elem	Zn2062	Zn2138	Na5895	Si2516	K_7698
Units	ug/L	ug/L	mg/L	ug/L	mg/L
Avg	**218.**	**221.**	**94.4**	**26.0**	**88.5**
Stddev	.	.	.5	2.4	.5
%RSD	.054	.094	.545	9.21	.519

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**117580.**	**1339800.**	**530860.**
Stddev	73.	2167.	2600.
%RSD	.06170	.16171	.48980

Sample Name: mbw81954 Acquired: 08/03/2021 22:38:11 Type: Unk
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.282**	**8.45**	**4.40**	**.266**	**.107**	**-1.11**	**.055**	**-1.30**	**.274**	**.475**	**1.09**	**2.09**
Stddev	.623	2.40	4.26	.433	.081	3.40	.353	.19	.423	.702	.34	1.77
%RSD	221.	28.4	96.8	163.	75.2	306.	644.	14.6	154.	148.	31.3	84.8

Elem	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**-.785**	**1.12**	**-.706**	**1.16**	**-1.40**	**-1.09**	**2.59**	**-1.51**	**.469**	**-.263**	**-.125**	**.039**
Stddev	19.4	.15	.037	.24	.30	1.27	1.64	2.78	3.44	.127	.131	.004
%RSD	2480.	13.6	5.28	21.0	21.3	116.	63.5	184.	732.	48.1	105.	10.4

Elem	Si2516	K_7664
Units	ug/L	mg/L
Avg	**7.76**	**-.002**
Stddev	5.36	.014
%RSD	69.1	784.

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**123080.**	**1391700.**	**547080.**
Stddev	148.	6067.	3838.
%RSD	.11993	.43596	.70153

Sample Name: 1032214 Acquired: 08/03/2021 22:45:55 Type: Unk
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.405**	**4860.**	**4.56**	**191.**	**.284**	**83300.**	**-.232**	**4.19**	**21.2**	**28.0**	**7830.**	**8180.**
Stddev	.406	51.	4.81	1.	.053	894.	.363	.21	.2	.7	44.	73.
%RSD	100.	1.05	106.	.643	18.6	1.07	157.	5.11	.937	2.67	.567	.892

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5895
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**43900.**	**566.**	**3.18**	**15.2**	**17.2**	**.647**	**-.345**	**-2.12**	**8.46**	**183.**	**190.**	**47.4**
Stddev	482.	3.	.64	.4	1.5	3.65	3.99	1.62	.36	1.	.	.3
%RSD	1.10	.449	20.3	2.90	8.54	564.	1160.	76.5	4.31	.305	.200	.713

Elem	Si2516	K_7664
Units	ug/L	mg/L
Avg	**13800.**	**5.30**
Stddev	144.	.03
%RSD	1.04	.559

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**117550.**	**1371900.**	**555540.**
Stddev	112.	6980.	7768.
%RSD	.09493	.50883	1.3982

Sample Name: I1032214 Acquired: 08/03/2021 22:53:49 Type: Unk
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.633**	**1810.**	**.169**	**44.0**	**.098**	**34000.**	**-.159**	**.120**	**6.75**	**5.89**	**2580.**	**3250.**
Stddev	.247	71.	6.59	6.7	.105	899.	.119	.191	.78	1.14	230.	93.
%RSD	39.0	3.90	3900.	15.2	107.	2.64	75.0	159.	11.6	19.3	8.91	2.86

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Si2516
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L
Avg	**17700.**	**191.**	**.462**	**2.47**	**2.56**	**-1.70**	**-2.31**	**.617**	**2.43**	**44.7**	**18.9**	**5190.**
Stddev	490.	16.	.927	1.09	1.92	2.04	6.79	2.13	.29	6.9	.6	221.
%RSD	2.77	8.51	201.	44.1	75.2	120.	295.	345.	12.0	15.5	2.97	4.27

Elem	K_7664
Units	mg/L
Avg	**2.04**
Stddev	.08
%RSD	4.12

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**122070.**	**1377000.**	**546860.**
Stddev	294.	4609.	1826.
%RSD	.24071	.33470	.33397

Sample Name: dup1032214 Acquired: 08/03/2021 23:01:52 Type: Unk
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.463**	**3940.**	**4.06**	**181.**	**.325**	**83200.**	**-.171**	**3.68**	**20.0**	**25.9**	**7440.**	**7800.**
Stddev	.290	50.	5.03	.	.202	1260.	.063	.29	.3	.6	12.	115.
%RSD	62.6	1.26	124.	.079	62.1	1.51	36.7	7.85	1.49	2.15	.167	1.47

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5895
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**43800.**	**566.**	**2.29**	**14.5**	**17.4**	**-1.76**	**-2.61**	**-.110**	**6.97**	**184.**	**189.**	**47.3**
Stddev	631.	1.	.44	.4	1.9	7.32	5.50	1.61	.26	.	.	.5
%RSD	1.44	.255	19.2	3.08	10.8	415.	211.	1470.	3.74	.155	.180	1.16

Elem	Si2516	K_7664
Units	ug/L	mg/L
Avg	**12000.**	**4.85**
Stddev	171.	.04
%RSD	1.43	.911

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**117540.**	**1363300.**	**553890.**
Stddev	72.	2974.	10702.
%RSD	.06130	.21812	1.9321

Sample Name: msw1032214 Acquired: 08/03/2021 23:09:46 Type: Unk
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1972	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**16.3**	**5020.**	**692.**	**696.**	**802.**	**17.1**	**208000.**	**16.2**	**170.**	**83.3**	**109.**
Stddev	.5	9.	3.	10.	2.	.2	629.	.3	.	.6	1.
%RSD	3.24	.173	.484	1.40	.214	1.40	.303	1.69	.116	.705	.682

Elem	Fe2343	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**6400.**	**6700.**	**108000.**	**618.**	**1680.**	**177.**	**181.**	**172.**	**701.**	**693.**	**172.**
Stddev	27.	26.	477.	3.	1.	1.	3.	1.	6.	4.	1.
%RSD	.416	.388	.443	.456	.058	.310	1.43	.779	.823	.540	.537

Elem	Zn2062	Zn2138	Na5895	Si2516	K_7698
Units	ug/L	ug/L	mg/L	ug/L	mg/L
Avg	**318.**	**335.**	**109.**	**11900.**	**74.6**
Stddev	.	.	.	32.	.2
%RSD	.147	.136	.443	.269	.224

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**115110.**	**1334200.**	**537700.**
Stddev	51.	5544.	1713.
%RSD	.04405	.41553	.31854

Sample Name: ccv1 Acquired: 08/03/2021 23:17:11 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3131	Ca3158	Cd2265	Co2388	Cr2055	Cu2230	Cu2247	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**516.**	**5100.**	**5310.**	**4690.**	**534.**	**4930.**	**540.**	**5290.**	**5200.**	**5090.**	**4930.**	**4980.**
Stddev	2.	16.	22.	14.	2.	26.	1.	12.	11.	7.	7.	13.
%RSD	.335	.317	.408	.309	.412	.532	.164	.218	.214	.147	.141	.260
Check ?	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	Mg2790	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2908	Zn2062	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**5170.**	**4850.**	**5100.**	**5230.**	**5150.**	**4950.**	**5180.**	**5300.**	**5220.**	**5200.**	**5330.**	**5170.**
Stddev	11.	16.	17.	8.	4.	6.	30.	19.	16.	26.	16.	3.
%RSD	.206	.325	.334	.144	.082	.115	.572	.361	.305	.497	.304	.055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Na5895	Si2516	K_7698
Units	mg/L	ug/L	mg/L
Avg	**49.1**	**5340.**	**48.0**
Stddev	.1	24.	.1
%RSD	.186	.451	.127
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv1 Acquired: 08/03/2021 23:17:11 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**120640.**	**1362200.**	**537480.**
Stddev	132.	2544.	2175.
%RSD	.10954	.18677	.40457

Sample Name: ccv2 Acquired: 08/03/2021 23:24:01 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1972	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**46.5**	**526.**	**535.**	**535.**	**528.**	**49.1**	**500.**	**50.2**	**532.**	**531.**	**527.**	**521.**
Stddev	.6	7.	3.	7.	.	.8	7.	.2	.	3.	1.	1.
%RSD	1.30	1.31	.541	1.24	.086	1.69	1.47	.458	.083	.477	.246	.198
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	Mg2790	Mg2802	Mn2576	Mo2020	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**538.**	**504.**	**544.**	**501.**	**544.**	**532.**	**538.**	**516.**	**533.**	**535.**	**543.**	**541.**
Stddev	9.	10.	2.	2.	1.	1.	1.	4.	3.	6.	2.	2.
%RSD	1.66	1.95	.406	.436	.271	.197	.150	.806	.545	1.11	.331	.394
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	V_2924	Zn2062	Zn2138	Na5889	Si2516	K_7664
Units	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
Avg	**530.**	**552.**	**543.**	**4.93**	**521.**	**5.11**
Stddev	3.	1.	.	.07	7.	.03
%RSD	.500	.256	.064	1.47	1.41	.551
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: ccv2 Acquired: 08/03/2021 23:24:01 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**122220.**	**1392100.**	**547760.**
Stddev	50.	6329.	6964.
%RSD	.04129	.45463	1.2713

Sample Name: ccb Acquired: 08/03/2021 23:31:06 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.259**	**1.68**	**1.30**	**.304**	**.006**	**-3.19**	**-.020**	**-.854**	**-.086**	**.394**	**-1.32**	**-1.04**
Stddev	.260	3.07	5.43	.129	.118	4.05	.227	.127	.185	1.26	.91	1.35
%RSD	101.	183.	418.	42.5	1880.	127.	1160.	14.8	214.	320.	69.0	130.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**2.31**	**.449**	**-.541**	**.620**	**-.104**	**-1.07**	**-2.65**	**-.544**	**.714**	**.226**	**.184**	**.033**
Stddev	6.79	.059	.042	.296	.473	.79	3.10	.883	1.20	.519	.109	.003
%RSD	294.	13.2	7.84	47.8	453.	74.0	117.	162.	168.	230.	59.4	8.04
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Si2516	K_7664
Units	ug/L	mg/L
Avg	**-3.01**	**.030**
Stddev	3.75	.004
%RSD	125.	13.7
Check ?	None	None
Value		
Range		

Sample Name: ccb Acquired: 08/03/2021 23:31:06 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**127200.**	**1432600.**	**555550.**
Stddev	72.	2798.	2346.
%RSD	.05662	.19533	.42229

Sample Name: msdw1032214 Acquired: 08/03/2021 23:38:51 Type: Unk
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1972	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**16.3**	**4970.**	**694.**	**707.**	**808.**	**17.1**	**208000.**	**16.3**	**170.**	**84.2**	**114.**
Stddev	.2	34.	6.	11.	1.	.2	1350.	.2	.	.3	1.
%RSD	1.36	.692	.872	1.48	.166	1.11	.648	1.48	.278	.329	1.05

Elem	Fe2343	Fe2599	Mg2790	Mn2576	Mo2045	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**6530.**	**6860.**	**108000.**	**636.**	**1690.**	**180.**	**185.**	**173.**	**702.**	**692.**	**173.**
Stddev	20.	53.	681.	2.	2.	1.	1.	3.	6.	2.	1.
%RSD	.300	.777	.629	.274	.106	.762	.722	1.70	.828	.262	.536

Elem	Zn2062	Zn2138	Na5895	Si2516	K_7698
Units	ug/L	ug/L	mg/L	ug/L	mg/L
Avg	**329.**	**343.**	**111.**	**11800.**	**78.4**
Stddev	1.	.	1.	79.	.5
%RSD	.315	.116	.795	.669	.699

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**115090.**	**1331100.**	**542150.**
Stddev	73.	2839.	3525.
%RSD	.06357	.21328	.65018

Sample Name: pdsw1032214 Acquired: 08/03/2021 23:46:17 Type: Unk
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3131	Ca3158	Cd2265	Co2388	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**97.0**	**8350.**	**4310.**	**3980.**	**103.**	**448000.**	**98.6**	**1000.**	**415.**	**535.**	**9050.**
Stddev	.7	250.	13.	129.	4.	16300.	.3	3.	2.	2.	31.
%RSD	.738	2.99	.302	3.25	3.70	3.63	.299	.340	.387	.337	.341

Elem	Fe2599	Mg2790	Mn2576	Mn2593	Mo2045	Ni2216	Ni2316	Pb2169	Sb2068	Se2062	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**9570.**	**236000.**	**1460.**	**1320.**	**1980.**	**1010.**	**1010.**	**1030.**	**1080.**	**4370.**	**4080.**
Stddev	166.	8240.	5.	39.	5.	1.	2.	9.	5.	28.	7.
%RSD	1.73	3.49	.355	2.95	.277	.117	.151	.886	.476	.636	.165

Elem	V_2908	Zn2062	Zn2138	Na5895	Si2516	K_7698
Units	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
Avg	**1050.**	**1170.**	**1260.**	**241.**	**12600.**	**95.8**
Stddev	39.	1.	1.	6.	294.	2.7
%RSD	3.74	.059	.081	2.58	2.33	2.77

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**111290.**	**1310300.**	**536200.**
Stddev	66.	3656.	11494.
%RSD	.05963	.27902	2.1435

Sample Name: ccv1 Acquired: 08/04/2021 00:55:38 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1972	Ba4934	Be3131	Ca3158	Cd2265	Co2388	Cr2055	Cu2230	Cu2247	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**514.**	**5130.**	**5310.**	**4670.**	**540.**	**4910.**	**546.**	**5340.**	**5270.**	**5140.**	**4990.**	**5020.**
Stddev	1.	39.	8.	37.	6.	48.	1.	8.	3.	1.	2.	8.
%RSD	.132	.759	.144	.788	1.06	.968	.109	.146	.061	.022	.050	.158
Check ?	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	Mg2790	Mn2593	Mo2045	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2908	Zn2062	Zn2138
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**5220.**	**4930.**	**5150.**	**5270.**	**5210.**	**4960.**	**5270.**	**5370.**	**5260.**	**5160.**	**5370.**	**5240.**
Stddev	45.	15.	44.	6.	3.	8.	9.	19.	18.	32.	7.	3.
%RSD	.863	.299	.854	.114	.065	.161	.174	.346	.340	.624	.134	.065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Na5895	Si2516	K_7698
Units	mg/L	ug/L	mg/L
Avg	**49.2**	**5340.**	**48.0**
Stddev	.4	40.	.4
%RSD	.794	.740	.777
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv1 Acquired: 08/04/2021 00:55:38 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**121500.**	**1388000.**	**543560.**
Stddev	77.	3346.	4803.
%RSD	.06353	.24106	.88359

Sample Name: ccv2 Acquired: 08/04/2021 01:02:30 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1972	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**47.2**	**533.**	**528.**	**542.**	**534.**	**50.1**	**508.**	**50.9**	**538.**	**540.**	**532.**	**524.**
Stddev	.2	3.	6.	12.	1.	.1	9.	.2	.	1.	1.	4.
%RSD	.515	.494	1.06	2.15	.189	.297	1.83	.485	.045	.235	.208	.850
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	Mg2790	Mg2802	Mn2576	Mo2020	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**540.**	**507.**	**552.**	**508.**	**549.**	**537.**	**541.**	**511.**	**543.**	**539.**	**543.**	**543.**
Stddev	.	6.	2.	1.	.	1.	.	1.	1.	4.	2.	.
%RSD	.047	1.12	.433	.183	.010	.146	.062	.246	.101	.742	.376	.032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	V_2924	Zn2138	Na5889	Si2516	K_7664
Units	ug/L	ug/L	mg/L	ug/L	mg/L
Avg	**533.**	**548.**	**5.03**	**535.**	**5.30**
Stddev	2.	.	.02	2.	.04
%RSD	.334	.054	.363	.292	.747
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Sample Name: ccv2 Acquired: 08/04/2021 01:02:30 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**122680.**	**1386100.**	**542830.**
Stddev	65.	3542.	773.
%RSD	.05271	.25556	.14248

Sample Name: ccb Acquired: 08/04/2021 01:09:36 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3131	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.575**	**.262**	**3.95**	**-.105**	**.012**	**-3.14**	**-.026**	**-1.11**	**-.247**	**.501**	**-1.12**	**-.236**
Stddev	.190	3.43	2.43	.281	.145	.10	.085	.12	.220	1.28	.47	.470
%RSD	33.0	1310.	61.5	268.	1210.	3.22	331.	10.4	89.1	255.	42.0	199.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mg2790	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**-7.20**	**-.389**	**-.708**	**.825**	**-.732**	**-.940**	**-.918**	**.780**	**2.88**	**-.353**	**-.230**	**.030**
Stddev	4.10	.017	.030	.378	.075	2.13	5.51	1.09	.71	.288	.053	.004
%RSD	56.9	4.42	4.29	45.9	10.3	227.	601.	140.	24.8	81.8	22.9	14.9
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

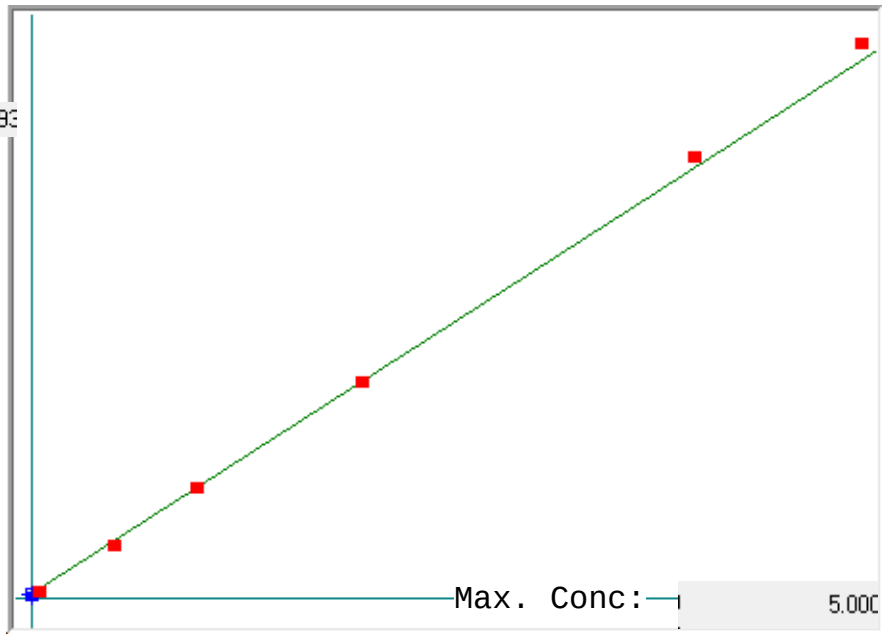
Elem	Si2516	K_7664
Units	ug/L	mg/L
Avg	**-4.81**	**.062**
Stddev	6.18	.019
%RSD	129.	31.3
Check ?	None	None
Value		
Range		

Sample Name: ccb Acquired: 08/04/2021 01:09:36 Type: QC
Method: DOD Calibration Updated 060614(v4435) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: PrepBatch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**126270.**	**1439000.**	**555420.**
Stddev	89.	4729.	2859.
%RSD	.07085	.32864	.51480

Hg WATERS

Wt. Linear



A= 0.0000e+000

B= 2.0860e-004

C= -3.6561e-002

Rho= 0.9989981

Accept= Accepted

Accepted Date=

08/04/21 11:26

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
CALIBRATION BLANK	0.000	0.001	0.001	178	4.272	176	184	173	181	
0.05	0.050	0.044	-0.006	384	3.6 %	374	368	392	403	
0.5	0.500	0.474	-0.026	2446	2.7 %	2344	2435	2481	2524	
1.0	1.000	1.023	0.023	5079	3.1 %	4866	5009	5165	5277	
2.0	2.000	2.004	0.004	9784	2.9 %	9379	9675	9945	10137	
4.0	4.000	4.123	0.123	19941	2.6 %	19224	19745	20214	20583	
5.0	5.000	5.177	0.177	24993	2.9 %	24016	24664	25302	25990	

Method: Hg WATERS Operator: Admin Date of Analysis: 04 Aug 2021 11:04:24

Sample ID	Date	Element	Units	Extended ID	LT Mean Conc
CALIBRATION BLANK	04 Aug 2021 11:04:27	Hg			178.500
0.05	04 Aug 2021 11:07:36	Hg			384.250
0.5	04 Aug 2021 11:10:48	Hg			2446.000
1.0	04 Aug 2021 11:14:00	Hg			5079.250
2.0	04 Aug 2021 11:17:11	Hg			9784.000
4.0	04 Aug 2021 11:20:21	Hg			19941.500
5.0	04 Aug 2021 11:23:31	Hg			24993.000
ICV	04 Aug 2021 11:26:41	Hg			3.132
ICB	04 Aug 2021 11:33:00	Hg			-0.012
LCSW	04 Aug 2021 11:36:09	Hg			2.063
MBW	04 Aug 2021 11:42:28	Hg			0.015
1030747	04 Aug 2021 11:45:37	Hg			0.008
1030749	04 Aug 2021 11:48:47	Hg			0.003
1030750	04 Aug 2021 11:51:56	Hg			0.008
1030751	04 Aug 2021 11:55:06	Hg			-0.006
1030752	04 Aug 2021 11:58:16	Hg			-0.010
1030753	04 Aug 2021 12:01:26	Hg			0.001
1030754	04 Aug 2021 12:04:36	Hg			-0.006
CCV	04 Aug 2021 12:07:46	Hg			3.200
CCB	04 Aug 2021 12:14:06	Hg			-0.007
1030755	04 Aug 2021 12:17:15	Hg			-0.007
1030756	04 Aug 2021 12:20:26	Hg			-0.011
1030757	04 Aug 2021 12:23:37	Hg			-0.001
1030758	04 Aug 2021 12:26:46	Hg			-0.011
1030759	04 Aug 2021 12:29:56	Hg			-0.010
1031322	04 Aug 2021 12:33:05	Hg			-0.007
1031323	04 Aug 2021 12:36:15	Hg			-0.010
1031324	04 Aug 2021 12:39:24	Hg			0.007
1031325	04 Aug 2021 12:42:34	Hg			-0.000
1031326	04 Aug 2021 12:45:44	Hg			-0.004
CCV	04 Aug 2021 12:48:54	Hg			3.198
CCB	04 Aug 2021 12:55:14	Hg			-0.009
1031328	04 Aug 2021 12:58:23	Hg			-0.004
1031329	04 Aug 2021 13:01:34	Hg			-0.003
MSW1030751	04 Aug 2021 13:04:44	Hg			2.113
MSDW1030751	04 Aug 2021 13:07:55	Hg			2.078
LCSW	04 Aug 2021 13:11:06	Hg			2.187
MBW	04 Aug 2021 13:17:25	Hg			-0.004
1031327	04 Aug 2021 13:20:35	Hg			-0.008
MSW1031327	04 Aug 2021 13:23:45	Hg			2.157
MSDW1031327	04 Aug 2021 13:26:54	Hg			2.206
CCV	04 Aug 2021 13:30:04	Hg			3.253
CCB	04 Aug 2021 13:36:23	Hg			-0.004
1031331	04 Aug 2021 13:39:32	Hg			-0.007
1030878	04 Aug 2021 13:42:41	Hg			-0.002
DUP1030878	04 Aug 2021 13:45:51	Hg			-0.005
1032214	04 Aug 2021 13:49:02	Hg			-0.001
1030733	04 Aug 2021 13:52:13	Hg			-0.005
1032388	04 Aug 2021 13:55:24	Hg			-0.012
MSW1030878	04 Aug 2021 13:58:34	Hg			2.145
MSDW1030878	04 Aug 2021 14:01:44	Hg			2.184
MSW1030733	04 Aug 2021 14:04:54	Hg			2.031
MSDW1030733	04 Aug 2021 14:08:03	Hg			2.092
CCV	04 Aug 2021 14:11:13	Hg			3.101
CCB	04 Aug 2021 14:17:32	Hg			0.000
1031731	04 Aug 2021 14:20:41	Hg			-0.009
MSW1032388	04 Aug 2021 14:23:51	Hg			1.822
MSDW1032388	04 Aug 2021 14:27:01	Hg			1.862
MSW1031731	04 Aug 2021 14:30:11	Hg			2.083
MSDW1031731	04 Aug 2021 14:33:22	Hg			2.078
LCSW	04 Aug 2021 14:36:32	Hg			2.126
MBW81946	04 Aug 2021 14:42:54	Hg			0.001
1030498	04 Aug 2021 14:46:05	Hg			-0.003
MSW1030498	04 Aug 2021 14:49:15	Hg			2.162
CCV	04 Aug 2021 14:52:25	Hg			3.101

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Method: Hg WATERS Operator: Admin Date of Analysis: 04 Aug 2021 11:04:24

Sample ID	Date	Element	Units	Extended ID	LT Mean Conc
CCB	04 Aug 2021 14:58:44	Hg			-0.001
MBW81983 81984	04 Aug 2021 15:01:54	Hg			-0.011
1030761	04 Aug 2021 15:05:04	Hg			-0.005
DUP1030761	04 Aug 2021 15:08:14	Hg			0.000
1031587	04 Aug 2021 15:11:24	Hg			0.005
1031634	04 Aug 2021 15:14:33	Hg			0.000
MSW1030761	04 Aug 2021 15:17:43	Hg			2.116
MSDW1030761	04 Aug 2021 15:20:53	Hg			2.098
MSW1031587	04 Aug 2021 15:24:04	Hg			2.106
CCV	04 Aug 2021 15:27:14	Hg			3.058
CCB	04 Aug 2021 15:33:33	Hg			-0.004

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Method: Hg WATERS Operator: Admin Date of Analysis: 04 Aug 2021 11:04:24

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CALIBRATION BLANK - 1	04 Aug 2021 11:04:27	Hg			176	-
CALIBRATION BLANK - 2	04 Aug 2021 11:04:27	Hg			184	-
CALIBRATION BLANK - 3	04 Aug 2021 11:04:27	Hg			173	-
CALIBRATION BLANK - 4	04 Aug 2021 11:04:27	Hg			181	-
0.05 - 1	04 Aug 2021 11:07:36	Hg			374	-
0.05 - 2	04 Aug 2021 11:07:36	Hg			368	-
0.05 - 3	04 Aug 2021 11:07:36	Hg			392	-
0.05 - 4	04 Aug 2021 11:07:36	Hg			403	-
0.5 - 1	04 Aug 2021 11:10:48	Hg			2344	-
0.5 - 2	04 Aug 2021 11:10:48	Hg			2435	-
0.5 - 3	04 Aug 2021 11:10:48	Hg			2481	-
0.5 - 4	04 Aug 2021 11:10:48	Hg			2524	-
1.0 - 1	04 Aug 2021 11:14:00	Hg			4866	-
1.0 - 2	04 Aug 2021 11:14:00	Hg			5009	-
1.0 - 3	04 Aug 2021 11:14:00	Hg			5165	-
1.0 - 4	04 Aug 2021 11:14:00	Hg			5277	-
2.0 - 1	04 Aug 2021 11:17:11	Hg			9379	-
2.0 - 2	04 Aug 2021 11:17:11	Hg			9675	-
2.0 - 3	04 Aug 2021 11:17:11	Hg			9945	-
2.0 - 4	04 Aug 2021 11:17:11	Hg			10137	-
4.0 - 1	04 Aug 2021 11:20:21	Hg			19224	-
4.0 - 2	04 Aug 2021 11:20:21	Hg			19745	-
4.0 - 3	04 Aug 2021 11:20:21	Hg			20214	-
4.0 - 4	04 Aug 2021 11:20:21	Hg			20583	-
5.0 - 1	04 Aug 2021 11:23:31	Hg			24016	-
5.0 - 2	04 Aug 2021 11:23:31	Hg			24664	-
5.0 - 3	04 Aug 2021 11:23:31	Hg			25302	-
5.0 - 4	04 Aug 2021 11:23:31	Hg			25990	-
ICV - 1	04 Aug 2021 11:26:41	Hg			14625	100.5% 3.014
ICV - 2	04 Aug 2021 11:26:41	Hg			15034	103.3% 3.099
ICV - 3	04 Aug 2021 11:26:41	Hg			15390	(H)105.8% 3.174
ICV - 4	04 Aug 2021 11:26:41	Hg			15707	(H)108.0% 3.240
ICB - 1	04 Aug 2021 11:33:00	Hg			116	-0.012
ICB - 2	04 Aug 2021 11:33:00	Hg			117	-0.012
ICB - 3	04 Aug 2021 11:33:00	Hg			128	-0.010
ICB - 4	04 Aug 2021 11:33:00	Hg			113	-0.013
LCSW - 1	04 Aug 2021 11:36:09	Hg			9671	1.981
LCSW - 2	04 Aug 2021 11:36:09	Hg			9961	2.041
LCSW - 3	04 Aug 2021 11:36:09	Hg			10220	2.095
LCSW - 4	04 Aug 2021 11:36:09	Hg			10404	2.134
MBW - 1	04 Aug 2021 11:42:28	Hg			238	0.013
MBW - 2	04 Aug 2021 11:42:28	Hg			238	0.013
MBW - 3	04 Aug 2021 11:42:28	Hg			258	0.017
MBW - 4	04 Aug 2021 11:42:28	Hg			262	0.018
1030747 - 1	04 Aug 2021 11:45:37	Hg			204	0.006
1030747 - 2	04 Aug 2021 11:45:37	Hg			221	0.010
1030747 - 3	04 Aug 2021 11:45:37	Hg			207	0.007
1030747 - 4	04 Aug 2021 11:45:37	Hg			216	0.008
1030749 - 1	04 Aug 2021 11:48:47	Hg			193	0.004
1030749 - 2	04 Aug 2021 11:48:47	Hg			188	0.003
1030749 - 3	04 Aug 2021 11:48:47	Hg			183	0.002
1030749 - 4	04 Aug 2021 11:48:47	Hg			204	0.006
1030750 - 1	04 Aug 2021 11:51:56	Hg			218	0.009
1030750 - 2	04 Aug 2021 11:51:56	Hg			206	0.006
1030750 - 3	04 Aug 2021 11:51:56	Hg			216	0.008
1030750 - 4	04 Aug 2021 11:51:56	Hg			216	0.008
1030751 - 1	04 Aug 2021 11:55:06	Hg			145	-0.006 [ ]
1030751 - 2	04 Aug 2021 11:55:06	Hg			136	-0.008 [ ]
1030751 - 3	04 Aug 2021 11:55:06	Hg			147	-0.006 [ ]
1030751 - 4	04 Aug 2021 11:55:06	Hg			158	-0.004 [ ]
1030752 - 1	04 Aug 2021 11:58:16	Hg			126	-0.010 [ ]
1030752 - 2	04 Aug 2021 11:58:16	Hg			119	-0.012 [ ]
1030752 - 3	04 Aug 2021 11:58:16	Hg			130	-0.009 [ ]
1030752 - 4	04 Aug 2021 11:58:16	Hg			126	-0.010 [ ]
1030753 - 1	04 Aug 2021 12:01:26	Hg			178	0.001
1030753 - 2	04 Aug 2021 12:01:26	Hg			174	-0.000 [ ]
1030753 - 3	04 Aug 2021 12:01:26	Hg			184	0.002
1030753 - 4	04 Aug 2021 12:01:26	Hg			177	0.000
1030754 - 1	04 Aug 2021 12:04:36	Hg			133	-0.009 [ ]
1030754 - 2	04 Aug 2021 12:04:36	Hg			146	-0.006 [ ]
1030754 - 3	04 Aug 2021 12:04:36	Hg			155	-0.004 [ ]
1030754 - 4	04 Aug 2021 12:04:36	Hg			160	-0.003 [ ]
CCV - 1	04 Aug 2021 12:07:46	Hg			15102	103.8% 3.114
CCV - 2	04 Aug 2021 12:07:46	Hg			15492	106.5% 3.195
CCV - 3	04 Aug 2021 12:07:46	Hg			15663	107.7% 3.231
CCV - 4	04 Aug 2021 12:07:46	Hg			15813	108.7% 3.262
CCB - 1	04 Aug 2021 12:14:06	Hg			141	-0.007
CCB - 2	04 Aug 2021 12:14:06	Hg			146	-0.006
CCB - 3	04 Aug 2021 12:14:06	Hg			142	-0.007

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Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CCB - 4	04 Aug 2021 12:14:06	Hg			142	-0.007
1030755 - 1	04 Aug 2021 12:17:15	Hg			135	-0.008 [ ]
1030755 - 2	04 Aug 2021 12:17:15	Hg			146	-0.006 [ ]
1030755 - 3	04 Aug 2021 12:17:15	Hg			150	-0.005 [ ]
1030755 - 4	04 Aug 2021 12:17:15	Hg			138	-0.008 [ ]
1030756 - 1	04 Aug 2021 12:20:26	Hg			123	-0.011 [ ]
1030756 - 2	04 Aug 2021 12:20:26	Hg			119	-0.012 [ ]
1030756 - 3	04 Aug 2021 12:20:26	Hg			114	-0.013 [ ]
1030756 - 4	04 Aug 2021 12:20:26	Hg			126	-0.010 [ ]
1030757 - 1	04 Aug 2021 12:23:37	Hg			164	-0.002 [ ]
1030757 - 2	04 Aug 2021 12:23:37	Hg			172	-0.001 [ ]
1030757 - 3	04 Aug 2021 12:23:37	Hg			174	-0.000 [ ]
1030757 - 4	04 Aug 2021 12:23:37	Hg			175	-0.000 [ ]
1030758 - 1	04 Aug 2021 12:26:46	Hg			120	-0.012 [ ]
1030758 - 2	04 Aug 2021 12:26:46	Hg			131	-0.009 [ ]
1030758 - 3	04 Aug 2021 12:26:46	Hg			121	-0.011 [ ]
1030758 - 4	04 Aug 2021 12:26:46	Hg			122	-0.011 [ ]
1030759 - 1	04 Aug 2021 12:29:56	Hg			129	-0.010 [ ]
1030759 - 2	04 Aug 2021 12:29:56	Hg			126	-0.010 [ ]
1030759 - 3	04 Aug 2021 12:29:56	Hg			122	-0.011 [ ]
1030759 - 4	04 Aug 2021 12:29:56	Hg			127	-0.010 [ ]
1031322 - 1	04 Aug 2021 12:33:05	Hg			133	-0.009 [ ]
1031322 - 2	04 Aug 2021 12:33:05	Hg			140	-0.007 [ ]
1031322 - 3	04 Aug 2021 12:33:05	Hg			140	-0.007 [ ]
1031322 - 4	04 Aug 2021 12:33:05	Hg			148	-0.006 [ ]
1031323 - 1	04 Aug 2021 12:36:15	Hg			132	-0.009 [ ]
1031323 - 2	04 Aug 2021 12:36:15	Hg			129	-0.010 [ ]
1031323 - 3	04 Aug 2021 12:36:15	Hg			129	-0.010 [ ]
1031323 - 4	04 Aug 2021 12:36:15	Hg			125	-0.010 [ ]
1031324 - 1	04 Aug 2021 12:39:24	Hg			203	0.006
1031324 - 2	04 Aug 2021 12:39:24	Hg			214	0.008
1031324 - 3	04 Aug 2021 12:39:24	Hg			200	0.005
1031324 - 4	04 Aug 2021 12:39:24	Hg			212	0.008
1031325 - 1	04 Aug 2021 12:42:34	Hg			168	-0.002 [ ]
1031325 - 2	04 Aug 2021 12:42:34	Hg			173	-0.000 [ ]
1031325 - 3	04 Aug 2021 12:42:34	Hg			171	-0.001 [ ]
1031325 - 4	04 Aug 2021 12:42:34	Hg			184	0.002
1031326 - 1	04 Aug 2021 12:45:44	Hg			163	-0.003 [ ]
1031326 - 2	04 Aug 2021 12:45:44	Hg			154	-0.004 [ ]
1031326 - 3	04 Aug 2021 12:45:44	Hg			153	-0.005 [ ]
1031326 - 4	04 Aug 2021 12:45:44	Hg			151	-0.005 [ ]
CCV - 1	04 Aug 2021 12:48:54	Hg			14813	101.8% 3.053
CCV - 2	04 Aug 2021 12:48:54	Hg			15361	105.6% 3.168
CCV - 3	04 Aug 2021 12:48:54	Hg			15781	108.5% 3.255
CCV - 4	04 Aug 2021 12:48:54	Hg			16067	(H)110.5% 3.315
CCB - 1	04 Aug 2021 12:55:14	Hg			121	-0.011
CCB - 2	04 Aug 2021 12:55:14	Hg			141	-0.007
CCB - 3	04 Aug 2021 12:55:14	Hg			127	-0.010
CCB - 4	04 Aug 2021 12:55:14	Hg			140	-0.007
1031328 - 1	04 Aug 2021 12:58:23	Hg			145	-0.006 [ ]
1031328 - 2	04 Aug 2021 12:58:23	Hg			150	-0.005 [ ]
1031328 - 3	04 Aug 2021 12:58:23	Hg			155	-0.004 [ ]
1031328 - 4	04 Aug 2021 12:58:23	Hg			165	-0.002 [ ]
1031329 - 1	04 Aug 2021 13:01:34	Hg			142	-0.007 [ ]
1031329 - 2	04 Aug 2021 13:01:34	Hg			158	-0.004 [ ]
1031329 - 3	04 Aug 2021 13:01:34	Hg			169	-0.001 [ ]
1031329 - 4	04 Aug 2021 13:01:34	Hg			166	-0.002 [ ]
MSW1030751 - 1	04 Aug 2021 13:04:44	Hg			9940	2.037
MSW1030751 - 2	04 Aug 2021 13:04:44	Hg			10227	2.097
MSW1030751 - 3	04 Aug 2021 13:04:44	Hg			10441	2.141
MSW1030751 - 4	04 Aug 2021 13:04:44	Hg			10610	2.177
MSDW1030751 - 1	04 Aug 2021 13:07:55	Hg			9861	2.020
MSDW1030751 - 2	04 Aug 2021 13:07:55	Hg			10016	2.053
MSDW1030751 - 3	04 Aug 2021 13:07:55	Hg			10230	2.097
MSDW1030751 - 4	04 Aug 2021 13:07:55	Hg			10435	2.140
LCSW - 1	04 Aug 2021 13:11:06	Hg			10341	2.121
LCSW - 2	04 Aug 2021 13:11:06	Hg			10597	2.174
LCSW - 3	04 Aug 2021 13:11:06	Hg			10782	2.213
LCSW - 4	04 Aug 2021 13:11:06	Hg			10928	2.243
MBW - 1	04 Aug 2021 13:17:25	Hg			158	-0.004 [ ]
MBW - 2	04 Aug 2021 13:17:25	Hg			157	-0.004 [ ]
MBW - 3	04 Aug 2021 13:17:25	Hg			158	-0.004 [ ]
MBW - 4	04 Aug 2021 13:17:25	Hg			152	-0.005 [ ]
1031327 - 1	04 Aug 2021 13:20:35	Hg			144	-0.007 [ ]
1031327 - 2	04 Aug 2021 13:20:35	Hg			131	-0.009 [ ]
1031327 - 3	04 Aug 2021 13:20:35	Hg			132	-0.009 [ ]
1031327 - 4	04 Aug 2021 13:20:35	Hg			144	-0.007 [ ]
MSW1031327 - 1	04 Aug 2021 13:23:45	Hg			10062	2.062
MSW1031327 - 2	04 Aug 2021 13:23:45	Hg			10410	2.135

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Method: Hg WATERS Operator: Admin Date of Analysis: 04 Aug 2021 11:04:24

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
MSW1031327 - 3	04 Aug 2021 13:23:45	Hg			10715	2.199
MSW1031327 - 4	04 Aug 2021 13:23:45	Hg			10884	2.234
MSDW1031327 - 1	04 Aug 2021 13:26:54	Hg			10451	2.143
MSDW1031327 - 2	04 Aug 2021 13:26:54	Hg			10670	2.189
MSDW1031327 - 3	04 Aug 2021 13:26:54	Hg			10851	2.227
MSDW1031327 - 4	04 Aug 2021 13:26:54	Hg			11039	2.266
CCV - 1	04 Aug 2021 13:30:04	Hg			15204	104.5% 3.135
CCV - 2	04 Aug 2021 13:30:04	Hg			15675	107.8% 3.233
CCV - 3	04 Aug 2021 13:30:04	Hg			15995	110.0% 3.300
CCV - 4	04 Aug 2021 13:30:04	Hg			16205	(H)111.5% 3.344
CCB - 1	04 Aug 2021 13:36:23	Hg			150	-0.005
CCB - 2	04 Aug 2021 13:36:23	Hg			154	-0.004
CCB - 3	04 Aug 2021 13:36:23	Hg			161	-0.003
CCB - 4	04 Aug 2021 13:36:23	Hg			168	-0.002
1031331 - 1	04 Aug 2021 13:39:32	Hg			138	-0.008 [ ]
1031331 - 2	04 Aug 2021 13:39:32	Hg			142	-0.007 [ ]
1031331 - 3	04 Aug 2021 13:39:32	Hg			143	-0.007 [ ]
1031331 - 4	04 Aug 2021 13:39:32	Hg			140	-0.007 [ ]
1030878 - 1	04 Aug 2021 13:42:41	Hg			148	-0.006 [ ]
1030878 - 2	04 Aug 2021 13:42:41	Hg			163	-0.003 [ ]
1030878 - 3	04 Aug 2021 13:42:41	Hg			173	-0.000 [ ]
1030878 - 4	04 Aug 2021 13:42:41	Hg			179	0.001
DUP1030878 - 1	04 Aug 2021 13:45:51	Hg			142	-0.007 [ ]
DUP1030878 - 2	04 Aug 2021 13:45:51	Hg			153	-0.005 [ ]
DUP1030878 - 3	04 Aug 2021 13:45:51	Hg			153	-0.005 [ ]
DUP1030878 - 4	04 Aug 2021 13:45:51	Hg			154	-0.004 [ ]
1032214 - 1	04 Aug 2021 13:49:02	Hg			171	-0.001 [ ]
1032214 - 2	04 Aug 2021 13:49:02	Hg			163	-0.003 [ ]
1032214 - 3	04 Aug 2021 13:49:02	Hg			170	-0.001 [ ]
1032214 - 4	04 Aug 2021 13:49:02	Hg			173	-0.000 [ ]
1030733 - 1	04 Aug 2021 13:52:13	Hg			142	-0.007 [ ]
1030733 - 2	04 Aug 2021 13:52:13	Hg			159	-0.003 [ ]
1030733 - 3	04 Aug 2021 13:52:13	Hg			153	-0.005 [ ]
1030733 - 4	04 Aug 2021 13:52:13	Hg			156	-0.004 [ ]
1032388 - 1	04 Aug 2021 13:55:24	Hg			116	-0.012 [ ]
1032388 - 2	04 Aug 2021 13:55:24	Hg			132	-0.009 [ ]
1032388 - 3	04 Aug 2021 13:55:24	Hg			114	-0.013 [ ]
1032388 - 4	04 Aug 2021 13:55:24	Hg			118	-0.012 [ ]
MSW1030878 - 1	04 Aug 2021 13:58:34	Hg			10152	2.081
MSW1030878 - 2	04 Aug 2021 13:58:34	Hg			10342	2.121
MSW1030878 - 3	04 Aug 2021 13:58:34	Hg			10564	2.167
MSW1030878 - 4	04 Aug 2021 13:58:34	Hg			10778	2.212
MSDW1030878 - 1	04 Aug 2021 14:01:44	Hg			10311	2.114
MSDW1030878 - 2	04 Aug 2021 14:01:44	Hg			10562	2.167
MSDW1030878 - 3	04 Aug 2021 14:01:44	Hg			10758	2.208
MSDW1030878 - 4	04 Aug 2021 14:01:44	Hg			10959	2.249
MSW1030733 - 1	04 Aug 2021 14:04:54	Hg			9487	1.942
MSW1030733 - 2	04 Aug 2021 14:04:54	Hg			9784	2.004
MSW1030733 - 3	04 Aug 2021 14:04:54	Hg			10091	2.068
MSW1030733 - 4	04 Aug 2021 14:04:54	Hg			10281	2.108
MSDW1030733 - 1	04 Aug 2021 14:08:03	Hg			9791	2.006
MSDW1030733 - 2	04 Aug 2021 14:08:03	Hg			10147	2.080
MSDW1030733 - 3	04 Aug 2021 14:08:03	Hg			10388	2.130
MSDW1030733 - 4	04 Aug 2021 14:08:03	Hg			10489	2.151
CCV - 1	04 Aug 2021 14:11:13	Hg			14576	100.1% 3.004
CCV - 2	04 Aug 2021 14:11:13	Hg			14942	102.7% 3.080
CCV - 3	04 Aug 2021 14:11:13	Hg			15200	104.5% 3.134
CCV - 4	04 Aug 2021 14:11:13	Hg			15446	106.2% 3.185
CCB - 1	04 Aug 2021 14:17:32	Hg			171	-0.001
CCB - 2	04 Aug 2021 14:17:32	Hg			173	-0.000
CCB - 3	04 Aug 2021 14:17:32	Hg			180	0.001
CCB - 4	04 Aug 2021 14:17:32	Hg			183	0.002
1031731 - 1	04 Aug 2021 14:20:41	Hg			126	-0.010 [ ]
1031731 - 2	04 Aug 2021 14:20:41	Hg			129	-0.010 [ ]
1031731 - 3	04 Aug 2021 14:20:41	Hg			138	-0.008 [ ]
1031731 - 4	04 Aug 2021 14:20:41	Hg			134	-0.009 [ ]
MSW1032388 - 1	04 Aug 2021 14:23:51	Hg			8526	1.742
MSW1032388 - 2	04 Aug 2021 14:23:51	Hg			8800	1.799
MSW1032388 - 3	04 Aug 2021 14:23:51	Hg			9037	1.849
MSW1032388 - 4	04 Aug 2021 14:23:51	Hg			9275	1.898
MSDW1032388 - 1	04 Aug 2021 14:27:01	Hg			8695	1.777
MSDW1032388 - 2	04 Aug 2021 14:27:01	Hg			8964	1.833
MSDW1032388 - 3	04 Aug 2021 14:27:01	Hg			9244	1.892
MSDW1032388 - 4	04 Aug 2021 14:27:01	Hg			9503	1.946
MSW1031731 - 1	04 Aug 2021 14:30:11	Hg			9652	1.977
MSW1031731 - 2	04 Aug 2021 14:30:11	Hg			10022	2.054
MSW1031731 - 3	04 Aug 2021 14:30:11	Hg			10354	2.123
MSW1031731 - 4	04 Aug 2021 14:30:11	Hg			10619	2.179
MSDW1031731 - 1	04 Aug 2021 14:33:22	Hg			9741	1.995

080421w detailed

Method: Hg WATERS Operator: Admin Date of Analysis: 04 Aug 2021 11:04:24

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
MSDW1031731 - 2	04 Aug 2021 14:33:22	Hg			9976	2.044
MSDW1031731 - 3	04 Aug 2021 14:33:22	Hg			10281	2.108
MSDW1031731 - 4	04 Aug 2021 14:33:22	Hg			10547	2.164
LCSW - 1	04 Aug 2021 14:36:32	Hg			10104	2.071
LCSW - 2	04 Aug 2021 14:36:32	Hg			10290	2.110
LCSW - 3	04 Aug 2021 14:36:32	Hg			10454	2.144
LCSW - 4	04 Aug 2021 14:36:32	Hg			10627	2.180
MBW81946 - 1	04 Aug 2021 14:42:54	Hg			172	-0.001 [ ]
MBW81946 - 2	04 Aug 2021 14:42:54	Hg			174	-0.000 [ ]
MBW81946 - 3	04 Aug 2021 14:42:54	Hg			179	0.001
MBW81946 - 4	04 Aug 2021 14:42:54	Hg			193	0.004
1030498 - 1	04 Aug 2021 14:46:05	Hg			157	-0.004 [ ]
1030498 - 2	04 Aug 2021 14:46:05	Hg			155	-0.004 [ ]
1030498 - 3	04 Aug 2021 14:46:05	Hg			163	-0.003 [ ]
1030498 - 4	04 Aug 2021 14:46:05	Hg			162	-0.003 [ ]
MSW1030498 - 1	04 Aug 2021 14:49:15	Hg			10249	2.101
MSW1030498 - 2	04 Aug 2021 14:49:15	Hg			10471	2.148
MSW1030498 - 3	04 Aug 2021 14:49:15	Hg			10643	2.184
MSW1030498 - 4	04 Aug 2021 14:49:15	Hg			10803	2.217
CCV - 1	04 Aug 2021 14:52:25	Hg			14464	99.4% 2.981
CCV - 2	04 Aug 2021 14:52:25	Hg			14857	102.1% 3.063
CCV - 3	04 Aug 2021 14:52:25	Hg			15255	104.9% 3.146
CCV - 4	04 Aug 2021 14:52:25	Hg			15583	107.1% 3.214
CCB - 1	04 Aug 2021 14:58:44	Hg			165	-0.002
CCB - 2	04 Aug 2021 14:58:44	Hg			163	-0.003
CCB - 3	04 Aug 2021 14:58:44	Hg			167	-0.002
CCB - 4	04 Aug 2021 14:58:44	Hg			179	0.001
MBW81983 81984 - 1	04 Aug 2021 15:01:54	Hg			118	-0.012 [ ]
MBW81983 81984 - 2	04 Aug 2021 15:01:54	Hg			126	-0.010 [ ]
MBW81983 81984 - 3	04 Aug 2021 15:01:54	Hg			121	-0.011 [ ]
MBW81983 81984 - 4	04 Aug 2021 15:01:54	Hg			133	-0.009 [ ]
1030761 - 1	04 Aug 2021 15:05:04	Hg			151	-0.005 [ ]
1030761 - 2	04 Aug 2021 15:05:04	Hg			144	-0.007 [ ]
1030761 - 3	04 Aug 2021 15:05:04	Hg			148	-0.006 [ ]
1030761 - 4	04 Aug 2021 15:05:04	Hg			163	-0.003 [ ]
DUP1030761 - 1	04 Aug 2021 15:08:14	Hg			171	-0.001 [ ]
DUP1030761 - 2	04 Aug 2021 15:08:14	Hg			179	0.001
DUP1030761 - 3	04 Aug 2021 15:08:14	Hg			175	-0.000 [ ]
DUP1030761 - 4	04 Aug 2021 15:08:14	Hg			184	0.002
1031587 - 1	04 Aug 2021 15:11:24	Hg			193	0.004
1031587 - 2	04 Aug 2021 15:11:24	Hg			209	0.007
1031587 - 3	04 Aug 2021 15:11:24	Hg			199	0.005
1031587 - 4	04 Aug 2021 15:11:24	Hg			196	0.004
1031634 - 1	04 Aug 2021 15:14:33	Hg			166	-0.002 [ ]
1031634 - 2	04 Aug 2021 15:14:33	Hg			173	-0.000 [ ]
1031634 - 3	04 Aug 2021 15:14:33	Hg			182	0.001
1031634 - 4	04 Aug 2021 15:14:33	Hg			181	0.001
MSW1030761 - 1	04 Aug 2021 15:17:43	Hg			9953	2.040
MSW1030761 - 2	04 Aug 2021 15:17:43	Hg			10199	2.091
MSW1030761 - 3	04 Aug 2021 15:17:43	Hg			10450	2.143
MSW1030761 - 4	04 Aug 2021 15:17:43	Hg			10674	2.190
MSDW1030761 - 1	04 Aug 2021 15:20:53	Hg			9885	2.025
MSDW1030761 - 2	04 Aug 2021 15:20:53	Hg			10130	2.077
MSDW1030761 - 3	04 Aug 2021 15:20:53	Hg			10356	2.124
MSDW1030761 - 4	04 Aug 2021 15:20:53	Hg			10556	2.165
MSW1031587 - 1	04 Aug 2021 15:24:04	Hg			9862	2.021
MSW1031587 - 2	04 Aug 2021 15:24:04	Hg			10175	2.086
MSW1031587 - 3	04 Aug 2021 15:24:04	Hg			10459	2.145
MSW1031587 - 4	04 Aug 2021 15:24:04	Hg			10589	2.172
CCV - 1	04 Aug 2021 15:27:14	Hg			14408	99.0% 2.969
CCV - 2	04 Aug 2021 15:27:14	Hg			14690	100.9% 3.028
CCV - 3	04 Aug 2021 15:27:14	Hg			14962	102.8% 3.084
CCV - 4	04 Aug 2021 15:27:14	Hg			15272	105.0% 3.149
CCB - 1	04 Aug 2021 15:33:33	Hg			149	-0.005
CCB - 2	04 Aug 2021 15:33:33	Hg			154	-0.004
CCB - 3	04 Aug 2021 15:33:33	Hg			153	-0.005
CCB - 4	04 Aug 2021 15:33:33	Hg			161	-0.003

METALS
LOGBOOK
DOCUMENTS

MICP WATER QSM Analytical Run
194081 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1034060								MICP WATER QSM				
					ICV					0			
	1034061								MICP WATER QSM				
					ICVLL					0			
	1034062								MICP WATER QSM				
					ICB					0			
	1034063								MICP WATER QSM				
					ICSA					0			
	1034064								MICP WATER QSM				
					ICSAB					0			
	1034065								MICP WATER QSM				
					ICVLL					0			
	1034066								MICP WATER QSM				
					CCV1					0			
	1034067								MICP WATER QSM				
					CCV2					0			
	1034068								MICP WATER QSM				
					CCB					0			
	1032232								ICP TOTAL QSM 5.0				
					LCSW					81955			
	1032231								ICP TOTAL QSM 5.0				
					MBW					81955			
163509	1032214		7/30/2021	14:05			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ICP TOTAL QSM 5.0		GW	4	
		IDW 48/49								81955			
	1035212								ICP TOTAL QSM 5.0				
					L	1032214							
	1032233		7/30/2021	14:05					ICP TOTAL QSM 5.0				
		IDW 48/49			DUP	1032214				81955			
	1032234		7/30/2021	14:05					ICP TOTAL QSM 5.0				
		IDW 48/49			MSW	1032214				81955			
	1034069								MICP WATER QSM				
					CCV1					0			
	1034070								MICP WATER QSM				
					CCV2					0			
	1034071								MICP WATER QSM				
					CCB					0			
	1032235		7/30/2021	14:05					ICP TOTAL QSM 5.0				
		IDW 48/49			MSDW	1032234				81955			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpC82F.tmp

MICP WATER QSM Analytical Run
194081 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1034072						ICP TOTAL QSM 5.0				
				PDSW 1032214				0			
	1034073						MICP WATER QSM				
				CCV1				0			
	1034074						MICP WATER QSM				
				CCV2				0			
	1034075						MICP WATER QSM				
				CCB				0			

23 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MICP WATER QSM K&Na Analytical Run
194082 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1034044								MICP WATER QSM K&Na				
					ICV					0			
	1034045								MICP WATER QSM K&Na				
					ICVLL					0			
	1034046								MICP WATER QSM K&Na				
					ICB					0			
	1034047								MICP WATER QSM K&Na				
					ICSA					0			
	1034048								MICP WATER QSM K&Na				
					ICSAB					0			
	1034050								MICP WATER QSM K&Na				
					CCV1					0			
	1034051								MICP WATER QSM K&Na				
					CCV2					0			
	1034052								MICP WATER QSM K&Na				
					CCB					0			
	1032227								ICP K TOTAL QSM 5.0				
					LCSW					81954			
	1032227								ICP NA TOTAL QSM 5.0				
					LCSW					81954			
	1032226								ICP K TOTAL QSM 5.0				
					MBW					81954			
	1032226								ICP NA TOTAL QSM 5.0				
					MBW					81954			
163509	1032214		7/30/2021	14:05			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ICP K TOTAL QSM 5.0		GW	4	
		IDW 48/49								81954			
163509	1032214		7/30/2021	14:05			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ICP NA TOTAL QSM 5.0		GW	4	
		IDW 48/49								81954			
	1032228		7/30/2021	14:05					ICP K TOTAL QSM 5.0				
		IDW 48/49			DUP	1032214				81954			
	1032228		7/30/2021	14:05					ICP NA TOTAL QSM 5.0				
		IDW 48/49			DUP	1032214				81954			
	1032229		7/30/2021	14:05					ICP K TOTAL QSM 5.0				
		IDW 48/49			MSW	1032214				81954			
	1032229		7/30/2021	14:05					ICP NA TOTAL QSM 5.0				
		IDW 48/49			MSW	1032214				81954			
	1034053								MICP WATER QSM K&Na				
					CCV1					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpF1F0.tmp

MICP WATER QSM K&Na Analytical Run
194082 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1034054						MICP WATER QSM K&Na				
				CCV2				0			
	1034055						MICP WATER QSM K&Na				
				CCB				0			
	1032230		7/30/2021 14:05				ICP K TOTAL QSM 5.0				
		IDW 48/49		MSDW	1032229			81954			
	1032230		7/30/2021 14:05				ICP NA TOTAL QSM 5.0				
		IDW 48/49		MSDW	1032229			81954			
	1034057						MICP WATER QSM K&Na				
				CCV1				0			
	1034058						MICP WATER QSM K&Na				
				CCV2				0			
	1034059						MICP WATER QSM K&Na				
				CCB				0			
	1035205						ICP K TOTAL QSM 5.0				
				L	1032214						
	1035206						ICP NA TOTAL QSM 5.0				
				L	1032214						
	1035207						ICP K TOTAL QSM 5.0				
				PDSW	1032214						
	1035208						ICP NA TOTAL QSM 5.0				
				PDSW	1032214						

30 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpF1F0.tmp

MERCURY QSM 5.0 Analytical Run
194190 on 8/5/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1034237							MERCURY QSM 5.0				
				ICV					0			
	1034238							MERCURY QSM 5.0				
				ICB					0			
	1034239							MERCURY QSM 5.0				
				CCV					0			
	1034240							MERCURY QSM 5.0				
				CCB					0			
	1032180							MERCURY TOTAL QSM 5.0				
				LCSW					81952			
	1032179							MERCURY TOTAL QSM 5.0				
				MBW					81952			
	1034241							MERCURY QSM 5.0				
				CCV					0			
	1034242							MERCURY QSM 5.0				
				CCB					0			
163429	1030878		7/27/2021 16:40			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-54	MERCURY TOTAL QSM 5.0		GW	**4**	
		IDW-54							81952			
	1032181		7/27/2021 16:40					MERCURY TOTAL QSM 5.0				
		IDW-54		DUP	1030878				81952			
163509	1032214		7/30/2021 14:05			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	MERCURY TOTAL QSM 5.0		GW	**4**	
		IDW 48/49							81952			
	1032182		7/27/2021 16:40					MERCURY TOTAL QSM 5.0				
		IDW-54		MSW	1030878				81952			
	1032183		7/27/2021 16:40					MERCURY TOTAL QSM 5.0				
		IDW-54		MSDW	1032182				81952			
	1034243							MERCURY QSM 5.0				
				CCV					0			
	1034244							MERCURY QSM 5.0				
				CCB					0			

15 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpE35D.tmp

PrepWrkSht2
on 8/9/2021

Prep Batch: **81955**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	1032231	MBW	0	ICP TOTAL QSM 5.0			LIQUID				
	1032232	LCSW	0	ICP TOTAL QSM 5.0			LIQUID				
163509	1032214			ICP TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	IDW 48/49	GROUND WATER	7/30/21	14:05	8/12/21	4
	1032233	DUP	1032214	ICP TOTAL QSM 5.0		IDW 48/49	GROUND WATER	7/30/21	14:05		
	1032234	MSW	1032214	ICP TOTAL QSM 5.0		IDW 48/49	GROUND WATER	7/30/21	14:05		
	1032235	MSDW	1032234	ICP TOTAL QSM 5.0		IDW 48/49	GROUND WATER	7/30/21	14:05		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpEC85.tmp

PrepWrkSht2
on 8/9/2021

Prep Batch: **81954**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	1032226	MBW	0	ICP K TOTAL QSM 5.0			LIQUID				
	1032226	MBW	0	ICP NA TOTAL QSM 5.0			LIQUID				
	1032227	LCSW	0	ICP K TOTAL QSM 5.0			LIQUID				
	1032227	LCSW	0	ICP NA TOTAL QSM 5.0			LIQUID				
163509	1032214			ICP K TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	IDW 48/49	GROUND WATER	7/30/21	14:05	8/12/21	4
	1032214			ICP NA TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	IDW 48/49	GROUND WATER	7/30/21	14:05	8/12/21	4
	1032228	DUP	1032214	ICP K TOTAL QSM 5.0		IDW 48/49	GROUND WATER	7/30/21	14:05		
	1032228	DUP	1032214	ICP NA TOTAL QSM 5.0		IDW 48/49	GROUND WATER	7/30/21	14:05		
	1032229	MSW	1032214	ICP K TOTAL QSM 5.0		IDW 48/49	GROUND WATER	7/30/21	14:05		
	1032229	MSW	1032214	ICP NA TOTAL QSM 5.0		IDW 48/49	GROUND WATER	7/30/21	14:05		
	1032230	MSDW	1032229	ICP K TOTAL QSM 5.0		IDW 48/49	GROUND WATER	7/30/21	14:05		
	1032230	MSDW	1032229	ICP NA TOTAL QSM 5.0		IDW 48/49	GROUND WATER	7/30/21	14:05		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp335A.tmp

PrepWrkSht2
on 8/16/2021

Prep Batch: **81952**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	1032179	MBW	0	MERCURY TOTAL QSM 5.0			LIQUID			
	1032180	LCSW	0	MERCURY TOTAL QSM 5.0			LIQUID			
163429	1030878			MERCURY TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	IDW-54	GROUND WATER	7/27/21 16:40	8/9/21	4
163509	1032214			MERCURY TOTAL QSM 5.0	WESTON SOLUTIONS, INC.	IDW 48/49	GROUND WATER	7/30/21 14:05	8/12/21	4
	1032181	DUP	1030878	MERCURY TOTAL QSM 5.0		IDW-54	GROUND WATER	7/27/21 16:40		
	1032182	MSW	1030878	MERCURY TOTAL QSM 5.0		IDW-54	GROUND WATER	7/27/21 16:40		
	1032183	MSDW	1032182	MERCURY TOTAL QSM 5.0		IDW-54	GROUND WATER	7/27/21 16:40		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp18CC.tmp

Metals Digestion Bench Sheet

Program: QSM
*Matrix: liquid

Prep Methods:
200.2= ICP/GFAA Liquids
3010= ICP Liquids
3020= GFAA Liquids
3005= Sb Liquids
3050= ICP/GFAA Solids
7060/7740= GFAA, As & Se Liquids

Prep Batch #:	81955
Prep Method:	200.2
Analyst:	NAH
Date:	08/02/2021
Start Time:	09:56

Prep Analyst: NAH
Balance ID:

End Date: 08/02/2021
End Time: 20:42

Reagent:	Ref. #
Nitric Acid:	AB.700
Hydrochloric Acid:	AB.702
Hydrogen Peroxide:	

Digestion Tube Lot #: 3375
Block Used: D2
Cell Position for Temp. Check: 60
Initial-DigestionTemp (ºC,corrected): 89
Final-Digestion Temp (ºC,corrected): 94

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
1032231	(MB)			50.0	50
1032232	(LCS)			50.0	50
1032214				50.0	50
	Comments:				50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
1032233	(DUP)			50.0	50
1032234	(MS)	Parent Sample		50.0	50
1032235	(MSD)	1032214		50.0	50
	(DUP)				50
	(MS)	Parent Sample			50
	(MSD)				50
Leave >>	(DUP) if applicable				50
blank	(MS)	Parent Sample			50
if N/A	(MSD)				50

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

MS/MSD Spike Amount (ml)	Spike Ref. #
0.2	M14776
0.5	M14887
0.5	M14834
0.1	M14684

LCS Spike Amount (ml)	Spike Ref. #
0.2	M14776
0.5	M14887
0.5	M14834
0.1	M14684

Reviewed x

08/09/202112:06

Metals Digestion Bench Sheet

Program: QSM
*Matrix: liquid

Prep Methods:
200.2= ICP/GFAA Liquids
3010= ICP Liquids
3020= GFAA Liquids
3005= Sb Liquids
3050= ICP/GFAA Solids
7060/7740= GFAA, As & Se Liquids

Prep Batch #:	81954
Prep Method:	200.2
Analyst:	NAH
Date:	08/02/2021
Start Time:	09:56

Prep Analyst: NAH
Balance ID:

End Date: 08/02/2021
End Time: 20:42

Reagent:	Ref. #
Nitric Acid:	AB.700
Hydrochloric Acid:	AB.702
Hydrogen Peroxide:	

Digestion Tube Lot #: 3375
Block Used: D2
Cell Position for Temp. Check: 60
Initial-DigestionTemp (ºC,corrected): 89
Final-Digestion Temp (ºC,corrected): 94

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
1032226	(MB)			50.0	50
1032227	(LCS)			50.0	50
1032214				50.0	50
	Comments:				50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
1032228	(DUP)			50.0	50
1032229	(MS)	Parent Sample		50.0	50
1032230	(MSD)	1032214		50.0	50
	(DUP)				50
	(MS)	Parent Sample			50
	(MSD)				50
Leave >>	(DUP) if applicable				50
blank	(MS)	Parent Sample			50
if N/A	(MSD)				50

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

MS/MSD Spike Amount (ml)	Spike Ref. #
0.2	M14776
0.5	M14887
0.5	M14834
0.1	M14684

LCS Spike Amount (ml)	Spike Ref. #
0.2	M14776
0.5	M14887
0.5	M14834
0.1	M14684

Reviewed x

08/09/202112:03

FMT12-03

Mercury Digestion Bench Sheet

(Prep Methods 7470A & 7471A)

CCV ID: M14980
ICV/LCSW ID: M14981

*Matrix: GW
Balance ID:

Prep Batch #:	81952
Prep Method:	7470a
Analyst:	MDS
Date:	08/03/2021
Start Time:	14:20

7470A= Hg Liquids
7471A= Hg Solids

End Date: 08/03/2021
End Time: 16:20

Digestion Tube Lot #: 6221041
Block Used: B
Cell Position for Temp. Check: C-4
Initial-DigestionTemp (ºC,corrected): 92.4
Final-Digestion Temp (ºC,corrected): 92.6
Additional KMnO4 added (ml):
Aqua Regia added (ml)
Calibration Stds: M14979

Reagent:	Ref. #
HNO3:	AB.705
H2SO4:	AB.696
NaCl/Hydrox.SO4:	M14985
KMnO4:	M14982
K2S2O8:	M14983
Aqua-Regia:	

	Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
	1032179	(MB)			25.0	25
	1032180	(LCS)			25.0	25
	1030878				25.0	25
	1032214	**Comments:**			25.0	25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
	1032181	(DUP) if applicable			25.0	25
	1032182	(MS)	Parent Sample		25.0	25
	1032183	(MSD)	1030878		25.0	25
Leave >>		(DUP) if applicable				25
blank		(MS)	Parent Sample			25
		(MSD)				25
		(DUP) if applicable				25
		(MS)	Parent Sample			25
if N/A		(MSD)				25

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

A:

Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #
0.5	100	M14981

B:

Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #

Reviewed By/Date: X

iCAP 6000/6500 Data Review Checklist	Analysis Date: 8/3/21	Data File: DODResalt	Date of review: 8/9/21
Cal Std ID: M14811 LIMS #: 19408281	Analyst:	Reviewer: MOS	Approved? Yes No
Is Audit Trail turned on or Manual Manipulations addressed? Yes No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)			
Prep Batch Check			

QC Parameters : 6010 / 200.7 / QSM / Other	YES	NO	YES	NO	Comments:
1) Calibration linearity: r ≥ 0.995 / r > 0.998	✓		✓		
2) ICV: ~~90-110%~~ / 95-105%	✓		✓		
2) ICVLL: 70-130% / 80-120%	✓		✓		
3) ICB: < 3X IDL / ≤LOD / <LOQ	✓		✓		
4) ICSA: < ABS LOD	✓		✓		
5) ICSAB: 80-120%	✓		✓		
6) MRL: 70-130% / 80-120%	✓		✓		
7) MDL Check: >LOD					
8) CCV1/CCB1 (CCV: 90-110%)	✓		✓		
9) CCV2/CCB2 (CCB: < 3X IDL / <LOD / <LOQ)					
10) CCV3/CCB3					
11) CCV4/CCB4					
12) CCV5/CCB5					

Preparation Batch Parameters	YES	NO	YES	NO	Comments:
Prep Batch ID#: 81954 Dig. Meth. 200.2	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD or ≤ ½ RL	✓	✓	✓	✓	Be >LOD <½ RL "B"
Spiked samples in batch:					
a) 1033214 matrix = GW	✓	✓	✓	✓	MS, MSD K, pump fail Al "P"
b) _____ matrix = _____					
c) _____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#: A	✓	✓	✓	✓	Fe, Mn - "M"
Prep Batch ID#: _____ Dig. Meth. _____					Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Zn, Ag
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) _____ matrix = _____					
b) _____ matrix = _____					
c) _____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#: _____					
Prep Batch ID#: _____ Dig. Meth. _____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) _____ matrix = _____					
b) _____ matrix = _____					
c) _____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#: _____					
Prep Batch ID#: _____ Dig. Meth. _____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) _____ matrix = _____					
b) _____ matrix = _____					
c) _____ matrix = _____					

GFAA / FLAA / CVAA Data Review checklist		Method: 200.9	7000 series AA	245.1 & 245.2	245.7	7470a / 7471a
Instrumentation:	THERMO M SERIES AA			Hydra II Hg ANALYZER		
Analysis Date: 8/4/21	Data File: 080421W		Date Review: 8/5/21	Analyte: Hg		
Cal Std ID: M14979	LIMS # : 194190	Analyst: MDS	Reviewer:	Approved? Yes	No	
Prep Batch Check ✓						

Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)

Calibration Parameters -	YES	NO	YES	NO	Comments:
1) Calibration linearity - r > 0.995	✓		✓		
2) ICV: 90-110% 95-105%	✓		✓		
2) ICVLL: 70-130% 80-120%					
3) ICB: <IDL / <LOD / <LOQ / <½ RL	✓		✓		
6) MRL: 70-130%					
7) CCV1/CCB1- (CCV: 90-110% / 80-120%)	✓		✓		
8) CCV2/CCB2 (CCB: <IDL / <LOD / <LOQ / <½ RL)					
9) CCV3/CCB3					
10) CCV4/CCB4					
11) CCV5/CCB5					
Preparation Batch Parameters	**YES**	**NO**	**YES**	**NO**	
Prep Batch ID#: 81952 Dig. Meth. 7470a	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD / <2.2X LOD / ≤ ½RL	✓		✓		
Spiked samples in batch:					
a) 1030878 matrix = Lw	✓	✓	✓	✓	Dup invalid
b)_____ matrix =_____					
c)_____ matrix =_____					
d)_____ matrix =_____					
e)_____ matrix =_____					
PDS: ±15% / 20% / 25% Sample#_____					
MSA Performed? Yes No					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a)_____ matrix =_____					
b)_____ matrix =_____					
c)_____ matrix =_____					
d)_____ matrix =_____					
e)_____ matrix =_____					
PDS: ±15% / 20% / 25% Sample#_____					
MSA Performed? Yes No					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a)_____ matrix =_____					
b)_____ matrix =_____					
c)_____ matrix =_____					
d)_____ matrix =_____					
e)_____ matrix =_____					
PDS: ±15% / 20% / 25% Sample#_____					

CT Laboratories, LLC

ICP-6500 Instrument Run Logbook

Date	Time: Start / End	Analyst	Analytes / Sequence I.D.	Method	LIMS # or Sample Description	Nebulizer Pressure (kpa)	Calib. Std ID	Version	Comments
7/6/2021	0957 / 2104	JA	070621	DOD Cal u	193248 193286 193285 193288	280	m14811 m14820 m14821	V4414 V4413	m14822 m14823 m14824
7/7/21	1112 / 2224	JA	070721	DOD Cal u	193350 193286 193351 193224 193349	280	m14811 m14820 m14821	V4416	m14822 m14823 m14824
7/13/21	1422 / 0650	JA	071321	DOD Cal u	193440 193443 193441 193380 193447, 193444, 42 193439, 436 193428, 29 193438, 35, 37	280	m14942 m14944 m14943	V4418 V4417 V4425	m14811 m14823 m14824
7/14/21	0719 / 2015	JA	071421	DOD Cal u	193514 193530 193524 193533 193442 193531 193529 193534 193532, 24 193548 193528	280	m14942 m14944 m14943	V4420 V4419 V4422	m14811 m14823 m14824
7/19/21	0834 / 7/20 2231	JA	071921	DOD Cal u 193470	193439 193573 193607 193676, 72 193661 193652 193617 193667, 68 193689 193671 193665 193677 193643 193668 193666 193669	280	m14942 m14944 m14943	V4426 V4424	m14811 m14823 m14824
7/26/21	0847 / 6/27 1801	JA	072621	DOD Cal u	193678 193868 193532 193820 193535 193741 193737 193818 193814 193819 193822 193815	270	m14942 m14944 m14943	V4429 V4428	m14811 m14823 m14824
7/28/21	0705 / 1213	JA	072621B	DOD Cal u	193826 193827 193828 193823 193829 193830, 193827, 193824 193824 193817 193860 193825 193860 193535 193975 193991 193937 193975 194015, 14 193977 194023 193930 194018	270	m14942 m14944 m14943	V4430	m14811 m14823 m14824
7/29/21	1331 / 7/30 1228	JA	072921	DOD Cal u	194019, 20, 193977 194124 194056 194129 194138 194082, 81 194053 194118 194116 194080 194052 194080 194079 194055 194058	270	m14942 m14944 m14943	V4431	m14811 m14823 m14824
8/3/21	0834 / 8/4 0523	JA	080321	DOD Cal u		270	m14942 m14944 m14943	V4434 V4433 V4435	m14811 m14823 m14824
8/5/21	/								
	/								
	/								

Comments: _____

_____

Checked By / Date: _____

CT Laboratories

Mercury Analyzer Instrument Run Log

Instrument ID: Cetac M-6000A

Analysis Date	Start Time	End Time	Analyst	LIMS Run # (s)	Method File ID #	Cal. Std. ID #	Lamp Current (mA)	Analysis Tube Lot #	Comments
8/4/21	1104	1533	MAS	194191, 194192, 194193, 194194 194186, 194187, 194188, 194189, 194190,	080421W	M14979	—	J500203-4932	$SnCl_2$: M14986
8/11/21	0843	1103	MDS	194353, 194355, 194356	081121S	M14989	5.784	J500203-4932	$SnCl_2$: M14996
8/11/21	1139	1358	MDS	194362, 194360, 194361, 194359	081121W	M14989	5.854	J500203-4932	$SnCl_2$: M14996

Reviewed By/Date:_____

Type	Date/Time	Message	User name	Application	Sequence Name
	08/03/2021 08:34:29	Autosampler Run Started	NAH	Analyst	
	08/03/2021 08:34:29	Sequence Started	NAH	Analyst	S_DOD Calibration
	08/03/2021 08:34:50	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	08/03/2021 08:42:40	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	08/03/2021 08:50:26	Running CalStd3=1 (3)	NAH	Analyst	S_DOD Calibration
	08/03/2021 08:58:14	Running CalStd4=5 (4)	NAH	Analyst	S_DOD Calibration
	08/03/2021 09:06:04	Running CalStd5=10 (5)	NAH	Analyst	S_DOD Calibration
	08/03/2021 09:13:56	Running CalStd6=20 (6)	NAH	Analyst	S_DOD Calibration
	08/03/2021 09:21:41	Running CalStd7=50 (7)	NAH	Analyst	S_DOD Calibration
	08/03/2021 09:29:23	Running CalStd8=100 (8)	NAH	Analyst	S_DOD Calibration
	08/03/2021 09:37:02	Running CalStd9=1000 (9)	NAH	Analyst	S_DOD Calibration
	08/03/2021 09:44:02	Running CalStd10=10000 (10)	NAH	Analyst	S_DOD Calibration
	08/03/2021 09:51:51	Running CalStd12=100K (11)	NAH	Analyst	S_DOD Calibration
	08/03/2021 10:00:14	Running CalStd13=100000 (12)	NAH	Analyst	S_DOD Calibration
	08/03/2021 10:08:14	Running CalStd14=500000 (13)	NAH	Analyst	S_DOD Calibration
	08/03/2021 10:16:42	Running CalibStd15=1000k (14)	NAH	Analyst	S_DOD Calibration
	08/03/2021 10:27:20	Running Ag Ba 1000, 50000 (15)	NAH	Analyst	S_DOD Calibration
	08/03/2021 10:35:54	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	08/03/2021 10:43:52	Running icv (16)	NAH	Analyst	S_DOD Calibration
	08/03/2021 10:51:18	Running icv (16)	NAH	Analyst	S_DOD Calibration
	08/03/2021 10:58:44	Running ICVLL (24)	NAH	Analyst	S_DOD Calibration
	08/03/2021 11:06:20	Running icb (17)	NAH	Analyst	S_DOD Calibration
	08/03/2021 11:14:08	Running icb (17)	NAH	Analyst	S_DOD Calibration
	08/03/2021 11:21:57	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	08/03/2021 11:29:40	Running ICSA (20)	NAH	Analyst	S_DOD Calibration
	08/03/2021 11:38:04	Running ICSAB (21)	NAH	Analyst	S_DOD Calibration
	08/03/2021 11:45:51	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	08/03/2021 11:54:03	Running ICVLL ag (1)	NAH	Analyst	S_DOD Calibration
	08/03/2021 12:01:51	Running 1032122 (2)	NAH	Analyst	S_DOD Calibration
	08/03/2021 12:10:00	Running msw1032122 (3)	NAH	Analyst	S_DOD Calibration
	08/03/2021 12:18:29	Running msdw1032122 (4)	NAH	Analyst	S_DOD Calibration
	08/03/2021 12:26:22	Running 1032132 (5)	NAH	Analyst	S_DOD Calibration
	08/03/2021 12:34:34	Running 1032133 (6)	NAH	Analyst	S_DOD Calibration
	08/03/2021 12:43:44	Running 1032134 (7)	NAH	Analyst	S_DOD Calibration
	08/03/2021 12:51:52	Running 1032135 (8)	NAH	Analyst	S_DOD Calibration
	08/03/2021 13:00:07	Running 1032136 (9)	NAH	Analyst	S_DOD Calibration
	08/03/2021 13:07:50	Running lcsw81937 (10)	NAH	Analyst	S_DOD Calibration
	08/03/2021 13:15:32	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	08/03/2021 13:22:27	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	08/03/2021 13:29:37	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	08/03/2021 13:37:26	Running mbw81937 (11)	NAH	Analyst	S_DOD Calibration
	08/03/2021 13:40:35	Closing will close the method and all associated samples.	NAH	Analyst	
	08/03/2021 13:40:40	Closing will close the method and all associated samples.	NAH	Analyst	
	08/03/2021 13:40:45	Closing will close the method and all associated samples.	NAH	Analyst	
	08/03/2021 13:45:12	Running 1031855 (12)	NAH	Analyst	S_DOD Calibration
	08/03/2021 13:52:41	Running msw1031855 (13)	NAH	Analyst	S_DOD Calibration
	08/03/2021 14:00:11	Running msdw1031855 (14)	NAH	Analyst	S_DOD Calibration
	08/03/2021 14:07:41	Running pdsw1031855 (15)	NAH	Analyst	S_DOD Calibration
	08/03/2021 14:15:21	Running lcsw81930 (16)	NAH	Analyst	S_DOD Calibration
	08/03/2021 14:23:01	Running mbw81930 (17)	NAH	Analyst	S_DOD Calibration
	08/03/2021 14:28:25	Closing will close the method and all associated samples.	NAH	Analyst	
	08/03/2021 14:30:44	Running 1031433 (18)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	08/03/2021 14:39:00	Running 1031731 (19)	NAH	Analyst	S_DOD Calibration
	08/03/2021 14:46:40	Running 1031733 (20)	NAH	Analyst	S_DOD Calibration
	08/03/2021 14:54:41	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	08/03/2021 15:01:13	Closing will close the method and all associated samples.	NAH	Analyst	
	08/03/2021 15:01:32	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	08/03/2021 15:08:38	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	08/03/2021 15:16:23	Running 1031735 (21)	NAH	Analyst	S_DOD Calibration
	08/03/2021 15:24:30	Running msw1031735 (22)	NAH	Analyst	S_DOD Calibration
	08/03/2021 15:32:15	Running msdw1031735 (23)	NAH	Analyst	S_DOD Calibration
	08/03/2021 15:40:01	Running pdsw1031735 (24)	NAH	Analyst	S_DOD Calibration
	08/03/2021 15:47:44	Running lcss81931 (25)	NAH	Analyst	S_DOD Calibration
	08/03/2021 15:55:01	Running mbs81931 (26)	NAH	Analyst	S_DOD Calibration
	08/03/2021 16:02:43	Running 1031441 (27)	NAH	Analyst	S_DOD Calibration
	08/03/2021 16:10:19	Running mss1031441 (28)	NAH	Analyst	S_DOD Calibration
	08/03/2021 16:17:35	Running msds1031441 (29)	NAH	Analyst	S_DOD Calibration
	08/03/2021 16:24:54	Running pdss1031441 (30)	NAH	Analyst	S_DOD Calibration
	08/03/2021 16:32:20	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	08/03/2021 16:39:11	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	08/03/2021 16:46:16	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	08/03/2021 16:54:01	Running 1031633 (31)	NAH	Analyst	S_DOD Calibration
	08/03/2021 17:01:32	Running 1031635 (32)	NAH	Analyst	S_DOD Calibration
	08/03/2021 17:09:29	Running 1031729 (33)	NAH	Analyst	S_DOD Calibration
	08/03/2021 17:17:26	Running lcsw81956 (34)	NAH	Analyst	S_DOD Calibration
	08/03/2021 17:25:04	Running mbw81956 (35)	NAH	Analyst	S_DOD Calibration
	08/03/2021 17:32:48	Running 1031915 (36)	NAH	Analyst	S_DOD Calibration
	08/03/2021 17:41:13	Running 1032063 (37)	NAH	Analyst	S_DOD Calibration
	08/03/2021 17:49:32	Running 1032064 (38)	NAH	Analyst	S_DOD Calibration
	08/03/2021 17:57:51	Running 1032065 (39)	NAH	Analyst	S_DOD Calibration
	08/03/2021 18:06:10	Running 1032073 (40)	NAH	Analyst	S_DOD Calibration
	08/03/2021 18:14:28	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	08/03/2021 18:21:19	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	08/03/2021 18:28:25	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	08/03/2021 18:36:10	Running 1032076 (41)	NAH	Analyst	S_DOD Calibration
	08/03/2021 18:44:29	Running 1032077 (42)	NAH	Analyst	S_DOD Calibration
	08/03/2021 18:52:48	Running msw1032277 (43)	NAH	Analyst	S_DOD Calibration
	08/03/2021 19:00:39	Running msdw1032277 (44)	NAH	Analyst	S_DOD Calibration
	08/03/2021 19:08:34	Running pdsw1032277 (45)	NAH	Analyst	S_DOD Calibration
	08/03/2021 19:16:21	Running 1032279 (46)	NAH	Analyst	S_DOD Calibration
	08/03/2021 19:24:16	Running lcsw81957 (47)	NAH	Analyst	S_DOD Calibration
	08/03/2021 19:31:54	Running mbw81957 (48)	NAH	Analyst	S_DOD Calibration
	08/03/2021 19:39:38	Running 1032118 (49)	NAH	Analyst	S_DOD Calibration
	08/03/2021 19:47:43	Running msw1032118 (50)	NAH	Analyst	S_DOD Calibration
	08/03/2021 19:55:30	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	08/03/2021 20:02:20	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	08/03/2021 20:09:25	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	08/03/2021 20:17:10	Running msdw1032118 (51)	NAH	Analyst	S_DOD Calibration
	08/03/2021 20:24:57	Running pdsw1032118 (52)	NAH	Analyst	S_DOD Calibration
	08/03/2021 20:32:37	Running 1032119 (53)	NAH	Analyst	S_DOD Calibration
	08/03/2021 20:40:34	Running 1032120 (54)	NAH	Analyst	S_DOD Calibration
	08/03/2021 20:48:42	Running 1032121 (55)	NAH	Analyst	S_DOD Calibration
	08/03/2021 20:56:52	Running 1032123 (56)	NAH	Analyst	S_DOD Calibration
	08/03/2021 21:04:44	Running 1032124 (57)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	08/03/2021 21:12:47	Running 1032125 (58)	NAH	Analyst	S_DOD Calibration
	08/03/2021 21:20:52	Running 1032126 (59)	NAH	Analyst	S_DOD Calibration
	08/03/2021 21:28:55	Running 1032127 (60)	NAH	Analyst	S_DOD Calibration
	08/03/2021 21:36:52	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	08/03/2021 21:43:41	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	08/03/2021 21:50:47	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	08/03/2021 21:58:32	Running 1032128 (61)	NAH	Analyst	S_DOD Calibration
	08/03/2021 22:06:37	Running 1032129 (62)	NAH	Analyst	S_DOD Calibration
	08/03/2021 22:14:43	Running 1032130 (63)	NAH	Analyst	S_DOD Calibration
	08/03/2021 22:22:28	Running 1032131 (64)	NAH	Analyst	S_DOD Calibration
	08/03/2021 22:30:34	Running lcsw81954 (65)	NAH	Analyst	S_DOD Calibration
	08/03/2021 22:38:11	Running mbw81954 (66)	NAH	Analyst	S_DOD Calibration
	08/03/2021 22:45:55	Running 1032214 (67)	NAH	Analyst	S_DOD Calibration
	08/03/2021 22:53:49	Running l1032214 (68)	NAH	Analyst	S_DOD Calibration
	08/03/2021 23:01:52	Running dup1032214 (69)	NAH	Analyst	S_DOD Calibration
	08/03/2021 23:09:46	Running msw1032214 (70)	NAH	Analyst	S_DOD Calibration
	08/03/2021 23:17:11	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	08/03/2021 23:24:01	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	08/03/2021 23:31:06	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	08/03/2021 23:38:51	Running msdw1032214 (71)	NAH	Analyst	S_DOD Calibration
	08/03/2021 23:46:17	Running pdsw1032214 (72)	NAH	Analyst	S_DOD Calibration
	08/03/2021 23:53:48	Running 1032780 (73)	NAH	Analyst	S_DOD Calibration
	08/04/2021 00:01:51	Running 1032788 (74)	NAH	Analyst	S_DOD Calibration
	08/04/2021 00:09:43	Running 1032789 (75)	NAH	Analyst	S_DOD Calibration
	08/04/2021 00:17:34	Running 1032790 (76)	NAH	Analyst	S_DOD Calibration
	08/04/2021 00:25:26	Running 1032791 (77)	NAH	Analyst	S_DOD Calibration
	08/04/2021 00:33:17	Running msw1032791 (78)	NAH	Analyst	S_DOD Calibration
	08/04/2021 00:40:56	Running msdw1032791 (79)	NAH	Analyst	S_DOD Calibration
	08/04/2021 00:48:21	Running lcss81968 (80)	NAH	Analyst	S_DOD Calibration
	08/04/2021 00:55:38	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	08/04/2021 01:02:30	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	08/04/2021 01:09:36	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	08/04/2021 01:17:24	Running mbs81968 (81)	NAH	Analyst	S_DOD Calibration
	08/04/2021 01:25:10	Running 1032281 (82)	NAH	Analyst	S_DOD Calibration
	08/04/2021 01:32:55	Running mss1032281 (83)	NAH	Analyst	S_DOD Calibration
	08/04/2021 01:40:10	Running msds1032281 (84)	NAH	Analyst	S_DOD Calibration
	08/04/2021 01:47:22	Running pdss1032281 (85)	NAH	Analyst	S_DOD Calibration
	08/04/2021 01:54:56	Running 1032282 (86)	NAH	Analyst	S_DOD Calibration
	08/04/2021 02:02:38	Running lcsw (87)	NAH	Analyst	S_DOD Calibration
	08/04/2021 02:10:22	Running mbw (88)	NAH	Analyst	S_DOD Calibration
	08/04/2021 02:18:07	Running 1031587 (89)	NAH	Analyst	S_DOD Calibration
	08/04/2021 02:26:29	Running msw1031587 (90)	NAH	Analyst	S_DOD Calibration
	08/04/2021 02:34:20	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	08/04/2021 02:41:12	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	08/04/2021 02:48:19	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	08/04/2021 02:56:06	Running 1031634 (91)	NAH	Analyst	S_DOD Calibration
	08/04/2021 03:04:36	Running 1033037 (92)	NAH	Analyst	S_DOD Calibration
	08/04/2021 03:12:39	Running msw1033037 (93)	NAH	Analyst	S_DOD Calibration
	08/04/2021 03:20:17	Running msdw1033037 (94)	NAH	Analyst	S_DOD Calibration
	08/04/2021 03:27:54	Running 1033040 (95)	NAH	Analyst	S_DOD Calibration
	08/04/2021 03:35:57	Running 1033041 (96)	NAH	Analyst	S_DOD Calibration
	08/04/2021 03:43:59	Running 1033042 (97)	NAH	Analyst	S_DOD Calibration

Standard Log #:	M14982	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/03/2021	Expiration Date:	09/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14983	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/03/2021	Expiration Date:	09/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14984	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/03/2021	Expiration Date:	08/04/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14985	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/04/2021	Expiration Date:	09/04/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14986	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/04/2021	Expiration Date:	09/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14979	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/03/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14980	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/03/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14981	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/03/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14978	Vendor:	Enviromental Express
Analyst:	BMM	Chemical:	Acid Washed TCLP Filters
Date Received:	05/20/2021	Lot #:	400175-1116-T
Expiration Date (if any):		Catalog #:	FG77150MM

Standard Log #:	M14973	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/27/2021	Expiration Date:	08/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14974	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/27/2021	Expiration Date:	08/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14975	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/27/2021	Expiration Date:	07/28/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14976	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/29/2021	Expiration Date:	08/29/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14977	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/29/2021	Expiration Date:	08/29/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14970	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/27/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14971	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/27/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14972	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/27/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14966	Vendor:	CPI
Analyst:	NAH	Chemical:	Boron 10,000 mg/L
Date Received:	07/27/2021	Lot #:	1101946-16
Expiration Date (if any):	01/2023	Catalog #:	S4400-100074

Standard ID#:	M14967	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10000 mk/L
Date Received:	07/27/2021	Lot #:	1109477-26
Expiration Date (if any):	01/2023	Catalog #:	4400-10M671

Standard ID#:	M14968	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	07/27/2021	Lot #:	1047570-64
Expiration Date (if any):	01/2023	Catalog #:	S4400-1000504F

Standard ID#:	M14969	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000
Date Received:	07/27/2021	Lot #:	1055526-35
Expiration Date (if any):	01/2023	Catalog #:	4400-10M521

		Instrument:	CETAC
Standard Log #:	M14963	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/21/2021	Expiration Date:	08/21/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

Standard Log #:	M14964	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/22/2021	Expiration Date:	07/22/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14964. Dilute to 20 L and mix.		

Standard Log #:	M14965	Reagent:	TCLP 1 N HCL
Analyst:	BMM		
Prep Date:	07/23/2021	Expiration Date:	07/23/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, added 83 mL HCL AB.704 and brought up to volume.		

Standard Log #:	M14959	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/20/2021	Expiration Date:	08/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14960	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/20/2021	Expiration Date:	08/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14961	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/20/2021	Expiration Date:	07/21/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14962	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/21/2021	Expiration Date:	08/21/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14956	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14957	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14958	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/20/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14955	Vendor:	GFS Chemicals
Analyst:	NAH	Chemical:	AMCO Clear 2.0 NTU
Date Received:	07/16/2021	Lot #:	21150075
Expiration Date (if any):	07/22/2022	Catalog #:	8008

Standard Log #:	M14950	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/14/2021	Expiration Date:	08/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14951	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/14/2021	Expiration Date:	08/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14952	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/14/2021	Expiration Date:	07/15/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14953	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/15/2021	Expiration Date:	08/15/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14954	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/15/2021	Expiration Date:	08/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14947	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14948	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14949	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/14/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14944	Standard:	ICV Std.
Analyst:	nah	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	07/09/2021	Expiration Date:	08/2022
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14874, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **0.5 mL** Mo (1000 mg/L) M14888, **0.5 mL** B (1000 mg/L) M14675, **0.5 mL** Sr (1000 mg/L) M14683, **0.5 mL** Li (1000 mg/L) M14681, **0.5 mL** Sn (1000 mg/L) M14774, **0.5 mL** Ti (1000 mg/L) M14674, **0.5 mL** W (1000 mg/L) XXXXXXX, **0.5 mL** Si (1000 mg/L) M14680, **0.5 mL** S (10000 mg/L) M14570, **0.5 mL** K (10000 mg/L) M14887, and **0.5 mL** Na (10000 mg/L) M14736		

Standard Log #:	M14945	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/12/2021	Expiration Date:	07/12/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14946	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	07/14/2021	Expiration Date:	12/14/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC272 and brought up to volume.		

Standard ID#:	M14939	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	07/09/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14940	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	07/09/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14941	Vendor:	GFS
Analyst:	NAH	Chemical:	AMCO Clear 0.1 ntu
Date Received:	07/12/2021	Lot #:	Returned to manufacturer
Expiration Date (if any):	not used	Catalog #:	not used

		Instrument:	ICP 6500
Standard Log #:	M14942	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	07/09/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14833 and 15 **mL** 10000 mg/L Fe M14676 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M14682 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14943	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	07/09/2021	Expiration Date:	12/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **15 mL** Fe (10,000 mg/L) M14676, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14788, **2.5 mLs Na 10,000 ug/mL** M14736 **,2.5 mLs k 10,000 ug/mL** M14370 **2.5 mLs S 10,000 ug/mL** M14677, **0.5 mls Si 1000 ug/mL** M14735 and brought up to volume with milli-Q .		

Standard Log #:	M14938	Reagent:	TCLP EXTRACTION FLUID #2
Analyst:	BMM	pH:	2.88 ± 0.05
Prep Date:	07/08/2021	Expiration Date:	07/08/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703. Dilute to 20 L and mix.		

Standard Log #:	M14933	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/07/2021	Expiration Date:	08/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14934	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/07/2021	Expiration Date:	08/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14935	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/07/2021	Expiration Date:	07/08/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14936	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/08/2021	Expiration Date:	08/08/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14937	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/08/2021	Expiration Date:	08/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14930	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/07/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14931	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/07/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14932	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/07/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14925	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14926	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14927	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	07/02/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14928	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14929	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14922	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/30/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14923	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/30/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14924	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/30/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14921	Vendor:	LabChem
Analyst:	NAH	Chemical:	Turbidity Standard(Formazin) 4000NT
Date Received:	06/25/2021	Lot #:	L147-07
Expiration Date (if any):	06/08/2022	Catalog #:	LC26290

		Instrument:	ICP 6500
Standard Log #:	M14919	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M14205 0.5 **mL** 10000 mg/L Cu M14199 5.0 **mL** 1000 mg/L Co M14204 5.0 **mL** 1000 mg/L Mo M14888 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14920	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M14196 5.0 **mL** 10000 mg/L Ti M14674 brought up to volume with milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M14916	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/23/2021	Expiration Date:	07/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M14917	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M14200 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14918	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ba, Be, and Sn
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M14772 5.0 **mL** 10000 mg/L Be M14203 5.0 **mL** 10000 mg/L Sn M14774 brought up to volume with milli-Q H_2O.		

Standard Log #:	M14912	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/22/2021	Expiration Date:	07/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14913	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/22/2021	Expiration Date:	07/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14914	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/22/2021	Expiration Date:	06/23/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14915	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/23/2021	Expiration Date:	07/23/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14909	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/22/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14910	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/22/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14911	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/22/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14904	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/16/2021	Expiration Date:	07/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14905	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/16/2021	Expiration Date:	07/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14906	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/16/2021	Expiration Date:	06/17/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14907	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/17/2021	Expiration Date:	07/17/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14908	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/17/2021	Expiration Date:	07/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

Standard Log #:	M14903	Instrument:	ICP 6500
Analyst:	NAH	Standard:	Dissolved MDL Verificaion
Prep Date:	06/16/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	2.7	M14623	1000	0.135
Al	10	M14736	**10000**	.05
As	20	M14621	1000	1
Ba	2	M14772	1000	0.1
Be	1	M14203	1000	0.05
Ca	50	M14740	**10000**	0.25
Cd	0.5	M14201	1000	.025
Co	2.5	M14204	1000	0.125
Cr	5	M14205	**10000**	.025
Cu	10	M14199	**10000**	.05
Fe	40	M14738	**10000**	0.2
Mg	25	M14676	**10000**	0.125
Mn	3	M14200	**10000**	.015
Mo	2.5	M14888	1000	0.125
Ni	3	M14196	1000	0.15
Pb	20	M14202	**10000**	0.1
Sb	10	M14622	1000	0.5
Se	20	M14624	1000	1
Tl	20	M14626	1000	1
V	3	M14198	1000	0.15
Zn	5	M14197	**10000**	0.025
Na	150	M14736	**10000**	0.75
K	150	M14741	**10000**	0.75
B	20	M14675	1000	1
Si	200	M14735	1000	10
Li	10	M14681	1000	0.5
Sr	20	M14775	1000	1
Sn	20	M14774	1000	1
Ti	5	M14674	1000	0.25
S	200	M14773	**10000**	10

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14902	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL spike Soln.
Prep Date:	06/16/2021	Expiration Date:	09//2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M14623	1000	2
Al	800	M14736	**10000**	4
As	40	M14621	1000	2
Ba	20	M14772	1000	1
Be	8	M14203	1000	0.4
Ca	1000	M14740	**10000**	5
Cd	10	M14201	1000	0.5
Co	20	M14204	1000	1
Cr	20	M14205	**10000**	0.1
Cu	20	M14199	**10000**	0.1
Fe	600	M14738	**10000**	3
Mg	1000	M14676	**10000**	5
Mn	20	M14200	**10000**	0.1
Mo	20	M14888	1000	1
Ni	20	M14196	1000	1
Pb	20	M14202	**10000**	0.1
Sb	40	M14622	1000	2
Se	40	M14624	1000	2
Tl	40	M14626	1000	2
V	20	M14198	1000	1
Zn	20	M14197	**10000**	0.1
Na	10000	M14736	**10000**	50
K	10000	M14741	**10000**	50
B	40	M14675	1000	2
Si	200	M14735	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M14773	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14901	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ Solid QSM
Prep Date:	06/16/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M14623	1000	2
Al	800	M14736	**10000**	4
As	40	M14621	1000	2
Ba	40	M14772	1000	2
Be	8	M14203	1000	0.4
Ca	1000	M14740	**10000**	5
Cd	10	M14201	1000	0.5
Co	20	M14204	1000	1
Cr	20	M14205	**10000**	0.1
Cu	20	M14199	**10000**	0.1
Fe	600	M14738	**10000**	3
Mg	1000	M14676	**10000**	5
Mn	20	M14200	**10000**	0.1
Mo	20	M14888	1000	1
Ni	20	M14196	1000	1
Pb	20	M14202	**10000**	0.1
Sb	40	M14622	1000	2
Se	40	M14624	1000	2
Tl	40	M14626	1000	2
V	20	M14198	1000	1
Zn	20	M14197	**10000**	0.1
Na	10000	M14736	**10000**	50
K	10000	M14741	**10000**	50
B	40	M14675	1000	2
Si	200	M14735	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M14773	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14900	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ water QSM
Prep Date:	06/16/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M14623	1000	0.25
Al	120	M14737	**10000**	0.6
As	40	M14621	1000	2
Ba	4	M14772	1000	0.2
Be	8	M14203	1000	0.4
Ca	100	M14740	**10000**	0.5
Cd	2	M14201	1000	0.1
Co	5	M14204	1000	0.25
Cr	5	M14205	**10000**	0.025
Cu	40	M14199	**10000**	0.2
Fe	80	M14738	**10000**	0.4
Mg	40	M14676	**10000**	0.2
Mn	5	M14200	**10000**	0.025
Mo	5	M14888	1000	0.25
Ni	5	M14196	1000	0.25
Pb	20	M14202	**10000**	0.1
Sb	20	M14622	1000	1.0
Se	40	M14624	1000	2
Tl	40	M14626	1000	2
V	5	M14198	1000	0.25
Zn	20	M14197	**10000**	0.1
Na	700	M14736	**10000**	3.5
K	500	M14741	**10000**	2.5
B	40	M14675	1000	2
Si	200	M14735	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M14773	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M14897	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/14/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14898	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/14/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14899	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/14/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14892	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/08/2021	Expiration Date:	07/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14893	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/08/2021	Expiration Date:	07/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14894	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/08/2021	Expiration Date:	06/09/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14895	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/09/2021	Expiration Date:	07/09/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14896	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/09/2021	Expiration Date:	07/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14889	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/08/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14890	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/08/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14891	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/08/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14886	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	06/04/2021	Lot #:	Y20F051
Expiration Date (if any):		Catalog #:	88944

Standard ID#:	M14887	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	06/04/2021	Lot #:	1053109-69
Expiration Date (if any):	11/2022	Catalog #:	4400-10M411500

Standard ID#:	M14888	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	06/04/2021	Lot #:	1075718-15
Expiration Date (if any):	11/2022	Catalog #:	S4400-1000343

Standard Log #:	M14885	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	06/03/2021	Expiration Date:	06/03/2022
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14883	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/03/2021	Expiration Date:	06/03/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14884	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/03/2021	Expiration Date:	06/03/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14878	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/01/2021	Expiration Date:	07/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14879	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/01/2021	Expiration Date:	07/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14880	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/01/2021	Expiration Date:	06/02/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14881	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/02/2021	Expiration Date:	07/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14882	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/02/2021	Expiration Date:	07/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14875	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14876	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14877	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/01/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14874	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05/24/2021	Lot #:	16-115AB
Expiration Date (if any):	05/30/2022	Catalog #:	XSPIKE-1-250

Standard Log #:	M14869	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/18/2021	Expiration Date:	06/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14870	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/18/2021	Expiration Date:	06/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14871	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/18/2021	Expiration Date:	05/19/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14872	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/19/2021	Expiration Date:	06/19/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14873	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/19/2021	Expiration Date:	06/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14866	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/18/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14867	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/18/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14868	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/18/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14865	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	05/12/2021	Expiration Date:	09/30/2021
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M14508 and **10 mL** Mg (10,000 mg/L) M14676 and brought up to volume.		

Standard Log #:	M14860	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/11/2021	Expiration Date:	06/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14861	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/11/2021	Expiration Date:	06/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14862	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/11/2021	Expiration Date:	05/12/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14863	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/12/2021	Expiration Date:	06/12/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14864	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/12/2021	Expiration Date:	06/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14857	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14858	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14859	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/11/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14854	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/05/2021	Expiration Date:	06/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard Log #:	M14855	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/05/2021	Expiration Date:	05/05/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14856	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/05/2021	Expiration Date:	05/05/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14850	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	06/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14851	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	06/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14852	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	05/05/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14853	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/05/2021	Expiration Date:	06/05/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14847	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/04/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14848	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/04/2021	Expiration Date:	05/02/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14849	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/04/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14846	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	ACID WASHED TCLP FILTERS
Date Received:	04/29/2021	Lot #:	400175-1081-AG
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

		Instrument:	CETAC
Standard Log #:	M14842	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/28/2021	Expiration Date:	05/28/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard Log #:	M14843	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/19/2021	Expiration Date:	04/19/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard ID#:	M14844	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	04/28/2021	Lot #:	L060-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14845	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	04/28/2021	Lot #:	L060-06
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M14838	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	05/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14839	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	05/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14840	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	04/28/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14841	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/28/2021	Expiration Date:	05/28/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14835	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14836	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14837	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/27/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14832	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/21/2021	Expiration Date:	05/21/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard ID#:	M14833	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	04/21/2021	Lot #:	18-102WLX
Expiration Date (if any):	04/30/2022	Catalog #:	INT-A1

Standard ID#:	M14834	Vendor:	Custom Assurance Std
Analyst:	NAH	Chemical:	Ca 20000 Mg,Na 10000: THardness
Date Received:	04/21/2021	Lot #:	16-022AB
Expiration Date (if any):	04/30/2022	Catalog #:	XCTIWI-1-500

Standard Log #:	M14828	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	05/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14829	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	05/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14830	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	04/21/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14831	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/21/2021	Expiration Date:	05/21/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14825	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/20/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14826	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/20/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14827	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/20/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14824	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	04/15/2021	Expiration Date:	09/21
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14821	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	04/15/2021	Expiration Date:	06/21
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14395 , **15 mL** Fe (10,000 mg/L) M14738 , **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 , **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14788 , **2.5 mLs Na 10,000 ug/mL** M14736 ,**2.5 mLs k 10,000 ug/mL** 14625 **2.5 mLs S 10,000 ug/mL** M14570 , **0.5 mls Si 1000 ug/mL** M14477 and brought up to volume with milli-Q .	

		Instrument:	ICP 6500
Standard Log #:	M14822	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	04/15/2021	Expiration Date:	06/21
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14395 and 15 **mL** 10000 mg/L Fe M14738 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M14682 and brought up to volume with milli-Q H_2O.	

		Instrument:	ICP 6500
Standard Log #:	M14823	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	04/15/2021	Expiration Date:	09/21
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.	

MRL BASE STD M14820 Analyst NAH

Prep Date 04/15/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	XX
Al	400	M14737	10000	2	XX
Ba	10	M14772	1000	0.5	XX
Be	4	M14203	1000	0.2	09/21
Cd	5	M14740	1000	0.25	09/21
Co	10	M14204	1000	0.5	09/21
Cr	10	M14205	10000	0.05	09/21
Cu	10	M14199	10000	0.05	09/21
Mg	500	M14676	10000	2.5	XX
Mn	10	M14200	10000	0.05	09/21
Mo	10	M14684	1000	0.5	XX
Ni	10	M14196	1000	0.5	09/21
Pb	10	M14202	10000	0.05	09/21
Sb	20	M14622	1000	1	XX
V	10	M14198	1000	0.5	09/21
Zn	10	M14197	10000	0.05	09/21
K	1000	M14741	10000	5	XX
Na	1000	M14736	10000	5	XX
As	20	M14621	1000	1	XX
Ca	500	M14740	10000	2.5	XX
Fe	300	M14738	10000	1.5	XX
Se	20	M14624	1000	1	XX
Tl	20	M14674	1000	1	XX
Si	100	M14735	1000	5	XX
B	20	M14675	1000	1	09/21
Li	20	M14681	1000	1	XX
W	50	MXXX	1000	2.5	XXXXX
Ti	10	M14674	1000	0.5	XX
Sr	10	M14775	1000	0.5	XX
Sn	50	M14774	1000	2.5	XX
S	300	M14773	10000	1.5	XX

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M14815	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	05/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14816	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	05/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14817	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	04/15/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14818	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/15/2021	Expiration Date:	05/15/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14819	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/15/2021	Expiration Date:	05/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14812	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/14/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14813	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/14/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14814	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/14/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14811	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	04/13/2021	Expiration Date:	09/2021
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 and **1 mL** of Si (1000 mg/L) M14477. *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14625. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14736. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14676, **10 mL** of Fe (10,000 mg/L) M14676, **10 mL** of Ca (10,000 mg/L) M14740 and **10 mL** Al (10,000 mg/L) M14478. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	GFAA
Standard Log #:	M14808	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14809	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14810	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14803	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	05/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14804	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	05/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14805	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	04/07/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14806	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/07/2021	Expiration Date:	05/07/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14807	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/07/2021	Expiration Date:	05/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14800	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/06/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14801	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/06/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14802	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/06/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14799	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	04/06/2021	Lot #:	A0417285
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M14797	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV
Date Received:	04/05/2021	Lot #:	S2-MEB703691
Expiration Date (if any):	04/12/2021	Catalog #:	CTI-SPK-1

Standard ID#:	M14798	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE
Date Received:	04/05/2021	Lot #:	S2-MEB703690
Expiration Date (if any):	04/12/2021	Catalog #:	CTI-GFCAL-1

Standard Log #:	M14792	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/30/2021	Expiration Date:	04/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14793	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/30/2021	Expiration Date:	03/31/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14794	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

Standard Log #:	M14795	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14796	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14789	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/30/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14790	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/30/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14791	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/30/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14787	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Phosphorus 10,000 mg/L
Date Received:	03/29/2021	Lot #:	AR18-111PY
Expiration Date (if any):	3/29/2022	Catalog #:	PLP9-3Y

Standard ID#:	M14788	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	03/29/2021	Lot #:	4-070MF
Expiration Date (if any):	03/29/2021	Catalog #:	XCTWI-5-500

Standard Log #:	M14786	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/25/2021	Expiration Date:	03/25/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14785	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	03/24/2021	Expiration Date:	08/24/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC208 and brought up to volume.		

Standard Log #:	M14780	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	04/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14781	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	04/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14782	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	03/24/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14783	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/24/2021	Expiration Date:	04/24/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14784	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/24/2021	Expiration Date:	04/24/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14777	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/23/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14778	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/23/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14779	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/23/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14772	Vendor:	CPI
Analyst:	NAH	Chemical:	Ba 1000 mg/mL
Date Received:	03/22/2021	Lot #:	994634-134
Expiration Date (if any):	09/2022	Catalog #:	S4400-100041

Standard ID#:	M14773	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/mL
Date Received:	03/22/2021	Lot #:	1050965-34
Expiration Date (if any):	09/2022	Catalog #:	4400-10M544

Standard ID#:	M14774	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/mL
Date Received:	03/22/2021	Lot #:	1066479-21
Expiration Date (if any):	09/2022	Catalog #:	S4400-1000613

Standard ID#:	M14775	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/mL
Date Received:	03/22/2021	Lot #:	1096004-1
Expiration Date (if any):	09/2022	Catalog #:	S4400-1000531

Standard ID#:	M14776	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	03/23/2021	Lot #:	56-049CR
Expiration Date (if any):	03/30/2022	Catalog #:	XSPIKE-1-250

Standard Log #:	M14767	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	04/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14768	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	03/17/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14769	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	04/16/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

Standard Log #:	M14770	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/17/2021	Expiration Date:	04/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14771	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/17/2021	Expiration Date:	04/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14764	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14765	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14766	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/16/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14763	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	TCLP Acid Washed Filters
Date Received:	01/05/21	Lot #:	400182-0364-T
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

Standard Log #:	M14758	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/09/2021	Expiration Date:	04/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14759	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/09/2021	Expiration Date:	03/10/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14760	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

Standard Log #:	M14761	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14762	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14755	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14756	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14757	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/09/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14754	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Mod.
Date Received:	03/04/2021	Lot #:	225022
Expiration Date (if any):	03/31/2022	Catalog #:	39043

		Instrument:	GFAA
Standard Log #:	M14751	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14752	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14753	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14748	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/02/2021	Expiration Date:	04/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14749	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/02/2021	Expiration Date:	04/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard Log #:	M14750	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/02/2021	Expiration Date:	03/02/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14745	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	04/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14746	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	04/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14747	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	03/02/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14742	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14743	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14744	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/01/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14740	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Calcium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1072921-23
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M91

Standard ID#:	M14741	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Potassium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1053109-37
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M411

Standard ID#:	M14735	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Silicon 1000 µg/mL
Date Received:	02/25/2021	Lot #:	1047570-64
Expiration Date (if any):	08/20/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14736	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Sodium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1055526-35
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M521

Standard ID#:	M14737	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Aluminum 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1077245-17
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M11

Standard ID#:	M14738	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Iron 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1034257-40
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M261

Standard ID#:	M14739	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Magnesium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1075232-5
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M311

Standard Log #:	M14731	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/16/2021	Expiration Date:	03/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14732	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/16/2021	Expiration Date:	03/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14733	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/17/2021	Expiration Date:	03/17/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14734	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/17/2021	Expiration Date:	03/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14728	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14729	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14730	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/16/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14725	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14726	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14727	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14720	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/09/2021	Expiration Date:	03/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14721	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/09/2021	Expiration Date:	03/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14722	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/10/2021	Expiration Date:	03/10/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14723	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/10/2021	Expiration Date:	03/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard ID#:	M14724	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Potassium Permanganate
Date Received:	02/08/2021	Lot #:	201466
Expiration Date (if any):	Suggested Retest 04/202	Catalog #:	P279

		Instrument:	HydraII
Standard Log #:	M14717	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14718	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14719	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/09/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14713	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	02/05/2021	Lot #:	L022-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14714	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	02/05/2021	Lot #:	L022-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14715 (1) & (2)	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	02/3/2021	Lot #:	2023715-500
Expiration Date (if any):	08/31/2022	Catalog #:	10M67-1-500

Standard ID#:	M14716	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Phosphorus 10000 mg/L
Date Received:	02/08/2021	Lot #:	AR18-111PY
Expiration Date (if any):	02/28/2022	Catalog #:	PLP9--3Y

Standard Log #:	M14708	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	03/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14709	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	03/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14710	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	02/03/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14711	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/03/2021	Expiration Date:	03/03/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14712	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/03/2021	Expiration Date:	03/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14705	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/02/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14706	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/02/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14707	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/02/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14702	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	01/27/2022
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14703	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/28/2021	Expiration Date:	02/28/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14704	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/28/2021	Expiration Date:	02/28/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard Log #:	M14699	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	02/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14700	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	02/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14701	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	01/28/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14696	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14697	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14698	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/27/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14694	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	01/26/2021	Expiration Date:	09/2021
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) N/A **3.2 mL** of As (1000 mg/L) M14621 **3.2 mL** of Se (1000 mg/L) M14624 **0.08 mL** of Pb (10,000 mg/L) M14202 **1.0 mL** of Tl (1000 mg/L) M14626 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M14695	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	01/26/2021	Expiration Date:	09/2021
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M14622 **1.0 mL** of As (1000 mg/L) M14621 **2.0 mL** of Se (1000 mg/L) M14624 **0.045 mL** of Pb (10,000 mg/L) M14202 **0.4 mL** of Tl (1000 mg/L) M14626 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M14689	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	02/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14690	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	02/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14691	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	01/20/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14692	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/20/2021	Expiration Date:	02/20/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14693	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/20/2021	Expiration Date:	02/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14686	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14687	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14688	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/19/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14680	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	01/15/2021	Lot #:	1047870-29
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14681	Vendor:	CPI
Analyst:	NAH	Chemical:	Li 1000 mg/L
Date Received:	01/15/2021	Lot #:	104768-6
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000291

Standard ID#:	M14682	Vendor:	CPI
Analyst:	NAH	Chemical:	Ce 1000 mg/L
Date Received:	01/15/2021	Lot #:	S4400-1000101
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000101

Standard ID#:	M14683	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	01/15/2021	Lot #:	1096004-1
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000531

Standard ID#:	M14684	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	01/15/2021	Lot #:	1075718-2
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000343

Standard ID#:	M14685	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance standard
Date Received:	01/18/2021	Lot #:	XCTWI-4-500
Expiration Date (if any):	01/30/2022	Catalog #:	14-242AB

Standard ID#:	M14674	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	01/15/2021	Lot #:	1038255-27
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000623

Standard ID#:	M14675	Vendor:	CPI
Analyst:	NAH	Chemical:	B 1000 mg/L
Date Received:	01/15/2021	Lot #:	1024903-65
Expiration Date (if any):	07/2022	Catalog #:	S4400-100074

Standard ID#:	M14676	Vendor:	CPI
Analyst:	NAH	Chemical:	M 10000 mg/L
Date Received:	01/15/2021	Lot #:	1013353
Expiration Date (if any):	07/2022	Catalog #:	4400-10M311

Standard ID#:	M14677	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	01/15/2021	Lot #:	1050965-25
Expiration Date (if any):	07/2022	Catalog #:	4400-10M544

Standard ID#:	M14678	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10000 mg/L
Date Received:	01/15/2021	Lot #:	1079898-6
Expiration Date (if any):	07/2022	Catalog #:	S4400-10M391

Standard ID#:	M14679	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	01/15/2021	Lot #:	1034527-40
Expiration Date (if any):	07/2022	Catalog #:	4400-10M261

Standard Log #:	M14673	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	01/13/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M14623	1000	0.01
As	2	M14621	1000	0.1
Pb	2	M14202	10000	0.01
Sb	2	M14622	1000	0.1
Se	2	M14624	1000	0.1
Tl	2	M14626	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14670	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/12/2021	Expiration Date:	02/12/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14671	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/12/2021	Expiration Date:	02/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

Standard Log #:	M14672	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	01/12/2021	Expiration Date:	01/12/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14667	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	02/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14668	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	02/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14669	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	01/12/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14664	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14665	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14666	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/11/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14663	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	8 µg/L As 10 µg/L Pb 8 µg/L Sb 16 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	01/06/2021	Expiration Date:	09/2021

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M14621	10,000
Pb	0.1	10,000	M14202	10,000
Tl	1	1000	M14626	10,000
Se	1	1000	M14624	10,000
Sb	1	1000	M14622	10,000
Ag	0.1	1000	M14623	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	0.8	10,000	8
Pb	1.0	10,000	10
Tl	1.0	10,000	10
Se	1.6	10,000	16
Sb	0.8	10,000	8
Ag	0.6	1000	0.6

		Instrument:	GFAA
Standard Log #:	M14660	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14661	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14662	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

MRL BASE STD M14659 Analyst NAH

Prep Date 01/04/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	02/22
Al	400	M14478	10000	2	02/22
Ba	10	M14568	1000	0.5	05/22
Be	4	M14203	1000	0.2	09/21
Cd	5	M14201	1000	0.25	09/21
Co	10	M14204	1000	0.5	09/21
Cr	10	M14205	10000	0.05	09/21
Cu	10	M14199	10000	0.05	09/21
Mg	500	M14472	10000	2.5	02/22
Mn	10	M14200	10000	0.05	09/21
Mo	10	M14569	1000	0.5	05/22
Ni	10	M14196	1000	0.5	09/21
Pb	10	M14202	10000	0.05	09/21
Sb	20	M14622	1000	1	02/22
V	10	M14198	1000	0.5	09/21
Zn	10	M14197	10000	0.05	09/21
K	1000	M14436	10000	5	02/22
Na	1000	M14559	10000	5	02/22
As	20	M14621	1000	1	02/22
Ca	500	M14476	10000	2.5	02/22
Fe	300	M14470	10000	1.5	02/22
Se	20	M14624	1000	1	02/22
Tl	20	M14626	1000	1	02/22
Si	100	M14435	1000	5	02/22
B	20	M14131	1000	1	07/21
Li	20	M14127	1000	1	07/21
W	50	xxxxxxxx	1000	2.5	xxxxxx
Ti	10	M14009	1000	0.5	04/21
Sr	10	M14007	1000	0.5	04/21
Sn	50	M14008	1000	2.5	04/21
S	300	M14570	10000	1.5	05/22

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	ICP 6500
Standard Log #:	M14658	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	1/04/2021	Expiration Date:	03/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14359, **15 mL** Fe (10,000 mg/L) M14470, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14628, **2.5 mLs Na 10,000 ug/mL** M14473 ,**2.5 mLs k 10,000 ug/mL** M14436 **2.5 mLs S 10,000 ug/mL** M14570, **0.5 mls Si 1000 ug/mL** M14477 and brought up to volume with milli-Q .	

		Instrument:	ICP 6500
Standard Log #:	M14656	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	01/04/2021	Expiration Date:	06/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14639, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14359, **0.5 mL** Mo (1000 mg/L) M14569, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008, **0.5 mL** Ti (1000 mg/L) M14009, **0.5 mL** W (1000 mg/L) xxxxxxx, **0.5 mL** Si (1000 mg/L) M14567, **0.5 mL** S (10000 mg/L) M14372, **0.5 mL** K (10000 mg/L) M14436, and **0.5 mL** Na (10000 mg/L) M14559		

		Instrument:	ICP 6500
Standard Log #:	M14657	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	01/04/2021	Expiration Date:	06/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14359 and 15 **mL** 10000 mg/L Fe M14470 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M1359 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14655	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	01/04/2021	Expiration Date:	03/30/2021
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14628, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **1 mL** of Si (1000 mg/L) M14435 and 1 mL M13859 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14625. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14559. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14472, **10 mL** of Fe (10,000 mg/L) M14470, **10 mL** of Ca (10,000 mg/L) M14476 and **10 mL** Al (10,000 mg/L) M14478. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

Standard Log #:	M14653	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/31/2020	Expiration Date:	01/31/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14654	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/31/2020	Expiration Date:	01/31/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

Standard Log #:	M14651	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/30/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14652	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/30/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14648	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/30/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14649	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/30/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14650	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/30/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14643	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/22/2020	Expiration Date:	01/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14644	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/22/2020	Expiration Date:	01/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14645	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/22/2020	Expiration Date:	12/23/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14646	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/23/2020	Expiration Date:	01/23/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14647	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/23/2020	Expiration Date:	01/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14640	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/22/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14641	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/22/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14642	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/22/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14637	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	ACID WASHED TCLP FILTERS
Date Received:	11/25/2020	Lot #:	400182-0316-D
Expiration Date (if any):		Catalog #:	FG77150MM

Standard Log #:	M14638	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/16/2020	Expiration Date:	12/16/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard ID#:	M14639	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/16/2020	Lot #:	55-139CR
Expiration Date (if any):	12/30/2021	Catalog #:	XSPIKE-1-250

Standard Log #:	M14632	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/15/2020	Expiration Date:	01/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14633	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/15/2020	Expiration Date:	12/16/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14634	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/16/2020	Expiration Date:	01/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14635	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/16/2020	Expiration Date:	01/16/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14636	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/16/2020	Expiration Date:	01/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14629	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/15/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14630	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/15/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14631	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/15/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14627	Vendor:	CPI
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/15/2020	Lot #:	55-113CR
Expiration Date (if any):	12/30/2021	Catalog #:	XCTWI-1-500

Standard ID#:	M14628	Vendor:	CPI
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/15/2020	Lot #:	55-112CR
Expiration Date (if any):	12/30/2021	Catalog #:	CTWI-5-500

Standard ID#:	M14623	Vendor:	CPI
Analyst:	NAH	Chemical:	Ag 1000 mg/L
Date Received:	12/09/2020	Lot #:	1026960-37
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000511

Standard ID#:	M14624	Vendor:	CPI
Analyst:	NAH	Chemical:	Se 1000 mg/L
Date Received:	12/09/2020	Lot #:	1063158-14
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000491

Standard ID#:	M14625	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	12/09/2020	Lot #:	1053109-46
Expiration Date (if any):	02/2022	Catalog #:	4400-10M411

Standard ID#:	M14626	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	12/09/2020	Lot #:	1025512-33
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000581

Standard Log #:	M14619	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/09/2020	Expiration Date:	01/09/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14620	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/09/2020	Expiration Date:	01/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

Standard ID#:	M14621	Vendor:	CPI
Analyst:	NAH	Chemical:	As 1000 mg/L
Date Received:	12/09/2020	Lot #:	1034904-74
Expiration Date (if any):	02/2022	Catalog #:	S4400-100031

Standard ID#:	M14622	Vendor:	CPI
Analyst:	NAH	Chemical:	Sb 1000 mg/L
Date Received:	12/09/2020	Lot #:	1045232-19
Expiration Date (if any):	02/2022	Catalog #:	S4400-100023

Standard Log #:	M14615	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/08/2020	Expiration Date:	01/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14616	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/08/2020	Expiration Date:	01/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14617	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/08/2020	Expiration Date:	12/09/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14618	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/08/2020	Expiration Date:	12/08/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard ID#:	M14611	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Hydroxlyamine Sulfate
Date Received:	12/07/2020	Lot #:	189407A
Expiration Date (if any):		Catalog #:	H331-500

		Instrument:	HydraII
Standard Log #:	M14612	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/08/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14613	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/08/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14614	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/08/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14610	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	12/03/2020	Expiration Date:	12/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M13951	1000	0.01
As	2	M13863	1000	0.1
Pb	2	M14202	10000	0.01
Sb	2	M13950	1000	0.1
Se	2	M13948	1000	0.1
Tl	2	M14207	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14605	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/01/2020	Expiration Date:	01/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14606	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/01/2020	Expiration Date:	01/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14607	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/01/2020	Expiration Date:	12/02/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14608	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/02/2020	Expiration Date:	01/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14609	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/02/2020	Expiration Date:	01/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14602	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/01/2020	Expiration Date:	05/02/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14603	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/01/2020	Expiration Date:	05/02/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14604	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/01/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14600	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate ACS
Date Received:	11/30/2020	Lot #:	A0412553
Expiration Date (if any):		Catalog #:	424185000

Standard Log #:	M14601	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/30/2020	Expiration Date:	11/30/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard ID#:	M14597	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	11/19/2020	Lot #:	K309-14
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14598	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	11/19/2020	Lot #:	K309-14
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14599	Vendor:	ThermoFisher
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	11/19/2020	Lot #:	225022
Expiration Date (if any):	03/31/2022	Catalog #:	39043

Standard Log #:	M14592	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/17/2020	Expiration Date:	12/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14593	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/17/2020	Expiration Date:	12/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14479 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14594	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/17/2020	Expiration Date:	11/18/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14595	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/18/2020	Expiration Date:	12/18/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14596	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/18/2020	Expiration Date:	12/18/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14589	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/17/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14590	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/17/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14591	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/17/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14586	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	11/17/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14587	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	11/17/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14588	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	11/17/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14582	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	11/13/2020	Expiration Date:	07/20/2021
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M14126 and Na (10,000 mg/L) M14473 and brought up to volume using Milli-Q H_2O. ($2\% HNO_3$)		

		Instrument:	ICP 6000
Standard Log #:	M14583	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	11/13/2020	Expiration Date:	07/20/2021
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M14473 and **0.15 mL** K (10,000 µg/mL) M14126 and brought to volume with Milli-Q H_2O. ($2\% HNO_3$)		

		Instrument:	ICP 6000
Standard Log #:	M14584	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	11/13/2020	Expiration Date:	07/20/2021
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M14359, **2.5 mL** of K (10,000 mg/L) M14126, **2.5 mL** of Na (10,000 mg/L) M14473 and **7.5 mL** of Fe (10,000 mg/L) M14101 and brought up to volume using Milli-Q H_2O. ($2\% HNO_3$)		

Standard ID#:	M14585	Vendor:	Environmental Epress
Analyst:	BMM	Chemical:	Acid washed TCLP Filters
Date Received:	10/29/2020	Lot #:	400157-0277-D
Expiration Date (if any):	xxxxx	Catalog #:	FG77150MM

Standard Log #:	M14579	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/12/2020	Expiration Date:	12/12/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14580	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/12/2020	Expiration Date:	12/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14510 and brought up to volume.		

Standard ID#:	M14581	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	11/12/2020	Lot #:	55-080CR
Expiration Date (if any):	11/30/2021	Catalog #:	XSPIKE-1-250

Standard Log #:	M14576	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/11/2020	Expiration Date:	12/11/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14577	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/11/2020	Expiration Date:	12/11/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14578	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/11/2020	Expiration Date:	11/12/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14573	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/11/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14574	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/11/2020	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14575	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/11/2020	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14571	Vendor:	CPI International
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	11/05/2020	Lot #:	1084154-12
Expiration Date (if any):	05/02/2022	Catalog #:	S4400-1000331

Standard ID#:	M14572	Vendor:	SPEX Certiprep
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	11/05/2020	Lot #:	CL12-01HGY
Expiration Date (if any):	11/30/2021	Catalog #:	CLHG4-2Y

Standard ID#:	M14567	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	11/05/2020	Lot #:	1047570-22
Expiration Date (if any):	05/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14568	Vendor:	CPI
Analyst:	NAH	Chemical:	Ba 1000 mg/L
Date Received:	11/05/2020	Lot #:	994634-121
Expiration Date (if any):	05/2022	Catalog #:	S4400-100041

Standard ID#:	M14569	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	11/05/2020	Lot #:	1075718-2
Expiration Date (if any):	05/2022	Catalog #:	S4400-1000343

Standard ID#:	M14570	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	11/05/2020	Lot #:	1050965-25
Expiration Date (if any):	05/2022	Catalog #:	4400-10M544

Standard Log #:	M14563	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14564	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

Standard Log #:	M14565	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14566	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/05/2020	Expiration Date:	12/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14560	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14561	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14562	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6000
Standard Log #:	M14556	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	11/03/2020	Expiration Date:	02/2022
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M14471 and K (1000 µg/mL) M14475 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14557	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	11/03/2020	Expiration Date:	02/2022
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M14471 and **0.5 mL** K (1000 µg/mL) M14475 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M14558	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	11/04/2020	Lot #:	997484-34
Expiration Date (if any):	02/2022	Catalog #:	4400-10M671

Standard ID#:	M14559	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 mg/L
Date Received:	11/04/20020	Lot #:	1055526-11
Expiration Date (if any):	02/2022	Catalog #:	4400-10M521

Standard Log #:	M14554	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/29/2020	Expiration Date:	11/29/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14555	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/29/2020	Expiration Date:	11/29/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

Standard Log #:	M14551	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/28/2020	Expiration Date:	11/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14552	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/28/2020	Expiration Date:	11/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14553	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/28/2020	Expiration Date:	10/29/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14548	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14549	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14550	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/28/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14545	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	10/26/2020	Expiration Date:	03/26/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC44 and brought up to volume.		

Standard Log #:	M14546	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/26/2020	Expiration Date:	10/26/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14547	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/26/2020	Expiration Date:	10/26/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M14543	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/21/2020	Expiration Date:	11/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

Standard ID#:	M14544	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	10/19/2020	Lot #:	202332
Expiration Date (if any):		Catalog #:	S271-3

Standard Log #:	M14539	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/20/2020	Expiration Date:	11/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14540	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/20/2020	Expiration Date:	11/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14541	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/20/2020	Expiration Date:	10/21/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14542	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/21/2020	Expiration Date:	11/21/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14536	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/20/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14537	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/20/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14538	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/20/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14533	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/19/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14534	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/19/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14535	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/19/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M14530	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/14/2020	Expiration Date:	10/15/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14531	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/14/2020	Expiration Date:	11/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14532	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/14/2020	Expiration Date:	11/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

Standard Log #:	M14526	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	11/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14527	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	10/14/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14528	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	11/13/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14529	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/13/2020	Expiration Date:	11/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14509 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14523	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14524	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14525	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/13/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14521	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/08/2020	Expiration Date:	10/09/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14522	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/09/2020	Expiration Date:	04/2021
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M14508 and **10 mL** Mg (10,000 mg/L) M13984 and brought up to volume.		

Standard Log #:	M14519	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/07/2020	Expiration Date:	11/07/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14520	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/08/2020	Expiration Date:	11/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14461 and brought up to volume.		

Standard Log #:	M14514	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/05/2020	Expiration Date:	11/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14515	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/05/2020	Expiration Date:	10/06/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14516	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/05/2020	Expiration Date:	11/05/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14446 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14517	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/06/2020	Expiration Date:	11/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14461 and brought up to volume.		

Standard ID#:	M14518	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	10/05/2020	Lot #:	55-031CR
Expiration Date (if any):	09/30/2021	Catalog #:	XSPIKE-1-250

		Instrument:	HydraII
Standard Log #:	M14511	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14512	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14513	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14508	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	Palladium (Matrix Modifier)
Date Received:	10/02/2020	Lot #:	2003608-100
Expiration Date (if any):	09/30/2021	Catalog #:	HP1900-100

Standard ID#:	M14509	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/05/2020	Lot #:	K269-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14510	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/05/2020	Lot #:	K269-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14507	Vendor:	Fisher
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	09/29/2020	Lot #:	189407A
Expiration Date (if any):	05/2024	Catalog #:	H331

Standard Log #:	M14502	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/21/2020	Expiration Date:	10/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14503	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/21/2020	Expiration Date:	10/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14504	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/21/2020	Expiration Date:	09/22/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14505	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/23/2020	Expiration Date:	10/23/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14506	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/23/2020	Expiration Date:	10/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14461 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14499	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14500	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14501	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/21/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14497	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/16/2020	Expiration Date:	09/16/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14498	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/16/2020	Expiration Date:	09/16/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14492	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/15/2020	Expiration Date:	10/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14493	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/15/2020	Expiration Date:	10/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14494	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/15/2020	Expiration Date:	09/16/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14495	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/16/2020	Expiration Date:	10/16/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14496	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/16/2020	Expiration Date:	10/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14460 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14489	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/15/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14490	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/15/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14491	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/15/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14487	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/09/2020	Expiration Date:	10/09/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14416 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14488	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/09/2020	Expiration Date:	10/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14460 and brought up to volume.		

Standard Log #:	M14483	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/08/2020	Expiration Date:	10/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14484	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/08/2020	Expiration Date:	10/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14485	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/08/2020	Expiration Date:	09/09/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard ID#:	M14486	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	09/04/2020	Lot #:	1933801-500
Expiration Date (if any):	03/31/2022	Catalog #:	HP10M67-1-500

Standard ID#:	M14479	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	09/03/2020	Lot #:	A0410243
Expiration Date (if any):		Catalog #:	202015000

		Instrument:	HydraII
Standard Log #:	M14480	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/08/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14481	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/08/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14482	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/08/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14478	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	09/01/2020	Lot #:	992536-34
Expiration Date (if any):	02/2022	Catalog #:	4400-10M11

Standard ID#:	M14471	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 1000 mg/L
Date Received:	09/01/2020	Lot #:	1038021-64
Expiration Date (if any):	02/2022	Catalog #:	4400-1000521-500

Standard ID#:	M14472	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	09/01/2020	Lot #:	1013353-76
Expiration Date (if any):	02/2022	Catalog #:	4400-10m311

Standard ID#:	M14473	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 mg/L
Date Received:	09/01/2020	Lot #:	1055526-11
Expiration Date (if any):	02/2022	Catalog #:	4400-10M521

Standard ID#:	M14474	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10000 mg/L
Date Received:	09/01/2020	Lot #:	1079898-2
Expiration Date (if any):	02/2022	Catalog #:	S4400-10M391

Standard ID#:	M14475	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	09/01/2020	Lot #:	1023166-47
Expiration Date (if any):	02/2022	Catalog #:	4400-1000411-500

Standard ID#:	M14476	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	09/01/2020	Lot #:	1072921-5
Expiration Date (if any):	02/2022	Catalog #:	4400-10M91

Standard ID#:	M14477	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	09/01/2020	Lot #:	1047570-22
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000504F

Standard Log #:	M14466	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/01/2020	Expiration Date:	10/01/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14467	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/01/2020	Expiration Date:	10/01/2020
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.694 in a hood.		

Standard Log #:	M14468	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/02/2020	Expiration Date:	10/02/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14469	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/02/2020	Expiration Date:	10/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14460 and brought up to volume.		

Standard ID#:	M14470	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	09/01/2020	Lot #:	1034257-21
Expiration Date (if any):	02/2022	Catalog #:	4400-10m261

		Instrument:	HydraII
Standard Log #:	M14463	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/01/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14464	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/01/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14465	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/01/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14460	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	08/26/2020	Lot #:	K196-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14461	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	08/26/2020	Lot #:	K196-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14462	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/31/2020	Lot #:	2-155mf
Expiration Date (if any):	08/31/2021	Catalog #:	XCTWI-1-500

Standard Log #:	M14457	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/26/2020	Expiration Date:	09/26/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14458	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/26/2020	Expiration Date:	09/26/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14355 and brought up to volume.		

Standard Log #:	M14459	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/26/2020	Expiration Date:	09/26/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14453	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/25/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14454	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/25/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14455	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/25/2020	Expiration Date:	09/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14456	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/25/2020	Expiration Date:	08/26/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.694 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M14450	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	08/24/2020	Expiration Date:	06/30/2021
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M14359, **2.5 mL** of K (10,000 mg/L) M14126, **2.5 mL** of Na (10,000 mg/L) M14103 and **7.5 mL** of Fe (10,000 mg/L) M14101 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14451	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	08/24/2020	Expiration Date:	10/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13808 and **0.5 mL** K (1000 µg/mL) M13809 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M14452	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/25/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

Standard ID#:	M14446	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	08/24/2020	Lot #:	197591
Expiration Date (if any):		Catalog #:	S271-500

		Instrument:	ICP 6000
Standard Log #:	M14447	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	08/24/2020	Expiration Date:	10/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13808 and K (1000 µg/mL) M13809 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14448	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	08/24/2020	Expiration Date:	07/2021
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M14126 and Na (10,000 mg/L) M14103 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14449	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	08/24/2020	Expiration Date:	07/2021
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M14103 and **0.15 mL** K (10,000 µg/mL) M14126 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M14445	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/21/2020	Lot #:	2-140MF
Expiration Date (if any):	08/30/2021	Catalog #:	XCTWI-5-500

Standard Log #:	M14440	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/19/2020	Expiration Date:	09/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14441	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/19/2020	Expiration Date:	09/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14442	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/19/2020	Expiration Date:	08/20/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14443	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/20/2020	Expiration Date:	09/20/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14444	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/20/2020	Expiration Date:	09/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14355 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14437	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14438	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14439	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/19/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14434	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	08/17/2020	Lot #:	997484-34
Expiration Date (if any):	02/2022	Catalog #:	4400-10M671

Standard ID#:	M14435	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 mg/L
Date Received:	08/17/2020	Lot #:	1047570-22
Expiration Date (if any):	02/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14436	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	08/17/2020	Lot #:	1053109-27
Expiration Date (if any):	02/2022	Catalog #:	4400-10M411-500

Standard Log #:	M14429	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/12/2020	Expiration Date:	09/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14430	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/12/2020	Expiration Date:	09/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

Standard Log #:	M14431	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/13/2020	Expiration Date:	09/13/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14432	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/13/2020	Expiration Date:	08/14/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14433	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/13/2020	Expiration Date:	09/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14355 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14426	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14427	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14428	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/12/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14425	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	08/10/2020	Expiration Date:	08/10/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14420	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/05/2020	Expiration Date:	09/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14421	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/05/2020	Expiration Date:	09/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14422	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/06/2020	Expiration Date:	08/07/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14423	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/06/2020	Expiration Date:	09/06/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14424	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/06/2020	Expiration Date:	09/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14417	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14418	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14419	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14416	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	08/03/2020	Lot #:	189407A
Expiration Date (if any):		Catalog #:	H331

		Instrument:	GFAA
Standard Log #:	M14413	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	07/30/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14414	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	07/30/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14415	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	07/30/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14408	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/28/2020	Expiration Date:	08/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14409	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/28/2020	Expiration Date:	08/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14410	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/28/2020	Expiration Date:	07/29/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14411	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/29/2020	Expiration Date:	08/29/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14346 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14412	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/29/2020	Expiration Date:	08/29/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14405	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14406	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/28/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14407	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/28/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14404	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	07/24/2020	Lot #:	54-207CR
Expiration Date (if any):	07/30/2020	Catalog #:	XSPIKE-1-250

Standard Log #:	M14399	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/21/2020	Expiration Date:	08/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14400	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/21/2020	Expiration Date:	08/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

Standard Log #:	M14401	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/22/2020	Expiration Date:	08/22/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14402	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/22/2020	Expiration Date:	07/23/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14403	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/22/2020	Expiration Date:	08/22/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14396	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/21/2020	Expiration Date:	07/21/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14397	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/21/2020	Expiration Date:	07/21/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14398	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/21/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14395	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	07/20/2020	Expiration Date:	09/30/2020
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13954 and **10 mL** Mg (10,000 mg/L) M13984 and brought up to volume.		

Standard Log #:	M14394	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	07/17/2020	Expiration Date:	07/17/2021
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14389	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/13/2020	Expiration Date:	08/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14390	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/13/2020	Expiration Date:	08/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14391	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/13/2020	Expiration Date:	07/14/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

Standard Log #:	M14392	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/14/2020	Expiration Date:	08/14/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14306 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14393	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/14/2020	Expiration Date:	08/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14356 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14386	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14387	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/13/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14388	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/13/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14384	Vendor:	Environmantal Express
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	07/08/2020	Lot #:	1933801-500
Expiration Date (if any):	01/31/2022	Catalog #:	HP10M67-1-500

Standard Log #:	M14385	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	12 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	07/08/2020	Expiration Date:	12/2020

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13863	10,000
Pb	0.1	10,000	M14202	10,000
Tl	1	1000	M14207	10,000
Se	1	1000	M13948	10,000
Sb	1	1000	M13950	10,000
Ag	0.1	1000	M13951	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.2	10,000	12
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

Standard Log #:	M14383	Reagent:	TCLP 1 N HCL
Analyst:	BMM		
Prep Date:	07/07/2020	Expiration Date:	07/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, added 83 mL HCL AB.685 and brought up to volume.		

Standard Log #:	M14381	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/03/2020	Expiration Date:	08/03/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14382	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/03/2020	Expiration Date:	08/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

Standard Log #:	M14378	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/02/2020	Expiration Date:	08/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14379	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/02/2020	Expiration Date:	08/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14380	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/02/2020	Expiration Date:	07/03/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.693 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14375	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/02/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14376	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/02/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14377	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/02/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14373	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/01/2020	Expiration Date:	07/01/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard ID#:	M14374	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	ACID WASHED TCLP FILTERS
Date Received:	06/18/2020	Lot #:	400169-0154-AG
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

Standard ID#:	M14368	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	06/30/2020	Lot #:	987189-75
Expiration Date (if any):	12/2021	Catalog #:	S4400-1000343

Standard ID#:	M14369	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	06/30/2020	Lot #:	1053109-22
Expiration Date (if any):	12/2021	Catalog #:	S4400-10M411-500

Standard ID#:	M14370	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	06/30/2020	Lot #:	1053109-8
Expiration Date (if any):	12/2021	Catalog #:	4400-10M411

Standard ID#:	M14371	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	06/30/2020	Lot #:	1047570-9
Expiration Date (if any):	12/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14372	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	06/30/2020	Lot #:	1050965-10
Expiration Date (if any):	12/2021	Catalog #:	4400-10M544

Standard Log #:	M14363	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/24/2020	Expiration Date:	07/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14364	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/24/2020	Expiration Date:	07/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14365	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/24/2020	Expiration Date:	06/25/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14366	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/25/2020	Expiration Date:	07/25/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14367	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/25/2020	Expiration Date:	07/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14360	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14361	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14362	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/24/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14358	Vendor:	Spex Certprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/22/2020	Lot #:	54-161CR
Expiration Date (if any):	06/30/2021	Catalog #:	XSOIKE-1-250

Standard ID#:	M14359	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/23/2020	Lot #:	52-213CRX
Expiration Date (if any):	06/30/2021	Catalog #:	INT-A1

Standard ID#:	M14355	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	06/17/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14356	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	06/17/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14357	Vendor:	Mettler toledo
Analyst:	NAH	Chemical:	Electrolyte Friscolyt-b
Date Received:	06/17/2020	Lot #:	1F091L
Expiration Date (if any):	03/31/2023	Catalog #:	51340053

Standard Log #:	M14350	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/16/2020	Expiration Date:	07/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14351	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/16/2020	Expiration Date:	07/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14352	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/16/2020	Expiration Date:	06/17/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14353	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/17/2020	Expiration Date:	07/17/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14354	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/17/2020	Expiration Date:	07/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14347	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/16/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14348	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/16/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14349	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/16/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14346	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	06/16/2020	Lot #:	196616
Expiration Date (if any):		Catalog #:	S271-500

Standard Log #:	M14344	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/12/2020	Expiration Date:	06/12/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14345	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/12/2020	Expiration Date:	06/12/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

		Instrument:	ICP 6500
Standard Log #:	M14342	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	06/11/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14214, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14120, **0.5 mL** Mo (1000 mg/L) M14121, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008 and **0.5 mL** Ti (1000 mg/L) M14009.		

		Instrument:	ICP 6500
Standard Log #:	M14343	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	06/11/2020	Expiration Date:	01/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14120, **15 mL** Fe (10,000 mg/L) M14101, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14340	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	06/11/2020	Expiration Date:	03/20/2021
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14195 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14341	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	06/11/2020	Expiration Date:	03/20/2021
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14195 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14337	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	06/11/2020	Expiration Date:	04/21
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M14196 5.0 **mL** 10000 mg/L Ti M14009 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14338	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ba, Be, and Sn
Prep Date:	06/11/2020	Expiration Date:	04/21
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M14130 5.0 **mL** 10000 mg/L Be M14203 5.0 **mL** 10000 mg/L Sn M14008 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14339	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	06/11/2020	Expiration Date:	07/21
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M14205 0.5 **mL** 10000 mg/L Cu M14199 5.0 **mL** 1000 mg/L Co M14204 5.0 **mL** 1000 mg/L Mo M14129 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14335	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/11/2020	Expiration Date:	12/2020
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14215, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **1 mL** of Si (1000 mg/L) M14006 and 1 mL M13859 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14104. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14103. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M13984, **10 mL** of Fe (10,000 mg/L) M14004, **10 mL** of Ca (10,000 mg/L) M13985 and **10 mL** Al (10,000 mg/L) M14105. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	ICP 6500
Standard Log #:	M14336	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	06/11/2020	Expiration Date:	04/21
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M14200 brought up to volume with milli-Q H_2O.		

		Instrument:	GFAA
Standard Log #:	M14332	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/11/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14333	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/11/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14334	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/11/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14327	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/09/2020	Expiration Date:	07/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14328	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/09/2020	Expiration Date:	07/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14246 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14329	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/10/2020	Expiration Date:	07/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14278 and brought up to volume.		

Standard Log #:	M14330	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/10/2020	Expiration Date:	07/10/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14331	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/10/2020	Expiration Date:	06/11/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14324	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/09/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14325	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/09/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14326	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/09/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14323	Vendor:	ThermoFisher
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	06/08/2020	Lot #:	216646
Expiration Date (if any):	11/30/2021	Catalog #:	39043

Standard Log #:	M14318	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/03/2020	Expiration Date:	07/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14319	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/03/2020	Expiration Date:	07/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14320	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/03/2020	Expiration Date:	06/04/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14321	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/04/2020	Expiration Date:	07/04/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14277 and brought up to volume.		

Standard Log #:	M14322	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/04/2020	Expiration Date:	07/04/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14315	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/03/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14316	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/03/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14317	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/03/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14310	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/27/2020	Expiration Date:	06/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14311	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/27/2020	Expiration Date:	06/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14312	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/28/2020	Expiration Date:	06/28/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14276 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14313	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	05/28/2020	Expiration Date:	05/29/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14314	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/28/2020	Expiration Date:	06/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14277 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14307	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14308	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14309	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/27/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14304	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/27/2020	Expiration Date:	05/27/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard Log #:	M14305	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/27/2020	Expiration Date:	05/27/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14287. Dilute to 20 L and mix.		

Standard ID#:	M14306	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	05/27/2020	Lot #:	189407A
Expiration Date (if any):		Catalog #:	H331-500

Standard Log #:	M14299	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/19/2020	Expiration Date:	06/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14300	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/19/2020	Expiration Date:	06/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14301	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/20/2020	Expiration Date:	06/20/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14302	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/19/2020	Expiration Date:	05/20/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14303	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/20/2020	Expiration Date:	06/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14277 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14296	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14297	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/19/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14298	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/19/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14291	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14292	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14293	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M14193 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14294	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	05/13/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14295	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/12/2020	Expiration Date:	06/12/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14288	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14289	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/12/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14290	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/12/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14287	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	05/08/2020	Expiration Date:	05/08/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC07 and brought up to volume.		

Standard Log #:	M14282	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/05/2020	Expiration Date:	06/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14283	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/05/2020	Expiration Date:	06/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14284	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/06/2020	Expiration Date:	06/06/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14285	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/05/2020	Expiration Date:	05/06/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14286	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/06/2020	Expiration Date:	06/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14279	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14280	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14281	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14277	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	05/05/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14278	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	05/05/2020	Lot #:	K111-25
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14276	Vendor:	Fisher Chemical
Analyst:	MDS	Chemical:	Sodium Chloride
Date Received:	05/01/2020	Lot #:	195918
Expiration Date (if any):		Catalog #:	S271-500

		Instrument:	CETAC
Standard Log #:	M14275	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/29/2020	Expiration Date:	04/30/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14271	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/27/2020	Expiration Date:	05/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14272	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/27/2020	Expiration Date:	05/27/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14273	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/28/2020	Expiration Date:	05/28/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14274	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/28/2020	Expiration Date:	05/28/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14268	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14269	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/27/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14270	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/27/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14266	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/22/2020	Expiration Date:	05/22/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13463 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14267	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/22/2020	Expiration Date:	05/22/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14262	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/21/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14263	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/21/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14264	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/21/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14265	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/21/2020	Expiration Date:	04/22/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

Standard Log #:	M14259	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/21/2020	Expiration Date:	04/21/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

		Instrument:	HydraII
Standard Log #:	M14260	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14261	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/21/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M14254	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/14/2020	Expiration Date:	05/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14255	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/14/2020	Expiration Date:	05/14/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14256	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/15/2020	Expiration Date:	05/15/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14257	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/15/2020	Expiration Date:	05/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14157 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14258	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/14/2020	Expiration Date:	04/15/20220
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.691 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14251	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/14/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14252	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/14/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14253	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/14/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14250	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	04/14/2020	Expiration Date:	12/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M13951	1000	2
Al	800	M13982	**10000**	4
As	40	M13863	1000	2
Ba	20	M14130	1000	1
Be	8	M14203	1000	0.4
Ca	1000	M13985	**10000**	5
Cd	10	M14201	1000	0.5
Co	20	M14204	1000	1
Cr	20	M14205	**10000**	0.1
Cu	20	M14199	**10000**	0.1
Fe	600	M14101	**10000**	3
Mg	1000	M14108	**10000**	5
Mn	20	M14200	**10000**	0.1
Mo	20	M14129	1000	1
Ni	20	M14196	1000	1
Pb	20	M14202	**10000**	0.1
Sb	40	M13950	1000	2
Se	40	M13948	1000	2
Tl	40	M14207	1000	2
V	20	M14198	1000	1
Zn	20	M14197	**10000**	0.1
Na	10000	M14103	**10000**	50
K	10000	M14104	**10000**	50
B	40	M13947	1000	2
Si	200	M14106	1000	10
S	2000	M14102	**10000**	10
Li	40	M14127	1000	2
Sr	20	M14007	1000	1
Sn	100	M14008	1000	5
Ti	20	M14009	1000	10

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M14247	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/10/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14248	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/10/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14249	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/10/2020	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M14246	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	04/08/2020	Lot #:	A0412553
Expiration Date (if any):		Catalog #:	424185000

Standard Log #:	M14242	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/06/2020	Expiration Date:	05/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14243	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/06/2020	Expiration Date:	05/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14244	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/07/2020	Expiration Date:	05/07/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14245	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/07/2020	Expiration Date:	05/07/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14239	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/06/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14240	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/06/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14241	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/06/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14234	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/31/2020	Expiration Date:	04/30/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14235	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/31/2020	Expiration Date:	04/30/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14236	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/01/2020	Expiration Date:	05/01/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14237	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/01/2020	Expiration Date:	05/01/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14158 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14238	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/01/2020	Expiration Date:	04/02/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14231	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/31/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14232	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/31/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14233	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/31/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

MRL BASE STD M14230

Analyst NAH

Prep Date 03/27/2020

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13951	1000	1	02/2021
Al	400	M14105	10000	2	07/2021
Ba	10	M14130	1000	0.5	07/2021
Be	4	M14203	1000	0.2	09/2021
Cd	5	M14201	1000	0.25	09/2021
Co	10	M14204	1000	0.5	09/2021
Cr	10	M14205	10000	0.05	09/2021
Cu	10	M14199	10000	0.05	09/2021
Mg	500	M14108	10000	2.5	07/2021
Mn	10	M14200	10000	0.05	09/2021
Mo	10	M14129	1000	0.5	07/2021
Ni	10	M14196	1000	0.5	09/2021
Pb	10	M14202	10000	0.05	09/2021
Sb	20	M13950	1000	1	02/2021
V	10	M14198	1000	0.5	09/2021
Zn	10	M14197	10000	0.05	09/2021
K	1000	M14104	10000	5	07/2021
Na	1000	M14103	10000	5	07/2021
As	20	M13863	1000	1	12/2020
Ca	500	M14107	10000	2.5	07/2021
Fe	300	M14101	10000	1.5	07/2021
Se	20	M13948	1000	1	02/2021
Tl	20	M14207	1000	1	09/2021
Si	100	M14106	1000	5	07/2021
B	20	M14131	1000	1	07/2021
Li	20	M14127	1000	1	07/2021
W	50	xxxxxxxd	1000	2.5	xxxxxxx
Ti	10	M14009	1000	0.5	04/2021
Sr	10	M14007	1000	0.5	04/2021
Sn	50	M14008	1000	2.5	04/2021
S	300	M14102	10000	1.5	07/2021

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M14224	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/25/2020	Expiration Date:	04/25/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14194 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14225	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/25/2020	Expiration Date:	04/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14158 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14226	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/25/2020	Expiration Date:	03/26/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

Standard ID#:	M14227	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV
Date Received:	03/25/2020	Lot #:	R2-MEB691217
Expiration Date (if any):		Catalog #:	CTI-SPK-1

Standard ID#:	M14228	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE
Date Received:	03/25/2020	Lot #:	R2-MEB691216
Expiration Date (if any):		Catalog #:	CTI-GFCAL-1

Standard ID#:	M14229	Vendor:	HACH
Analyst:	NAH	Chemical:	StablCal Standard 200 NTU
Date Received:	03/25/2020	Lot #:	A0038
Expiration Date (if any):	02/2022	Catalog #:	2660449

Standard Log #:	M14222	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/24/2020	Expiration Date:	04/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14223	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/24/2020	Expiration Date:	04/24/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14219	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14220	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14221	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/24/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14218	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	03/19/2020	Lot #:	54-035CR
Expiration Date (if any):	03/30/2021	Catalog #:	XCTWI-1-500

		Instrument:	CETAC
Standard Log #:	M14216	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	03/18/2020	Expiration Date:	03/19/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14217	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/18/2020	Expiration Date:	04/18/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14158 and brought up to volume.		

Standard Log #:	M14211	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/17/2020	Expiration Date:	04/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14212	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/17/2020	Expiration Date:	04/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14213	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/17/2020	Expiration Date:	04/17/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

Standard ID#:	M14214	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	03/17/2020	Lot #:	54-027CR
Expiration Date (if any):	03/30/2021	Catalog #:	XSPIKE-1-250

Standard ID#:	M14215	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	03/17/2020	Lot #:	54-028CR
Expiration Date (if any):	03/30/2021	Catalog #:	XCTWI-5-500

		Instrument:	HydraII
Standard Log #:	M14208	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14209	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14210	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/17/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14201	Vendor:	CPI
Analyst:	NAH	Chemical:	Cd 1000 mg/L
Date Received:	03/11/2020	Lot #:	996631-64
Expiration Date (if any):	09/2021	Catalog #:	S4400-100081

Standard ID#:	M14202	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 10000
Date Received:	03/11/2020	Lot #:	168223-44
Expiration Date (if any):	09/2021	Catalog #:	4400-10M281

Standard ID#:	M14203	Vendor:	CPI
Analyst:	NAH	Chemical:	Be 1000 mg/L
Date Received:	03/11/2020	Lot #:	998969-61
Expiration Date (if any):	09/2021	Catalog #:	S4400-100051

Standard ID#:	M14204	Vendor:	CPI
Analyst:	NAH	Chemical:	Co 1000 mg/L
Date Received:	03/11/2020	Lot #:	1024904-44
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000131

Standard ID#:	M14205	Vendor:	CPI
Analyst:	NAH	Chemical:	Cr 10000 mg/L
Date Received:	03/11/2020	Lot #:	880115-56
Expiration Date (if any):	09/2021	Catalog #:	S4400-10M121

Standard ID#:	M14206	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	03/11/2020	Lot #:	997484-19
Expiration Date (if any):	09/2021	Catalog #:	4400-10M671

Standard ID#:	M14207	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	03/11/2020	Lot #:	991734-85
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000581

Standard ID#:	M14195	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	03/09/2020	Lot #:	54-005CR
Expiration Date (if any):	3/30/2021	Catalog #:	XCTWI-4-500

Standard ID#:	M14196	Vendor:	CPI
Analyst:	NAH	Chemical:	Ni 1000 mg/L
Date Received:	03/11/2020	Lot #:	984273-111
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000361

Standard ID#:	M14197	Vendor:	CPI
Analyst:	NAH	Chemical:	Zn 10000 mg/L
Date Received:	03/11/2020	Lot #:	1025267-1
Expiration Date (if any):	09/2021	Catalog #:	4400-10M681

Standard ID#:	M14198	Vendor:	CPI
Analyst:	NAH	Chemical:	V 1000 mg/L
Date Received:	03/11/2020	Lot #:	990117-98
Expiration Date (if any):	09/2021	Catalog #:	S4400-1000651

Standard ID#:	M14199	Vendor:	CPI
Analyst:	NAH	Chemical:	Cu 10000 mg/L
Date Received:	03/11/2020	Lot #:	982824-45
Expiration Date (if any):	09/2021	Catalog #:	S4400-10M141

Standard ID#:	M14200	Vendor:	CPI
Analyst:	NAH	Chemical:	Mn 10000 mg/L
Date Received:	03/11/2020	Lot #:	985851-17
Expiration Date (if any):	09/2021	Catalog #:	S4400-10M321

Standard ID#:	M14193	Vendor:	Fisher
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	03/09/2020	Lot #:	189407
Expiration Date (if any):		Catalog #:	H331-500

Standard ID#:	M14194	Vendor:	Fisher
Analyst:	NAH	Chemical:	Sodium Chloride
Date Received:	03/09/2020	Lot #:	193465
Expiration Date (if any):		Catalog #:	S271-500

		Instrument:	CETAC
Standard Log #:	M14189	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/10/2020	Expiration Date:	04/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M14190	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/09/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M14191	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/09/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M14192	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/09/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	HydraII
Standard Log #:	M14186	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14187	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14188	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14182	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/06/2020	Expiration Date:	04/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

Standard Log #:	M14183	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/06/2020	Expiration Date:	04/06/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

Standard Log #:	M14184	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14185	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/09/2020	Expiration Date:	04/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14180	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/04/2020	Expiration Date:	04/04/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14181	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/04/2020	Expiration Date:	03/05/2020
Prep:	Carefully mixed **3** parts HCl AB.685 with **1** part HNO_3 AB.686 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14177	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/04/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14178	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/04/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14179	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/04/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14175	Vendor:	COLE-PARMER
Analyst:	BMM	Chemical:	Acid Washed TCLP Filters
Date Received:	03/02/2020	Lot #:	400168
Expiration Date (if any):		Catalog #:	FG77150MM

Standard Log #:	M14176	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/03/2020	Expiration Date:	03/03/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

		Instrument:	ICP 6500
Standard Log #:	M14172	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14121 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14173	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	02/25/2020	Expiration Date:	01/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14137 and 15 **mL** 10000 mg/L Fe M14004 5.0 **mL** 1000 mg/L V M13578 5.0 **mL** 1000 mg/L Ce M13859 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14174	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14137, **15 mL** Fe (10,000 mg/L) M14004, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14121, **2.5 mLs Na 10,000 ug/mL** M14103 ,**2.5 mLs k 10,000 ug/mL** M14126 **2.5 mLs S 10,000 ug/mL** M14102, **0.5 mls Si 1000 ug/mL** M13981 and brought up to volume with milli-Q .		

		Instrument:	ICP 6500
Standard Log #:	M14170	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	02/25/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14138, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14137, **0.5 mL** Mo (1000 mg/L) M14129, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008, **0.5 mL** Ti (1000 mg/L) M141009, **0.5 mL** W (1000 mg/L) Mxxxx, **0.5 mL** Si (1000 mg/L) M14106, **0.5 mL** S (10000 mg/L) M14102, **0.5 mL** K (10000 mg/L) M14126, and **0.5 mL** Na (10000 mg/L) M14103		

		Instrument:	ICP 6500
Standard Log #:	M14171	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14121 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M14168	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/24/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M14169	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	02/25/2020	Expiration Date:	05/30/2020
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14121, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827 and **1 mL** of Si (1000 mg/L) M14106 and 1 mL M13859 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14104. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M13618, **10 mL** of Mn (10,000 mg/L) M13616, **10 mL** of Cr (10,000 mg/L) M13617, **10 mL** Pb (10,000 mg/L) M13615, **10 mL** of Zn (10,000 mg/L) M13610 and **10 mL** of Na (10,000 mg/L) M14103. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14108, **10 mL** of Fe (10,000 mg/L) M14004, **10 mL** of Ca (10,000 mg/L) M14107 and **10 mL** Al (10,000 mg/L) M14105. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	HydraII
Standard Log #:	M14165	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14166	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/24/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14167	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/24/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6000
Standard Log #:	M14163	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	02/21/2020	Expiration Date:	07/2021
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M14103 and **0.15 mL** K (10,000 µg/mL) M14109 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14164	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	02/21/2020	Expiration Date:	01/30/2021
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M14120, **2.5 mL** of K (10,000 mg/L) M14109, **2.5 mL** of Na (10,000 mg/L) M14103 and **7.5 mL** of Fe (10,000 mg/L) M14101 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M14159	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/20/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

		Instrument:	ICP 6000
Standard Log #:	M14160	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	02/21/2020	Expiration Date:	10/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13808 and K (1000 µg/mL) M13809 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14161	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	02/21/2020	Expiration Date:	10/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13808 and **0.5 mL** K (1000 µg/mL) M13809 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M14162	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	02/21/2020	Expiration Date:	07/2021
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M14109 and Na (10,000 mg/L) M14103 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6500
Standard Log #:	M14156	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	02/19/2020	Expiration Date:	01/30/21
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14138, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14120, **0.5 mL** Mo (1000 mg/L) M14129, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M141008, **0.5 mL** Ti (1000 mg/L) M14009, **0.5 mL** W (1000 mg/L) Mxxxxxxx, **0.5 mL** Si (1000 mg/L) M13981, **0.5 mL** S (10000 mg/L) M14102, **0.5 mL** K (10000 mg/L) M14109, and **0.5 mL** Na (10000 mg/L) M14103		

Standard ID#:	M14157	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	02/19/2020	Lot #:	J347-07
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14158	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	02/19/2020	Lot #:	J347-07
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	CETAC
Standard Log #:	M14148	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/13/2020	Expiration Date:	
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14081 and brought up to volume.		

Standard Log #:	M14152	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14153	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14154	Reagent:	Potassium Persulfate Solution
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14155	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	02/13/2020	Expiration Date:	07/13/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13994 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14149	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14150	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/17/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14151	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/17/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	HydraII
Standard Log #:	M14145	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/11/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14146	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/11/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14147	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/11/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14144	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/06/2020	Expiration Date:	03/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

Standard Log #:	M14142	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	02/05/2020	Expiration Date:	07/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14143	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	02/05/2020	Expiration Date:	02/06/2020
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14139	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14140	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/05/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14141	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/05/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14137	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/04/2020	Lot #:	53-196CR
Expiration Date (if any):	01/30/2021	Catalog #:	XCTIWI-1-500

Standard ID#:	M14138	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/04/2020	Lot #:	XSPIKE-1-250
Expiration Date (if any):	01/30/2021	Catalog #:	53-197CR

		Instrument:	CETAC
Standard Log #:	M14136	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/30/2020	Expiration Date:	01/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14132	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/29/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14133	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/29/2020	Expiration Date:	07/20/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14125 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14134	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/29/2020	Expiration Date:	01/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14119 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14135	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	01/29/2020	Expiration Date:	01/30/2020
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

Standard ID#:	M14125	Vendor:	CPI International
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	01/24/2020	Lot #:	1009904-41
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-1000331

Standard ID#:	M14126	Vendor:	CPI International
Analyst:	MDS	Chemical:	Potassium 10,000 µg/mL
Date Received:	01/24/2020	Lot #:	980507-31
Expiration Date (if any):	07/20/2021	Catalog #:	4400-10M411

Standard ID#:	M14127	Vendor:	CPI International
Analyst:	MDS	Chemical:	Lithium 1000 µg/mL
Date Received:	01/24/2020	Lot #:	1017511-7
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-1000291

Standard ID#:	M14128	Vendor:	CPI International
Analyst:	MDS	Chemical:	Phosphorus 10,000 µg/mL
Date Received:	01/24/2020	Lot #:	979480-24
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-10M391

Standard ID#:	M14129	Vendor:	CPI International
Analyst:	MDS	Chemical:	Molybdenum 1000 µg/mL
Date Received:	01/24/2020	Lot #:	987189-55
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-1000343

Standard ID#:	M14130	Vendor:	CPI International
Analyst:	MDS	Chemical:	Barium 1000 µg/mL
Date Received:	01/24/2020	Lot #:	994634-53
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-100041

Standard ID#:	M14131	Vendor:	CPI International
Analyst:	MDS	Chemical:	Boron 1000 µg/mL
Date Received:	01/24/2020	Lot #:	1024903-6
Expiration Date (if any):	07/20/2021	Catalog #:	S4400-100074

		Instrument:	HydraII
Standard Log #:	M14122	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/23/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14123	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/23/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14124	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/23/2020	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14119	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Hg 1000 ug/mL
Date Received:	01/21/2020	Lot #:	CL11-96HGY
Expiration Date (if any):	01/30/2021	Catalog #:	CLHG4-2Y

Standard ID#:	M14120	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	01/21/2020	Lot #:	2-96JX
Expiration Date (if any):	01/30/2021	Catalog #:	INT-A1

Standard ID#:	M14121	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	01/21/2020	Lot #:	1-008DMP
Expiration Date (if any):	01/21/2021	Catalog #:	XCTWI-5-500

		Instrument:	CETAC
Standard Log #:	M14117	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/17/2020	Expiration Date:	02/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.685 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

Standard Log #:	M14118	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	01/17/2020	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M13951	1000	0.01
As	2	M13863	1000	0.1
Pb	2	M13615	10000	0.01
Sb	2	M13950	1000	0.1
Se	2	M13948	1000	0.1
Tl	2	M13583	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	HydraII
Standard Log #:	M14114	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/16/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14115	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/16/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14116	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/16/2020	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14111	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/13/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14112	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/13/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14113	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/13/2020	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M14106	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	01/13/2020	Lot #:	175213-60
Expiration Date (if any):	07/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14107	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 ug/mL
Date Received:	01/13/2020	Lot #:	855297-68
Expiration Date (if any):	07/2021	Catalog #:	4400-10M91

Standard ID#:	M14108	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 ug/mL
Date Received:	01/13/2020	Lot #:	1013353-36
Expiration Date (if any):	07/2021	Catalog #:	4400-10M311

Standard ID#:	M14109	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000ug/mL
Date Received:	01/13/2020	Lot #:	980507-79
Expiration Date (if any):	07/2021	Catalog #:	4400-10M411

Standard Log #:	M14110	Reagent:	TCLP EXTRACTION FLUID #2
Analyst:	BMM	pH:	2.88 ± 0.05
Prep Date:	01/14/2020	Expiration Date:	01/14/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684. Dilute to 20 L and mix.		

Standard ID#:	M14100	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 ug/mL
Date Received:	01/10/2020	Lot #:	1905324-500
Expiration Date (if any):	07/31/2021	Catalog #:	HP10M67-1-500

Standard ID#:	M14101	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 ug/mL
Date Received:	01/13/2020	Lot #:	998527-45
Expiration Date (if any):	07/2021	Catalog #:	4400-10M261

Standard ID#:	M14102	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10000 ug/mL
Date Received:	01/13/2020	Lot #:	9987745-28
Expiration Date (if any):	07/2021	Catalog #:	4400-10M544

Standard ID#:	M14103	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 10000 ug/mL
Date Received:	01/13/2020	Lot #:	752887-79
Expiration Date (if any):	01/2021	Catalog #:	4400-40M521

Standard ID#:	M14104	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10000 ug/mL
Date Received:	01/13/2020	Lot #:	980507-31
Expiration Date (if any):	07/2021	Catalog #:	4400-10M411

Standard ID#:	M14105	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 ug/mL
Date Received:	01/13/2020	Lot #:	992536-34
Expiration Date (if any):	07/2021	Catalog #:	4400-10M11

Standard Log #:	M14099revised below	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	01/09/2020	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M13951	1000	0.25
Al	10	M13962	**10000**	0.05
As	20	M13863	1000	1
Ba	2	M13949	1000	0.1
Be	0.5	M13579	1000	0.025
Ca	50	M13841	**10000**	0.25
Cd	0.5	M13570	1000	0.025
Co	2.5	M13575	1000	0.125
Cr	5.0	M13617	**10000**	0.025
Cu	10	M13618	**10000**	0.05
Fe	40	M13963	**10000**	0.2
Mg	25	M13752	**10000**	0.125
Mn	5	M13616	**10000**	0.025
Mo	2.5	M13860	1000	0.125
Ni	5	M13569	1000	0.25
Pb	10	M13615	**10000**	0.05
Sb	20	M13950	1000	1
Se	20	M13948	1000	1
Tl	20	M13583	1000	1
V	5	M13578	1000	0.25
Zn	5	M13610	**10000**	0.025

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14099	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	01/09/2020	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M13951	1000	0.25
Al	10	M13962	**10000**	0.05
As	20	M13863	1000	1
Ba	2	M13949	1000	0.1
Be	0.5	M13579	1000	0.025
Ca	50	M13841	**10000**	0.25
Cd	0.5	M13570	1000	0.025
Co	2.5	M13575	1000	0.125
Cr	5.0	M13617	**10000**	0.025
Cu	10	M13618	**10000**	0.05
Fe	40	M13963	**10000**	0.2
Mg	25	M13752	**10000**	0.125
Mn	5	M13616	**10000**	0.025
Mo	2.5	M13860	1000	0.125
Ni	5	M13569	1000	0.25
Pb	10	M13615	**10000**	0.05
Sb	20	M13950	1000	1
Se	20	M13948	1000	1
Tl	20	M13583	1000	1
V	5	M13578	1000	0.25
Zn	5	M13610	**10000**	0.025
Na	500	M13862	**10000**	2.5
K	500	M14003	**10000**	2.5
B	20	M13947	1000	1
Si	100	M13981	1000	5
S	200	M13696	**10000**	1
Li	20	M13577	1000	1
Sr	20	M14007	1000	1
Sn	20	M14008	1000	1
Ti	20	M14009	1000	1

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M14097	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/09/2020	Expiration Date:	02/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

Standard Log #:	M14098	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 S Spiking Solution
Prep Date:	01/09/2020	Expiration Date:	06/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	240	M13696	10000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M14096	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	01/08/2020	Expiration Date:	01/09/2020
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14093	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/08/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14094	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/08/2020	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14095	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/08/2020	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14092	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/26/2019	Expiration Date:	01/26/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14088	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/20/2019	Expiration Date:	01/20/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14089	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/24/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14090	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/24/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14091	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/24/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14086	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/19/2019	Expiration Date:	12/20/2019
Prep:	Carefully mixed **3** parts HCl AB.862 with **1** part HNO_3 AB.861 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14087	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/24/2019	Expiration Date:	12/25/2019
Prep:	Carefully mixed **3** parts HCl AB.862 with **1** part HNO_3 AB.861 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14083	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/18/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14084	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/18/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14085	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/18/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14082	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	Acid Washed TCLP Filters
Date Received:	12/11/2019	Lot #:	400168-9329-CM
Expiration Date (if any):		Catalog #:	FG77150MM

Standard ID#:	M14079	Vendor:	Thermofisher Scientific
Analyst:	MDS	Chemical:	GFAA Nickel Nitrate Modifier
Date Received:	12/12/2019	Lot #:	9192422
Expiration Date (if any):	04/30/2021	Catalog #:	39043

Standard ID#:	M14080	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	12/12/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14081	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	12/12/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M14078A	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	12/11/2019	Expiration Date:	02/21

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13947	1000	0.8
Si	200	M13810	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14078b Combined with	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	12/11/2019	Expiration Date:	03/201

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M13604	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14077	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	12/11/2019	Expiration Date:	02/20

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13851	1000	0.2
Al	36	M13982	**10000**	0.18
As	24	M13863	1000	1.2
Ba	1.8	M13949	1000	0.09
Be	0.6	M13579	1000	0.03
Ca	100	M13841	**10000**	0.5
Cd	2.0	M13570	1000	0.1
Co	4	M13575	1000	0.2
Cr	4	M13617	**10000**	0.02
Cu	7	M13618	**10000**	0.035
Fe	100	M13983	**10000**	0.5
Mg	40	M13752	**10000**	0.2
Mn	4	M13616	**10000**	0.02
Mo	7	M13860	1000	0.35
Ni	6	M13569	1000	0.2
Pb	4	M13615	**10000**	0.02
Sb	12	M13950	1000	0.6
Se	13	M13948	1000	0.65
Tl	20	M13583	1000	0.75
V	5	M13578	1000	0.25
Zn	10	M13610	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14076	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	12/10/2019	Expiration Date:	02/20

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13951	1000	0.2
Al	9.6	M13982	**10000**	0.048
As	32	M13863	1000	1.6
Ba	2	M13949	1000	0.1
Be	1.6	M13579	1000	0.08
Ca	56	M13841	**10000**	0.28
Cd	1.6	M13570	1000	0.08
Co	9.6	M13575	1000	0.48
Cr	5.6	M13617	**10000**	0.028
Cu	16	M13618	**10000**	0.08
Fe	72	M13983	**10000**	0.36
Mg	32	M13752	**10000**	0.16
Mn	6	M13616	**10000**	0.03
Mo	9.6	M13860	1000	0.48
Ni	4.8	M13569	1000	0.24
Pb	10	M13615	**10000**	0.05
Sb	32	M13950	1000	1.6
Se	16	M13948	1000	0.8
Tl	19	M13583	1000	0.95
V	3.2	M13578	1000	0.16
Zn	12	M13610	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M14074	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	12/10/2019	Expiration Date:	02/2021
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13951 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M14075	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/10/2019	Expiration Date:	12/11/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	GFAA
Standard Log #:	M14072	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	12/10/2019	Expiration Date:	02/2020
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13950 **3.2 mL** of As (1000 mg/L) M13863 **3.2 mL** of Se (1000 mg/L) M13948 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M14073	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	12/10/2019	Expiration Date:	02/2020
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13950 **1.0 mL** of As (1000 mg/L) M13863 **2.0 mL** of Se (1000 mg/L) M13948 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M14071	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	12 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	12/10/2019	Expiration Date:	02/2020

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13863	10,000
Pb	0.1	10,000	M13615	10,000
Tl	1	1000	M13583	10,000
Se	1	1000	M13948	10,000
Sb	1	1000	M13950	10,000
Ag	0.1	1000	M13951	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.2	10,000	12
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

		Instrument:	HydraII
Standard Log #:	M14068	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/10/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14069	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	12/10/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13734 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M14070	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/10/2019	Expiration Date:	01/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14065	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/05/2019	Expiration Date:	01/05/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14066	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/06/2019	Expiration Date:	01/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14067	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/10/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M14063	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/03/2019	Expiration Date:	01/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.682 and dissolved **100 g** Stannous chloride M14016 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14064	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	12/04/2019	Expiration Date:	12/05/2019
Prep:	Carefully mixed **3** parts HCl AB.682 with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14061	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/02/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14062	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	Acid Washed TCLP Filters
Date Received:	12/02/2019	Lot #:	400168-9305-CM
Expiration Date (if any):		Catalog #:	

		Instrument:	CETAC
Standard Log #:	M14058	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/20/2019	Expiration Date:	12/20/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M14017 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14059	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/02/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14060	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/02/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M14056	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/26/2019	Expiration Date:	11/26/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

Standard Log #:	M14057	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/26/2019	Expiration Date:	11/26/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M14002. Dilute to 20 L and mix.		

Standard ID#:	M14054	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	11/20/2019	Lot #:	53-042CR
Expiration Date (if any):	11/30/2020	Catalog #:	XCTWI-5-500

Standard ID#:	M14055	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	11/20/2019	Lot #:	53-041CR
Expiration Date (if any):	11/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	GFAA
Standard Log #:	M14051	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	11/20/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14052	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	11/20/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14053	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	11/20/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M14048	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/19/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14049	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/19/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14050	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	11/19/2019	Expiration Date:	11/20/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14045	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/11/2019	Expiration Date:	05/11/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.681 and dissolved **100 g** Stannous chloride M14017 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14046	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/13/19	Expiration Date:	05/13/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.681 and dissolved **100 g** Stannous chloride M14017 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14047	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/19/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

Standard Log #:	M14044	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/13/2019	Expiration Date:	11/13/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.684 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M14041	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	11/09/2019	Expiration Date:	11/10/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M14042	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	11/12/2019	Expiration Date:	11/13/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M14043	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	11/12/2019	Expiration Date:	04/12/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13993 and **60 g** hydroxylamine sulfate M13874 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14038	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14039	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14040	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/07/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6000
Standard Log #:	M14035	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/04/2019	Expiration Date:	02/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M14008 Sr (1000 µg/mL) M14007 Ti (1000 µg/mL) M14009 W (1000 µg/mL) MXXXXX		

		Instrument:	ICP 6000
Standard Log #:	M14036	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	11/04/2019	Expiration Date:	02/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	MXXXX	1000	5	XX/XXXX
Ti	10/30	M14009	1000	0.5	04/2021
Sr	10/30	M14007	1000	0.5	04/2021
Sn	20/60	M14008	1000	1	04/2021

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	CETAC
Standard Log #:	M14037	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/04/2019	Expiration Date:	05/04/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13922 and brought up to volume.		

		Instrument:	ICP
Standard Log #:	M14033	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	11/04/2019	Expiration Date:	05/30/2020
Prep:	Standard Conc. (ug/L)	Pipette the following:	
	1	**0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.001 mL** W (1000 µg/mL) MXXXXX into 1L = *1 µg/L*	
	10	**0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.01 mL** W (1000 µg/mL) MXXXXX into 1L = *10 µg/L*	
	100	**1 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.1 mL** W (1000 µg/mL) MXXXXX into 1L = *100 µg/L*	
	1000 (CCV)	**2 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **0.2 mL** W (1000 µg/mL) MXXXXX into 200mL = *1000 µg/L*	
	10000	**20 mL** of Custom Assurance Standard XCTWI-5-500 M13839 and **2 mL** W (1000 µg/mL) MXXXXX into 200mL = *10000 µg/L*	

		Instrument:	ICP 6000
Standard Log #:	M14034	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/04/2019	Expiration Date:	02/28/2020
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **6 mL** of Fe (10,000 mg/L) M13751, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M14008, **0.1 mL** of Sr (1000 µg/mL) M14007, **0.1 mL** of Ti (1000 µg/mL) M14009, and **0.1 mL** of W (1000 µg/mL) MXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	CETAC
Standard Log #:	M14032	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/31/2019	Expiration Date:	10/31/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M14028	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	10/30/2019	Expiration Date:	10/2020
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13947 and Si (1000 mg/L) M13810 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M14029	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/30/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **0.05 mL** of B (1000 µg/mL) M13947, **0.05 mL** of Si (1000 µg/mL) M13810 and **3 mL** of Fe (10,000 mg/L) M13751 and brought up to volume using Milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M14030	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	10/30/2019	Expiration Date:	05/30/2020
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13839 and **1.0 mL** Si (1000 mg/L) M13981 and brought up to volume using milli-Q H_2O.		

Standard ID#:	M14031	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Acid Washed TCLP filters
Date Received:	10/31/2019	Lot #:	400165
Expiration Date (if any):		Catalog #:	FG77150MM

		Instrument:	HydraII
Standard Log #:	M14024	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/29/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14025	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/29/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14026	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/29/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14027	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/30/2019	Expiration Date:	04/30/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13922 and brought up to volume.		

MRL BASE STD M14024 Analyst NAH

Prep Date 10/30/2019

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13951	1000	1	02/2021
Al	400	M13690	10000	2	06/2020
Ba	10	M13949	1000	0.5	02/2021
Be	4	M13579	1000	0.2	02/2020
Cd	5	M13570	1000	0.25	01/2020
Co	10	M13575	1000	0.5	01/2020
Cr	10	M13617	10000	0.05	03/2020
Cu	10	M13618	10000	0.05	03/2020
Mg	500	M13752	10000	2.5	09/2020
Mn	10	M13616	10000	0.05	03/2020
Mo	10	M13860	1000	0.5	12/2020
Ni	10	M13569	1000	0.5	01/2020
Pb	10	M13615	10000	0.05	03/2020
Sb	20	M13950	1000	1	02/2021
V	10	M13578	1000	0.5	02/2020
Zn	10	M13610	10000	0.05	03/2020
K	1000	M14003	10000	5	04/2021
Na	1000	M13862	10000	5	12/2020
As	20	M13763	1000	1	12/2020
Ca	500	M13985	10000	2.5	04/2021
Fe	300	M13751	10000	1.5	09/2020
Se	20	M13948	1000	1	02/2021
Tl	20	M13583	1000	1	02/2020
Si	100	M13810	1000	5	10/2020
B	20	M13947	1000	1	02/2021
Li	20	M13577	1000	1	02/2020
W	50	Mxxxxxx	1000	2.5	xxxxxxxx
Ti	10	M14009	1000	0.5	04/2021
Sr	10	M14007	1000	0.5	03/2020
Sn	50	M14008	1000	2.5	04/2021
S	300	M13604	10000	1.5	03/2020

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M14022	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13922 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M14023	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	10/30/2019	Expiration Date:	02/2020
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M13738 and 15 **mL** 10000 mg/L Fe M14004 5.0 **mL** 1000 mg/L V M13578 5.0 **mL** 1000 mg/L Ce M13859 and brought up to volume with milli-Q H_2O.		

Standard Log #:	M14020	Reagent:	Potassium Persulfate Solution
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13714 and brought up to volume.		

Standard Log #:	M14021	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13993 and **60 g** hydroxylamine sulfate M13874 and brought up to volume.		

Standard ID#:	M14016	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/23/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14017	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	10/23/2019	Lot #:	J267-10
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	CETAC
Standard Log #:	M14018	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	10/24/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M14019	Reagent:	Potassium Permanganate Solution
Analyst:	BMM		
Prep Date:	10/23/2019	Expiration Date:	04/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14012	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/21/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14013	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/21/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14014	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/21/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14015	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/22/2019	Expiration Date:	09/30/2020
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13954 and **10 mL** Mg (10,000 mg/L) M13752 and brought up to volume.		

Standard Log #:	M14010	Reagent:	SPLP ACID MIX
Analyst:	BMM		60/40 H_2SO_4 - HNO_3
Prep Date:	10/21/2019	Expiration Date:	10/21/2020
Prep:	Into a 200 mL volumetric flask, partially filled with DI H_2O, add **12 g** H_2SO_4 AB.674 and **8 g** HNO_3 AB.677 and bring up to volume using DI H_2O.		

Standard Log #:	M14011	Reagent:	SPLP EXTRACTION FLUID EAST #
Analyst:	BMM	pH:	4.20 ± 0.05
Prep Date:	10/21/2019	Expiration Date:	10/21/2020
Prep:	Into a 20 L carboy filled with DI H_2O, adjust pH to 4.20 ± 0.05 using 60/40 HNO_3 - H_2SO_4 M14010.		

Standard ID#:	M14005	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	10/17/2019	Lot #:	168189-30
Expiration Date (if any):	04/2021	Catalog #:	4400-110M671

Standard ID#:	M14006	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	10/17/2019	Lot #:	1004985-62
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14007	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	10/17/2019	Lot #:	168227-95
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000531

Standard ID#:	M14008	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/L
Date Received:	10/17/2019	Lot #:	977645-2
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000613

Standard ID#:	M14009	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	10/17/2019	Lot #:	987438-36
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000623

		Instrument:	CETAC
Standard Log #:	M14000	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/16/2019	Expiration Date:	04/16/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

Standard ID#:	M14001	Vendor:	ThermoFisher
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	10/17/2019	Lot #:	9192422
Expiration Date (if any):	04/30/2021	Catalog #:	39043

Standard Log #:	M14002	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	10/17/2019	Expiration Date:	10/17/2020
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W47366 and brought up to volume.		

Standard ID#:	M14003	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	10/17/2019	Lot #:	980507-31
Expiration Date (if any):	04/2021	Catalog #:	4400-10M411

Standard ID#:	M14004	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	10/17/2019	Lot #:	998527-45
Expiration Date (if any):	04/2021	Catalog #:	4400-10M261

		Instrument:	GFAA
Standard Log #:	M13997	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/16/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13998	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/16/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13999	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/16/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M13993	Vendor:	Thermo fisher Scientific
Analyst:	NAH	Chemical:	Sodium Chloride
Date Received:	10/15/2019	Lot #:	193463
Expiration Date (if any):	06/2024	Catalog #:	S271-500

Standard ID#:	M13994	Vendor:	Thermo Fisher Scientific
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	10/15/2019	Lot #:	189407
Expiration Date (if any):	05/2024	Catalog #:	H331-500

		Instrument:	CETAC
Standard Log #:	M13995	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/15/2019	Expiration Date:	10/16/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13996	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/16/2019	Expiration Date:	10/16/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

		Instrument:	ICP 6000
Standard Log #:	M13992	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	10/15/2019	Expiration Date:	01/2020
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **6 mL** of Fe (10,000 mg/L) M13751, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) MXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	ICP 6000
Standard Log #:	M13989	Standard:	Sulfur ICAL
Analyst:	MDS	Concentrations:	1000 10,000 100,000 1000K µg/L (S)
Prep Date:	10/14/2019	Expiration Date:	06/2020
Prep:	Into four, 100 mL volumetric flasks, pipetted the following from stock standard S (10,000 µg/mL) M13696 and brought up to volume using milli-Q H_2O. *1000 ug/L std.* - **0.01 mL** *10,000 ug/L std.* - **0.1 mL** *100,000 ug/L std.* -**1.0 mL**, also used as the CCV *1000K ug/L std.* - **10 mL**		

		Instrument:	ICP 6000
Standard Log #:	M13990	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	10/14/2019	Expiration Date:	03/2020
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M13604 and brought up to volume using Milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13991	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/14/2019	Expiration Date:	12/2019
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **0.05 mL** of B (1000 µg/mL) M13531, **0.05 mL** of Si (1000 µg/mL) M13861 and **3 mL** of Fe (10,000 mg/L) M13751 and brought up to volume using Milli-Q H_2O.		

		Instrument:	HydraII
Standard Log #:	M13986	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/15/2019	Expiration Date:	04/15/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13987	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/15/2019	Expiration Date:	04/15/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13988	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/15/2019	Expiration Date:	04/15/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M13982	Vendor:	CPI
Analyst:	NAH	Chemical:	Aluminum 10000 mg/L
Date Received:	10/09/2019	Lot #:	992536-16
Expiration Date (if any):	04/2021	Catalog #:	4400-10M11

Standard ID#:	M13983	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	10/09/2019	Lot #:	998527-45
Expiration Date (if any):	04/2021	Catalog #:	4400-10M261

Standard ID#:	M13984	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	10/09/2019	Lot #:	1013353-4
Expiration Date (if any):	04/2021	Catalog #:	4400-10M311

Standard ID#:	M13985	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	10/09/2019	Lot #:	855297-68
Expiration Date (if any):	04/2021	Catalog #:	4400-10M91

		Instrument:	CETAC
Standard Log #:	M13978	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/08/2019	Expiration Date:	04/08/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13979	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/09/2019	Expiration Date:	04/09/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

Standard ID#:	M13980	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	10/08/2019	Lot #:	52-248CR
Expiration Date (if any):	10/30/2020	Catalog #:	XSPIKE-1-250

Standard ID#:	M13981	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 mg/l
Date Received:	10/09/2019	Lot #:	1004985-62
Expiration Date (if any):	04/2021	Catalog #:	S4400-1000504F

		Instrument:	HydraII
Standard Log #:	M13976	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	10/07/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13975 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13977	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/07/2019	Expiration Date:	10/07/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13973	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13974	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/07/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13975	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/07/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M13970	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/07/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13971	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/07/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13972	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/07/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13969	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	10/02/2019	Expiration Date:	10/02/2020
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.681 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13967	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	10/01/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13966 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13968	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	10/01/2019	Expiration Date:	10/01/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13964	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/01/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13965	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/01/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13966	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/01/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M13963	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/30/2019	Expiration Date:	09/30/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard ID#:	M13961	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std.
Date Received:	09/24/2019	Lot #:	7-093AB
Expiration Date (if any):	09/30/2020	Catalog #:	XCTWI-1-500

		Instrument:	CETAC
Standard Log #:	M13962	Reagent:	Stannous Chloride Solution
Analyst:	NAH		
Prep Date:	09/25/2019	Expiration Date:	09/25/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13923 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13960	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/19/2019	Expiration Date:	03/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.678 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M13958	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/17/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	HydraII
Standard Log #:	M13959	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	09/17/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13958 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13955	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	09/17/2019	Expiration Date:	09/17/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13956	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/17/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13957	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/17/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M13952	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/13/2019	Expiration Date:	09/13/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard Log #:	M13953	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/13/2019	Expiration Date:	09/13/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard ID#:	M13954	Vendor:	Environmental Expresss
Analyst:	MDS	Chemical:	1% Pd Matrix Modifier
Date Received:	09/13/2019	Lot #:	1925215
Expiration Date (if any):	09/30/2020	Catalog #:	HP1900-100

		Instrument:	CETAC
Standard Log #:	M13946	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/10/2019	Expiration Date:	03/10/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

Standard ID#:	M13947	Vendor:	CPI
Analyst:	NAH	Chemical:	Boron 1000 mg/lL
Date Received:	09/10/2019	Lot #:	982524-80
Expiration Date (if any):	02/2021	Catalog #:	S4400-100074

Standard ID#:	M13948	Vendor:	CPI
Analyst:	NAH	Chemical:	Selenium 1000 mg/L
Date Received:	09/10/2019	Lot #:	982461-61
Expiration Date (if any):	02/2021	Catalog #:	S4400-1000491

Standard ID#:	M13949	Vendor:	CPI
Analyst:	NAH	Chemical:	Barium 1000 mg/L
Date Received:	09/10/2019	Lot #:	994634-28
Expiration Date (if any):	02/2021	Catalog #:	S4400-100041

Standard ID#:	M13950	Vendor:	CPI
Analyst:	NAH	Chemical:	Antimony 1000 mg/L
Date Received:	09/10/2019	Lot #:	1013797-3
Expiration Date (if any):	02/2019	Catalog #:	S4400-100023

Standard ID#:	M13951	Vendor:	CPI
Analyst:	NAH	Chemical:	Silver 1000 mg/L
Date Received:	09/10/2019	Lot #:	975475-71
Expiration Date (if any):	02/2021	Catalog #:	S4400-1000511

		Instrument:	HydraII
Standard Log #:	M13944	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	09/09/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13943 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13945	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	09/09/2019	Expiration Date:	09/09/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13941	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/09/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13942	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/09/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13943	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/09/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M13938	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	09/09/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13939	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	09/09/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13940	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	09/09/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13937	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	09/06/2019	Expiration Date:	02/28/2020
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13738, **2.5 mL** of K (10,000 mg/L) M13755, **2.5 mL** of Na (10,000 mg/L) M13691 and **7.5 mL** of Fe (10,000 mg/L) M13695 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13933	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	09/06/2019	Expiration Date:	03/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13607 and K (1000 µg/mL) M13606 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13934	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	09/06/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13607 and **0.5 mL** K (1000 µg/mL) M13606 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13935	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	09/06/2019	Expiration Date:	06/2020
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13755 and Na (10,000 mg/L) M13691 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13936	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	09/06/2019	Expiration Date:	06/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M13691 and **0.15 mL** K (10,000 µg/mL) M13755 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	HydraII
Standard Log #:	M13929	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13928 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13930	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/03/2019	Expiration Date:	10/03/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

Standard Log #:	M13931	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/03/2019	Expiration Date:	09/03/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

Standard Log #:	M13932	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/03/2019	Expiration Date:	09/03/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13877. Dilute to 20 L and mix.		

		Instrument:	HydraII
Standard Log #:	M13926	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13927	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13928	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/03/2019	Expiration Date:	03/03/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M13924	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	08/29/2019	Lot #:	1833905
Expiration Date (if any):	02/28/2021	Catalog #:	HP10M67-1

		Instrument:	HydraII
Standard Log #:	M13920	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/27/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13919 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13921	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/28/2019	Expiration Date:	09/28/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13889 and brought up to volume.		

Standard ID#:	M13922	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	08/28/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M13923	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	08/28/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	HydraII
Standard Log #:	M13917	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/27/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13918	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/27/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13919	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/27/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M13916	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	08/26/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	GFAA
Standard Log #:	M13914	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	08/26/2019	Expiration Date:	10/2019
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13459 **3.2 mL** of As (1000 mg/L) M13863 **3.2 mL** of Se (1000 mg/L) M13460 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M13915	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	08/26/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13459 **1.0 mL** of As (1000 mg/L) M13863 **2.0 mL** of Se (1000 mg/L) M13460 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M13913 (A)	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	08/26/2019	Expiration Date:	12/19/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13531	1000	0.8
Si	200	M13861	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13913 combined with A	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	08/26/2019	Expiration Date:	06/20/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M13696	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M13911	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/21/2019	Expiration Date:	02/21/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13912	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	08/21/2019	Expiration Date:	08/21/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13909	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/20/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13908 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13910	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	08/20/2019	Expiration Date:	08/20/2020
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.655 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13906	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/20/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13907	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/20/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13908	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/20/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M13904	Reagent:	Potassium Persulfate Solution
Analyst:	BMM		
Prep Date:	08/19/2019	Expiration Date:	08/19/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

Standard Log #:	M13905	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	BMM		
Prep Date:	08/19/2019	Expiration Date:	08/19/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13728 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13902	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/15/2019	Expiration Date:	02/15/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

Standard ID#:	M13903	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/15/2019	Lot #:	52-161Cr
Expiration Date (if any):	8/30/2020	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13898	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	08/13/2019	Expiration Date:	08/13/2020
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	HydraII
Standard Log #:	M13899	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/13/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M13900	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/13/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M13901	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/13/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13734 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13897	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	12 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	08/12/2019	Expiration Date:	10/2019

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13863	10,000
Pb	0.1	10,000	M13615	10,000
Tl	1	1000	M13583	10,000
Se	1	1000	M13460	10,000
Sb	1	1000	M13459	10,000
Ag	0.1	1000	M13458	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.2	10,000	12
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

Standard Log #:	M13896	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	08/09/2019	Expiration Date:	08/09/2020
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13895	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/06/2019	Expiration Date:	02/06/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13894	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	08/05/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13893 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13891	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/05/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13892	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/05/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13893	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/05/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13890	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/29/2019	Expiration Date:	01/29/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13888 and brought up to volume.		

Standard ID#:	M13888	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	07/25/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M13889	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride Dihydrate
Date Received:	07/25/2019	Lot #:	J142-19
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	CETAC
Standard Log #:	M13884	Reagent:	Hg Aqua Regia
Analyst:	BMM		
Prep Date:	07/22/2019	Expiration Date:	
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13885	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	07/22/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13886	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	07/22/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13887	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	07/22/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M13883	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/18/2019	Expiration Date:	01/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13879	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13880	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/18/2019	Expiration Date:	01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13881	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/18/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13882	Standard:	Hg ICV/LCS
Analyst:	MDS	Concentration:	3 ug/L
Prep Date:	07/18/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13881 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13876	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13877	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W45383 and brought up to volume.		

Standard Log #:	M13878	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M45383. Dilute to 20 L and mix.		

Standard Log #:	M13873	Reagent:	Potassium Permanganate Solution
Analyst:	NAH		
Prep Date:	07/17/2019	Expiration Date:	07/17/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard ID#:	M13874	Vendor:	Fisher
Analyst:	NAH	Chemical:	Hydroxylamine Sulfate
Date Received:	07/17/2019	Lot #:	175511
Expiration Date (if any):		Catalog #:	H331-500

Standard Log #:	M13875	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	NAH		
Prep Date:	07/18/2019	Expiration Date:	07/18/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13728 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13872	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/12/2019	Expiration Date:	07/12/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13871	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/11/2019	Expiration Date:	07/11/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13870	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/10/2019	Expiration Date:	07/10/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13869	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/08/2019	Expiration Date:	07/08/2019
Prep:	Carefully mixed **3** parts HCl AB.680 with **1** part HNO_3 AB.679 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13868	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	07/03/2019	Expiration Date:	01/03/2020
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.680 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13864	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	07/02/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13865	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	01/02/2020
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13728 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

Standard Log #:	M13866	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	01/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M13867	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	07/02/2019	Expiration Date:	01/02/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13858	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/26/2019	Expiration Date:	06/26/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13859	Vendor:	CPI
Analyst:	NAH	Chemical:	Ce 1000 mg/L
Date Received:	06-26-2019	Lot #:	171633-12
Expiration Date (if any):	12/2020	Catalog #:	S4400-1000101

Standard ID#:	M13860	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	06-26-2019	Lot #:	987189-17
Expiration Date (if any):	12/2020	Catalog #:	S4400-1000343

Standard ID#:	M13861	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	06-26-2019	Lot #:	175213-60
Expiration Date (if any):	12/2020	Catalog #:	S4400-1000504F

Standard ID#:	M13862	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 mg/L
Date Received:	06-26-2019	Lot #:	752887-32
Expiration Date (if any):	12/2020	Catalog #:	4400-10M521

Standard ID#:	M13863	Vendor:	CPI
Analyst:	NAH	Chemical:	As 1000 mg/L
Date Received:	06-26-2019	Lot #:	175385-105
Expiration Date (if any):	12/2020	Catalog #:	S4400-100031

Standard Log #:	M13856	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/21/2019	Expiration Date:	06/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13857	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/21/2019	Expiration Date:	06/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M13855	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/19/2019	Expiration Date:	06/19/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13851	Vendor:	CPI
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06-19-2019	Lot #:	52-082CR
Expiration Date (if any):	06/30/2020	Catalog #:	XSPIKE-1-250

		Instrument:	GFAA
Standard Log #:	M13852	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13853	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13854	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	CETAC
Standard Log #:	M13850	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/14/2019	Expiration Date:	06/14/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13849	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	06/13/2019	Expiration Date:	07/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M13458	1000	0.01
As	2	M13392	1000	0.1
Pb	2	M13615	10000	0.01
Sb	2	M13459	1000	0.1
Se	2	M13460	1000	0.1
Tl	2	M13583	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13848	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	06/11/2019	Expiration Date:	10/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	36	M13611	**10000**	0.18
As	24	M13753	1000	1.2
Ba	1.8	M13457	1000	0.09
Be	0.6	M13579	1000	0.03
Ca	100	M13692	**10000**	0.5
Cd	2.0	M13570	1000	0.1
Co	4	M13575	1000	0.2
Cr	4	M13697	**10000**	0.02
Cu	7	M13618	**10000**	0.035
Fe	100	M13609	**10000**	0.5
Mg	40	M13694	**10000**	0.2
Mn	4	M13616	**10000**	0.02
Mo	7	M13697	1000	0.35
Ni	6	M13569	1000	0.2
Pb	4	M13615	**10000**	0.02
Sb	12	M13459	1000	0.6
Se	13	M13460	1000	0.65
Tl	20	M13583	1000	0.75
V	5	M13578	1000	0.25
Zn	10	M13610	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13847	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	06/11/2019	Expiration Date:	10/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	9.6	M13611	**10000**	0.048
As	32	M13753	1000	1.6
Ba	2	M13457	1000	0.1
Be	1.6	M13579	1000	0.08
Ca	56	M13692	**10000**	0.28
Cd	1.6	M13570	1000	0.08
Co	9.6	M13575	1000	0.48
Cr	5.6	M13697	**10000**	0.028
Cu	16	M13618	**10000**	0.08
Fe	72	M13609	**10000**	0.36
Mg	32	M13694	**10000**	0.16
Mn	6	M13616	**10000**	0.03
Mo	9.6	M13697	1000	0.48
Ni	4.8	M13569	1000	0.24
Pb	10	M13615	**10000**	0.05
Sb	32	M13459	1000	1.6
Se	16	M13460	1000	0.8
Tl	19	M13583	1000	0.95
V	3.2	M13578	1000	0.16
Zn	12	M13610	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13845	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 k&na Spiking Solution
Prep Date:	06/11/2019	Expiration Date:	06/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
K	500	M13811	10000	2.5
Na	600	M13691	10000	3

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13846	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 k&na Spiking Solution
Prep Date:	06/11/2019	Expiration Date:	06/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
K	2640	M13811	10000	13.2
Na	960	M13691	10000	4.8

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard ID#:	M13839	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/11/2019	Lot #:	52-038CR
Expiration Date (if any):	05/30/2020	Catalog #:	XCTWI-5-500

Standard ID#:	M13840	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/11/2019	Lot #:	5-244AB
Expiration Date (if any):	06/30/2020	Catalog #:	XCTWWI-1-500

Standard ID#:	M13841	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 mg/L
Date Received:	06/11/2019	Lot #:	855297-41
Expiration Date (if any):	11/2020	Catalog #:	4400-10M91

Standard ID#:	M13842	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 mg/L
Date Received:	06/11/2019	Lot #:	169484-36
Expiration Date (if any):	11/2020	Catalog #:	4400-10M11

Standard ID#:	M13843	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	06/11/2019	Lot #:	168189-30
Expiration Date (if any):	11/20	Catalog #:	4400-10M671

Standard ID#:	M13844	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	06/11/2019	Lot #:	175213-60
Expiration Date (if any):	11/2020	Catalog #:	S4400-1000504F

		Instrument:	GFAA
Standard Log #:	M13838	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	06/07/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	GFAA
Standard Log #:	M13836	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	06/07/2019	Expiration Date:	07/2019
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13459 **3.2 mL** of As (1000 mg/L) M13392 **3.2 mL** of Se (1000 mg/L) M13460 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M13837	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	06/07/2019	Expiration Date:	07/2019
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13459 **1.0 mL** of As (1000 mg/L) M13392 **2.0 mL** of Se (1000 mg/L) M13460 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

		Instrument:	CETAC
Standard Log #:	M13835	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/06/2019	Expiration Date:	06/06/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	ICP 6500
Standard Log #:	M13832	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13833	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M13827 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13834	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M13738, **15 mL** Fe (10,000 mg/L) M13751, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and brought up to volume with milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M13830	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	06/03/2019	Expiration Date:	12/03/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M13831	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/03/2019	Expiration Date:	02/20
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13827 and **1 mL** of Si (1000 mg/L) M13810 and 1 mL M13703 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M13811. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M13618, **10 mL** of Mn (10,000 mg/L) M13616, **10 mL** of Cr (10,000 mg/L) M13617, **10 mL** Pb (10,000 mg/L) M13610, **10 mL** of Zn (10,000 mg/L) M13615 and **10 mL** of Na (10,000 mg/L) M13691. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M13752, **10 mL** of Fe (10,000 mg/L) M13751, **10 mL** of Ca (10,000 mg/L) M13690 and **10 mL** Al (10,000 mg/L) M13693. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	CETAC
Standard Log #:	M13829	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/31/2019	Expiration Date:	05/31/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13828	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/30/2019	Expiration Date:	05/30/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13827	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05-29-2019	Lot #:	XCTWI-4-500
Expiration Date (if any):	5/30/2020	Catalog #:	5-116AB

		Instrument:	CETAC
Standard Log #:	M13823	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	05/24/2019	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13824	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	05/24/2019	Expiration Date:	11/24/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

Standard Log #:	M13825	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	05/24/2019	Expiration Date:	11/24/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

Standard Log #:	M13826	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/24/2019	Expiration Date:	11/24/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13820	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/24/2019	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13821	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/24/2019	Expiration Date:	02/28/2020
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13734 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13822	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	05/24/2019	Expiration Date:	02/28/2020
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13734 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13818	Reagent:	TCLP 1 N HCL
Analyst:	BMM		
Prep Date:	05/22/2019	Expiration Date:	05/23/2020
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, added 83 mL HCL AB.676 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13819	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/22/2019	Expiration Date:	05/22/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13817	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/16/2019	Expiration Date:	05/16/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard Log #:	M13813	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	05/14/2019	Expiration Date:	09/30/2019
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13600 and **10 mL** Mg (10,000 mg/L) M13694 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M13814	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	05/14/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13815	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	05/14/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13816	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	05/14/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13812	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/13/2019	Expiration Date:	11/13/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard ID#:	M13808	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 ug/mL
Date Received:	05-09-2019	Lot #:	158237-121
Expiration Date (if any):	10/20	Catalog #:	4400-1000521-500

Standard ID#:	M13809	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 ug/mL
Date Received:	05-09-2019	Lot #:	832313-110
Expiration Date (if any):	10/20	Catalog #:	4400-1000411-500

Standard ID#:	M13810	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	05-09-2019	Lot #:	175213-60
Expiration Date (if any):	10/20	Catalog #:	S400-1000504F

Standard ID#:	M13811	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 ug/mL
Date Received:	05-09-2019	Lot #:	980507-14
Expiration Date (if any):	10/20	Catalog #:	4400-10M411-500

		Instrument:	CETAC
Standard Log #:	M13805	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/07/2019	Expiration Date:	05/07/2019
Prep:	Carefully mixed **3** parts HCl AB.677 with **1** part HNO_3 AB.676 in a hood.		

Standard Log #:	M13806	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/07/2019	Expiration Date:	05/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13807	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/07/2019	Expiration Date:	05/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

MRL BASE STD M13804 Analyst NAH

Prep Date 05/07/2019

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13458	1000	1	10/19
Al	400	M13611	10000	2	3/20
Ba	10	M13457	1000	0.5	10/19
Be	4	M13579	1000	0.2	2/20
Cd	5	M13570	1000	0.25	1/20
Co	10	M13575	1000	0.5	1/20
Cr	10	M13617	10000	0.05	3/20
Cu	10	M13618	10000	0.05	3/20
Mg	500	M13694	10000	2.5	6/20
Mn	10	M13616	10000	0.05	3/20
Mo	10	M13697	1000	0.5	6/20
Ni	10	M13569	1000	0.5	1/20
Pb	10	M13615	10000	0.05	3/20
Sb	20	M13579	1000	1	10/19
V	10	M13578	1000	0.5	2/20
Zn	10	M13610	10000	0.05	3/20
K	1000	M13755	10000	5	9/20
Na	1000	M13691	10000	5	6/20
As	20	M13753	1000	1	10000 std 0.1, 9/20
Ca	500	M13692	10000	2.5	6/20
Fe	300	M13695	10000	1.5	6/20
Se	20	M13460	1000	1	10/19
Tl	20	M13583	1000	1	2/20
Si	100	M13754	1000	5	9/20
B	20	M13531	1000	1	12/19
Li	20	M13577	1000	1	2/20
W	50	xxxx	1000	2.5	xxxx
Ti	10	M13573	1000	0.5	1/20
Sr	10	M13580	1000	0.5	2/20
Sn	50	M13572	1000	2.5	1/20
S	300	M13604	10000	1.5	3/20

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Expiration Date: 10/19

		Instrument:	CETAC
Standard Log #:	M13800	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	05/06/2019	Expiration Date:	11/06/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	ICP 6000
Standard Log #:	M13801	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	05/06/2019	Expiration Date:	12/2019
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13531 and Si (1000 mg/L) M13731 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13802	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	05/06/2019	Expiration Date:	02/28/2020
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13741 and **1.0 mL** Si (1000 mg/L) M13754 and brought up to volume using milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13803	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	05/06/2019	Expiration Date:	09/30/2019
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **0.05 mL** of B (1000 µg/mL) M13531, **0.05 mL** of Si (1000 µg/mL) M13731 and **3 mL** of Fe (10,000 mg/L) M13609 and brought up to volume using Milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13798	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	05/03/2019	Expiration Date:	01/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M13572 Sr (1000 µg/mL) M13580 Ti (1000 µg/mL) M13573 W (1000 µg/mL) MXXXXX		

		Instrument:	ICP 6000
Standard Log #:	M13799	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	05/03/2019	Expiration Date:	01/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	MXXXXX	1000	5	XX/XXXX
Ti	10/30	M13573	1000	0.5	01/2020
Sr	10/30	M13580	1000	0.5	02/2020
Sn	20/60	M13572	1000	1	01/2020

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	CETAC
Standard Log #:	M13795	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/03/2019	Expiration Date:	05/03/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

		Instrument:	ICP
Standard Log #:	M13796	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	05/03/2019	Expiration Date:	02/28/2020
Prep:	Standard Conc. (ug/L) — Pipette the following: 1 — **0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.001 mL** W (1000 µg/mL) MXXXXX into 1L = *1 µg/L* 10 — **0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.01 mL** W (1000 µg/mL) MXXXXX into 1L = *10 µg/L* 100 — **1 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.1 mL** W (1000 µg/mL) MXXXXX into 1L = *100 µg/L* 1000 (CCV) — **2 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **0.2 mL** W (1000 µg/mL) MXXXXX into 200mL = *1000 µg/L* 10000 — **20 mL** of Custom Assurance Standard XCTWI-5-500 M13741 and **2 mL** W (1000 µg/mL) MXXXXX into 200mL = *10000 µg/L*		

		Instrument:	ICP 6000
Standard Log #:	M13797	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	05/03/2019	Expiration Date:	09/30/2019
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **6 mL** of Fe (10,000 mg/L) M13609, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) MXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

Standard Log #:	M13793	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/02/2019	Expiration Date:	11/02/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13793 and brought up to volume.		

Standard Log #:	M13794	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	05/02/2019	Expiration Date:	11/02/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13511 and **60 g** hydroxylamine sulfate M13727 and brought up to volume.		

Standard ID#:	M13790	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	04/29/2019	Lot #:	1833905
Expiration Date (if any):	10/31/2020	Catalog #:	HP10M67-1

Standard ID#:	M13791	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	04/29/2019	Lot #:	51-239CR
Expiration Date (if any):	02/28/2020	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13792	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/29/2019	Expiration Date:	04/29/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.677 in a hood.		

Standard ID#:	M13785	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV BASE STD
Date Received:	04/19/2019	Lot #:	P2-MEB678822
Expiration Date (if any):	04/19/2020	Catalog #:	CTI-SPK-1

Standard ID#:	M13786	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE BASE STD
Date Received:	04/19/2019	Lot #:	P2-MEB678821
Expiration Date (if any):	04/19/2020	Catalog #:	CTI-GFCAL-1

		Instrument:	GFAA
Standard Log #:	M13787	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13788	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13785 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	GFAA
Standard Log #:	M13789	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/19/2019	Expiration Date:	04/19/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13786 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

Standard Log #:	M13782	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/18/2019	Expiration Date:	04/18/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard ID#:	M13783	Vendor:	Alfa Aesar
Analyst:	MDS	Chemical:	GFAA 1% Nickel Nitrate Matrix Mod.
Date Received:	04/18/2019	Lot #:	9166009
Expiration Date (if any):	09/30/2020	Catalog #:	39043

Standard Log #:	M13784	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	04/18/2019	Expiration Date:	10/18/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M13780	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	04/17/2019	Expiration Date:	10/17/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13781	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/17/2019	Expiration Date:	04/17/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M13779	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	04/12/2019	Expiration Date:	09/30/2019
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **2.5 mL** of K (10,000 mg/L) M13693, **2.5 mL** of Na (10,000 mg/L) M13605 and **7.5 mL** of Fe (10,000 mg/L) M13609 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M13778	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	04/11/2019	Expiration Date:	04/11/2020
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.672 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13777	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/09/2019	Expiration Date:	04/09/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

Standard Log #:	M13775	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	04/02/2019	Expiration Date:	09/30/2019
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13600 and **10 mL** Mg (10,000 mg/L) M13614 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13776	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/03/2019	Expiration Date:	04/03/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13771	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/26/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13772	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/26/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13773	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/26/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13774	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	03/26/2019	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M13770	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	03/25/2019	Expiration Date:	03/25/2019
Prep:	Carefully mixed **3** parts HCl AB.676 with **1** part HNO_3 AB.675 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13768	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	03/21/2019	Expiration Date:	01/01/2019
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13769	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	03/21/2019	Expiration Date:	09/21/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.676 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13765	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/21/2019	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13766	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/21/2019	Expiration Date:	04/30/2019
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13444 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13767	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	03/21/2019	Expiration Date:	04/30/2019
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13444 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M13763	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/20/2019	Expiration Date:	03/20/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

Standard Log #:	M13764	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/20/2019	Expiration Date:	03/20/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13750. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M13761	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	03/19/2019	Expiration Date:	03/19/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard Log #:	M13762	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	03/19/2019	Expiration Date:	09/19/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13511 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M13758	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	03/13/2019	Expiration Date:	01/2020
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M13569 5.0 **mL** 10000 mg/L Ti M13573 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13759	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ba, Be, and Sn
Prep Date:	03/13/2019	Expiration Date:	10/2019
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M13457 5.0 **mL** 10000 mg/L Be M13579 5.0 **mL** 10000 mg/L Sn M13572 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13760	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	03/13/2019	Expiration Date:	09/2019
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M13635 and 15 **mL** 10000 mg/L Fe M13609 5.0 **mL** 1000 mg/L V M13578 5.0 **mL** 1000 mg/L Ce M13203 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13756	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	03/13/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M13616 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13757	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	03/13/2019	Expiration Date:	01/20
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M13617 0.5 **mL** 10000 mg/L Cu M13618 5.0 **mL** 1000 mg/L Co M13575 5.0 **mL** 1000 mg/L Mo M13697 brought up to volume with milli-Q H_2O.		

Standard ID#:	M13751	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	03/12/2019	Lot #:	998527-19
Expiration Date (if any):	09/2020	Catalog #:	4400-10M261

Standard ID#:	M13752	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	03/12/2019	Lot #:	982185-12
Expiration Date (if any):	09/2020	Catalog #:	4400-10M311

Standard ID#:	M13753	Vendor:	CPI
Analyst:	NAH	Chemical:	As 10000 mg/L
Date Received:	03/12/2019	Lot #:	166531-32
Expiration Date (if any):	09/2020	Catalog #:	S4400--10M31

Standard ID#:	M13754	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	03/12/2019	Lot #:	175213-60
Expiration Date (if any):	09/2020	Catalog #:	S4400-1000504F

Standard ID#:	M13755	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	03/12/2019	Lot #:	172053-77
Expiration Date (if any):	09/2020	Catalog #:	4400-10M411

		Instrument:	CETAC
Standard Log #:	M13749	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	03/08/2019	Expiration Date:	03/08/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard Log #:	M13750	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	03/08/2019	Expiration Date:	03/08/2020
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W45383 and brought up to volume.		

Standard ID#:	M13748	Vendor:	Potters Ind. LLC (Gainger)
Analyst:	NAH	Chemical:	Glass beads Extra Fine
Date Received:	03/07/2019	Lot #:	
Expiration Date (if any):	XXXXXX	Catalog #:	6ZC13

		Instrument:	ICP
Standard Log #:	M13746	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	03/04/2019	Expiration Date:	09/30/2019
Prep:	Standard Conc. (ug/L) — Pipette the following: 1 — **0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.001 mL** W (1000 µg/mL) XXXXXX into 1L = *1 µg/L* 10 — **0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.01 mL** W (1000 µg/mL) XXXXXX into 1L = *10 µg/L* 100 — **1 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.1 mL** W (1000 µg/mL) XXXXXX into 1L = *100 µg/L* 1000 (CCV) — **2 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **0.2 mL** W (1000 µg/mL) XXXXXX into 200mL = *1000 µg/L* 10000 — **20 mL** of Custom Assurance Standard XCTWI-5-500 M13602 and **2 mL** W (1000 µg/mL) XXXXXX into 200mL = *10000 µg/L*		

		Instrument:	ICP 6000
Standard Log #:	M13747	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	03/04/2019	Expiration Date:	09/30/2019
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **6 mL** of Fe (10,000 mg/L) M13609, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) XXXXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

Standard Log #:	M13743	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL DOD Metals Spiking soln
Prep Date:	02/26/2019	Expiration Date:	10/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M13458	1000	0.25
Al	10	M13611	**10000**	0.05
As	20	M13392	1000	1
Ba	2	M13457	1000	0.1
Be	0.5	M13579	1000	0.025
Ca	50	M13692	**10000**	0.25
Cd	0.5	M13570	1000	0.025
Co	2.5	M13575	1000	0.125
Cr	5.0	M13617	**10000**	0.025
Cu	10	M13618	**10000**	0.05
Fe	40	M13609	**10000**	0.2
Mg	25	M13694	**10000**	0.125
Mn	5	M13616	**10000**	0.025
Mo	2.5	M13697	1000	0.125
Ni	5	M13569	1000	0.25
Pb	10	M13615	**10000**	0.05
Sb	20	M13459	1000	1
Se	20	M13460	1000	1
Tl	20	M13583	1000	1
V	5	M13578	1000	0.25
Zn	5	M13610	**10000**	0.025
Na	500	M13605	**10000**	2.5
K	500	M13733	**10000**	2.5
B	20	M13531	1000	1
Si	100	M13731	1000	5
S	200	M13604	**10000**	1
Li	20	M13537	1000	1
Sr	20	M13572	1000	1
Sn	20	M13580	1000	1
Ti	20	M13573	1000	1

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	ICP 6000
Standard Log #:	M13740	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	02/26/2019	Expiration Date:	03/2020
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M13604 and brought up to volume using Milli-Q H_2O.		

Standard ID#:	M13741	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02-26-2019	Lot #:	3-153AB
Expiration Date (if any):	02/28/2020	Catalog #:	XCTWI-5-500

Standard ID#:	M13742	Vendor:	IKOHE Blasting Media
Analyst:	NAH	Chemical:	Glass Neads X-fine-20u
Date Received:	02/26/2019	Lot #:	52-144
Expiration Date (if any):	*********	Catalog #:	UL-49/52-1544

		Instrument:	CETAC
Standard Log #:	M13739	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/22/2019	Expiration Date:	02/22/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard ID#:	M13734	Vendor:	SPEX CERTIPREP
Analyst:	LJF	Chemical:	HG 1000 ug/mL
Date Received:	02/21/2019	Lot #:	CL10-136HGY
Expiration Date (if any):	02/28/2020	Catalog #:	CLHG4-2Y

Standard Log #:	M13735	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/21/2019	Expiration Date:	02/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13736	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/21/2019	Expiration Date:	02/21/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13737	Vendor:	SPEX CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	02/21/2019	Lot #:	51-117CR
Expiration Date (if any):	02/28/2020	Catalog #:	XSPIKE-1-250

Standard ID#:	M13738	Vendor:	SPEX CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	02/21/2019	Lot #:	2-230SGX
Expiration Date (if any):	02/28/2020	Catalog #:	INT-A1

		Instrument:	CETAC
Standard Log #:	M13730	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/14/2019	Expiration Date:	02/14/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard ID#:	M13731	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 ug/mL
Date Received:	02/14/2019	Lot #:	175213-60
Expiration Date (if any):	08/20	Catalog #:	S4400-1000504F

Standard ID#:	M13732	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10000 ug/mL
Date Received:	02/14/2019	Lot #:	139448-54
Expiration Date (if any):	08/20	Catalog #:	4400-10M671

Standard ID#:	M13733	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10000 ug/mL
Date Received:	02/14/2019	Lot #:	172053-36
Expiration Date (if any):	08/20	Catalog #:	4400-10M411

Standard ID#:	M13727	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	02/08/2019	Lot #:	175511
Expiration Date (if any):		Catalog #:	H331-500

Standard ID#:	M13728	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	02/08/2019	Lot #:	186819
Expiration Date (if any):		Catalog #:	S271-500

Standard Log #:	M13729	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	02/11/2019	Expiration Date:	08/11/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M13059 and brought up to volume.		

Standard Log #:	M13724	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/07/2019	Expiration Date:	02/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13725	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	02/07/2019	Expiration Date:	02/07/2020
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.673 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13726	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	02/07/2019	Expiration Date:	08/07/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13721	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/05/2019	Expiration Date:	02/05/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

Standard Log #:	M13722	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	02/05/2019	Expiration Date:	08/05/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13723	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	02/05/2019	Expiration Date:	08/05/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.671 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13720	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	01/31/2019	Expiration Date:	01/31/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13716	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/30/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13717	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/30/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13718	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/30/2019	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13719	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	01/30/2019	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13713	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	01/29/2019	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

Standard ID#:	M13714	Vendor:	ACROS ORGANICS
Analyst:	LJF	Chemical:	POTASSIUM PERSULFATE
Date Received:	01/29/2019	Lot #:	A0391673
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M13715	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	1/29/2019	Lot #:	51-013CR
Expiration Date (if any):	01/30/2020	Catalog #:	XCTWI-1-500

		Instrument:	GFAA
Standard Log #:	M13711	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	01/29/2019	Expiration Date:	07/2019
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M13459 **3.2 mL** of As (1000 mg/L) M13392 **3.2 mL** of Se (1000 mg/L) M13460 **0.08 mL** of Pb (10,000 mg/L) M13615 **1.0 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M13712	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	01/29/2019	Expiration Date:	07/2019
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M13459 **1.0 mL** of As (1000 mg/L) M13392 **2.0 mL** of Se (1000 mg/L) M13460 **0.045 mL** of Pb (10,000 mg/L) M13615 **0.4 mL** of Tl (1000 mg/L) M13583 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

		Instrument:	CETAC
Standard Log #:	M13710	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	01/22/2019	Expiration Date:	01/22/2019
Prep:	Carefully mixed **3** parts HCl AB.671 with **1** part HNO_3 AB.672 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M13709	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	01/10/2019	Expiration Date:	09/30/2019
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13635, **2.5 mL** of K (10,000 mg/L) M13689, **2.5 mL** of Na (10,000 mg/L) M13605 and **7.5 mL** of Fe (10,000 mg/L) M13609 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13705	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13607 and K (1000 µg/mL) M13606 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13706	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13607 and **0.5 mL** K (1000 µg/mL) M13606 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13707	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13689 and Na (10,000 mg/L) M13605 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13708	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	01/10/2019	Expiration Date:	03/2020
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M13605 and **0.15 mL** K (10,000 µg/mL) M13689 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M13703	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/20/2018	Expiration Date:	12/20/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13704	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	12/20/2018	Expiration Date:	12/20/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13701	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	12/13/2018	Expiration Date:	06/13/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

Standard ID#:	M13696	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10,000 mg/L
Date Received:	12/11/2018	Lot #:	167967-42
Expiration Date (if any):	06/20	Catalog #:	4400-10M544

Standard ID#:	M13697	Vendor:	CPI
Analyst:	NAH	Chemical:	Moybdenum 1000 mg/L
Date Received:	12/11/2018	Lot #:	169424-59
Expiration Date (if any):	06/20	Catalog #:	4400-1000343

Standard ID#:	M13698	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 mg/L
Date Received:	12/11/2018	Lot #:	175213-60
Expiration Date (if any):	06/20	Catalog #:	S4400-10005044F

Standard ID#:	M13699	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12/11/2018	Lot #:	50-120CR
Expiration Date (if any):	12/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13700	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	12/12/2018	Expiration Date:	12/12/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

Standard ID#:	M13689	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	169484-36
Expiration Date (if any):	06/20	Catalog #:	4400-10M11

Standard ID#:	M13690	Vendor:	CPI
Analyst:	NAH	Chemical:	Aluminum 10,000 mg/L
Date Received:	12/11/2018	Lot #:	169484-36
Expiration Date (if any):	06/20	Catalog #:	4400-10M11

Standard ID#:	M13691	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	752887-32
Expiration Date (if any):	06/20	Catalog #:	4400-10M521

Standard ID#:	M13692	Vendor:	CPI
Analyst:	NAH	Chemical:	Calcium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	855297-1
Expiration Date (if any):	06/20	Catalog #:	4400-10M91

Standard ID#:	M13693	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	156651-78
Expiration Date (if any):	06/20	Catalog #:	4400-10M261

Standard ID#:	M13694	Vendor:	CPI
Analyst:	NAH	Chemical:	Magnesium 10,000 mg/L
Date Received:	12/11/2018	Lot #:	148250-72
Expiration Date (if any):	06/20	Catalog #:	4400-10M311

Standard ID#:	M13695	Vendor:	CPI
Analyst:	NAH	Chemical:	Iron 10,000 mg/L
Date Received:	12/11/2018	Lot #:	156651-78
Expiration Date (if any):	06/20	Catalog #:	4400-10M261

		Instrument:	GFAA
Standard Log #:	M13686	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	12/07/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13687	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	12/07/2018	Expiration Date:	05/17/2018
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13688	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	12/07/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13684	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	12/04/2018	Expiration Date:	06/04/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard ID#:	M13683	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	10000 mg/L
Date Received:	11/30/2018	Lot #:	1805105
Expiration Date (if any):	5/31/2020	Catalog #:	HP10M67-1

Standard Log #:	M13681	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 B&Si Spiking Solution
Prep Date:	11/29/2018	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	52	M13531	1000	2.6
Si	192	M13394	1000	9.6

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M13682	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/29/2018	Expiration Date:	11/29/2018

Prep: Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.

Standard Log #:	M13679	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 L2 Spiking Solution
Prep Date:	11/29/2018	Expiration Date:	02/2020

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Li	14.4	M13517	1000	0.72
Sn	20	M13572	1000	1
Sr	3.2	M13586	1000	0.16
Ti	9.6	M13573	1000	0.48
W	24	xxxxxxxx	1000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13680	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	11/29/2018	Expiration Date:	07/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13531	1000	0.8
Si	200	M13394	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13677	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	11/29/2018	Expiration Date:	04/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	9.6	M13562	**10000**	0.048
As	32	M13392	1000	1.6
Ba	2	M13457	1000	0.1
Be	1.6	M13579	1000	0.08
Ca	56	M13324	**10000**	0.28
Cd	1.6	M13570	1000	0.08
Co	9.6	M13575	1000	0.48
Cr	5.6	M13617	**10000**	0.028
Cu	16	M13618	**10000**	0.08
Fe	72	M13463	**10000**	0.36
Mg	32	M13319	**10000**	0.16
Mn	6	M13616	**10000**	0.03
Mo	9.6	M13608	1000	0.48
Ni	4.8	M13569	1000	0.24
Pb	10	M13610	**10000**	0.05
Sb	32	M13459	1000	1.6
Se	16	M13460	1000	0.8
Tl	19	M13583	1000	0.95
V	3.2	M13578	1000	0.16
Zn	12	M13610	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13676	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	11/29/2018	Expiration Date:	04/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M13458	1000	0.2
Al	36	M13462	**10000**	0.18
As	24	M13392	1000	1.2
Ba	1.8	M13457	1000	0.09
Be	0.6	M13579	1000	0.03
Ca	100	M13324	**10000**	0.5
Cd	2.0	M13570	1000	0.1
Co	4	M13575	1000	0.2
Cr	4	M13617	**10000**	0.02
Cu	7	M13618	**10000**	0.035
Fe	100	M13463	**10000**	0.5
Mg	40	M13319	**10000**	0.2
Mn	4	M13616	**10000**	0.02
Mo	7	M13608	1000	0.35
Ni	6	M13569	1000	0.2
Pb	4	M13610	**10000**	0.02
Sb	12	M13459	1000	0.6
Se	13	M13460	1000	0.65
Tl	20	M13583	1000	0.75
V	5	M13578	1000	0.25
Zn	10	M13610	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M13675	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/26/2018	Expiration Date:	11/26/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13671	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	11/21/2018	Expiration Date:	01/01/2020
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13672	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	11/21/2018	Expiration Date:	05/21/2019
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.668 and dissolved **100 g** Stannous chloride M13648 and brought up to volume.		

Standard Log #:	M13673	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	11/21/2018	Expiration Date:	05/21/2018
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M13674	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	11/21/2018	Expiration Date:	05/21/2018
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13620 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13668	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/21/2018	Expiration Date:	01/01/2019
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M13574 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13669	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/21/2018	Expiration Date:	04/30/2019
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M13444 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13670	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	11/21/2018	Expiration Date:	04/30/2019
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M13444 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	ICP
Standard Log #:	M13666	Standard:	As Pb ICV1
Analyst:	MDS	Concentrations:	5000 ug/L (As,Pb)
Prep Date:	11/19/2018	Expiration Date:	07/2019
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** of As (1000 mg/L) M13392 and **0.5 mL** Pb (10,000 mg/L) M13615 and brought to volume with Milli-Q H_2O. (2% HNO_3, 2% HCl)		

		Instrument:	CETAC
Standard Log #:	M13667	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/19/2018	Expiration Date:	11/19/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

Standard Log #:	M13664	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/16/2018	Expiration Date:	11/16/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13665	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	11/16/2018	Expiration Date:	11/16/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M13659	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/01/2018	Expiration Date:	11/01/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

		Instrument:	ICP 6500
Standard Log #:	M13660	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg
Prep Date:	11/01/2018	Expiration Date:	09/19
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M13635 and **15 mL** Fe (10000 mg/L) M13609 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13661	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	11/06/2018	Expiration Date:	10/19
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M13637, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M13635, **0.5 mL** Mo (1000 mg/L) M13608, **0.5 mL** B (1000 mg/L) M13531, **0.5 mL** Sr (1000 mg/L) M13580, **0.5 mL** Li (1000 mg/L) M13577, **0.5 mL** Sn (1000 mg/L) M13572, **0.5 mL** Ti (1000 mg/L) M13573, **0.5 mL** W (1000 mg/L) Mxxxxx, **0.5 mL** Si (1000 mg/L) M13571, **0.5 mL** S (10000 mg/L) M13530, **0.5 mL** K (10000 mg/L) M13612, and **0.5 mL** K (10000 mg/L)		

		Instrument:	ICP 6000
Standard Log #:	M13657	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/2/2018	Expiration Date:	01/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M13572 Sr (1000 µg/mL) M13580 Ti (1000 µg/mL) M13573 W (1000 µg/mL) XXX		

		Instrument:	ICP 6000
Standard Log #:	M13658	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	11/2/2018	Expiration Date:	01/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	XXX	1000	5	XXX
Ti	10/30	M13573	1000	0.5	01/2020
Sr	10/30	M13580	1000	0.5	02/2020
Sn	20/60	M13572	1000	1	01/2020

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	ICP
Standard Log #:	M13655	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	11/2/2018	Expiration Date:	02/28/2019
Prep:	Standard Conc. (ug/L) — Pipette the following: 1 — **0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.001 mL** W (1000 µg/mL) xxx into 1L = *1 µg/L* 10 — **0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.01 mL** W (1000 µg/mL) xxx into 1L = *10 µg/L* 100 — **1 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.1 mL** W (1000 µg/mL) xxx into 1L = *100 µg/L* 1000 (CCV) — **2 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.2 mL** W (1000 µg/mL) xxx into 200mL = *1000 µg/L* 10000 — **20 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **2 mL** W (1000 µg/mL) xxx into 200mL = *10000 µg/L*		

		Instrument:	ICP 6000
Standard Log #:	M13656	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/2/2018	Expiration Date:	02/28/2019
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13410, **6 mL** of Fe (10,000 mg/L) M13529, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) XXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	GFAA
Standard Log #:	M13651	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	10/29/2018	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. ($1\% HNO_3$)		

		Instrument:	ICP 6000
Standard Log #:	M13652	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	10/29/2018	Expiration Date:	10/2019
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13612 and Na (10,000 mg/L) M13461 and brought up to volume using Milli-Q H_2O. ($2\% HNO_3$)		

Standard ID#:	M13653	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance std
Date Received:	10/29/2018	Lot #:	2-036AB
Expiration Date (if any):	10/30/2019	Catalog #:	XCTWI-1-500

		Instrument:	ICP 6000
Standard Log #:	M13648	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	10/26/2018	Expiration Date:	07/2019
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13390 and Si (1000 mg/L) M13528 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13649	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	10/26/2018	Expiration Date:	07/30/2019
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13576 and **1.0 mL** Si (1000 mg/L) M13571 and brought up to volume using milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13650	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/27/2018	Expiration Date:	02/28/2019
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13410 , **0.05 mL** of B (1000 µg/mL) M13390 , **0.05 mL** of Si (1000 µg/mL) M13528 and **3 mL** of Fe (10,000 mg/L) M13529 and brought up to volume using Milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M13645	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/24/2018	Expiration Date:	10/24/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.669 in a hood.		

Standard ID#:	M13646	Vendor:	Alfa Aesar
Analyst:	MDS	Chemical:	1% Nickel Nitrate Matrix Modifier
Date Received:	10/25/2018	Lot #:	8137324
Expiration Date (if any):	12/31/2019	Catalog #:	39043

Standard ID#:	M13647	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	10/24/2018	Lot #:	H226-02
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M13643	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/24/2018	Expiration Date:	10/24/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13644	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/24/2018	Expiration Date:	10/24/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

		Instrument:	GFAA
Standard Log #:	M13639	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/24/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13640	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/24/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13641	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/24/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M13498 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M13642	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/24/2018	Expiration Date:	10/24/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13638	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	10 µg/L As 6 µg/L Pb 12 µg/L Sb 20 µg/L Se 14 µg/L Tl 0.6 µg/L Ag
Prep Date:	10/23/2018	Expiration Date:	07/2019

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13392	10,000
Pb	0.1	10,000	M13615	10,000
Tl	1	1000	M13583	10,000
Se	1	1000	M13460	10,000
Sb	1	1000	M13459	10,000
Ag	0.1	1000	M13458	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.0	10,000	10
Pb	0.6	10,000	6
Tl	1.4	10,000	14
Se	2.0	10,000	20
Sb	1.2	10,000	12
Ag	0.6	1000	0.6

Standard ID#:	M13634	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,0000 mg/L
Date Received:	10/18/2018	Lot #:	139448-54
Expiration Date (if any):	04/20	Catalog #:	4400-10m671

Standard ID#:	M13635	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	10/18/2018	Lot #:	2-230sgx
Expiration Date (if any):	09/30/2019	Catalog #:	INT-A1

		Instrument:	CETAC
Standard Log #:	M13636	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/18/2018	Expiration Date:	10/18/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.665 in a hood.		

Standard ID#:	M13637	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance standard
Date Received:	10/18/2018	Lot #:	50-0007CR
Expiration Date (if any):	10/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13633	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/16/2018	Expiration Date:	10/16/2018
Prep:	Carefully mixed **3** parts HCl AB.668 with **1** part HNO_3 AB.665 in a hood.		

		Instrument:	GFAA
Standard Log #:	M13632	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	10/16/2018	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

Standard Log #:	M13627	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/03/2018	Expiration Date:	10/03/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13628	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	10/03/2018	Expiration Date:	10/03/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

MRL BASE STD M13626

Analyst NAH

Prep Date 10/01/2018

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M13458	1000	1	10/2019
Al	400	M13462	10000	2	10/2019
Ba	10	M13457	1000	0.5	10/2019
Be	4	M13579	1000	0.2	02/20
Cd	5	M13570	1000	0.25	01/20
Co	10	M13575	1000	0.5	01/20
Cr	10	M13617	10000	0.05	03/20
Cu	10	M13618	10000	0.05	03/20
Mg	500	M13319	10000	2.5	04/19
Mn	10	M13616	10000	0.05	03/20
Mo	10	M13608	1000	0.5	03/20
Ni	10	M13569	1000	0.5	03/20
Pb	10	M13610	10000	0.05	03/20
Sb	20	M13459	1000	1	03/20
V	10	M13578	1000	0.5	02/20
Zn	10	M13610	10000	0.05	02/20
K	1000	M13341	10000	5	05/19
Na	1000	M13402	10000	5	08/19
As	20	M13392	1000	1	07/19
Ca	500	M13324	10000	2.5	04/19
Fe	300	M13463	10000	1.5	10/19
Se	20	M13460	1000	1	10/19
Tl	20	M13583	1000	1	02/20
Si	100	M13394	1000	5	07/19
B	20	M13531	1000	1	07/19
Li	20	M13517	1000	1	02/20
W	50	xxxxxxx	1000	2.5	xxxxxxx
Ti	10	M13573	1000	0.5	02/20
Sr	10	M13586	1000	0.5	02/20
Sn	50	M13572	1000	2.5	02/20
S	300	M13391	10000	1.5	07/19

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M13625	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/03/2018	Expiration Date:	09/30/2019
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M13600 and **10 mL** Mg (10,000 mg/L) M13464 and brought up to volume.		

Standard ID#:	M13618	Vendor:	CPI
Analyst:	NAH	Chemical:	Cu 10000 mg/L
Date Received:	09/20/2018	Lot #:	148796-39
Expiration Date (if any):	03/2020	Catalog #:	S4400-10M141

		Instrument:	CETAC
Standard Log #:	M13619	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	09/19/2018	Expiration Date:	09/19/2018
Prep:	Carefully mixed **3** parts HCl AB.664 with **1** part HNO_3 AB.665 in a hood.		

Standard ID#:	M13620	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	09/04/2018	Lot #:	177409
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13611	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	09/20/2018	Lot #:	169484-18
Expiration Date (if any):	03/2020	Catalog #:	4400-10M11

Standard ID#:	M13612	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	09/20/2018	Lot #:	172053-36
Expiration Date (if any):	03/2020	Catalog #:	440010M411

Standard ID#:	M13613	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	09/20/2018	Lot #:	855297-1
Expiration Date (if any):	03/2020	Catalog #:	4400-10M91

Standard ID#:	M13614	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	09/20/2018	Lot #:	148250-72
Expiration Date (if any):	03/2020	Catalog #:	4400-10M311

Standard ID#:	M13615	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 10000 mg/L
Date Received:	09/20/2018	Lot #:	168223-17
Expiration Date (if any):	03/2020	Catalog #:	4400-10M281

Standard ID#:	M13616	Vendor:	CPI
Analyst:	NAH	Chemical:	Mn 10000 mg/L
Date Received:	09/20/2018	Lot #:	167540-6
Expiration Date (if any):	03/2020	Catalog #:	S4400-10M321

Standard ID#:	M13617	Vendor:	CPI
Analyst:	NAH	Chemical:	Cr 10000 mg/L
Date Received:	09/20/2018	Lot #:	158236-7
Expiration Date (if any):	03/2020	Catalog #:	s4400-10M121

Standard ID#:	M13604	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10000 mg/L
Date Received:	09/20/2018	Lot #:	167967-37
Expiration Date (if any):	03/2020	Catalog #:	4400-10M544

Standard ID#:	M13605	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 10000 mg/L
Date Received:	09/20/2018	Lot #:	752887-3
Expiration Date (if any):	03/2020	Catalog #:	4400-10M521

Standard ID#:	M13606	Vendor:	CPI
Analyst:	NAH	Chemical:	K 1000 mg/L
Date Received:	09/20/2018	Lot #:	144467-179
Expiration Date (if any):	03/2020	Catalog #:	4400-1000411-500

Standard ID#:	M13607	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 1000 mg/L
Date Received:	09/20/2018	Lot #:	158237-113
Expiration Date (if any):	03/2020	Catalog #:	4400-1000521-500

Standard ID#:	M13608	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	09/20/2018	Lot #:	169424-37
Expiration Date (if any):	03/2020	Catalog #:	S4400-1000343

Standard ID#:	M13609	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	09/20/2018	Lot #:	156651-53
Expiration Date (if any):	03/2020	Catalog #:	4400-10M261

Standard ID#:	M13610	Vendor:	CPI
Analyst:	NAH	Chemical:	Zn 10000 mg/L
Date Received:	09/20/2018	Lot #:	979871-2
Expiration Date (if any):	03/2020	Catalog #:	4400-10M681

Standard Log #:	M13601	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/12/2018	Expiration Date:	09/12/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13602	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	09-12-2018	Lot #:	1-124AB
Expiration Date (if any):	09-30-2019	Catalog #:	XCTWI-5-500

Standard ID#:	M13600	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	1% Pd Matrix Modifier
Date Received:	09/11/2018	Lot #:	1808015
Expiration Date (if any):	09/30/2019	Catalog #:	HP1900-100

Standard Log #:	M13599	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	09/08/2018	Expiration Date:	09/08/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13595	Vendor:	SPEX CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	08/29/2018	Lot #:	49-151CR
Expiration Date (if any):	08/30/2019	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13596	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	08/30/2018	Expiration Date:	08/30/2018
Prep:	Carefully mixed **3** parts HCl AB.664 with **1** part HNO_3 AB.665 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M13597	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	08/30/2018	Expiration Date:	05/2019
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13339 and K (1000 µg/mL) M13340 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13598	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	08/30/2018	Expiration Date:	05/2019
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13339 and **0.5 mL** K (1000 µg/mL) M13340 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M13588	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	08/21/2018	Expiration Date:	08/21/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard Log #:	M13589	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	08/21/2018	Expiration Date:	08/21/2019
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.659 and **128.6 mL** 10N NaOH M13514. Dilute to 20 L and mix.		

Standard ID#:	M13590	Vendor:	AMCO Clear
Analyst:	NAH	Chemical:	turbidity std 2.0 ntu
Date Received:	08/21/2018	Lot #:	18272791
Expiration Date (if any):	08/2019	Catalog #:	8008

		Instrument:	ICP 6000
Standard Log #:	M13586	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	08/20/2018	Expiration Date:	01/2020
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M13577 Sn (1000 µg/mL) M13572 Sr (1000 µg/mL) M13580 Ti (1000 µg/mL) M13573 W (1000 µg/mL) MXXX		

		Instrument:	ICP 6000
Standard Log #:	M13587	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	08/20/2018	Expiration Date:	01/2020

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M13577	1000	1	02/2020
W	100/300	XXX	1000	5	XXX
Ti	10/30	M13573	1000	0.5	01/2020
Sr	10/30	M13580	1000	0.5	02/2020
Sn	20/60	M13572	1000	1	01/2020

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	ICP
Standard Log #:	M13584	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	08/20/2018	Expiration Date:	07/30/2019
Prep:	Standard Conc. (ug/L)	Pipette the following:	
	1	**0.01 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.001 mL** W (1000 µg/mL) MXXX into 1L = *1 µg/L*	
	10	**0.10 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.01 mL** W (1000 µg/mL) MXXX into 1L = *10 µg/L*	
	100	**1 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.1 mL** W (1000 µg/mL) MXXX into 1L = *100 µg/L*	
	1000 (CCV)	**2 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **0.2 mL** W (1000 µg/mL) MXXX into 200mL = *1000 µg/L*	
	10000	**20 mL** of Custom Assurance Standard XCTWI-5-500 M13576 and **2 mL** W (1000 µg/mL) MXXX into 200mL = *10000 µg/L*	

		Instrument:	ICP 6000
Standard Log #:	M13585	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	08/20/2018	Expiration Date:	
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13410, **6 mL** of Fe (10,000 mg/L) M13463, **0.1 mL** of Li (1000 µg/mL) M13577, **0.1 mL** of Sn (1000 µg/mL) M13572, **0.1 mL** of Sr (1000 µg/mL) M13580, **0.1 mL** of Ti (1000 µg/mL) M13573, and **0.1 mL** of W (1000 µg/mL) MXXX and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

Standard ID#:	M13577	Vendor:	CPI
Analyst:	NAH	Chemical:	Li 1000 mg/L
Date Received:	08/17/2018	Lot #:	751942-25
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000291

Standard ID#:	M13578	Vendor:	CPI
Analyst:	NAH	Chemical:	V 1000 mg/L
Date Received:	08/17/2018	Lot #:	152207-68
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000651

Standard ID#:	M13579	Vendor:	CPI
Analyst:	NAH	Chemical:	Be 1000 mg/L
Date Received:	08/17/2018	Lot #:	660981-5
Expiration Date (if any):	02/2020	Catalog #:	S4400-100051

Standard ID#:	M13580	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	08/17/2018	Lot #:	168227-29
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000531

Standard ID#:	M13581	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	08/17/2018	Lot #:	172053-36
Expiration Date (if any):	02/2020	Catalog #:	4400-10411

Standard ID#:	M13582	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	08/17/2018	Lot #:	1805105
Expiration Date (if any):	02/2020	Catalog #:	HP10M67-1

Standard ID#:	M13583	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	08/17/2018	Lot #:	148983-70
Expiration Date (if any):	02/2020	Catalog #:	S4400-1000581

Standard ID#:	M13576	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	08/04/2018	Lot #:	49-045CR
Expiration Date (if any):	07/30/2019	Catalog #:	XCTWI-5-500

Standard ID#:	M13569	Vendor:	CPI
Analyst:	NAH	Chemical:	Ni 1000 mg/L
Date Received:	07/27/2018	Lot #:	166665-86
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000361

Standard ID#:	M13570	Vendor:	CPI
Analyst:	NAH	Chemical:	Cd 1000 mg/L
Date Received:	07/27/2018	Lot #:	160499-32
Expiration Date (if any):	01/2020	Catalog #:	s4400-100081

Standard ID#:	M13571	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	07/27/2018	Lot #:	175213-28
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000504F

Standard ID#:	M13572	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/L
Date Received:	07/27/2018	Lot #:	144466-74
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000613

Standard ID#:	M13573	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	07/27/2018	Lot #:	152616-55
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000623

Standard ID#:	M13574	Vendor:	CPI
Analyst:	NAH	Chemical:	Hg 1000 mg/L
Date Received:	07/27/2018	Lot #:	175191-22
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000331

Standard ID#:	M13575	Vendor:	CPI
Analyst:	NAH	Chemical:	Co 1000 mg/L
Date Received:	07/27/2018	Lot #:	161693-10
Expiration Date (if any):	01/2020	Catalog #:	s4400-1000131

Standard Log #:	M13563	Instrument:	ICP
Analyst:	LJF	Standard:	LOQ 3050 S Spiking Solution
Prep Date:	07/19/2018	Expiration Date:	10/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	240	M13466	10000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard ID#:	M13557	Vendor:	Alfa Aesar Specpure
Analyst:	MDS	Chemical:	1% Nickel Nitrate Matrix Modifier
Date Received:	07/17/2018	Lot #:	8137324
Expiration Date (if any):	12/31/2019	Catalog #:	39043

		Instrument:	ICP 6000
Standard Log #:	M13558	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	07/17/2018	Expiration Date:	05/2019
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13518 and **1.0 mL** Si (1000 mg/L) M13338 and brought up to volume using milli-Q H_2O.		

Standard Log #:	M13559	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	07/17/2018	Expiration Date:	01/17/2019
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13559 and brought up to volume.		

Standard Log #:	M13554	Instrument:	ICP
Analyst:	LJF	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	07/13/2018	Expiration Date:	05/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M13390	1000	0.8
Si	200	M13338	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M13555	Instrument:	ICP
Analyst:	LJF	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	07/13/2018	Expiration Date:	10/2019

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M13466	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M13553	Standard:	Sb ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 µg/L (Sb)
Prep Date:	07/12/2018	Expiration Date:	10/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.01 mL** of Antimony Stock Std. (1000 µg/mL Sb) M13459 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13547	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	07/09/2018	Expiration Date:	10/2019
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M13458 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

Standard Log #:	M13548	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	07/10/2018	Expiration Date:	01/10/2019
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M13226 and **60 g** hydroxylamine sulfate M13468 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M13549	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	07/10/2018	Expiration Date:	05/17/2019
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M13497 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

Standard Log #:	M13534	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	10 µg/L As 6 µg/L Pb 12 µg/L Sb 20 µg/L Se 14 µg/L Tl 0.6 µg/L Ag
Prep Date:	07/02/2018	Expiration Date:	09/16/2018

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M13392	10,000
Pb	0.1	10,000	M13169	10,000
Tl	1	1000	M13124	10,000
Se	1	1000	M13460	10,000
Sb	1	1000	M13459	10,000
Ag	0.1	1000	M13458	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.0	10,000	10
Pb	0.6	10,000	6
Tl	1.4	10,000	14
Se	2.0	10,000	20
Sb	1.2	10,000	12
Ag	0.6	1000	0.6

Standard ID#:	M13535	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	07/02/2018	Lot #:	48-179CR
Expiration Date (if any):	06/30/2019	Catalog #:	XSPIKE-1-250

Standard ID#:	M13526	Vendor:	CPI
Analyst:	NAH	Chemical:	YTTRIUM 10,000 ug/mL
Date Received:	06/22/2018	Lot #:	138448-54
Expiration Date (if any):	12/2019	Catalog #:	4400-10M671

Standard ID#:	M13527	Vendor:	CPI
Analyst:	NAH	Chemical:	POTASSIUM 10,000
Date Received:	06/22/2018	Lot #:	172053-32
Expiration Date (if any):	12/2019	Catalog #:	4400-104411

Standard ID#:	M13528	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	06/22/2018	Lot #:	142610-115
Expiration Date (if any):	12/2019	Catalog #:	S4400-1000504F

Standard ID#:	M13529	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10,000 ug/mL
Date Received:	06/22/2018	Lot #:	156651-42
Expiration Date (if any):	12/2019	Catalog #:	4400-10M261

Standard ID#:	M13530	Vendor:	CPI
Analyst:	NAH	Chemical:	SULFUR 10,000ug/mL
Date Received:	06/22/2018	Lot #:	129880-46
Expiration Date (if any):	12/2019	Catalog #:	4400-10M544

Standard ID#:	M13531	Vendor:	CPI
Analyst:	NAH	Chemical:	BORON 1000 ug/mL
Date Received:	06/22/2018	Lot #:	158372-91
Expiration Date (if any):	12/2019	Catalog #:	S4400-100074

Standard ID#:	M13532	Vendor:	CPI
Analyst:	NAH	Chemical:	CUSTOM ASSURANCE STANDARD
Date Received:	06/22/2018	Lot #:	48-146CR
Expiration Date (if any):	06/30/2019	Catalog #:	XCTWI-1-500

Standard ID#:	M13520	Vendor:	FRISCOLYT
Analyst:	NAH	Chemical:	Electrolyte Solution
Date Received:	06/13/2018	Lot #:	1DO71H
Expiration Date (if any):	12/03/2021	Catalog #:	51 340 053

		Instrument:	ICP
Standard Log #:	M13521	Standard:	As Pb ICV1
Analyst:	MDS	Concentrations:	5000 ug/L (As,Pb)
Prep Date:	06/13/2018	Expiration Date:	10/20/2018
Prep:	Into a 1 L volumetric flask, pipetted **0.5 mL** of As (10,000 mg/L) M13392 and **0.5 mL** Pb (10,000 mg/L) M13169 and brought to volume with Milli-Q H_2O. (2% HNO_3, 2% HCl)		

Standard ID#:	M13518	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/11/2018	Lot #:	48-060CR
Expiration Date (if any):	06/30/2019	Catalog #:	XCTWI-5-500

		Instrument:	ICP 6500
Standard Log #:	M13519	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/11/2018	Expiration Date:	06/30/2019

Prep:

Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O.
(5% HNO_3, 5% HCl)
1000 ug/L Std. - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13518, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M13506 and **1 mL** of Si (1000 mg/L) M13394 and 1 mL M13203 Ce
0.25 ug/L Std. - **0.25 mL** of the 1000 ug/L Std.
0.5 ug/L Std. - **0.5 mL** of the 1000 ug/L Std.
1 ug/L Std. - **1 mL** of the 1000 ug/L Std.
5 ug/L Std. - **5 mL** of the 1000 ug/L Std.
10 ug/L Std. - **10 mL** of the 1000 ug/L Std.
20 ug/L Std. - **20 mL** of the 1000 ug/L Std.
50 ug/L Std. - **50 mL** of the 1000 ug/L Std.
100 ug/L Std. - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3
10,000 ug/L Std. - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M13465.
100k ug/L Std. - **10 mL** of Cu (10,000 mg/L) M13166, **10 mL** of Mn (10,000 mg/L) M13167, **10 mL** of Cr (10,000 mg/L) M13165, **10 mL** Pb (10,000 mg/L) M13169, **10 mL** of Zn (10,000 mg/L) M13168 and **10 mL** of Na (10,000 mg/L) M13461.
100,000 ug/L Std. - **10 mL** of Mg (10,000 mg/L) M13319, **10 mL** of Fe (10,000 mg/L) M13463, **10 mL** of Ca (10,000 mg/L) M13467 and **10 mL** Al (10,000 mg/L) M13462.
500,000 ug/L Std. - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L)
1000k ug/L Std. - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)

		Instrument:	CETAC
Standard Log #:	M13510	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/01/2018	Expiration Date:	06/01/2018
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.655 in a hood.		

Standard ID#:	M13511	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	06/04/2018	Lot #:	176877
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13506	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05/22/2018	Lot #:	48-042CR
Expiration Date (if any):	05/30/2019	Catalog #:	XCTWI-4-500

Standard ID#:	M13507	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05/22/2018	Lot #:	48-041CR
Expiration Date (if any):	05/30/2019	Catalog #:	XSPIKE-1-250

Standard ID#:	M13508	Vendor:	RESTEK
Analyst:	NAH	Chemical:	Diatomaceous earth (Celite 566)
Date Received:	05/22/2018	Lot #:	811030-BG
Expiration Date (if any):	N/A	Catalog #:	26033

Standard ID#:	M13495	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	05/15/2018	Lot #:	H052-17
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	ICP 6000
Standard Log #:	M13485	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	05/07/2018	Expiration Date:	05/2019
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M13339 and K (1000 µg/mL) M13340 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13486	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	05/07/2018	Expiration Date:	08/2019
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M13400 and Na (10,000 mg/L) M13402 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13487	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	05/07/2018	Expiration Date:	08/2019
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M13402 and **0.15 mL** K (10,000 µg/mL) M13400 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M13488	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	05/07/2018	Expiration Date:	05/2019
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M13339 and **0.5 mL** K (1000 µg/mL) M13340 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M13484	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	05/03/2018	Lot #:	1805105
Expiration Date (if any):	10/31/2019	Catalog #:	HP10M67-1

		Instrument:	ICP 6000
Standard Log #:	M13471	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	04/26/2018	Expiration Date:	07/2019
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M13390 and Si (1000 mg/L) M13394 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M13472	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	04/26/2018	Expiration Date:	07/02/2018
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M13364 and **1.0 mL** Si (1000 mg/L) M13085 and brought up to volume using milli-Q H_2O.		

		Instrument:	ICP 6000
Standard Log #:	M13473	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	04/26/2018	Expiration Date:	10/30/2018
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M13305 , **0.05 mL** of B (1000 µg/mL) M13390 , **0.05 mL** of Si (1000 µg/mL) M13394 and **3 mL** of Fe (10,000 mg/L) M13321 and brought up to volume using Milli-Q H_2O.		

Standard ID#:	M13467	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	04/20/2018	Lot #:	147497-47
Expiration Date (if any):	10/2019	Catalog #:	4400-10M91

Standard ID#:	M13468	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	04/24/2018	Lot #:	174236
Expiration Date (if any):		Catalog #:	H331-500

		Instrument:	CETAC
Standard Log #:	M13469	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/24/2018	Expiration Date:	04/24/2018
Prep:	Carefully mixed **3** parts HCl AB.656 with **1** part HNO_3 AB.655 in a hood.		

Standard ID#:	M13462	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	04/20/2018	Lot #:	158058-23
Expiration Date (if any):	10/2019	Catalog #:	4400-10M11

Standard ID#:	M13463	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	04/20/2018	Lot #:	156651-18
Expiration Date (if any):	10/2019	Catalog #:	4400-10M261

Standard ID#:	M13464	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	04/20/2018	Lot #:	148250-67
Expiration Date (if any):	10/2019	Catalog #:	4400-10M311

Standard ID#:	M13465	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	04/20/2018	Lot #:	172053-2
Expiration Date (if any):	10/2019	Catalog #:	4400-10M411

Standard ID#:	M13466	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	04/20/2018	Lot #:	129880-37
Expiration Date (if any):	10/2019	Catalog #:	4400-10M544

Standard ID#:	M13457	Vendor:	CPI
Analyst:	NAH	Chemical:	Barium 1000 mg/L
Date Received:	04/20/2018	Lot #:	158364-3
Expiration Date (if any):	10/2019	Catalog #:	S4400-100041

Standard ID#:	M13458	Vendor:	CPI
Analyst:	NAH	Chemical:	Ag 1000 mg/L
Date Received:	04/20/2018	Lot #:	162712-9
Expiration Date (if any):	10/2019	Catalog #:	S4400-1000511

Standard ID#:	M13459	Vendor:	CPI
Analyst:	NAH	Chemical:	Sb 1000 mg/L
Date Received:	04/20/2018	Lot #:	153992-1
Expiration Date (if any):	10/2019	Catalog #:	S4400-100023

Standard ID#:	M13460	Vendor:	CPI
Analyst:	NAH	Chemical:	Se 1000 mg/L
Date Received:	04/20/2018	Lot #:	154366-16
Expiration Date (if any):	10/2019	Catalog #:	S4400-1000491

Standard ID#:	M13461	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 mg/L
Date Received:	04/20/2018	Lot #:	107139-108
Expiration Date (if any):	10/2019	Catalog #:	4400-10M521

Standard Log #:	M13445	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	04/19/2018	Expiration Date:	10/19/2018
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M12652 and brought up to volume.		

		Instrument:	Hach 2100 turbidity meter
Standard Log #:	M13446	Standard:	Turbity ICAL
Analyst:	NAH	Concentrations:	20, 100, 200 ntu
Prep Date:	04/19/2018	Expiration Date:	12/2019
Prep:	Using the hach vials , pipet the following: *20 ntu Std.* = **1 ml** M13436 and 9 mls DI H20. *100 ntu Std.* = **5 mls** M13436 and 5 mls DI H20. *200 ntu Std.* = ***10 mls*** M13436 *and* 0 mls DI H20.		

LPMT1-04
Metals Reagents and Standards
Prep Logbook
Created: 12/19/17

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		Instrument:	ICP 6000
Standard Log #:	M13438	Standard:	Sulfur ICAL
Analyst:	MDS	Concentrations:	1000 10,000 100,000 1000K µg/L (S)
Prep Date:	04/11/2018	Expiration Date:	07/2019
Prep:	Into four, 100 mL volumetric flasks, pipetted the following from stock standard S (10,000 µg/mL) M13391 and brought up to volume using milli-Q H_2O. *1000 ug/L std.* - **0.01 mL** *10,000 ug/L std.* - **0.1 mL** *100,000 ug/L std.* -**1.0 mL**, also used as the CCV *1000K ug/L std.* - **10 mL**		

		Instrument:	ICP 6000
Standard Log #:	M13439	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	04/11/2018	Expiration Date:	01/19/2019
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M13280 and brought up to volume using Milli-Q H_2O.		

Standard Log #:	M13437	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 B&Si Spiking Solution
Prep Date:	04/10/2018	Expiration Date:	07/19

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	52	M13390	1000	2.6
Si	192	M13394	1000	9.6

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Content below was appended to locked page by mszymanski on 4/19/2018 12:20:57 PM

Standard ID#:	M13436a	Vendor:	HACH
Analyst:	NAH	Chemical:	StablCal 200 NTU
Date Received:	04/10/2018	Lot #:	A7354
Expiration Date (if any):	12/2019	Catalog #:	2660449

Standard ID#:	M13400	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 ug/mL
Date Received:	02/15/2018	Lot #:	106958-116
Expiration Date (if any):	08/2019	Catalog #:	4400-10M411

Standard ID#:	M13401	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 ug/mL
Date Received:	02/15/2018	Lot #:	139448-54
Expiration Date (if any):	08/2019	Catalog #:	4400-10M671

Standard ID#:	M13402	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 ug/mL
Date Received:	02/15/2018	Lot #:	107139-126
Expiration Date (if any):	08/2019	Catalog #:	4400-10M521

Standard Log #:	M13388	Reagent:	SPLP EXTRACTION FLUID EAST #
Analyst:	BMM	pH:	4.20 ± 0.05
Prep Date:	01/23/2018	Expiration Date:	01/23/2019
Prep:	Into a 20 L carboy filled with DI H_2O, adjust pH to 4.20 ± 0.05 using 60/40 SPLP extraction fluid acid mixture M12457 .		

Standard Log #:	M13389	Reagent:	SPLP EXTRACTION FLUID WEST #
Analyst:	BMM	pH:	5.00 ± 0.05
Prep Date:	01/23/2018	Expiration Date:	01/23/2019
Prep:	Into a 20 L carboy filled with DI H_2O, adjust pH to 5.00 ± 0.05 using 60/40 SPLP extraction fluid acid mixture M12457 .		

Standard ID#:	M13390	Vendor:	CPI
Analyst:	NAH	Chemical:	Boron 1000 ug/mL
Date Received:	01/23/2018	Lot #:	158372-29
Expiration Date (if any):	07/2019	Catalog #:	S4400-100074

Standard ID#:	M13391	Vendor:	CPI
Analyst:	NAH	Chemical:	Sulfur 10000 ug/mL
Date Received:	01/23/2018	Lot #:	129880-28
Expiration Date (if any):	07/2019	Catalog #:	4400-10M544

Standard ID#:	M13392	Vendor:	CPI
Analyst:	NAH	Chemical:	Arsenic 1000 ug/mL
Date Received:	01/23/2018	Lot #:	143356-61
Expiration Date (if any):	07/2019	Catalog #:	S4400-100031

Standard ID#:	M13393	Vendor:	CPI
Analyst:	NAH	Chemical:	Molybdenum 1000 ug/mL
Date Received:	01/23/2018	Lot #:	134169R-102
Expiration Date (if any):	07/2019	Catalog #:	S4400-1000343

Standard ID#:	M13394	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 ug/mL
Date Received:	01/23/2018	Lot #:	142610-58
Expiration Date (if any):	07/2019	Catalog #:	S4400-1000504F

Standard ID#:	M13350	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	12/12/2017	Lot #:	1729606
Expiration Date (if any):	06//2019	Catalog #:	10M67-1

Standard ID#:	M13226	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	07/21/2017	Lot #:	170229
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13199	Vendor:	National Institute of Standards and Te
Analyst:	NAH	Chemical:	SRM Montana I soil
Date Received:	05/15/2017	Lot #:	2710a
Expiration Date (if any):		Catalog #:	

Standard ID#:	M13200	Vendor:	National Institute of Standards and Te
Analyst:	NAH	Chemical:	SRM Montana II soil
Date Received:	05/15/2017	Lot #:	2711a
Expiration Date (if any):		Catalog #:	

Standard ID#:	M13186	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	05/22/2017	Lot #:	166161
Expiration Date (if any):		Catalog #:	H331-500

Standard ID#:	M13187	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10,000 ug/mL
Date Received:	05/22/2017	Lot #:	1705408
Expiration Date (if any):	11/16/2018	Catalog #:	HP10M67-1

Standard ID#:	M13080	Vendor:	FISHER
Analyst:	LJF	Chemical:	POTASSIUM PERMANGANATE
Date Received:	01/30/2017	Lot #:	164080
Expiration Date (if any):		Catalog #:	P279-212

Standard ID#:	M13059	Vendor:	ACROS ORGANICS
Analyst:	LJF	Chemical:	POTASSIUM PERSULFATE
Date Received:	12/19/2016	Lot #:	A0375670
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M13024	Vendor:	METTLER TOLEDO
Analyst:	LJF	Chemical:	FRISCOLYT
Date Received:	11/01/2016	Lot #:	1B167D
Expiration Date (if any):		Catalog #:	51340053

INORGANIC
CLP FORMS
DOCUMENTS

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031438
Analytical Method:	EPA 9056A	Date Received:	07/29/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193993	Analysis Date/Time	07/29/2021 13:17
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.25	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	34	M	0.80	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031438
Analytical Method:	EPA 9060A	Date Received:	07/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 17:23
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030468
Analytical Method:	EPA 9056A	Date Received:	07/27/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193948	Analysis Date/Time	07/28/2021 08:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	96		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030468
Analytical Method:	EPA 9056A	Date Received:	07/27/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193948	Analysis Date/Time	07/27/2021 14:54
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.5		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030468
Analytical Method:	EPA 9060A	Date Received:	07/27/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/04/2021 18:21
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030462
Analytical Method:	EPA 9056A	Date Received:	07/27/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193948	Analysis Date/Time	07/27/2021 14:36
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.73		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	42		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030462
Analytical Method:	EPA 9060A	Date Received:	07/27/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/04/2021 18:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030469
Analytical Method:	EPA 9056A	Date Received:	07/27/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193948	Analysis Date/Time	07/28/2021 08:43
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	99	M	4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030469
Analytical Method:	EPA 9056A	Date Received:	07/27/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193948	Analysis Date/Time	07/27/2021 15:12
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.5		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030469
Analytical Method:	EPA 9060A	Date Received:	07/27/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 16:59
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031957
Analytical Method:	EPA 9056A	Date Received:	07/30/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194031	Analysis Date/Time	07/30/2021 12:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.4		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	44		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031957
Analytical Method:	EPA 9060A	Date Received:	07/30/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 18:11
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032208
Analytical Method:	EPA 9060A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/10/2021 08:58
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032208
Analytical Method:	EPA 9056A	Date Received:	07/31/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194052	Analysis Date/Time	07/31/2021 23:21
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.8	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.82		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	2.9	J	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032210
Analytical Method:	EPA 9060A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/10/2021 09:10
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032210
Analytical Method:	EPA 9056A	Date Received:	07/31/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194052	Analysis Date/Time	07/31/2021 23:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.2	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	4.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	19		0.80	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031437
Analytical Method:	EPA 9056A	Date Received:	07/29/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193993	Analysis Date/Time	07/29/2021 12:59
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	8.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.0		0.12	0.20	0.40	0.40

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031437
Analytical Method:	EPA 9056A	Date Received:	07/29/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193993	Analysis Date/Time	08/02/2021 15:02
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	120		4.0	7.5	15	15

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031437
Analytical Method:	EPA 9060A	Date Received:	07/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 17:12
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	2.7	J	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48RB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032212
Analytical Method:	EPA 9056A	Date Received:	07/31/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194052	Analysis Date/Time	08/01/2021 01:10
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.5	U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	1.5	U	0.80	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48RB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032212
Analytical Method:	EPA 9060A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/10/2021 09:36
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032211
Analytical Method:	EPA 9056A	Date Received:	07/31/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194052	Analysis Date/Time	08/01/2021 00:33
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.3	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	4.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	20		0.80	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032211
Analytical Method:	EPA 9060A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/10/2021 09:23
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49EB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031958
Analytical Method:	EPA 9056A	Date Received:	07/30/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194031	Analysis Date/Time	07/30/2021 13:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.5	U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	1.5	U	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49EB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031958
Analytical Method:	EPA 9060A	Date Received:	07/30/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 18:24
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031959
Analytical Method:	EPA 9056A	Date Received:	07/30/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194031	Analysis Date/Time	07/30/2021 13:27
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.9		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.38	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	0.88	J	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031959
Analytical Method:	EPA 9060A	Date Received:	07/30/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 18:35
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032213
Analytical Method:	EPA 9056A	Date Received:	07/31/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194052	Analysis Date/Time	08/01/2021 02:22
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.6	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.34	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	12		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032213
Analytical Method:	EPA 9060A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/10/2021 09:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032207
Analytical Method:	EPA 9060A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/10/2021 08:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.61	J	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032207
Analytical Method:	EPA 9056A	Date Received:	07/31/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194052	Analysis Date/Time	07/31/2021 22:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.24	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	58		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031961
Analytical Method:	EPA 9056A	Date Received:	07/30/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194031	Analysis Date/Time	07/30/2021 13:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	59	M	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031961
Analytical Method:	EPA 9060A	Date Received:	07/30/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 18:47
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW 48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032214
Analytical Method:	EPA 410.4	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194113	Analysis Date/Time	08/05/2021 10:40
Analytical Prep Batch #:	81979	Prep. Date/Time:	08/03/2021 10:48
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	84		18	50	75	75

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW 48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032214
Analytical Method:	EPA 9040C	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194093	Analysis Date/Time	08/02/2021 14:50
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	7.58		0.1	0.1	0.1	0.1

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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193948 Lab Sample ID: 1035193

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	4/26/21	16:57	15.00	13.66	91.1	90	110
Nitrate Nitrogen	4/26/21	16:57	3.50	3.336	95.3	90	110
Sulfate	4/26/21	16:57	25.00	23.21	92.8	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194113 Lab Sample ID: 1038043

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	8/5/21 10:40	400.0	401.1	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060 Lab Sample ID: 1036601

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	6/3/21	14:14	50.0	50.72	101	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193948

Lab Sample ID: 1030816

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	7/27/21	12:30	15.00	14.23	94.9	90	110
Nitrate Nitrogen	7/27/21	12:30	3.500	3.491	99.7	90	110
Sulfate	7/27/21	12:30	25.00	24.03	96.1	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193948

Lab Sample ID: 1030818

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	7/28/21	09:55	15.00	14.23	94.9	90	110
Nitrate Nitrogen	7/28/21	09:55	3.500	3.495	99.9	90	110
Sulfate	7/28/21	09:55	25.00	23.99	96.0	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193948

Lab Sample ID: 1030820

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	7/28/21	07:30	15.00	14.15	94.3	90	110
Nitrate Nitrogen	7/28/21	07:30	3.500	3.475	99.3	90	110
Sulfate	7/28/21	07:30	25.00	23.89	95.6	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193948

Lab Sample ID: 1030822

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	7/27/21	16:25	15.00	14.22	94.8	90	110
Nitrate Nitrogen	7/27/21	16:25	3.500	3.490	99.7	90	110
Sulfate	7/27/21	16:25	25.00	24.01	96.0	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194052

Lab Sample ID: 1032218

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	8/1/21	01:46	15.00	14.36	95.7	90	110
Nitrate Nitrogen	8/1/21	01:46	3.500	3.510	100	90	110
Sulfate	8/1/21	01:46	25.00	23.95	95.8	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194052 Lab Sample ID: 1032220

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	7/31/21	21:51	15.00	14.48	96.5	90	110
Nitrate Nitrogen	7/31/21	21:51	3.500	3.559	102	90	110
Sulfate	7/31/21	21:51	25.00	24.14	96.6	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194052

Lab Sample ID: 1032222

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	8/1/21	03:52	15.00	14.39	95.9	90	110
Nitrate Nitrogen	8/1/21	03:52	3.500	3.502	100	90	110
Sulfate	8/1/21	03:52	25.00	23.97	95.9	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194031 Lab Sample ID: 1032980

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	7/30/21	11:57	15.00	14.48	96.5	90	110
Nitrate Nitrogen	7/30/21	11:57	3.500	3.543	101	90	110
Sulfate	7/30/21	11:57	25.00	23.94	95.8	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194031

Lab Sample ID: 1032985

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	7/30/21	15:52	15.00	14.90	99.3	90	110
Nitrate Nitrogen	7/30/21	15:52	3.500	3.561	102	90	110
Sulfate	7/30/21	15:52	25.00	24.10	96.4	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193993

Lab Sample ID: 1033003

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	7/29/21	12:05	15.00	14.24	94.9	90	110
Nitrate Nitrogen	7/29/21	12:05	3.500	3.498	99.9	90	110
Sulfate	7/29/21	12:05	25.00	24.00	96.0	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193993

Lab Sample ID: 1033005

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	8/2/21	15:20	15.00	14.50	96.7	90	110
Nitrate Nitrogen	8/2/21	15:20	3.500	3.564	102	90	110
Sulfate	8/2/21	15:20	25.00	24.19	96.8	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193993

Lab Sample ID: 1033007

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	8/2/21	14:26	15.00	14.49	96.6	90	110
Nitrate Nitrogen	8/2/21	14:26	3.500	3.564	102	90	110
Sulfate	8/2/21	14:26	25.00	24.11	96.4	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193993

Lab Sample ID: 1033009

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Chloride	7/29/21	14:30	15.00	14.28	95.2	90	110
Nitrate Nitrogen	7/29/21	14:30	3.500	3.496	99.9	90	110
Sulfate	7/29/21	14:30	25.00	24.01	96.0	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194113

Lab Sample ID: 1035650

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	8/5/21	10:40	400.0	386.7	96.7	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194113

Lab Sample ID: 1035652

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
COD	8/5/21	10:40	400.0	386.7	96.7	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060

Lab Sample ID: 1036326

ICAL Calibration #: ICAL 0514

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	8/4/21	15:45	50.0	48.99	98.0	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060

Lab Sample ID: 1036328

ICAL Calibration #: ICAL 0514

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	8/4/21	18:34	50.0	48.12	96.2	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060

Lab Sample ID: 1036330

ICAL Calibration #: ICAL 0514

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	8/9/21	16:27	50.0	47.38	94.8	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060

Lab Sample ID: 1036335

ICAL Calibration #: ICAL 0514

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	8/9/21	18:58	50.0	47.19	94.4	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060

Lab Sample ID: 1036640

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	8/10/21	08:17	50.0	48.25	96.5	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060

Lab Sample ID: 1036643

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Total Organic Carbon	8/10/21	10:00	50.0	47.12	94.2	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

CT LABORATORIES
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Sample No

3-1

ICB

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060 Lab Sample ID: 1036602

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	06/03/2021 14:28	0.20	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194113

Lab Sample ID: 1038044

Analytical Prep Batch #

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	08/05/2021 10:40	-2.0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193948 Lab Sample ID: 1035194

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	04/27/2021 10:28	0.5847	U	1.0	1.5
Nitrate Nitrogen	04/27/2021 10:28	0	U	0.12	0.20
Sulfate	04/27/2021 10:28	0.7141	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193948

Lab Sample ID: 1030817

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	07/28/2021 10:13	0.6059	U	1.0	1.5
Nitrate Nitrogen	07/28/2021 10:13	0.08650	U	0.12	0.20
Sulfate	07/28/2021 10:13	0.7378	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193948 Lab Sample ID: 1030819

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	07/28/2021 07:48	0.5998	U	1.0	1.5
Nitrate Nitrogen	07/28/2021 07:48	0.08470	U	0.12	0.20
Sulfate	07/28/2021 07:48	0.7226	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193948 Lab Sample ID: 1030821

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	07/27/2021 16:43	0.6051	U	1.0	1.5
Nitrate Nitrogen	07/27/2021 16:43	0.08620	U	0.12	0.20
Sulfate	07/27/2021 16:43	0.7500	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194052 Lab Sample ID: 1032217

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	08/01/2021 02:04	0.5949	U	1.0	1.5
Nitrate Nitrogen	08/01/2021 02:04	0.08370	U	0.12	0.20
Sulfate	08/01/2021 02:04	0.7153	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194052 Lab Sample ID: 1032221

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	08/01/2021 04:10	0.5972	U	1.0	1.5
Nitrate Nitrogen	08/01/2021 04:10	0.08410	U	0.12	0.20
Sulfate	08/01/2021 04:10	0.7193	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194031 Lab Sample ID: 1032984

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	07/30/2021 16:10	0.6362	U	1.0	1.5
Nitrate Nitrogen	07/30/2021 16:10	0.08430	U	0.12	0.20
Sulfate	07/30/2021 16:10	0.7235	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193993

Lab Sample ID: 1033004

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	08/02/2021 15:38	0.5981	U	1.0	1.5
Nitrate Nitrogen	08/02/2021 15:38	0.08350	U	0.12	0.20
Sulfate	08/02/2021 15:38	0.7233	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193993

Lab Sample ID: 1033006

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	08/02/2021 14:44	0.6049	U	1.0	1.5
Nitrate Nitrogen	08/02/2021 14:44	0.08510	U	0.12	0.20
Sulfate	08/02/2021 14:44	0.7208	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193993 Lab Sample ID: 1033008

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	07/29/2021 14:48	0.5989	U	1.0	1.5
Nitrate Nitrogen	07/29/2021 14:48	0.08480	U	0.12	0.20
Sulfate	07/29/2021 14:48	0.7272	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194113

Lab Sample ID: 1035649

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	08/05/2021 10:40	0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194113

Lab Sample ID: 1035651

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
COD	08/05/2021 10:40	0			37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060 Lab Sample ID: 1036329

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0514 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	08/04/2021 18:48	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060 Lab Sample ID: 1036331

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0514 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	08/09/2021 16:41	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060

Lab Sample ID: 1036336

Analytical Prep Batch # 0

Preparation Date/Time:

ICAL Calibration #: ICAL 0514

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	08/09/2021 19:11	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060 Lab Sample ID: 1036639

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	08/10/2021 08:30	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060

Lab Sample ID: 1036642

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	08/10/2021 10:13	0	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193948 Lab Sample ID: 1030815

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	07/27/2021 13:06	0.6010	U	1.0	1.5
Nitrate Nitrogen	07/27/2021 13:06	0.08520	U	0.12	0.20
Sulfate	07/27/2021 13:06	0.7260	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194052 Lab Sample ID: 1032219

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	07/31/2021 22:27	0.6012	U	1.0	1.5
Nitrate Nitrogen	07/31/2021 22:27	0.08510	U	0.12	0.20
Sulfate	07/31/2021 22:27	0.7257	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194031 Lab Sample ID: 1032979

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	07/30/2021 12:33	0.6025	U	1.0	1.5
Nitrate Nitrogen	07/30/2021 12:33	0.08580	U	0.12	0.20
Sulfate	07/30/2021 12:33	0.7295	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 193993 Lab Sample ID: 1033002

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Chloride	07/29/2021 12:41	0.5956	U	1.0	1.5
Nitrate Nitrogen	07/29/2021 12:41	0.08400	U	0.12	0.20
Sulfate	07/29/2021 12:41	0.7216	U	0.8	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194113 Lab Sample ID: 1033057

Analytical Prep Batch # 81979 Preparation Date/Time: 08/03/2021 10:48

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total COD	08/05/2021 10:40	2.80	U	18	37

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

SDG No.: 163390

Analytical Run #: 194060 Lab Sample ID: 1036327

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: ICAL 0514 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Total Organic Carbon	08/04/2021 16:12	0.37	U	0.5	1.5

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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5A

SPIKE SAMPLE RECOVERY

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1030824	Parent Sample No.:	1030469
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	193948	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	07/27/2021	Analysis Time: --------	15:49

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	11.0		3.7		8.00	91.3		
Nitrate Nitrogen	88-111	3.47		1.5		2.00	98.5		

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1030824	Parent Sample No.:	1030469
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	193948	ICAL Calibration #:	

ReRun *Re-Analysis #1* Analysis Date: ----- 07/28/2021 Analysis Time: -------- 09:19

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Sulfate	87-112	130		99		40.0	77.5			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1032224	Parent Sample No.:	1032213
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	194052	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	08/01/2021	Analysis Time: --------	03:16

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	8.79		1.6	J	8.00	89.9		
Nitrate Nitrogen	88-111	2.30		0.34	J	2.00	98.0		
Sulfate	87-112	19.5		12		8.00	93.8		

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1032982	Parent Sample No.:	1031961
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	194031	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	07/30/2021	Analysis Time: --------	14:22

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	14.5		6.8		8.00	96.3			
Nitrate Nitrogen	88-111	4.08		2.1		2.00	99.0			
Sulfate	87-112	64.4		59		8.00	67.5			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1033011	Parent Sample No.:	1031438
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	193993	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	07/29/2021	Analysis Time: --------	13:53

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	11.9		4.7		8.00	90.0			
Nitrate Nitrogen	88-111	2.12		0.25	J	2.00	93.5			
Sulfate	87-112	40.4		34		8.00	80.0			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5A

SPIKE SAMPLE RECOVERY

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1036333	Parent Sample No.:	1031438
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	194060	ICAL Calibration #:	ICAL 0514

Analysis Type	*Initial Analysis*	Analysis Date: -----	08/09/2021	Analysis Time: --------	17:47

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	50.0		BDL	U	50.0	100		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **13TW3**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1030823	Parent Sample No.:	1030824
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	193948	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 07/27/2021 Analysis Time: -------- 16:07

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	11.0		3.7		8.00	91.3		
Nitrate Nitrogen	88-111	3.49		1.5		2.00	99.5		

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **13TW3**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solids for Sample:
Concentration Units: mg/L
Sample No: 1030823
Parent Sample No.: 1030824
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 193948
ICAL Calibration #:

ReRun | *Re-Analysis #1* | Analysis Date: ----- 07/28/2021 | Analysis Time: -------- 09:37

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Sulfate	87-112	133		99		40.0	85.0			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1032223	Parent Sample No.:	1032224
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	194052	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	08/01/2021	Analysis Time: --------	03:34

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Chloride	87-111	8.84		1.6		8.00	90.5		
Nitrate Nitrogen	88-111	2.31		0.34		2.00	98.5		
Sulfate	87-112	19.6		12		8.00	95.0		

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1032981	Parent Sample No.:	1032982
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	194031	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	07/30/2021	Analysis Time: --------	14:40

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	14.6		6.8		8.00	97.5			
Nitrate Nitrogen	88-111	4.10		2.1		2.00	100			
Sulfate	87-112	64.4		59		8.00	67.5			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1033010	Parent Sample No.:	1033011
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	193993	ICAL Calibration #:	

Analysis Type	*Initial Analysis*	Analysis Date: -----	07/29/2021	Analysis Time: --------	14:11

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Chloride	87-111	12.1		4.7		8.00	92.5			
Nitrate Nitrogen	88-111	2.16		0.25		2.00	95.5			
Sulfate	87-112	40.6		34		8.00	82.5			*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	LIQUID	SDG No.:	163390
% Solids for Sample:		Concentration Units:	mg/L
Sample No	1036334	Parent Sample No.:	1036333
Analytical Prep Batch #	0	Analytical Preparation Date/Time:	
Analytical Run #:	194060	ICAL Calibration #:	ICAL 0514

Analysis Type	*Initial Analysis*	Analysis Date: -----	08/09/2021	Analysis Time: --------	17:59

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Total Organic Carbon	85-111	50.1		BDL	U	50.0	100		TOC

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

13TW3

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 163390

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 193948

ICAL Calibration #:

Sample #: 1030825

Parent Sample #: 1030469

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	07/27/2021	15:31	10	3.7		3.67		0.814		
Nitrate Nitrogen	07/27/2021	15:31	10	1.5		1.53		1.98		

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

13TW3

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 163390

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 2

Analytical Preparation Date/Time 0

Analytical Run #: 193948

ICAL Calibration #:

Sample #: 1030825

Parent Sample #: 1030469

ReRun *Re-Analysis #1*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Sulfate	07/28/2021	09:01	10	99		95.6		3.49		

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

49MW2

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 163390

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 194052

ICAL Calibration #:

Sample #: 1032225

Parent Sample #: 1032213

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	08/01/2021	02:58	10	1.6	J	1.56	J	2.53		
Nitrate Nitrogen	08/01/2021	02:58	10	0.34	J	0.342	J	0.587		
Sulfate	08/01/2021	02:58	10	12		12.4		3.28		

CT LABORATORIES
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6

DUPLICATES

Sample Description

IDW 48/49

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 163390

% Solid for Sample:

Concentration Units: S.U.

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 194093

ICAL Calibration #:

Sample #: 1032883

Parent Sample #: 1032214

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim	RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
pH	08/02/2021 14:50	1	7.58		7.59		0.132		ELEC

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

50MW2

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 163390

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 194031

ICAL Calibration #:

Sample #: 1032983

Parent Sample #: 1031961

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	07/30/2021	14:04	10	6.8		6.81		0.147		
Nitrate Nitrogen	07/30/2021	14:04	10	2.1		2.07		1.44		
Sulfate	07/30/2021	14:04	10	59		59.1		0.169		

CT LABORATORIES
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6

DUPLICATES

Sample Description

13MW2

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 1
Analytical Preparation Date/Time: 0
Analytical Run #: 193993
ICAL Calibration #:
Sample #: 1033001
Parent Sample #: 1031438

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Chloride	07/29/2021	13:35	10	4.7		4.71		0.213		
Nitrate Nitrogen	07/29/2021	13:35	10	0.25	J	0.245	J	2.02		
Sulfate	07/29/2021	13:35	10	34		34.1		0.294		

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

13MW2

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

Matrix: LIQUID

SDG No.: 163390

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 0

Analytical Run #: 194060

ICAL Calibration #: ICAL 0514

Sample #: 1036332

Parent Sample #: 1031438

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	08/09/2021	17:34	20	0.5	U	0.5	U	0		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **13TW3**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 193948
ICAL Calibration #:
Sample #: 1030823
Parent Sample #: 1030824

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	07/27/2021	16:07	15	11.0		11.0		0.741		
Nitrate Nitrogen	07/27/2021	16:07	15	3.47		3.49		0.544		

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **13TW3**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 193948
ICAL Calibration #:
Sample #: 1030823
Parent Sample #: 1030824

ReRun *Re-Analysis #1*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Sulfate	07/28/2021	09:37	15	130		133		2.44		

CT LABORATORIES
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6A

MATRIX SPIKE DUPLICATES

Sample Description: **49MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 194052
ICAL Calibration #:
Sample #: 1032223
Parent Sample #: 1032224

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	08/01/2021	03:34	15	8.79		8.84		0.573		
Nitrate Nitrogen	08/01/2021	03:34	15	2.30		2.31		0.534		
Sulfate	08/01/2021	03:34	15	19.5		19.6		0.338		

CT LABORATORIES
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6A

MATRIX SPIKE DUPLICATES

Sample Description: **50MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 194031
ICAL Calibration #:
Sample #: 1032981
Parent Sample #: 1032982

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	07/30/2021	14:40	15	14.5		14.6		0.739		
Nitrate Nitrogen	07/30/2021	14:40	15	4.08		4.10		0.709		
Sulfate	07/30/2021	14:40	15	64.4		64.4		0.005		

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 193993
ICAL Calibration #:
Sample #: 1033010
Parent Sample #: 1033011

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Chloride	07/29/2021	14:11	15	11.9		12.1		1.43		
Nitrate Nitrogen	07/29/2021	14:11	15	2.12		2.16		1.88		
Sulfate	07/29/2021	14:11	15	40.4		40.6		0.503		

CT LABORATORIES
delivering more than data from your environmental analyses

6A

MATRIX SPIKE DUPLICATES

Sample Description: **13MW2**

Lab Name: CT Laboratories
Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix: LIQUID
SDG No.: 163390
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 194060
ICAL Calibration #: ICAL 0514
Sample #: 1036334
Parent Sample #: 1036333

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim	RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Total Organic Carbon	08/09/2021 17:59	20	50.0		50.1		0.240		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 163390

Concentration Units: mg/L

Analytical Run #: 194113 Sample No.:#: 1033058

Analytical Prep Batch #: 81979 Preparation Date/Time: 08/03/2021 10:48

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
COD	08/05/2021 10:40	90-110	398.7		400.0	99.7		SP

CT LABORATORIES
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7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 163390

Concentration Units: mg/L

Analytical Run #: 194060

Sample No.:#: 1036600

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Total Organic Carbon	08/04/2021 15:58	85-111	48.86		50.0	97.7		TOC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 163390

Concentration Units: mg/L

Analytical Run #: 193948

Sample No.:#: 1031436

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	07/27/2021 12:48	87-111	14.03		15.00	93.5		IC
Nitrate Nitrogen	07/27/2021 12:48	88-111	3.486		3.50	99.6		IC
Sulfate	07/27/2021 12:48	87-112	24.22		25.00	96.9		IC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 163390

Concentration Units: mg/L

Analytical Run #: 194052 Sample No.:#: 1032356

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	07/31/2021 22:09	87-111	14.07		15.00	93.8		IC
Nitrate Nitrogen	07/31/2021 22:09	88-111	3.502		3.50	100		IC
Sulfate	07/31/2021 22:09	87-112	24.34		25.00	97.4		IC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories

Contract: WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra

SDG No.: 163390

Concentration Units: mg/L

Analytical Run #: 193993

Sample No.:#: 1033025

Analytical Prep Batch #:

Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	07/29/2021 12:23	87-111	14.06		15.00	93.7		IC
Nitrate Nitrogen	07/29/2021 12:23	88-111	3.490		3.50	99.7		IC
Sulfate	07/29/2021 12:23	87-112	24.24		25.00	97.0		IC

CT LABORATORIES
delivering more than data from your environmental analyses

7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49

LCS Source: SPEX and Ultra SDG No.: 163390

Concentration Units: mg/L

Analytical Run #: 194031 Sample No.:#: 1033106

Analytical Prep Batch #: Preparation Date/Time:

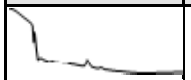
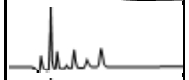
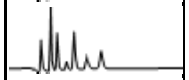
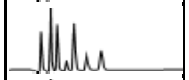
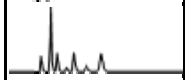
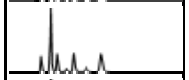
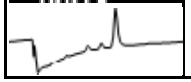
ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Chloride	07/30/2021 12:15	87-111	14.14		15.00	94.3		IC
Nitrate Nitrogen	07/30/2021 12:15	88-111	3.514		3.50	100		IC
Sulfate	07/30/2021 12:15	87-112	24.46		25.00	97.8		IC

INORGANICS
RAW DATA
DOCUMENTS

Sequence: 042621 - IC3602A
Last Update Operator: AQUION

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	STD1	1.0000	Calibration Standard	1	2	5000	Anions 1.0	IC3602A	Finished
	STD2	1.0000	Calibration Standard	2	3	5000	Anions 1.0	IC3602A	Finished
	STD3	1.0000	Calibration Standard	3	4	5000	Anions 1.0	IC3602A	Finished
	STD4	1.0000	Calibration Standard	4	5	5000	Anions 1.0	IC3602A	Finished
	STD5	1.0000	Calibration Standard	5	6	5000	Anions 1.0	IC3602A	Finished
	STD6	1.0000	Calibration Standard	6	7	5000	Anions 1.0	IC3602A	Finished
	STD7	1.0000	Calibration Standard	7	8	5000	Anions 1.0	IC3602A	Finished
	STD8	1.0000	Calibration Standard	8	9	5000	Anions 1.0	IC3602A	Finished
	STD9	1.0000	Calibration Standard	9	10	5000	Anions 1.0	IC3602A	Finished
	ICV	1.0000	Unknown		11	5000	Anions 1.0	IC3602A	Finished
	ICB	1.0000	Unknown		23	5000	Anions 1.0	IC3602A	Finished

Calibration Concentrations

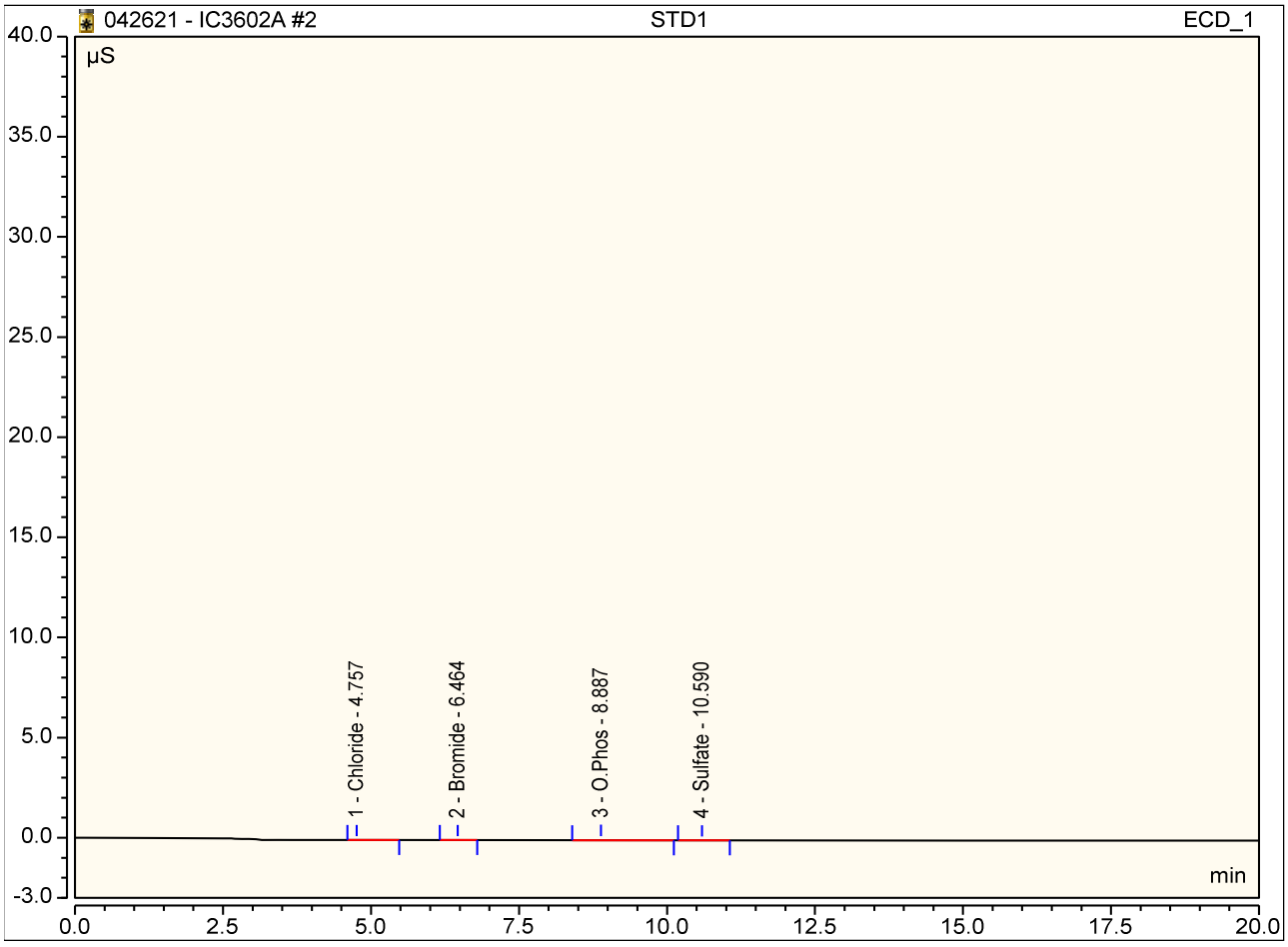
Instrument:AQUION 4	Cal. File: IC3602A				ICV	IC3596 IC3599		Analyst/Date: TMG 04/26/2021		
Analyte	Cal Level 1 (mg/L)	Cal Level 2 (mg/L)	Cal Level 3 (mg/L)	Cal Level 4 (mg/L)	Cal Level 5 (mg/L)	Cal Level 6 (mg/L)	Cal Level 7 (mg/L)	Cal Level 8 (mg/L)	Cal Level 9 (mg/L)	ICV (mg/L)
Fluoride	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Chloride	0.0	0.5	0.75	1.0	5.0	10.0	20.0	30.0	40.0	15.0
Bromide	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrite	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Nitrate	0.0	0.1	0.30	0.5	1.0	2.0	5.0	7.0		3.5
O-Phoshorous	0.0	0.1	0.30	0.5	1.0	2.0	5.0			3.5
Sulfate	0.0	0.5	0.75	1.0	5.0	10.0	30.0	50.0	70.0	25.0

RJ 05/06/2021

Peak Integration Report

Sample Name:	**STD1**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 13:57**	*Run Time:*	**20.00**

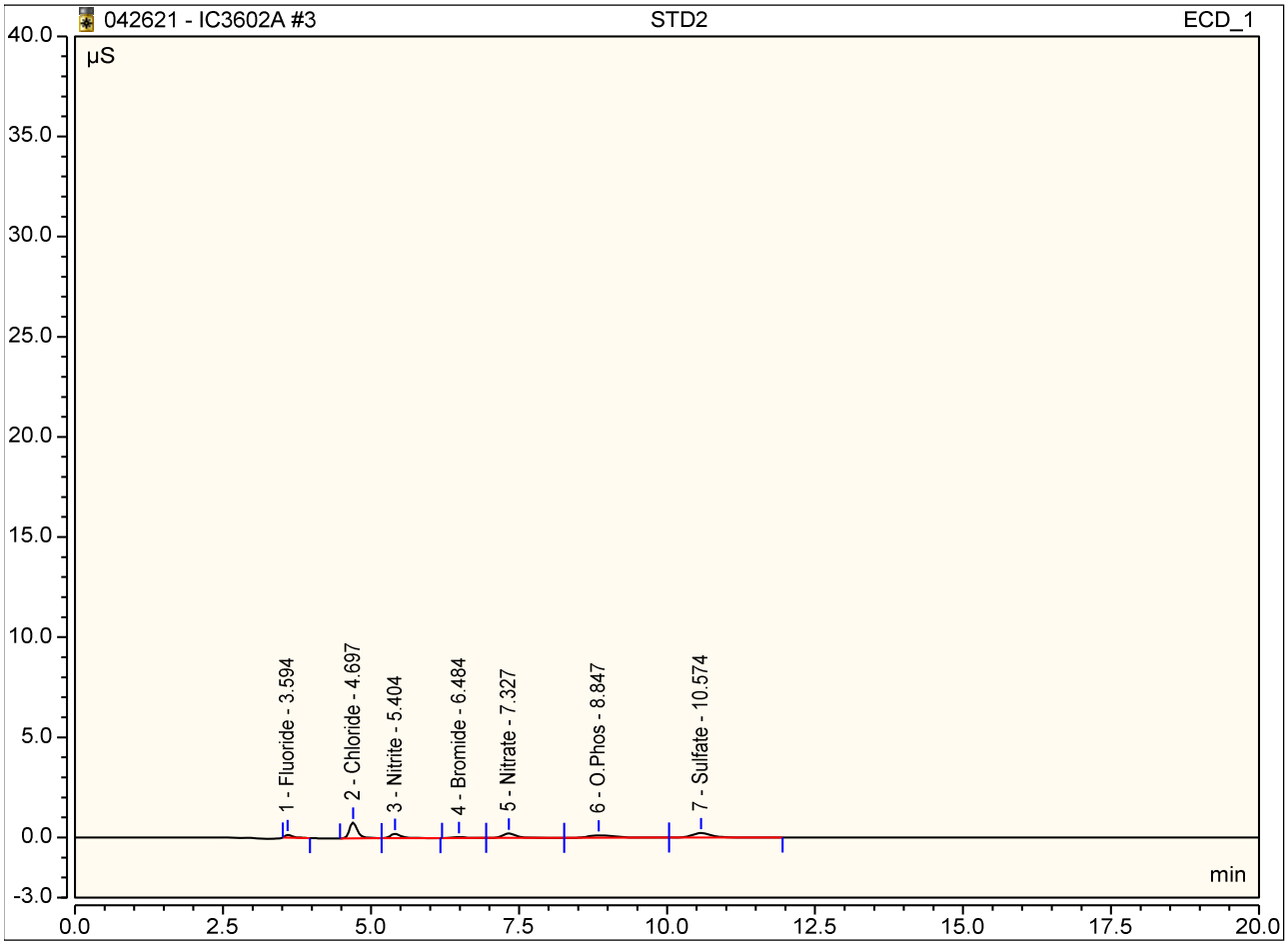
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.76	Chloride	0.002	0.005	0.5812
2	6.46	Bromide	0.001	0.002	n.a.
3	8.89	O.Phos	0.011	0.021	n.a.
4	10.59	Sulfate	0.001	0.003	0.7007



Peak Integration Report

Sample Name:	**STD2**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 14:17**	*Run Time:*	**20.00**

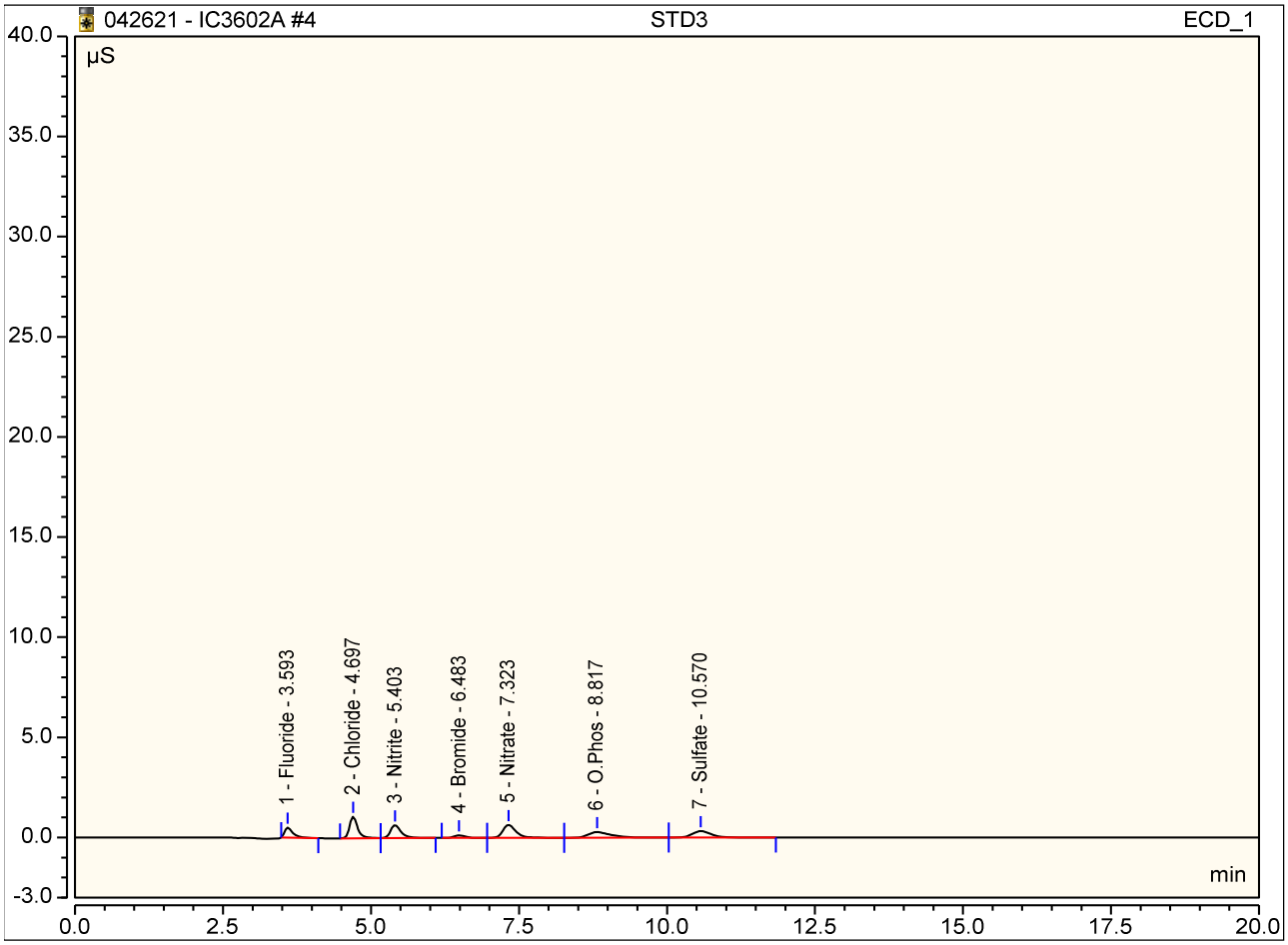
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.59	Fluoride	0.020	0.135	0.1309
2	4.70	Chloride	0.127	0.783	0.9998
3	5.40	Nitrite	0.044	0.213	0.1113
4	6.48	Bromide	0.010	0.046	0.0954
5	7.33	Nitrate	0.057	0.220	0.1671
6	8.85	O.Phos	0.059	0.122	0.0635
7	10.57	Sulfate	0.086	0.224	1.1155



Peak Integration Report

Sample Name:	**STD3**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 14:37**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.59	Fluoride	0.081	0.497	0.2981
2	4.70	Chloride	0.174	1.072	1.1555
3	5.40	Nitrite	0.132	0.636	0.3004
4	6.48	Bromide	0.029	0.133	0.2916
5	7.32	Nitrate	0.166	0.643	0.3379
6	8.82	O.Phos	0.124	0.278	0.3469
7	10.57	Sulfate	0.123	0.323	1.2980

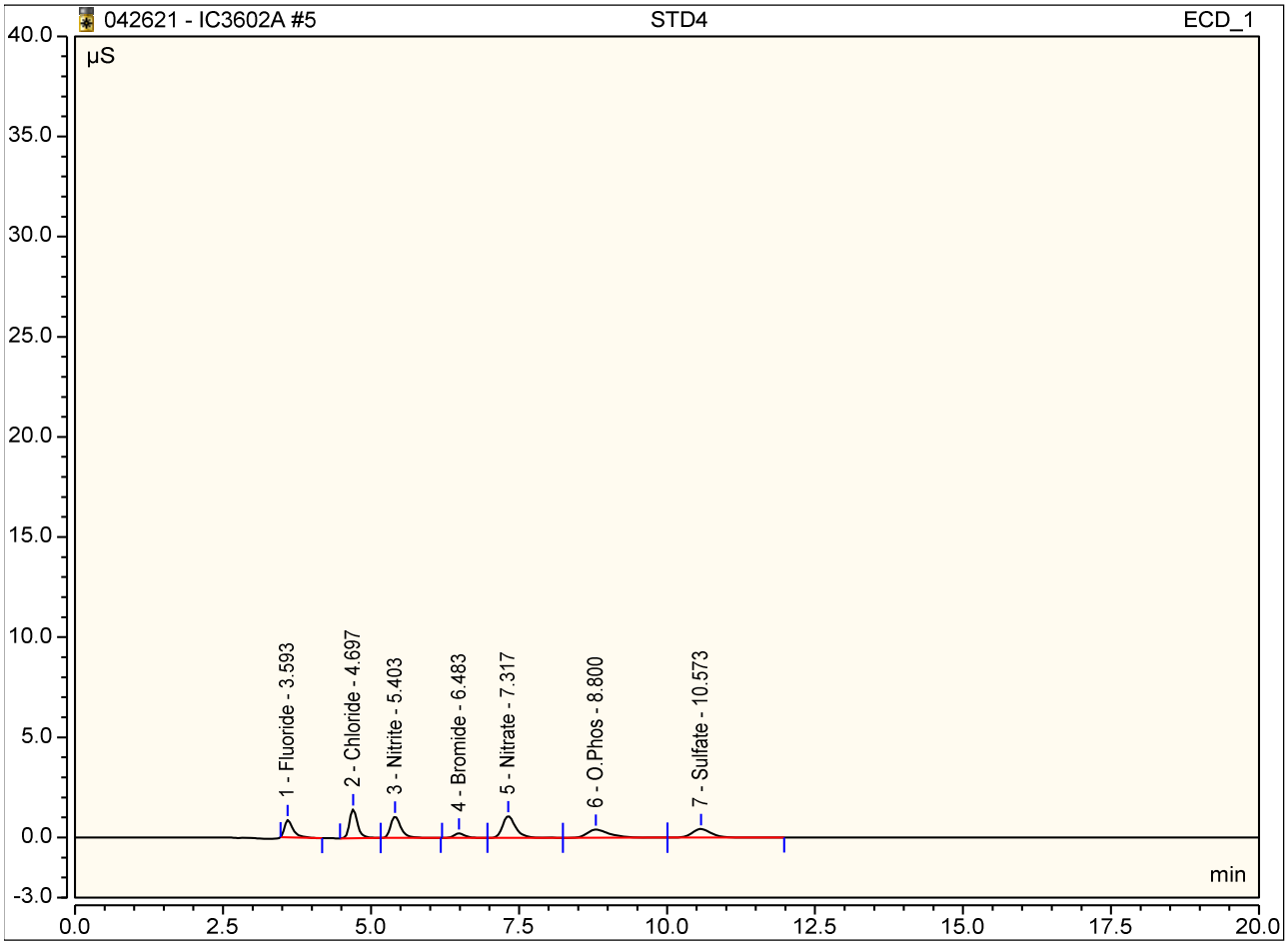


Chromeleon (c) Dionex 1996-2009
Version 7.2.9.11323

Peak Integration Report

Sample Name:	**STD4**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 14:57**	*Run Time:*	**20.00**

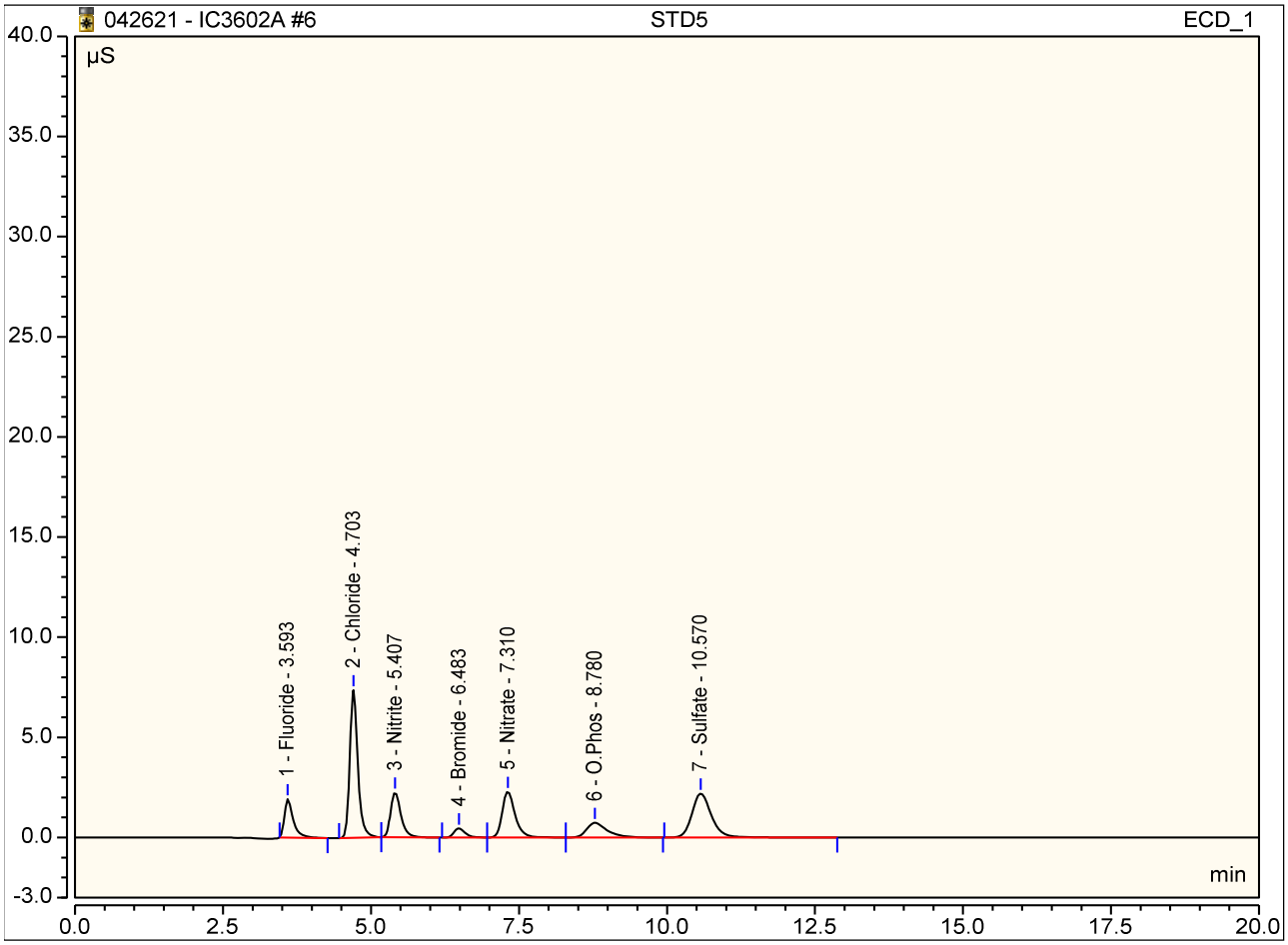
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.59	Fluoride	0.150	0.880	0.4868
2	4.70	Chloride	0.234	1.448	1.3560
3	5.40	Nitrite	0.222	1.069	0.4938
4	6.48	Bromide	0.048	0.222	0.4892
5	7.32	Nitrate	0.277	1.080	0.5121
6	8.80	O.Phos	0.176	0.409	0.5701
7	10.57	Sulfate	0.165	0.433	1.5061



Peak Integration Report

Sample Name:	**STD5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 15:17**	*Run Time:*	**20.00**

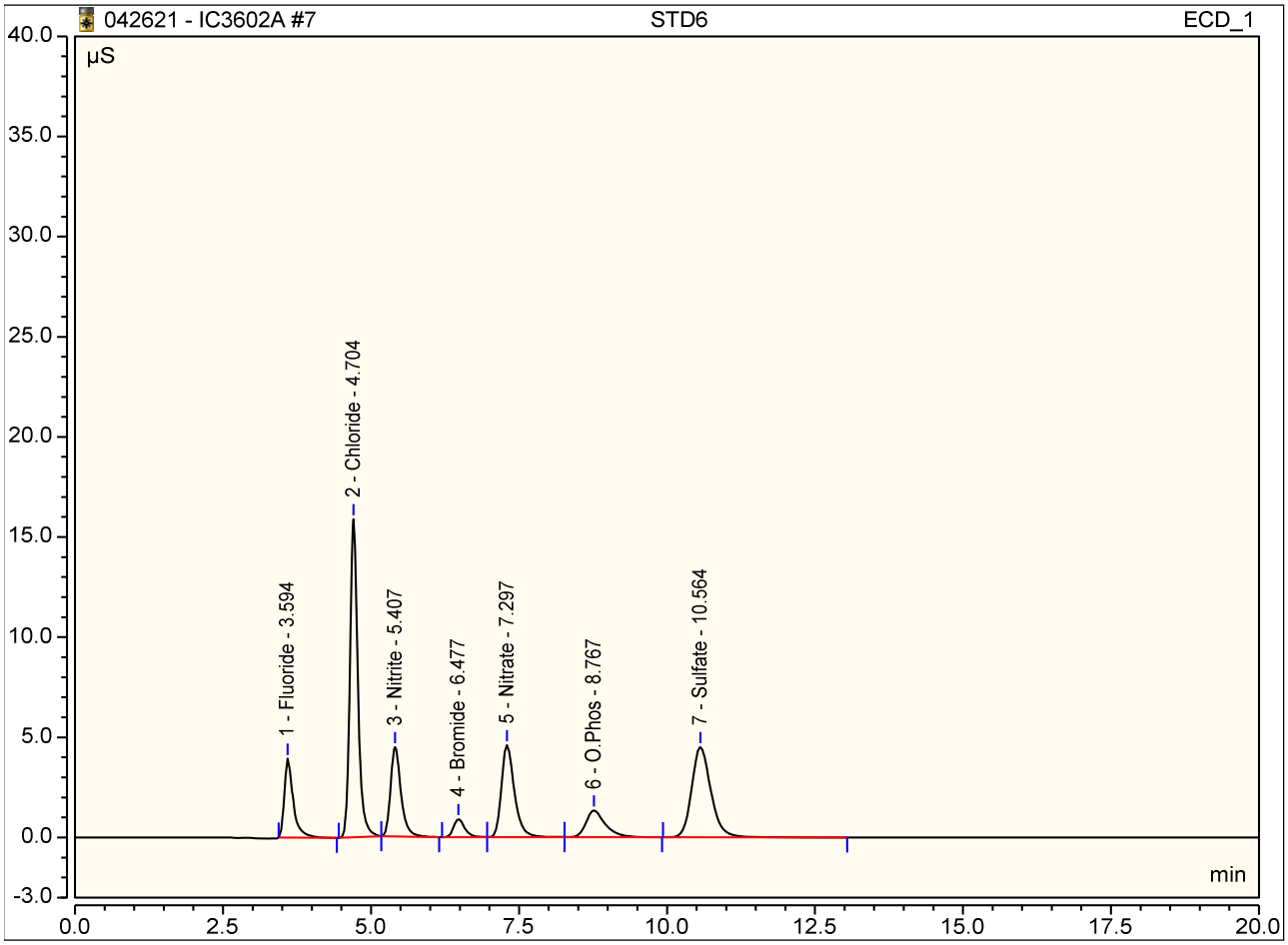
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.59	Fluoride	0.335	1.918	0.9947
2	4.70	Chloride	1.170	7.371	4.4751
3	5.41	Nitrite	0.461	2.244	1.0069
4	6.48	Bromide	0.100	0.459	1.0213
5	7.31	Nitrate	0.584	2.282	0.9928
6	8.78	O.Phos	0.296	0.735	1.0881
7	10.57	Sulfate	0.836	2.196	4.7988



Peak Integration Report

Sample Name:	**STD6**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 15:37**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.59	Fluoride	0.694	3.939	1.9793
2	4.70	Chloride	2.475	15.887	8.8219
3	5.41	Nitrite	0.915	4.462	1.9810
4	6.48	Bromide	0.196	0.904	2.0129
5	7.30	Nitrate	1.169	4.589	1.9100
6	8.77	O.Phos	0.507	1.334	2.0002
7	10.56	Sulfate	1.705	4.511	9.0620



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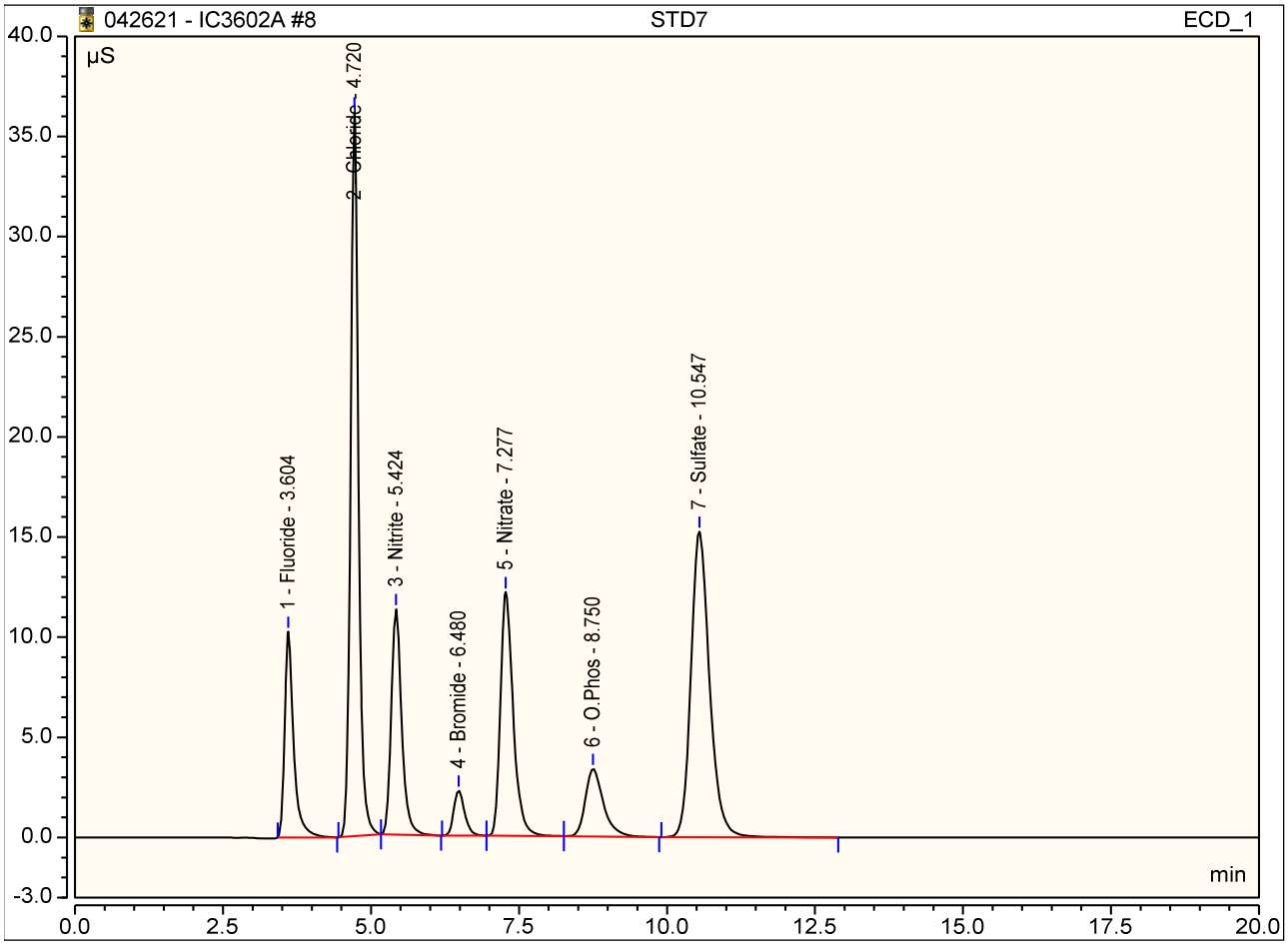
Version 7.2.9.11323

Peak Integration Report

Sample Name:	**STD7**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 15:57**	*Run Time:*	**20.00**

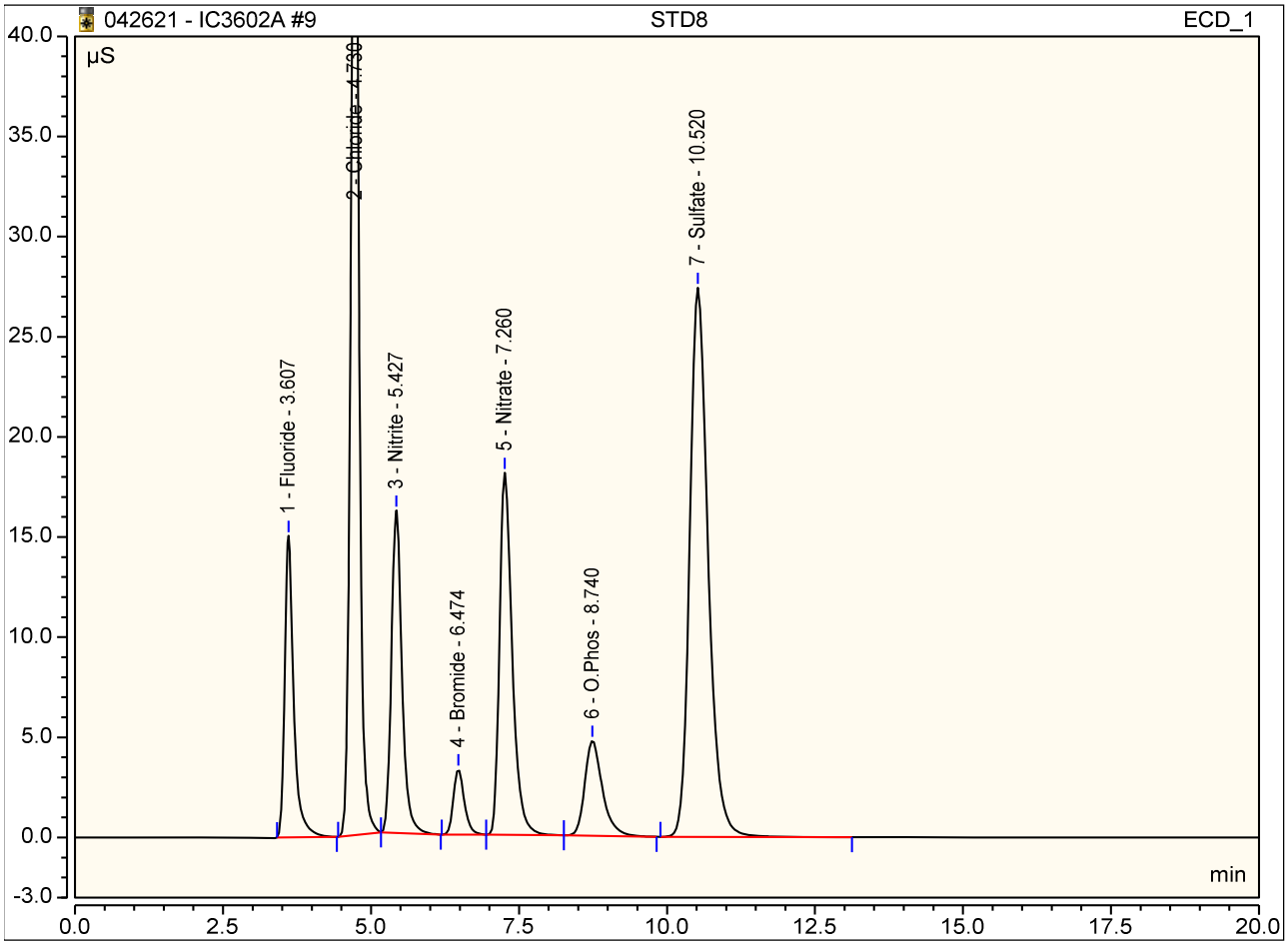
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.60	Fluoride	1.801	10.272	5.0101
2	4.72	Chloride	5.574	36.153	19.1491
3	5.42	Nitrite	2.325	11.275	5.0066
4	6.48	Bromide	0.486	2.263	4.9922
5	7.28	Nitrate	3.044	12.166	4.8487
6	8.75	O.Phos	1.196	3.382	4.9732
7	10.55	Sulfate	5.562	15.252	27.9879



Peak Integration Report

Sample Name:	**STD8**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 16:17**	*Run Time:*	**20.00**

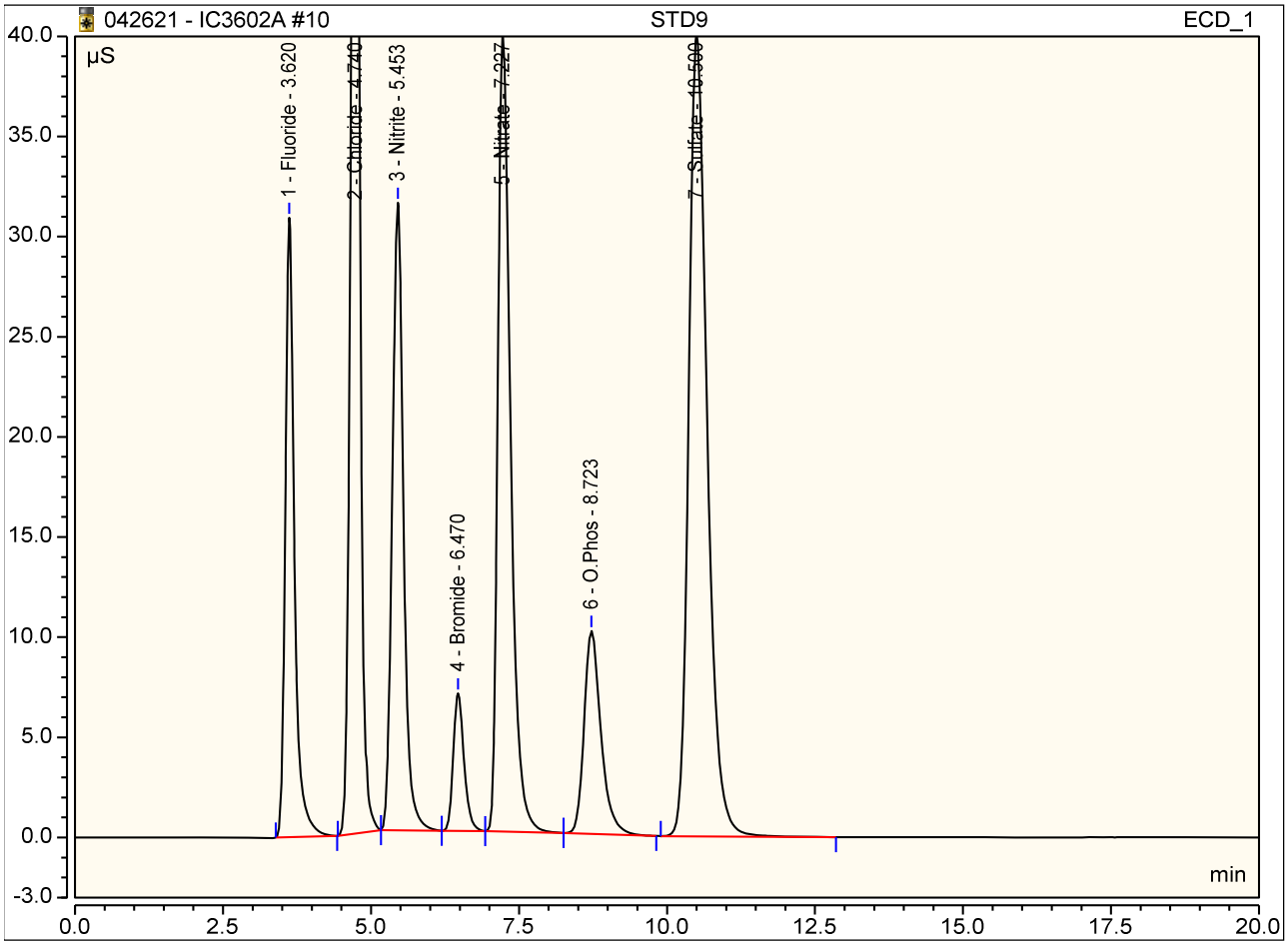
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.61	Fluoride	2.637	15.048	7.2999
2	4.73	Chloride	8.769	55.885	29.7944
3	5.43	Nitrite	3.348	16.093	7.2041
4	6.47	Bromide	0.697	3.262	7.1617
5	7.26	Nitrate	4.501	18.075	7.1314
6	8.74	O.Phos	1.637	4.743	6.8778
7	10.52	Sulfate	9.897	27.424	49.2574



Peak Integration Report

Sample Name:	**STD9**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 16:37**	*Run Time:*	**20.00**

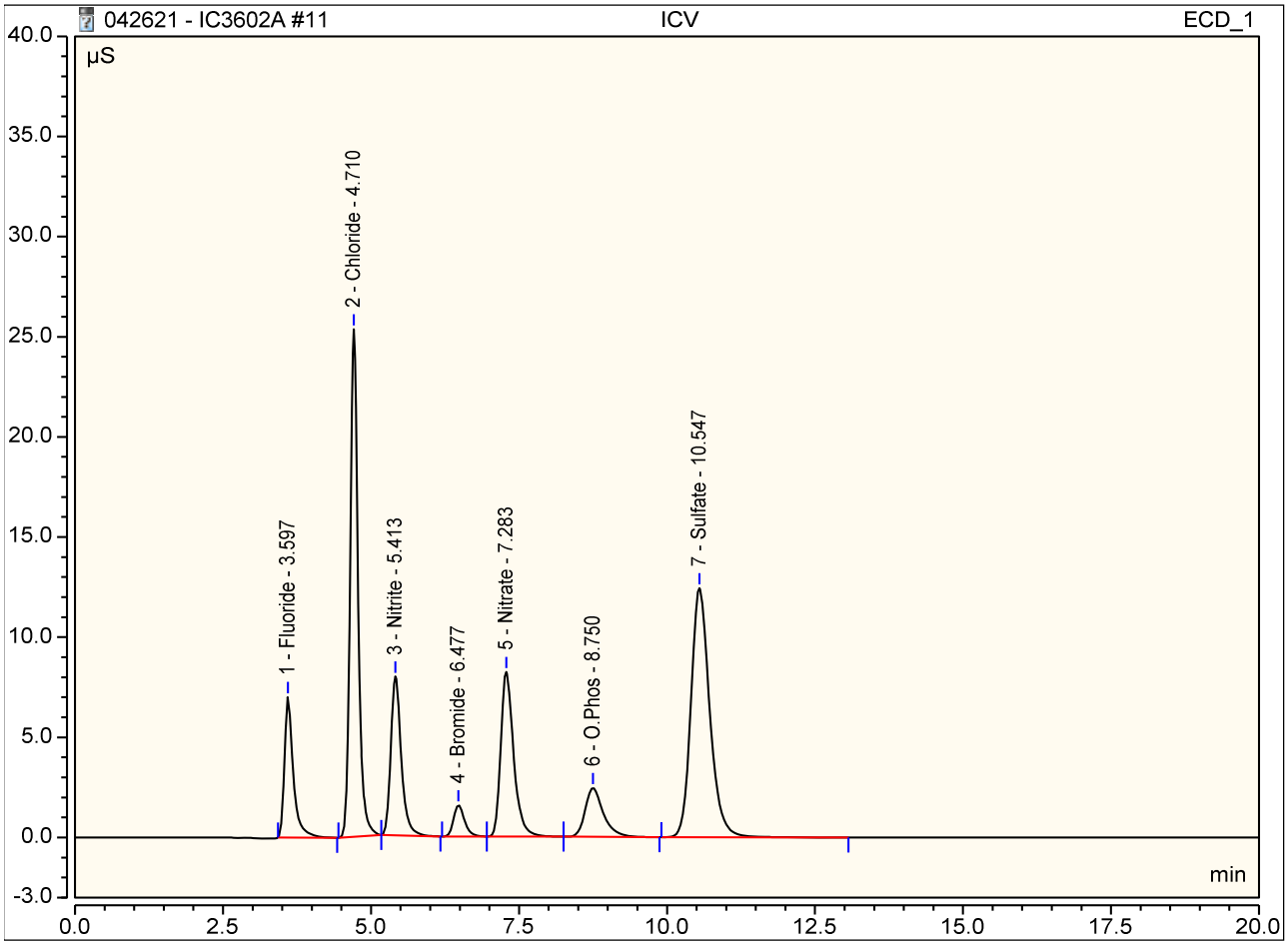
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.62	Fluoride	5.521	30.932	15.2019
2	4.74	Chloride	12.107	74.563	40.9170
3	5.45	Nitrite	6.874	31.339	14.7710
4	6.47	Bromide	1.445	6.872	14.8532
5	7.23	Nitrate	9.938	39.842	15.6520
6	8.72	O.Phos	3.344	10.135	14.2505
7	10.50	Sulfate	14.435	40.069	71.5237



Peak Integration Report

Sample Name:	**ICV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**26-Apr-2021 / 16:57**	*Run Time:*	**20.00**

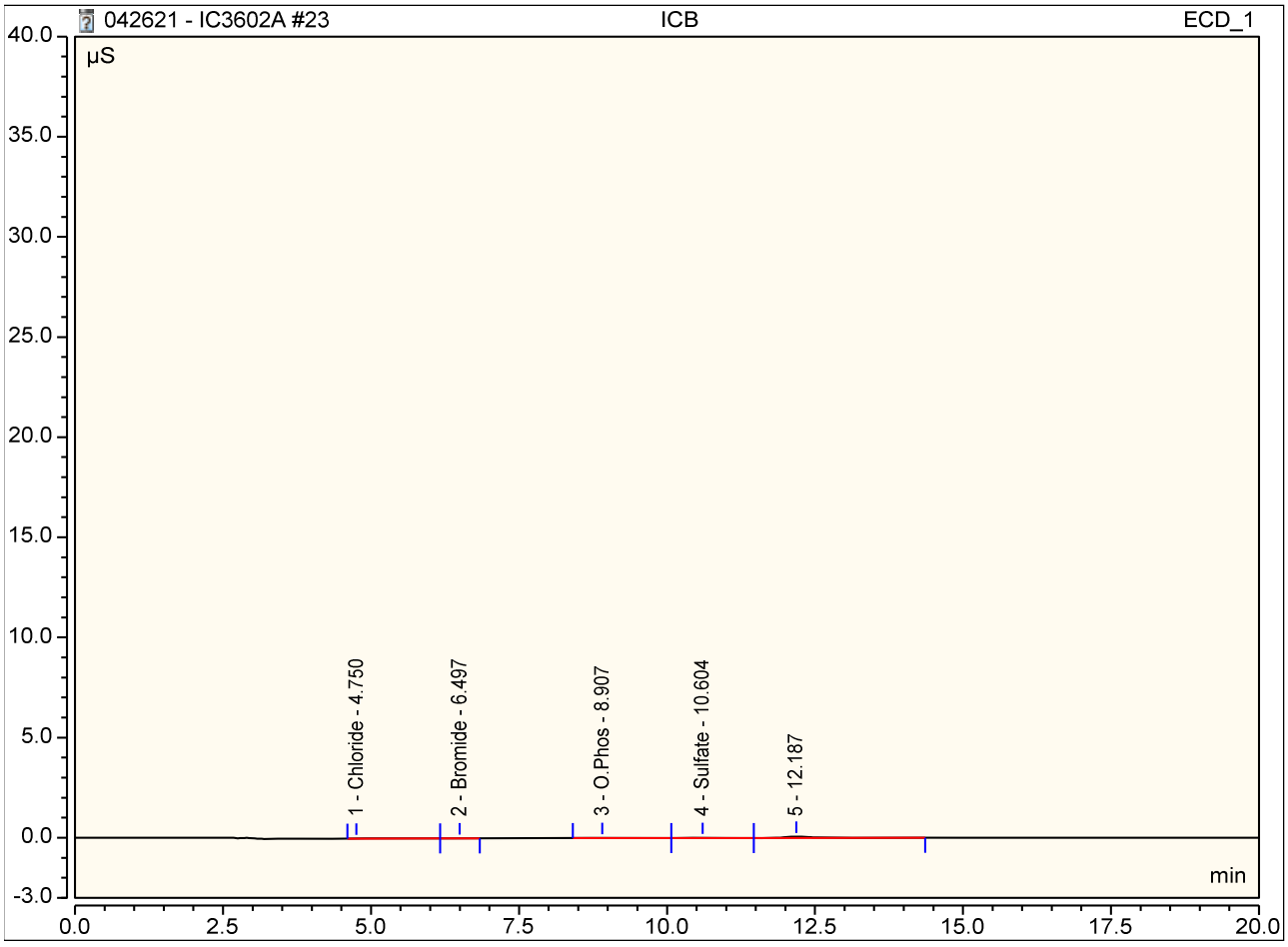
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.60	Fluoride	1.219	7.014	3.4149
2	4.71	Chloride	3.927	25.333	13.6600
3	5.41	Nitrite	1.632	7.933	3.5197
4	6.48	Bromide	0.338	1.559	3.4673
5	7.28	Nitrate	2.079	8.216	3.3362
6	8.75	O.Phos	0.873	2.441	3.5784
7	10.55	Sulfate	4.589	12.436	23.2125



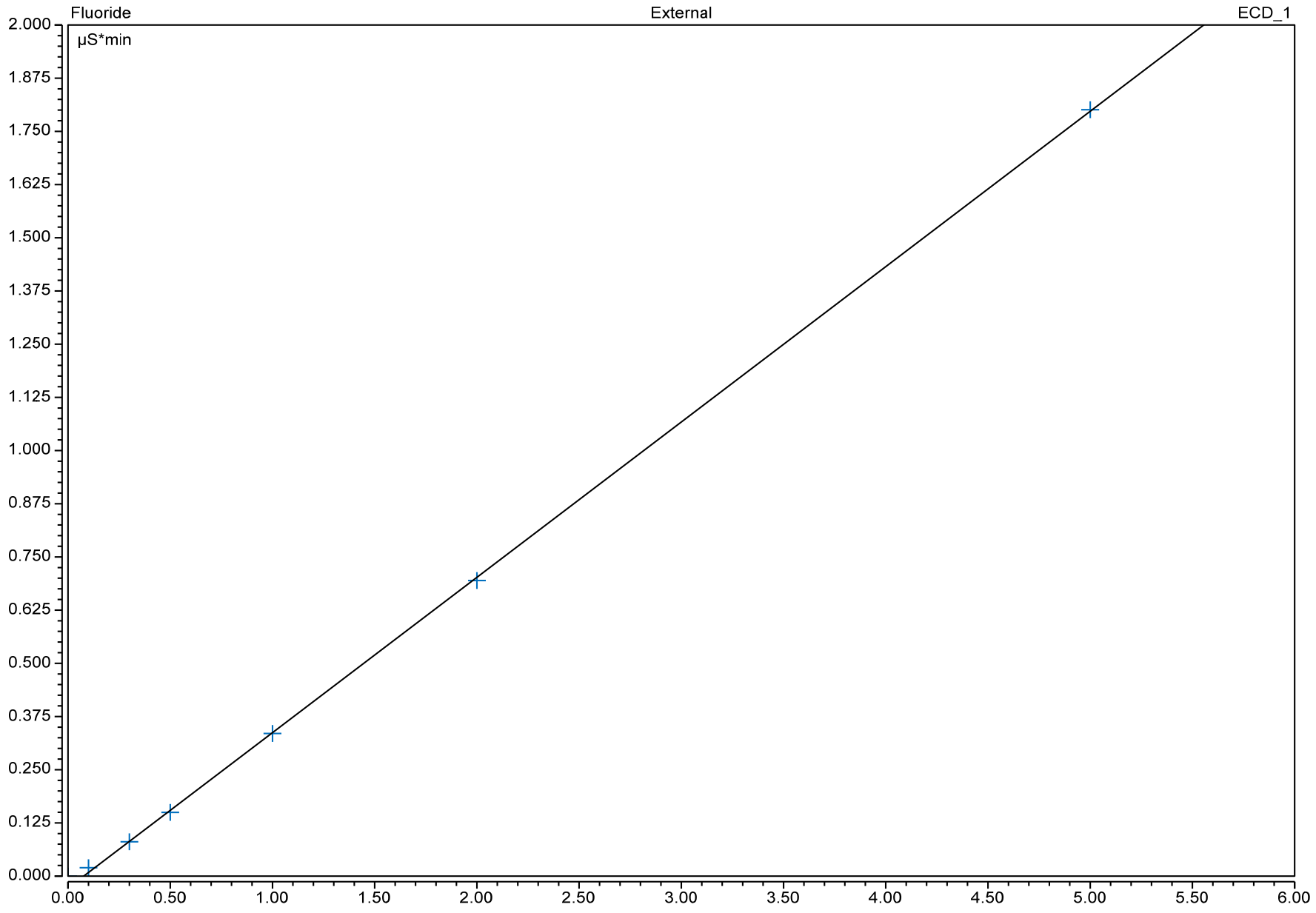
Peak Integration Report

Sample Name:	**ICB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Apr-2021 / 10:28**	*Run Time:*	**20.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.75	Chloride	0.003	0.004	0.5847
2	6.50	Bromide	0.001	0.004	0.0025
3	8.91	O.Phos	0.006	0.011	n.a.
4	10.60	Sulfate	0.004	0.010	0.7141



Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	*Fluoride*	*Lin, WithOffset*	*Area*	*6*	*1.4622*	*0.99990*	*-0.0281*	*0.3650*	*0.0000*
2	Chloride	Lin, WithOffset	Area	9	6.7889	0.99763	-0.1728	0.3001	0.0000
3	Nitrite	Lin, WithOffset	Area	6	0.8487	0.99996	-0.0078	0.4659	0.0000
4	Bromide	Lin, WithOffset	Area	7	1.0465	0.99995	0.0008	0.0972	0.0000
5	Nitrate	Lin, WithOffset	Area	7	4.7550	0.99874	-0.0496	0.6381	0.0000
6	O.Phos	Lin, WithOffset	Area	7	5.8978	0.99805	0.0438	0.2316	0.0000
7	Sulfate	Lin, WithOffset	Area	9	6.4325	0.99826	-0.1416	0.2038	0.0000
Maximum					**6.7889**	0.99996			
Minimum					0.8487	**0.99763**			


Fluoride
External
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1.625
1.500
1.375
1.250
1.125
1.000
0.875
0.750
0.625
0.500
0.375
0.250
0.125
0.000
0.00
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1.50
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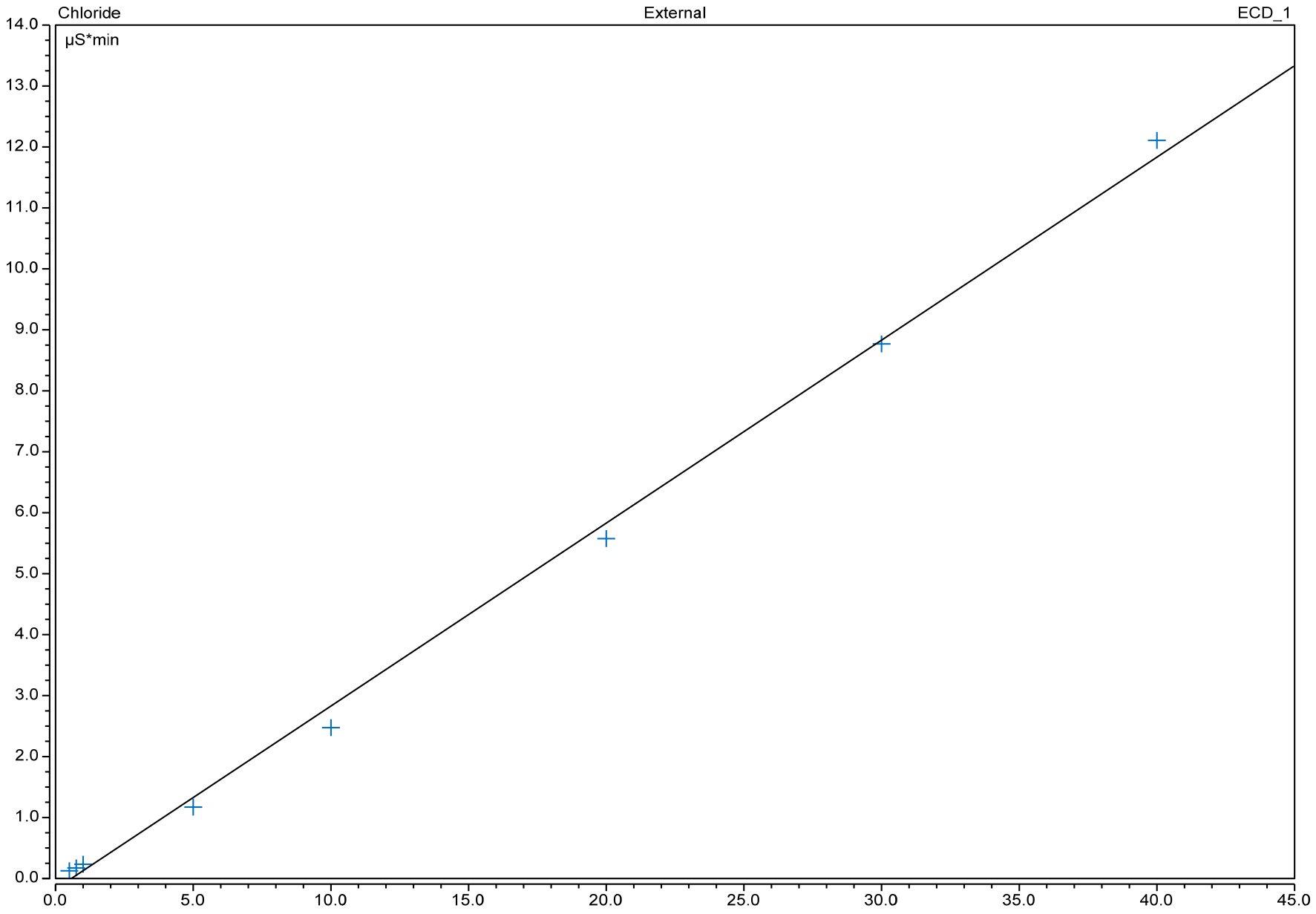
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00


Chloride
External
ECD_1
µS*min
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12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
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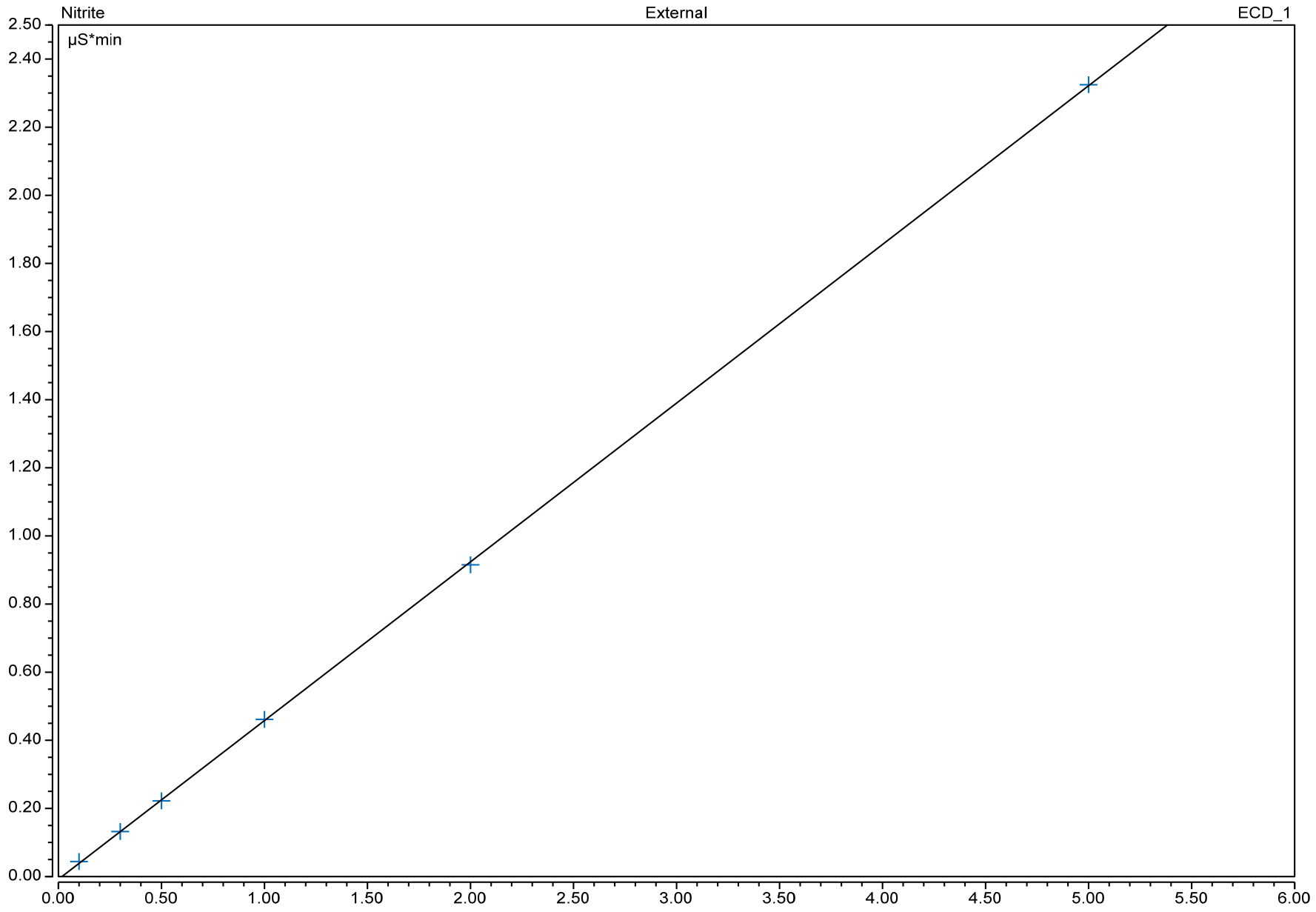
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0


Nitrite
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1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.00
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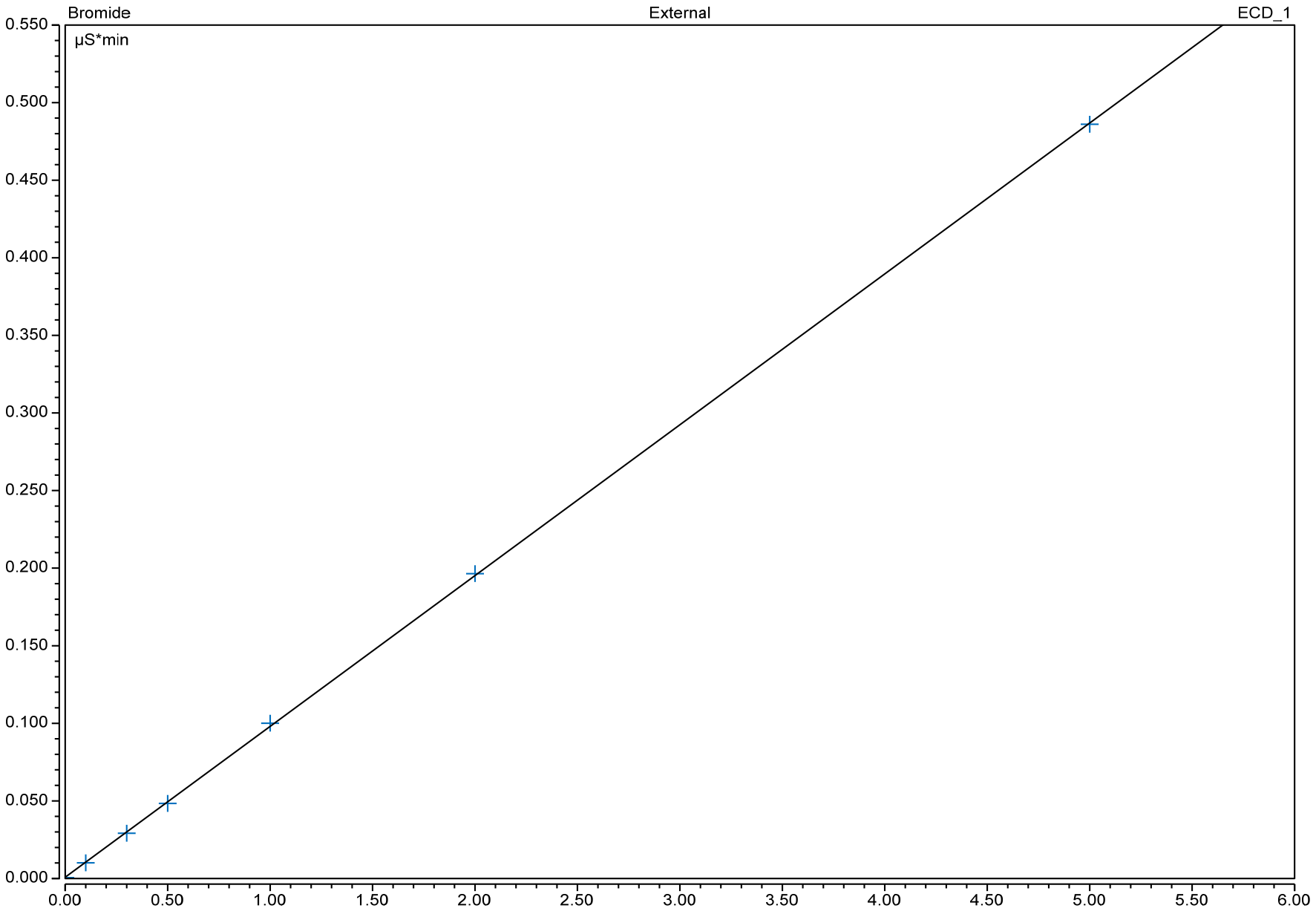
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00


Bromide
External
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0.500
0.450
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0.350
0.300
0.250
0.200
0.150
0.100
0.050
0.000
0.00
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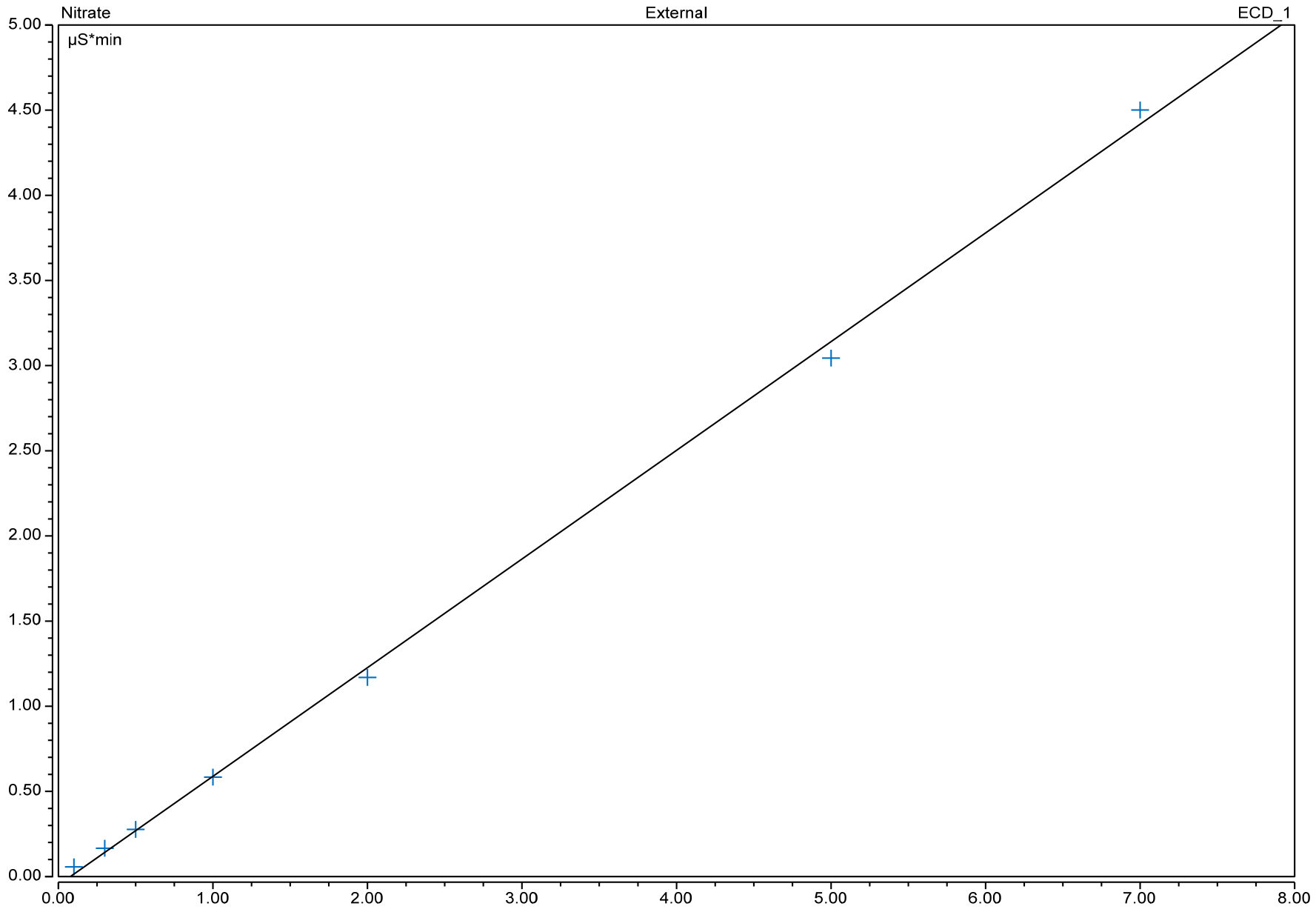
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00


Nitrate
External
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µS*min
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4.00
3.50
3.00
2.50
2.00
1.50
1.00
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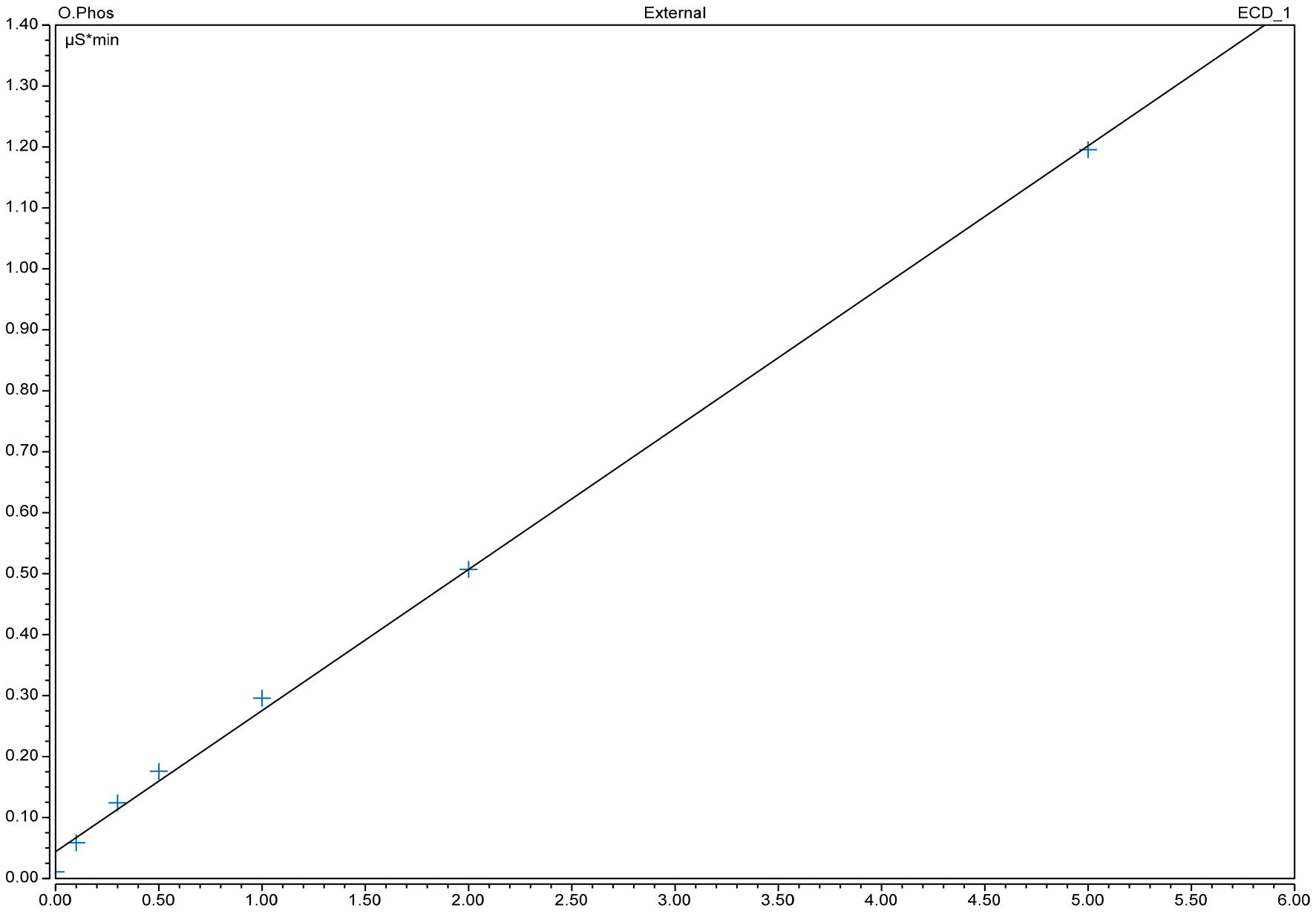
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00


O.Phos
External
ECD_1
µS*min
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1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.00
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1.00
1.50
2.00
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3.00
3.50
4.00
4.50
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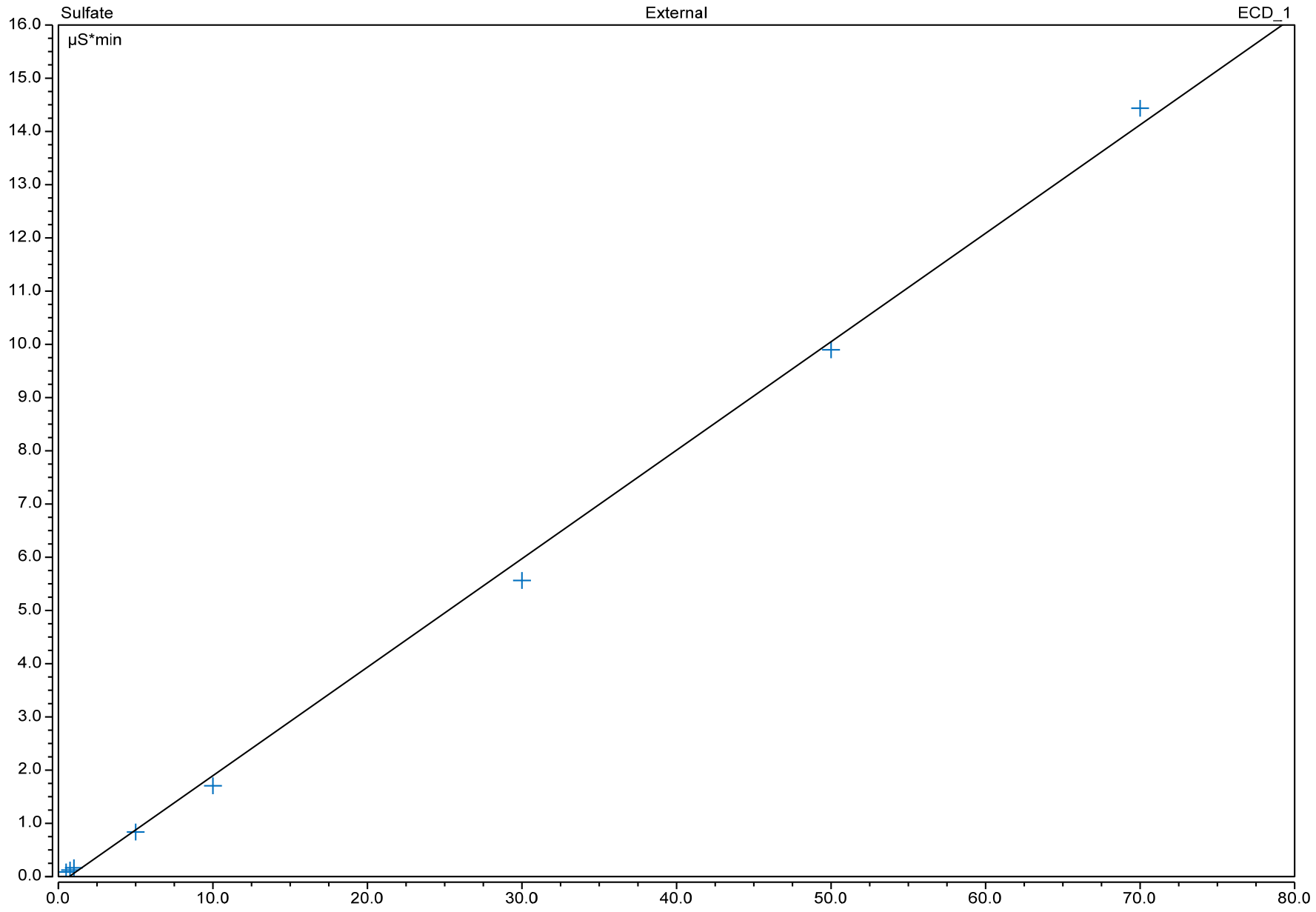
5.50
6.00


Sulfate
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µS*min
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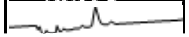
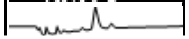
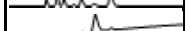
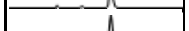
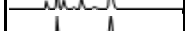
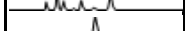
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0

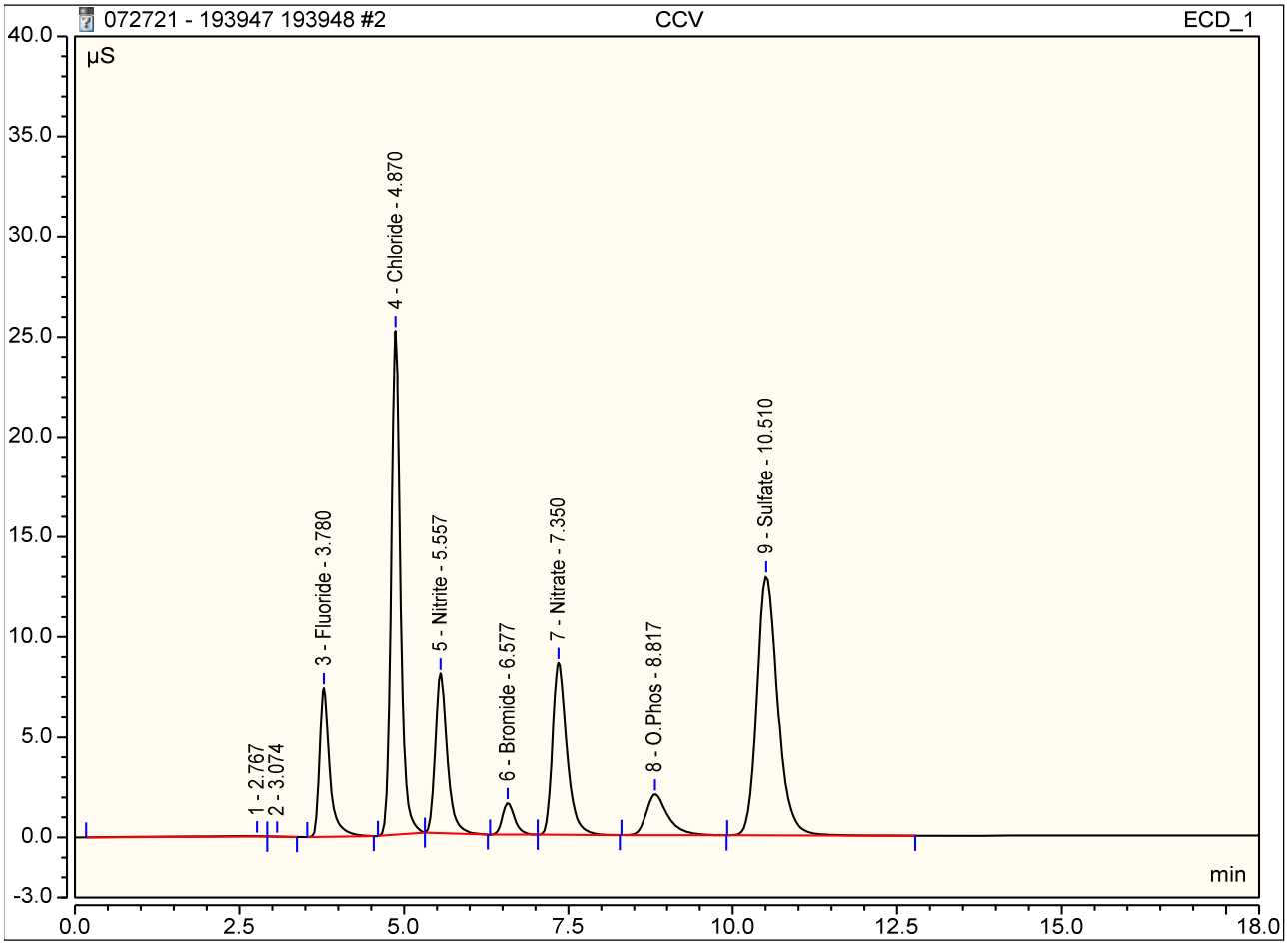
Sequence: 072721 - 193947 193948
Last Update Operator: AQUION

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	CCV	1.0000	Unknown		2	5000	Anions	IC3602A	Finished
	LCSW	1.0000	Unknown		3	5000	Anions	IC3602A	Finished
	MBW	1.0000	Unknown		4	5000	Anions	IC3602A	Finished
	1030462	1.0000	Unknown		9	5000	Anions	IC3602A	Finished
	1030468	1.0000	Unknown		10	5000	Anions	IC3602A	Finished
	1030469	1.0000	Unknown		11	5000	Anions	IC3602A	Finished
	DUP1030469	1.0000	Unknown		12	5000	Anions	IC3602A	Finished
	MSW1030469	1.0000	Unknown		13	5000	Anions	IC3602A	Finished
	MSDW1030469	1.0000	Unknown		14	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		15	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		16	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		19	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		20	5000	Anions	IC3602A	Finished
	1030462X5	1.0000	Unknown		21	5000	Anions	IC3602A	Finished
	1030468X5	1.0000	Unknown		22	5000	Anions	IC3602A	Finished
	1030469X5	1.0000	Unknown		23	5000	Anions	IC3602A	Finished
	DUP1030469X5	1.0000	Unknown		24	5000	Anions	IC3602A	Finished
	MSW1030469X5	1.0000	Unknown		25	5000	Anions	IC3602A	Finished
	MSDW1030469X5	1.0000	Unknown		26	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		27	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		28	5000	Anions	IC3602A	Finished

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jul-2021 / 12:30**	*Run Time:*	**18.00**

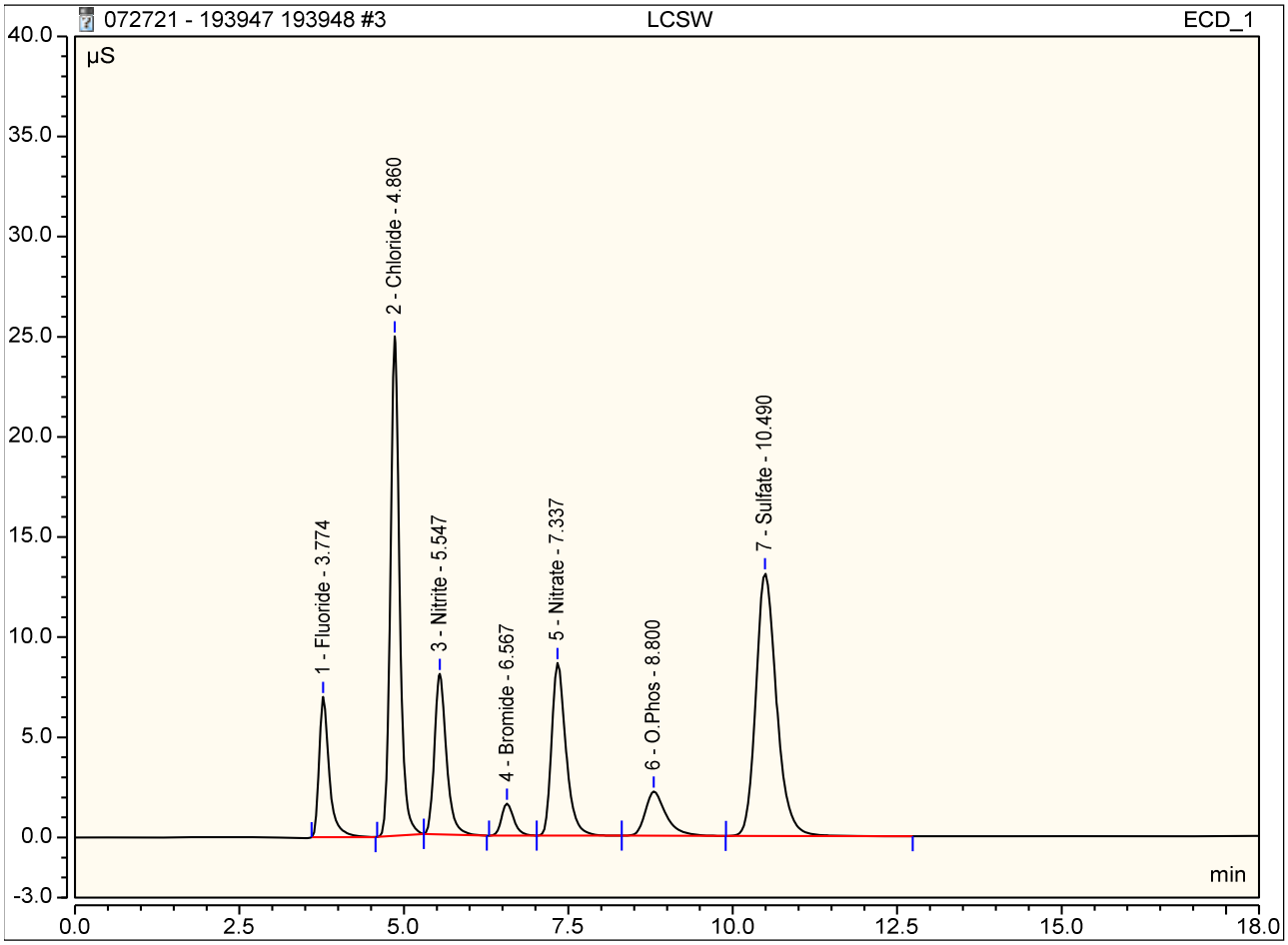
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
3	3.78	Fluoride	1.332	7.419	3.7270
4	4.87	Chloride	4.099	25.155	14.2349
5	5.56	Nitrite	1.689	7.963	3.6417
6	6.58	Bromide	0.345	1.581	3.5442
7	7.35	Nitrate	2.178	8.583	3.4910
8	8.82	O.Phos	0.779	2.046	3.1749
9	10.51	Sulfate	4.755	12.941	24.0287



Peak Integration Report

Sample Name:	**LCSW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jul-2021 / 12:48**	*Run Time:*	**18.00**

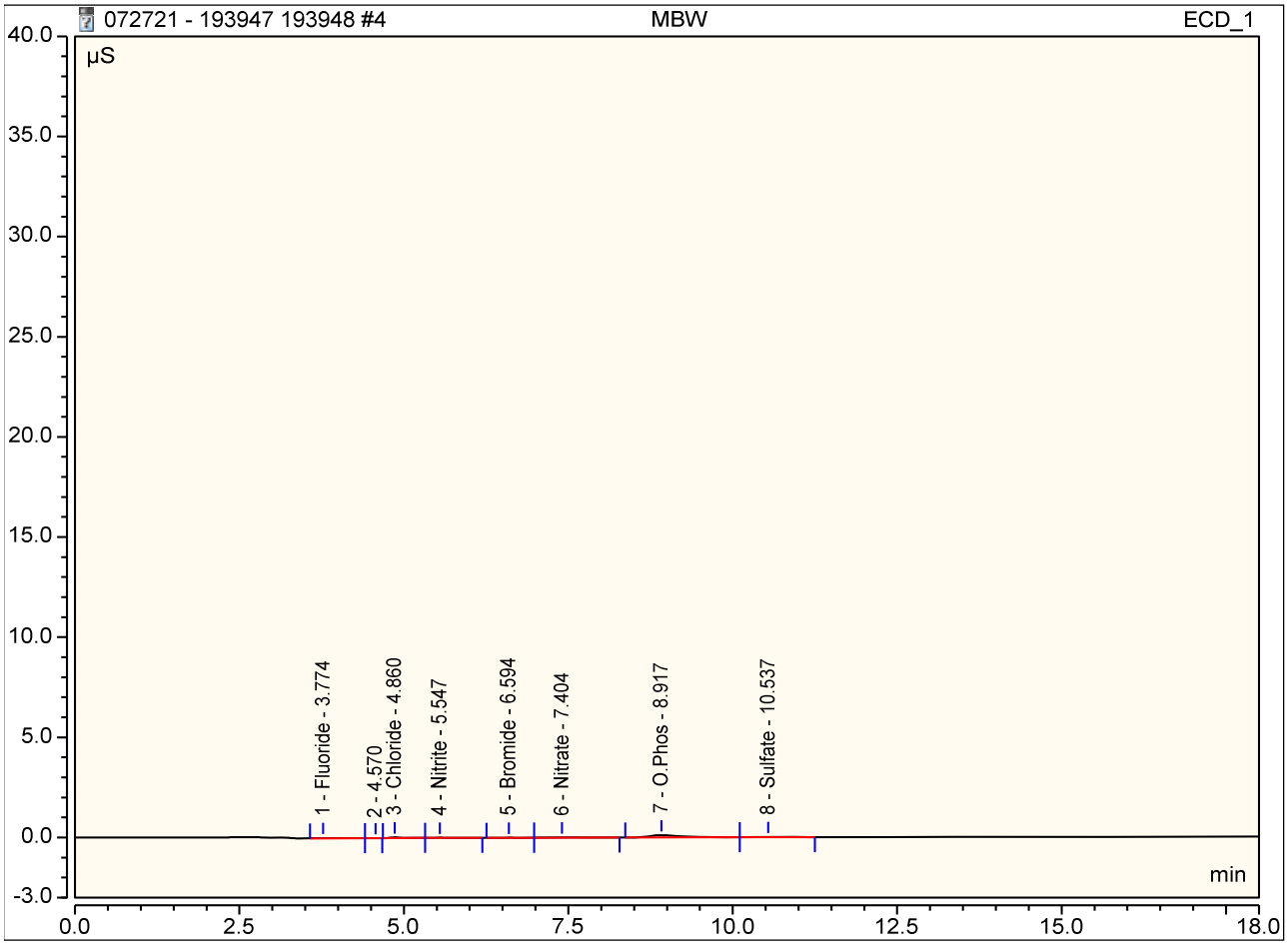
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	1.245	7.003	3.4865
2	4.86	Chloride	4.039	24.939	14.0341
3	5.55	Nitrite	1.692	8.013	3.6482
4	6.57	Bromide	0.347	1.594	3.5626
5	7.34	Nitrate	2.175	8.624	3.4858
6	8.80	O.Phos	0.809	2.210	3.3057
7	10.49	Sulfate	4.795	13.121	24.2221



Peak Integration Report

Sample Name:	**MBW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jul-2021 / 13:06**	*Run Time:*	**18.00**

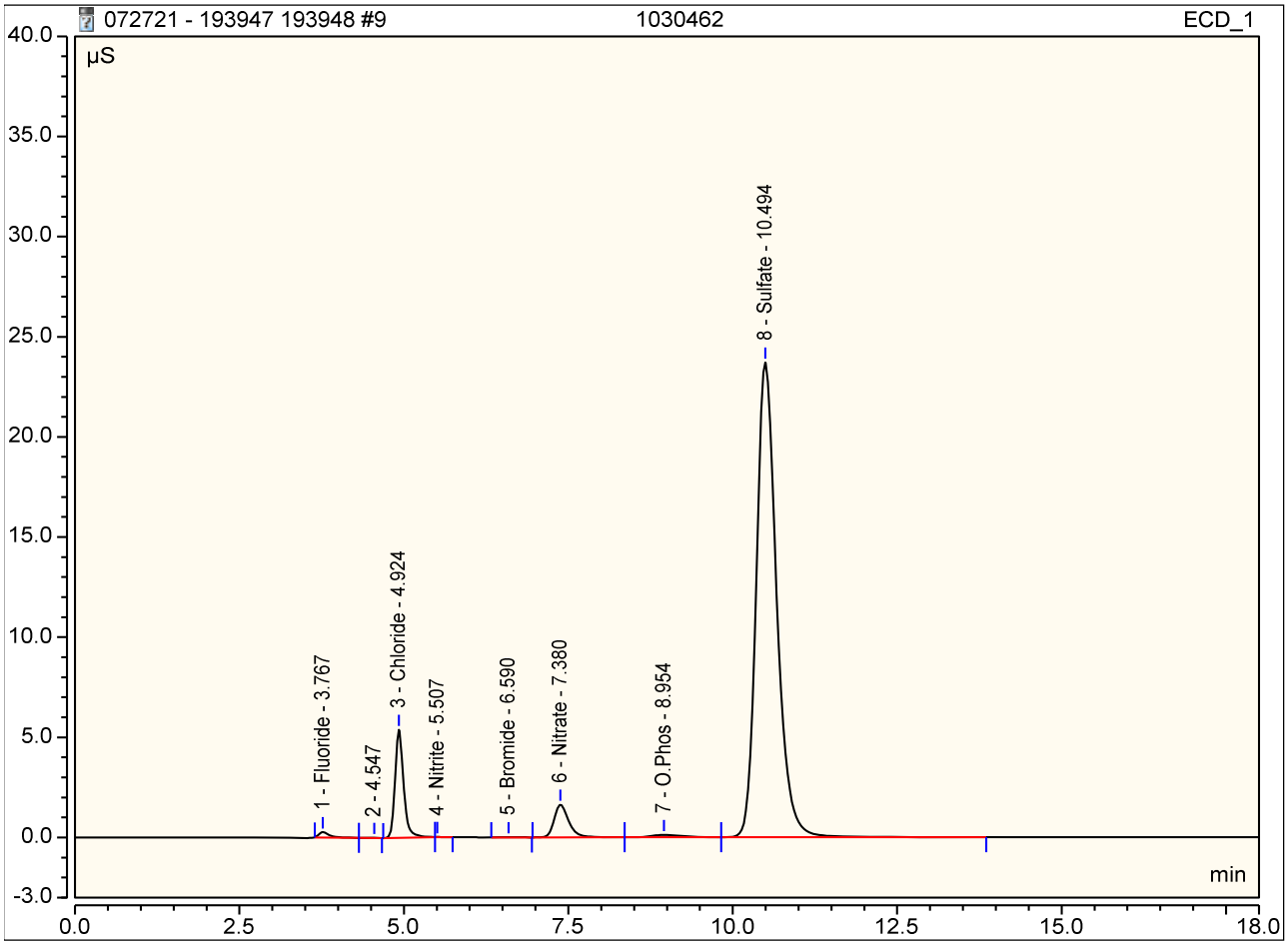
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	0.006	0.023	0.0921
3	4.86	Chloride	0.008	0.039	0.6010
4	5.55	Nitrite	0.004	0.015	0.0248
5	6.59	Bromide	0.001	0.004	0.0014
6	7.40	Nitrate	0.005	0.015	0.0852
7	8.92	O.Phos	0.057	0.110	0.0572
8	10.54	Sulfate	0.006	0.016	0.7260



Peak Integration Report

Sample Name:	**1030462**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jul-2021 / 14:36**	*Run Time:*	**18.00**

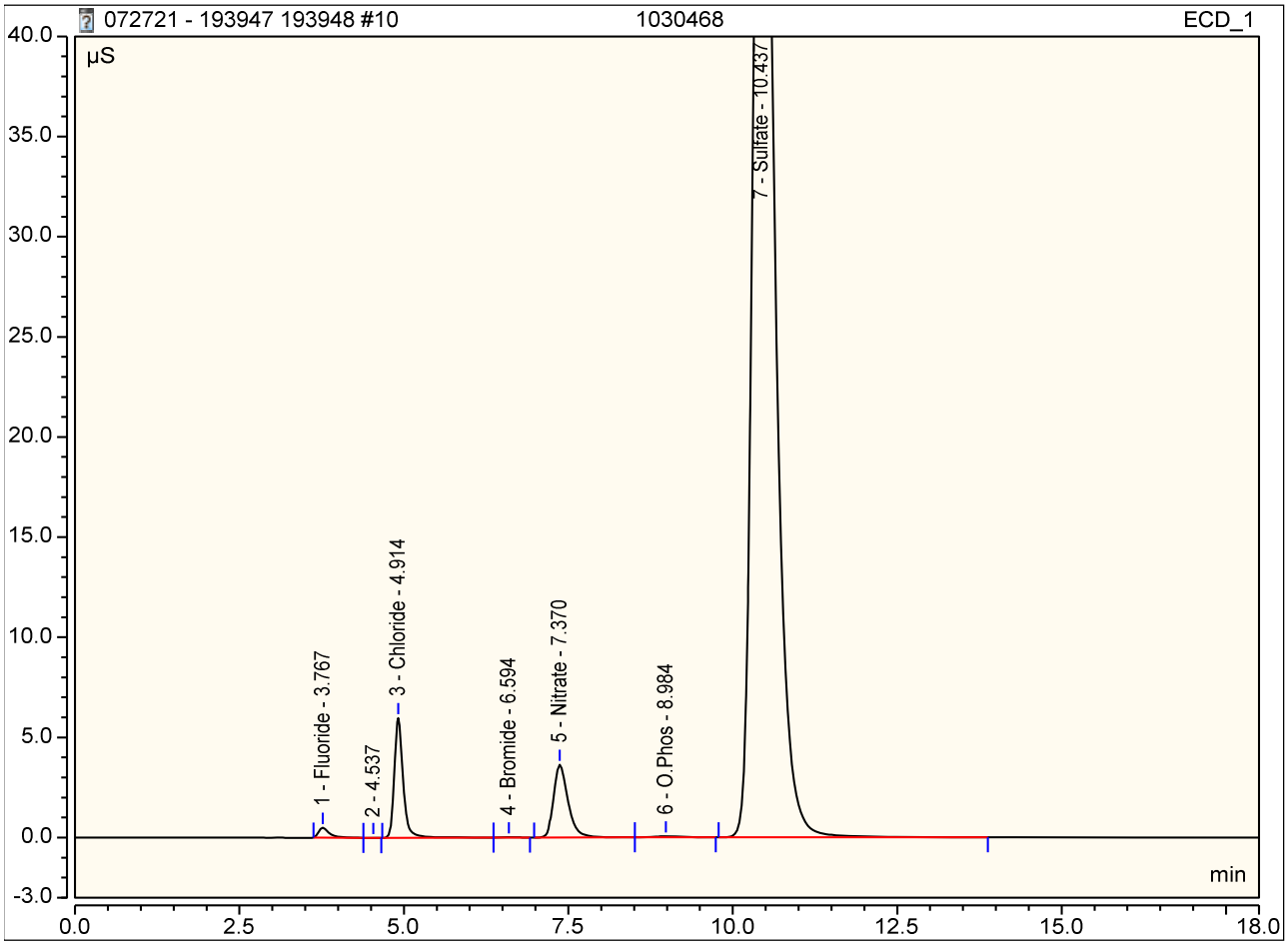
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	0.048	0.266	0.2071
3	4.92	Chloride	0.804	5.395	3.2557
4	5.51	Nitrite	0.000	0.002	0.0179
5	6.59	Bromide	0.002	0.010	0.0141
6	7.38	Nitrate	0.419	1.636	0.7346
7	8.95	O.Phos	0.059	0.118	0.0667
8	10.49	Sulfate	8.514	23.706	42.4718



Peak Integration Report

Sample Name:	**1030468**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jul-2021 / 14:54**	*Run Time:*	**18.00**

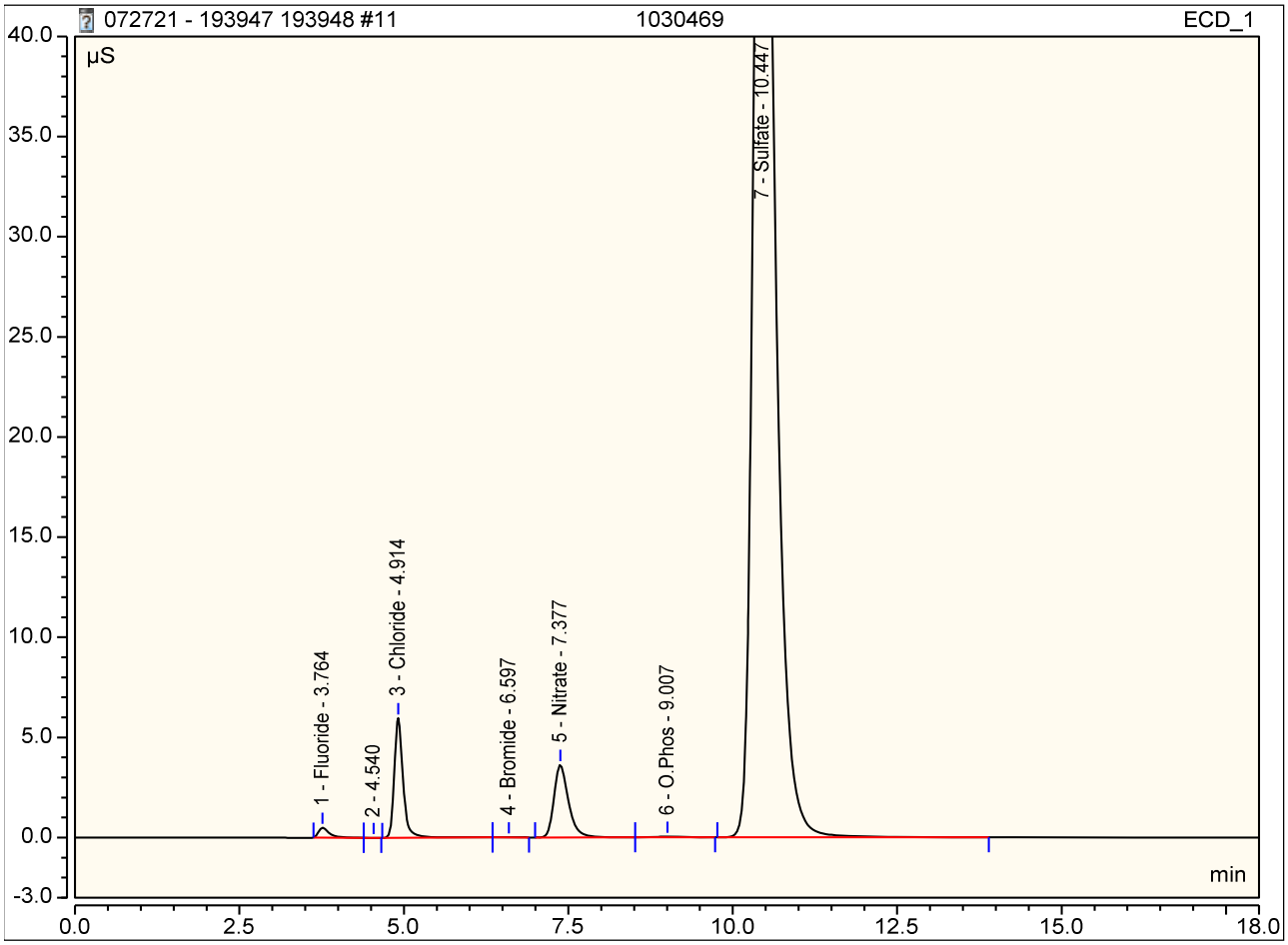
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	0.091	0.488	0.3254
3	4.91	Chloride	0.929	5.992	3.6718
4	6.59	Bromide	0.003	0.014	0.0224
5	7.37	Nitrate	0.927	3.634	1.5312
6	8.98	O.Phos	0.027	0.054	n.a.
7	10.44	Sulfate	23.589	64.849	116.4398



Peak Integration Report

Sample Name:	**1030469**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jul-2021 / 15:12**	*Run Time:*	**18.00**

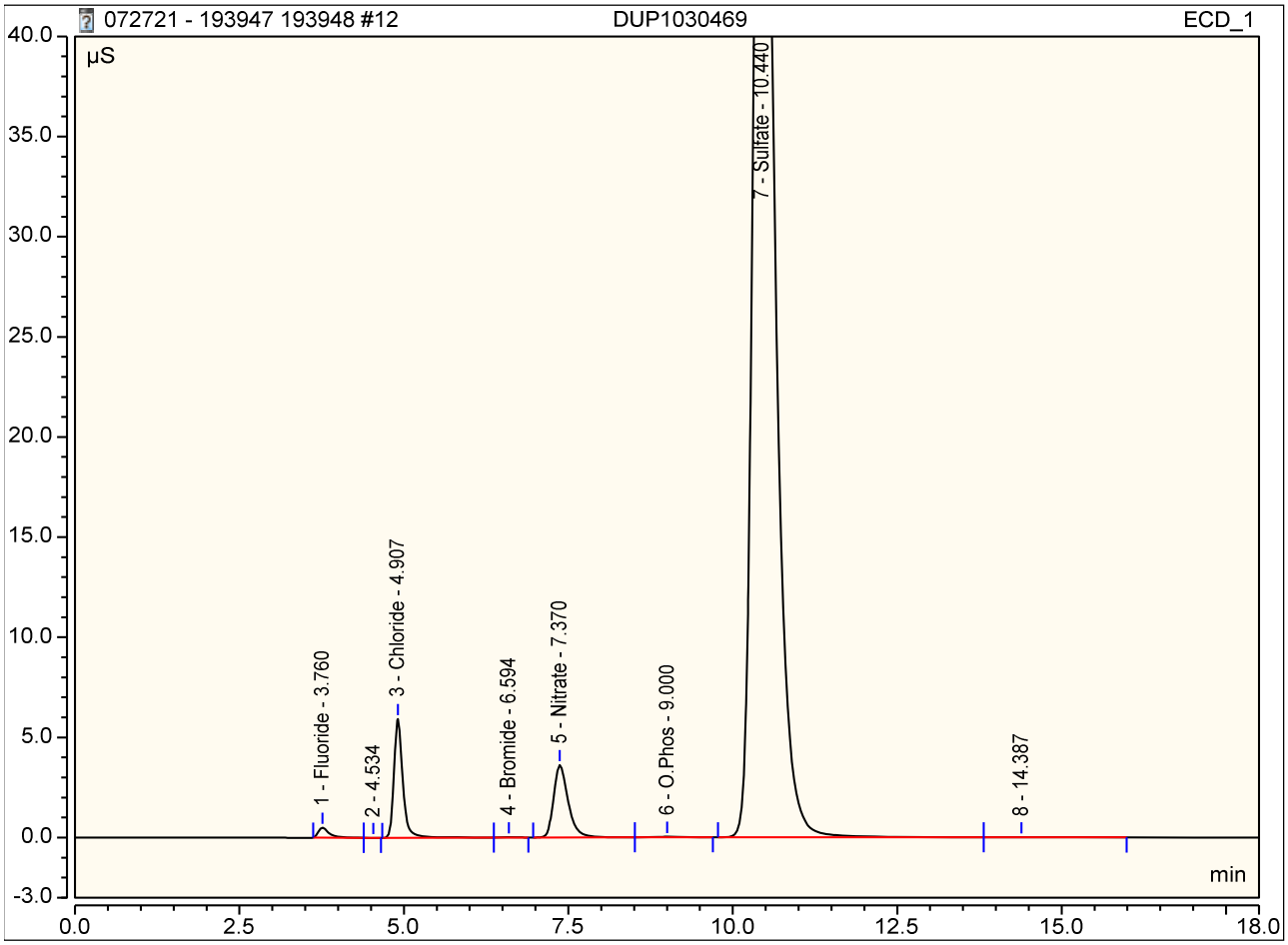
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.092	0.493	0.3292
3	4.91	Chloride	0.927	5.981	3.6650
4	6.60	Bromide	0.003	0.014	0.0214
5	7.38	Nitrate	0.927	3.624	1.5311
6	9.01	O.Phos	0.018	0.037	n.a.
7	10.45	Sulfate	23.612	64.890	116.5559



Peak Integration Report

Sample Name:	**DUP1030469**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jul-2021 / 15:31**	*Run Time:*	**18.00**

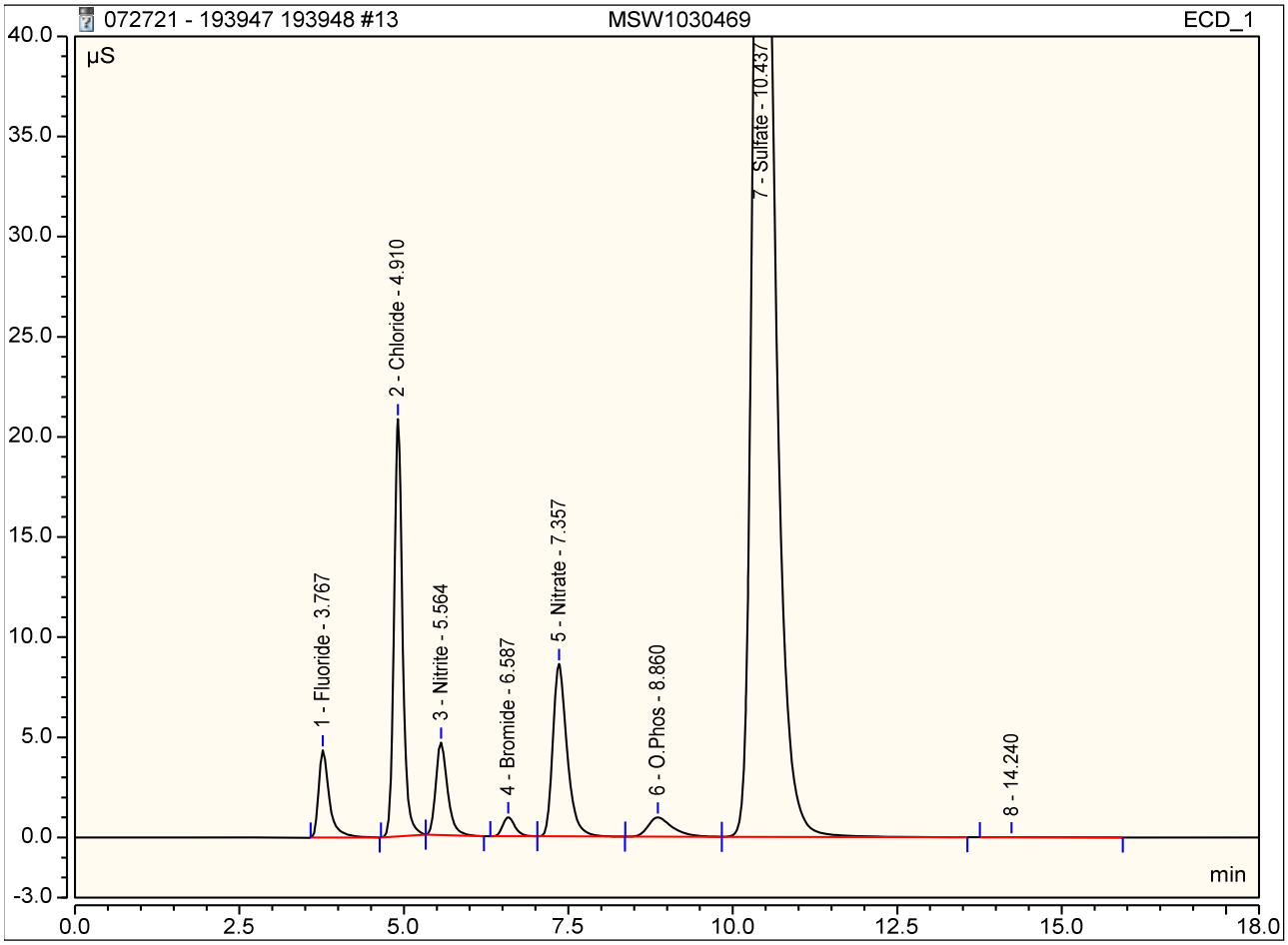
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.092	0.495	0.3295
3	4.91	Chloride	0.929	5.945	3.6701
4	6.59	Bromide	0.003	0.013	0.0209
5	7.37	Nitrate	0.926	3.616	1.5288
6	9.00	O.Phos	0.014	0.029	n.a.
7	10.44	Sulfate	23.593	64.765	116.4632



Peak Integration Report

Sample Name:	**MSW1030469**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jul-2021 / 15:49**	*Run Time:*	**18.00**

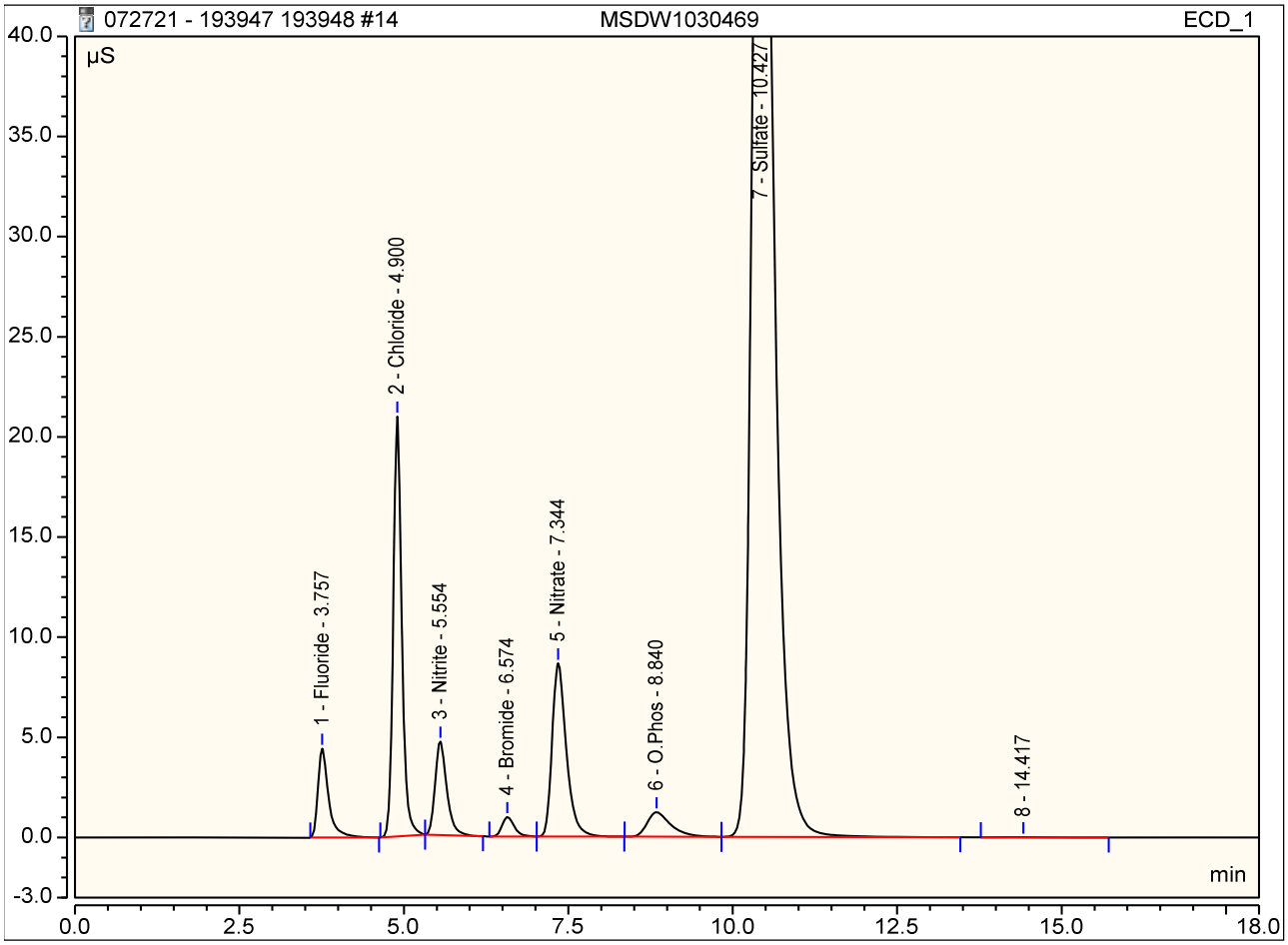
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	0.820	4.362	2.3225
2	4.91	Chloride	3.115	20.831	10.9532
3	5.56	Nitrite	0.956	4.621	2.0683
4	6.59	Bromide	0.208	0.959	2.1290
5	7.36	Nitrate	2.163	8.604	3.4679
6	8.86	O.Phos	0.410	0.962	1.5819
7	10.44	Sulfate	23.921	65.650	118.0690



Peak Integration Report

Sample Name:	**MSDW1030469**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jul-2021 / 16:07**	*Run Time:*	**18.00**

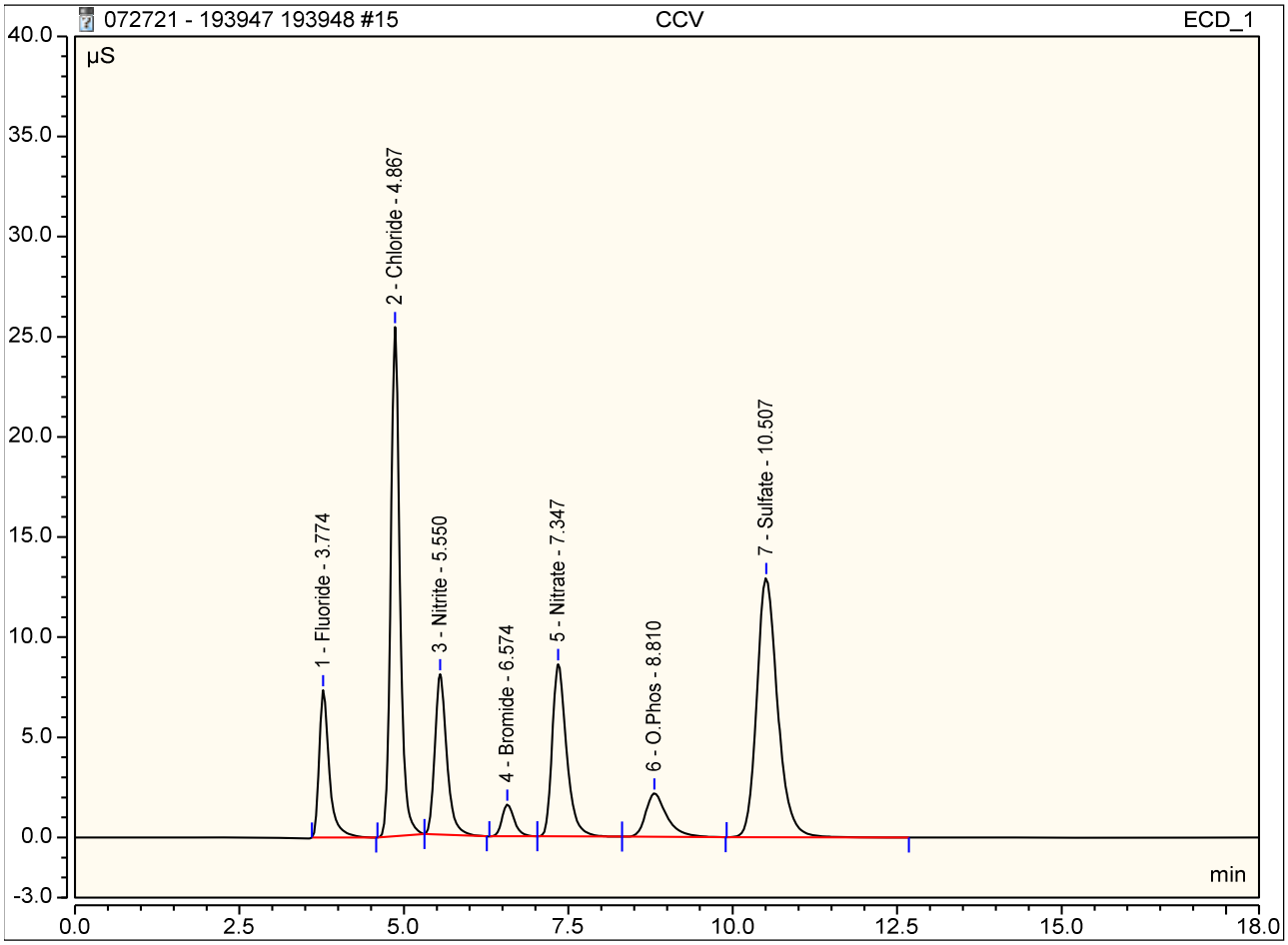
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.830	4.440	2.3505
2	4.90	Chloride	3.139	20.969	11.0347
3	5.55	Nitrite	0.966	4.670	2.0894
4	6.57	Bromide	0.210	0.969	2.1525
5	7.34	Nitrate	2.175	8.644	3.4868
6	8.84	O.Phos	0.511	1.220	2.0166
7	10.43	Sulfate	23.916	65.618	118.0433



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jul-2021 / 16:25**	*Run Time:*	**18.00**

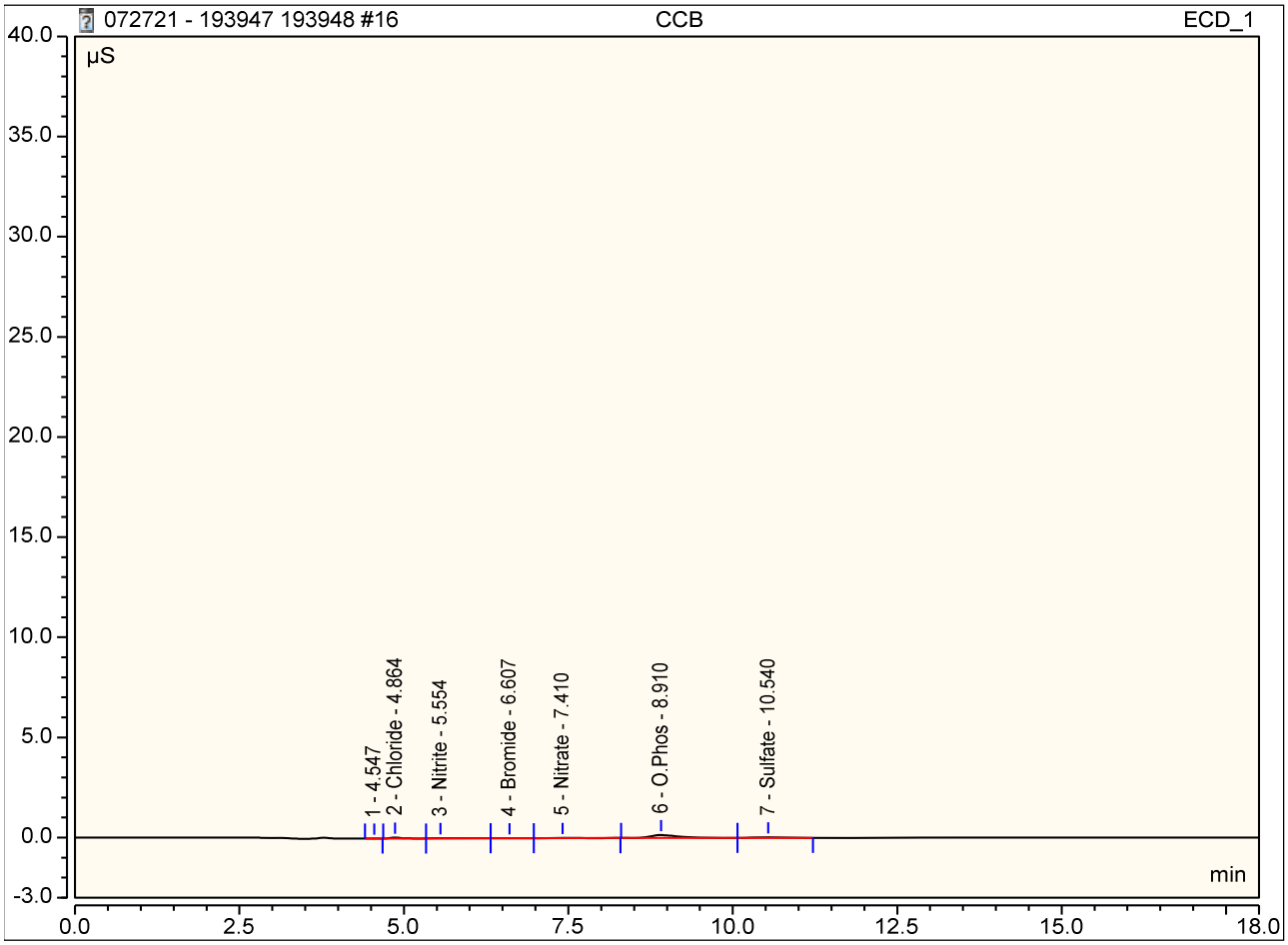
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	1.306	7.356	3.6554
2	4.87	Chloride	4.095	25.422	14.2207
3	5.55	Nitrite	1.691	8.012	3.6467
4	6.57	Bromide	0.345	1.584	3.5399
5	7.35	Nitrate	2.178	8.602	3.4904
6	8.81	O.Phos	0.808	2.169	3.3008
7	10.51	Sulfate	4.751	12.946	24.0086



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**27-Jul-2021 / 16:43**	*Run Time:*	**18.00**

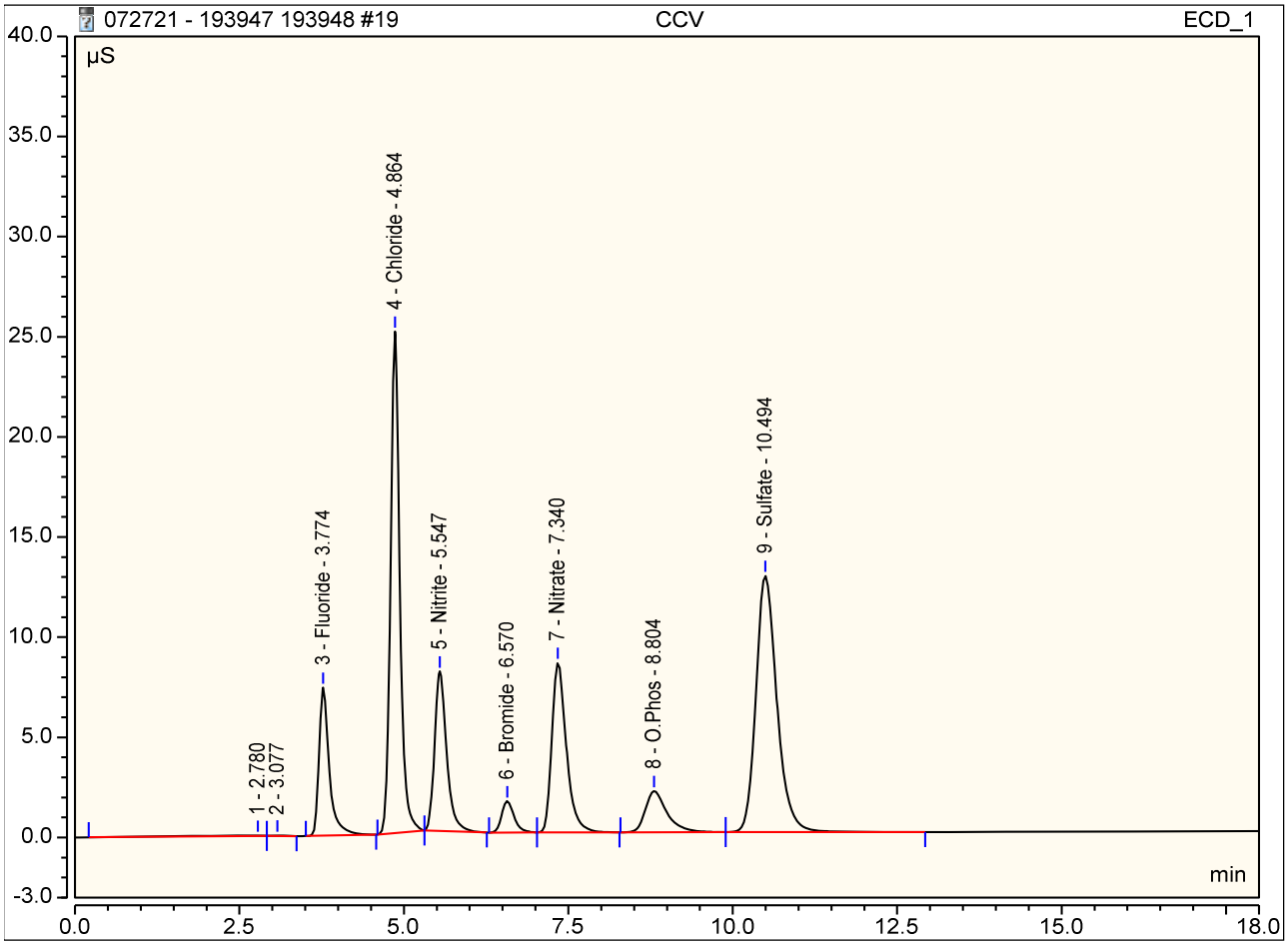
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	4.86	Chloride	0.009	0.046	0.6051
3	5.55	Nitrite	0.004	0.016	0.0250
4	6.61	Bromide	0.001	0.004	0.0017
5	7.41	Nitrate	0.005	0.018	0.0862
6	8.91	O.Phos	0.072	0.144	0.1215
7	10.54	Sulfate	0.011	0.029	0.7500



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**28-Jul-2021 / 07:30**	*Run Time:*	**18.00**

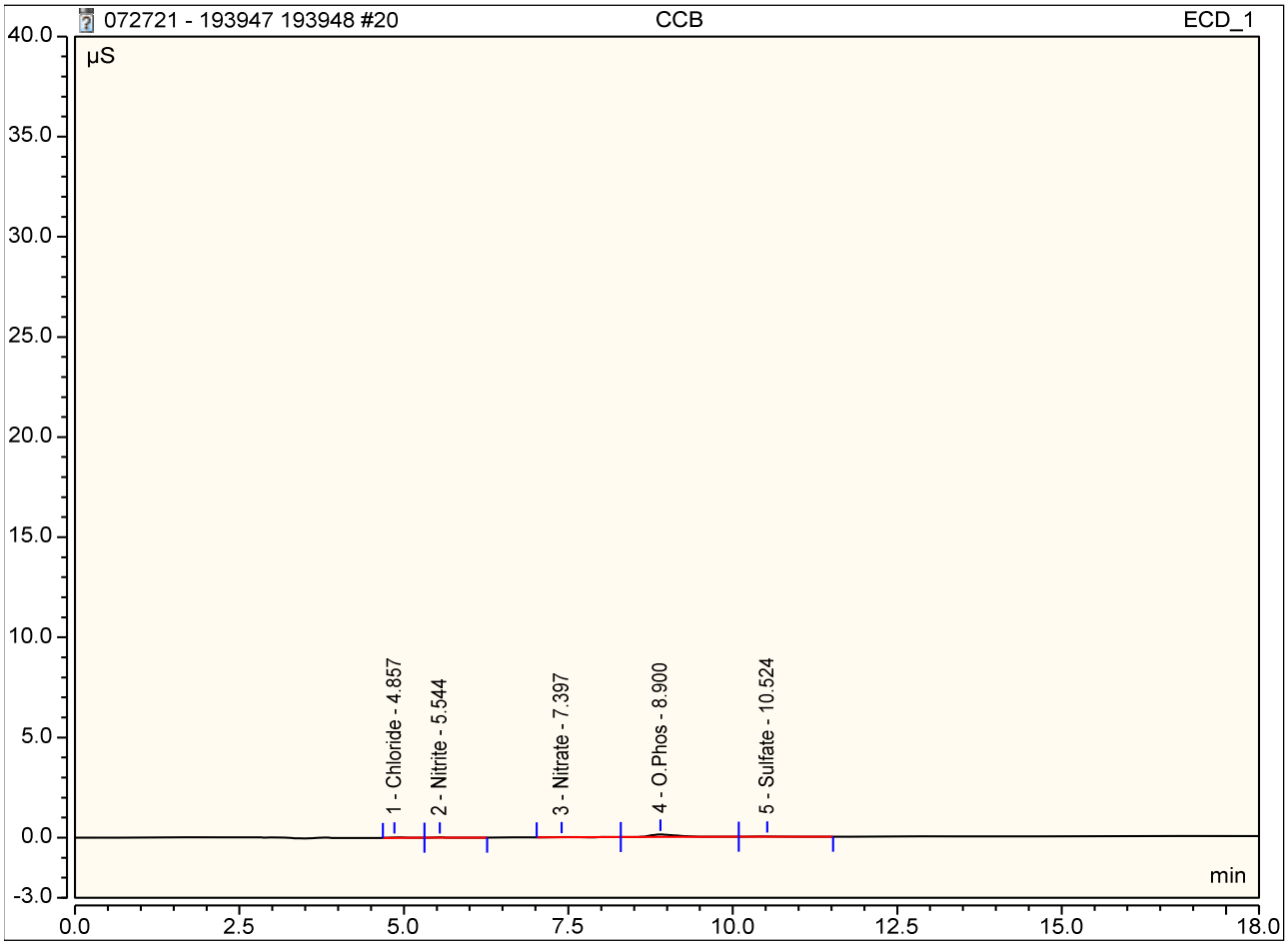
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
3	3.77	Fluoride	1.333	7.400	3.7280
4	4.86	Chloride	4.073	25.039	14.1476
5	5.55	Nitrite	1.696	7.964	3.6565
6	6.57	Bromide	0.343	1.562	3.5183
7	7.34	Nitrate	2.168	8.478	3.4753
8	8.80	O.Phos	0.781	2.058	3.1814
9	10.49	Sulfate	4.726	12.802	23.8853



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**28-Jul-2021 / 07:48**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.86	Chloride	0.007	0.036	0.5998
2	5.54	Nitrite	0.004	0.014	0.0246
3	7.40	Nitrate	0.004	0.014	0.0847
4	8.90	O.Phos	0.062	0.122	0.0777
5	10.52	Sulfate	0.006	0.014	0.7226

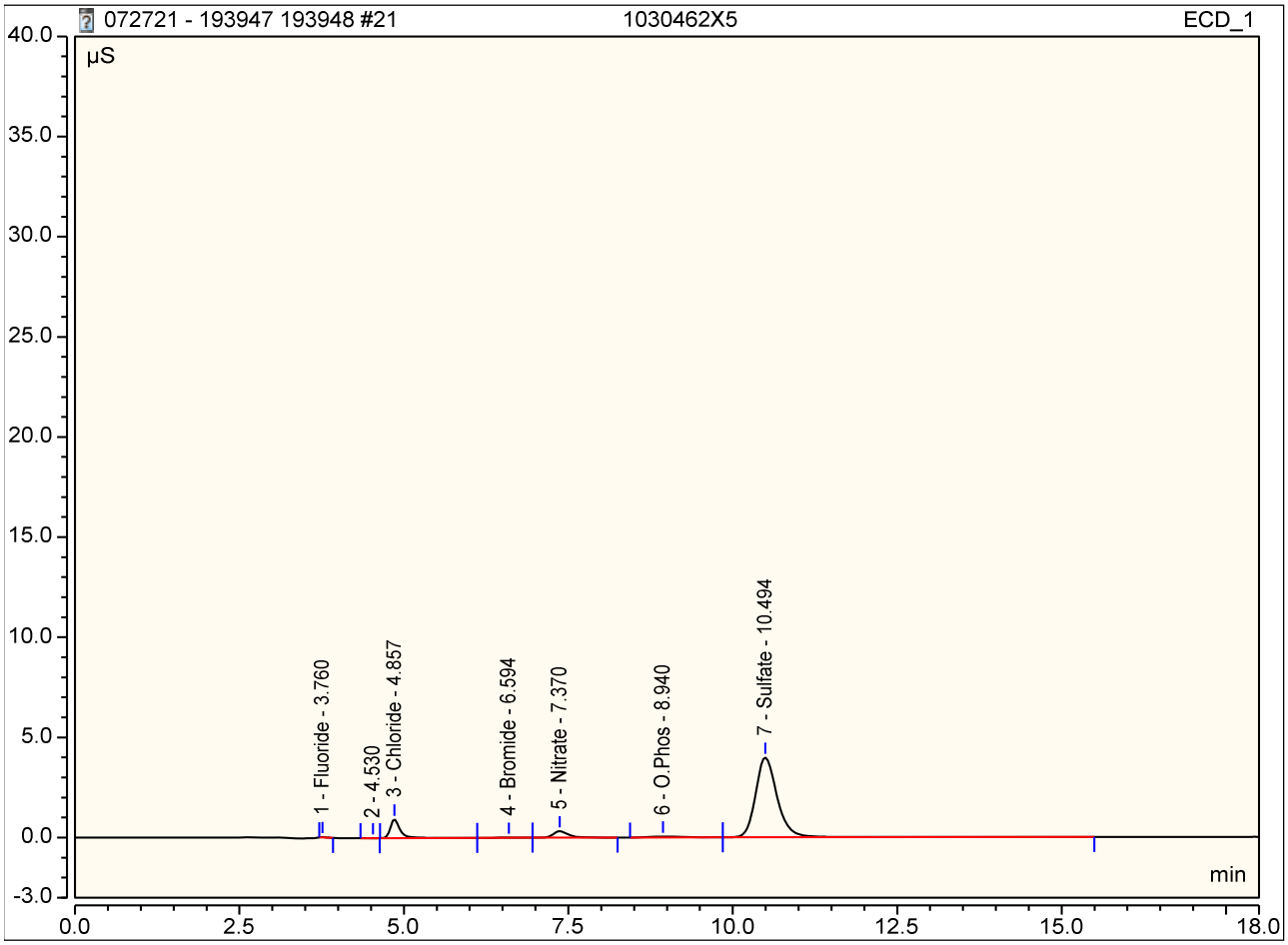


NOT USED

Peak Integration Report

Sample Name:	**1030462X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**28-Jul-2021 / 08:07**	*Run Time:*	**18.00**

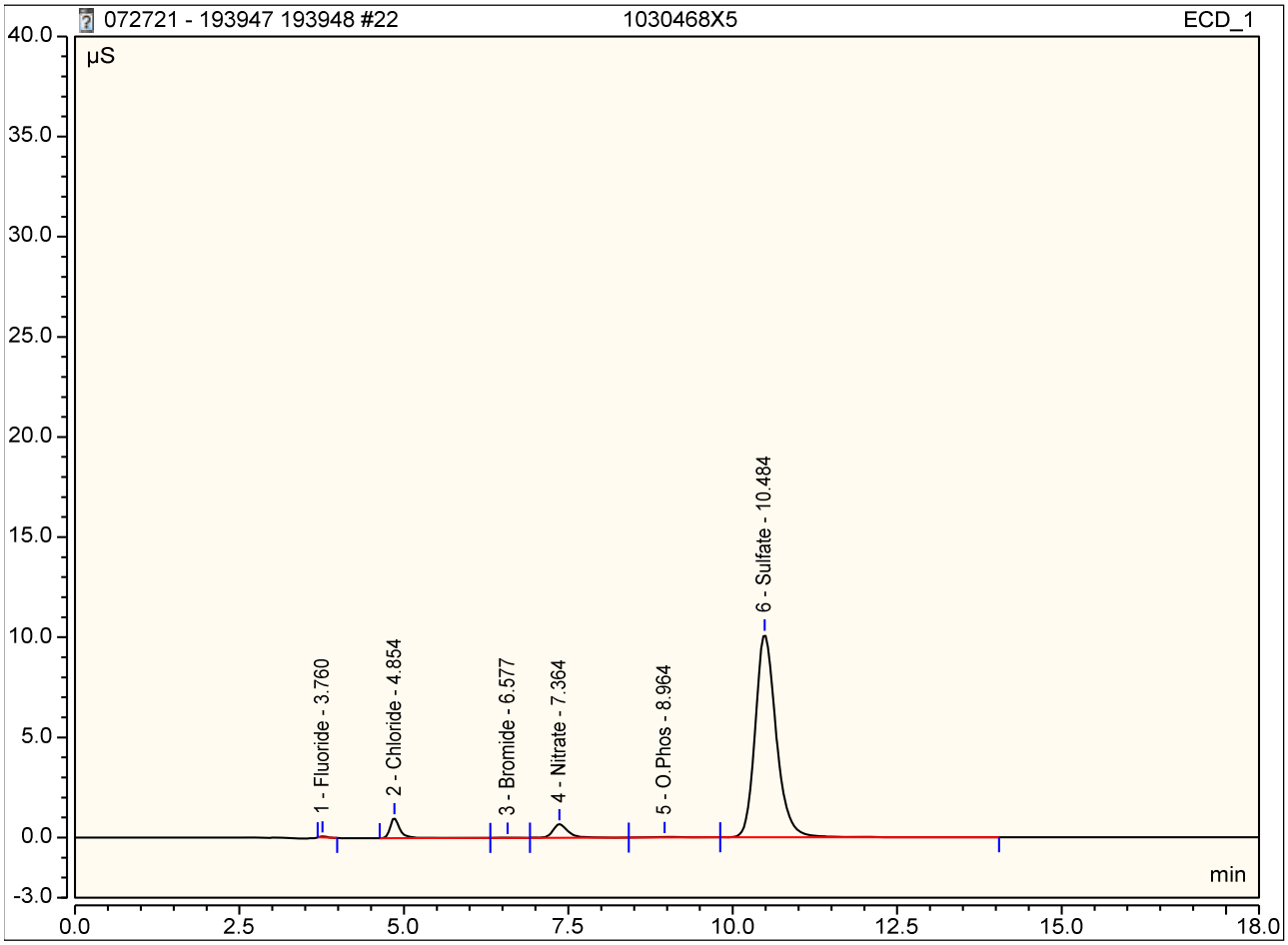
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.003	0.024	0.0839
3	4.86	Chloride	0.163	0.931	1.1173
4	6.59	Bromide	0.001	0.003	0.0012
5	7.37	Nitrate	0.084	0.319	0.2091
6	8.94	O.Phos	0.024	0.046	n.a.
7	10.49	Sulfate	1.522	3.979	8.1607



Peak Integration Report

Sample Name:	**1030468X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**28-Jul-2021 / 08:25**	*Run Time:*	**18.00**

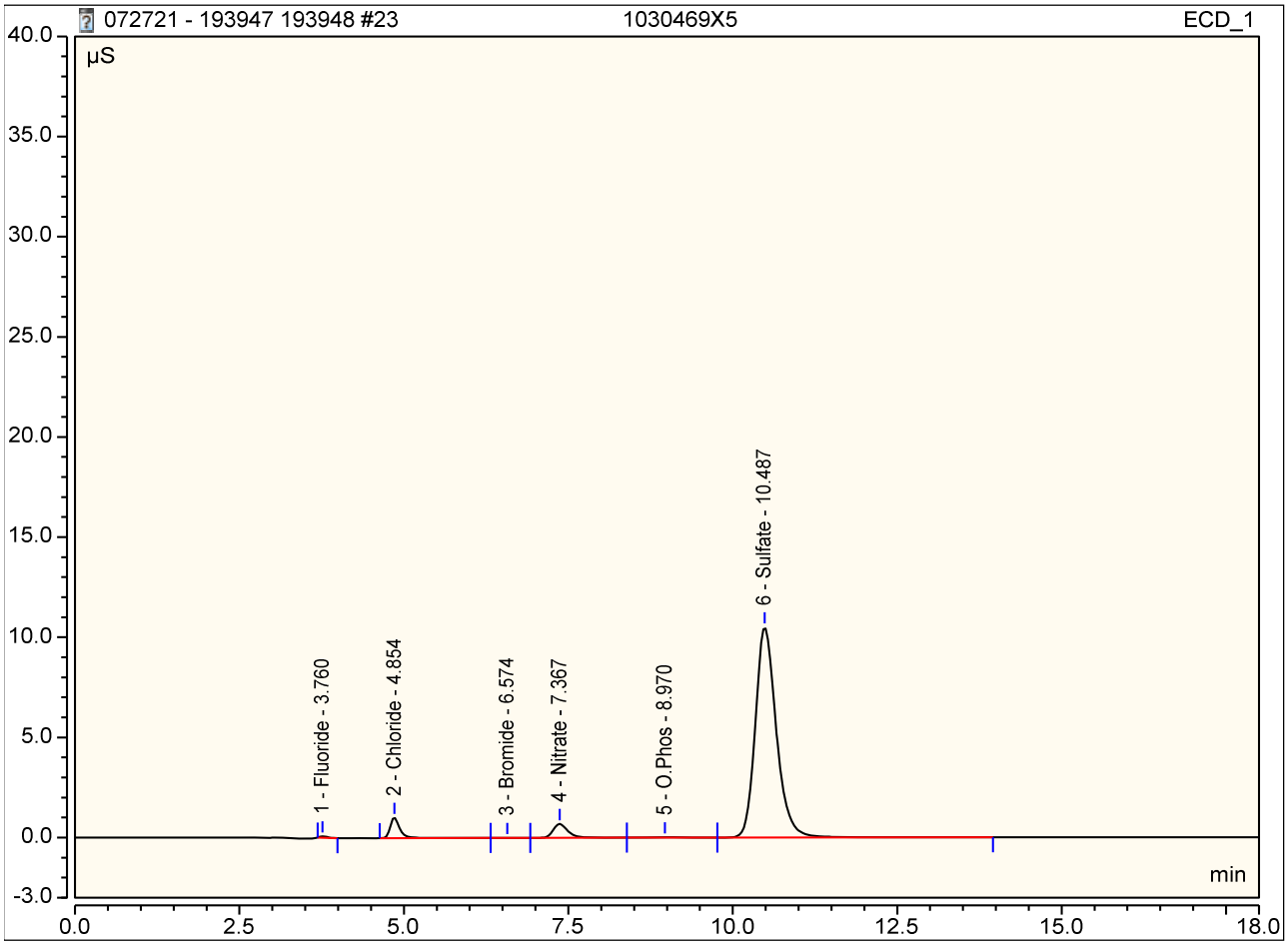
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.008	0.061	0.0981
2	4.85	Chloride	0.175	1.002	1.1588
3	6.58	Bromide	0.001	0.005	0.0041
4	7.36	Nitrate	0.176	0.673	0.3544
5	8.96	O.Phos	0.015	0.030	n.a.
6	10.48	Sulfate	3.764	10.131	19.1650



Peak Integration Report

Sample Name:	**1030469X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**28-Jul-2021 / 08:43**	*Run Time:*	**18.00**

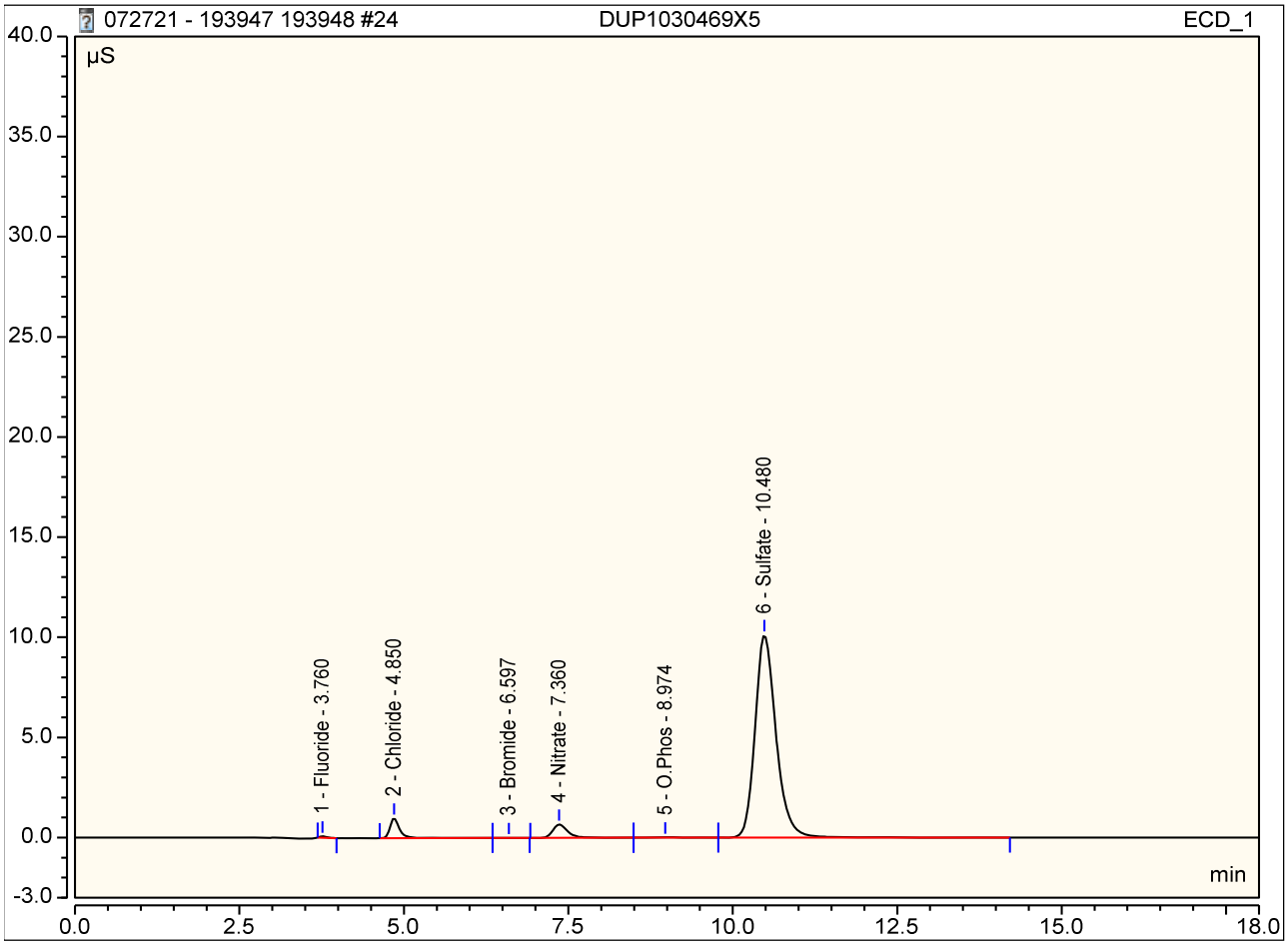
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.009	0.066	0.1004
2	4.85	Chloride	0.180	1.029	1.1754
3	6.57	Bromide	0.001	0.005	0.0027
4	7.37	Nitrate	0.181	0.692	0.3621
5	8.97	O.Phos	0.012	0.022	n.a.
6	10.49	Sulfate	3.900	10.497	19.8317



Peak Integration Report

Sample Name:	**DUP1030469X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**28-Jul-2021 / 09:01**	*Run Time:*	**18.00**

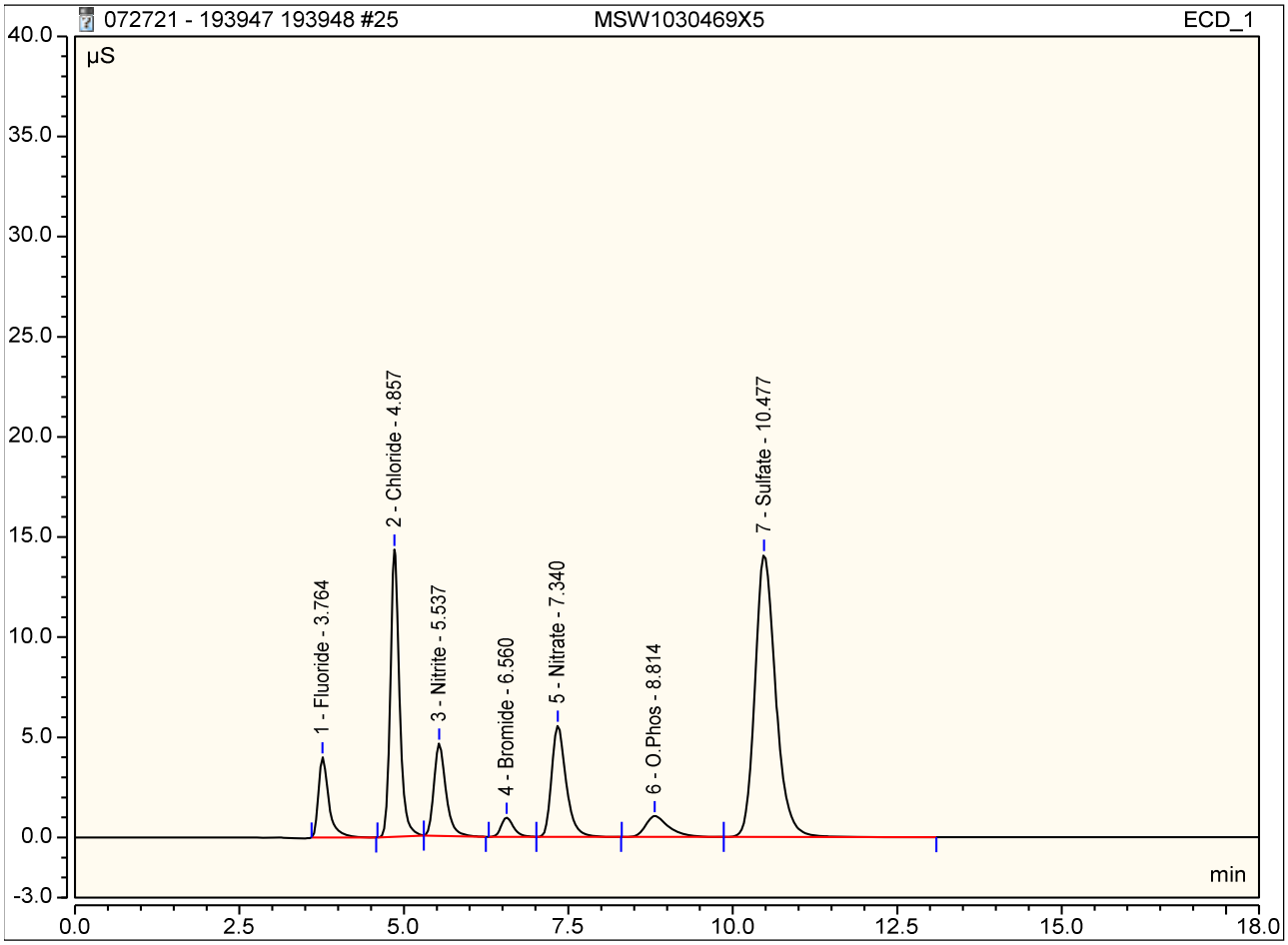
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.007	0.059	0.0970
2	4.85	Chloride	0.173	0.996	1.1537
3	6.60	Bromide	0.001	0.003	n.a.
4	7.36	Nitrate	0.176	0.670	0.3531
5	8.97	O.Phos	0.009	0.017	n.a.
6	10.48	Sulfate	3.754	10.112	19.1159



Peak Integration Report

Sample Name:	**MSW1030469X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**28-Jul-2021 / 09:19**	*Run Time:*	**18.00**

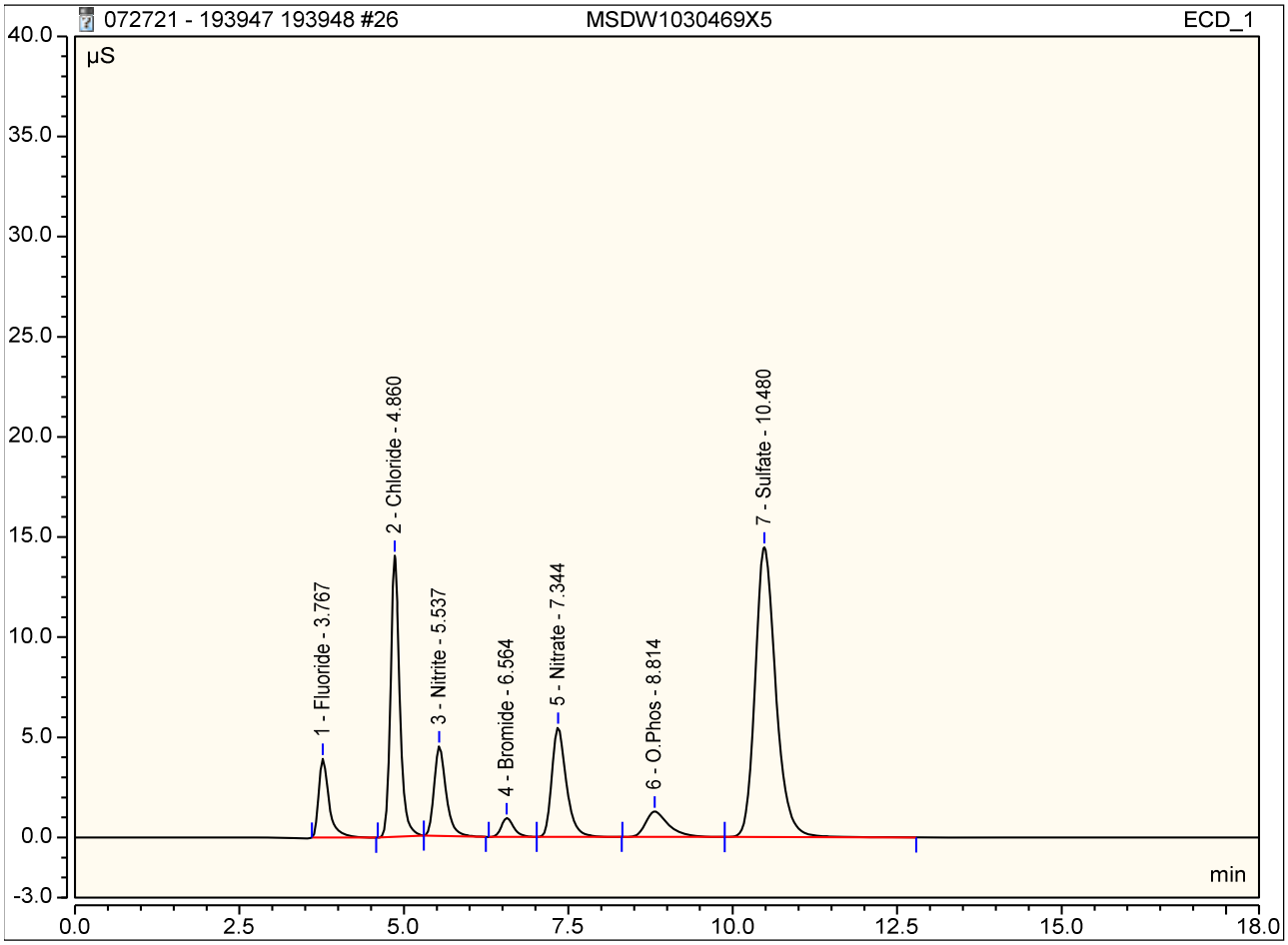
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.729	4.002	2.0745
2	4.86	Chloride	2.309	14.339	8.2699
3	5.54	Nitrite	0.972	4.610	2.1034
4	6.56	Bromide	0.209	0.955	2.1410
5	7.34	Nitrate	1.415	5.549	2.2953
6	8.81	O.Phos	0.428	1.043	1.6608
7	10.48	Sulfate	5.156	14.093	25.9917



Peak Integration Report

Sample Name:	**MSDW1030469X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**28-Jul-2021 / 09:37**	*Run Time:*	**18.00**

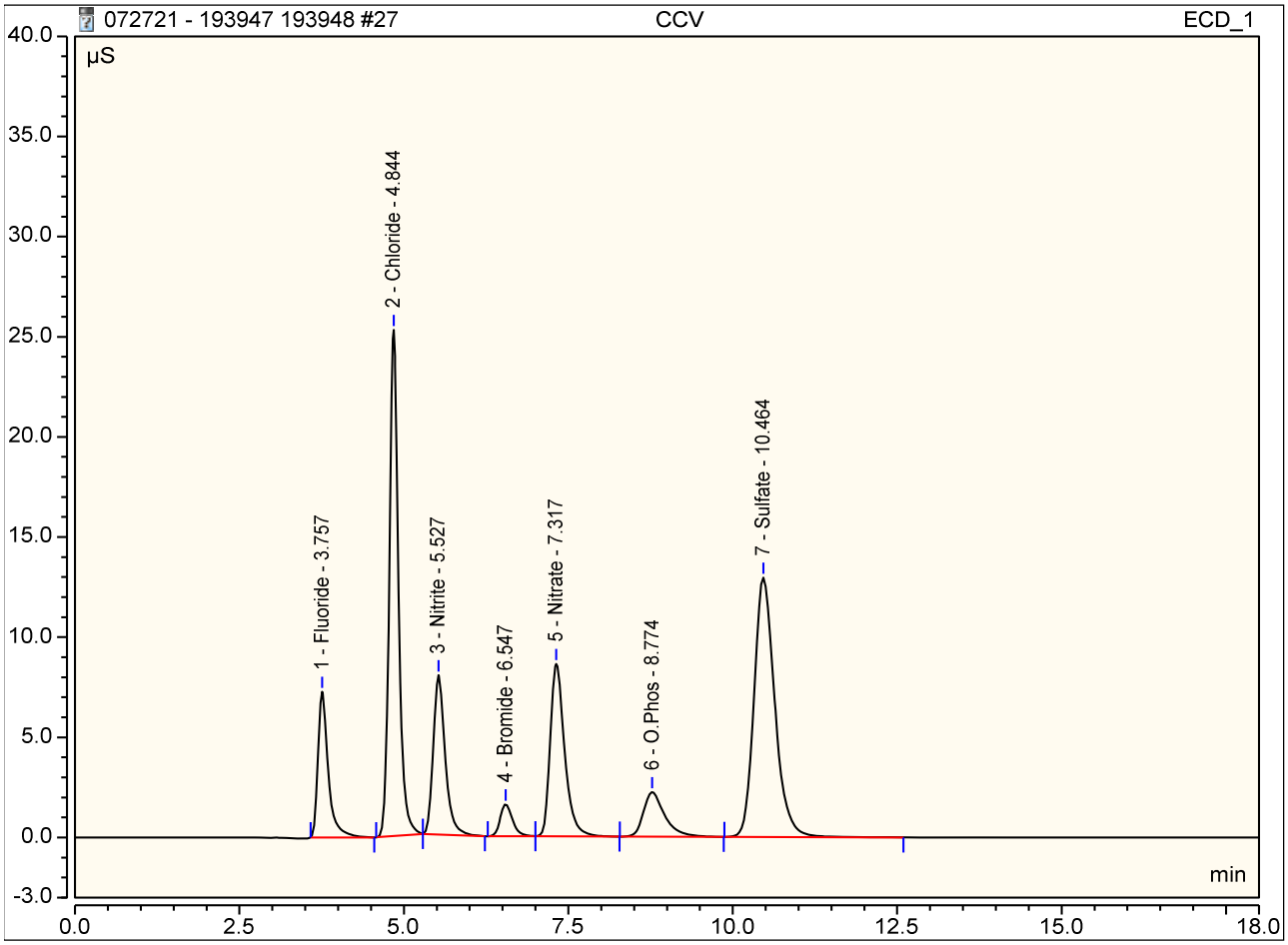
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	0.717	3.932	2.0398
2	4.86	Chloride	2.261	14.043	8.1100
3	5.54	Nitrite	0.945	4.475	2.0443
4	6.56	Bromide	0.205	0.934	2.0973
5	7.34	Nitrate	1.395	5.460	2.2647
6	8.81	O.Phos	0.515	1.277	2.0338
7	10.48	Sulfate	5.286	14.477	26.6342



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**28-Jul-2021 / 09:55**	*Run Time:*	**18.00**

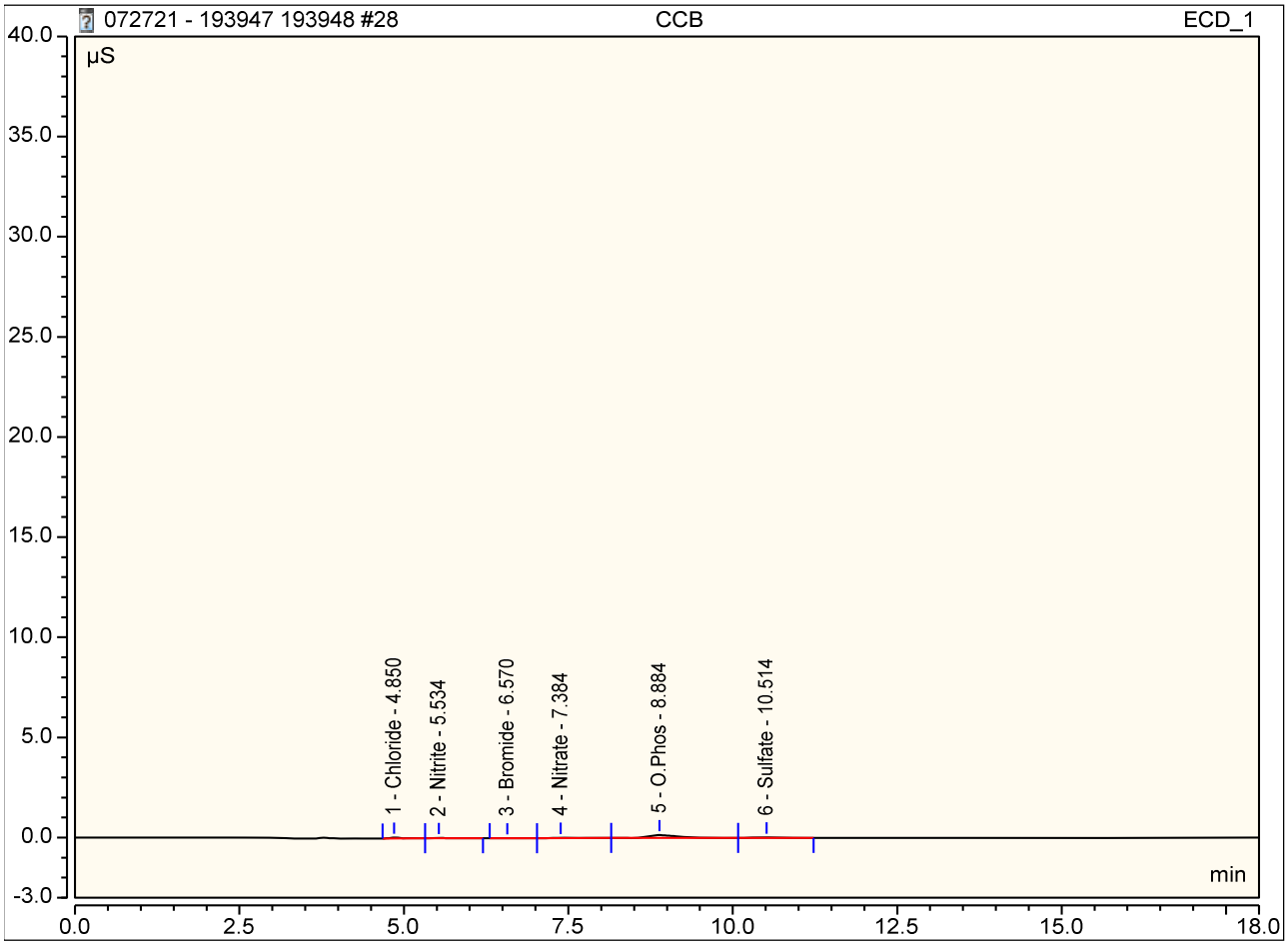
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	1.308	7.268	3.6589
2	4.84	Chloride	4.098	25.268	14.2284
3	5.53	Nitrite	1.679	7.947	3.6197
4	6.55	Bromide	0.346	1.586	3.5528
5	7.32	Nitrate	2.180	8.606	3.4950
6	8.77	O.Phos	0.832	2.229	3.4018
7	10.46	Sulfate	4.747	12.946	23.9865



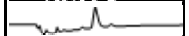
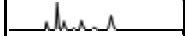
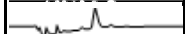
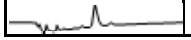
Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**28-Jul-2021 / 10:13**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.85	Chloride	0.009	0.048	0.6059
2	5.53	Nitrite	0.004	0.017	0.0256
3	6.57	Bromide	0.001	0.005	0.0054
4	7.38	Nitrate	0.006	0.019	0.0865
5	8.88	O.Phos	0.072	0.142	0.1198
6	10.51	Sulfate	0.009	0.022	0.7378



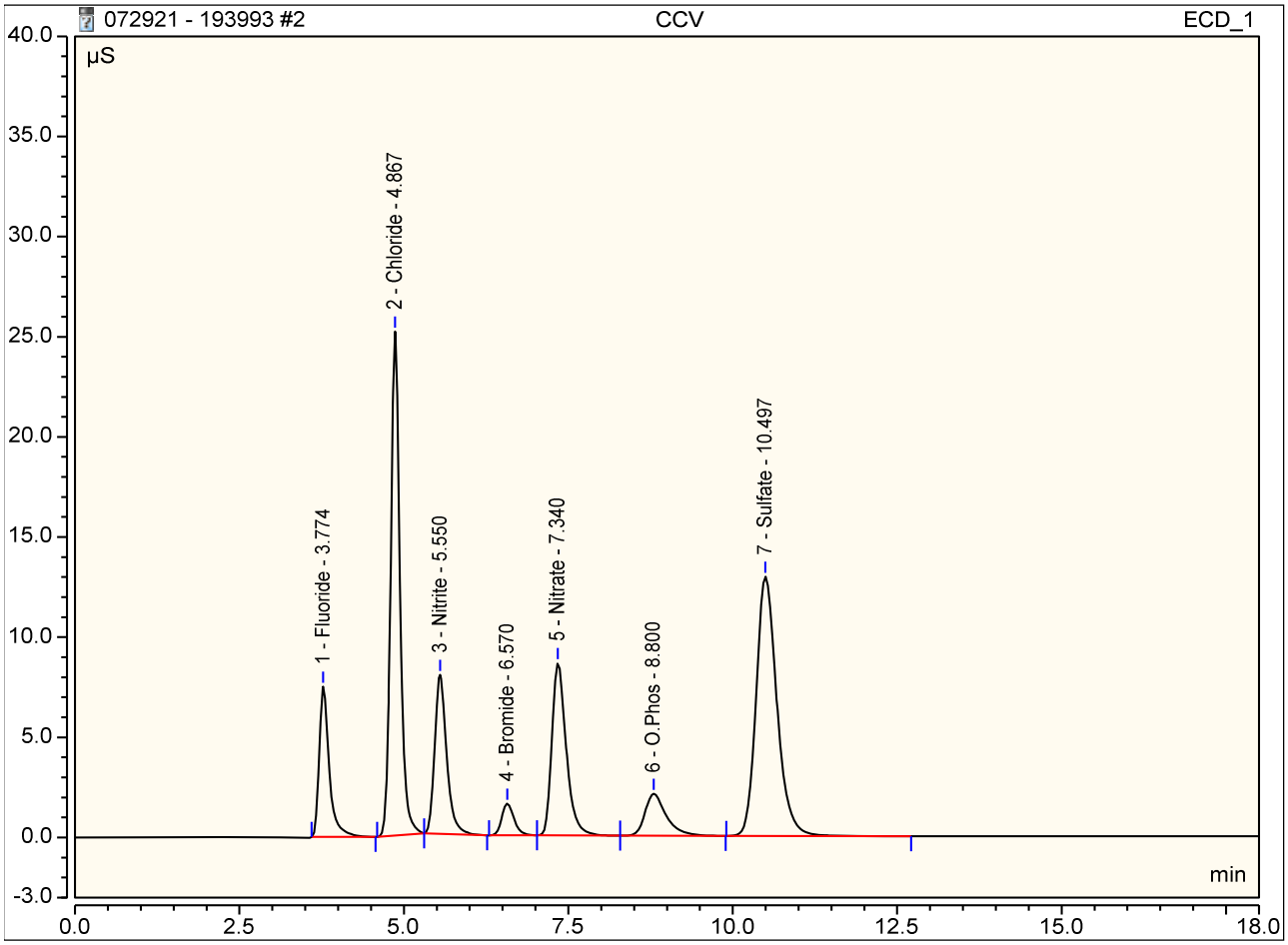
Sequence: 072921 - 193993
Last Update Operator: aquion

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	CCV	1.0000	Unknown		2	5000	Anions	IC3602A	Finished
	LCSW	1.0000	Unknown		3	5000	Anions	IC3602A	Finished
	MBW	1.0000	Unknown		4	5000	Anions	IC3602A	Finished
	1031437	1.0000	Unknown		5	5000	Anions	IC3602A	Finished
	1031438	1.0000	Unknown		6	5000	Anions	IC3602A	Finished
	DUP1031438	1.0000	Unknown		7	5000	Anions	IC3602A	Finished
	MSW1031438	1.0000	Unknown		8	5000	Anions	IC3602A	Finished
	MSDW1031438	1.0000	Unknown		9	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		10	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		11	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		2	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		3	5000	Anions	IC3602A	Finished
	1031437X5	1.0000	Unknown		4	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		5	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		6	5000	Anions	IC3602A	Finished

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Jul-2021 / 12:05**	*Run Time:*	**18.00**

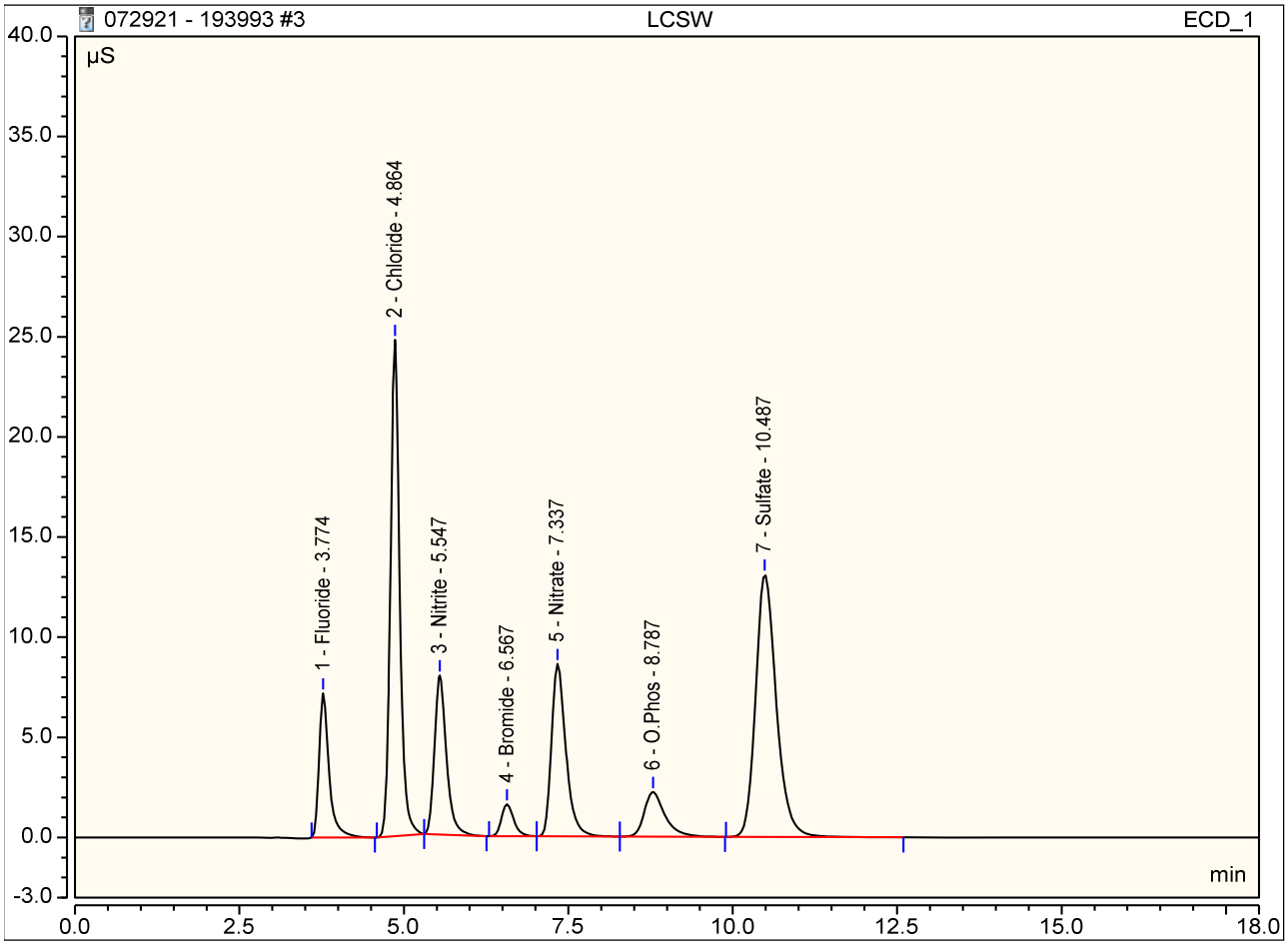
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	1.319	7.508	3.6901
2	4.87	Chloride	4.101	25.161	14.2391
3	5.55	Nitrite	1.681	7.942	3.6258
4	6.57	Bromide	0.347	1.586	3.5590
5	7.34	Nitrate	2.183	8.609	3.4983
6	8.80	O.Phos	0.786	2.096	3.2054
7	10.50	Sulfate	4.750	12.954	24.0021



Peak Integration Report

Sample Name:	**LCSW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Jul-2021 / 12:23**	*Run Time:*	**18.00**

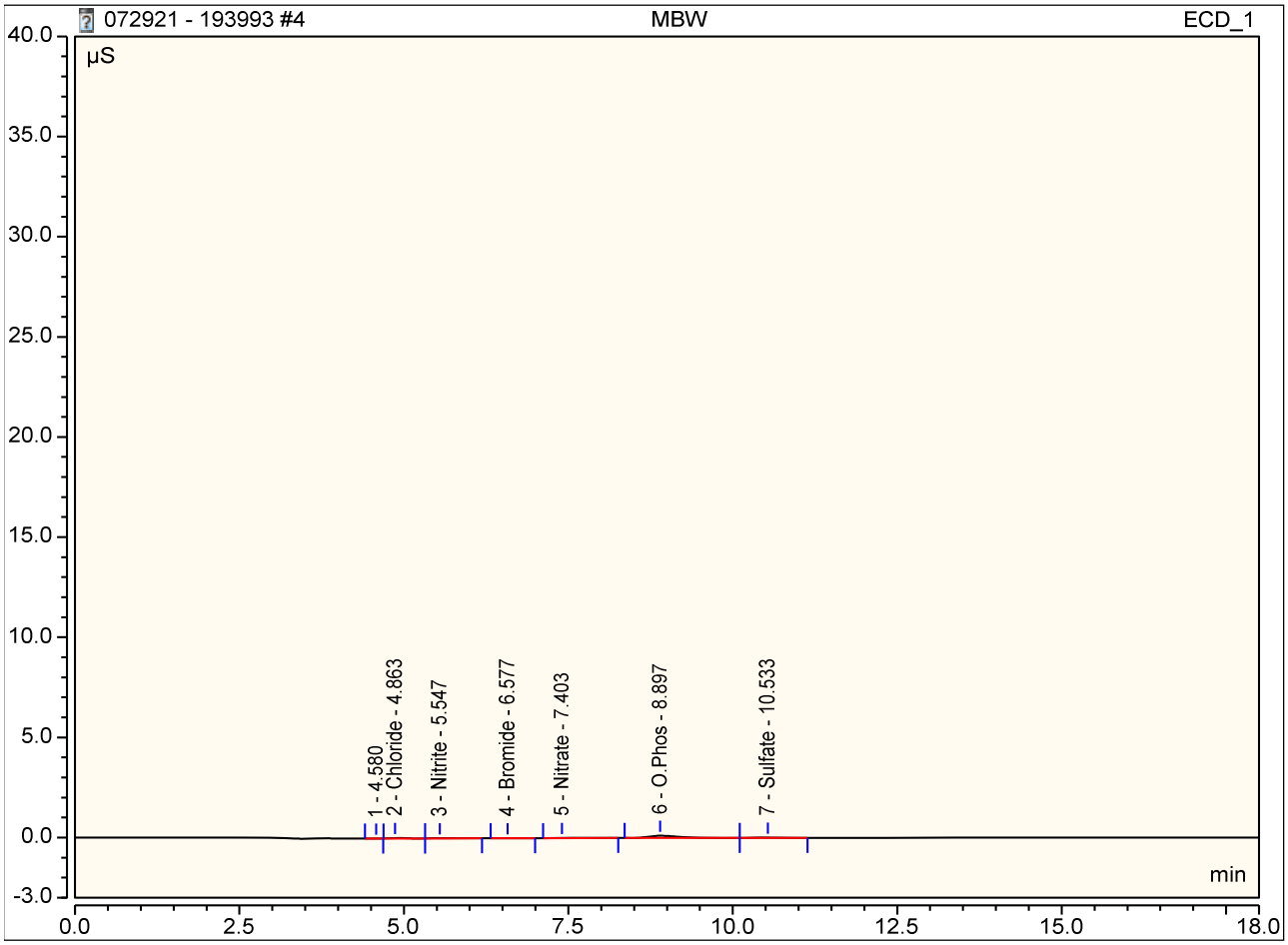
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	1.259	7.193	3.5252
2	4.86	Chloride	4.046	24.781	14.0564
3	5.55	Nitrite	1.681	7.955	3.6248
4	6.57	Bromide	0.347	1.592	3.5658
5	7.34	Nitrate	2.177	8.602	3.4901
6	8.79	O.Phos	0.816	2.232	3.3327
7	10.49	Sulfate	4.799	13.110	24.2424



Peak Integration Report

Sample Name:	**MBW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Jul-2021 / 12:41**	*Run Time:*	**18.00**

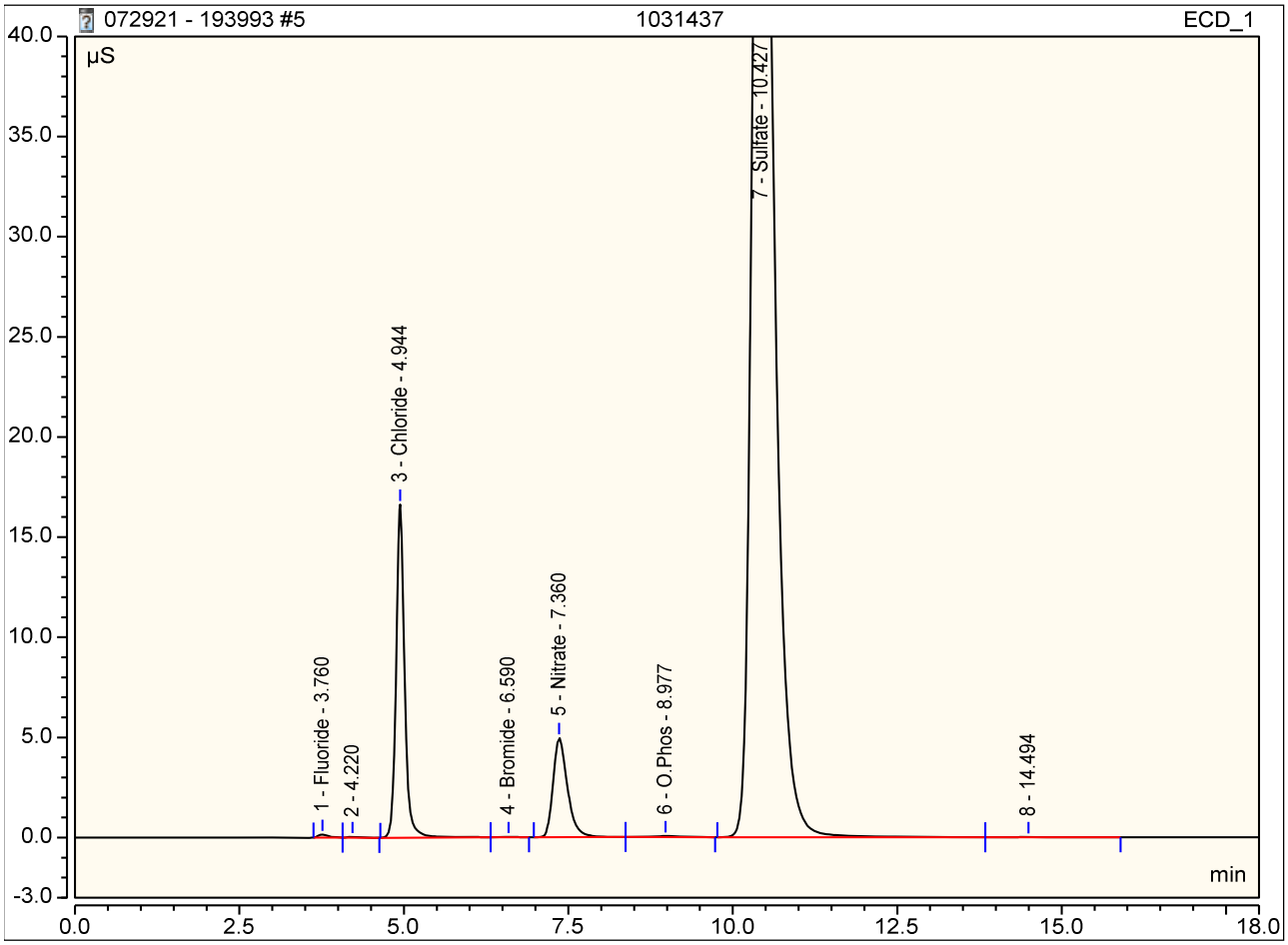
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	4.86	Chloride	0.006	0.031	0.5956
3	5.55	Nitrite	0.003	0.011	0.0228
4	6.58	Bromide	0.001	0.004	0.0015
5	7.40	Nitrate	0.004	0.013	0.0840
6	8.90	O.Phos	0.057	0.113	0.0561
7	10.53	Sulfate	0.005	0.014	0.7216



Peak Integration Report

Sample Name:	**1031437**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Jul-2021 / 12:59**	*Run Time:*	**18.00**

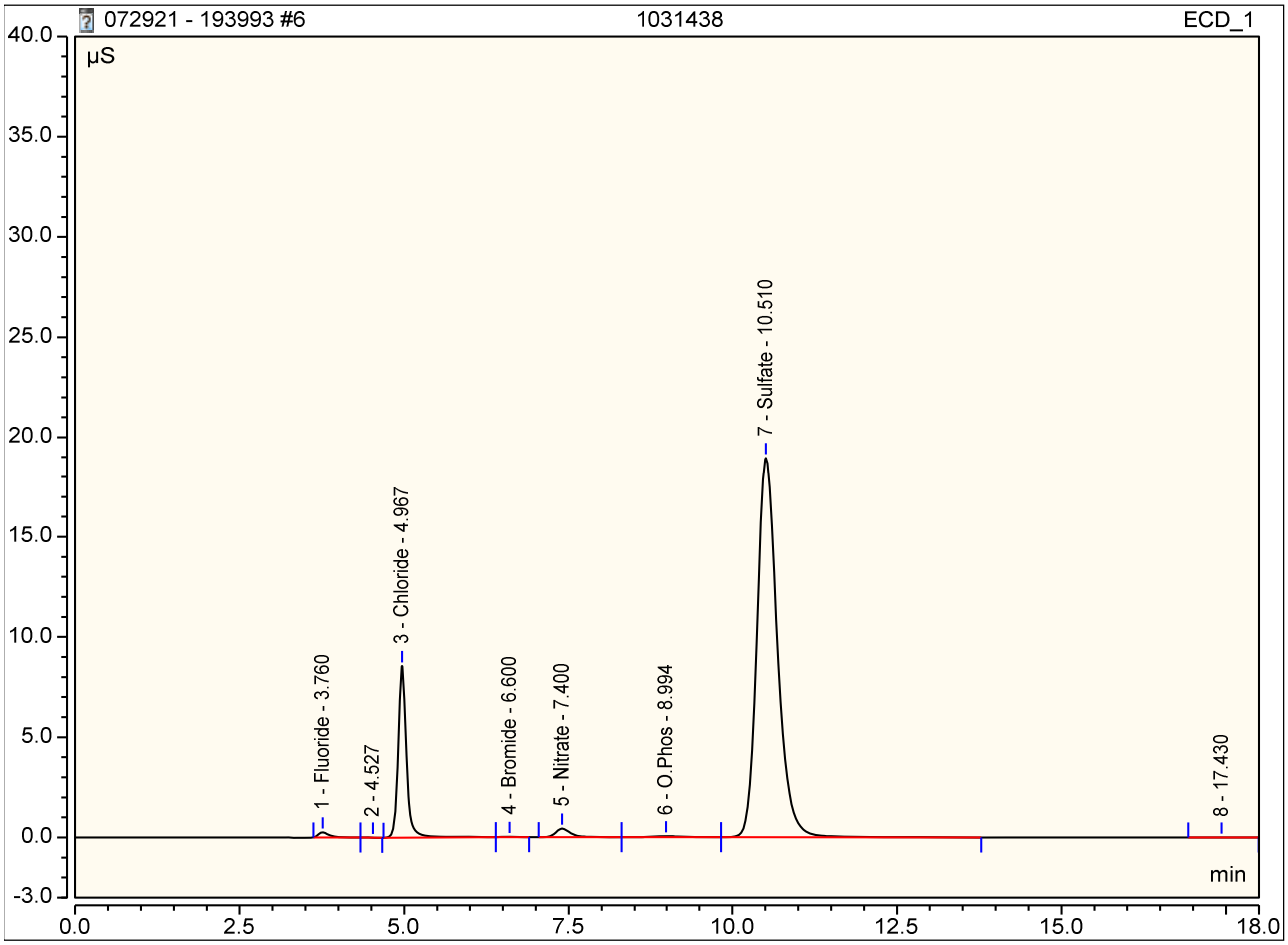
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.025	0.146	0.1448
3	4.94	Chloride	2.461	16.628	8.7754
4	6.59	Bromide	0.003	0.015	0.0238
5	7.36	Nitrate	1.253	4.949	2.0415
6	8.98	O.Phos	0.025	0.049	n.a.
7	10.43	Sulfate	24.194	66.347	119.4080



Peak Integration Report

Sample Name:	**1031438**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Jul-2021 / 13:17**	*Run Time:*	**18.00**

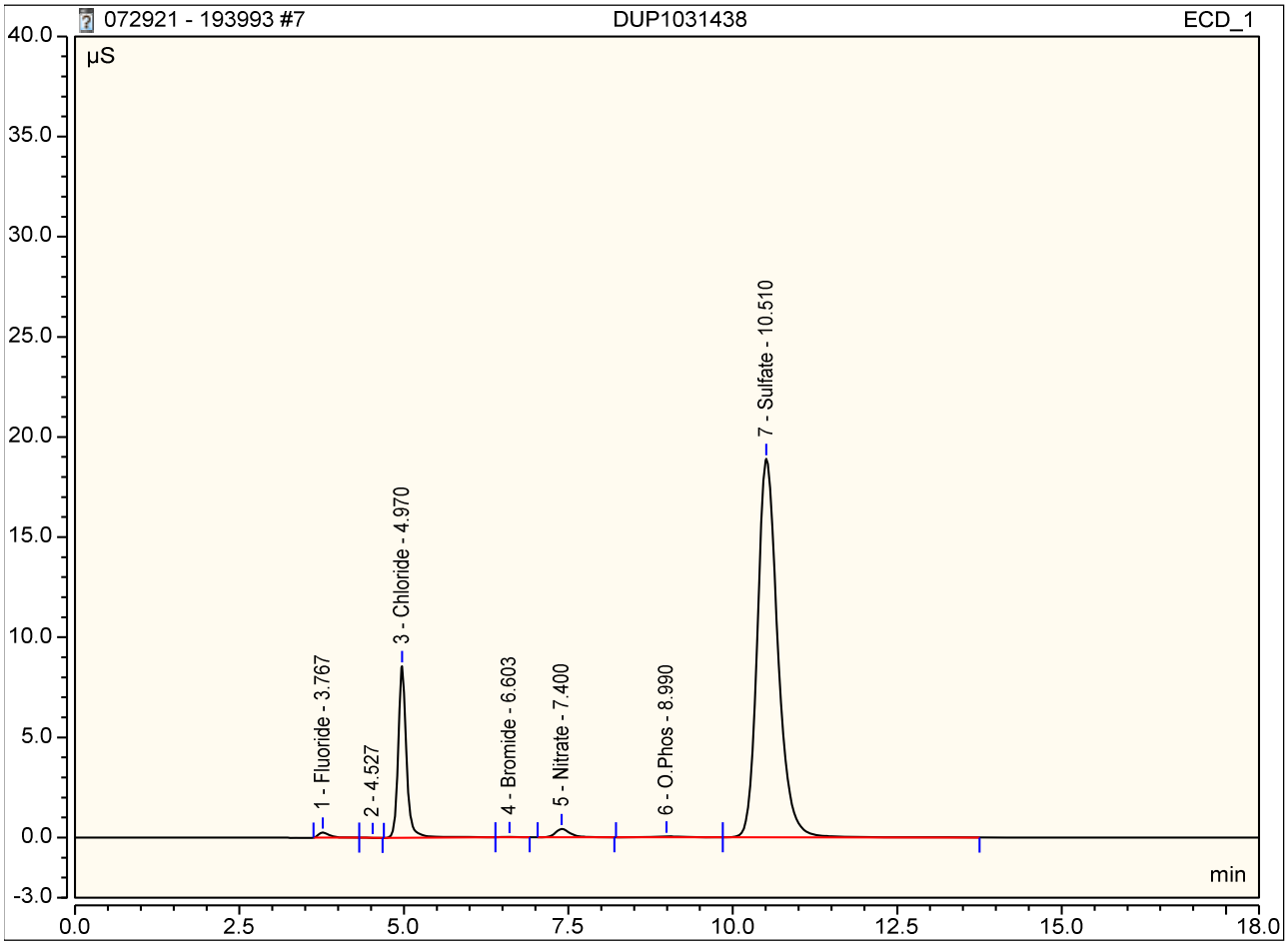
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.049	0.262	0.2116
3	4.97	Chloride	1.245	8.561	4.7240
4	6.60	Bromide	0.002	0.009	0.0113
5	7.40	Nitrate	0.109	0.425	0.2488
6	8.99	O.Phos	0.024	0.046	n.a.
7	10.51	Sulfate	6.830	18.943	34.2104



Peak Integration Report

Sample Name:	**DUP1031438**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Jul-2021 / 13:35**	*Run Time:*	**18.00**

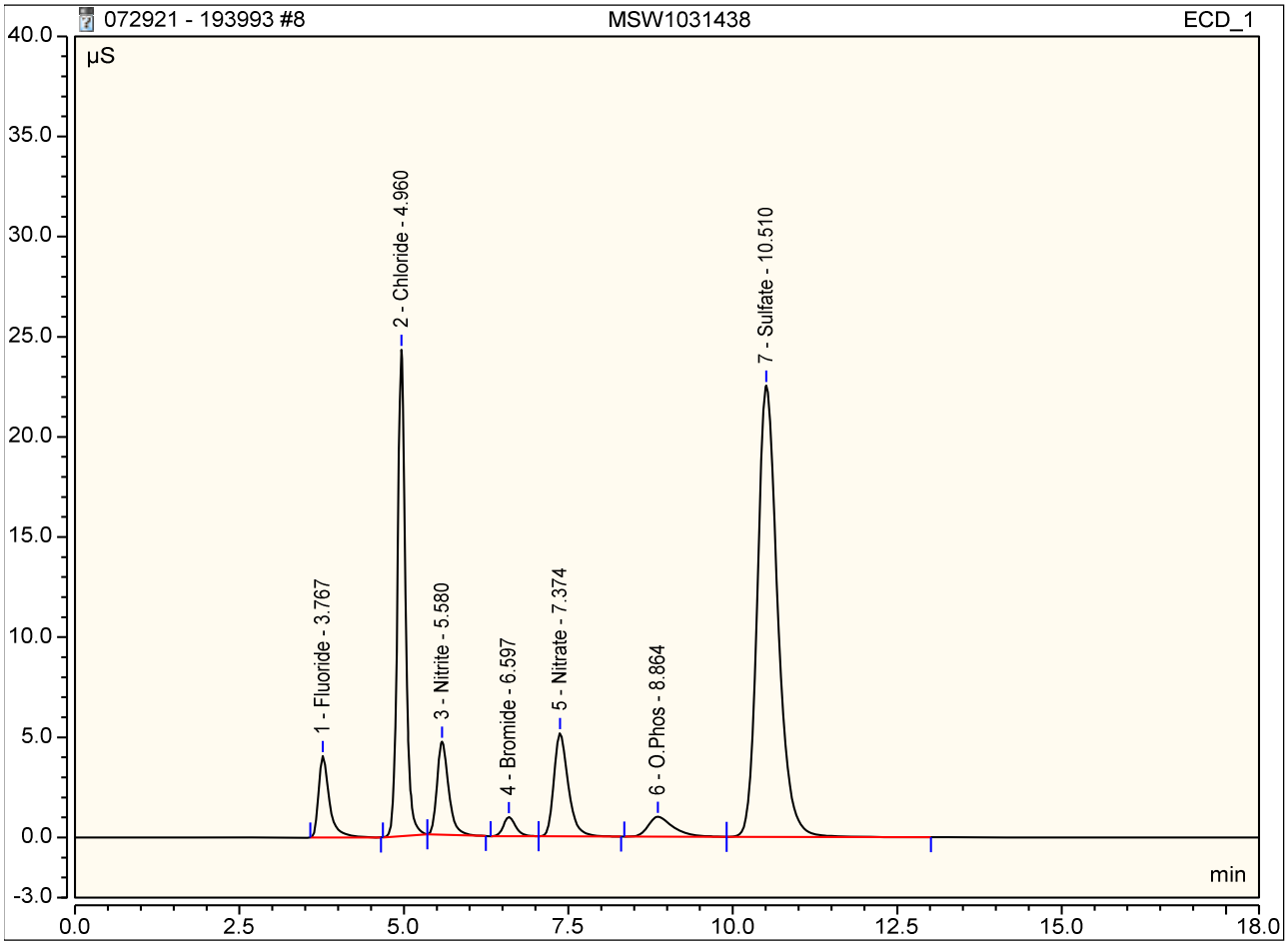
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	0.049	0.261	0.2105
3	4.97	Chloride	1.240	8.576	4.7071
4	6.60	Bromide	0.002	0.009	0.0114
5	7.40	Nitrate	0.106	0.415	0.2447
6	8.99	O.Phos	0.022	0.043	n.a.
7	10.51	Sulfate	6.811	18.894	34.1140



Peak Integration Report

Sample Name:	**MSW1031438**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Jul-2021 / 13:53**	*Run Time:*	**18.00**

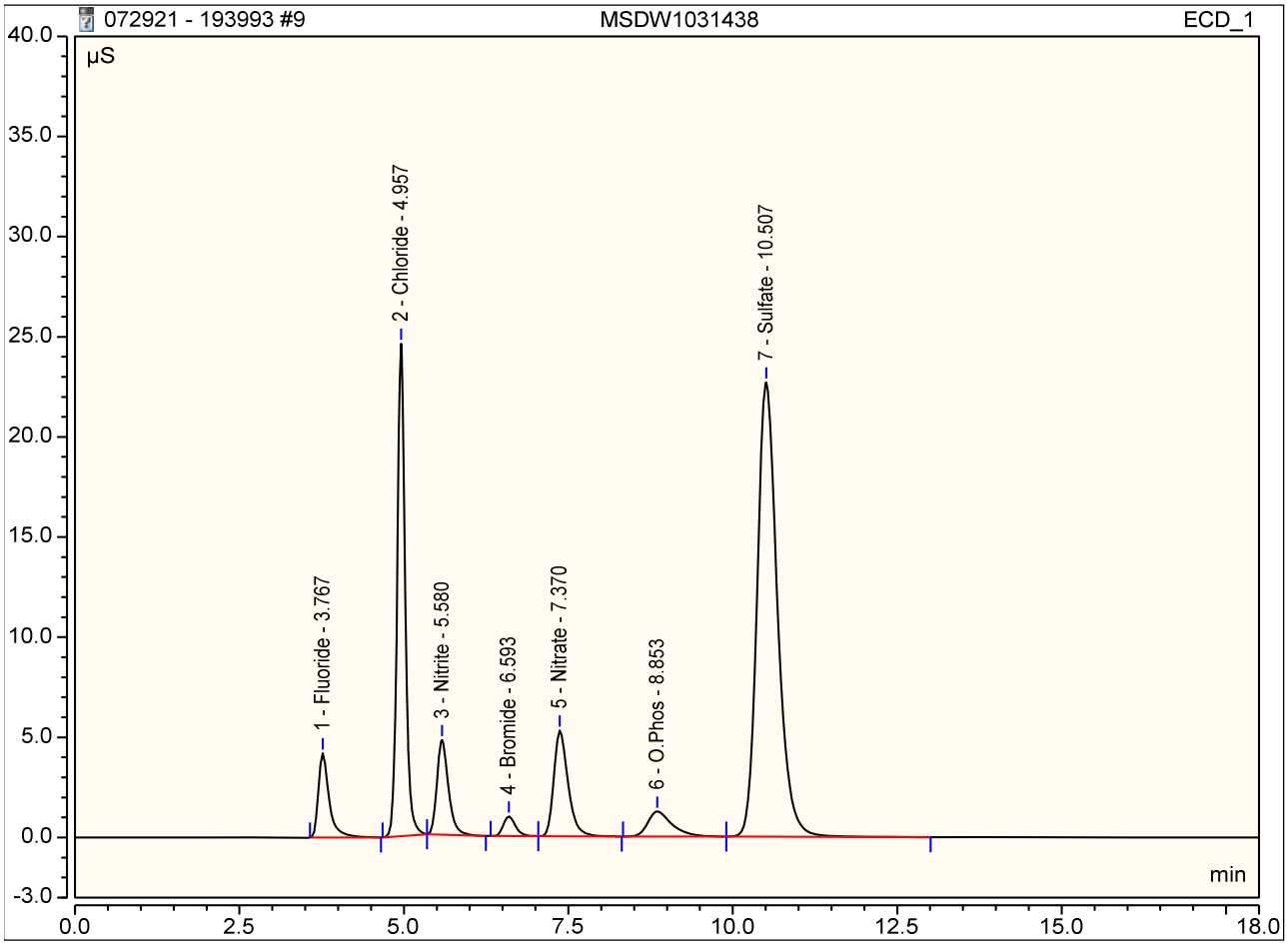
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	0.777	4.070	2.2063
2	4.96	Chloride	3.409	24.283	11.9347
3	5.58	Nitrite	0.944	4.644	2.0434
4	6.60	Bromide	0.206	0.955	2.1146
5	7.37	Nitrate	1.300	5.161	2.1157
6	8.86	O.Phos	0.433	0.988	1.6807
7	10.51	Sulfate	8.082	22.527	40.3513



Peak Integration Report

Sample Name:	**MSDW1031438**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Jul-2021 / 14:11**	*Run Time:*	**18.00**

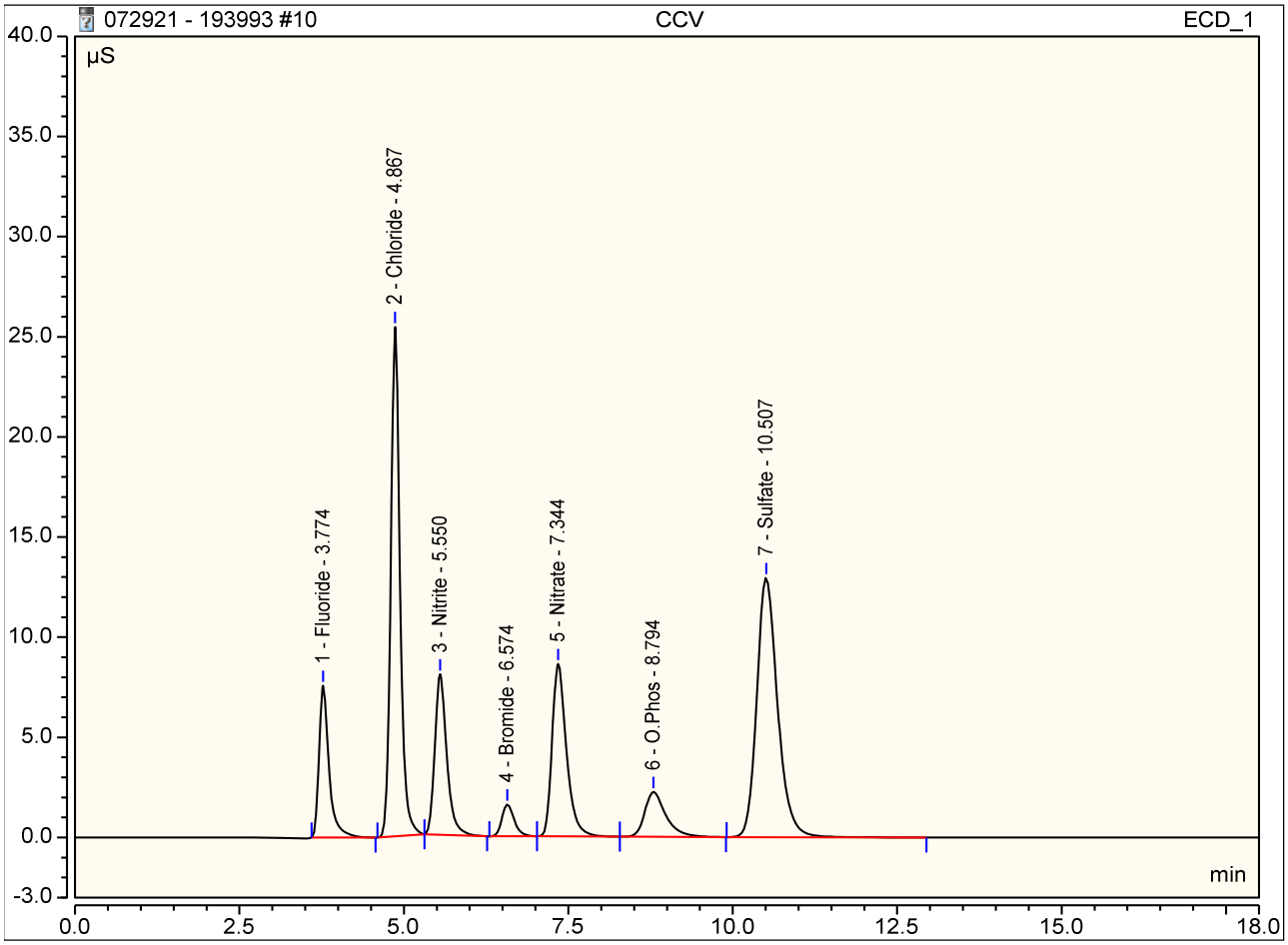
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	0.799	4.208	2.2661
2	4.96	Chloride	3.461	24.593	12.1060
3	5.58	Nitrite	0.961	4.729	2.0786
4	6.59	Bromide	0.211	0.980	2.1640
5	7.37	Nitrate	1.326	5.280	2.1559
6	8.85	O.Phos	0.532	1.244	2.1087
7	10.51	Sulfate	8.123	22.683	40.5546



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Jul-2021 / 14:30**	*Run Time:*	**18.00**

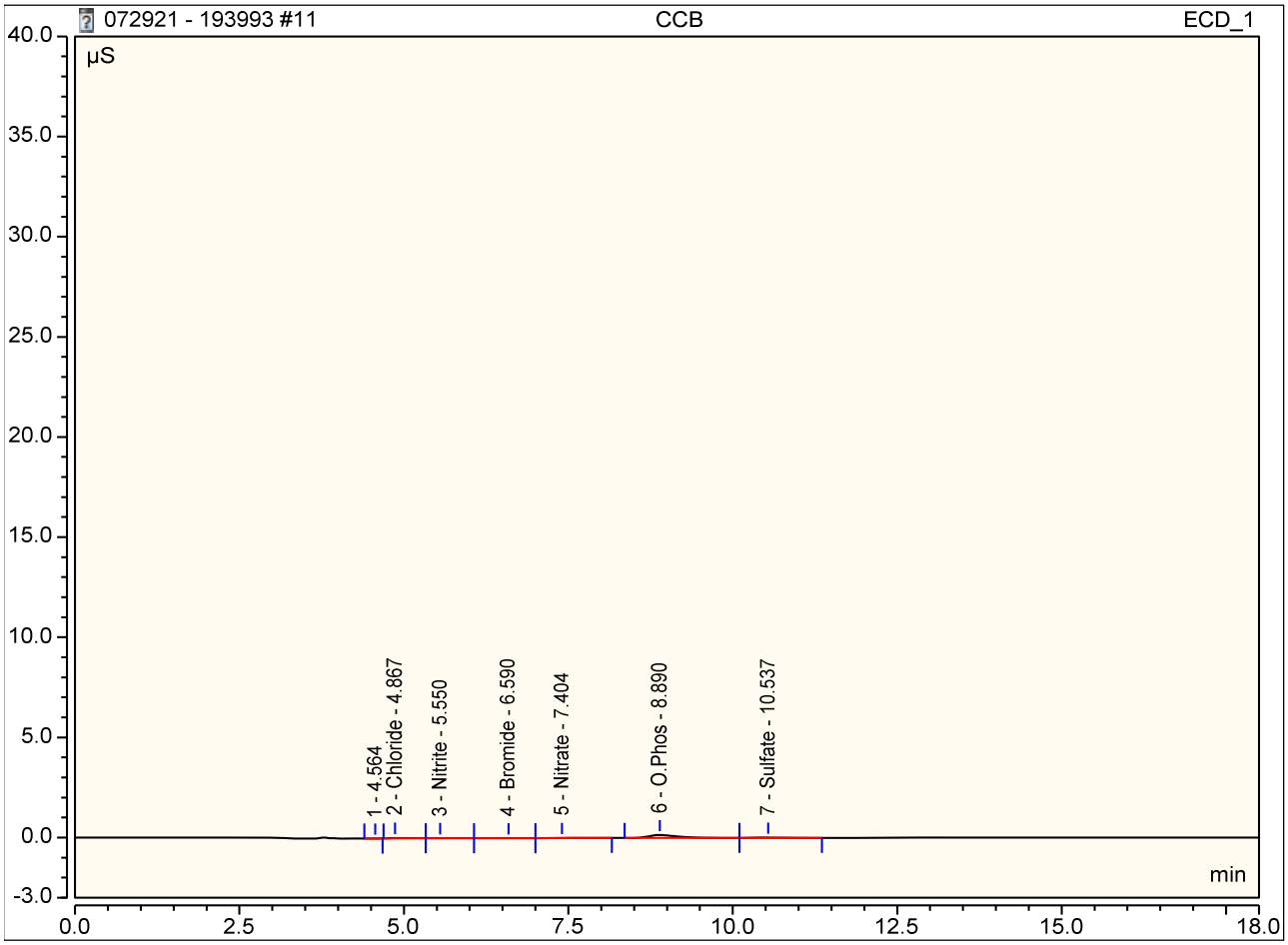
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	1.327	7.575	3.7121
2	4.87	Chloride	4.112	25.436	14.2755
3	5.55	Nitrite	1.694	8.014	3.6526
4	6.57	Bromide	0.348	1.592	3.5704
5	7.34	Nitrate	2.181	8.609	3.4957
6	8.79	O.Phos	0.833	2.240	3.4059
7	10.51	Sulfate	4.751	12.949	24.0070



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**29-Jul-2021 / 14:48**	*Run Time:*	**18.00**

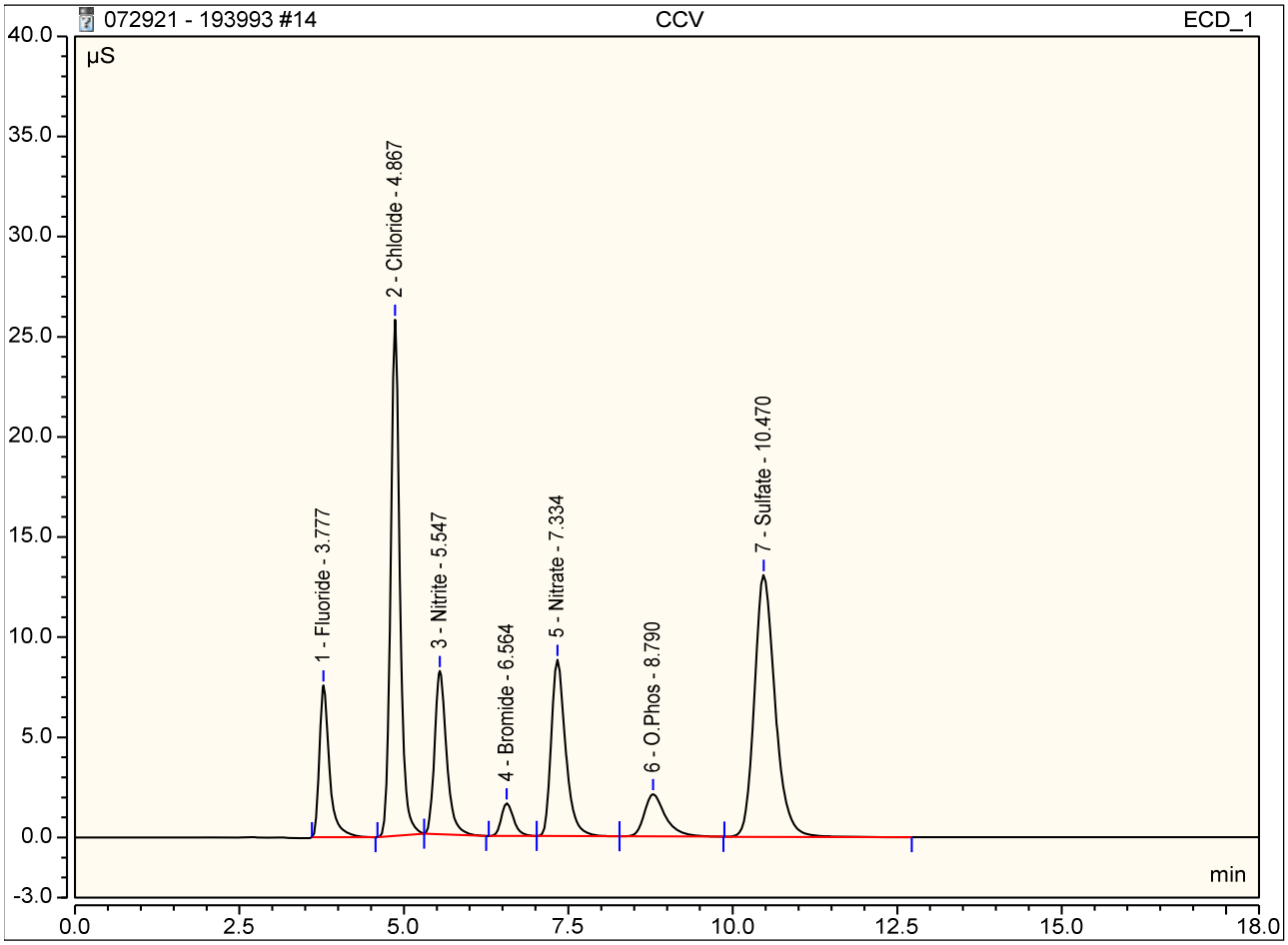
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	4.87	Chloride	0.007	0.036	0.5989
3	5.55	Nitrite	0.003	0.013	0.0232
4	6.59	Bromide	0.001	0.005	0.0057
5	7.40	Nitrate	0.004	0.014	0.0848
6	8.89	O.Phos	0.073	0.147	0.1259
7	10.54	Sulfate	0.007	0.017	0.7272



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**02-Aug-2021 / 14:26**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.78	Fluoride	1.344	7.589	3.7594
2	4.87	Chloride	4.175	25.776	14.4861
3	5.55	Nitrite	1.725	8.158	3.7204
4	6.56	Bromide	0.355	1.633	3.6471
5	7.33	Nitrate	2.224	8.796	3.5635
6	8.79	O.Phos	0.783	2.115	3.1933
7	10.47	Sulfate	4.772	13.076	24.1086



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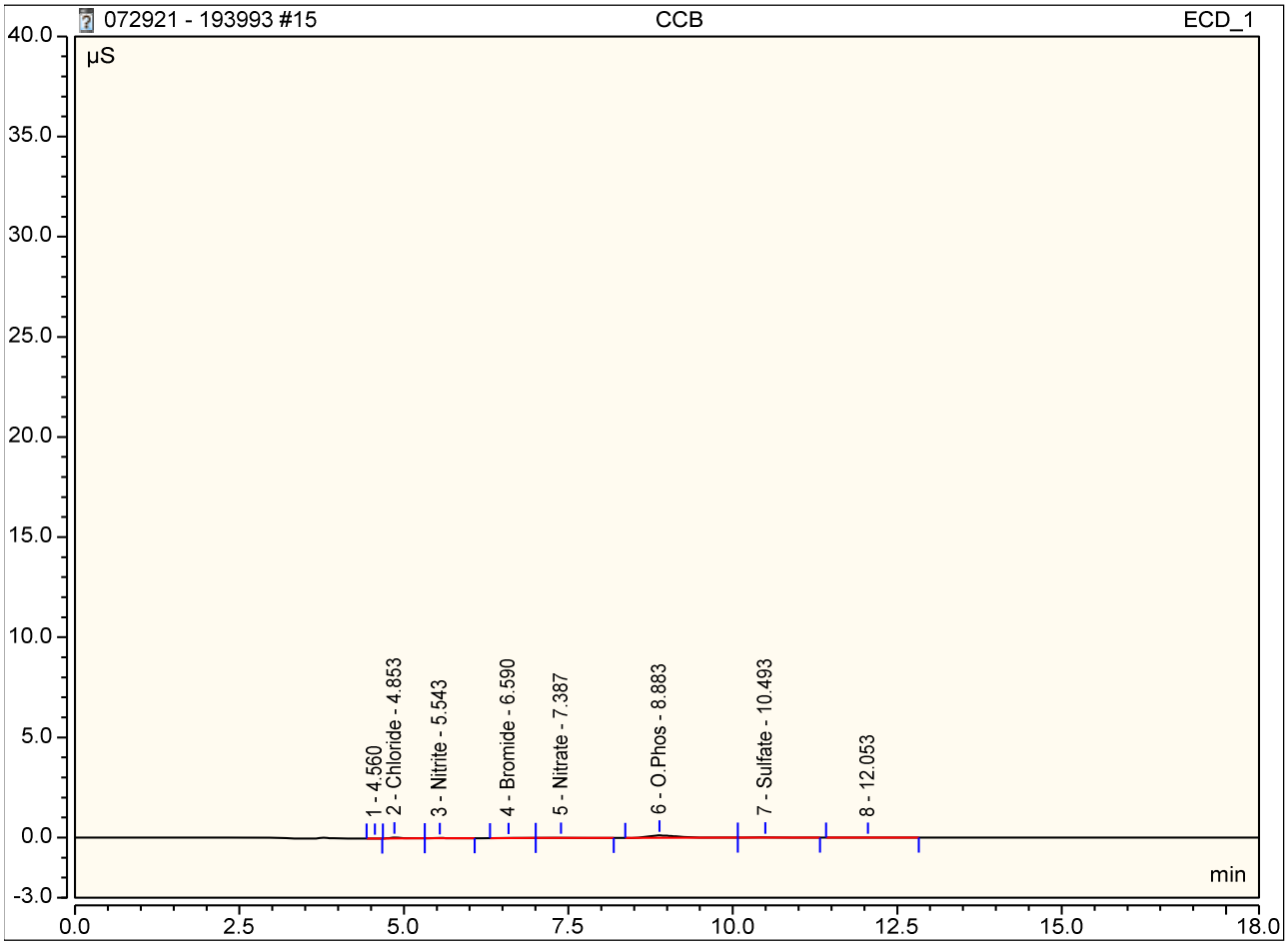
Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**02-Aug-2021 / 14:44**	*Run Time:*	**18.00**

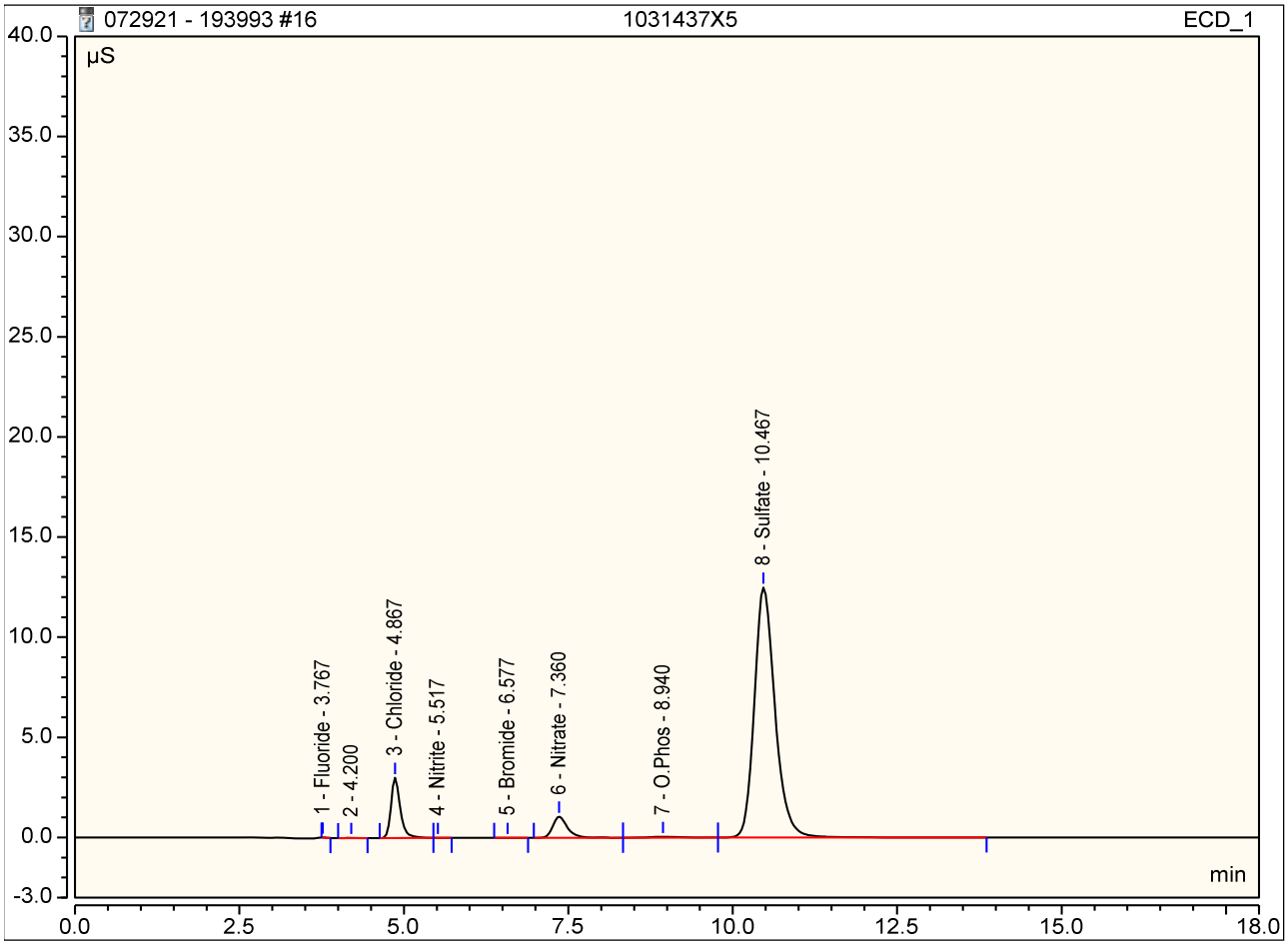
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	4.85	Chloride	0.009	0.047	0.6049
3	5.54	Nitrite	0.003	0.010	0.0223
4	6.59	Bromide	0.001	0.004	0.0023
5	7.39	Nitrate	0.005	0.016	0.0851
6	8.88	O.Phos	0.059	0.116	0.0638
7	10.49	Sulfate	0.005	0.013	0.7208



Peak Integration Report

Sample Name:	**1031437X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**02-Aug-2021 / 15:02**	*Run Time:*	**18.00**

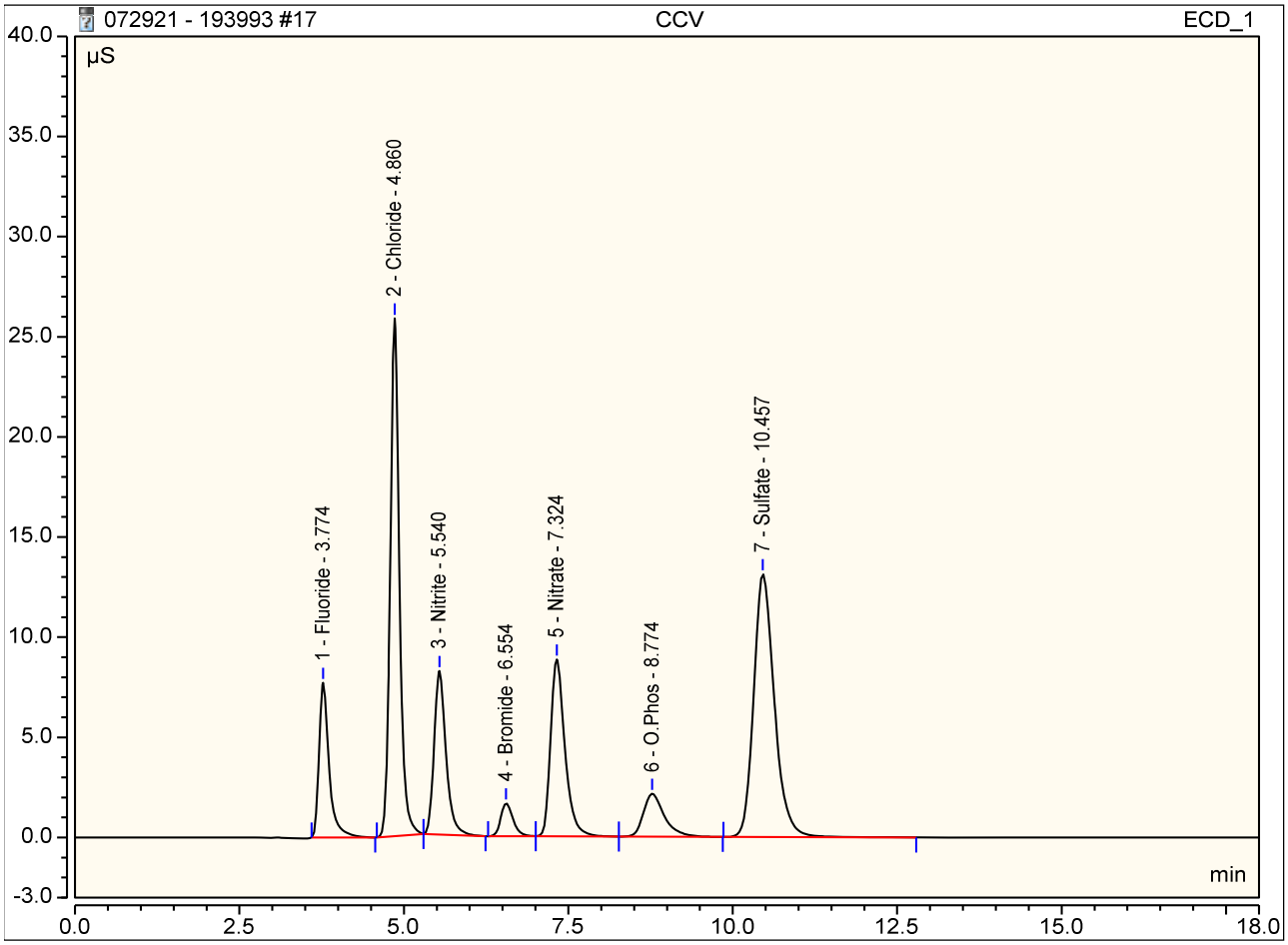
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	0.001	0.006	0.0784
3	4.87	Chloride	0.495	3.009	2.2235
4	5.52	Nitrite	0.000	0.003	0.0176
5	6.58	Bromide	0.001	0.003	n.a.
6	7.36	Nitrate	0.274	1.060	0.5066
7	8.94	O.Phos	0.021	0.041	n.a.
8	10.47	Sulfate	4.570	12.486	23.1175



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**02-Aug-2021 / 15:20**	*Run Time:*	**18.00**

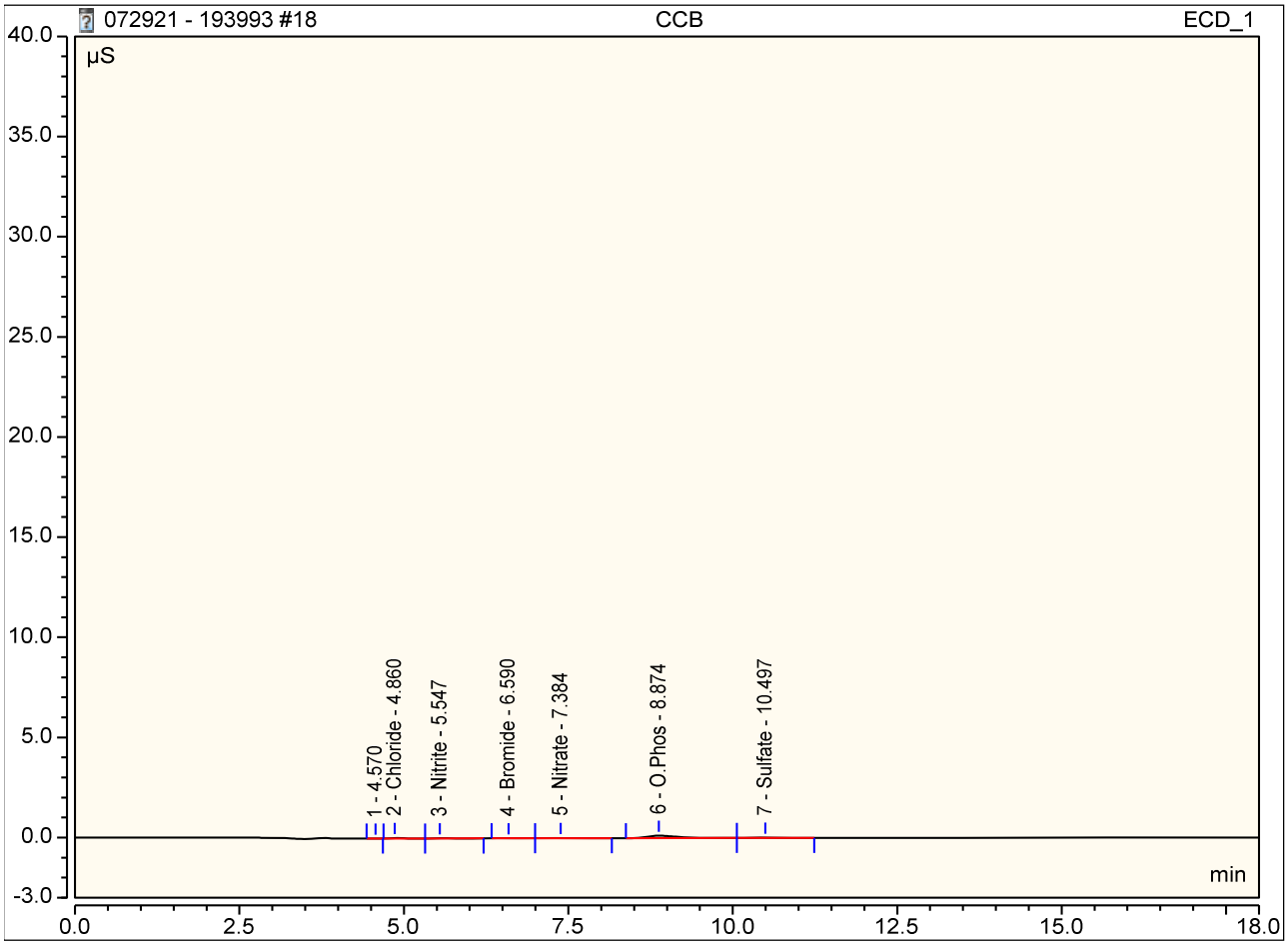
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	1.359	7.716	3.7987
2	4.86	Chloride	4.179	25.838	14.5012
3	5.54	Nitrite	1.721	8.160	3.7097
4	6.55	Bromide	0.356	1.640	3.6590
5	7.32	Nitrate	2.225	8.826	3.5641
6	8.77	O.Phos	0.792	2.144	3.2288
7	10.46	Sulfate	4.788	13.134	24.1897



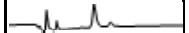
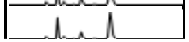
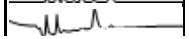
Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**02-Aug-2021 / 15:38**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	4.86	Chloride	0.007	0.035	0.5981
3	5.55	Nitrite	0.003	0.011	0.0229
4	6.59	Bromide	0.001	0.004	0.0018
5	7.38	Nitrate	0.004	0.013	0.0835
6	8.87	O.Phos	0.061	0.124	0.0750
7	10.50	Sulfate	0.006	0.015	0.7233



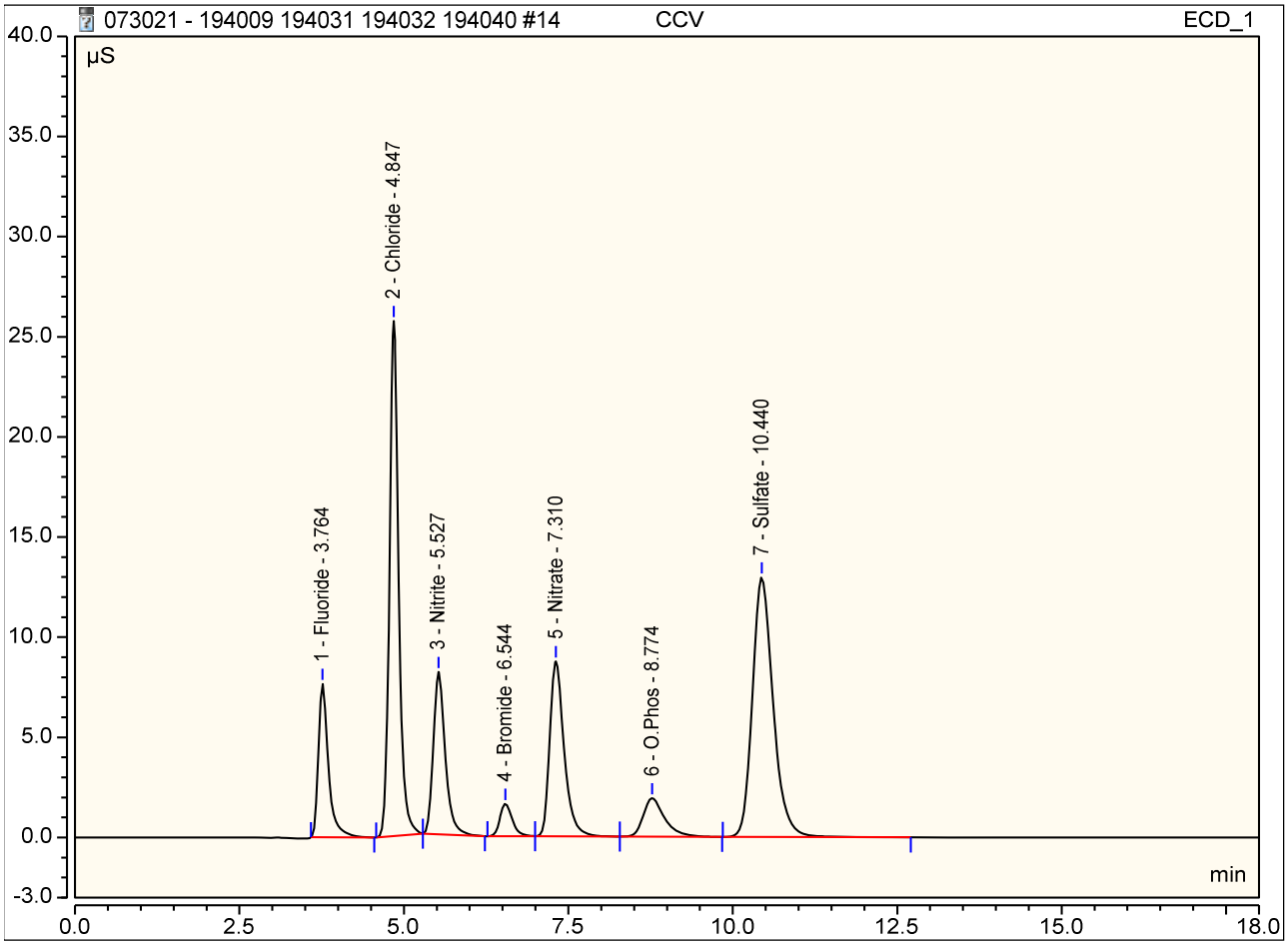
Sequence: 073021 - 194009 194031 194032 194040
Last Update Operator: aquion

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	CCV	1.0000	Unknown		14	5000	Anions	IC3602A	Finished
	LCSW	1.0000	Unknown		15	5000	Anions	IC3602A	Finished
	MBW-CCB	1.0000	Unknown		16	5000	Anions	IC3602A	Finished
	1031957	1.0000	Unknown		17	5000	Anions	IC3602A	Finished
	1031958	1.0000	Unknown		18	5000	Anions	IC3602A	Finished
	1031959	1.0000	Unknown		19	5000	Anions	IC3602A	Finished
	1031961	1.0000	Unknown		20	5000	Anions	IC3602A	Finished
	DUP1031961	1.0000	Unknown		21	5000	Anions	IC3602A	Finished
	MSW1031961	1.0000	Unknown		22	5000	Anions	IC3602A	Finished
	MSDW1031961	1.0000	Unknown		23	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		27	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		28	5000	Anions	IC3602A	Finished

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**30-Jul-2021 / 11:57**	*Run Time:*	**18.00**

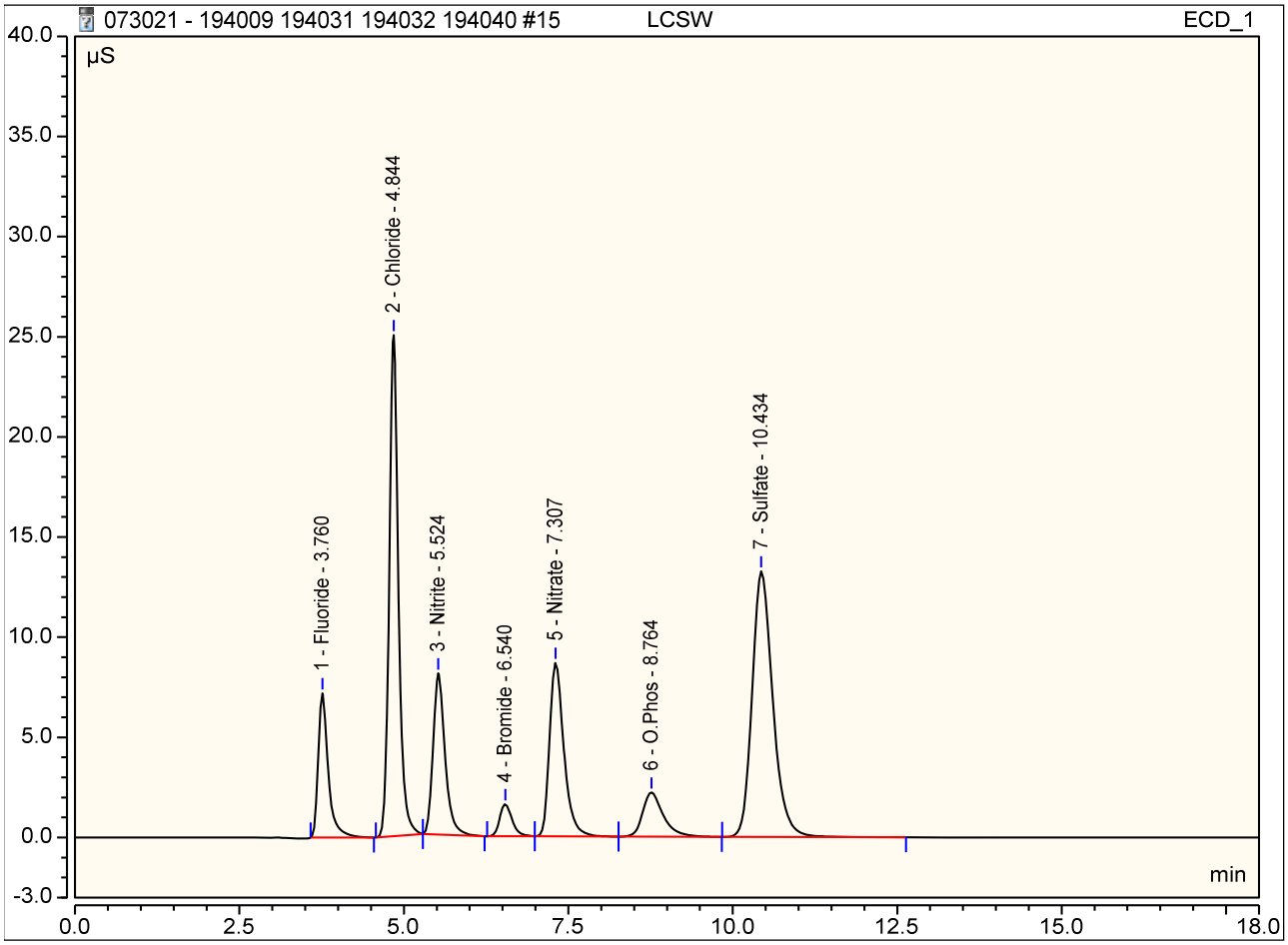
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	1.355	7.668	3.7887
2	4.85	Chloride	4.174	25.722	14.4816
3	5.53	Nitrite	1.713	8.108	3.6947
4	6.54	Bromide	0.353	1.618	3.6191
5	7.31	Nitrate	2.211	8.736	3.5434
6	8.77	O.Phos	0.724	1.926	2.9388
7	10.44	Sulfate	4.738	12.965	23.9448



Peak Integration Report

Sample Name:	**LCSW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**30-Jul-2021 / 12:15**	*Run Time:*	**18.00**

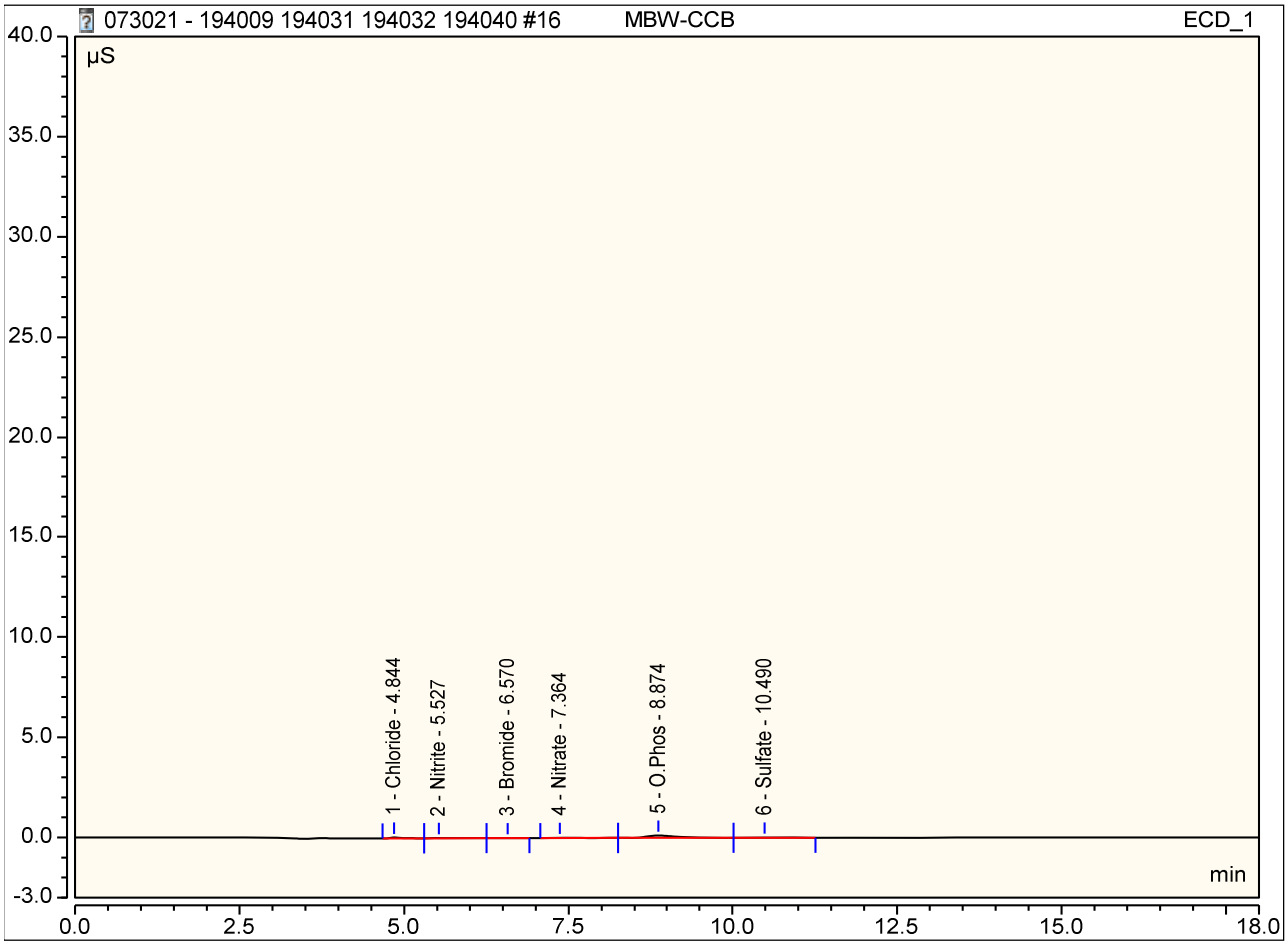
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	1.267	7.203	3.5479
2	4.84	Chloride	4.071	25.020	14.1403
3	5.52	Nitrite	1.702	8.047	3.6697
4	6.54	Bromide	0.349	1.602	3.5842
5	7.31	Nitrate	2.193	8.668	3.5141
6	8.76	O.Phos	0.804	2.213	3.2827
7	10.43	Sulfate	4.843	13.266	24.4575



Peak Integration Report

Sample Name:	**MBW-CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**30-Jul-2021 / 12:33**	*Run Time:*	**18.00**

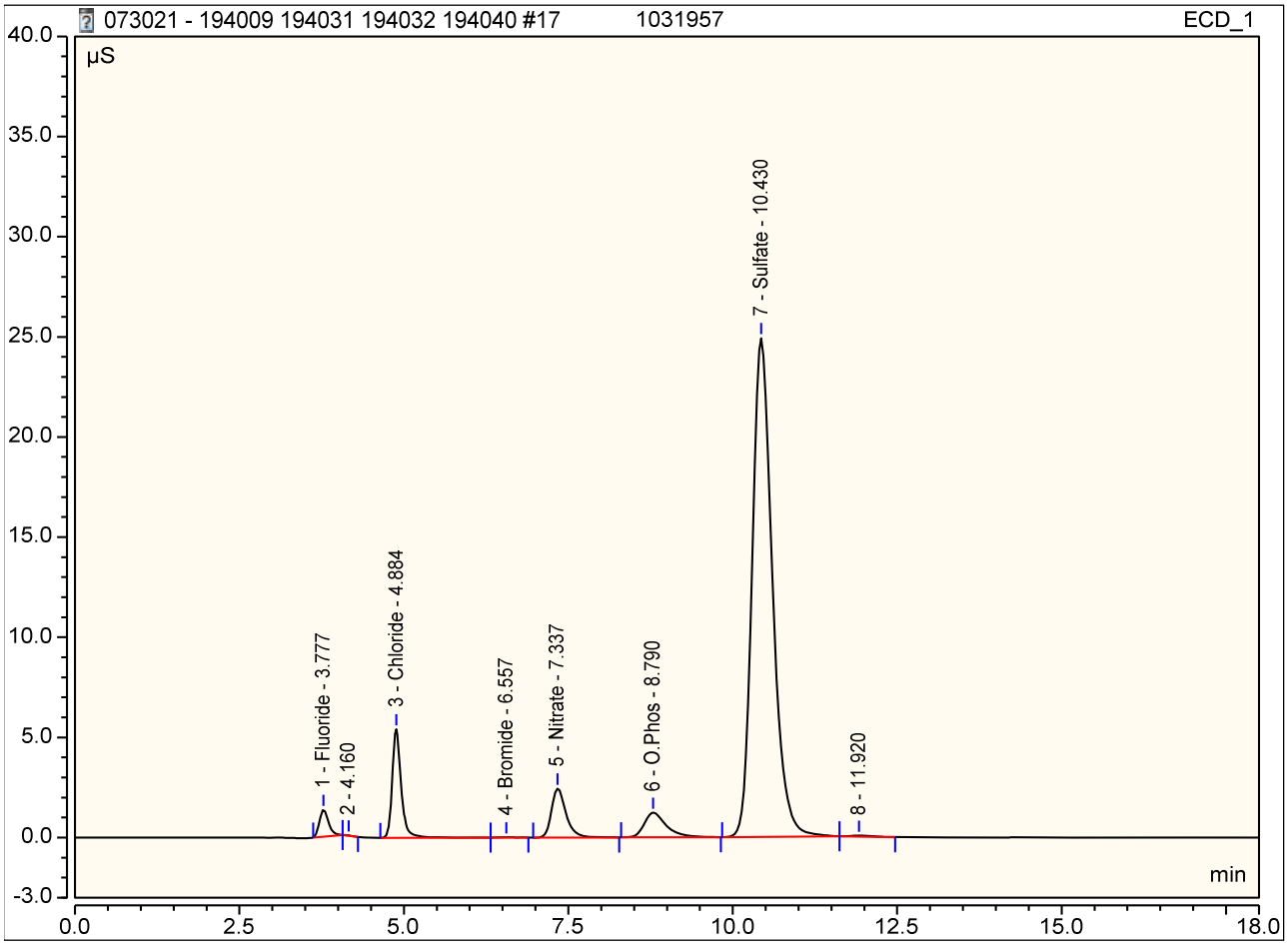
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.84	Chloride	0.008	0.041	0.6025
2	5.53	Nitrite	0.004	0.015	0.0248
3	6.57	Bromide	0.001	0.005	0.0041
4	7.36	Nitrate	0.005	0.017	0.0858
5	8.87	O.Phos	0.058	0.115	0.0606
6	10.49	Sulfate	0.007	0.017	0.7295



Peak Integration Report

Sample Name:	**1031957**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**30-Jul-2021 / 12:51**	*Run Time:*	**18.00**

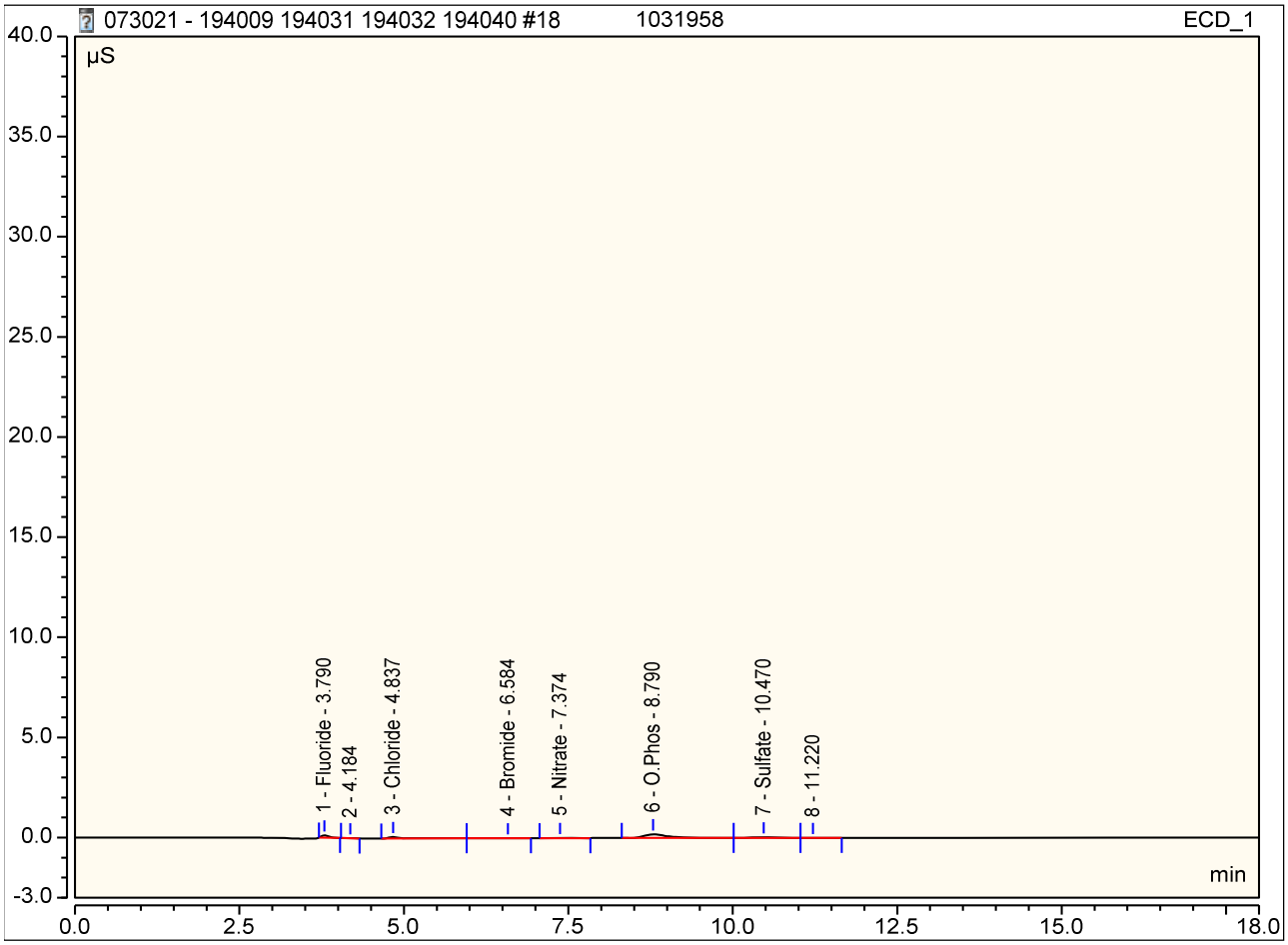
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.78	Fluoride	0.213	1.339	0.6614
3	4.88	Chloride	0.855	5.427	3.4258
4	6.56	Bromide	0.003	0.016	0.0267
5	7.34	Nitrate	0.628	2.449	1.0621
6	8.79	O.Phos	0.478	1.232	1.8748
7	10.43	Sulfate	8.892	24.907	44.3239



Peak Integration Report

Sample Name:	**1031958**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**30-Jul-2021 / 13:09**	*Run Time:*	**18.00**

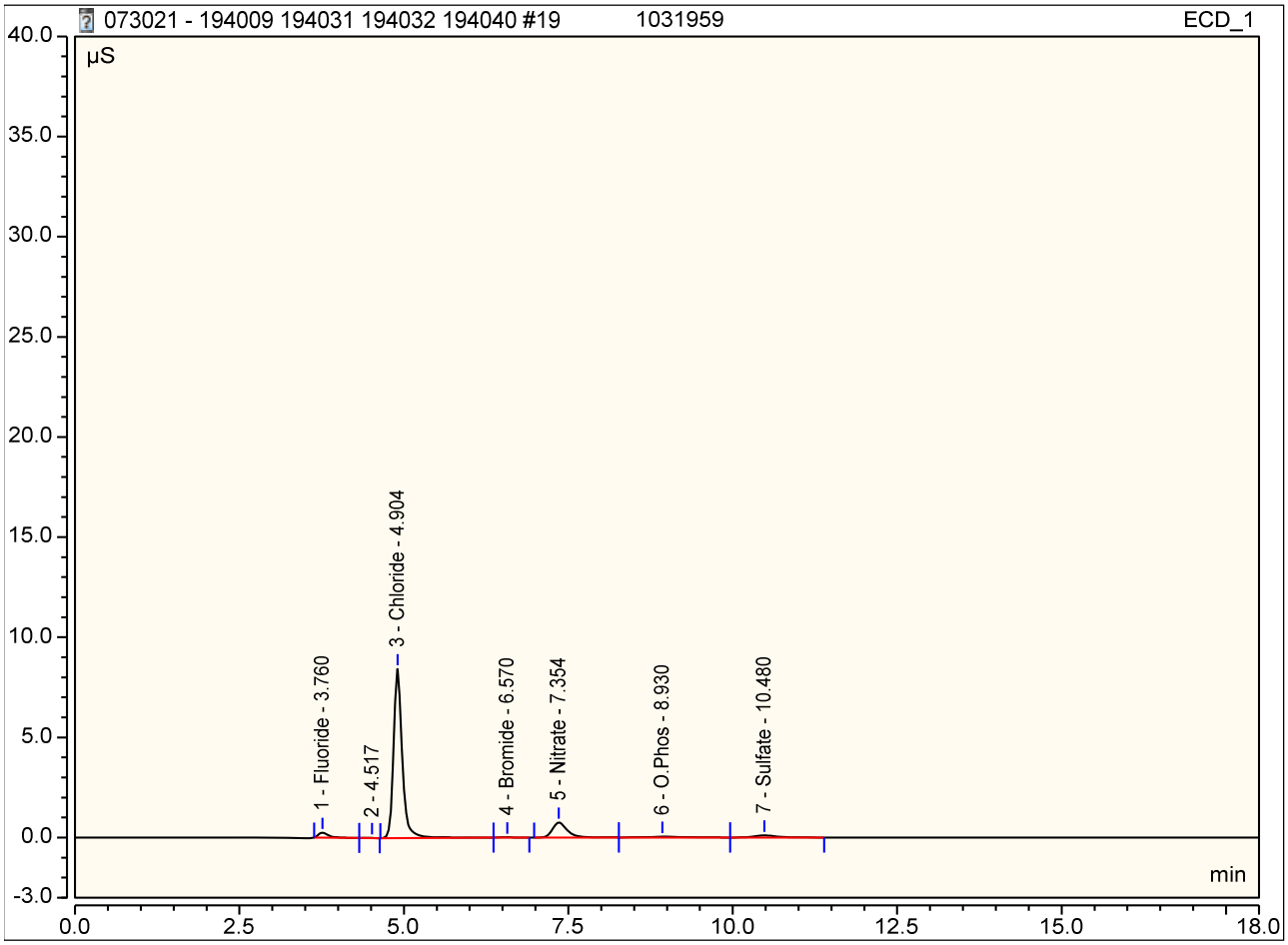
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.79	Fluoride	0.015	0.116	0.1174
3	4.84	Chloride	0.013	0.074	0.6199
4	6.58	Bromide	0.001	0.003	0.0006
5	7.37	Nitrate	0.002	0.008	0.0812
6	8.79	O.Phos	0.077	0.186	0.1433
7	10.47	Sulfate	0.012	0.034	0.7549



Peak Integration Report

Sample Name:	**1031959**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**30-Jul-2021 / 13:27**	*Run Time:*	**18.00**

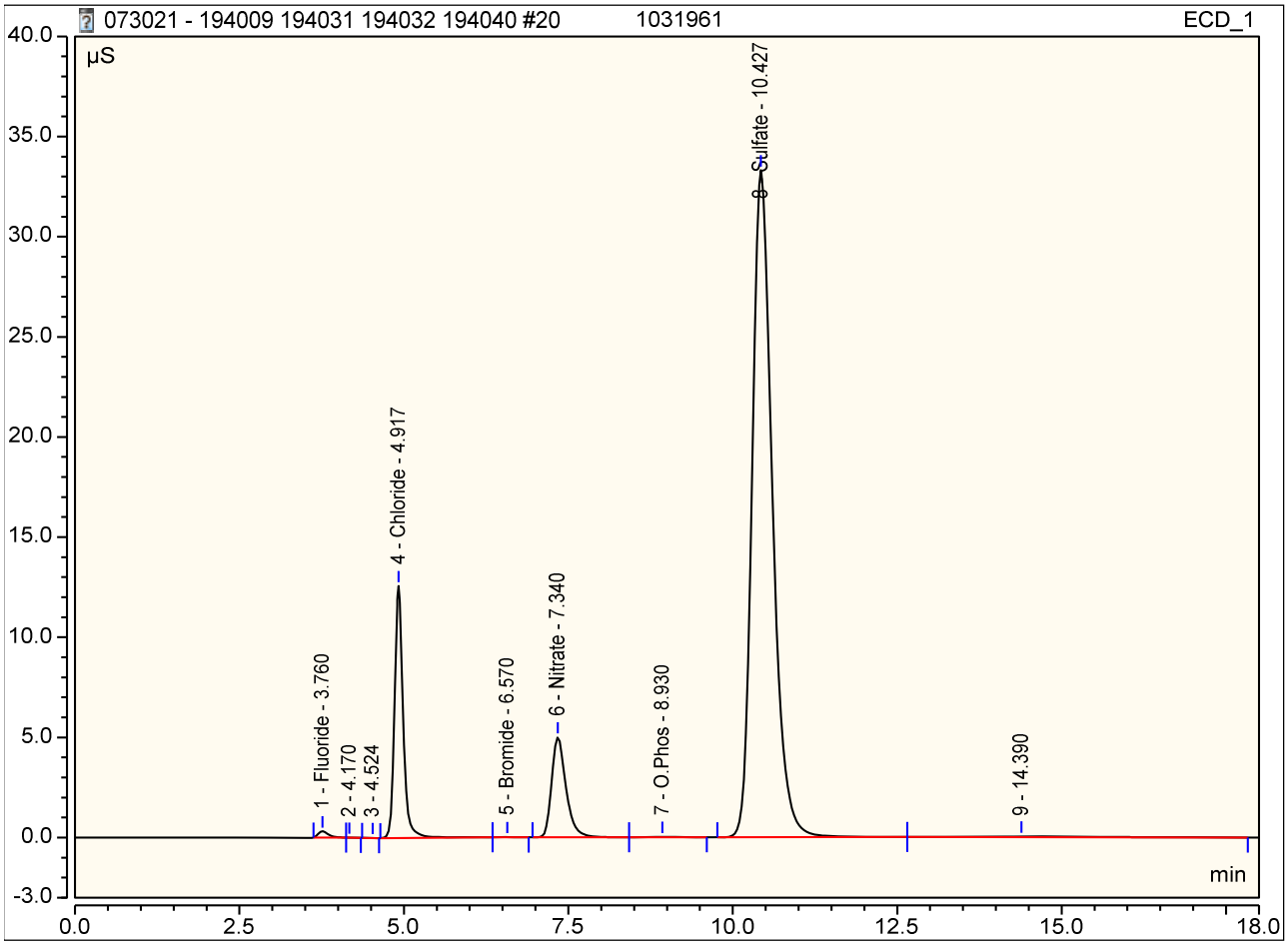
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.043	0.245	0.1944
3	4.90	Chloride	1.284	8.433	4.8532
4	6.57	Bromide	0.001	0.006	0.0044
5	7.35	Nitrate	0.193	0.748	0.3799
6	8.93	O.Phos	0.019	0.035	n.a.
7	10.48	Sulfate	0.037	0.099	0.8761



Peak Integration Report

Sample Name:	**1031961**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**30-Jul-2021 / 13:45**	*Run Time:*	**18.00**

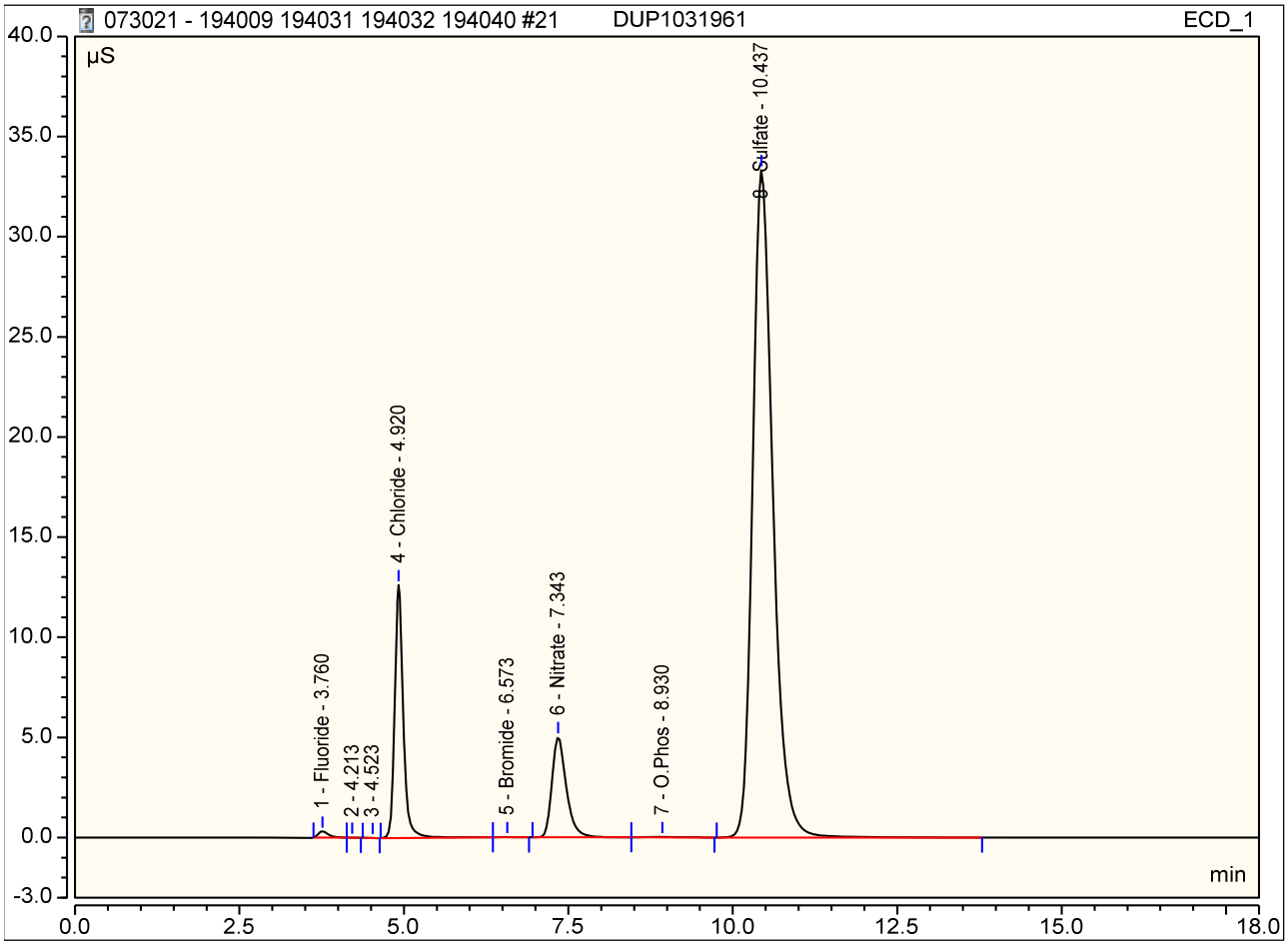
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.054	0.312	0.2237
4	4.92	Chloride	1.869	12.580	6.8027
5	6.57	Bromide	0.004	0.019	0.0326
6	7.34	Nitrate	1.269	4.999	2.0660
7	8.93	O.Phos	0.013	0.026	n.a.
8	10.43	Sulfate	11.877	33.302	58.9726



Peak Integration Report

Sample Name:	**DUP1031961**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**30-Jul-2021 / 14:04**	*Run Time:*	**18.00**

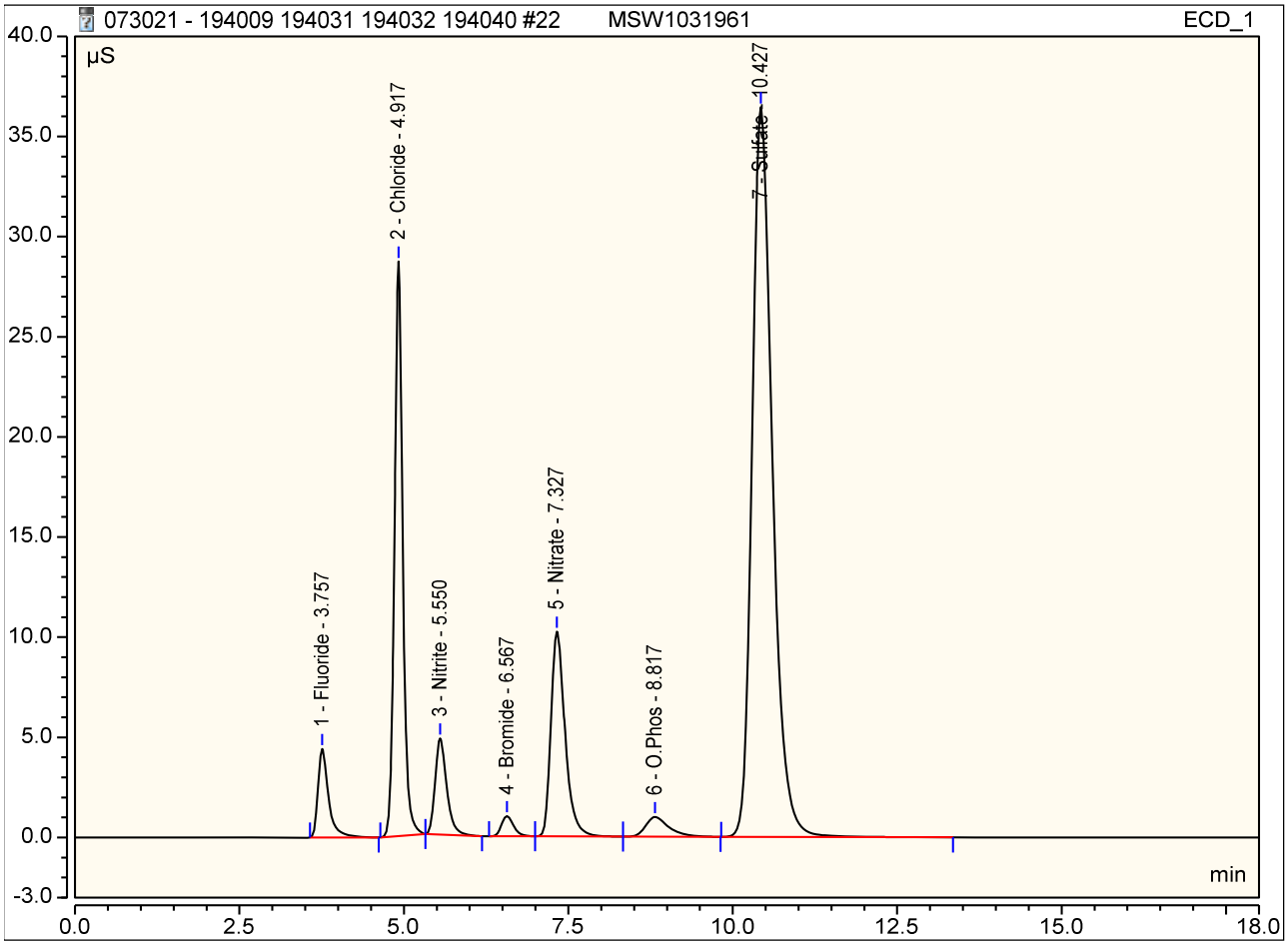
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.053	0.307	0.2228
4	4.92	Chloride	1.872	12.632	6.8138
5	6.57	Bromide	0.004	0.019	0.0324
6	7.34	Nitrate	1.272	5.009	2.0711
7	8.93	O.Phos	0.011	0.022	n.a.
8	10.44	Sulfate	11.906	33.326	59.1160



Peak Integration Report

Sample Name:	**MSW1031961**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**30-Jul-2021 / 14:22**	*Run Time:*	**18.00**

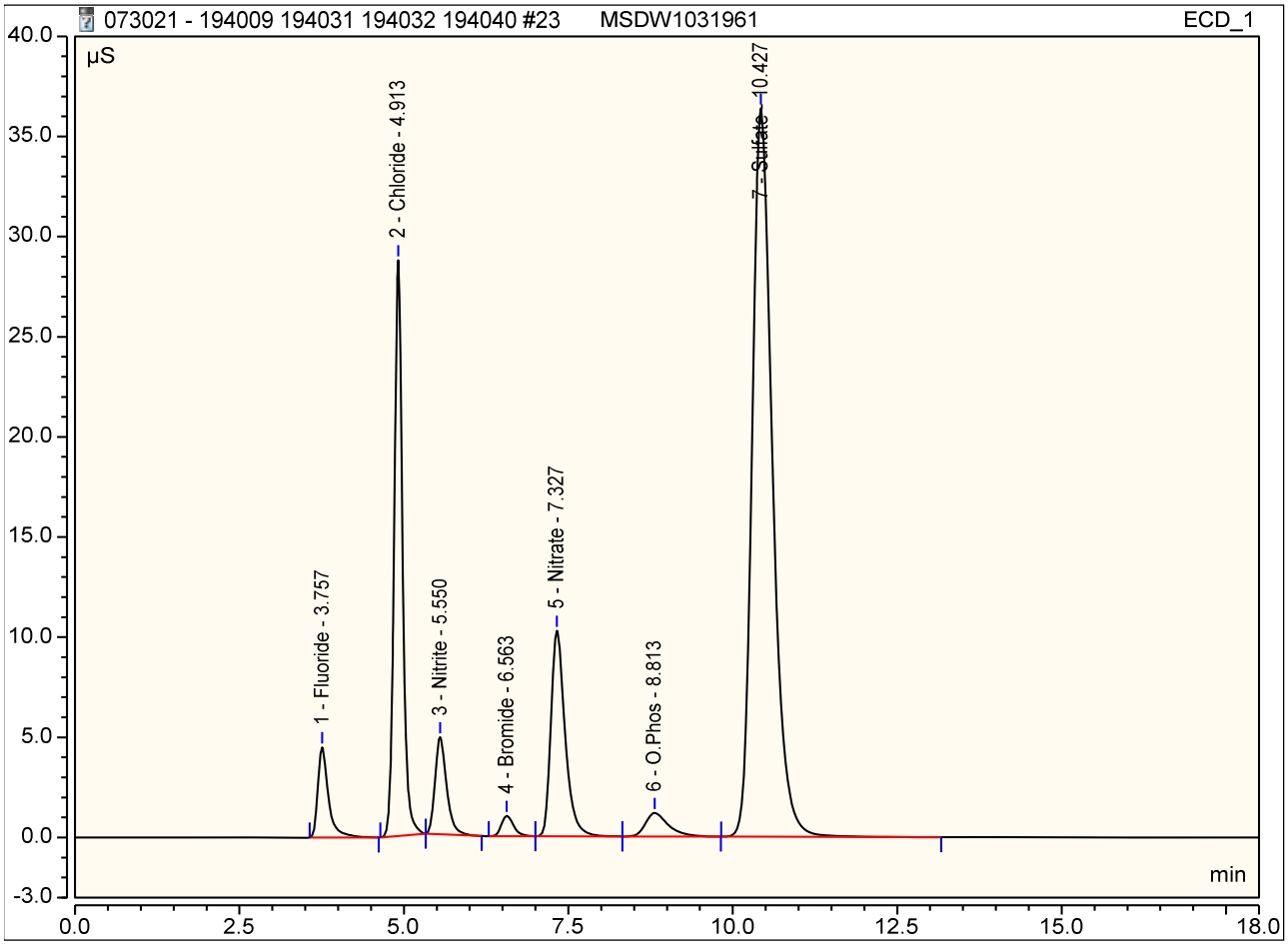
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.821	4.419	2.3262
2	4.92	Chloride	4.183	28.683	14.5129
3	5.55	Nitrite	0.983	4.806	2.1277
4	6.57	Bromide	0.217	1.007	2.2235
5	7.33	Nitrate	2.551	10.217	4.0753
6	8.82	O.Phos	0.401	0.982	1.5445
7	10.43	Sulfate	12.987	36.430	64.4200



Peak Integration Report

Sample Name:	**MSDW1031961**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**30-Jul-2021 / 14:40**	*Run Time:*	**18.00**

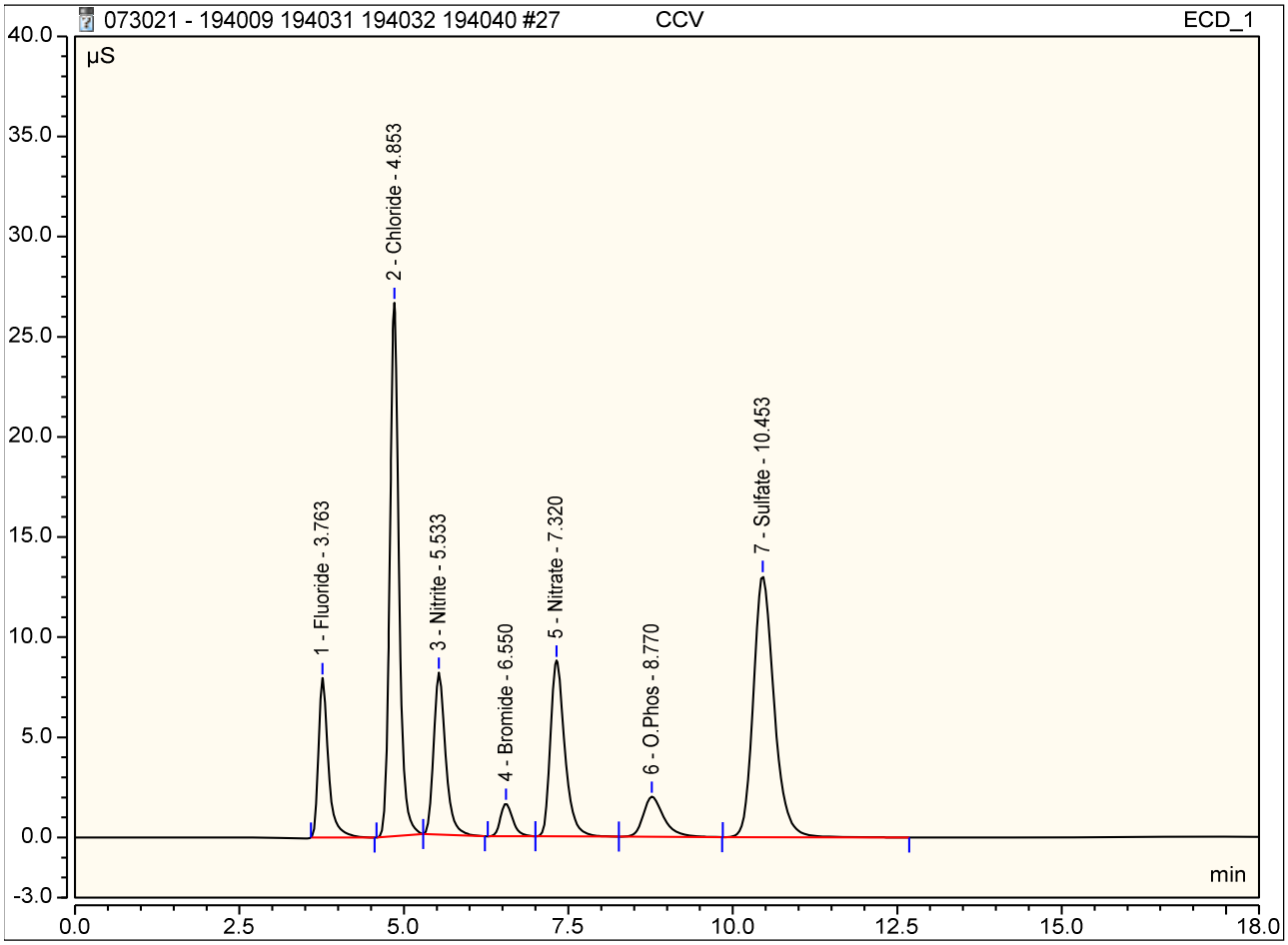
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.837	4.506	2.3707
2	4.91	Chloride	4.215	28.745	14.6205
3	5.55	Nitrite	0.993	4.855	2.1484
4	6.56	Bromide	0.220	1.020	2.2525
5	7.33	Nitrate	2.569	10.266	4.1043
6	8.81	O.Phos	0.478	1.178	1.8735
7	10.43	Sulfate	12.988	36.367	64.4238



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**30-Jul-2021 / 15:52**	*Run Time:*	**18.00**

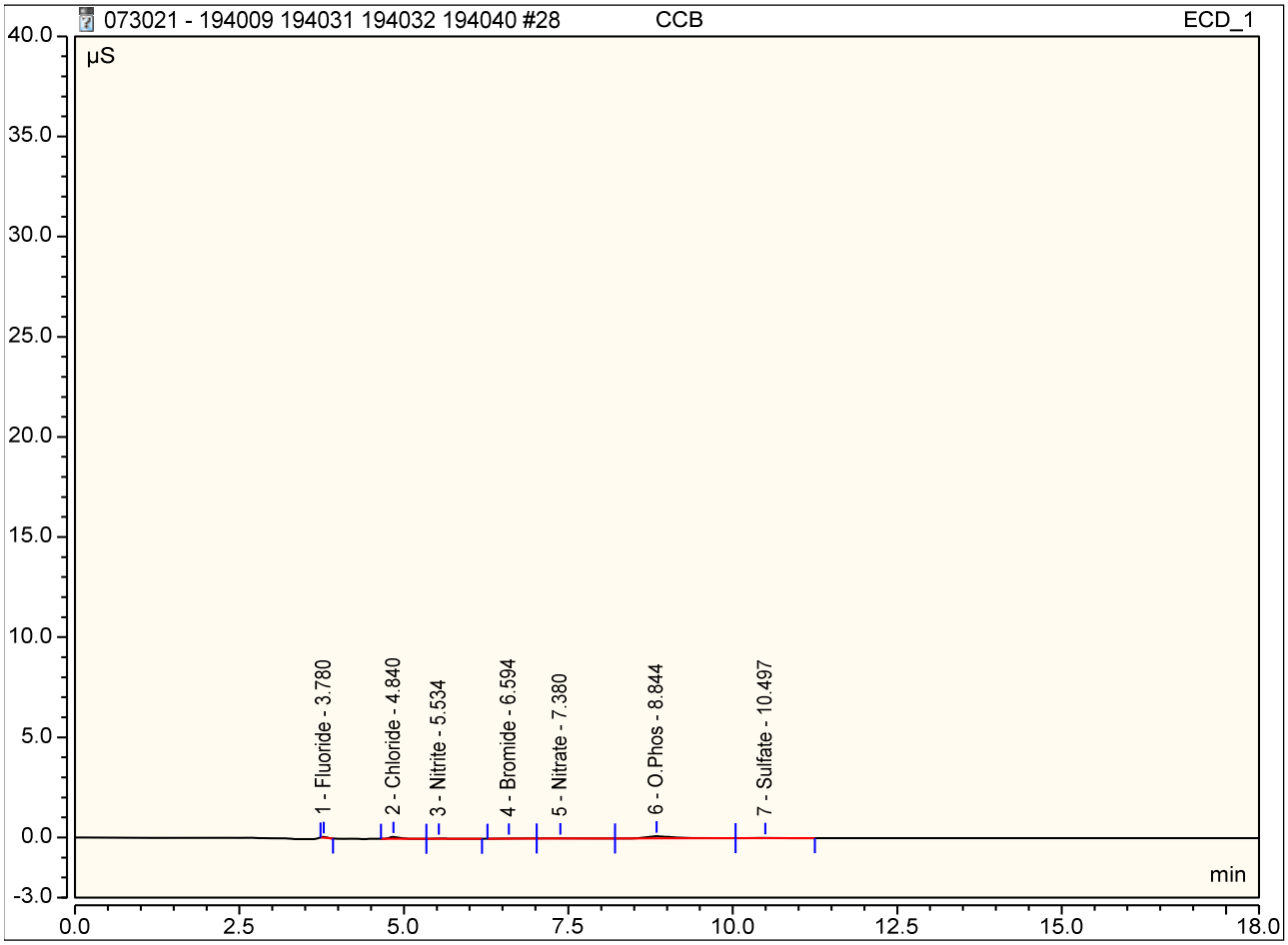
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	1.383	7.956	3.8643
2	4.85	Chloride	4.298	26.638	14.8977
3	5.53	Nitrite	1.707	8.093	3.6797
4	6.55	Bromide	0.356	1.632	3.6541
5	7.32	Nitrate	2.222	8.776	3.5608
6	8.77	O.Phos	0.723	2.007	2.9324
7	10.45	Sulfate	4.770	13.048	24.1012



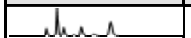
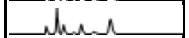
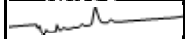
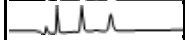
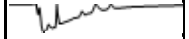
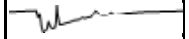
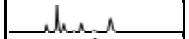
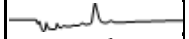
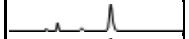
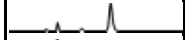
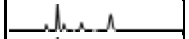
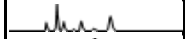
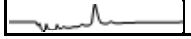
Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**30-Jul-2021 / 16:10**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.78	Fluoride	0.004	0.039	0.0873
2	4.84	Chloride	0.018	0.099	0.6362
3	5.53	Nitrite	0.003	0.011	0.0225
4	6.59	Bromide	0.001	0.004	0.0022
5	7.38	Nitrate	0.004	0.014	0.0843
6	8.84	O.Phos	0.049	0.101	0.0230
7	10.50	Sulfate	0.006	0.015	0.7235



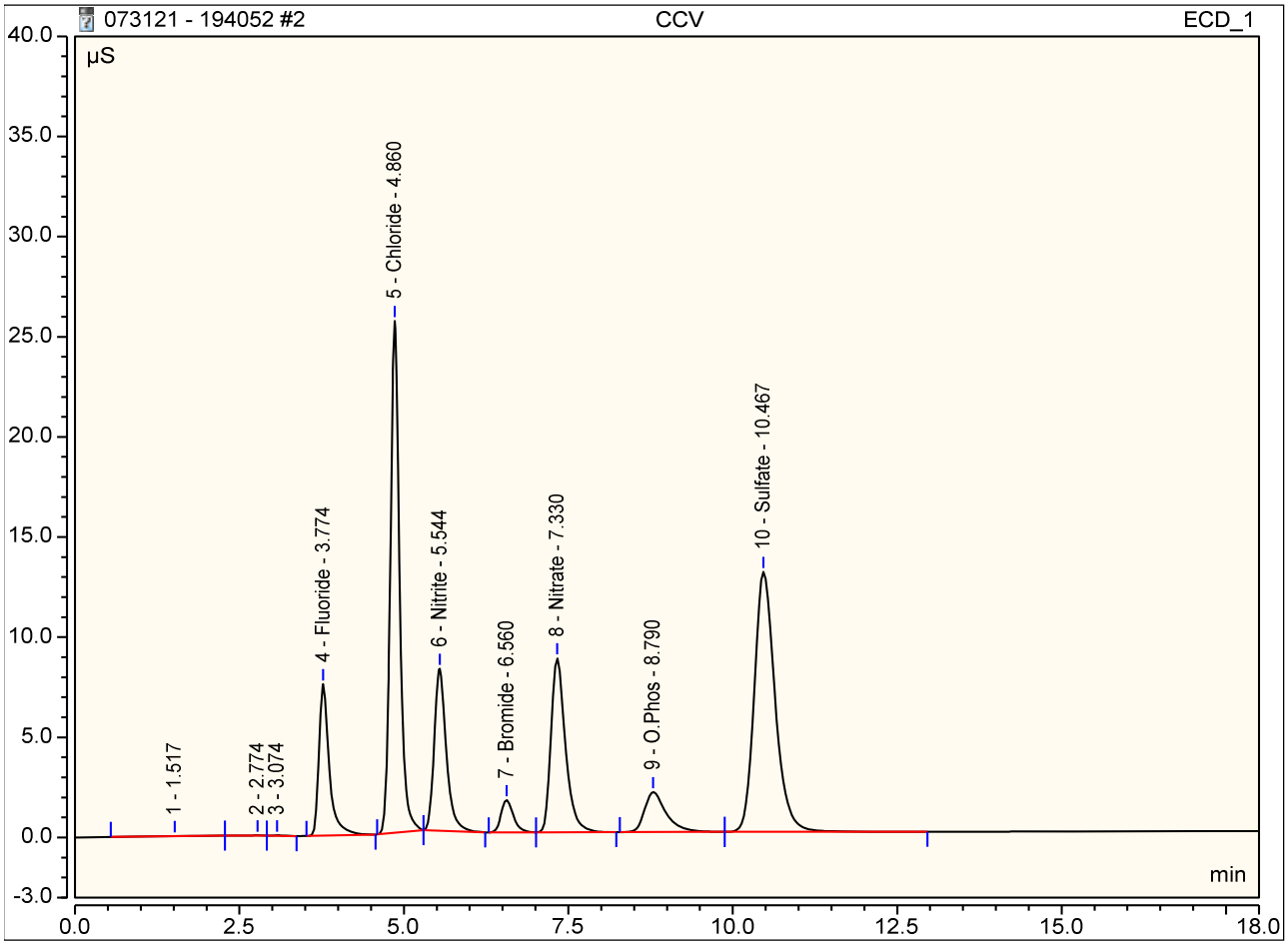
Sequence: 073121 - 194052
Last Update Operator: aquion

ECD_1	Name	Dilution	Type	Level	Position	Volume	Instrument Method	Processing Method	Status
	CCV	1.0000	Unknown		2	5000	Anions	IC3602A	Finished
	LCSW	1.0000	Unknown		3	5000	Anions	IC3602A	Finished
	MBW	1.0000	Unknown		4	5000	Anions	IC3602A	Finished
	1032207	1.0000	Unknown		5	5000	Anions	IC3602A	Finished
	1032207X5	1.0000	Unknown		6	5000	Anions	IC3602A	Finished
	1032208	1.0000	Unknown		7	5000	Anions	IC3602A	Finished
	1032208X5	1.0000	Unknown		8	5000	Anions	IC3602A	Finished
	1032210	1.0000	Unknown		9	5000	Anions	IC3602A	Finished
	1032210X5	1.0000	Unknown		10	5000	Anions	IC3602A	Finished
	1032211	1.0000	Unknown		11	5000	Anions	IC3602A	Finished
	1032211X5	1.0000	Unknown		12	5000	Anions	IC3602A	Finished
	1032212	1.0000	Unknown		13	5000	Anions	IC3602A	Finished
	1032212X5	1.0000	Unknown		14	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		15	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		16	5000	Anions	IC3602A	Finished
	1032213	1.0000	Unknown		17	5000	Anions	IC3602A	Finished
	1032213X5	1.0000	Unknown		18	5000	Anions	IC3602A	Finished
	DUP1032213	1.0000	Unknown		19	5000	Anions	IC3602A	Finished
	MSW1032213	1.0000	Unknown		20	5000	Anions	IC3602A	Finished
	MSDW1032213	1.0000	Unknown		21	5000	Anions	IC3602A	Finished
	CCV	1.0000	Unknown		22	5000	Anions	IC3602A	Finished
	CCB	1.0000	Unknown		23	5000	Anions	IC3602A	Finished

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**31-Jul-2021 / 21:51**	*Run Time:*	**18.00**

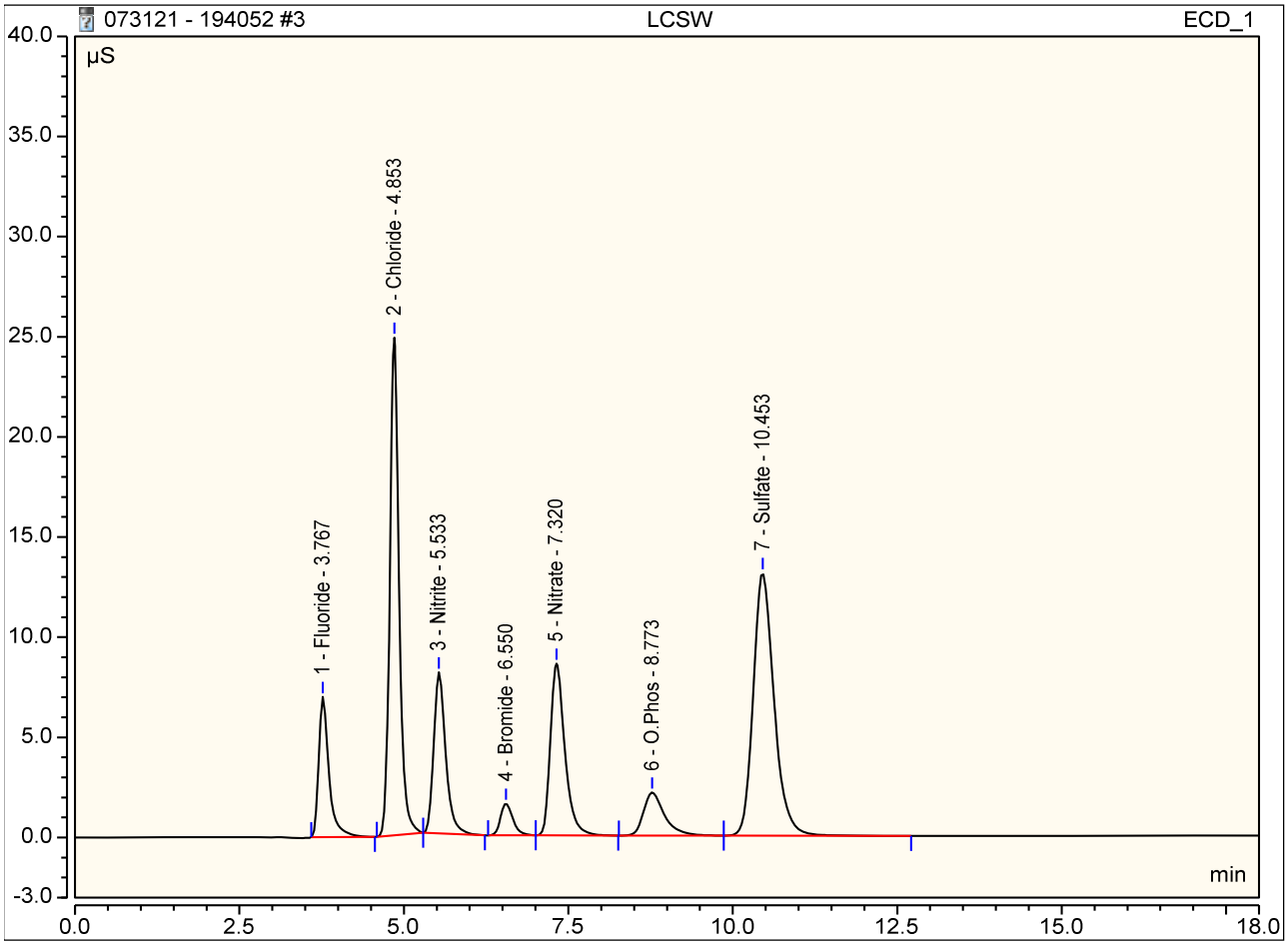
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
4	3.77	Fluoride	1.371	7.561	3.8324
5	4.86	Chloride	4.173	25.553	14.4800
6	5.54	Nitrite	1.727	8.092	3.7233
7	6.56	Bromide	0.354	1.612	3.6308
8	7.33	Nitrate	2.221	8.690	3.5586
9	8.79	O.Phos	0.761	2.000	3.0983
10	10.47	Sulfate	4.779	12.981	24.1427



Peak Integration Report

Sample Name:	**LCSW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**31-Jul-2021 / 22:09**	*Run Time:*	**18.00**

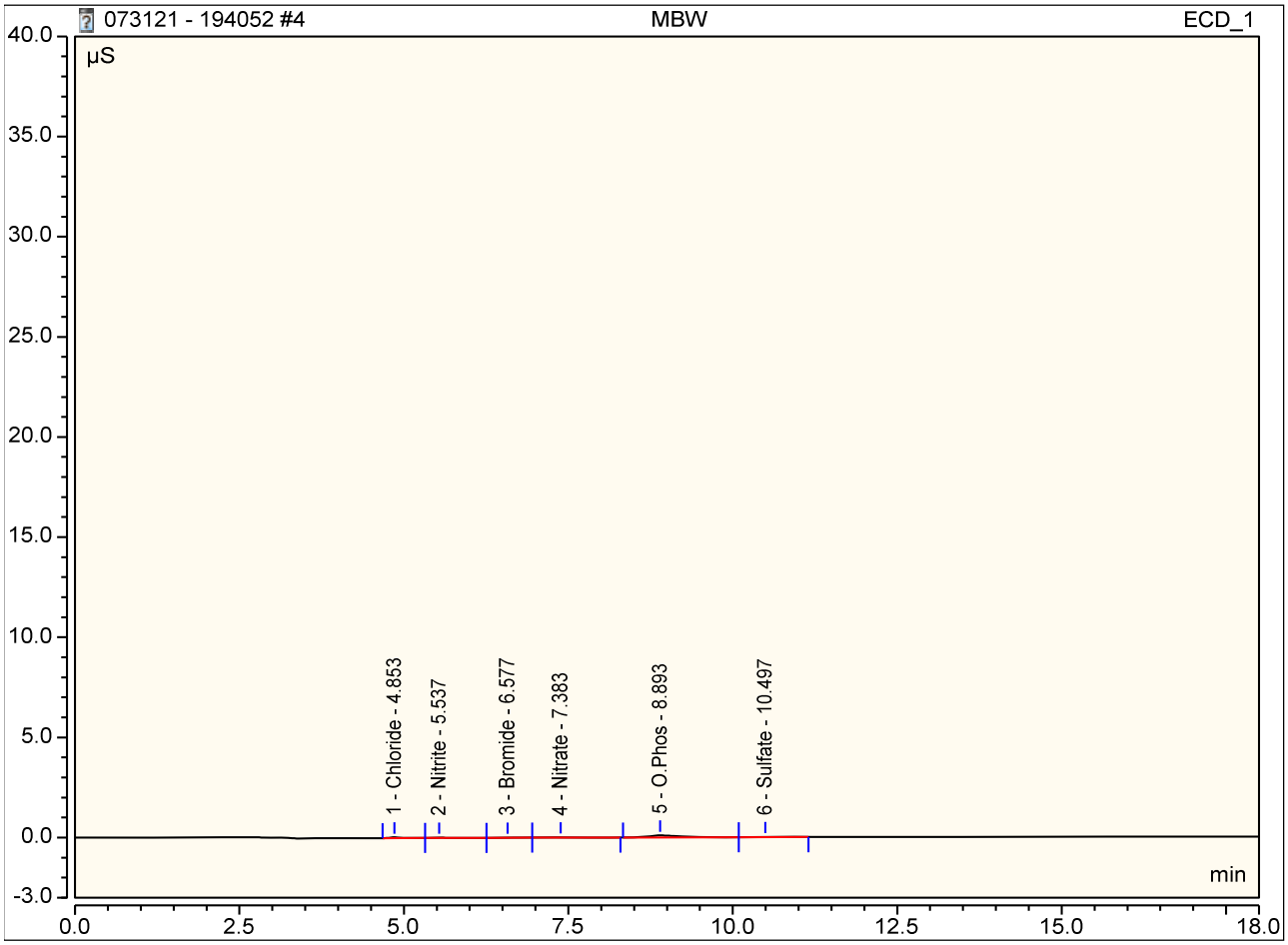
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	1.259	6.995	3.5266
2	4.85	Chloride	4.049	24.850	14.0662
3	5.53	Nitrite	1.709	8.042	3.6848
4	6.55	Bromide	0.348	1.584	3.5669
5	7.32	Nitrate	2.185	8.570	3.5021
6	8.77	O.Phos	0.796	2.152	3.2473
7	10.45	Sulfate	4.819	13.119	24.3403



Peak Integration Report

Sample Name:	**MBW**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**31-Jul-2021 / 22:27**	*Run Time:*	**18.00**

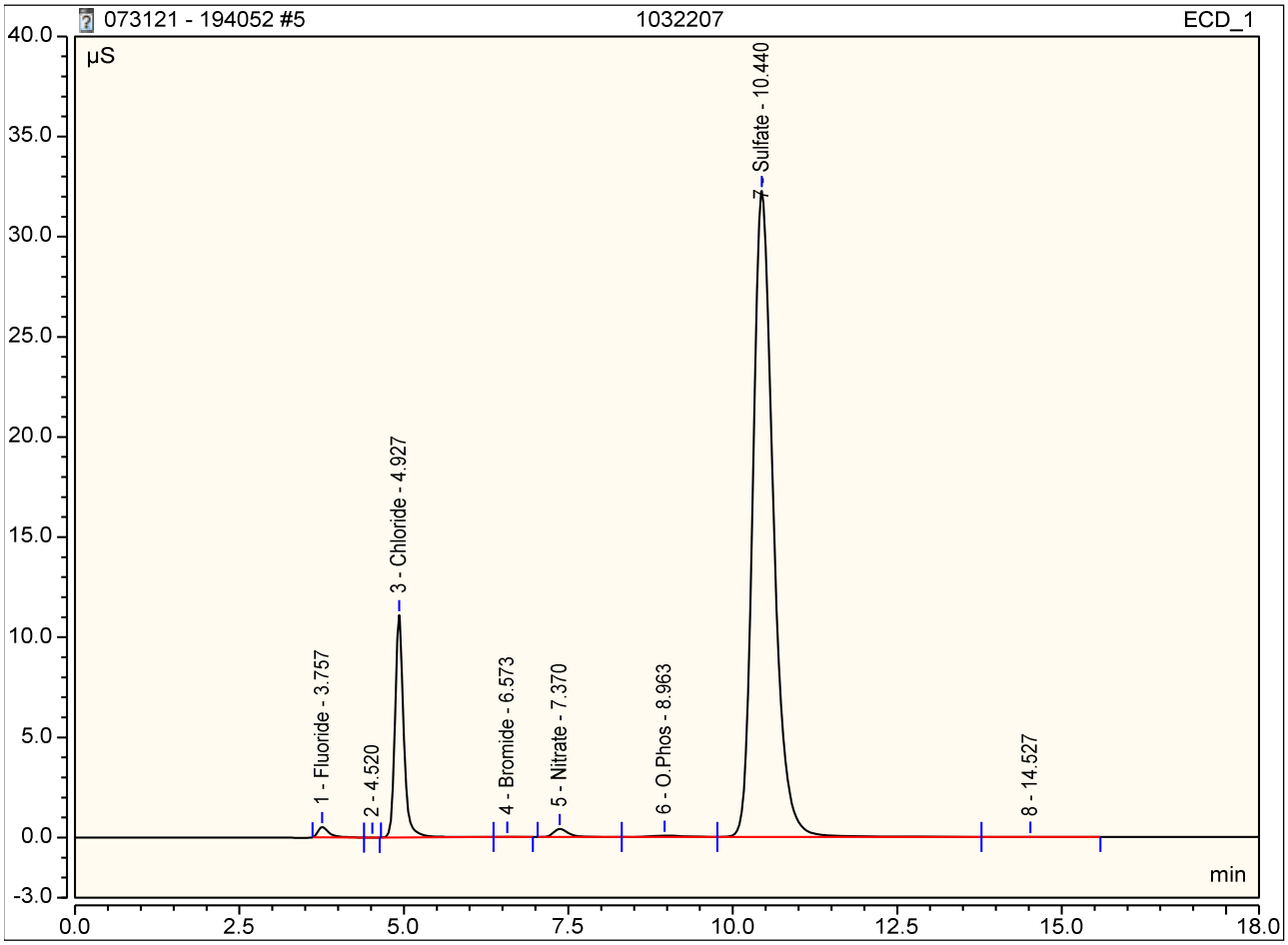
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.85	Chloride	0.008	0.038	0.6012
2	5.54	Nitrite	0.004	0.014	0.0247
3	6.58	Bromide	0.001	0.004	0.0030
4	7.38	Nitrate	0.005	0.015	0.0851
5	8.89	O.Phos	0.051	0.096	0.0292
6	10.50	Sulfate	0.006	0.016	0.7257



Peak Integration Report

Sample Name:	**1032207**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**31-Jul-2021 / 22:45**	*Run Time:*	**18.00**

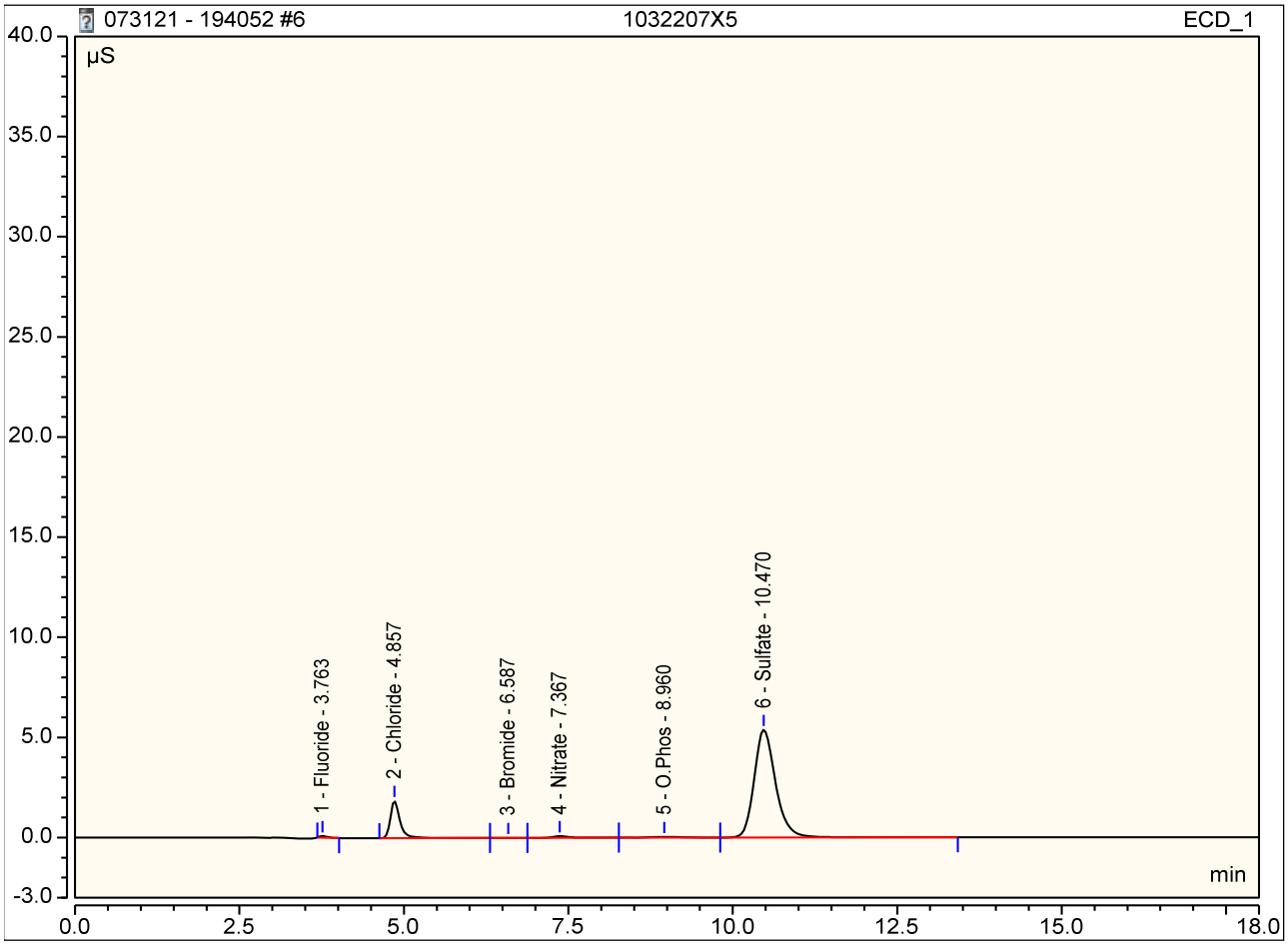
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.100	0.519	0.3521
3	4.93	Chloride	1.684	11.113	6.1880
4	6.57	Bromide	0.003	0.013	0.0202
5	7.37	Nitrate	0.105	0.403	0.2427
6	8.96	O.Phos	0.033	0.064	n.a.
7	10.44	Sulfate	11.606	32.255	57.6428



Peak Integration Report

Sample Name:	**1032207X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**31-Jul-2021 / 23:03**	*Run Time:*	**18.00**

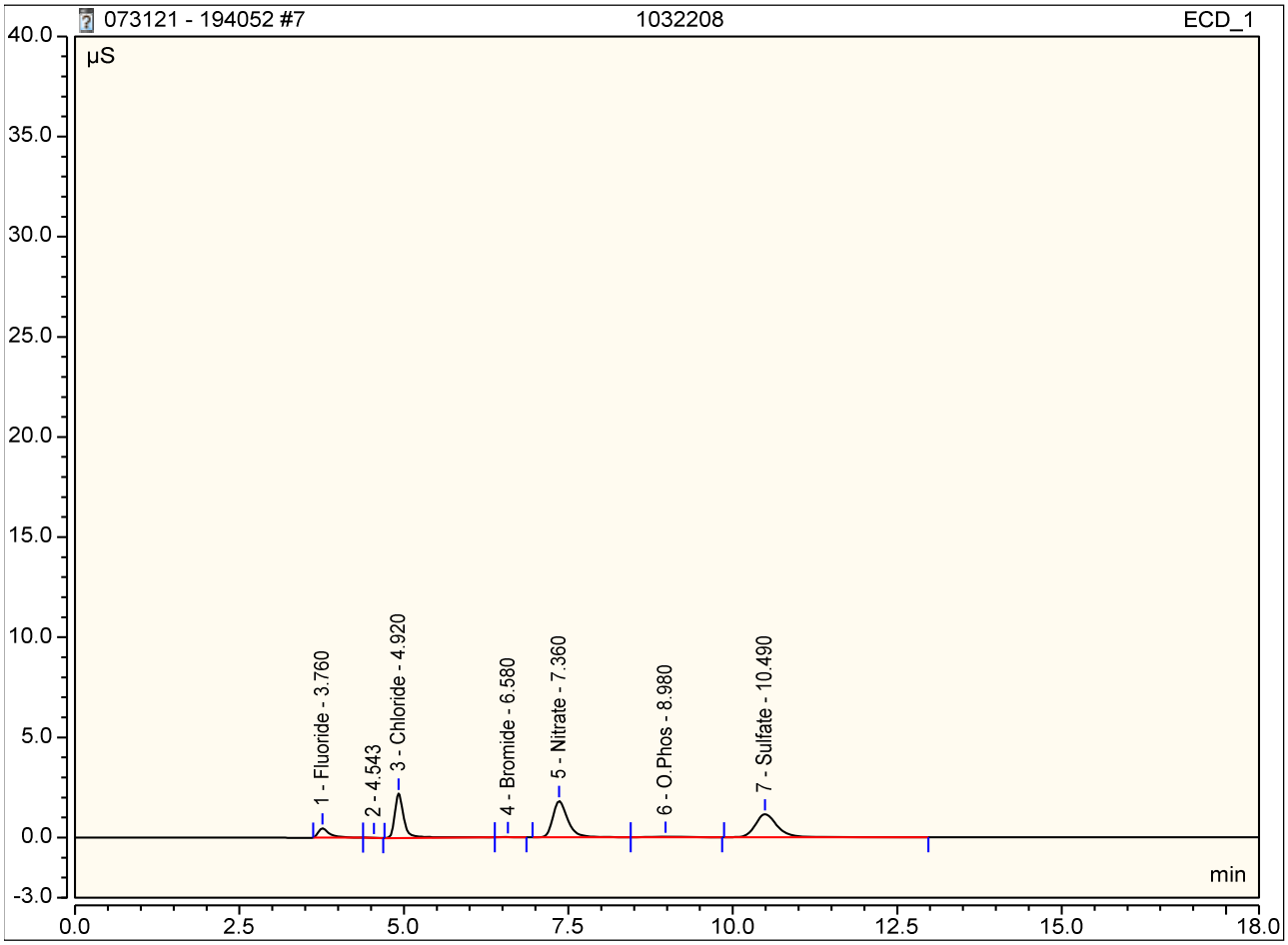
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.010	0.075	0.1040
2	4.86	Chloride	0.321	1.865	1.6455
3	6.59	Bromide	0.001	0.004	0.0002
4	7.37	Nitrate	0.022	0.082	0.1125
5	8.96	O.Phos	0.020	0.037	n.a.
6	10.47	Sulfate	2.038	5.374	10.6938



Peak Integration Report

Sample Name:	**1032208**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**31-Jul-2021 / 23:21**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.089	0.456	0.3207
3	4.92	Chloride	0.358	2.215	1.7693
4	6.58	Bromide	0.002	0.008	0.0082
5	7.36	Nitrate	0.471	1.810	0.8152
6	8.98	O.Phos	0.012	0.023	n.a.
7	10.49	Sulfate	0.442	1.145	2.8635

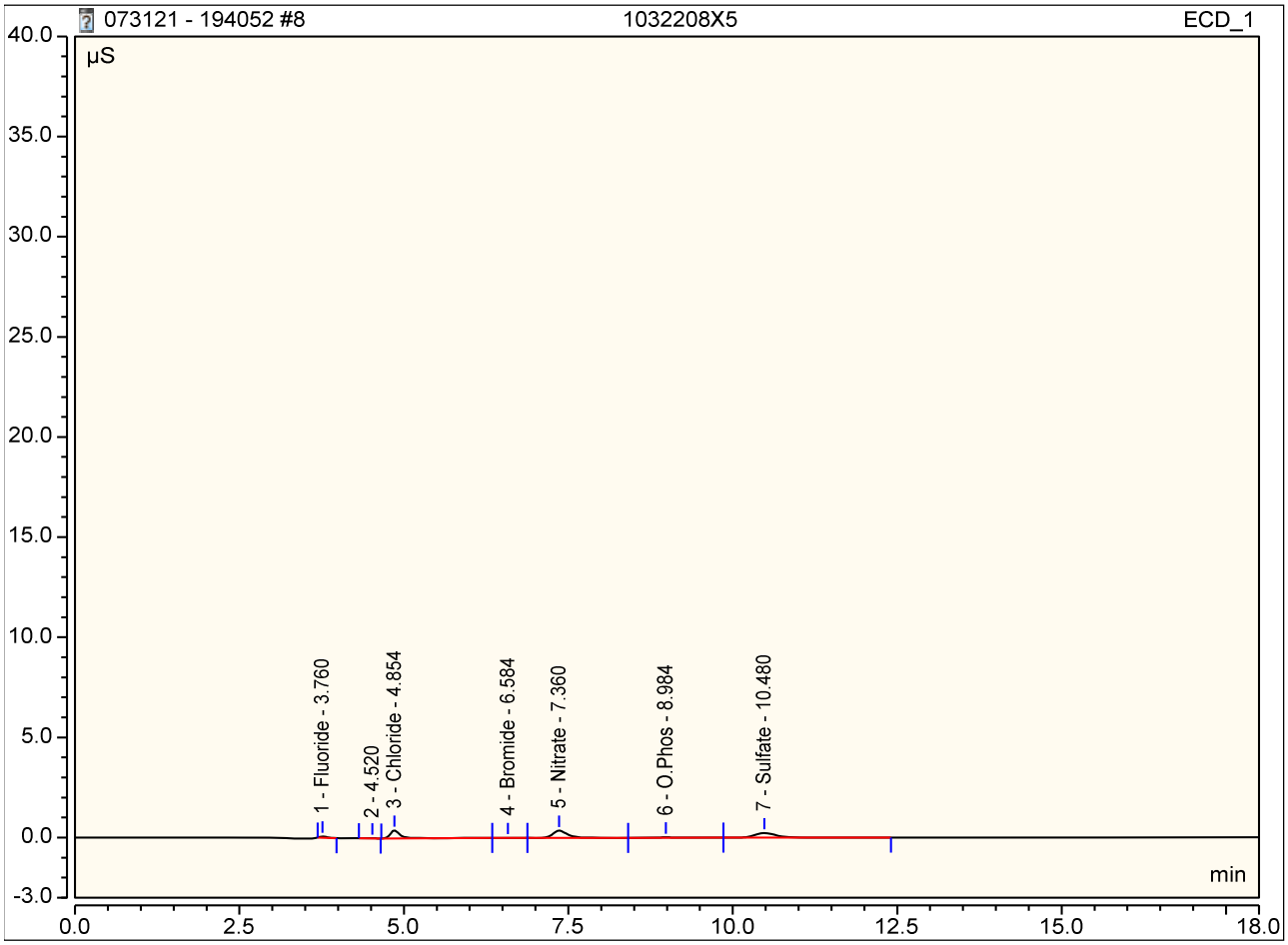


NOT USED

Peak Integration Report

Sample Name:	**1032208X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**31-Jul-2021 / 23:39**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.007	0.060	0.0974
3	4.85	Chloride	0.074	0.397	0.8217
4	6.58	Bromide	0.001	0.004	0.0011
5	7.36	Nitrate	0.096	0.360	0.2275
6	8.98	O.Phos	0.009	0.017	n.a.
7	10.48	Sulfate	0.091	0.232	1.1397



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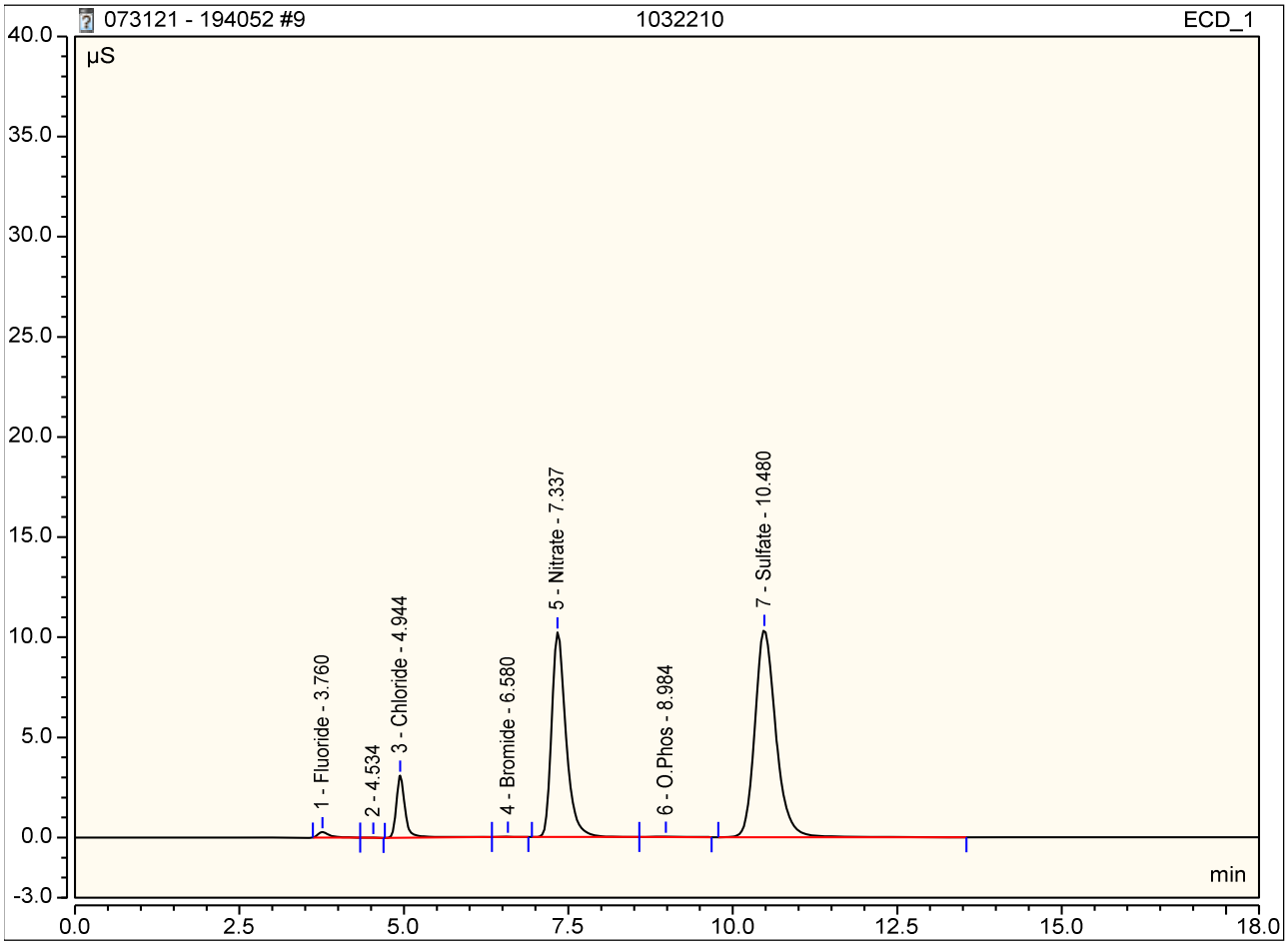
Peak Integration Report

Sample Name:	**1032210**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**31-Jul-2021 / 23:57**	*Run Time:*	**18.00**

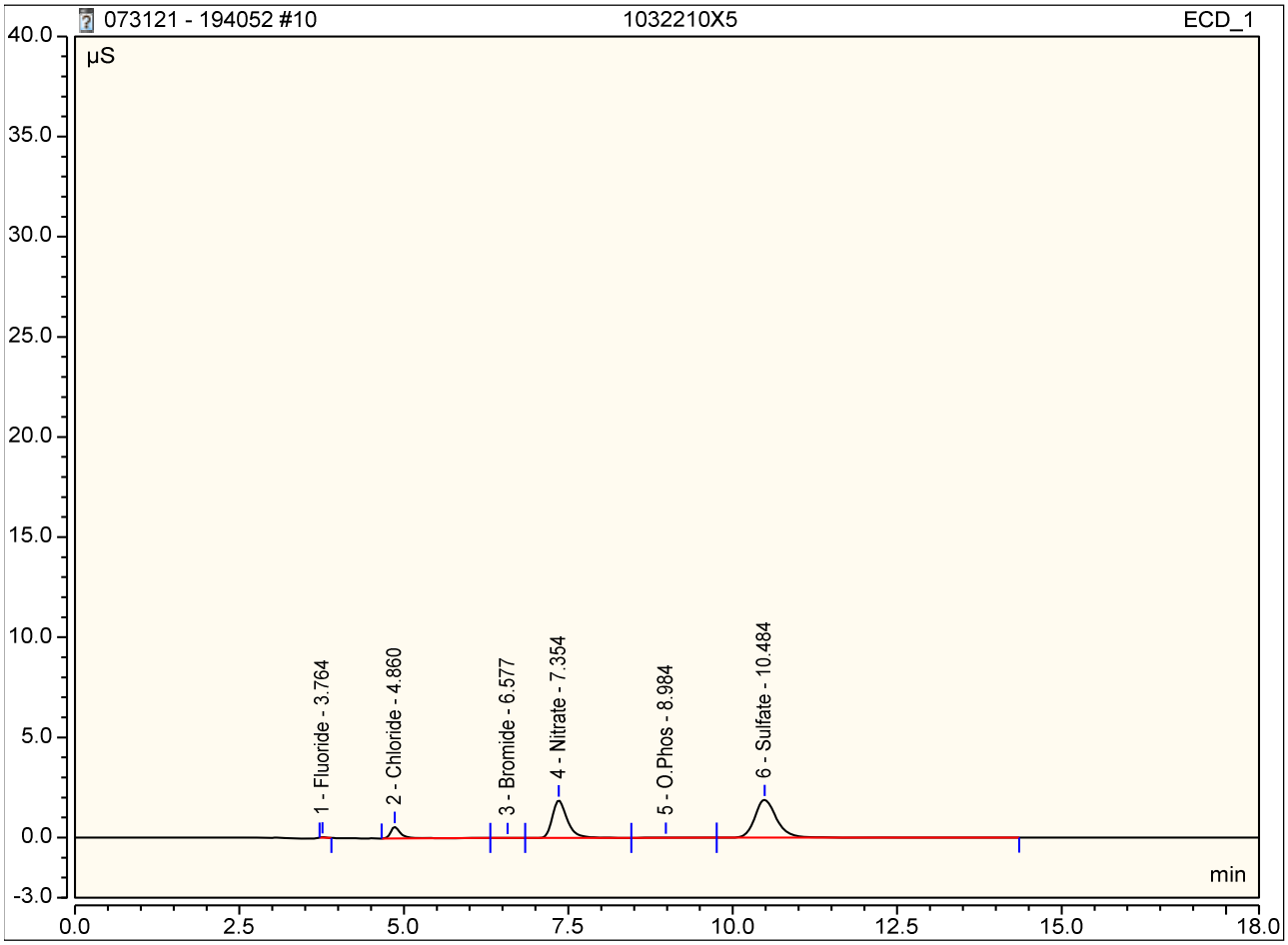
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.054	0.273	0.2235
3	4.94	Chloride	0.487	3.116	2.1972
4	6.58	Bromide	0.004	0.017	0.0295
5	7.34	Nitrate	2.587	10.224	4.1317
6	8.98	O.Phos	0.008	0.017	n.a.
7	10.48	Sulfate	3.829	10.350	19.4816



Peak Integration Report

Sample Name:	**1032210X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 00:15**	*Run Time:*	**18.00**

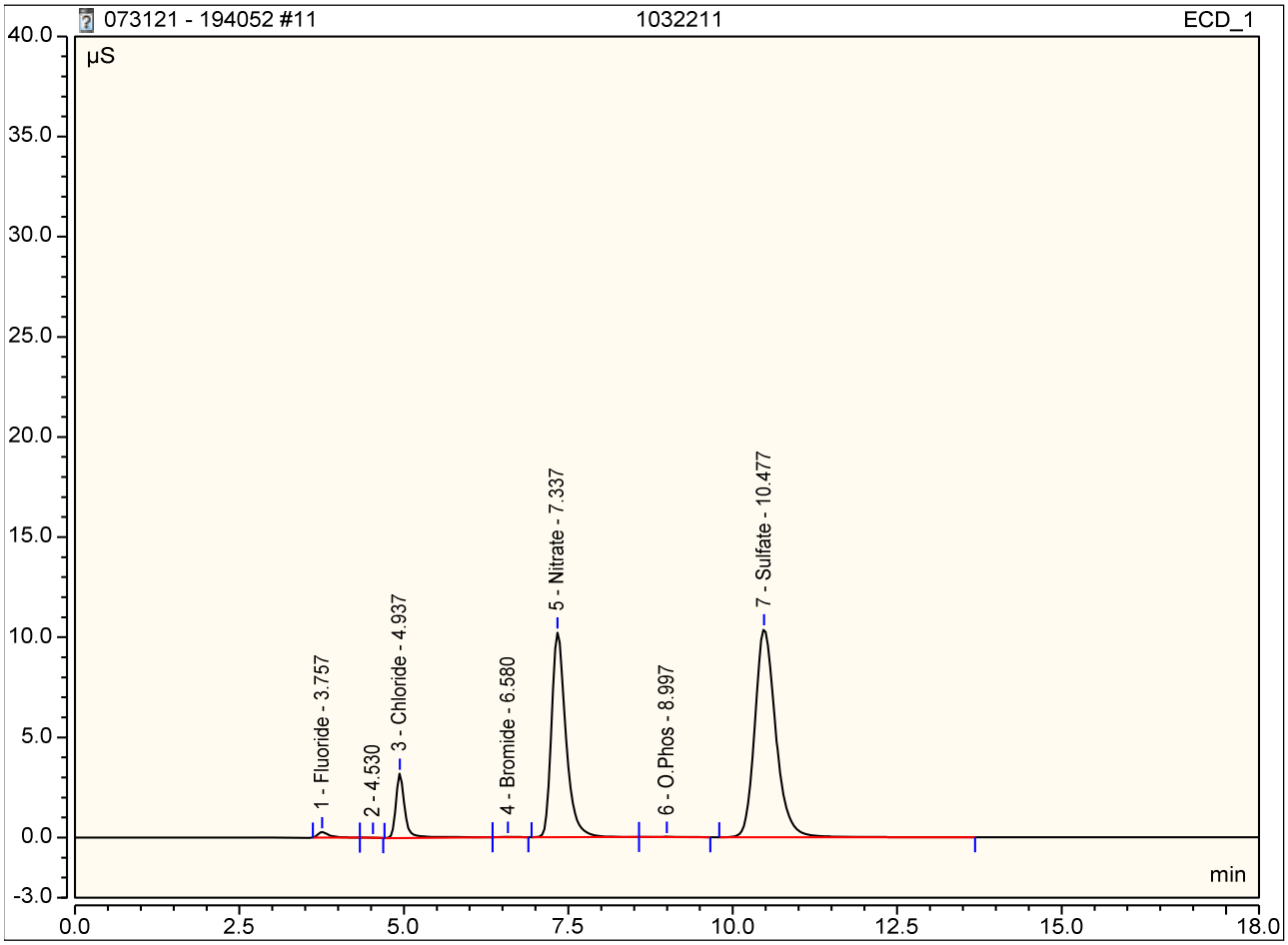
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.002	0.021	0.0824
2	4.86	Chloride	0.105	0.579	0.9260
3	6.58	Bromide	0.001	0.005	0.0022
4	7.35	Nitrate	0.493	1.875	0.8505
5	8.98	O.Phos	0.007	0.014	n.a.
6	10.48	Sulfate	0.735	1.890	4.3007



Peak Integration Report

Sample Name:	**1032211**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 00:33**	*Run Time:*	**18.00**

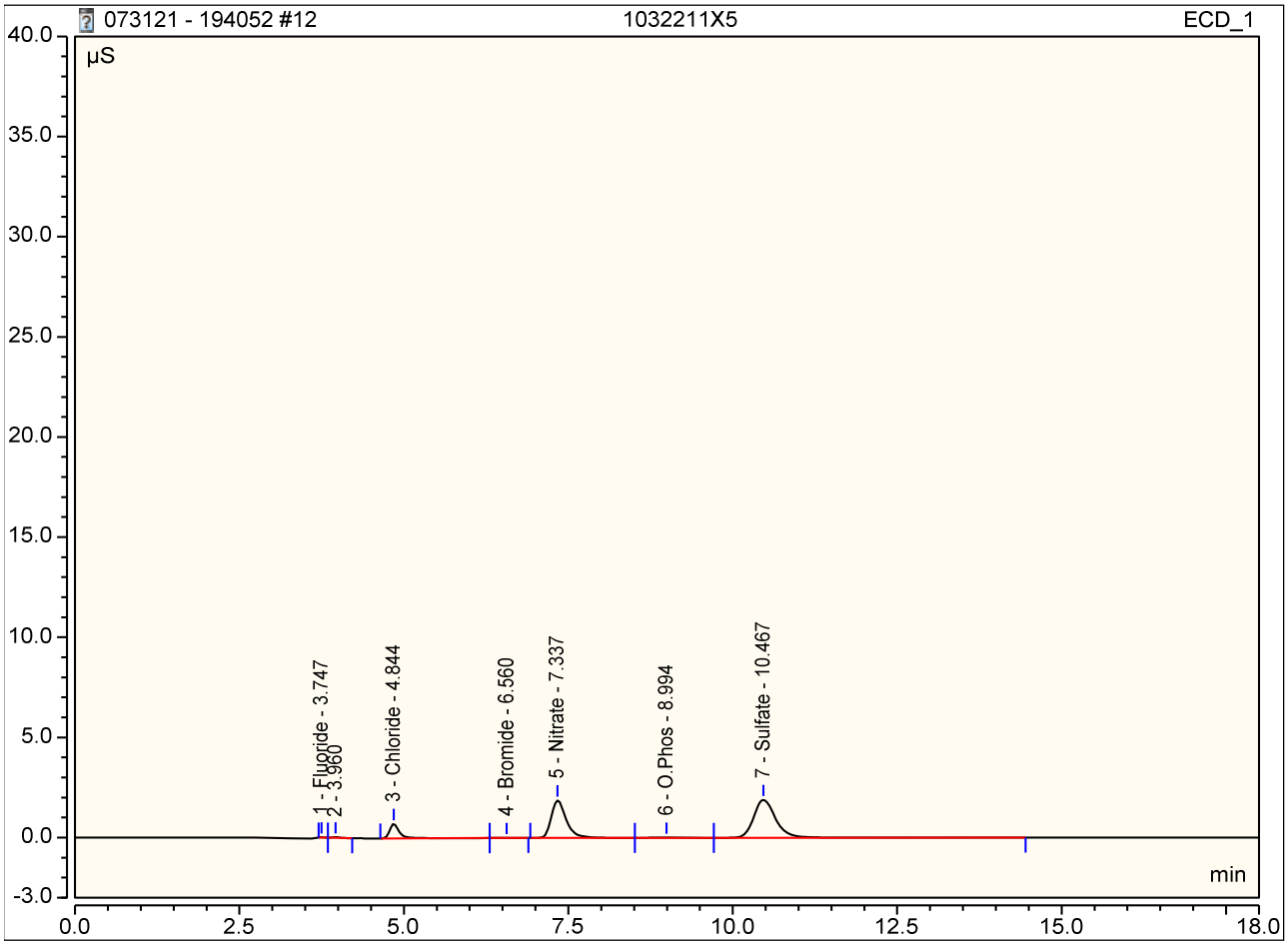
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.053	0.272	0.2228
3	4.94	Chloride	0.504	3.213	2.2549
4	6.58	Bromide	0.004	0.017	0.0293
5	7.34	Nitrate	2.591	10.219	4.1383
6	9.00	O.Phos	0.007	0.014	n.a.
7	10.48	Sulfate	3.847	10.388	19.5734



Peak Integration Report

Sample Name:	**1032211X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 00:51**	*Run Time:*	**18.00**

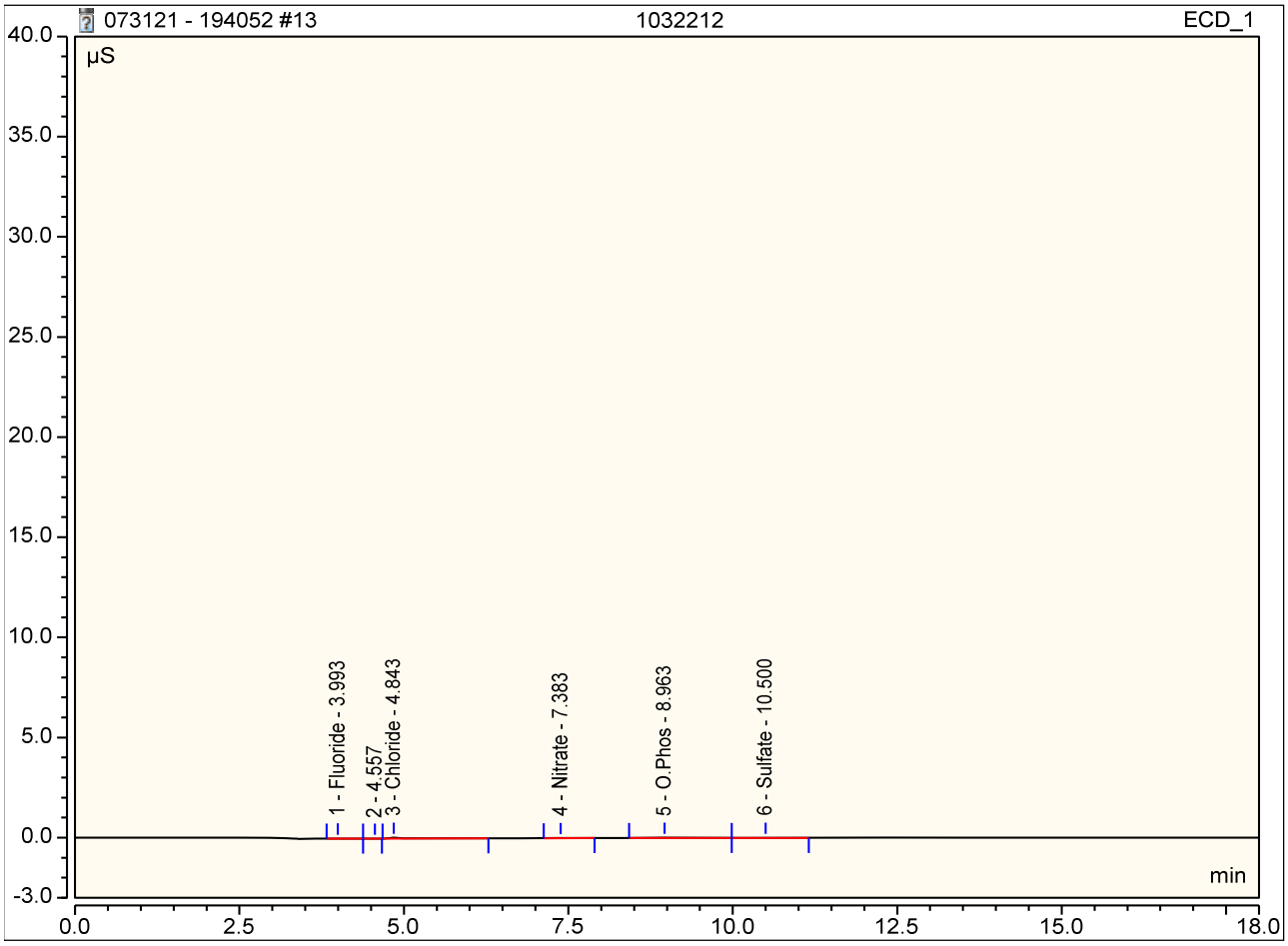
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.75	Fluoride	0.001	0.017	0.0805
3	4.84	Chloride	0.130	0.724	1.0083
4	6.56	Bromide	0.001	0.004	0.0021
5	7.34	Nitrate	0.494	1.877	0.8520
6	8.99	O.Phos	0.006	0.012	n.a.
7	10.47	Sulfate	0.736	1.893	4.3078



Peak Integration Report

Sample Name:	**1032212**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 01:10**	*Run Time:*	**18.00**

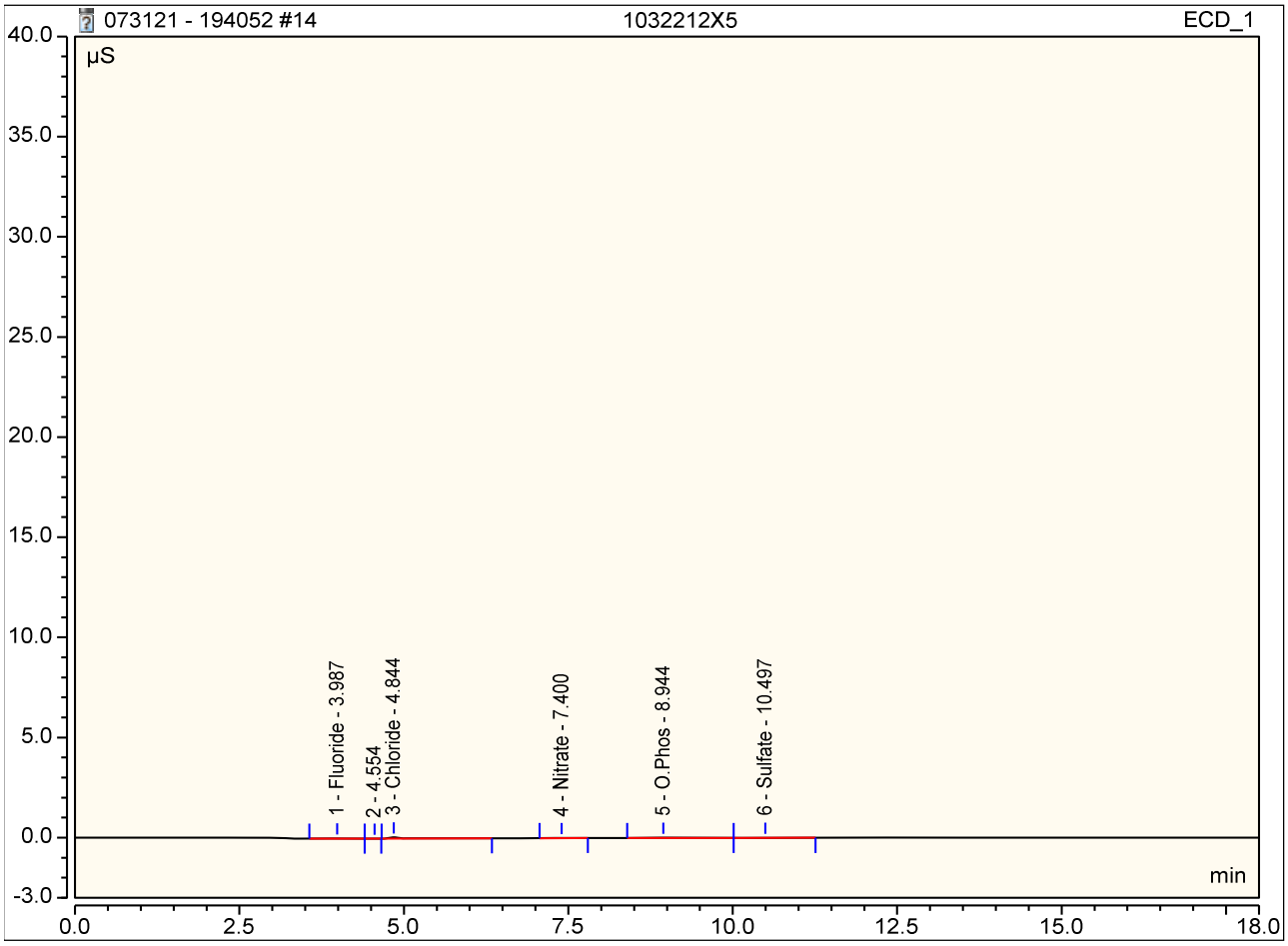
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.99	Fluoride	0.002	0.010	0.0830
3	4.84	Chloride	0.010	0.046	0.6084
4	7.38	Nitrate	0.003	0.010	0.0821
5	8.96	O.Phos	0.009	0.015	n.a.
6	10.50	Sulfate	0.004	0.010	0.7133



Peak Integration Report

Sample Name:	**1032212X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 01:28**	*Run Time:*	**18.00**

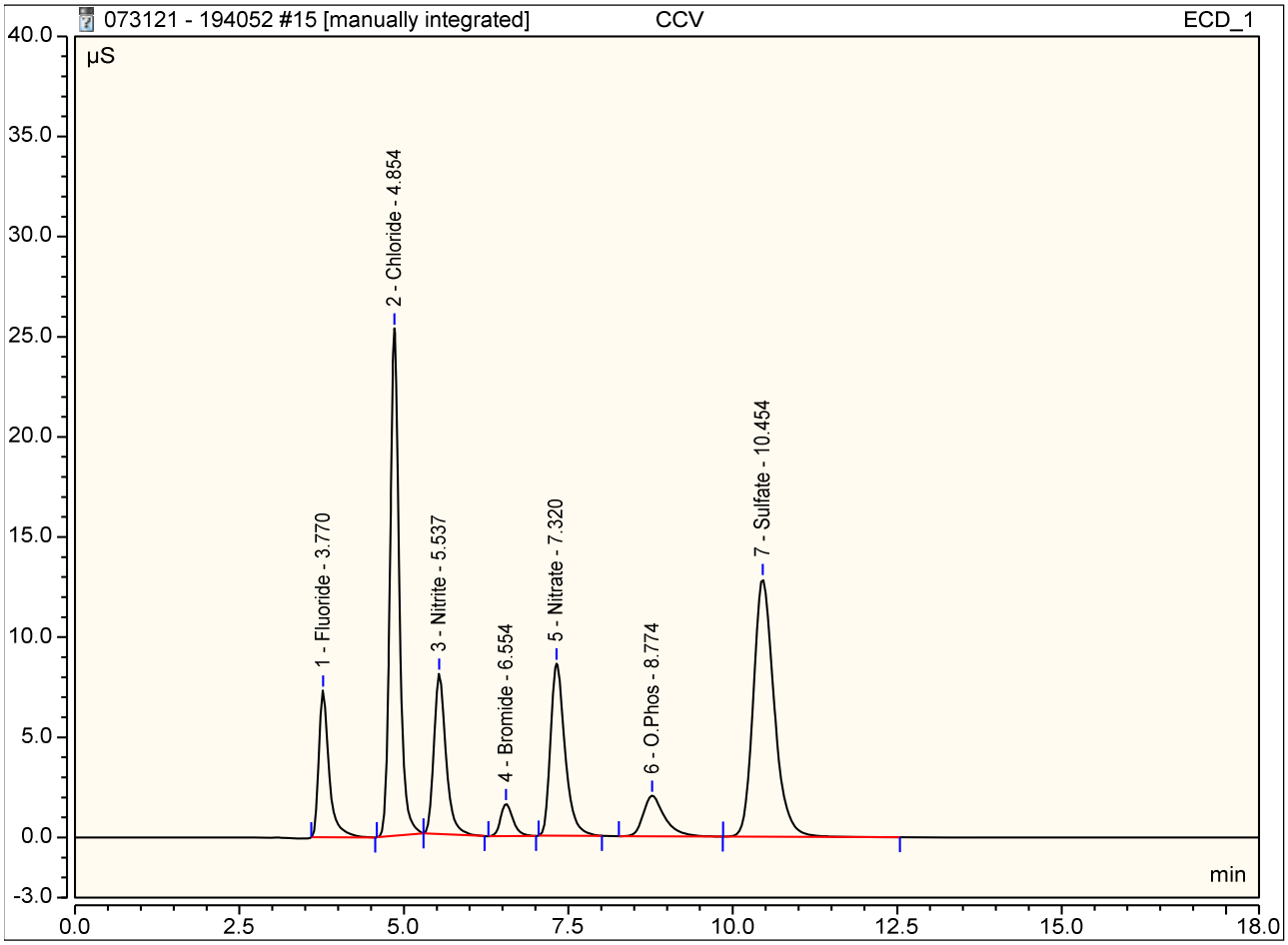
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.99	Fluoride	0.005	0.021	0.0910
3	4.84	Chloride	0.012	0.060	0.6166
4	7.40	Nitrate	0.001	0.004	0.0796
5	8.94	O.Phos	0.009	0.017	n.a.
6	10.50	Sulfate	0.003	0.007	0.7081



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**01-Aug-2021 / 01:46**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	1.327	7.332	3.7110
2	4.85	Chloride	4.136	25.331	14.3554
3	5.54	Nitrite	1.706	8.008	3.6788
4	6.55	Bromide	0.352	1.601	3.6160
5	7.32	Nitrate	2.190	8.596	3.5100
6	8.77	O.Phos	0.764	2.031	3.1104
7	10.45	Sulfate	4.740	12.878	23.9518



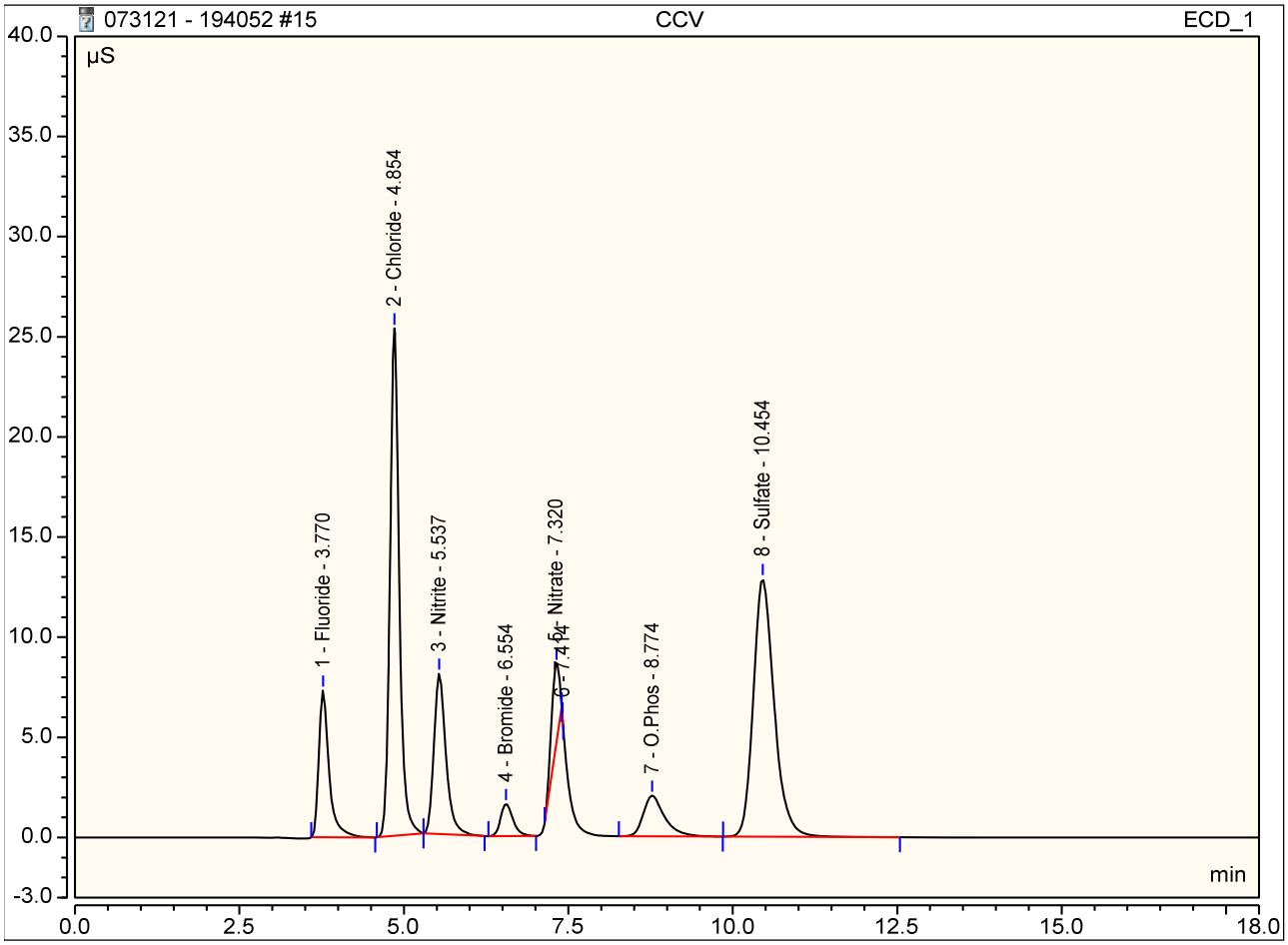
RJ 08/02/2021

TMC 08/02/2021

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 01:46**	*Run Time:*	**18.00**

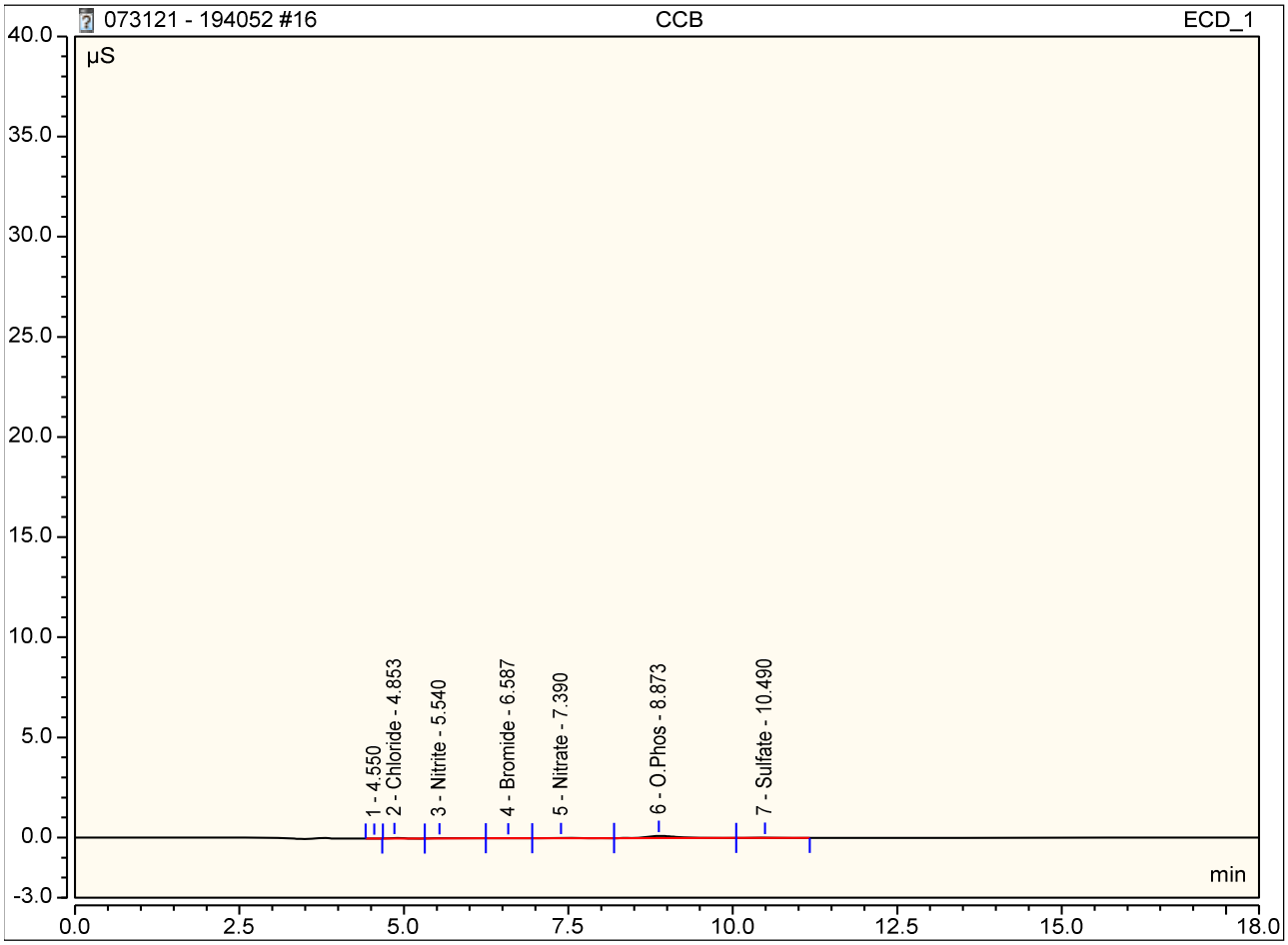
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	1.327	7.332	3.7110
2	4.85	Chloride	4.136	25.331	14.3554
3	5.54	Nitrite	1.706	8.008	3.6788
4	6.55	Bromide	0.352	1.601	3.6160
5	7.32	Nitrate	0.569	3.946	0.9695
7	8.77	O.Phos	0.764	2.031	3.1104
8	10.45	Sulfate	4.740	12.878	23.9518



Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 02:04**	*Run Time:*	**18.00**

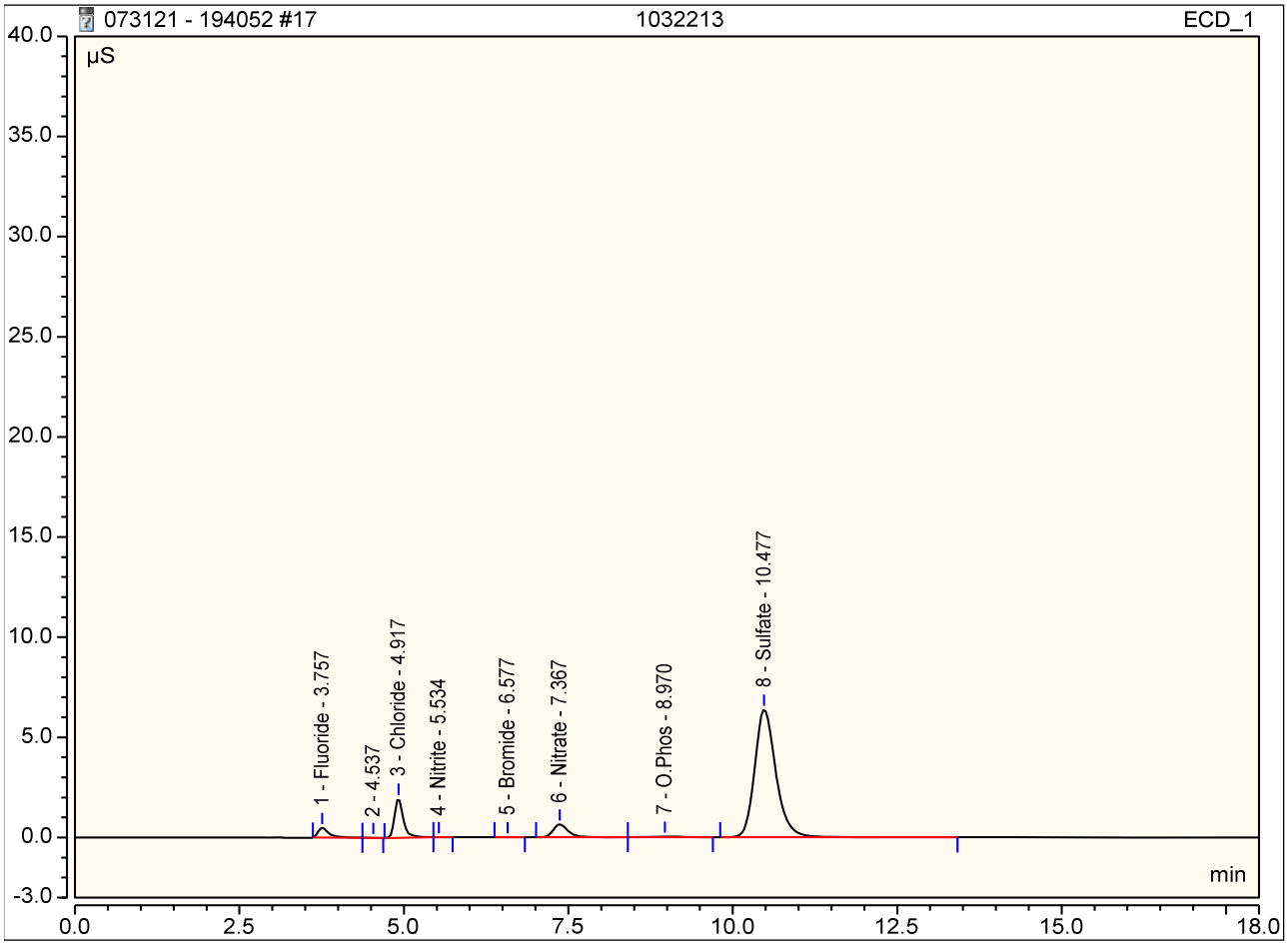
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
2	4.85	Chloride	0.006	0.028	0.5949
3	5.54	Nitrite	0.003	0.010	0.0225
4	6.59	Bromide	0.001	0.004	0.0019
5	7.39	Nitrate	0.004	0.012	0.0837
6	8.87	O.Phos	0.055	0.109	0.0484
7	10.49	Sulfate	0.004	0.011	0.7153



Peak Integration Report

Sample Name:	**1032213**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 02:22**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.092	0.482	0.3293
3	4.92	Chloride	0.301	1.955	1.5785
4	5.53	Nitrite	0.001	0.004	0.0182
5	6.58	Bromide	0.001	0.006	0.0039
6	7.37	Nitrate	0.170	0.646	0.3436
7	8.97	O.Phos	0.018	0.035	n.a.
8	10.48	Sulfate	2.393	6.377	12.4373

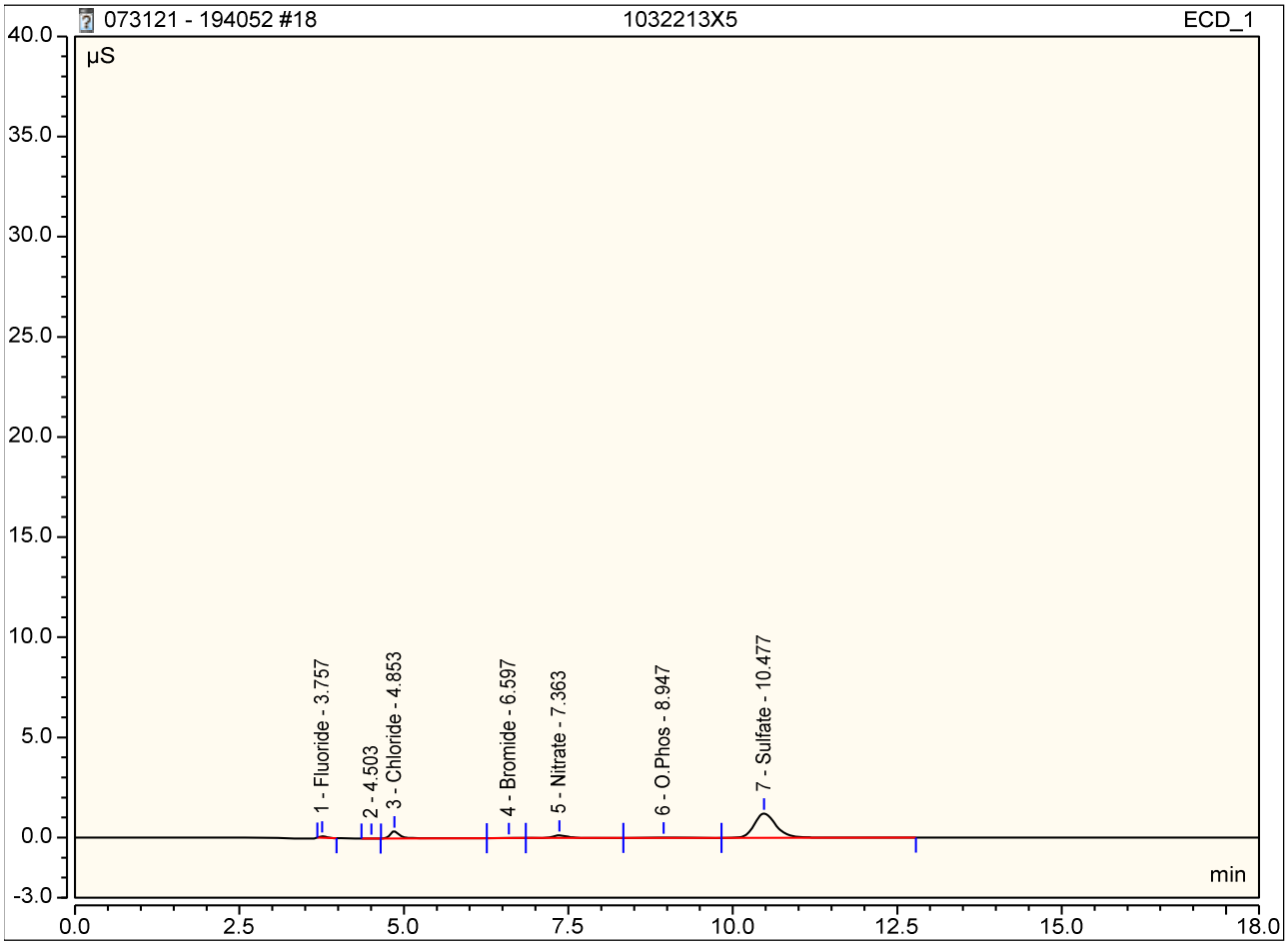


NOT USED

Peak Integration Report

Sample Name:	**1032213X5**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 02:40**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.009	0.069	0.1007
3	4.85	Chloride	0.067	0.357	0.7977
4	6.60	Bromide	0.001	0.002	n.a.
5	7.36	Nitrate	0.035	0.131	0.1331
6	8.95	O.Phos	0.012	0.022	n.a.
7	10.48	Sulfate	0.470	1.215	3.0030



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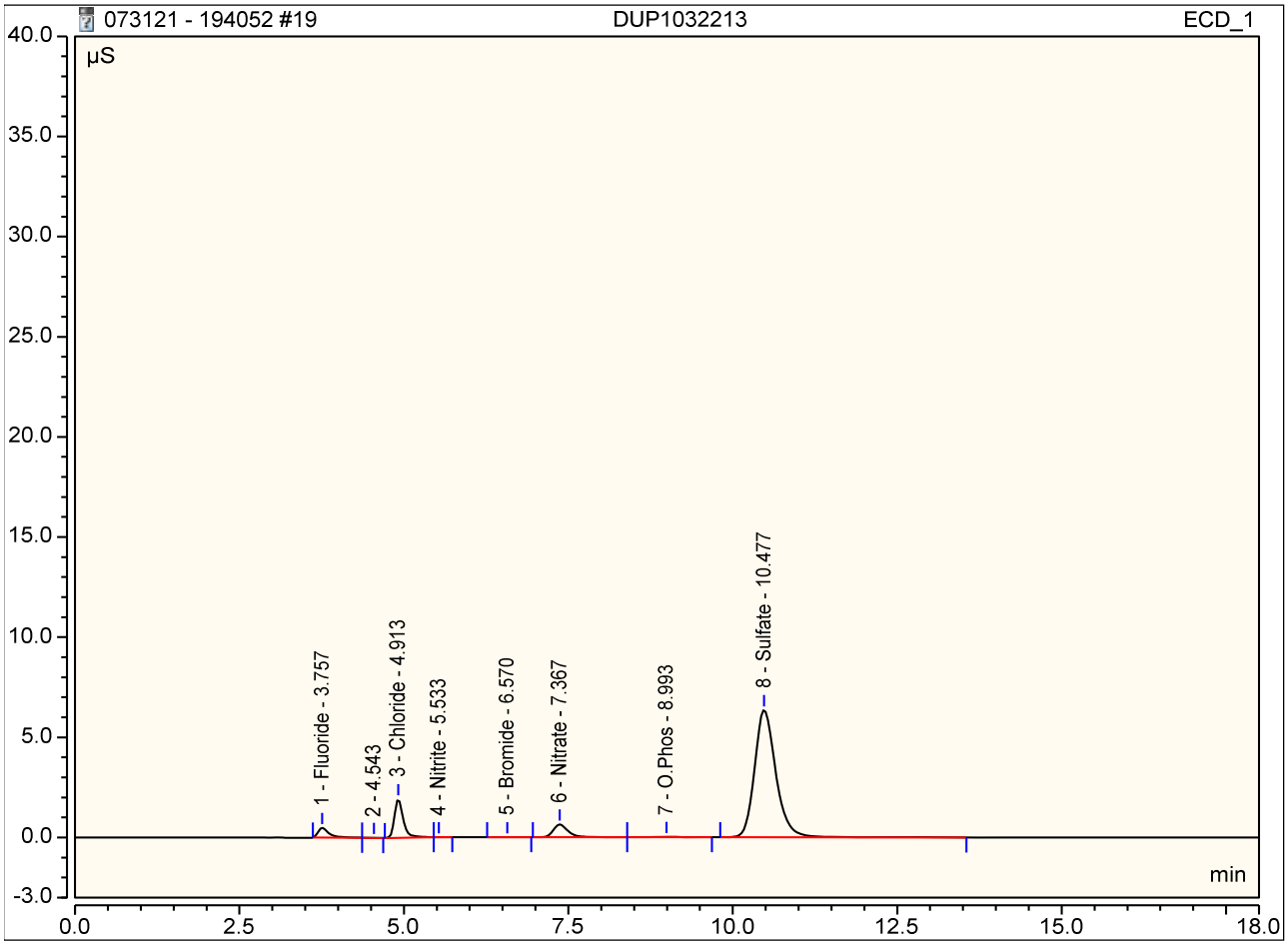
Peak Integration Report

Sample Name:	**DUP1032213**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 02:58**	*Run Time:*	**18.00**

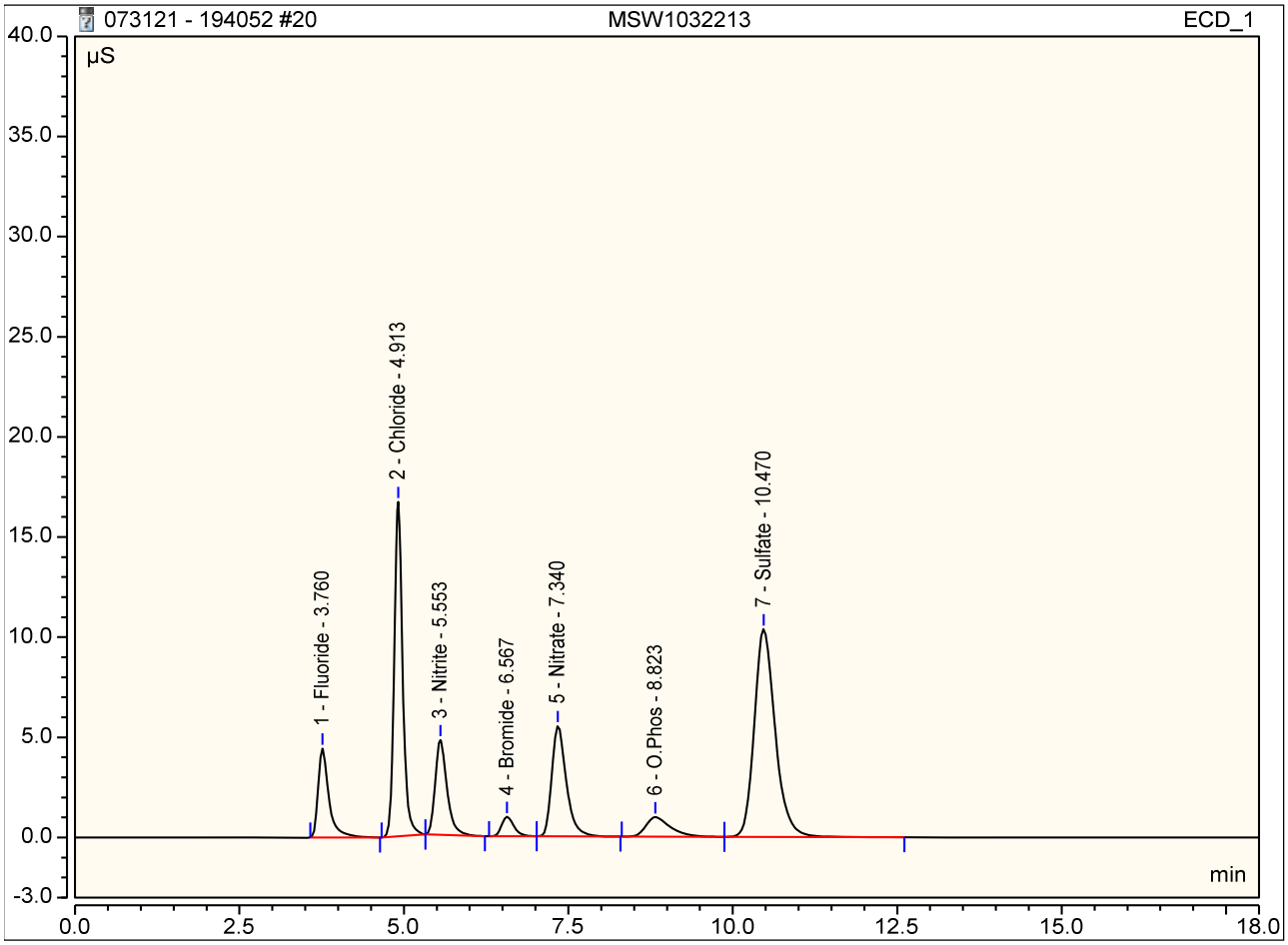
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.090	0.480	0.3240
3	4.91	Chloride	0.297	1.933	1.5639
4	5.53	Nitrite	0.000	0.003	0.0179
5	6.57	Bromide	0.001	0.006	0.0068
6	7.37	Nitrate	0.168	0.642	0.3416
7	8.99	O.Phos	0.008	0.017	n.a.
8	10.48	Sulfate	2.388	6.353	12.4132



Peak Integration Report

Sample Name:	**MSW1032213**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 03:16**	*Run Time:*	**18.00**

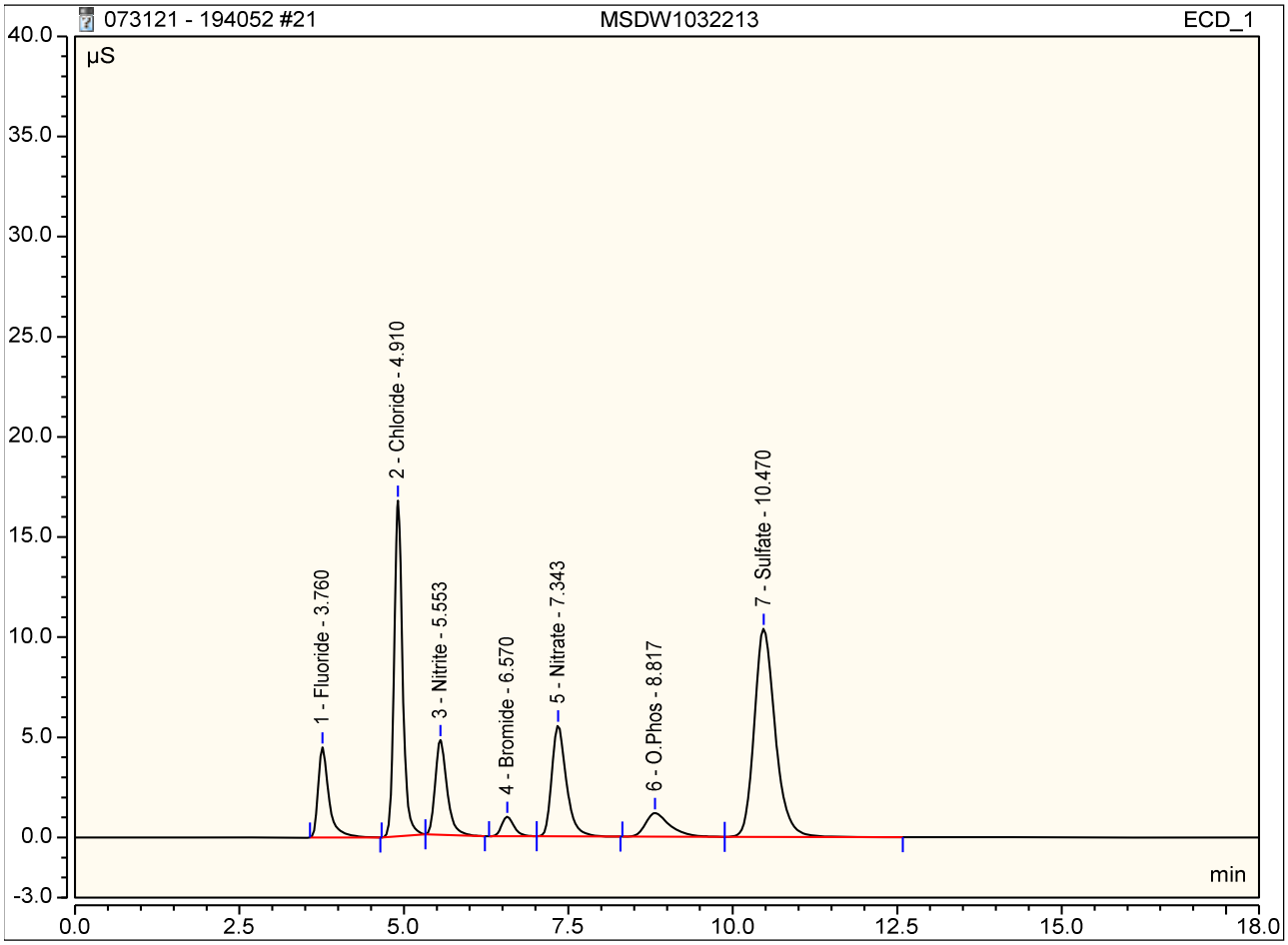
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.843	4.442	2.3853
2	4.91	Chloride	2.466	16.699	8.7909
3	5.55	Nitrite	0.990	4.743	2.1423
4	6.57	Bromide	0.213	0.973	2.1802
5	7.34	Nitrate	1.415	5.517	2.2955
6	8.82	O.Phos	0.424	0.977	1.6431
7	10.47	Sulfate	3.830	10.371	19.4877



Peak Integration Report

Sample Name:	**MSDW1032213**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 03:34**	*Run Time:*	**18.00**

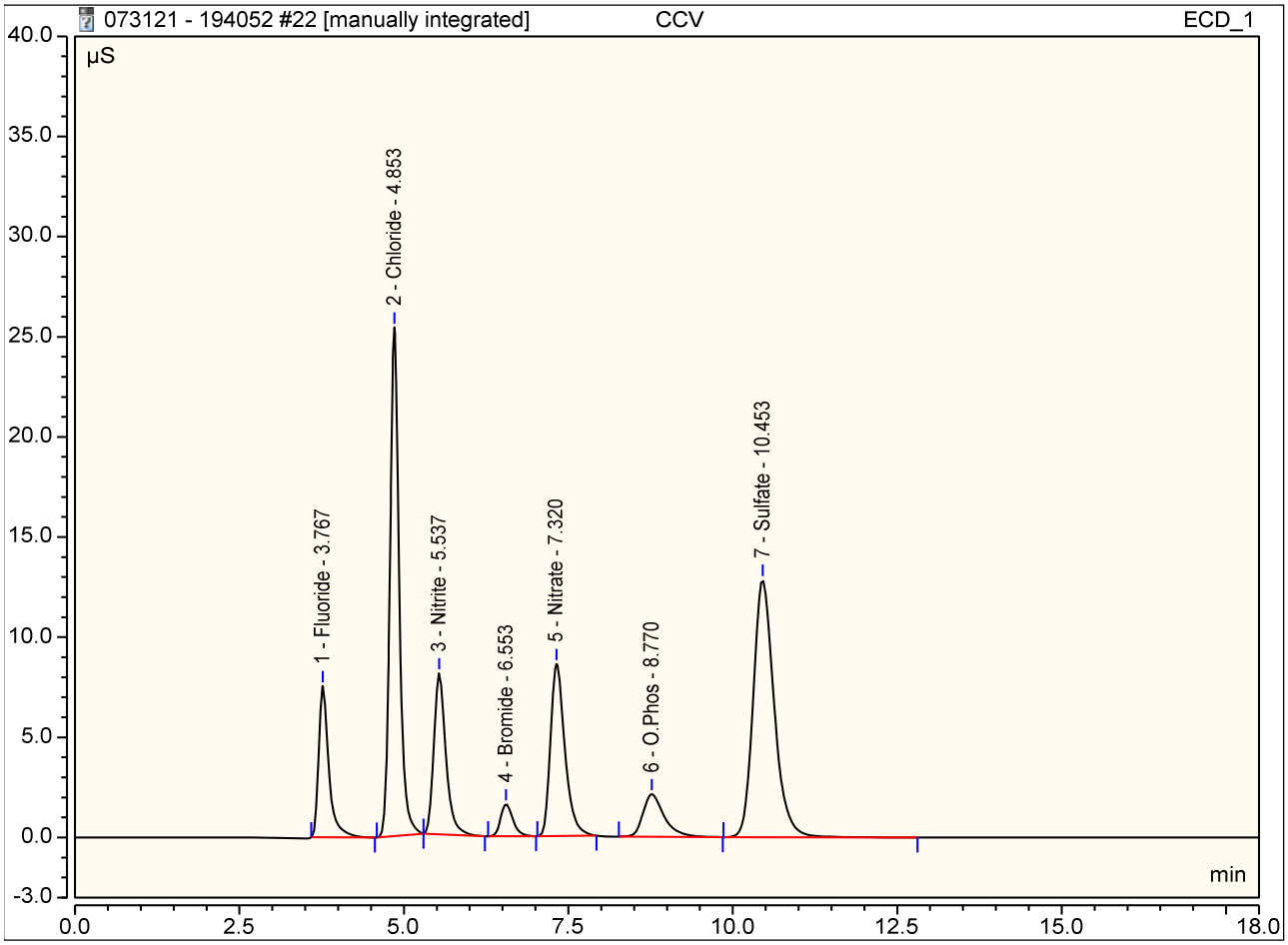
No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.76	Fluoride	0.854	4.497	2.4163
2	4.91	Chloride	2.481	16.765	8.8414
3	5.55	Nitrite	0.991	4.734	2.1431
4	6.57	Bromide	0.213	0.974	2.1853
5	7.34	Nitrate	1.423	5.540	2.3078
6	8.82	O.Phos	0.505	1.180	1.9898
7	10.47	Sulfate	3.843	10.397	19.5537



Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**AQUION**
Inj. Date / Time:	**01-Aug-2021 / 03:52**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	1.346	7.551	3.7646
2	4.85	Chloride	4.145	25.393	14.3871
3	5.54	Nitrite	1.719	8.040	3.7068
4	6.55	Bromide	0.353	1.599	3.6204
5	7.32	Nitrate	2.185	8.591	3.5020
6	8.77	O.Phos	0.794	2.133	3.2389
7	10.45	Sulfate	4.744	12.854	23.9718



RJ 08/02/2021

Before Manual Integration

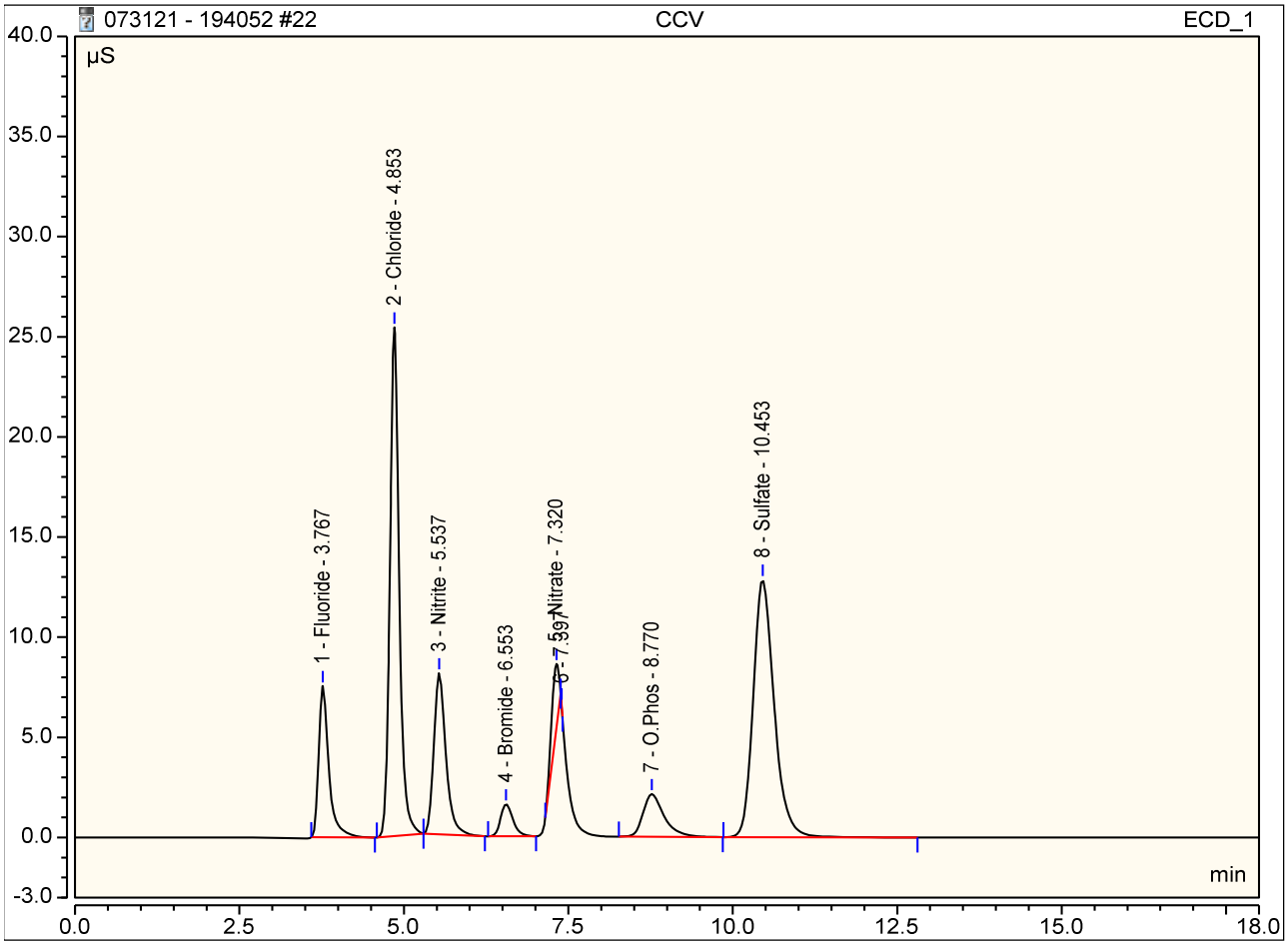
REASON #4

TMC 08/02/2021

Peak Integration Report

Sample Name:	**CCV**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 03:52**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	3.77	Fluoride	1.346	7.551	3.7646
2	4.85	Chloride	4.145	25.393	14.3871
3	5.54	Nitrite	1.719	8.040	3.7068
4	6.55	Bromide	0.353	1.599	3.6204
5	7.32	Nitrate	0.436	3.161	0.7612
7	8.77	O.Phos	0.794	2.133	3.2389
8	10.45	Sulfate	4.744	12.854	23.9718



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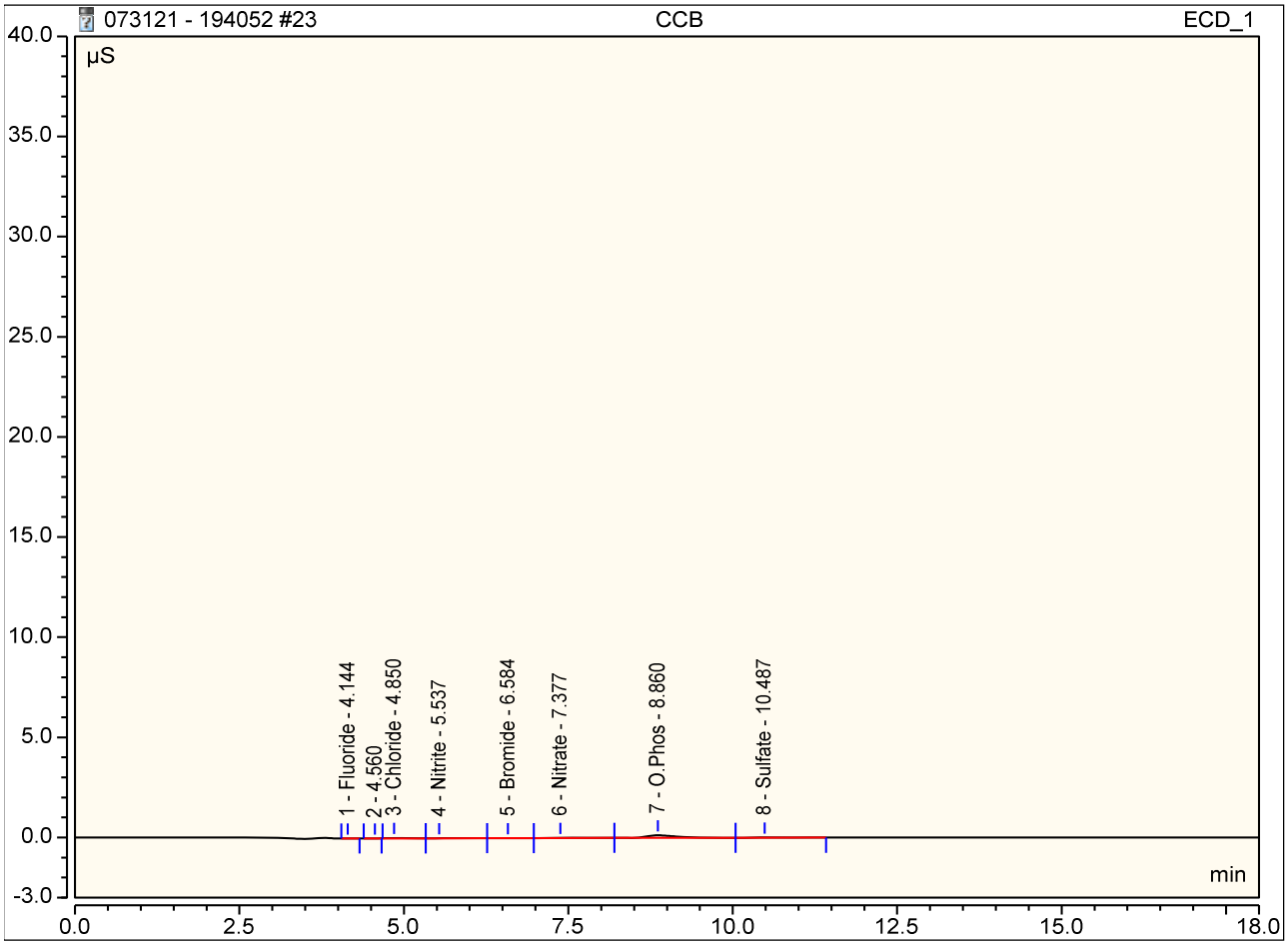
Version 7.2.9.11323

Peak Integration Report

Sample Name:	**CCB**	*Sequence Date:*	**05/04/2018**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Processing Method:	**IC3602A**	*Operator:*	**aquion**
Inj. Date / Time:	**01-Aug-2021 / 04:10**	*Run Time:*	**18.00**

No.	Time min	Peak Name	Area µS*min	Height µS	Amount
1	4.14	Fluoride	0.000	0.001	0.0774
3	4.85	Chloride	0.006	0.032	0.5972
4	5.54	Nitrite	0.003	0.012	0.0233
5	6.58	Bromide	0.001	0.004	0.0017
6	7.38	Nitrate	0.004	0.013	0.0841
7	8.86	O.Phos	0.063	0.126	0.0824
8	10.49	Sulfate	0.005	0.013	0.7193



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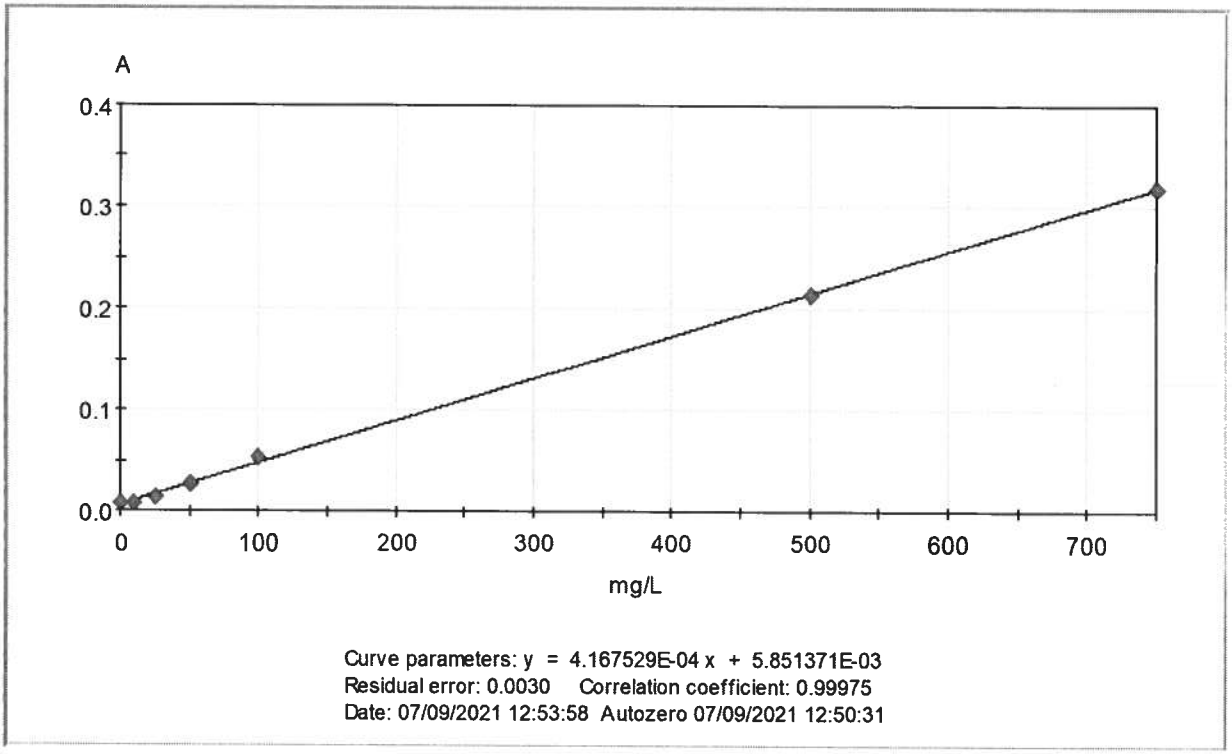
Autozero:	08/05/2021 10:19:47
Measured:	08/05/2021 10:40:30 by CTLABORATORIES\spec (SPEC)
Result filename:	194111 113 DATA.rqa

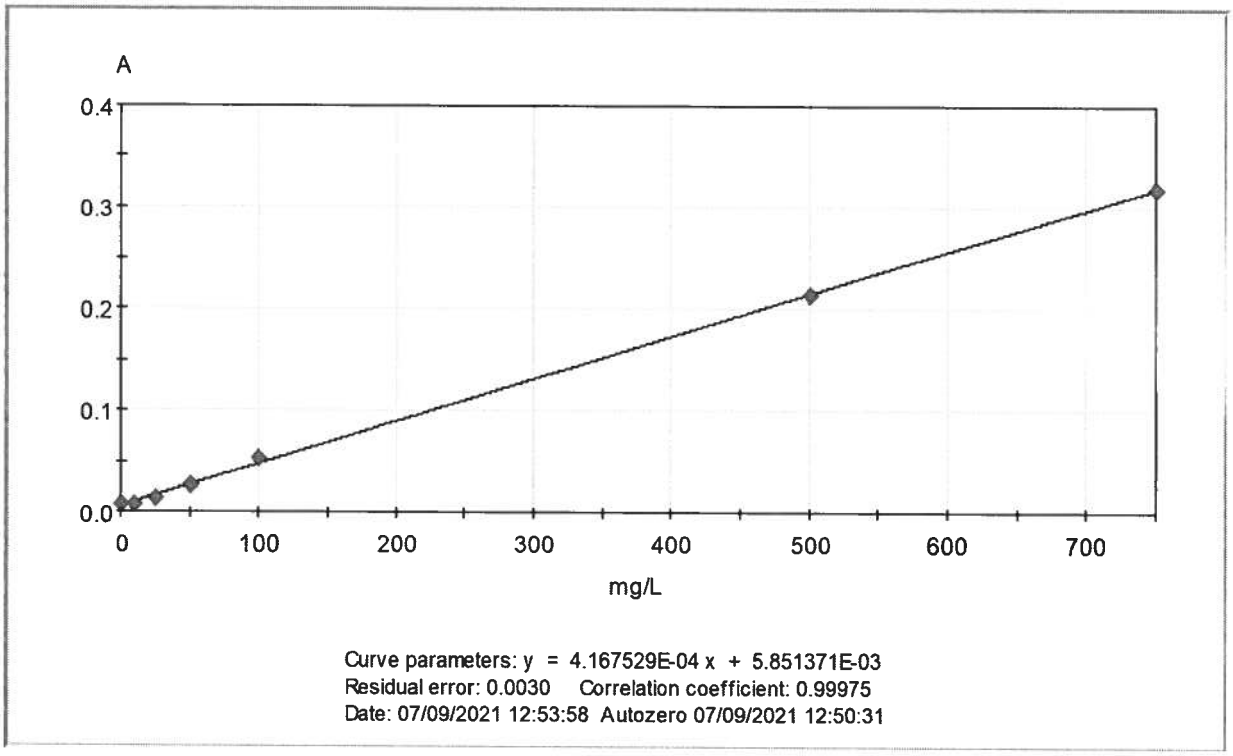


Curve parameters: y = 4.167529E-04 x + 5.851371E-03
Residual error: 0.0030 Correlation coefficient: 0.99975
Date: 07/09/2021 12:53:58 Autozero 07/09/2021 12:50:31

Sample	Dilution Factor	Ordinate [A]	Concentration [mg/L]
ICV	1	0.173	401.1
ICB	1	0.005	-2.0
CCV	1	0.169	391.5
CCB	1	0.004	-4.4
1033039	1	0.173	401.1
1033038	1	0.003	-6.8
1030638	1	0.009	7.6
MSW1030638	1	0.073	161.1
MSDW1030638	1	0.075	165.9
1031433 X50	1	0.134	307.5
1031915 X100	1	0.138	317.1
1032736	1	0.009	7.6
1032889 X5	1	0.104	235.5
CCV	1	0.170	393.9
CCB	1	0.004	-4.4
1033058 MB	1	0.007	2.8

1033057 LCS	1	0.172	398.7
RLB IDC	1	0.173	401.1
RLB IDC	1	0.173	401.1
RLB IDC	1	0.174	403.5
RLB IDC	1	0.174	403.5
1030878	1	0.003	-6.8
1030878MSW	1	0.074	163.5
1030878MSDW		0.079	discarded
1030878MSDW	1	0.075	165.9
1030878DUP	1	0.013	17.2
CCV	1	0.170	393.9
CCB	1	0.003	-6.8
1032214	1	0.041	84.3
CCV	1	0.171	396.3
CCB	1	0.005	-2.0

Method: W51074.mqa (600 nm)
Last modified: 07/09/2021 12:54:23 by CTLABORATORIES\SPEC
Spectrophotometer: GENESYS 30
Serial number: 9A1W117104
Firmware: 104
Autozero: 08/05/2021 11:10:19
Measured: 08/05/2021 11:14:48 by CTLABORATORIES\spec (SPEC)
Result filename: 194113 RERUN.rqa



Curve parameters: y = 4.167529E-04 x + 5.851371E-03
Residual error: 0.0030 Correlation coefficient: 0.99975
Date: 07/09/2021 12:53:58 Autozero 07/09/2021 12:50:31

Sample	Dilution Factor	Ordinate [A]	Concentration [mg/L]
CCV	1	0.167	386.7
CCB	1	0.001	-11.6
1030878	1	0.001	-11.6
DUP1030878	1	0.001	-11.6
MSW1030878	1	0.072	158.7
MSDW1030878	1	0.072	158.7
CCV	1	0.167	386.7
CCB	1	0.002	-9.2

HB
8.5.2021

pH - Mettler Toledo Seven Easy

Date:	08/02/2021	Analyst:	RLB	Lims #:	194093	Slope (%)	98%

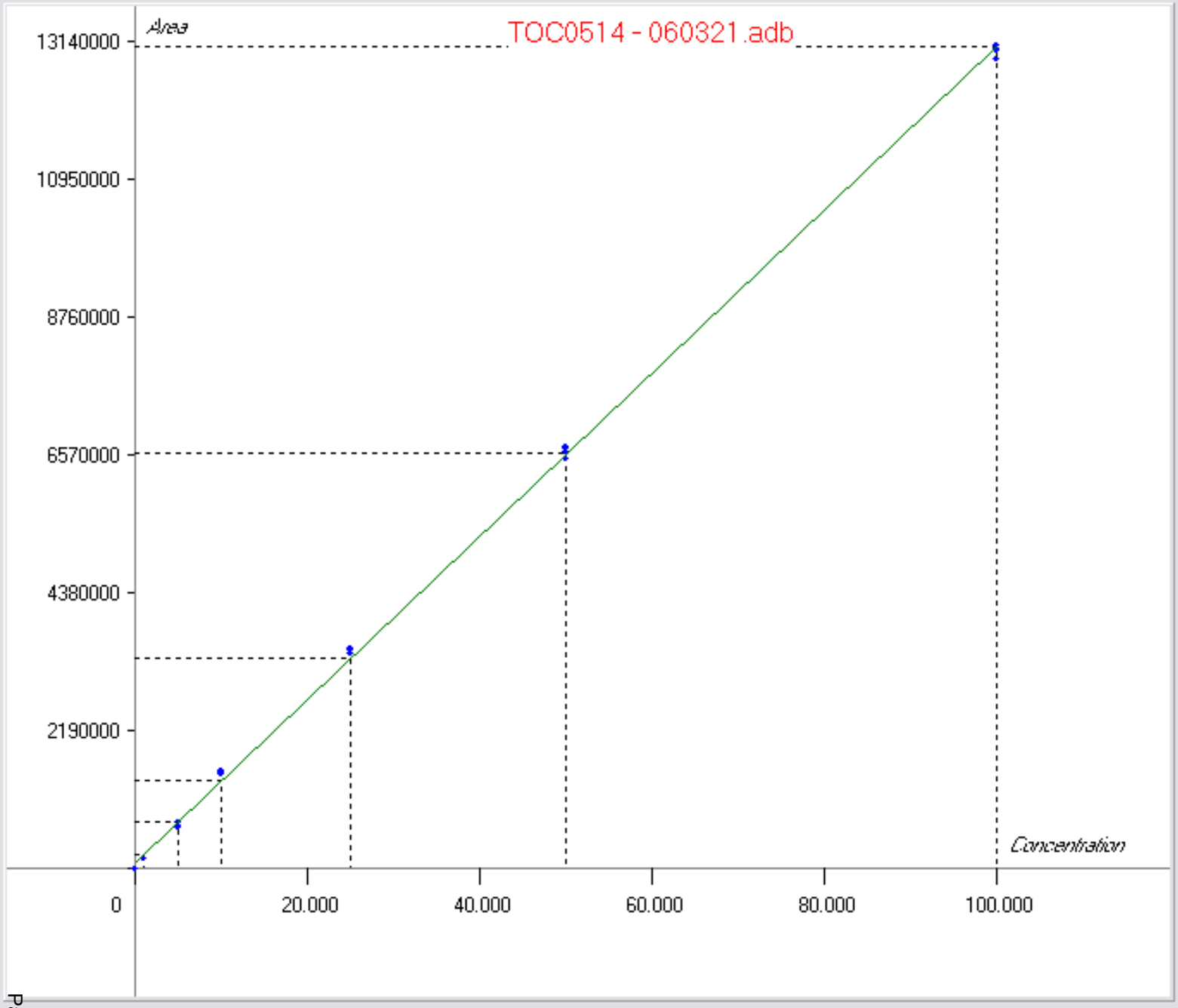
GRP	Sample ID#	Matrix	DF	Corrected Temp (°C)*	Result	
1	BUFFER 7	QC	1	22.0	7.02	
2			1			
3			1			
4			1			
5			1			
6			1			
7			1			
8			1			
9			1			
10			1			
11	1032214	WW	1	9.9	7.58	
dup 11	1032214	WW	1	10.2	7.59	
12	BUFFER 7	QC	1	21.8	7.08	
13			1			
14			1			
15			1			
16			1			
17			1			
18			1			
19			1			
20			1			
21			1			
23			1			
dup 23			1			
24	BUFFER 7		1			
25			1			
dup 25			1			
26			1			
dup 26			1			

To datacapture: Save CSV file under the TSS datacapture folder.

*Temperature of samples should be room temperature around 25°C

Buffer Standard IDs:

pH 4: WC205 pH 7: WC234 pH 10: WC275



Cursor Position

Concentration	Area
119.600 mg/l	1642500

A2	0
A1	129690
A0	112989
Correlation	0.99971
Order	1
Volume	100 µl
Conc.	100.00
Area	13108693

Confidence Intervals 95%

Detection/Determination 95%

Conc.	Area	Sel.
0	0	☑
0	0	☑
0	0	☑
0	0	☑
1	174956	☑
1	167886	☑
1	175879	☑
1	168007	☑

• Used Value
• Ignored Value

CurveNo:1 CurveType:TC

<-- --> Print... Exit

06/22/2021

Analysis Name TOC0514 - 060321.adb

Template Name CURVE TEMP.tdb
Method Name N / A
Operator KMT

Date Thursday, June 3, 2021
Time 12:09

Start Oven Temp. 786 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0514 INST: TOCW

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %

SampleTime 240 s

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	This Analysis	Jun 3 2021, 12:09	13108693	100	1	0.99971	100 µl	Yes
	A2: 0		*A1: 129690.408486744*		*A0: 112989.354147417*				

Inj. Order 1 | Position 1 | Type Unknown | Identification BLANK | Dilution Factor 1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.00**	**0**	**0.00**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	6 3 2021 12:20:19	26.49	3548828	1	783	2	-	-
2	6 3 2021 12:24:57	0.00	0	0	780	2	-	Yes
3	6 3 2021 12:28:59	0.00	0	0	778	2	-	Yes
4	6 3 2021 12:33:01	0.00	0	0	776	2	-	Yes
5	6 3 2021 12:37:02	0.00	0	0	774	2	-	Yes

---

2 S1 Standard TC Std 0.00 mg/l 1 x

TC	**0.00**	**0**	**0.00**	**100 µl**	

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	6 3 2021 12:41:54	0.00	0	1	772	2	-	Yes
2	6 3 2021 12:46:32	0.00	0	1	770	2	-	Yes
3	6 3 2021 12:50:35	0.00	0	1	769	2	-	Yes
4	6 3 2021 12:54:36	0.00	0	1	767	2	-	Yes

---

3 S2 Standard TC Std 1.00 mg/l 1 x

TC	**0.45**	**171682**	**2.52**	**100 µl**	

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	6 3 2021 12:59:30	0.48	174956	1	767	2	-	Yes
2	6 3 2021 13:02:29	0.42	167886	1	765	2	-	Yes
3	6 3 2021 13:04:46	0.48	175879	1	764	2	-	Yes
4	6 3 2021 13:06:58	0.42	168007	1	763	2	-	Yes

---

4 S3 Standard TC Std. 5.00 mg/l 1 x

TC	**4.51**	**698350**	**4.59**	**100 µl**	

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	6 3 2021 13:10:39	4.88	745959	1	763	2	-	Yes
2	6 3 2021 13:13:50	4.36	679014	1	763	2	-	Yes
3	6 3 2021 13:16:23	4.37	679973	1	762	2	-	Yes
4	6 3 2021 13:18:55	4.44	688454	1	761	2	-	Yes

---

5 S4 Standard TC Std. 10.00 mg/l 1 x

TC	**11.05**	**1546248**	**1.12**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.

1		6 3 2021 13:22:16	11.23	1569842	1	761	2	-	Yes
2		6 3 2021 13:25:35	11.00	1539226	1	761	2	-	Yes
3		6 3 2021 13:28:11	11.06	1546802	1	760	2	-	Yes
4		6 3 2021 13:30:58	10.92	1529125	1	760	2	-	Yes

---

6 S5 Standard TC Std. 25.00 mg/l 1 x

	TC	**25.98**	**3483070**	**1.08**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	6 3 2021 13:34:29	26.29	3522784	1	760	2	-	Yes
2	6 3 2021 13:38:06	26.03	3488622	1	759	2	-	Yes
3	6 3 2021 13:40:56	25.59	3432266	1	759	2	-	Yes
4	6 3 2021 13:43:45	26.03	3488610	1	758	2	-	Yes

---

7 S6 Standard TC Std. 50.00 mg/l 1 x

	TC	**50.38**	**6646766**	**1.22**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	6 3 2021 13:47:33	50.93	6717665	1	758	2	-	Yes
2	6 3 2021 13:51:12	49.56	6541017	1	757	2	-	Yes
3	6 3 2021 13:54:04	50.22	6625786	1	756	2	-	Yes
4	6 3 2021 13:57:00	50.81	6702599	1	756	2	-	Yes

---

8 S7 Standard TC Std. 100.00 mg/l 1 x

	TC	**99.49**	**13015675**	**0.73**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	6 3 2021 14:00:56	98.48	12885334	1	756	2	-	Yes
2	6 3 2021 14:04:45	99.48	13014537	1	756	2	-	Yes
3	6 3 2021 14:07:49	99.78	13054138	1	755	2	-	Yes
4	6 3 2021 14:10:52	100.21	13108693	1	755	2	-	Yes

---

9 S8 Unknown ICV - 50.00 mg/L 1 x

	TC	**50.72**	**6690724**	**0.79**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	6 3 2021 14:14:53	51.13	6744708	1	756	2	-	Yes
2	6 3 2021 14:18:43	50.77	6697379	1	755	2	-	Yes
3	6 3 2021 14:21:42	50.81	6702474	1	755	2	-	Yes
4	6 3 2021 14:24:42	50.16	6618337	1	754	2	-	Yes

---

10 2 Unknown ICB 1 x

	TC	**0.20**	**139477**	**11.13**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	6 3 2021 14:28:35	0.57	187131	1	755	2	-	-
2	6 3 2021 14:31:39	0.05	119904	1	753	2	-	Yes
3	6 3 2021 14:33:50	0.19	137274	1	753	2	-	Yes
4	6 3 2021 14:36:05	0.23	143373	1	752	2	-	Yes
5	6 3 2021 14:38:19	0.34	157357	1	751	2	-	Yes

Analysis Name 080421 - 194059 194060.adb

Template Name 080421 - 194059 194060.tdb
Method Name N / A
Operator KMT

Date Wednesday, August 4, 2021
Time 15:19

Start Oven Temp. 752 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0514 INST: TOCW
CCV 0529 LCS 0530 SPIKE 0439

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0514 - 060321	Jun 3 2021, 12:09	13108693	100	1	0.99971	100 µl	Yes
	A2: 0		*A1: 129690.408486744*		*A0: 112989.354147417*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.98**	**239786**	**29.41**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/4/2021 15:30:13	8.99	1278428	1	780	2	-	-
2	8/4/2021 15:34:23	1.62	323085	1	781	2	-	Yes
3	8/4/2021 15:36:57	0.55	183820	1	782	2	-	Yes
4	8/4/2021 15:39:19	1.24	273434	1	781	2	-	Yes
5	8/4/2021 15:41:53	0.51	178805	1	782	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**48.99**	**6466955**	**1.02**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/4/2021 15:45:07	48.73	6432885	1	782	2	-	Yes
2	8/4/2021 15:48:45	49.15	6486779	1	781	2	-	Yes
3	8/4/2021 15:51:45	48.47	6398532	1	781	2	-	Yes
4	8/4/2021 15:54:38	49.63	6549627	1	780	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	S5	Unknown	LCSW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**48.86**	**6449065**	**3.37**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/4/2021 15:58:27	51.15	6747187	1	780	2	-	Yes
2	8/4/2021 16:02:27	47.16	6229108	1	779	2	-	Yes
3	8/4/2021 16:05:24	48.78	6438732	1	778	2	-	Yes
4	8/4/2021 16:08:24	48.33	6381236	1	777	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	2	Unknown	MBW	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**0.37**	**161550**	**18.56**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/4/2021 16:12:15	1.48	304523	1	776	2	-	-
2	8/4/2021 16:15:24	0.67	200458	1	774	2	-	Yes
3	8/4/2021 16:17:47	0.12	129200	1	773	2	-	Yes
4	8/4/2021 16:20:06	0.29	150658	1	773	2	-	Yes
5	8/4/2021 16:22:26	0.41	165885	1	772	2	-	Yes

13 11 Unknown 1030462 1 x

TC **0.20** **139301** **4.44** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/4/2021 18:09:29	1.31	282732	1	755	2	-	-
2	8/4/2021 18:12:28	0.22	141485	1	755	2	-	Yes
3	8/4/2021 18:14:37	0.14	130967	1	754	2	-	Yes
4	8/4/2021 18:16:47	0.25	145645	1	754	2	-	Yes
5	8/4/2021 18:18:56	0.20	139110	1	754	2	-	Yes

14 12 Unknown 1030468 1 x

TC **0.26** **147177** **3.71** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/4/2021 18:21:56	1.42	297257	1	755	2	-	-
2	8/4/2021 18:24:50	0.29	151236	1	754	2	-	Yes
3	8/4/2021 18:27:01	0.20	139551	1	754	2	-	Yes
4	8/4/2021 18:29:08	0.26	146925	1	754	2	-	Yes
5	8/4/2021 18:31:16	0.29	150999	1	753	2	-	Yes

15 S1 Unknown CCV 1 x

TC **48.12** **6354499** **1.15** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/4/2021 18:34:16	48.83	6446216	1	754	2	-	Yes
2	8/4/2021 18:38:01	47.49	6272232	1	754	2	-	Yes
3	8/4/2021 18:41:03	47.95	6331124	1	754	2	-	Yes
4	8/4/2021 18:44:09	48.23	6368426	1	754	2	-	Yes

16 13 Unknown CCB 1 x

TC **ZERO !** **88623** **11.81** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/4/2021 18:48:07	0.84	222143	1	754	2	-	-
2	8/4/2021 18:51:10	ZERO !	99000	1	753	2	-	Yes
3	8/4/2021 18:53:24	ZERO !	92794	1	752	2	-	Yes
4	8/4/2021 18:55:38	ZERO !	88338	1	753	2	-	Yes
5	8/4/2021 18:57:54	ZERO !	74363	1	753	2	-	Yes

17 14 Unknown 1030469 1 x

NOT USED

TC **0.35** **158767** **9.41** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/4/2021 19:01:03	1.40	294551	1	753	2	-	-
2	8/4/2021 19:04:05	0.40	164811	1	753	2	-	Yes
3	8/4/2021 19:06:23	0.46	172961	1	753	2	-	Yes
4	8/4/2021 19:08:40	0.19	137996	1	752	2	-	Yes
5	8/4/2021 19:10:58	0.36	159303	1	752	2	-	Yes

18 15 Unknown 1031437 1 x

NOT USED

TC **2.47** **434124** **2.94** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/4/2021 19:14:06	3.57	576484	1	753	2	-	-
2	8/4/2021 19:17:12	2.55	443301	1	752	2	-	Yes
3	8/4/2021 19:19:37	2.50	437822	1	752	2	-	Yes
4	8/4/2021 19:21:58	2.52	440119	1	752	2	-	Yes
5	8/4/2021 19:24:19	2.33	415255	1	752	2	-	Yes

19 16 Unknown 1031438 1 x

NOT USED

TC **0.00** **232223** **30.28** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/4/2021 19:27:28	0	336464	0	752	2	-	Yes
2	8/4/2021 19:30:28	0	209801	0	753	2	-	Yes
3	8/4/2021 19:32:42	0	199065	0	752	2	-	Yes
4	8/4/2021 19:34:57	0	183564	0	752	2	-	Yes

	5	8/4/2021 19:37:13	0	0	0	752	2	-	-

20	17	Unknown	DUP1031438	1 x
21	18	Unknown	MSW1031438	1 x
22	19	Unknown	MSDW1031438	1 x
23	20	Unknown	1031957	1 x
24	21	Unknown	1031958	1 x
25	22	Unknown	1031959	1 x
26	23	Unknown	1031961	1 x
27	S1	Unknown	CCV	1 x
28	24	Unknown	CCB	1 x
29	25	Unknown	1032207	1 x
30	26	Unknown	1032208	1 x
31	27	Unknown	1032210	1 x
32	28	Unknown	1032211	1 x
33	29	Unknown	1032212	1 x
34	30	Unknown	1032213	1 x
35	S2	Unknown	CCV	1 x
36	31	Unknown	CCB	1 x

NOT USED

Analysis Name 080921 - 194060.adb

Template Name 080421 - 194059 194060.tdb
Method Name N / A
Operator KMT

Date Monday, August 9, 2021
Time 16:02

Start Oven Temp. 777 °C
Start Cooler Temp. 4 °C

Version 2.55 Release
Info ICAL 0514 INST: TOCW
CCV 0529 LCS0530 SPIKE 0439

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0514 - 060321	Jun 3 2021, 12:09	13108693	100	1	0.99971	100 µl	Yes
	A2: 0		*A1: 129690.408486744*		*A0: 112989.354147417*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**54155**	**69.59**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 16:13:27	1.46	302056	1	789	2	-	-
2	8/9/2021 16:16:33	ZERO !	87475	1	787	2	-	Yes
3	8/9/2021 16:18:45	ZERO !	64133	1	786	2	-	Yes
4	8/9/2021 16:20:53	0	0	0	785	2	-	Yes
5	8/9/2021 16:24:55	ZERO !	65012	1	786	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**47.38**	**6257295**	**1.29**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 16:27:57	47.95	6331665	1	785	2	-	Yes
2	8/9/2021 16:31:35	47.82	6314572	1	784	2	-	Yes
3	8/9/2021 16:34:34	47.11	6222575	1	782	2	-	Yes
4	8/9/2021 16:37:29	46.63	6160369	1	780	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	2	Unknown	CCB	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**36377**	**123.85**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 16:41:14	ZERO !	92701	1	780	2	-	Yes
2	8/9/2021 16:44:06	0	0	0	779	2	-	Yes
3	8/9/2021 16:48:07	ZERO !	52809	1	778	2	-	Yes
4	8/9/2021 16:50:23	0	0	0	776	2	-	Yes
5	8/9/2021 16:54:25	0	0	0	774	2	-	-

Inj. Order	Position	Type	Identification	Dilution Factor
4	3	Unknown	1030469	1 x

Injection Type	Conc.	Area	CV	Inj. Volume
TC	**ZERO !**	**93566**	**3.98**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 16:59:15	ZERO !	112633	1	773	2	-	-
2	8/9/2021 17:02:05	ZERO !	91000	1	771	2	-	Yes
3	8/9/2021 17:04:19	ZERO !	91460	1	770	2	-	Yes
4	8/9/2021 17:06:31	ZERO !	92766	1	769	2	-	Yes
5	8/9/2021 17:08:49	ZERO !	99039	1	768	2	-	Yes

5 4 Unknown 1031437 1 x

	TC	2.65	456889	7.37		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 17:12:03	3.02	504654	1	768	2	-	Yes
2	8/9/2021 17:15:13	2.59	448737	1	766	2	-	Yes
3	8/9/2021 17:17:35	2.41	425514	1	766	2	-	Yes
4	8/9/2021 17:19:59	2.59	448654	1	765	2	-	Yes

6 5 Unknown 1031438 1 x

	TC	0.26	145932	8.89		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 17:23:21	0.39	162923	1	764	2	-	Yes
2	8/9/2021 17:26:15	0.27	147649	1	763	2	-	Yes
3	8/9/2021 17:28:39	0.15	132180	1	763	2	-	Yes
4	8/9/2021 17:30:51	0.22	140978	1	761	2	-	Yes

7 6 Unknown DUP1031438 1 x

	TC	0.27	147741	11.69		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 17:34:30	0.44	169725	1	762	2	-	Yes
2	8/9/2021 17:37:27	0.30	152024	1	760	2	-	Yes
3	8/9/2021 17:39:45	0.20	139518	1	760	2	-	Yes
4	8/9/2021 17:42:02	0.13	129698	1	760	2	-	Yes
5	8/9/2021 17:44:18	ZERO !	101706	1	759	2	-	-

8 7 Unknown MSW1031438 1 x

	TC	49.97	6593204	1.23		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 17:47:23	49.50	6532768	1	759	2	-	Yes
2	8/9/2021 17:50:48	50.77	6697514	1	759	2	-	Yes
3	8/9/2021 17:53:31	49.45	6525970	1	758	2	-	Yes
4	8/9/2021 17:56:10	50.15	6616564	1	757	2	-	Yes

9 8 Unknown MSDW1031438 1 x

	TC	50.09	6609162	1.75		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 17:59:41	50.46	6657800	1	758	2	-	Yes
2	8/9/2021 18:03:03	50.36	6643907	1	757	2	-	Yes
3	8/9/2021 18:05:45	50.76	6695690	1	757	2	-	Yes
4	8/9/2021 18:08:27	48.78	6439251	1	756	2	-	Yes

10 9 Unknown 1031957 1 x

	TC	0.17	134451	5.08		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 18:11:58	0.47	173481	1	757	2	-	-
2	8/9/2021 18:14:49	0.09	124912	1	755	2	-	Yes
3	8/9/2021 18:16:57	0.16	134143	1	755	2	-	Yes
4	8/9/2021 18:19:05	0.20	139024	1	755	2	-	Yes
5	8/9/2021 18:21:13	0.21	139727	1	755	2	-	Yes

11 10 Unknown 1031958 1 x

	TC	ZERO !	116988	8.16		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 18:24:11	0.13	129699	1	755	2	-	Yes
2	8/9/2021 18:26:58	0.01	114879	1	755	2	-	Yes
3	8/9/2021 18:29:02	0.03	116735	1	754	2	-	Yes
4	8/9/2021 18:31:06	ZERO !	106642	1	754	2	-	Yes

12 11 Unknown 1031959 1 x

	TC	ZERO !	96681	12.28		100 µl		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 18:35:20	0.18	136132	1	756	2	-	-
2	8/9/2021 18:38:12	ZERO !	89916	1	755	2	-	Yes
3	8/9/2021 18:40:16	0.01	113992	1	754	2	-	Yes

4	8/9/2021 18:42:21	ZERO !	88086	1	754	2	-	Yes
5	8/9/2021 18:44:26	ZERO !	94732	1	754	2	-	Yes

13 12 Unknown 1031961 1 x

TC **0.30** **151624** **6.62** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 18:47:22	0.39	163558	1	754	2	-	Yes
2	8/9/2021 18:50:13	0.24	144568	1	755	2	-	Yes
3	8/9/2021 18:52:20	0.33	156175	1	755	2	-	Yes
4	8/9/2021 18:54:27	0.23	142196	1	754	2	-	Yes

14 S1 Unknown CCV 1 x

TC **47.19** **6232718** **0.76** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 18:58:29	47.63	6290325	1	755	2	-	Yes
2	8/9/2021 19:02:09	46.98	6205923	1	755	2	-	Yes
3	8/9/2021 19:05:07	47.33	6250853	1	756	2	-	Yes
4	8/9/2021 19:08:06	46.81	6183773	1	755	2	-	Yes

15 13 Unknown CCB 1 x

TC **0.00** **0** **0.00** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 19:11:59	0	0	0	756	2	-	Yes
2	8/9/2021 19:16:36	0	0	0	755	2	-	Yes
3	8/9/2021 19:20:39	0	0	0	755	2	-	Yes
4	8/9/2021 19:24:39	0	0	0	755	2	-	Yes

16 14 Unknown 1032207 1 x

NOT USED

TC **0.46** **173165** **5.08** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 19:29:33	0.55	184955	1	755	2	-	Yes
2	8/9/2021 19:32:31	0.39	163713	1	753	2	-	Yes
3	8/9/2021 19:34:48	0.46	172603	1	753	2	-	Yes
4	8/9/2021 19:37:09	0.45	171389	1	753	2	-	Yes

17 15 Unknown 1032208 1 x

NOT USED

TC **ZERO !** **108811** **9.57** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 19:40:42	0.18	136020	1	754	2	-	-
2	8/9/2021 19:43:43	ZERO !	100618	1	753	2	-	Yes
3	8/9/2021 19:46:02	ZERO !	110707	1	753	2	-	Yes
4	8/9/2021 19:48:18	0.08	122788	1	753	2	-	Yes
5	8/9/2021 19:50:40	ZERO !	101132	1	753	2	-	Yes

18 16 Unknown 1032210 1 x

NOT USED

TC **ZERO !** **125431** **11.38** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 19:53:49	0.21	139921	1	753	2	-	Yes
2	8/9/2021 19:56:42	ZERO !	103249	1	753	2	-	-
3	8/9/2021 19:58:52	0.01	114546	1	753	2	-	Yes
4	8/9/2021 20:01:03	ZERO !	111872	1	752	2	-	Yes
5	8/9/2021 20:03:11	0.17	135385	1	751	2	-	Yes

19 17 Unknown 1032211 1 x

NOT USED

TC **ZERO !** **107672** **5.67** **100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 20:06:10	0.17	134446	1	752	2	-	-
2	8/9/2021 20:09:01	ZERO !	103712	1	752	2	-	Yes
3	8/9/2021 20:11:08	0.02	116067	1	751	2	-	Yes
4	8/9/2021 20:13:17	ZERO !	108283	1	751	2	-	Yes
5	8/9/2021 20:15:22	ZERO !	102629	1	751	2	-	Yes

20 18 Unknown 1032212 1 x

NOT USED

	TC	**0.00**	**117847**	**9.90**		**100 µl**		
Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/9/2021 20:18:20	0	131066	0	752	2	-	Yes
2	8/9/2021 20:21:11	0	109016	0	752	2	-	Yes
3	8/9/2021 20:23:14	0	113459	0	751	2	-	Yes
4	8/9/2021 20:25:19	0	0	0	751	2	-	-

21	19	Unknown	1032213	1 x
22	S1	Unknown	CCV	1 x
23	20	Unknown	CCB	1 x

NOT USED

Analysis Name 081021 - 194060.adb

Template Name 081021 - 194060.tdb
Method Name N / A
Operator KMT

Date Tuesday, August 10, 2021
Time 7:52

Start Oven Temp. 780 °C
Start Cooler Temp. 2 °C

Version 2.55 Release
Info ICAL 0514 INST: TOCW
CCV 0529 LCS 0530 SPIKE 0439

Element	Integration Time	Samples	Extra Samples	Max. CV
Carbon	60 s	4	1	10 %
SampleTime	240 s			

No	Type	FileName	Date/Time	Max. Area	Max Conc.	Order	Correlation	Volume	Sel.
1	TC	TOC0514 - 060321	Jun 3 2021, 12:09	13108693	100	1	0.99971	100 µl	Yes
	A2: 0		*A1: 129690.408486744*		*A0: 112989.354147417*				

Inj. Order	Position	Type	Identification	Dilution Factor
1	1	Unknown	IB	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**ZERO !**	**103103**	**46.08**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/10/2021 8:02:51	6.15	910416	1	779	2	-	-
2	8/10/2021 8:07:00	0.46	172320	1	777	2	-	Yes
3	8/10/2021 8:09:25	ZERO !	85443	1	775	2	-	Yes
4	8/10/2021 8:11:38	ZERO !	64299	1	773	2	-	Yes
5	8/10/2021 8:13:51	ZERO !	90353	1	772	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
2	S1	Unknown	CCV	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**48.25**	**6370775**	**1.55**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/10/2021 8:17:03	49.07	6476813	1	772	2	-	Yes
2	8/10/2021 8:20:43	47.99	6336638	1	771	2	-	Yes
3	8/10/2021 8:23:40	47.32	6250417	1	771	2	-	Yes
4	8/10/2021 8:26:35	48.63	6419234	1	770	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
3	2	Unknown	CCB	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**ZERO !**	**55734**	**68.84**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/10/2021 8:30:22	ZERO !	84361	1	769	2	-	Yes
2	8/10/2021 8:33:18	ZERO !	61430	1	768	2	-	Yes
3	8/10/2021 8:35:36	0	0	0	767	2	-	Yes
4	8/10/2021 8:39:38	0	0	0	767	2	-	-
5	8/10/2021 8:43:39	ZERO !	77146	1	766	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
4	3	Unknown	1032207	1 x

	Injection Type	Conc.	Area	CV	Inj. Volume
	TC	**0.61**	**191559**	**9.97**	**100 µl**

Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
1	8/10/2021 8:46:52	0.80	216523	1	765	2	-	Yes
2	8/10/2021 8:50:04	0.64	196007	1	764	2	-	Yes
3	8/10/2021 8:52:19	0.47	173726	1	763	2	-	Yes
4	8/10/2021 8:54:39	0.52	179980	1	763	2	-	Yes

Inj. Order	Position	Type	Identification	Dilution Factor
5	4	Unknown	1032208	1 x

		TC	**0.13**	**129617**	**7.24**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	8/10/2021 8:58:01	0.40	165140	1	762	2	-	-
	2	8/10/2021 9:01:01	0.21	139802	1	762	2	-	Yes
	3	8/10/2021 9:03:16	0.04	118462	1	761	2	-	Yes
	4	8/10/2021 9:05:34	0.10	125889	1	761	2	-	Yes
	5	8/10/2021 9:07:49	0.16	134315	1	761	2	-	Yes

6	5	Unknown	1032210	1 x

		TC	**0.30**	**151853**	**5.44**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	8/10/2021 9:10:57	0.39	163276	1	761	2	-	Yes
	2	8/10/2021 9:13:50	0.27	148121	1	760	2	-	Yes
	3	8/10/2021 9:16:14	0.24	144084	1	760	2	-	Yes
	4	8/10/2021 9:18:32	0.08	123759	1	760	2	-	-
	5	8/10/2021 9:20:45	0.30	151933	1	759	2	-	Yes

7	6	Unknown	1032211	1 x

		TC	**ZERO !**	**120045**	**5.07**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	8/10/2021 9:23:55	0.26	146325	1	759	2	-	-
	2	8/10/2021 9:26:53	0.07	122633	1	758	2	-	Yes
	3	8/10/2021 9:29:13	0.08	123619	1	758	2	-	Yes
	4	8/10/2021 9:31:30	ZERO !	110938	1	757	2	-	Yes
	5	8/10/2021 9:33:44	0.08	122992	1	757	2	-	Yes

8	7	Unknown	1032212	1 x

		TC	**ZERO !**	**100558**	**5.70**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	8/10/2021 9:36:49	0.11	127016	1	758	2	-	-
	2	8/10/2021 9:39:44	ZERO !	94009	1	756	2	-	Yes
	3	8/10/2021 9:41:54	ZERO !	98808	1	756	2	-	Yes
	4	8/10/2021 9:44:01	ZERO !	101687	1	756	2	-	Yes
	5	8/10/2021 9:46:10	ZERO !	107730	1	755	2	-	Yes

9	8	Unknown	1032213	1 x

		TC	**0.15**	**131987**	**9.59**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	8/10/2021 9:49:11	0.29	150400	1	755	2	-	Yes
	2	8/10/2021 9:52:08	0.13	129518	1	755	2	-	Yes
	3	8/10/2021 9:54:19	0.10	126013	1	755	2	-	Yes
	4	8/10/2021 9:56:26	0.07	122018	1	754	2	-	Yes

10	S1	Unknown	CCV	1 x

		TC	**47.12**	**6223855**	**0.95**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	8/10/2021 10:00:19	46.61	6157870	1	755	2	-	Yes
	2	8/10/2021 10:04:03	46.95	6201612	1	755	2	-	Yes
	3	8/10/2021 10:07:02	47.68	6296812	1	755	2	-	Yes
	4	8/10/2021 10:10:04	47.24	6239129	1	754	2	-	Yes

11	9	Unknown	CCB	1 x

		TC	**0.00**	**0**	**0.00**		**100 µl**		
	Sample	Inj. Time	Conc.	Area	Curve	Oven	Cooler	Edited	Sel.
	1	8/10/2021 10:13:59	0	0	0	755	2	-	Yes
	2	8/10/2021 10:18:36	0	0	0	754	2	-	Yes
	3	8/10/2021 10:22:37	0	0	0	754	2	-	Yes
	4	8/10/2021 10:26:38	0	0	0	754	2	-	Yes

INORGANICS
LOGBOOK
DOCUMENTS

WANIONS IC QSM 5.0 Anion Run
193948 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1035193						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICV							
		Chloride		ICV							
		Sulfate		ICV							
	1035194						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		ICB							
		Chloride		ICB							
		Sulfate		ICB							
	1030816						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1031436						WANIONS IC QSM 5.0				
		Chloride		LCSW							
		Nitrate Nitrogen		LCSW							
		Sulfate		LCSW							
	1030815						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		MBW				0			
		Chloride		MBW				0			
		Sulfate		MBW				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
193948 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
163390	1030462		7/26/2021	13:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Sulfate										
		Nitrate Nitrogen										
163390	1030468		7/26/2021	15:20		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
163390	1030469		7/26/2021	15:20		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate										
		Chloride										
		Nitrate Nitrogen										
	1030825		7/26/2021	15:20				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			DUP	1030469			0			
		Chloride			DUP	1030469			0			
		Sulfate			DUP	1030469			0			
	1030824		7/26/2021	15:20				ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSW	1030469			0			
		Chloride			MSW	1030469			0			
		Sulfate			MSW	1030469			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
193948 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1030823		7/26/2021 15:20				ANIONS IC QSM 5.0				
		Chloride		MSDW 1030824				0			
		Nitrate Nitrogen		MSDW 1030824				0			
		Sulfate		MSDW 1030824				0			
	1030822						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1030821						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			
	1030820						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1030819						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
193948 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
163390	1030468		7/26/2021 15:20		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Sulfate	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
163390	1030469		7/26/2021 15:20		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride	***RERUN***								
		Sulfate	***RERUN***								
		Nitrate Nitrogen	***RERUN***								
	1030825		7/26/2021 15:20				ANIONS IC QSM 5.0				
		Sulfate	***RERUN***	DUP	1030469			0			
		Chloride	***RERUN***	DUP	1030469			0			
		Nitrate Nitrogen	***RERUN***	DUP	1030469			0			
	1030824		7/26/2021 15:20				ANIONS IC QSM 5.0				
		Sulfate	***RERUN***	MSW	1030469			0			
		Chloride	***RERUN***	MSW	1030469			0			
		Nitrate Nitrogen	***RERUN***	MSW	1030469			0			
	1030823		7/26/2021 15:20				ANIONS IC QSM 5.0				
		Nitrate Nitrogen	***RERUN***	MSDW	1030824			0			
		Chloride	***RERUN***	MSDW	1030824			0			
		Sulfate	***RERUN***	MSDW	1030824			0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
193948 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1030818						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1030817						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Data Review Checklist

	Method: Anions by Ion Chromatography 300.0/9056	Independent Data Review Checklist	Instrument: Aquion - System 4

LIMS Run #(s)	Analysis Date	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes/No)
193947 193948	07/27/2021	TMG	RLD	07/29/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3	Yes		Yes		
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits		No		No	Affected sample reuslts were "M" flagged
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits	Yes		Yes		
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

WANIONS IC QSM 5.0 Anion Run
193993 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1033003							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	1033025							WANIONS IC QSM 5.0				
		Chloride			LCSW							
		Nitrate Nitrogen			LCSW							
		Sulfate			LCSW							
	1033002							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			MBW				0			
		Chloride			MBW				0			
		Sulfate			MBW				0			
163449	1031437		7/28/2021	11:30		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
163449	1031438		7/28/2021	16:26		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride			*							
		Nitrate Nitrogen			*							
		Sulfate			*							

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
193993 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1033001		7/28/2021	16:26					ANIONS IC QSM 5.0				
		Nitrate Nitrogen			DUP	1031438				0			
		Chloride			DUP	1031438				0			
		Sulfate			DUP	1031438				0			
	1033011		7/28/2021	16:26					ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSW	1031438				0			
		Chloride			MSW	1031438				0			
		Sulfate			MSW	1031438				0			
	1033010		7/28/2021	16:26					ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSDW	1033011				0			
		Chloride			MSDW	1033011				0			
		Sulfate			MSDW	1033011				0			
	1033009								WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV					0			
		Chloride			CCV					0			
		Sulfate			CCV					0			
	1033008								WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB					0			
		Chloride			CCB					0			
		Sulfate			CCB					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
193993 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1033007						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1033006						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			
163449	1031437		7/28/2021 11:30		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Nitrate Nitrogen	***RERUN***								
		Chloride	***RERUN***								
		Sulfate	***RERUN***								
	1033005						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1033004						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Data Review Checklist

	Method: Anions by Ion Chromatography 300.0/9056	Independent Data Review Checklist	Instrument: Aquion - System 4

LIMS Run #(s)	Analysis Date	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes/No)
193993	07/29/2021	TMG	RLD	08/03/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3	Yes		Yes		
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits		No		No	Affected sample results were "M" flagged
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits	Yes		Yes		
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

WANIONS IC QSM 5.0 Anion Run
194031 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1032980							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	1033106							WANIONS IC QSM 5.0				
		Chloride			LCSW							
		Nitrate Nitrogen			LCSW							
		Sulfate			LCSW							
	1032979							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			MBW				0			
		Chloride			MBW				0			
		Sulfate			MBW				0			
163492	1031957		7/29/2021	13:42		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										
163492	1031958		7/29/2021	14:40		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride										
		Nitrate Nitrogen										
		Sulfate										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
194031 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
163492	1031959		7/29/2021	15:23			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride											
		Nitrate Nitrogen											
		Sulfate											
163492	1031961		7/29/2021	17:45			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Chloride											
		Nitrate Nitrogen											
		Sulfate											
	1032983		7/29/2021	17:45					ANIONS IC QSM 5.0				
		Nitrate Nitrogen			DUP	1031961				0			
		Chloride			DUP	1031961				0			
		Sulfate			DUP	1031961				0			
	1032982		7/29/2021	17:45					ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSW	1031961				0			
		Chloride			MSW	1031961				0			
		Sulfate			MSW	1031961				0			
	1032981		7/29/2021	17:45					ANIONS IC QSM 5.0				
		Nitrate Nitrogen			MSDW	1032982				0			
		Chloride			MSDW	1032982				0			
		Sulfate			MSDW	1032982				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
194031 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1032985						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			
	1032984						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Data Review Checklist

	Method: Anions by Ion Chromatography 300.0/9056	Independent Data Review Checklist	Instrument: Aquion - System 4

LIMS Run #(s)	Analysis Date	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes/No)
194009 194031 194032 194040	07/30/2021	TMG	RLD	08/04/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3		No		No	Affected sample results were "H" flagged
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits		No		No	Affected sample results were "M" flagged
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits		No		No	Affected sample results were "Y" flagged
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

WANIONS IC QSM 5.0 Anion Run
194052 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1032220							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	1032356							WANIONS IC QSM 5.0				
		Chloride			LCSW							
		Nitrate Nitrogen			LCSW							
		Sulfate			LCSW							
	1032219							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			MBW				0			
		Chloride			MBW				0			
		Sulfate			MBW				0			
163509	1032207		7/30/2021	08:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate										
		Chloride										
		Nitrate Nitrogen										
163509	1032208		7/30/2021	09:27		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate										
		Chloride										
		Nitrate Nitrogen										

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
194052 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
163509	1032210		7/30/2021	11:11		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate										
		Chloride										
		Nitrate Nitrogen										
163509	1032211		7/30/2021	11:11		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate										
		Chloride										
		Nitrate Nitrogen										
163509	1032212		7/30/2021	10:30		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate										
		Chloride										
		Nitrate Nitrogen										
	1032218							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCV				0			
		Chloride			CCV				0			
		Sulfate			CCV				0			
	1032217							WANIONS IC QSM 5.0				
		Nitrate Nitrogen			CCB				0			
		Chloride			CCB				0			
		Sulfate			CCB				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
194052 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
163509	1032213		7/30/2021 13:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ANIONS IC QSM 5.0		GW	**4**	
		Sulfate									
		Chloride									
		Nitrate Nitrogen									
	1032225		7/30/2021 13:00				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		DUP 1032213				0			
		Chloride		DUP 1032213				0			
		Sulfate		DUP 1032213				0			
	1032224		7/30/2021 13:00				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSW 1032213				0			
		Chloride		MSW 1032213				0			
		Sulfate		MSW 1032213				0			
	1032223		7/30/2021 13:00				ANIONS IC QSM 5.0				
		Nitrate Nitrogen		MSDW 1032224				0			
		Chloride		MSDW 1032224				0			
		Sulfate		MSDW 1032224				0			
	1032222						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCV				0			
		Chloride		CCV				0			
		Sulfate		CCV				0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

WANIONS IC QSM 5.0 Anion Run
194052 on 8/9/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	ANALYTE	SAMPLE DATE:	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1032221						WANIONS IC QSM 5.0				
		Nitrate Nitrogen		CCB				0			
		Chloride		CCB				0			
		Sulfate		CCB				0			

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Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Data Review Checklist

	Method: Anions by Ion Chromatography 300.0/9056	Independent Data Review Checklist	Instrument: Aquion - System 4

LIMS Run #(s)	Analysis Date	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes/No)
194052	07/31/2021	TMG	RLD	08/02/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples analyzed within hold time?	28 days for Cl, F, SO_4;14 days for preserved NO_2+NO_3; 48 hours for O.Phos, and unpreserved NO_2 and NO_3	Yes		Yes		
2. Was the calibration performed using the required number of standards?	Minimum three plus a blank	Yes		Yes		
3. Is the standard prep log number noted on the analytical report bench sheet?	---	Yes		Yes		
4. Was the correlation coefficient acceptable?	≥ .995	Yes		Yes		
5. Were the ICV and ICB run immediately after the calibration check standard?	---	Yes		Yes		
6. Was the ICV recovery acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
7. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
8. Were the CCV's and the CCB's analyzed at the required frequency?	1 / 10 samples or contract/program specific	Yes		Yes		
9. Were the CCV recoveries acceptable?	90 – 110 % or contract/program specific	Yes		Yes		
10. Were the CCB results acceptable?	< LOD or program/project specific	Yes		Yes		
11. Was the MB analyzed at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
12. Were the MB results acceptable?	< LOD or contract/program specific	Yes		Yes		

13. Was a LCS run at the required frequency?	1 / 20 samples or contract/program specific	Yes		Yes		
14. Was the LCS recovery acceptable?	Within in-house or contract/program specific limits	Yes		Yes		
15. Was the LCS used before the indicated expiration date?	---	Yes		Yes		
16. Were the MS and MSD (when required) prepared at the required frequency?	1 per 20 samples per matrix or contract/program specific	Yes		Yes		
17. Were the MS and MSD (when required) recoveries acceptable?	Within In-house or contract/program specific limits	Yes		Yes		
18. Was the RPD between the MS and MSD (when required) acceptable?	Within in house or contract/program specific limits	Yes		Yes		
19. Was a sample duplicate prepared at the required frequency?	Contract/program specific or 1 per 20 samples (1 / 10 for SDWA samples)	Yes		Yes		
20. Was the duplicate within precision limits?	Within in-house or contract/program specific limits	Yes		Yes		
21. Were all chromatograms checked to ensure accurate peak identification?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		
23. Were all samples having analytes detected in amounts exceeding the calibration range diluted, reanalyzed and DF applied to the final results?	---	Yes		Yes		
24. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

Aquion Run Log - System 4

Start Date	Start Time	End Date	End Time	Analyst	Lims Run #(s)	Calibration ID#	Data File	CCV ID's	LCS ID's	Spike ID's	Total Cond.	Pressure (Mpa)	Flow (mL/min)	Comments	Reviewed/Date
05/27/21	12:32	05/28/21	09:34	KMT	192253	IC3602A	052721 -	IC3639 IC3645	IC3640 IC3646	IC3641 IC3647	21.33	1097	0.94		
05/28/21	10:45	05/28/21	19:31	KMT	192316	IC3602A	052821 -	IC3648 IC3651	IC3649 IC3652	IC3650 IC3653	21.95	1090	0.94		
06/01/21	13:14	06/01/21	21:43	KMT	192370 192371	IC3602A	060121 -	IC3648 IC3651	IC3649 IC3652	IC3650 IC3653	21.55	1094	0.94		
06/02/21	14:24	06/02/21	17:24	KMT	192432	IC3602A	060221 -	IC3648 IC3651	IC3649 IC3652	IC3650 IC3653	21.35	1095	0.94		
06/03/21	14:59	06/03/21	18:53	TMG	192461	IC3602A	060321 -	IC3654 IC3657	IC3655 IC3658	IC3656 IC3659	21.37	1087	0.94		
06/04/21	14:05	06/07/21	09:26	TMG	192511	IC3602A	060421 -	IC3654 IC3657	IC3655 IC3658	IC3656 IC3659	21.77	1092	0.94		
06/08/21	10:09	06/08/21	21:17	TMG	192549 192567	IC3602A	060821 -	IC3654 IC3657	IC3655 IC3658	IC3656 IC3659	21.79	1094	0.94		
06/09/21	12:50	06/09/21	18:51	TMG	192616 192617 192618	IC3602A	060921 -	IC3654 IC3662	IC3655 IC3663	IC3656 IC3664	21.86	1092	0.94		
06/10/21	14:26	06/10/21	19:33	TMG	192658 192659	IC3602A	061021 -	IC3665 IC3668	IC3666 IC3669	IC3667 IC3670	21.23	1090	0.94		
06/14/21	12:29	06/14/21	18:31	TMG	192708 192709	IC3602A	061421 -	IC3665 IC3668	IC3666 IC3669	IC3667 IC3670	21.53	1103	0.94		
06/16/21	11:03	06/16/21	17:04	TMG	192764 192765	IC3602A	061621 -	IC3665 IC3668	IC3666 IC3669	IC3667 IC3670	21.22	1097	0.94		
06/17/21	13:38	06/17/21	20:33	TMG	192833 192834	IC3602A	061721 -	IC3676 IC3679	IC3677 IC3680	IC3678 IC3681	21.16	1098	0.94		
06/18/21	14:15	06/18/21	18:10	TMG	192871	IC3602A	061821 -	IC3676 IC3679	IC3677 IC3680	IC3678 IC3681	21.2	1102	0.94		
06/22/21	13:15	06/23/21	09:31	TMG	192935	IC3602A	062221 -	IC3676 IC3679	IC3677 IC3680	IC3678 IC3681	21.52	1096	0.94		
06/23/21	14:33	06/24/21	09:53	TMG	192993 192994 192995 192996	IC3602A	062321 -	IC3676 IC3679	IC3677 IC3680	IC3678 IC3681	21.32	1100	0.94		
06/24/21	12:47	06/25/21	10:13	TMG	193019 193020 193036 193050	IC3602A	062421 -	IC3684 IC3687	IC3685 IC3688	IC3686 IC3689	21.5	1102	0.94		
06/25/21	13:15	06/26/21	11:15	TMG	193095 193096	IC3602A	062521 -	IC3684 IC3687	IC3685 IC3688	IC3686 IC3689	21.53	1099	0.94		
06/29/21	12:46	06/29/21	16:59	TMG	193162	IC3602A	062921 -	IC3684 IC3687	IC3685 IC3688	IC3686 IC3689	21.19	1113	0.94		
06/30/21	14:12	07/01/21	09:30	TMG	193197 193198	IC3602A	063021 -	IC3684 IC3690	IC3685 IC3691	IC3686 IC3692	21.06	1126	0.94		
07/01/21	12:47	07/02/21	10:52	TMG	193232 193233 193240	IC3602A	070121 -	IC3694 IC3697	IC3695 IC3698	IC3696 IC3699	21.5	1111	0.94		
07/02/21	11:47	07/02/21	15:24	TMG	193283	IC3602A	070221 -	IC3694 IC3697	IC3695 IC3698	IC3696 IC3699	21.65	1105	0.94		
07/06/21	11:15	07/06/21	13:39	TMG	193329	IC3602A	070621 -	IC3694 IC3697	IC3695 IC3698	IC3696 IC3699	21.23	1107	0.94		
07/07/21	10:25	07/07/21	19:08	TMG	193354 193355 193364	IC3602A	070721 -	IC3694 IC3697	IC3695 IC3698	IC3696 IC3699	21.1	1105	0.94		
07/08/21	12:09	07/08/21	19:41	TMG	193416 193417	IC3602A	070821 -	IC3700 IC3703	IC3701 IC3704	IC3702 IC3705	21.17	1111	0.94		
07/09/21	12:02	07/12/21	09:12	KMT	193446 193459	IC3602A	070921 -	IC3700 IC3703	IC3701 IC3704	IC3702 IC3705	21.17	1110	0.94		
07/13/21	14:15	07/13/21	20:34	TMG	193537 193538	IC3602A	071321 -	IC3700 IC3703	IC3701 IC3704	IC3702 IC3705	21.16	1118	0.94		
07/14/21	12:58	07/15/21	09:10	TMG	193558 193559	IC3602A	071421 -	IC3700 IC3703	IC3701 IC3704	IC3702 IC3705	21.25	1117	0.94		
07/15/21	12:33	07/16/21	09:54	TMG	193602 193603	IC3602A	071521 -	IC3700 IC3703	IC3701 IC3704	IC3702 IC3705	21.67	1110	0.94		
07/16/21	11:52	07/19/21	08:56	TMG	193632	IC3602A	071621 -	IC3706 IC3709	IC3707 IC3710	IC3708 IC3711	21.82	1097	0.94		
07/19/21	14:55	07/19/21	19:08	TMG	193700	IC3602A	071921 -	IC3706 IC3709	IC3707 IC3710	IC3708 IC3711	21.45	1101	0.94		
07/20/21	11:57	07/21/21	10:35	TMG	193718 193725	IC3602A	072021 -	IC3706 IC3709	IC3707 IC3710	IC3708 IC3711	21.27	1110	0.94		
07/22/21	12:21	07/23/21	11:57	TMG	193790 193798	IC3602A	072221 -	IC3715 IC3718	IC3716 IC3719	IC3717 IC3720	21.46	1114	0.94		
07/23/21	13:09	07/26/21	09:22	TMG	193844 193846	IC3602A	072321 -	IC3715 IC3718	IC3716 IC3719	IC3717 IC3720	21.86	1115	0.94		
07/26/21	14:48	07/26/21	21:25	TMG	193913	IC3602A	072621 -	IC3715 IC3718	IC3716 IC3719	IC3717 IC3720	21.38	1110	0.94		
07/27/21	12:30	07/28/21	10:13	TMG	193947 193948	IC3602A	072721 -	IC3715 IC3723	IC3716 IC3724	IC3717 IC3725	21.21	1121	0.94		
07/28/21	13:55	07/29/21	10:29	TMG	193965 193966 193967	IC3602A	072821 -	IC3715 IC3723	IC3716 IC3724	IC3717 IC3725	21.29	1120	0.94		
07/29/21	12:05	08/02/21	15:38	TMG	193993	IC3602A	072921 -	IC3726 IC3729	IC3727 IC3730	IC3728 IC3731	21.5	1110	0.94		
07/30/21	8:20	08/03/21	11:51	TMG	194009 194031 194032 194040	IC3602A	073021 -	IC3726 IC3729	IC3727 IC3730	IC3728 IC3731	21.08	1112	0.94		
07/31/21	21:51	08/01/21	04:10	TMG	194052	IC3602A	073121 -	IC3726 IC3729	IC3727 IC3730	IC3728 IC3731	21	1123	0.94		
08/03/21	14:31	08/03/21	18:44	TMG	194134	IC3602A	080321 -	IC3726 IC3729	IC3727 IC3730	IC3728 IC3731	21.36	1105	0.94		
08/04/21	12:52	08/05/21	10:24	TMG	194166	IC3602A	080421 -	IC3726 IC3729	IC3727 IC3730	IC3728 IC3731	20.96	1103	0.94		
08/05/21	12:22	08/05/21	20:12	TMG	194197 194198	IC3602A	080521 -	IC3734 IC3737	IC3735 IC3738	IC3736 IC3739	21.41	1112	0.94		
08/06/21	12:55	08/06/21	21:38	TMG	194241 194258	IC3602A	080621 -	IC3734 IC3737	IC3735 IC3738	IC3736 IC3739	21.01	1118	0.94		
08/09/21	7:44			TMG	194259	IC3602A	080921 -	IC3734 IC3737	IC3735 IC3738	IC3736 IC3739	21.06	1119	0.94		

WCOD QSM Analytical Run
194113 on 8/18/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
163429	1030878		7/27/2021 16:40			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-54	COD QSM		GW	4	
		IDW-54							81979			
163509	1032214		7/30/2021 14:05			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	COD QSM		GW	4	
		IDW 48/49							81979			
	1033057							COD QSM				
				MBW					81979			
	1033058							COD QSM				
				LCSW					81979			
	1033059		7/27/2021 16:40					COD QSM				
		IDW-54		MSW	1030878				81979			
	1033060		7/27/2021 16:40					COD QSM				
		IDW-54		MSDW	1033059				81979			
	1033064		7/27/2021 16:40					COD QSM				
		IDW-54		DUP	1030878				81979			
	1035649							WCOD QSM				
				CCB								
	1035650							WCOD QSM				
				CCV								
	1035651							WCOD QSM				
				CCB								
	1035652							WCOD QSM				
				CCV								
	1038043							WCOD QSM				
				ICV								
	1038044							WCOD QSM				
				ICB								

17 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

COD Data Validation Checklist

		Method: Chemical Oxygen Demand EPA 410.4			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
194111, 113	08/05/2021	HLB/RLB	HLB	08/10/2021	Yes

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Does a digestion sheet accompany the data package?	---	Yes		Yes		
2. Does the digestion sheet include all reagent and standard prep log numbers?	---	Yes		Yes		
3. Was a passing calibration test applied to sample analysis?	≥0.995	Yes		Yes		
4. Was a passing ICV analyzed immediately after the calibration?	90-110%	Yes		Yes		
5. Was a passing ICB analyzed immediately after the ICV?	< |LOD|or client/project specific	Yes		Yes		
6. Were CCVs and CCB analyzed at the required frequency?	1 per 10 samples	Yes		Yes		
7. Did analyzed CCVs meet the required acceptance criteria?	90-110%	Yes		Yes		
8. Did analyzed CCBs meet the acceptance criteria?	< |LOD|or client/project specific	Yes		Yes		
9. Was a Method Blank prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes		Yes		
10. Was the method blank within acceptance criteria?	< |LOD|or client/project specific	Yes		Yes		
11. Was an LCS prepared at the required frequency?	1per 20 samples or at contract/program specific frequencies	Yes		Yes		
12. Did the LCS meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits	Yes		Yes		
13. Was an MS and MSD prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes		Yes		
14. Did the MS/ MSD's meet the acceptance criteria?	90-110% or Within in-house or contract/program specific limits		No		No	1030638 MSD failed high, M flagged

15. Did the MS/MSD's meet the RPD criteria?	Within in-house or contract/program specific limits	Yes		Yes		
16. Was a Duplicate prepared at the required frequency?	1per 10 per batch or at contract/program specific frequencies	Yes		Yes		
17. Did the Duplicate meet the RPD criteria?	Within in-house or contract/program specific limits	Yes		Yes		
18. Were the samples digested within hold time?	28 days	Yes		Yes		
19. Was the max temperature(s) for reactor(s) documented?	---	Yes		Yes		
20. Was the method specifed temperature reached?		Yes		Yes		
21. Were reagents/standards used before expiration date?	---	Yes		Yes		
22. Are all samples on the job lists accounted for?	---	Yes		Yes		

CHEMICAL OXYGEN DEMAND REAGENT LOG

Prep Batch(es): 81977, 81979
Date/Time/Analyst: 08/03/2021 13:50 HLB/RLB
Run(s): 194111, 194113
Date/Time/Analyst: 08/05/2021 10:40 HLB/RLB

Reagents:	W #	Exp Date
ICAL Preparation	W51074	10/09/2021
CCV Preparation	W51076	10/09/2021
LCS/ICV Preparation	W51077	10/09/2021
Silver Sulfate Acid	W50788	05/14/2022
Potassium Dichromate Dig Solution	W50710	05/05/2022

Spiked Samples:	W #	Exp Date
Spiking Solution	W51075	10/09/2021
Concentration 2000 mg/L		
Volume of Spike Used 0.2 mL		
Final Sample Volume 2.5 mL		
Final Spike Concentration 148.2 mg/L		

Date: 08/03/2021
Time: 13:50

COD DIGESTION BLOCK TEMPS

	A	B
Temperature (Max) 150°C ± 2°C:		

	E	D
Temperature (Max) 150°C ± 2°C:	150.4	

194113

PrepWrkSht2
on 8/3/2021

Prep Batch: 81979

Date Prepped: 8/3/21 CCV 1 RLB 8/5/21 Vol

Prepped By: HLB/RLB

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	1033057	MBW TX 12	0	COD QSM			LIQUID			
	1033058	LCSW TX 11	0	COD QSM			LIQUID			
163429 L	1030878	17,18,19,20		COD QSM	WESTON SOLUTIONS, INC.	IDW-54	GROUND WATER	7/27/21 16:40	8/9/21	4
	1033059	MSW	1030878	COD QSM		IDW-54	GROUND WATER	7/27/21 16:40		
	1033060	MSDW	1033059	COD QSM		IDW-54	GROUND WATER	7/27/21 16:40		
	1033064	DUP	1030878	COD QSM		IDW-54	GROUND WATER	7/27/21 16:40		

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Distibution:

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpB3DF.tmp

GENESYS 30 Instrument Run Logbook

Date	Start Time	End Time	Analyst	Test/Analyte	Calibration Test #	Run #/ Comments
08/05/21	10:40	10:55	HLB/RLB	COD	CODW51074	194111, 113

WPH Analytical Run
194093 on 8/13/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
163509	1032214		7/30/2021	14:05			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	PH		GW	**4**	
		IDW 48/49											
	1032883		7/30/2021	14:05					PH				
		IDW 48/49			DUP	1032214				0			

2 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

pH Data Validation Checklist

		Method: pH EPA 150.1, SM 4500-H+B, EPA 9040C, EPA 9045D			
LIMS Run #(s)	**Analysis Date**	**Analyst / Data Interpreter**	**Independent Reviewer**	**Date of Review**	**Approved? (Yes or No)**
194093	08/02/2021	RLB	HLB	08/06/2021	Yes

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question.
Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	**Acceptance Criteria**	**Analyst Review**		**Independent Review**		**Comments:**
		Yes	No	Yes	No	(indicate reference to an attachment if necessary)
1. Was the calibration slope recorded on the bench sheet?	95-110%	Yes		Yes		
2. Were reagents/standards used before expiration date?	---	Yes		Yes		
3. Were duplicates analyzed at the appropriate frequency?	1 every 20 samples of the same matrix	Yes		Yes		
4. Were the duplicates within acceptable limits?	Differ by $\leq$ 0.10 pH units	Yes		Yes		
5. Are all samples on the job lists accounted for?	---	Yes		Yes		
6. Were SM 4500-H+B samples bracketed by calibration buffer 7?	Every 10 samples, Differ by $\leq$ 0.10 pH units	Yes		Yes		

Mettler Toledo (Easy Seven) Instrument Run Logbook

Date	Start Time	End Time	Analyst	Analyte	Lims Run #(s)
07/28/21	16:24	17:00	SRW	PH	193972
07/29/21	14:10	14:40	HLB	PH	194006
07/30/21	14:50	15:10	ATJ	PH	194050
08/02/21	14:00	14:20	RLB	PH	194089
08/02/21	14:50	15:00	RLB	PH	194093
08/03/21	15:00	15:30	LAY	PH	194140
08/04/21	15:30	16:00	HLB	PH	194171
08/05/21	15:45	15:15	HLB	PH	194214
08/06/21	14:20	14:45	HLB	PH	194261
08/09/21	14:00	14:20	RLB	PH	194294
08/10/21	14:30	14:55	HLB	PH	194344
08/11/21	15:00	15:30	SRW	PH	194393

Mettler Toledo (Easy Seven) pH Calibration & Maintenance Run Logb

		pH Buffer Reference ID #			3 Point Calibration				
Date	Analyst	pH 7	pH 4	pH 10	1st Buffer	2nd Buffer	3rd Buffer	Slope (95-110%)	Temp ° C
07/26/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.03	4	10.07	98%	18.8
07/27/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.01	98%	24.8
07/28/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.01	98%	24.6
07/29/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.01	98%	24.9
07/30//21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	98%	24.4
08/02/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.03	4	10.09	98%	17.2
08/03/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	98%	23.9
08/03/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	98%	24.2
08/04/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	98%	24
08/04/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.03	98%	23
08/05/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.02	98%	24.4
08/05/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.03	97%	23.7
08/06/21	LAY	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.01	98%	24.5
08/09/21	HLB	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.01	98	25.1
08/10/21	SRW	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.02	98	23.5
08/10/21	HLB	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10	98	25.1
08/11/21	SRW	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.02	98	24.5
08/11/21	SRW	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7	4	10.01	97	25.3
08/12/21	HLB	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.01	98	25.3
08/13/21	HLB	WC234 EX: 02/05/22	WC205 EX: 10-31-2022	WC275 EX:05/04/22	7.01	4	10.01	98	24.6

WORGANIC CARBON QSM 5.0 Analytical Run
194060 on 8/12/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1036601								WORGANIC CARBON QSM 5.0				
					ICV								
	1036602								WORGANIC CARBON QSM 5.0				
					ICB								
	1036326								WORGANIC CARBON QSM 5.0				
					CCV					0			
	1036600								WORGANIC CARBON QSM 5.0				
					LCSW								
	1036327								WORGANIC CARBON QSM 5.0				
					MBW					0			
163390	1030462		7/26/2021	13:00			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		13MW4											
163390	1030468		7/26/2021	15:20			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		13MW3											
	1036328								WORGANIC CARBON QSM 5.0				
					CCV					0			
	1036329								WORGANIC CARBON QSM 5.0				
					CCB					0			
	1036330								WORGANIC CARBON QSM 5.0				
					CCV					0			
	1036331								WORGANIC CARBON QSM 5.0				
					CCB					0			
163390	1030469		7/26/2021	15:20			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		13TW3											
163449	1031437		7/28/2021	11:30			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		48MW6											
163449	1031438		7/28/2021	16:26			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		13MW2			Designated MS/MSD								
	1036332		7/28/2021	16:26					ORGAN CARBON T QSM 5.0				
		13MW2			DUP	1031438				0			
	1036333		7/28/2021	16:26					ORGAN CARBON T QSM 5.0				
		13MW2			MSW	1031438				0			
	1036334		7/28/2021	16:26					ORGAN CARBON T QSM 5.0				
		13MW2			MSDW	1036333				0			
163492	1031957		7/29/2021	13:42			WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		48MW1											

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: WetChem C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpB059.tmp

WORGANIC CARBON QSM 5.0 Analytical Run
194060 on 8/12/2021

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
163492	1031958		7/29/2021	14:40		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		49EB1										
163492	1031959		7/29/2021	15:23		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		49MW1										
163492	1031961		7/29/2021	17:45		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		50MW2										
	1036335							WORGANIC CARBON QSM 5.0				
					CCV				0			
	1036336							WORGANIC CARBON QSM 5.0				
					CCB				0			
	1036640							WORGANIC CARBON QSM 5.0				
					CCV							
	1036639							WORGANIC CARBON QSM 5.0				
					CCB							
163509	1032207		7/30/2021	08:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		49MW4										
163509	1032208		7/30/2021	09:27		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		48MW2										
163509	1032210		7/30/2021	11:11		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		48MW3										
163509	1032211		7/30/2021	11:11		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		48TW3										
163509	1032212		7/30/2021	10:30		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		48RB3										
163509	1032213		7/30/2021	13:00		WESTON SOLUTIONS, INC.	RADFORD AAP SWMU-49	ORGAN CARBON T QSM 5.0		GW	4	
		49MW2										
	1036643							WORGANIC CARBON QSM 5.0				
					CCV							
	1036642							WORGANIC CARBON QSM 5.0				
					CCB							

33 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpB059.tmp

FWC39-01 Data Review Checklist

	Method: Total Organic Carbon Method 415.1/9060	Independent Data Review Checklist	Instrument: TOCW

LIMS Run #(s)	Analysis Date	Analyst / Data Interpreter	Independent Reviewer	Date of Review	Approved? (Yes or No)
194059, 194060	08/04/2021, 08/09/2021, 08/10/2021	KMT	RLD	08/12/2021	Yes

Instructions: Complete one checklist per *analytical sequence* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement	Acceptance Criteria	Analyst Review		Independent Review		Comments
		Yes	No	Yes	No	(Indicate reference to an attachment if necessary)
1. Were the samples preserved prior to analysis and analyzed within hold time?	pH <2, 28 days or program/project specific	Yes		Yes		
2. Was the calibration curve performed using the required number of standards?	3 standards and a blank	Yes		Yes		
3. Was the correlation coefficient acceptable?	r ≥ .995	Yes		Yes		
4. Were the ICV and ICB analyzed?	---	Yes		Yes		
5. Was the ICV result acceptable?	90 – 110 % Rec. or contract/program specific	Yes		Yes		
6. Was the ICB result acceptable?	< LOD or contract/program specific	Yes		Yes		
7. Was an LCS & MB run with each batch of samples?	One each per analytical batch or contract/program specific frequency.	Yes		Yes		
8. Was the LCS recovery acceptable?	In-house derived or contract/program specific limits.	Yes		Yes		
9. Were the MB results acceptable?	< LOD or project/ program specific (<1/2 RL for DOD-QSM).	Yes		Yes		
10. Were the CCV's analyzed at the required frequency?	Beginning, after every 10 sample, & at the end of a sequence.	Yes		Yes		
11. Were the CCB's analyzed at the required frequency?	After each CCV (unless MB analyzed after CCV)	Yes		Yes		
12. Were the CCV recoveries acceptable?	90 – 110 % Rec. or project/ program specific	Yes		Yes		
13. Were the CCB results acceptable?	< LOD or project/ program specific	Yes		Yes		

14. Were all positive results that were reported within the calibration curve?	---	Yes		Yes		
15. Was an MS and MSD analyzed at the required frequency?	1 / 20 of the same matrix or project/ program specific	Yes		Yes		
16. Were the MS and MSD recoveries acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
17. Was the RPD between the MS and MSD acceptable?	In-house derived or project/ program specific limits	Yes		Yes		
18. Was a Duplicate analyzed at the required frequency?	1 per 20 of the same matrix or contract/program specific	Yes		Yes		
19. Was the RPD between the Duplicate (if valid) and the sample acceptable?	In-house derived or project/ program specific limits (QSM samples, duplicate only valid when sample result ≥5x the LOQ)	Yes		Yes		
20. Are all samples on the job lists accounted for?	---	Yes		Yes		
21. Is the standards prep log numbers noted on the analytical report?	---	Yes		Yes		
22. Were post analysis corrections addressed and/or the Audit Trail function turned on (if available)?	Correction should be initialed, dated, and reason given. Audit trail must be on (if available)	Yes		Yes		
23. Were non-matrix related nonconformities (if applicable) documented in the NCR spreadsheet?	---	Yes		Yes		

Non-Applicable Yes/No Cells Are Left Blank

Comments:

TOC Instrument Run Logbook

Start Date	Start Time	End Date	End Time	Analyst	LIMs Run #	Matrix (S or W)	Calibration ID #	COMMENTS
8/3/2021	12:30	8/3/2021	14:10	KMT	194062 RR	W	0514	
8/4/2021	15:30	8/4/2021	19:27	KMT	194059, 194060	W	0514	
8/5/2021	14:59	8/5/2021	16:25	KMT	ICAL 0535	S	0535	ICAL
8/6/2021	10:07	8/6/2021	13:33	KMT	194149	S	0535	
8/9/2021	09:36	8/9/2021	11:00	KMT	194149 R, 194148	S	0535	
~~8/9/2021~~ ~~8/10/2021~~ KMT 8/18/21	16:30	8/9/2021	20:18	KMT	194060R	W	0514	
8/10/2021	08:02	8/10/2021	10:13	KMT	194060 R	W	0514	
8/10/2021	14:37	8/10/2021	20:05	KMT	194325	W	0514	
8/11/2021	07:57	8/11/2021	11:49	KMT	194325 R	W	0514	
8/12/2021	11:16	8/12/2021	19:24	KMT	~~194150~~ 194413, 194414, 194415 ①	~~S~~ W ①	~~0535~~ 0514 ①	
8/13/2021	10:03	8/13/2021	13:33	KMT	194450, 194451, 194454	W	0514	
8/13/2021	14:10	8/13/2021	17:32	KMT	194450, 194451, 194454	W	0514	
8/16/2021				KMT	194150	S	0535	

Reviewed By: _____

① KMT 8/12/21

CHAIN OF CUSTODY,
PM CONFIRMATION
AND
SAMPLE CONDITION FORMS
DOCUMENTS

Form #FPM3-04 Rev. 09/2020

CHAIN OF CUSTODY

Company: WESTON SOLUTIONS, INC.
Project Contact: TONY PACE
Telephone: 757-819-5310
Project Name: Radford AAP SWMU-49
Project #:
Location: RADFORD, VA
Sampled By: KORMOS / BEBEE

CT LABORATORIES
1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 163390
Company: WESTON SOLUTIONS, INC.
Project: RADFORD AAP SWMU-49
Logged By: erc PM: BMS

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: Tony Pace
EMAIL: pacea@WestonSolutions.com
Company: Weston Solutions, Inc.
Address: 2 Eaton St., Suite 603
Hampton, VA 23669

Invoice To:*
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	VOCs – 8260C	MEE – Rsk-175	Anions – 9056A	TOC – 9060A	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
						Fill in Spaces with Bottles per Test							
07/26/21	1300	GW	G		13MW4	N	3	2	1	1	7	N	1030462
07/26/21	1520	GW	G		13MW3	N	3	2	1	1	7	N	68
07/26/21	1520	GW	G		13TW3	N	3	2	1	1	7	N	69
07/26/21	1625	GW	G		TB-1	N	2				2	N	71

ANALYSES REQUESTED

Turnaround Time
(Normal) RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

07/26/21

Relinquished By:	Date/Time	Received By:	Date/Time
	07/26/21 @ 1748	FEDEX	
Received by:	Date/Time	Received for Laboratory by:	Date/Time
	1020		1038

Lab Use Only
Ice Present (Yes) No
Obs. Temp 1.0 IR Gun 27
Act. Temp 1.0 Cooler 6331

Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 1.0

Actual Temperature 1.0

IR Gun # 27

Initials ERC

Date 7/27/21 Time 1020

Cooler #: 6331

FedEx Ship Manager - Print Your Label(s)

ORIGIN ID:BIGA (860) 912-9892
DANE KORMOS
WESTON SOLUTIONS, INC.
1400 WESTON WAY
4-2
WEST CHESTER, PA 19380
UNITED STATES US

SHIP DATE: 26JUL21
ACTWGT: 40.00 LB
CAD: 109455225/INET4400
DIMS: 26x15x14 IN

BILL SENDER

TO SAMPLE RECEIVING
CT LABORATORIES
1230 LANGE COURT

BARABOO WI 53913
(608) 356-2760 REF: 03886.552.500.2240
INV
PO DEPT

56D.I202265/FE4A

FedEx Express

J212021070901uv

TUE - 27 JUL 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7743 5013 5538

53913
WI-US MSN

NA LNRA

PM Login Confirmation

Folder #: 163390

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 164037

Project Manager: *BMS* **Date Received:** 07/27/21 **Log Date:** 07/27/2021

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 1 oC

SAMPLE #: 1030462 **DESCR:** 13MW4 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/26/2021 **Time:** 13:00

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/9/2021	8/8/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/9/2021	8/8/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				7/28/2021	8/8/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/23/2021	8/8/2021		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpB0A9.tmp

Folder #: 163390 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 1030468 **DESCR:** 13MW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/26/2021 **Time:** 15:20

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/9/2021	8/8/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/9/2021	8/8/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				7/28/2021	8/8/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/23/2021	8/8/2021		Logged

SAMPLE #: 1030469 **DESCR:** 13TW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/26/2021 **Time:** 15:20

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/9/2021	8/8/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/9/2021	8/8/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				7/28/2021	8/8/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/23/2021	8/8/2021		Logged

Folder #: 163390 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 1030471 **DESCR: TB-1** **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED: 7/26/2021** **Time: 16:25**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/9/2021	8/8/2021		Logged

Invoice Number: 164037 **Preliminary Invoice Estimate:** $576.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	3	$12.00	0.00	$36.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	3	$12.00	0.00	$36.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	3	$12.00	0.00	$36.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	3	$16.00	0.00	$48.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	3	$16.00	0.00	$48.00
METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	3	$16.00	0.00	$48.00
ORGAN CARBON T QSM 5.0	GROUND WATER	3	$28.00	0.00	$84.00
VOC 8260 QSM 5.0	GROUND WATER	3	$60.00	0.00	$180.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$60.00	0.00	$60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**3**	TOC
UNPRES PL	**3**	Anions
VOA HCL	**17**	VOC

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpB0A9.tmp

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	163390	Print Date / Time:	07/27/2021	10:33	
Client:	WESTON SOLUTIONS, INC.	Received Date / Time / By:	07/27/2021	10:20	erc
Project Name:	RADFORD AAP SWMU-49	Log-In Date / Time / By:	07/27/2021	10:33	erc
Project Phase:	RADFORD, VA	Project #:			PM: BMS
Coolers:	6331	Temperature:	1.0 C	On Ice:	**Y**
Custody Seals Present :	**Y**	COC Present:?	**Y**	Complete?	**Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED		
Ship Method:	FEDEX EXPRESS	Tracking Number:	7743 5013 5538		
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**		

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 07/26/2021 AND SIGNED.

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1030462	13MW4				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**		
1030462	13MW4				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	(***VOA HCL***) = **5**		
1030462	13MW4				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1030468	13MW3				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**		
1030468	13MW3				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC

		Total # of Containers of Type	**(*VOA HCL*) =**	**5**		
1030468	13MW3					
		H2SO4 PL	1	Y / N		TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**		
Sample ID /	**Description**	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**		**Tests**
1030469	13TW3					
		UNPRES PL	1	/		Anions
		Total # of Containers of Type	**(*UNPRES PL*) =**	**1**		
1030469	13TW3					
		VOA HCL	1	/		GAS,VOC
		VOA HCL	1	/		GAS,VOC
		VOA HCL	1	/		GAS,VOC
		VOA HCL	1	/		GAS,VOC
		VOA HCL	1	/		GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**5**		
1030469	13TW3					
		H2SO4 PL	1	Y / N		TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**		
Sample ID /	**Description**	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**		**Tests**
1030471	TB-1					
		VOA HCL	1	/		VOC
		VOA HCL	1	/		VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**2**		

Condition Code *Condition Description*

1 Sample Received OK

Form #FPM3-04 Rev. 09/2020

CHAIN OF CUSTODY

Page 1 of 1

Company: WESTON SOLUTIONS, INC.
Project Contact: TONY PACE
Telephone: 757-819-5310
Project Name: Radford AAP SWMU-49
Project #:
Location: RADFORD, VA
Sampled By: KORMOS / BEBEE

CT LABORATORIES
1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 163449
Company: WESTON SOLUTIONS, INC.
Project: RADFORD AAP SWMU-49
Logged By: erc PM: BMS

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____
PO #

Report To: Tony Pace
EMAIL: pacea@WestonSolutions.com
Company: Weston Solutions, Inc.
Address: 2 Eaton St., Suite 603
Hampton, VA 23669

Invoice To:*
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	VOCs – 8260C	MEE – Rsk-175	Anions – 9056A	TOC – 9060A	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
						Fill in Spaces with Bottles per Test							
07/28/21	1130	GW	G		48MW6	N	3	2	1	1	7	N	103437
07/28/21	1626	GW	G		13MW2	N	9	6	3	3	21	Y	" 38
06/17/21	1200	TB	G		LAB TRIP BLANK-1	N	3				3	N	" 40

ANALYSES REQUESTED

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

07/28/21

Relinquished By:	Date/Time	Received By:	Date/Time
(Weston)	07/28/21 / 1745	FEDEX AIRBILL# 774350144073	
Received by:	**Date/Time**	**Received for Laboratory by:**	**Date/Time**
	7/29/21 935	erc	7/29/21 1003

Lab Use Only
Ice Present Yes No
Obs. Temp 1.9 IR Gun 27
Act. Temp 1.4 Cooler 6226

Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 1.4

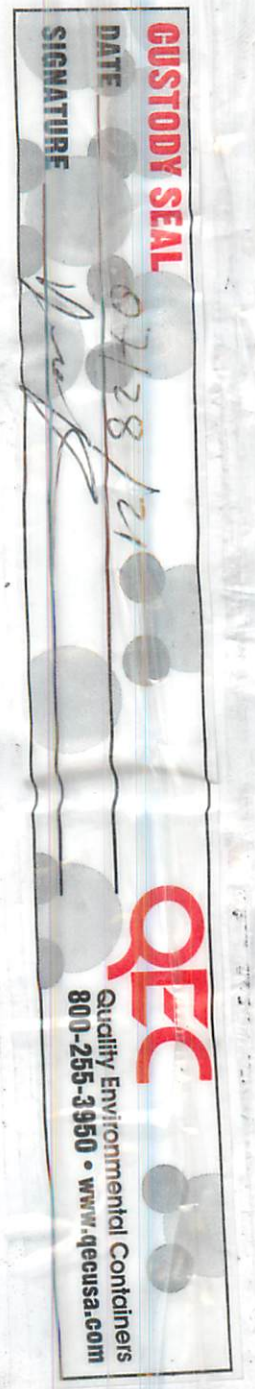
Actual Temperature 1.4

IR Gun # 27

Initials EAL

Date 7/29/21 Time 0935 EAL

Cooler #: 628



ORIGIN ID:BIGA (860) 912-9892
DANE KORMOS
WESTON SOLUTIONS, INC.
1400 WESTON WAY
4-2
WEST CHESTER, PA 19380
UNITED STATES US

SHIP DATE: 28JUL21
ACTWGT: 40.00 LB
CAD: 109455225/INET4400
DIMS: 26x15x14 IN

BILL SENDER

TO SAMPLE RECEIVING
CT LABORATORIES
1230 LANGE COURT

BARABOO WI 53913
(608) 356-2760
INV:
PO:
REF: 03886 552 500 2240
DEPT:

56D.I20265/FE4A

FedEx Express

J212021070901uv

THU - 29 JUL 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7743 5014 4083

53913
WI-US MSN

NA LNRA

PM Login Confirmation

Folder #: 163449

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 164097

Project Manager: *BMS* **Date Received:** 07/29/21 **Log Date:** 07/29/2021

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 1.4 oC

SAMPLE #: 1031437 **DESCR:** 48MW6 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/28/2021 **Time:** 11:30

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/11/2021	8/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/11/2021	8/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				7/30/2021	8/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/25/2021	8/10/2021		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpAA9.tmp

Folder #: 163449 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 1031438 **DESCR:** 13MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/28/2021 **Time:** 16:26

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			***Y*** ***DESIGNATED MATRIX SPIKE***	8/11/2021	8/10/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)			***DESIGNATED MATRIX SPIKE***	8/11/2021	8/10/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)			***DESIGNATED MATRIX SPIKE***	7/30/2021	8/10/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)			***DESIGNATED MATRIX SPIKE***	8/25/2021	8/10/2021		Logged

SAMPLE #: 1031440 **DESCR:** LAB TRIP BLANK-1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED:** 6/17/2021 **Time:** 12:00

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			***Y***	8/11/2021	8/10/2021		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpAA9.tmp

Folder #: 163449 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

Invoice Number: 164097 **Preliminary Invoice Estimate:** $748.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	4	$12.00	0.00	$48.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	4	$12.00	0.00	$48.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	4	$12.00	0.00	$48.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	4	$16.00	0.00	$64.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	4	$16.00	0.00	$64.00
METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	4	$16.00	0.00	$64.00
ORGAN CARBON T QSM 5.0	GROUND WATER	4	$28.00	0.00	$112.00
VOC 8260 QSM 5.0	GROUND WATER	4	$60.00	0.00	$240.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$60.00	0.00	$60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**4**	TOC
UNPRES PL	**4**	Anions
VOA HCL	**23**	VOC

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpAA9.tmp

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	163449	Print Date / Time:	07/29/2021	09:58	
Client:	WESTON SOLUTIONS, INC.	Received Date / Time / By:	07/29/2021	09:35	erc
Project Name:	RADFORD AAP SWMU-49	Log-In Date / Time / By:	07/29/2021	09:58	erc
Project Phase:	RADFORD, VA	Project #:		PM:	BMS
Coolers:	6226	Temperature:	1.4 C	On Ice:	**Y**
Custody Seals Present :	**Y**	COC Present:?	**Y**	Complete?	**Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED		
Ship Method:	FEDEX EXPRESS	Tracking Number:	7743 5014 4083		
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**		

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 07/28/21 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1031437 48MW6				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **1**		
1031437 48MW6				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type	(***VOA HCL***) = **5**		
1031437 48MW6				
	H2SO4 PL	1	Y / N	TOC
	Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1031438 13MW2				
	UNPRES PL	1	N / N	ANIONS
	UNPRES PL	1	N / N	ANIONS
	UNPRES PL	1	/	Anions
	Total # of Containers of Type	(***UNPRES PL***) = **3**		
1031438 13MW2				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC

	VOA HCL	1		/		GAS,VOC
	VOA HCL	1		/		GAS,VOC
	VOA HCL	1		/		GAS,VOC
	VOA HCL	1	N	/	N	GAS,VOC
	VOA HCL	1	N	/	N	GAS,VOC
	VOA HCL	1	N	/	N	GAS,VOC
	VOA HCL	1	N	/	N	GAS,VOC
	VOA HCL	1	N	/	N	GAS,VOC
	VOA HCL	1	N	/	N	GAS,VOC
	VOA HCL	1	N	/	N	GAS,VOC
	VOA HCL	1	N	/	N	GAS,VOC
	VOA HCL	1	N	/	N	GAS,VOC
	Total # of Containers of Type	**(*VOA HCL*) =**	**15**			

1031438	13MW2					
	H2SO4 PL	1	Y	/	N	TOC
	H2SO4 PL	1	Y	/	N	TOC
	H2SO4 PL	1	Y	/	N	TOC
	Total # of Containers of Type	**(*H2SO4 PL*) =**	**3**			

Sample ID /	**Description**	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**		**Tests**
1031440	LAB TRIP BLANK-1					
		VOA HCL	1	N /	N	VOC
		VOA HCL	1	/		VOC
		VOA HCL	1	/		VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**3**		

Condition Code *Condition Description*

1 Sample Received OK

Form #FPM3-04 Rev. 09/2020

CHAIN OF CUSTODY

Page 1 of 1

Company: WESTON SOLUTIONS, INC.
Project Contact: TONY PACE
Telephone: 757-819-5310
Project Name: Radford AAP SWMU-49
Project #:
Location: RADFORD, VA
Sampled By: KORMOS / BEBEE

CT LABORATORIES
1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 163492
Company: WESTON SOLUTIONS, INC.
Project: RADFORD AAP SWMU-49
Logged By: erc PM: BMS

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: Tony Pace
EMAIL: pacea@WestonSolutions.com
Company: Weston Solutions, Inc.
Address: 2 Eaton St., Suite 603
Hampton, VA 23669

Invoice To:*
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	VOCs – 8260C	MEE – Rsk-175	Anions – 9056A	TOC – 9060A	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
						ANALYSES REQUESTED / Fill in Spaces with Bottles per Test							
07/29/21	1342	GW	G		48MW1	N	3	2	1	1	7	N	103957
07/29/21	1440	GW	G		49 EB 1	N	3	2	1	1	7	N	58
07/29/21	1523	GW	G		49MW1	N	3	2	1	1	7	N	59
07/29/21	1500	GW	G		TB-49	N	3				3	N	60
07/29/21	1745	GW	G		50MW2	N	3	2	1	1	7	N	61

07/29/2021

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Relinquished By:	Date/Time	Received By:	Date/Time
Dan Kormos (Weston)	07/29/21 1917	FED EX Airbill # 774350146156	
Received by:	**Date/Time**	**Received for Laboratory by:**	**Date/Time**
erc	7/30/21 955	erc	7/30/21 1017

Lab Use Only
Ice Present Yes No
Obs. Temp 2.1 IR Gun 27
Act. Temp 2.1 Cooler XXX

Cooler Receipt Form

Ice Present YES NO

Observed Temperature 21

Actual Temperature 21

IR Gun # 27

Initials BRL

Date 7/30/21 Time 955

Cooler #: XXX

ORIGIN ID:BIGA (860) 912-9892
DANE KORMOS
WESTON SOLUTIONS, INC.
1400 WESTON WAY
4-2
WEST CHESTER, PA 19380
UNITED STATES US

SHIP DATE: 29JUL21
ACTWGT: 40.00 LB
CAD: 109455225/INET4400
DIMS: 26x15x14 IN

BILL SENDER

TO SAMPLE RECEIVING
CT LABORATORIES
1230 LANGE COURT

BARABOO WI 53913
(608) 356-2760 REF: 03886 552 500 2240
INV
PO DEPT

56DJ20265/FE4A

FedEx Express

J212021070901uv

FRI - 30 JUL 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7743 5014 6156

NA LNRA

53913
WI-US MSN

PM Login Confirmation

Folder #: 163492

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 164140

Project Manager: *BMS* **Date Received:** 07/30/21 **Log Date:** 07/30/2021

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 2.1 oC

SAMPLE #: 1031957 **DESCR:** 48MW1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/29/2021 **Time:** 13:42

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/12/2021	8/11/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/12/2021	8/11/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				7/31/2021	8/11/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/26/2021	8/11/2021		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp21AC.tmp

Folder #: 163492 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 1031958 **DESCR:** 49EB1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/29/2021 **Time:** 14:40

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/12/2021	8/11/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/12/2021	8/11/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				7/31/2021	8/11/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/26/2021	8/11/2021		Logged

SAMPLE #: 1031959 **DESCR:** 49MW1 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/29/2021 **Time:** 15:23

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/12/2021	8/11/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/12/2021	8/11/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				7/31/2021	8/11/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/26/2021	8/11/2021		Logged

Folder #: 163492 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 1031960 **DESCR:** TB-49 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED:** 7/29/2021 **Time:** 15:00

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/12/2021	8/11/2021		Logged

SAMPLE #: 1031961 **DESCR:** 50MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/29/2021 **Time:** 17:45

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/12/2021	8/11/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/12/2021	8/11/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				7/31/2021	8/11/2021		Logged
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/26/2021	8/11/2021		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp21AC.tmp

Folder #: 163492 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

Invoice Number: 164140 **Preliminary Invoice Estimate:** $748.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	4	$12.00	0.00	$48.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	4	$12.00	0.00	$48.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	4	$12.00	0.00	$48.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	4	$16.00	0.00	$64.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	4	$16.00	0.00	$64.00
METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	4	$16.00	0.00	$64.00
ORGAN CARBON T QSM 5.0	GROUND WATER	4	$28.00	0.00	$112.00
VOC 8260 QSM 5.0	GROUND WATER	4	$60.00	0.00	$240.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$60.00	0.00	$60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**4**	TOC
UNPRES PL	**4**	Anions
VOA HCL	**23**	GAS,VOC

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp21AC.tmp

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	163492	Print Date / Time:	07/30/2021	10:15	
Client:	WESTON SOLUTIONS, INC.	Received Date / Time / By:	07/30/2021	09:55	erc
Project Name:	RADFORD AAP SWMU-49	Log-In Date / Time / By:	07/30/2021	10:15	erc
Project Phase:	RADFORD, VA	Project #:			PM: BMS
Coolers:	UNMARKED	Temperature:	2.1 C		On Ice: **Y**
Custody Seals Present :	**Y**	COC Present:?	**Y**	Complete?	**Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED		
Ship Method:	FEDEX EXPRESS	Tracking Number:	7743 5014 6156		
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**		

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 07/29/21 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1031957 48MW1				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type (*UNPRES PL*) = 1			
1031957 48MW1				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	Total # of Containers of Type (*VOA HCL*) = 5			
1031957 48MW1				
	H2SO4 PL	1	Y / N	TOC
	Total # of Containers of Type (*H2SO4 PL*) = 1			

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1031958 49EB1				
	UNPRES PL	1	/	Anions
	Total # of Containers of Type (*UNPRES PL*) = 1			
1031958 49EB1				
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC
	VOA HCL	1	/	GAS,VOC

		Total # of Containers of Type	**(*VOA HCL*) =**	**5**			
1031958	49EB1						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**			

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1031959	49MW1						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	**(*UNPRES PL*) =**	**1**			
1031959	49MW1						
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**5**			
1031959	49MW1						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**			

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1031960	TB-49						
		VOA HCL	1	N	/	N	VOC
		VOA HCL	1		/		VOC
		VOA HCL	1		/		VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**3**			

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?			Tests
1031961	50MW2						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	**(*UNPRES PL*) =**	**1**			
1031961	50MW2						
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**5**			
1031961	50MW2						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**			

Condition Code *Condition Description*

1 Sample Received OK

Form #FPM3-04 Rev. 09/2020

CHAIN OF CUSTODY

Page 1 of 1

Company: WESTON SOLUTIONS, INC.
Project Contact: TONY PACE
Telephone: 757-819-5310
Project Name: Radford AAP SWMU-48/49
Project #:
Location: RADFORD, VA
Sampled By: KORMOS / BEBEE

CT LABORATORIES
1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 163509
Company: WESTON SOLUTIONS, INC.
Project: RADFORD AAP SWMU-48/49
Logged By: erc PM: BMS

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To: Tony Pace
EMAIL: pacea@WestonSolutions.com
Company: Weston Solutions, Inc.
Address: 2 Eaton St., Suite 603
Hampton, VA 23669

Invoice To:*
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

NOTE: #48RB3 VOCs & MEE are not preserved w/ HCl; shorter hold time.

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	VOCs – 8260C	MEE – Rsk-175	Anions – 9056A	TOC – 9060A	TAL metals (200.7/200.8)	pH (9040C)	COD (410.4)	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
						Fill in Spaces with Bottles per Test										
07/30/21	0800	GW	G		49MW4	N	3	2	1	1				7	N	1032207
07/30/21	0927	GW	G		48MW2	N	3	2	1	1				7	N	08
06	1230	GW	G		Lab Trip Blank - 2	N	3							3	N	09
07/30/21	1111	GW	G		48MW3	N	3	2	1	1				7	N	10
07/30/21	1111	GW	G		~~48MW~~ 48TW3	N	3	2	1	1				7	N	11
07/30/21	1030	GW	G		48RB3	N	3	2	1	1	*VOCs & MEE NOT PRESERVED			7	N	12
07/30/21	1300	GW	G		49MW2	N	3	2	1	1				7	N	13
07/30/21	1405	WW	G		IDW 48/49	N					1	1	1	3	N	14

Relinquished By:	Date/Time	Received By:	Date/Time
(weston)	07/30/21 1725	FEDEX - Air-Bill # 744 0130 5693	
Received by:	**Date/Time**	**Received for Laboratory by:**	**Date/Time**
ERC	7/31/21 1100	ERC	7/31/21 1123

Lab Use Only
Ice Present Yes No
Obs. Temp 2.2 IR Gun 27
Act. Temp 2.2 Cooler xxx

Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 2.2

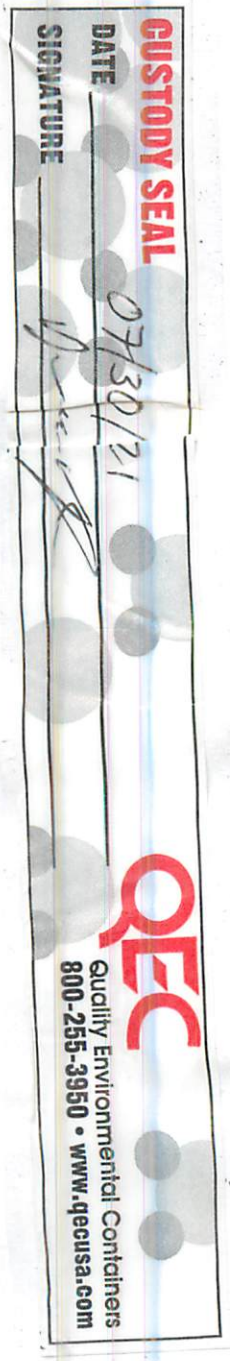
Actual Temperature 2.2

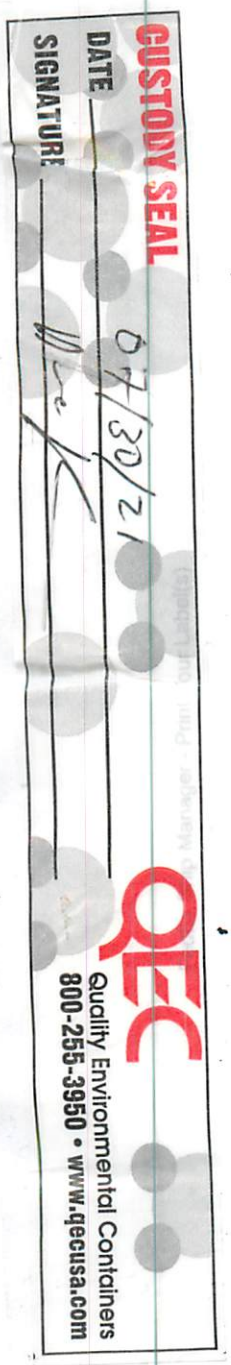
IR Gun # 27

Initials ERK

Date 7/31/21 Time 1100

Cooler #: XXX





FedEx Express

SDR

FedEx Saturday Delivery

151967 REV 5/20

ORIGIN ID:BIGA (860) 912-9892
DANE KORMOS
WESTON SOLUTIONS, INC.
1400 WESTON WAY
4-2
WEST CHESTER, PA 19380
UNITED STATES US

SHIP DATE: 30JUL21
ACTWGT: 40.00 LB
CAD: 109455225/INET4400
DIMS: 26x15x14 IN

BILL SENDER

TO SAMPLE RECEIVING
CT LABORATORIES
1230 LANGE COURT

BARABOO WI 53913
(608) 356-2760 REF 03886 552 500 2240
INV
PO DEPT

56D.D2665/FE4A

FedEx Express

J21302107080 1uv

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 0201 7744 0130 5693

X0 LNRA

53913
WI-US MSN

PM Login Confirmation

Folder #: 163509

Contract #: 3313

Company: WESTON SOLUTIONS, INC. **Project:** RADFORD AAP SWMU-49 **Proj #:**

Project Phase: RADFORD, VA **PO Number:** **Invoice #:** 164157

Project Manager: *BMS* **Date Received:** 07/31/21 **Log Date:** 07/31/2021

Report To: ANTHONY PACE CC:
2 EATON STREET
SUITE 603
HAMPTON, VA 23669
Phone: 757-819-5310: Fax:
Rep. E-Mail anthony.pace@westonsolutions.com

Invoice To :ACCOUNTS PAYABLE CC:
1400 WESTON WAY, BLDG 5-1
WEST CHESTER, PA 19380
Phone: Fax:
EMail:

Collected By:
Collector's Phone: 757-819-5310

Arrival Temperature: 2.2 oC

SAMPLE #: 1032207 **DESCR:** 49MW4 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/30/2021 **Time:** 08:00

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/13/2021	8/12/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/13/2021	8/12/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				8/1/2021	8/12/2021		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/27/2021	8/12/2021		Logged

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp8FE3.tmp

Folder #: 163509 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 1032208 **DESCR:** 48MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/30/2021 **Time:** 09:27

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/13/2021	8/12/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/13/2021	8/12/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				8/1/2021	8/12/2021		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/27/2021	8/12/2021		Logged

SAMPLE #: 1032209 **DESCR:** LAB TRIP BLANK-2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / TRIP BLANK **SAMPLED:** 7/30/2021 **Time:** 12:30

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/13/2021	8/12/2021		Logged

SAMPLE #: 1032210 **DESCR:** 48MW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/30/2021 **Time:** 11:11

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/13/2021	8/12/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/13/2021	8/12/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				8/1/2021	8/12/2021		Entered
			Chloride						
			Nitrate Nitrogen						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp8FE3.tmp

Folder #: 163509 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 1032210 **DESCR:** 48MW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/30/2021 **Time:** 11:11

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/27/2021	8/12/2021		Logged

SAMPLE #: 1032211 **DESCR:** 48TW3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/30/2021 **Time:** 11:11

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/13/2021	8/12/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/13/2021	8/12/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				8/1/2021	8/12/2021		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/27/2021	8/12/2021		Logged

SAMPLE #: 1032212 **DESCR:** 48RB3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/30/2021 **Time:** 10:30

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/13/2021	8/12/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/13/2021	8/12/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				8/1/2021	8/12/2021		Entered
			Chloride						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp8FE3.tmp

Folder #: 163509 **Company:** *WESTON SOLUTIONS, INC.* **Project:** RADFORD AAP SWMU-49

SAMPLE #: 1032212 **DESCR:** 48RB3 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/30/2021 **Time:** 10:30

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/27/2021	8/12/2021		Logged

SAMPLE #: 1032213 **DESCR:** 49MW2 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/30/2021 **Time:** 13:00

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1221	VOC 8260 QSM 5.0	(EPA 8260C)			*Y*	8/13/2021	8/12/2021		Logged
1224	METH,ETH,ETHE QSM 5.0	(RSK 175)				8/13/2021	8/12/2021		NeedPrep
			Ethane						
			Ethene						
			Methane						
1227	ANIONS IC QSM 5.0	(EPA 9056A)				8/1/2021	8/12/2021		Entered
			Chloride						
			Nitrate Nitrogen						
			Sulfate						
1230	ORGAN CARBON T QSM 5.0	(EPA 9060A)				8/27/2021	8/12/2021		Logged

SAMPLE #: 1032214 **DESCR:** IDW 48/49 **PRIMARY / DETAILED MATRIX:** AQUEOUS / GROUND WATER **SAMPLED:** 7/30/2021 **Time:** 14:05

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
203	PH	(EPA 9040C)					8/12/2021		Logged
989	COD QSM	(EPA 410.4)				8/27/2021	8/12/2021		NeedPrep
1183	ICP K TOTAL QSM 5.0	(EPA 6010C)				1/26/2022	8/12/2021		NeedPrep
1190	ICP NA TOTAL QSM 5.0	(EPA 6010C)				1/26/2022	8/12/2021		NeedPrep
1200	ICP TOTAL QSM 5.0	(EPA 6010C)				1/26/2022	8/12/2021		NeedPrep
			Total Aluminum						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp8FE3.tmp

Folder #:	163509	Company:	*WESTON SOLUTIONS, INC.*	Project:	RADFORD AAP SWMU-49

SAMPLE #:	1032214	DESCR: IDW 48/49	PRIMARY / DETAILED MATRIX:	AQUEOUS / GROUND WATER	SAMPLED: 7/30/2021	Time: 14:05
CLIENT SAMPLE #:			DETAILED SITE/POINT ID INFORMATION:			

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Total Antimony						
			Total Arsenic						
			Total Barium						
			Total Beryllium						
			Total Cadmium						
			Total Calcium						
			Total Chromium						
			Total Cobalt						
			Total Copper						
			Total Iron						
			Total Lead						
			Total Magnesium						
			Total Manganese						
			Total Nickel						
			Total Selenium						
			Total Silver						
			Total Thallium						
			Total Vanadium						
			Total Zinc						
1208	MERCURY TOTAL QSM 5.0	(EPA 7470A)				8/27/2021	8/12/2021		NeedPrep

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmp8FE3.tmp

Invoice Number: 164157 **Preliminary Invoice Estimate:** $1,220.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ANIONS IC QSM 5.0 Chloride	GROUND WATER	6	$12.00	0.00	$72.00
ANIONS IC QSM 5.0 Nitrate Nitrogen	GROUND WATER	6	$12.00	0.00	$72.00
ANIONS IC QSM 5.0 Sulfate	GROUND WATER	6	$12.00	0.00	$72.00
COD QSM	GROUND WATER	1	$18.00	0.00	$18.00
ICP K TOTAL QSM 5.0	GROUND WATER	1	$3.50	0.00	$3.50
ICP NA TOTAL QSM 5.0	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Aluminum	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Antimony	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Arsenic	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Barium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Beryllium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Cadmium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Calcium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Chromium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Cobalt	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Copper	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Iron	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Lead	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Magnesium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Manganese	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Nickel	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Selenium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Silver	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Thallium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Vanadium	GROUND WATER	1	$3.50	0.00	$3.50
ICP TOTAL QSM 5.0 Total Zinc	GROUND WATER	1	$3.50	0.00	$3.50
MERCURY TOTAL QSM 5.0	GROUND WATER	1	$23.00	0.00	$23.00
METH,ETH,ETHE QSM 5.0 Ethane	GROUND WATER	6	$16.00	0.00	$96.00
METH,ETH,ETHE QSM 5.0 Ethene	GROUND WATER	6	$16.00	0.00	$96.00

METH,ETH,ETHE QSM 5.0 Methane	GROUND WATER	6	$16.00	0.00	$96.00
ORGAN CARBON T QSM 5.0	GROUND WATER	6	$28.00	0.00	$168.00
PH	GROUND WATER	1	$10.00	0.00	$10.00
VOC 8260 QSM 5.0	GROUND WATER	6	$60.00	0.00	$360.00
VOC 8260 QSM 5.0	TRIP BLANK	1	$60.00	0.00	$60.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$0.00

Bottle Information

Container	# Containers	Tests
H2SO4 PL	**7**	COD
HNO3	**1**	HG,ICP,K,NA
UNPRES PL	**7**	Anions
VOA	**5**	GAS,VOC
VOA HCL	**28**	VOC

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	163509	Print Date / Time:	07/31/2021	11:15	
Client:	WESTON SOLUTIONS, INC.	Received Date / Time / By:	07/31/2021	11:00	erc
Project Name:	RADFORD AAP SWMU-49	Log-In Date / Time / By:	07/31/2021	11:15	erc
Project Phase:	RADFORD, VA	Project #:			PM: BMS
Coolers:	UNMARKED	Temperature:	2.2 C		On Ice: **Y**
Custody Seals Present :	**Y**	COC Present:?	**Y**	Complete?	**Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED		
Ship Method:	FEDEX EXPRESS	Tracking Number:	7744 0130 5693		
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**		

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 07/30/21 AND SIGNED.

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1032207	49MW4				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**		
1032207	49MW4				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	(***VOA HCL***) = **5**		
1032207	49MW4				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type	(***H2SO4 PL***) = **1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1032208	48MW2				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	(***UNPRES PL***) = **1**		
1032208	48MW2				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC

		Total # of Containers of Type	**(*VOA HCL*) =**	**5**			
1032208	48MW2						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**			
Sample ID /	**Description**	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**			**Tests**
1032209	LAB TRIP BLANK-2						
		VOA HCL	12	N	/	N	VOC
		VOA HCL	12	N	/	N	VOC
		VOA HCL	12	N	/	N	VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**3**			
Sample ID /	**Description**	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**			**Tests**
1032210	48MW3						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	**(*UNPRES PL*) =**	**1**			
1032210	48MW3						
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**5**			
1032210	48MW3						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**			
Sample ID /	**Description**	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**			**Tests**
1032211	48TW3						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	**(*UNPRES PL*) =**	**1**			
1032211	48TW3						
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		VOA HCL	1		/		GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) =**	**5**			
1032211	48TW3						
		H2SO4 PL	1	Y	/	N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) =**	**1**			
Sample ID /	**Description**	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**			**Tests**
1032212	48RB3						
		UNPRES PL	1		/		Anions
		Total # of Containers of Type	**(*UNPRES PL*) =**	**1**			

1032212	48RB3					
		VOA	1	N	/ N	GAS,VOC
		VOA	1	N	/ N	GAS,VOC
		VOA	1	N	/ N	GAS,VOC
		VOA	1	N	/ N	GAS,VOC
		VOA	1	N	/ N	GAS,VOC
		Total # of Containers of Type	**(*VOA*) = 5**			
1032212	48RB3					
		H2SO4 PL	1	Y	/ N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**			

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1032213	49MW2				
		UNPRES PL	1	/	Anions
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		
1032213	49MW2				
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		VOA HCL	1	/	GAS,VOC
		Total # of Containers of Type	**(*VOA HCL*) = 5**		
1032213	49MW2				
		H2SO4 PL	1	Y / N	TOC
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1032214	IDW 48/49				
		H2SO4 PL	1	Y / N	COD
		Total # of Containers of Type	**(*H2SO4 PL*) = 1**		
1032214	IDW 48/49				
		HNO3	1	Y / N	HG,ICP,K,NA
		Total # of Containers of Type	**(*HNO3*) = 1**		
1032214	IDW 48/49				
		UNPRES PL	1	/	pH
		Total # of Containers of Type	**(*UNPRES PL*) = 1**		

Condition Code	*Condition Description*
12	Air Bubbles

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Weston Solutions, Inc

Radford AAP; VA

SGS Job Number: FA87620

Sampling Date: 07/27/21

Report to:

Weston Solutions, Inc
2 Eaton St Suite 603
Hampton, VA 23669
pacea@westonsolutions.com

ATTN: Tony Pace

Total number of pages in report: **468**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, UT, VT, WA, WV

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Weston Solutions, Inc

Radford AAP; VA

Job No: FA87620

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA87620-1	07/27/21	13:00	DKNB	07/28/21	AQ	Ground Water	54MW12
FA87620-1D	07/27/21	13:00	DKNB	07/28/21	AQ	Water Dup/MSD	54MW12
FA87620-1S	07/27/21	13:00	DKNB	07/28/21	AQ	Water Matrix Spike	54MW12
FA87620-2	07/27/21	15:26	DKNB	07/28/21	AQ	Ground Water	54MW1

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Weston Solutions, Inc **Job No:** FA87620

Site: Radford AAP; VA **Report Date** 8/17/2021 7:59:25 PM

On 07/28/2021, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc.- Orlando at a maximum corrected temperature of 1.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FA87620 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Semi-volatiles By Method SW846 6850

Matrix: AQ **Batch ID:** OP86789

Sample(s) FA87620-1MS, FA87620-1MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Perchlorate are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Perchlorate are outside control limits. Probable cause due to matrix interference.

GC/LC Semi-volatiles By Method SW846 8330B

Matrix: AQ **Batch ID:** OP86727

Sample(s) FA87620-1MS, FA87620-1MSD were used as the QC samples indicated.

The following samples were extracted outside of holding time for method SW846 8330B: FA87620-1, FA87620-2

Blank Spike Recovery(s) for 2,4,6-Trinitrotoluene, Tetryl are outside control limits.

Matrix Spike Recovery(s) for RDX, Tetryl, TNX are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recovery(s) for RDX, Tetryl, TNX are outside control limits. Probable cause due to matrix interference.

FA87620-1: Confirmation run.

FA87620-1: Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.

FA87620-2: Confirmation run.

FA87620-2: Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Ariel Hartney, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA87620
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 07/27/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA87620-1	**54MW12**					
Perchlorate		0.30	0.20	0.10	ug/l	SW846 6850
HMX [a]		9.8 J	0.19	0.094	ug/l	SW846 8330B
MNX [b]		5.3 J	0.19	0.094	ug/l	SW846 8330B
3,5-Dinitroaniline [b]		0.21 J	0.19	0.094	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [a]		3.3 J	0.19	0.094	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		2.1 J	0.19	0.094	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [a]		10.6 J	0.19	0.094	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [c]		10.0 J	0.19	0.094	ug/l	SW846 8330B
FA87620-2	**54MW1**					
RDX [b]		0.37 J	0.19	0.096	ug/l	SW846 8330B
o-Nitrotoluene [a]		0.42 J	0.19	0.096	ug/l	SW846 8330B
p-Nitrotoluene [b]		0.089 J	0.19	0.096	ug/l	SW846 8330B
Nitroglycerine [b]		1.6 J	1.9	0.96	ug/l	SW846 8330B

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column. Primary and confirmation results differ by more than 40%.
(c) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column. Associated BS recovery outside control limits.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW12
Lab Sample ID: FA87620-1
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 07/27/21
Date Received: 07/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q84262.D	1	08/11/21 14:48	NG	08/11/21 09:00	OP86789	SQ1826
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.30	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW12
Lab Sample ID: FA87620-1
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 07/27/21
Date Received: 07/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP391150.D	1	08/09/21 19:04	JB	08/06/21 09:00	OP86727	GPP2467
Run #2 [b]	GG622039.D	1	08/12/21 22:54	JB	08/06/21 09:00	OP86727	GGG3025

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2	1060 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	9.8	0.19	0.094	0.075	ug/l	J
121-82-4	RDX	0.094 U	0.19	0.094	0.075	ug/l	
	DNX	0.094 U	0.19	0.094	0.075	ug/l	
	MNX [c]	5.3	0.19	0.094	0.075	ug/l	J
	TNX	0.094 U	0.19	0.094	0.075	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.21	0.19	0.094	0.075	ug/l	J
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	3.3	0.19	0.094	0.075	ug/l	J
19406-51-0	4-amino-2,6-Dinitrotoluene	2.1	0.19	0.094	0.075	ug/l	J
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl [d]	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	10.6	0.19	0.094	0.093	ug/l	J
118-96-7	2,4,6-Trinitrotoluene [d]	10.0	0.19	0.094	0.075	ug/l	J
55-63-0	Nitroglycerine	0.94 U	1.9	0.94	0.47	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	94%	99%	70-136%

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Associated BS recovery outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW1
Lab Sample ID: FA87620-2
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 07/27/21
Date Received: 07/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q84268.D	1	08/11/21 15:39	NG	08/11/21 09:00	OP86789	SQ1826
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.10 U	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW1		
Lab Sample ID:	FA87620-2	**Date Sampled:**	07/27/21
Matrix:	AQ - Ground Water	**Date Received:**	07/28/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP391151.D	1	08/09/21 19:35	JB	08/06/21 09:00	OP86727	GPP2467
Run #2 [b]	GG622042.D	1	08/13/21 00:28	JB	08/06/21 09:00	OP86727	GGG3025

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U	0.19	0.096	0.077	ug/l	
121-82-4	RDX [c]	0.37	0.19	0.096	0.077	ug/l	J
	DNX	0.096 U	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX	0.096 U	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline	0.096 U	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.42	0.19	0.096	0.077	ug/l	J
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene [c]	0.089	0.19	0.096	0.077	ug/l	J
479-45-8	Tetryl [d]	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.096 U	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene [d]	0.096 U	0.19	0.096	0.077	ug/l	
55-63-0	Nitroglycerine [c]	1.6	1.9	0.96	0.48	ug/l	J
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	93%	107%	70-136%

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Associated BS recovery outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

SGS North America Inc - Orlando

Chain of Custody

FA87620

SGS - ORLANDO JOB # :

PAGE 1 OF 1

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO Quote #

SKIFF #

Client / Reporting Information

Company Name: WESTON SOLUTIONS, INC.
Address: 2 EATON ST.; Suite 603
City: HAMPTON State: VA Zip: 23669
Project Contact: TONY PACE Email: pace@westonsolutions.com
Phone #: 757-819-5310
Sampler(s) Name(s) (Printed)
Sampler 1: D. KOONCE Sampler 2: N. BEBEE

Project Information

Project Name: RADFORD AAP 54
Street
City RADFORD State VA
Project #
Fax #
Client Purchase Order #

Analytical Information

Explosives + DNX, MNX, TNX (LC8338, XLC3MX)
PERCHLORATE (LC6850 PERCHLT)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	CONTAINER INFORMATION TOTAL # OF BOTTLES	OTHER	NONE	HCl	MeOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	Explosives + DNX, MNX, TNX (LC8338, XLC3MX)	PERCHLORATE (LC6850 PERCHLT)								LAB USE ONLY
1	54MW12	07/27/21	1300	DK/AB	GW	9		X								6	3	MS/MSD							
2	54MW1	07/27/21	1526	DK/AB	GW	3		X								2	1								

Turnaround Time (Business days)

10 Day (Business)
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Approved By: / Date:
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

INITIAL ASSESSMENT
LABEL VERIFICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	(Weston)	07/27/21 1730	2 FEDEX 7 [redacted] 5014 1376	3 FX	7/28/21	4
5	Relinquished by/Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	Date Time: 9:10	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 1.8 - IR1

http://www.sgs.com/en/terms-and-conditions

FA87620: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA87620 **Client:** WESTON SOLUTIONS **Project:** RADFORD AAP 54

Date / Time Received: 7/28/2021 9:40:00 AM **Delivery Method:** FX **Airbill #'s:** 7743 5019 1376

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (1.6);

Cooler Temps (Corrected) °C: Cooler 1: (1.8);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: PETERH Date: 7/28/2021 9:40:00 AM Reviewer: _____ Date: _____

FA87620: Chain of Custody
Page 2 of 2

QC Evaluation: DOD QSM5.x Limits

Job Number: FA87620
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 07/27/21

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP86789	SW846 6850						
OP86789-BS	14797-73-0	Perchlorate	BSP	REC	85	%	84-119
OP86789-MS	14797-73-0	Perchlorate	MS	REC	50	%	84-119
OP86789-MSD	14797-73-0	Perchlorate	MSD	REC	75	%	84-119
OP86789-MSD	14797-73-0	Perchlorate	MSD	RPD	12	%	15
OP86727	SW846 8330B						
OP86727-BS	2691-41-0	HMX	BSP	REC	82	%	65-135
OP86727-BS	121-82-4	RDX	BSP	REC	86	%	68-130
OP86727-BS	618-87-1	3,5-Dinitroaniline	BSP	REC	94	%	71-117
OP86727-BS	99-65-0	1,3-Dinitrobenzene	BSP	REC	96	%	78-120
OP86727-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	112	%	77-127
OP86727-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	90	%	78-120
OP86727-BS	35572-78-2	2-amino-4,6-Dinitrotoluene	BSP	REC	92	%	79-120
OP86727-BS	19406-51-0	4-amino-2,6-Dinitrotoluene	BSP	REC	94	%	76-125
OP86727-BS	98-95-3	Nitrobenzene	BSP	REC	90	%	65-134
OP86727-BS	88-72-2	o-Nitrotoluene	BSP	REC	84	%	70-127
OP86727-BS	99-08-1	m-Nitrotoluene	BSP	REC	90	%	73-125
OP86727-BS	99-99-0	p-Nitrotoluene	BSP	REC	90	%	71-127
OP86727-BS	479-45-8	Tetryl	BSP	REC	46	%	64-128
OP86727-BS	99-35-4	1,3,5-Trinitrobenzene	BSP	REC	98	%	73-125
OP86727-BS	118-96-7	2,4,6-Trinitrotoluene	BSP	REC	66	%	71-123
OP86727-BS	55-63-0	Nitroglycerine	BSP	REC	88	%	74-127
OP86727-BS	78-11-5	PETN	BSP	REC	110	%	73-127
OP86727-MS2	2691-41-0	HMX	MS	REC	110	%	65-135
OP86727-MS2	121-82-4	RDX	MS	REC	132	%	68-130
OP86727-MS2		DNX	MS	REC	99	%	66-119
OP86727-MS2		MNX	MS	REC	91	%	57-132
OP86727-MS2	618-87-1	3,5-Dinitroaniline	MS	REC	99	%	71-117
OP86727-MS2	99-65-0	1,3-Dinitrobenzene	MS	REC	100	%	78-120
OP86727-MS2	606-20-2	2,6-Dinitrotoluene	MS	REC	128	%	77-127
OP86727-MS2	121-14-2	2,4-Dinitrotoluene	MS	REC	96	%	78-120
OP86727-MS2	35572-78-2	2-amino-4,6-Dinitrotoluene	MS	REC	102	%	79-120
OP86727-MS2	19406-51-0	4-amino-2,6-Dinitrotoluene	MS	REC	100	%	76-125
OP86727-MS2	98-95-3	Nitrobenzene	MS	REC	95	%	65-134
OP86727-MS2	88-72-2	o-Nitrotoluene	MS	REC	88	%	70-127
OP86727-MS2	99-08-1	m-Nitrotoluene	MS	REC	94	%	73-125
OP86727-MS2	99-99-0	p-Nitrotoluene	MS	REC	94	%	71-127
OP86727-MS2	479-45-8	Tetryl	MS	REC	47	%	64-128
OP86727-MS2	99-35-4	1,3,5-Trinitrobenzene	MS	REC	112	%	73-125
OP86727-MS2	118-96-7	2,4,6-Trinitrotoluene	MS	REC	76	%	71-123
OP86727-MS2	55-63-0	Nitroglycerine	MS	REC	93	%	74-127

* Sample used for QC is not from job FA87620

QC Evaluation: DOD QSM5.x Limits

Job Number: FA87620
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 07/27/21

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP86727-MS2	78-11-5	PETN	MS	REC	107	%	73-127
OP86727-MSD2	2691-41-0	HMX	MSD	REC	110	%	65-135
OP86727-MSD2	2691-41-0	HMX	MSD	RPD	0	%	20
OP86727-MSD2	121-82-4	RDX	MSD	REC	133	%	68-130
OP86727-MSD2	121-82-4	RDX	MSD	RPD	1	%	20
OP86727-MSD2		DNX	MSD	REC	100	%	66-119
OP86727-MSD2		DNX	MSD	RPD	1	%	20
OP86727-MSD2		MNX	MSD	REC	91	%	57-132
OP86727-MSD2		MNX	MSD	RPD	1	%	20
OP86727-MSD2	618-87-1	3,5-Dinitroaniline	MSD	REC	99	%	71-117
OP86727-MSD2	618-87-1	3,5-Dinitroaniline	MSD	RPD	0	%	20
OP86727-MSD2	99-65-0	1,3-Dinitrobenzene	MSD	REC	100	%	78-120
OP86727-MSD2	99-65-0	1,3-Dinitrobenzene	MSD	RPD	0	%	20
OP86727-MSD2	606-20-2	2,6-Dinitrotoluene	MSD	REC	128	%	77-127
OP86727-MSD2	606-20-2	2,6-Dinitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2	121-14-2	2,4-Dinitrotoluene	MSD	REC	96	%	78-120
OP86727-MSD2	121-14-2	2,4-Dinitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	REC	102	%	79-120
OP86727-MSD2	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	REC	100	%	76-125
OP86727-MSD2	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2	98-95-3	Nitrobenzene	MSD	REC	95	%	65-134
OP86727-MSD2	98-95-3	Nitrobenzene	MSD	RPD	0	%	20
OP86727-MSD2	88-72-2	o-Nitrotoluene	MSD	REC	88	%	70-127
OP86727-MSD2	88-72-2	o-Nitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2	99-08-1	m-Nitrotoluene	MSD	REC	94	%	73-125
OP86727-MSD2	99-08-1	m-Nitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2	99-99-0	p-Nitrotoluene	MSD	REC	94	%	71-127
OP86727-MSD2	99-99-0	p-Nitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2	479-45-8	Tetryl	MSD	REC	47	%	64-128
OP86727-MSD2	479-45-8	Tetryl	MSD	RPD	0	%	20
OP86727-MSD2	99-35-4	1,3,5-Trinitrobenzene	MSD	REC	112	%	73-125
OP86727-MSD2	99-35-4	1,3,5-Trinitrobenzene	MSD	RPD	0	%	20
OP86727-MSD2	118-96-7	2,4,6-Trinitrotoluene	MSD	REC	76	%	71-123
OP86727-MSD2	118-96-7	2,4,6-Trinitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2	55-63-0	Nitroglycerine	MSD	REC	95	%	74-127
OP86727-MSD2	55-63-0	Nitroglycerine	MSD	RPD	2	%	20
OP86727-MSD2	78-11-5	PETN	MSD	REC	107	%	73-127
OP86727-MSD2	78-11-5	PETN	MSD	RPD	0	%	20

* Sample used for QC is not from job FA87620

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Instrument Blank

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
SQ1826-IBLK	Q84274.D	1	08/11/21	NG	n/a	n/a	SQ1826

The QC reported here applies to the following samples: **Method:** SW846 6850

FA87620-1, FA87620-2

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Method Blank Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86789-MB	Q84259.D	1	08/11/21	NG	08/11/21	OP86789	SQ1826

The QC reported here applies to the following samples: **Method:** SW846 6850

FA87620-1, FA87620-2

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Blank Spike Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86789-BS	Q84258.D	1	08/11/21	NG	08/11/21	OP86789	SQ1826

The QC reported here applies to the following samples: **Method:** SW846 6850

FA87620-1, FA87620-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
14797-73-0	Perchlorate	0.2	0.17	85	80-120

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86789-MS	Q84263.D	1	08/11/21	NG	08/11/21	OP86789	SQ1826
OP86789-MSD	Q84264.D	1	08/11/21	NG	08/11/21	OP86789	SQ1826
FA87620-1	Q84262.D	1	08/11/21	NG	08/11/21	OP86789	SQ1826

The QC reported here applies to the following samples: **Method:** SW846 6850

FA87620-1, FA87620-2

CAS No.	Compound	FA87620-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
14797-73-0	Perchlorate	0.30		0.2	0.40	50*	0.2	0.45	75*	12	80-120/15

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1826-ICC1826	**Injection Date:**	08/11/21
Lab File ID:	Q84250.D	**Injection Time:**	11:33
Instrument ID:	GCMSQ	**Method:**	SW846 6850

	IS 1 AREA	RT
Initial Cal [a]	140140	6.33
Check Std [b]	153252	6.33
Upper Limit [c]	210210	8.33
Lower Limit [d]	70070	4.33

Lab Sample ID	IS 1 AREA	RT
OP86789-BS	124323	6.35
OP86789-MB	123166	6.35
ZZZZZZ	126584	6.36
FA87620-1	83101	6.08
OP86789-MS	98540	6.12
OP86789-MSD	89011	6.08

IS 1 = Cl18O4 (ISTD)

(a) Initial Cal is: SQ1826-ICC1826 Q84250.D 08/11/21 11:33. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to + 50% of initial cal area.
(c) Upper Limit = + 50% of initial standard area; Retention time + 2 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -2 minutes of check standard.

Internal Standard Area Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1826-CC1826	**Injection Date:**	08/11/21
Lab File ID:	Q84265.D	**Injection Time:**	15:14
Instrument ID:	GCMSQ	**Method:**	SW846 6850

	IS 1 AREA	RT
Initial Cal [a]	140140	6.33
Check Std [b]	112156	6.35
Upper Limit [c]	210210	8.35
Lower Limit [d]	70070	4.35

Lab Sample ID	IS 1 AREA	RT
FA87620-2	92626	6.12
ZZZZZZ	80437	6.07
ZZZZZZ	86565	6.07
ZZZZZZ	84548	6.07

IS 1 = Cl18O4 (ISTD)

(a) Initial Cal is: SQ1826-ICC1826 Q84250.D 08/11/21 11:33. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to + 50% of initial cal area.
(c) Upper Limit = + 50% of initial standard area; Retention time + 2 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -2 minutes of check standard.

Initial Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1826-ICC1826
Lab FileID: Q84250.D

Initial Calibration Report

Method Path	D:\MassHunter\Methods
Method File	6850_081121_SQ1826.quantmethod.xml
Batch Name	D:\MassHunter\Data\0811_6850_SQ1826\QuantResults\sq1826.batch.bin
Last Calib Update	8/12/2021 7:46:54 AM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\0811_6850_SQ1826\Q84247.d	8/11/2021 11:08:04 AM	8/12/2021 7:46:54 AM
2	D:\MassHunter\Data\0811_6850_SQ1826\Q84248.d	8/11/2021 11:16:29 AM	8/12/2021 7:46:54 AM
3	D:\MassHunter\Data\0811_6850_SQ1826\Q84249.d	8/11/2021 11:24:53 AM	8/12/2021 7:46:54 AM
4	D:\MassHunter\Data\0811_6850_SQ1826\Q84250.d	8/11/2021 11:33:17 AM	8/12/2021 7:46:54 AM
5	D:\MassHunter\Data\0811_6850_SQ1826\Q84251.d	8/11/2021 11:41:43 AM	8/12/2021 7:46:54 AM
6	D:\MassHunter\Data\0811_6850_SQ1826\Q84253.d	8/11/2021 1:27:52 PM	8/12/2021 7:46:54 AM
7	D:\MassHunter\Data\0811_6850_SQ1826\Q84254.d	8/11/2021 1:36:16 PM	8/12/2021 7:46:54 AM
8	D:\MassHunter\Data\0811_6850_SQ1826\Q84255.d	8/11/2021 1:44:38 PM	8/12/2021 7:46:54 AM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I Cl18O4		---------- ISTD ----------									
T Perchlorate	Quadratic	1.2032	1.2512	1.2205	1.3195	1.3750	1.4450	1.5497	1.5360	1.3625	10.075

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Generated at 7:47 AM on 8/12/2021

Initial Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1826-ICC1826
Lab FileID: Q84250.D

Initial Calibration Report

Compounds with Curve fitting not using Avg Response Factor:

Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
T Perchlorate	Quadratic	y = 0.013935 * x ^ 2 + 1.412658 * x	0.998830

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Verification

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1826-ICV1826
Lab FileID: Q84256.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0811_6850_SQ1826\sq1826.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0811_6850_SQ1826\Q84247.d
2:D:\MassHunter\Data\0811_6850_SQ1826\Q84248.d
3:D:\MassHunter\Data\0811_6850_SQ1826\Q84249.d
4:D:\MassHunter\Data\0811_6850_SQ1826\Q84250.d
5:D:\MassHunter\Data\0811_6850_SQ1826\Q84251.d
6:D:\MassHunter\Data\0811_6850_SQ1826\Q84253.d
7:D:\MassHunter\Data\0811_6850_SQ1826\Q84254.d
8:D:\MassHunter\Data\0811_6850_SQ1826\Q84255.d

Data File: Q84256
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.891	-5.5	94.5

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1826-CC1826
Lab FileID: Q84265.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0811_6850_SQ1826\sq1826.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0811_6850_SQ1826\Q84247.d
2:D:\MassHunter\Data\0811_6850_SQ1826\Q84248.d
3:D:\MassHunter\Data\0811_6850_SQ1826\Q84249.d
4:D:\MassHunter\Data\0811_6850_SQ1826\Q84250.d
5:D:\MassHunter\Data\0811_6850_SQ1826\Q84251.d
6:D:\MassHunter\Data\0811_6850_SQ1826\Q84253.d
7:D:\MassHunter\Data\0811_6850_SQ1826\Q84254.d
8:D:\MassHunter\Data\0811_6850_SQ1826\Q84255.d

Data File: Q84265
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.825	-8.8	91.2

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1826-CC1826
Lab FileID: Q84266.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0811_6850_SQ1826\sq1826.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0811_6850_SQ1826\Q84247.d
2:D:\MassHunter\Data\0811_6850_SQ1826\Q84248.d
3:D:\MassHunter\Data\0811_6850_SQ1826\Q84249.d
4:D:\MassHunter\Data\0811_6850_SQ1826\Q84250.d
5:D:\MassHunter\Data\0811_6850_SQ1826\Q84251.d
6:D:\MassHunter\Data\0811_6850_SQ1826\Q84253.d
7:D:\MassHunter\Data\0811_6850_SQ1826\Q84254.d
8:D:\MassHunter\Data\0811_6850_SQ1826\Q84255.d

Data File: Q84266
Type : QC
Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	0.200	0.171	-14.3	85.7

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1826-CC1826
Lab FileID: Q84272.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0811_6850_SQ1826\sq1826.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0811_6850_SQ1826\Q84247.d
2:D:\MassHunter\Data\0811_6850_SQ1826\Q84248.d
3:D:\MassHunter\Data\0811_6850_SQ1826\Q84249.d
4:D:\MassHunter\Data\0811_6850_SQ1826\Q84250.d
5:D:\MassHunter\Data\0811_6850_SQ1826\Q84251.d
6:D:\MassHunter\Data\0811_6850_SQ1826\Q84253.d
7:D:\MassHunter\Data\0811_6850_SQ1826\Q84254.d
8:D:\MassHunter\Data\0811_6850_SQ1826\Q84255.d

Data File: Q84272
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.851	-7.4	92.6

CC Criteria: +/- 15%

Run Sequence Report

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: SQ1826	**Method:** SW846 6850	**Instrument ID:** GCMSQ

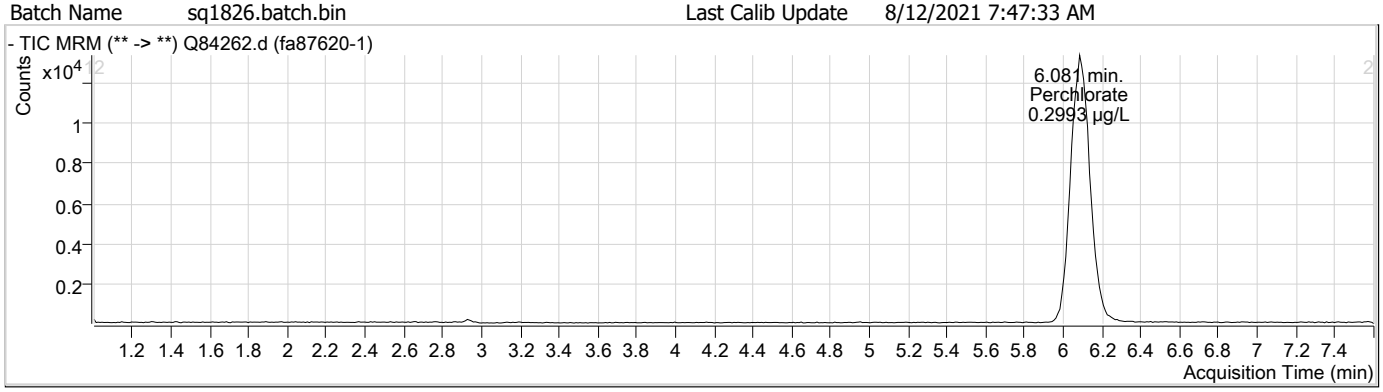
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ1826-IC1826	Q84246.D	08/11/21 10:59	n/a	Mass Calibration Verification
SQ1826-IC1826	Q84247.D	08/11/21 11:08	n/a	Initial cal 0.2
SQ1826-IC1826	Q84248.D	08/11/21 11:16	n/a	Initial cal 0.5
SQ1826-IC1826	Q84249.D	08/11/21 11:24	n/a	Initial cal 1.0
SQ1826-ICC1826	Q84250.D	08/11/21 11:33	n/a	Initial cal 2.0
SQ1826-IC1826	Q84251.D	08/11/21 11:41	n/a	Initial cal 5.0
SQ1826-IC1826	Q84253.D	08/11/21 13:27	n/a	Initial cal 10
SQ1826-IC1826	Q84254.D	08/11/21 13:36	n/a	Initial cal 25
SQ1826-IC1826	Q84255.D	08/11/21 13:44	n/a	Initial cal 50
SQ1826-ICV1826	Q84256.D	08/11/21 13:53	n/a	Initial cal verification 2
OP86789-BS	Q84258.D	08/11/21 14:09	OP86789	Blank Spike
OP86789-MB	Q84259.D	08/11/21 14:23	OP86789	Method Blank
ZZZZZZ	Q84260.D	08/11/21 14:31	OP86789	(unrelated sample)
FA87620-1	Q84262.D	08/11/21 14:48	OP86789	54MW12
OP86789-MS	Q84263.D	08/11/21 14:57	OP86789	Matrix Spike
OP86789-MSD	Q84264.D	08/11/21 15:05	OP86789	Matrix Spike Duplicate
SQ1826-CC1826	Q84265.D	08/11/21 15:14	n/a	Continuing cal 2.0
SQ1826-CC1826	Q84266.D	08/11/21 15:22	n/a	Continuing cal 0.2
FA87620-2	Q84268.D	08/11/21 15:39	OP86789	54MW1
ZZZZZZ	Q84269.D	08/11/21 15:47	OP86789	(unrelated sample)
ZZZZZZ	Q84270.D	08/11/21 15:56	OP86789	(unrelated sample)
ZZZZZZ	Q84271.D	08/11/21 16:04	OP86789	(unrelated sample)
SQ1826-CC1826	Q84272.D	08/11/21 16:13	n/a	Continuing cal 2.0
SQ1826-ECC1826	Q84273.D	08/11/21 16:21	n/a	Ending cal 0.2
SQ1826-IBLK	Q84274.D	08/11/21 16:29	n/a	Method Blank

MS Semi-volatiles

Raw Data

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84262.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 2:48:18 PM
Sample Name	fa87620-1	Instrument	Instrument 1
Vial	P2-C5	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

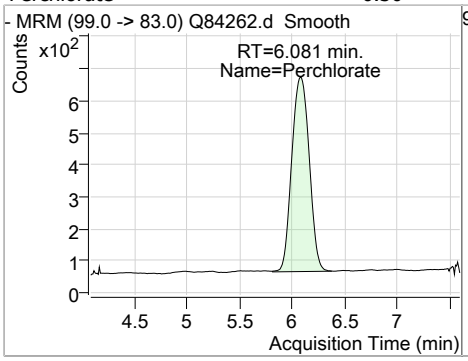


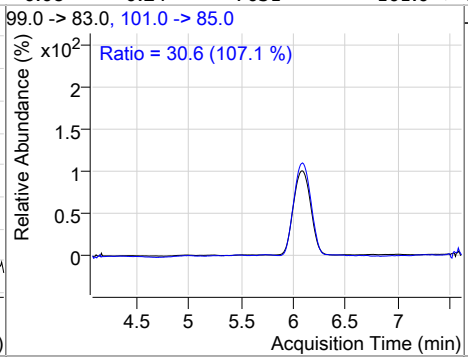
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.085	107.0 -> 89.0	83101	NoQ	5.00 µg/L	-0.244
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.081	99.0 -> 83.0	7031	3.3	0.30 µg/L	96

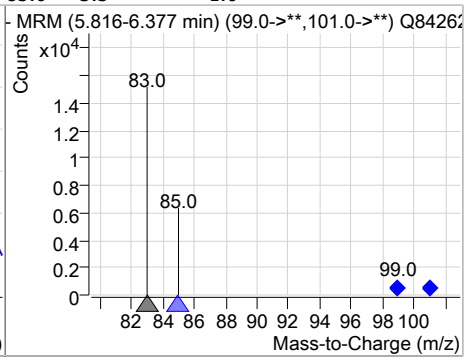
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.30	6.08	-0.24	7031	101.0 -> 85.0	3.3	1.6	

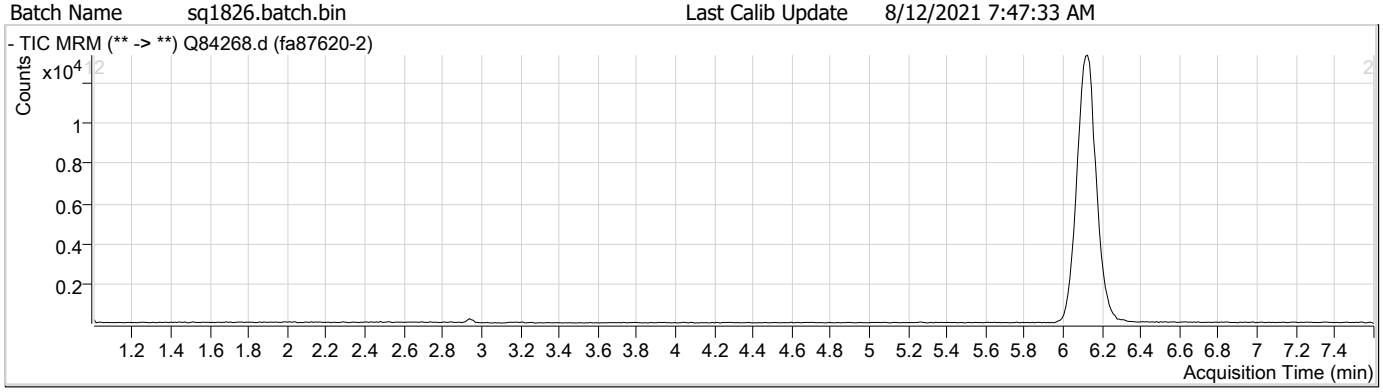






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84268.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 3:39:31 PM
Sample Name	fa87620-2	Instrument	Instrument 1
Vial	P2-C8	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

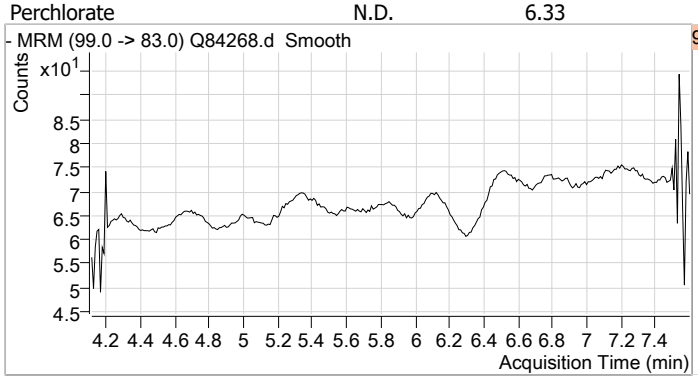


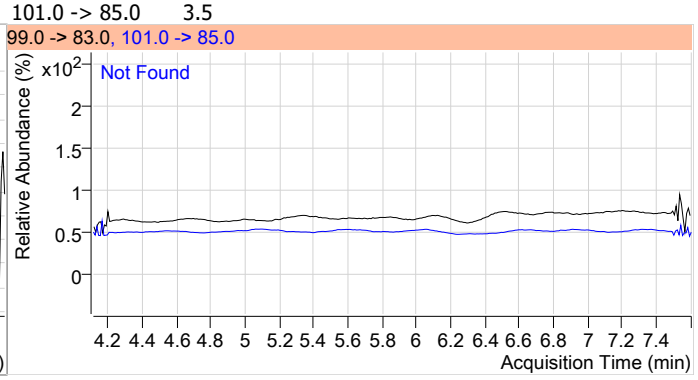
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.115	107.0 -> 89.0	92626	NoQ	5.00	µg/L	-0.214
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	-	99.0 -> 83.0		-	N.D.		

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

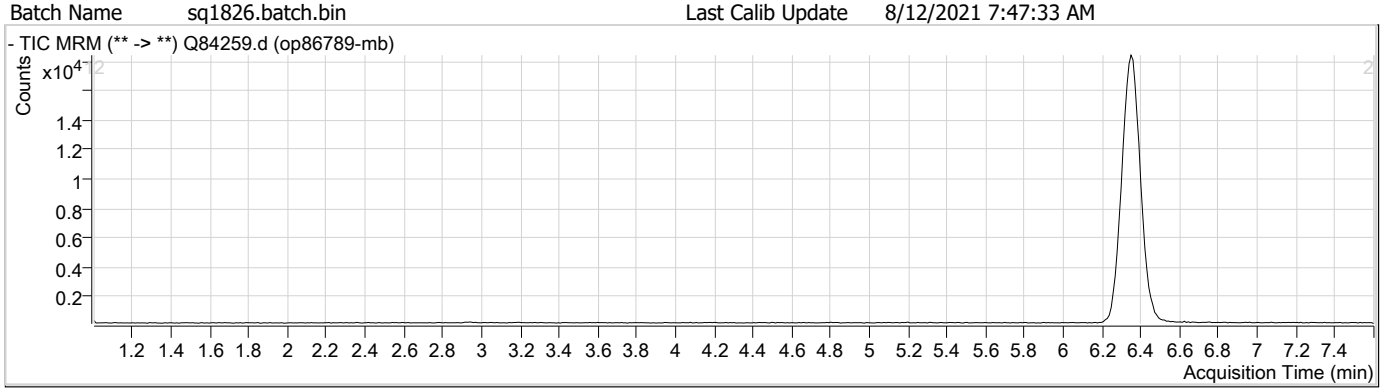
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	6.33	101.0 -> 85.0	3.5





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84259.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 2:23:06 PM
Sample Name	op86789-mb	Instrument	Instrument 1
Vial	P2-C2	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

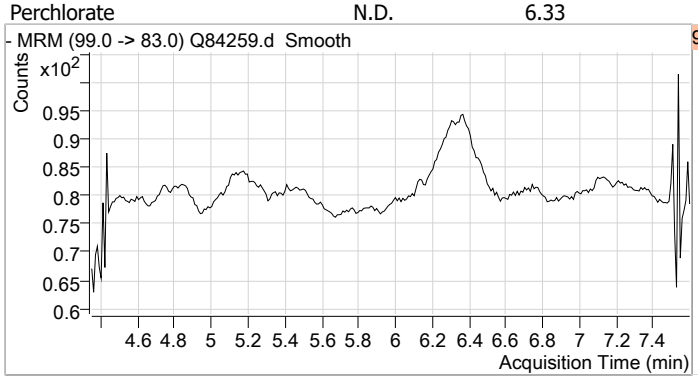


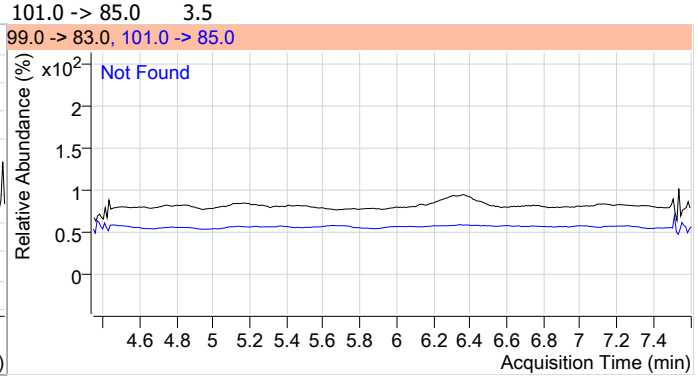
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.349	107.0 -> 89.0	123166	NoQ	5.00	µg/L	0.020
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	-	99.0 -> 83.0		-	N.D.		

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

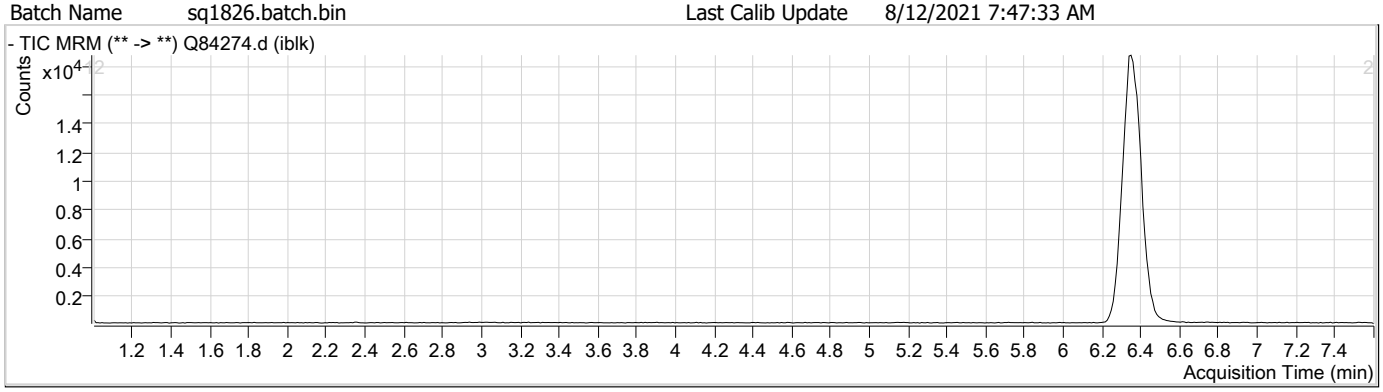
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	6.33	101.0 -> 85.0	3.5





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84274.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 4:29:55 PM
Sample Name	iblk	Instrument	Instrument 1
Vial	P2-A1	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

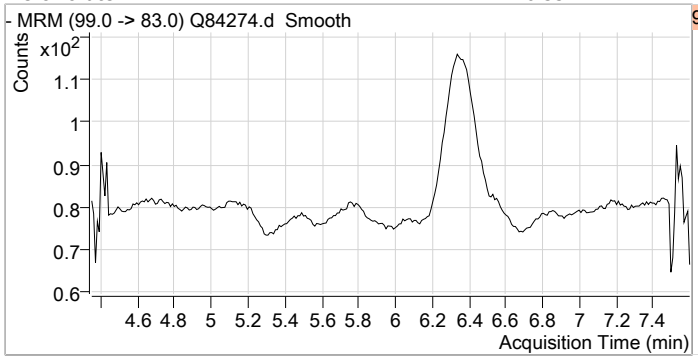


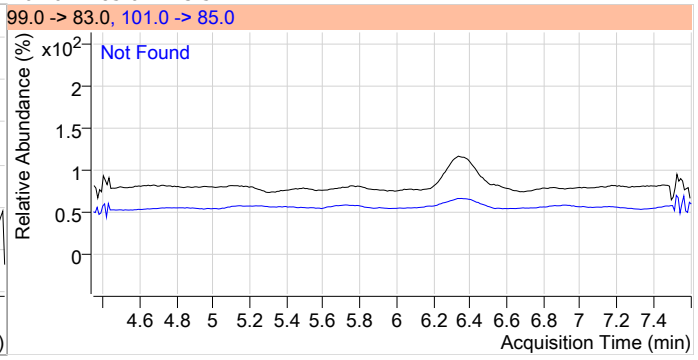
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.349	107.0 -> 89.0	126787	NoQ	5.00	µg/L	0.020
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	-	99.0 -> 83.0		-	N.D.		

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

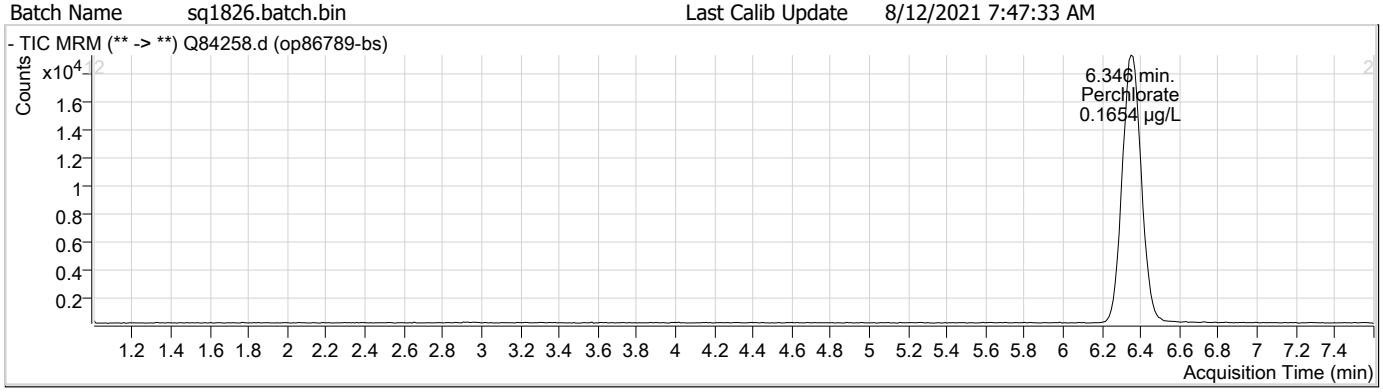
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	6.33	101.0 -> 85.0	3.5





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84258.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 2:09:52 PM
Sample Name	op86789-bs	Instrument	Instrument 1
Vial	P2-C1	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

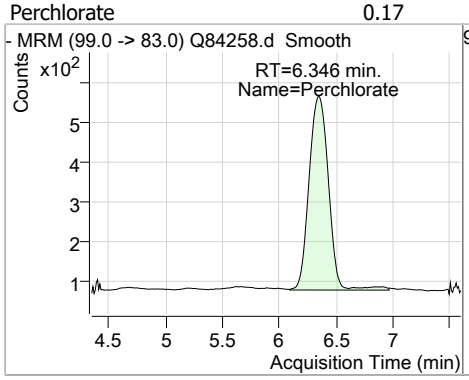


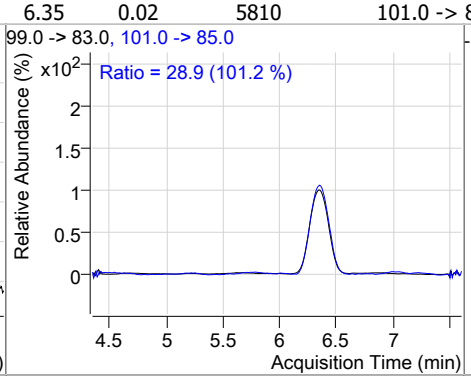
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.349	107.0 -> 89.0	124323	NoQ	5.00 µg/L	0.020
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.346	99.0 -> 83.0	5810	3.5	0.17 µg/L	99

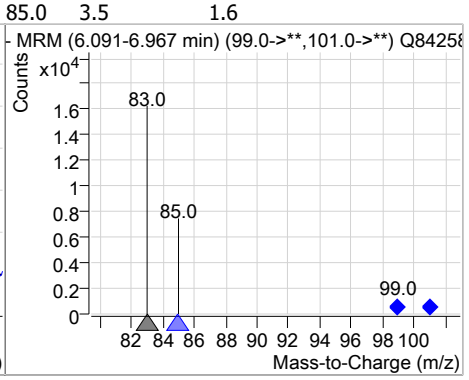
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.17	6.35	0.02	5810	101.0 -> 85.0	3.5	1.6	

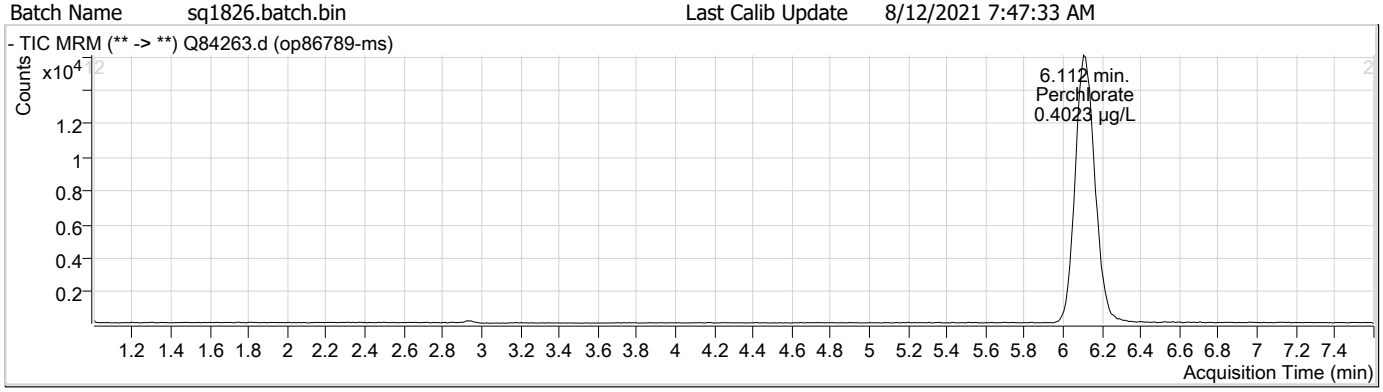






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84263.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 2:57:29 PM
Sample Name	op86789-ms	Instrument	Instrument 1
Vial	P2-C6	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

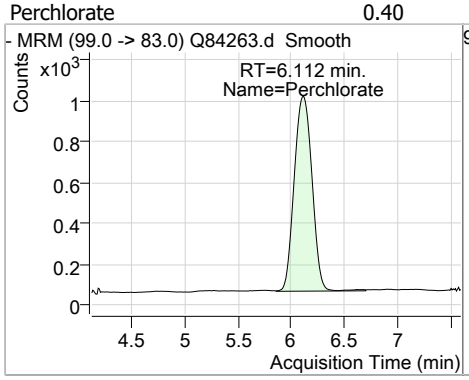


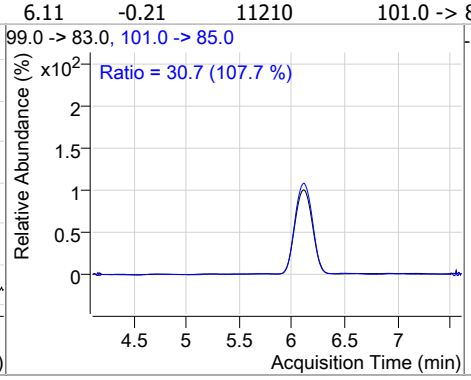
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.115	107.0 -> 89.0	98540	NoQ	5.00 µg/L	-0.214
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.112	99.0 -> 83.0	11210	3.3	0.40 µg/L	96

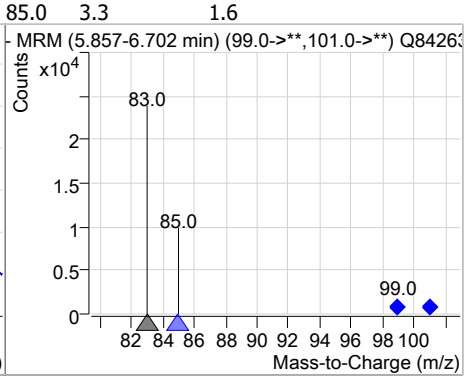
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.40	6.11	-0.21	11210	101.0 -> 85.0	3.3	1.6	

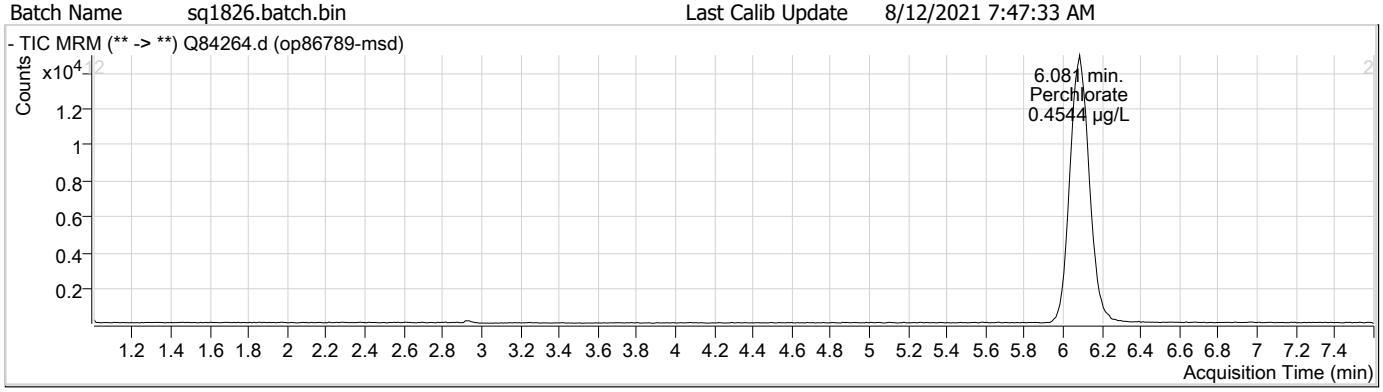






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84264.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 3:05:53 PM
Sample Name	op86789-msd	Instrument	Instrument 1
Vial	P2-C7	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

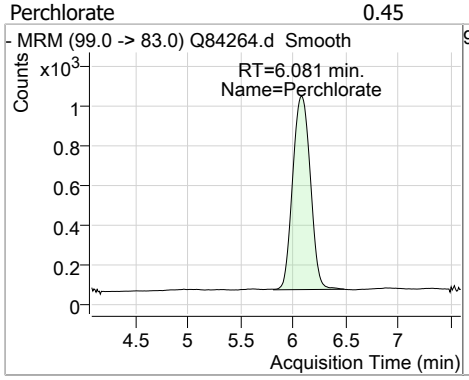


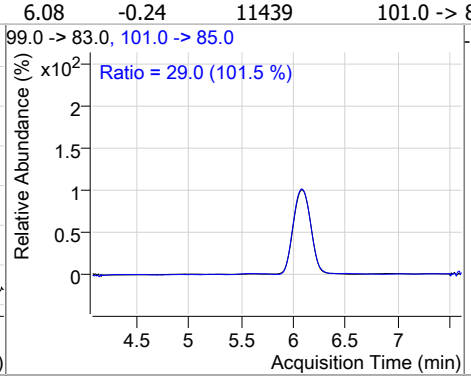
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.085	107.0 -> 89.0	89011	NoQ	5.00	µg/L	-0.244
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.081	99.0 -> 83.0	11439	3.5	0.45	µg/L	99

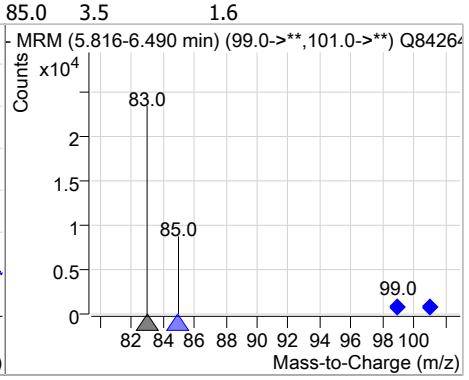
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.45	6.08	-0.24	11439	101.0 -> 85.0	3.5	1.6	







QQQ Check Tune Report

Agilent Technologies

Instrument Name	Instrument 1
MS Model	G6460A
MS Instrument Serial	SG10447001
Software_Firmware Version	B.08.02.B8260.0, FW: A.00.08.62
Tune Date & Time	11 August 2021 09:41:34
Data Path	D:\MassHunter\Tune\QQQ\G6460A\atunes.TUNE.XML
Ion Source	AJS ESI
Ionization Mode	AJS ESI
Tuned Resolution	All
Vacuum Pressure	1.62E+0[R]; 2.40E-5[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	10
Nebulizer	15
Capillary	4000
Nozzle Voltage	1500
Sheath Gas Temp	250
Sheath Gas Flow	7

QQQ Check Tune Report

Agilent Technologies

Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.99	0.00	Pass	0.70	0.65	-0.05	Pass	145674
302.00	302.00	0.00	Pass	0.70	0.72	0.02	Pass	26119
601.98	601.99	0.01	Pass	0.70	0.74	0.04	Pass	76303
1033.99	1033.98	-0.01	Pass	0.70	0.77	0.07	Pass	228679
1633.95	1634.07	0.12	Pass	0.70	0.82	0.12	Pass	541601
2233.91	2233.94	0.03	Pass	0.70	0.69	-0.01	Pass	202381

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.01	0.01	Pass	0.70	0.70	0.00	Pass	44881
112.99	112.96	-0.03	Pass	0.70	0.74	0.04	Pass	195167
302.00	301.93	-0.07	Pass	0.70	0.75	0.05	Pass	42637
601.98	601.96	-0.02	Pass	0.70	0.72	0.02	Pass	81258
1033.99	1034.08	0.09	Pass	0.70	0.70	0.00	Pass	209170
1633.95	1633.85	-0.10	Pass	0.70	0.75	0.05	Pass	373262
2233.91	2233.81	-0.10	Pass	0.70	0.78	0.08	Pass	173253

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.59	-0.40	Pass	1.20	1.43	0.23	Pass	207090
302.00	302.04	0.04	Pass	1.20	1.51	0.31	Pass	39817
601.98	602.04	0.06	Pass	1.20	1.33	0.13	Pass	118562
1033.99	1034.03	0.04	Pass	1.20	1.17	-0.03	Pass	386446
1633.95	1633.73	-0.22	Pass	1.20	1.09	-0.11	Pass	931762
2233.91	2233.93	0.02	Pass	1.20	1.26	0.06	Pass	809936

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.08	0.08	Pass	1.20	1.36	0.16	Pass	60216
112.99	113.06	0.07	Pass	1.20	1.39	0.19	Pass	275726
302.00	301.80	-0.20	Pass	1.20	1.25	0.05	Pass	68338
601.98	601.92	-0.06	Pass	1.20	1.08	-0.12	Pass	138026
1033.99	1033.91	-0.08	Pass	1.20	0.87	-0.33	Pass	325333
1633.95	1633.80	-0.15	Pass	1.20	0.87	-0.33	Pass	628804
2233.91	2233.67	-0.24	Pass	1.20	1.04	-0.16	Pass	531107

Analyzer: MS1 Polarity: Negative Width: Widest

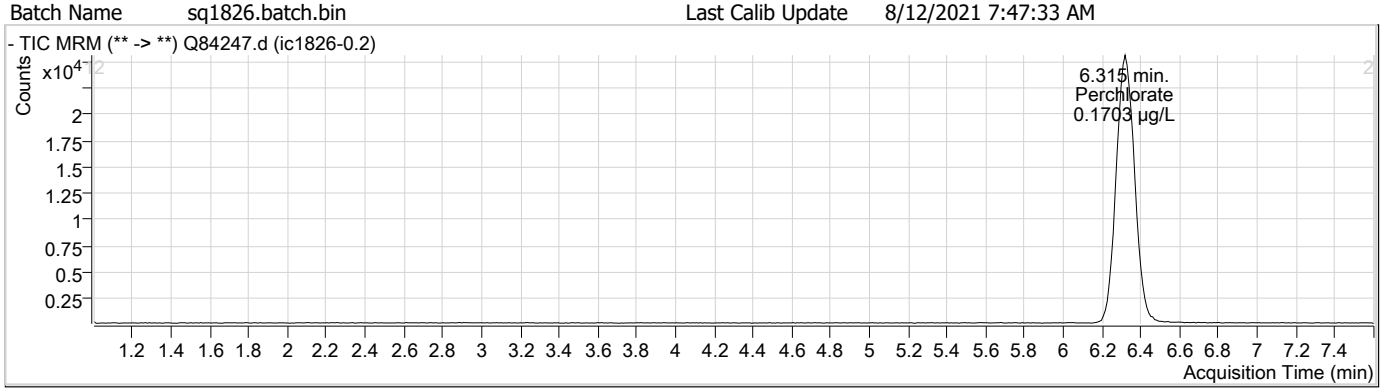
m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.52	-0.47	Pass	2.50	2.28	-0.22	Pass	231410
302.00	302.63	0.63	Pass	2.50	2.49	-0.01	Pass	38537
601.98	602.17	0.19	Pass	2.50	2.60	0.10	Pass	135563
1033.99	1033.93	-0.06	Pass	2.50	2.69	0.19	Pass	549358
1633.95	1634.38	0.43	Pass	2.50	2.89	0.39	Pass	1688984
2233.91	2233.92	0.01	Pass	2.50	3.39	0.89	Pass	2111035

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.19	0.19	Pass	2.50	2.50	0.00	Pass	71236
112.99	113.07	0.08	Pass	2.50	2.44	-0.06	Pass	321582
302.00	302.12	0.12	Pass	2.50	2.41	-0.09	Pass	74398
601.98	602.05	0.07	Pass	2.50	2.34	-0.16	Pass	190746
1033.99	1033.65	-0.34	Pass	2.50	2.51	0.01	Pass	580242
1633.95	1633.61	-0.34	Pass	2.50	2.21	-0.29	Pass	2321300
2233.91	2233.62	-0.29	Pass	2.50	2.69	0.19	Pass	2356783

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84247.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 11:08:04 AM
Sample Name	ic1826-0.2	Instrument	Instrument 1
Vial	P2-A2	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

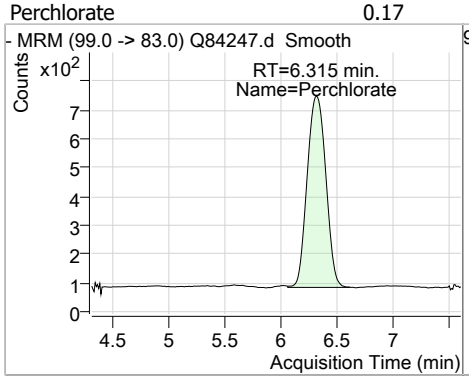


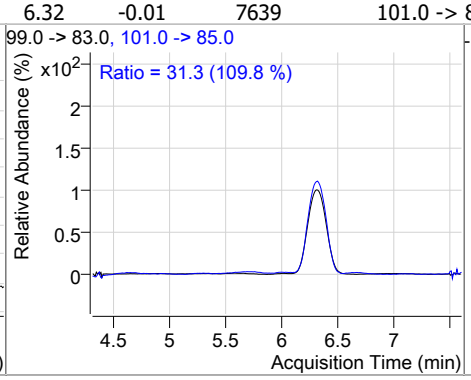
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.319	107.0 -> 89.0	158723	NoQ	5.00 µg/L	-0.010
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.315	99.0 -> 83.0	7639	3.2	0.17 µg/L	95

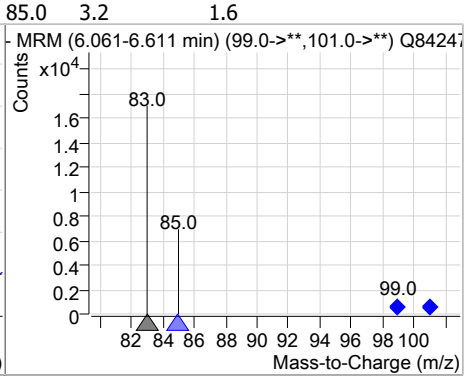
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.17	6.32	-0.01	7639	101.0 -> 85.0	3.2	1.6	

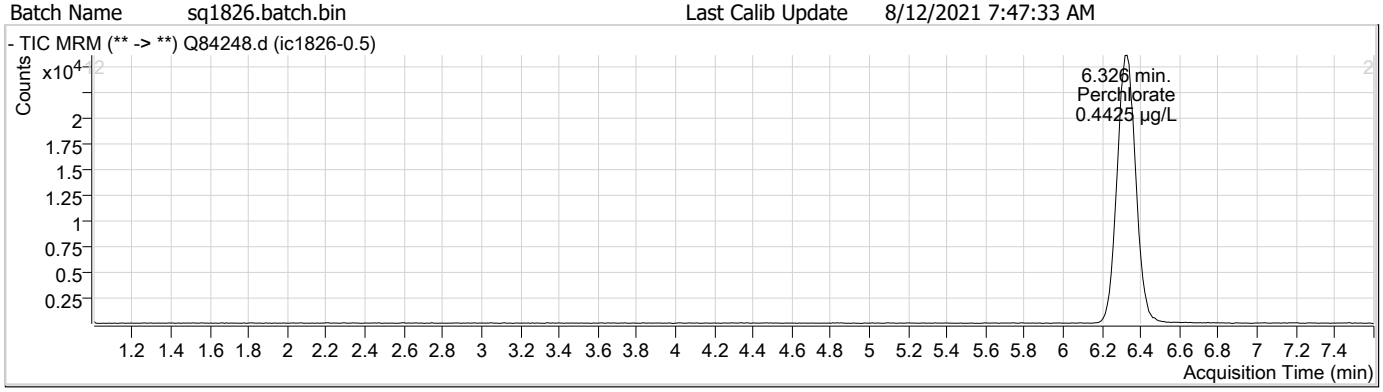






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84248.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 11:16:29 AM
Sample Name	ic1826-0.5	Instrument	Instrument 1
Vial	P2-A3	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

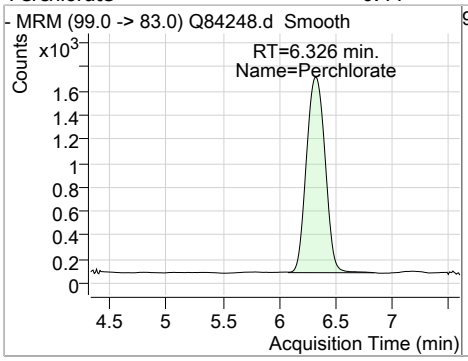


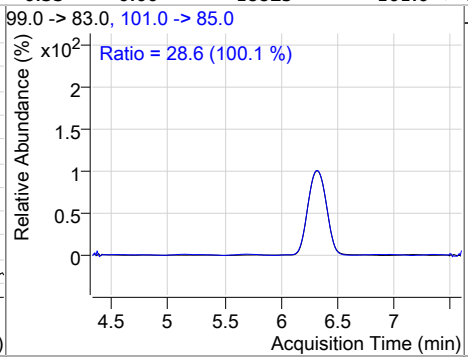
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.329	107.0 -> 89.0	150458	NoQ	5.00 µg/L	0.000
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.326	99.0 -> 83.0	18825	3.5	0.44 µg/L	100

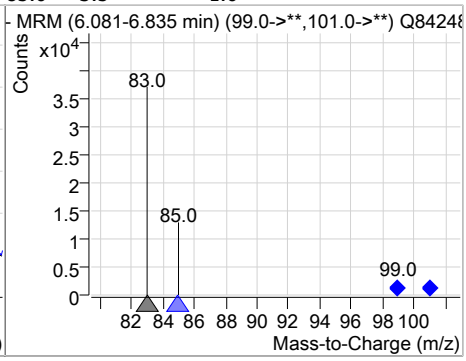
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.44	6.33	0.00	18825	101.0 -> 85.0	3.5	1.6	

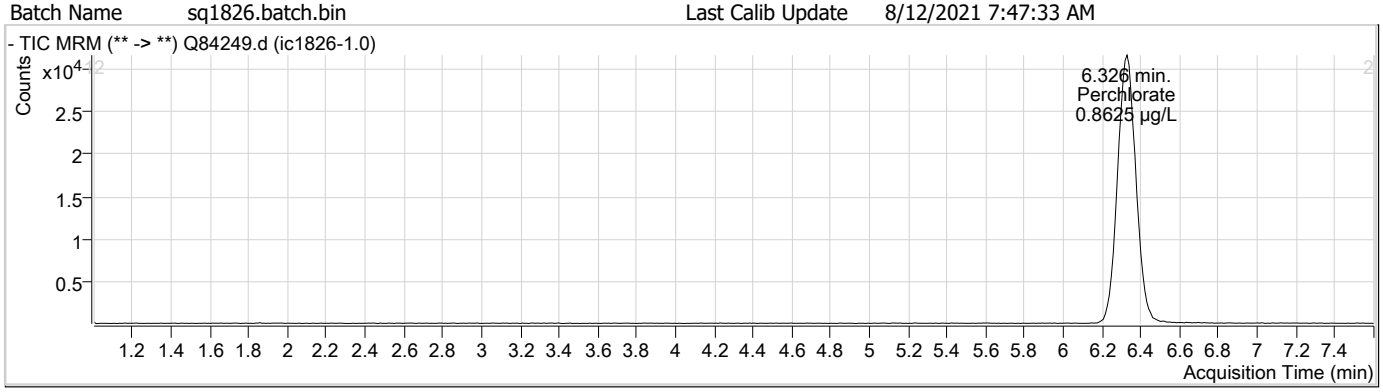






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84249.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 11:24:53 AM
Sample Name	ic1826-1.0	Instrument	Instrument 1
Vial	P2-A4	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

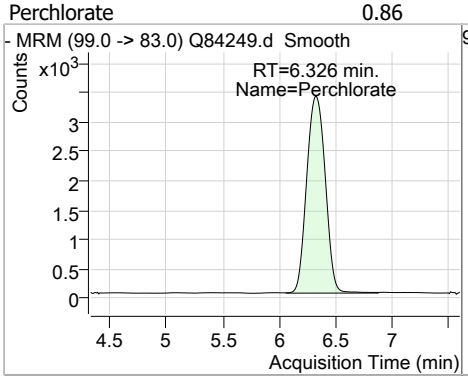


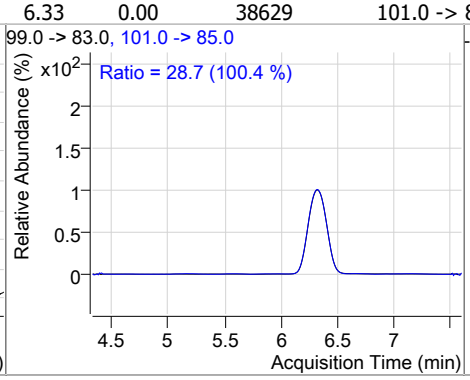
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.329	107.0 -> 89.0	158249	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.326	99.0 -> 83.0	38629	3.5	0.86	µg/L	100

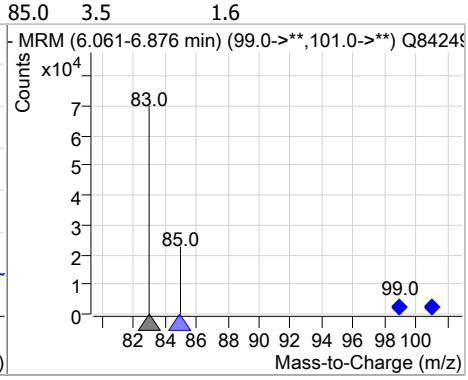
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.86	6.33	0.00	38629	101.0 -> 85.0	3.5	1.6	

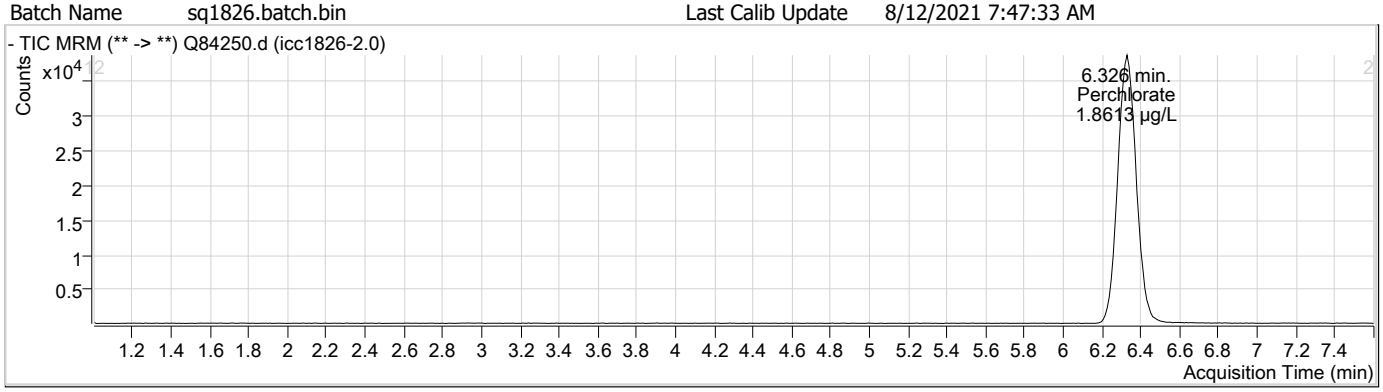






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84250.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 11:33:17 AM
Sample Name	icc1826-2.0	Instrument	Instrument 1
Vial	P2-A5	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

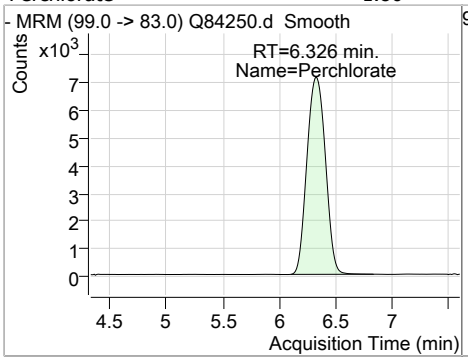


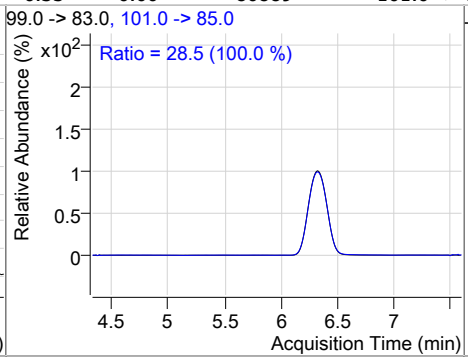
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.329	107.0 -> 89.0	153252	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.326	99.0 -> 83.0	80889	3.5	1.86	µg/L	100

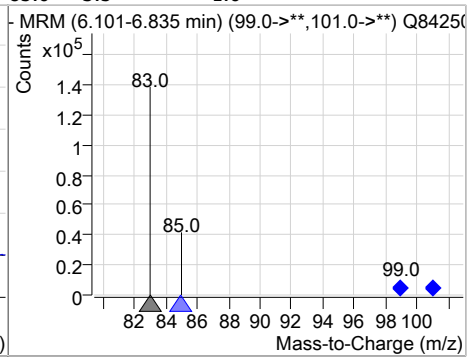
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.86	6.33	0.00	80889	101.0 -> 85.0	3.5	1.6	

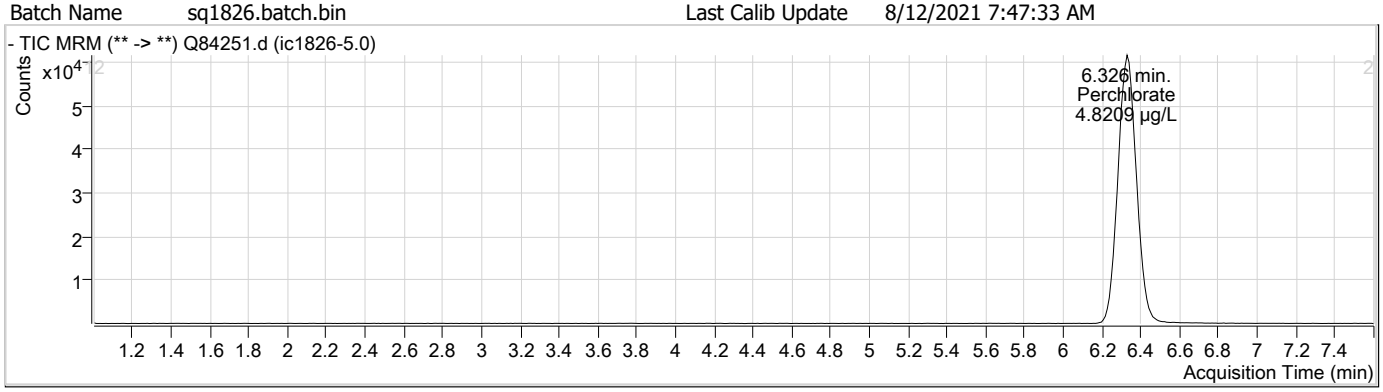






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84251.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 11:41:43 AM
Sample Name	ic1826-5.0	Instrument	Instrument 1
Vial	P2-A6	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

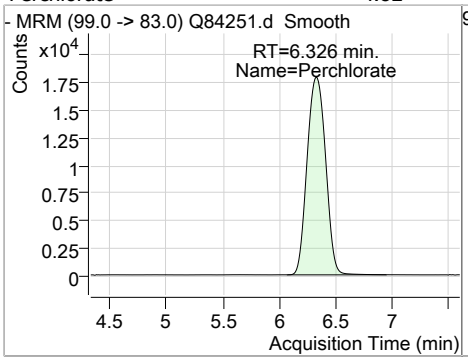


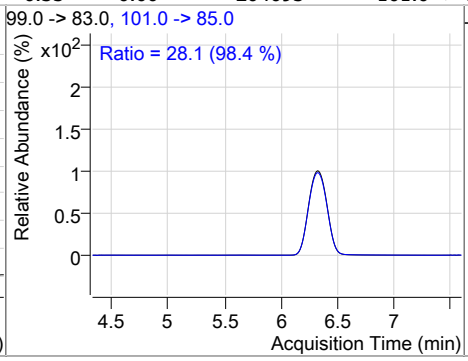
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.329	107.0 -> 89.0	148865	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.326	99.0 -> 83.0	204693	3.6	4.82	µg/L	99

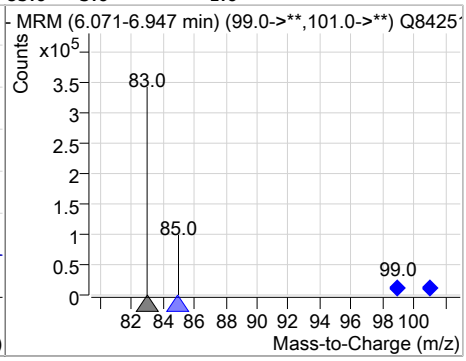
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	4.82	6.33	0.00	204693	101.0 -> 85.0	3.6	1.6	

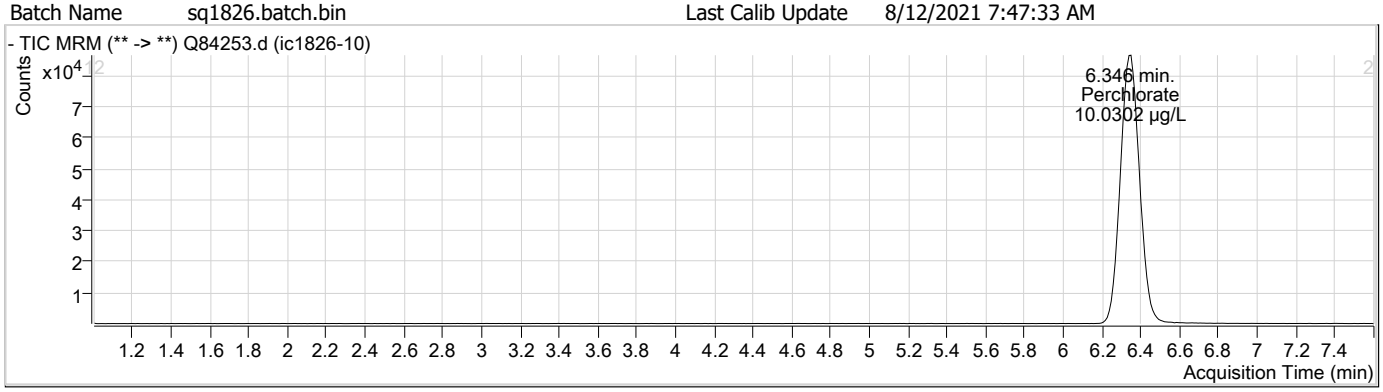






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84253.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 1:27:52 PM
Sample Name	ic1826-10	Instrument	Instrument 1
Vial	P2-A7	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

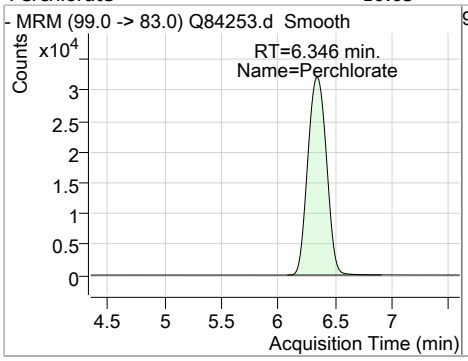


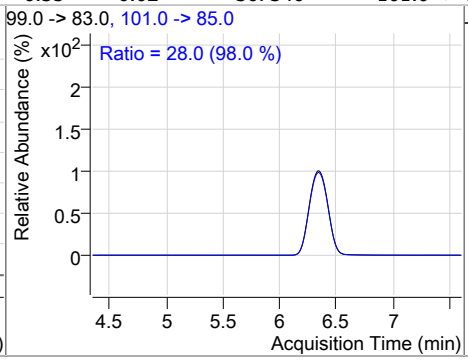
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.349	107.0 -> 89.0	127112	NoQ	5.00	µg/L	0.020
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.346	99.0 -> 83.0	367346	3.6	10.03	µg/L	99

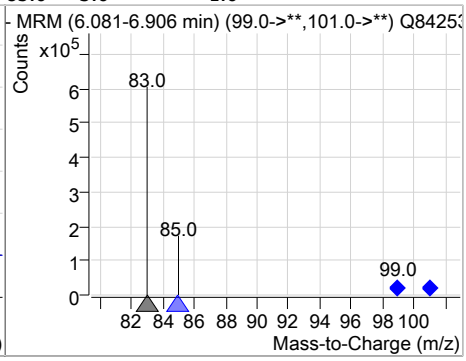
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	10.03	6.35	0.02	367346	101.0 -> 85.0	3.6	1.6	

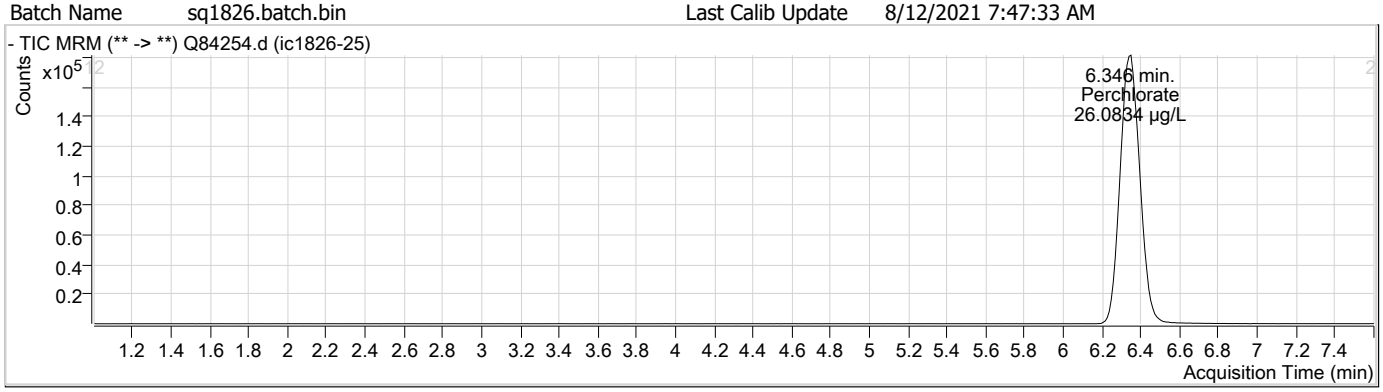






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84254.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 1:36:16 PM
Sample Name	ic1826-25	Instrument	Instrument 1
Vial	P2-A8	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

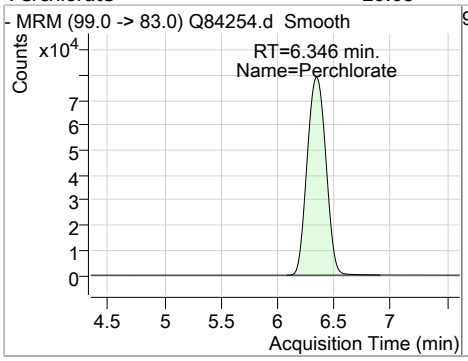


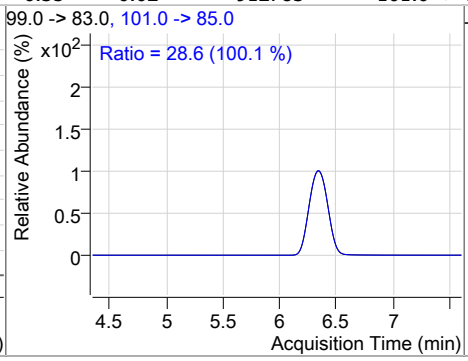
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.349	107.0 -> 89.0	117800	NoQ	5.00	µg/L	0.020
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.346	99.0 -> 83.0	912783	3.5	26.08	µg/L	100

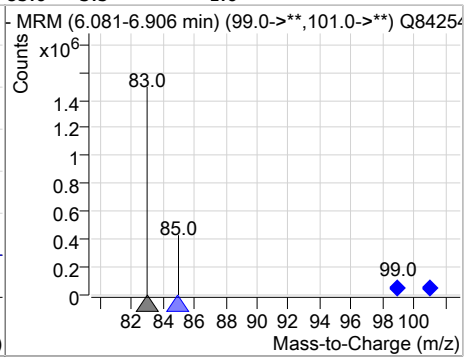
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	26.08	6.35	0.02	912783	101.0 -> 85.0	3.5	1.6	

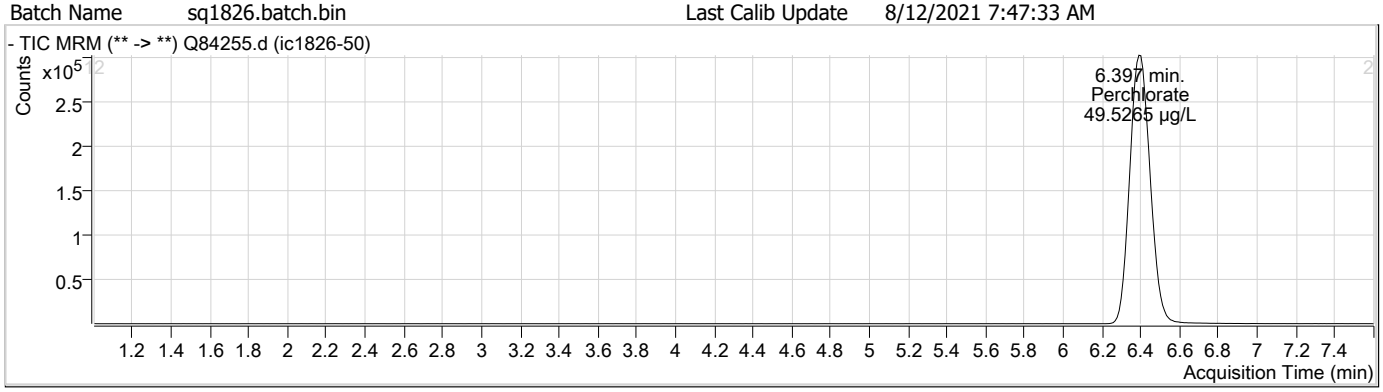






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84255.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 1:44:38 PM
Sample Name	ic1826-50	Instrument	Instrument 1
Vial	P2-A9	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

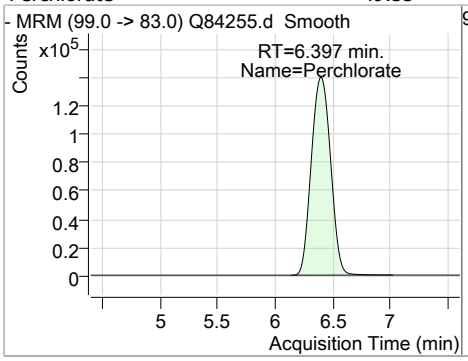


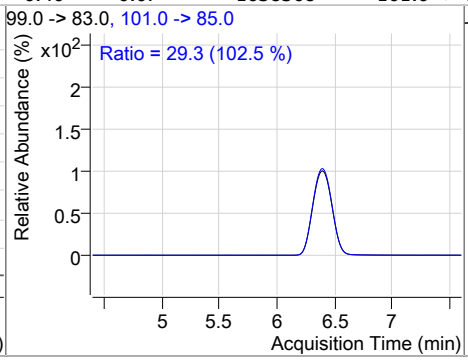
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.400	107.0 -> 89.0	106664	NoQ	5.00	µg/L	0.071
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.397	99.0 -> 83.0	1638368	3.4	49.53	µg/L	99

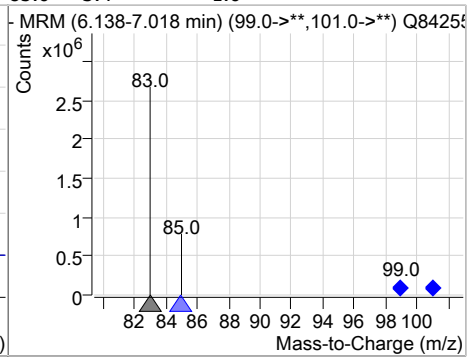
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	49.53	6.40	0.07	1638368	101.0 -> 85.0	3.4	1.6	

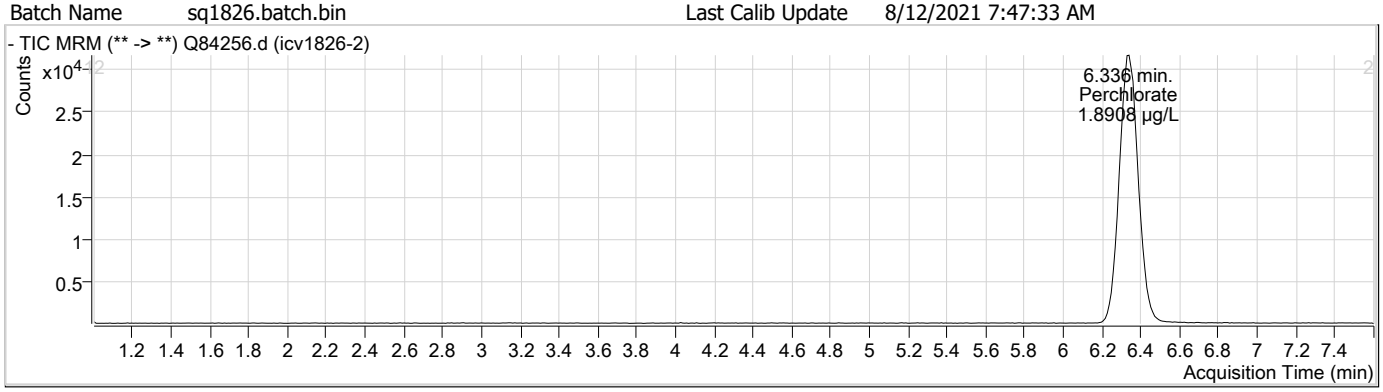






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84256.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 1:53:03 PM
Sample Name	icv1826-2	Instrument	Instrument 1
Vial	P2-B1	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

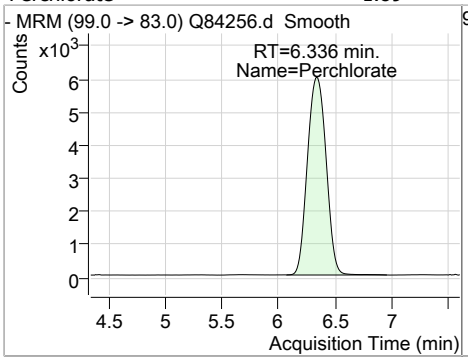


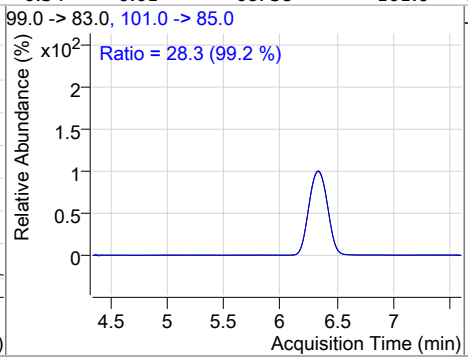
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.339	107.0 -> 89.0	128195	NoQ	5.00	µg/L	0.010
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.336	99.0 -> 83.0	68738	3.5	1.89	µg/L	100

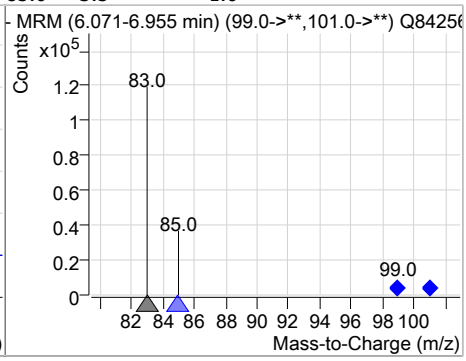
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.89	6.34	0.01	68738	101.0 -> 85.0	3.5	1.6	

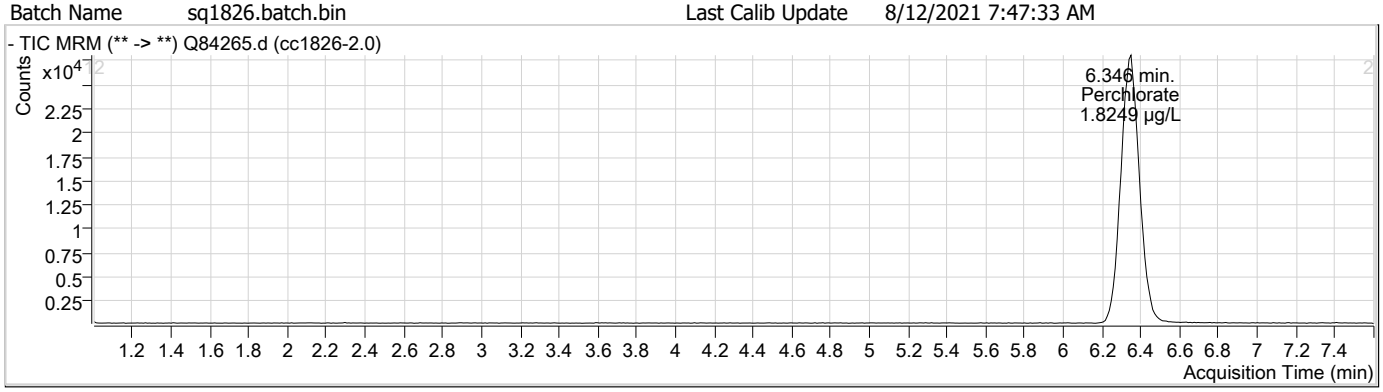






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84265.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 3:14:18 PM
Sample Name	cc1826-2.0	Instrument	Instrument 1
Vial	P2-A5	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

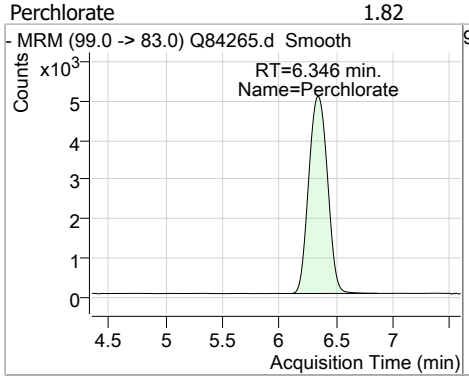


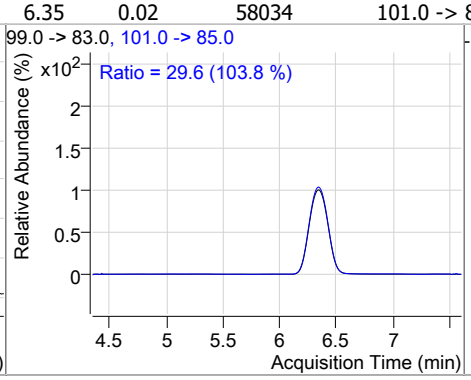
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.349	107.0 -> 89.0	112156	NoQ	5.00	µg/L	0.020
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.346	99.0 -> 83.0	58034	3.4	1.82	µg/L	98

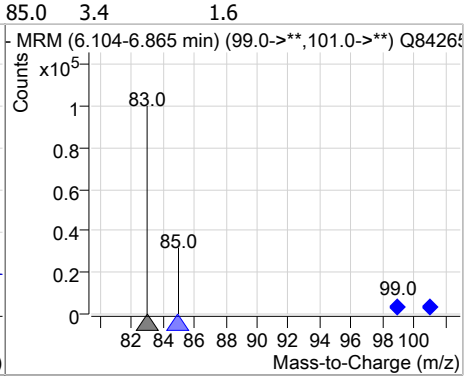
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.82	6.35	0.02	58034	101.0 -> 85.0	3.4	1.6	

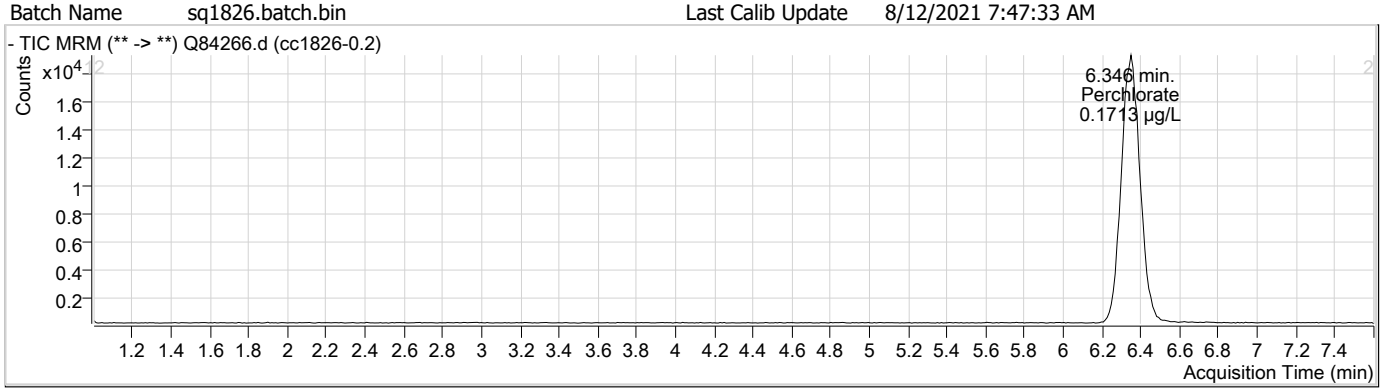






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84266.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 3:22:42 PM
Sample Name	cc1826-0.2	Instrument	Instrument 1
Vial	P2-A2	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

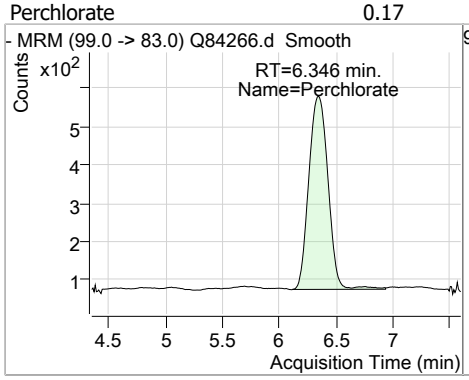


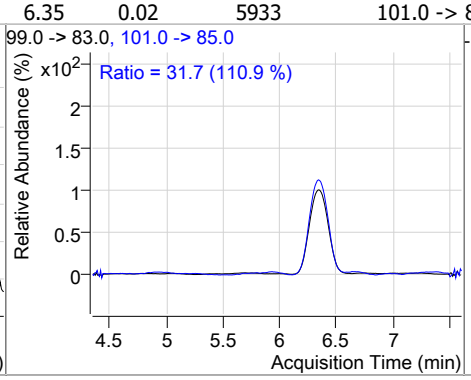
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.349	107.0 -> 89.0	122539	NoQ	5.00 µg/L	0.020
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.346	99.0 -> 83.0	5933	3.2	0.17 µg/L	94

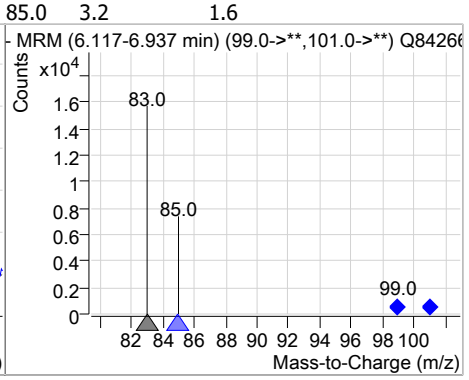
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.17	6.35	0.02	5933	101.0 -> 85.0	3.2	1.6	

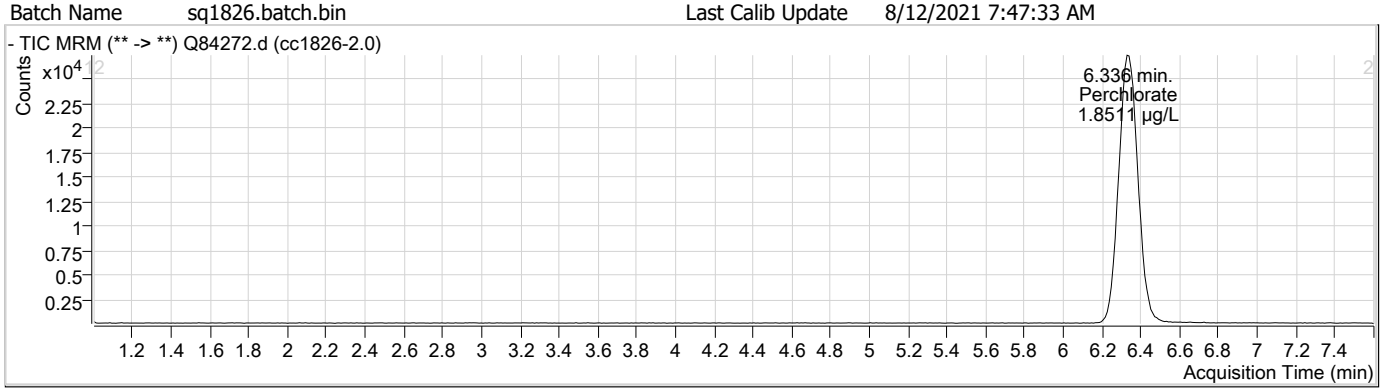






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84272.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 4:13:07 PM
Sample Name	cc1826-2.0	Instrument	Instrument 1
Vial	P2-A5	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

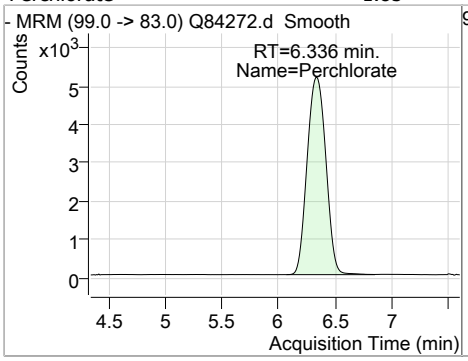


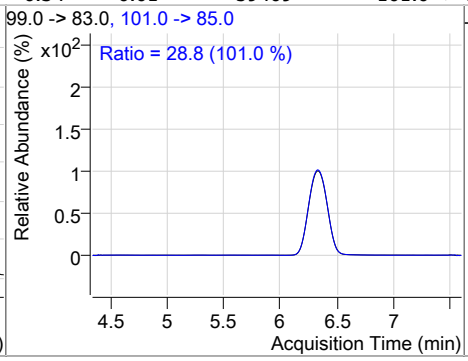
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.339	107.0 -> 89.0	113179	NoQ	5.00	µg/L	0.010
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.336	99.0 -> 83.0	59409	3.5	1.85	µg/L	99

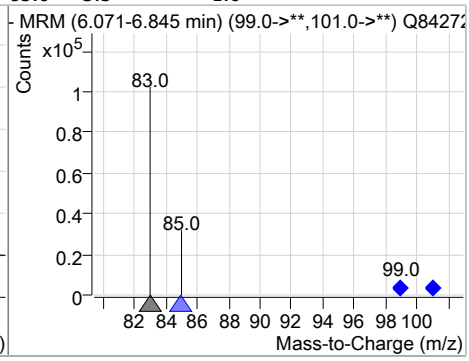
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.85	6.34	0.01	59409	101.0 -> 85.0	3.5	1.6	







SGS ORLANDO

LCMS1-Q ANALYSIS LOG

DATE:	08/11/21
COLUMN TYPE:	K PRIME
AMOUNT INJ:	7.5 ul
INSTRUMENT:	LCMS1-Q

METHODS:	SW846 6850
PROC. METH:	6850_081121_SQ1826
CAL DATE:	08/11/21
ANALYST:	NG
RUN BATCH:	SQ1826

ELUENT A LOT #:	207355 W/0.1% AA
ELUENT B LOT #:	204566 W/0.1% AA
IC/CC STD LOT #:	LCMS1604
ICV STD LOT #:	LCMS1636
ISTD/ID STD LOT #:	10663A

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	Q84241.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,1,1,WATER	BDL
2	Q84242.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	BDL
3	Q84243.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	BDL
4	Q84244.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	BDL
5	Q84245.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	BDL
6	Q84246.d	P2-A1	ic1826-0	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	Check Tune File
7	Q84247.d	P2-A2	ic1826-0.2	Perchlorate2.m	Calibration	500x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
8	Q84248.d	P2-A3	ic1826-0.5	Perchlorate2.m	Calibration	200x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
9	Q84249.d	P2-A4	ic1826-1.0	Perchlorate2.m	Calibration	100x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
10	Q84250.d	P2-A5	icc1826-2.0	Perchlorate2.m	Calibration	50x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
11	Q84251.d	P2-A6	ic1826-5.0	Perchlorate2.m	Calibration	20x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
12	Q84252.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	instrument stopped
13	Q84253.d	P2-A7	ic1826-10	Perchlorate2.m	Calibration	10x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
14	Q84254.d	P2-A8	ic1826-25	Perchlorate2.m	Calibration	4x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
15	Q84255.d	P2-A9	ic1826-50	Perchlorate2.m	Calibration	2x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
16	Q84256.d	P2-B1	icv1826-2	Perchlorate2.m	QC	50x	OP86789,SQ1826,10.0,,,10,1,WATER	PASS
17	Q84257.d	P2-B2	ics	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	PASS
18	Q84258.d	P2-C1	op86789-bs	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	BS PASS
19	Q84259.d	P2-C2	op86789-mb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	ND
20	Q84260.d	P2-C3	fa87664-2	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
21	Q84261.d	P2-C4	fa87664-2	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,10,WATER	10x, don't need
22	Q84262.d	P2-C5	fa87620-1	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
23	Q84263.d	P2-C6	op86789-ms	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
24	Q84264.d	P2-C7	op86789-msd	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
25	Q84265.d	P2-A5	cc1826-2.0	Perchlorate2.m	QC	50x	OP86789,SQ1826,10.0,,,10,1,WATER	PASS
26	Q84266.d	P2-A2	cc1826-0.2	Perchlorate2.m	QC	500x	OP86789,SQ1826,10.0,,,10,1,WATER	PASS
27	Q84267.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	ND
28	Q84268.d	P2-C8	fa87620-2	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
29	Q84269.d	P2-C9	fa87622-1	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
30	Q84270.d	P2-D1	fa87622-2	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
31	Q84271.d	P2-D2	fa87622-3	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
32	Q84272.d	P2-A5	cc1826-2.0	Perchlorate2.m	QC	50x	OP86789,SQ1826,10.0,,,10,1,WATER	PASS
33	Q84273.d	P2-A2	ecc1826-0.2	Perchlorate2.m	QC	500x	OP86789,SQ1826,10.0,,,10,1,WATER	PASS
34	Q84274.d	P2-A1	iblk	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	ND
35	Q84275.d	P2-D3	cap test (blank)	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	test

SGS - ORLANDO

LIQUID SAMPLE PREP REPORT

Date/Time: 08/11/21 09:00 Started {mm/dd/yy 24:00}

Date/Time: 08/11/21 09:50 Finished {mm/dd/yy 24:00}

Prep Method: 3510C 3580A or Method (circle)

Analytical Method: 6850

Batch#: OP86789 Ext. By: NG Conc. By: — Vialed By: NG

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP86789 MB	X	10.0					10.0	
OP86789 BS	X	↓				20uL	↓	
FA87620-1	1	↓				↓	↓	MS/MSD
↓ -2	↓	↓				↓	↓	↓
FA87622-1	↓	↓				↓	↓	↓
↓ -2	↓	↓				↓	↓	↓
↓ -3	↓	↓				↓	↓	↓
FA87664-2	1	↓				↓	10.0	PT sample
				NG 08/11/21				
OP86789-MS	2	10.0				20uL	10.0	FA87620-1
OP86789-MSD	3	↓				20uL	↓	↓
DUP								

Comments: Istd: 106603A 50uL EXP: 06/01/24 1.0mg/L

Surr. ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

Spk. ID: LCMS1636 Conc: 100ppb Exp. Date: 09/23/21 Inj. By: NG Ver. By NG

Initial Bath Temp (Therm ID): _____ Observed Temp °C: _____ Corr. Temp °C: _____

Exchange Bath/N-Evap Temp (Therm ID): _____ Observed Temp °C: _____ Corr. Temp °C: _____

CH2CL2 Lot #: — Hexane Lot #: — Na2SO4 Lot#: —

Acetonitrile Lot #: — Methanol Lot #: — Acetone Lot#: —

Syringe Filter Lot#: P22000-0419 pH Paper #: — Reagent #: 206688 = HPLC water

Copper Lot #: — If Sulfur Cleaning is performed in Extractions (3660B)

Relinquished By: _____ Date: 08/11/21

Accepted By: _____ Date: 08/11/21

ORLD-EXT-0001-1-06-FORM-extwater.xls 032718

7.7.1

7

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- GC Identification Summaries (Explosives)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86727-MB	PP391142.D	1	08/09/21	JB	08/06/21	OP86727	GPP2467

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA87620-1, FA87620-2

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	90%	70-136%

Method Blank Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86727-MB	GG622032.D	1	08/12/21	JB	08/06/21	OP86727	GGG3025

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA87620-1, FA87620-2

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	96%	70-136%

Blank Spike Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86727-BS	PP391143.D	1	08/09/21	JB	08/06/21	OP86727	GPP2467

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA87620-1, FA87620-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
2691-41-0	HMX	5	4.1	82	77-144
121-82-4	RDX	5	4.3	86	77-125
618-87-1	3,5-Dinitroaniline	5	4.7	94	77-115
99-65-0	1,3-Dinitrobenzene	5	4.8	96	79-122
606-20-2	2,6-Dinitrotoluene	5	5.6	112	81-131
121-14-2	2,4-Dinitrotoluene	5	4.5	90	80-123
35572-78-2	2-amino-4,6-Dinitrotoluene	5	4.6	92	81-120
19406-51-0	4-amino-2,6-Dinitrotoluene	5	4.7	94	79-119
98-95-3	Nitrobenzene	5	4.5	90	78-130
88-72-2	o-Nitrotoluene	5	4.2	84	76-131
99-08-1	m-Nitrotoluene	5	4.5	90	78-122
99-99-0	p-Nitrotoluene	5	4.5	90	79-124
479-45-8	Tetryl	5	2.3	46*	65-124
99-35-4	1,3,5-Trinitrobenzene	5	4.9	98	79-128
118-96-7	2,4,6-Trinitrotoluene	5	3.3	66*	72-112
55-63-0	Nitroglycerine	5	4.4	88	69-123
78-11-5	PETN	5	5.5	110	73-145

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	97%	70-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86727-MS2	PP391159.D	1	08/09/21	JB	08/06/21	OP86727	GPP2467
OP86727-MSD2	PP391160.D	1	08/10/21	JB	08/06/21	OP86727	GPP2467
FA87620-1 [a]	PP391150.D	1	08/09/21	JB	08/06/21	OP86727	GPP2467
FA87620-1 [b]	GG622039.D	1	08/12/21	JB	08/06/21	OP86727	GGG3025

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA87620-1, FA87620-2

CAS No.	Compound	FA87620-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	9.8	J	9.62	20.4	110	9.62	20.4	110	0	77-144/21
121-82-4	RDX	0.19 U		9.62	12.7	132*	9.62	12.8	133*	1	77-125/19
	DNX	0.19 U		9.62	9.5	99	9.62	9.6	100	1	66-127/25
	MNX	5.3	J	11.2	15.4	91	11.2	15.5	91	1	71-137/20
	TNX	0.19 U		4.52	7.2	159*	4.52	6.9	153*	4	60-126/18
618-87-1	3,5-Dinitroaniline	0.21	J	9.62	9.7	99	9.62	9.7	99	0	77-115/19
99-65-0	1,3-Dinitrobenzene	0.19 U		9.62	9.6	100	9.62	9.6	100	0	79-122/17
606-20-2	2,6-Dinitrotoluene	0.19 U		9.62	12.3	128	9.62	12.3	128	0	81-131/17
121-14-2	2,4-Dinitrotoluene	0.19 U		9.62	9.2	96	9.62	9.2	96	0	80-123/19
35572-78-2	2-amino-4,6-Dinitrotoluene	3.3	J	9.62	13.1	102	9.62	13.1	102	0	81-120/19
19406-51-0	4-amino-2,6-Dinitrotoluene	2.1	J	9.62	11.7	100	9.62	11.7	100	0	79-119/20
98-95-3	Nitrobenzene	0.19 U		9.62	9.1	95	9.62	9.1	95	0	78-130/19
88-72-2	o-Nitrotoluene	0.19 U		9.62	8.5	88	9.62	8.5	88	0	76-131/20
99-08-1	m-Nitrotoluene	0.19 U		9.62	9.0	94	9.62	9.0	94	0	78-122/18
99-99-0	p-Nitrotoluene	0.19 U		9.62	9.0	94	9.62	9.0	94	0	79-124/18
479-45-8	Tetryl	0.19 U		9.62	4.5	47*	9.62	4.5	47*	0	65-124/20
99-35-4	1,3,5-Trinitrobenzene	10.6	J	9.62	21.4	112	9.62	21.4	112	0	79-128/16
118-96-7	2,4,6-Trinitrotoluene	10.0	J	9.62	17.3	76	9.62	17.3	76	0	72-112/16
55-63-0	Nitroglycerine	1.9 U		9.62	8.9	93	9.62	9.1	95	2	69-123/18
78-11-5	PETN	1.9 U		9.62	10.3	107	9.62	10.3	107	0	73-145/18

CAS No.	Surrogate Recoveries	MS	MSD	FA87620-1	FA87620-1	Limits
610-39-9	3,4-Dinitrotoluene	100%	99%	94%	99%	70-136%

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.

* = Outside of Control Limits.

GC Identification Summary (Explosives)

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA87620-1	**Method:**	SW846 8330B
Client ID:	54MW12		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP391150.D	1	OP86727	GPP2467	08/09/21 19:04	GCPP
Confirmation	GG622039.D	1	OP86727	GGG3025	08/12/21 22:54	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
HMX	PP391150.D	1	1	9.8	J	ug/l	13.3
HMX	GG622039.D	1	1	11.2		ug/l	
MNX [a]	PP391150.D	1	1	5.3	J	ug/l	153.3
MNX	GG622039.D	1	1	.7		ug/l	
3,5-Dinitroaniline [a]	PP391150.D	1	1	.21	J	ug/l	116.8
3,5-Dinitroaniline	GG622039.D	1	1	.8		ug/l	
2-amino-4,6-Dinitrotoluene	PP391150.D	1	1	3.3	J	ug/l	3.0
2-amino-4,6-Dinitrotoluene	GG622039.D	1	1	3.4		ug/l	
4-amino-2,6-Dinitrotoluene	PP391150.D	1	1	2.1	J	ug/l	21.3
4-amino-2,6-Dinitrotoluene	GG622039.D	1	1	2.6		ug/l	
1,3,5-Trinitrobenzene	PP391150.D	1	1	10.6	J	ug/l	2.8
1,3,5-Trinitrobenzene	GG622039.D	1	1	10.9		ug/l	
2,4,6-Trinitrotoluene [b]	PP391150.D	1	1	10	J	ug/l	4.9
2,4,6-Trinitrotoluene	GG622039.D	1	1	10.5		ug/l	

(a) Primary and confirmation results differ by more than 40%.
(b) Associated BS recovery outside control limits.

GC Identification Summary (Explosives)

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA87620-2	**Method:**	SW846 8330B
Client ID:	54MW1		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP391151.D	1	OP86727	GPP2467	08/09/21 19:35	GCPP
Confirmation	GG622042.D	1	OP86727	GGG3025	08/13/21 00:28	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
RDX [a]	PP391151.D	1	1	.37	J	ug/l	160.7
RDX	GG622042.D	1	1	3.4		ug/l	
o-Nitrotoluene	PP391151.D	1	1	.42	J	ug/l	12.7
o-Nitrotoluene	GG622042.D	1	1	.37		ug/l	
p-Nitrotoluene [a]	PP391151.D	1	1	.089	J	ug/l	147.6
p-Nitrotoluene	GG622042.D	1	1	.59		ug/l	
Nitroglycerine [a]	PP391151.D	1	2	1.6	J	ug/l	60.2
Nitroglycerine	GG622042.D	1	2	.86	J	ug/l	

(a) Primary and confirmation results differ by more than 40%.

Surrogate Recovery Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Method: SW846 8330B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
FA87620-1	GG622039.D	99
FA87620-1	PP391150.D	94
FA87620-2	GG622042.D	107
FA87620-2	PP391151.D	93
OP86727-BS	PP391143.D	97
OP86727-MB	PP391142.D	90
OP86727-MB	GG622032.D	96
OP86727-MS2	PP391159.D	100
OP86727-MSD2	PP391160.D	99

Surrogate Compounds	Recovery Limits
S1 = 3,4-Dinitrotoluene	70-136%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GGG3025-CC3024	**Injection Date:**	08/12/21
Lab File ID:	GG622028.D	**Injection Time:**	17:08
Instrument ID:	GCGG	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	13.88

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP86682-MB	GG622030.D	08/12/21	18:11	13.90
ZZZZZZ	GG622031.D	08/12/21	18:42	13.87
OP86727-MB	GG622032.D	08/12/21	19:14	13.87
FA87620-1	GG622039.D	08/12/21	22:54	13.91

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

8.6.1

8

GC Surrogate Retention Time Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GGG3025-CC3024	**Injection Date:**	08/12/21
Lab File ID:	GG622040.D	**Injection Time:**	23:25
Instrument ID:	GCGG	**Method:**	SW846 8330B

	S1 [a] RT	S1 [b] RT
Check Std	13.93	13.93

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
FA87620-2	GG622042.D	08/13/21	00:28		13.90
ZZZZZZ	GG622043.D	08/13/21	00:59		13.90
ZZZZZZ	GG622044.D	08/13/21	01:31		13.90
ZZZZZZ	GG622045.D	08/13/21	02:02		13.91
GGG3025-ECC3024	GG622046.D	08/13/21	02:33	13.88	13.88

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GPP2467-CC2464	**Injection Date:**	08/09/21
Lab File ID:	PP391140.D	**Injection Time:**	13:54
Instrument ID:	GCPP	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	11.22

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP86727-MB	PP391142.D	08/09/21	14:56	11.26
OP86727-BS	PP391143.D	08/09/21	15:27	11.27
FA87760-1	PP391144.D	08/09/21	15:58	11.27
ZZZZZZ	PP391145.D	08/09/21	16:29	11.19
ZZZZZZ	PP391146.D	08/09/21	17:00	11.27
ZZZZZZ	PP391147.D	08/09/21	17:31	11.27
ZZZZZZ	PP391148.D	08/09/21	18:02	11.19
ZZZZZZ	PP391149.D	08/09/21	18:33	11.14
FA87620-1	PP391150.D	08/09/21	19:04	11.26
FA87620-2	PP391151.D	08/09/21	19:35	11.27

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GPP2467-CC2464	**Injection Date:**	08/09/21
Lab File ID:	PP391152.D	**Injection Time:**	20:06
Instrument ID:	GCPP	**Method:**	SW846 8330B

	S1 [a] RT	S1 [b] RT
Check Std	11.28	11.28

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	PP391154.D	08/09/21	21:08		11.27
ZZZZZZ	PP391155.D	08/09/21	21:38		11.27
ZZZZZZ	PP391156.D	08/09/21	22:09		11.27
OP86727-MS	PP391157.D	08/09/21	22:40		11.26
OP86727-MSD	PP391158.D	08/09/21	23:12		11.26
OP86727-MS2	PP391159.D	08/09/21	23:43		11.26
OP86727-MSD2	PP391160.D	08/10/21	00:14		11.26
OP86682-DUP	PP391161.D	08/10/21	00:45		11.24
OP86682-DUP2	PP391162.D	08/10/21	01:16		11.25
GPP2467-ECC2464	PP391163.D	08/10/21	01:47	11.26	11.26

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3024-ICC3024
Lab FileID: GG622005.D

Response Factor Report G1315B

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration

Calibration Files
20 =GG622000.D 50 =GG622001.D 100 =GG622002.D 200 =GG622003.D
500 =GG622004.D 1000=GG622005.D 2500=GG622006.D 5000=GG622007.D

Compound	20	50	100	200	500	1000	2500	5000	Avg	%RSD
1) TNX	6.694	5.096	4.481	4.443	4.105	4.141	4.060	4.081	4.638 E3	19.41
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 4079.64981 *A										
2) HMX	3.590	3.406	3.229	3.271	3.158	3.150	3.128	3.134	3.258 E3	5.02
3) DNX	5.970	5.694	5.461	5.516	5.313	5.304	5.303	5.356	5.489 E3	4.31
4) MNX	6.604	5.956	5.980	6.104	5.969	5.950	5.959	6.016	6.067 E3	3.67
5) 1,3,5-Trinit	9.657	9.257	9.157	9.374	9.126	9.104	9.110	9.185	9.246 E3	2.04
6) RDX	4.272	4.053	3.904	4.014	3.960	3.955	3.966	4.012	4.017 E3	2.80
7) 1,3-Dinitrob	1.306	1.222	1.197	1.233	1.203	1.201	1.201	1.213	1.222 E4	2.95
8) Nitrobenzene	7.932	7.756	7.816	7.920	7.782	7.797	7.817	7.795	7.827 E3	0.82
9) 2,4,6-Trinit	9.217	8.464	8.521	8.684	8.473	8.441	8.465	8.564	8.603 E3	3.02
10) Nitroglyceri									0.000	-1.00
11) Tetryl	6.882	6.628	6.671	6.780	6.704	6.724	6.789	6.890	6.758 E3	1.40
12) 3,4-Dinitrot	5.276	4.953	4.910	5.017	4.909	4.916	4.943	5.010	4.992 E3	2.45
13) 2,6-Dinitrot	6.179	5.889	5.776	5.854	5.783	5.760	5.783	5.851	5.859 E3	2.34
14) 2,4-Dinitrot	1.161	1.094	1.087	1.106	1.088	1.085	1.090	1.104	1.102 E4	2.27
15) 3,5-Dinitroa	1.008	0.922	0.910	0.935	0.920	0.919	0.923	0.935	0.934 E4	3.33
16) o-Nitrotolue	4.997	4.797	4.725	4.860	4.846	4.878	4.928	4.924	4.869 E3	1.73
17) p-Nitrotolue	5.234	4.953	5.030	5.119	5.055	5.053	5.089	5.132	5.083 E3	1.63
18) 4-Amino-2,6-	5.234	4.953	5.030	5.119	5.055	5.053	5.089	5.132	5.083 E3	1.63
19) m-Nitrotolue	5.599	5.634	5.503	5.528	5.444	5.440	5.490	5.472	5.514 E3	1.28
20) 2-Amino-4,6-	8.791	8.209	8.145	8.291	8.069	8.042	8.061	8.176	8.223 E3	2.98
21) PETN									0.000	-1.00

Signal #2

1) TNX	6.694	5.096	4.481	4.443	4.105	4.141	4.060	4.081	4.638 E3	19.41
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 4079.64981 *A										
2) HMX	3.590	3.406	3.229	3.271	3.158	3.150	3.128	3.134	3.258 E3	5.02
3) DNX	5.958	5.589	5.446	5.485	5.313	5.304	5.303	5.356	5.469 E3	4.07
4) MNX	6.604	5.956	5.980	6.104	5.969	5.950	5.959	6.016	6.067 E3	3.67
5) 1,3,5-Trinit	9.657	9.257	9.157	9.374	9.126	9.104	9.110	9.185	9.246 E3	2.04
6) RDX	4.272	4.053	3.904	4.014	3.960	3.955	3.966	4.012	4.017 E3	2.80
7) 1,3-Dinitrob	9.909	8.690	8.405	9.193	8.585	9.463	9.124	9.147	9.064 E3	5.44
8) Nitrobenzene	7.574	7.308	7.176	8.311	7.927	7.973	7.398	7.283	7.619 E3	5.33
9) 2,4,6-Trinit	1.268	1.043	1.256	1.254	1.179	1.134	1.110	1.124	1.171 E4	7.02
10) Nitroglyceri	3.644	2.586	3.132	3.876	3.197	3.040	2.937	2.976	3.173 E3	12.91
11) Tetryl	1.168	1.074	1.224	1.208	1.165	1.156	1.157	1.178	1.166 E4	3.81
12) 3,4-Dinitrot	1.128	0.892	0.940	0.993	0.954	0.955	0.959	0.976	0.975 E4	7.04
13) 2,6-Dinitrot	8.319	7.826	8.249	8.452	8.534	8.237	8.244	8.451	8.289 E3	2.64
14) 2,4-Dinitrot	7.038	6.623	7.386	7.517	7.966	7.605	7.691	7.875	7.462 E3	5.97
15) 3,5-Dinitroa	1.774	1.489	1.440	1.526	1.527	1.491	1.510	1.541	1.537 E4	6.56
16) o-Nitrotolue	8.065	8.725	5.622	7.220	7.299	7.217	7.335	7.368	7.356 E3	11.97
17) p-Nitrotolue	7.902	7.477	8.566	8.890	9.202	9.154	9.256	9.350	8.725 E3	7.95

Initial Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3024-ICC3024
Lab FileID: GG622005.D

18)	4-Amino-2,6-	7.902	7.477	8.566	8.890	9.202	9.154	9.256	9.350	8.725	E3	7.95
19)	m-Nitrotolue	6.136	8.925	9.309	9.055	9.473	9.400	9.574	9.541	8.927	E3	12.89
20)	2-Amino-4,6-	0.854	0.992	1.060	1.079	1.151	1.143	1.146	1.160	1.073	E4	9.87
21)	PETN	3.434	2.733	3.248	3.009	3.231	3.215	3.091	3.234	3.149	E3	6.63

(#) = Out of Range ### Number of calibration levels exceeded format ###

GGG3024_080821.M Mon Aug 09 10:18:19 2021

Initial Calibration Verification

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3024-ICV3024
Lab FileID: GG622008.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1A.ch
Acq On : 08-Aug-2021, 21:45:56 Operator: jamesb
Sample : icv3024-1000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	472.000	505.160	-7.0	105	0.00	4.28- 5.28
2		HMX	1000.000	926.949	7.3	96	0.00	4.68- 5.68
3		DNX	1000.000	1024.661	-2.5	106	0.00	4.86- 5.86
4		MNX	1166.000	1213.889	-4.1	106	0.00	5.95- 6.95
5		1,3,5-Trinitrobenzene	1000.000	958.592	4.1	97	0.00	6.98- 7.98
6		RDX	1000.000	950.233	5.0	97	0.00	7.20- 8.20
7		1,3-Dinitrobenzene	1000.000	954.780	4.5	97	0.00	9.17-10.17
8		Nitrobenzene	1000.000	950.838	4.9	95	0.00	10.11-11.11
9		2,4,6-Trinitrotoluene	1000.000	943.019	5.7	96	0.00	11.07-12.07
10		Nitroglycerin			NA			
11		Tetryl	1000.000	964.101	3.6	97	0.00	12.32-13.32
12	S	3,4-Dinitrotoluene			NA			
13		2,6-Dinitrotoluene	1000.000	952.231	4.8	97	0.00	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	958.433	4.2	97	0.00	14.31-15.31
15		3,5-Dinitroaniline	1000.000	1109.387	-10.9	113	0.00	14.99-15.99
16		o-Nitrotoluene	1000.000	960.676	3.9	96	0.00	15.86-16.86
17		p-Nitrotoluene	2000.000	1947.961	2.6	98	0.02	16.78-17.78
18		4-Amino-2,6-Dinitrotol	2000.000	1947.961	2.6	98	0.02	16.78-17.78
19		m-Nitrotoluene	1000.000	947.818	5.2	96	0.00	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	967.495	3.3	99	0.02	18.53-19.53
21		PETN			NA			

***** Signal #2 *****

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	472.000	505.160	-7.0	105	0.00	4.28- 5.28
2		HMX	1000.000	926.949	7.3	96	0.00	4.68- 5.68
3		DNX	1000.000	1028.467	-2.8	106	0.00	4.86- 5.86
4		MNX	1166.000	1213.889	-4.1	106	0.00	5.95- 6.95
5		1,3,5-Trinitrobenzene	1000.000	958.592	4.1	97	0.00	6.98- 7.98
6		RDX	1000.000	950.233	5.0	97	-0.01	7.21- 8.21
7		1,3-Dinitrobenzene	1000.000	1058.497	-5.8	101	0.00	9.17-10.17
8		Nitrobenzene	1000.000	1101.499	-10.1	105	0.00	10.11-11.11
9		2,4,6-Trinitrotoluene	1000.000	979.670	2.0	101	0.00	11.07-12.07

Initial Calibration Verification

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3024-ICV3024
Lab FileID: GG622008.D

10		Nitroglycerin	1000.000	954.377	4.6	100	0.00	11.85-12.85
11		Tetryl	1000.000	970.431	3.0	98	0.00	12.32-13.32
12	S	3,4-Dinitrotoluene		----------NA----------				
13		2,6-Dinitrotoluene	1000.000	982.311	1.8	99	0.00	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	992.438	0.8	97	0.00	14.31-15.31
15		3,5-Dinitroaniline	1000.000	1095.895	-9.6	113	0.00	14.99-15.99
16		o-Nitrotoluene	1000.000	919.253	8.1	94	0.00	15.86-16.86
17		p-Nitrotoluene	2000.000	2013.696	-0.7	96	0.02	16.77-17.77
18		4-Amino-2,6-Dinitrotol	2000.000	2013.696	-0.7	96	0.02	16.77-17.77
19		m-Nitrotoluene	1000.000	1016.304	-1.6	97	0.01	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	1050.381	-5.0	99	0.02	18.53-19.53
21		PETN	1000.000	969.900	3.0	95	0.00	20.90-21.90

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622005.D GGG3024_080821.M Mon Aug 09 10:18:09 2021

8.7.2

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Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3025-CC3024
Lab FileID: GG622028.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1A.ch
Acq On : 12-Aug-2021, 17:08:21 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : op86682,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	472.000	470.235	0.4	98	0.02	4.28- 5.28
2		HMX	1000.000	938.140	6.2	97	0.03	4.68- 5.68
3		DNX	1000.000	942.026	5.8	97	0.03	4.86- 5.86
4		MNX	1166.000	1105.351	5.2	97	0.03	5.95- 6.95
5		1,3,5-Trinitrobenzene	1000.000	958.345	4.2	97	0.02	6.98- 7.98
6		RDX	1000.000	1000.062	-0.0	102	0.04	7.20- 8.20
7		1,3-Dinitrobenzene	1000.000	967.445	3.3	98	0.02	9.17-10.17
8		Nitrobenzene	1000.000	984.095	1.6	99	0.00	10.11-11.11
9		2,4,6-Trinitrotoluene	1000.000	959.025	4.1	98	0.03	11.07-12.07
10		Nitroglycerin	----------	----------	NA	----------		
11		Tetryl	1000.000	934.814	6.5	94	0.06	12.32-13.32
12	S	3,4-Dinitrotoluene	1000.000	977.837	2.2	99	0.05	13.33-14.33
13		2,6-Dinitrotoluene	1000.000	971.501	2.8	99	0.05	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	971.714	2.8	99	0.05	14.31-15.31
15		3,5-Dinitroaniline	1000.000	970.630	2.9	99	0.05	14.99-15.99
16		o-Nitrotoluene	1000.000	989.772	1.0	99	0.03	15.86-16.86
17		p-Nitrotoluene	2000.000	1956.543	2.2	98	0.06	16.78-17.78
18		4-Amino-2,6-Dinitrotol	2000.000	1956.543	2.2	98	0.06	16.78-17.78
19		m-Nitrotoluene	1000.000	969.079	3.1	98	0.03	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	966.382	3.4	99	0.08	18.53-19.53
21		PETN	----------	----------	NA	----------		

***** Signal #2 *****

1		TNX	472.000	470.235	0.4	98	0.02	4.28- 5.28
2		HMX	1000.000	938.140	6.2	97	0.03	4.68- 5.68
3		DNX	1000.000	945.525	5.4	97	0.03	4.86- 5.86
4		MNX	1166.000	1105.351	5.2	97	0.03	5.95- 6.95
5		1,3,5-Trinitrobenzene	1000.000	958.345	4.2	97	0.02	6.98- 7.98
6		RDX	1000.000	1000.062	-0.0	102	0.03	7.21- 8.21
7		1,3-Dinitrobenzene	1000.000	1025.151	-2.5	98	0.02	9.17-10.17
8		Nitrobenzene	1000.000	1010.950	-1.1	97	0.00	10.11-11.11
9		2,4,6-Trinitrotoluene	1000.000	952.532	4.7	98	0.03	11.07-12.07

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3025-CC3024
Lab FileID: GG622028.D

10		Nitroglycerin	1000.000	924.894	7.5	97	0.04	11.85-12.85
11		Tetryl	1000.000	918.887	8.1	93	0.06	12.32-13.32
12	S	3,4-Dinitrotoluene	1000.000	968.606	3.1	99	0.05	13.33-14.33
13		2,6-Dinitrotoluene	1000.000	977.774	2.2	98	0.05	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	1025.689	-2.6	101	0.05	14.31-15.31
15		3,5-Dinitroaniline	1000.000	957.680	4.2	99	0.05	14.99-15.99
16		o-Nitrotoluene	1000.000	943.956	5.6	96	0.03	15.86-16.86
17		p-Nitrotoluene	2000.000	2055.726	-2.8	98	0.07	16.77-17.77
18		4-Amino-2,6-Dinitrotol	2000.000	2055.726	-2.8	98	0.07	16.77-17.77
19		m-Nitrotoluene	1000.000	1030.904	-3.1	98	0.03	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	1048.943	-4.9	98	0.08	18.53-19.53
21		PETN	1000.000	968.561	3.1	95	0.09	20.90-21.90

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622005.D GGG3024_080821.M Fri Aug 13 10:07:49 2021

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3025-CC3024
Lab FileID: GG622040.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1A.ch
Acq On : 12-Aug-2021, 23:25:25 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	472.000	470.802	0.3	98	0.03	4.28- 5.28
2		HMX	1000.000	941.460	5.9	97	0.04	4.68- 5.68
3		DNX	1000.000	934.819	6.5	97	0.04	4.86- 5.86
4		MNX	1166.000	1095.080	6.1	96	0.06	5.95- 6.95
5		1,3,5-Trinitrobenzene	1000.000	952.807	4.7	97	0.04	6.98- 7.98
6		RDX	1000.000	988.554	1.1	100	0.07	7.20- 8.20
7		1,3-Dinitrobenzene	1000.000	962.142	3.8	98	0.06	9.17-10.17
8		Nitrobenzene	1000.000	971.393	2.9	98	0.05	10.11-11.11
9		2,4,6-Trinitrotoluene	1000.000	952.706	4.7	97	0.08	11.07-12.07
10		Nitroglycerin			NA			
11		Tetryl	1000.000	932.164	6.8	94	0.11	12.32-13.32
12	S	3,4-Dinitrotoluene	1000.000	968.394	3.2	98	0.10	13.33-14.33
13		2,6-Dinitrotoluene	1000.000	962.965	3.7	98	0.10	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	963.293	3.7	98	0.10	14.31-15.31
15		3,5-Dinitroaniline	1000.000	963.202	3.7	98	0.12	14.99-15.99
16		o-Nitrotoluene	1000.000	979.819	2.0	98	0.09	15.86-16.86
17		p-Nitrotoluene	2000.000	1954.416	2.3	98	0.13	16.78-17.78
18		4-Amino-2,6-Dinitrotol	2000.000	1954.416	2.3	98	0.14	16.78-17.78
19		m-Nitrotoluene	1000.000	961.901	3.8	97	0.09	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	959.636	4.0	98	0.15	18.53-19.53
21		PETN			NA			

***** Signal #2 *****

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	472.000	470.802	0.3	98	0.03	4.28- 5.28
2		HMX	1000.000	941.460	5.9	97	0.04	4.68- 5.68
3		DNX	1000.000	938.292	6.2	97	0.04	4.86- 5.86
4		MNX	1166.000	1095.080	6.1	96	0.06	5.95- 6.95
5		1,3,5-Trinitrobenzene	1000.000	952.807	4.7	97	0.04	6.98- 7.98
6		RDX	1000.000	988.554	1.1	100	0.06	7.21- 8.21
7		1,3-Dinitrobenzene	1000.000	1026.808	-2.7	98	0.06	9.17-10.17
8		Nitrobenzene	1000.000	1036.884	-3.7	99	0.05	10.11-11.11
9		2,4,6-Trinitrotoluene	1000.000	956.776	4.3	99	0.08	11.07-12.07

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3025-CC3024
Lab FileID: GG622040.D

10		Nitroglycerin	1000.000	947.117	5.3	99	0.08	11.85-12.85
11		Tetryl	1000.000	923.590	7.6	93	0.11	12.32-13.32
12	S	3,4-Dinitrotoluene	1000.000	969.489	3.1	99	0.10	13.33-14.33
13		2,6-Dinitrotoluene	1000.000	959.487	4.1	97	0.10	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	987.065	1.3	97	0.10	14.31-15.31
15		3,5-Dinitroaniline	1000.000	954.103	4.6	98	0.12	14.99-15.99
16		o-Nitrotoluene	1000.000	946.556	5.3	96	0.09	15.86-16.86
17		p-Nitrotoluene	2000.000	2053.063	-2.7	98	0.14	16.77-17.77
18		4-Amino-2,6-Dinitrotol	2000.000	2053.063	-2.7	98	0.14	16.77-17.77
19		m-Nitrotoluene	1000.000	1047.213	-4.7	99	0.09	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	1059.394	-5.9	99	0.15	18.53-19.53
21		PETN	1000.000	988.489	1.2	97	0.13	20.90-21.90

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622005.D GGG3024_080821.M Fri Aug 13 10:07:50 2021

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3025-ECC3024
Lab FileID: GG622046.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1A.ch
Acq On : 13-Aug-2021, 02:33:57 Operator: jamesb
Sample : ecc3024-1000 Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	460.027	2.5	96	0.03	4.28- 5.28
2	HMX	1000.000	920.600	7.9	95	0.04	4.68- 5.68
3	DNX	1000.000	919.025	8.1	95	0.04	4.86- 5.86
4	MNX	1166.000	1092.398	6.3	96	0.05	5.95- 6.95
5	1,3,5-Trinitrobenzene	1000.000	948.506	5.1	96	0.03	6.98- 7.98
6	RDX	1000.000	983.550	1.6	100	0.05	7.20- 8.20
7	1,3-Dinitrobenzene	1000.000	958.564	4.1	98	0.03	9.17-10.17
8	Nitrobenzene	1000.000	962.670	3.7	97	0.02	10.11-11.11
9	2,4,6-Trinitrotoluene	1000.000	951.735	4.8	97	0.04	11.07-12.07
10	Nitroglycerin			NA			
11	Tetryl	1000.000	933.315	6.7	94	0.07	12.32-13.32
12 S	3,4-Dinitrotoluene	1000.000	968.921	3.1	98	0.05	13.33-14.33
13	2,6-Dinitrotoluene	1000.000	965.112	3.5	98	0.05	13.67-14.67
14	2,4-Dinitrotoluene	1000.000	963.437	3.7	98	0.06	14.31-15.31
15	3,5-Dinitroaniline	1000.000	961.529	3.8	98	0.07	14.99-15.99
16	o-Nitrotoluene	1000.000	966.443	3.4	96	0.03	15.86-16.86
17	p-Nitrotoluene	2000.000	1935.312	3.2	97	0.07	16.78-17.78
18	4-Amino-2,6-Dinitrotol	2000.000	1935.312	3.2	97	0.07	16.78-17.78
19	m-Nitrotoluene	1000.000	947.712	5.2	96	0.03	18.09-19.09
20	2-Amino-4,6-Dinitrotol	1000.000	956.426	4.4	98	0.09	18.53-19.53
21	PETN			NA			

***** Signal #2 *****

		Amount	Calc.	%Drift			
1	TNX	472.000	460.027	2.5	96	0.03	4.28- 5.28
2	HMX	1000.000	920.600	7.9	95	0.04	4.68- 5.68
3	DNX	1000.000	922.438	7.8	95	0.04	4.86- 5.86
4	MNX	1166.000	1092.398	6.3	96	0.05	5.95- 6.95
5	1,3,5-Trinitrobenzene	1000.000	948.506	5.1	96	0.03	6.98- 7.98
6	RDX	1000.000	983.550	1.6	100	0.04	7.21- 8.21
7	1,3-Dinitrobenzene	1000.000	1004.938	-0.5	96	0.03	9.17-10.17
8	Nitrobenzene	1000.000	988.041	1.2	94	0.02	10.11-11.11
9	2,4,6-Trinitrotoluene	1000.000	946.414	5.4	98	0.04	11.07-12.07

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3025-ECC3024
Lab FileID: GG622046.D

10		Nitroglycerin	1000.000	884.492	11.6	92	0.04	11.85-12.85
11		Tetryl	1000.000	915.646	8.4	92	0.07	12.32-13.32
12	S	3,4-Dinitrotoluene	1000.000	961.791	3.8	98	0.05	13.33-14.33
13		2,6-Dinitrotoluene	1000.000	965.236	3.5	97	0.05	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	997.601	0.2	98	0.06	14.31-15.31
15		3,5-Dinitroaniline	1000.000	949.142	5.1	98	0.07	14.99-15.99
16		o-Nitrotoluene	1000.000	926.922	7.3	94	0.03	15.86-16.86
17		p-Nitrotoluene	2000.000	2030.184	-1.5	97	0.07	16.77-17.77
18		4-Amino-2,6-Dinitrotol	2000.000	2030.184	-1.5	97	0.08	16.77-17.77
19		m-Nitrotoluene	1000.000	1021.712	-2.2	97	0.03	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	1056.694	-5.7	99	0.09	18.53-19.53
21		PETN	1000.000	997.962	0.2	98	0.06	20.90-21.90

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622005.D GGG3024_080821.M Fri Aug 13 10:07:51 2021

8.7.5

8

Initial Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2464-ICC2464
Lab FileID: PP391048.D

Response Factor Report G1315B

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Initial Calibration

Calibration Files
20 =PP391043.D 50 =PP391044.D 100 =PP391045.D 200 =PP391046.D
500 =PP391047.D 1000=PP391048.D 2500=PP391049.D 5000=PP391050.D

Compound	20	50	100	200	500	1000	2500	5000	Avg	%RSD
1) TNX	1.663	1.532	1.540	1.851	1.681	1.681	1.684	1.683	1.664 E3	5.97
2) HMX	1.767	1.492	1.587	1.600	1.554	1.519	1.511	1.507	1.567 E3	5.73
3) DNX	2.227	2.084	2.237	2.254	2.231	2.187	2.173	2.149	2.193 E3	2.59
4) MNX	2.714	2.652	2.556	2.668	2.590	2.557	2.538	2.506	2.598 E3	2.79
5) RDX	1.862	1.870	1.843	1.914	1.880	1.857	1.850	1.834	1.864 E3	1.35
6) 1,3,5-Trinit	4.023	3.963	3.988	4.131	4.061	4.026	4.017	3.983	4.024 E3	1.31
7) 1,3-Dinitrob	4.925	5.182	5.123	5.388	5.298	5.250	5.238	5.216	5.203 E3	2.63
8) 3,5-Dinitroa	3.898	3.990	3.924	4.105	4.026	3.989	3.975	3.951	3.982 E3	1.61
9) Nitrobenzene	3.045	3.030	2.977	3.070	3.077	3.027	3.024	3.078	3.041 E3	1.12
10) Nitroglyceri									0.000	-1.00
11) Tetryl	3.670	2.992	3.086	3.144	3.080	3.060	3.040	2.992	3.133 E3	7.11
12) 2,4,6-Trinit	4.298	3.534	3.759	3.829	3.745	3.714	3.697	3.674	3.781 E3	5.96
13) 2-Amino-4,6-	4.247	3.080	3.491	3.473	3.391	3.349	3.331	3.307	3.459 E3	9.91
14) 4-Amino-2,6-	3.927	2.196	2.679	2.621	2.507	2.468	2.450	2.428	2.659 E3	20.00
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 2434.19322 *A										
15) 3,4-Dinitrot	2.756		2.153	2.058	2.000	1.986	1.981	1.975	2.130 E3	13.30
16) 2,4-Dinitrot	5.119	4.565	4.751	4.822	4.730	4.687	4.681	4.665	4.753 E3	3.48
17) 2,6-Dinitrot	2.904	2.610	2.822	2.782	2.710	2.687	2.695	2.693	2.738 E3	3.38
18) o-Nitrotolue	2.814	2.329	2.223	2.245	2.193	2.150	2.150	2.185	2.286 E3	9.67
19) p-Nitrotolue	3.668	3.463	3.367	3.473	3.410	3.367	3.376	3.402	3.441 E3	2.92
20) m-Nitrotolue	3.264	3.241	3.129	3.284	3.211	3.179	3.183	3.231	3.215 E3	1.57
21) PETN									0.000	-1.00

Signal #2

1) TNX	3.176	2.432	2.653	2.772	2.745	2.749	2.691	2.659	2.735 E3	7.61
2) HMX	4.800	5.643	4.745	4.618	4.428	4.321	4.246	4.221	4.628 E3	10.07
3) DNX	5.264	4.271	3.702	3.668	3.544	3.480	3.435	3.393	3.845 E3	16.57
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 3405.46750 *A										
4) MNX	4.412	4.086	4.030	4.150	4.040	3.976	3.950	3.897	4.068 E3	3.93
5) RDX	3.100	2.967	2.979	3.068	3.027	2.996	2.984	2.953	3.009 E3	1.72
6) 1,3,5-Trinit	7.959	7.632	7.685	7.966	7.850	7.768	7.760	7.719	7.793 E3	1.58
7) 1,3-Dinitrob	3.570	4.080	3.818	3.780	3.727	3.656	3.641	3.613	3.736 E3	4.36
8) 3,5-Dinitroa	7.262	7.708	6.924	7.226	7.035	6.898	6.837	6.788	7.085 E3	4.31
9) Nitrobenzene	3.210	2.892	2.960	3.021	2.998	2.962	2.943	2.990	2.997 E3	3.15
10) Nitroglyceri	1.279	1.285	1.217	1.254	1.257	1.240	1.244	1.240	1.252 E3	1.77
11) Tetryl	4.799	4.748	4.767	4.909	4.852	4.824	4.828	4.785	4.814 E3	1.07
12) 2,4,6-Trinit	4.413	4.335	4.384	4.536	4.543	4.527	4.534	4.525	4.475 E3	1.86
13) 2-Amino-4,6-	4.887	4.818	4.925	5.063	5.098	5.094	5.119	5.121	5.016 E3	2.39
14) 4-Amino-2,6-	4.711	4.512	4.562	4.862	4.960	4.991	5.021	5.034	4.832 E3	4.35
15) 3,4-Dinitrot	2.710	2.945	3.024	3.345	3.426	3.470	3.506	3.562	3.249 E3	9.64
16) 2,4-Dinitrot	3.281	2.858	2.946	3.143	3.110	3.099	3.105	3.142	3.085 E3	4.19
17) 2,6-Dinitrot	2.859	3.088	3.319	3.544	3.497	3.501	3.516	3.527	3.356 E3	7.56

8.7.6

8

Initial Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA
Sample: GPP2464-ICC2464
Lab FileID: PP391048.D

```
18) o-Nitrotolue 2.695 2.949 2.867 2.974 2.987 2.921 2.977 3.047 2.927 E3   3.66
19) p-Nitrotolue 1.460 1.647 2.058 2.340 2.604 2.667 2.808 2.838 2.303 E3  23.02
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 2823.90503 *A

20) m-Nitrotolue 3.857 3.205 3.678 3.695 3.703 3.744 3.788 3.856 3.691 E3   5.64
21) PETN         1.134 1.057 1.138 1.335 1.416 1.385 1.391 1.365 1.278 E3  11.19
-------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          GPP2464_080321PRI.M        Thu Aug 05 10:36:24 2021
```

8.7.6

8

Initial Calibration Verification

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2464-ICV2464
Lab FileID: PP391051.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	462.250	2.1	97	0.00	1.01- 1.61
2	HMX	1000.000	963.905	3.6	99	0.00	1.14- 1.74
3	DNX	1000.000	990.651	0.9	99	0.00	1.38- 1.98
4	MNX	1166.000	1128.163	3.2	98	0.00	1.97- 2.57
5	RDX	1000.000	983.394	1.7	99	0.00	2.48- 3.28
6	1,3,5-Trinitrobenzene	1000.000	990.896	0.9	99	0.00	4.25- 5.05
7	1,3-Dinitrobenzene	1000.000	993.219	0.7	98	0.00	5.46- 6.26
8	3,5-Dinitroaniline	1000.000	981.572	1.8	98	0.00	5.82- 6.62
9	Nitrobenzene	1000.000	993.036	0.7	100	0.00	7.06- 7.86
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	970.430	3.0	99	0.02	9.10- 9.90
12	2,4,6-Trinitrotoluene	1000.000	967.521	3.2	98	0.02	9.48-10.28
13	2-Amino-4,6-Dinitrotol	1000.000	973.899	2.6	101	0.02	9.87-10.67
	----------	Amount	Calc.	%Drift	----------		
14	4-Amino-2,6-Dinitrotol	1000.000	1010.203	-1.0	100	0.02	10.40-11.20
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene		----------NA----------				
16	2,4-Dinitrotoluene	1000.000	971.884	2.8	99	0.02	11.48-12.28
17	2,6-Dinitrotoluene	1000.000	976.574	2.3	99	0.02	11.87-12.77
18	o-Nitrotoluene	1000.000	954.737	4.5	102	0.01	14.98-15.98
19	p-Nitrotoluene	1000.000	998.951	0.1	102	0.01	15.54-16.54
20	m-Nitrotoluene	1000.000	993.230	0.7	100	0.01	16.36-17.36
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	472.000	456.694	3.2	96	0.00	1.01- 1.61
2	HMX	1000.000	925.187	7.5	99	0.00	1.14- 1.74
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	1019.742	-2.0	100	0.00	1.38- 1.98
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1166.000	1130.153	3.1	99	0.00	1.97- 2.57
5	RDX	1000.000	984.323	1.6	99	0.00	2.48- 3.28
6	1,3,5-Trinitrobenzene	1000.000	985.463	1.5	99	0.00	4.25- 5.05
7	1,3-Dinitrobenzene	1000.000	965.007	3.5	99	0.00	5.46- 6.26
8	3,5-Dinitroaniline	1000.000	962.122	3.8	99	0.00	5.82- 6.62
9	Nitrobenzene	1000.000	982.610	1.7	99	0.00	7.06- 7.86

8.7.7

Initial Calibration Verification

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2464-ICV2464
Lab FileID: PP391051.D

10		Nitroglycerin	1000.000	912.128	8.8	92	0.02	8.47- 9.47
11		Tetryl	1000.000	1004.267	-0.4	100	0.02	9.10- 9.90
12		2,4,6-Trinitrotoluene	1000.000	1008.390	-0.8	100	0.02	9.48-10.28
13		2-Amino-4,6-Dinitrotol	1000.000	1037.443	-3.7	102	0.02	9.87-10.67
14		4-Amino-2,6-Dinitrotol	1000.000	1048.781	-4.9	102	0.02	10.40-11.20
15	S	3,4-Dinitrotoluene	----------NA----------					
16		2,4-Dinitrotoluene	1000.000	1002.279	-0.2	100	0.02	10.68-12.28
17		2,6-Dinitrotoluene	1000.000	1046.141	-4.6	100	0.02	11.04-12.77
18		o-Nitrotoluene	1000.000	1006.331	-0.6	101	0.01	13.17-15.98
		---------- Amount	Calc.	%Drift	----------			
19		p-Nitrotoluene	1000.000	964.772	3.5	102	0.01	13.50-16.54
		---------- Amount	Calc.	%Drift	----------			
20		m-Nitrotoluene	1000.000	1044.659	-4.5	103	0.01	16.36-17.36
21		PETN	1000.000	1046.344	-4.6	97	0.02	14.91-19.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:36:12 2021

8.7.7

8

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2467-CC2464
Lab FileID: PP391140.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	453.840	3.8	95	0.00	1.01- 1.61
2	HMX	1000.000	952.551	4.7	98	0.00	1.14- 1.74
3	DNX	1000.000	972.378	2.8	97	0.00	1.39- 1.99
4	MNX	1166.000	1134.663	2.7	99	-0.02	1.98- 2.58
5	RDX	1000.000	965.075	3.5	97	-0.02	2.50- 3.30
6	1,3,5-Trinitrobenzene	1000.000	970.188	3.0	97	-0.02	4.28- 5.08
7	1,3-Dinitrobenzene	1000.000	974.022	2.6	97	-0.03	5.48- 6.28
8	3,5-Dinitroaniline	1000.000	980.547	1.9	98	-0.06	5.85- 6.65
9	Nitrobenzene	1000.000	1000.657	-0.1	101	-0.05	7.09- 7.89
10	Nitroglycerin	----------	NA	----------			
11	Tetryl	1000.000	894.687	10.5	92	-0.09	9.19- 9.99
12	2,4,6-Trinitrotoluene	1000.000	937.855	6.2	95	-0.07	9.56-10.36
13	2-Amino-4,6-Dinitrotol	1000.000	976.788	2.3	101	-0.13	9.96-10.76
	----------	Amount	Calc.	%Drift	----------		
14	4-Amino-2,6-Dinitrotol	1000.000	980.064	2.0	97	-0.14	10.49-11.29
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene	1000.000	988.886	1.1	106	-0.10	10.93-11.73
16	2,4-Dinitrotoluene	1000.000	947.684	5.2	96	-0.10	11.57-12.37
17	2,6-Dinitrotoluene	1000.000	980.169	2.0	100	-0.11	11.95-12.85
18	o-Nitrotoluene	1000.000	932.734	6.7	99	-0.10	15.04-16.04
19	p-Nitrotoluene	1000.000	979.226	2.1	100	-0.09	15.60-16.60
20	m-Nitrotoluene	1000.000	989.143	1.1	100	-0.07	16.41-17.41
21	PETN	----------	NA	----------			
*****	Signal #2 *****						
1	TNX	472.000	441.943	6.4	93	0.00	1.01- 1.61
2	HMX	1000.000	907.701	9.2	97	0.00	1.14- 1.74
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	997.070	0.3	98	0.00	1.39- 1.99
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1166.000	1126.099	3.4	99	-0.02	1.98- 2.58
5	RDX	1000.000	960.504	3.9	96	-0.02	2.50- 3.30
6	1,3,5-Trinitrobenzene	1000.000	973.947	2.6	98	-0.02	4.28- 5.08
7	1,3-Dinitrobenzene	1000.000	939.691	6.0	96	-0.03	5.48- 6.28
8	3,5-Dinitroaniline	1000.000	948.520	5.1	97	-0.06	5.85- 6.65
9	Nitrobenzene	1000.000	986.897	1.3	100	-0.05	7.09- 7.89

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2467-CC2464
Lab FileID: PP391140.D

10		Nitroglycerin	1000.000	924.390	7.6	93	-0.05	8.57- 9.57
11		Tetryl	1000.000	939.411	6.1	94	-0.09	9.19- 9.99
12		2,4,6-Trinitrotoluene	1000.000	952.876	4.7	94	-0.07	9.56-10.36
13		2-Amino-4,6-Dinitrotol	1000.000	1000.743	-0.1	99	-0.13	9.96-10.76
14		4-Amino-2,6-Dinitrotol	1000.000	969.243	3.1	94	-0.14	10.49-11.29
15	S	3,4-Dinitrotoluene	1000.000	1102.246	-10.2	103	-0.10	10.93-11.73
16		2,4-Dinitrotoluene	1000.000	917.106	8.3	91	-0.10	10.77-12.37
17		2,6-Dinitrotoluene	1000.000	1013.021	-1.3	97	-0.10	11.13-12.85
18		o-Nitrotoluene	1000.000	982.267	1.8	98	-0.11	13.23-16.04
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	896.979	10.3	95	-0.09	13.56-16.60
			Amount	Calc.	%Drift			
20		m-Nitrotoluene	1000.000	994.999	0.5	98	-0.07	16.41-17.41
21		PETN	1000.000	1077.325	-7.7	99	0.00	15.00-19.12

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP391048.D GPP2464_080321PRI.M Thu Aug 12 10:52:21 2021

8.7.8

8

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2467-CC2464
Lab FileID: PP391152.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	456.549	3.3	96	0.00	1.01- 1.61
2	HMX	1000.000	949.089	5.1	98	0.00	1.14- 1.74
3	DNX	1000.000	966.653	3.3	97	0.00	1.39- 1.99
4	MNX	1166.000	1130.346	3.1	98	0.00	1.98- 2.58
5	RDX	1000.000	961.564	3.8	96	-0.01	2.50- 3.30
6	1,3,5-Trinitrobenzene	1000.000	963.610	3.6	96	0.00	4.28- 5.08
7	1,3-Dinitrobenzene	1000.000	968.022	3.2	96	-0.01	5.48- 6.28
8	3,5-Dinitroaniline	1000.000	970.548	2.9	97	-0.04	5.85- 6.65
9	Nitrobenzene	1000.000	984.725	1.5	99	-0.02	7.09- 7.89
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	888.379	11.2	91	-0.04	9.19- 9.99
12	2,4,6-Trinitrotoluene	1000.000	933.036	6.7	95	-0.03	9.56-10.36
13	2-Amino-4,6-Dinitrotol	1000.000	966.115	3.4	100	-0.09	9.96-10.76
	----------	Amount	Calc.	%Drift	----------		
14	4-Amino-2,6-Dinitrotol	1000.000	974.702	2.5	96	-0.09	10.49-11.29
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene	1000.000	980.205	2.0	105	-0.05	10.93-11.73
16	2,4-Dinitrotoluene	1000.000	944.462	5.6	96	-0.05	11.57-12.37
17	2,6-Dinitrotoluene	1000.000	976.644	2.3	100	-0.06	11.95-12.85
18	o-Nitrotoluene	1000.000	924.172	7.6	98	-0.05	15.04-16.04
19	p-Nitrotoluene	1000.000	972.896	2.7	99	-0.04	15.60-16.60
20	m-Nitrotoluene	1000.000	979.208	2.1	99	-0.03	16.41-17.41
21	PETN	----------	----------	NA	----------		
*****	Signal #2 *****						
1	TNX	472.000	443.102	6.1	93	0.00	1.01- 1.61
2	HMX	1000.000	901.274	9.9	97	0.00	1.14- 1.74
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	989.915	1.0	97	0.00	1.39- 1.99
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1166.000	1120.749	3.9	98	0.00	1.98- 2.58
5	RDX	1000.000	956.066	4.4	96	-0.01	2.50- 3.30
6	1,3,5-Trinitrobenzene	1000.000	965.257	3.5	97	0.00	4.28- 5.08
7	1,3-Dinitrobenzene	1000.000	932.451	6.8	95	-0.01	5.48- 6.28
8	3,5-Dinitroaniline	1000.000	941.384	5.9	97	-0.04	5.85- 6.65
9	Nitrobenzene	1000.000	975.045	2.5	99	-0.02	7.09- 7.89

8.7.9

8

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2467-CC2464
Lab FileID: PP391152.D

10		Nitroglycerin	1000.000	879.097	12.1	89	0.00	8.57- 9.57
11		Tetryl	1000.000	924.480	7.6	92	-0.04	9.19- 9.99
12		2,4,6-Trinitrotoluene	1000.000	940.598	5.9	93	-0.03	9.56-10.36
13		2-Amino-4,6-Dinitrotol	1000.000	985.099	1.5	97	-0.09	9.96-10.76
14		4-Amino-2,6-Dinitrotol	1000.000	953.804	4.6	92	-0.09	10.49-11.29
15	S	3,4-Dinitrotoluene	1000.000	1076.929	-7.7	101	-0.05	10.93-11.73
16		2,4-Dinitrotoluene	1000.000	908.022	9.2	90	-0.05	10.77-12.37
17		2,6-Dinitrotoluene	1000.000	1004.355	-0.4	96	-0.05	11.13-12.85
18		o-Nitrotoluene	1000.000	967.243	3.3	97	-0.05	13.23-16.04
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	928.651	7.1	98	-0.05	13.56-16.60
			Amount	Calc.	%Drift			
20		m-Nitrotoluene	1000.000	973.012	2.7	96	-0.03	16.41-17.41
21		PETN	1000.000	1022.304	-2.2	94	0.02	15.00-19.12

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP391048.D GPP2464_080321PRI.M Thu Aug 12 10:52:22 2021

8.7.9

8

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2467-ECC2464
Lab FileID: PP391163.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	441.764	6.4	93	0.00	1.01- 1.61
2	HMX	1000.000	917.634	8.2	95	0.00	1.14- 1.74
3	DNX	1000.000	924.488	7.6	93	0.00	1.39- 1.99
4	MNX	1166.000	1117.746	4.1	97	-0.01	1.98- 2.58
5	RDX	1000.000	950.206	5.0	95	-0.02	2.50- 3.30
6	1,3,5-Trinitrobenzene	1000.000	955.646	4.4	96	-0.01	4.28- 5.08
7	1,3-Dinitrobenzene	1000.000	963.203	3.7	95	-0.02	5.48- 6.28
8	3,5-Dinitroaniline	1000.000	964.611	3.5	96	-0.05	5.85- 6.65
9	Nitrobenzene	1000.000	966.772	3.3	97	-0.03	7.09- 7.89
10	Nitroglycerin	----------	NA	----------			
11	Tetryl	1000.000	875.738	12.4	90	-0.06	9.19- 9.99
12	2,4,6-Trinitrotoluene	1000.000	922.564	7.7	94	-0.04	9.56-10.36
13	2-Amino-4,6-Dinitrotol	1000.000	956.636	4.3	99	-0.11	9.96-10.76
	----------	Amount	Calc.	%Drift			----------
14	4-Amino-2,6-Dinitrotol	1000.000	964.416	3.6	95	-0.11	10.49-11.29
	----------	Amount	Calc.	%Drift			----------
15 S	3,4-Dinitrotoluene	1000.000	968.988	3.1	104	-0.07	10.93-11.73
16	2,4-Dinitrotoluene	1000.000	936.811	6.3	95	-0.07	11.57-12.37
17	2,6-Dinitrotoluene	1000.000	974.314	2.6	99	-0.08	11.95-12.85
18	o-Nitrotoluene	1000.000	892.260	10.8	95	-0.07	15.04-16.04
19	p-Nitrotoluene	1000.000	947.657	5.2	97	-0.06	15.60-16.60
20	m-Nitrotoluene	1000.000	954.187	4.6	97	-0.05	16.41-17.41
21	PETN	----------	NA	----------			
*****	Signal #2 *****						
1	TNX	472.000	434.190	8.0	92	0.00	1.01- 1.61
2	HMX	1000.000	877.774	12.2	94	0.00	1.14- 1.74
	----------	Amount	Calc.	%Drift			----------
3	DNX	1000.000	947.925	5.2	93	0.00	1.39- 1.99
	----------	Amount	Calc.	%Drift			----------
4	MNX	1166.000	1105.472	5.2	97	-0.01	1.98- 2.58
5	RDX	1000.000	945.179	5.5	95	-0.02	2.50- 3.30
6	1,3,5-Trinitrobenzene	1000.000	957.682	4.2	96	-0.01	4.28- 5.08
7	1,3-Dinitrobenzene	1000.000	932.579	6.7	95	-0.02	5.48- 6.28
8	3,5-Dinitroaniline	1000.000	934.593	6.5	96	-0.05	5.85- 6.65
9	Nitrobenzene	1000.000	954.326	4.6	97	-0.03	7.09- 7.89

Continuing Calibration Summary

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2467-ECC2464
Lab FileID: PP391163.D

10		Nitroglycerin	1000.000	898.076	10.2	91	-0.02	8.57- 9.57
11		Tetryl	1000.000	916.410	8.4	91	-0.06	9.19- 9.99
12		2,4,6-Trinitrotoluene	1000.000	932.884	6.7	92	-0.04	9.56-10.36
13		2-Amino-4,6-Dinitrotol	1000.000	978.718	2.1	96	-0.11	9.96-10.76
14		4-Amino-2,6-Dinitrotol	1000.000	944.862	5.5	91	-0.11	10.49-11.29
15	S	3,4-Dinitrotoluene	1000.000	1068.790	-6.9	100	-0.07	10.93-11.73
16		2,4-Dinitrotoluene	1000.000	897.653	10.2	89	-0.07	10.77-12.37
17		2,6-Dinitrotoluene	1000.000	1001.925	-0.2	96	-0.07	11.13-12.85
18		o-Nitrotoluene	1000.000	935.652	6.4	94	-0.07	13.23-16.04
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	897.767	10.2	95	-0.07	13.56-16.60
			Amount	Calc.	%Drift			
20		m-Nitrotoluene	1000.000	984.937	1.5	97	-0.05	16.41-17.41
21		PETN	1000.000	1007.254	-0.7	93	0.02	15.00-19.12

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP391048.D GPP2464_080321PRI.M Thu Aug 12 10:52:23 2021

8.7.10

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Run Sequence Report

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG3024	**Method:** SW846 8330B	**Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG3024-IC3024	GG622000.D	08/08/21 17:34	n/a	Initial cal 20
GGG3024-IC3024	GG622001.D	08/08/21 18:05	n/a	Initial cal 50
GGG3024-IC3024	GG622002.D	08/08/21 18:37	n/a	Initial cal 100
GGG3024-IC3024	GG622003.D	08/08/21 19:08	n/a	Initial cal 200
GGG3024-IC3024	GG622004.D	08/08/21 19:40	n/a	Initial cal 500
GGG3024-ICC3024	GG622005.D	08/08/21 20:11	n/a	Initial cal 1000
GGG3024-IC3024	GG622006.D	08/08/21 20:43	n/a	Initial cal 2500
GGG3024-IC3024	GG622007.D	08/08/21 21:14	n/a	Initial cal 5000
GGG3024-ICV3024	GG622008.D	08/08/21 21:45	n/a	Initial cal verification 1000

Run Sequence Report

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG3025	**Method:** SW846 8330B	**Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG3025-CC3024	GG622028.D	08/12/21 17:08	n/a	Continuing cal 1000
OP86682-MB	GG622030.D	08/12/21 18:11	OP86682	Method Blank
ZZZZZZ	GG622031.D	08/12/21 18:42	OP86682	(unrelated sample)
OP86727-MB	GG622032.D	08/12/21 19:14	OP86727	Method Blank
FA87620-1	GG622039.D	08/12/21 22:54	OP86727	54MW12
GGG3025-CC3024	GG622040.D	08/12/21 23:25	n/a	Continuing cal 1000
FA87620-2	GG622042.D	08/13/21 00:28	OP86727	54MW1
ZZZZZZ	GG622043.D	08/13/21 00:59	OP86727	(unrelated sample)
ZZZZZZ	GG622044.D	08/13/21 01:31	OP86727	(unrelated sample)
ZZZZZZ	GG622045.D	08/13/21 02:02	OP86727	(unrelated sample)
GGG3025-ECC3024	GG622046.D	08/13/21 02:33	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GPP2464	**Method:** SW846 8330B	**Instrument ID:** GCPP

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GPP2464-IC2464	PP391043.D	08/03/21 11:45	n/a	Initial cal 20
GPP2464-IC2464	PP391044.D	08/03/21 12:16	n/a	Initial cal 50
GPP2464-IC2464	PP391045.D	08/03/21 12:47	n/a	Initial cal 100
GPP2464-IC2464	PP391046.D	08/03/21 13:18	n/a	Initial cal 200
GPP2464-IC2464	PP391047.D	08/03/21 13:49	n/a	Initial cal 500
GPP2464-ICC2464	PP391048.D	08/03/21 14:20	n/a	Initial cal 1000
GPP2464-IC2464	PP391049.D	08/03/21 14:51	n/a	Initial cal 2500
GPP2464-IC2464	PP391050.D	08/03/21 15:22	n/a	Initial cal 5000
GPP2464-ICV2464	PP391051.D	08/03/21 15:54	n/a	Initial cal verification 1000

Run Sequence Report

Job Number: FA87620
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GPP2467 **Method:** SW846 8330B **Instrument ID:** GCPP

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GPP2467-CC2464	PP391140.D	08/09/21 13:54	n/a	Continuing cal 1000
OP86727-MB	PP391142.D	08/09/21 14:56	OP86727	Method Blank
OP86727-BS	PP391143.D	08/09/21 15:27	OP86727	Blank Spike
FA87760-1	PP391144.D	08/09/21 15:58	OP86727	(used for QC only; not part of job FA87620)
ZZZZZZ	PP391145.D	08/09/21 16:29	OP86727	(unrelated sample)
ZZZZZZ	PP391146.D	08/09/21 17:00	OP86727	(unrelated sample)
ZZZZZZ	PP391147.D	08/09/21 17:31	OP86727	(unrelated sample)
ZZZZZZ	PP391148.D	08/09/21 18:02	OP86727	(unrelated sample)
ZZZZZZ	PP391149.D	08/09/21 18:33	OP86727	(unrelated sample)
FA87620-1	PP391150.D	08/09/21 19:04	OP86727	54MW12
FA87620-2	PP391151.D	08/09/21 19:35	OP86727	54MW1
GPP2467-CC2464	PP391152.D	08/09/21 20:06	n/a	Continuing cal 1000
ZZZZZZ	PP391154.D	08/09/21 21:08	OP86727	(unrelated sample)
ZZZZZZ	PP391155.D	08/09/21 21:38	OP86727	(unrelated sample)
ZZZZZZ	PP391156.D	08/09/21 22:09	OP86727	(unrelated sample)
OP86727-MS	PP391157.D	08/09/21 22:40	OP86727	Matrix Spike
OP86727-MSD	PP391158.D	08/09/21 23:12	OP86727	Matrix Spike Duplicate
OP86727-MS2	PP391159.D	08/09/21 23:43	OP86727	Matrix Spike
OP86727-MSD2	PP391160.D	08/10/21 00:14	OP86727	Matrix Spike Duplicate
OP86682-DUP	PP391161.D	08/10/21 00:45	OP86682	Duplicate
OP86682-DUP2	PP391162.D	08/10/21 01:16	OP86682	Duplicate
GPP2467-ECC2464	PP391163.D	08/10/21 01:47	n/a	Ending cal 1000

GC/LC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:23

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1A.ch
Acq On : 09-Aug-2021, 19:04:05 Operator: jamesb
Sample : FA87620-1 Inst : G1315B
Misc : op86727,GPP2467,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:32 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.26	11.26	995909	1716547	467.590	528.392
	Spiked Amount 500.000	Range 70 - 136		Recovery =		93.52%	105.68%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.44	1.44	1620599	4527022	1034.221m	978.259m
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	2.23	2.23	1469734	1807362	565.805	444.324
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	4.67	4.67	4523819	8964210	1124.191	1150.353
7)	1,3-Dinitrobenze	5.86	5.88	46006	67481	8.843m	18.064m#
8)	3,5-Dinitroanili	6.21	6.21	87886	193922	22.069	27.372
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	9.92	9.92	4012108	4857271	1061.081	1085.499
13)	2-Amino-4,6-Dini	10.25	10.25	1213152	1826585	350.748	364.186
14)	4-Amino-2,6-Dini	10.78	10.78	540881	992079	222.201	205.334
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D. d	N.D.

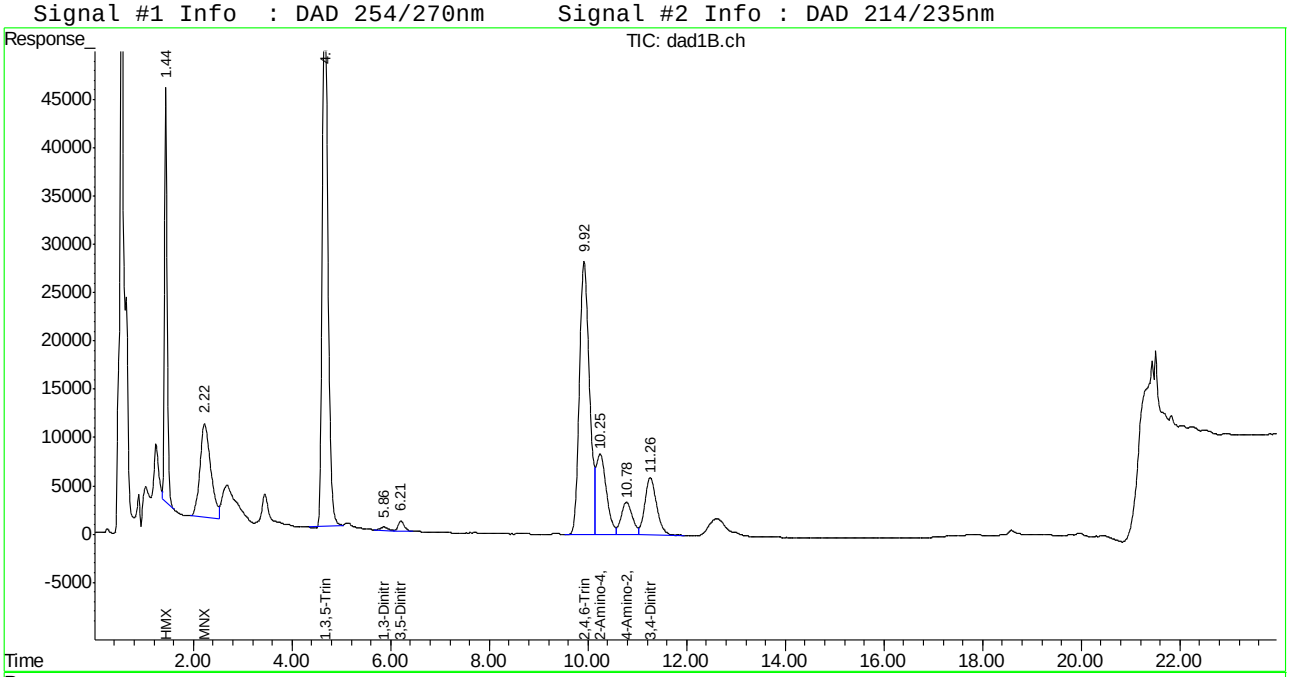
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391150.D GPP2464_080321PRI.M Thu Aug 12 15:29:47 2021 Page 1

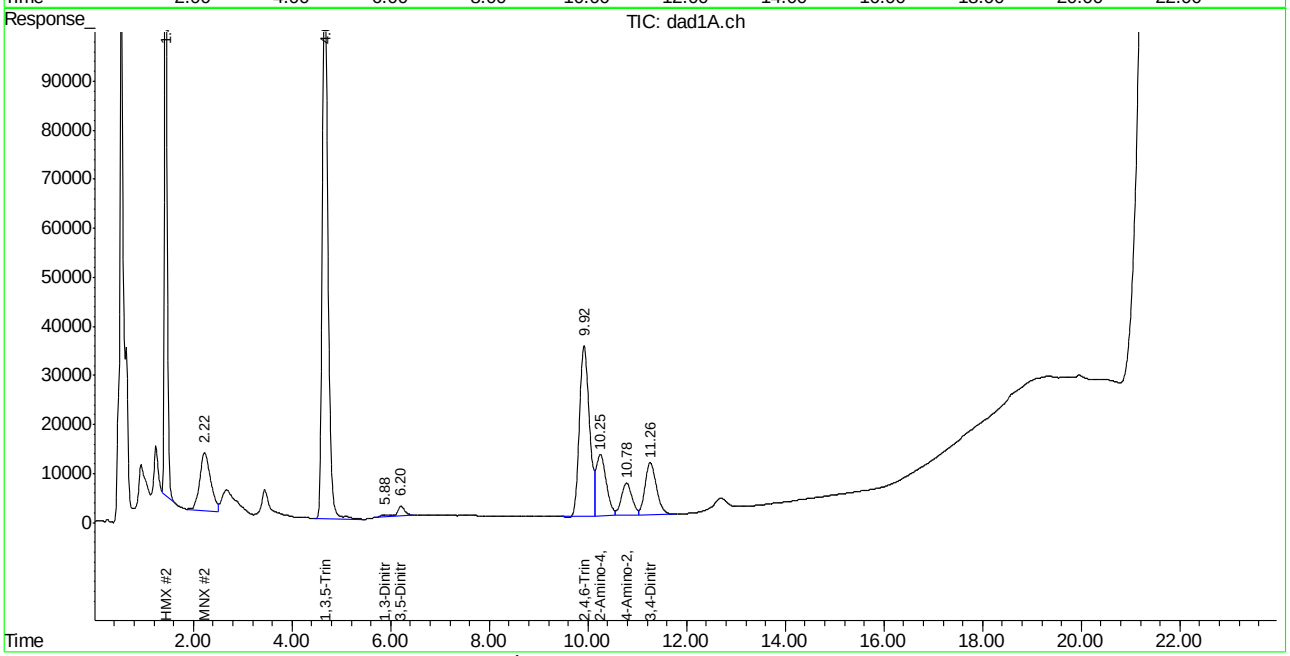
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1A.ch
Acq On : 09-Aug-2021, 19:04:05 Operator: jamesb
Sample : FA87620-1 Inst : G1315B
Misc : op86727,GPP2467,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 15:08 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

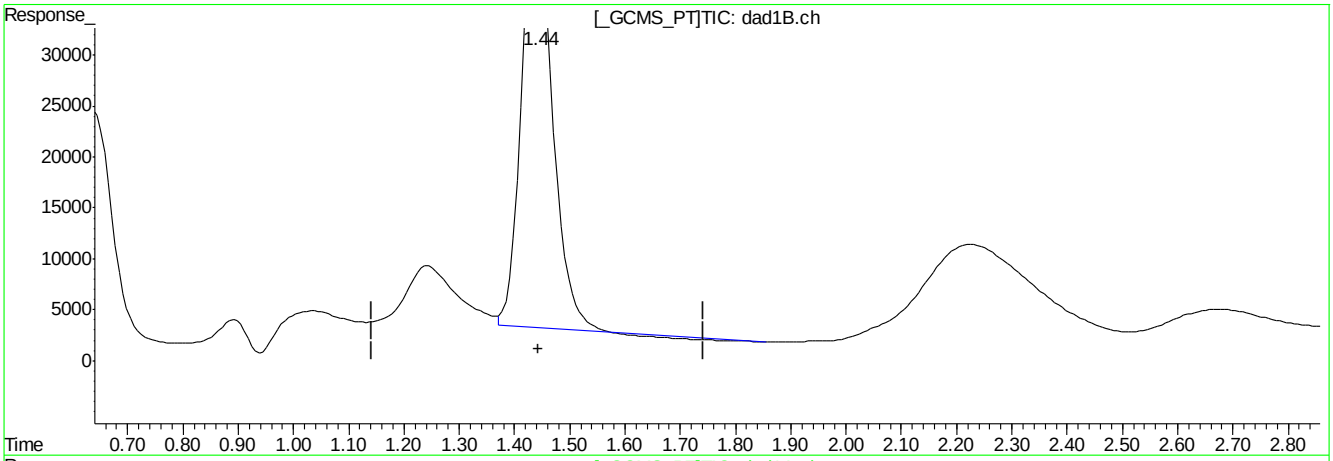
Sample Number: FA87620-1
Lab FileID: PP391150.D
Injection Time: 08/09/21 19:04
Method: SW846 8330B
Analyst approved: 08/12/21 15:32 James Boone
Supervisor approved: 08/13/21 17:23 Naresh Jiawan

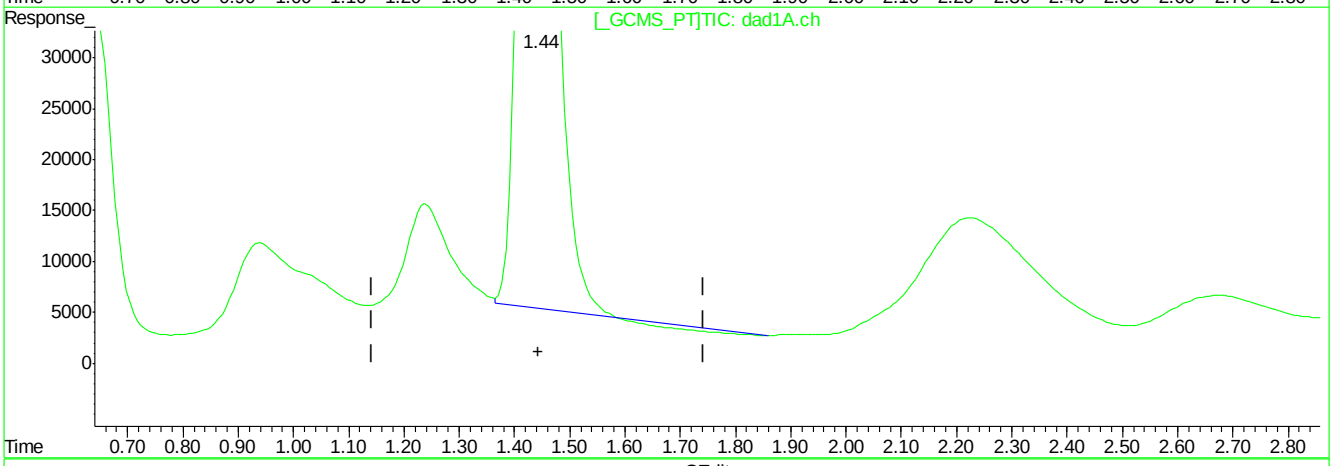
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.44	Poor instrument integration
HMX	2691-41-0	2	1.44	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	5.86	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.88	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1A.ch
Acq On : 09-Aug-2021, 19:04:05 Operator: jamesb
Sample : FA87620-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.44min 1022.099ppb

response 1601603

(2) HMX #2

1.44min 967.991ppb

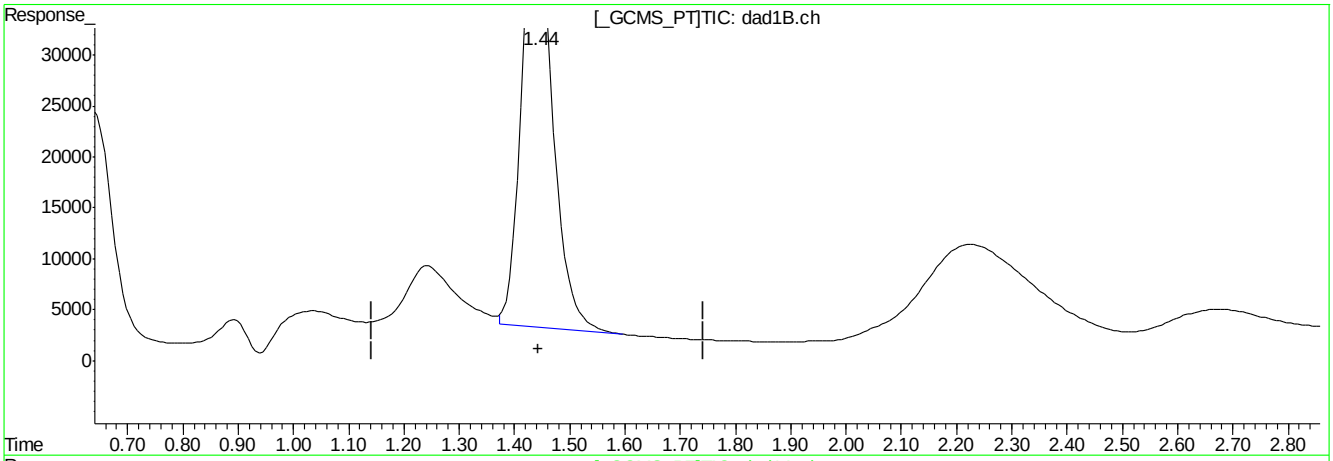
response 4479503

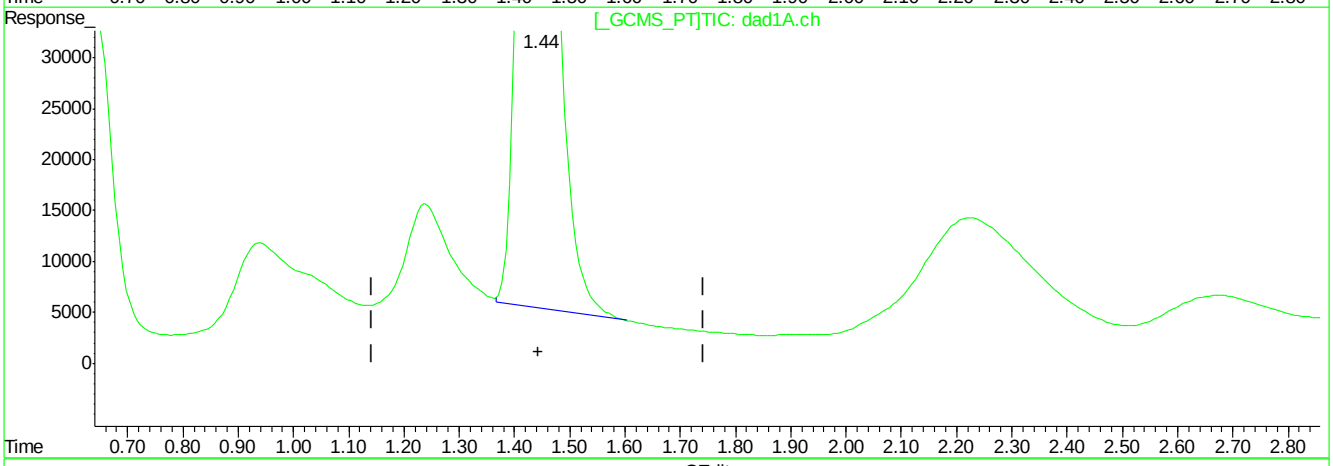
(+) = Expected Retention Time
PP391150.D GPP2464_080321PRI.M Thu Aug 12 15:06:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1A.ch
Acq On : 09-Aug-2021, 19:04:05 Operator: jamesb
Sample : FA87620-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.44min 1034.221ppb m

response 1620599

(2) HMX #2

1.44min 978.259ppb m

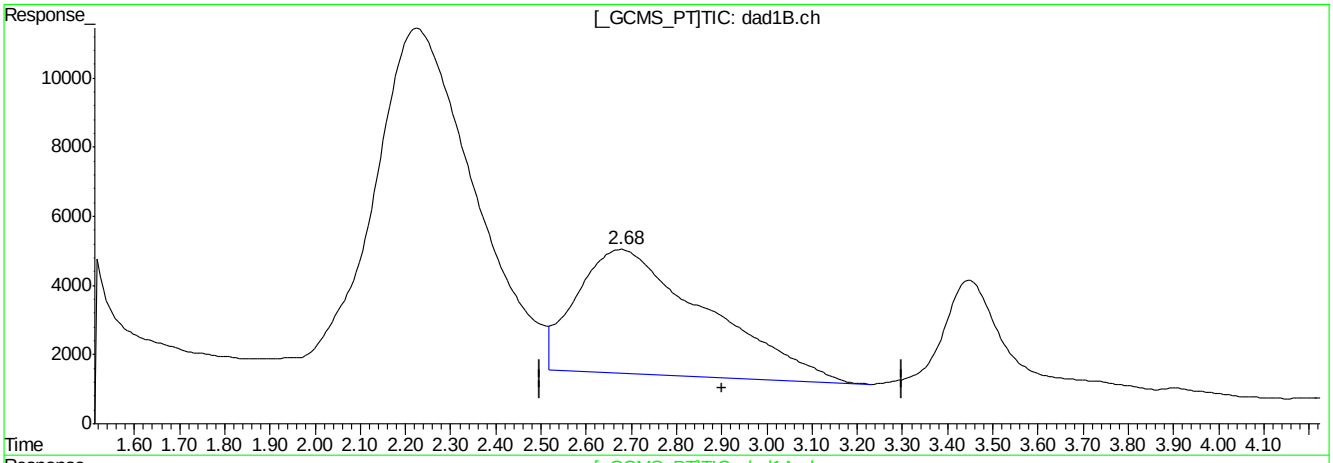
response 4527022

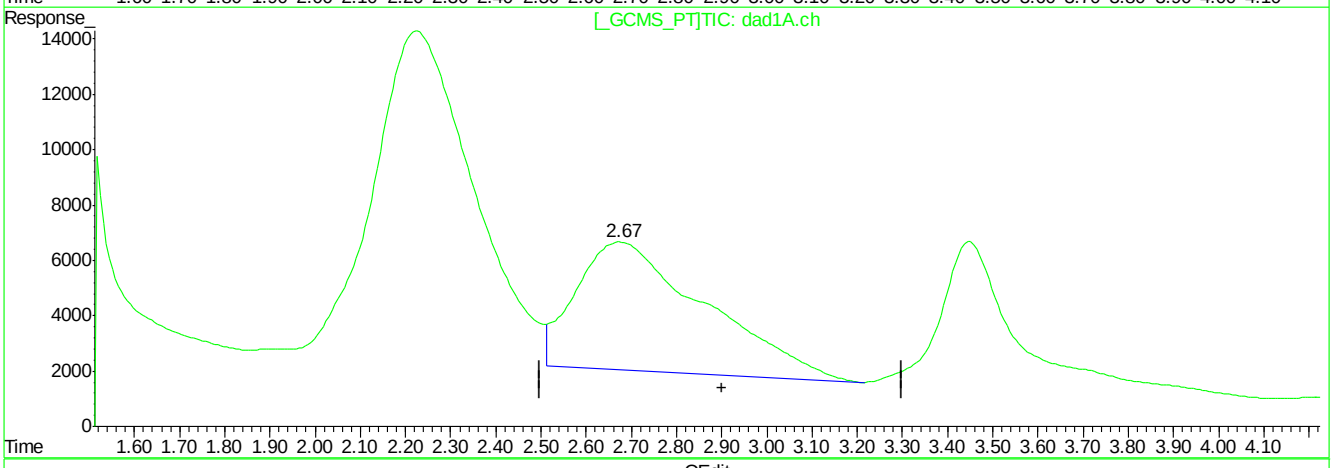
(+) = Expected Retention Time
PP391150.D GPP2464_080321PRI.M Thu Aug 12 15:07:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1A.ch
Acq On : 09-Aug-2021, 19:04:05 Operator: jamesb
Sample : FA87620-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.68min 390.776ppb

response 728299

(5) RDX #2

2.68min 308.002ppb

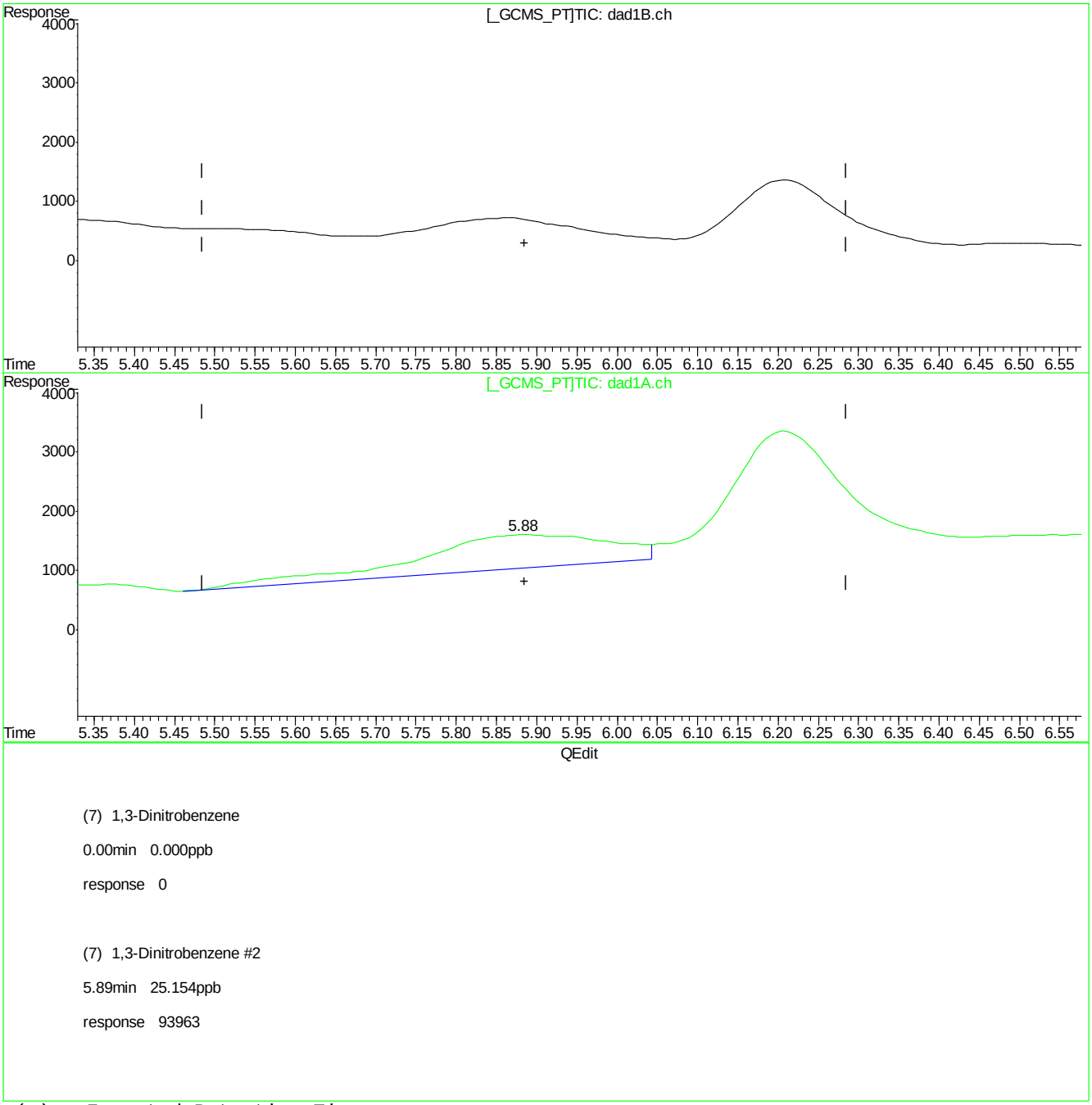
response 926898

(+) = Expected Retention Time
PP391150.D GPP2464_080321PRI.M Thu Aug 12 15:07:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1A.ch
Acq On : 09-Aug-2021, 19:04:05 Operator: jamesb
Sample : FA87620-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

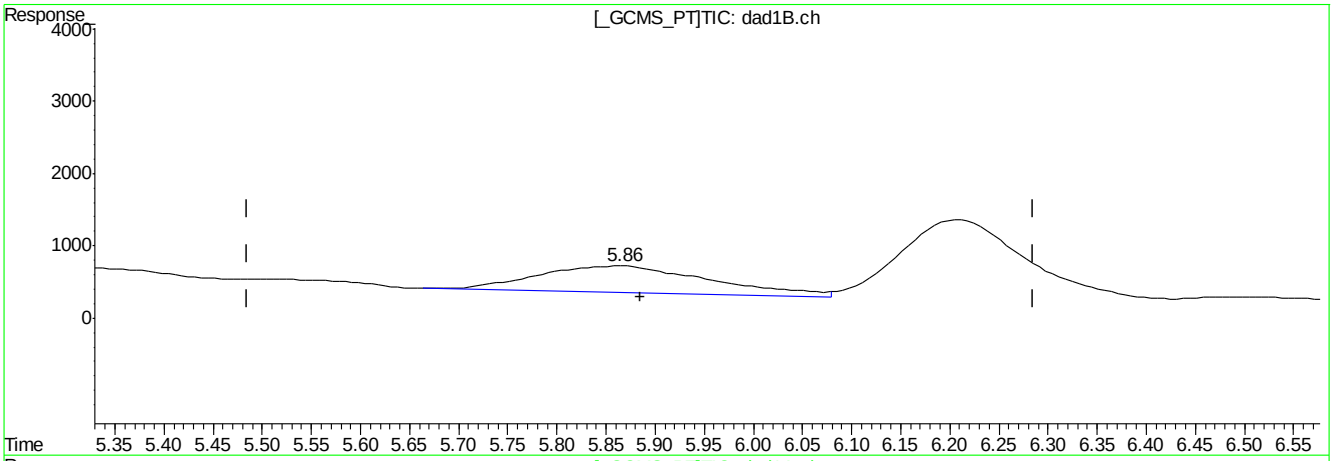


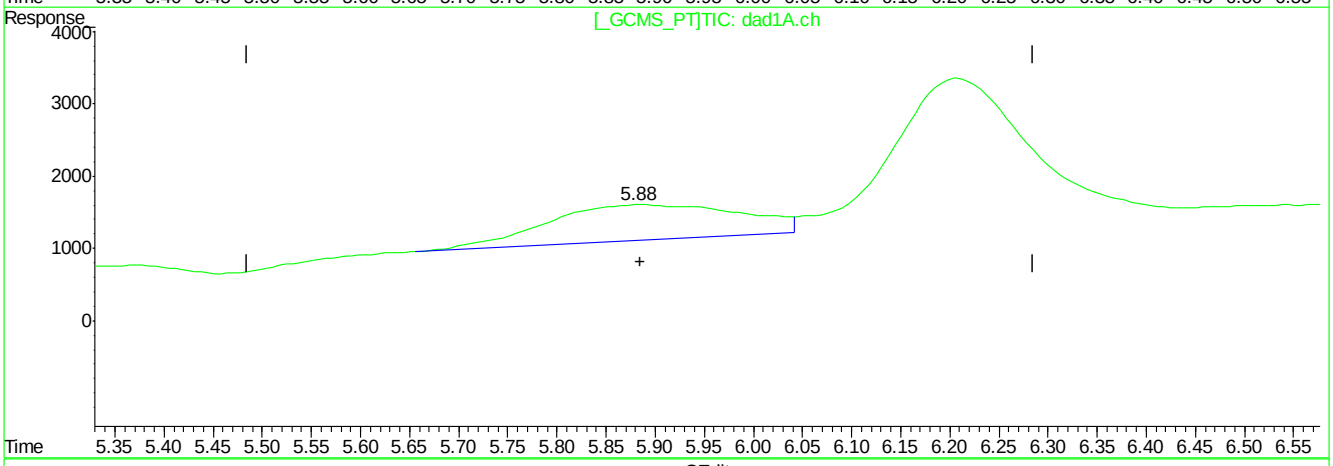
(+) = Expected Retention Time
PP391150.D GPP2464_080321PRI.M Thu Aug 12 15:07:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391150.D\dad1A.ch
Acq On : 09-Aug-2021, 19:04:05 Operator: jamesb
Sample : FA87620-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.86min 8.843ppb m

response 46006

(7) 1,3-Dinitrobenzene #2

5.88min 18.064ppb m

response 67481

(+) = Expected Retention Time
PP391150.D GPP2464_080321PRI.M Thu Aug 12 15:07:52 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 08/13/21 17:23

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1A.ch
Acq On : 12-Aug-2021, 22:54:01 Operator: jamesb
Sample : FA87620-1cf Inst : G1315B
Misc : op86727,GGG3025,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:45 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.91	13.90	2480014	4759966	496.822	488.346m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		99.36%	97.67%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	5.22	5.22	3884587	3884587	1192.232	1192.232
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	6.39	6.39	451311	451311	74.386	74.386
5)	1,3,5-Trinitrobe	7.51	7.51	10658495	10658495	1152.740	1152.740
6)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	9.71	9.77	32989	8294	2.700m	0.915m#
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.64	11.64	9587562	15583234	1114.387	1330.666
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.60	15.60	795644	1420029	85.172	92.373
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	17.34	17.34	1411436	2459561	277.673	281.912m
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.19	19.19	2927853	4244524	356.060	395.601m
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

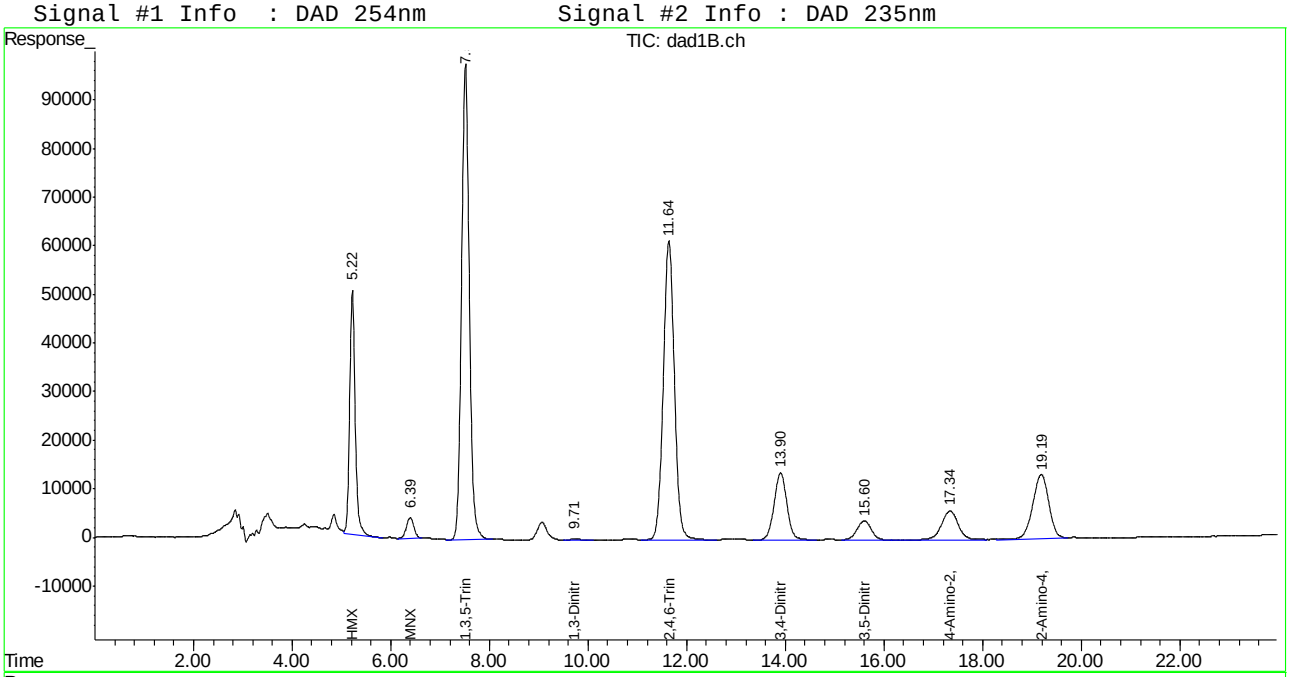
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622039.D GGG3024_080821.M Fri Aug 13 10:49:16 2021 Page 1

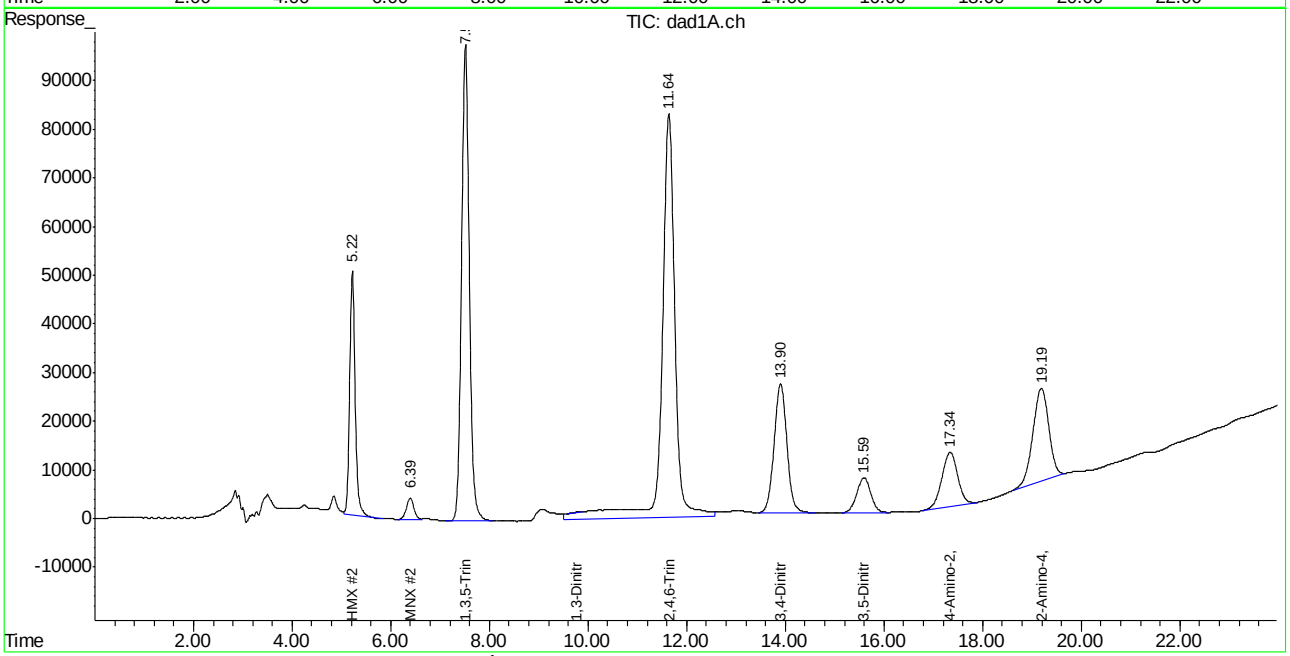
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1A.ch
Acq On : 12-Aug-2021, 22:54:01 Operator: jamesb
Sample : FA87620-1cf Inst : G1315B
Misc : op86727,GGG3025,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:34 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

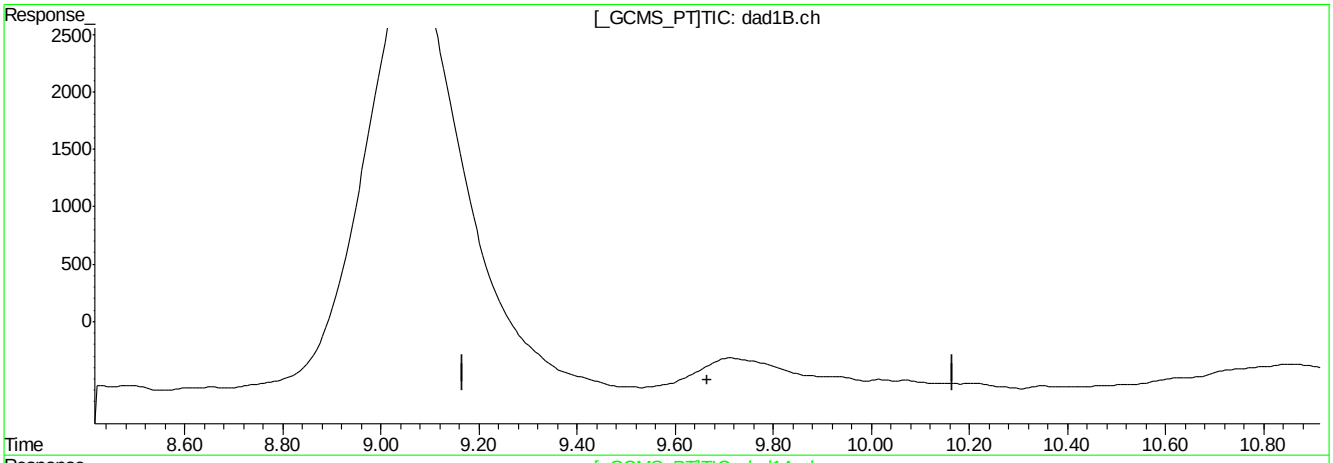
Sample Number: FA87620-1
Lab FileID: GG622039.D
Injection Time: 08/12/21 22:54
Method: SW846 8330B
Analyst approved: 08/13/21 11:12 James Boone
Supervisor approved: 08/13/21 17:23 Naresh Jiawan

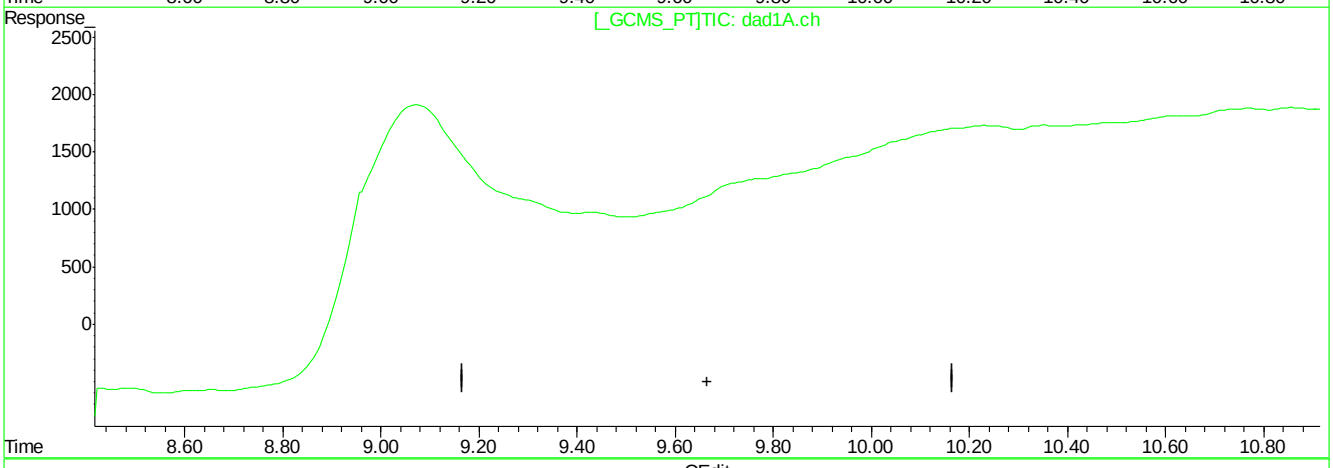
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	1	9.71	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.77	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	13.90	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.34	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.19	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1A.ch
Acq On : 12-Aug-2021, 22:54:01 Operator: jamesb
Sample : FA87620-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

0.00min 0.000ppb

response 0

(7) 1,3-Dinitrobenzene #2

0.00min 0.000ppb

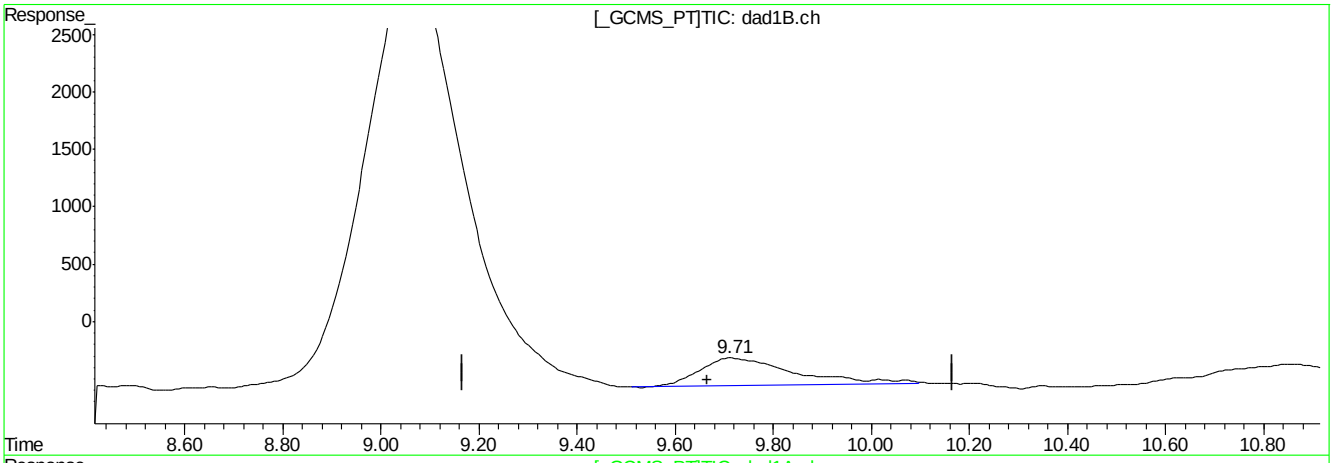
response 0

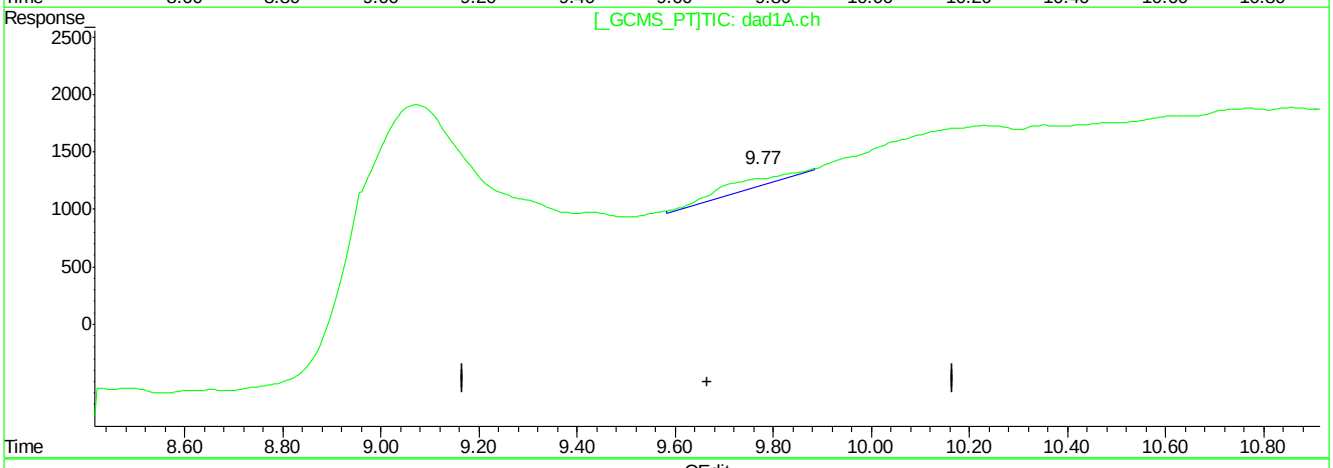
(+) = Expected Retention Time
GG622039.D GGG3024_080821.M Fri Aug 13 10:33:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1A.ch
Acq On : 12-Aug-2021, 22:54:01 Operator: jamesb
Sample : FA87620-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.71min 2.700ppb m

response 32989

(7) 1,3-Dinitrobenzene #2

9.77min 0.915ppb m

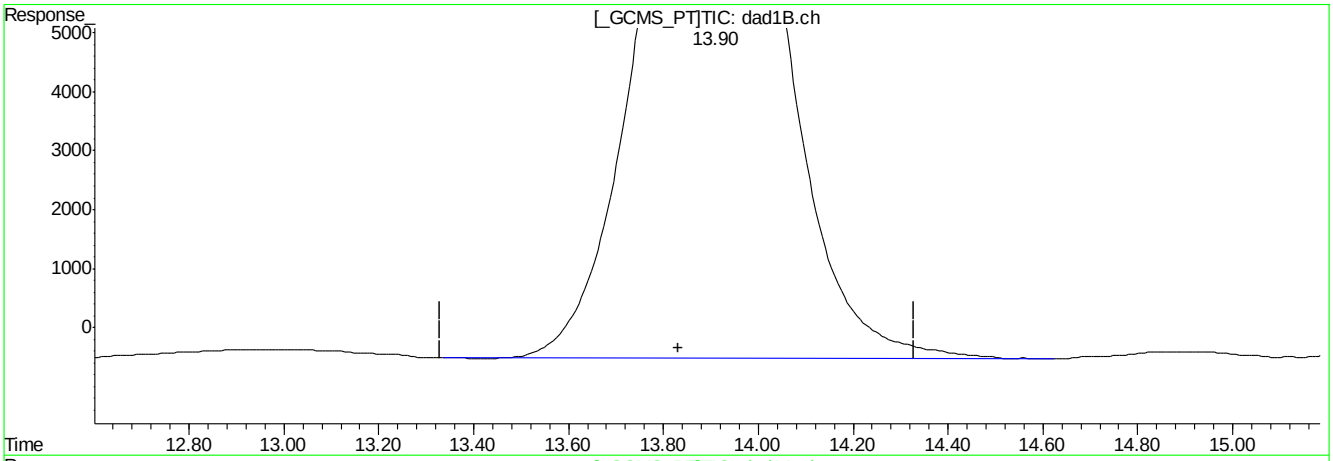
response 8294

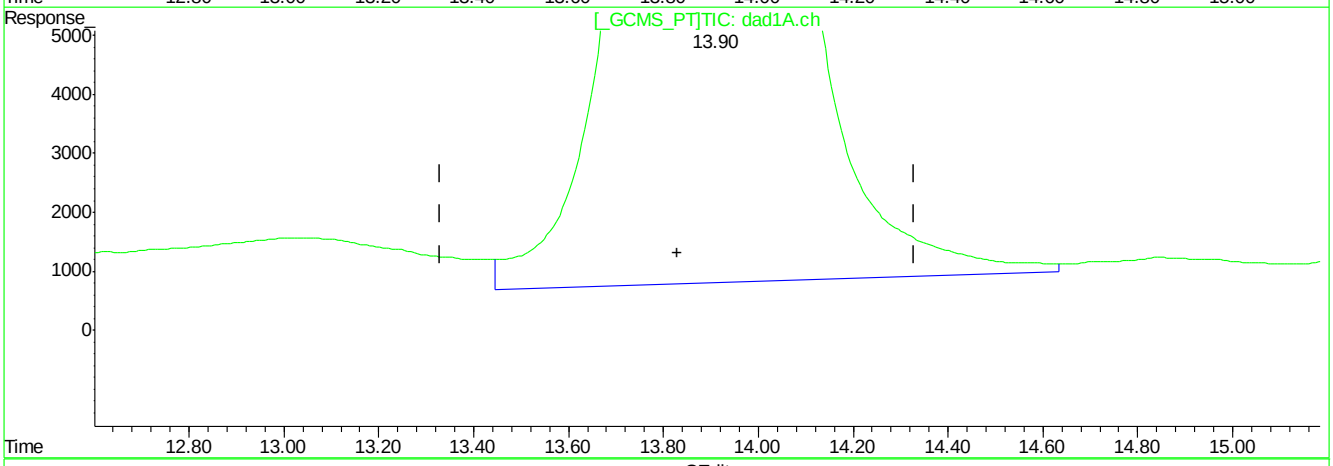
(+) = Expected Retention Time
GG622039.D GGG3024_080821.M Fri Aug 13 10:33:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1A.ch
Acq On : 12-Aug-2021, 22:54:01 Operator: jamesb
Sample : FA87620-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.91min 496.822ppb

response 2480014

(12) 3,4-Dinitrotoluene #2 (S)

13.91min 512.852ppb

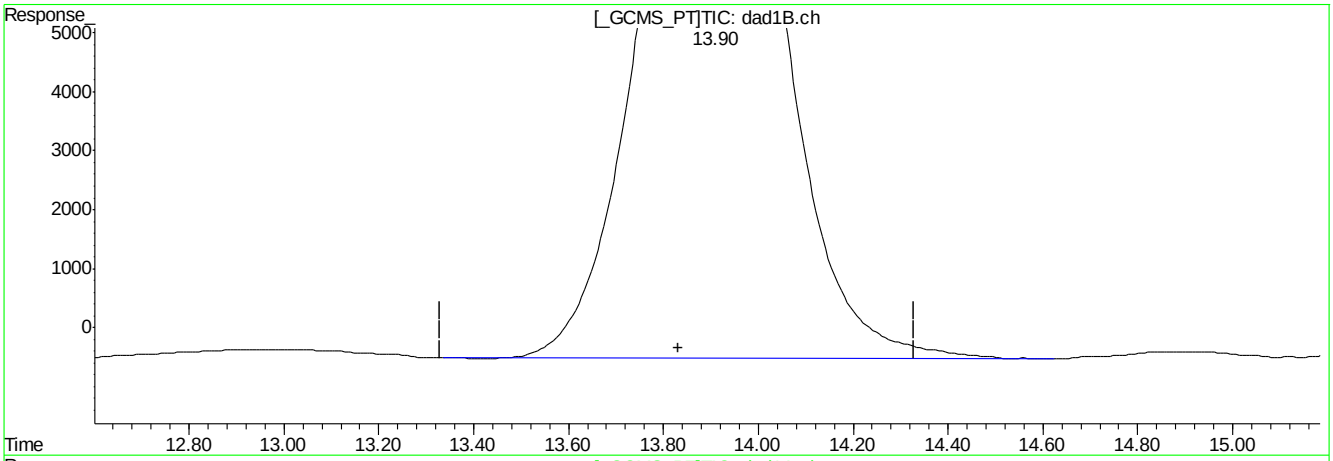
response 4998830

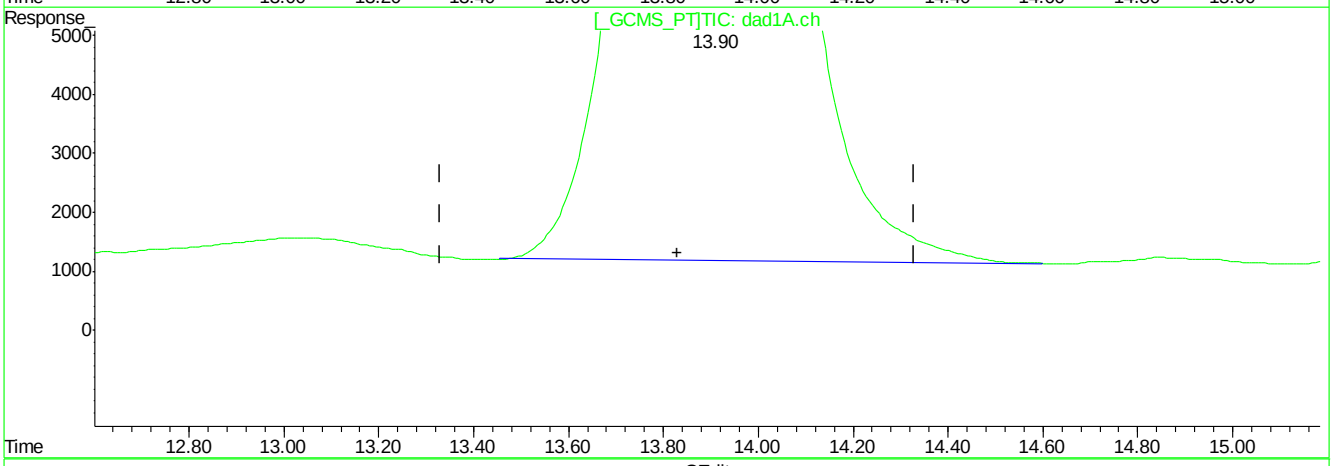
(+) = Expected Retention Time
GG622039.D GGG3024_080821.M Fri Aug 13 10:34:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1A.ch
Acq On : 12-Aug-2021, 22:54:01 Operator: jamesb
Sample : FA87620-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.91min 496.822ppb

response 2480014

(12) 3,4-Dinitrotoluene #2 (S)

13.90min 488.346ppb m

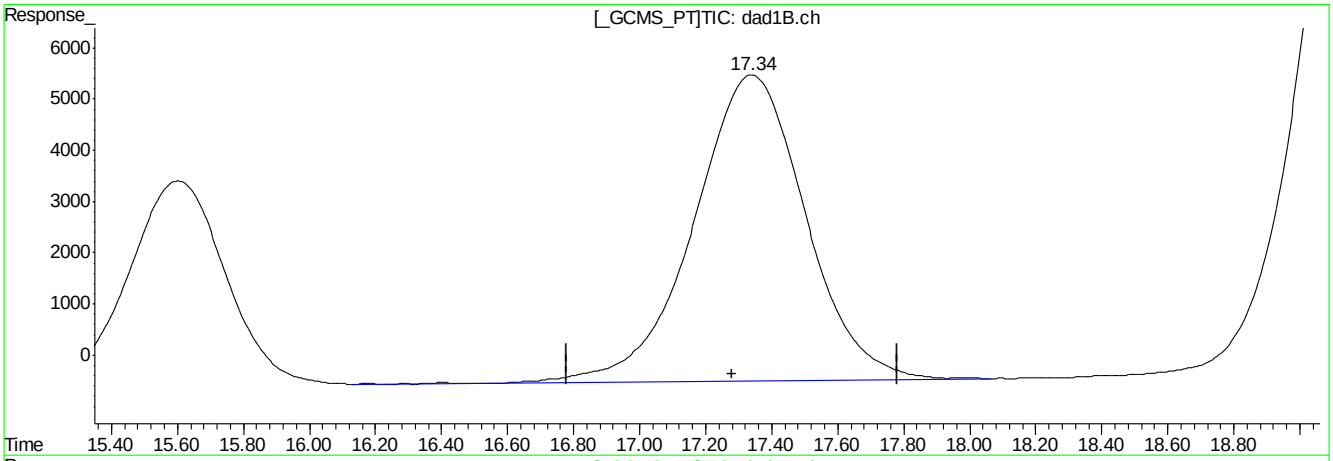
response 4759966

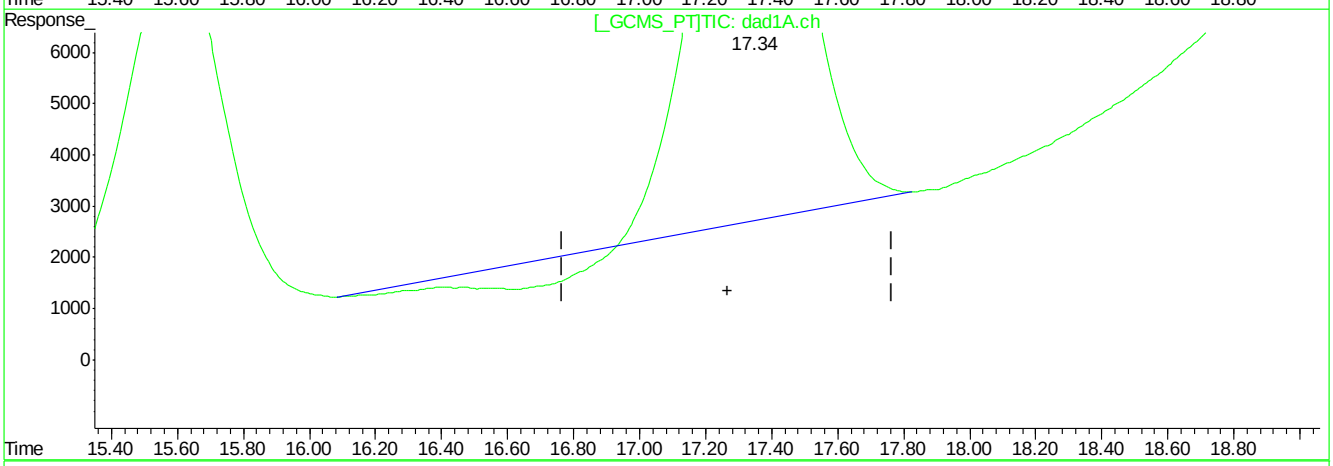
(+) = Expected Retention Time
GG622039.D GGG3024_080821.M Fri Aug 13 10:34:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1A.ch
Acq On : 12-Aug-2021, 22:54:01 Operator: jamesb
Sample : FA87620-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.34min 277.673ppb

response 1411436

(18) 4-Amino-2,6-Dinitrotoluene #2

17.34min 252.867ppb

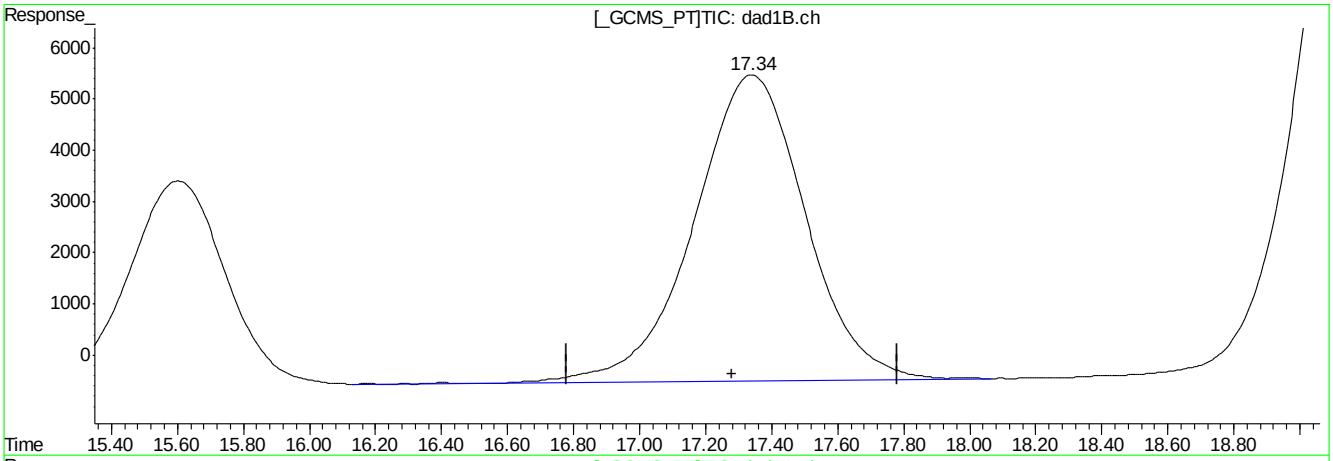
response 2206154

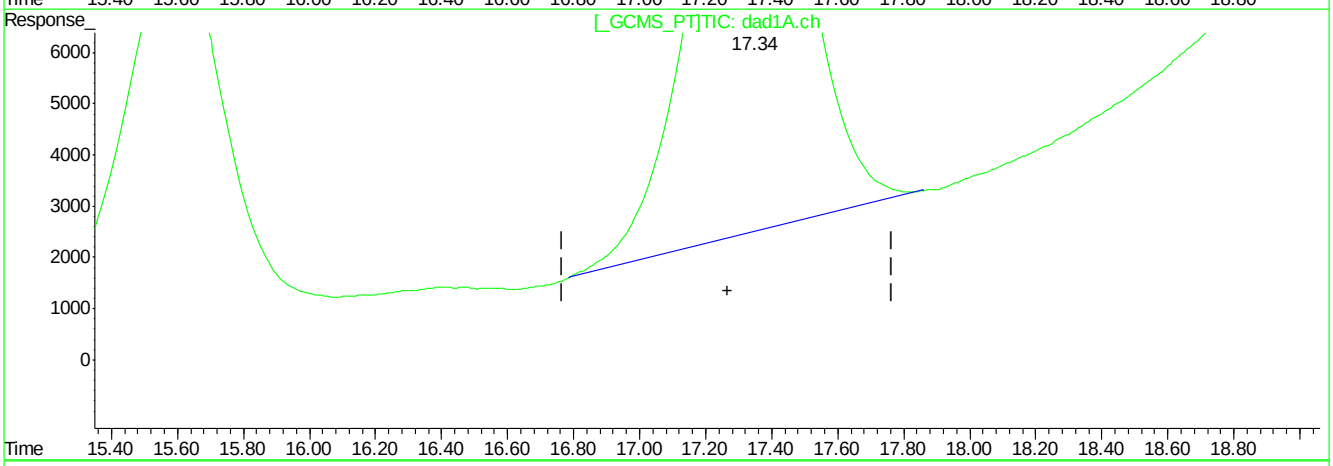
(+) = Expected Retention Time
GG622039.D GGG3024_080821.M Fri Aug 13 10:34:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1A.ch
Acq On : 12-Aug-2021, 22:54:01 Operator: jamesb
Sample : FA87620-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.34min 277.673ppb

response 1411436

(18) 4-Amino-2,6-Dinitrotoluene #2

17.34min 281.912ppb m

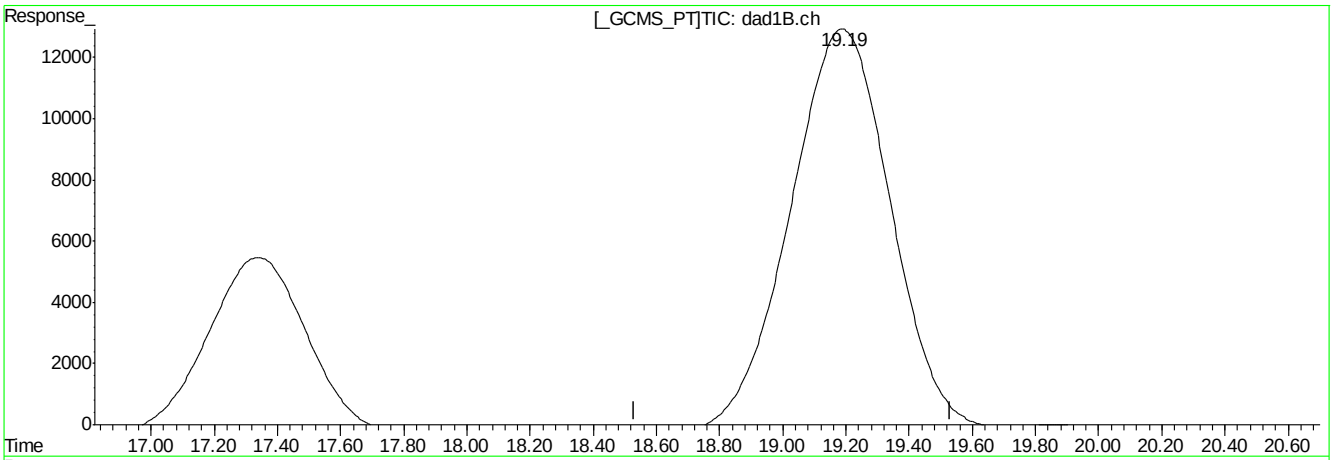
response 2459561

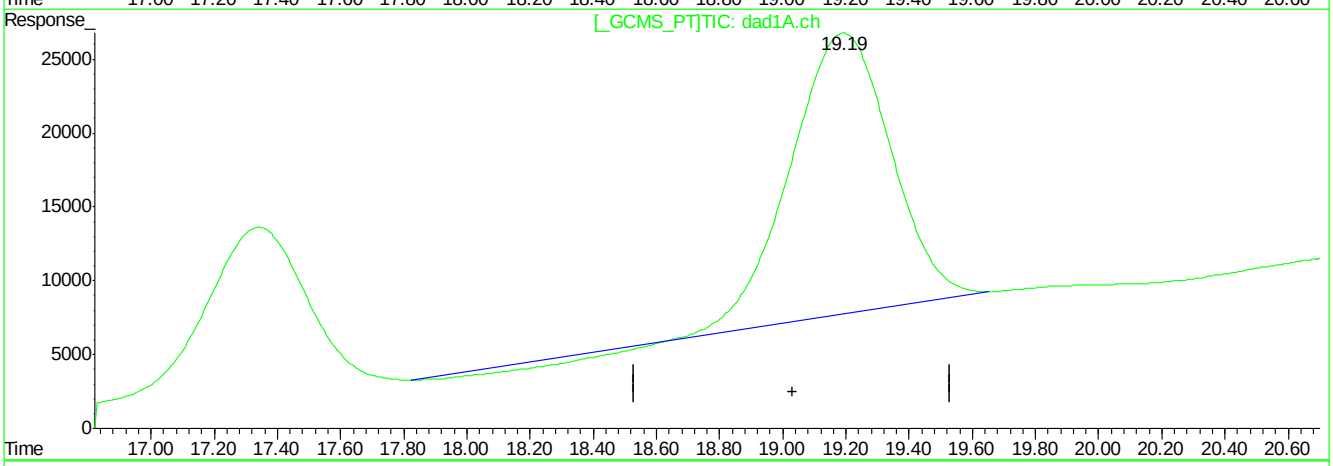
(+) = Expected Retention Time
GG622039.D GGG3024_080821.M Fri Aug 13 10:34:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1A.ch
Acq On : 12-Aug-2021, 22:54:01 Operator: jamesb
Sample : FA87620-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.19min 356.060ppb

response 2927853

(20) 2-Amino-4,6-Dinitrotoluene #2

19.19min 380.434ppb

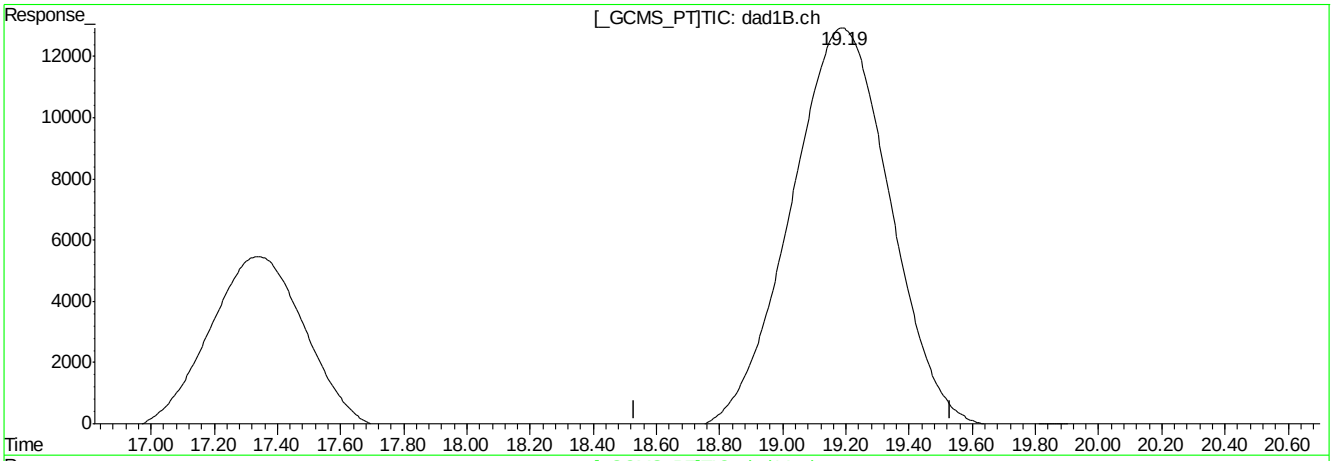
response 4081788

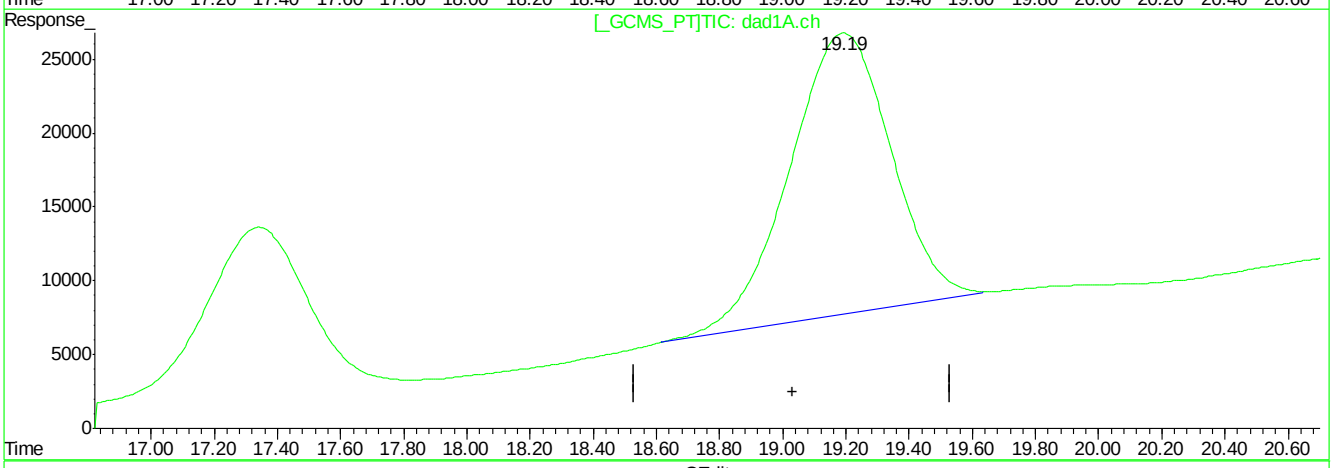
(+) = Expected Retention Time
GG622039.D GGG3024_080821.M Fri Aug 13 10:34:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622039.D\dad1A.ch
Acq On : 12-Aug-2021, 22:54:01 Operator: jamesb
Sample : FA87620-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.19min 356.060ppb

response 2927853

(20) 2-Amino-4,6-Dinitrotoluene #2

19.19min 395.601ppb m

response 4244524

(+) = Expected Retention Time
GG622039.D GGG3024_080821.M Fri Aug 13 10:34:33 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:24

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : op86727,GPP2467,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:33 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.27	11.27	994286	1808347	466.828	556.650
	Spiked Amount 500.000	Range 70 - 136		Recovery =		93.37%	111.33%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	2.85	2.85	71747	119783	38.496m	39.803m
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D.	N.D.
7)	1,3-Dinitrobenze	6.02	5.91	257675	215690	49.527	57.739m
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	8.91	0	211014	N.D.	168.545 #
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D.	N.D.
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D.	N.D.
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D.	N.D.
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	15.68	15.75	100075	44056	43.774	15.052m#
19)	p-Nitrotoluene	16.16	16.19	31945	30945	9.284m	10.958m
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	18.44	0	464016	N.D. d	363.209m

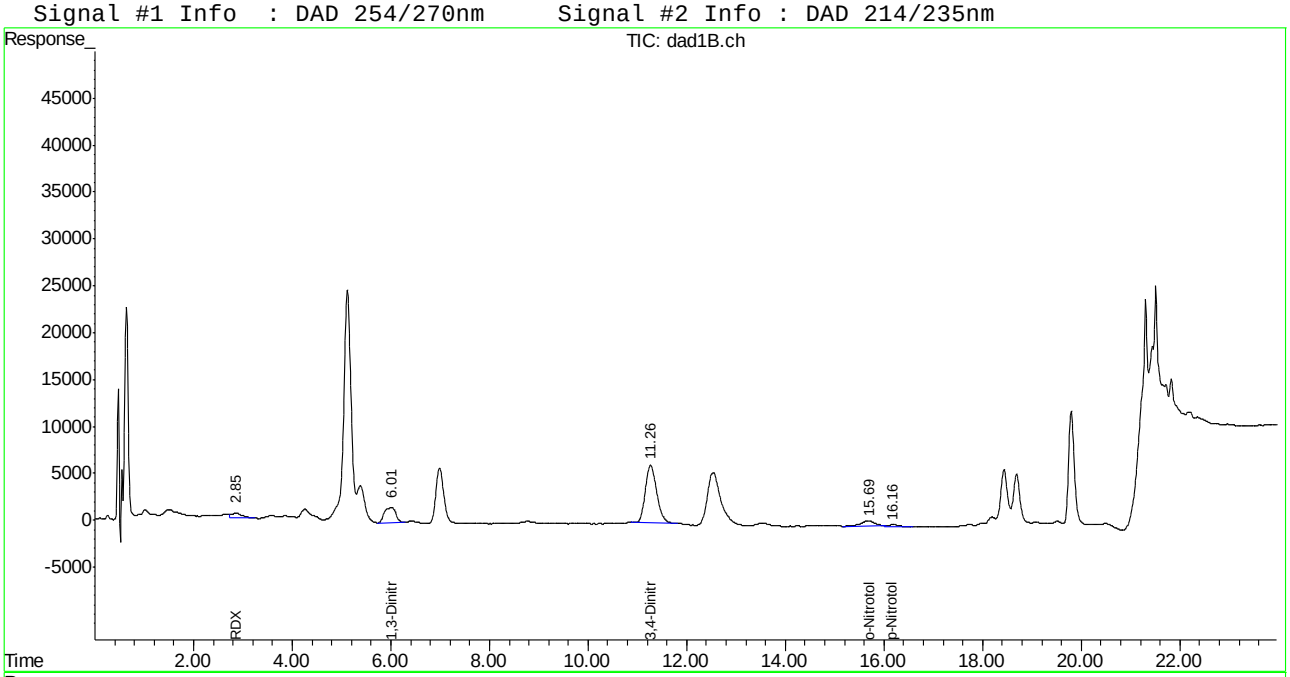
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391151.D GPP2464_080321PRI.M Thu Aug 12 15:29:48 2021 Page 1

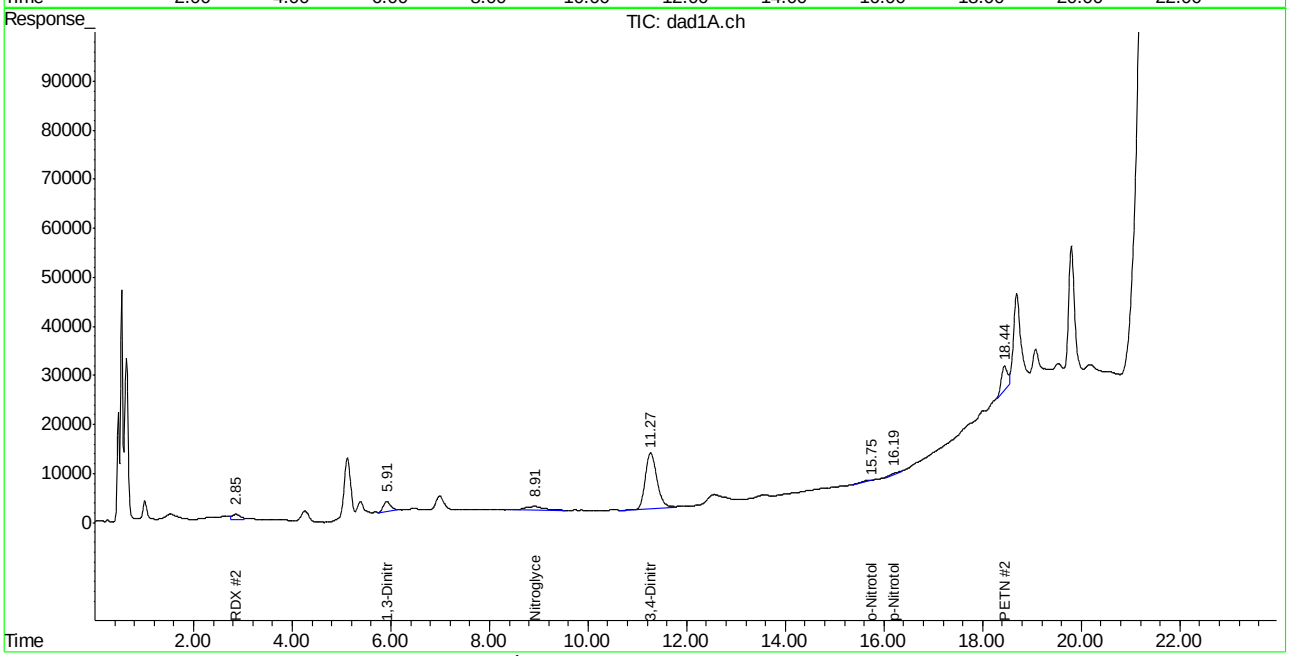
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : op86727,GPP2467,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 15:10 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

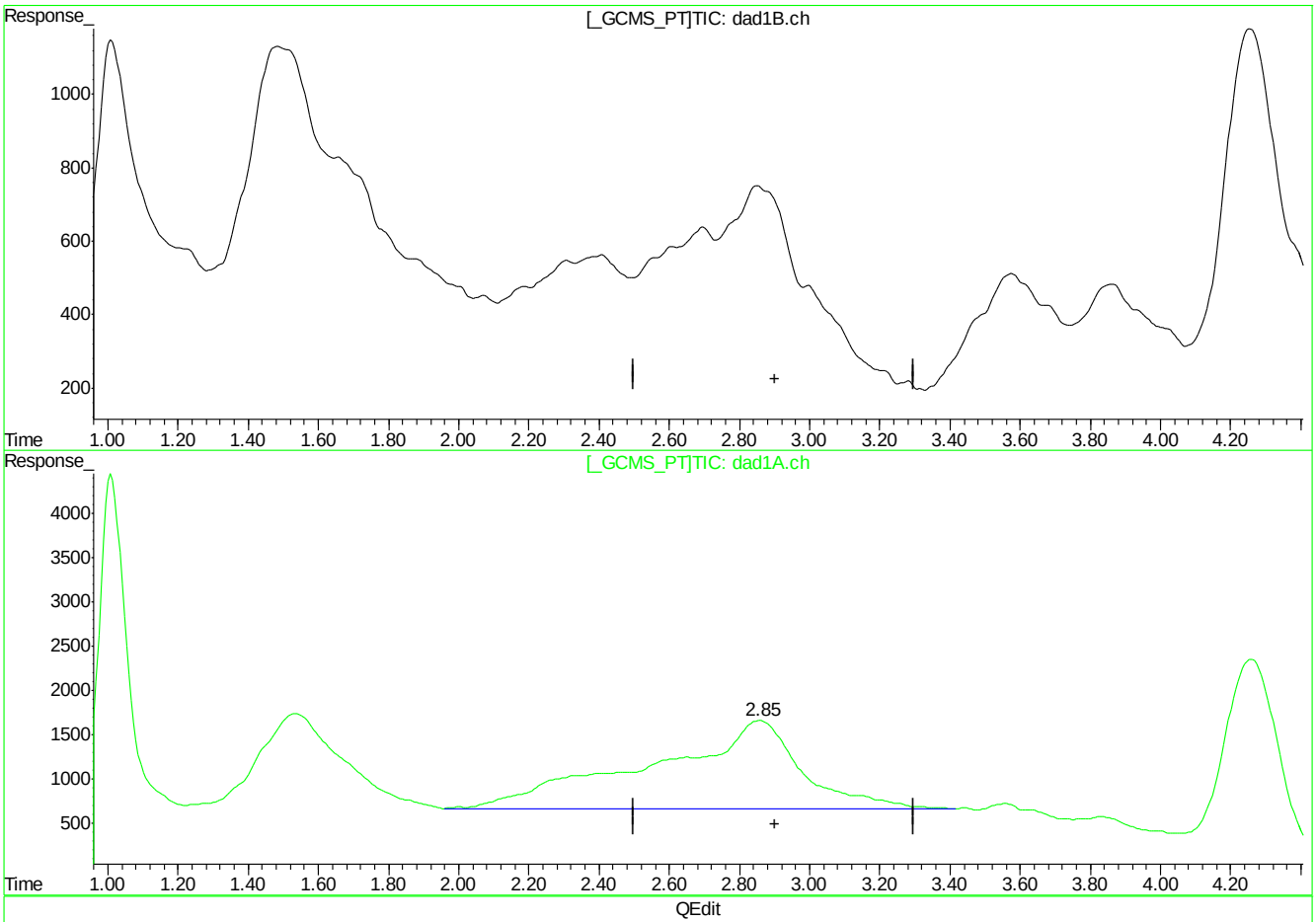
Sample Number: FA87620-2
Lab FileID: PP391151.D
Injection Time: 08/09/21 19:35
Method: SW846 8330B
Analyst approved: 08/12/21 15:32 James Boone
Supervisor approved: 08/13/21 17:24 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
RDX	121-82-4	1	2.85	Poor instrument integration
RDX	121-82-4	2	2.85	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.91	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.75	Poor instrument integration
p-Nitrotoluene	99-99-0	1	16.16	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.19	Poor instrument integration
PETN	78-11-5	2	18.44	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



QEdit

(5) RDX

0.00min 0.000ppb

response 0

(5) RDX #2

2.86min 98.043ppb

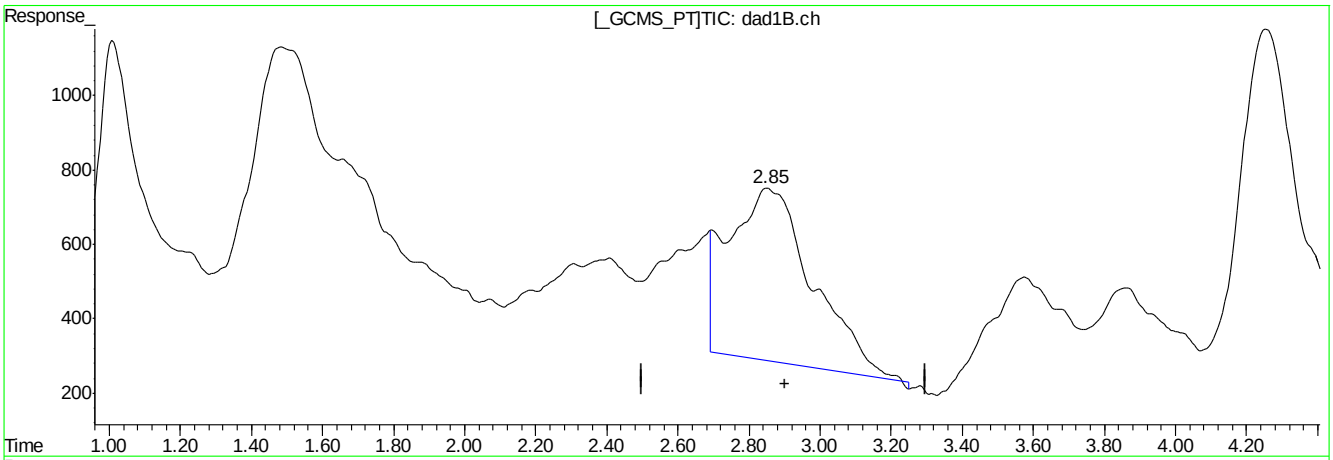
response 295050

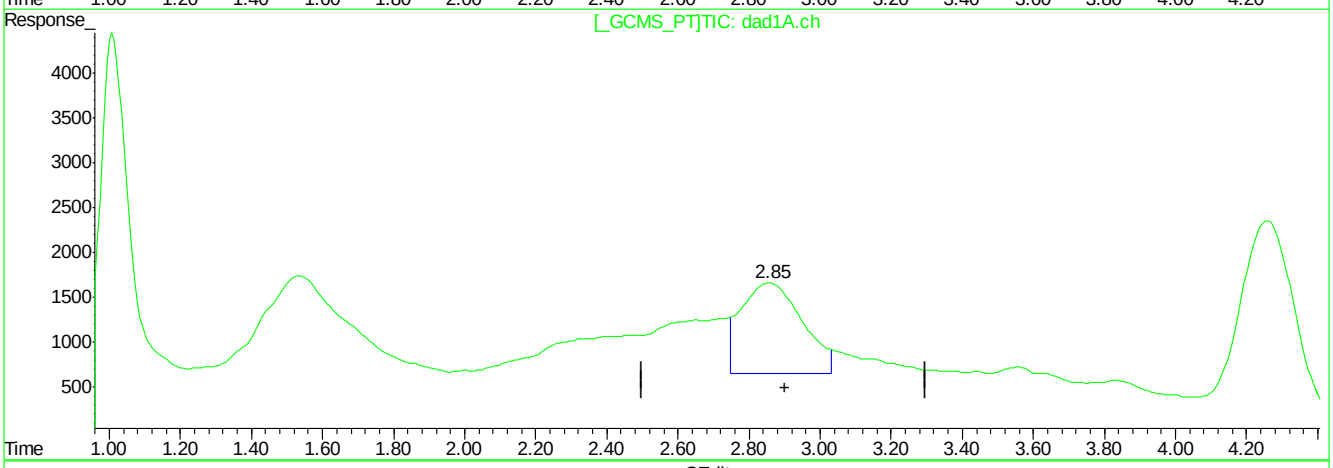
(+) = Expected Retention Time
PP391151.D GPP2464_080321PRI.M Thu Aug 12 15:09:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.85min 41.117ppb m

response 76631

(5) RDX #2

2.85min 39.803ppb m

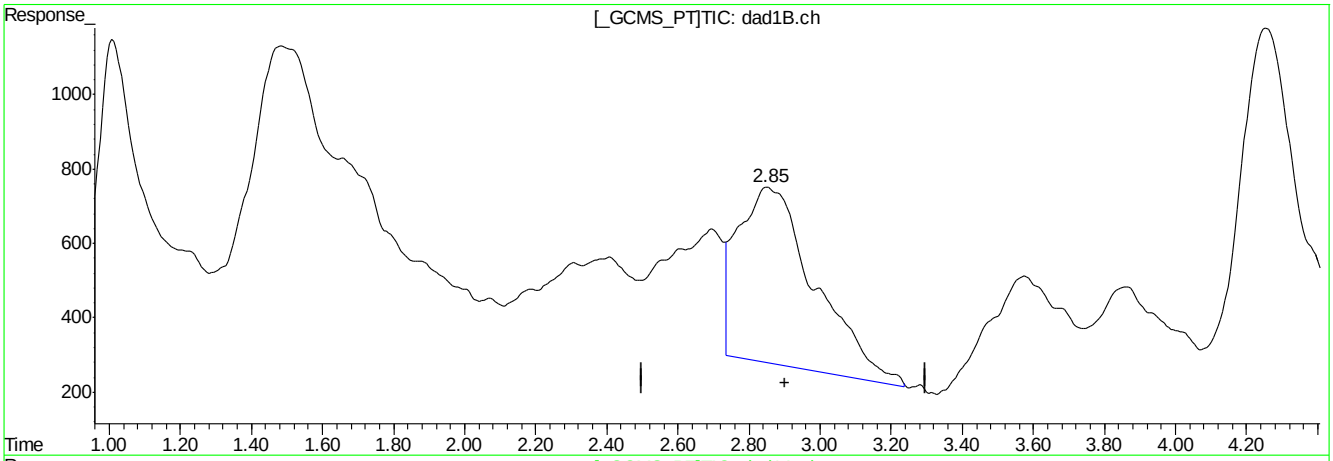
response 119783

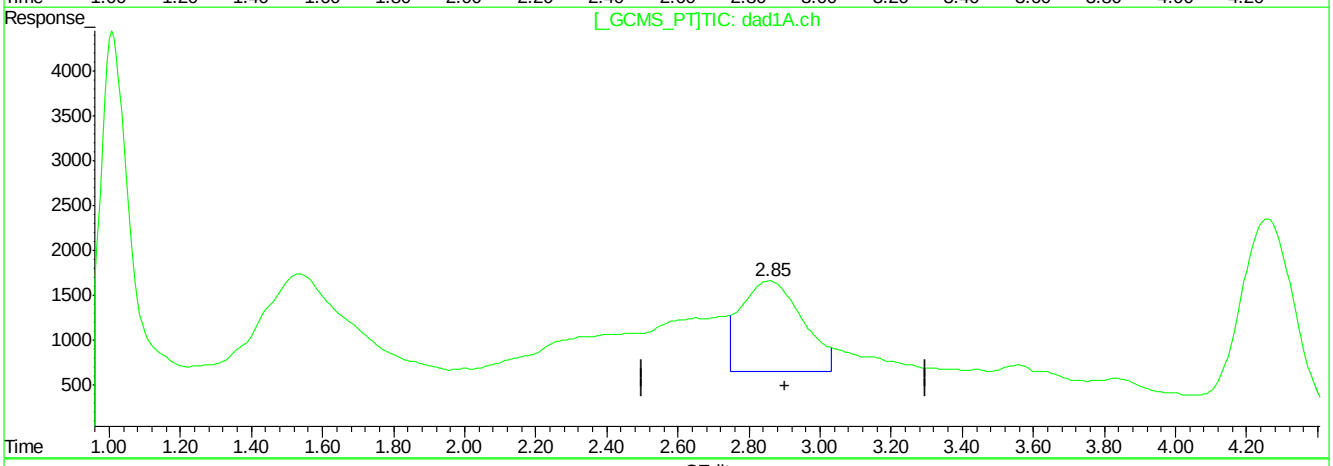
(+) = Expected Retention Time
PP391151.D GPP2464_080321PRI.M Thu Aug 12 15:09:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.85min 38.496ppb m

response 71747

(5) RDX #2

2.85min 39.803ppb m

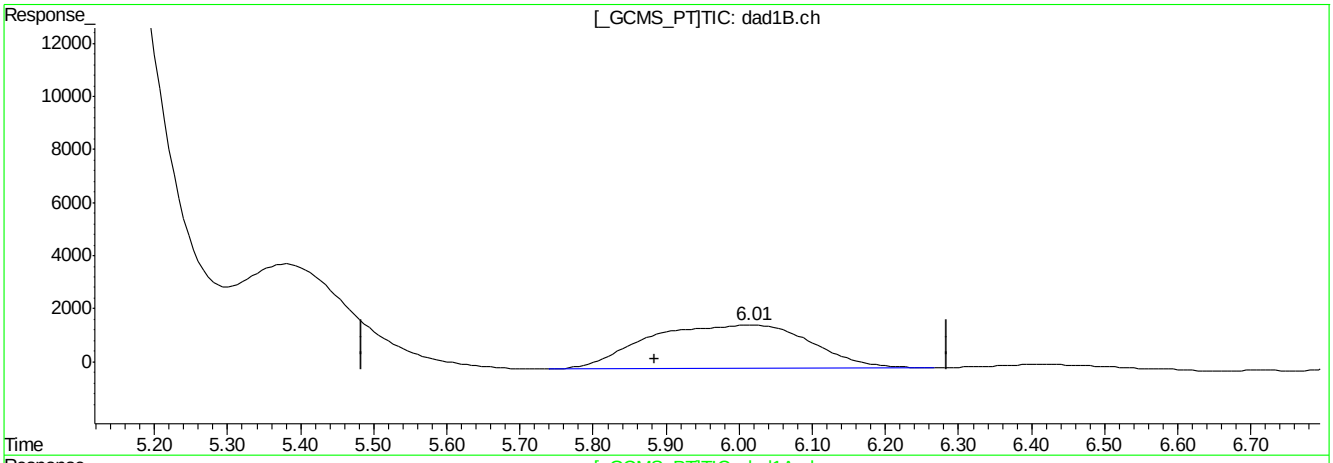
response 119783

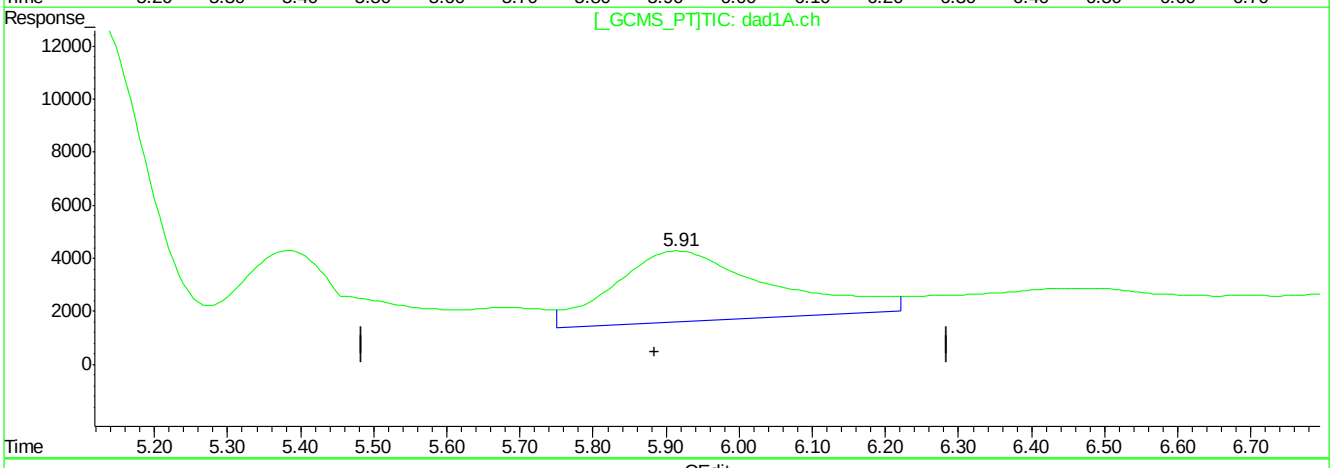
(+) = Expected Retention Time
PP391151.D GPP2464_080321PRI.M Thu Aug 12 15:09:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.02min 49.527ppb

response 257675

(7) 1,3-Dinitrobenzene #2

5.92min 105.494ppb

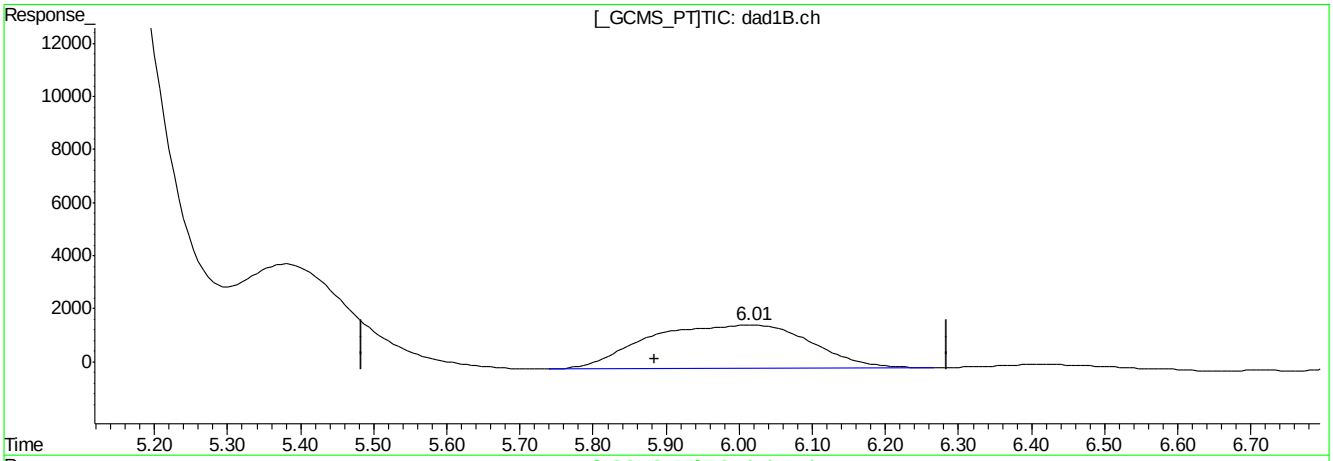
response 394084

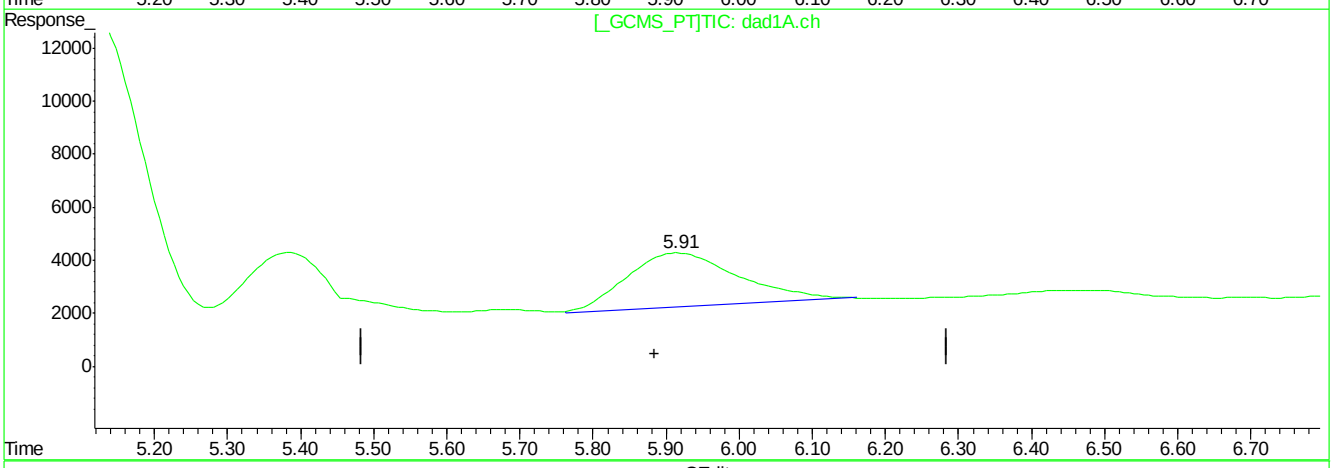
(+) = Expected Retention Time
PP391151.D GPP2464_080321PRI.M Thu Aug 12 15:09:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.02min 49.527ppb

response 257675

(7) 1,3-Dinitrobenzene #2

5.91min 57.739ppb m

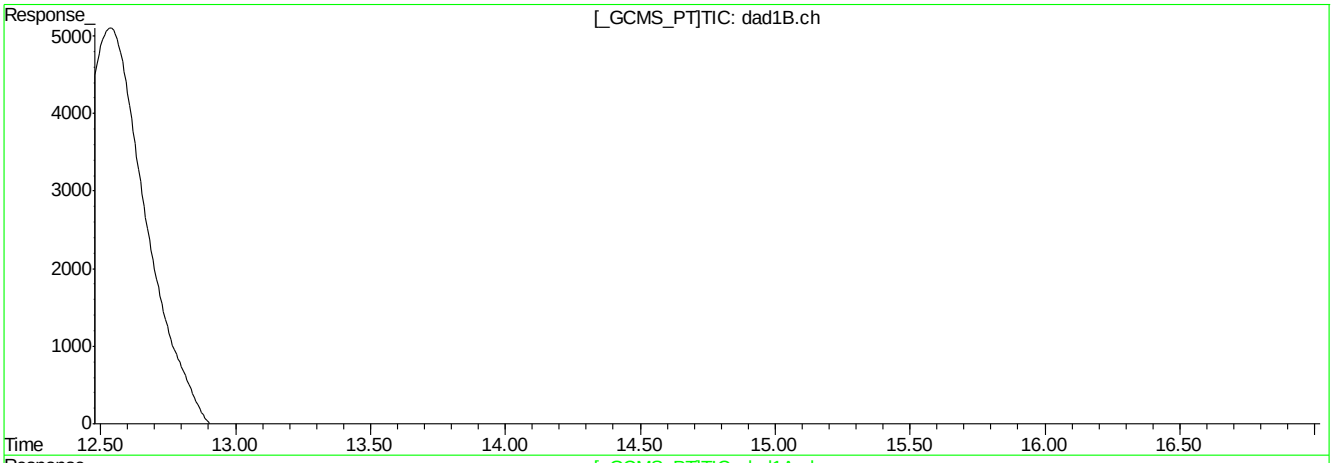
response 215690

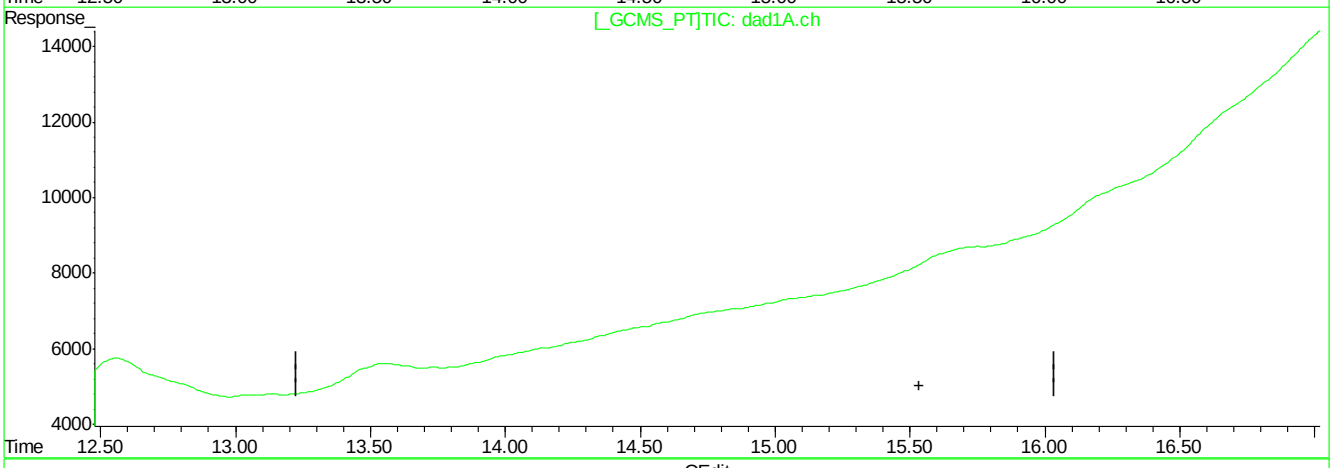
(+) = Expected Retention Time
PP391151.D GPP2464_080321PRI.M Thu Aug 12 15:09:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.68min 43.774ppb

response 100075

(18) o-Nitrotoluene #2

0.00min 0.000ppb

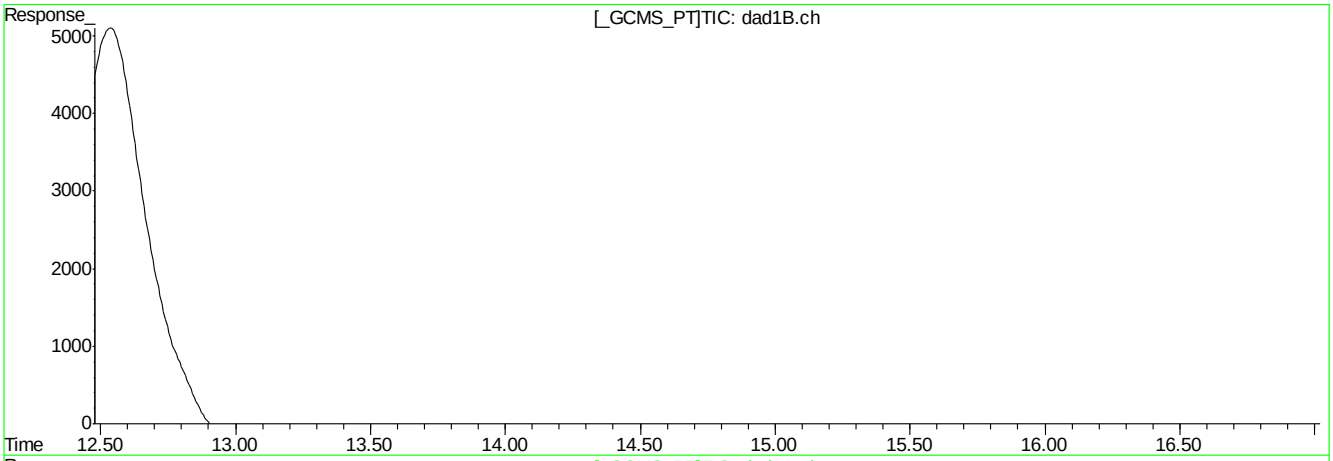
response 0

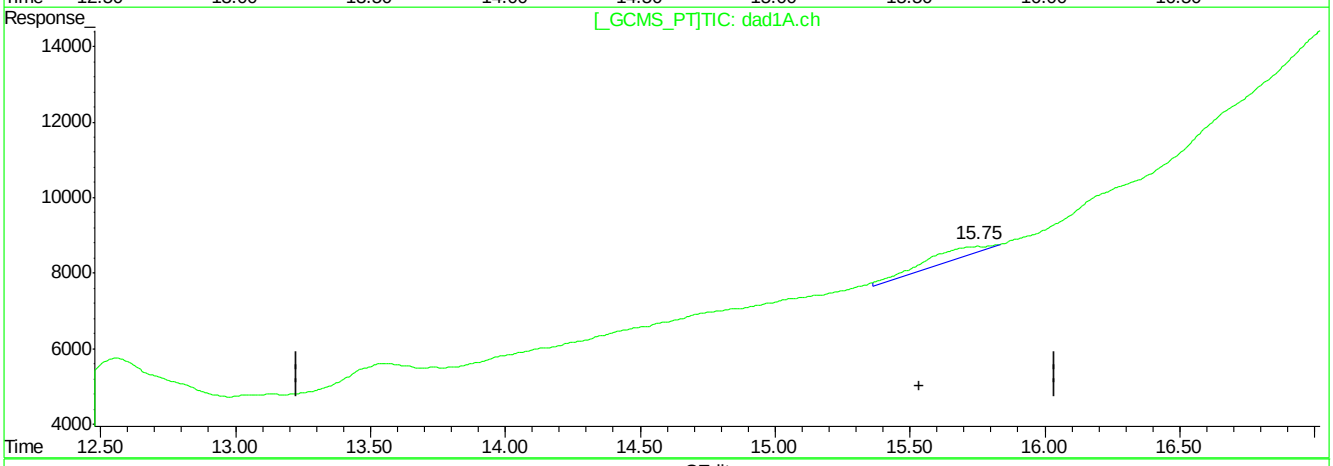
(+) = Expected Retention Time
PP391151.D GPP2464_080321PRI.M Thu Aug 12 15:10:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.68min 43.774ppb

response 100075

(18) o-Nitrotoluene #2

15.75min 15.052ppb m

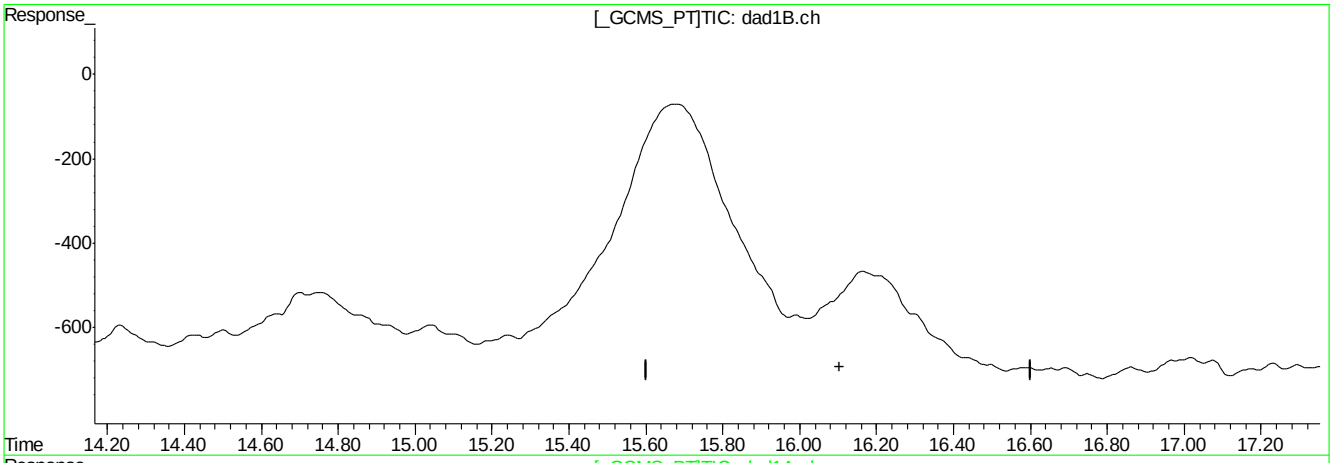
response 44056

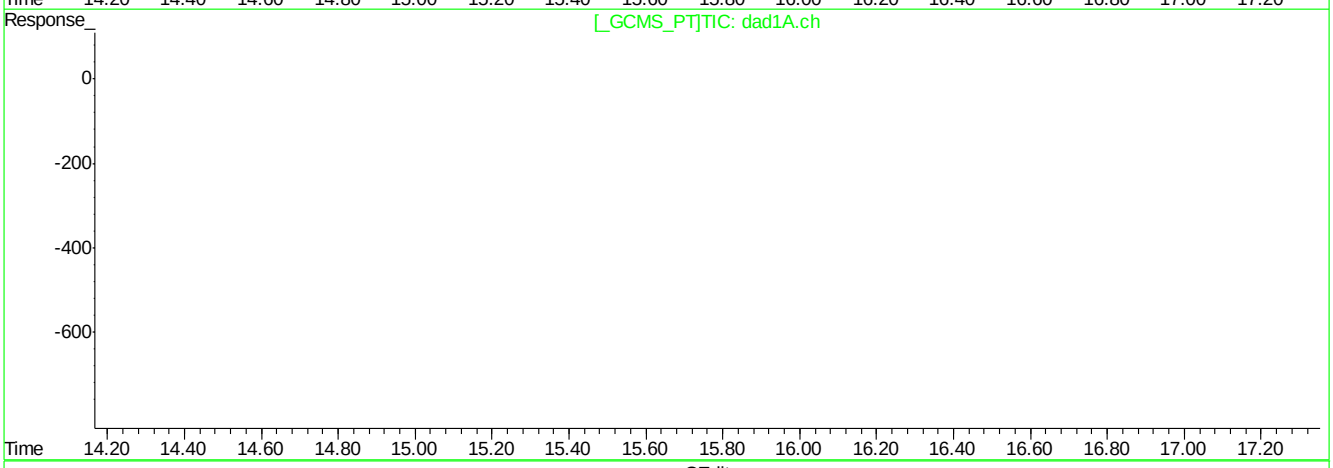
(+) = Expected Retention Time
PP391151.D GPP2464_080321PRI.M Thu Aug 12 15:10:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

0.00min 0.000ppb

response 0

(19) p-Nitrotoluene #2

0.00min 0.000ppb

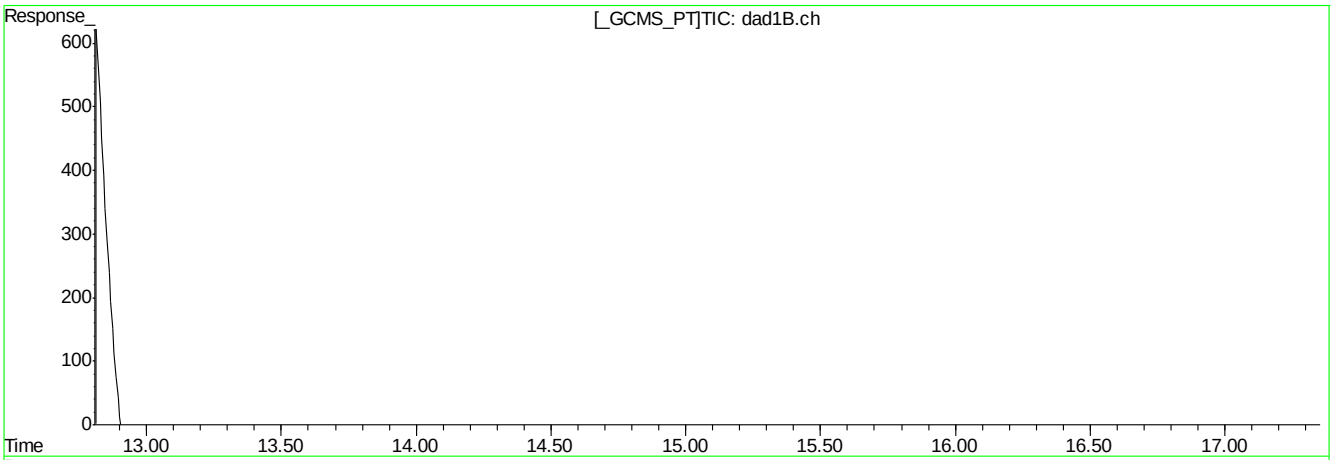
response 0

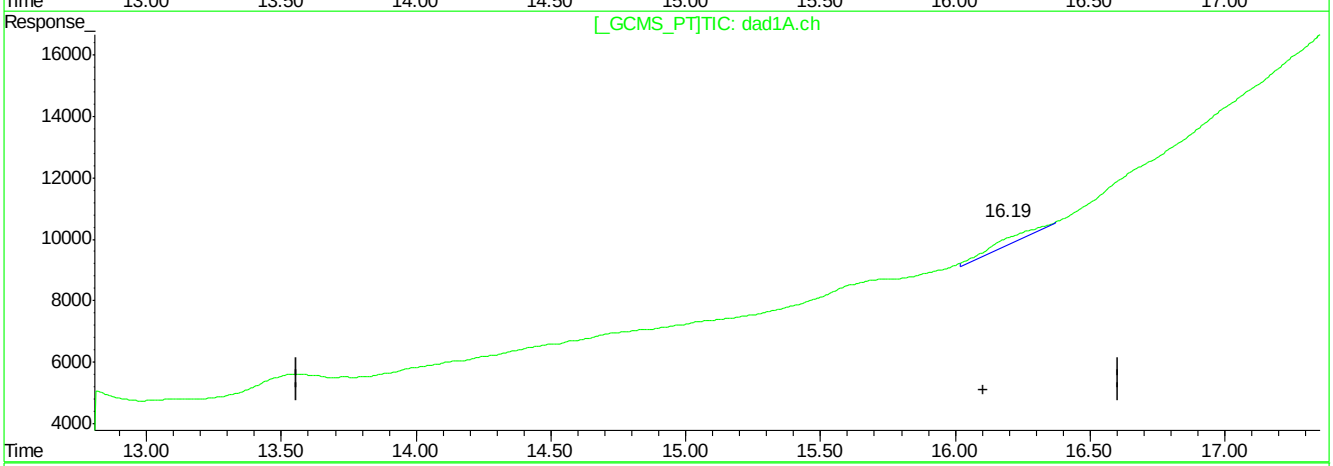
(+) = Expected Retention Time
PP391151.D GPP2464_080321PRI.M Thu Aug 12 15:10:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.16min 9.284ppb m

response 31945

(19) p-Nitrotoluene #2

16.19min 10.958ppb m

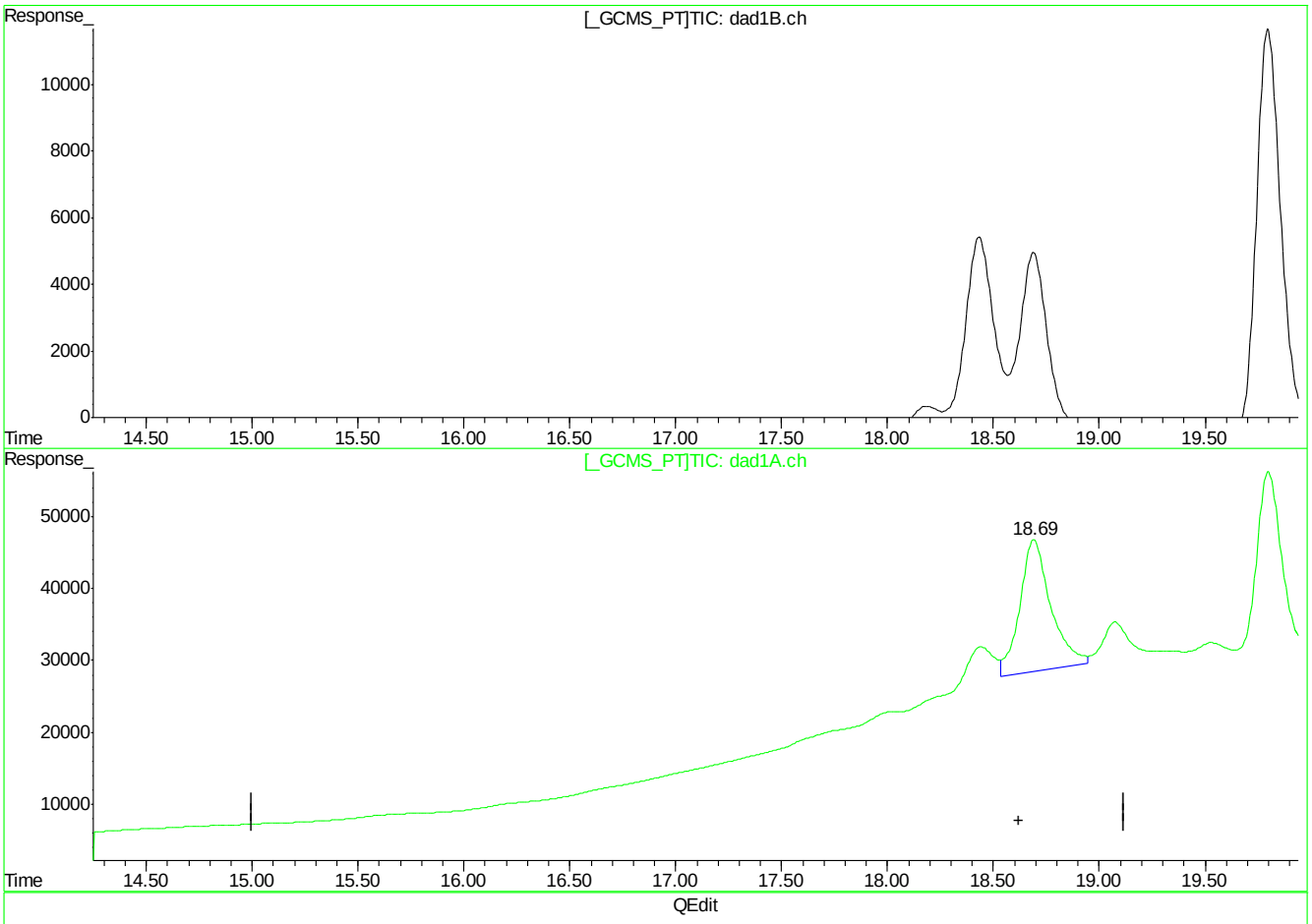
response 30945

(+) = Expected Retention Time
PP391151.D GPP2464_080321PRI.M Thu Aug 12 15:10:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.69min 1458.281ppb

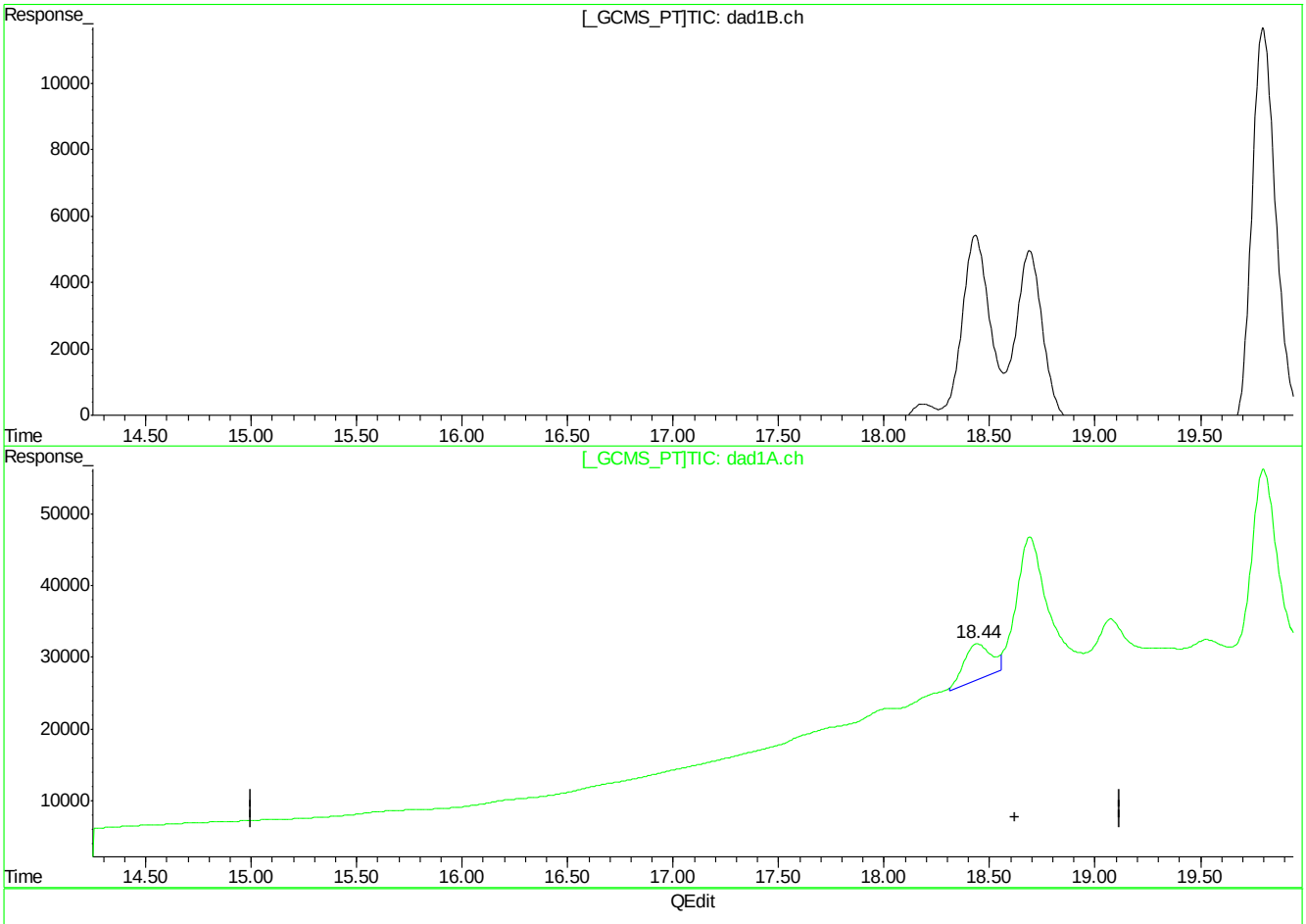
response 1863023

(+) = Expected Retention Time
PP391151.D GPP2464_080321PRI.M Thu Aug 12 15:10:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391151.D\dad1A.ch
Acq On : 09-Aug-2021, 19:35:04 Operator: jamesb
Sample : FA87620-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.44min 363.209ppb m

response 464016

(+) = Expected Retention Time
PP391151.D GPP2464_080321PRI.M Thu Aug 12 15:10:56 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:24

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622042.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622042.D\dad1A.ch
Acq On : 13-Aug-2021, 00:28:15 Operator: jamesb
Sample : FA87620-2cf Inst : G1315B
Misc : op86727,GGG3025,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:48 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.90	13.89	2666715	4938502	534.224	506.663
	Spiked Amount 500.000	Range 70 - 136		Recovery =		106.84%	101.33%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
6)	RDX	7.65	7.65	1403727	1438508	349.440m	358.099m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	12.27	0	283904	N.D.	89.461 #
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
16)	o-Nitrotoluene	16.43	16.27	186681	446669	38.337	60.718m#
17)	p-Nitrotoluene	17.07	16.95f	313691	729209	61.713m	83.581m
18)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

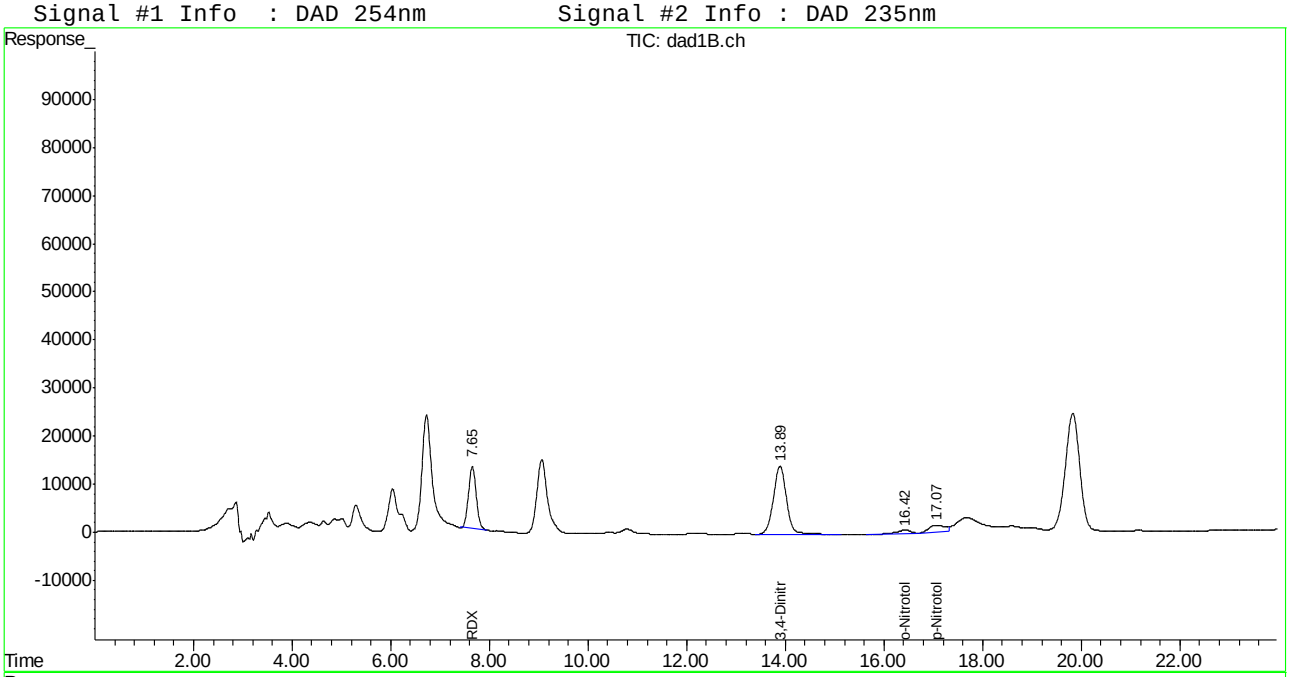
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622042.D GGG3024_080821.M Fri Aug 13 10:49:17 2021 Page 1

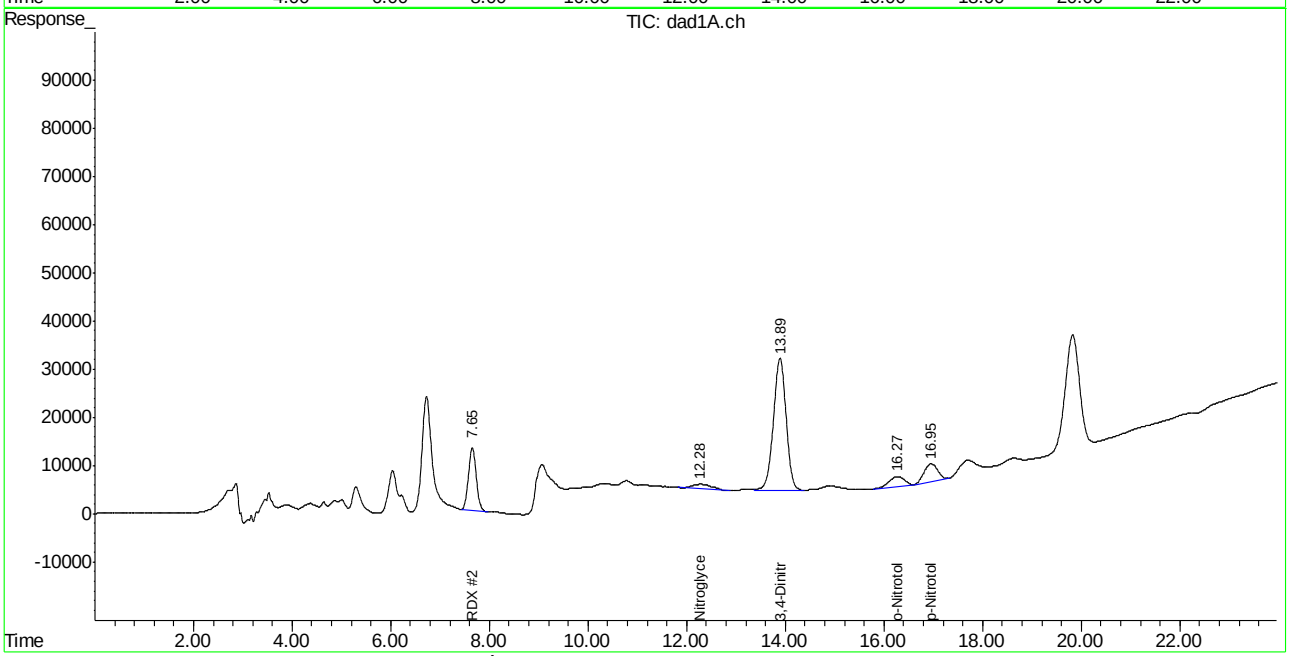
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622042.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622042.D\dad1A.ch
Acq On : 13-Aug-2021, 00:28:15 Operator: jamesb
Sample : FA87620-2cf Inst : G1315B
Misc : op86727,GGG3025,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:36 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

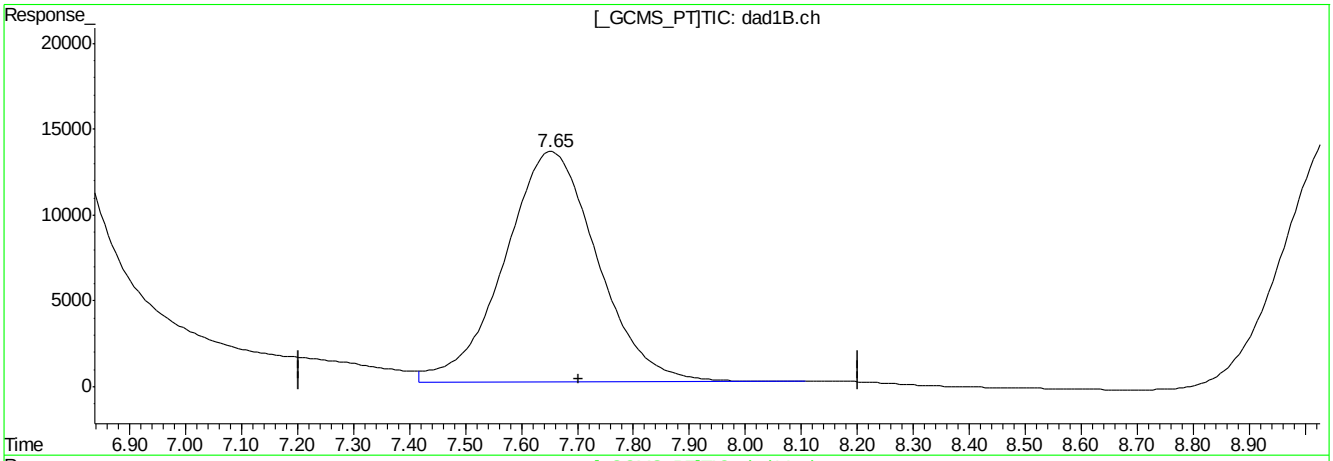
Sample Number: FA87620-2
Lab FileID: GG622042.D
Injection Time: 08/13/21 00:28
Method: SW846 8330B
Analyst approved: 08/13/21 11:12 James Boone
Supervisor approved: 08/13/21 17:24 Naresh Jiawan

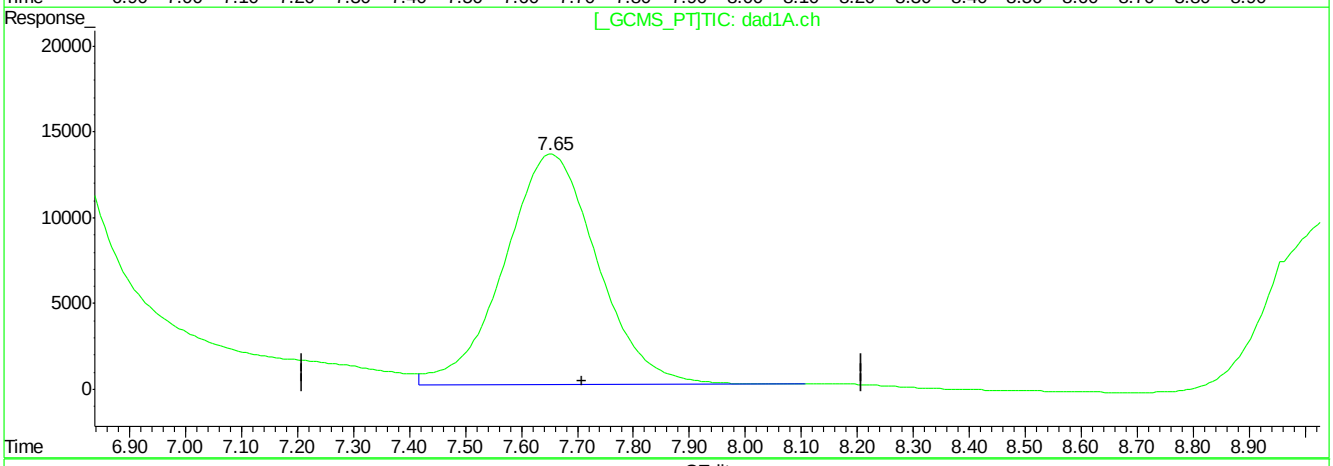
Parameter	CAS	Sig#	R.T. (min.)	Reason
RDX	121-82-4	1	7.65	Poor instrument integration
RDX	121-82-4	2	7.65	Poor instrument integration
o-Nitrotoluene	88-72-2	2	16.27	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.95	Poor instrument integration
p-Nitrotoluene	99-99-0	1	17.07	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622042.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622042.D\dad1A.ch
Acq On : 13-Aug-2021, 00:28:15 Operator: jamesb
Sample : FA87620-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.65min 386.813ppb

response 1553857

(6) RDX #2

7.65min 386.813ppb

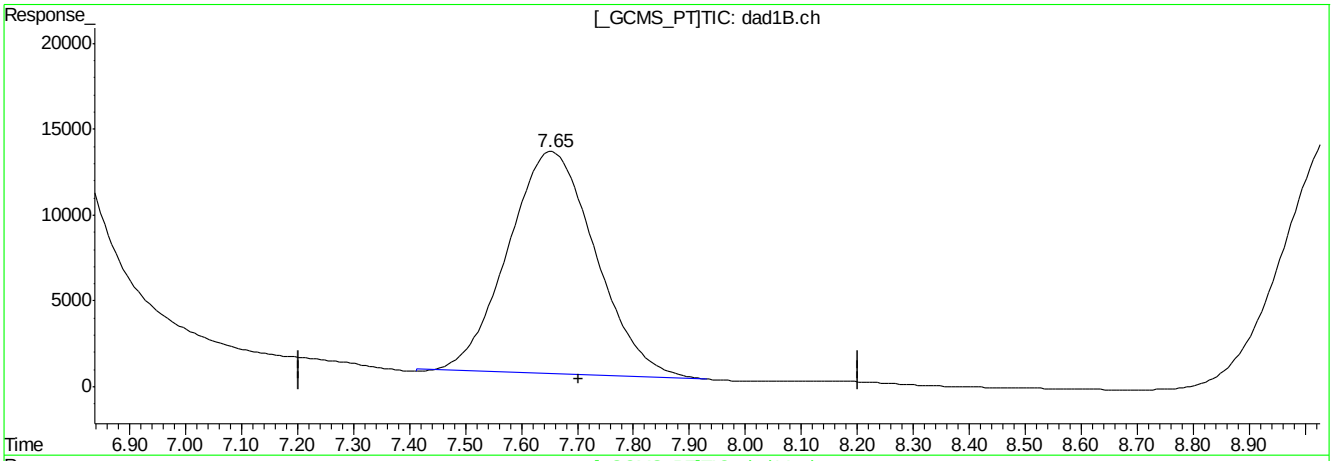
response 1553857

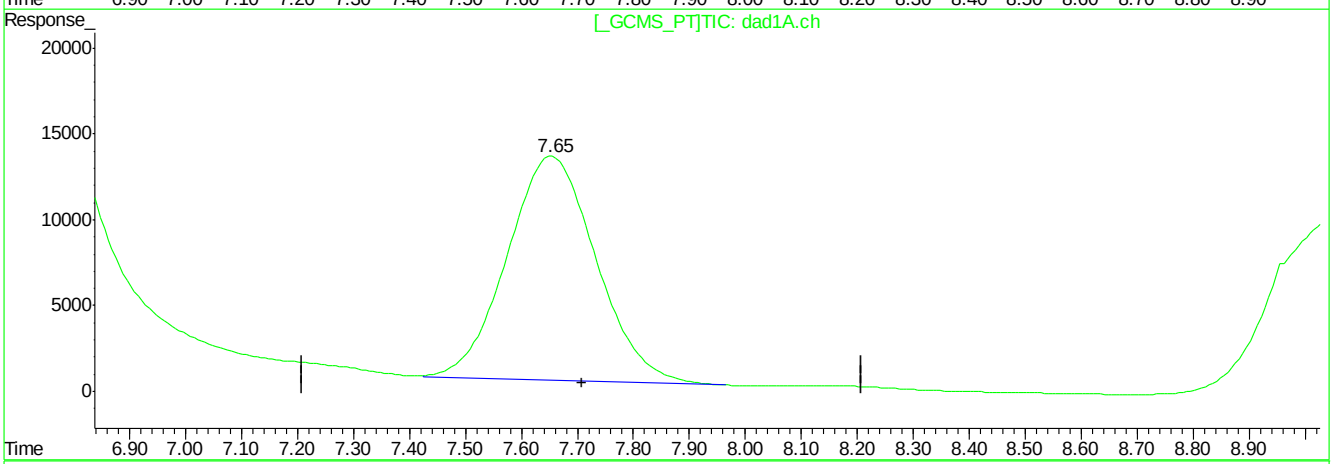
(+) = Expected Retention Time
GG622042.D GGG3024_080821.M Fri Aug 13 10:35:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622042.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622042.D\dad1A.ch
Acq On : 13-Aug-2021, 00:28:15 Operator: jamesb
Sample : FA87620-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.65min 349.440ppb m

response 1403727

(6) RDX #2

7.65min 358.099ppb m

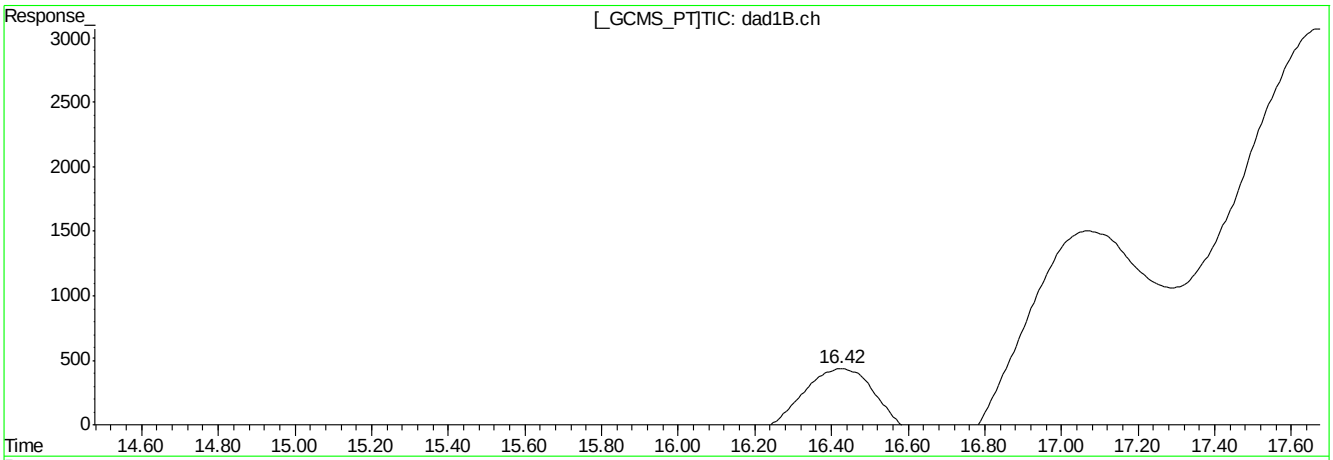
response 1438508

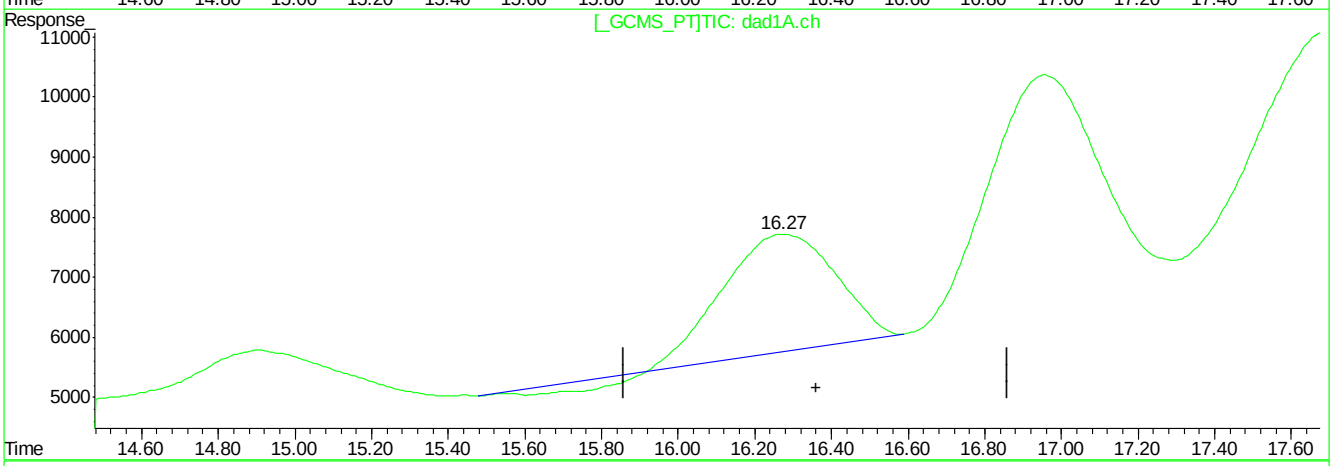
(+) = Expected Retention Time
GG622042.D GGG3024_080821.M Fri Aug 13 10:35:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622042.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622042.D\dad1A.ch
Acq On : 13-Aug-2021, 00:28:15 Operator: jamesb
Sample : FA87620-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(16) o-Nitrotoluene

16.43min 38.337ppb

response 186681

(16) o-Nitrotoluene #2

16.27min 51.450ppb

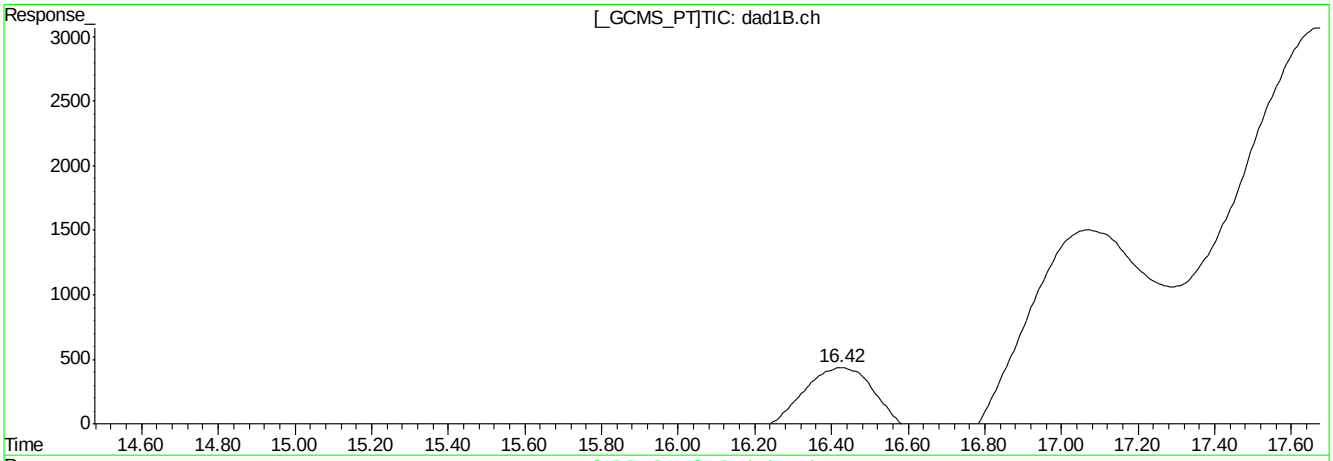
response 378492

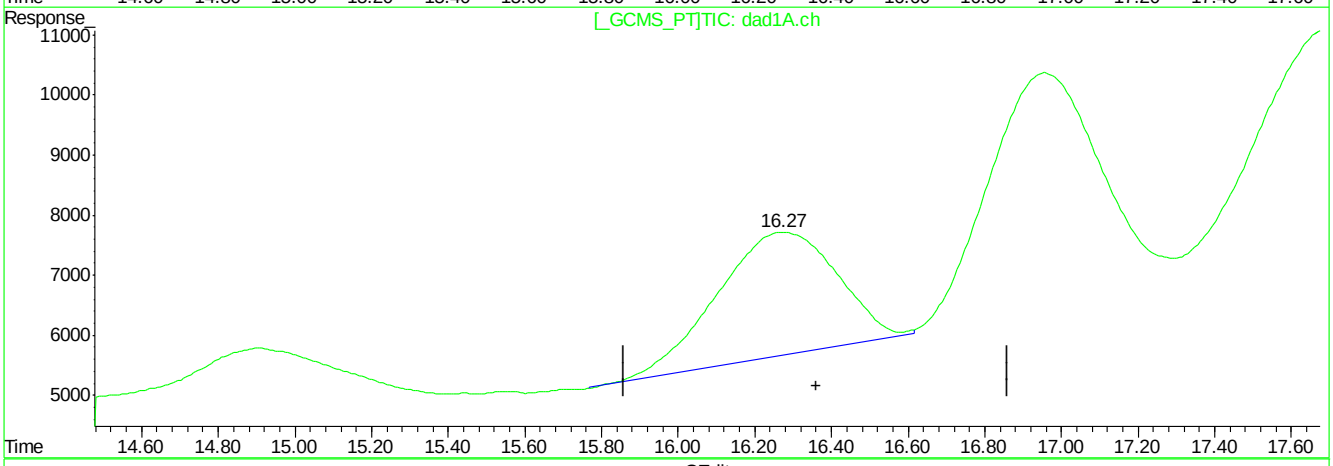
(+) = Expected Retention Time
GG622042.D GGG3024_080821.M Fri Aug 13 10:35:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622042.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622042.D\dad1A.ch
Acq On : 13-Aug-2021, 00:28:15 Operator: jamesb
Sample : FA87620-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(16) o-Nitrotoluene

16.43min 38.337ppb

response 186681

(16) o-Nitrotoluene #2

16.27min 60.718ppb m

response 446669

(+) = Expected Retention Time
GG622042.D GGG3024_080821.M Fri Aug 13 10:35:56 2021

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391142.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391142.D\dad1A.ch
Acq On : 09-Aug-2021, 14:56:04 Operator: jamesb
Sample : op86727-MB Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:24 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.26	11.27	959213	1700295	450.361	523.389
	Spiked Amount 500.000	Range 70 - 136		Recovery =		90.07%	104.68%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

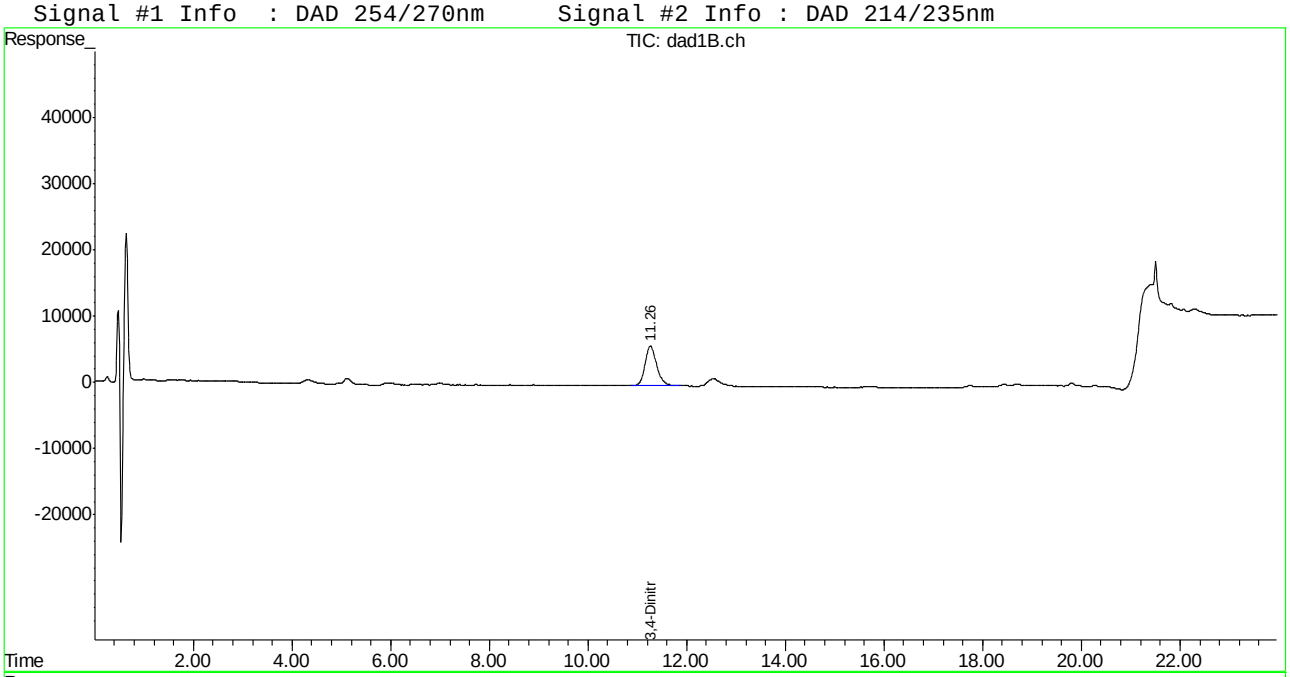
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391142.D GPP2464_080321PRI.M Thu Aug 12 12:59:06 2021 Page 1

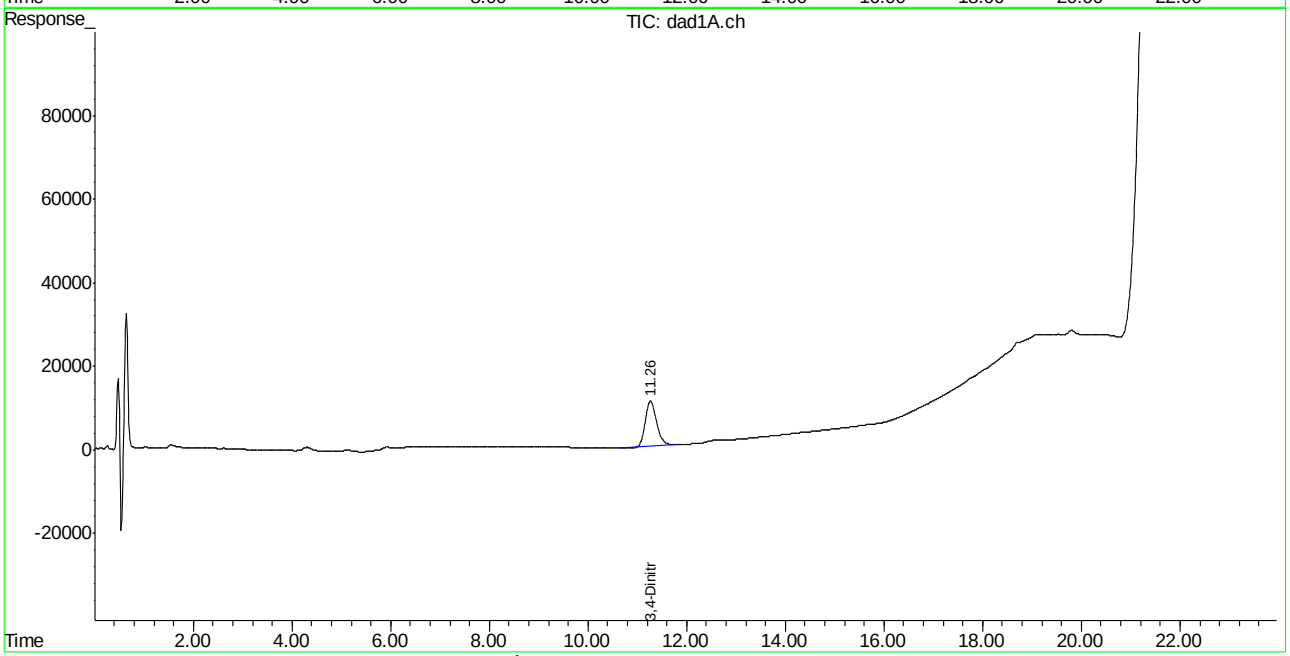
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391142.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391142.D\dad1A.ch
Acq On : 09-Aug-2021, 14:56:04 Operator: jamesb
Sample : op86727-MB Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 12:55 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:23

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1A.ch
Acq On : 12-Aug-2021, 19:14:01 Operator: jamesb
Sample : op86727-MB Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:38 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.87	13.87	2397310	4750020	480.254	487.326m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		96.05%	97.47%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
6)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

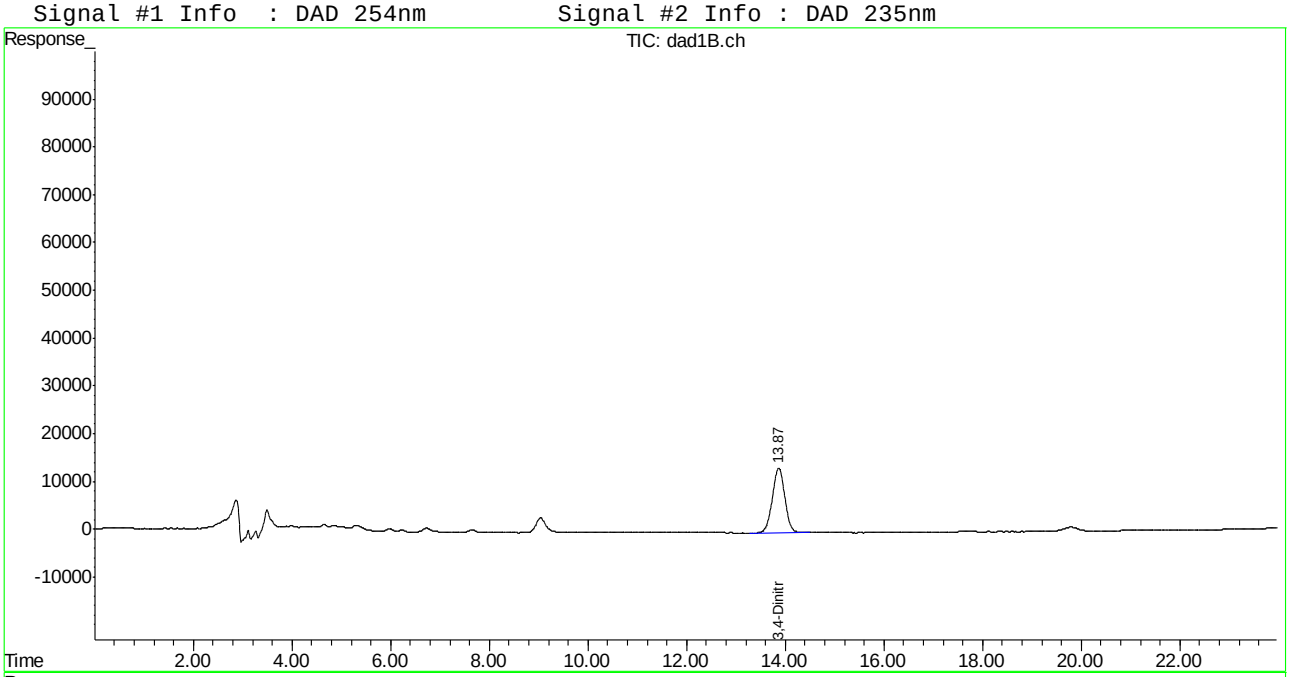
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

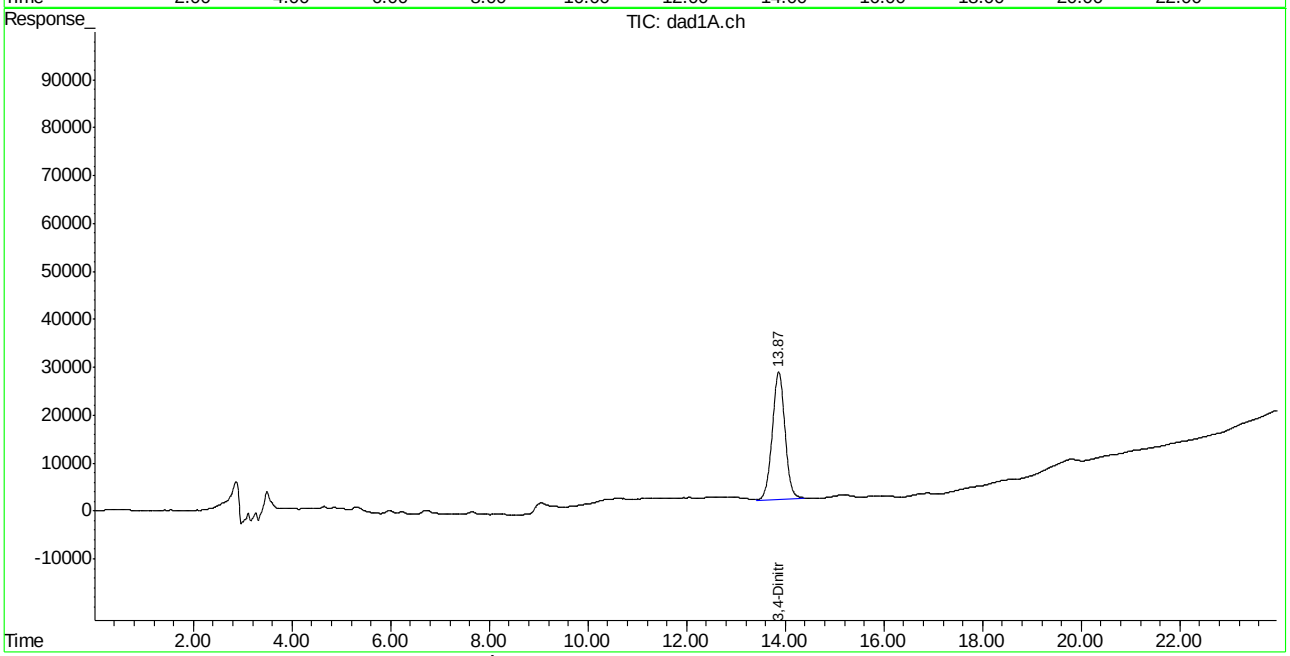
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1A.ch
Acq On : 12-Aug-2021, 19:14:01 Operator: jamesb
Sample : op86727-MB Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:23 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

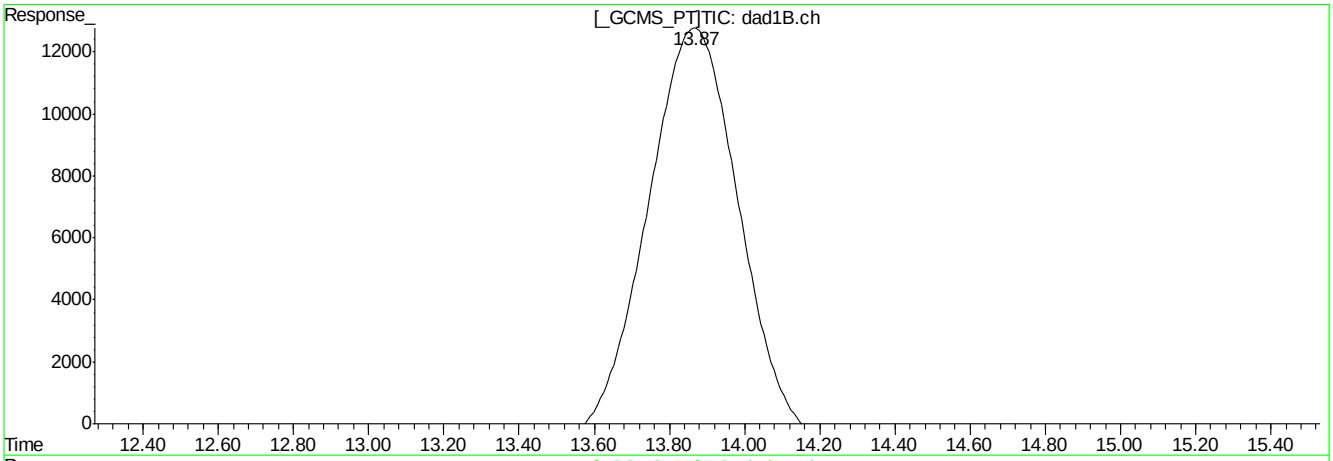
Sample Number: OP86727-MB
Lab FileID: GG622032.D
Injection Time: 08/12/21 19:14
Method: SW846 8330B
Analyst approved: 08/13/21 11:12 James Boone
Supervisor approved: 08/13/21 17:23 Naresh Jiawan

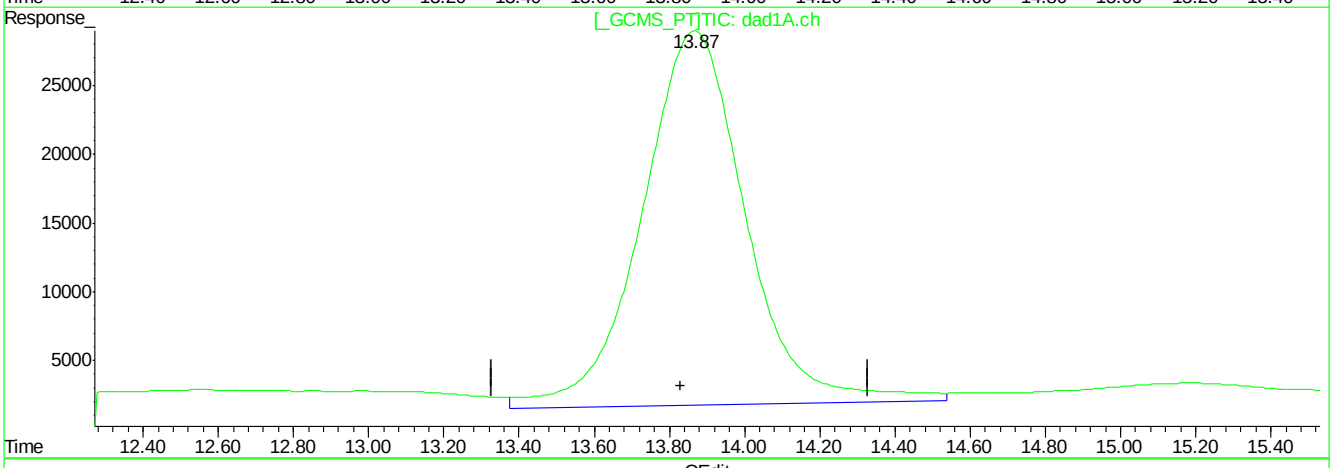
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,4-Dinitrotoluene	610-39-9	2	13.87	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1A.ch
Acq On : 12-Aug-2021, 19:14:01 Operator: jamesb
Sample : op86727-MB Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.87min 480.254ppb

response 2397310

(12) 3,4-Dinitrotoluene #2 (S)

13.87min 537.339ppb

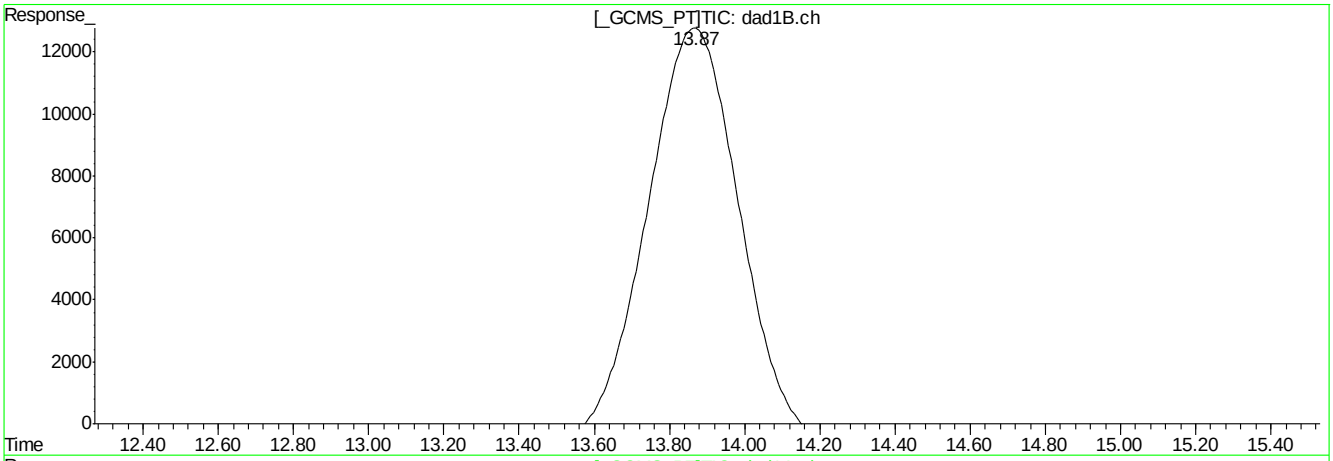
response 5237507

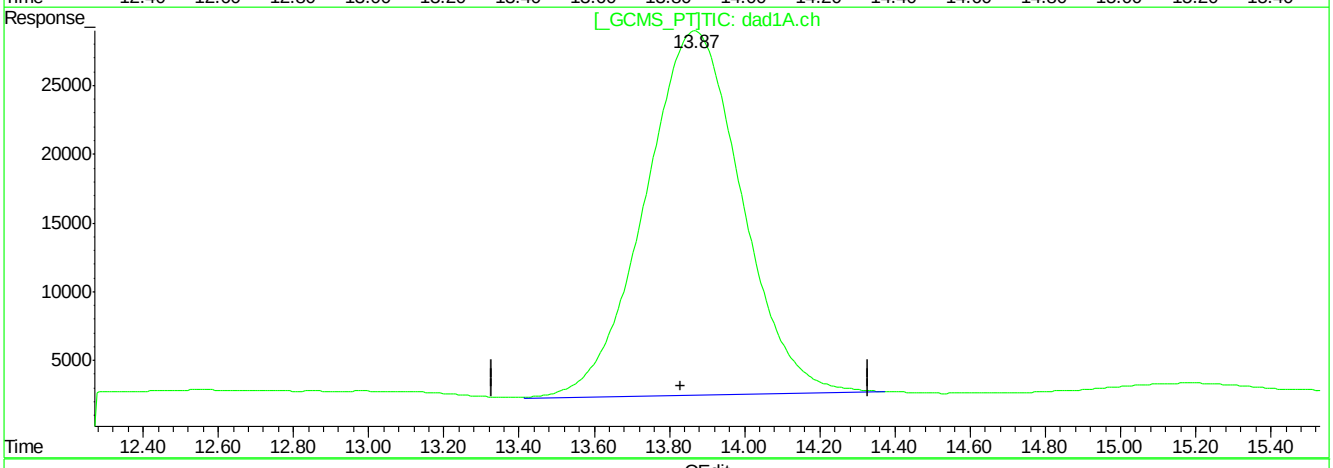
(+) = Expected Retention Time
GG622032.D GGG3024_080821.M Fri Aug 13 10:19:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1A.ch
Acq On : 12-Aug-2021, 19:14:01 Operator: jamesb
Sample : op86727-MB Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.87min 480.254ppb

response 2397310

(12) 3,4-Dinitrotoluene #2 (S)

13.87min 487.326ppb m

response 4750020

(+) = Expected Retention Time
GG622032.D GGG3024_080821.M Fri Aug 13 10:19:51 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:22

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:25 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.27	11.27	1038049	1672400	487.375	514.802
	Spiked Amount 500.000	Range 70 - 136		Recovery =		97.47%	102.96%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.44	1.44	638888	1873389	407.721	404.827
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.89	2.89	807175	1288083	433.098	428.021
6)	1,3,5-Trinitrobe	4.67	4.67	1955289	3822967	485.899	490.591
7)	1,3-Dinitrobenze	5.87	5.87	2471635	1733017	475.062	463.919
8)	3,5-Dinitroanili	6.21	6.22	1868288	3214227	469.154	453.684
9)	Nitrobenzene	7.46	7.46	1373828	1338752	451.763	446.661
10)	Nitroglycerin	0.00	9.05	0	555400	N.D.	443.618m#
11)	Tetryl	9.54	9.54	716330	1110412	228.645	230.661m
12)	2,4,6-Trinitroto	9.92	9.92	1232469	1630173	325.951	364.310
13)	2-Amino-4,6-Dini	10.27	10.27	1592286	2290780	460.363	456.737
14)	4-Amino-2,6-Dini	10.80	10.80	1132682	2118292	465.321	438.430
16)	2,4-Dinitrotolue	11.91	11.91	2160314	1307740	454.543	423.838
17)	2,6-Dinitrotolue	12.40	12.40	1534777	1675512	560.539	499.206
18)	o-Nitrotoluene	15.48	15.48	964238	1207695	421.769	412.614m
19)	p-Nitrotoluene	16.05	16.06	1538497	1087429	447.123	385.080m
20)	m-Nitrotoluene	16.87	16.87	1432880	1663422	445.641	450.704m
21)	PETN	0.00	18.64	0	701550	N.D. d	549.138m

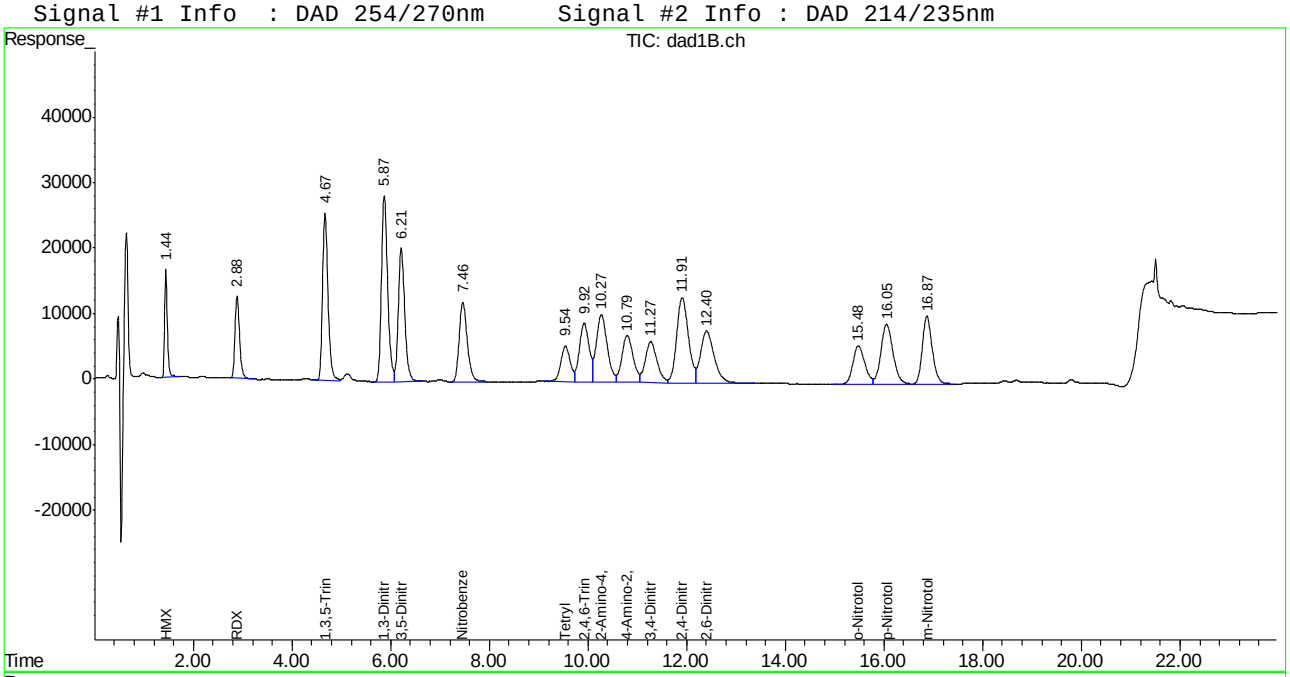
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

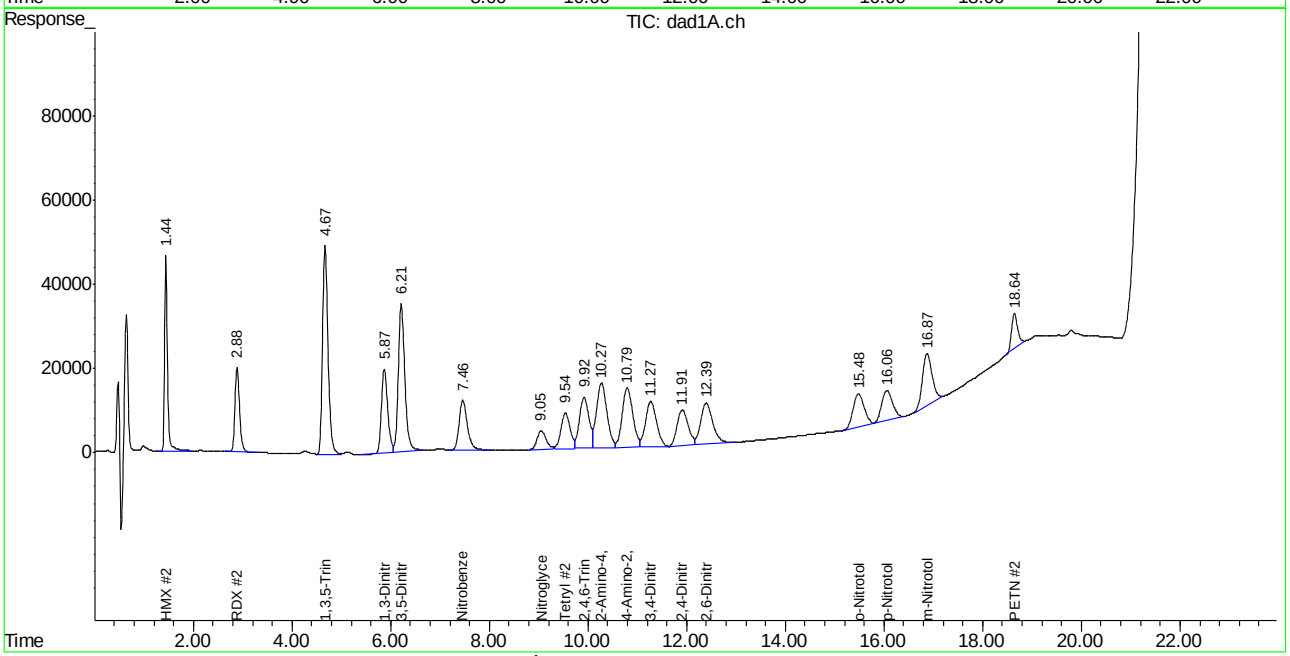
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 13 17:10 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

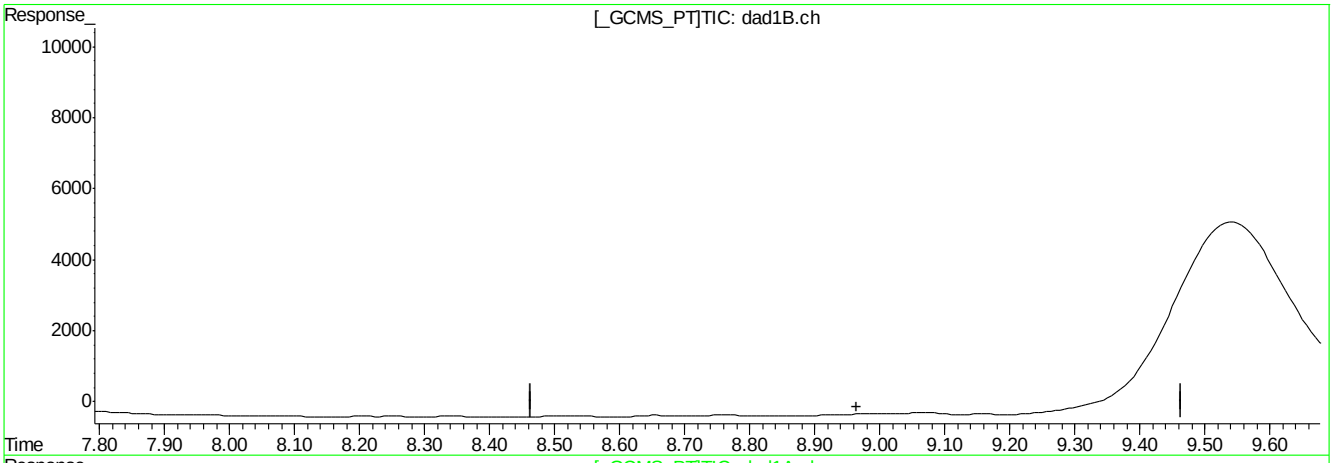
Sample Number: OP86727-BS
Lab FileID: PP391143.D
Injection Time: 08/09/21 15:27
Method: SW846 8330B
Analyst approved: 08/13/21 17:12 James Boone
Supervisor approved: 08/13/21 17:22 Naresh Jiawan

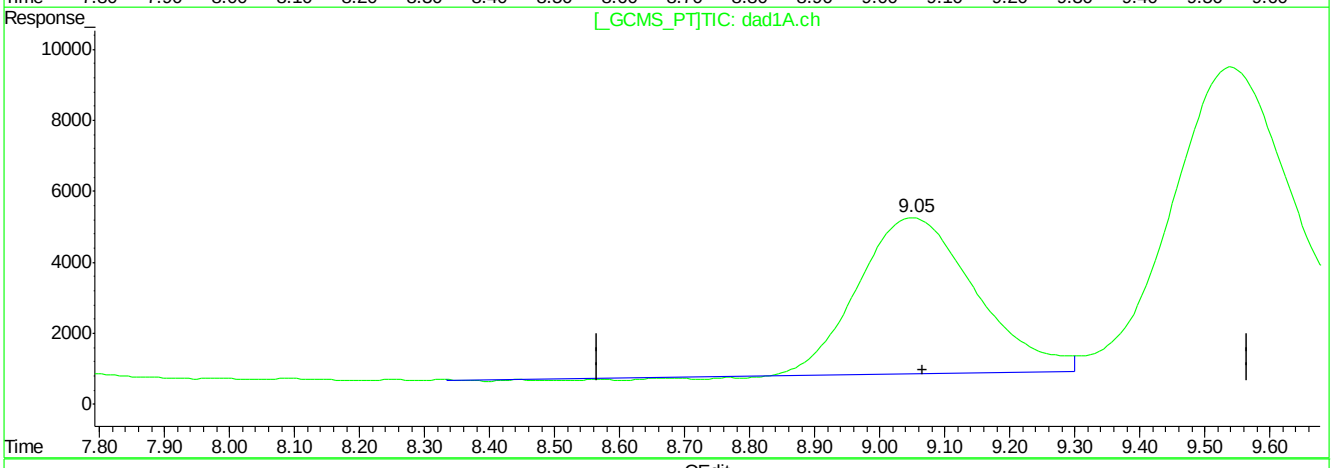
Parameter	CAS	Sig#	R.T. (min.)	Reason
Nitroglycerine	55-63-0	2	9.05	Poor instrument integration
Tetryl	479-45-8	2	9.54	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.48	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.06	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.87	Poor instrument integration
PETN	78-11-5	2	18.64	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.05min 428.479ppb

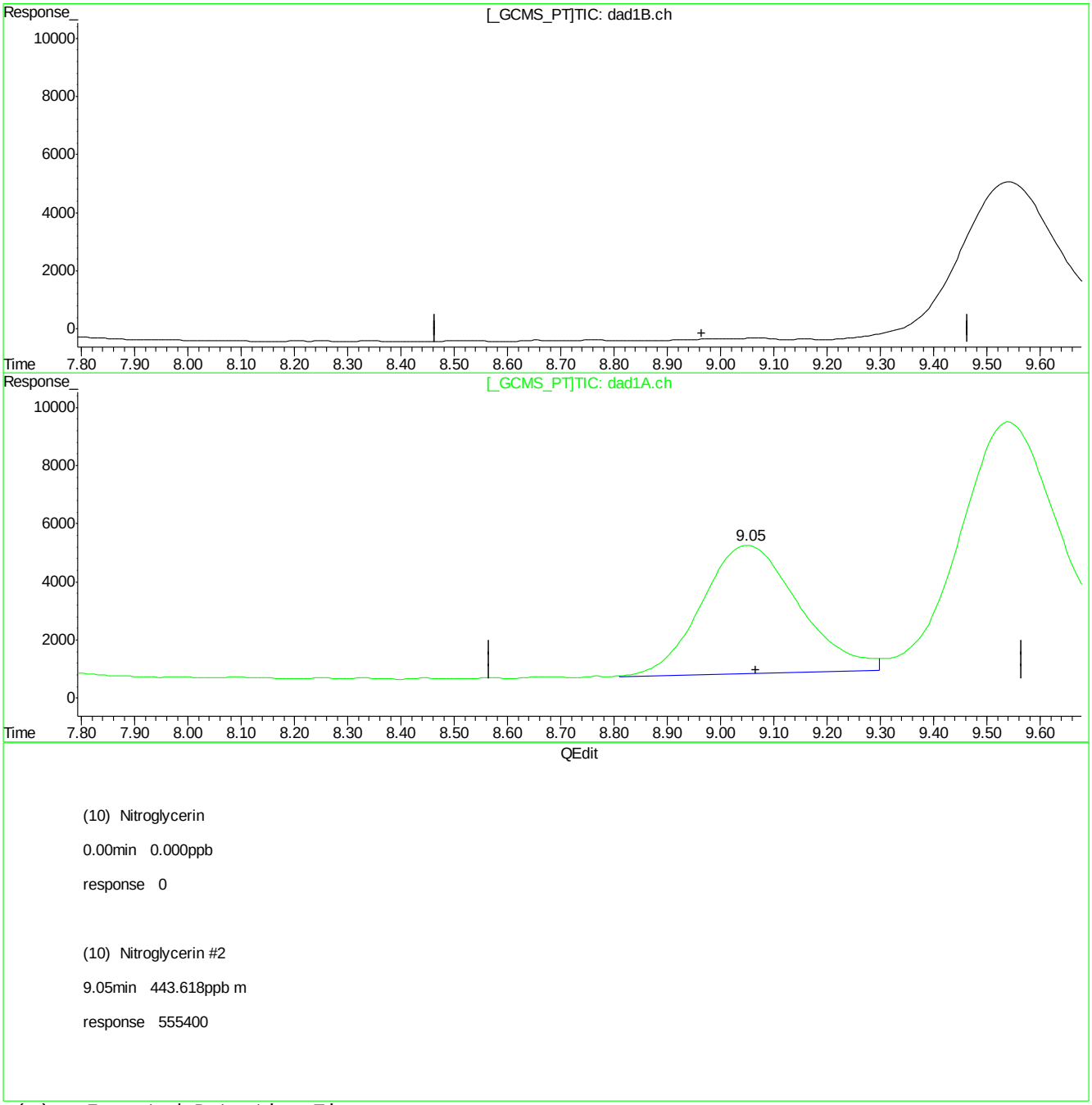
response 536446

(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:56:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.05min 443.618ppb m

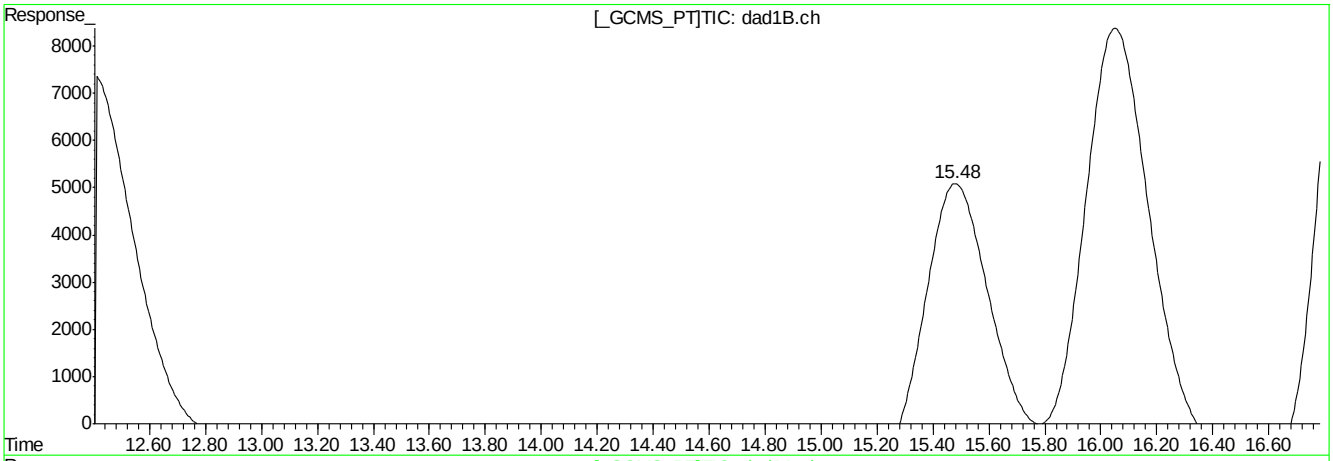
response 555400

(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:56:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.48min 421.769ppb

response 964238

(18) o-Nitrotoluene #2

15.48min 224.898ppb

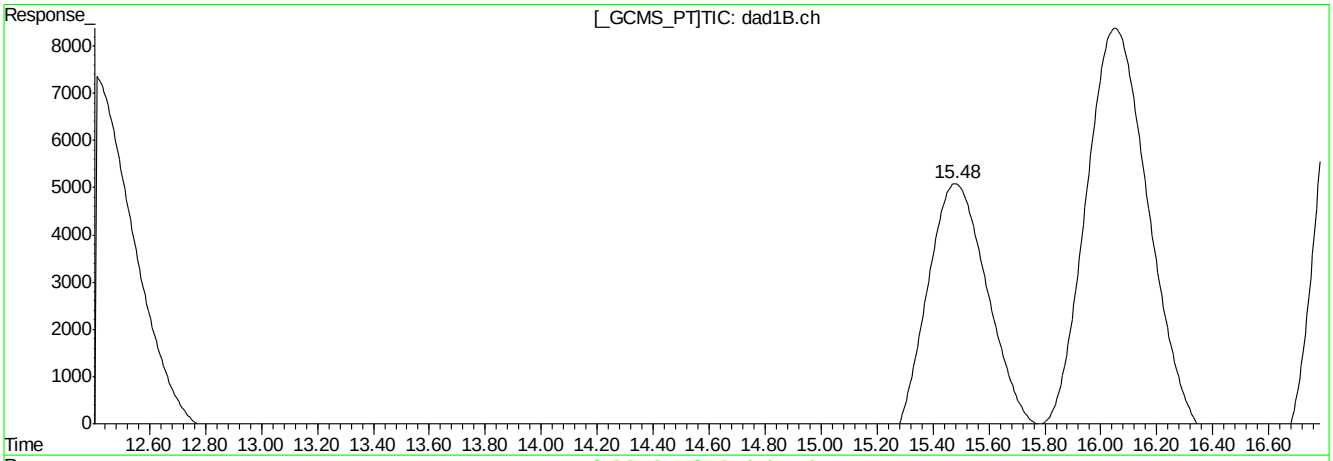
response 658262

(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.48min 421.769ppb

response 964238

(18) o-Nitrotoluene #2

15.48min 412.614ppb m

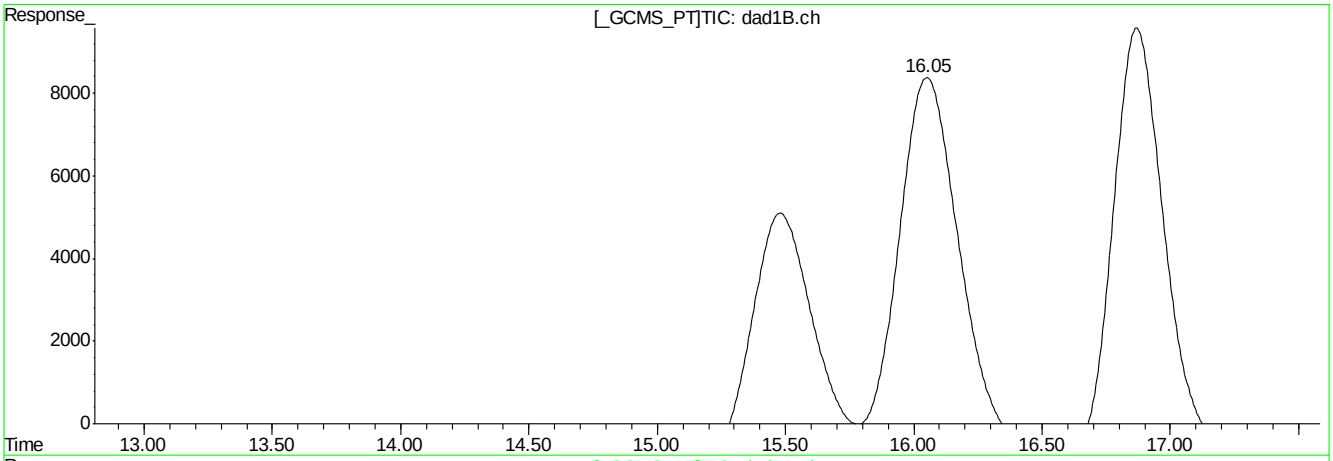
response 1207695

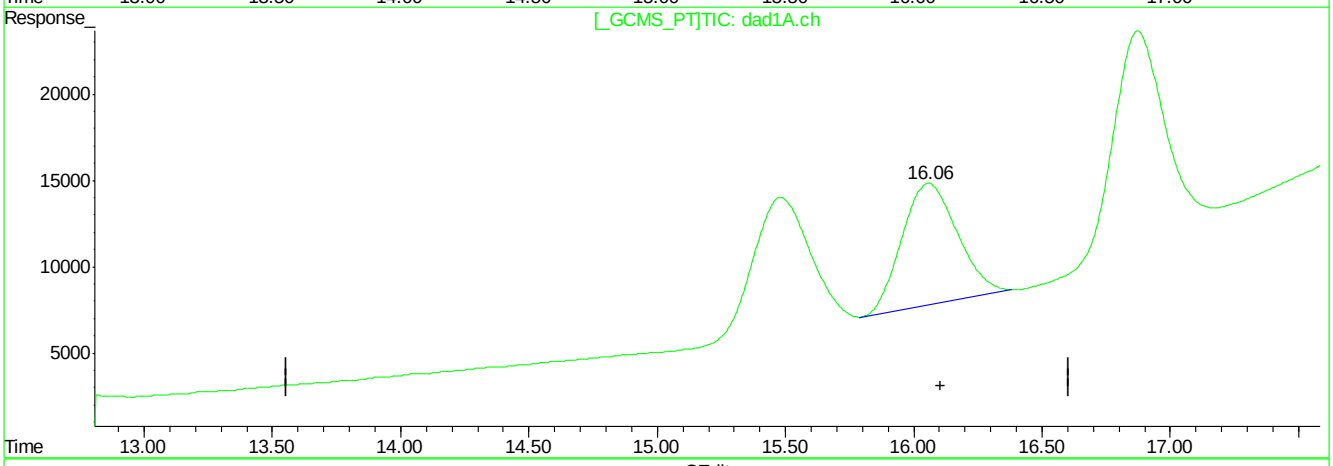
(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.05min 447.123ppb

response 1538497

(19) p-Nitrotoluene #2

16.06min 372.400ppb

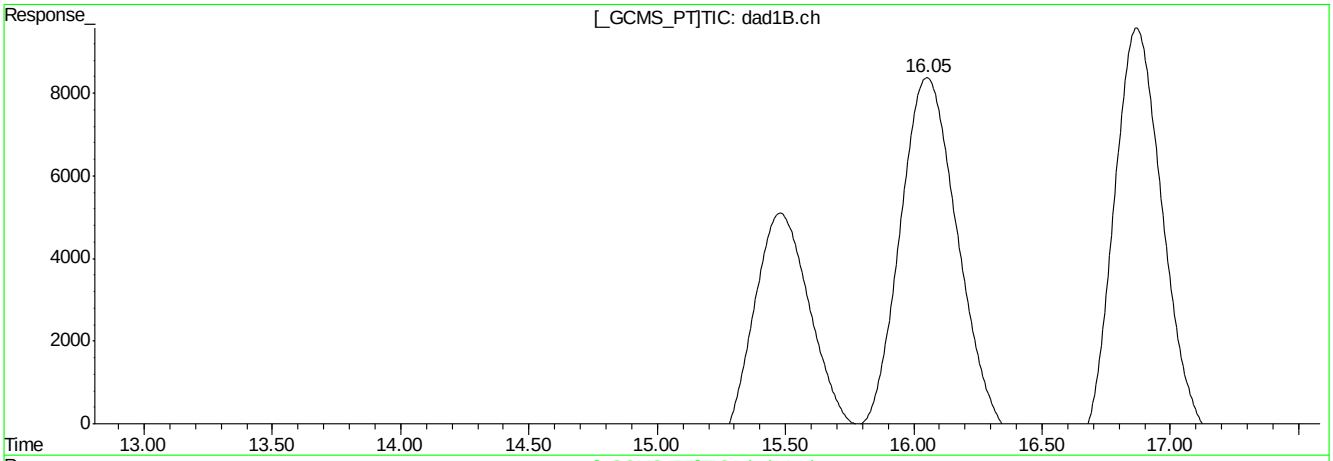
response 1051622

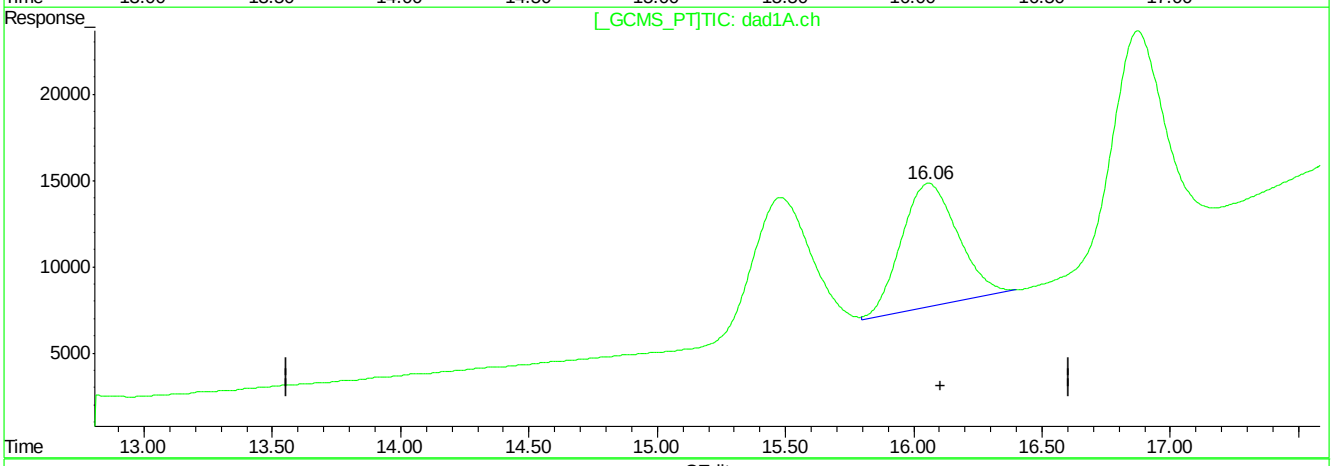
(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.05min 447.123ppb

response 1538497

(19) p-Nitrotoluene #2

16.06min 385.080ppb m

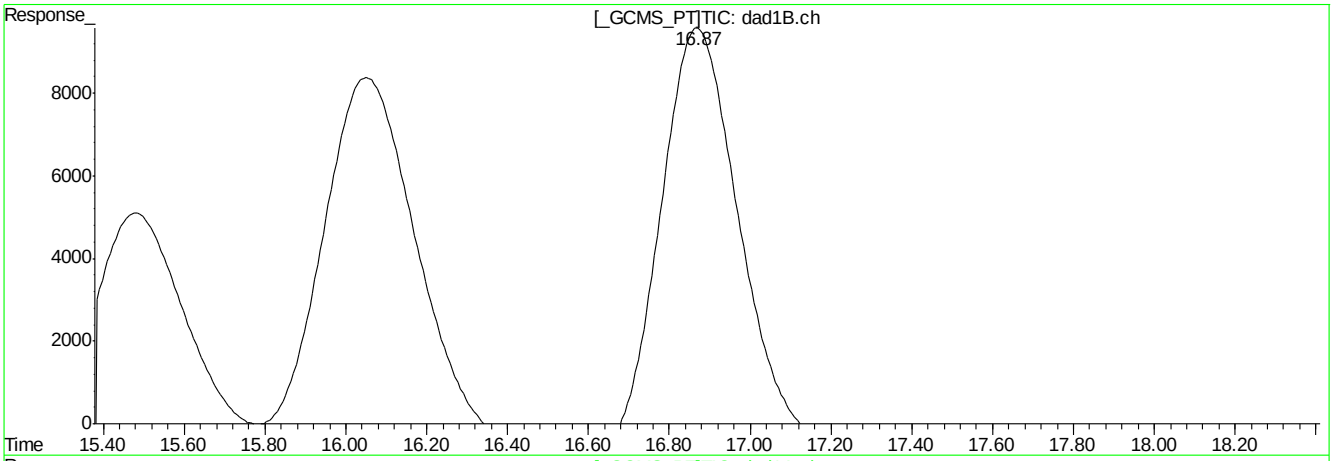
response 1087429

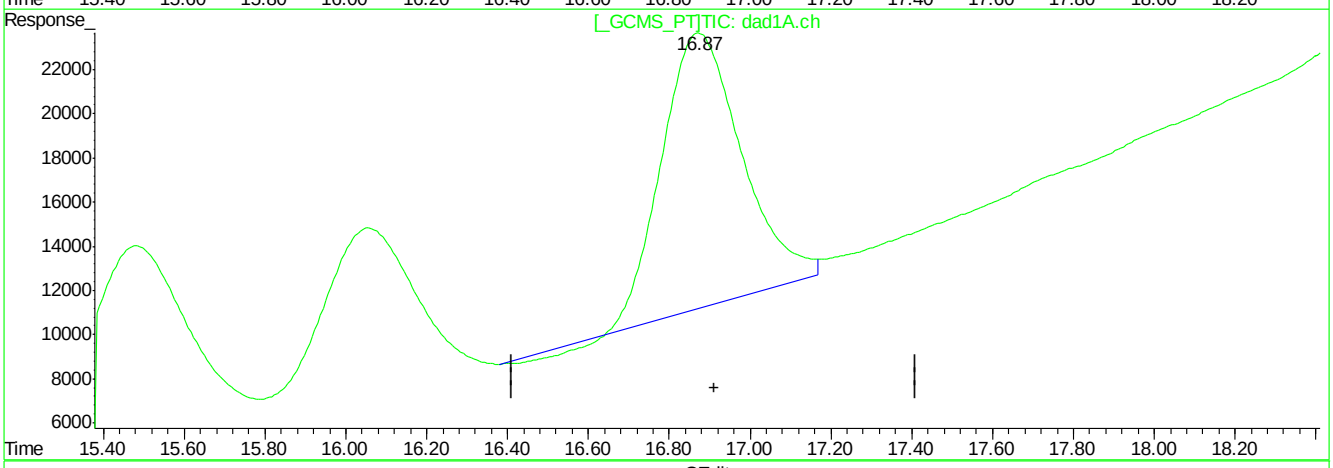
(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 445.641ppb

response 1432880

(20) m-Nitrotoluene #2

16.88min 453.362ppb

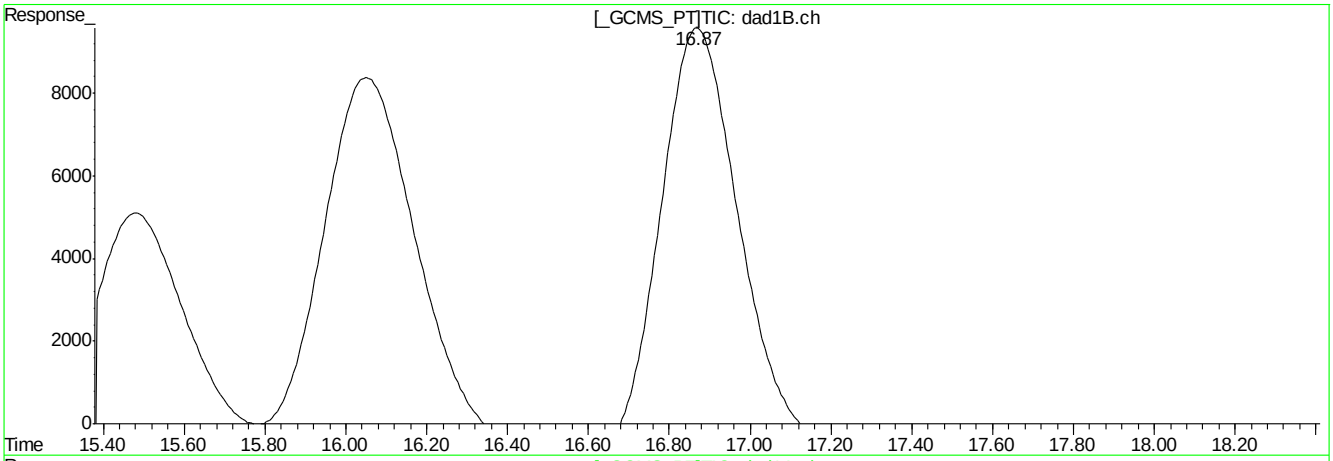
response 1673231

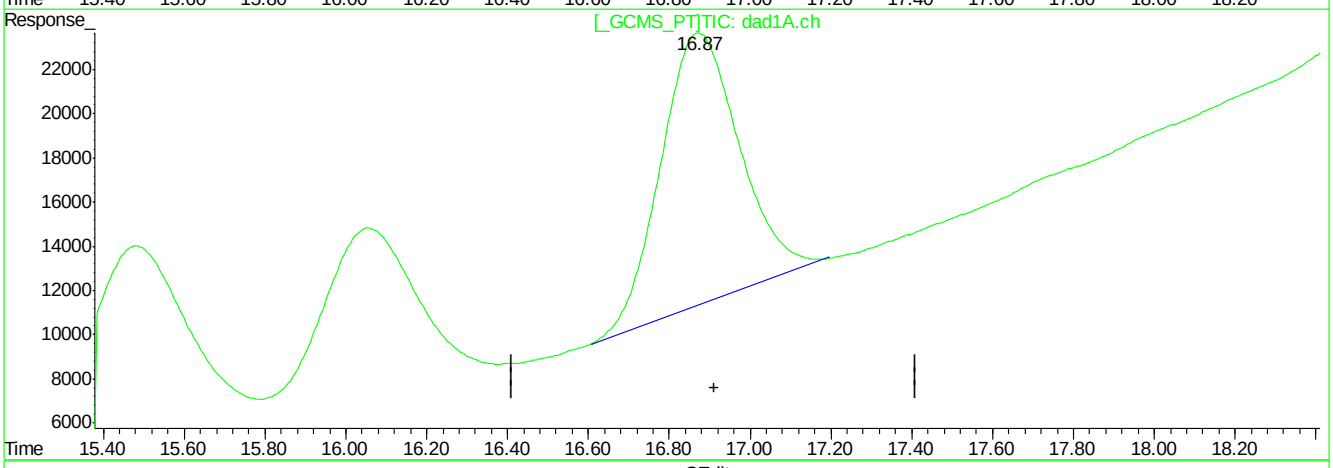
(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 445.641ppb

response 1432880

(20) m-Nitrotoluene #2

16.87min 450.704ppb m

response 1663422

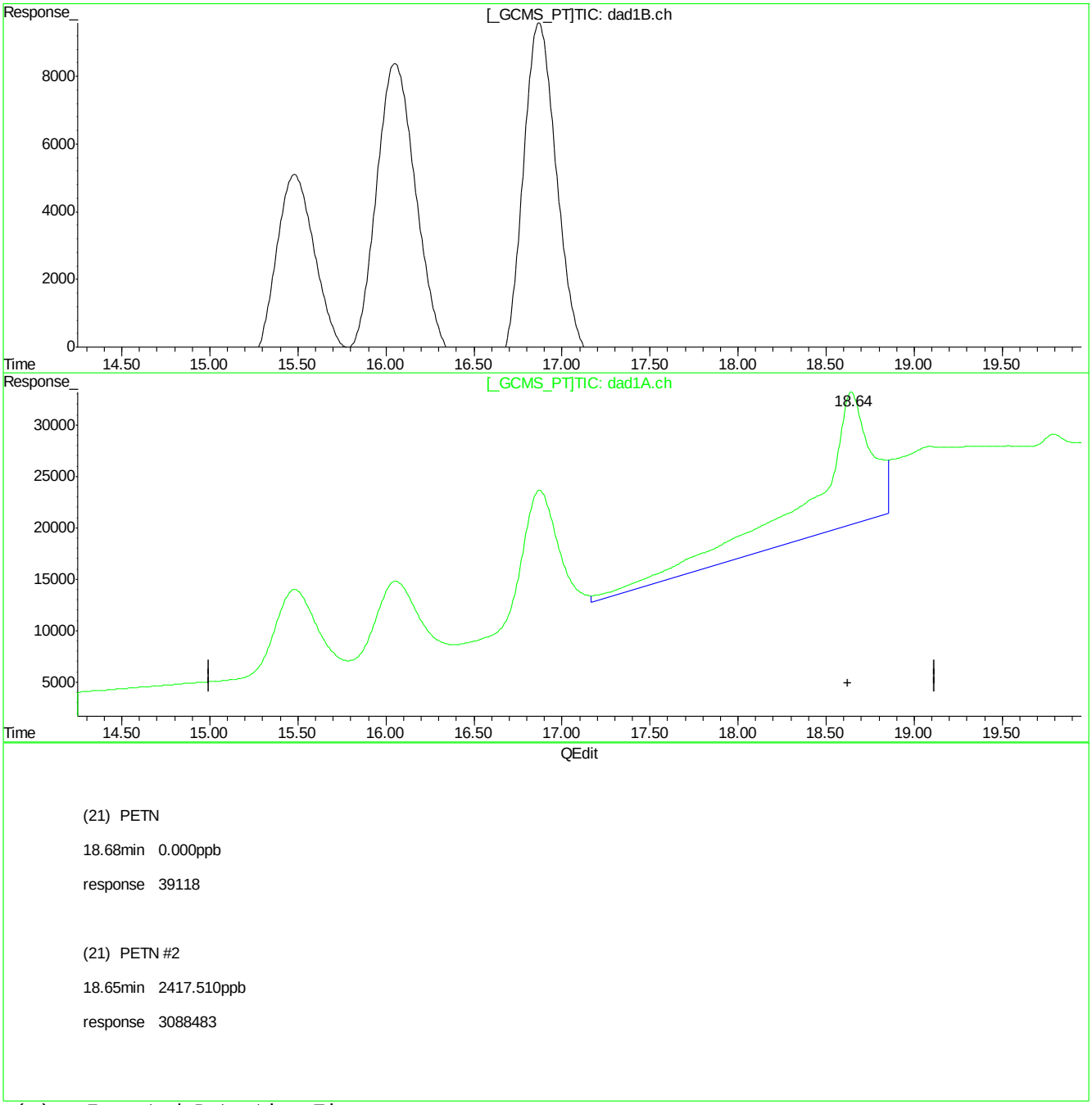
(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:52 2021

PP391143.D edits: m-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

18.68min 0.000ppb

response 39118

(21) PETN #2

18.65min 2417.510ppb

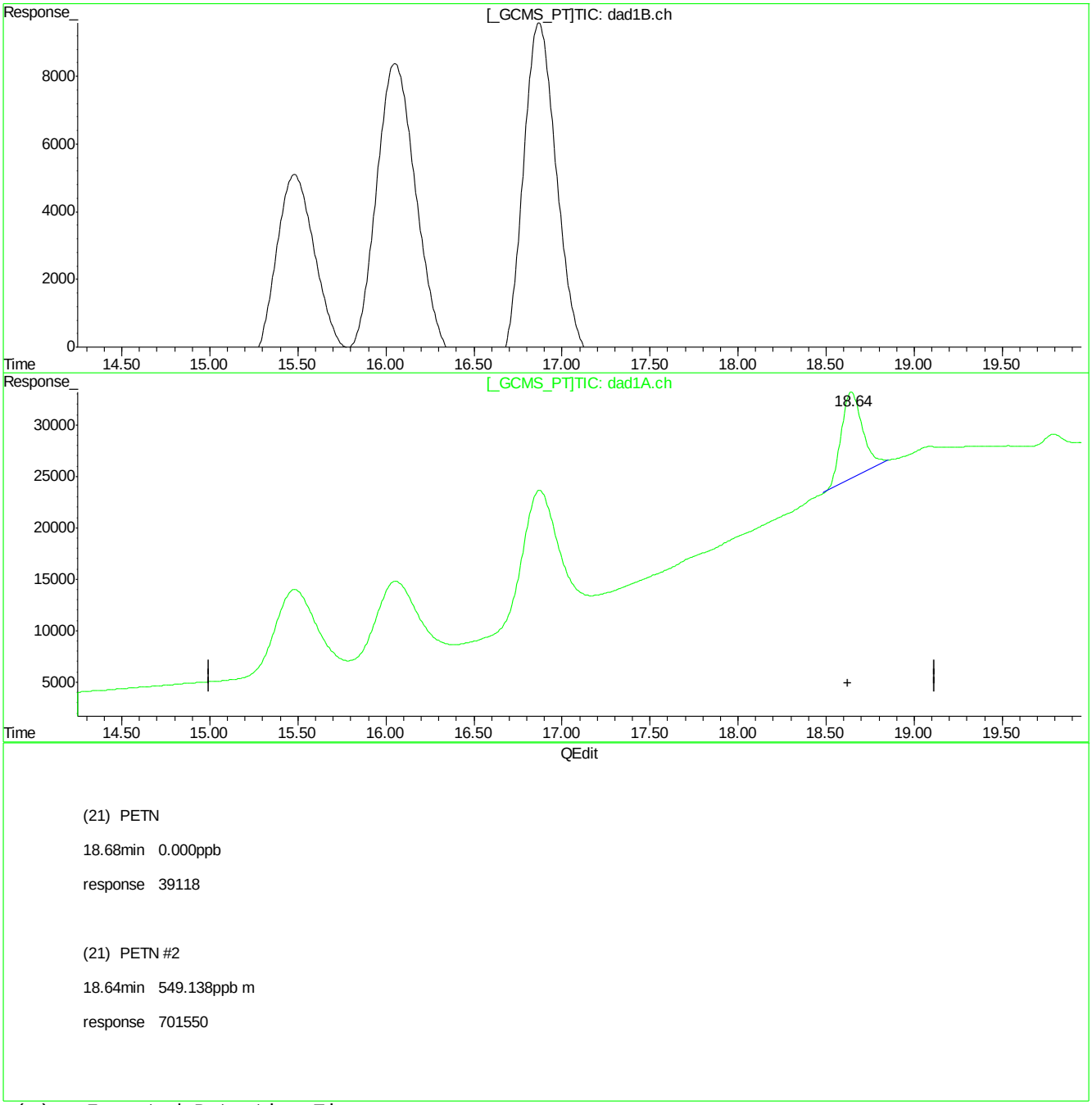
response 3088483

(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

18.68min 0.000ppb

response 39118

(21) PETN #2

18.64min 549.138ppb m

response 701550

(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:59 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:28

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : op86727,GPP2467,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:41 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.26	11.26	1061744	1723339	498.500	530.483
	Spiked Amount 500.000	Range 70 - 136		Recovery =		99.70%	106.10%
	Target Compounds						
1)	TNX	1.31	1.31	625293	1004255	375.700m	367.239m
2)	HMX	1.44	1.44	1660163	4635733	1059.470	1001.751
3)	DNX	1.69	1.69	1088677	1703203	496.487	500.138
4)	MNX	2.27	2.27	2080787	3002989	801.043	738.258
5)	RDX	2.88	2.88	1235549	1875353	662.946	623.167
6)	1,3,5-Trinitrobe	4.67	4.67	4473061	8794133	1111.577	1128.527
7)	1,3-Dinitrobenze	5.87	5.87	2602203	1875174	500.158	501.974
8)	3,5-Dinitroanili	6.21	6.21	2013797	3533035	505.693	498.683
9)	Nitrobenzene	7.46	7.46	1444732	1413384	475.079	471.561
10)	Nitroglycerin	0.00	9.05	0	580829	N.D.	463.929 #
11)	Tetryl	9.53	9.53	735554	1150886	234.781	239.069
12)	2,4,6-Trinitroto	9.92	9.92	3406266	4324149	900.854	966.357
13)	2-Amino-4,6-Dini	10.25	10.25	2352994	3496948	680.299	697.223
14)	4-Amino-2,6-Dini	10.78	10.78	1480416	2852131	608.175	590.316
16)	2,4-Dinitrotolue	11.90	11.90	2283632	1389718	480.489	450.407
17)	2,6-Dinitrotolue	12.39	12.39	1747725	1922229	638.313	572.714
18)	o-Nitrotoluene	15.47	15.46	1009288	1293235	441.474	441.839m
19)	p-Nitrotoluene	16.04	16.05	1613135	1115902	468.815	395.163
20)	m-Nitrotoluene	16.86	16.86	1509169	1794151	469.368	486.125m
21)	PETN	0.00	18.64	0	682735	N.D. d	534.411m

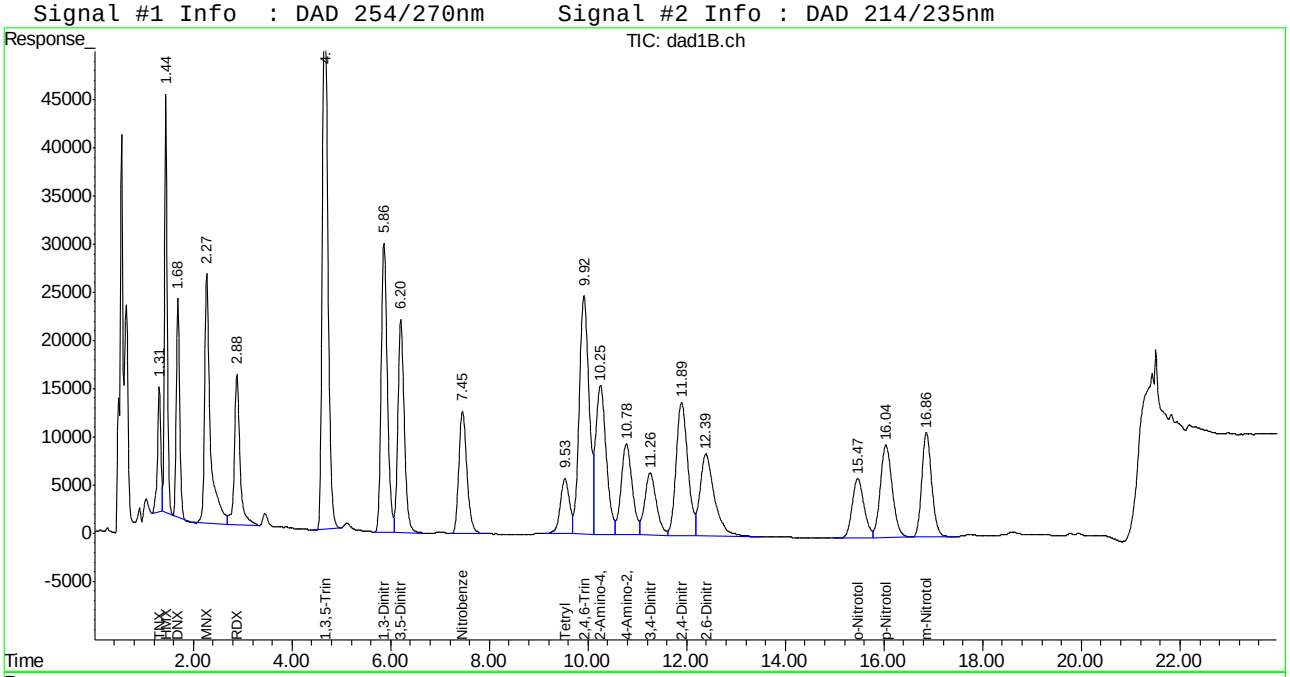
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391159.D GPP2464_080321PRI.M Fri Aug 13 17:10:48 2021 Page 1

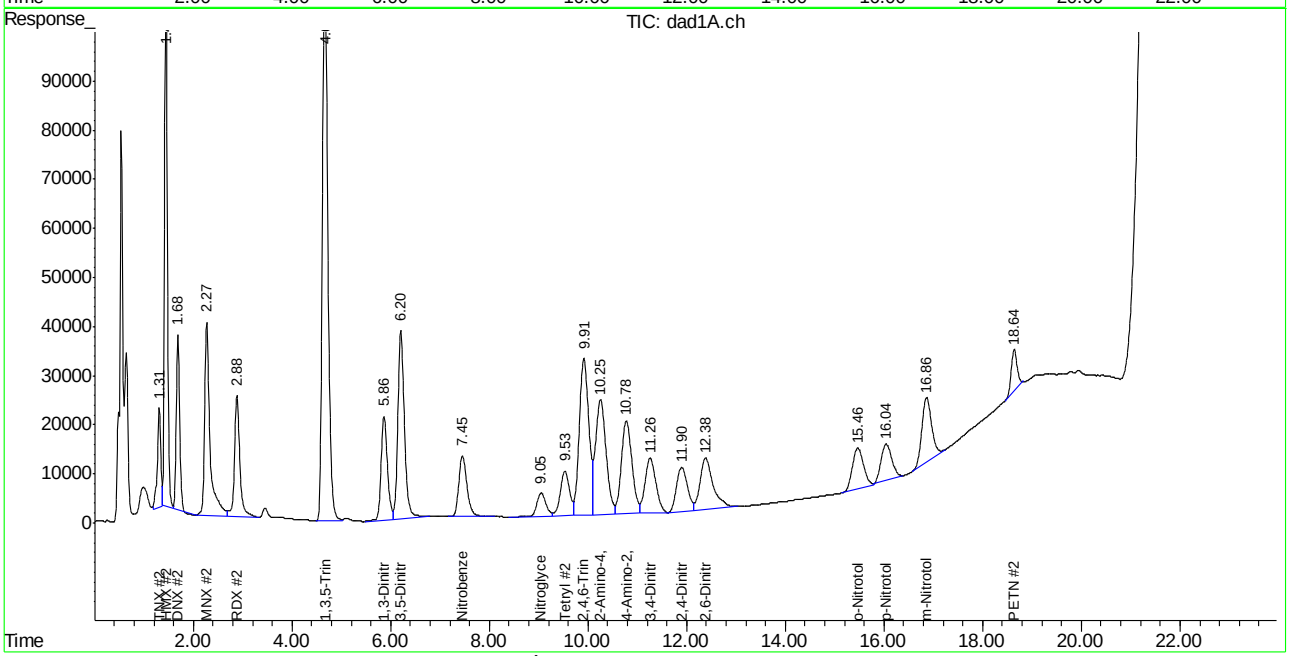
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : op86727,GPP2467,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 15:27 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

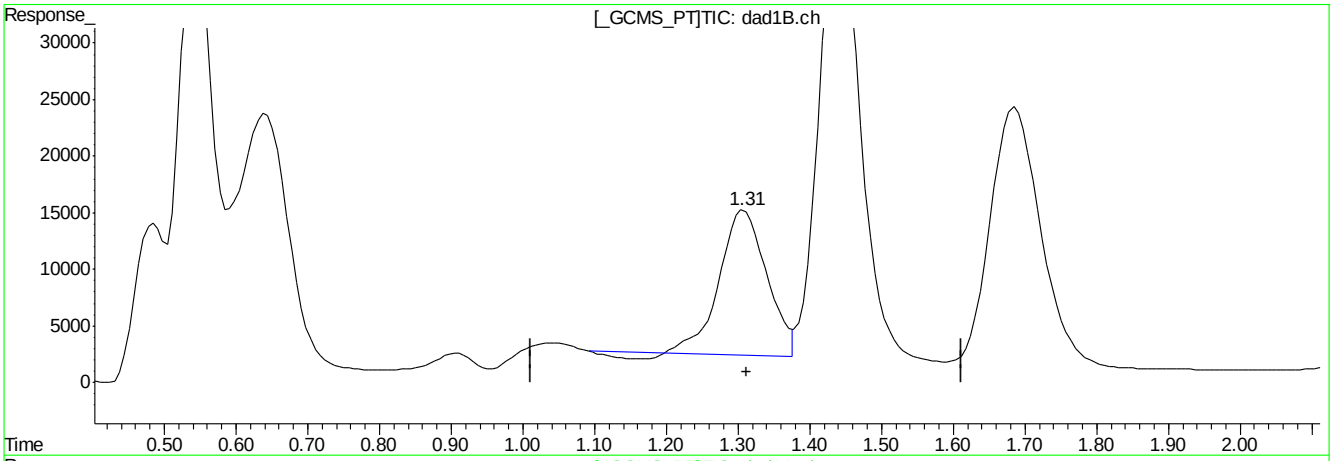
Sample Number: OP86727-MS2
Lab FileID: PP391159.D
Injection Time: 08/09/21 23:43
Method: SW846 8330B
Analyst approved: 08/13/21 17:12 James Boone
Supervisor approved: 08/13/21 17:28 Naresh Jiawan

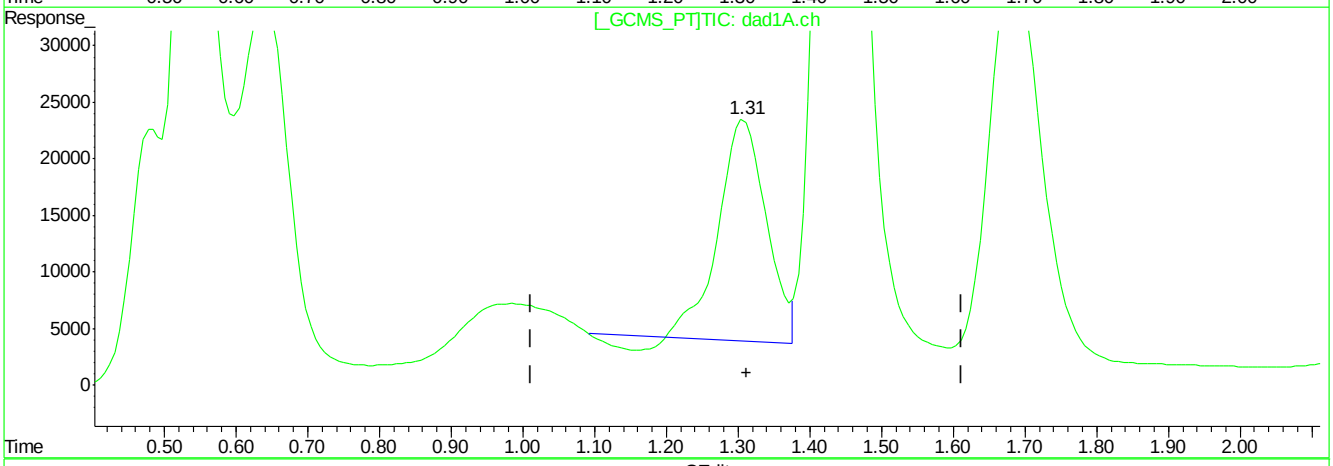
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.31	Poor instrument integration
TNX		2	1.31	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.46	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.64	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 349.067ppb

response 580968

(1) TNX #2

1.31min 318.997ppb

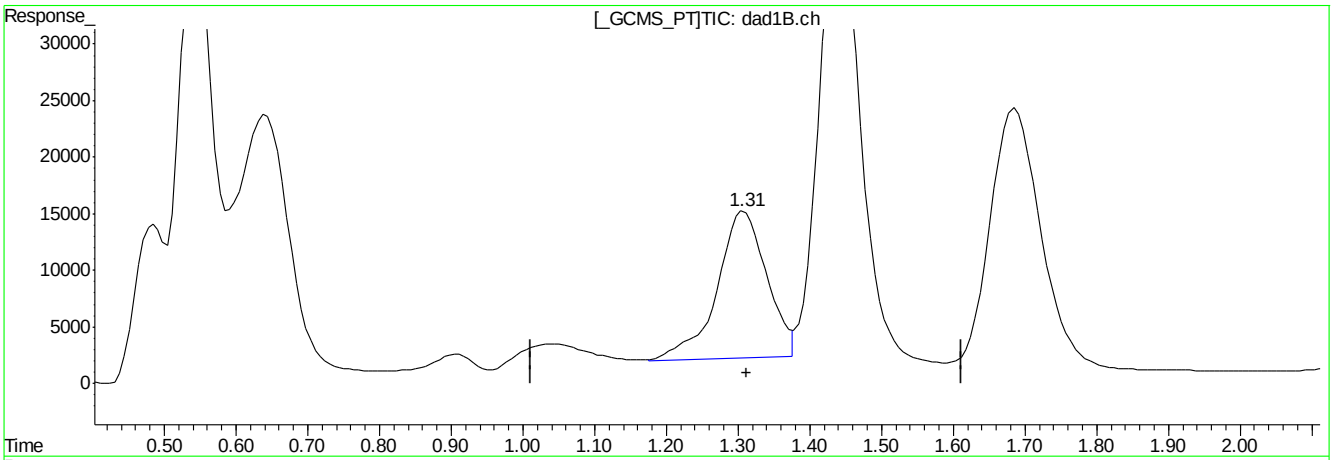
response 872332

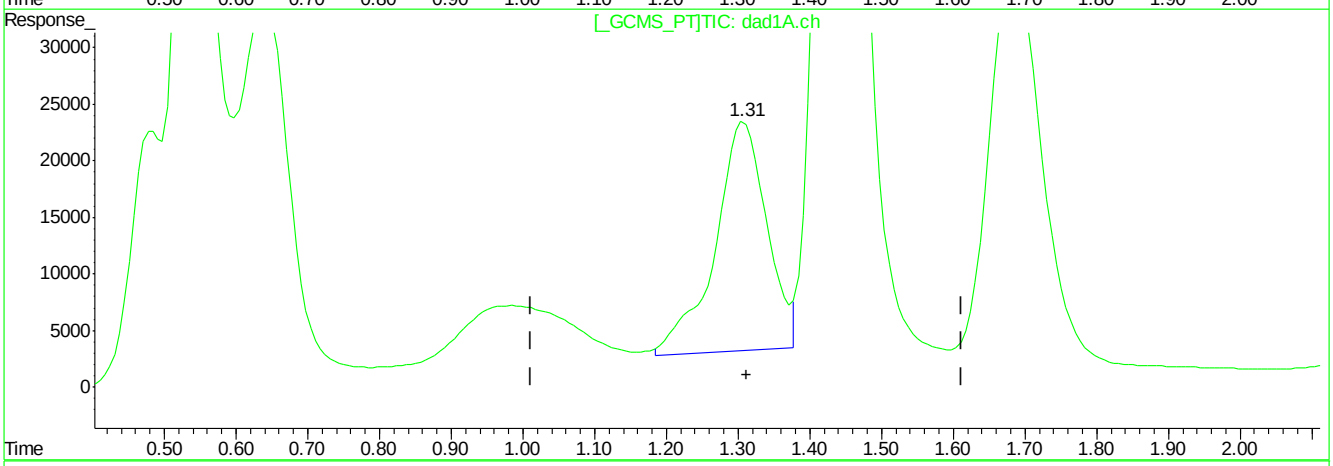
(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:26:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 375.700ppb m

response 625293

(1) TNX #2

1.31min 367.239ppb m

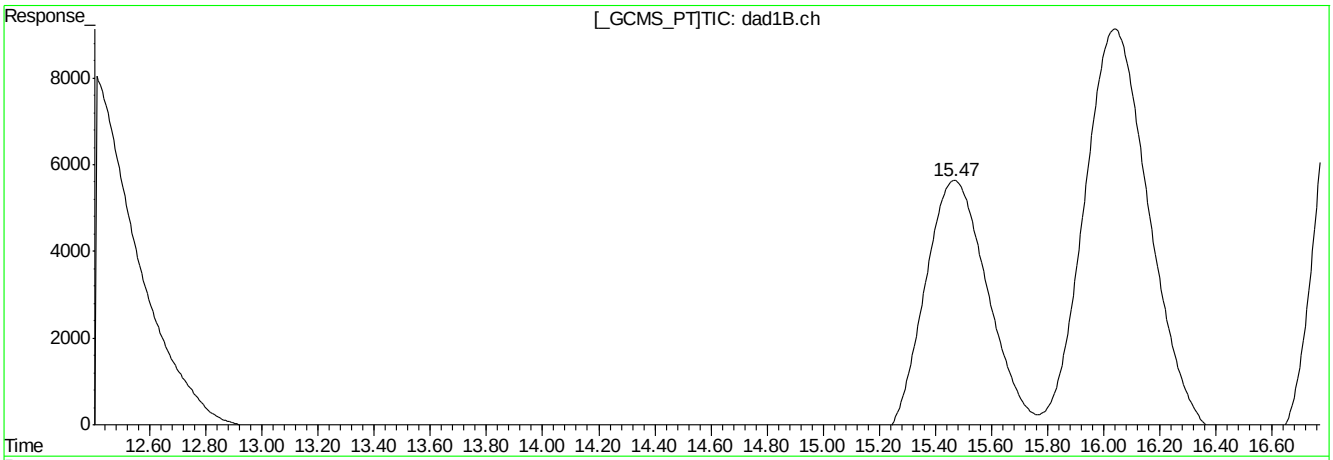
response 1004255

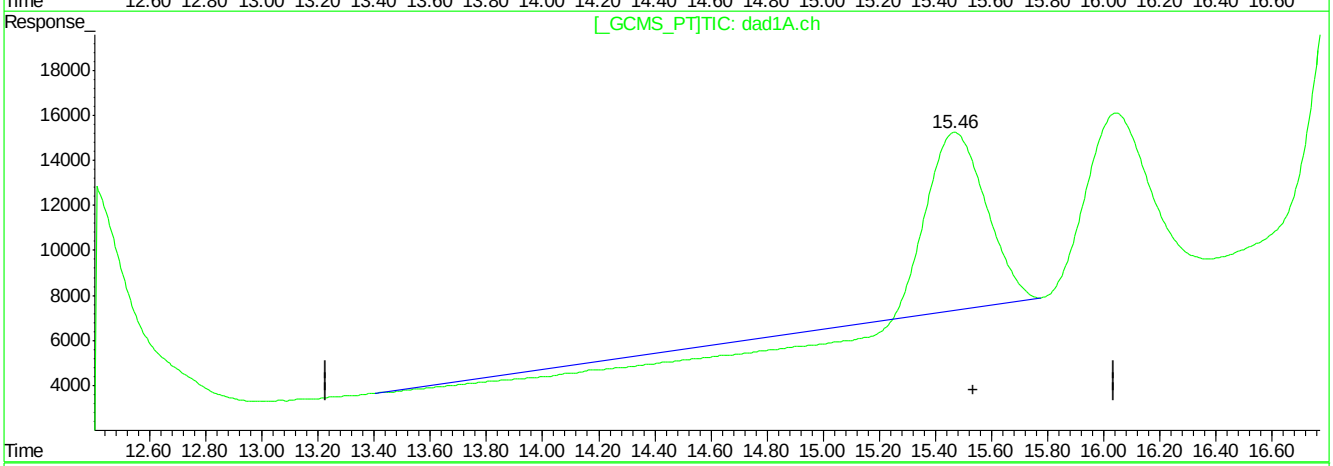
(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:26:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 441.474ppb

response 1009288

(18) o-Nitrotoluene #2

15.47min 249.469ppb

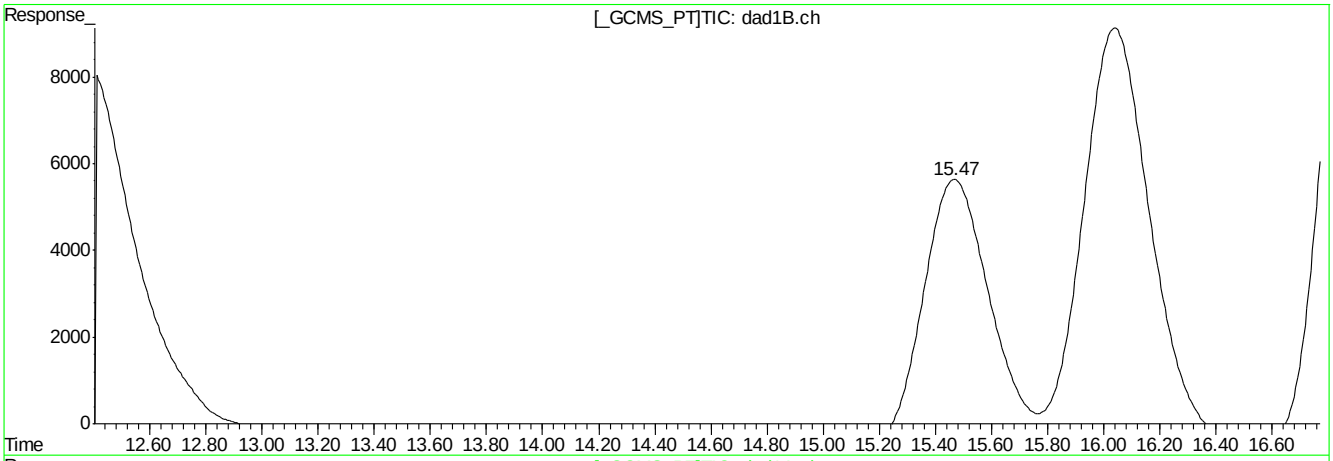
response 730180

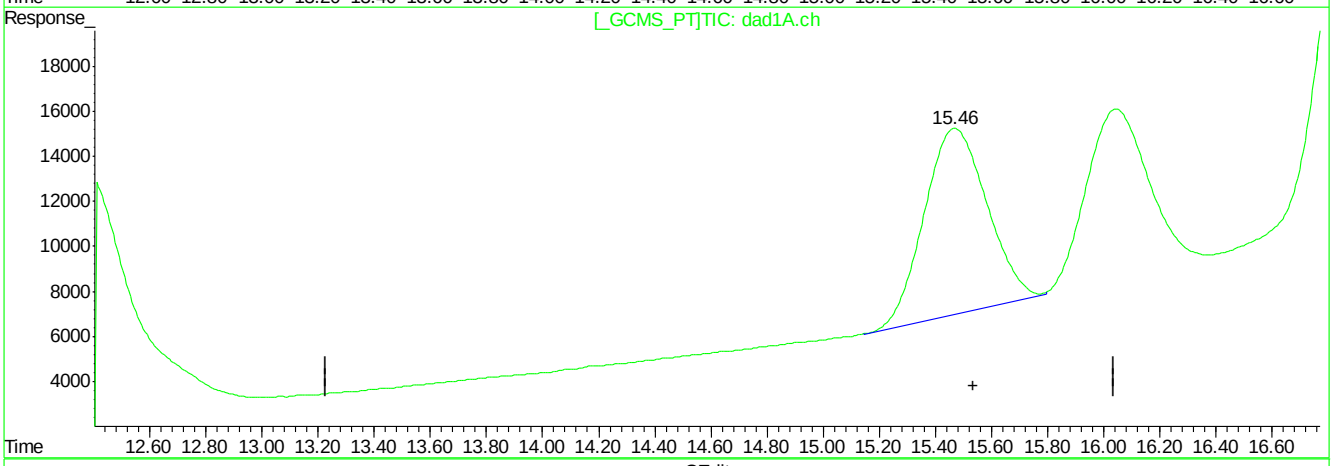
(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:27:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 441.474ppb

response 1009288

(18) o-Nitrotoluene #2

15.46min 441.839ppb m

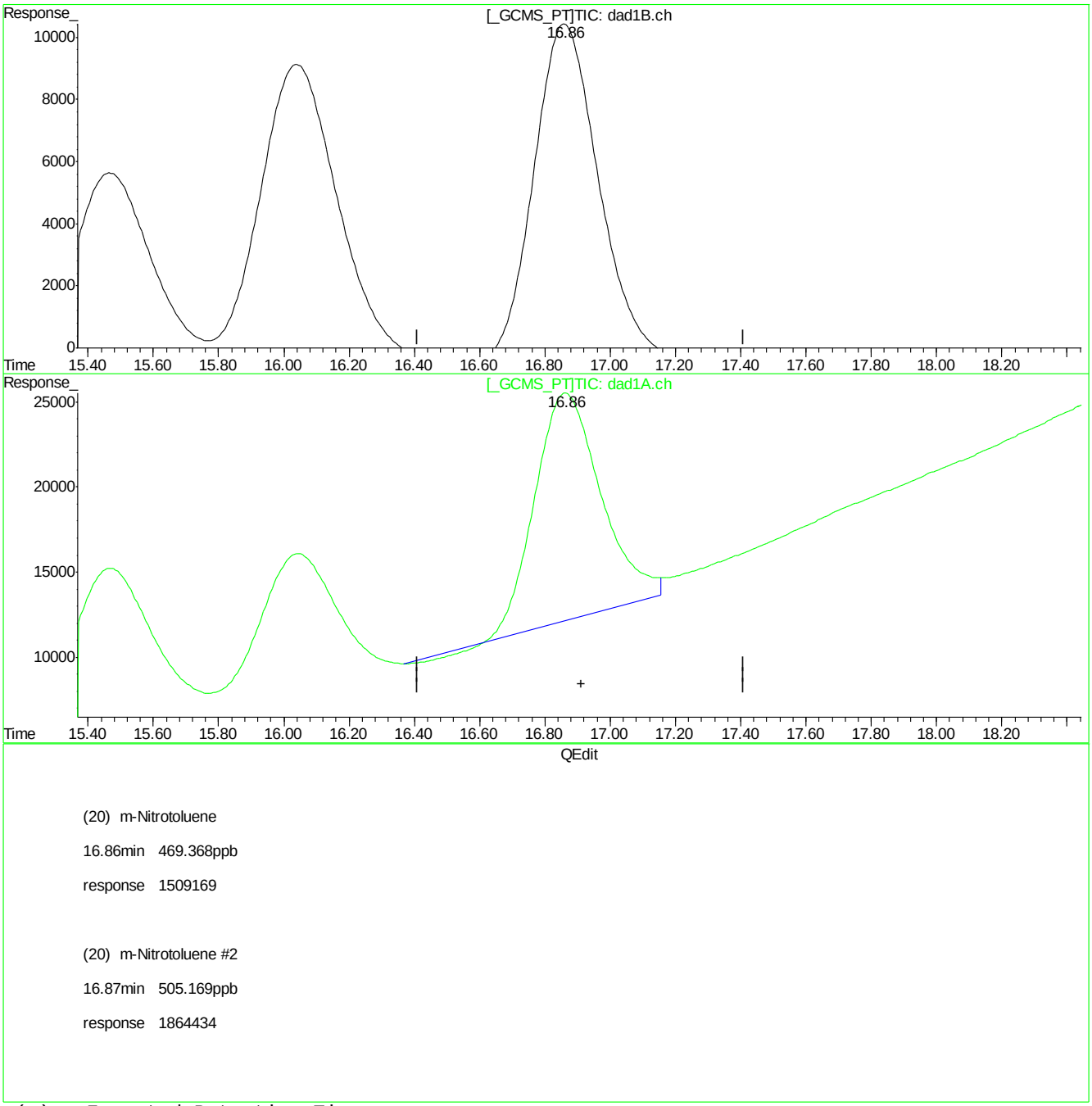
response 1293235

(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:27:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

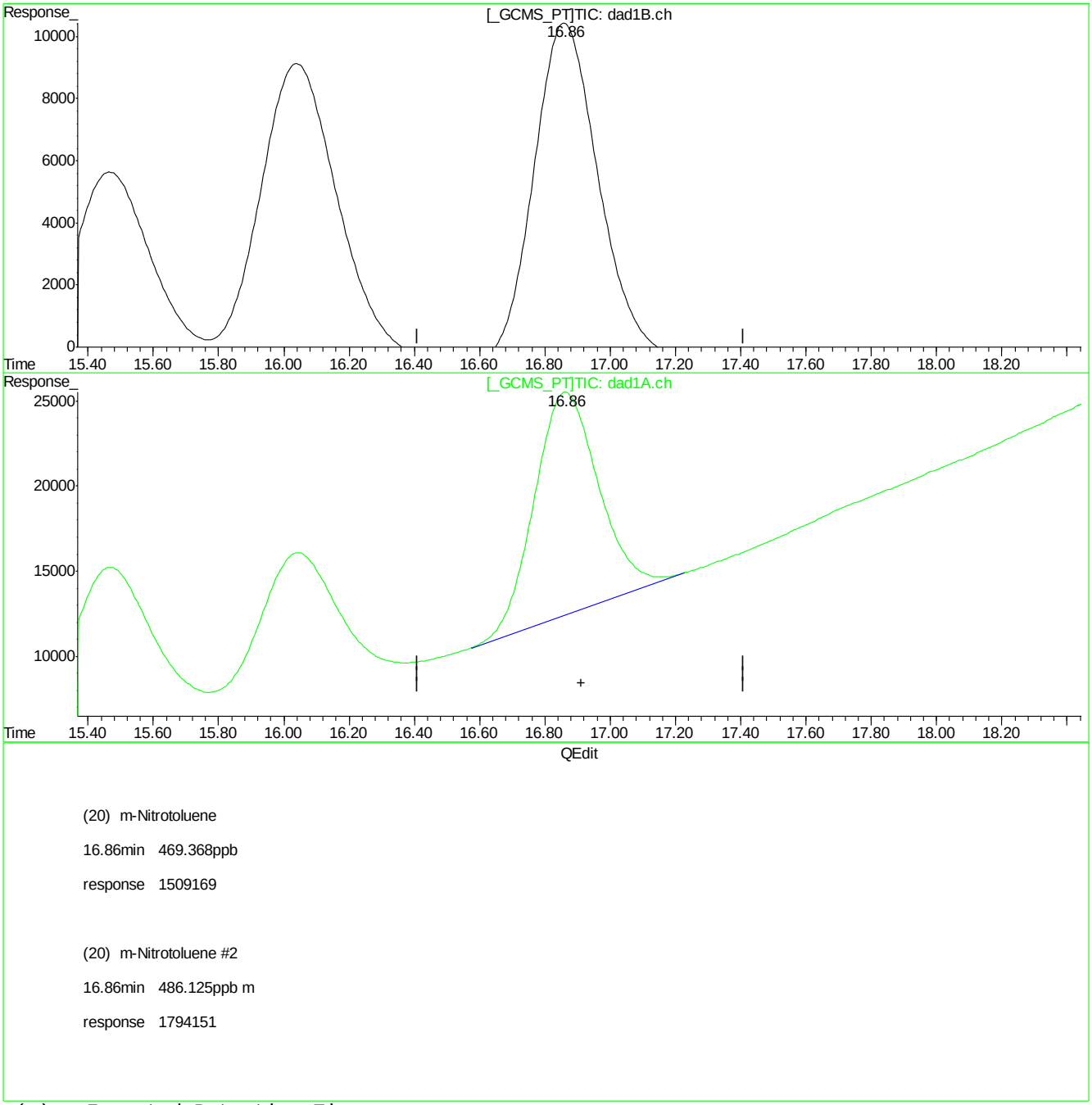


(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:27:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

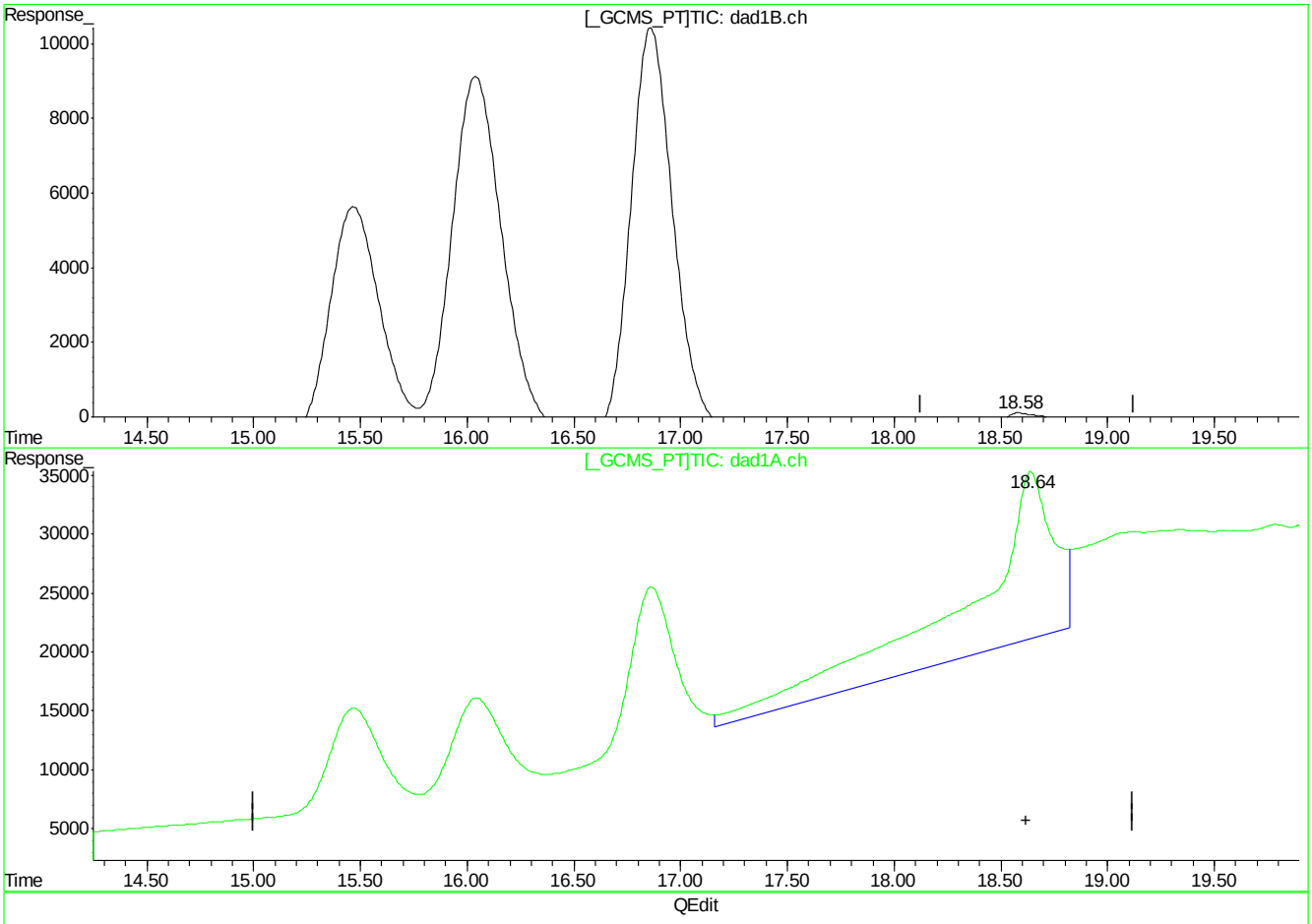


(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:27:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

18.59min 0.000ppb

response 66530

(21) PETN #2

18.64min 3034.096ppb

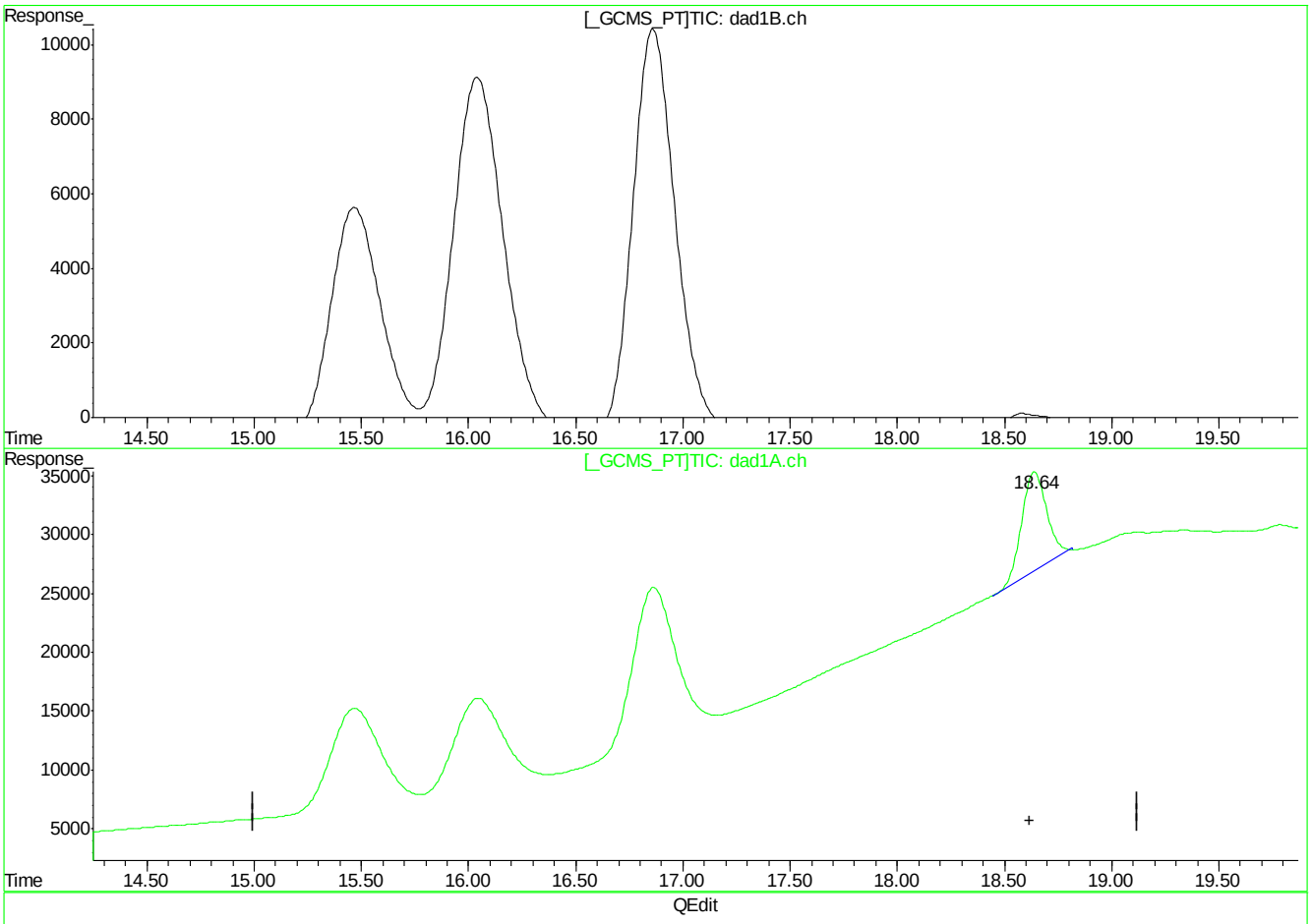
response 3876201

(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:27:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.64min 534.411ppb m

response 682735

(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:27:27 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:28

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : op86727,GPP2467,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:42 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.26	11.26	1056263	1726126	495.927	531.341
	Spiked Amount 500.000	Range 70 - 136		Recovery =		99.19%	106.27%
	Target Compounds						
1)	TNX	1.31	1.31	594917	1004181	357.448m	367.212m
2)	HMX	1.44	1.44	1662041	4635833	1060.668	1001.772
3)	DNX	1.69	1.69	1089710	1703954	496.958	500.358
4)	MNX	2.27	2.27	2098185	3023130	807.741	743.210
5)	RDX	2.88	2.88	1237083	1853947	663.769	616.054
6)	1,3,5-Trinitrobe	4.67	4.67	4476379	8798801	1112.402	1129.127
7)	1,3-Dinitrobenze	5.87	5.87	2597676	1882427	499.288	503.916
8)	3,5-Dinitroanili	6.21	6.21	2014912	3556095	505.974	501.938
9)	Nitrobenzene	7.46	7.46	1442921	1445687	474.484	482.339
10)	Nitroglycerin	0.00	9.05	0	589295	N.D.	470.692 #
11)	Tetryl	9.53	9.53	737344	1154494	235.353	239.818
12)	2,4,6-Trinitroto	9.92	9.92	3407862	4323205	901.276	966.146
13)	2-Amino-4,6-Dini	10.25	10.25	2348954	3498744	679.131	697.582
14)	4-Amino-2,6-Dini	10.78	10.78	1478172	2849760	607.253	589.825
16)	2,4-Dinitrotolue	11.90	11.90	2280347	1388796	479.798	450.108
17)	2,6-Dinitrotolue	12.39	12.38	1747795	1917557	638.339	571.322
18)	o-Nitrotoluene	15.47	15.46	1005674	1281727	439.893	437.907m
19)	p-Nitrotoluene	16.04	16.04	1605706	1107905	466.656	392.331
20)	m-Nitrotoluene	16.86	16.86	1501685	1785170	467.040	483.692m
21)	PETN	0.00	18.64	0	681393	N.D. d	533.360m

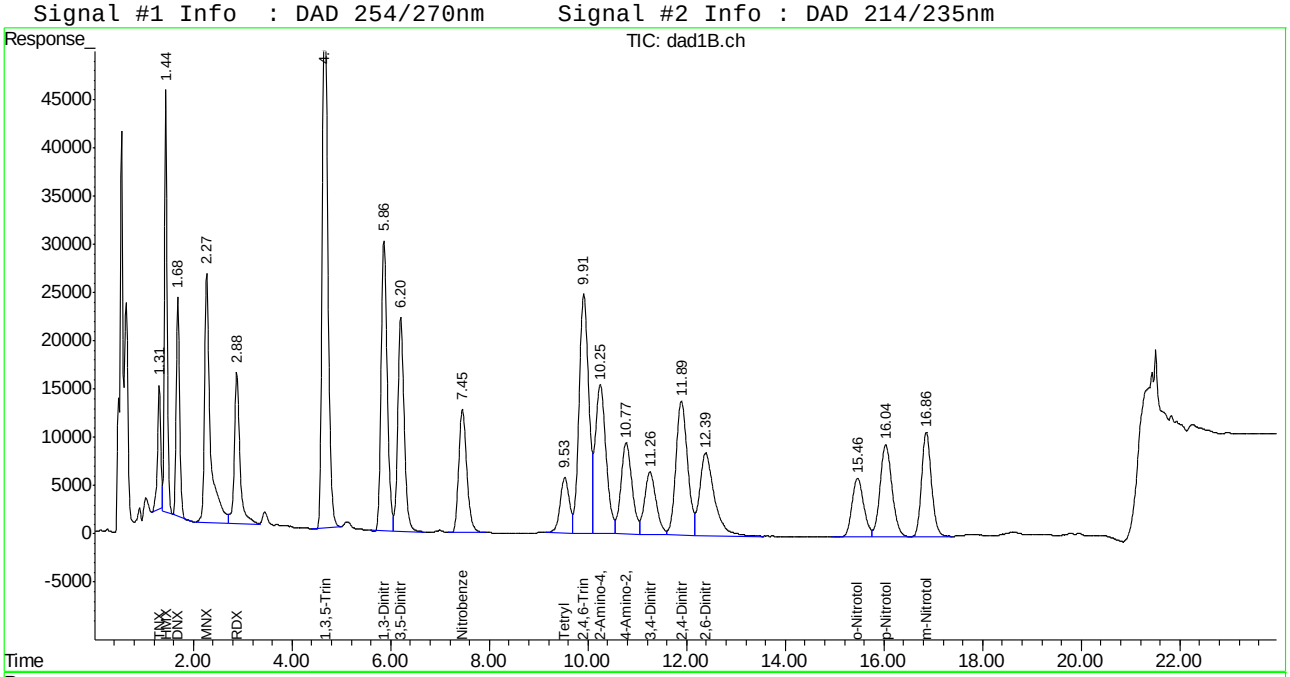
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

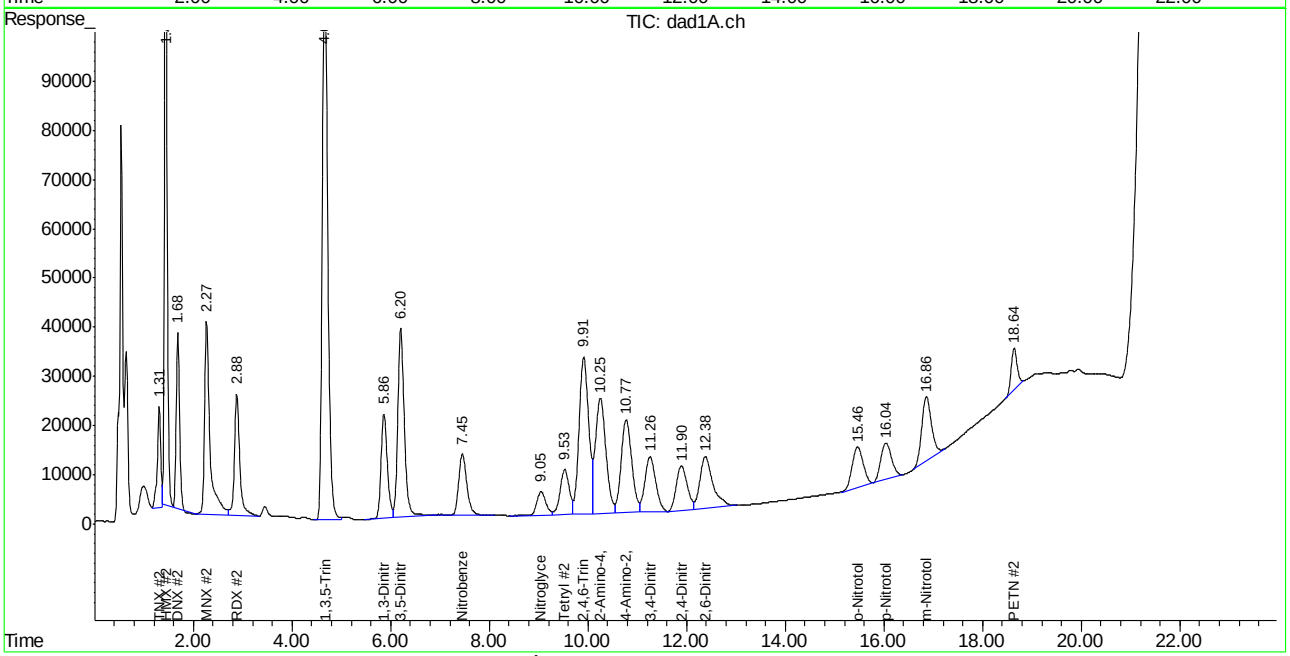
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : op86727,GPP2467,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 15:29 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

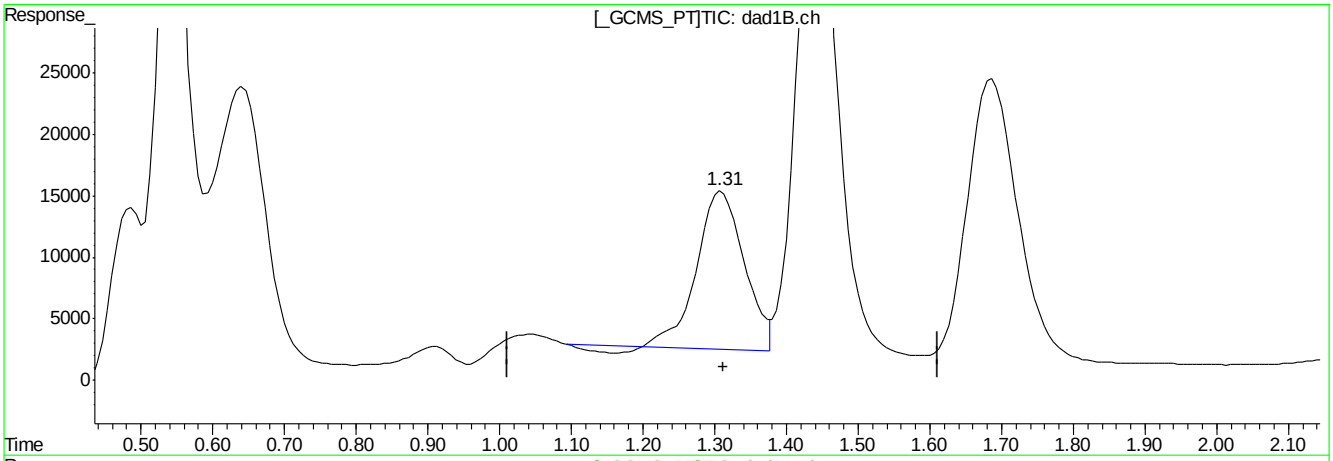
Sample Number: OP86727-MSD2
Lab FileID: PP391160.D
Injection Time: 08/10/21 00:14
Method: SW846 8330B
Analyst approved: 08/13/21 17:12 James Boone
Supervisor approved: 08/13/21 17:28 Naresh Jiawan

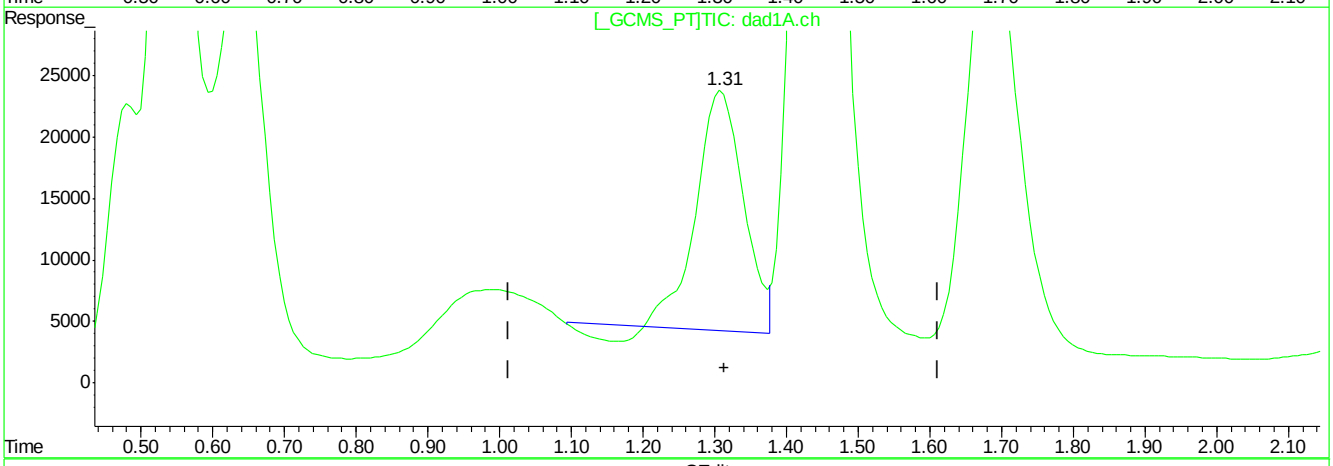
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.31	Poor instrument integration
TNX		2	1.31	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.46	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.64	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 347.466ppb

response 578303

(1) TNX #2

1.31min 318.032ppb

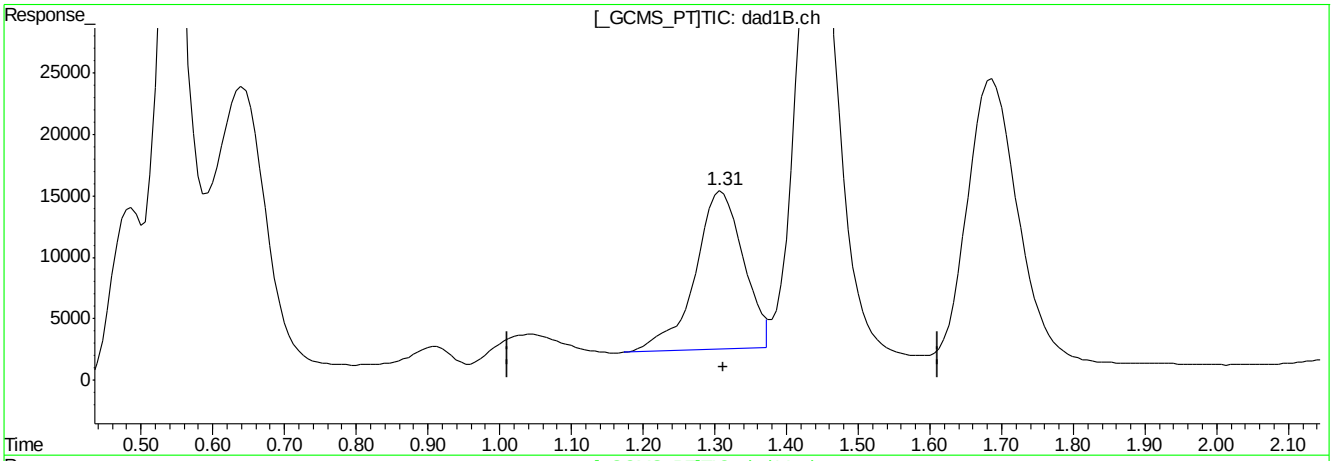
response 869693

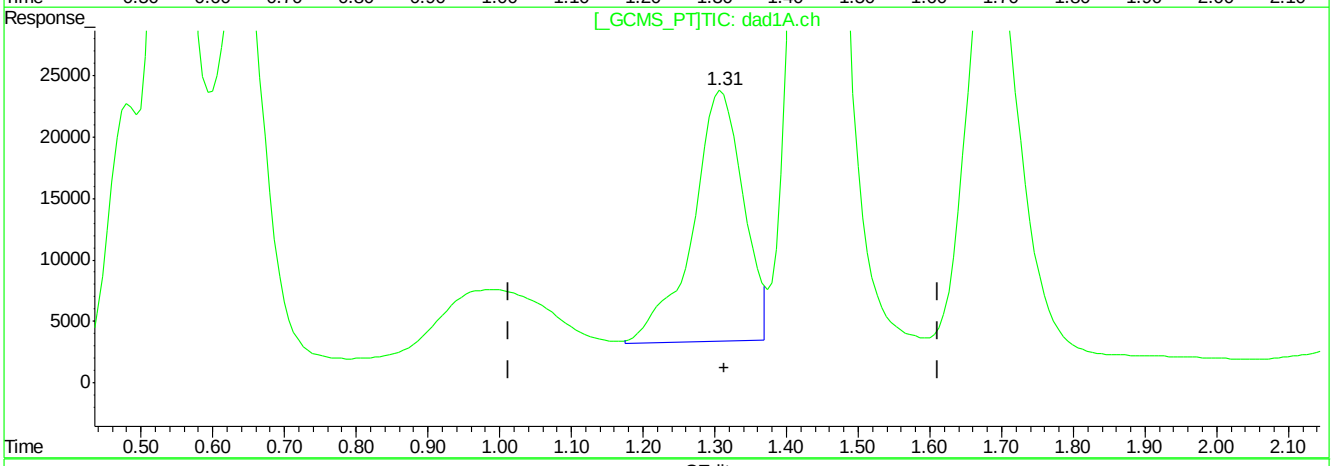
(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:28:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 357.448ppb m

response 594917

(1) TNX #2

1.31min 367.212ppb m

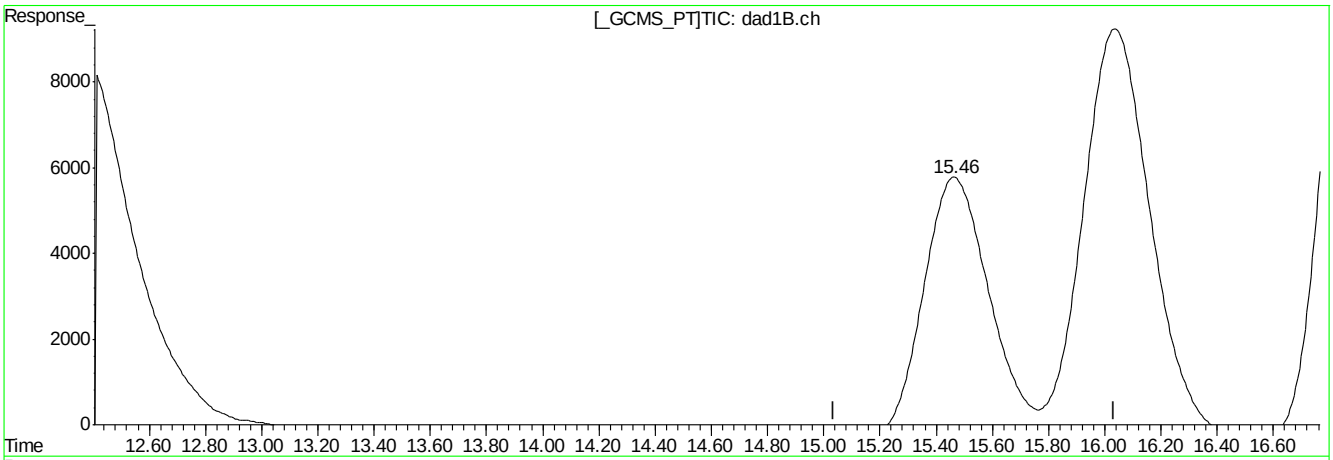
response 1004181

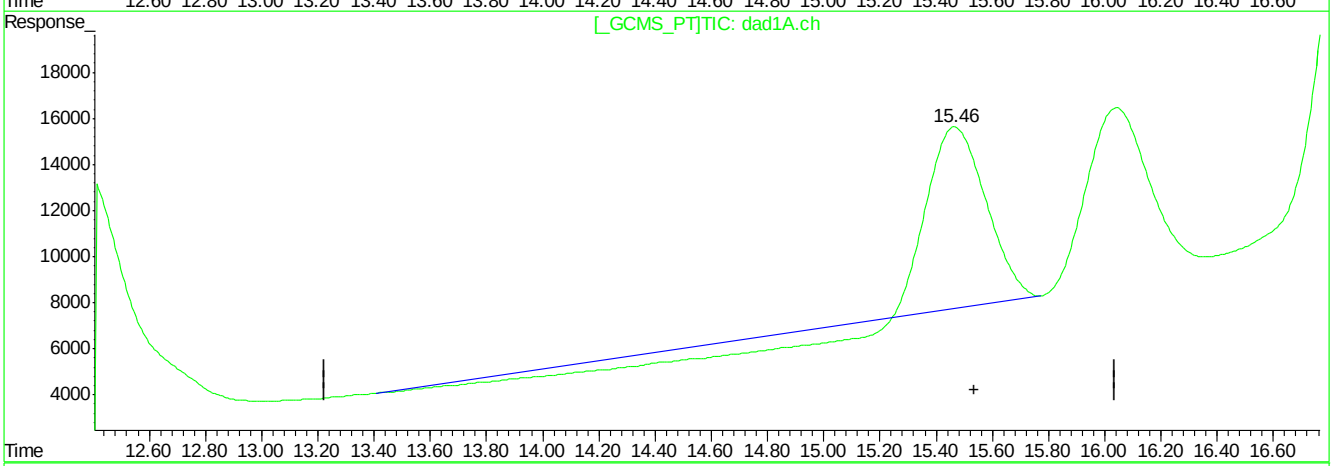
(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:28:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 439.893ppb

response 1005674

(18) o-Nitrotoluene #2

15.47min 246.053ppb

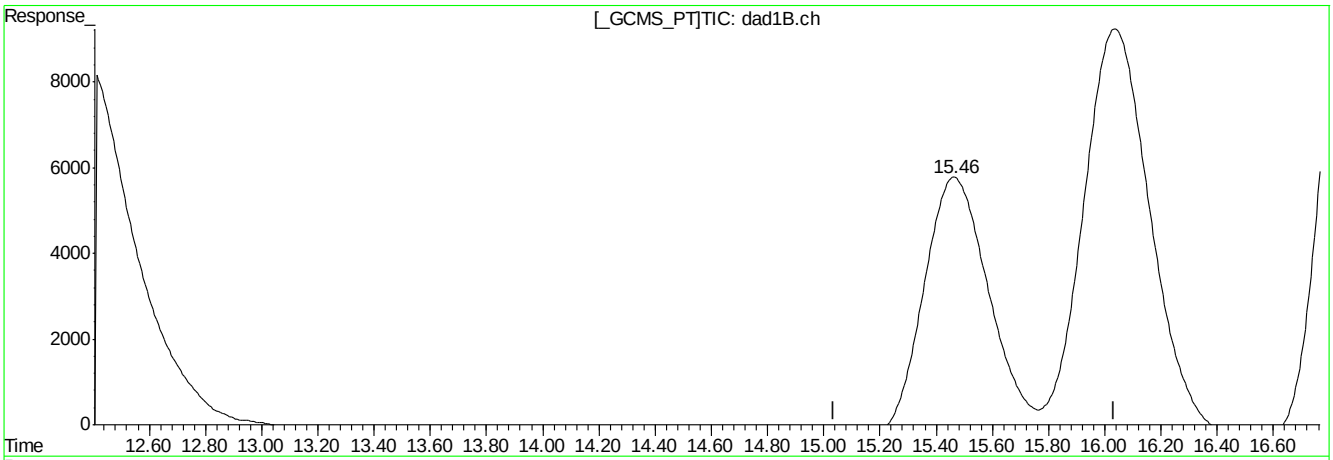
response 720182

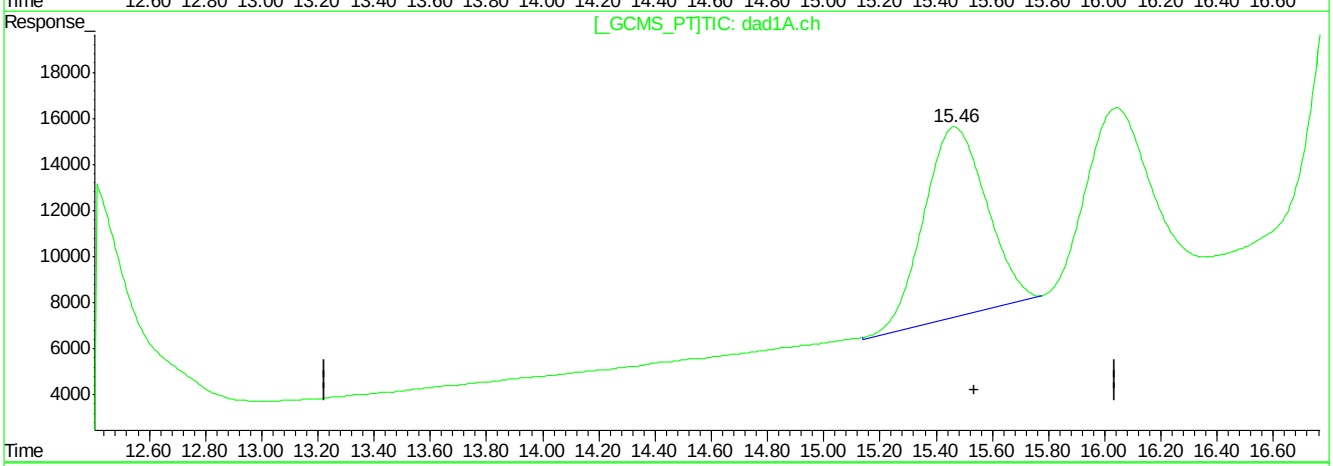
(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:28:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 439.893ppb

response 1005674

(18) o-Nitrotoluene #2

15.46min 437.907ppb m

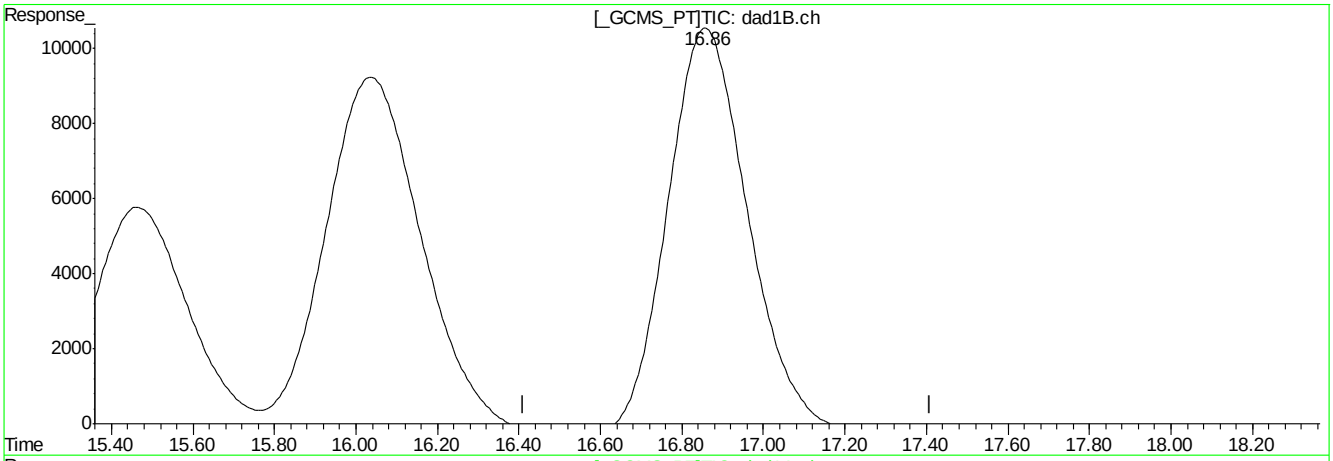
response 1281727

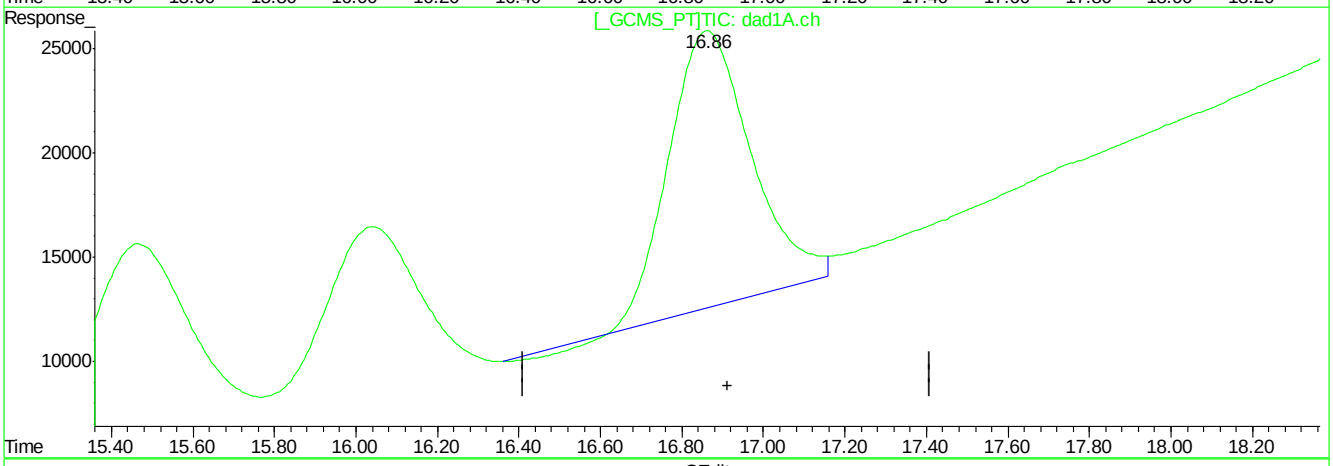
(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:28:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 467.040ppb

response 1501685

(20) m-Nitrotoluene #2

16.86min 499.914ppb

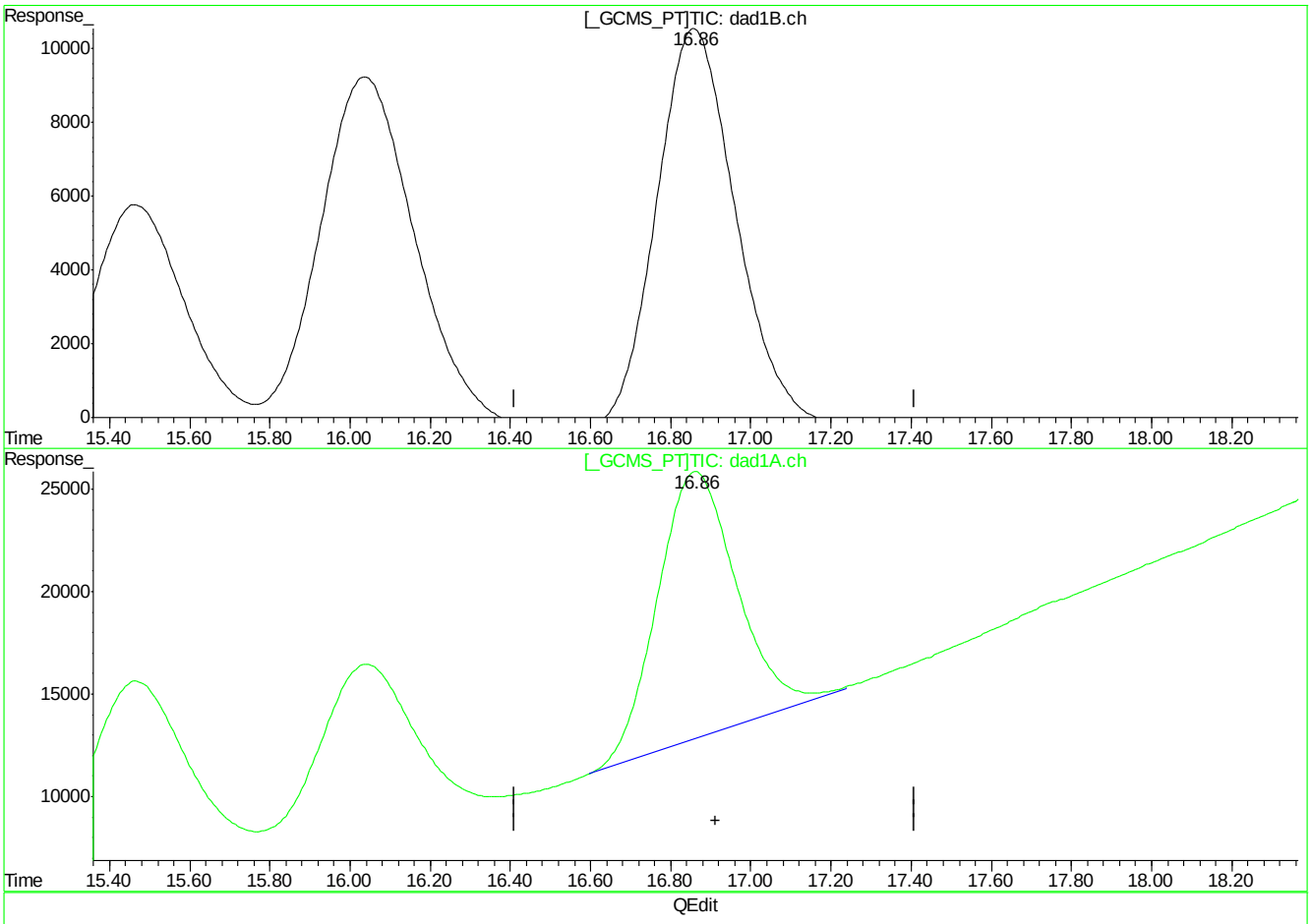
response 1845039

(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:29:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.86min 467.040ppb

response 1501685

(20) m-Nitrotoluene #2

16.86min 483.692ppb m

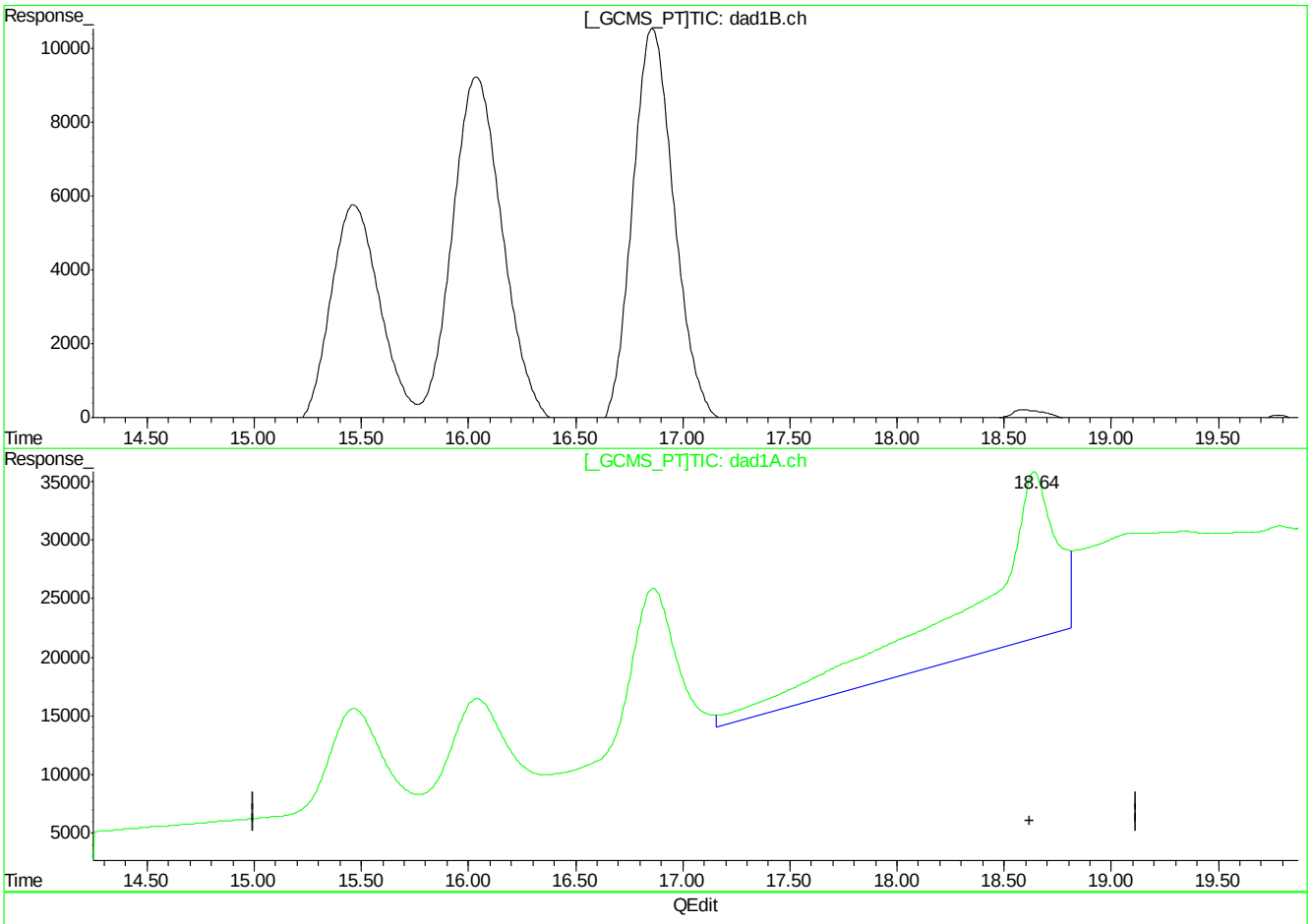
response 1785170

(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:29:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.64min 2980.703ppb

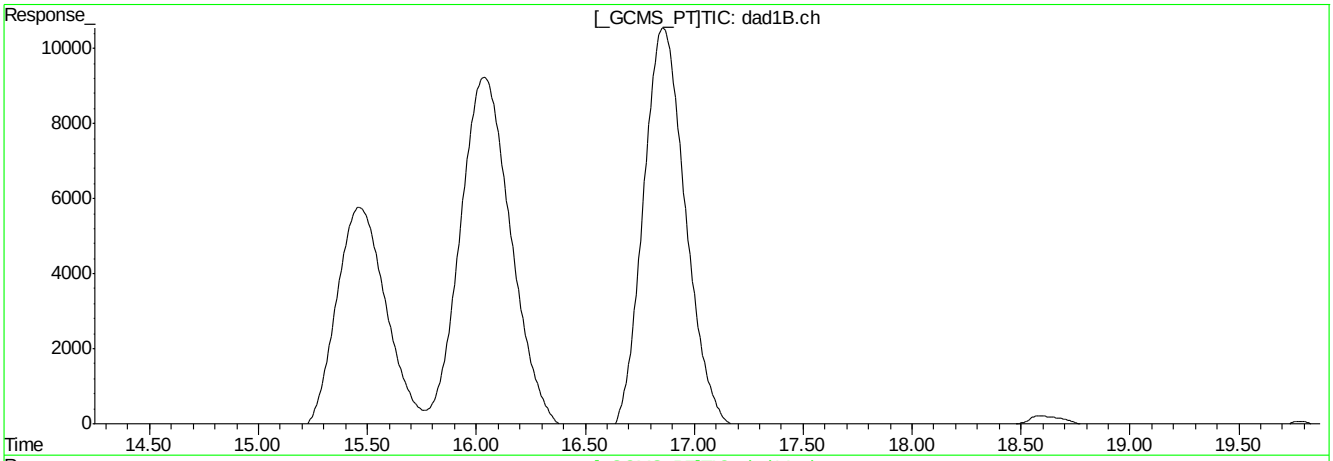
response 3807988

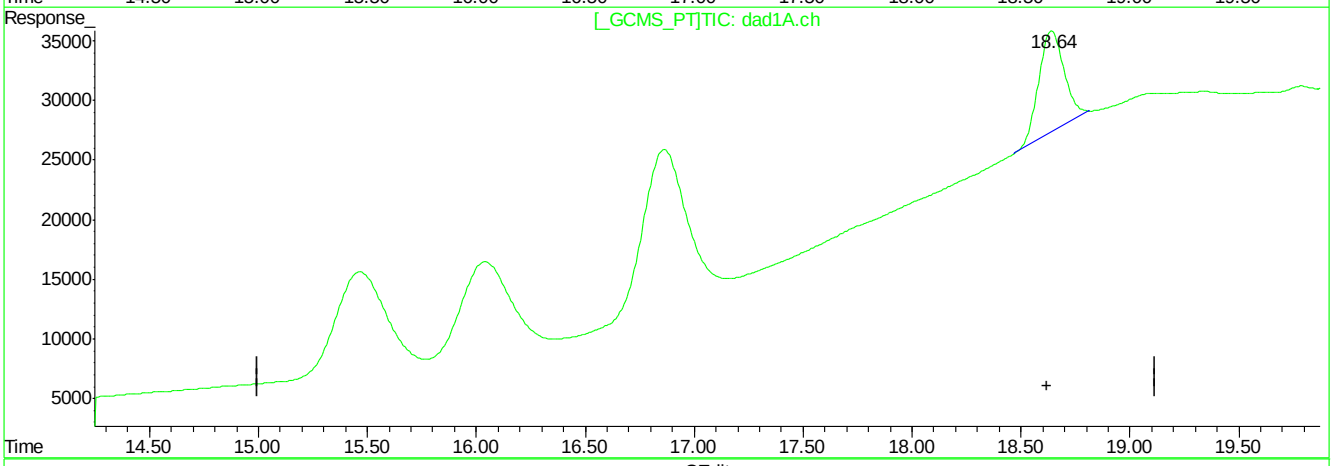
(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:29:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.64min 533.360ppb m

response 681393

(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:29:13 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:08 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.94	13.92	105512	225560	21.598	24.846
	Spiked Amount 500.000	Range 70 - 136		Recovery =		4.32%#	4.97%#
	Target Compounds						
1)	TNX	4.79	4.79	63589	63589	13.795	13.884
2)	HMX	5.20	5.20	71803	71803	22.144	21.988
3)	DNX	5.38	5.38	119402	119159	20.206m	20.122m
4)	MNX	6.49	6.49	151891	151891	25.071	25.071
5)	1,3,5-Trinitrobe	7.51	7.51	193145	193145	20.472	20.472
6)	RDX	7.76	7.76	85439	85439	19.442	19.442
7)	1,3-Dinitrobenze	9.72	9.72	261156	198181	20.446	20.426m
8)	Nitrobenzene	10.66	10.66	158637	151481	18.755	18.330m
9)	2,4,6-Trinitroto	11.63	11.63	184332	253651	20.133	19.504m
10)	Nitroglycerin	0.00	12.41	0	72875	N.D.	23.028m#
11)	Tetryl	12.91	12.90	137631	233676	19.395	18.860m
13)	2,6-Dinitrotolue	14.27	14.26	123571	166374	19.596	18.049
14)	2,4-Dinitrotolue	14.89	14.89	232165	140761	20.134	17.729
15)	3,5-Dinitroanili	15.60	15.61	201655	354854	20.465	22.820
16)	o-Nitrotoluene	16.46	16.47	99948	161297	19.290	22.017
17)	p-Nitrotoluene	17.40	17.41	209347	316070	39.377	34.375
18)	4-Amino-2,6-Dini	17.40	17.41	209347	316070	39.377	34.375
19)	m-Nitrotoluene	18.68	18.73	111987	122725	19.284	12.669m
20)	2-Amino-4,6-Dini	19.15	19.21	175826	170803	20.335	14.374m
21)	PETN	0.00	21.54	0	68686	N.D.	21.105m#

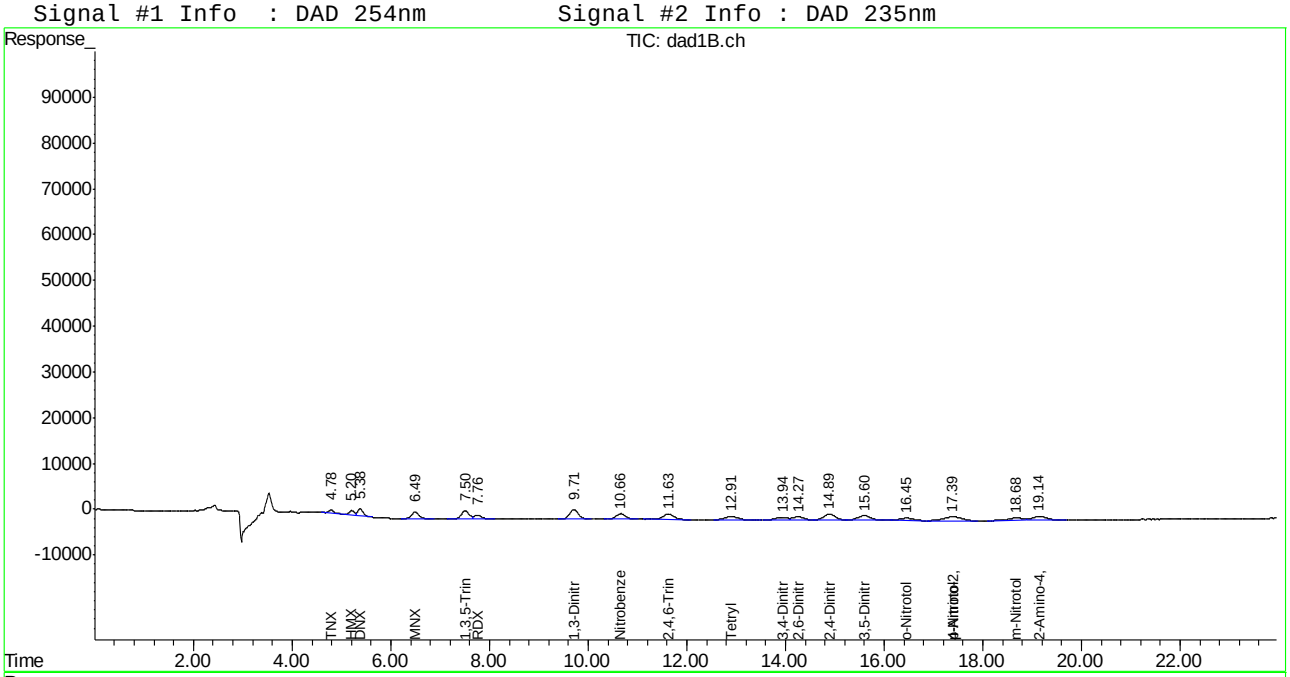
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622000.D GGG3024_080821.M Mon Aug 09 10:17:34 2021 Page 1

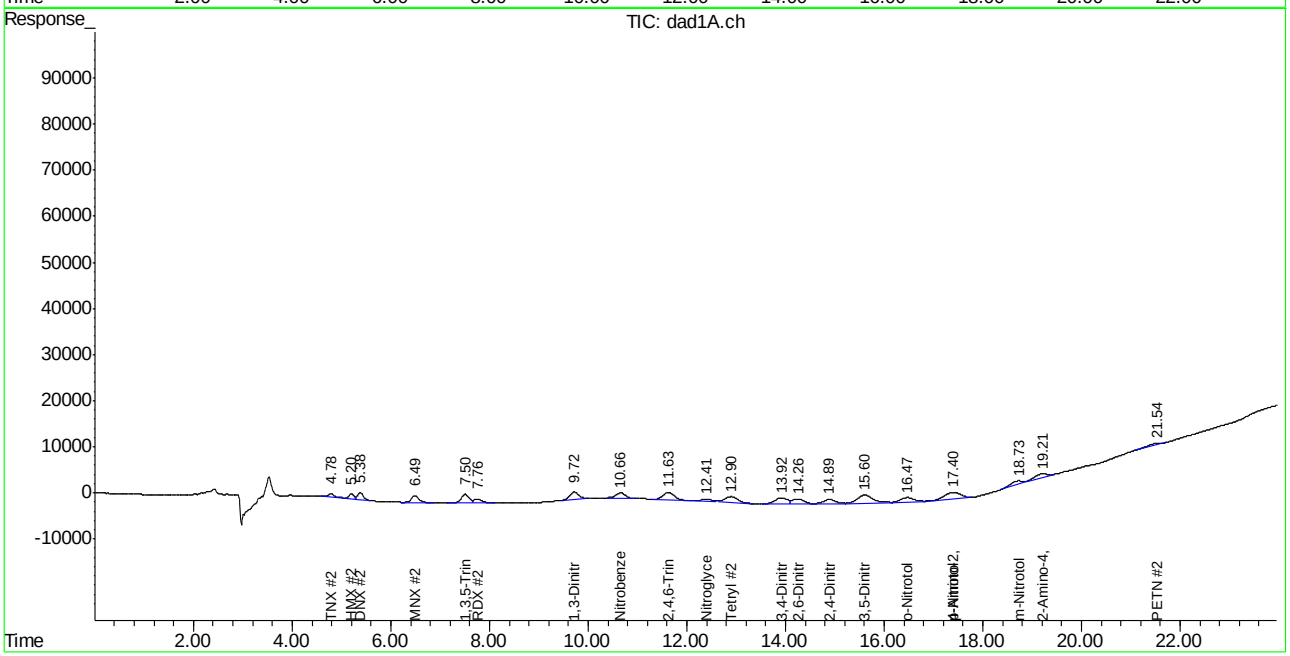
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:13 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

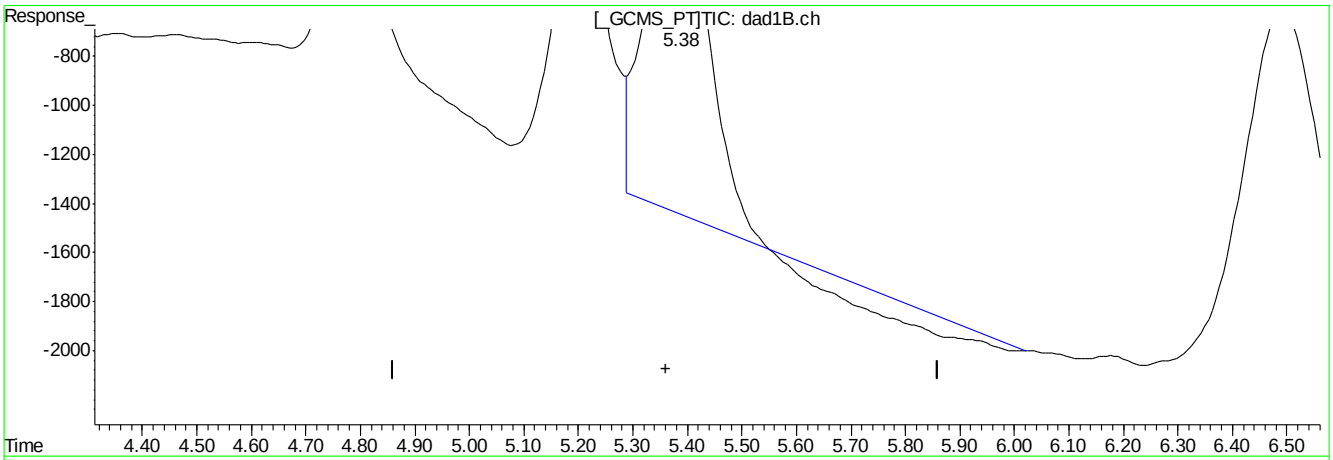
Sample Number: GGG3024-IC3024
Lab FileID: GG622000.D
Injection Time: 08/08/21 17:34
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

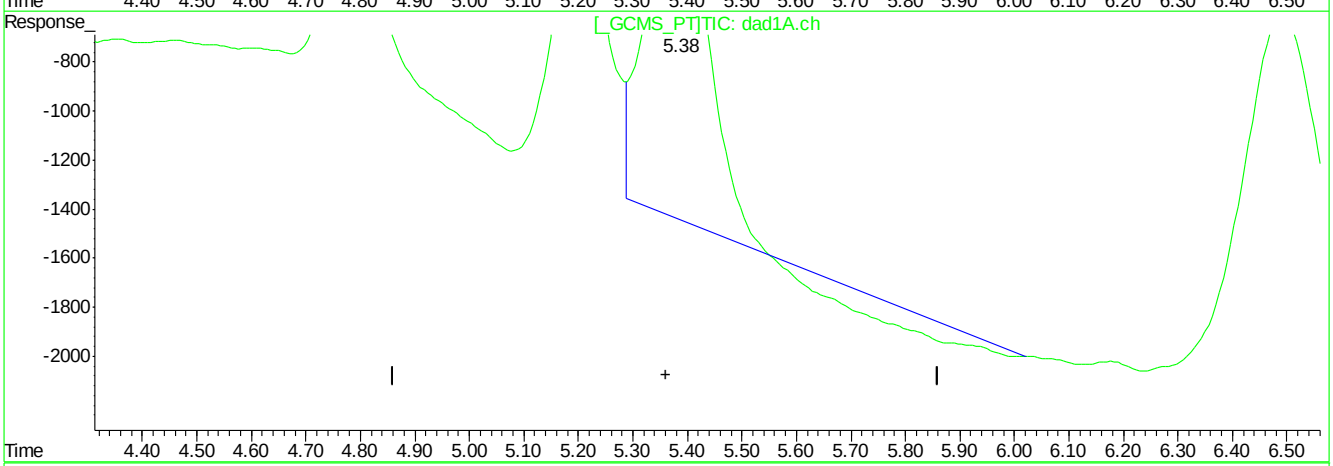
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.38	Poor instrument integration
DNX		2	5.38	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.72	Poor instrument integration
Nitrobenzene	98-95-3	2	10.66	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.63	Poor instrument integration
Nitroglycerine	55-63-0	2	12.41	Poor instrument integration
Tetryl	479-45-8	2	12.90	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.73	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.21	Poor instrument integration
PETN	78-11-5	2	21.54	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.38min 17.223ppb

response 101777

(3) DNX #2

5.38min 17.187ppb

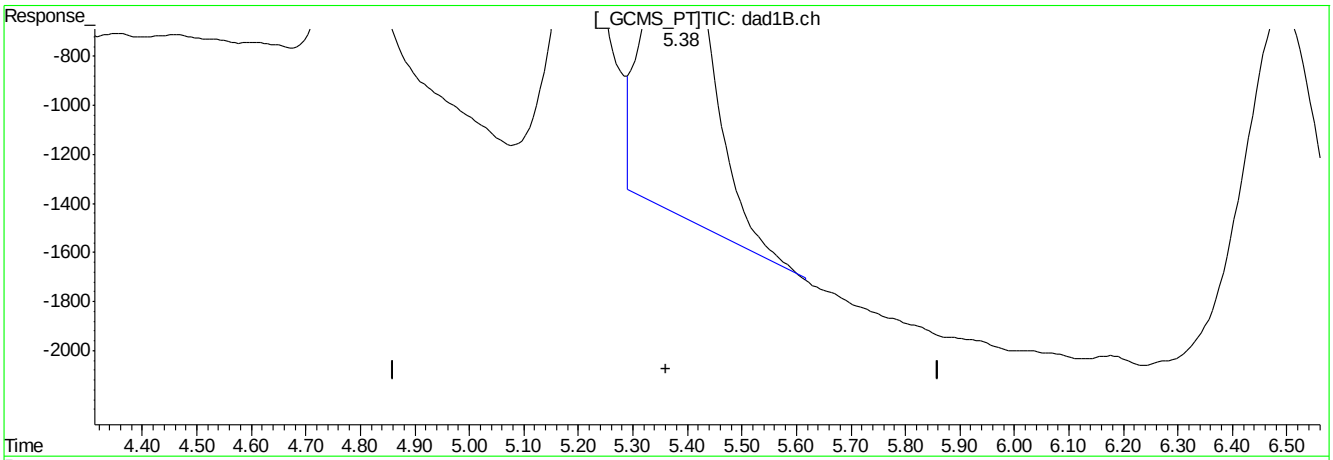
response 101777

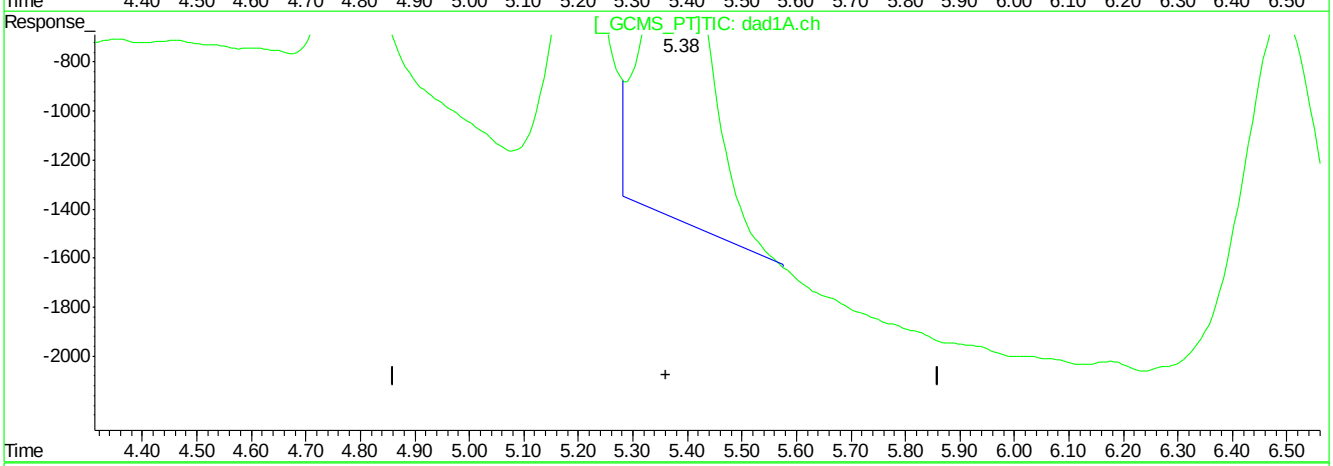
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.38min 20.206ppb m

response 119402

(3) DNX #2

5.38min 20.122ppb m

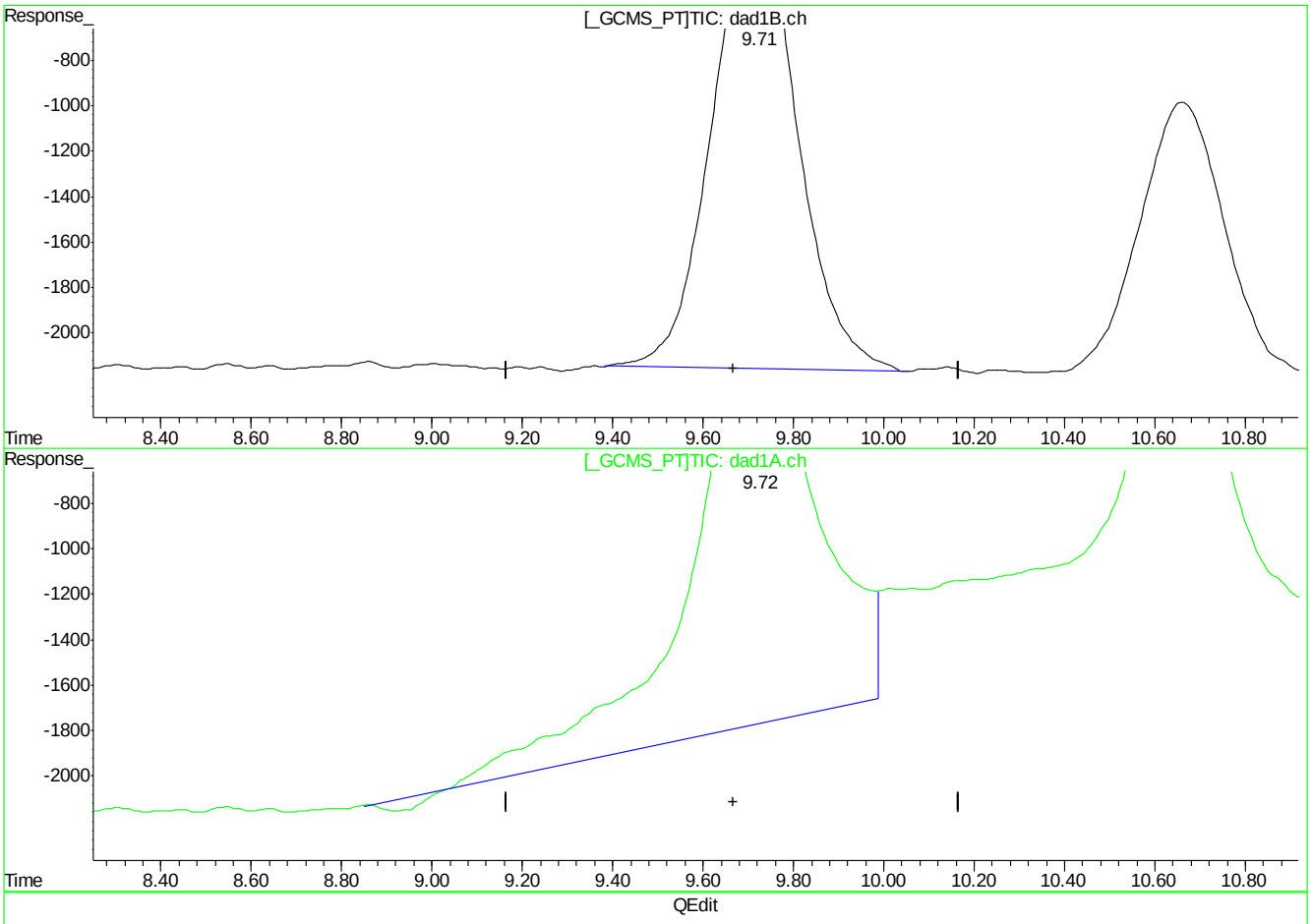
response 119159

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.72min 20.446ppb

response 261156

(7) 1,3-Dinitrobenzene #2

9.72min 36.165ppb

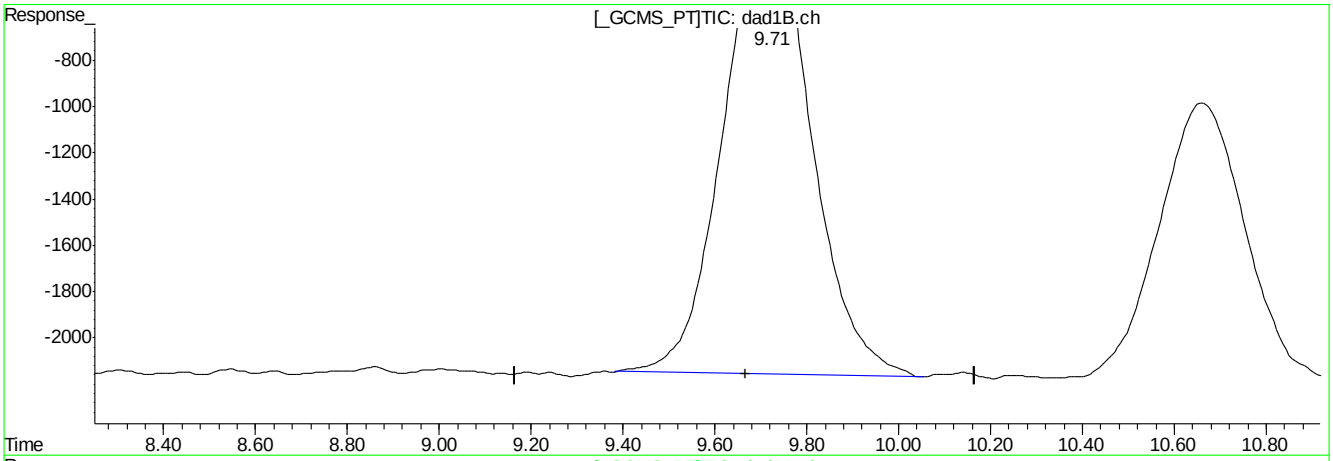
response 350886

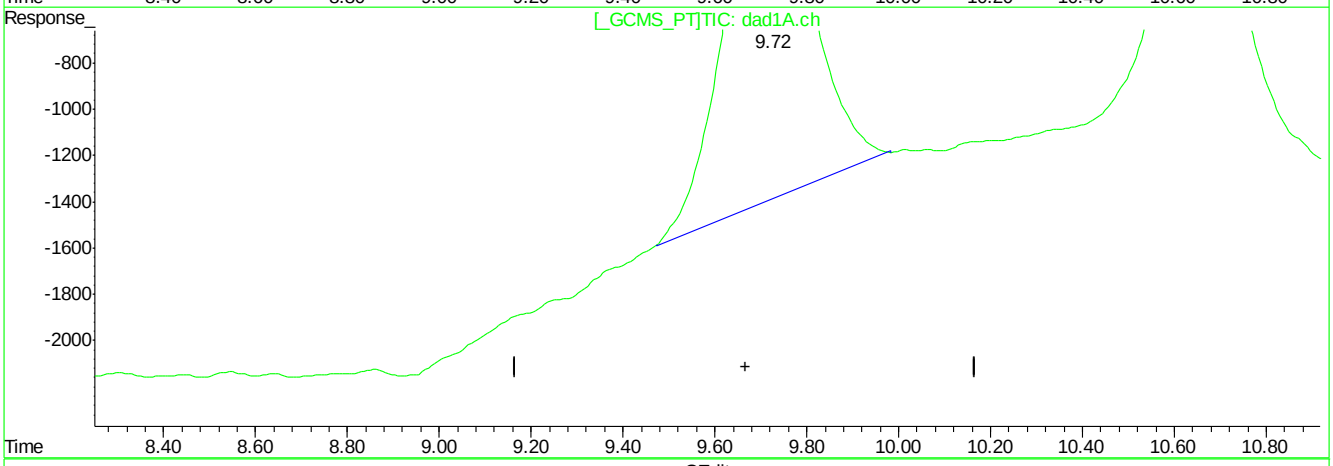
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.72min 20.446ppb

response 261156

(7) 1,3-Dinitrobenzene #2

9.72min 20.426ppb m

response 198181

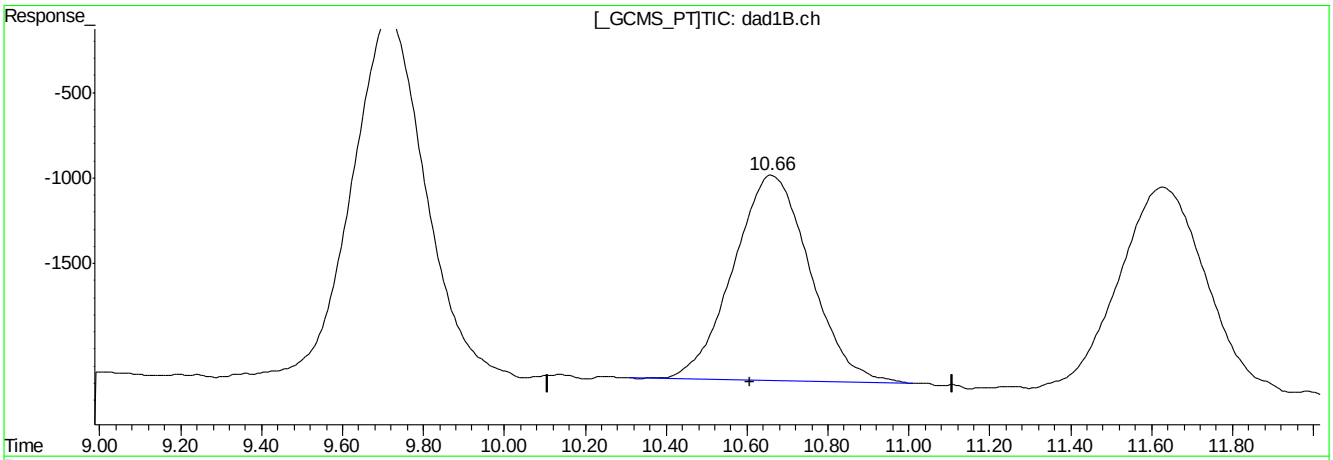
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:43 2021

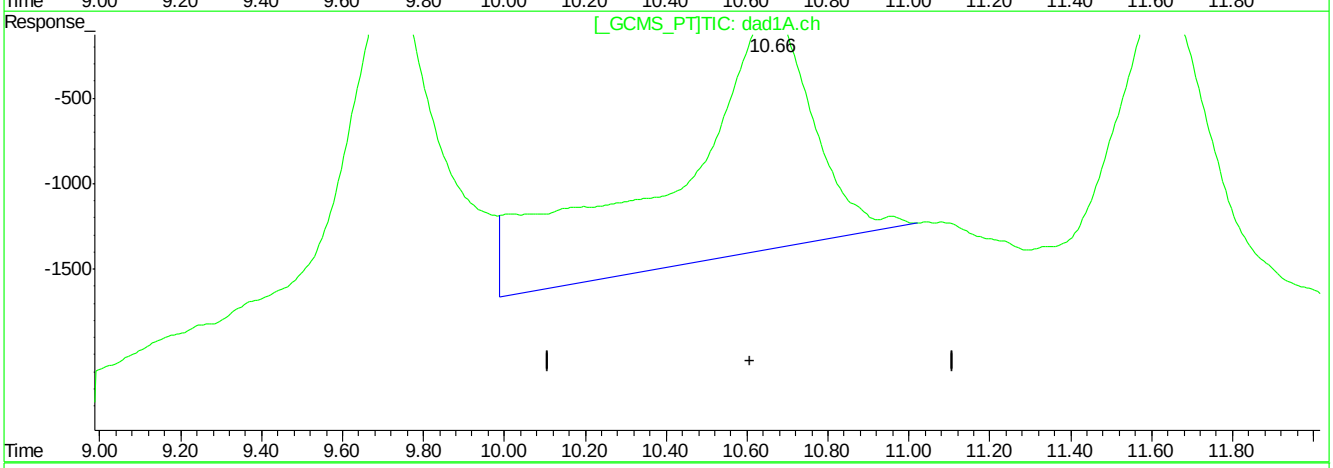
GG622000.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.66min 18.755ppb

response 158637

(8) Nitrobenzene #2

10.66min 40.763ppb

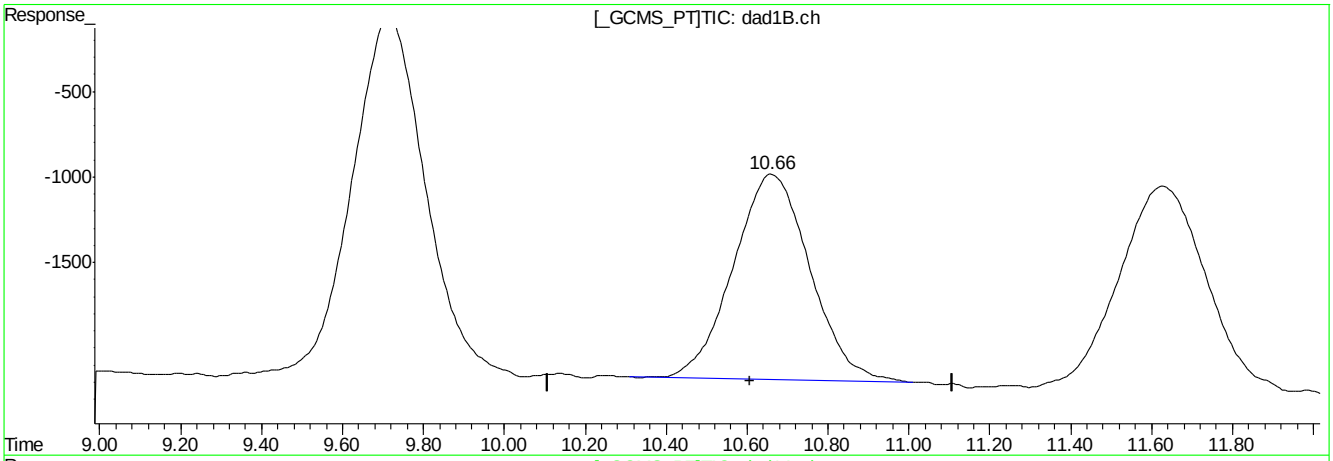
response 336874

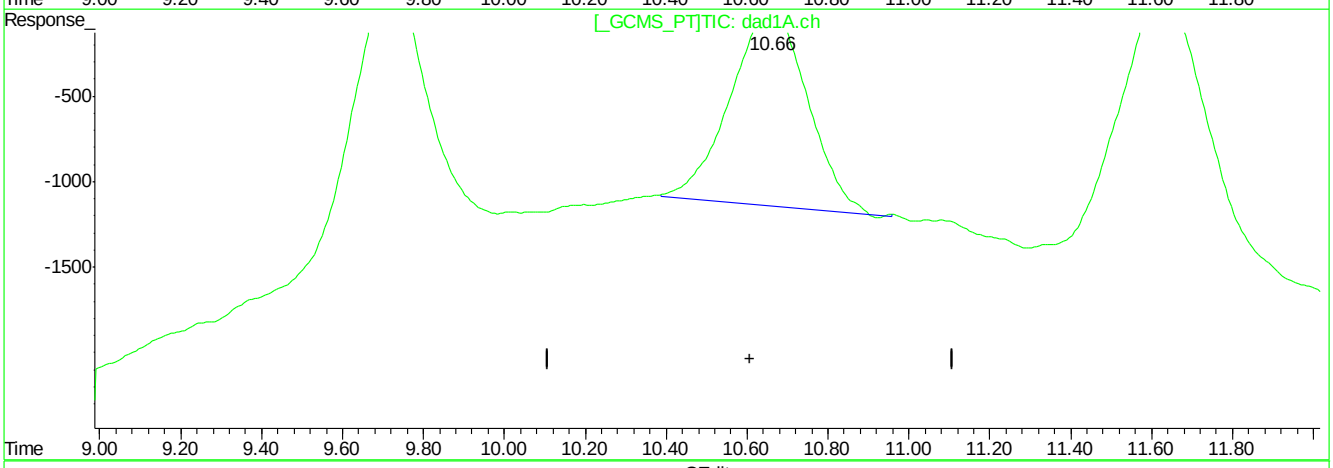
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.66min 18.755ppb

response 158637

(8) Nitrobenzene #2

10.66min 18.330ppb m

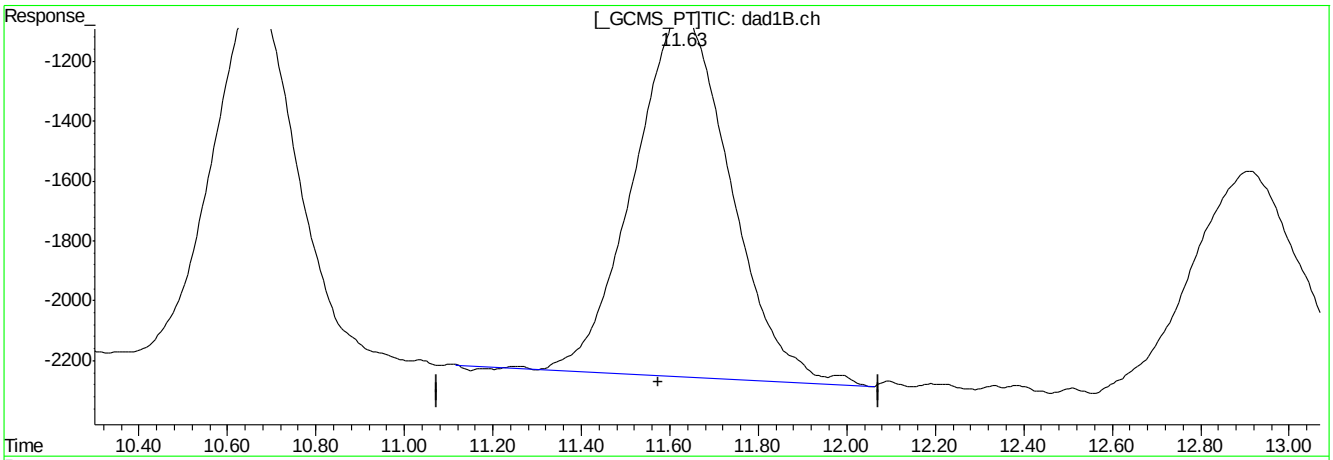
response 151481

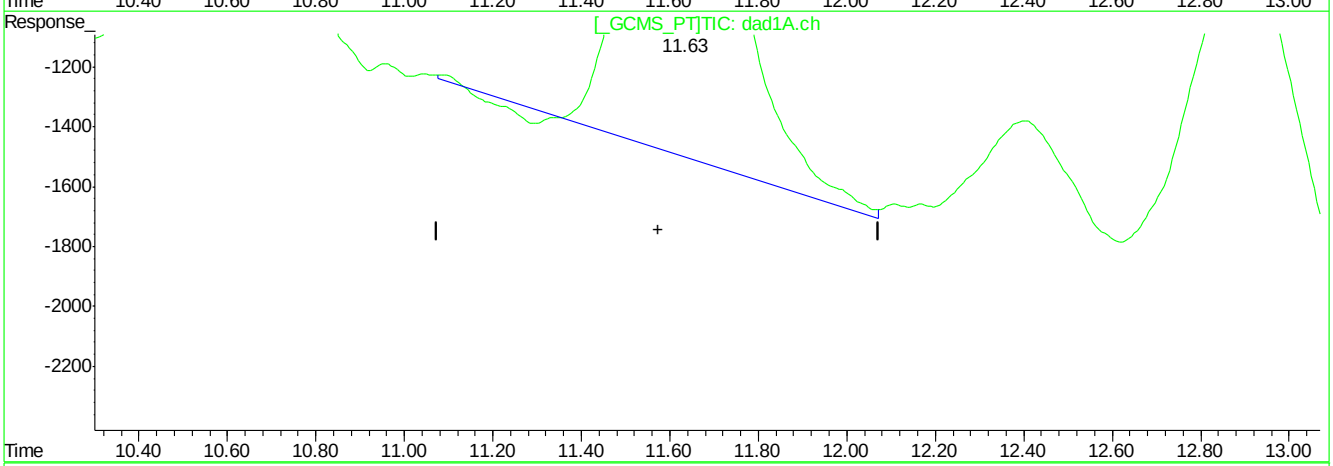
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.63min 20.133ppb

response 184332

(9) 2,4,6-Trinitrotoluene #2

11.63min 19.073ppb

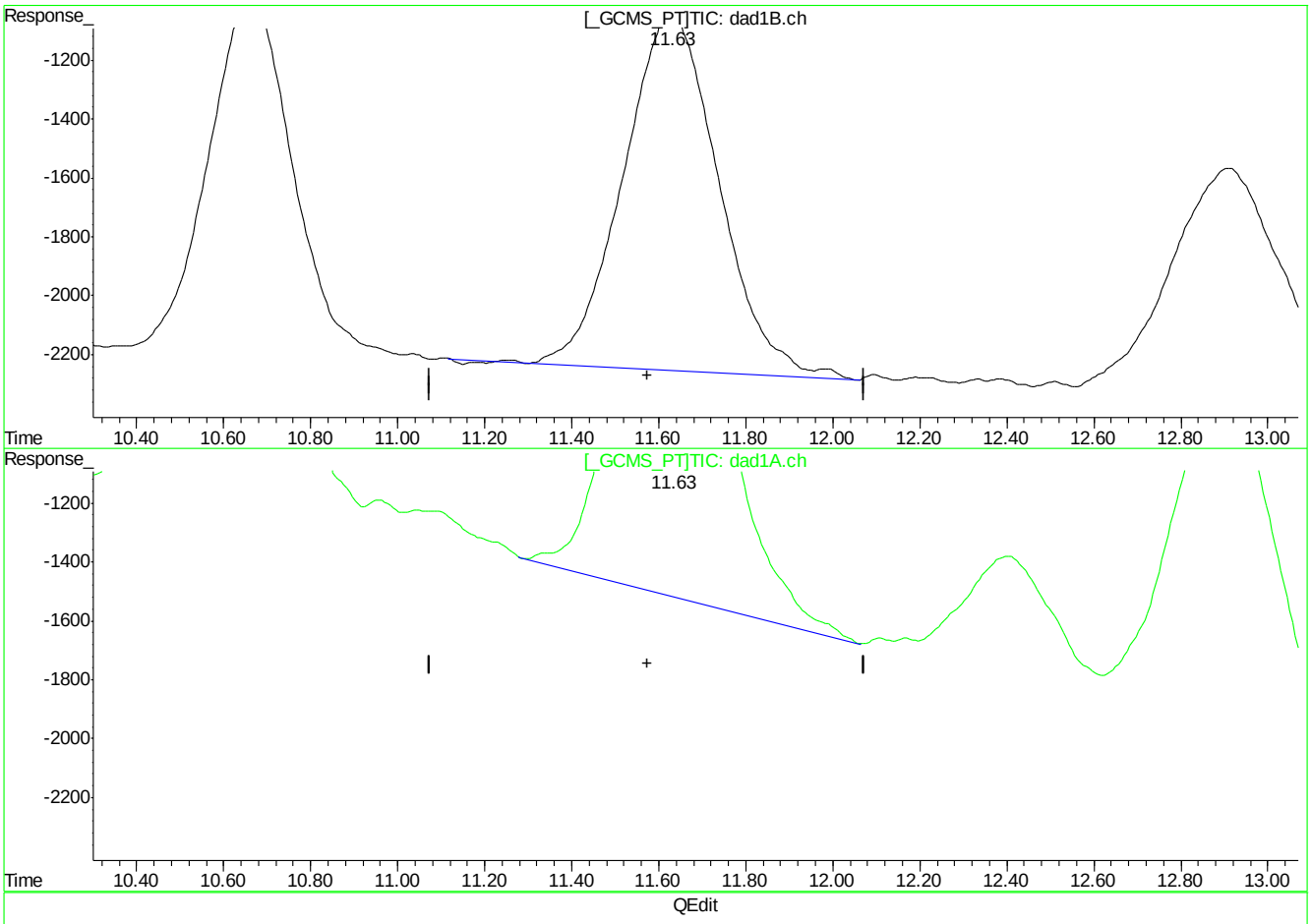
response 248041

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(9) 2,4,6-Trinitrotoluene

11.63min 20.133ppb

response 184332

(9) 2,4,6-Trinitrotoluene #2

11.63min 19.504ppb m

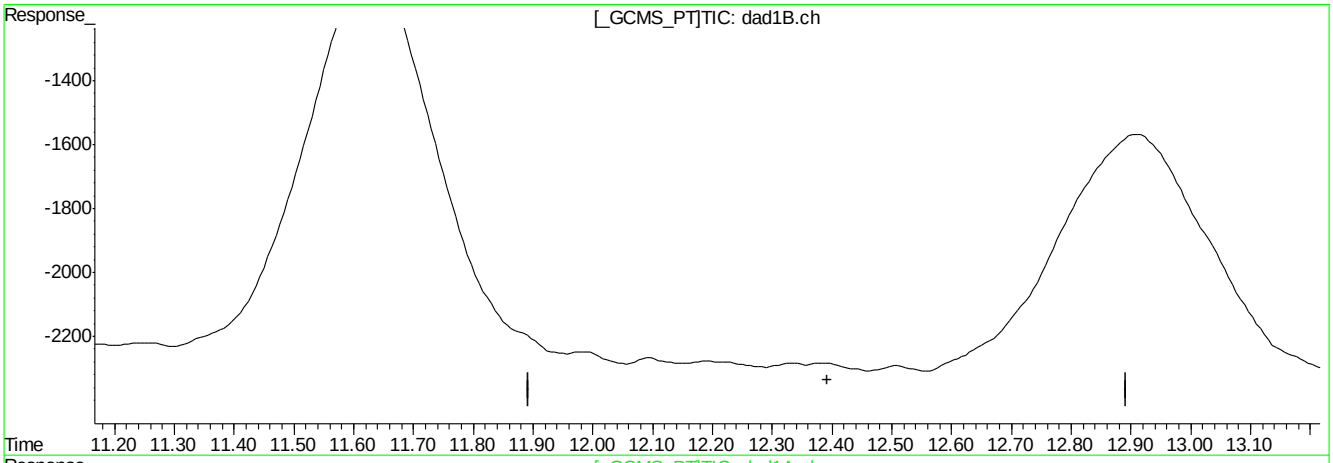
response 253651

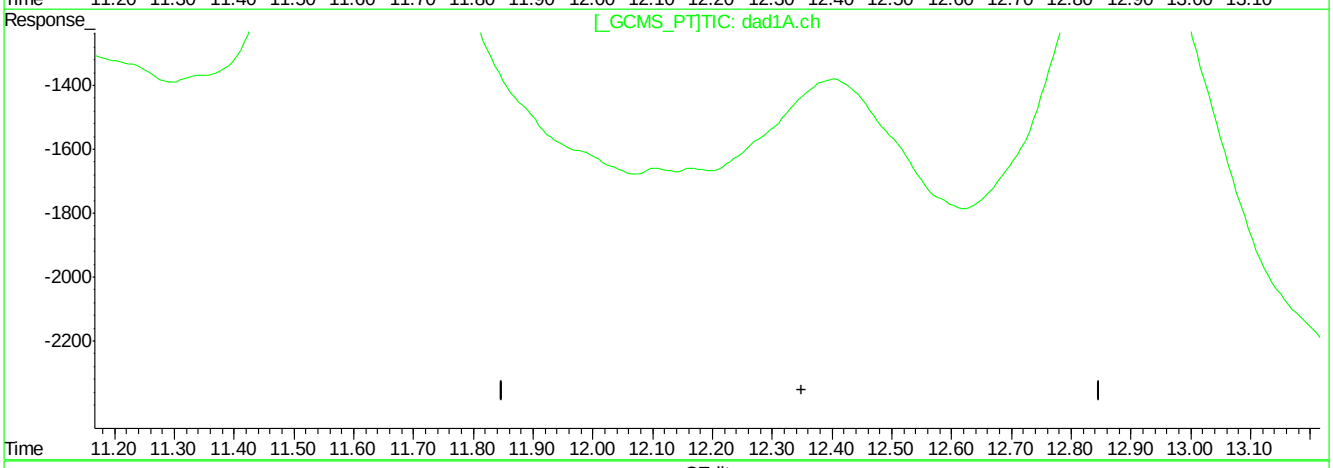
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:12:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

0.00min 0.000ppb

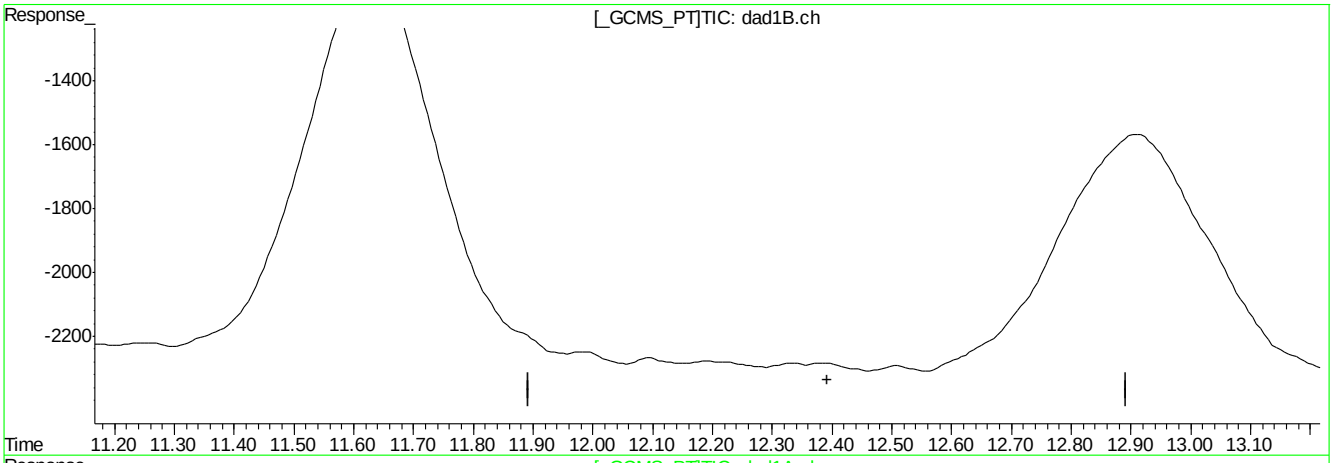
response 0

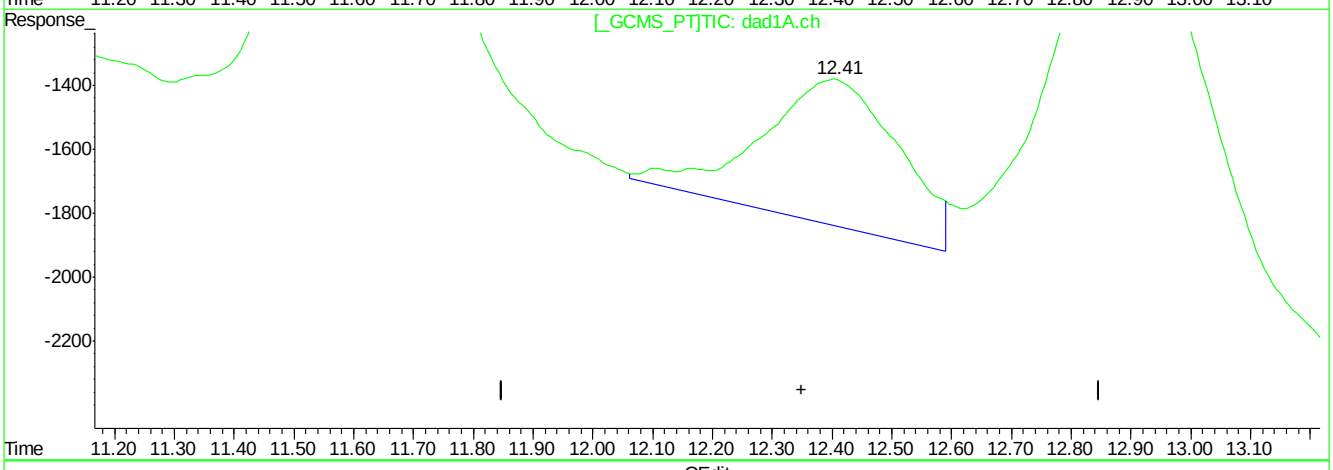
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:12:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.41min 23.028ppb m

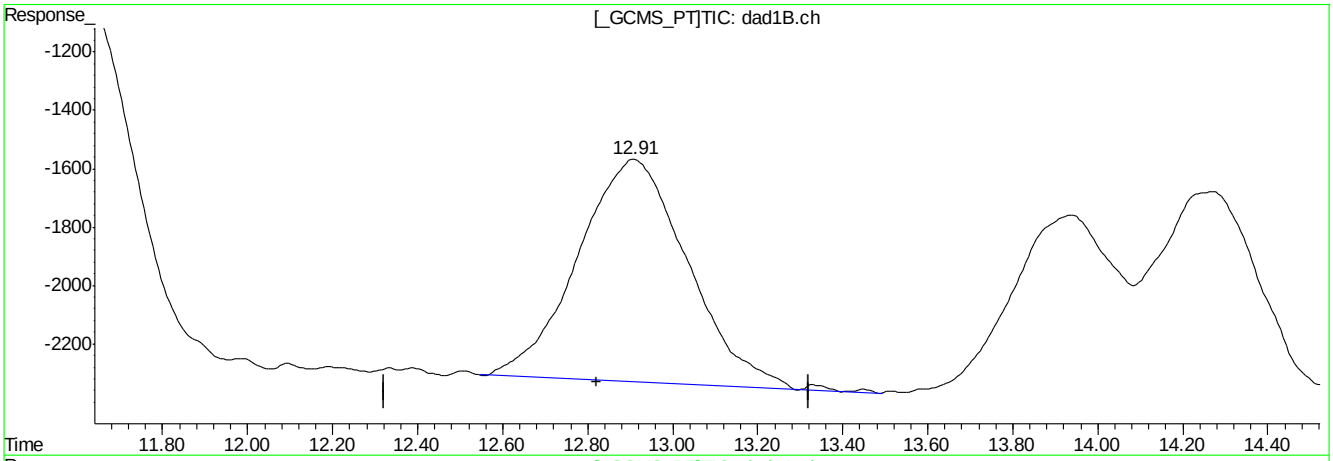
response 72875

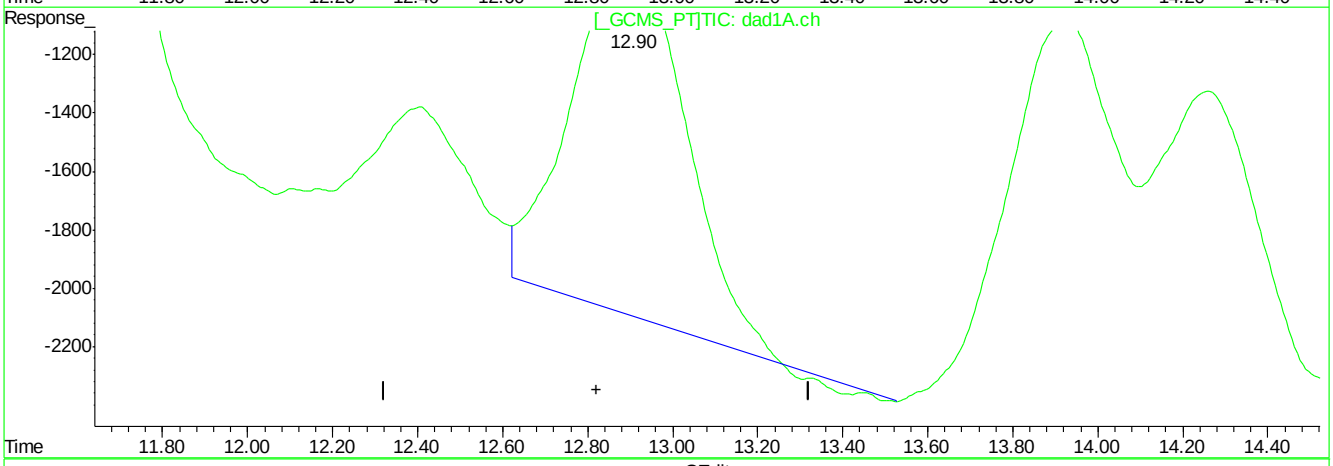
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:12:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.91min 19.395ppb

response 137631

(11) Tetryl #2

12.90min 18.721ppb

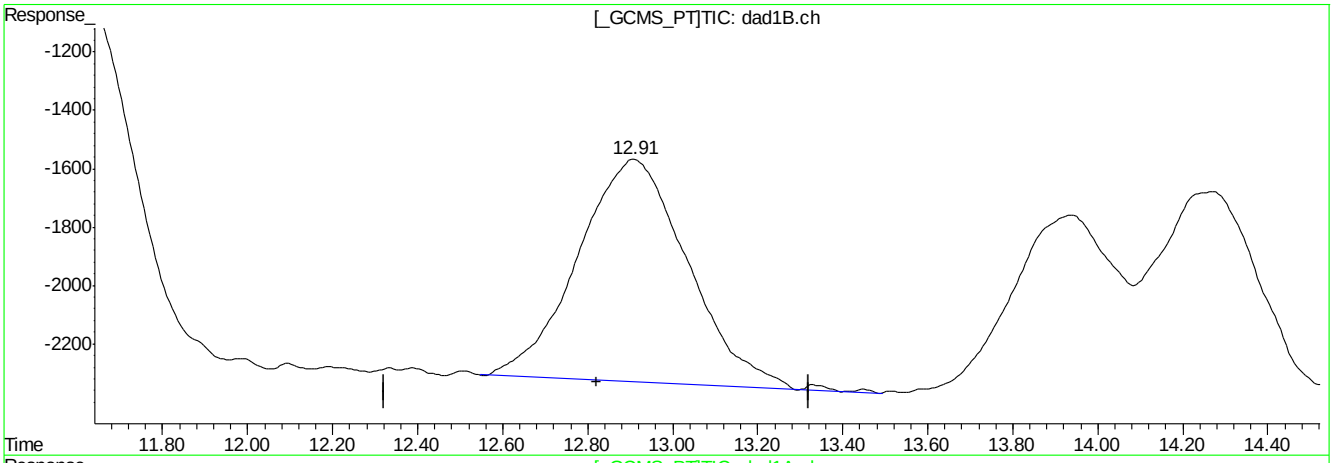
response 231954

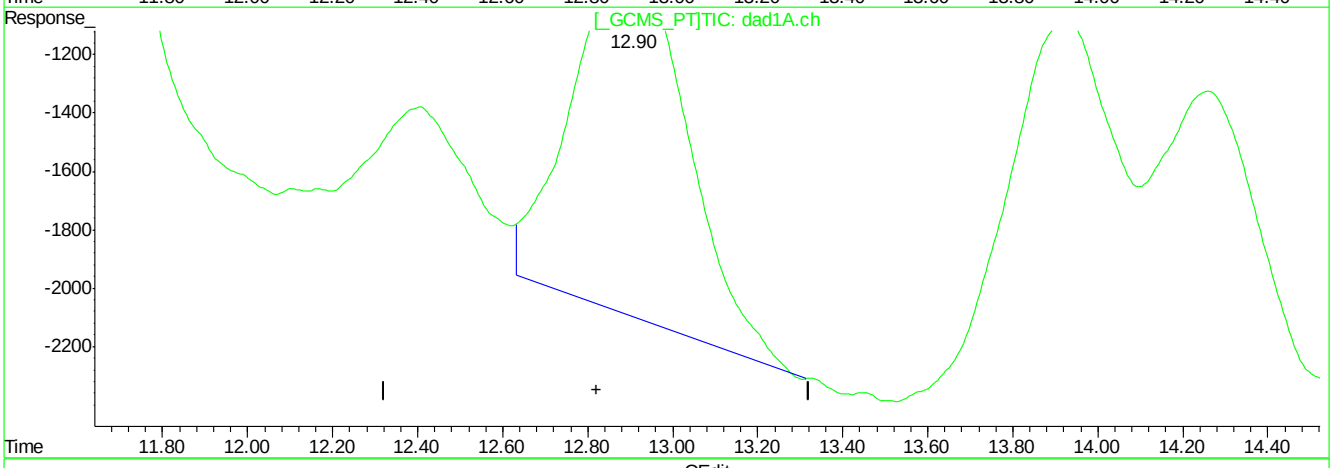
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:12:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.91min 19.395ppb

response 137631

(11) Tetryl #2

12.90min 18.860ppb m

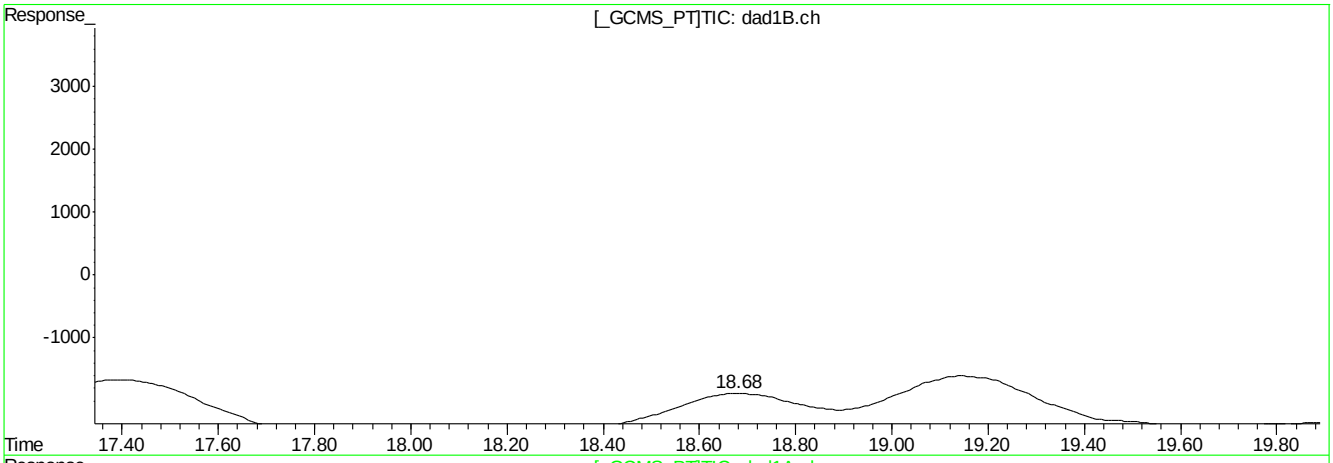
response 233676

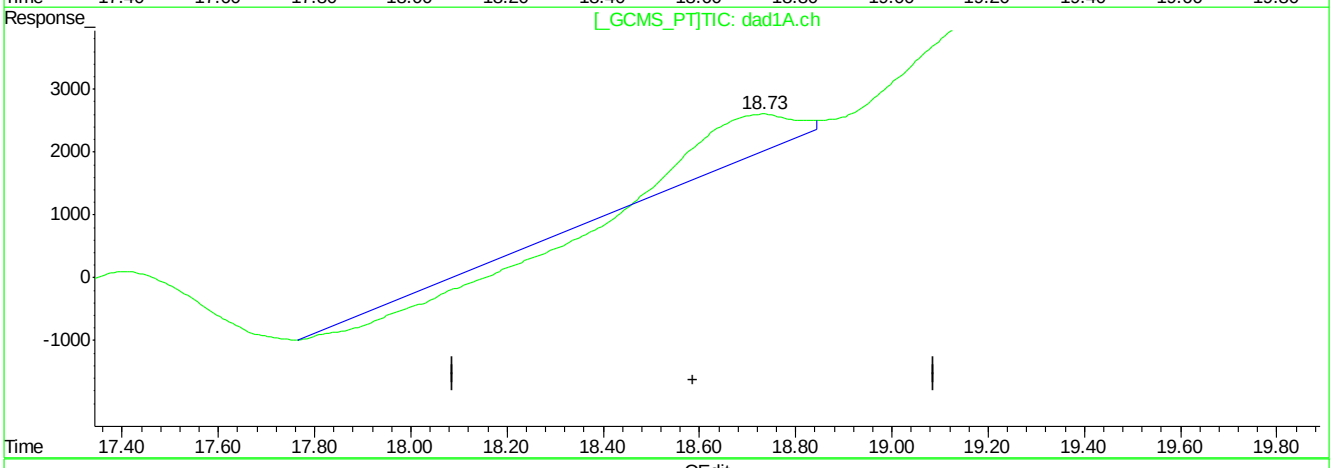
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:12:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.68min 19.284ppb

response 111987

(19) m-Nitrotoluene #2

18.73min 2.130ppb

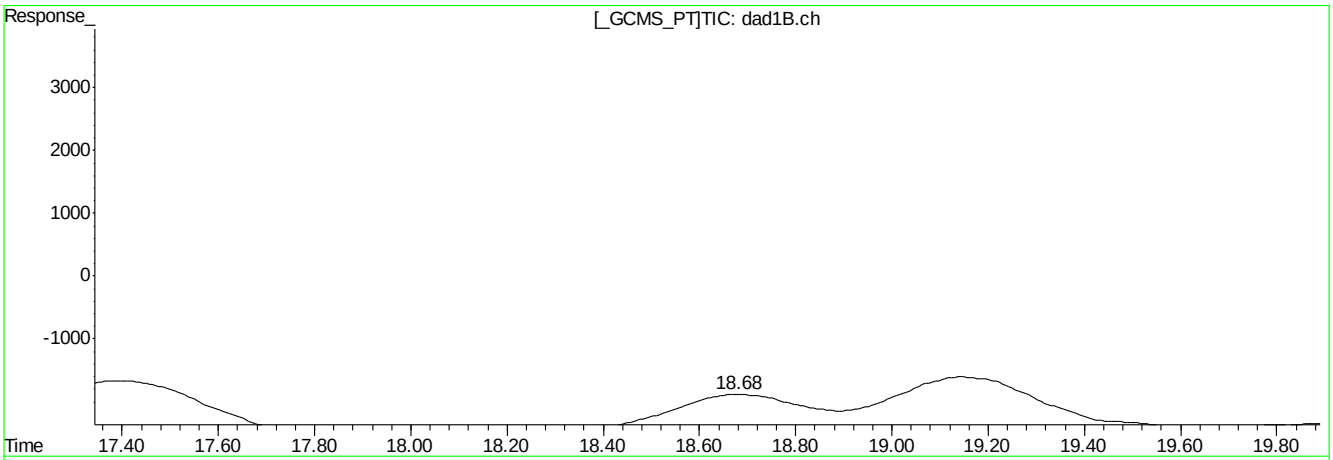
response 20632

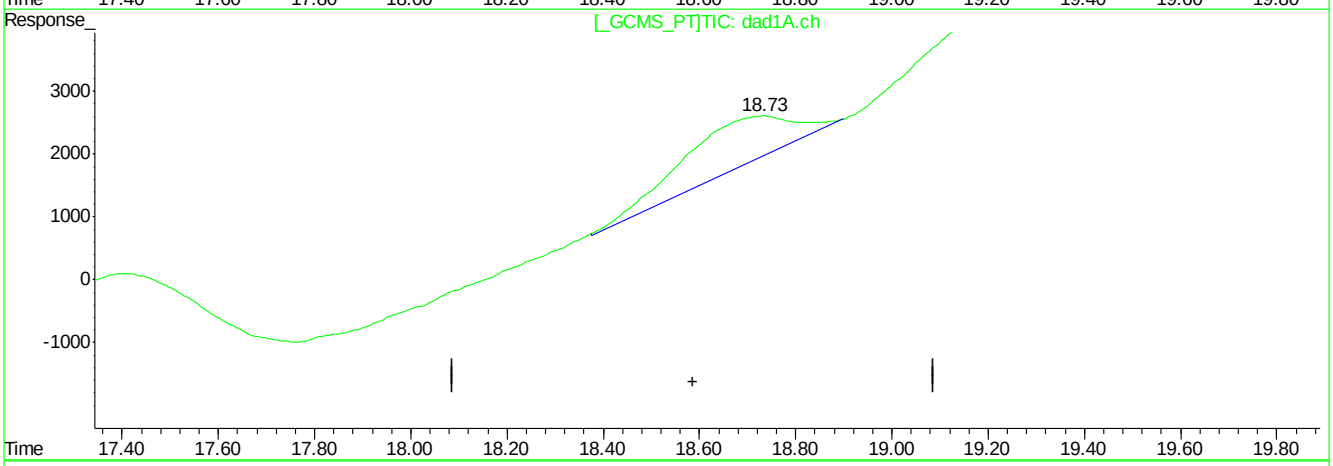
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:13:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.68min 19.284ppb

response 111987

(19) m-Nitrotoluene #2

18.73min 12.669ppb m

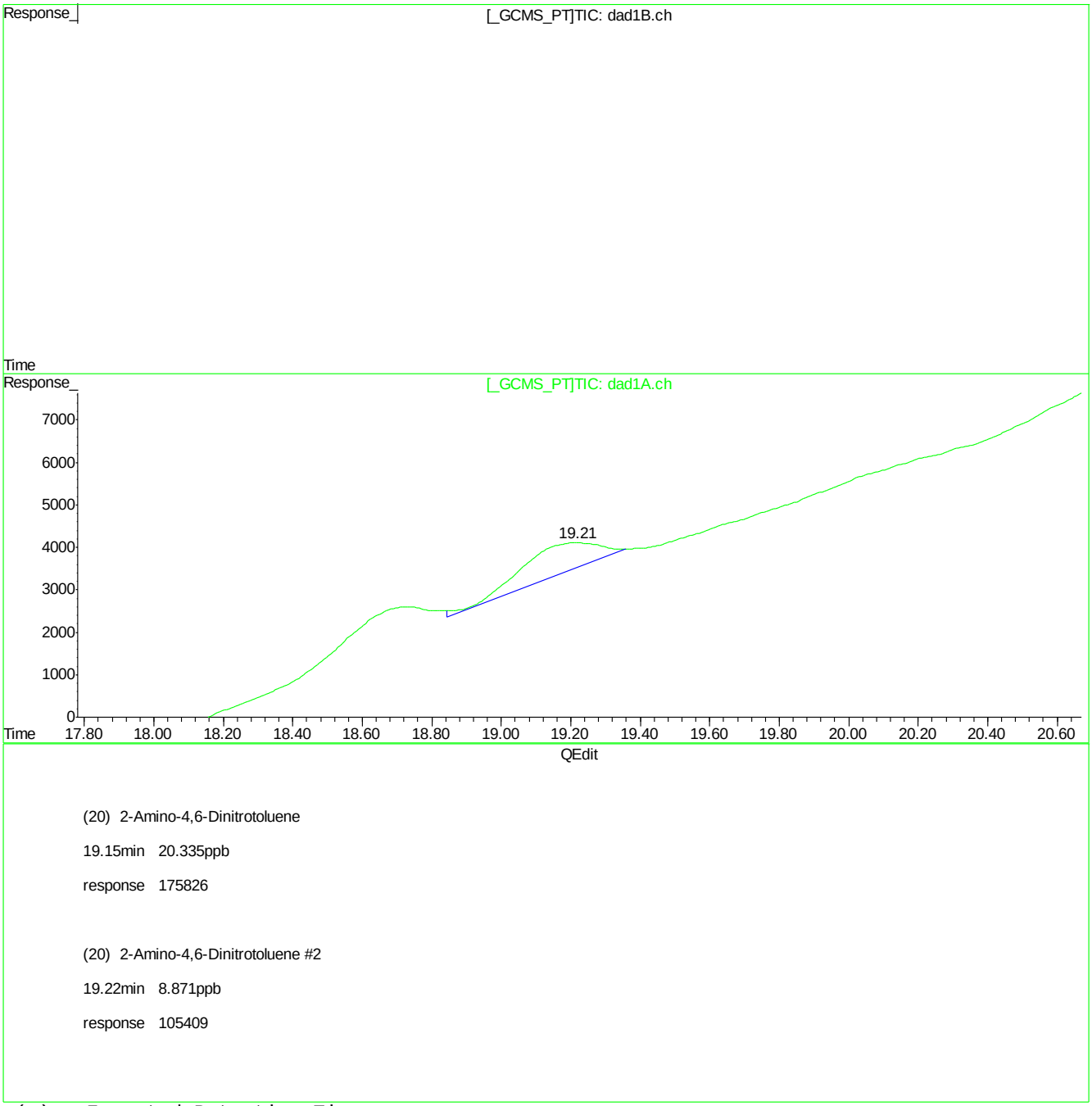
response 122725

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:13:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(20) 2-Amino-4,6-Dinitrotoluene

19.15min 20.335ppb

response 175826

(20) 2-Amino-4,6-Dinitrotoluene #2

19.22min 8.871ppb

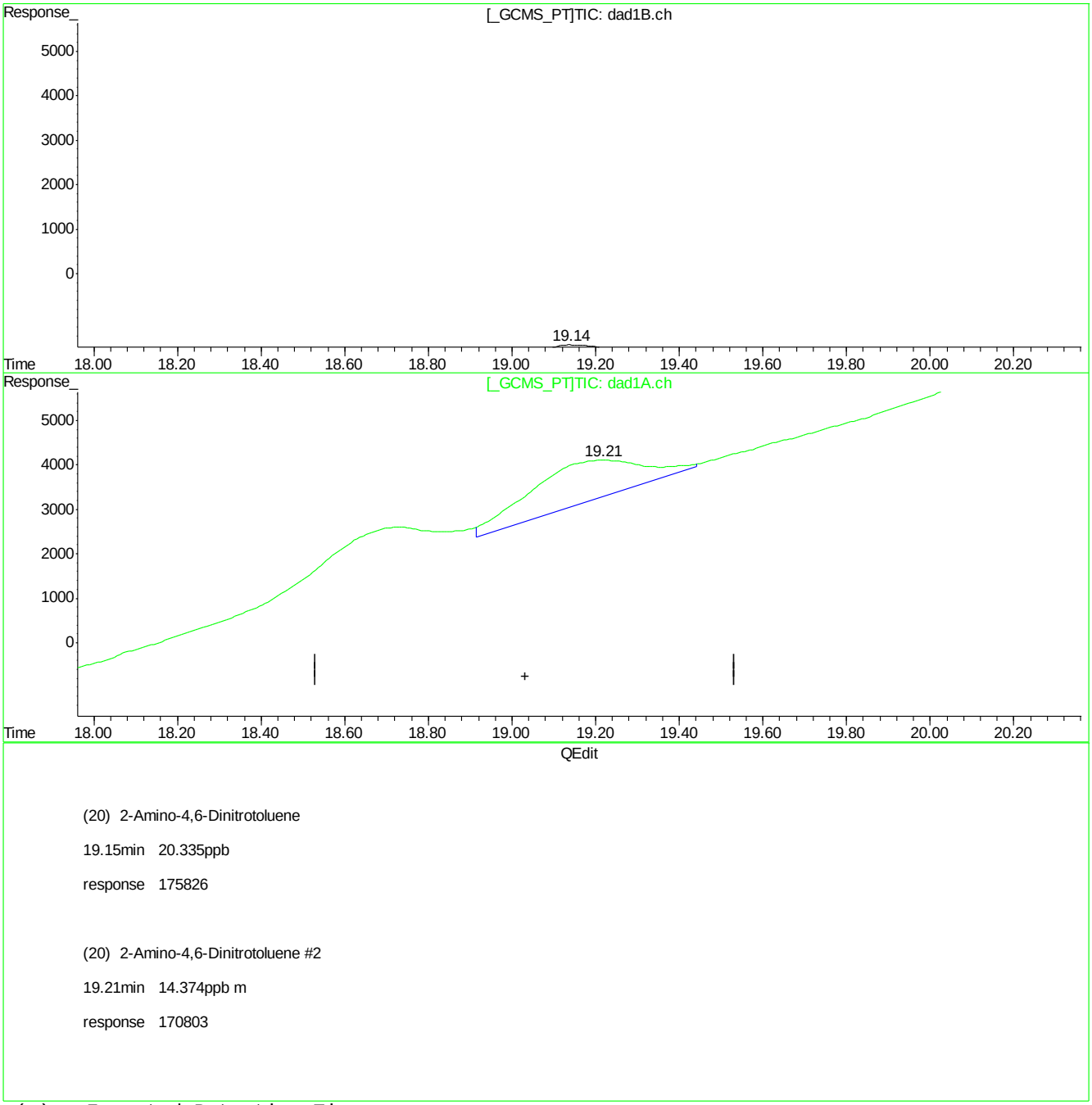
response 105409

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:13:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(20) 2-Amino-4,6-Dinitrotoluene

19.15min 20.335ppb

response 175826

(20) 2-Amino-4,6-Dinitrotoluene #2

19.21min 14.374ppb m

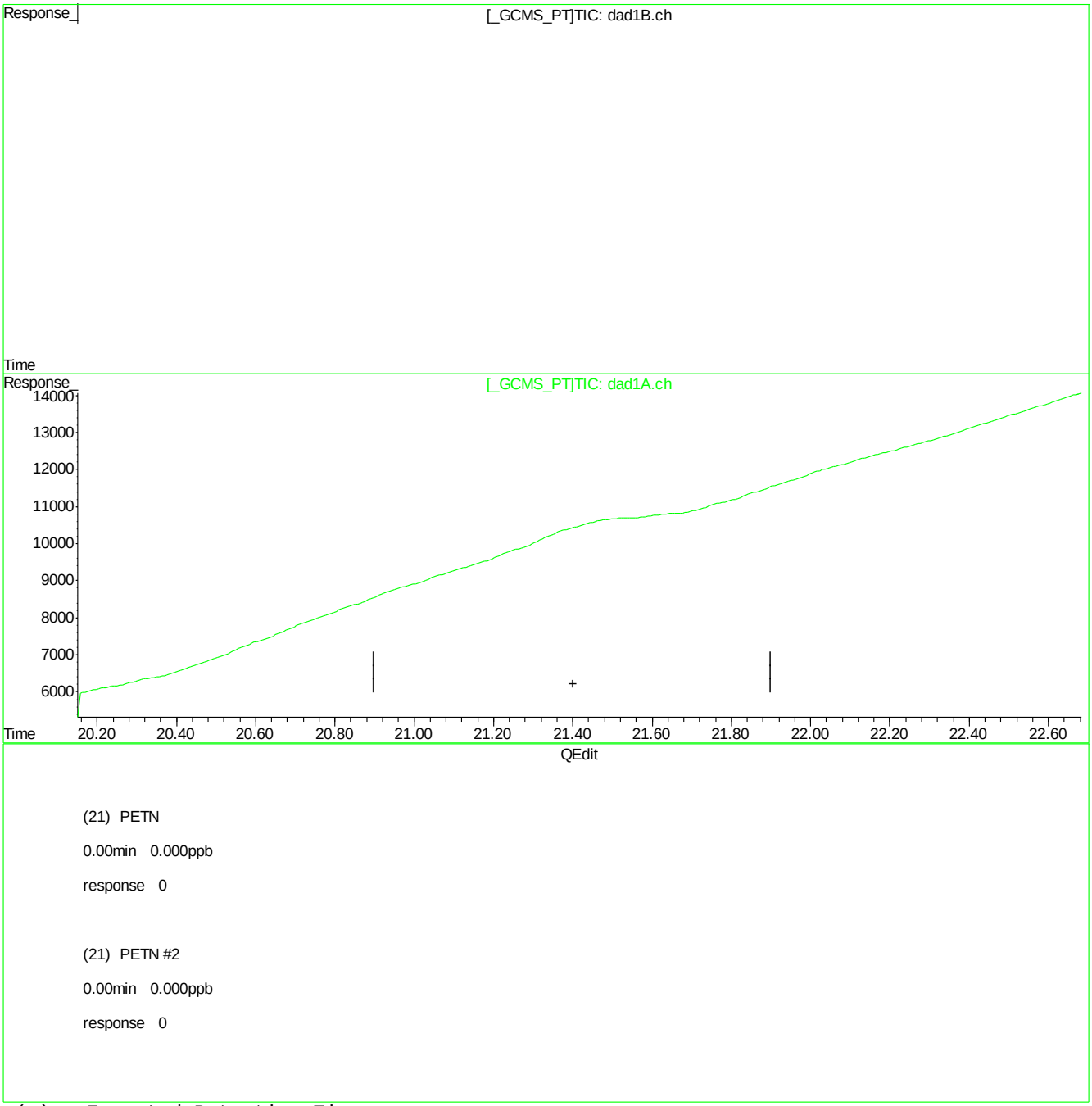
response 170803

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:13:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration

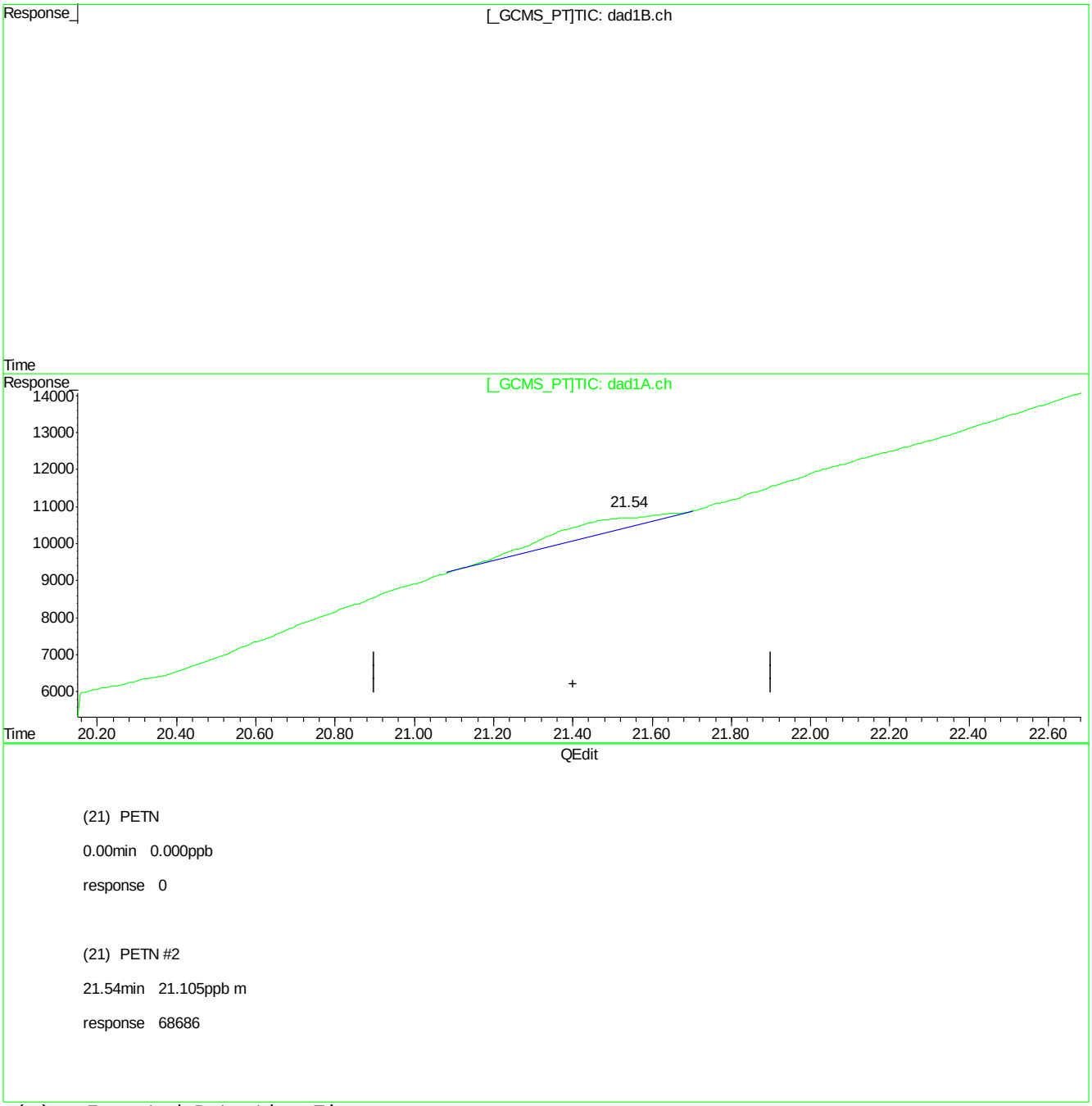


(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:13:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.54min 21.105ppb m

response 68686

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:13:49 2021

GG622000.D edits: PETN

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:09 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.83	13.83	247673	445809	50.698	49.106
	Spiked Amount 500.000	Range 70 - 136		Recovery =		10.14%#	9.82%#
	Target Compounds						
1)	TNX	4.78	4.78	122293	122293	26.531	26.701
2)	HMX	5.18	5.18	170288	170288	52.517	52.147
3)	DNX	5.36	5.36	284676	279432	48.175m	47.187m
4)	MNX	6.45	6.45	345422	345422	57.015	57.015
5)	1,3,5-Trinitrobe	7.48	7.48	462849	462849	49.060	49.060
6)	RDX	7.71	7.71	202635	202635	46.109	46.109
7)	1,3-Dinitrobenze	9.67	9.67	610864	434490	47.824	44.782m
8)	Nitrobenzene	10.61	10.60	387786	365414	45.846	44.217m
9)	2,4,6-Trinitroto	11.57	11.57	423177	521552	46.221	40.104m
10)	Nitroglycerin	0.00	12.33	0	129295	N.D.	40.856m#
11)	Tetryl	12.82	12.82	331420	537082	46.704	43.348
13)	2,6-Dinitrotolue	14.17	14.17	294439	391301	46.693	42.450
14)	2,4-Dinitrotolue	14.81	14.81	547029	331126	47.439	41.706
15)	3,5-Dinitroanili	15.49	15.50	461026	744634	46.787	47.886
16)	o-Nitrotoluene	16.36	16.36	239848	436254	46.292	59.548
17)	p-Nitrotoluene	17.30	17.30	495268	747698	93.157	81.318
18)	4-Amino-2,6-Dini	17.30	17.30	495268	747698	93.157	81.318
19)	m-Nitrotoluene	18.60	18.60	281706	446271	48.509	46.070m
20)	2-Amino-4,6-Dini	19.05	19.07	410448	495966	47.469	41.739
21)	PETN	0.00	21.48	0	136642	N.D.	41.985m#

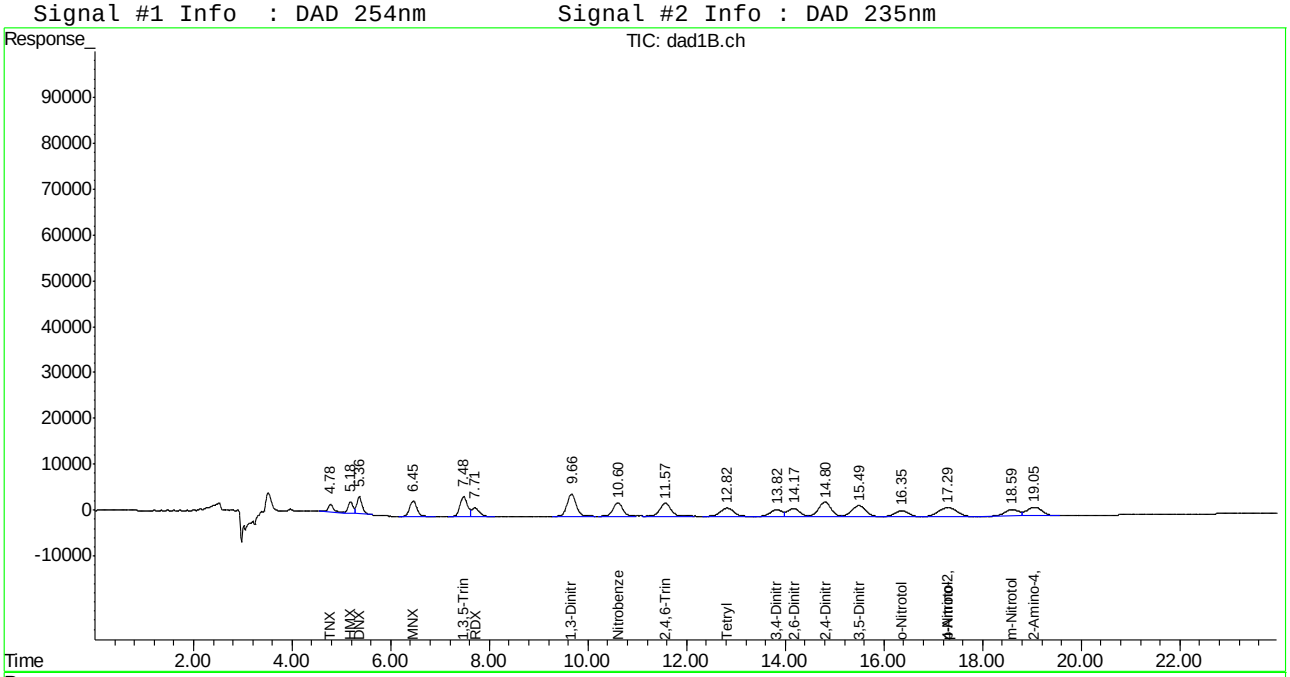
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622001.D GGG3024_080821.M Mon Aug 09 10:17:35 2021 Page 1

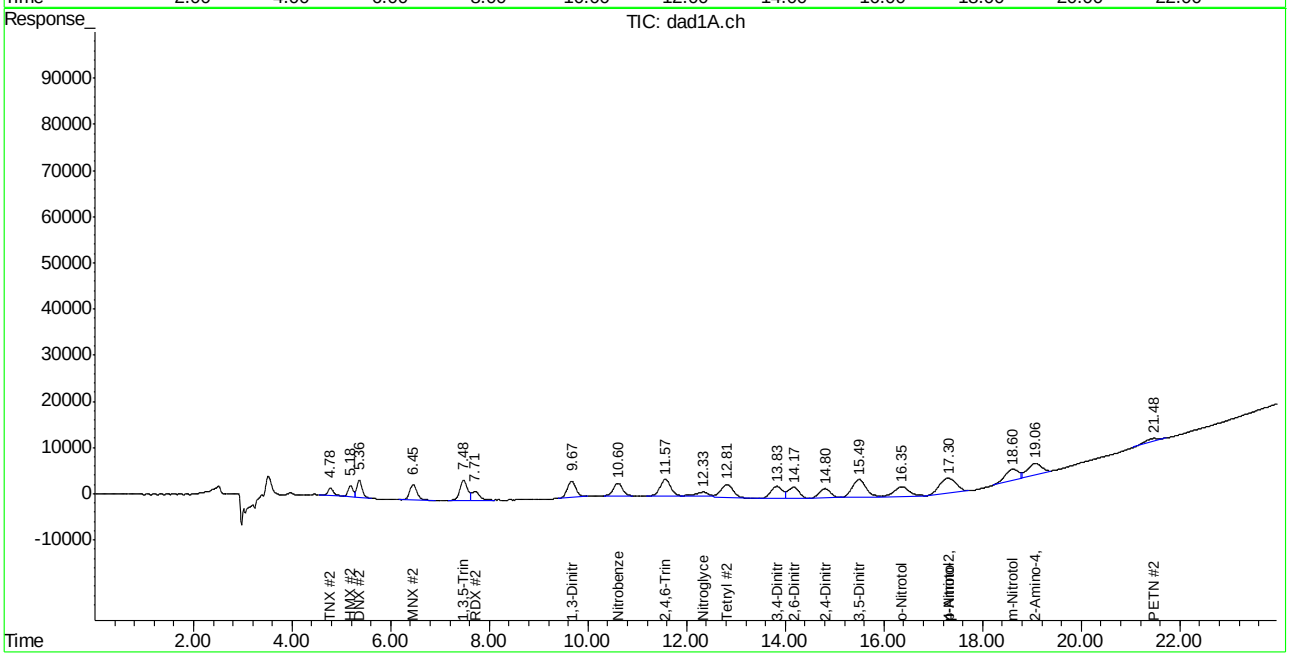
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:10 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

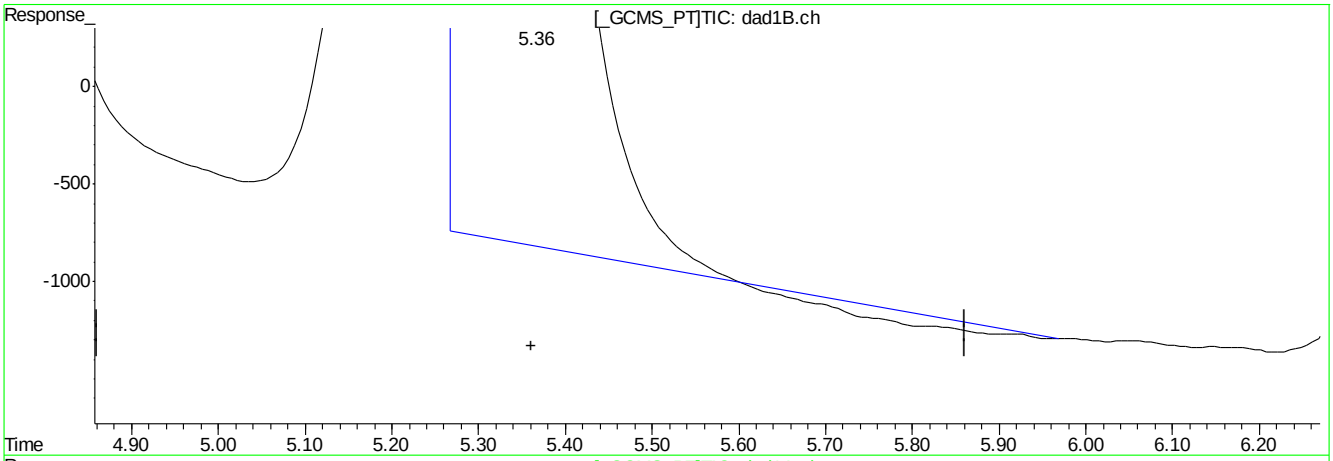
Sample Number: GGG3024-IC3024 **Method:** SW846 8330B
Lab FileID: GG622001.D **Analyst approved:** 08/09/21 10:24 James Boone
Injection Time: 08/08/21 18:05 **Supervisor approved:** 08/10/21 07:46 Mike Eger

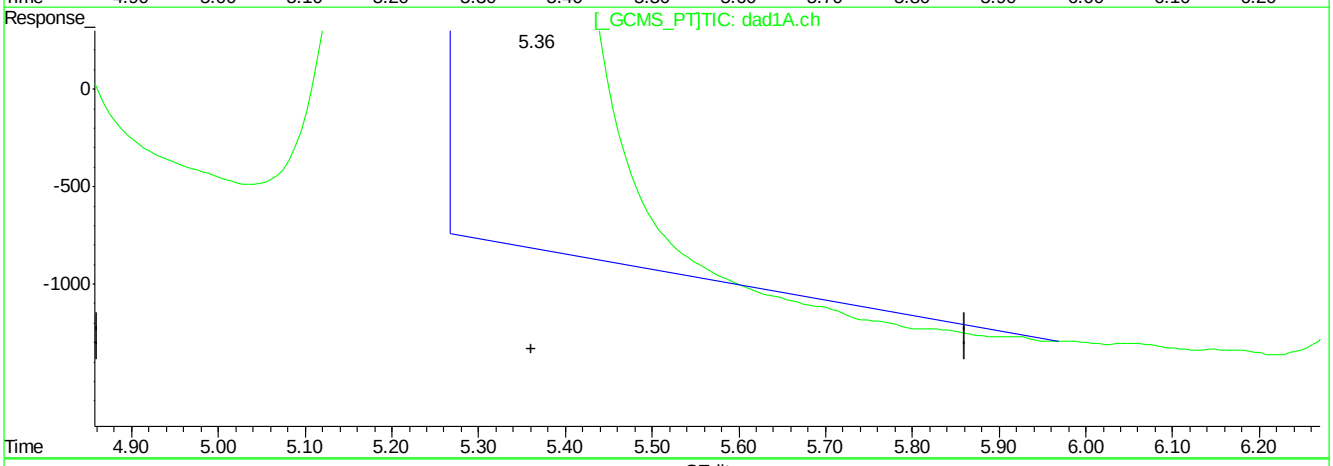
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.36	Poor instrument integration
DNX		2	5.36	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.67	Poor instrument integration
Nitrobenzene	98-95-3	2	10.60	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.57	Poor instrument integration
Nitroglycerine	55-63-0	2	12.33	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.60	Poor instrument integration
PETN	78-11-5	2	21.48	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.36min 47.027ppb

response 277891

(3) DNX #2

5.36min 46.926ppb

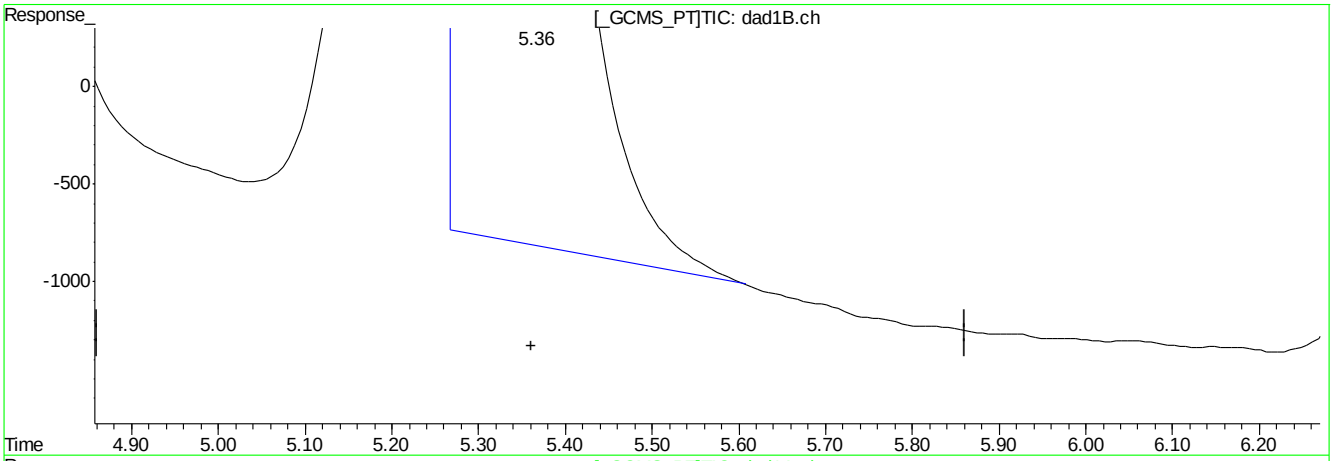
response 277891

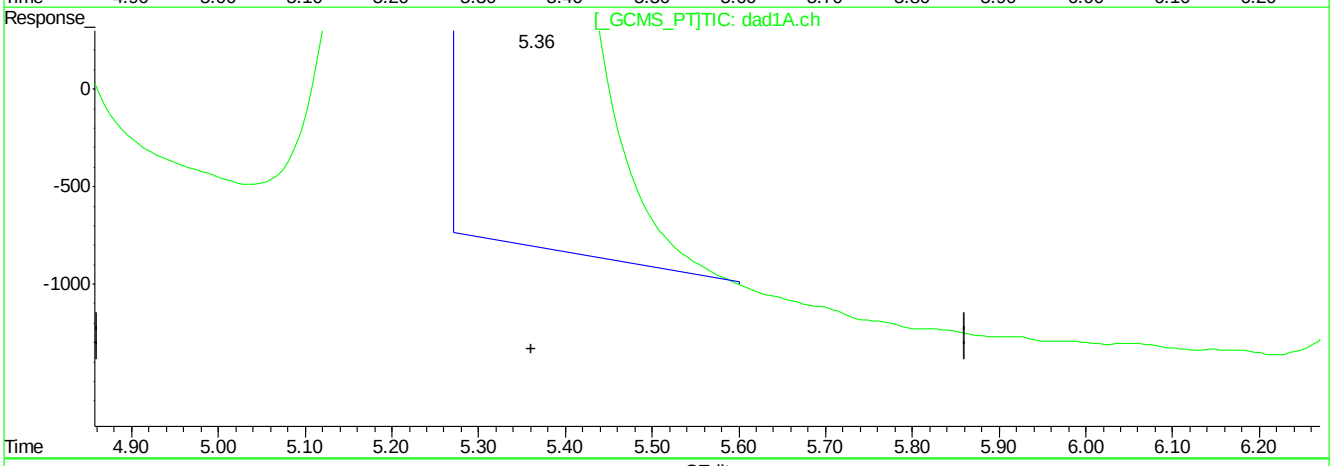
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.36min 48.175ppb m

response 284676

(3) DNX #2

5.36min 47.187ppb m

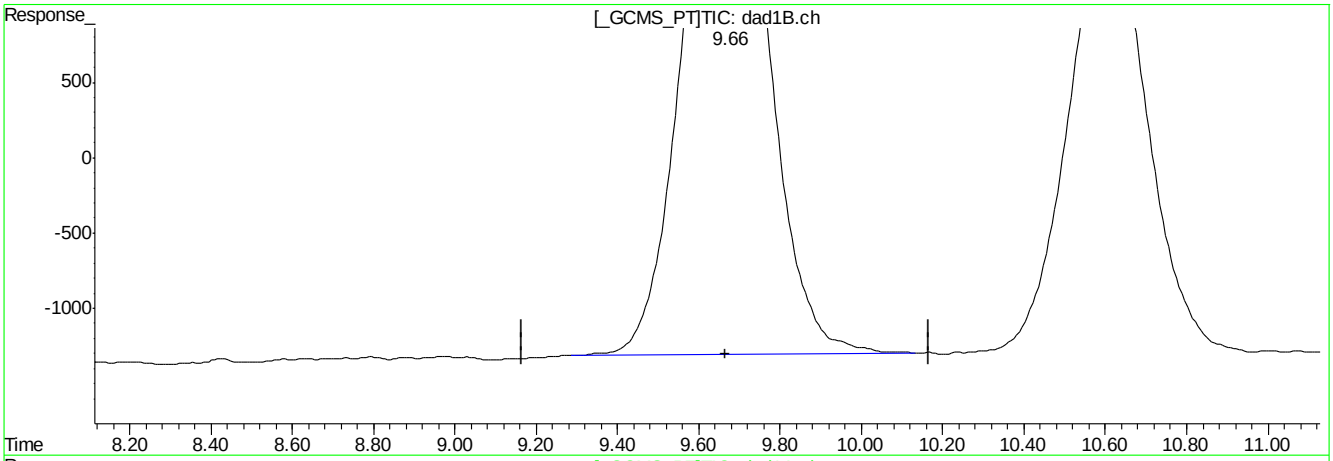
response 279432

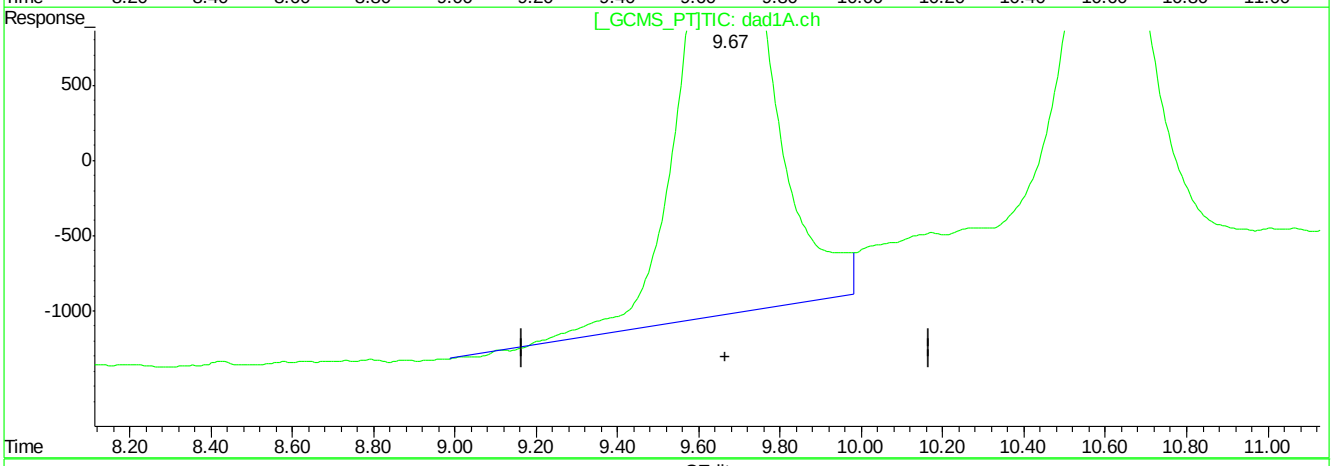
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.67min 47.824ppb

response 610864

(7) 1,3-Dinitrobenzene #2

9.67min 52.300ppb

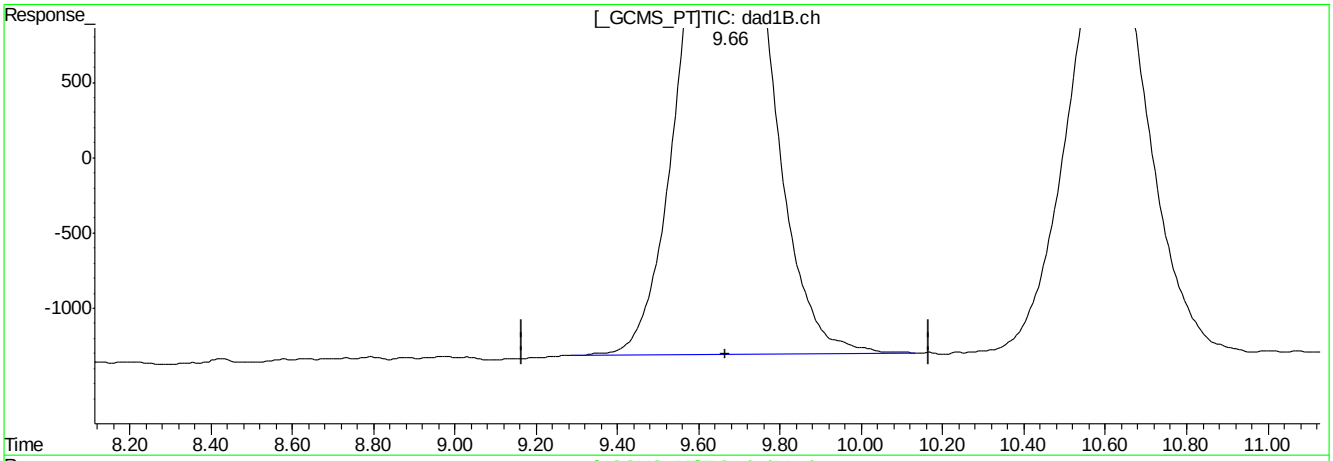
response 507426

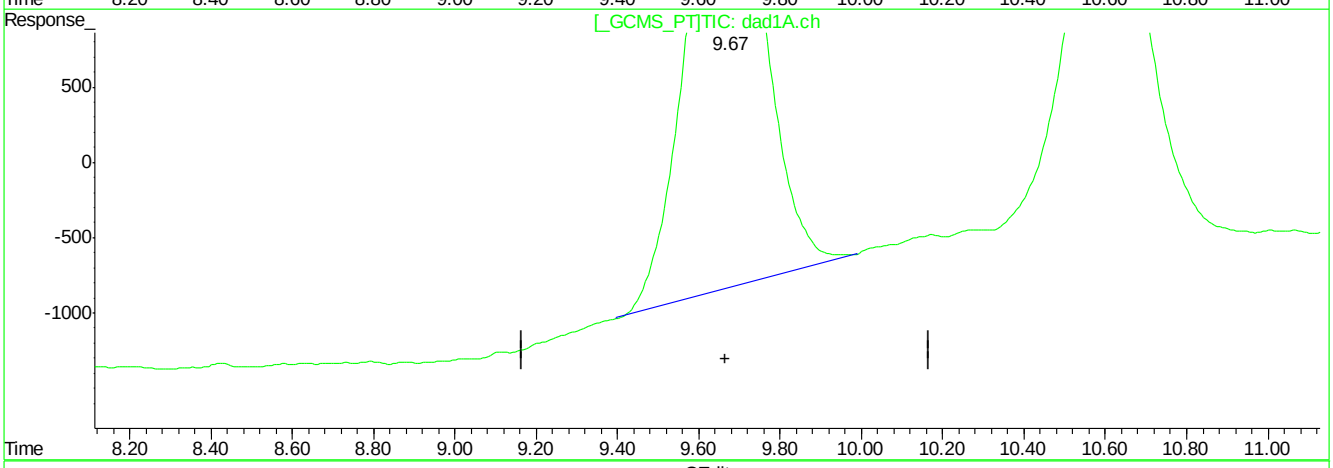
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.67min 47.824ppb

response 610864

(7) 1,3-Dinitrobenzene #2

9.67min 44.782ppb m

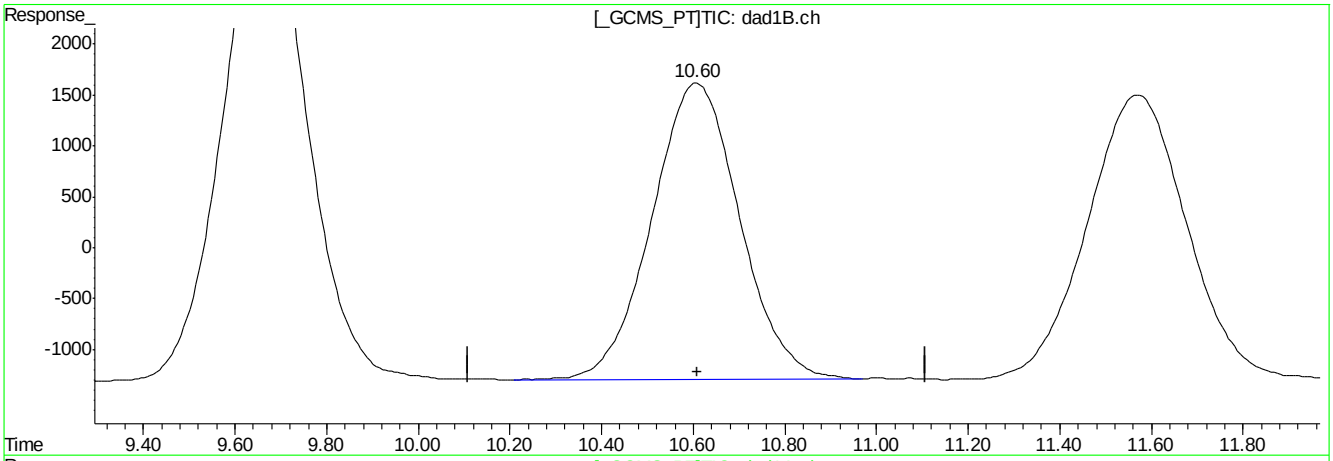
response 434490

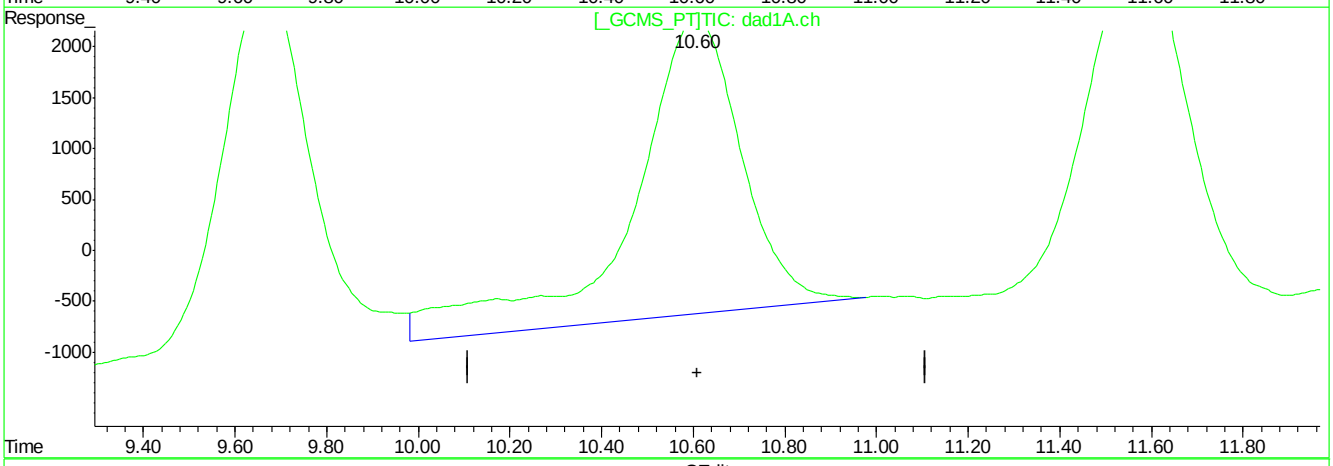
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.61min 45.846ppb

response 387786

(8) Nitrobenzene #2

10.61min 58.819ppb

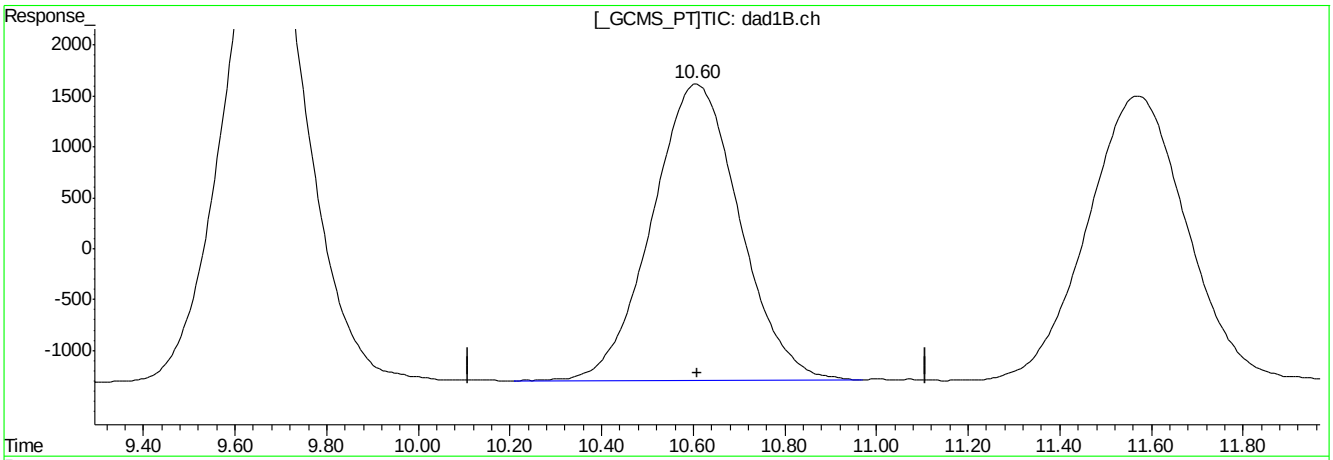
response 486087

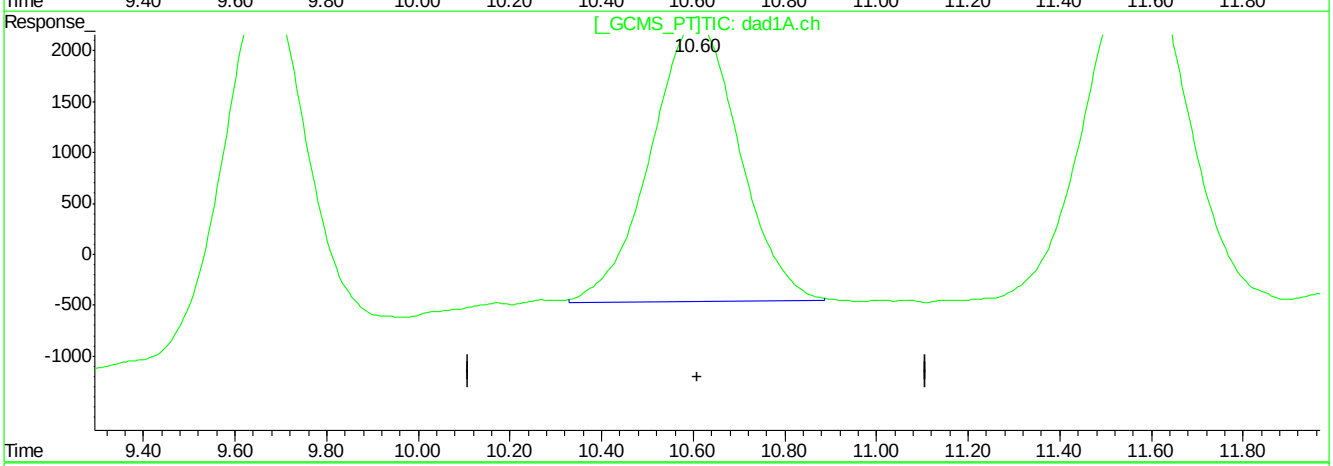
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.61min 45.846ppb

response 387786

(8) Nitrobenzene #2

10.60min 44.217ppb m

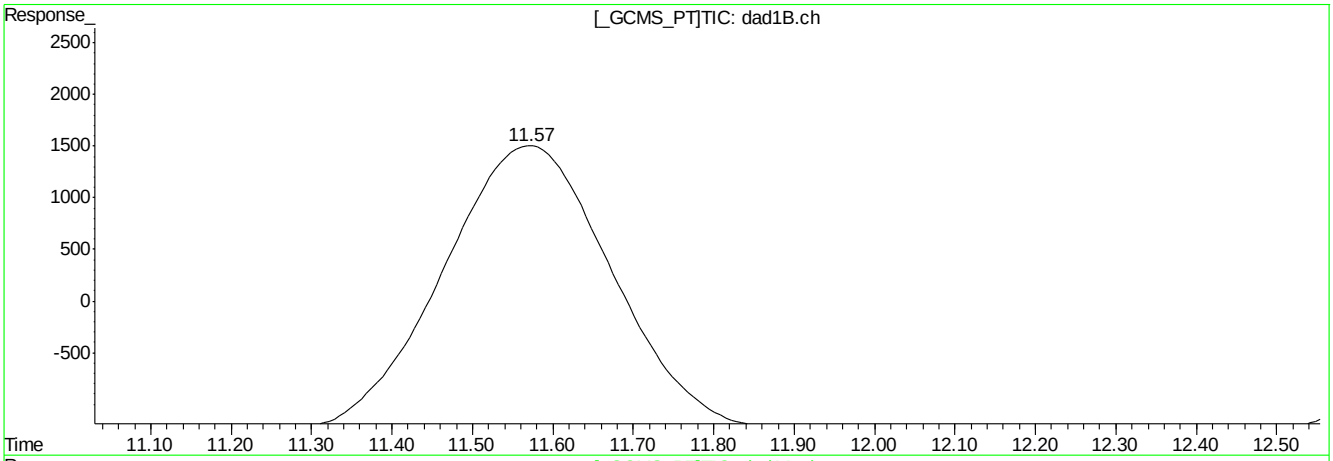
response 365414

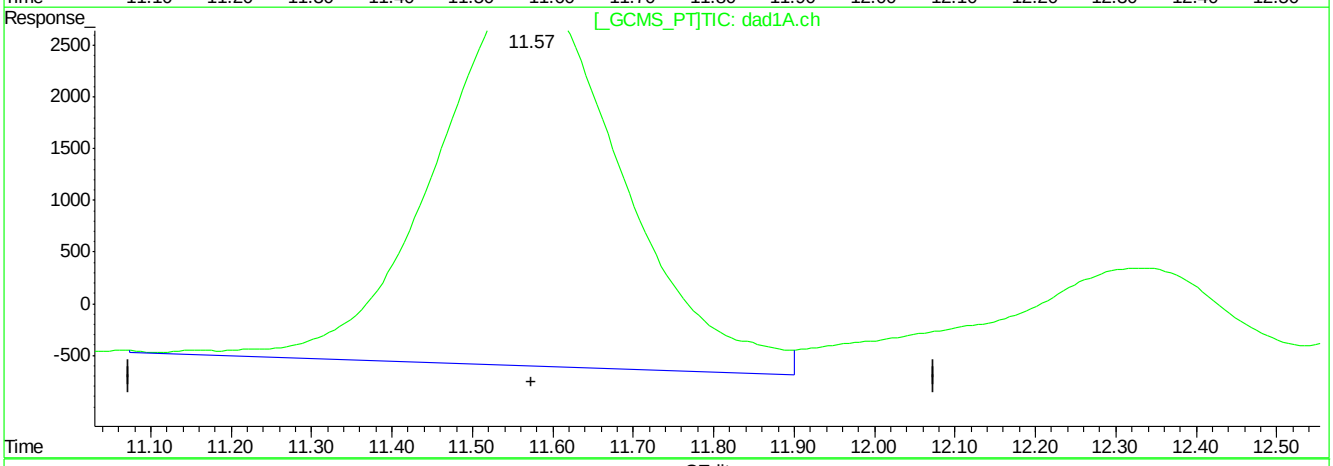
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.57min 46.221ppb

response 423177

(9) 2,4,6-Trinitrotoluene #2

11.57min 45.019ppb

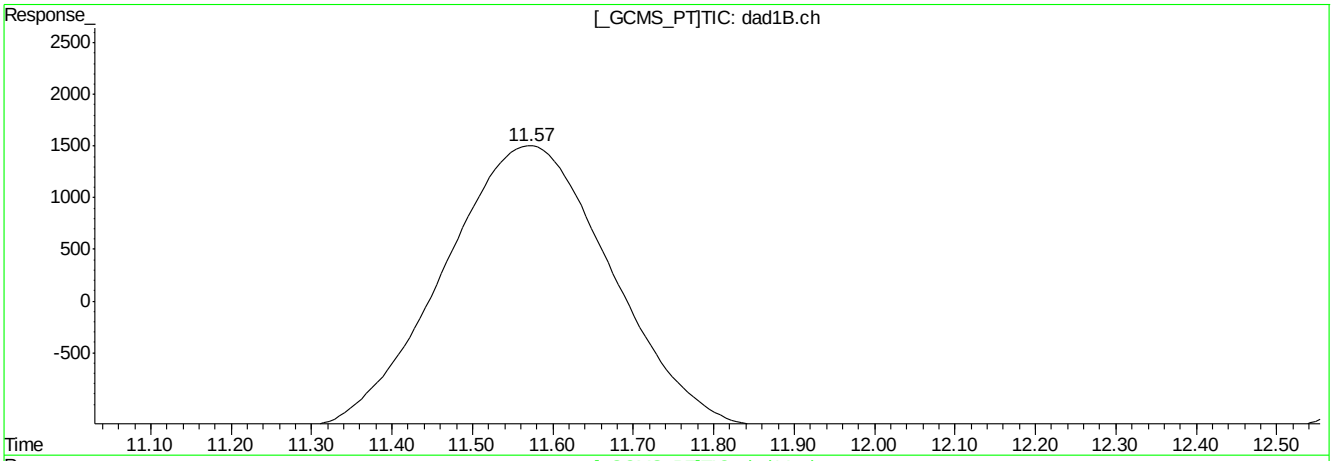
response 585475

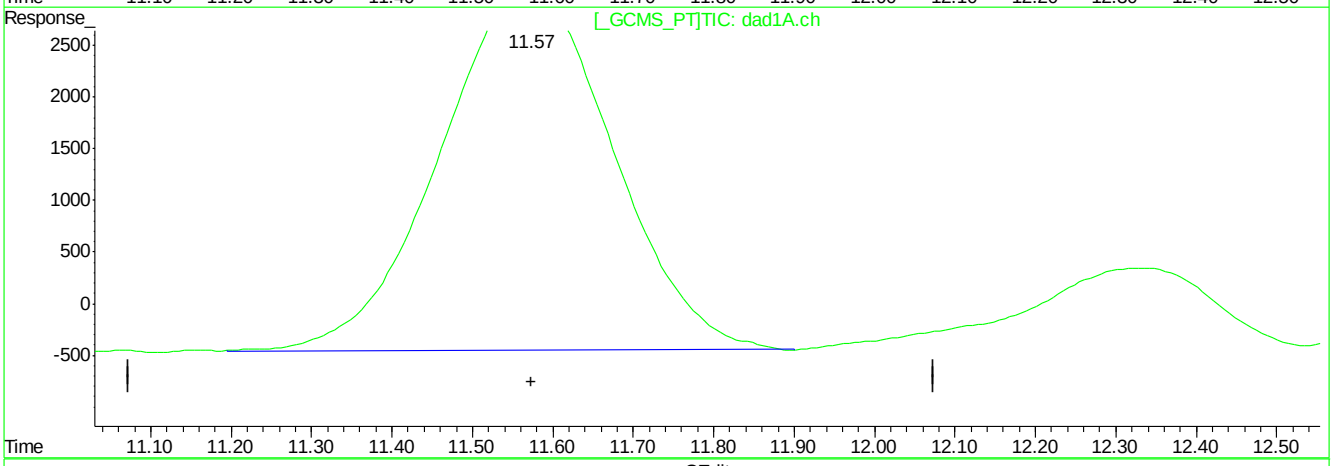
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.57min 46.221ppb

response 423177

(9) 2,4,6-Trinitrotoluene #2

11.57min 40.104ppb m

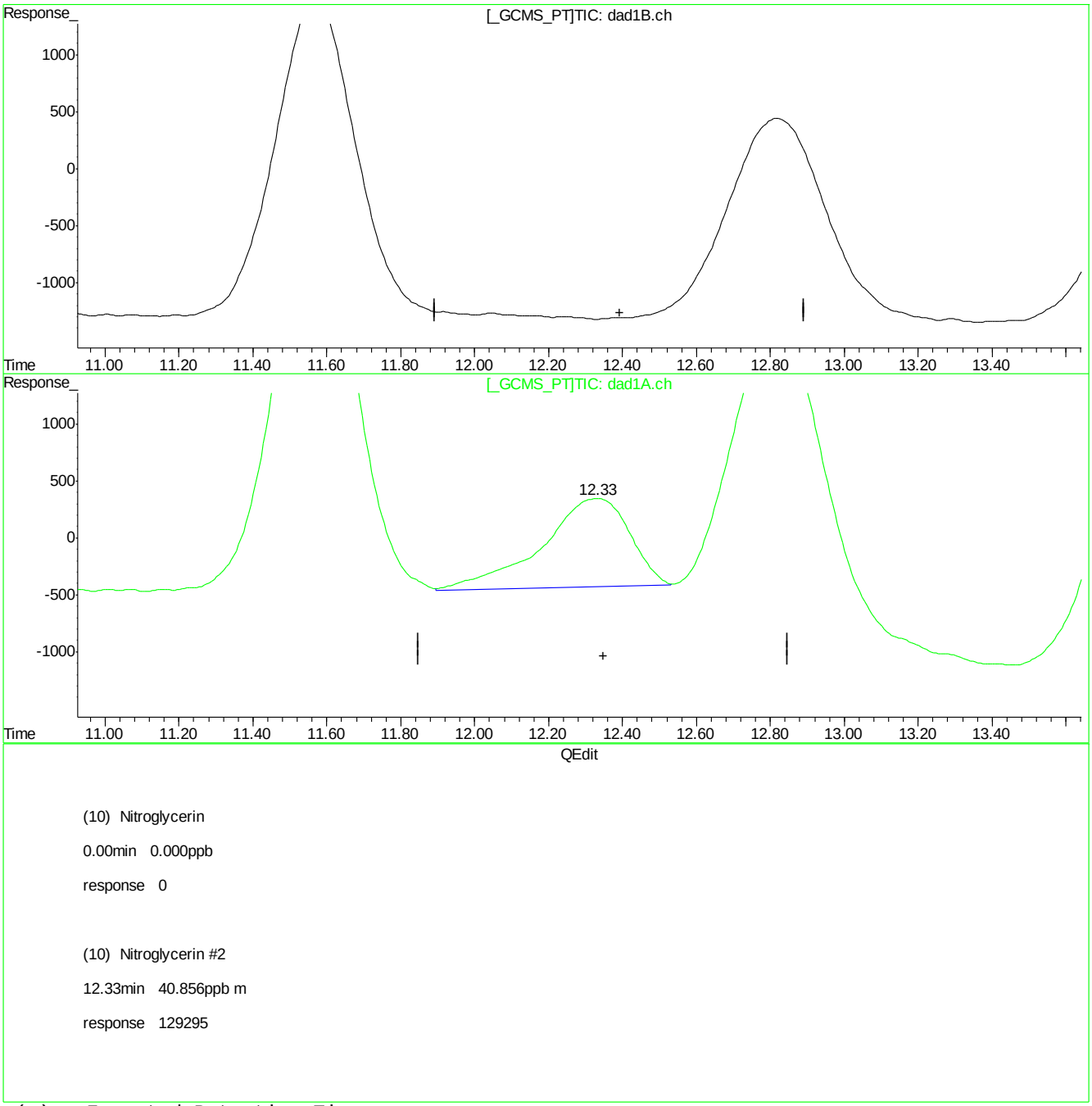
response 521552

(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.33min 40.856ppb m

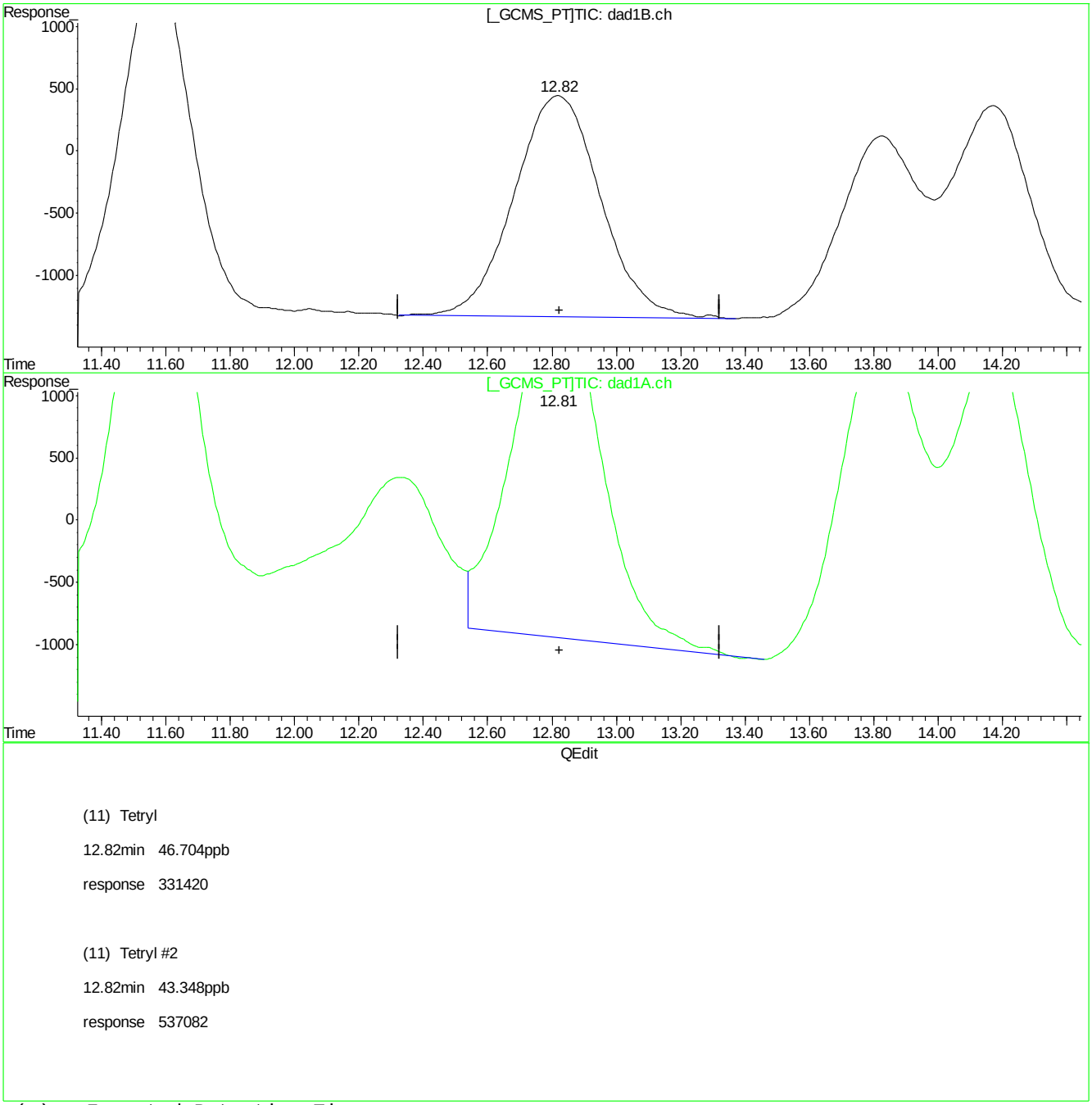
response 129295

(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(11) Tetryl

12.82min 46.704ppb

response 331420

(11) Tetryl #2

12.82min 43.348ppb

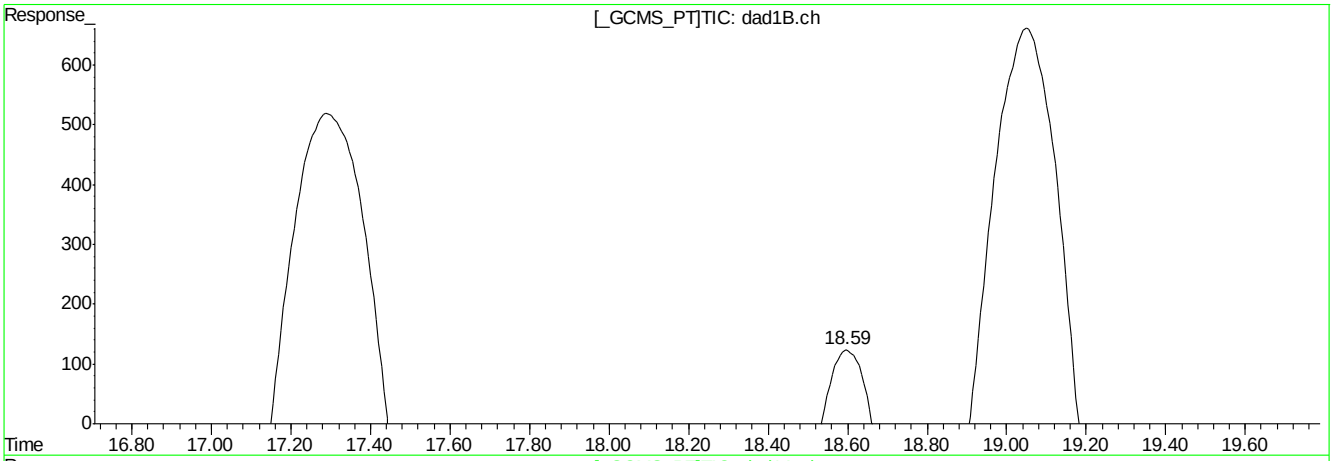
response 537082

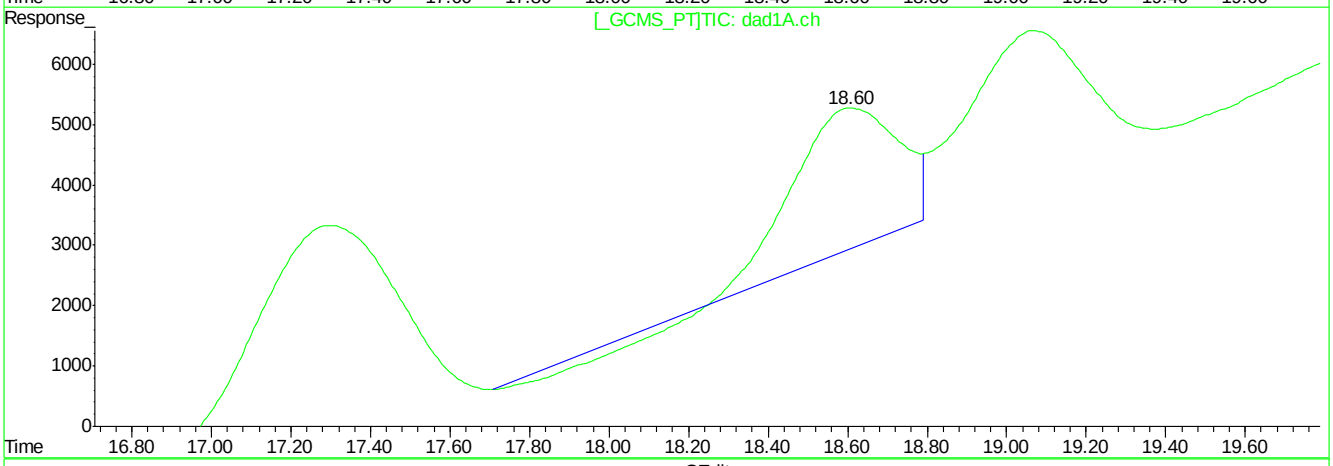
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:10:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.60min 48.509ppb

response 281706

(19) m-Nitrotoluene #2

18.61min 40.334ppb

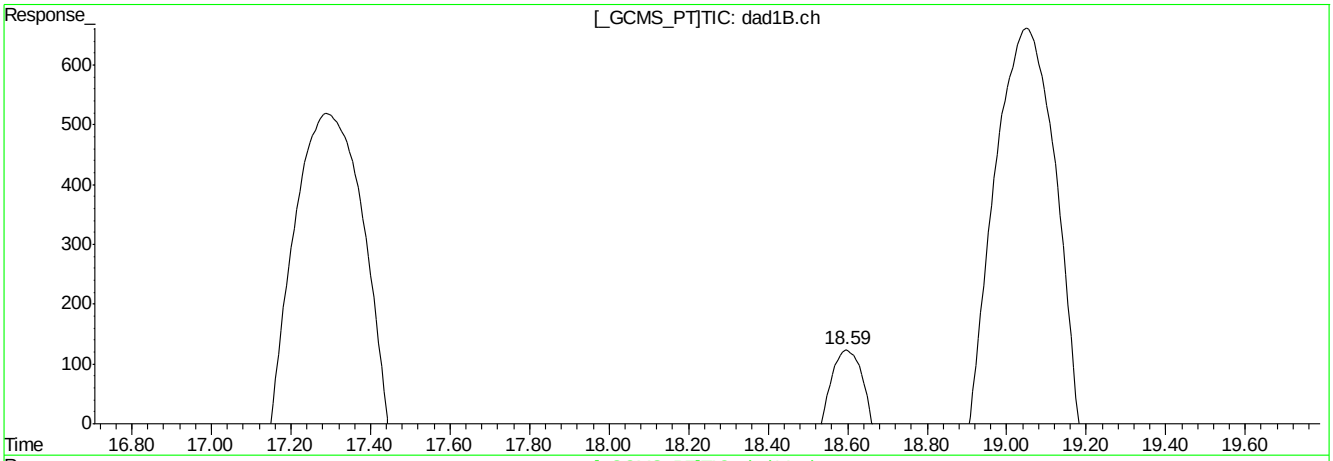
response 390708

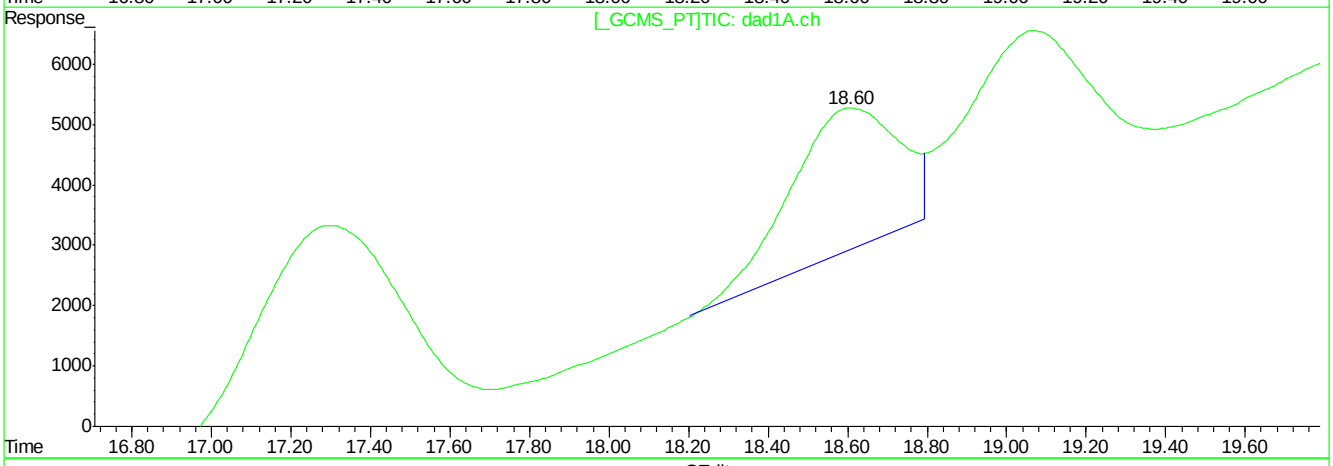
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:10:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.60min 48.509ppb

response 281706

(19) m-Nitrotoluene #2

18.60min 46.070ppb m

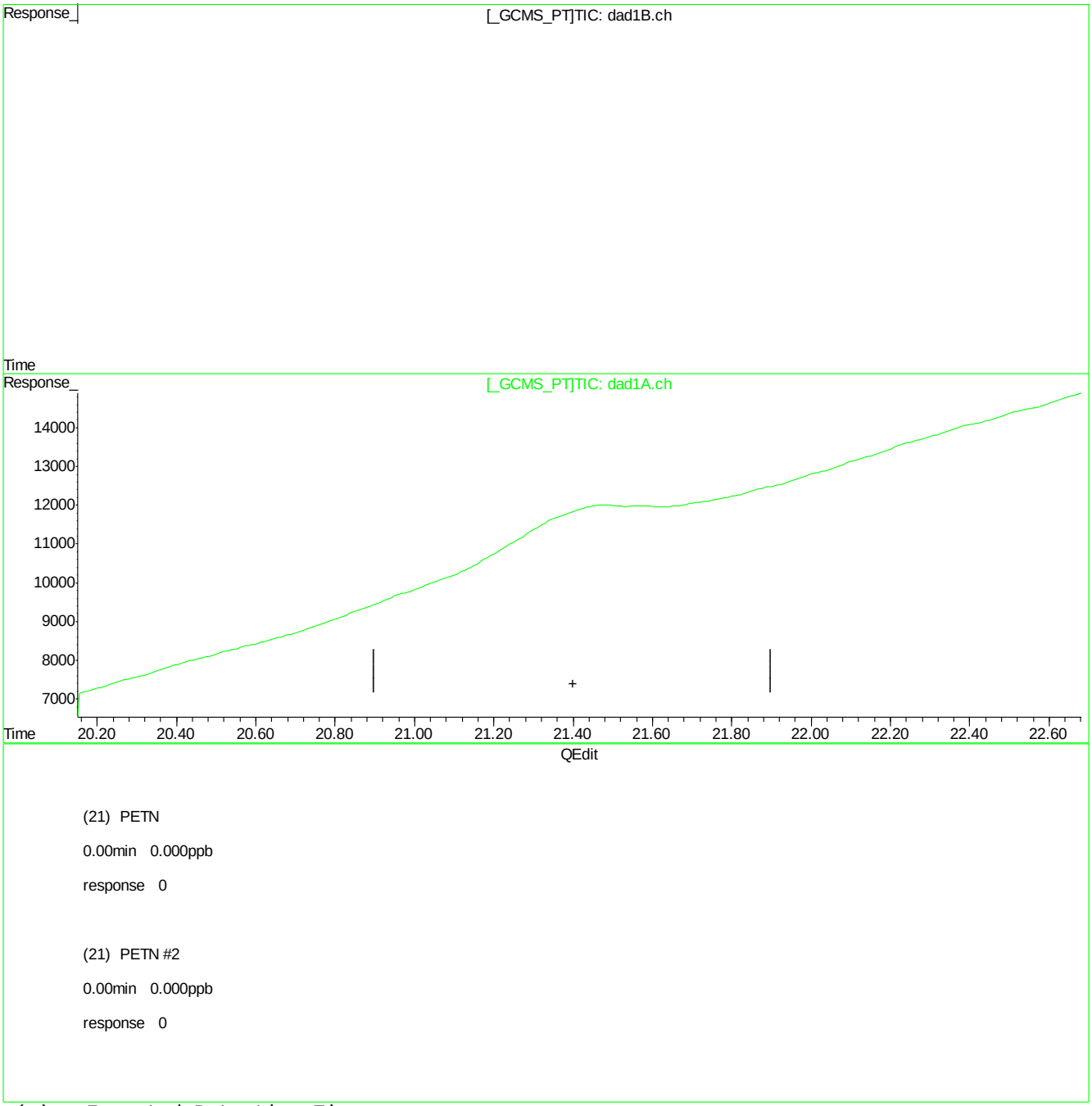
response 446271

(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:10:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration

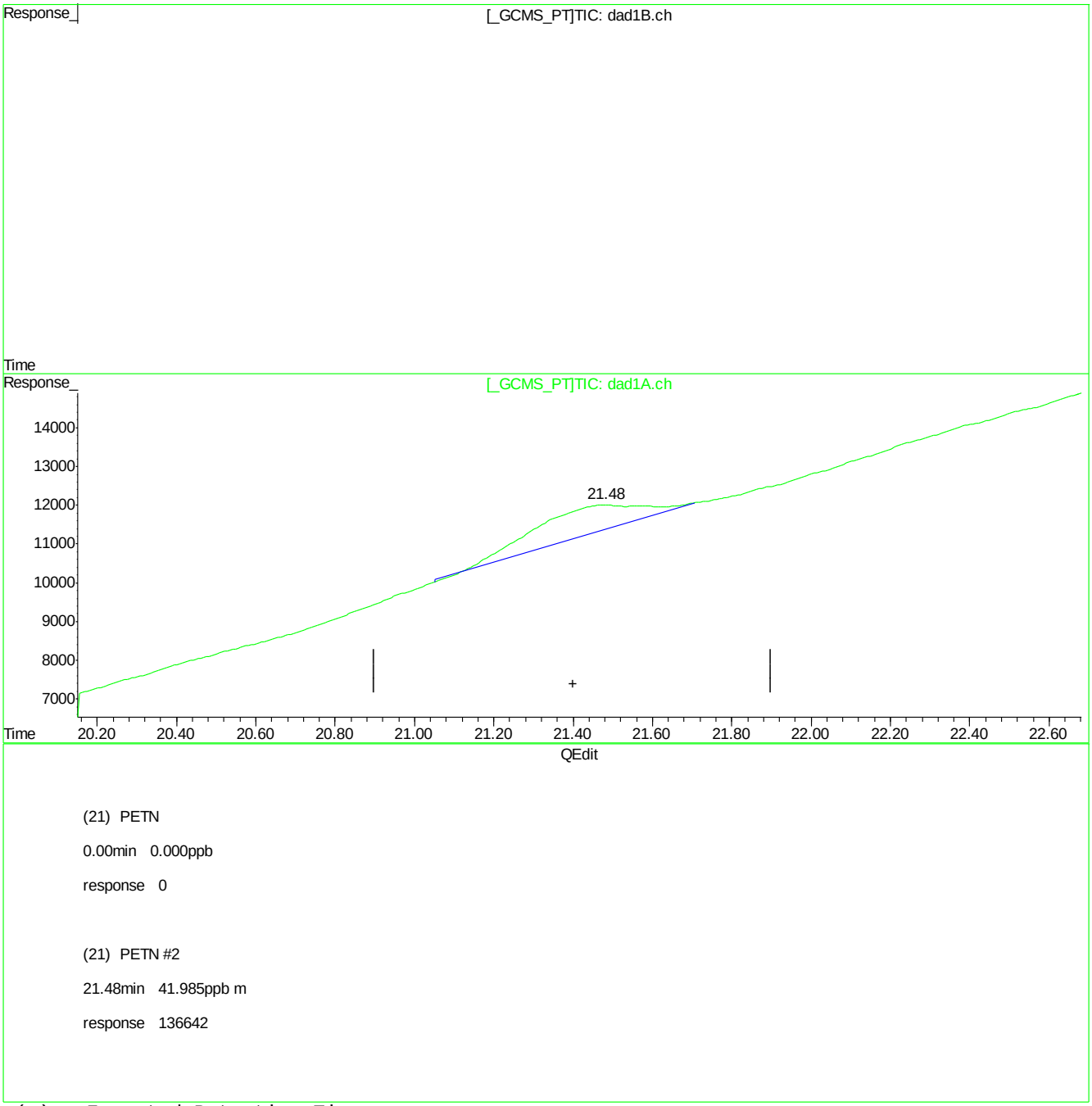


(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:10:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:10:52 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:10 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.83	13.83	490974	940274	100.501	103.572
	Spiked Amount 500.000	Range 70 - 136		Recovery =		20.10%#	20.71%#
	Target Compounds						
1)	TNX	4.78	4.78	210628	210628	45.695	45.988
2)	HMX	5.19	5.19	322878	322878	99.576	98.875
3)	DNX	5.36	5.36	546071	544560	92.410m	91.958m
4)	MNX	6.45	6.45	699619	699619	115.477	115.477
5)	1,3,5-Trinitrobe	7.48	7.48	915661	915661	97.056	97.056
6)	RDX	7.70	7.70	390379	390379	88.830	88.830
7)	1,3-Dinitrobenze	9.66	9.66	1197405	840474	93.744	86.626m
8)	Nitrobenzene	10.60	10.60	781642	717630	92.410	86.836m
9)	2,4,6-Trinitroto	11.57	11.57	852085	1256036	93.068	96.581
10)	Nitroglycerin	0.00	12.35	0	313188	N.D.	98.964 #
11)	Tetryl	12.82	12.82	667084	1223520	94.005	98.751
13)	2,6-Dinitrotolue	14.17	14.17	577604	824913	91.597	89.490
14)	2,4-Dinitrotolue	14.81	14.81	1086516	738551	94.224	93.021
15)	3,5-Dinitroanili	15.49	15.50	910186	1439668	92.370	92.581
16)	o-Nitrotoluene	16.37	16.37	472535	562229	91.201	76.744
17)	p-Nitrotoluene	17.30	17.29	1006089	1713208	189.239	186.325
18)	4-Amino-2,6-Dini	17.30	17.29	1006089	1713208	189.239	186.325
19)	m-Nitrotoluene	18.60	18.61	550268	930945	94.754	96.105m
20)	2-Amino-4,6-Dini	19.05	19.06	814460	1059559	94.193	89.170
21)	PETN	0.00	21.46	0	324765	N.D.	99.788m#

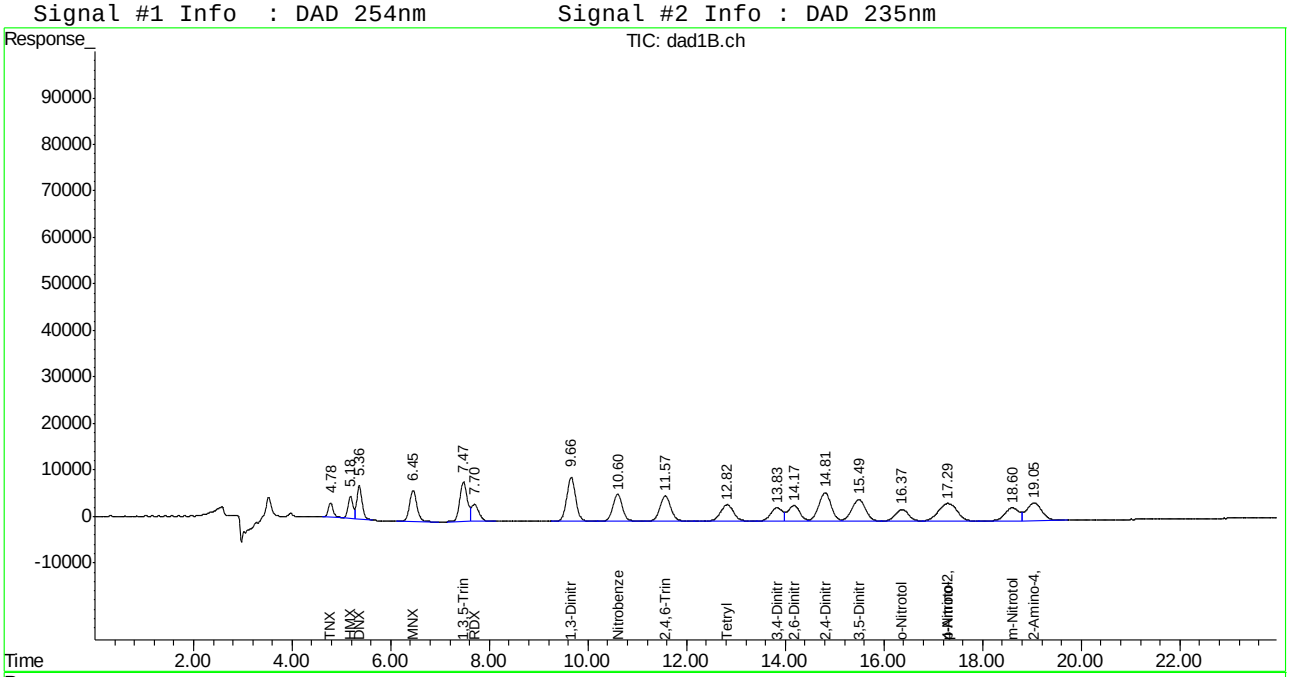
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

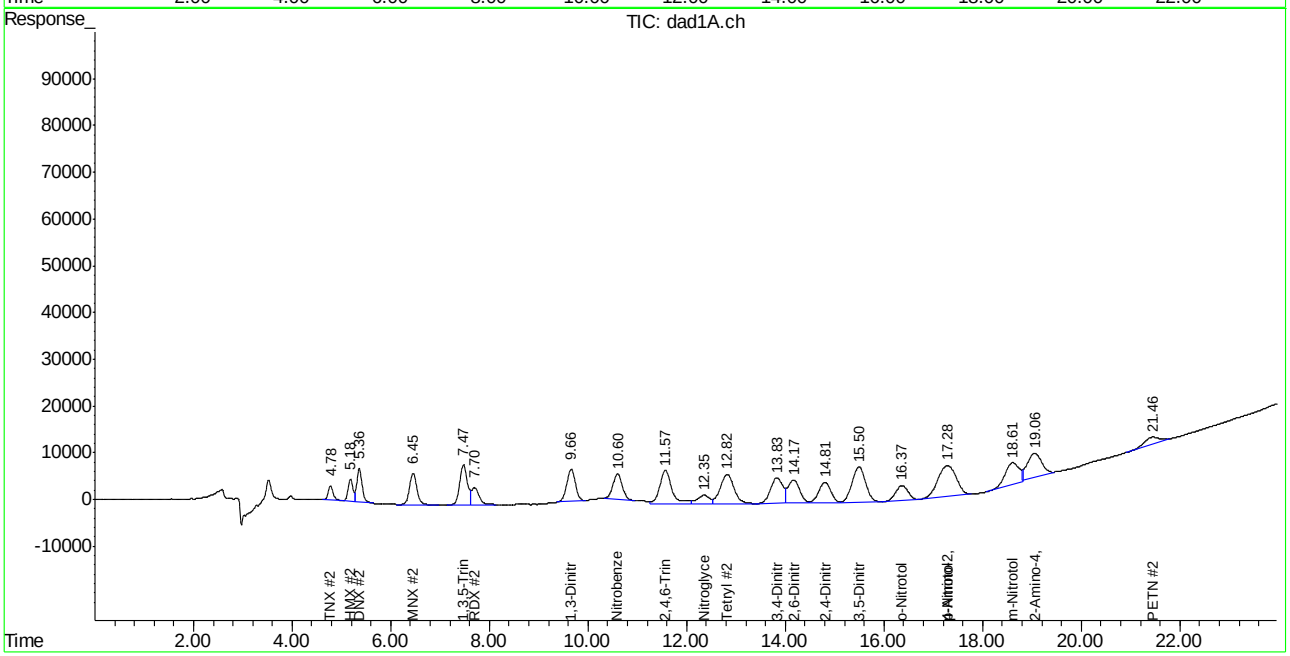
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:08 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

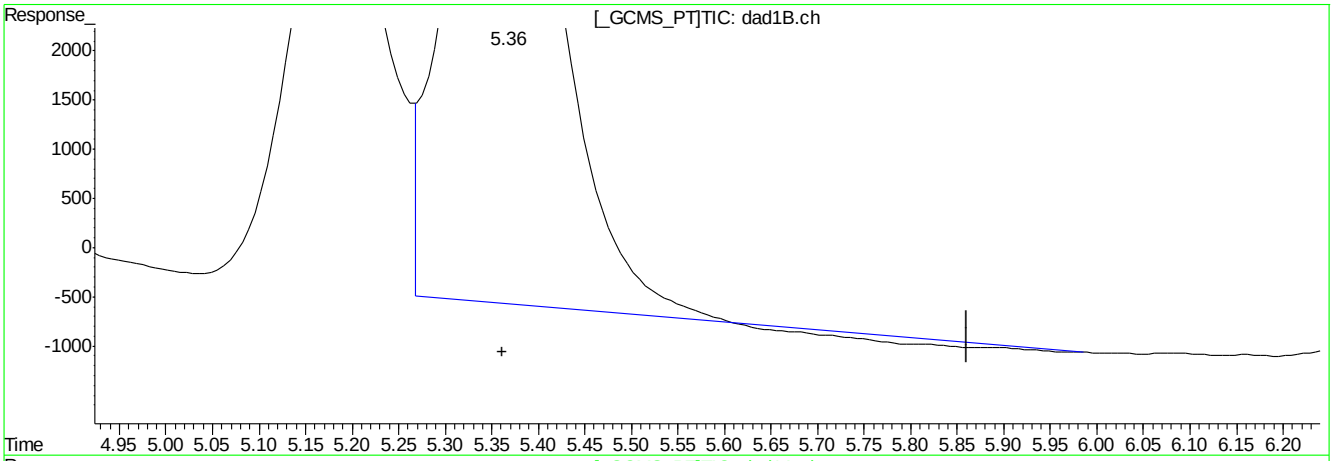
Sample Number: GGG3024-IC3024
Lab FileID: GG622002.D
Injection Time: 08/08/21 18:37
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

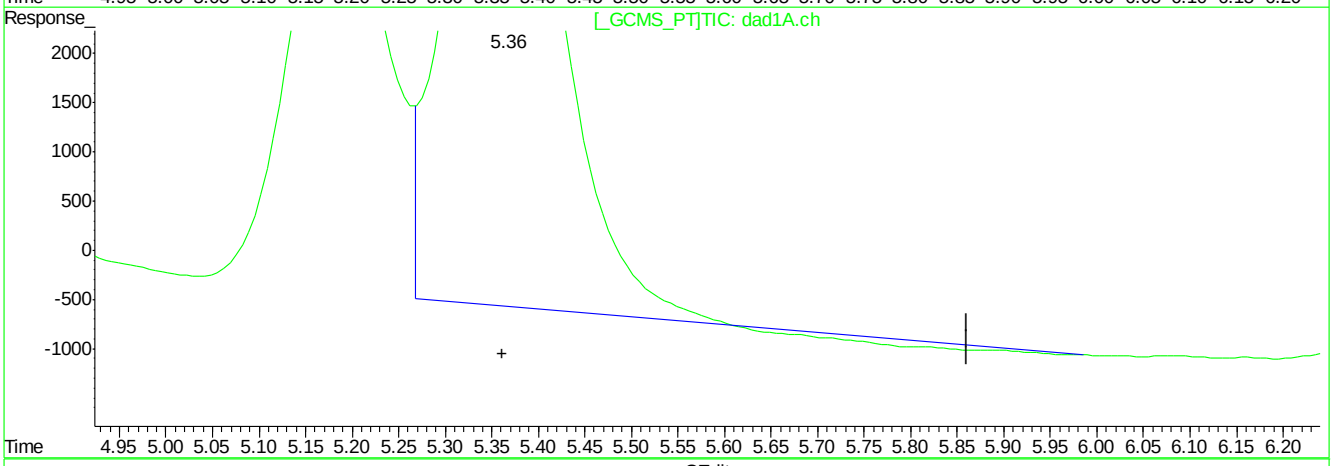
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.36	Poor instrument integration
DNX		2	5.36	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.66	Poor instrument integration
Nitrobenzene	98-95-3	2	10.60	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.61	Poor instrument integration
PETN	78-11-5	2	21.46	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.36min 90.880ppb

response 537027

(3) DNX #2

5.36min 90.686ppb

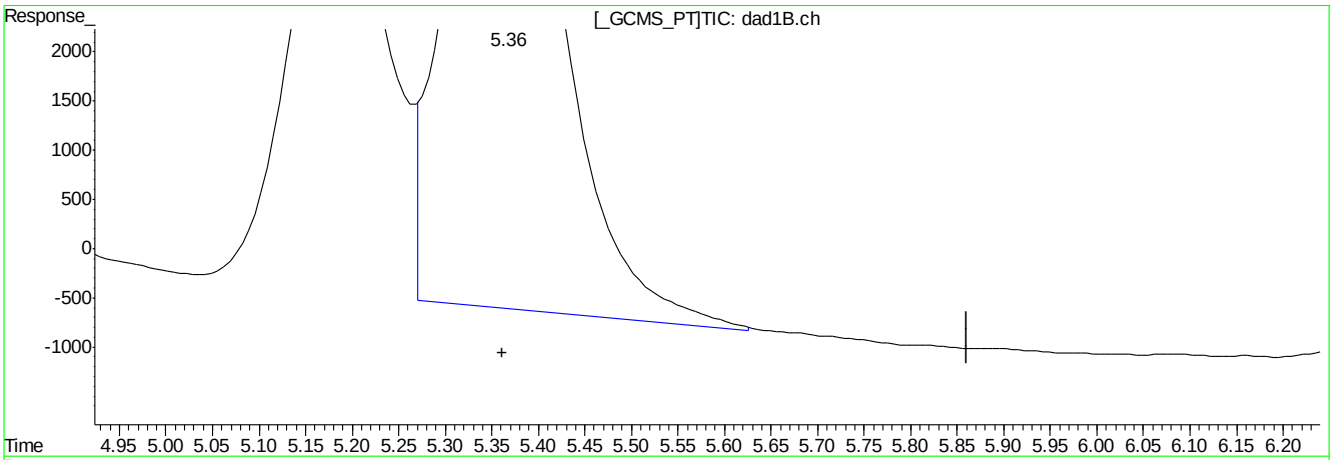
response 537027

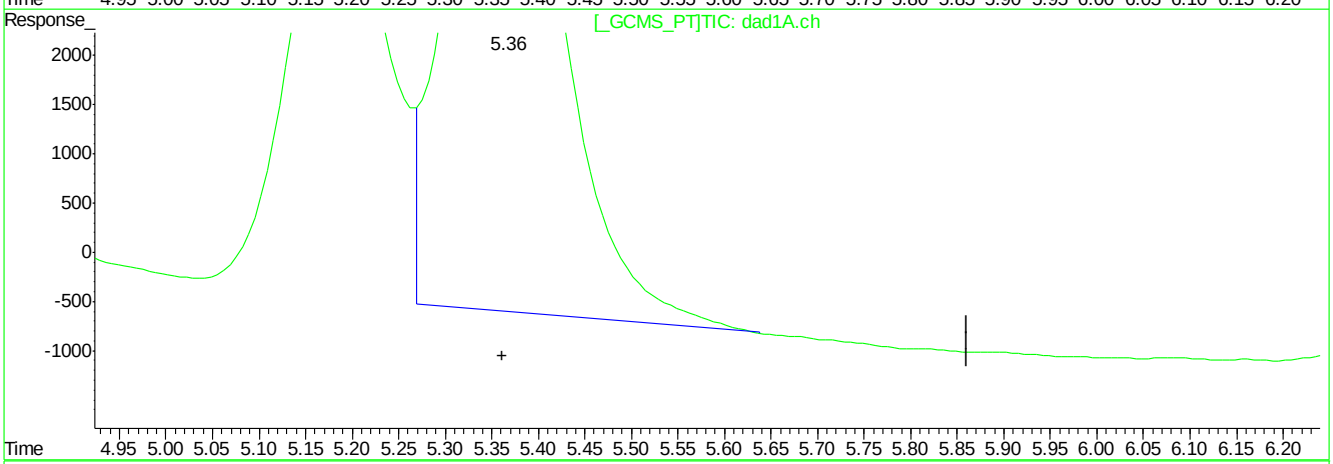
(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:07:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.36min 92.410ppb m

response 546071

(3) DNX #2

5.36min 91.958ppb m

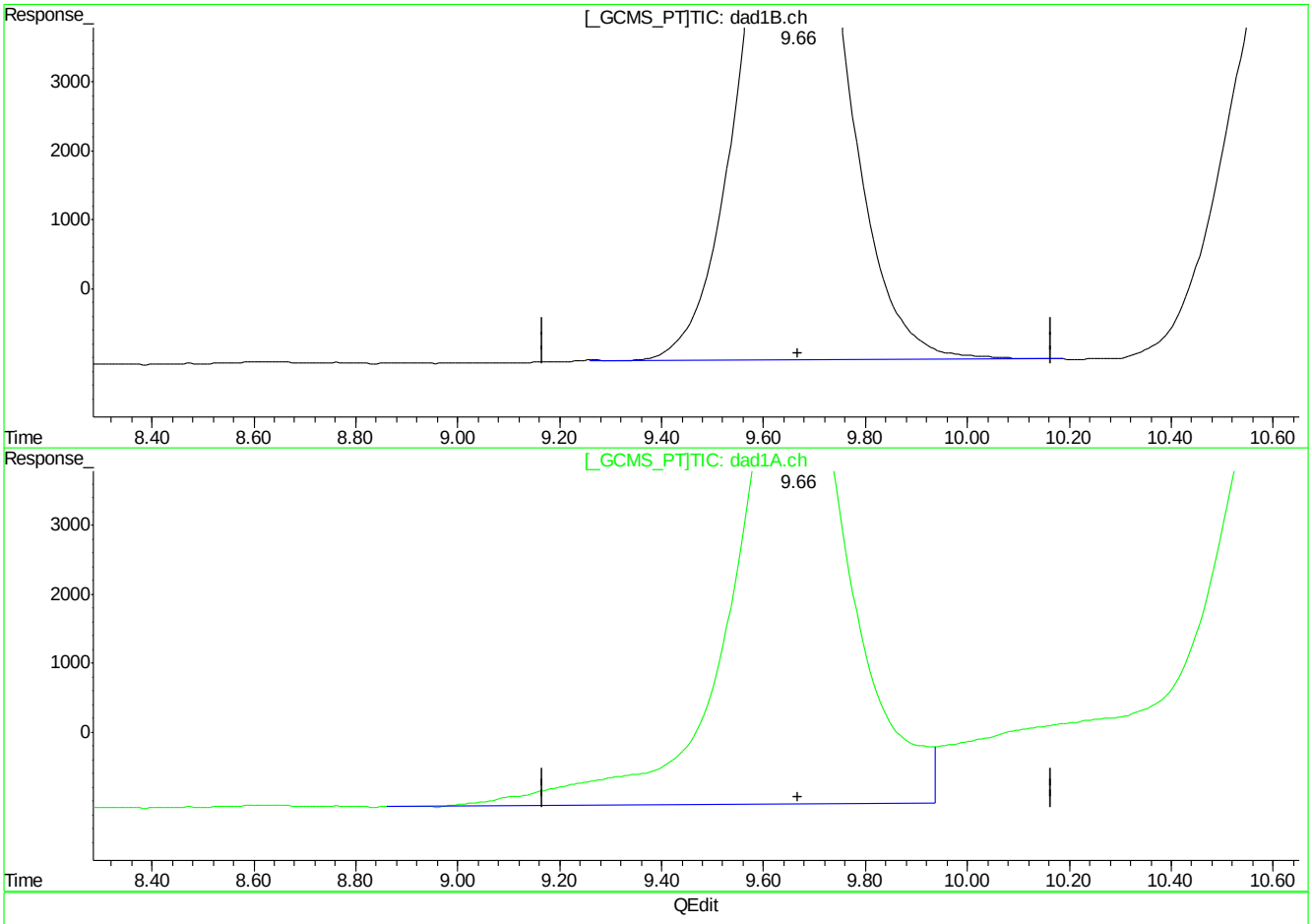
response 544560

(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:07:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.66min 93.744ppb

response 1197405

(7) 1,3-Dinitrobenzene #2

9.66min 114.509ppb

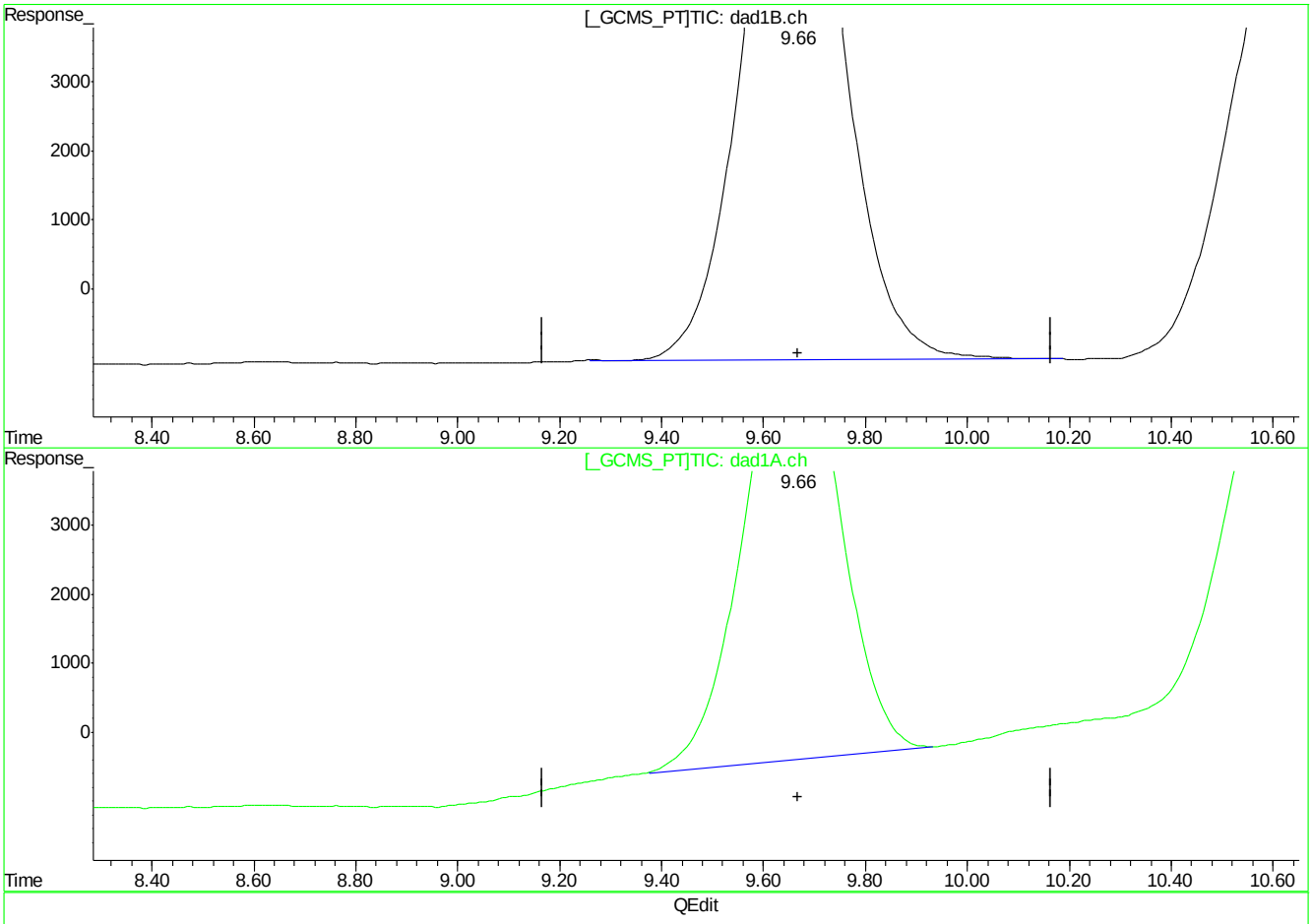
response 1111003

(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:07:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.66min 93.744ppb

response 1197405

(7) 1,3-Dinitrobenzene #2

9.66min 86.626ppb m

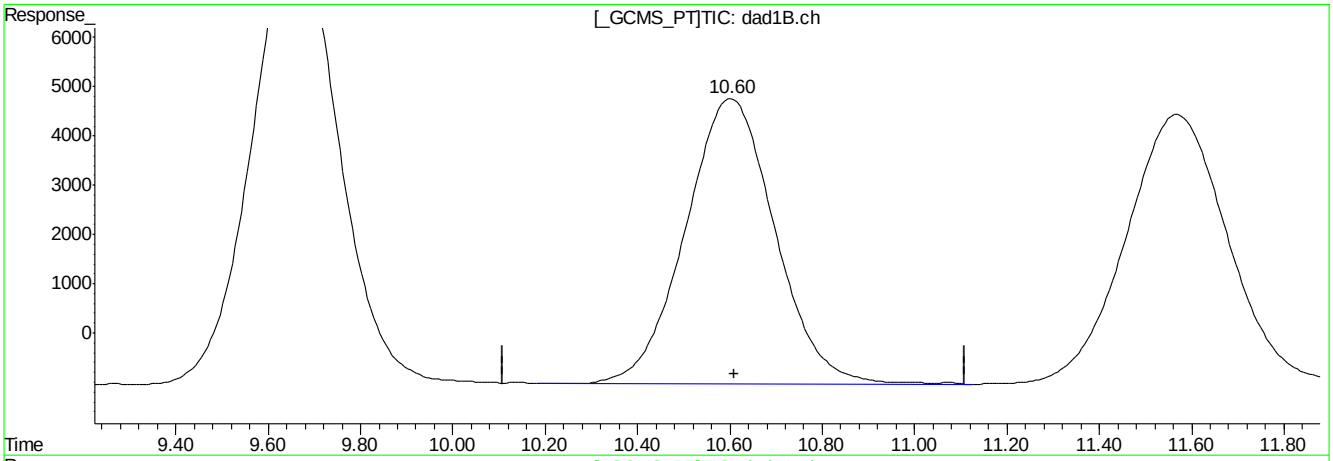
response 840474

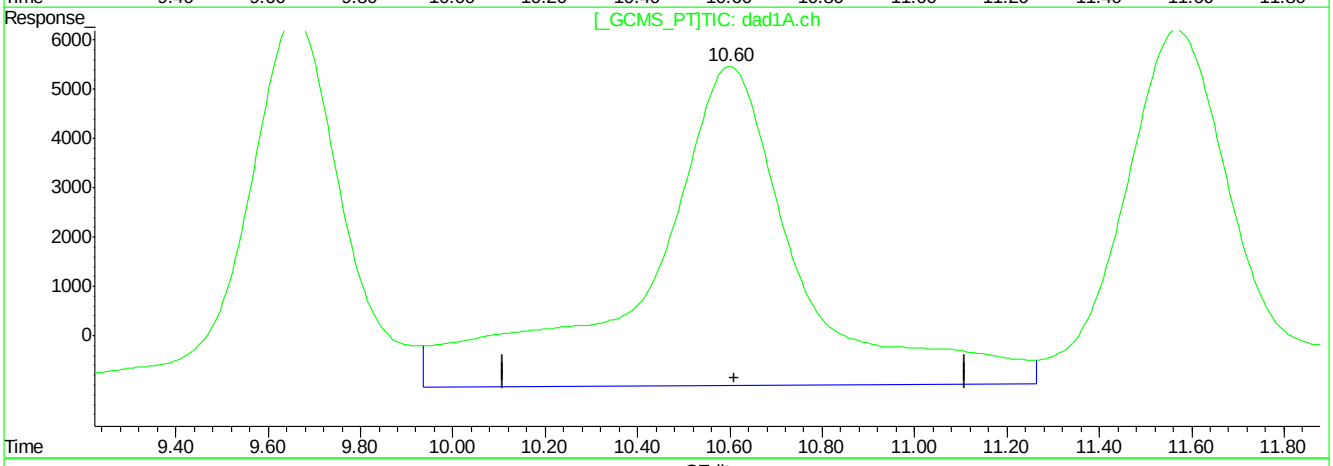
(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:07:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.60min 92.410ppb

response 781642

(8) Nitrobenzene #2

10.60min 177.792ppb

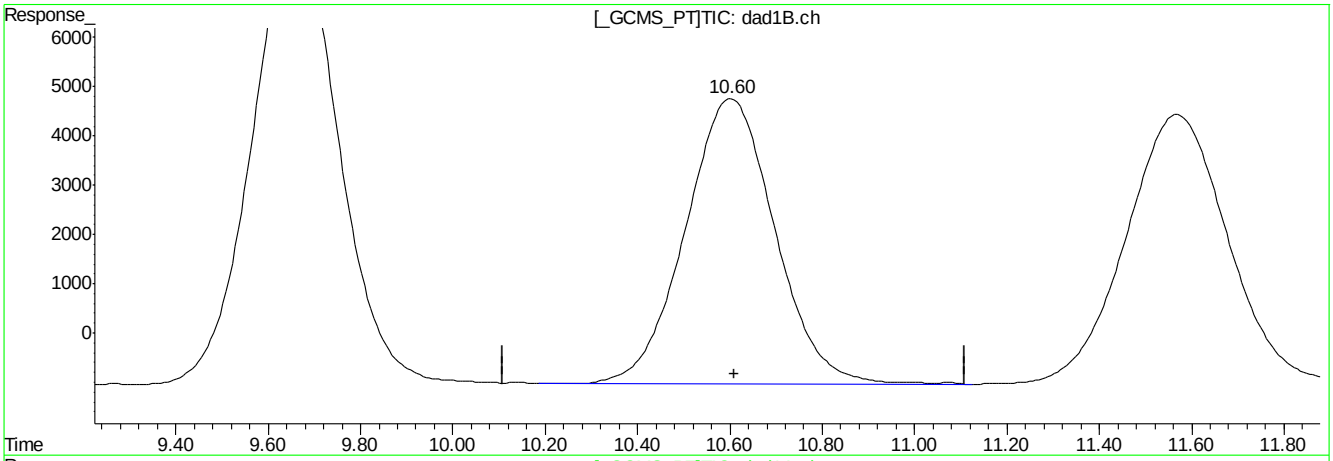
response 1469302

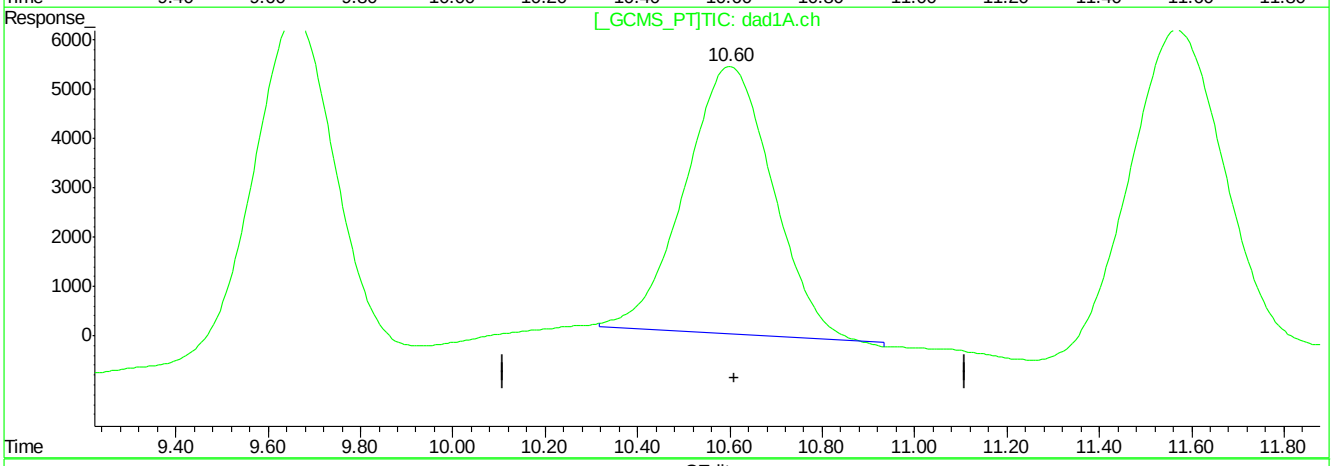
(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:07:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.60min 92.410ppb

response 781642

(8) Nitrobenzene #2

10.60min 86.836ppb m

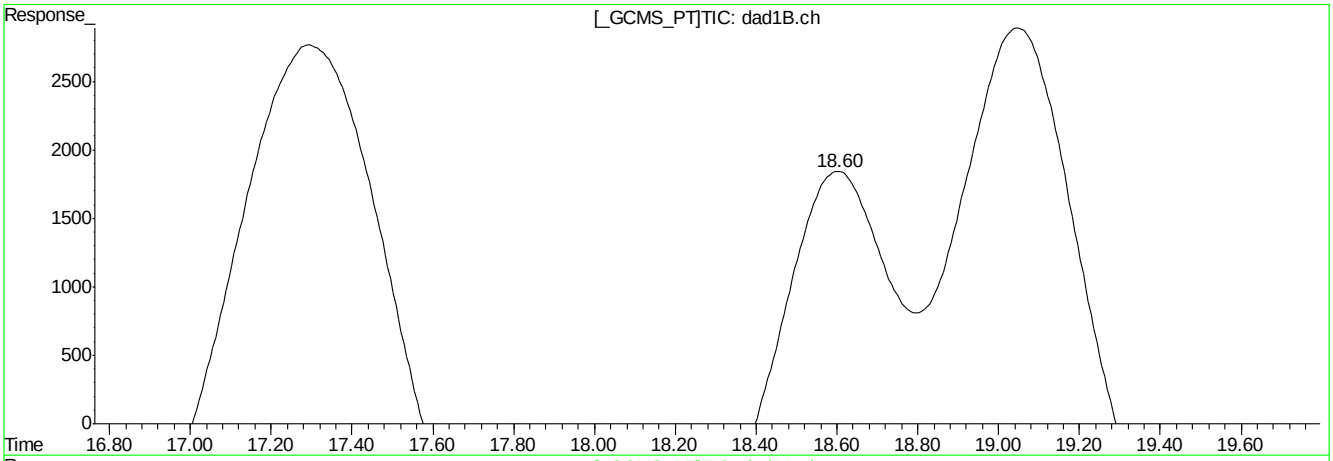
response 717630

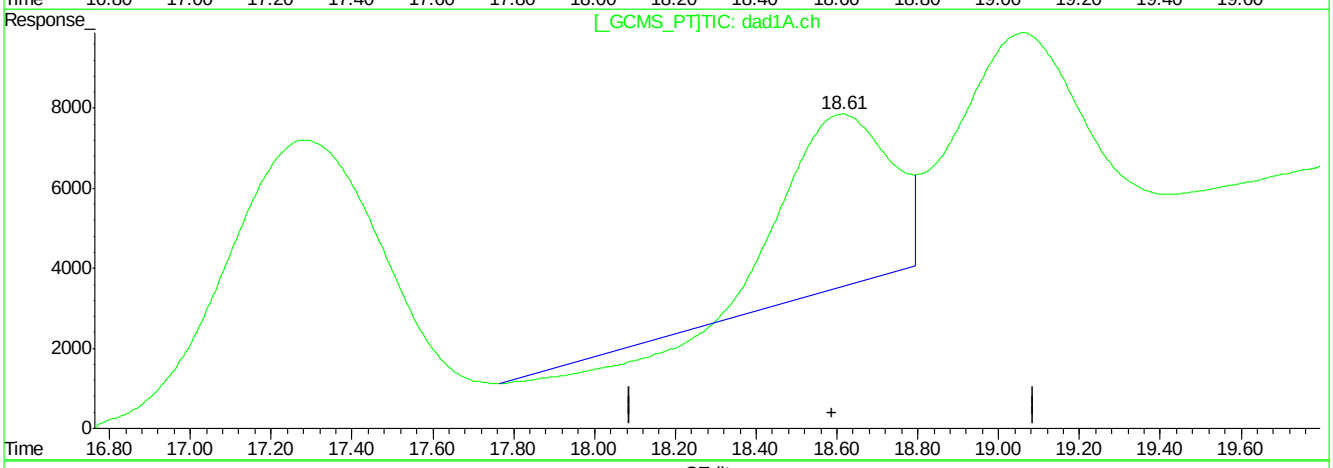
(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:07:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.60min 94.754ppb

response 550268

(19) m-Nitrotoluene #2

18.61min 72.516ppb

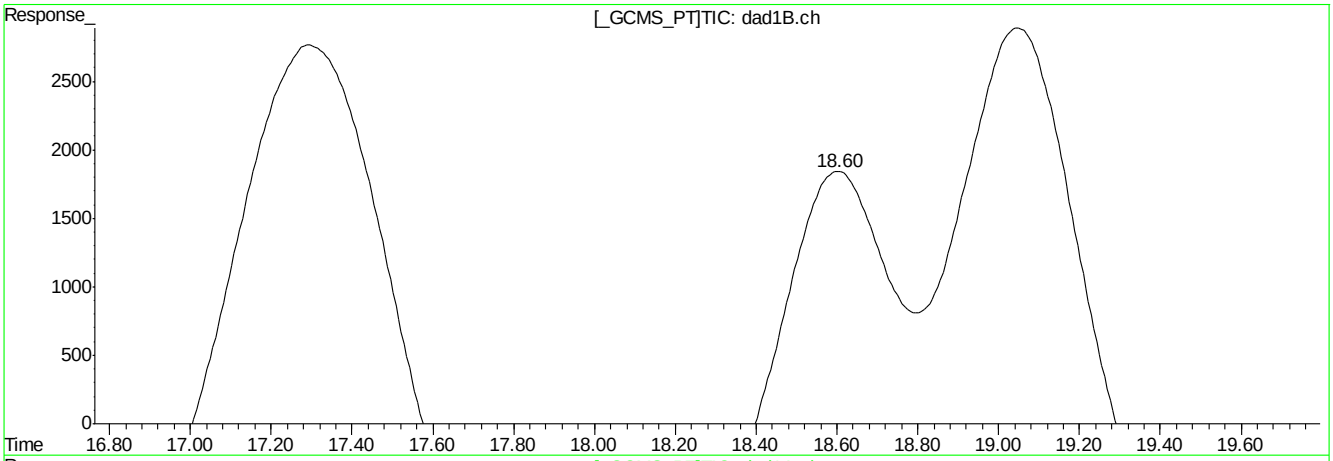
response 702444

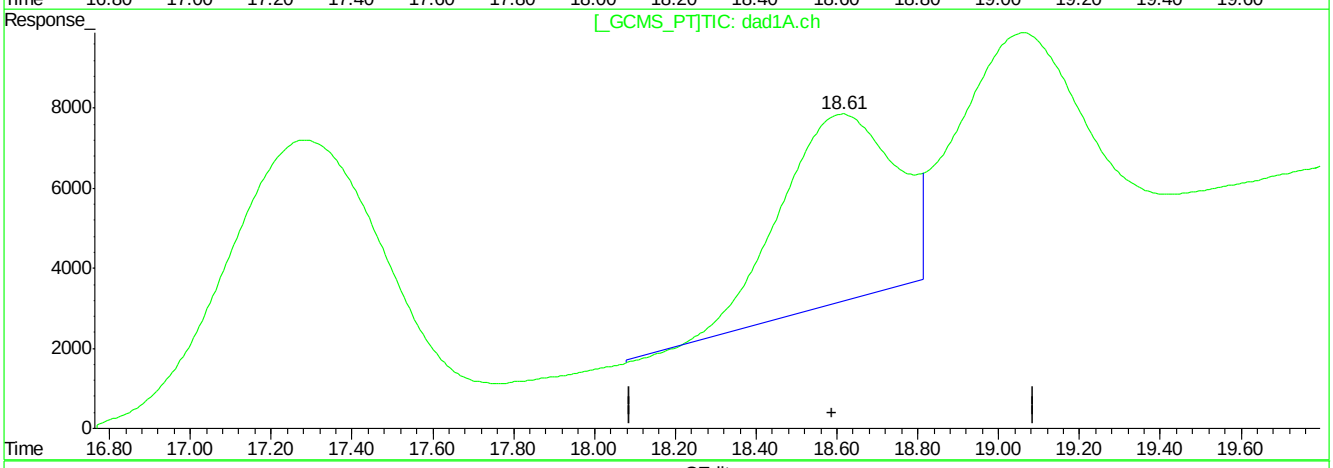
(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:08:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.60min 94.754ppb

response 550268

(19) m-Nitrotoluene #2

18.61min 96.105ppb m

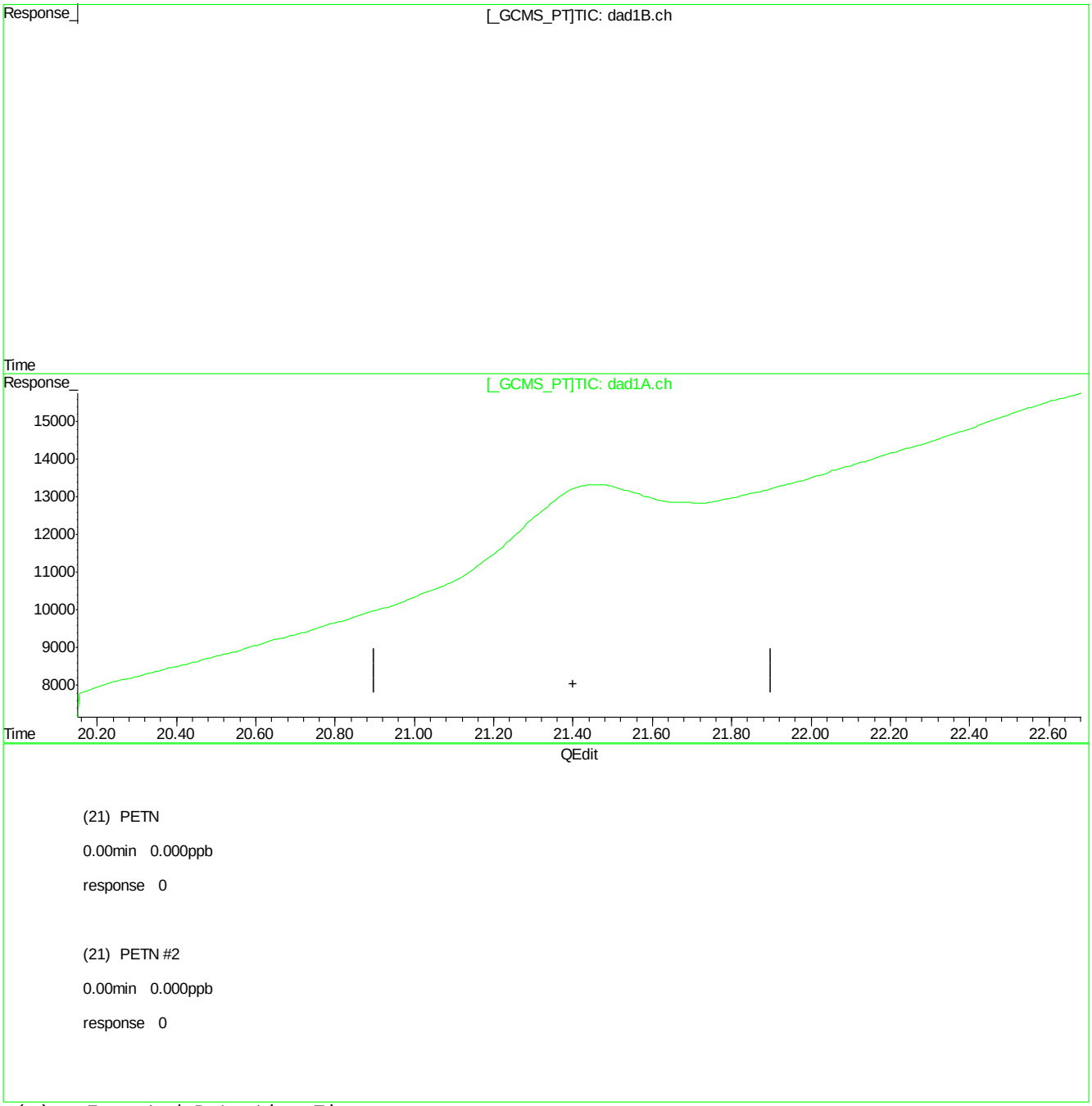
response 930945

(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:08:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration

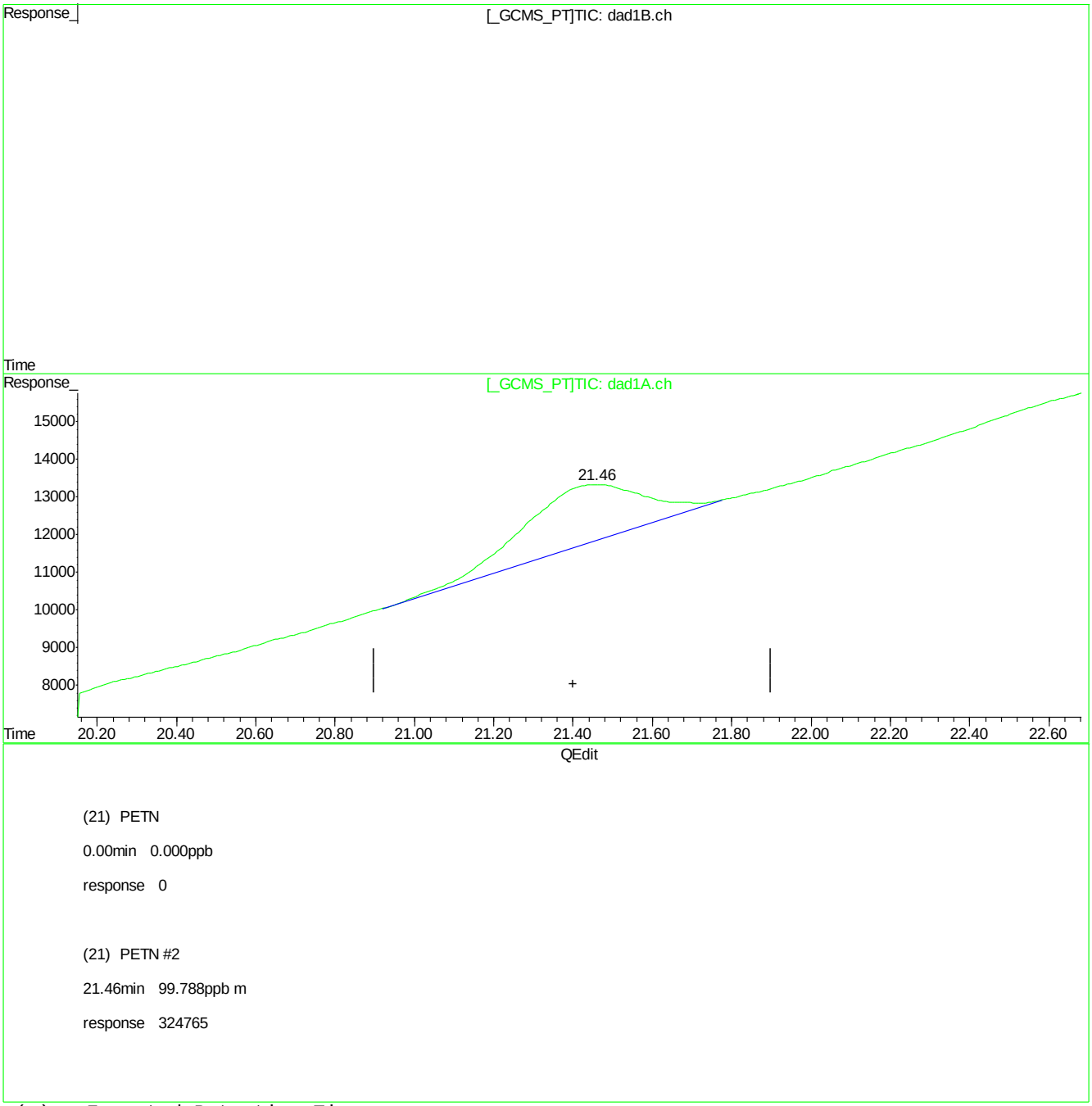


(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:08:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.46min 99.788ppb m

response 324765

(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:08:48 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:11 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.83	13.83	1003456	1986936	205.404	218.862
	Spiked Amount 500.000	Range 70 - 136		Recovery =		41.08%#	43.77%#
	Target Compounds						
1)	TNX	4.78	4.78	417601	417601	90.598	91.177
2)	HMX	5.19	5.19	654230	654230	201.765	200.346
3)	DNX	5.36	5.36	1103127	1097056	186.680m	185.256m
4)	MNX	6.45	6.45	1422276	1422276	234.757	234.757
5)	1,3,5-Trinitrobe	7.48	7.48	1874732	1874732	198.713	198.713
6)	RDX	7.70	7.70	802841	802841	182.684	182.684
7)	1,3-Dinitrobenze	9.66	9.66	2466882	1838535	193.130	189.495m
8)	Nitrobenzene	10.60	10.60	1584060	1662149	187.277	201.127
9)	2,4,6-Trinitroto	11.58	11.58	1736799	2508007	189.700	192.849
10)	Nitroglycerin	0.00	12.35	0	775277	N.D.	244.979 #
11)	Tetryl	12.82	12.82	1356093	2416141	191.101	195.009
13)	2,6-Dinitrotolue	14.17	14.17	1170706	1690452	185.652	183.386
14)	2,4-Dinitrotolue	14.81	14.81	2212342	1503408	191.858	189.356
15)	3,5-Dinitroanili	15.49	15.49	1869967	3052376	189.773	196.291
16)	o-Nitrotoluene	16.37	16.37	972002	1444098	187.601	197.117
17)	p-Nitrotoluene	17.30	17.28	2047770	3555924	385.172	386.735
18)	4-Amino-2,6-Dini	17.30	17.28	2047770	3555924	385.172	386.735
19)	m-Nitrotoluene	18.60	18.60	1105696	1811034	190.397	186.960m
20)	2-Amino-4,6-Dini	19.05	19.06	1658293	2157095	191.784	181.537
21)	PETN	0.00	21.42	0	601835	N.D. d	184.922m

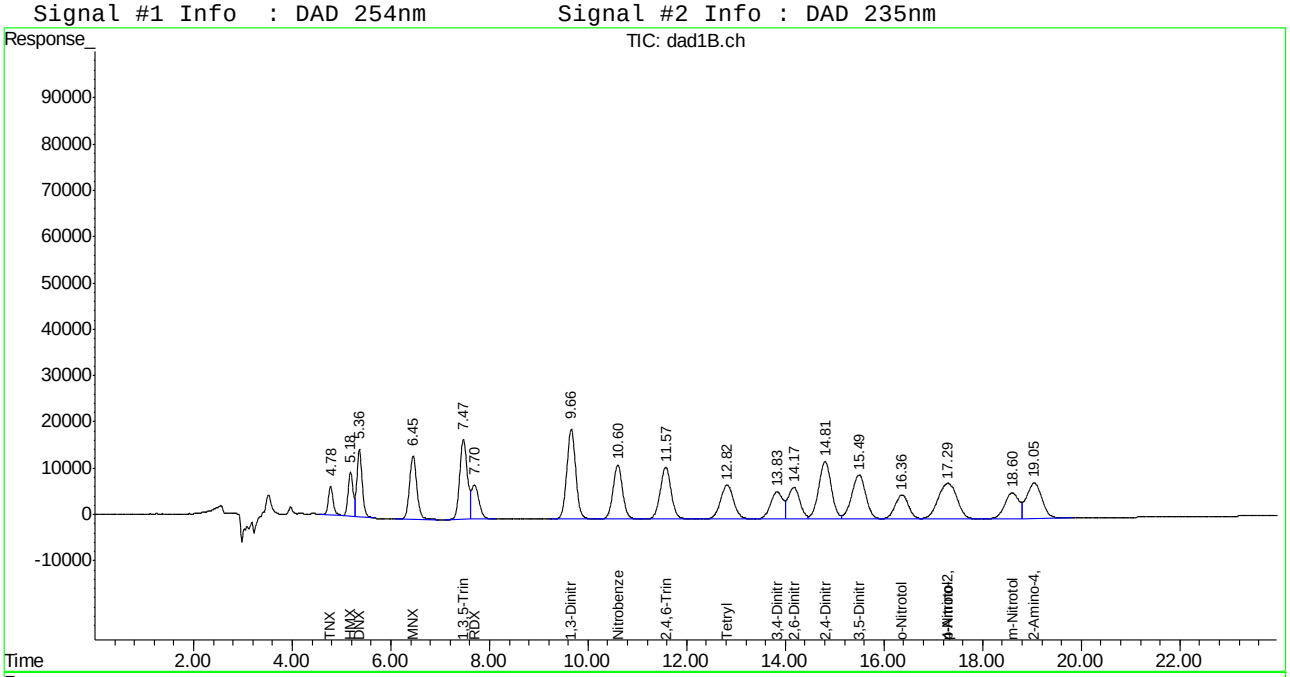
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622003.D GGG3024_080821.M Mon Aug 09 10:17:37 2021 Page 1

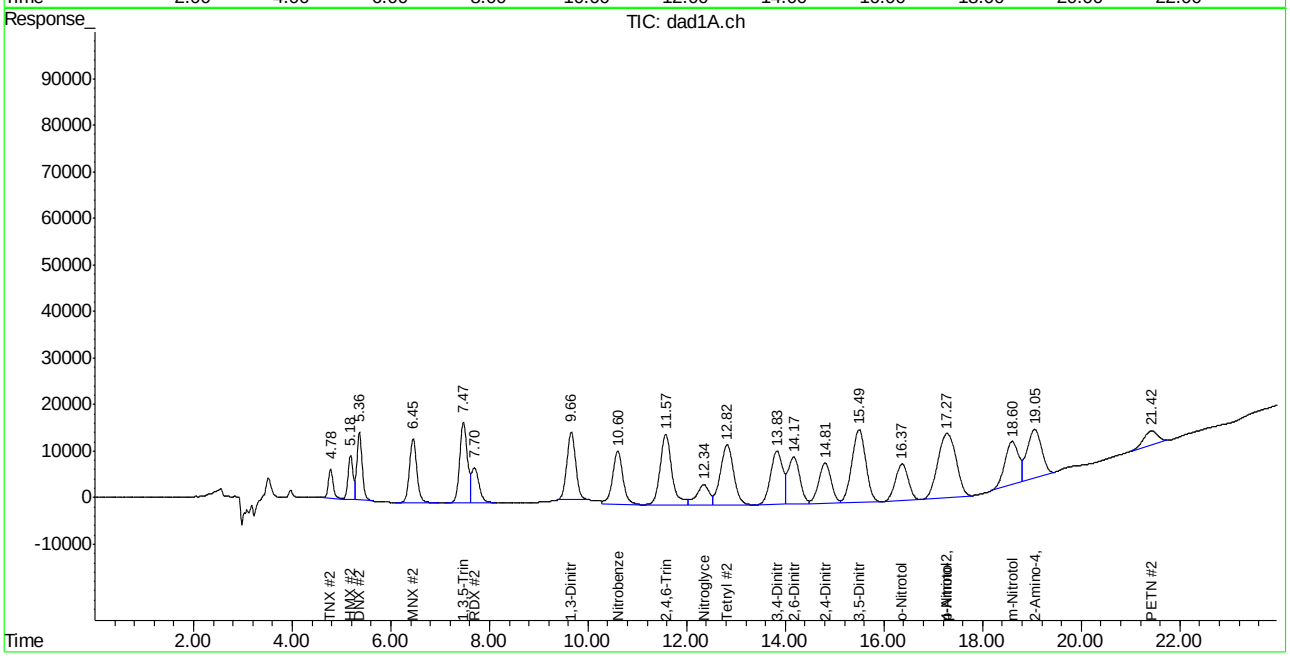
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:06 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

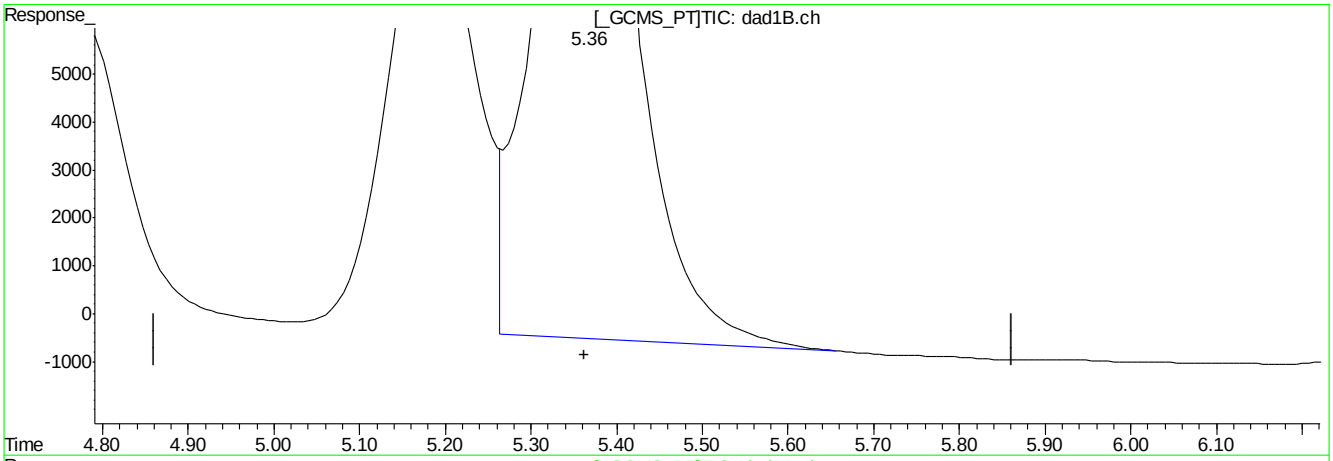
Sample Number: GGG3024-IC3024
Lab FileID: GG622003.D
Injection Time: 08/08/21 19:08
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

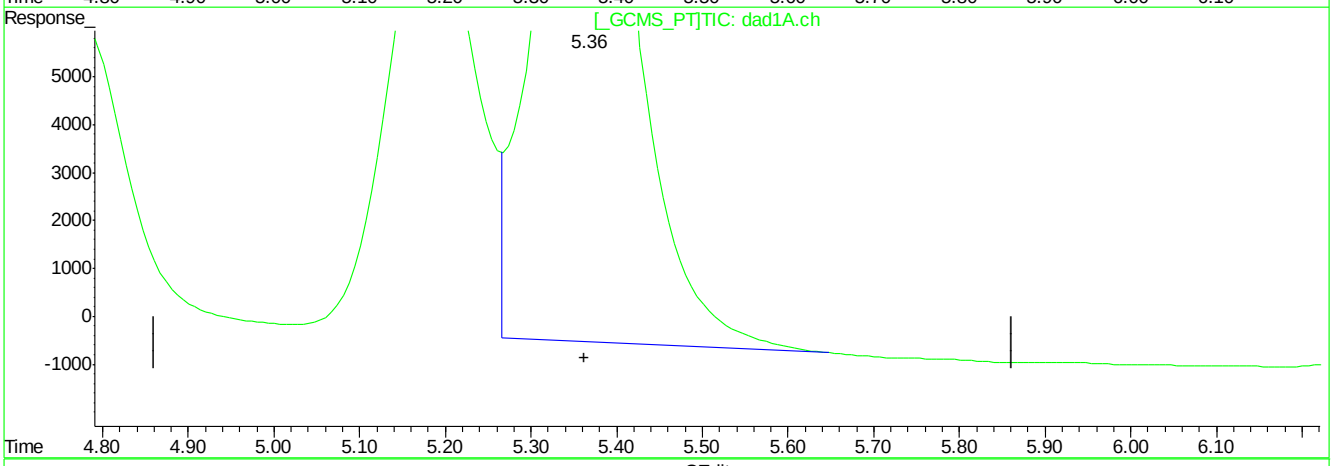
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.36	Poor instrument integration
DNX		2	5.36	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.66	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.60	Poor instrument integration
PETN	78-11-5	2	21.42	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.36min 186.680ppb m

response 1103127

(3) DNX #2

5.36min 185.256ppb m

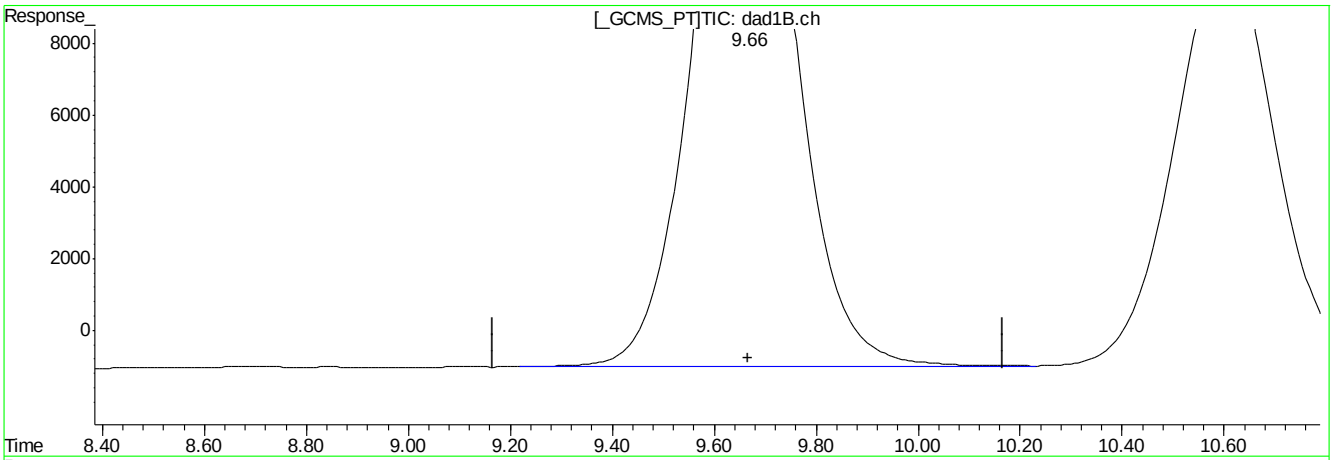
response 1097056

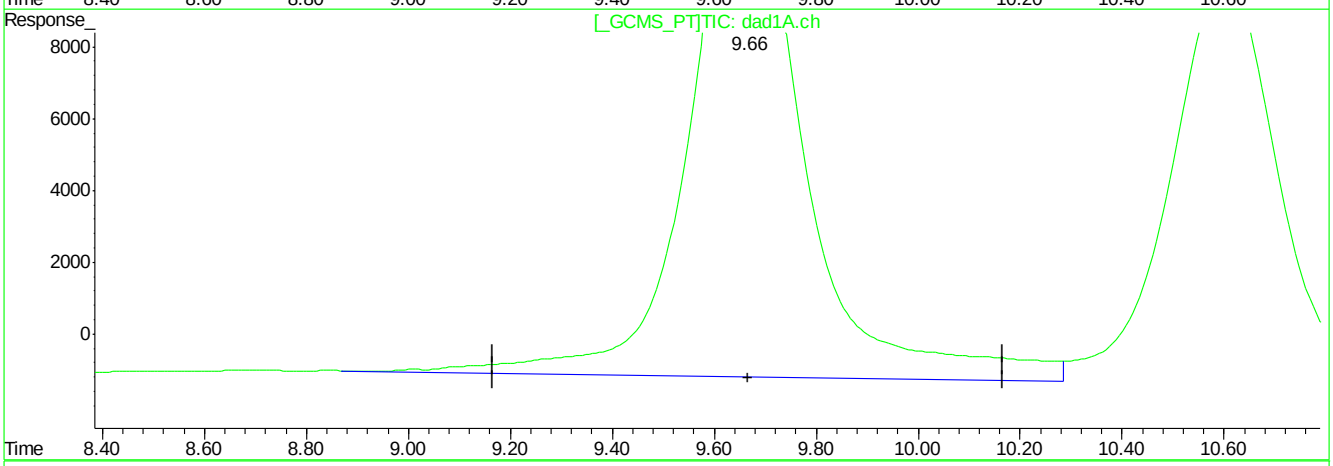
(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:05:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.66min 193.130ppb

response 2466882

(7) 1,3-Dinitrobenzene #2

9.66min 235.022ppb

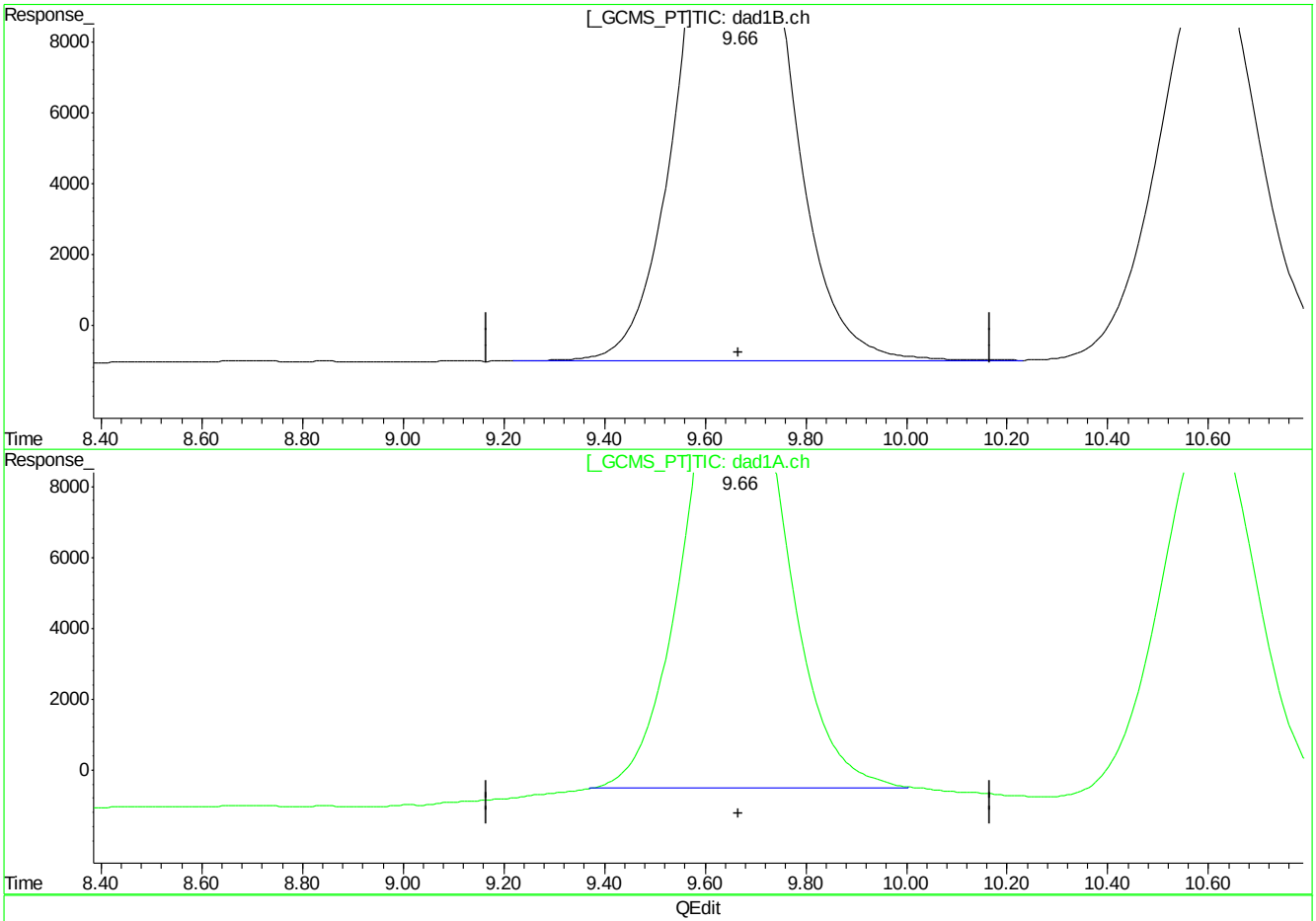
response 2280257

(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:06:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.66min 193.130ppb

response 2466882

(7) 1,3-Dinitrobenzene #2

9.66min 189.495ppb m

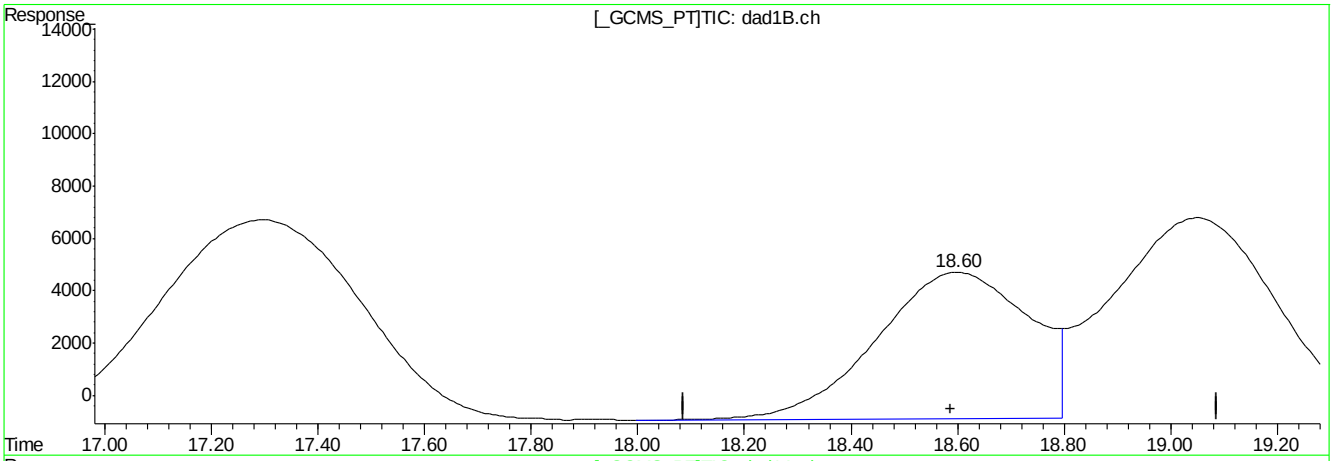
response 1838535

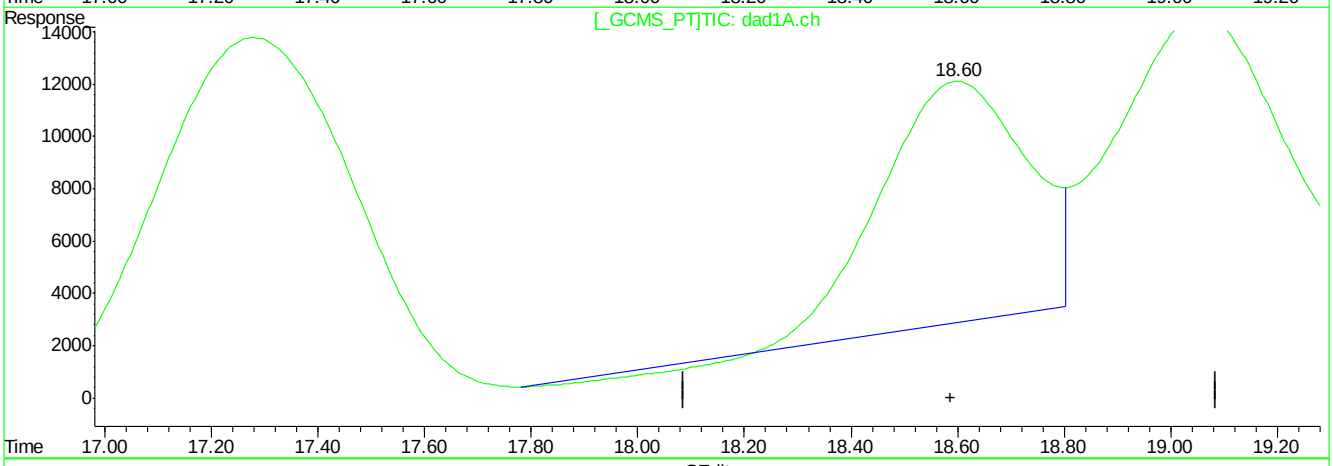
(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:06:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.60min 190.397ppb

response 1105696

(19) m-Nitrotoluene #2

18.60min 178.193ppb

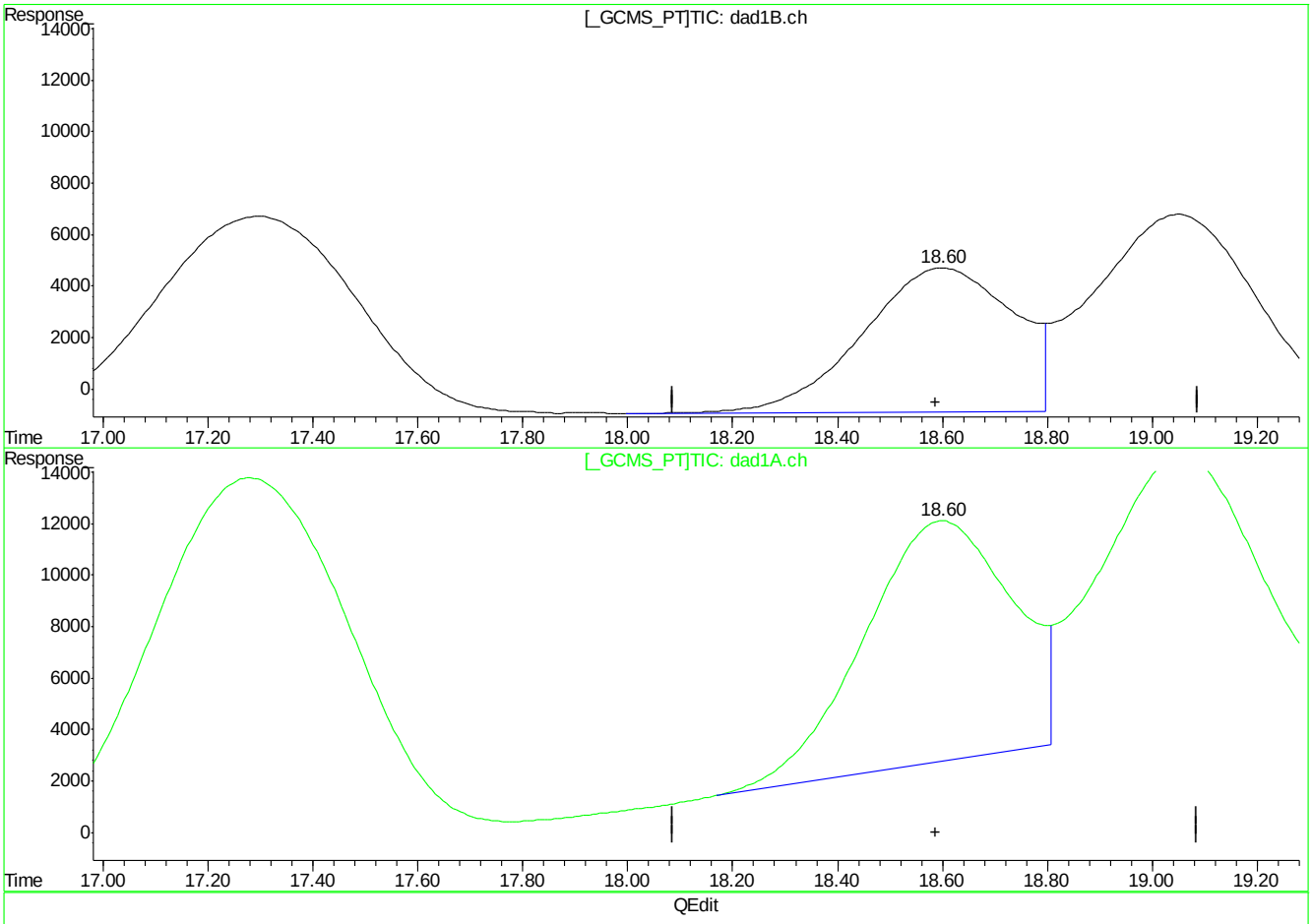
response 1726108

(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:06:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(19) m-Nitrotoluene

18.60min 190.397ppb

response 1105696

(19) m-Nitrotoluene #2

18.60min 186.960ppb m

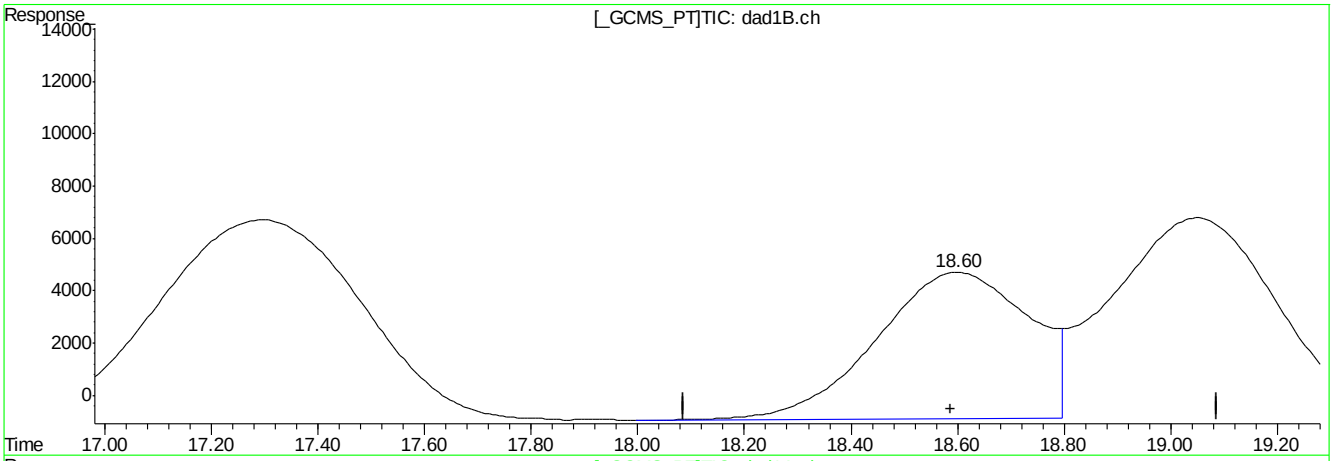
response 1811034

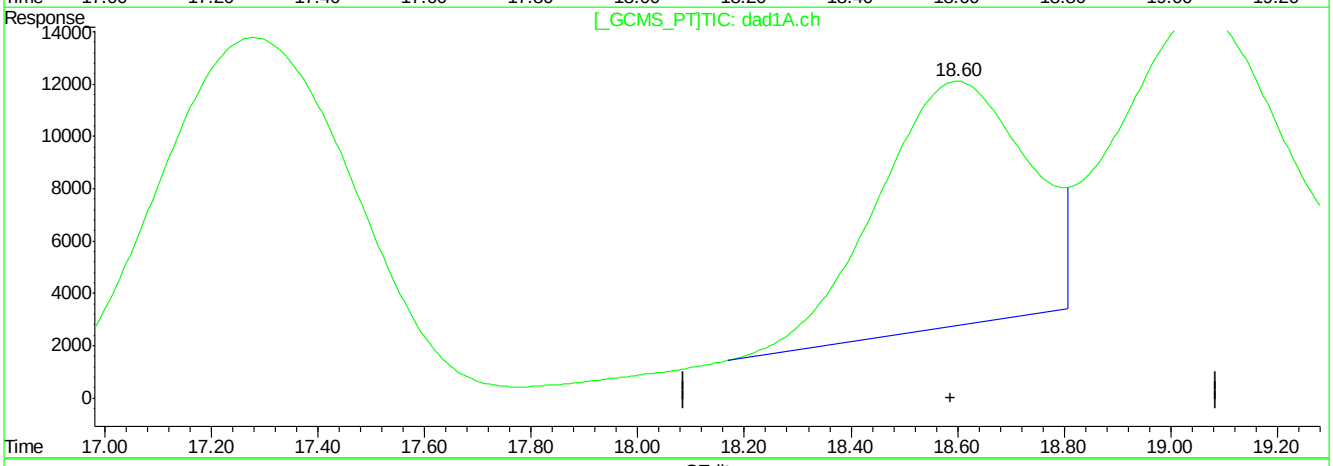
(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:06:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.60min 190.397ppb

response 1105696

(19) m-Nitrotoluene #2

18.60min 186.960ppb m

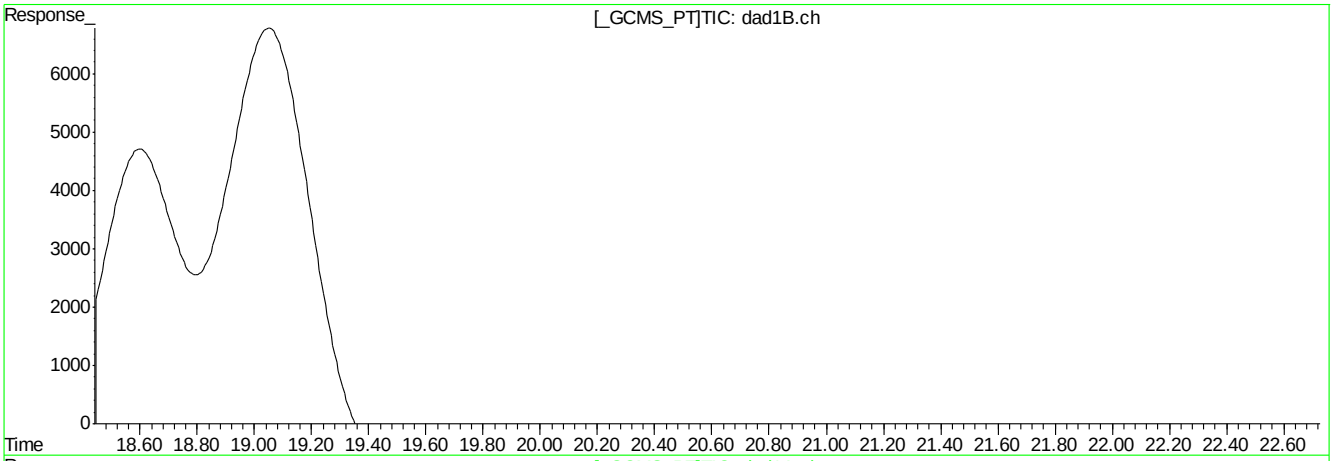
response 1811034

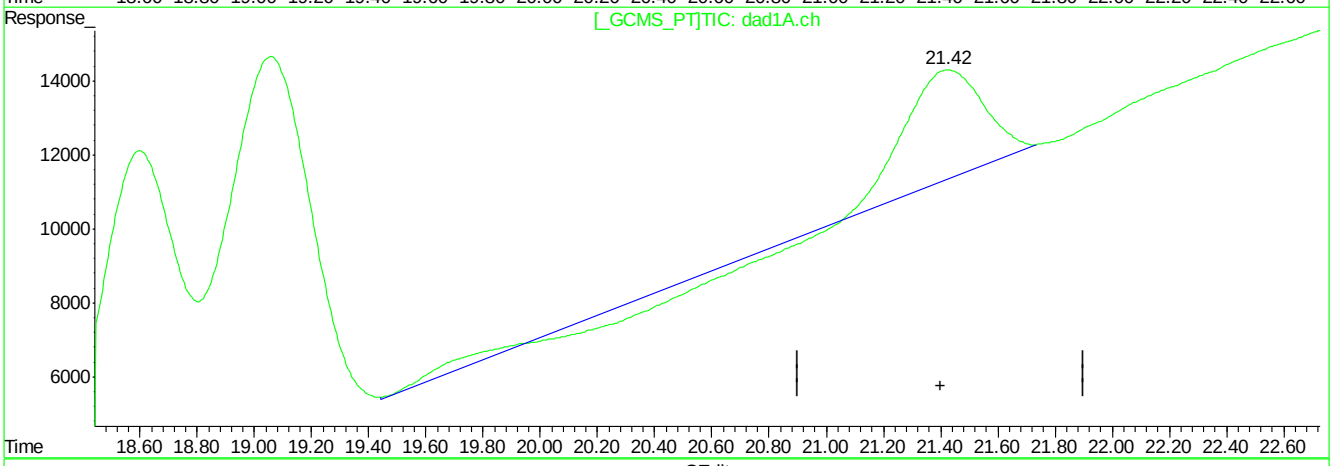
(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:06:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.43min 134.990ppb

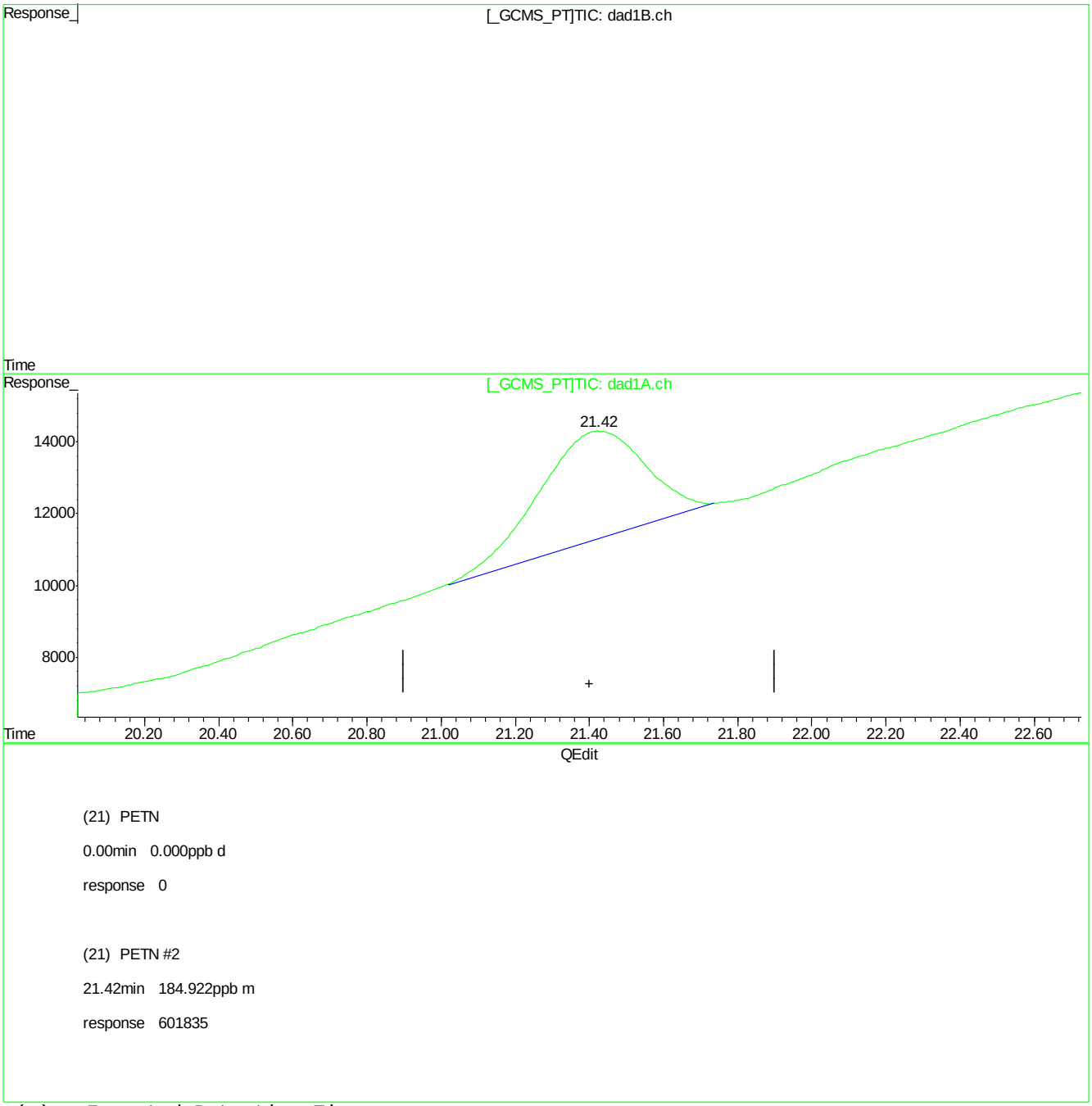
response 439330

(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:06:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:07:00 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1A.ch
Acq On : 08-Aug-2021, 19:40:11 Operator: jamesb
Sample : ic3024-500 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:12 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.85	13.85	2454479	4772341	502.424	525.676
	Spiked Amount 500.000	Range 70 - 136		Recovery =		100.48%	105.14%
	Target Compounds						
1)	TNX	4.78	4.78	968875	968875	210.195	211.541
2)	HMX	5.19	5.19	1578840	1578840	486.915	483.491
3)	DNX	5.37	5.37	2656372	2656372	449.532	448.572
4)	MNX	6.46	6.46	3479939	3479939	574.390	574.390
5)	1,3,5-Trinitrobe	7.48	7.48	4563158	4563158	483.673	483.673
6)	RDX	7.70	7.70	1980125	1980125	450.572	450.572
7)	1,3-Dinitrobenze	9.67	9.67	6014993	4292464	470.909	442.417m
8)	Nitrobenzene	10.61	10.61	3890841	3963359	459.997	479.584
9)	2,4,6-Trinitroto	11.58	11.58	4236318	5896693	462.708	453.416
10)	Nitroglycerin	0.00	12.36	0	1598288	N.D.	505.041 #
11)	Tetryl	12.83	12.83	3352033	5822929	472.368	469.974
13)	2,6-Dinitrotolue	14.19	14.19	2891271	4267209	458.502	462.922
14)	2,4-Dinitrotolue	14.82	14.82	5439363	3982881	471.711	501.649
15)	3,5-Dinitroanili	15.50	15.50	4602026	7636462	467.034	491.082
16)	o-Nitrotoluene	16.37	16.37	2423246	3649392	467.697	498.137
17)	p-Nitrotoluene	17.31	17.30	5054642	9201731	950.746	1000.761
18)	4-Amino-2,6-Dini	17.31	17.30	5054642	9201731	950.746	1000.761
19)	m-Nitrotoluene	18.62	18.63	2722224	4736371	468.757	488.953
20)	2-Amino-4,6-Dini	19.07	19.08	4034430	5753154	466.587	484.173
21)	PETN	0.00	21.44	0	1615551	N.D.	496.399m#

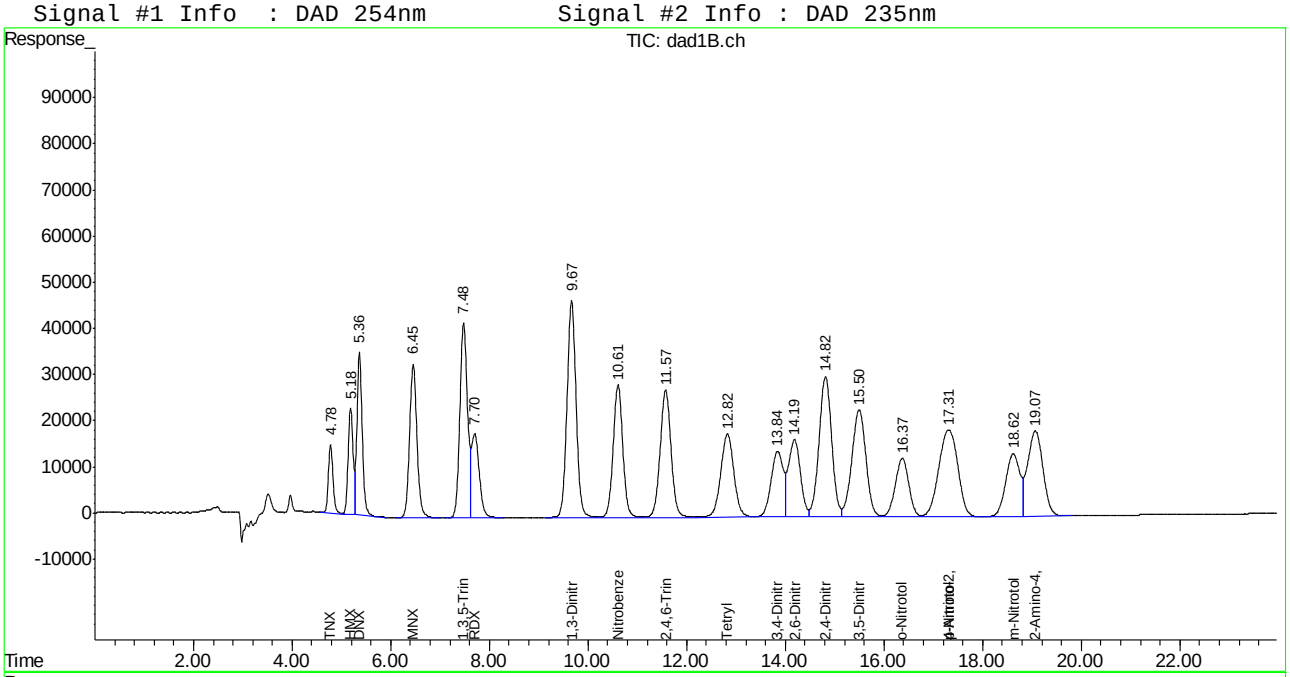
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

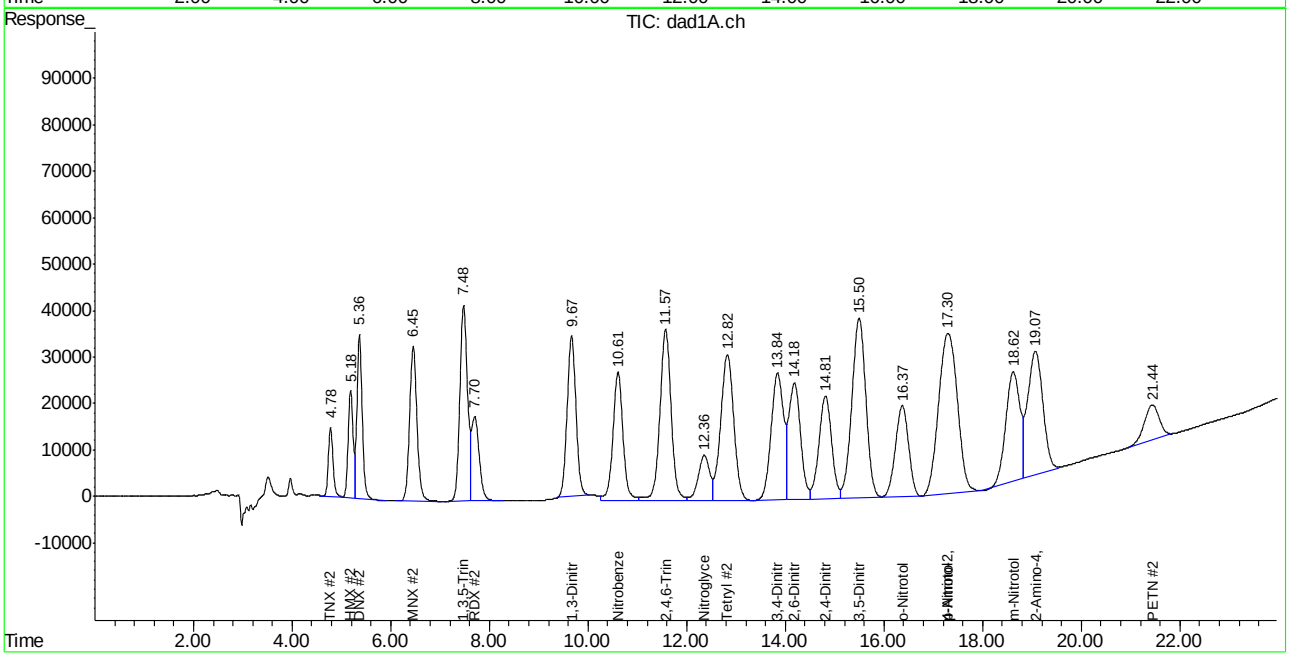
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1A.ch
Acq On : 08-Aug-2021, 19:40:11 Operator: jamesb
Sample : ic3024-500 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:05 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

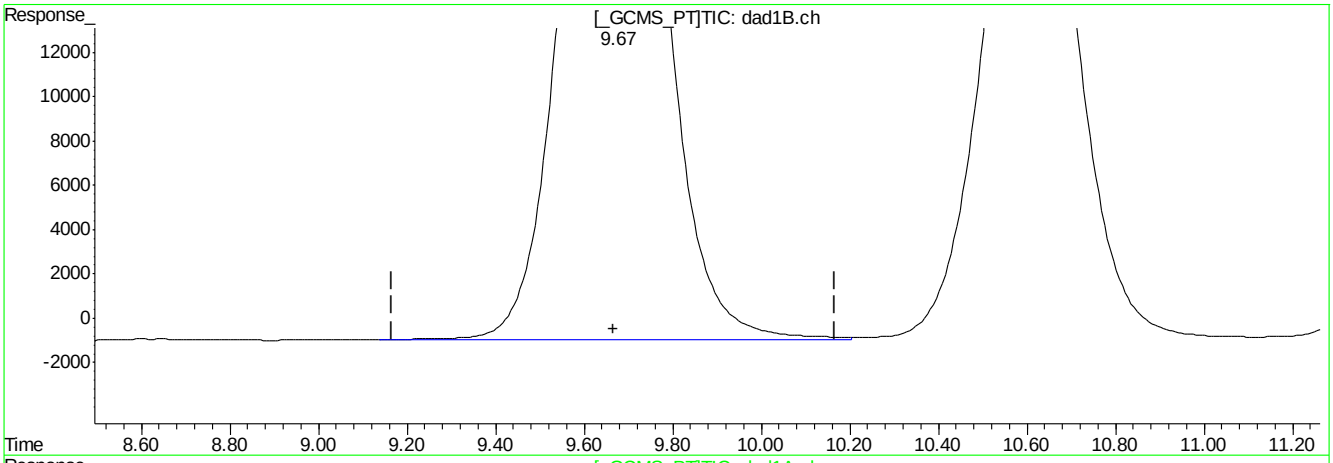
Sample Number: GGG3024-IC3024
Lab FileID: GG622004.D
Injection Time: 08/08/21 19:40
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

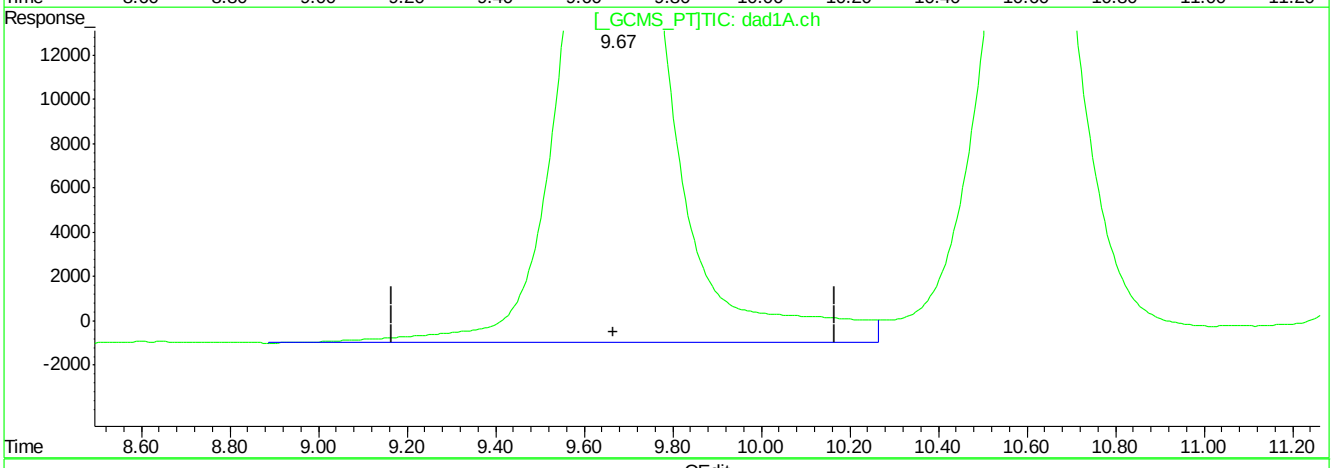
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	9.67	Poor instrument integration
PETN	78-11-5	2	21.44	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1A.ch
Acq On : 08-Aug-2021, 19:40:11 Operator: jamesb
Sample : ic3024-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.67min 470.909ppb

response 6014993

(7) 1,3-Dinitrobenzene #2

9.67min 506.215ppb

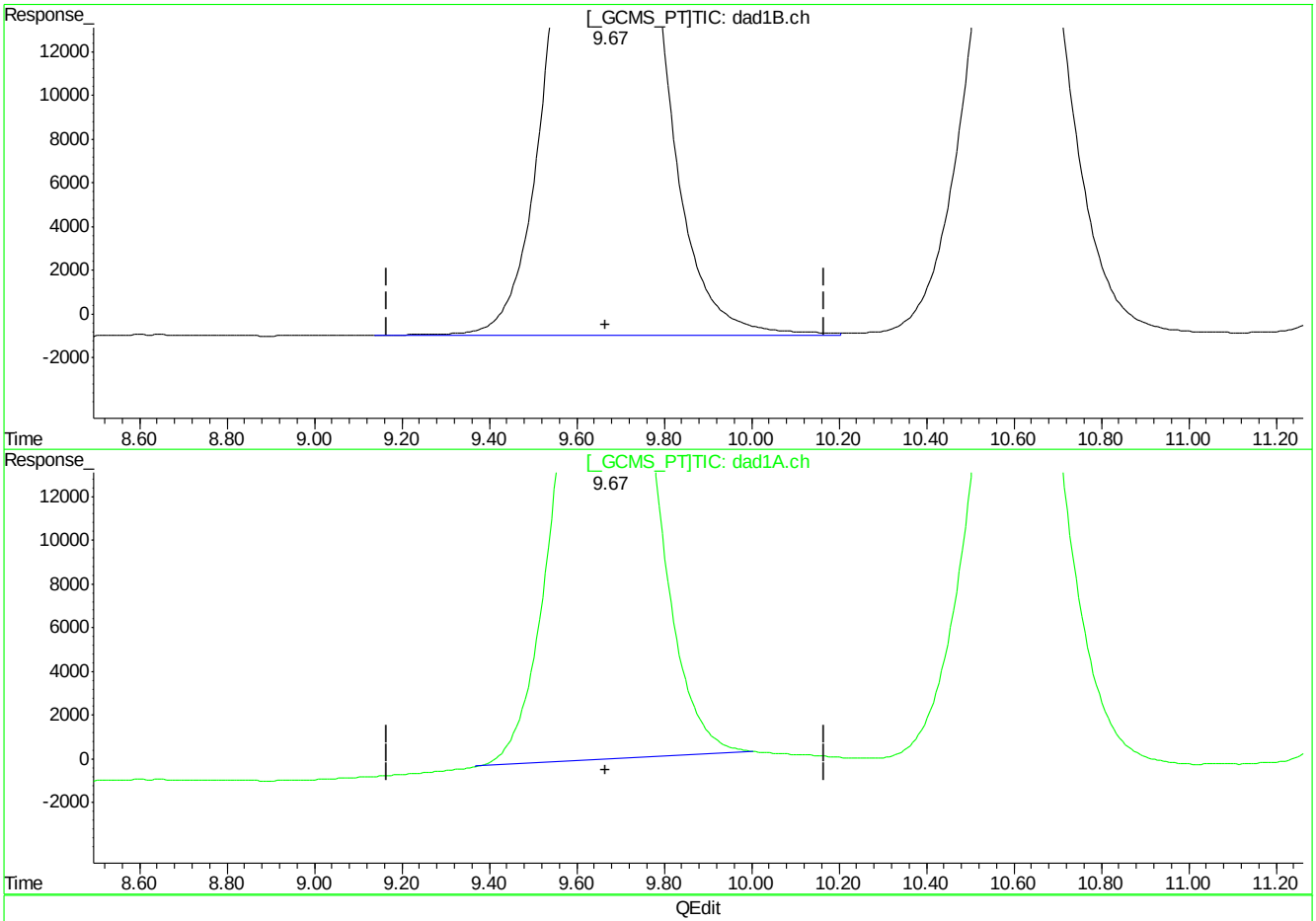
response 4911455

(+) = Expected Retention Time
GG622004.D GGG3024_080821.M Mon Aug 09 10:04:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1A.ch
Acq On : 08-Aug-2021, 19:40:11 Operator: jamesb
Sample : ic3024-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.67min 470.909ppb

response 6014993

(7) 1,3-Dinitrobenzene #2

9.67min 442.417ppb m

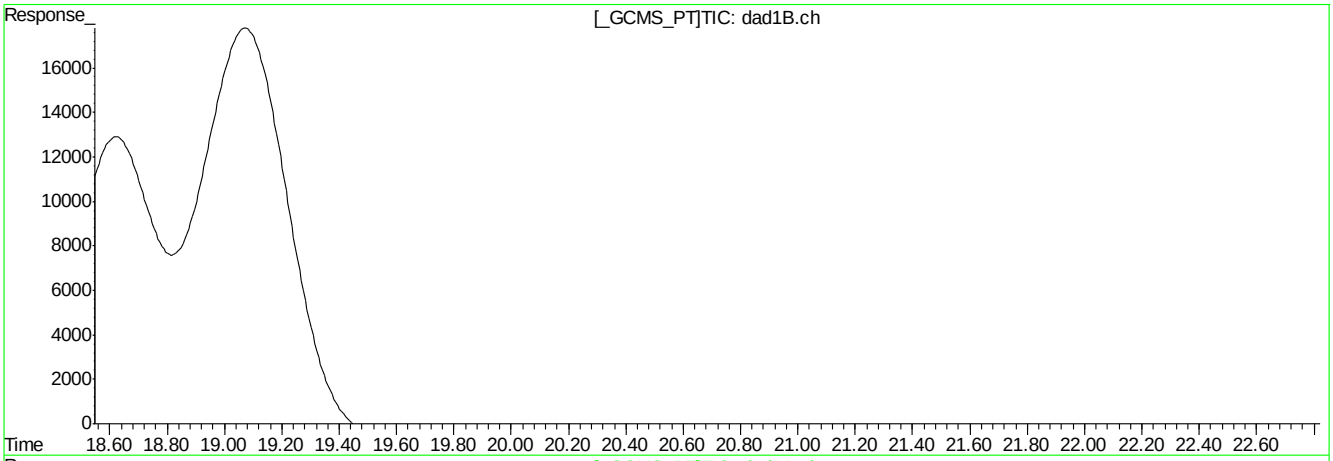
response 4292464

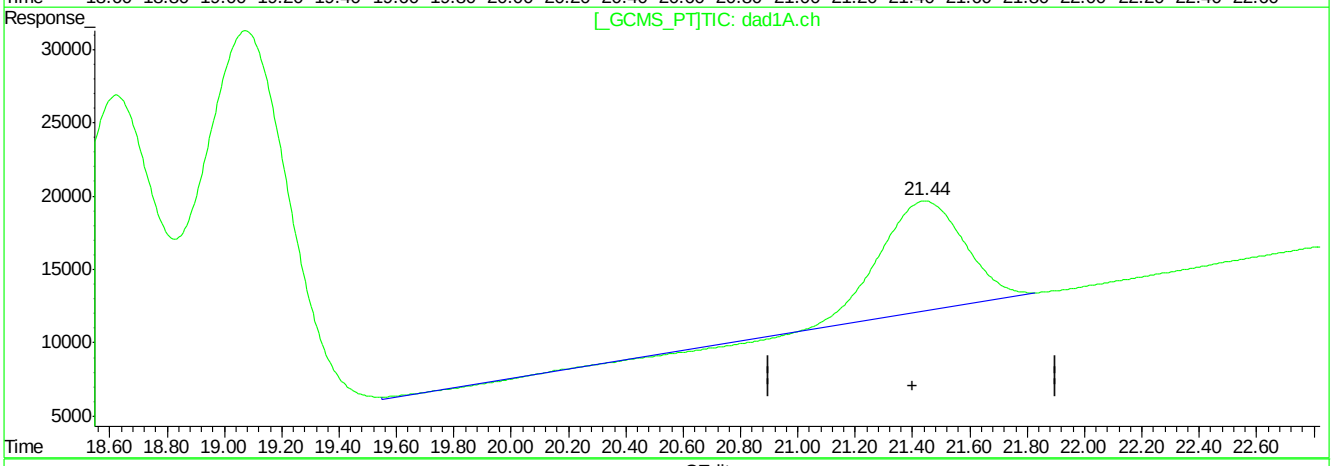
(+) = Expected Retention Time
GG622004.D GGG3024_080821.M Mon Aug 09 10:04:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1A.ch
Acq On : 08-Aug-2021, 19:40:11 Operator: jamesb
Sample : ic3024-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.45min 450.068ppb

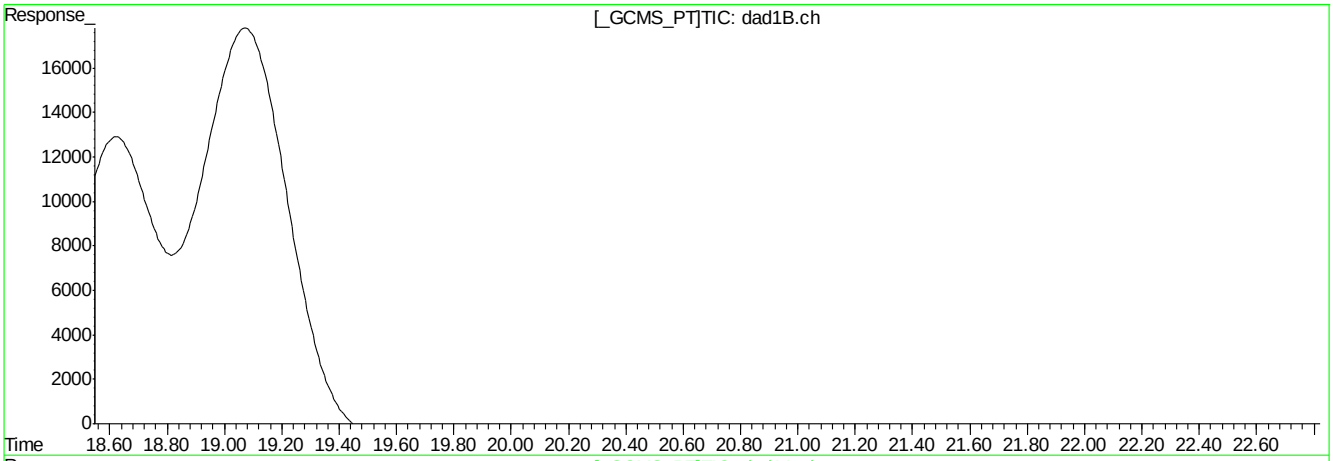
response 1464765

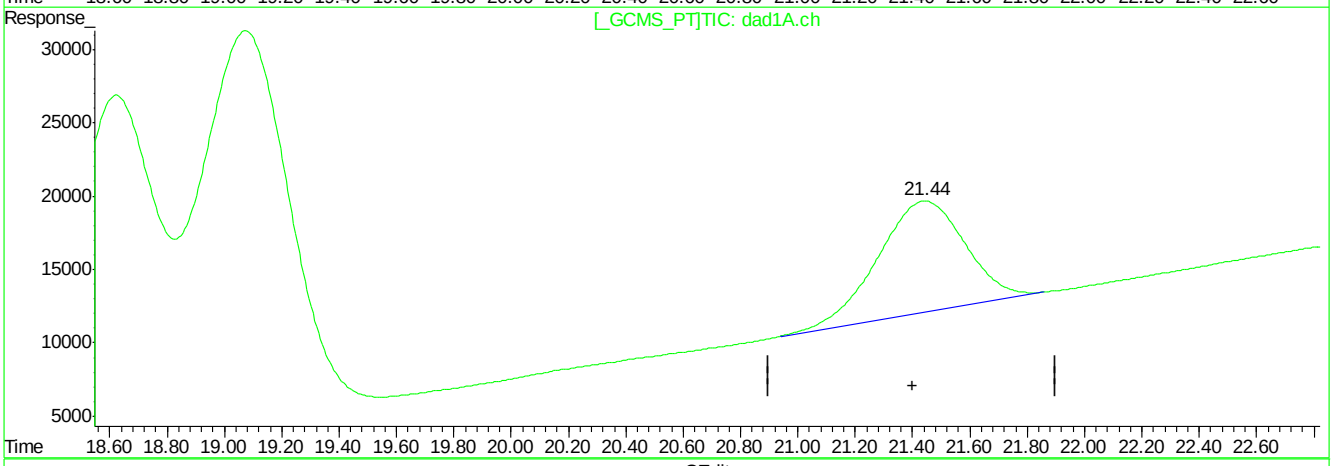
(+) = Expected Retention Time
GG622004.D GGG3024_080821.M Mon Aug 09 10:05:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1A.ch
Acq On : 08-Aug-2021, 19:40:11 Operator: jamesb
Sample : ic3024-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.44min 496.399ppb m

response 1615551

(+) = Expected Retention Time
GG622004.D GGG3024_080821.M Mon Aug 09 10:05:21 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1A.ch
Acq On : 08-Aug-2021, 20:11:36 Operator: jamesb
Sample : icc3024-1000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:13 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.83	13.83	4915906	9549235	1006.270	1051.853
	Spiked Amount 500.000	Range 70 - 136		Recovery =		201.25%#	210.37%#
	Target Compounds						
1)	TNX	4.78	4.78	1954429	1954429	424.009	426.723
2)	HMX	5.18	5.18	3150326	3150326	971.563	964.731
3)	DNX	5.36	5.36	5303950	5303950	897.575	895.659
4)	MNX	6.45	6.45	6937389	6937389	1145.069	1145.069
5)	1,3,5-Trinitrobe	7.48	7.48	9104485	9104485	965.032	965.032
6)	RDX	7.71	7.71	3955472	3955472	900.058	900.058
7)	1,3-Dinitrobenze	9.67	9.67	12005156	9463217	939.874	975.357
8)	Nitrobenzene	10.61	10.61	7797387	7973332	921.851	964.808
9)	2,4,6-Trinitroto	11.58	11.58	8440762	11344438	921.935	872.311
10)	Nitroglycerin	0.00	12.35	0	3040460	N.D.	960.751 #
11)	Tetryl	12.82	12.82	6723694	11562907	947.502	933.252
13)	2,6-Dinitrotolue	14.18	14.17	5760009	8237098	913.431	893.590
14)	2,4-Dinitrotolue	14.81	14.81	10854356	7604790	941.308	957.833
15)	3,5-Dinitroanili	15.49	15.49	9189652	14912298	932.607	958.973
16)	o-Nitrotoluene	16.36	16.36	4877601	7217149	941.399	985.130
17)	p-Nitrotoluene	17.28	17.27	10105442	18308327	1900.769	1991.176
18)	4-Amino-2,6-Dini	17.28	17.27	10105442	18308327	1900.769	1991.176
19)	m-Nitrotoluene	18.59	18.59	5440488	9400492	936.832	970.448
20)	2-Amino-4,6-Dini	19.03	19.03	8041950	11433378	930.063	962.209
21)	PETN	0.00	21.40	0	3215127	N.D.	987.890m#

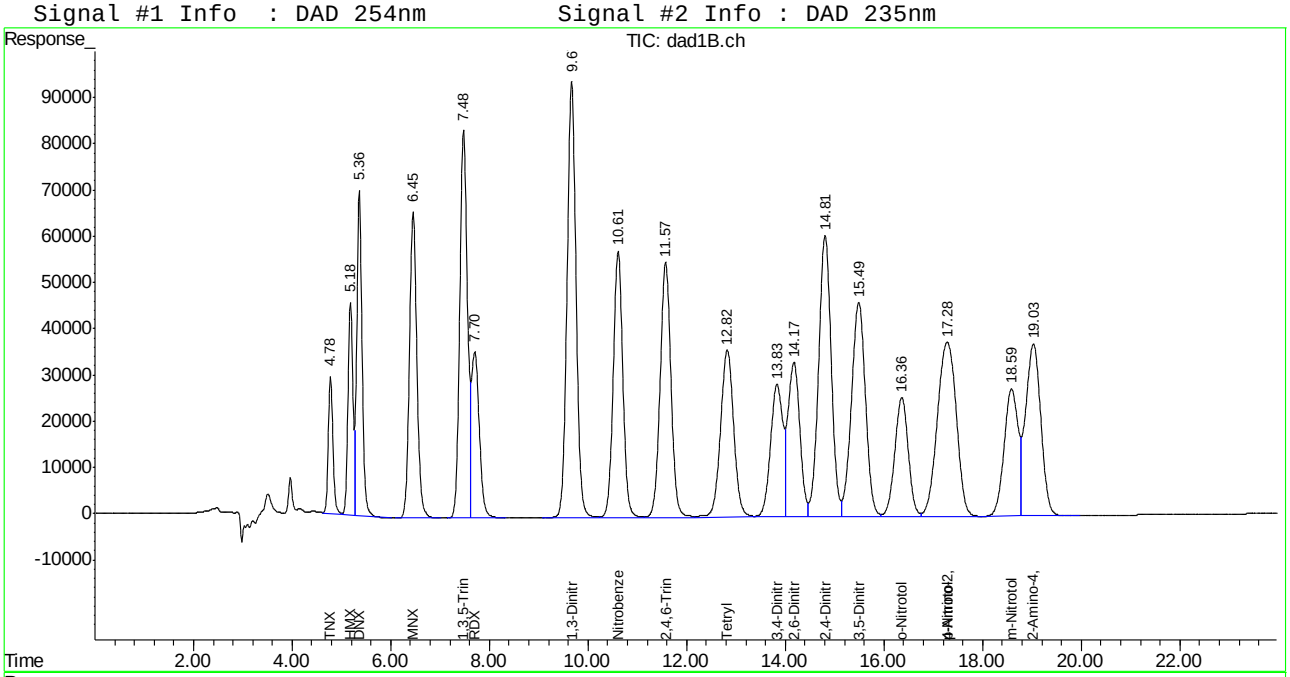
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

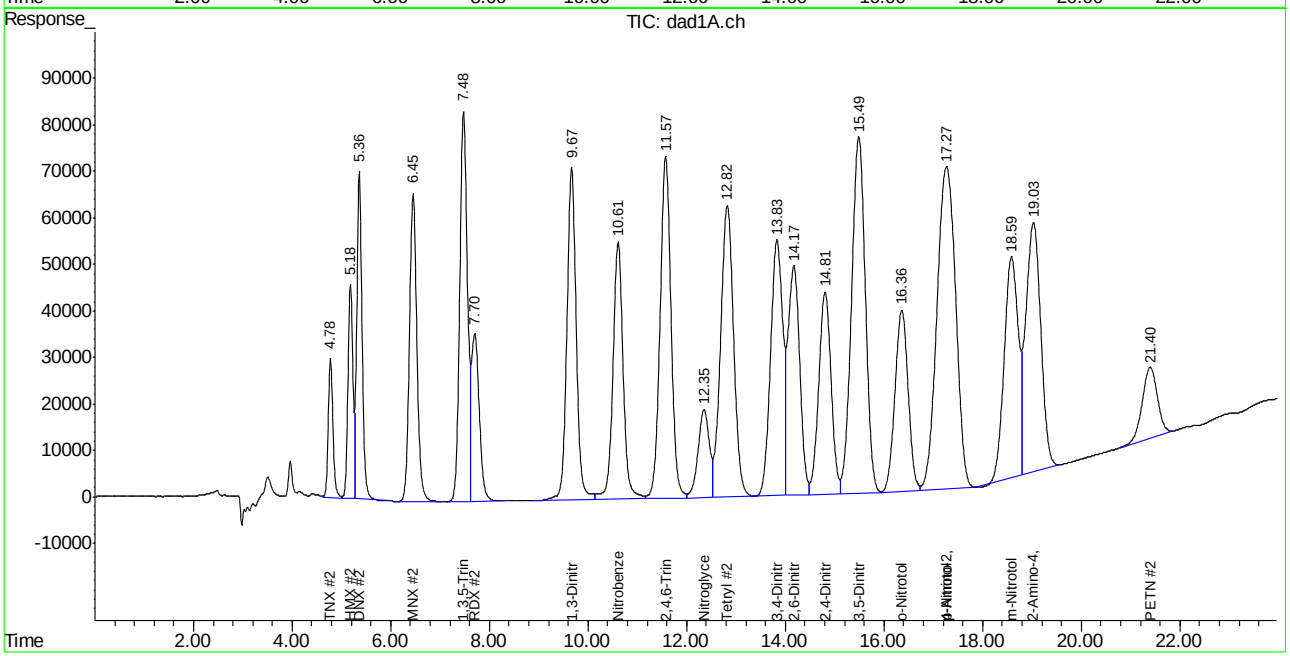
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1A.ch
Acq On : 08-Aug-2021, 20:11:36 Operator: jamesb
Sample : icc3024-1000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:03 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

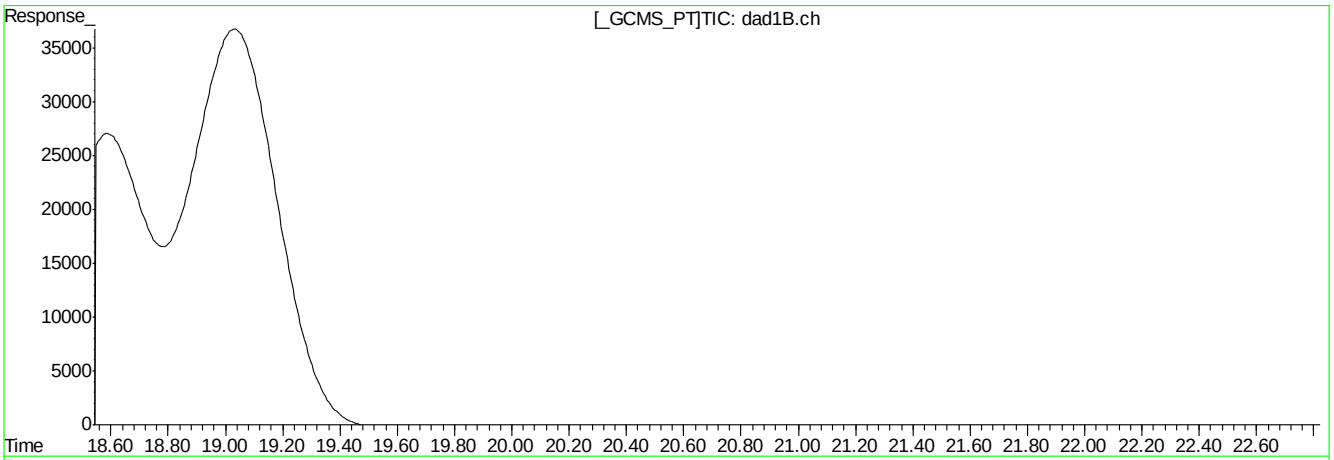
Sample Number: GGG3024-ICC3024 **Method:** SW846 8330B
Lab FileID: GG622005.D **Analyst approved:** 08/09/21 10:24 James Boone
Injection Time: 08/08/21 20:11 **Supervisor approved:** 08/10/21 07:46 Mike Eger

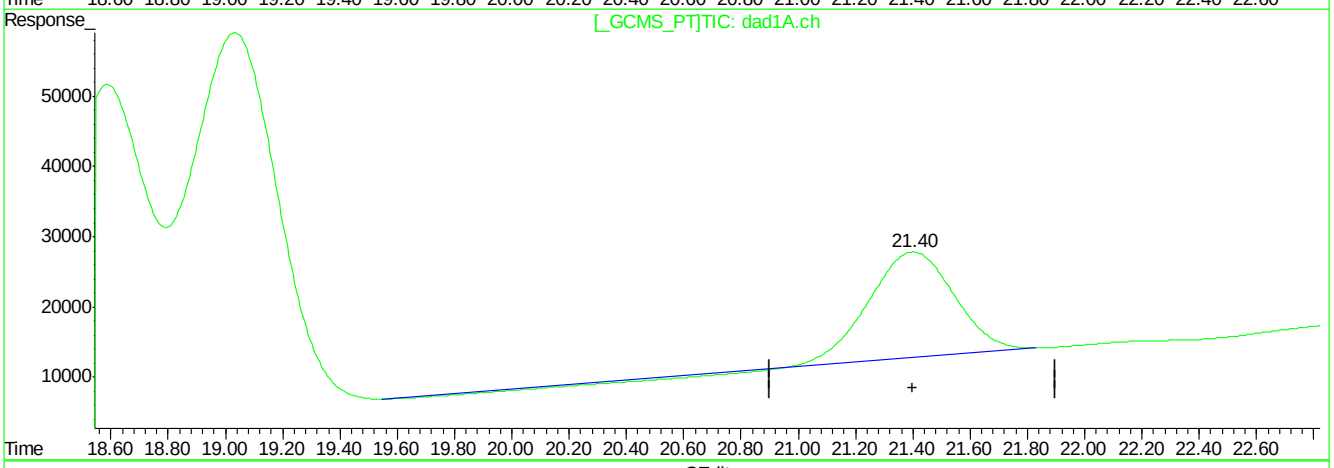
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.40	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1A.ch
Acq On : 08-Aug-2021, 20:11:36 Operator: jamesb
Sample : icc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.40min 902.121ppb

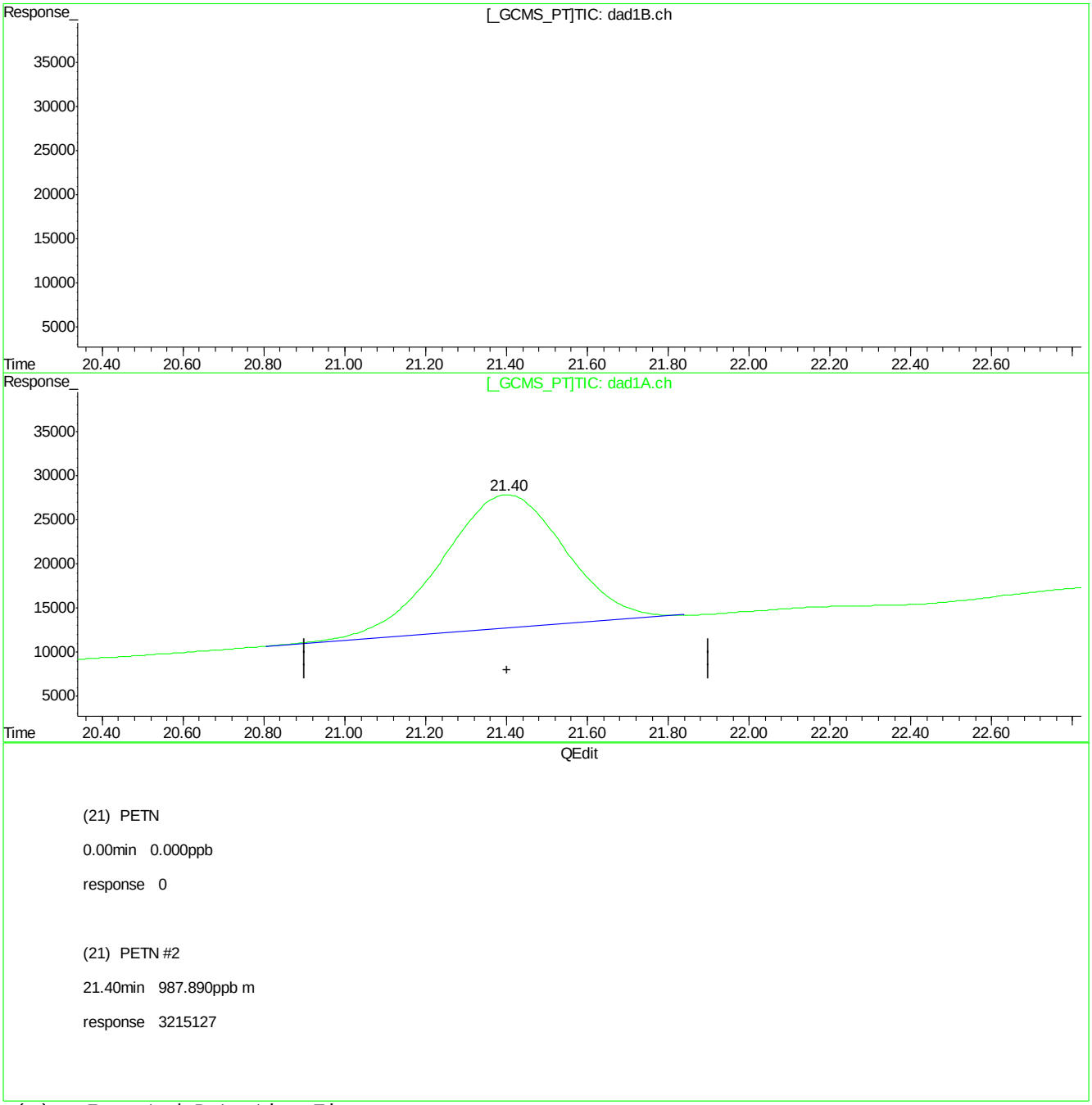
response 2935989

(+) = Expected Retention Time
GG622005.D GGG3024_080821.M Mon Aug 09 10:03:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1A.ch
Acq On : 08-Aug-2021, 20:11:36 Operator: jamesb
Sample : icc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
GG622005.D GGG3024_080821.M Mon Aug 09 10:04:01 2021

GG622006.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1A.ch
Acq On : 08-Aug-2021, 20:43:01 Operator: jamesb
Sample : ic3024-2500 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:14 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.84	13.84	12358567	23969803	2529.760	2640.286
	Spiked Amount 500.000	Range 70 - 136		Recovery =		505.95%#	528.06%#
	Target Compounds						
1)	TNX	4.78	4.78	4791086	4791086	1039.415	1046.068
2)	HMX	5.19	5.19	7820618	7820618	2411.884	2394.924
3)	DNX	5.37	5.37	13256476	13256476	2243.362	2238.574
4)	MNX	6.46	6.46	17370393	17370393	2867.115	2867.115
5)	1,3,5-Trinitrobe	7.49	7.49	22774436	22774436	2413.981	2413.981
6)	RDX	7.71	7.71	9914943	9914943	2256.120	2256.120
7)	1,3-Dinitrobenze	9.68	9.68	30033635	22809893	2351.309	2350.976
8)	Nitrobenzene	10.62	10.62	19543626	18494467	2310.557	2237.911
9)	2,4,6-Trinitroto	11.59	11.59	21163261	27747827	2311.540	2133.622
10)	Nitroglycerin	0.00	12.36	0	7341584	N.D.	2319.856 #
11)	Tetryl	12.84	12.84	16971326	28934406	2391.598	2335.321
13)	2,6-Dinitrotolue	14.19	14.18	14458386	20610087	2292.833	2235.856
14)	2,4-Dinitrotolue	14.82	14.82	27252797	19226354	2363.408	2421.583
15)	3,5-Dinitroanili	15.51	15.51	23082184	37739769	2342.484	2426.951
16)	o-Nitrotoluene	16.37	16.37	12319522	18337314	2377.723	2503.017
17)	p-Nitrotoluene	17.30	17.28	25446496	46281719	4786.324	5033.504
18)	4-Amino-2,6-Dini	17.30	17.28	25446496	46281719	4786.324	5033.504
19)	m-Nitrotoluene	18.60	18.60	13723874	23933820	2363.201	2470.778
20)	2-Amino-4,6-Dini	19.05	19.05	20151452	28646973	2330.543	2410.869
21)	PETN	0.00	21.40	0	7726944	N.D. d	2374.204m

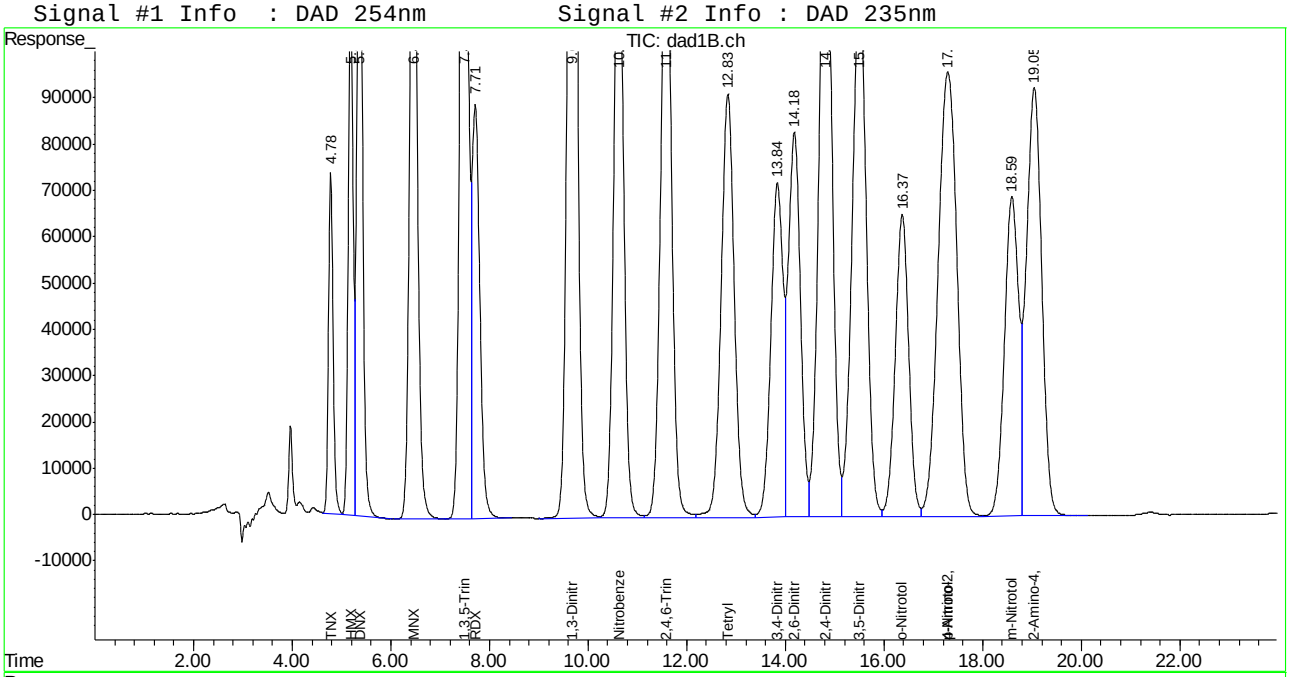
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

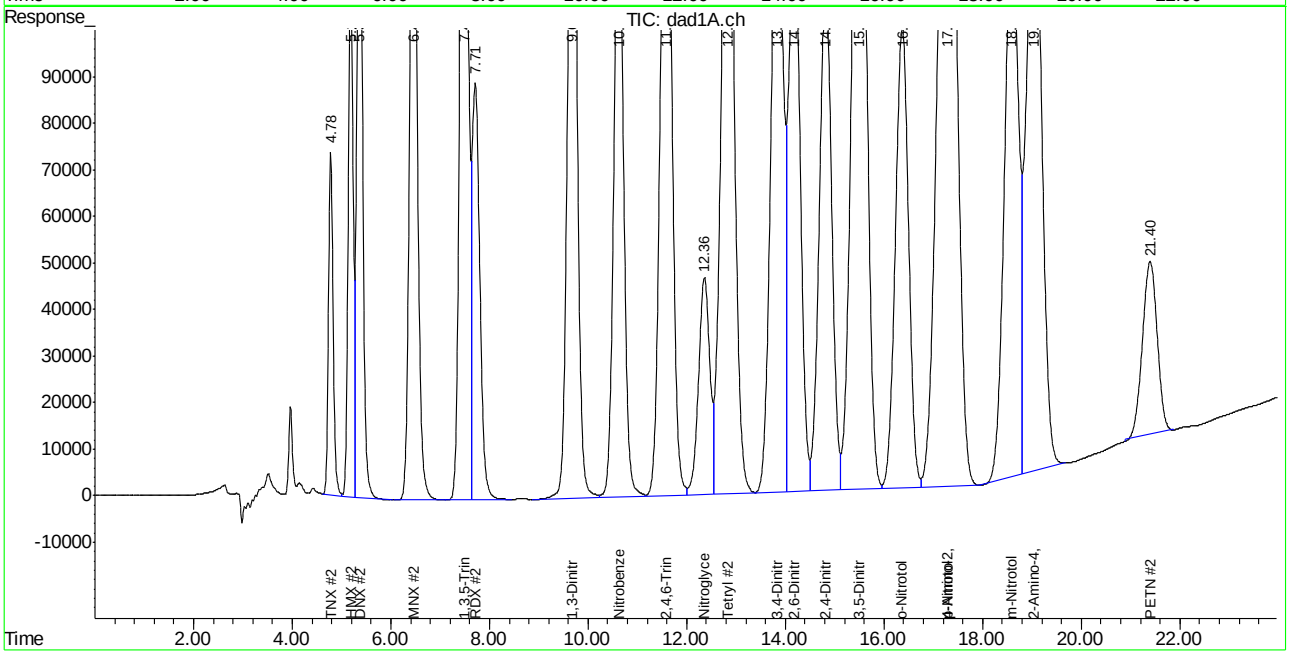
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1A.ch
Acq On : 08-Aug-2021, 20:43:01 Operator: jamesb
Sample : ic3024-2500 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:02 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

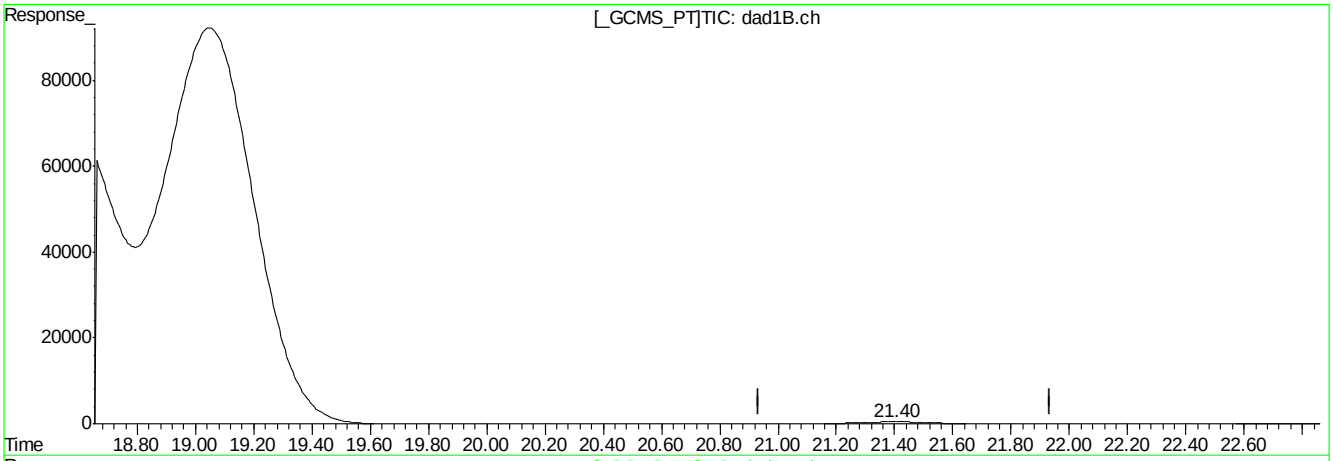
Sample Number: GGG3024-IC3024
Lab FileID: GG622006.D
Injection Time: 08/08/21 20:43
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

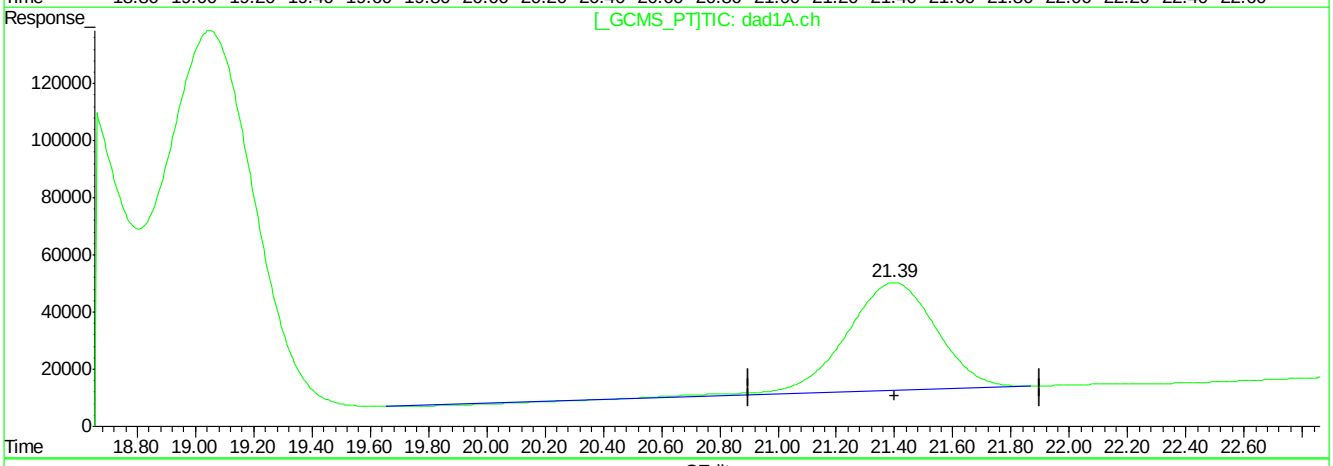
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.40	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1A.ch
Acq On : 08-Aug-2021, 20:43:01 Operator: jamesb
Sample : ic3024-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.40min 0.000ppb

response 125791

(21) PETN #2

21.40min 2479.328ppb

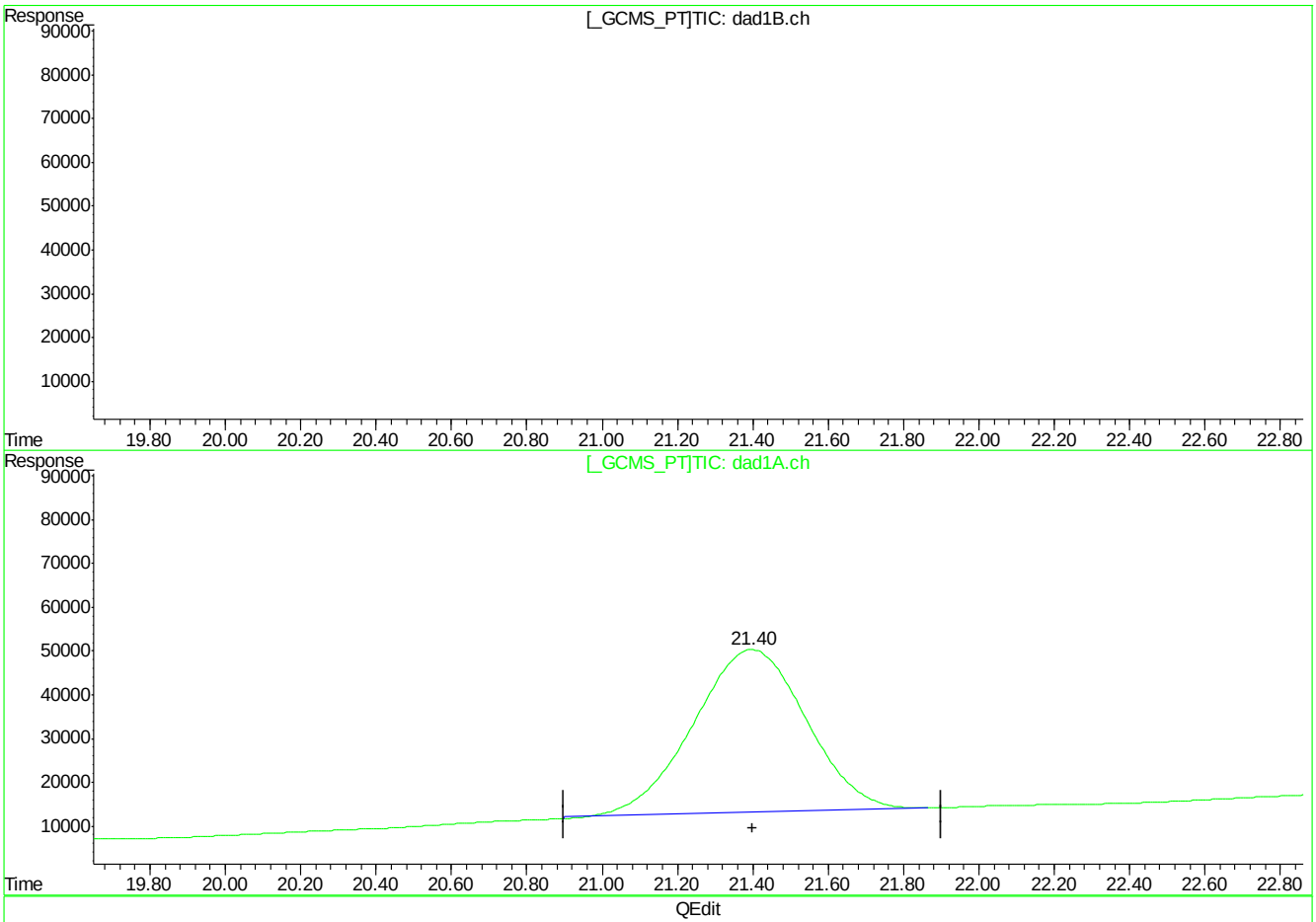
response 8069075

(+) = Expected Retention Time
GG622006.D GGG3024_080821.M Mon Aug 09 10:02:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1A.ch
Acq On : 08-Aug-2021, 20:43:01 Operator: jamesb
Sample : ic3024-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.40min 2374.204ppb m

response 7726944

(+) = Expected Retention Time
GG622006.D GGG3024_080821.M Mon Aug 09 10:02:56 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1A.ch
Acq On : 08-Aug-2021, 21:14:25 Operator: jamesb
Sample : ic3024-5000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:15 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.83	13.83	25048204	48817267	5127.288	5377.247
	Spiked Amount 500.000	Range 70 - 136		Recovery = 1025.46%#		1075.45%#	
	Target Compounds						
1)	TNX	4.78	4.78	9630966	9630966	2089.417	2102.790
2)	HMX	5.19	5.19	15669611	15669611	4832.519	4798.537
3)	DNX	5.37	5.37	26781436	26781436	4532.158	4522.485
4)	MNX	6.46	6.46	35073461	35073461	5789.141	5789.141
5)	1,3,5-Trinitrobe	7.48	7.48	45923704	45923704	4867.693	4867.693
6)	RDX	7.70	7.70	20061099	20061099	4564.851	4564.851
7)	1,3-Dinitrobenze	9.67	9.67	60634986	45735174	4747.065	4713.845
8)	Nitrobenzene	10.60	10.60	38975507	36416955	4607.904	4406.611
9)	2,4,6-Trinitroto	11.57	11.57	42819352	56179118	4676.909	4319.797
10)	Nitroglycerin	0.00	12.34	0	14881917	N.D.	4702.515 #
11)	Tetryl	12.82	12.82	34449813	58881158	4854.664	4752.349
13)	2,6-Dinitrotolue	14.17	14.17	29253677	42254940	4639.093	4583.966
14)	2,4-Dinitrotolue	14.81	14.81	55181037	39375944	4785.391	4959.449
15)	3,5-Dinitroanili	15.49	15.49	46757793	77034388	4745.191	4953.891
16)	o-Nitrotoluene	16.36	16.36	24618668	36839630	4751.512	5028.556
17)	p-Nitrotoluene	17.28	17.27	51318918	93496672	9652.762	10168.504
18)	4-Amino-2,6-Dini	17.28	17.27	51318918	93496672	9652.762	10168.504
19)	m-Nitrotoluene	18.58	18.58	27359267	47702631	4711.166	4924.522
20)	2-Amino-4,6-Dini	19.03	19.03	40878065	57976920	4727.604	4879.217
21)	PETN	0.00	21.38	0	16168442	N.D. d	4967.964m

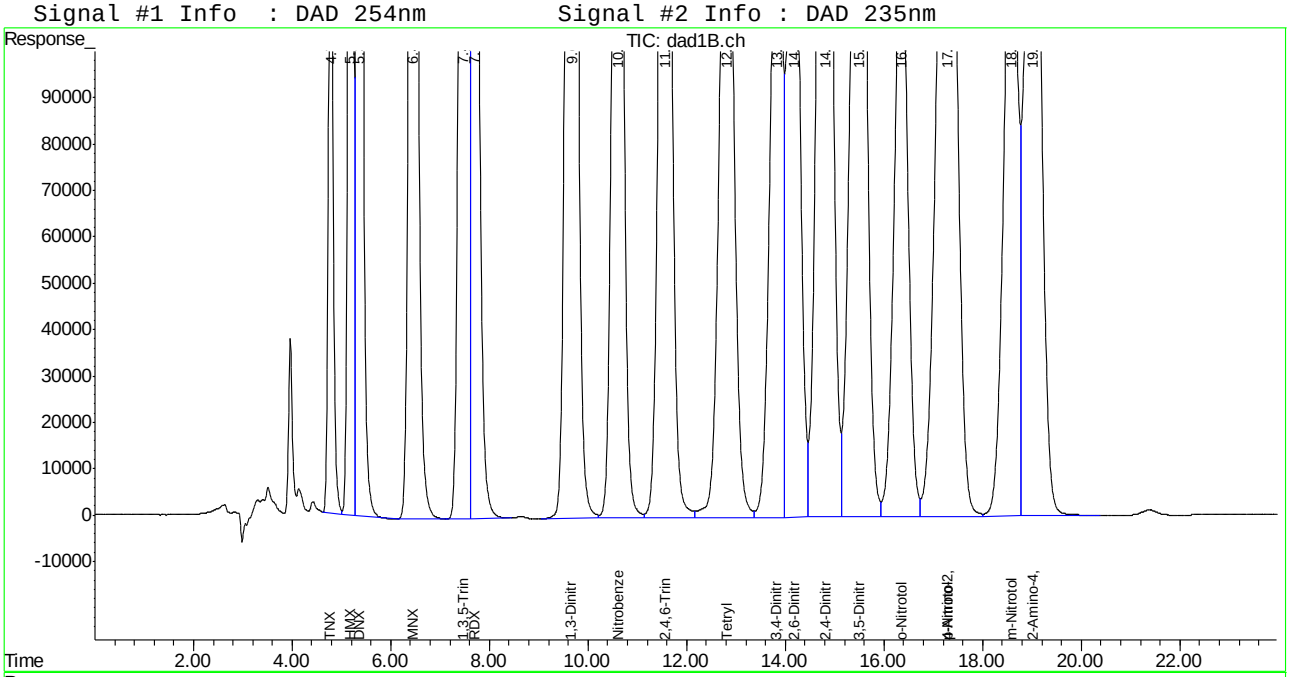
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

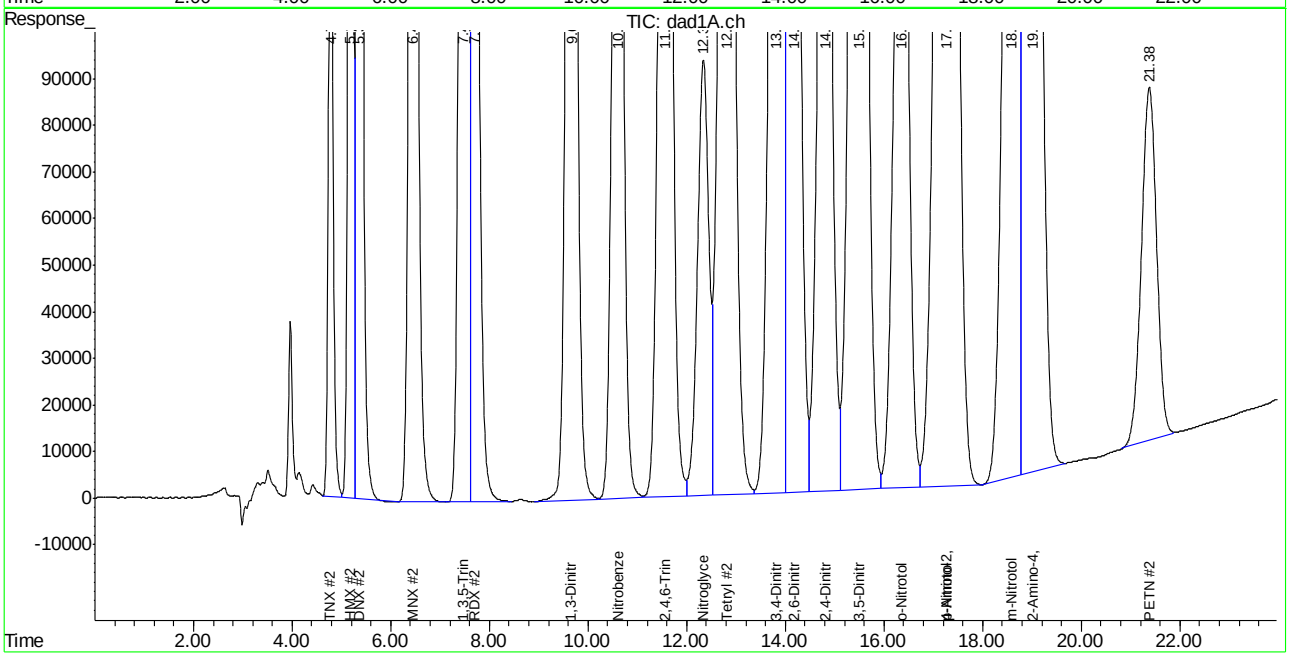
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1A.ch
Acq On : 08-Aug-2021, 21:14:25 Operator: jamesb
Sample : ic3024-5000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:01 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

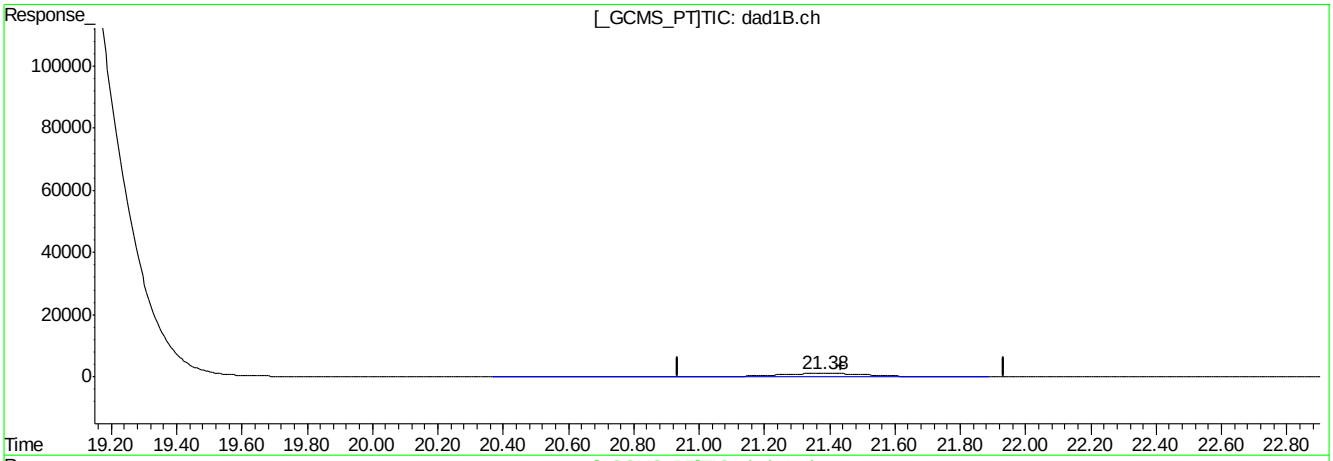
Sample Number: GGG3024-IC3024
Lab FileID: GG622007.D
Injection Time: 08/08/21 21:14
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

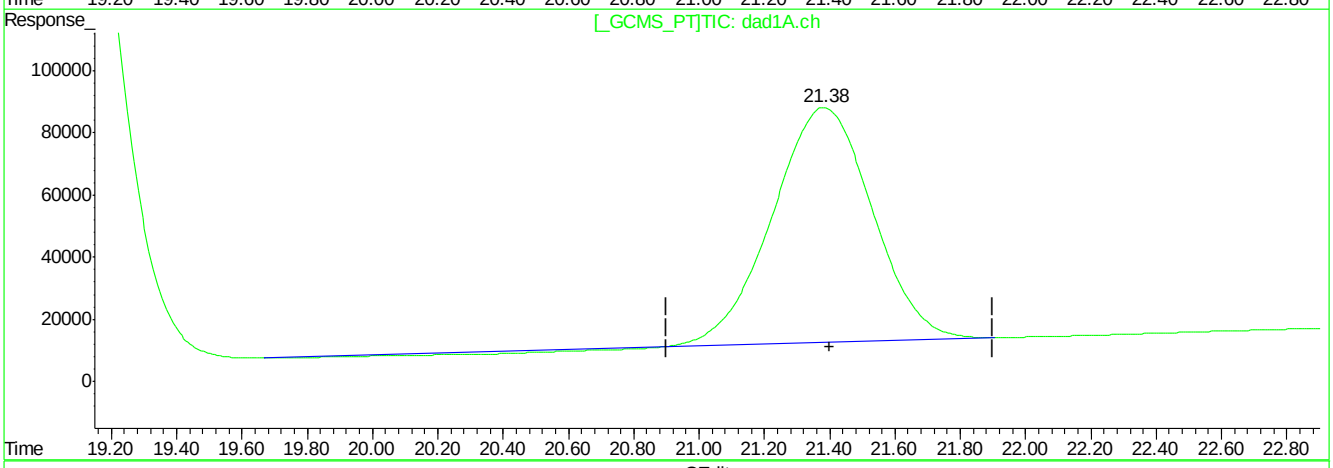
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.38	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1A.ch
Acq On : 08-Aug-2021, 21:14:25 Operator: jamesb
Sample : ic3024-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.38min 0.000ppb

response 254909

(21) PETN #2

21.38min 4846.263ppb

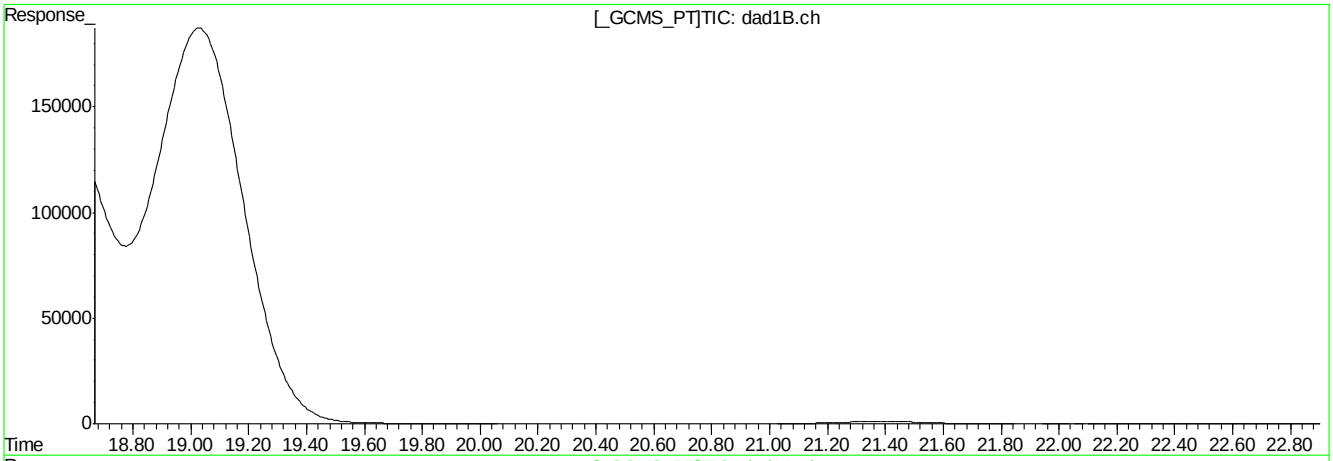
response 15772359

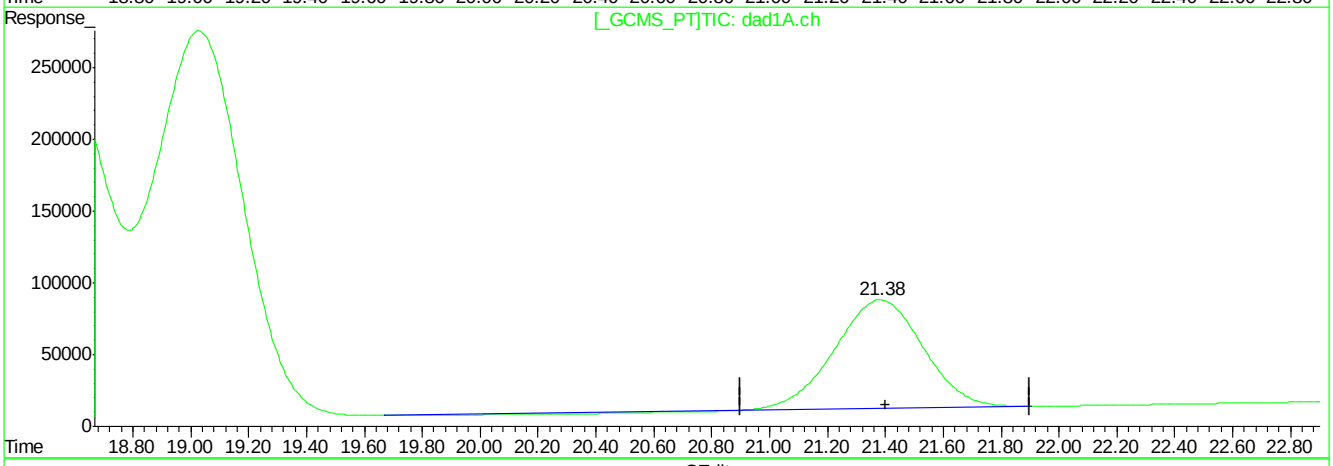
(+) = Expected Retention Time
GG622007.D GGG3024_080821.M Mon Aug 09 10:01:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1A.ch
Acq On : 08-Aug-2021, 21:14:25 Operator: jamesb
Sample : ic3024-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.38min 4846.263ppb

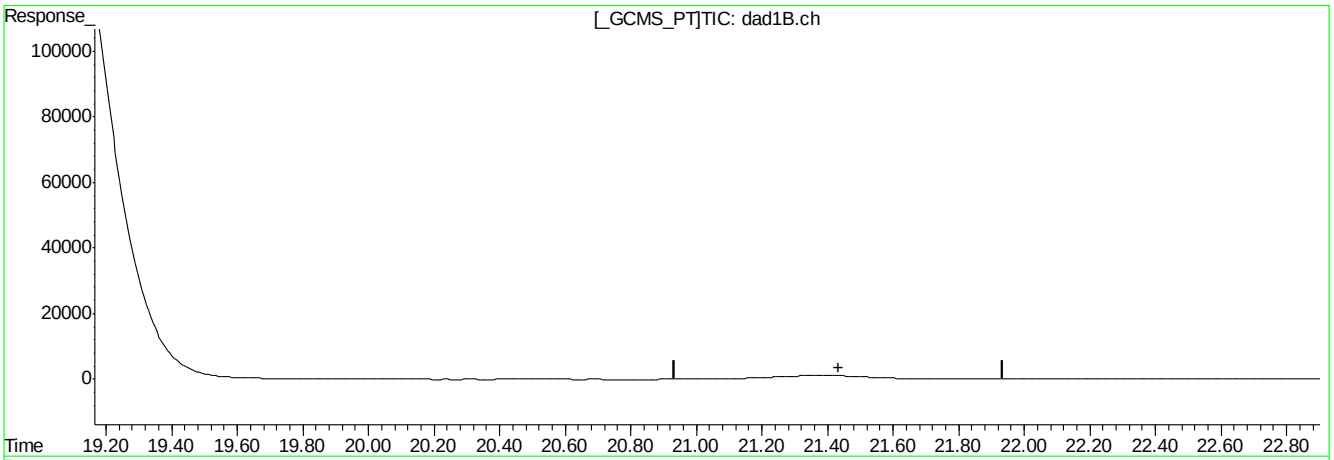
response 15772359

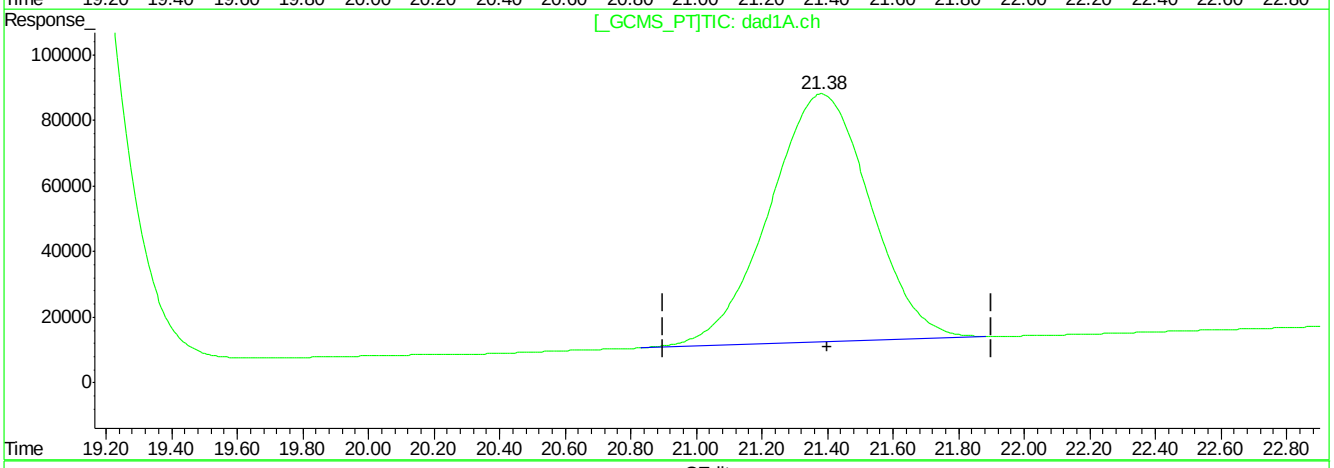
(+) = Expected Retention Time
GG622007.D GGG3024_080821.M Mon Aug 09 10:01:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1A.ch
Acq On : 08-Aug-2021, 21:14:25 Operator: jamesb
Sample : ic3024-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.38min 4967.964ppb m

response 16168442

(+) = Expected Retention Time
GG622007.D GGG3024_080821.M Mon Aug 09 10:01:41 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1A.ch
Acq On : 08-Aug-2021, 21:45:56 Operator: jamesb
Sample : icv3024-1000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:15:24 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
	Spiked Amount 500.000	Range 70 - 136		Recovery =		0.00%#	0.00%#
	Target Compounds						
1)	TNX	4.78	4.78	2060877	2060877	505.160	505.160
2)	HMX	5.18	5.18	3020232	3020232	926.949	926.949
3)	DNX	5.36	5.36	5624817	5624817	1024.661	1028.467
4)	MNX	6.45	6.45	7364830	7364830	1213.889	1213.889
5)	1,3,5-Trinitrobe	7.47	7.47	8863362	8863362	958.592	958.592
6)	RDX	7.70	7.70	3817157	3817157	950.233	950.233
7)	1,3-Dinitrobenze	9.67	9.67	11667307	9594667	954.780	1058.497
8)	Nitrobenzene	10.61	10.61	7442197	8392127	950.838	1101.499
9)	2,4,6-Trinitroto	11.57	11.57	8113210	11472766	943.019	979.670
10)	Nitroglycerin	0.00	12.35	0	3028713	N.D.	954.377 #
11)	Tetryl	12.82	12.82	6515817	11317664	964.101	970.431
13)	2,6-Dinitrotolue	14.17	14.17	5579302	8142456	952.231	982.311
14)	2,4-Dinitrotolue	14.80	14.80	10560262	7405993	958.433	992.438
15)	3,5-Dinitroanili	15.49	15.49	10363491	16846909	1109.387	1095.895
16)	o-Nitrotoluene	16.36	16.36	4677934	6762426	960.676	919.253
17)	p-Nitrotoluene	17.30	17.29	9901675	17568617	1947.961	2013.696
18)	4-Amino-2,6-Dini	17.30	17.29	9901675	17568617	1947.961	2013.696
19)	m-Nitrotoluene	18.60	18.60	5226146	9072240	947.818	1016.304
20)	2-Amino-4,6-Dini	19.05	19.05	7955630	11269851	967.495	1050.381
21)	PETN	0.00	21.40	0	3054539	N.D.	969.900m#

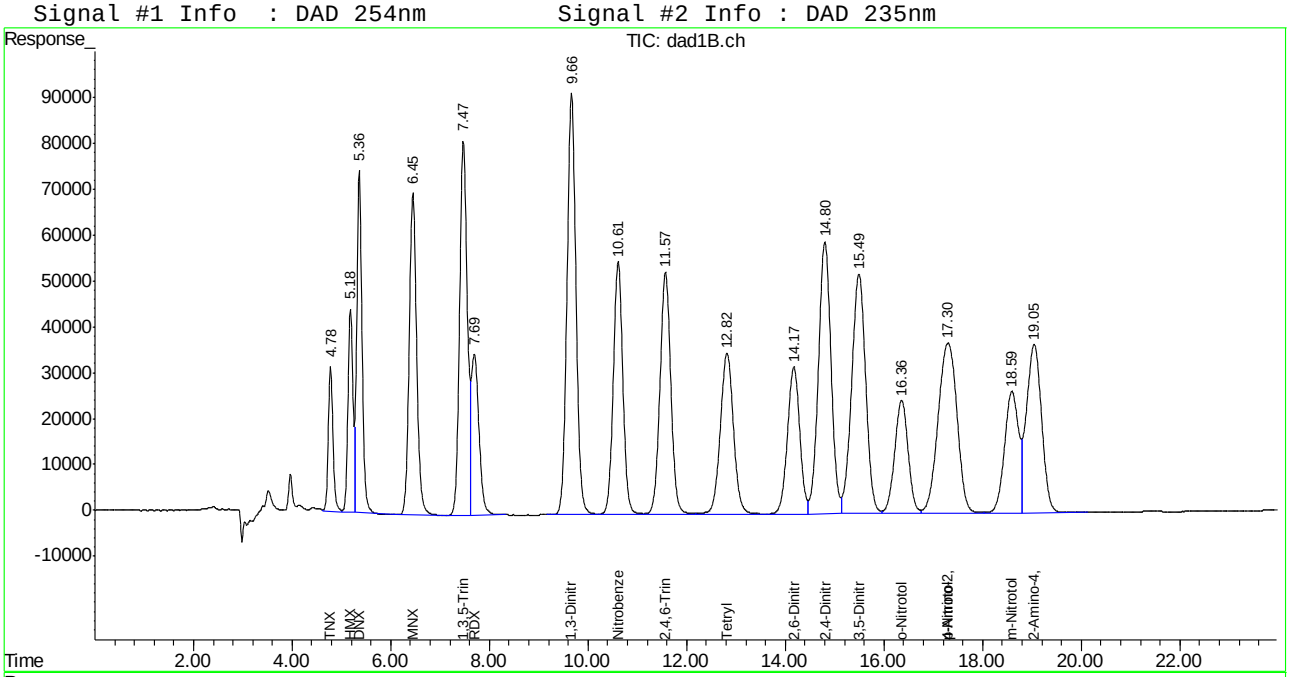
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622008.D GGG3024_080821.M Mon Aug 09 10:17:42 2021 Page 1

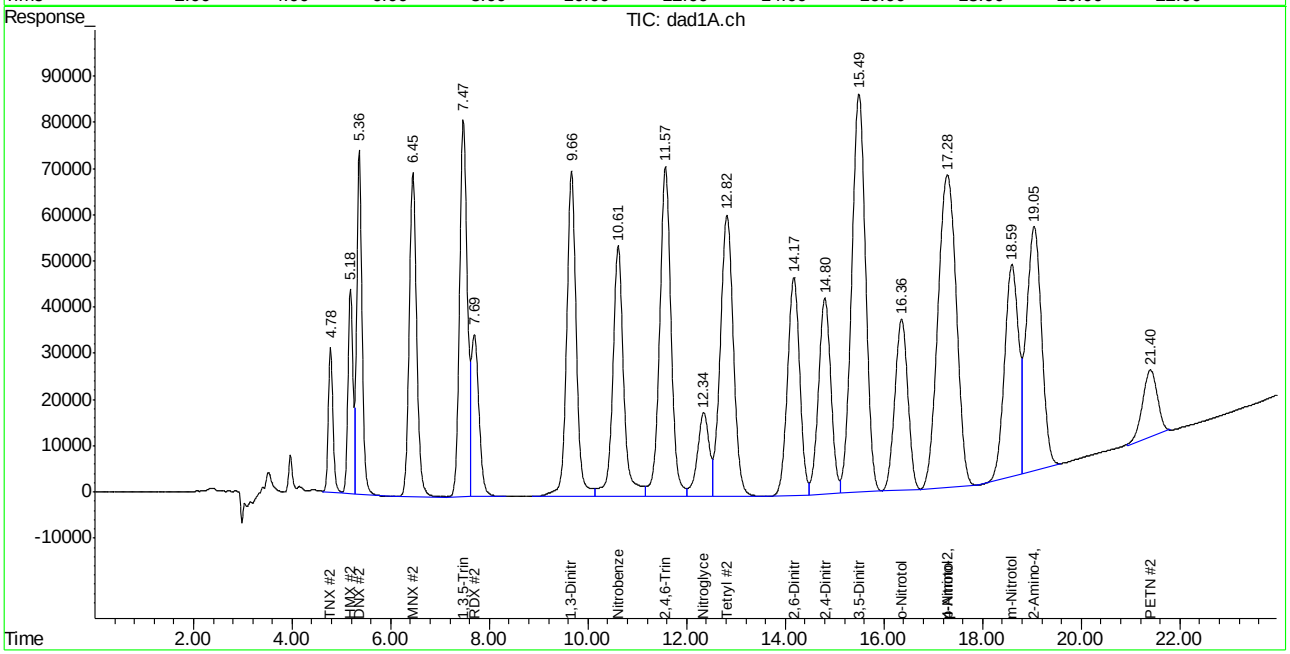
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1A.ch
Acq On : 08-Aug-2021, 21:45:56 Operator: jamesb
Sample : icv3024-1000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:15 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

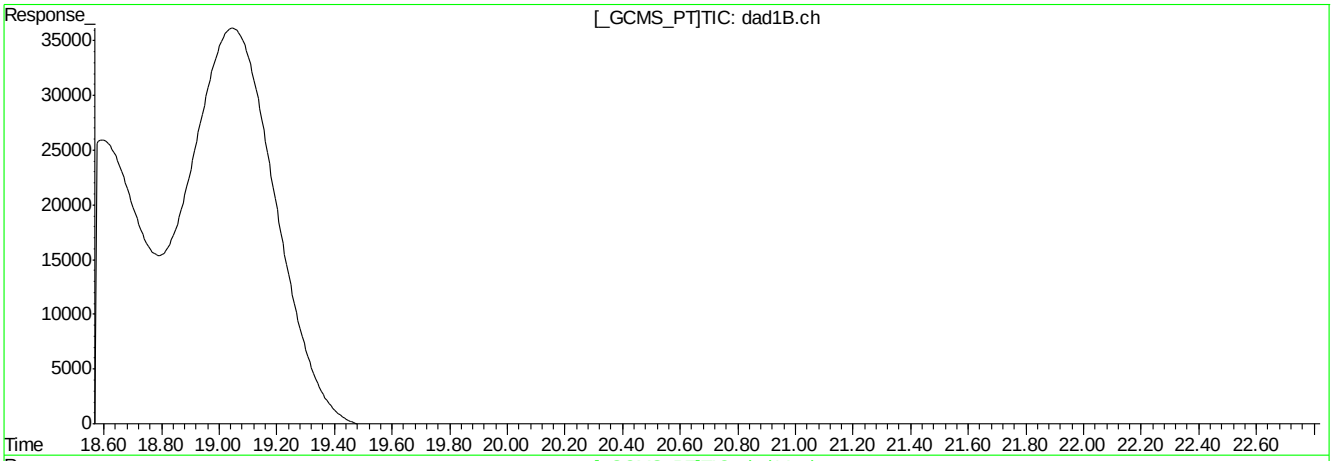
Sample Number: GGG3024-ICV3024 **Method:** SW846 8330B
Lab FileID: GG622008.D **Analyst approved:** 08/09/21 10:24 James Boone
Injection Time: 08/08/21 21:45 **Supervisor approved:** 08/10/21 07:46 Mike Eger

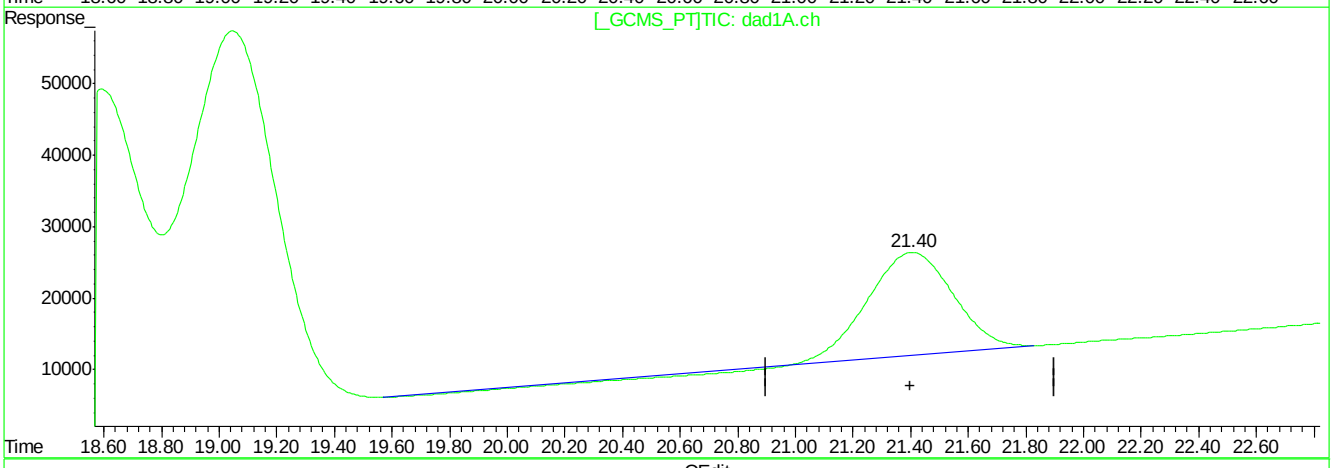
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.40	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1A.ch
Acq On : 08-Aug-2021, 21:45:56 Operator: jamesb
Sample : icv3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:15 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.41min 886.499ppb

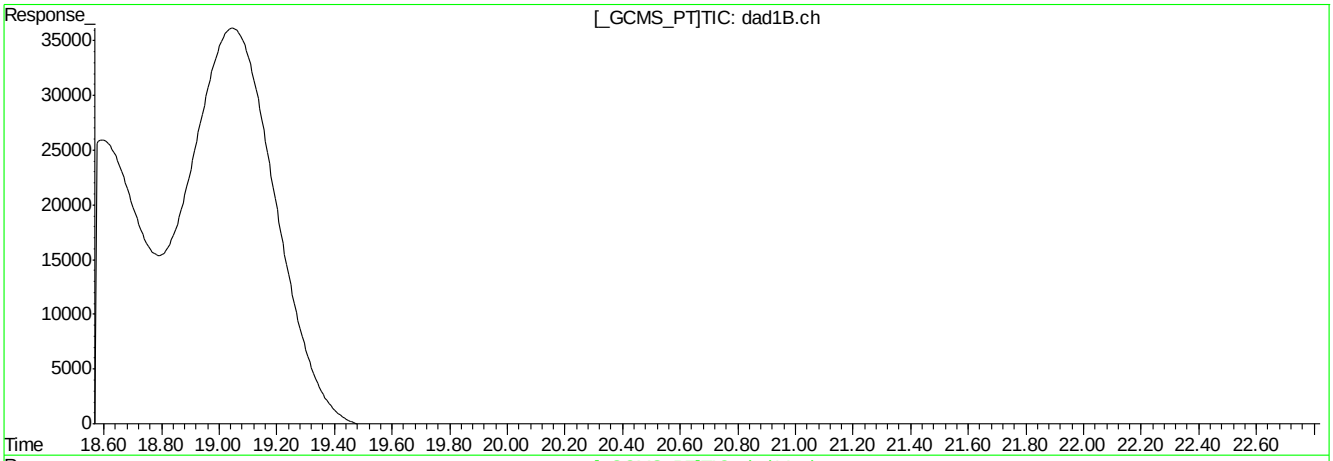
response 2791883

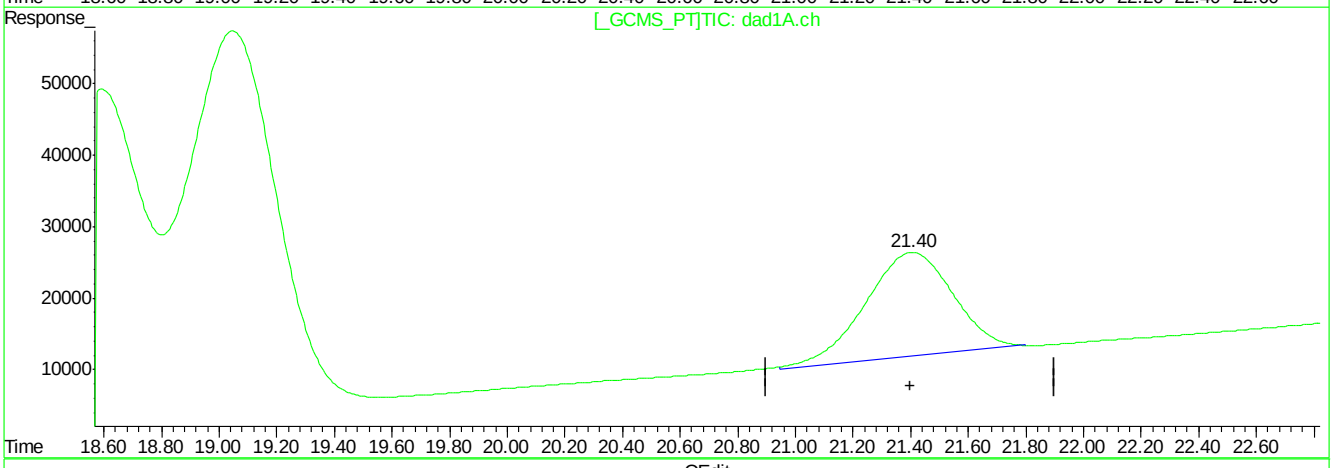
(+) = Expected Retention Time
GG622008.D GGG3024_080821.M Mon Aug 09 10:15:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1A.ch
Acq On : 08-Aug-2021, 21:45:56 Operator: jamesb
Sample : icv3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:15 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.40min 969.900ppb m

response 3054539

(+) = Expected Retention Time
GG622008.D GGG3024_080821.M Mon Aug 09 10:16:01 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 10:27

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1A.ch
Acq On : 12-Aug-2021, 17:08:21 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : op86682,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:34 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.88	13.88	4881118	9441108	977.837	968.606
	Spiked Amount 500.000	Range 70 - 136		Recovery =		195.57%#	193.72%#
	Target Compounds						
1)	TNX	4.79	4.79	1918394	1918394	470.235	470.235
2)	HMX	5.21	5.21	3056694	3056694	938.140	938.140
3)	DNX	5.39	5.39	5171198	5171198	942.026	945.525
4)	MNX	6.49	6.49	6706320	6706320	1105.351	1105.351
5)	1,3,5-Trinitrobe	7.50	7.50	8861077	8861077	958.345	958.345
6)	RDX	7.74	7.74	4017324	4017324	1000.062	1000.062
7)	1,3-Dinitrobenze	9.68	9.68	11822069	9292404	967.445	1025.151
8)	Nitrobenzene	10.61	10.61	7702499	7702250	984.095	1010.950
9)	2,4,6-Trinitroto	11.61	11.61	8250919	11154955	959.025	952.532
10)	Nitroglycerin	0.00	12.38	0	2935149	N.D.	924.894 #
11)	Tetryl	12.88	12.88	6317883	10716535	934.814	918.887
13)	2,6-Dinitrotolue	14.22	14.22	5692210	8104850	971.501	977.774
14)	2,4-Dinitrotolue	14.85	14.85	10706598	7654125	971.714	1025.689
15)	3,5-Dinitroanili	15.54	15.54	9067273	14722169	970.630	957.680
16)	o-Nitrotoluene	16.39	16.39	4819615	6944151	989.772	943.956
17)	p-Nitrotoluene	17.34	17.33	9945296	17935309	1956.543	2055.726
18)	4-Amino-2,6-Dini	17.34	17.33	9945296	17935309	1956.543	2055.726
19)	m-Nitrotoluene	18.62	18.62	5343378	9202571	969.079	1030.904
20)	2-Amino-4,6-Dini	19.11	19.11	7946476	11254427	966.382	1048.943
21)	PETN	0.00	21.49	0	3050322	N.D.	968.561m#

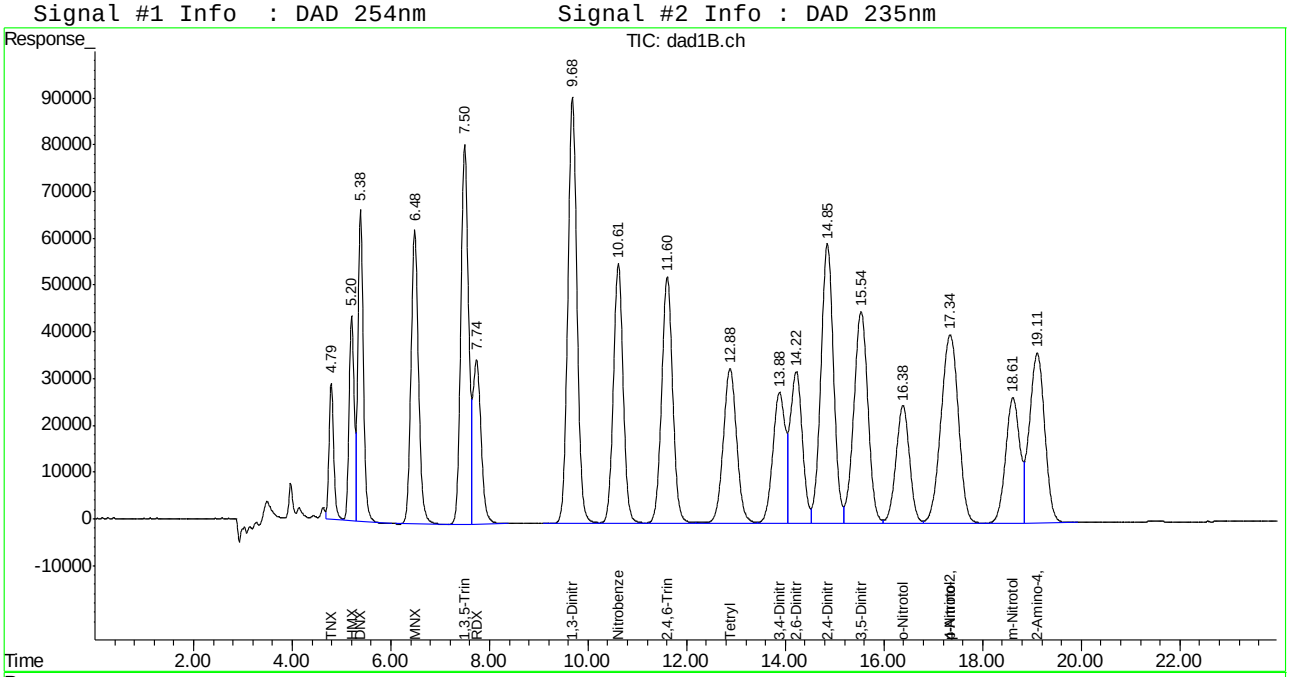
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

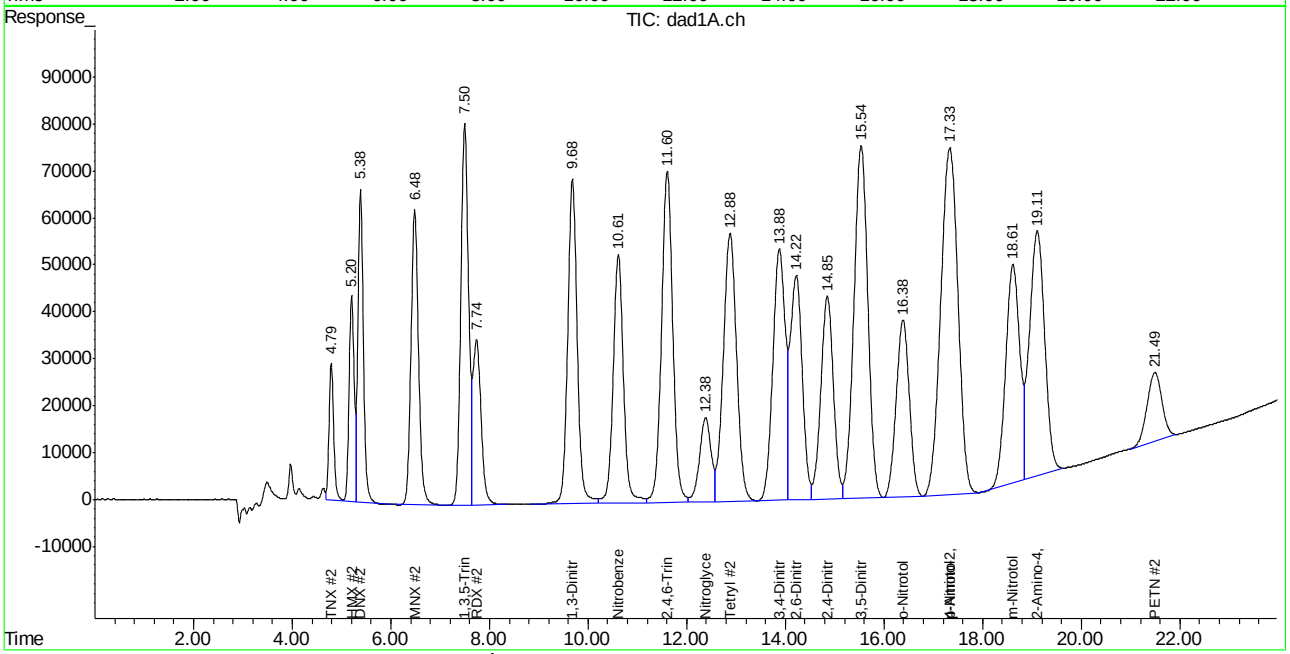
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1A.ch
Acq On : 12-Aug-2021, 17:08:21 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : op86682,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:05 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

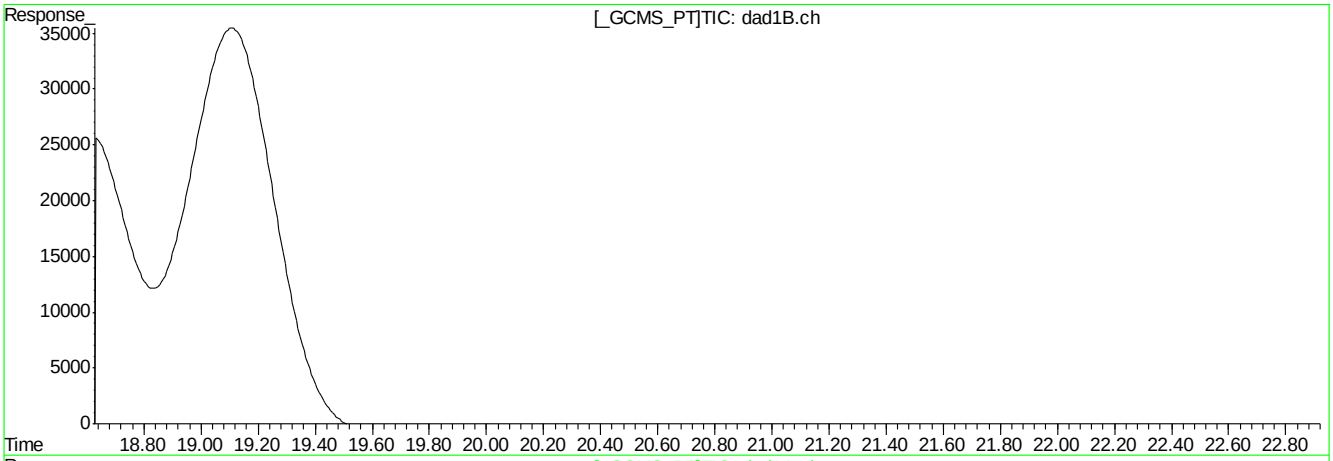
Sample Number:	GGG3025-CC3024	**Method:**	SW846 8330B
Lab FileID:	GG622028.D	**Analyst approved:**	08/13/21 10:08 James Boone
Injection Time:	08/12/21 17:08	**Supervisor approved:**	08/13/21 10:27 Naresh Jiawan

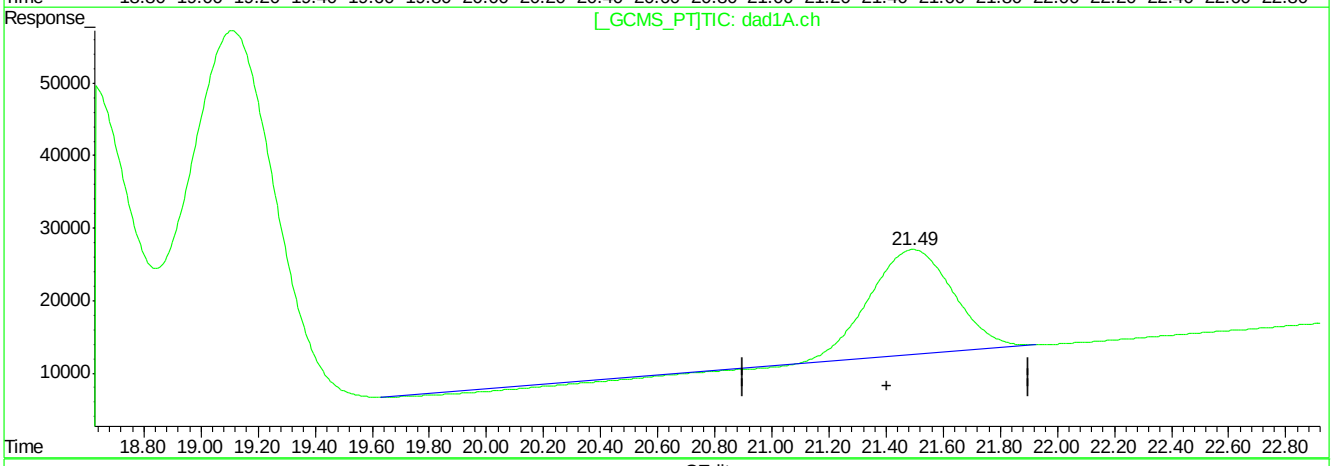
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.49	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1A.ch
Acq On : 12-Aug-2021, 17:08:21 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.50min 885.147ppb

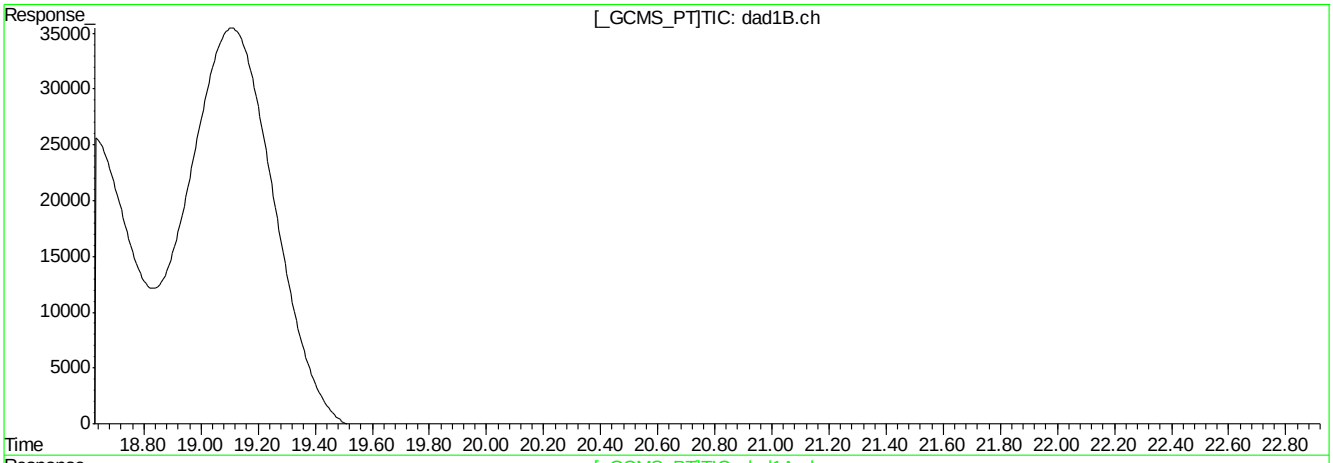
response 2787626

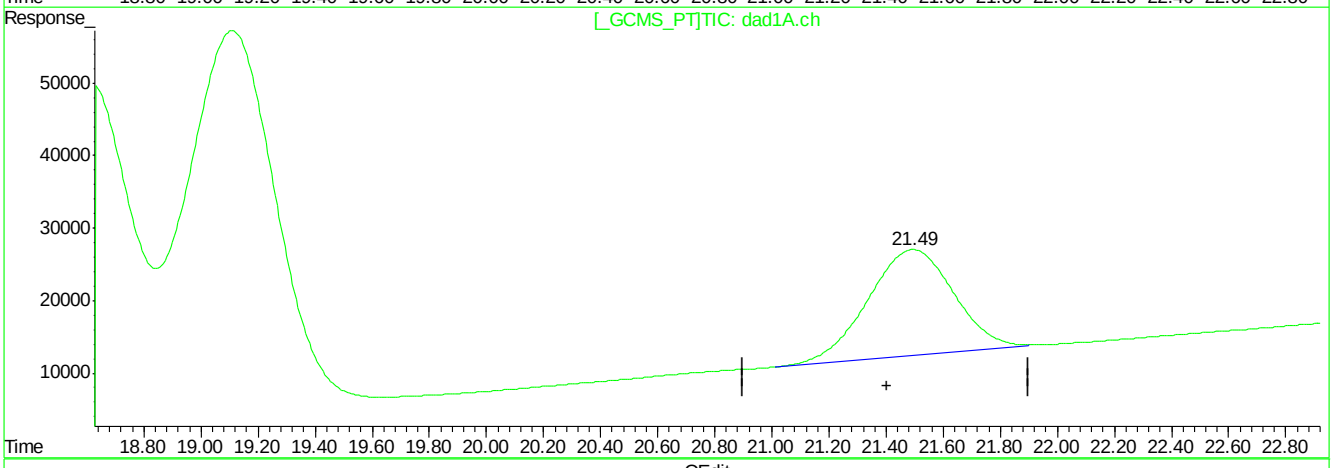
(+) = Expected Retention Time
GG622028.D GGG3024_080821.M Fri Aug 13 10:05:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1A.ch
Acq On : 12-Aug-2021, 17:08:21 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.49min 968.561ppb m

response 3050322

(+) = Expected Retention Time
GG622028.D GGG3024_080821.M Fri Aug 13 10:05:17 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 10:27

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1A.ch
Acq On : 12-Aug-2021, 23:25:25 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:46 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.93	13.93	4833983	9449720	968.394	969.489
	Spiked Amount 500.000	Range 70 - 136		Recovery =		193.68%#	193.90%#
	Target Compounds						
1)	TNX	4.80	4.80	1920709	1920709	470.802	470.802
2)	HMX	5.22	5.22	3067511	3067511	941.460	941.460
3)	DNX	5.40	5.40	5131638	5131638	934.819	938.292
4)	MNX	6.51	6.51	6644003	6644003	1095.080	1095.080
5)	1,3,5-Trinitrobe	7.52	7.52	8809865	8809865	952.807	952.807
6)	RDX	7.77	7.77	3971093	3971093	988.554	988.554
7)	1,3-Dinitrobenze	9.73	9.73	11757267	9307421	962.142	1026.808
8)	Nitrobenzene	10.66	10.66	7603085	7899840	971.393	1036.884
9)	2,4,6-Trinitroto	11.65	11.65	8196550	11204660	952.706	956.776
10)	Nitroglycerin	0.00	12.43	0	3005673	N.D.	947.117 #
11)	Tetryl	12.93	12.93	6299973	10771377	932.164	923.590
13)	2,6-Dinitrotolue	14.27	14.27	5642194	7953270	962.965	959.487
14)	2,4-Dinitrotolue	14.91	14.91	10613814	7365894	963.293	987.065
15)	3,5-Dinitroanili	15.60	15.61	8997886	14667180	963.202	954.103
16)	o-Nitrotoluene	16.45	16.45	4771152	6963277	979.819	946.556
17)	p-Nitrotoluene	17.42	17.41	9934485	17912074	1954.416	2053.063
18)	4-Amino-2,6-Dini	17.42	17.41	9934485	17912074	1954.416	2053.063
19)	m-Nitrotoluene	18.68	18.68	5303798	9348157	961.901	1047.213
20)	2-Amino-4,6-Dini	19.18	19.18	7891010	11366557	959.636	1059.394
21)	PETN	0.00	21.53	0	3113084	N.D. d	988.489m

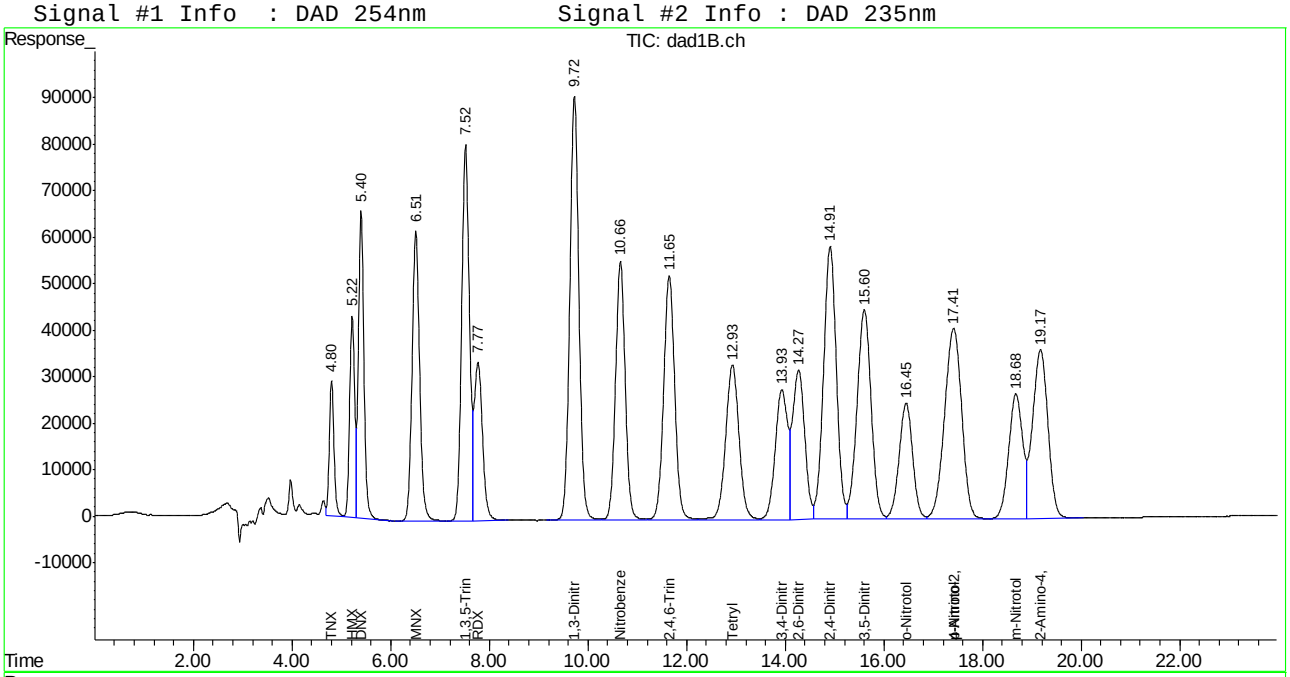
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

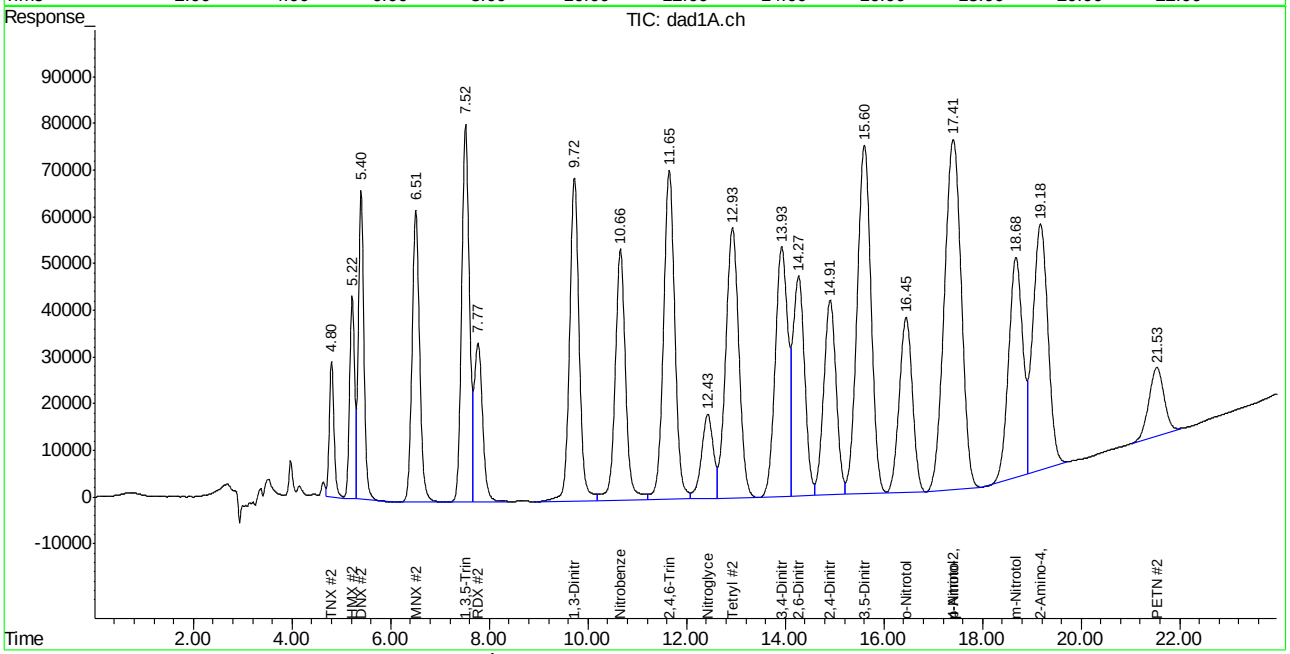
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1A.ch
Acq On : 12-Aug-2021, 23:25:25 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:05 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

Sample Number: GGG3025-CC3024
Lab FileID: GG622040.D
Injection Time: 08/12/21 23:25

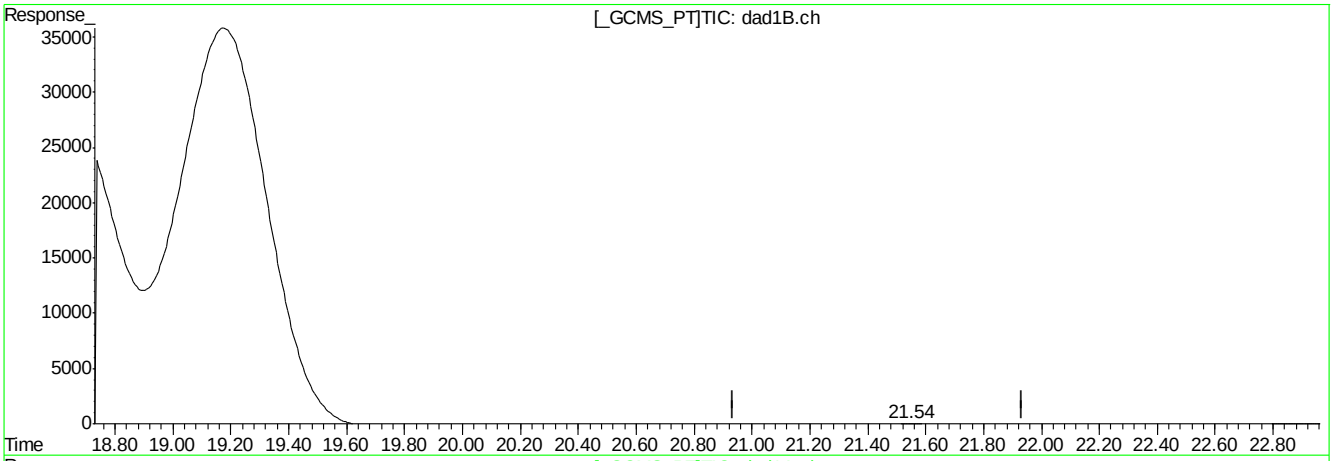
Method: SW846 8330B
Analyst approved: 08/13/21 10:08 James Boone
Supervisor approved: 08/13/21 10:27 Naresh Jiawan

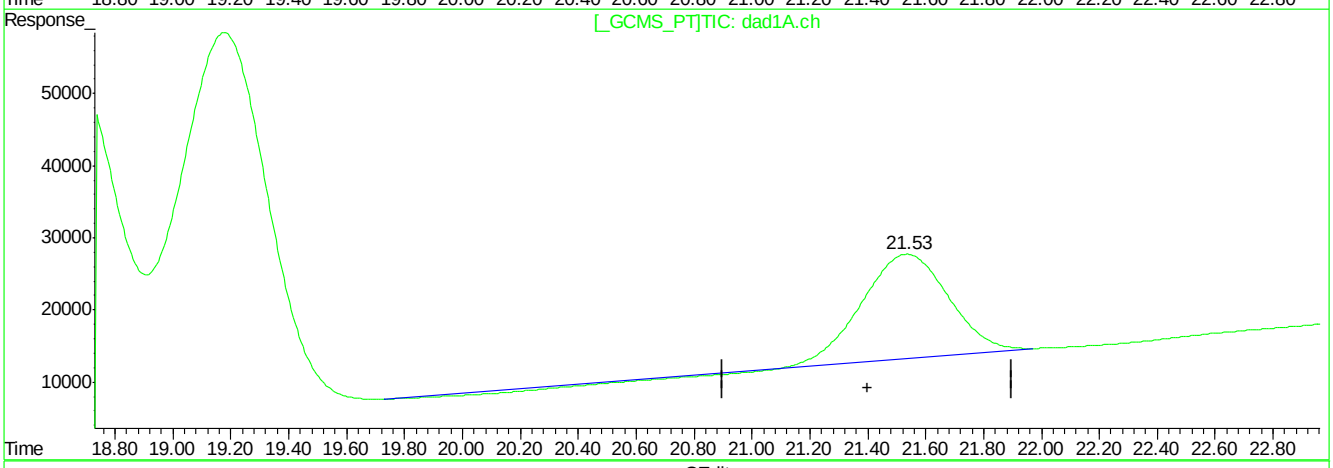
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.53	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1A.ch
Acq On : 12-Aug-2021, 23:25:25 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.55min 0.000ppb

response 50075

(21) PETN #2

21.54min 888.747ppb

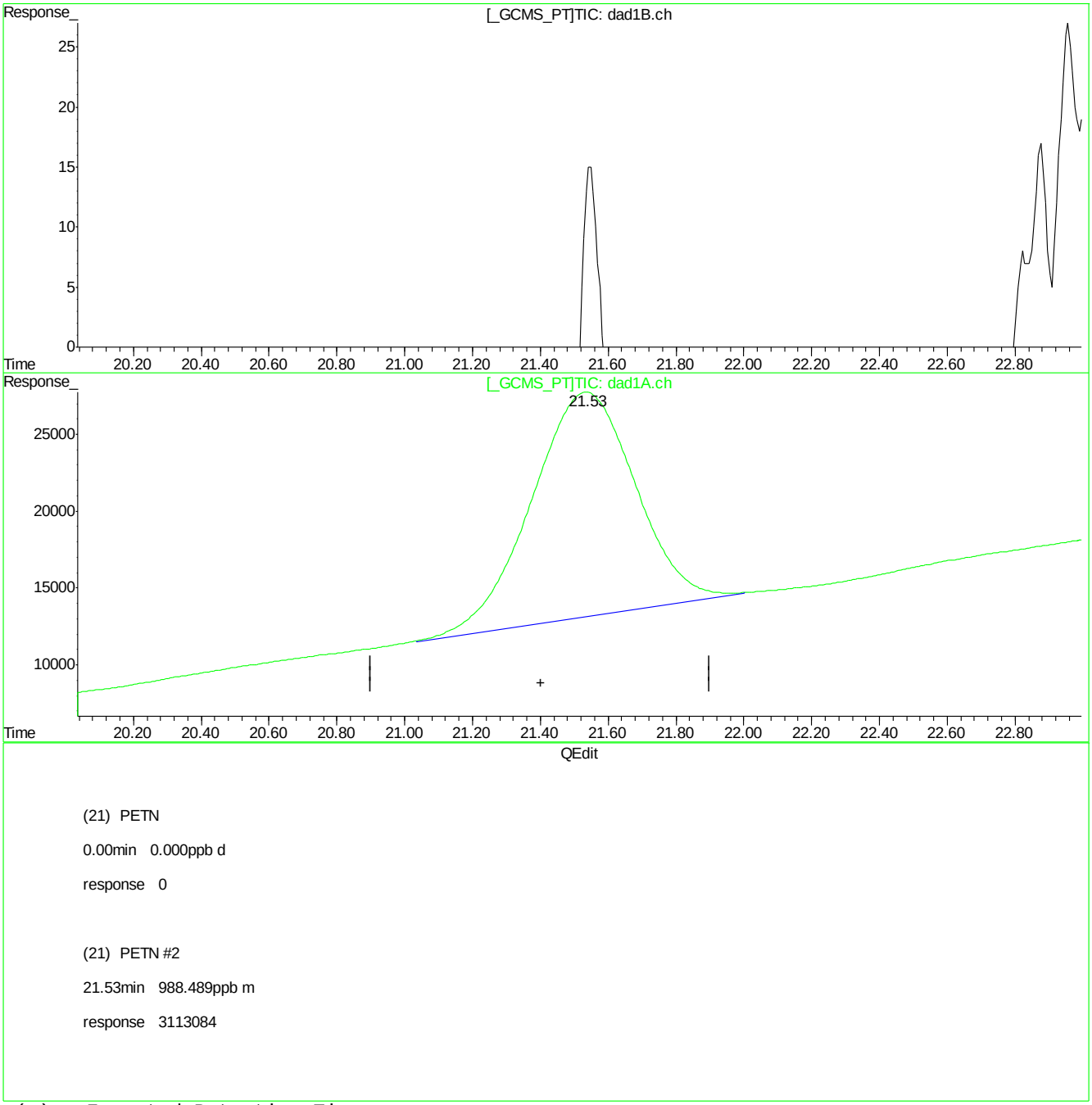
response 2798962

(+) = Expected Retention Time
GG622040.D GGG3024_080821.M Fri Aug 13 10:05:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1A.ch
Acq On : 12-Aug-2021, 23:25:25 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
GG622040.D GGG3024_080821.M Fri Aug 13 10:05:59 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 08/13/21 10:27

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1A.ch
Acq On : 13-Aug-2021, 02:33:57 Operator: jamesb
Sample : ecc3024-1000 Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:52 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.88	13.88	4836612	9374689	968.921	961.791
	Spiked Amount 500.000	Range 70 - 136		Recovery =		193.78%#	192.36%#
	Target Compounds						
1)	TNX	4.80	4.80	1876748	1876748	460.027	460.027
2)	HMX	5.22	5.22	2999546	2999546	920.600	920.600
3)	DNX	5.40	5.40	5044935	5044935	919.025	922.438
4)	MNX	6.50	6.50	6627731	6627731	1092.398	1092.398
5)	1,3,5-Trinitrobe	7.51	7.51	8770103	8770103	948.506	948.506
6)	RDX	7.75	7.75	3950994	3950994	983.550	983.550
7)	1,3-Dinitrobenze	9.70	9.70	11713553	9109187	958.564	1004.938
8)	Nitrobenzene	10.63	10.63	7534810	7527710	962.670	988.041
9)	2,4,6-Trinitroto	11.61	11.61	8188194	11083316	951.735	946.414
10)	Nitroglycerin	0.00	12.39	0	2806934	N.D.	884.492 #
11)	Tetryl	12.89	12.89	6307748	10678729	933.315	915.646
13)	2,6-Dinitrotolue	14.23	14.22	5654773	8000926	965.112	965.236
14)	2,4-Dinitrotolue	14.86	14.86	10615395	7444516	963.437	997.601
15)	3,5-Dinitroanili	15.55	15.55	8982255	14590918	961.529	949.142
16)	o-Nitrotoluene	16.39	16.39	4706015	6818842	966.443	926.922
17)	p-Nitrotoluene	17.35	17.34	9837378	17712464	1935.312	2030.184
18)	4-Amino-2,6-Dini	17.35	17.34	9837378	17712464	1935.312	2030.184
19)	m-Nitrotoluene	18.62	18.62	5225563	9120517	947.712	1021.712
20)	2-Amino-4,6-Dini	19.12	19.12	7864612	11337587	956.426	1056.694
21)	PETN	0.00	21.46	0	3142917	N.D. d	997.962m

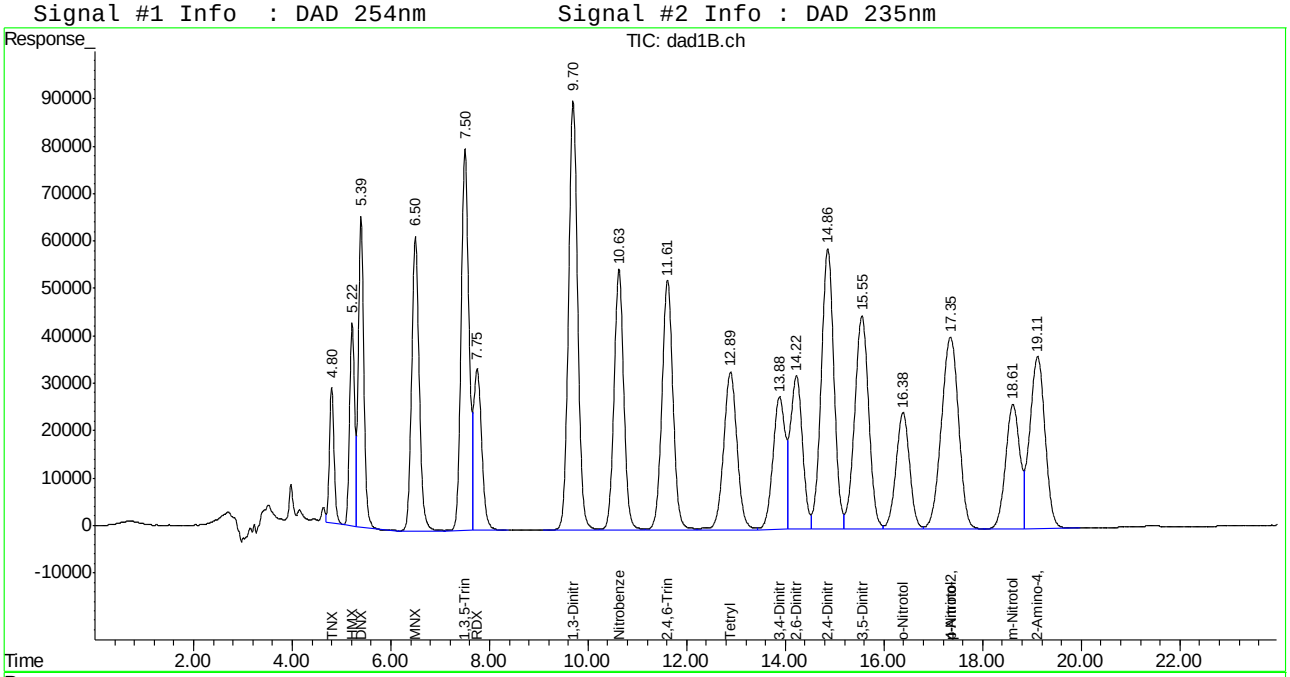
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

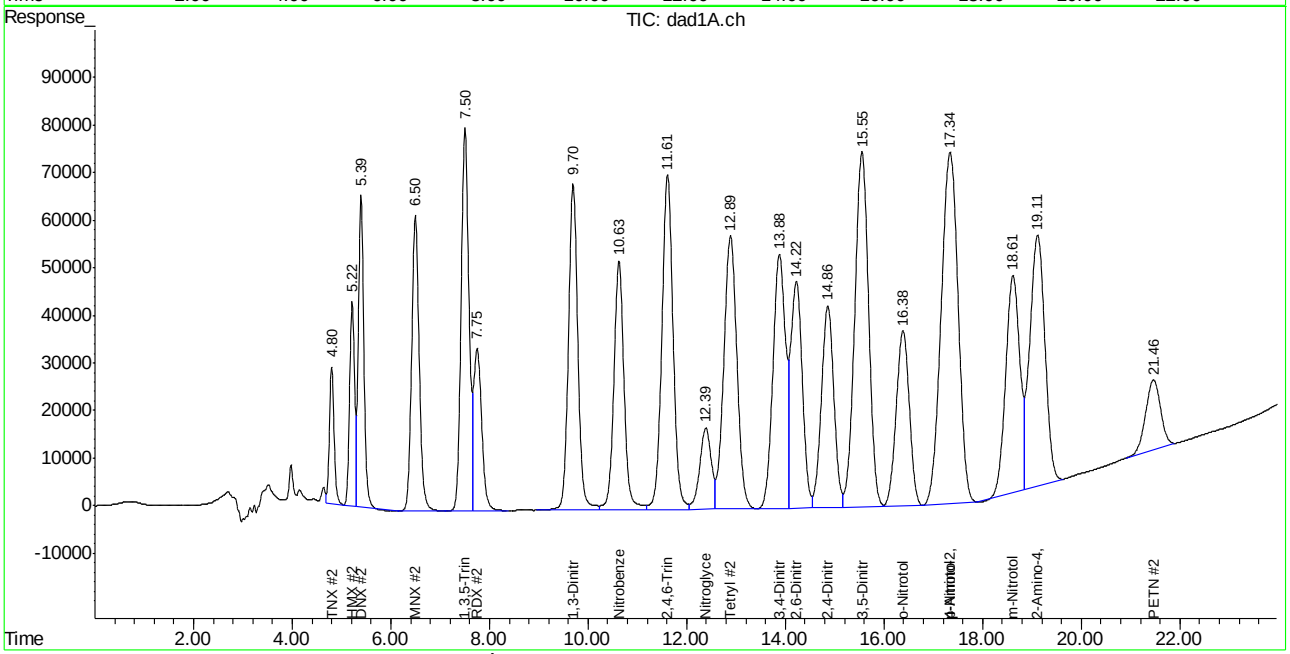
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1A.ch
Acq On : 13-Aug-2021, 02:33:57 Operator: jamesb
Sample : ecc3024-1000 Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:06 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

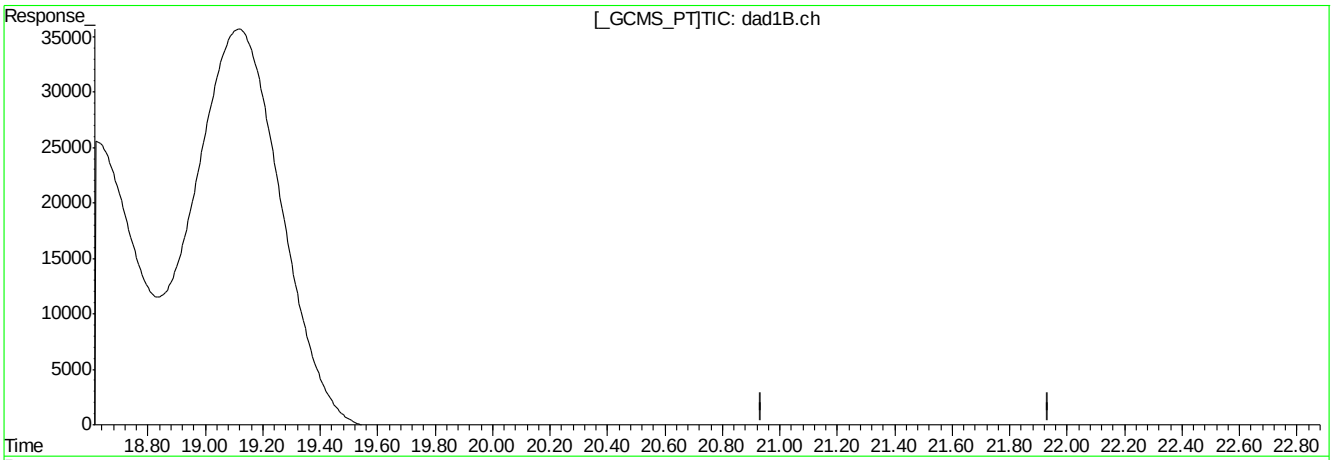
Sample Number:	GGG3025-ECC3024	**Method:**	SW846 8330B
Lab FileID:	GG622046.D	**Analyst approved:**	08/13/21 10:08 James Boone
Injection Time:	08/13/21 02:33	**Supervisor approved:**	08/13/21 10:27 Naresh Jiawan

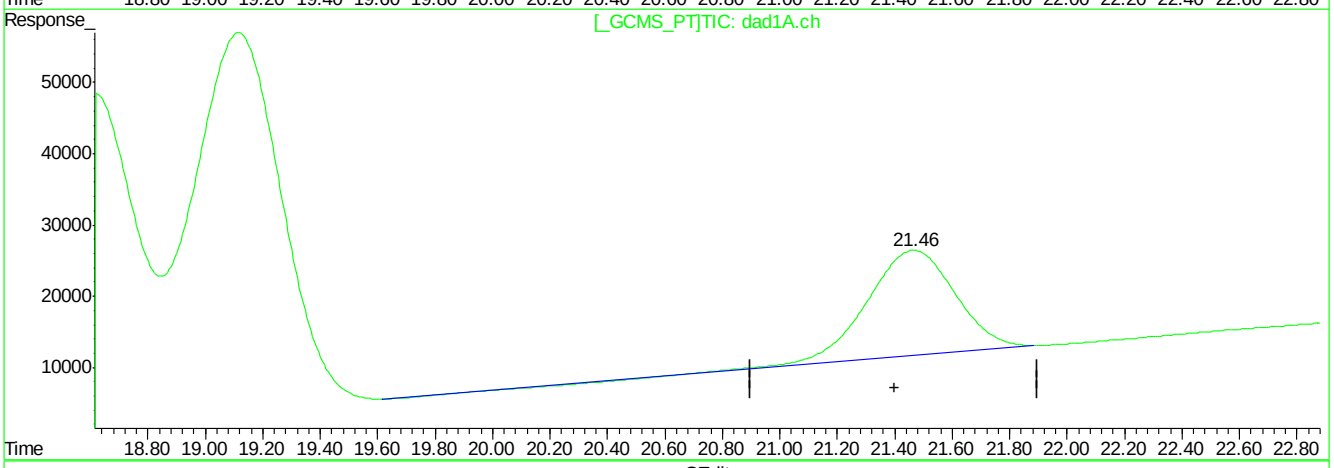
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.46	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1A.ch
Acq On : 13-Aug-2021, 02:33:57 Operator: jamesb
Sample : ecc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.47min 0.000ppb

response 106202

(21) PETN #2

21.47min 974.156ppb

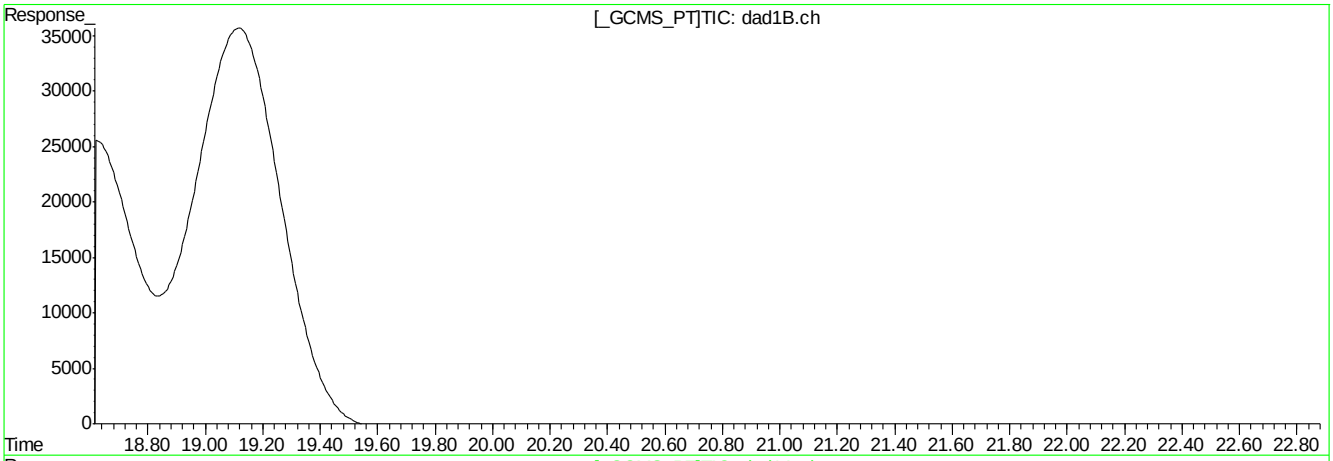
response 3067944

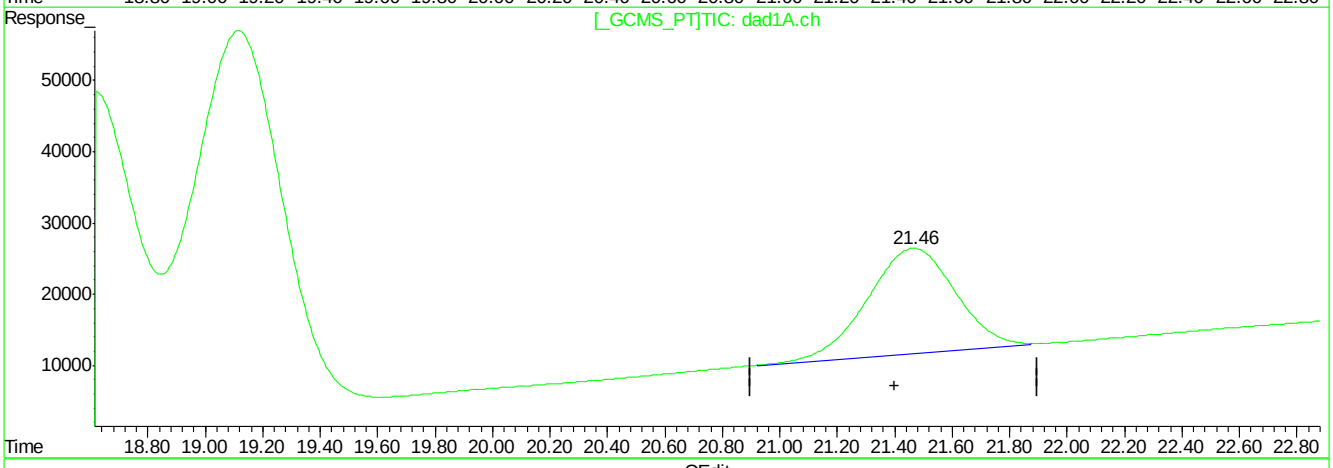
(+) = Expected Retention Time
GG622046.D GGG3024_080821.M Fri Aug 13 10:06:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1A.ch
Acq On : 13-Aug-2021, 02:33:57 Operator: jamesb
Sample : ecc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.46min 997.962ppb m

response 3142917

(+) = Expected Retention Time
GG622046.D GGG3024_080821.M Fri Aug 13 10:06:54 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:31 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.19	11.19	55119	54206	26.025m	16.328
Spiked Amount	500.000	Range	70 - 136	Recovery	=	5.21%#	3.27%#
	Target Compounds						
1)	TNX	1.30	1.31	15798	30173	8.369m	9.722
2)	HMX	1.43	1.43	35334	95994	24.448m	22.362m
3)	DNX	1.67	1.67	44540	105273	19.299	26.867
4)	MNX	2.25	2.25	62431	101476	24.645	25.956
5)	RDX	2.86	2.86	37234	62000	20.505m	21.231
6)	1,3,5-Trinitrobe	4.63	4.63	80463	159187	20.625	21.005
7)	1,3-Dinitrobenze	5.83	5.83	98498	71391	19.504	19.161m
8)	3,5-Dinitroanili	6.18	6.18	77965	145247	20.259	21.098m
9)	Nitrobenzene	7.44	7.44	60904	64197	20.960m	22.453m
10)	Nitroglycerin	0.00	8.87	0	25585	N.D.	21.312m#
11)	Tetryl	9.41	9.41	73398	95987	25.045m	20.765
12)	2,4,6-Trinitroto	9.81	9.81	85957	88258	23.242m	20.208
13)	2-Amino-4,6-Dini	10.20	10.19	84948	97732	25.826m	20.338
14)	4-Amino-2,6-Dini	10.69	10.71	78544	94221	31.459m	20.989
16)	2,4-Dinitrotolue	11.82	11.80	102385	65618	22.683m	22.697m
17)	2,6-Dinitrotolue	12.28	12.32	58085	57183	22.800m	17.790
18)	o-Nitrotoluene	15.41	15.46	56286	53898	26.113m	18.970m
19)	p-Nitrotoluene	15.99	15.98	73367	29202	21.876m	11.406m#
20)	m-Nitrotoluene	16.82	16.82	65274	77138	21.415	22.089m
21)	PETN	0.00	18.47	0	22677	N.D.	16.487m#

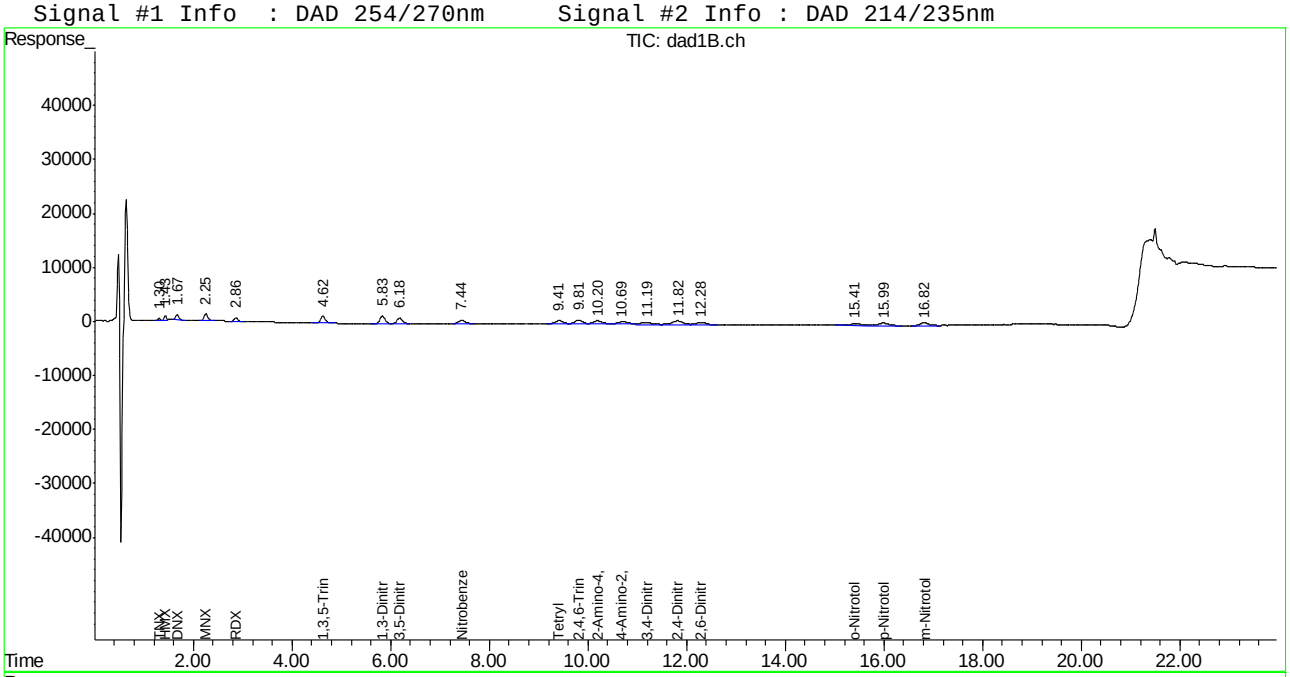
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:35:47 2021 Page 1

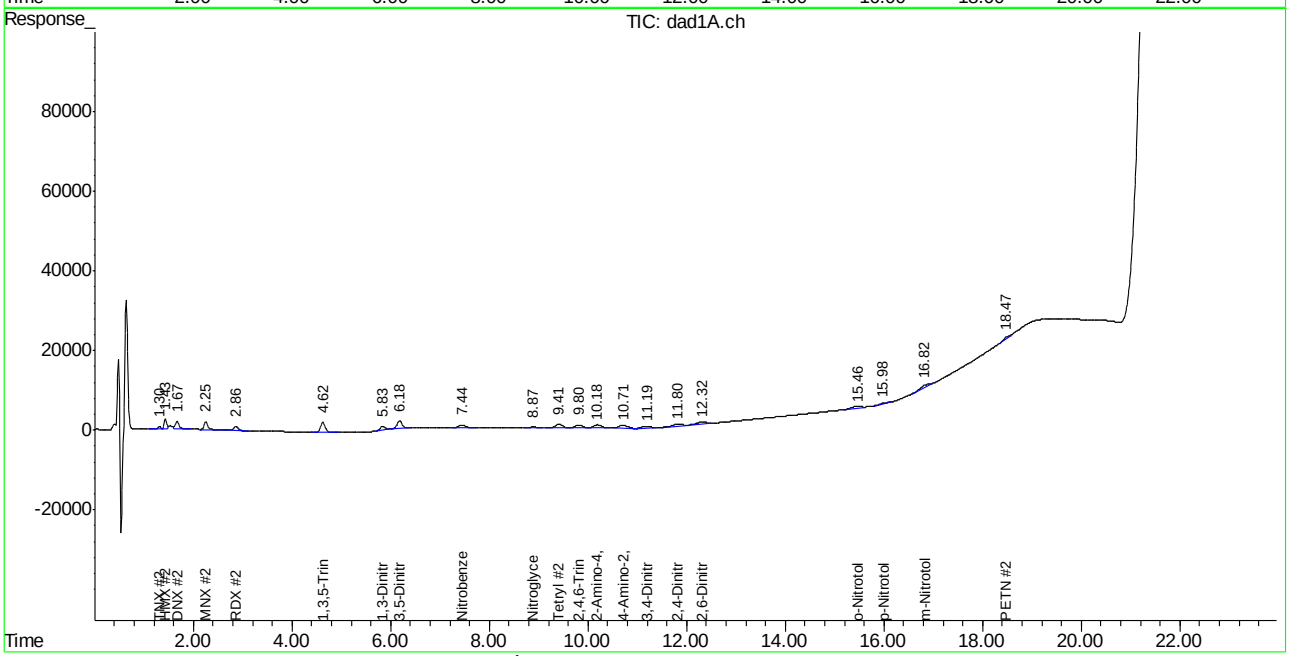
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:32 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

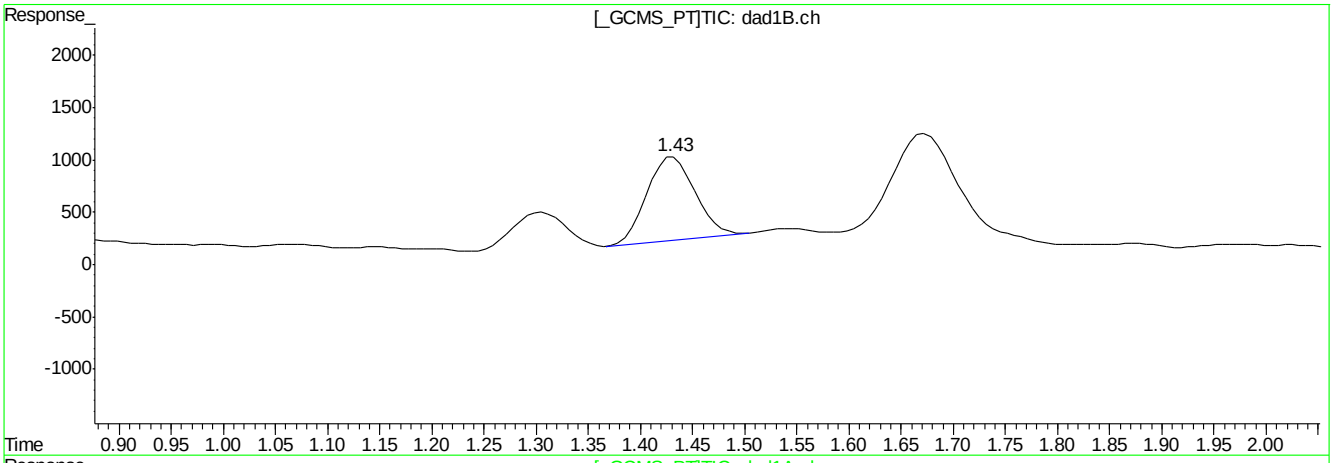
Sample Number: GPP2464-IC2464
Lab FileID: PP391043.D
Injection Time: 08/03/21 11:45
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

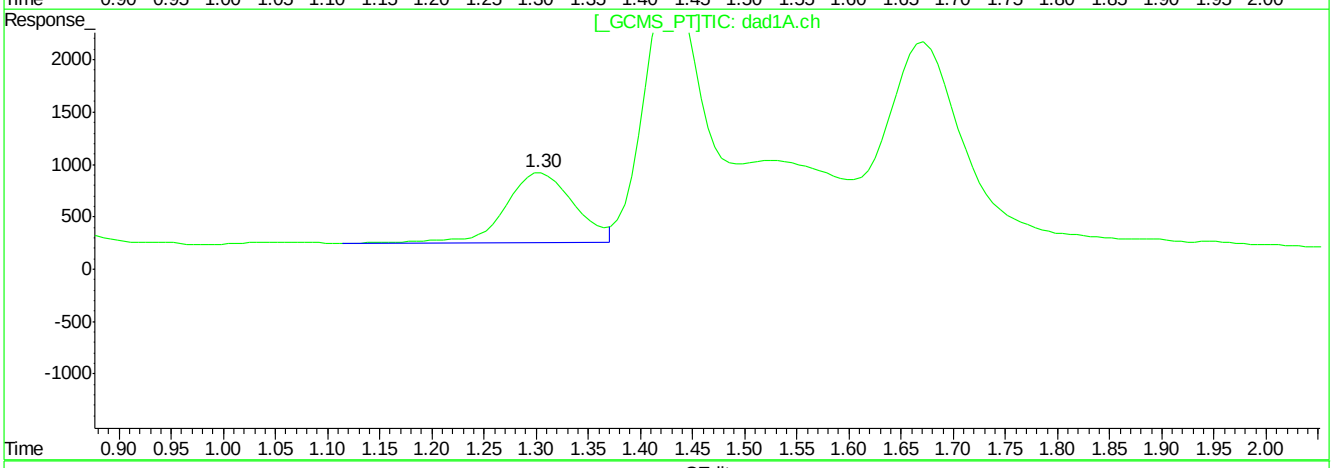
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.30	Poor instrument integration
HMX	2691-41-0	1	1.43	Poor instrument integration
HMX	2691-41-0	2	1.43	Poor instrument integration
RDX	121-82-4	1	2.86	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.83	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.18	Poor instrument integration
Nitrobenzene	98-95-3	1	7.44	Poor instrument integration
Nitrobenzene	98-95-3	2	7.44	Poor instrument integration
Nitroglycerine	55-63-0	2	8.87	Poor instrument integration
Tetryl	479-45-8	1	9.41	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.81	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.20	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.69	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.19	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	11.80	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	11.82	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.28	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.41	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.46	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.98	Poor instrument integration
p-Nitrotoluene	99-99-0	1	15.99	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.82	Poor instrument integration
PETN	78-11-5	2	18.47	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.43min 13.504ppb

response 25490

(1) TNX #2

1.31min 9.722ppb

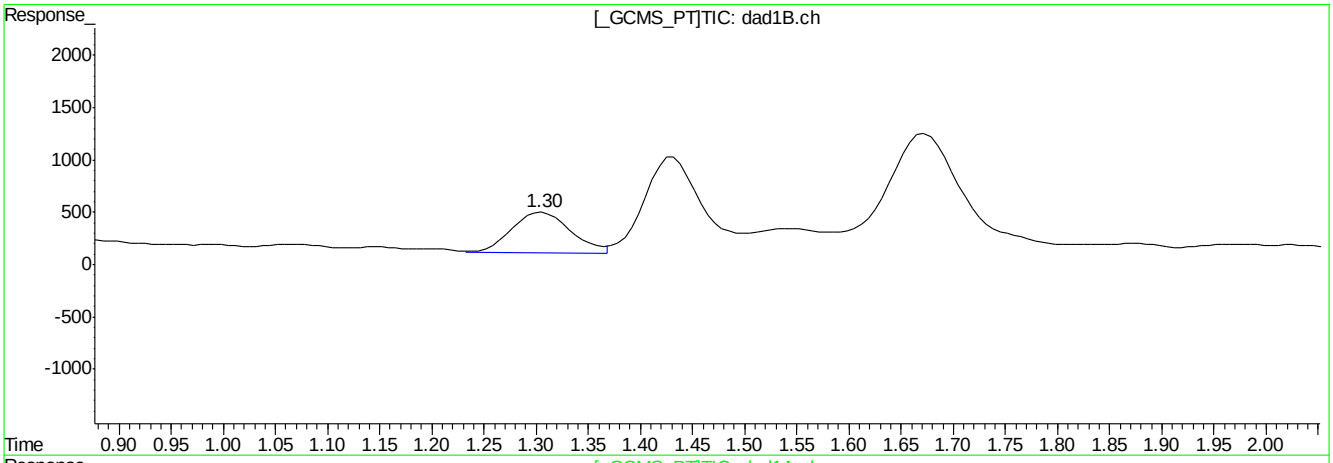
response 30173

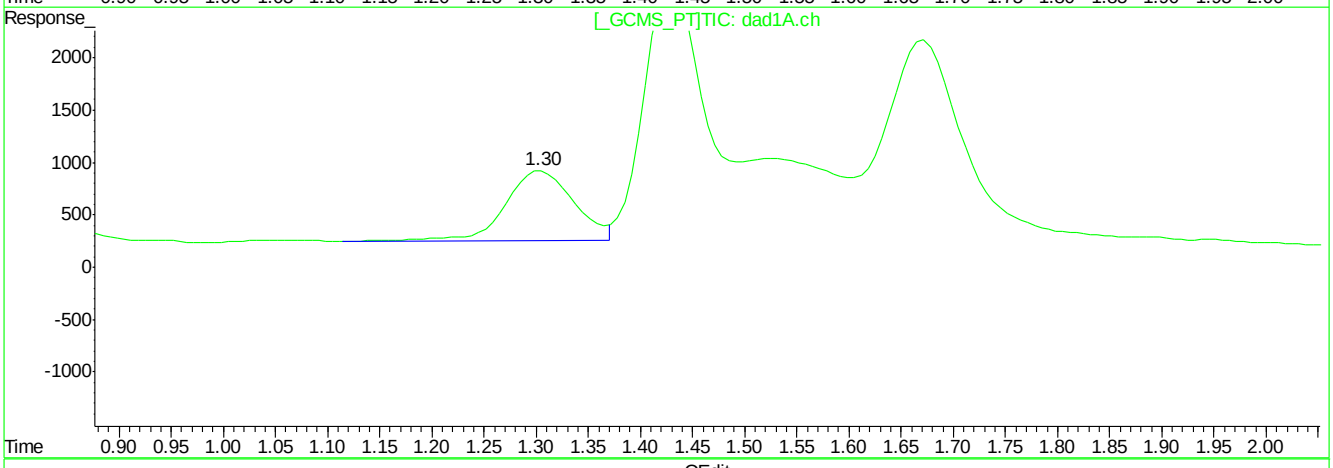
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:28:24 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.30min 8.369ppb m

response 15798

(1) TNX #2

1.31min 9.722ppb

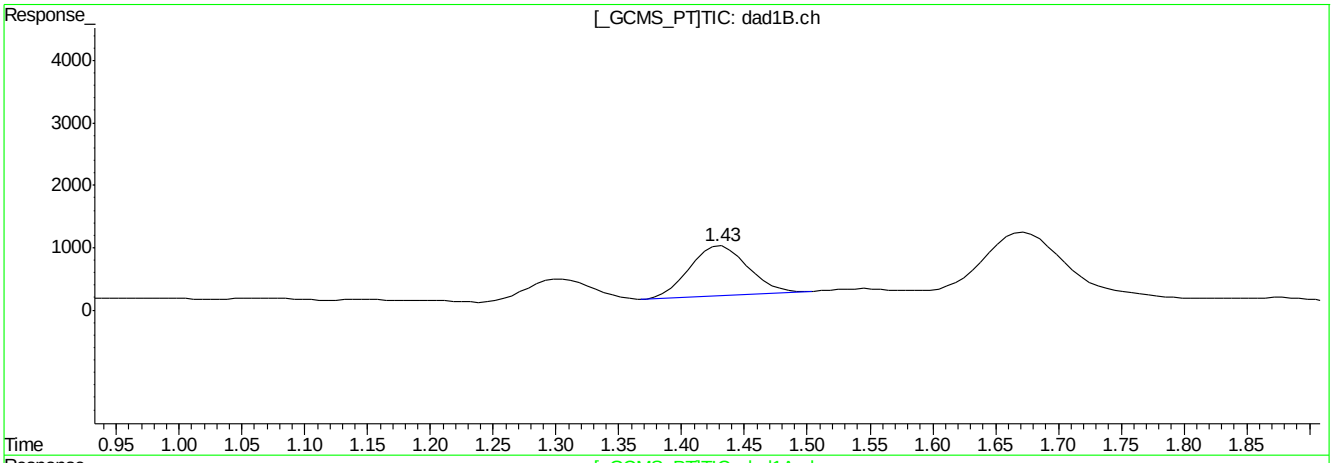
response 30173

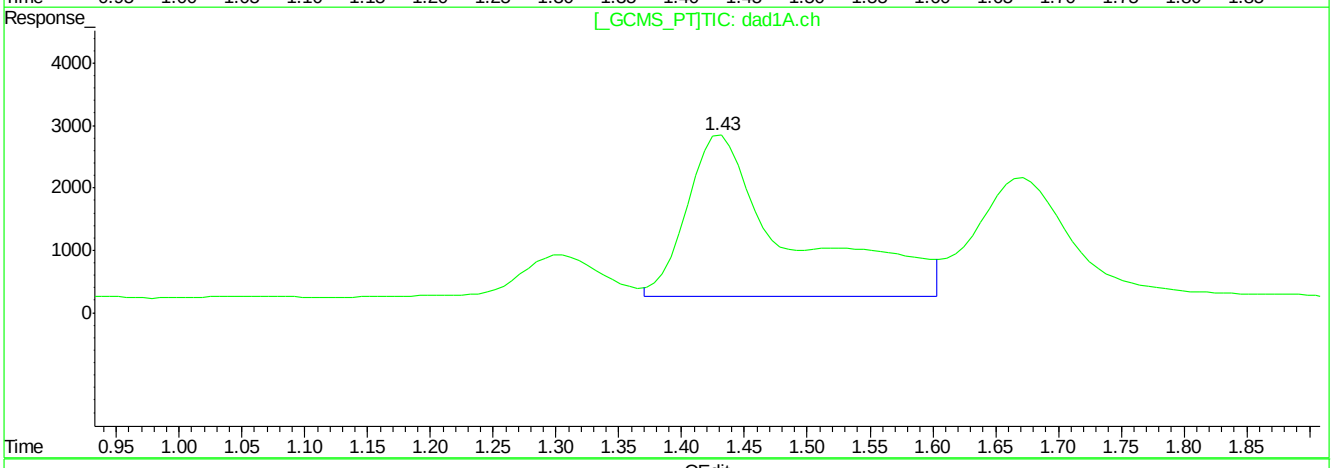
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:28:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.43min 17.637ppb

response 25490

(2) HMX #2

1.43min 34.228ppb

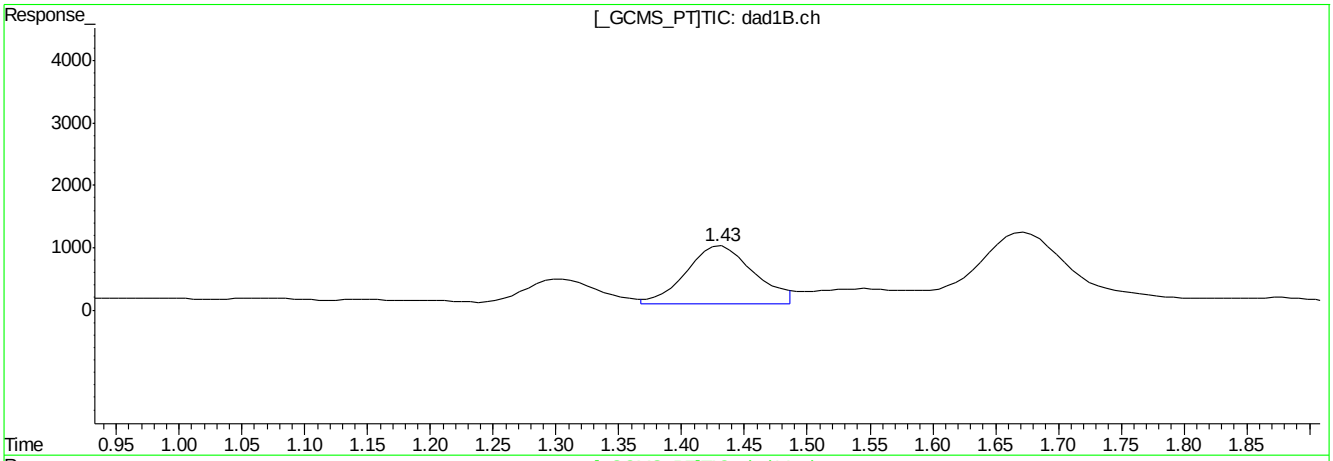
response 146933

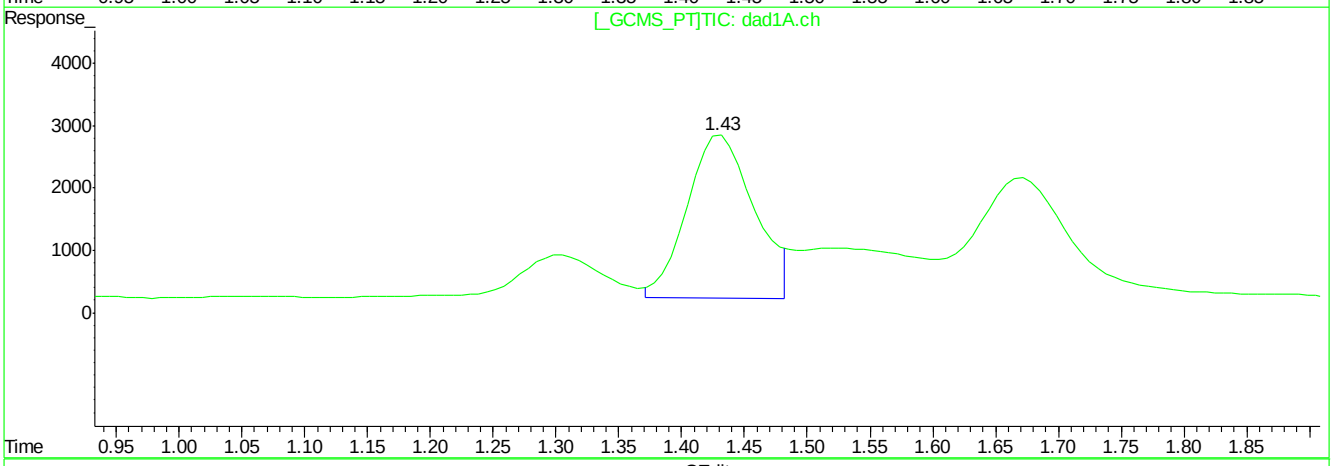
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:28:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.43min 24.448ppb m

response 35334

(2) HMX #2

1.43min 22.362ppb m

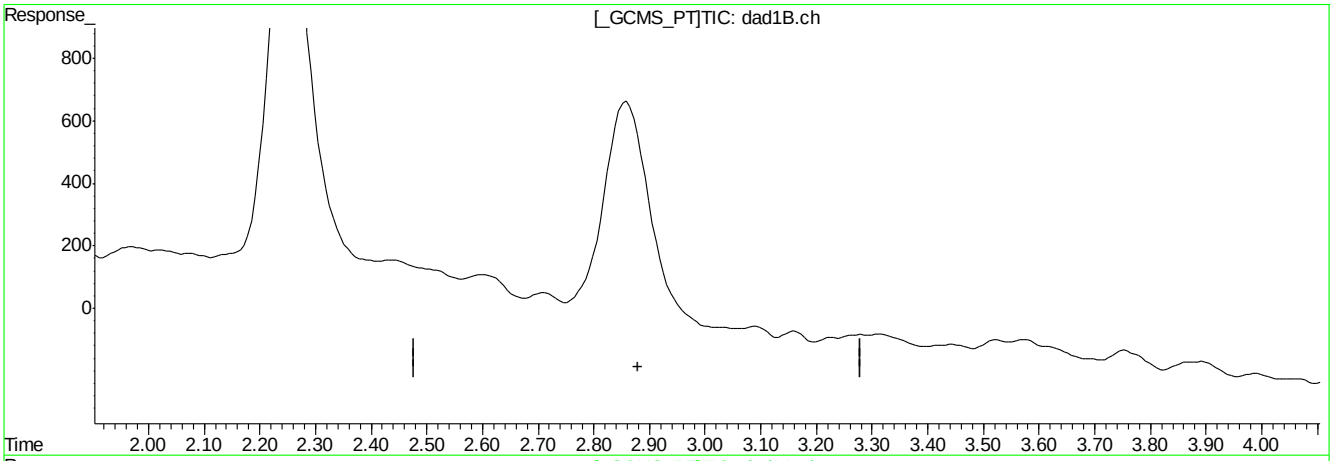
response 95994

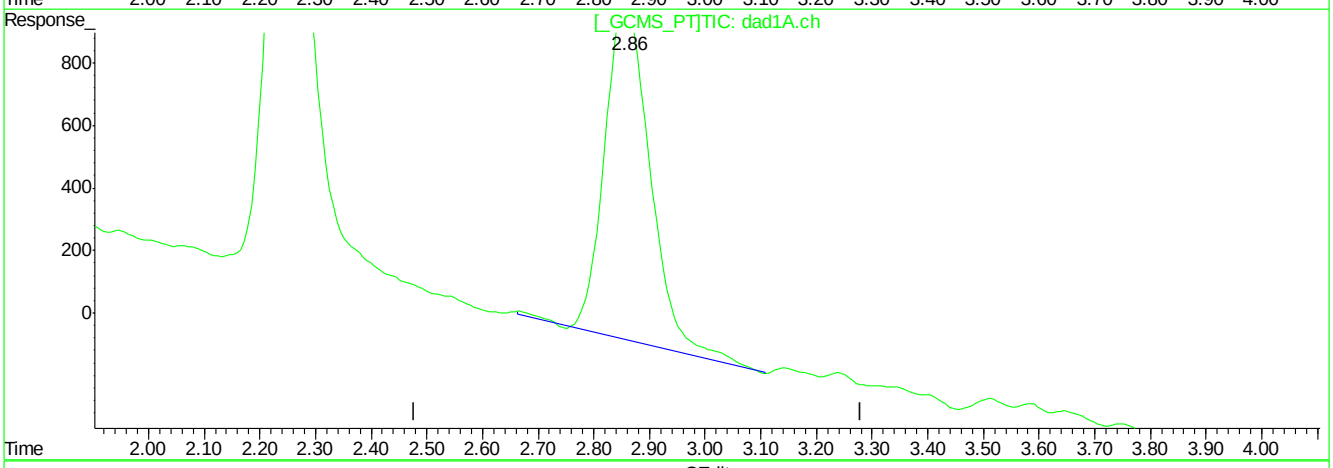
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:28:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

0.00min 0.000ppb

response 0

(5) RDX #2

2.86min 21.231ppb

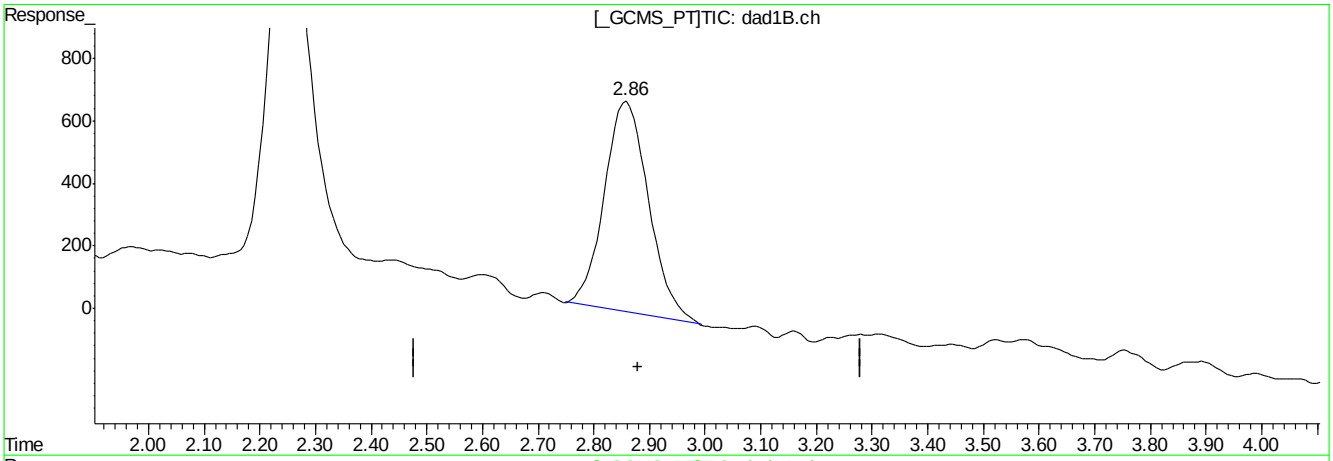
response 62000

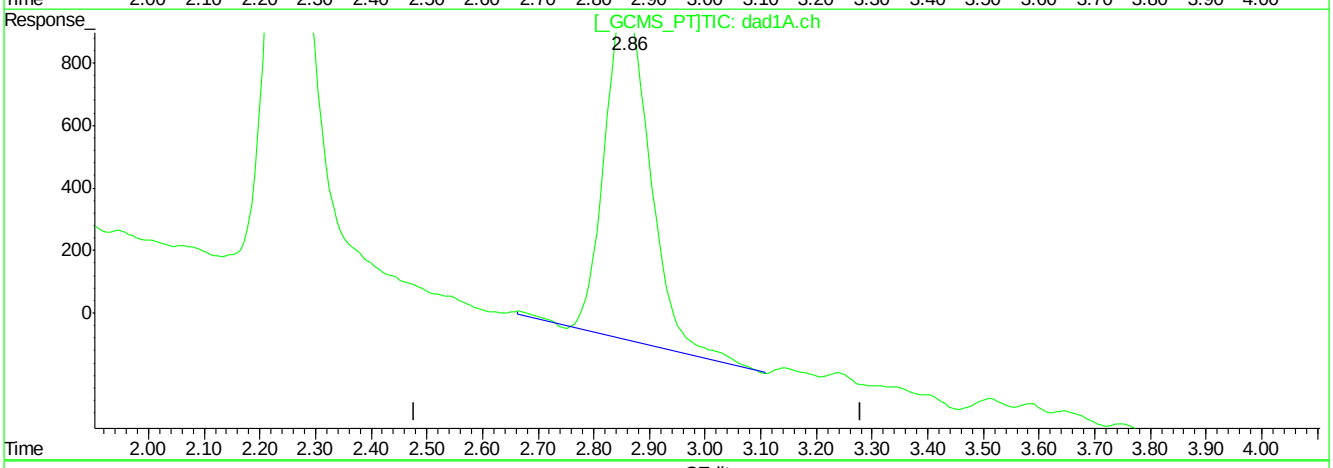
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.86min 20.505ppb m

response 37234

(5) RDX #2

2.86min 21.231ppb

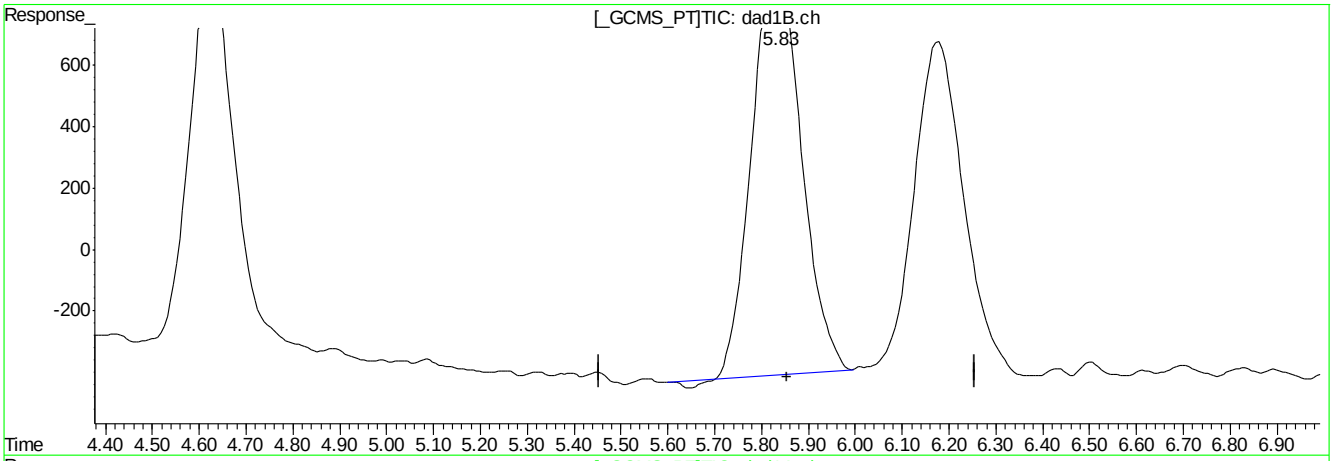
response 62000

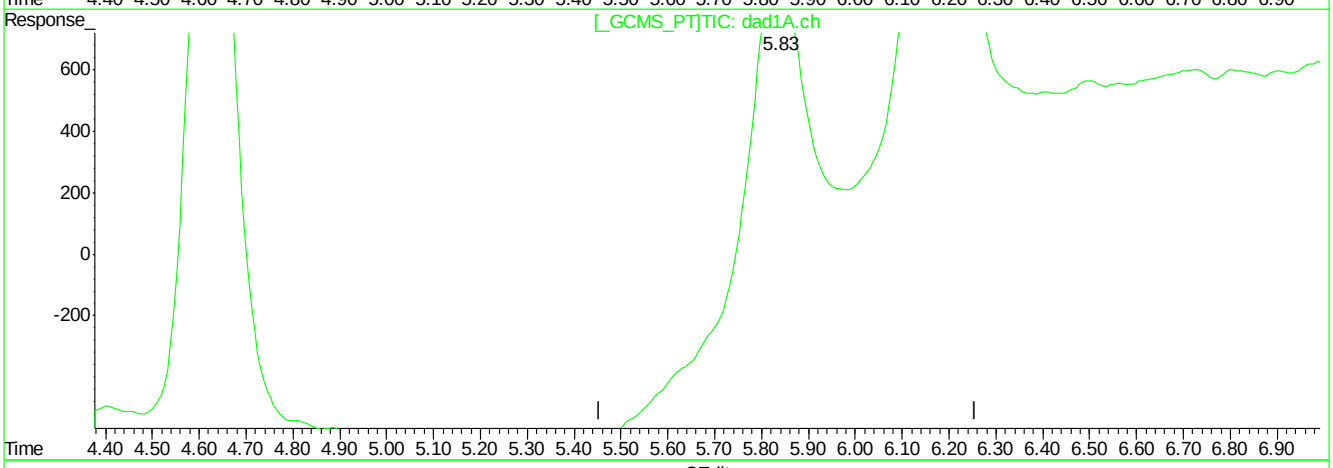
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.83min 19.504ppb

response 98498

(7) 1,3-Dinitrobenzene #2

5.83min 20.741ppb

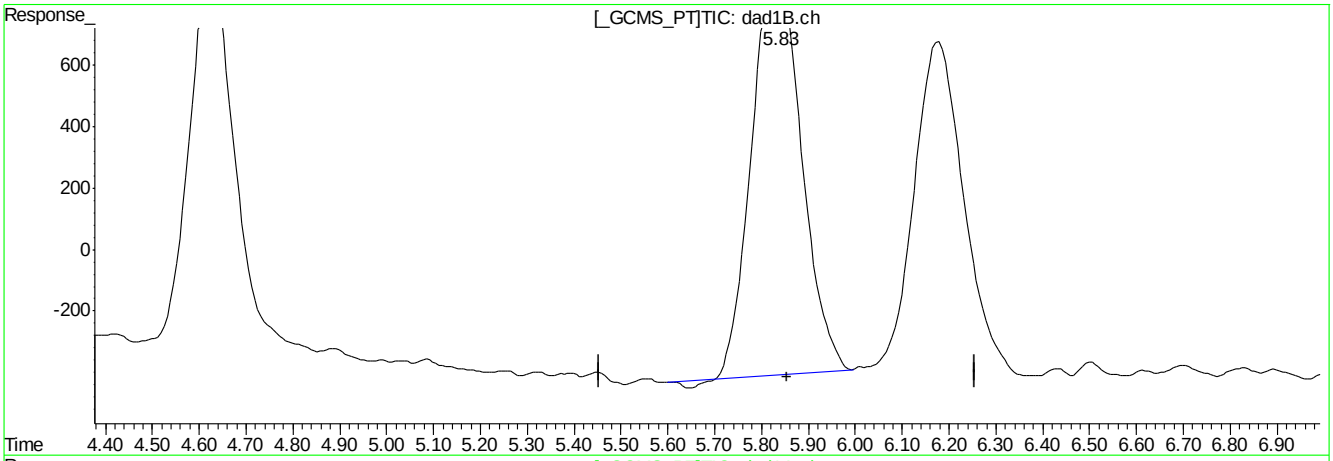
response 77275

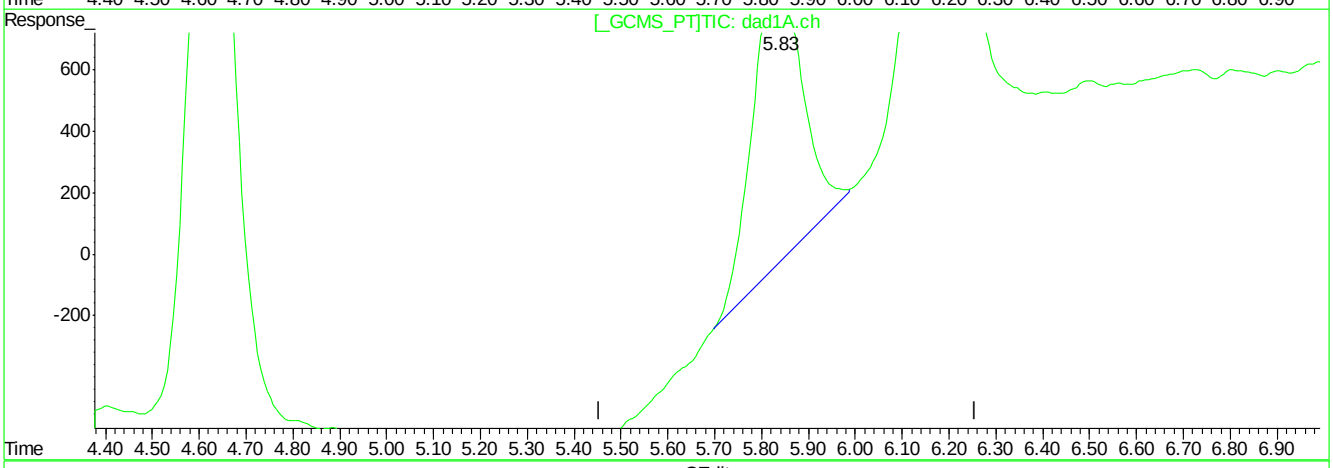
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.83min 19.504ppb

response 98498

(7) 1,3-Dinitrobenzene #2

5.83min 19.161ppb m

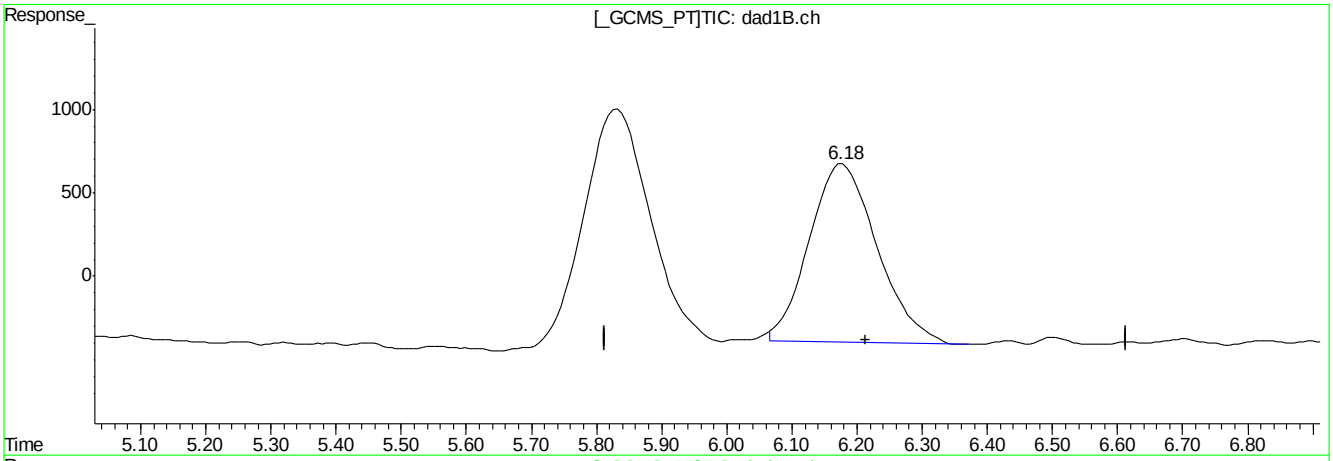
response 71391

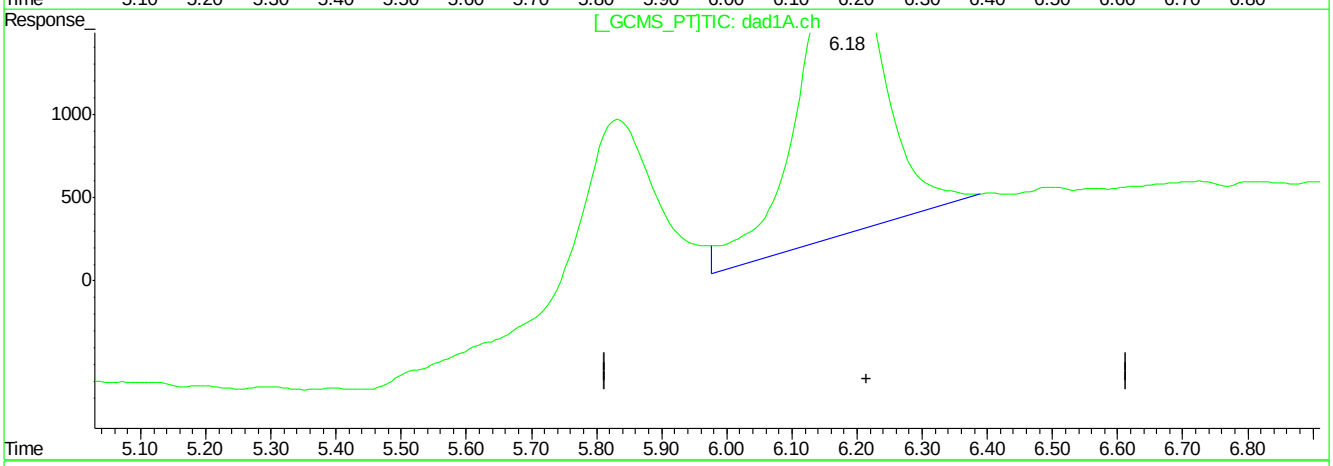
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.18min 20.259ppb

response 77965

(8) 3,5-Dinitroaniline #2

6.18min 24.020ppb

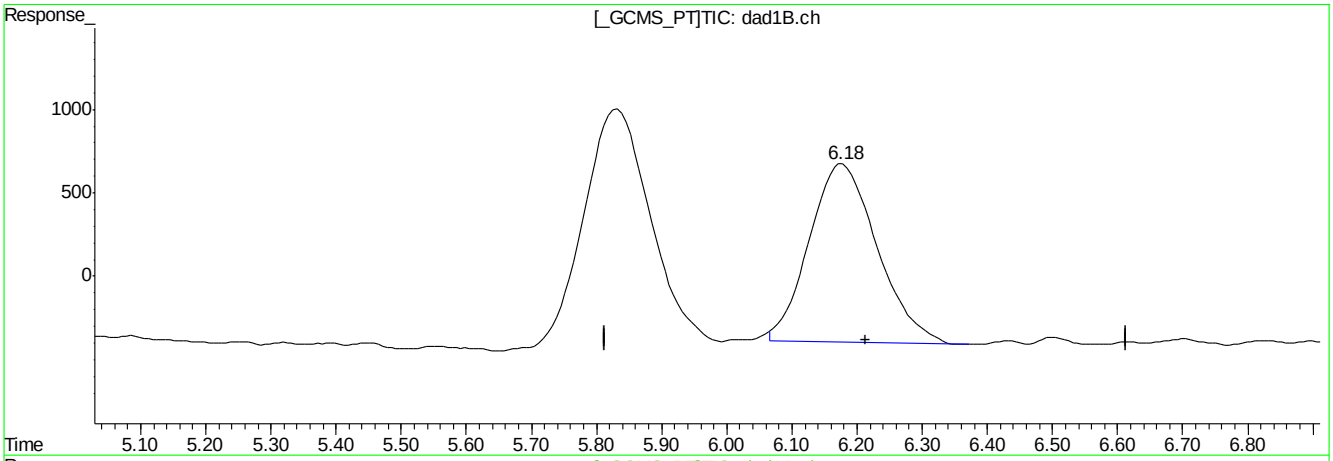
response 165367

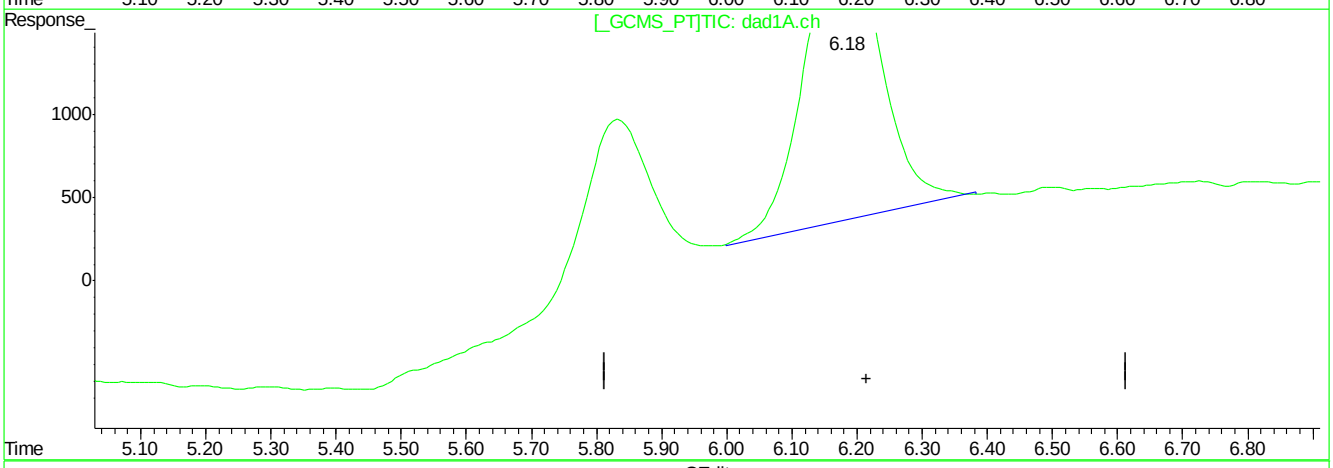
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.18min 20.259ppb

response 77965

(8) 3,5-Dinitroaniline #2

6.18min 21.098ppb m

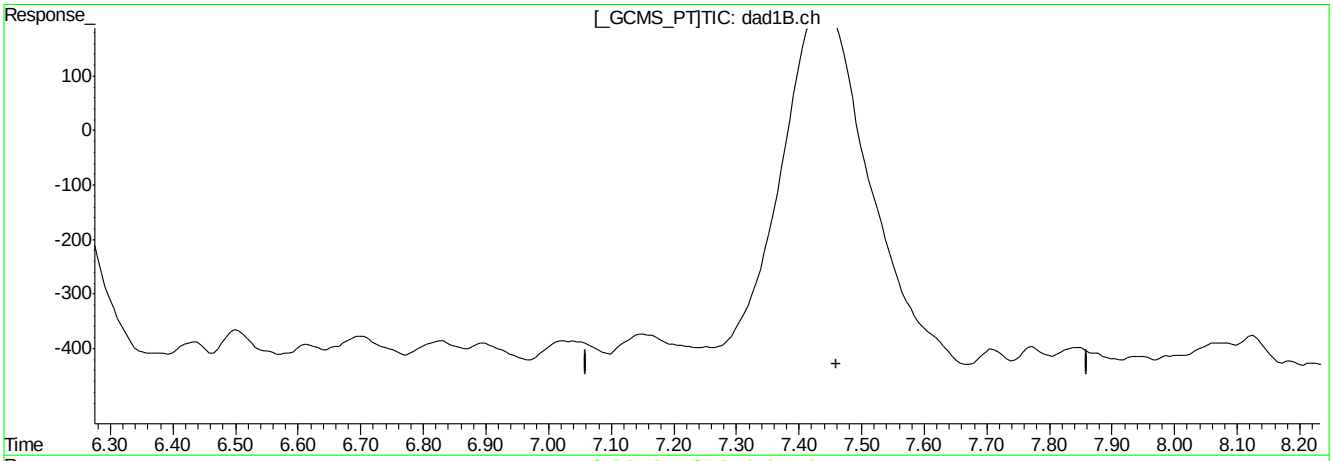
response 145247

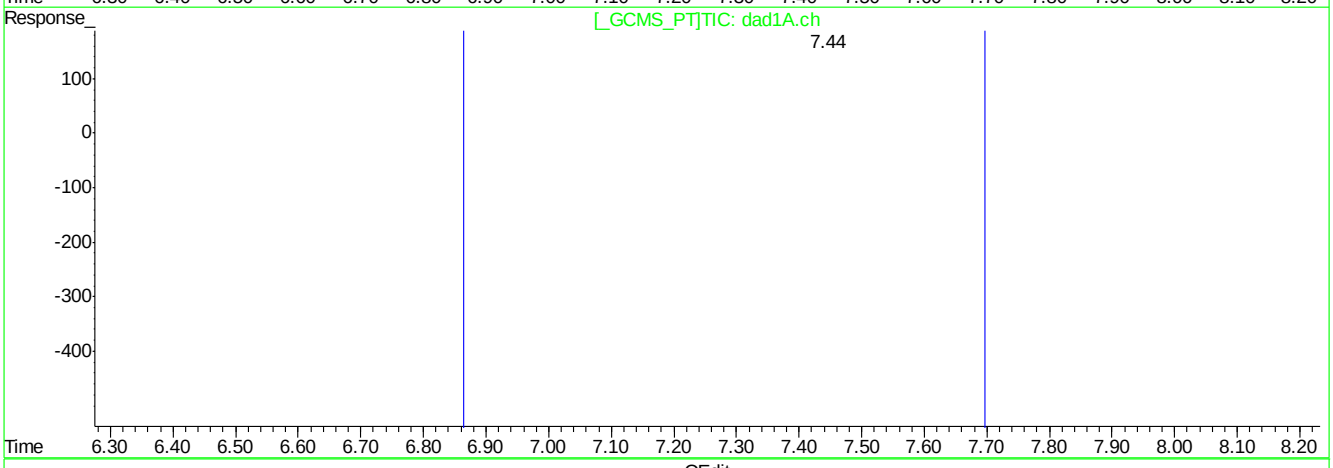
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

0.00min 0.000ppb

response 0

(9) Nitrobenzene #2

7.44min 25.115ppb

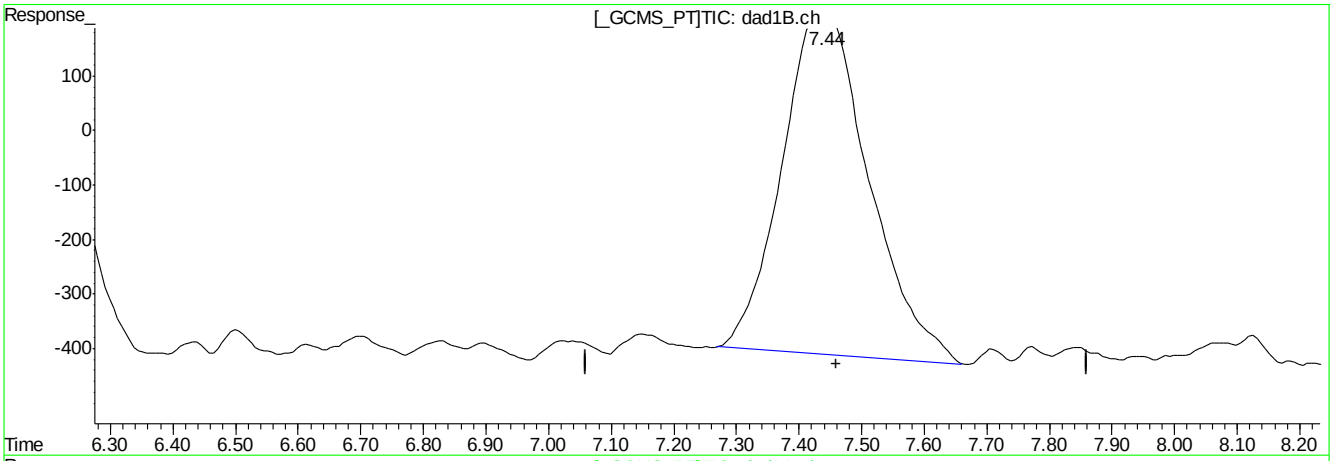
response 71808

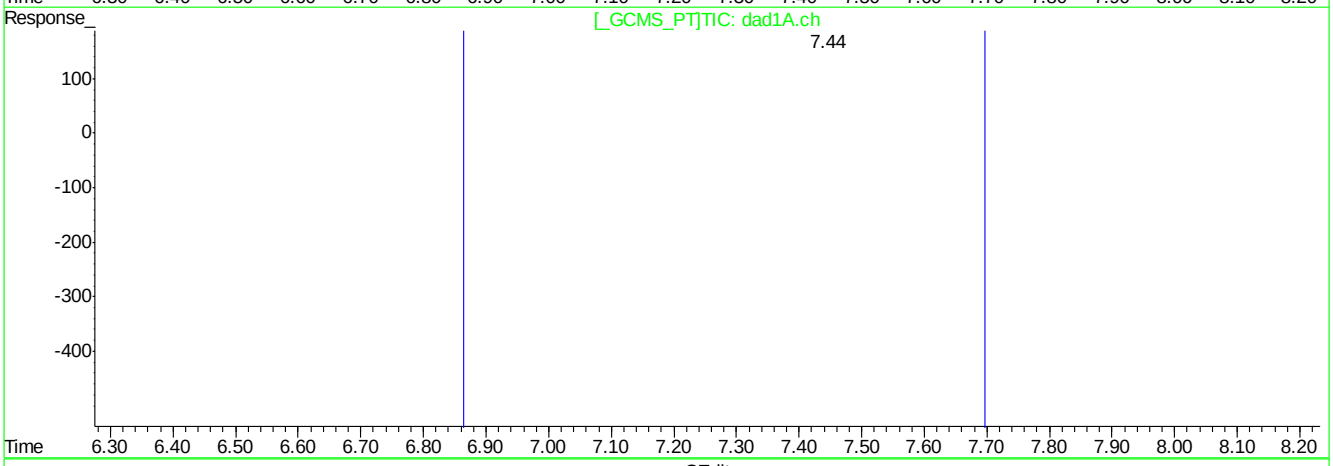
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.44min 20.960ppb m

response 60904

(9) Nitrobenzene #2

7.44min 25.115ppb

response 71808

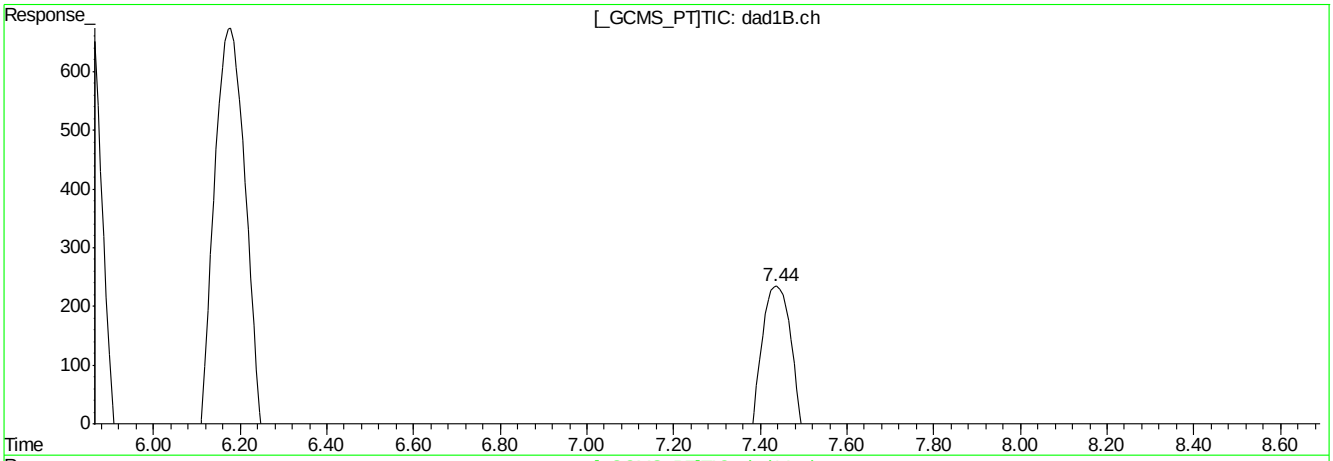
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:58 2021

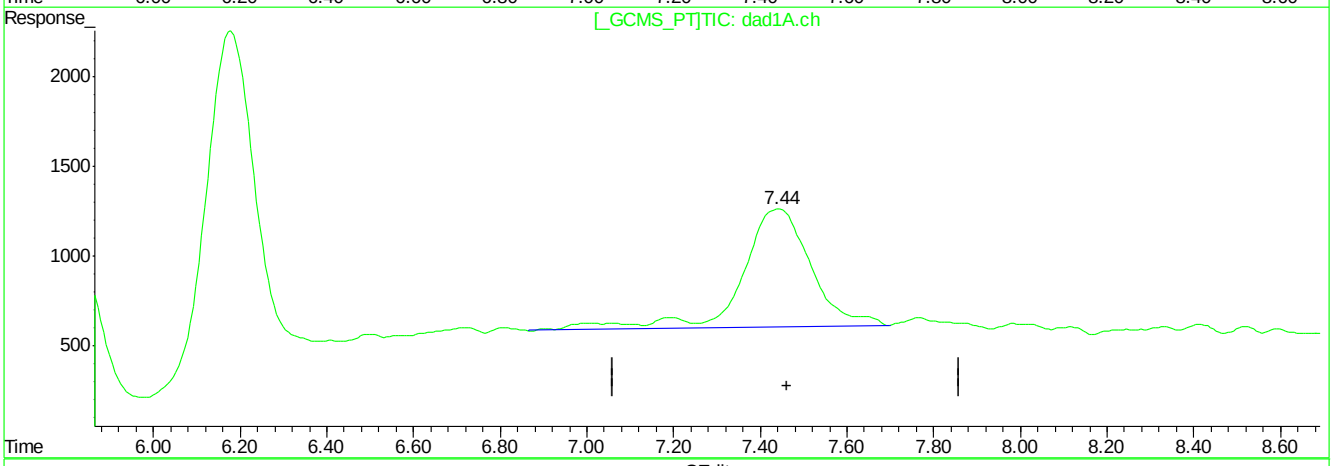
PP391043.D edits: Nitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.44min 20.960ppb m

response 60904

(9) Nitrobenzene #2

7.44min 25.115ppb

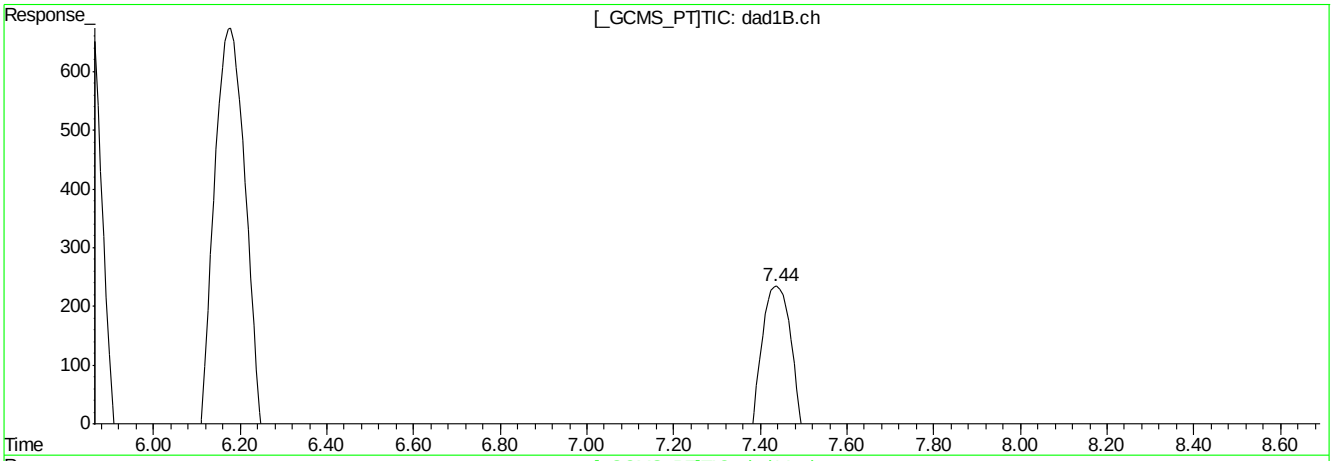
response 71808

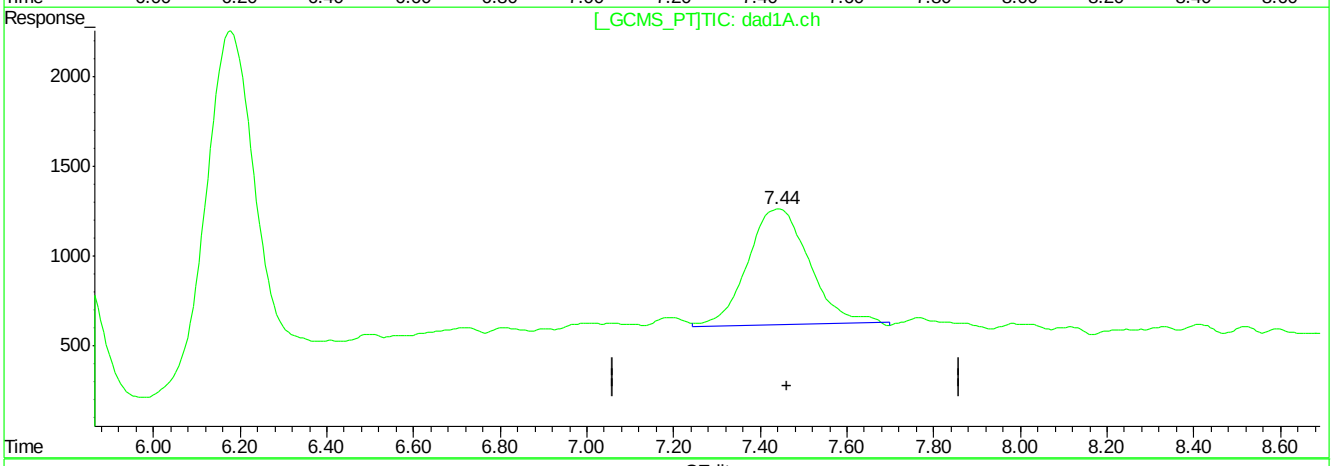
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.44min 20.960ppb m

response 60904

(9) Nitrobenzene #2

7.44min 22.453ppb m

response 64197

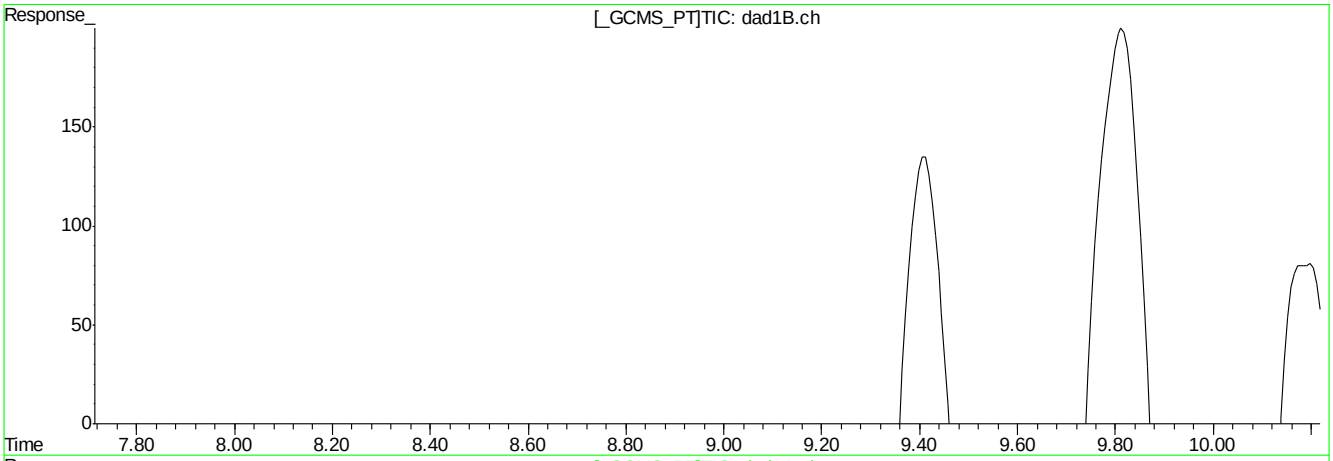
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:05 2021

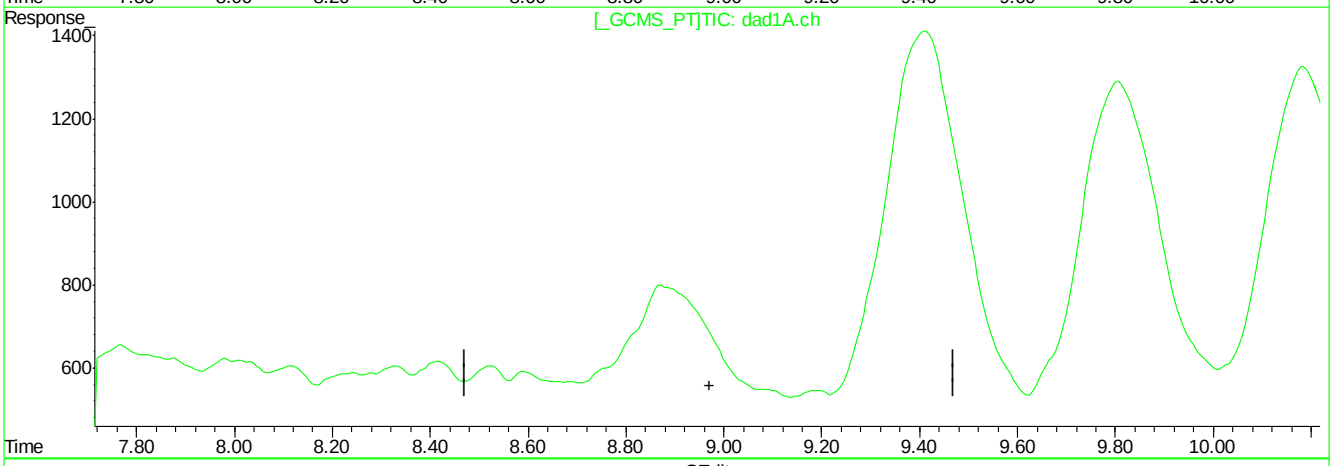
PP391043.D edits: Nitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

0.00min 0.000ppb

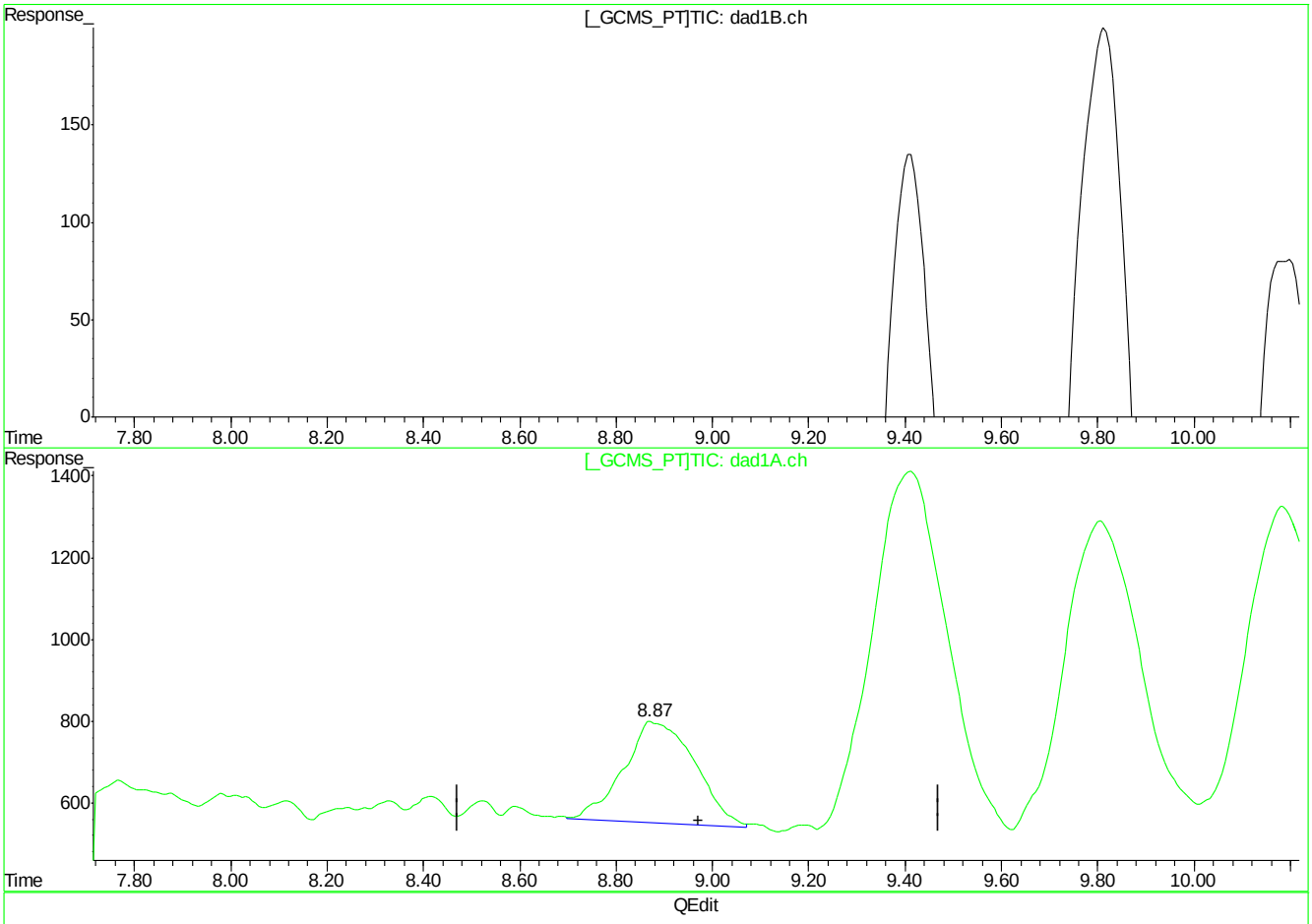
response 0

(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

8.87min 21.312ppb m

response 25585

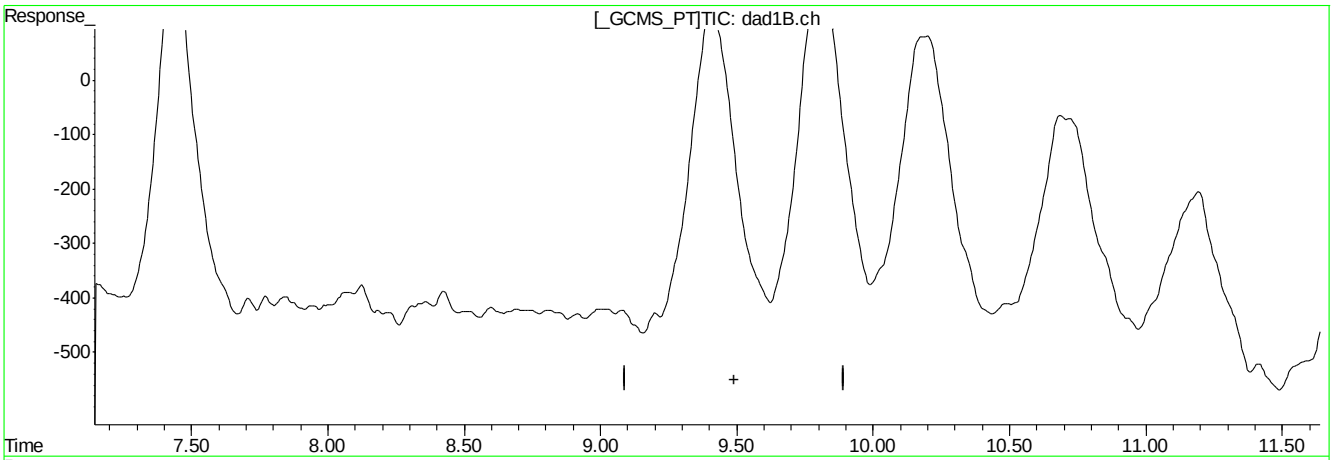
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:12 2021

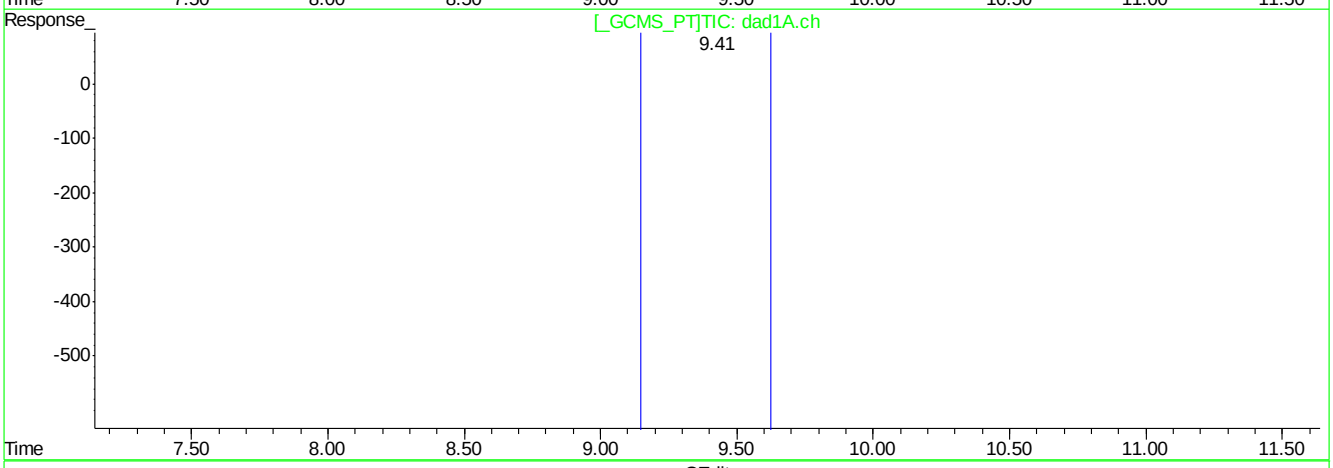
PP391043.D edits: Nitroglycerin

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

0.00min 0.000ppb

response 0

(11) Tetryl #2

9.41min 20.765ppb

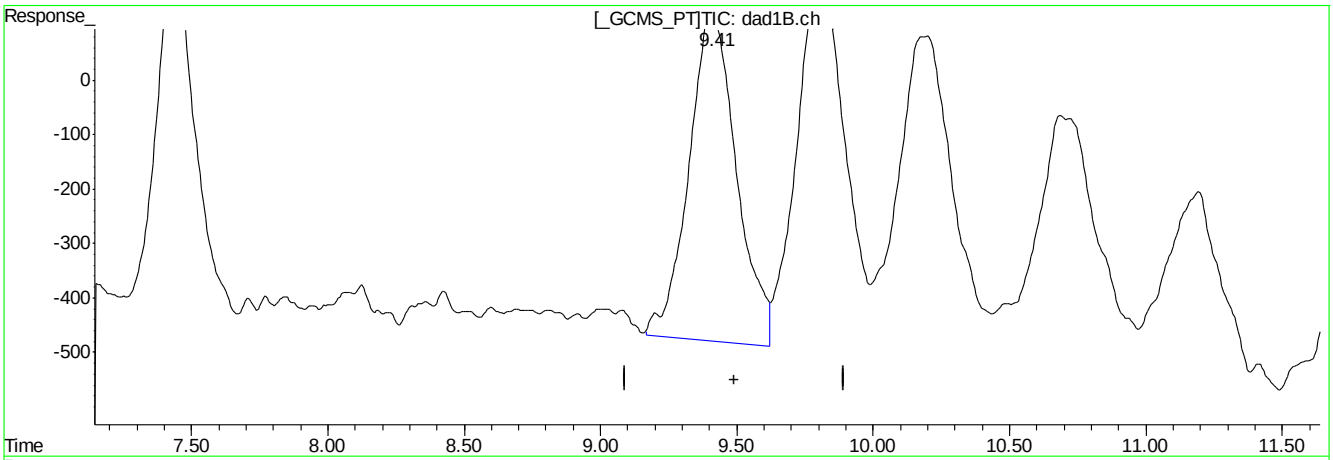
response 95987

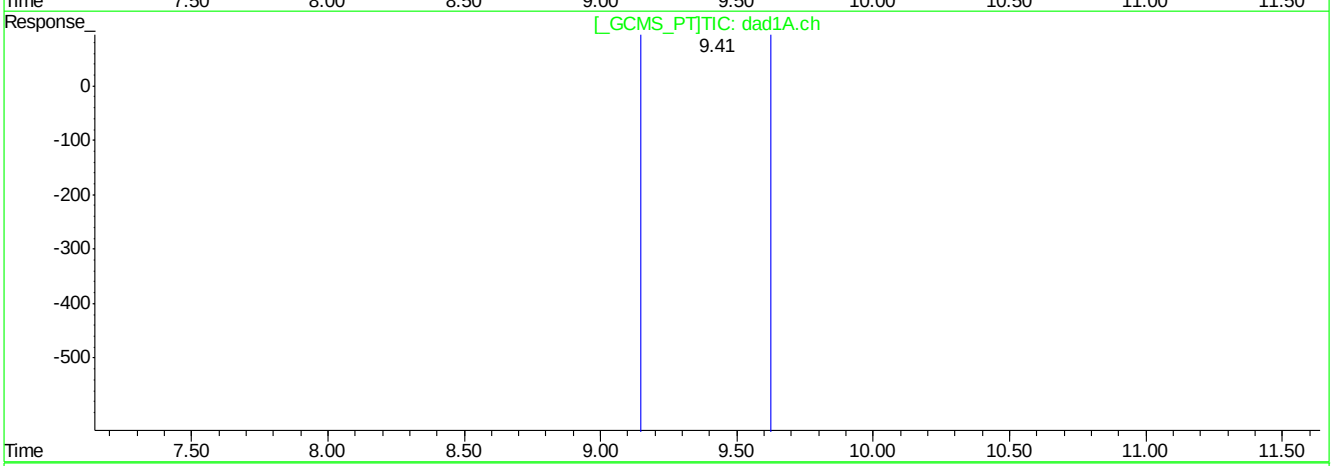
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.41min 25.045ppb m

response 73398

(11) Tetryl #2

9.41min 20.765ppb

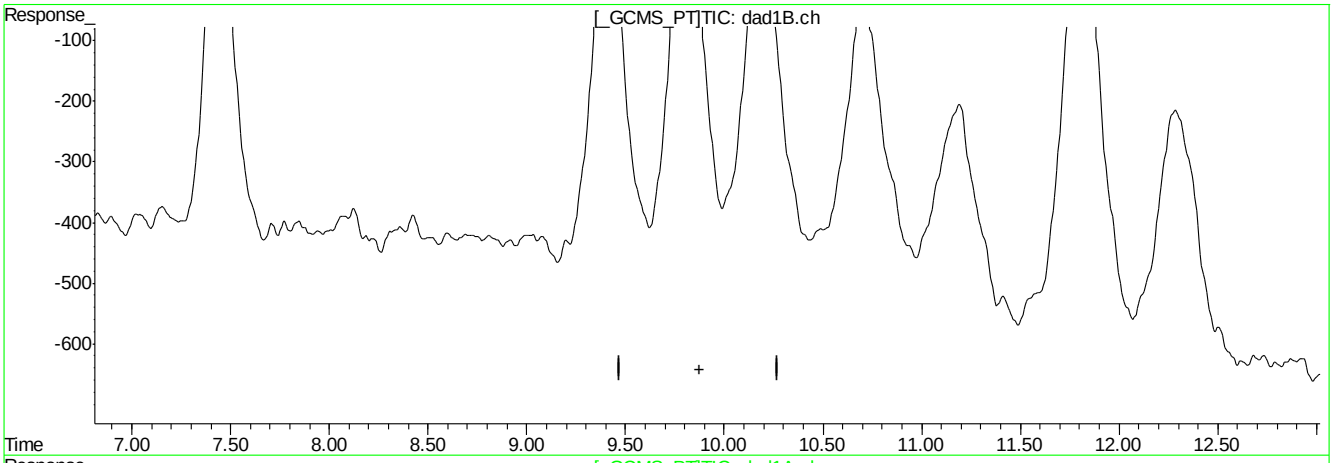
response 95987

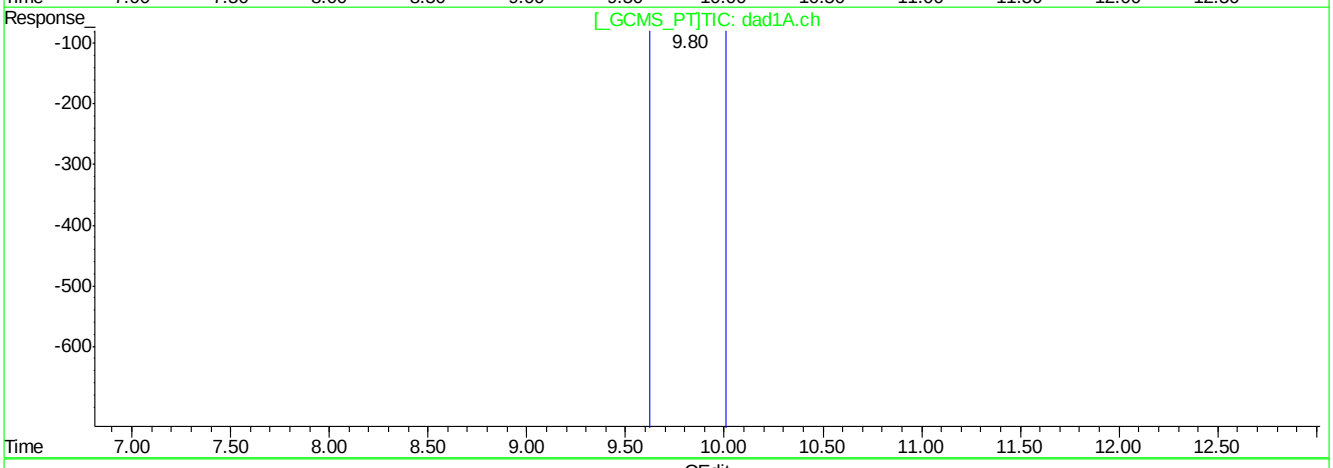
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

0.00min 0.000ppb

response 0

(12) 2,4,6-Trinitrotoluene #2

9.81min 20.208ppb

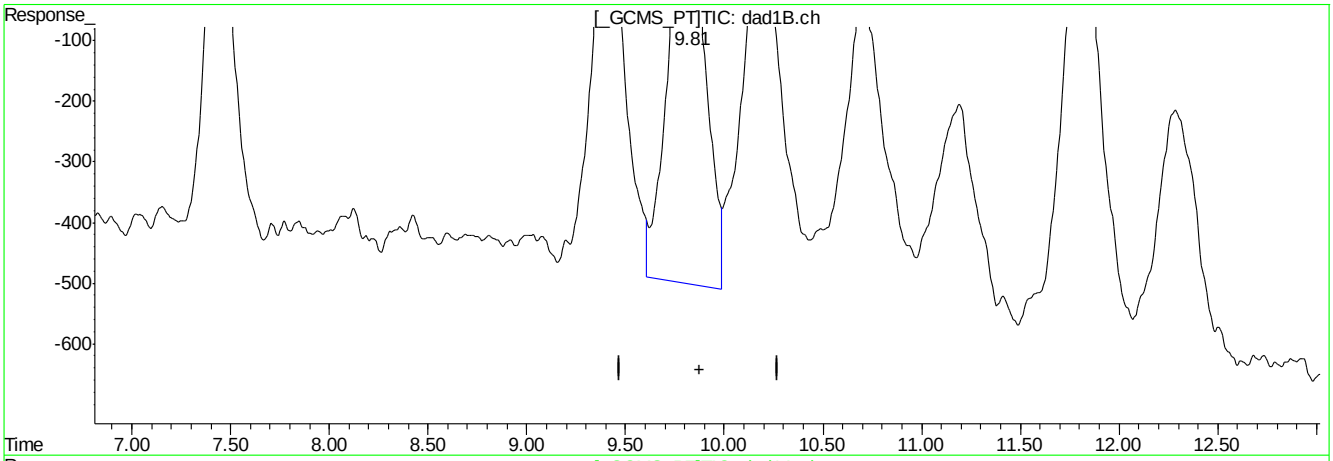
response 88258

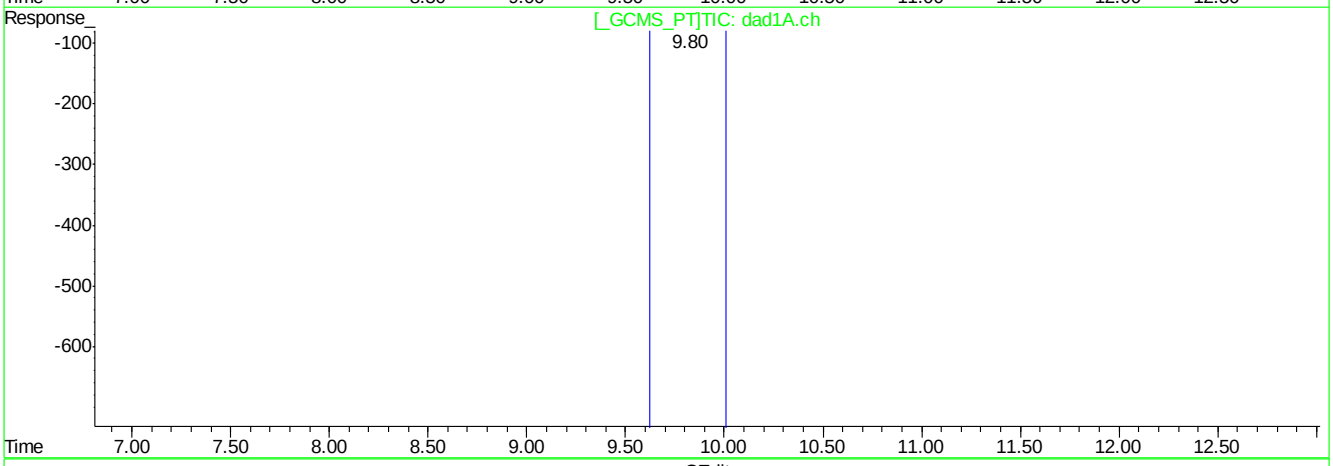
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.81min 23.242ppb m

response 85957

(12) 2,4,6-Trinitrotoluene #2

9.81min 20.208ppb

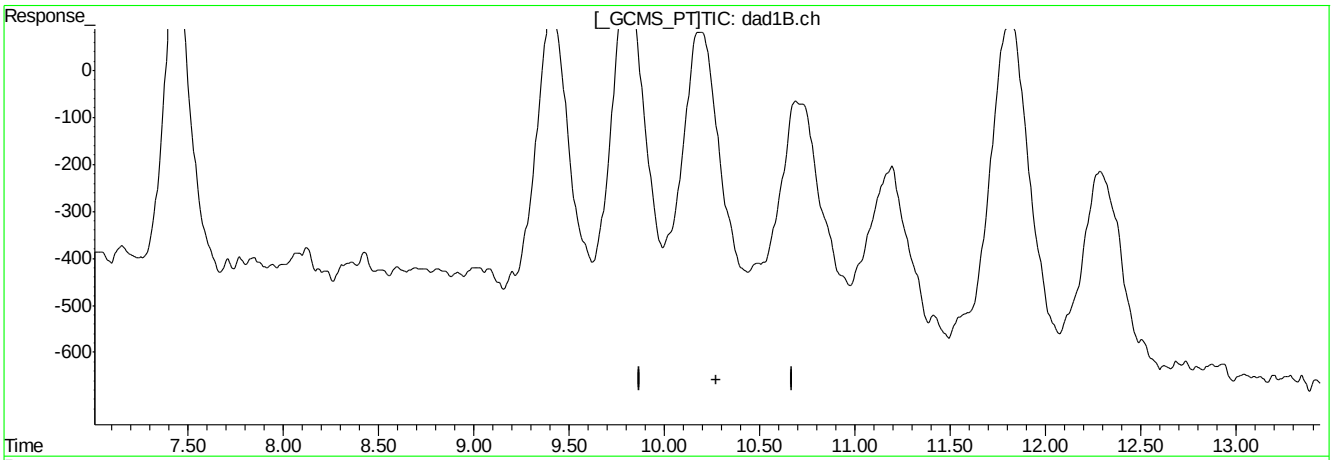
response 88258

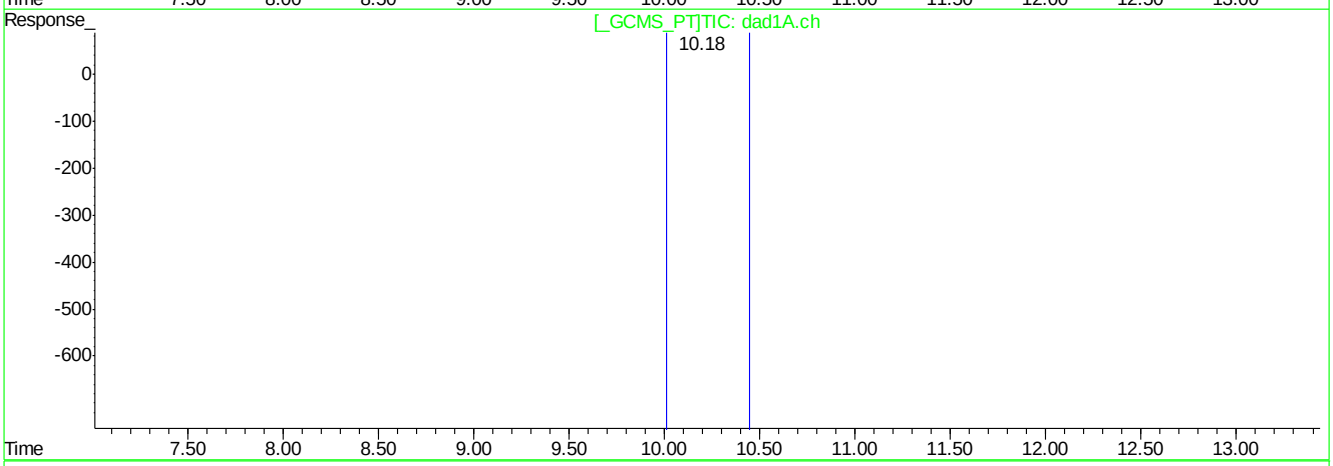
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(13) 2-Amino-4,6-Dinitrotoluene #2

10.19min 20.338ppb

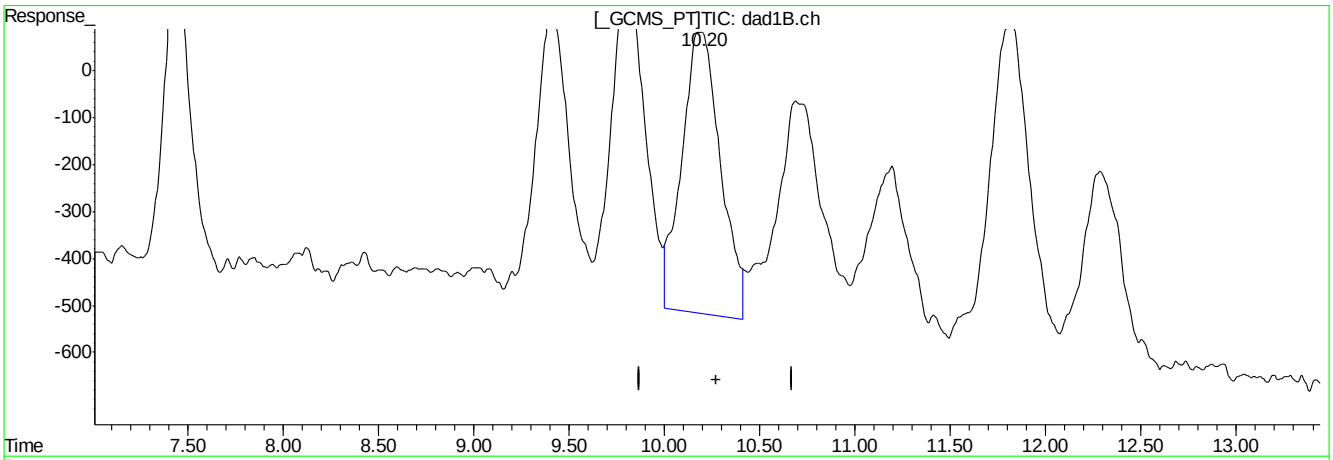
response 97732

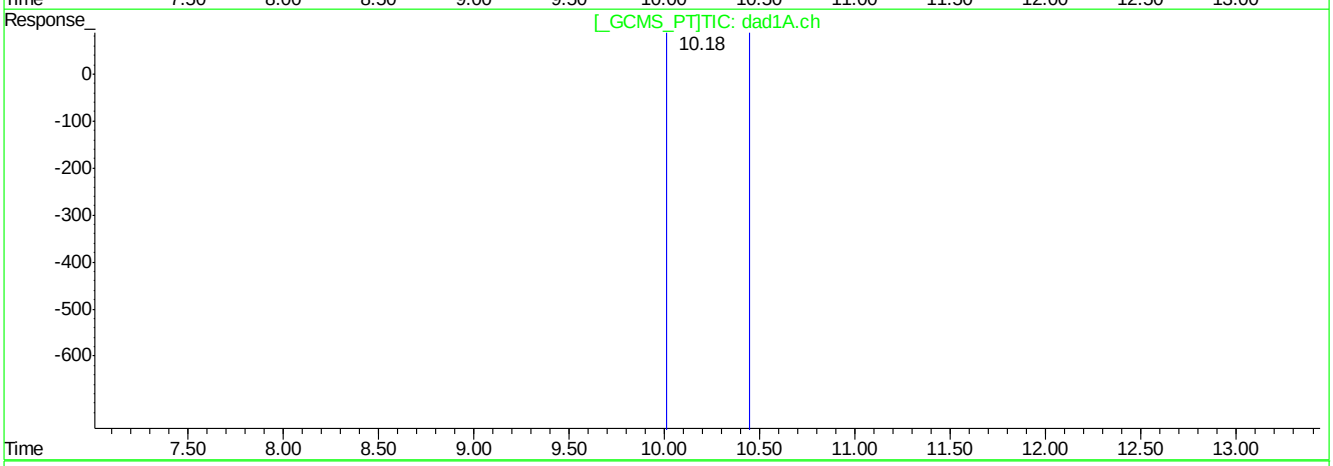
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.20min 25.826ppb m

response 84948

(13) 2-Amino-4,6-Dinitrotoluene #2

10.19min 20.338ppb

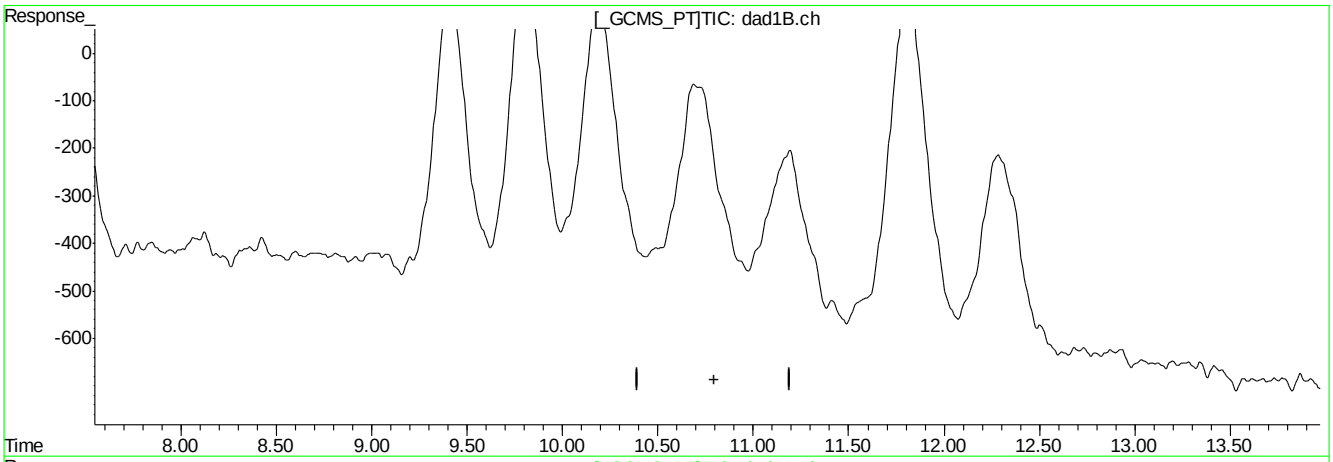
response 97732

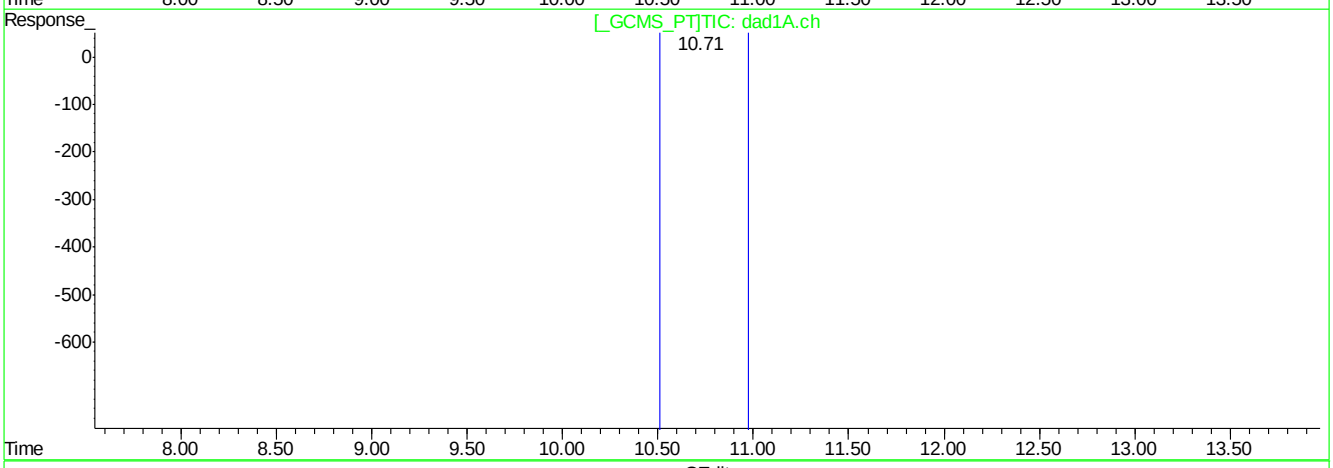
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(14) 4-Amino-2,6-Dinitrotoluene #2

10.71min 20.989ppb

response 94221

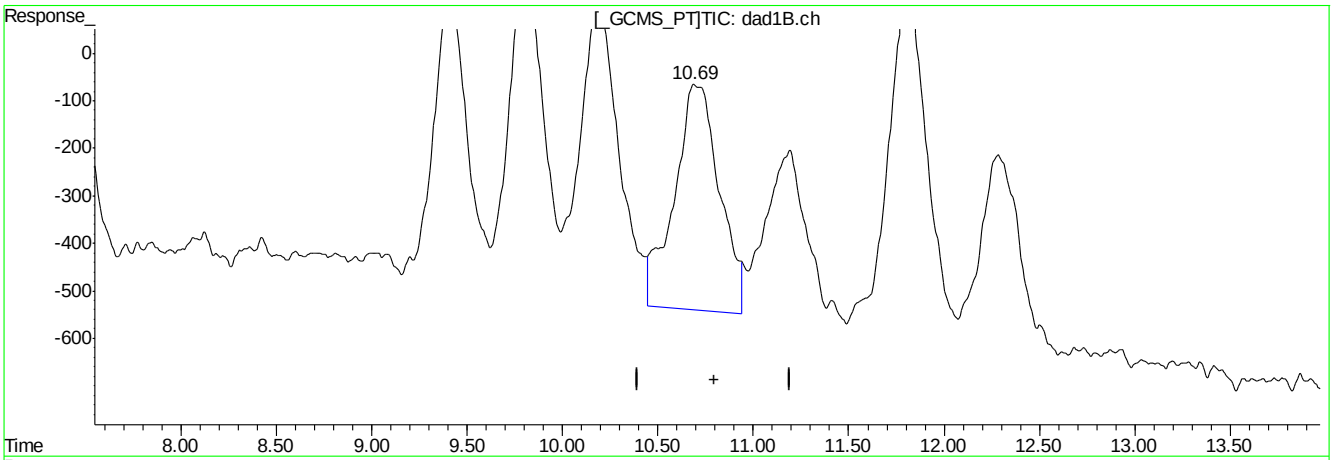
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:06 2021

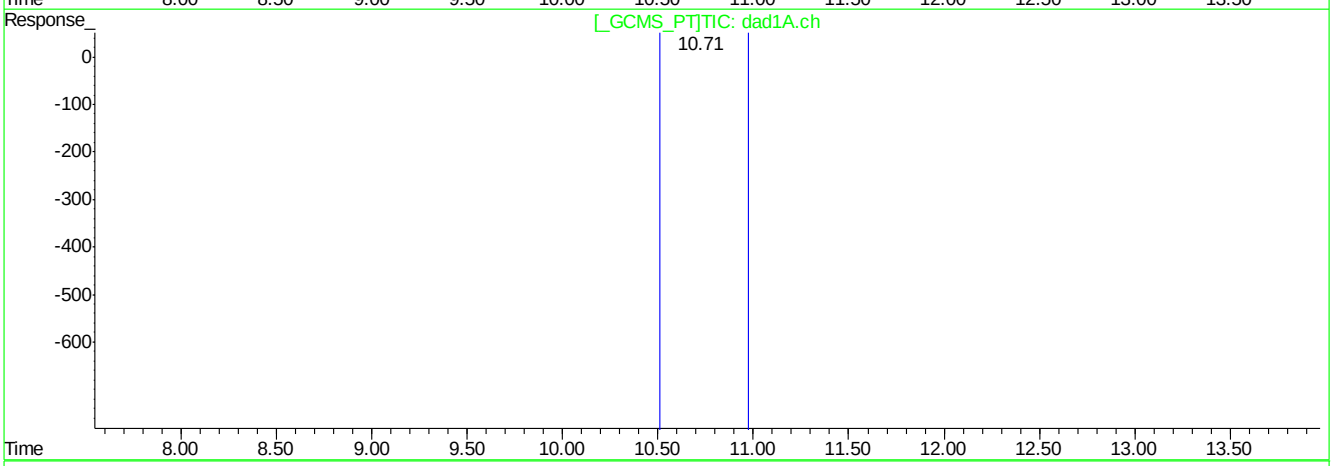
PP391043.D edits: 4-Amino-2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.69min 31.459ppb m

response 78544

(14) 4-Amino-2,6-Dinitrotoluene #2

10.71min 20.989ppb

response 94221

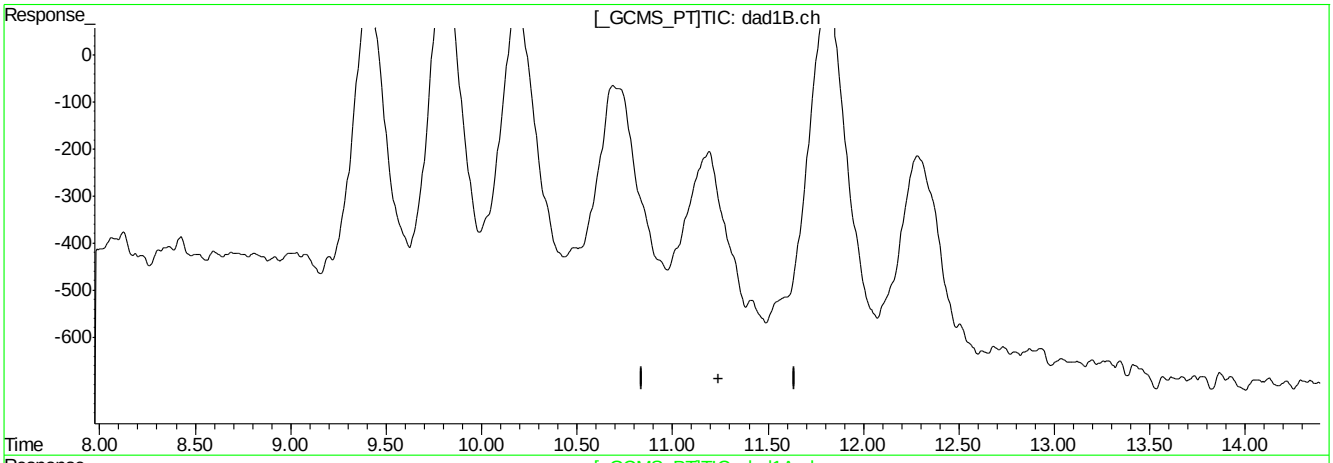
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:14 2021

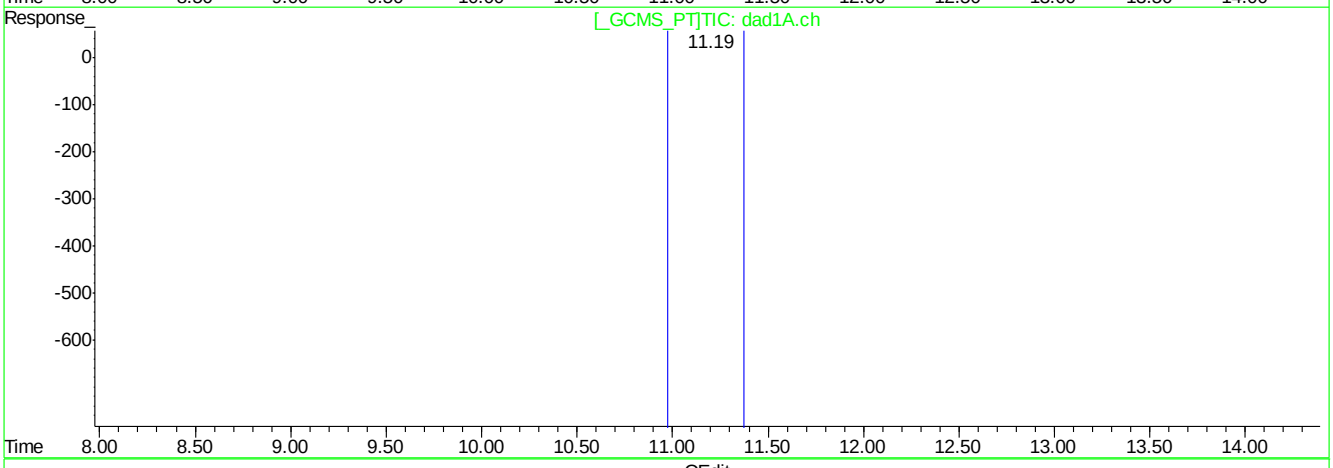
PP391043.D edits: 4-Amino-2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

0.00min 0.000ppb

response 0

(15) 3,4-Dinitrotoluene #2 (S)

11.19min 16.328ppb

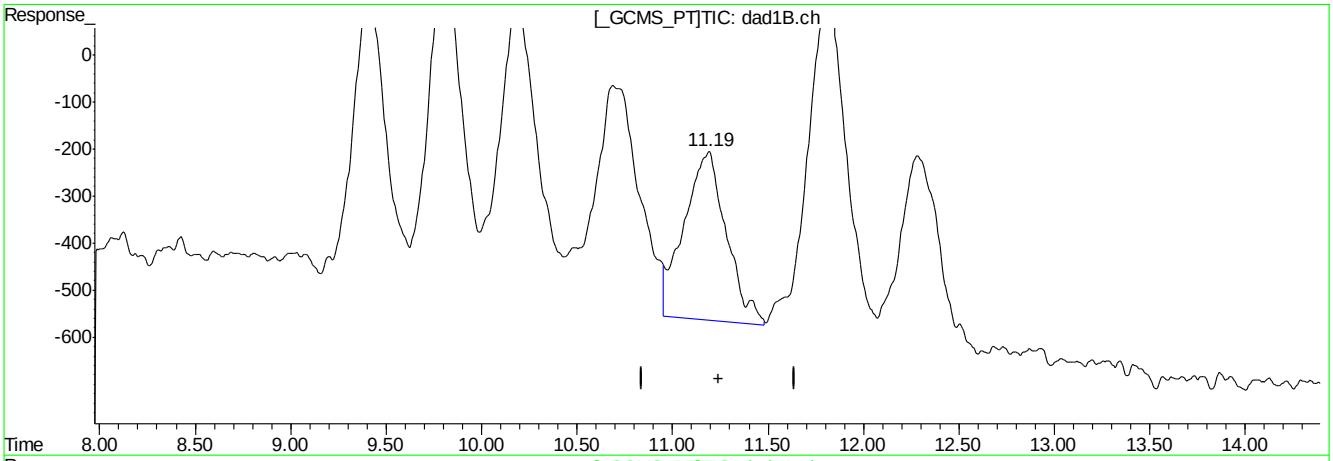
response 54206

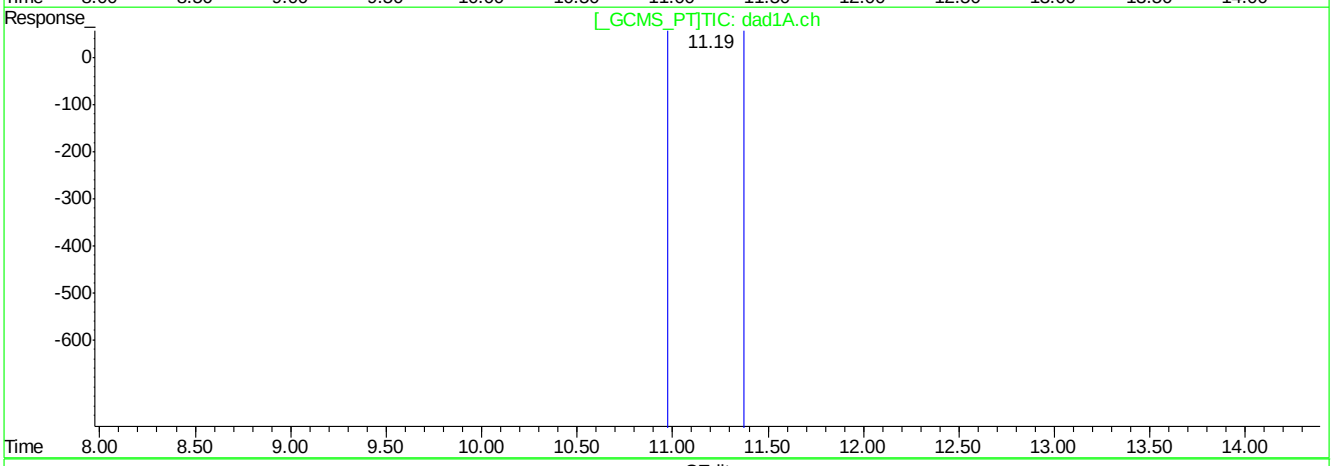
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.19min 26.025ppb m

response 55119

(15) 3,4-Dinitrotoluene #2 (S)

11.19min 16.328ppb

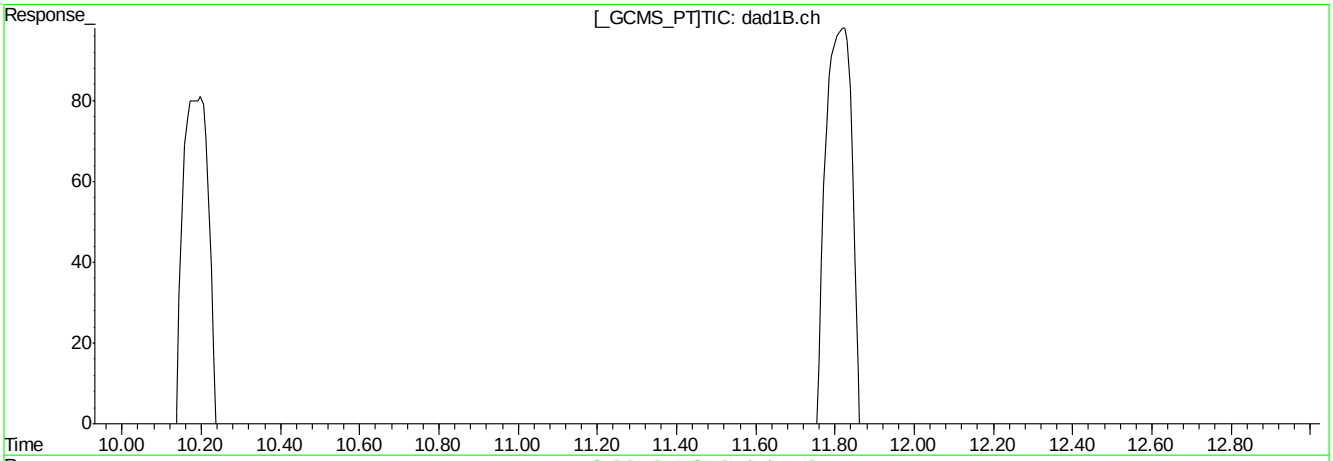
response 54206

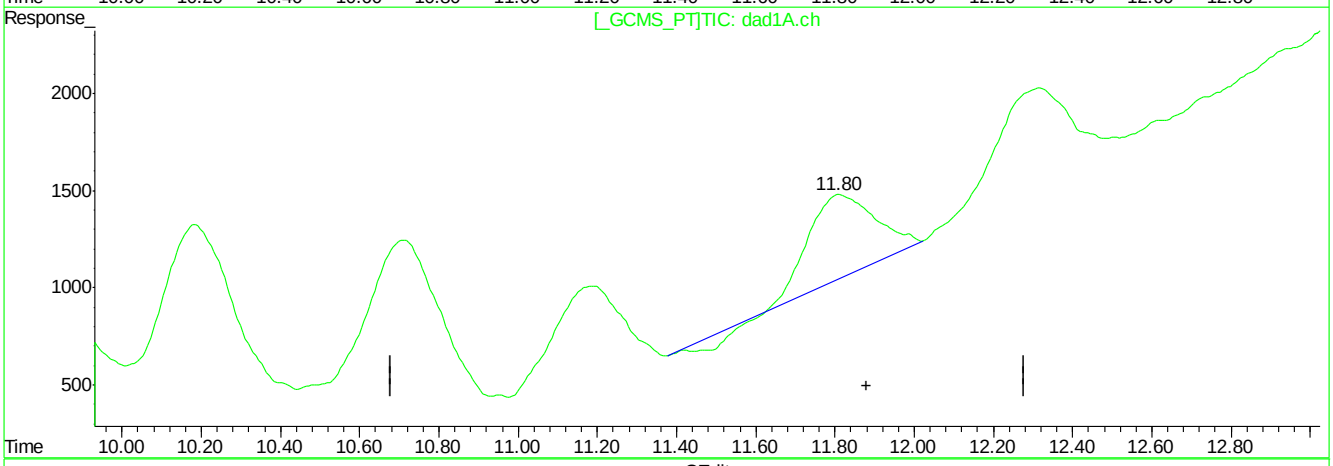
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

0.00min 0.000ppb

response 0

(16) 2,4-Dinitrotoluene #2

11.81min 15.885ppb

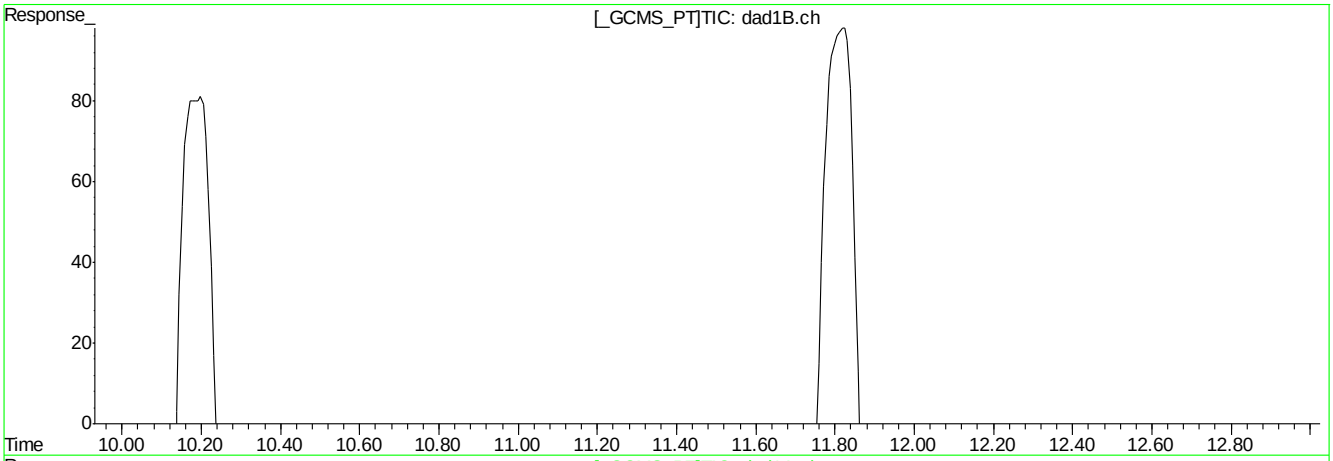
response 45925

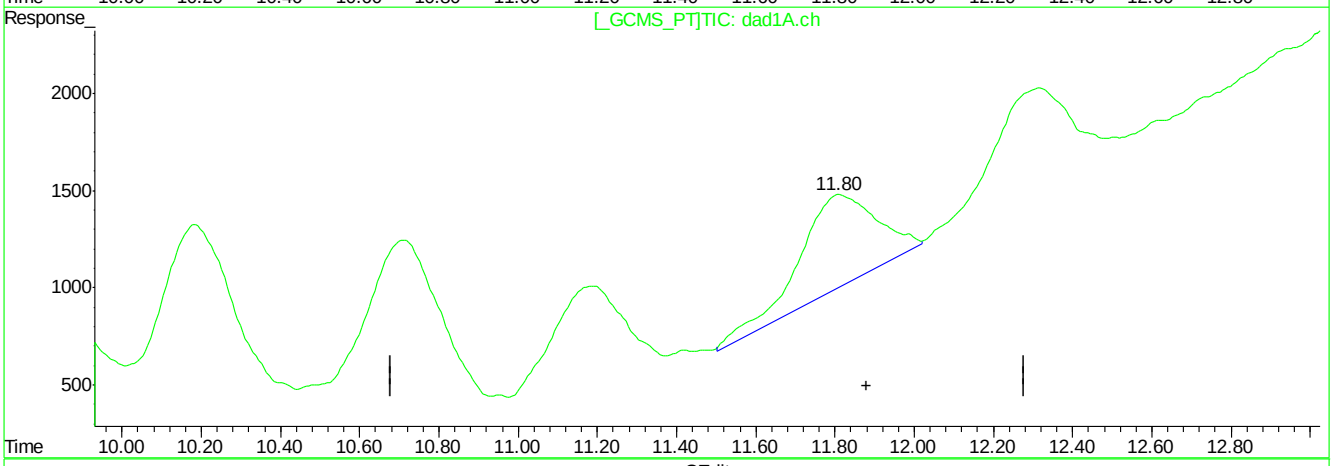
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

0.00min 0.000ppb

response 0

(16) 2,4-Dinitrotoluene #2

11.80min 22.697ppb m

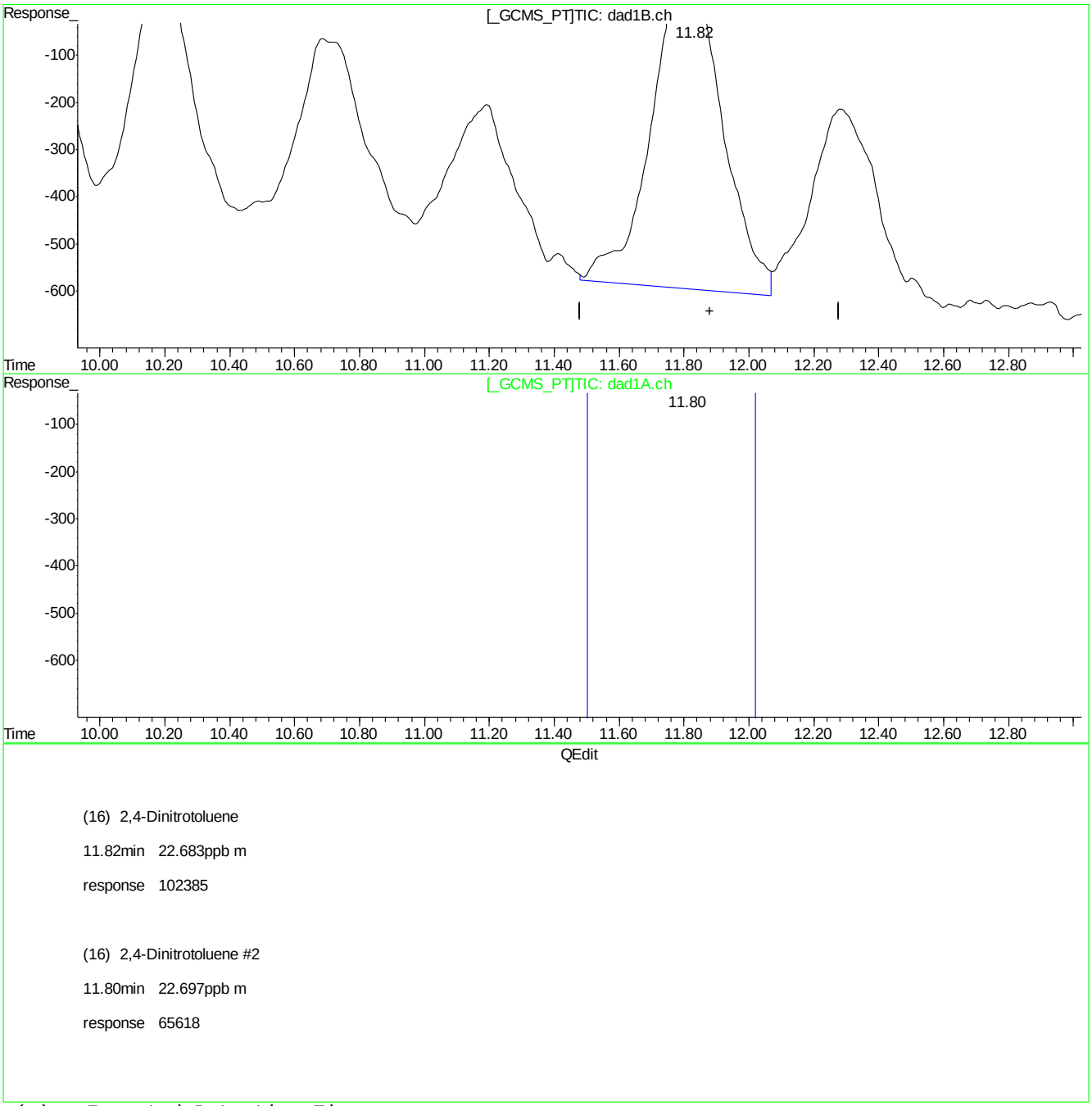
response 65618

(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(16) 2,4-Dinitrotoluene

11.82min 22.683ppb m

response 102385

(16) 2,4-Dinitrotoluene #2

11.80min 22.697ppb m

response 65618

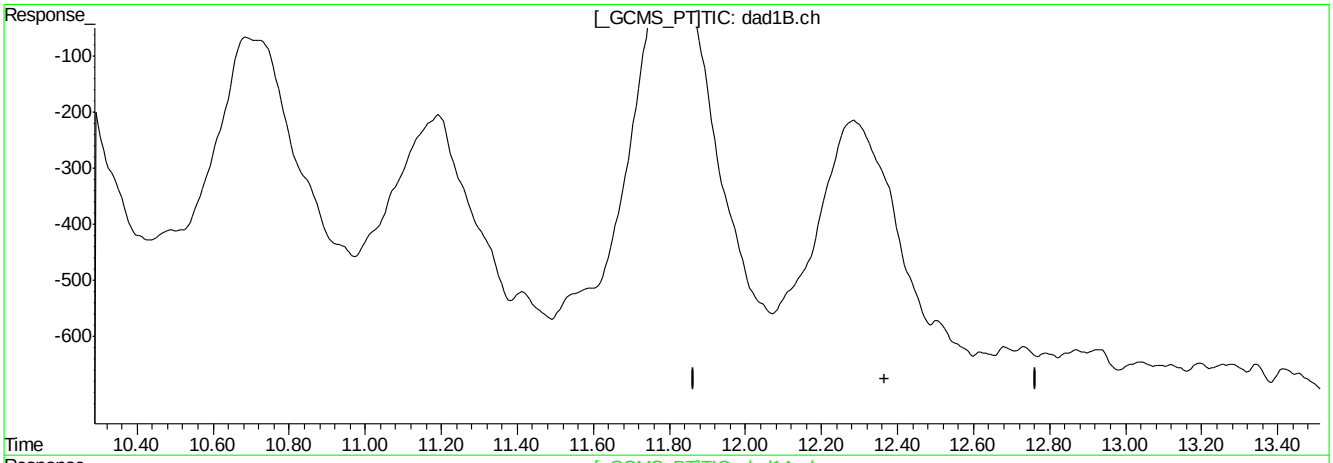
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:42 2021

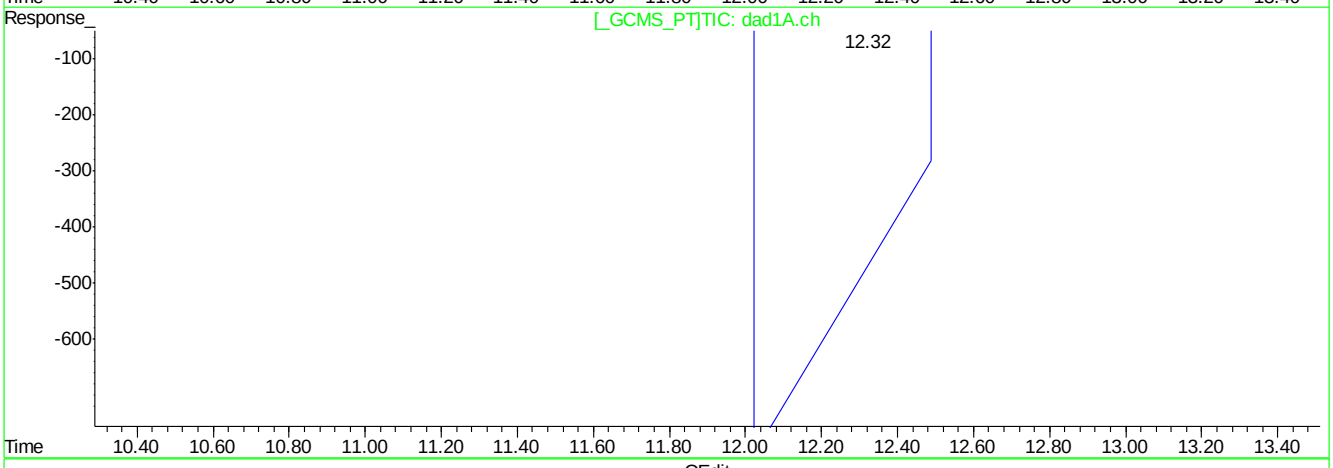
PP391043.D edits: 2,4-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(17) 2,6-Dinitrotoluene #2

12.32min 17.790ppb

response 57183

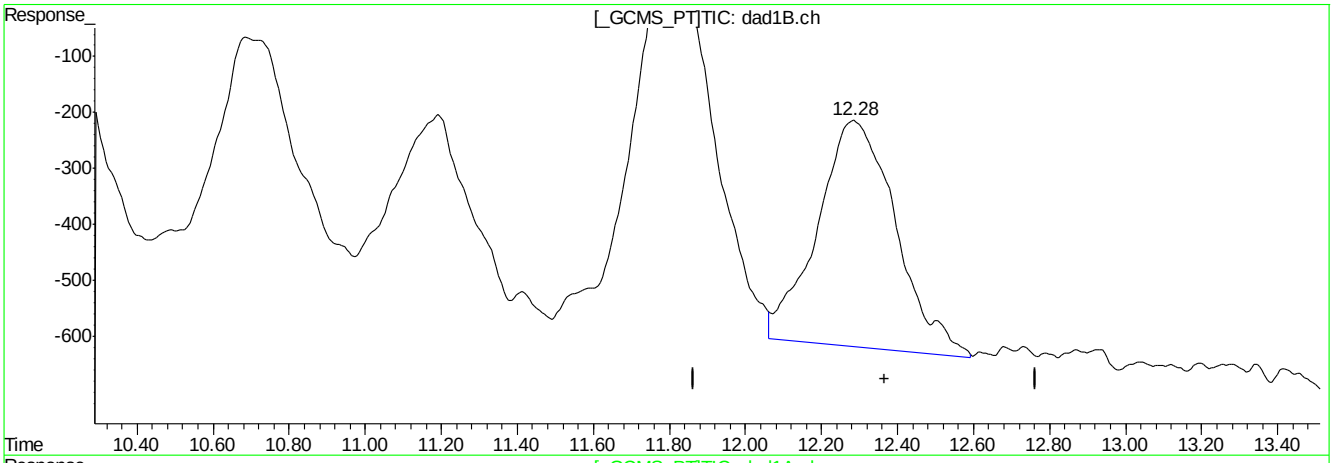
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:49 2021

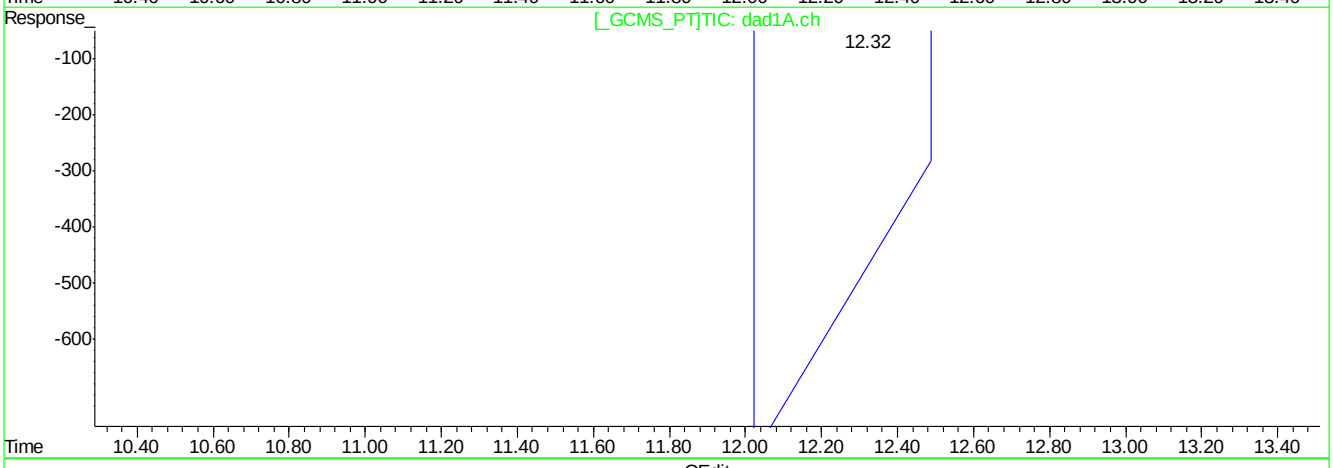
PP391043.D edits: 2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.28min 22.800ppb m

response 58085

(17) 2,6-Dinitrotoluene #2

12.32min 17.790ppb

response 57183

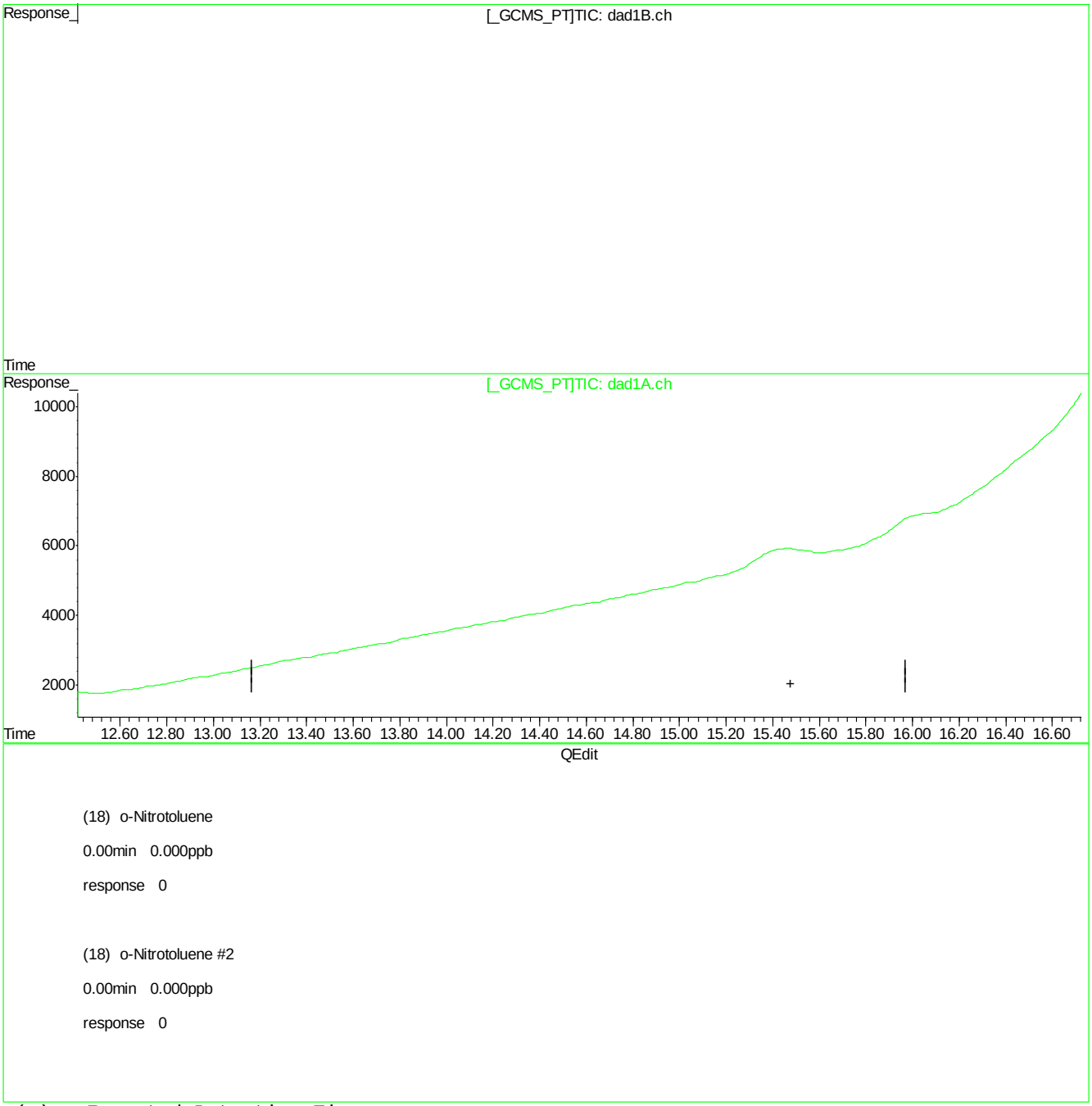
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:54 2021

PP391043.D edits: 2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



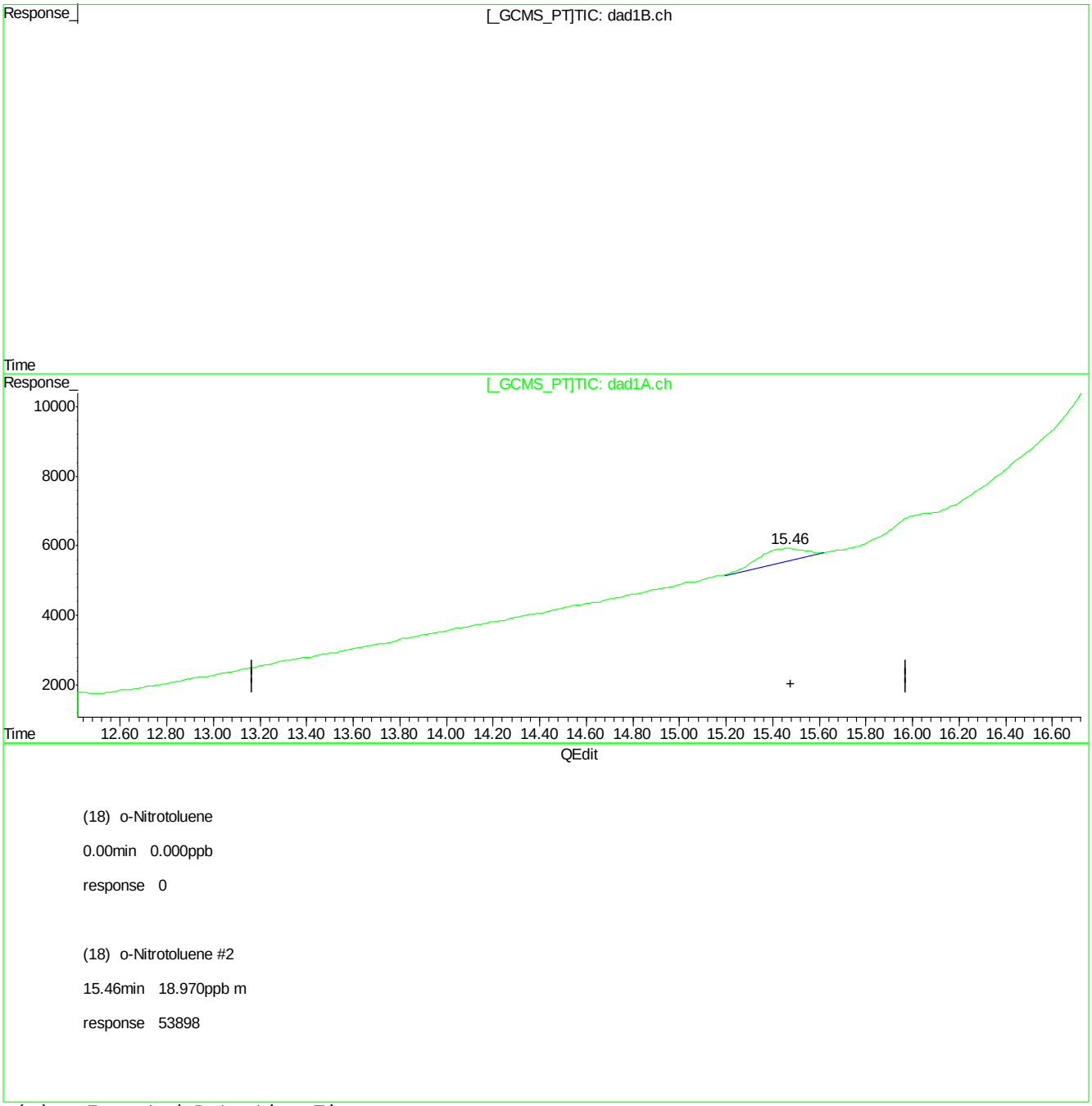
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:58 2021

PP391043.D edits: o-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration

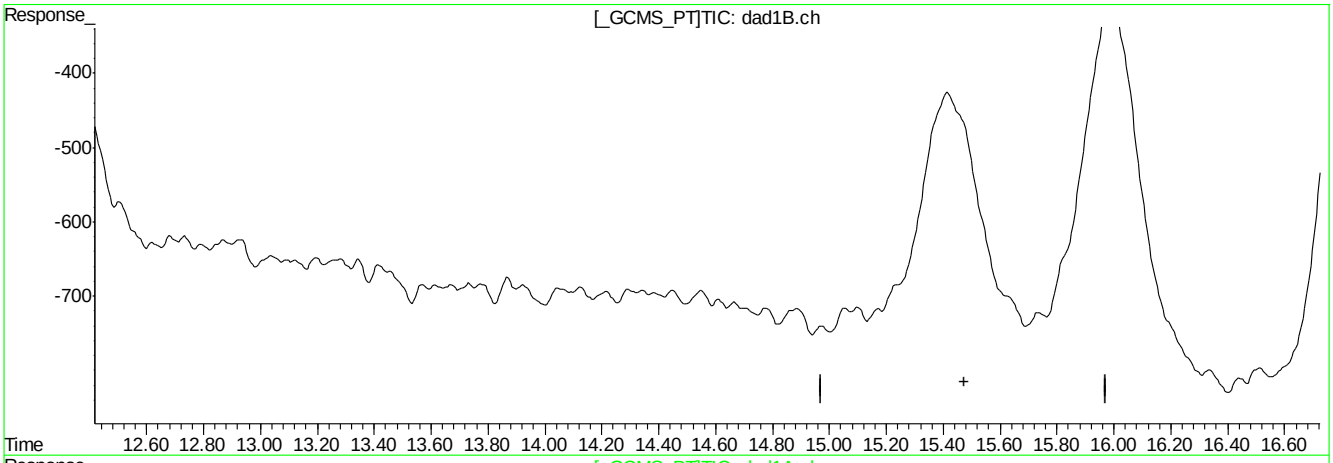


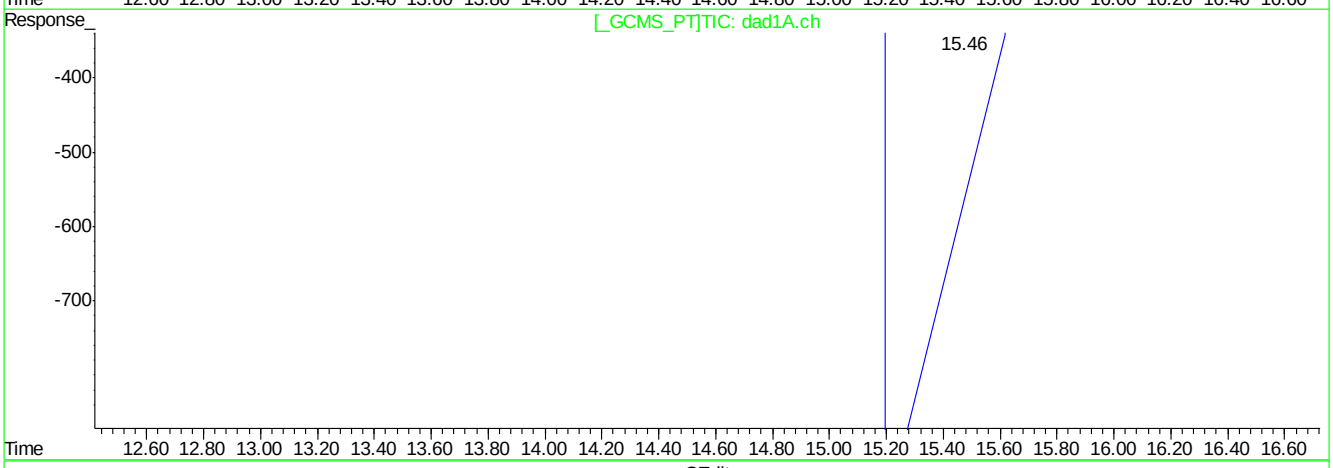
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

0.00min 0.000ppb

response 0

(18) o-Nitrotoluene #2

15.46min 18.970ppb m

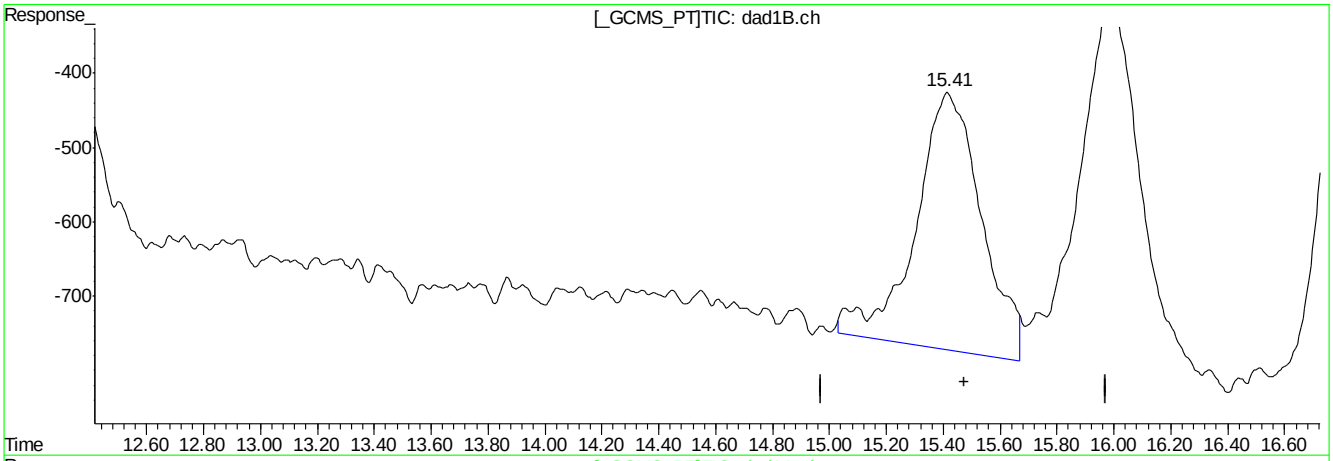
response 53898

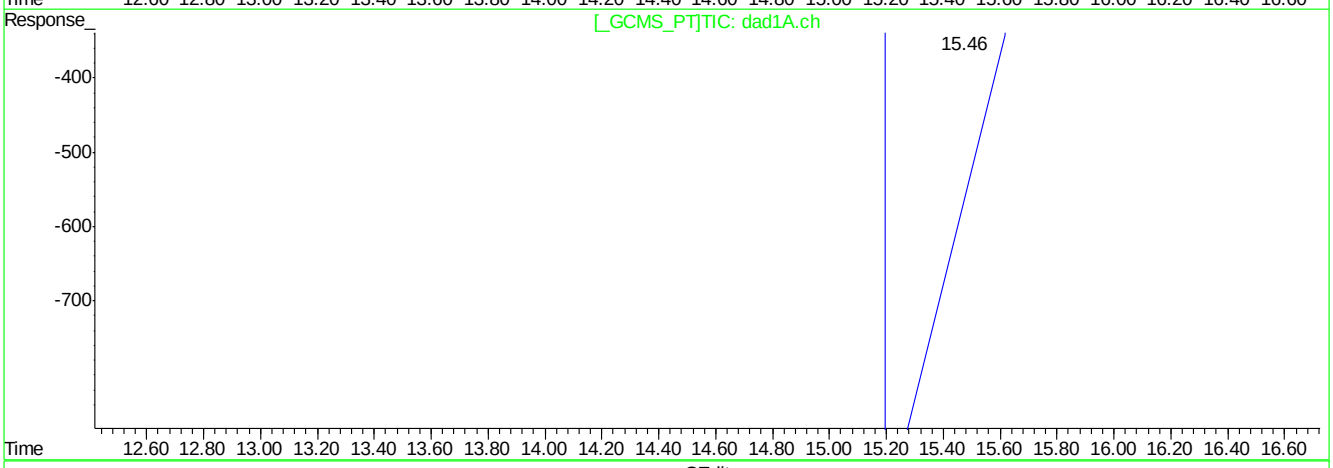
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.41min 26.113ppb m

response 56286

(18) o-Nitrotoluene #2

15.46min 18.970ppb m

response 53898

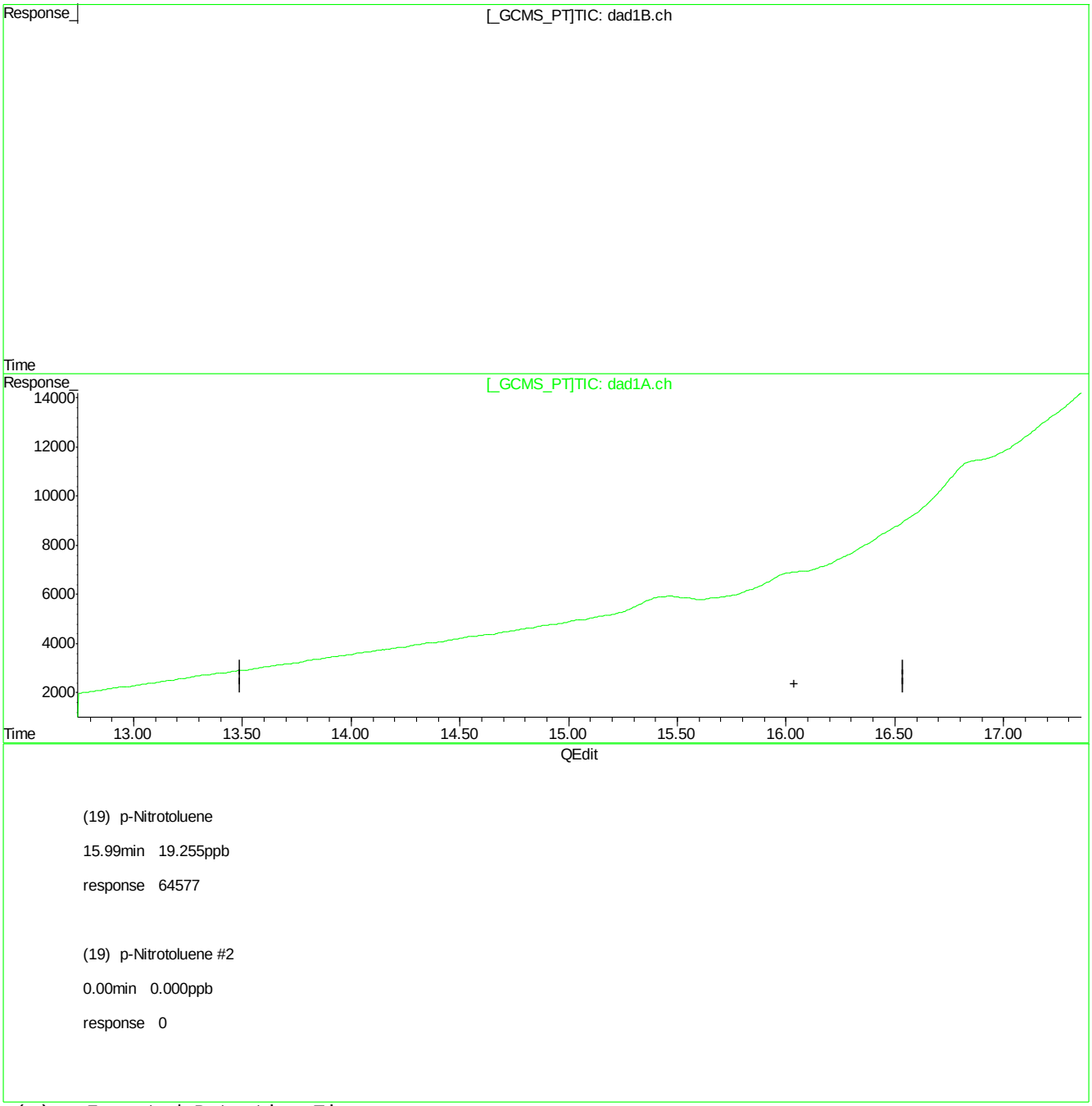
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:11 2021

PP391043.D edits: o-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration

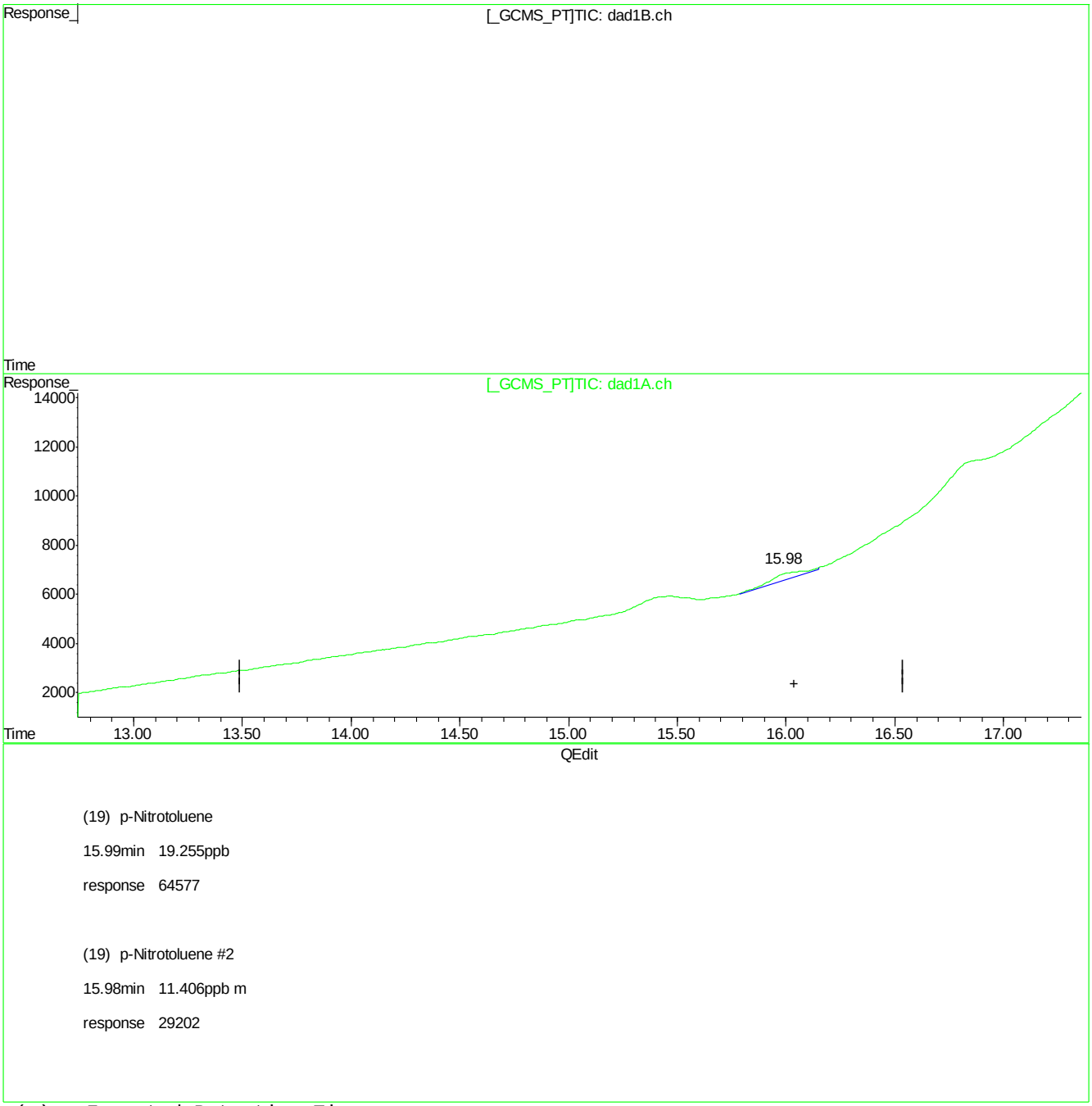


(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.99min 19.255ppb

response 64577

(19) p-Nitrotoluene #2

15.98min 11.406ppb m

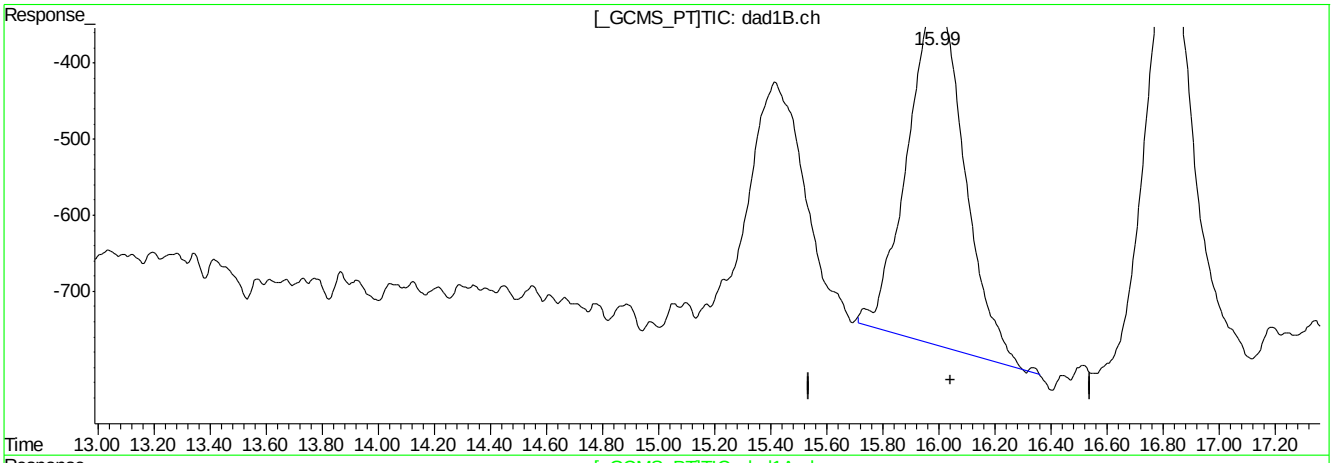
response 29202

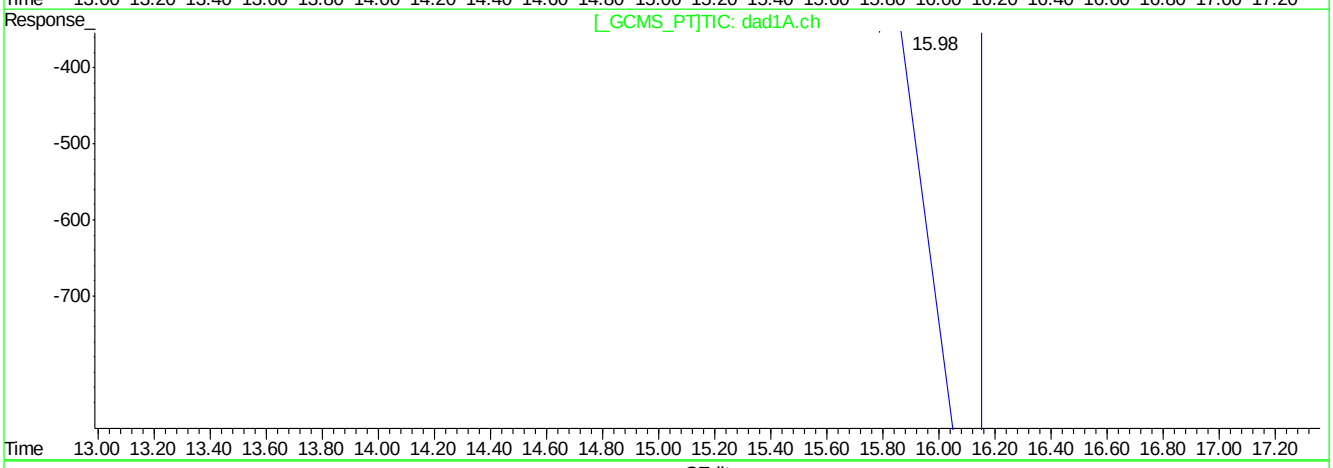
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.99min 19.255ppb

response 64577

(19) p-Nitrotoluene #2

15.98min 11.406ppb m

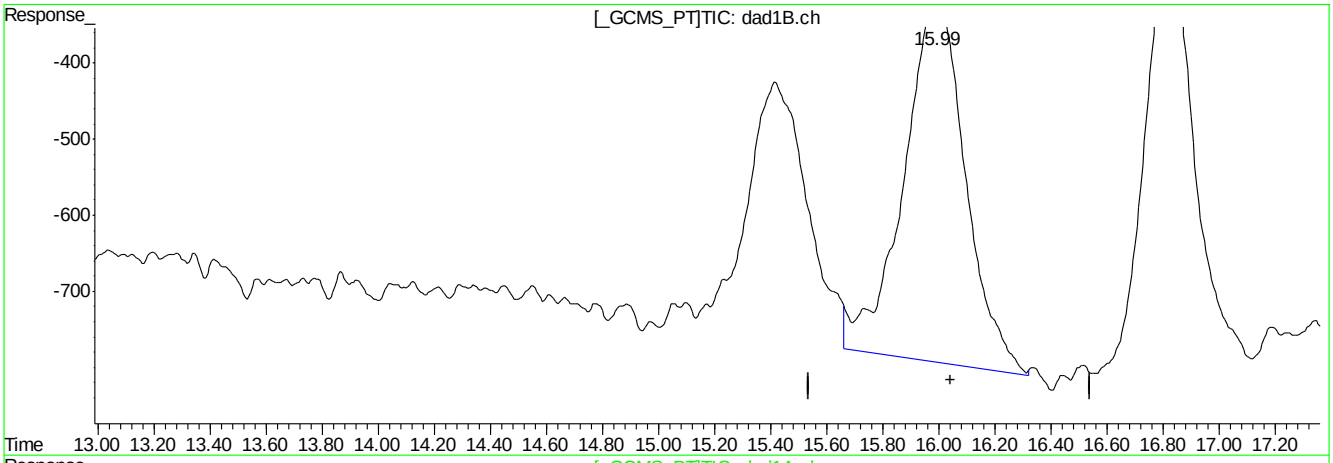
response 29202

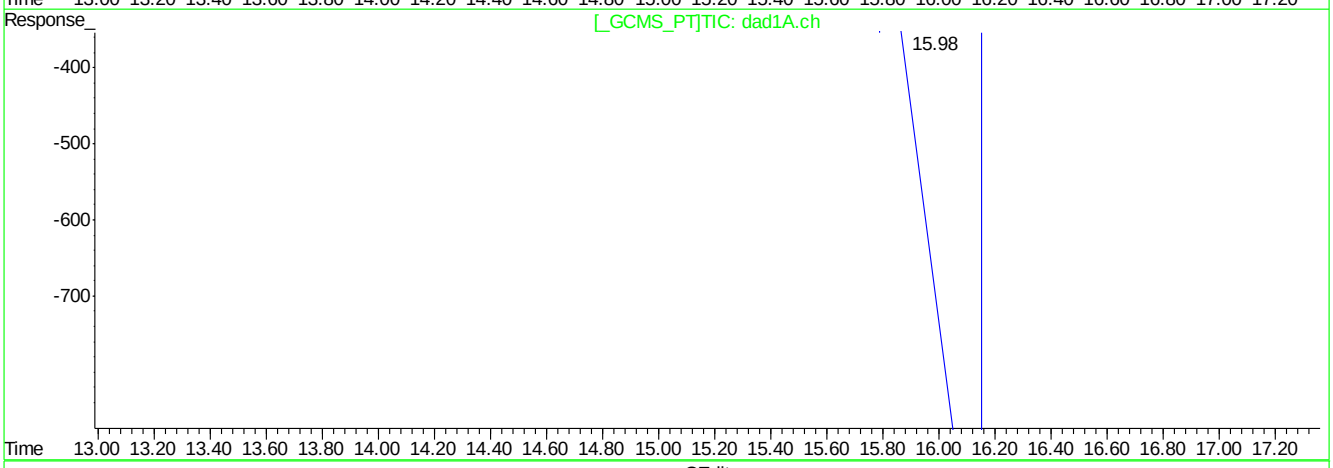
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.99min 21.876ppb m

response 73367

(19) p-Nitrotoluene #2

15.98min 11.406ppb m

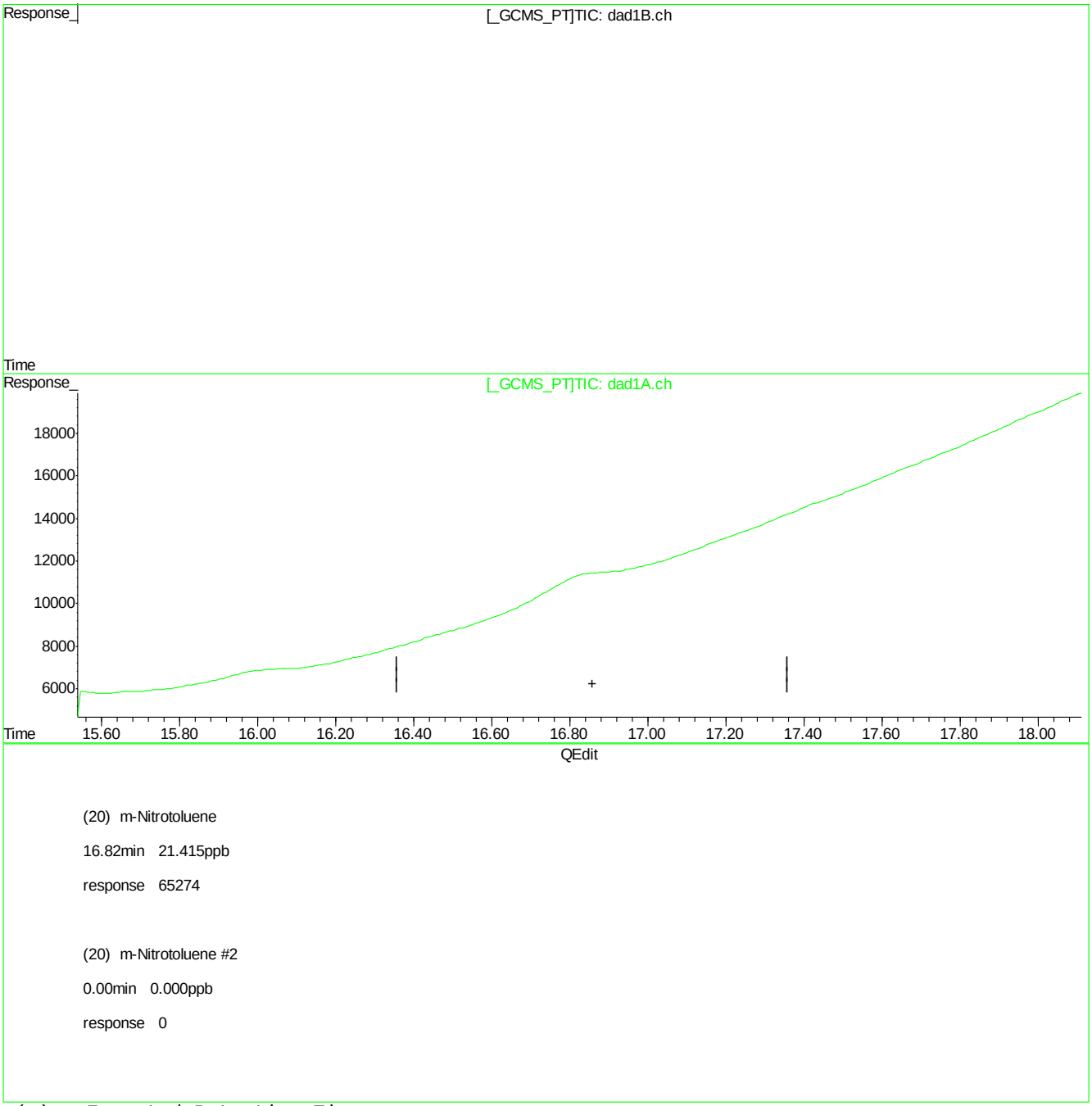
response 29202

(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration

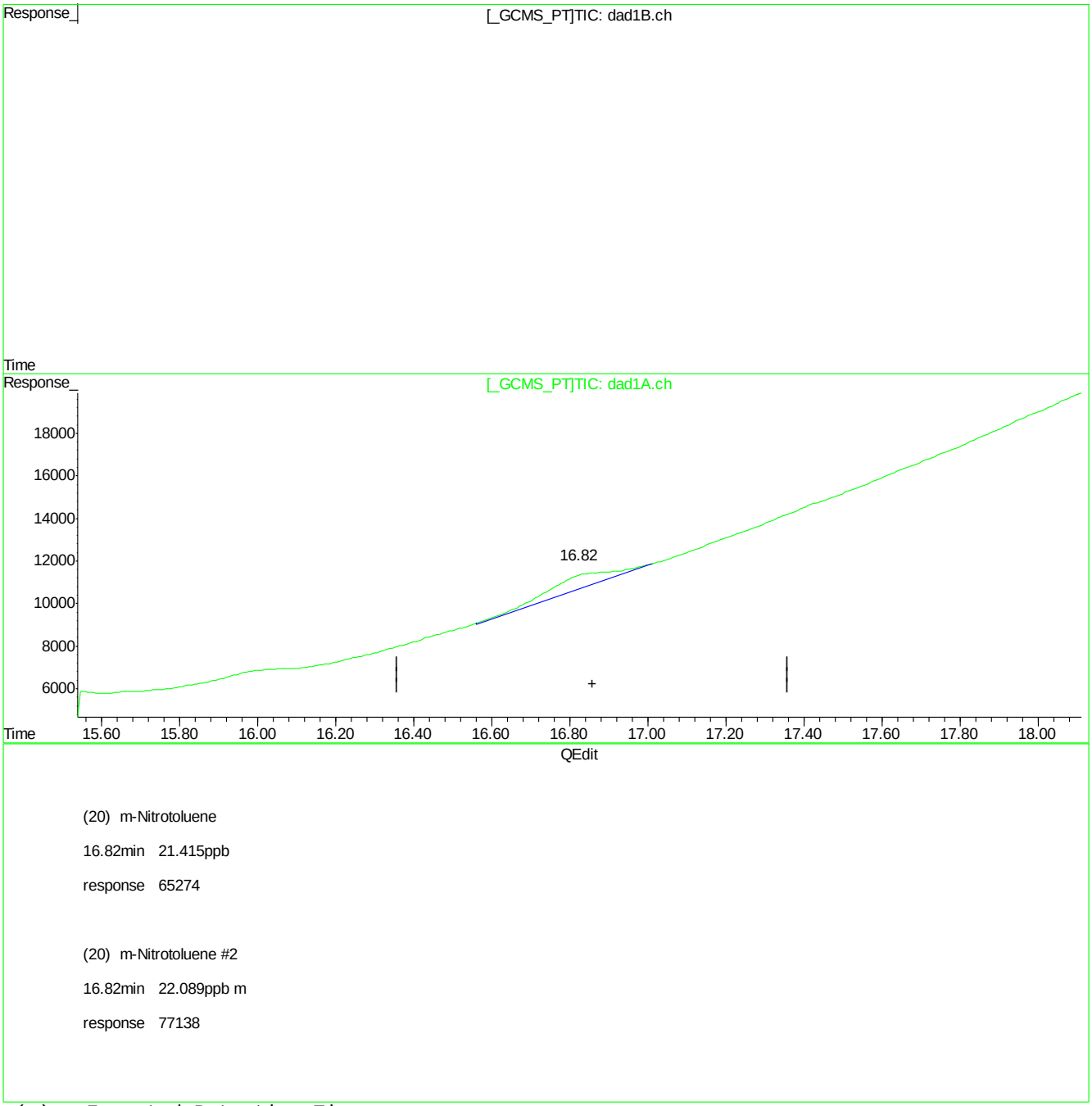


(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.82min 21.415ppb

response 65274

(20) m-Nitrotoluene #2

16.82min 22.089ppb m

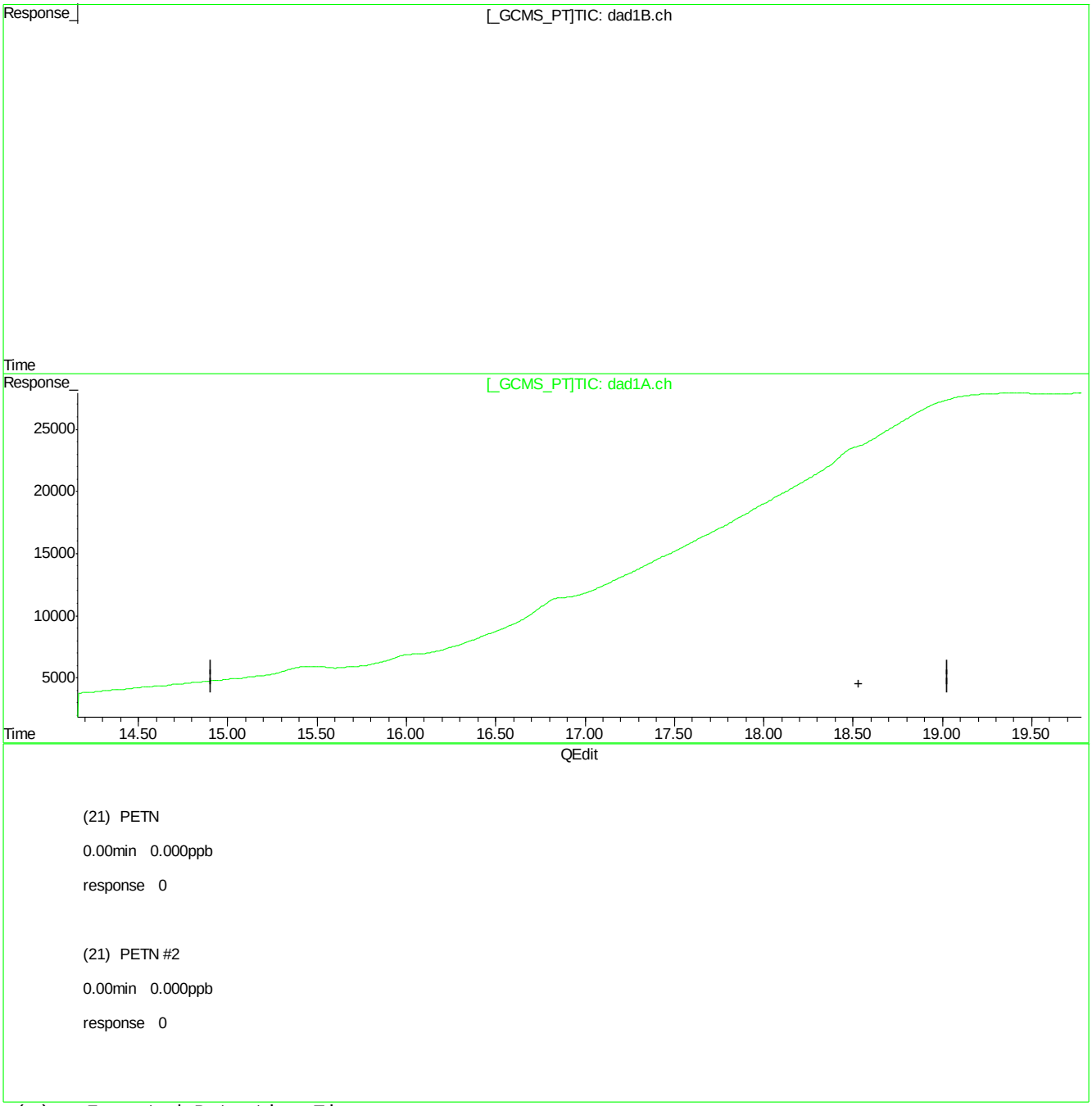
response 77138

(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:39 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:32 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	11.22	0	147253	N.D.	44.355 #
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	8.87%#
	Target Compounds						
1)	TNX	1.30	1.31	36764	58359	19.477m	18.804
2)	HMX	1.44	1.44	74591	282137	51.610	65.725
3)	DNX	1.68	1.68	104181	213538	45.141	54.498
4)	MNX	2.26	2.26	153793	236990	60.711	60.619m
5)	RDX	2.87	2.87	93506	148375	51.495	50.808
6)	1,3,5-Trinitrobe	4.64	4.64	198142	381585	50.791	50.351
7)	1,3-Dinitrobenze	5.85	5.84	259124	204018	51.311	54.758m
8)	3,5-Dinitroanili	6.20	6.20	199482	385391	51.836	55.980m
9)	Nitrobenzene	7.46	7.46	151485	144611	52.132	50.579
10)	Nitroglycerin	0.00	8.93	0	64252	N.D.	53.509 #
11)	Tetryl	9.45	9.45	149582	237413	51.041	51.361
12)	2,4,6-Trinitroto	9.84	9.84	176694	216766	47.777	49.633
13)	2-Amino-4,6-Dini	10.23	10.23	153979	240894	46.813	50.130
14)	4-Amino-2,6-Dini	10.76	10.75	109820	225590	43.986	50.252
16)	2,4-Dinitrotolue	11.85	11.86	228274	142914	50.573	49.433
17)	2,6-Dinitrotolue	12.33	12.34	130505	154396	51.226	48.032
18)	o-Nitrotoluene	15.46	15.47	116436	147434	54.019	51.890m
19)	p-Nitrotoluene	16.02	16.05	173143	82337	51.625	32.146m
20)	m-Nitrotoluene	16.84	16.86	162054	160245	53.167	45.888m
21)	PETN	0.00	18.52	0	52867	N.D.	38.436m#

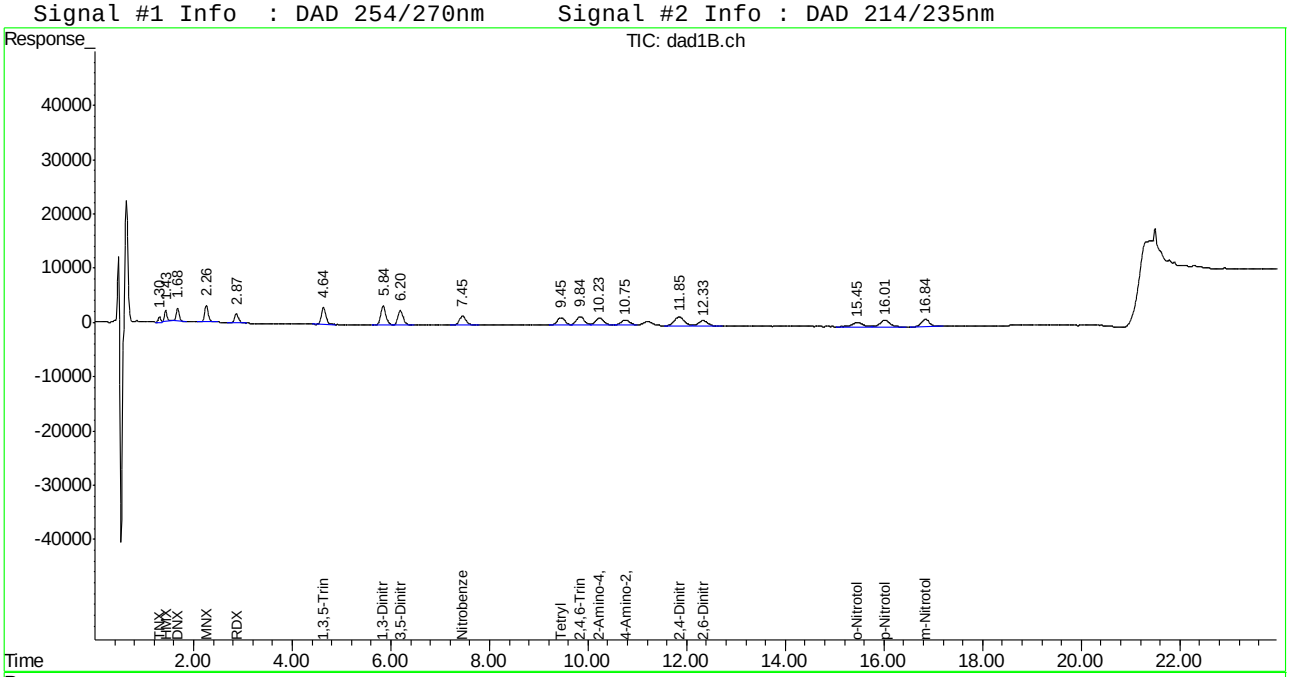
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:35:48 2021 Page 1

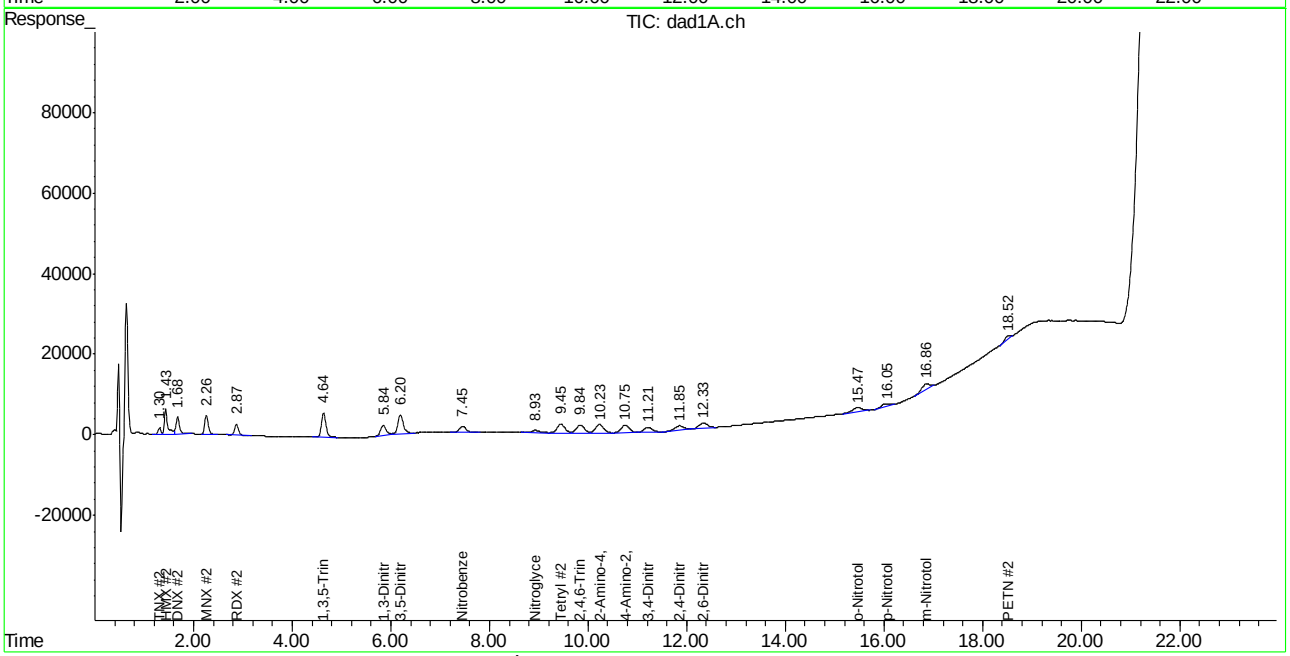
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:27 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

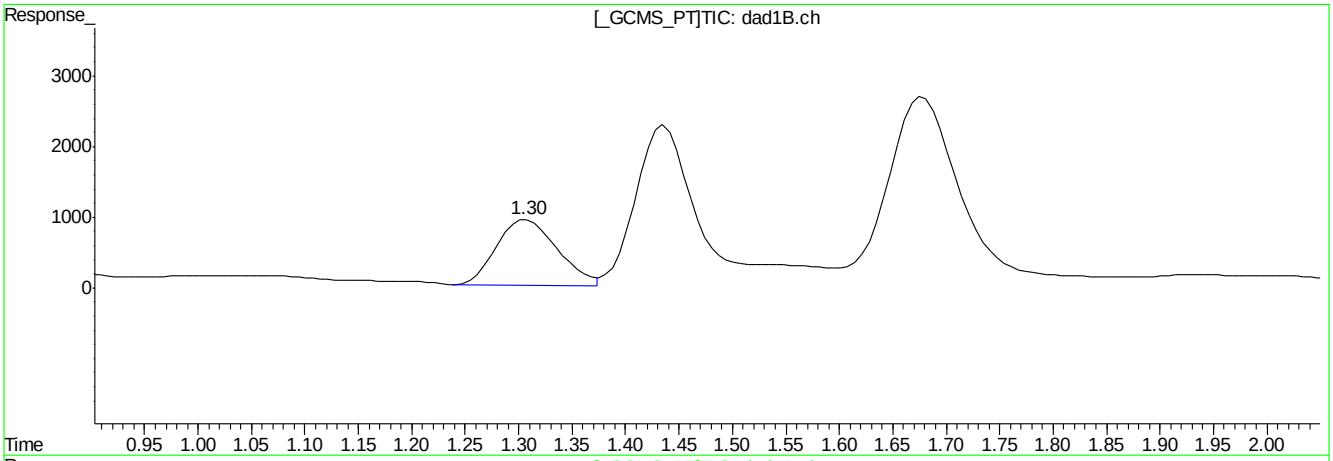
Sample Number: GPP2464-IC2464
Lab FileID: PP391044.D
Injection Time: 08/03/21 12:16
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

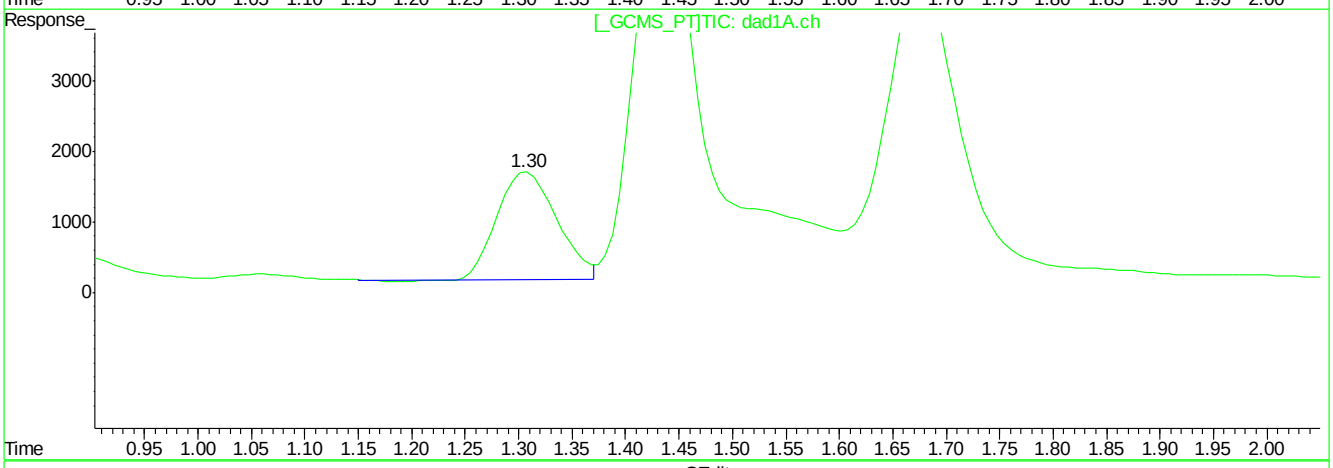
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.30	Poor instrument integration
MNX		2	2.26	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.84	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.20	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.47	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.05	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.52	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.30min 19.477ppb m

response 36764

(1) TNX #2

1.31min 18.804ppb

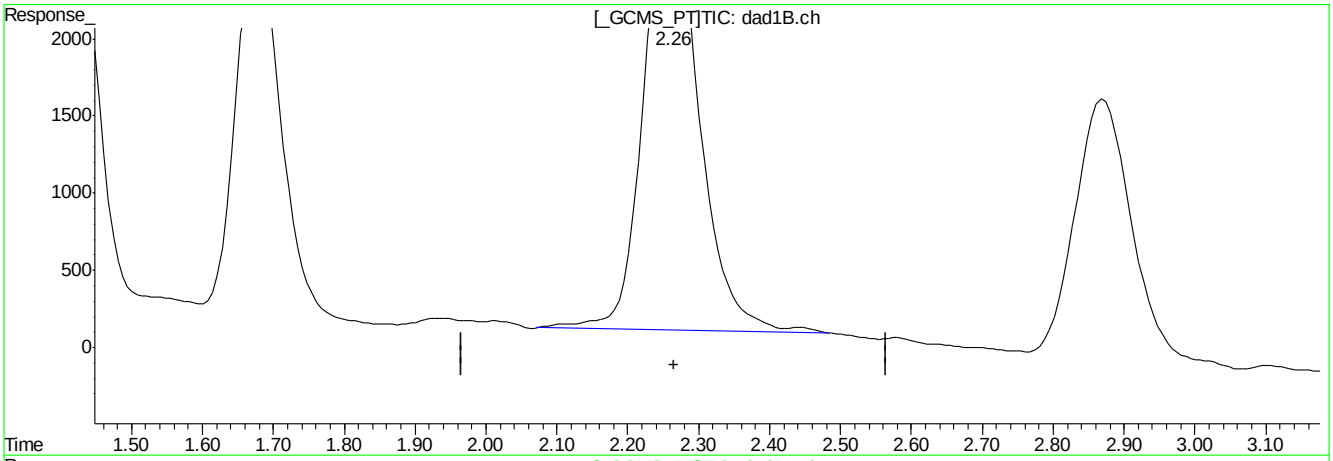
response 58359

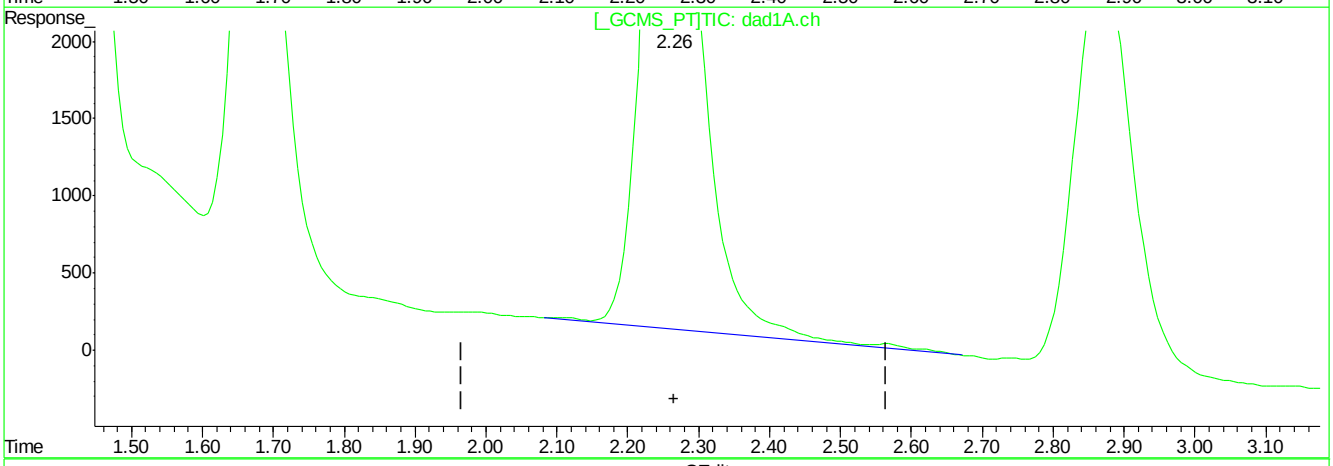
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:26:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.26min 60.711ppb

response 153793

(4) MNX #2

2.26min 61.510ppb

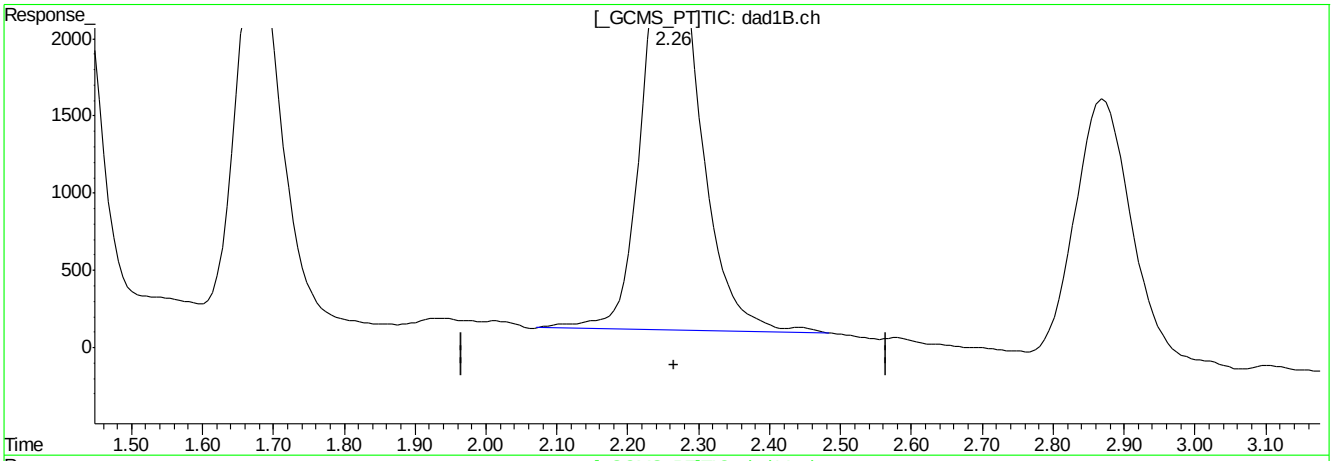
response 240474

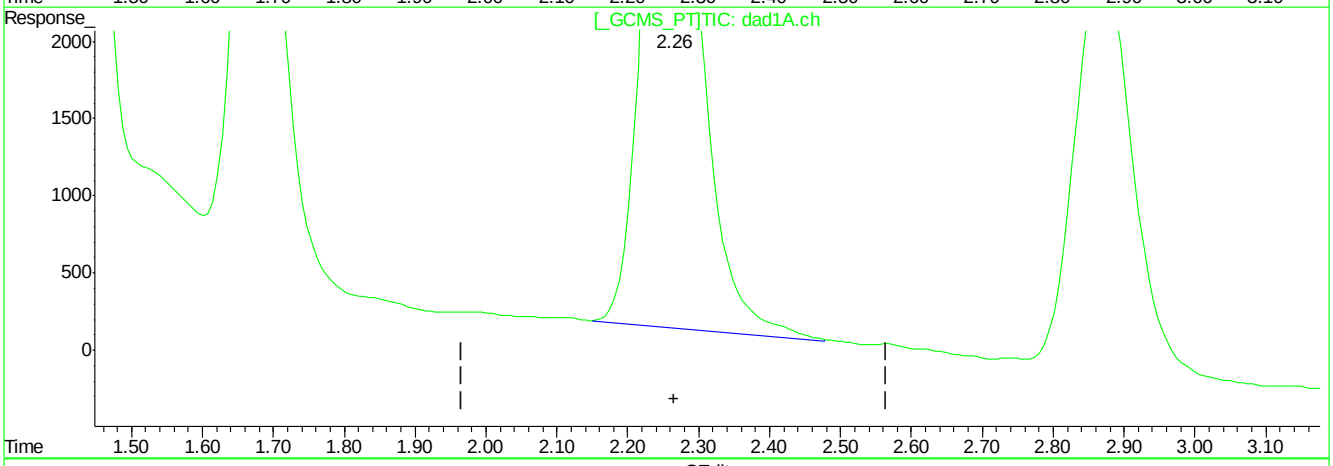
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:26:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.26min 60.711ppb

response 153793

(4) MNX #2

2.26min 60.619ppb m

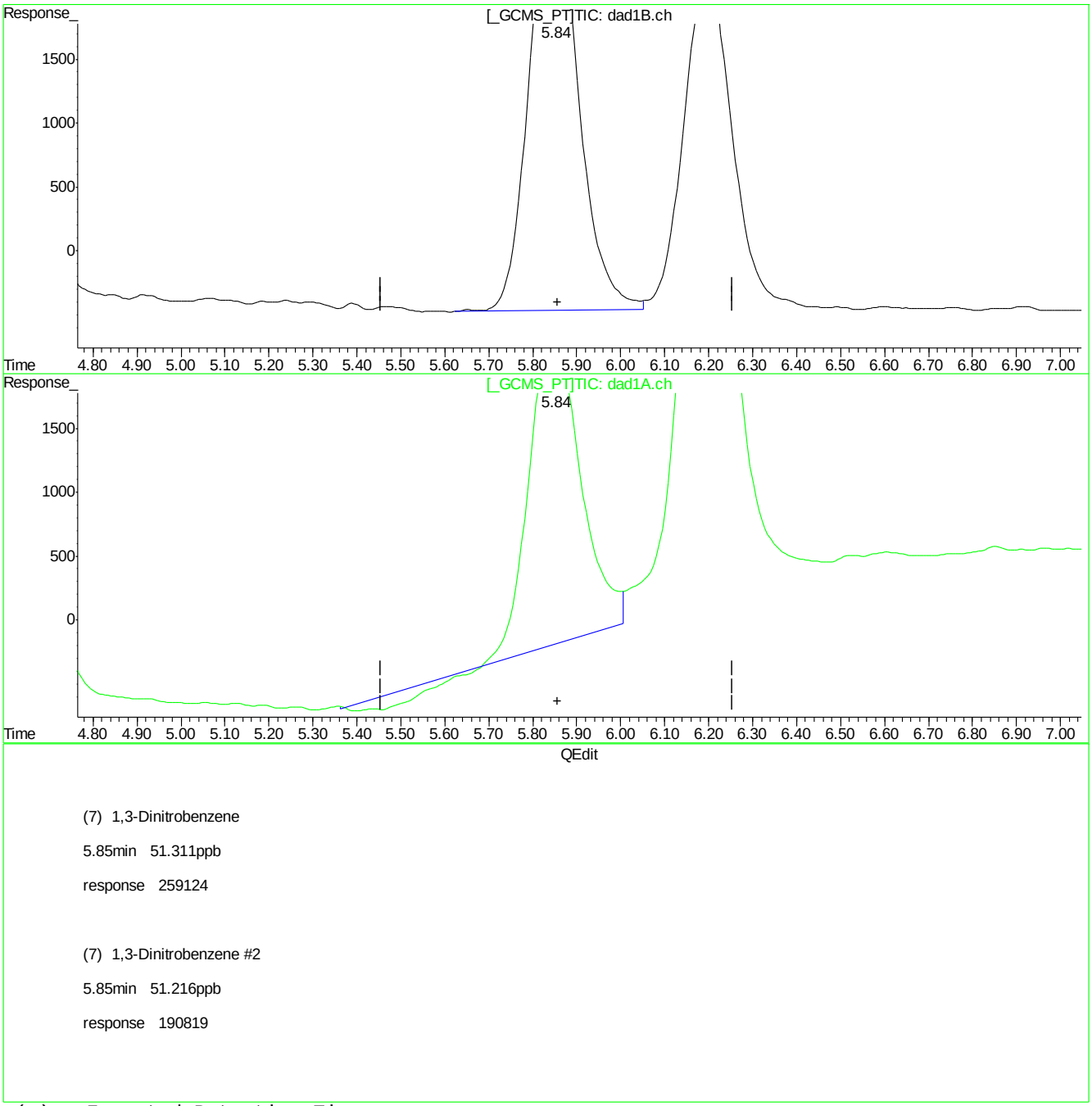
response 236990

(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:26:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.85min 51.311ppb

response 259124

(7) 1,3-Dinitrobenzene #2

5.85min 51.216ppb

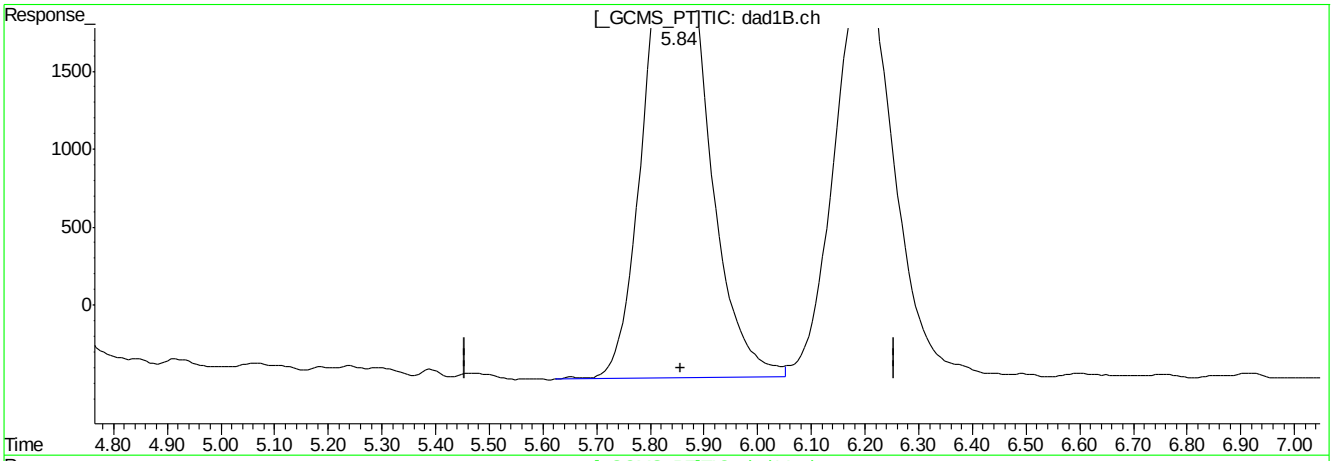
response 190819

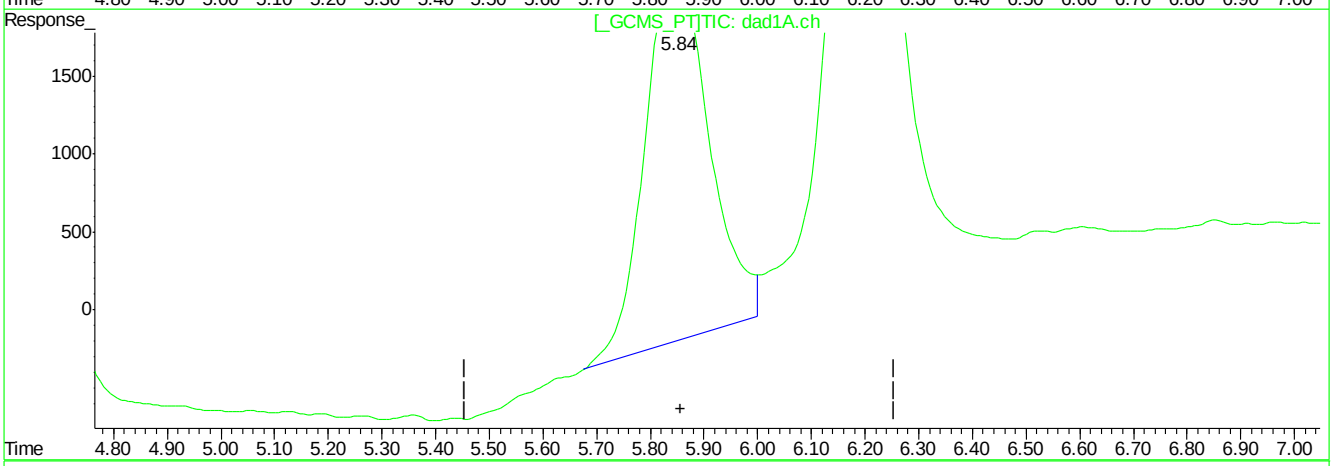
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:26:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 51.311ppb

response 259124

(7) 1,3-Dinitrobenzene #2

5.84min 54.758ppb m

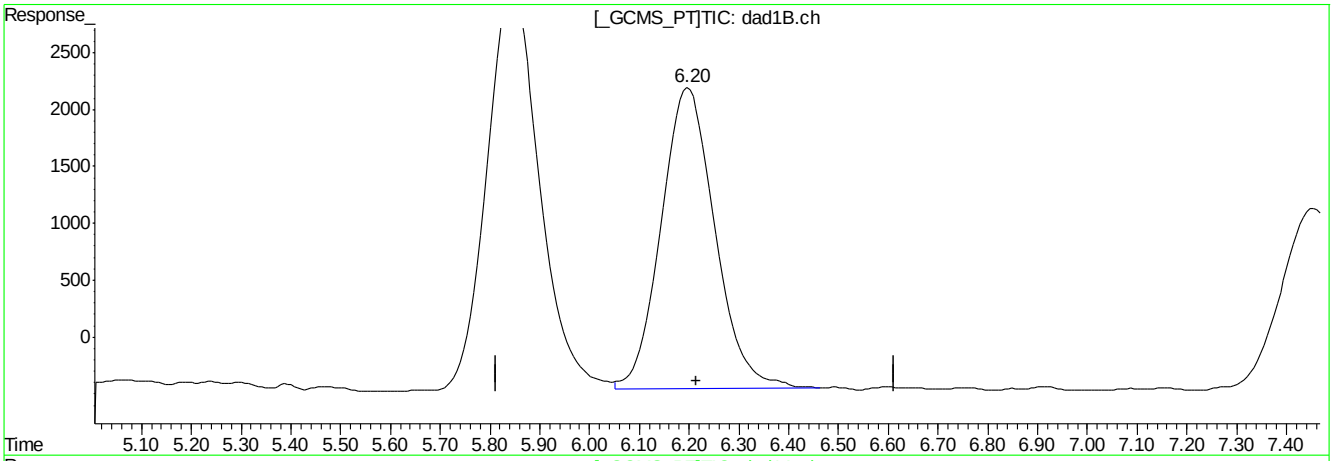
response 204018

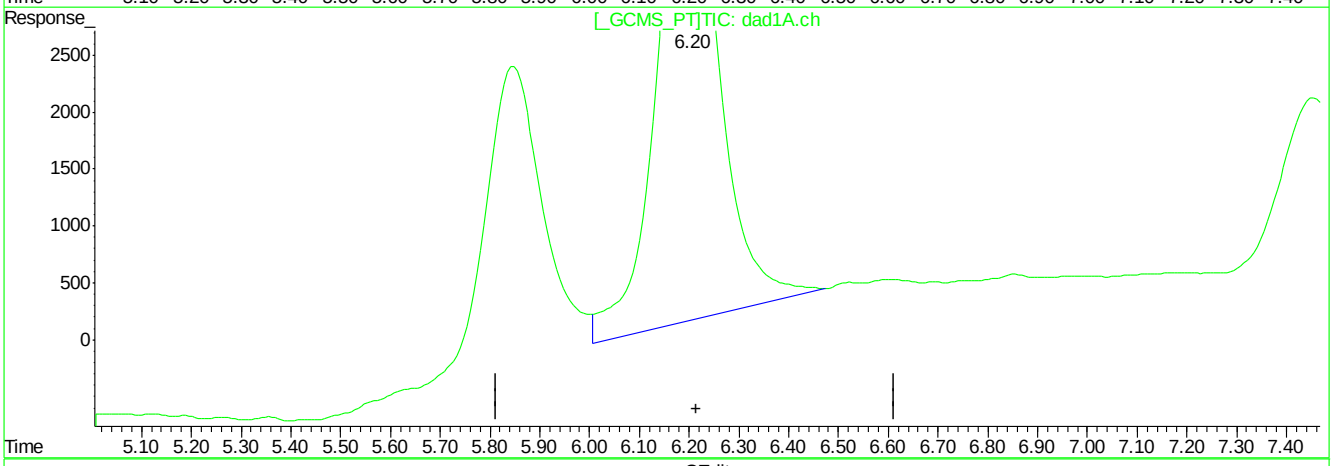
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:26:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.20min 51.836ppb

response 199482

(8) 3,5-Dinitroaniline #2

6.20min 56.245ppb

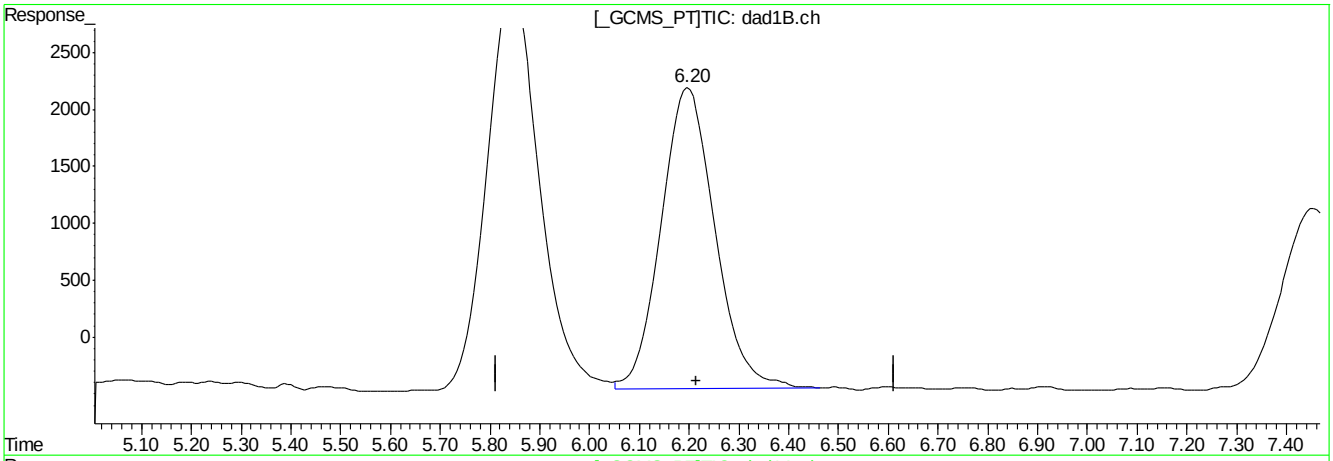
response 387219

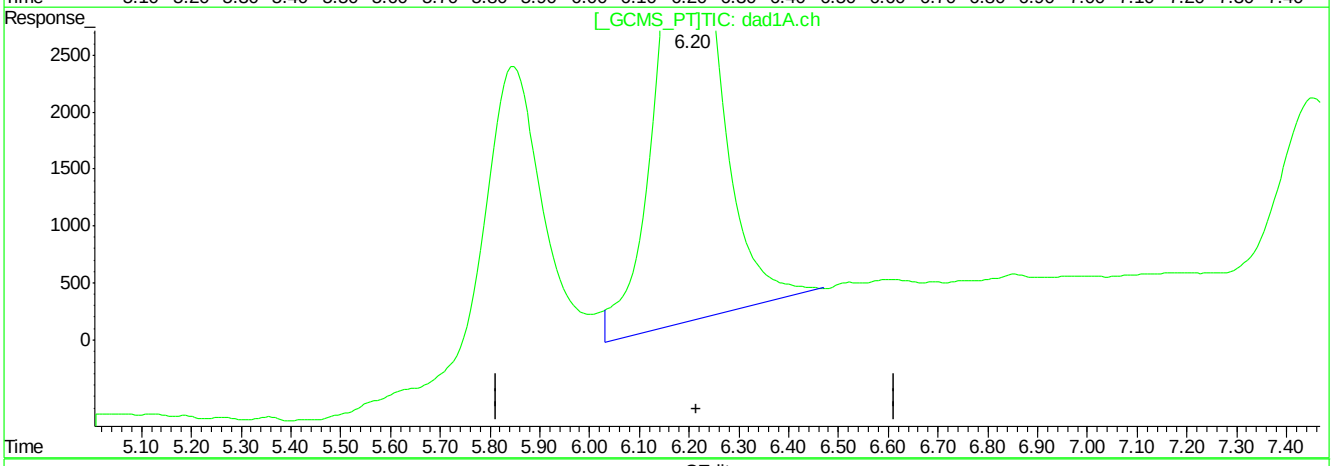
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:26:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.20min 51.836ppb

response 199482

(8) 3,5-Dinitroaniline #2

6.20min 55.980ppb m

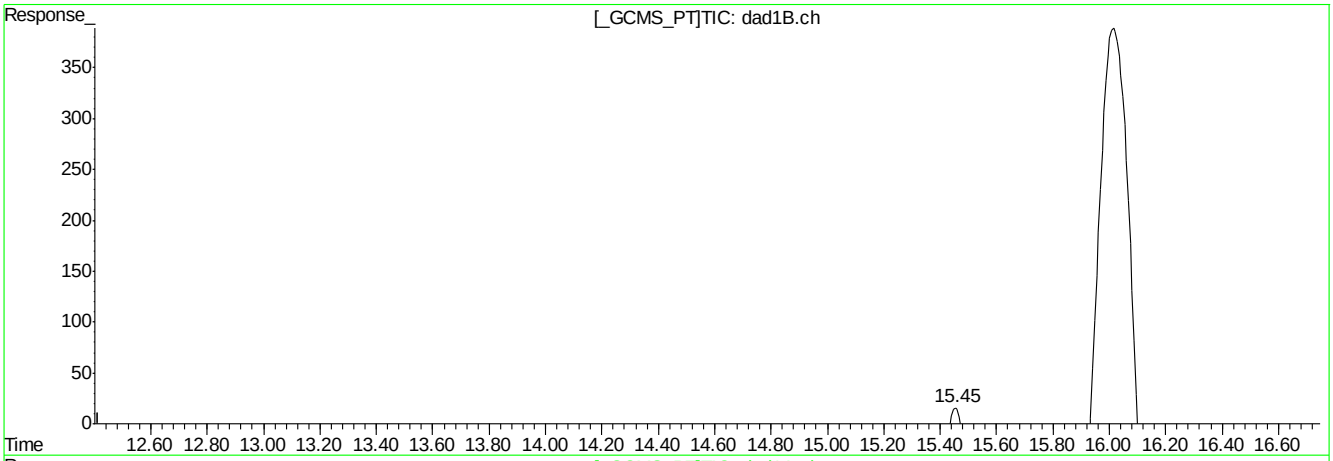
response 385391

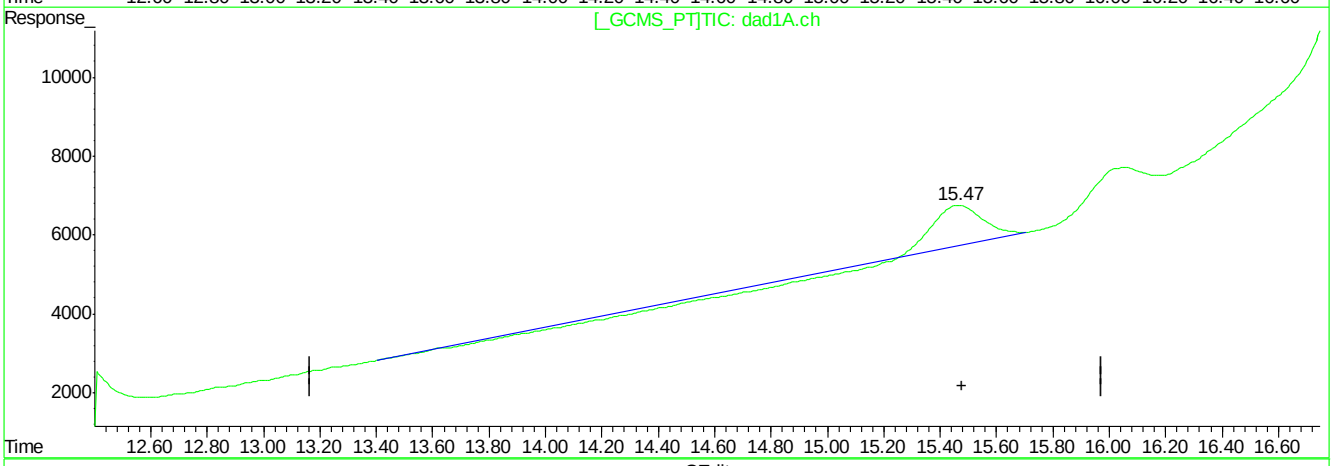
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.46min 54.019ppb

response 116436

(18) o-Nitrotoluene #2

15.47min 16.750ppb

response 47592

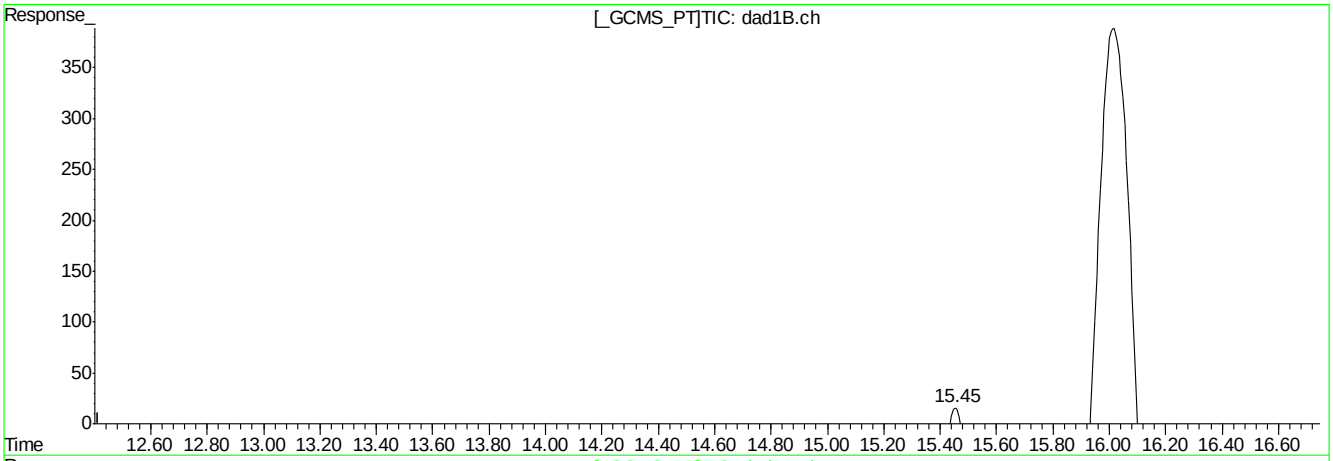
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:20 2021

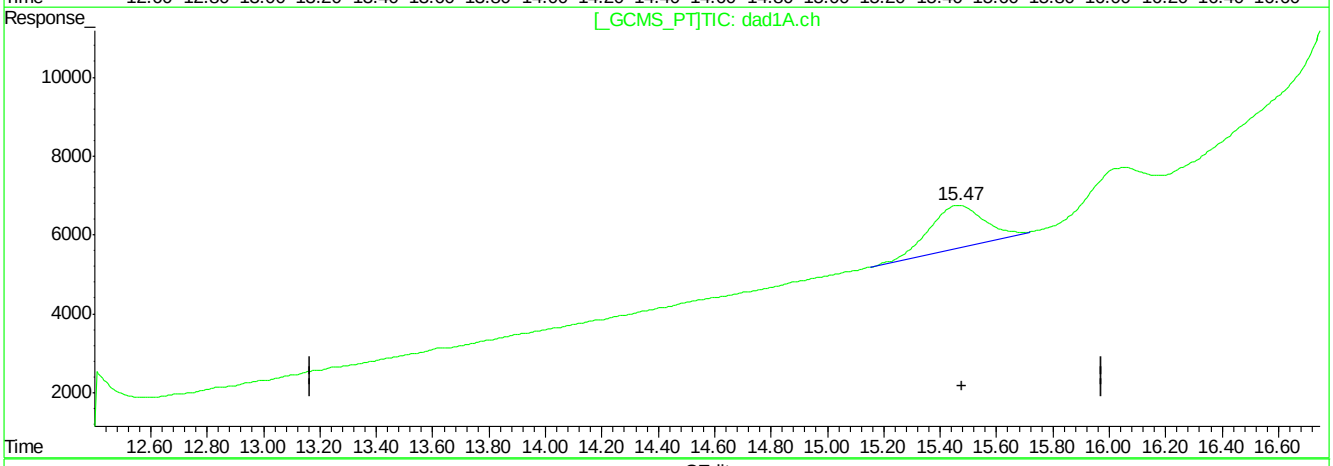
PP391044.D edits: o-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.46min 54.019ppb

response 116436

(18) o-Nitrotoluene #2

15.47min 51.890ppb m

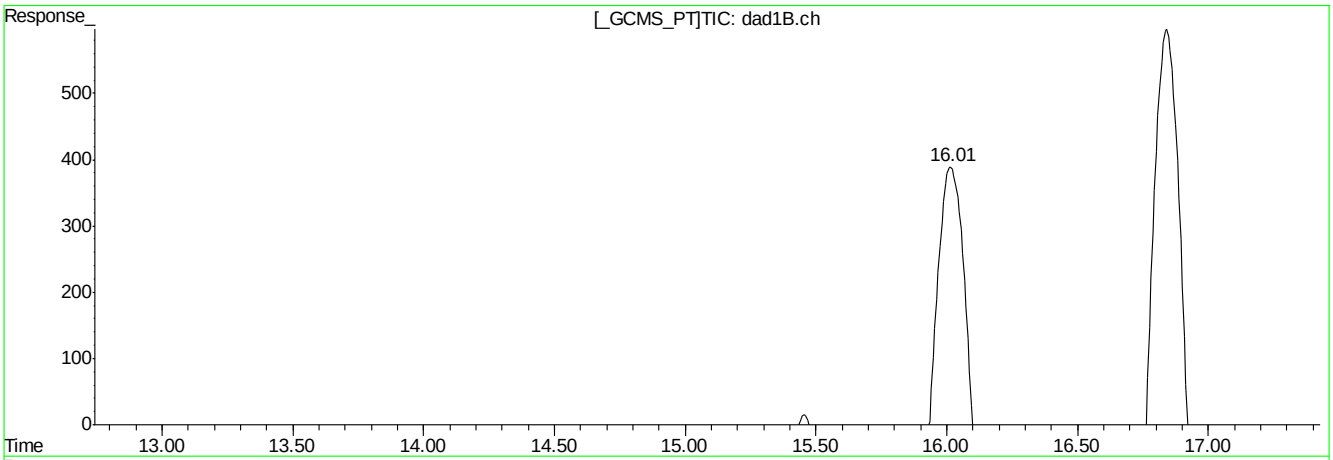
response 147434

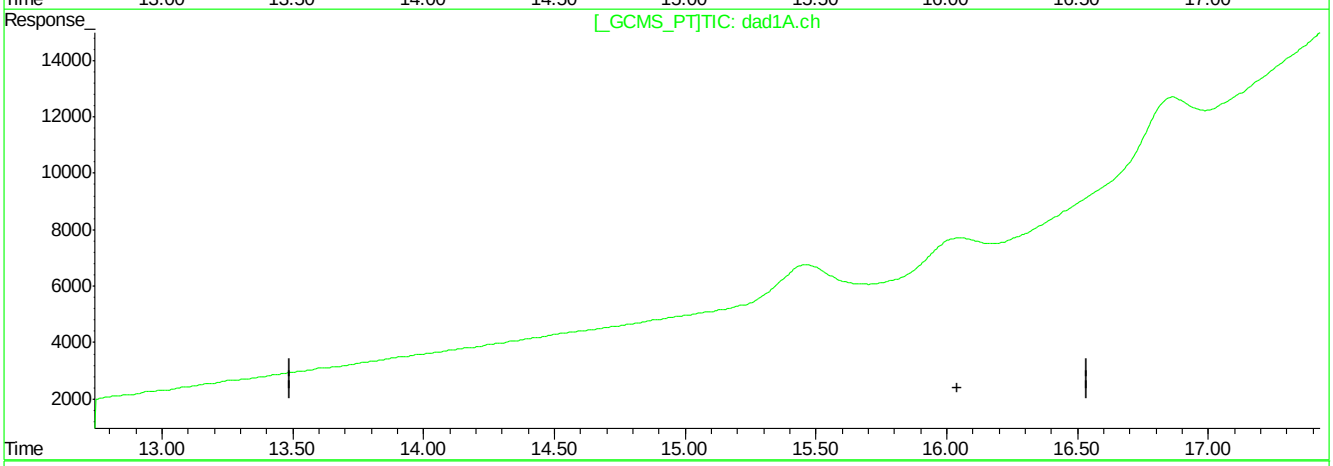
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.02min 51.625ppb

response 173143

(19) p-Nitrotoluene #2

0.00min 0.000ppb

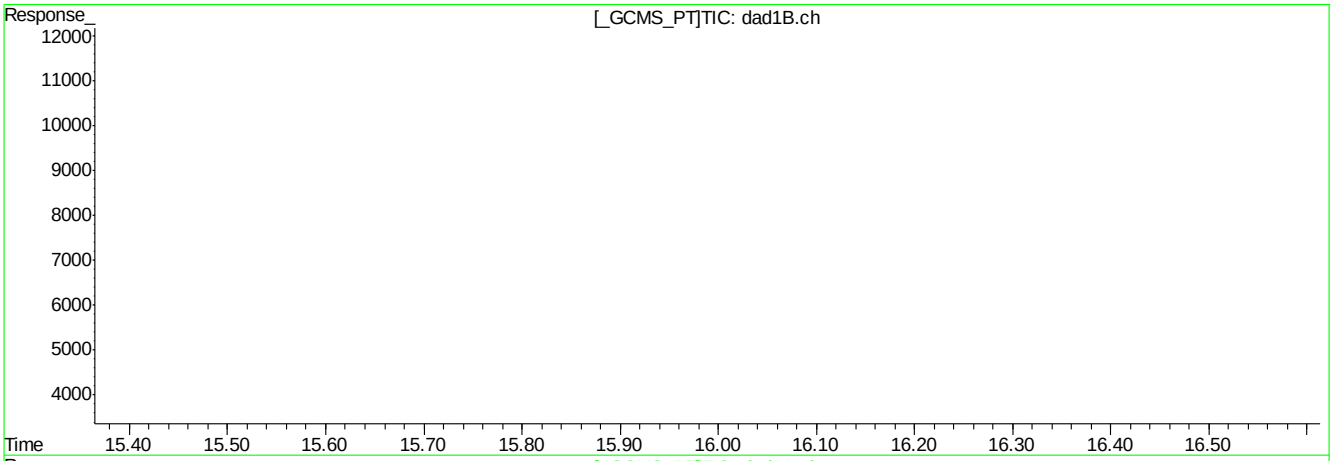
response 0

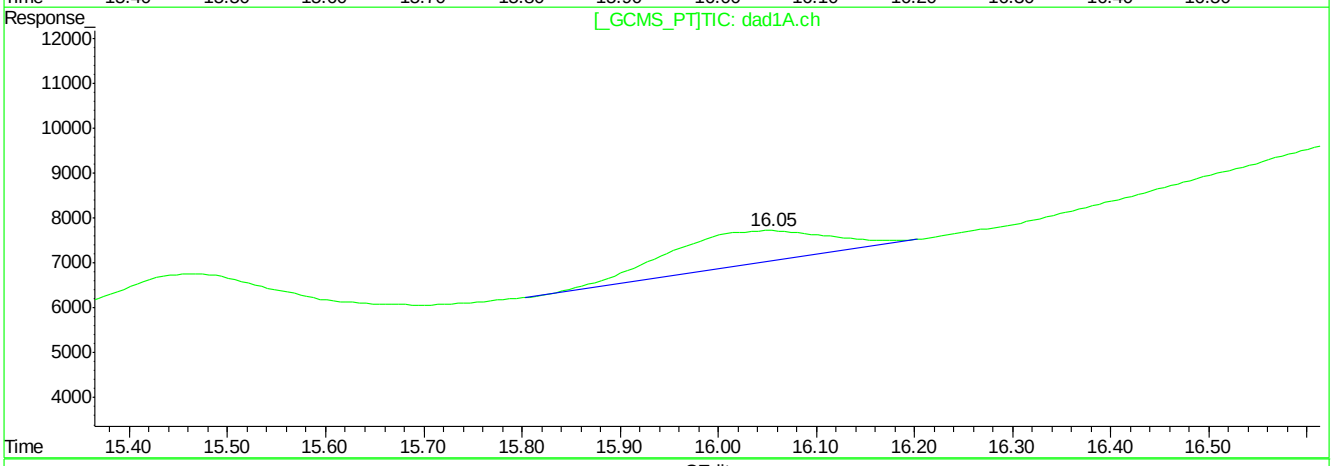
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.02min 51.625ppb

response 173143

(19) p-Nitrotoluene #2

16.05min 32.146ppb m

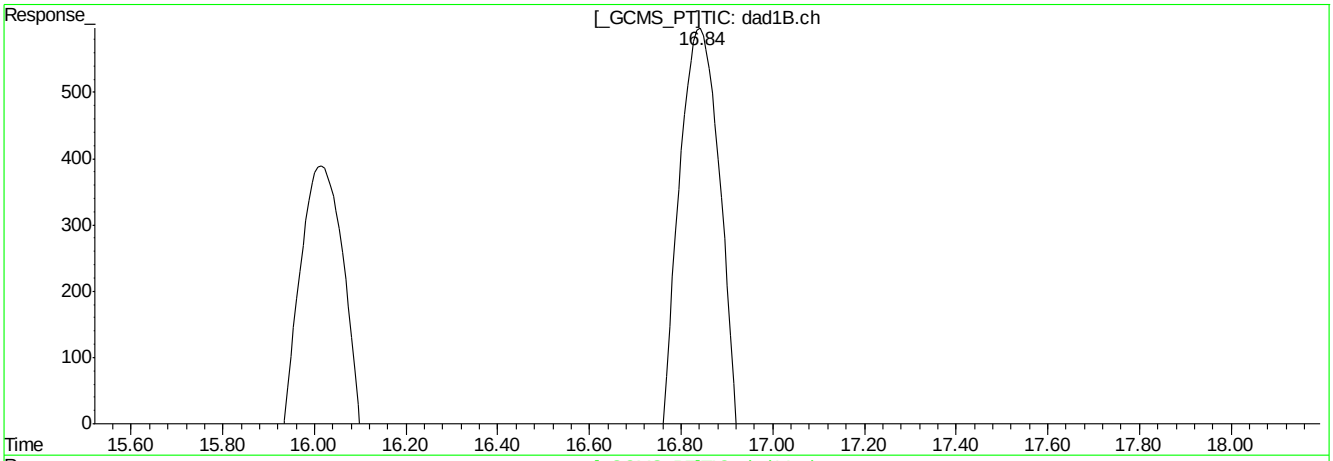
response 82337

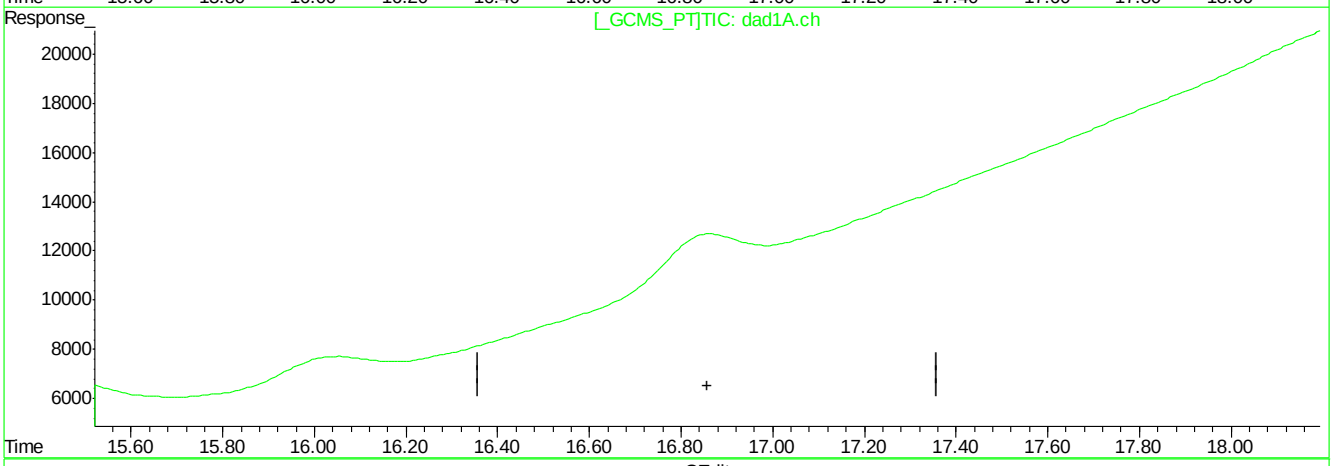
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.84min 53.167ppb

response 162054

(20) m-Nitrotoluene #2

0.00min 0.000ppb

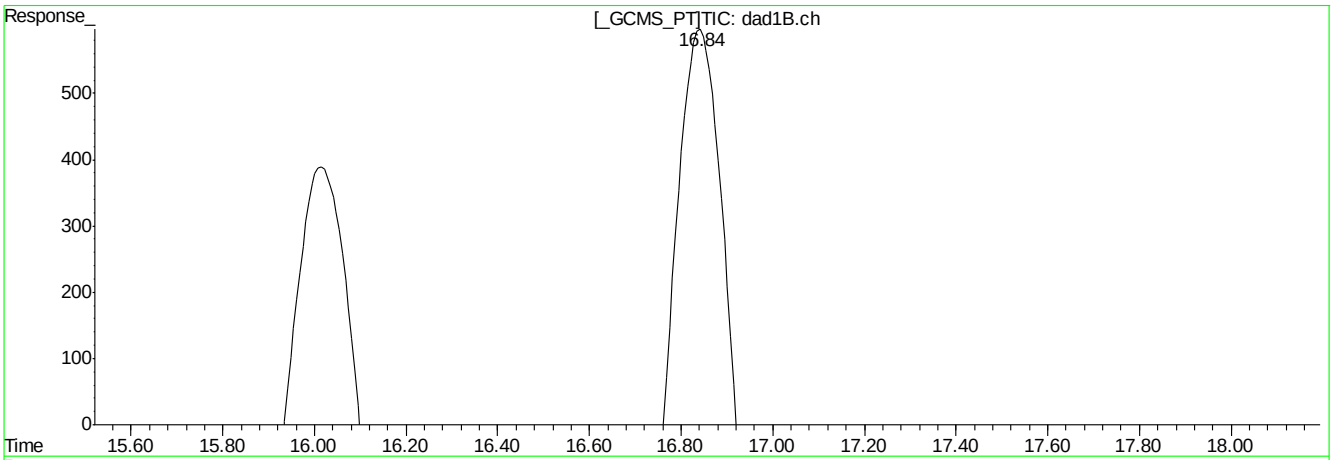
response 0

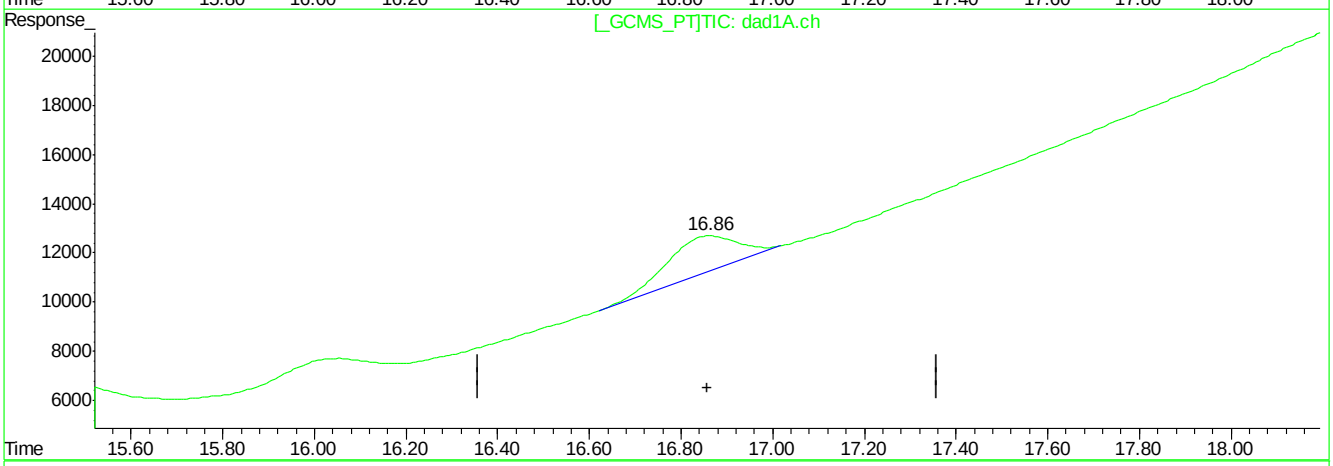
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.84min 53.167ppb

response 162054

(20) m-Nitrotoluene #2

16.86min 45.888ppb m

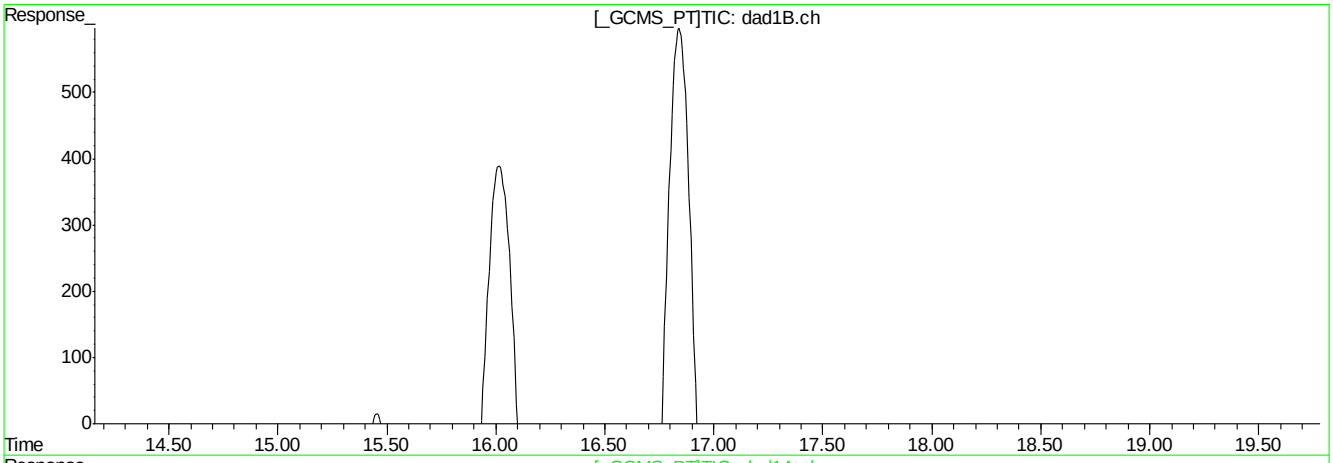
response 160245

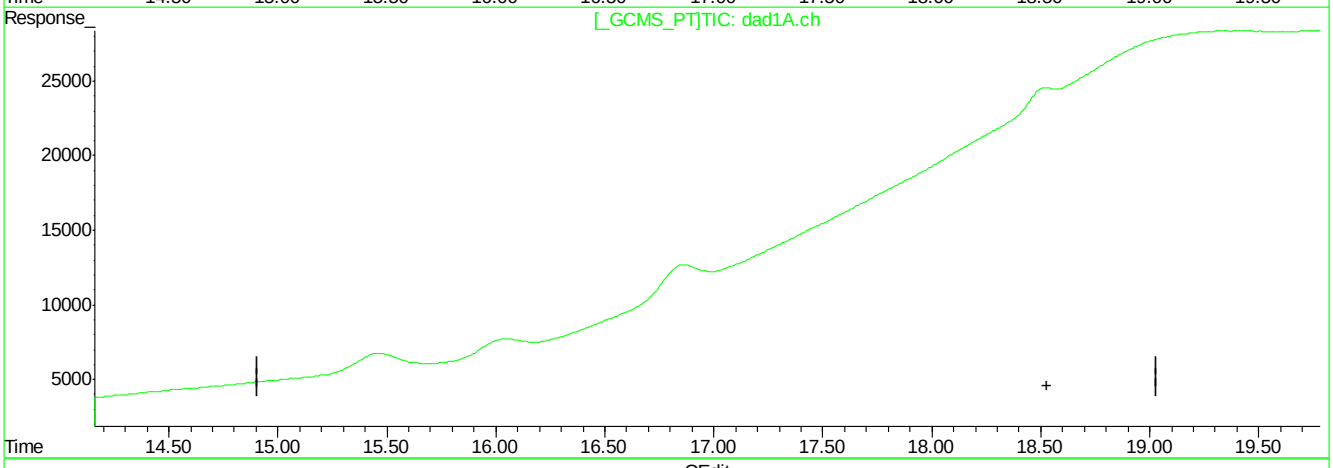
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

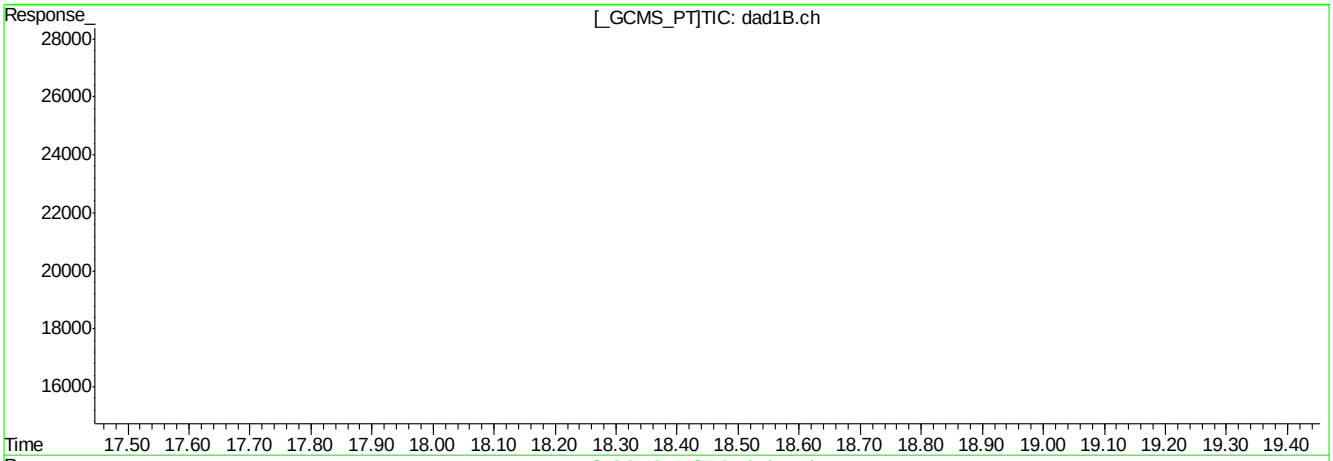
response 0

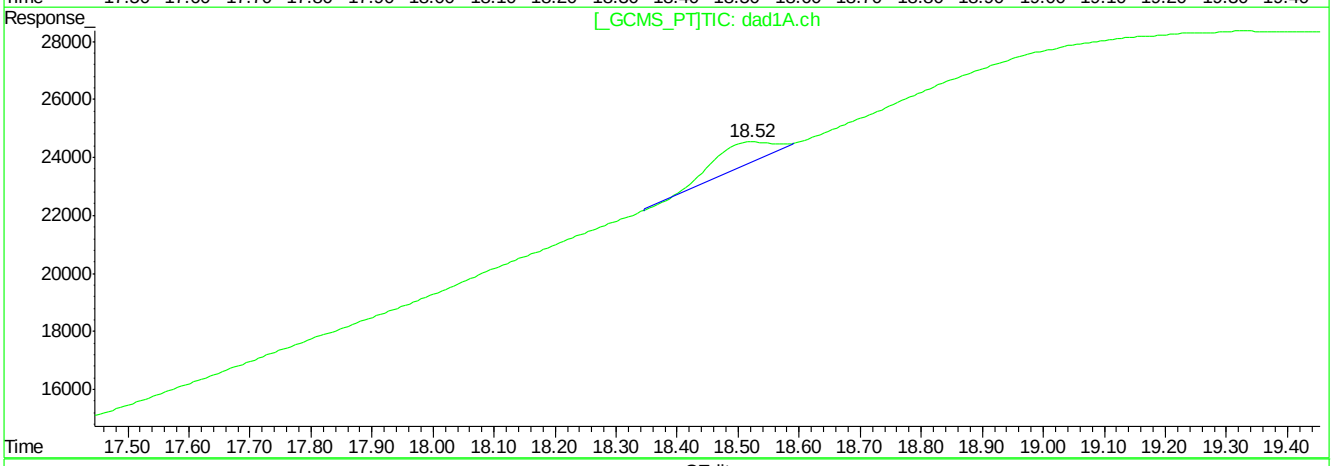
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.52min 38.436ppb m

response 52867

(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:55 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:33 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.22	11.22	215286	302408	101.650	91.090
	Spiked Amount 500.000	Range 70 - 136		Recovery =		20.33%#	18.22%#
	Target Compounds						
1)	TNX	1.31	1.31	72360	124678	38.334	40.173
2)	HMX	1.44	1.44	158702	474470	109.807	110.529
3)	DNX	1.68	1.68	223745	370194	96.948	94.479
4)	MNX	2.26	2.26	299090	471558	118.068	120.618
5)	RDX	2.88	2.88	184281	297900	101.487	102.011
6)	1,3,5-Trinitrobe	4.64	4.64	398840	768544	102.237	101.411
7)	1,3-Dinitrobenze	5.85	5.85	512345	381773	101.453	102.468m
8)	3,5-Dinitroanili	6.21	6.20	392368	692378	101.957	100.571m
9)	Nitrobenzene	7.46	7.46	297732	296047	102.461	103.544m
10)	Nitroglycerin	0.00	8.95	0	121721	N.D.	101.338 #
11)	Tetryl	9.47	9.47	308618	476672	105.308	103.121
12)	2,4,6-Trinitroto	9.85	9.85	375905	438391	101.642	100.379
13)	2-Amino-4,6-Dini	10.25	10.25	349071	492542	106.126	102.499
14)	4-Amino-2,6-Dini	10.77	10.77	267905	456178	107.304	101.618
16)	2,4-Dinitrotolue	11.86	11.86	475137	294577	105.264	101.893
17)	2,6-Dinitrotolue	12.34	12.35	282193	331858	110.768	103.240
18)	o-Nitrotoluene	15.46	15.46	222278	286701	103.122	100.906m
19)	p-Nitrotoluene	16.02	16.03	336728	205776	100.401	80.260m
20)	m-Nitrotoluene	16.85	16.85	312923	367838	102.663	105.336m
21)	PETN	0.00	18.51	0	113767	N.D. d	82.713m

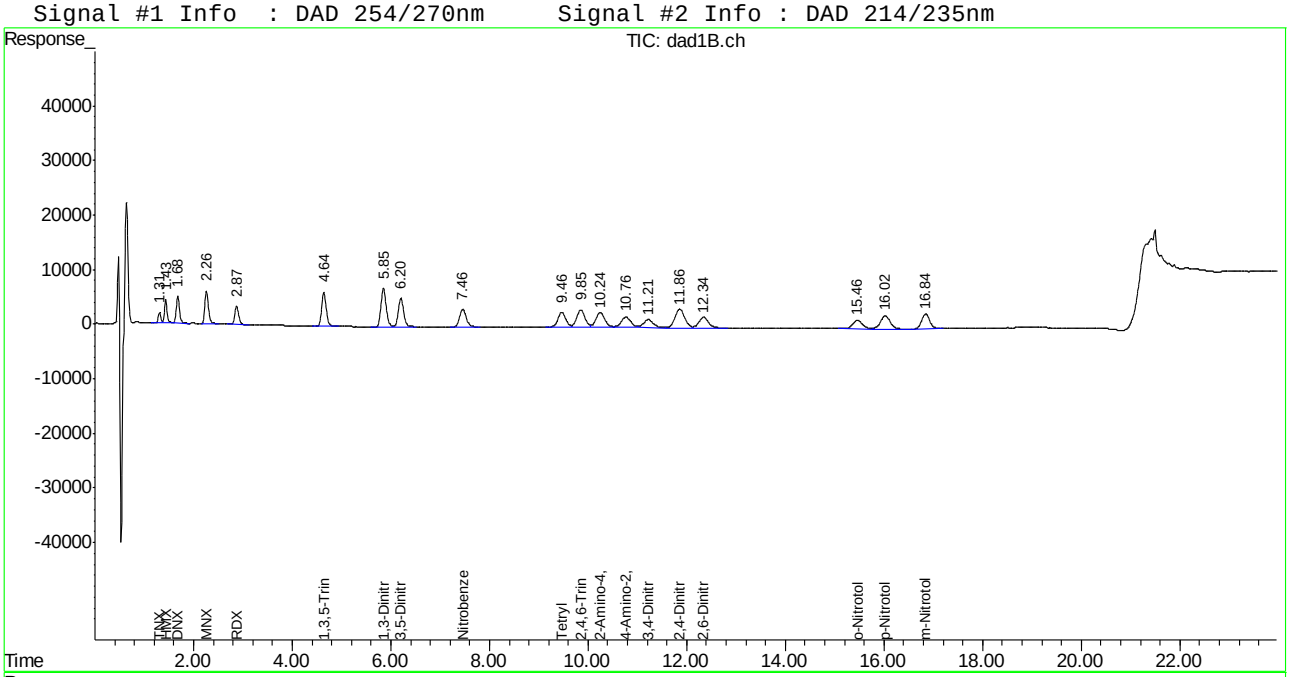
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:35:49 2021 Page 1

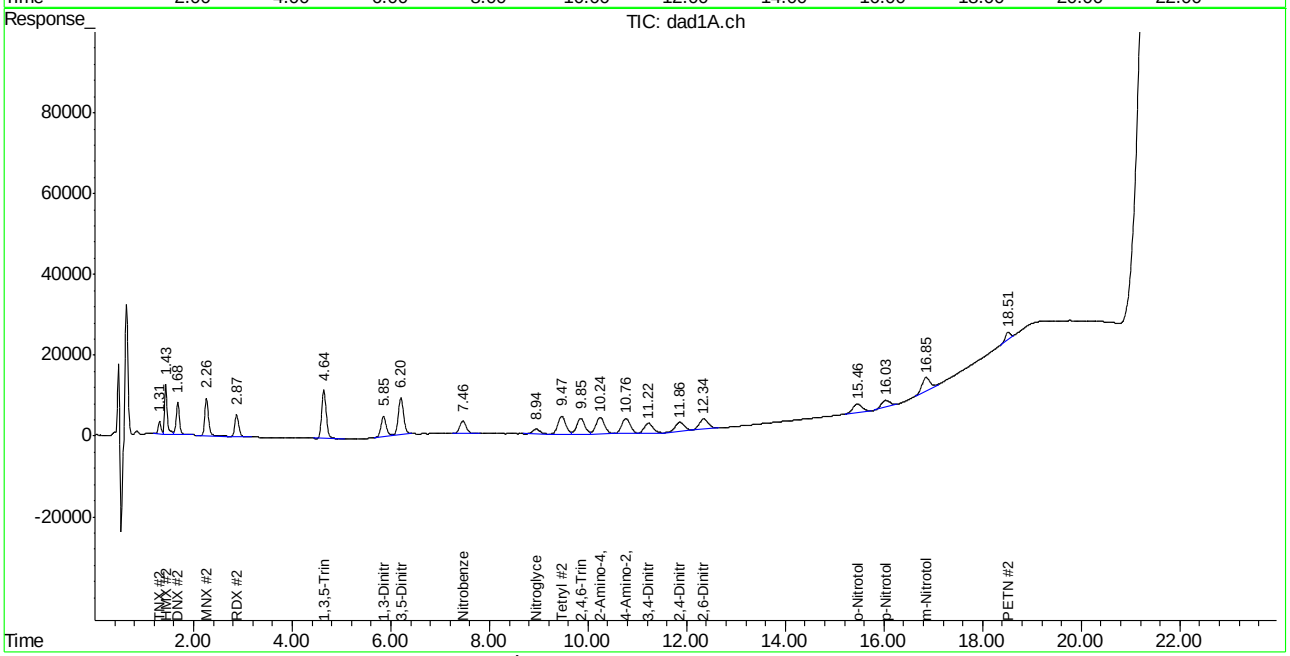
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:25 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

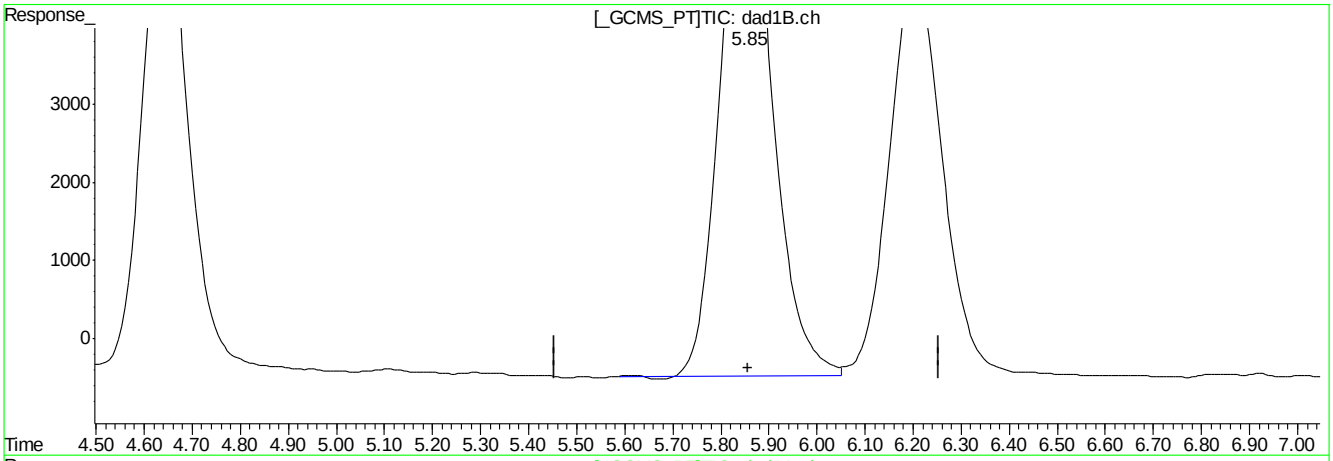
Sample Number: GPP2464-IC2464
Lab FileID: PP391045.D
Injection Time: 08/03/21 12:47
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

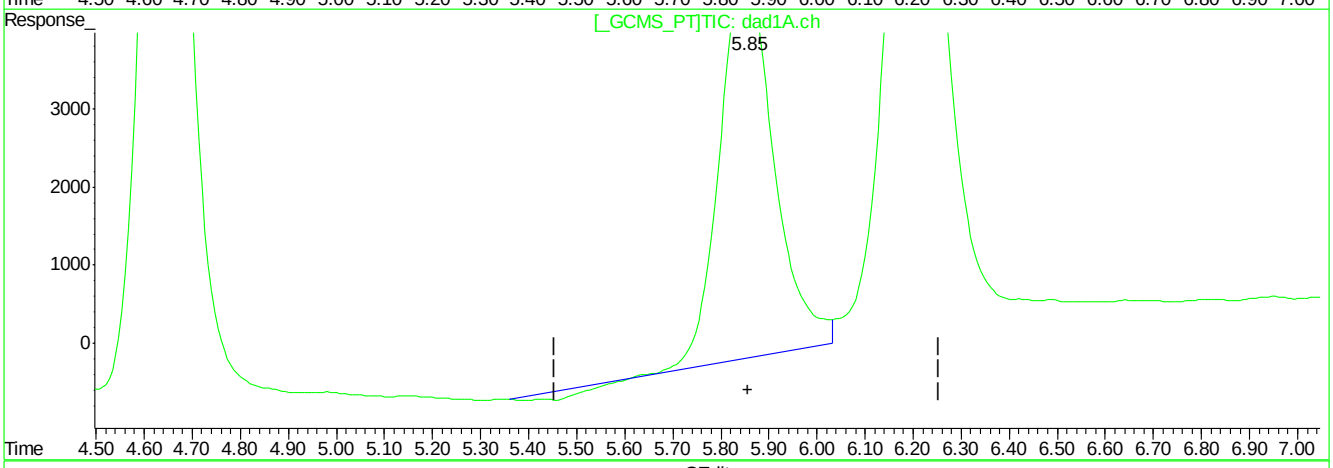
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	5.85	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.20	Poor instrument integration
Nitrobenzene	98-95-3	2	7.46	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.46	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.03	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.85	Poor instrument integration
PETN	78-11-5	2	18.51	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 101.453ppb

response 512345

(7) 1,3-Dinitrobenzene #2

5.85min 102.240ppb

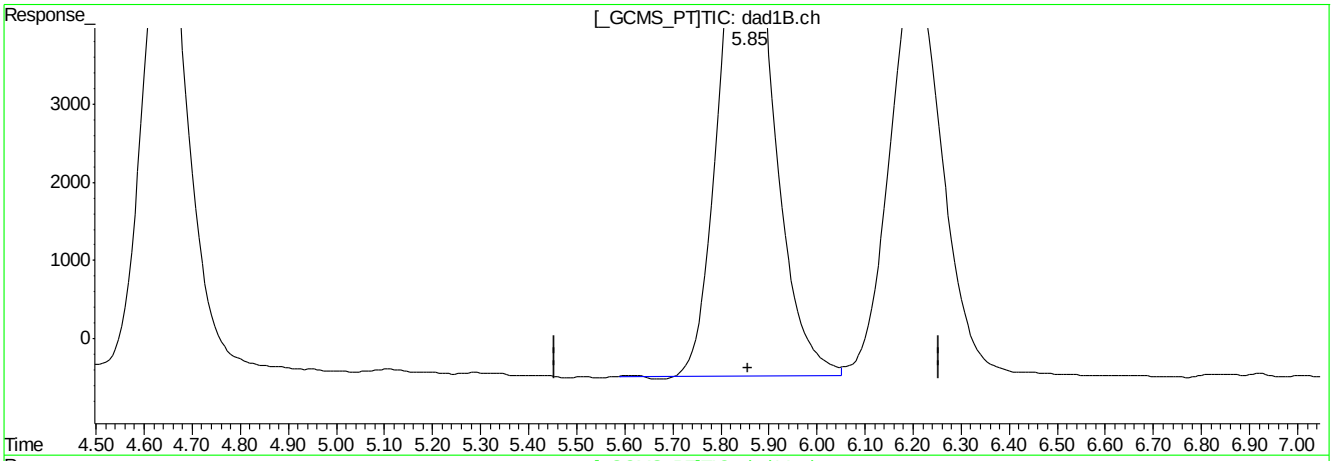
response 380926

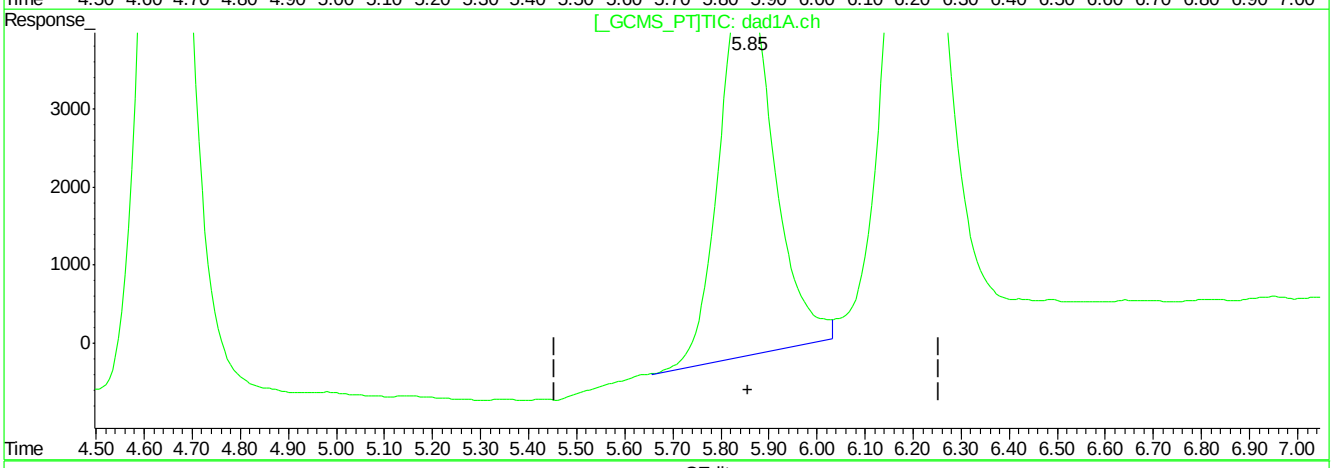
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:24:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 101.453ppb

response 512345

(7) 1,3-Dinitrobenzene #2

5.85min 102.468ppb m

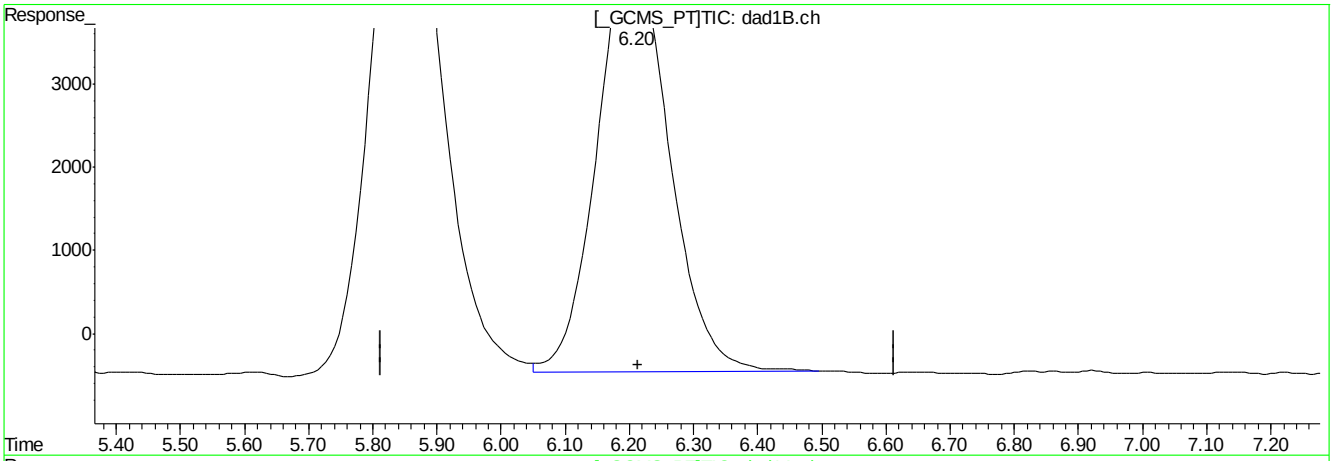
response 381773

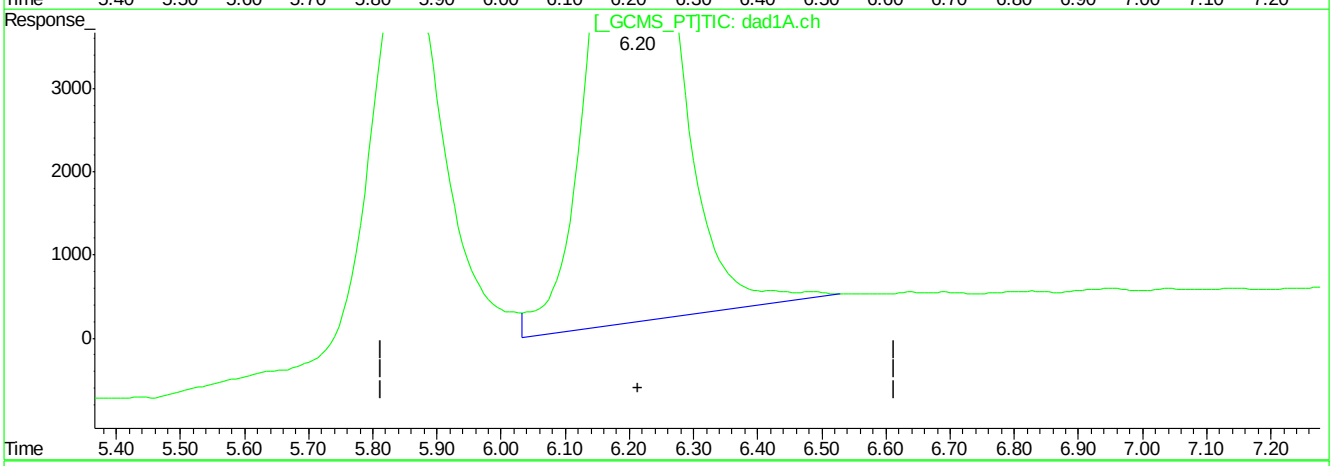
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:24:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.21min 101.957ppb

response 392368

(8) 3,5-Dinitroaniline #2

6.21min 105.306ppb

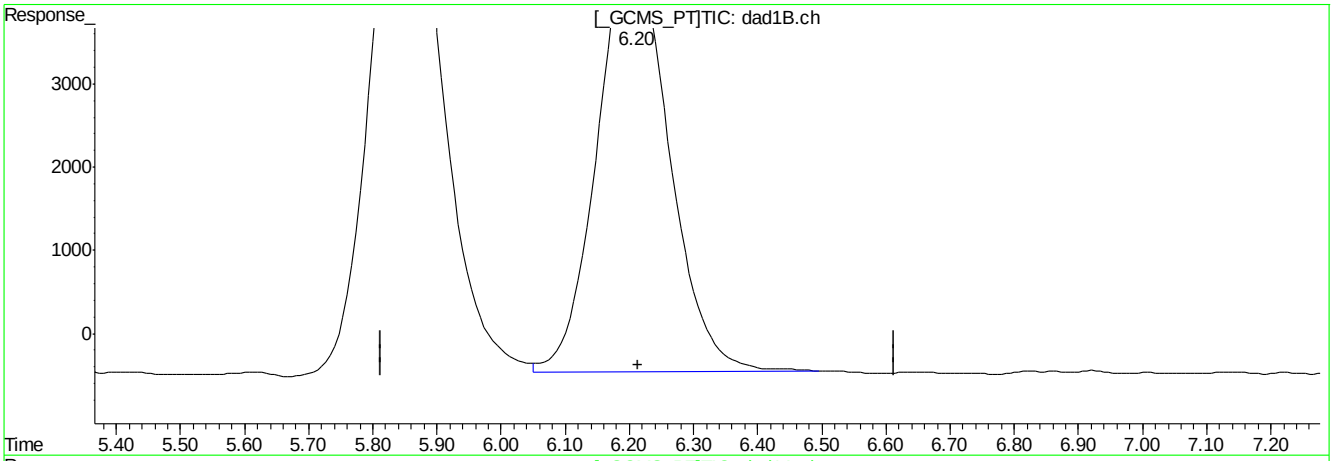
response 724973

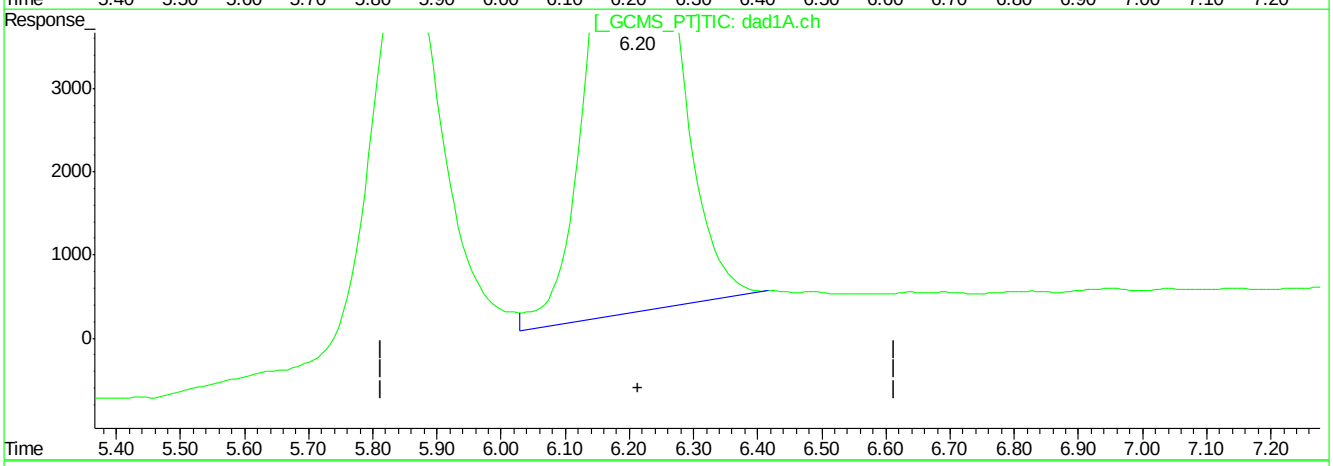
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:24:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.21min 101.957ppb

response 392368

(8) 3,5-Dinitroaniline #2

6.20min 100.571ppb m

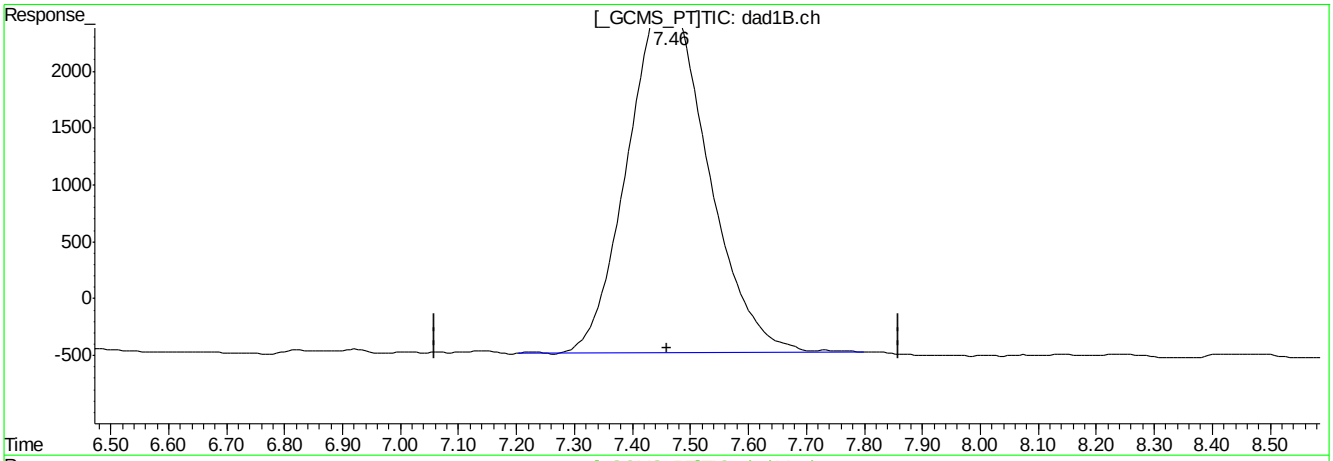
response 692378

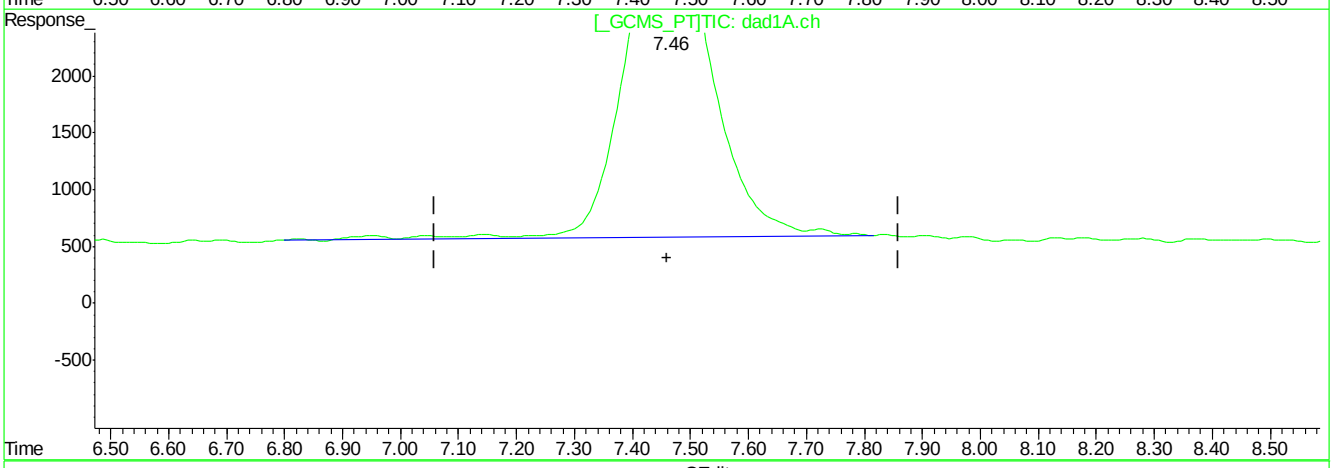
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:24:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.46min 102.461ppb

response 297732

(9) Nitrobenzene #2

7.46min 105.534ppb

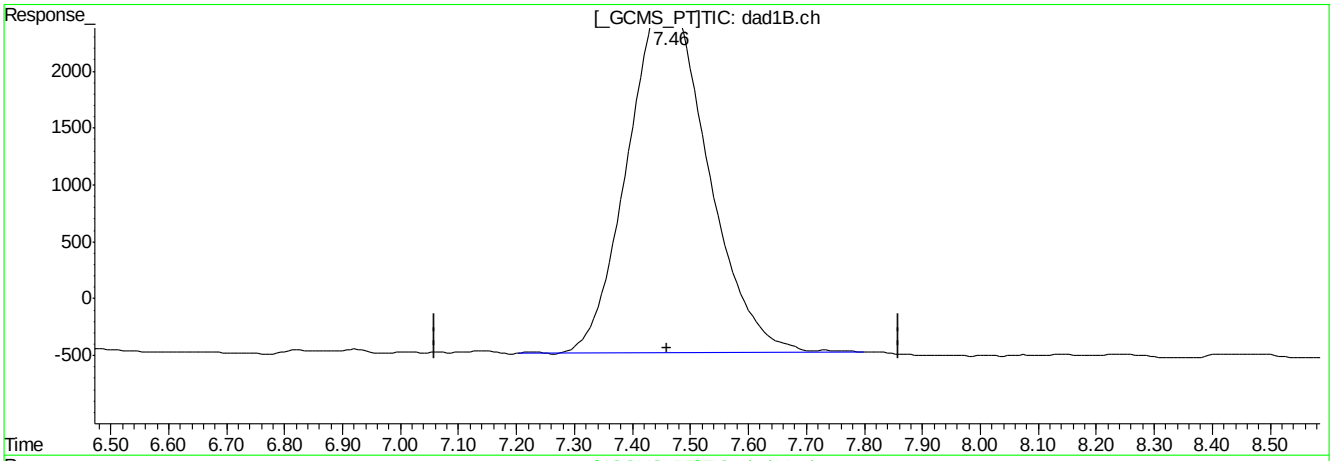
response 301736

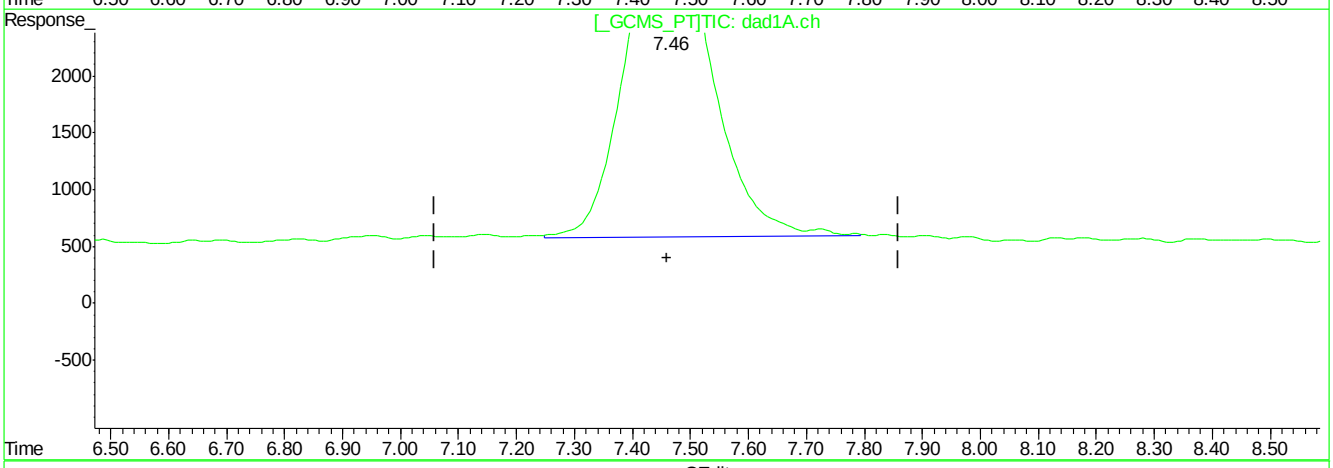
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.46min 102.461ppb

response 297732

(9) Nitrobenzene #2

7.46min 103.544ppb m

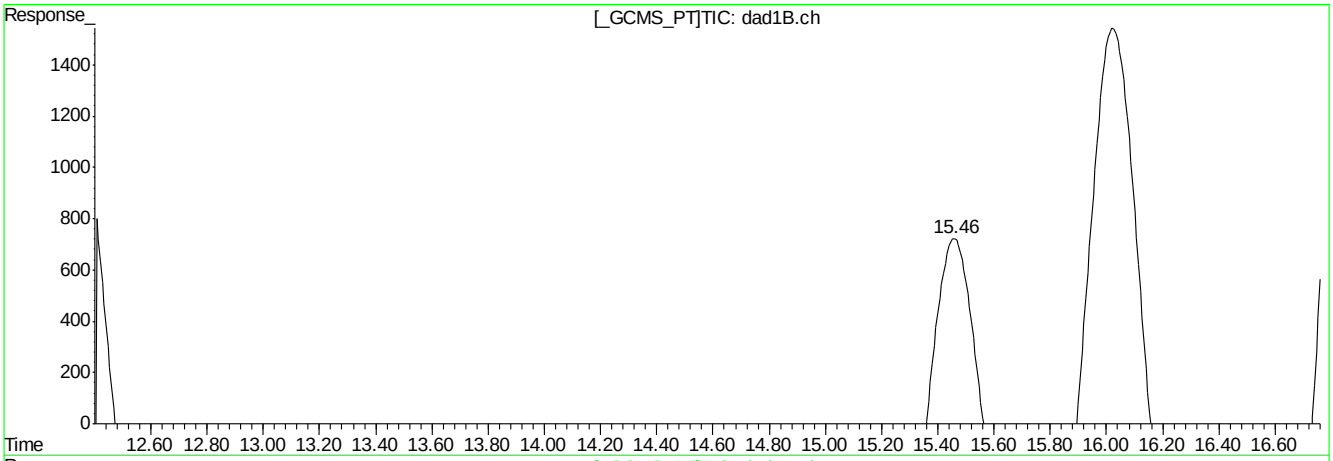
response 296047

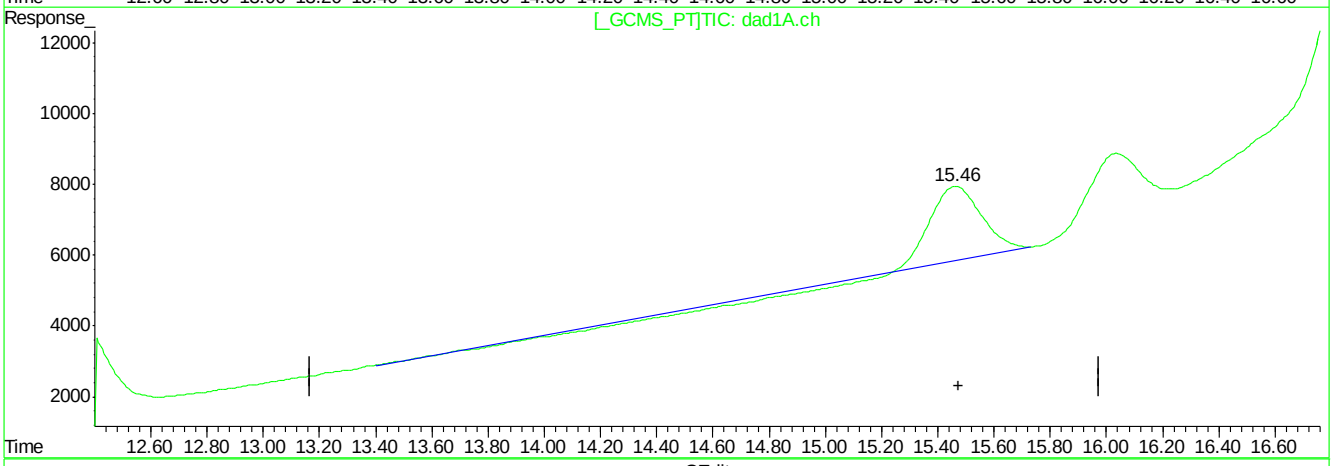
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.46min 103.122ppb

response 222278

(18) o-Nitrotoluene #2

15.46min 62.431ppb

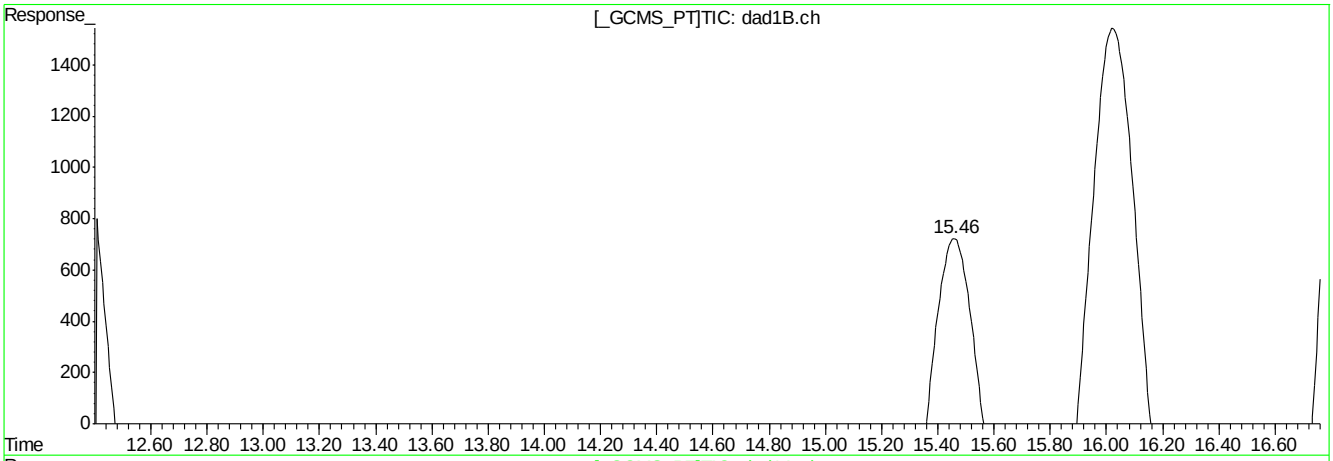
response 177383

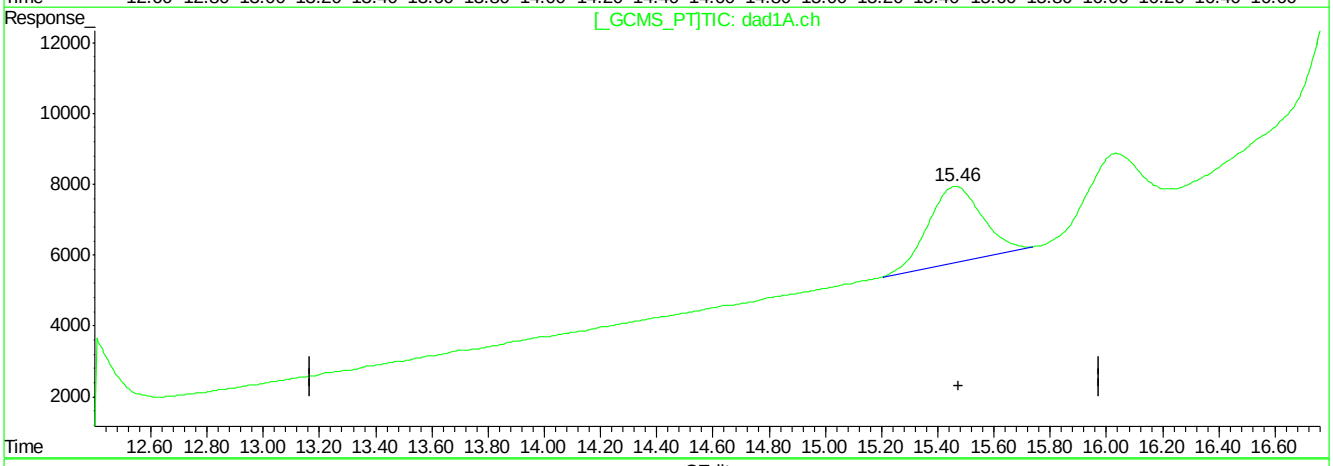
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.46min 103.122ppb

response 222278

(18) o-Nitrotoluene #2

15.46min 100.906ppb m

response 286701

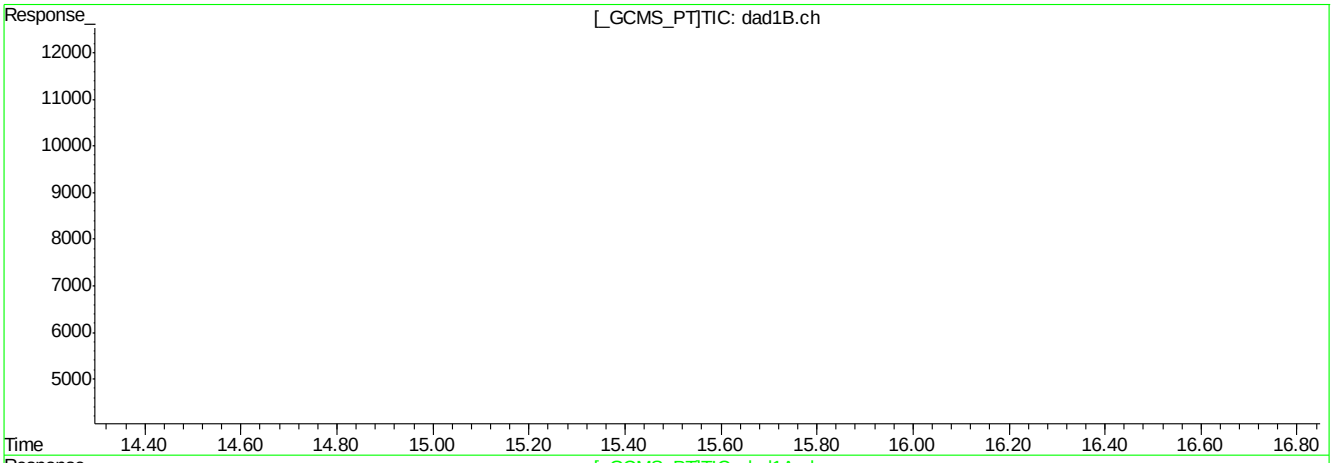
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:23 2021

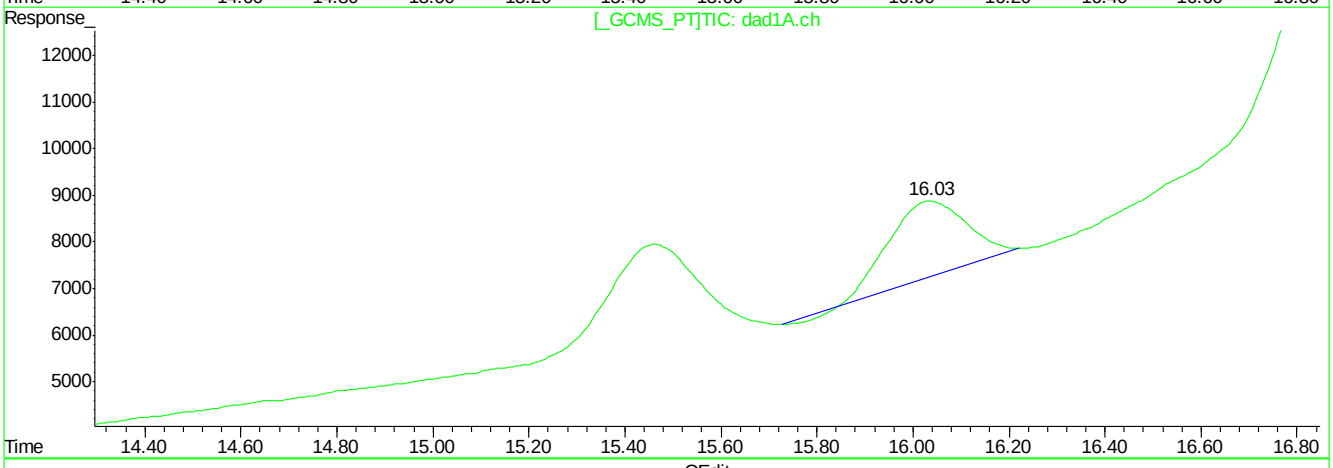
PP391045.D edits: o-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.02min 100.401ppb

response 336728

(19) p-Nitrotoluene #2

16.04min 69.405ppb

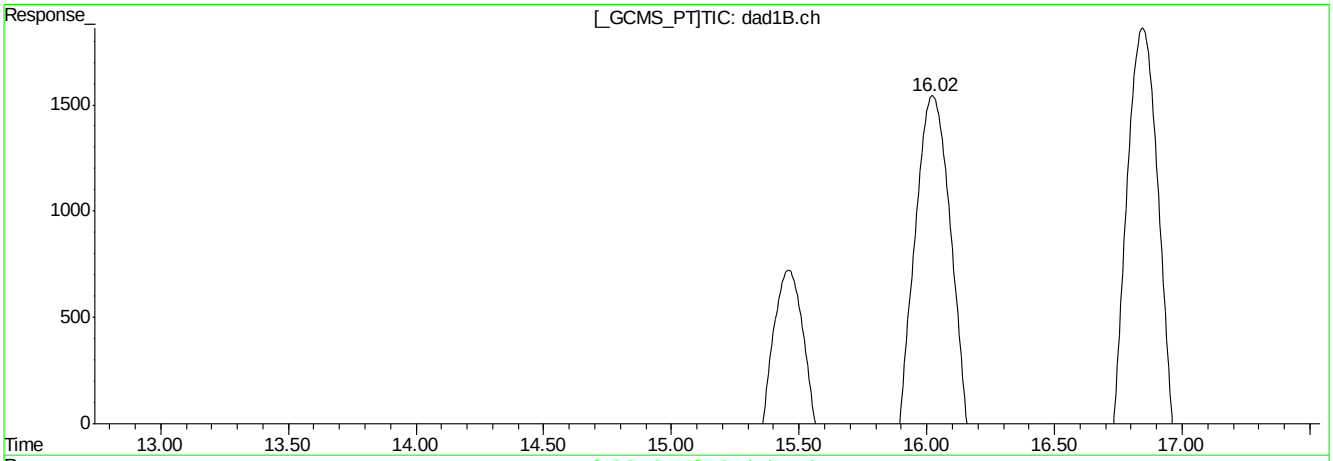
response 177906

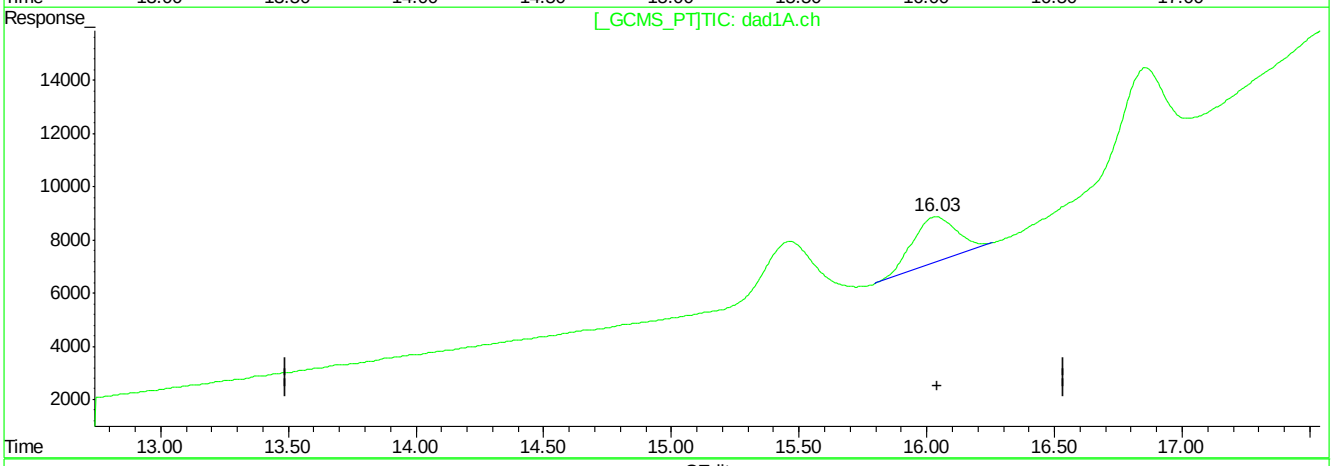
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.02min 100.401ppb

response 336728

(19) p-Nitrotoluene #2

16.03min 80.260ppb m

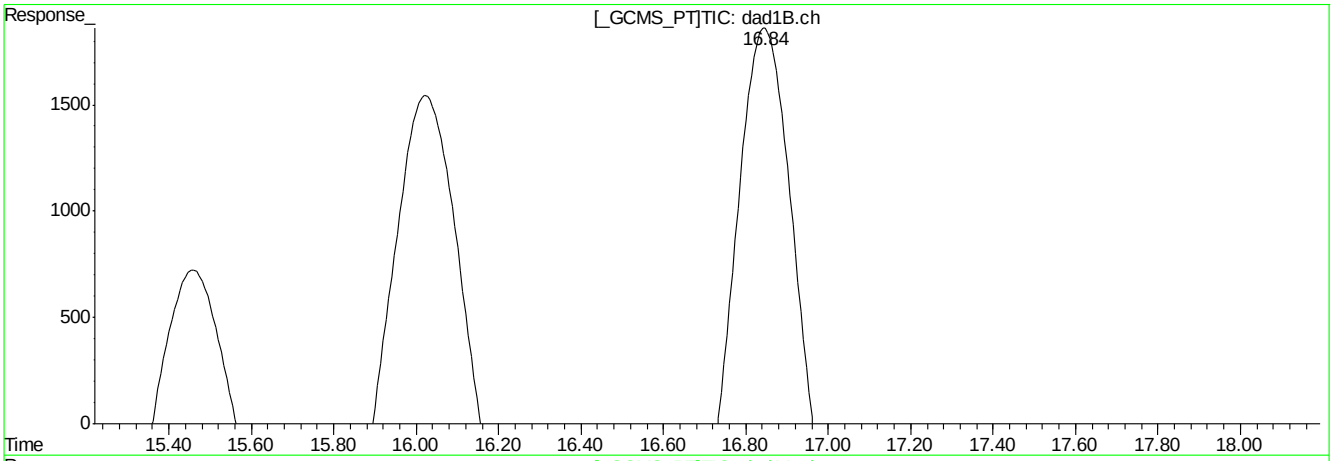
response 205776

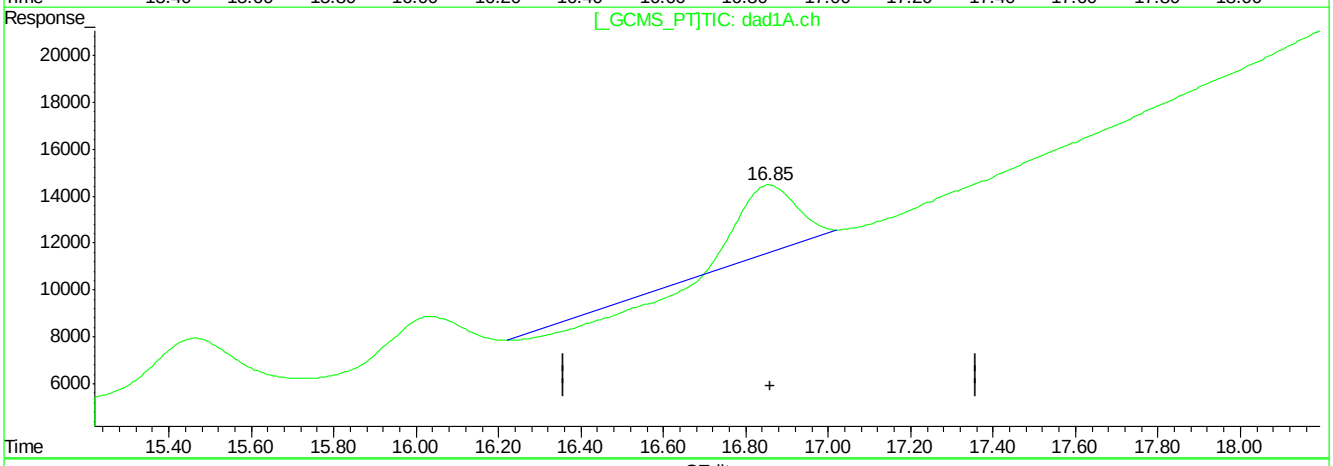
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.85min 102.663ppb

response 312923

(20) m-Nitrotoluene #2

16.86min 49.479ppb

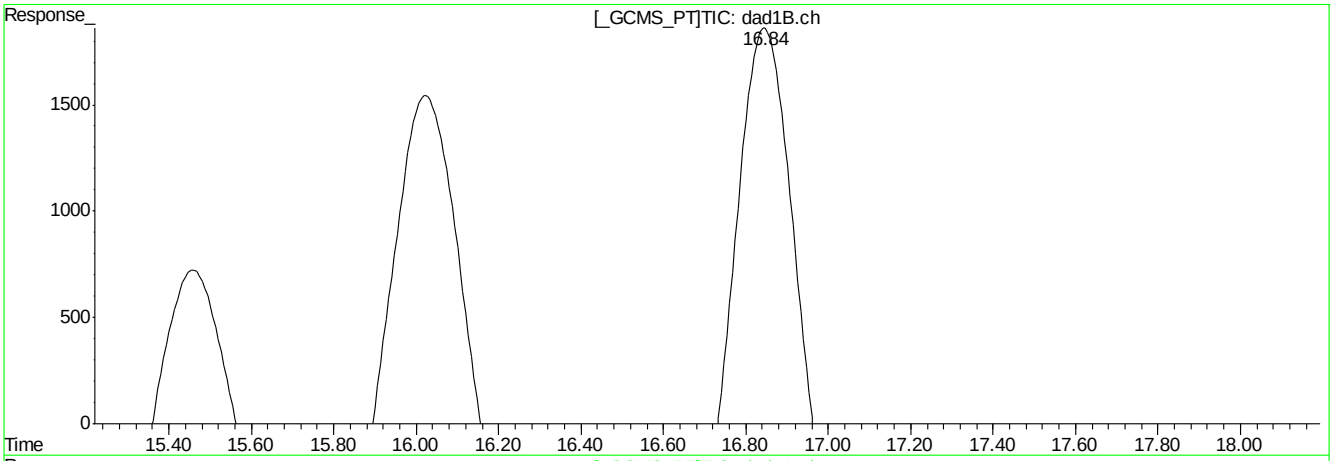
response 172784

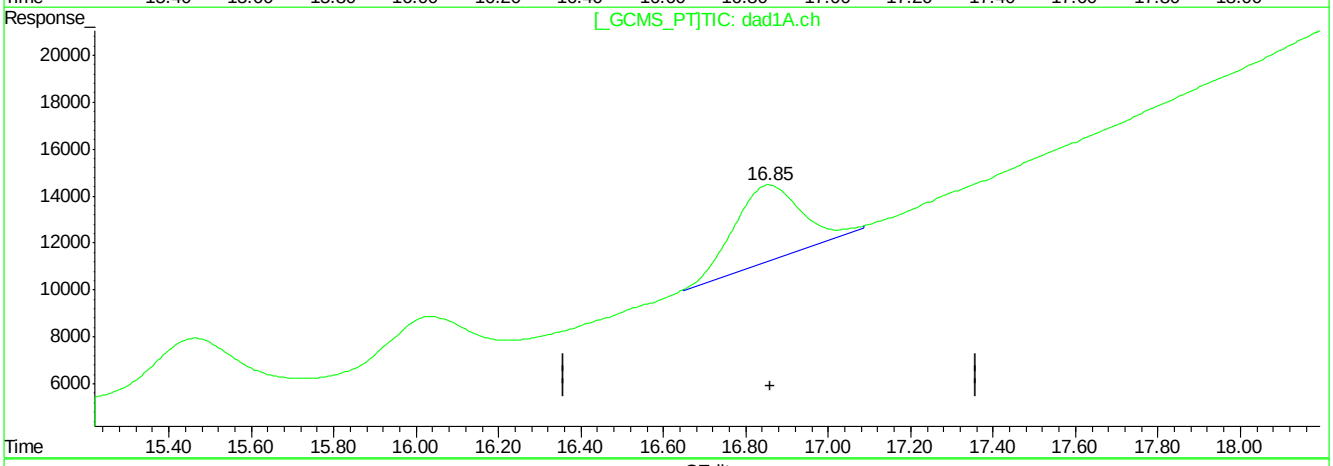
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.85min 102.663ppb

response 312923

(20) m-Nitrotoluene #2

16.85min 105.336ppb m

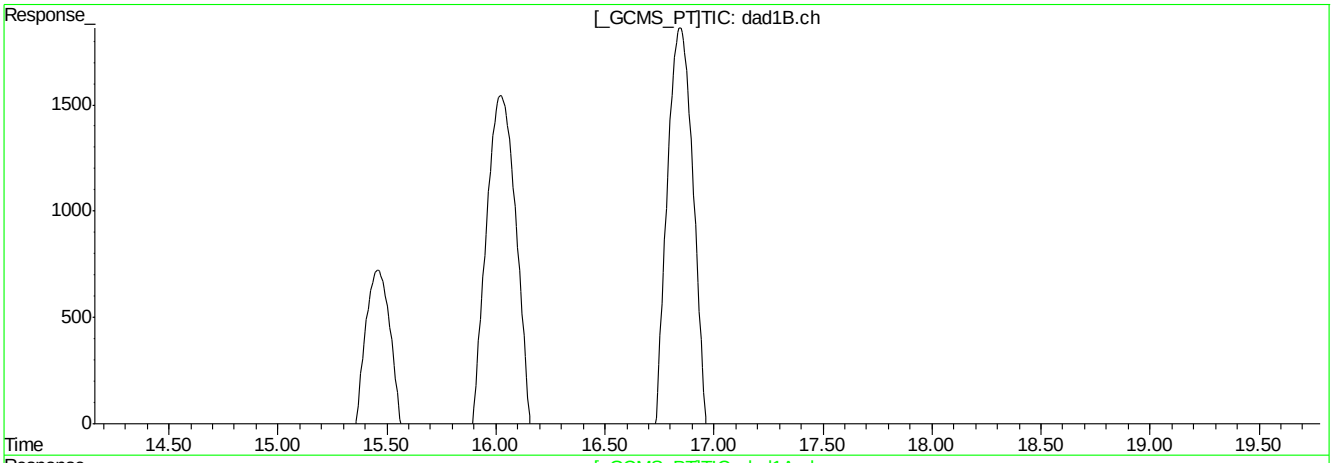
response 367838

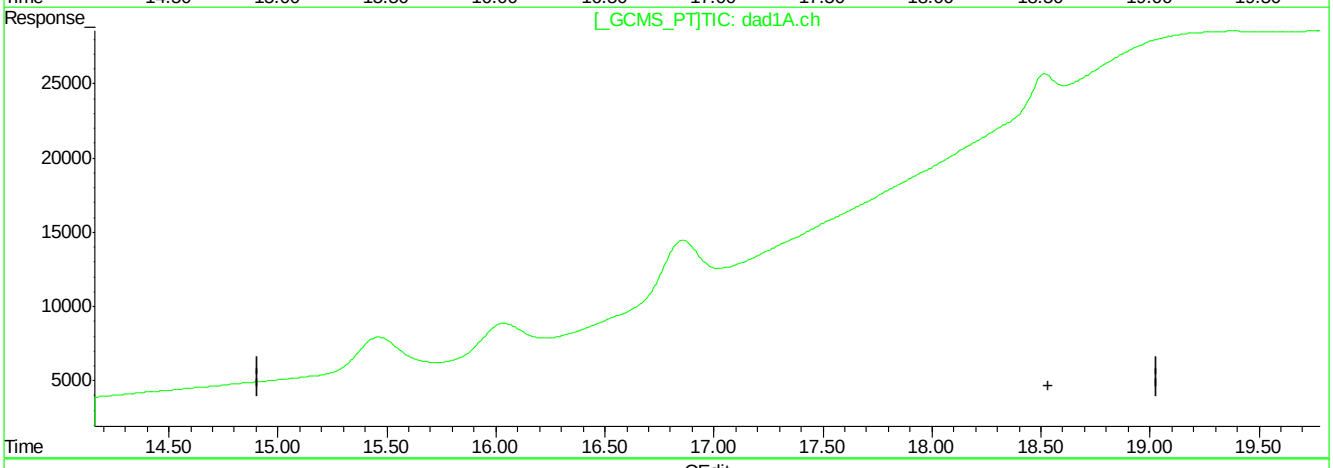
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

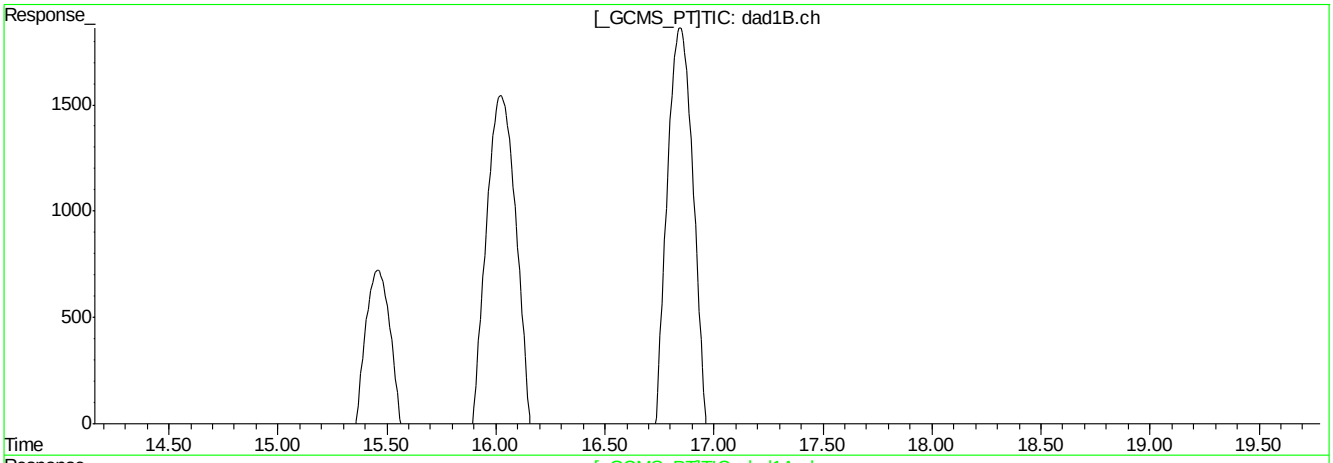
response 0

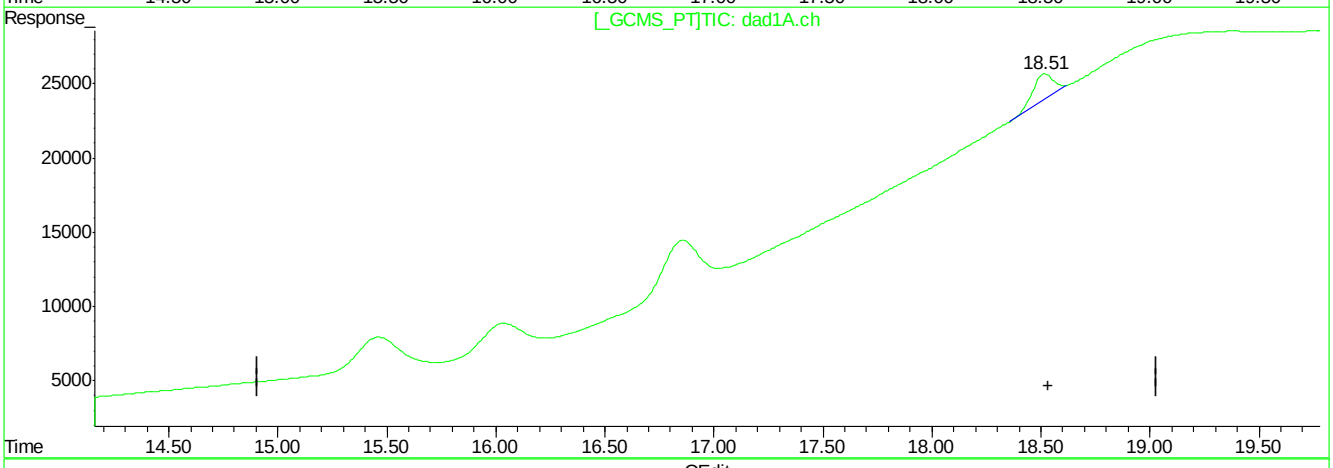
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.51min 82.713ppb m

response 113767

(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:50 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:34 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.21	11.22	411506	669064	194.297	201.532
Spiked Amount	500.000	Range	70 - 136	Recovery	=	38.86%#	40.31%#
	Target Compounds						
1)	TNX	1.31	1.31	173978	260591	92.169	83.966
2)	HMX	1.44	1.44	320036	923632	221.434	215.162
3)	DNX	1.68	1.68	450757	733619	195.312	187.231
4)	MNX	2.26	2.26	621562	966935	245.367	247.328
5)	RDX	2.87	2.88	382792	613620	210.809	210.123
6)	1,3,5-Trinitrobe	4.64	4.64	826241	1593265	211.795	210.234
7)	1,3-Dinitrobenze	5.85	5.85	1077690	756038	213.401	202.920m
8)	3,5-Dinitroanili	6.20	6.20	821023	1445136	213.344	209.913
9)	Nitrobenzene	7.45	7.45	614082	604276	211.330	211.349
10)	Nitroglycerin	0.00	8.95	0	250714	N.D.	208.584 #
11)	Tetryl	9.46	9.46	628778	981892	214.554	212.418
12)	2,4,6-Trinitroto	9.85	9.85	765725	907216	207.047	207.727
13)	2-Amino-4,6-Dini	10.24	10.24	694658	1012529	211.193	210.710
14)	4-Amino-2,6-Dini	10.76	10.76	524112	972465	209.922	216.625
16)	2,4-Dinitrotolue	11.86	11.86	964367	628600	213.651	217.431
17)	2,6-Dinitrotolue	12.34	12.34	556357	708736	218.384	220.487
18)	o-Nitrotoluene	15.46	15.46	448911	594838	208.265	209.357m
19)	p-Nitrotoluene	16.02	16.03	694697	468007	207.135	182.154
20)	m-Nitrotoluene	16.85	16.84	656877	738915	215.507	211.598m
21)	PETN	0.00	18.52	0	266949	N.D.	194.083m#

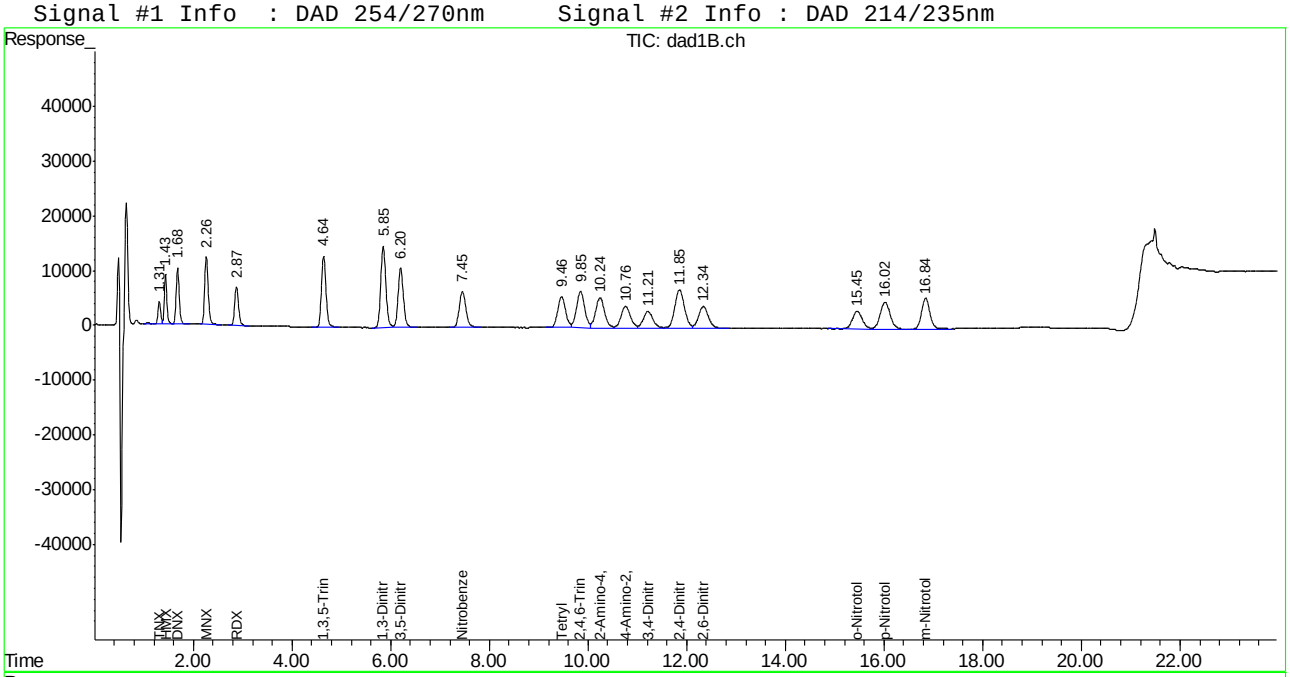
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:35:50 2021 Page 1

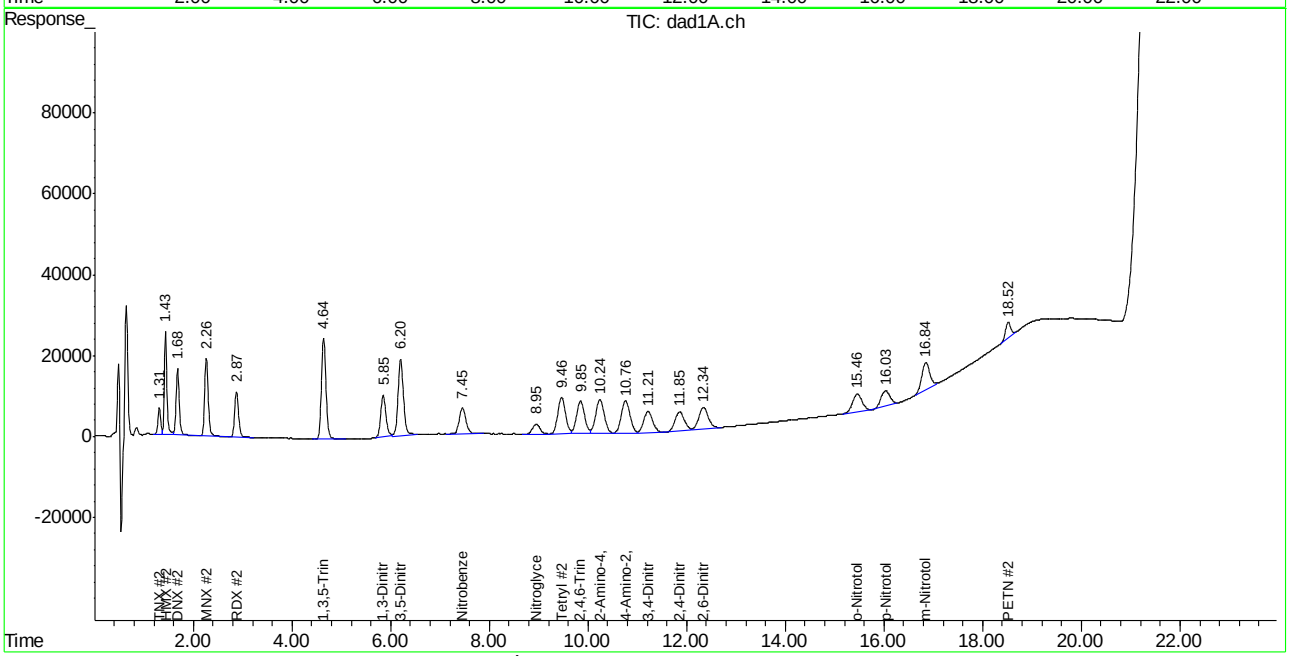
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:23 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

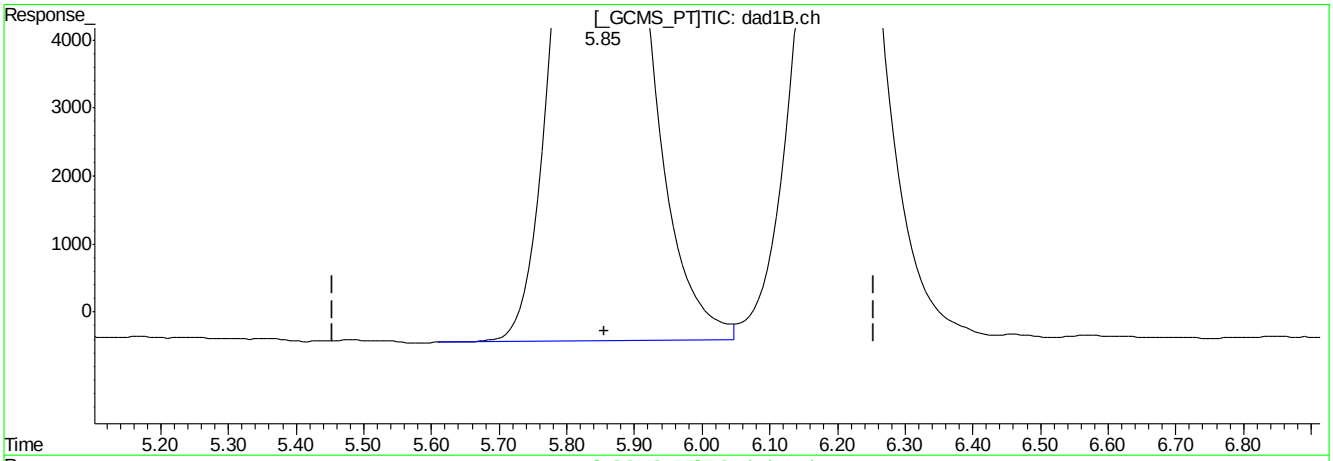
Sample Number: GPP2464-IC2464
Lab FileID: PP391046.D
Injection Time: 08/03/21 13:18
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

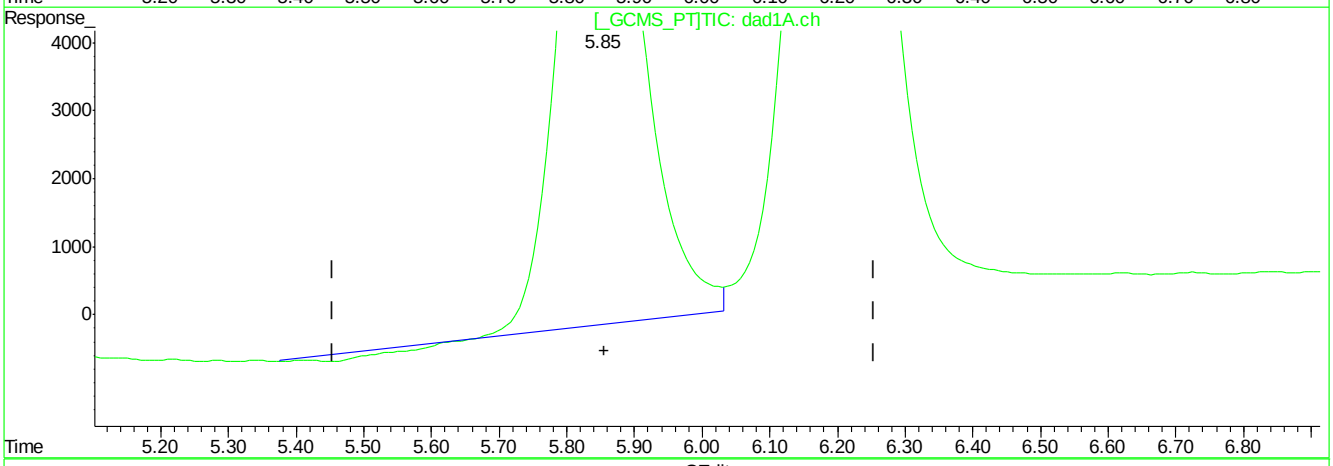
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	5.85	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.46	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.84	Poor instrument integration
PETN	78-11-5	2	18.52	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 213.401ppb

response 1077690

(7) 1,3-Dinitrobenzene #2

5.85min 204.160ppb

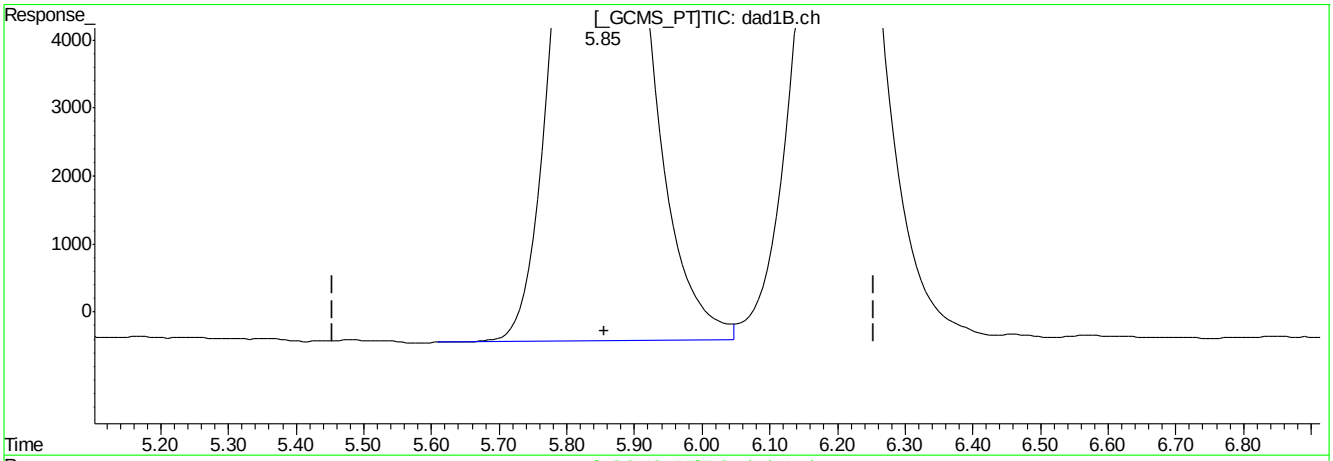
response 760658

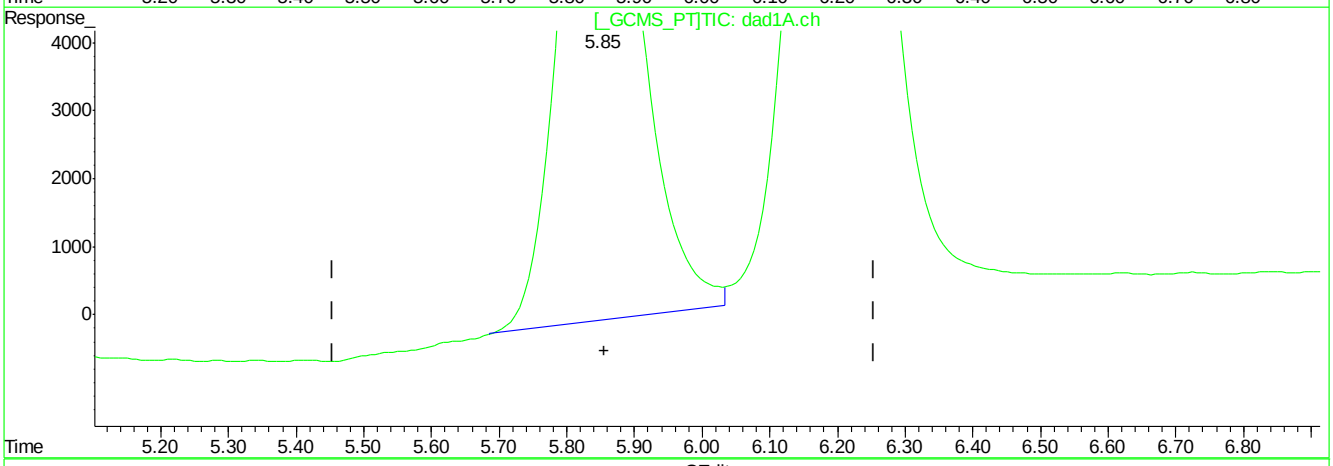
(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 213.401ppb

response 1077690

(7) 1,3-Dinitrobenzene #2

5.85min 202.920ppb m

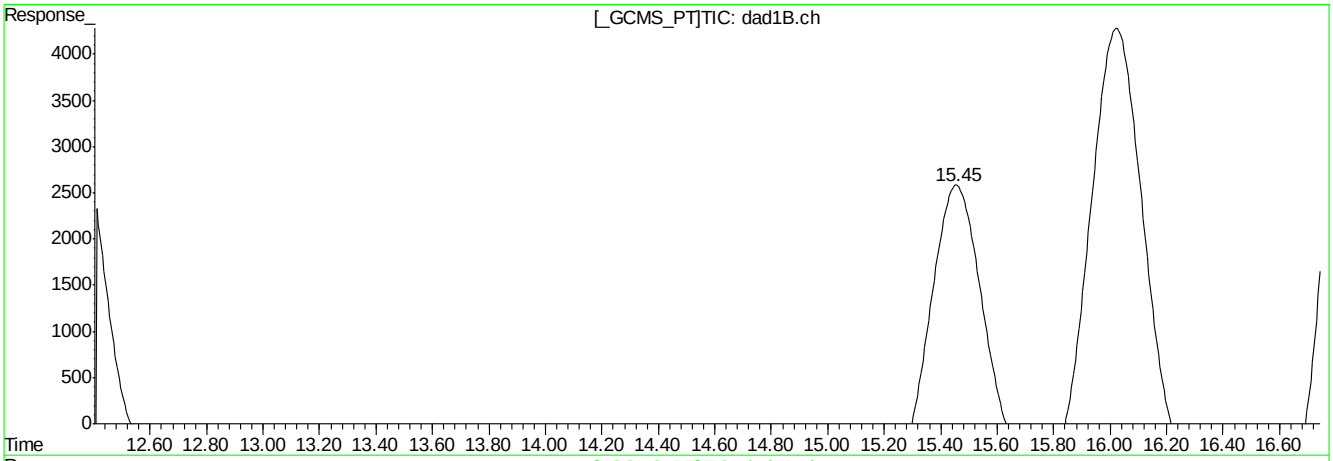
response 756038

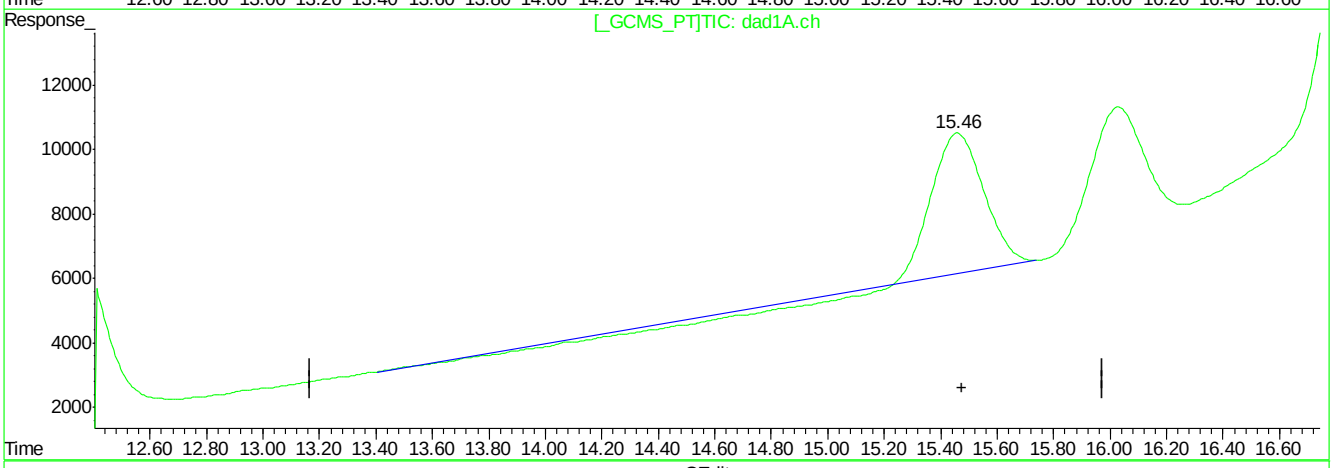
(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.46min 208.265ppb

response 448911

(18) o-Nitrotoluene #2

15.46min 157.930ppb

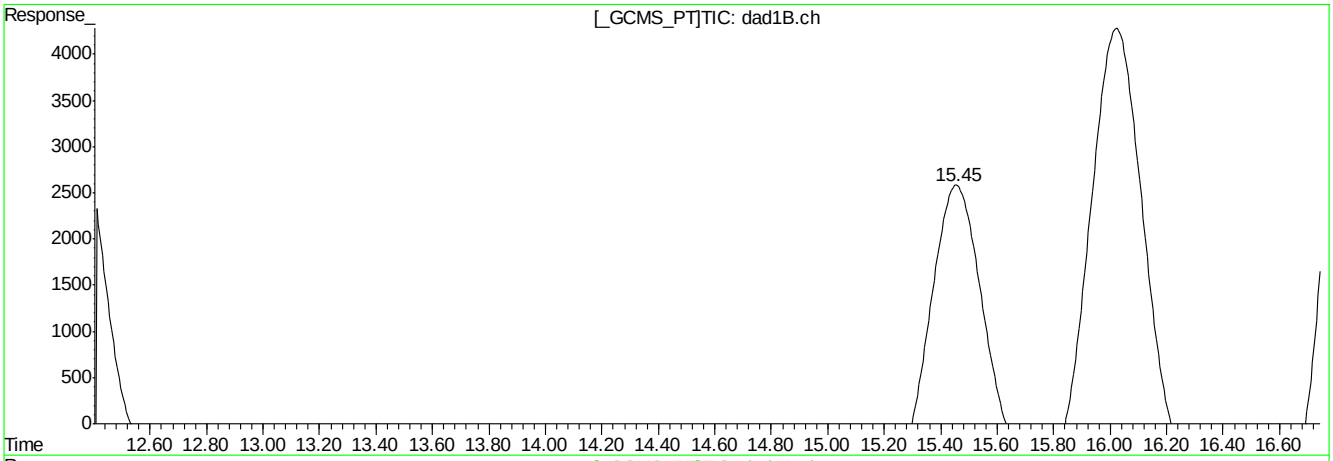
response 448719

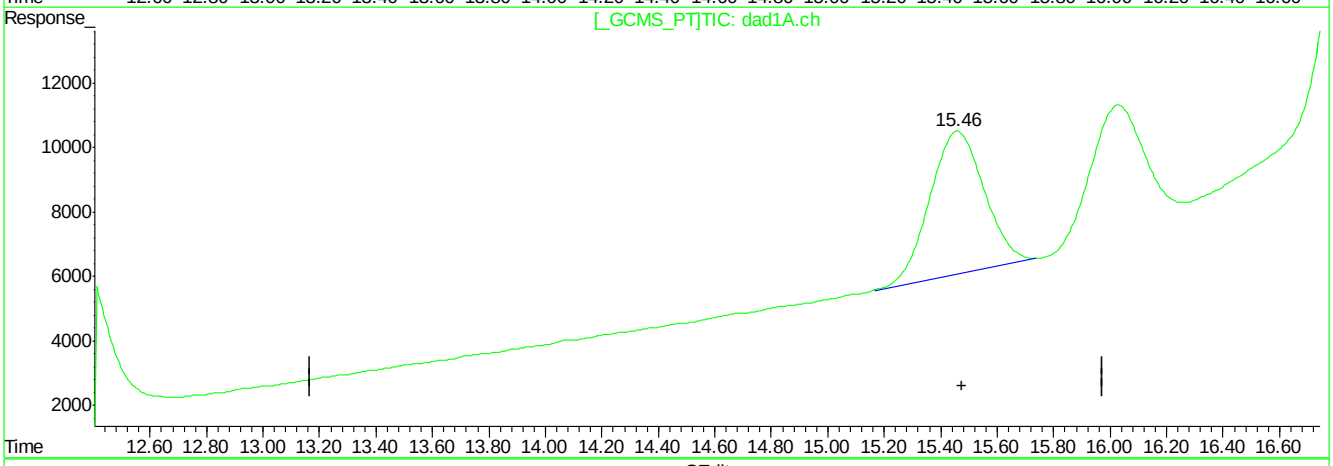
(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.46min 208.265ppb

response 448911

(18) o-Nitrotoluene #2

15.46min 209.357ppb m

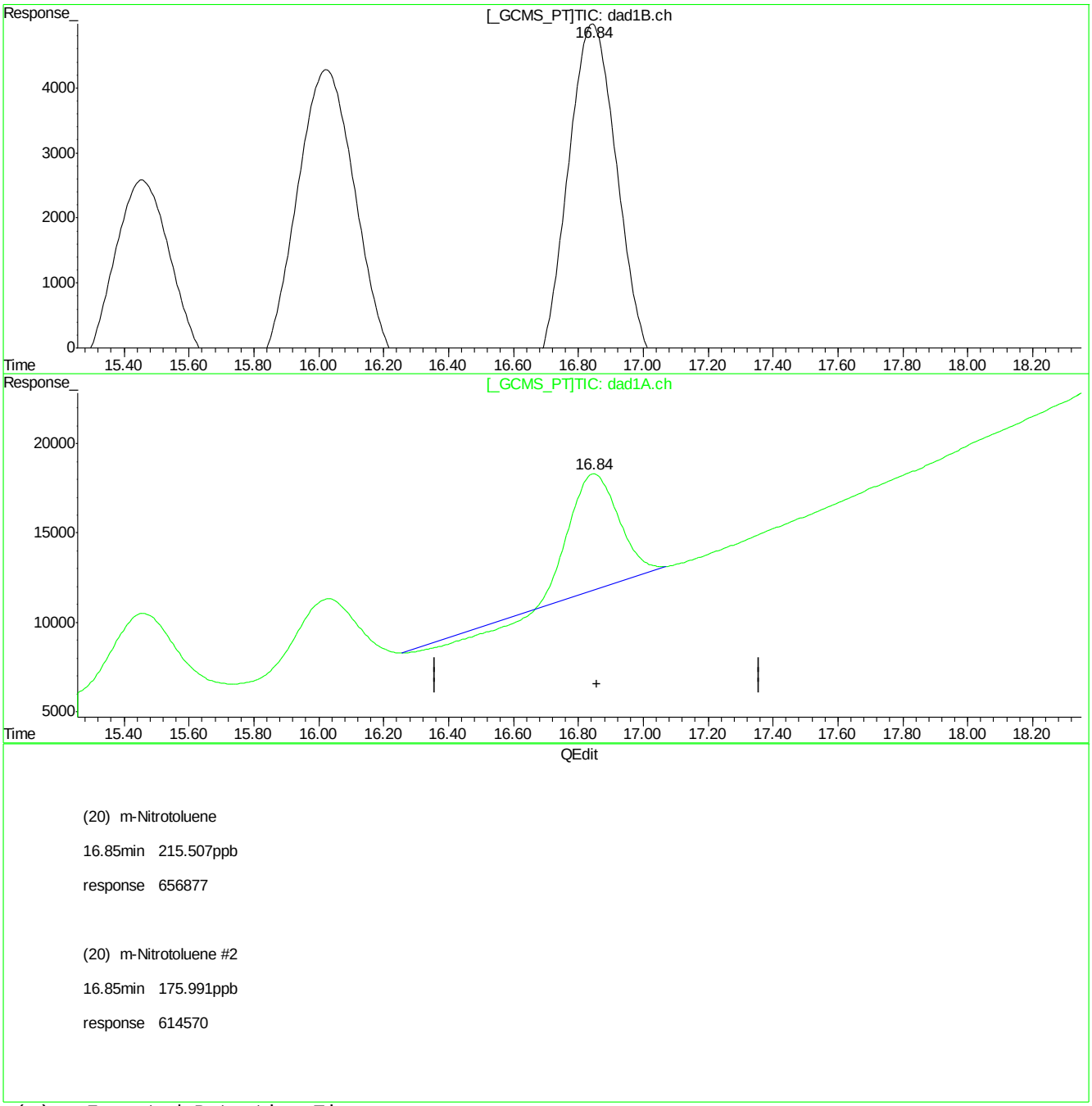
response 594838

(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.85min 215.507ppb

response 656877

(20) m-Nitrotoluene #2

16.85min 175.991ppb

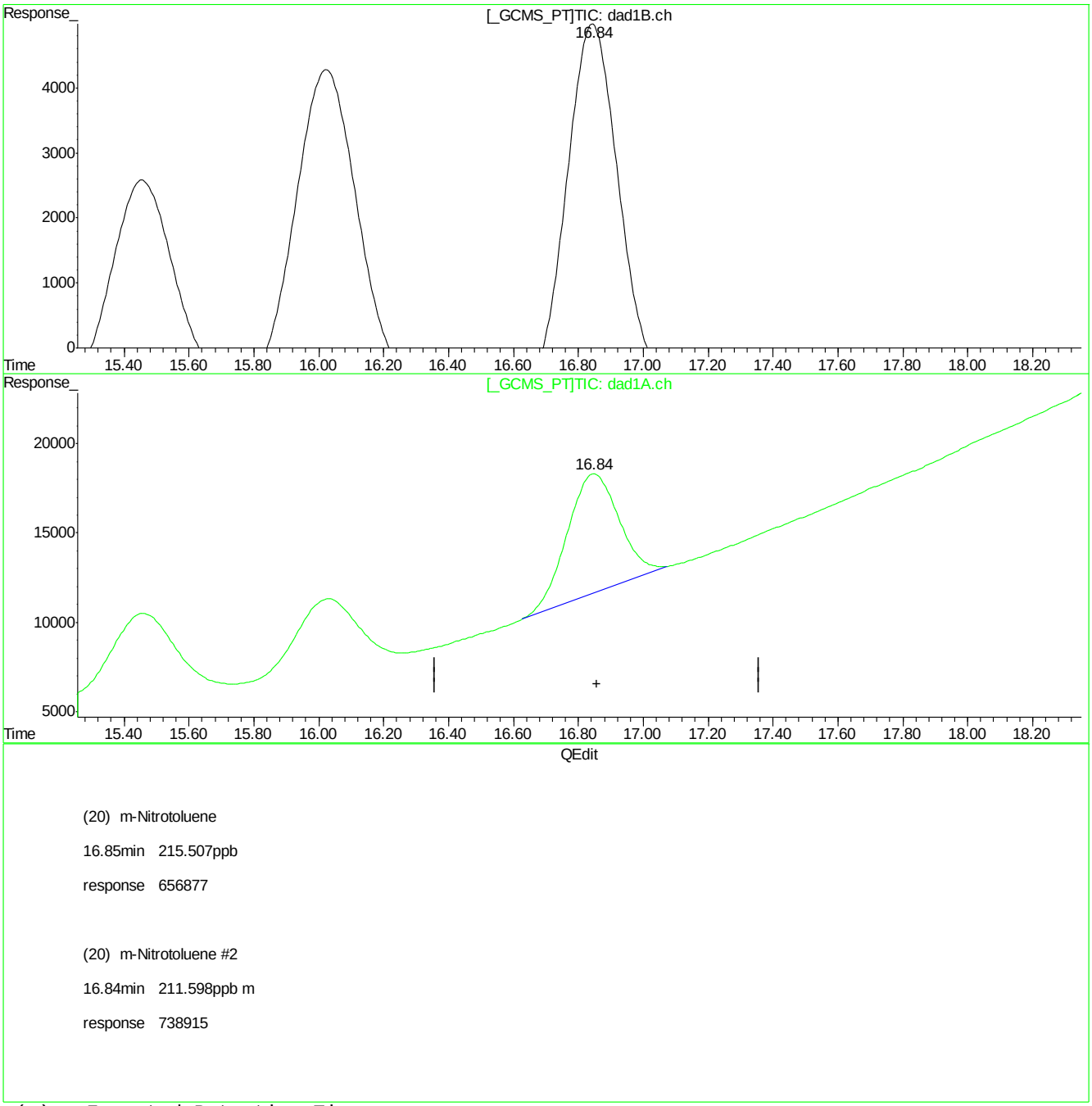
response 614570

(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.85min 215.507ppb

response 656877

(20) m-Nitrotoluene #2

16.84min 211.598ppb m

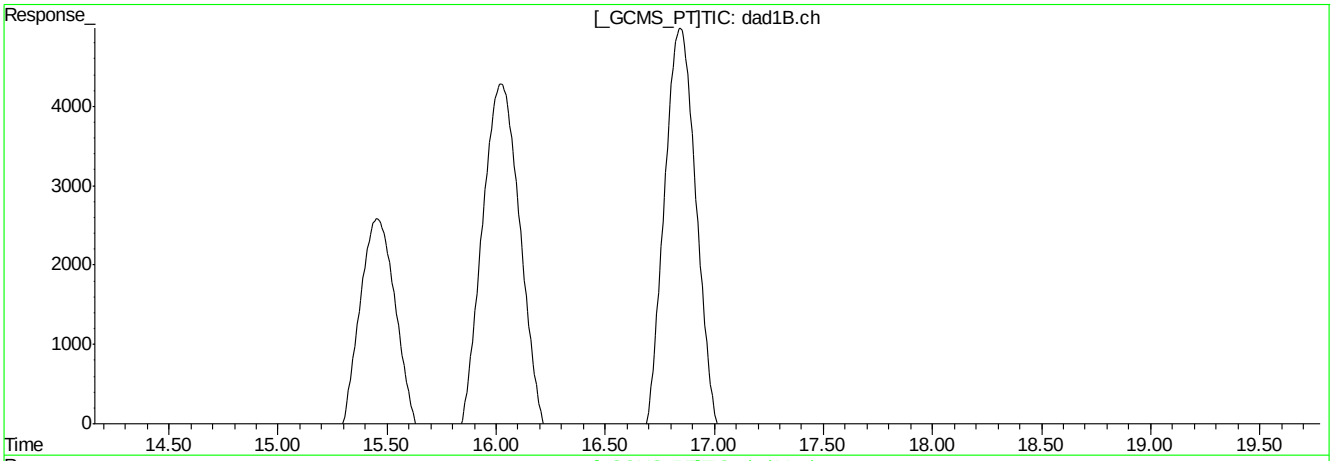
response 738915

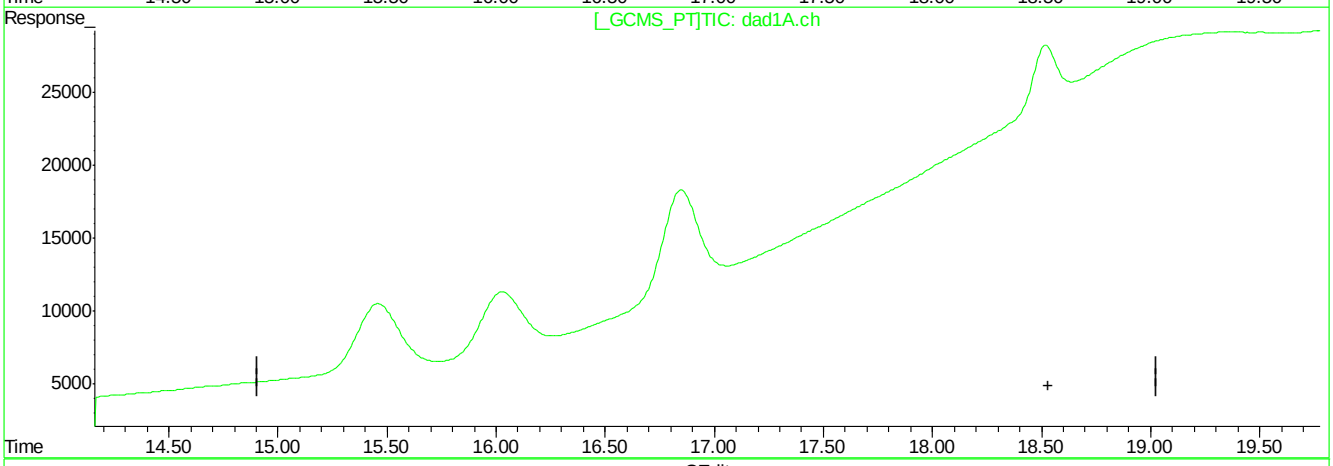
(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

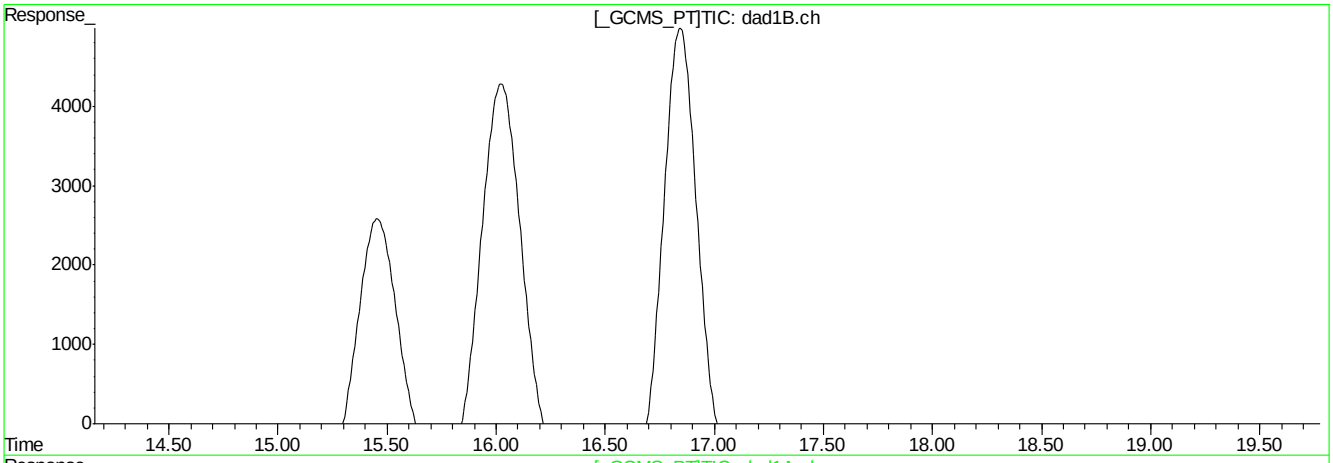
response 0

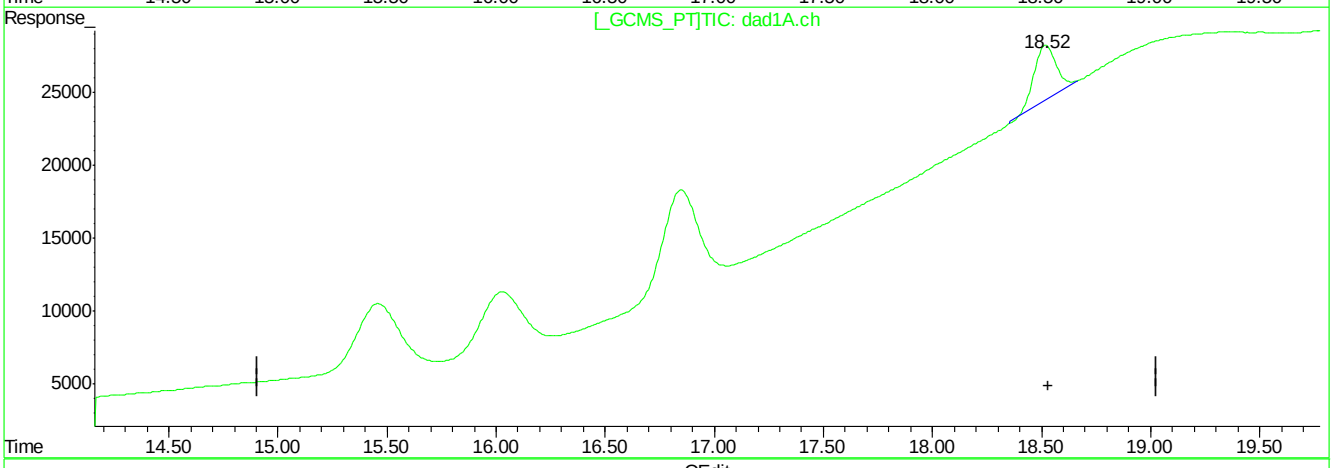
(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.52min 194.083ppb m

response 266949

(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:57 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:35 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.23	11.24	1000006	1713224	472.165	516.048
	Spiked Amount 500.000	Range 70 - 136		Recovery =		94.43%	103.21%
	Target Compounds						
1)	TNX	1.31	1.31	396758	647935	210.190	208.772
2)	HMX	1.44	1.44	776847	2213812	537.503	515.713
3)	DNX	1.68	1.68	1115285	1772239	483.250	452.303
4)	MNX	2.27	2.27	1509815	2355188	596.013	602.424
5)	RDX	2.88	2.88	940142	1513610	517.751	518.308
6)	1,3,5-Trinitrobe	4.65	4.65	2030446	3925086	520.476	517.922
7)	1,3-Dinitrobenze	5.85	5.85	2649190	1863428	524.584	500.143m
8)	3,5-Dinitroanili	6.21	6.21	2013083	3517517	523.103	510.937
9)	Nitrobenzene	7.46	7.46	1538459	1499224	529.444	524.361
10)	Nitroglycerin	0.00	8.96	0	628351	N.D.	521.705 #
11)	Tetryl	9.48	9.48	1540000	2425988	525.485	524.827
12)	2,4,6-Trinitroto	9.87	9.87	1872544	2271498	506.324	520.109
13)	2-Amino-4,6-Dini	10.26	10.26	1695721	2548977	515.540	530.448
14)	4-Amino-2,6-Dini	10.78	10.78	1253523	2479832	502.074	552.404
16)	2,4-Dinitrotolue	11.87	11.87	2365023	1555027	523.960	537.879
17)	2,6-Dinitrotolue	12.36	12.36	1355158	1748450	531.934	543.940
18)	o-Nitrotoluene	15.47	15.47	1096525	1493372	508.715	525.603m
19)	p-Nitrotoluene	16.04	16.04	1705042	1301929	508.385	503.387
20)	m-Nitrotoluene	16.86	16.85	1605691	1851664	526.793	530.250m
21)	PETN	0.00	18.53	0	708056	N.D.	514.786m#

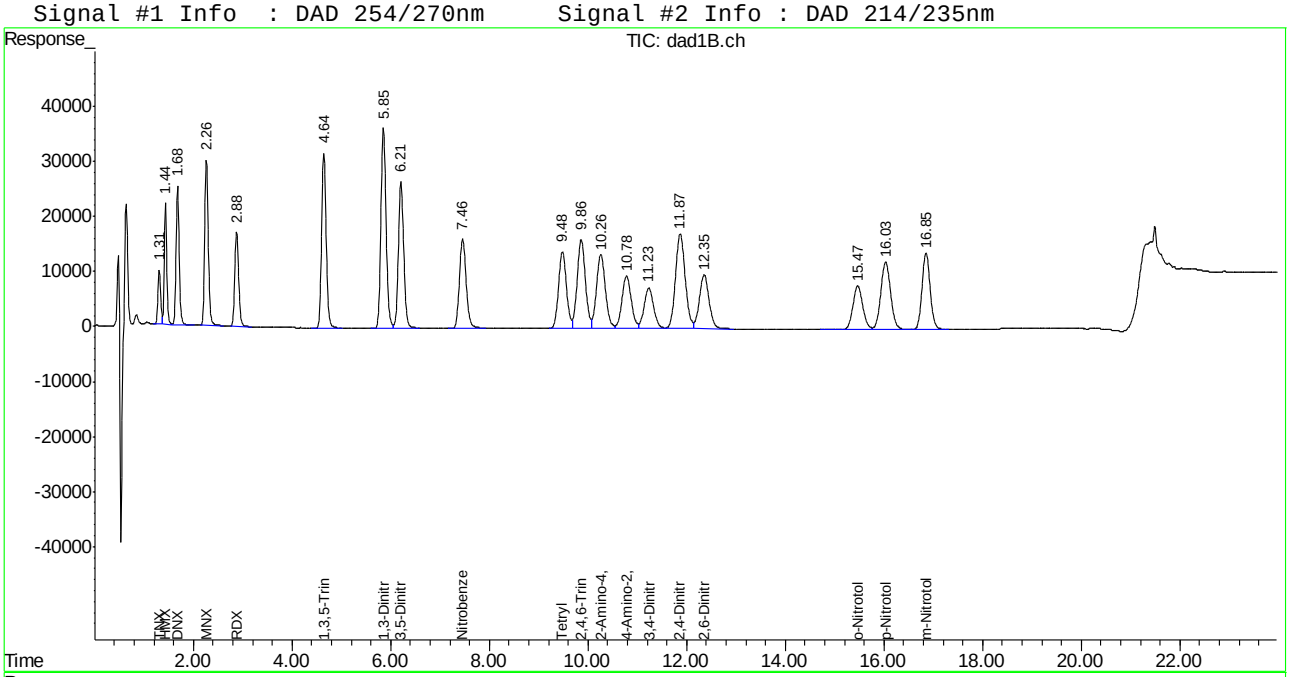
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:35:51 2021 Page 1

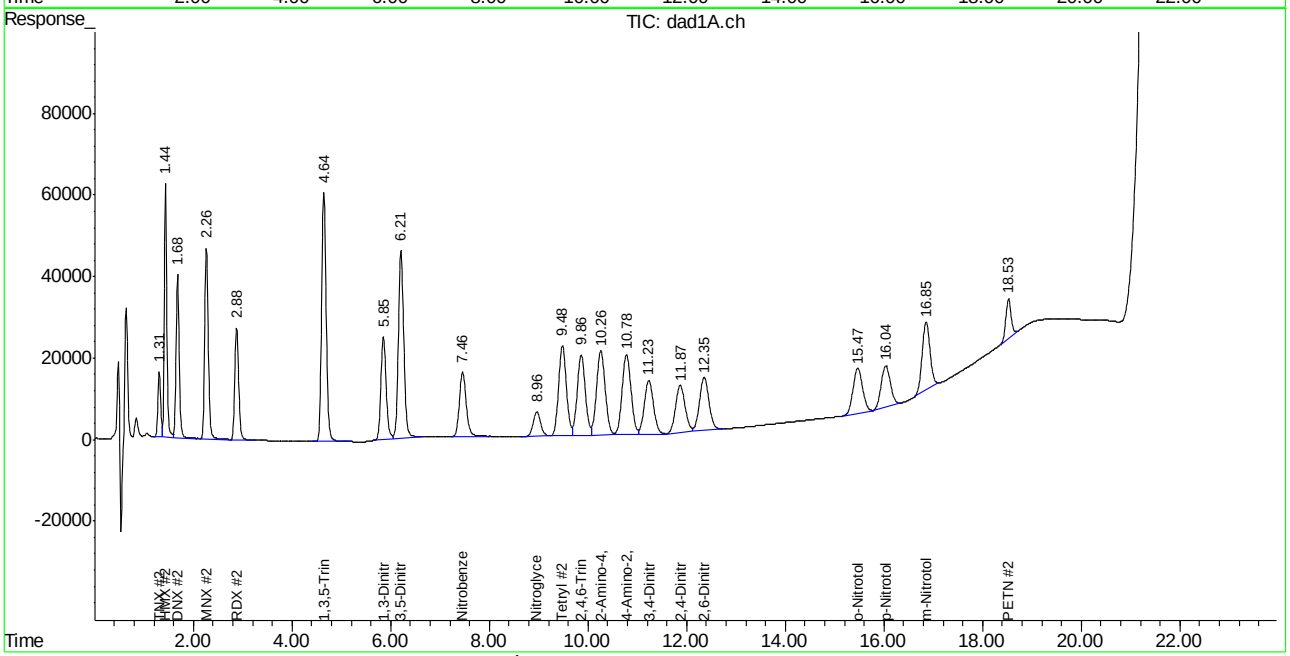
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:22 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

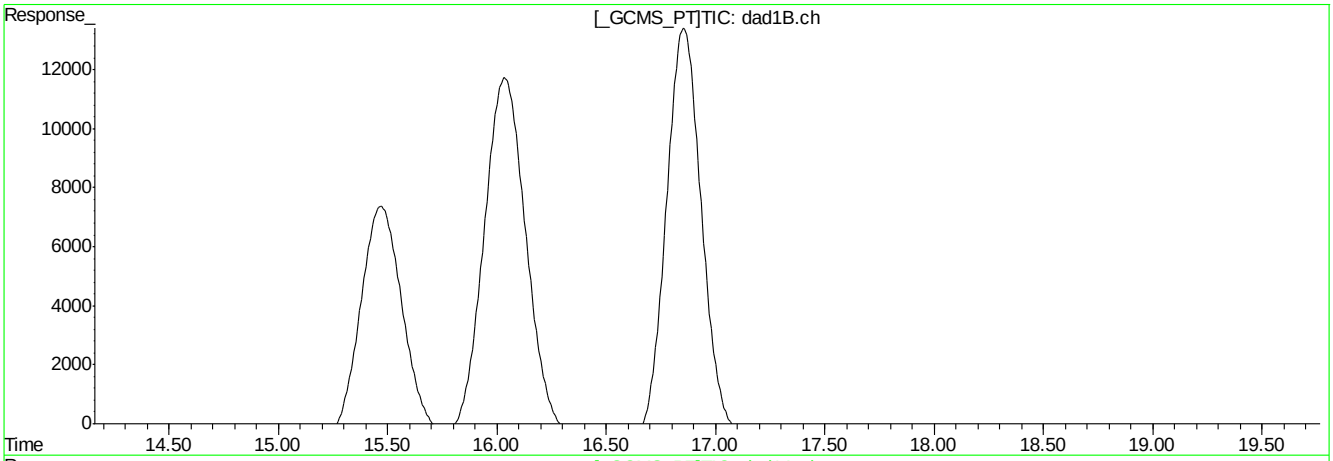
Sample Number: GPP2464-IC2464
Lab FileID: PP391047.D
Injection Time: 08/03/21 13:49
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

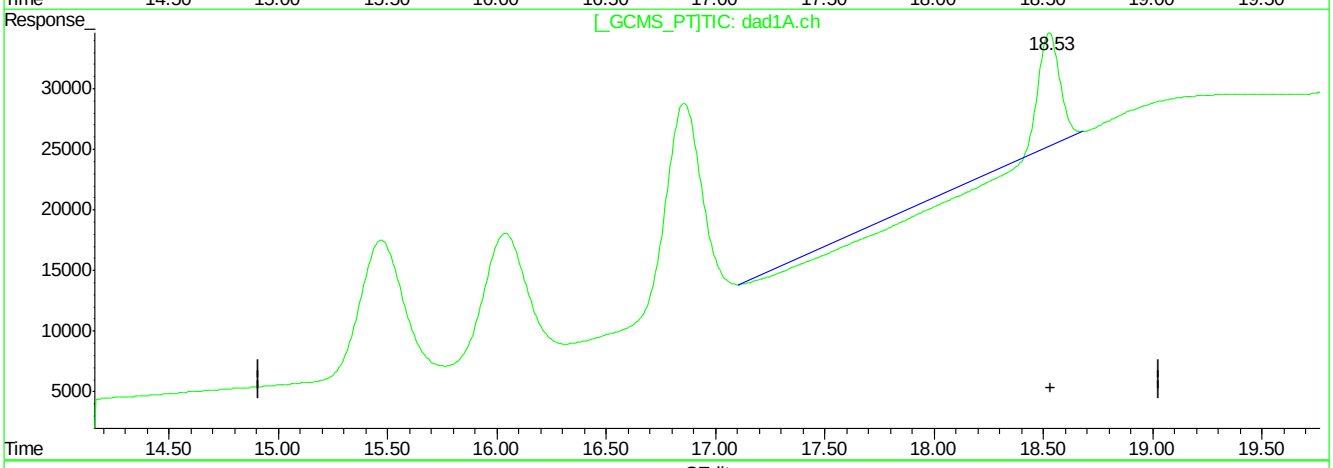
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	5.85	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.47	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.85	Poor instrument integration
PETN	78-11-5	2	18.53	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.53min 72.480ppb

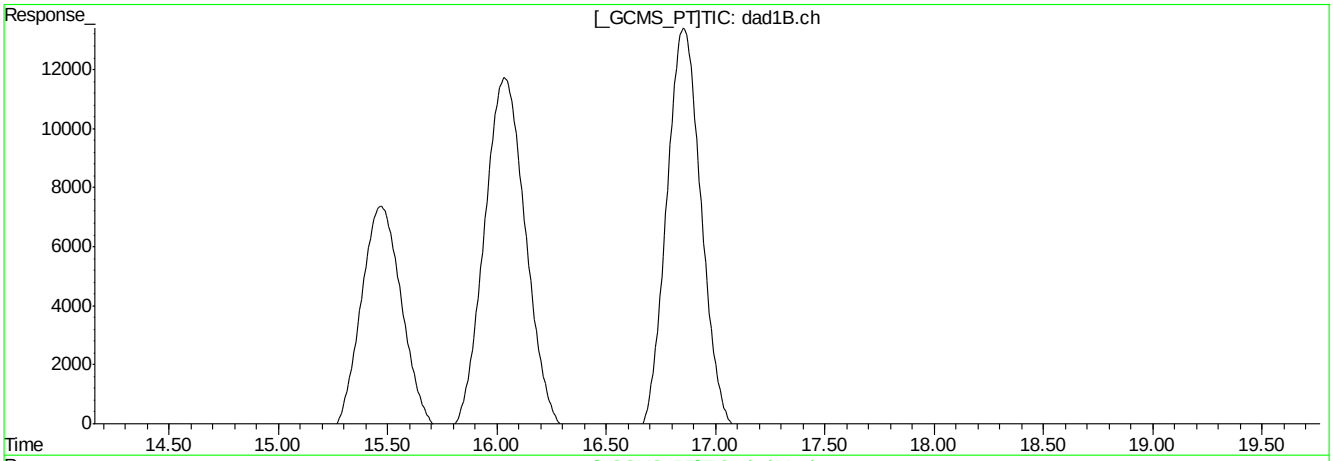
response 99691

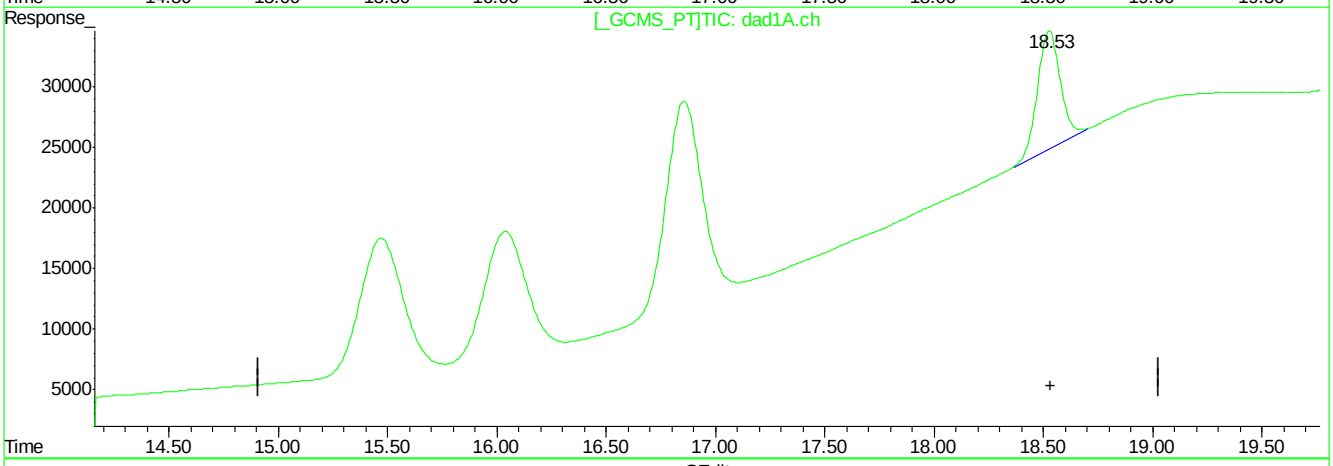
(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:21:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.53min 514.786ppb m

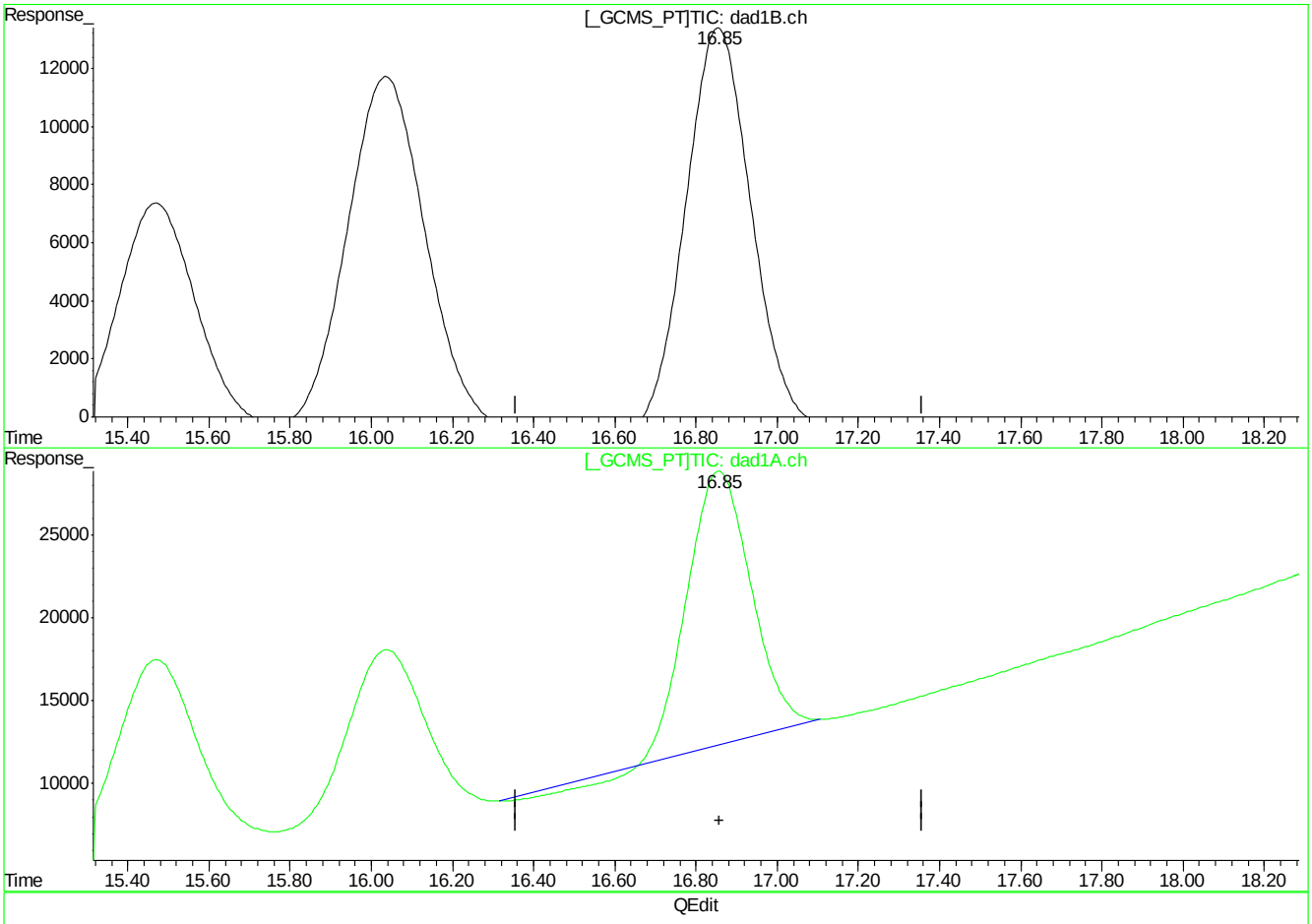
response 708056

(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:21:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.86min 526.793ppb

response 1605691

(20) m-Nitrotoluene #2

16.86min 500.451ppb

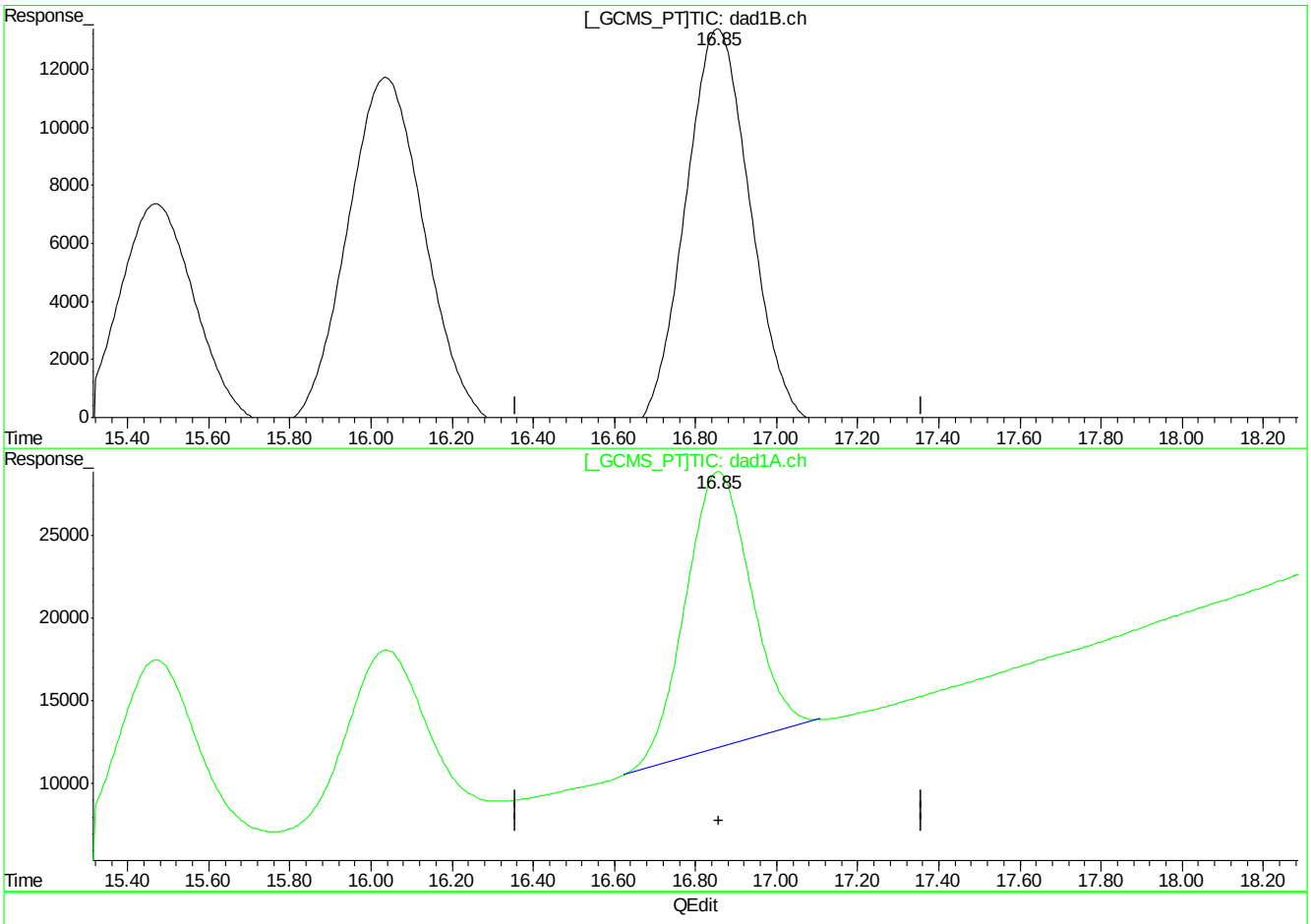
response 1747606

(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:21:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.86min 526.793ppb

response 1605691

(20) m-Nitrotoluene #2

16.85min 530.250ppb m

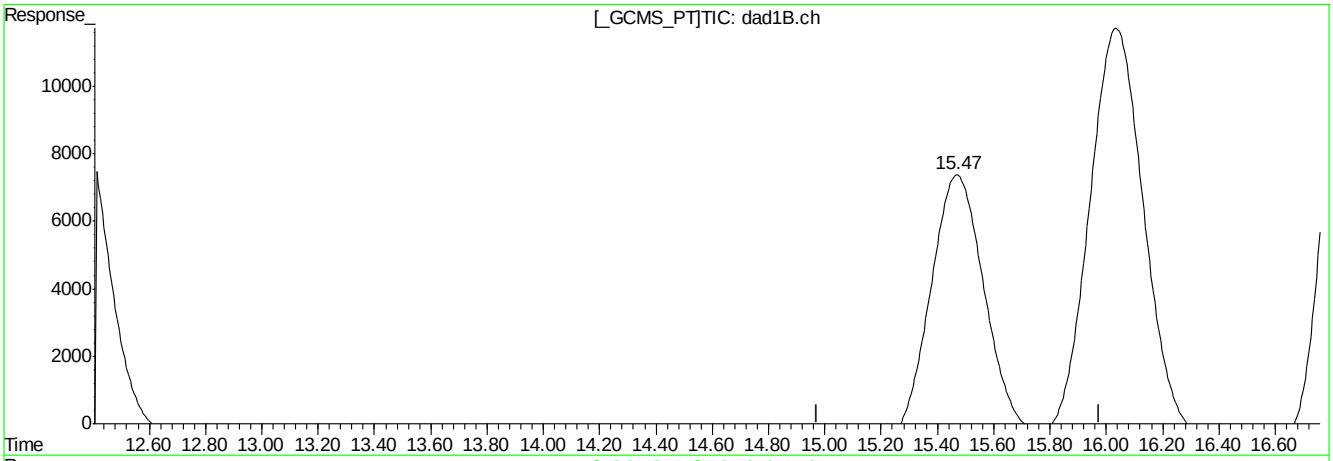
response 1851664

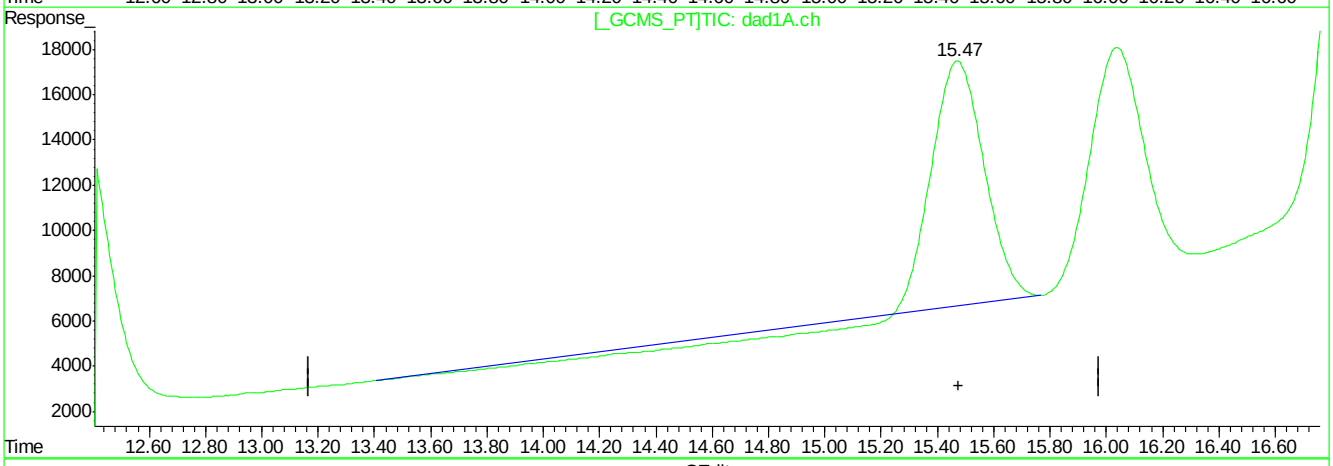
(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:21:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 508.715ppb

response 1096525

(18) o-Nitrotoluene #2

15.47min 423.701ppb

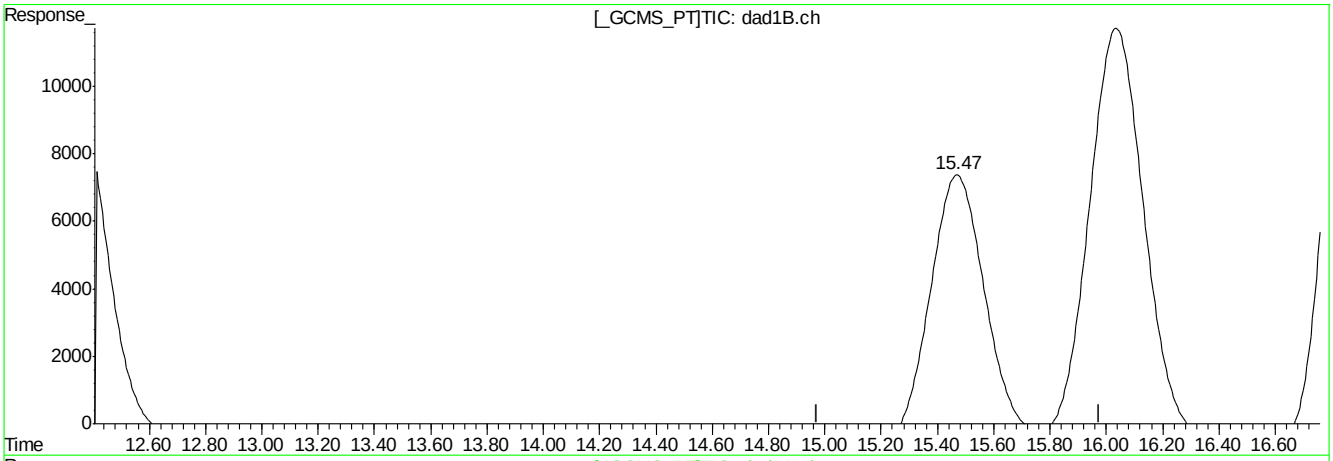
response 1203842

(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:21:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.47min 508.715ppb

response 1096525

(18) o-Nitrotoluene #2

15.47min 525.603ppb m

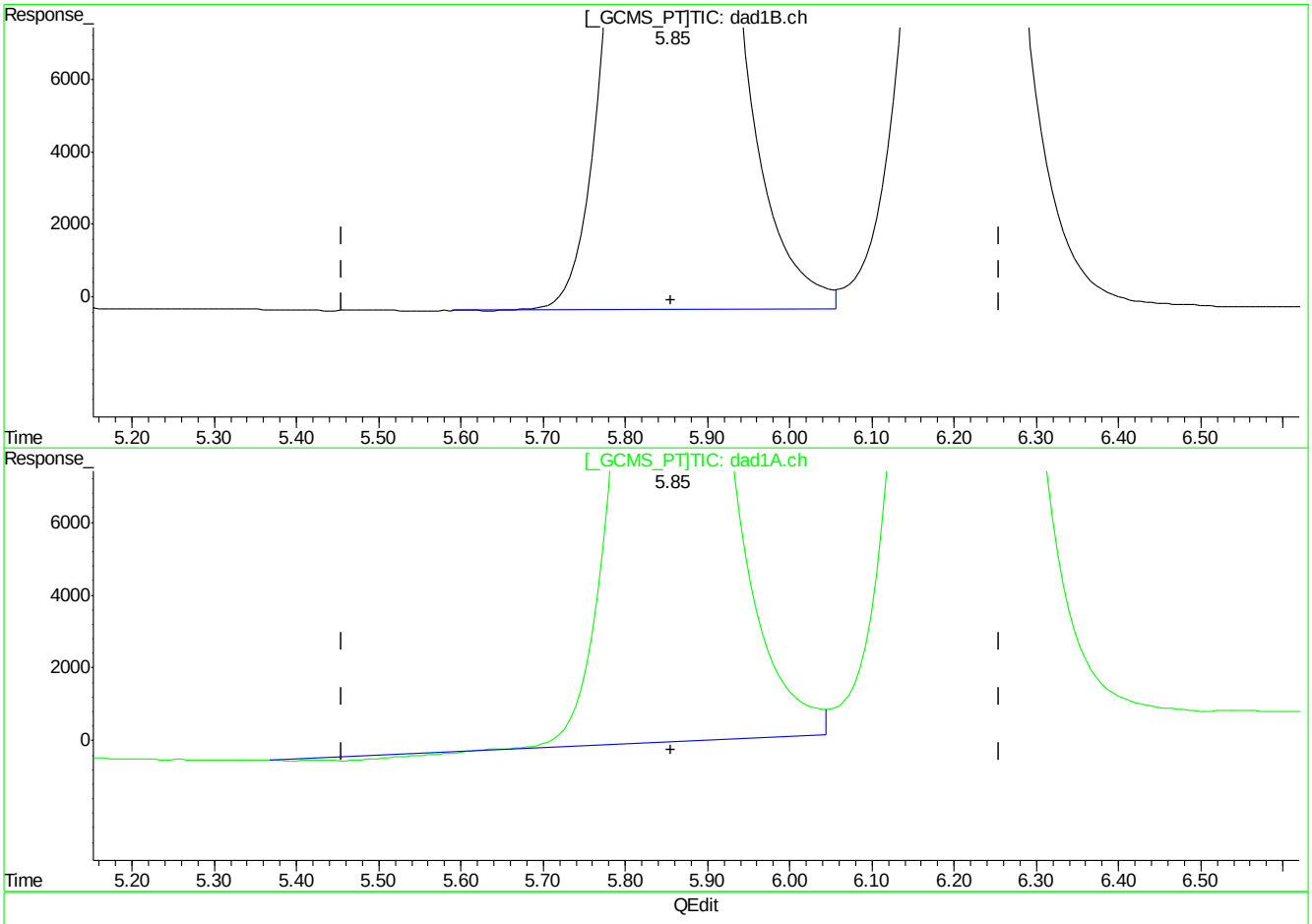
response 1493372

(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:21:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.85min 524.584ppb

response 2649190

(7) 1,3-Dinitrobenzene #2

5.85min 497.832ppb

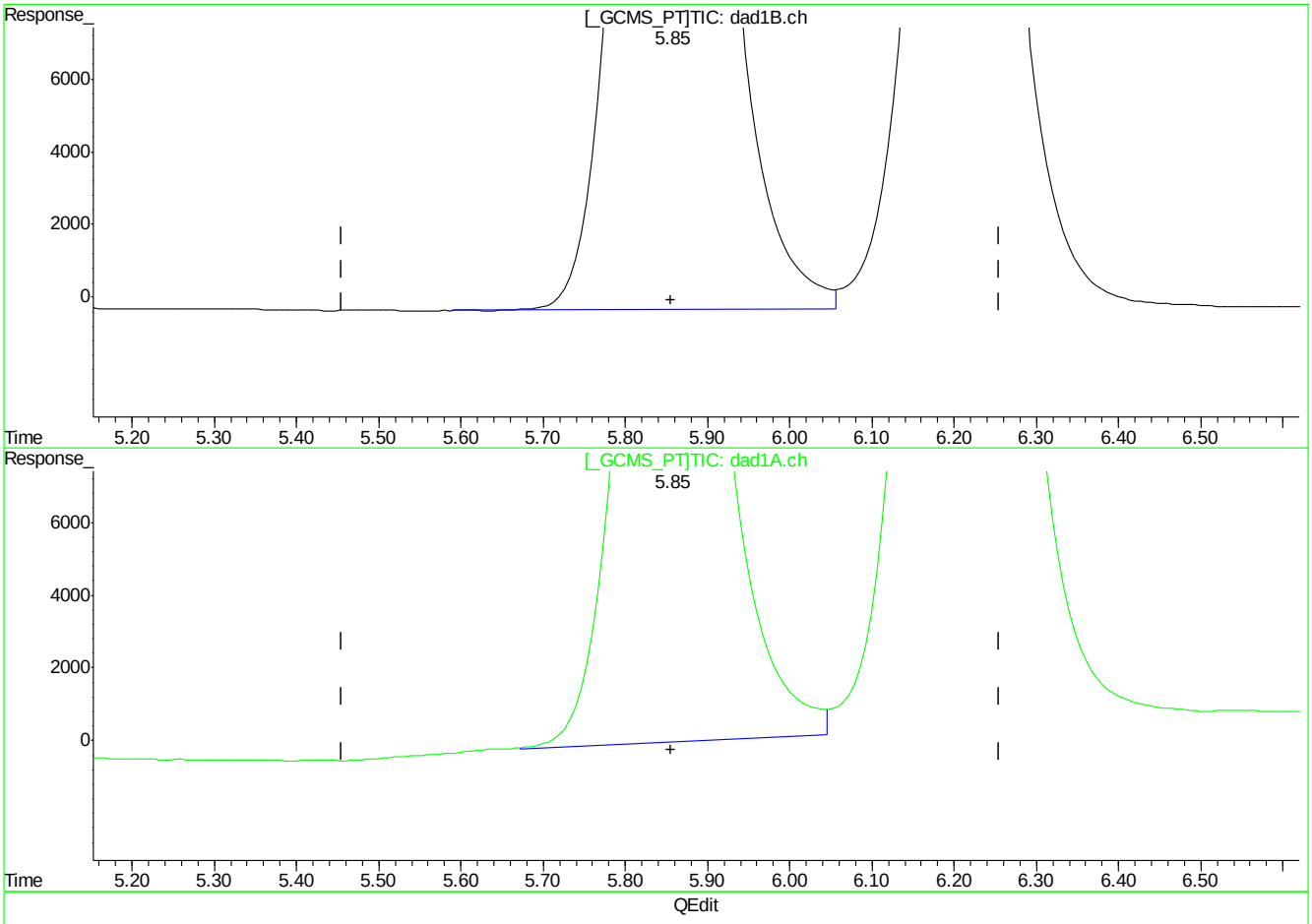
response 1854819

(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:22:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.85min 524.584ppb

response 2649190

(7) 1,3-Dinitrobenzene #2

5.85min 500.143ppb m

response 1863428

(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:22:10 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:36 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.25	11.25	1986465	3469698	937.933	1045.123
	Spiked Amount 500.000	Range 70 - 136		Recovery =		187.59%#	209.02%#
	Target Compounds						
1)	TNX	1.31	1.31	793397	1297449	420.318	418.054
2)	HMX	1.44	1.44	1519202	4320919	1051.142	1006.569
3)	DNX	1.68	1.68	2187293	3480110	947.748	888.178
4)	MNX	2.27	2.27	2981694	4635874	1177.051	1185.791
5)	RDX	2.88	2.88	1857199	2996166	1022.789	1025.983
6)	1,3,5-Trinitrobe	4.65	4.65	4026294	7768170	1032.083	1025.024
7)	1,3-Dinitrobenze	5.86	5.86	5250204	3656190	1039.629	981.319
8)	3,5-Dinitroanili	6.22	6.22	3989024	6898037	1036.554	1001.974
9)	Nitrobenzene	7.46	7.46	3026799	2962458	1041.640	1036.134
10)	Nitroglycerin	0.00	8.97	0	1240163	N.D.	1026.334 #
11)	Tetryl	9.50	9.50	3059567	4824499	1043.999	1043.710
12)	2,4,6-Trinitroto	9.88	9.88	3714292	4527147	1004.321	1036.588
13)	2-Amino-4,6-Dini	10.27	10.27	3349026	5094220	1018.185	1060.118
14)	4-Amino-2,6-Dini	10.80	10.80	2468235	4990716	988.602	1111.725
16)	2,4-Dinitrotolue	11.88	11.88	4687496	3098874	1038.494	1071.892
17)	2,6-Dinitrotolue	12.37	12.37	2687441	3500805	1054.888	1089.094
18)	o-Nitrotoluene	15.48	15.48	2150436	2920568	997.660	1027.914m
19)	p-Nitrotoluene	16.04	16.04	3366947	2666812	1003.909	1020.296
20)	m-Nitrotoluene	16.86	16.86	3179293	3743514	1043.058	1072.007m
21)	PETN	0.00	18.53	0	1385195	N.D.	1007.094m#

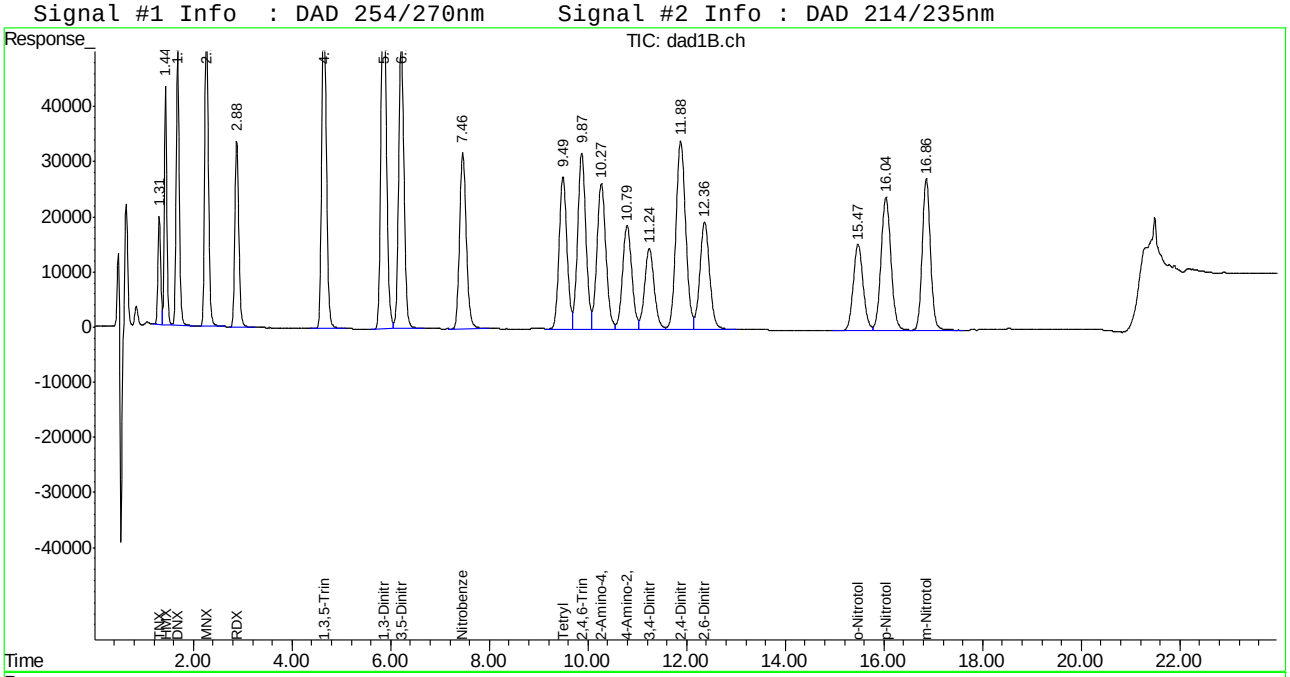
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:35:52 2021 Page 1

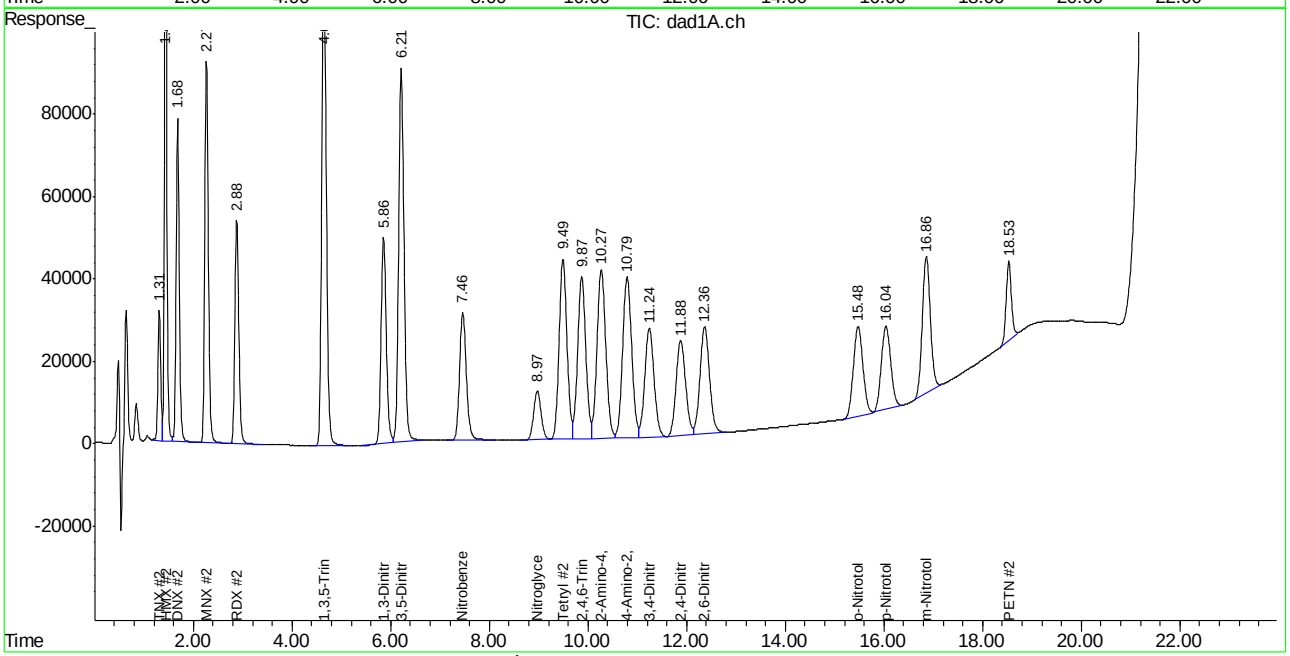
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:20 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

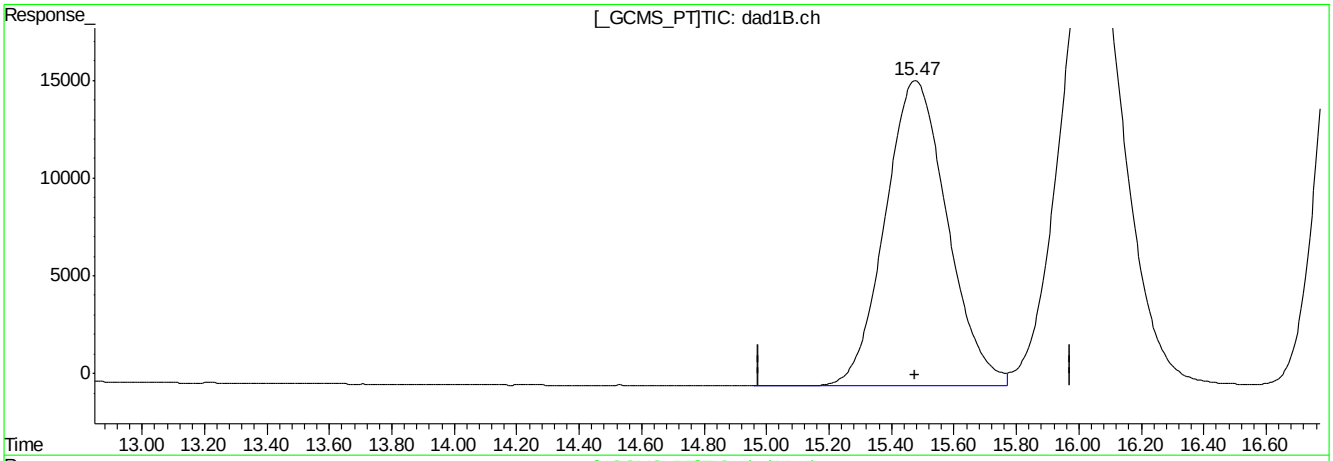
Sample Number: GPP2464-ICC2464
Lab FileID: PP391048.D
Injection Time: 08/03/21 14:20
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

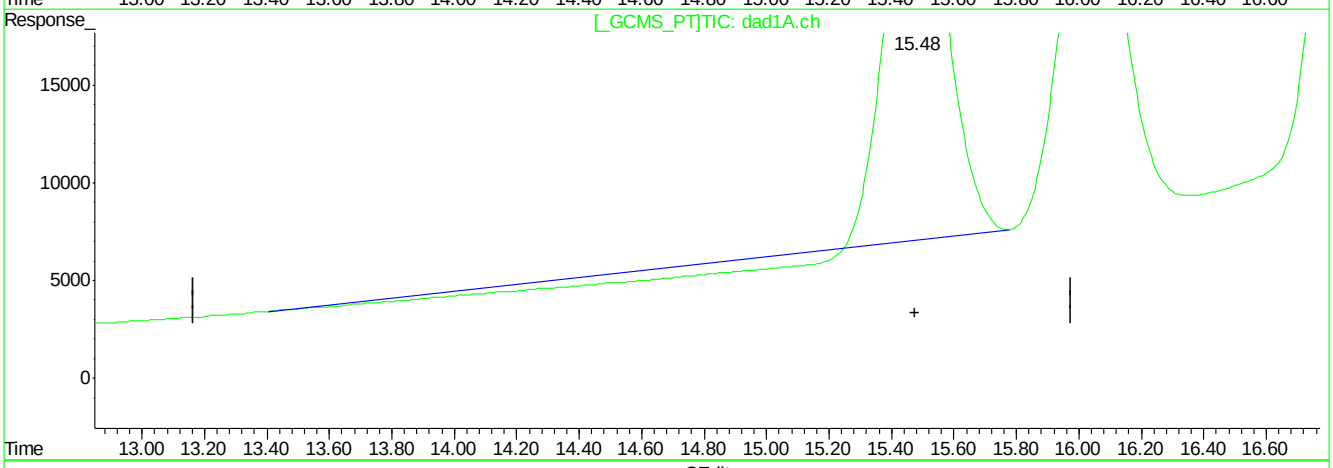
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.48	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.53	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 997.660ppb

response 2150436

(18) o-Nitrotoluene #2

15.48min 843.955ppb

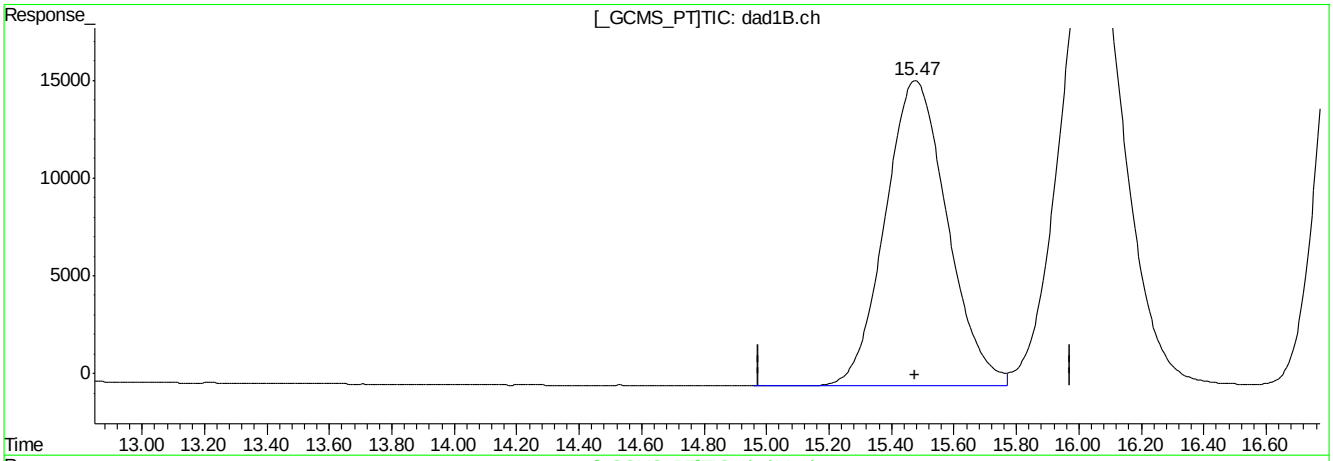
response 2397893

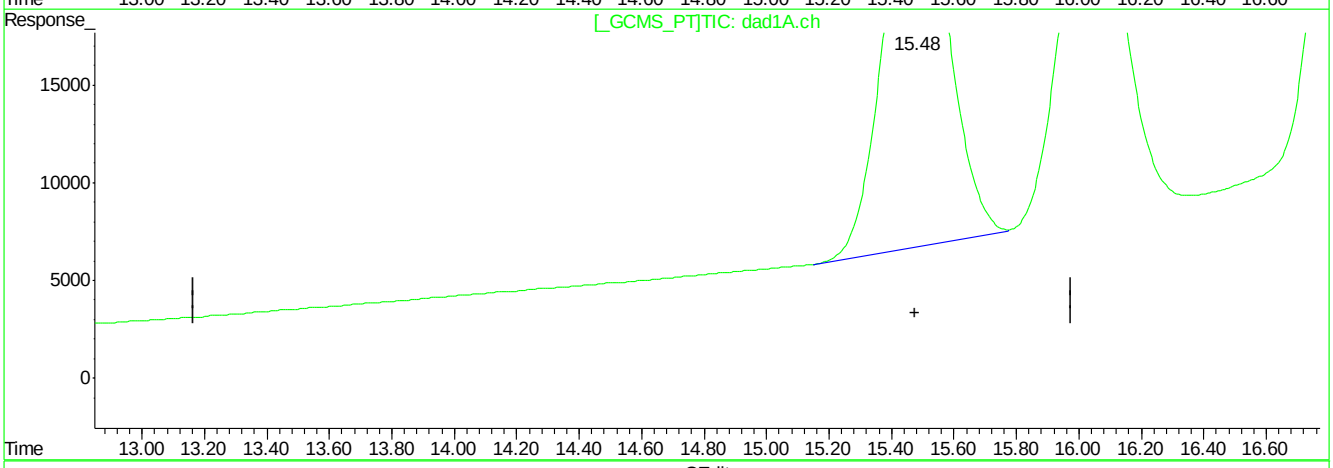
(+) = Expected Retention Time
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:20:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 997.660ppb

response 2150436

(18) o-Nitrotoluene #2

15.48min 1027.914ppb m

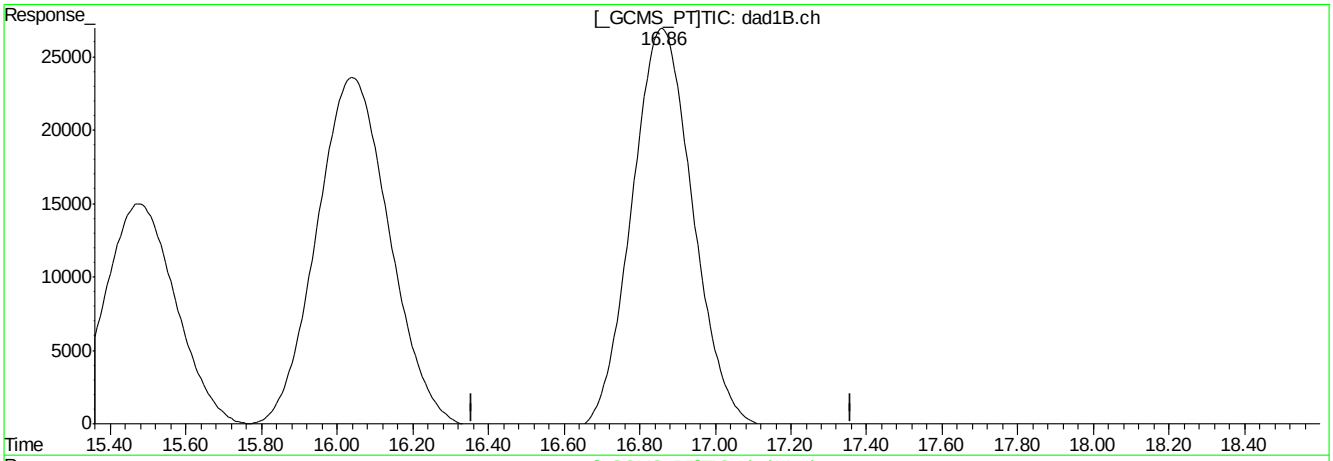
response 2920568

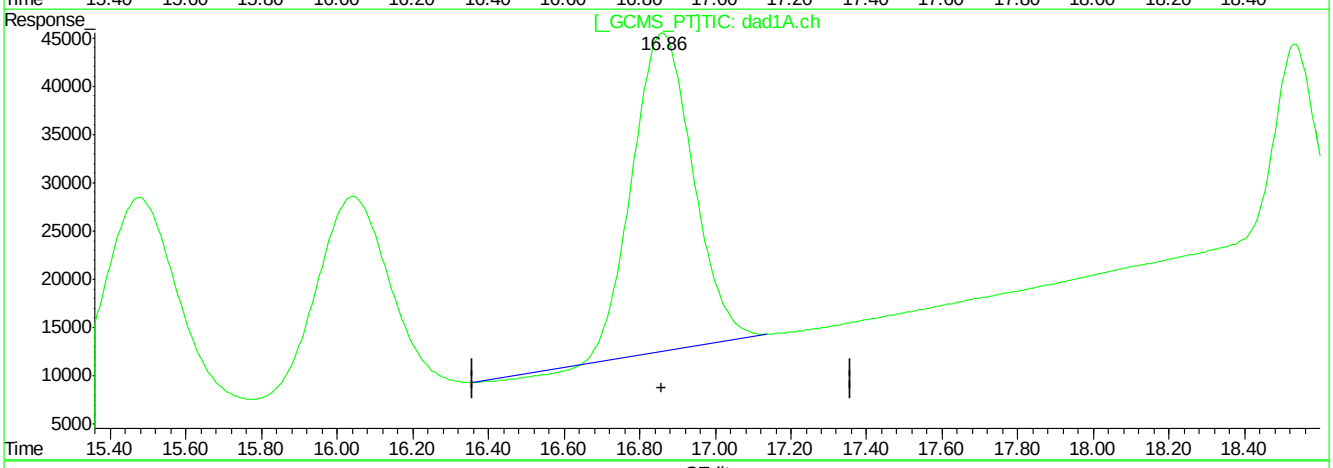
(+) = Expected Retention Time
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:20:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 1043.058ppb

response 3179293

(20) m-Nitrotoluene #2

16.86min 1041.441ppb

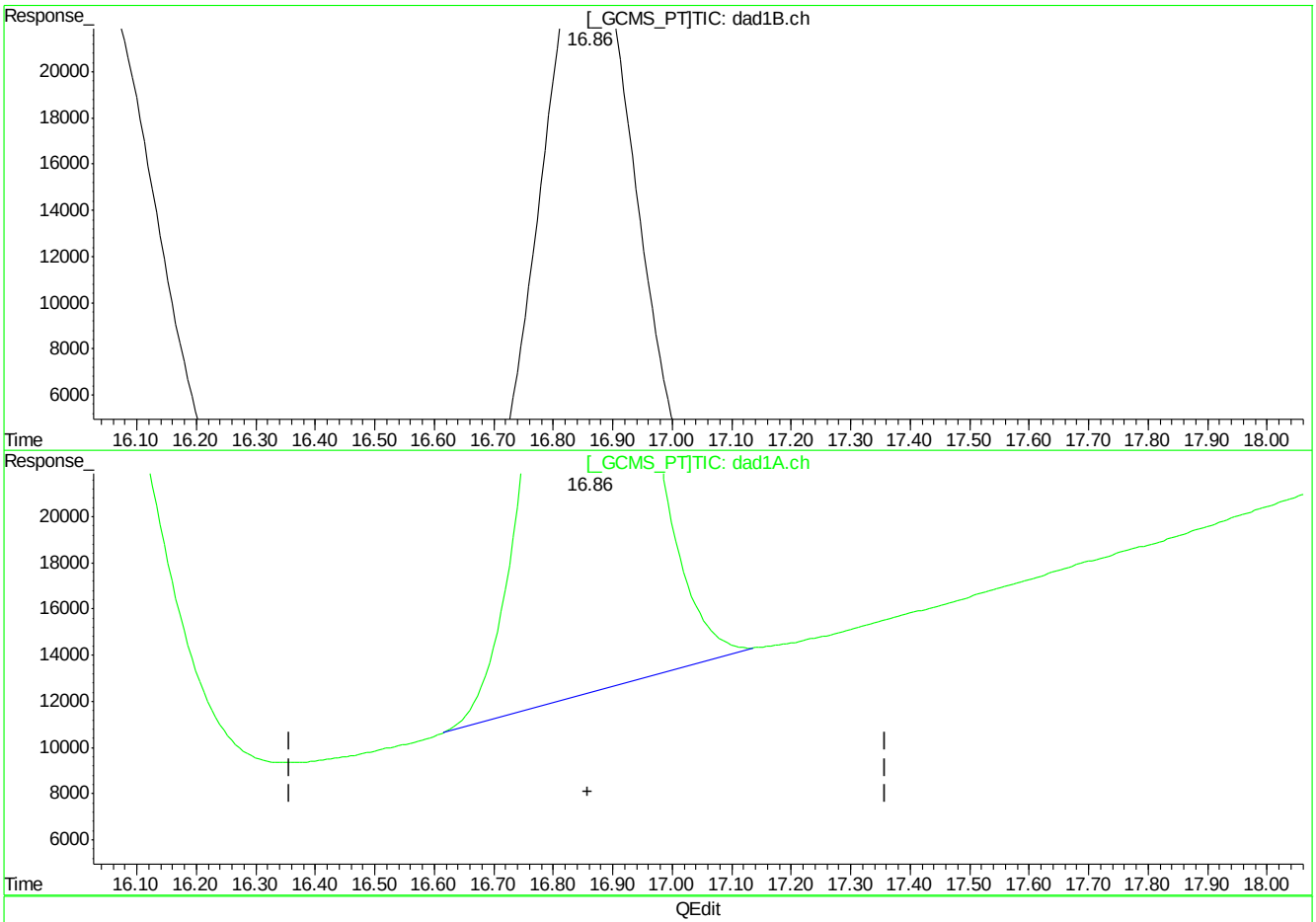
response 3636777

(+) = Expected Retention Time
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:20:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.86min 1043.058ppb

response 3179293

(20) m-Nitrotoluene #2

16.86min 1072.007ppb m

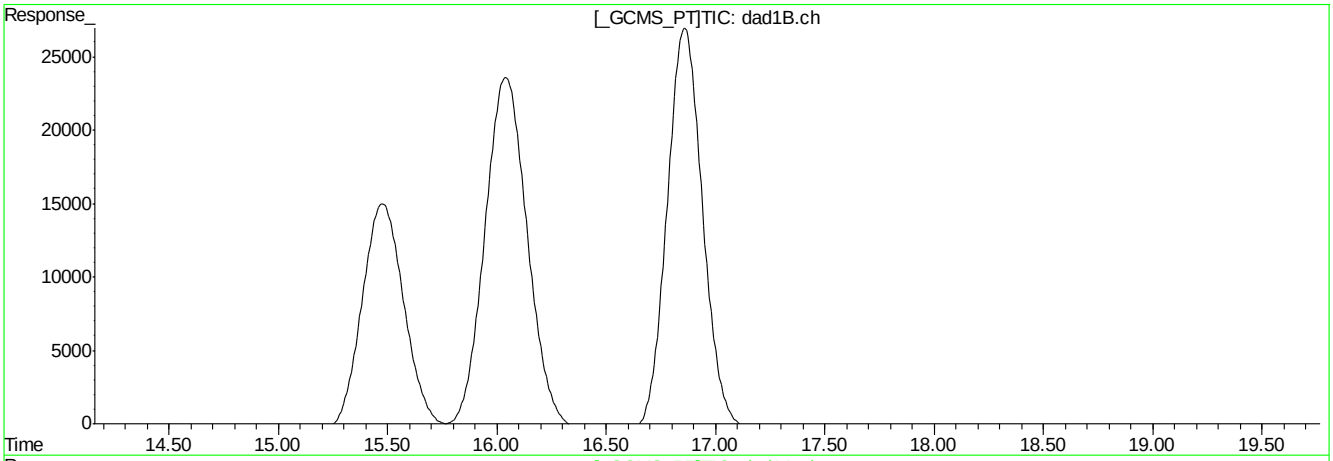
response 3743514

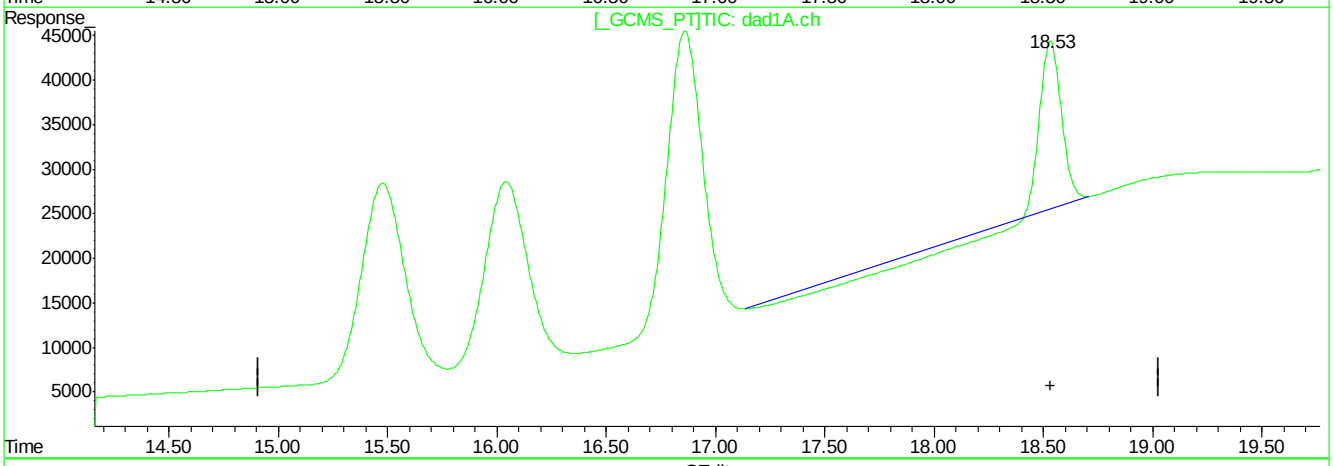
(+) = Expected Retention Time
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:20:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.53min 564.398ppb

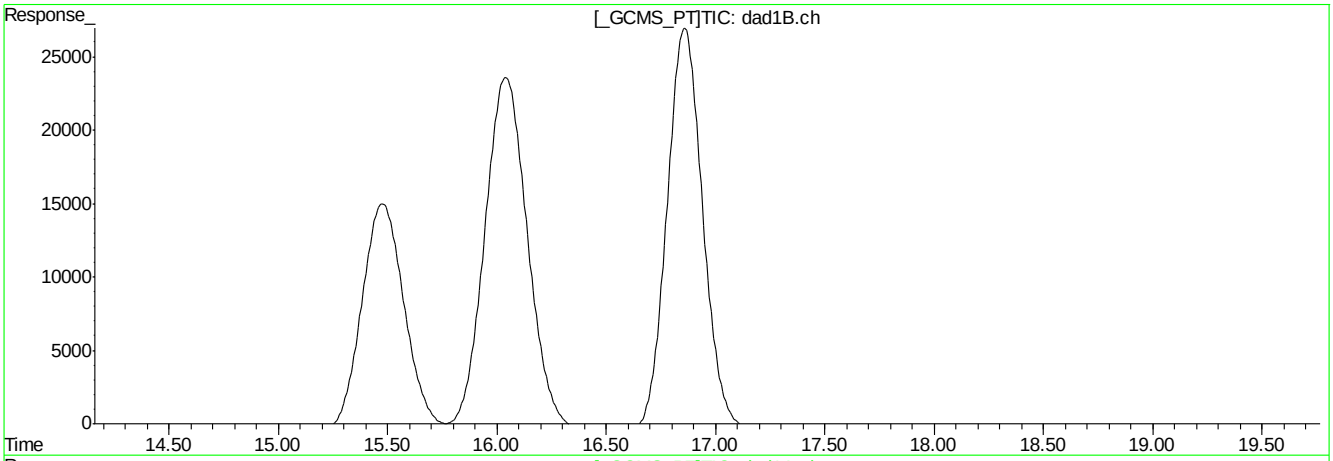
response 776294

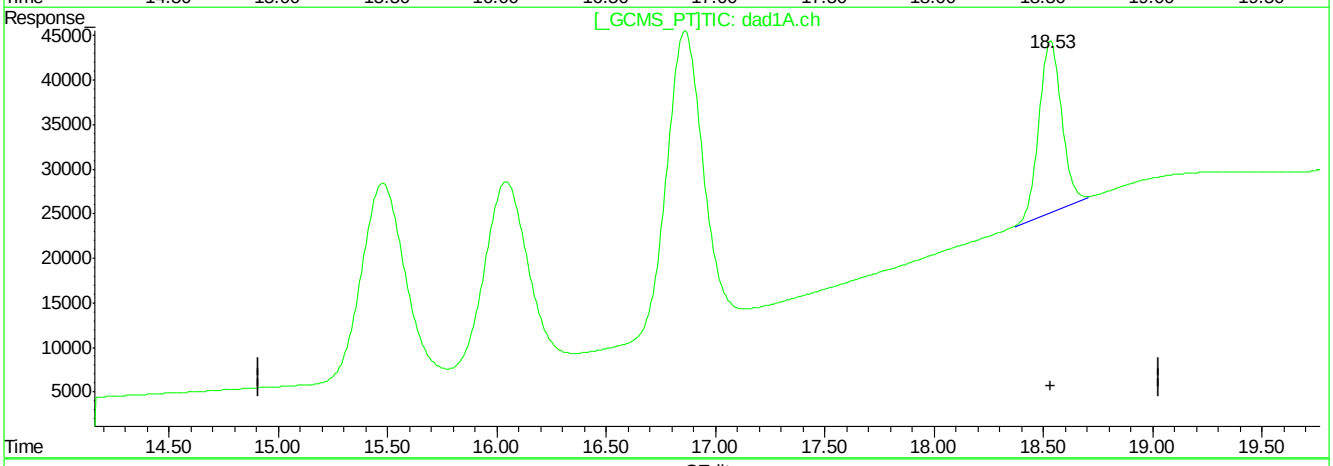
(+) = Expected Retention Time
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:20:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.53min 1007.094ppb m

response 1385195

(+) = Expected Retention Time
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:21:01 2021

PP391049.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:37 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.25	11.25	4952666	8765580	2338.460	2640.319
Spiked Amount	500.000	Range	70 - 136	Recovery	=	467.69%#	528.06%#
	Target Compounds						
1)	TNX	1.31	1.31	1987029	3175023	1052.667	1023.030
2)	HMX	1.44	1.44	3776592	10616112	2613.038	2473.050
3)	DNX	1.68	1.68	5433682	8586544	2354.400	2191.419
4)	MNX	2.27	2.27	7397232	11514253	2920.124	2945.183
5)	RDX	2.88	2.88	4624811	7460726	2546.955	2554.791
6)	1,3,5-Trinitrobe	4.65	4.65	10041841	19401002	2574.084	2559.997
7)	1,3-Dinitrobenze	5.86	5.86	13094462	9101696	2592.925	2442.890
8)	3,5-Dinitroanili	6.22	6.22	9938339	17093699	2582.493	2482.944
9)	Nitrobenzene	7.46	7.46	7560596	7357638	2601.897	2573.369
10)	Nitroglycerin	0.00	8.98	0	3109453	N.D.	2548.356 #
11)	Tetryl	9.50	9.50	7600723	12068755	2593.552	2610.898
12)	2,4,6-Trinitroto	9.88	9.88	9242136	11334622	2499.014	2595.306
13)	2-Amino-4,6-Dini	10.27	10.27	8328695	12796485	2532.124	2662.977
14)	4-Amino-2,6-Dini	10.80	10.80	6124005	12553009	2452.847	2796.291
16)	2,4-Dinitrotolue	11.88	11.88	11702407	7762939	2592.616	2685.179
17)	2,6-Dinitrotolue	12.37	12.37	6738178	8791051	2644.905	2734.879
18)	o-Nitrotoluene	15.48	15.47	5375914	7442275	2494.069	2619.361m
19)	p-Nitrotoluene	16.04	16.04	8439427	7020624	2516.348	2602.435m
20)	m-Nitrotoluene	16.86	16.86	7957134	9470637	2610.564	2712.048m
21)	PETN	0.00	18.53	0	3476262	N.D. d	2527.387m

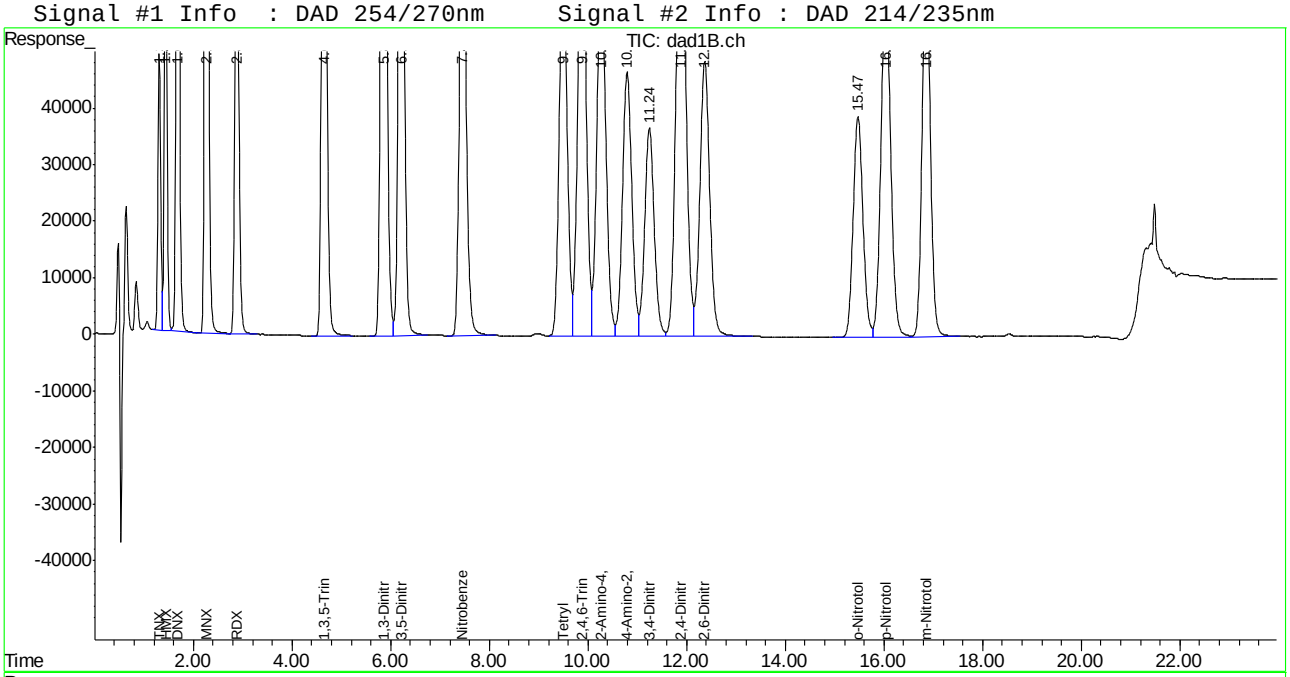
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

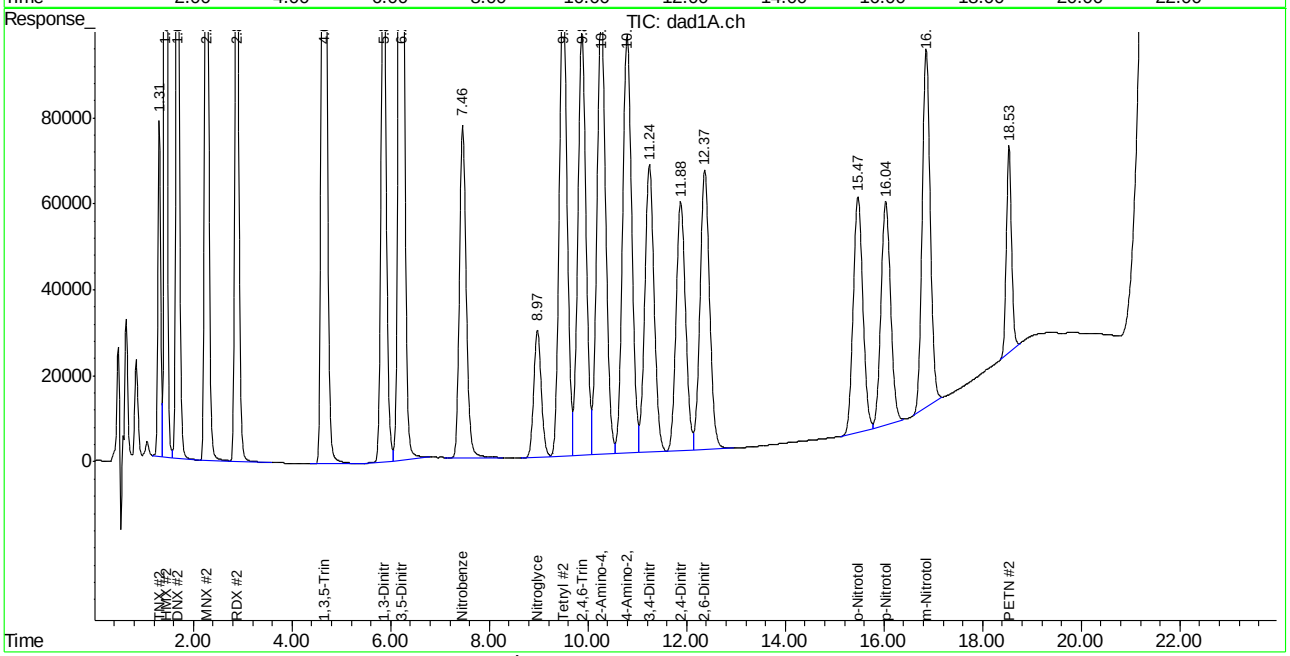
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:19 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

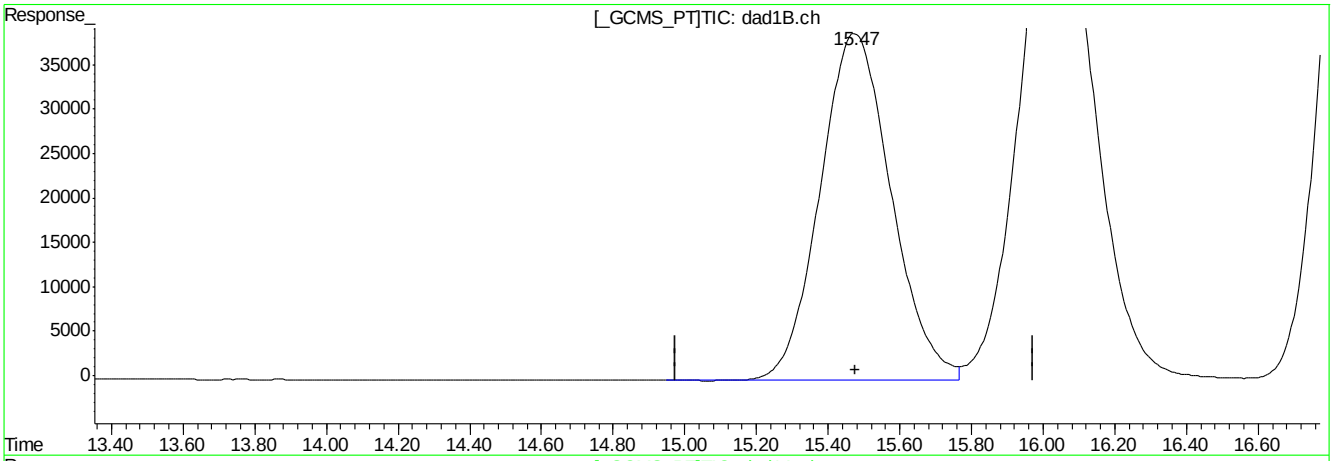
Sample Number: GPP2464-IC2464
Lab FileID: PP391049.D
Injection Time: 08/03/21 14:51
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

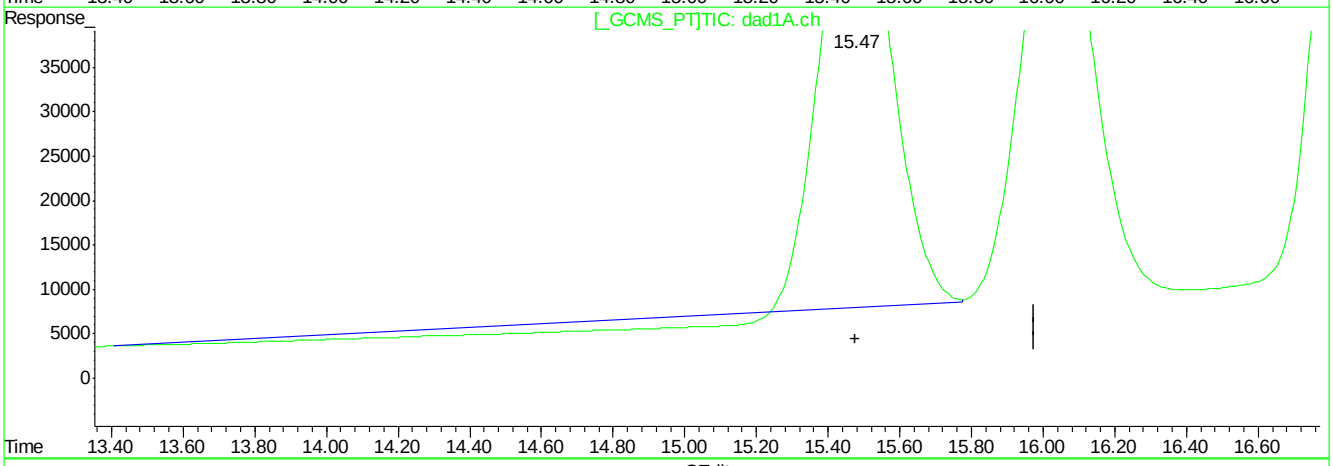
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.47	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.04	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.53	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 2494.069ppb

response 5375914

(18) o-Nitrotoluene #2

15.48min 2213.542ppb

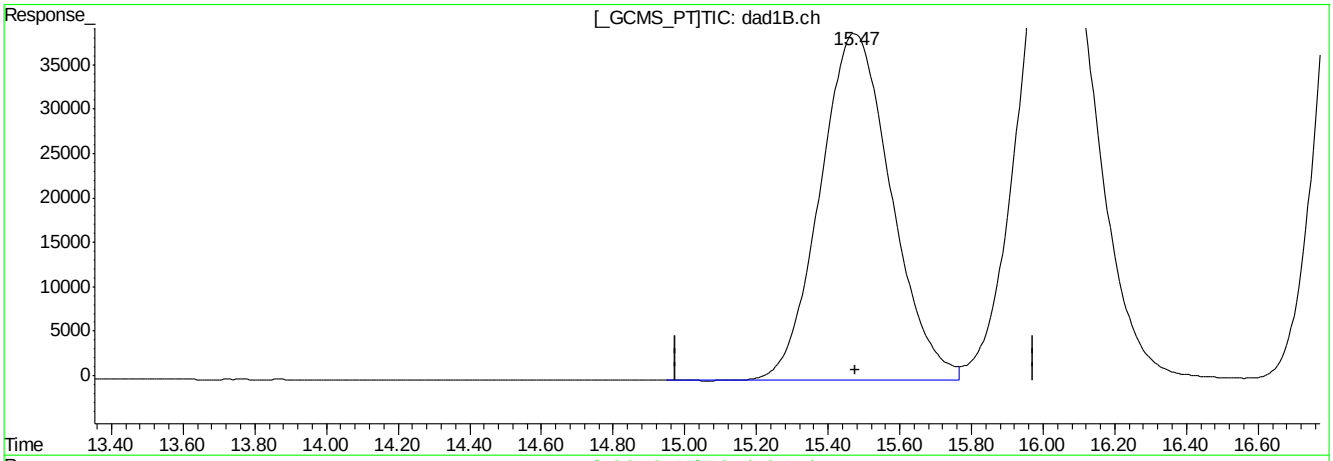
response 6289240

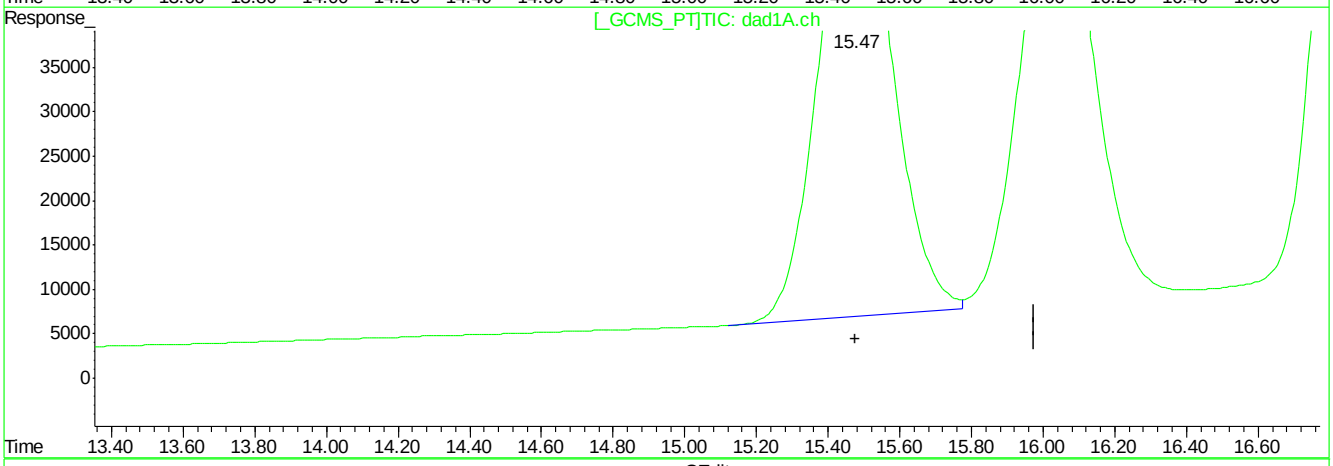
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:18:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 2494.069ppb

response 5375914

(18) o-Nitrotoluene #2

15.47min 2619.361ppb m

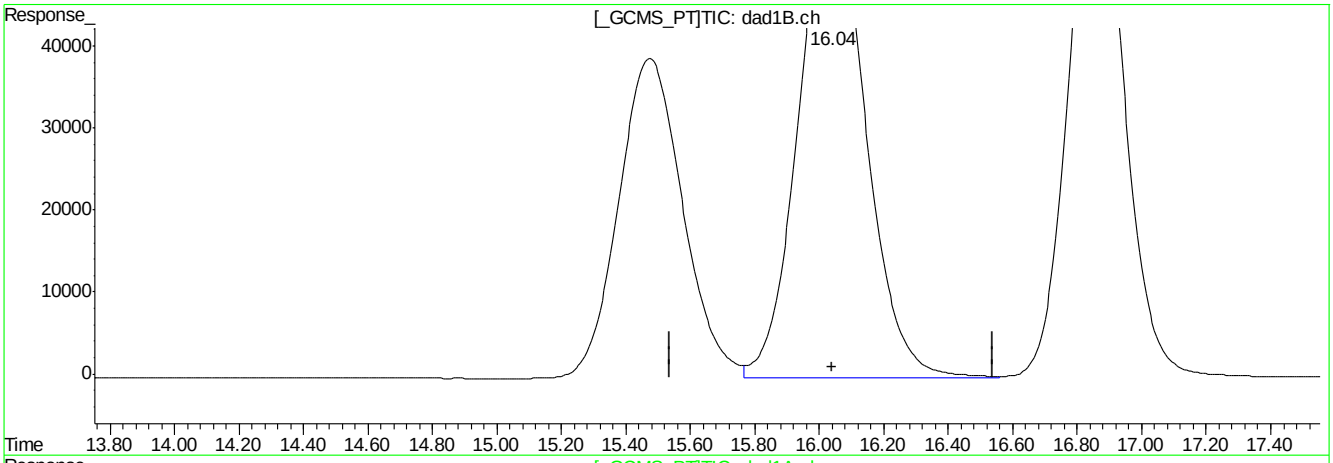
response 7442275

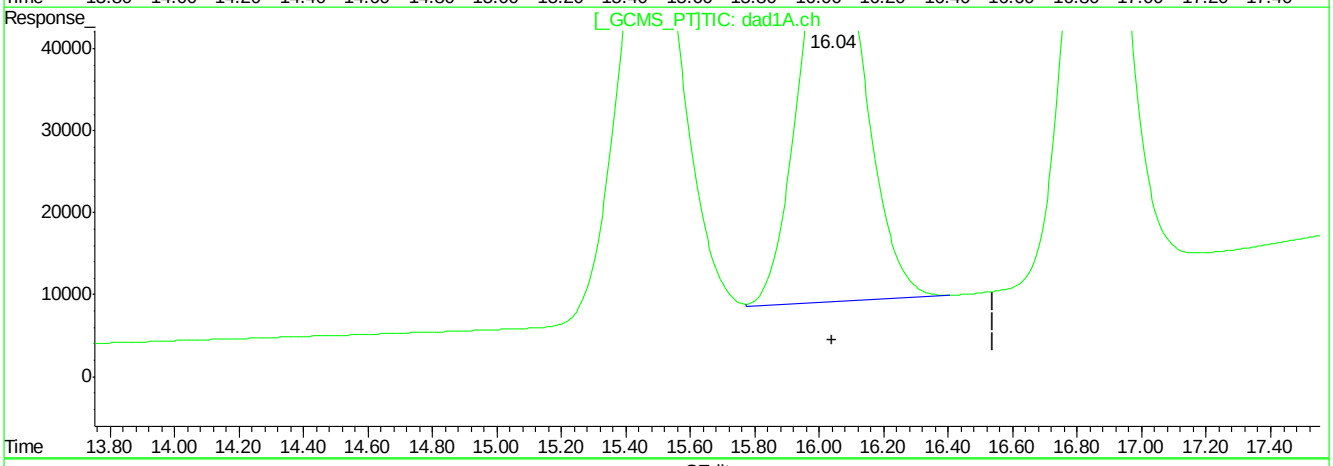
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.04min 2516.348ppb

response 8439427

(19) p-Nitrotoluene #2

16.04min 2548.155ppb

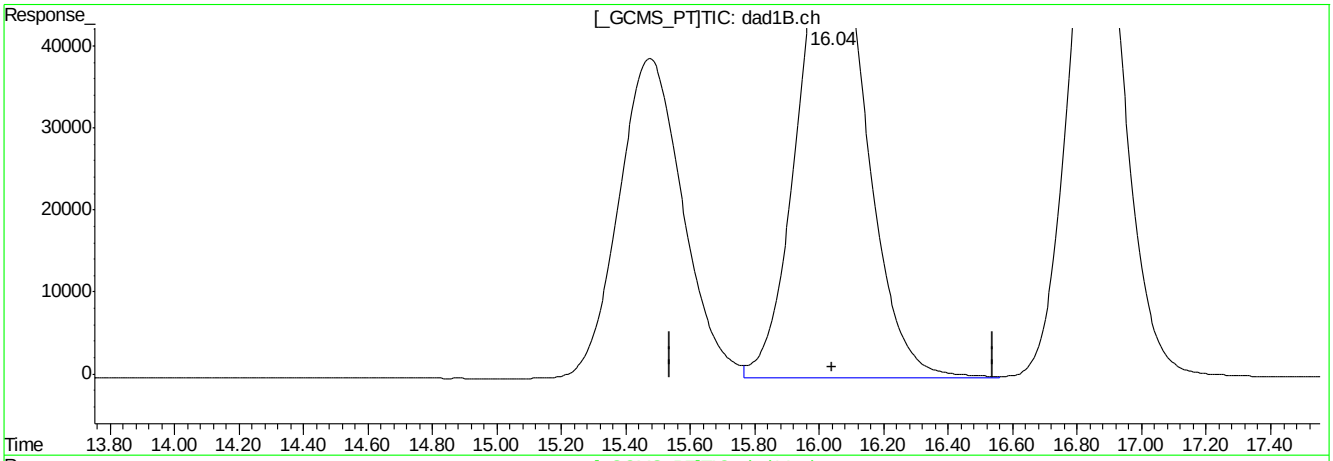
response 6866852

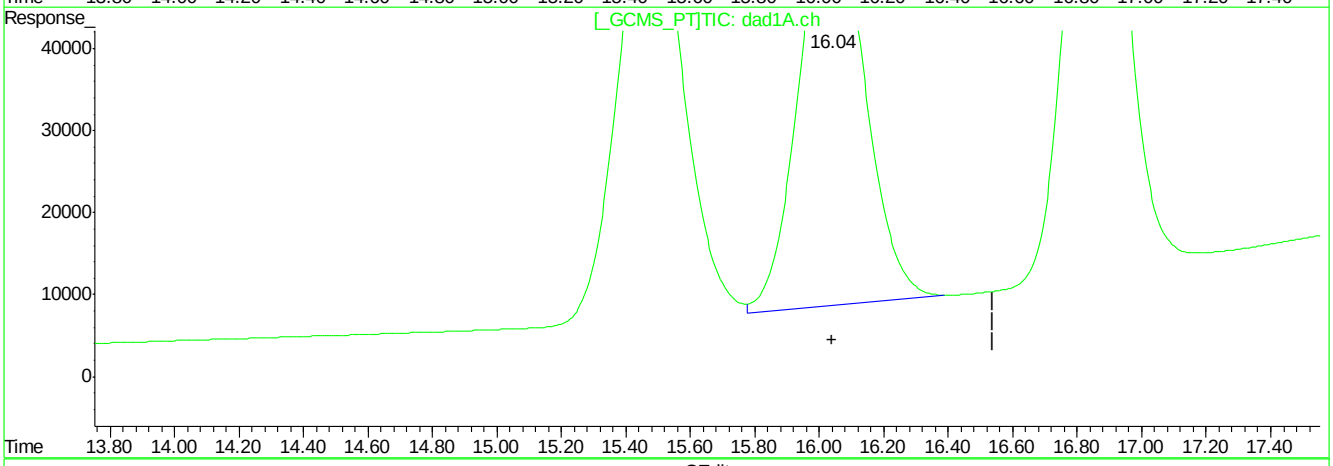
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.04min 2516.348ppb

response 8439427

(19) p-Nitrotoluene #2

16.04min 2602.435ppb m

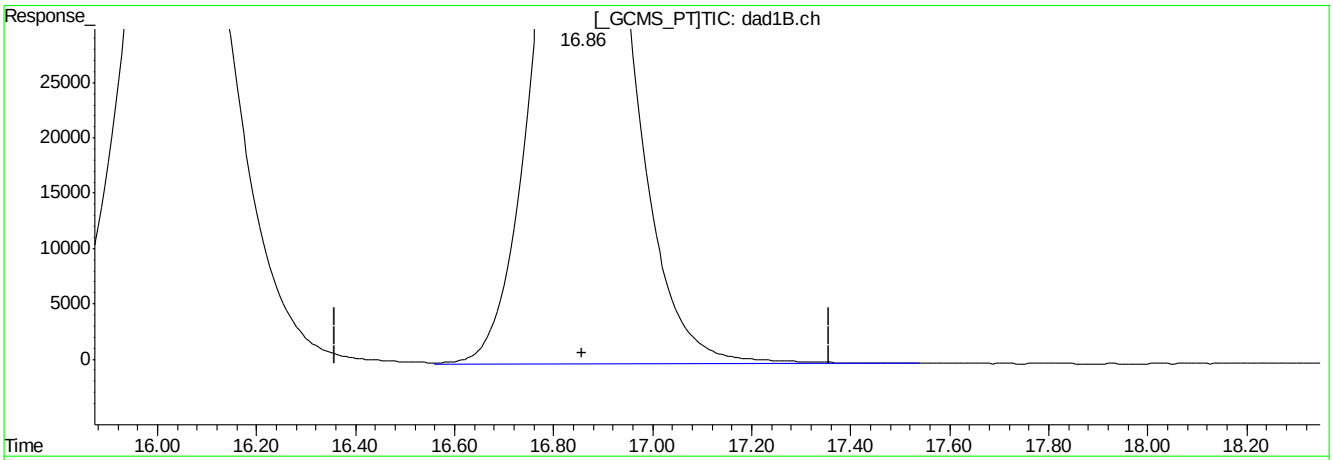
response 7020624

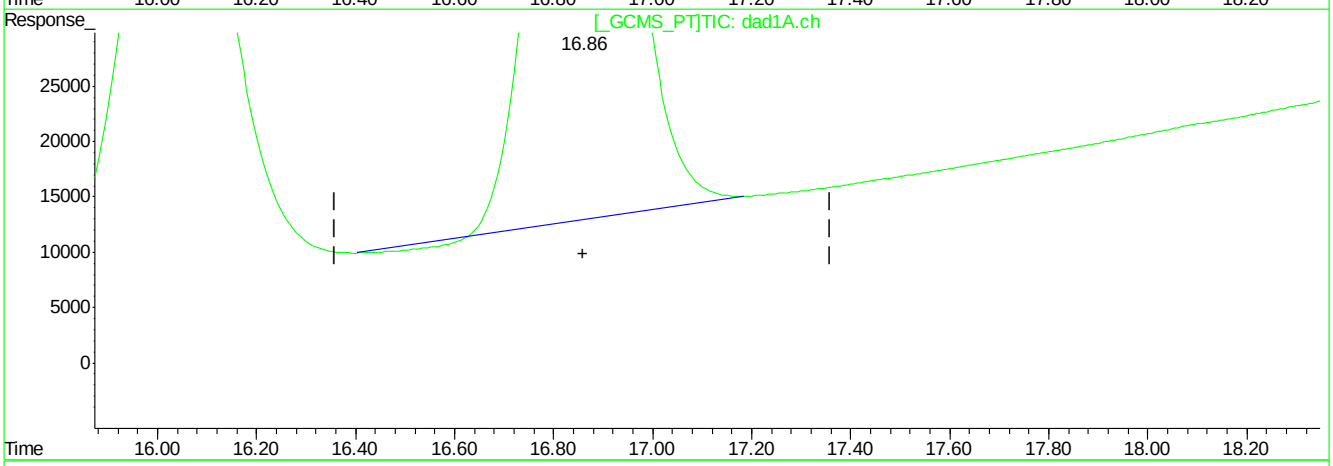
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 2610.564ppb

response 7957134

(20) m-Nitrotoluene #2

16.86min 2681.736ppb

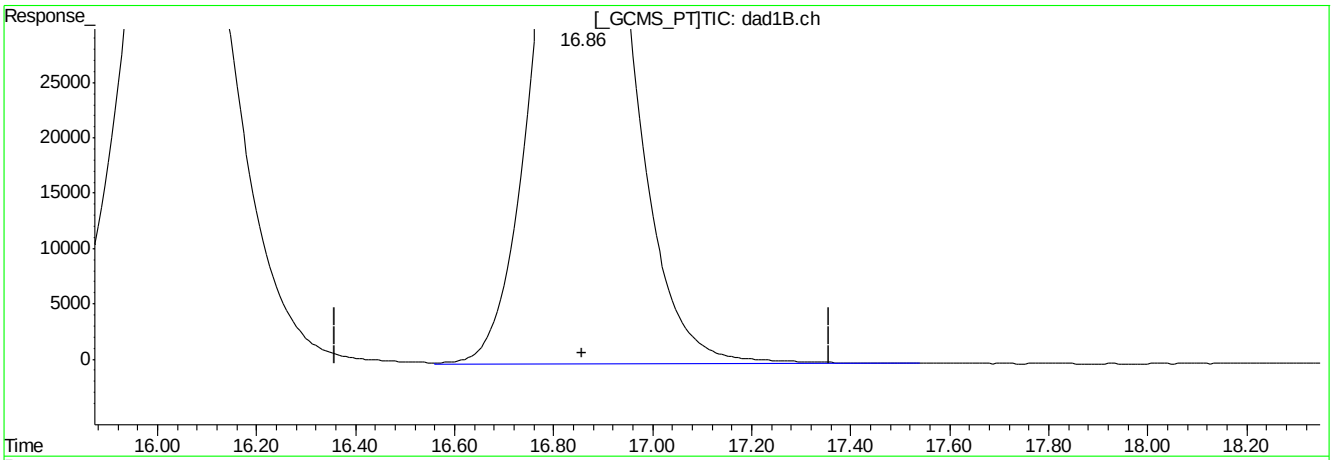
response 9364785

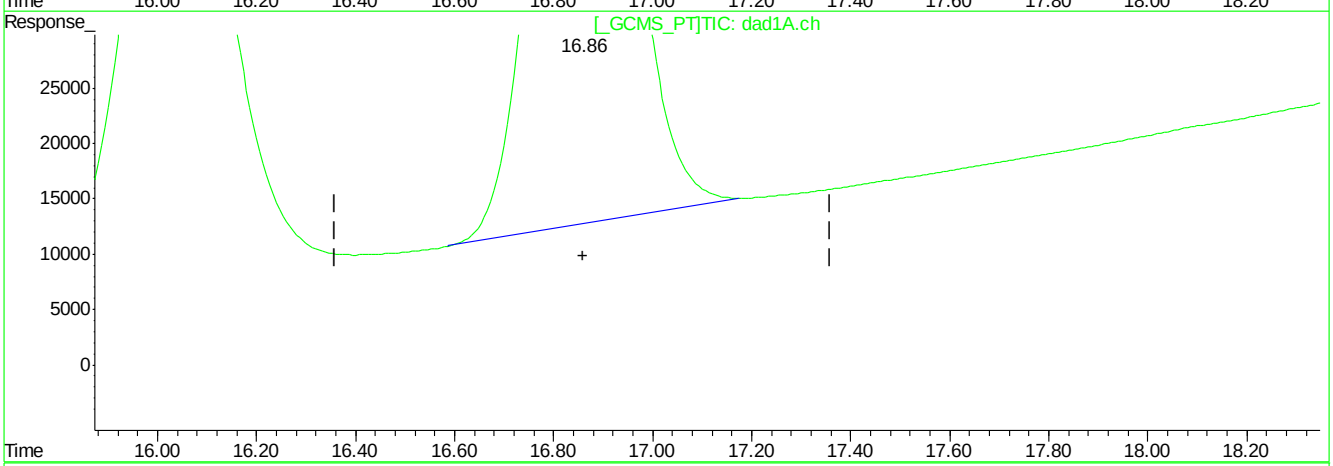
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 2610.564ppb

response 7957134

(20) m-Nitrotoluene #2

16.86min 2712.048ppb m

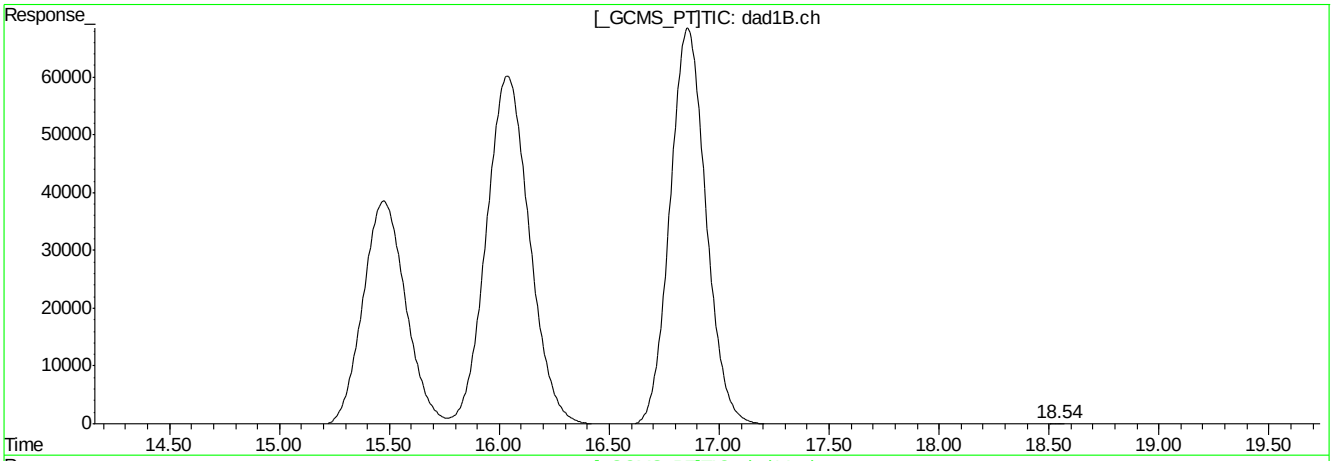
response 9470637

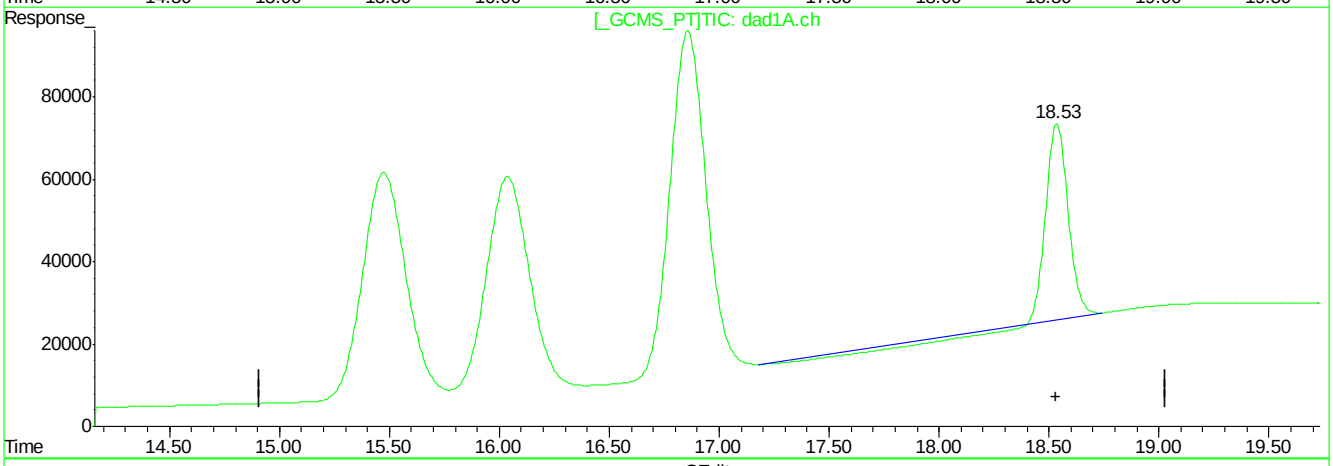
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.54min 0.000ppb

response 27226

(21) PETN #2

18.54min 2034.067ppb

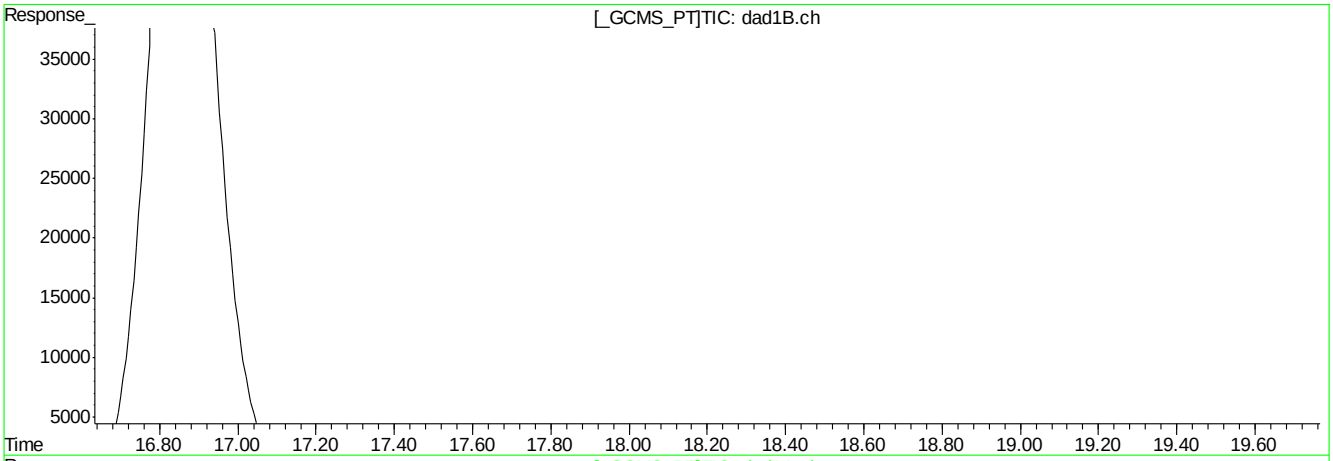
response 2797732

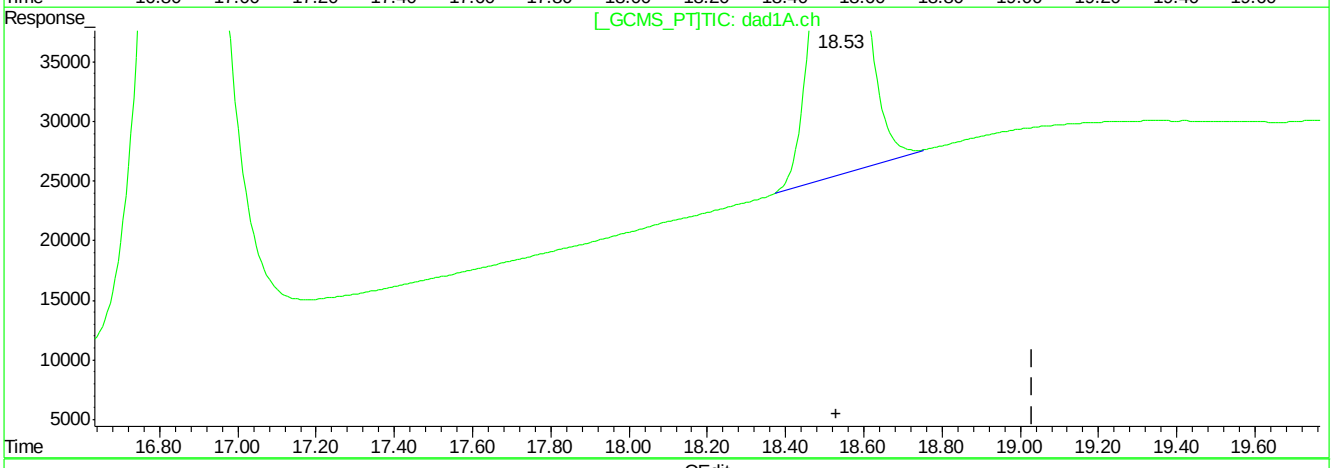
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.53min 2527.387ppb m

response 3476262

(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:35 2021

PP391049.D edits: PETN

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:38 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.26	11.26	9876299	17809377	4663.212	5364.442
	Spiked Amount 500.000	Range 70 - 136		Recovery =		932.64%#	1072.89%#
	Target Compounds						
1)	TNX	1.31	1.31	3972994	6275652	2104.771	2022.090
2)	HMX	1.44	1.44	7532644	21103897	5211.865	4916.206
3)	DNX	1.68	1.68	10744398	16965746	4655.519	4329.922
4)	MNX	2.27	2.27	14611386	22721296	5767.977	5811.787
5)	RDX	2.88	2.88	9168937	14764404	5049.477	5055.804
6)	1,3,5-Trinitrobe	4.65	4.65	19915216	38595239	5104.984	5092.711
7)	1,3-Dinitrobenze	5.86	5.86	26082180	18066195	5164.712	4848.956
8)	3,5-Dinitroanili	6.22	6.22	19753762	33938220	5133.046	4929.694
9)	Nitrobenzene	7.46	7.46	15388390	14950193	5295.748	5228.901
10)	Nitroglycerin	0.00	8.98	0	6200453	N.D. d	5003.297
11)	Tetryl	9.50	9.51	14959842	23922684	5104.663	5175.322
12)	2,4,6-Trinitroto	9.89	9.89	18367759	22626715	4966.523	5180.874
13)	2-Amino-4,6-Dini	10.27	10.27	16535863	25604744	5027.301	5328.404
14)	4-Amino-2,6-Dini	10.80	10.80	12139273	25168613	4862.142	5606.526
16)	2,4-Dinitrotolue	11.89	11.89	23326548	15708729	5167.893	5433.606
17)	2,6-Dinitrotolue	12.38	12.38	13465936	17636699	5285.719	5486.744
18)	o-Nitrotoluene	15.48	15.48	10925938	15232507	5068.914	5361.187m
19)	p-Nitrotoluene	16.04	16.04	17011241	14187616	5072.170	5020.370
20)	m-Nitrotoluene	16.86	16.86	16153130	19279539	5299.494	5520.962m
21)	PETN	0.00	18.54	0	6824785	N.D. d	4961.902m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:35:54 2021 Page 1

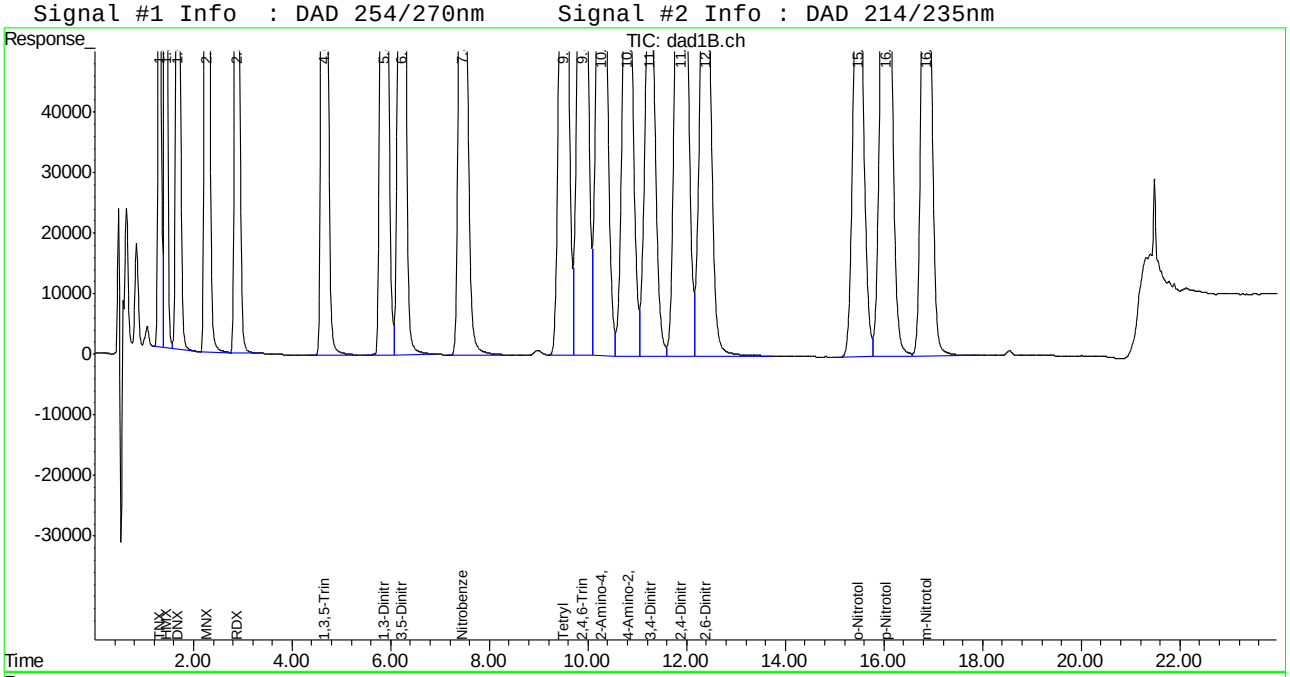
9.5.20
9

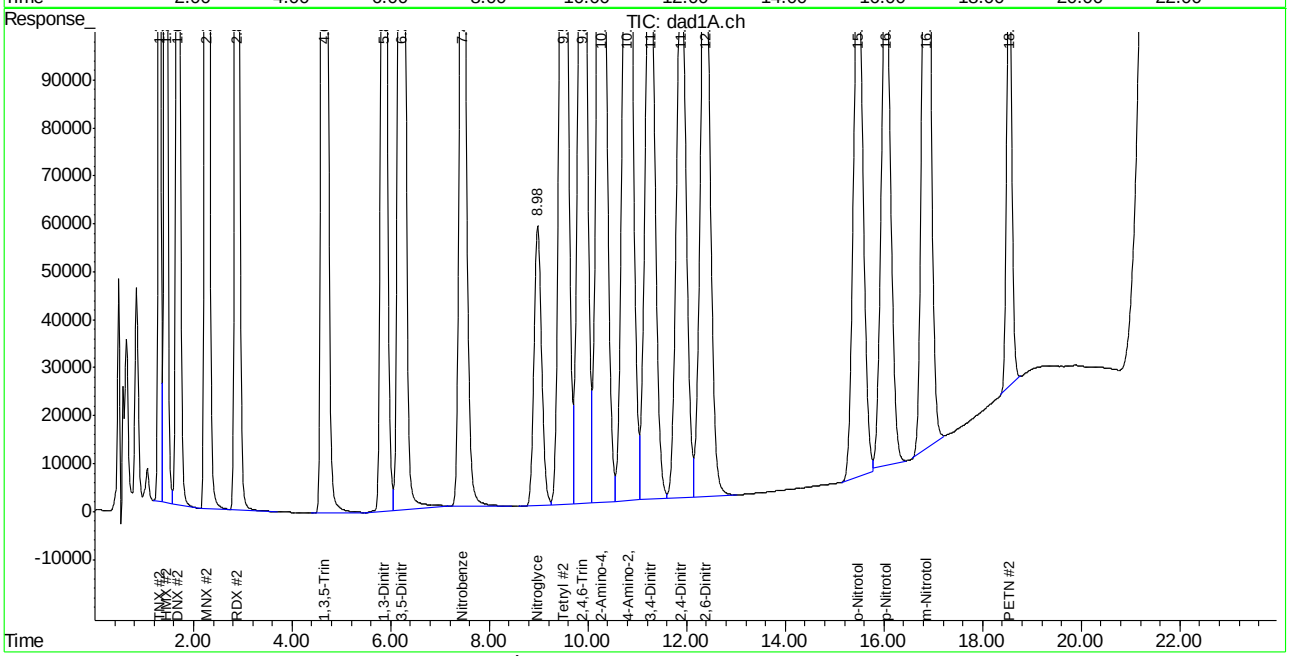
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:18 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

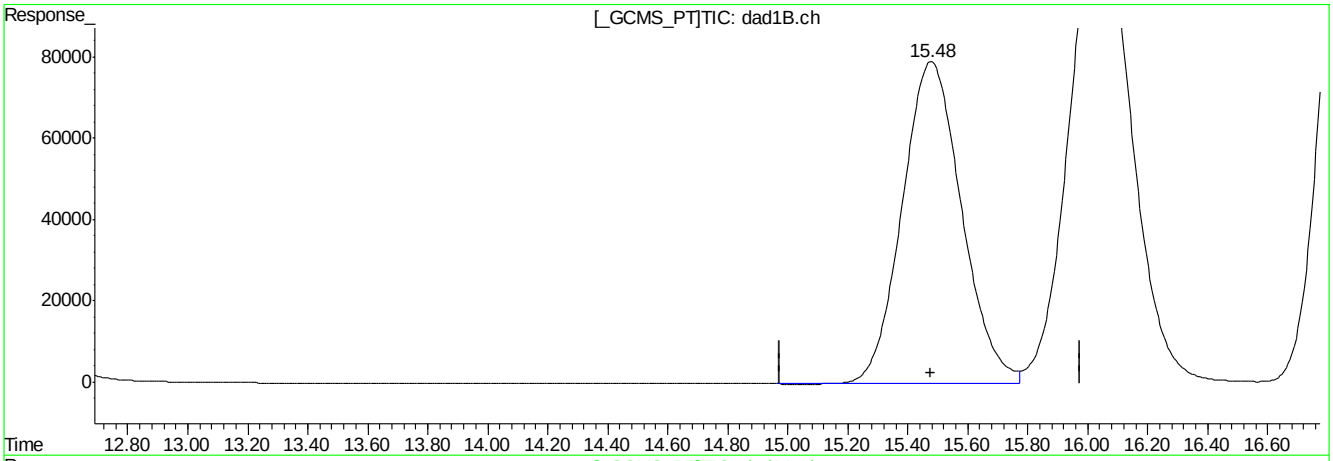
Sample Number: GPP2464-IC2464
Lab FileID: PP391050.D
Injection Time: 08/03/21 15:22
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

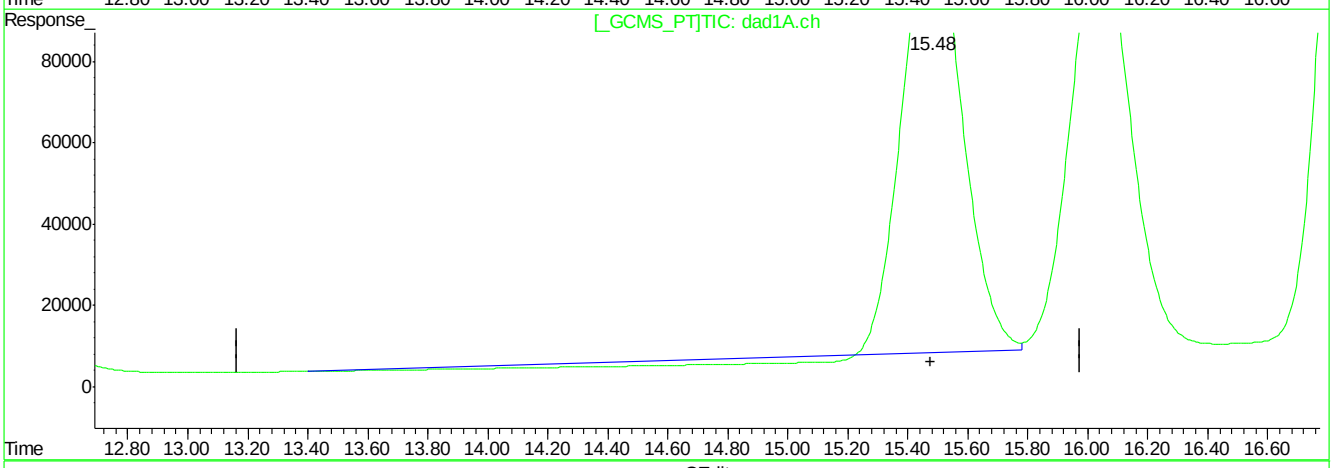
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.48	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.54	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 5068.914ppb

response 10925938

(18) o-Nitrotoluene #2

15.48min 4868.863ppb

response 13833688

(+) = Expected Retention Time
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:17:28 2021

9.5.20.2

9

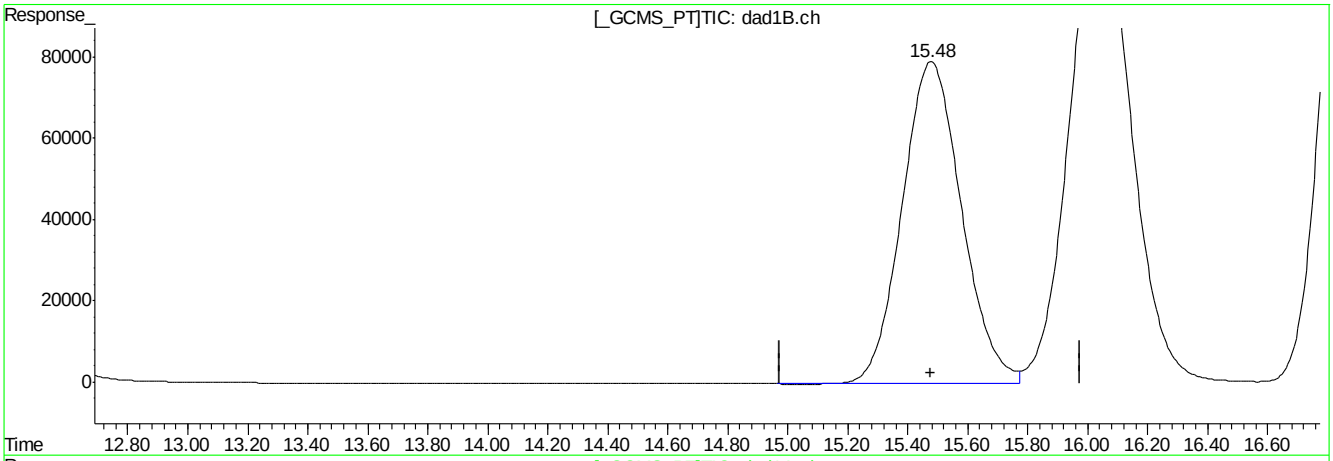
PP391050.D edits: o-Nitrotoluene

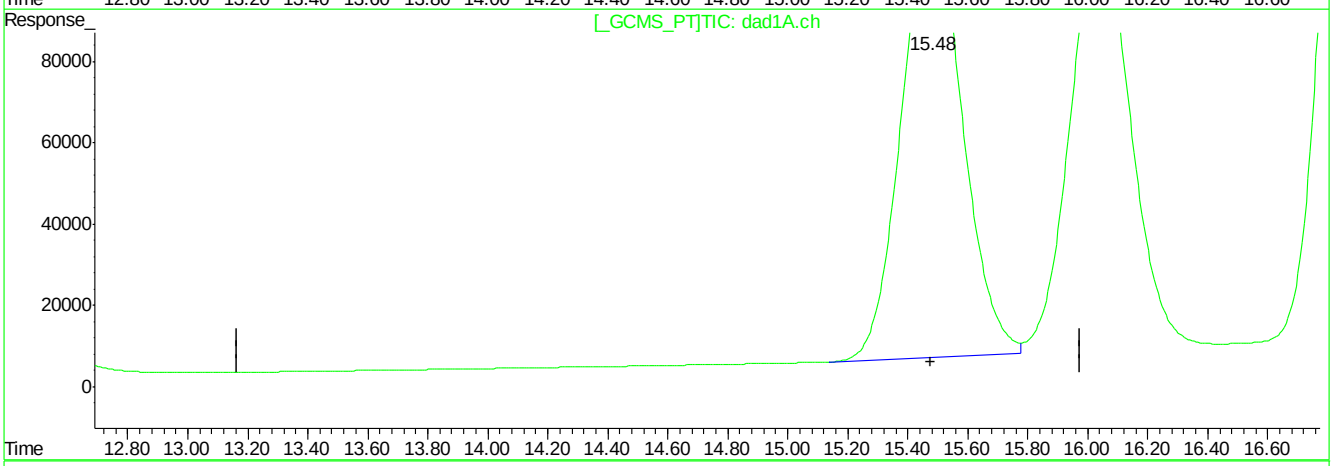
FA87620

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 5068.914ppb

response 10925938

(18) o-Nitrotoluene #2

15.48min 5361.187ppb m

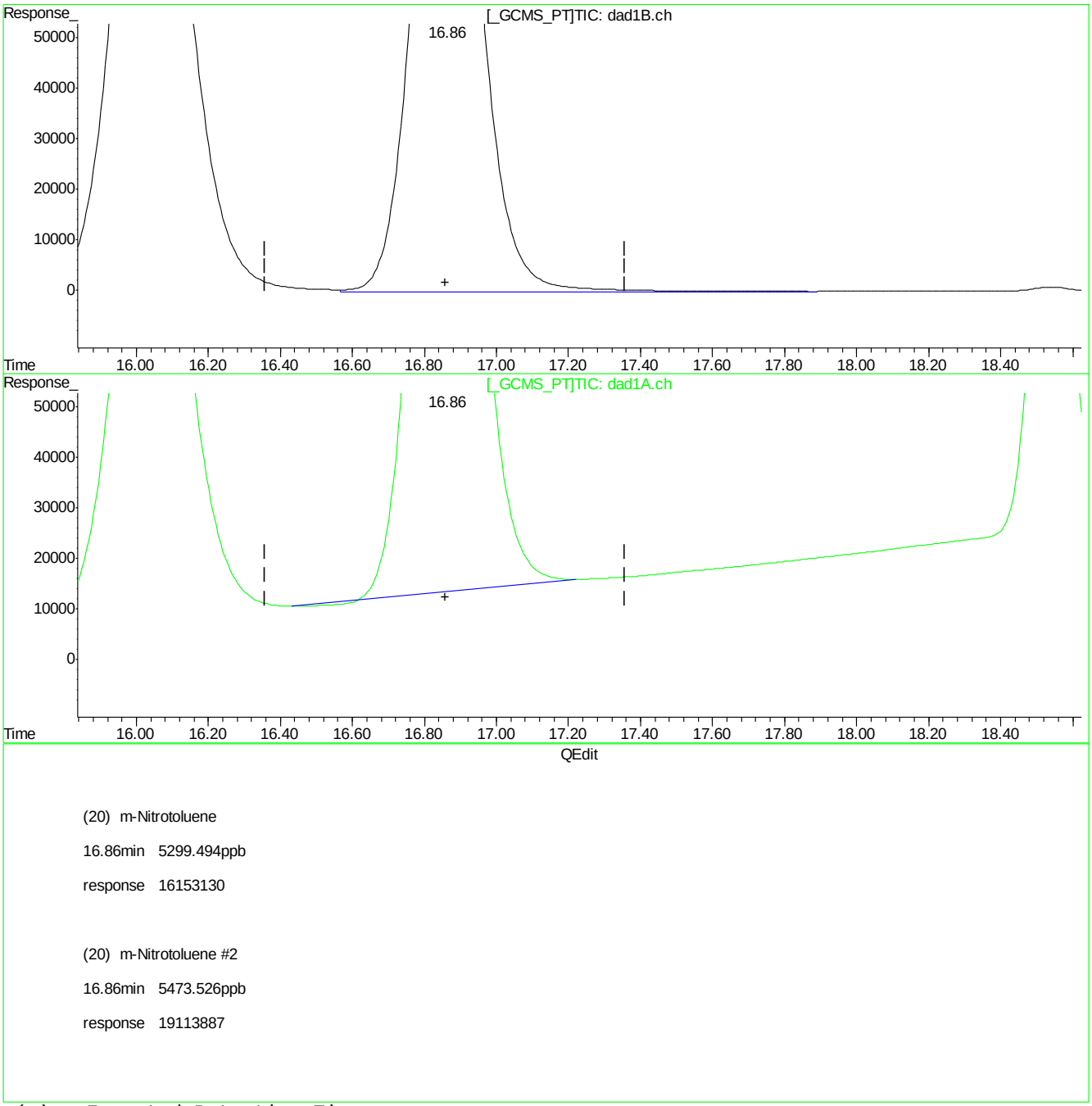
response 15232507

(+) = Expected Retention Time
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:17:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration

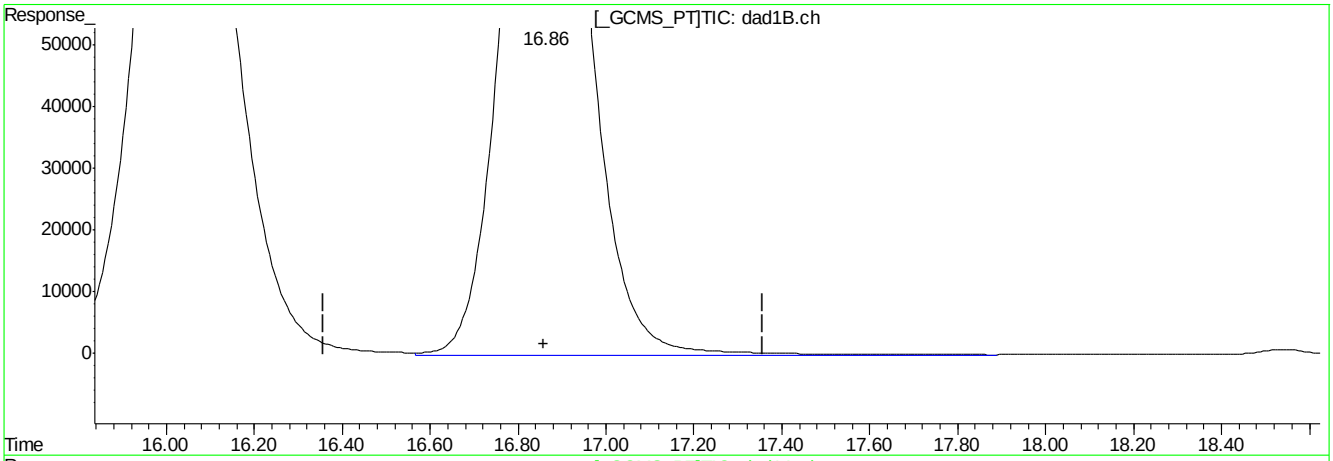


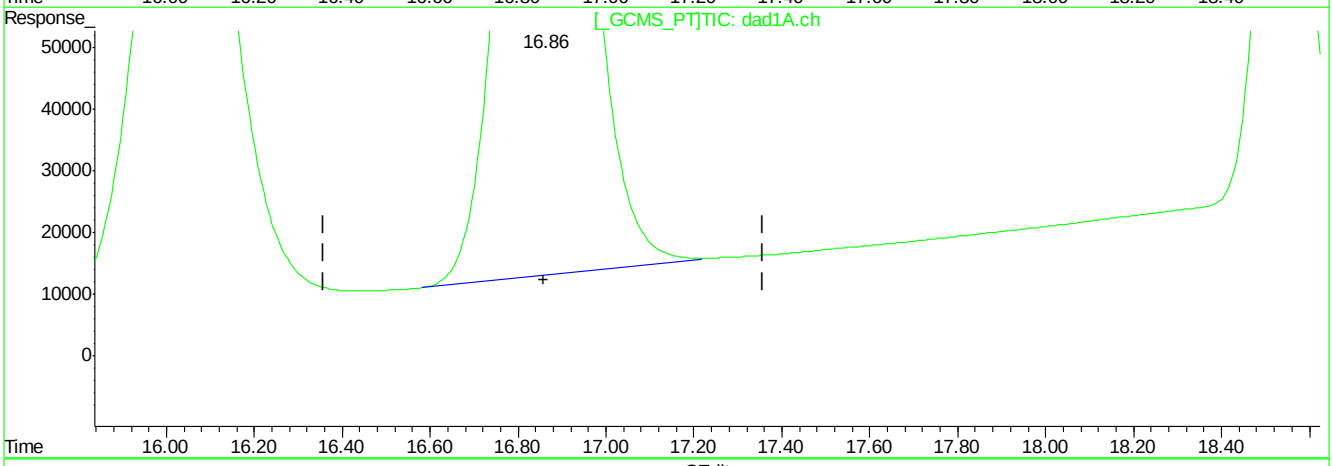
(+) = Expected Retention Time
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:17:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 5299.494ppb

response 16153130

(20) m-Nitrotoluene #2

16.86min 5520.962ppb m

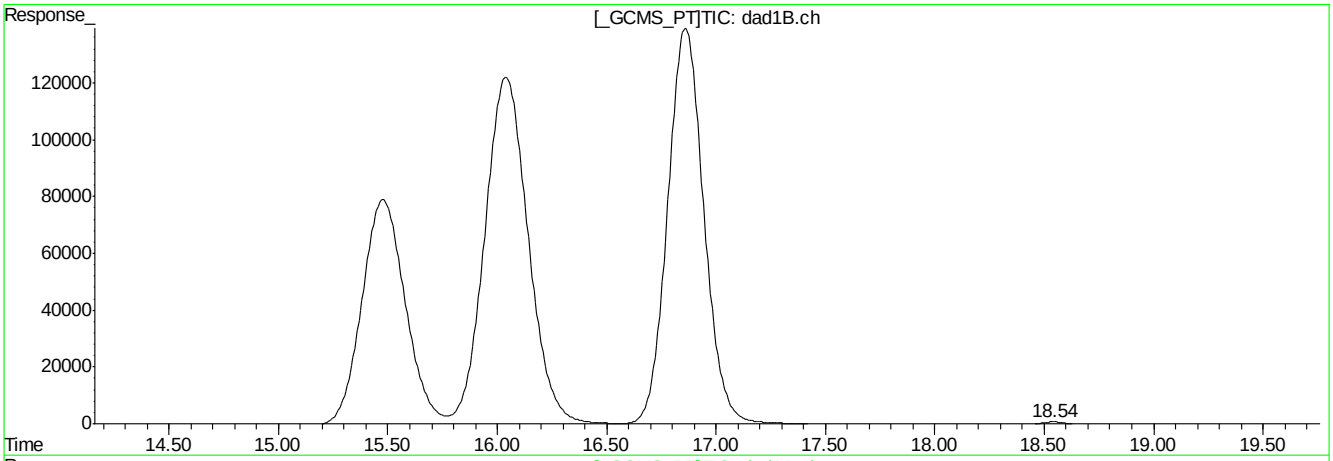
response 19279539

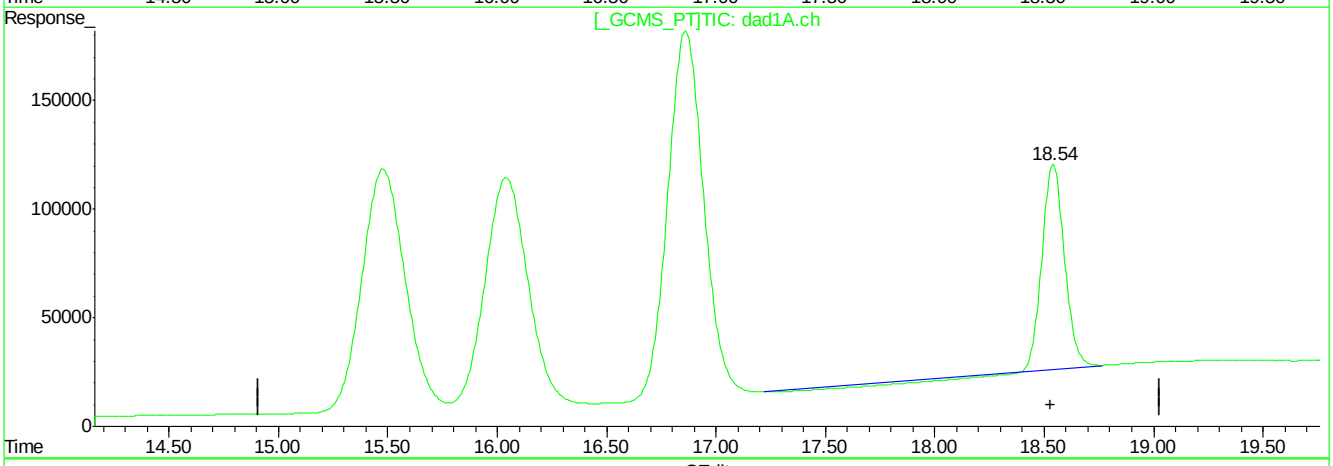
(+) = Expected Retention Time
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:17:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.54min 0.000ppb

response 61242

(21) PETN #2

18.54min 4462.408ppb

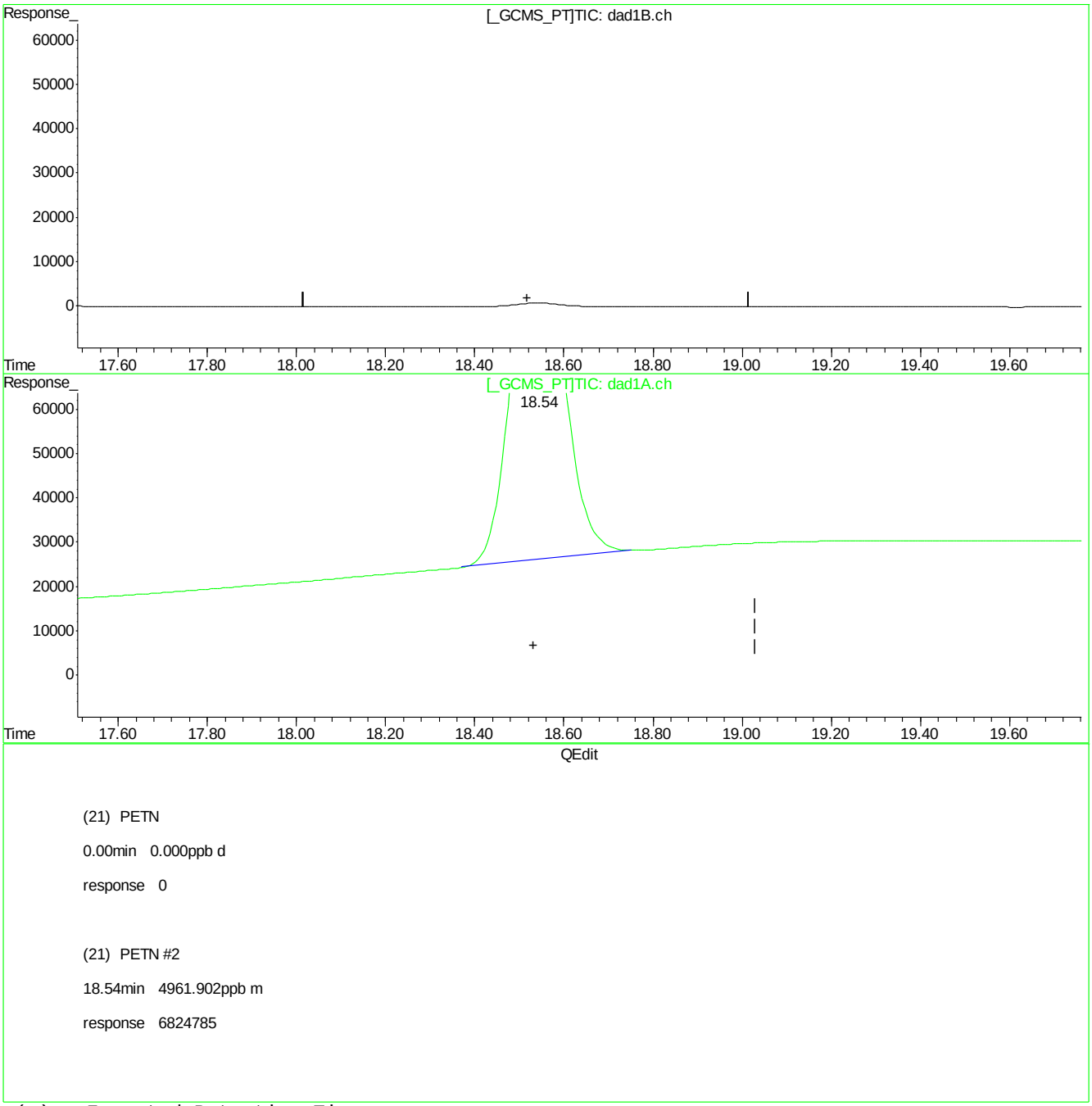
response 6137763

(+) = Expected Retention Time
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:17:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:18:03 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:34:23 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
	Spiked Amount 500.000	Range 70 - 136		Recovery =		0.00%#	0.00%#
	Target Compounds						
1)	TNX	1.31	1.31	769344	1248880	462.250	456.694
2)	HMX	1.44	1.44	1510415	4281423	963.905	925.187
3)	DNX	1.69	1.69	2172260	3472697	990.651	1019.742
4)	MNX	2.27	2.27	2930513	4597087	1128.163	1130.153
5)	RDX	2.89	2.89	1832775	2962213	983.394	984.323
6)	1,3,5-Trinitrobe	4.66	4.66	3987431	7679293	990.896	985.463
7)	1,3-Dinitrobenze	5.86	5.87	5167484	3604879	993.219	965.007
8)	3,5-Dinitroanili	6.23	6.23	3908865	6816374	981.572	962.122
9)	Nitrobenzene	7.47	7.47	3019857	2945120	993.036	982.610
10)	Nitroglycerin	0.00	8.99	0	1141963	N.D.	912.128 #
11)	Tetryl	9.52	9.52	3040293	4834577	970.430	1004.267
12)	2,4,6-Trinitroto	9.89	9.89	3658341	4512233	967.521	1008.390
13)	2-Amino-4,6-Dini	10.29	10.29	3368485	5203330	973.899	1037.443
14)	4-Amino-2,6-Dini	10.81	10.81	2459031	5067220	1010.203	1048.781
16)	2,4-Dinitrotolue	11.90	11.90	4619092	3092507	971.884	1002.279
17)	2,6-Dinitrotolue	12.38	12.39	2673896	3511217	976.574	1046.141
18)	o-Nitrotoluene	15.49	15.49	2182696	2945467	954.737	1006.331m
19)	p-Nitrotoluene	16.05	16.06	3437265	2724424	998.951	964.772
20)	m-Nitrotoluene	16.87	16.87	3193554	3855542	993.230	1044.659m
21)	PETN	0.00	18.55	0	1336755	N.D.	1046.344m#

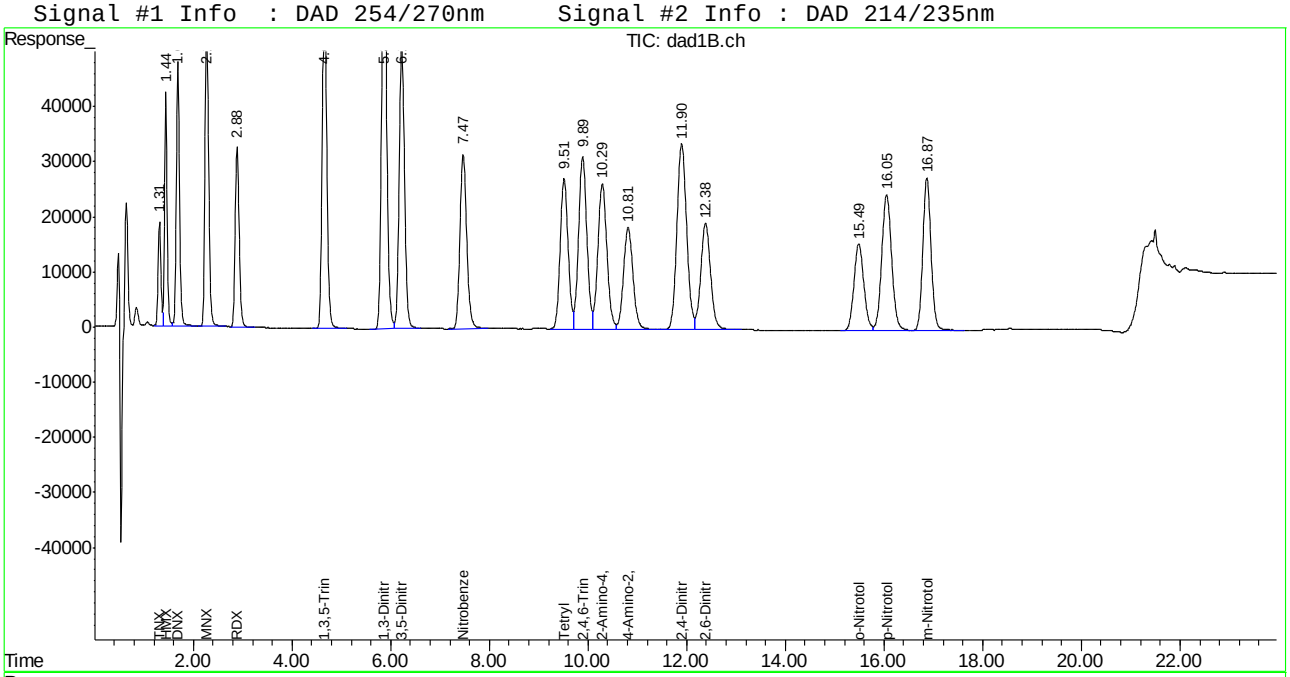
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

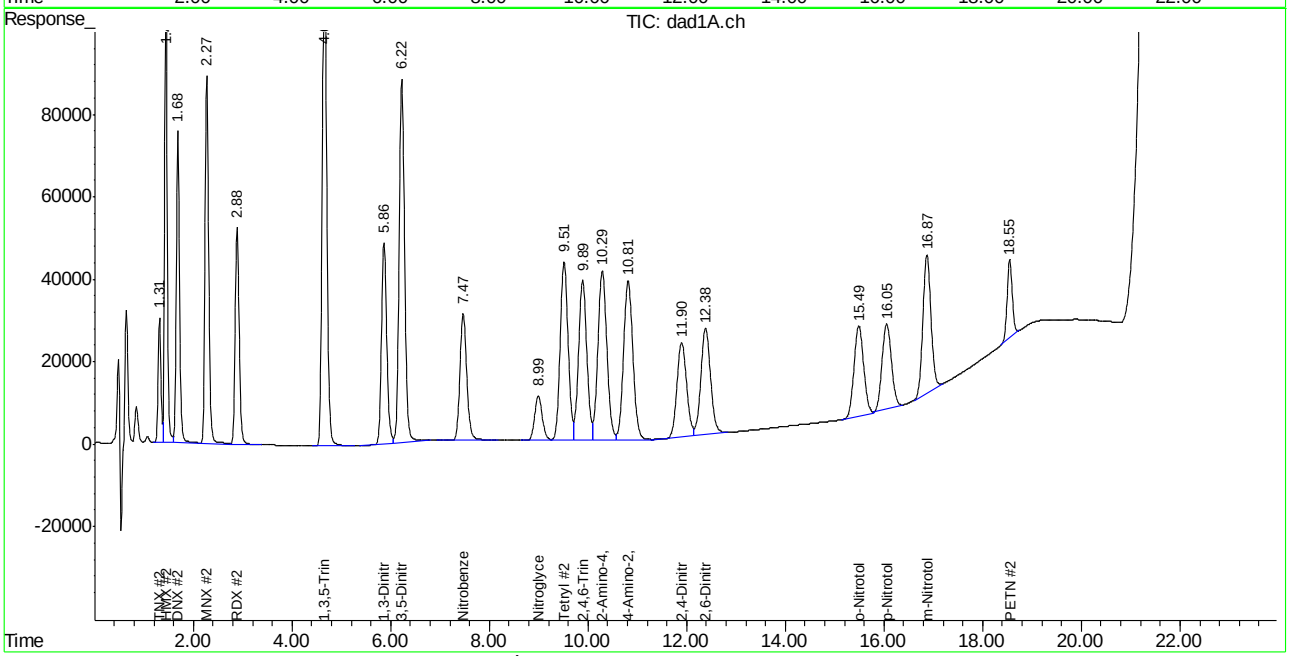
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:35 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

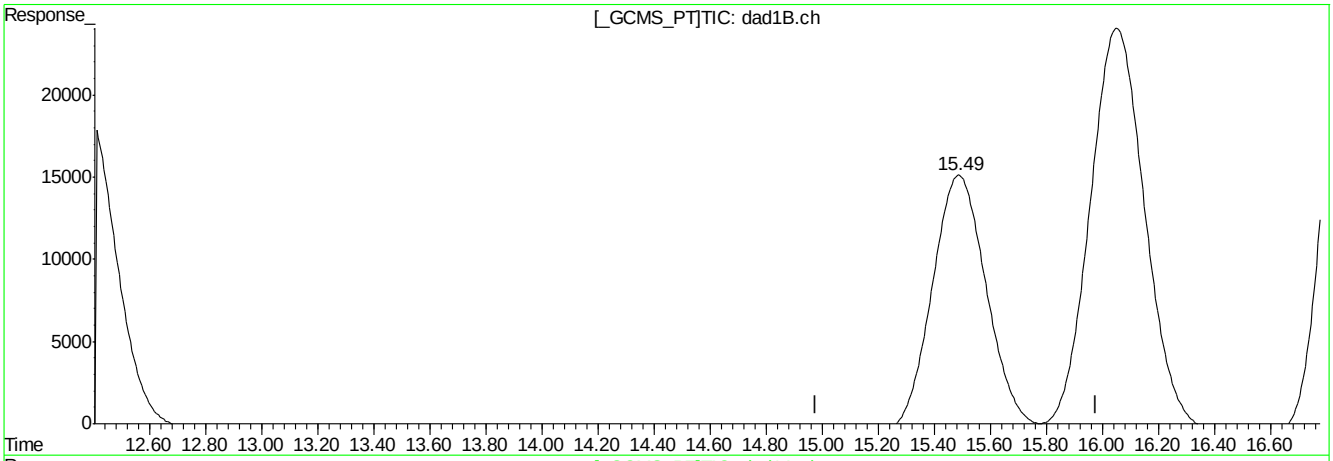
Sample Number: GPP2464-ICV2464 **Method:** SW846 8330B
Lab FileID: PP391051.D **Analyst approved:** 08/05/21 10:38 James Boone
Injection Time: 08/03/21 15:54 **Supervisor approved:** 08/05/21 14:12 Mike Eger

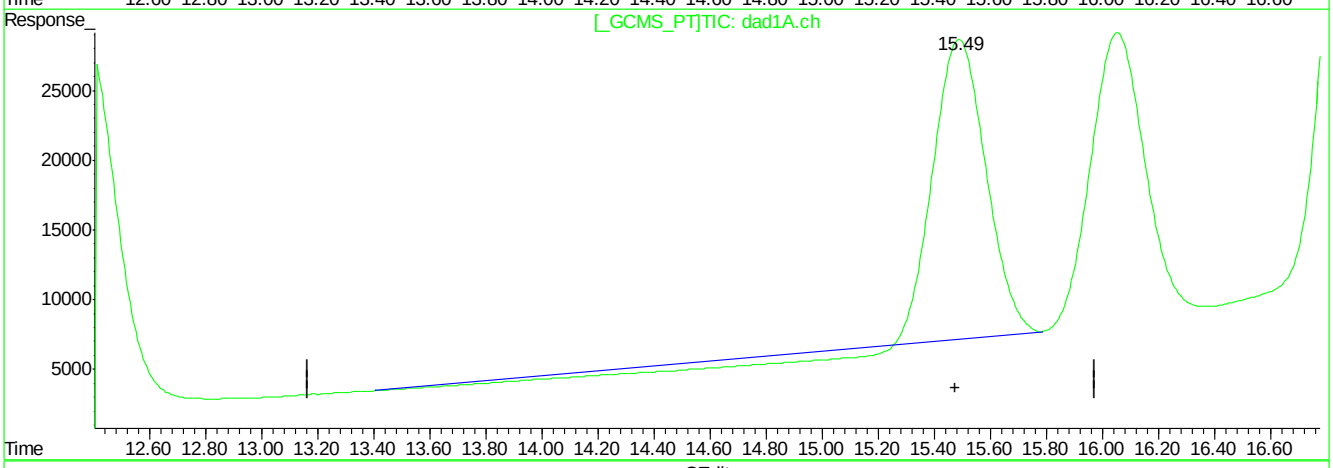
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.49	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.87	Poor instrument integration
PETN	78-11-5	2	18.55	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:34 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.49min 954.737ppb

response 2182696

(18) o-Nitrotoluene #2

15.49min 832.540ppb

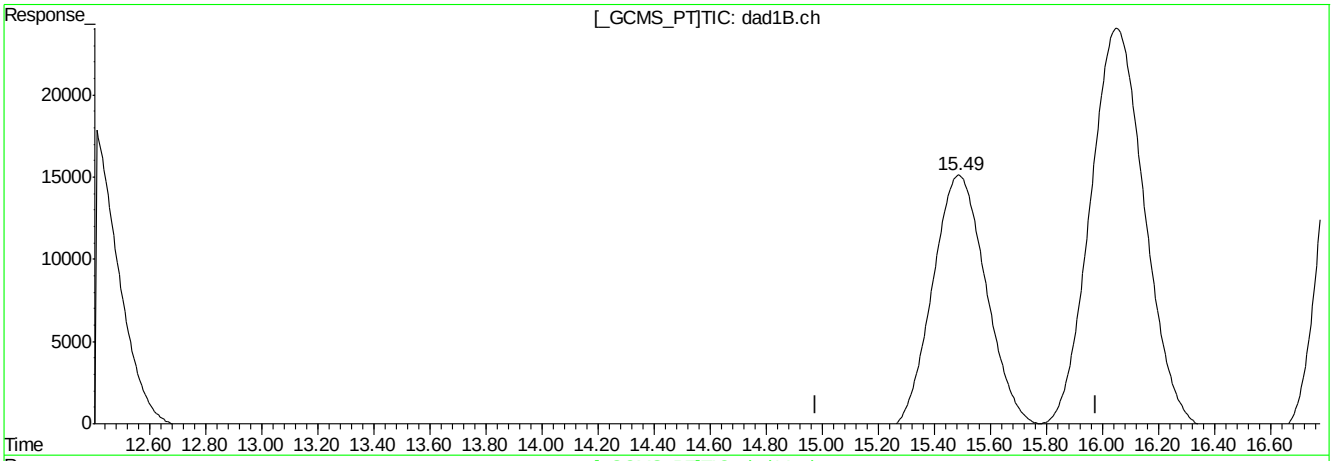
response 2436794

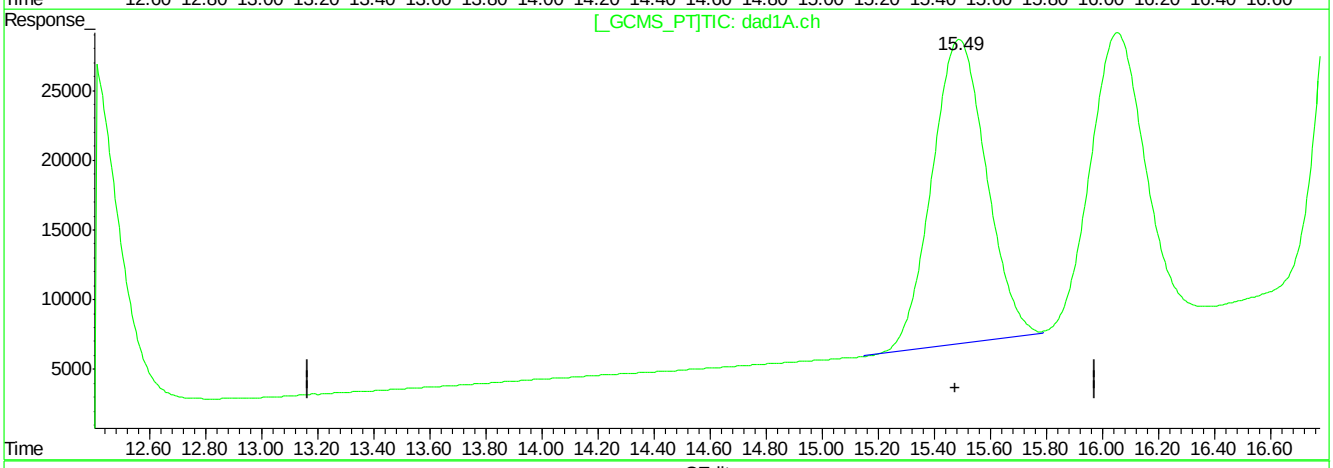
(+) = Expected Retention Time
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:34:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:34 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.49min 954.737ppb

response 2182696

(18) o-Nitrotoluene #2

15.49min 1006.331ppb m

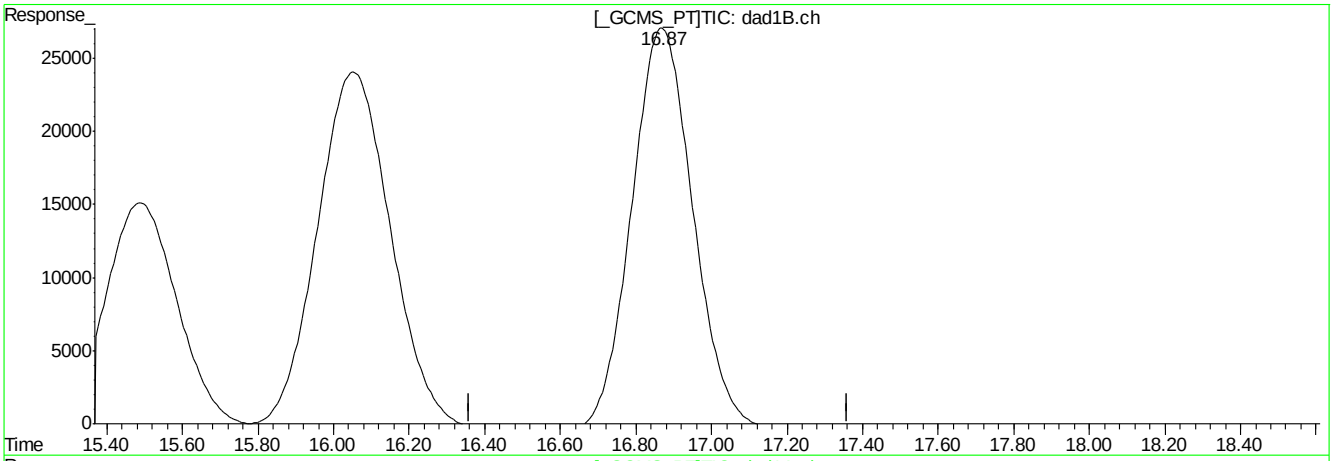
response 2945467

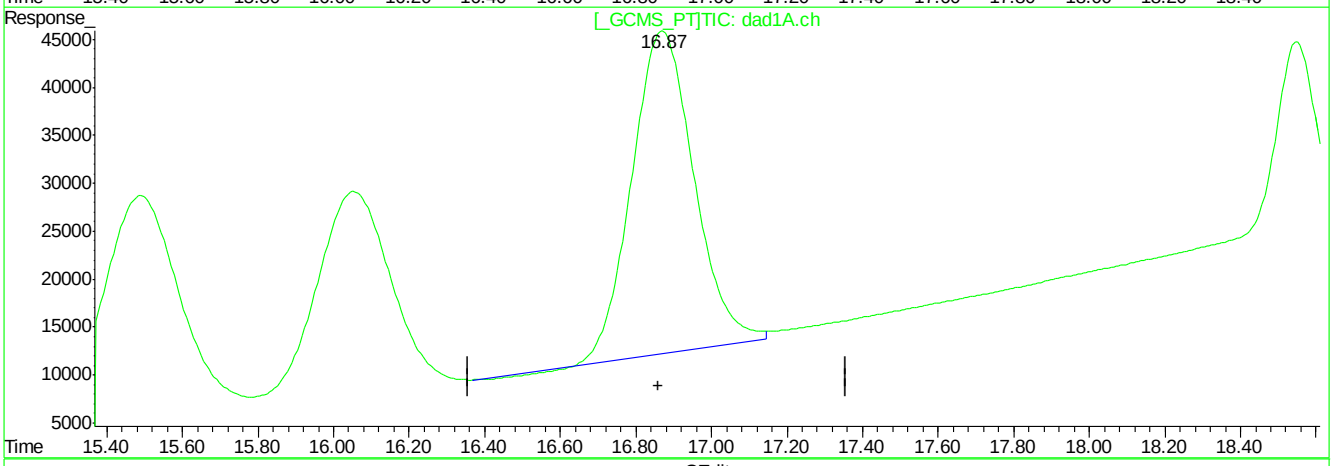
(+) = Expected Retention Time
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:34:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:34 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 993.230ppb

response 3193554

(20) m-Nitrotoluene #2

16.87min 1039.931ppb

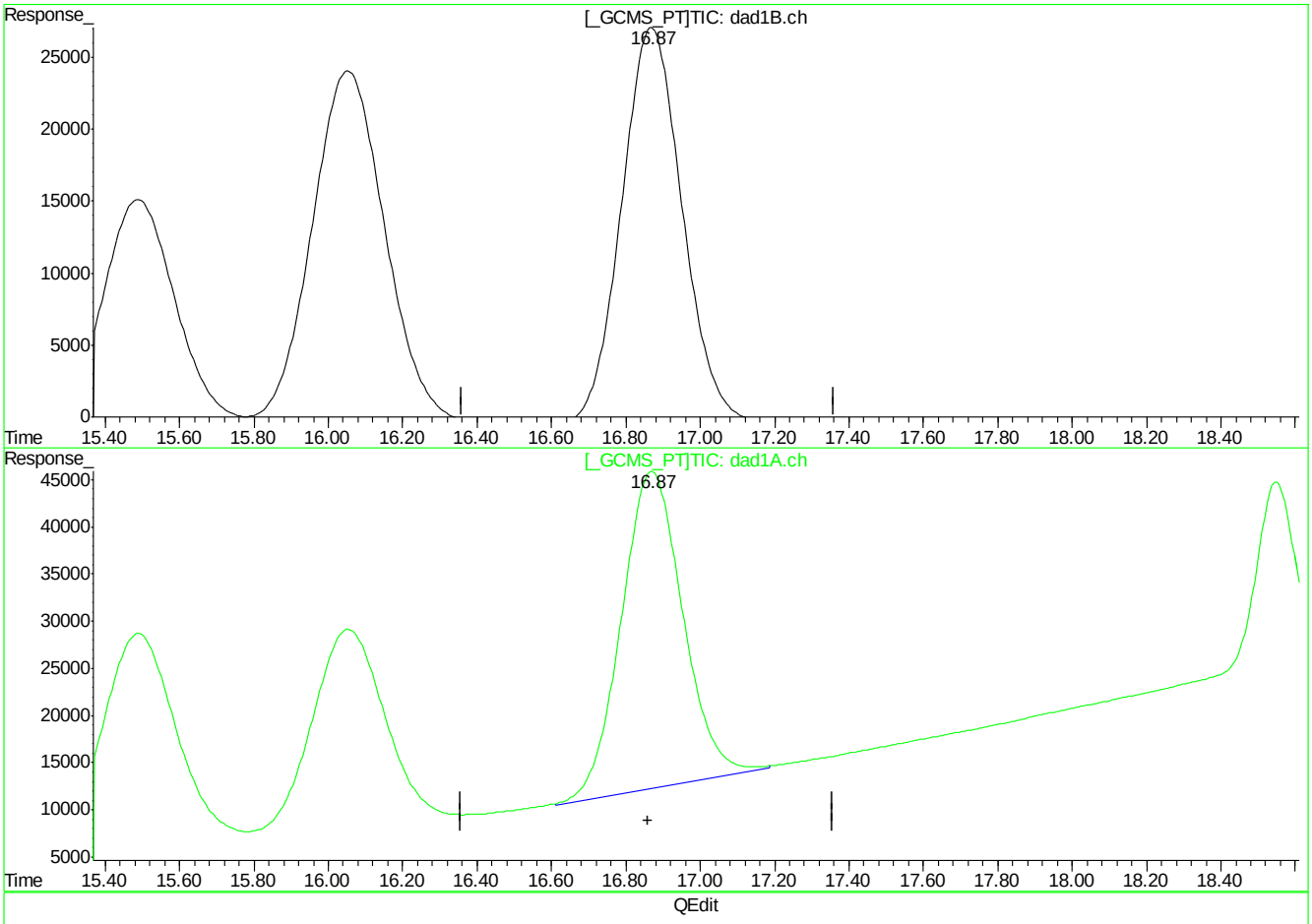
response 3838092

(+) = Expected Retention Time
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:35:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:34 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.87min 993.230ppb

response 3193554

(20) m-Nitrotoluene #2

16.87min 1044.659ppb m

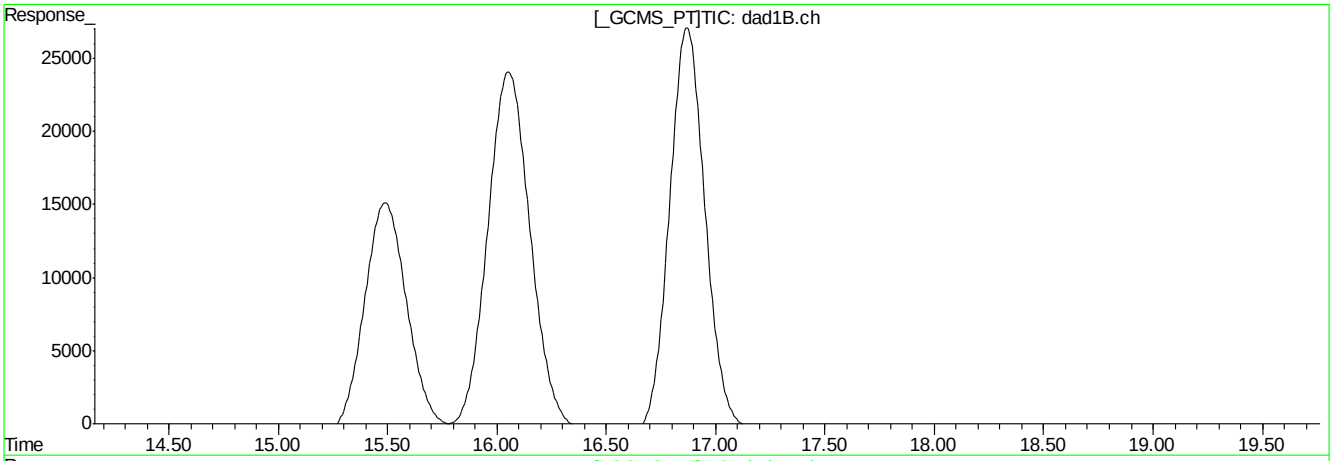
response 3855542

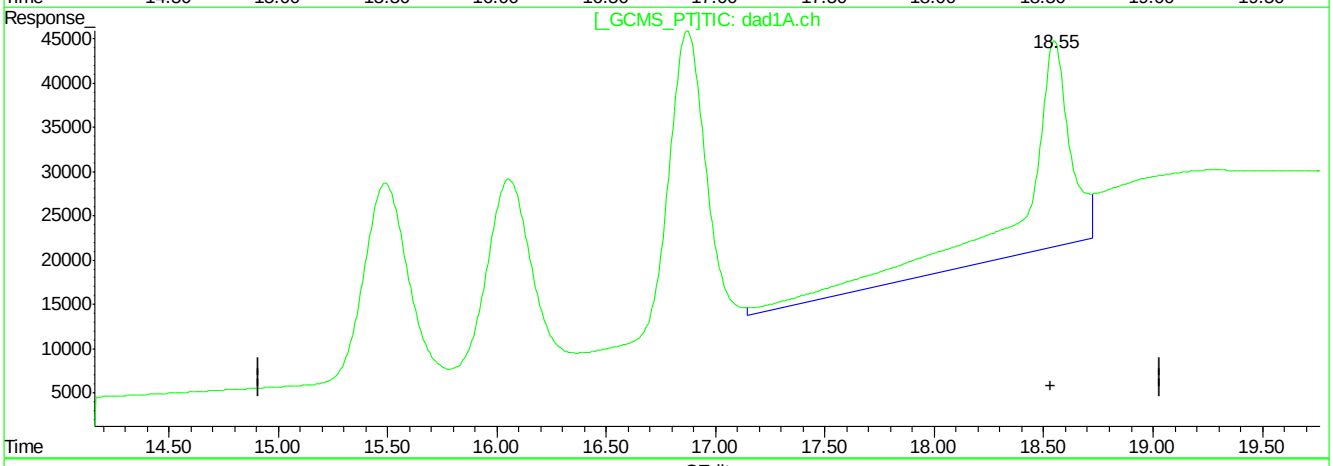
(+) = Expected Retention Time
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:35:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:34 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.55min 2756.768ppb

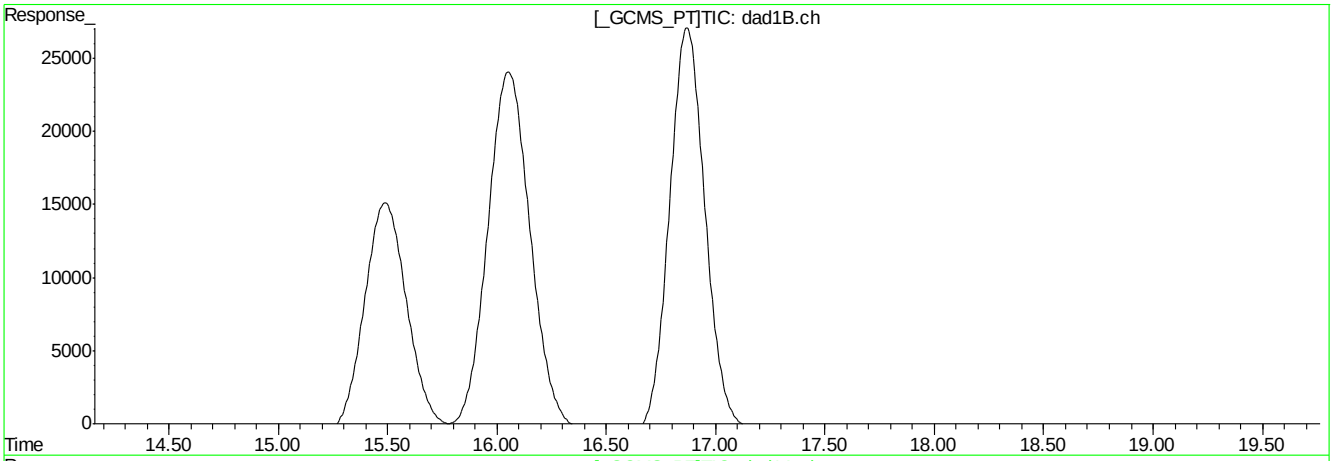
response 3521901

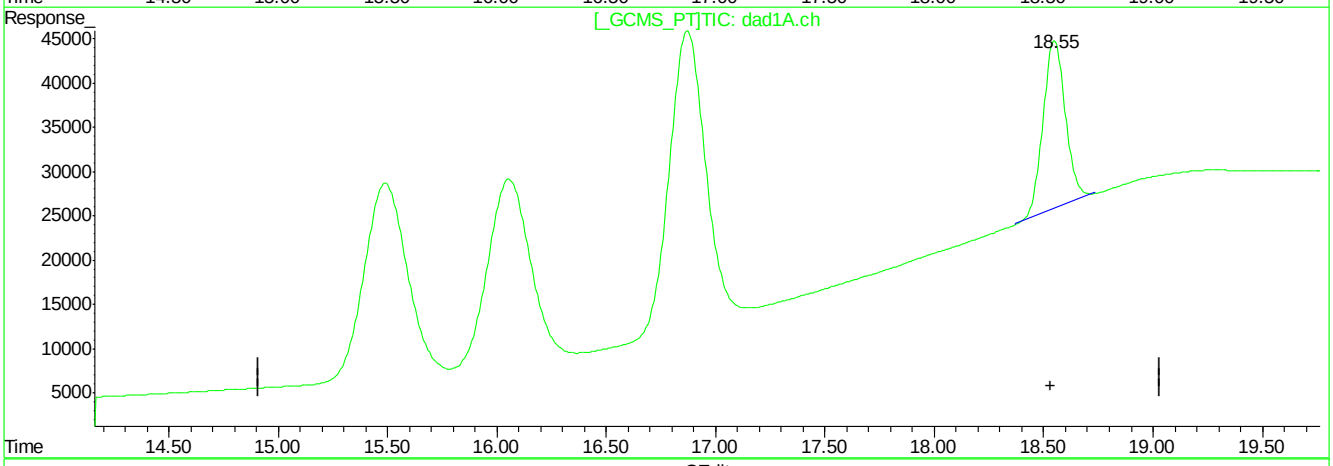
(+) = Expected Retention Time
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:35:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:34 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.55min 1046.344ppb m

response 1336755

(+) = Expected Retention Time
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:35:16 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/12/21 11:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 09 14:46:56 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.22	11.22	2106206	3580782	988.886	1102.246
	Spiked Amount 500.000	Range 70 - 136		Recovery =		197.78%#	220.45%#
	Target Compounds						
1)	TNX	1.31	1.31	755345	1208542	453.840	441.943
2)	HMX	1.44	1.44	1492623	4200505	952.551	907.701
3)	DNX	1.68	1.68	2132192	3395488	972.378	997.070
4)	MNX	2.26	2.26	2947396	4580596	1134.663	1126.099
5)	RDX	2.88	2.88	1798635	2890533	965.075	960.504
6)	1,3,5-Trinitrobe	4.65	4.65	3904100	7589556	970.188	973.947
7)	1,3-Dinitrobenze	5.85	5.85	5067607	3510308	974.022	939.691
8)	3,5-Dinitroanili	6.19	6.19	3904783	6720004	980.547	948.520
9)	Nitrobenzene	7.44	7.44	3043032	2957971	1000.657	986.897
10)	Nitroglycerin	0.00	9.02	0	1157315	N.D.	924.390 #
11)	Tetryl	9.50	9.50	2802995	4522359	894.687	939.411
12)	2,4,6-Trinitroto	9.89	9.89	3546171	4263824	937.855	952.876
13)	2-Amino-4,6-Dini	10.23	10.23	3378477	5019260	976.788	1000.743
14)	4-Amino-2,6-Dini	10.75	10.75	2385666	4682930	980.064	969.243
16)	2,4-Dinitrotolue	11.86	11.87	4504076	2829705	947.684	917.106
17)	2,6-Dinitrotolue	12.35	12.35	2683738	3400054	980.169	1013.021
18)	o-Nitrotoluene	15.44	15.43	2132393	2875035	932.734	982.267m
19)	p-Nitrotoluene	16.01	16.01	3369395	2532984	979.226	896.979
20)	m-Nitrotoluene	16.84	16.84	3180414	3672258	989.143	994.999
21)	PETN	0.00	18.61	0	1376333	N.D.	1077.325m#

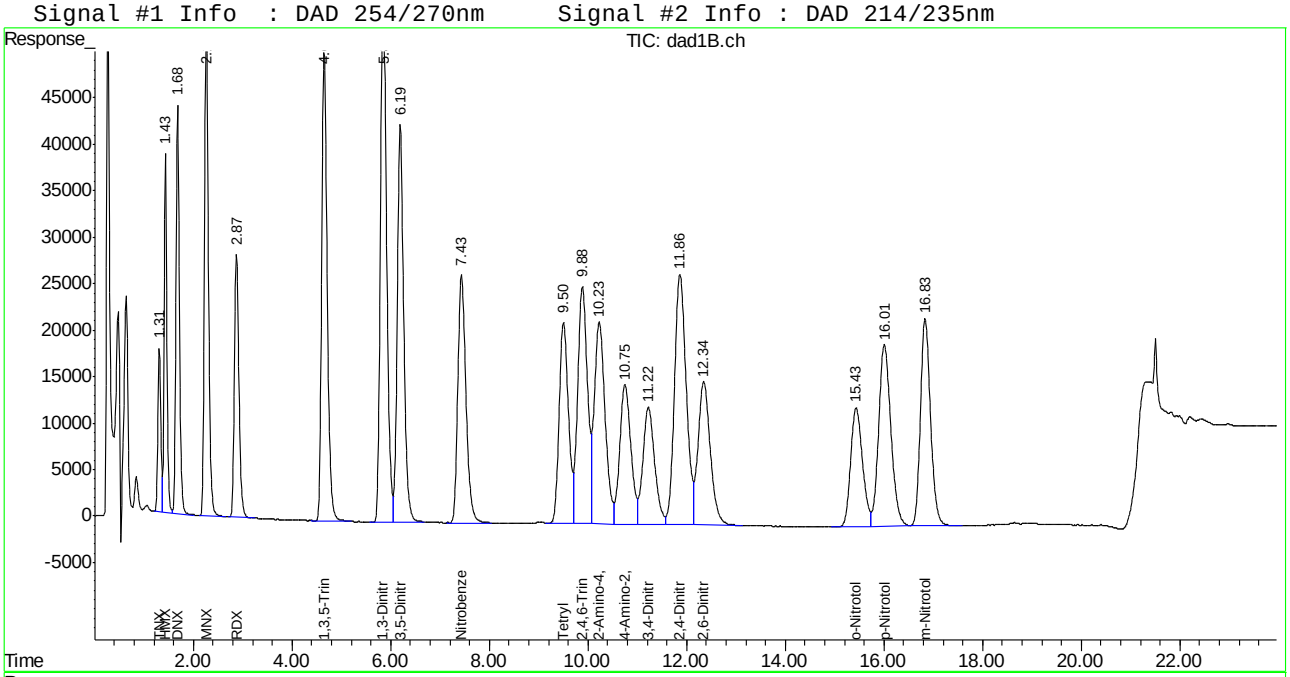
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391140.D GPP2464_080321PRI.M Thu Aug 12 10:52:05 2021 Page 1

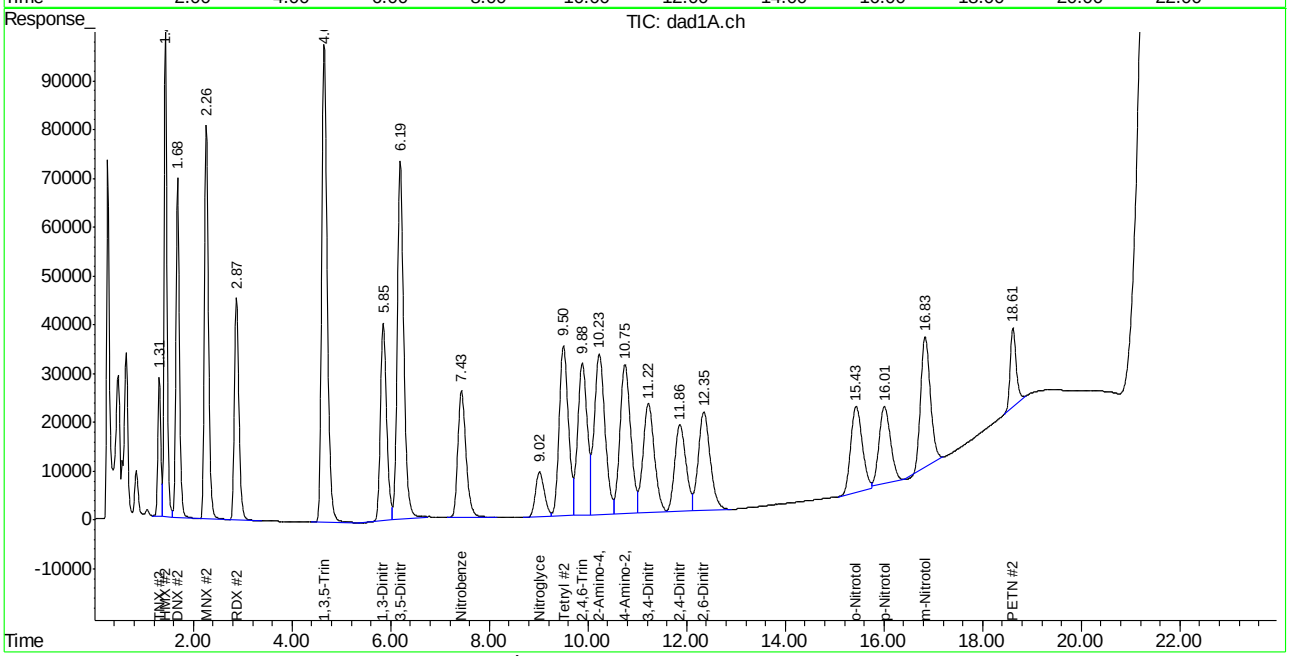
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 9 14:47 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

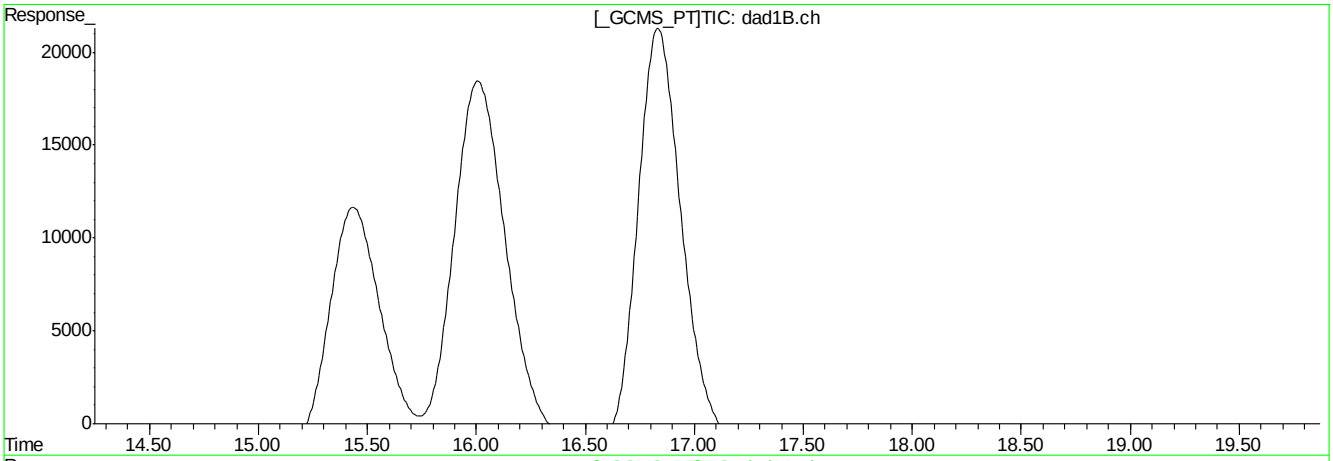
Sample Number: GPP2467-CC2464
Lab FileID: PP391140.D
Injection Time: 08/09/21 13:54
Method: SW846 8330B
Analyst approved: 08/12/21 10:53 James Boone
Supervisor approved: 08/12/21 11:12 Naresh Jiawan

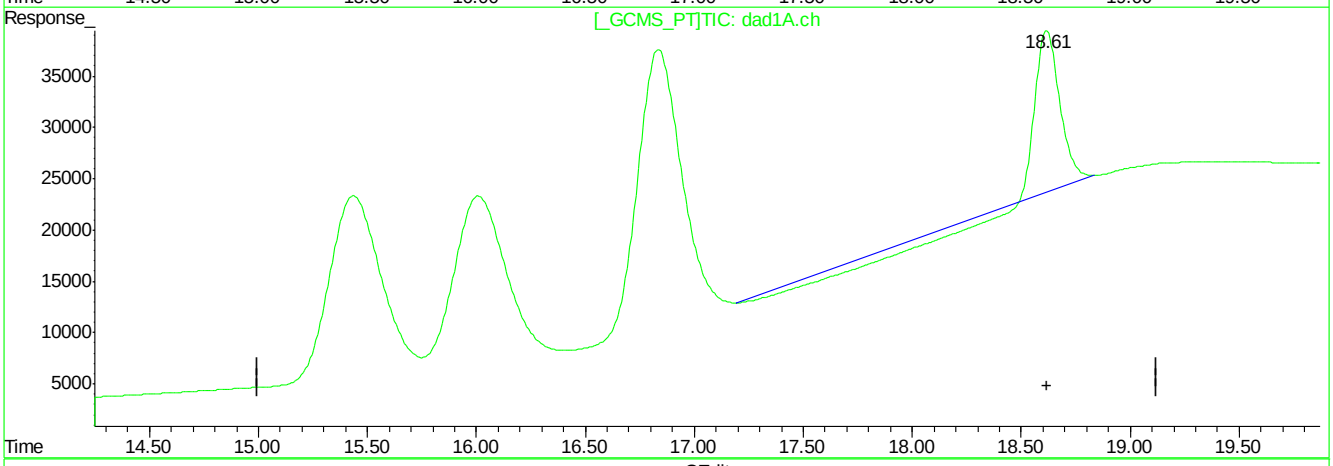
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.43	Poor instrument integration
PETN	78-11-5	2	18.61	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 9 14:46 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.62min 553.996ppb

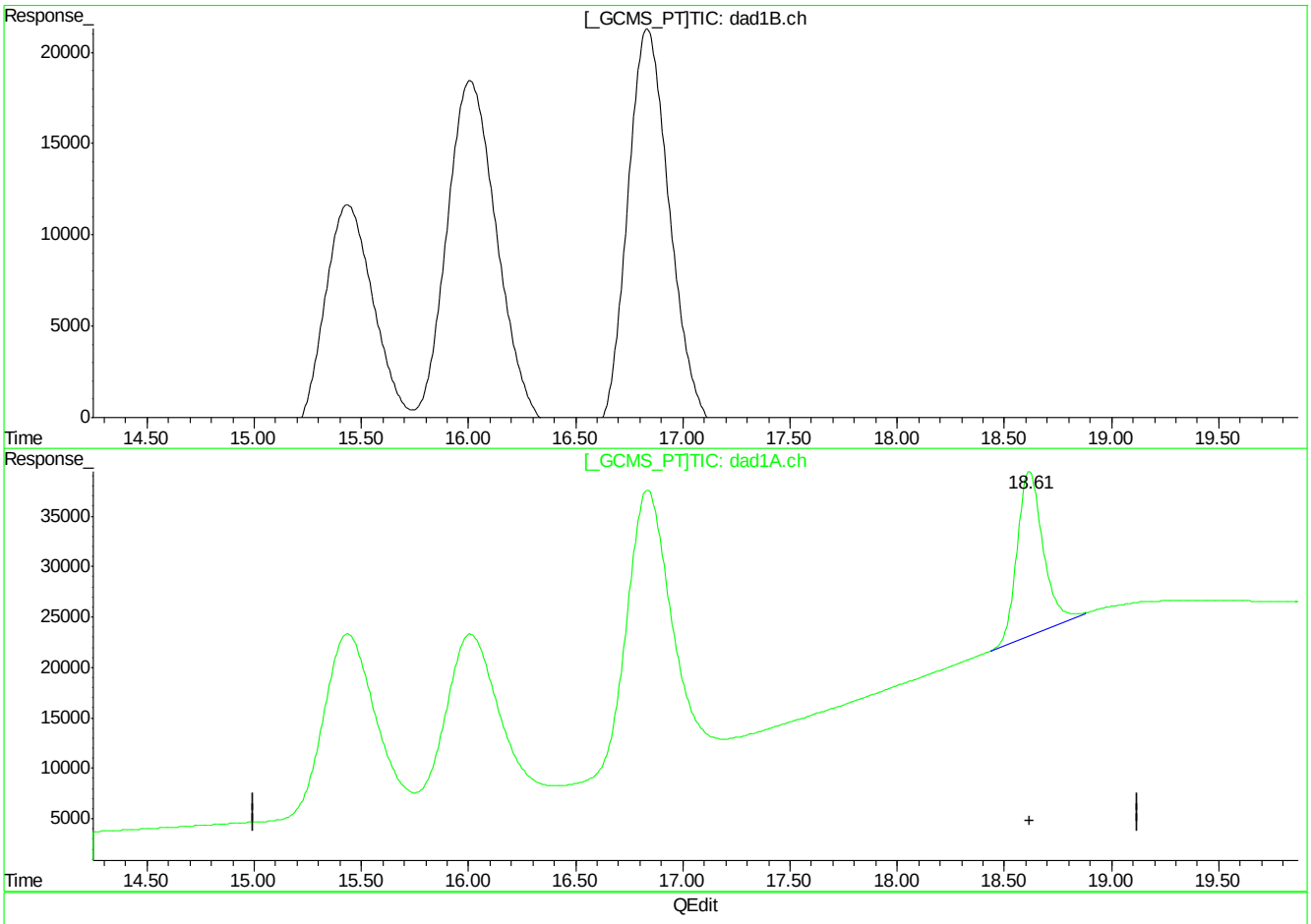
response 707756

(+) = Expected Retention Time
PP391140.D GPP2464_080321PRI.M Mon Aug 09 14:47:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 9 14:46 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.61min 1077.325ppb m

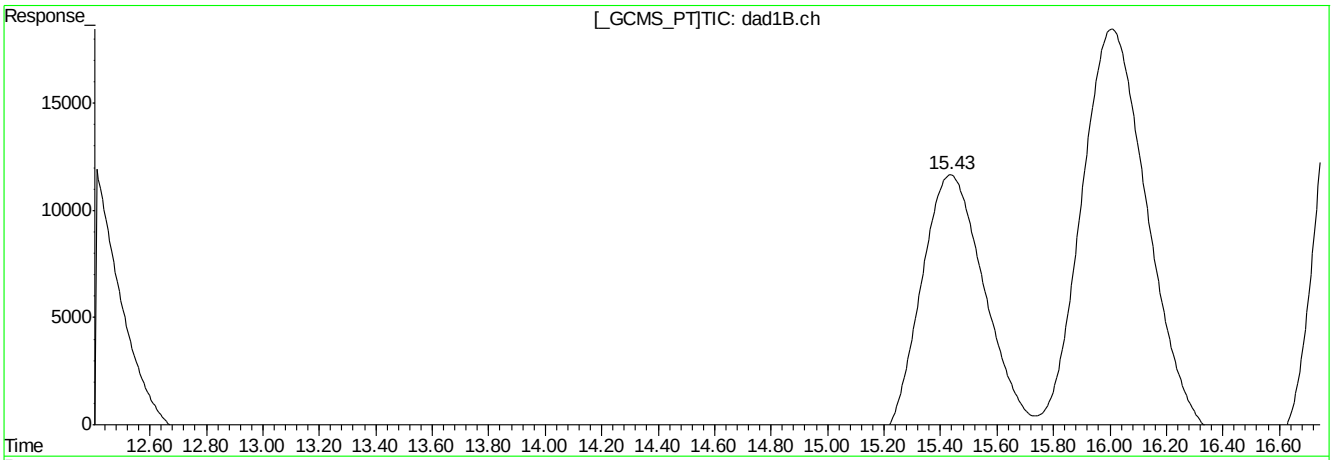
response 1376333

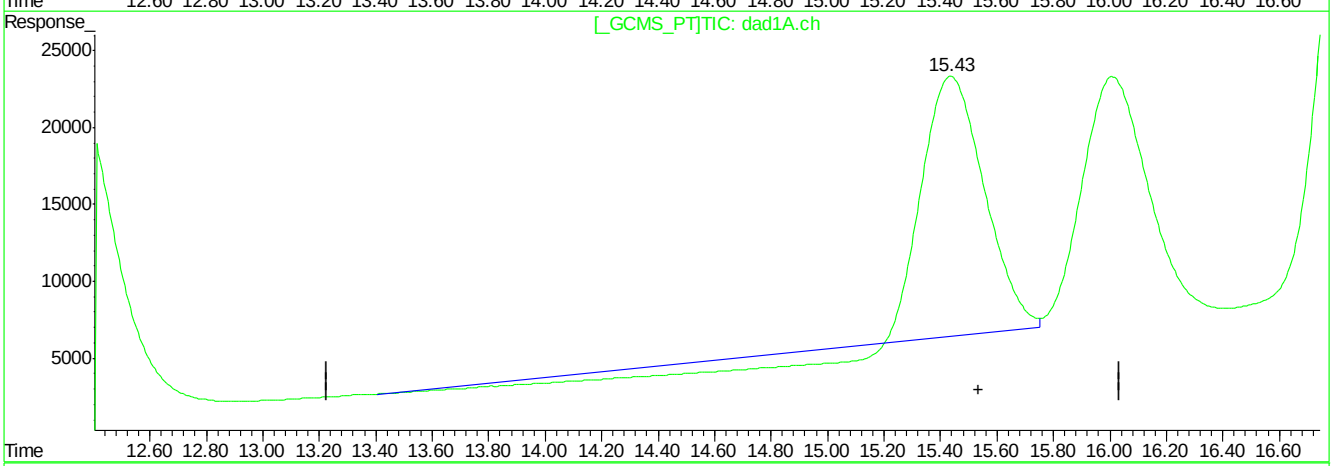
(+) = Expected Retention Time
PP391140.D GPP2464_080321PRI.M Mon Aug 09 14:47:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 9 14:46 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.44min 932.734ppb

response 2132393

(18) o-Nitrotoluene #2

15.44min 697.838ppb

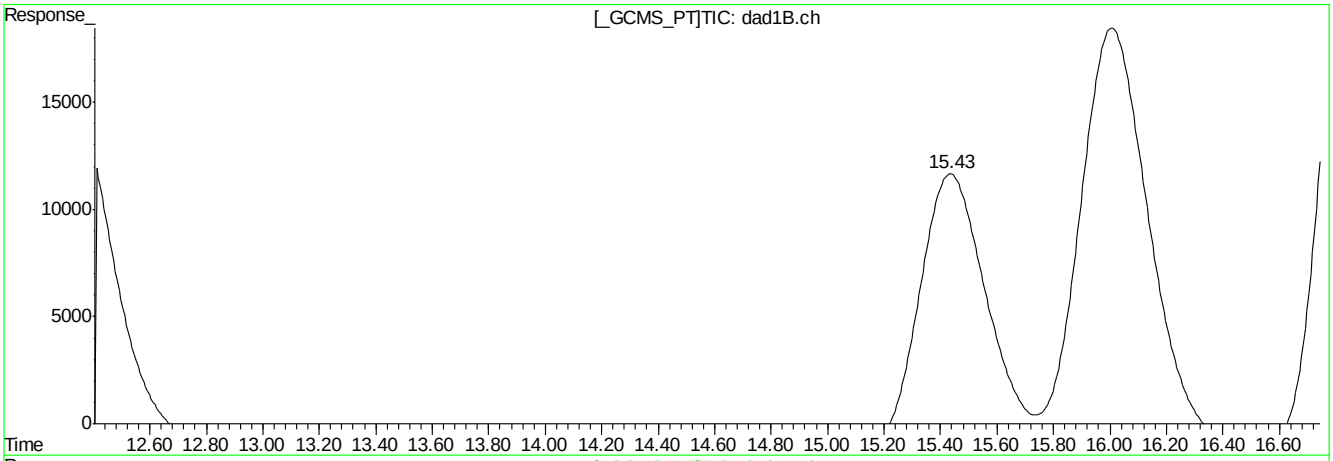
response 2042530

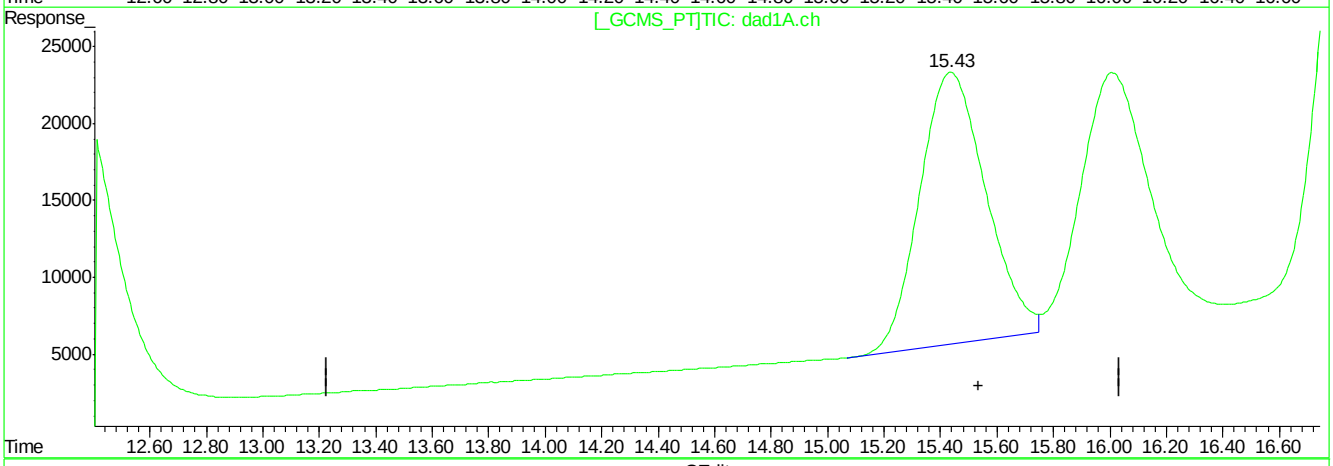
(+) = Expected Retention Time
PP391140.D GPP2464_080321PRI.M Mon Aug 09 14:47:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 9 14:46 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.44min 932.734ppb

response 2132393

(18) o-Nitrotoluene #2

15.43min 982.267ppb m

response 2875035

(+) = Expected Retention Time
PP391140.D GPP2464_080321PRI.M Mon Aug 09 14:47:25 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/12/21 11:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:34 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.28	11.28	2087715	3498538	980.205	1076.929
	Spiked Amount 500.000	Range 70 - 136		Recovery =		196.04%#	215.39%#
	Target Compounds						
1)	TNX	1.31	1.32	759854	1211711	456.549	443.102
2)	HMX	1.44	1.44	1487200	4170764	949.089	901.274
3)	DNX	1.69	1.69	2119638	3371125	966.653	989.915
4)	MNX	2.27	2.27	2936183	4558834	1130.346	1120.749
5)	RDX	2.89	2.89	1792091	2877177	961.564	956.066
6)	1,3,5-Trinitrobe	4.67	4.67	3877632	7521835	963.610	965.257
7)	1,3-Dinitrobenze	5.87	5.87	5036390	3483264	968.022	932.451
8)	3,5-Dinitroanili	6.22	6.22	3864963	6669452	970.548	941.384
9)	Nitrobenzene	7.46	7.46	2994584	2922447	984.725	975.045
10)	Nitroglycerin	0.00	9.06	0	1100609	N.D.	879.097 #
11)	Tetryl	9.55	9.55	2783231	4450480	888.379	924.480
12)	2,4,6-Trinitroto	9.93	9.93	3527948	4208887	933.036	940.598
13)	2-Amino-4,6-Dini	10.27	10.27	3341563	4940799	966.115	985.099
14)	4-Amino-2,6-Dini	10.80	10.80	2372614	4608338	974.702	953.804
16)	2,4-Dinitrotolue	11.91	11.91	4488767	2801677	944.462	908.022
17)	2,6-Dinitrotolue	12.40	12.40	2674086	3370968	976.644	1004.355
18)	o-Nitrotoluene	15.49	15.48	2112820	2831061	924.172	967.243m
19)	p-Nitrotoluene	16.06	16.06	3347616	2622423	972.896	928.651m
20)	m-Nitrotoluene	16.88	16.88	3148471	3591112	979.208	973.012
21)	PETN	0.00	18.65	0	1306042	N.D.	1022.304m#

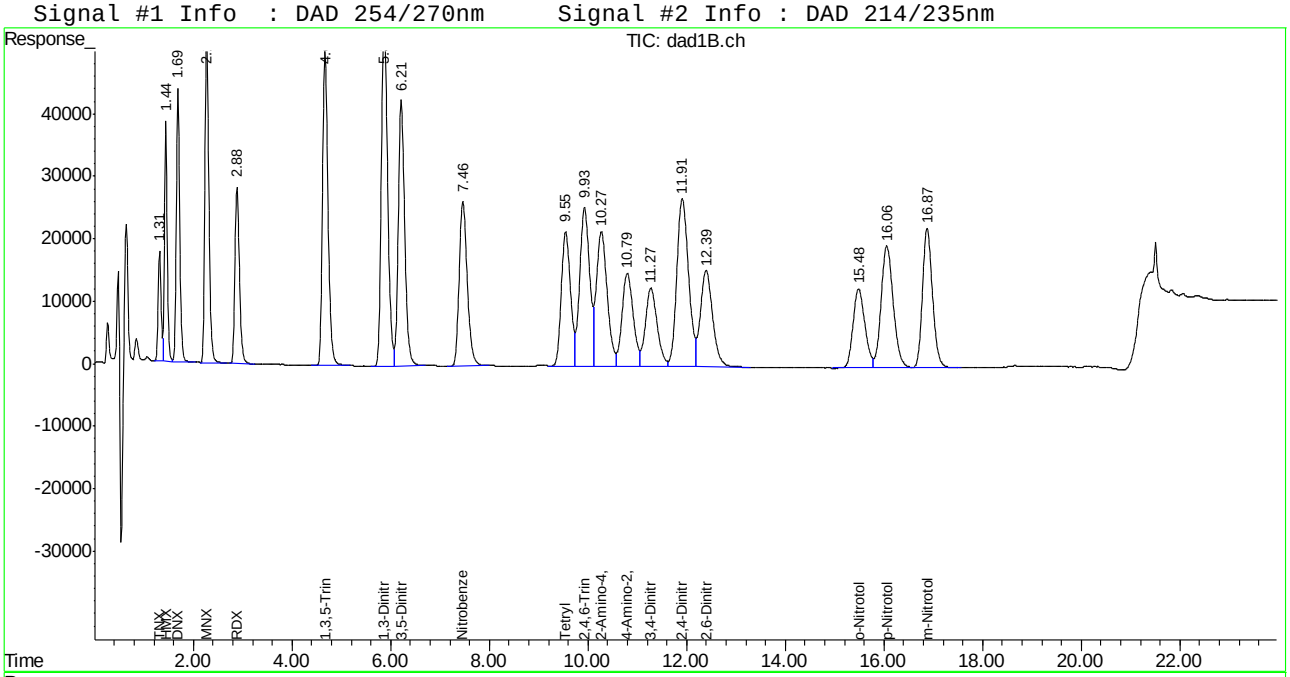
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

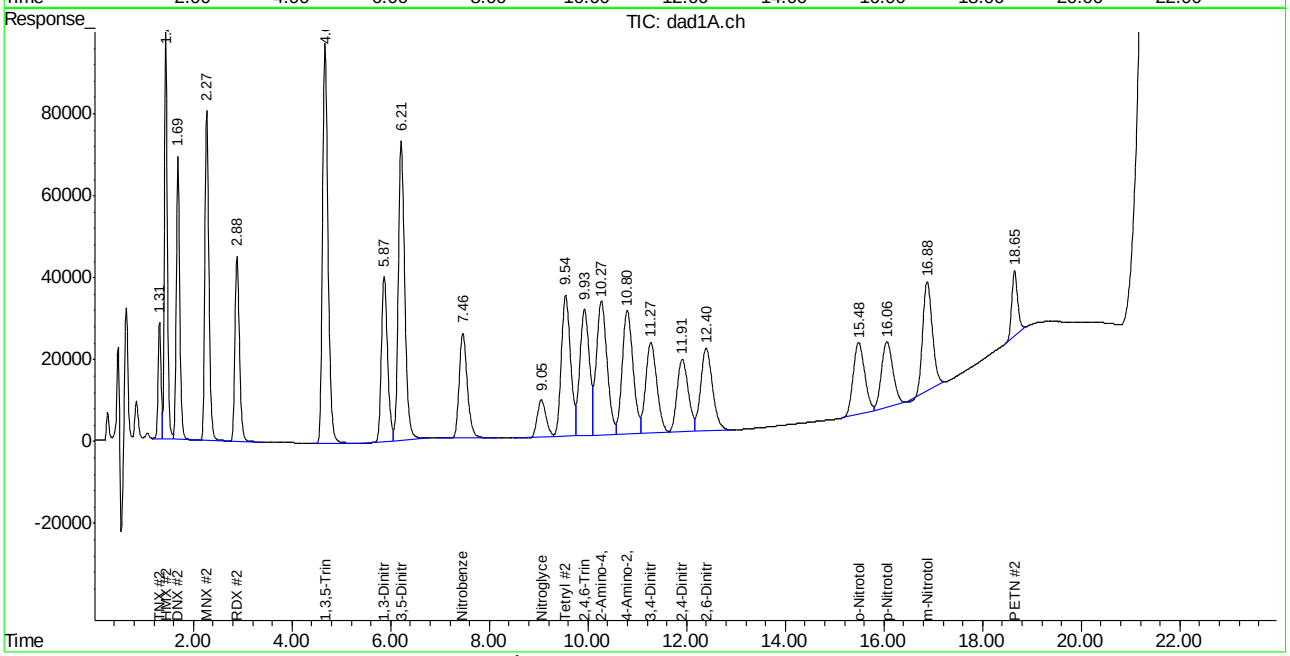
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:48 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

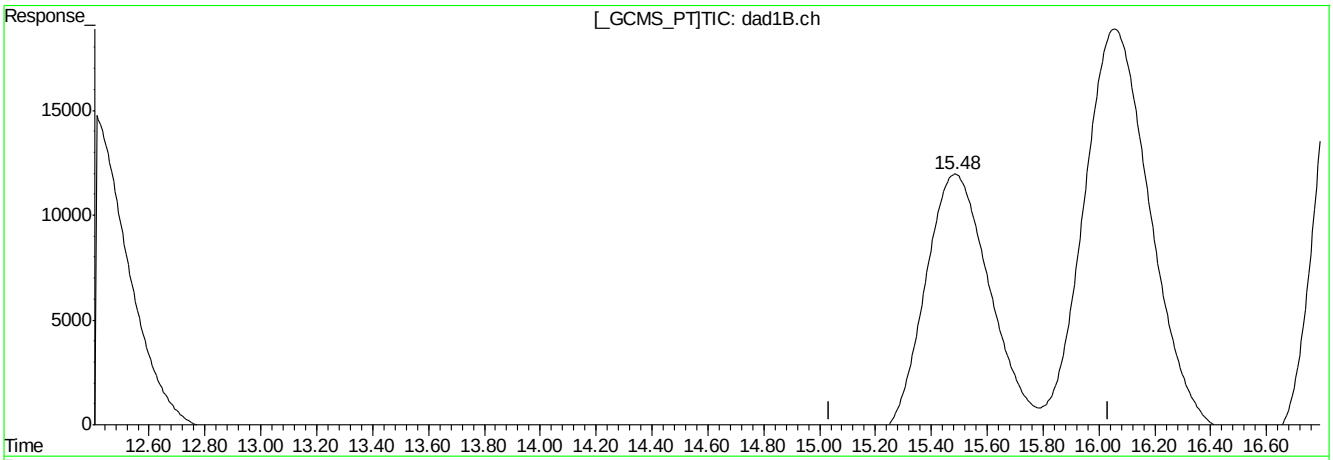
Sample Number: GPP2467-CC2464
Lab FileID: PP391152.D
Injection Time: 08/09/21 20:06
Method: SW846 8330B
Analyst approved: 08/12/21 10:53 James Boone
Supervisor approved: 08/12/21 11:12 Naresh Jiawan

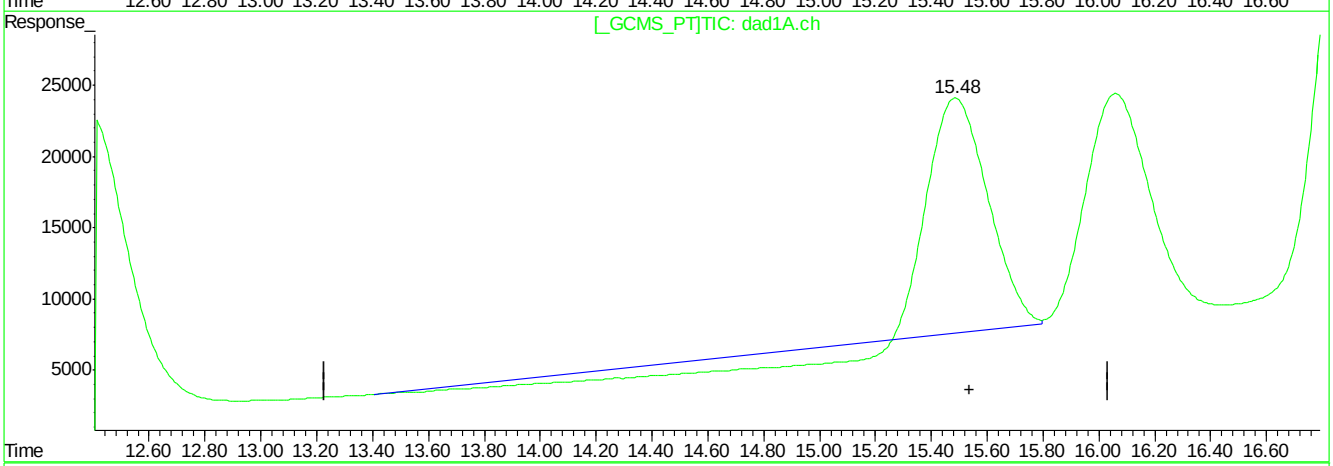
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.48	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.06	Poor instrument integration
PETN	78-11-5	2	18.65	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.49min 924.172ppb

response 2112820

(18) o-Nitrotoluene #2

15.49min 608.747ppb

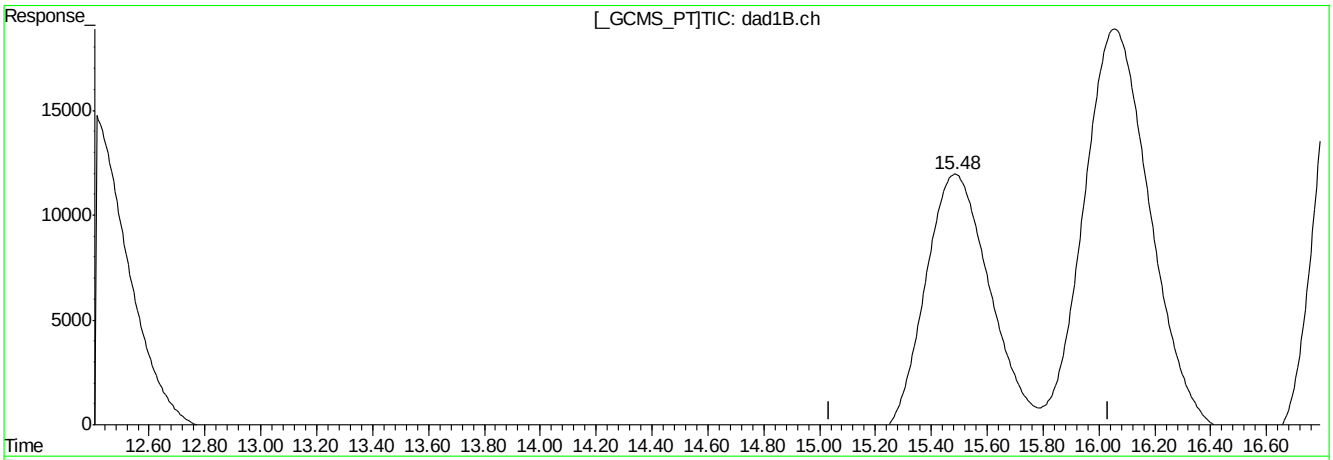
response 1781766

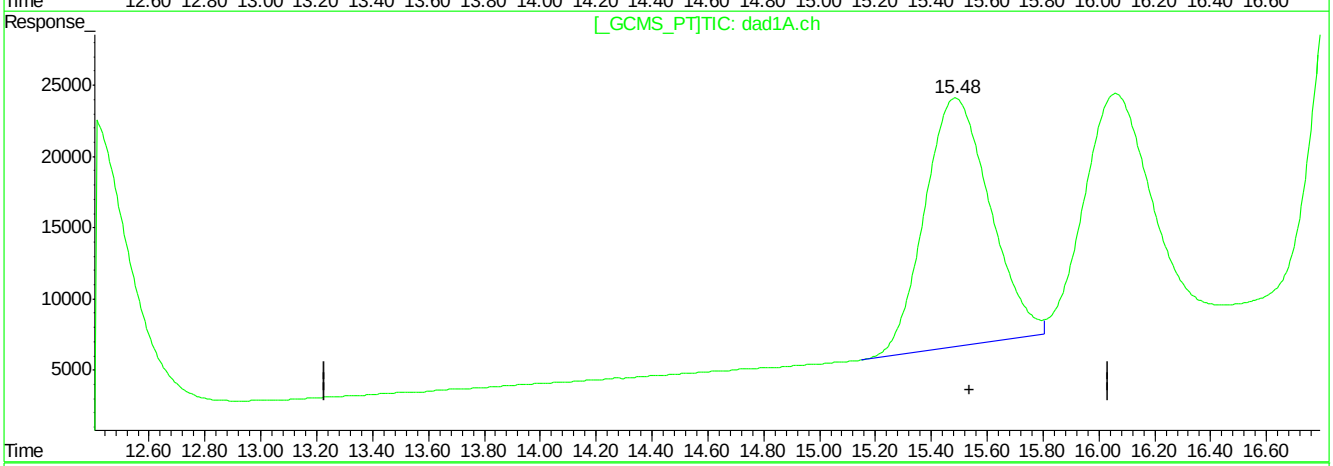
(+) = Expected Retention Time
PP391152.D GPP2464_080321PRI.M Thu Aug 12 10:48:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.49min 924.172ppb

response 2112820

(18) o-Nitrotoluene #2

15.48min 967.243ppb m

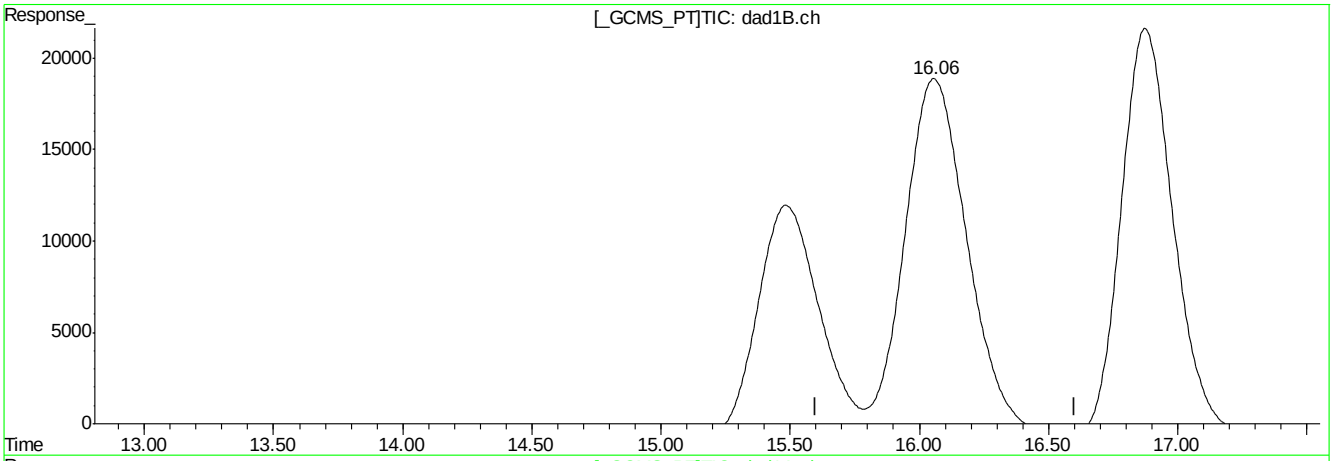
response 2831061

(+) = Expected Retention Time
PP391152.D GPP2464_080321PRI.M Thu Aug 12 10:48:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.06min 972.896ppb

response 3347616

(19) p-Nitrotoluene #2

16.06min 873.789ppb

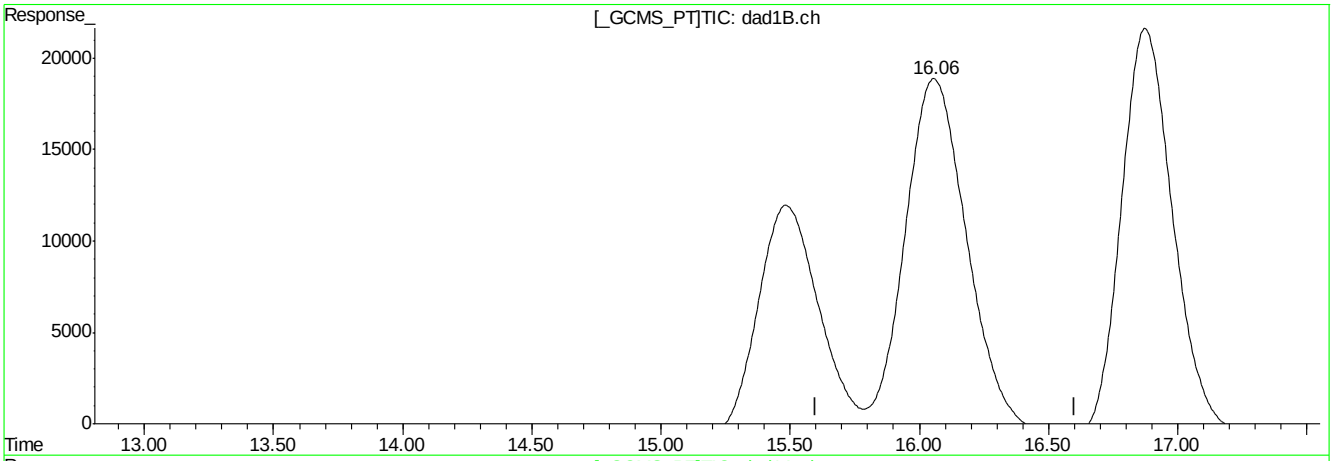
response 2467498

(+) = Expected Retention Time
PP391152.D GPP2464_080321PRI.M Thu Aug 12 10:48:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.06min 972.896ppb

response 3347616

(19) p-Nitrotoluene #2

16.06min 928.651ppb m

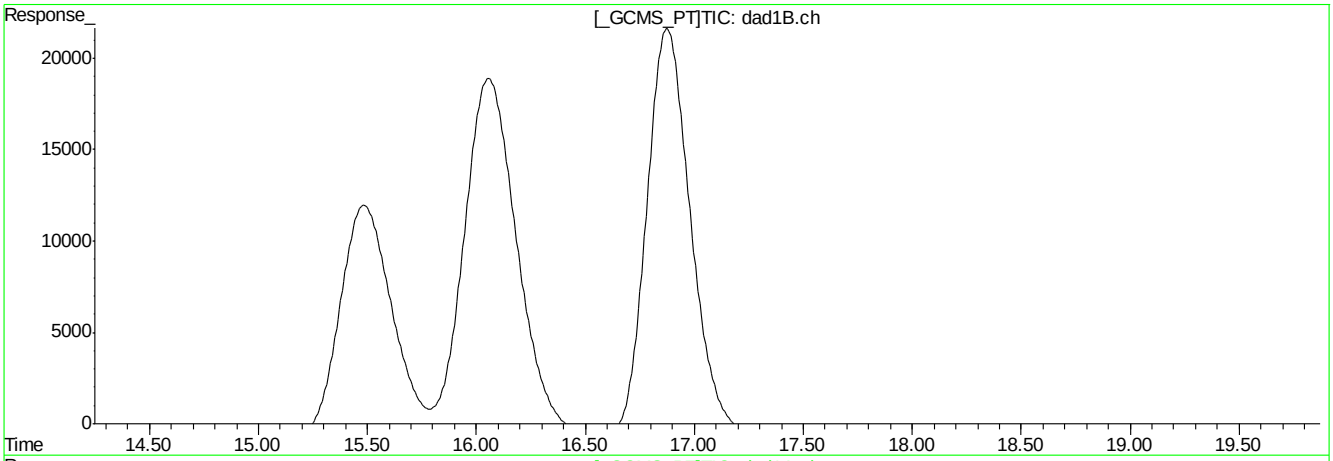
response 2622423

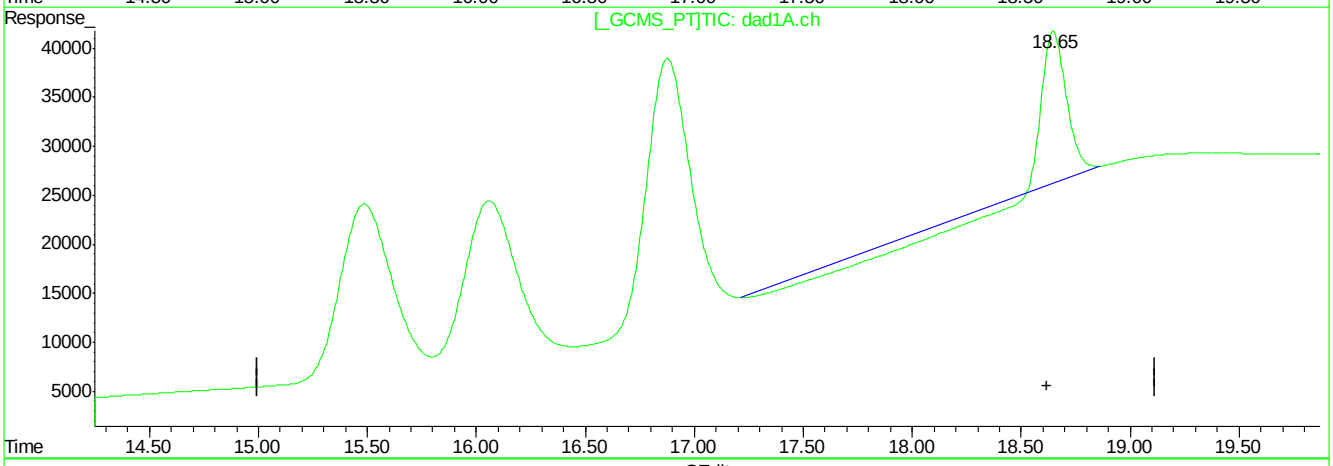
(+) = Expected Retention Time
PP391152.D GPP2464_080321PRI.M Thu Aug 12 10:48:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.65min 457.534ppb

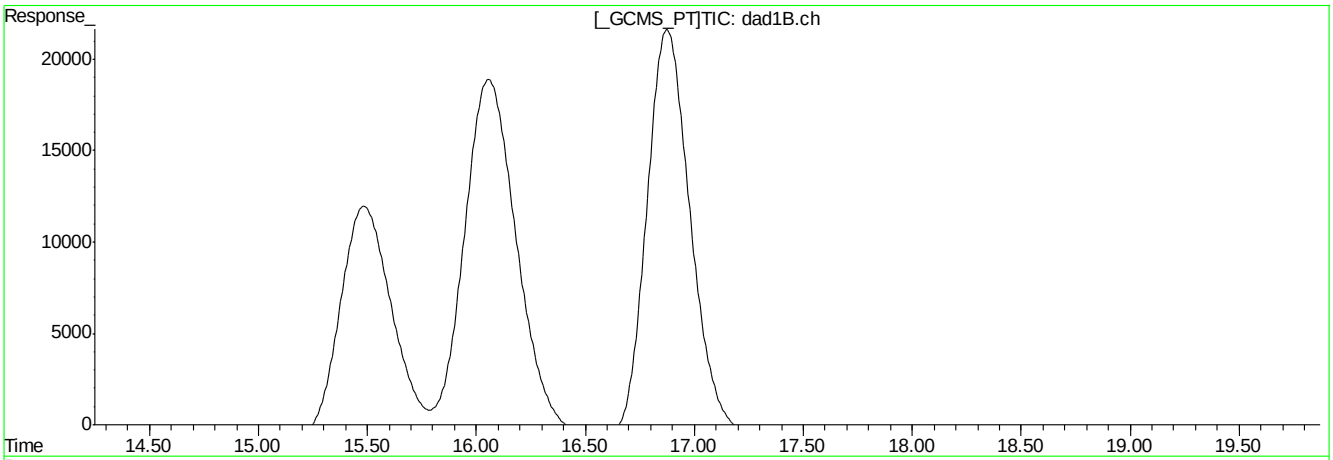
response 584521

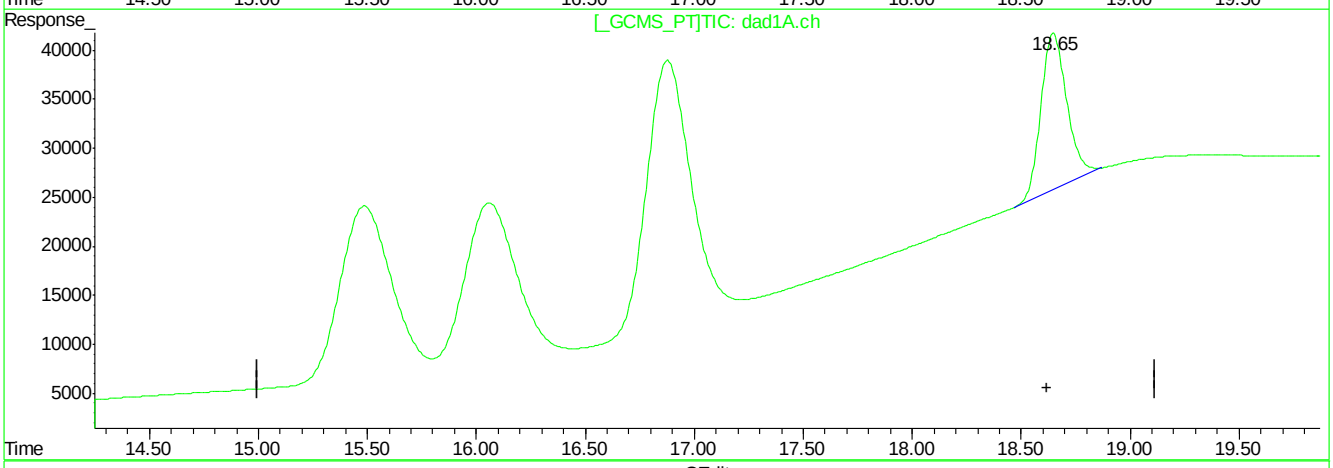
(+) = Expected Retention Time
PP391152.D GPP2464_080321PRI.M Thu Aug 12 10:48:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.65min 1022.304ppb m

response 1306042

(+) = Expected Retention Time
PP391152.D GPP2464_080321PRI.M Thu Aug 12 10:48:54 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/12/21 11:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:45 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.26	11.26	2063824	3472098	968.988	1068.790
	Spiked Amount 500.000	Range 70 - 136		Recovery =		193.80%#	213.76%#
	Target Compounds						
1)	TNX	1.31	1.31	735248	1187340	441.764	434.190
2)	HMX	1.44	1.44	1437911	4062014	917.634	877.774
3)	DNX	1.68	1.68	2027182	3228127	924.488	947.925
4)	MNX	2.27	2.27	2903453	4496692	1117.746	1105.472
5)	RDX	2.88	2.88	1770921	2844413	950.206	945.179
6)	1,3,5-Trinitrobe	4.67	4.67	3845585	7462808	955.646	957.682
7)	1,3-Dinitrobenze	5.86	5.86	5011317	3483741	963.203	932.579
8)	3,5-Dinitroanili	6.20	6.21	3841319	6621335	964.611	934.593
9)	Nitrobenzene	7.46	7.46	2939987	2860348	966.772	954.326
10)	Nitroglycerin	0.00	9.05	0	1124370	N.D.	898.076 #
11)	Tetryl	9.53	9.53	2743628	4411631	875.738	916.410
12)	2,4,6-Trinitroto	9.92	9.92	3488355	4174368	922.564	932.884
13)	2-Amino-4,6-Dini	10.25	10.25	3308778	4908793	956.636	978.718
14)	4-Amino-2,6-Dini	10.77	10.77	2347576	4565135	964.416	944.862
16)	2,4-Dinitrotolue	11.90	11.90	4452404	2769684	936.811	897.653
17)	2,6-Dinitrotolue	12.38	12.38	2667708	3362811	974.314	1001.925
18)	o-Nitrotoluene	15.47	15.46	2039864	2738594	892.260	935.652m
19)	p-Nitrotoluene	16.04	16.04	3260770	2535209	947.657	897.767m
20)	m-Nitrotoluene	16.86	16.86	3068019	3635125	954.187	984.937m
21)	PETN	0.00	18.64	0	1286815	N.D.	1007.254m#

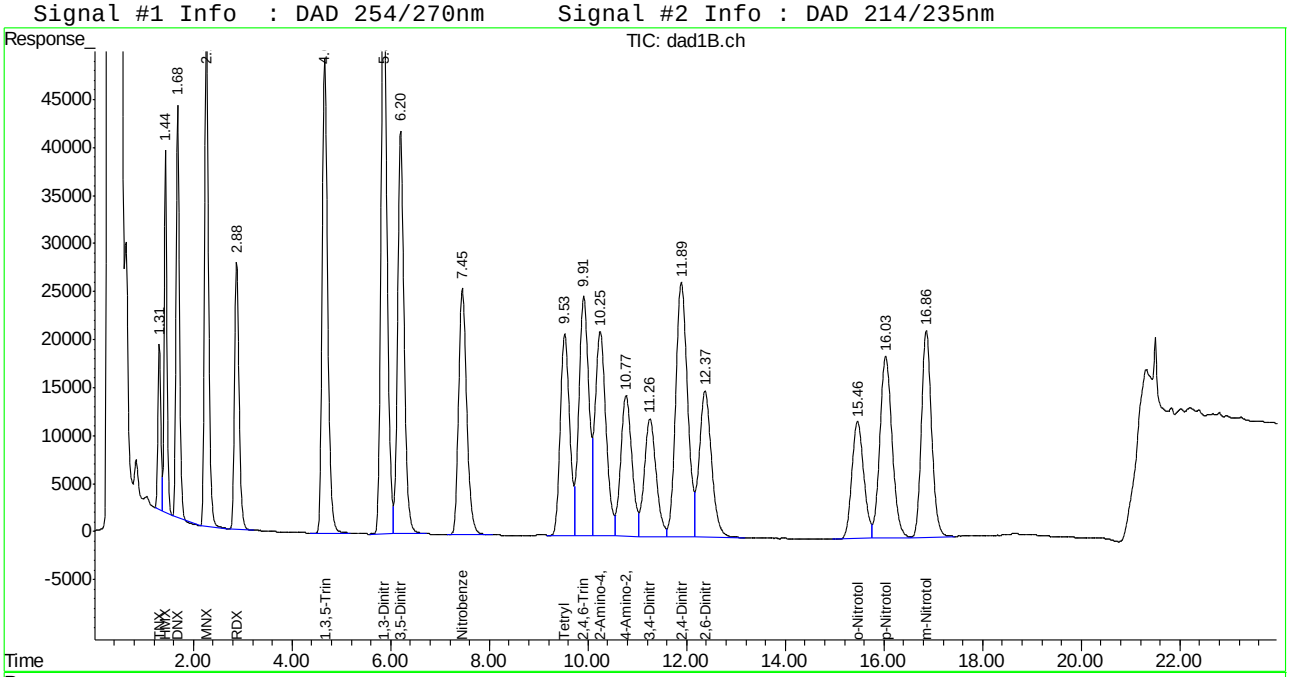
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:52:07 2021 Page 1

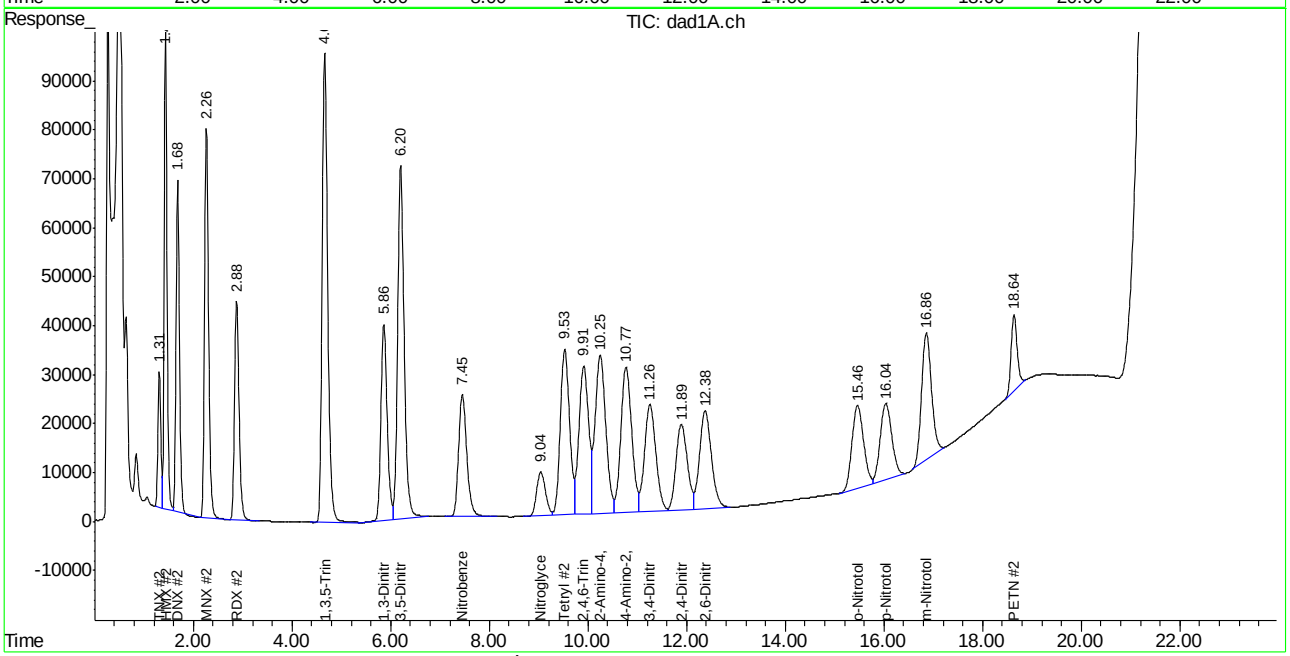
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:50 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

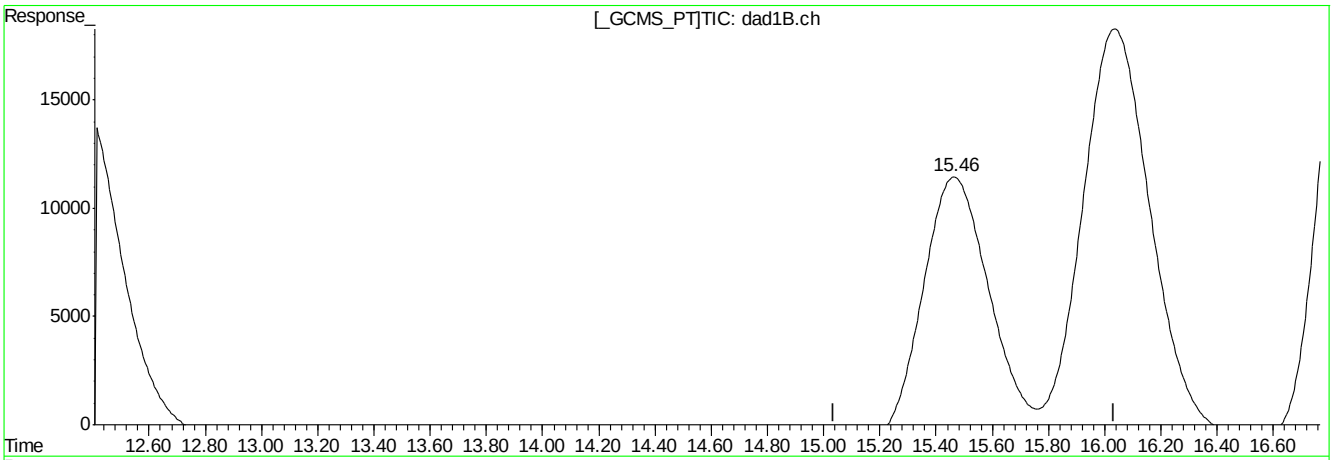
Sample Number: GPP2467-ECC2464 **Method:** SW846 8330B
Lab FileID: PP391163.D **Analyst approved:** 08/12/21 10:53 James Boone
Injection Time: 08/10/21 01:47 **Supervisor approved:** 08/12/21 11:12 Naresh Jiawan

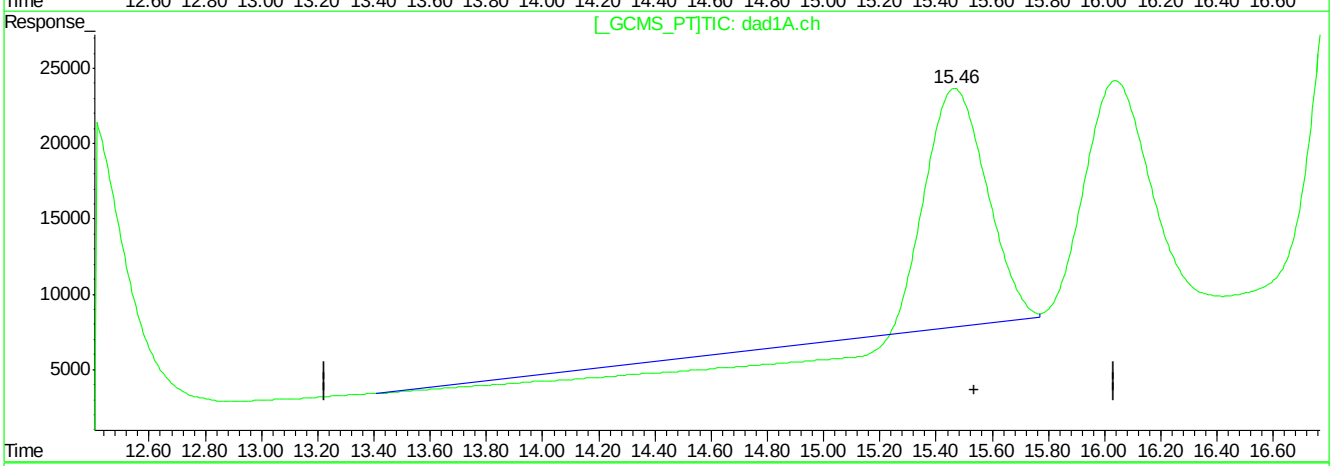
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.46	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.04	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.64	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 892.260ppb

response 2039864

(18) o-Nitrotoluene #2

15.47min 579.977ppb

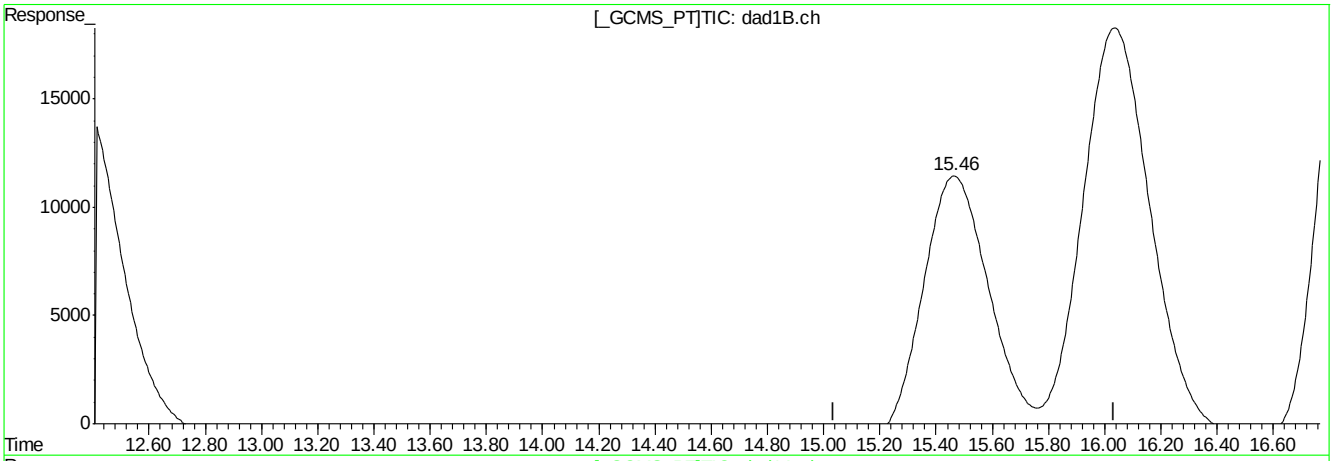
response 1697558

(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:49:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.47min 892.260ppb

response 2039864

(18) o-Nitrotoluene #2

15.46min 935.652ppb m

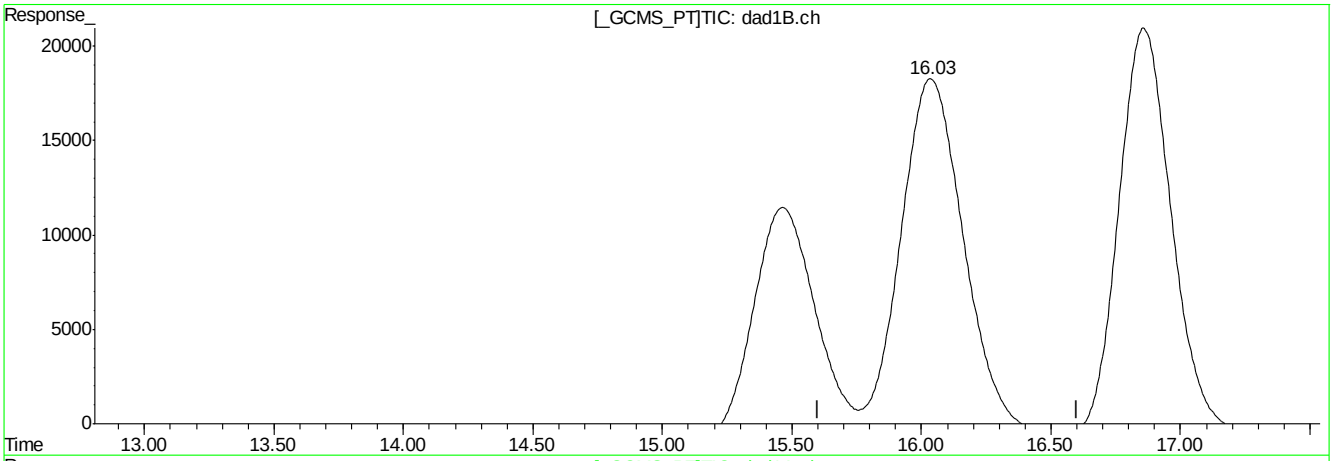
response 2738594

(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.04min 947.657ppb

response 3260770

(19) p-Nitrotoluene #2

16.04min 850.473ppb

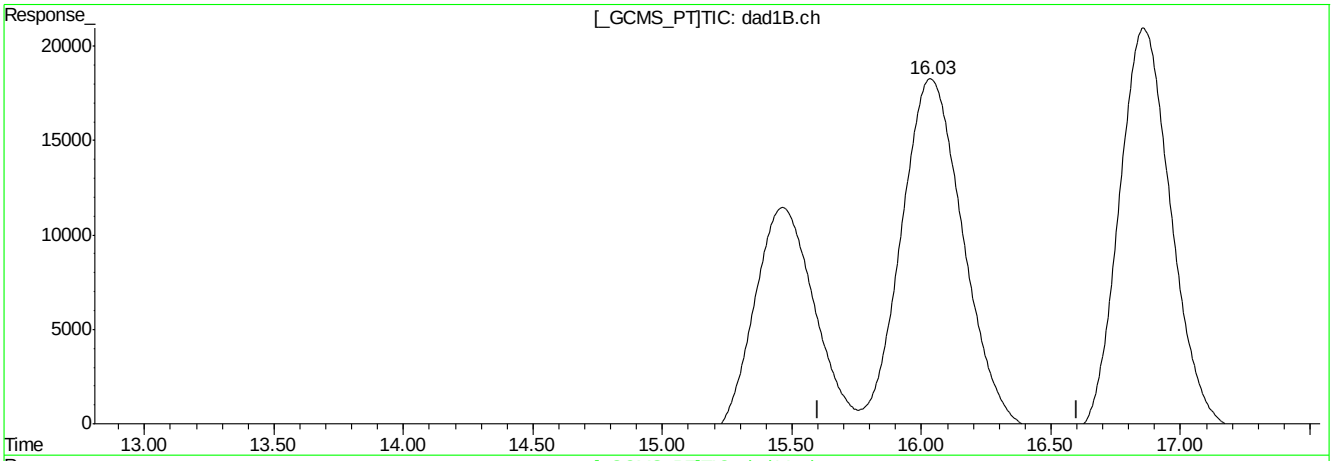
response 2401656

(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.04min 947.657ppb

response 3260770

(19) p-Nitrotoluene #2

16.04min 897.767ppb m

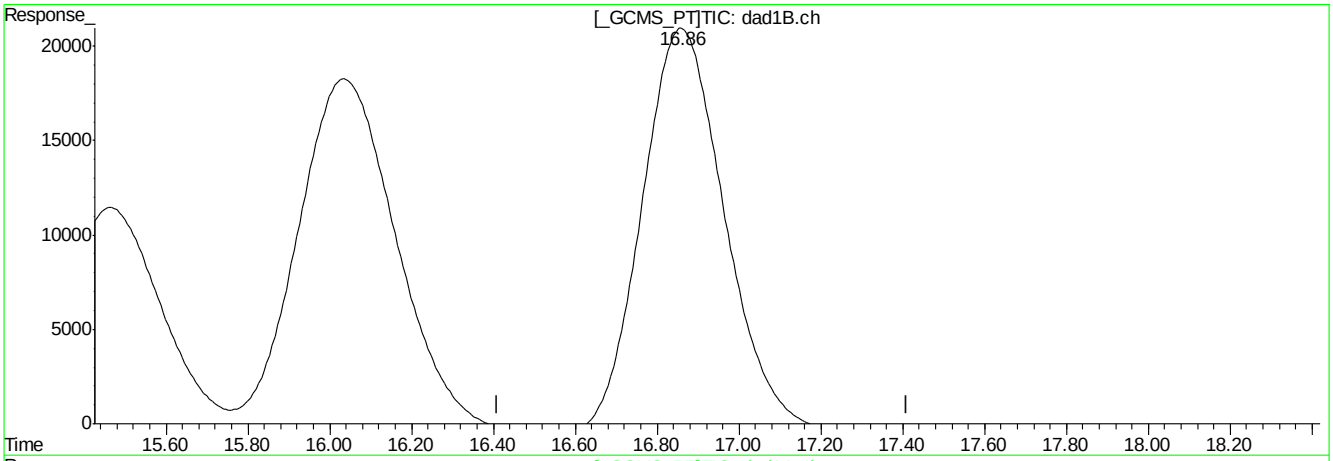
response 2535209

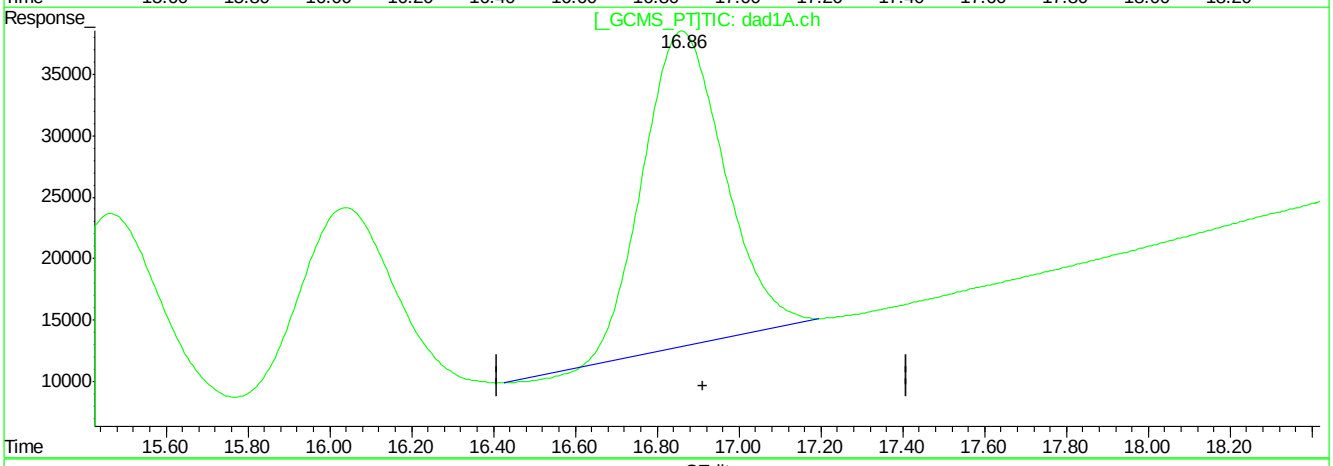
(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 954.187ppb

response 3068019

(20) m-Nitrotoluene #2

16.86min 954.688ppb

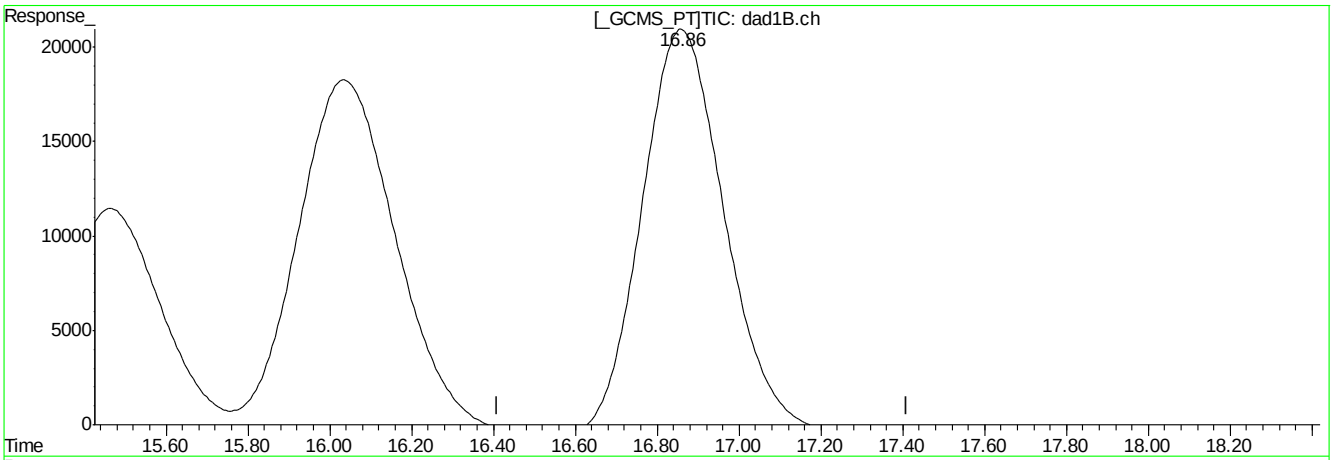
response 3523483

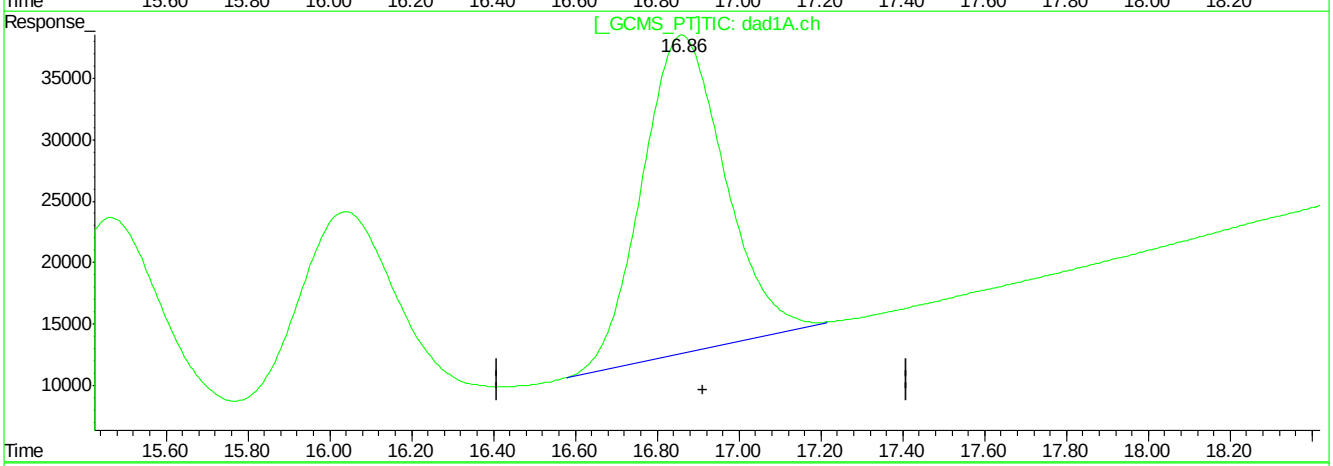
(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 954.187ppb

response 3068019

(20) m-Nitrotoluene #2

16.86min 984.937ppb m

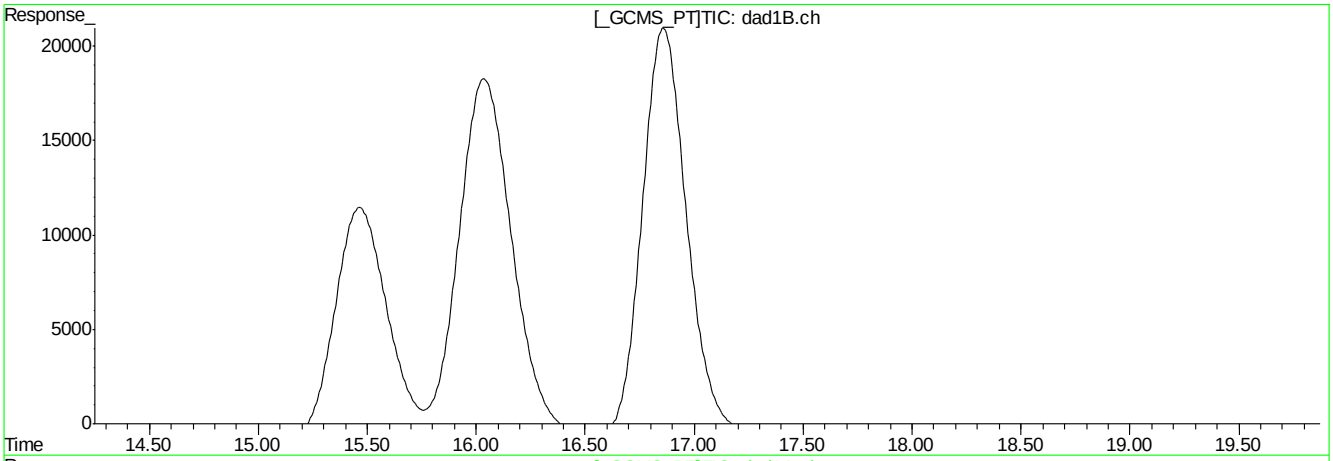
response 3635125

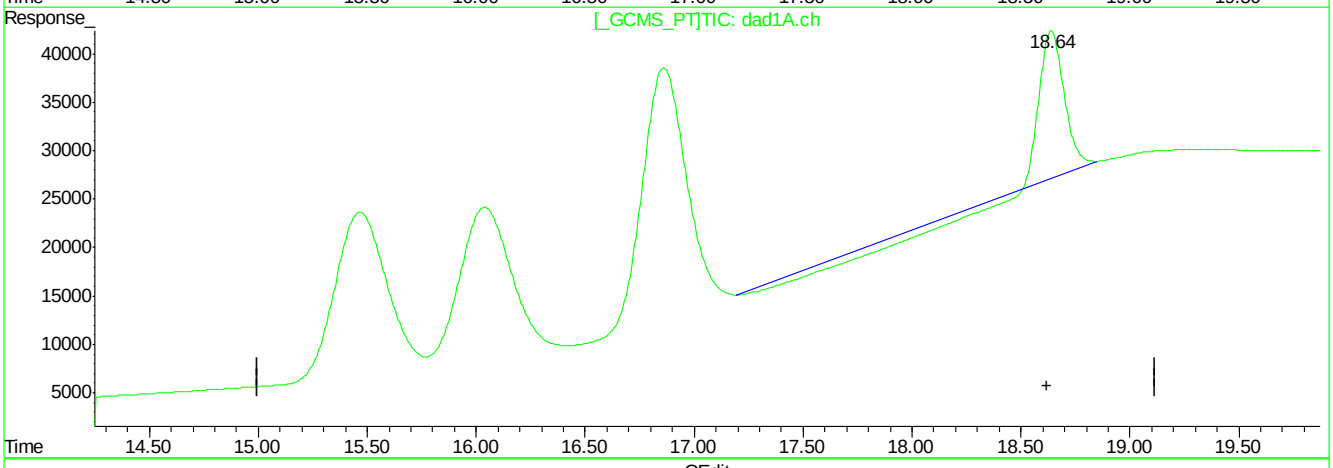
(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.64min 509.349ppb

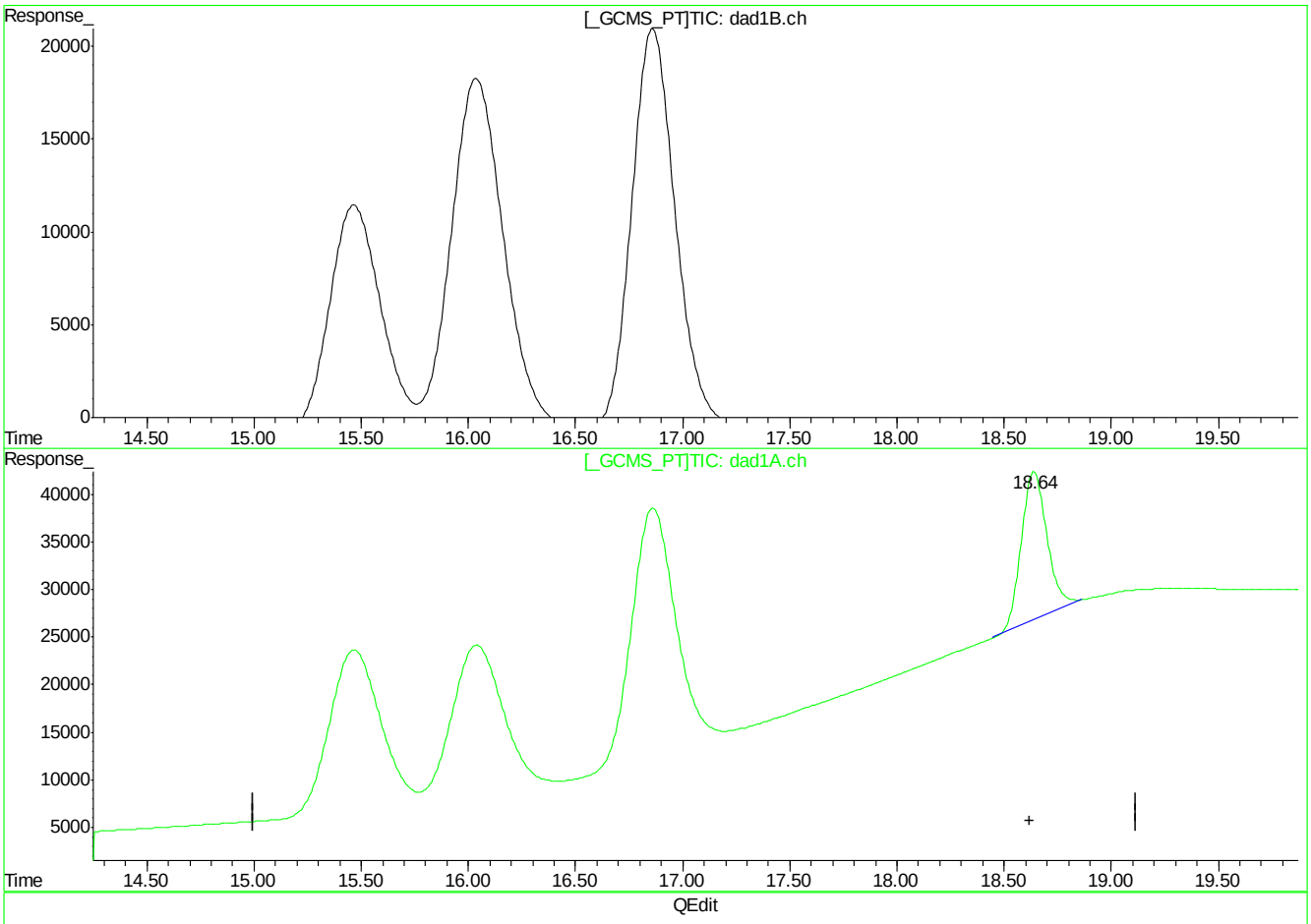
response 650717

(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.64min 1007.254ppb m

response 1286815

(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:30 2021

DATE	8/8/2021	METHODS	8330	IC/ICC STD LOT	LC1509
COLUMN TYPE	Bonus-RP	ACQ. METHOD	8330RPB3	ICV STD LOT	LC1510
AMOUNT INJ	100uL	PROC. METHOD	GGG3024_080821.M	SOLVENT	204903
INSTRUMENT	HPLC3-GG	CALIB. DATE	8/8/2021	SOLVENT	204513
ANALYST	JB	RUN BATCH	GGG3024	HEAD PRESSURE	111

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG621999	1	FA87585-5	8330	1	op86681,GGG3024,10.05,,,50,1,soil	DNR
GG622000	91	ic3024-20	8330	2/500	op86681,GGG3024,1000,,,10,1,water	/
GG622001	92	ic3024-50	8330	5/500	op86681,GGG3024,1000,,,10,1,water	/
GG622002	93	ic3024-100	8330	10/500	op86681,GGG3024,1000,,,10,1,water	/
GG622003	94	ic3024-200	8330	20/500	op86681,GGG3024,1000,,,10,1,water	/
GG622004	95	ic3024-500	8330	50/500	op86681,GGG3024,1000,,,10,1,water	/
GG622005	96	icc3024-1000	8330	100/500	op86681,GGG3024,1000,,,10,1,water	/
GG622006	97	ic3024-2500	8330	250/500	op86681,GGG3024,1000,,,10,1,water	/
GG622007	98	ic3024-5000	8330	1	op86681,GGG3024,1000,,,10,1,water	/
GG622008	99	icv3024-1000	8330	1	op86681,GGG3024,1000,,,10,1,water	Pass
GG622009	3	op86681-MB	8330	1	op86681,GGG3024,10,,,50,1,soil	/
GG622010	4	FA87585-1cf	8330	1	op86681,GGG3024,10.77,,,50,1,soil	/
GG622011	5	FA87585-2cf	8330	1	op86681,GGG3024,10.7,,,50,1,soil	/
GG622012	6	FA87585-3cf	8330	1	op86681,GGG3024,10.13,,,50,1,soil	/
GG622013	7	FA87585-4cf	8330	1	op86681,GGG3024,10.1,,,50,1,soil	/
GG622014	8	FA87585-5cf	8330	1	op86681,GGG3024,10.05,,,50,1,soil	/
GG622015	9	FA87585-6cf	8330	1	op86681,GGG3024,10.11,,,50,1,soil	/
GG622016	10	FA87585-7cf	8330	1	op86681,GGG3024,10.15,,,50,1,soil	/
GG622017	11	FA87585-8cf	8330	1	op86681,GGG3024,10.06,,,50,1,soil	/
GG622018	12	FA87585-15cf	8330	1	op86681,GGG3024,10.09,,,50,1,soil	/
GG622019	96	ecc3024-1000	8330	100/500	op86681,GGG3024,1000,,,10,1,water	/
GG622020	1	ccb	8330	1	op86681,GGG3024,1000,,,10,1,water	/
GG622021	13	FA87585-16cf	8330	1	op86681,GGG3024,10.13,,,50,1,soil	DNR RR
GG622022	14	FA87585-17cf	8330	1	op86681,GGG3024,10.1,,,50,1,soil	DNR RR
GG622023	15	FA87585-18cf	8330	1	op86681,GGG3024,10.08,,,50,1,soil	DNR RR
GG622024	16	FA87585-19cf	8330	1	op86681,GGG3024,10.02,,,50,1,soil	DNR RR
GG622025	17	FA87585-10Acf	8330	1	op86681,GGG3024,10.01,,,50,1,soil	DNR RR
GG622026	96	ecc3024-1000	8330	100/500	op86681,GGG3024,1000,,,10,1,water	DNR RR

DATE	8/12/2021	METHODS	8330	IC/ICC STD LOT	LC1509
COLUMN TYPE	Bonus-RP	ACQ. METHOD	8330RPB3	ICV STD LOT	LC1510
AMOUNT INJ	100uL	PROC. METHOD	GGG3024_080821.M	SOLVENT	204903
INSTRUMENT	HPLC3-GG	CALIB. DATE	8/8/2021	SOLVENT	204513
ANALYST	JB	RUN BATCH	GGG3025	HEAD PRESSURE	113

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG622027	1	ccb	8330	1	op86682,GGG3025,1000,,,10,1,water	/
GG622028	2	cc3024-1000	8330	100/500	op86682,GGG3025,1000,,,10,1,water	Pass
GG622029	1	ccb	8330	1	op86682,GGG3025,1000,,,10,1,water	/
GG622030	3	op86682-MB	8330	1	op86682,GGG3025,10,,,50,1,soil	/
GG622031	4	FA87678-11Acf	8330	1	op86682,GGG3025,10,,,50,1,soil	/
GG622032	5	op86727-MB	8330	1	op86727,GGG3025,1000,,,10,1,water	/
GG622033	6	FA87760-1cf	8330	1	op86727,GGG3025,1040,,,10,1,water	x DNR
GG622034	7	FA87760-2cf	8330	1	op86727,GGG3025,1050,,,10,1,water	/
GG622035	8	FA87760-4cf	8330	1	op86727,GGG3025,1050,,,10,1,water	only RDX
GG622036	9	FA87785-1cf	8330	1	op86727,GGG3025,1060,,,10,1,water	x DNR
GG622037	10	FA87785-2cf	8330	1	op86727,GGG3025,1030,,,10,1,water	x DNR
GG622038	11	FA87785-3cf	8330	1	op86727,GGG3025,1060,,,10,1,water	x DNR
GG622039	12	FA87620-1cf	8330	1	op86727,GGG3025,1060,,,10,1,water	/
GG622040	2	cc3024-1000	8330	100/500	op86727,GGG3025,1000,,,10,1,water	Pass
GG622041	1	ccb	8330	1	op86727,GGG3025,1000,,,10,1,water	/
GG622042	13	FA87620-2cf	8330	1	op86727,GGG3025,1040,,,10,1,water	/
GG622043	14	FA87622-1cf	8330	1	op86727,GGG3025,1050,,,10,1,water	RDX 135 Merging
GG622044	15	FA87622-2cf	8330	1	op86727,GGG3025,1040,,,10,1,water	RDX 135, 34 26 Merging
GG622045	16	FA87622-3cf	8330	1	op86727,GGG3025,1040,,,10,1,water	RDX 135, 34 26 Merging
GG622046	2	ecc3024-1000	8330	100/500	op86727,GGG3025,1000,,,10,1,water	Pass

DATE	8/3/2021	**METHODS**	8330	**IC/ICC STD LOT**	**LC1497**
COLUMN TYPE	Extend C18	**ACQ. METHOD**	8330BPL	**ICV STD LOT**	**LC1482**
AMOUNT INJ	100uL	**PROC. METHOD**	GPP2464_080321PRI.M	**SOLVENT**	**205227**
INSTRUMENT	HPLC4-PP	**CALIB. DATE**	8/3/2021	**SOLVENT**	**203405**
ANALYST	JB	**RUN BATCH**	GPP2464	**HEAD PRESSURE**	**192**

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
PP391042	1	ccb	8330	1	op86615,GPP2464,1000,,,10,1,water	/
PP391043	91	ic2464-20	8330	2/500	op86615,GPP2464,1000,,,10,1,water	/
PP391044	92	ic2464-50	8330	5/500	op86615,GPP2464,1000,,,10,1,water	/
PP391045	93	ic2464-100	8330	10/500	op86615,GPP2464,1000,,,10,1,water	/
PP391046	94	ic2464-200	8330	20/500	op86615,GPP2464,1000,,,10,1,water	/
PP391047	95	ic2464-500	8330	50/500	op86615,GPP2464,1000,,,10,1,water	/
PP391048	96	icc2464-1000	8330	100/500	op86615,GPP2464,1000,,,10,1,water	/
PP391049	97	ic2464-2500	8330	250/500	op86615,GPP2464,1000,,,10,1,water	/
PP391050	98	ic2464-5000	8330	1	op86615,GPP2464,1000,,,10,1,water	/
PP391051	99	icv2464-1000	8330	1	op86615,GPP2464,1000,,,10,1,water	Pass

DATE	8/9/2021	METHODS	8330	IC/ICC STD LOT	LC1509
COLUMN TYPE	Extend C18	ACQ. METHOD	8330BPL	ICV STD LOT	LC1482
AMOUNT INJ	100uL	PROC. METHOD	GPP2464_080321PRI.M	SOLVENT	205227
INSTRUMENT	HPLC4-PP	CALIB. DATE	8/3/2021	SOLVENT	203405
ANALYST	JB	RUN BATCH	GPP2467	HEAD PRESSURE	197

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
PP391139	1	ccb	8330	1	op86727,GPP2467,1000,,,10,1,water	/
PP391140	2	cc2464-1000	8330	100/500	op86727,GPP2467,1000,,,10,1,water	Pass
PP391141	1	ccb	8330	1	op86727,GPP2467,1000,,,10,1,water	/
PP391142	3	op86727-MB	8330	1	op86727,GPP2467,1000,,,10,1,water	/
PP391143	4	op86727-BS	8330	1	op86727,GPP2467,1000,,,10,1,water	/
PP391144	5	FA87760-1	8330	1	op86727,GPP2467,1040,,,10,1,water	cf-13
PP391145	6	FA87760-2	8330	1	op86727,GPP2467,1050,,,10,1,water	cf-DNX 13
PP391146	7	FA87760-4	8330	1	op86727,GPP2467,1050,,,10,1,water	cf-RDX 13 PETN
PP391147	8	FA87785-1	8330	1	op86727,GPP2467,1060,,,10,1,water	cf-13 PETN
PP391148	9	FA87785-2	8330	1	op86727,GPP2467,1030,,,10,1,water	cf-13
PP391149	10	FA87785-3	8330	1	op86727,GPP2467,1060,,,10,1,water	cf-13 PETN
PP391150	11	FA87620-1	8330	1	op86727,GPP2467,1060,,,10,1,water	cf-HMX MNX 135 13 35 TNT 2a 4a
PP391151	12	FA87620-2	8330	1	op86727,GPP2467,1040,,,10,1,water	cf-RDX 13 NG OP PETN
PP391152	2	cc2464-1000	8330	100/500	op86727,GPP2467,1000,,,10,1,water	Pass
PP391153	1	ccb	8330	1	op86727,GPP2467,1000,,,10,1,water	/
PP391154	13	FA87622-1	8330	1	op86727,GPP2467,1050,,,10,1,water	cf-RDX 135 13 35 TNT 2a 4a OP PETN
PP391155	14	FA87622-2	8330	1	op86727,GPP2467,1040,,,10,1,water	cf-RDX 135 13 35 TNT 2a 4a 26 OP PETN
PP391156	15	FA87622-3	8330	1	op86727,GPP2467,1040,,,10,1,water	cf-RDX 135 13 35 TNT 2a 4a 26 OP PETN
PP391157	16	op86727-MS	8330	1	op86727,GPP2467,520,,,10,1,water	/
PP391158	17	op86727-MSD	8330	1	op86727,GPP2467,520,,,10,1,water	/
PP391159	18	op86727-MS2	8330	1	op86727,GPP2467,520,,,10,1,water	/
PP391160	19	op86727-MSD2	8330	1	op86727,GPP2467,520,,,10,1,water	/
PP391161	20	op86682-DUP	8330	1	op86682,GPP2467,10,,,50,1,soil	/
PP391162	21	op86682-DUP2	8330	1	op86682,GPP2467,10.01,,,50,1,soil	/
PP391163	2	ecc2464-1000	8330	100/500	op86727,GPP2467,1000,,,10,1,water	Pass

SGS - ORLANDO

MB 08/04/21

Date/Time: 08/06/2021 0900
Started {mm/dd/yy 24:00}

Date/Time: 08/07/21 0800
Finished {mm/dd/yy 24:00}

Batch#: OP86727 Ext. By: MB Conc. By: — Vialed By: MB

SPE LIQUID SAMPLE PREP REPORT

Prep Method: (3535A) or 537 or 537MOD (circle)

Analytical Method: 8330B

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP86727 MB	X	1000	6	N/A	250ul		10ml	AT-1	
OP86727 BS	X	1000	↓	↓	↓	200+250ul	↓	↓	
FA87760-1	30	1040						↓	
-2	15	1050							
-4	15	1050						AT-2	
MB 08/05/21 FA87785-1	10	1060						↓	
-2	15	1030							
-3	15	1060							
FA87620-1 RE	6	1060						↓	
-2 RE	3	1040							
FA87622-1 RE	2	1050						AT-1	
-2 RE	2	1040						↓	
-3 RE	2	1040	↓	↓	↓		↓	↓	
								AT-1	
FA87620-1 MS2	5	520	6	N/A	250ul	200+250ul	10ml	AT-1	MB 08/06/21
-1 MSD2	5	520	↓	↓	↓	↓	↓	↓	
FA87760-1 MS	29	520	↓	↓	↓	250ul	↓	AT-1	
-1 MSD	29	520	↓	↓	↓	↓	↓	↓	
DUP									

Comments: LCM36 25 ppm 09/10/21

MB 08/06/21

Surr.1 ID: LC1503	Conc: 20 ppm	Exp. Date: 02/03/22	Inj. By: MB	Ver. By MB
Spk.1 ID: LC1499	Conc: 20 ppm	Exp. Date: 02/01/22	Inj. By: MB	Ver. By MB
Spk.2 ID: ~~LC1436~~	Conc: 25 ppm	Exp. Date: 04/10/21	Inj. By: MB	Ver. By ~~MB~~
Spk.3 ID: —	Conc: —	Exp. Date: —	Inj. By: —	Ver. By —

TurboVap Temp (Therm ID):	N-Evap Temp (Therm ID):
Observed Temp °C: Corr. Temp °C:	Observed Temp °C: Corr. Temp °C:

Methanol Lot # —	SPE Lot # 5214-0112	pH Paper # 222420
Acetonitrile Lot # — 208069	Syringe filter Lot # —	Reagent # —
Water Lot# DI H2O	Pre-filter Lot# —	Reagent # —
Solvent# —	Carbon Lot# —	Other —

Relinquished By: Date: 08/09/21

Accepted By: Date: 8/9/21

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Weston Solutions, Inc

Radford AAP; VA

SGS Job Number: FA87622

Sampling Date: 07/27/21

Report to:

Weston Solutions, Inc
2 Eaton St Suite 603
Hampton, VA 23669
pacea@westonsolutions.com

ATTN: Tony Pace

Total number of pages in report: 550

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, UT, VT, WA, WV

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Weston Solutions, Inc

Radford AAP; VA

Job No: FA87622

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA87622-1	07/27/21	09:40	DKNB	07/28/21	AQ	Ground Water	54MW10
FA87622-2	07/27/21	11:03	DKNB	07/28/21	AQ	Ground Water	54MW13
FA87622-3	07/27/21	11:03	DKNB	07/28/21	AQ	Ground Water	54TW13

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Weston Solutions, Inc **Job No:** FA87622

Site: Radford AAP; VA **Report Date** 8/17/2021 8:07:47 PM

On 07/28/2021, 3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc.- Orlando at a maximum corrected temperature of 3.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FA87622 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Semi-volatiles By Method SW846 6850

Matrix: AQ **Batch ID:** OP86789

Sample(s) FA87620-1MS, FA87620-1MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Perchlorate are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Perchlorate are outside control limits. Probable cause due to matrix interference.

GC/LC Semi-volatiles By Method SW846 8330B

Matrix: AQ **Batch ID:** OP86727

Sample(s) FA87620-1MS, FA87620-1MSD were used as the QC samples indicated.

The following samples were extracted outside of holding time for method SW846 8330B: FA87622-1, FA87622-2, FA87622-3

Blank Spike Recovery(s) for 2,4,6-Trinitrotoluene, Tetryl are outside control limits.

Matrix Spike Recovery(s) for RDX, Tetryl, TNX are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recovery(s) for RDX, Tetryl, TNX are outside control limits. Probable cause due to matrix interference.

FA87622-1: Confirmation run.

FA87622-1: Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.

FA87622-2: Confirmation run.

FA87622-2: Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.

FA87622-3: Confirmation run.

FA87622-3: Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Ariel Hartney, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA87622
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 07/27/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA87622-1	**54MW10**					
Perchlorate		0.19 J	0.20	0.10	ug/l	SW846 6850
RDX [a]		0.48 J	0.19	0.095	ug/l	SW846 8330B
3,5-Dinitroaniline [a]		0.12 J	0.19	0.095	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [b]		1.2 J	0.19	0.095	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		1.4 J	0.19	0.095	ug/l	SW846 8330B
o-Nitrotoluene [a]		0.41 J	0.19	0.095	ug/l	SW846 8330B
p-Nitrotoluene [a]		0.092 J	0.19	0.095	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [b]		4.6 J	0.19	0.095	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [c]		13.0 J	0.19	0.095	ug/l	SW846 8330B
FA87622-2	**54MW13**					
Perchlorate		0.26	0.20	0.10	ug/l	SW846 6850
RDX [a]		0.38 J	0.19	0.096	ug/l	SW846 8330B
3,5-Dinitroaniline [a]		0.17 J	0.19	0.096	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [b]		1.7 J	0.19	0.096	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		1.2 J	0.19	0.096	ug/l	SW846 8330B
o-Nitrotoluene [a]		0.37 J	0.19	0.096	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [b]		12.2 J	0.19	0.096	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [c]		17.0 J	0.19	0.096	ug/l	SW846 8330B
FA87622-3	**54TW13**					
Perchlorate		0.31	0.20	0.10	ug/l	SW846 6850
RDX [a]		0.43 J	0.19	0.096	ug/l	SW846 8330B
3,5-Dinitroaniline [a]		0.20 J	0.19	0.096	ug/l	SW846 8330B
2-amino-4,6-Dinitrotoluene [b]		1.7 J	0.19	0.096	ug/l	SW846 8330B
4-amino-2,6-Dinitrotoluene [a]		1.3 J	0.19	0.096	ug/l	SW846 8330B
o-Nitrotoluene [a]		0.39 J	0.19	0.096	ug/l	SW846 8330B
p-Nitrotoluene [a]		0.096 J	0.19	0.096	ug/l	SW846 8330B
1,3,5-Trinitrobenzene [b]		13.3 J	0.19	0.096	ug/l	SW846 8330B
2,4,6-Trinitrotoluene [c]		17.7 J	0.19	0.096	ug/l	SW846 8330B

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column. Primary and confirmation results differ by more than 40%.
(b) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(c) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column. Associated BS recovery outside control limits.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA87622-1	**Date Sampled:**	07/27/21
Matrix:	AQ - Ground Water	**Date Received:**	07/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q84269.D	1	08/11/21 15:47	NG	08/11/21 09:00	OP86789	SQ1826
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.19	0.20	0.10	0.050	ug/l	J

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW10
Lab Sample ID: FA87622-1
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 07/27/21
Date Received: 07/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP391154.D	1	08/09/21 21:08	JB	08/06/21 09:00	OP86727	GPP2467
Run #2 [b]	GG622043.D	1	08/13/21 00:59	JB	08/06/21 09:00	OP86727	GGG3025

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.095 U	0.19	0.095	0.076	ug/l	
121-82-4	RDX [c]	0.48	0.19	0.095	0.076	ug/l	J
	DNX	0.095 U	0.19	0.095	0.076	ug/l	
	MNX	0.095 U	0.19	0.095	0.076	ug/l	
	TNX	0.095 U	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.12	0.19	0.095	0.076	ug/l	J
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.2	0.19	0.095	0.076	ug/l	J
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	1.4	0.19	0.095	0.076	ug/l	J
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene [c]	0.41	0.19	0.095	0.076	ug/l	J
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene [c]	0.092	0.19	0.095	0.076	ug/l	J
479-45-8	Tetryl [d]	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	4.6	0.19	0.095	0.094	ug/l	J
118-96-7	2,4,6-Trinitrotoluene [d]	13.0	0.19	0.095	0.076	ug/l	J
55-63-0	Nitroglycerine	0.95 U	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	100%	110%	70-136%

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Associated BS recovery outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW13		
Lab Sample ID:	FA87622-2	**Date Sampled:**	07/27/21
Matrix:	AQ - Ground Water	**Date Received:**	07/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q84270.D	1	08/11/21 15:56	NG	08/11/21 09:00	OP86789	SQ1826
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.26	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA87622-2
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 07/27/21
Date Received: 07/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP391155.D	1	08/09/21 21:38	JB	08/06/21 09:00	OP86727	GPP2467
Run #2 [b]	GG622044.D	1	08/13/21 01:31	JB	08/06/21 09:00	OP86727	GGG3025

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U	0.19	0.096	0.077	ug/l	
121-82-4	RDX [c]	0.38	0.19	0.096	0.077	ug/l	J
	DNX	0.096 U	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX	0.096 U	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.17	0.19	0.096	0.077	ug/l	J
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.7	0.19	0.096	0.077	ug/l	J
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	1.2	0.19	0.096	0.077	ug/l	J
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene [c]	0.37	0.19	0.096	0.077	ug/l	J
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl [d]	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	12.2	0.19	0.096	0.095	ug/l	J
118-96-7	2,4,6-Trinitrotoluene [d]	17.0	0.19	0.096	0.077	ug/l	J
55-63-0	Nitroglycerine	0.96 U	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	100%	108%	70-136%

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Associated BS recovery outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54TW13		
Lab Sample ID:	FA87622-3	**Date Sampled:**	07/27/21
Matrix:	AQ - Ground Water	**Date Received:**	07/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q84271.D	1	08/11/21 16:04	NG	08/11/21 09:00	OP86789	SQ1826
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.31	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54TW13
Lab Sample ID: FA87622-3
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 07/27/21
Date Received: 07/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP391156.D	1	08/09/21 22:09	JB	08/06/21 09:00	OP86727	GPP2467
Run #2 [b]	GG622045.D	1	08/13/21 02:02	JB	08/06/21 09:00	OP86727	GGG3025

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U	0.19	0.096	0.077	ug/l	
121-82-4	RDX [c]	0.43	0.19	0.096	0.077	ug/l	J
	DNX	0.096 U	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX	0.096 U	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.20	0.19	0.096	0.077	ug/l	J
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.7	0.19	0.096	0.077	ug/l	J
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	1.3	0.19	0.096	0.077	ug/l	J
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene [c]	0.39	0.19	0.096	0.077	ug/l	J
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene [c]	0.096	0.19	0.096	0.077	ug/l	J
479-45-8	Tetryl [d]	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	13.3	0.19	0.096	0.095	ug/l	J
118-96-7	2,4,6-Trinitrotoluene [d]	17.7	0.19	0.096	0.077	ug/l	J
55-63-0	Nitroglycerine	0.96 U	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	103%	112%	70-136%

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Associated BS recovery outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

FA87622

SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: WESTON SOLUTIONS, INC.
Address: 2 EATON ST., Suite 603
City: HAMPTON State: VA Zip: 23669
Project Contact: TONI PALE Email: paleat@westonsolutions.com
Phone #: 757-819-5310
Sampler(s) Name(s) (Printed)
Sampler 1: D.KORNAS Sampler 2: N.BEBEE

Project Information

Project Name: RADFORD AAP 54
Street
City RADFORD State VA
Project #
Fax #
Client Purchase Order #

Analytical Information

Explosives + DNA, MNX, TNX (LC8338, XLL 3NX) | PERCHLORATE (LC16350 PERCHLT)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNA	DI WATER	MEOH	Explosives + DNA, MNX, TNX (LC8338, XLL 3NX)	PERCHLORATE (LC16350 PERCHLT)	LAB USE ONLY
1	54MW10	07/22/21	0940	DK/NB	GW	3		X								2	1	
2	54MW13	07/23/21	1103	DK/NB	GW	3		X								2	1	
3	54TW13	07/23/21	1103	DK/NB	GW	3		X								2	1	

07/27/21

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

FEDEX Air-Bill #774363111449

INITIAL ASSESSMENT
LABEL VERIFICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	WESTON	07/27/21/1735	2 FED EX	3 FX	7/28/21	4
5	Relinquished by/Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	930	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 3.8-IR1

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (4).xls Rev 031318

FA87622: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA87622 **Client:** WESTON SOLUTIONS **Project:** RADFORD AAD 54

Date / Time Received: 7/28/2021 9:30:00 AM **Delivery Method:** FX **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.6);

Cooler Temps (Corrected) °C: Cooler 1: (3.8);

Cooler Information	Y	N
1. Custody Seals Present	☑	☐
2. Custody Seals Intact	☑	☐
3. Temp criteria achieved	☑	☐
4. Cooler temp verification	IR Gun	
5. Cooler media	Ice (Bag)	

Trip Blank Information	Y	N	N/A
1. Trip Blank present / cooler	☐	☐	☑
2. Trip Blank listed on COC	☐	☐	☑

	W	S	N/A
3. Type Of TB Received	☐	☐	☑

Sample Information	Y	N	N/A
1. Sample labels present on bottles	☑	☐	
2. Samples preserved properly	☑	☐	
3. Sufficient volume/containers recvd for analysis:	☑	☐	
4. Condition of sample	Intact		
5. Sample recvd within HT	☑	☐	
6. Dates/Times/IDs on COC match Sample Label	☑	☐	
7. VOCs have headspace	☐	☐	☑
8. Bottles received for unspecified tests	☐	☑	
9. Compositing instructions clear	☐	☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐	☐	☑
11. % Solids Jar received?	☐	☐	☑
12. Residual Chlorine Present?	☐	☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: PETERH Date: 7/28/2021 9:30:00 AM Reviewer: _____ Date: _____

FA87622: Chain of Custody
Page 2 of 2

QC Evaluation: DOD QSM5.x Limits

Job Number: FA87622
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 07/27/21

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP86789	SW846 6850						
OP86789-BS	14797-73-0	Perchlorate	BSP	REC	85	%	84-119
OP86789-MS*	14797-73-0	Perchlorate	MS	REC	50	%	84-119
OP86789-MSD*	14797-73-0	Perchlorate	MSD	REC	75	%	84-119
OP86789-MSD*	14797-73-0	Perchlorate	MSD	RPD	12	%	15
OP86727	SW846 8330B						
OP86727-BS	2691-41-0	HMX	BSP	REC	82	%	65-135
OP86727-BS	121-82-4	RDX	BSP	REC	86	%	68-130
OP86727-BS	618-87-1	3,5-Dinitroaniline	BSP	REC	94	%	71-117
OP86727-BS	99-65-0	1,3-Dinitrobenzene	BSP	REC	96	%	78-120
OP86727-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	112	%	77-127
OP86727-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	90	%	78-120
OP86727-BS	35572-78-2	2-amino-4,6-Dinitrotoluene	BSP	REC	92	%	79-120
OP86727-BS	19406-51-0	4-amino-2,6-Dinitrotoluene	BSP	REC	94	%	76-125
OP86727-BS	98-95-3	Nitrobenzene	BSP	REC	90	%	65-134
OP86727-BS	88-72-2	o-Nitrotoluene	BSP	REC	84	%	70-127
OP86727-BS	99-08-1	m-Nitrotoluene	BSP	REC	90	%	73-125
OP86727-BS	99-99-0	p-Nitrotoluene	BSP	REC	90	%	71-127
OP86727-BS	479-45-8	Tetryl	BSP	REC	46	%	64-128
OP86727-BS	99-35-4	1,3,5-Trinitrobenzene	BSP	REC	98	%	73-125
OP86727-BS	118-96-7	2,4,6-Trinitrotoluene	BSP	REC	66	%	71-123
OP86727-BS	55-63-0	Nitroglycerine	BSP	REC	88	%	74-127
OP86727-BS	78-11-5	PETN	BSP	REC	110	%	73-127
OP86727-MS2*	2691-41-0	HMX	MS	REC	110	%	65-135
OP86727-MS2*	121-82-4	RDX	MS	REC	132	%	68-130
OP86727-MS2*		DNX	MS	REC	99	%	66-119
OP86727-MS2*		MNX	MS	REC	91	%	57-132
OP86727-MS2*	618-87-1	3,5-Dinitroaniline	MS	REC	99	%	71-117
OP86727-MS2*	99-65-0	1,3-Dinitrobenzene	MS	REC	100	%	78-120
OP86727-MS2*	606-20-2	2,6-Dinitrotoluene	MS	REC	128	%	77-127
OP86727-MS2*	121-14-2	2,4-Dinitrotoluene	MS	REC	96	%	78-120
OP86727-MS2*	35572-78-2	2-amino-4,6-Dinitrotoluene	MS	REC	102	%	79-120
OP86727-MS2*	19406-51-0	4-amino-2,6-Dinitrotoluene	MS	REC	100	%	76-125
OP86727-MS2*	98-95-3	Nitrobenzene	MS	REC	95	%	65-134
OP86727-MS2*	88-72-2	o-Nitrotoluene	MS	REC	88	%	70-127
OP86727-MS2*	99-08-1	m-Nitrotoluene	MS	REC	94	%	73-125
OP86727-MS2*	99-99-0	p-Nitrotoluene	MS	REC	94	%	71-127
OP86727-MS2*	479-45-8	Tetryl	MS	REC	47	%	64-128
OP86727-MS2*	99-35-4	1,3,5-Trinitrobenzene	MS	REC	112	%	73-125
OP86727-MS2*	118-96-7	2,4,6-Trinitrotoluene	MS	REC	76	%	71-123
OP86727-MS2*	55-63-0	Nitroglycerine	MS	REC	93	%	74-127

* Sample used for QC is not from job FA87622

QC Evaluation: DOD QSM5.x Limits

Job Number: FA87622
Account: Weston Solutions, Inc
Project: Radford AAP; VA
Collected: 07/27/21

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP86727-MS2*	78-11-5	PETN	MS	REC	107	%	73-127
OP86727-MSD2*	2691-41-0	HMX	MSD	REC	110	%	65-135
OP86727-MSD2*	2691-41-0	HMX	MSD	RPD	0	%	20
OP86727-MSD2*	121-82-4	RDX	MSD	REC	133	%	68-130
OP86727-MSD2*	121-82-4	RDX	MSD	RPD	1	%	20
OP86727-MSD2*		DNX	MSD	REC	100	%	66-119
OP86727-MSD2*		DNX	MSD	RPD	1	%	20
OP86727-MSD2*		MNX	MSD	REC	91	%	57-132
OP86727-MSD2*		MNX	MSD	RPD	1	%	20
OP86727-MSD2*	618-87-1	3,5-Dinitroaniline	MSD	REC	99	%	71-117
OP86727-MSD2*	618-87-1	3,5-Dinitroaniline	MSD	RPD	0	%	20
OP86727-MSD2*	99-65-0	1,3-Dinitrobenzene	MSD	REC	100	%	78-120
OP86727-MSD2*	99-65-0	1,3-Dinitrobenzene	MSD	RPD	0	%	20
OP86727-MSD2*	606-20-2	2,6-Dinitrotoluene	MSD	REC	128	%	77-127
OP86727-MSD2*	606-20-2	2,6-Dinitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2*	121-14-2	2,4-Dinitrotoluene	MSD	REC	96	%	78-120
OP86727-MSD2*	121-14-2	2,4-Dinitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2*	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	REC	102	%	79-120
OP86727-MSD2*	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2*	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	REC	100	%	76-125
OP86727-MSD2*	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2*	98-95-3	Nitrobenzene	MSD	REC	95	%	65-134
OP86727-MSD2*	98-95-3	Nitrobenzene	MSD	RPD	0	%	20
OP86727-MSD2*	88-72-2	o-Nitrotoluene	MSD	REC	88	%	70-127
OP86727-MSD2*	88-72-2	o-Nitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2*	99-08-1	m-Nitrotoluene	MSD	REC	94	%	73-125
OP86727-MSD2*	99-08-1	m-Nitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2*	99-99-0	p-Nitrotoluene	MSD	REC	94	%	71-127
OP86727-MSD2*	99-99-0	p-Nitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2*	479-45-8	Tetryl	MSD	REC	47	%	64-128
OP86727-MSD2*	479-45-8	Tetryl	MSD	RPD	0	%	20
OP86727-MSD2*	99-35-4	1,3,5-Trinitrobenzene	MSD	REC	112	%	73-125
OP86727-MSD2*	99-35-4	1,3,5-Trinitrobenzene	MSD	RPD	0	%	20
OP86727-MSD2*	118-96-7	2,4,6-Trinitrotoluene	MSD	REC	76	%	71-123
OP86727-MSD2*	118-96-7	2,4,6-Trinitrotoluene	MSD	RPD	0	%	20
OP86727-MSD2*	55-63-0	Nitroglycerine	MSD	REC	95	%	74-127
OP86727-MSD2*	55-63-0	Nitroglycerine	MSD	RPD	2	%	20
OP86727-MSD2*	78-11-5	PETN	MSD	REC	107	%	73-127
OP86727-MSD2*	78-11-5	PETN	MSD	RPD	0	%	20

* Sample used for QC is not from job FA87622

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Instrument Blank

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
SQ1826-IBLK	Q84274.D	1	08/11/21	NG	n/a	n/a	SQ1826

The QC reported here applies to the following samples: **Method:** SW846 6850

FA87622-1, FA87622-2, FA87622-3

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Method Blank Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86789-MB	Q84259.D	1	08/11/21	NG	08/11/21	OP86789	SQ1826

The QC reported here applies to the following samples: **Method:** SW846 6850

FA87622-1, FA87622-2, FA87622-3

CAS No.	Compound	Result	RL	MDL	Units	Q
14797-73-0	Perchlorate	ND	0.20	0.050	ug/l	

Blank Spike Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86789-BS	Q84258.D	1	08/11/21	NG	08/11/21	OP86789	SQ1826

The QC reported here applies to the following samples: **Method:** SW846 6850

FA87622-1, FA87622-2, FA87622-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
14797-73-0	Perchlorate	0.2	0.17	85	80-120

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86789-MS	Q84263.D	1	08/11/21	NG	08/11/21	OP86789	SQ1826
OP86789-MSD	Q84264.D	1	08/11/21	NG	08/11/21	OP86789	SQ1826
FA87620-1	Q84262.D	1	08/11/21	NG	08/11/21	OP86789	SQ1826

The QC reported here applies to the following samples: **Method:** SW846 6850

FA87622-1, FA87622-2, FA87622-3

CAS No.	Compound	FA87620-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
14797-73-0	Perchlorate	0.30		0.2	0.40	50*	0.2	0.45	75*	12	80-120/15

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1826-ICC1826	**Injection Date:**	08/11/21
Lab File ID:	Q84250.D	**Injection Time:**	11:33
Instrument ID:	GCMSQ	**Method:**	SW846 6850

	IS 1 AREA	RT
Initial Cal [a]	140140	6.33
Check Std [b]	153252	6.33
Upper Limit [c]	210210	8.33
Lower Limit [d]	70070	4.33

Lab Sample ID	IS 1 AREA	RT
OP86789-BS	124323	6.35
OP86789-MB	123166	6.35
ZZZZZZ	126584	6.36
FA87620-1	83101	6.08
OP86789-MS	98540	6.12
OP86789-MSD	89011	6.08

IS 1 = Cl18O4 (ISTD)

(a) Initial Cal is: SQ1826-ICC1826 Q84250.D 08/11/21 11:33. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to + 50% of initial cal area.
(c) Upper Limit = + 50% of initial standard area; Retention time + 2 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -2 minutes of check standard.

Internal Standard Area Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	SQ1826-CC1826	**Injection Date:**	08/11/21
Lab File ID:	Q84265.D	**Injection Time:**	15:14
Instrument ID:	GCMSQ	**Method:**	SW846 6850

	IS 1 AREA	RT
Initial Cal [a]	140140	6.33
Check Std [b]	112156	6.35
Upper Limit [c]	210210	8.35
Lower Limit [d]	70070	4.35

Lab Sample ID	IS 1 AREA	RT
ZZZZZZ	92626	6.12
FA87622-1	80437	6.07
FA87622-2	86565	6.07
FA87622-3	84548	6.07

IS 1 = Cl18O4 (ISTD)

(a) Initial Cal is: SQ1826-ICC1826 Q84250.D 08/11/21 11:33. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to + 50% of initial cal area.
(c) Upper Limit = + 50% of initial standard area; Retention time + 2 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -2 minutes of check standard.

Initial Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1826-ICC1826
Lab FileID: Q84250.D

Initial Calibration Report

Method Path	D:\MassHunter\Methods
Method File	6850_081121_SQ1826.quantmethod.xml
Batch Name	D:\MassHunter\Data\0811_6850_SQ1826\QuantResults\sq1826.batch.bin
Last Calib Update	8/12/2021 7:46:54 AM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\0811_6850_SQ1826\Q84247.d	8/11/2021 11:08:04 AM	8/12/2021 7:46:54 AM
2	D:\MassHunter\Data\0811_6850_SQ1826\Q84248.d	8/11/2021 11:16:29 AM	8/12/2021 7:46:54 AM
3	D:\MassHunter\Data\0811_6850_SQ1826\Q84249.d	8/11/2021 11:24:53 AM	8/12/2021 7:46:54 AM
4	D:\MassHunter\Data\0811_6850_SQ1826\Q84250.d	8/11/2021 11:33:17 AM	8/12/2021 7:46:54 AM
5	D:\MassHunter\Data\0811_6850_SQ1826\Q84251.d	8/11/2021 11:41:43 AM	8/12/2021 7:46:54 AM
6	D:\MassHunter\Data\0811_6850_SQ1826\Q84253.d	8/11/2021 1:27:52 PM	8/12/2021 7:46:54 AM
7	D:\MassHunter\Data\0811_6850_SQ1826\Q84254.d	8/11/2021 1:36:16 PM	8/12/2021 7:46:54 AM
8	D:\MassHunter\Data\0811_6850_SQ1826\Q84255.d	8/11/2021 1:44:38 PM	8/12/2021 7:46:54 AM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I Cl18O4		---------- ISTD ----------									
T Perchlorate	Quadratic	1.2032	1.2512	1.2205	1.3195	1.3750	1.4450	1.5497	1.5360	1.3625	10.075

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Generated at 7:47 AM on 8/12/2021

Initial Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1826-ICC1826
Lab FileID: Q84250.D

Initial Calibration Report

Compounds with Curve fitting not using Avg Response Factor:

Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
T Perchlorate	Quadratic	y = 0.013935 * x ^ 2 + 1.412658 * x	0.998830

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Generated at 7:47 AM on 8/12/2021

Initial Calibration Verification

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1826-ICV1826
Lab FileID: Q84256.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0811_6850_SQ1826\sq1826.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0811_6850_SQ1826\Q84247.d
2:D:\MassHunter\Data\0811_6850_SQ1826\Q84248.d
3:D:\MassHunter\Data\0811_6850_SQ1826\Q84249.d
4:D:\MassHunter\Data\0811_6850_SQ1826\Q84250.d
5:D:\MassHunter\Data\0811_6850_SQ1826\Q84251.d
6:D:\MassHunter\Data\0811_6850_SQ1826\Q84253.d
7:D:\MassHunter\Data\0811_6850_SQ1826\Q84254.d
8:D:\MassHunter\Data\0811_6850_SQ1826\Q84255.d

Data File: Q84256
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.891	-5.5	94.5

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1826-CC1826
Lab FileID: Q84265.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0811_6850_SQ1826\sq1826.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0811_6850_SQ1826\Q84247.d
2:D:\MassHunter\Data\0811_6850_SQ1826\Q84248.d
3:D:\MassHunter\Data\0811_6850_SQ1826\Q84249.d
4:D:\MassHunter\Data\0811_6850_SQ1826\Q84250.d
5:D:\MassHunter\Data\0811_6850_SQ1826\Q84251.d
6:D:\MassHunter\Data\0811_6850_SQ1826\Q84253.d
7:D:\MassHunter\Data\0811_6850_SQ1826\Q84254.d
8:D:\MassHunter\Data\0811_6850_SQ1826\Q84255.d

Data File: Q84265
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.825	-8.8	91.2

CC Criteria: +/- 15%

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1826-CC1826
Lab FileID: Q84266.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0811_6850_SQ1826\sq1826.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0811_6850_SQ1826\Q84247.d
2:D:\MassHunter\Data\0811_6850_SQ1826\Q84248.d
3:D:\MassHunter\Data\0811_6850_SQ1826\Q84249.d
4:D:\MassHunter\Data\0811_6850_SQ1826\Q84250.d
5:D:\MassHunter\Data\0811_6850_SQ1826\Q84251.d
6:D:\MassHunter\Data\0811_6850_SQ1826\Q84253.d
7:D:\MassHunter\Data\0811_6850_SQ1826\Q84254.d
8:D:\MassHunter\Data\0811_6850_SQ1826\Q84255.d

Data File: Q84266
Type : QC
Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	0.200	0.171	-14.3	85.7

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: SQ1826-CC1826
Lab FileID: Q84272.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0811_6850_SQ1826\sq1826.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0811_6850_SQ1826\Q84247.d
2:D:\MassHunter\Data\0811_6850_SQ1826\Q84248.d
3:D:\MassHunter\Data\0811_6850_SQ1826\Q84249.d
4:D:\MassHunter\Data\0811_6850_SQ1826\Q84250.d
5:D:\MassHunter\Data\0811_6850_SQ1826\Q84251.d
6:D:\MassHunter\Data\0811_6850_SQ1826\Q84253.d
7:D:\MassHunter\Data\0811_6850_SQ1826\Q84254.d
8:D:\MassHunter\Data\0811_6850_SQ1826\Q84255.d

Data File: Q84272
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
Cl18O4	---	--ISTD--		
Perchlorate	2.000	1.851	-7.4	92.6

CC Criteria: +/- 15%

Run Sequence Report

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: SQ1826	**Method:** SW846 6850	**Instrument ID:** GCMSQ

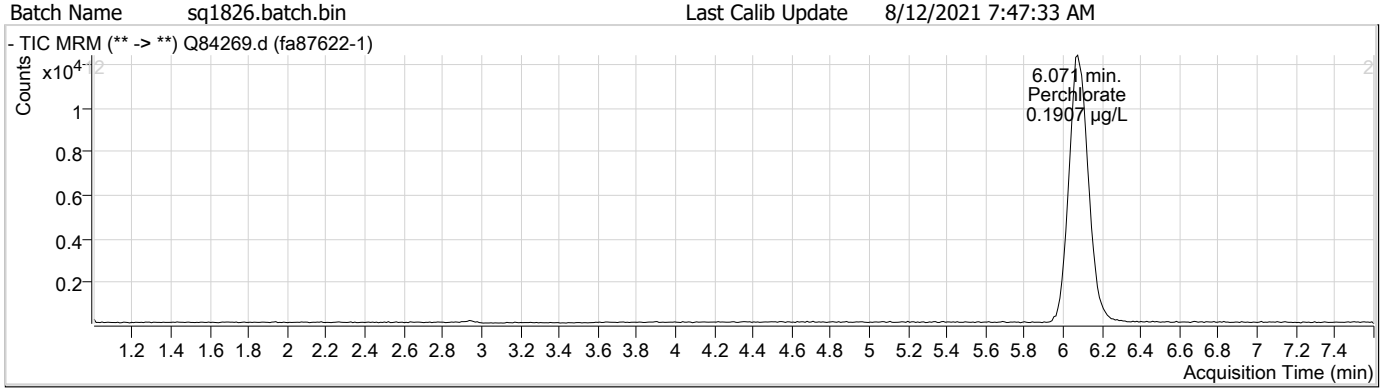
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ1826-IC1826	Q84246.D	08/11/21 10:59	n/a	Mass Calibration Verification
SQ1826-IC1826	Q84247.D	08/11/21 11:08	n/a	Initial cal 0.2
SQ1826-IC1826	Q84248.D	08/11/21 11:16	n/a	Initial cal 0.5
SQ1826-IC1826	Q84249.D	08/11/21 11:24	n/a	Initial cal 1.0
SQ1826-ICC1826	Q84250.D	08/11/21 11:33	n/a	Initial cal 2.0
SQ1826-IC1826	Q84251.D	08/11/21 11:41	n/a	Initial cal 5.0
SQ1826-IC1826	Q84253.D	08/11/21 13:27	n/a	Initial cal 10
SQ1826-IC1826	Q84254.D	08/11/21 13:36	n/a	Initial cal 25
SQ1826-IC1826	Q84255.D	08/11/21 13:44	n/a	Initial cal 50
SQ1826-ICV1826	Q84256.D	08/11/21 13:53	n/a	Initial cal verification 2
OP86789-BS	Q84258.D	08/11/21 14:09	OP86789	Blank Spike
OP86789-MB	Q84259.D	08/11/21 14:23	OP86789	Method Blank
ZZZZZZ	Q84260.D	08/11/21 14:31	OP86789	(unrelated sample)
FA87620-1	Q84262.D	08/11/21 14:48	OP86789	(used for QC only; not part of job FA87622)
OP86789-MS	Q84263.D	08/11/21 14:57	OP86789	Matrix Spike
OP86789-MSD	Q84264.D	08/11/21 15:05	OP86789	Matrix Spike Duplicate
SQ1826-CC1826	Q84265.D	08/11/21 15:14	n/a	Continuing cal 2.0
SQ1826-CC1826	Q84266.D	08/11/21 15:22	n/a	Continuing cal 0.2
ZZZZZZ	Q84268.D	08/11/21 15:39	OP86789	(unrelated sample)
FA87622-1	Q84269.D	08/11/21 15:47	OP86789	54MW10
FA87622-2	Q84270.D	08/11/21 15:56	OP86789	54MW13
FA87622-3	Q84271.D	08/11/21 16:04	OP86789	54TW13
SQ1826-CC1826	Q84272.D	08/11/21 16:13	n/a	Continuing cal 2.0
SQ1826-ECC1826	Q84273.D	08/11/21 16:21	n/a	Ending cal 0.2
SQ1826-IBLK	Q84274.D	08/11/21 16:29	n/a	Method Blank

MS Semi-volatiles

Raw Data

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84269.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 3:47:55 PM
Sample Name	fa87622-1	Instrument	Instrument 1
Vial	P2-C9	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

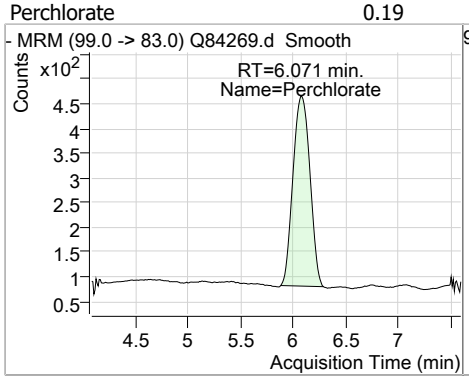


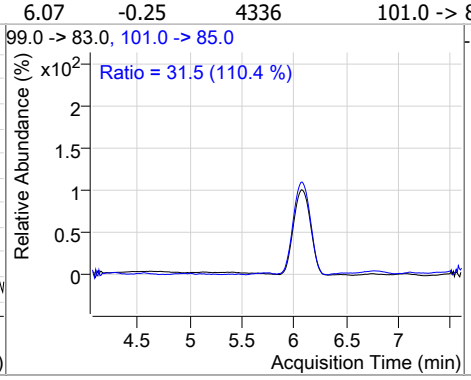
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.074	107.0 -> 89.0	80437	NoQ	5.00	µg/L	-0.255
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.071	99.0 -> 83.0	4336	3.2	0.19	µg/L	94

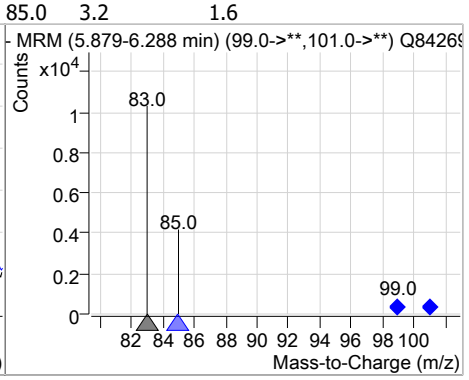
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.19	6.07	-0.25	4336	101.0 -> 85.0	3.2	1.6	

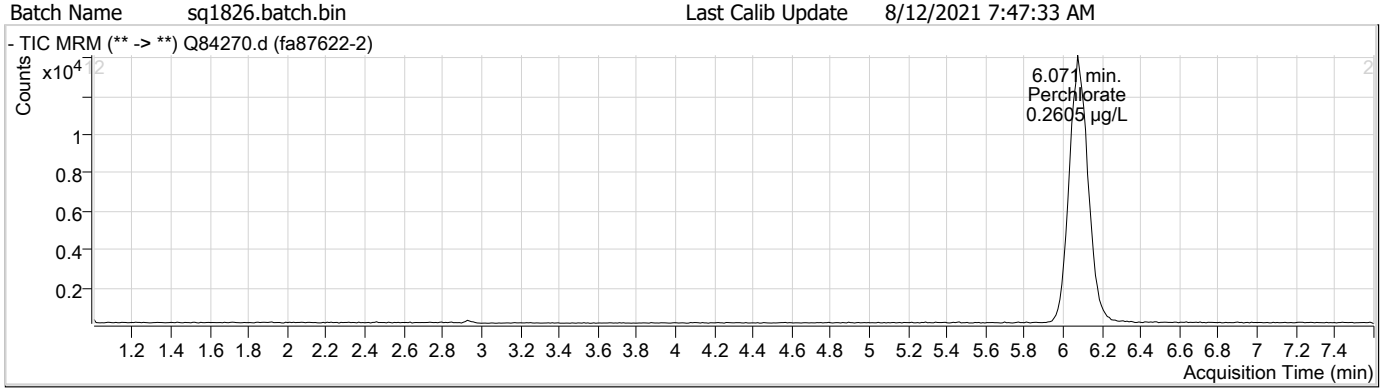






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84270.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 3:56:18 PM
Sample Name	fa87622-2	Instrument	Instrument 1
Vial	P2-D1	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

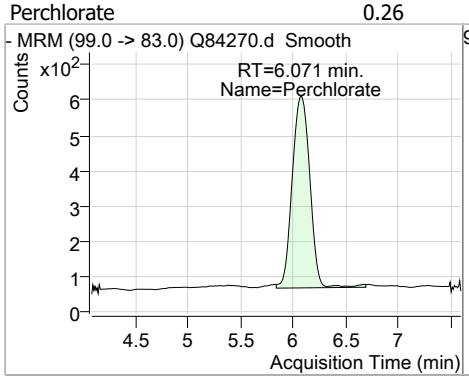


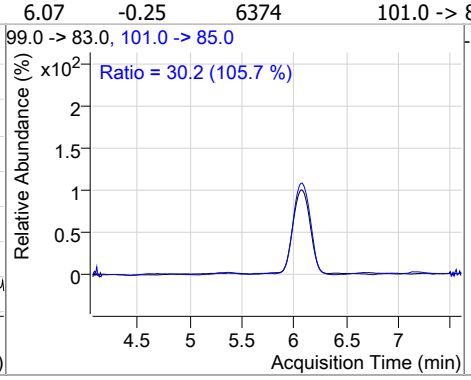
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.074	107.0 -> 89.0	86565	NoQ	5.00 µg/L	-0.255
System Monitoring Compounds						
Target Compounds						QValue
Perchlorate	6.071	99.0 -> 83.0	6374	3.3	0.26 µg/L	97

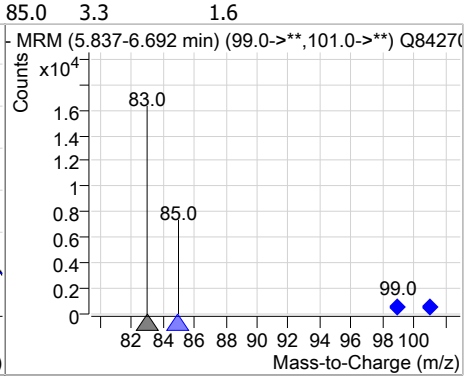
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.26	6.07	-0.25	6374	101.0 -> 85.0	3.3	1.6	





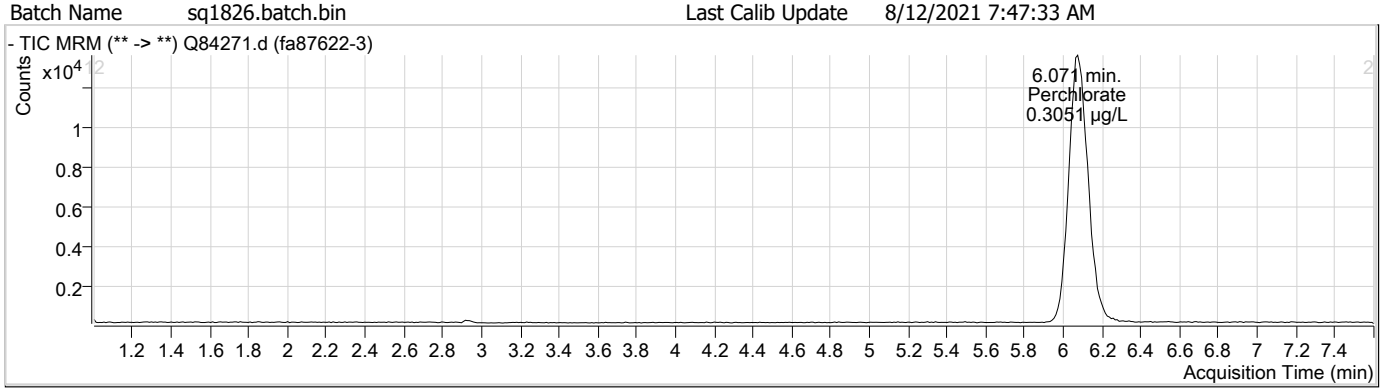


7.1.2

7

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84271.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 4:04:43 PM
Sample Name	fa87622-3	Instrument	Instrument 1
Vial	P2-D2	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

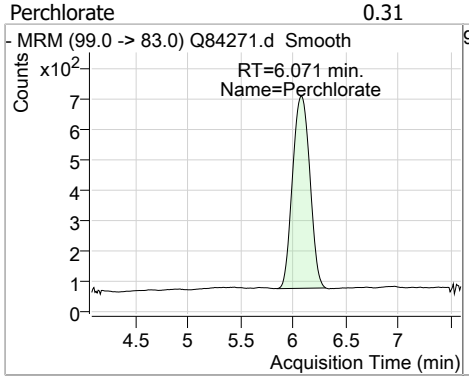


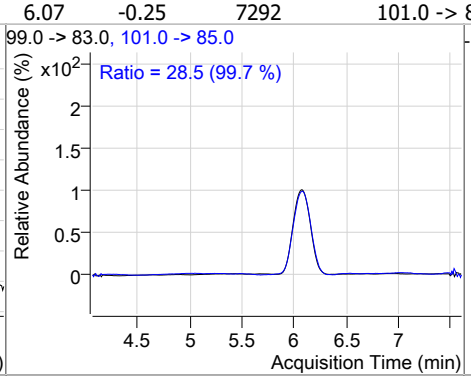
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.074	107.0 -> 89.0	84548	NoQ	5.00	µg/L	-0.255
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.071	99.0 -> 83.0	7292	3.5	0.31	µg/L	100

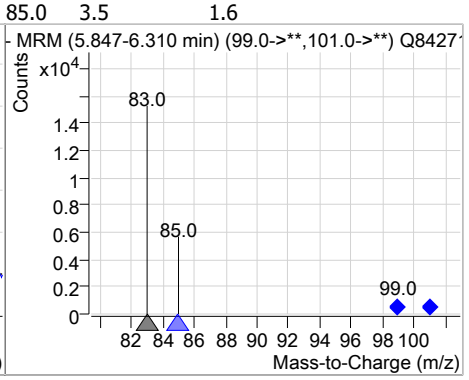
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.31	6.07	-0.25	7292	101.0 -> 85.0	3.5	1.6	

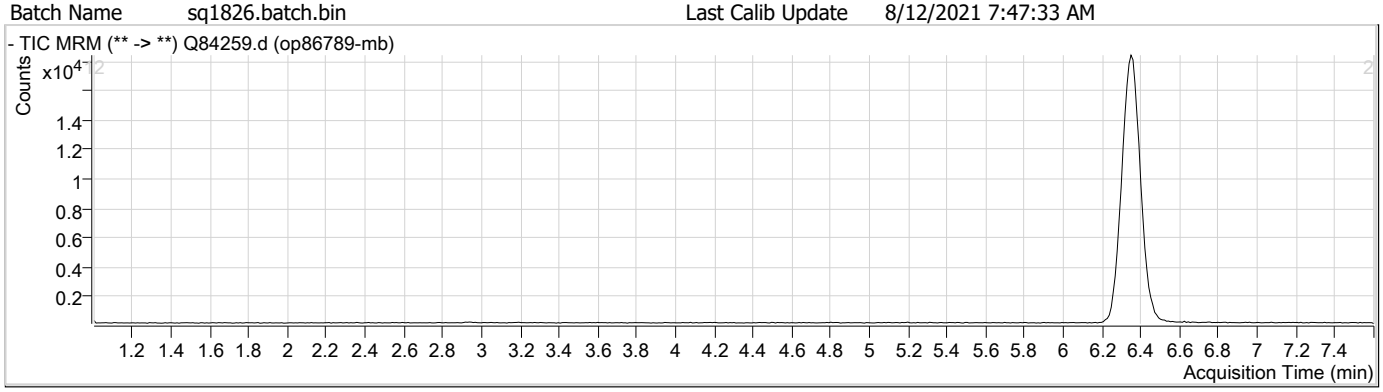






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84259.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 2:23:06 PM
Sample Name	op86789-mb	Instrument	Instrument 1
Vial	P2-C2	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

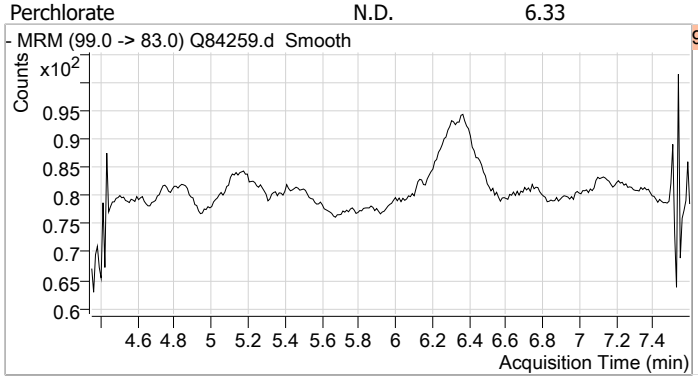


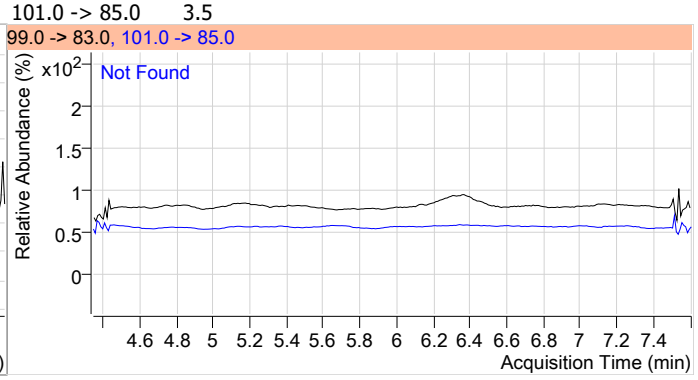
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.349	107.0 -> 89.0	123166	NoQ	5.00	µg/L	0.020
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	-	99.0 -> 83.0		-	N.D.		

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

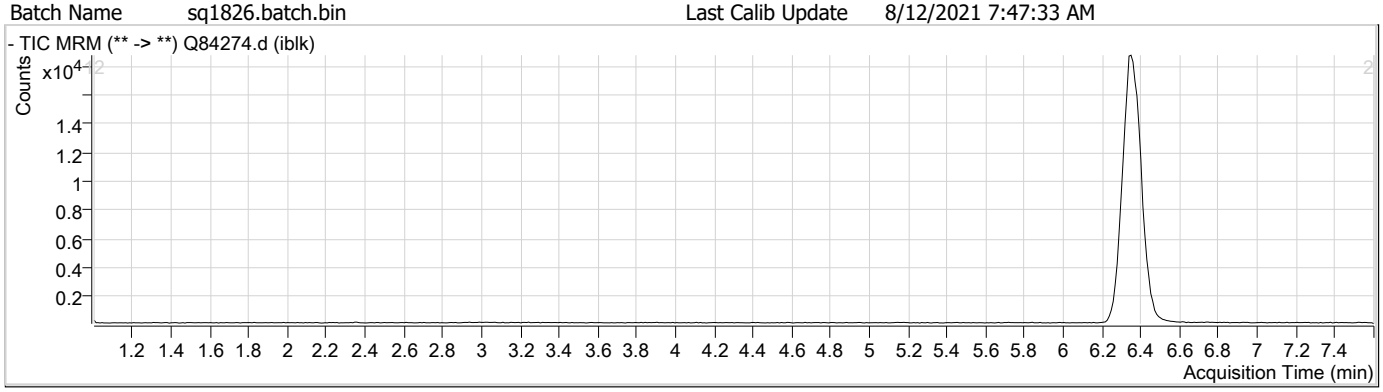
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	6.33	101.0 -> 85.0	3.5





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84274.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 4:29:55 PM
Sample Name	iblk	Instrument	Instrument 1
Vial	P2-A1	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

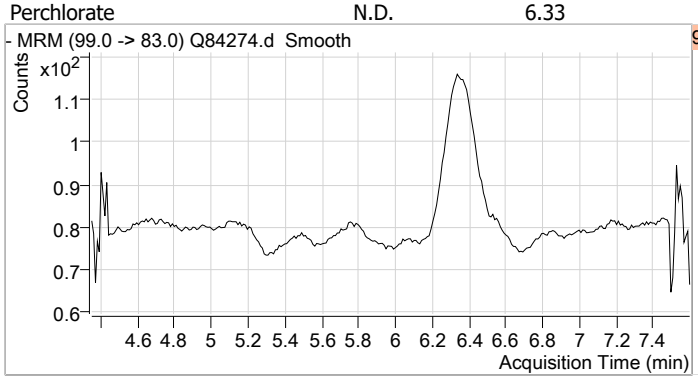


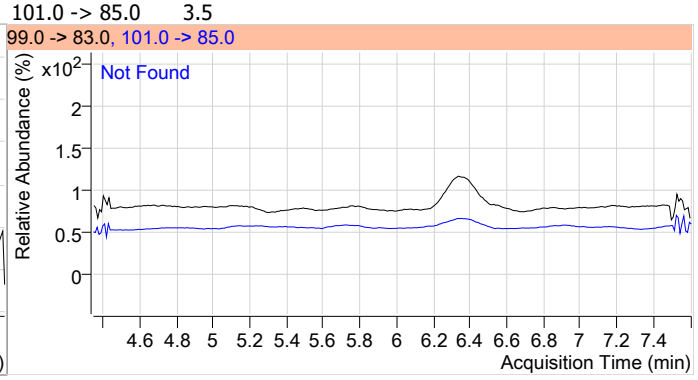
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.349	107.0 -> 89.0	126787	NoQ	5.00	µg/L	0.020
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	-	99.0 -> 83.0		-	N.D.		

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

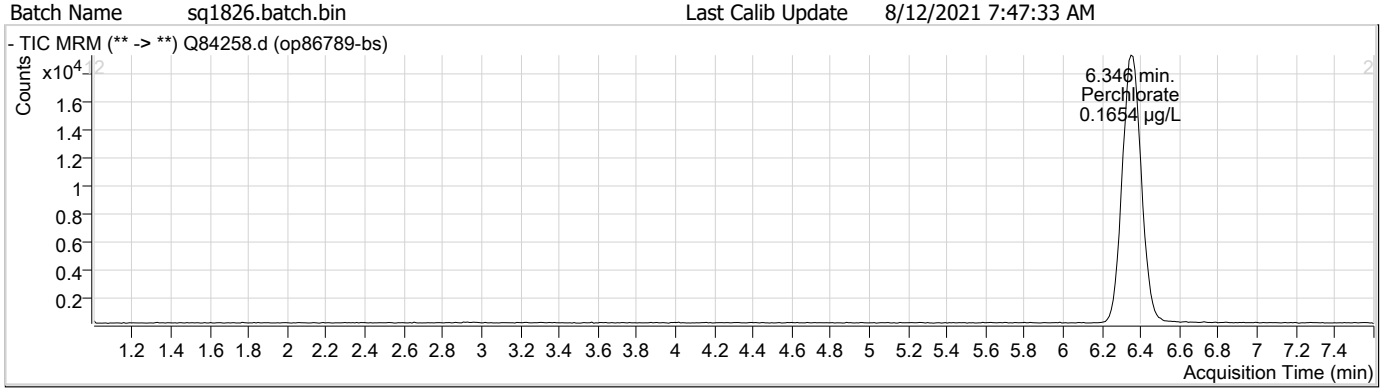
Compound	Conc.	Exp RT	QIon	Exp Ratio
Perchlorate	N.D.	6.33	101.0 -> 85.0	3.5





Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84258.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 2:09:52 PM
Sample Name	op86789-bs	Instrument	Instrument 1
Vial	P2-C1	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

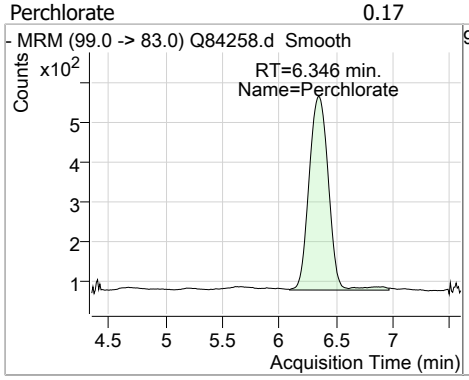


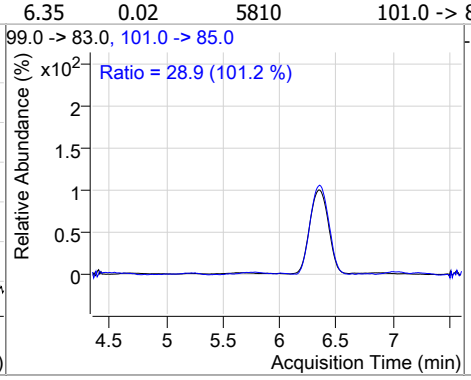
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.349	107.0 -> 89.0	124323	NoQ	5.00 µg/L	0.020
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.346	99.0 -> 83.0	5810	3.5	0.17 µg/L	99

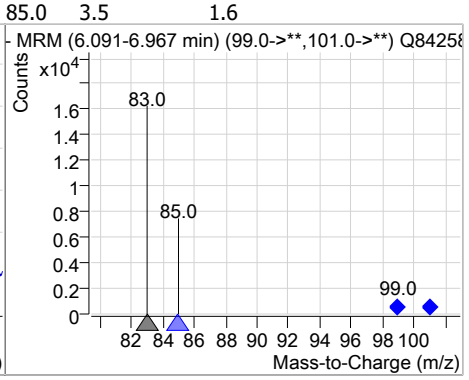
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.17	6.35	0.02	5810	101.0 -> 85.0	3.5	1.6	

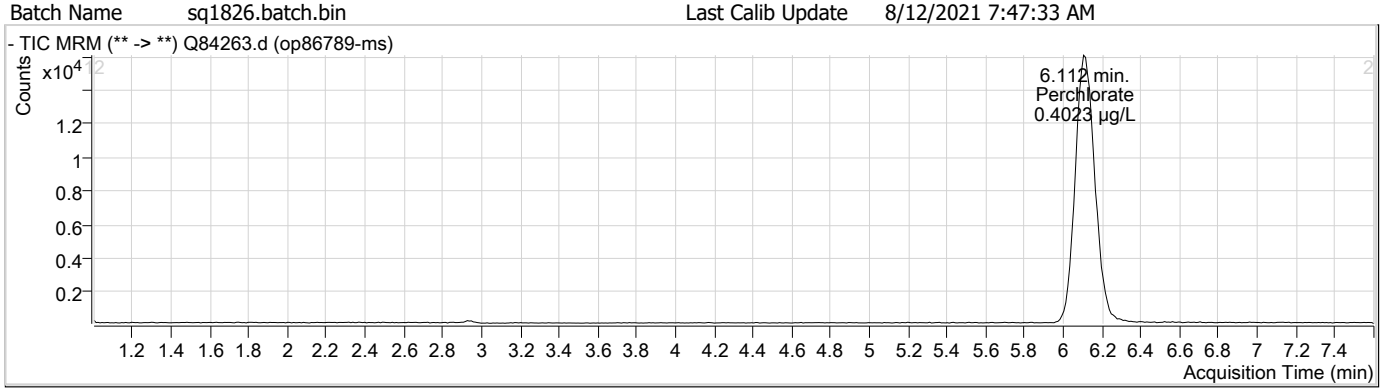






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84263.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 2:57:29 PM
Sample Name	op86789-ms	Instrument	Instrument 1
Vial	P2-C6	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

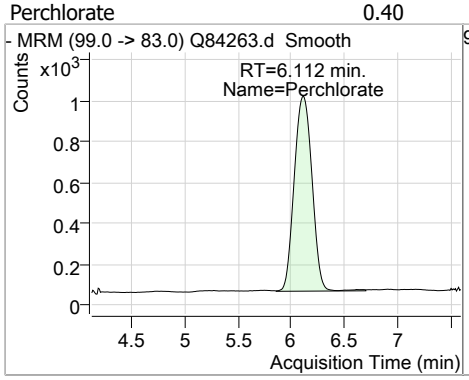


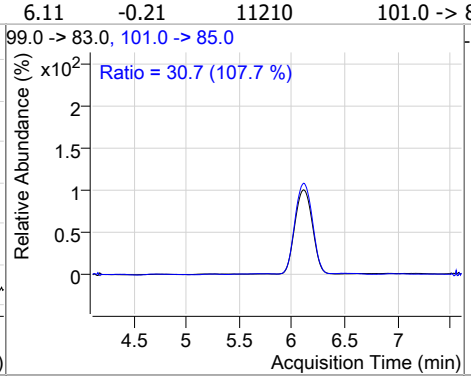
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.115	107.0 -> 89.0	98540	NoQ	5.00 µg/L	-0.214
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.112	99.0 -> 83.0	11210	3.3	0.40 µg/L	96

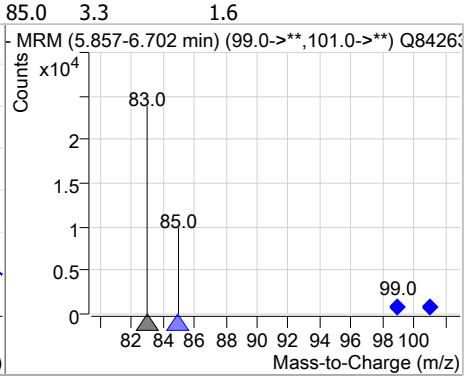
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.40	6.11	-0.21	11210	101.0 -> 85.0	3.3	1.6	

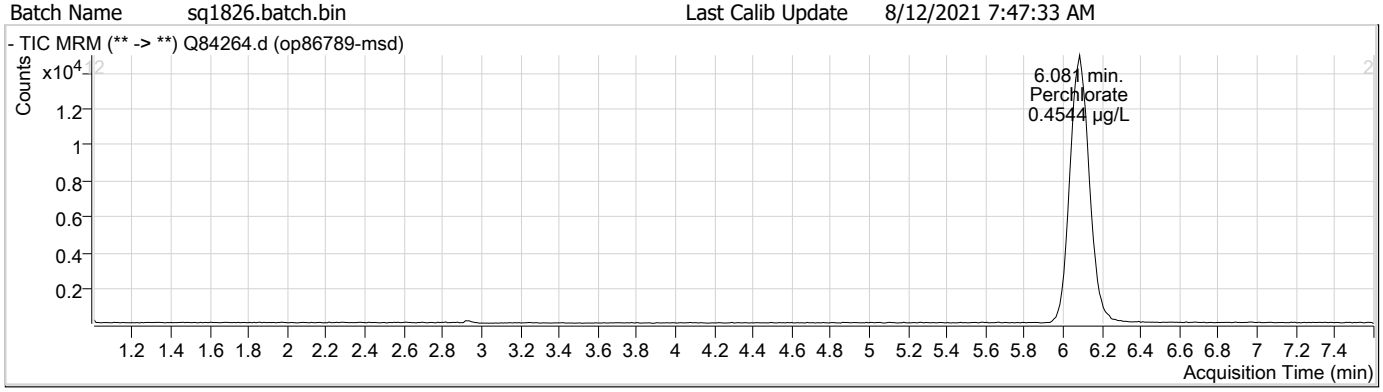






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84264.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 3:05:53 PM
Sample Name	op86789-msd	Instrument	Instrument 1
Vial	P2-C7	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

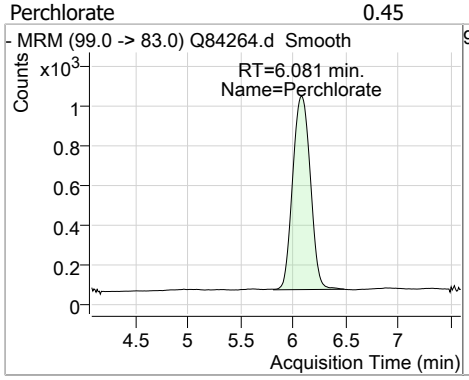


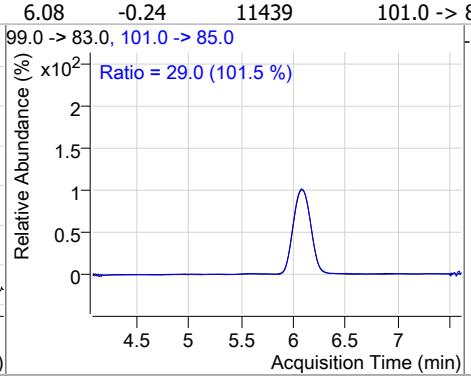
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.085	107.0 -> 89.0	89011	NoQ	5.00 µg/L	-0.244
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.081	99.0 -> 83.0	11439	3.5	0.45 µg/L	99

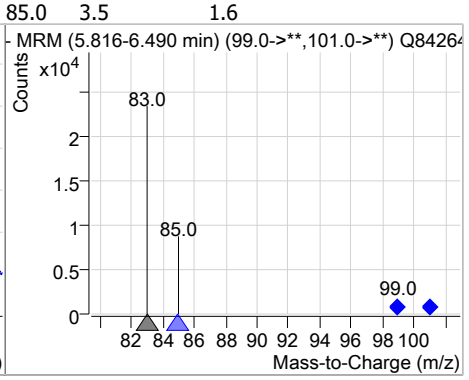
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.45	6.08	-0.24	11439	101.0 -> 85.0	3.5	1.6	







QQQ Check Tune Report

Agilent Technologies

Instrument Name	Instrument 1
MS Model	G6460A
MS Instrument Serial	SG10447001
Software_Firmware Version	B.08.02.B8260.0, FW: A.00.08.62
Tune Date & Time	11 August 2021 09:41:34
Data Path	D:\MassHunter\Tune\QQQ\G6460A\atunes.TUNE.XML
Ion Source	AJS ESI
Ionization Mode	AJS ESI
Tuned Resolution	All
Vacuum Pressure	1.62E+0[R]; 2.40E-5[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	10
Nebulizer	15
Capillary	4000
Nozzle Voltage	1500
Sheath Gas Temp	250
Sheath Gas Flow	7

QQQ Check Tune Report

Agilent Technologies

Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.99	0.00	Pass	0.70	0.65	-0.05	Pass	145674
302.00	302.00	0.00	Pass	0.70	0.72	0.02	Pass	26119
601.98	601.99	0.01	Pass	0.70	0.74	0.04	Pass	76303
1033.99	1033.98	-0.01	Pass	0.70	0.77	0.07	Pass	228679
1633.95	1634.07	0.12	Pass	0.70	0.82	0.12	Pass	541601
2233.91	2233.94	0.03	Pass	0.70	0.69	-0.01	Pass	202381

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.01	0.01	Pass	0.70	0.70	0.00	Pass	44881
112.99	112.96	-0.03	Pass	0.70	0.74	0.04	Pass	195167
302.00	301.93	-0.07	Pass	0.70	0.75	0.05	Pass	42637
601.98	601.96	-0.02	Pass	0.70	0.72	0.02	Pass	81258
1033.99	1034.08	0.09	Pass	0.70	0.70	0.00	Pass	209170
1633.95	1633.85	-0.10	Pass	0.70	0.75	0.05	Pass	373262
2233.91	2233.81	-0.10	Pass	0.70	0.78	0.08	Pass	173253

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.59	-0.40	Pass	1.20	1.43	0.23	Pass	207090
302.00	302.04	0.04	Pass	1.20	1.51	0.31	Pass	39817
601.98	602.04	0.06	Pass	1.20	1.33	0.13	Pass	118562
1033.99	1034.03	0.04	Pass	1.20	1.17	-0.03	Pass	386446
1633.95	1633.73	-0.22	Pass	1.20	1.09	-0.11	Pass	931762
2233.91	2233.93	0.02	Pass	1.20	1.26	0.06	Pass	809936

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.08	0.08	Pass	1.20	1.36	0.16	Pass	60216
112.99	113.06	0.07	Pass	1.20	1.39	0.19	Pass	275726
302.00	301.80	-0.20	Pass	1.20	1.25	0.05	Pass	68338
601.98	601.92	-0.06	Pass	1.20	1.08	-0.12	Pass	138026
1033.99	1033.91	-0.08	Pass	1.20	0.87	-0.33	Pass	325333
1633.95	1633.80	-0.15	Pass	1.20	0.87	-0.33	Pass	628804
2233.91	2233.67	-0.24	Pass	1.20	1.04	-0.16	Pass	531107

Analyzer: MS1 Polarity: Negative Width: Widest

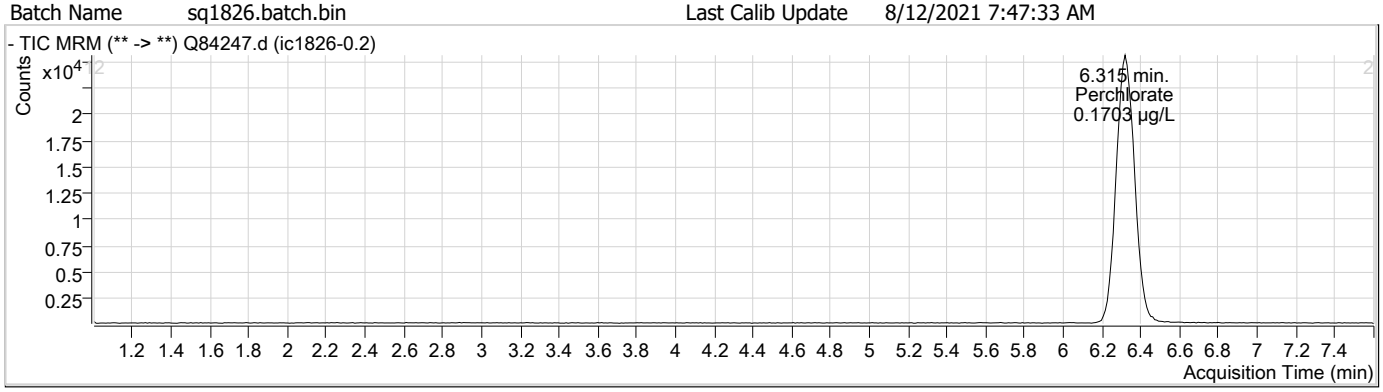
m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.52	-0.47	Pass	2.50	2.28	-0.22	Pass	231410
302.00	302.63	0.63	Pass	2.50	2.49	-0.01	Pass	38537
601.98	602.17	0.19	Pass	2.50	2.60	0.10	Pass	135563
1033.99	1033.93	-0.06	Pass	2.50	2.69	0.19	Pass	549358
1633.95	1634.38	0.43	Pass	2.50	2.89	0.39	Pass	1688984
2233.91	2233.92	0.01	Pass	2.50	3.39	0.89	Pass	2111035

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.19	0.19	Pass	2.50	2.50	0.00	Pass	71236
112.99	113.07	0.08	Pass	2.50	2.44	-0.06	Pass	321582
302.00	302.12	0.12	Pass	2.50	2.41	-0.09	Pass	74398
601.98	602.05	0.07	Pass	2.50	2.34	-0.16	Pass	190746
1033.99	1033.65	-0.34	Pass	2.50	2.51	0.01	Pass	580242
1633.95	1633.61	-0.34	Pass	2.50	2.21	-0.29	Pass	2321300
2233.91	2233.62	-0.29	Pass	2.50	2.69	0.19	Pass	2356783

Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84247.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 11:08:04 AM
Sample Name	ic1826-0.2	Instrument	Instrument 1
Vial	P2-A2	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

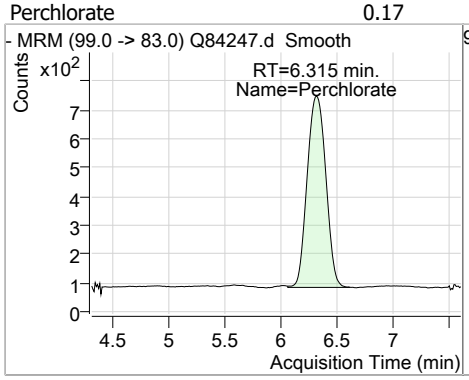


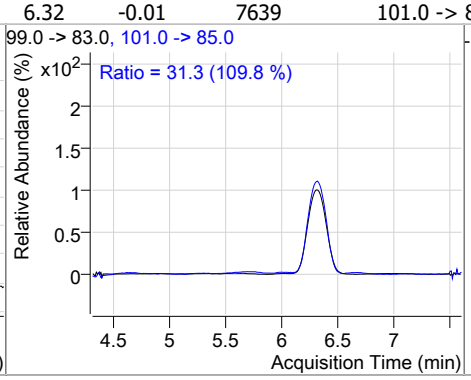
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.319	107.0 -> 89.0	158723	NoQ	5.00 µg/L	-0.010
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.315	99.0 -> 83.0	7639	3.2	0.17 µg/L	95

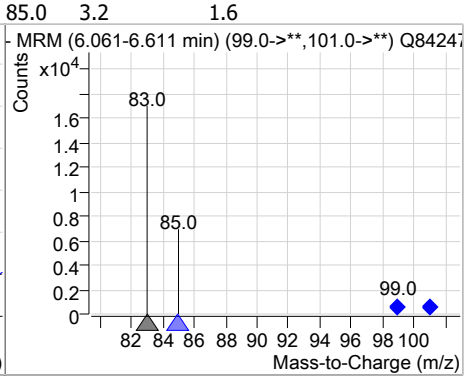
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.17	6.32	-0.01	7639	101.0 -> 85.0	3.2	1.6	

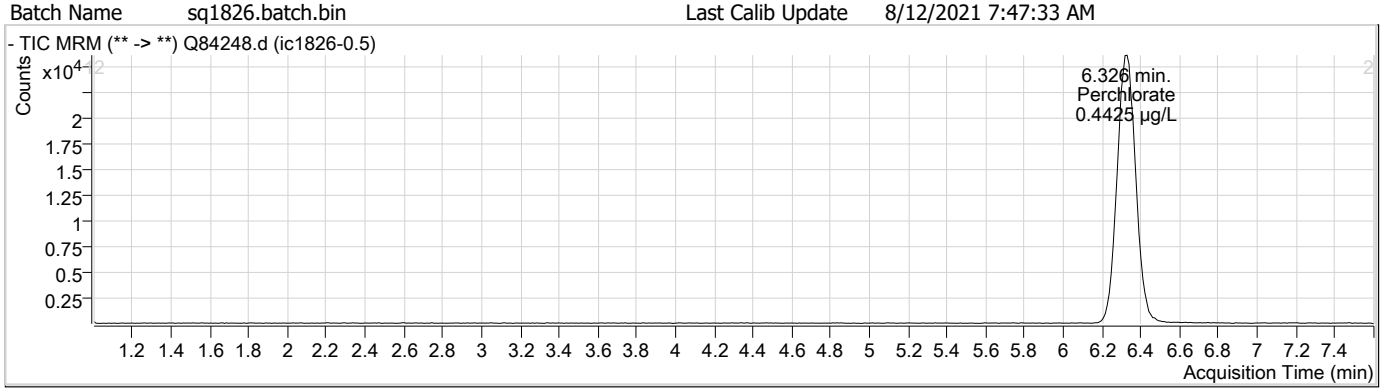






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84248.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 11:16:29 AM
Sample Name	ic1826-0.5	Instrument	Instrument 1
Vial	P2-A3	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

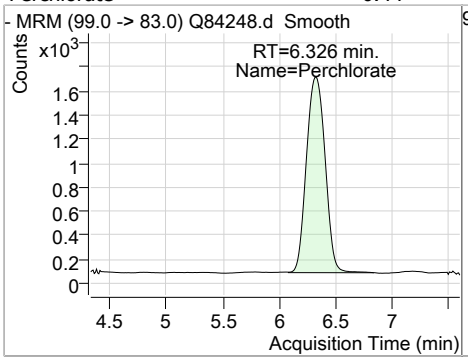


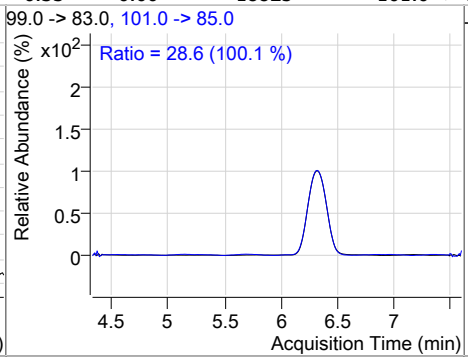
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.329	107.0 -> 89.0	150458	NoQ	5.00 µg/L	0.000
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.326	99.0 -> 83.0	18825	3.5	0.44 µg/L	100

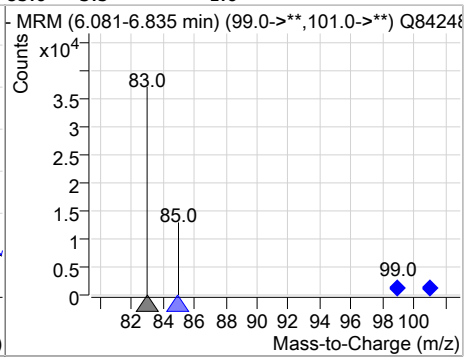
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.44	6.33	0.00	18825	101.0 -> 85.0	3.5	1.6	

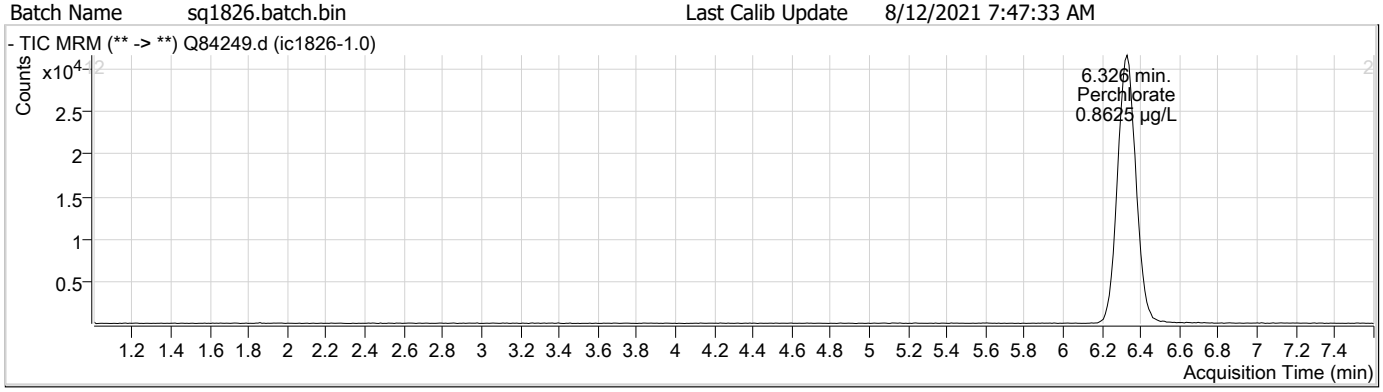






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84249.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 11:24:53 AM
Sample Name	ic1826-1.0	Instrument	Instrument 1
Vial	P2-A4	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

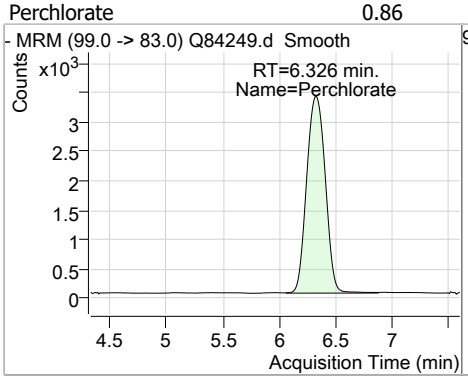


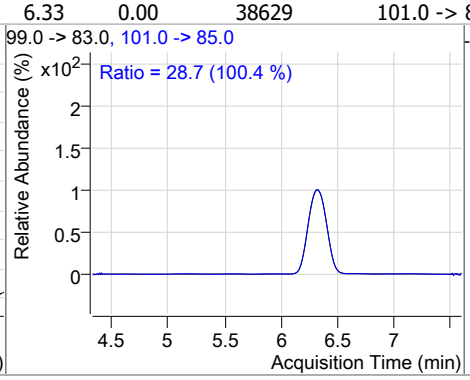
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.329	107.0 -> 89.0	158249	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.326	99.0 -> 83.0	38629	3.5	0.86	µg/L	100

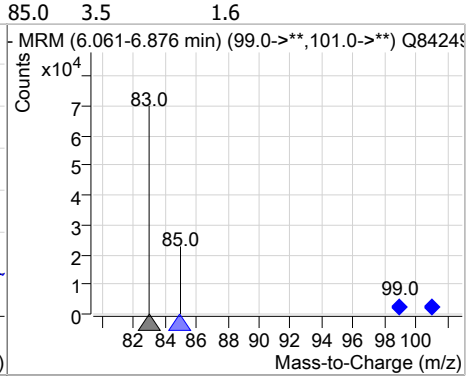
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.86	6.33	0.00	38629	101.0 -> 85.0	3.5	1.6	

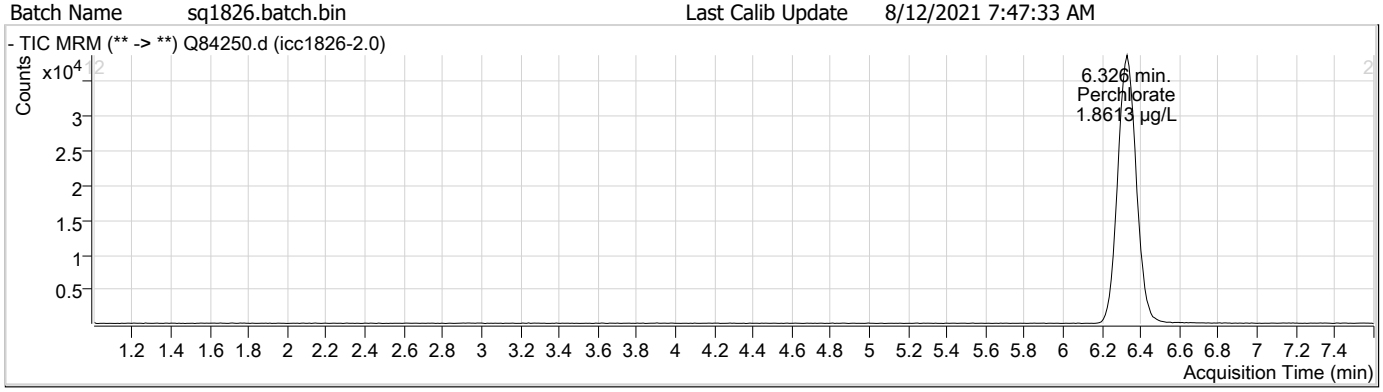






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84250.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 11:33:17 AM
Sample Name	icc1826-2.0	Instrument	Instrument 1
Vial	P2-A5	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

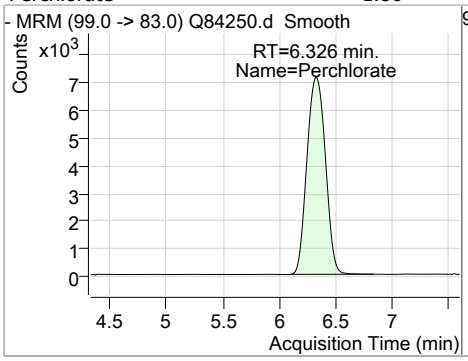


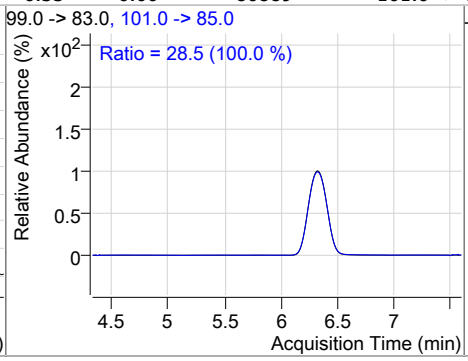
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.329	107.0 -> 89.0	153252	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.326	99.0 -> 83.0	80889	3.5	1.86	µg/L	100

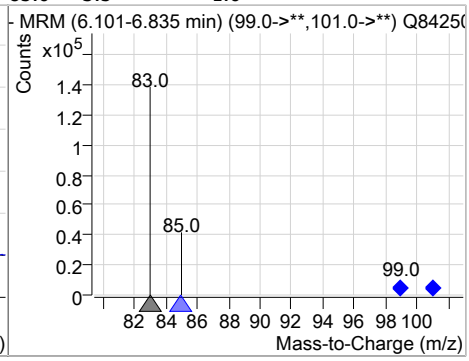
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.86	6.33	0.00	80889	101.0 -> 85.0	3.5	1.6	

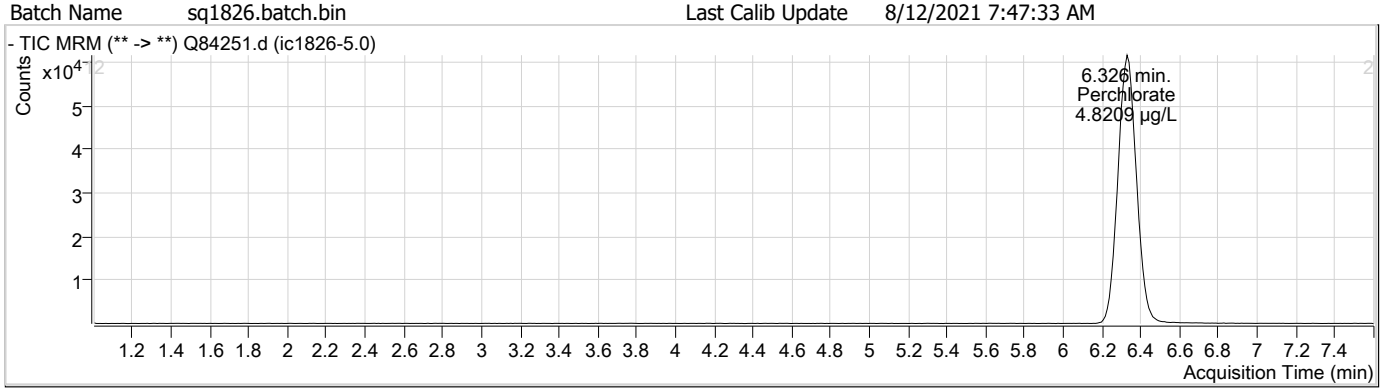






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84251.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 11:41:43 AM
Sample Name	ic1826-5.0	Instrument	Instrument 1
Vial	P2-A6	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

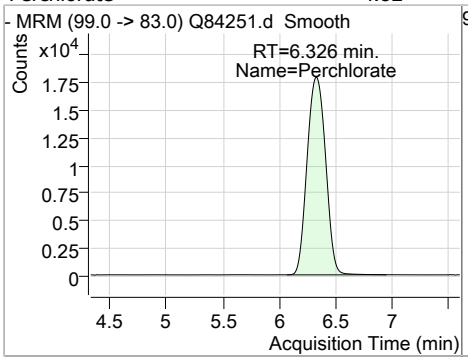


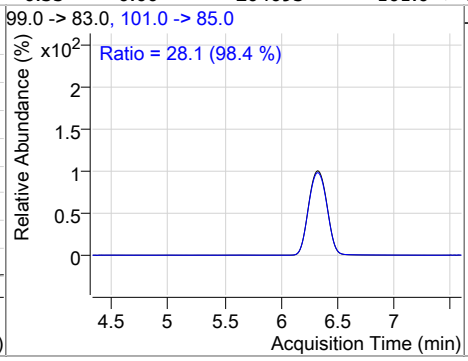
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.329	107.0 -> 89.0	148865	NoQ	5.00	µg/L	0.000
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.326	99.0 -> 83.0	204693	3.6	4.82	µg/L	99

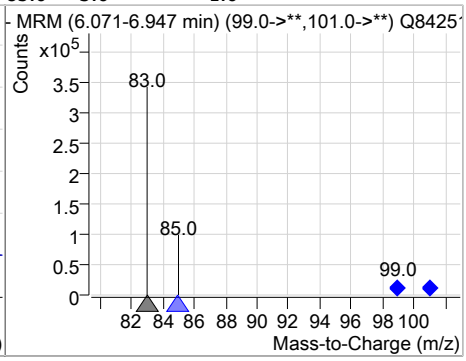
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	4.82	6.33	0.00	204693	101.0 -> 85.0	3.6	1.6	

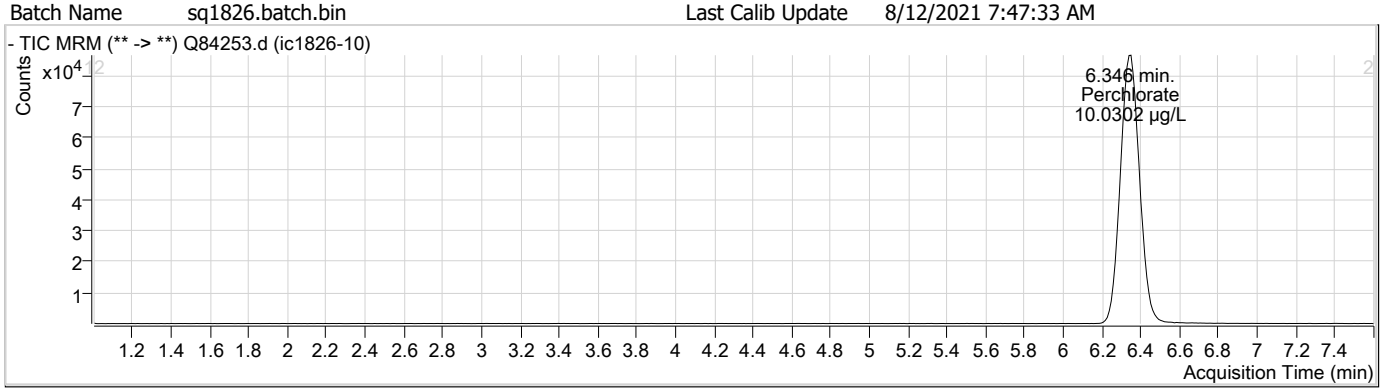






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84253.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 1:27:52 PM
Sample Name	ic1826-10	Instrument	Instrument 1
Vial	P2-A7	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

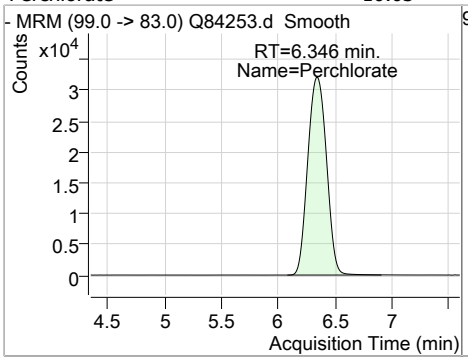


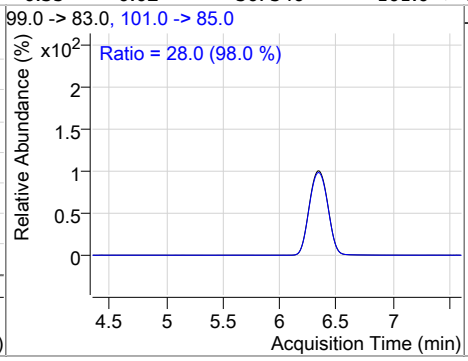
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.349	107.0 -> 89.0	127112	NoQ	5.00	µg/L	0.020
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.346	99.0 -> 83.0	367346	3.6	10.03	µg/L	99

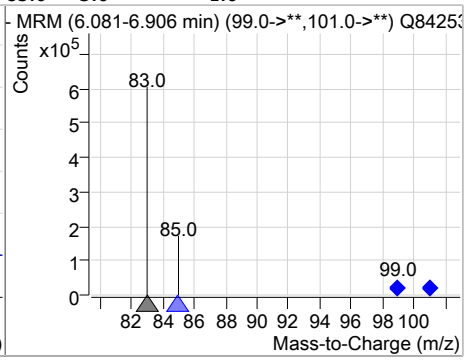
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	10.03	6.35	0.02	367346	101.0 -> 85.0	3.6	1.6	

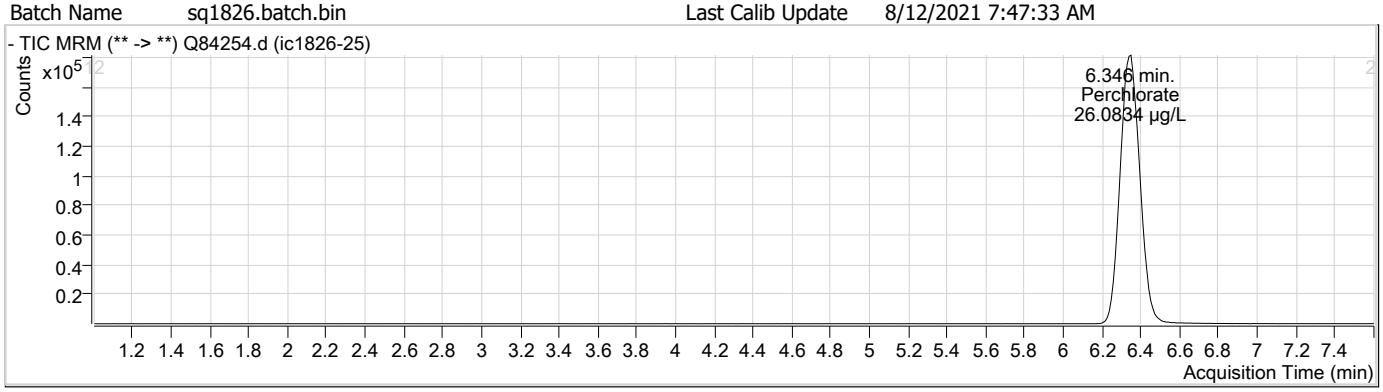






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84254.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 1:36:16 PM
Sample Name	ic1826-25	Instrument	Instrument 1
Vial	P2-A8	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

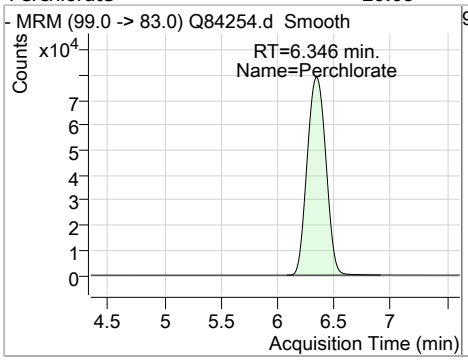


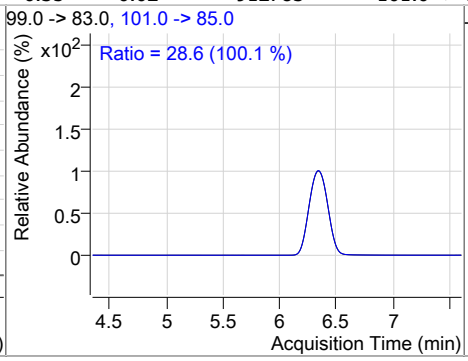
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.349	107.0 -> 89.0	117800	NoQ	5.00	µg/L	0.020
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.346	99.0 -> 83.0	912783	3.5	26.08	µg/L	100

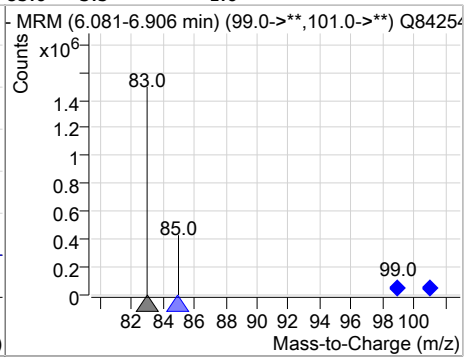
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	26.08	6.35	0.02	912783	101.0 -> 85.0	3.5	1.6	

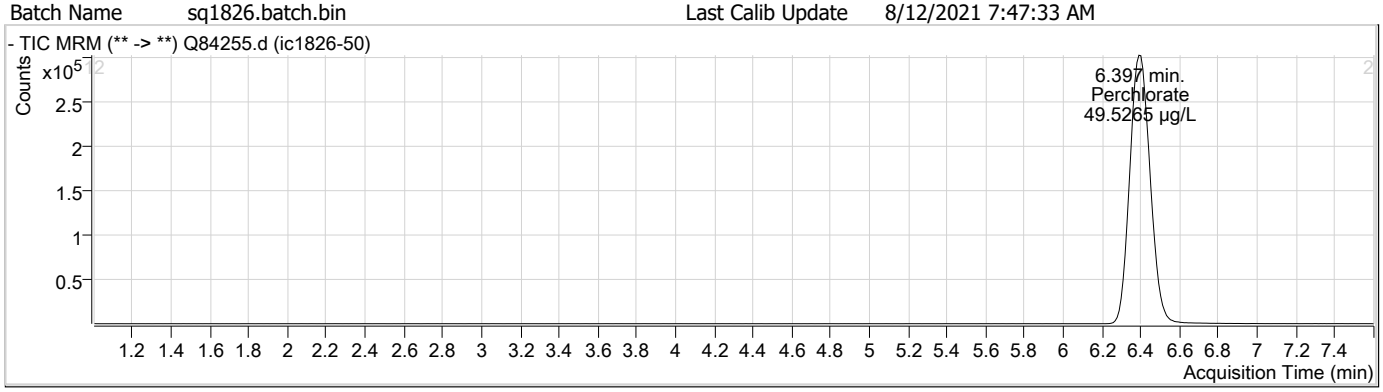






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84255.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 1:44:38 PM
Sample Name	ic1826-50	Instrument	Instrument 1
Vial	P2-A9	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

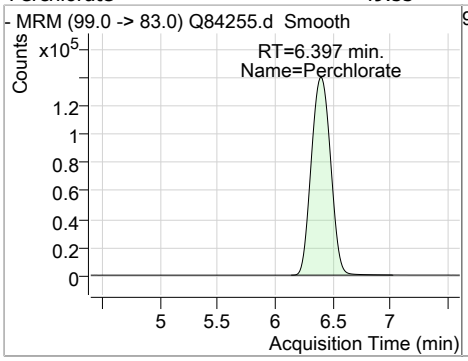


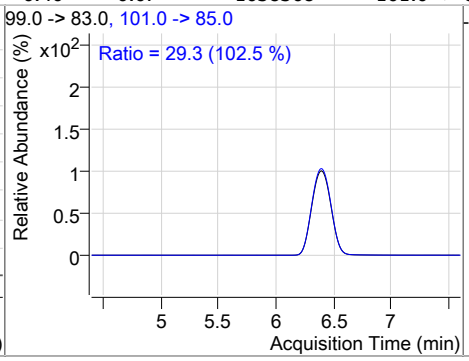
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.400	107.0 -> 89.0	106664	NoQ	5.00	µg/L	0.071
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.397	99.0 -> 83.0	1638368	3.4	49.53	µg/L	99

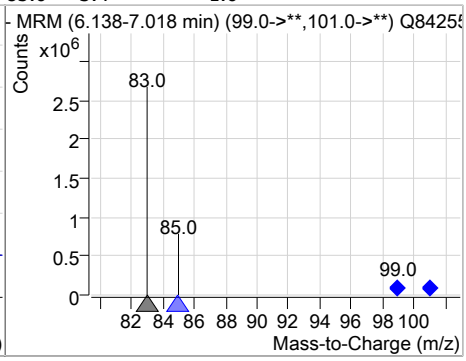
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	49.53	6.40	0.07	1638368	101.0 -> 85.0	3.4	1.6	

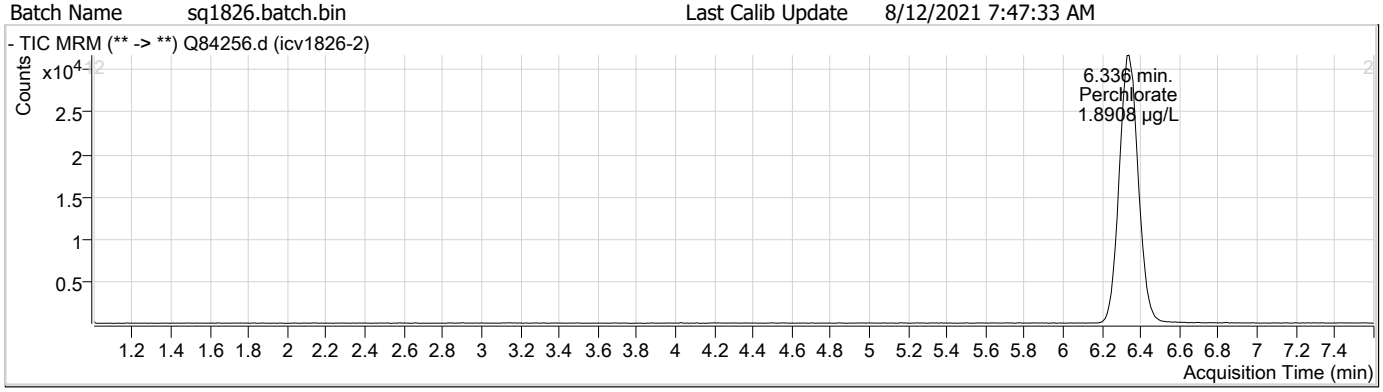






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84256.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 1:53:03 PM
Sample Name	icv1826-2	Instrument	Instrument 1
Vial	P2-B1	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

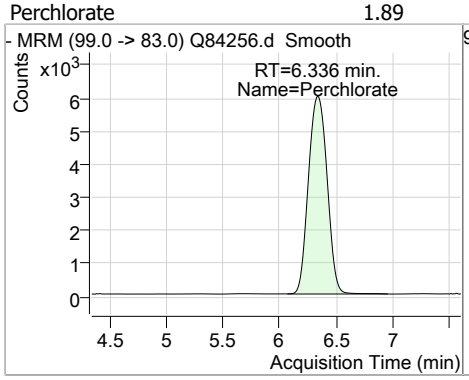


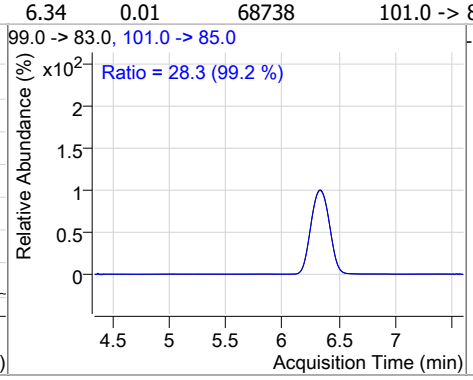
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.339	107.0 -> 89.0	128195	NoQ	5.00	µg/L	0.010
System Monitoring Compounds							
Target Compounds							QValue
Perchlorate	6.336	99.0 -> 83.0	68738	3.5	1.89	µg/L	100

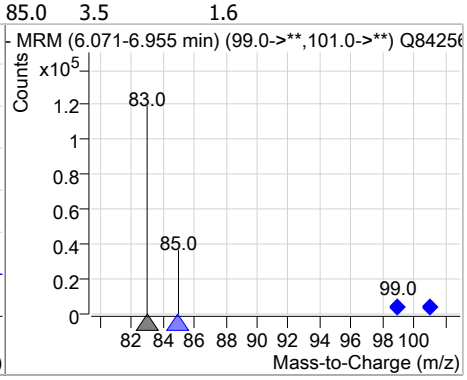
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.89	6.34	0.01	68738	101.0 -> 85.0	3.5	1.6	

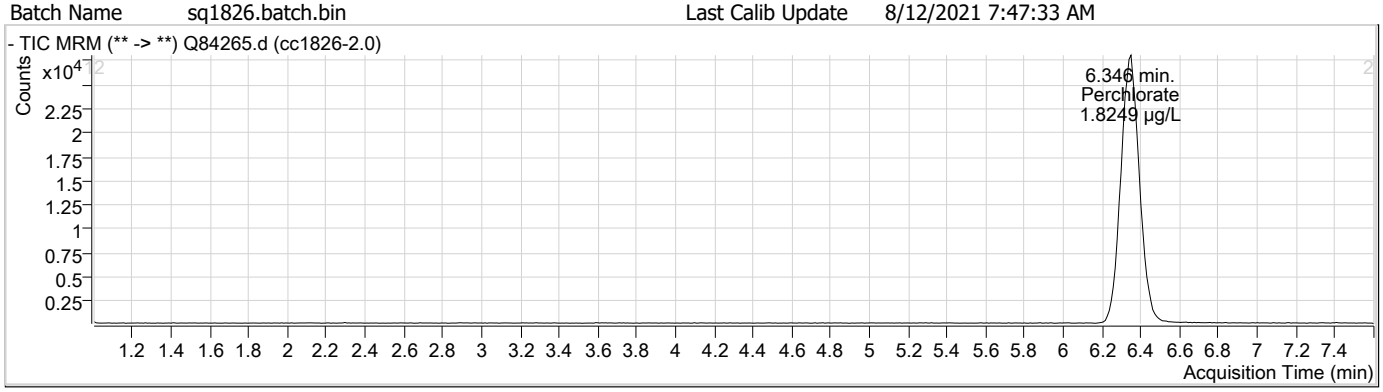






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84265.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 3:14:18 PM
Sample Name	cc1826-2.0	Instrument	Instrument 1
Vial	P2-A5	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

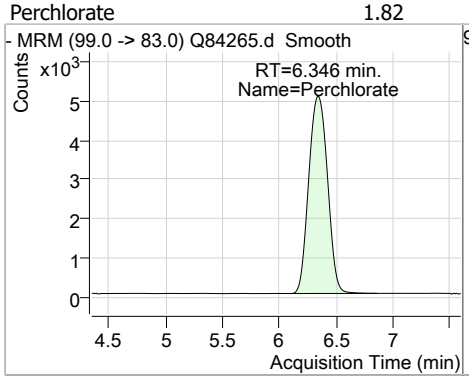


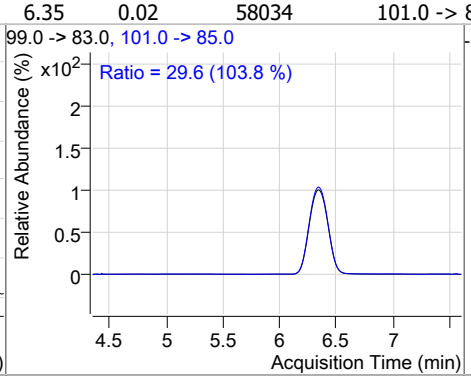
Compound	RT	QIon	Resp.	Q-ratio	Conc.	Units	Dev(Min)
Internal Standards							
Cl18O4	6.349	107.0 -> 89.0	112156	NoQ	5.00	µg/L	0.020
System Monitoring Compounds							
Target Compounds							**QValue**
Perchlorate	6.346	99.0 -> 83.0	58034	3.4	1.82	µg/L	98

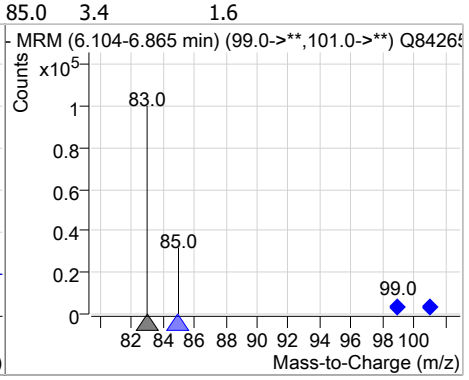
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.82	6.35	0.02	58034	101.0 -> 85.0	3.4	1.6	

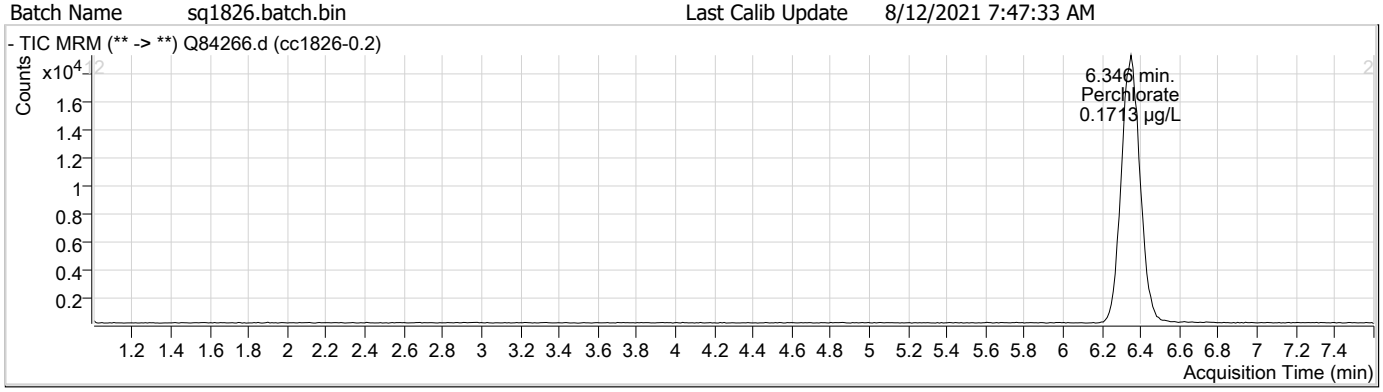






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84266.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 3:22:42 PM
Sample Name	cc1826-0.2	Instrument	Instrument 1
Vial	P2-A2	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

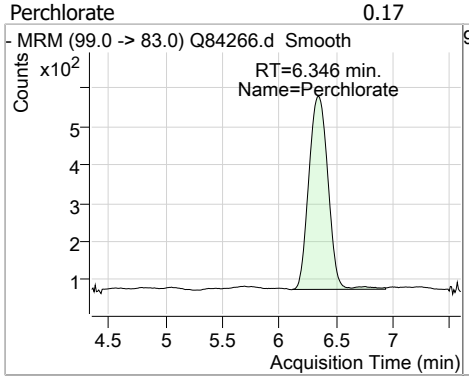


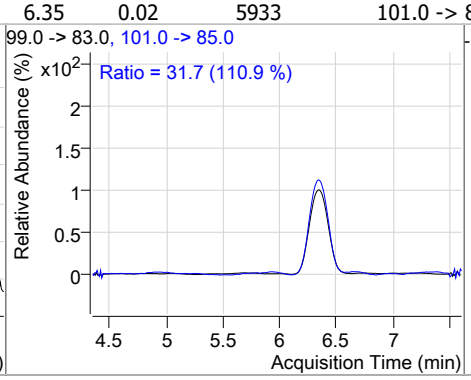
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.349	107.0 -> 89.0	122539	NoQ	5.00 µg/L	0.020
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.346	99.0 -> 83.0	5933	3.2	0.17 µg/L	94

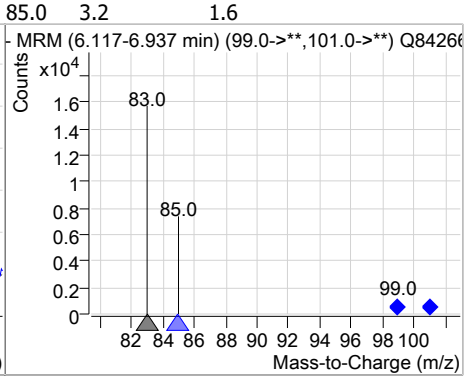
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	0.17	6.35	0.02	5933	101.0 -> 85.0	3.2	1.6	

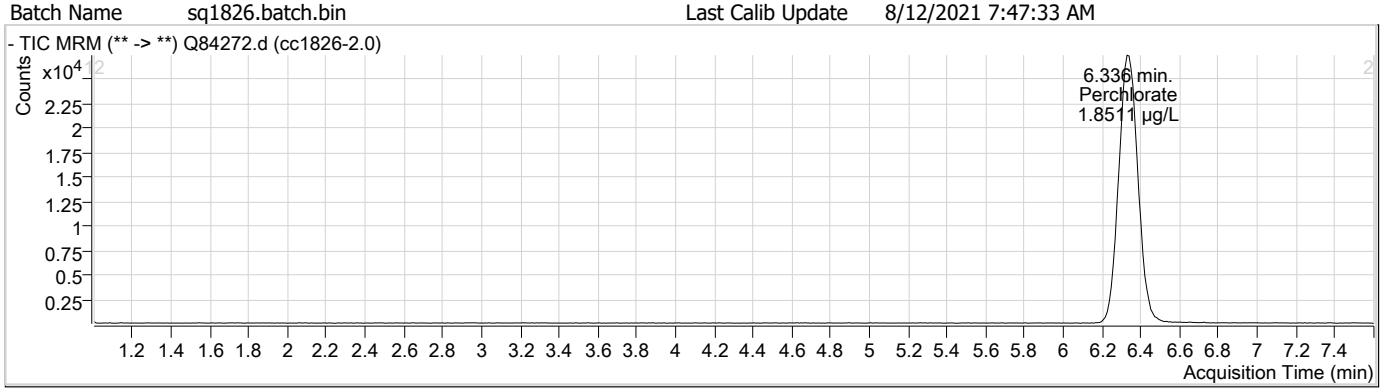






Quantitative Analysis Report for Perchlorate by 6850

Data File	: Q84272.d	Operator	natashag
Acq. Method	Perchlorate2.m	Acq. Date-Time	8/11/2021 4:13:07 PM
Sample Name	cc1826-2.0	Instrument	Instrument 1
Vial	P2-A5	Sample Information	OP86789,SQ1826,10.0,,,10,1,WATER
DA Method File	6850_081121_SQ1826.quantmethod.xml	Comment	
Batch Name	sq1826.batch.bin	Last Calib Update	8/12/2021 7:47:33 AM

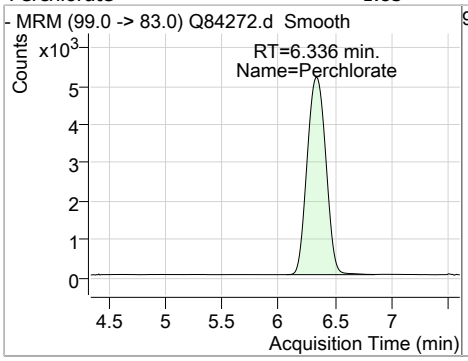


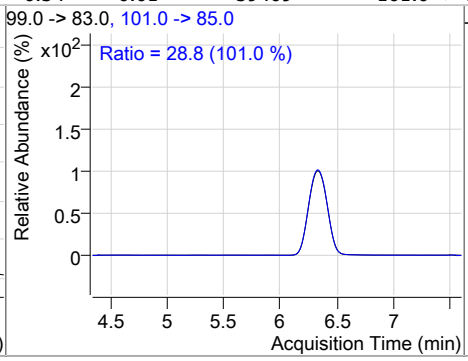
Compound	RT	QIon	Resp.	Q-ratio	Conc. Units	Dev(Min)
Internal Standards						
Cl18O4	6.339	107.0 -> 89.0	113179	NoQ	5.00 µg/L	0.010
System Monitoring Compounds						
Target Compounds						**QValue**
Perchlorate	6.336	99.0 -> 83.0	59409	3.5	1.85 µg/L	99

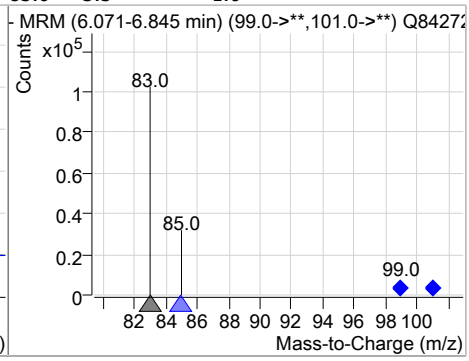
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitative Analysis Report for Perchlorate by 6850

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
Perchlorate	1.85	6.34	0.01	59409	101.0 -> 85.0	3.5	1.6	







SGS ORLANDO

LCMS1-Q ANALYSIS LOG

DATE:	08/11/21
COLUMN TYPE:	K PRIME
AMOUNT INJ:	7.5 ul
INSTRUMENT:	LCMS1-Q

METHODS:	SW846 6850
PROC. METH:	6850_081121_SQ1826
CAL DATE:	08/11/21
ANALYST:	NG
RUN BATCH:	SQ1826

ELUENT A LOT #:	207355 W/0.1% AA
ELUENT B LOT #:	204566 W/0.1% AA
IC/CC STD LOT #:	LCMS1604
ICV STD LOT #:	LCMS1636
ISTD/ID STD LOT #:	10663A

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	Q84241.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,1,1,WATER	BDL
2	Q84242.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	BDL
3	Q84243.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	BDL
4	Q84244.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	BDL
5	Q84245.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	BDL
6	Q84246.d	P2-A1	ic1826-0	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	Check Tune File
7	Q84247.d	P2-A2	ic1826-0.2	Perchlorate2.m	Calibration	500x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
8	Q84248.d	P2-A3	ic1826-0.5	Perchlorate2.m	Calibration	200x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
9	Q84249.d	P2-A4	ic1826-1.0	Perchlorate2.m	Calibration	100x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
10	Q84250.d	P2-A5	icc1826-2.0	Perchlorate2.m	Calibration	50x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
11	Q84251.d	P2-A6	ic1826-5.0	Perchlorate2.m	Calibration	20x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
12	Q84252.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	instrument stopped
13	Q84253.d	P2-A7	ic1826-10	Perchlorate2.m	Calibration	10x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
14	Q84254.d	P2-A8	ic1826-25	Perchlorate2.m	Calibration	4x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
15	Q84255.d	P2-A9	ic1826-50	Perchlorate2.m	Calibration	2x	OP86789,SQ1826,10.0,,,10,1,WATER	Updated
16	Q84256.d	P2-B1	icv1826-2	Perchlorate2.m	QC	50x	OP86789,SQ1826,10.0,,,10,1,WATER	PASS
17	Q84257.d	P2-B2	ics	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	PASS
18	Q84258.d	P2-C1	op86789-bs	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	BS PASS
19	Q84259.d	P2-C2	op86789-mb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	ND
20	Q84260.d	P2-C3	fa87664-2	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
21	Q84261.d	P2-C4	fa87664-2	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,10,WATER	10x, don't need
22	Q84262.d	P2-C5	fa87620-1	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
23	Q84263.d	P2-C6	op86789-ms	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
24	Q84264.d	P2-C7	op86789-msd	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
25	Q84265.d	P2-A5	cc1826-2.0	Perchlorate2.m	QC	50x	OP86789,SQ1826,10.0,,,10,1,WATER	PASS
26	Q84266.d	P2-A2	cc1826-0.2	Perchlorate2.m	QC	500x	OP86789,SQ1826,10.0,,,10,1,WATER	PASS
27	Q84267.d	P2-A1	ccb	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	ND
28	Q84268.d	P2-C8	fa87620-2	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
29	Q84269.d	P2-C9	fa87622-1	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
30	Q84270.d	P2-D1	fa87622-2	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
31	Q84271.d	P2-D2	fa87622-3	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	✓
32	Q84272.d	P2-A5	cc1826-2.0	Perchlorate2.m	QC	50x	OP86789,SQ1826,10.0,,,10,1,WATER	PASS
33	Q84273.d	P2-A2	ecc1826-0.2	Perchlorate2.m	QC	500x	OP86789,SQ1826,10.0,,,10,1,WATER	PASS
34	Q84274.d	P2-A1	iblk	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	ND
35	Q84275.d	P2-D3	cap test (blank)	Perchlorate2.m	Sample		OP86789,SQ1826,10.0,,,10,1,WATER	test

SGS - ORLANDO

LIQUID SAMPLE PREP REPORT

Date/Time: Started 08/11/21 09:00 {mm/dd/yy 24:00}

Date/Time: Finished 08/11/21 09:50 {mm/dd/yy 24:00}

Prep Method: 3510C 3580A or Method (circle)

Analytical Method: 6850

Batch#: OP86789 Ext. By: NG Conc. By: — Vialed By: NG

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP86789 MB	X	10.0					10.0	
OP86789 BS	X	↓				20uL	↓	
FA87620-1	1	↓				↓	↓	MS/MSD
↓ -2	↓	↓				↓	↓	↓
FA87622-1	↓	↓				↓	↓	↓
↓ -2	↓	↓				↓	↓	↓
↓ -3	↓	↓				↓	↓	↓
FA87664-2	1	↓				↓	10.0	PT sample
				NG 08/11/21				
OP86789-MS	2	10.0				20uL	10.0	FA87620-1
OP86789-MSD	3	↓				20uL	↓	↓
DUP								

Comments: Istd: 106603A 50uL EXP: 06/01/24 1.0mg/L

Surr. ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

Spk. ID: LCMS1636 Conc: 100ppb Exp. Date: 09/23/21 Inj. By: NG Ver. By NG

Initial Bath Temp (Therm ID): _____ Observed Temp °C: _____ Corr. Temp °C: _____

Exchange Bath/N-Evap Temp (Therm ID): _____ Observed Temp °C: _____ Corr. Temp °C: _____

CH2CL2 Lot #: — Hexane Lot #: — Na2SO4 Lot#: —

Acetonitrile Lot #: — Methanol Lot #: — Acetone Lot#: —

Syringe Filter Lot#: P22000-0419 pH Paper #: — Reagent #: 206688 = HPLC water

Copper Lot #: — If Sulfur Cleaning is performed in Extractions (3660B)

Relinquished By: _____ Date: 08/11/21

Accepted By: _____ Date: 08/11/21

ORLD-EXT-0001-1-06-FORM-extwater.xls 032718

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- GC Identification Summaries (Explosives)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86727-MB	PP391142.D	1	08/09/21	JB	08/06/21	OP86727	GPP2467

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA87622-1, FA87622-2, FA87622-3

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	90%	70-136%

Method Blank Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86727-MB	GG622032.D	1	08/12/21	JB	08/06/21	OP86727	GGG3025

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA87622-1, FA87622-2, FA87622-3

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
	DNX	ND	0.20	0.080	ug/l	
	MNX	ND	0.20	0.080	ug/l	
	TNX	ND	0.20	0.080	ug/l	
618-87-1	3,5-Dinitroaniline	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
55-63-0	Nitroglycerine	ND	2.0	0.50	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	96%	70-136%

Blank Spike Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86727-BS	PP391143.D	1	08/09/21	JB	08/06/21	OP86727	GPP2467

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA87622-1, FA87622-2, FA87622-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
2691-41-0	HMX	5	4.1	82	77-144
121-82-4	RDX	5	4.3	86	77-125
618-87-1	3,5-Dinitroaniline	5	4.7	94	77-115
99-65-0	1,3-Dinitrobenzene	5	4.8	96	79-122
606-20-2	2,6-Dinitrotoluene	5	5.6	112	81-131
121-14-2	2,4-Dinitrotoluene	5	4.5	90	80-123
35572-78-2	2-amino-4,6-Dinitrotoluene	5	4.6	92	81-120
19406-51-0	4-amino-2,6-Dinitrotoluene	5	4.7	94	79-119
98-95-3	Nitrobenzene	5	4.5	90	78-130
88-72-2	o-Nitrotoluene	5	4.2	84	76-131
99-08-1	m-Nitrotoluene	5	4.5	90	78-122
99-99-0	p-Nitrotoluene	5	4.5	90	79-124
479-45-8	Tetryl	5	2.3	46*	65-124
99-35-4	1,3,5-Trinitrobenzene	5	4.9	98	79-128
118-96-7	2,4,6-Trinitrotoluene	5	3.3	66*	72-112
55-63-0	Nitroglycerine	5	4.4	88	69-123
78-11-5	PETN	5	5.5	110	73-145

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	97%	70-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP86727-MS2	PP391159.D	1	08/09/21	JB	08/06/21	OP86727	GPP2467
OP86727-MSD2	PP391160.D	1	08/10/21	JB	08/06/21	OP86727	GPP2467
FA87620-1 [a]	PP391150.D	1	08/09/21	JB	08/06/21	OP86727	GPP2467
FA87620-1 [b]	GG622039.D	1	08/12/21	JB	08/06/21	OP86727	GGG3025

The QC reported here applies to the following samples: **Method:** SW846 8330B

FA87622-1, FA87622-2, FA87622-3

CAS No.	Compound	FA87620-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	9.8	J	9.62	20.4	110	9.62	20.4	110	0	77-144/21
121-82-4	RDX	0.19 U		9.62	12.7	132*	9.62	12.8	133*	1	77-125/19
	DNX	0.19 U		9.62	9.5	99	9.62	9.6	100	1	66-127/25
	MNX	5.3	J	11.2	15.4	91	11.2	15.5	91	1	71-137/20
	TNX	0.19 U		4.52	7.2	159*	4.52	6.9	153*	4	60-126/18
618-87-1	3,5-Dinitroaniline	0.21	J	9.62	9.7	99	9.62	9.7	99	0	77-115/19
99-65-0	1,3-Dinitrobenzene	0.19 U		9.62	9.6	100	9.62	9.6	100	0	79-122/17
606-20-2	2,6-Dinitrotoluene	0.19 U		9.62	12.3	128	9.62	12.3	128	0	81-131/17
121-14-2	2,4-Dinitrotoluene	0.19 U		9.62	9.2	96	9.62	9.2	96	0	80-123/19
35572-78-2	2-amino-4,6-Dinitrotoluene	3.3	J	9.62	13.1	102	9.62	13.1	102	0	81-120/19
19406-51-0	4-amino-2,6-Dinitrotoluene	2.1	J	9.62	11.7	100	9.62	11.7	100	0	79-119/20
98-95-3	Nitrobenzene	0.19 U		9.62	9.1	95	9.62	9.1	95	0	78-130/19
88-72-2	o-Nitrotoluene	0.19 U		9.62	8.5	88	9.62	8.5	88	0	76-131/20
99-08-1	m-Nitrotoluene	0.19 U		9.62	9.0	94	9.62	9.0	94	0	78-122/18
99-99-0	p-Nitrotoluene	0.19 U		9.62	9.0	94	9.62	9.0	94	0	79-124/18
479-45-8	Tetryl	0.19 U		9.62	4.5	47*	9.62	4.5	47*	0	65-124/20
99-35-4	1,3,5-Trinitrobenzene	10.6	J	9.62	21.4	112	9.62	21.4	112	0	79-128/16
118-96-7	2,4,6-Trinitrotoluene	10.0	J	9.62	17.3	76	9.62	17.3	76	0	72-112/16
55-63-0	Nitroglycerine	1.9 U		9.62	8.9	93	9.62	9.1	95	2	69-123/18
78-11-5	PETN	1.9 U		9.62	10.3	107	9.62	10.3	107	0	73-145/18

CAS No.	Surrogate Recoveries	MS	MSD	FA87620-1	FA87620-1	Limits
610-39-9	3,4-Dinitrotoluene	100%	99%	94%	99%	70-136%

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.

* = Outside of Control Limits.

GC Identification Summary (Explosives)

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA87622-1	**Method:**	SW846 8330B
Client ID:	54MW10		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP391154.D	1	OP86727	GPP2467	08/09/21 21:08	GCPP
Confirmation	GG622043.D	1	OP86727	GGG3025	08/13/21 00:59	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
RDX [a]	PP391154.D	1	1	.48	J	ug/l	146.4
RDX	GG622043.D	1	1	3.1		ug/l	
3,5-Dinitroaniline [a]	PP391154.D	1	1	.12	J	ug/l	111.1
3,5-Dinitroaniline	GG622043.D	1	1	.42		ug/l	
2-amino-4,6-Dinitrotoluene	PP391154.D	1	1	1.2	J	ug/l	28.6
2-amino-4,6-Dinitrotoluene	GG622043.D	1	1	1.6		ug/l	
4-amino-2,6-Dinitrotoluene [a]	PP391154.D	1	1	1.4	J	ug/l	60.0
4-amino-2,6-Dinitrotoluene	GG622043.D	1	1	2.6		ug/l	
o-Nitrotoluene [a]	PP391154.D	1	1	.41	J	ug/l	48.5
o-Nitrotoluene	GG622043.D	1	1	.25		ug/l	
p-Nitrotoluene [a]	PP391154.D	1	1	.092	J	ug/l	187.3
p-Nitrotoluene	GG622043.D	1	1	2.8		ug/l	
1,3,5-Trinitrobenzene	PP391154.D	1	1	4.6	J	ug/l	21.7
1,3,5-Trinitrobenzene	GG622043.D	1	1	3.7		ug/l	
2,4,6-Trinitrotoluene [b]	PP391154.D	1	1	13	J	ug/l	3.8
2,4,6-Trinitrotoluene	GG622043.D	1	1	13.5		ug/l	

(a) Primary and confirmation results differ by more than 40%.
(b) Associated BS recovery outside control limits.

GC Identification Summary (Explosives)

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA87622-2	**Method:**	SW846 8330B
Client ID:	54MW13		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP391155.D	1	OP86727	GPP2467	08/09/21 21:38	GCPP
Confirmation	GG622044.D	1	OP86727	GGG3025	08/13/21 01:31	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
RDX [a]	PP391155.D	1	1	.38	J	ug/l	168.2
RDX	GG622044.D	1	1	4.4		ug/l	
3,5-Dinitroaniline [a]	PP391155.D	1	1	.17	J	ug/l	170.0
3,5-Dinitroaniline	GG622044.D	1	1	2.1		ug/l	
2-amino-4,6-Dinitrotoluene	PP391155.D	1	1	1.7	J	ug/l	19.4
2-amino-4,6-Dinitrotoluene	GG622044.D	1	1	1.4		ug/l	
4-amino-2,6-Dinitrotoluene [a]	PP391155.D	1	1	1.2	J	ug/l	58.8
4-amino-2,6-Dinitrotoluene	GG622044.D	1	1	2.2		ug/l	
o-Nitrotoluene [a]	PP391155.D	1	1	.37	J	ug/l	42.6
o-Nitrotoluene	GG622044.D	1	1	.24		ug/l	
1,3,5-Trinitrobenzene	PP391155.D	1	1	12.2	J	ug/l	10.3
1,3,5-Trinitrobenzene	GG622044.D	1	1	11		ug/l	
2,4,6-Trinitrotoluene [b]	PP391155.D	1	1	17	J	ug/l	3.5
2,4,6-Trinitrotoluene	GG622044.D	1	1	17.6		ug/l	

(a) Primary and confirmation results differ by more than 40%.
(b) Associated BS recovery outside control limits.

GC Identification Summary (Explosives)

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample ID:	FA87622-3	**Method:**	SW846 8330B
Client ID:	54TW13		

Injection Type	Lab File ID	Dilution	Prep Batch	Inst Batch	Injection Time	Inst ID
Reportable	PP391156.D	1	OP86727	GPP2467	08/09/21 22:09	GCPP
Confirmation	GG622045.D	1	OP86727	GGG3025	08/13/21 02:02	GCGG

Compound	Lab File ID	Dilution	Sig#	Conc	Q	Units	RPD Conc
RDX [a]	PP391156.D	1	1	.43	J	ug/l	158.4
RDX	GG622045.D	1	1	3.7		ug/l	
3,5-Dinitroaniline [a]	PP391156.D	1	1	.2	J	ug/l	165.2
3,5-Dinitroaniline	GG622045.D	1	1	2.1		ug/l	
2-amino-4,6-Dinitrotoluene	PP391156.D	1	1	1.7	J	ug/l	5.7
2-amino-4,6-Dinitrotoluene	GG622045.D	1	1	1.8		ug/l	
4-amino-2,6-Dinitrotoluene [a]	PP391156.D	1	1	1.3	J	ug/l	51.4
4-amino-2,6-Dinitrotoluene	GG622045.D	1	1	2.2		ug/l	
o-Nitrotoluene [a]	PP391156.D	1	1	.39	J	ug/l	51.6
o-Nitrotoluene	GG622045.D	1	1	.23		ug/l	
p-Nitrotoluene [a]	PP391156.D	1	1	.096	J	ug/l	183.3
p-Nitrotoluene	GG622045.D	1	1	2.2		ug/l	
1,3,5-Trinitrobenzene	PP391156.D	1	1	13.3	J	ug/l	14.5
1,3,5-Trinitrobenzene	GG622045.D	1	1	11.5		ug/l	
2,4,6-Trinitrotoluene [b]	PP391156.D	1	1	17.7	J	ug/l	4.4
2,4,6-Trinitrotoluene	GG622045.D	1	1	18.5		ug/l	

(a) Primary and confirmation results differ by more than 40%.
(b) Associated BS recovery outside control limits.

Surrogate Recovery Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Method: SW846 8330B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
FA87622-1	GG622043.D	110
FA87622-1	PP391154.D	100
FA87622-2	GG622044.D	108
FA87622-2	PP391155.D	100
FA87622-3	GG622045.D	112
FA87622-3	PP391156.D	103
OP86727-BS	PP391143.D	97
OP86727-MB	PP391142.D	90
OP86727-MB	GG622032.D	96
OP86727-MS2	PP391159.D	100
OP86727-MSD2	PP391160.D	99

Surrogate Compounds	Recovery Limits
S1 = 3,4-Dinitrotoluene	70-136%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GGG3025-CC3024	**Injection Date:**	08/12/21
Lab File ID:	GG622028.D	**Injection Time:**	17:08
Instrument ID:	GCGG	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	13.88

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP86682-MB	GG622030.D	08/12/21	18:11	13.90
ZZZZZZ	GG622031.D	08/12/21	18:42	13.87
OP86727-MB	GG622032.D	08/12/21	19:14	13.87
FA87620-1	GG622039.D	08/12/21	22:54	13.91

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

8.6.1

8

GC Surrogate Retention Time Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GGG3025-CC3024	**Injection Date:**	08/12/21
Lab File ID:	GG622040.D	**Injection Time:**	23:25
Instrument ID:	GCGG	**Method:**	SW846 8330B

	S1 [a] RT	S1 [b] RT
Check Std	13.93	13.93

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	GG622042.D	08/13/21	00:28		13.90
FA87622-1	GG622043.D	08/13/21	00:59		13.90
FA87622-2	GG622044.D	08/13/21	01:31		13.90
FA87622-3	GG622045.D	08/13/21	02:02		13.91
GGG3025-ECC3024	GG622046.D	08/13/21	02:33	13.88	13.88

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GPP2467-CC2464	**Injection Date:**	08/09/21
Lab File ID:	PP391140.D	**Injection Time:**	13:54
Instrument ID:	GCPP	**Method:**	SW846 8330B

	S1 [a] **RT**
Check Std	11.22

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP86727-MB	PP391142.D	08/09/21	14:56	11.26
OP86727-BS	PP391143.D	08/09/21	15:27	11.27
FA87760-1	PP391144.D	08/09/21	15:58	11.27
ZZZZZZ	PP391145.D	08/09/21	16:29	11.19
ZZZZZZ	PP391146.D	08/09/21	17:00	11.27
ZZZZZZ	PP391147.D	08/09/21	17:31	11.27
ZZZZZZ	PP391148.D	08/09/21	18:02	11.19
ZZZZZZ	PP391149.D	08/09/21	18:33	11.14
FA87620-1	PP391150.D	08/09/21	19:04	11.26
ZZZZZZ	PP391151.D	08/09/21	19:35	11.27

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Check Std:	GPP2467-CC2464	**Injection Date:**	08/09/21
Lab File ID:	PP391152.D	**Injection Time:**	20:06
Instrument ID:	GCPP	**Method:**	SW846 8330B

	S1 [a] RT	S1 [b] RT
Check Std	11.28	11.28

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
FA87622-1	PP391154.D	08/09/21	21:08		11.27
FA87622-2	PP391155.D	08/09/21	21:38		11.27
FA87622-3	PP391156.D	08/09/21	22:09		11.27
OP86727-MS	PP391157.D	08/09/21	22:40		11.26
OP86727-MSD	PP391158.D	08/09/21	23:12		11.26
OP86727-MS2	PP391159.D	08/09/21	23:43		11.26
OP86727-MSD2	PP391160.D	08/10/21	00:14		11.26
OP86682-DUP	PP391161.D	08/10/21	00:45		11.24
OP86682-DUP2	PP391162.D	08/10/21	01:16		11.25
GPP2467-ECC2464	PP391163.D	08/10/21	01:47	11.26	11.26

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3024-ICC3024
Lab FileID: GG622005.D

Response Factor Report G1315B

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration

Calibration Files
20 =GG622000.D 50 =GG622001.D 100 =GG622002.D 200 =GG622003.D
500 =GG622004.D 1000=GG622005.D 2500=GG622006.D 5000=GG622007.D

Compound	20	50	100	200	500	1000	2500	5000	Avg		%RSD
1) TNX	6.694	5.096	4.481	4.443	4.105	4.141	4.060	4.081	4.638	E3	19.41
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000											
Response Ratio = 0.00000 + 4079.64981 *A											
2) HMX	3.590	3.406	3.229	3.271	3.158	3.150	3.128	3.134	3.258	E3	5.02
3) DNX	5.970	5.694	5.461	5.516	5.313	5.304	5.303	5.356	5.489	E3	4.31
4) MNX	6.604	5.956	5.980	6.104	5.969	5.950	5.959	6.016	6.067	E3	3.67
5) 1,3,5-Trinit	9.657	9.257	9.157	9.374	9.126	9.104	9.110	9.185	9.246	E3	2.04
6) RDX	4.272	4.053	3.904	4.014	3.960	3.955	3.966	4.012	4.017	E3	2.80
7) 1,3-Dinitrob	1.306	1.222	1.197	1.233	1.203	1.201	1.201	1.213	1.222	E4	2.95
8) Nitrobenzene	7.932	7.756	7.816	7.920	7.782	7.797	7.817	7.795	7.827	E3	0.82
9) 2,4,6-Trinit	9.217	8.464	8.521	8.684	8.473	8.441	8.465	8.564	8.603	E3	3.02
10) Nitroglyceri									0.000		-1.00
11) Tetryl	6.882	6.628	6.671	6.780	6.704	6.724	6.789	6.890	6.758	E3	1.40
12) 3,4-Dinitrot	5.276	4.953	4.910	5.017	4.909	4.916	4.943	5.010	4.992	E3	2.45
13) 2,6-Dinitrot	6.179	5.889	5.776	5.854	5.783	5.760	5.783	5.851	5.859	E3	2.34
14) 2,4-Dinitrot	1.161	1.094	1.087	1.106	1.088	1.085	1.090	1.104	1.102	E4	2.27
15) 3,5-Dinitroa	1.008	0.922	0.910	0.935	0.920	0.919	0.923	0.935	0.934	E4	3.33
16) o-Nitrotolue	4.997	4.797	4.725	4.860	4.846	4.878	4.928	4.924	4.869	E3	1.73
17) p-Nitrotolue	5.234	4.953	5.030	5.119	5.055	5.053	5.089	5.132	5.083	E3	1.63
18) 4-Amino-2,6-	5.234	4.953	5.030	5.119	5.055	5.053	5.089	5.132	5.083	E3	1.63
19) m-Nitrotolue	5.599	5.634	5.503	5.528	5.444	5.440	5.490	5.472	5.514	E3	1.28
20) 2-Amino-4,6-	8.791	8.209	8.145	8.291	8.069	8.042	8.061	8.176	8.223	E3	2.98
21) PETN									0.000		-1.00

Signal #2

1) TNX	6.694	5.096	4.481	4.443	4.105	4.141	4.060	4.081	4.638	E3	19.41
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000											
Response Ratio = 0.00000 + 4079.64981 *A											
2) HMX	3.590	3.406	3.229	3.271	3.158	3.150	3.128	3.134	3.258	E3	5.02
3) DNX	5.958	5.589	5.446	5.485	5.313	5.304	5.303	5.356	5.469	E3	4.07
4) MNX	6.604	5.956	5.980	6.104	5.969	5.950	5.959	6.016	6.067	E3	3.67
5) 1,3,5-Trinit	9.657	9.257	9.157	9.374	9.126	9.104	9.110	9.185	9.246	E3	2.04
6) RDX	4.272	4.053	3.904	4.014	3.960	3.955	3.966	4.012	4.017	E3	2.80
7) 1,3-Dinitrob	9.909	8.690	8.405	9.193	8.585	9.463	9.124	9.147	9.064	E3	5.44
8) Nitrobenzene	7.574	7.308	7.176	8.311	7.927	7.973	7.398	7.283	7.619	E3	5.33
9) 2,4,6-Trinit	1.268	1.043	1.256	1.254	1.179	1.134	1.110	1.124	1.171	E4	7.02
10) Nitroglyceri	3.644	2.586	3.132	3.876	3.197	3.040	2.937	2.976	3.173	E3	12.91
11) Tetryl	1.168	1.074	1.224	1.208	1.165	1.156	1.157	1.178	1.166	E4	3.81
12) 3,4-Dinitrot	1.128	0.892	0.940	0.993	0.954	0.955	0.959	0.976	0.975	E4	7.04
13) 2,6-Dinitrot	8.319	7.826	8.249	8.452	8.534	8.237	8.244	8.451	8.289	E3	2.64
14) 2,4-Dinitrot	7.038	6.623	7.386	7.517	7.966	7.605	7.691	7.875	7.462	E3	5.97
15) 3,5-Dinitroa	1.774	1.489	1.440	1.526	1.527	1.491	1.510	1.541	1.537	E4	6.56
16) o-Nitrotolue	8.065	8.725	5.622	7.220	7.299	7.217	7.335	7.368	7.356	E3	11.97
17) p-Nitrotolue	7.902	7.477	8.566	8.890	9.202	9.154	9.256	9.350	8.725	E3	7.95

Initial Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3024-ICC3024
Lab FileID: GG622005.D

18)	4-Amino-2,6-	7.902	7.477	8.566	8.890	9.202	9.154	9.256	9.350	8.725	E3	7.95
19)	m-Nitrotolue	6.136	8.925	9.309	9.055	9.473	9.400	9.574	9.541	8.927	E3	12.89
20)	2-Amino-4,6-	0.854	0.992	1.060	1.079	1.151	1.143	1.146	1.160	1.073	E4	9.87
21)	PETN	3.434	2.733	3.248	3.009	3.231	3.215	3.091	3.234	3.149	E3	6.63

(#) = Out of Range ### Number of calibration levels exceeded format ###

GGG3024_080821.M Mon Aug 09 10:18:19 2021

Initial Calibration Verification

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3024-ICV3024
Lab FileID: GG622008.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1A.ch
Acq On : 08-Aug-2021, 21:45:56 Operator: jamesb
Sample : icv3024-1000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	472.000	505.160	-7.0	105	0.00	4.28- 5.28
2		HMX	1000.000	926.949	7.3	96	0.00	4.68- 5.68
3		DNX	1000.000	1024.661	-2.5	106	0.00	4.86- 5.86
4		MNX	1166.000	1213.889	-4.1	106	0.00	5.95- 6.95
5		1,3,5-Trinitrobenzene	1000.000	958.592	4.1	97	0.00	6.98- 7.98
6		RDX	1000.000	950.233	5.0	97	0.00	7.20- 8.20
7		1,3-Dinitrobenzene	1000.000	954.780	4.5	97	0.00	9.17-10.17
8		Nitrobenzene	1000.000	950.838	4.9	95	0.00	10.11-11.11
9		2,4,6-Trinitrotoluene	1000.000	943.019	5.7	96	0.00	11.07-12.07
10		Nitroglycerin			NA			
11		Tetryl	1000.000	964.101	3.6	97	0.00	12.32-13.32
12	S	3,4-Dinitrotoluene			NA			
13		2,6-Dinitrotoluene	1000.000	952.231	4.8	97	0.00	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	958.433	4.2	97	0.00	14.31-15.31
15		3,5-Dinitroaniline	1000.000	1109.387	-10.9	113	0.00	14.99-15.99
16		o-Nitrotoluene	1000.000	960.676	3.9	96	0.00	15.86-16.86
17		p-Nitrotoluene	2000.000	1947.961	2.6	98	0.02	16.78-17.78
18		4-Amino-2,6-Dinitrotol	2000.000	1947.961	2.6	98	0.02	16.78-17.78
19		m-Nitrotoluene	1000.000	947.818	5.2	96	0.00	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	967.495	3.3	99	0.02	18.53-19.53
21		PETN			NA			

***** Signal #2 *****

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	472.000	505.160	-7.0	105	0.00	4.28- 5.28
2		HMX	1000.000	926.949	7.3	96	0.00	4.68- 5.68
3		DNX	1000.000	1028.467	-2.8	106	0.00	4.86- 5.86
4		MNX	1166.000	1213.889	-4.1	106	0.00	5.95- 6.95
5		1,3,5-Trinitrobenzene	1000.000	958.592	4.1	97	0.00	6.98- 7.98
6		RDX	1000.000	950.233	5.0	97	-0.01	7.21- 8.21
7		1,3-Dinitrobenzene	1000.000	1058.497	-5.8	101	0.00	9.17-10.17
8		Nitrobenzene	1000.000	1101.499	-10.1	105	0.00	10.11-11.11
9		2,4,6-Trinitrotoluene	1000.000	979.670	2.0	101	0.00	11.07-12.07

Initial Calibration Verification

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3024-ICV3024
Lab FileID: GG622008.D

10		Nitroglycerin	1000.000	954.377	4.6	100	0.00	11.85-12.85
11		Tetryl	1000.000	970.431	3.0	98	0.00	12.32-13.32
12	S	3,4-Dinitrotoluene		----------NA----------				
13		2,6-Dinitrotoluene	1000.000	982.311	1.8	99	0.00	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	992.438	0.8	97	0.00	14.31-15.31
15		3,5-Dinitroaniline	1000.000	1095.895	-9.6	113	0.00	14.99-15.99
16		o-Nitrotoluene	1000.000	919.253	8.1	94	0.00	15.86-16.86
17		p-Nitrotoluene	2000.000	2013.696	-0.7	96	0.02	16.77-17.77
18		4-Amino-2,6-Dinitrotol	2000.000	2013.696	-0.7	96	0.02	16.77-17.77
19		m-Nitrotoluene	1000.000	1016.304	-1.6	97	0.01	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	1050.381	-5.0	99	0.02	18.53-19.53
21		PETN	1000.000	969.900	3.0	95	0.00	20.90-21.90

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622005.D GGG3024_080821.M Mon Aug 09 10:18:09 2021

8.7.2

8

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3025-CC3024
Lab FileID: GG622028.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1A.ch
Acq On : 12-Aug-2021, 17:08:21 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : op86682,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	470.235	0.4	98	0.02	4.28- 5.28
2	HMX	1000.000	938.140	6.2	97	0.03	4.68- 5.68
3	DNX	1000.000	942.026	5.8	97	0.03	4.86- 5.86
4	MNX	1166.000	1105.351	5.2	97	0.03	5.95- 6.95
5	1,3,5-Trinitrobenzene	1000.000	958.345	4.2	97	0.02	6.98- 7.98
6	RDX	1000.000	1000.062	-0.0	102	0.04	7.20- 8.20
7	1,3-Dinitrobenzene	1000.000	967.445	3.3	98	0.02	9.17-10.17
8	Nitrobenzene	1000.000	984.095	1.6	99	0.00	10.11-11.11
9	2,4,6-Trinitrotoluene	1000.000	959.025	4.1	98	0.03	11.07-12.07
10	Nitroglycerin	----------	----------	NA	----------		
11	Tetryl	1000.000	934.814	6.5	94	0.06	12.32-13.32
12 S	3,4-Dinitrotoluene	1000.000	977.837	2.2	99	0.05	13.33-14.33
13	2,6-Dinitrotoluene	1000.000	971.501	2.8	99	0.05	13.67-14.67
14	2,4-Dinitrotoluene	1000.000	971.714	2.8	99	0.05	14.31-15.31
15	3,5-Dinitroaniline	1000.000	970.630	2.9	99	0.05	14.99-15.99
16	o-Nitrotoluene	1000.000	989.772	1.0	99	0.03	15.86-16.86
17	p-Nitrotoluene	2000.000	1956.543	2.2	98	0.06	16.78-17.78
18	4-Amino-2,6-Dinitrotol	2000.000	1956.543	2.2	98	0.06	16.78-17.78
19	m-Nitrotoluene	1000.000	969.079	3.1	98	0.03	18.09-19.09
20	2-Amino-4,6-Dinitrotol	1000.000	966.382	3.4	99	0.08	18.53-19.53
21	PETN	----------	----------	NA	----------		

***** Signal #2 *****

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	470.235	0.4	98	0.02	4.28- 5.28
2	HMX	1000.000	938.140	6.2	97	0.03	4.68- 5.68
3	DNX	1000.000	945.525	5.4	97	0.03	4.86- 5.86
4	MNX	1166.000	1105.351	5.2	97	0.03	5.95- 6.95
5	1,3,5-Trinitrobenzene	1000.000	958.345	4.2	97	0.02	6.98- 7.98
6	RDX	1000.000	1000.062	-0.0	102	0.03	7.21- 8.21
7	1,3-Dinitrobenzene	1000.000	1025.151	-2.5	98	0.02	9.17-10.17
8	Nitrobenzene	1000.000	1010.950	-1.1	97	0.00	10.11-11.11
9	2,4,6-Trinitrotoluene	1000.000	952.532	4.7	98	0.03	11.07-12.07

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3025-CC3024
Lab FileID: GG622028.D

10		Nitroglycerin	1000.000	924.894	7.5	97	0.04	11.85-12.85
11		Tetryl	1000.000	918.887	8.1	93	0.06	12.32-13.32
12	S	3,4-Dinitrotoluene	1000.000	968.606	3.1	99	0.05	13.33-14.33
13		2,6-Dinitrotoluene	1000.000	977.774	2.2	98	0.05	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	1025.689	-2.6	101	0.05	14.31-15.31
15		3,5-Dinitroaniline	1000.000	957.680	4.2	99	0.05	14.99-15.99
16		o-Nitrotoluene	1000.000	943.956	5.6	96	0.03	15.86-16.86
17		p-Nitrotoluene	2000.000	2055.726	-2.8	98	0.07	16.77-17.77
18		4-Amino-2,6-Dinitrotol	2000.000	2055.726	-2.8	98	0.07	16.77-17.77
19		m-Nitrotoluene	1000.000	1030.904	-3.1	98	0.03	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	1048.943	-4.9	98	0.08	18.53-19.53
21		PETN	1000.000	968.561	3.1	95	0.09	20.90-21.90

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622005.D GGG3024_080821.M Fri Aug 13 10:07:49 2021

8.7.3

8

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3025-CC3024
Lab FileID: GG622040.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1A.ch
Acq On : 12-Aug-2021, 23:25:25 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	472.000	470.802	0.3	98	0.03	4.28- 5.28
2		HMX	1000.000	941.460	5.9	97	0.04	4.68- 5.68
3		DNX	1000.000	934.819	6.5	97	0.04	4.86- 5.86
4		MNX	1166.000	1095.080	6.1	96	0.06	5.95- 6.95
5		1,3,5-Trinitrobenzene	1000.000	952.807	4.7	97	0.04	6.98- 7.98
6		RDX	1000.000	988.554	1.1	100	0.07	7.20- 8.20
7		1,3-Dinitrobenzene	1000.000	962.142	3.8	98	0.06	9.17-10.17
8		Nitrobenzene	1000.000	971.393	2.9	98	0.05	10.11-11.11
9		2,4,6-Trinitrotoluene	1000.000	952.706	4.7	97	0.08	11.07-12.07
10		Nitroglycerin	----------	----------	NA	----------		
11		Tetryl	1000.000	932.164	6.8	94	0.11	12.32-13.32
12	S	3,4-Dinitrotoluene	1000.000	968.394	3.2	98	0.10	13.33-14.33
13		2,6-Dinitrotoluene	1000.000	962.965	3.7	98	0.10	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	963.293	3.7	98	0.10	14.31-15.31
15		3,5-Dinitroaniline	1000.000	963.202	3.7	98	0.12	14.99-15.99
16		o-Nitrotoluene	1000.000	979.819	2.0	98	0.09	15.86-16.86
17		p-Nitrotoluene	2000.000	1954.416	2.3	98	0.13	16.78-17.78
18		4-Amino-2,6-Dinitrotol	2000.000	1954.416	2.3	98	0.14	16.78-17.78
19		m-Nitrotoluene	1000.000	961.901	3.8	97	0.09	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	959.636	4.0	98	0.15	18.53-19.53
21		PETN	----------	----------	NA	----------		

***** Signal #2 *****

1		TNX	472.000	470.802	0.3	98	0.03	4.28- 5.28
2		HMX	1000.000	941.460	5.9	97	0.04	4.68- 5.68
3		DNX	1000.000	938.292	6.2	97	0.04	4.86- 5.86
4		MNX	1166.000	1095.080	6.1	96	0.06	5.95- 6.95
5		1,3,5-Trinitrobenzene	1000.000	952.807	4.7	97	0.04	6.98- 7.98
6		RDX	1000.000	988.554	1.1	100	0.06	7.21- 8.21
7		1,3-Dinitrobenzene	1000.000	1026.808	-2.7	98	0.06	9.17-10.17
8		Nitrobenzene	1000.000	1036.884	-3.7	99	0.05	10.11-11.11
9		2,4,6-Trinitrotoluene	1000.000	956.776	4.3	99	0.08	11.07-12.07

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3025-CC3024
Lab FileID: GG622040.D

10		Nitroglycerin	1000.000	947.117	5.3	99	0.08	11.85-12.85
11		Tetryl	1000.000	923.590	7.6	93	0.11	12.32-13.32
12	S	3,4-Dinitrotoluene	1000.000	969.489	3.1	99	0.10	13.33-14.33
13		2,6-Dinitrotoluene	1000.000	959.487	4.1	97	0.10	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	987.065	1.3	97	0.10	14.31-15.31
15		3,5-Dinitroaniline	1000.000	954.103	4.6	98	0.12	14.99-15.99
16		o-Nitrotoluene	1000.000	946.556	5.3	96	0.09	15.86-16.86
17		p-Nitrotoluene	2000.000	2053.063	-2.7	98	0.14	16.77-17.77
18		4-Amino-2,6-Dinitrotol	2000.000	2053.063	-2.7	98	0.14	16.77-17.77
19		m-Nitrotoluene	1000.000	1047.213	-4.7	99	0.09	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	1059.394	-5.9	99	0.15	18.53-19.53
21		PETN	1000.000	988.489	1.2	97	0.13	20.90-21.90

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622005.D GGG3024_080821.M Fri Aug 13 10:07:50 2021

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3025-ECC3024
Lab FileID: GG622046.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1A.ch
Acq On : 13-Aug-2021, 02:33:57 Operator: jamesb
Sample : ecc3024-1000 Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	460.027	2.5	96	0.03	4.28- 5.28
2	HMX	1000.000	920.600	7.9	95	0.04	4.68- 5.68
3	DNX	1000.000	919.025	8.1	95	0.04	4.86- 5.86
4	MNX	1166.000	1092.398	6.3	96	0.05	5.95- 6.95
5	1,3,5-Trinitrobenzene	1000.000	948.506	5.1	96	0.03	6.98- 7.98
6	RDX	1000.000	983.550	1.6	100	0.05	7.20- 8.20
7	1,3-Dinitrobenzene	1000.000	958.564	4.1	98	0.03	9.17-10.17
8	Nitrobenzene	1000.000	962.670	3.7	97	0.02	10.11-11.11
9	2,4,6-Trinitrotoluene	1000.000	951.735	4.8	97	0.04	11.07-12.07
10	Nitroglycerin			NA			
11	Tetryl	1000.000	933.315	6.7	94	0.07	12.32-13.32
12 S	3,4-Dinitrotoluene	1000.000	968.921	3.1	98	0.05	13.33-14.33
13	2,6-Dinitrotoluene	1000.000	965.112	3.5	98	0.05	13.67-14.67
14	2,4-Dinitrotoluene	1000.000	963.437	3.7	98	0.06	14.31-15.31
15	3,5-Dinitroaniline	1000.000	961.529	3.8	98	0.07	14.99-15.99
16	o-Nitrotoluene	1000.000	966.443	3.4	96	0.03	15.86-16.86
17	p-Nitrotoluene	2000.000	1935.312	3.2	97	0.07	16.78-17.78
18	4-Amino-2,6-Dinitrotol	2000.000	1935.312	3.2	97	0.07	16.78-17.78
19	m-Nitrotoluene	1000.000	947.712	5.2	96	0.03	18.09-19.09
20	2-Amino-4,6-Dinitrotol	1000.000	956.426	4.4	98	0.09	18.53-19.53
21	PETN			NA			

***** Signal #2 *****

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	460.027	2.5	96	0.03	4.28- 5.28
2	HMX	1000.000	920.600	7.9	95	0.04	4.68- 5.68
3	DNX	1000.000	922.438	7.8	95	0.04	4.86- 5.86
4	MNX	1166.000	1092.398	6.3	96	0.05	5.95- 6.95
5	1,3,5-Trinitrobenzene	1000.000	948.506	5.1	96	0.03	6.98- 7.98
6	RDX	1000.000	983.550	1.6	100	0.04	7.21- 8.21
7	1,3-Dinitrobenzene	1000.000	1004.938	-0.5	96	0.03	9.17-10.17
8	Nitrobenzene	1000.000	988.041	1.2	94	0.02	10.11-11.11
9	2,4,6-Trinitrotoluene	1000.000	946.414	5.4	98	0.04	11.07-12.07

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GGG3025-ECC3024
Lab FileID: GG622046.D

10		Nitroglycerin	1000.000	884.492	11.6	92	0.04	11.85-12.85
11		Tetryl	1000.000	915.646	8.4	92	0.07	12.32-13.32
12	S	3,4-Dinitrotoluene	1000.000	961.791	3.8	98	0.05	13.33-14.33
13		2,6-Dinitrotoluene	1000.000	965.236	3.5	97	0.05	13.67-14.67
14		2,4-Dinitrotoluene	1000.000	997.601	0.2	98	0.06	14.31-15.31
15		3,5-Dinitroaniline	1000.000	949.142	5.1	98	0.07	14.99-15.99
16		o-Nitrotoluene	1000.000	926.922	7.3	94	0.03	15.86-16.86
17		p-Nitrotoluene	2000.000	2030.184	-1.5	97	0.07	16.77-17.77
18		4-Amino-2,6-Dinitrotol	2000.000	2030.184	-1.5	97	0.08	16.77-17.77
19		m-Nitrotoluene	1000.000	1021.712	-2.2	97	0.03	18.09-19.09
20		2-Amino-4,6-Dinitrotol	1000.000	1056.694	-5.7	99	0.09	18.53-19.53
21		PETN	1000.000	997.962	0.2	98	0.06	20.90-21.90

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG622005.D GGG3024_080821.M Fri Aug 13 10:07:51 2021

8.7.5

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Initial Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2464-ICC2464
Lab FileID: PP391048.D

Response Factor Report G1315B

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Initial Calibration

Calibration Files
20 =PP391043.D 50 =PP391044.D 100 =PP391045.D 200 =PP391046.D
500 =PP391047.D 1000=PP391048.D 2500=PP391049.D 5000=PP391050.D

Compound	20	50	100	200	500	1000	2500	5000	Avg	%RSD
1) TNX	1.663	1.532	1.540	1.851	1.681	1.681	1.684	1.683	1.664 E3	5.97
2) HMX	1.767	1.492	1.587	1.600	1.554	1.519	1.511	1.507	1.567 E3	5.73
3) DNX	2.227	2.084	2.237	2.254	2.231	2.187	2.173	2.149	2.193 E3	2.59
4) MNX	2.714	2.652	2.556	2.668	2.590	2.557	2.538	2.506	2.598 E3	2.79
5) RDX	1.862	1.870	1.843	1.914	1.880	1.857	1.850	1.834	1.864 E3	1.35
6) 1,3,5-Trinit	4.023	3.963	3.988	4.131	4.061	4.026	4.017	3.983	4.024 E3	1.31
7) 1,3-Dinitrob	4.925	5.182	5.123	5.388	5.298	5.250	5.238	5.216	5.203 E3	2.63
8) 3,5-Dinitroa	3.898	3.990	3.924	4.105	4.026	3.989	3.975	3.951	3.982 E3	1.61
9) Nitrobenzene	3.045	3.030	2.977	3.070	3.077	3.027	3.024	3.078	3.041 E3	1.12
10) Nitroglyceri									0.000	-1.00
11) Tetryl	3.670	2.992	3.086	3.144	3.080	3.060	3.040	2.992	3.133 E3	7.11
12) 2,4,6-Trinit	4.298	3.534	3.759	3.829	3.745	3.714	3.697	3.674	3.781 E3	5.96
13) 2-Amino-4,6-	4.247	3.080	3.491	3.473	3.391	3.349	3.331	3.307	3.459 E3	9.91
14) 4-Amino-2,6-	3.927	2.196	2.679	2.621	2.507	2.468	2.450	2.428	2.659 E3	20.00
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 2434.19322 *A										
15) 3,4-Dinitrot	2.756		2.153	2.058	2.000	1.986	1.981	1.975	2.130 E3	13.30
16) 2,4-Dinitrot	5.119	4.565	4.751	4.822	4.730	4.687	4.681	4.665	4.753 E3	3.48
17) 2,6-Dinitrot	2.904	2.610	2.822	2.782	2.710	2.687	2.695	2.693	2.738 E3	3.38
18) o-Nitrotolue	2.814	2.329	2.223	2.245	2.193	2.150	2.150	2.185	2.286 E3	9.67
19) p-Nitrotolue	3.668	3.463	3.367	3.473	3.410	3.367	3.376	3.402	3.441 E3	2.92
20) m-Nitrotolue	3.264	3.241	3.129	3.284	3.211	3.179	3.183	3.231	3.215 E3	1.57
21) PETN									0.000	-1.00

Signal #2

1) TNX	3.176	2.432	2.653	2.772	2.745	2.749	2.691	2.659	2.735 E3	7.61
2) HMX	4.800	5.643	4.745	4.618	4.428	4.321	4.246	4.221	4.628 E3	10.07
3) DNX	5.264	4.271	3.702	3.668	3.544	3.480	3.435	3.393	3.845 E3	16.57
---- Linear regr., Force(0,0) ---- Coefficient = 1.0000										
Response Ratio = 0.00000 + 3405.46750 *A										
4) MNX	4.412	4.086	4.030	4.150	4.040	3.976	3.950	3.897	4.068 E3	3.93
5) RDX	3.100	2.967	2.979	3.068	3.027	2.996	2.984	2.953	3.009 E3	1.72
6) 1,3,5-Trinit	7.959	7.632	7.685	7.966	7.850	7.768	7.760	7.719	7.793 E3	1.58
7) 1,3-Dinitrob	3.570	4.080	3.818	3.780	3.727	3.656	3.641	3.613	3.736 E3	4.36
8) 3,5-Dinitroa	7.262	7.708	6.924	7.226	7.035	6.898	6.837	6.788	7.085 E3	4.31
9) Nitrobenzene	3.210	2.892	2.960	3.021	2.998	2.962	2.943	2.990	2.997 E3	3.15
10) Nitroglyceri	1.279	1.285	1.217	1.254	1.257	1.240	1.244	1.240	1.252 E3	1.77
11) Tetryl	4.799	4.748	4.767	4.909	4.852	4.824	4.828	4.785	4.814 E3	1.07
12) 2,4,6-Trinit	4.413	4.335	4.384	4.536	4.543	4.527	4.534	4.525	4.475 E3	1.86
13) 2-Amino-4,6-	4.887	4.818	4.925	5.063	5.098	5.094	5.119	5.121	5.016 E3	2.39
14) 4-Amino-2,6-	4.711	4.512	4.562	4.862	4.960	4.991	5.021	5.034	4.832 E3	4.35
15) 3,4-Dinitrot	2.710	2.945	3.024	3.345	3.426	3.470	3.506	3.562	3.249 E3	9.64
16) 2,4-Dinitrot	3.281	2.858	2.946	3.143	3.110	3.099	3.105	3.142	3.085 E3	4.19
17) 2,6-Dinitrot	2.859	3.088	3.319	3.544	3.497	3.501	3.516	3.527	3.356 E3	7.56

8.7.6

8

Initial Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA
Sample: GPP2464-ICC2464
Lab FileID: PP391048.D

```
18) o-Nitrotolue 2.695 2.949 2.867 2.974 2.987 2.921 2.977 3.047 2.927 E3   3.66
19) p-Nitrotolue 1.460 1.647 2.058 2.340 2.604 2.667 2.808 2.838 2.303 E3  23.02
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 2823.90503 *A

20) m-Nitrotolue 3.857 3.205 3.678 3.695 3.703 3.744 3.788 3.856 3.691 E3   5.64
21) PETN         1.134 1.057 1.138 1.335 1.416 1.385 1.391 1.365 1.278 E3  11.19
------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          GPP2464_080321PRI.M        Thu Aug 05 10:36:24 2021
```

8.7.6

8

Initial Calibration Verification

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2464-ICV2464
Lab FileID: PP391051.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	472.000	462.250	2.1	97	0.00	1.01- 1.61
2	HMX	1000.000	963.905	3.6	99	0.00	1.14- 1.74
3	DNX	1000.000	990.651	0.9	99	0.00	1.38- 1.98
4	MNX	1166.000	1128.163	3.2	98	0.00	1.97- 2.57
5	RDX	1000.000	983.394	1.7	99	0.00	2.48- 3.28
6	1,3,5-Trinitrobenzene	1000.000	990.896	0.9	99	0.00	4.25- 5.05
7	1,3-Dinitrobenzene	1000.000	993.219	0.7	98	0.00	5.46- 6.26
8	3,5-Dinitroaniline	1000.000	981.572	1.8	98	0.00	5.82- 6.62
9	Nitrobenzene	1000.000	993.036	0.7	100	0.00	7.06- 7.86
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	970.430	3.0	99	0.02	9.10- 9.90
12	2,4,6-Trinitrotoluene	1000.000	967.521	3.2	98	0.02	9.48-10.28
13	2-Amino-4,6-Dinitrotol	1000.000	973.899	2.6	101	0.02	9.87-10.67
	----------	Amount	Calc.	%Drift	----------		
14	4-Amino-2,6-Dinitrotol	1000.000	1010.203	-1.0	100	0.02	10.40-11.20
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene		----------NA----------				
16	2,4-Dinitrotoluene	1000.000	971.884	2.8	99	0.02	11.48-12.28
17	2,6-Dinitrotoluene	1000.000	976.574	2.3	99	0.02	11.87-12.77
18	o-Nitrotoluene	1000.000	954.737	4.5	102	0.01	14.98-15.98
19	p-Nitrotoluene	1000.000	998.951	0.1	102	0.01	15.54-16.54
20	m-Nitrotoluene	1000.000	993.230	0.7	100	0.01	16.36-17.36
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	472.000	456.694	3.2	96	0.00	1.01- 1.61
2	HMX	1000.000	925.187	7.5	99	0.00	1.14- 1.74
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	1019.742	-2.0	100	0.00	1.38- 1.98
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1166.000	1130.153	3.1	99	0.00	1.97- 2.57
5	RDX	1000.000	984.323	1.6	99	0.00	2.48- 3.28
6	1,3,5-Trinitrobenzene	1000.000	985.463	1.5	99	0.00	4.25- 5.05
7	1,3-Dinitrobenzene	1000.000	965.007	3.5	99	0.00	5.46- 6.26
8	3,5-Dinitroaniline	1000.000	962.122	3.8	99	0.00	5.82- 6.62
9	Nitrobenzene	1000.000	982.610	1.7	99	0.00	7.06- 7.86

8.7.7

Initial Calibration Verification

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2464-ICV2464
Lab FileID: PP391051.D

10		Nitroglycerin	1000.000	912.128	8.8	92	0.02	8.47- 9.47
11		Tetryl	1000.000	1004.267	-0.4	100	0.02	9.10- 9.90
12		2,4,6-Trinitrotoluene	1000.000	1008.390	-0.8	100	0.02	9.48-10.28
13		2-Amino-4,6-Dinitrotol	1000.000	1037.443	-3.7	102	0.02	9.87-10.67
14		4-Amino-2,6-Dinitrotol	1000.000	1048.781	-4.9	102	0.02	10.40-11.20
15	S	3,4-Dinitrotoluene	----------NA----------					
16		2,4-Dinitrotoluene	1000.000	1002.279	-0.2	100	0.02	10.68-12.28
17		2,6-Dinitrotoluene	1000.000	1046.141	-4.6	100	0.02	11.04-12.77
18		o-Nitrotoluene	1000.000	1006.331	-0.6	101	0.01	13.17-15.98
		---------- Amount	Calc.	%Drift	----------			
19		p-Nitrotoluene	1000.000	964.772	3.5	102	0.01	13.50-16.54
		---------- Amount	Calc.	%Drift	----------			
20		m-Nitrotoluene	1000.000	1044.659	-4.5	103	0.01	16.36-17.36
21		PETN	1000.000	1046.344	-4.6	97	0.02	14.91-19.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:36:12 2021

8.7.7

8

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2467-CC2464
Lab FileID: PP391140.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	472.000	453.840	3.8	95	0.00	1.01- 1.61
2		HMX	1000.000	952.551	4.7	98	0.00	1.14- 1.74
3		DNX	1000.000	972.378	2.8	97	0.00	1.39- 1.99
4		MNX	1166.000	1134.663	2.7	99	-0.02	1.98- 2.58
5		RDX	1000.000	965.075	3.5	97	-0.02	2.50- 3.30
6		1,3,5-Trinitrobenzene	1000.000	970.188	3.0	97	-0.02	4.28- 5.08
7		1,3-Dinitrobenzene	1000.000	974.022	2.6	97	-0.03	5.48- 6.28
8		3,5-Dinitroaniline	1000.000	980.547	1.9	98	-0.06	5.85- 6.65
9		Nitrobenzene	1000.000	1000.657	-0.1	101	-0.05	7.09- 7.89
10		Nitroglycerin	----------NA----------					
11		Tetryl	1000.000	894.687	10.5	92	-0.09	9.19- 9.99
12		2,4,6-Trinitrotoluene	1000.000	937.855	6.2	95	-0.07	9.56-10.36
13		2-Amino-4,6-Dinitrotol	1000.000	976.788	2.3	101	-0.13	9.96-10.76
		----------	Amount	Calc.	%Drift	----------		
14		4-Amino-2,6-Dinitrotol	1000.000	980.064	2.0	97	-0.14	10.49-11.29
		----------	Amount	Calc.	%Drift	----------		
15	S	3,4-Dinitrotoluene	1000.000	988.886	1.1	106	-0.10	10.93-11.73
16		2,4-Dinitrotoluene	1000.000	947.684	5.2	96	-0.10	11.57-12.37
17		2,6-Dinitrotoluene	1000.000	980.169	2.0	100	-0.11	11.95-12.85
18		o-Nitrotoluene	1000.000	932.734	6.7	99	-0.10	15.04-16.04
19		p-Nitrotoluene	1000.000	979.226	2.1	100	-0.09	15.60-16.60
20		m-Nitrotoluene	1000.000	989.143	1.1	100	-0.07	16.41-17.41
21		PETN	----------NA----------					
*****		Signal #2 *****						
1		TNX	472.000	441.943	6.4	93	0.00	1.01- 1.61
2		HMX	1000.000	907.701	9.2	97	0.00	1.14- 1.74
		----------	Amount	Calc.	%Drift	----------		
3		DNX	1000.000	997.070	0.3	98	0.00	1.39- 1.99
		----------	Amount	Calc.	%Drift	----------		
4		MNX	1166.000	1126.099	3.4	99	-0.02	1.98- 2.58
5		RDX	1000.000	960.504	3.9	96	-0.02	2.50- 3.30
6		1,3,5-Trinitrobenzene	1000.000	973.947	2.6	98	-0.02	4.28- 5.08
7		1,3-Dinitrobenzene	1000.000	939.691	6.0	96	-0.03	5.48- 6.28
8		3,5-Dinitroaniline	1000.000	948.520	5.1	97	-0.06	5.85- 6.65
9		Nitrobenzene	1000.000	986.897	1.3	100	-0.05	7.09- 7.89

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2467-CC2464
Lab FileID: PP391140.D

10		Nitroglycerin	1000.000	924.390	7.6	93	-0.05	8.57- 9.57
11		Tetryl	1000.000	939.411	6.1	94	-0.09	9.19- 9.99
12		2,4,6-Trinitrotoluene	1000.000	952.876	4.7	94	-0.07	9.56-10.36
13		2-Amino-4,6-Dinitrotol	1000.000	1000.743	-0.1	99	-0.13	9.96-10.76
14		4-Amino-2,6-Dinitrotol	1000.000	969.243	3.1	94	-0.14	10.49-11.29
15	S	3,4-Dinitrotoluene	1000.000	1102.246	-10.2	103	-0.10	10.93-11.73
16		2,4-Dinitrotoluene	1000.000	917.106	8.3	91	-0.10	10.77-12.37
17		2,6-Dinitrotoluene	1000.000	1013.021	-1.3	97	-0.10	11.13-12.85
18		o-Nitrotoluene	1000.000	982.267	1.8	98	-0.11	13.23-16.04
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	896.979	10.3	95	-0.09	13.56-16.60
			Amount	Calc.	%Drift			
20		m-Nitrotoluene	1000.000	994.999	0.5	98	-0.07	16.41-17.41
21		PETN	1000.000	1077.325	-7.7	99	0.00	15.00-19.12

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP391048.D GPP2464_080321PRI.M Thu Aug 12 10:52:21 2021

8.7.8

8

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2467-CC2464
Lab FileID: PP391152.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	472.000	456.549	3.3	96	0.00	1.01- 1.61
2		HMX	1000.000	949.089	5.1	98	0.00	1.14- 1.74
3		DNX	1000.000	966.653	3.3	97	0.00	1.39- 1.99
4		MNX	1166.000	1130.346	3.1	98	0.00	1.98- 2.58
5		RDX	1000.000	961.564	3.8	96	-0.01	2.50- 3.30
6		1,3,5-Trinitrobenzene	1000.000	963.610	3.6	96	0.00	4.28- 5.08
7		1,3-Dinitrobenzene	1000.000	968.022	3.2	96	-0.01	5.48- 6.28
8		3,5-Dinitroaniline	1000.000	970.548	2.9	97	-0.04	5.85- 6.65
9		Nitrobenzene	1000.000	984.725	1.5	99	-0.02	7.09- 7.89
10		Nitroglycerin	----------	NA	----------			
11		Tetryl	1000.000	888.379	11.2	91	-0.04	9.19- 9.99
12		2,4,6-Trinitrotoluene	1000.000	933.036	6.7	95	-0.03	9.56-10.36
13		2-Amino-4,6-Dinitrotol	1000.000	966.115	3.4	100	-0.09	9.96-10.76
		----------	Amount	Calc.	%Drift		----------	
14		4-Amino-2,6-Dinitrotol	1000.000	974.702	2.5	96	-0.09	10.49-11.29
		----------	Amount	Calc.	%Drift		----------	
15	S	3,4-Dinitrotoluene	1000.000	980.205	2.0	105	-0.05	10.93-11.73
16		2,4-Dinitrotoluene	1000.000	944.462	5.6	96	-0.05	11.57-12.37
17		2,6-Dinitrotoluene	1000.000	976.644	2.3	100	-0.06	11.95-12.85
18		o-Nitrotoluene	1000.000	924.172	7.6	98	-0.05	15.04-16.04
19		p-Nitrotoluene	1000.000	972.896	2.7	99	-0.04	15.60-16.60
20		m-Nitrotoluene	1000.000	979.208	2.1	99	-0.03	16.41-17.41
21		PETN	----------	NA	----------			
*****		Signal #2 *****						
1		TNX	472.000	443.102	6.1	93	0.00	1.01- 1.61
2		HMX	1000.000	901.274	9.9	97	0.00	1.14- 1.74
		----------	Amount	Calc.	%Drift		----------	
3		DNX	1000.000	989.915	1.0	97	0.00	1.39- 1.99
		----------	Amount	Calc.	%Drift		----------	
4		MNX	1166.000	1120.749	3.9	98	0.00	1.98- 2.58
5		RDX	1000.000	956.066	4.4	96	-0.01	2.50- 3.30
6		1,3,5-Trinitrobenzene	1000.000	965.257	3.5	97	0.00	4.28- 5.08
7		1,3-Dinitrobenzene	1000.000	932.451	6.8	95	-0.01	5.48- 6.28
8		3,5-Dinitroaniline	1000.000	941.384	5.9	97	-0.04	5.85- 6.65
9		Nitrobenzene	1000.000	975.045	2.5	99	-0.02	7.09- 7.89

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2467-CC2464
Lab FileID: PP391152.D

10		Nitroglycerin	1000.000	879.097	12.1	89	0.00	8.57- 9.57
11		Tetryl	1000.000	924.480	7.6	92	-0.04	9.19- 9.99
12		2,4,6-Trinitrotoluene	1000.000	940.598	5.9	93	-0.03	9.56-10.36
13		2-Amino-4,6-Dinitrotol	1000.000	985.099	1.5	97	-0.09	9.96-10.76
14		4-Amino-2,6-Dinitrotol	1000.000	953.804	4.6	92	-0.09	10.49-11.29
15	S	3,4-Dinitrotoluene	1000.000	1076.929	-7.7	101	-0.05	10.93-11.73
16		2,4-Dinitrotoluene	1000.000	908.022	9.2	90	-0.05	10.77-12.37
17		2,6-Dinitrotoluene	1000.000	1004.355	-0.4	96	-0.05	11.13-12.85
18		o-Nitrotoluene	1000.000	967.243	3.3	97	-0.05	13.23-16.04
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	928.651	7.1	98	-0.05	13.56-16.60
			Amount	Calc.	%Drift			
20		m-Nitrotoluene	1000.000	973.012	2.7	96	-0.03	16.41-17.41
21		PETN	1000.000	1022.304	-2.2	94	0.02	15.00-19.12

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP391048.D GPP2464_080321PRI.M Thu Aug 12 10:52:22 2021

8.7.9

8

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2467-ECC2464
Lab FileID: PP391163.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		TNX	472.000	441.764	6.4	93	0.00	1.01- 1.61
2		HMX	1000.000	917.634	8.2	95	0.00	1.14- 1.74
3		DNX	1000.000	924.488	7.6	93	0.00	1.39- 1.99
4		MNX	1166.000	1117.746	4.1	97	-0.01	1.98- 2.58
5		RDX	1000.000	950.206	5.0	95	-0.02	2.50- 3.30
6		1,3,5-Trinitrobenzene	1000.000	955.646	4.4	96	-0.01	4.28- 5.08
7		1,3-Dinitrobenzene	1000.000	963.203	3.7	95	-0.02	5.48- 6.28
8		3,5-Dinitroaniline	1000.000	964.611	3.5	96	-0.05	5.85- 6.65
9		Nitrobenzene	1000.000	966.772	3.3	97	-0.03	7.09- 7.89
10		Nitroglycerin		----------NA----------				
11		Tetryl	1000.000	875.738	12.4	90	-0.06	9.19- 9.99
12		2,4,6-Trinitrotoluene	1000.000	922.564	7.7	94	-0.04	9.56-10.36
13		2-Amino-4,6-Dinitrotol	1000.000	956.636	4.3	99	-0.11	9.96-10.76
		----------	Amount	Calc.	%Drift			----------
14		4-Amino-2,6-Dinitrotol	1000.000	964.416	3.6	95	-0.11	10.49-11.29
		----------	Amount	Calc.	%Drift			----------
15	S	3,4-Dinitrotoluene	1000.000	968.988	3.1	104	-0.07	10.93-11.73
16		2,4-Dinitrotoluene	1000.000	936.811	6.3	95	-0.07	11.57-12.37
17		2,6-Dinitrotoluene	1000.000	974.314	2.6	99	-0.08	11.95-12.85
18		o-Nitrotoluene	1000.000	892.260	10.8	95	-0.07	15.04-16.04
19		p-Nitrotoluene	1000.000	947.657	5.2	97	-0.06	15.60-16.60
20		m-Nitrotoluene	1000.000	954.187	4.6	97	-0.05	16.41-17.41
21		PETN		----------NA----------				
*****		Signal #2 *****						
1		TNX	472.000	434.190	8.0	92	0.00	1.01- 1.61
2		HMX	1000.000	877.774	12.2	94	0.00	1.14- 1.74
		----------	Amount	Calc.	%Drift			----------
3		DNX	1000.000	947.925	5.2	93	0.00	1.39- 1.99
		----------	Amount	Calc.	%Drift			----------
4		MNX	1166.000	1105.472	5.2	97	-0.01	1.98- 2.58
5		RDX	1000.000	945.179	5.5	95	-0.02	2.50- 3.30
6		1,3,5-Trinitrobenzene	1000.000	957.682	4.2	96	-0.01	4.28- 5.08
7		1,3-Dinitrobenzene	1000.000	932.579	6.7	95	-0.02	5.48- 6.28
8		3,5-Dinitroaniline	1000.000	934.593	6.5	96	-0.05	5.85- 6.65
9		Nitrobenzene	1000.000	954.326	4.6	97	-0.03	7.09- 7.89

Continuing Calibration Summary

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Sample: GPP2467-ECC2464
Lab FileID: PP391163.D

10		Nitroglycerin	1000.000	898.076	10.2	91	-0.02	8.57- 9.57
11		Tetryl	1000.000	916.410	8.4	91	-0.06	9.19- 9.99
12		2,4,6-Trinitrotoluene	1000.000	932.884	6.7	92	-0.04	9.56-10.36
13		2-Amino-4,6-Dinitrotol	1000.000	978.718	2.1	96	-0.11	9.96-10.76
14		4-Amino-2,6-Dinitrotol	1000.000	944.862	5.5	91	-0.11	10.49-11.29
15	S	3,4-Dinitrotoluene	1000.000	1068.790	-6.9	100	-0.07	10.93-11.73
16		2,4-Dinitrotoluene	1000.000	897.653	10.2	89	-0.07	10.77-12.37
17		2,6-Dinitrotoluene	1000.000	1001.925	-0.2	96	-0.07	11.13-12.85
18		o-Nitrotoluene	1000.000	935.652	6.4	94	-0.07	13.23-16.04
			Amount	Calc.	%Drift			
19		p-Nitrotoluene	1000.000	897.767	10.2	95	-0.07	13.56-16.60
			Amount	Calc.	%Drift			
20		m-Nitrotoluene	1000.000	984.937	1.5	97	-0.05	16.41-17.41
21		PETN	1000.000	1007.254	-0.7	93	0.02	15.00-19.12

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP391048.D GPP2464_080321PRI.M Thu Aug 12 10:52:23 2021

8.7.10

8

Run Sequence Report

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG3024	**Method:** SW846 8330B	**Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG3024-IC3024	GG622000.D	08/08/21 17:34	n/a	Initial cal 20
GGG3024-IC3024	GG622001.D	08/08/21 18:05	n/a	Initial cal 50
GGG3024-IC3024	GG622002.D	08/08/21 18:37	n/a	Initial cal 100
GGG3024-IC3024	GG622003.D	08/08/21 19:08	n/a	Initial cal 200
GGG3024-IC3024	GG622004.D	08/08/21 19:40	n/a	Initial cal 500
GGG3024-ICC3024	GG622005.D	08/08/21 20:11	n/a	Initial cal 1000
GGG3024-IC3024	GG622006.D	08/08/21 20:43	n/a	Initial cal 2500
GGG3024-IC3024	GG622007.D	08/08/21 21:14	n/a	Initial cal 5000
GGG3024-ICV3024	GG622008.D	08/08/21 21:45	n/a	Initial cal verification 1000

Run Sequence Report

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GGG3025 **Method:** SW846 8330B **Instrument ID:** GCGG

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GGG3025-CC3024	GG622028.D	08/12/21 17:08	n/a	Continuing cal 1000
OP86682-MB	GG622030.D	08/12/21 18:11	OP86682	Method Blank
ZZZZZZ	GG622031.D	08/12/21 18:42	OP86682	(unrelated sample)
OP86727-MB	GG622032.D	08/12/21 19:14	OP86727	Method Blank
FA87620-1	GG622039.D	08/12/21 22:54	OP86727	(used for QC only; not part of job FA87622)
GGG3025-CC3024	GG622040.D	08/12/21 23:25	n/a	Continuing cal 1000
ZZZZZZ	GG622042.D	08/13/21 00:28	OP86727	(unrelated sample)
FA87622-1	GG622043.D	08/13/21 00:59	OP86727	54MW10
FA87622-2	GG622044.D	08/13/21 01:31	OP86727	54MW13
FA87622-3	GG622045.D	08/13/21 02:02	OP86727	54TW13
GGG3025-ECC3024	GG622046.D	08/13/21 02:33	n/a	Ending cal 1000

Run Sequence Report

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GPP2464	**Method:** SW846 8330B	**Instrument ID:** GCPP

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GPP2464-IC2464	PP391043.D	08/03/21 11:45	n/a	Initial cal 20
GPP2464-IC2464	PP391044.D	08/03/21 12:16	n/a	Initial cal 50
GPP2464-IC2464	PP391045.D	08/03/21 12:47	n/a	Initial cal 100
GPP2464-IC2464	PP391046.D	08/03/21 13:18	n/a	Initial cal 200
GPP2464-IC2464	PP391047.D	08/03/21 13:49	n/a	Initial cal 500
GPP2464-ICC2464	PP391048.D	08/03/21 14:20	n/a	Initial cal 1000
GPP2464-IC2464	PP391049.D	08/03/21 14:51	n/a	Initial cal 2500
GPP2464-IC2464	PP391050.D	08/03/21 15:22	n/a	Initial cal 5000
GPP2464-ICV2464	PP391051.D	08/03/21 15:54	n/a	Initial cal verification 1000

Run Sequence Report

Job Number: FA87622
Account: WESTVAH Weston Solutions, Inc
Project: Radford AAP; VA

Run ID: GPP2467 **Method:** SW846 8330B **Instrument ID:** GCPP

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GPP2467-CC2464	PP391140.D	08/09/21 13:54	n/a	Continuing cal 1000
OP86727-MB	PP391142.D	08/09/21 14:56	OP86727	Method Blank
OP86727-BS	PP391143.D	08/09/21 15:27	OP86727	Blank Spike
FA87760-1	PP391144.D	08/09/21 15:58	OP86727	(used for QC only; not part of job FA87622)
ZZZZZZ	PP391145.D	08/09/21 16:29	OP86727	(unrelated sample)
ZZZZZZ	PP391146.D	08/09/21 17:00	OP86727	(unrelated sample)
ZZZZZZ	PP391147.D	08/09/21 17:31	OP86727	(unrelated sample)
ZZZZZZ	PP391148.D	08/09/21 18:02	OP86727	(unrelated sample)
ZZZZZZ	PP391149.D	08/09/21 18:33	OP86727	(unrelated sample)
FA87620-1	PP391150.D	08/09/21 19:04	OP86727	(used for QC only; not part of job FA87622)
ZZZZZZ	PP391151.D	08/09/21 19:35	OP86727	(unrelated sample)
GPP2467-CC2464	PP391152.D	08/09/21 20:06	n/a	Continuing cal 1000
FA87622-1	PP391154.D	08/09/21 21:08	OP86727	54MW10
FA87622-2	PP391155.D	08/09/21 21:38	OP86727	54MW13
FA87622-3	PP391156.D	08/09/21 22:09	OP86727	54TW13
OP86727-MS	PP391157.D	08/09/21 22:40	OP86727	Matrix Spike
OP86727-MSD	PP391158.D	08/09/21 23:12	OP86727	Matrix Spike Duplicate
OP86727-MS2	PP391159.D	08/09/21 23:43	OP86727	Matrix Spike
OP86727-MSD2	PP391160.D	08/10/21 00:14	OP86727	Matrix Spike Duplicate
OP86682-DUP	PP391161.D	08/10/21 00:45	OP86682	Duplicate
OP86682-DUP2	PP391162.D	08/10/21 01:16	OP86682	Duplicate
GPP2467-ECC2464	PP391163.D	08/10/21 01:47	n/a	Ending cal 1000

GC/LC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : op86727,GPP2467,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:36 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.27	11.27	1064061	1850161	499.588	569.521
	Spiked Amount 500.000	Range 70 - 136		Recovery =		99.92%	113.90%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	2.87	2.86	93913	158725	50.390m	52.743
6)	1,3,5-Trinitrobe	4.67	4.67	1955739	3665671	486.011	470.406
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	6.15	6.21	49993	145765	12.554m	20.575m#
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	9.93	9.93	5159472	6350177	1364.524m	1419.132m
13)	2-Amino-4,6-Dini	10.22	10.20	433856	666030	125.437m	132.793m
14)	4-Amino-2,6-Dini	10.80	10.79	363326	613461	149.259	126.970
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	15.69	15.73	98242	37011	42.972	12.645m#
19)	p-Nitrotoluene	16.17	16.20	33149	22809	9.634m	8.077m
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

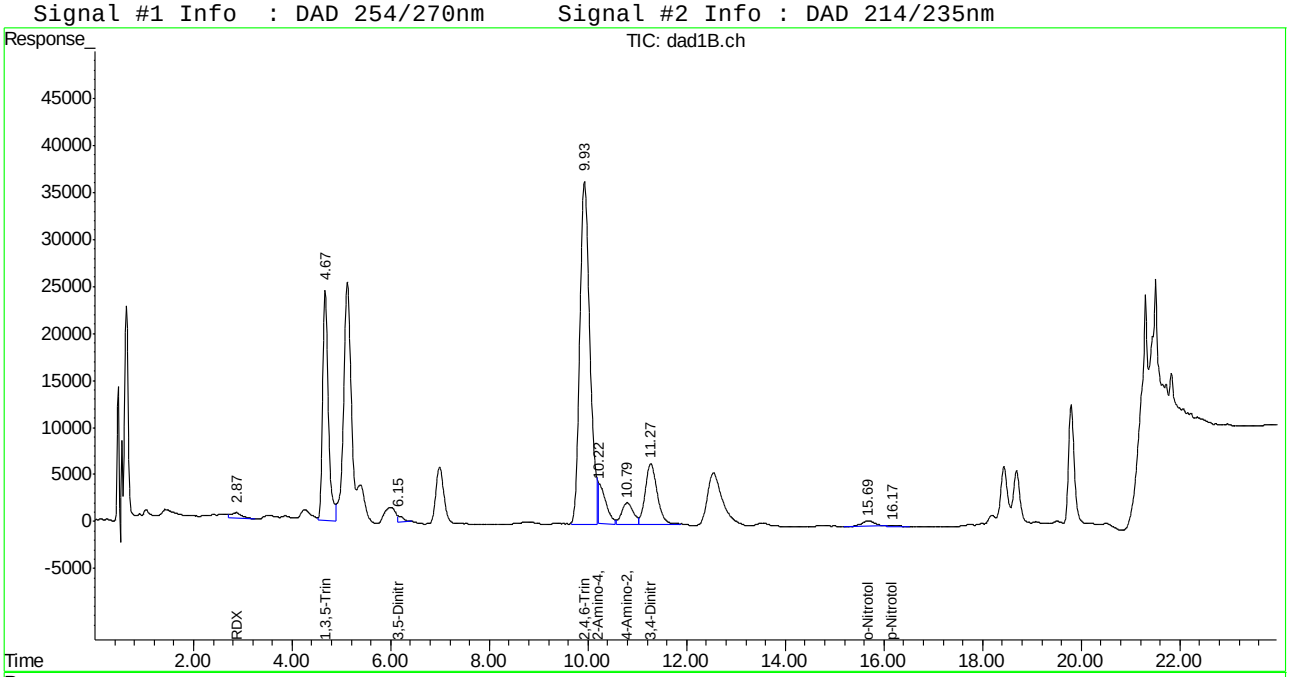
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391154.D GPP2464_080321PRI.M Fri Aug 13 11:31:43 2021 Page 1

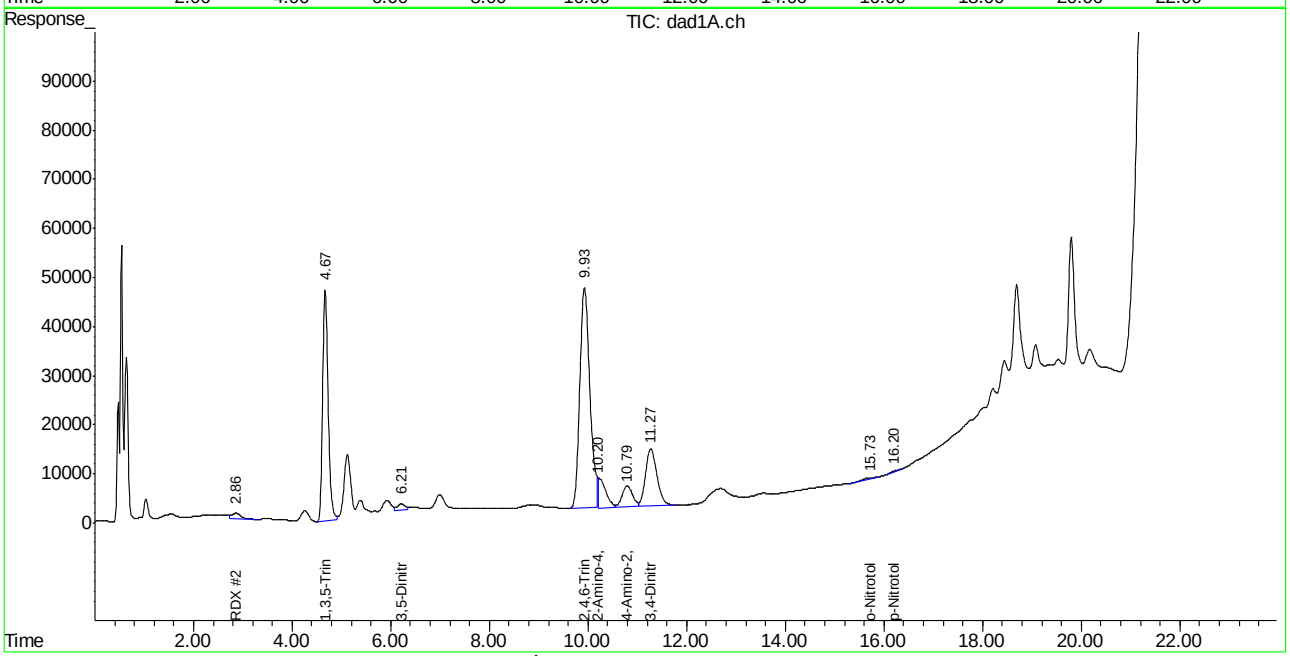
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : op86727,GPP2467,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 13 11:31 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

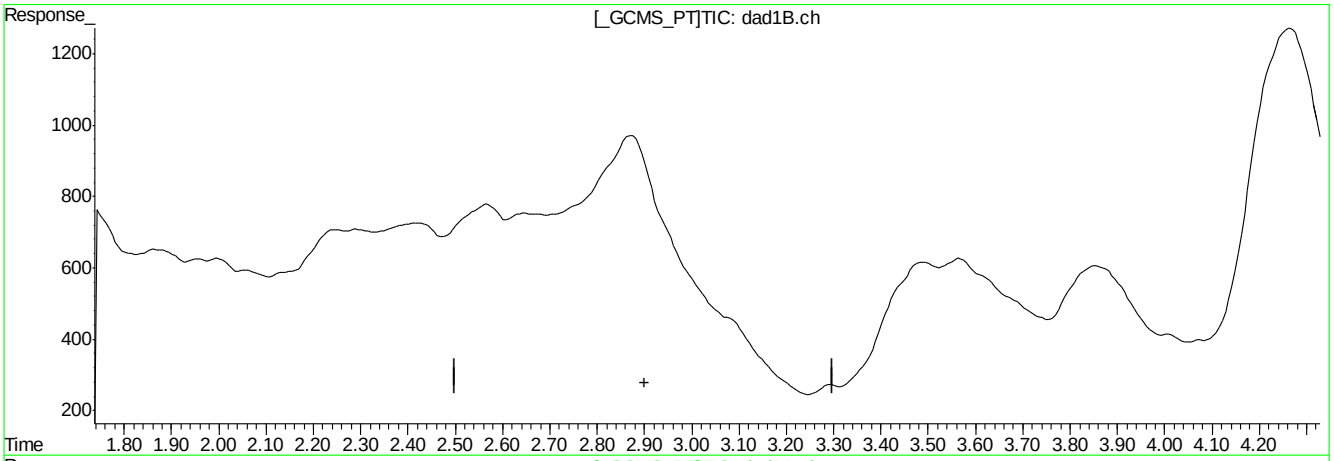
Sample Number: FA87622-1
Lab FileID: PP391154.D
Injection Time: 08/09/21 21:08
Method: SW846 8330B
Analyst approved: 08/12/21 15:32 James Boone
Supervisor approved: 08/13/21 17:26 Naresh Jiawan

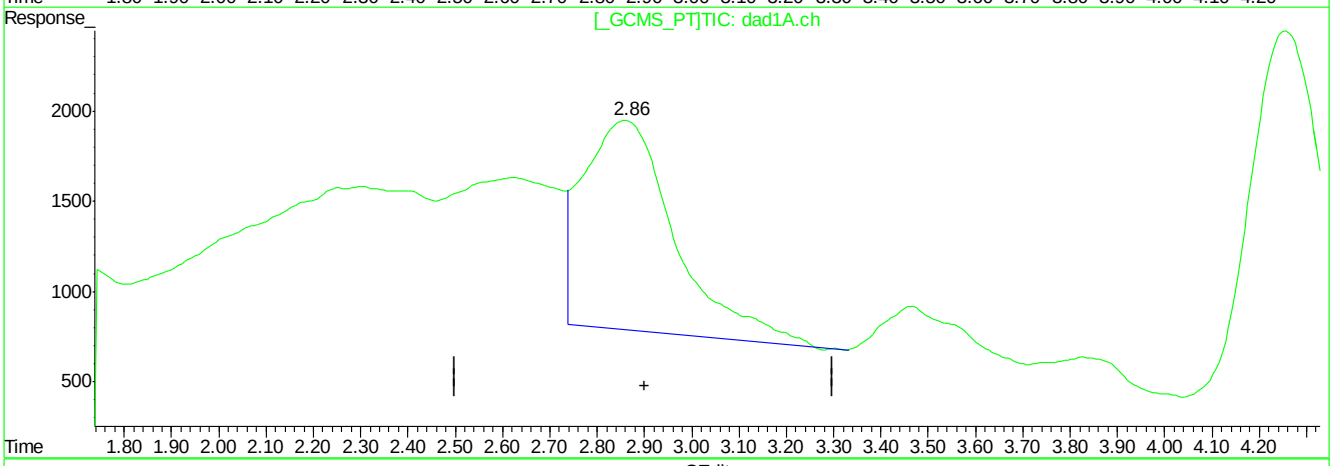
Parameter	CAS	Sig#	R.T. (min.)	Reason
RDX	121-82-4	1	2.87	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.92	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.00	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.15	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.21	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.93	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	9.93	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.20	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.22	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.73	Poor instrument integration
p-Nitrotoluene	99-99-0	1	16.17	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.20	Poor instrument integration
PETN	78-11-5	2	18.44	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

0.00min 0.000ppb

response 0

(5) RDX #2

2.86min 52.743ppb

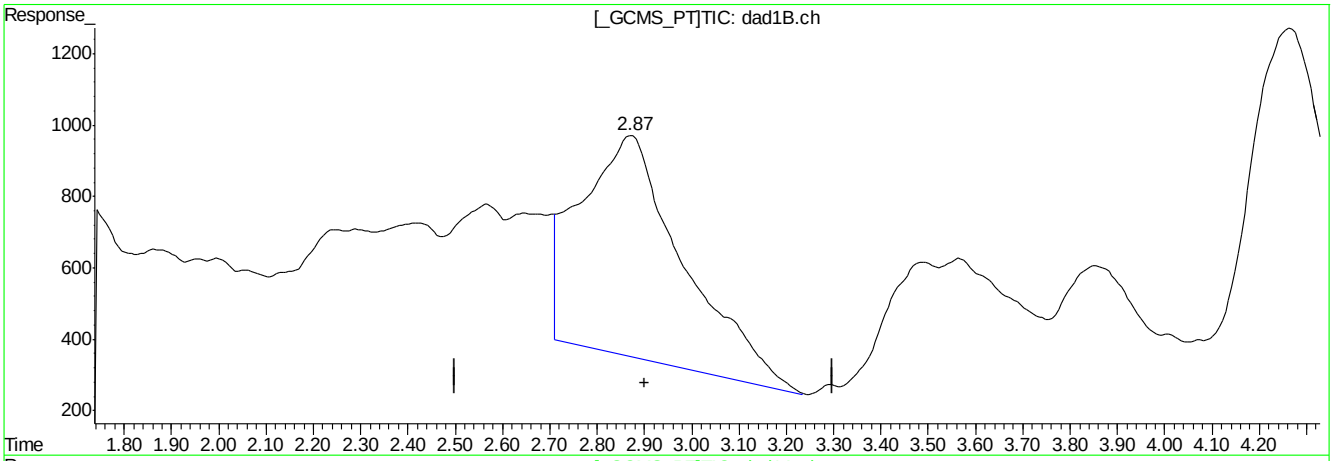
response 158725

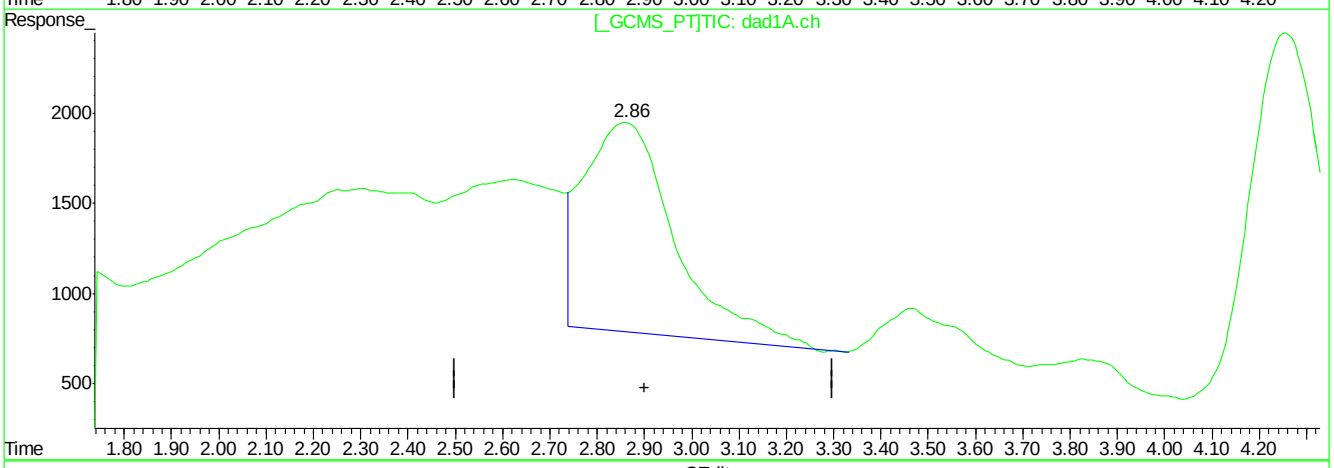
(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:14:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.87min 50.390ppb m

response 93913

(5) RDX #2

2.86min 52.743ppb

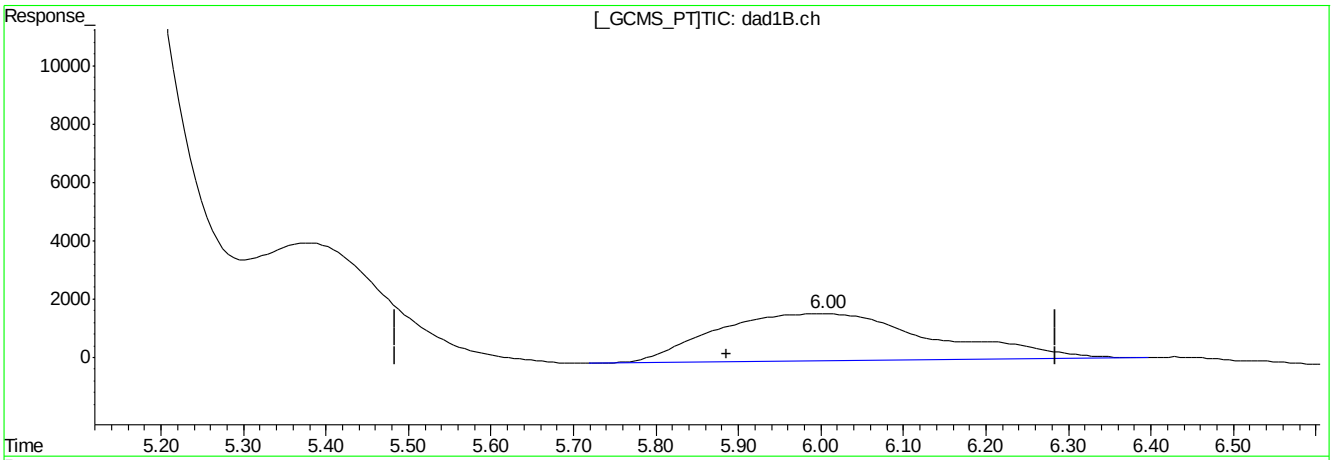
response 158725

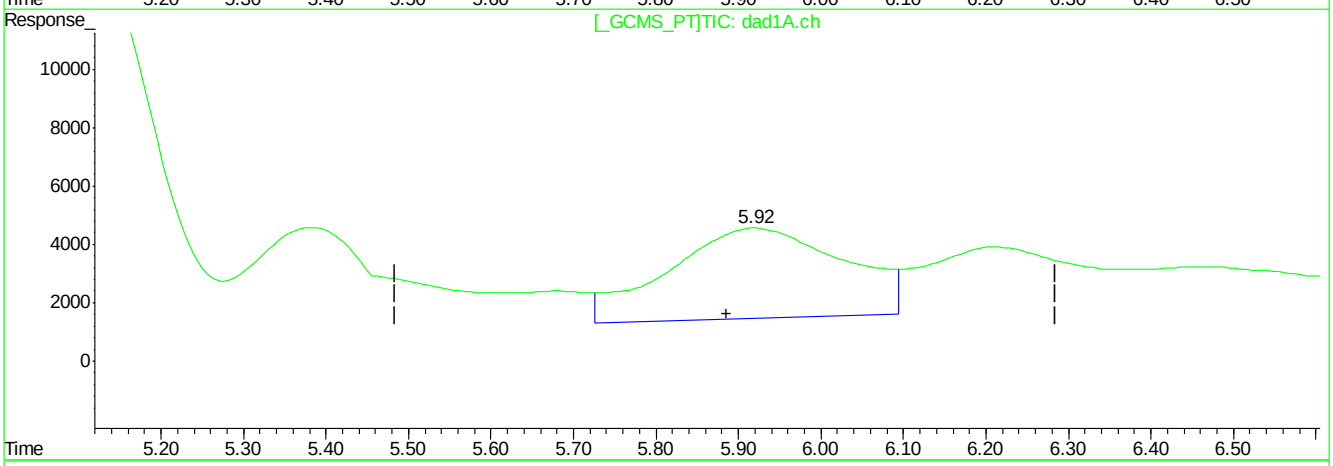
(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:14:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.00min 57.510ppb

response 299210

(7) 1,3-Dinitrobenzene #2

5.92min 121.925ppb

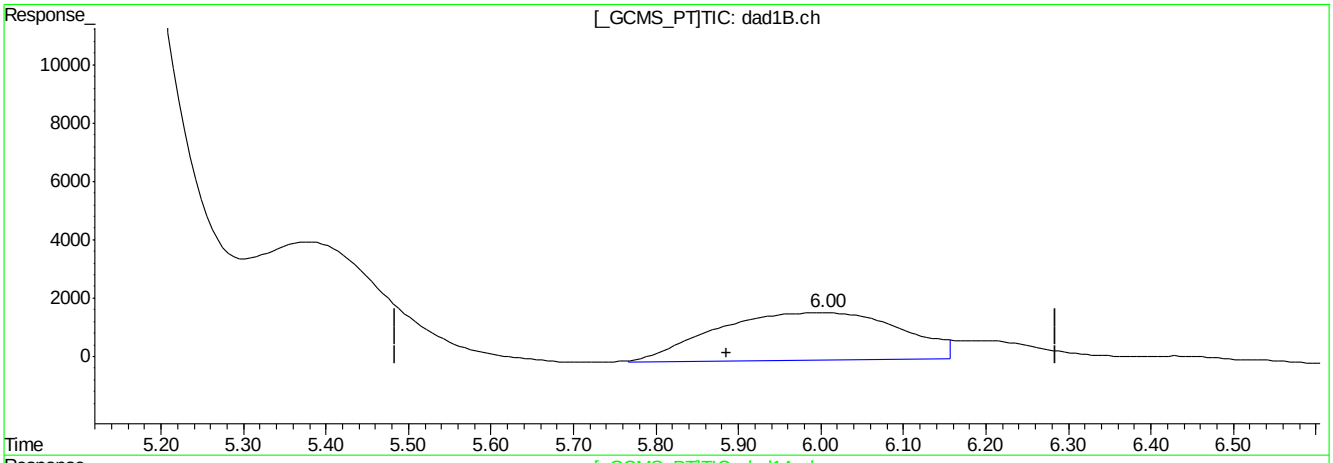
response 455464

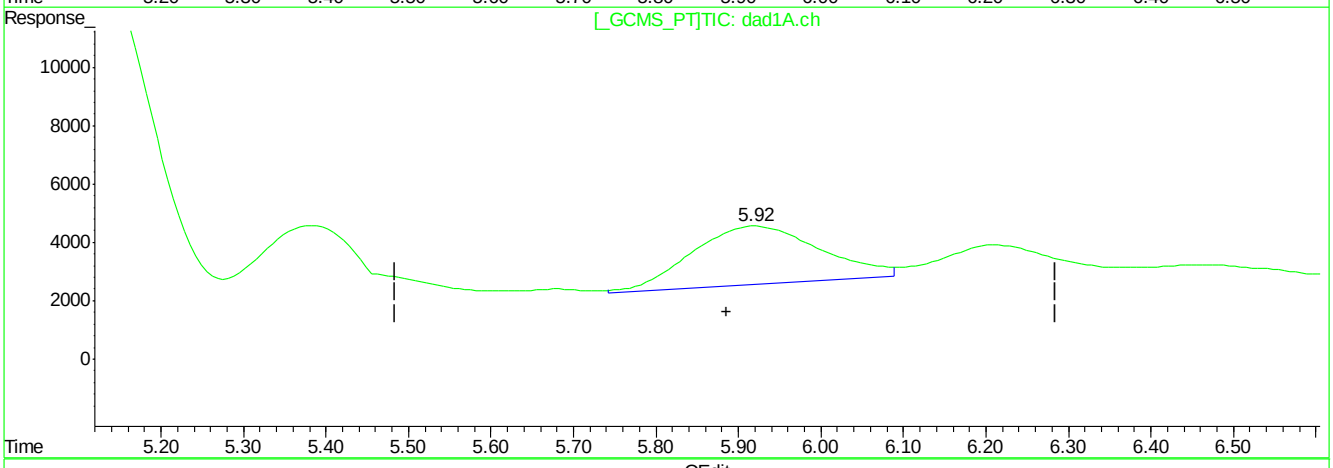
(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:15:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.00min 50.215ppb m

response 261256

(7) 1,3-Dinitrobenzene #2

5.92min 58.106ppb m

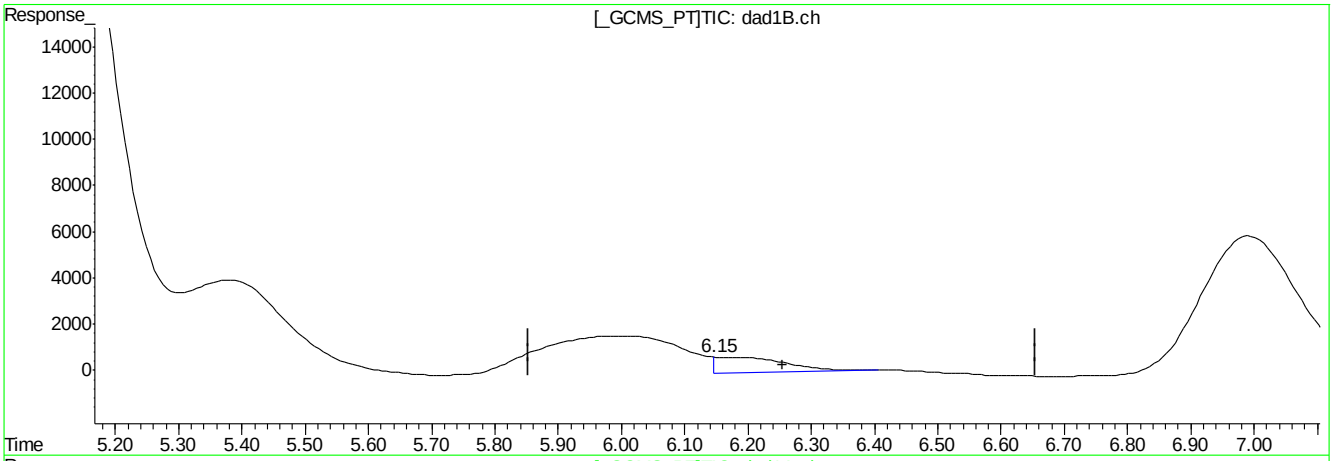
response 217060

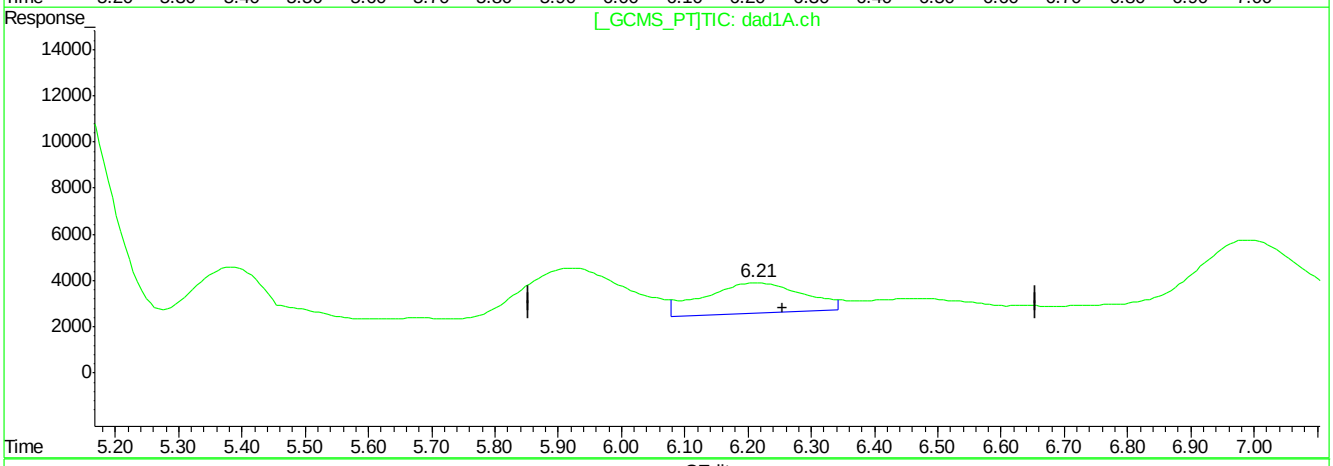
(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:15:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.15min 12.554ppb m

response 49993

(8) 3,5-Dinitroaniline #2

6.21min 20.575ppb m

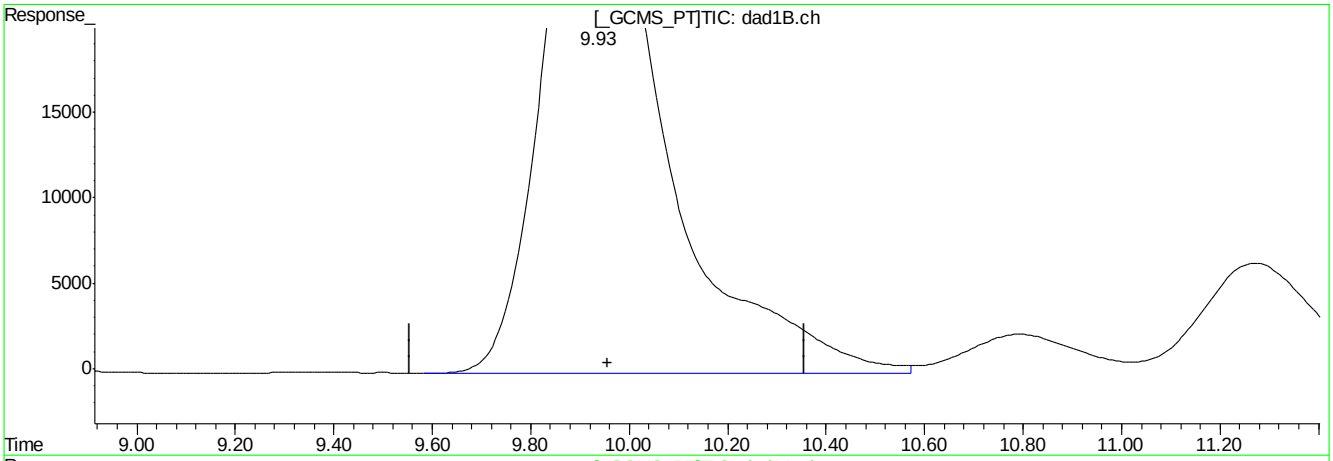
response 145765

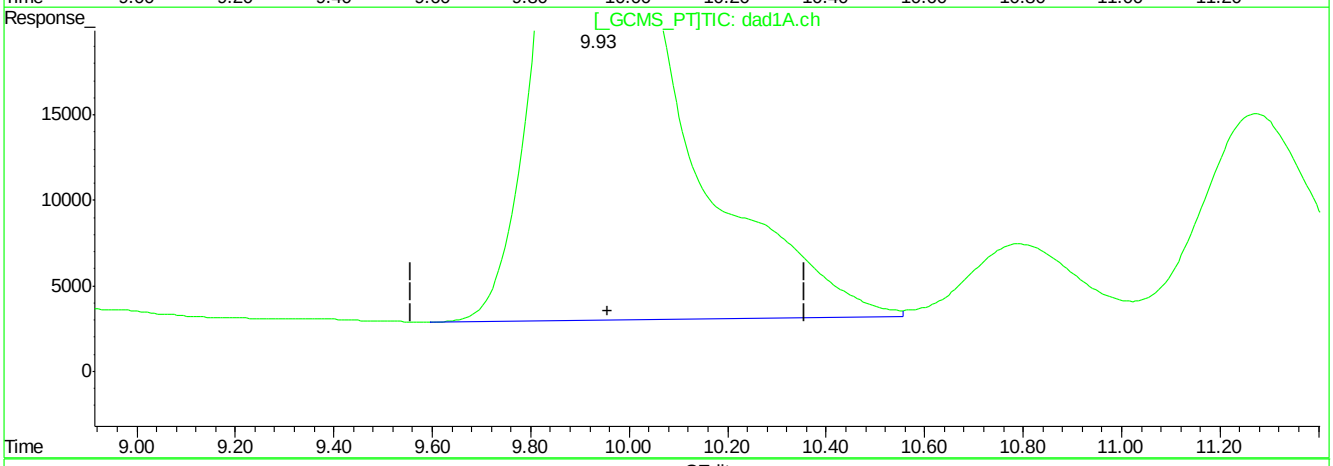
(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:15:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.93min 1503.037ppb

response 5683209

(12) 2,4,6-Trinitrotoluene #2

9.93min 1580.869ppb

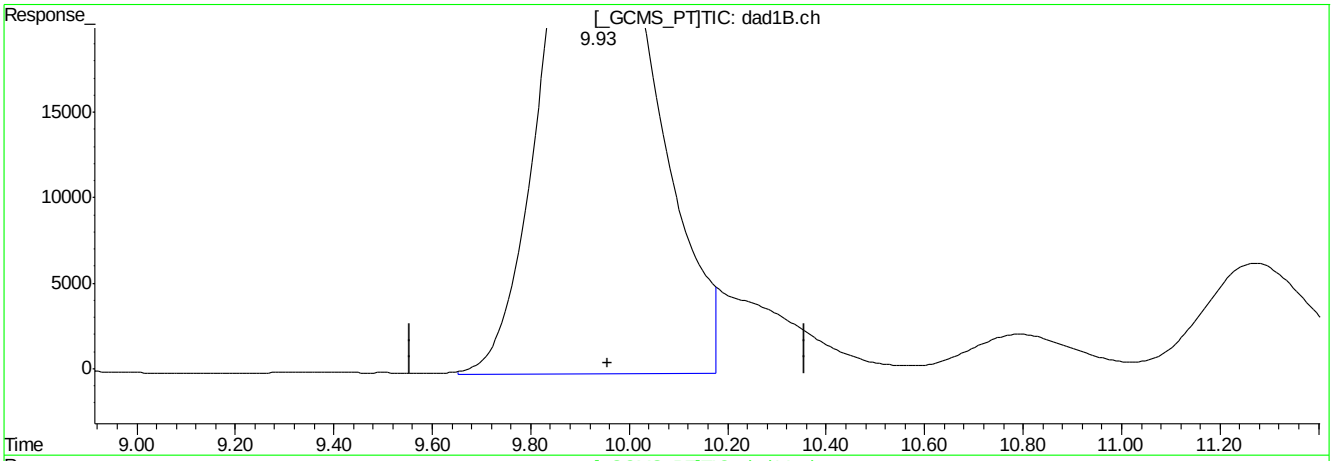
response 7073900

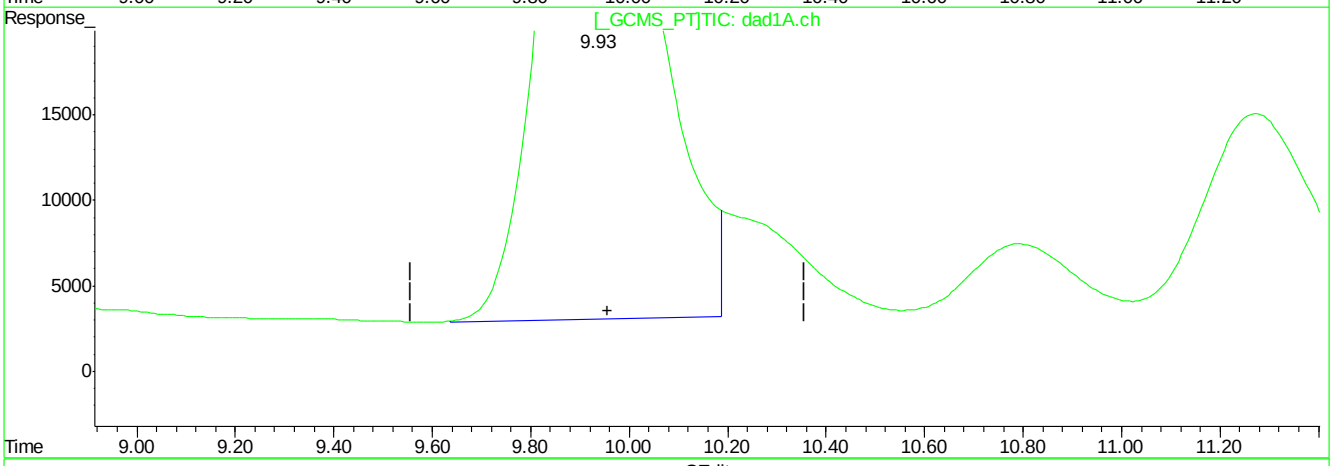
(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:15:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.93min 1364.524ppb m

response 5159472

(12) 2,4,6-Trinitrotoluene #2

9.93min 1419.132ppb m

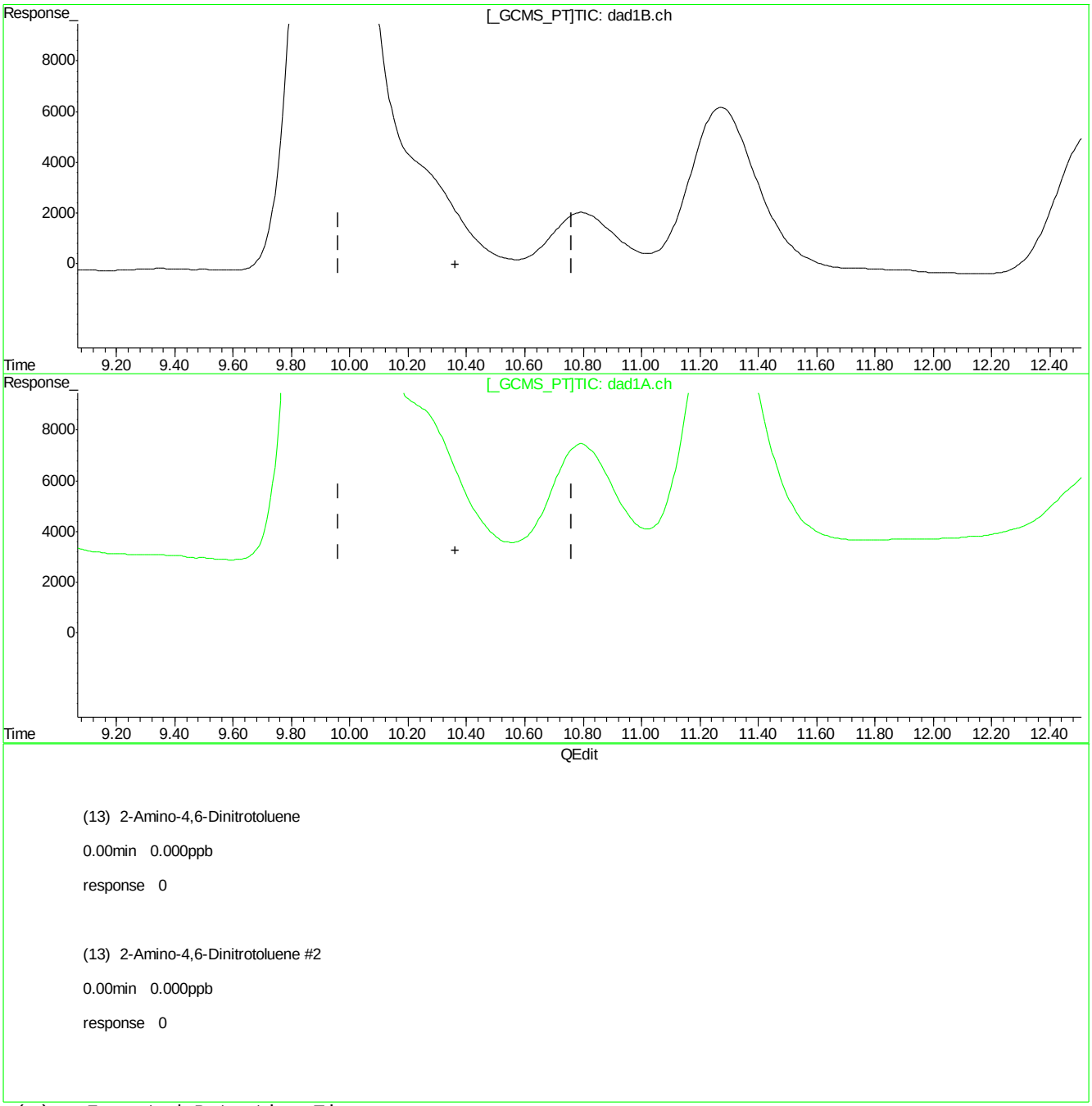
response 6350177

(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:15:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

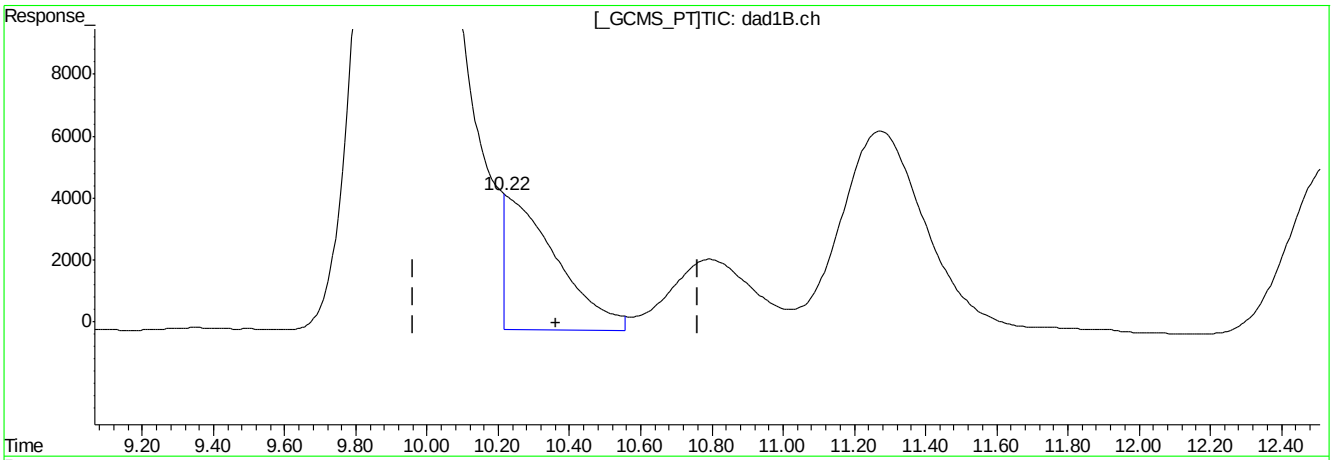


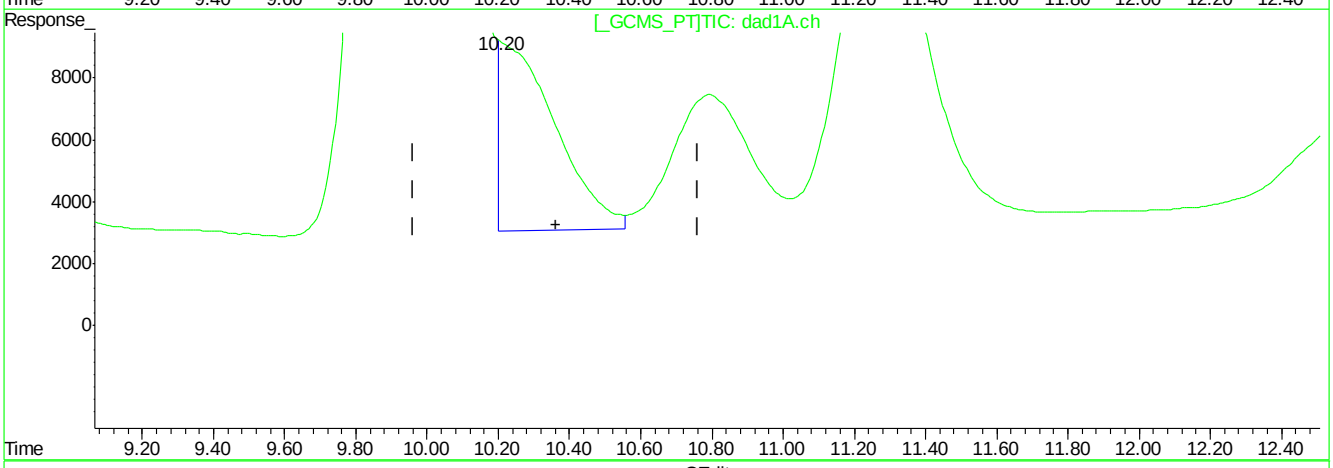
(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:16:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.22min 125.437ppb m

response 433856

(13) 2-Amino-4,6-Dinitrotoluene #2

10.20min 132.793ppb m

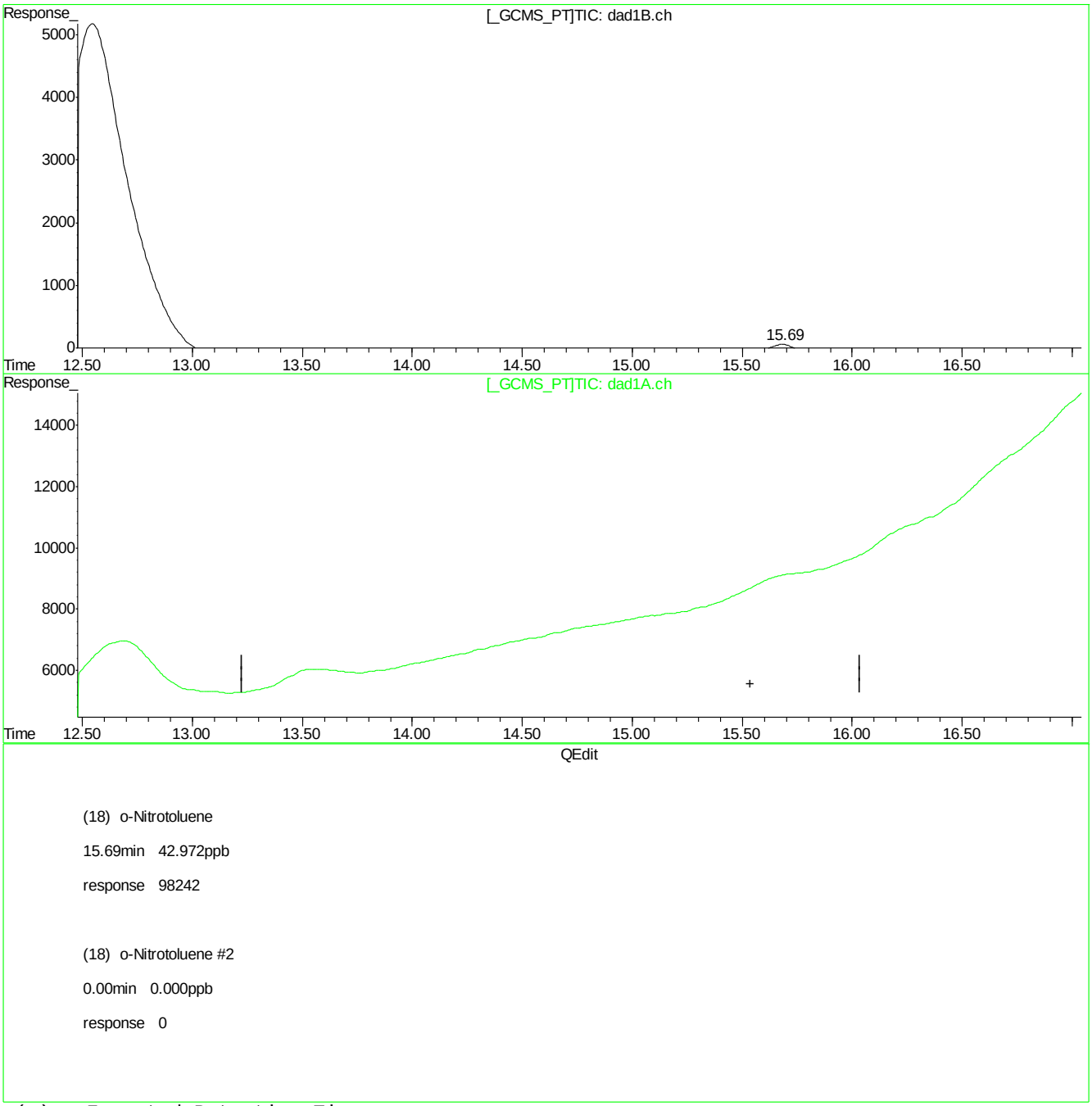
response 666030

(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:16:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

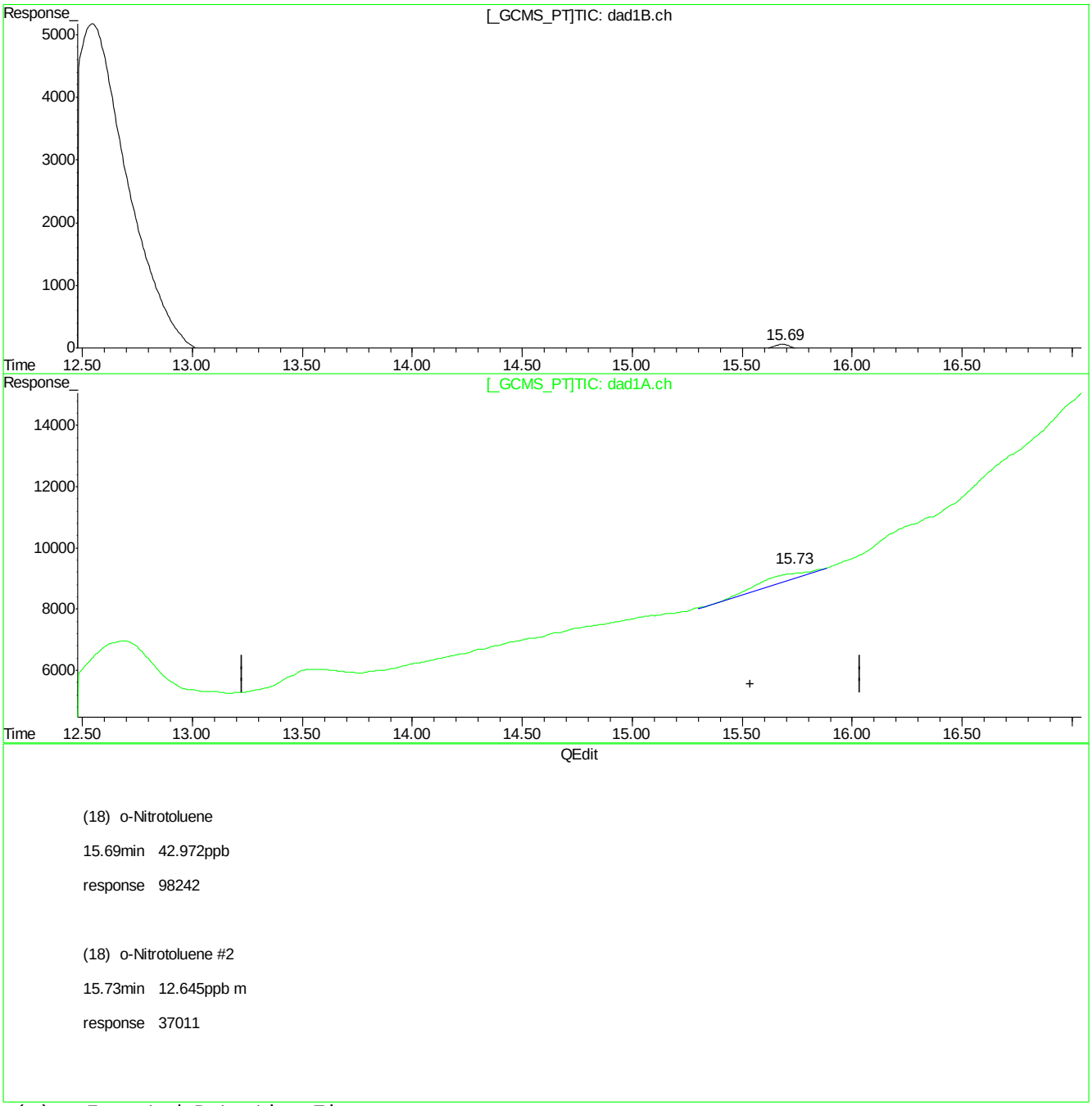


(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:16:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.69min 42.972ppb

response 98242

(18) o-Nitrotoluene #2

15.73min 12.645ppb m

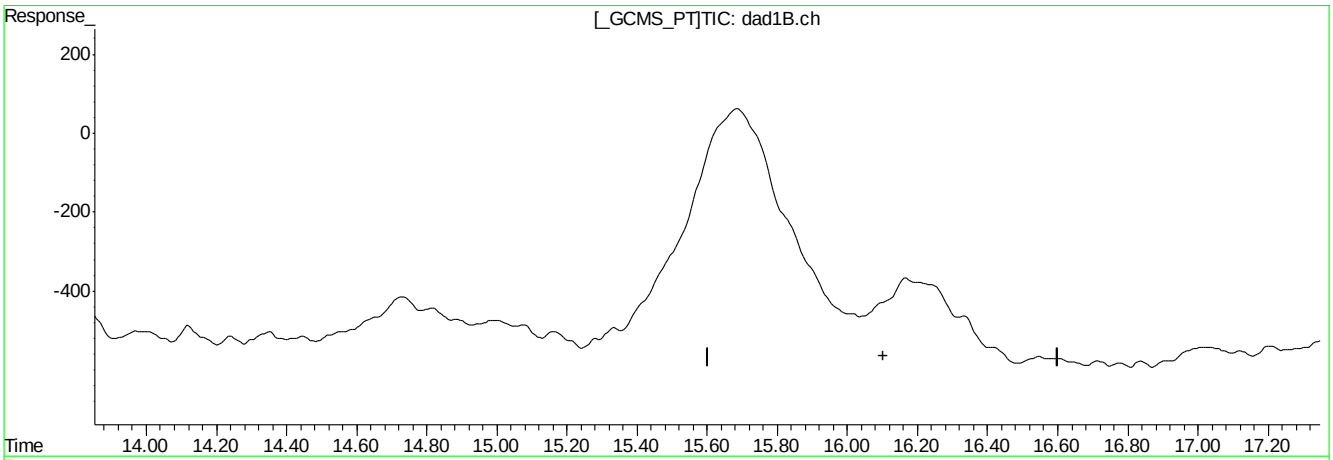
response 37011

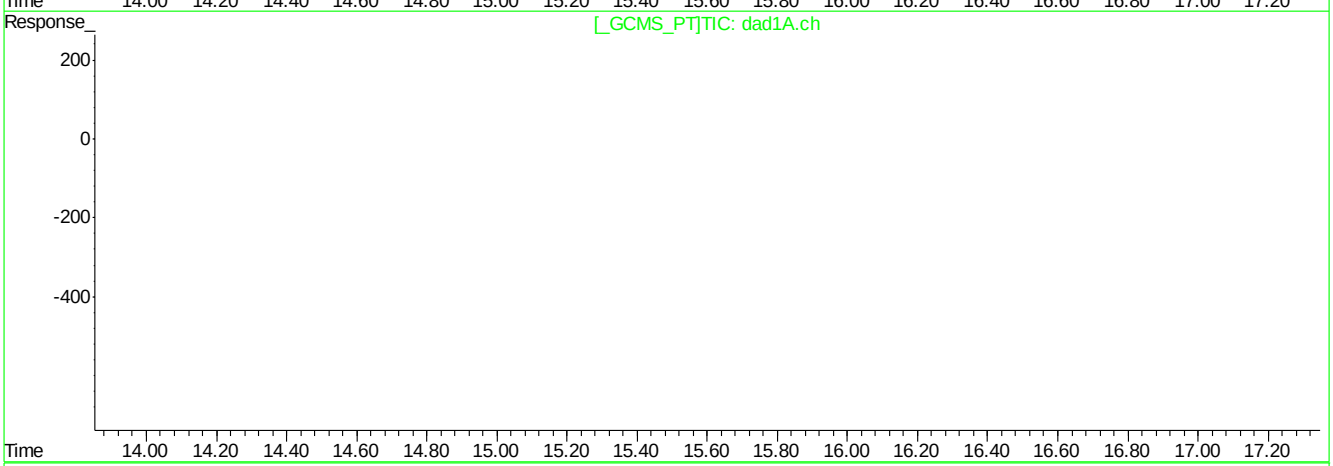
(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:16:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

0.00min 0.000ppb

response 0

(19) p-Nitrotoluene #2

0.00min 0.000ppb

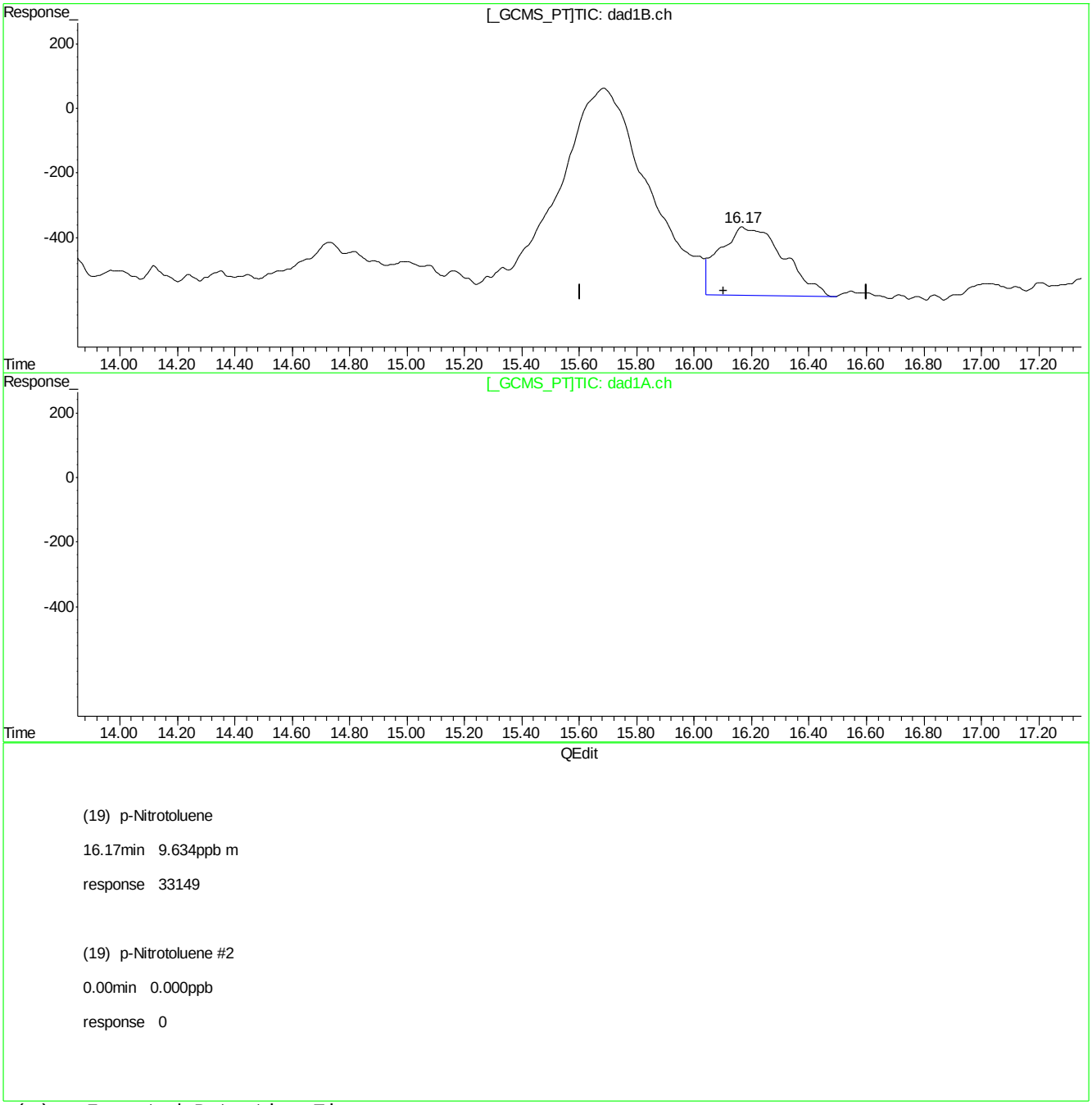
response 0

(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:16:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.17min 9.634ppb m

response 33149

(19) p-Nitrotoluene #2

0.00min 0.000ppb

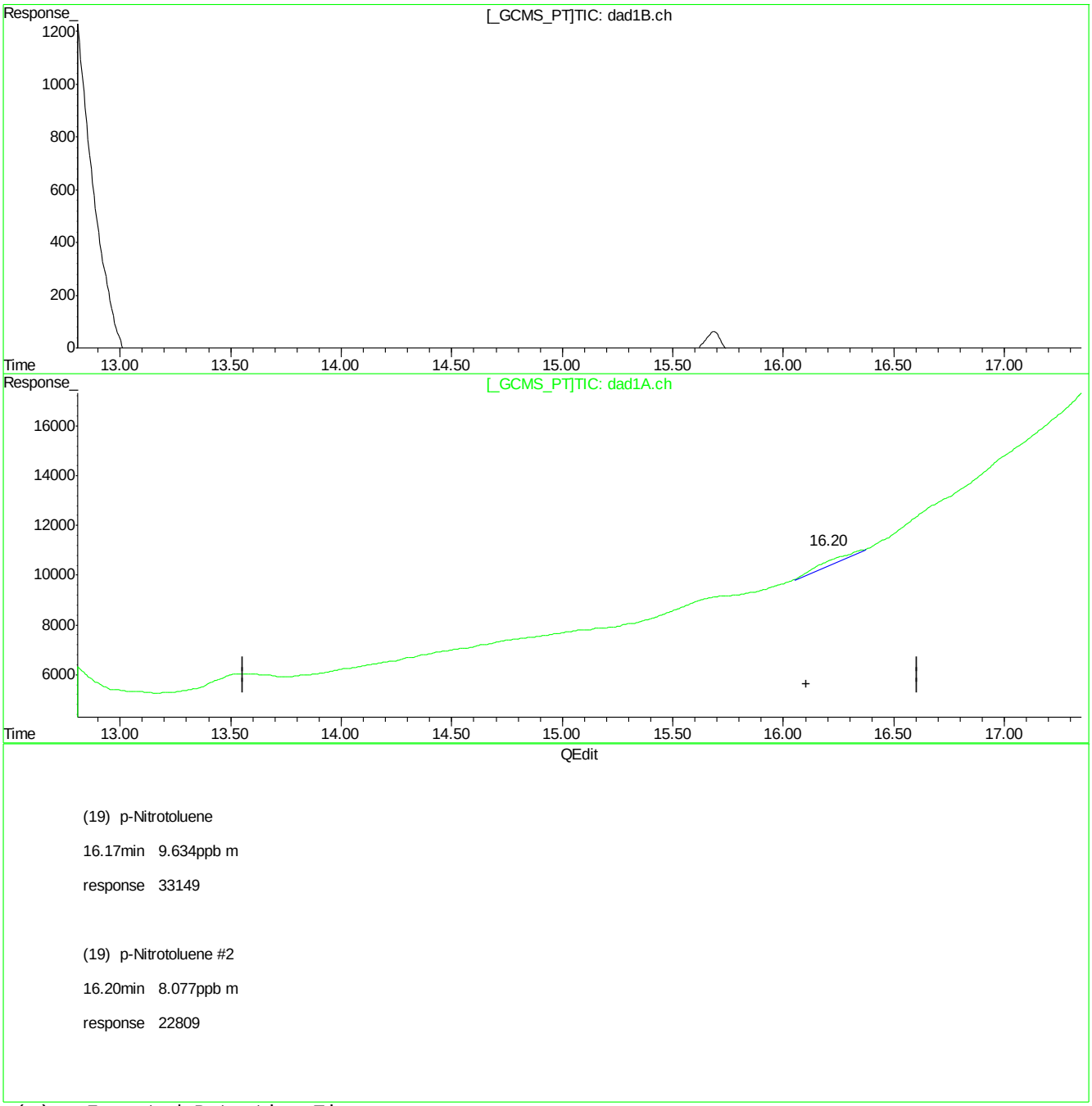
response 0

(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:16:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.17min 9.634ppb m

response 33149

(19) p-Nitrotoluene #2

16.20min 8.077ppb m

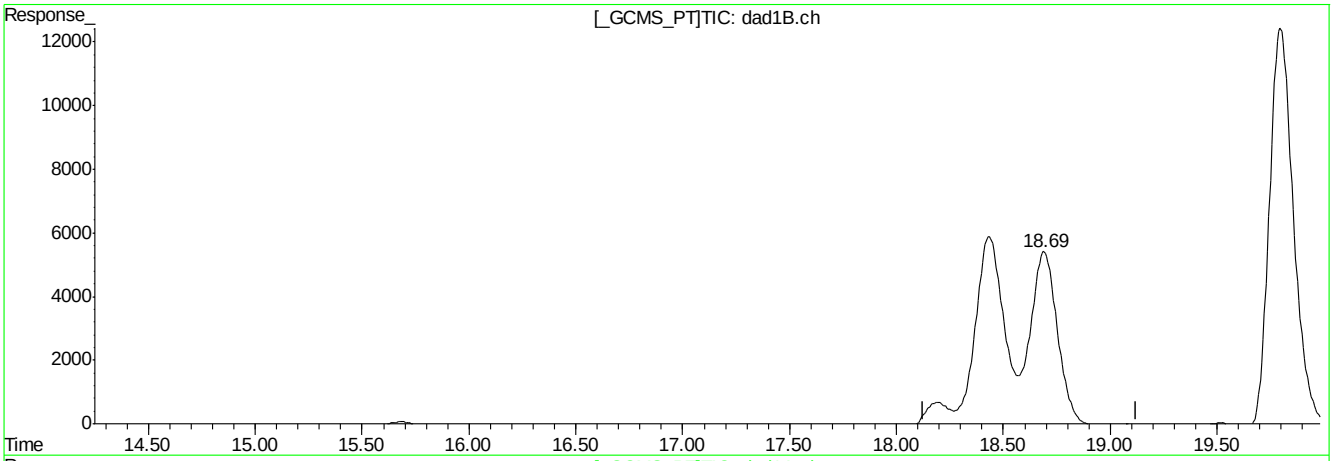
response 22809

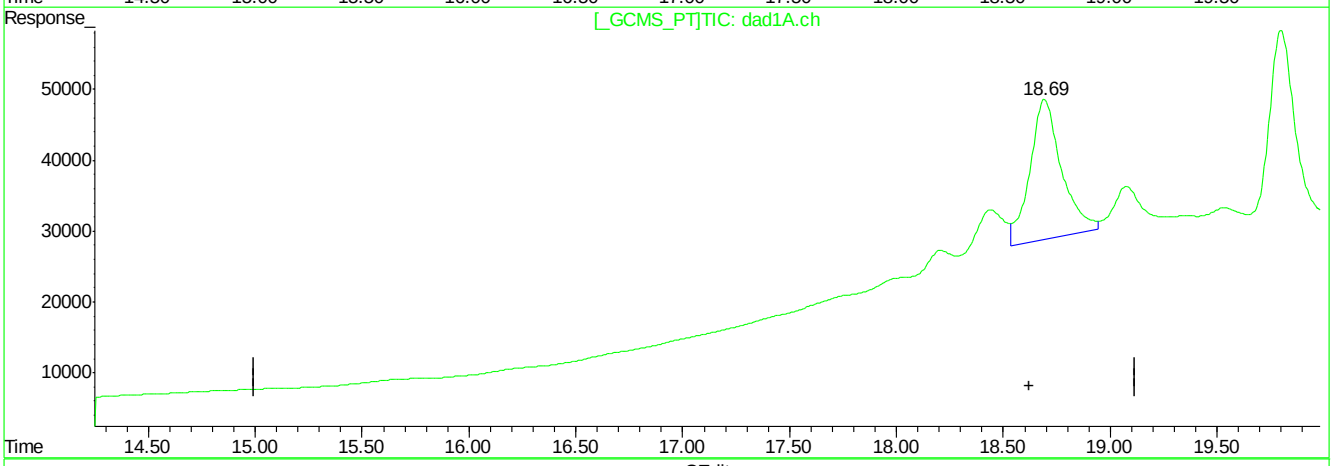
(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:17:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.69min 0.000ppb

response 661689

(21) PETN #2

18.69min 1602.864ppb

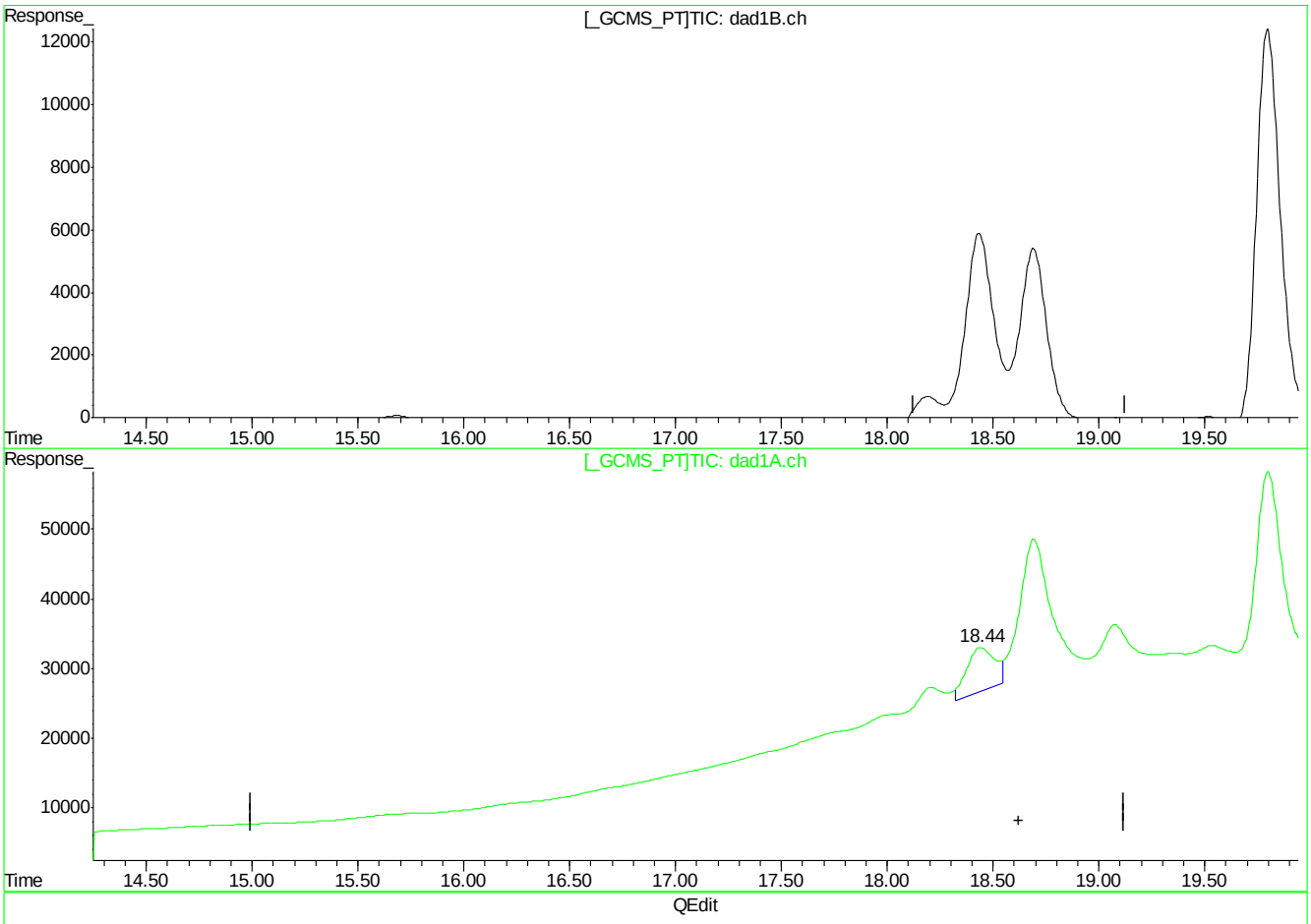
response 2047735

(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:17:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391154.D\dad1A.ch
Acq On : 09-Aug-2021, 21:08:01 Operator: jamesb
Sample : FA87622-1 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.44min 459.017ppb m

response 586416

(+) = Expected Retention Time
PP391154.D GPP2464_080321PRI.M Thu Aug 12 15:17:15 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 08/13/21 17:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : op86727,GGG3025,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:49 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.90	13.90	2739712	4922100	548.848	504.980m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		109.77%	101.00%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.50	7.50	3614818	4017299	390.951m	434.480m
6)	RDX	7.61	7.61	1286876	1331118	320.352m	331.365m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.63	11.63	12232214	15910925	1421.781	1358.648m
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.60	15.57	411120	584615	44.009	38.029m
16)	o-Nitrotoluene	16.42	16.28	129193	468310	26.532	63.660 #
17)	p-Nitrotoluene	17.34	17.34	1506496	1776488	296.374m	203.619m
18)	4-Amino-2,6-Dini	17.34	17.34	1410583	1560782	277.505m	178.895m
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.16	19.17	1408975	1517085	171.347	141.396m
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

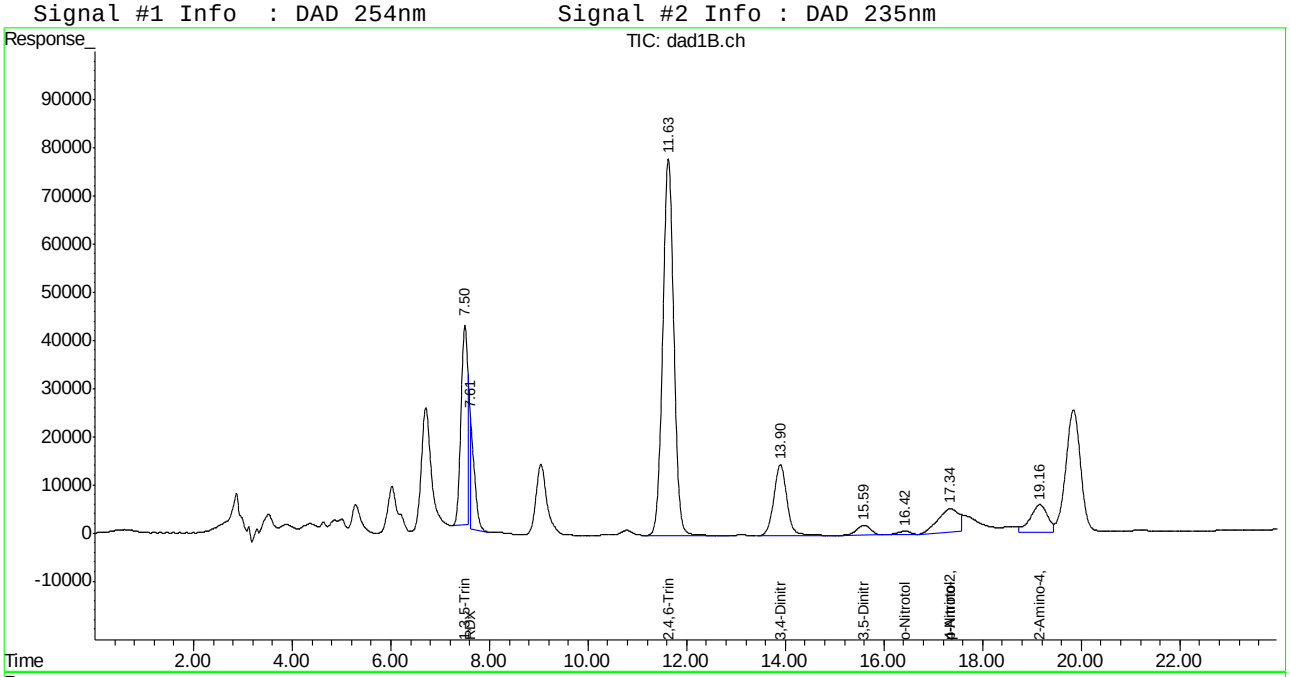
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

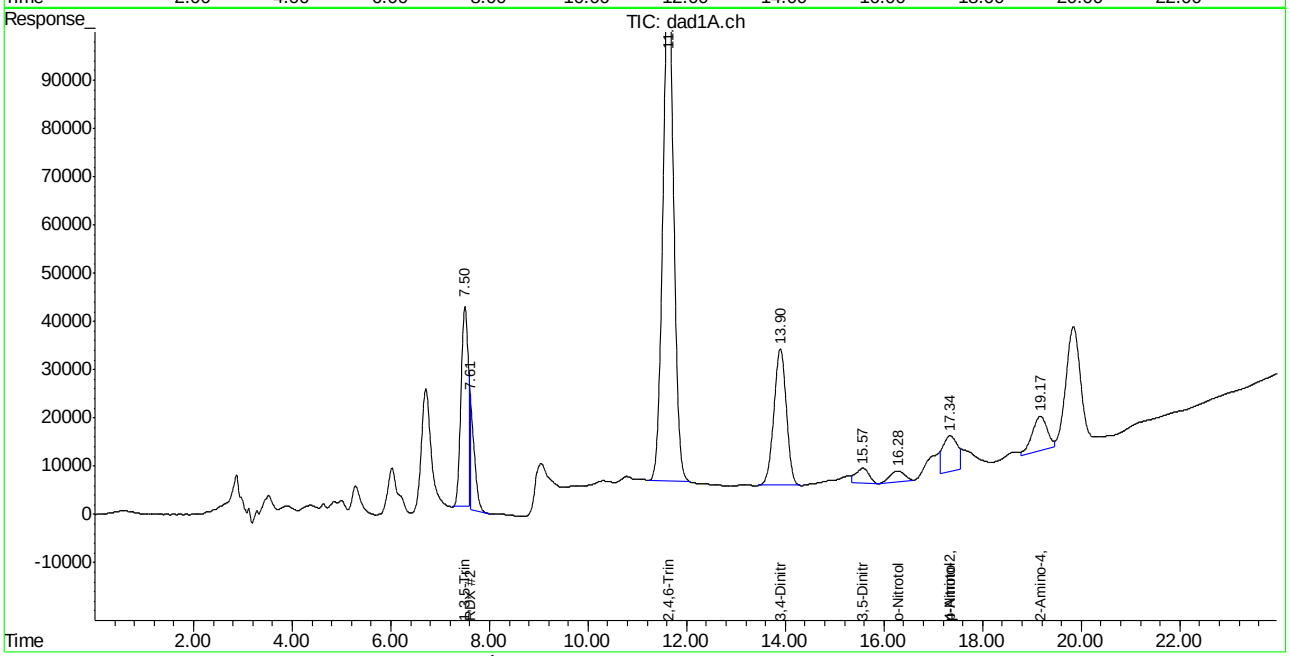
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : op86727,GGG3025,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:40 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

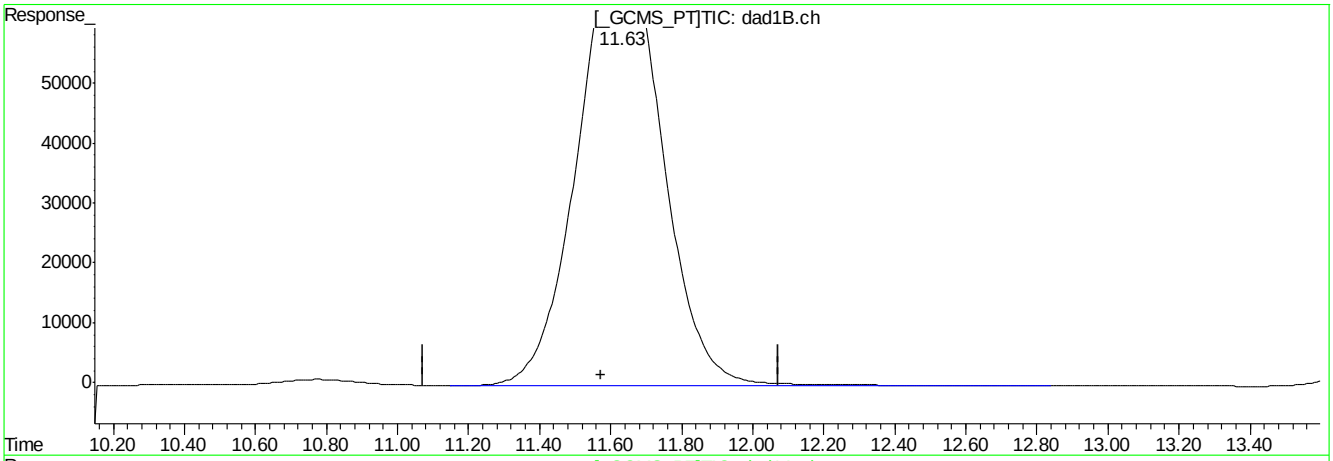
Sample Number: FA87622-1
Lab FileID: GG622043.D
Injection Time: 08/13/21 00:59
Method: SW846 8330B
Analyst approved: 08/13/21 11:12 James Boone
Supervisor approved: 08/13/21 17:26 Naresh Jiawan

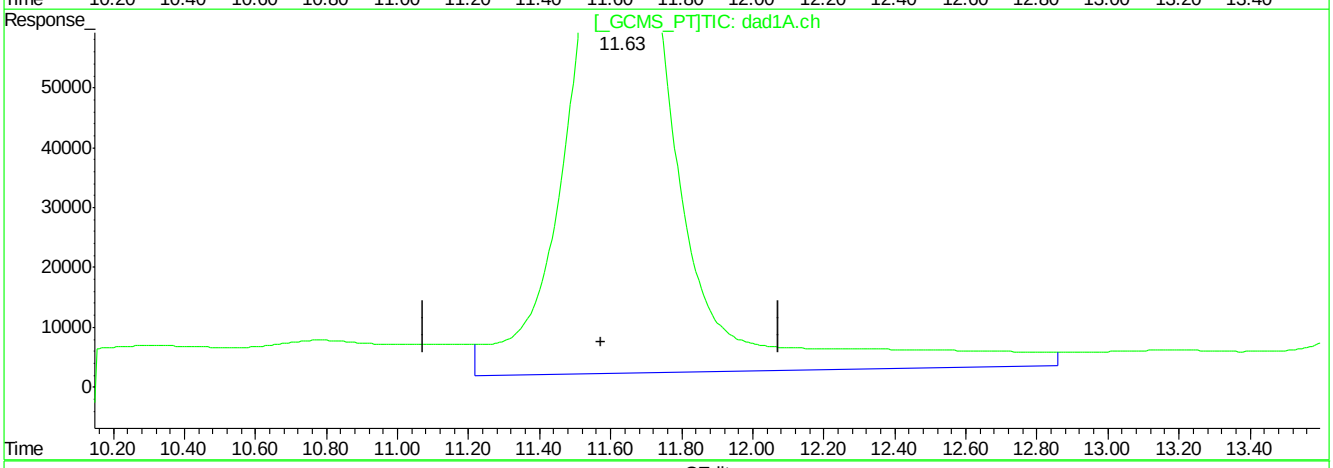
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	1	7.50	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.50	Poor instrument integration
RDX	121-82-4	1	7.61	Poor instrument integration
RDX	121-82-4	2	7.61	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.63	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	13.90	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	15.57	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	17.34	Poor instrument integration
p-Nitrotoluene	99-99-0	1	17.34	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.34	Poor instrument integration
p-Nitrotoluene	99-99-0	2	17.34	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.17	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.63min 1421.781ppb

response 12232214

(9) 2,4,6-Trinitrotoluene #2

11.63min 1682.142ppb

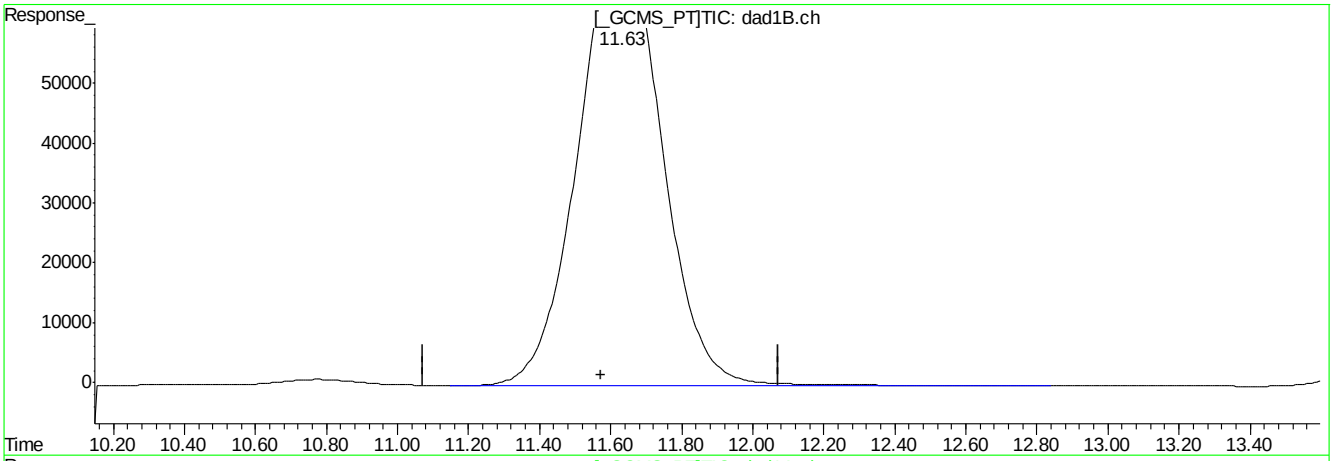
response 19699314

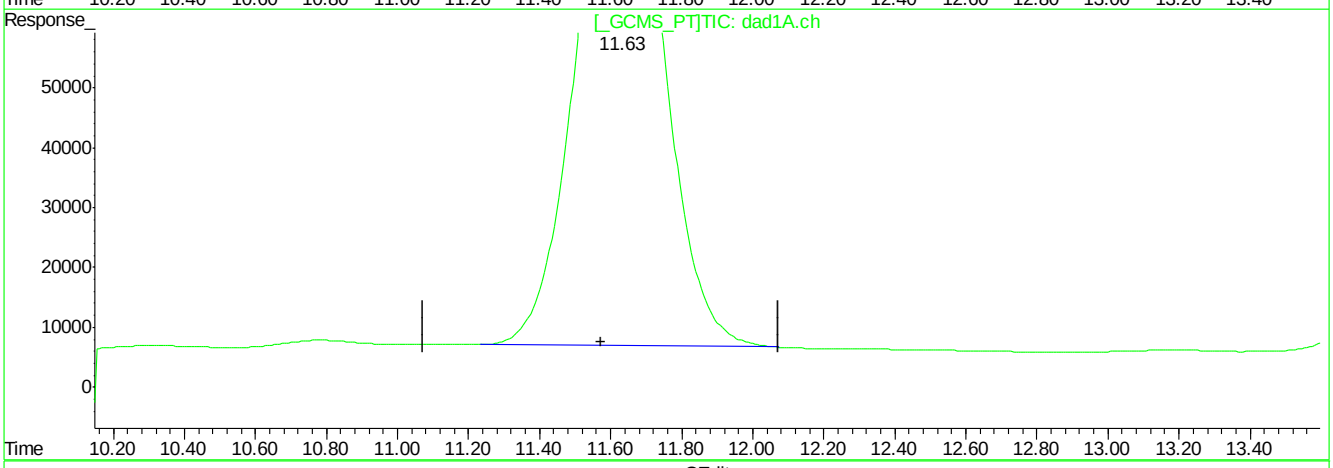
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:37:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.63min 1421.781ppb

response 12232214

(9) 2,4,6-Trinitrotoluene #2

11.63min 1358.648ppb m

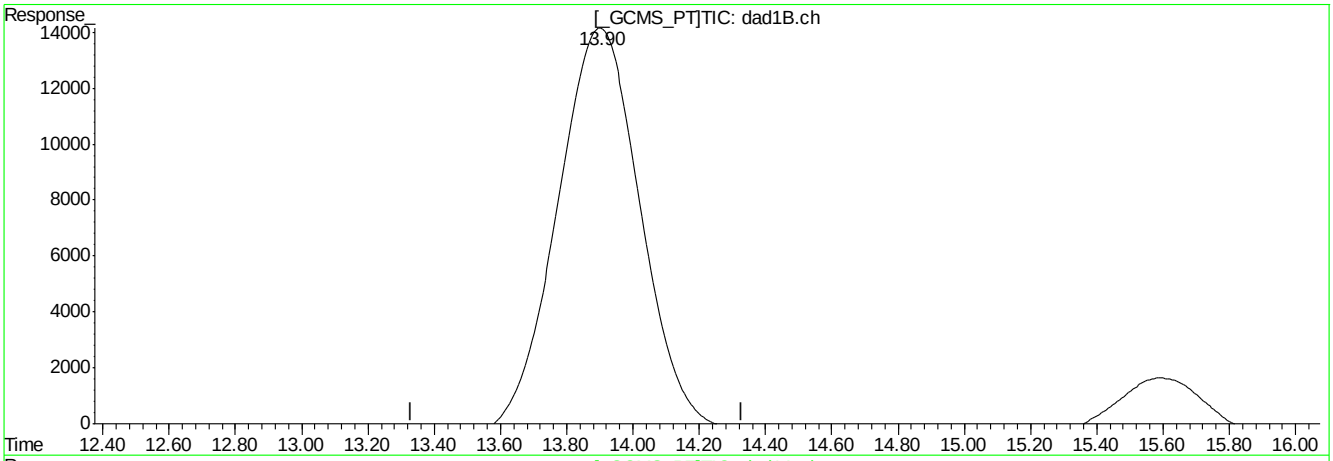
response 15910925

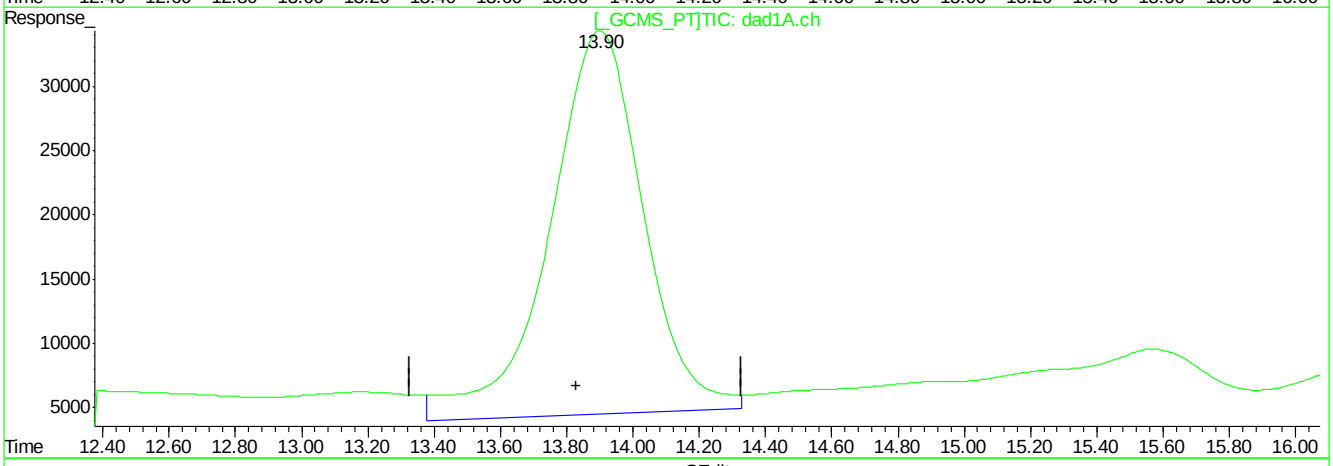
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:37:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.90min 548.848ppb

response 2739712

(12) 3,4-Dinitrotoluene #2 (S)

13.90min 601.607ppb

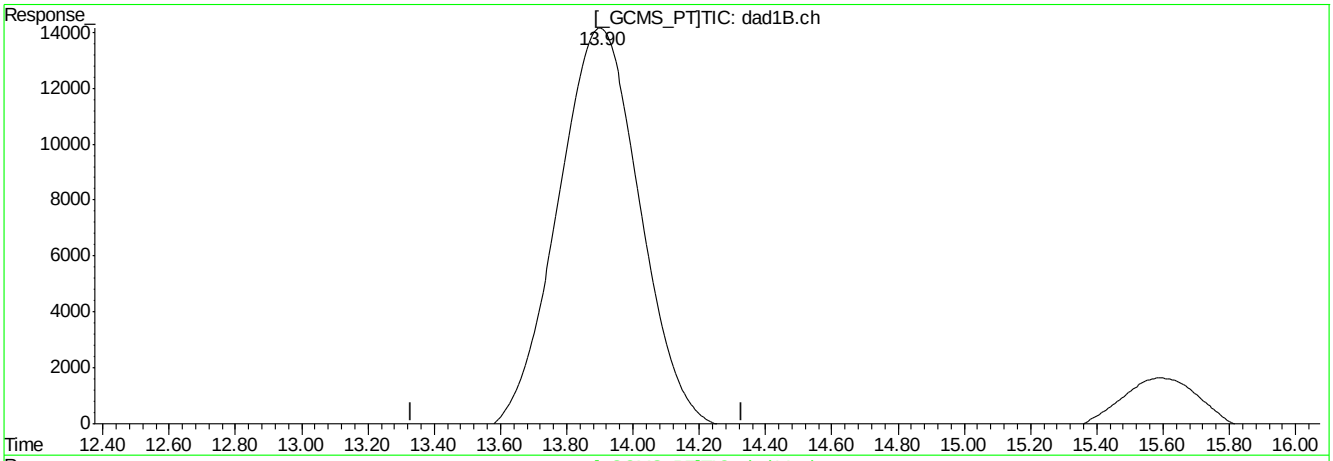
response 5863933

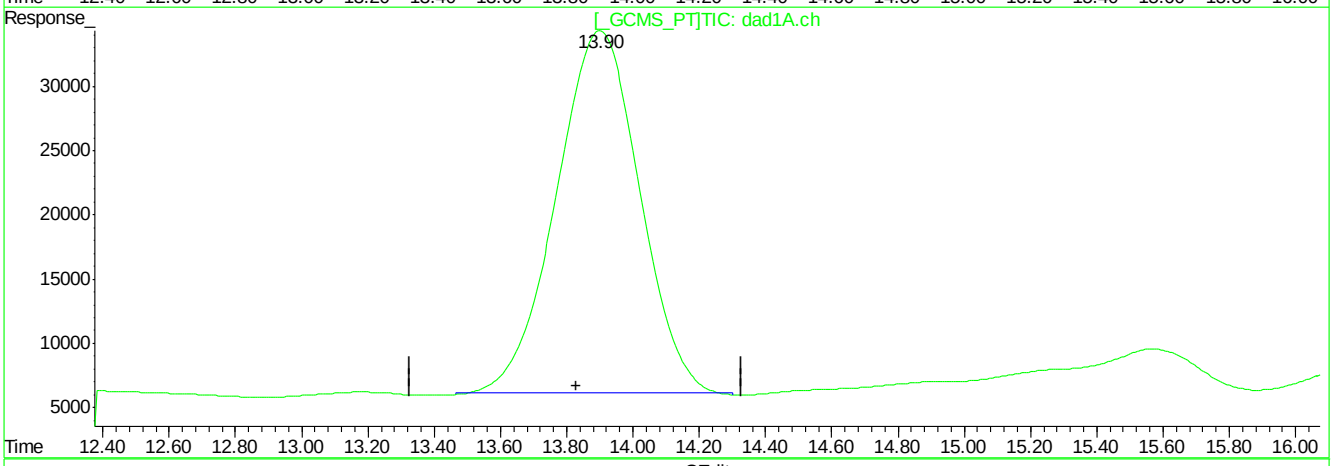
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:37:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.90min 548.848ppb

response 2739712

(12) 3,4-Dinitrotoluene #2 (S)

13.90min 504.980ppb m

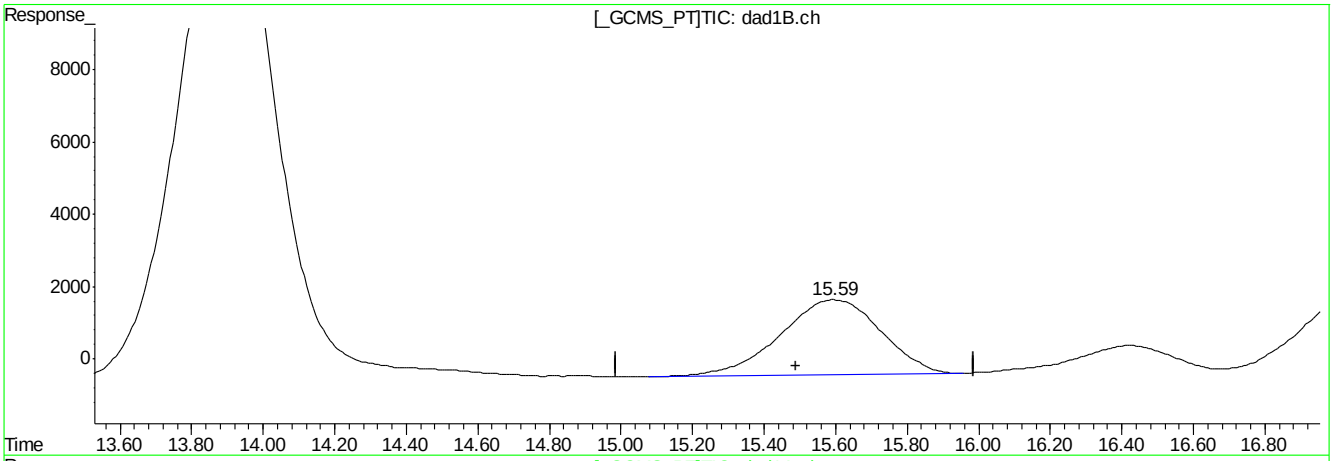
response 4922100

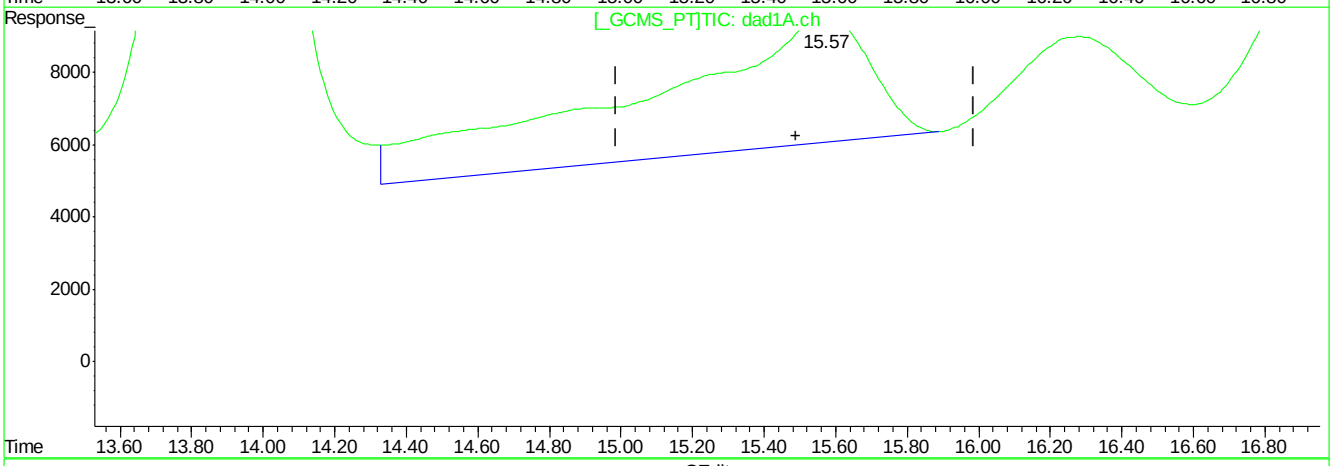
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:38:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,5-Dinitroaniline

15.60min 44.009ppb

response 411120

(15) 3,5-Dinitroaniline #2

15.57min 106.497ppb

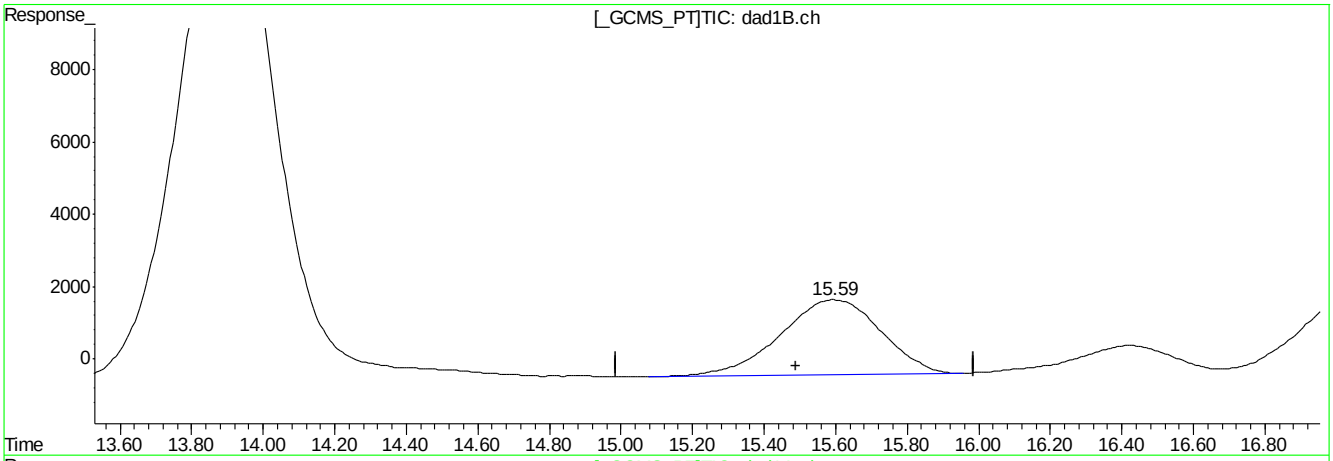
response 1637157

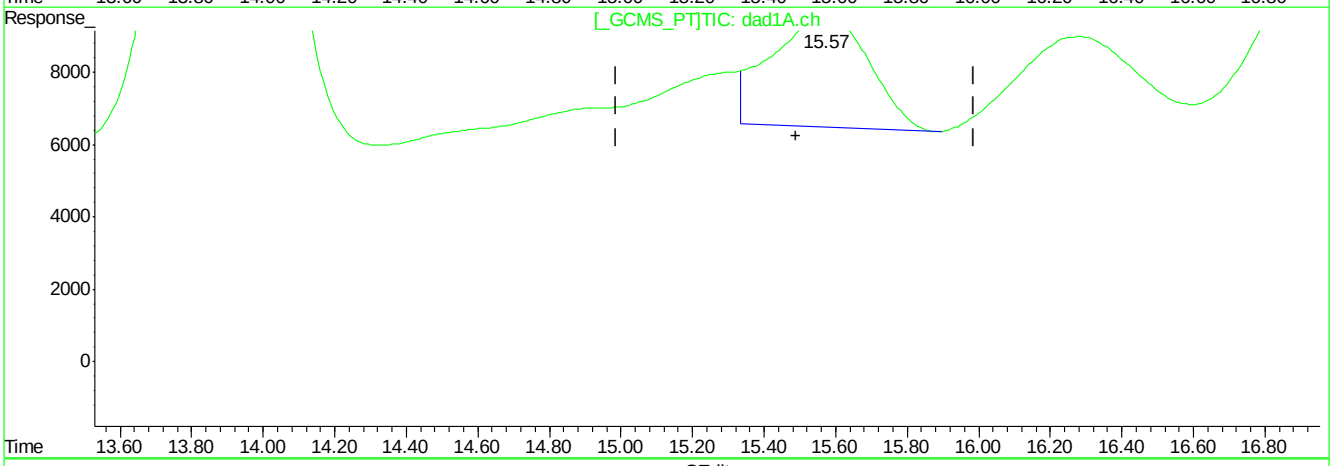
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:38:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,5-Dinitroaniline

15.60min 44.009ppb

response 411120

(15) 3,5-Dinitroaniline #2

15.57min 38.029ppb m

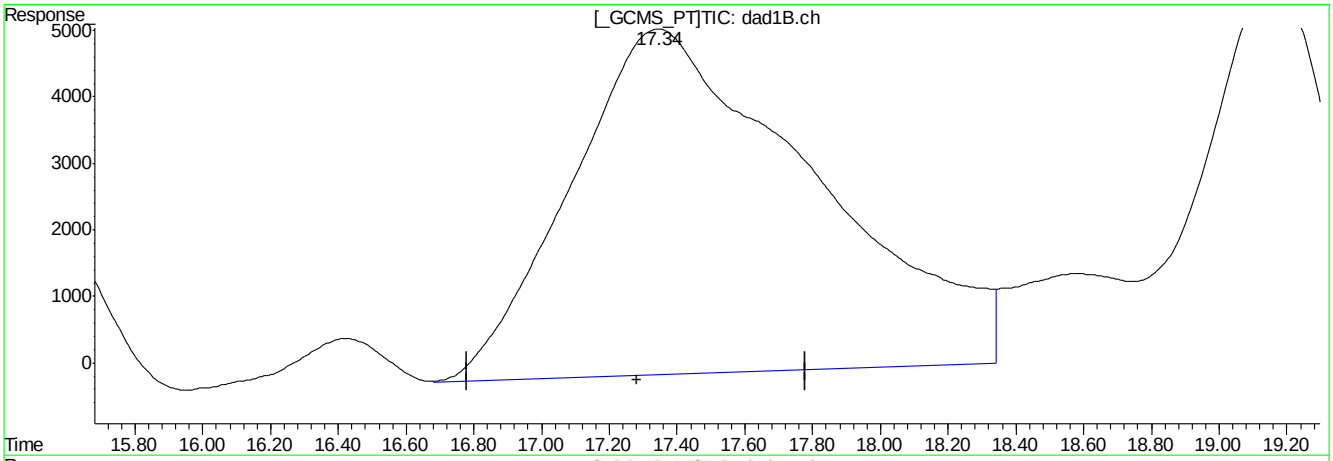
response 584615

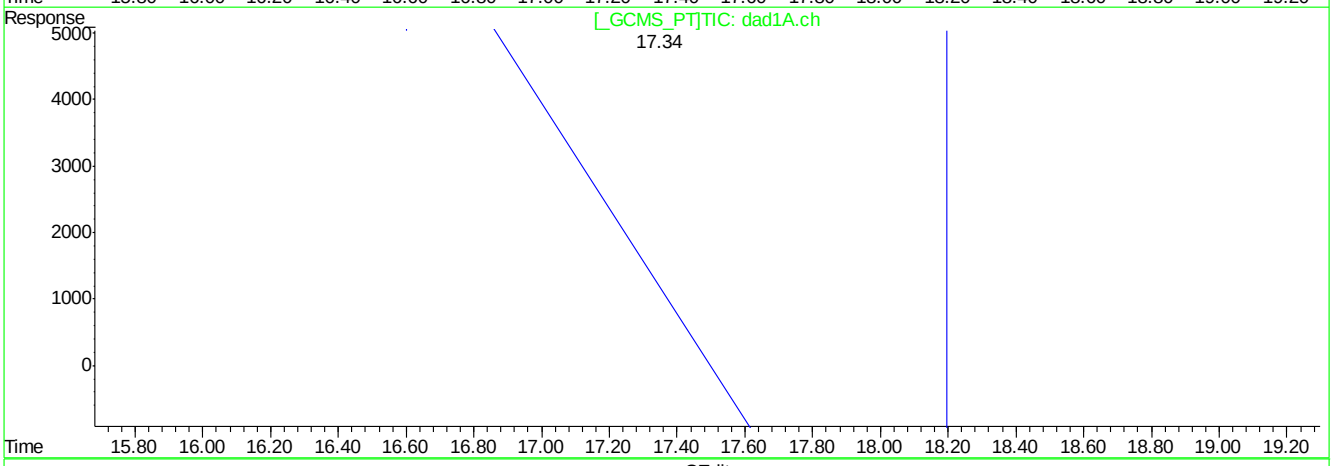
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:38:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.35min 511.888ppb

response 2601977

(17) p-Nitrotoluene #2

17.34min 353.587ppb

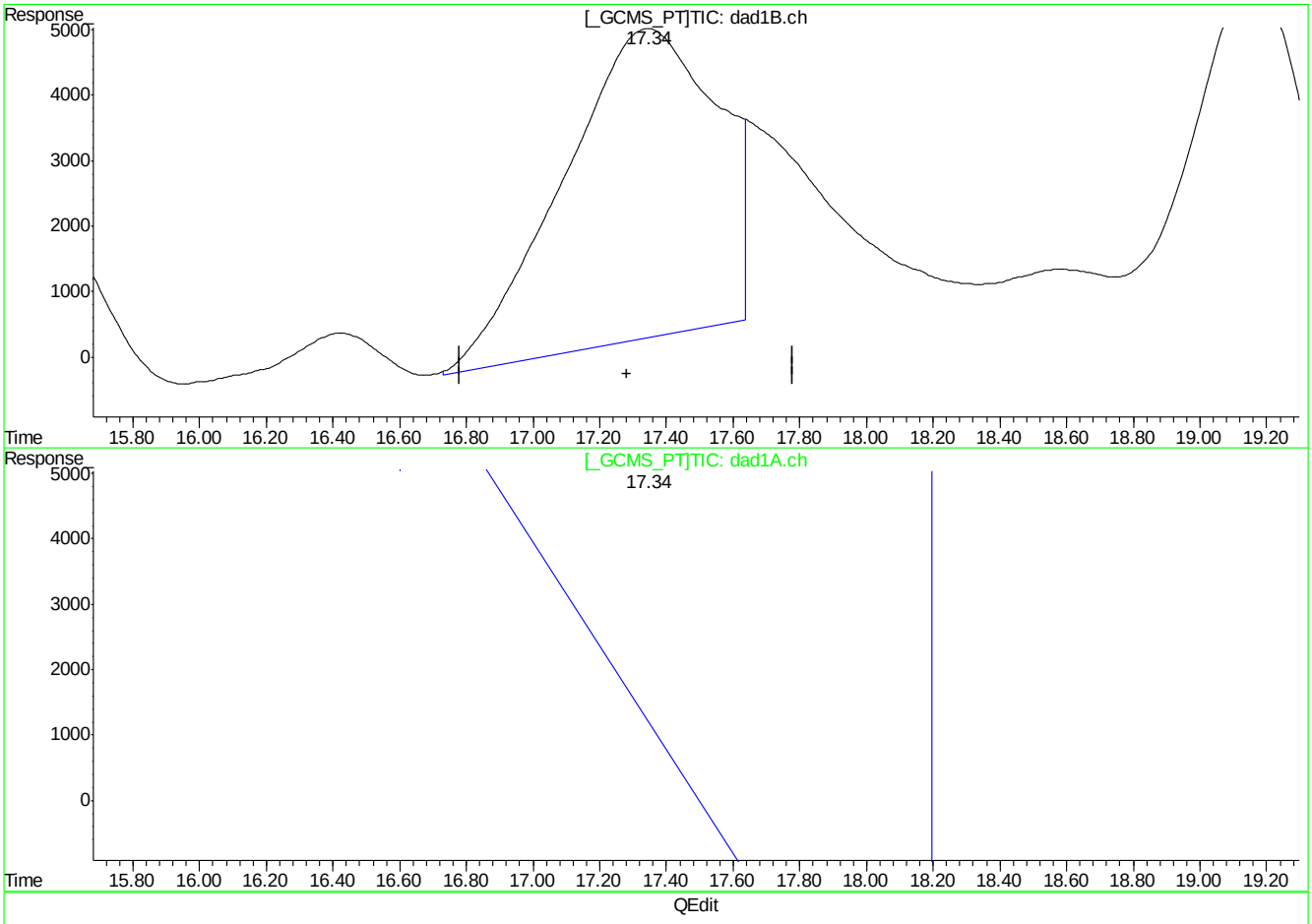
response 3084890

(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:38:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration



(17) p-Nitrotoluene

17.34min 296.374ppb m

response 1506496

(17) p-Nitrotoluene #2

17.34min 353.587ppb

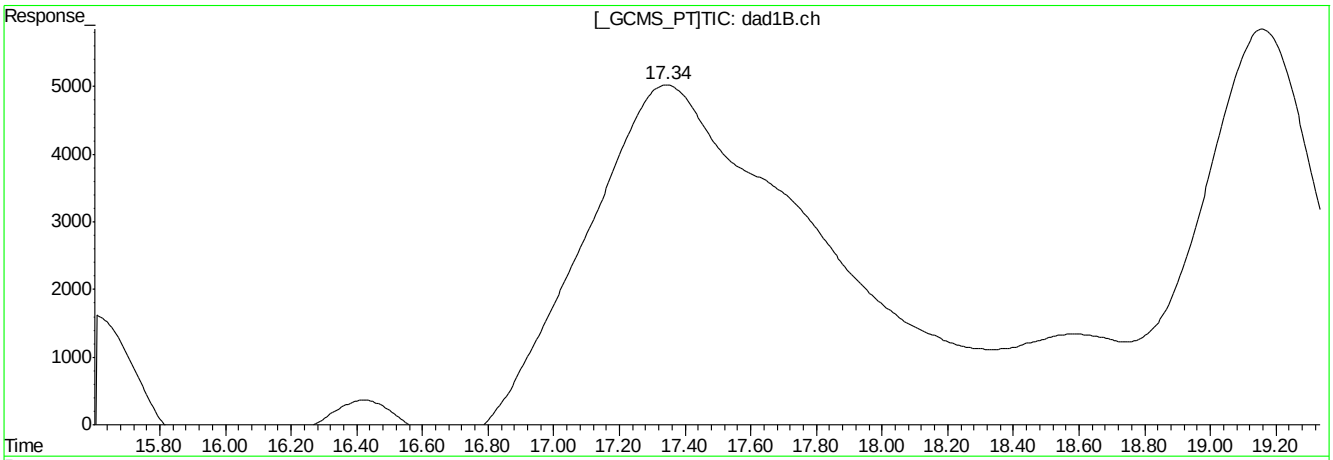
response 3084890

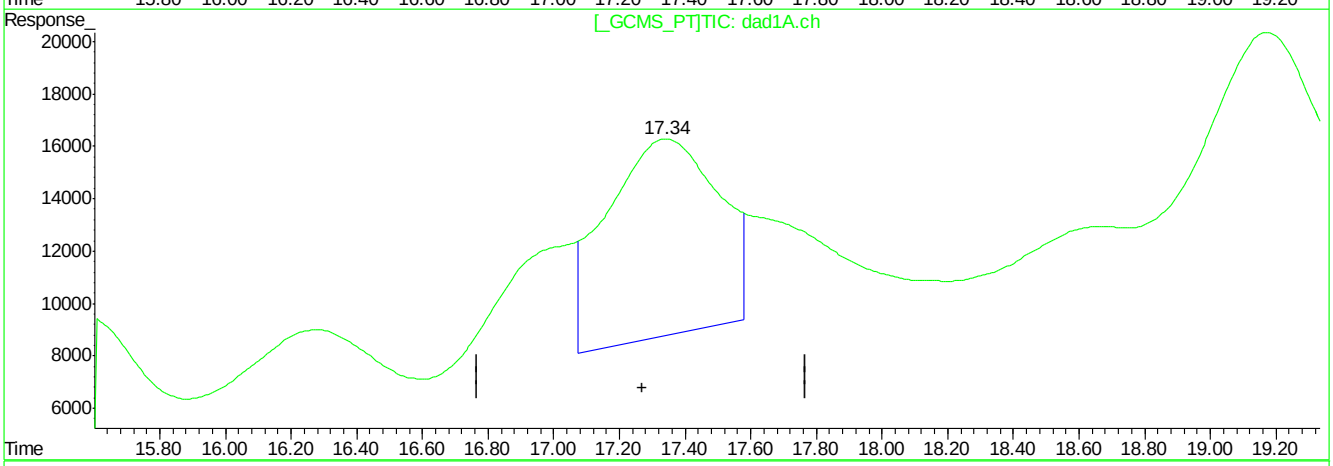
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:38:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.34min 296.374ppb m

response 1506496

(17) p-Nitrotoluene #2

17.34min 203.619ppb m

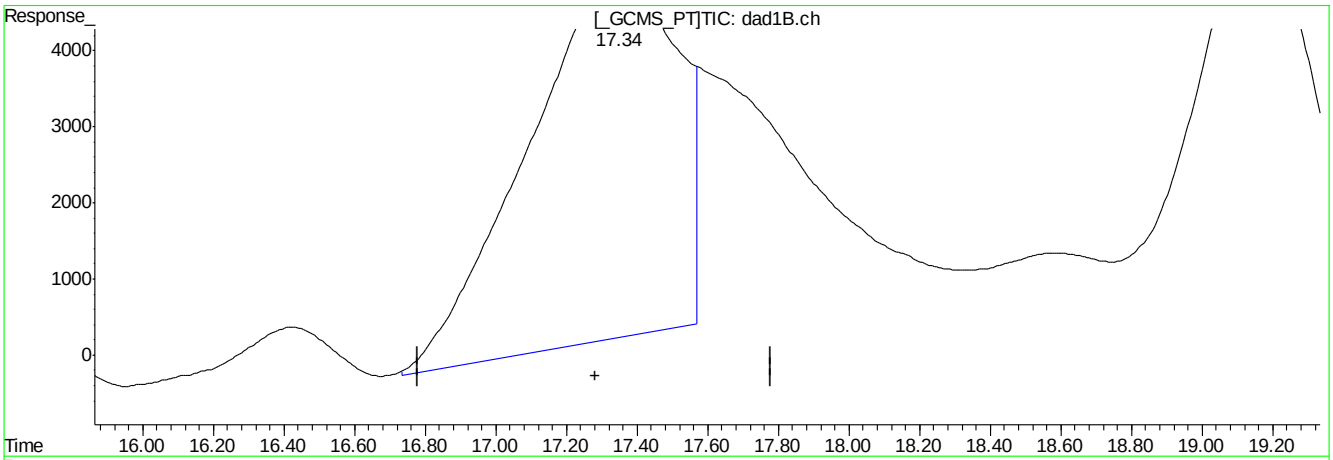
response 1776488

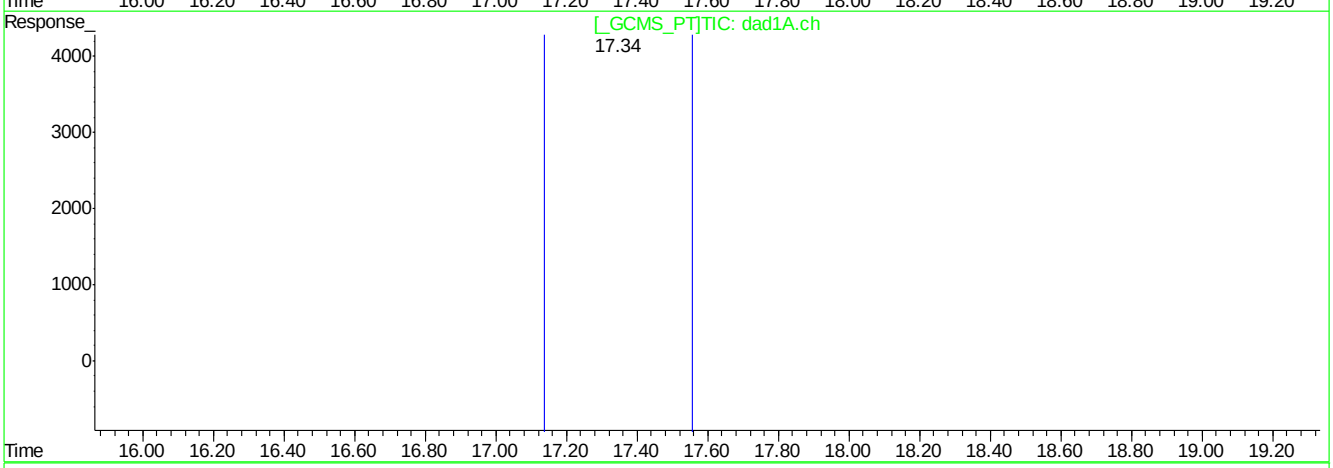
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:38:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.34min 277.505ppb m

response 1410583

(18) 4-Amino-2,6-Dinitrotoluene #2

17.34min 178.895ppb m

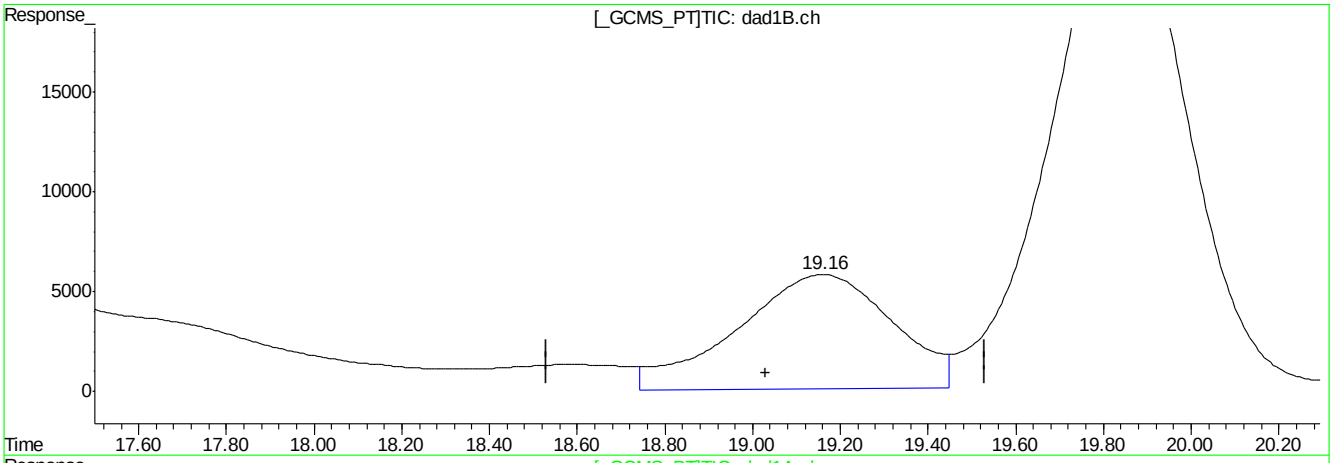
response 1560782

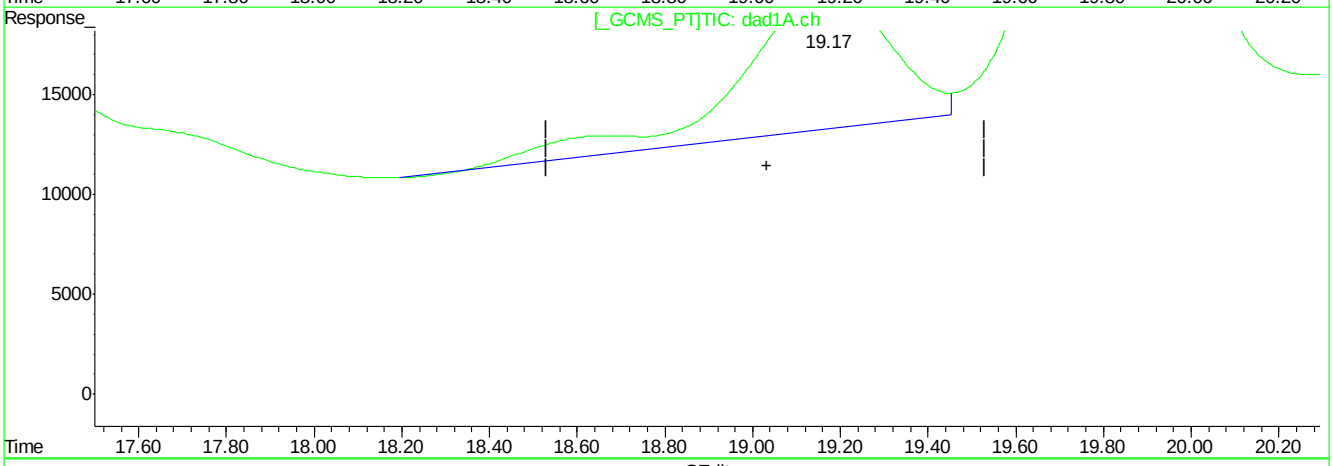
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:38:51 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.16min 171.347ppb

response 1408975

(20) 2-Amino-4,6-Dinitrotoluene #2

19.17min 154.912ppb

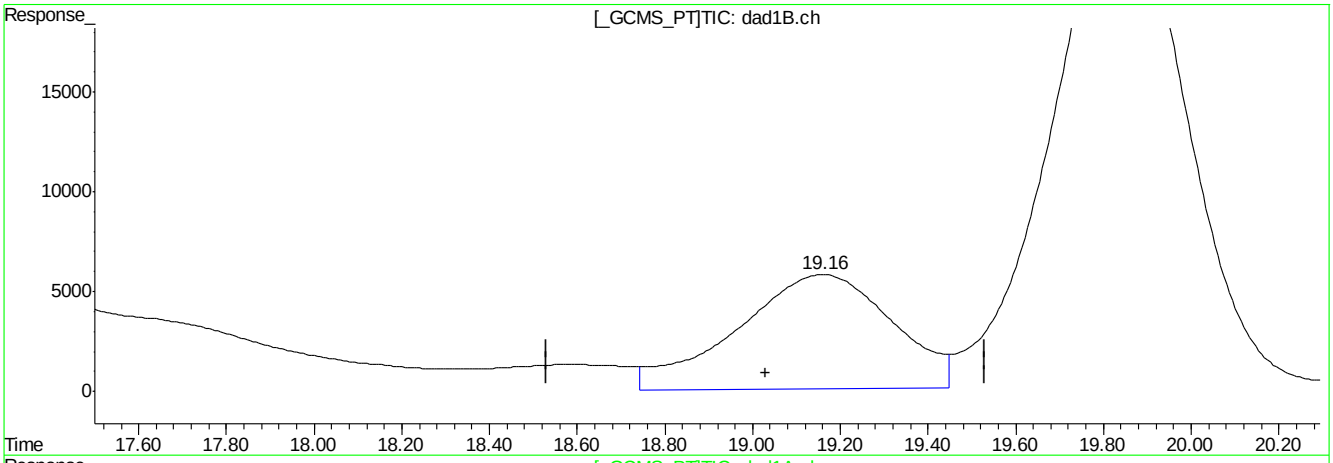
response 1662099

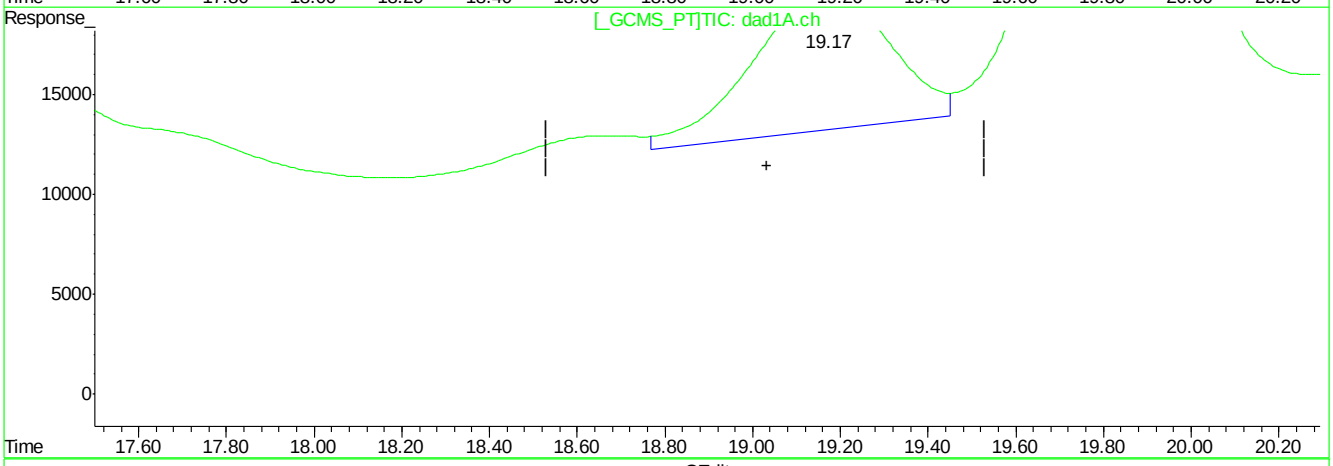
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:38:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.16min 171.347ppb

response 1408975

(20) 2-Amino-4,6-Dinitrotoluene #2

19.17min 141.396ppb m

response 1517085

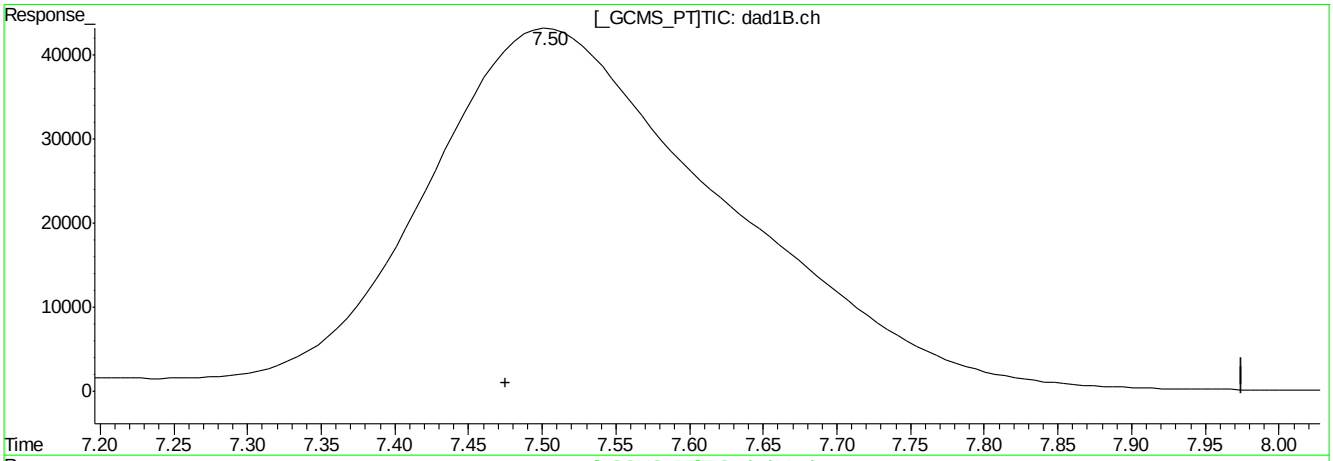
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:39:02 2021

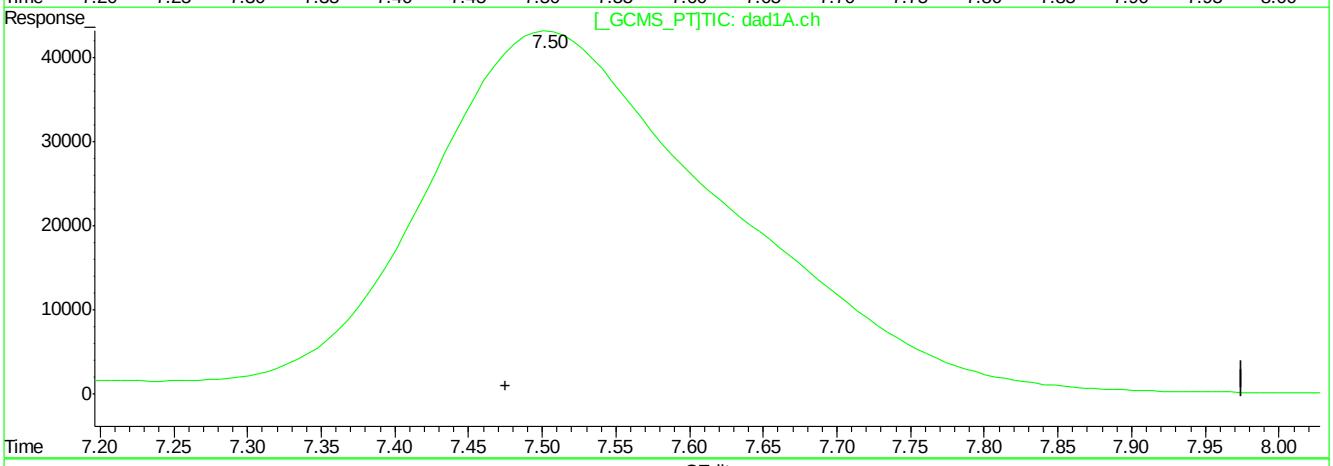
GG622043.D edits: 2-Amino-4,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.50min 666.392ppb

response 6161611

(5) 1,3,5-Trinitrobenzene #2

7.50min 666.392ppb

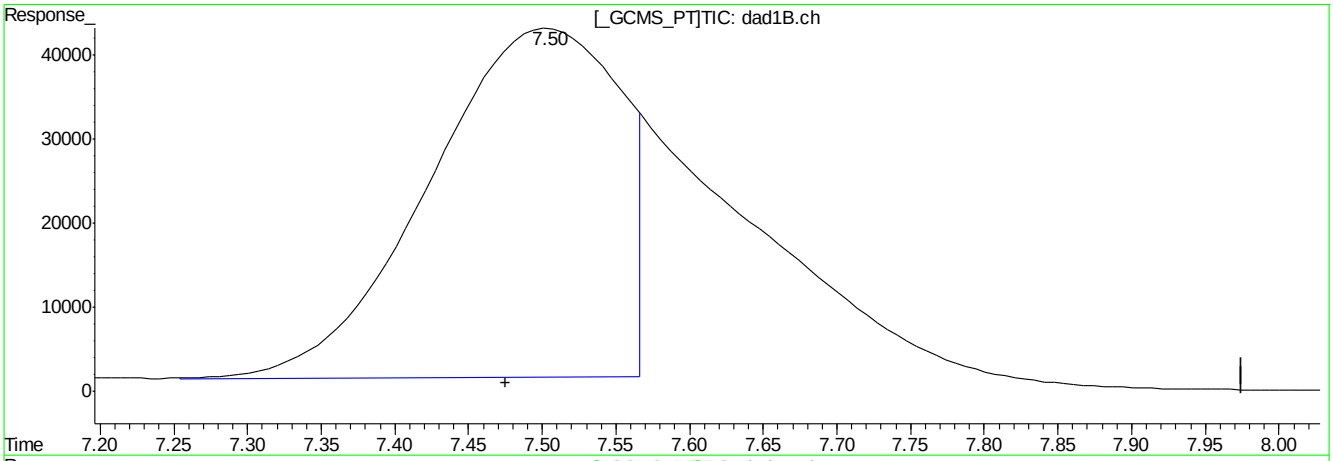
response 6161611

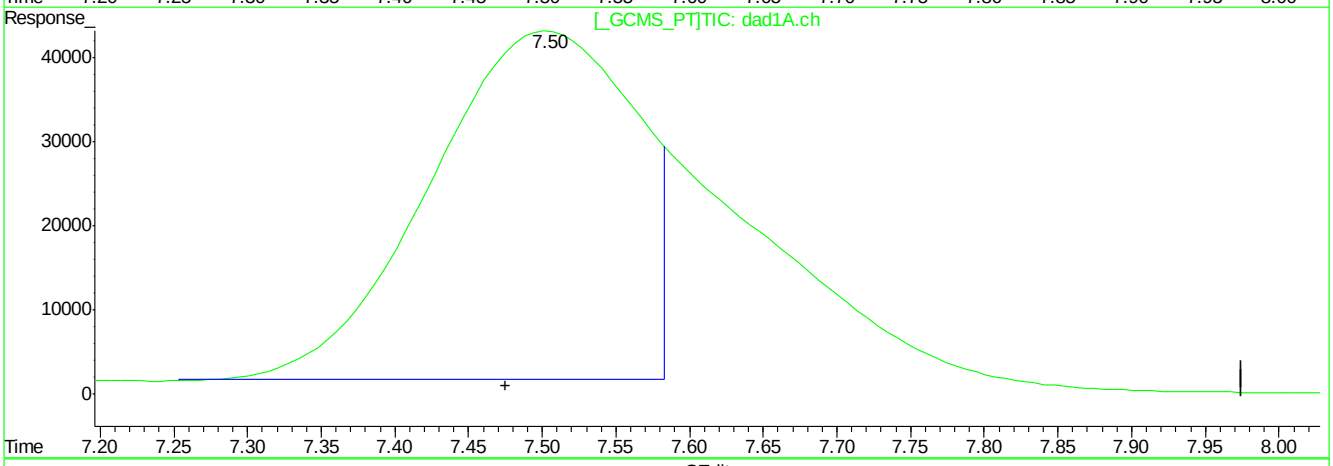
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:39:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.50min 390.951ppb m

response 3614818

(5) 1,3,5-Trinitrobenzene #2

7.50min 434.480ppb m

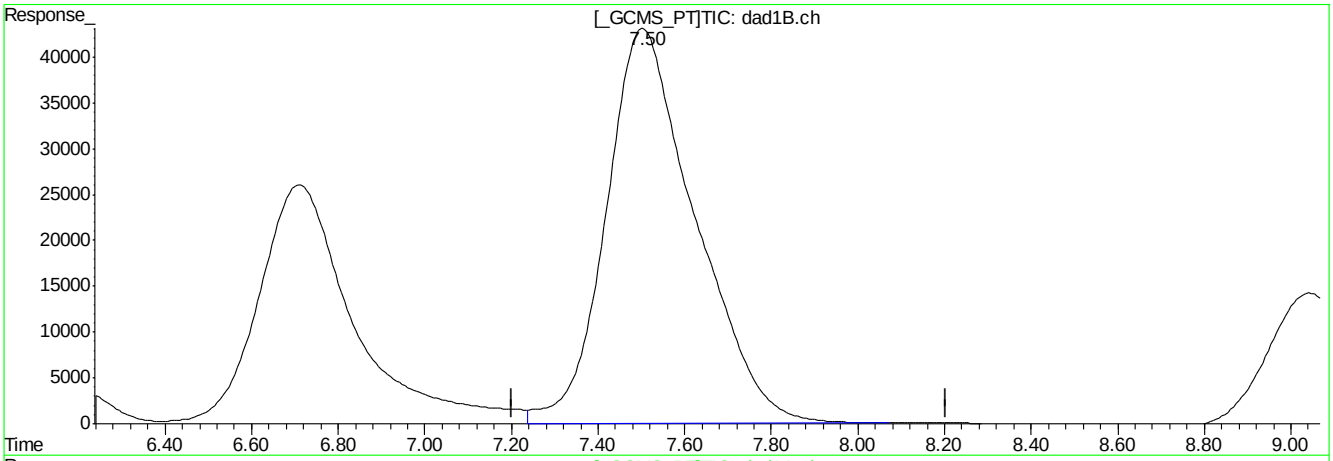
response 4017299

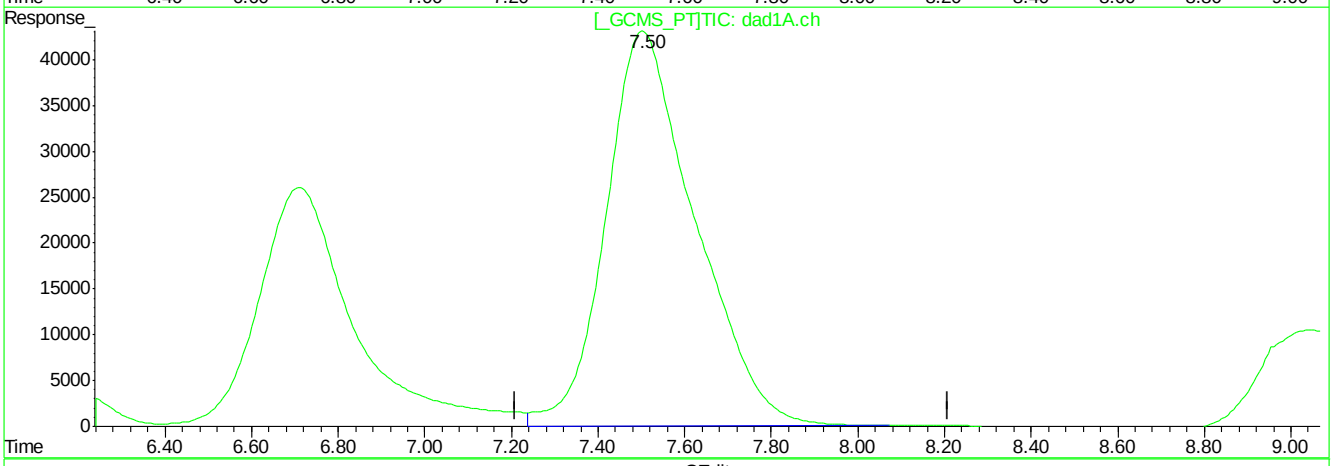
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:39:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.50min 1533.856ppb

response 6161611

(6) RDX #2

7.50min 1533.856ppb

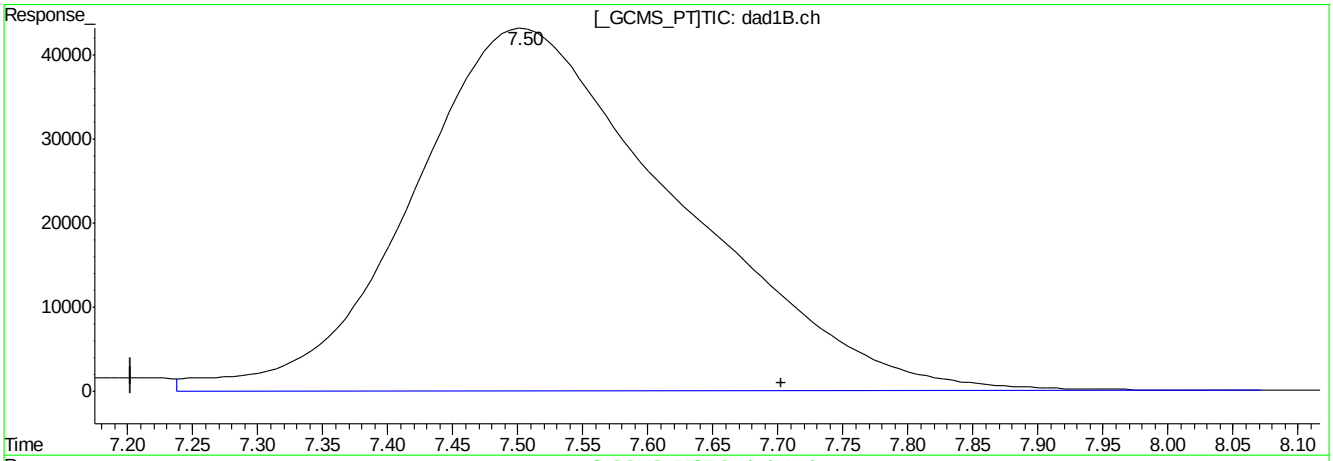
response 6161611

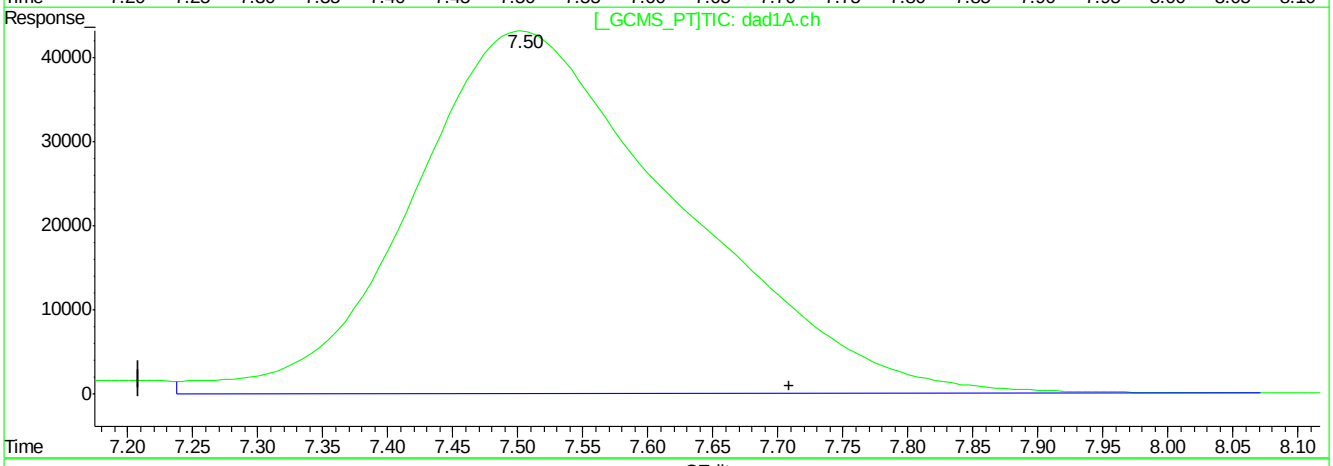
(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:39:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622043.D\dad1A.ch
Acq On : 13-Aug-2021, 00:59:40 Operator: jamesb
Sample : FA87622-1cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.50min 1533.856ppb

response 6161611

(6) RDX #2

7.50min 1533.856ppb

response 6161611

(+) = Expected Retention Time
GG622043.D GGG3024_080821.M Fri Aug 13 10:39:49 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:28

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : op86727,GPP2467,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:37 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.27	11.27	1066598	1789058	500.779	550.713
	Spiked Amount 500.000	Range 70 - 136		Recovery =		100.16%	110.14%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	2.85	2.87	73950	54063	39.678m	17.965m#
6)	1,3,5-Trinitrobe	4.67	4.67	5113497	9695150	1270.729	1244.152
7)	1,3-Dinitrobenze	6.01	5.92	231054	223932	44.410m	59.946
8)	3,5-Dinitroanili	6.21	6.22	70339	187141	17.663m	26.415 #
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	9.92	9.92	6674776	8142946	1765.276m	1819.779m
13)	2-Amino-4,6-Dini	10.17	10.18	601067	789412	173.781m	157.393m
14)	4-Amino-2,6-Dini	10.80	10.79	312649	485180	128.441	100.419
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	12.61	12.70	1745719	1715425	637.581	511.098m
18)	o-Nitrotoluene	15.69	15.77	88532	34341	38.725	11.733m#
19)	p-Nitrotoluene	16.18	16.17	19551	30148	5.682m	10.676m#
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	18.44	0	416206	N.D. d	325.785m

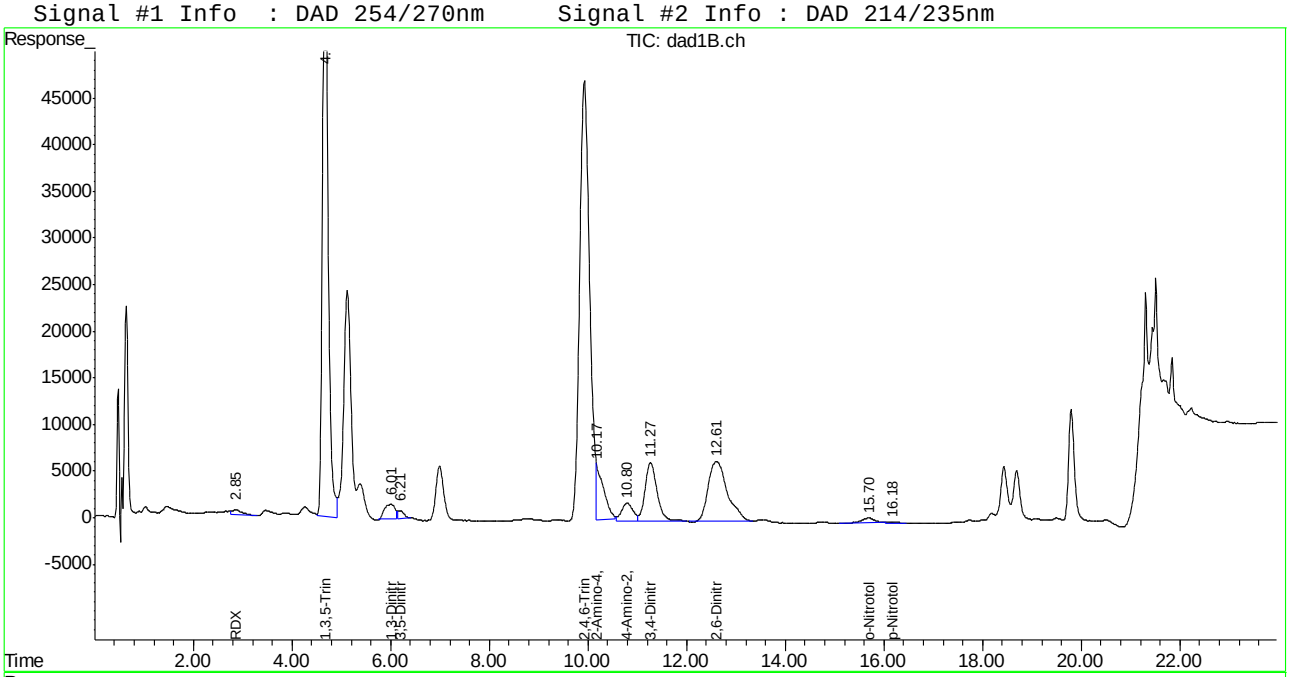
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

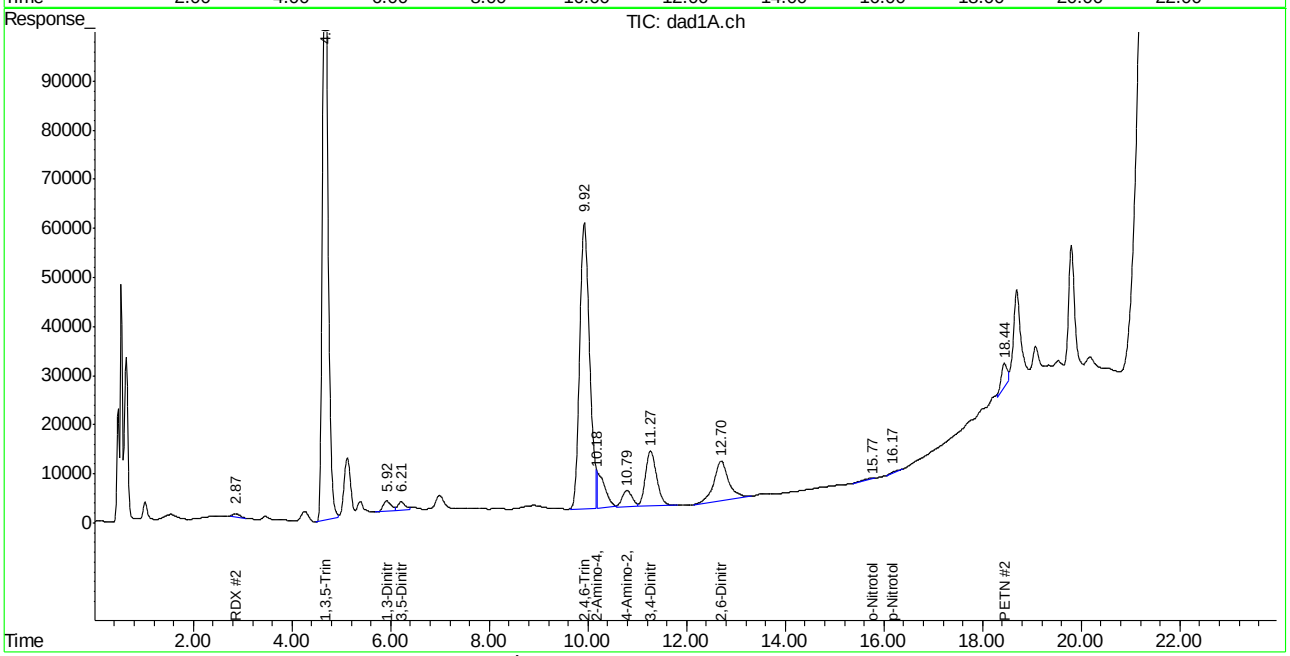
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : op86727,GPP2467,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 15:20 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

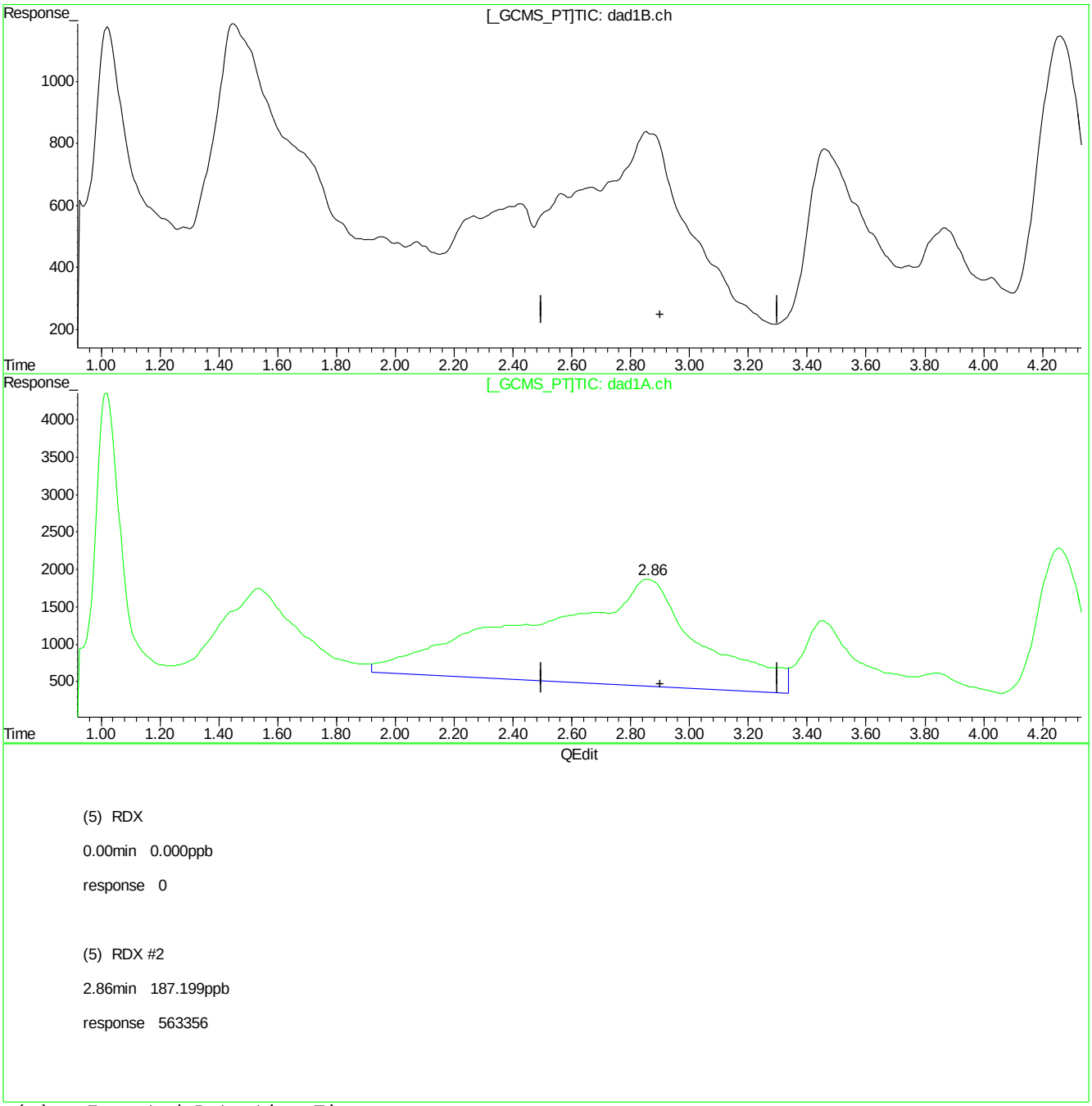
Sample Number: FA87622-2
Lab FileID: PP391155.D
Injection Time: 08/09/21 21:38
Method: SW846 8330B
Analyst approved: 08/12/21 15:32 James Boone
Supervisor approved: 08/13/21 17:28 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
RDX	121-82-4	1	2.85	Poor instrument integration
RDX	121-82-4	2	2.87	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.01	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.21	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.92	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	9.92	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.17	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.18	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.70	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.77	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.17	Poor instrument integration
p-Nitrotoluene	99-99-0	1	16.18	Poor instrument integration
PETN	78-11-5	2	18.44	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(5) RDX

0.00min 0.000ppb

response 0

(5) RDX #2

2.86min 187.199ppb

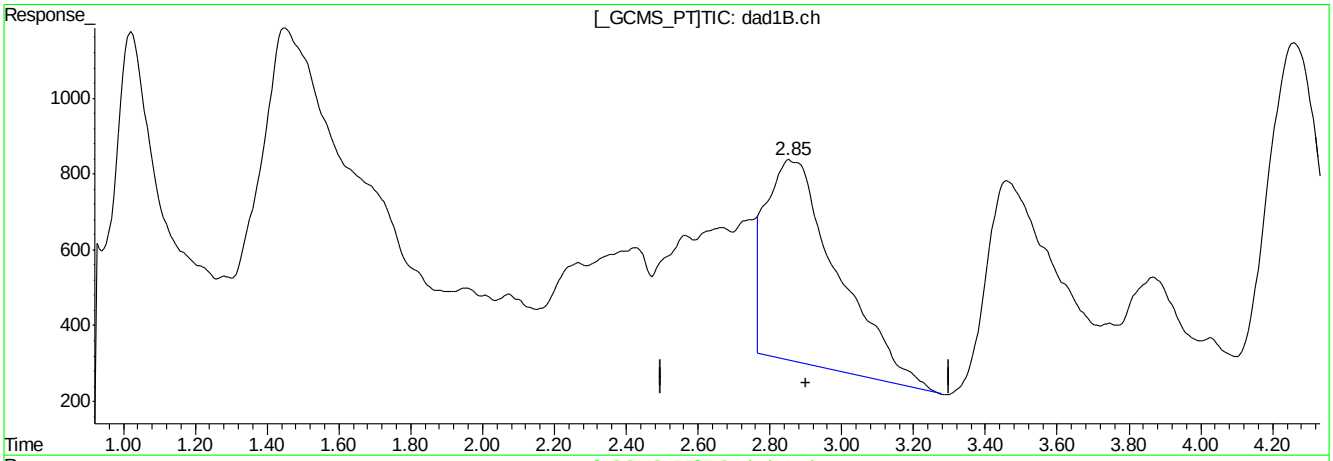
response 563356

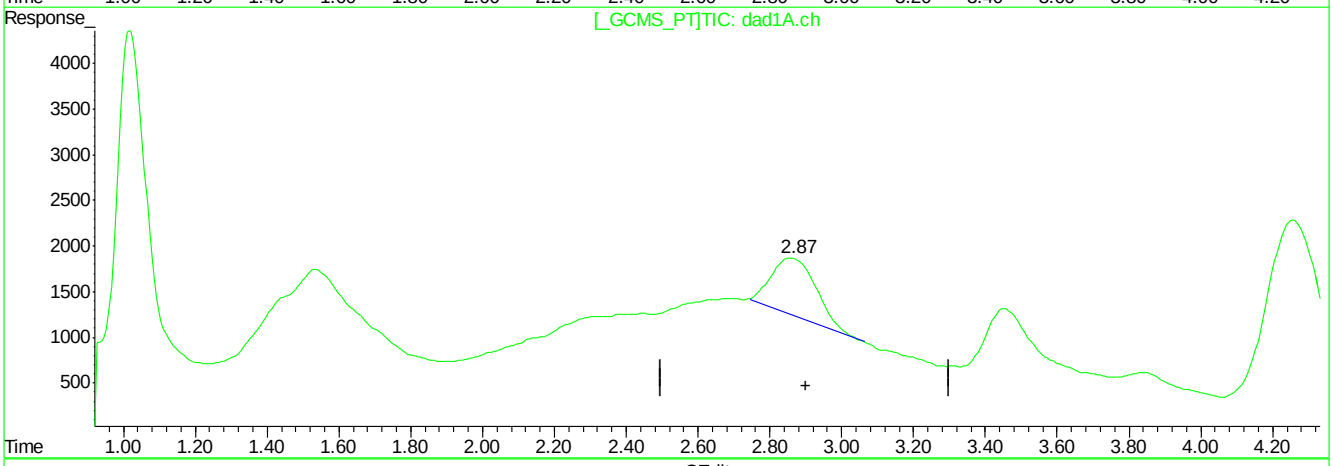
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:17:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.85min 39.678ppb m

response 73950

(5) RDX #2

2.87min 17.965ppb m

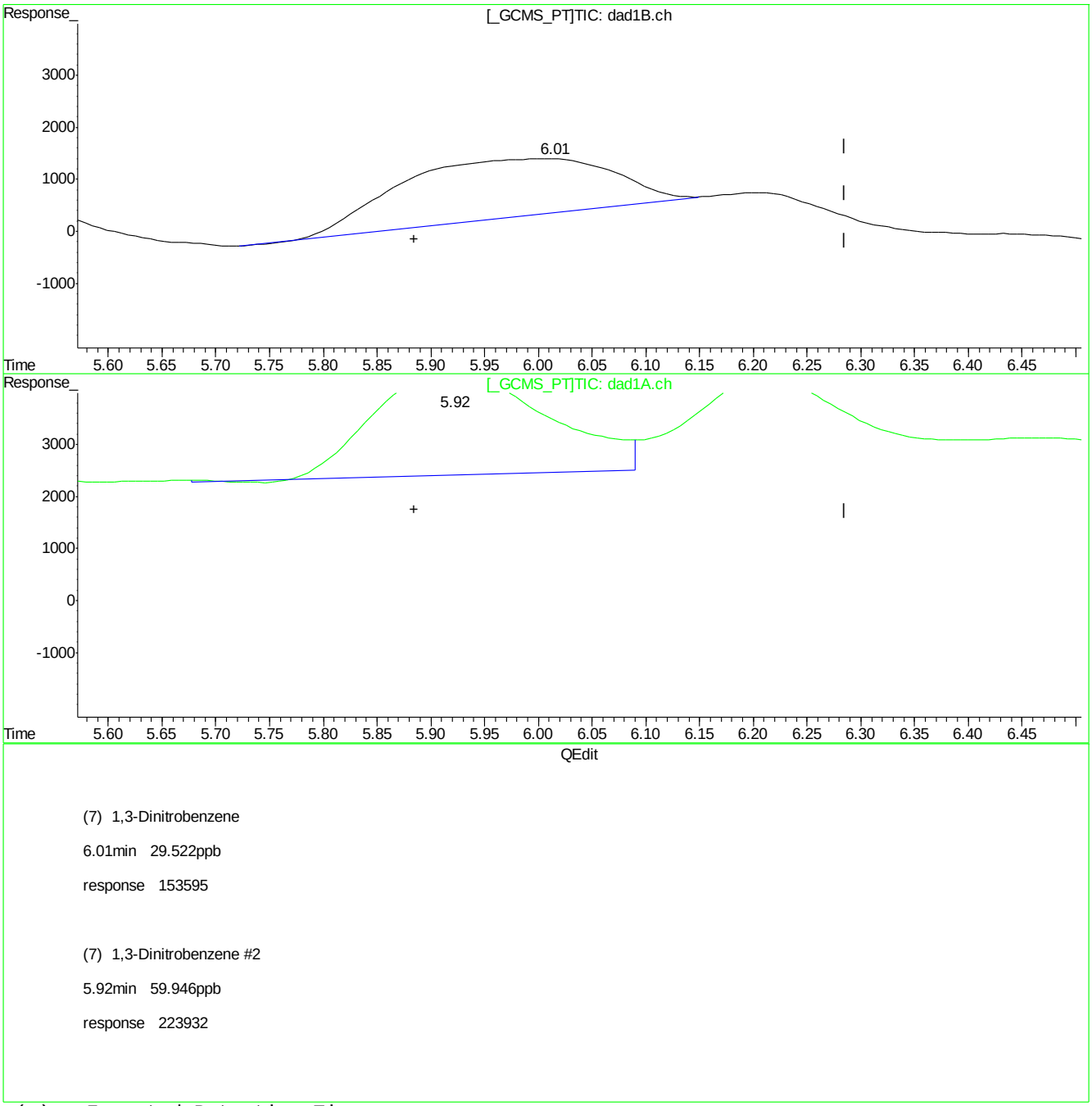
response 54063

(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:18:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

6.01min 29.522ppb

response 153595

(7) 1,3-Dinitrobenzene #2

5.92min 59.946ppb

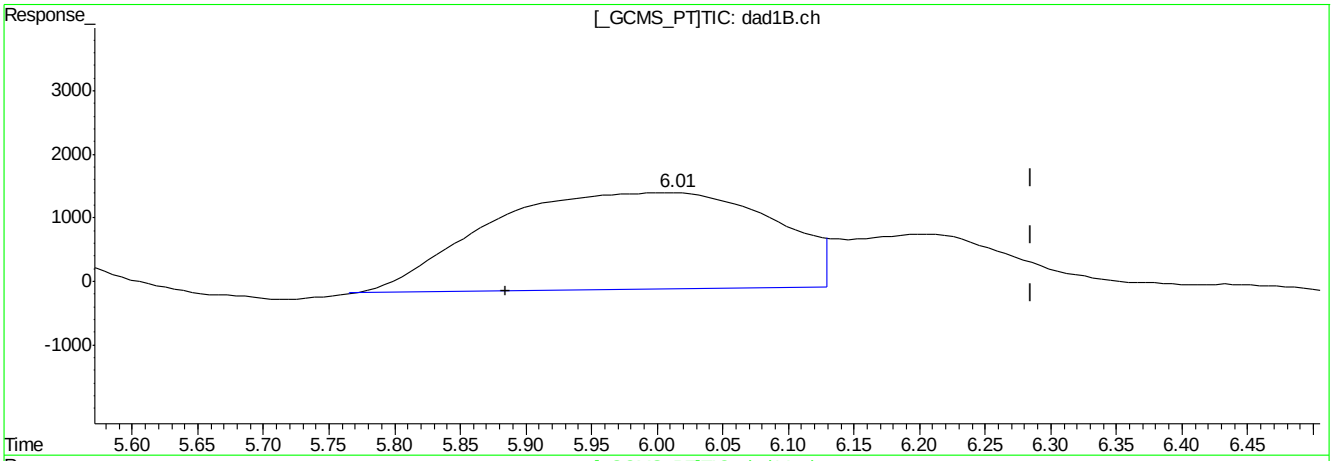
response 223932

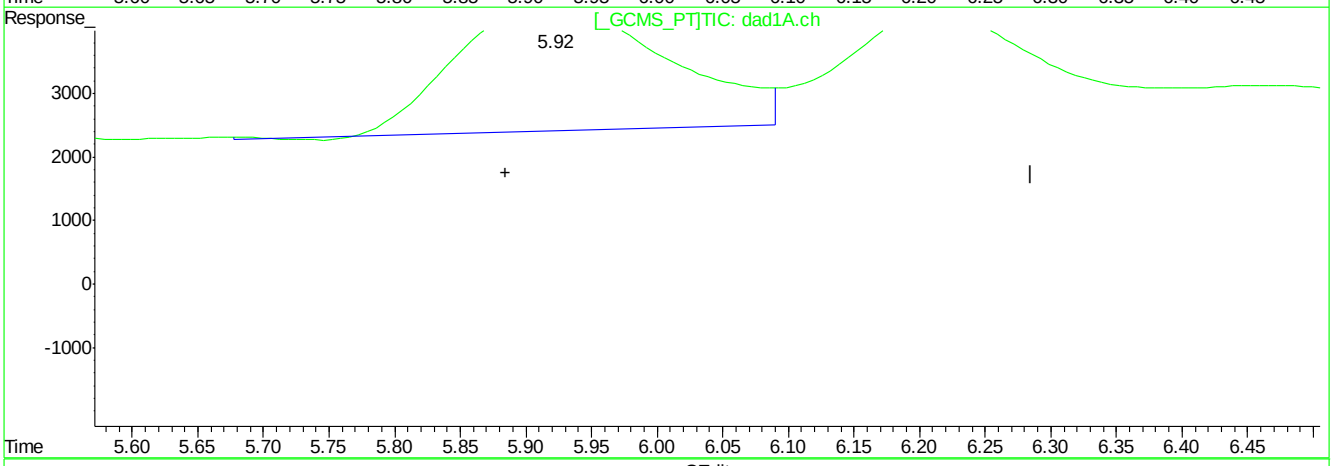
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:18:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.01min 44.410ppb m

response 231054

(7) 1,3-Dinitrobenzene #2

5.92min 59.946ppb

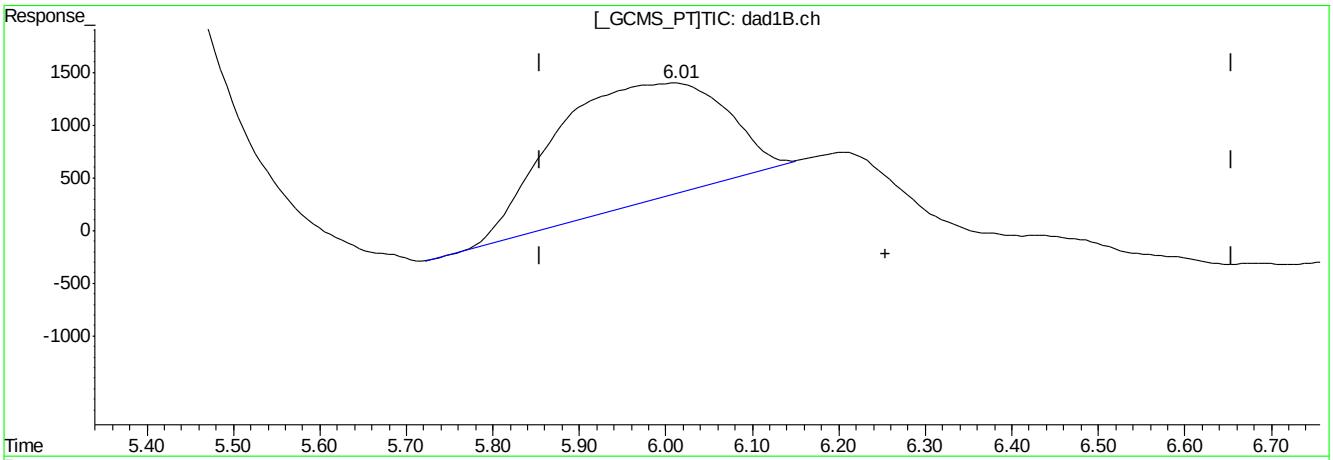
response 223932

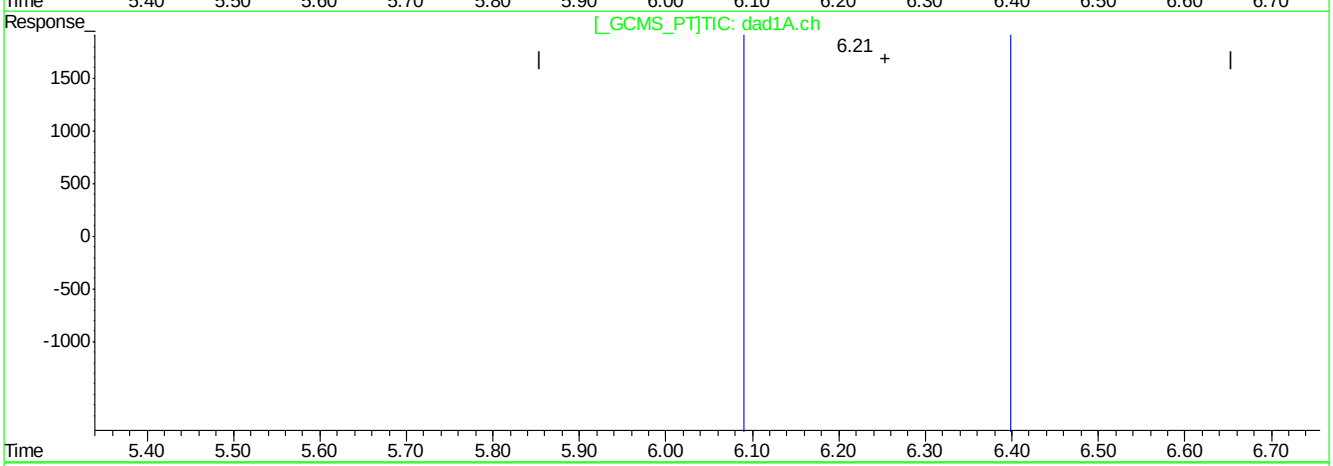
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:18:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.01min 38.570ppb

response 153595

(8) 3,5-Dinitroaniline #2

6.22min 26.415ppb

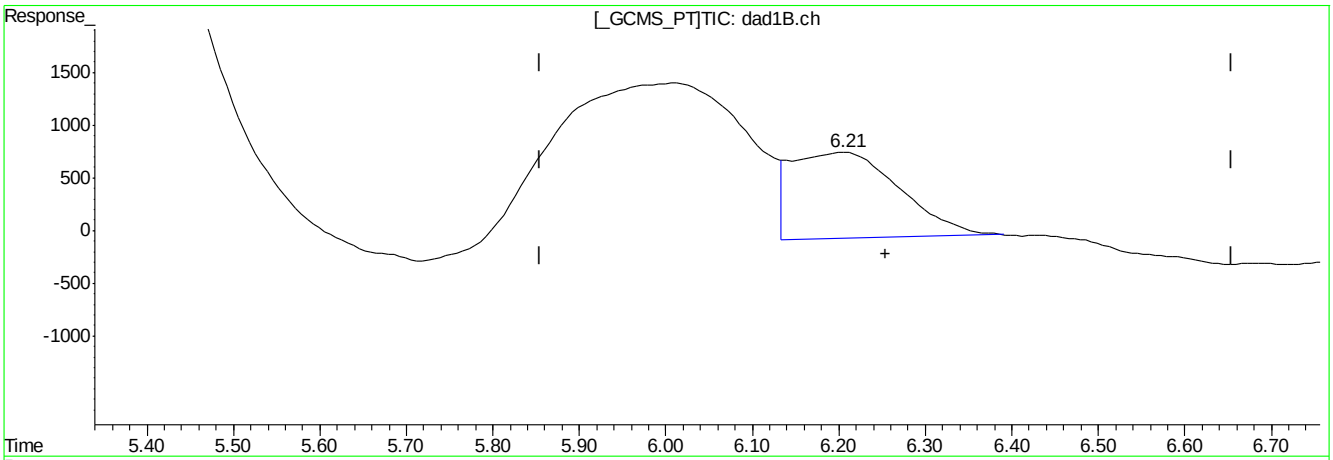
response 187141

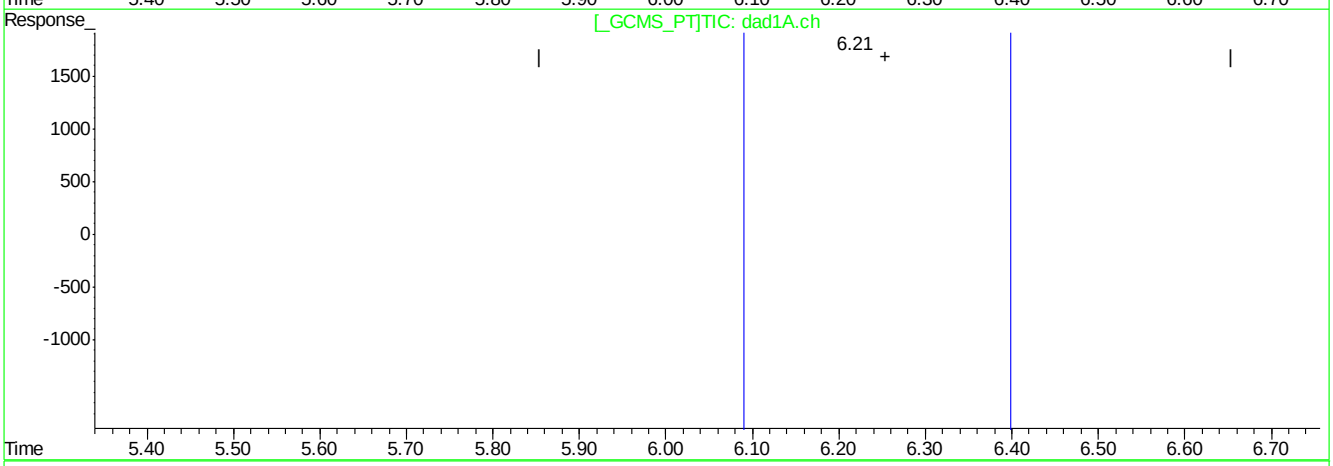
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:18:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.21min 17.663ppb m

response 70339

(8) 3,5-Dinitroaniline #2

6.22min 26.415ppb

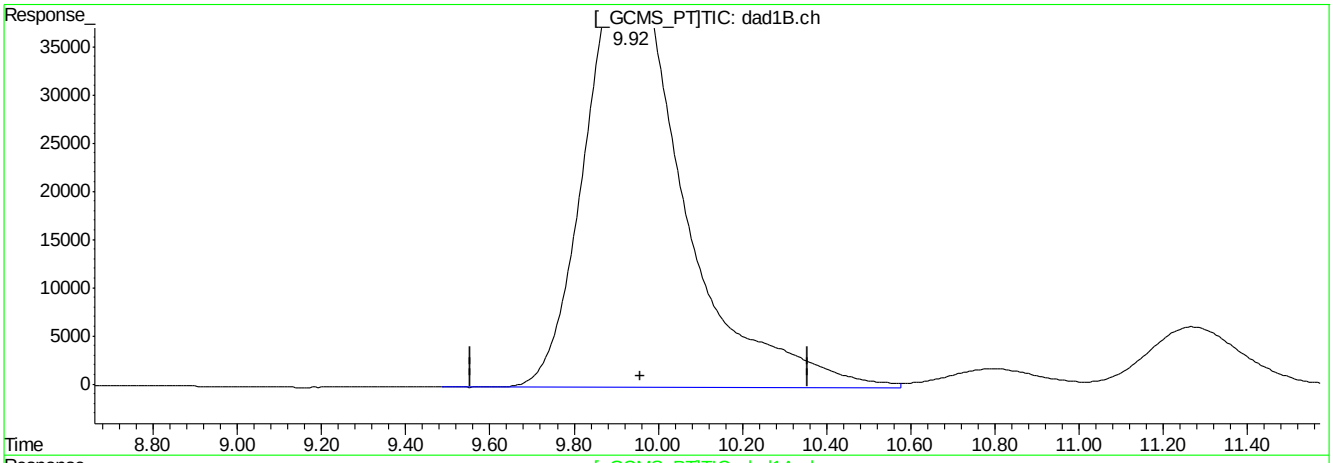
response 187141

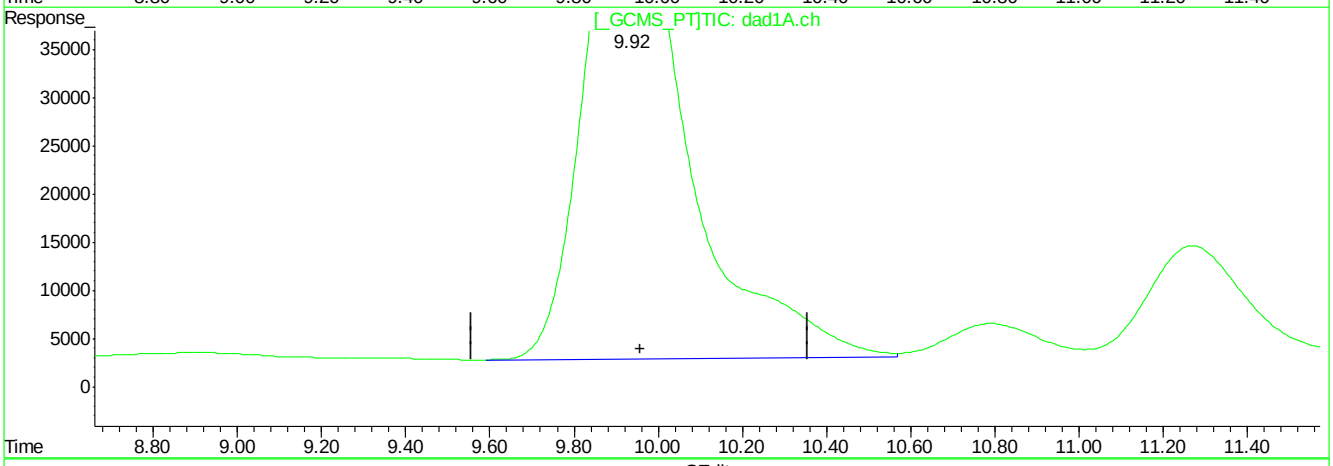
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:18:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.93min 1916.227ppb

response 7245544

(12) 2,4,6-Trinitrotoluene #2

9.93min 2014.314ppb

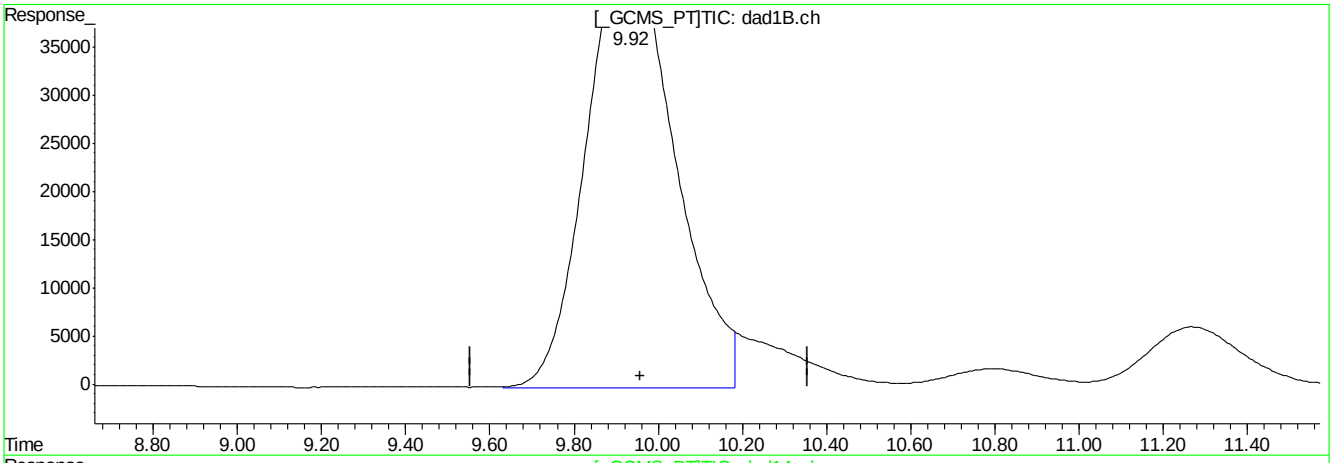
response 9013432

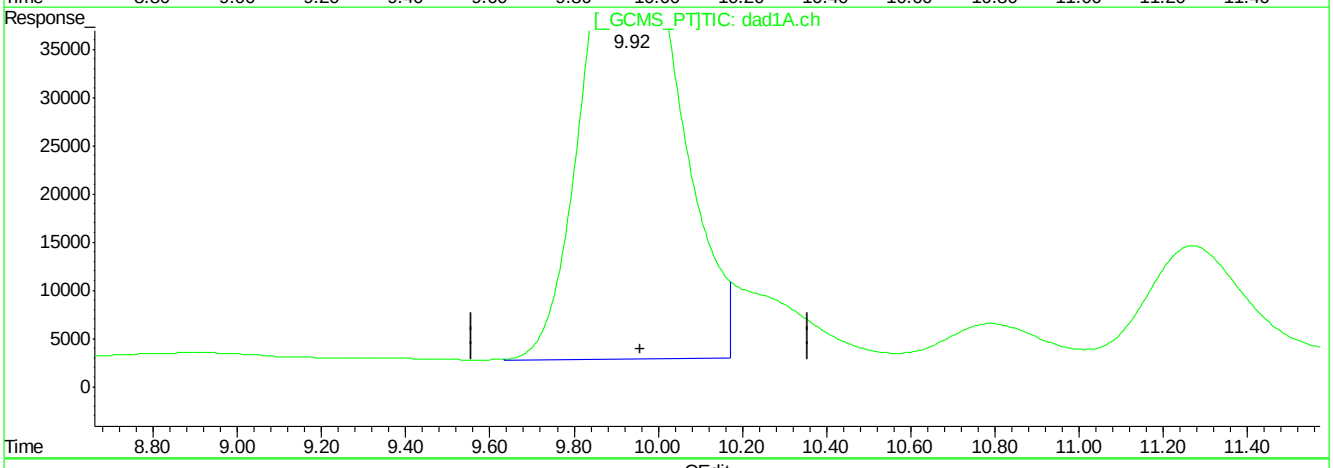
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:19:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.92min 1765.276ppb m

response 6674776

(12) 2,4,6-Trinitrotoluene #2

9.92min 1819.779ppb m

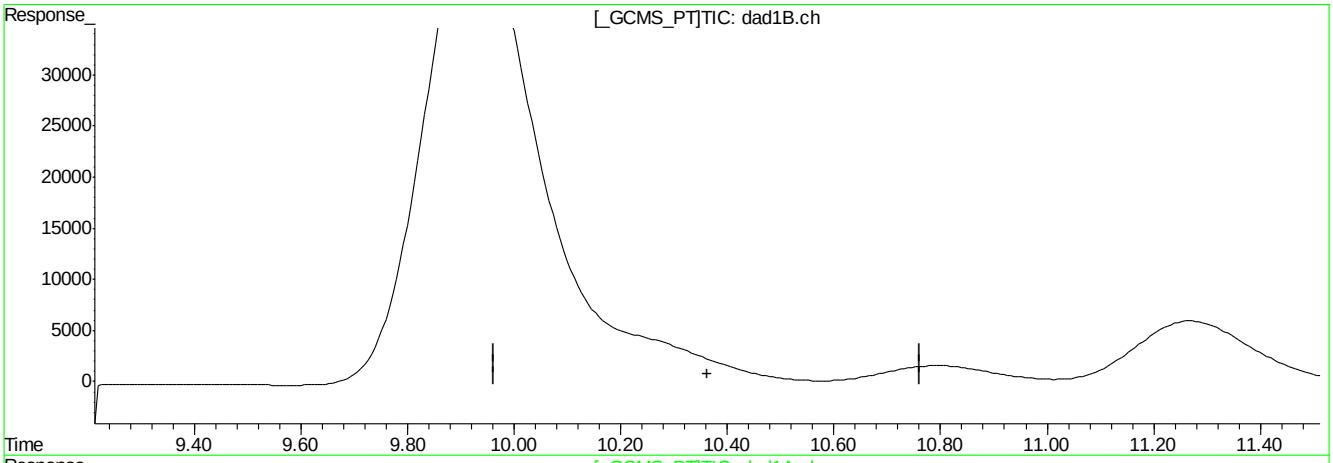
response 8142946

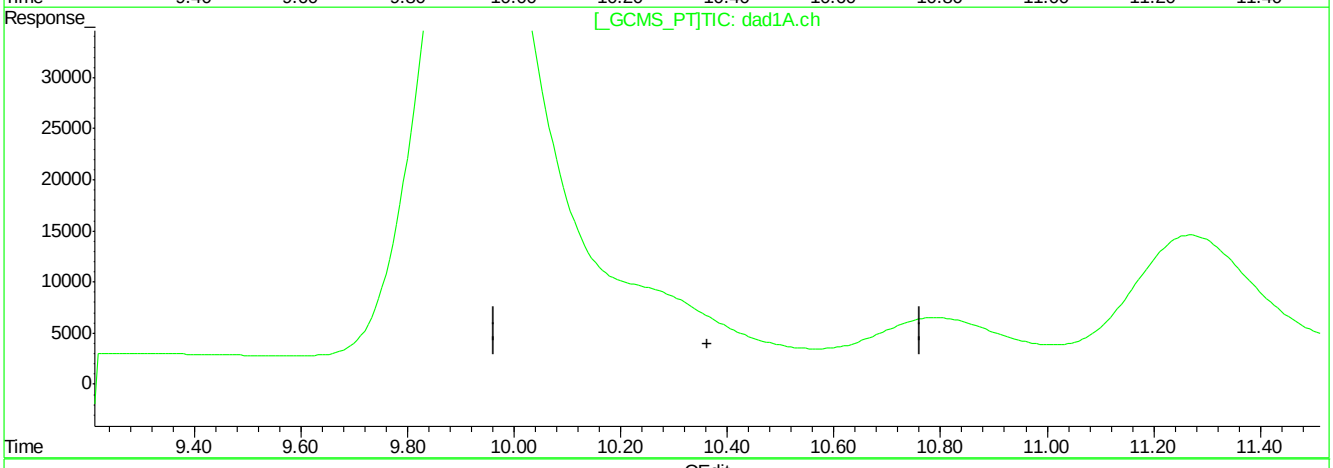
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:19:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

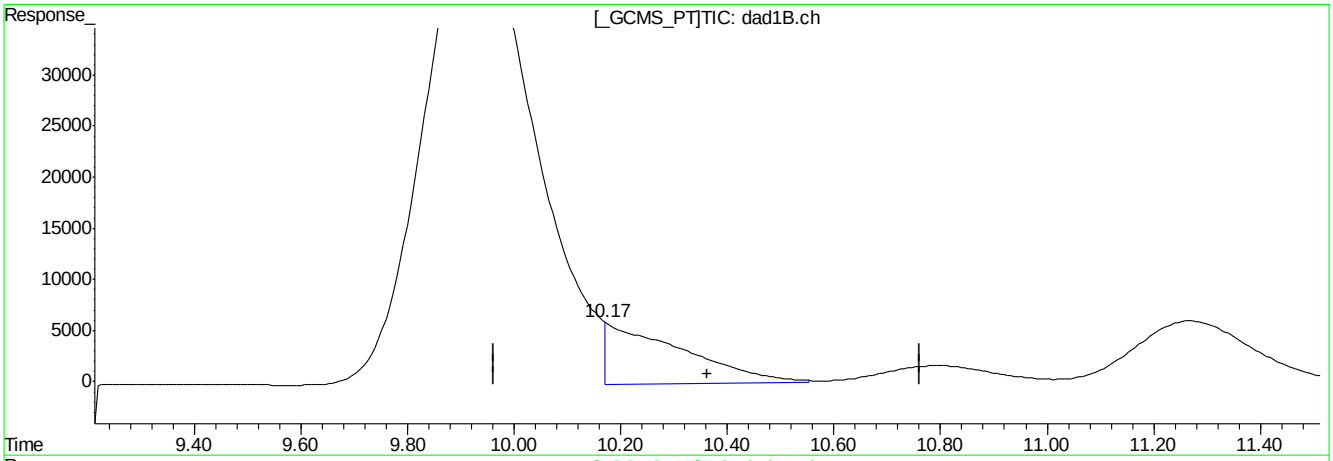
response 0

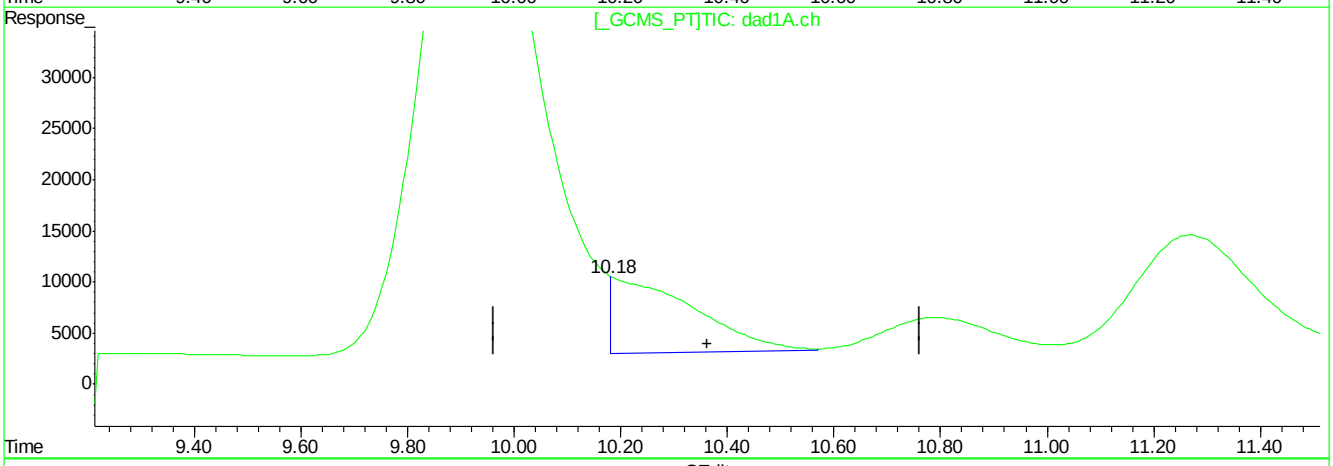
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:19:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.17min 173.781ppb m

response 601067

(13) 2-Amino-4,6-Dinitrotoluene #2

10.18min 157.393ppb m

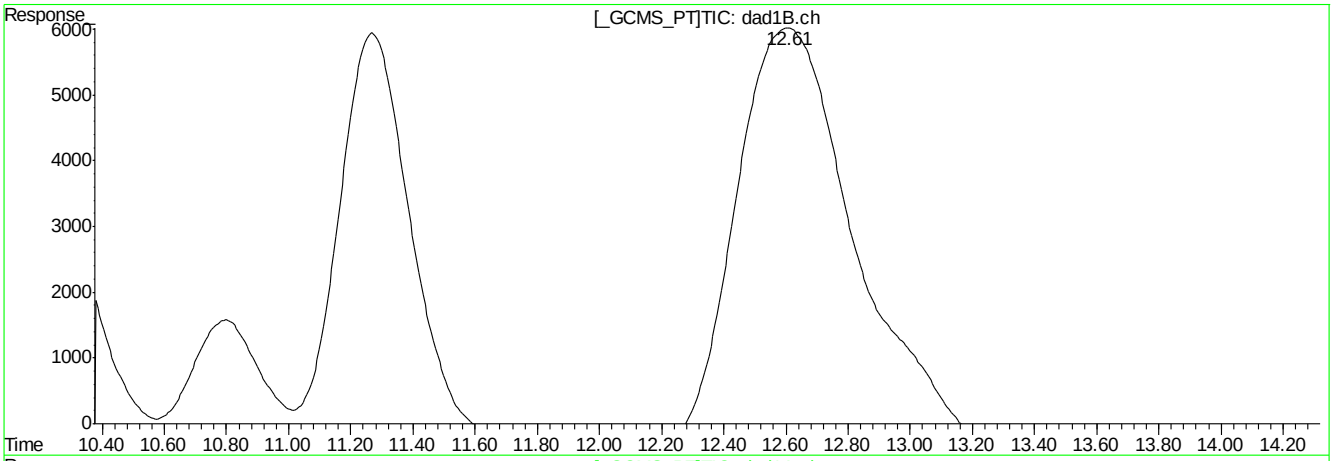
response 789412

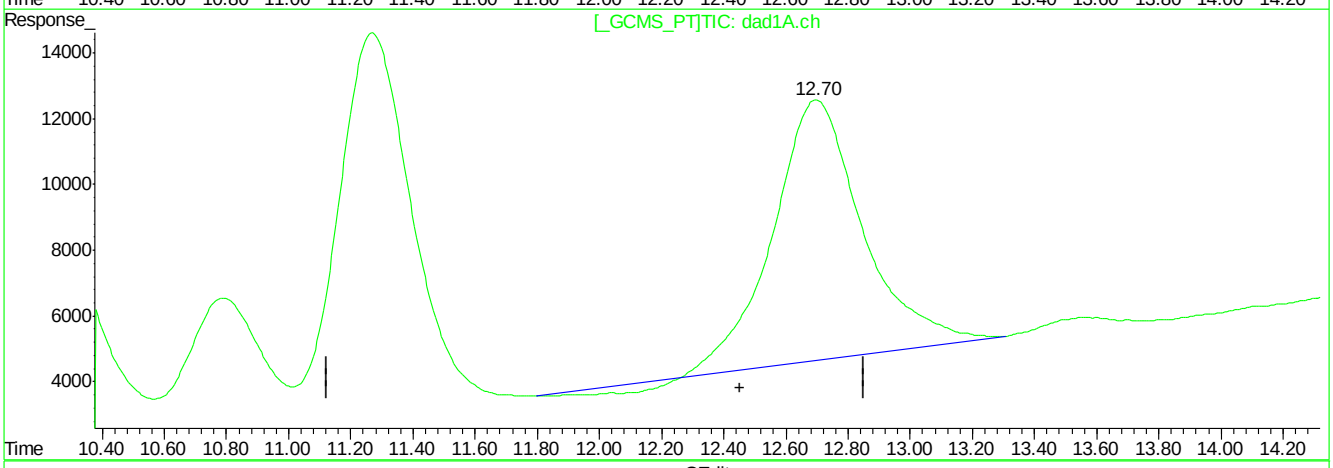
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:19:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.61min 637.581ppb

response 1745719

(17) 2,6-Dinitrotoluene #2

12.70min 467.082ppb

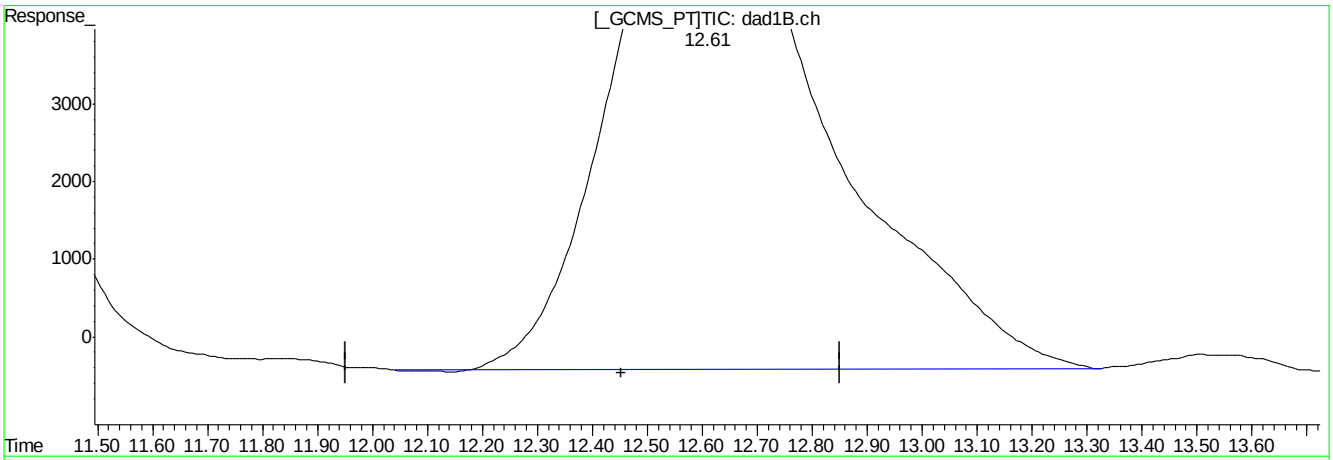
response 1567692

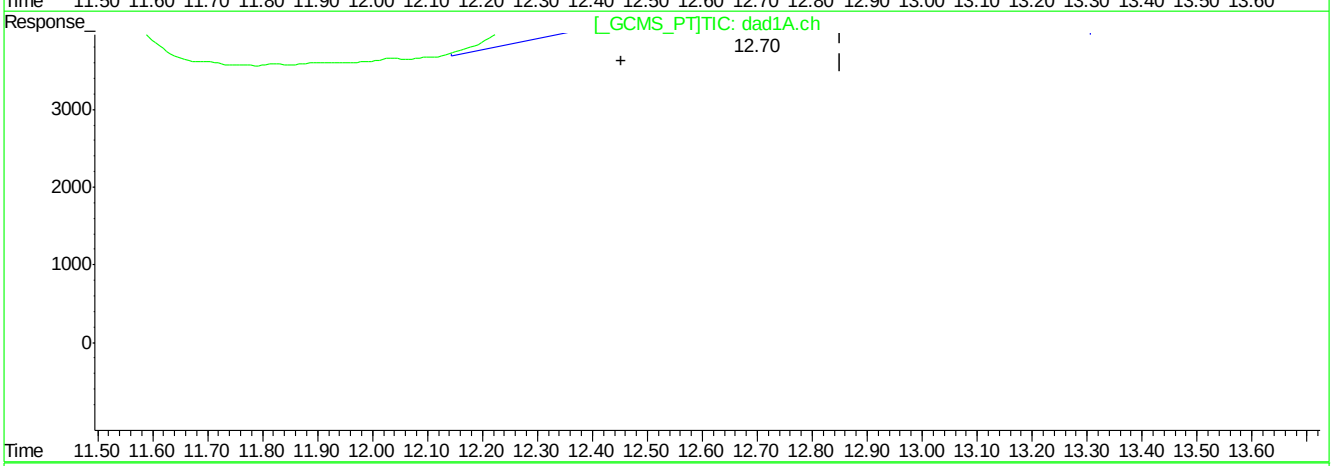
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:19:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.61min 637.581ppb

response 1745719

(17) 2,6-Dinitrotoluene #2

12.70min 511.098ppb m

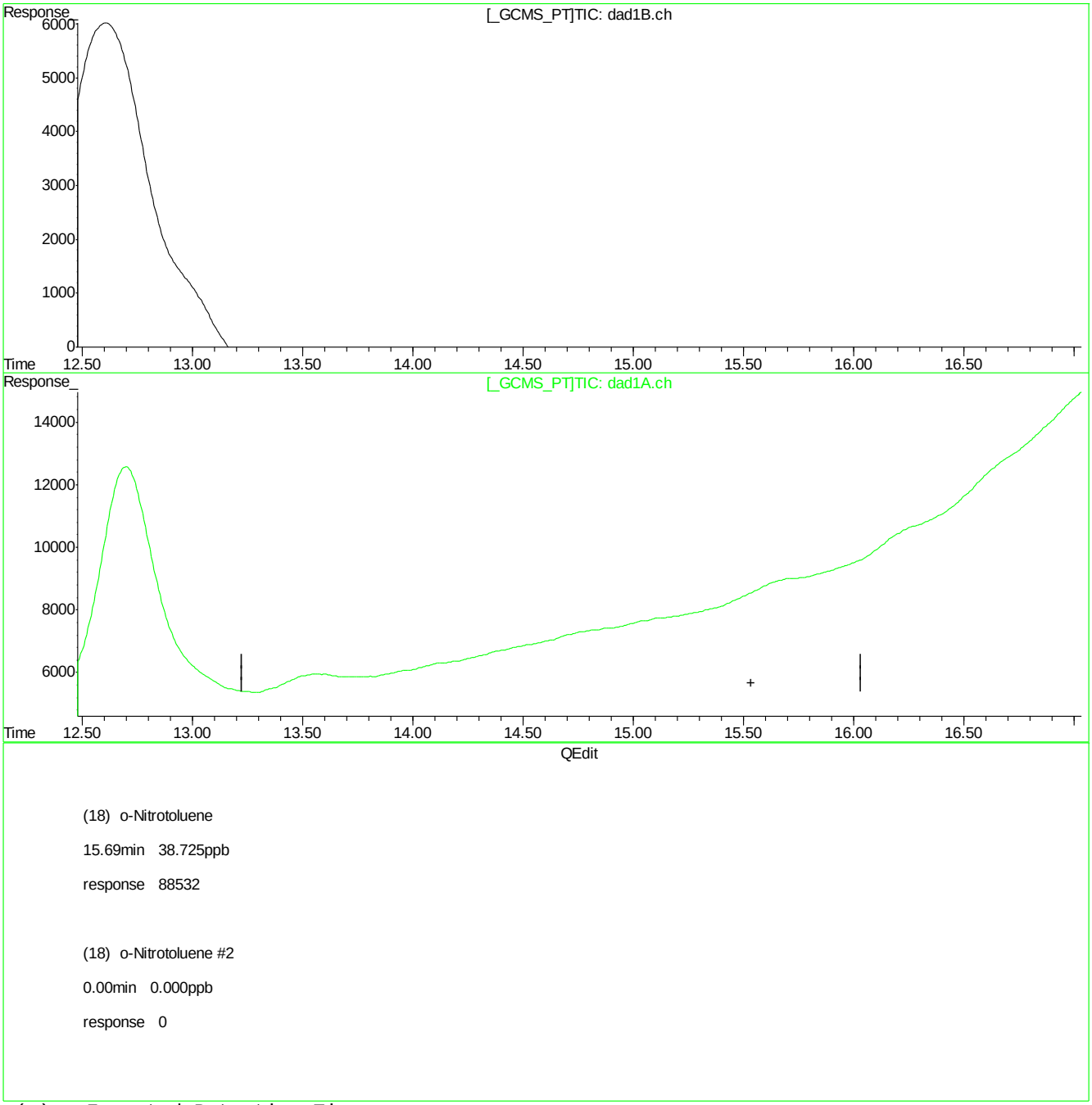
response 1715425

(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:20:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

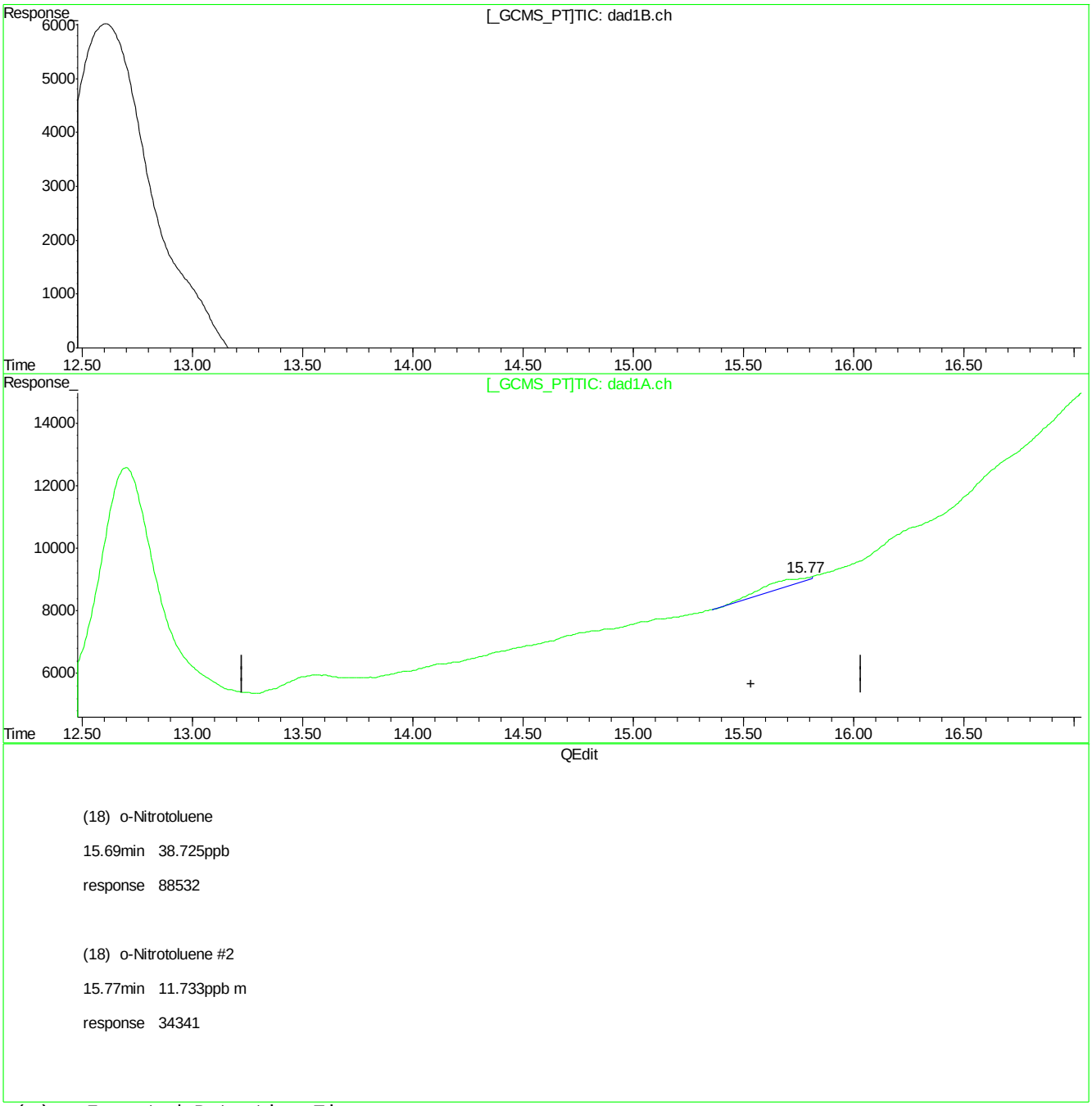


(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:20:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.69min 38.725ppb

response 88532

(18) o-Nitrotoluene #2

15.77min 11.733ppb m

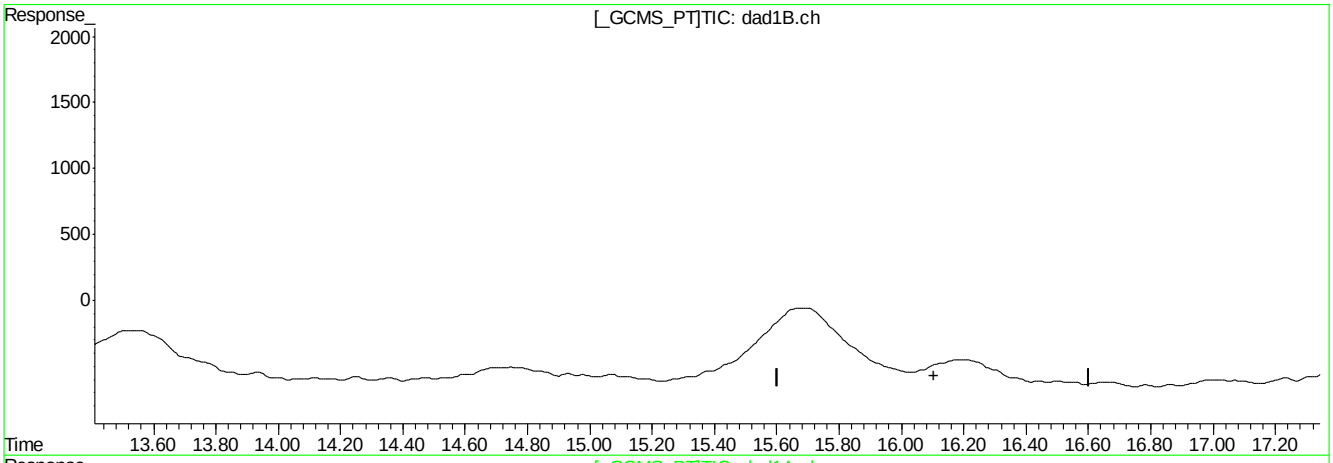
response 34341

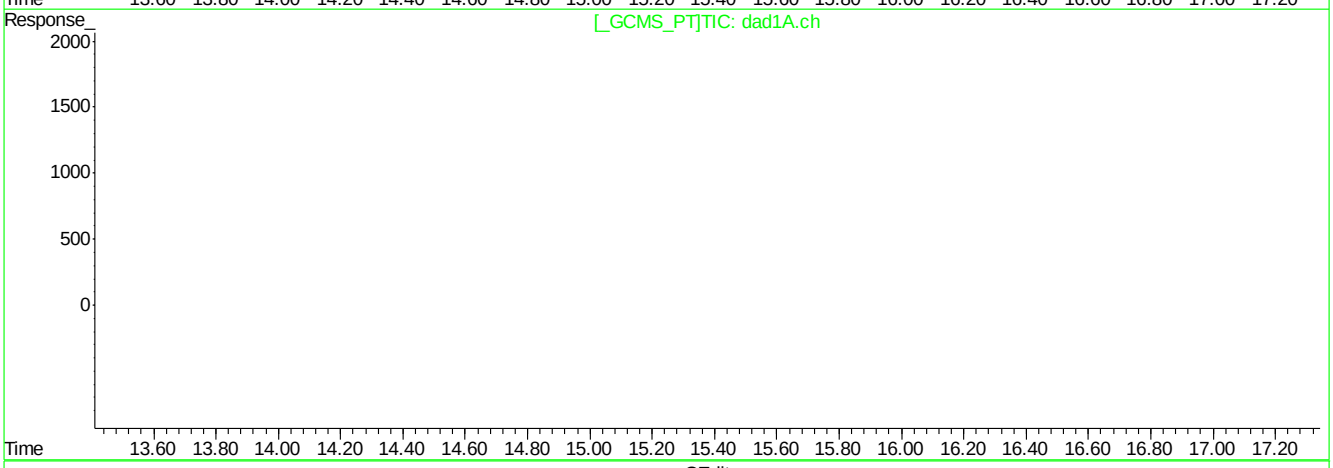
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:20:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

0.00min 0.000ppb

response 0

(19) p-Nitrotoluene #2

0.00min 0.000ppb

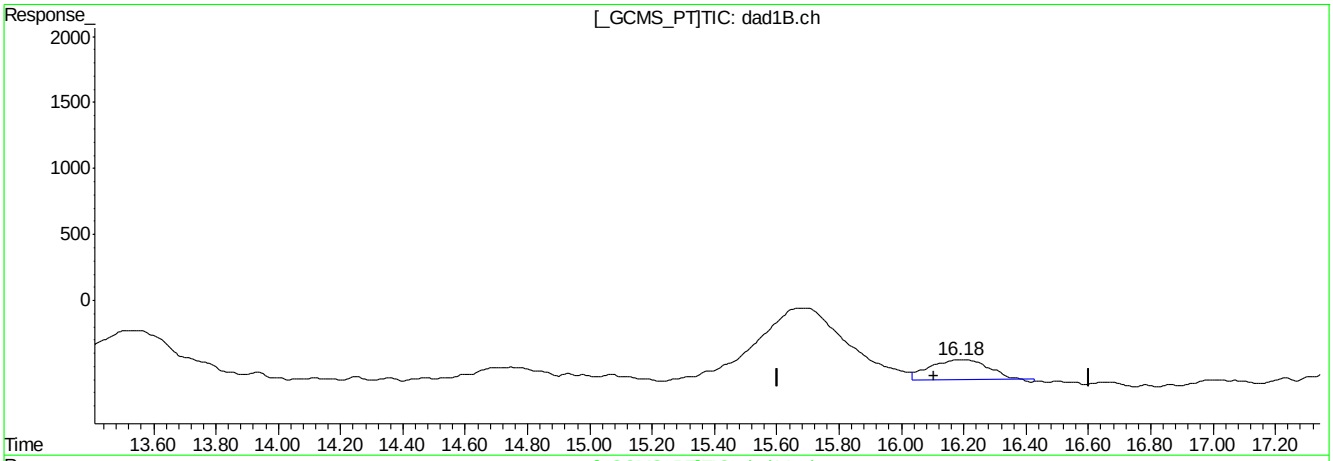
response 0

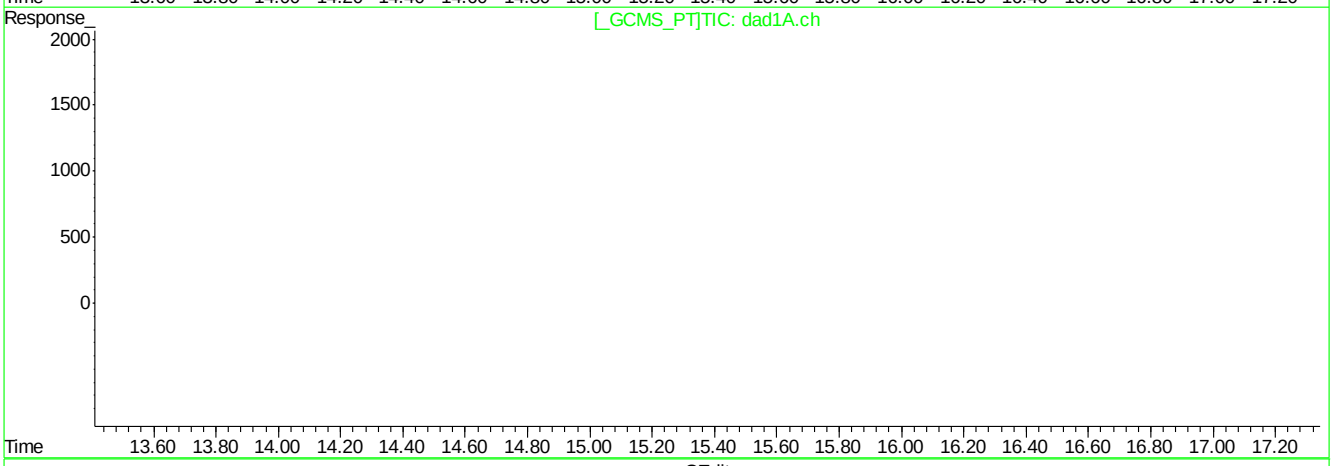
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:20:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.18min 5.682ppb m

response 19551

(19) p-Nitrotoluene #2

0.00min 0.000ppb

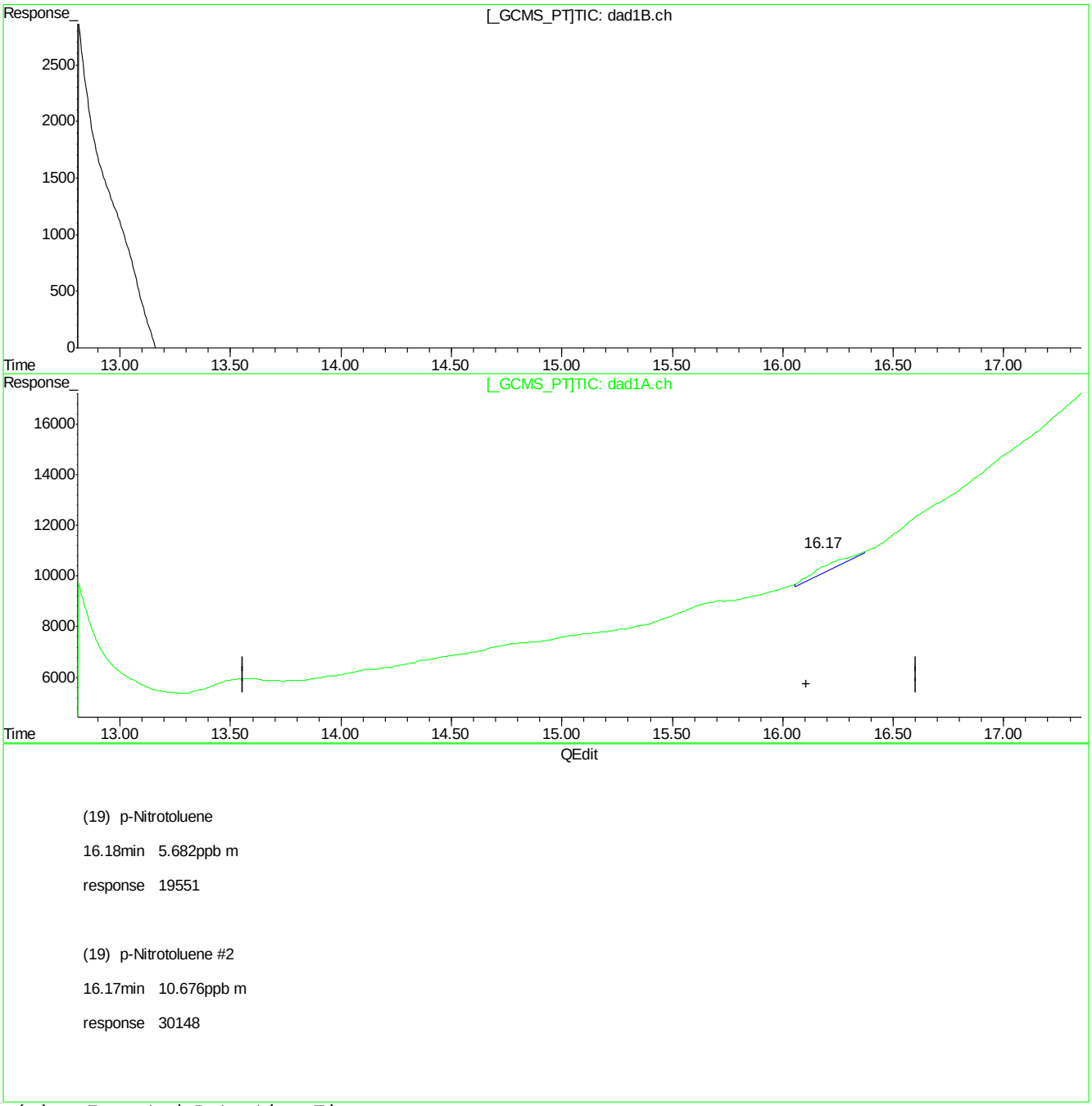
response 0

(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:20:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.18min 5.682ppb m

response 19551

(19) p-Nitrotoluene #2

16.17min 10.676ppb m

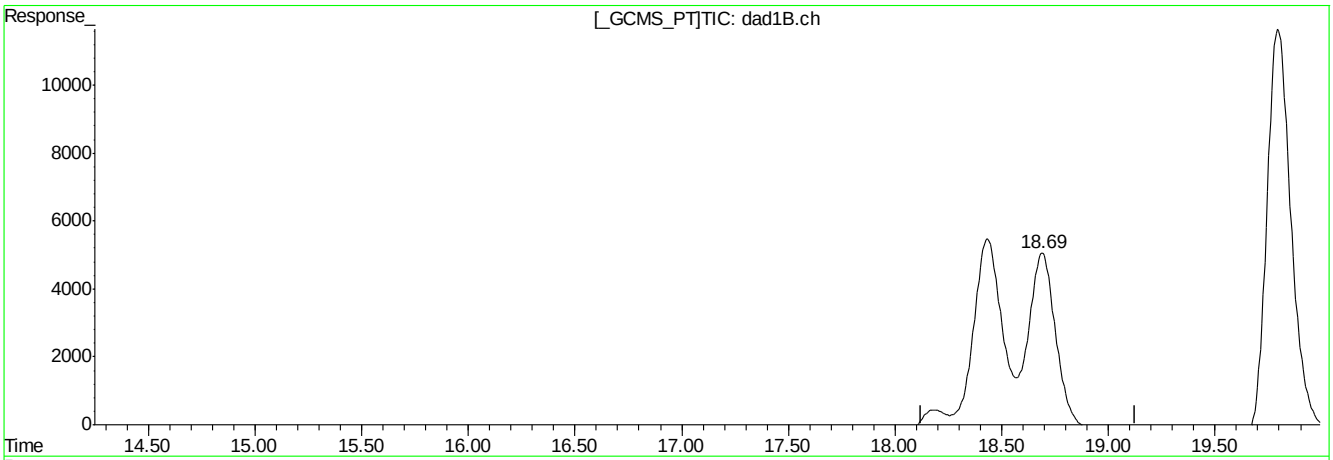
response 30148

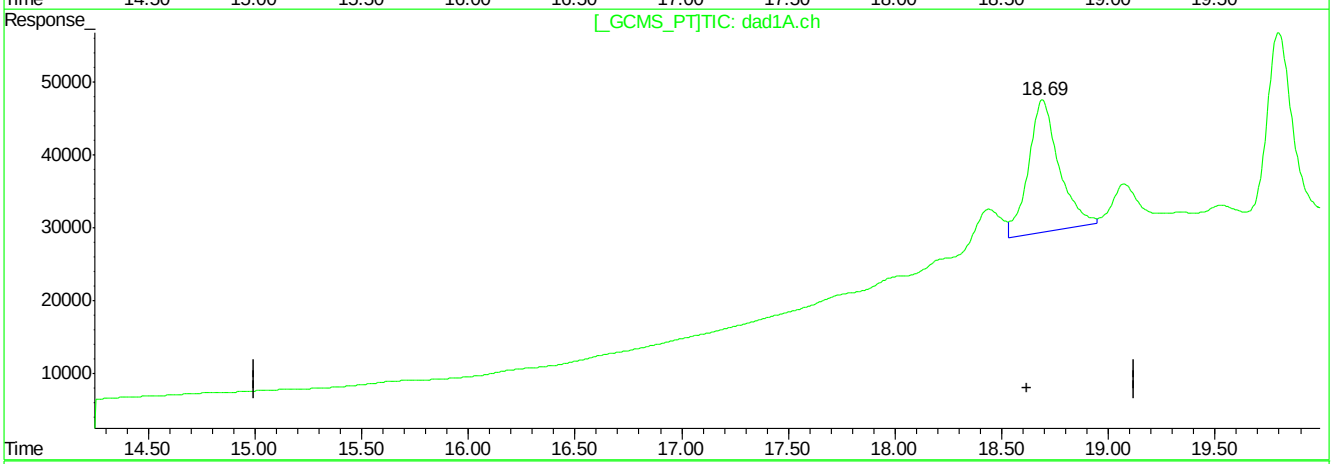
(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:20:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.69min 0.000ppb

response 499889

(21) PETN #2

18.69min 1423.723ppb

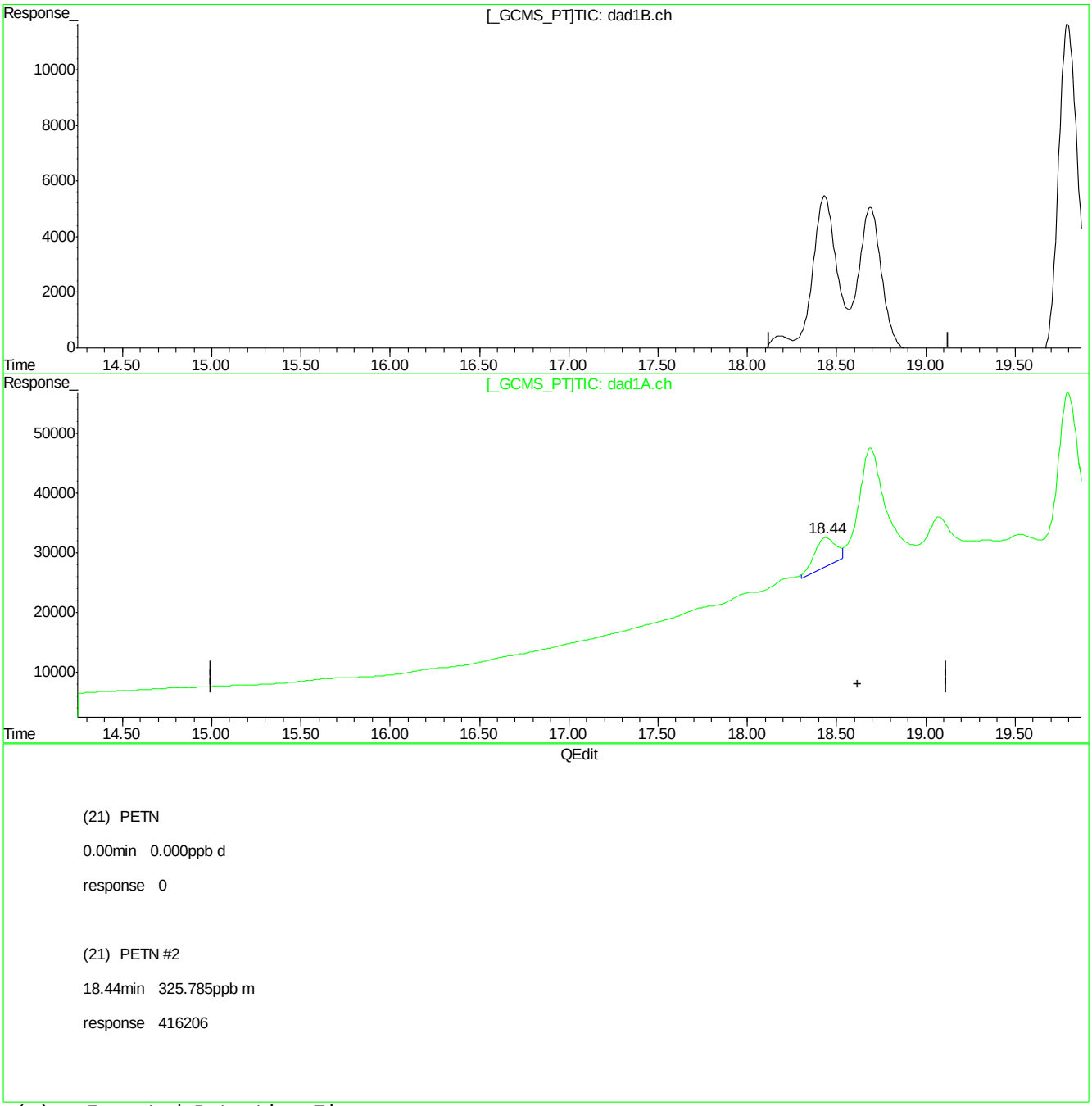
response 1818873

(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:20:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391155.D\dad1A.ch
Acq On : 09-Aug-2021, 21:38:59 Operator: jamesb
Sample : FA87622-2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
PP391155.D GPP2464_080321PRI.M Thu Aug 12 15:20:38 2021

PP391155.D edits: PETN

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 08/13/21 17:28

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : op86727,GGG3025,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:50 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.90	13.90	2687880	4895091	538.464m	502.209m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		107.69%	100.44%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.50	7.50	10624602	10757508	1149.074m	1163.448m
6)	RDX	7.61	7.61	1845629	1840466	459.446m	458.161m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.63	11.62	15754821	20688911	1831.223	1766.645m
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.62	15.61	2006464	3581641	214.787	232.986
16)	o-Nitrotoluene	16.44	16.29	119012	470660	24.441	63.979 #
17)	p-Nitrotoluene	17.35	17.35	1130358	1336705	222.376m	153.212m
18)	4-Amino-2,6-Dini	17.35	17.35	1161569	1281237	228.516m	146.854m
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.16	19.17	1192495	1699906	145.021m	158.436m
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

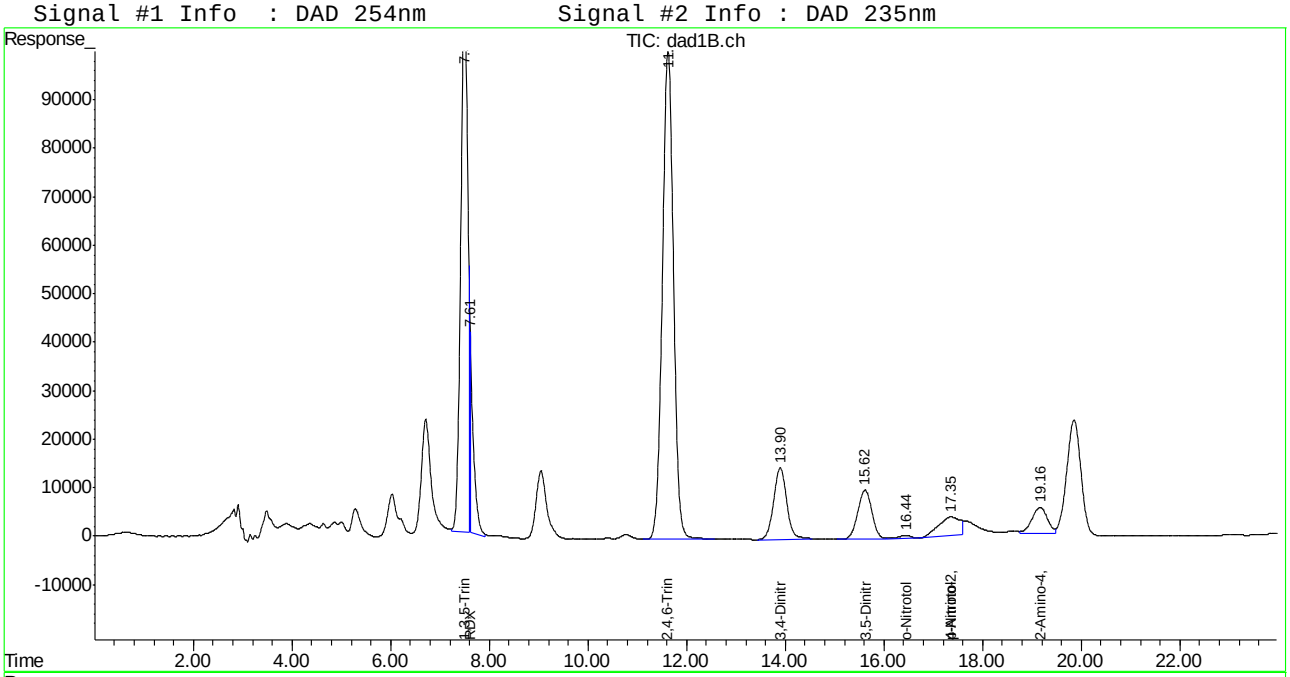
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622044.D GGG3024_080821.M Fri Aug 13 10:49:19 2021 Page 1

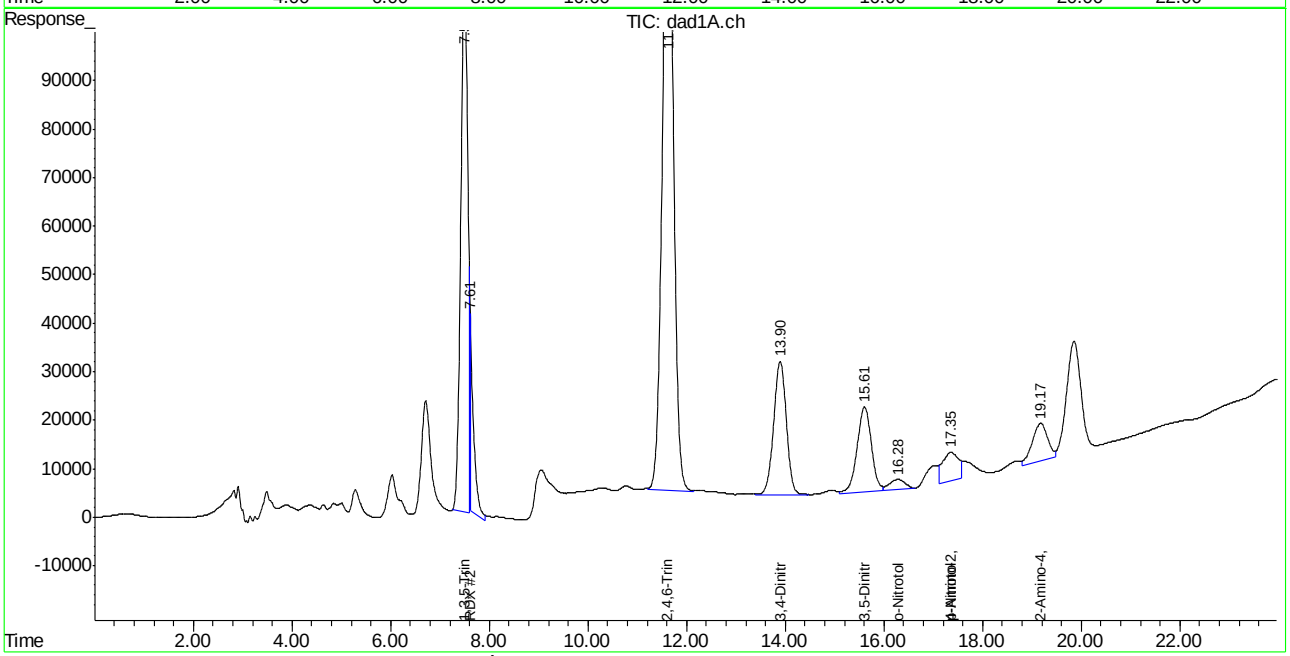
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : op86727,GGG3025,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:44 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

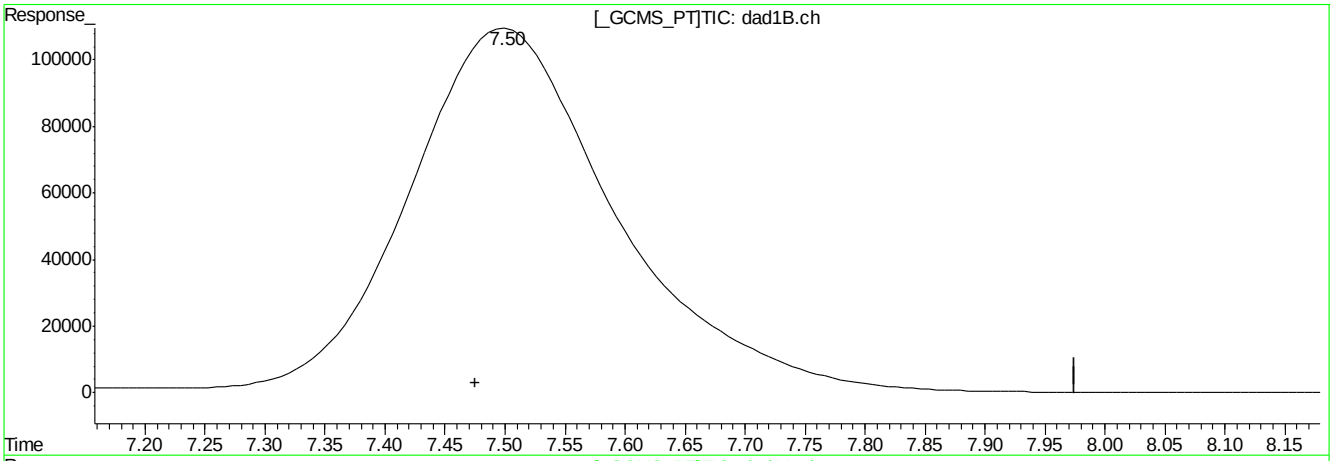
Sample Number: FA87622-2
Lab FileID: GG622044.D
Injection Time: 08/13/21 01:31
Method: SW846 8330B
Analyst approved: 08/13/21 11:12 James Boone
Supervisor approved: 08/13/21 17:28 Naresh Jiawan

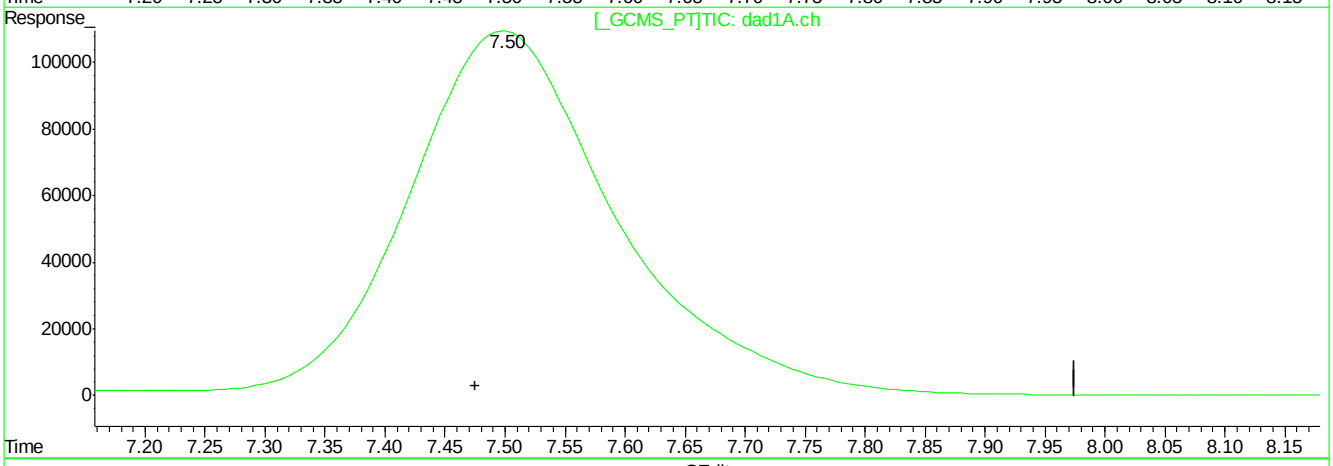
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	1	7.50	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.50	Poor instrument integration
RDX	121-82-4	1	7.61	Poor instrument integration
RDX	121-82-4	2	7.61	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.62	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	13.90	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	13.90	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	17.35	Poor instrument integration
p-Nitrotoluene	99-99-0	1	17.35	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.35	Poor instrument integration
p-Nitrotoluene	99-99-0	2	17.35	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	19.16	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.17	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.50min 1472.064ppb

response 13611041

(5) 1,3,5-Trinitrobenzene #2

7.50min 1472.064ppb

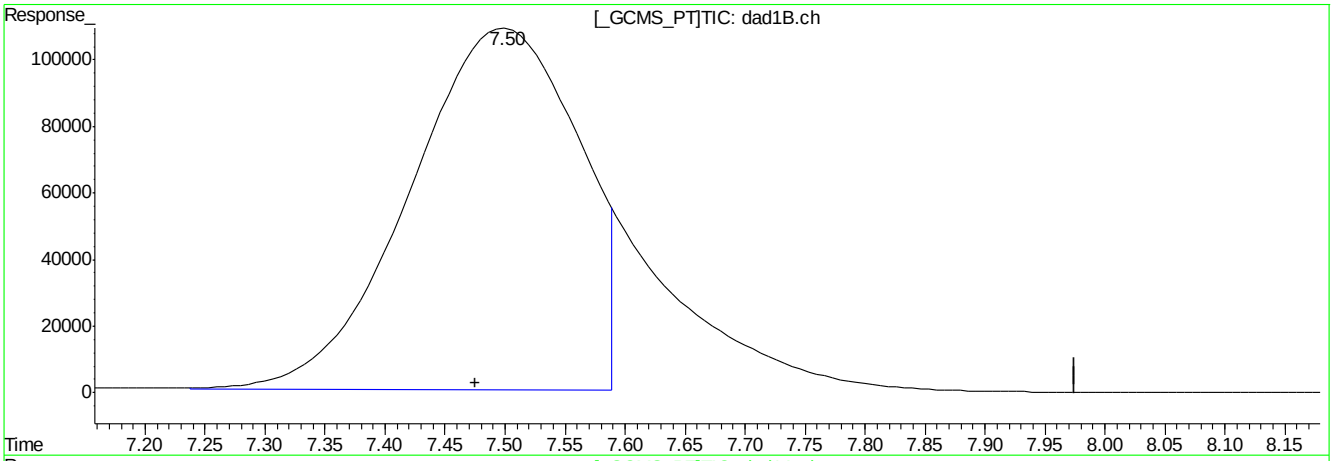
response 13611041

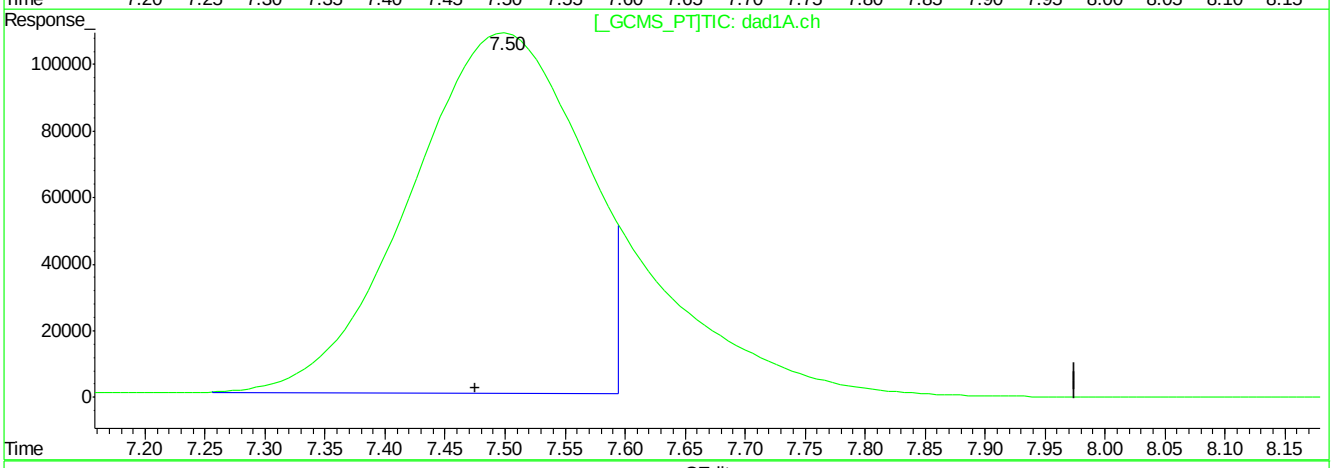
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:41:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.50min 1149.074ppb m

response 10624602

(5) 1,3,5-Trinitrobenzene #2

7.50min 1163.448ppb m

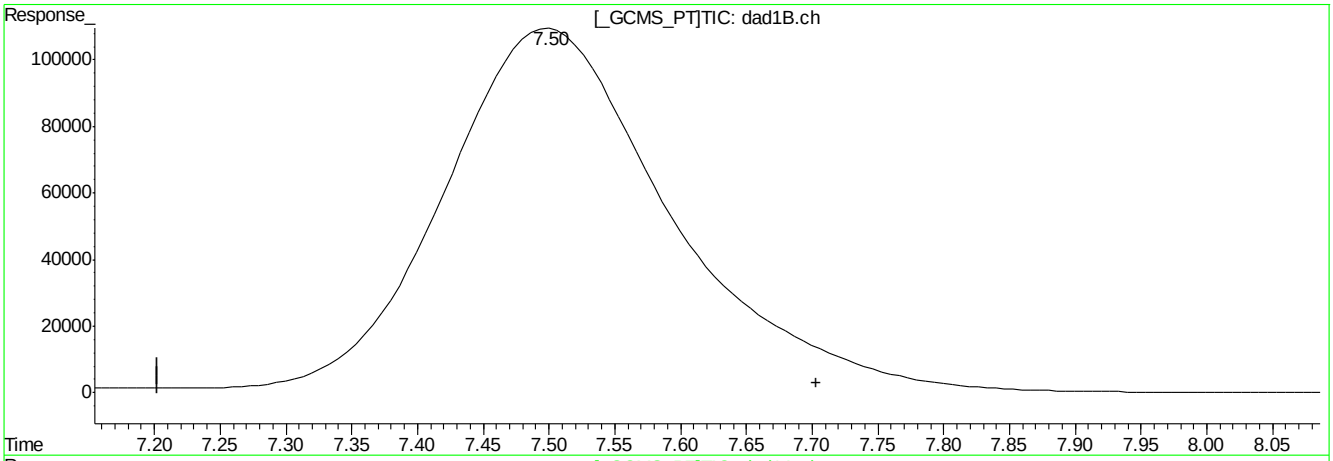
response 10757508

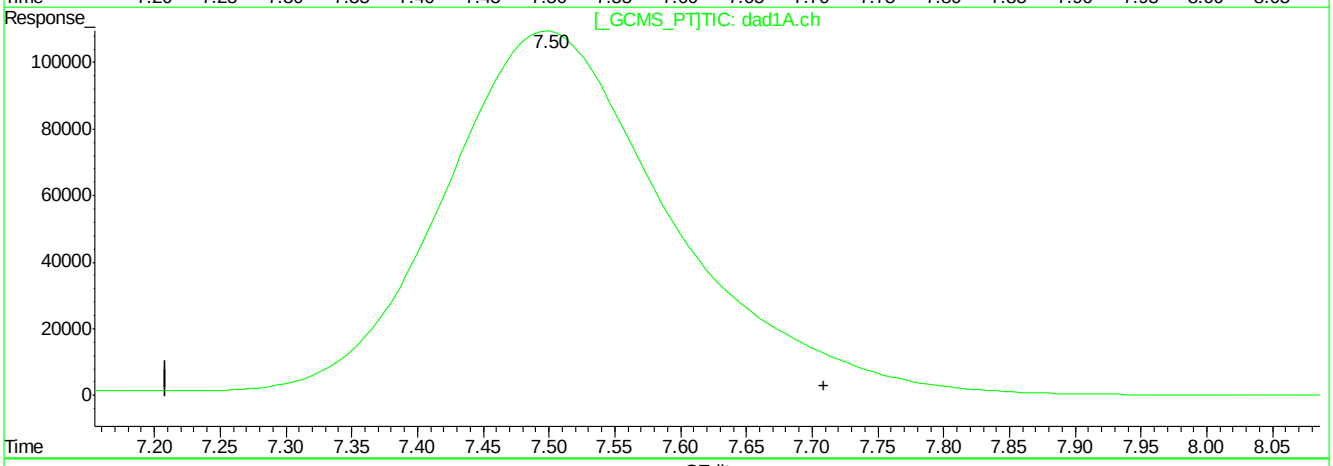
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:42:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.50min 3388.298ppb

response 13611041

(6) RDX #2

7.50min 3388.298ppb

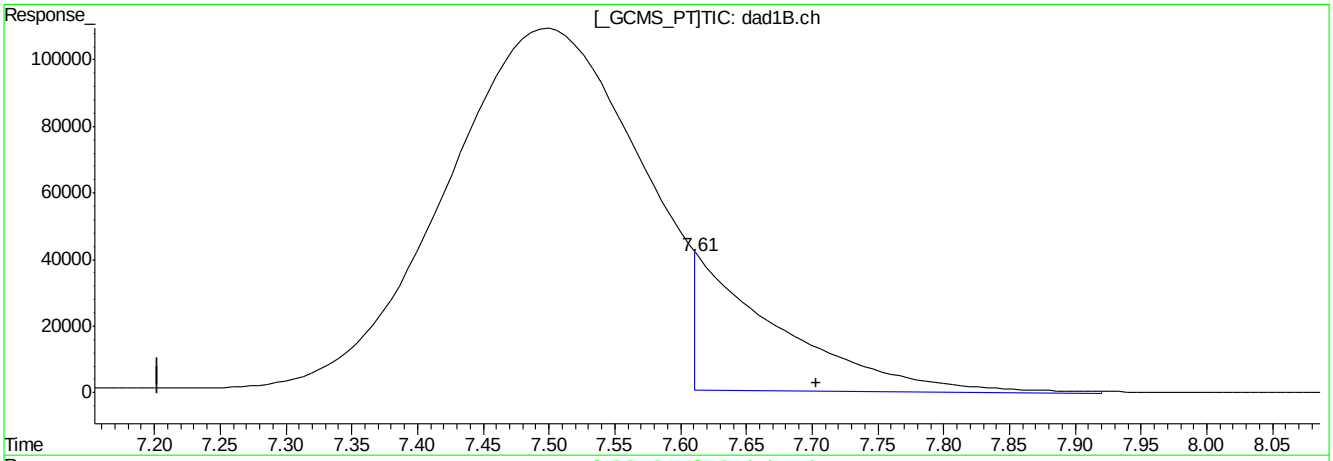
response 13611041

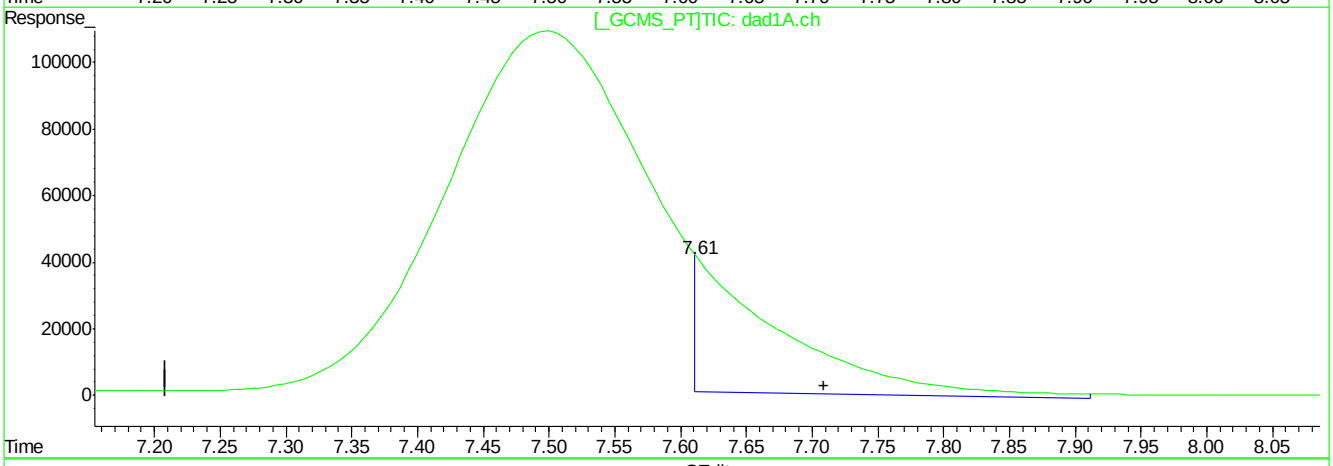
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:42:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.61min 459.446ppb m

response 1845629

(6) RDX #2

7.61min 458.161ppb m

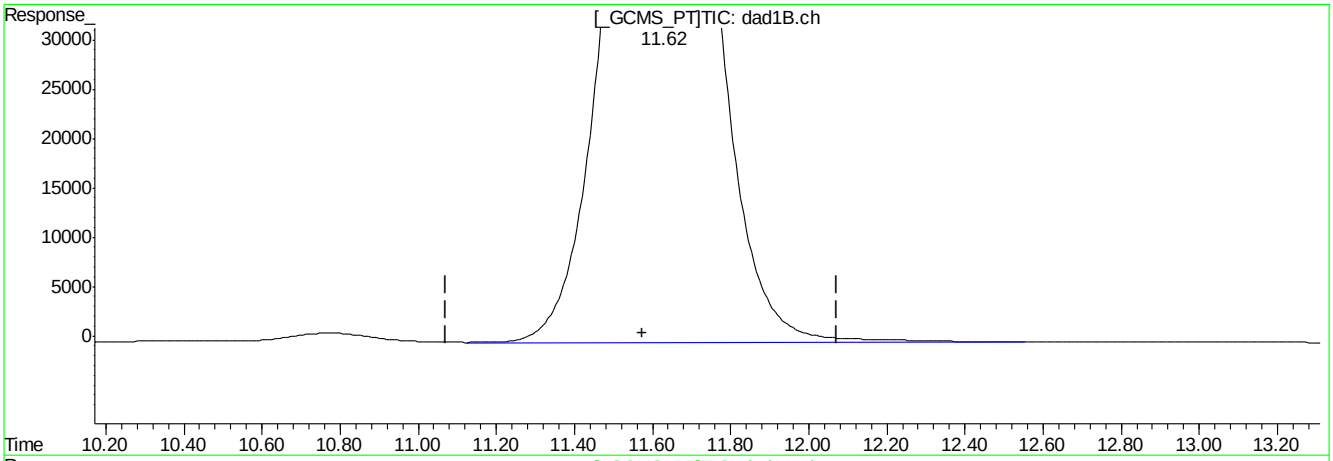
response 1840466

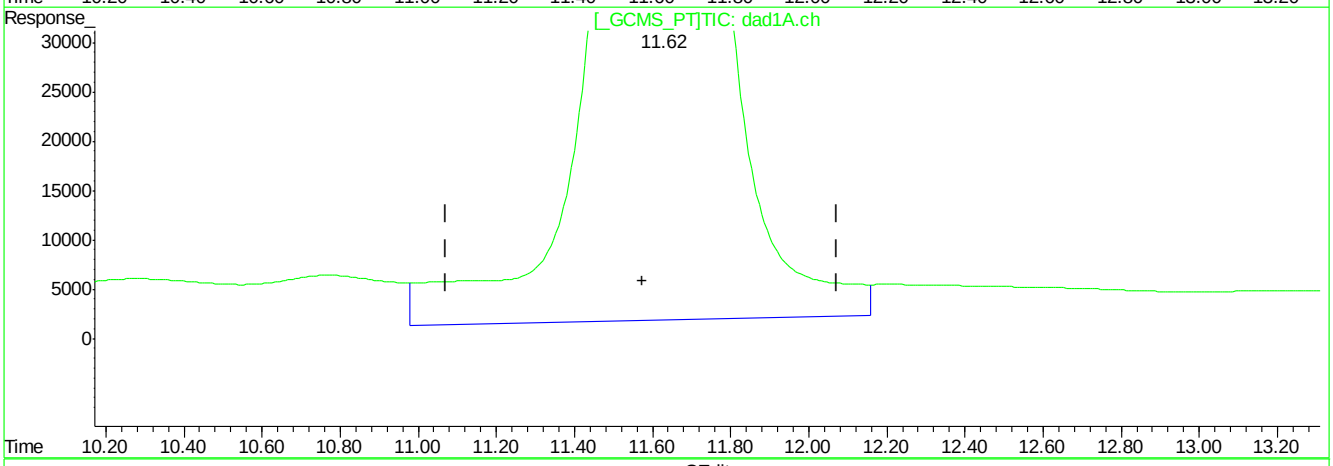
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:42:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.63min 1831.223ppb

response 15754821

(9) 2,4,6-Trinitrotoluene #2

11.63min 1994.999ppb

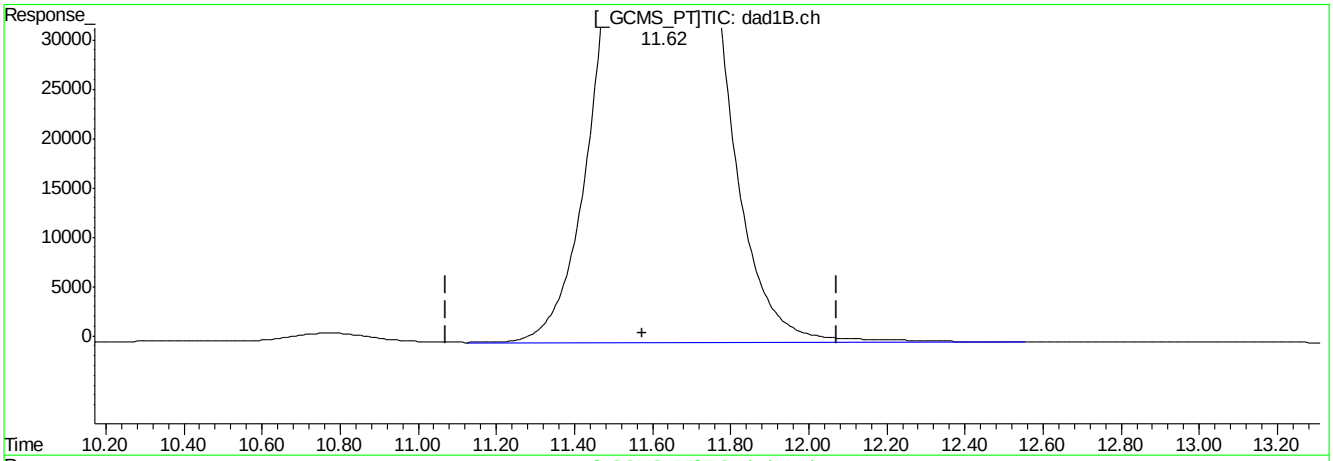
response 23363132

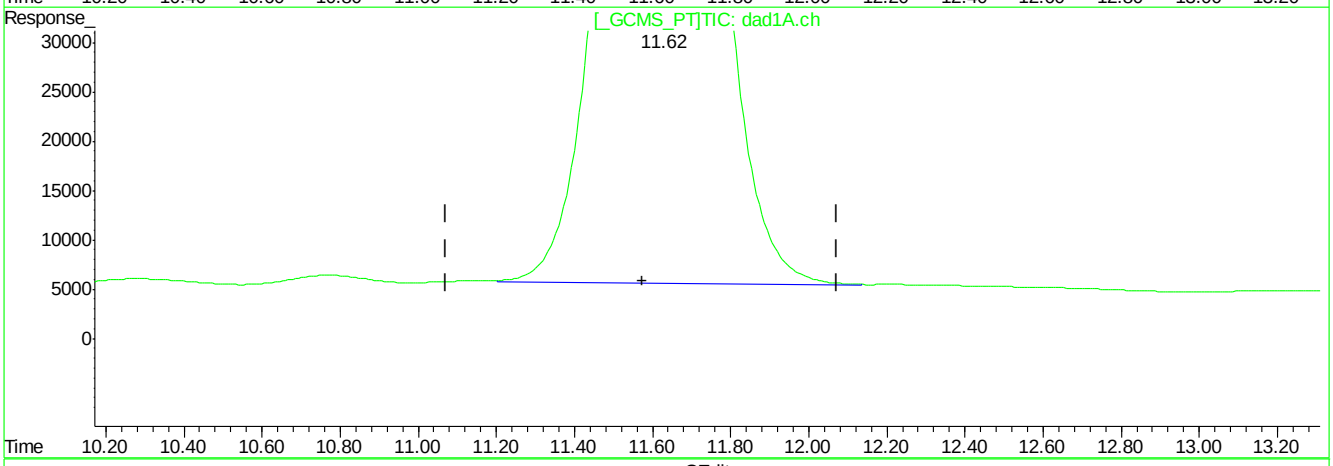
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:42:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.63min 1831.223ppb

response 15754821

(9) 2,4,6-Trinitrotoluene #2

11.62min 1766.645ppb m

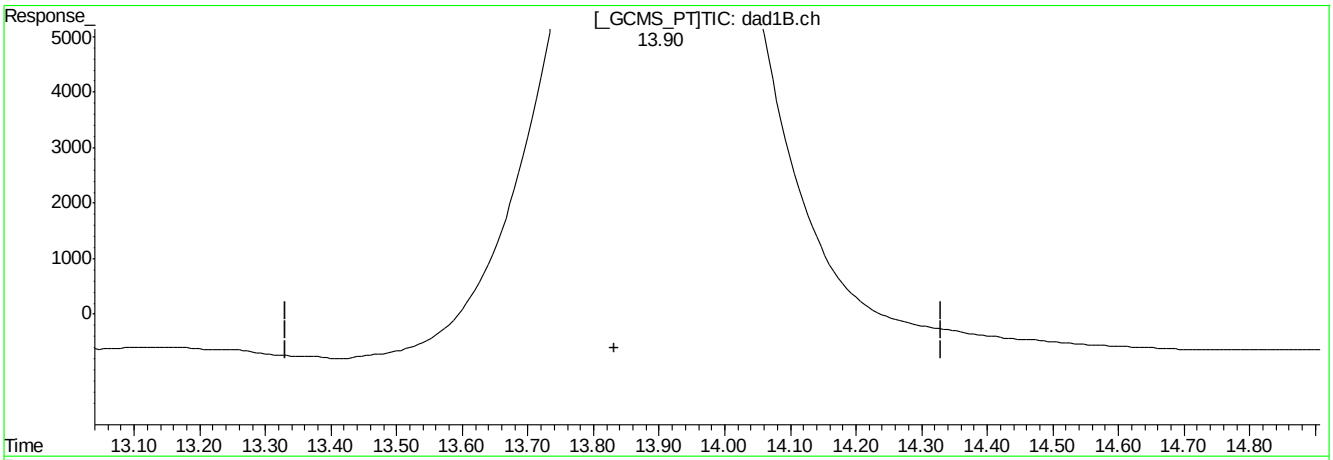
response 20688911

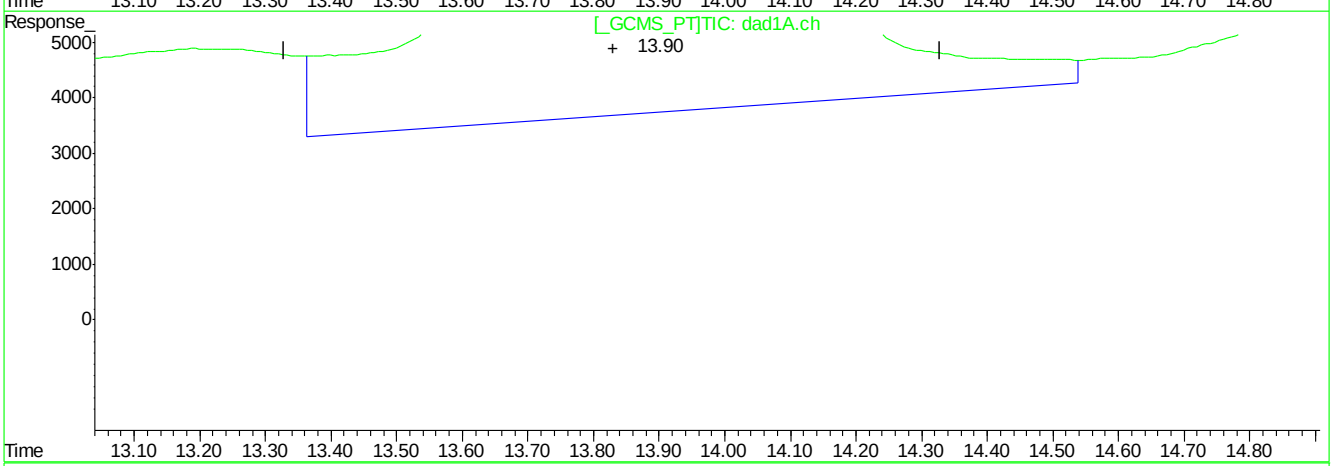
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:42:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.90min 554.301ppb

response 2766933

(12) 3,4-Dinitrotoluene #2 (S)

13.90min 567.367ppb

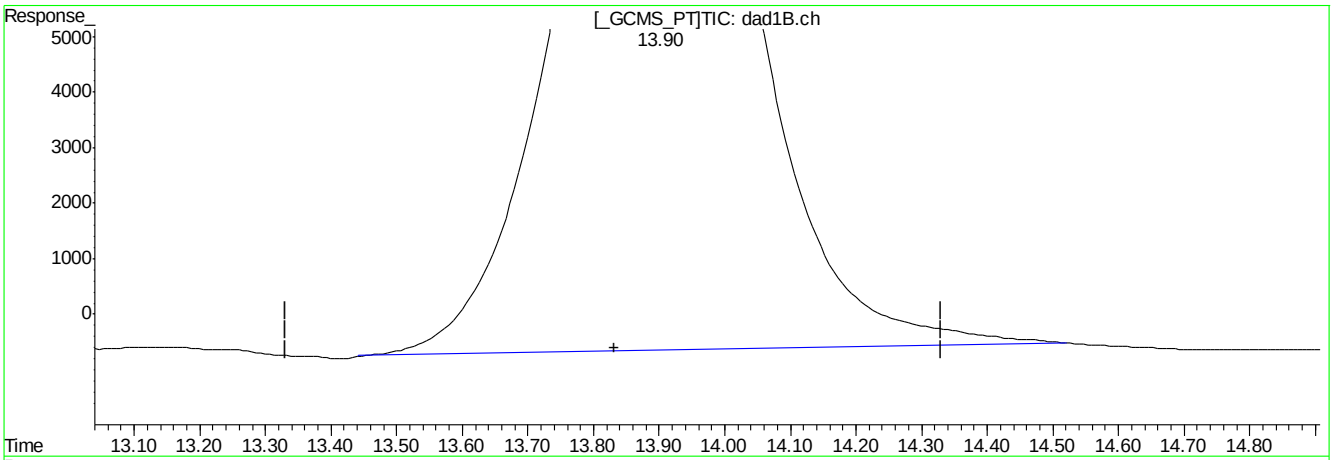
response 5530186

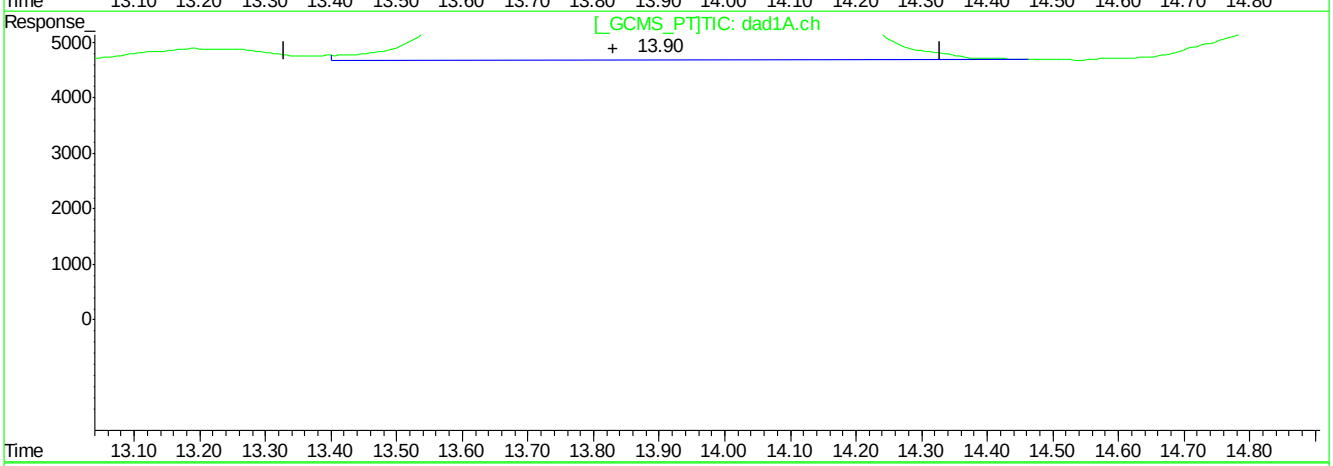
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:42:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.90min 538.464ppb m

response 2687880

(12) 3,4-Dinitrotoluene #2 (S)

13.90min 502.209ppb m

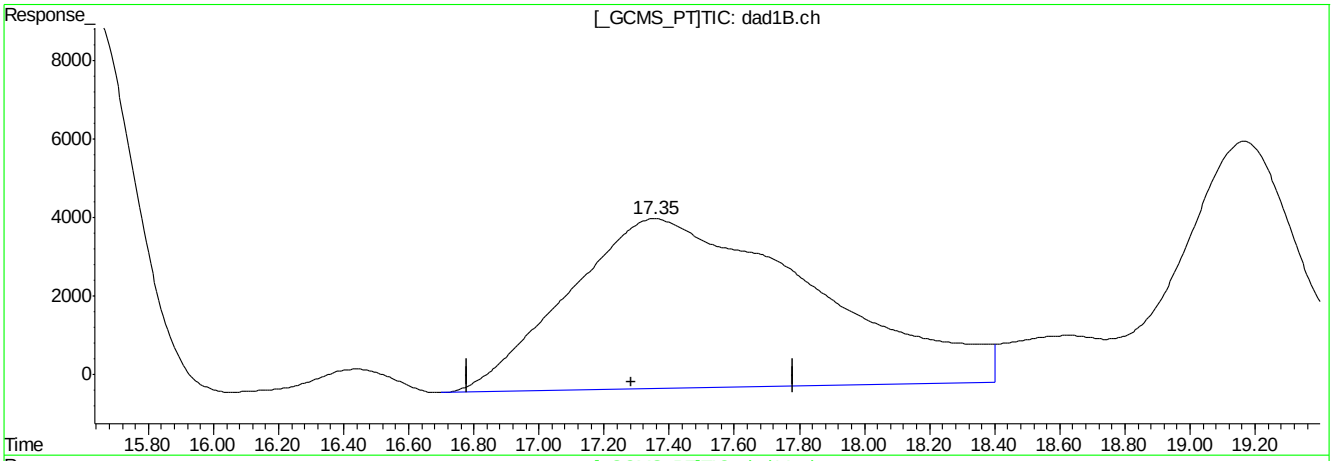
response 4895091

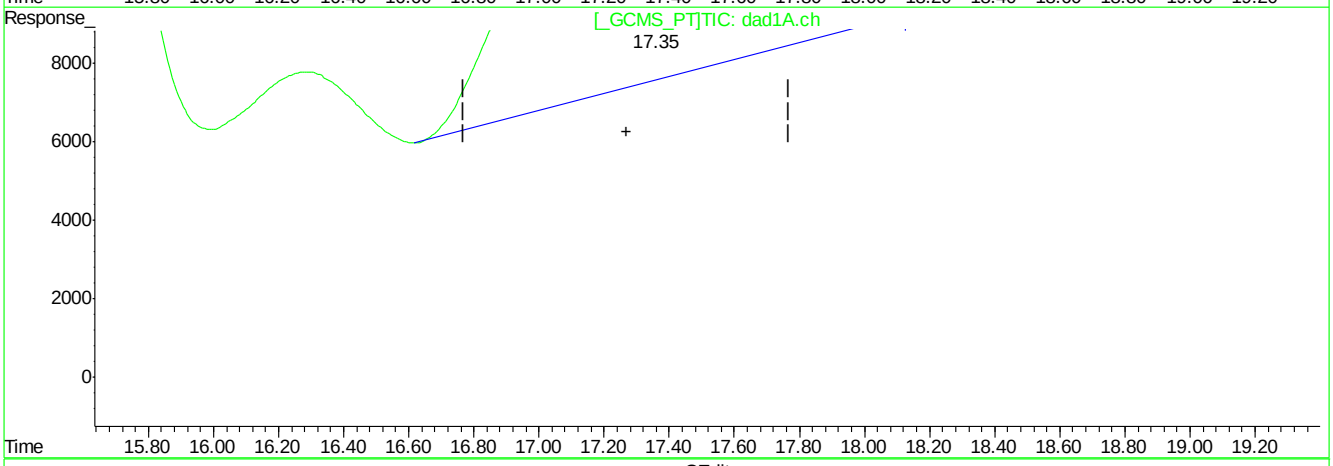
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:43:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.36min 454.595ppb

response 2310750

(17) p-Nitrotoluene #2

17.36min 291.901ppb

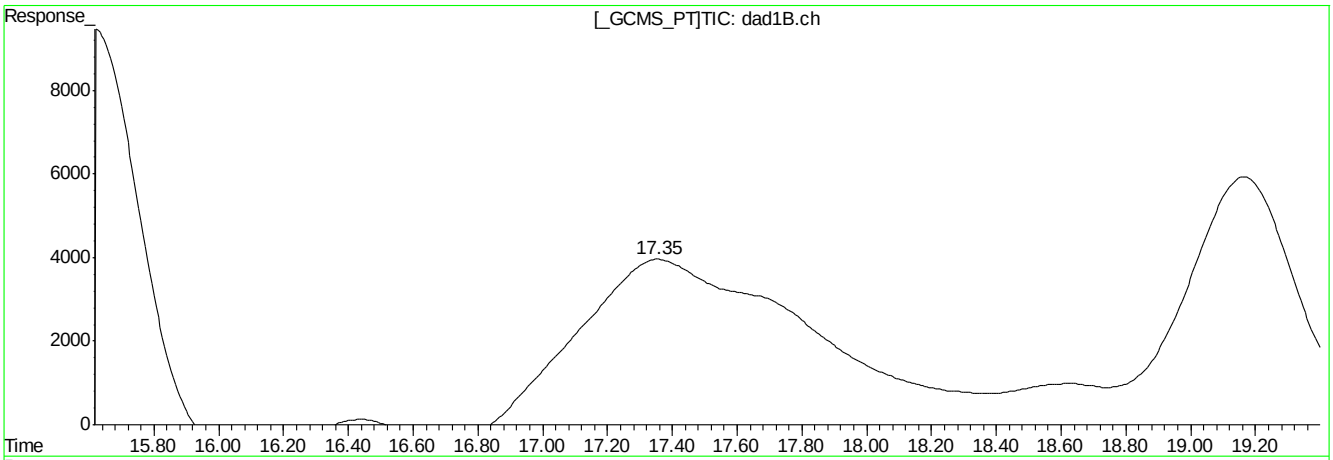
response 2546704

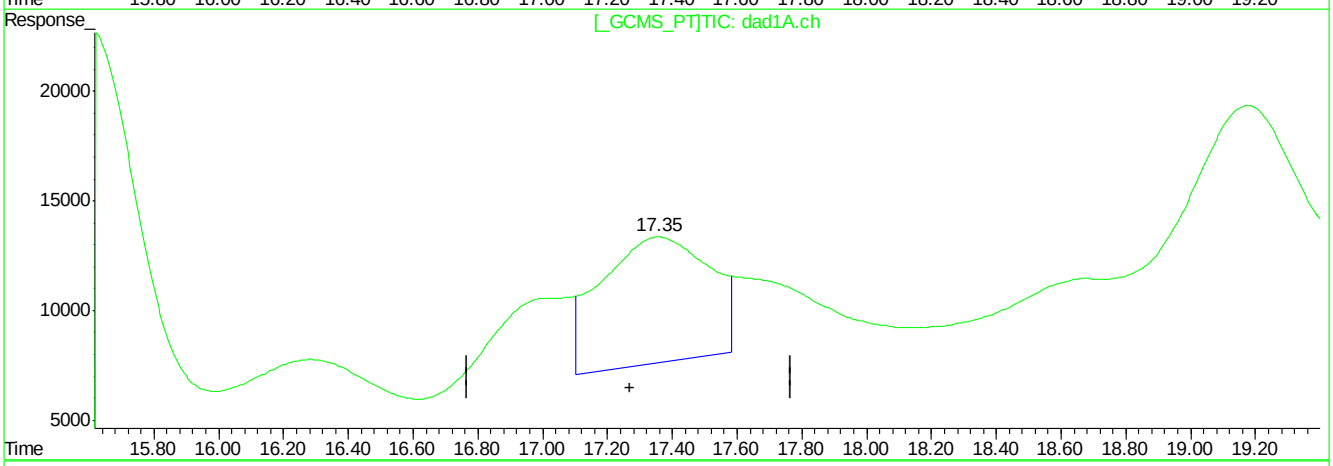
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:43:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.35min 222.376ppb m

response 1130358

(17) p-Nitrotoluene #2

17.35min 153.212ppb m

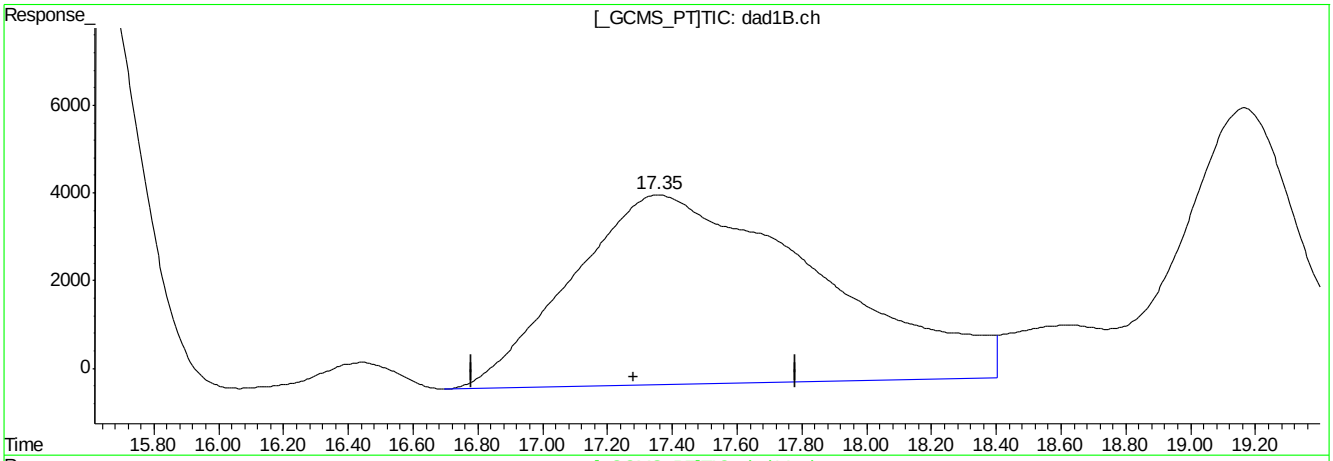
response 1336705

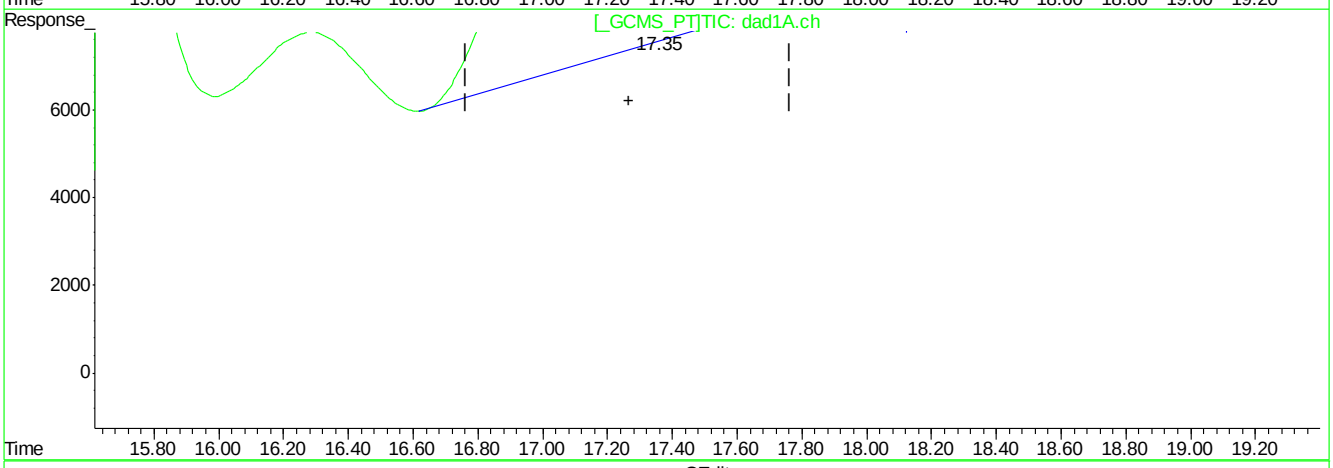
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:43:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.36min 454.595ppb

response 2310750

(18) 4-Amino-2,6-Dinitrotoluene #2

17.36min 291.901ppb

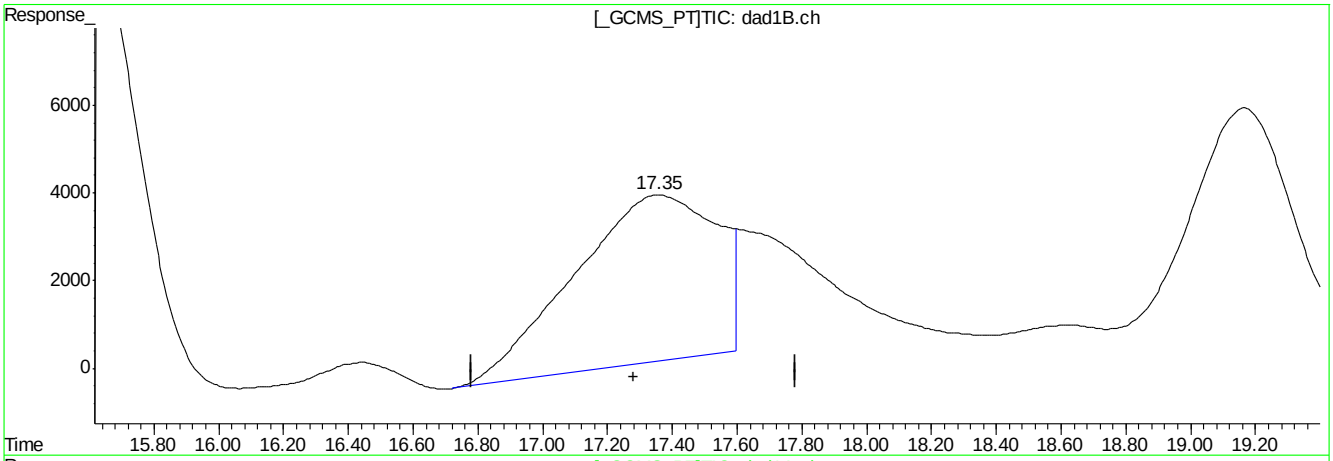
response 2546704

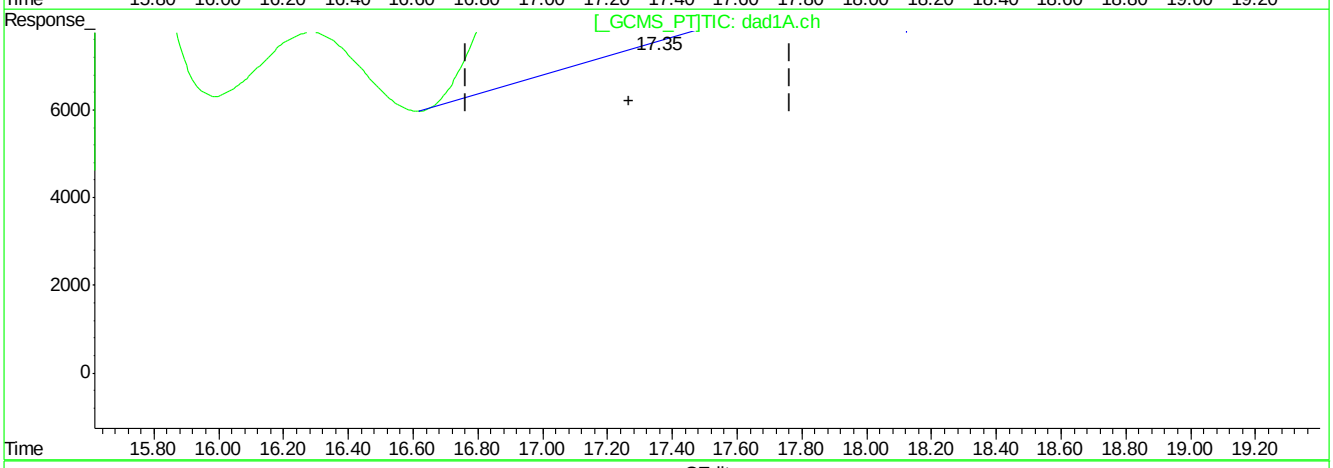
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:43:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.35min 228.516ppb m

response 1161569

(18) 4-Amino-2,6-Dinitrotoluene #2

17.36min 291.901ppb

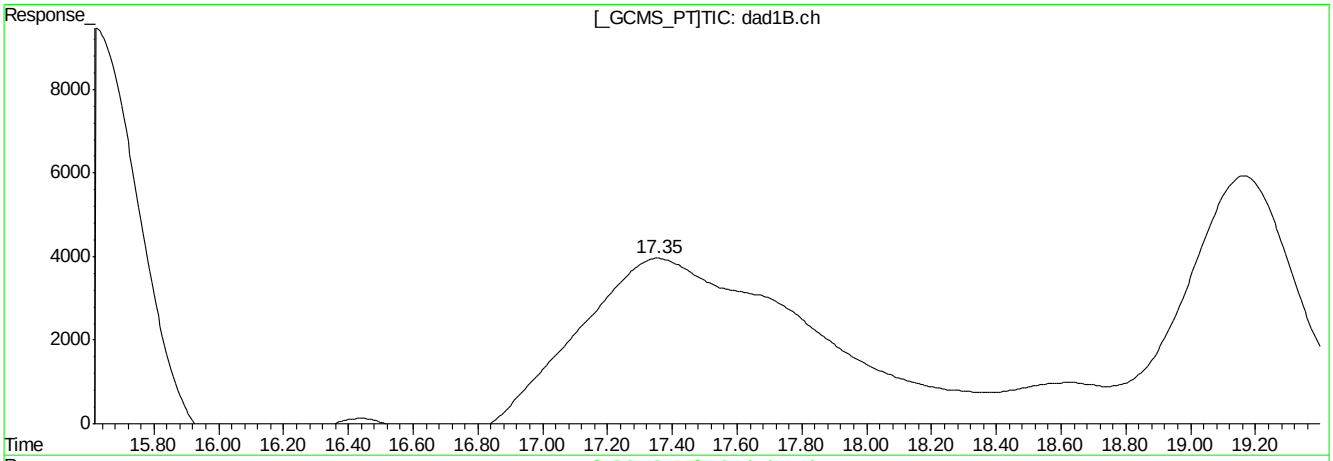
response 2546704

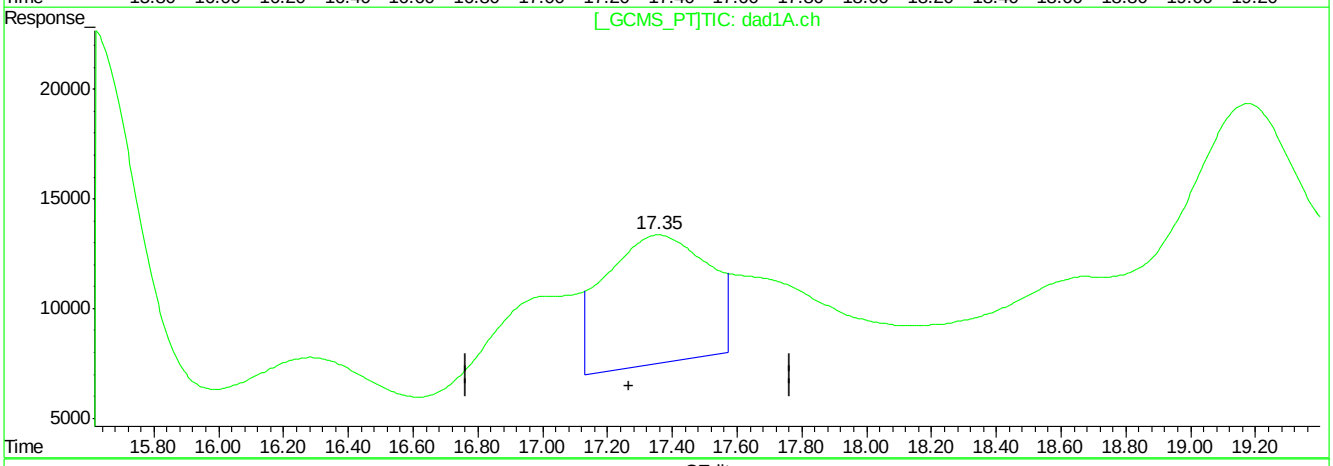
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:43:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.35min 228.516ppb m

response 1161569

(18) 4-Amino-2,6-Dinitrotoluene #2

17.35min 146.854ppb m

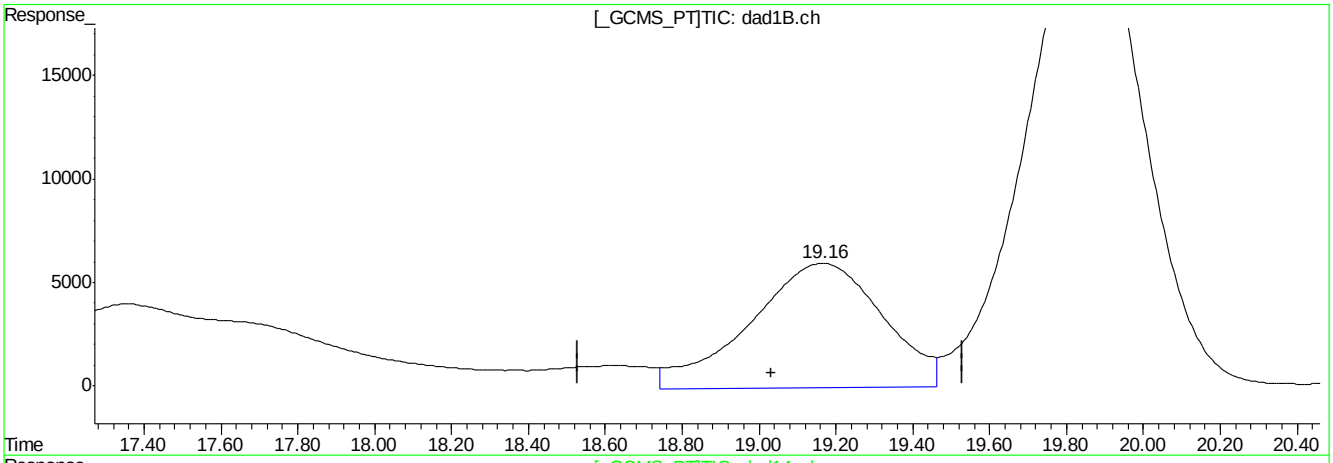
response 1281237

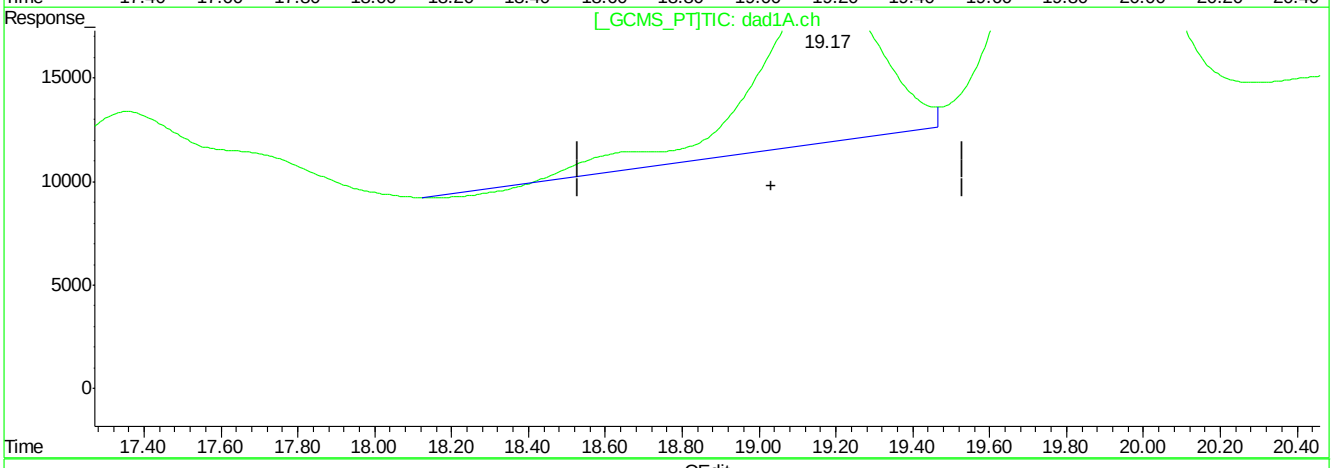
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:43:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.17min 176.401ppb

response 1450534

(20) 2-Amino-4,6-Dinitrotoluene #2

19.18min 155.024ppb

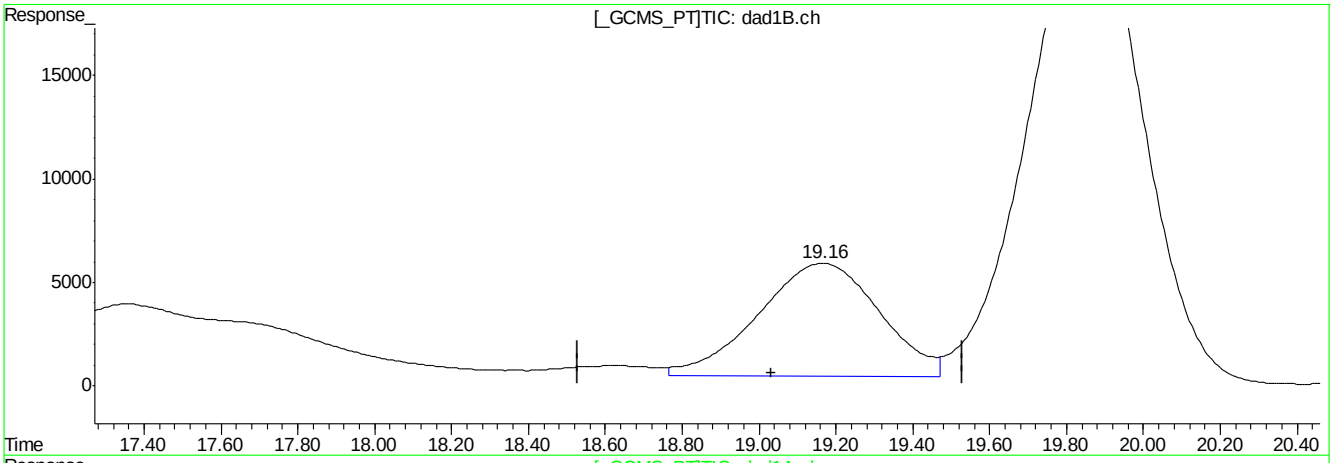
response 1663299

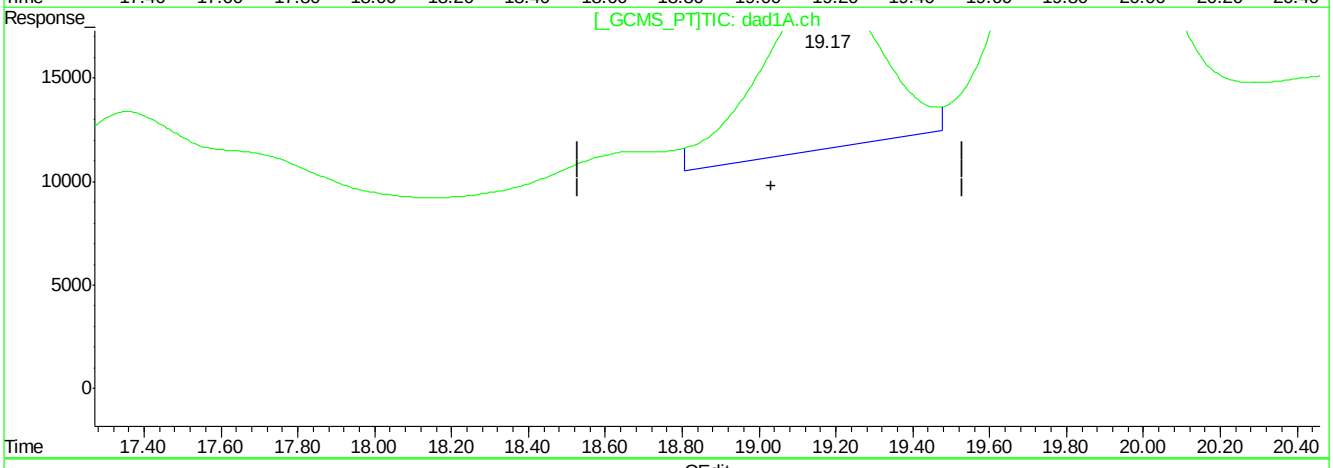
(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:43:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622044.D\dad1A.ch
Acq On : 13-Aug-2021, 01:31:05 Operator: jamesb
Sample : FA87622-2cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.16min 145.021ppb m

response 1192495

(20) 2-Amino-4,6-Dinitrotoluene #2

19.17min 158.436ppb m

response 1699906

(+) = Expected Retention Time
GG622044.D GGG3024_080821.M Fri Aug 13 10:44:04 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:28

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : op86727,GPP2467,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:38 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.27	11.27	1092638	1827449	513.006	562.530
	Spiked Amount 500.000	Range 70 - 136		Recovery =		102.60%	112.51%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	2.87	2.87	83727	58874	44.925m	19.563m#
6)	1,3,5-Trinitrobe	4.67	4.67	5559419	10569927	1381.543	1356.410
7)	1,3-Dinitrobenze	6.00	5.92	253843	232941	48.790m	62.357
8)	3,5-Dinitroanili	6.20	6.21	83706	175497	21.020m	24.771
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	9.92	9.92	6972071	8573573	1843.902m	1916.015m
13)	2-Amino-4,6-Dini	10.17	10.18	628790	816238	181.796m	162.742m
14)	4-Amino-2,6-Dini	10.79	10.79	320146	492782	131.520	101.993
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
17)	2,6-Dinitrotolue	12.60	12.69	1913691	1794791	698.928	534.745m
18)	o-Nitrotoluene	15.68	15.72	92663	31523	40.532	10.770m#
19)	p-Nitrotoluene	16.17	16.19	34532	39016	10.036m	13.816m
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	18.44	0	630357	N.D. d	493.412m

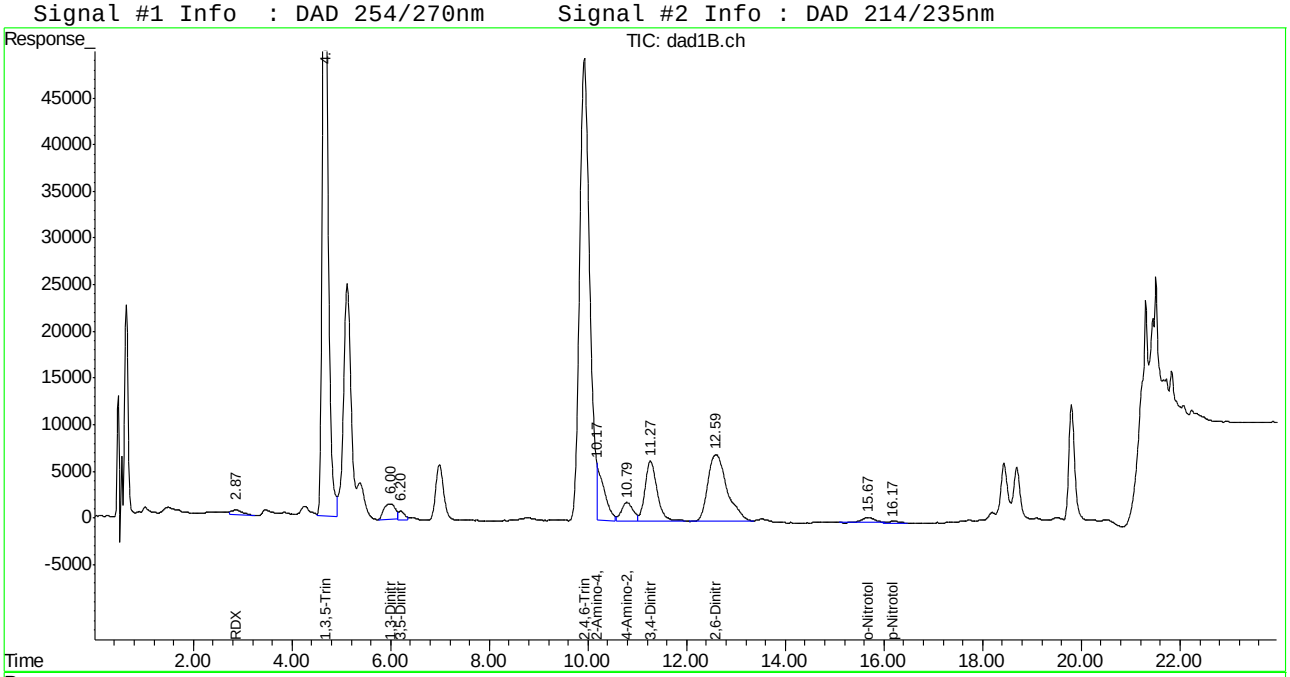
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:29:51 2021 Page 1

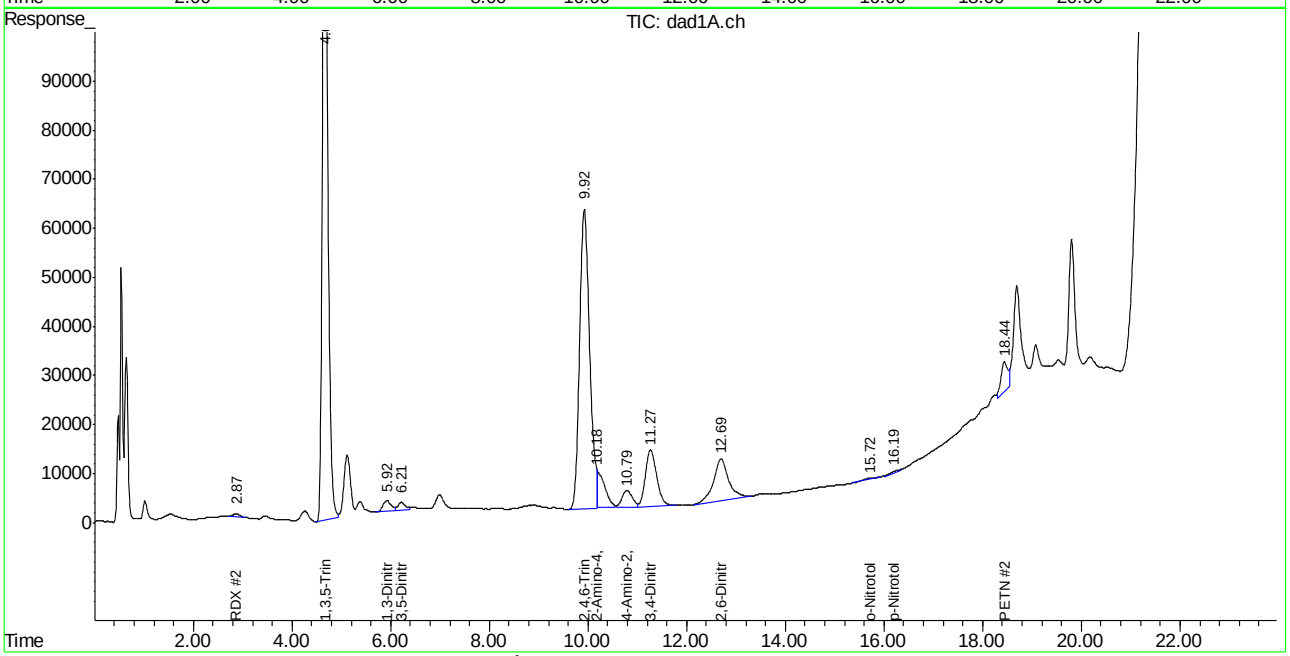
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : op86727,GPP2467,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 15:23 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

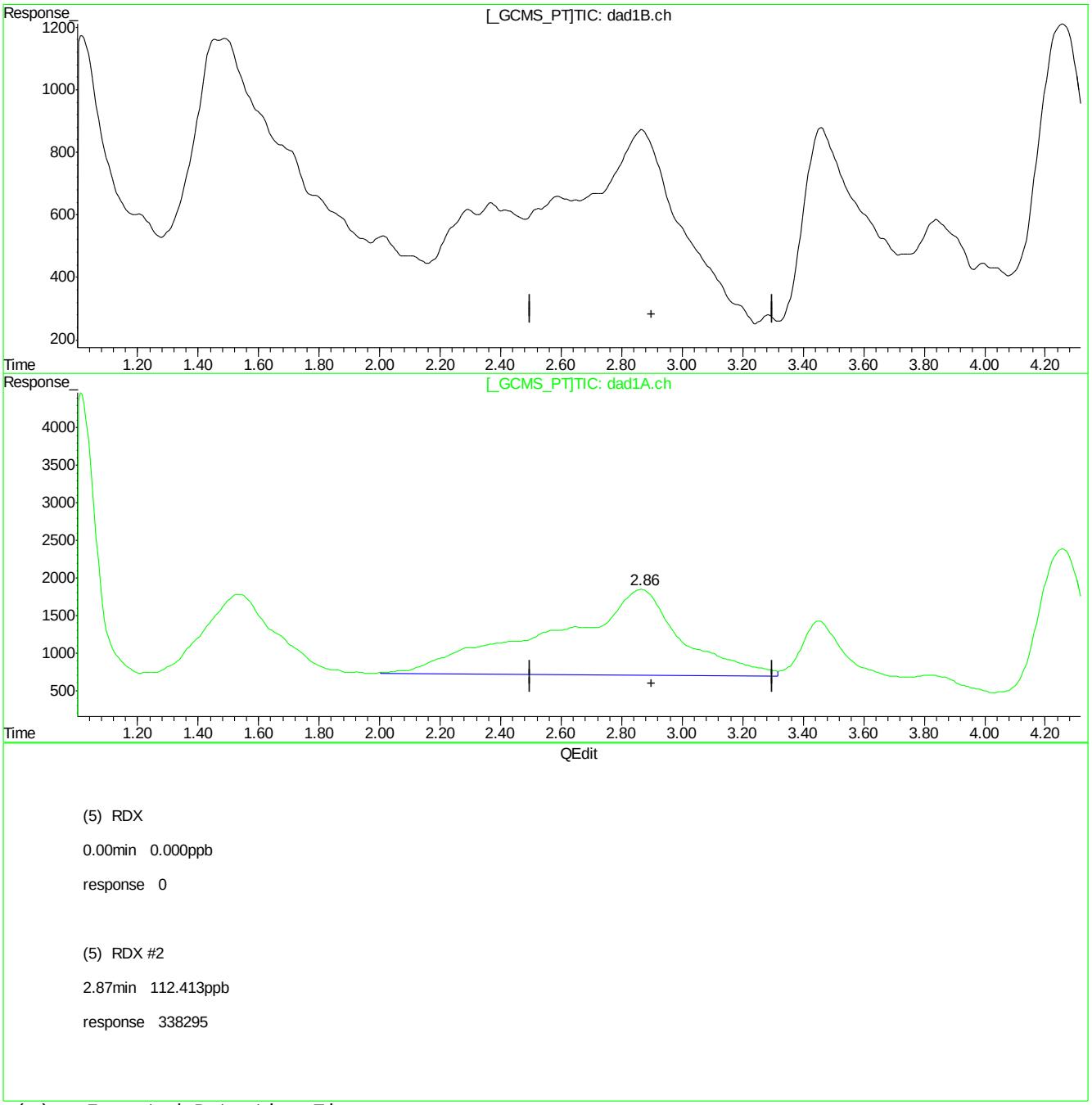
Sample Number: FA87622-3
Lab FileID: PP391156.D
Injection Time: 08/09/21 22:09
Method: SW846 8330B
Analyst approved: 08/12/21 15:32 James Boone
Supervisor approved: 08/13/21 17:28 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
RDX	121-82-4	1	2.87	Poor instrument integration
RDX	121-82-4	2	2.87	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.00	Poor instrument integration
3,5-Dinitroaniline	618-87-1	1	6.20	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.92	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	9.92	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.17	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.18	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.69	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.72	Poor instrument integration
p-Nitrotoluene	99-99-0	1	16.17	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.19	Poor instrument integration
PETN	78-11-5	2	18.44	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(5) RDX

0.00min 0.000ppb

response 0

(5) RDX #2

2.87min 112.413ppb

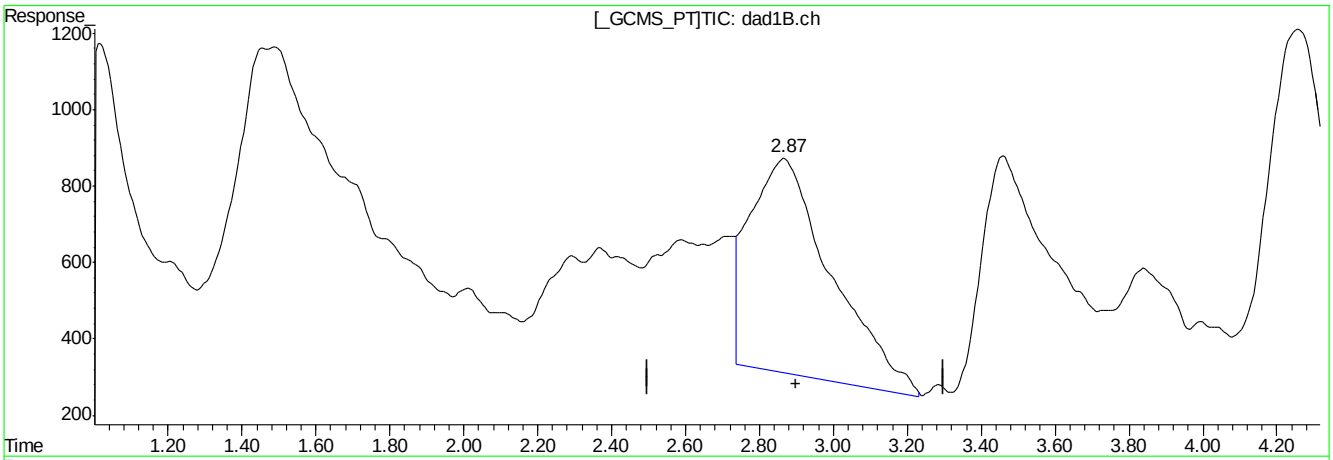
response 338295

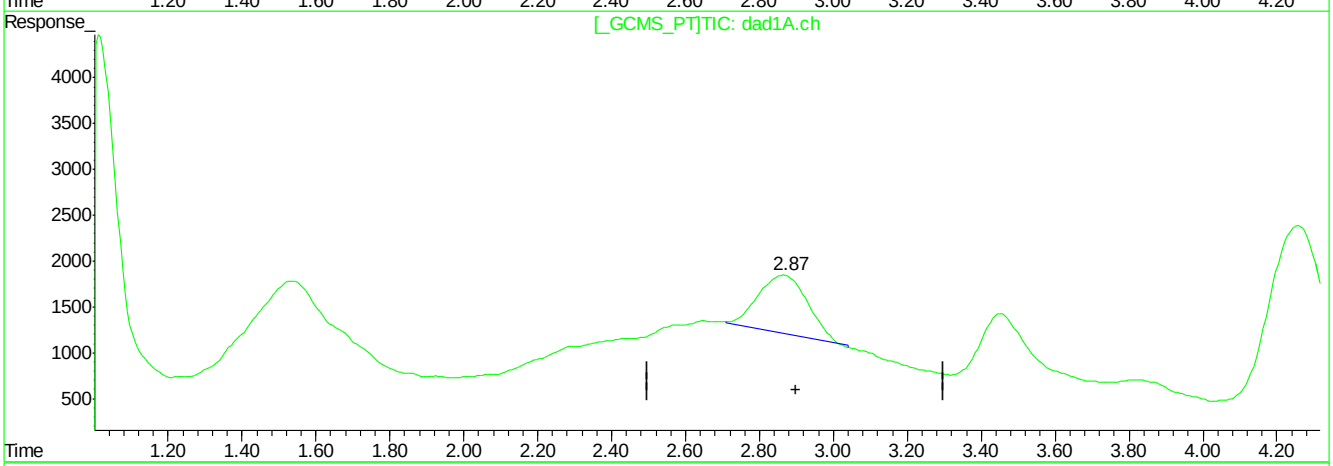
(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:21:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.87min 44.925ppb m

response 83727

(5) RDX #2

2.87min 19.563ppb m

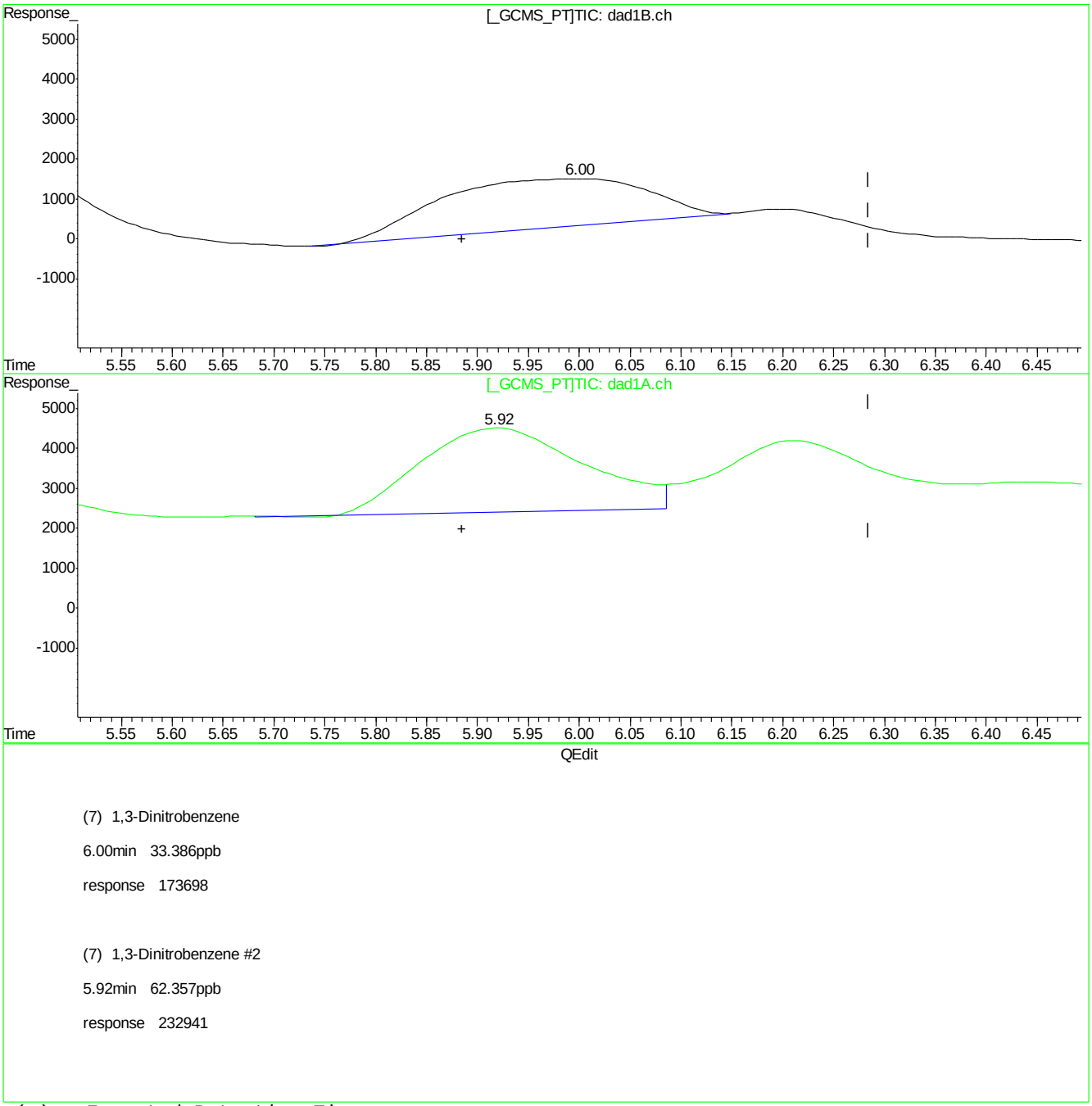
response 58874

(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:21:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

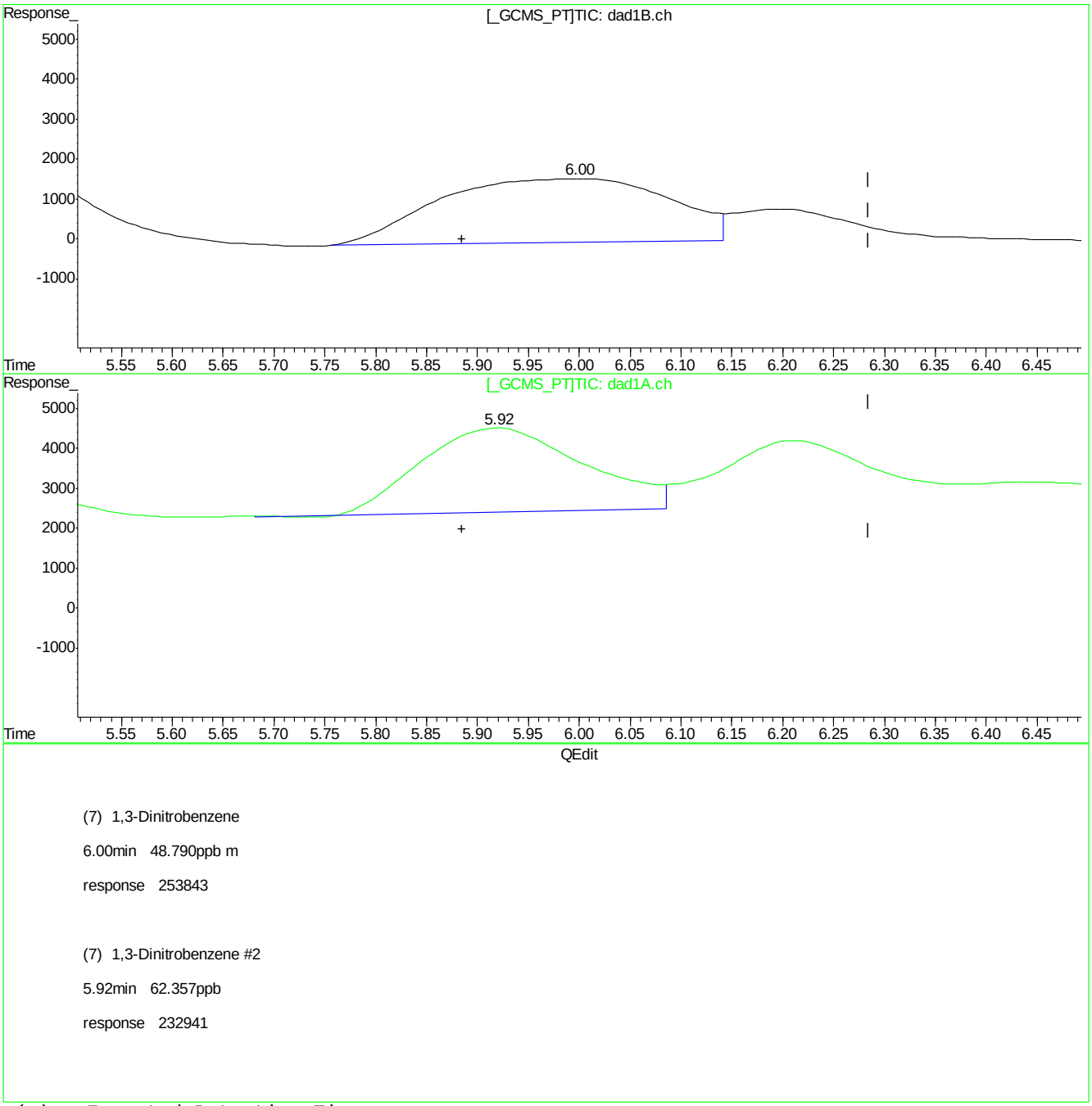


(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:21:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

6.00min 48.790ppb m

response 253843

(7) 1,3-Dinitrobenzene #2

5.92min 62.357ppb

response 232941

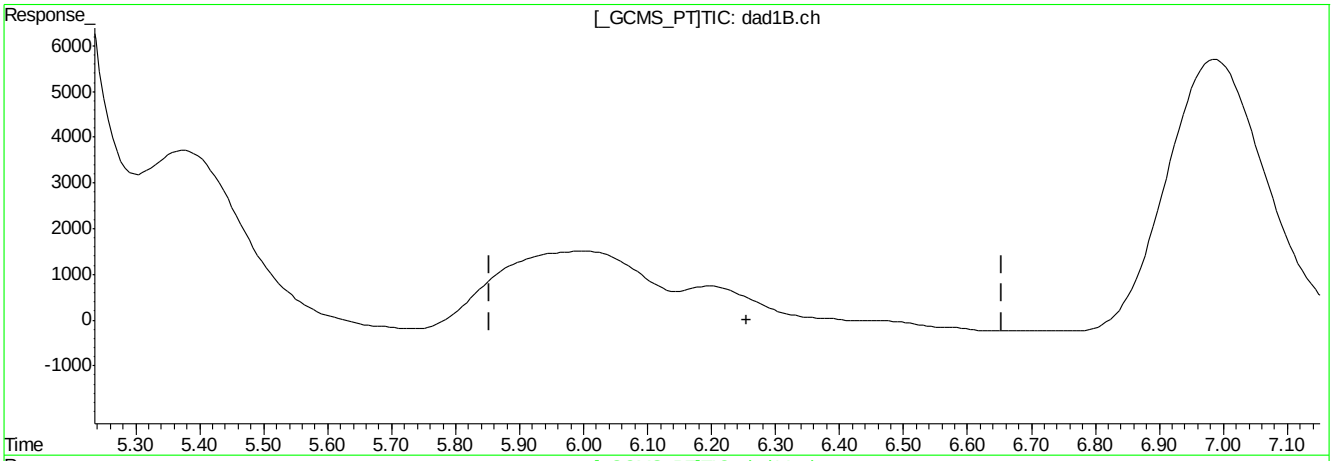
(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:21:54 2021

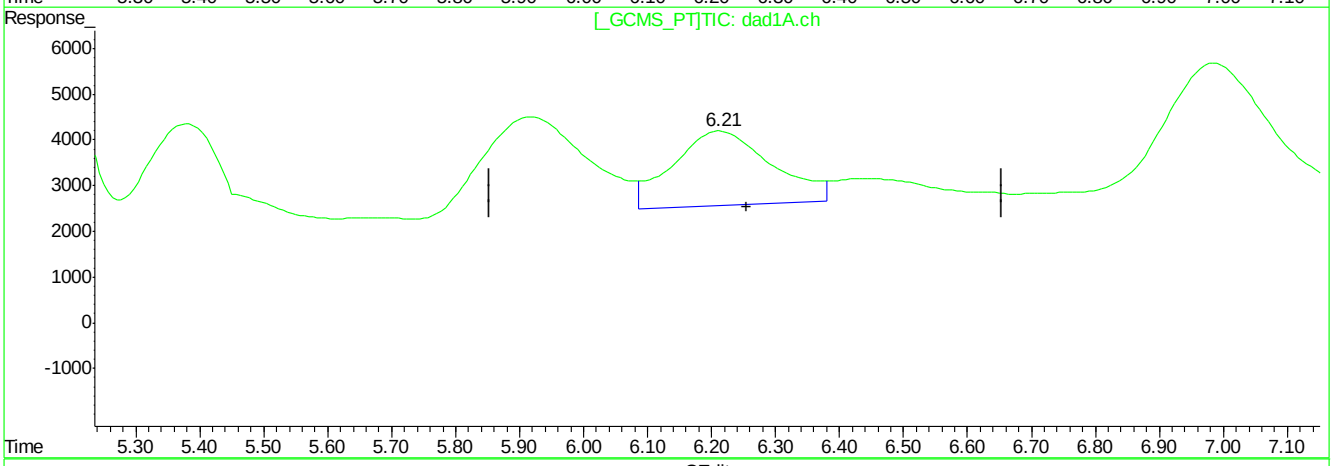
PP391156.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

0.00min 0.000ppb

response 0

(8) 3,5-Dinitroaniline #2

6.21min 24.771ppb

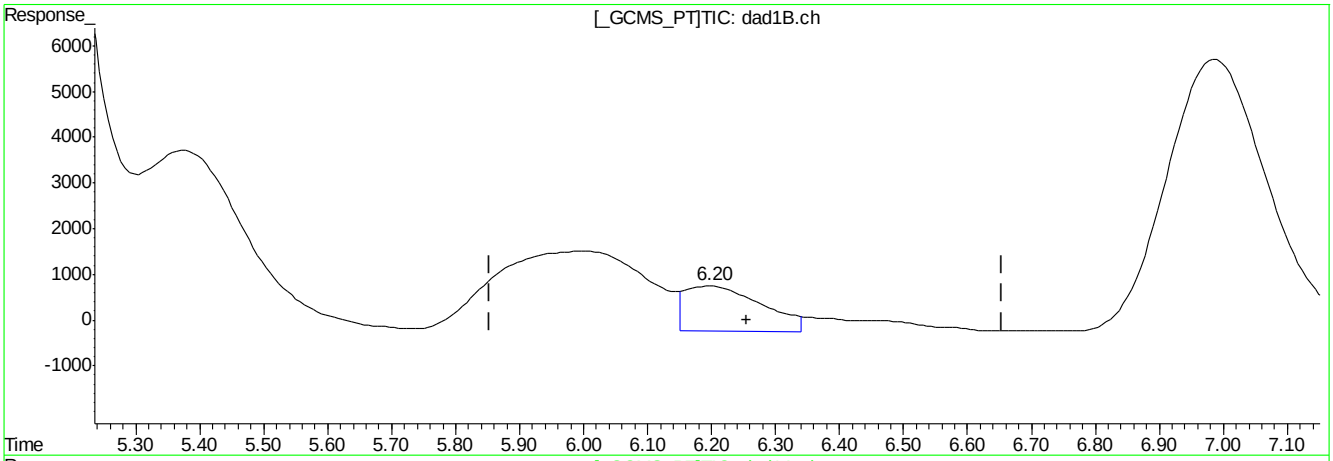
response 175497

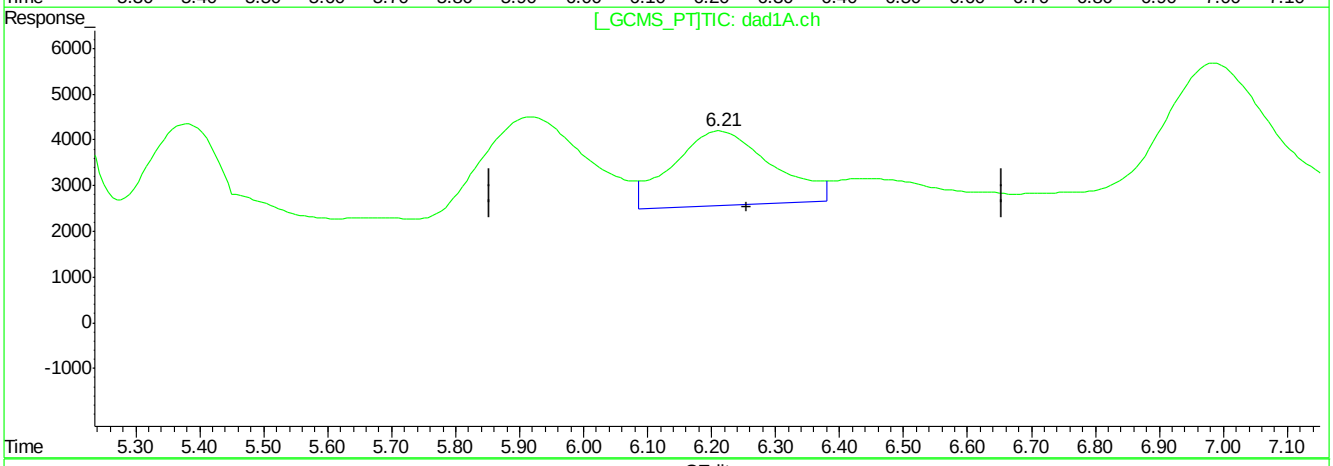
(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:21:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.20min 21.020ppb m

response 83706

(8) 3,5-Dinitroaniline #2

6.21min 24.771ppb

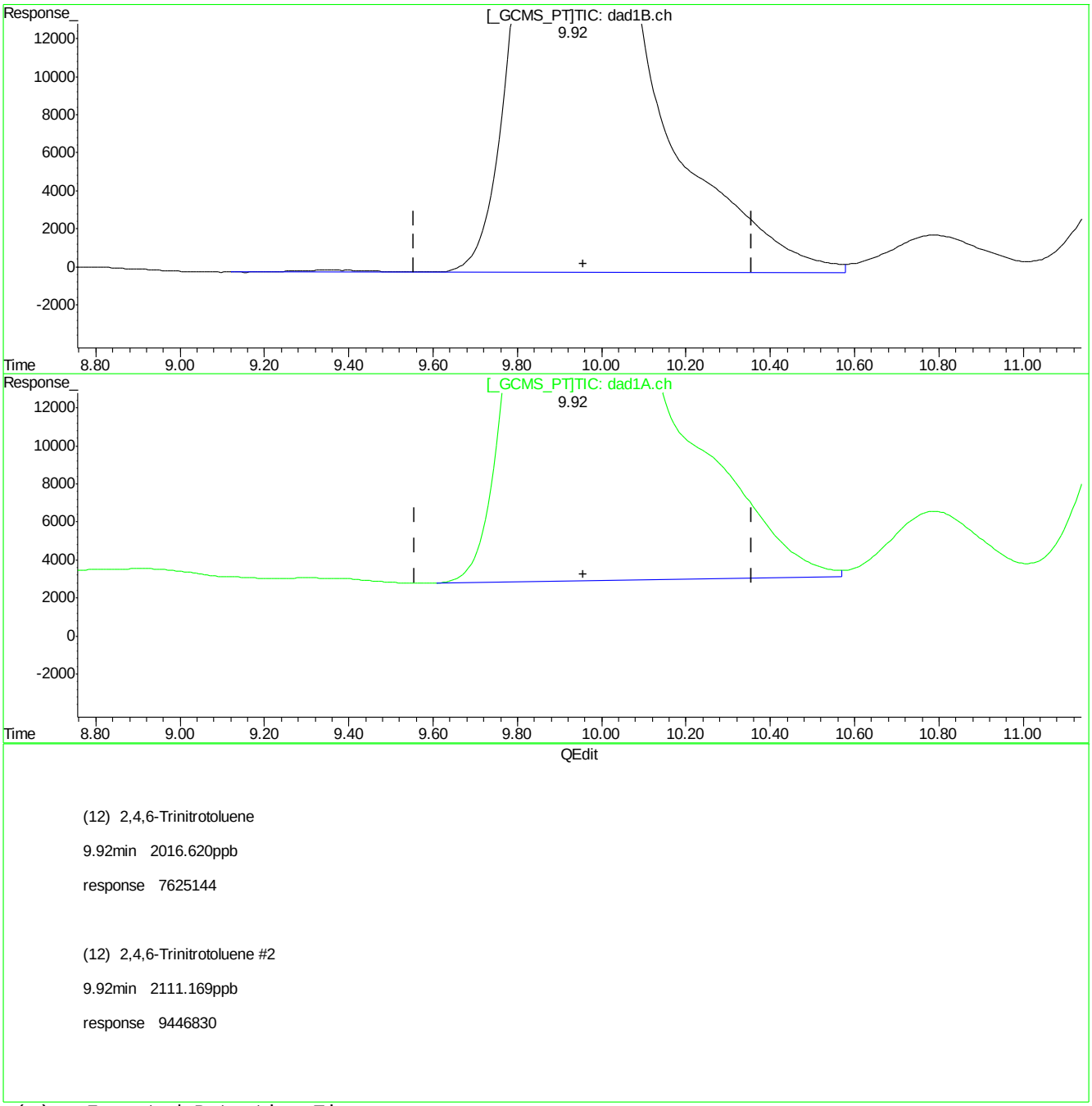
response 175497

(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:22:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

9.92min 2016.620ppb

response 7625144

(12) 2,4,6-Trinitrotoluene #2

9.92min 2111.169ppb

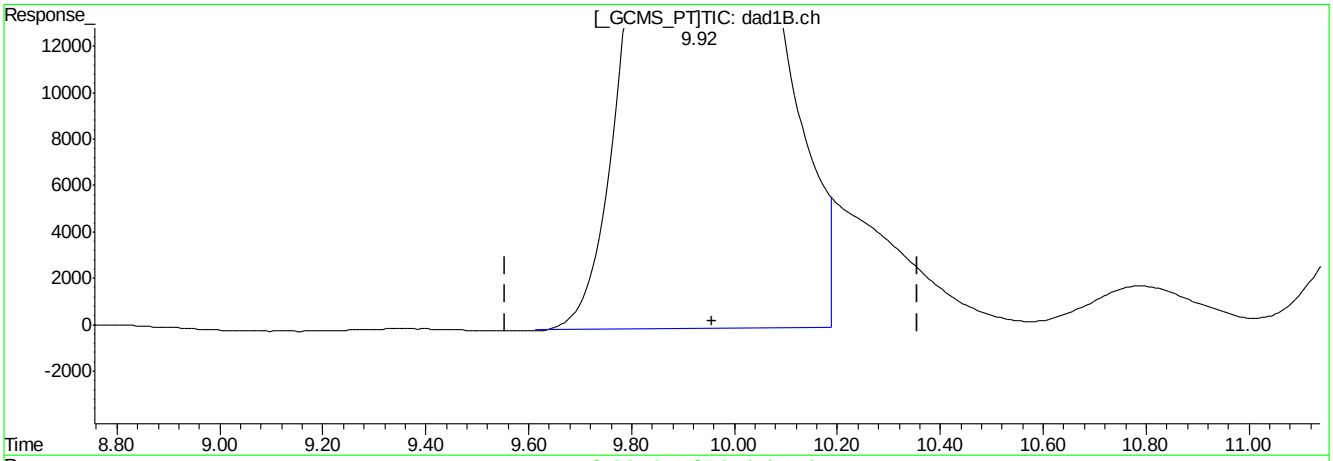
response 9446830

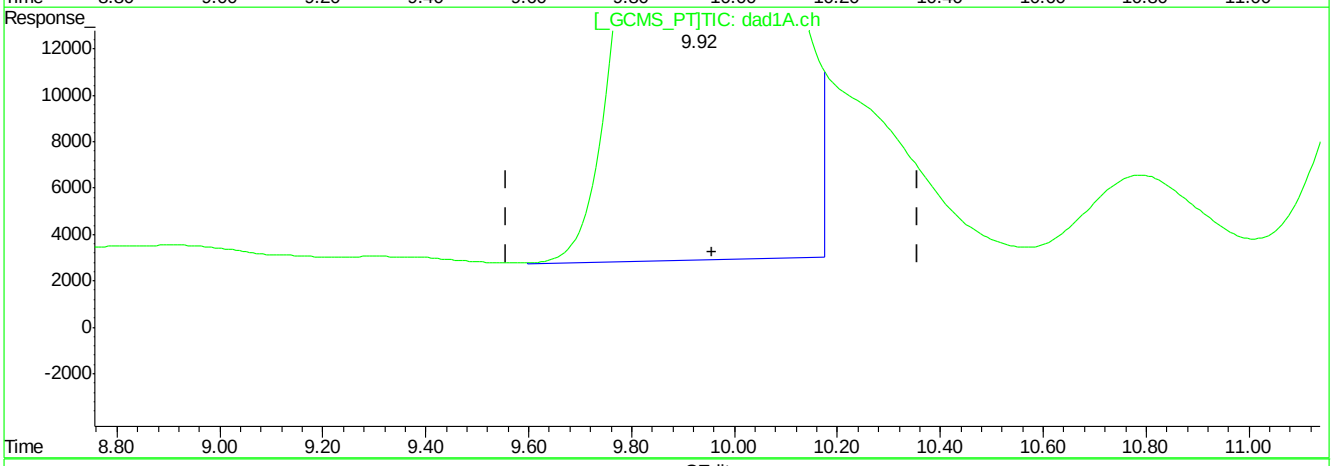
(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:22:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.92min 1843.902ppb m

response 6972071

(12) 2,4,6-Trinitrotoluene #2

9.92min 1916.015ppb m

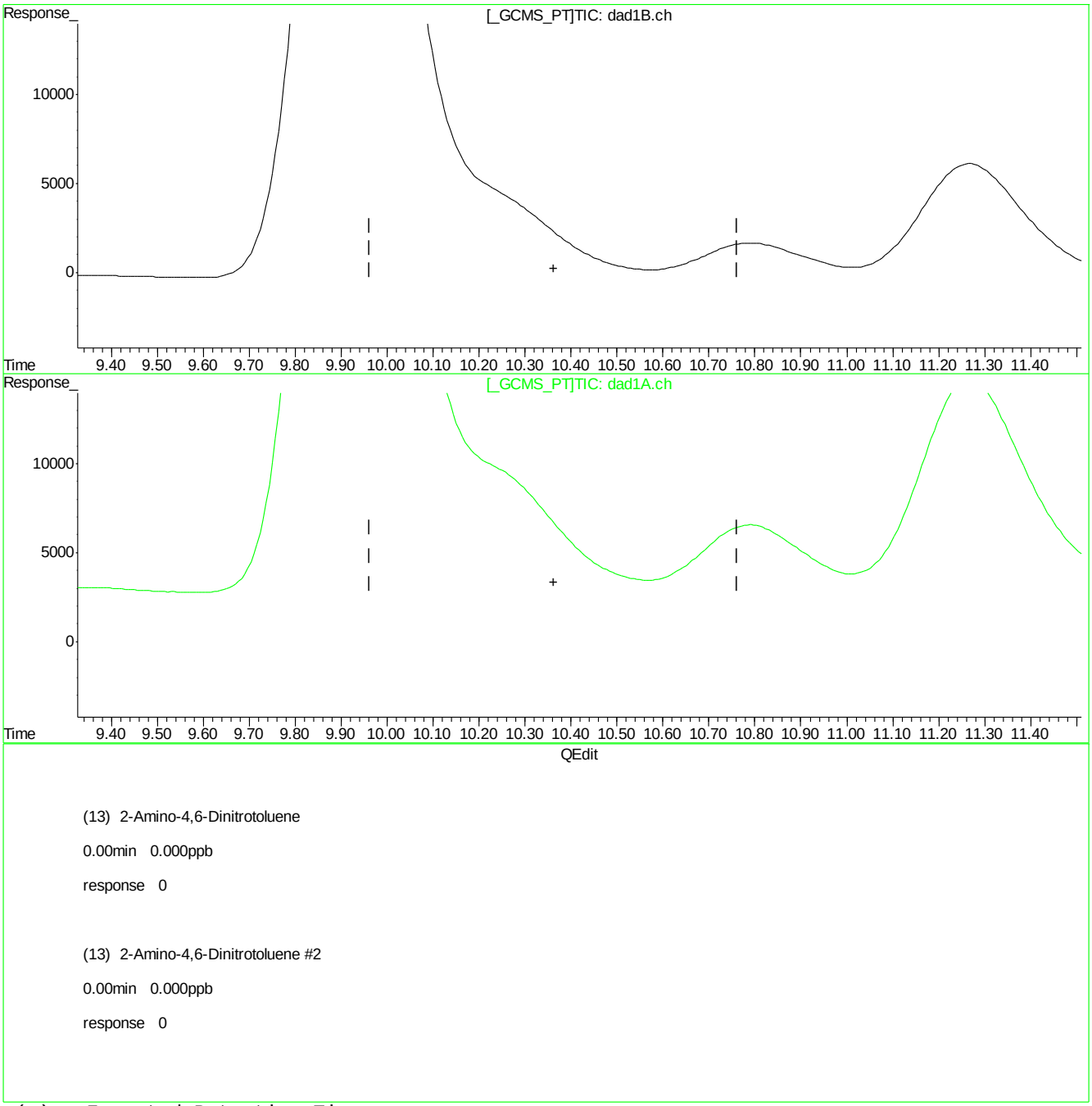
response 8573573

(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:22:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

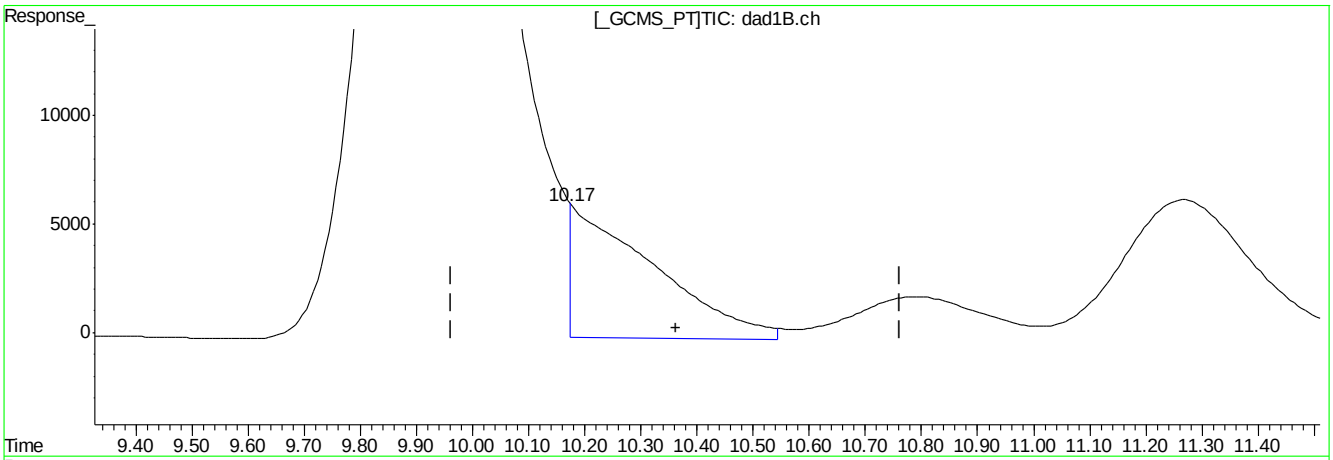


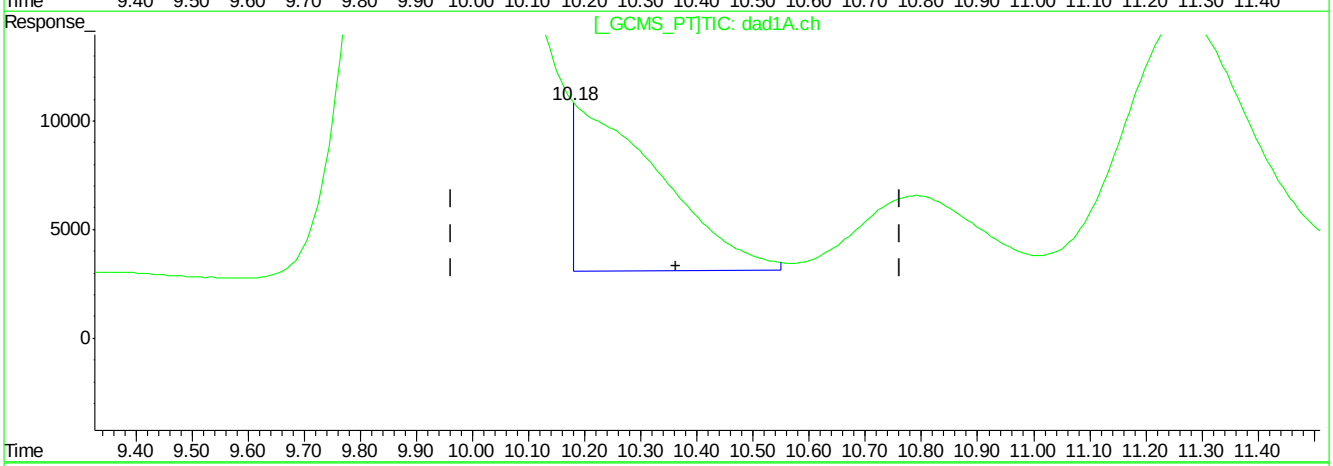
(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:22:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.17min 181.796ppb m

response 628790

(13) 2-Amino-4,6-Dinitrotoluene #2

10.18min 162.742ppb m

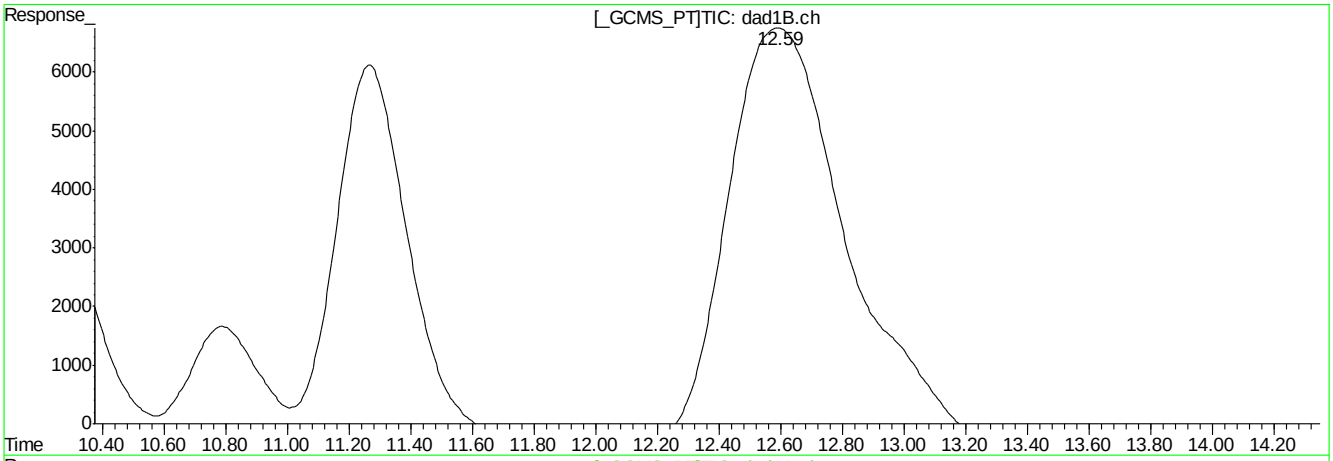
response 816238

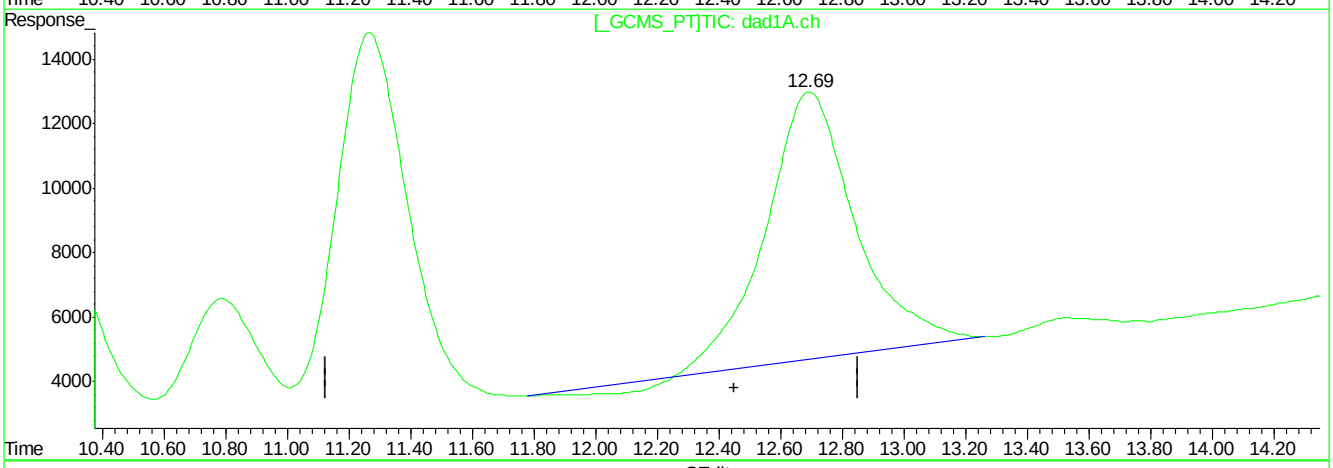
(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:22:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.60min 698.928ppb

response 1913691

(17) 2,6-Dinitrotoluene #2

12.70min 490.299ppb

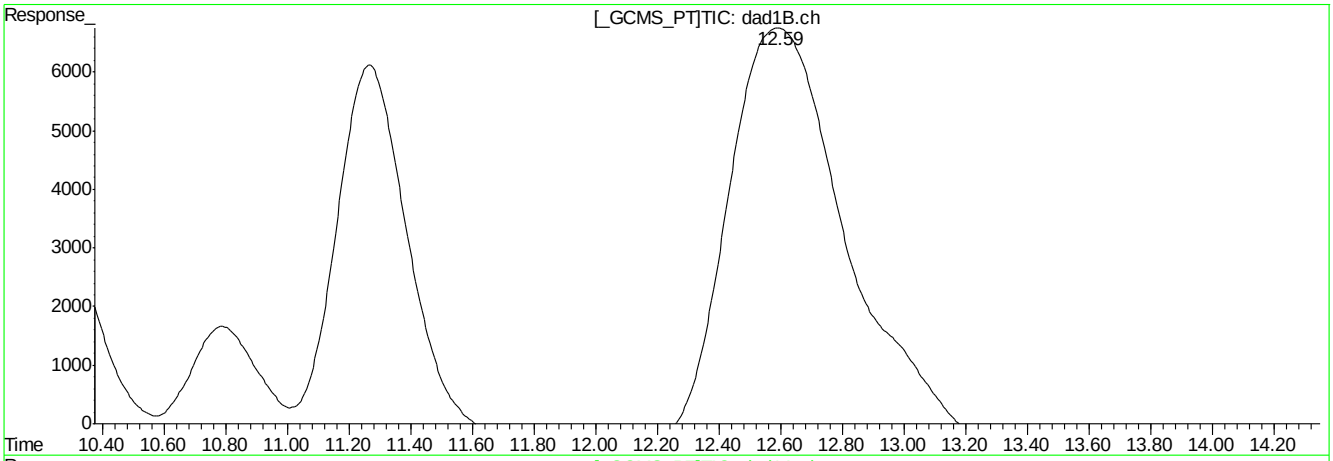
response 1645614

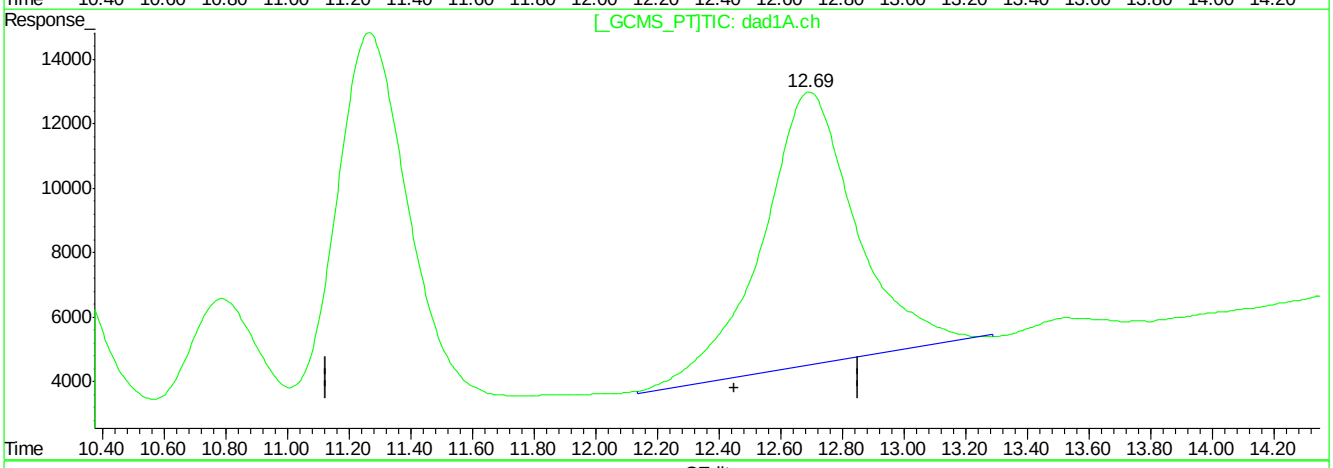
(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:22:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.60min 698.928ppb

response 1913691

(17) 2,6-Dinitrotoluene #2

12.69min 534.745ppb m

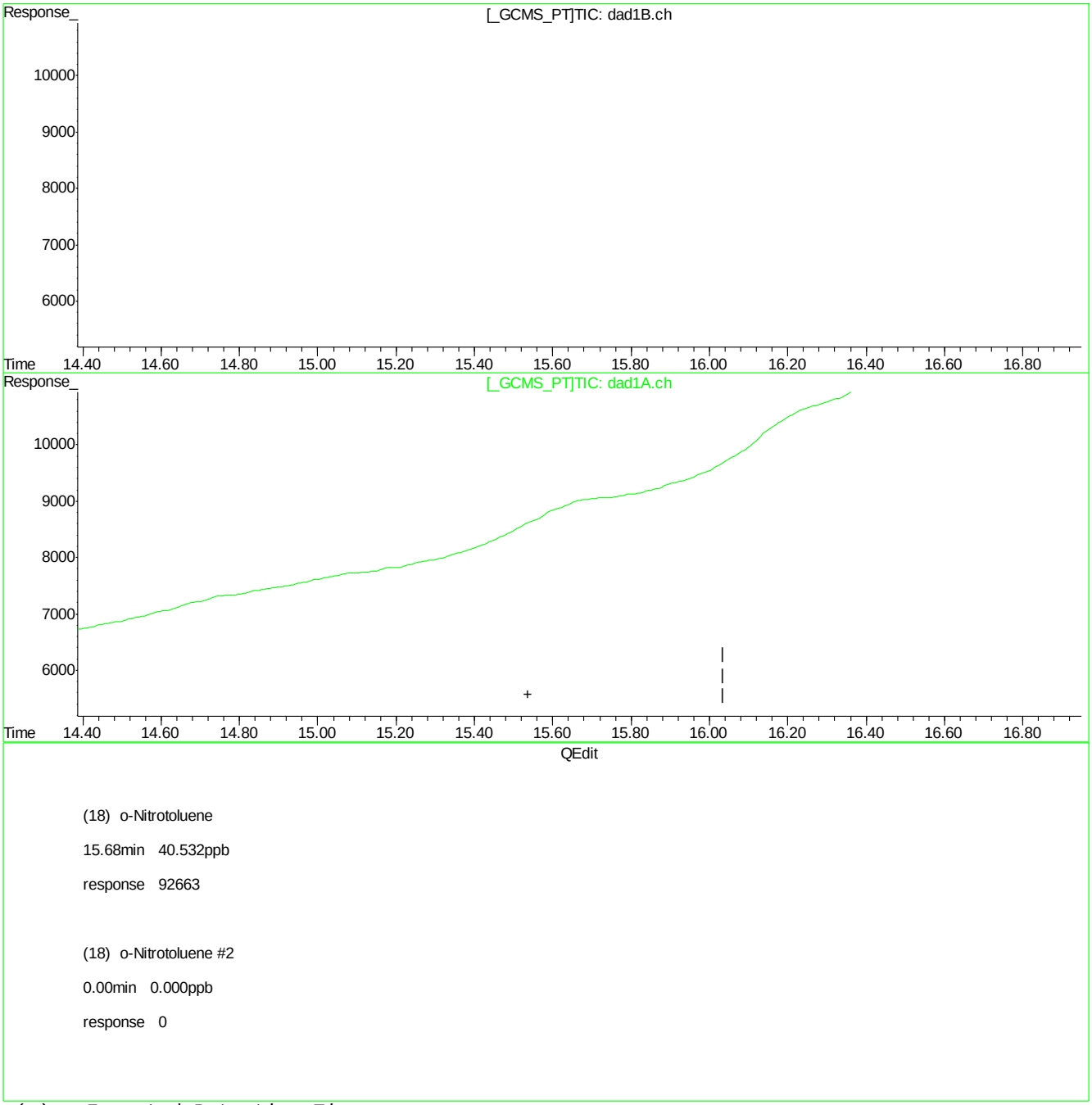
response 1794791

(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:22:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

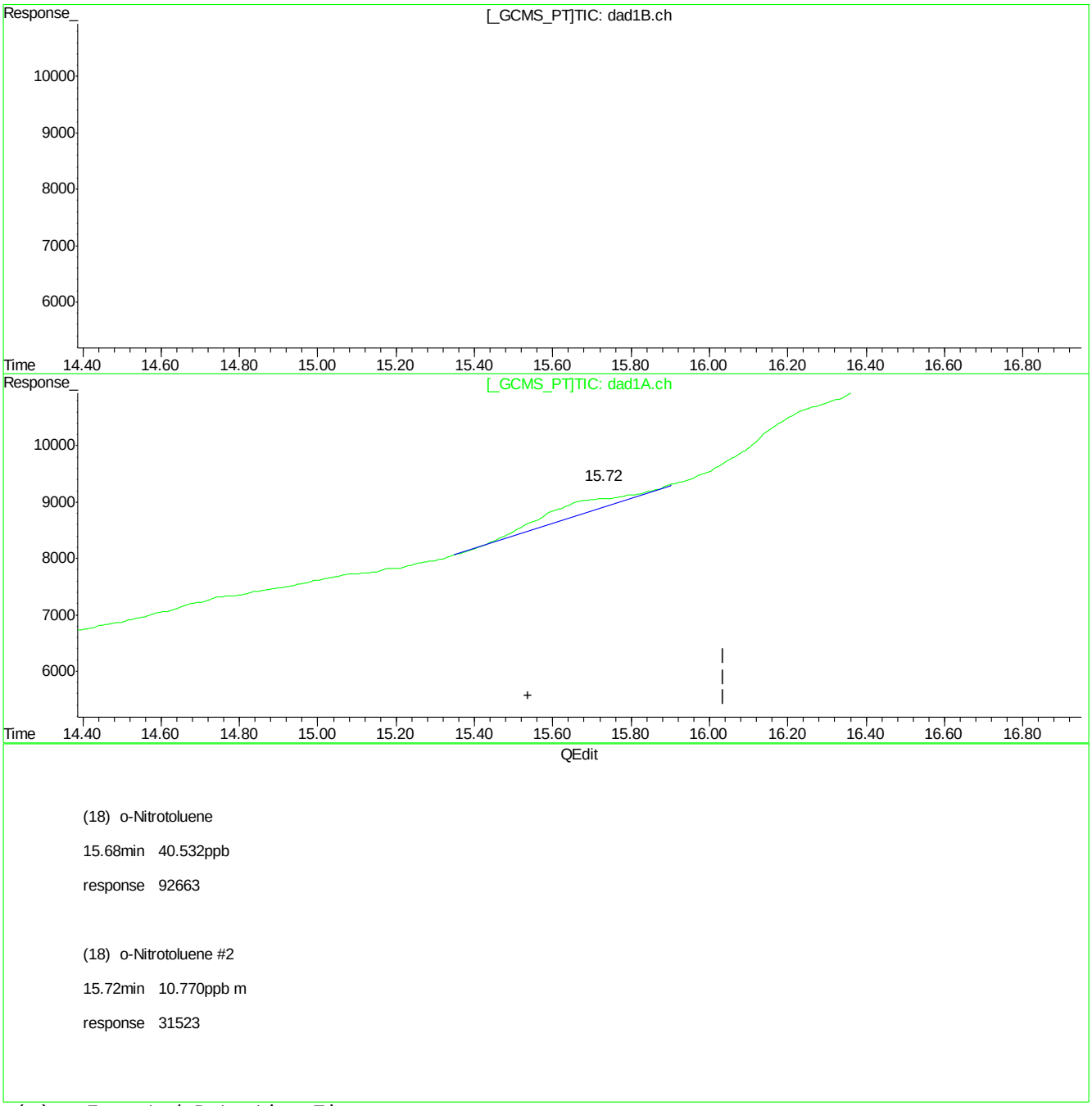


(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:22:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

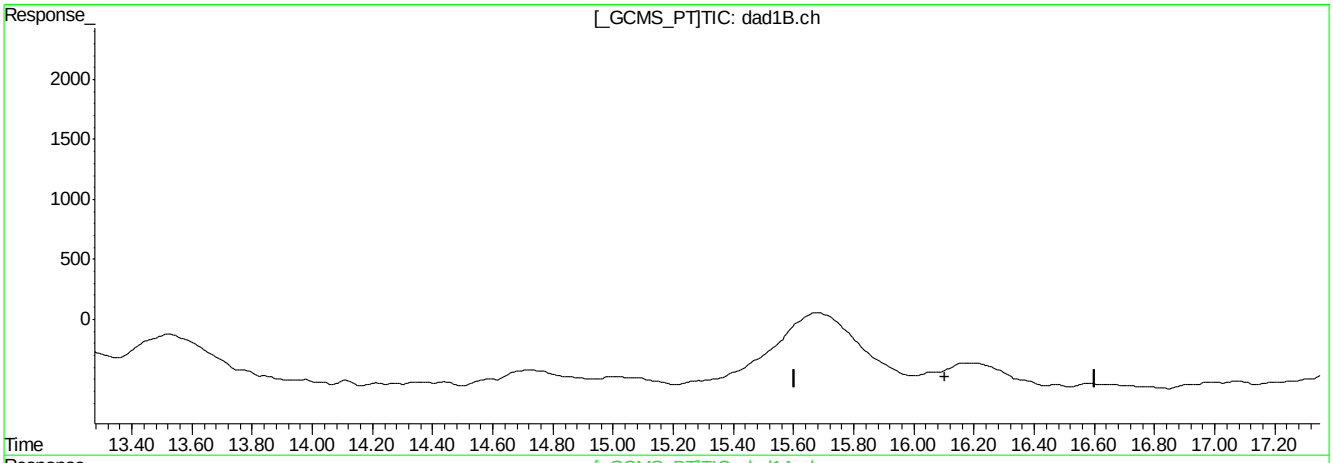


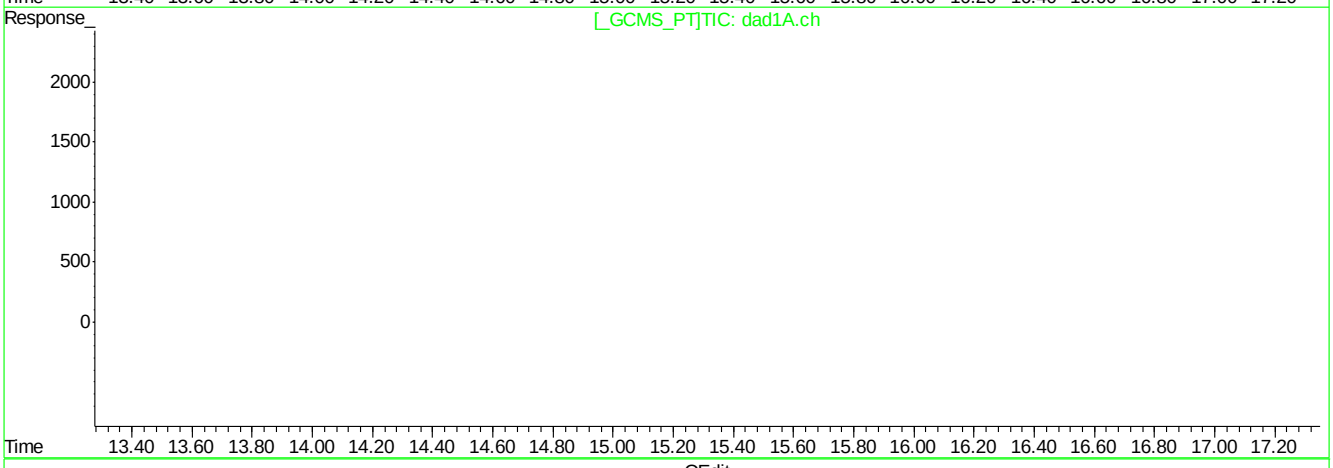
(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:23:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

0.00min 0.000ppb

response 0

(19) p-Nitrotoluene #2

0.00min 0.000ppb

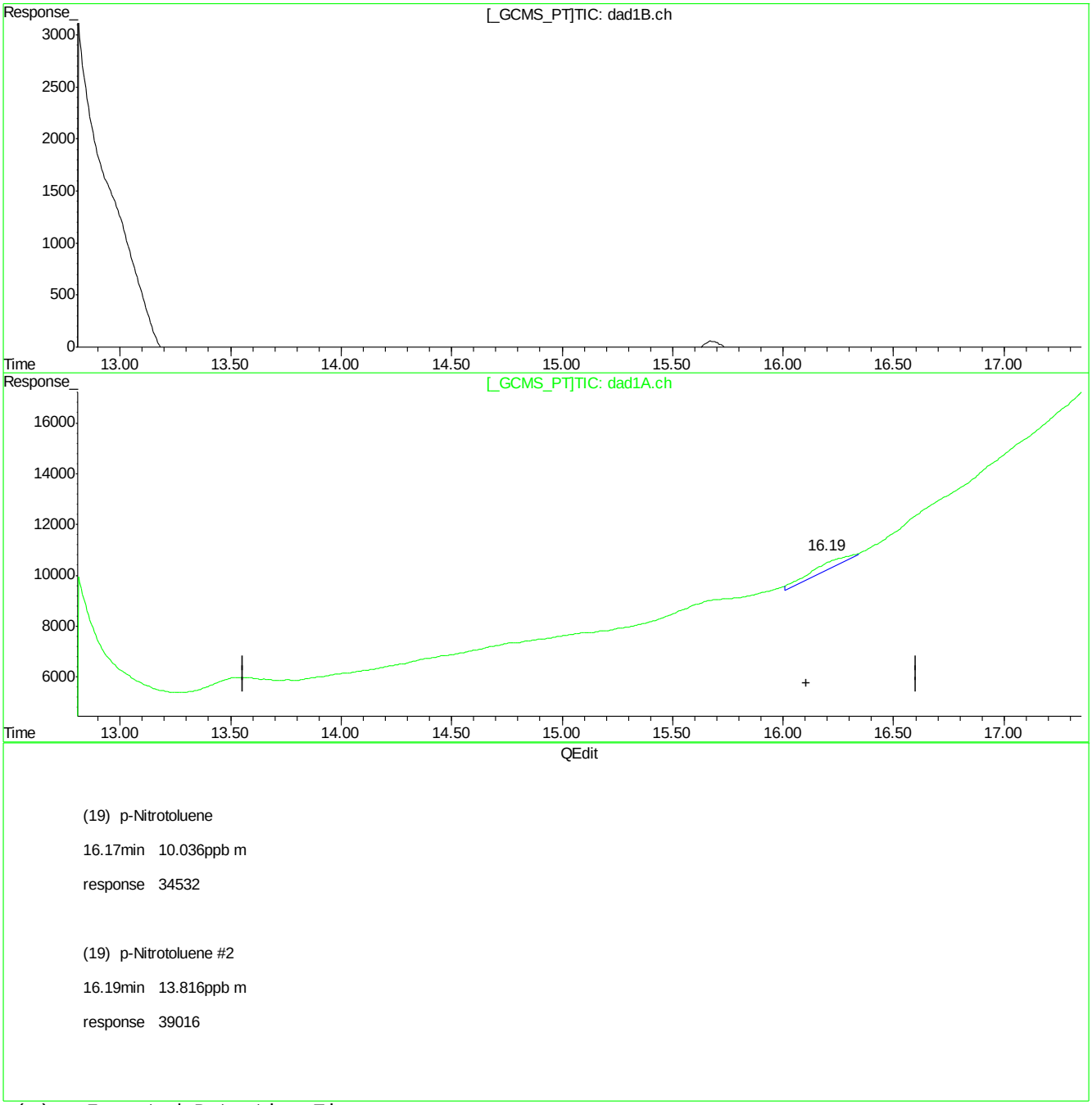
response 0

(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:23:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.17min 10.036ppb m

response 34532

(19) p-Nitrotoluene #2

16.19min 13.816ppb m

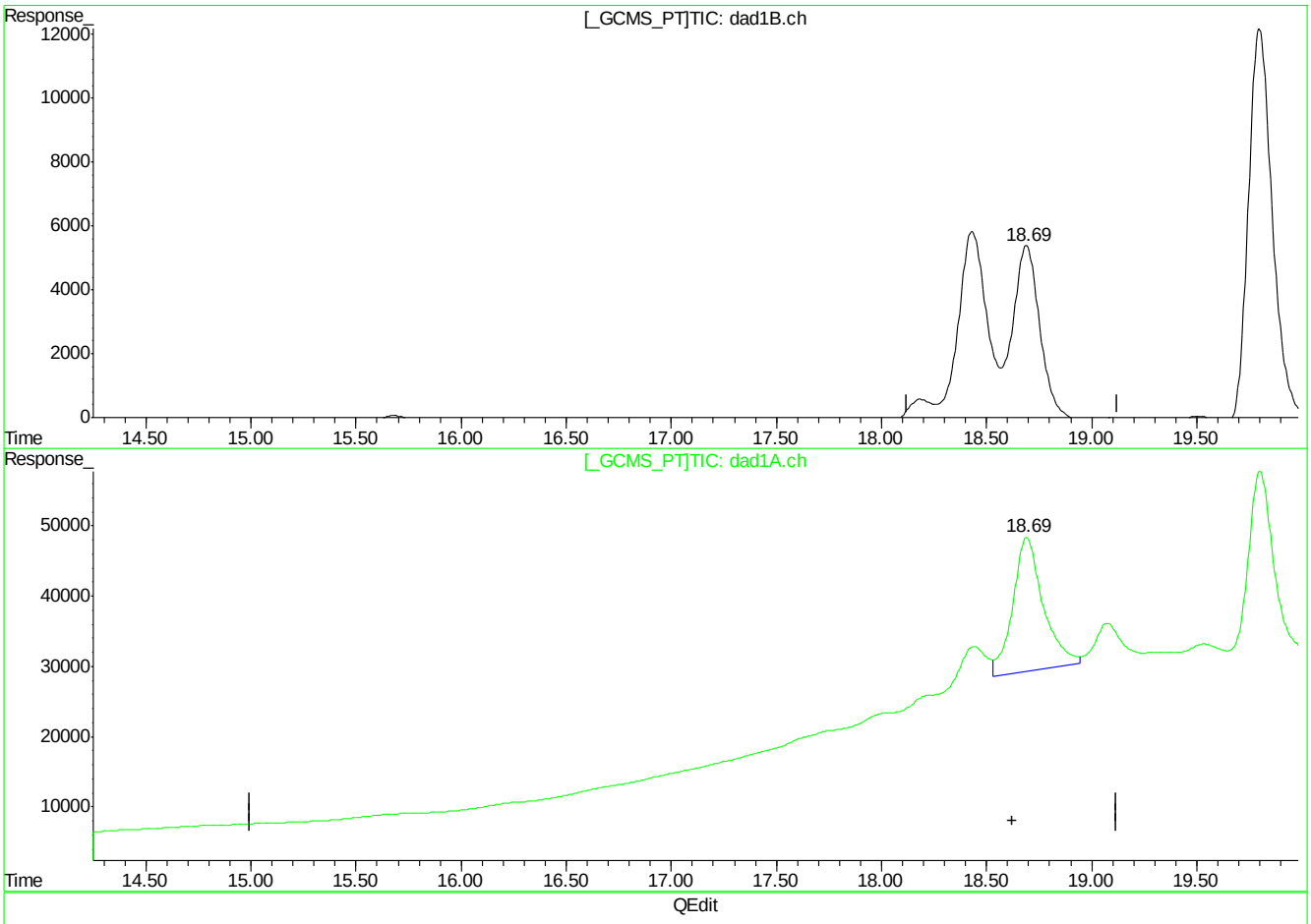
response 39016

(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:23:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

18.69min 0.000ppb

response 523800

(21) PETN #2

18.69min 1499.489ppb

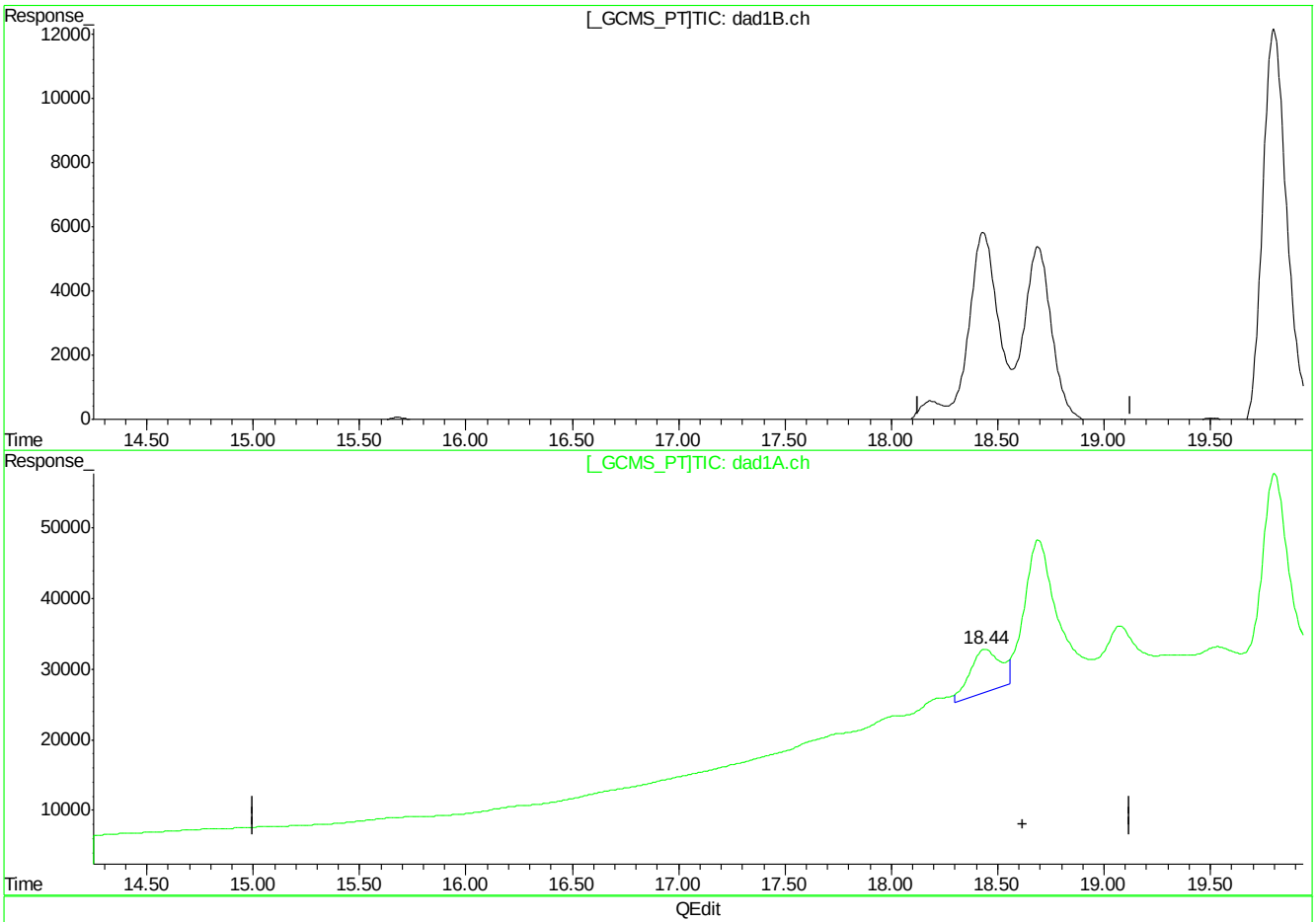
response 1915668

(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:23:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391156.D\dad1A.ch
Acq On : 09-Aug-2021, 22:09:57 Operator: jamesb
Sample : FA87622-3 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.44min 493.412ppb m

response 630357

(+) = Expected Retention Time
PP391156.D GPP2464_080321PRI.M Thu Aug 12 15:23:24 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:28

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : op86727,GGG3025,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:51 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.91	13.91	2798868	5153227	560.699	528.693
	Spiked Amount 500.000	Range 70 - 136		Recovery =		112.14%	105.74%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	7.51	7.51	11106572	11818568	1201.201m	1278.204m
6)	RDX	7.64	7.64	1528746	1810922	380.562m	450.806m
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	11.64	11.64	16565020	21756873	1925.394	1857.839m
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	15.62	15.61	2024671	3517990	216.736	228.846
16)	o-Nitrotoluene	16.45	16.32	114008	285547	23.413	38.816 #
17)	p-Nitrotoluene	17.35	17.36	1165881	1245503	229.364m	142.758m
18)	4-Amino-2,6-Dini	17.35	17.36	1146308	1241450	225.514m	142.294m
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	19.18	19.19	1535537	1614782	186.739	150.502m
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

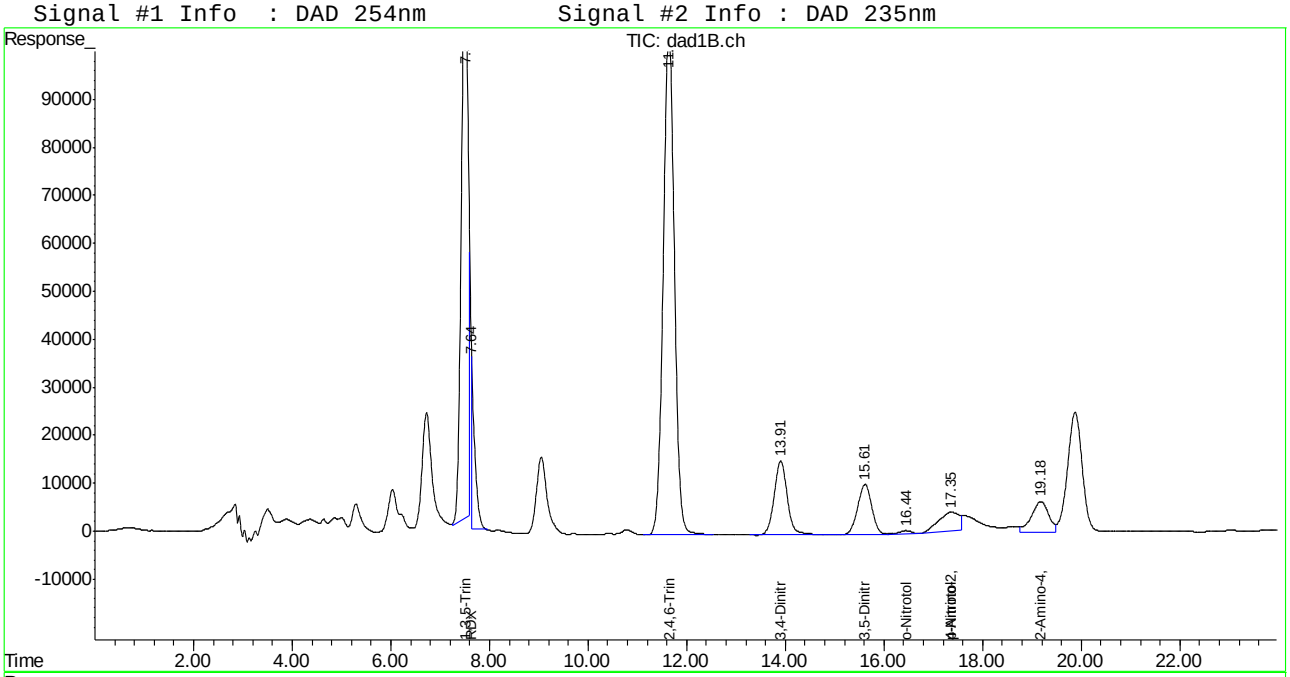
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

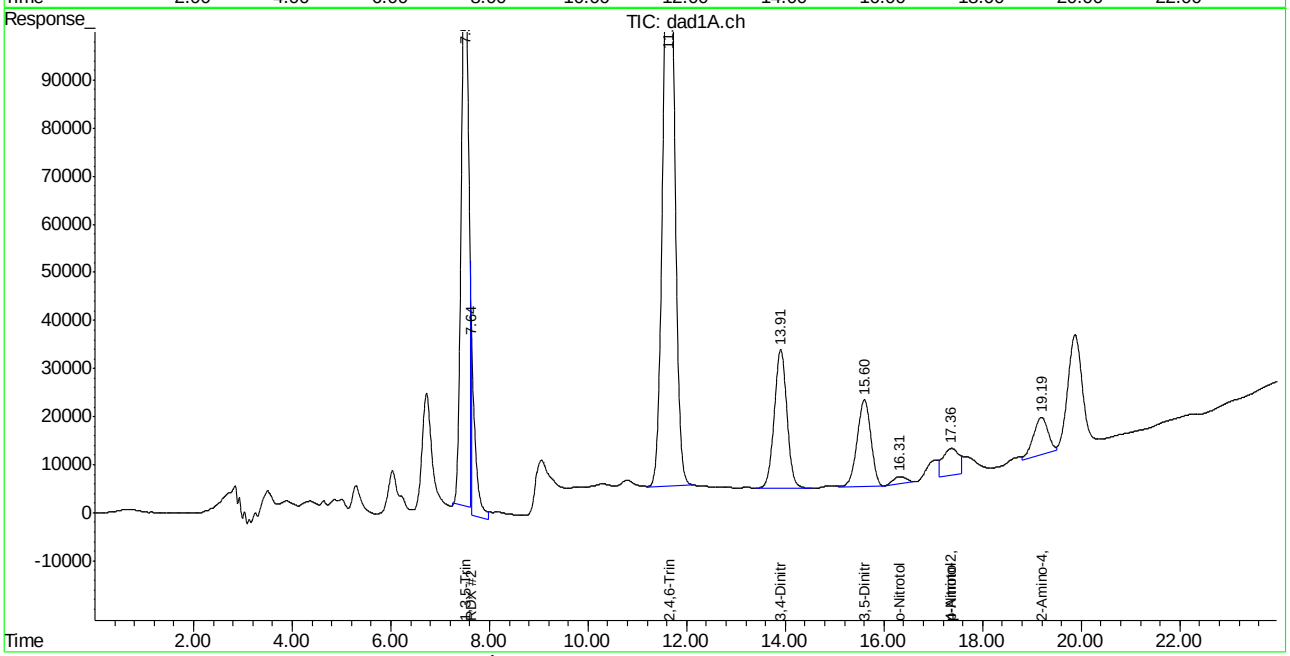
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : op86727,GGG3025,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:47 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

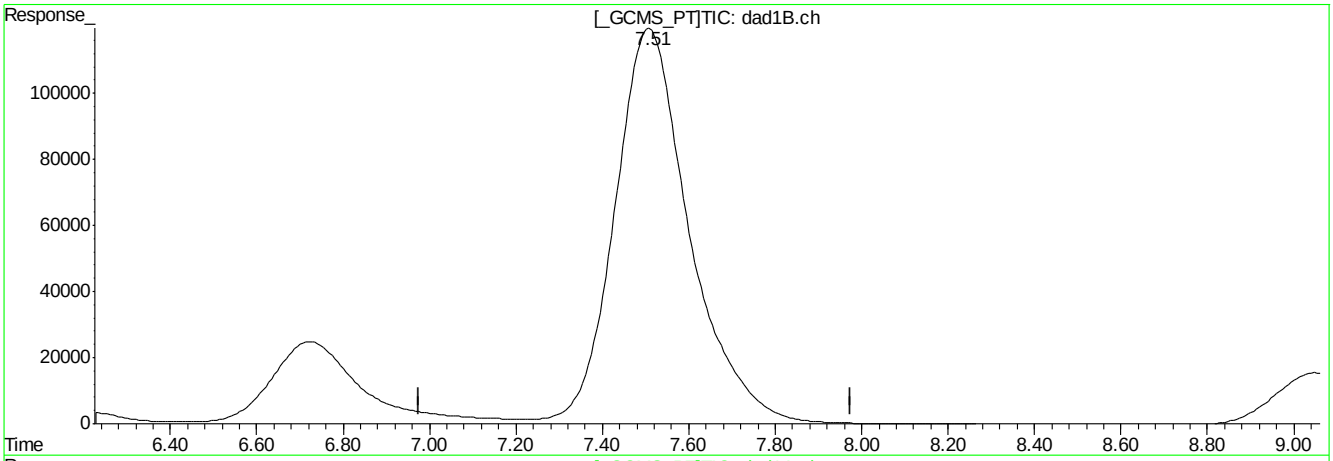
Sample Number: FA87622-3
Lab FileID: GG622045.D
Injection Time: 08/13/21 02:02
Method: SW846 8330B
Analyst approved: 08/13/21 11:12 James Boone
Supervisor approved: 08/13/21 17:28 Naresh Jiawan

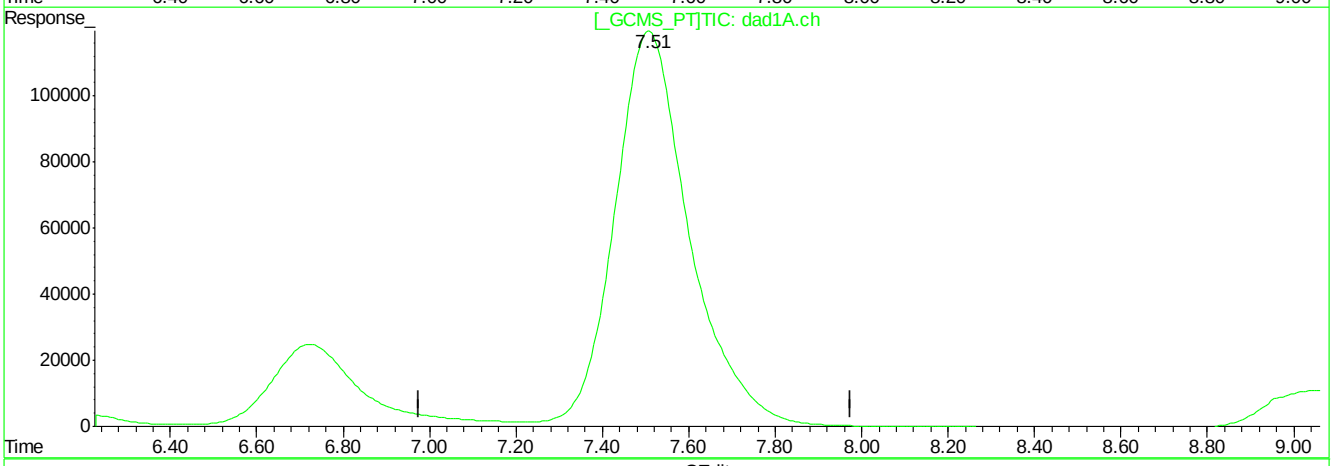
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3,5-Trinitrobenzene	99-35-4	1	7.51	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	7.51	Poor instrument integration
RDX	121-82-4	1	7.64	Poor instrument integration
RDX	121-82-4	2	7.64	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.64	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	17.35	Poor instrument integration
p-Nitrotoluene	99-99-0	1	17.35	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	17.36	Poor instrument integration
p-Nitrotoluene	99-99-0	2	17.36	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.19	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.51min 1558.035ppb

response 14405948

(5) 1,3,5-Trinitrobenzene #2

7.51min 1558.035ppb

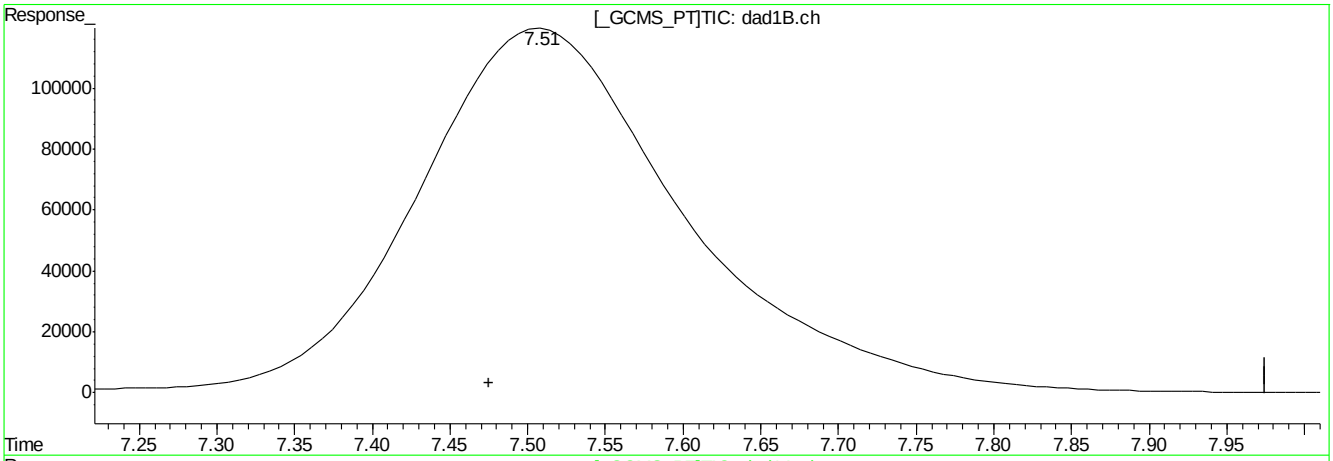
response 14405948

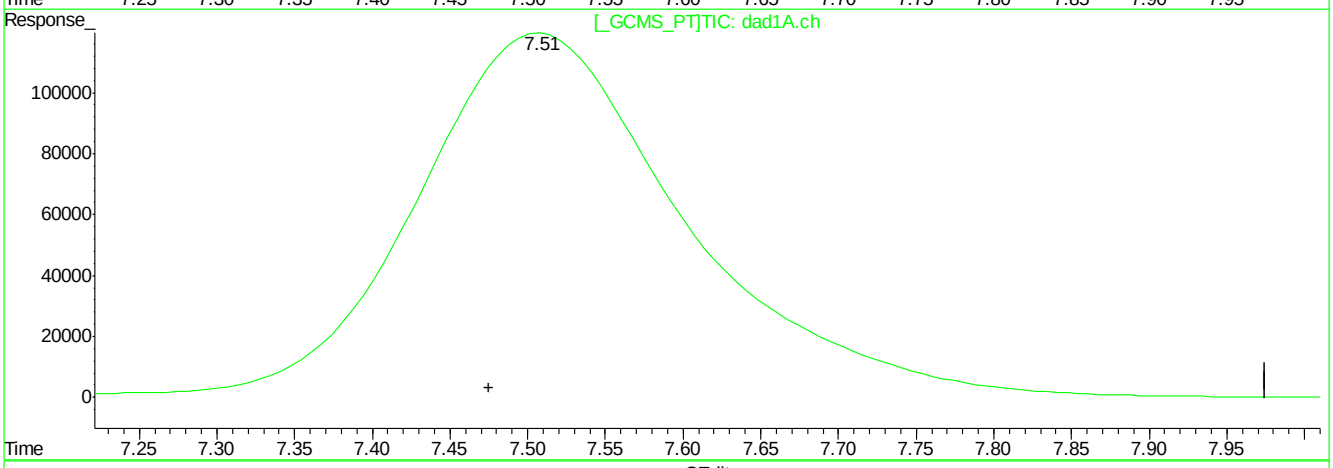
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:45:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.51min 1558.035ppb

response 14405948

(5) 1,3,5-Trinitrobenzene #2

7.51min 1558.035ppb

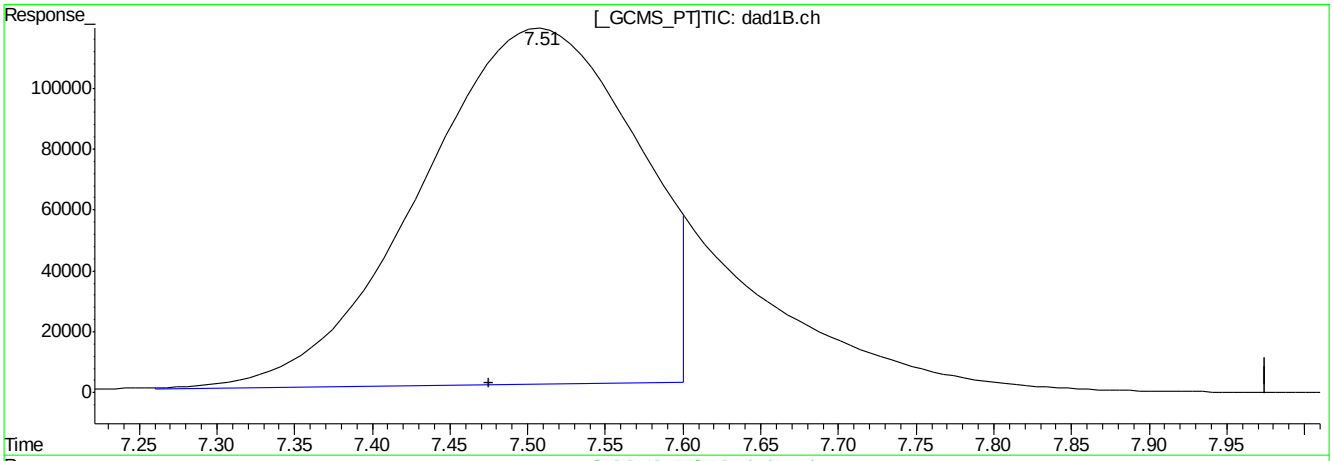
response 14405948

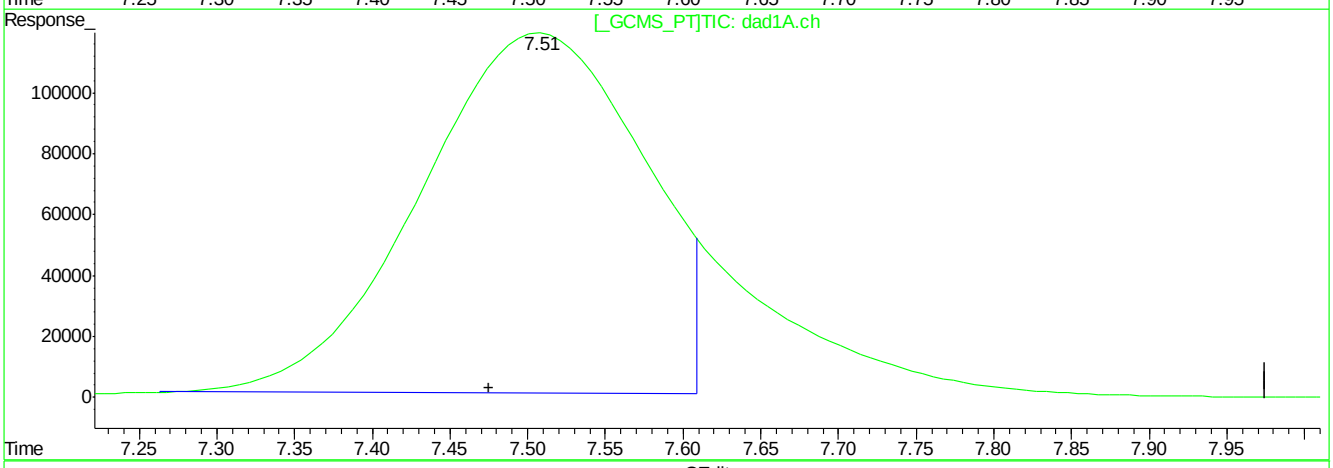
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:45:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(5) 1,3,5-Trinitrobenzene

7.51min 1201.201ppb m

response 11106572

(5) 1,3,5-Trinitrobenzene #2

7.51min 1278.204ppb m

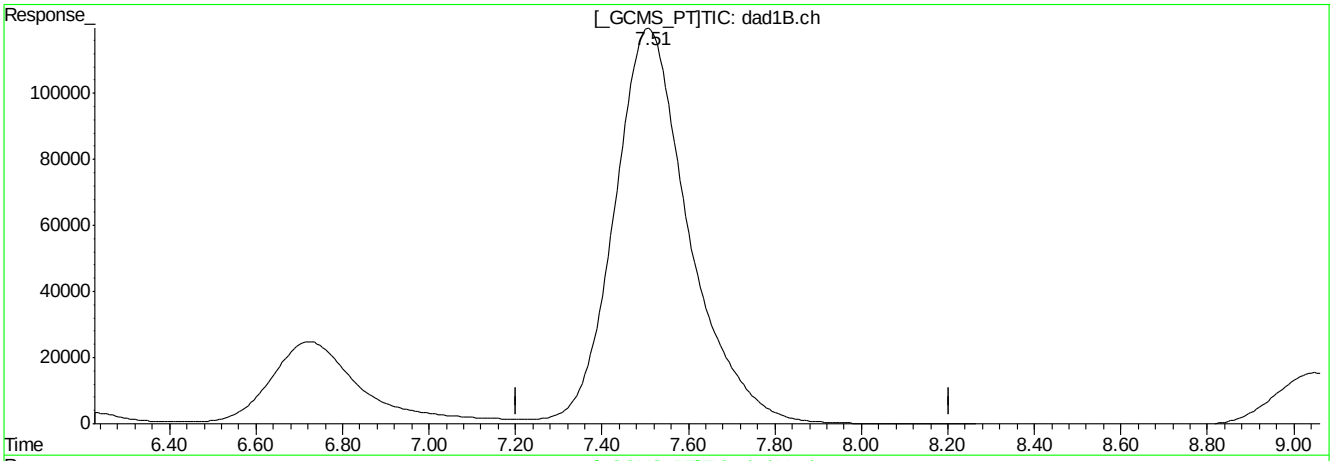
response 11818568

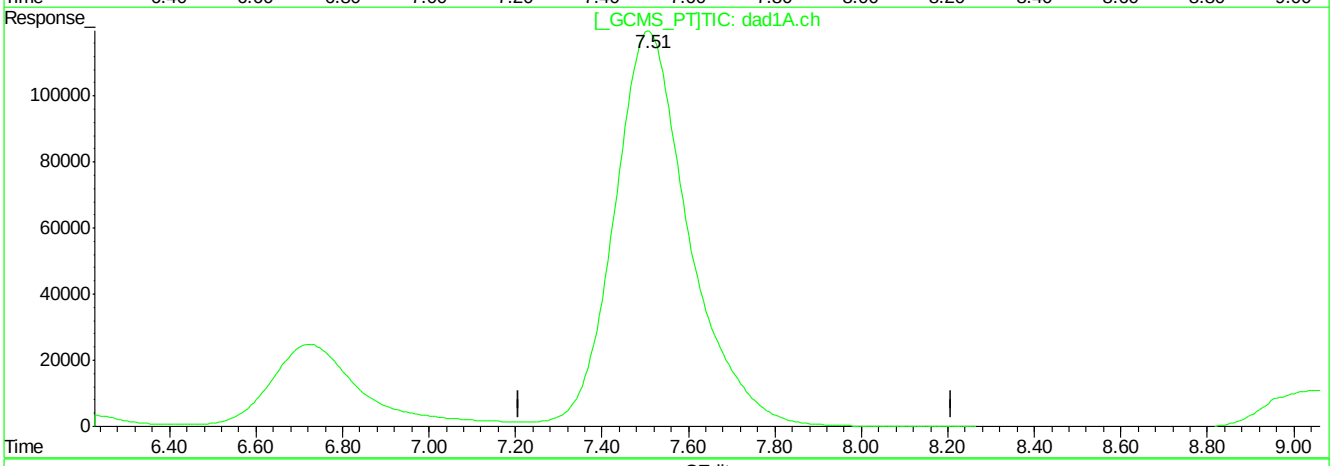
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:45:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.51min 3586.181ppb

response 14405948

(6) RDX #2

7.51min 3586.181ppb

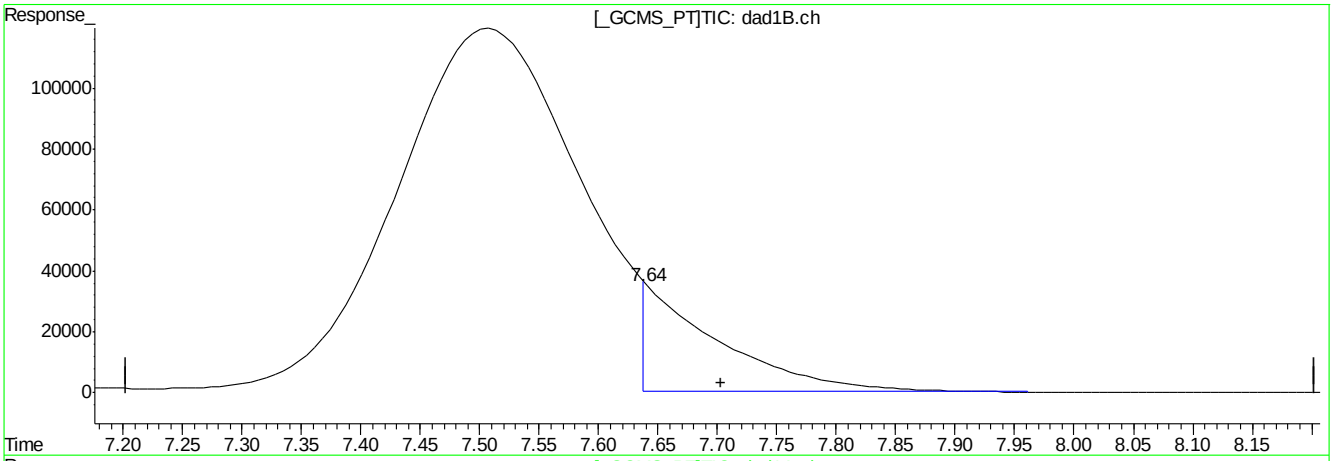
response 14405948

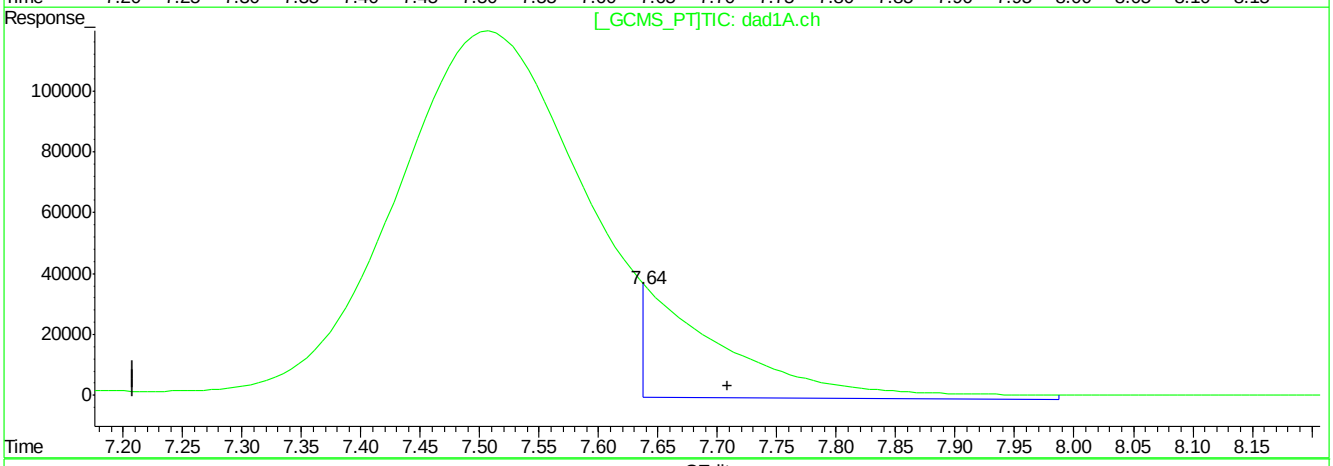
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:46:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(6) RDX

7.64min 380.562ppb m

response 1528746

(6) RDX #2

7.64min 450.806ppb m

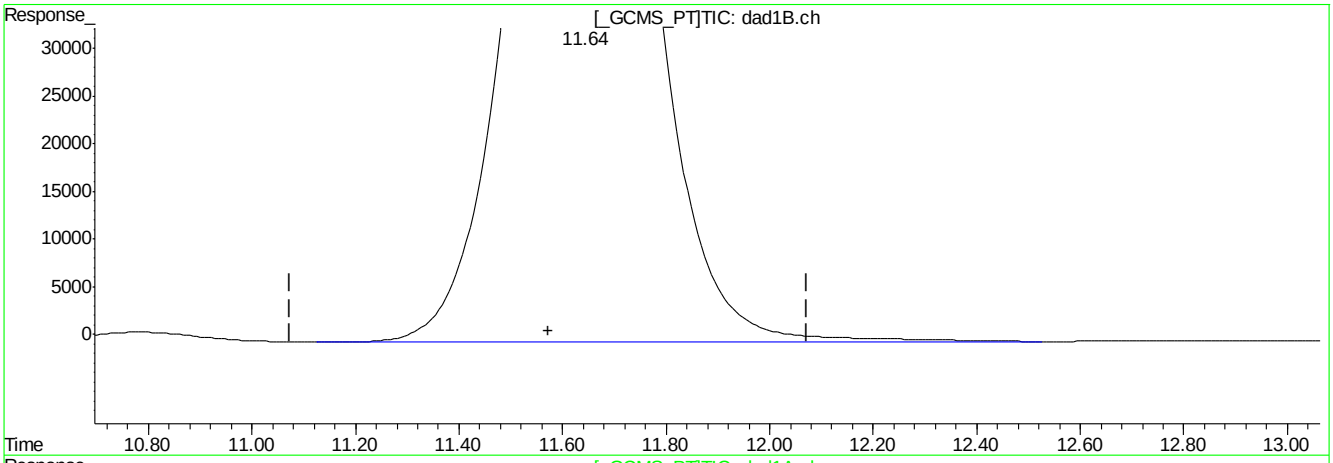
response 1810922

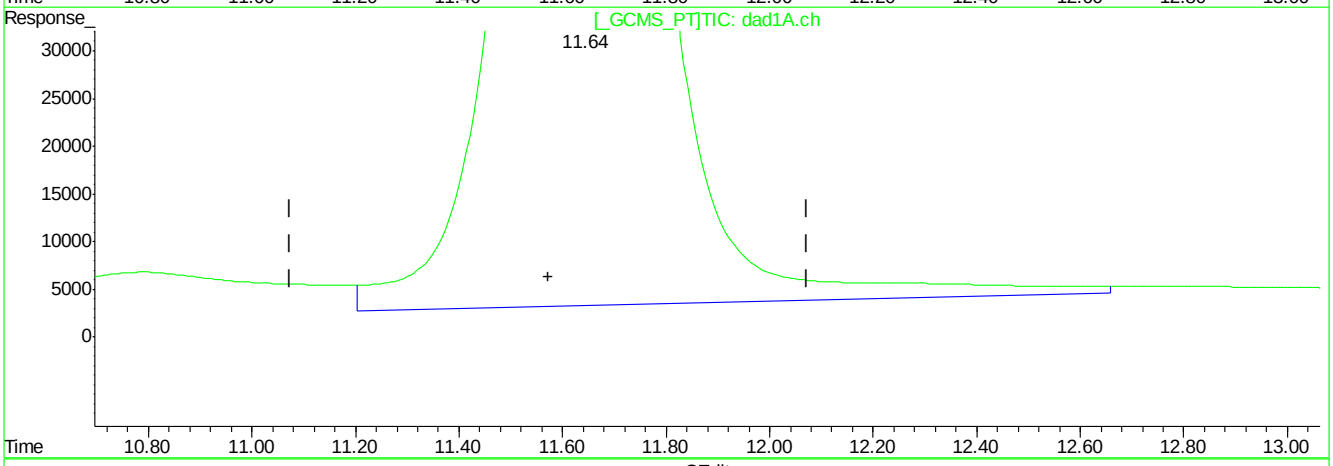
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:46:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.64min 1925.394ppb

response 16565020

(9) 2,4,6-Trinitrotoluene #2

11.64min 1995.395ppb

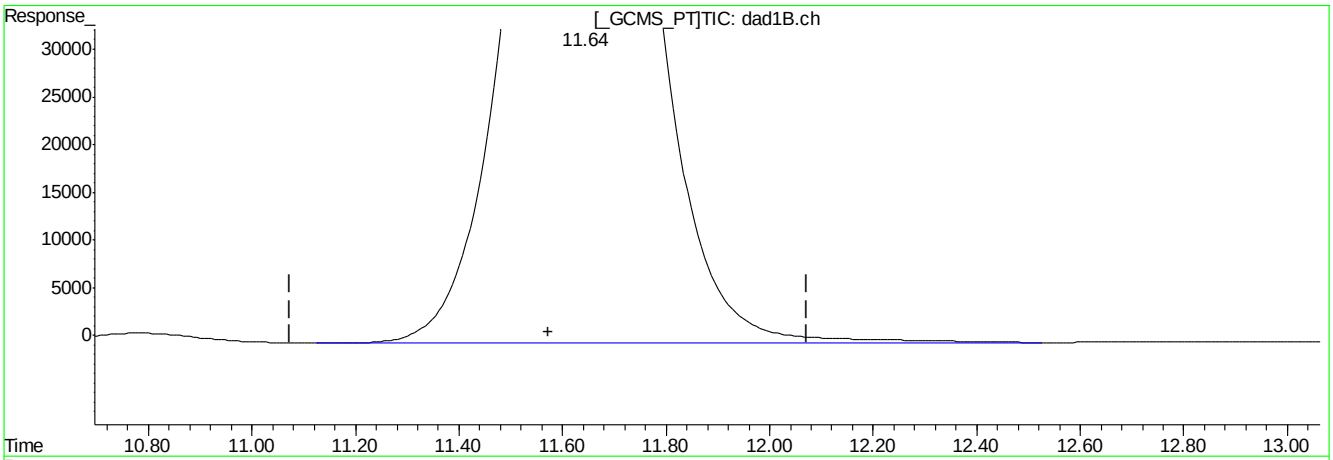
response 23367775

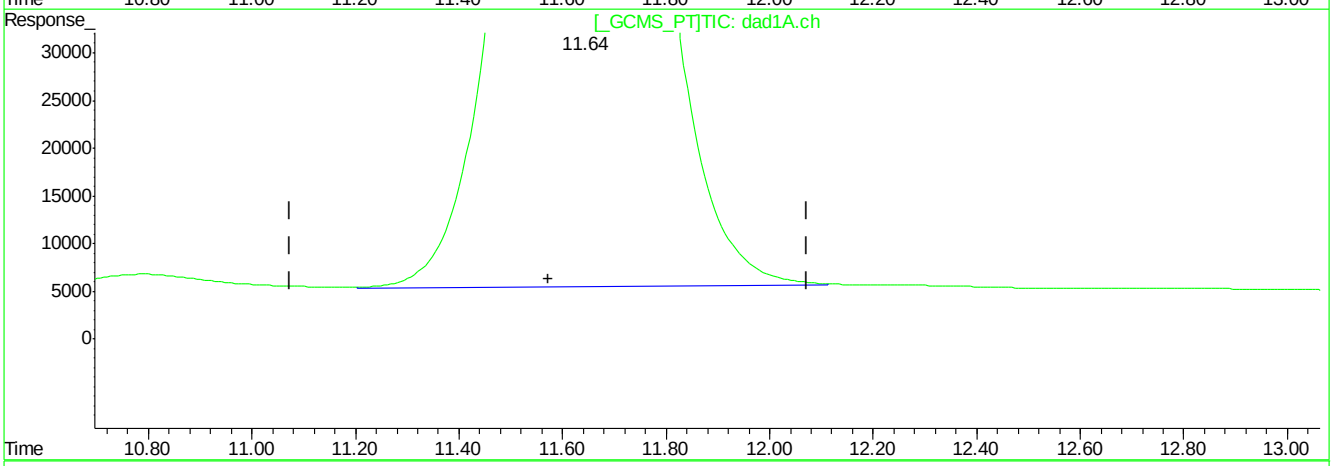
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:46:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.64min 1925.394ppb

response 16565020

(9) 2,4,6-Trinitrotoluene #2

11.64min 1857.839ppb m

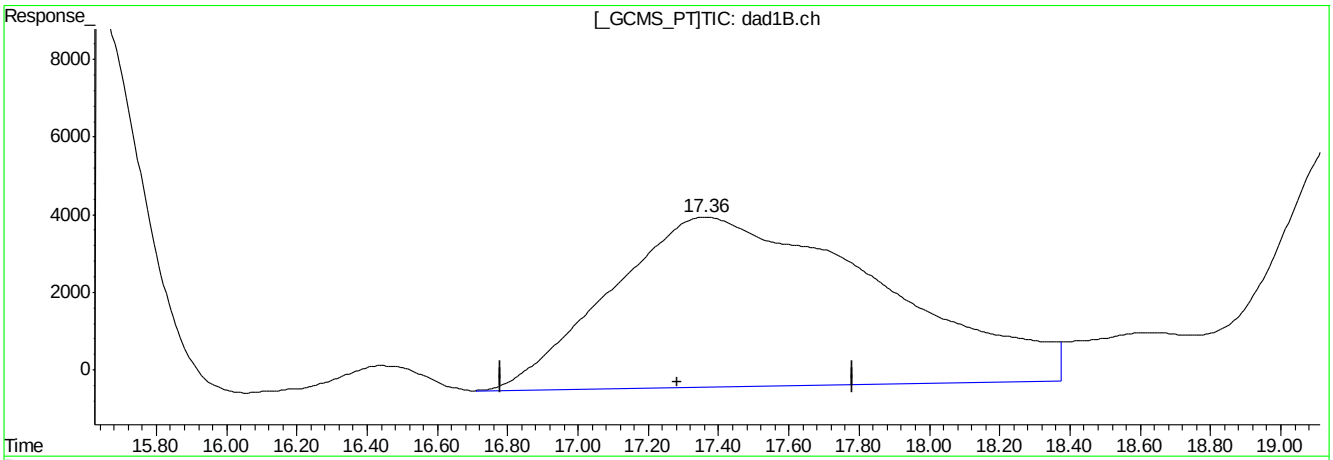
response 21756873

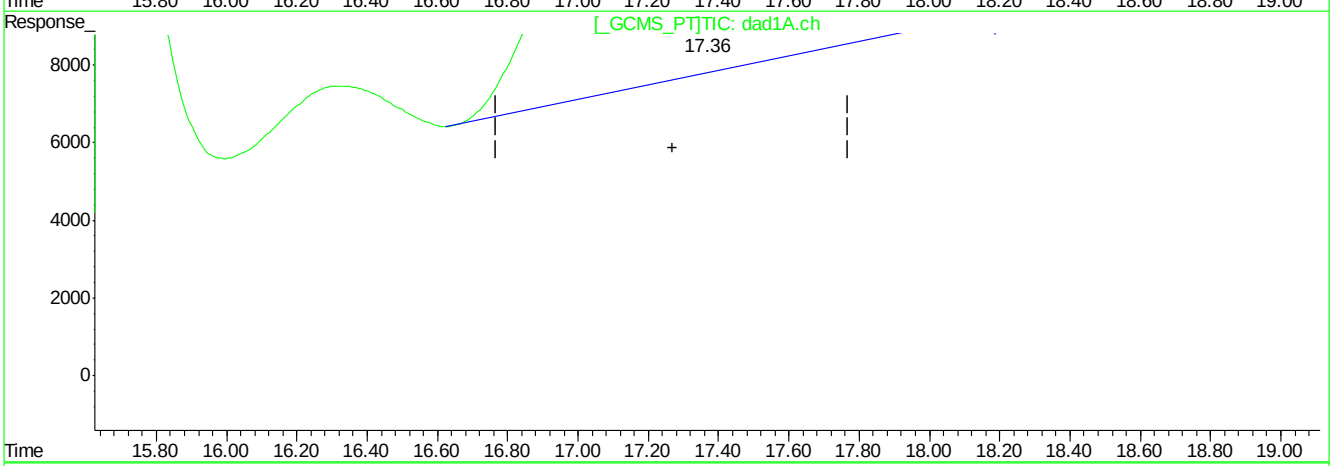
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:46:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.36min 465.536ppb

response 2366366

(17) p-Nitrotoluene #2

17.37min 288.845ppb

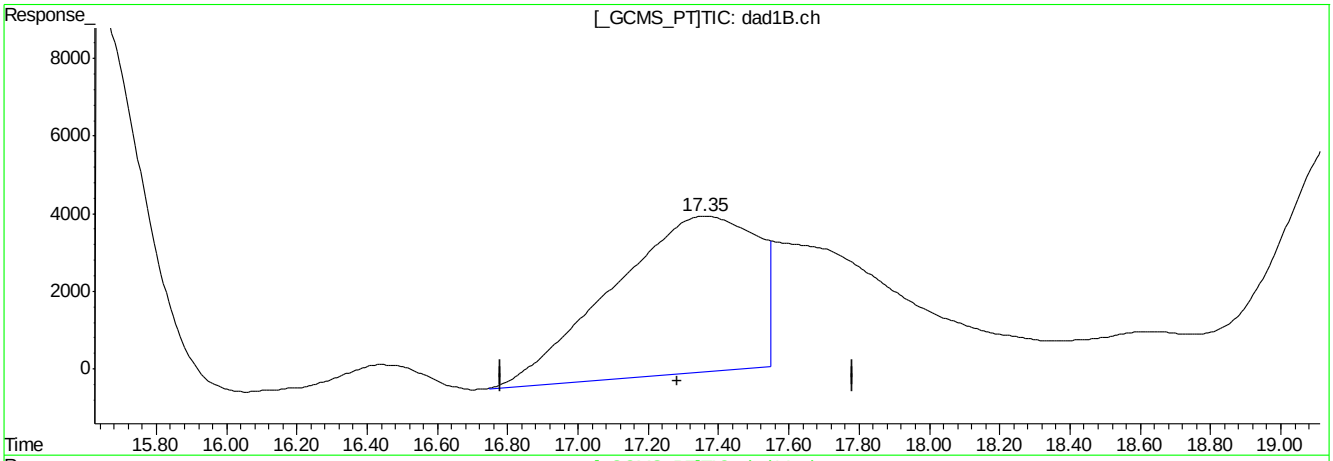
response 2520049

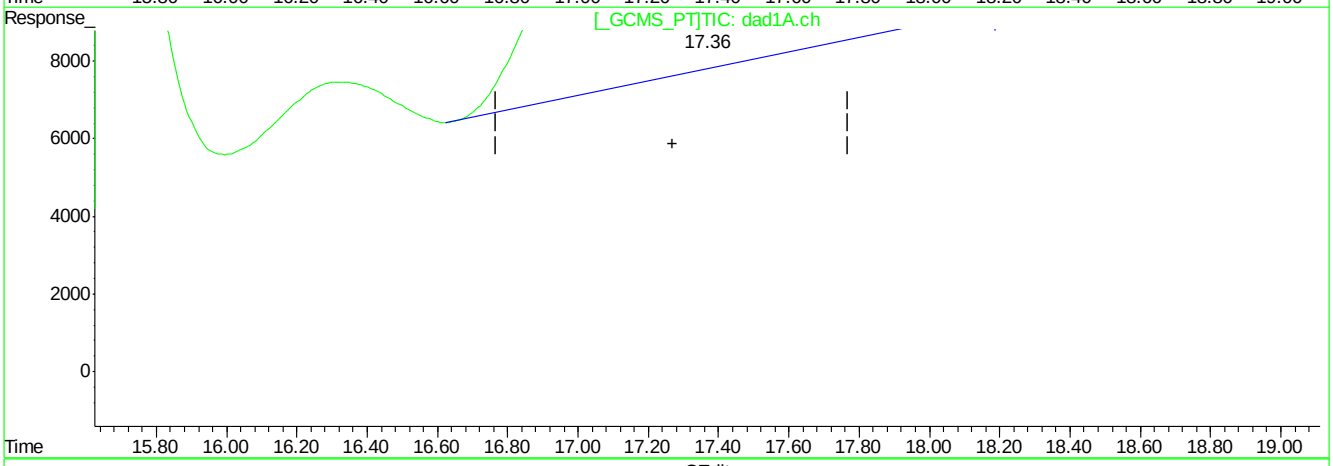
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:46:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.35min 229.364ppb m

response 1165881

(17) p-Nitrotoluene #2

17.37min 288.845ppb

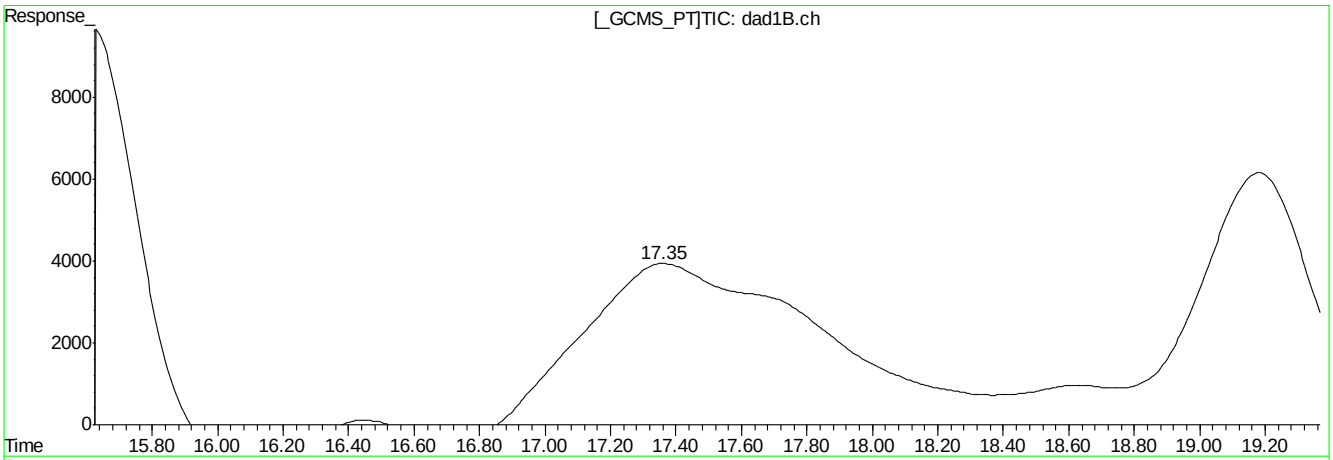
response 2520049

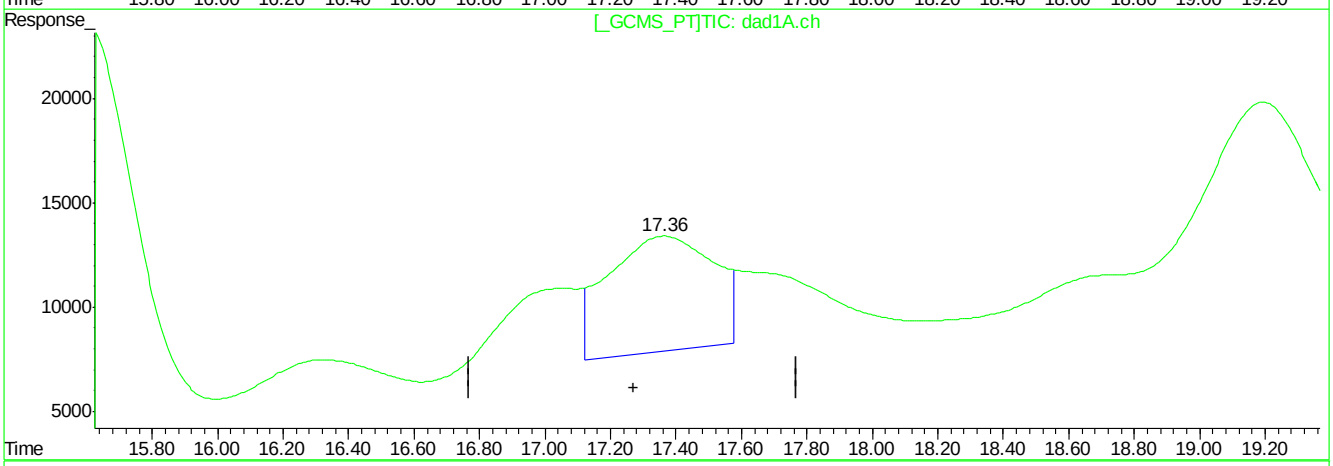
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:46:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(17) p-Nitrotoluene

17.35min 229.364ppb m

response 1165881

(17) p-Nitrotoluene #2

17.36min 142.758ppb m

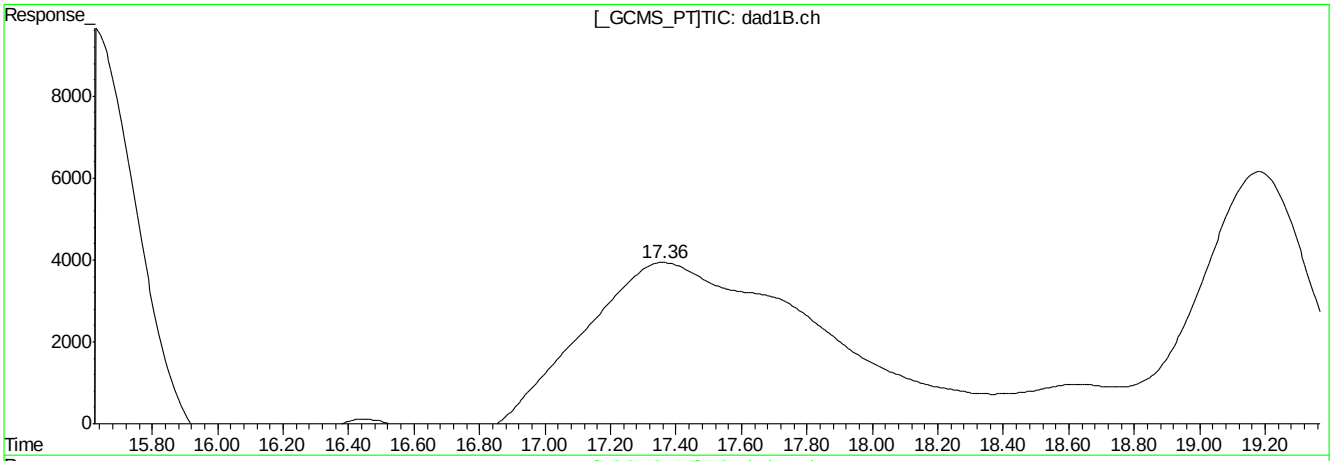
response 1245503

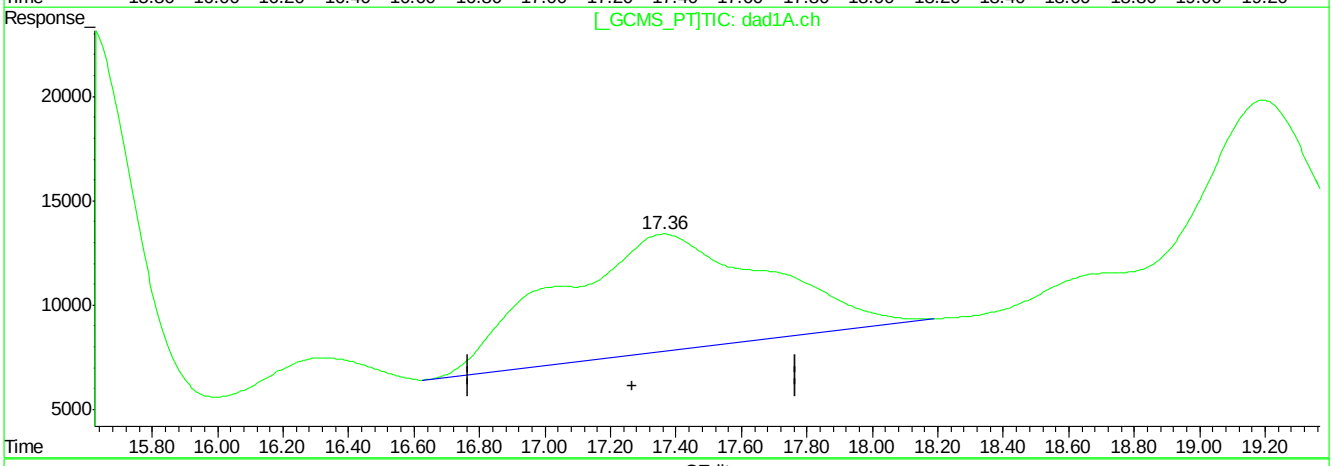
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:46:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.36min 465.536ppb

response 2366366

(18) 4-Amino-2,6-Dinitrotoluene #2

17.37min 288.845ppb

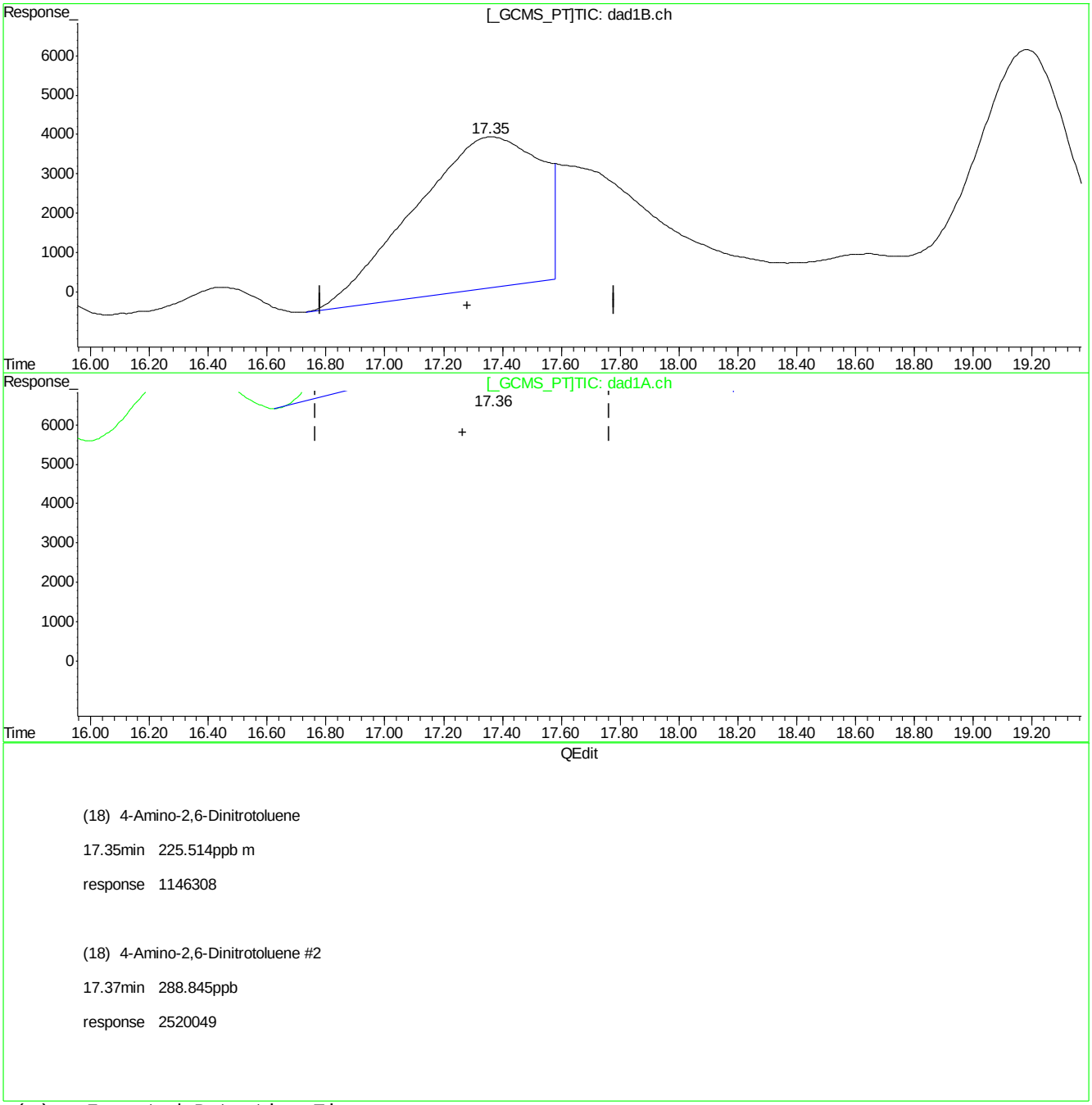
response 2520049

(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:46:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration



(18) 4-Amino-2,6-Dinitrotoluene

17.35min 225.514ppb m

response 1146308

(18) 4-Amino-2,6-Dinitrotoluene #2

17.37min 288.845ppb

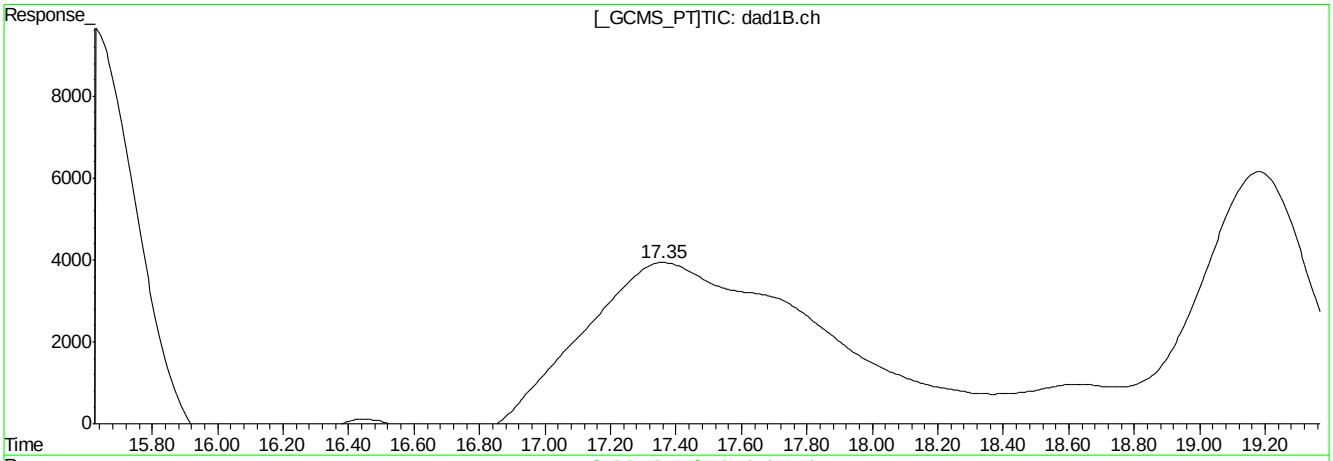
response 2520049

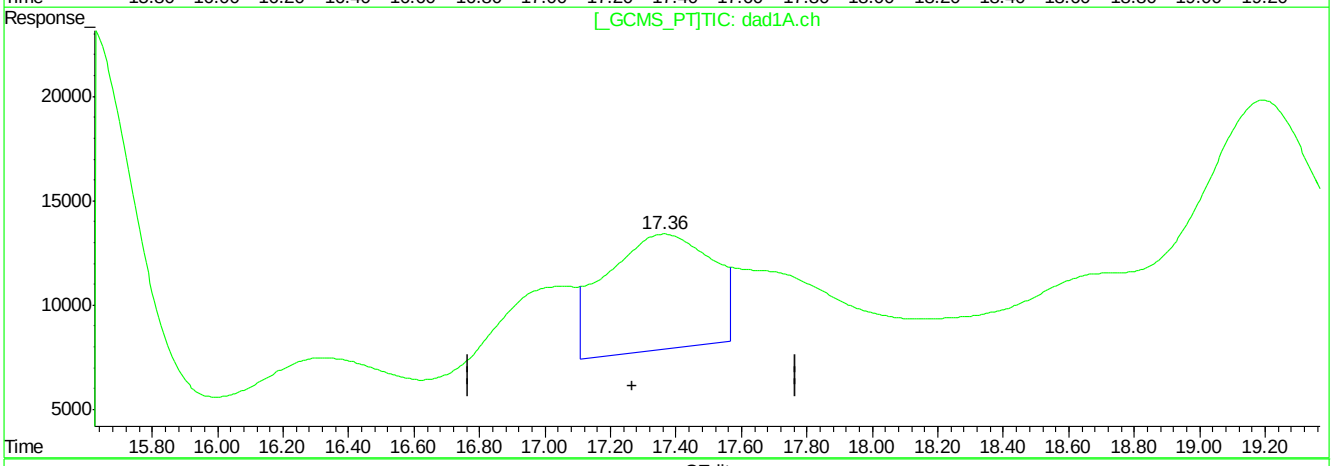
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:46:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(18) 4-Amino-2,6-Dinitrotoluene

17.35min 225.514ppb m

response 1146308

(18) 4-Amino-2,6-Dinitrotoluene #2

17.36min 142.294ppb m

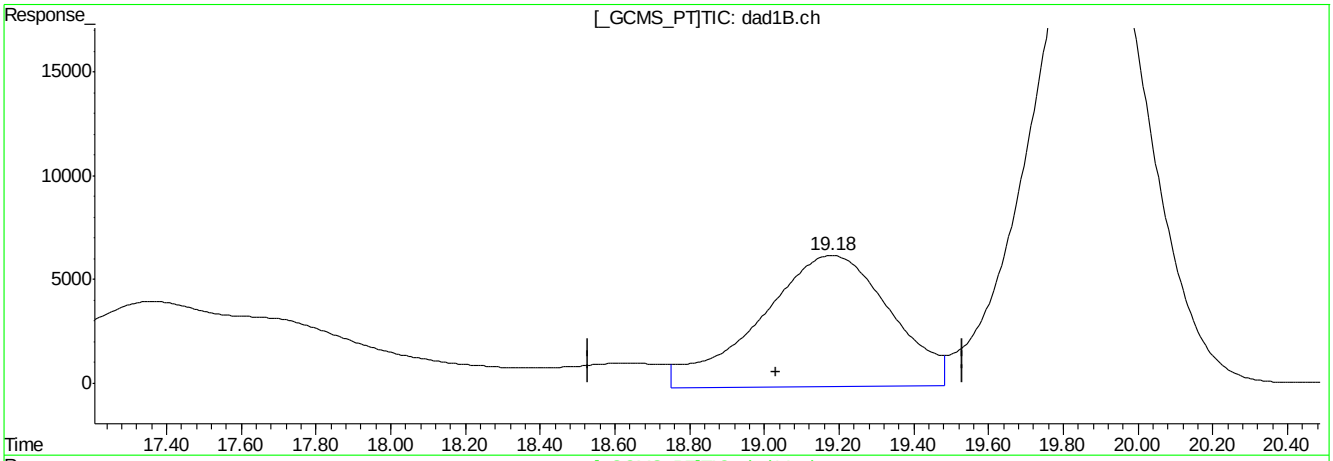
response 1241450

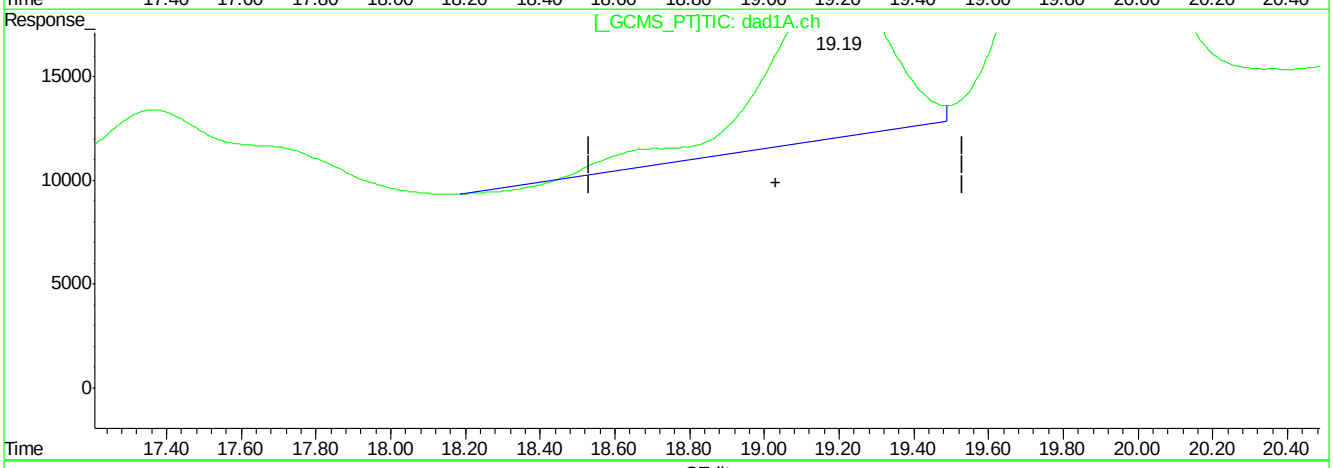
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:46:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.18min 186.739ppb

response 1535537

(20) 2-Amino-4,6-Dinitrotoluene #2

19.19min 160.541ppb

response 1722490

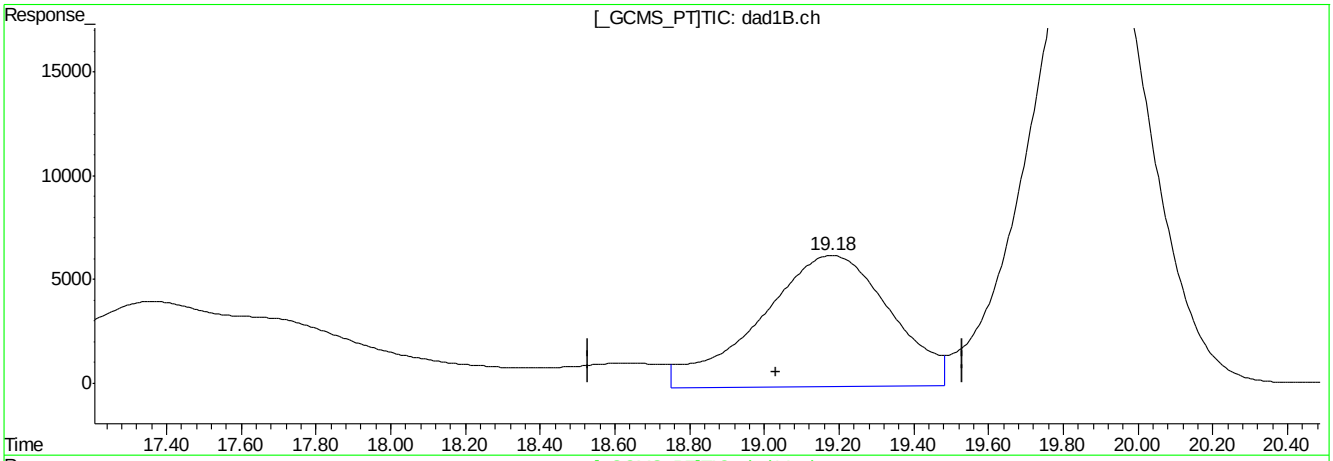
(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:47:04 2021

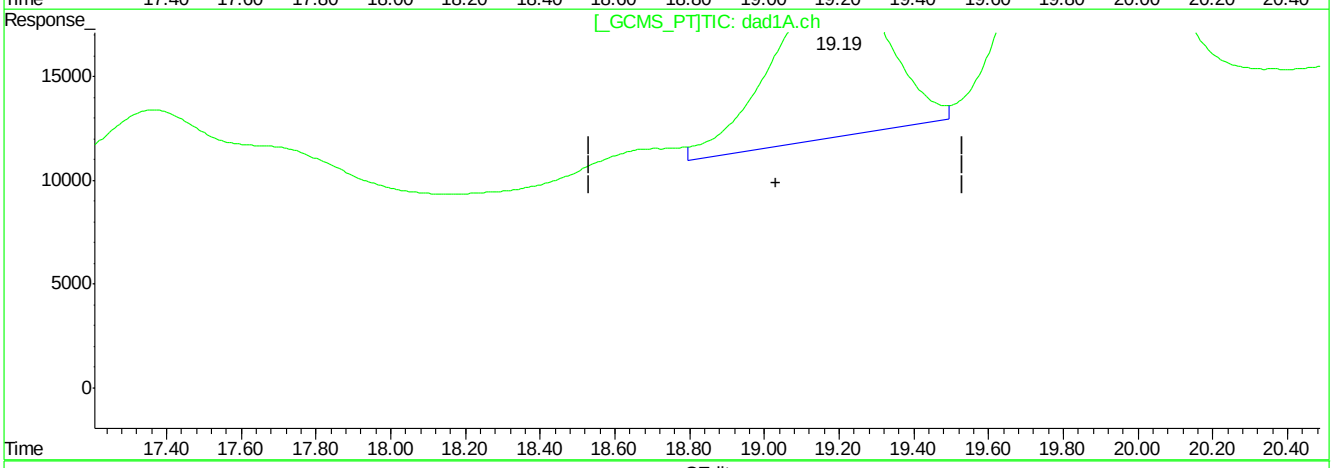
GG622045.D edits: 2-Amino-4,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1B.ch Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622045.D\dad1A.ch
Acq On : 13-Aug-2021, 02:02:29 Operator: jamesb
Sample : FA87622-3cf Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.18min 186.739ppb

response 1535537

(20) 2-Amino-4,6-Dinitrotoluene #2

19.19min 150.502ppb m

response 1614782

(+) = Expected Retention Time
GG622045.D GGG3024_080821.M Fri Aug 13 10:47:10 2021

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391142.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391142.D\dad1A.ch
Acq On : 09-Aug-2021, 14:56:04 Operator: jamesb
Sample : op86727-MB Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:24 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.26	11.27	959213	1700295	450.361	523.389
	Spiked Amount 500.000	Range 70 - 136		Recovery =		90.07%	104.68%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

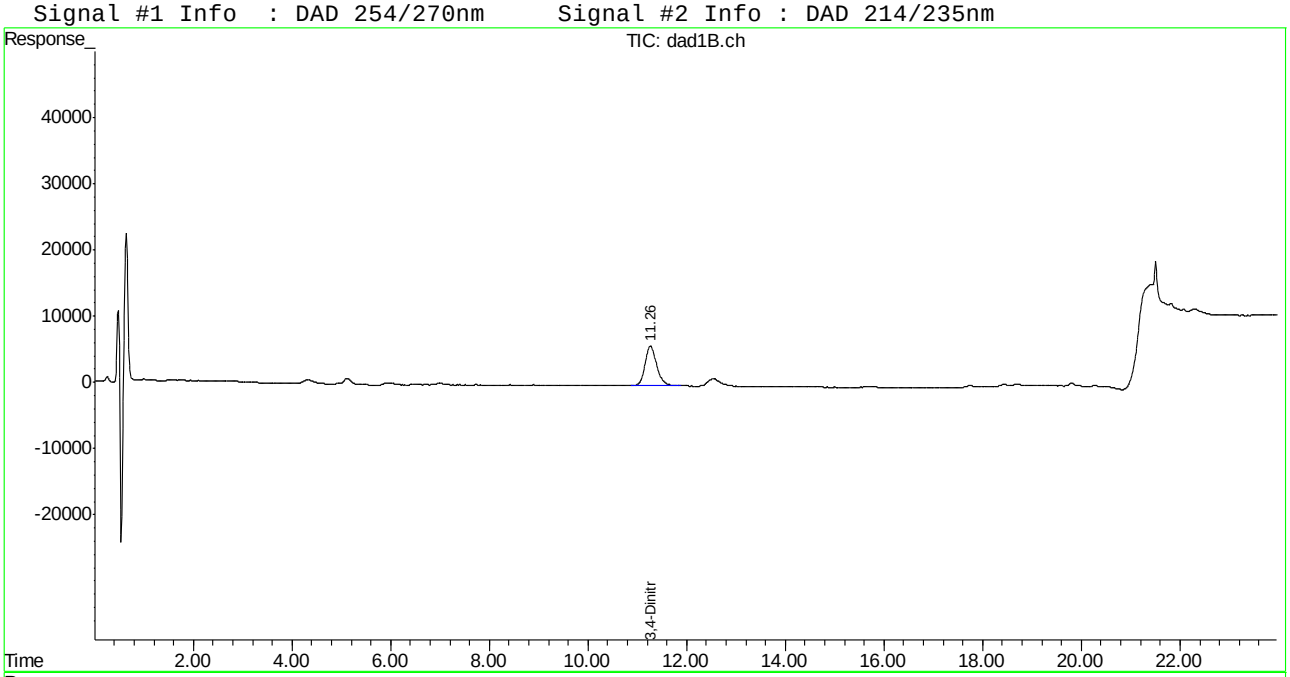
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391142.D GPP2464_080321PRI.M Thu Aug 12 12:59:06 2021 Page 1

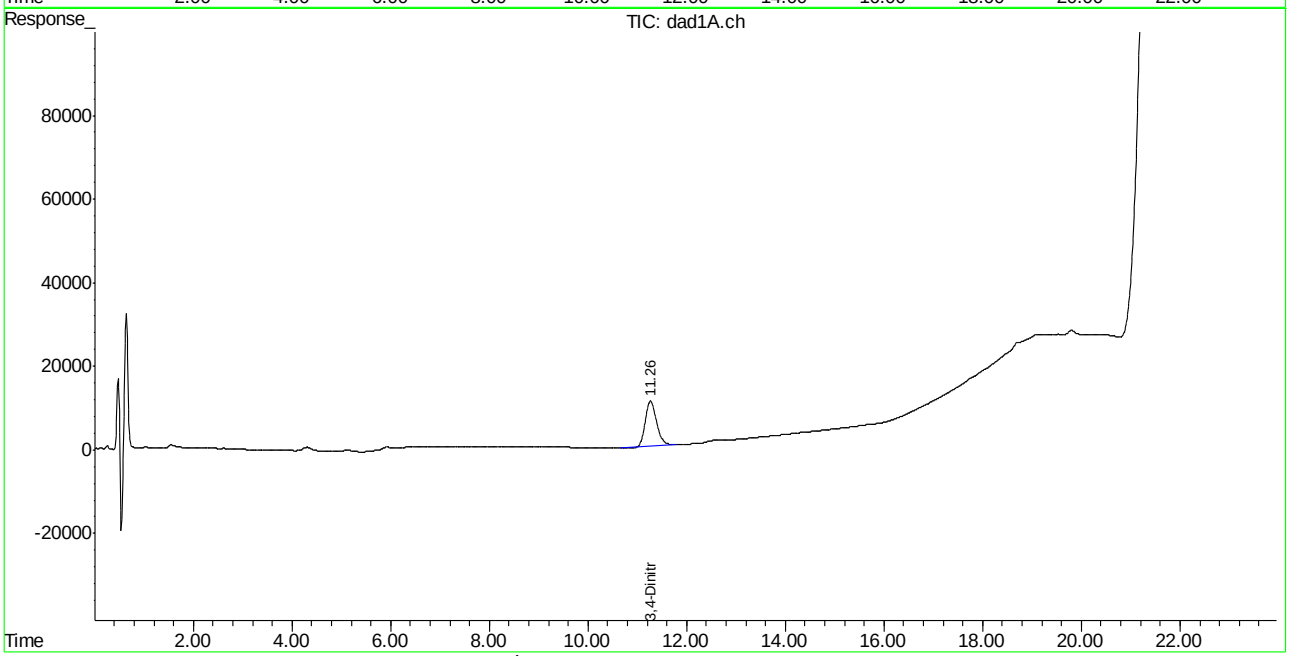
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391142.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391142.D\dad1A.ch
Acq On : 09-Aug-2021, 14:56:04 Operator: jamesb
Sample : op86727-MB Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 12:55 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:23

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1A.ch
Acq On : 12-Aug-2021, 19:14:01 Operator: jamesb
Sample : op86727-MB Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:38 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.87	13.87	2397310	4750020	480.254	487.326m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		96.05%	97.47%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
6)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
9)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
13)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
14)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
15)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
16)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
17)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
18)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
19)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

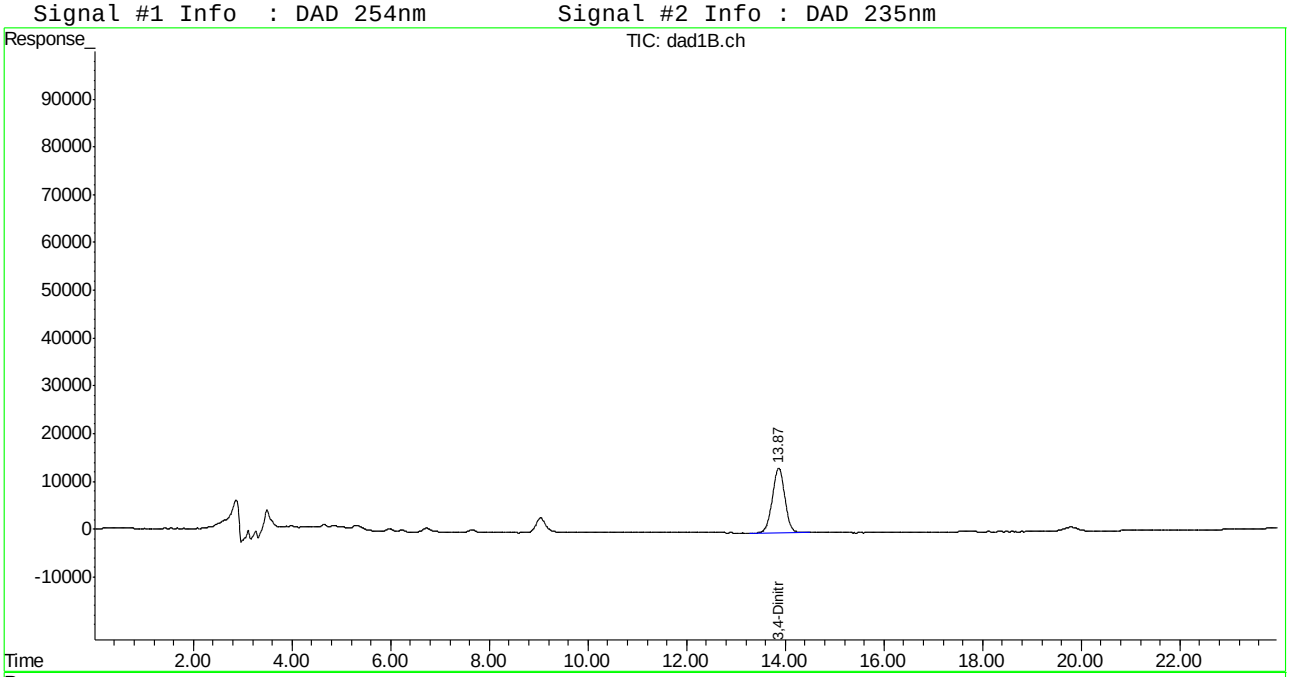
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622032.D GGG3024_080821.M Fri Aug 13 10:49:09 2021 Page 1

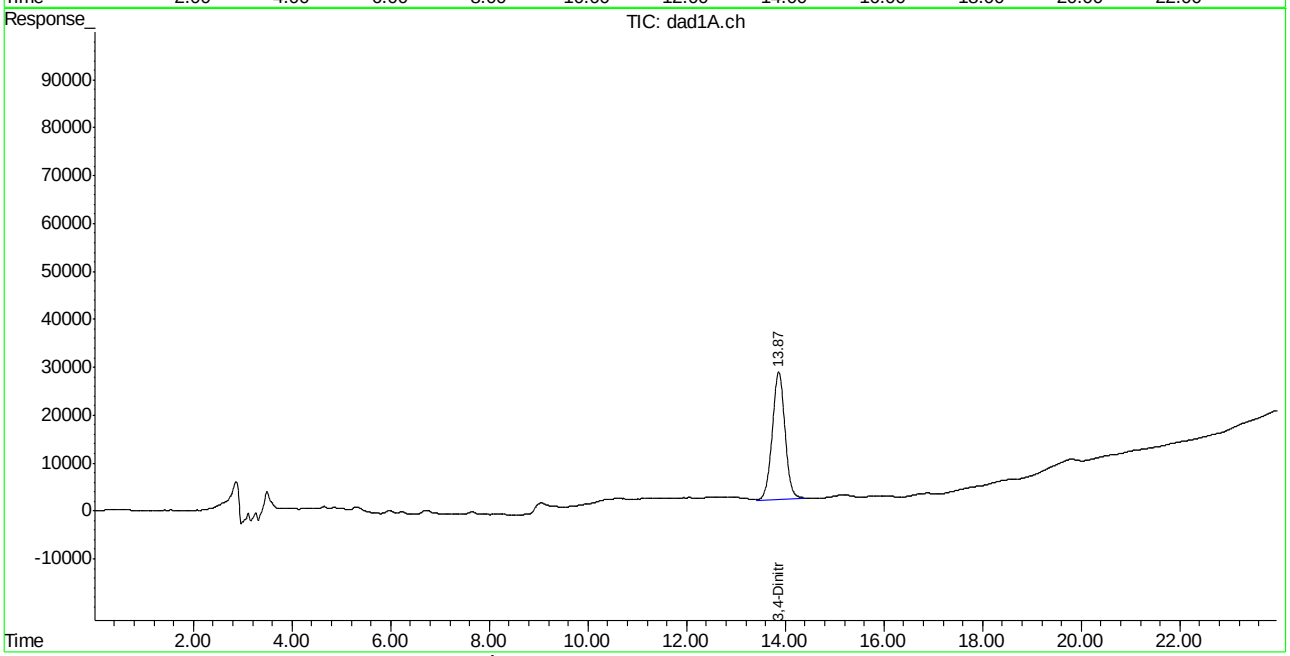
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1A.ch
Acq On : 12-Aug-2021, 19:14:01 Operator: jamesb
Sample : op86727-MB Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:23 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

Sample Number: OP86727-MB
Lab FileID: GG622032.D
Injection Time: 08/12/21 19:14

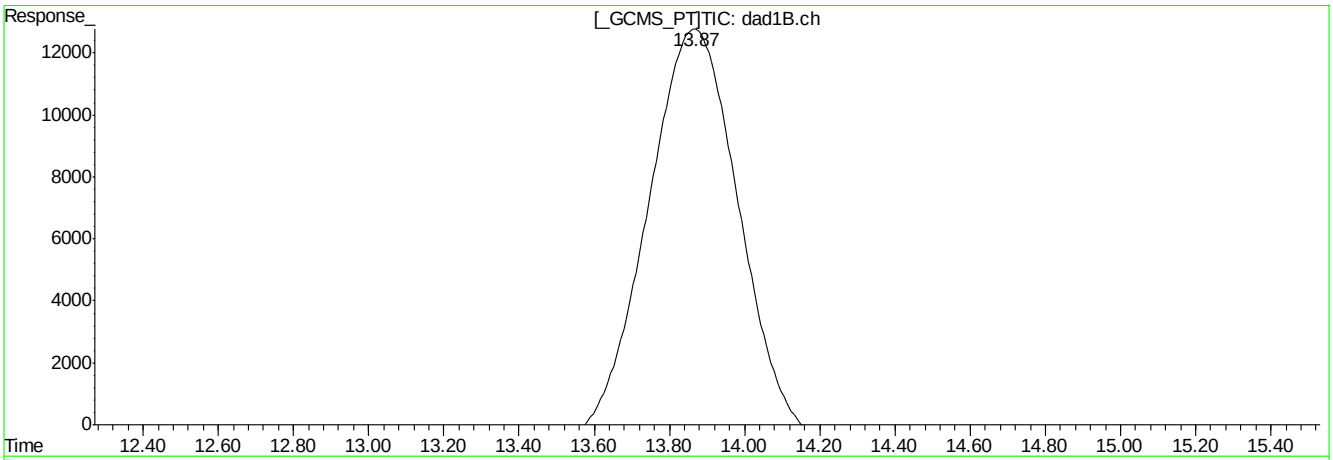
Method: SW846 8330B
Analyst approved: 08/13/21 11:12 James Boone
Supervisor approved: 08/13/21 17:23 Naresh Jiawan

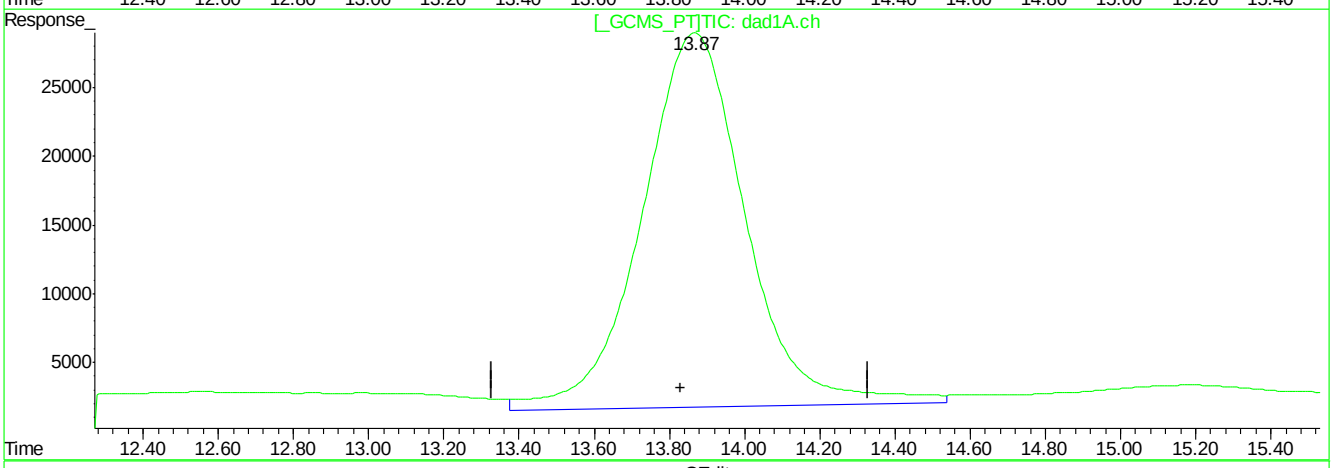
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,4-Dinitrotoluene	610-39-9	2	13.87	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1A.ch
Acq On : 12-Aug-2021, 19:14:01 Operator: jamesb
Sample : op86727-MB Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.87min 480.254ppb

response 2397310

(12) 3,4-Dinitrotoluene #2 (S)

13.87min 537.339ppb

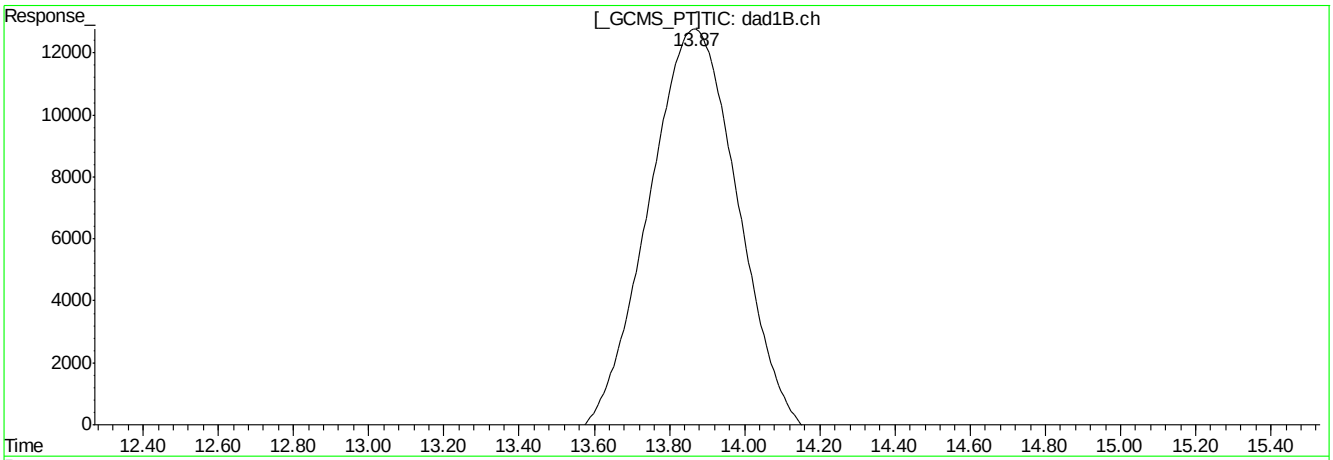
response 5237507

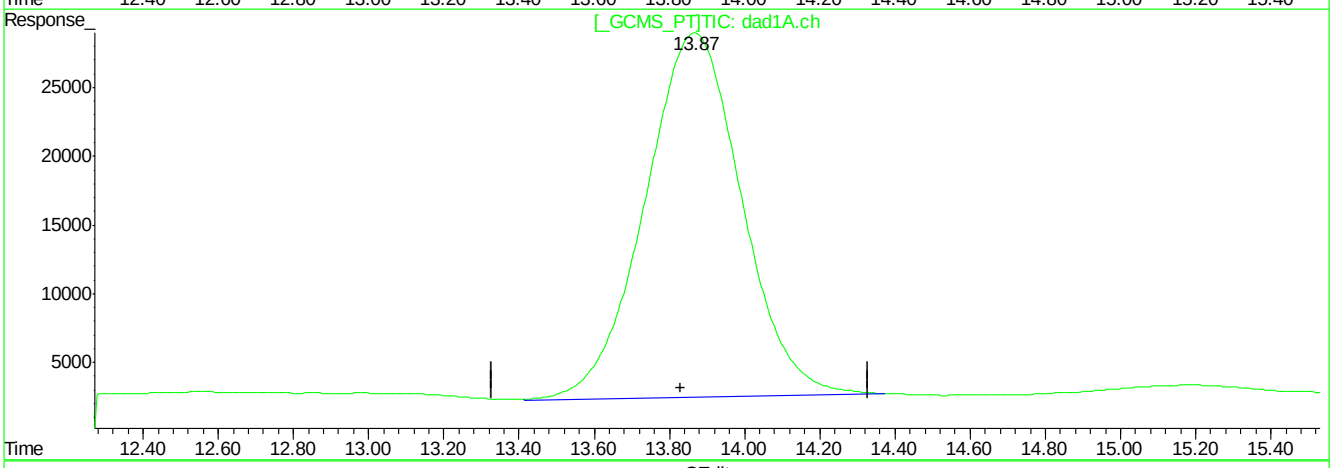
(+) = Expected Retention Time
GG622032.D GGG3024_080821.M Fri Aug 13 10:19:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622032.D\dad1A.ch
Acq On : 12-Aug-2021, 19:14:01 Operator: jamesb
Sample : op86727-MB Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(12) 3,4-Dinitrotoluene (S)

13.87min 480.254ppb

response 2397310

(12) 3,4-Dinitrotoluene #2 (S)

13.87min 487.326ppb m

response 4750020

(+) = Expected Retention Time
GG622032.D GGG3024_080821.M Fri Aug 13 10:19:51 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:22

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:25 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.27	11.27	1038049	1672400	487.375	514.802
	Spiked Amount 500.000	Range 70 - 136		Recovery =		97.47%	102.96%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.44	1.44	638888	1873389	407.721	404.827
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.89	2.89	807175	1288083	433.098	428.021
6)	1,3,5-Trinitrobe	4.67	4.67	1955289	3822967	485.899	490.591
7)	1,3-Dinitrobenze	5.87	5.87	2471635	1733017	475.062	463.919
8)	3,5-Dinitroanili	6.21	6.22	1868288	3214227	469.154	453.684
9)	Nitrobenzene	7.46	7.46	1373828	1338752	451.763	446.661
10)	Nitroglycerin	0.00	9.05	0	555400	N.D.	443.618m#
11)	Tetryl	9.54	9.54	716330	1110412	228.645	230.661m
12)	2,4,6-Trinitroto	9.92	9.92	1232469	1630173	325.951	364.310
13)	2-Amino-4,6-Dini	10.27	10.27	1592286	2290780	460.363	456.737
14)	4-Amino-2,6-Dini	10.80	10.80	1132682	2118292	465.321	438.430
16)	2,4-Dinitrotolue	11.91	11.91	2160314	1307740	454.543	423.838
17)	2,6-Dinitrotolue	12.40	12.40	1534777	1675512	560.539	499.206
18)	o-Nitrotoluene	15.48	15.48	964238	1207695	421.769	412.614m
19)	p-Nitrotoluene	16.05	16.06	1538497	1087429	447.123	385.080m
20)	m-Nitrotoluene	16.87	16.87	1432880	1663422	445.641	450.704m
21)	PETN	0.00	18.64	0	701550	N.D. d	549.138m

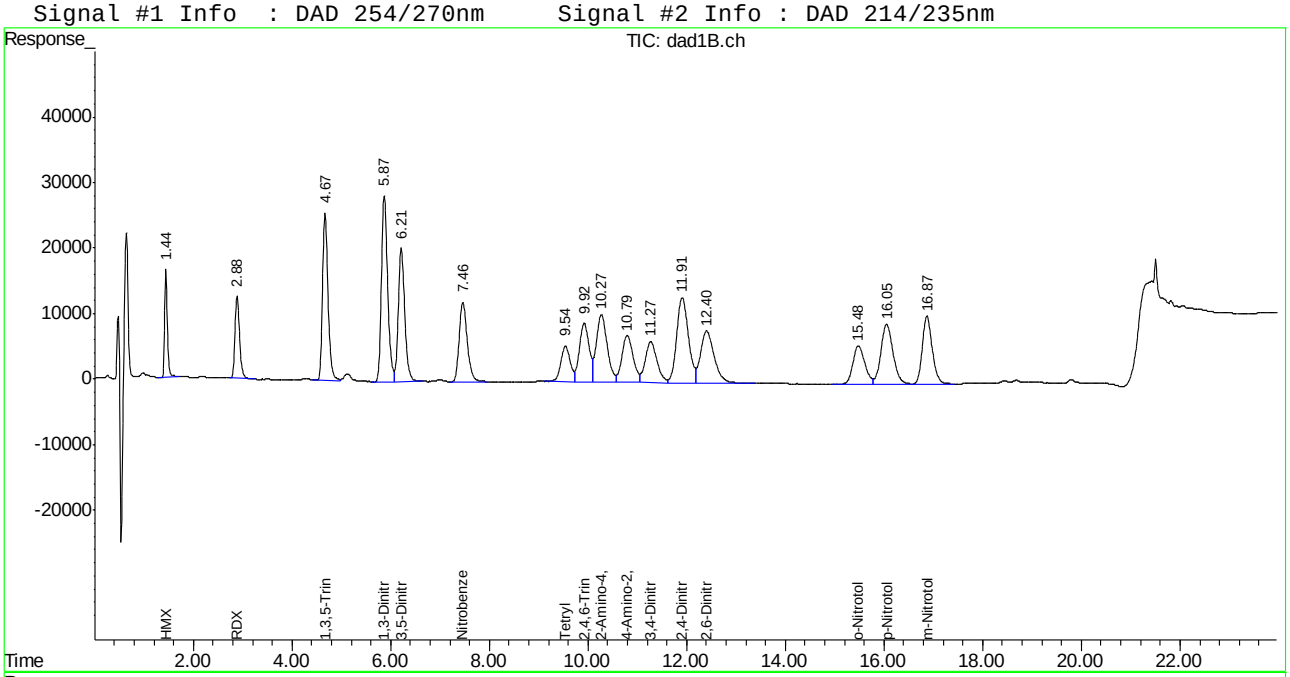
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

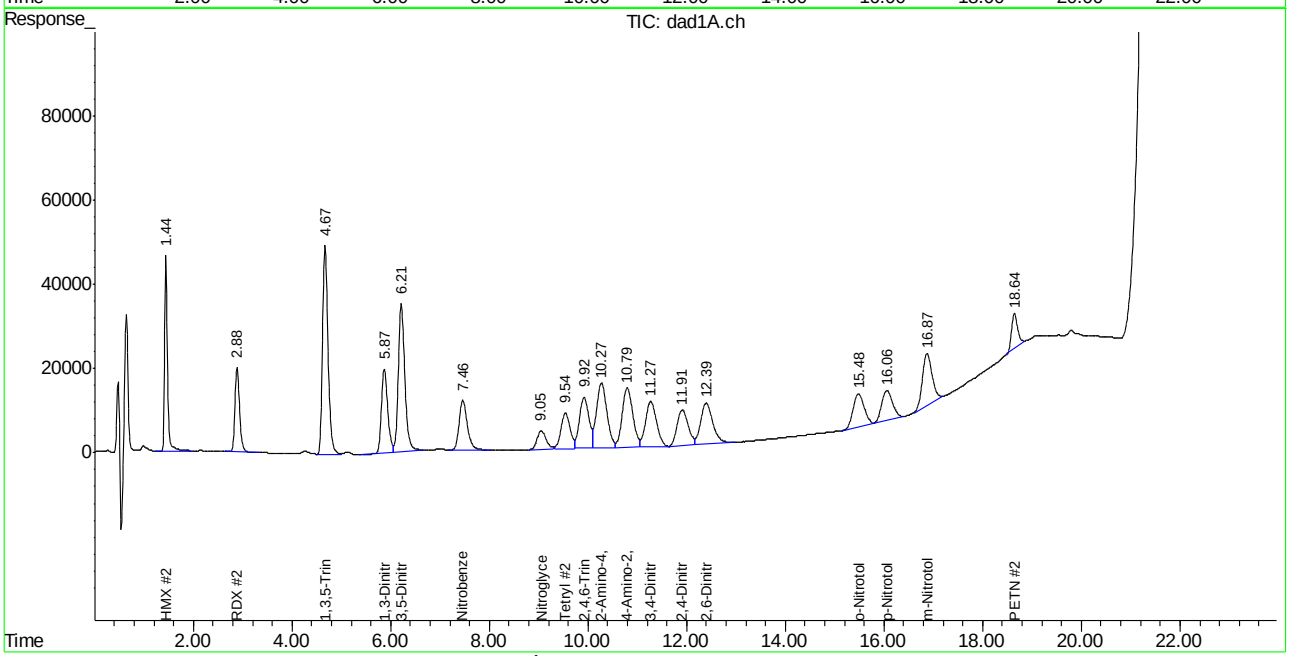
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 13 17:10 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

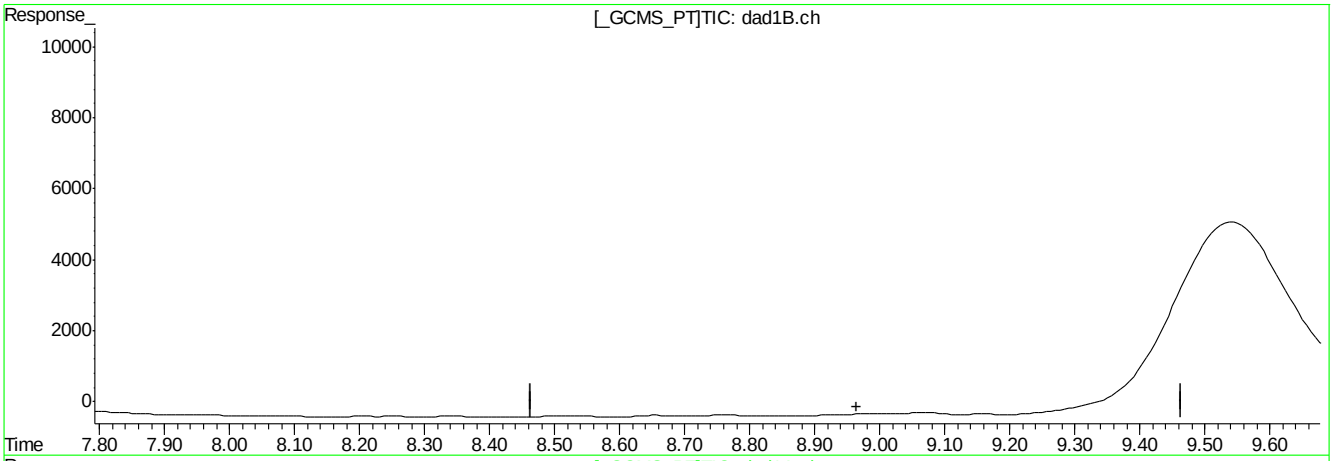
Sample Number: OP86727-BS
Lab FileID: PP391143.D
Injection Time: 08/09/21 15:27
Method: SW846 8330B
Analyst approved: 08/13/21 17:12 James Boone
Supervisor approved: 08/13/21 17:22 Naresh Jiawan

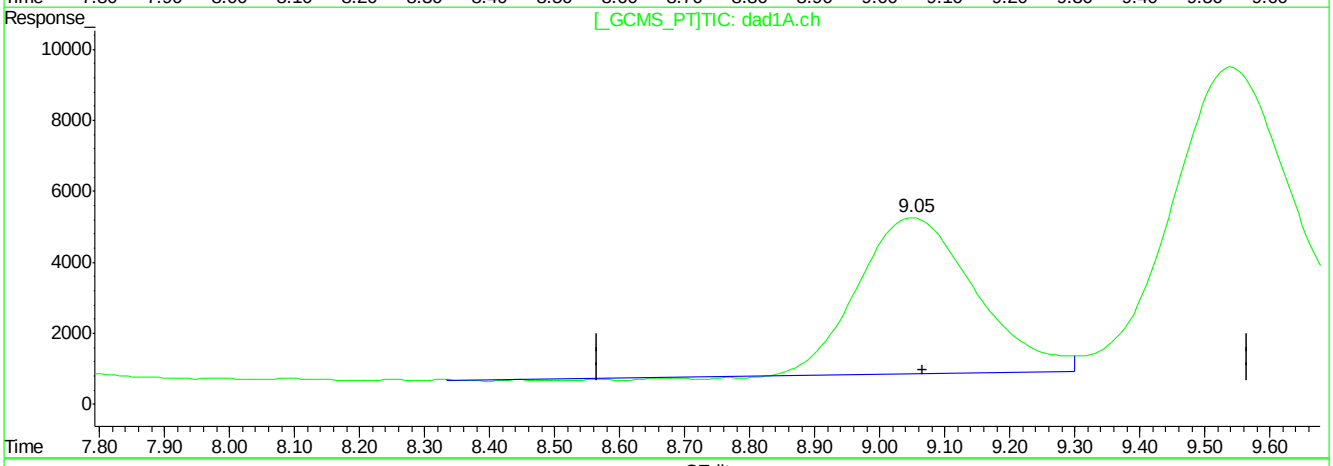
Parameter	CAS	Sig#	R.T. (min.)	Reason
Nitroglycerine	55-63-0	2	9.05	Poor instrument integration
Tetryl	479-45-8	2	9.54	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.48	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.06	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.87	Poor instrument integration
PETN	78-11-5	2	18.64	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.05min 428.479ppb

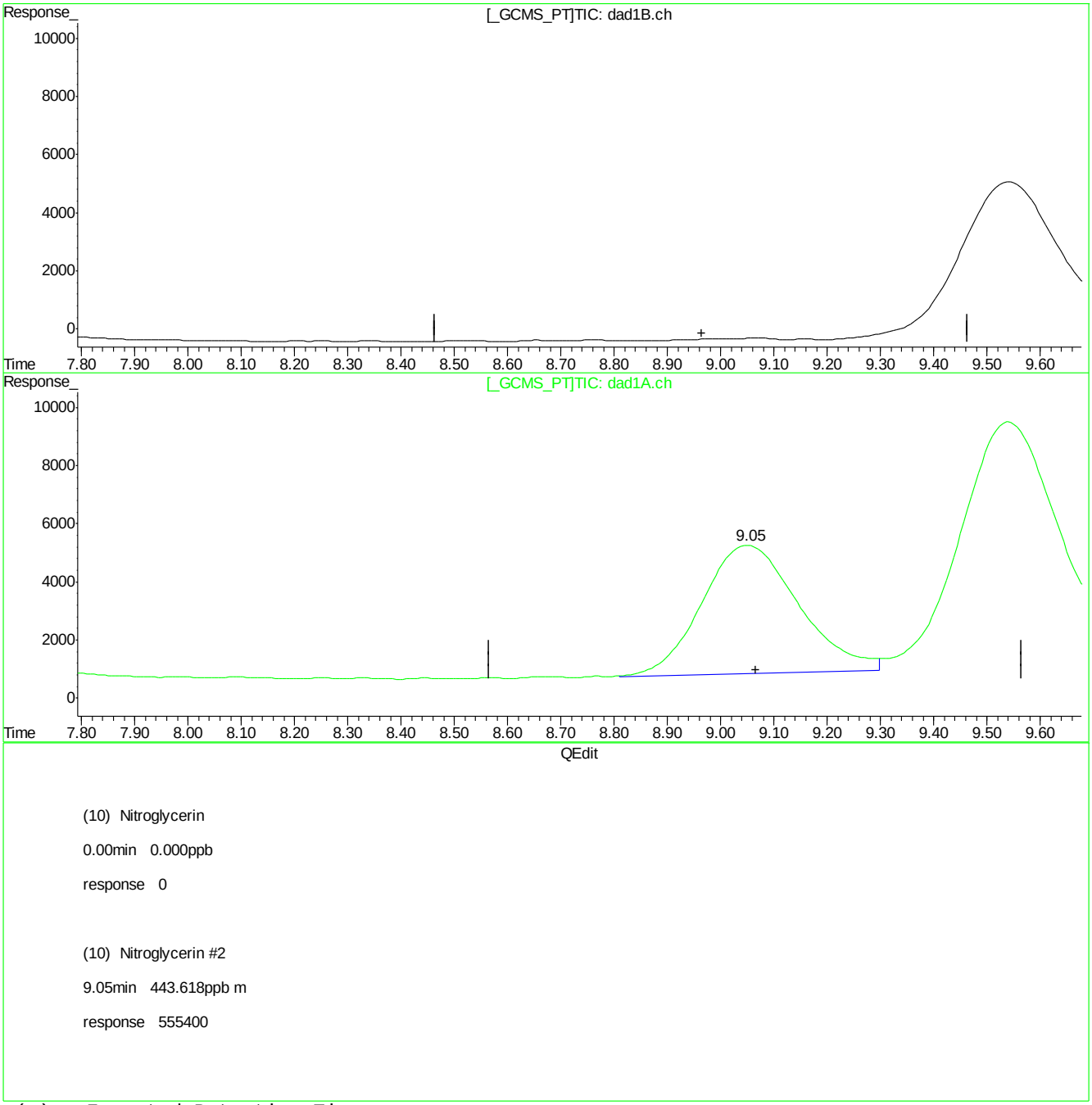
response 536446

(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:56:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

9.05min 443.618ppb m

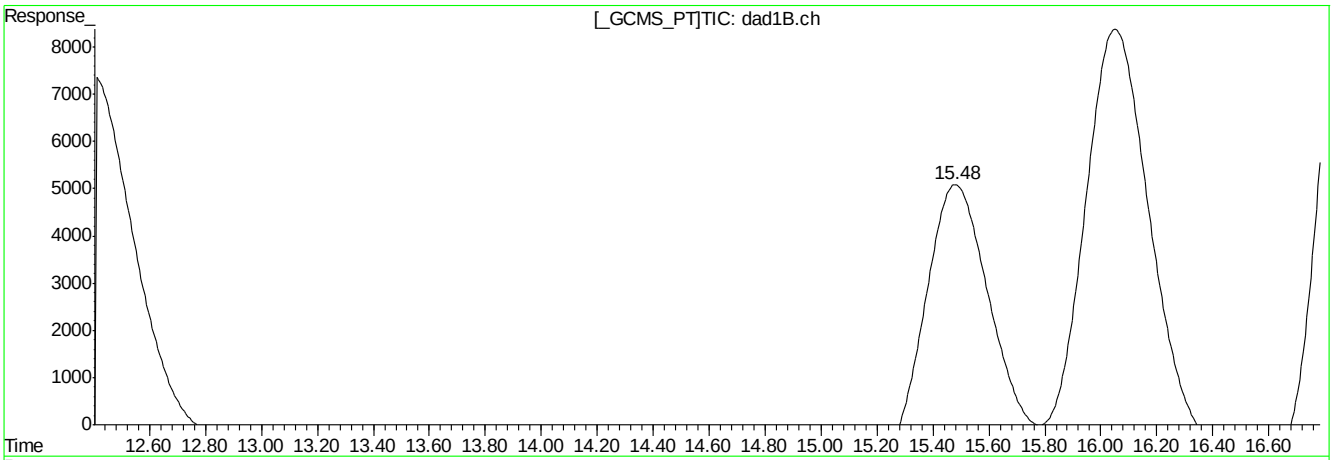
response 555400

(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:56:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.48min 421.769ppb

response 964238

(18) o-Nitrotoluene #2

15.48min 224.898ppb

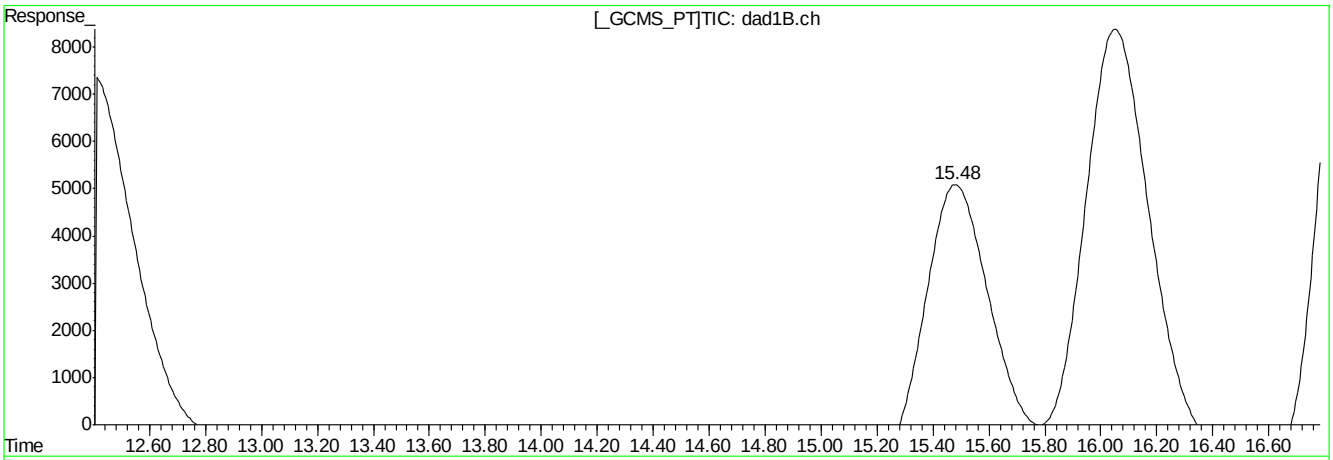
response 658262

(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.48min 421.769ppb

response 964238

(18) o-Nitrotoluene #2

15.48min 412.614ppb m

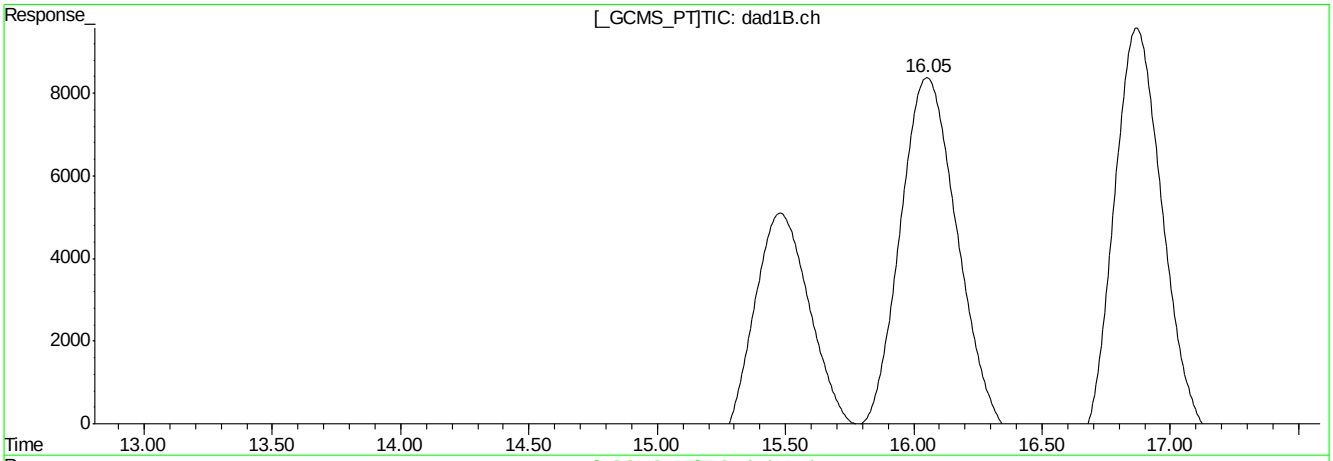
response 1207695

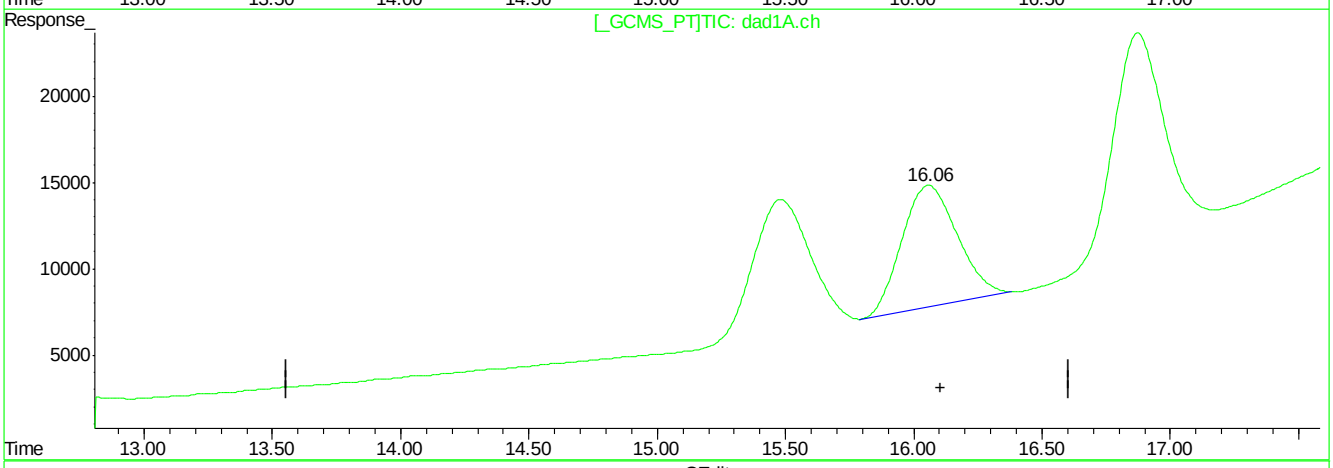
(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.05min 447.123ppb

response 1538497

(19) p-Nitrotoluene #2

16.06min 372.400ppb

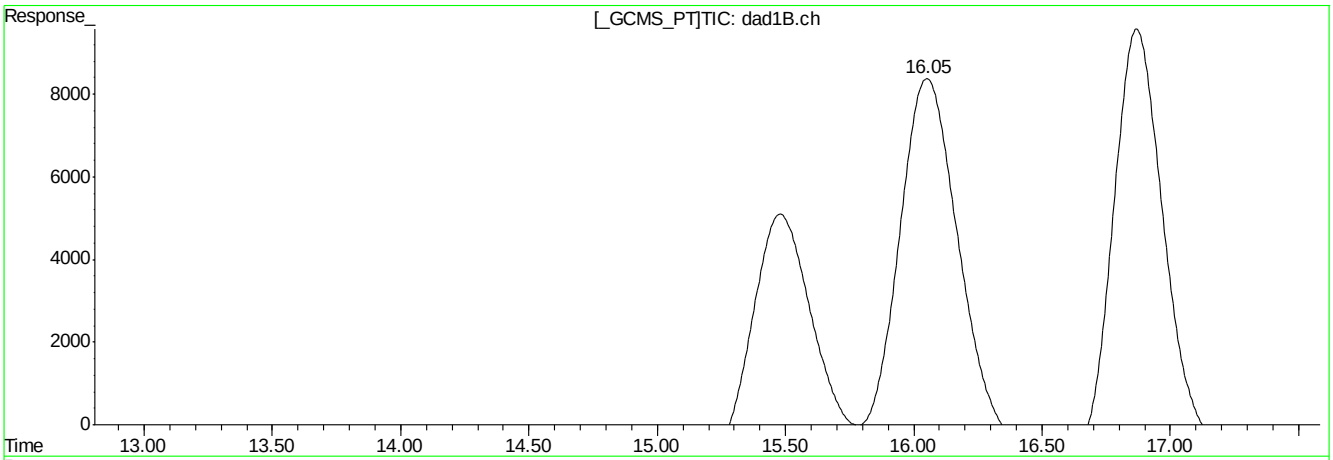
response 1051622

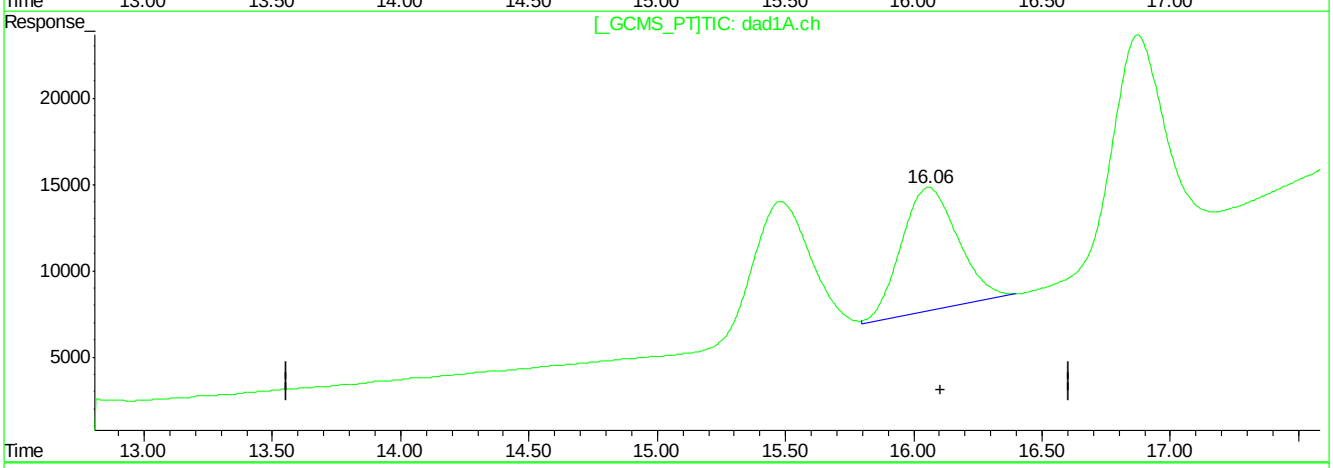
(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.05min 447.123ppb

response 1538497

(19) p-Nitrotoluene #2

16.06min 385.080ppb m

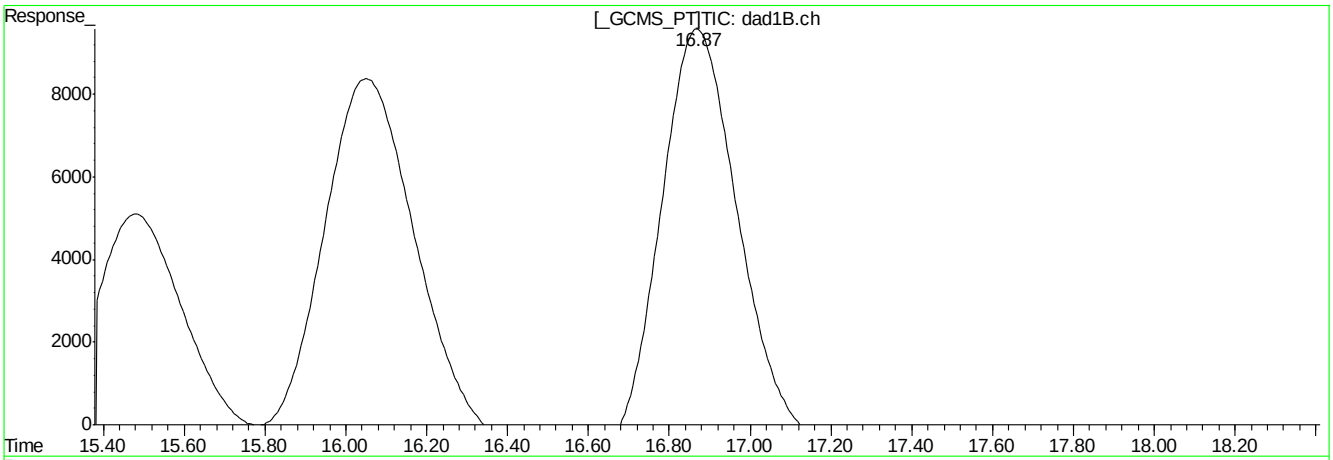
response 1087429

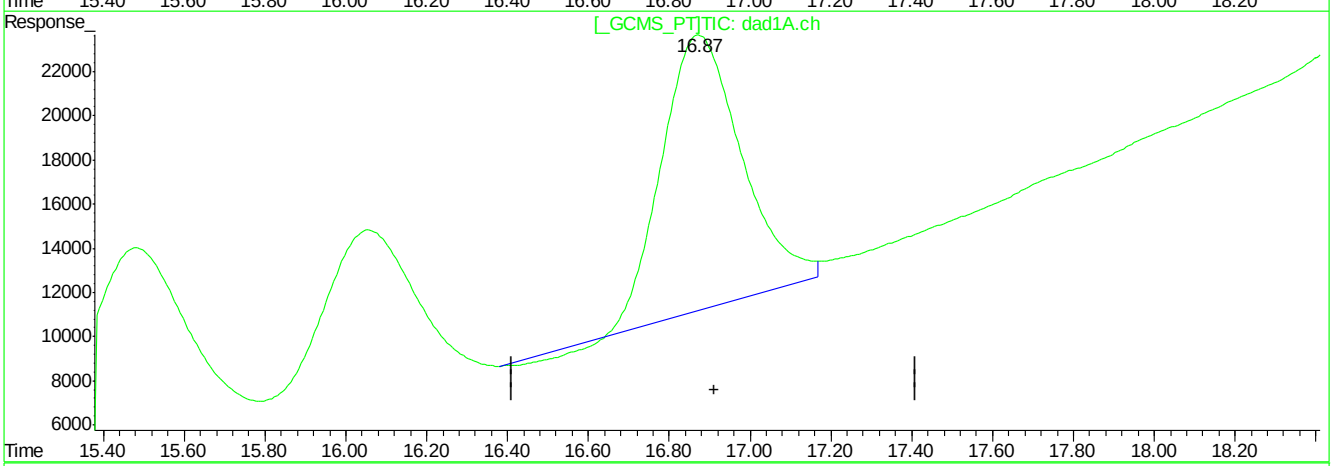
(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 445.641ppb

response 1432880

(20) m-Nitrotoluene #2

16.88min 453.362ppb

response 1673231

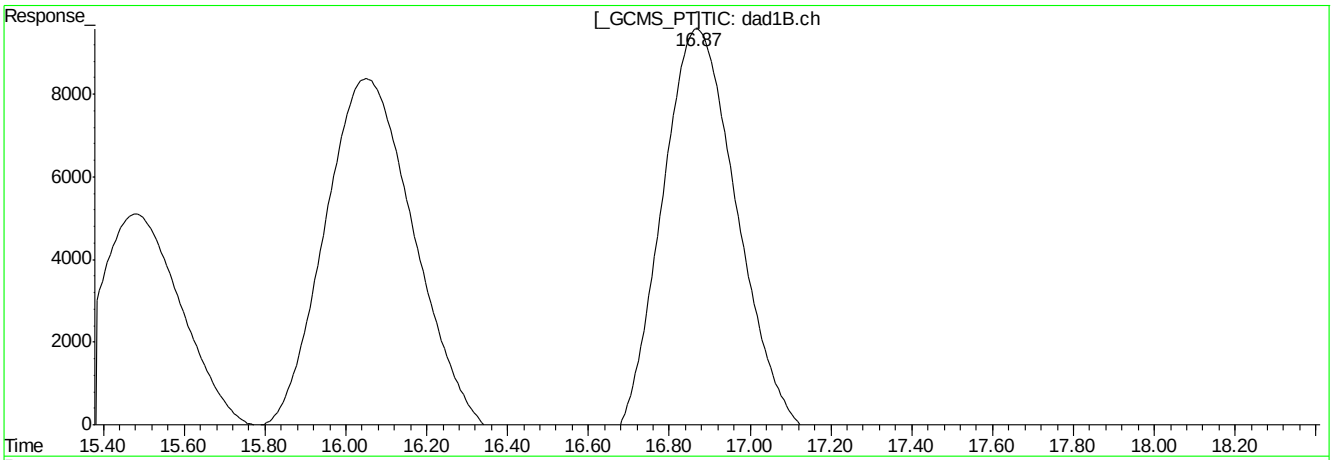
(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:47 2021

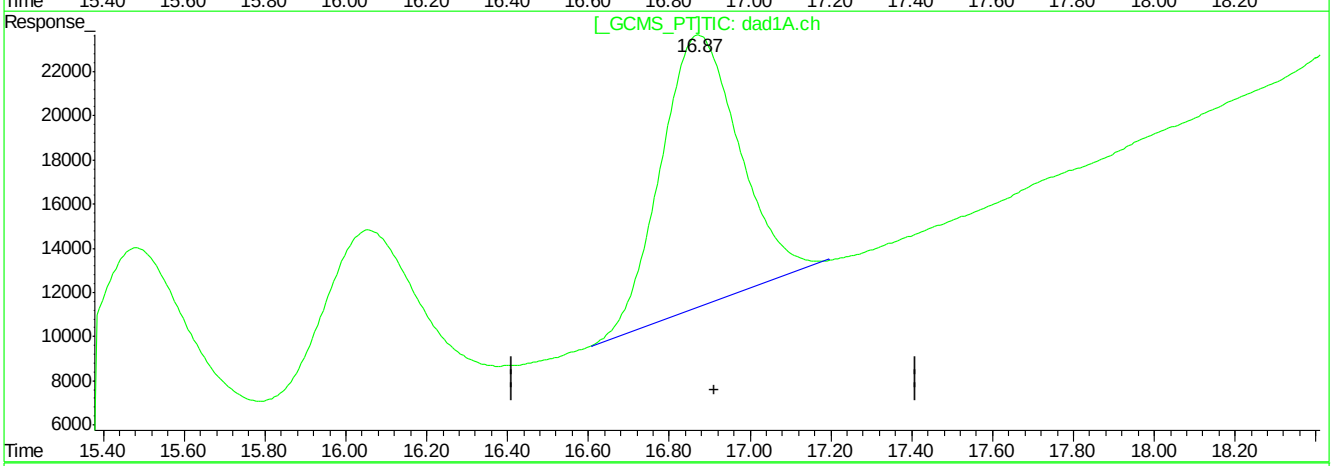
PP391143.D edits: m-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 445.641ppb

response 1432880

(20) m-Nitrotoluene #2

16.87min 450.704ppb m

response 1663422

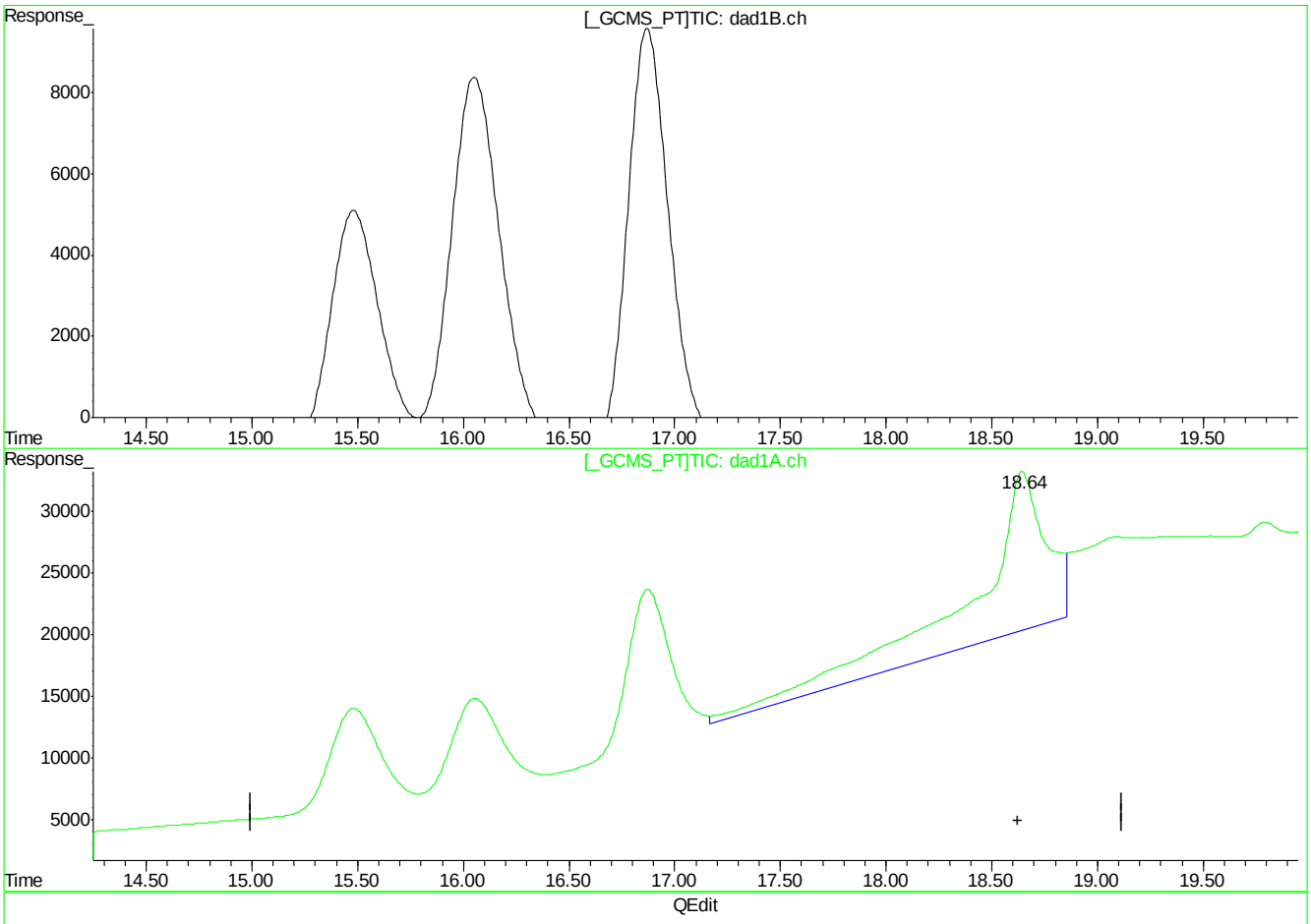
(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:52 2021

PP391143.D edits: m-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

18.68min 0.000ppb

response 39118

(21) PETN #2

18.65min 2417.510ppb

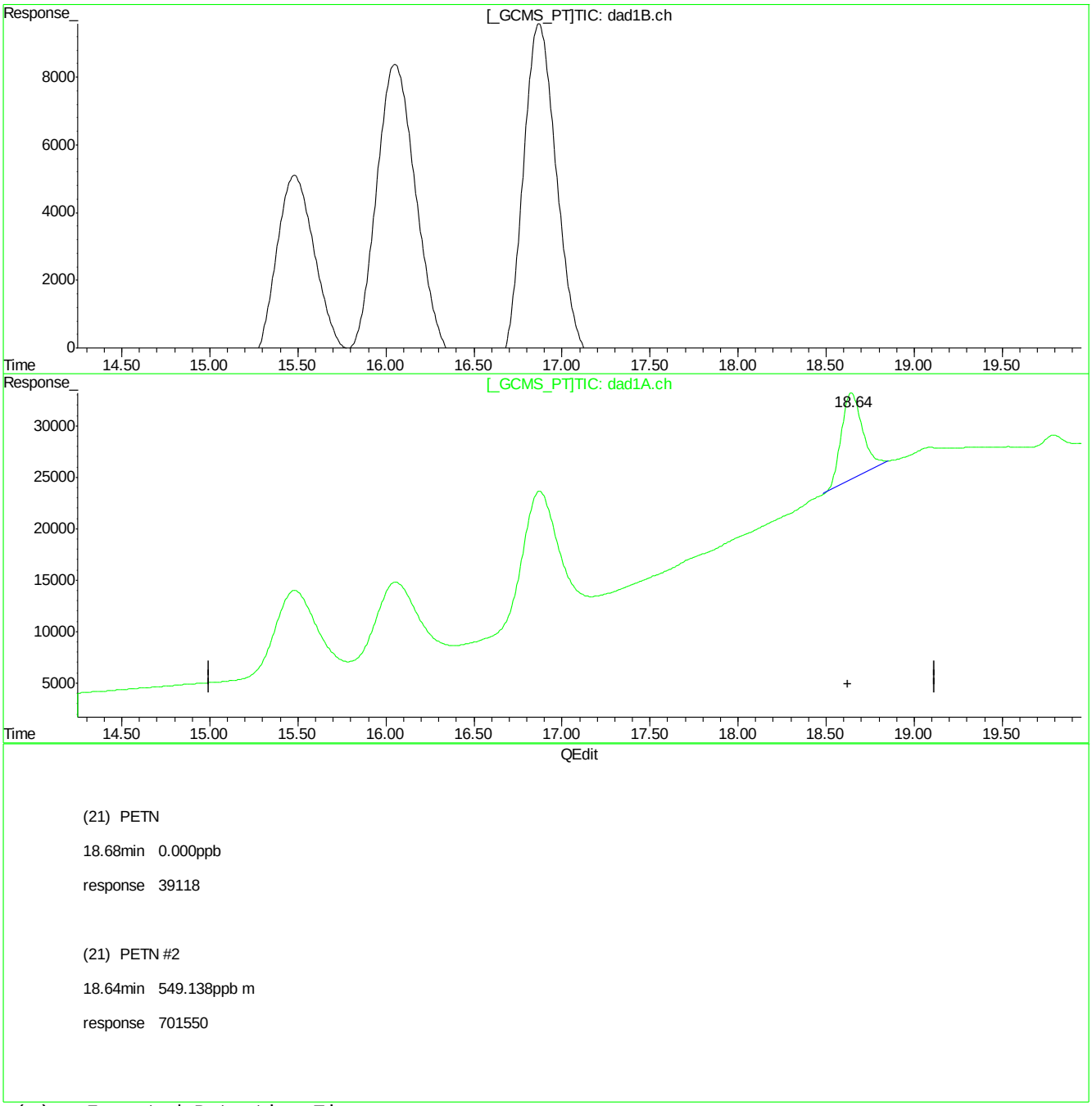
response 3088483

(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391143.D\dad1A.ch
Acq On : 09-Aug-2021, 15:27:03 Operator: jamesb
Sample : op86727-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
PP391143.D GPP2464_080321PRI.M Thu Aug 12 12:57:59 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/13/21 17:28

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : op86727,GPP2467,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:41 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.26	11.26	1061744	1723339	498.500	530.483
	Spiked Amount 500.000	Range 70 - 136		Recovery =		99.70%	106.10%
	Target Compounds						
1)	TNX	1.31	1.31	625293	1004255	375.700m	367.239m
2)	HMX	1.44	1.44	1660163	4635733	1059.470	1001.751
3)	DNX	1.69	1.69	1088677	1703203	496.487	500.138
4)	MNX	2.27	2.27	2080787	3002989	801.043	738.258
5)	RDX	2.88	2.88	1235549	1875353	662.946	623.167
6)	1,3,5-Trinitrobe	4.67	4.67	4473061	8794133	1111.577	1128.527
7)	1,3-Dinitrobenze	5.87	5.87	2602203	1875174	500.158	501.974
8)	3,5-Dinitroanili	6.21	6.21	2013797	3533035	505.693	498.683
9)	Nitrobenzene	7.46	7.46	1444732	1413384	475.079	471.561
10)	Nitroglycerin	0.00	9.05	0	580829	N.D.	463.929 #
11)	Tetryl	9.53	9.53	735554	1150886	234.781	239.069
12)	2,4,6-Trinitroto	9.92	9.92	3406266	4324149	900.854	966.357
13)	2-Amino-4,6-Dini	10.25	10.25	2352994	3496948	680.299	697.223
14)	4-Amino-2,6-Dini	10.78	10.78	1480416	2852131	608.175	590.316
16)	2,4-Dinitrotolue	11.90	11.90	2283632	1389718	480.489	450.407
17)	2,6-Dinitrotolue	12.39	12.39	1747725	1922229	638.313	572.714
18)	o-Nitrotoluene	15.47	15.46	1009288	1293235	441.474	441.839m
19)	p-Nitrotoluene	16.04	16.05	1613135	1115902	468.815	395.163
20)	m-Nitrotoluene	16.86	16.86	1509169	1794151	469.368	486.125m
21)	PETN	0.00	18.64	0	682735	N.D. d	534.411m

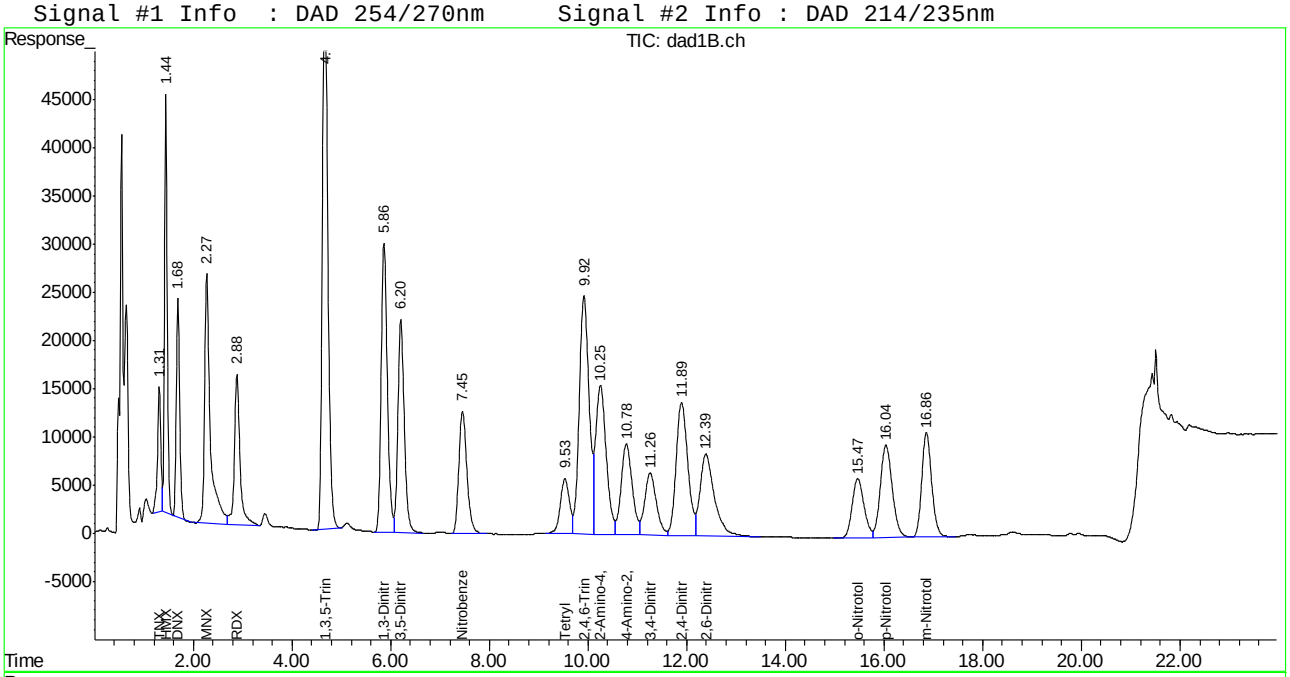
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

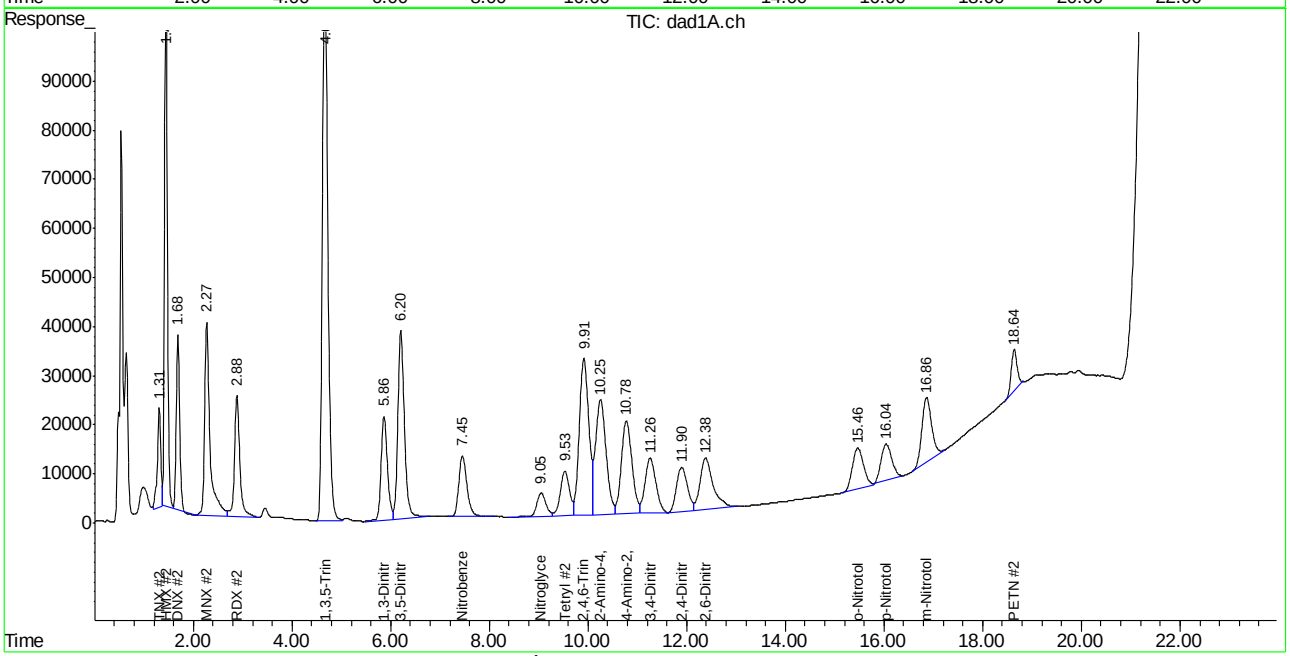
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : op86727,GPP2467,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 15:27 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

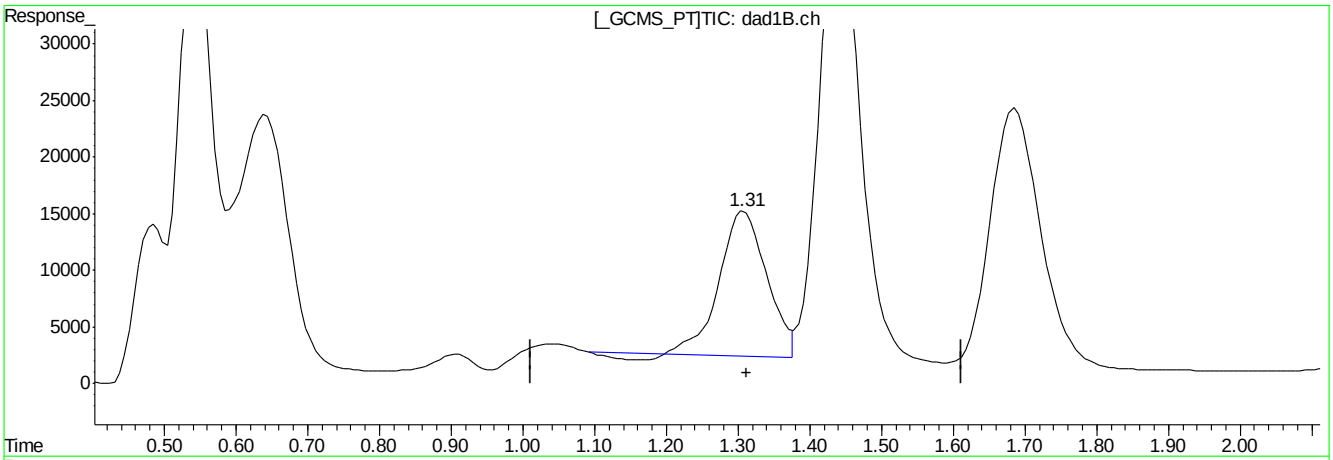
Sample Number: OP86727-MS2
Lab FileID: PP391159.D
Injection Time: 08/09/21 23:43
Method: SW846 8330B
Analyst approved: 08/13/21 17:12 James Boone
Supervisor approved: 08/13/21 17:28 Naresh Jiawan

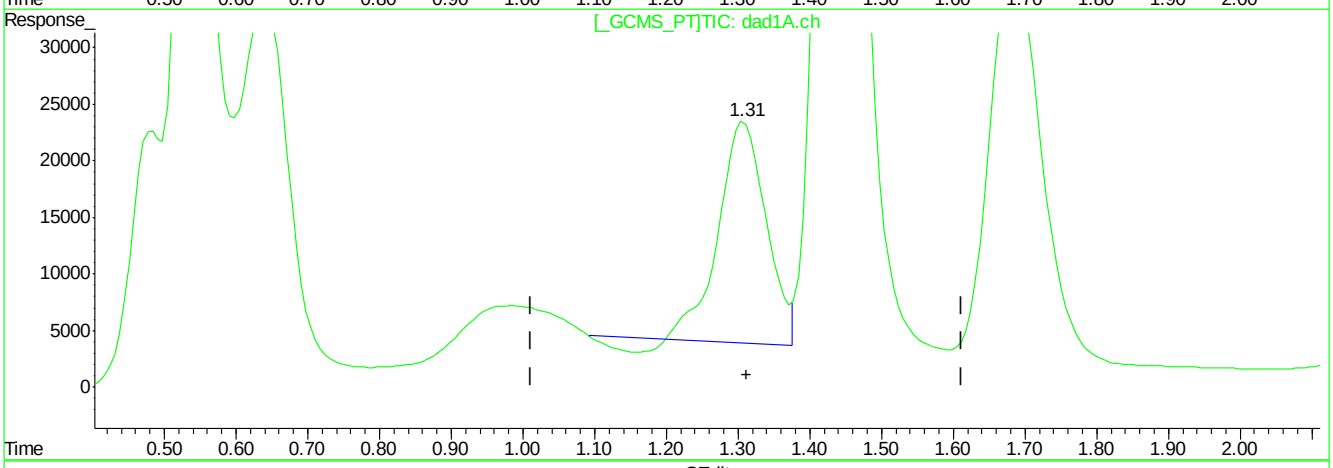
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.31	Poor instrument integration
TNX		2	1.31	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.46	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.64	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 349.067ppb

response 580968

(1) TNX #2

1.31min 318.997ppb

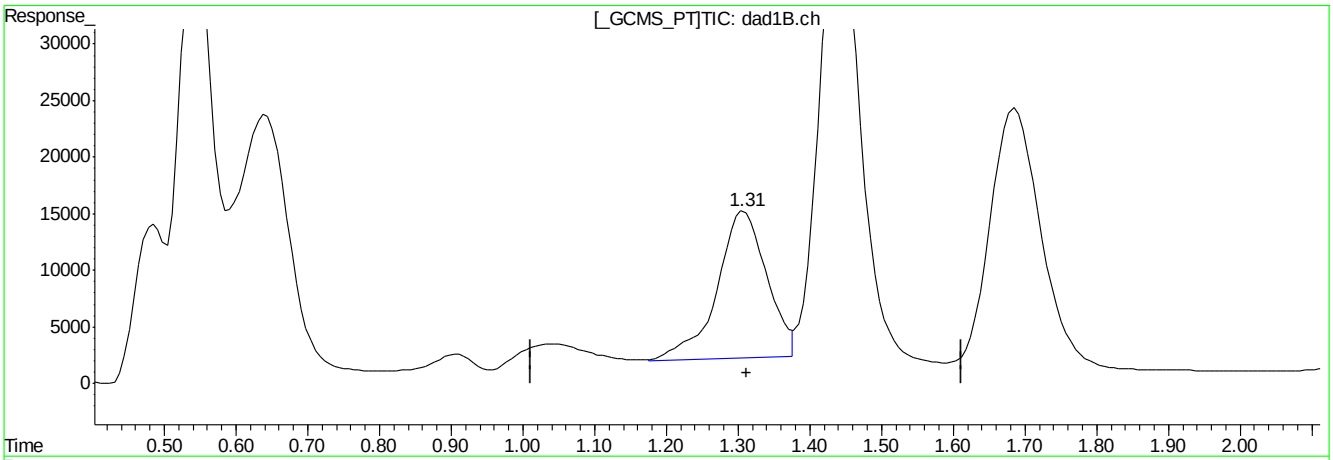
response 872332

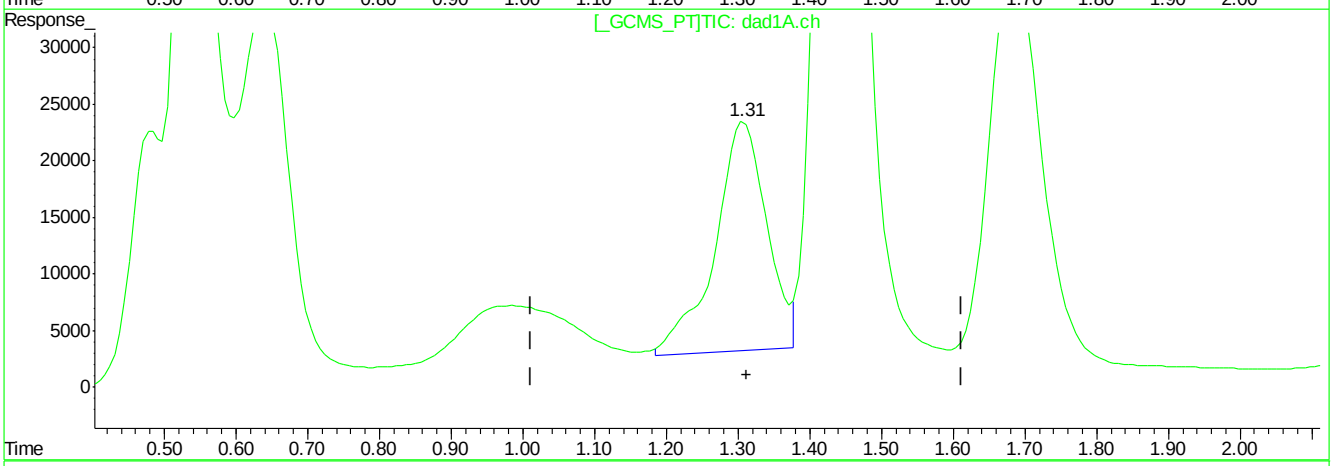
(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:26:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 375.700ppb m

response 625293

(1) TNX #2

1.31min 367.239ppb m

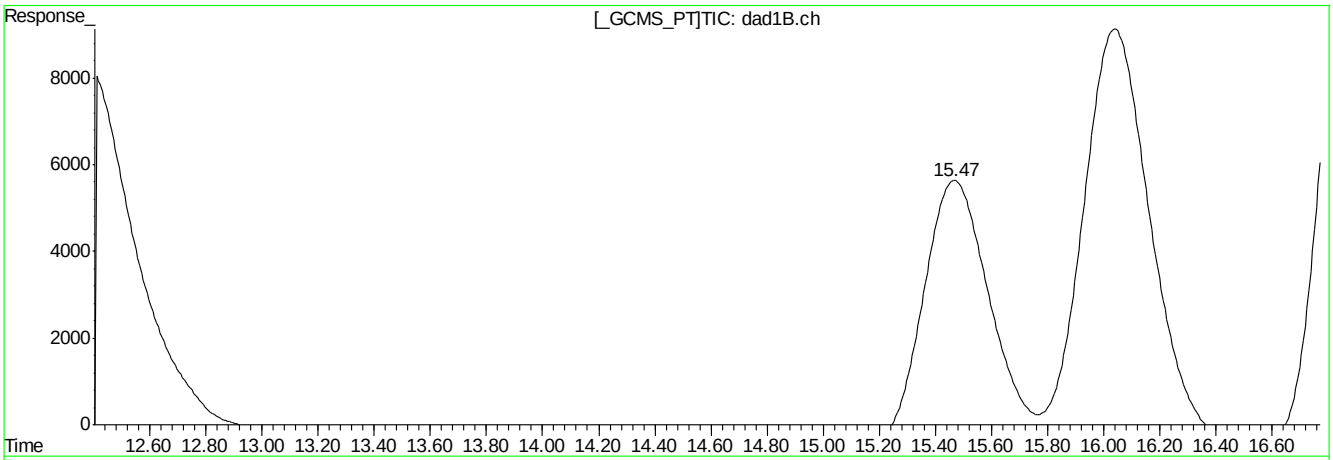
response 1004255

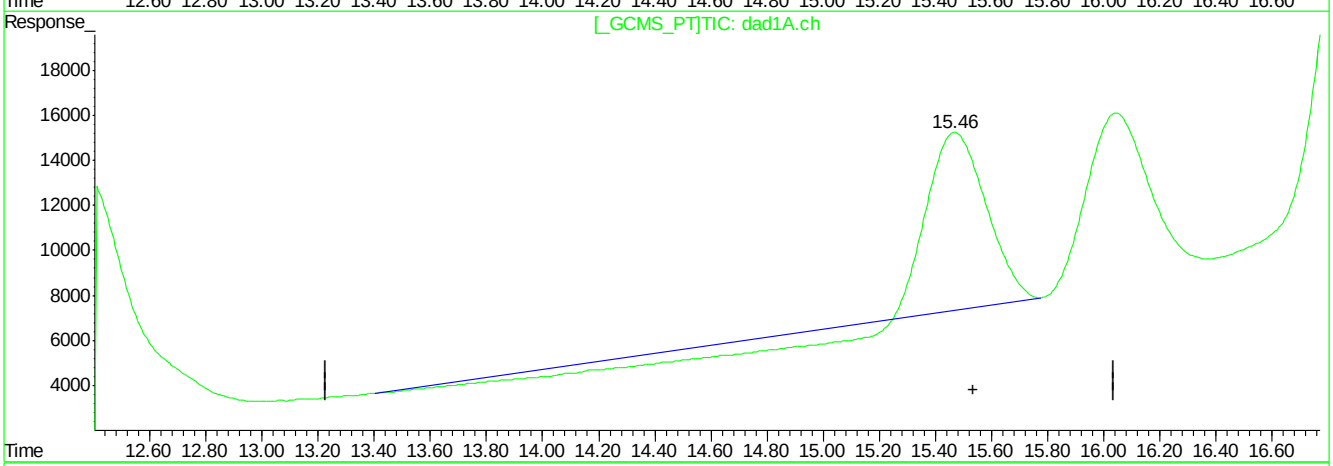
(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:26:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 441.474ppb

response 1009288

(18) o-Nitrotoluene #2

15.47min 249.469ppb

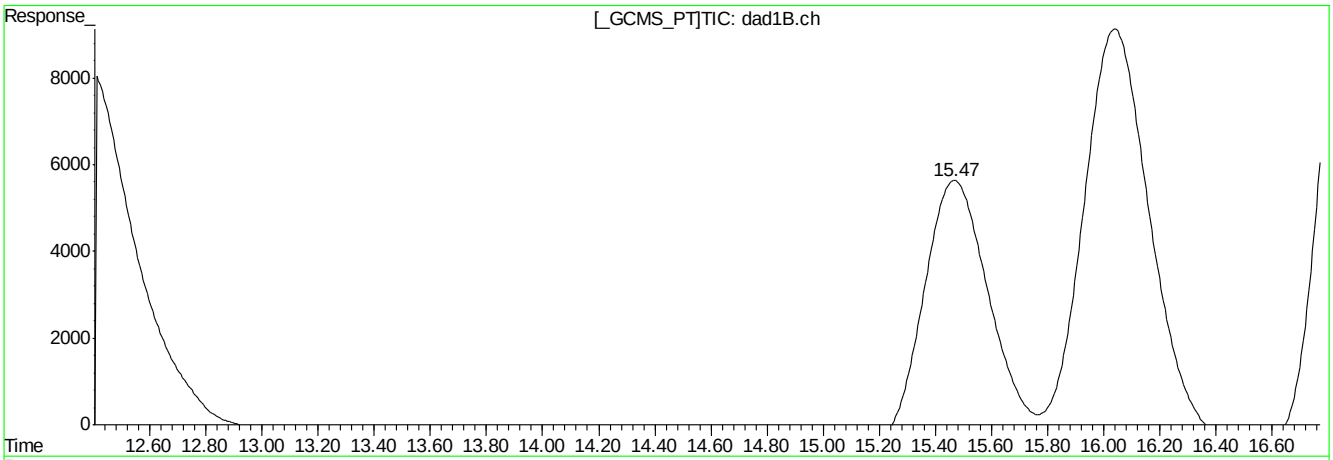
response 730180

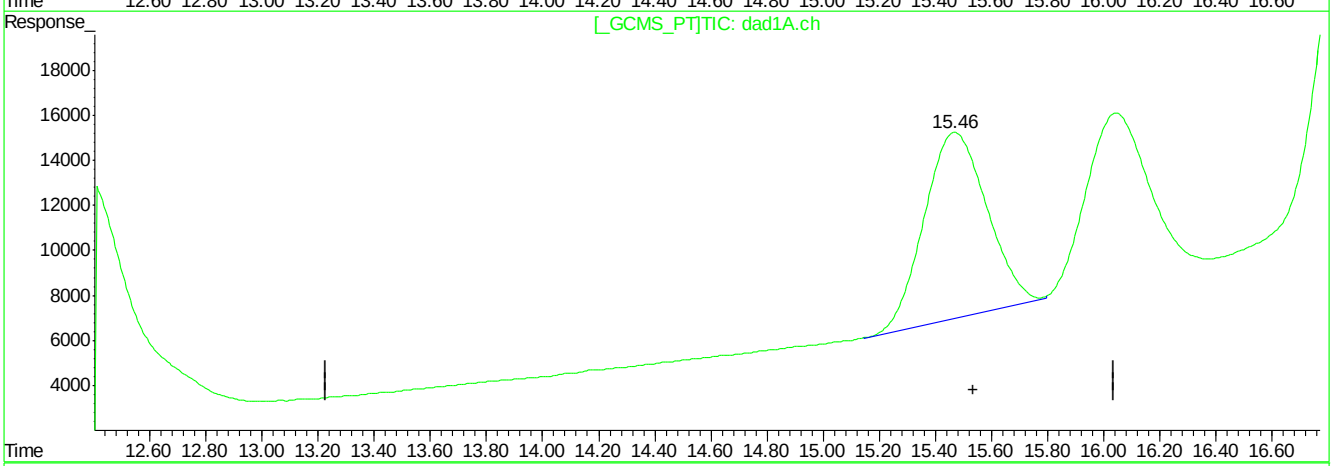
(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:27:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 441.474ppb

response 1009288

(18) o-Nitrotoluene #2

15.46min 441.839ppb m

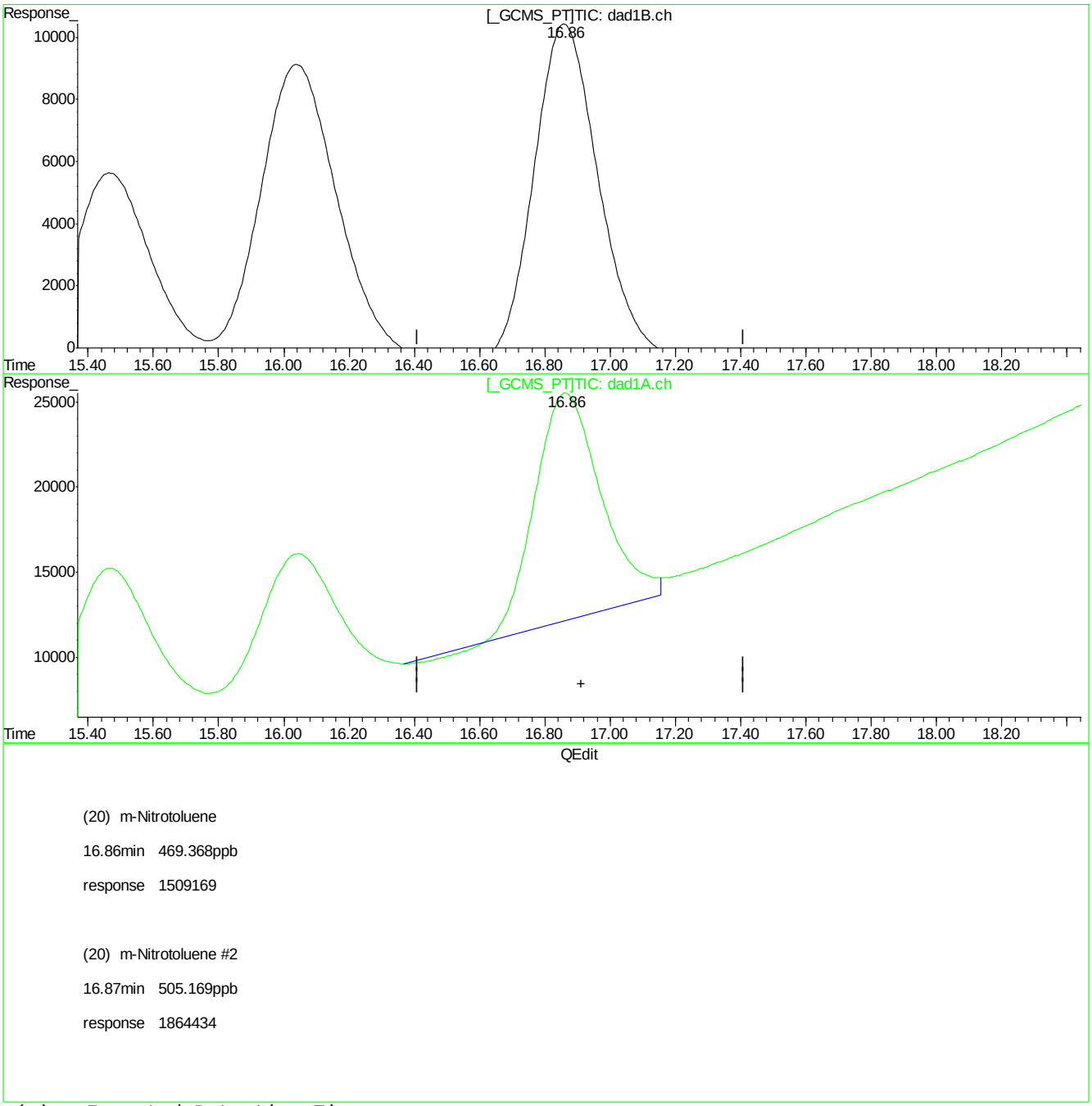
response 1293235

(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:27:10 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

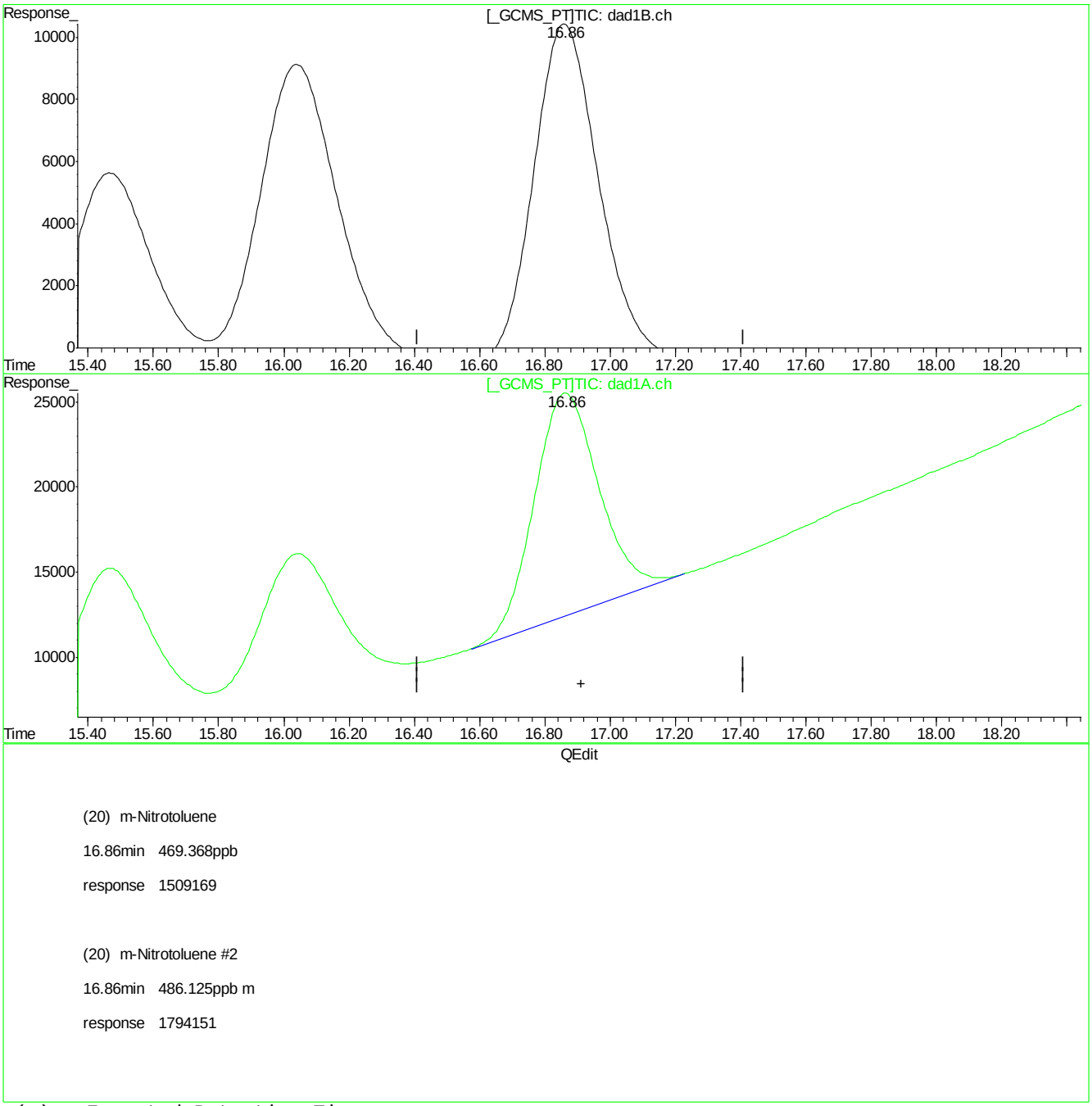


(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:27:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.86min 469.368ppb

response 1509169

(20) m-Nitrotoluene #2

16.86min 486.125ppb m

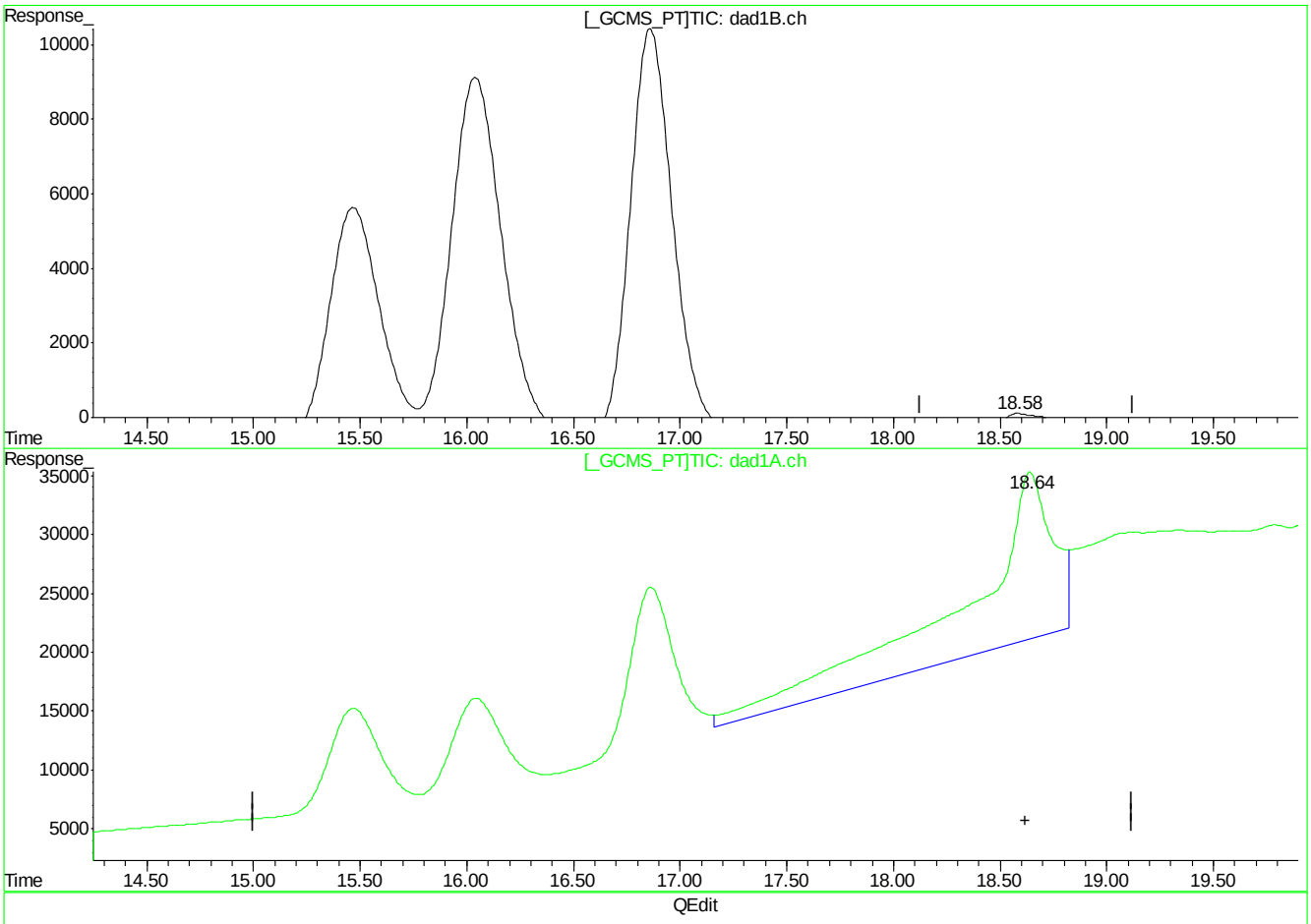
response 1794151

(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:27:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

18.59min 0.000ppb

response 66530

(21) PETN #2

18.64min 3034.096ppb

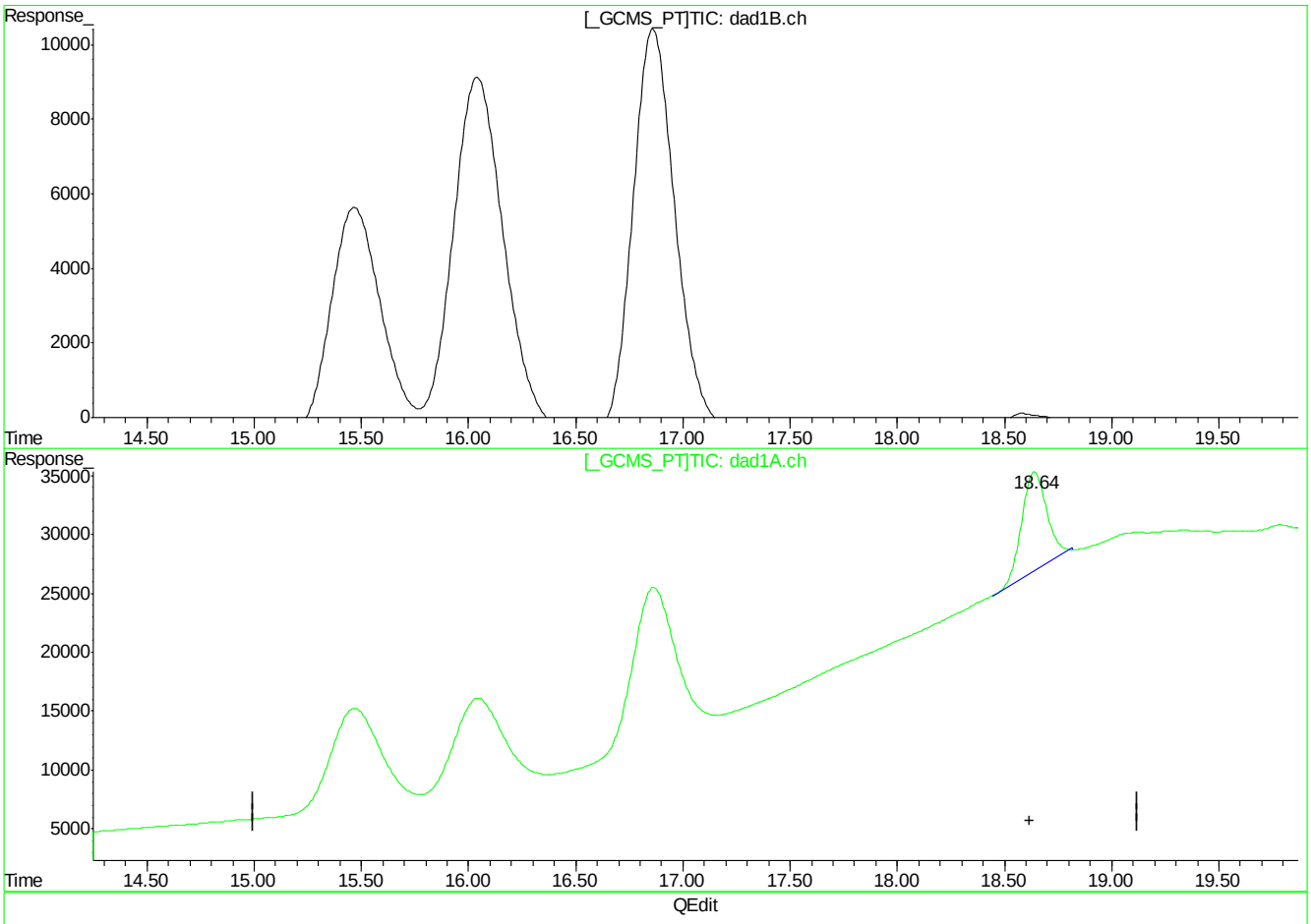
response 3876201

(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:27:22 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1B.ch Vial: 18
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391159.D\dad1A.ch
Acq On : 09-Aug-2021, 23:43:00 Operator: jamesb
Sample : op86727-MS2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.64min 534.411ppb m

response 682735

(+) = Expected Retention Time
PP391159.D GPP2464_080321PRI.M Thu Aug 12 15:27:27 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 08/13/21 17:28

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : op86727,GPP2467,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:42 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.26	11.26	1056263	1726126	495.927	531.341
	Spiked Amount 500.000	Range 70 - 136		Recovery =		99.19%	106.27%
	Target Compounds						
1)	TNX	1.31	1.31	594917	1004181	357.448m	367.212m
2)	HMX	1.44	1.44	1662041	4635833	1060.668	1001.772
3)	DNX	1.69	1.69	1089710	1703954	496.958	500.358
4)	MNX	2.27	2.27	2098185	3023130	807.741	743.210
5)	RDX	2.88	2.88	1237083	1853947	663.769	616.054
6)	1,3,5-Trinitrobe	4.67	4.67	4476379	8798801	1112.402	1129.127
7)	1,3-Dinitrobenze	5.87	5.87	2597676	1882427	499.288	503.916
8)	3,5-Dinitroanili	6.21	6.21	2014912	3556095	505.974	501.938
9)	Nitrobenzene	7.46	7.46	1442921	1445687	474.484	482.339
10)	Nitroglycerin	0.00	9.05	0	589295	N.D.	470.692 #
11)	Tetryl	9.53	9.53	737344	1154494	235.353	239.818
12)	2,4,6-Trinitroto	9.92	9.92	3407862	4323205	901.276	966.146
13)	2-Amino-4,6-Dini	10.25	10.25	2348954	3498744	679.131	697.582
14)	4-Amino-2,6-Dini	10.78	10.78	1478172	2849760	607.253	589.825
16)	2,4-Dinitrotolue	11.90	11.90	2280347	1388796	479.798	450.108
17)	2,6-Dinitrotolue	12.39	12.38	1747795	1917557	638.339	571.322
18)	o-Nitrotoluene	15.47	15.46	1005674	1281727	439.893	437.907m
19)	p-Nitrotoluene	16.04	16.04	1605706	1107905	466.656	392.331
20)	m-Nitrotoluene	16.86	16.86	1501685	1785170	467.040	483.692m
21)	PETN	0.00	18.64	0	681393	N.D. d	533.360m

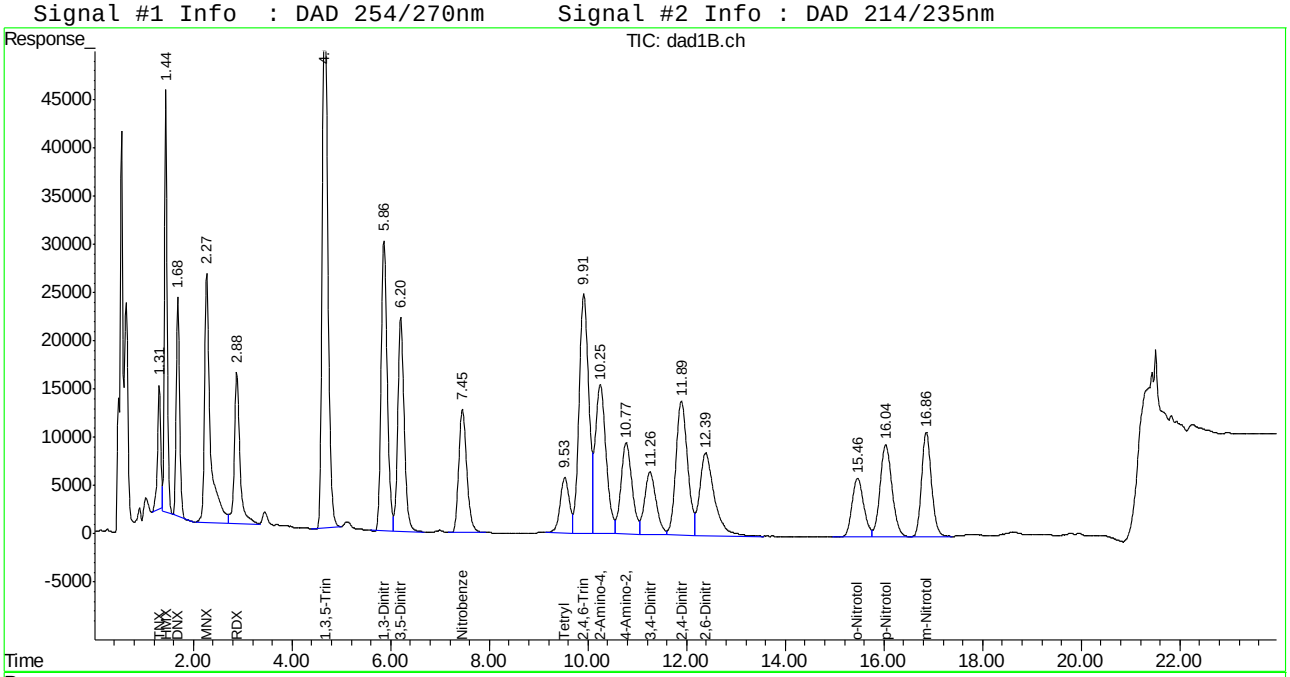
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

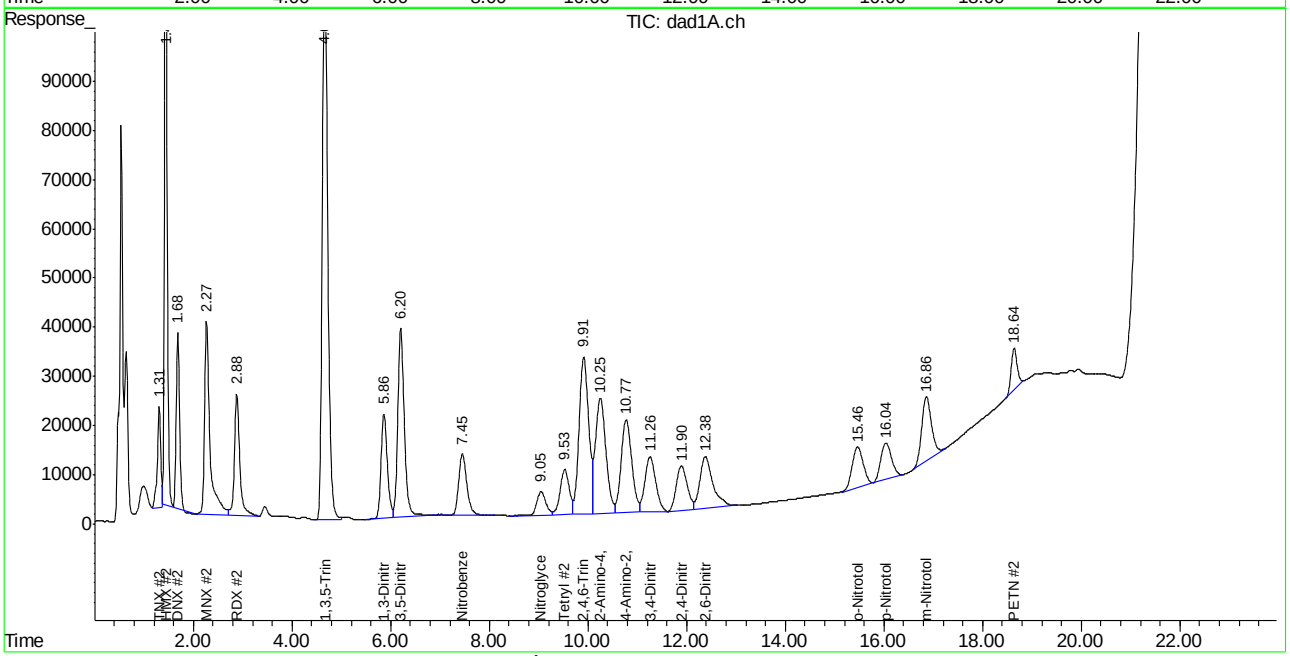
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : op86727,GPP2467,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 15:29 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

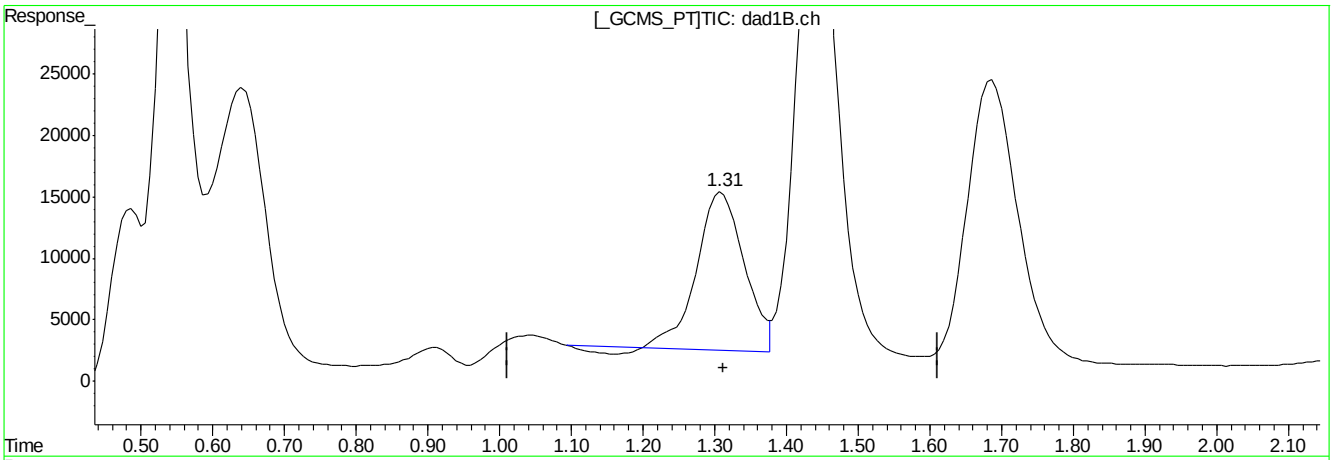
Sample Number: OP86727-MSD2
Lab FileID: PP391160.D
Injection Time: 08/10/21 00:14
Method: SW846 8330B
Analyst approved: 08/13/21 17:12 James Boone
Supervisor approved: 08/13/21 17:28 Naresh Jiawan

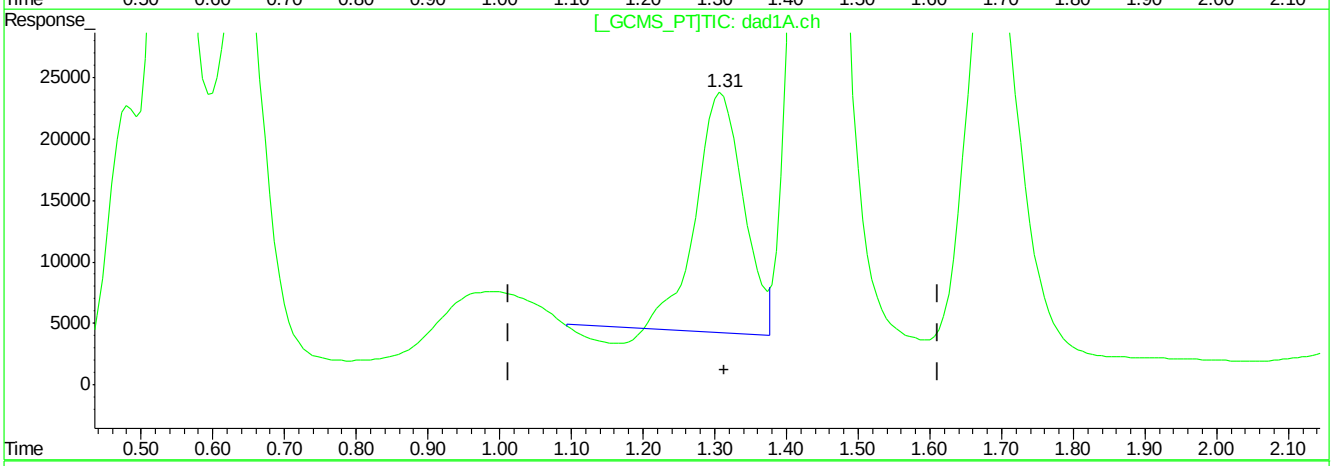
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.31	Poor instrument integration
TNX		2	1.31	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.46	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.64	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 347.466ppb

response 578303

(1) TNX #2

1.31min 318.032ppb

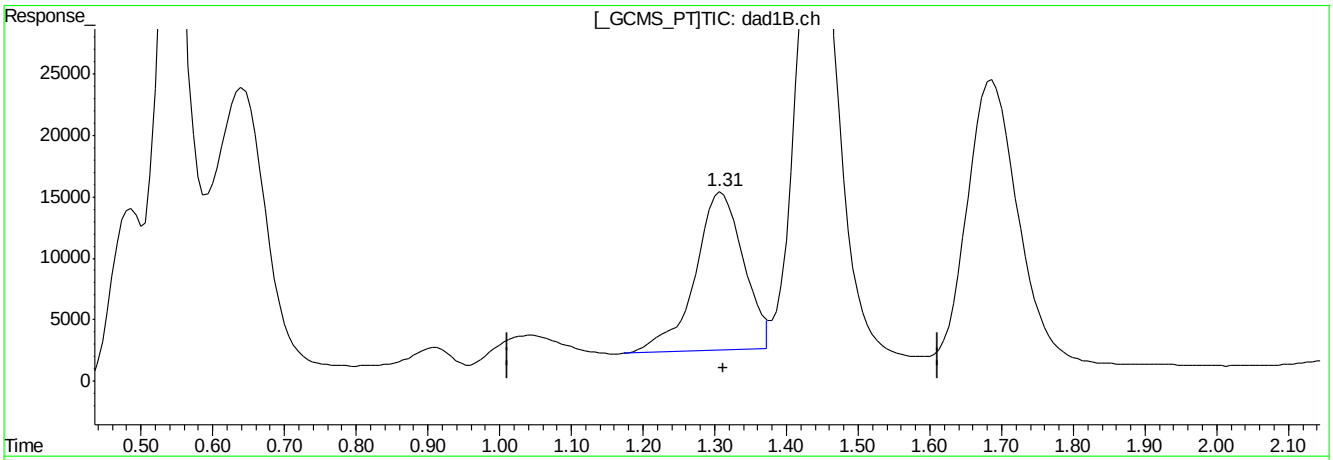
response 869693

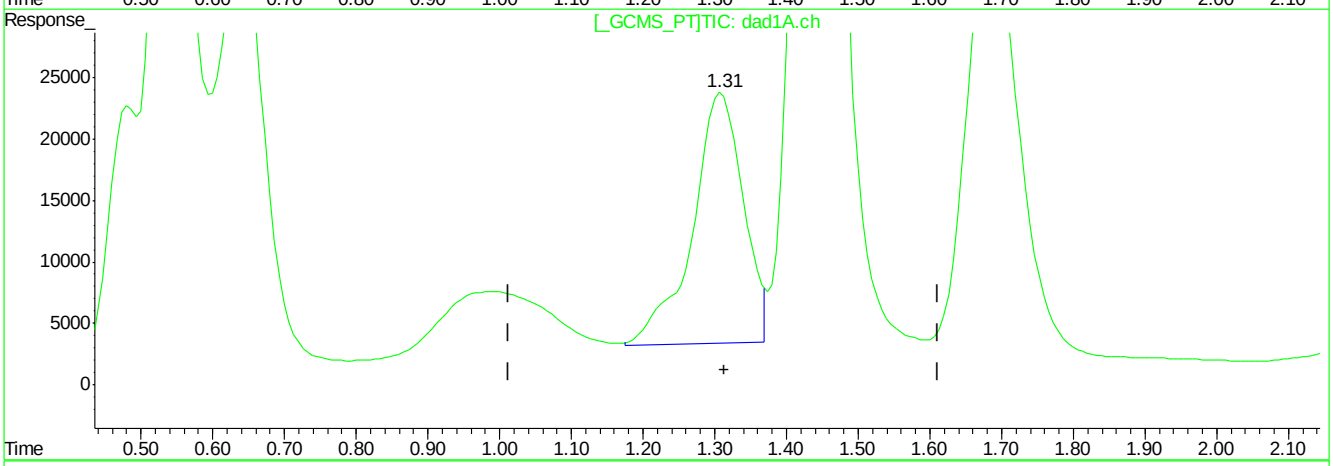
(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:28:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.31min 357.448ppb m

response 594917

(1) TNX #2

1.31min 367.212ppb m

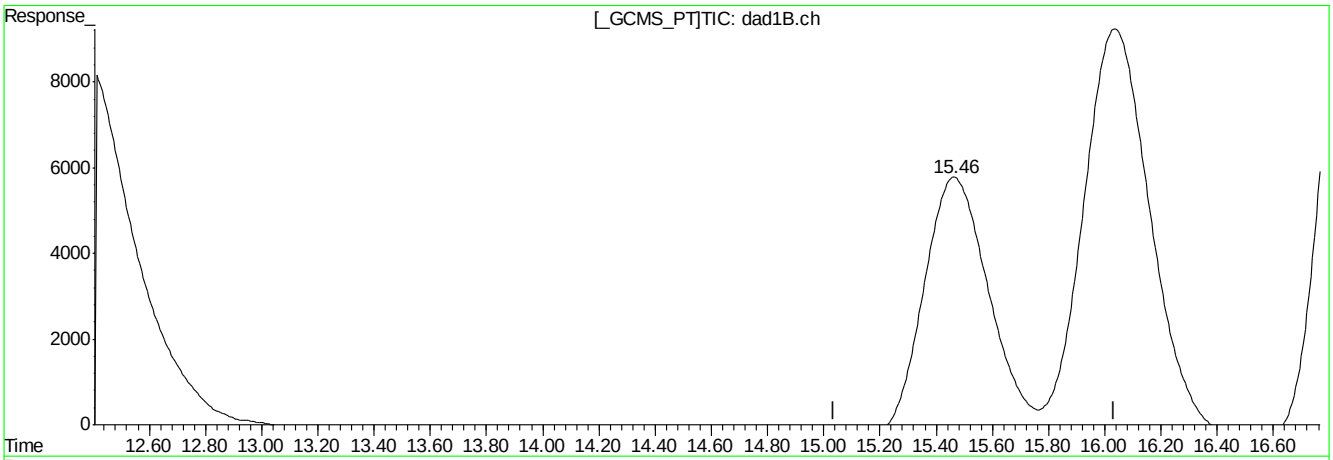
response 1004181

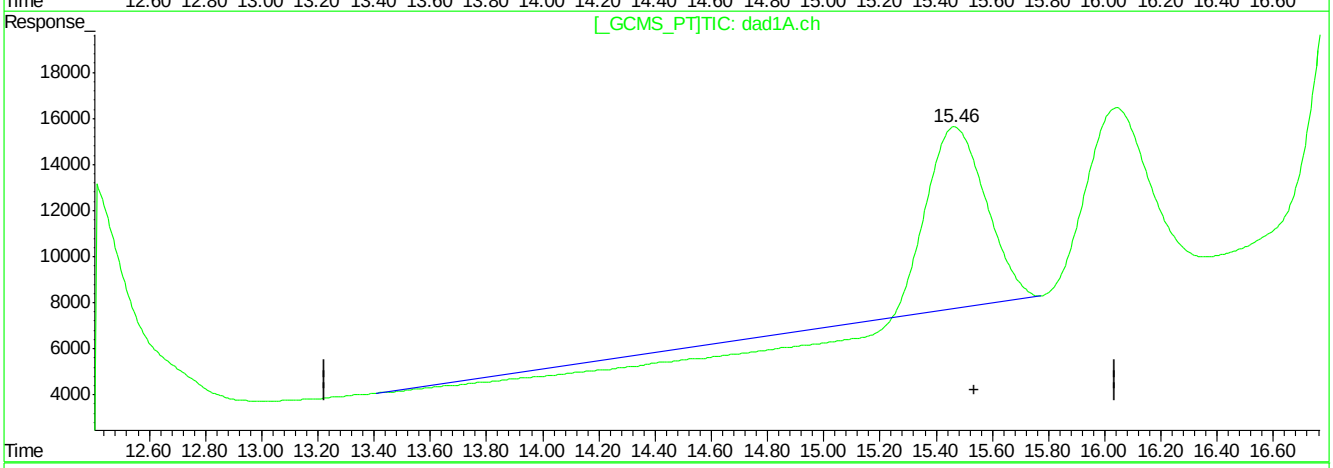
(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:28:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 439.893ppb

response 1005674

(18) o-Nitrotoluene #2

15.47min 246.053ppb

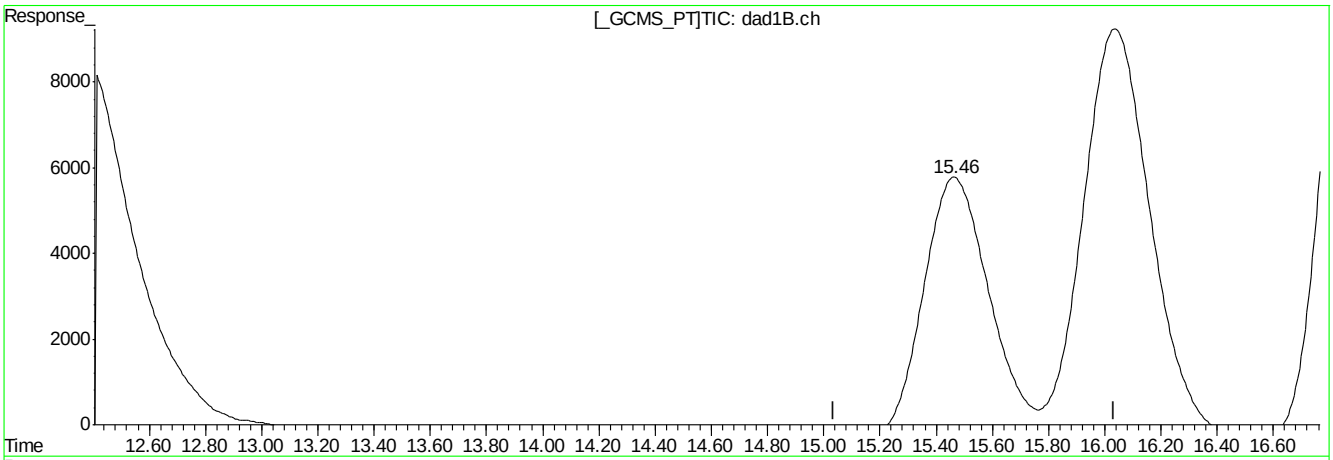
response 720182

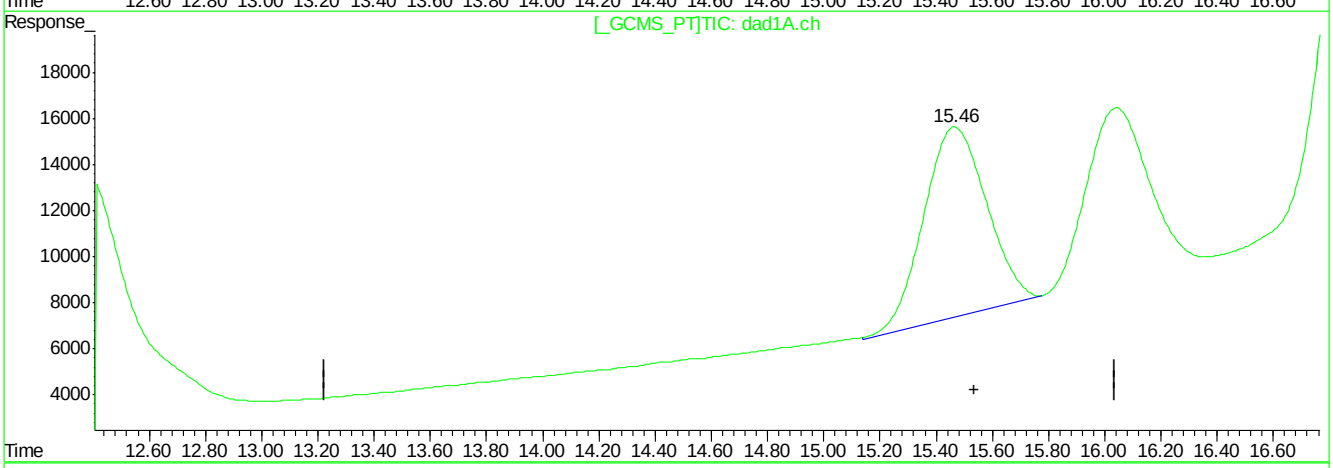
(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:28:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 439.893ppb

response 1005674

(18) o-Nitrotoluene #2

15.46min 437.907ppb m

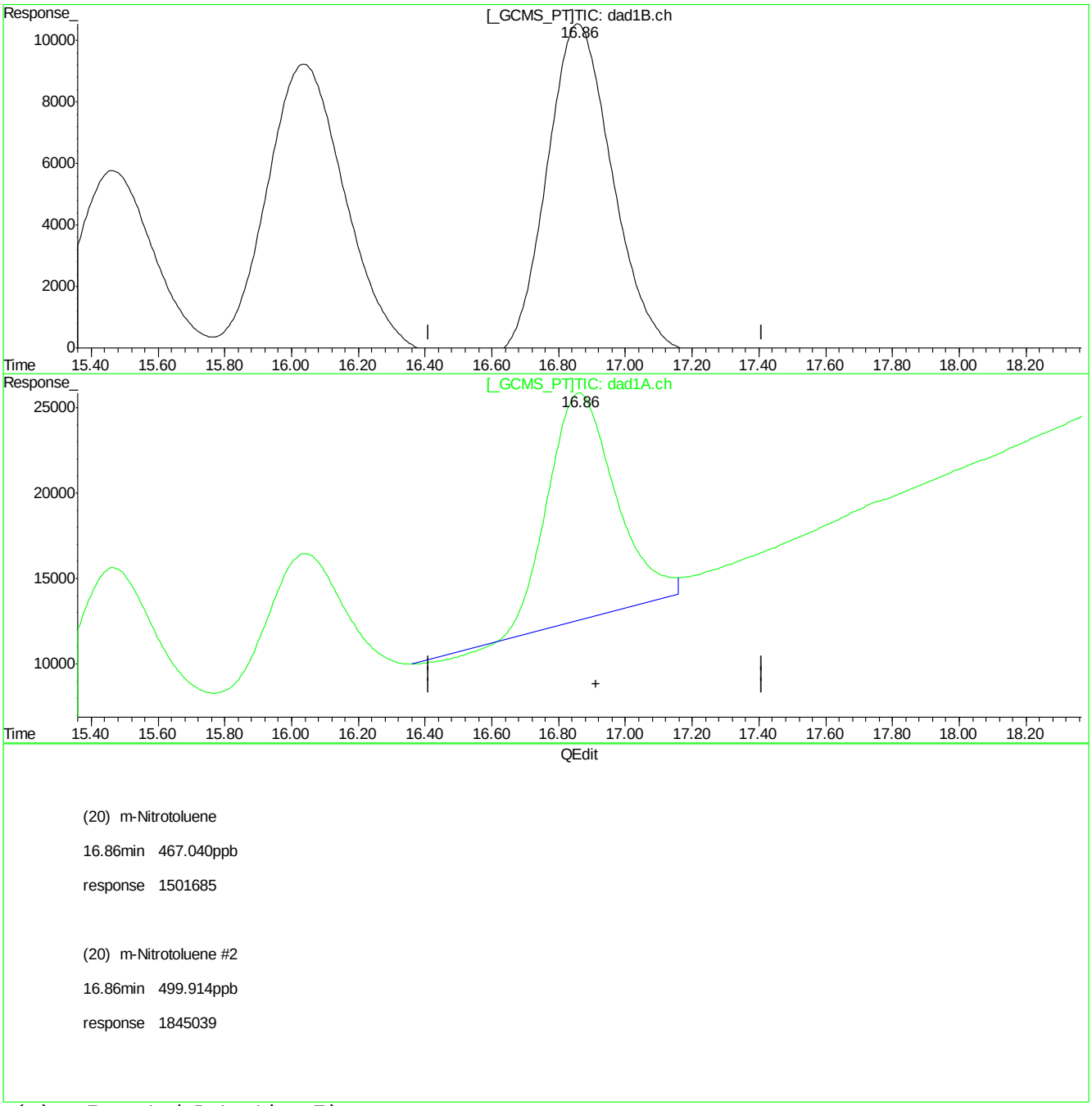
response 1281727

(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:28:56 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration

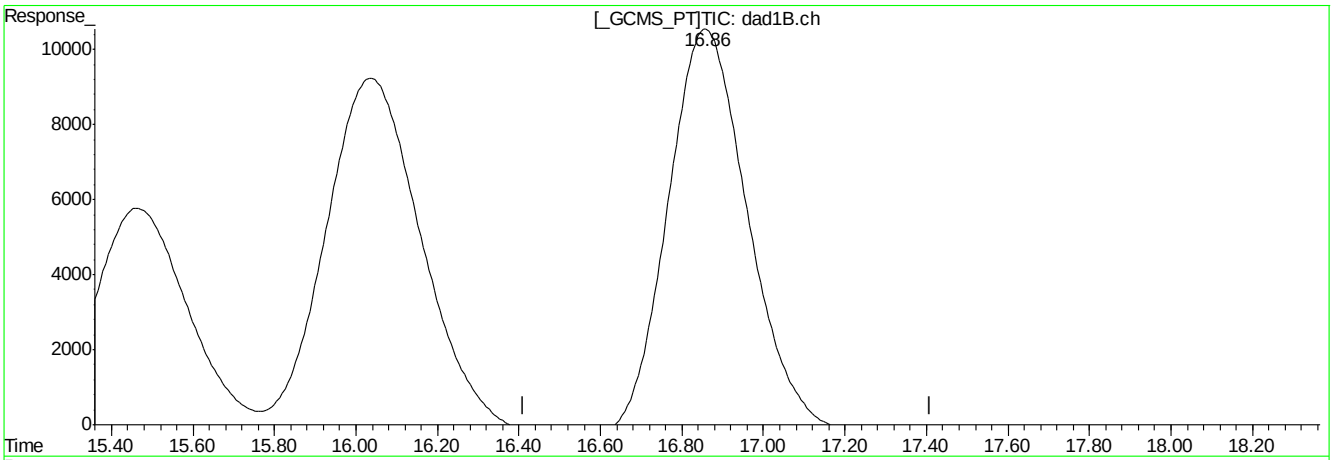


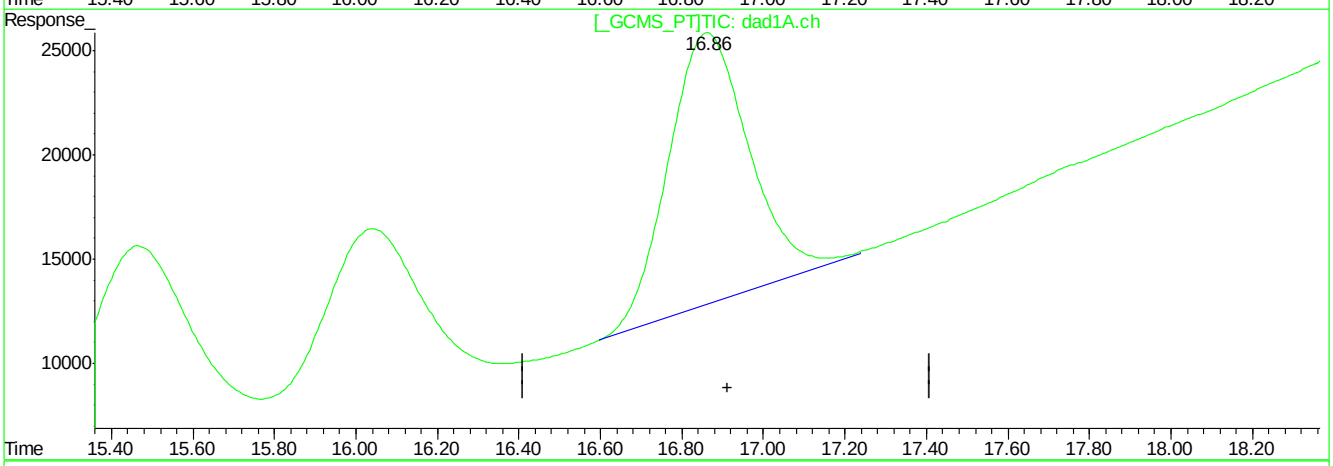
(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:29:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 467.040ppb

response 1501685

(20) m-Nitrotoluene #2

16.86min 483.692ppb m

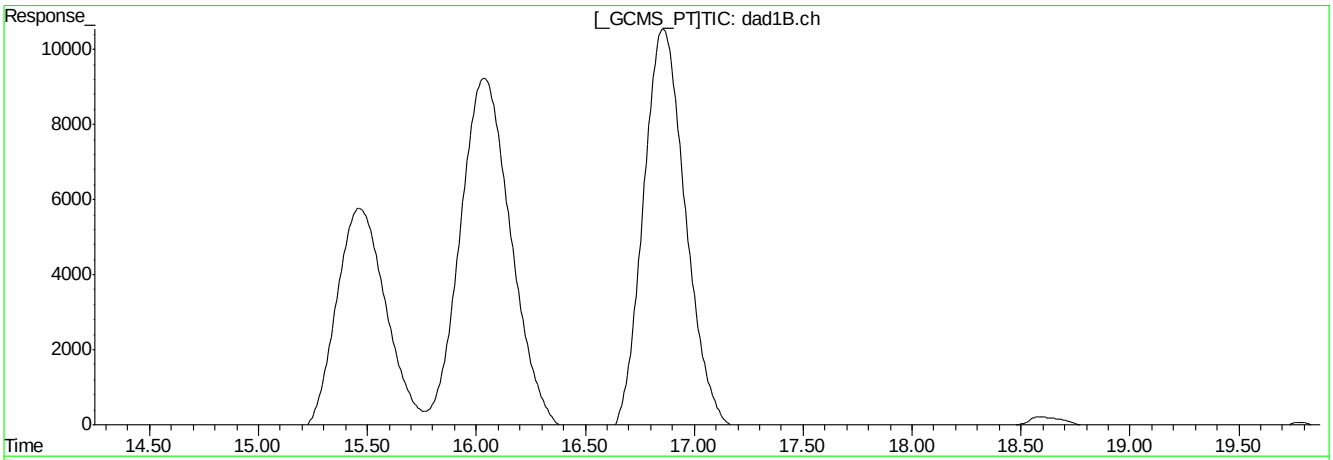
response 1785170

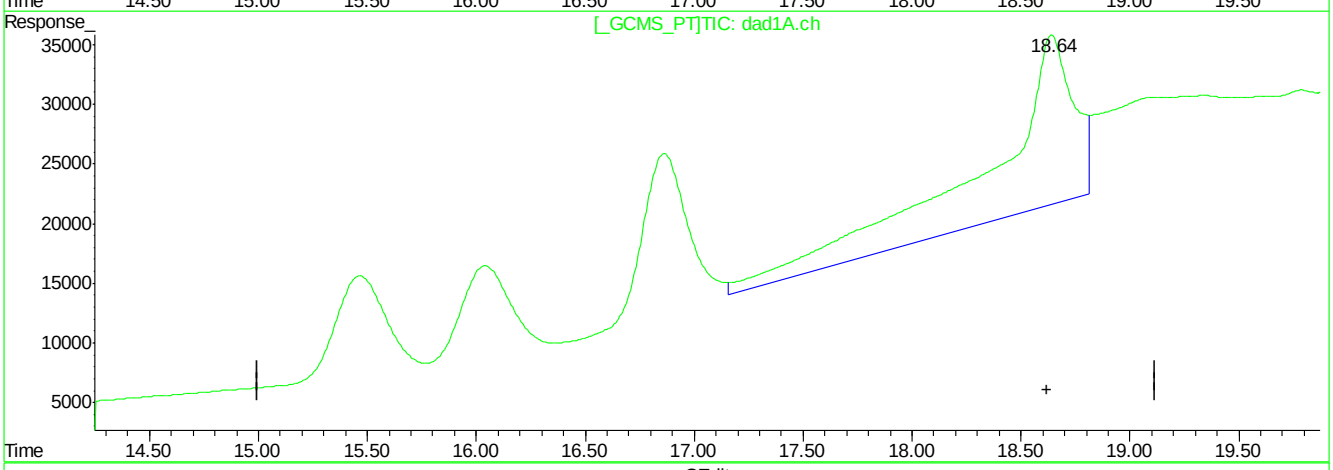
(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:29:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.64min 2980.703ppb

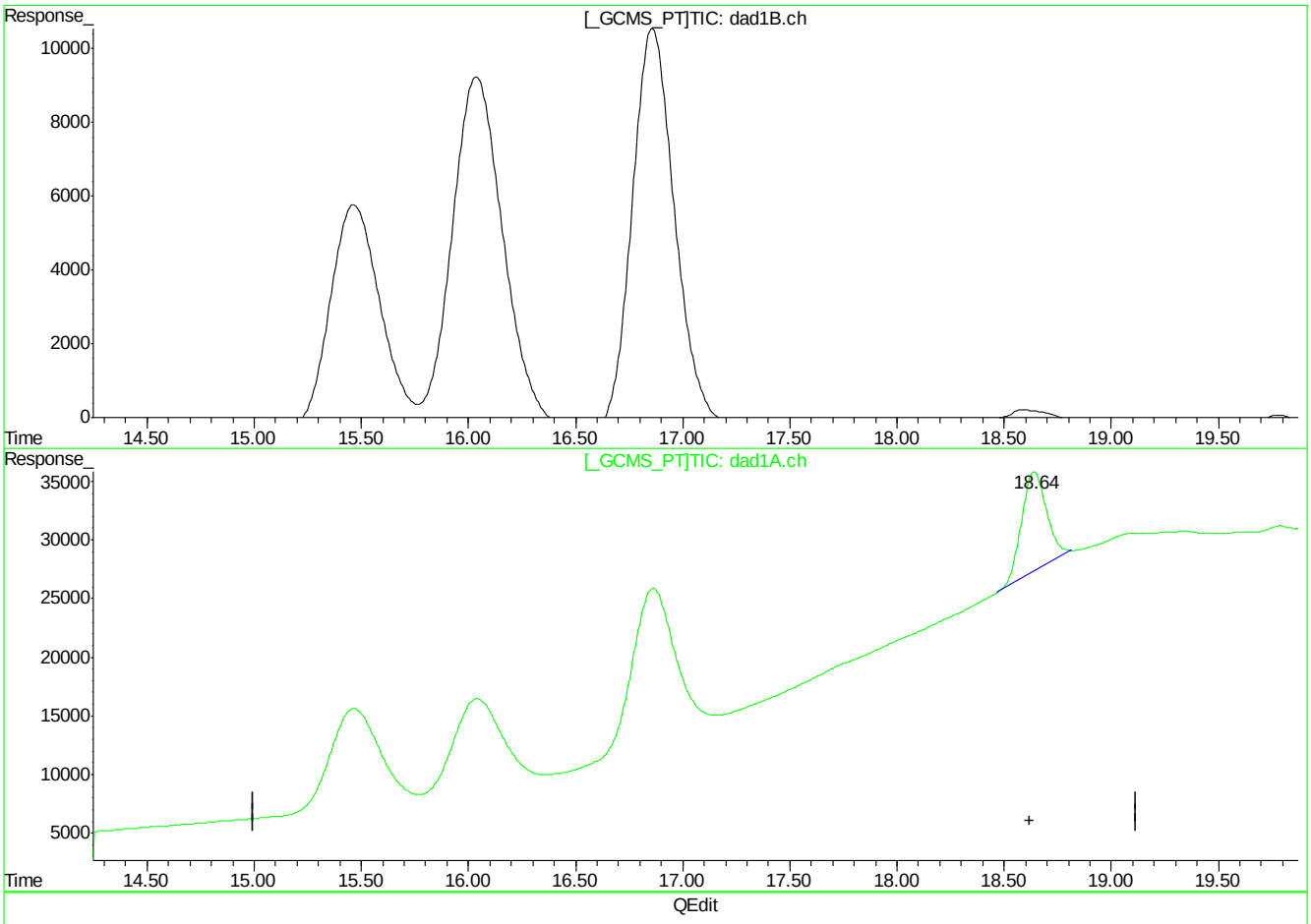
response 3807988

(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:29:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1B.ch Vial: 19
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391160.D\dad1A.ch
Acq On : 10-Aug-2021, 00:14:05 Operator: jamesb
Sample : op86727-MSD2 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.64min 533.360ppb m

response 681393

(+) = Expected Retention Time
PP391160.D GPP2464_080321PRI.M Thu Aug 12 15:29:13 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:08 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.94	13.92	105512	225560	21.598	24.846
	Spiked Amount 500.000	Range 70 - 136		Recovery =		4.32%#	4.97%#
	Target Compounds						
1)	TNX	4.79	4.79	63589	63589	13.795	13.884
2)	HMX	5.20	5.20	71803	71803	22.144	21.988
3)	DNX	5.38	5.38	119402	119159	20.206m	20.122m
4)	MNX	6.49	6.49	151891	151891	25.071	25.071
5)	1,3,5-Trinitrobe	7.51	7.51	193145	193145	20.472	20.472
6)	RDX	7.76	7.76	85439	85439	19.442	19.442
7)	1,3-Dinitrobenze	9.72	9.72	261156	198181	20.446	20.426m
8)	Nitrobenzene	10.66	10.66	158637	151481	18.755	18.330m
9)	2,4,6-Trinitroto	11.63	11.63	184332	253651	20.133	19.504m
10)	Nitroglycerin	0.00	12.41	0	72875	N.D.	23.028m#
11)	Tetryl	12.91	12.90	137631	233676	19.395	18.860m
13)	2,6-Dinitrotolue	14.27	14.26	123571	166374	19.596	18.049
14)	2,4-Dinitrotolue	14.89	14.89	232165	140761	20.134	17.729
15)	3,5-Dinitroanili	15.60	15.61	201655	354854	20.465	22.820
16)	o-Nitrotoluene	16.46	16.47	99948	161297	19.290	22.017
17)	p-Nitrotoluene	17.40	17.41	209347	316070	39.377	34.375
18)	4-Amino-2,6-Dini	17.40	17.41	209347	316070	39.377	34.375
19)	m-Nitrotoluene	18.68	18.73	111987	122725	19.284	12.669m
20)	2-Amino-4,6-Dini	19.15	19.21	175826	170803	20.335	14.374m
21)	PETN	0.00	21.54	0	68686	N.D.	21.105m#

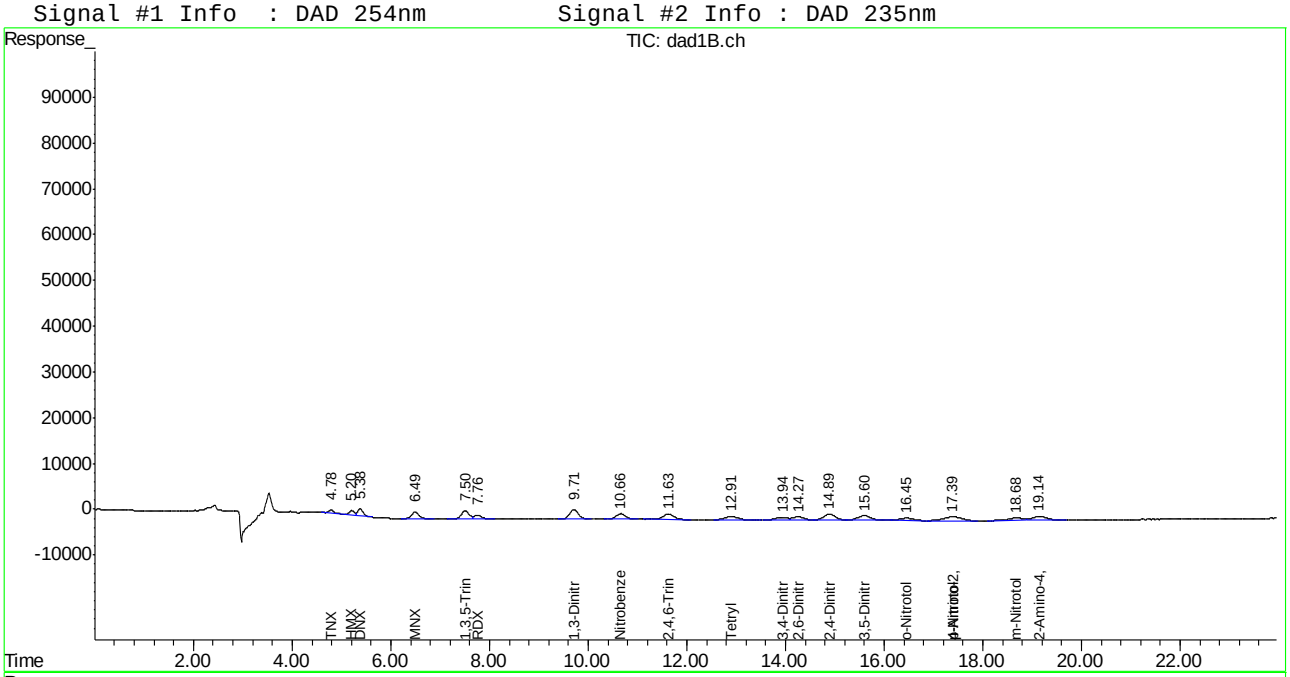
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622000.D GGG3024_080821.M Mon Aug 09 10:17:34 2021 Page 1

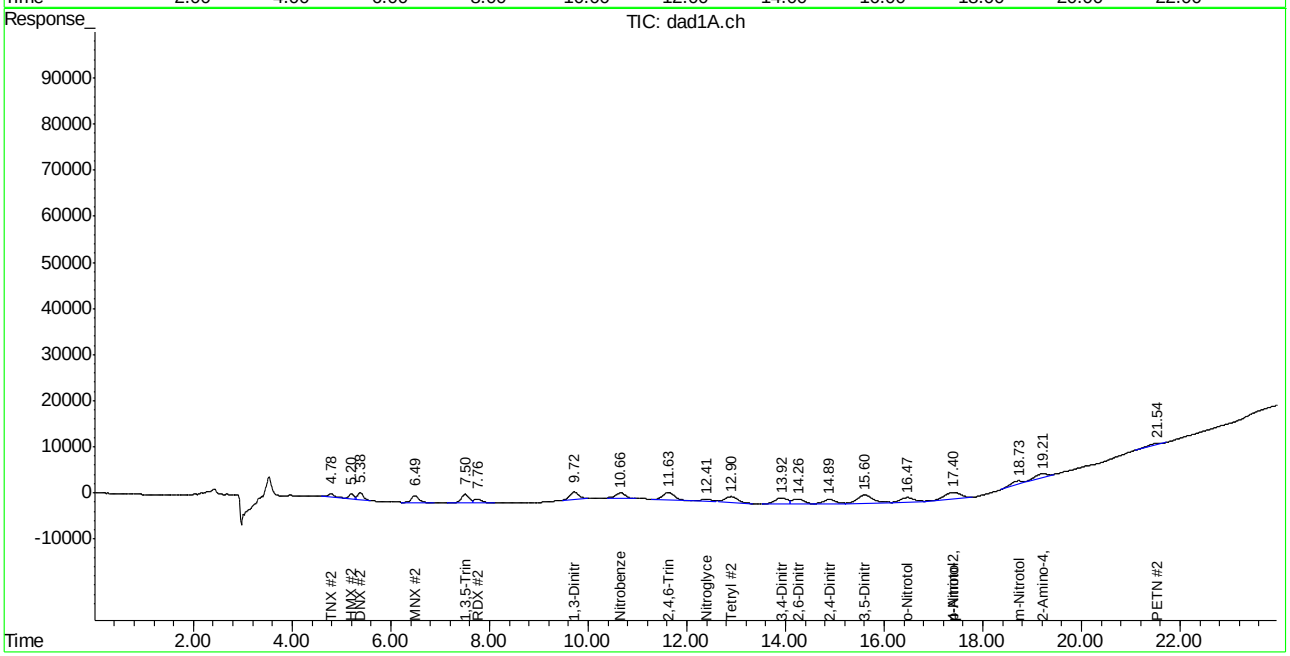
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:13 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

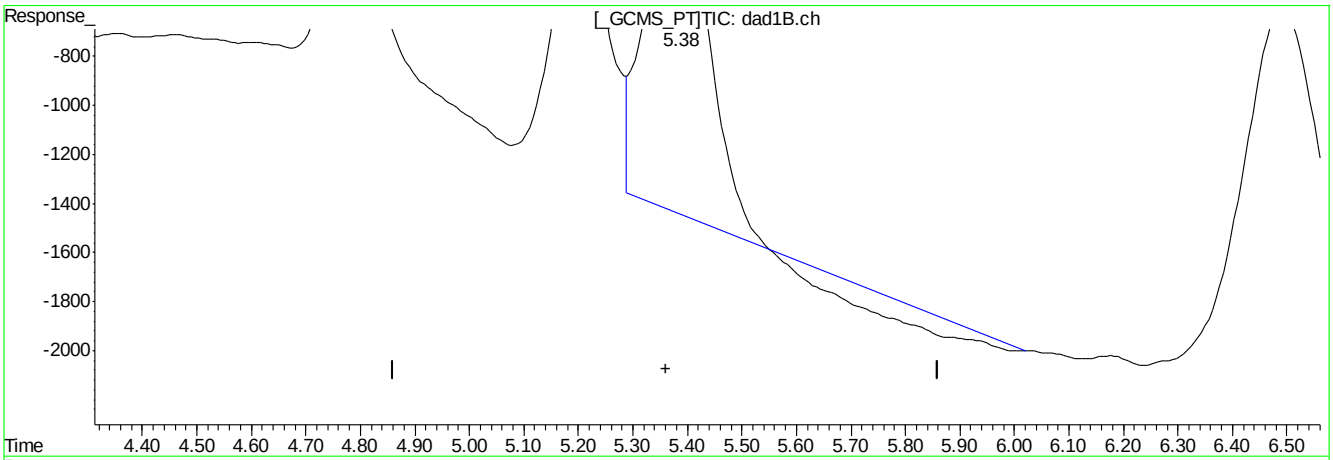
Sample Number: GGG3024-IC3024
Lab FileID: GG622000.D
Injection Time: 08/08/21 17:34
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

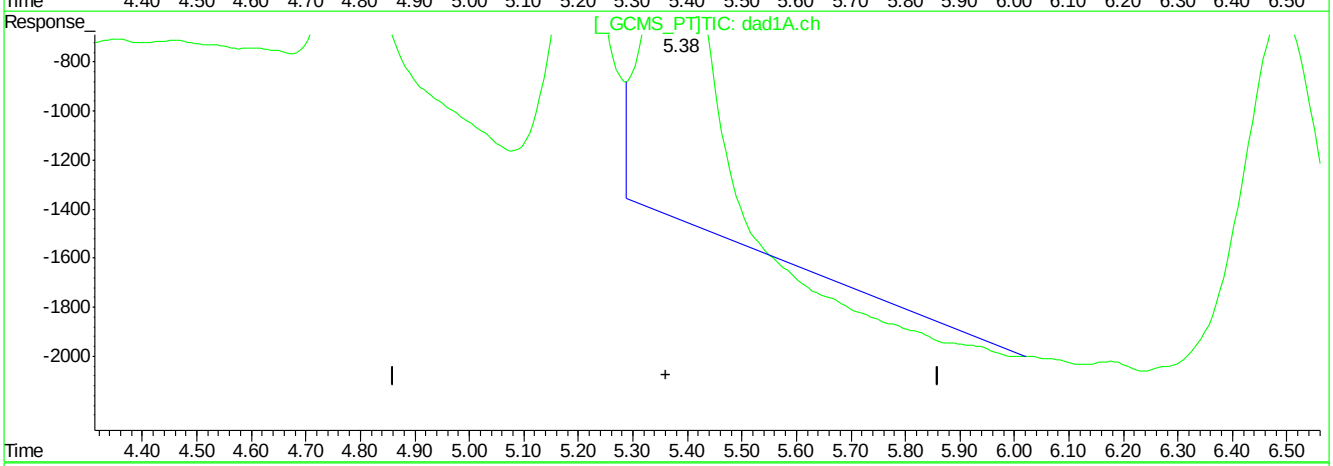
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.38	Poor instrument integration
DNX		2	5.38	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.72	Poor instrument integration
Nitrobenzene	98-95-3	2	10.66	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.63	Poor instrument integration
Nitroglycerine	55-63-0	2	12.41	Poor instrument integration
Tetryl	479-45-8	2	12.90	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.73	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	19.21	Poor instrument integration
PETN	78-11-5	2	21.54	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.38min 17.223ppb

response 101777

(3) DNX #2

5.38min 17.187ppb

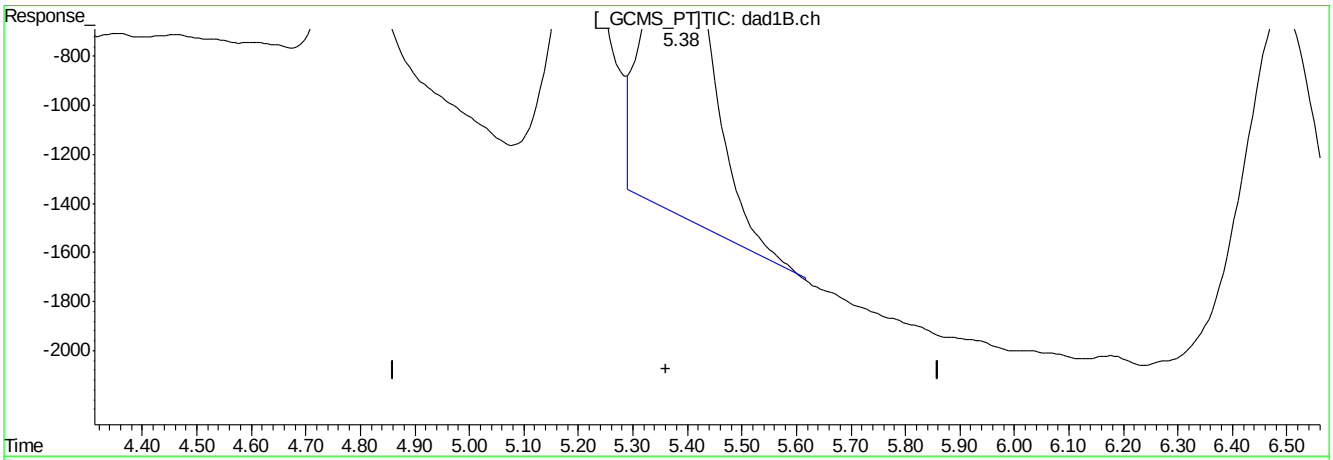
response 101777

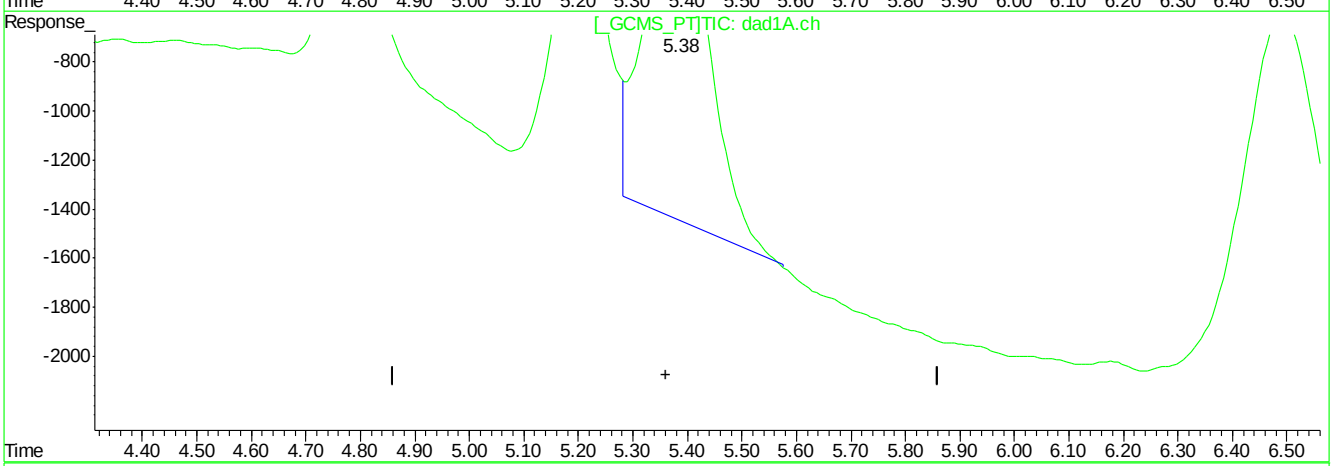
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:17 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.38min 20.206ppb m

response 119402

(3) DNX #2

5.38min 20.122ppb m

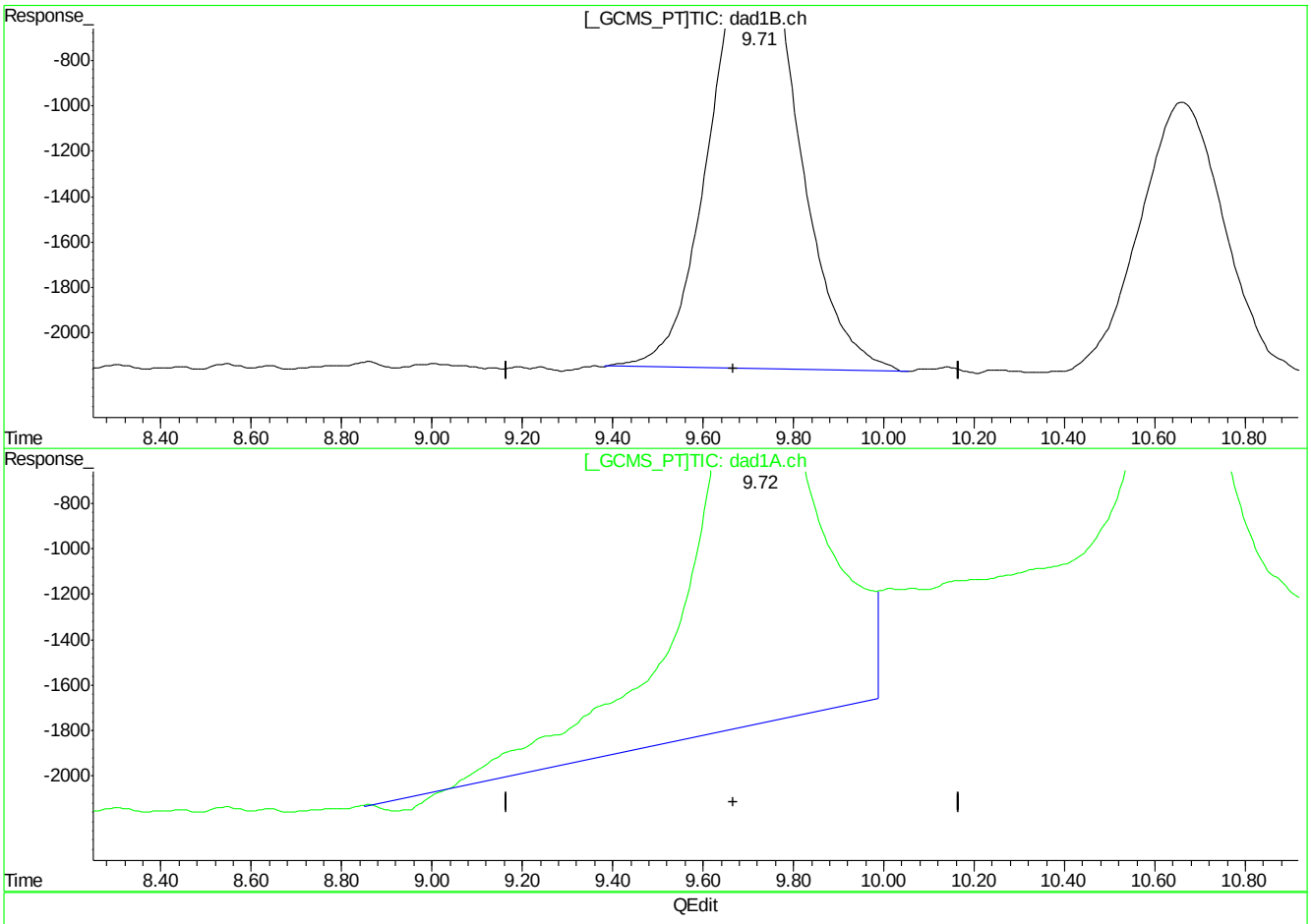
response 119159

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.72min 20.446ppb

response 261156

(7) 1,3-Dinitrobenzene #2

9.72min 36.165ppb

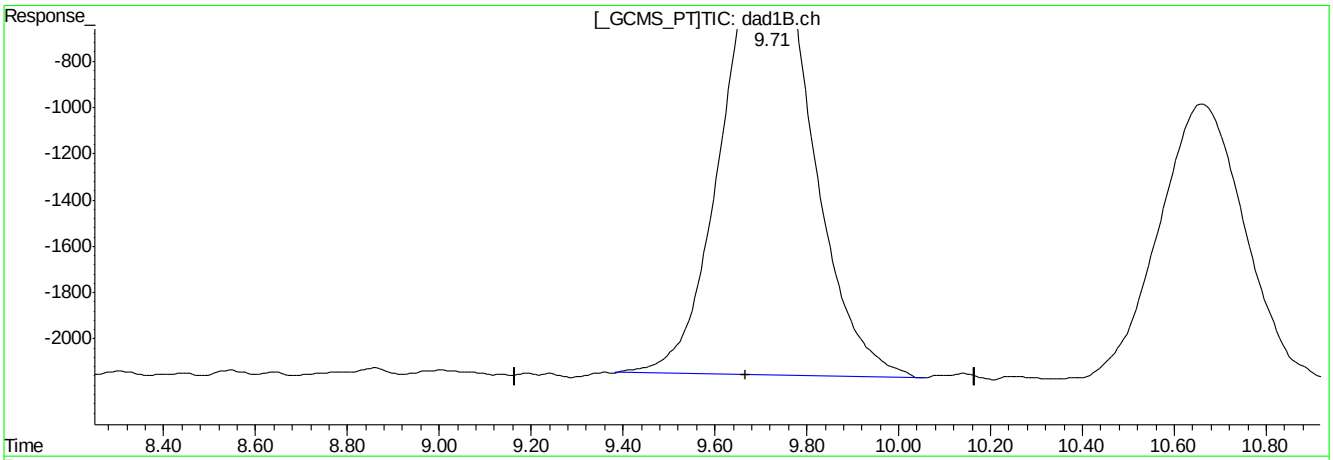
response 350886

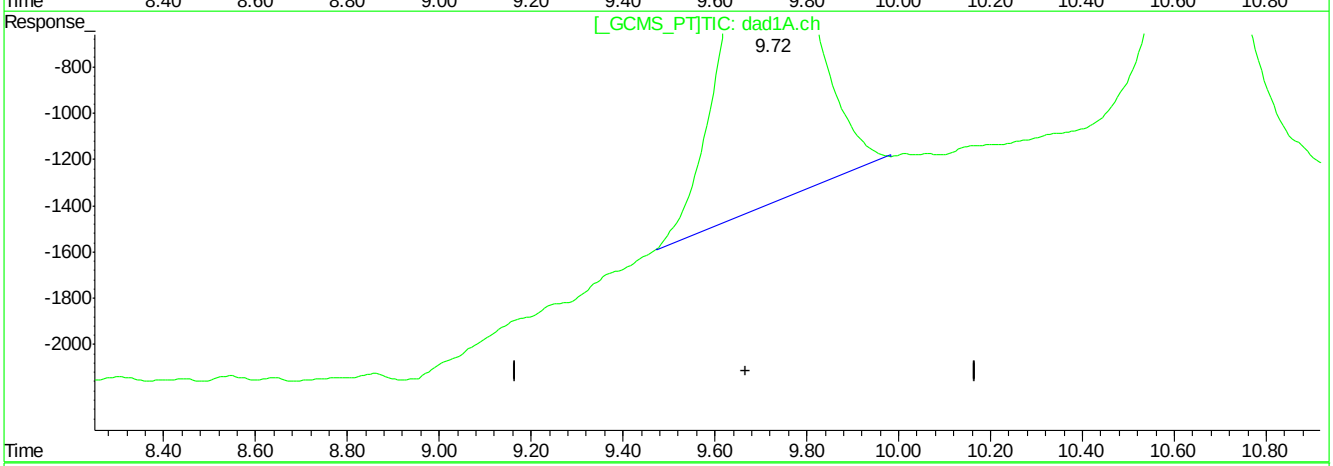
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.72min 20.446ppb

response 261156

(7) 1,3-Dinitrobenzene #2

9.72min 20.426ppb m

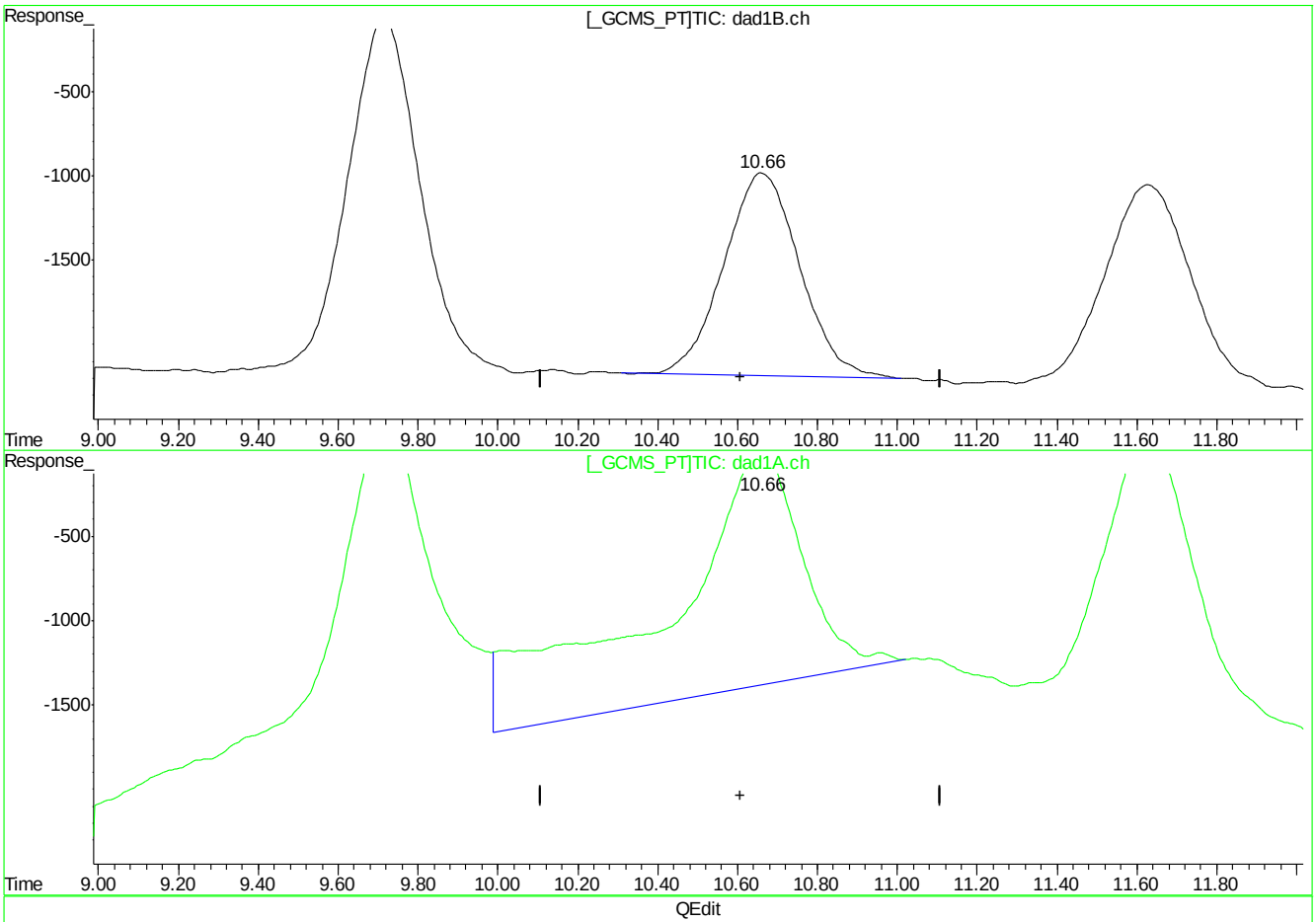
response 198181

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(8) Nitrobenzene

10.66min 18.755ppb

response 158637

(8) Nitrobenzene #2

10.66min 40.763ppb

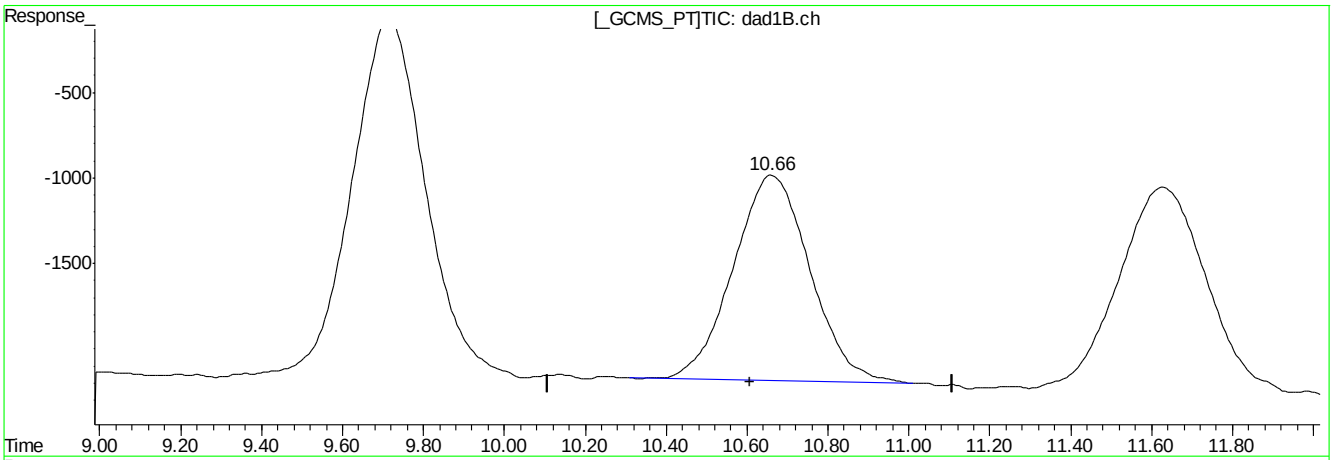
response 336874

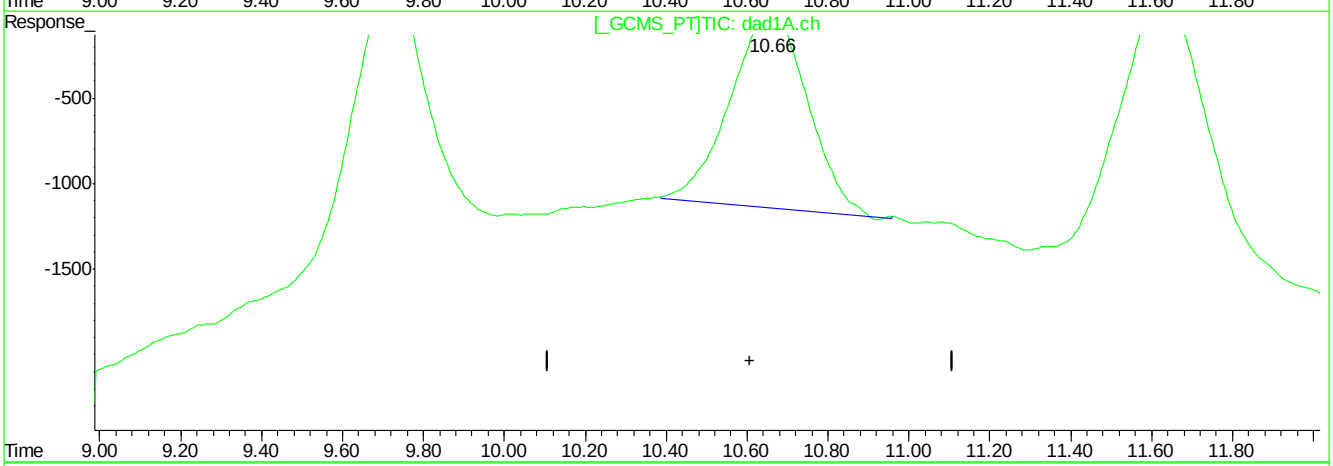
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.66min 18.755ppb

response 158637

(8) Nitrobenzene #2

10.66min 18.330ppb m

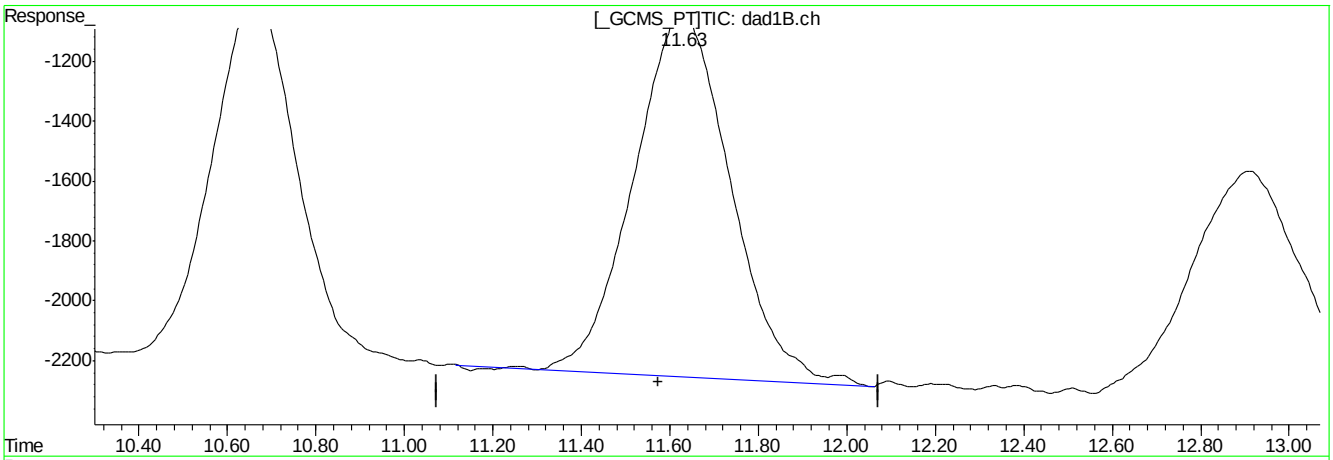
response 151481

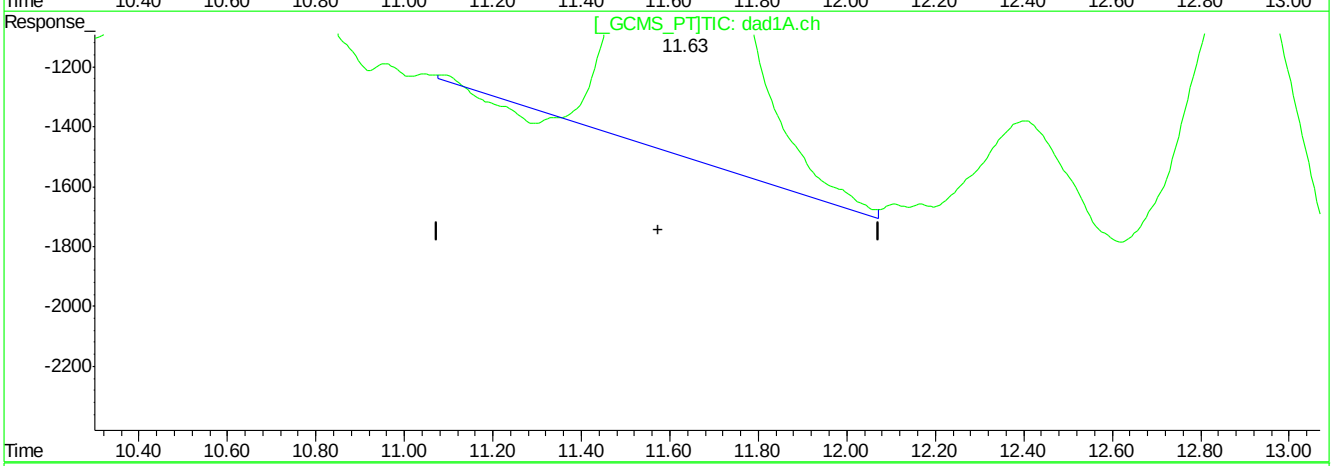
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.63min 20.133ppb

response 184332

(9) 2,4,6-Trinitrotoluene #2

11.63min 19.073ppb

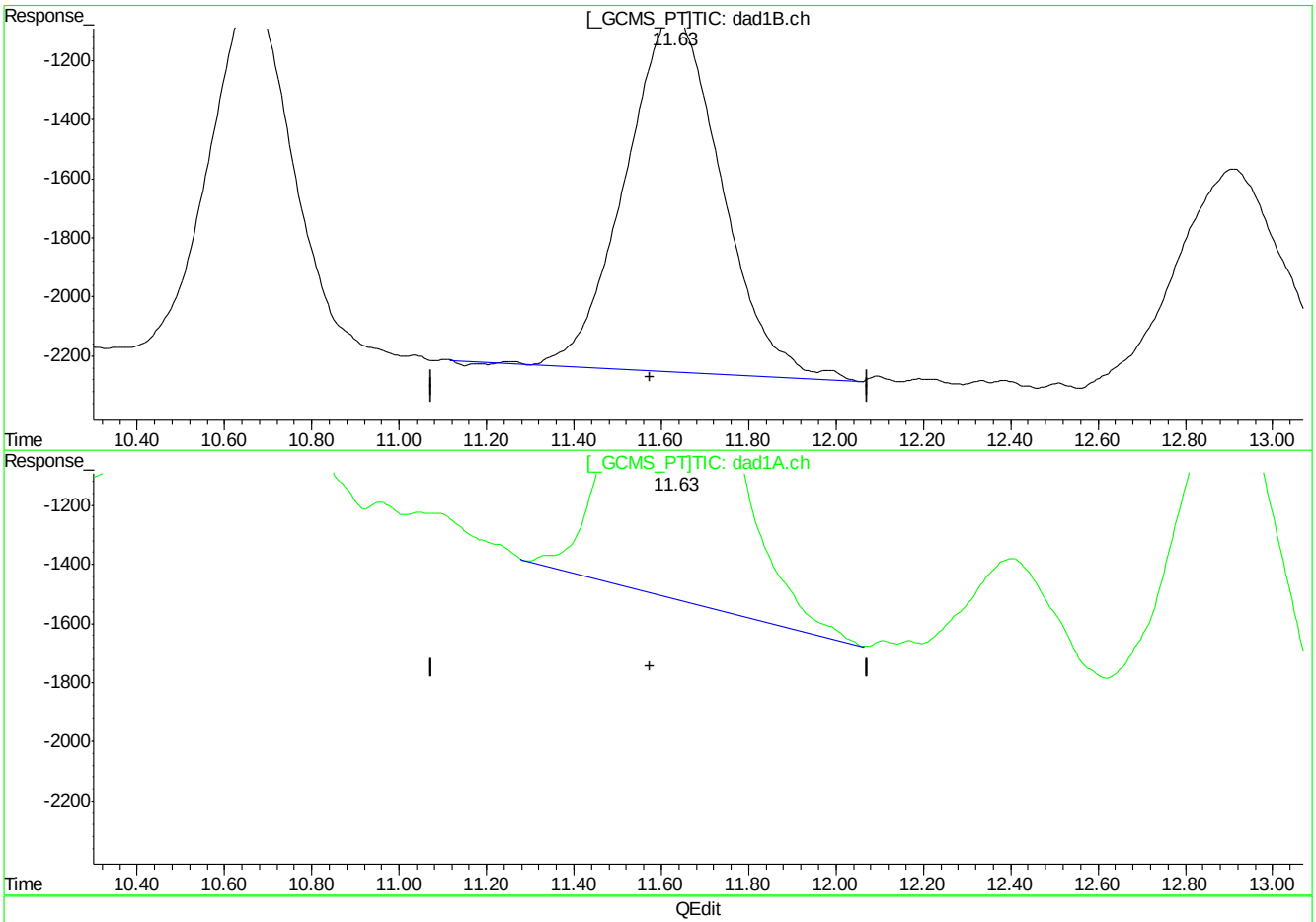
response 248041

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:11:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(9) 2,4,6-Trinitrotoluene

11.63min 20.133ppb

response 184332

(9) 2,4,6-Trinitrotoluene #2

11.63min 19.504ppb m

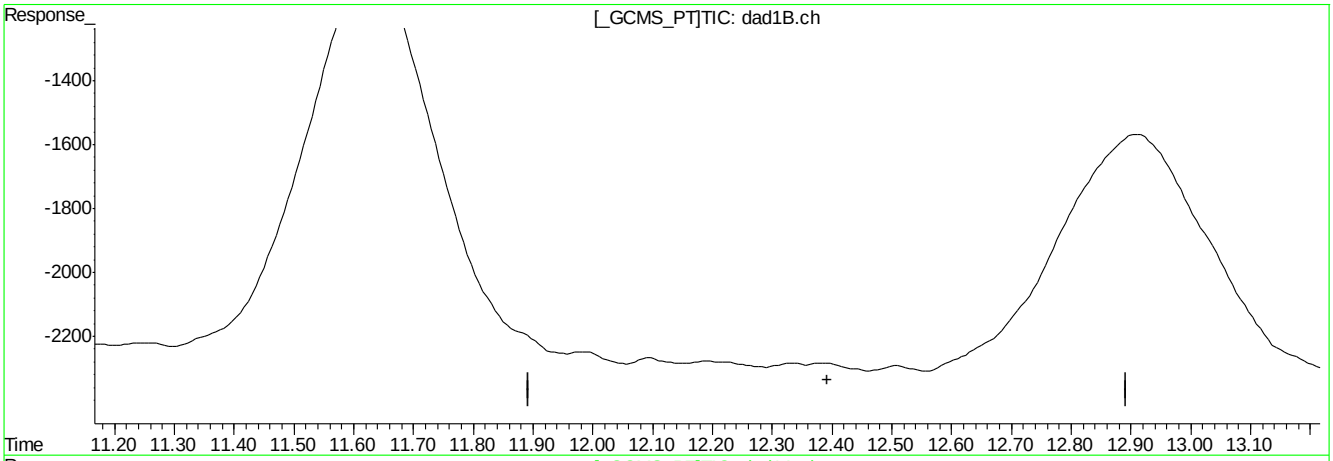
response 253651

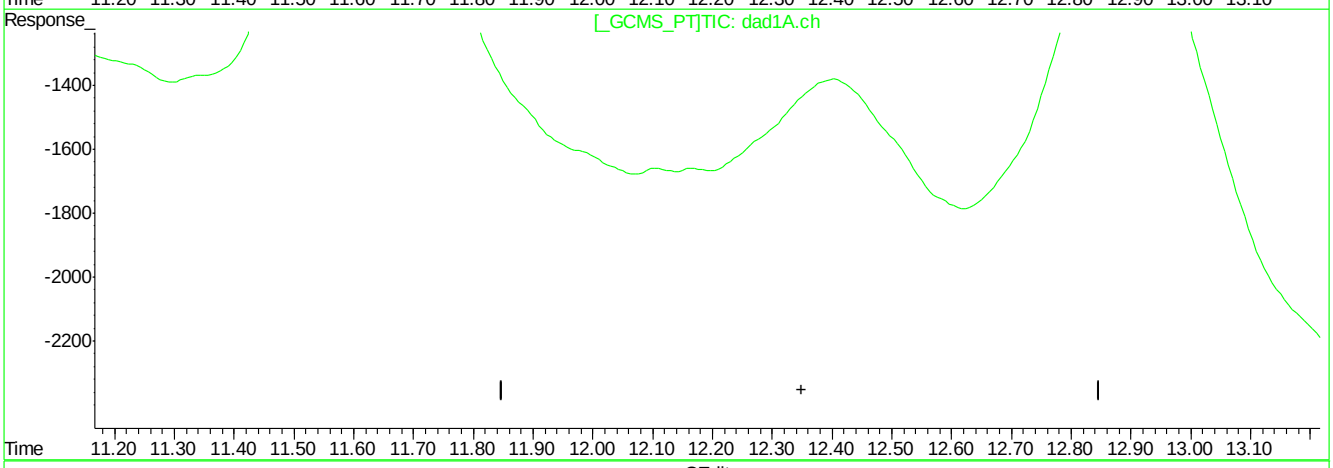
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:12:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

0.00min 0.000ppb

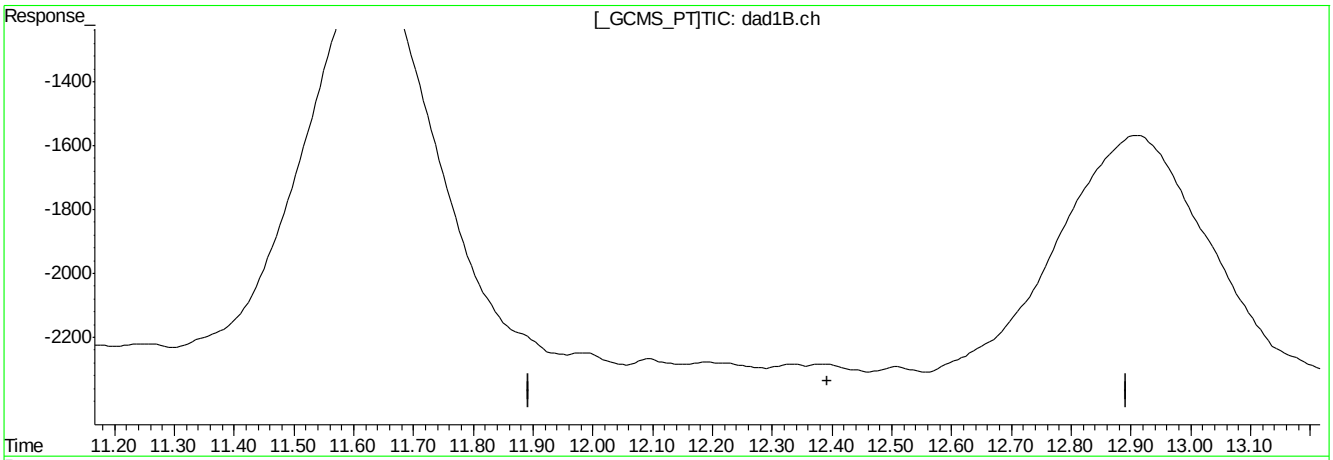
response 0

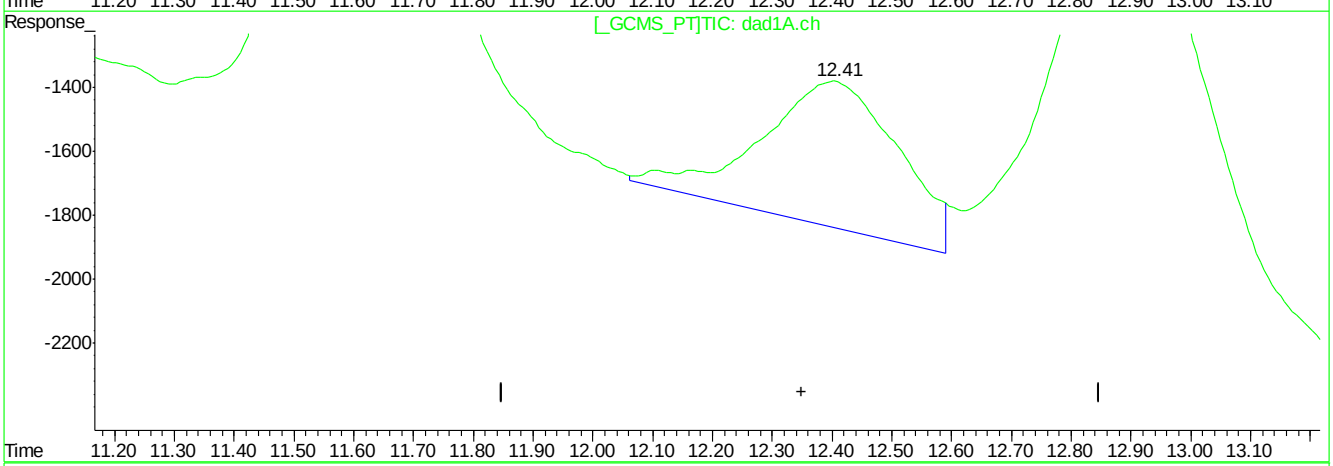
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:12:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.41min 23.028ppb m

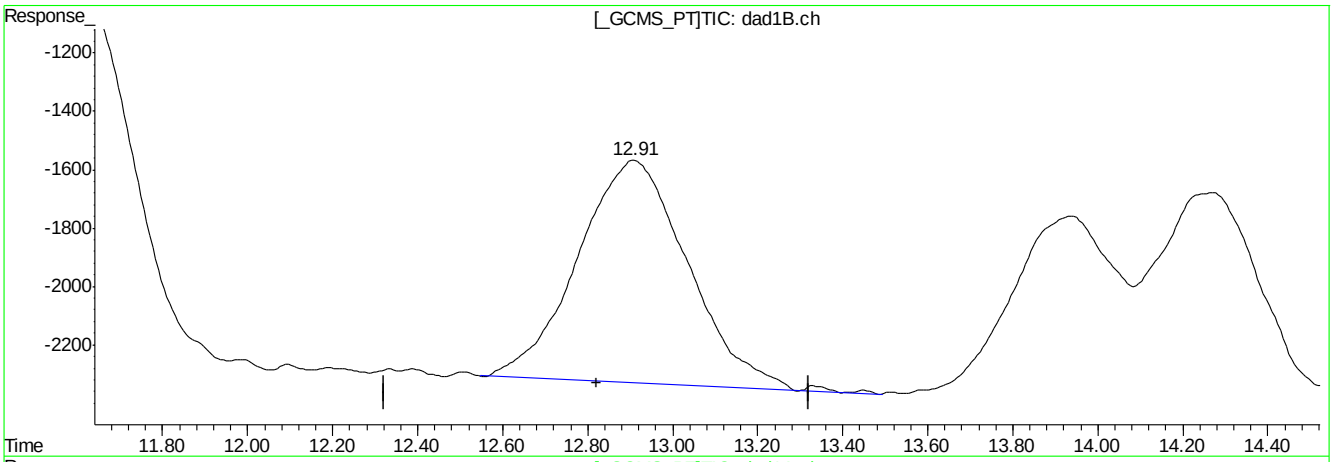
response 72875

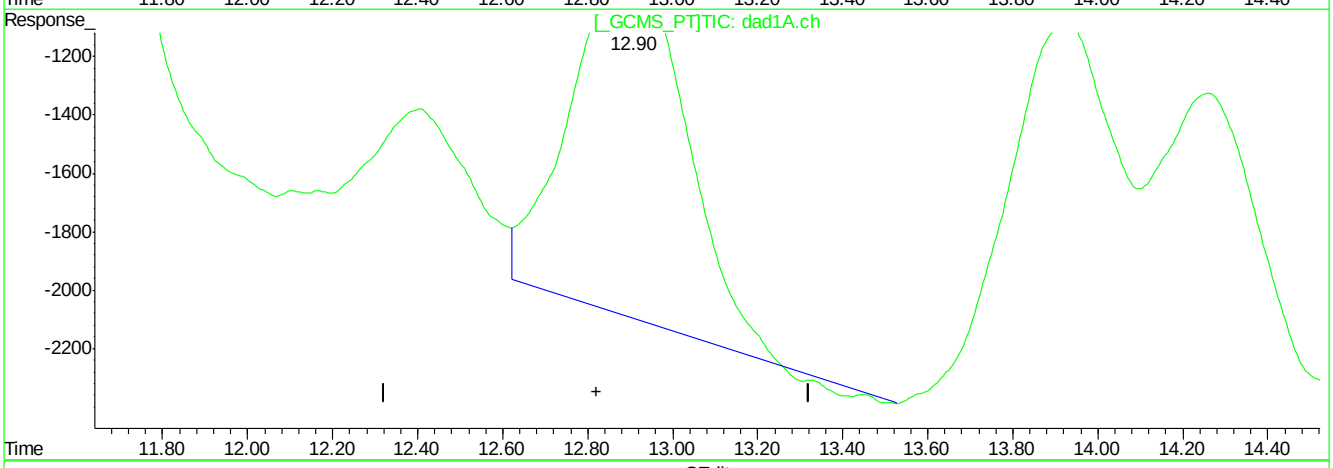
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:12:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.91min 19.395ppb

response 137631

(11) Tetryl #2

12.90min 18.721ppb

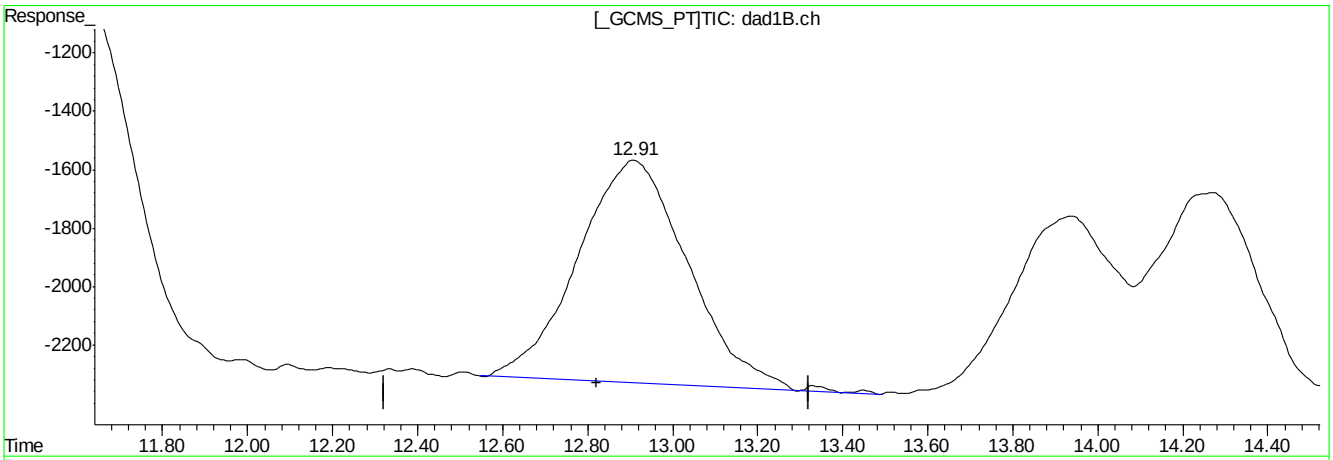
response 231954

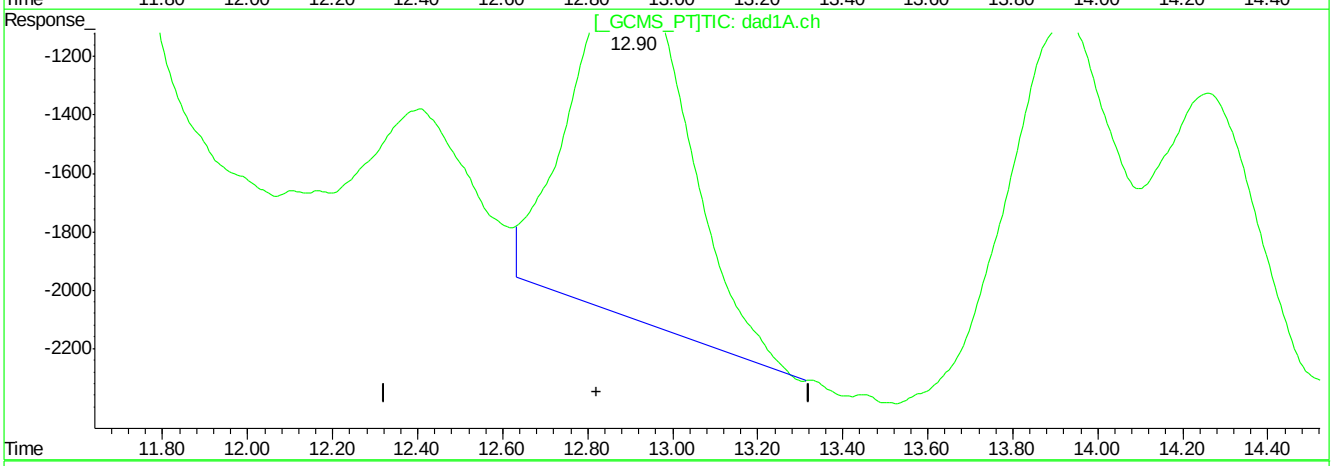
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:12:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.91min 19.395ppb

response 137631

(11) Tetryl #2

12.90min 18.860ppb m

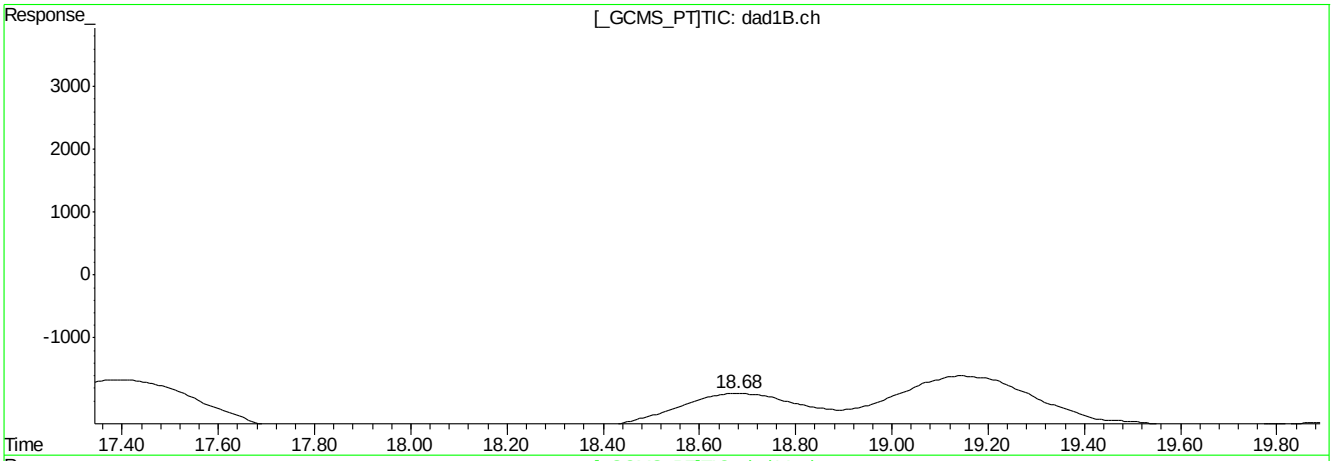
response 233676

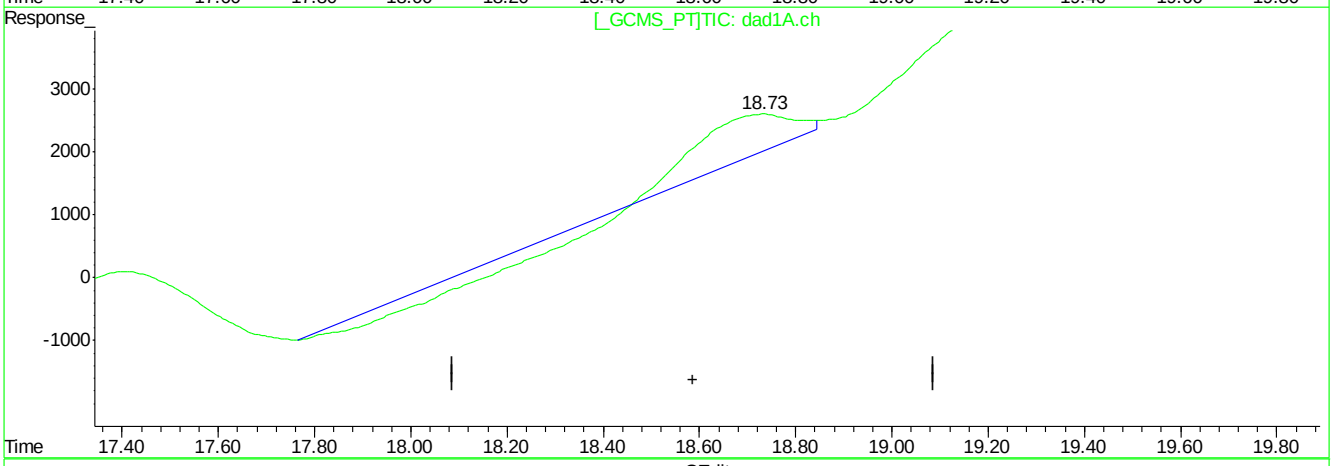
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:12:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.68min 19.284ppb

response 111987

(19) m-Nitrotoluene #2

18.73min 2.130ppb

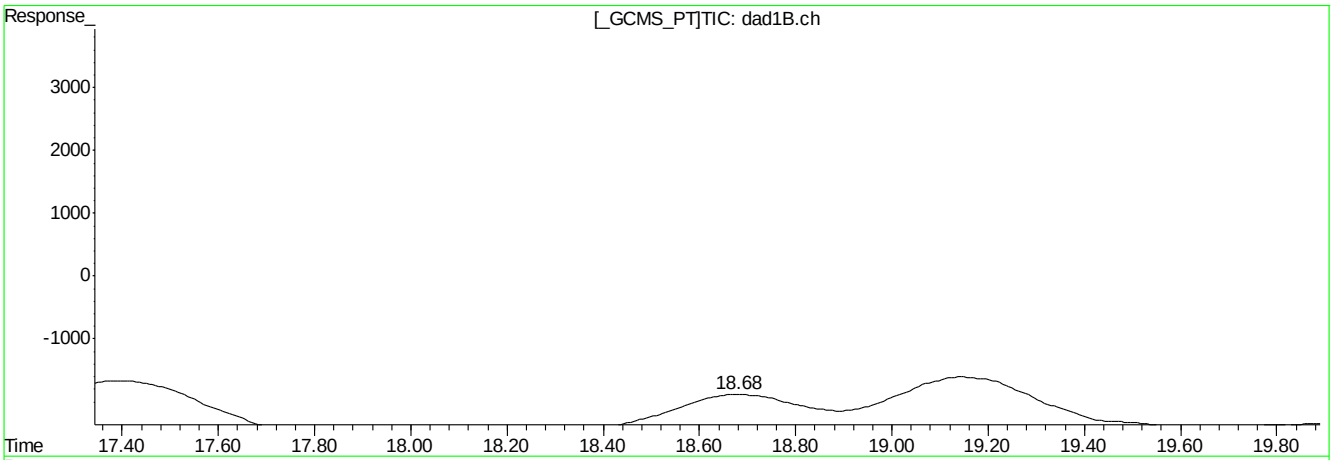
response 20632

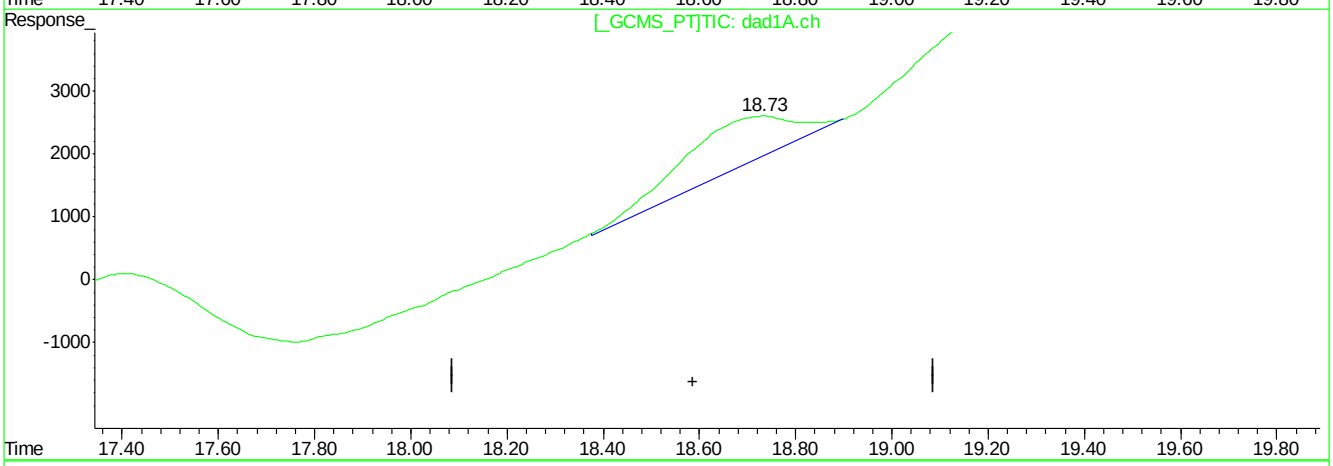
(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:13:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.68min 19.284ppb

response 111987

(19) m-Nitrotoluene #2

18.73min 12.669ppb m

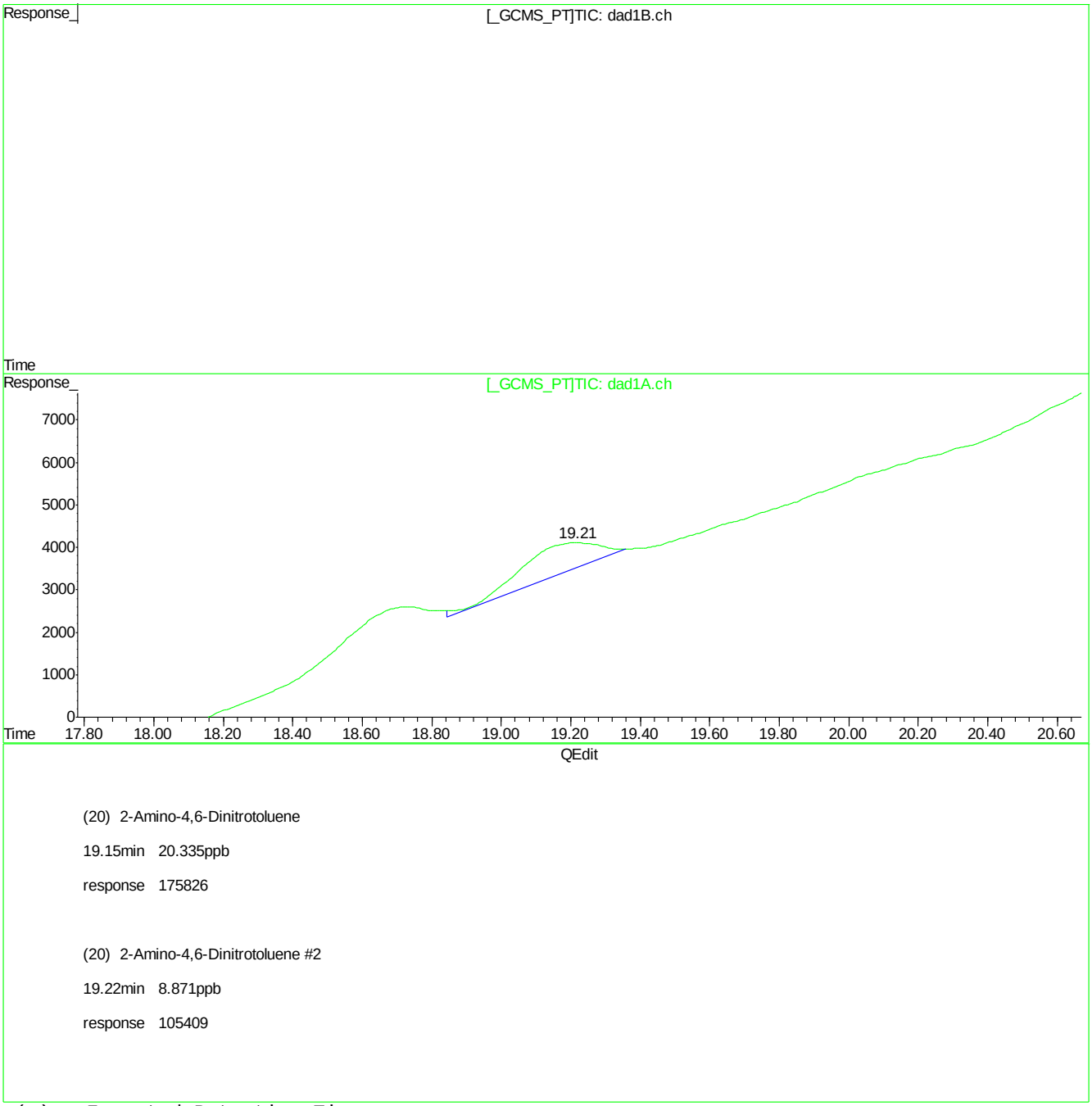
response 122725

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:13:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(20) 2-Amino-4,6-Dinitrotoluene

19.15min 20.335ppb

response 175826

(20) 2-Amino-4,6-Dinitrotoluene #2

19.22min 8.871ppb

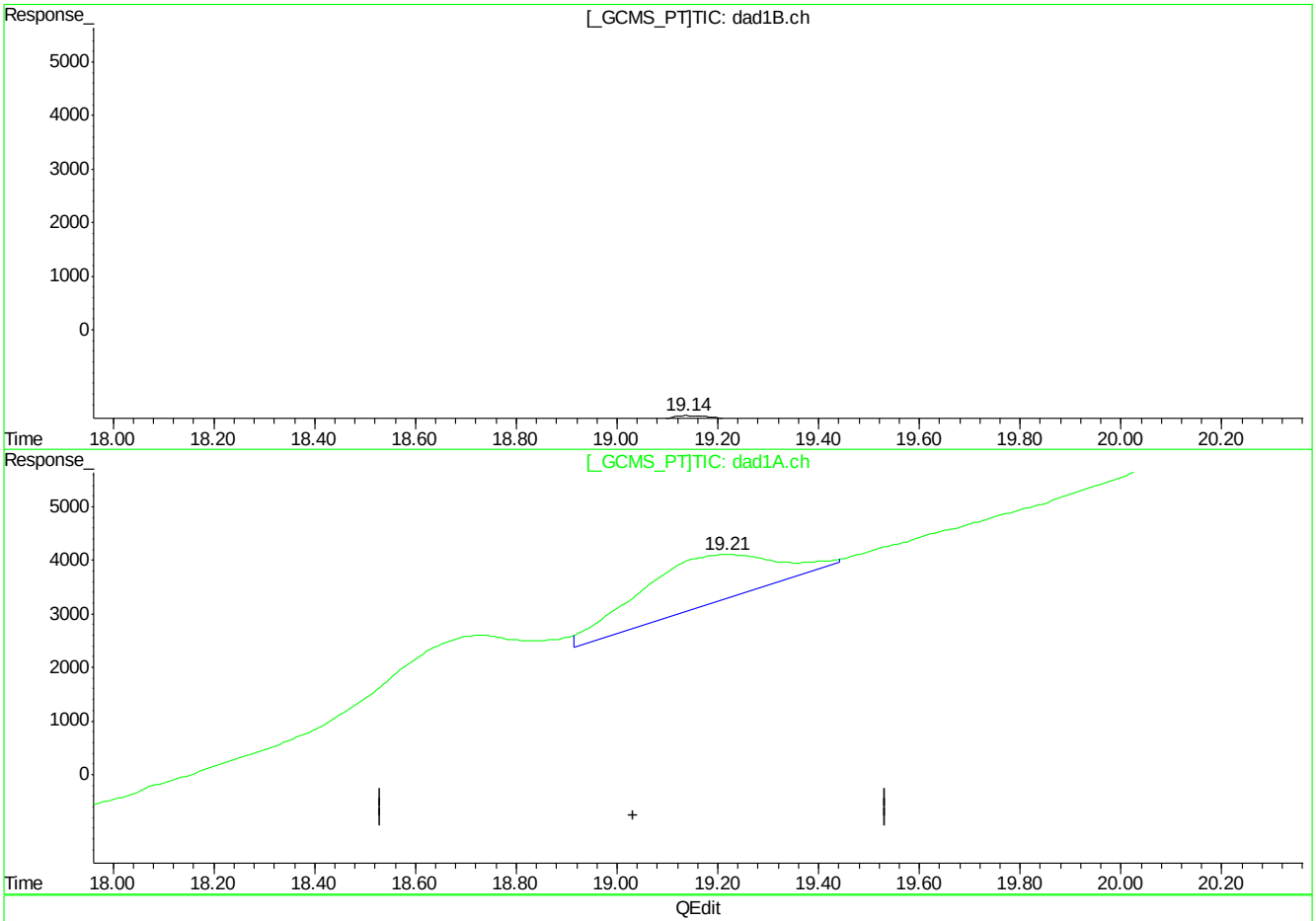
response 105409

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:13:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



QEdit

(20) 2-Amino-4,6-Dinitrotoluene

19.15min 20.335ppb

response 175826

(20) 2-Amino-4,6-Dinitrotoluene #2

19.21min 14.374ppb m

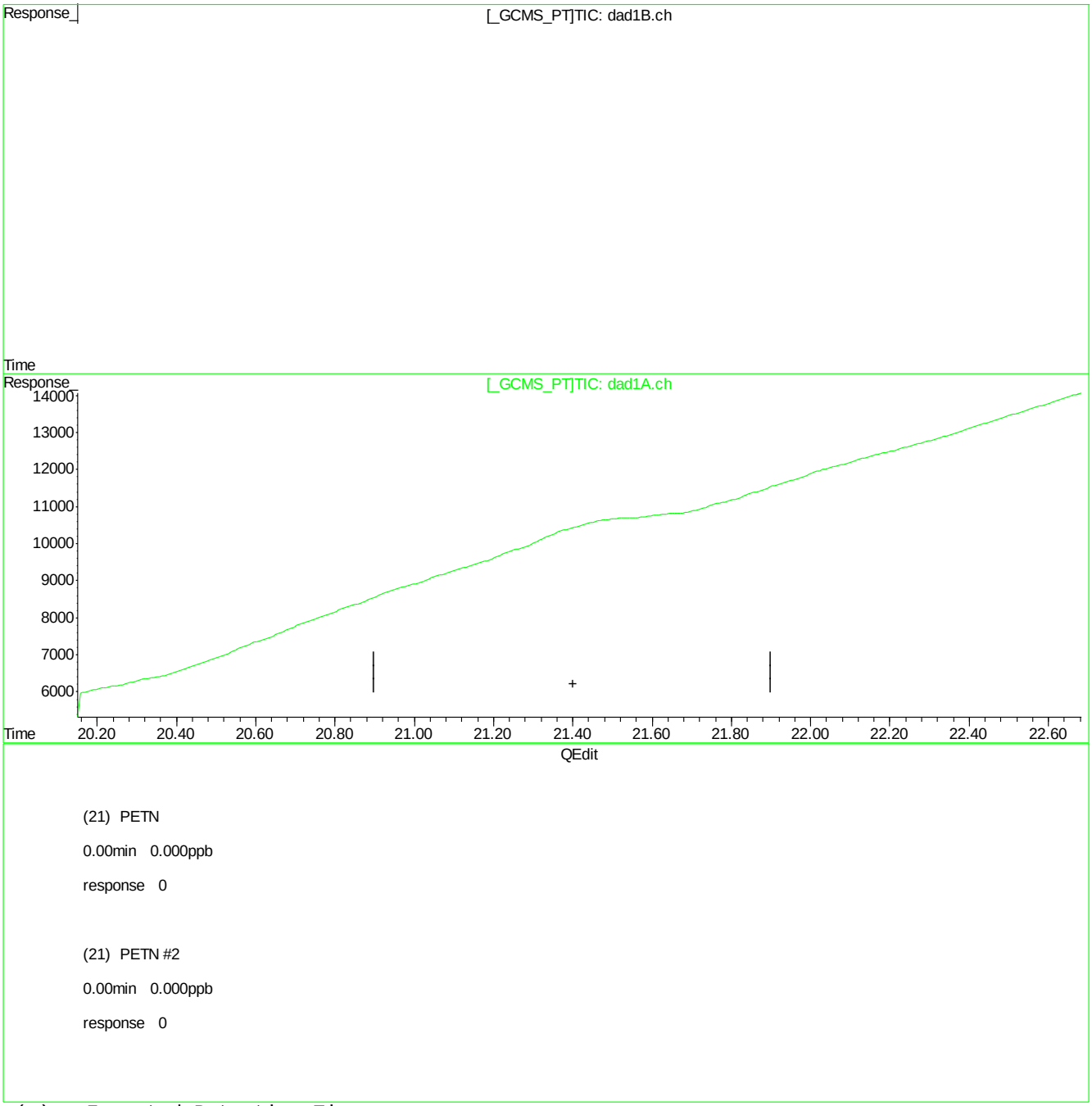
response 170803

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:13:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration

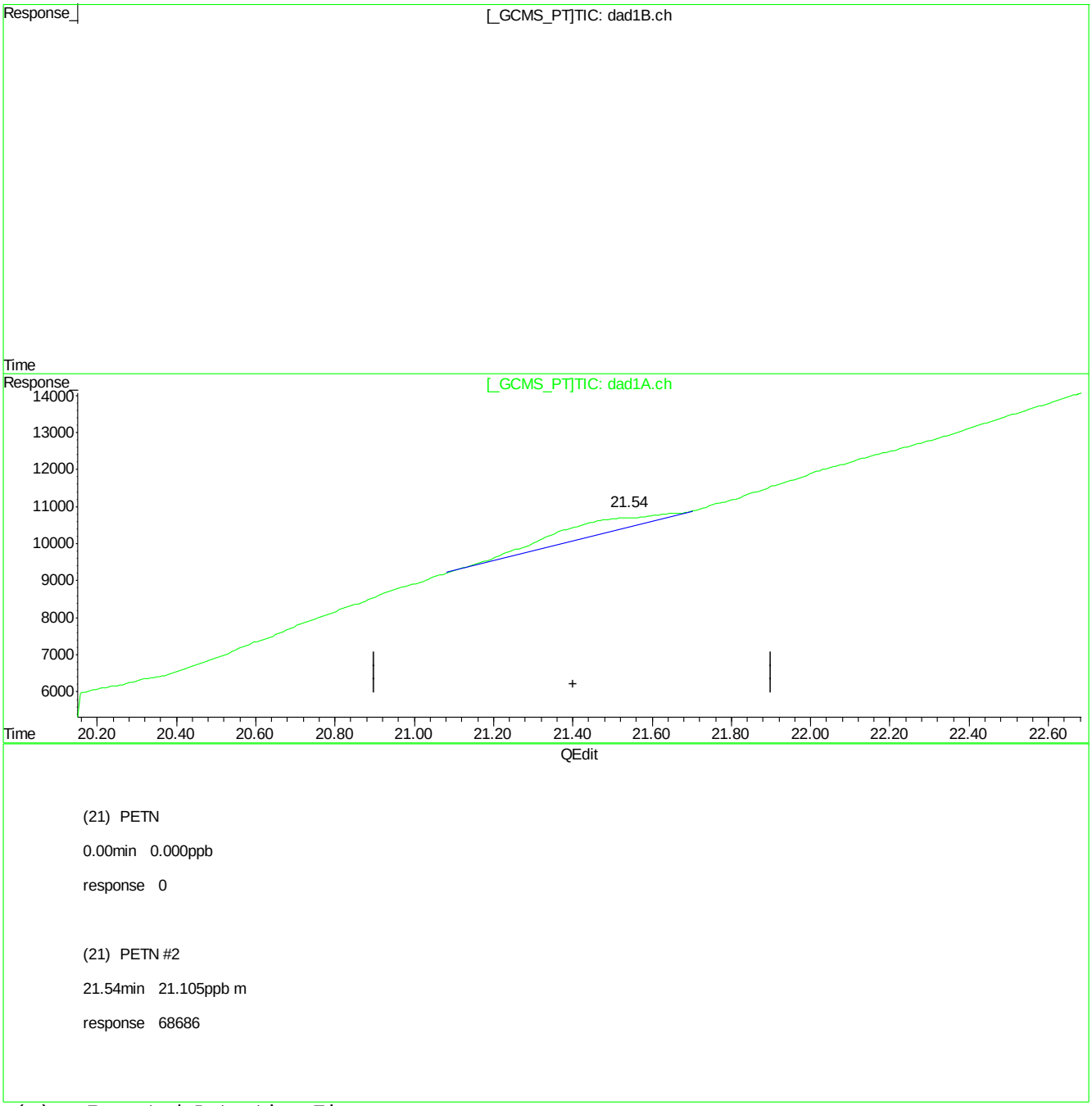


(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:13:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622000.D\dad1A.ch
Acq On : 08-Aug-2021, 17:34:29 Operator: jamesb
Sample : ic3024-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.54min 21.105ppb m

response 68686

(+) = Expected Retention Time
GG622000.D GGG3024_080821.M Mon Aug 09 10:13:49 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:09 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.83	13.83	247673	445809	50.698	49.106
	Spiked Amount 500.000	Range 70 - 136		Recovery =		10.14%#	9.82%#
	Target Compounds						
1)	TNX	4.78	4.78	122293	122293	26.531	26.701
2)	HMX	5.18	5.18	170288	170288	52.517	52.147
3)	DNX	5.36	5.36	284676	279432	48.175m	47.187m
4)	MNX	6.45	6.45	345422	345422	57.015	57.015
5)	1,3,5-Trinitrobe	7.48	7.48	462849	462849	49.060	49.060
6)	RDX	7.71	7.71	202635	202635	46.109	46.109
7)	1,3-Dinitrobenze	9.67	9.67	610864	434490	47.824	44.782m
8)	Nitrobenzene	10.61	10.60	387786	365414	45.846	44.217m
9)	2,4,6-Trinitroto	11.57	11.57	423177	521552	46.221	40.104m
10)	Nitroglycerin	0.00	12.33	0	129295	N.D.	40.856m#
11)	Tetryl	12.82	12.82	331420	537082	46.704	43.348
13)	2,6-Dinitrotolue	14.17	14.17	294439	391301	46.693	42.450
14)	2,4-Dinitrotolue	14.81	14.81	547029	331126	47.439	41.706
15)	3,5-Dinitroanili	15.49	15.50	461026	744634	46.787	47.886
16)	o-Nitrotoluene	16.36	16.36	239848	436254	46.292	59.548
17)	p-Nitrotoluene	17.30	17.30	495268	747698	93.157	81.318
18)	4-Amino-2,6-Dini	17.30	17.30	495268	747698	93.157	81.318
19)	m-Nitrotoluene	18.60	18.60	281706	446271	48.509	46.070m
20)	2-Amino-4,6-Dini	19.05	19.07	410448	495966	47.469	41.739
21)	PETN	0.00	21.48	0	136642	N.D.	41.985m#

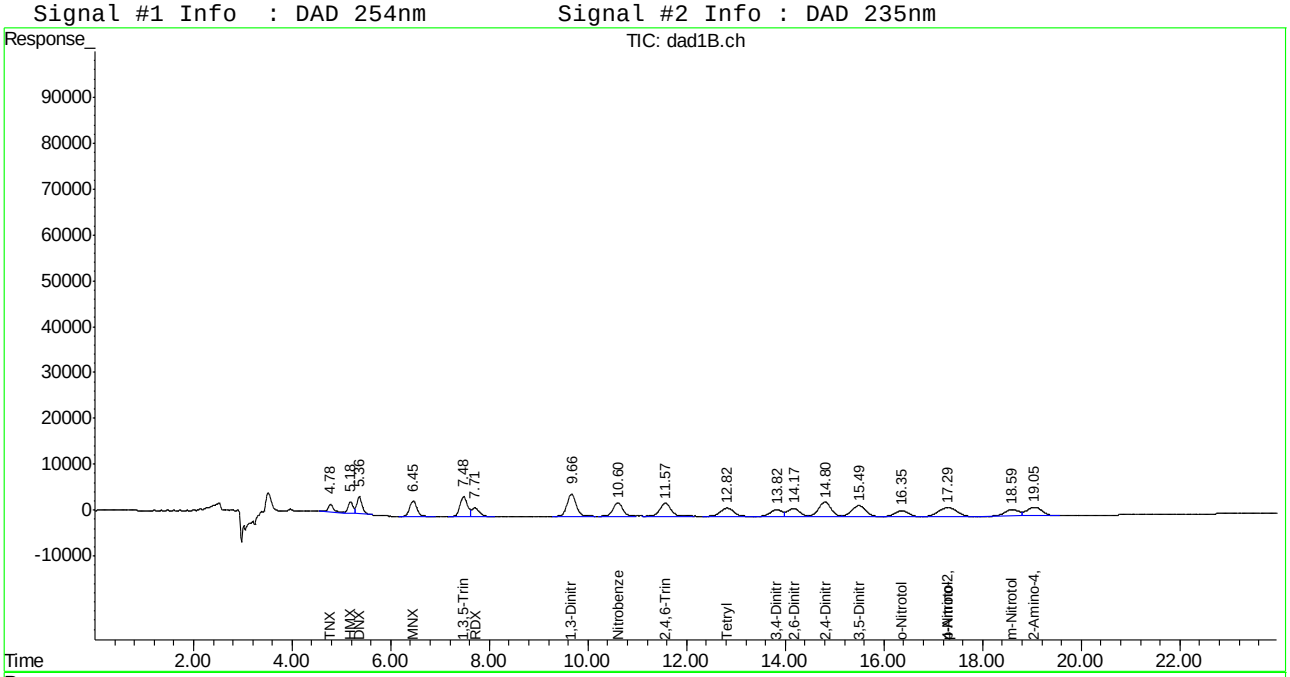
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622001.D GGG3024_080821.M Mon Aug 09 10:17:35 2021 Page 1

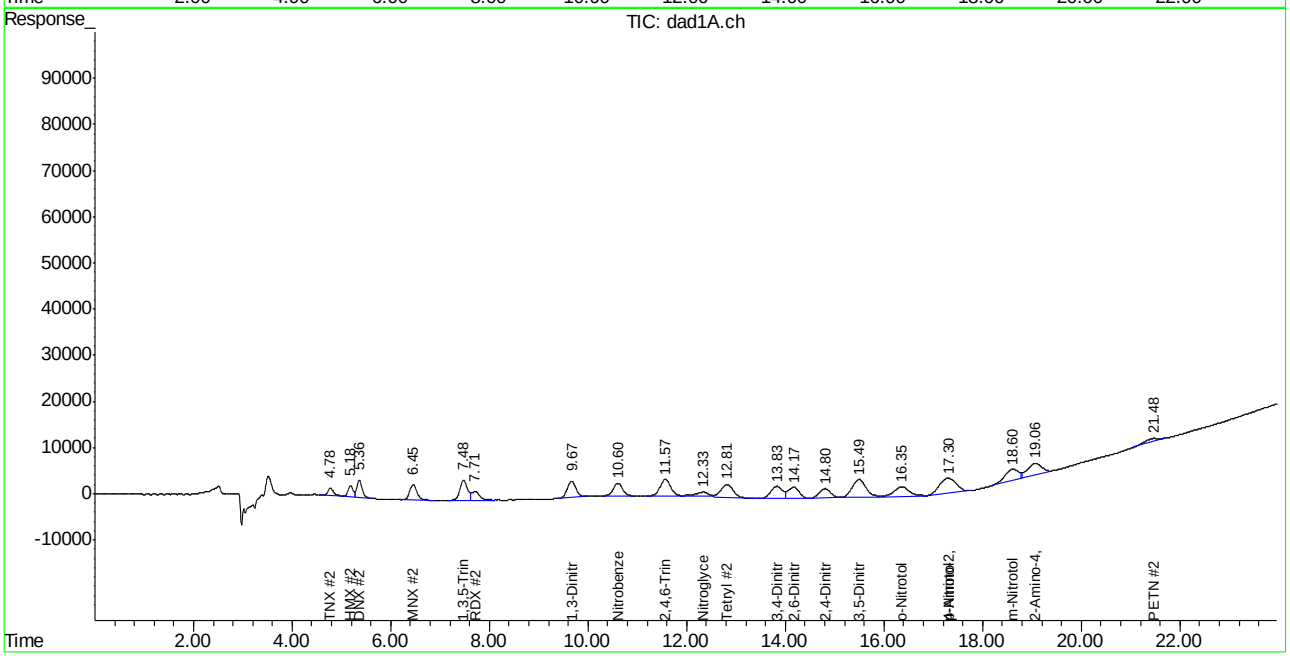
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:10 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

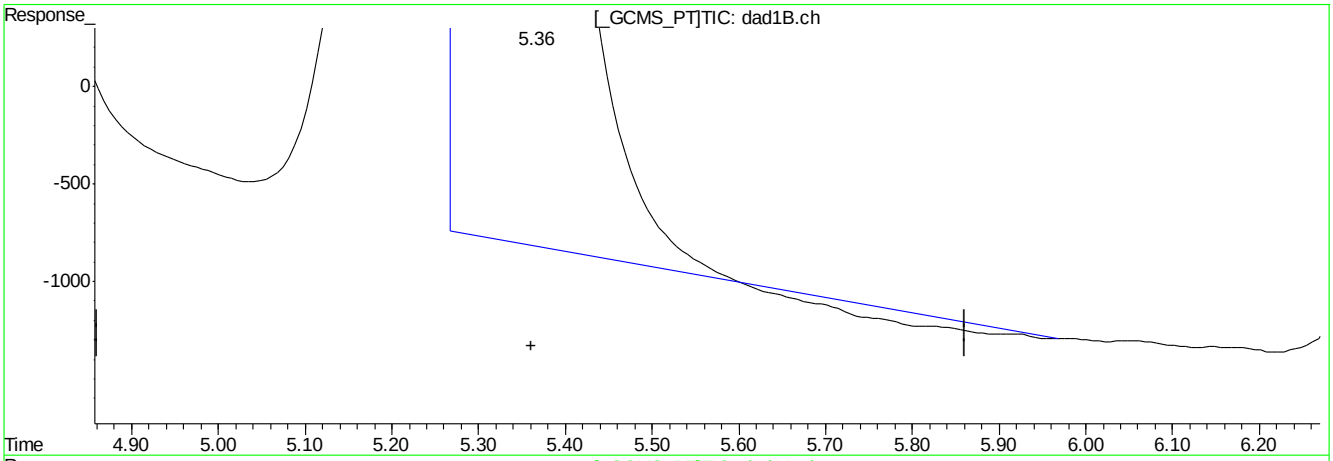
Sample Number: GGG3024-IC3024
Lab FileID: GG622001.D
Injection Time: 08/08/21 18:05
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

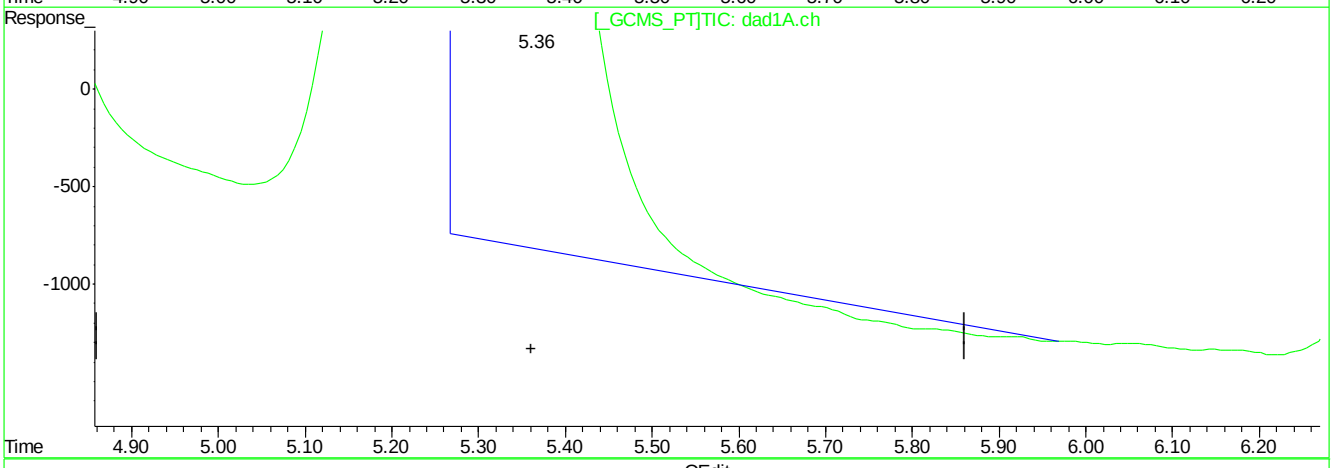
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.36	Poor instrument integration
DNX		2	5.36	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.67	Poor instrument integration
Nitrobenzene	98-95-3	2	10.60	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	11.57	Poor instrument integration
Nitroglycerine	55-63-0	2	12.33	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.60	Poor instrument integration
PETN	78-11-5	2	21.48	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.36min 47.027ppb

response 277891

(3) DNX #2

5.36min 46.926ppb

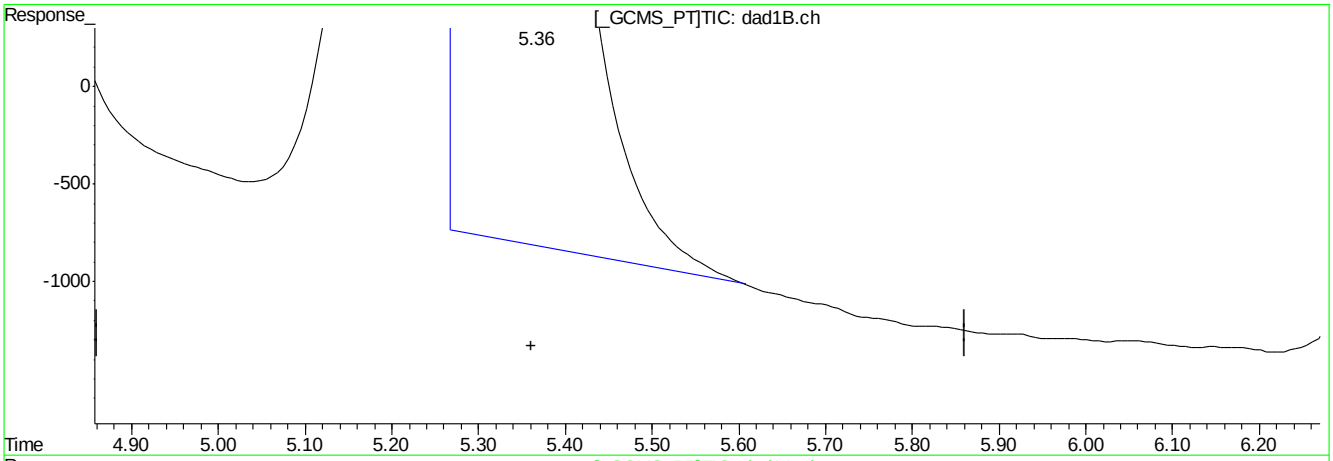
response 277891

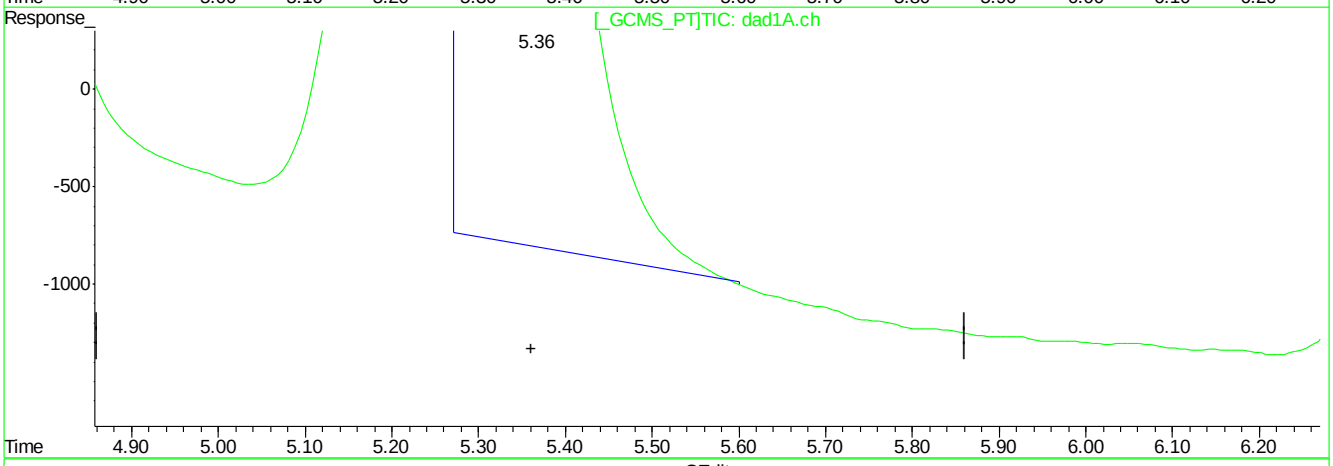
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.36min 48.175ppb m

response 284676

(3) DNX #2

5.36min 47.187ppb m

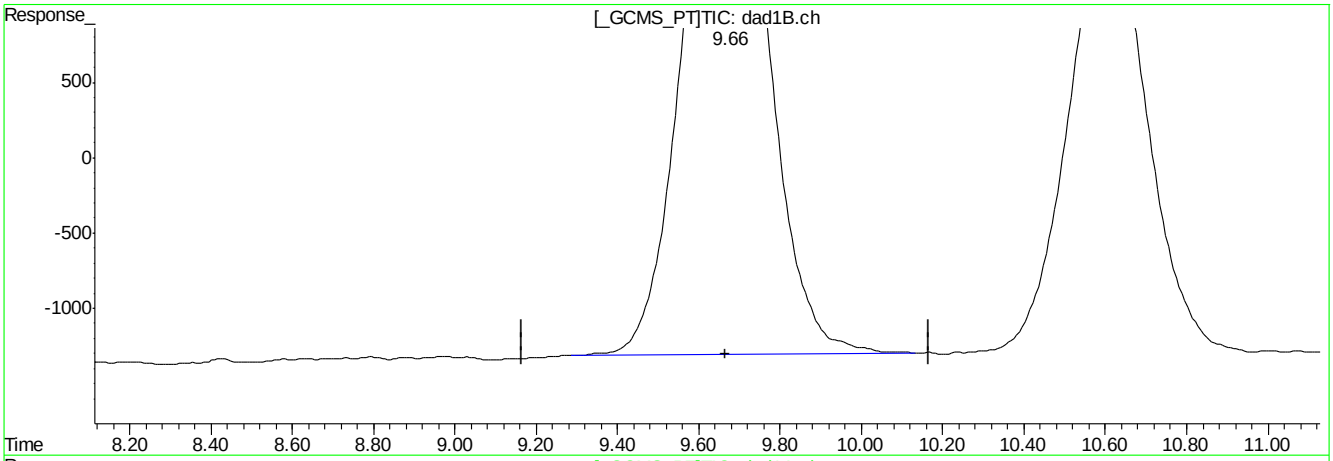
response 279432

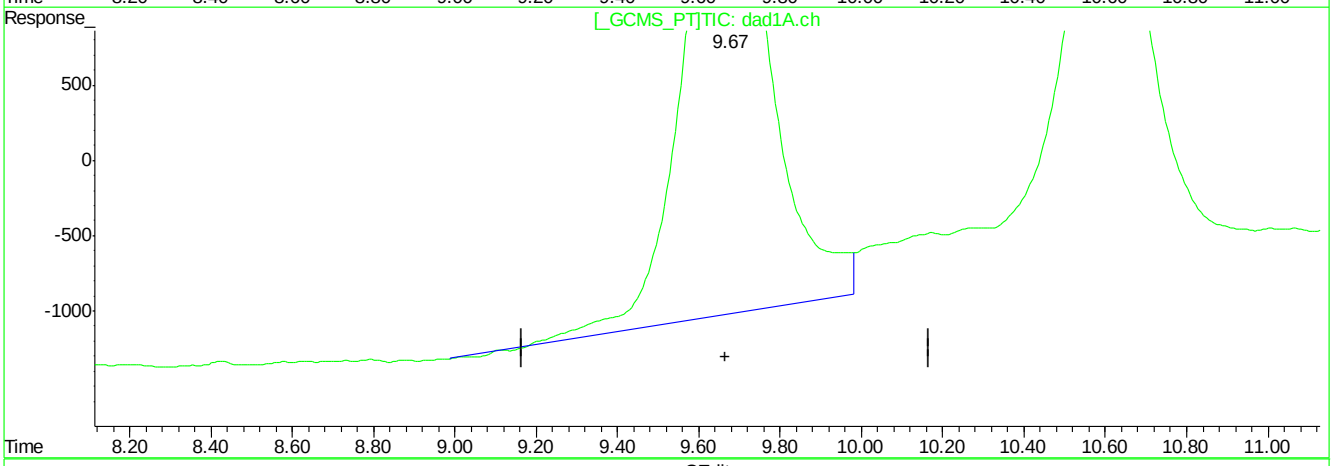
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.67min 47.824ppb

response 610864

(7) 1,3-Dinitrobenzene #2

9.67min 52.300ppb

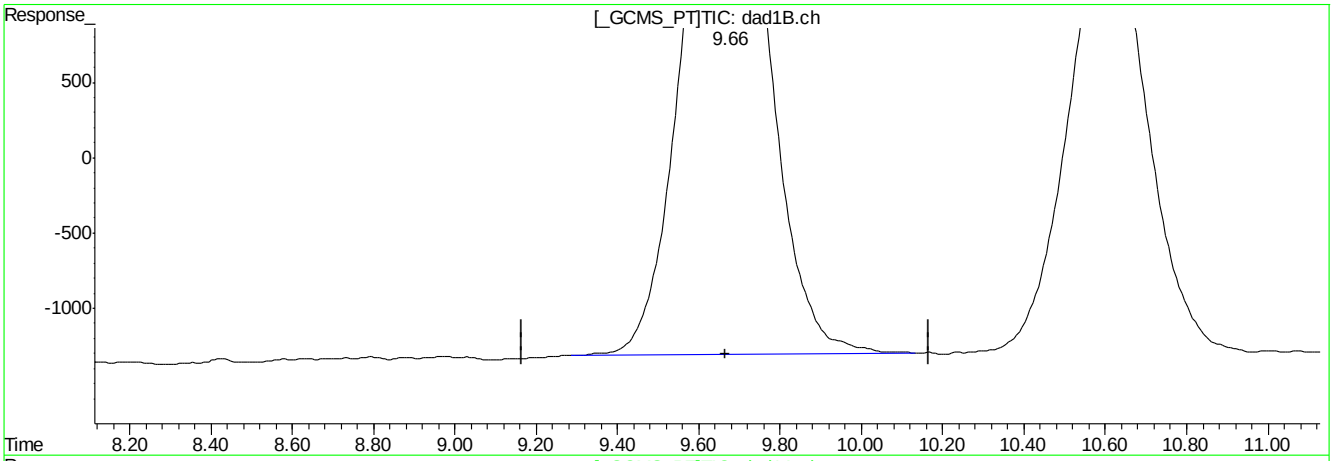
response 507426

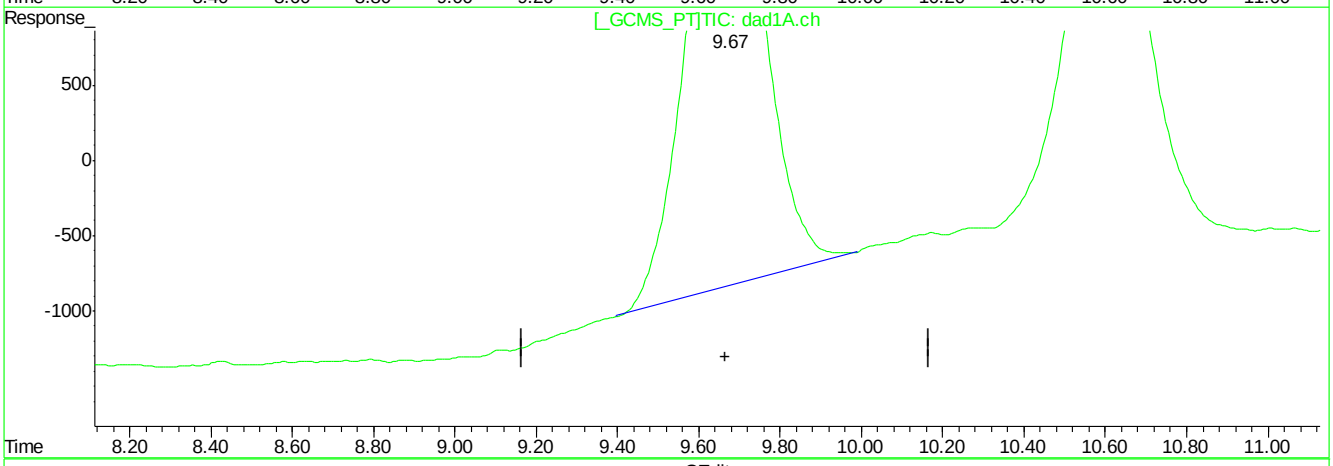
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.67min 47.824ppb

response 610864

(7) 1,3-Dinitrobenzene #2

9.67min 44.782ppb m

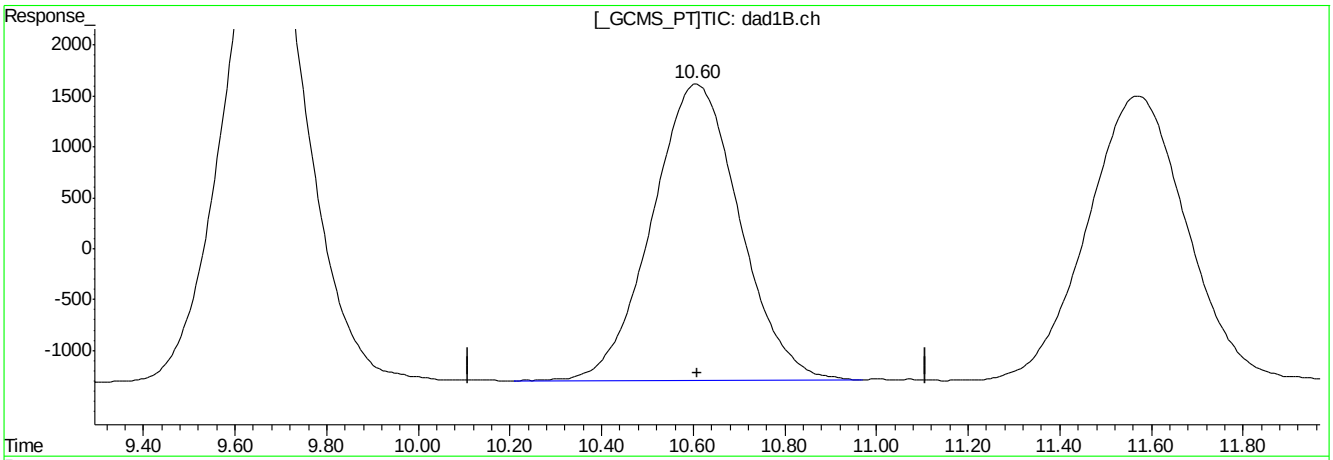
response 434490

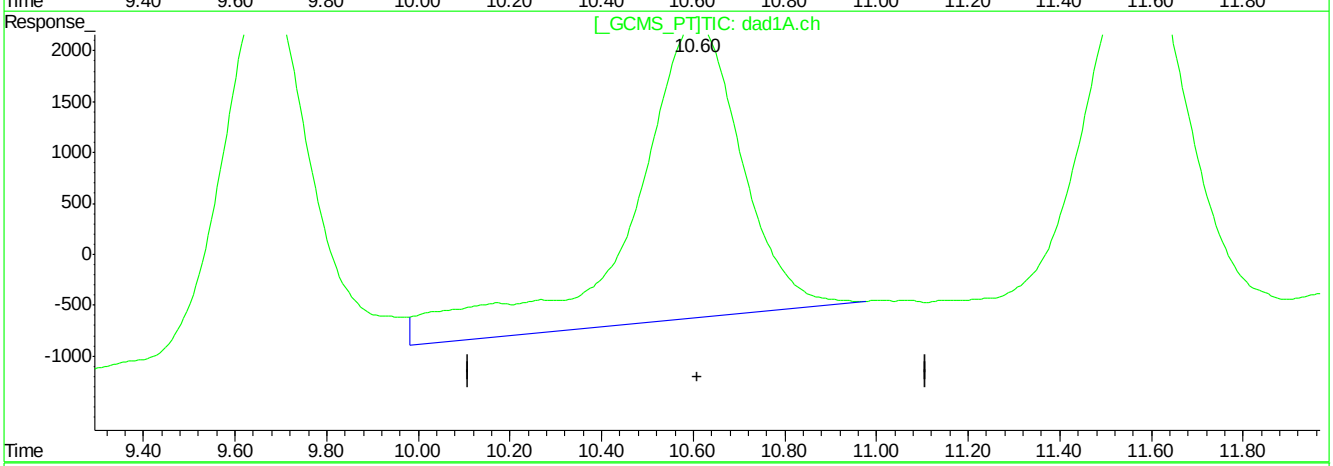
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.61min 45.846ppb

response 387786

(8) Nitrobenzene #2

10.61min 58.819ppb

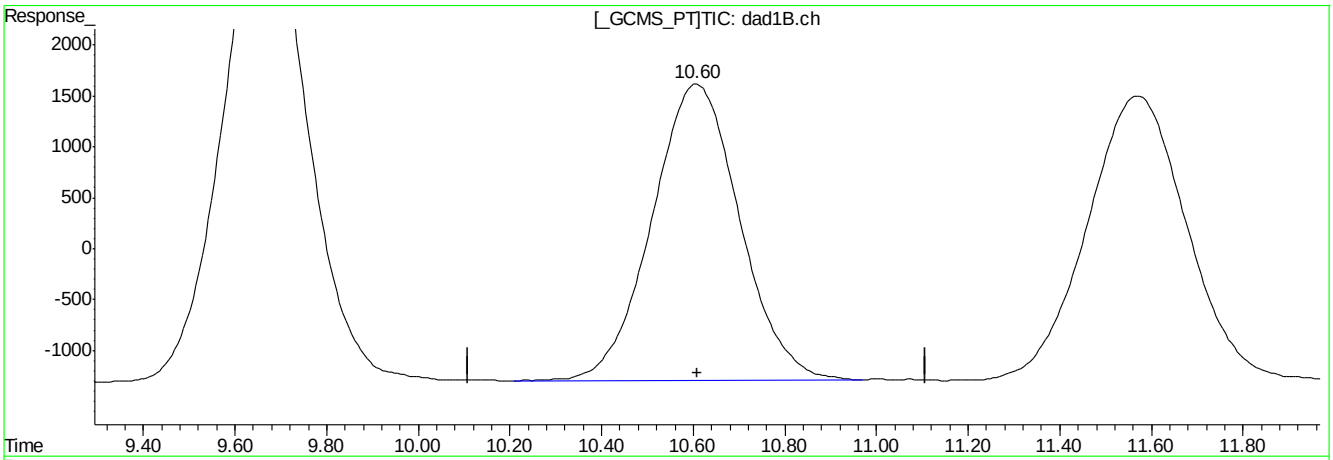
response 486087

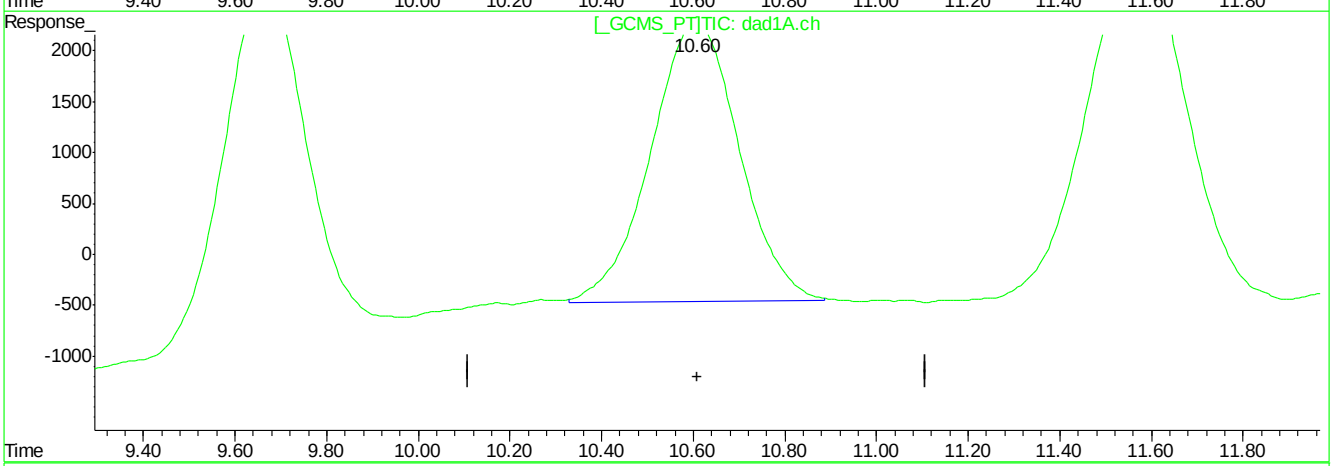
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.61min 45.846ppb

response 387786

(8) Nitrobenzene #2

10.60min 44.217ppb m

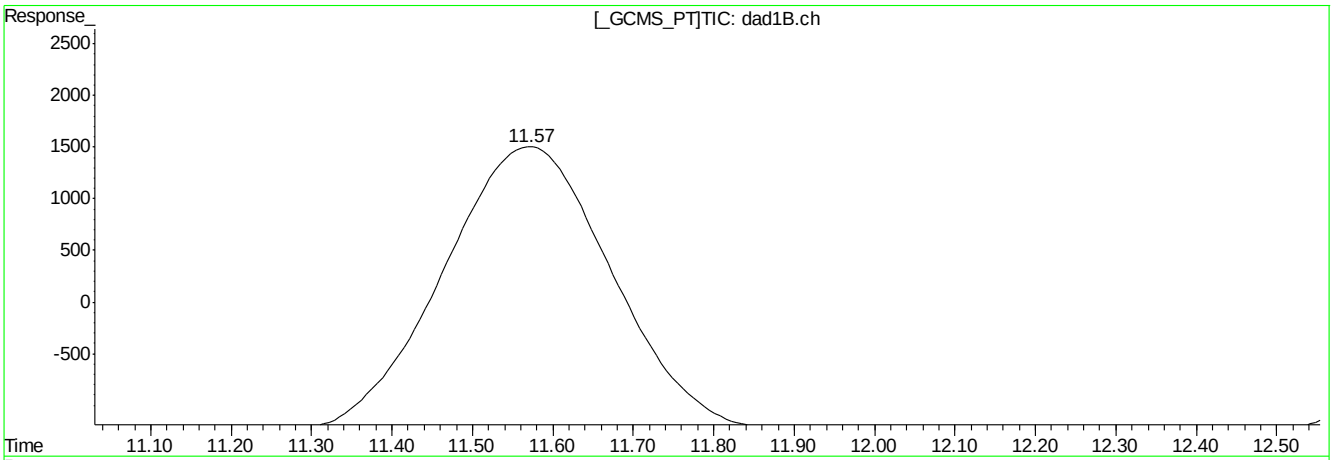
response 365414

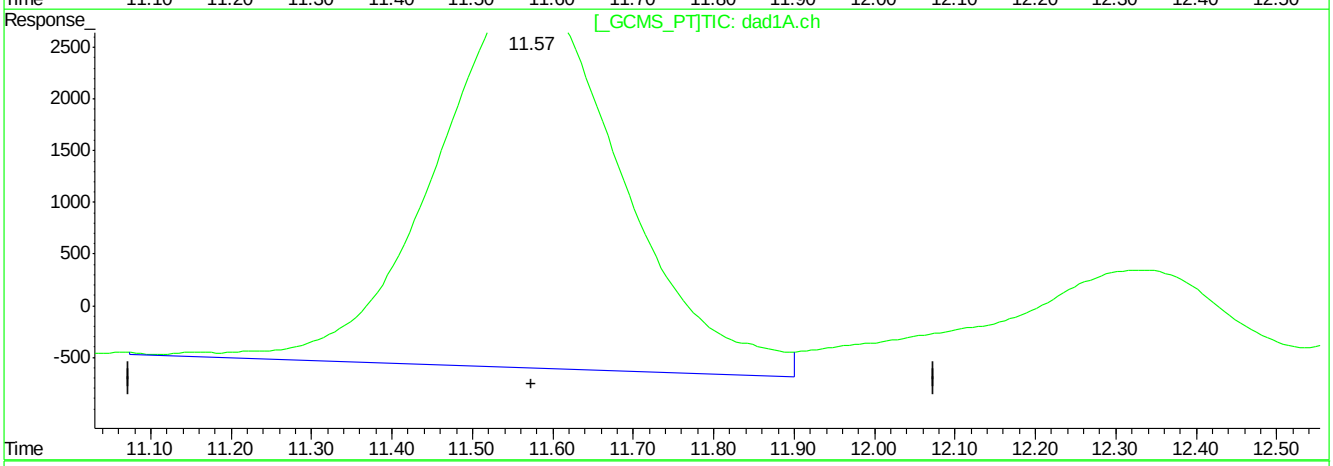
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.57min 46.221ppb

response 423177

(9) 2,4,6-Trinitrotoluene #2

11.57min 45.019ppb

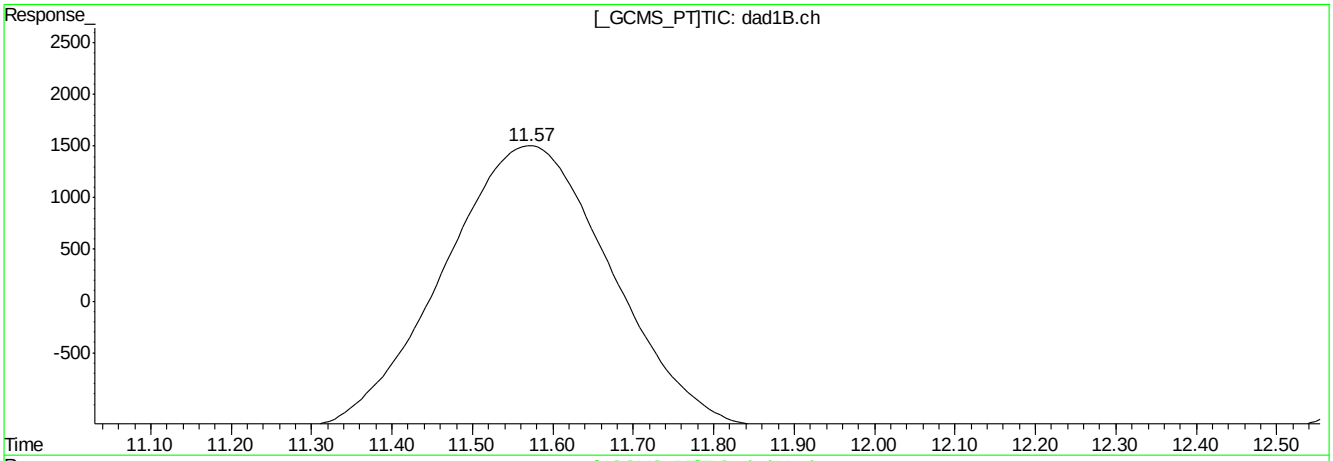
response 585475

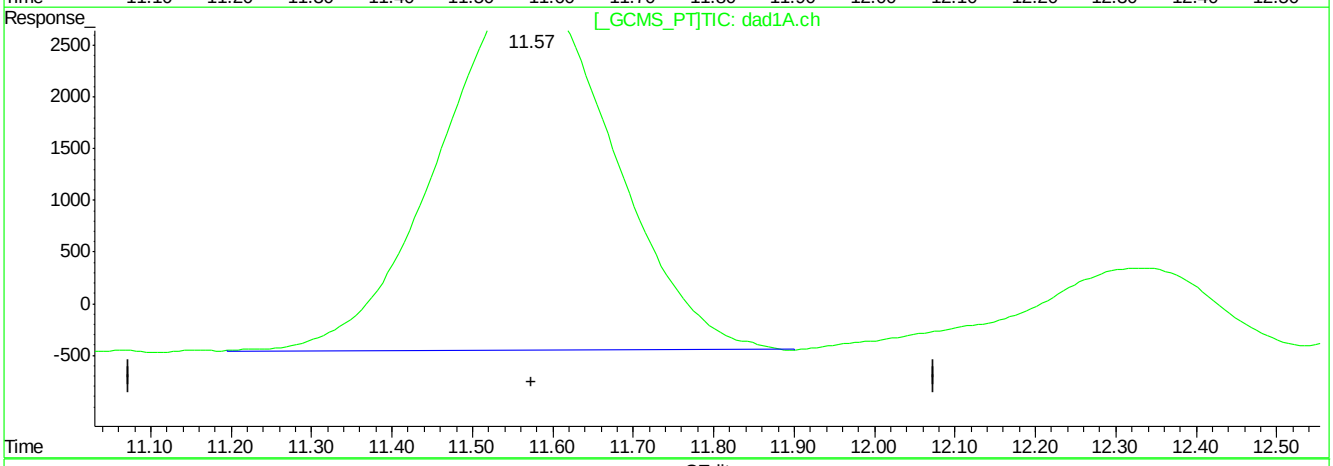
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(9) 2,4,6-Trinitrotoluene

11.57min 46.221ppb

response 423177

(9) 2,4,6-Trinitrotoluene #2

11.57min 40.104ppb m

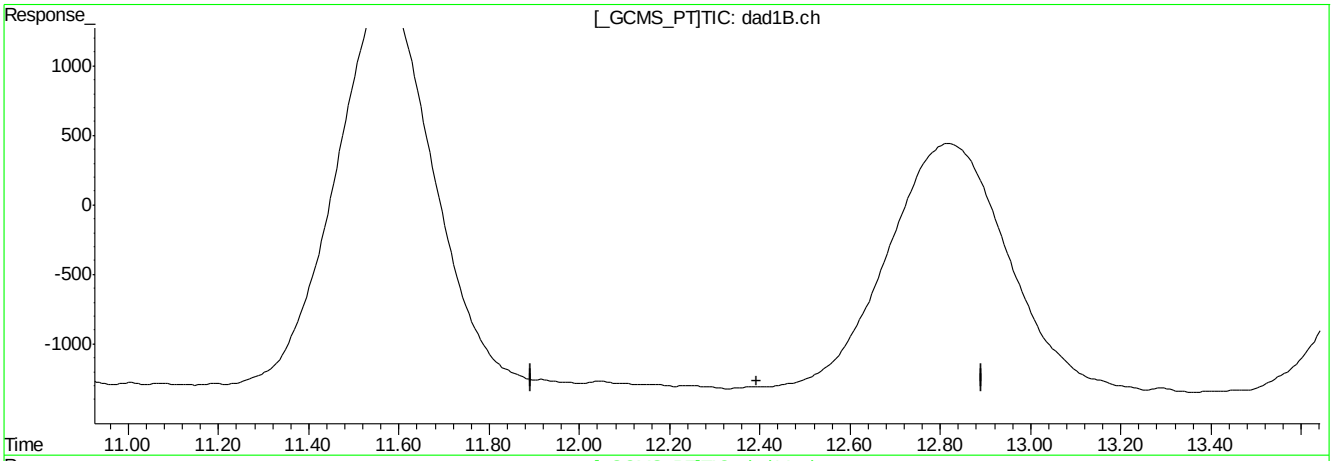
response 521552

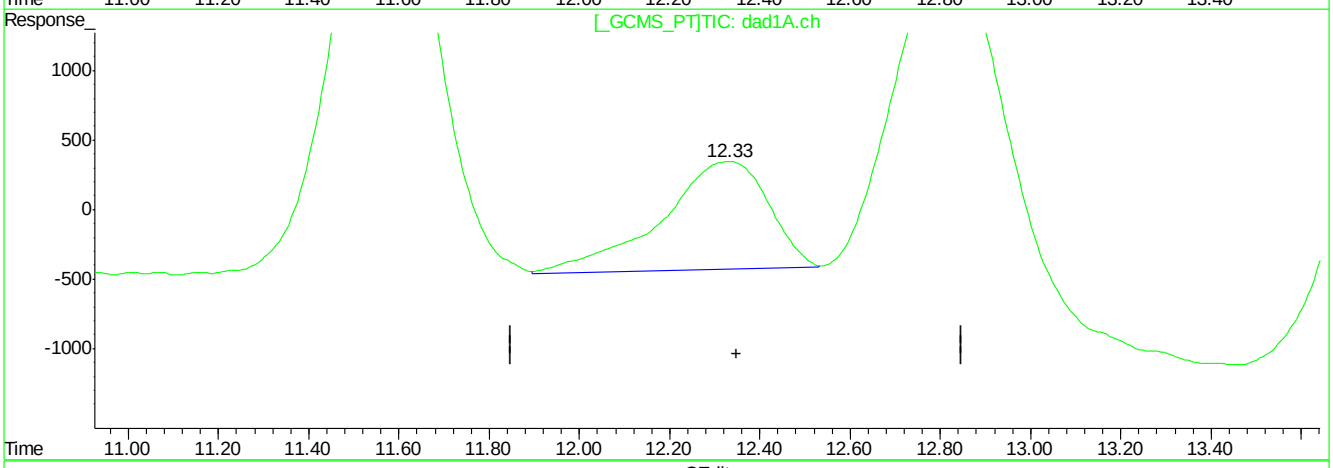
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

12.33min 40.856ppb m

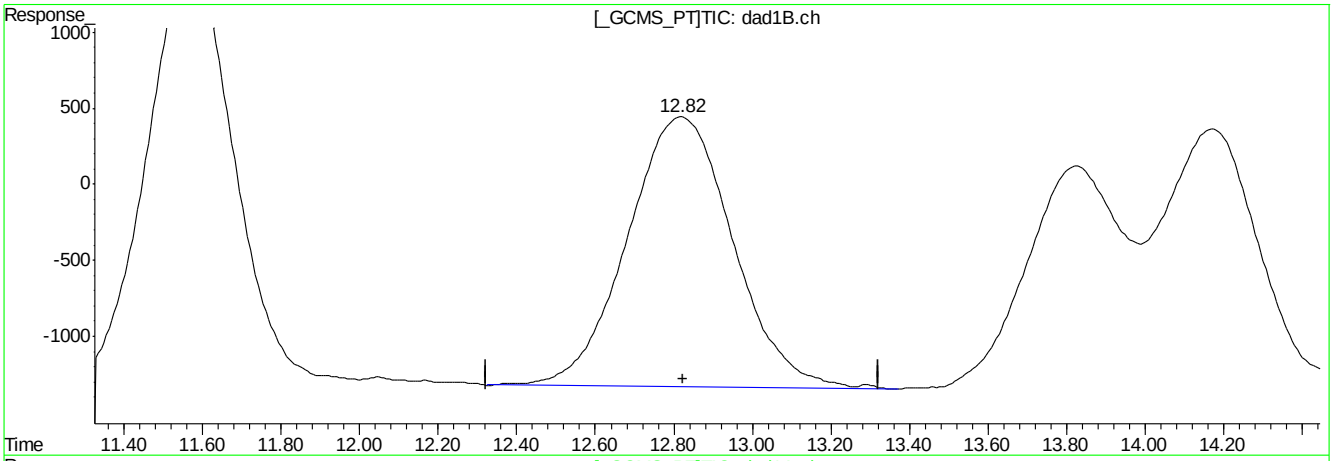
response 129295

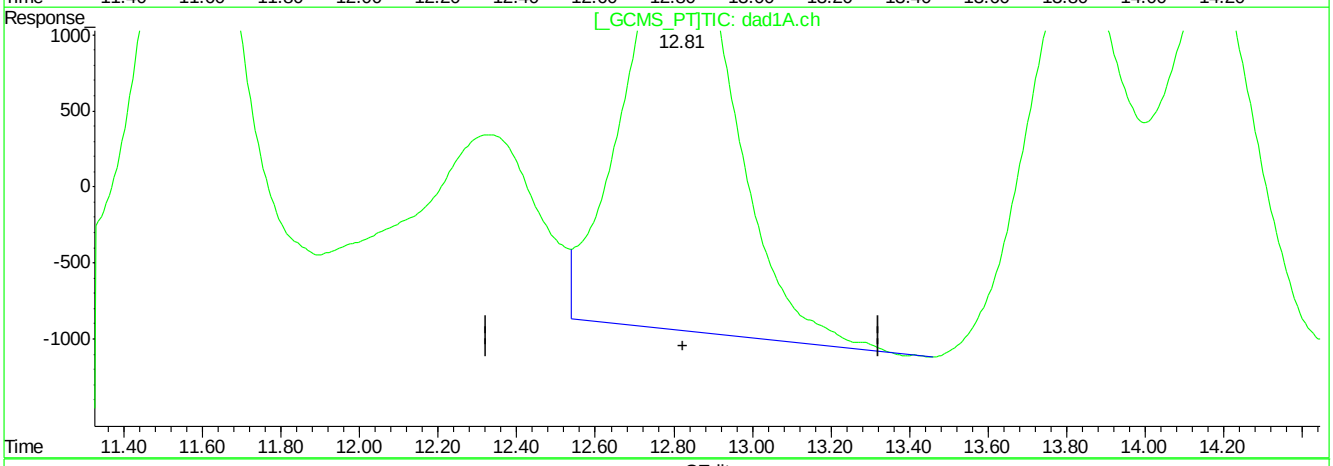
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:09:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

12.82min 46.704ppb

response 331420

(11) Tetryl #2

12.82min 43.348ppb

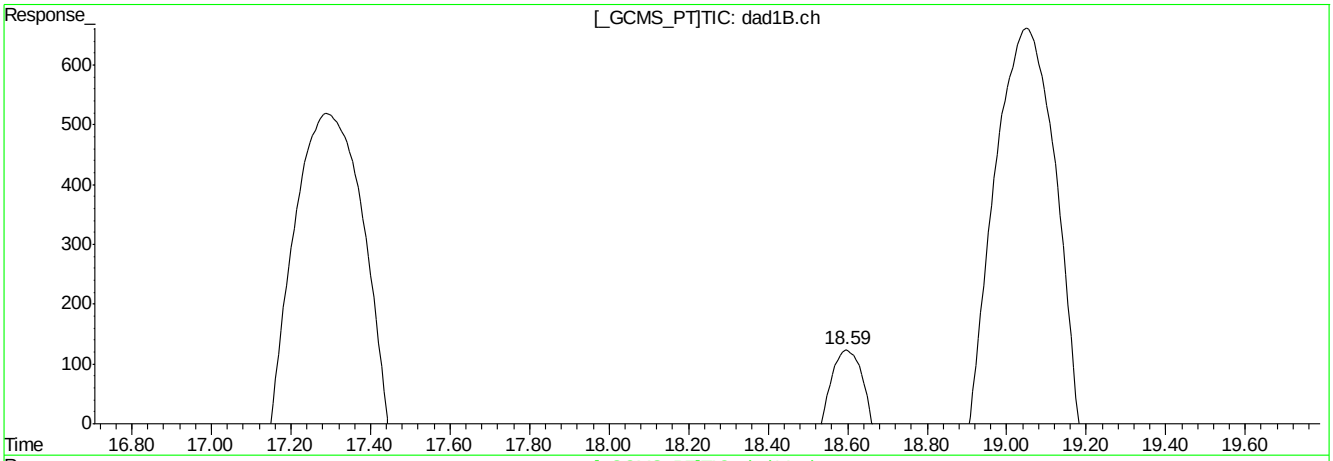
response 537082

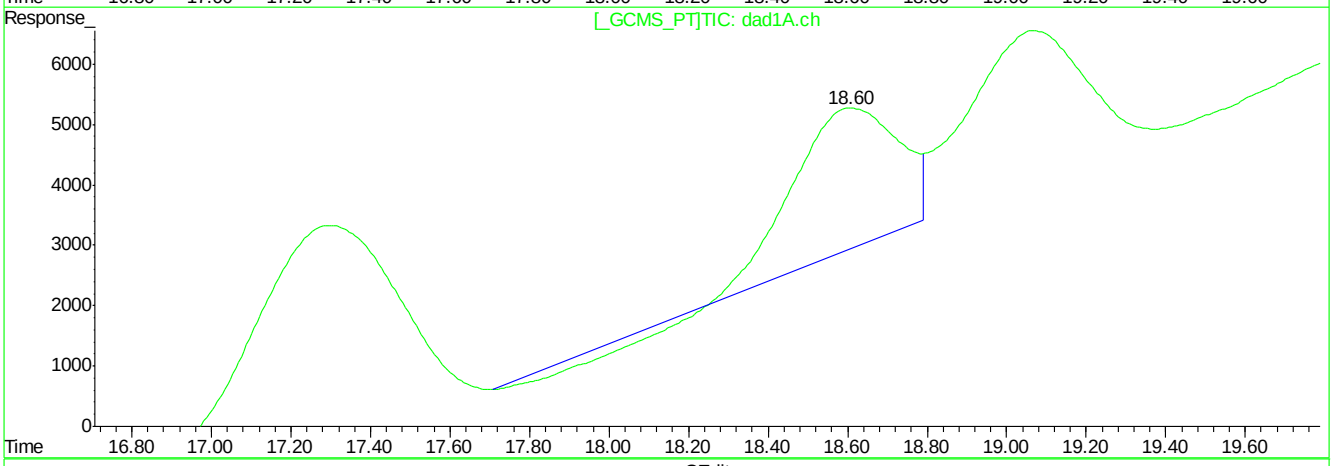
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:10:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.60min 48.509ppb

response 281706

(19) m-Nitrotoluene #2

18.61min 40.334ppb

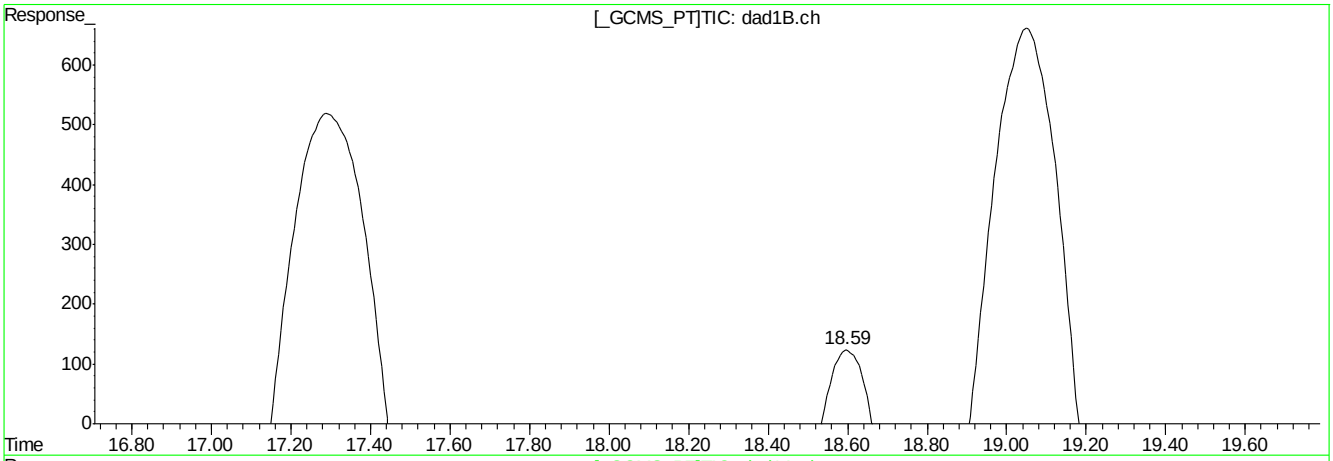
response 390708

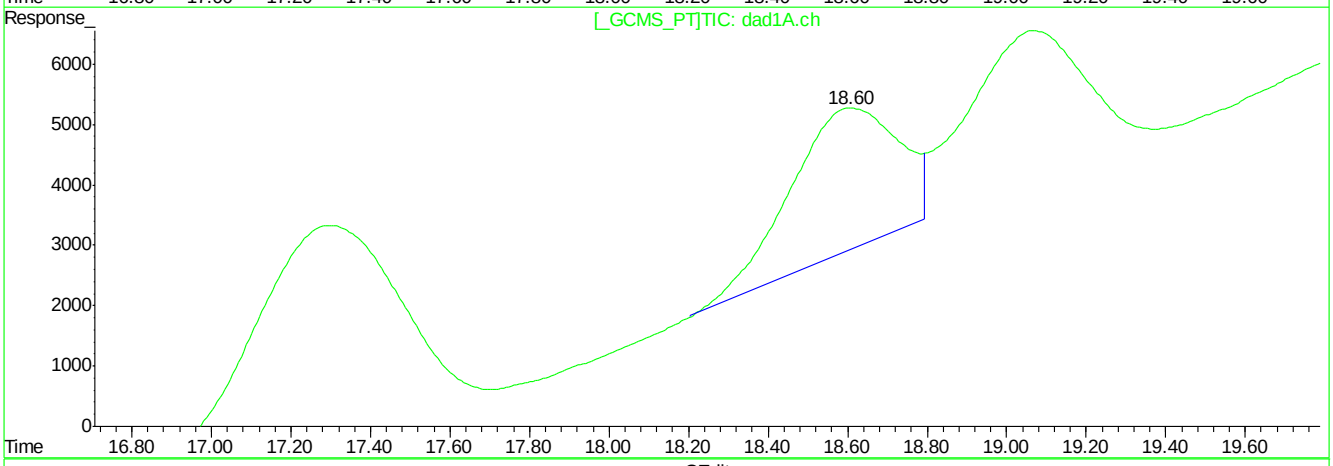
(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:10:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.60min 48.509ppb

response 281706

(19) m-Nitrotoluene #2

18.60min 46.070ppb m

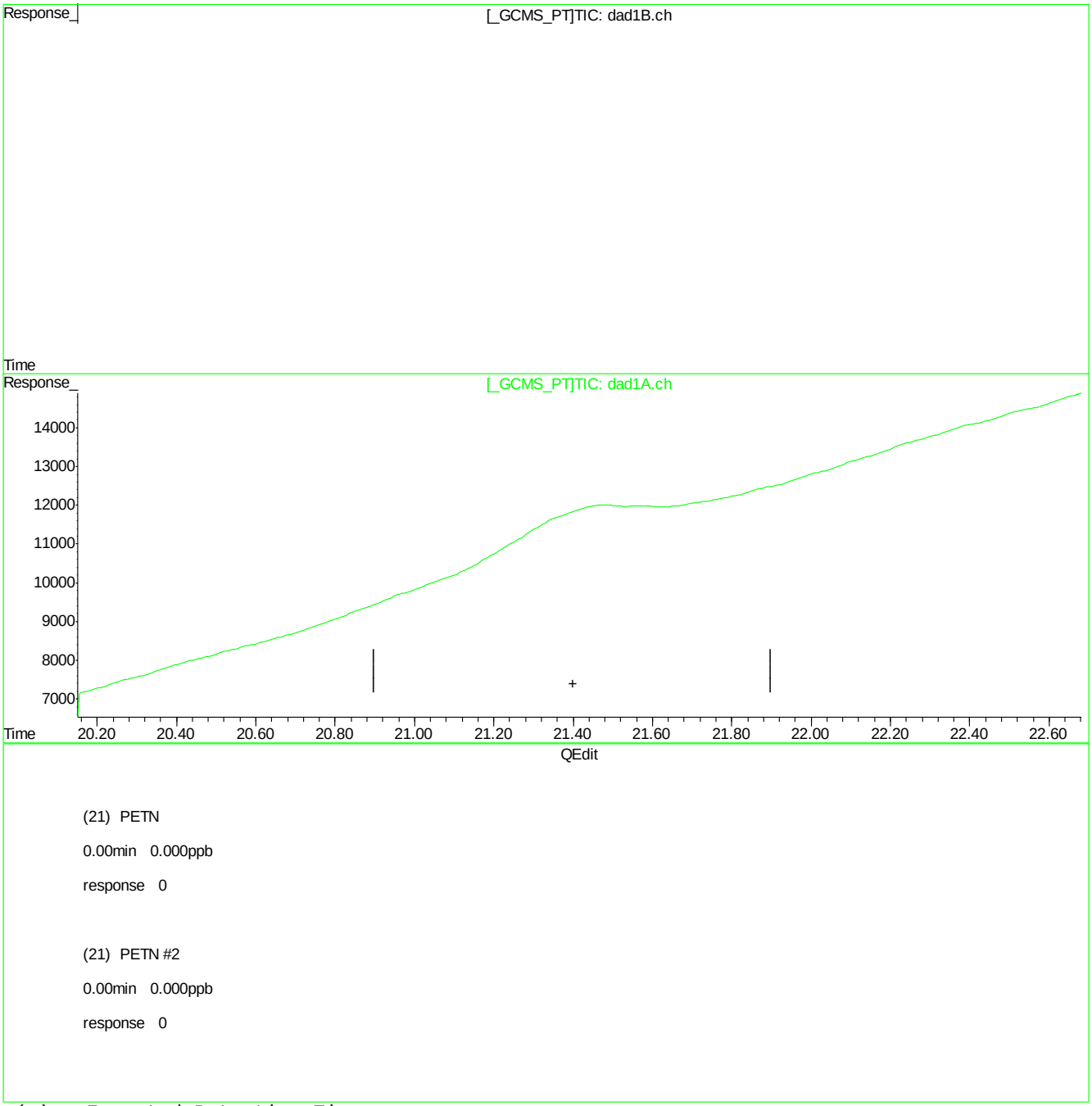
response 446271

(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:10:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration

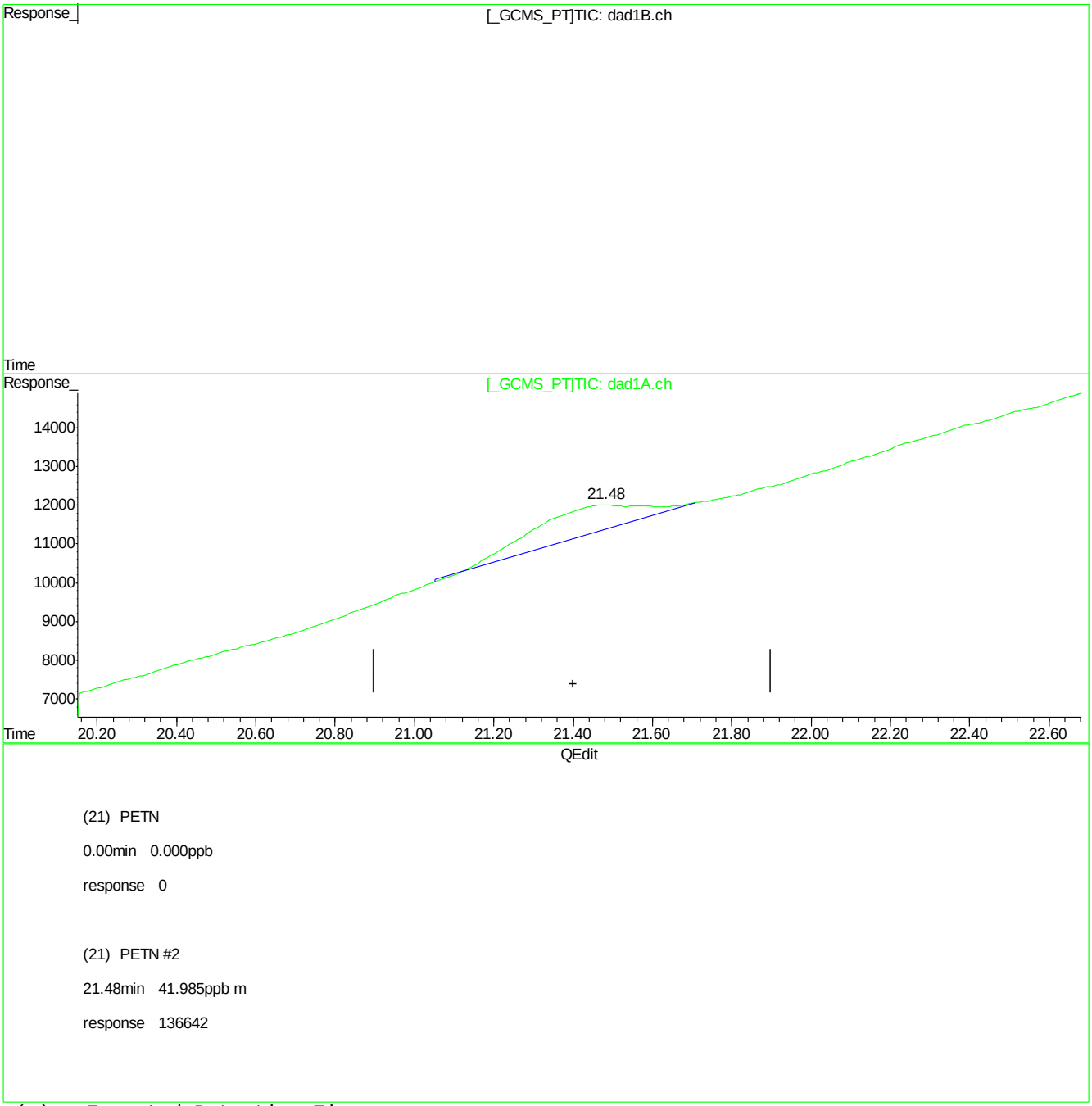


(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:10:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622001.D\dad1A.ch
Acq On : 08-Aug-2021, 18:05:54 Operator: jamesb
Sample : ic3024-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
GG622001.D GGG3024_080821.M Mon Aug 09 10:10:52 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:10 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.83	13.83	490974	940274	100.501	103.572
	Spiked Amount 500.000	Range 70 - 136		Recovery =		20.10%#	20.71%#
	Target Compounds						
1)	TNX	4.78	4.78	210628	210628	45.695	45.988
2)	HMX	5.19	5.19	322878	322878	99.576	98.875
3)	DNX	5.36	5.36	546071	544560	92.410m	91.958m
4)	MNX	6.45	6.45	699619	699619	115.477	115.477
5)	1,3,5-Trinitrobe	7.48	7.48	915661	915661	97.056	97.056
6)	RDX	7.70	7.70	390379	390379	88.830	88.830
7)	1,3-Dinitrobenze	9.66	9.66	1197405	840474	93.744	86.626m
8)	Nitrobenzene	10.60	10.60	781642	717630	92.410	86.836m
9)	2,4,6-Trinitroto	11.57	11.57	852085	1256036	93.068	96.581
10)	Nitroglycerin	0.00	12.35	0	313188	N.D.	98.964 #
11)	Tetryl	12.82	12.82	667084	1223520	94.005	98.751
13)	2,6-Dinitrotolue	14.17	14.17	577604	824913	91.597	89.490
14)	2,4-Dinitrotolue	14.81	14.81	1086516	738551	94.224	93.021
15)	3,5-Dinitroanili	15.49	15.50	910186	1439668	92.370	92.581
16)	o-Nitrotoluene	16.37	16.37	472535	562229	91.201	76.744
17)	p-Nitrotoluene	17.30	17.29	1006089	1713208	189.239	186.325
18)	4-Amino-2,6-Dini	17.30	17.29	1006089	1713208	189.239	186.325
19)	m-Nitrotoluene	18.60	18.61	550268	930945	94.754	96.105m
20)	2-Amino-4,6-Dini	19.05	19.06	814460	1059559	94.193	89.170
21)	PETN	0.00	21.46	0	324765	N.D.	99.788m#

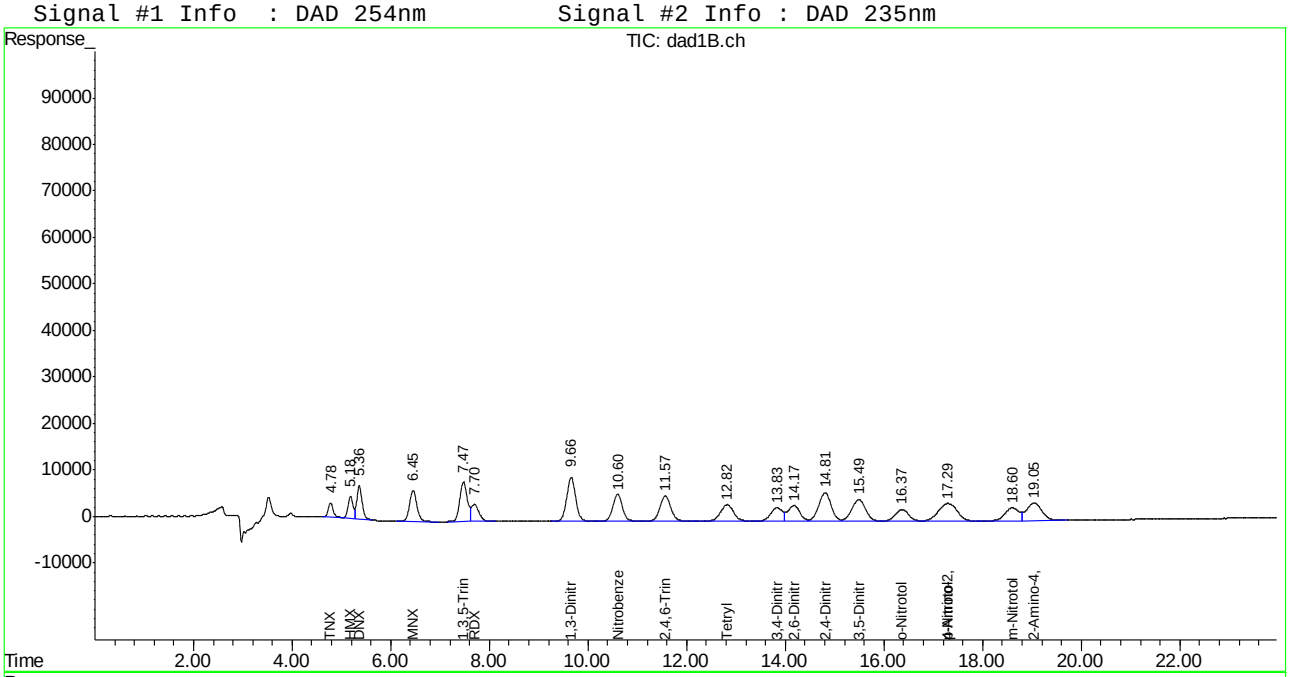
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622002.D GGG3024_080821.M Mon Aug 09 10:17:36 2021 Page 1

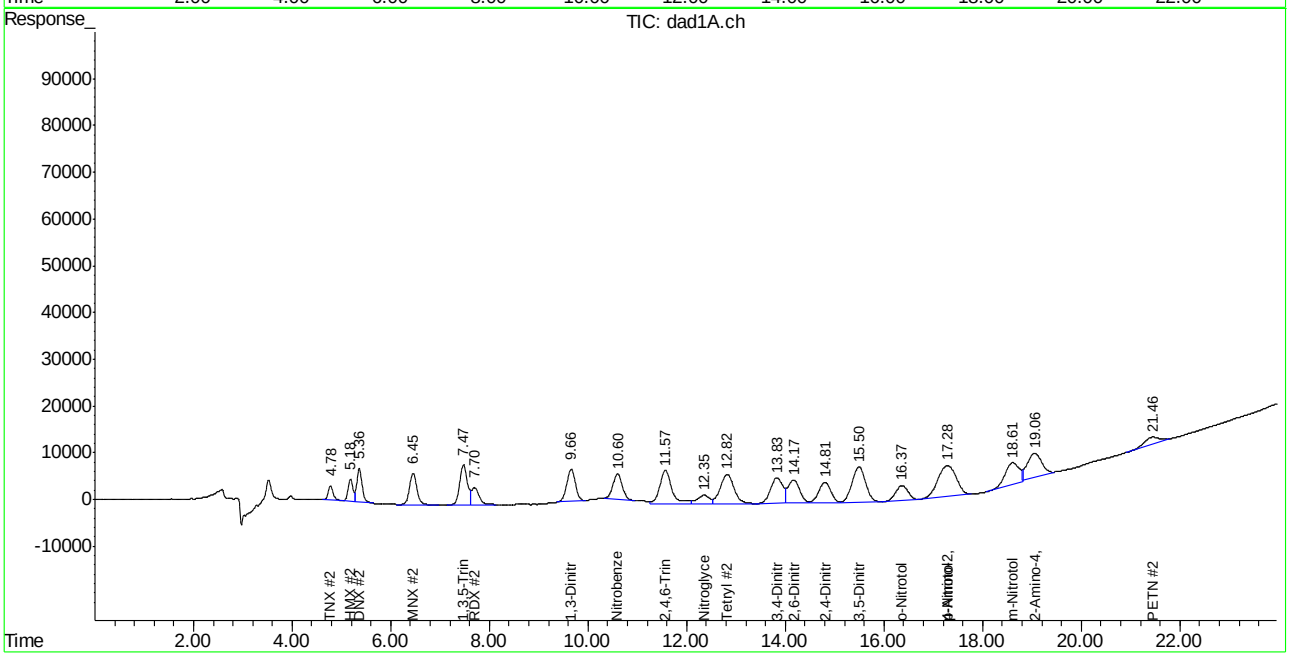
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:08 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

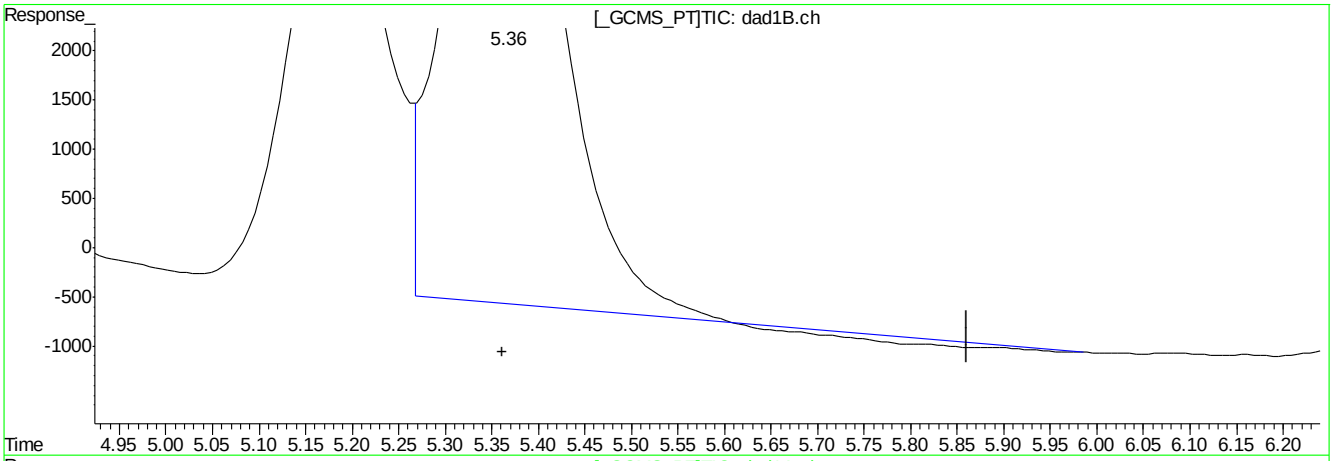
Sample Number: GGG3024-IC3024
Lab FileID: GG622002.D
Injection Time: 08/08/21 18:37
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

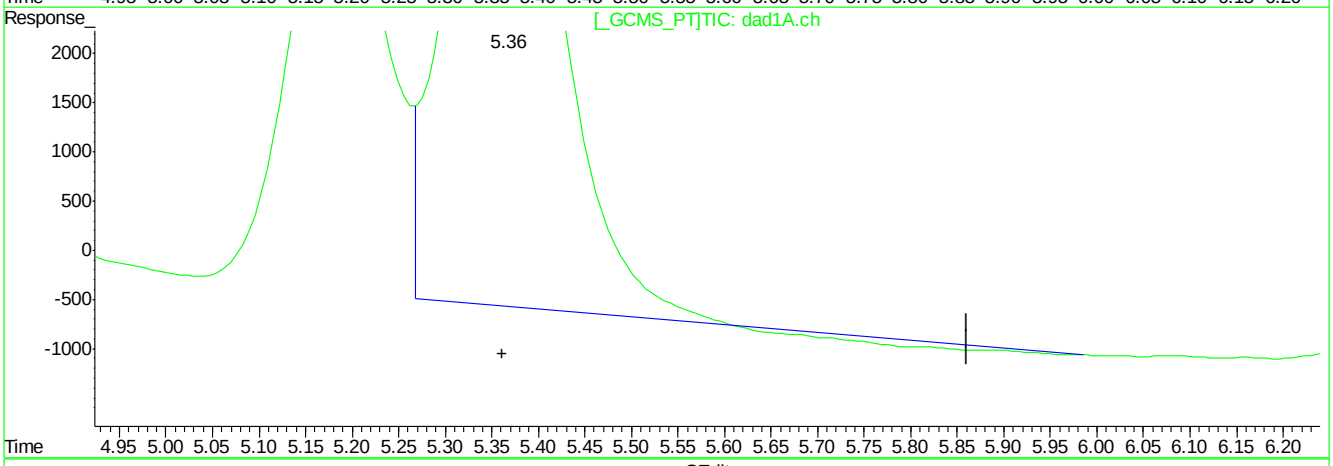
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.36	Poor instrument integration
DNX		2	5.36	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.66	Poor instrument integration
Nitrobenzene	98-95-3	2	10.60	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.61	Poor instrument integration
PETN	78-11-5	2	21.46	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.36min 90.880ppb

response 537027

(3) DNX #2

5.36min 90.686ppb

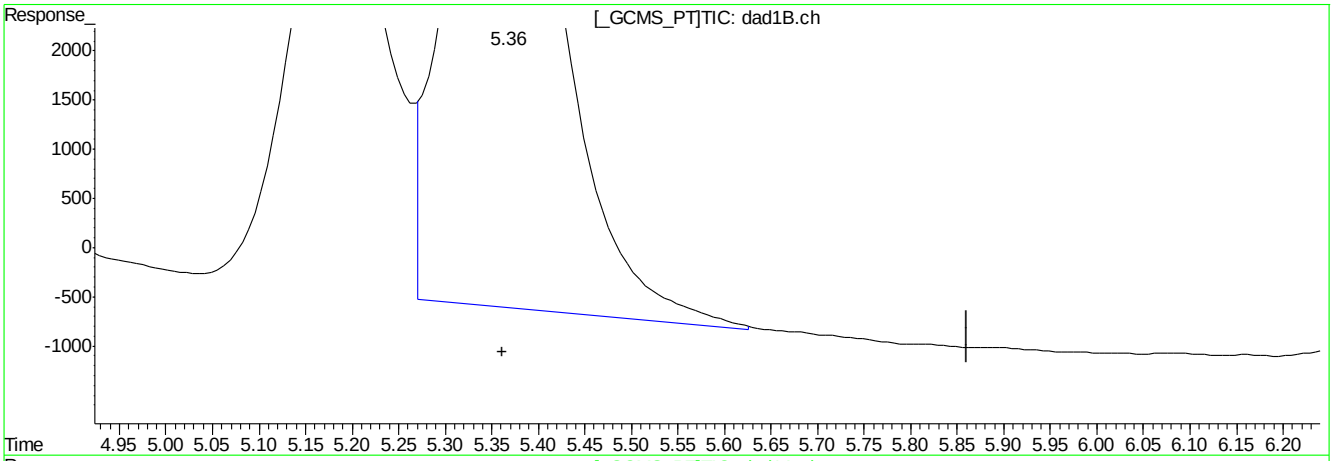
response 537027

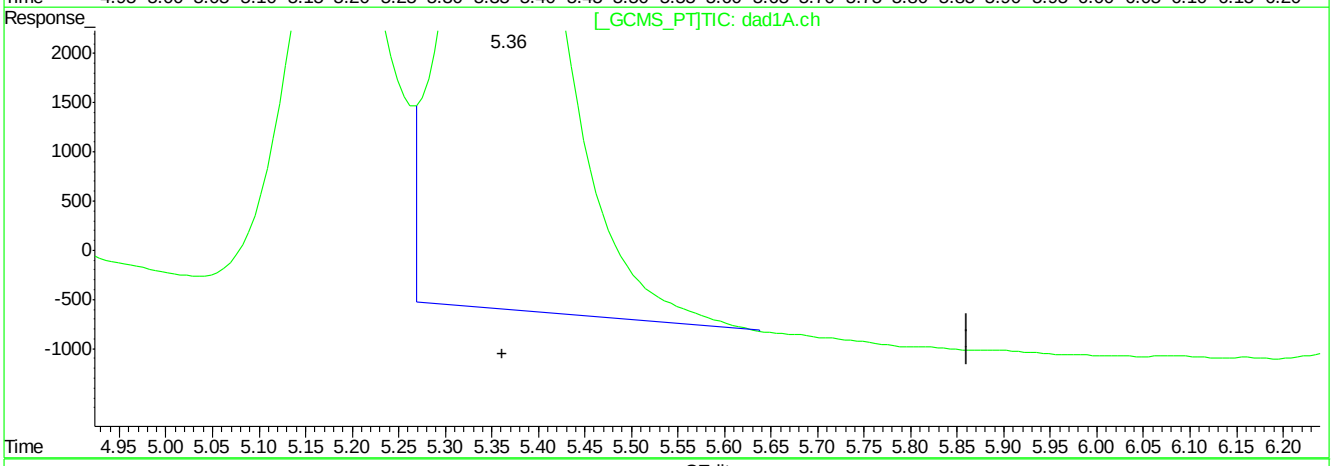
(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:07:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.36min 92.410ppb m

response 546071

(3) DNX #2

5.36min 91.958ppb m

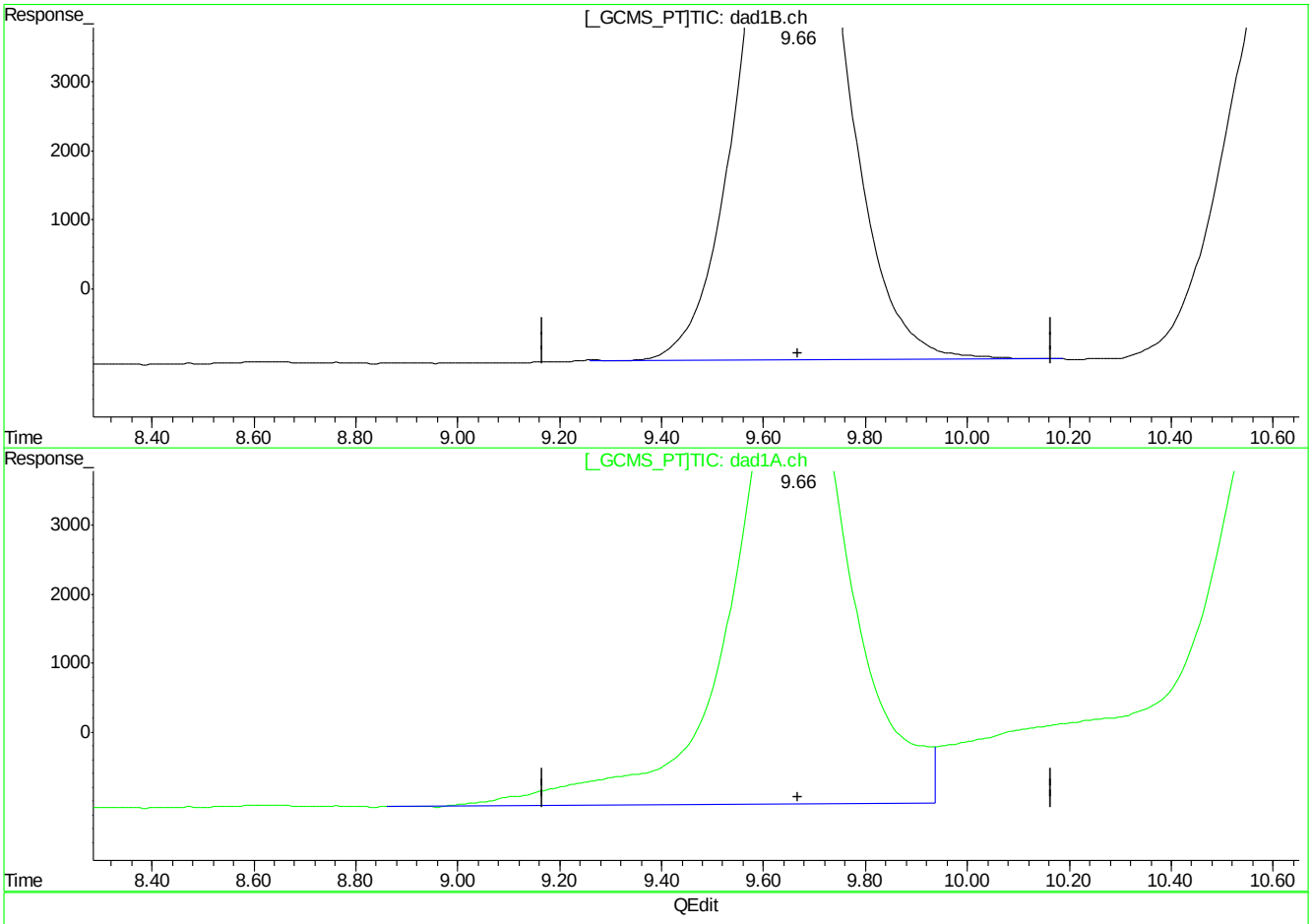
response 544560

(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:07:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.66min 93.744ppb

response 1197405

(7) 1,3-Dinitrobenzene #2

9.66min 114.509ppb

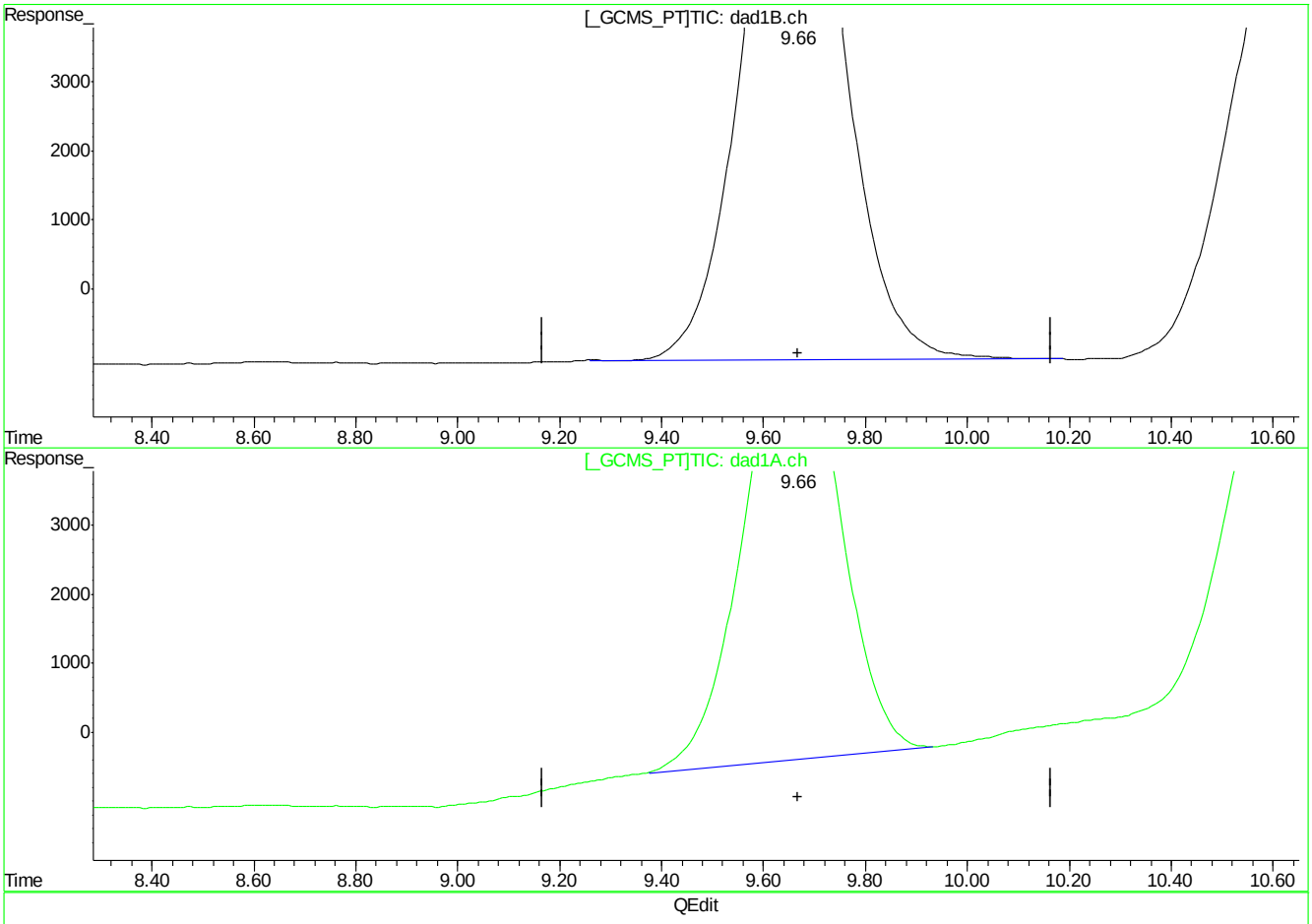
response 1111003

(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:07:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.66min 93.744ppb

response 1197405

(7) 1,3-Dinitrobenzene #2

9.66min 86.626ppb m

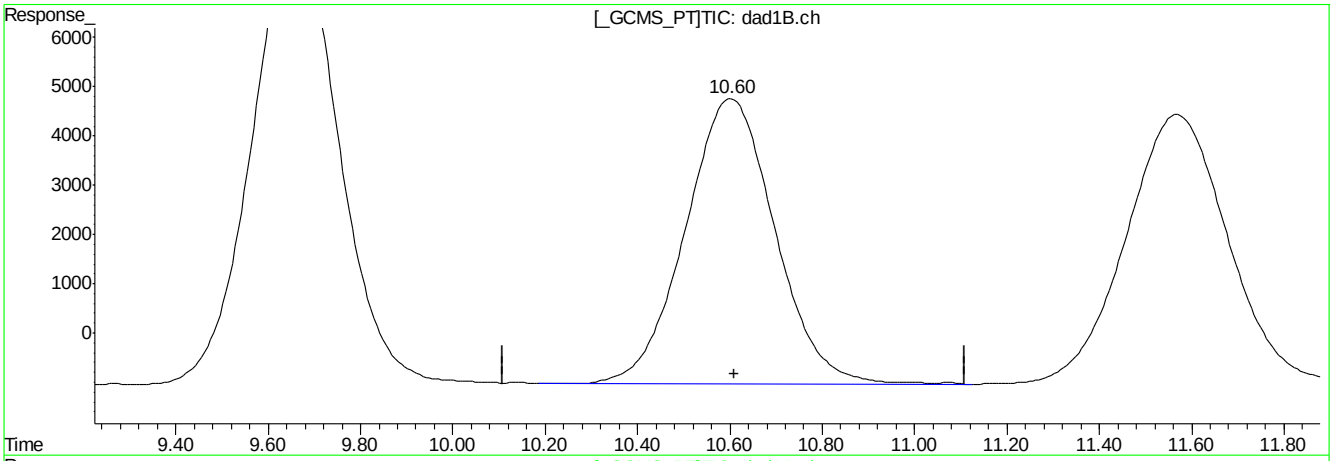
response 840474

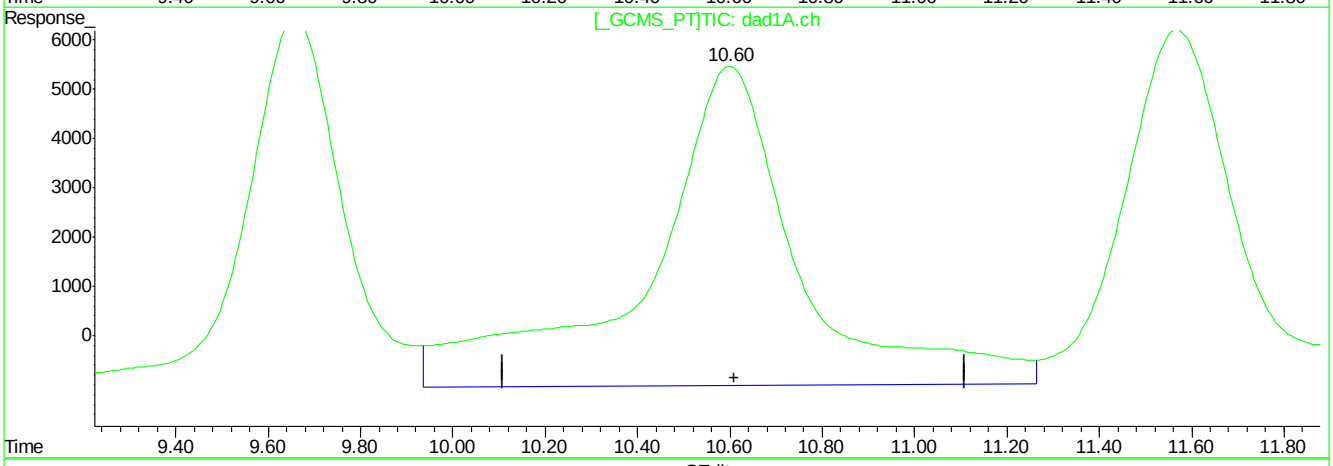
(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:07:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.60min 92.410ppb

response 781642

(8) Nitrobenzene #2

10.60min 177.792ppb

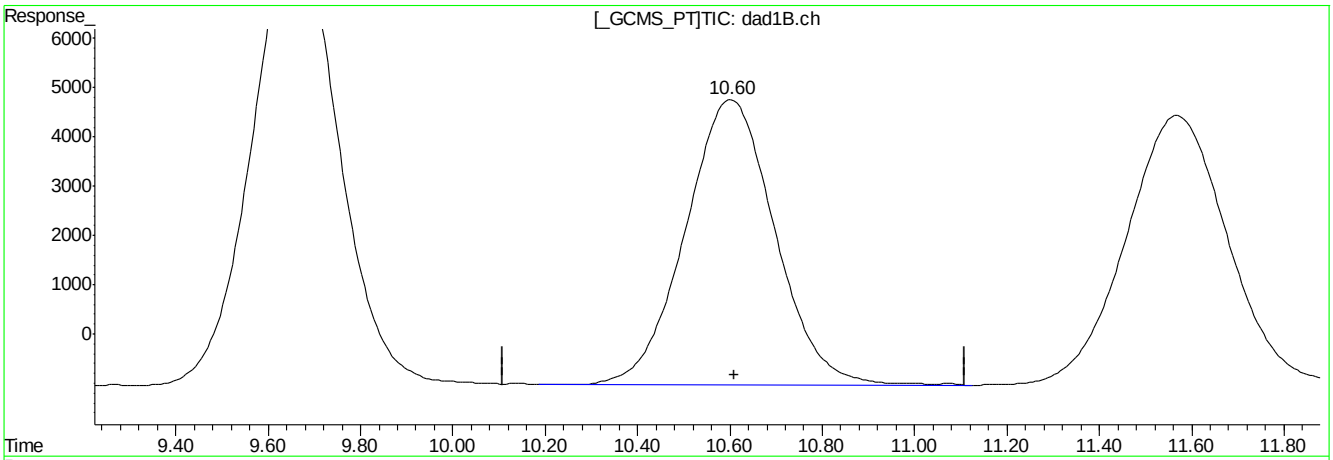
response 1469302

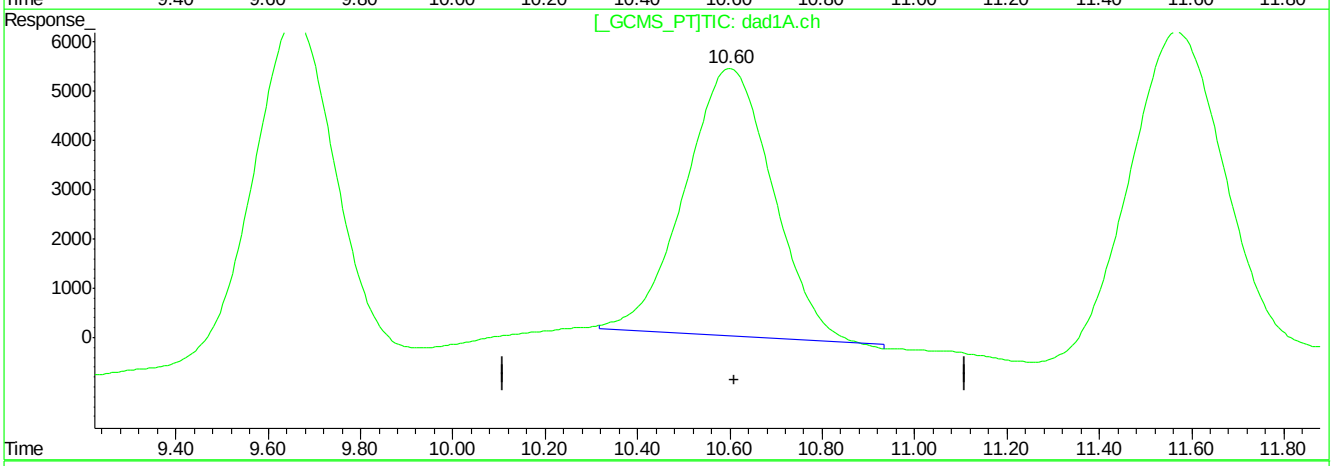
(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:07:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(8) Nitrobenzene

10.60min 92.410ppb

response 781642

(8) Nitrobenzene #2

10.60min 86.836ppb m

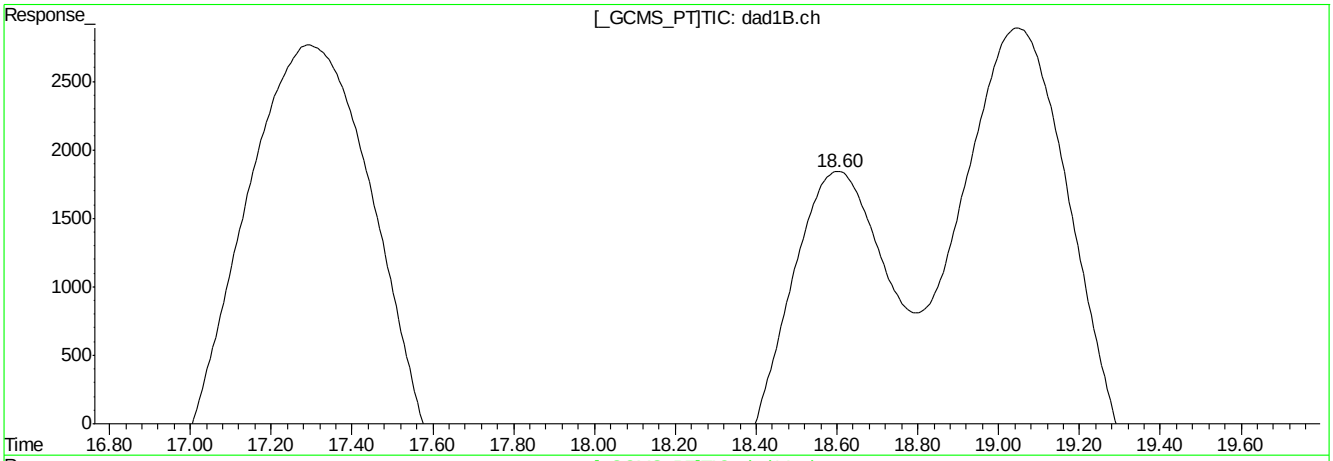
response 717630

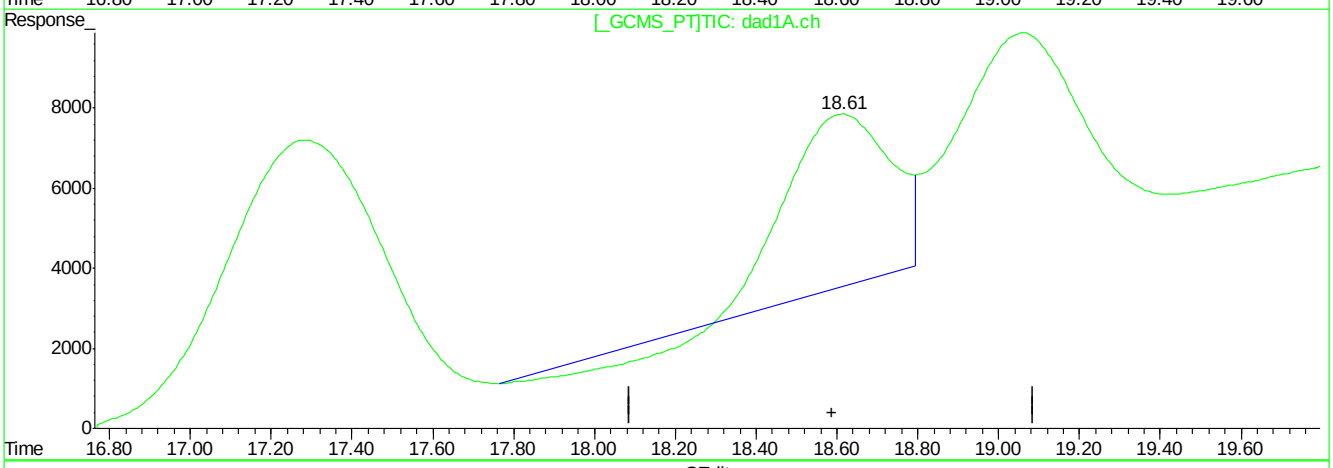
(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:07:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.60min 94.754ppb

response 550268

(19) m-Nitrotoluene #2

18.61min 72.516ppb

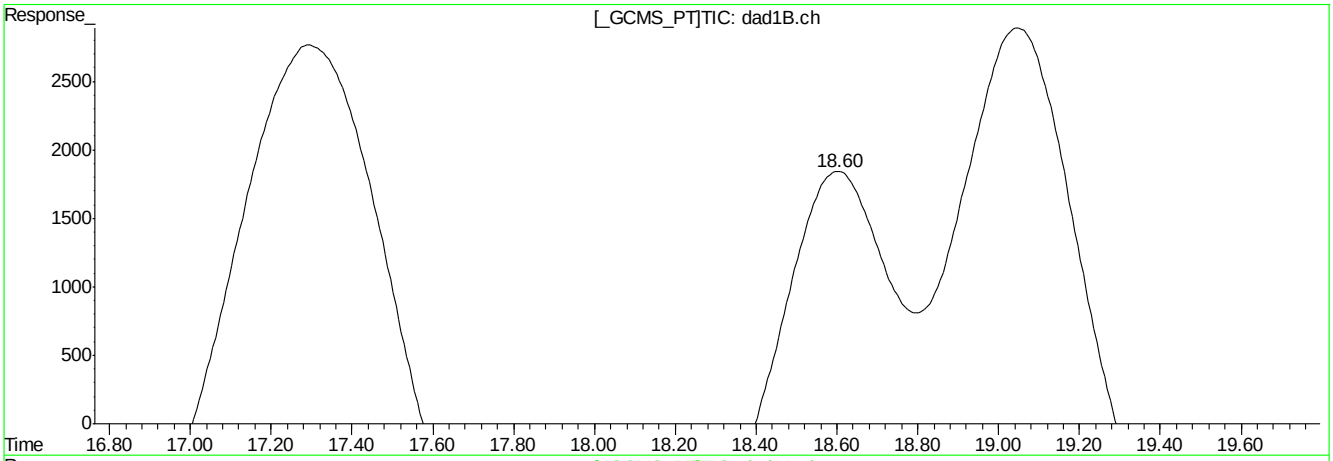
response 702444

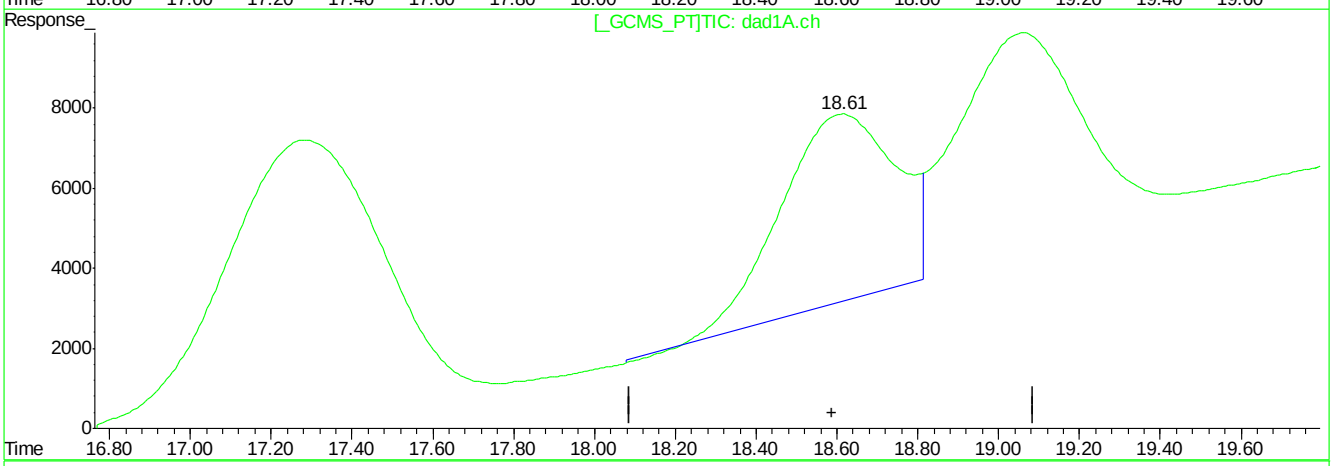
(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:08:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(19) m-Nitrotoluene

18.60min 94.754ppb

response 550268

(19) m-Nitrotoluene #2

18.61min 96.105ppb m

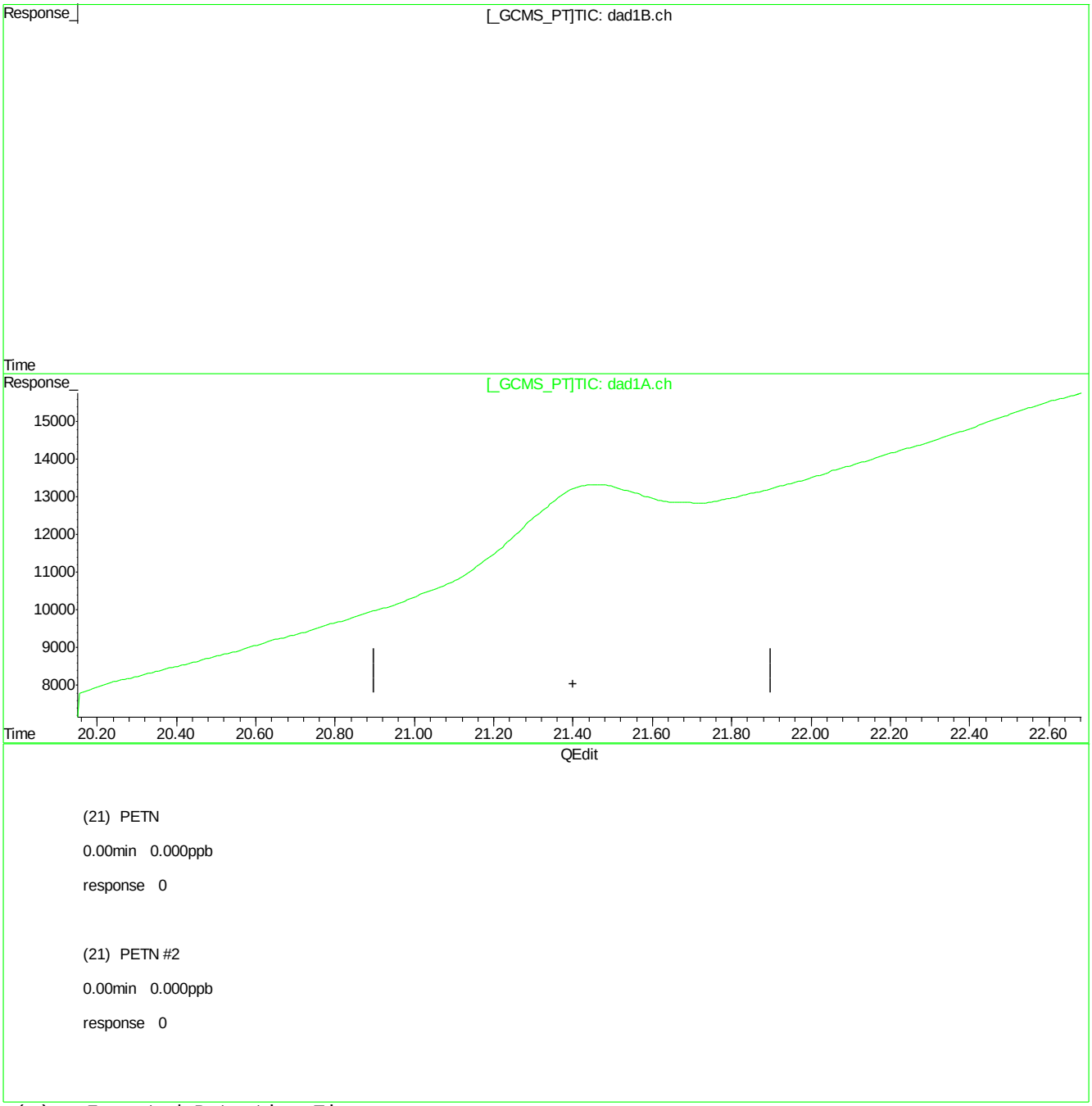
response 930945

(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:08:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration

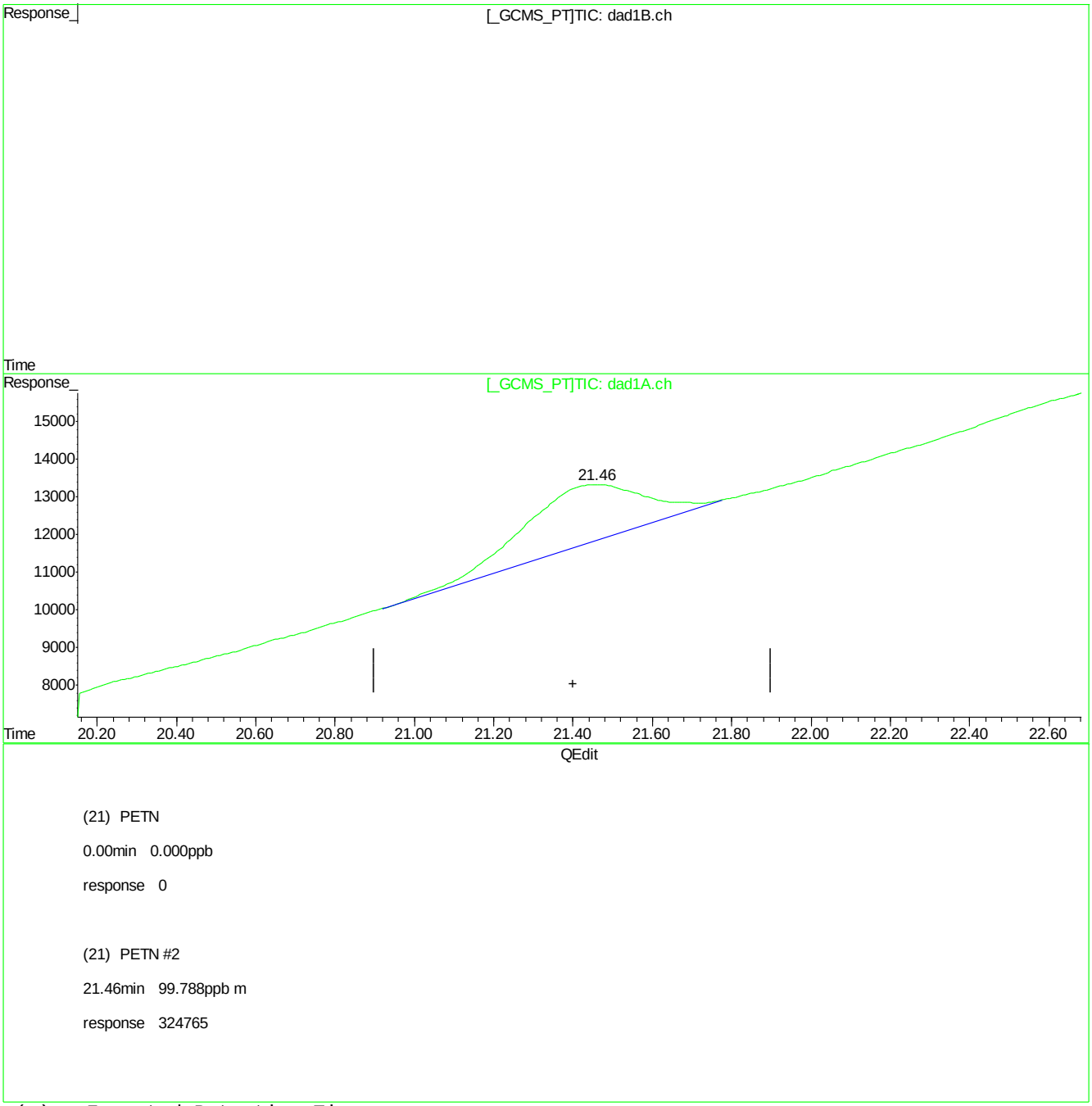


(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:08:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622002.D\dad1A.ch
Acq On : 08-Aug-2021, 18:37:20 Operator: jamesb
Sample : ic3024-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.46min 99.788ppb m

response 324765

(+) = Expected Retention Time
GG622002.D GGG3024_080821.M Mon Aug 09 10:08:48 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:11 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.83	13.83	1003456	1986936	205.404	218.862
	Spiked Amount 500.000	Range 70 - 136		Recovery =		41.08%#	43.77%#
	Target Compounds						
1)	TNX	4.78	4.78	417601	417601	90.598	91.177
2)	HMX	5.19	5.19	654230	654230	201.765	200.346
3)	DNX	5.36	5.36	1103127	1097056	186.680m	185.256m
4)	MNX	6.45	6.45	1422276	1422276	234.757	234.757
5)	1,3,5-Trinitrobe	7.48	7.48	1874732	1874732	198.713	198.713
6)	RDX	7.70	7.70	802841	802841	182.684	182.684
7)	1,3-Dinitrobenze	9.66	9.66	2466882	1838535	193.130	189.495m
8)	Nitrobenzene	10.60	10.60	1584060	1662149	187.277	201.127
9)	2,4,6-Trinitroto	11.58	11.58	1736799	2508007	189.700	192.849
10)	Nitroglycerin	0.00	12.35	0	775277	N.D.	244.979 #
11)	Tetryl	12.82	12.82	1356093	2416141	191.101	195.009
13)	2,6-Dinitrotolue	14.17	14.17	1170706	1690452	185.652	183.386
14)	2,4-Dinitrotolue	14.81	14.81	2212342	1503408	191.858	189.356
15)	3,5-Dinitroanili	15.49	15.49	1869967	3052376	189.773	196.291
16)	o-Nitrotoluene	16.37	16.37	972002	1444098	187.601	197.117
17)	p-Nitrotoluene	17.30	17.28	2047770	3555924	385.172	386.735
18)	4-Amino-2,6-Dini	17.30	17.28	2047770	3555924	385.172	386.735
19)	m-Nitrotoluene	18.60	18.60	1105696	1811034	190.397	186.960m
20)	2-Amino-4,6-Dini	19.05	19.06	1658293	2157095	191.784	181.537
21)	PETN	0.00	21.42	0	601835	N.D. d	184.922m

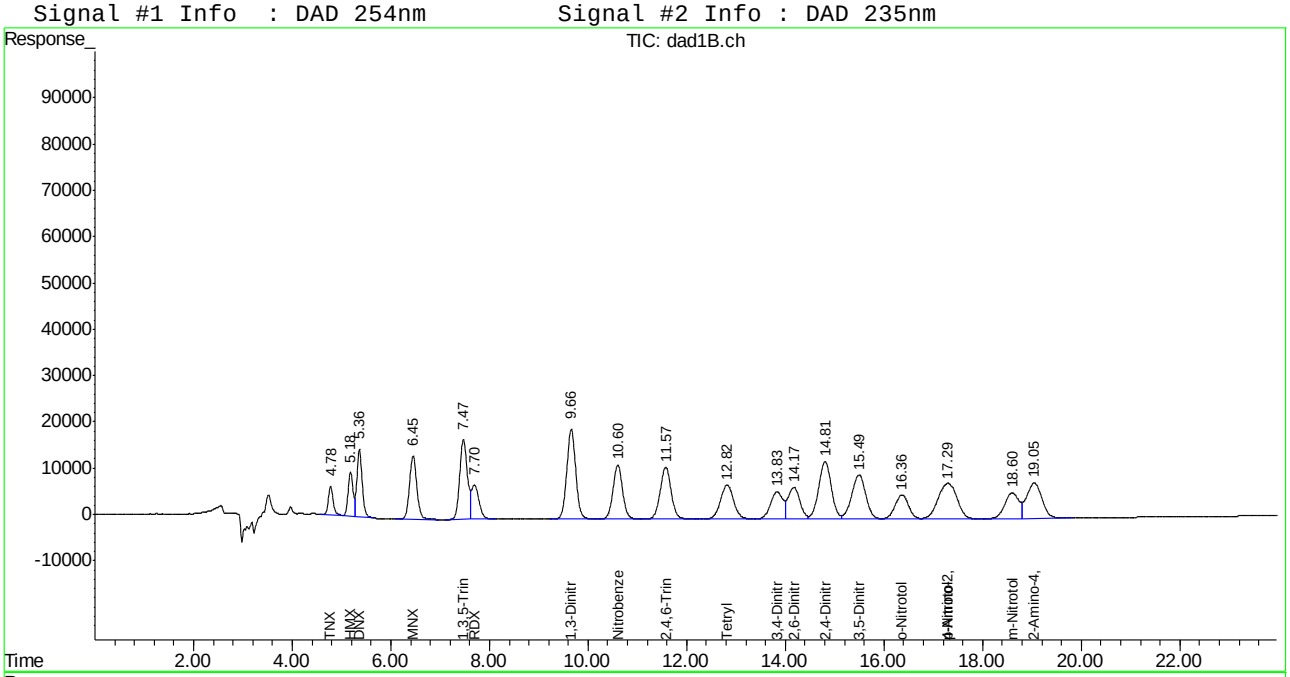
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622003.D GGG3024_080821.M Mon Aug 09 10:17:37 2021 Page 1

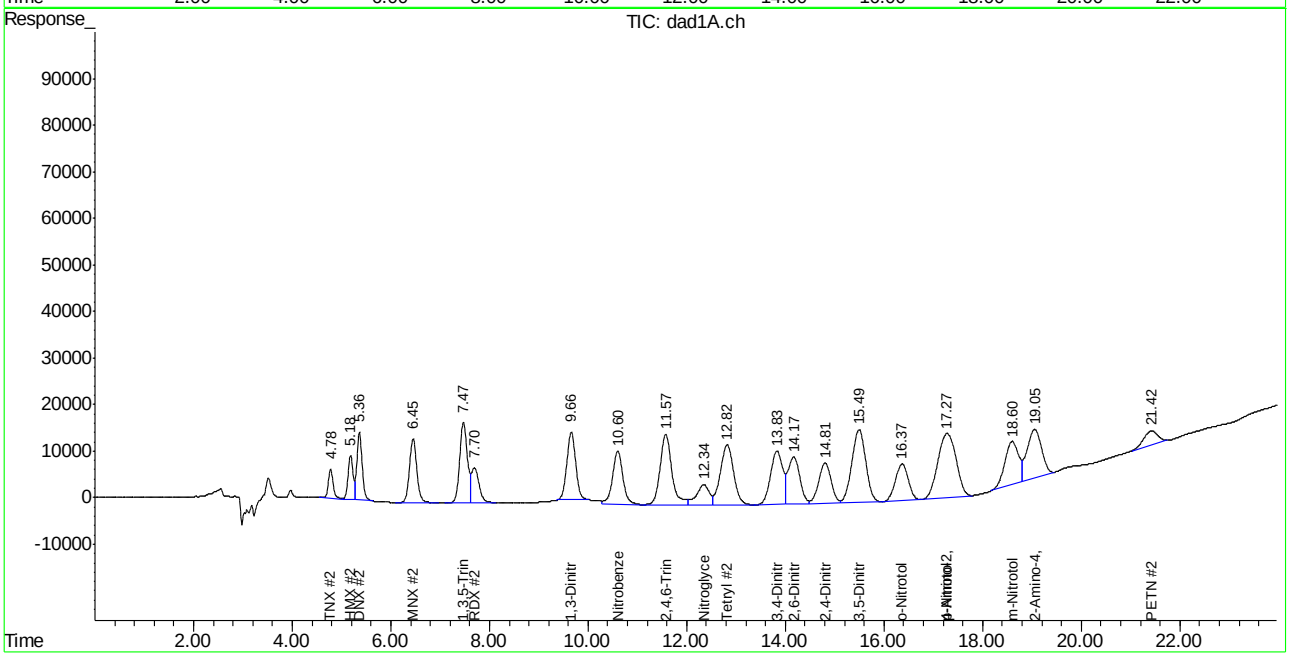
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:06 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

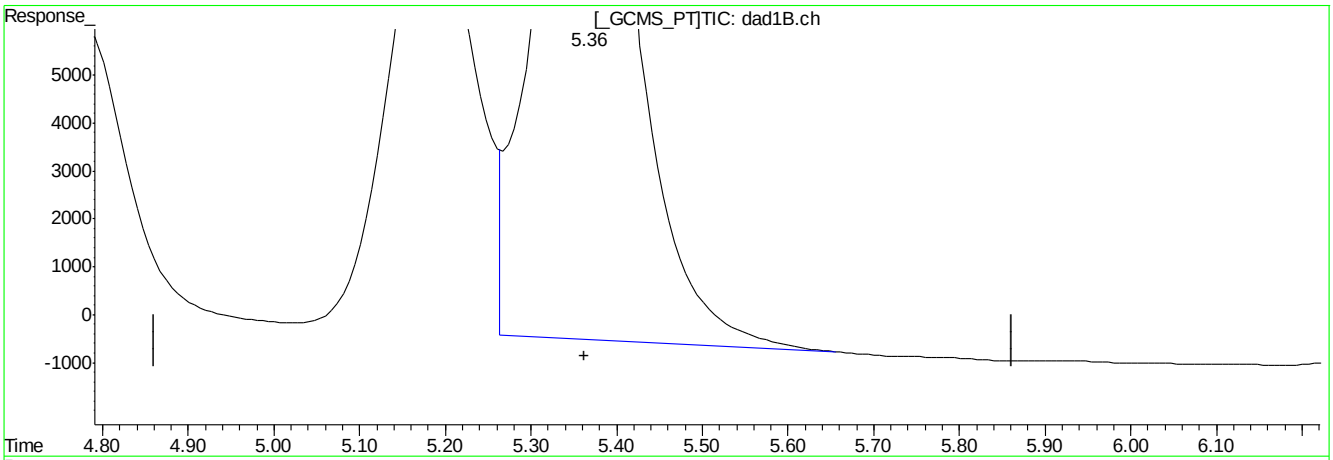
Sample Number: GGG3024-IC3024
Lab FileID: GG622003.D
Injection Time: 08/08/21 19:08
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

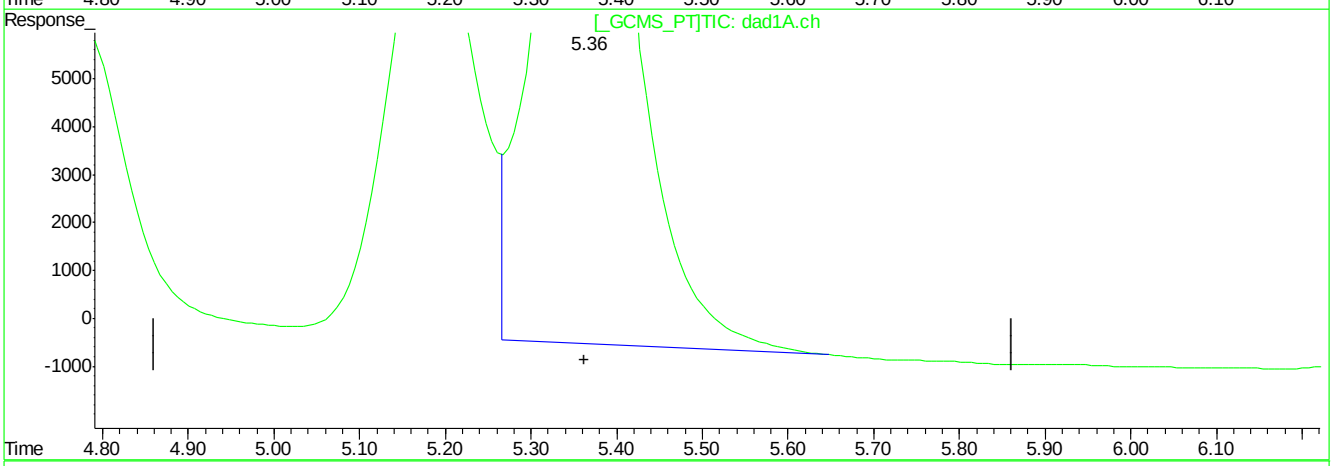
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	5.36	Poor instrument integration
DNX		2	5.36	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	9.66	Poor instrument integration
m-Nitrotoluene	99-08-1	2	18.60	Poor instrument integration
PETN	78-11-5	2	21.42	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(3) DNX

5.36min 186.680ppb m

response 1103127

(3) DNX #2

5.36min 185.256ppb m

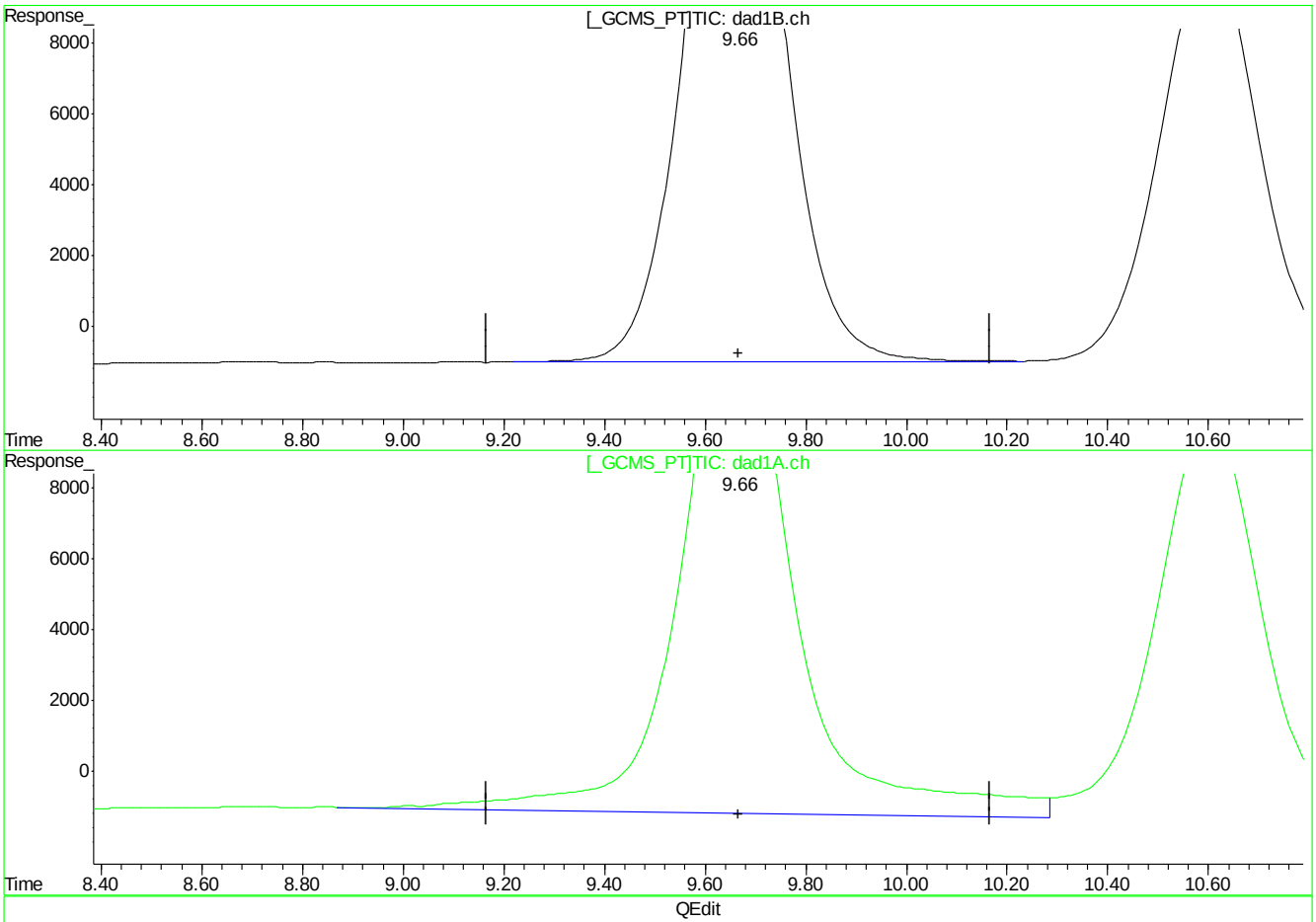
response 1097056

(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:05:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.66min 193.130ppb

response 2466882

(7) 1,3-Dinitrobenzene #2

9.66min 235.022ppb

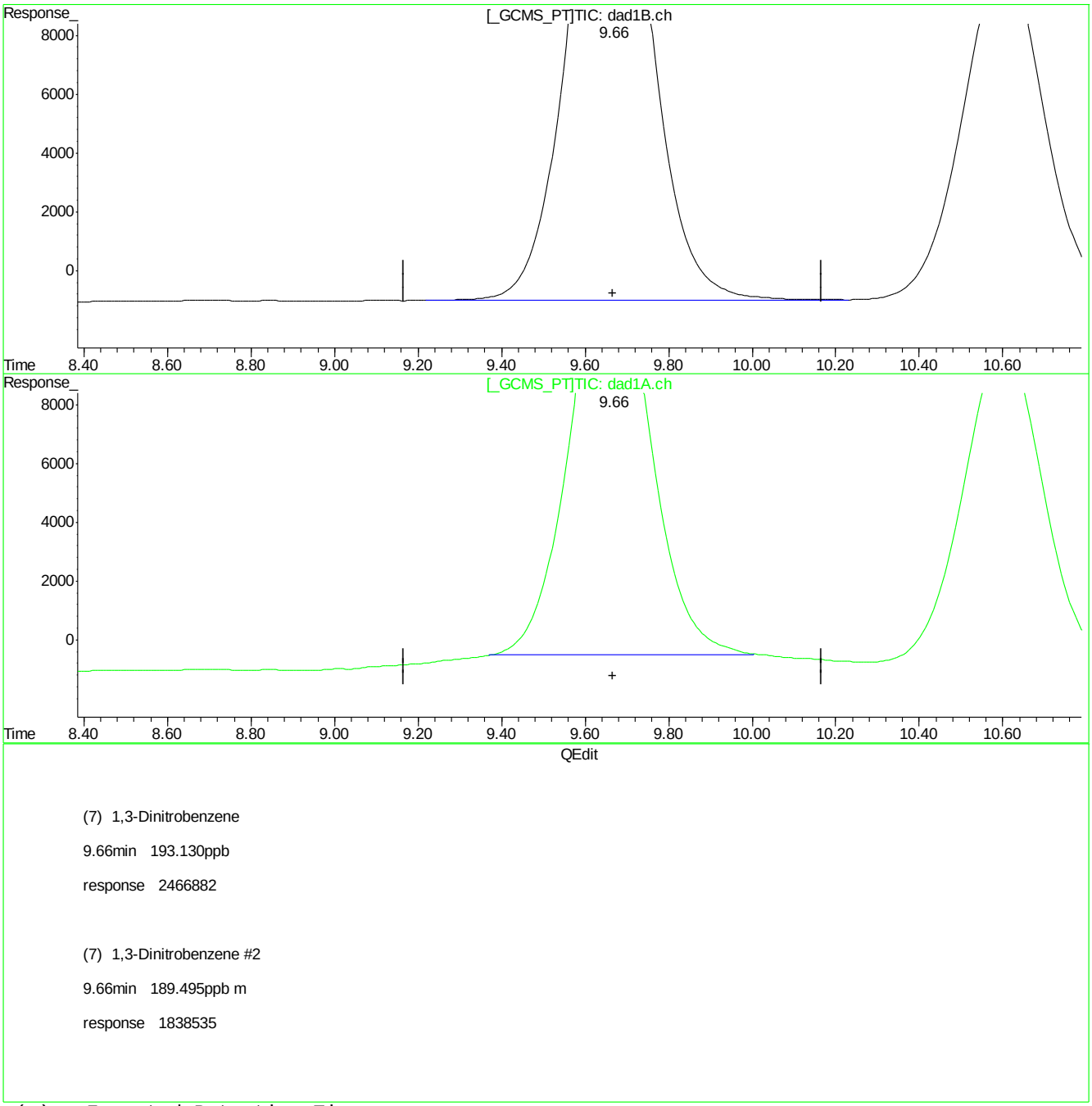
response 2280257

(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:06:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

9.66min 193.130ppb

response 2466882

(7) 1,3-Dinitrobenzene #2

9.66min 189.495ppb m

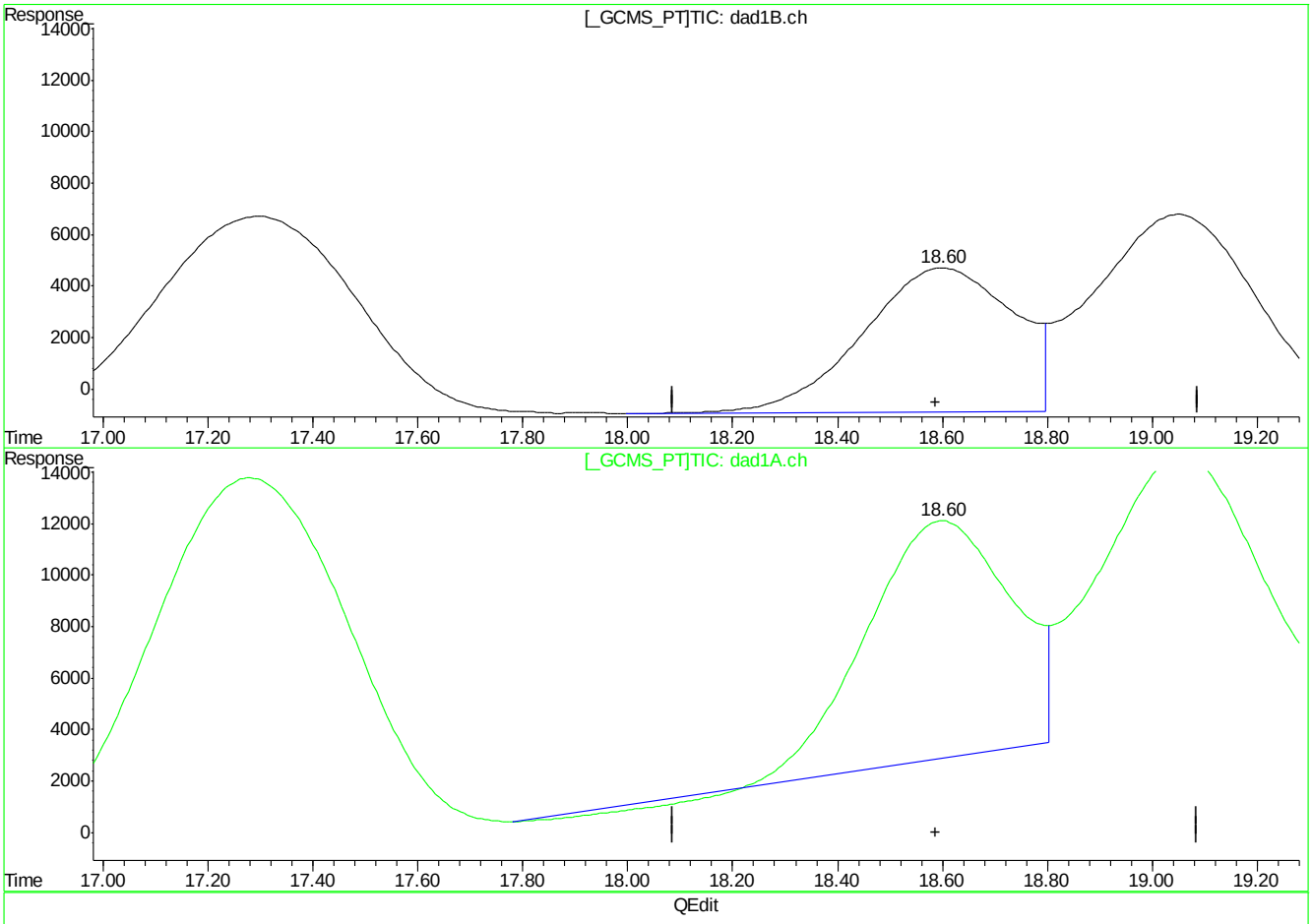
response 1838535

(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:06:09 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(19) m-Nitrotoluene

18.60min 190.397ppb

response 1105696

(19) m-Nitrotoluene #2

18.60min 178.193ppb

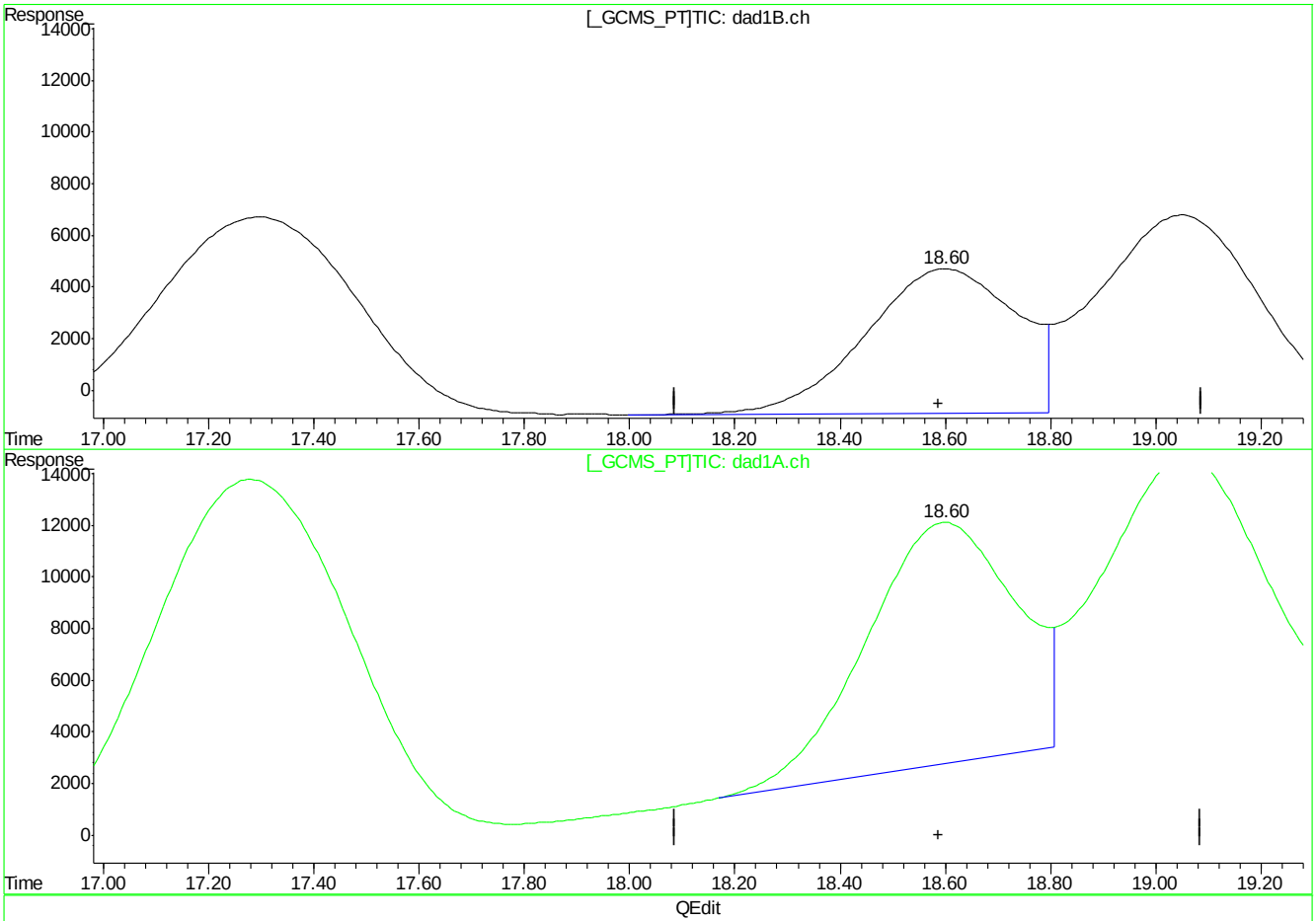
response 1726108

(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:06:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(19) m-Nitrotoluene

18.60min 190.397ppb

response 1105696

(19) m-Nitrotoluene #2

18.60min 186.960ppb m

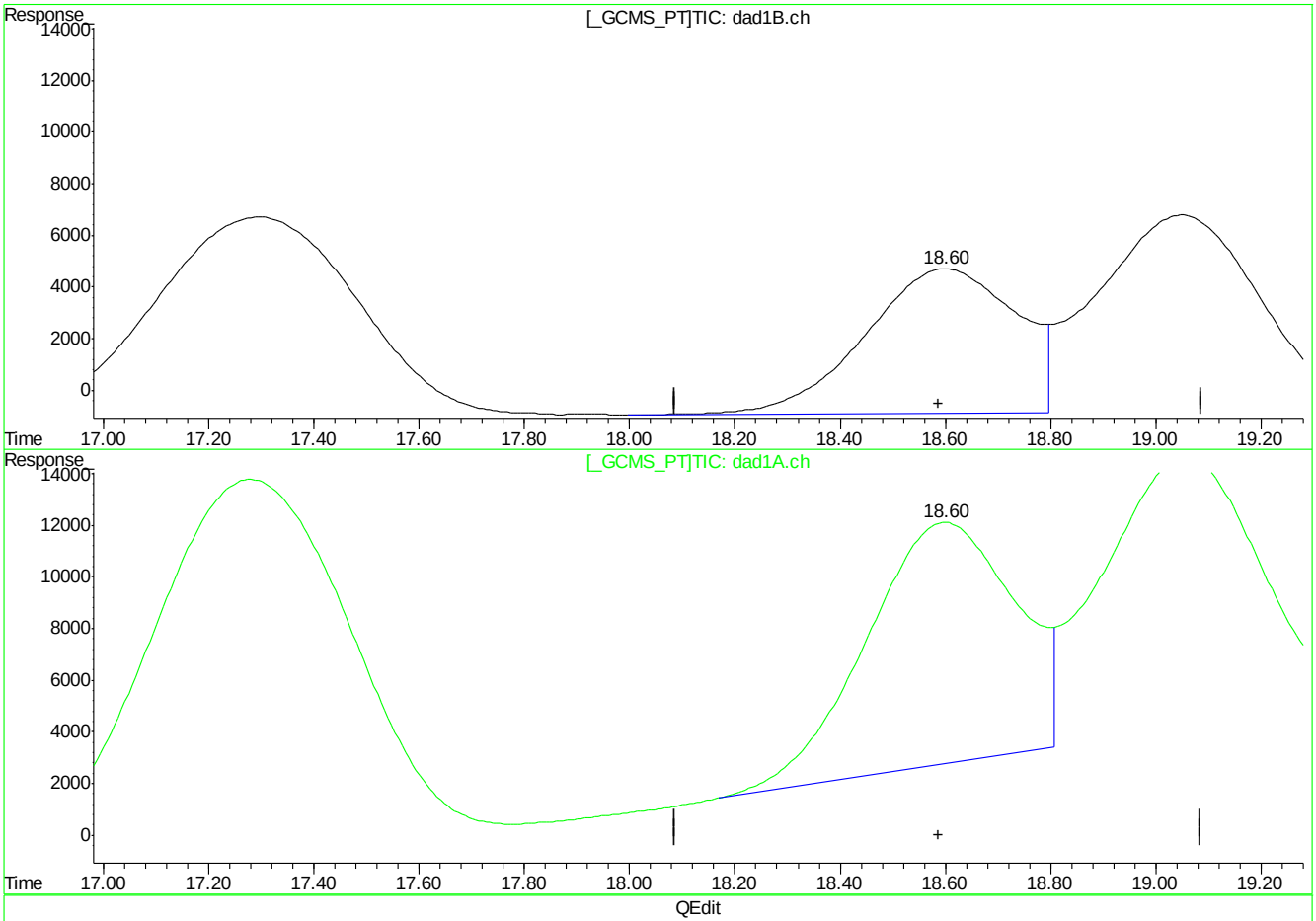
response 1811034

(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:06:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(19) m-Nitrotoluene

18.60min 190.397ppb

response 1105696

(19) m-Nitrotoluene #2

18.60min 186.960ppb m

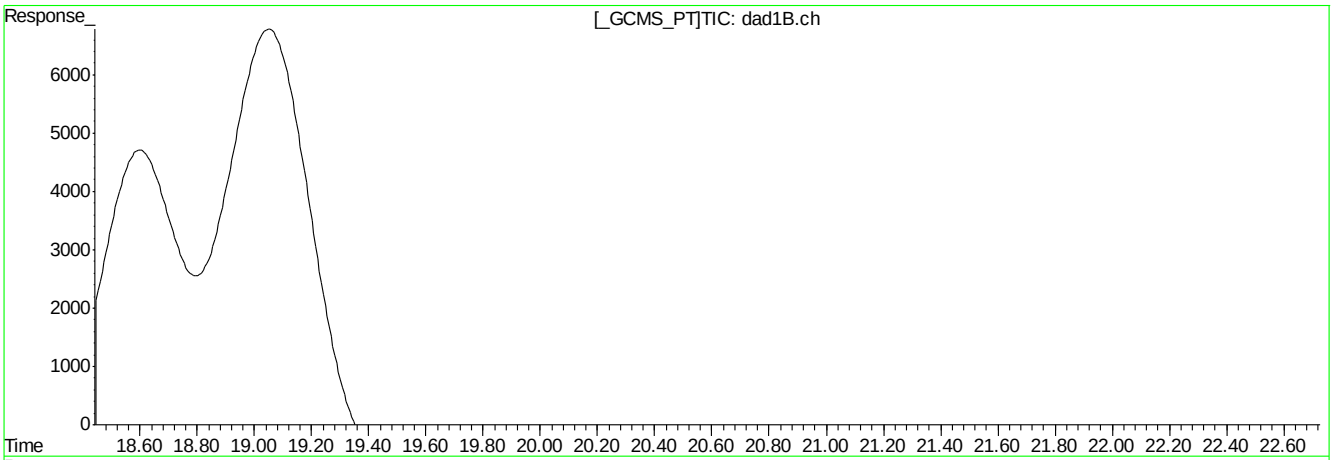
response 1811034

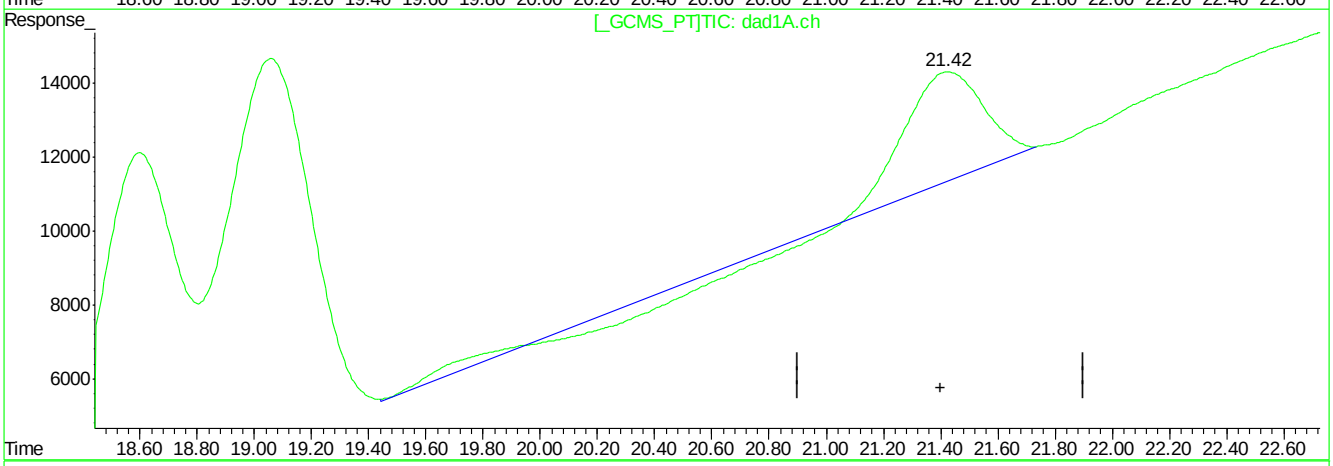
(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:06:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.43min 134.990ppb

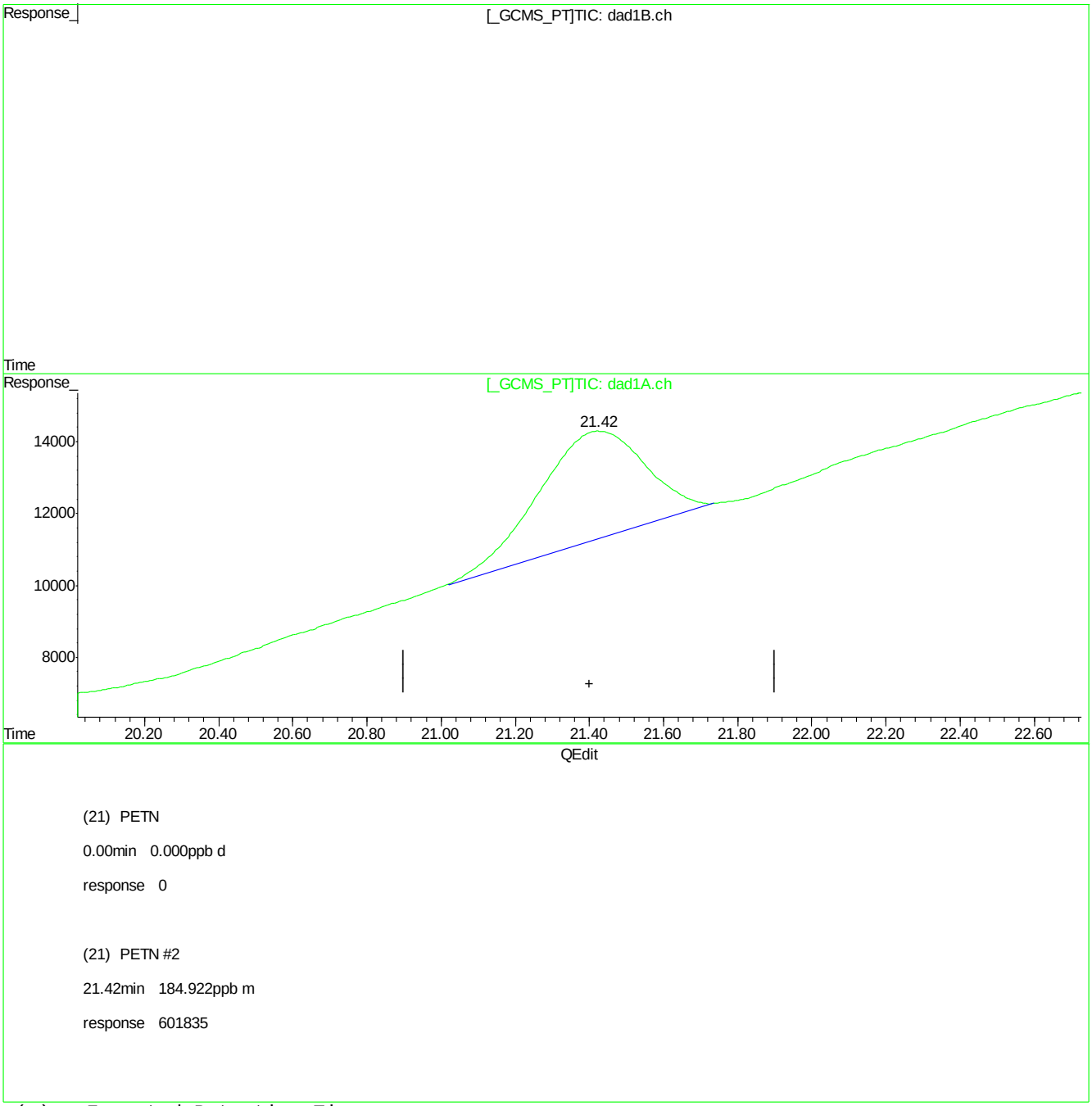
response 439330

(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:06:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622003.D\dad1A.ch
Acq On : 08-Aug-2021, 19:08:46 Operator: jamesb
Sample : ic3024-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.42min 184.922ppb m

response 601835

(+) = Expected Retention Time
GG622003.D GGG3024_080821.M Mon Aug 09 10:07:00 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1A.ch
Acq On : 08-Aug-2021, 19:40:11 Operator: jamesb
Sample : ic3024-500 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:12 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.85	13.85	2454479	4772341	502.424	525.676
	Spiked Amount 500.000	Range 70 - 136		Recovery =		100.48%	105.14%
	Target Compounds						
1)	TNX	4.78	4.78	968875	968875	210.195	211.541
2)	HMX	5.19	5.19	1578840	1578840	486.915	483.491
3)	DNX	5.37	5.37	2656372	2656372	449.532	448.572
4)	MNX	6.46	6.46	3479939	3479939	574.390	574.390
5)	1,3,5-Trinitrobe	7.48	7.48	4563158	4563158	483.673	483.673
6)	RDX	7.70	7.70	1980125	1980125	450.572	450.572
7)	1,3-Dinitrobenze	9.67	9.67	6014993	4292464	470.909	442.417m
8)	Nitrobenzene	10.61	10.61	3890841	3963359	459.997	479.584
9)	2,4,6-Trinitroto	11.58	11.58	4236318	5896693	462.708	453.416
10)	Nitroglycerin	0.00	12.36	0	1598288	N.D.	505.041 #
11)	Tetryl	12.83	12.83	3352033	5822929	472.368	469.974
13)	2,6-Dinitrotolue	14.19	14.19	2891271	4267209	458.502	462.922
14)	2,4-Dinitrotolue	14.82	14.82	5439363	3982881	471.711	501.649
15)	3,5-Dinitroanili	15.50	15.50	4602026	7636462	467.034	491.082
16)	o-Nitrotoluene	16.37	16.37	2423246	3649392	467.697	498.137
17)	p-Nitrotoluene	17.31	17.30	5054642	9201731	950.746	1000.761
18)	4-Amino-2,6-Dini	17.31	17.30	5054642	9201731	950.746	1000.761
19)	m-Nitrotoluene	18.62	18.63	2722224	4736371	468.757	488.953
20)	2-Amino-4,6-Dini	19.07	19.08	4034430	5753154	466.587	484.173
21)	PETN	0.00	21.44	0	1615551	N.D.	496.399m#

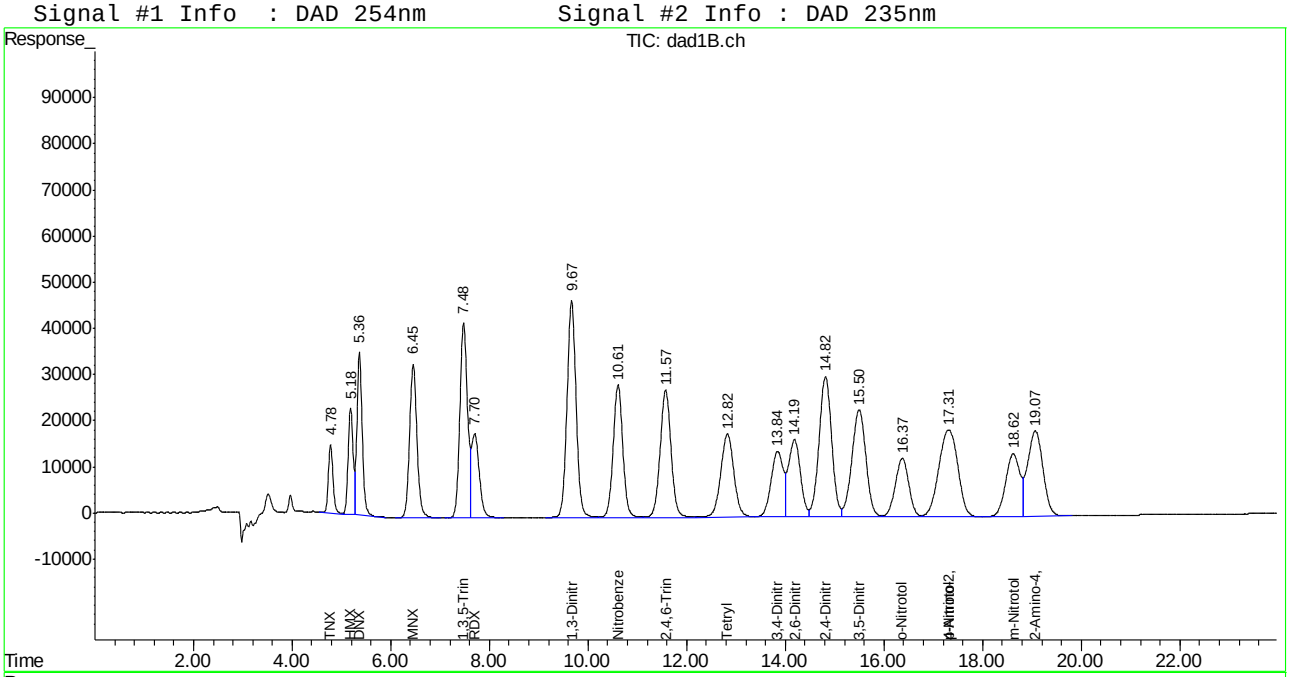
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622004.D GGG3024_080821.M Mon Aug 09 10:17:38 2021 Page 1

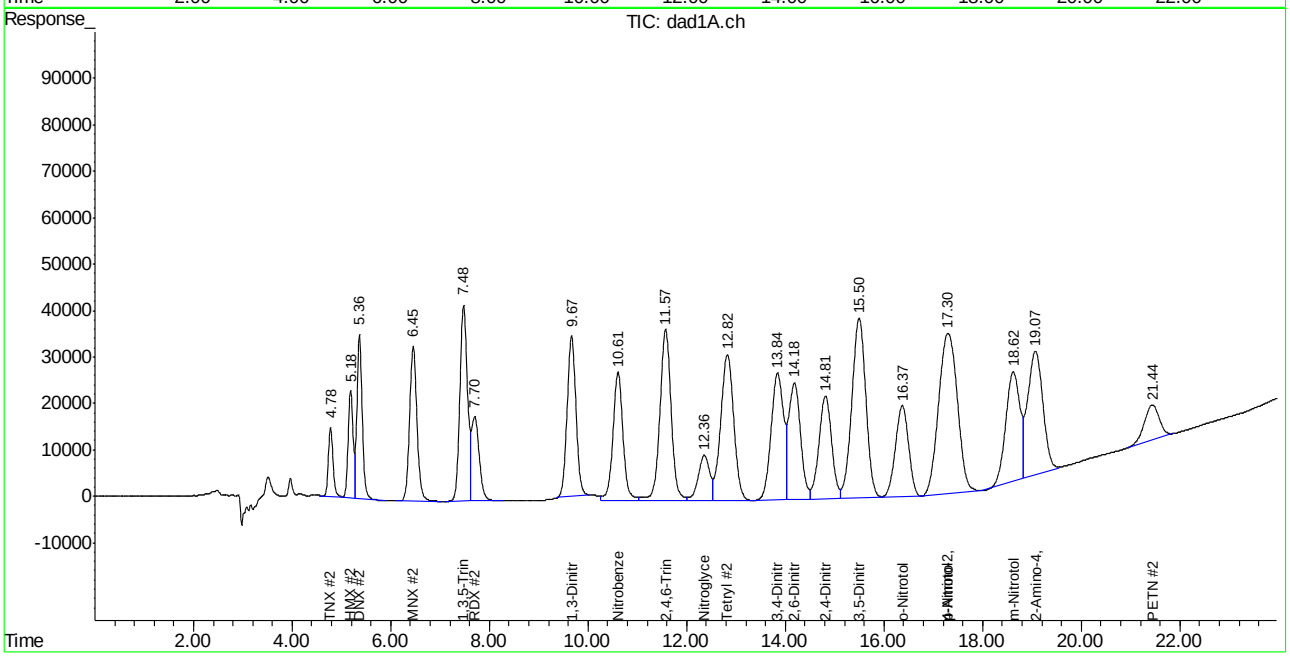
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1A.ch
Acq On : 08-Aug-2021, 19:40:11 Operator: jamesb
Sample : ic3024-500 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:05 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

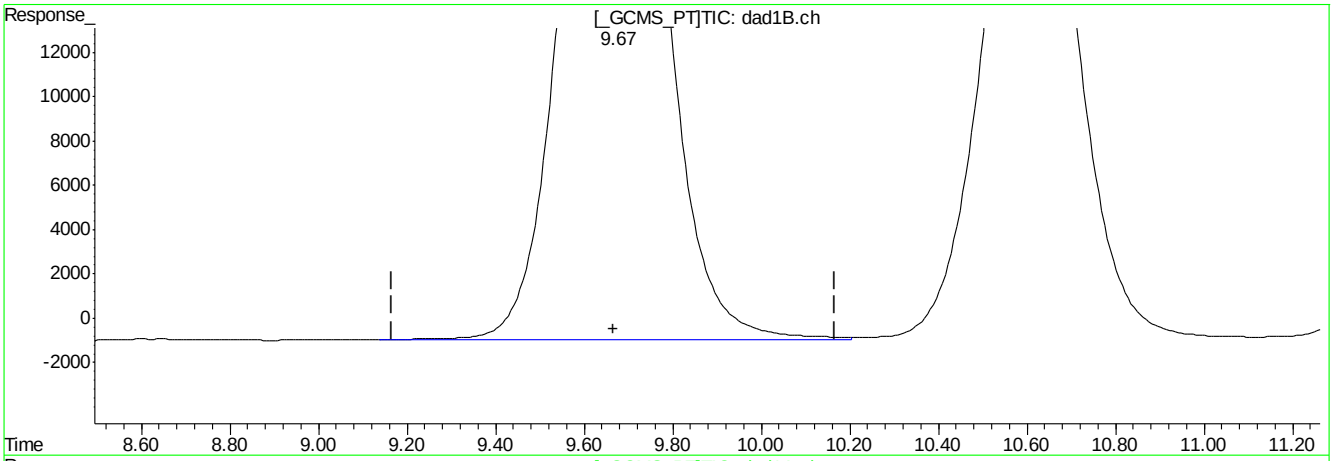
Sample Number: GGG3024-IC3024
Lab FileID: GG622004.D
Injection Time: 08/08/21 19:40
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

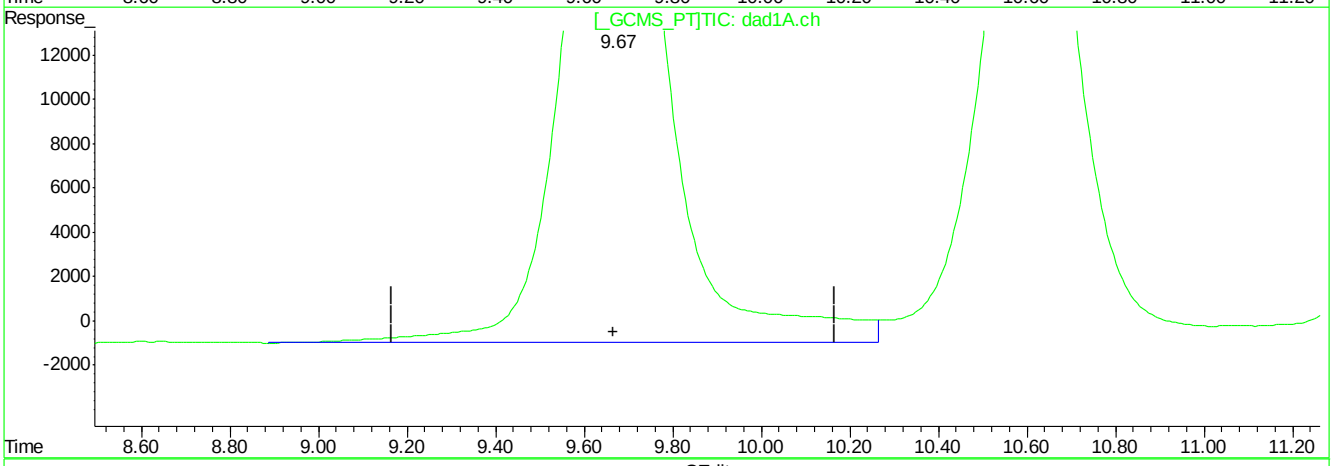
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	9.67	Poor instrument integration
PETN	78-11-5	2	21.44	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1A.ch
Acq On : 08-Aug-2021, 19:40:11 Operator: jamesb
Sample : ic3024-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.67min 470.909ppb

response 6014993

(7) 1,3-Dinitrobenzene #2

9.67min 506.215ppb

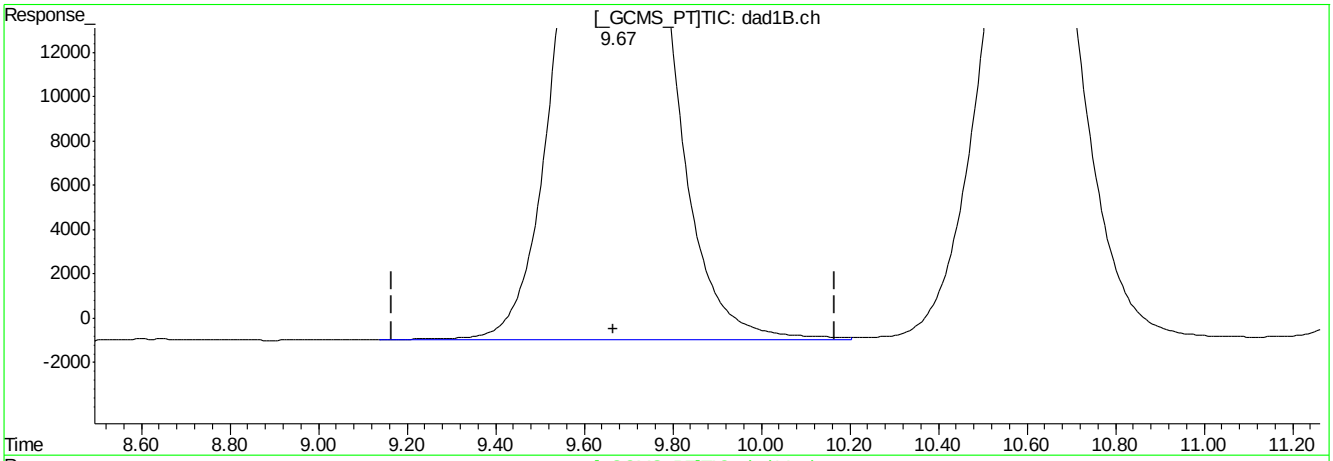
response 4911455

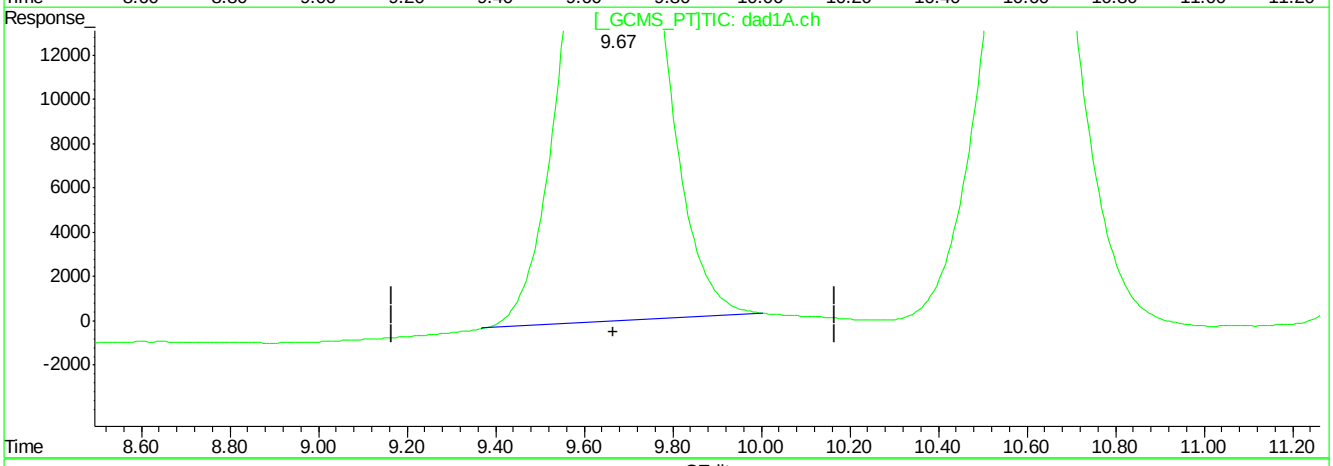
(+) = Expected Retention Time
GG622004.D GGG3024_080821.M Mon Aug 09 10:04:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1A.ch
Acq On : 08-Aug-2021, 19:40:11 Operator: jamesb
Sample : ic3024-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

9.67min 470.909ppb

response 6014993

(7) 1,3-Dinitrobenzene #2

9.67min 442.417ppb m

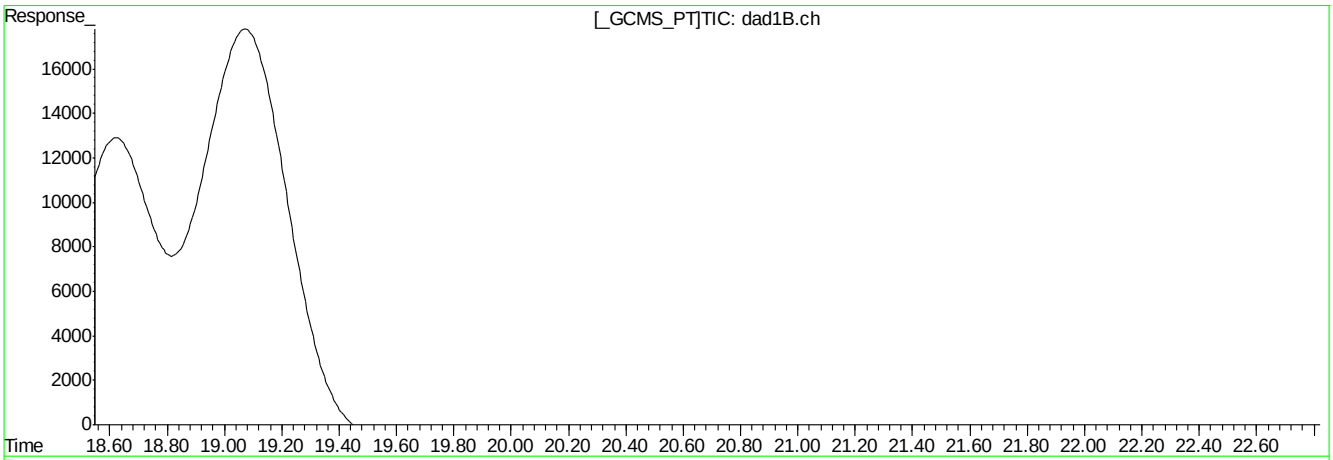
response 4292464

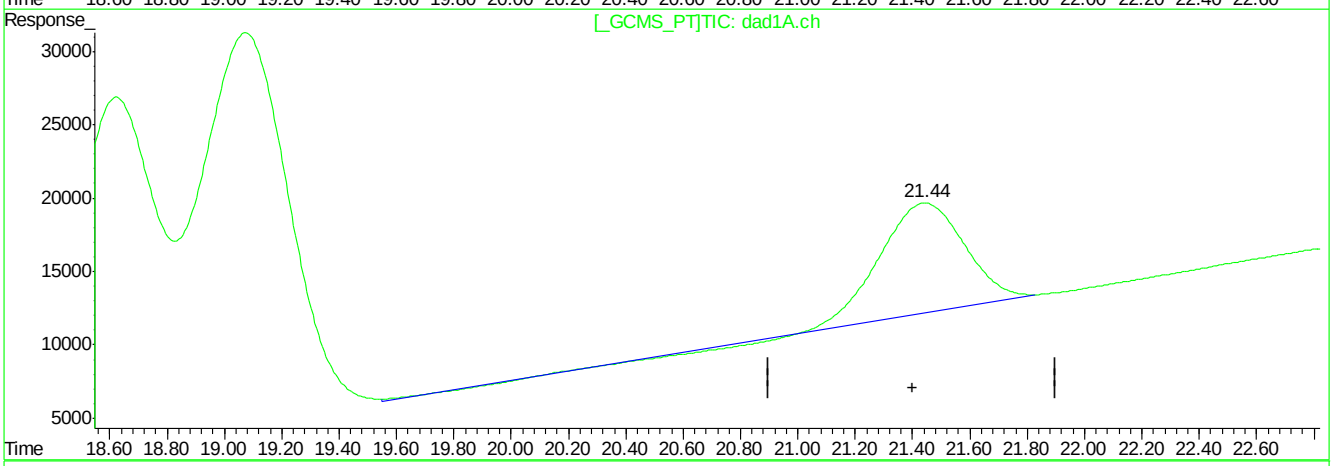
(+) = Expected Retention Time
GG622004.D GGG3024_080821.M Mon Aug 09 10:04:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1A.ch
Acq On : 08-Aug-2021, 19:40:11 Operator: jamesb
Sample : ic3024-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.45min 450.068ppb

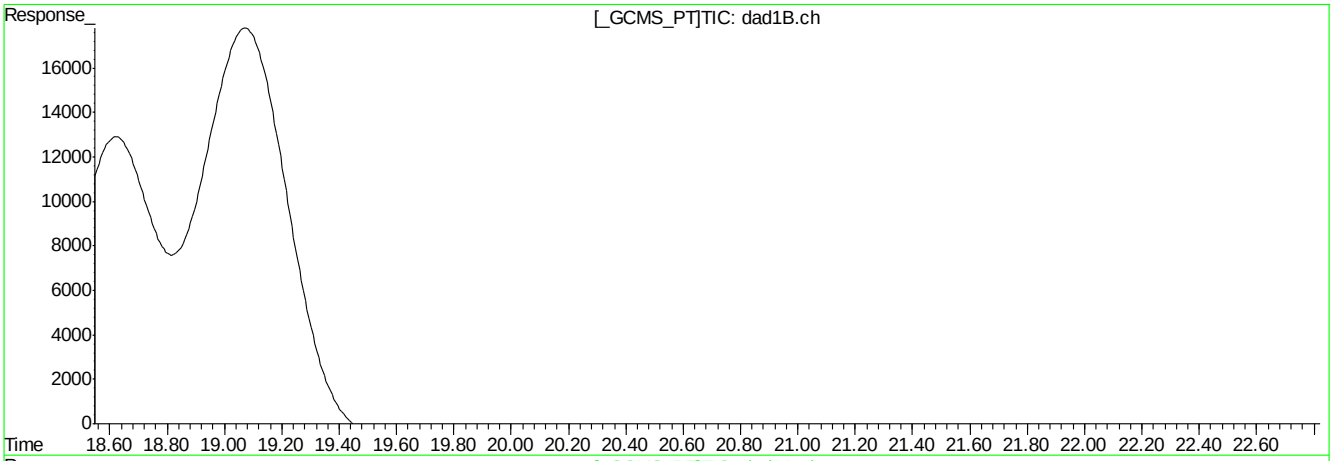
response 1464765

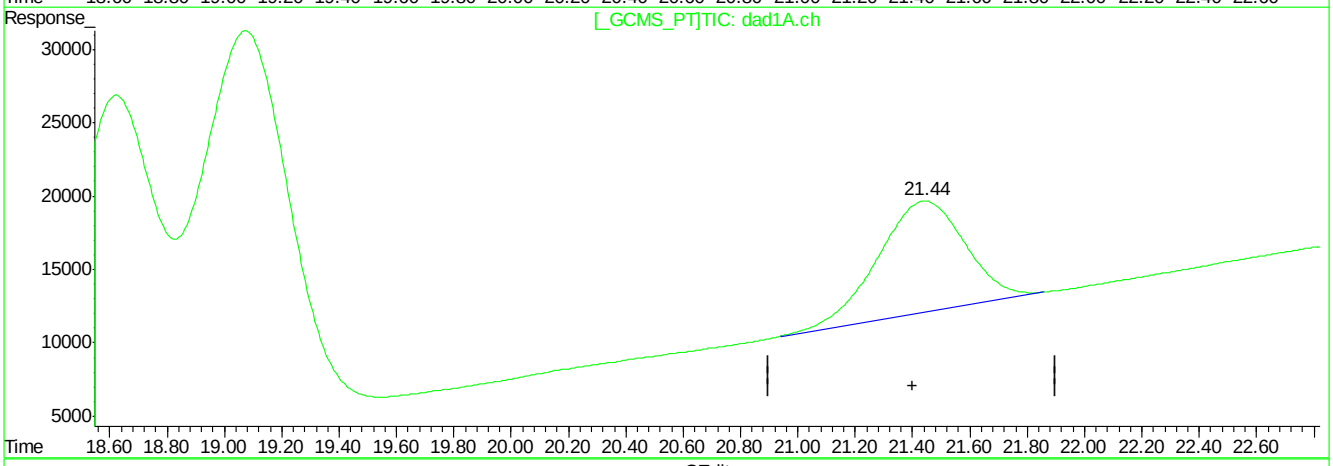
(+) = Expected Retention Time
GG622004.D GGG3024_080821.M Mon Aug 09 10:05:16 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622004.D\dad1A.ch
Acq On : 08-Aug-2021, 19:40:11 Operator: jamesb
Sample : ic3024-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.44min 496.399ppb m

response 1615551

(+) = Expected Retention Time
GG622004.D GGG3024_080821.M Mon Aug 09 10:05:21 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1A.ch
Acq On : 08-Aug-2021, 20:11:36 Operator: jamesb
Sample : icc3024-1000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:13 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.83	13.83	4915906	9549235	1006.270	1051.853
	Spiked Amount 500.000	Range 70 - 136		Recovery =		201.25%#	210.37%#
	Target Compounds						
1)	TNX	4.78	4.78	1954429	1954429	424.009	426.723
2)	HMX	5.18	5.18	3150326	3150326	971.563	964.731
3)	DNX	5.36	5.36	5303950	5303950	897.575	895.659
4)	MNX	6.45	6.45	6937389	6937389	1145.069	1145.069
5)	1,3,5-Trinitrobe	7.48	7.48	9104485	9104485	965.032	965.032
6)	RDX	7.71	7.71	3955472	3955472	900.058	900.058
7)	1,3-Dinitrobenze	9.67	9.67	12005156	9463217	939.874	975.357
8)	Nitrobenzene	10.61	10.61	7797387	7973332	921.851	964.808
9)	2,4,6-Trinitroto	11.58	11.58	8440762	11344438	921.935	872.311
10)	Nitroglycerin	0.00	12.35	0	3040460	N.D.	960.751 #
11)	Tetryl	12.82	12.82	6723694	11562907	947.502	933.252
13)	2,6-Dinitrotolue	14.18	14.17	5760009	8237098	913.431	893.590
14)	2,4-Dinitrotolue	14.81	14.81	10854356	7604790	941.308	957.833
15)	3,5-Dinitroanili	15.49	15.49	9189652	14912298	932.607	958.973
16)	o-Nitrotoluene	16.36	16.36	4877601	7217149	941.399	985.130
17)	p-Nitrotoluene	17.28	17.27	10105442	18308327	1900.769	1991.176
18)	4-Amino-2,6-Dini	17.28	17.27	10105442	18308327	1900.769	1991.176
19)	m-Nitrotoluene	18.59	18.59	5440488	9400492	936.832	970.448
20)	2-Amino-4,6-Dini	19.03	19.03	8041950	11433378	930.063	962.209
21)	PETN	0.00	21.40	0	3215127	N.D.	987.890m#

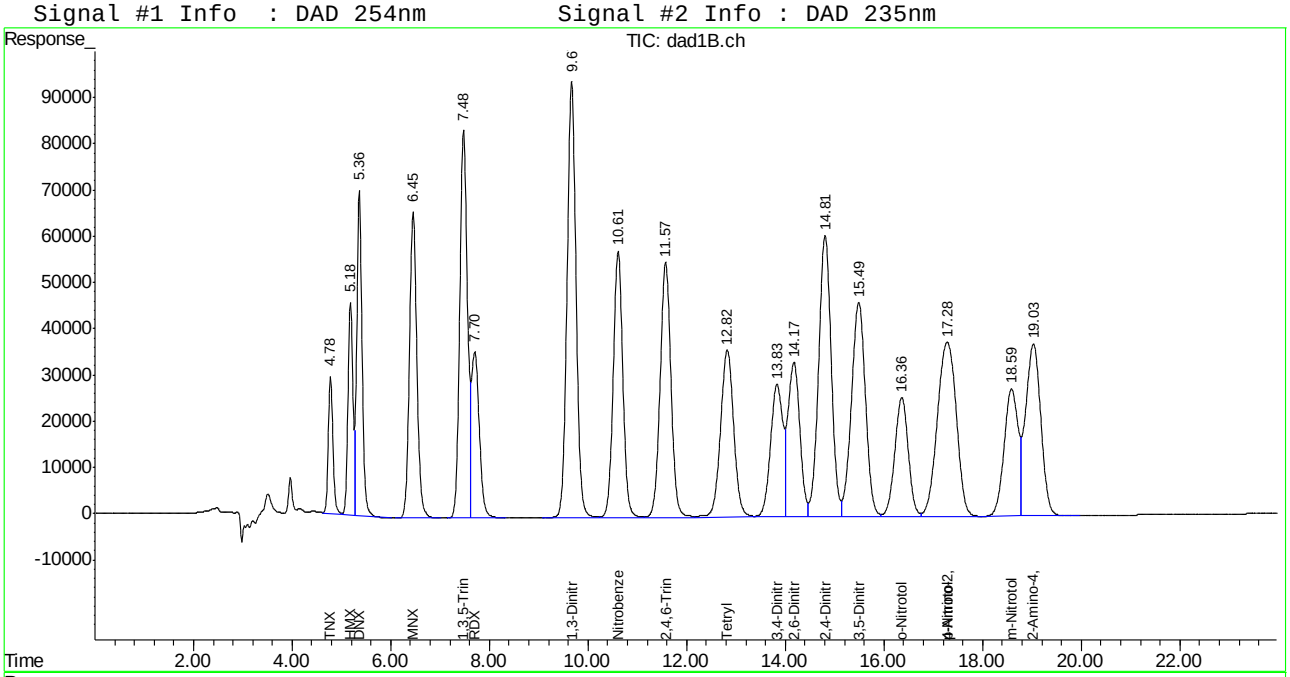
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622005.D GGG3024_080821.M Mon Aug 09 10:17:39 2021 Page 1

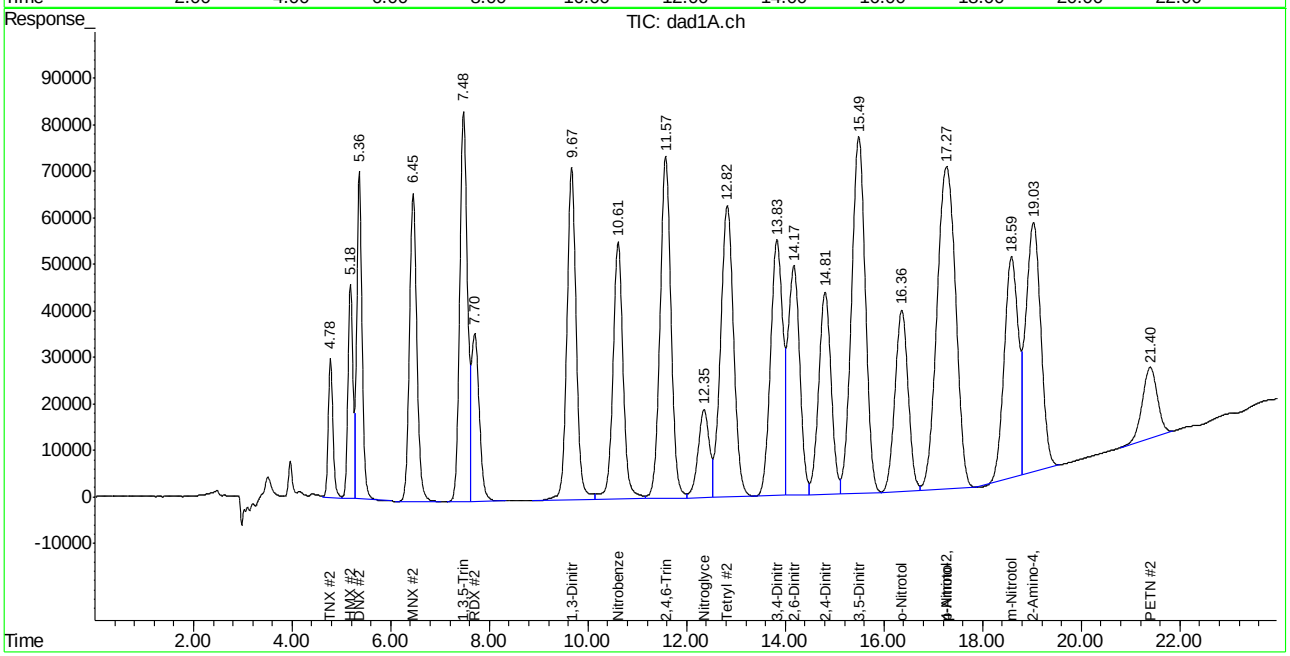
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1A.ch
Acq On : 08-Aug-2021, 20:11:36 Operator: jamesb
Sample : icc3024-1000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:03 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

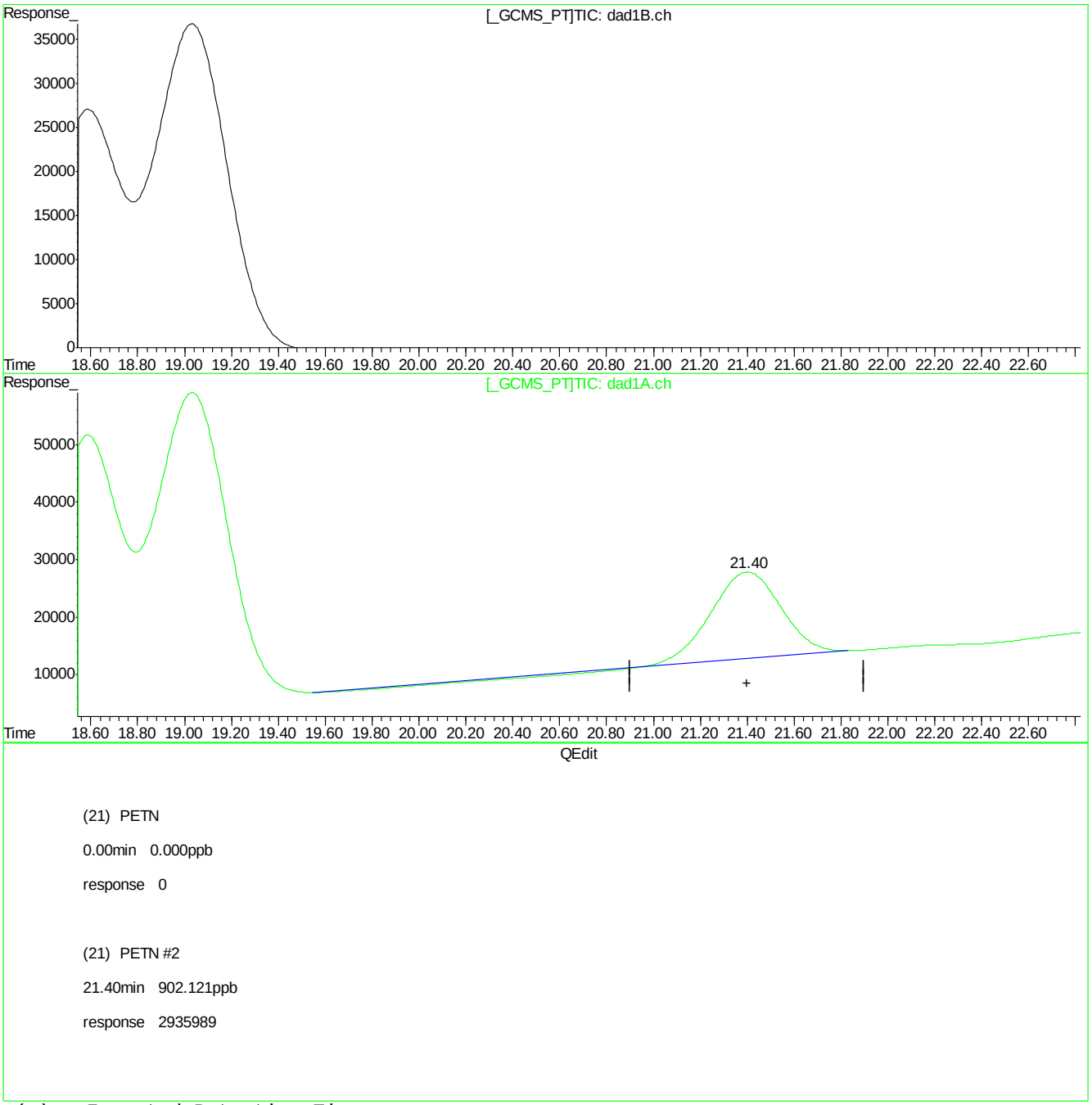
Sample Number: GGG3024-ICC3024 **Method:** SW846 8330B
Lab FileID: GG622005.D **Analyst approved:** 08/09/21 10:24 James Boone
Injection Time: 08/08/21 20:11 **Supervisor approved:** 08/10/21 07:46 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.40	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1A.ch
Acq On : 08-Aug-2021, 20:11:36 Operator: jamesb
Sample : icc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration

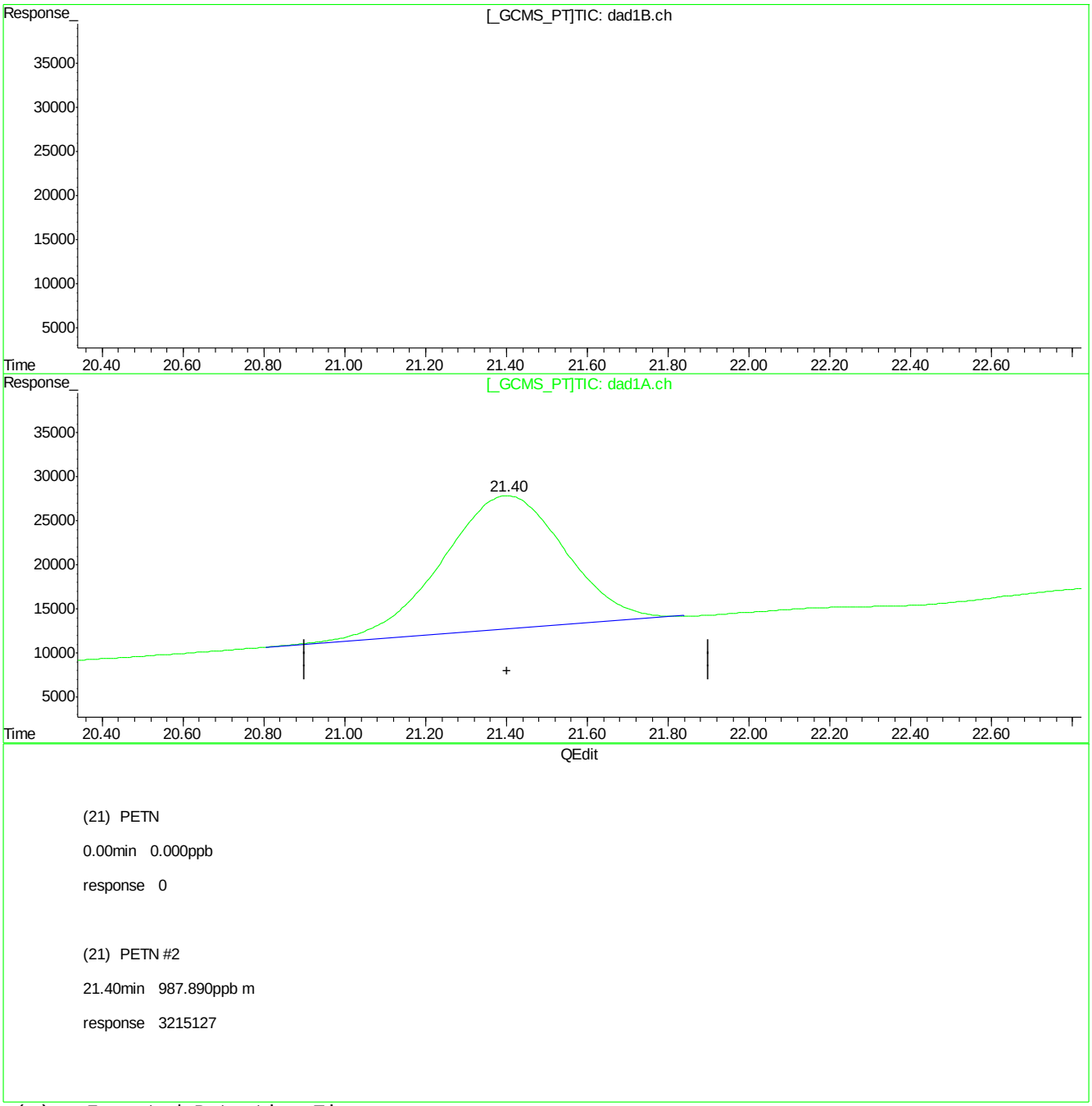


(+) = Expected Retention Time
GG622005.D GGG3024_080821.M Mon Aug 09 10:03:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622005.D\dad1A.ch
Acq On : 08-Aug-2021, 20:11:36 Operator: jamesb
Sample : icc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
GG622005.D GGG3024_080821.M Mon Aug 09 10:04:01 2021

GG622006.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1A.ch
Acq On : 08-Aug-2021, 20:43:01 Operator: jamesb
Sample : ic3024-2500 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:14 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.84	13.84	12358567	23969803	2529.760	2640.286
	Spiked Amount 500.000	Range 70 - 136		Recovery =		505.95%#	528.06%#
	Target Compounds						
1)	TNX	4.78	4.78	4791086	4791086	1039.415	1046.068
2)	HMX	5.19	5.19	7820618	7820618	2411.884	2394.924
3)	DNX	5.37	5.37	13256476	13256476	2243.362	2238.574
4)	MNX	6.46	6.46	17370393	17370393	2867.115	2867.115
5)	1,3,5-Trinitrobe	7.49	7.49	22774436	22774436	2413.981	2413.981
6)	RDX	7.71	7.71	9914943	9914943	2256.120	2256.120
7)	1,3-Dinitrobenze	9.68	9.68	30033635	22809893	2351.309	2350.976
8)	Nitrobenzene	10.62	10.62	19543626	18494467	2310.557	2237.911
9)	2,4,6-Trinitroto	11.59	11.59	21163261	27747827	2311.540	2133.622
10)	Nitroglycerin	0.00	12.36	0	7341584	N.D.	2319.856 #
11)	Tetryl	12.84	12.84	16971326	28934406	2391.598	2335.321
13)	2,6-Dinitrotolue	14.19	14.18	14458386	20610087	2292.833	2235.856
14)	2,4-Dinitrotolue	14.82	14.82	27252797	19226354	2363.408	2421.583
15)	3,5-Dinitroanili	15.51	15.51	23082184	37739769	2342.484	2426.951
16)	o-Nitrotoluene	16.37	16.37	12319522	18337314	2377.723	2503.017
17)	p-Nitrotoluene	17.30	17.28	25446496	46281719	4786.324	5033.504
18)	4-Amino-2,6-Dini	17.30	17.28	25446496	46281719	4786.324	5033.504
19)	m-Nitrotoluene	18.60	18.60	13723874	23933820	2363.201	2470.778
20)	2-Amino-4,6-Dini	19.05	19.05	20151452	28646973	2330.543	2410.869
21)	PETN	0.00	21.40	0	7726944	N.D. d	2374.204m

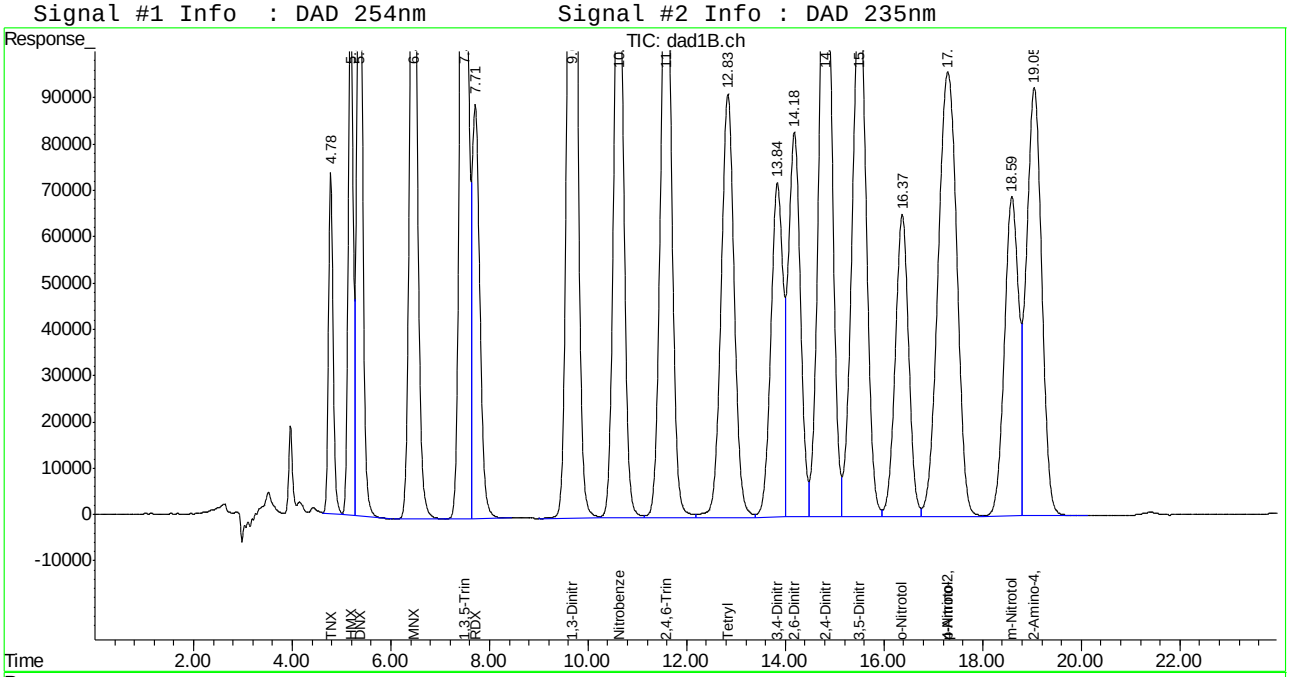
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

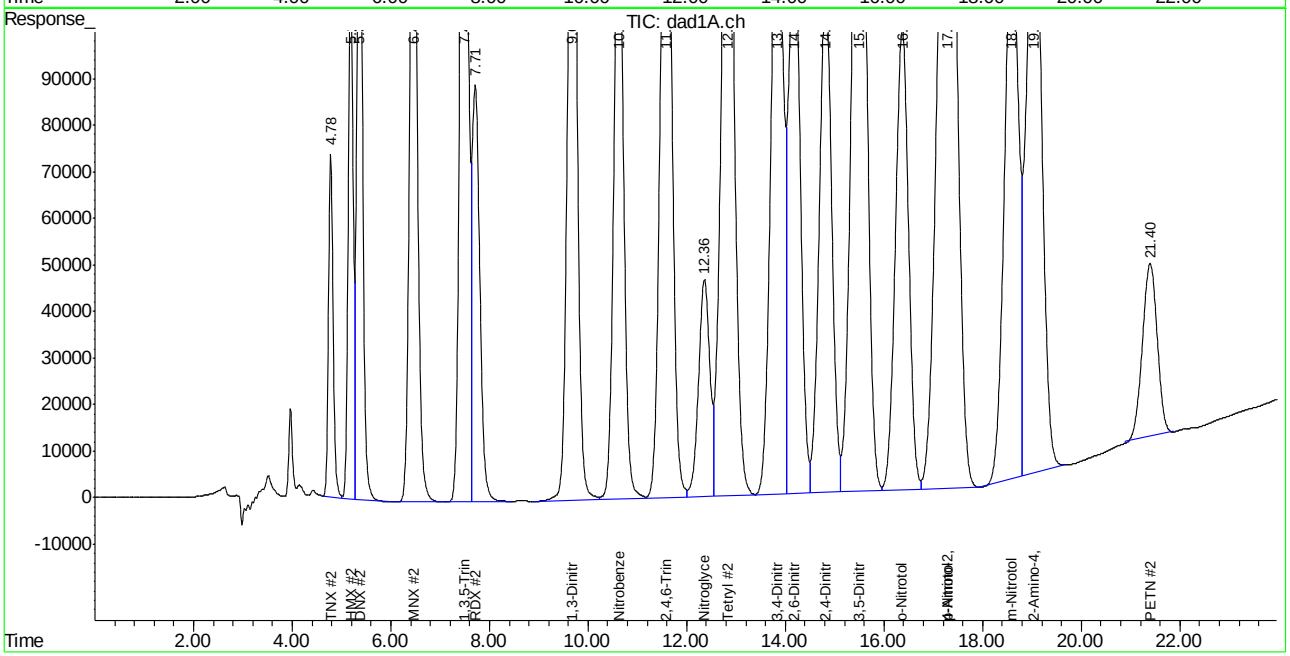
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1A.ch
Acq On : 08-Aug-2021, 20:43:01 Operator: jamesb
Sample : ic3024-2500 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:02 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

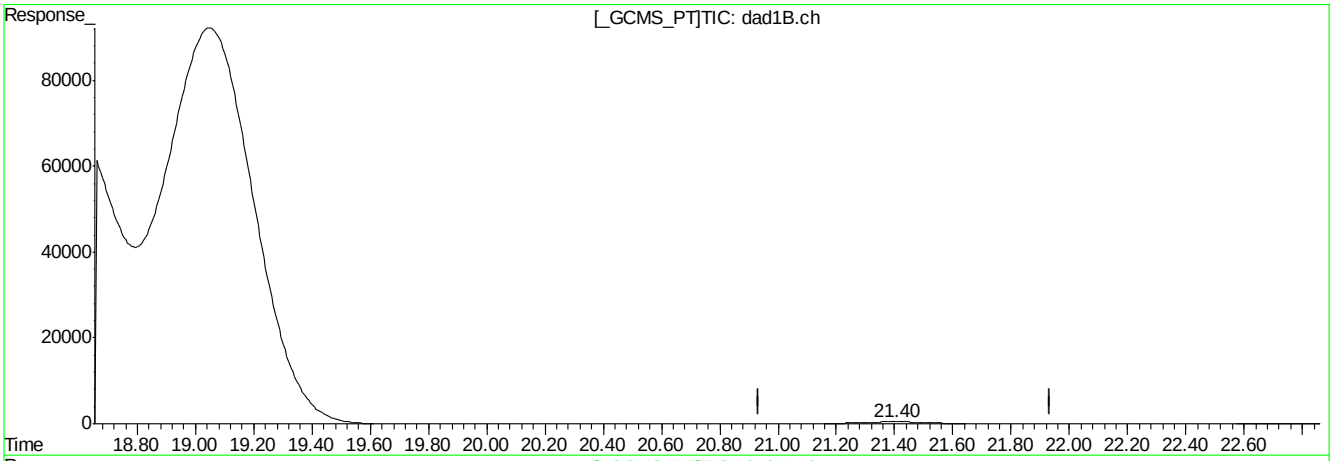
Sample Number: GGG3024-IC3024
Lab FileID: GG622006.D
Injection Time: 08/08/21 20:43
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

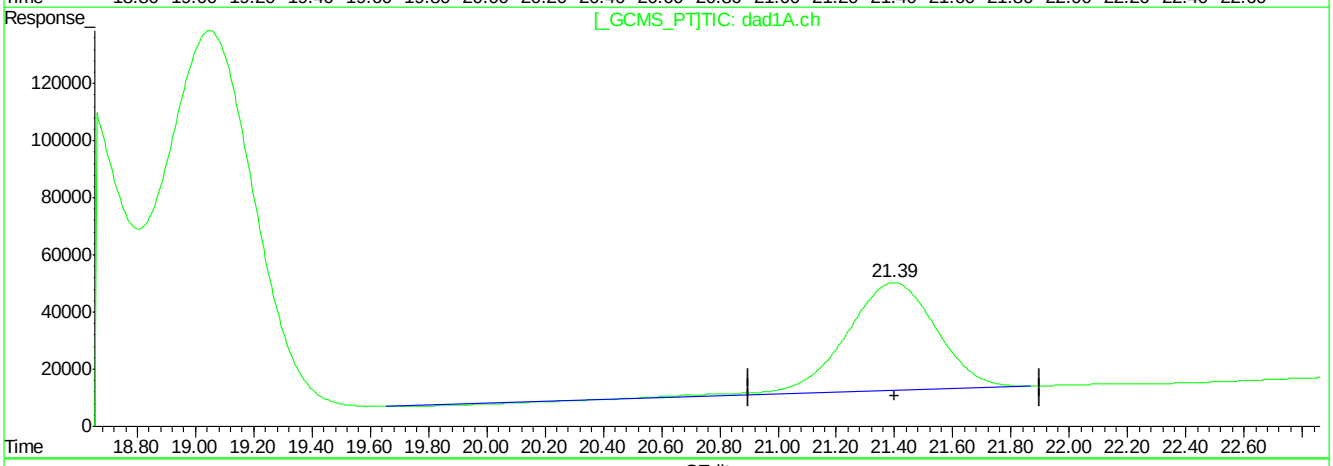
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.40	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1A.ch
Acq On : 08-Aug-2021, 20:43:01 Operator: jamesb
Sample : ic3024-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.40min 0.000ppb

response 125791

(21) PETN #2

21.40min 2479.328ppb

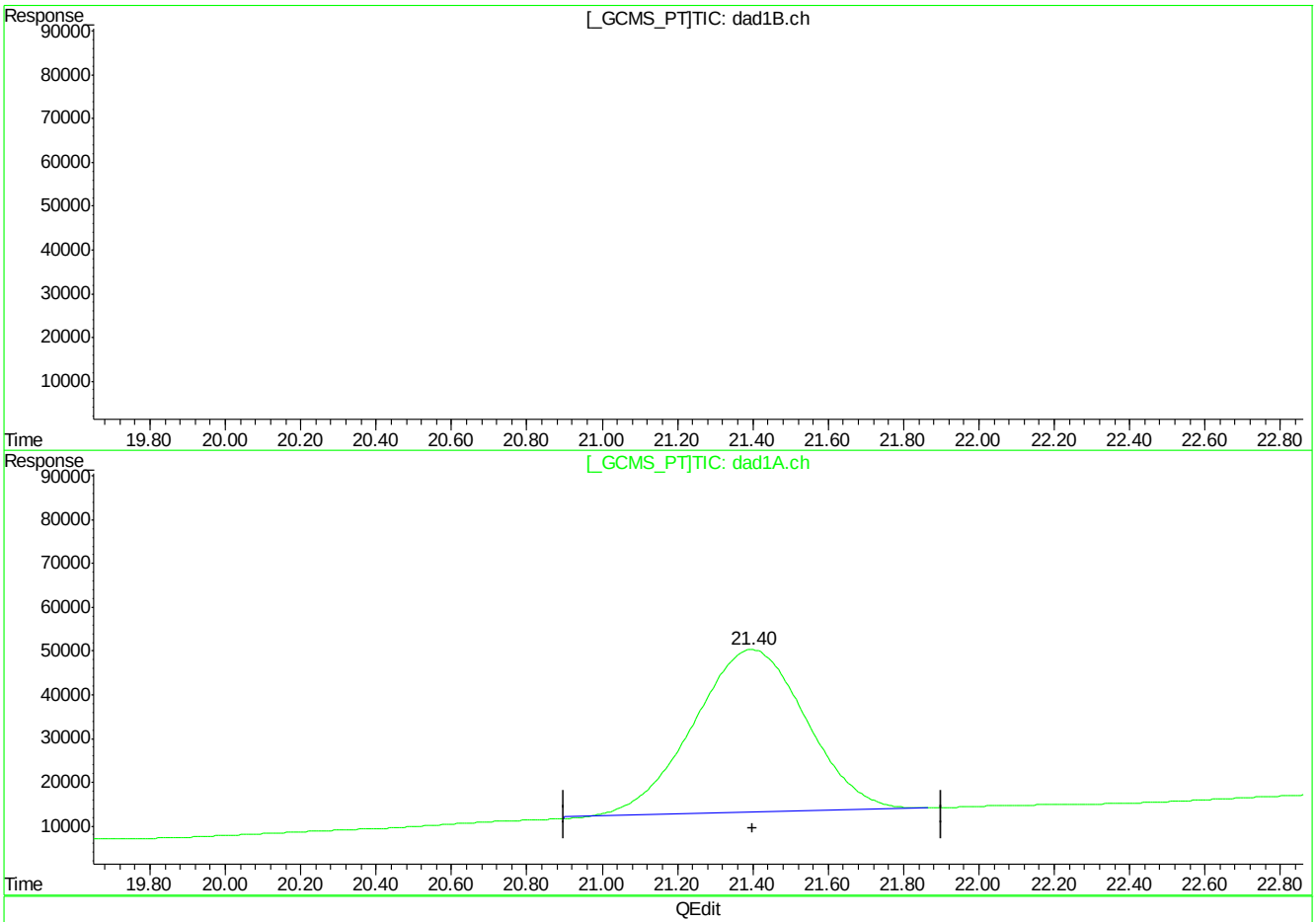
response 8069075

(+) = Expected Retention Time
GG622006.D GGG3024_080821.M Mon Aug 09 10:02:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622006.D\dad1A.ch
Acq On : 08-Aug-2021, 20:43:01 Operator: jamesb
Sample : ic3024-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.40min 2374.204ppb m

response 7726944

(+) = Expected Retention Time
GG622006.D GGG3024_080821.M Mon Aug 09 10:02:56 2021

9.5.7.3

9

GG622006.D edits: PETN

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1A.ch
Acq On : 08-Aug-2021, 21:14:25 Operator: jamesb
Sample : ic3024-5000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:00:15 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.83	13.83	25048204	48817267	5127.288	5377.247
	Spiked Amount 500.000	Range 70 - 136		Recovery = 1025.46%#		1075.45%#	
	Target Compounds						
1)	TNX	4.78	4.78	9630966	9630966	2089.417	2102.790
2)	HMX	5.19	5.19	15669611	15669611	4832.519	4798.537
3)	DNX	5.37	5.37	26781436	26781436	4532.158	4522.485
4)	MNX	6.46	6.46	35073461	35073461	5789.141	5789.141
5)	1,3,5-Trinitrobe	7.48	7.48	45923704	45923704	4867.693	4867.693
6)	RDX	7.70	7.70	20061099	20061099	4564.851	4564.851
7)	1,3-Dinitrobenze	9.67	9.67	60634986	45735174	4747.065	4713.845
8)	Nitrobenzene	10.60	10.60	38975507	36416955	4607.904	4406.611
9)	2,4,6-Trinitroto	11.57	11.57	42819352	56179118	4676.909	4319.797
10)	Nitroglycerin	0.00	12.34	0	14881917	N.D.	4702.515 #
11)	Tetryl	12.82	12.82	34449813	58881158	4854.664	4752.349
13)	2,6-Dinitrotolue	14.17	14.17	29253677	42254940	4639.093	4583.966
14)	2,4-Dinitrotolue	14.81	14.81	55181037	39375944	4785.391	4959.449
15)	3,5-Dinitroanili	15.49	15.49	46757793	77034388	4745.191	4953.891
16)	o-Nitrotoluene	16.36	16.36	24618668	36839630	4751.512	5028.556
17)	p-Nitrotoluene	17.28	17.27	51318918	93496672	9652.762	10168.504
18)	4-Amino-2,6-Dini	17.28	17.27	51318918	93496672	9652.762	10168.504
19)	m-Nitrotoluene	18.58	18.58	27359267	47702631	4711.166	4924.522
20)	2-Amino-4,6-Dini	19.03	19.03	40878065	57976920	4727.604	4879.217
21)	PETN	0.00	21.38	0	16168442	N.D. d	4967.964m

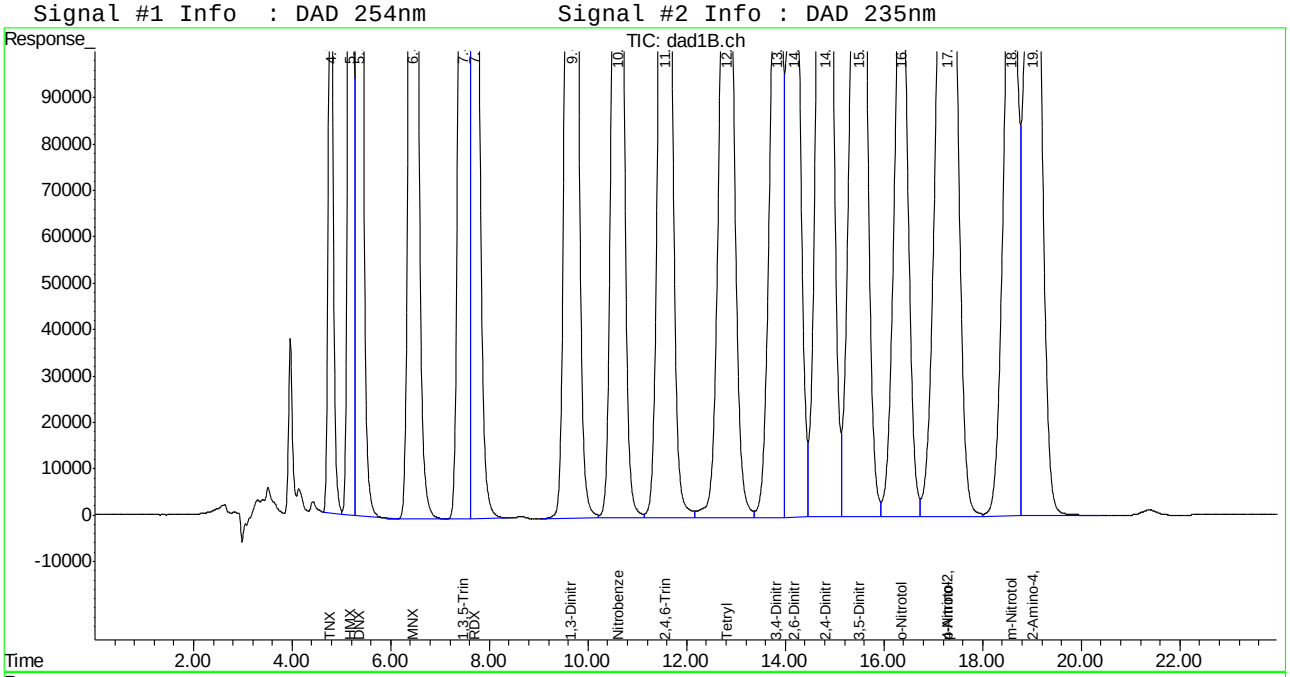
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

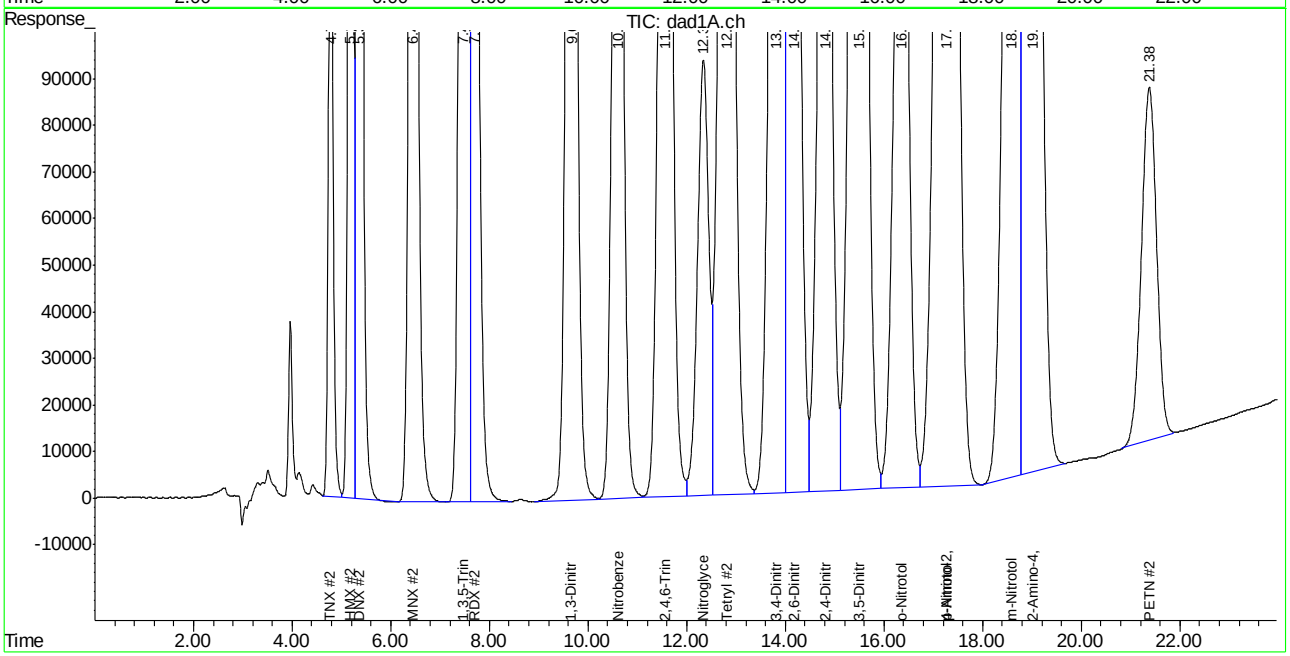
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1A.ch
Acq On : 08-Aug-2021, 21:14:25 Operator: jamesb
Sample : ic3024-5000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:01 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

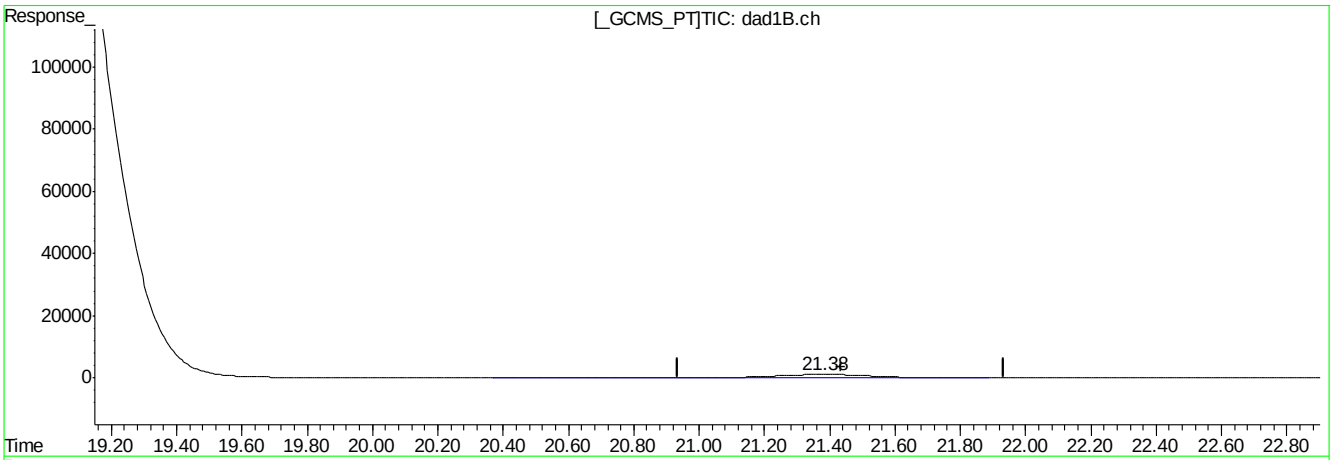
Sample Number: GGG3024-IC3024
Lab FileID: GG622007.D
Injection Time: 08/08/21 21:14
Method: SW846 8330B
Analyst approved: 08/09/21 10:24 James Boone
Supervisor approved: 08/10/21 07:46 Mike Eger

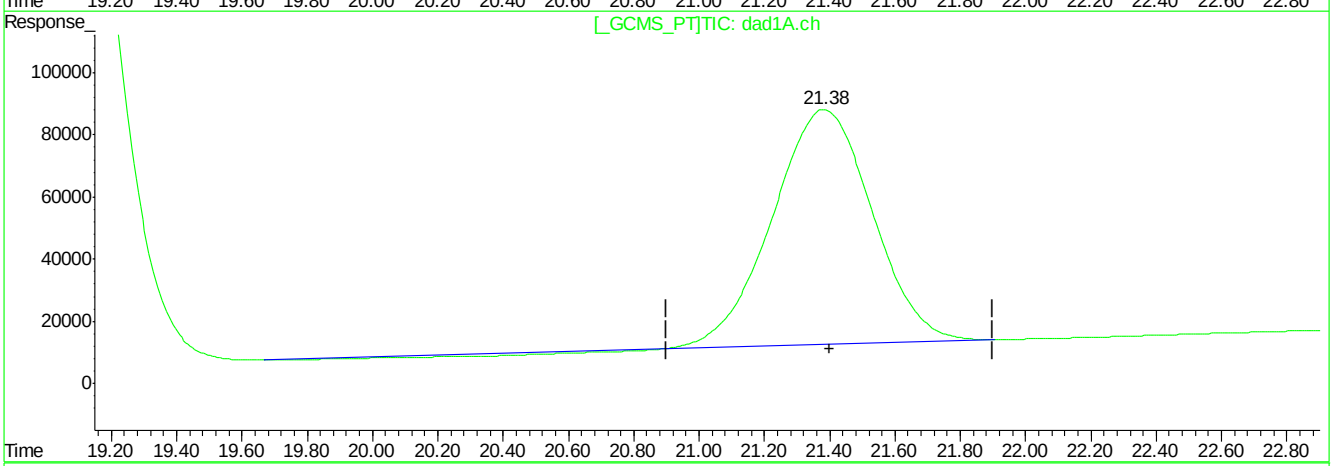
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.38	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1A.ch
Acq On : 08-Aug-2021, 21:14:25 Operator: jamesb
Sample : ic3024-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.38min 0.000ppb

response 254909

(21) PETN #2

21.38min 4846.263ppb

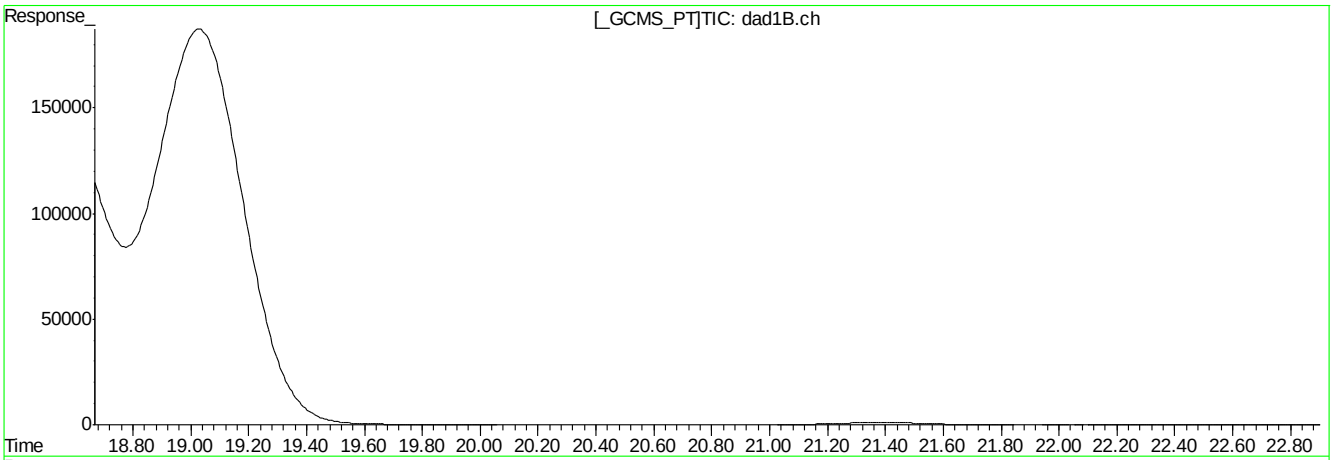
response 15772359

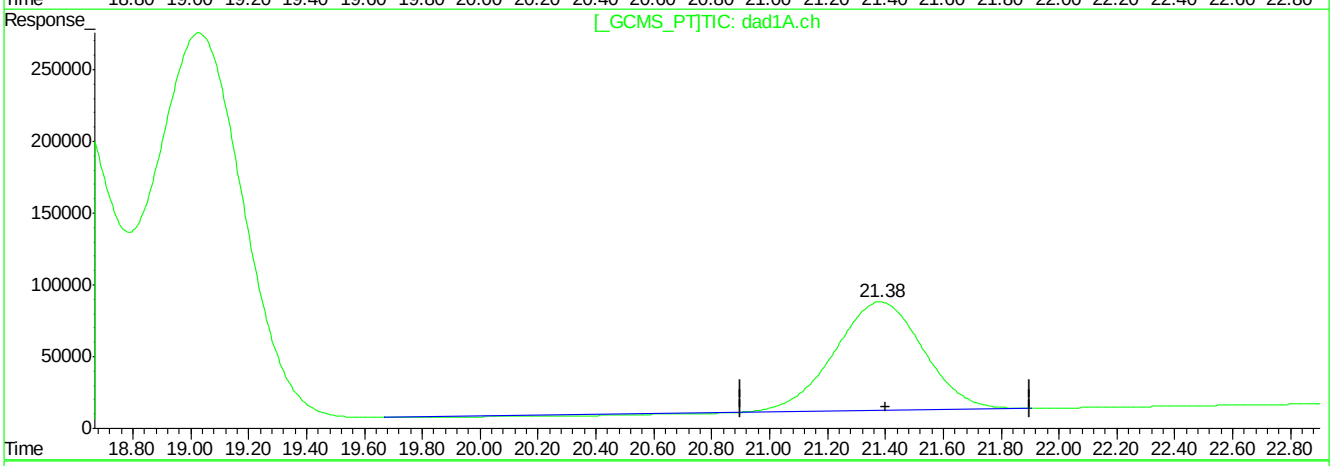
(+) = Expected Retention Time
GG622007.D GGG3024_080821.M Mon Aug 09 10:01:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1A.ch
Acq On : 08-Aug-2021, 21:14:25 Operator: jamesb
Sample : ic3024-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.38min 4846.263ppb

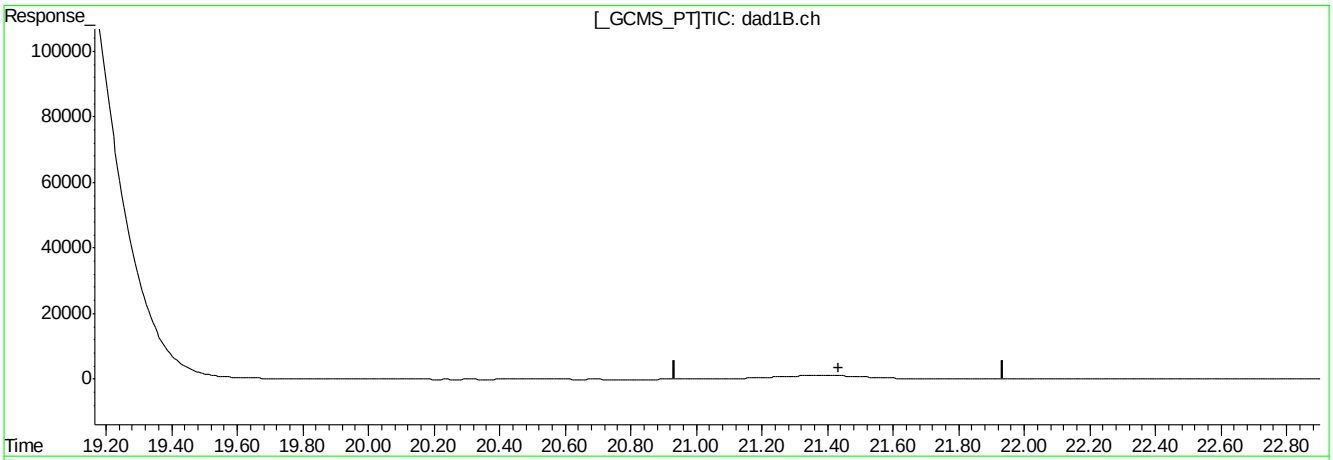
response 15772359

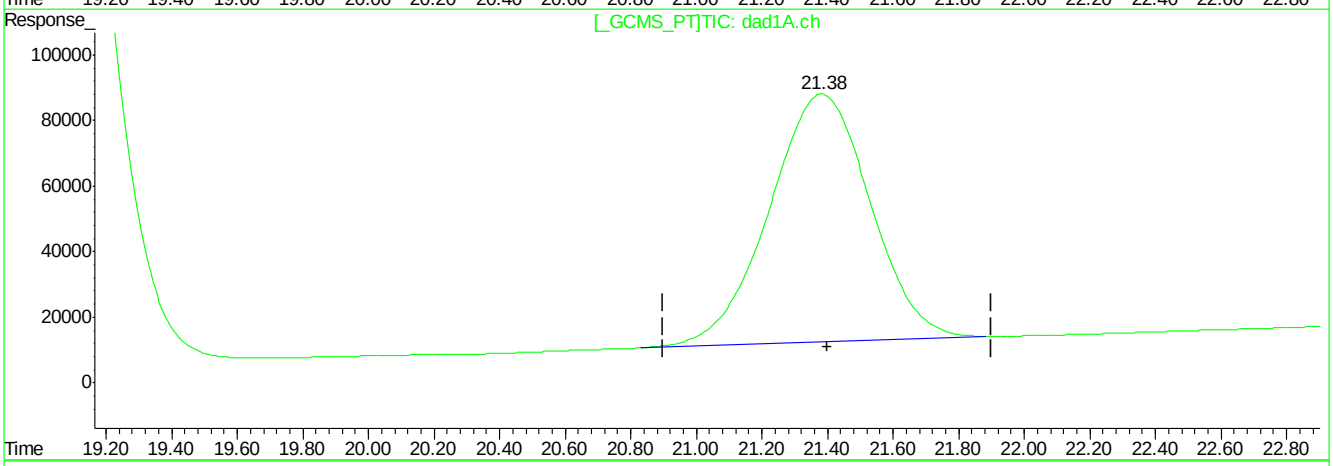
(+) = Expected Retention Time
GG622007.D GGG3024_080821.M Mon Aug 09 10:01:33 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622007.D\dad1A.ch
Acq On : 08-Aug-2021, 21:14:25 Operator: jamesb
Sample : ic3024-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:00 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 09:59:54 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.38min 4967.964ppb m

response 16168442

(+) = Expected Retention Time
GG622007.D GGG3024_080821.M Mon Aug 09 10:01:41 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/10/21 07:46

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1A.ch
Acq On : 08-Aug-2021, 21:45:56 Operator: jamesb
Sample : icv3024-1000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 09 10:15:24 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
	Spiked Amount 500.000	Range 70 - 136		Recovery =		0.00%#	0.00%#
	Target Compounds						
1)	TNX	4.78	4.78	2060877	2060877	505.160	505.160
2)	HMX	5.18	5.18	3020232	3020232	926.949	926.949
3)	DNX	5.36	5.36	5624817	5624817	1024.661	1028.467
4)	MNX	6.45	6.45	7364830	7364830	1213.889	1213.889
5)	1,3,5-Trinitrobe	7.47	7.47	8863362	8863362	958.592	958.592
6)	RDX	7.70	7.70	3817157	3817157	950.233	950.233
7)	1,3-Dinitrobenze	9.67	9.67	11667307	9594667	954.780	1058.497
8)	Nitrobenzene	10.61	10.61	7442197	8392127	950.838	1101.499
9)	2,4,6-Trinitroto	11.57	11.57	8113210	11472766	943.019	979.670
10)	Nitroglycerin	0.00	12.35	0	3028713	N.D.	954.377 #
11)	Tetryl	12.82	12.82	6515817	11317664	964.101	970.431
13)	2,6-Dinitrotolue	14.17	14.17	5579302	8142456	952.231	982.311
14)	2,4-Dinitrotolue	14.80	14.80	10560262	7405993	958.433	992.438
15)	3,5-Dinitroanili	15.49	15.49	10363491	16846909	1109.387	1095.895
16)	o-Nitrotoluene	16.36	16.36	4677934	6762426	960.676	919.253
17)	p-Nitrotoluene	17.30	17.29	9901675	17568617	1947.961	2013.696
18)	4-Amino-2,6-Dini	17.30	17.29	9901675	17568617	1947.961	2013.696
19)	m-Nitrotoluene	18.60	18.60	5226146	9072240	947.818	1016.304
20)	2-Amino-4,6-Dini	19.05	19.05	7955630	11269851	967.495	1050.381
21)	PETN	0.00	21.40	0	3054539	N.D.	969.900m#

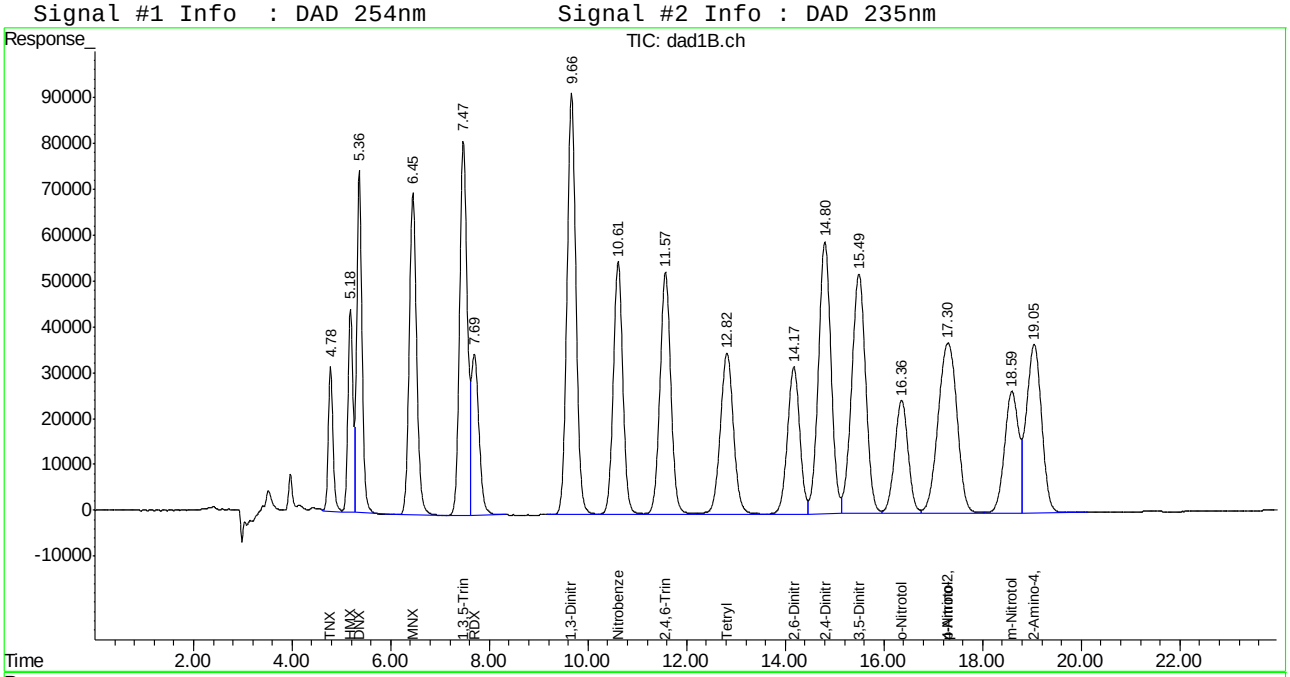
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622008.D GGG3024_080821.M Mon Aug 09 10:17:42 2021 Page 1

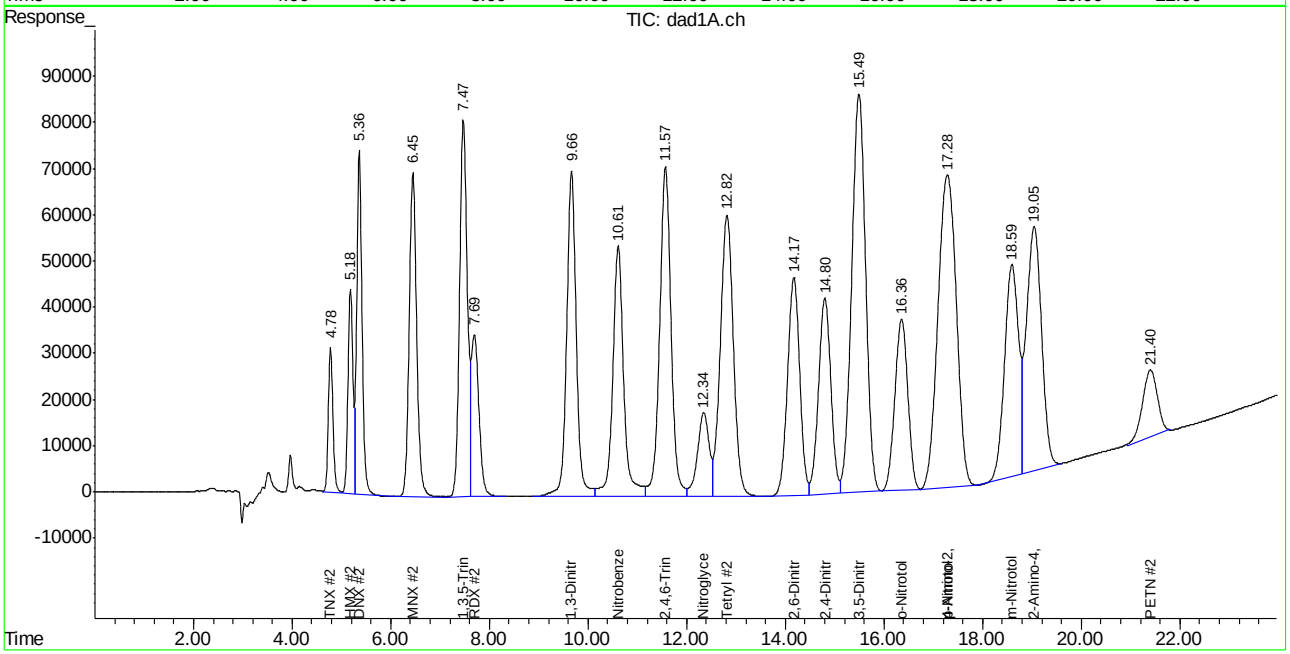
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1A.ch
Acq On : 08-Aug-2021, 21:45:56 Operator: jamesb
Sample : icv3024-1000 Inst : G1315B
Misc : op86681,GGG3024,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:15 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

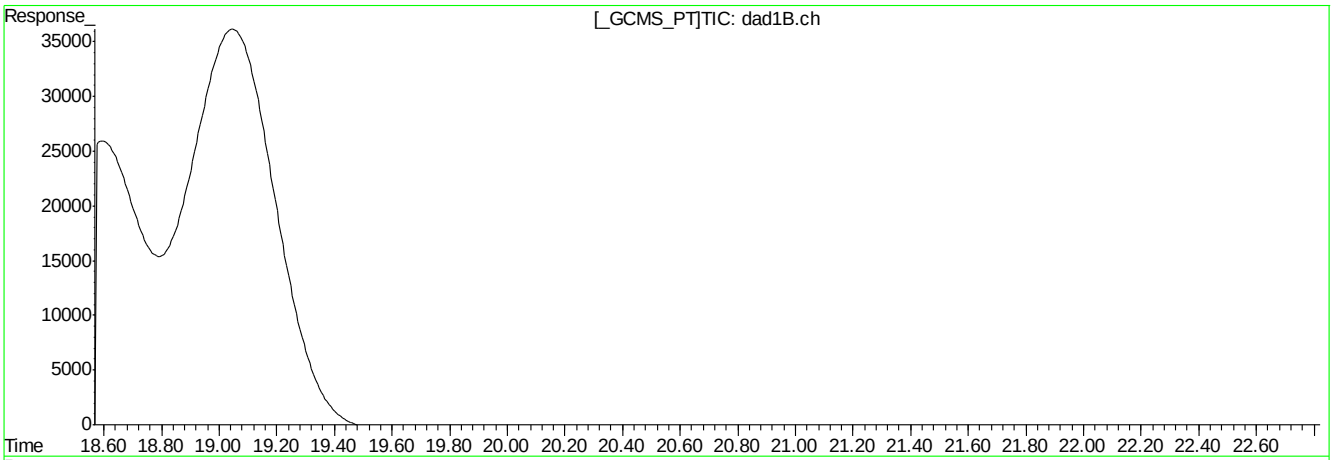
Sample Number: GGG3024-ICV3024 **Method:** SW846 8330B
Lab FileID: GG622008.D **Analyst approved:** 08/09/21 10:24 James Boone
Injection Time: 08/08/21 21:45 **Supervisor approved:** 08/10/21 07:46 Mike Eger

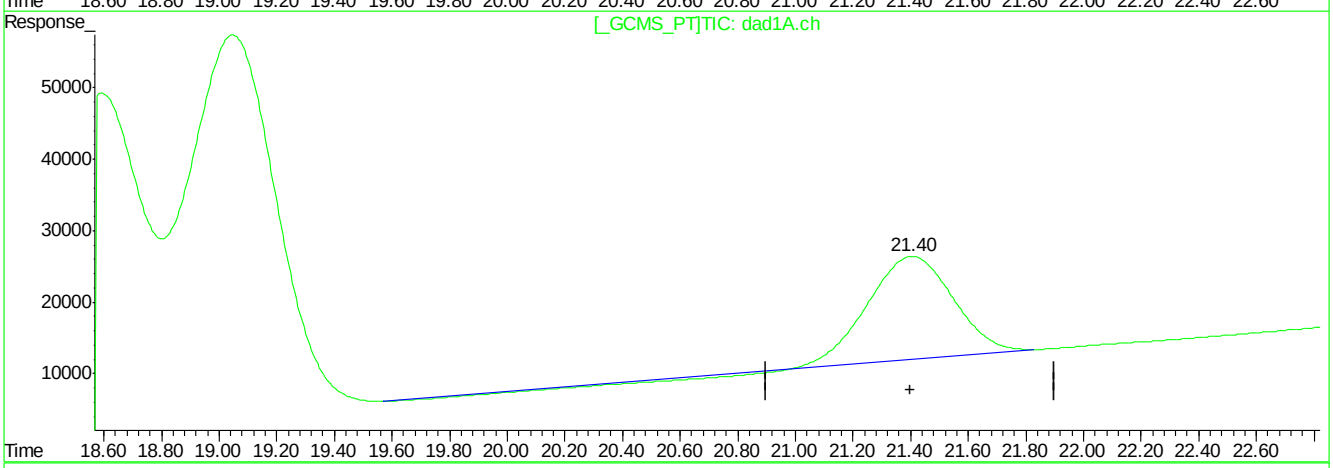
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.40	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1A.ch
Acq On : 08-Aug-2021, 21:45:56 Operator: jamesb
Sample : icv3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:15 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.41min 886.499ppb

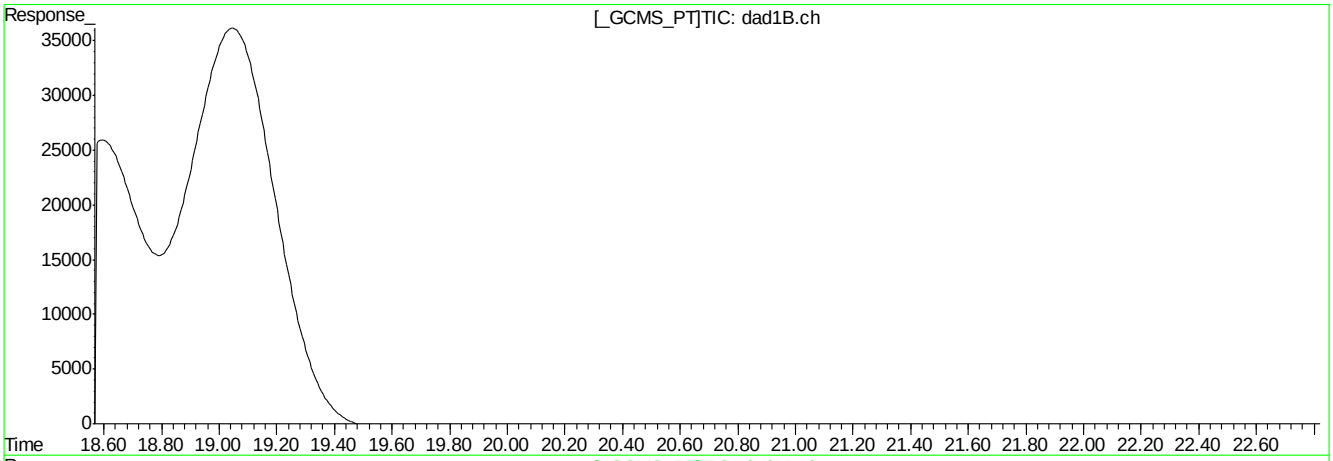
response 2791883

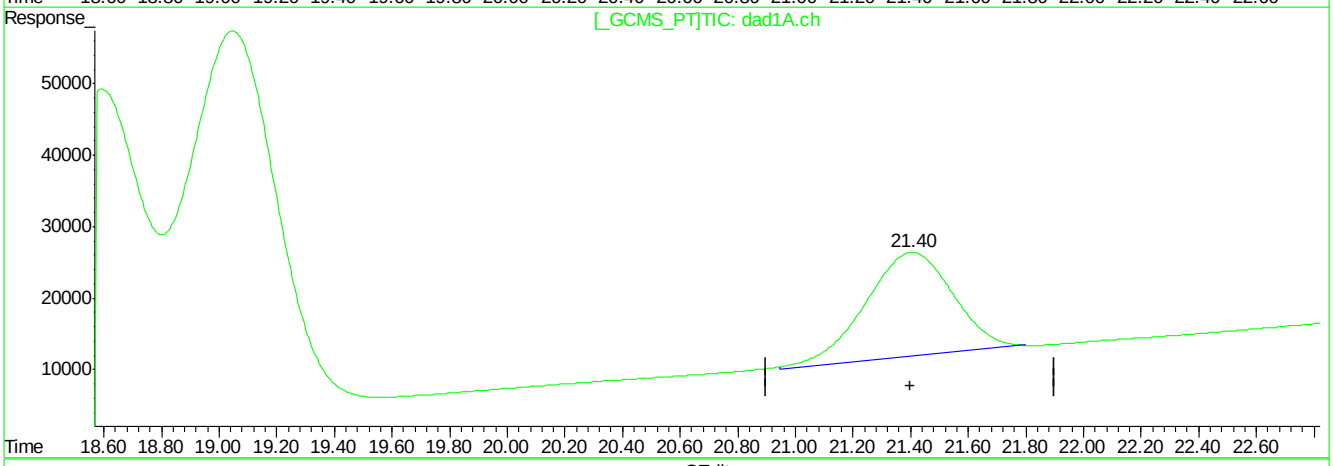
(+) = Expected Retention Time
GG622008.D GGG3024_080821.M Mon Aug 09 10:15:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\1\DATA\GGG3024\GG622008.D\dad1A.ch
Acq On : 08-Aug-2021, 21:45:56 Operator: jamesb
Sample : icv3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 9 10:15 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.40min 969.900ppb m

response 3054539

(+) = Expected Retention Time
GG622008.D GGG3024_080821.M Mon Aug 09 10:16:01 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 08/13/21 10:27

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1A.ch
Acq On : 12-Aug-2021, 17:08:21 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : op86682,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:34 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.88	13.88	4881118	9441108	977.837	968.606
	Spiked Amount 500.000	Range 70 - 136		Recovery =		195.57%#	193.72%#
	Target Compounds						
1)	TNX	4.79	4.79	1918394	1918394	470.235	470.235
2)	HMX	5.21	5.21	3056694	3056694	938.140	938.140
3)	DNX	5.39	5.39	5171198	5171198	942.026	945.525
4)	MNX	6.49	6.49	6706320	6706320	1105.351	1105.351
5)	1,3,5-Trinitrobe	7.50	7.50	8861077	8861077	958.345	958.345
6)	RDX	7.74	7.74	4017324	4017324	1000.062	1000.062
7)	1,3-Dinitrobenze	9.68	9.68	11822069	9292404	967.445	1025.151
8)	Nitrobenzene	10.61	10.61	7702499	7702250	984.095	1010.950
9)	2,4,6-Trinitroto	11.61	11.61	8250919	11154955	959.025	952.532
10)	Nitroglycerin	0.00	12.38	0	2935149	N.D.	924.894 #
11)	Tetryl	12.88	12.88	6317883	10716535	934.814	918.887
13)	2,6-Dinitrotolue	14.22	14.22	5692210	8104850	971.501	977.774
14)	2,4-Dinitrotolue	14.85	14.85	10706598	7654125	971.714	1025.689
15)	3,5-Dinitroanili	15.54	15.54	9067273	14722169	970.630	957.680
16)	o-Nitrotoluene	16.39	16.39	4819615	6944151	989.772	943.956
17)	p-Nitrotoluene	17.34	17.33	9945296	17935309	1956.543	2055.726
18)	4-Amino-2,6-Dini	17.34	17.33	9945296	17935309	1956.543	2055.726
19)	m-Nitrotoluene	18.62	18.62	5343378	9202571	969.079	1030.904
20)	2-Amino-4,6-Dini	19.11	19.11	7946476	11254427	966.382	1048.943
21)	PETN	0.00	21.49	0	3050322	N.D.	968.561m#

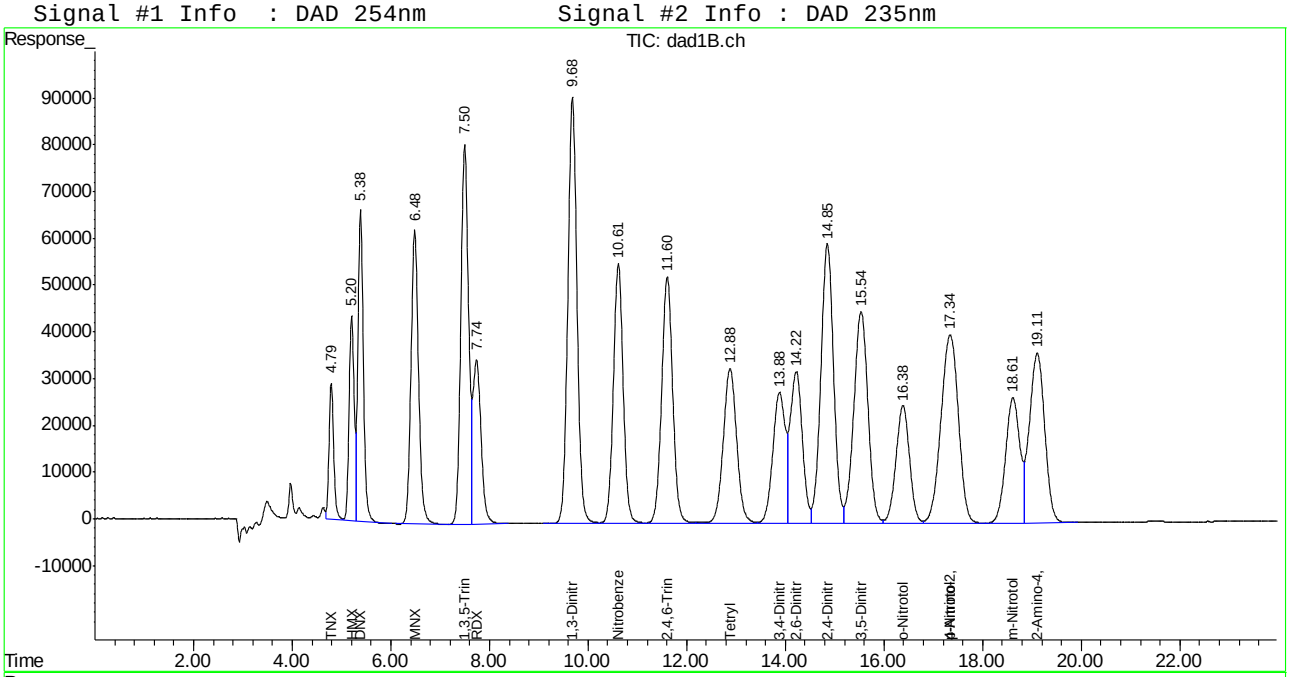
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

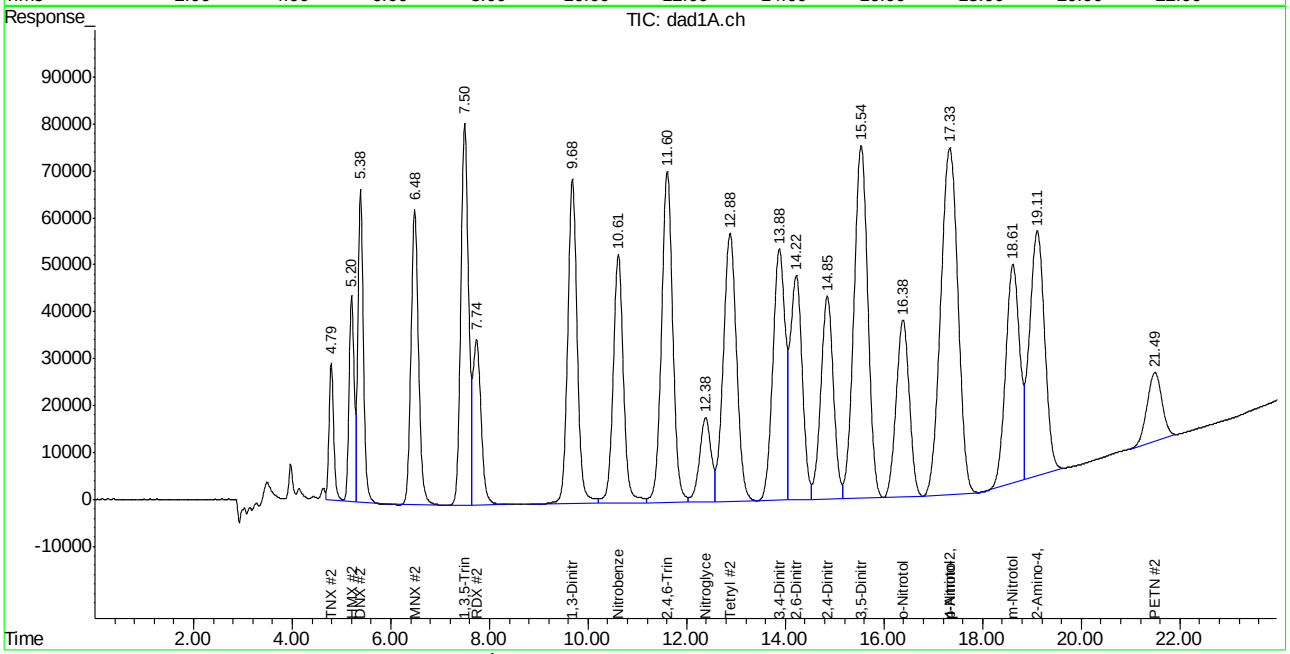
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1A.ch
Acq On : 12-Aug-2021, 17:08:21 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : op86682,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:05 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

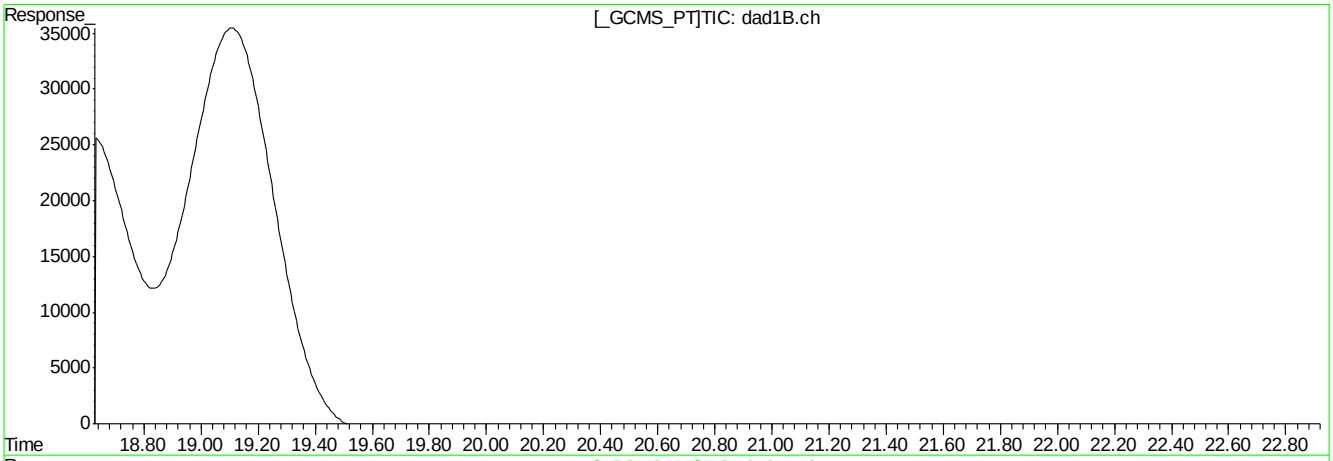
Sample Number:	GGG3025-CC3024	**Method:**	SW846 8330B
Lab FileID:	GG622028.D	**Analyst approved:**	08/13/21 10:08 James Boone
Injection Time:	08/12/21 17:08	**Supervisor approved:**	08/13/21 10:27 Naresh Jiawan

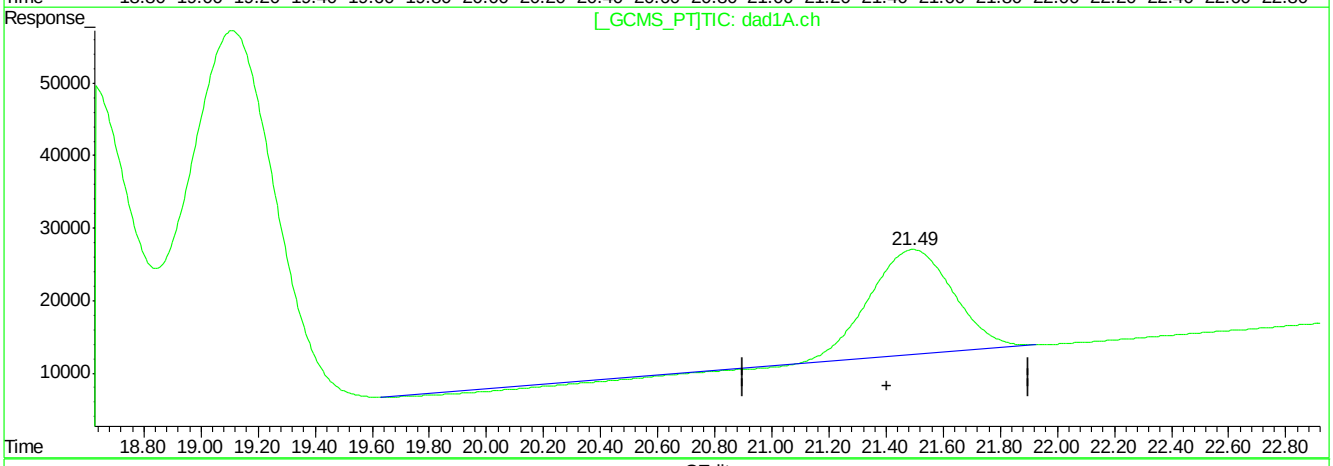
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.49	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1A.ch
Acq On : 12-Aug-2021, 17:08:21 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.50min 885.147ppb

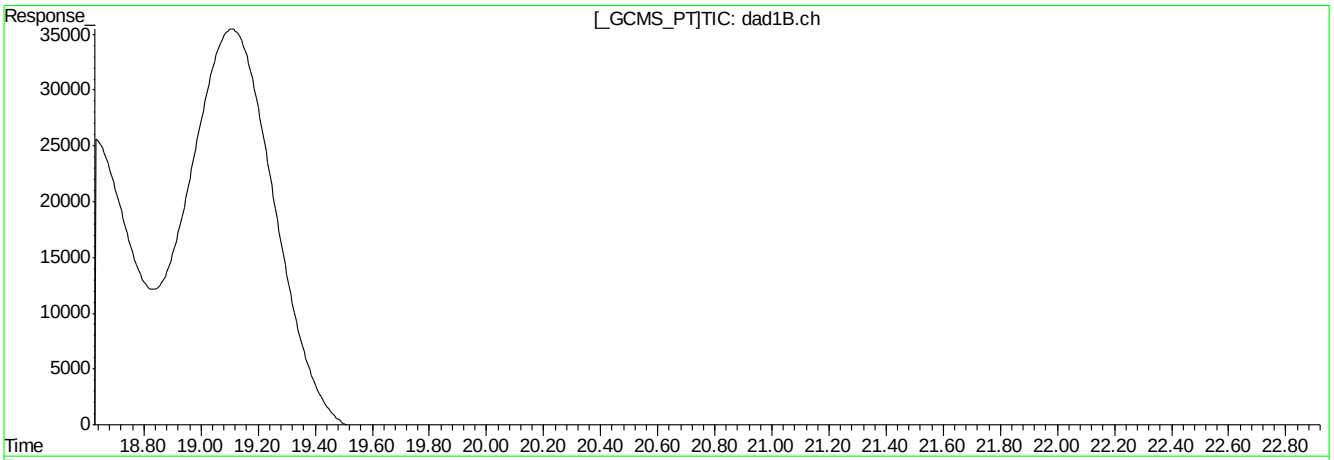
response 2787626

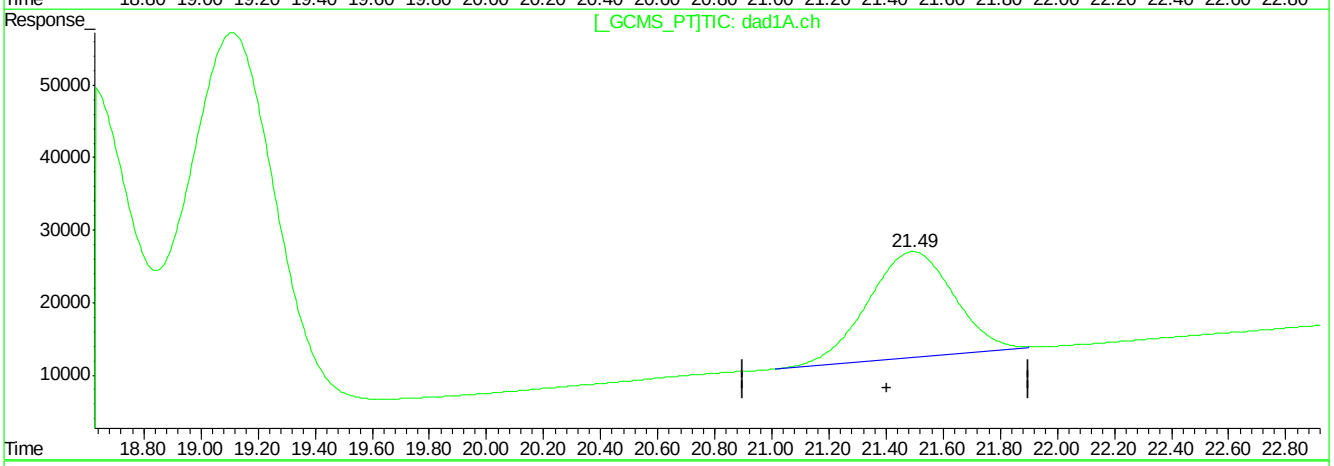
(+) = Expected Retention Time
GG622028.D GGG3024_080821.M Fri Aug 13 10:05:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622028.D\dad1A.ch
Acq On : 12-Aug-2021, 17:08:21 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

21.49min 968.561ppb m

response 3050322

(+) = Expected Retention Time
GG622028.D GGG3024_080821.M Fri Aug 13 10:05:17 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 08/13/21 10:27

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1A.ch
Acq On : 12-Aug-2021, 23:25:25 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:46 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.93	13.93	4833983	9449720	968.394	969.489
	Spiked Amount 500.000	Range 70 - 136		Recovery =		193.68%#	193.90%#
	Target Compounds						
1)	TNX	4.80	4.80	1920709	1920709	470.802	470.802
2)	HMX	5.22	5.22	3067511	3067511	941.460	941.460
3)	DNX	5.40	5.40	5131638	5131638	934.819	938.292
4)	MNX	6.51	6.51	6644003	6644003	1095.080	1095.080
5)	1,3,5-Trinitrobe	7.52	7.52	8809865	8809865	952.807	952.807
6)	RDX	7.77	7.77	3971093	3971093	988.554	988.554
7)	1,3-Dinitrobenze	9.73	9.73	11757267	9307421	962.142	1026.808
8)	Nitrobenzene	10.66	10.66	7603085	7899840	971.393	1036.884
9)	2,4,6-Trinitroto	11.65	11.65	8196550	11204660	952.706	956.776
10)	Nitroglycerin	0.00	12.43	0	3005673	N.D.	947.117 #
11)	Tetryl	12.93	12.93	6299973	10771377	932.164	923.590
13)	2,6-Dinitrotolue	14.27	14.27	5642194	7953270	962.965	959.487
14)	2,4-Dinitrotolue	14.91	14.91	10613814	7365894	963.293	987.065
15)	3,5-Dinitroanili	15.60	15.61	8997886	14667180	963.202	954.103
16)	o-Nitrotoluene	16.45	16.45	4771152	6963277	979.819	946.556
17)	p-Nitrotoluene	17.42	17.41	9934485	17912074	1954.416	2053.063
18)	4-Amino-2,6-Dini	17.42	17.41	9934485	17912074	1954.416	2053.063
19)	m-Nitrotoluene	18.68	18.68	5303798	9348157	961.901	1047.213
20)	2-Amino-4,6-Dini	19.18	19.18	7891010	11366557	959.636	1059.394
21)	PETN	0.00	21.53	0	3113084	N.D. d	988.489m

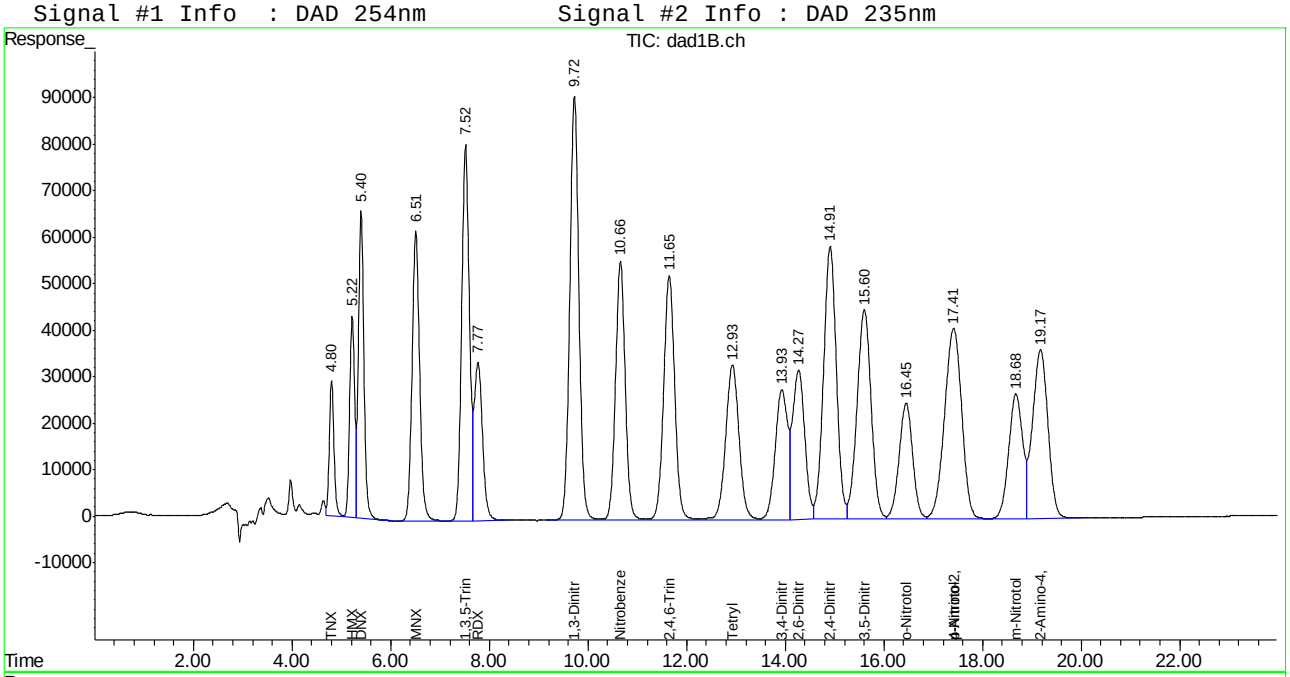
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

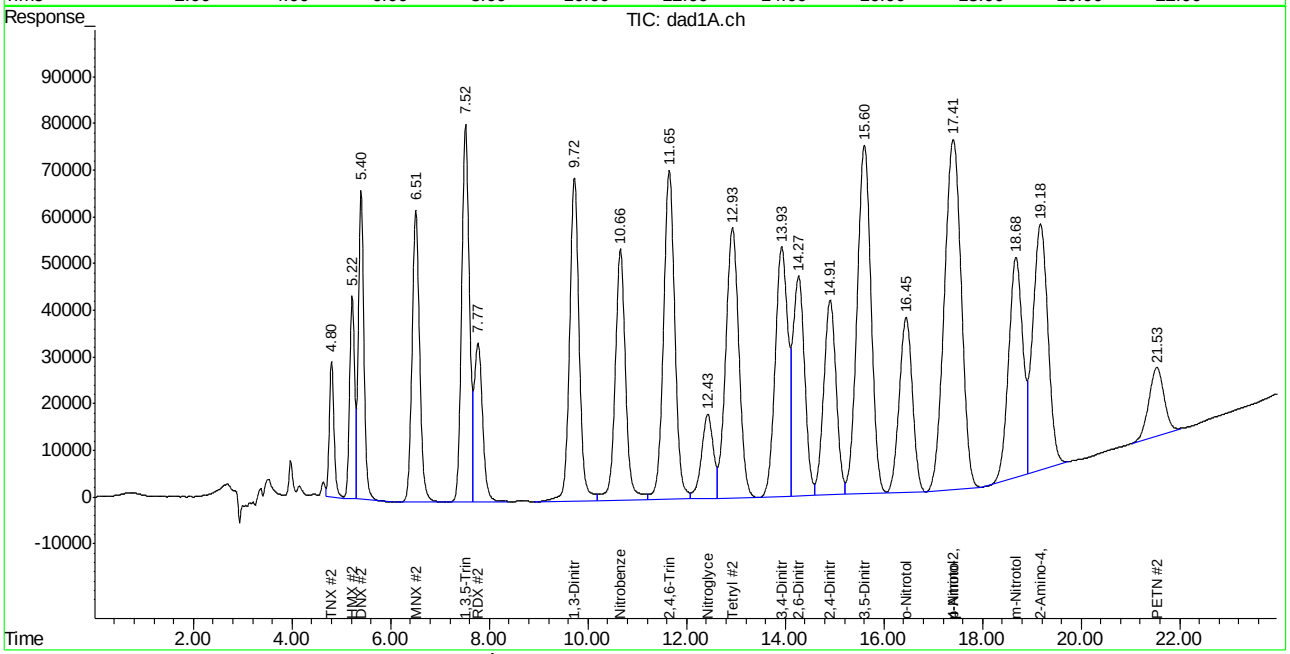
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1A.ch
Acq On : 12-Aug-2021, 23:25:25 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:05 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

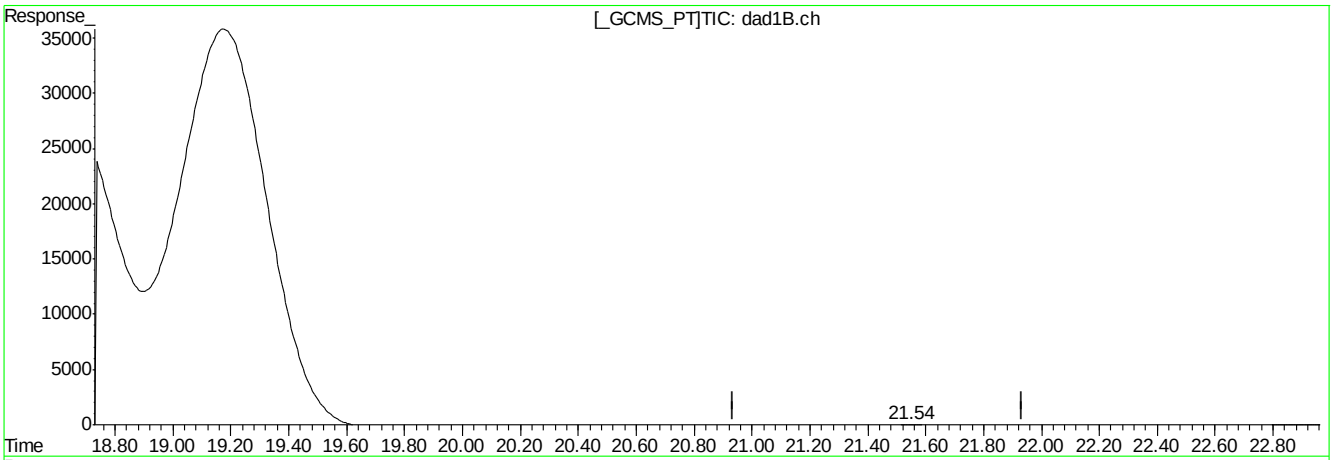
Sample Number:	GGG3025-CC3024	**Method:**	SW846 8330B
Lab FileID:	GG622040.D	**Analyst approved:**	08/13/21 10:08 James Boone
Injection Time:	08/12/21 23:25	**Supervisor approved:**	08/13/21 10:27 Naresh Jiawan

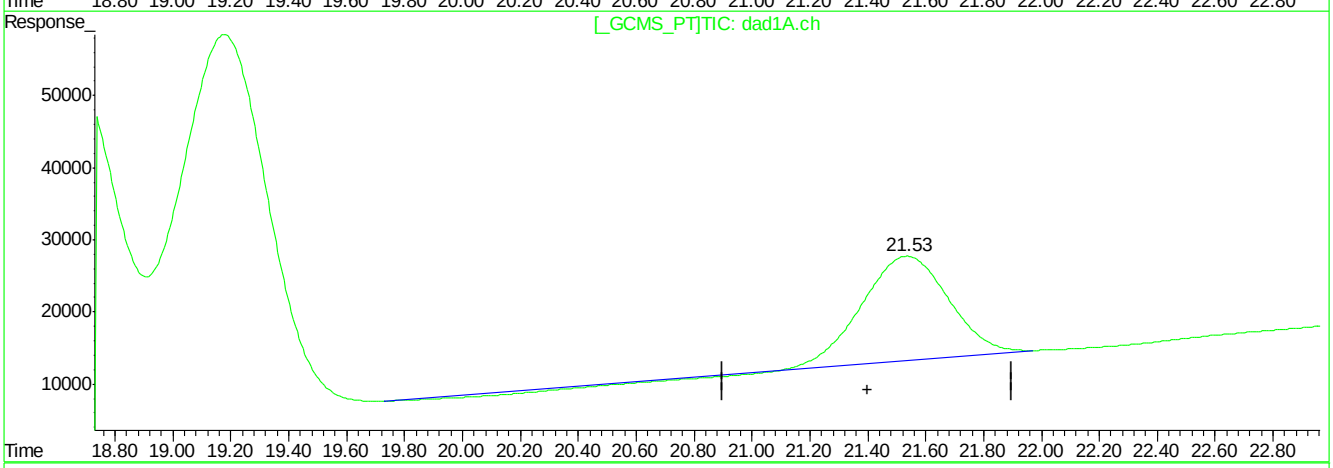
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.53	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1A.ch
Acq On : 12-Aug-2021, 23:25:25 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.55min 0.000ppb

response 50075

(21) PETN #2

21.54min 888.747ppb

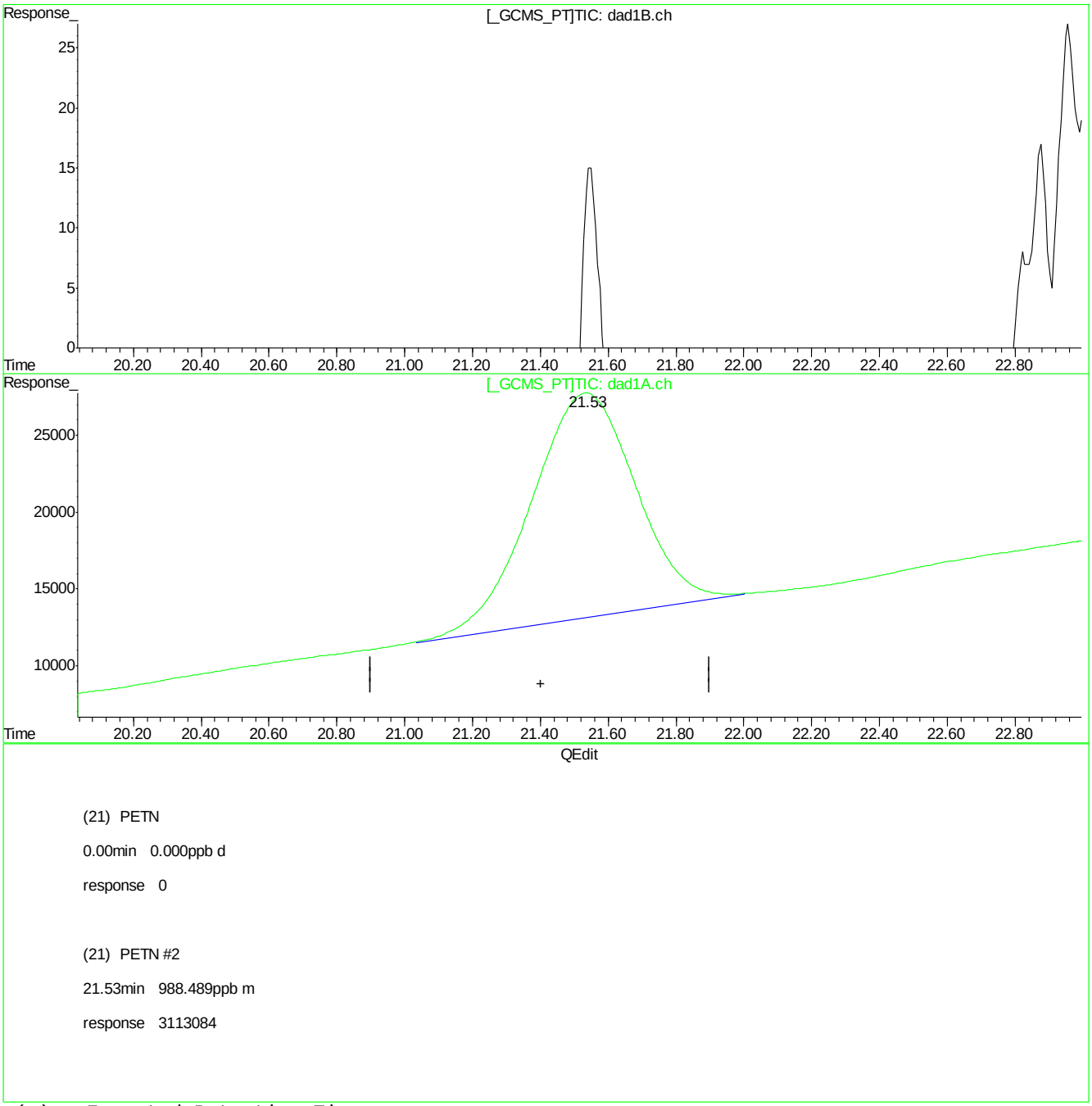
response 2798962

(+) = Expected Retention Time
GG622040.D GGG3024_080821.M Fri Aug 13 10:05:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622040.D\dad1A.ch
Acq On : 12-Aug-2021, 23:25:25 Operator: jamesb
Sample : cc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration



(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.53min 988.489ppb m

response 3113084

(+) = Expected Retention Time
GG622040.D GGG3024_080821.M Fri Aug 13 10:05:59 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 08/13/21 10:27

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1A.ch
Acq On : 13-Aug-2021, 02:33:57 Operator: jamesb
Sample : ecc3024-1000 Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04:52 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Initial Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
12) S	3,4-Dinitrotolue	13.88	13.88	4836612	9374689	968.921	961.791
	Spiked Amount 500.000	Range 70 - 136		Recovery =		193.78%#	192.36%#
	Target Compounds						
1)	TNX	4.80	4.80	1876748	1876748	460.027	460.027
2)	HMX	5.22	5.22	2999546	2999546	920.600	920.600
3)	DNX	5.40	5.40	5044935	5044935	919.025	922.438
4)	MNX	6.50	6.50	6627731	6627731	1092.398	1092.398
5)	1,3,5-Trinitrobe	7.51	7.51	8770103	8770103	948.506	948.506
6)	RDX	7.75	7.75	3950994	3950994	983.550	983.550
7)	1,3-Dinitrobenze	9.70	9.70	11713553	9109187	958.564	1004.938
8)	Nitrobenzene	10.63	10.63	7534810	7527710	962.670	988.041
9)	2,4,6-Trinitroto	11.61	11.61	8188194	11083316	951.735	946.414
10)	Nitroglycerin	0.00	12.39	0	2806934	N.D.	884.492 #
11)	Tetryl	12.89	12.89	6307748	10678729	933.315	915.646
13)	2,6-Dinitrotolue	14.23	14.22	5654773	8000926	965.112	965.236
14)	2,4-Dinitrotolue	14.86	14.86	10615395	7444516	963.437	997.601
15)	3,5-Dinitroanili	15.55	15.55	8982255	14590918	961.529	949.142
16)	o-Nitrotoluene	16.39	16.39	4706015	6818842	966.443	926.922
17)	p-Nitrotoluene	17.35	17.34	9837378	17712464	1935.312	2030.184
18)	4-Amino-2,6-Dini	17.35	17.34	9837378	17712464	1935.312	2030.184
19)	m-Nitrotoluene	18.62	18.62	5225563	9120517	947.712	1021.712
20)	2-Amino-4,6-Dini	19.12	19.12	7864612	11337587	956.426	1056.694
21)	PETN	0.00	21.46	0	3142917	N.D. d	997.962m

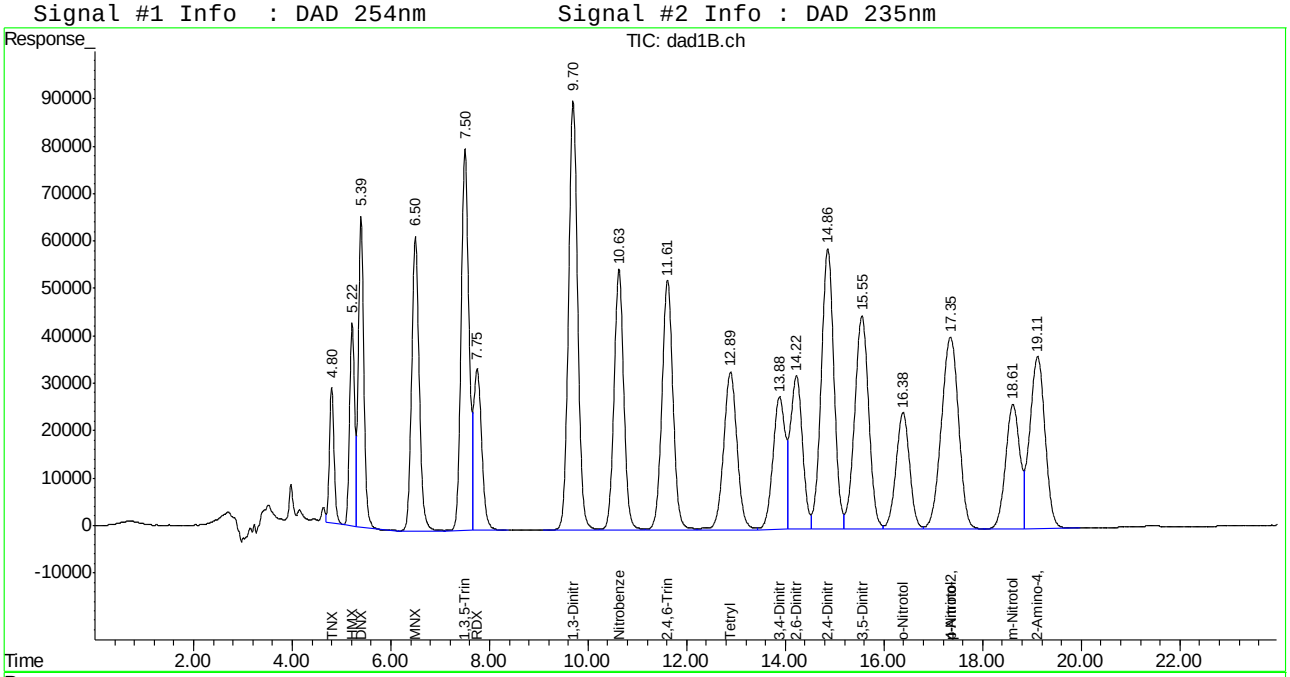
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GG622046.D GGG3024_080821.M Fri Aug 13 10:07:33 2021 Page 1

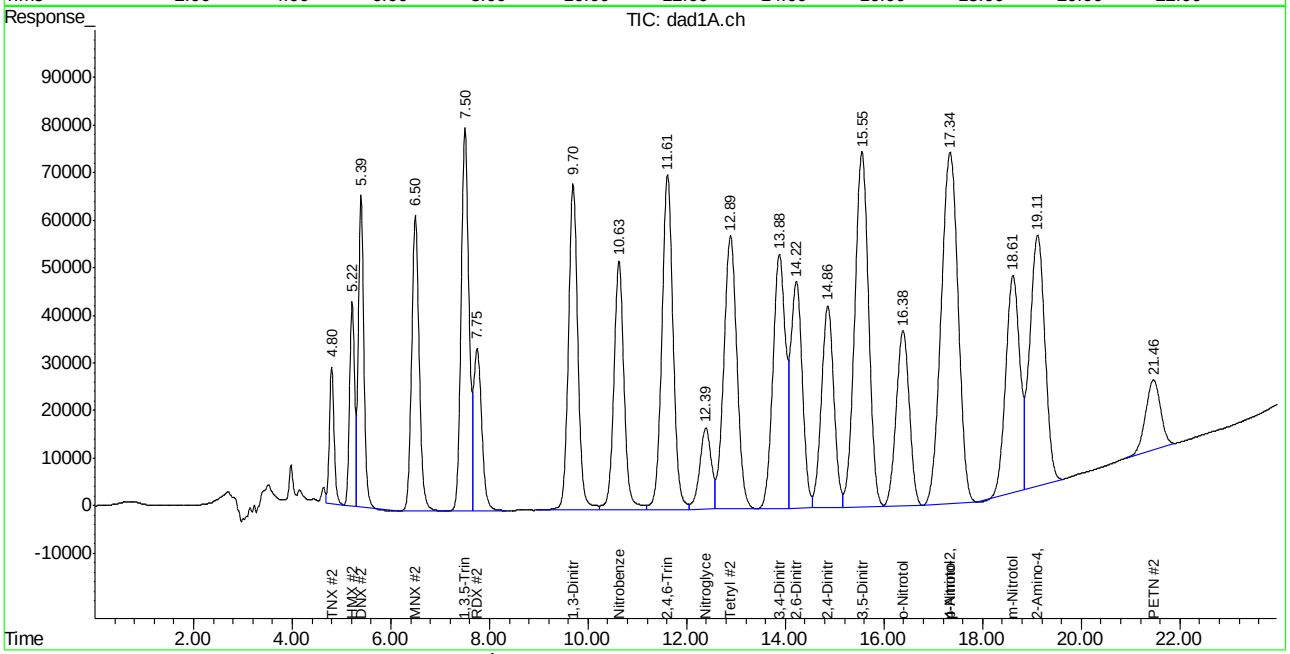
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1A.ch
Acq On : 13-Aug-2021, 02:33:57 Operator: jamesb
Sample : ecc3024-1000 Inst : G1315B
Misc : op86727,GGG3025,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:06 2021 Quant Results File: GGG3024_080821.RES

Quant Method : C:\MSDCHEM\1...\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330RPB3.M

Volume Inj. : 100ul
Signal #1 Phase : Bonus RP Signal #2 Phase: Bonus RP
Signal #1 Info : DAD 254nm Signal #2 Info : DAD 235nm





Manual Integration Approval Summary

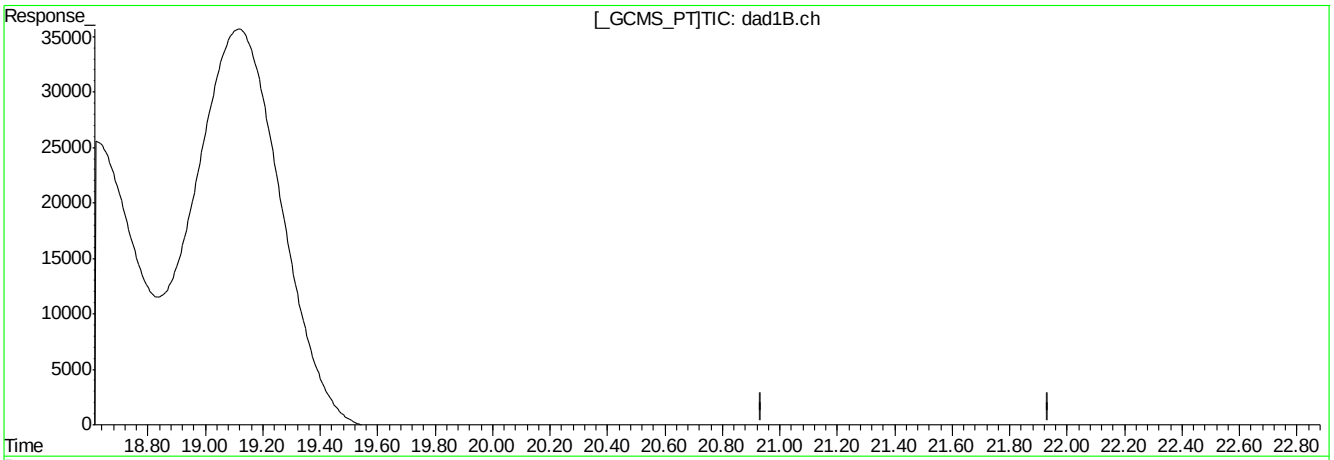
Sample Number:	GGG3025-ECC3024	**Method:**	SW846 8330B
Lab FileID:	GG622046.D	**Analyst approved:**	08/13/21 10:08 James Boone
Injection Time:	08/13/21 02:33	**Supervisor approved:**	08/13/21 10:27 Naresh Jiawan

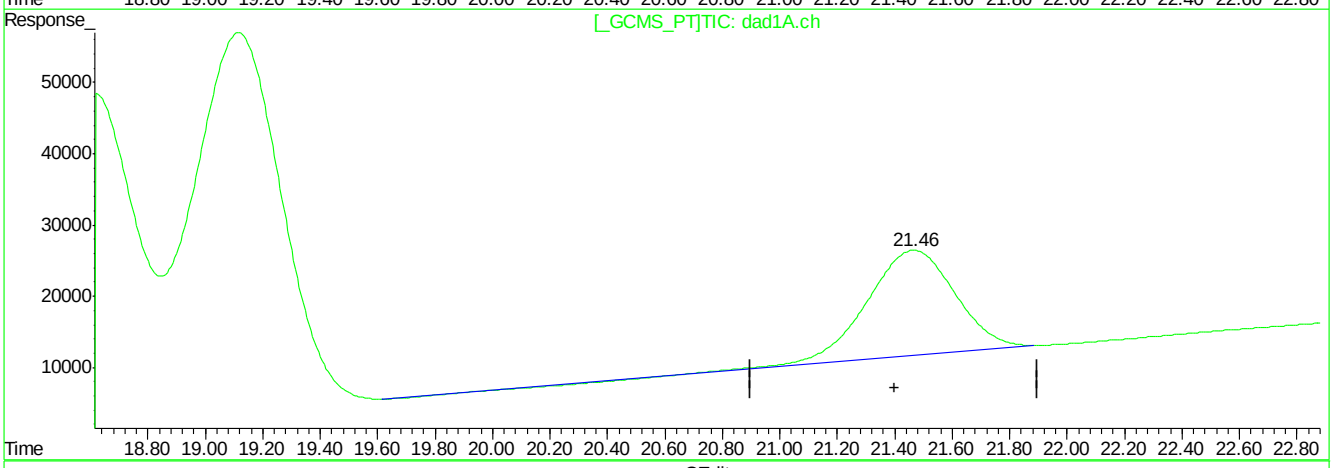
Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	21.46	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1A.ch
Acq On : 13-Aug-2021, 02:33:57 Operator: jamesb
Sample : ecc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

21.47min 0.000ppb

response 106202

(21) PETN #2

21.47min 974.156ppb

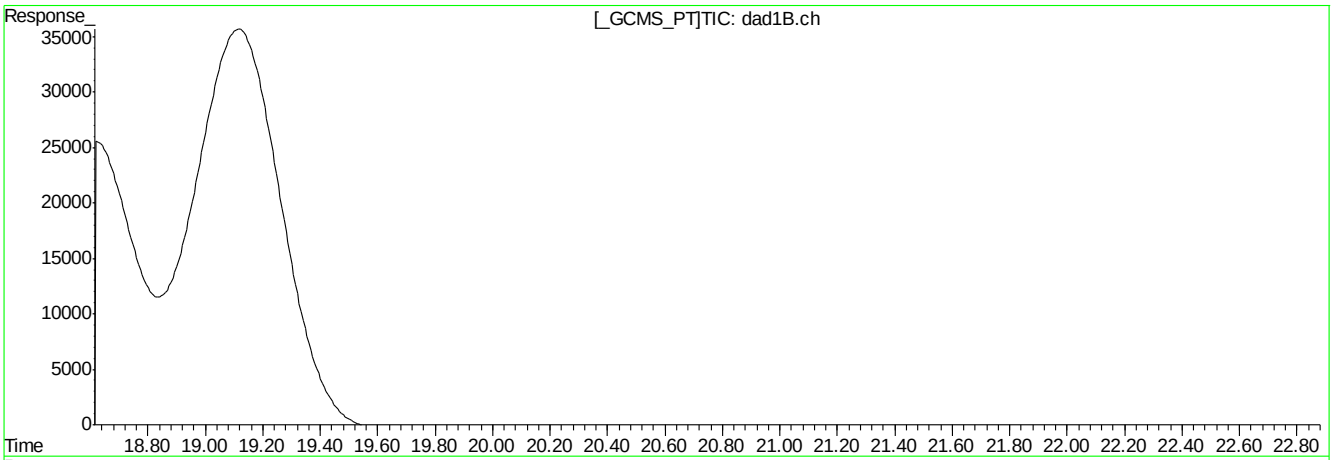
response 3067944

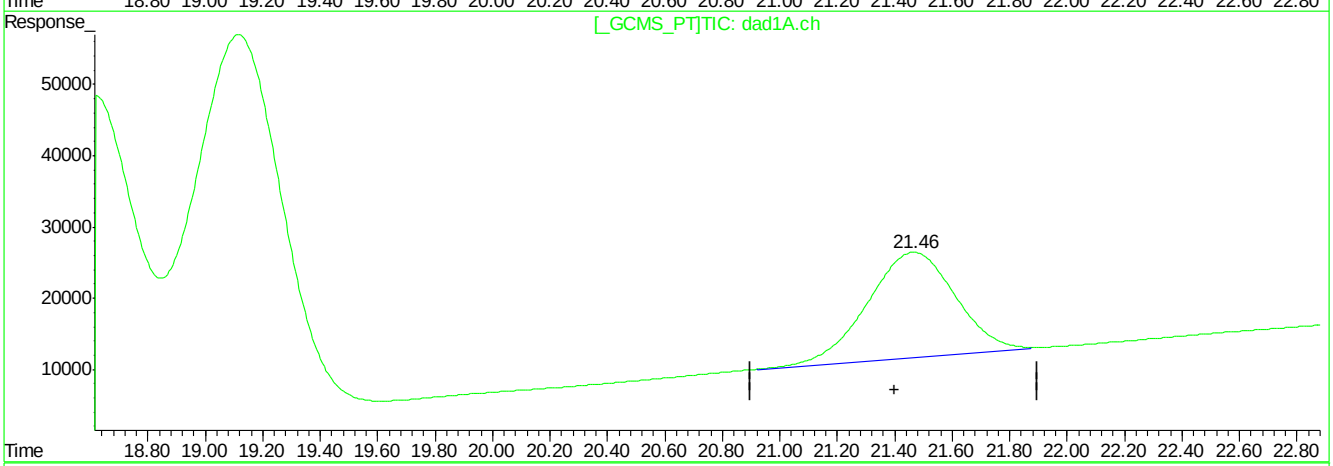
(+) = Expected Retention Time
GG622046.D GGG3024_080821.M Fri Aug 13 10:06:46 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GGG3025\GG622046.D\dad1A.ch
Acq On : 13-Aug-2021, 02:33:57 Operator: jamesb
Sample : ecc3024-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Aug 13 10:04 2021 Quant Results File: GGG3024_080821.RES

Method : C:\MSDCHEM\1\METHODS\GGG3024_080821.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 09 10:15:00 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

21.46min 997.962ppb m

response 3142917

(+) = Expected Retention Time
GG622046.D GGG3024_080821.M Fri Aug 13 10:06:54 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:31 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.19	11.19	55119	54206	26.025m	16.328
	Spiked Amount 500.000	Range 70 - 136		Recovery =		5.21%#	3.27%#
	Target Compounds						
1)	TNX	1.30	1.31	15798	30173	8.369m	9.722
2)	HMX	1.43	1.43	35334	95994	24.448m	22.362m
3)	DNX	1.67	1.67	44540	105273	19.299	26.867
4)	MNX	2.25	2.25	62431	101476	24.645	25.956
5)	RDX	2.86	2.86	37234	62000	20.505m	21.231
6)	1,3,5-Trinitrobe	4.63	4.63	80463	159187	20.625	21.005
7)	1,3-Dinitrobenze	5.83	5.83	98498	71391	19.504	19.161m
8)	3,5-Dinitroanili	6.18	6.18	77965	145247	20.259	21.098m
9)	Nitrobenzene	7.44	7.44	60904	64197	20.960m	22.453m
10)	Nitroglycerin	0.00	8.87	0	25585	N.D.	21.312m#
11)	Tetryl	9.41	9.41	73398	95987	25.045m	20.765
12)	2,4,6-Trinitroto	9.81	9.81	85957	88258	23.242m	20.208
13)	2-Amino-4,6-Dini	10.20	10.19	84948	97732	25.826m	20.338
14)	4-Amino-2,6-Dini	10.69	10.71	78544	94221	31.459m	20.989
16)	2,4-Dinitrotolue	11.82	11.80	102385	65618	22.683m	22.697m
17)	2,6-Dinitrotolue	12.28	12.32	58085	57183	22.800m	17.790
18)	o-Nitrotoluene	15.41	15.46	56286	53898	26.113m	18.970m
19)	p-Nitrotoluene	15.99	15.98	73367	29202	21.876m	11.406m#
20)	m-Nitrotoluene	16.82	16.82	65274	77138	21.415	22.089m
21)	PETN	0.00	18.47	0	22677	N.D.	16.487m#

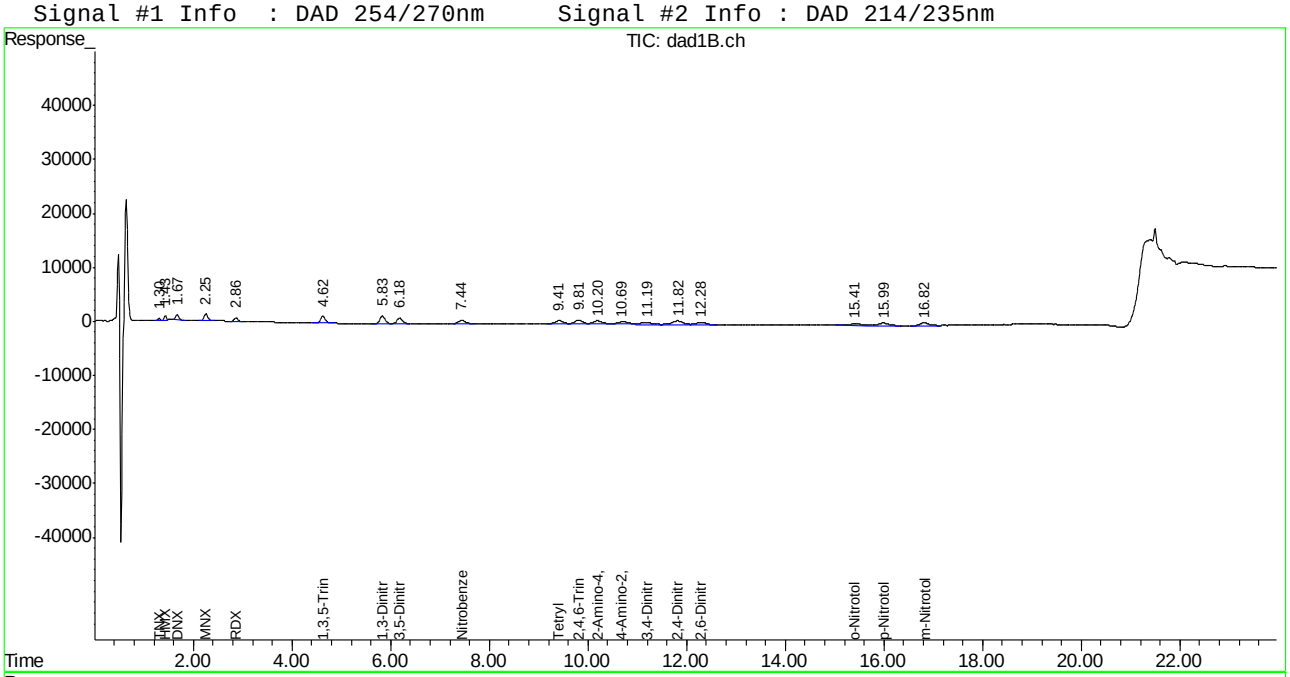
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:35:47 2021 Page 1

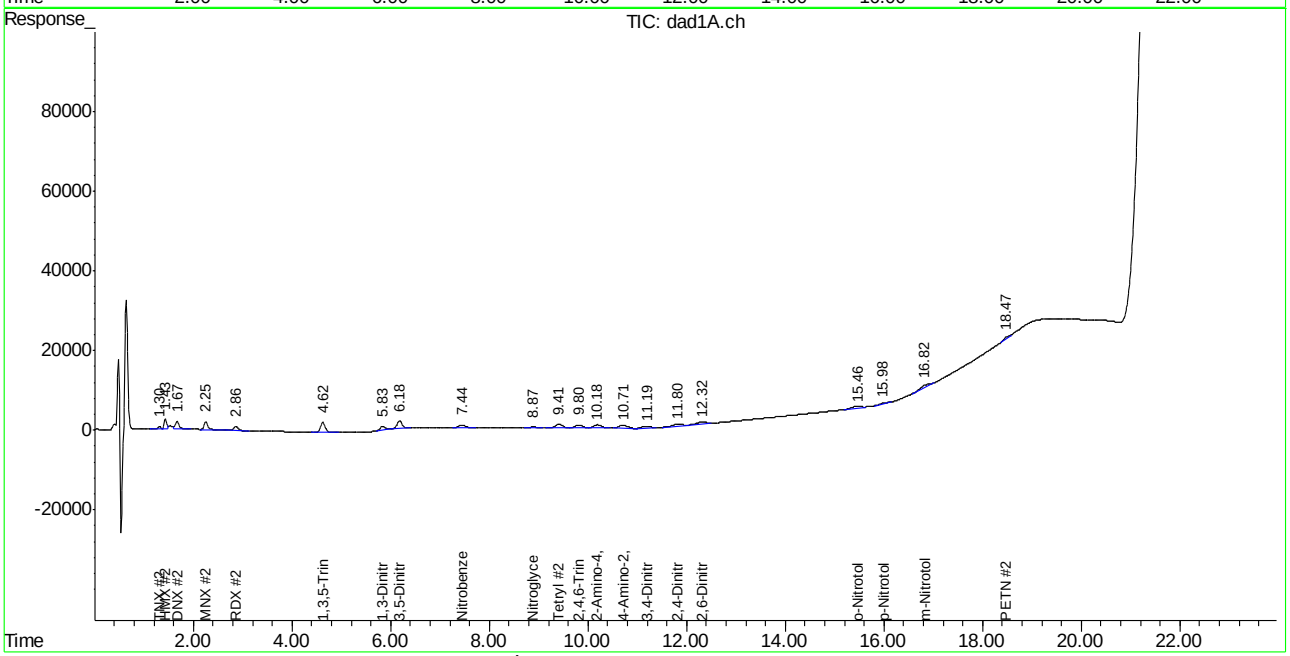
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:32 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

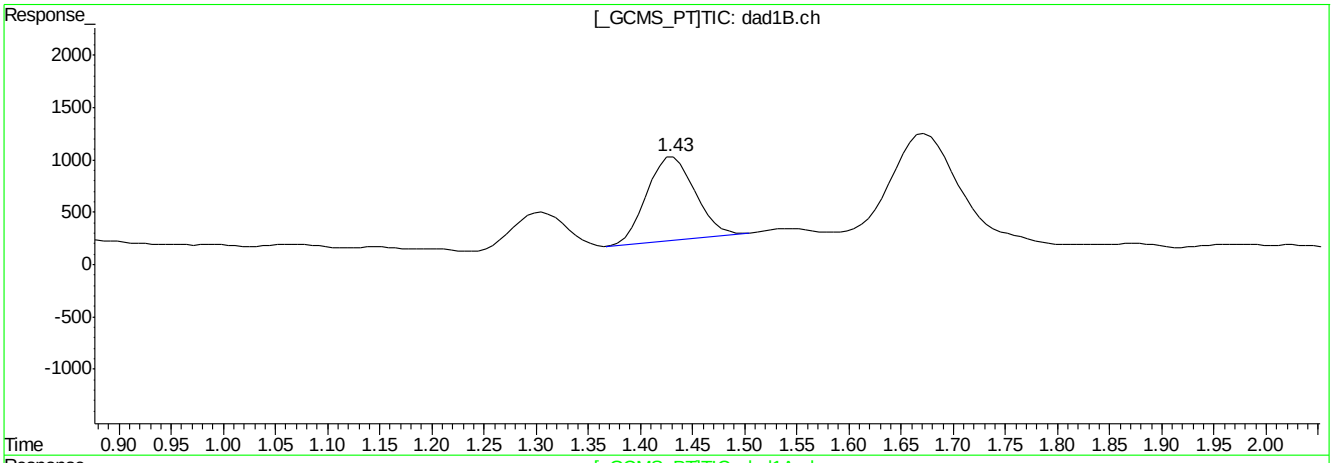
Sample Number: GPP2464-IC2464
Lab FileID: PP391043.D
Injection Time: 08/03/21 11:45
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

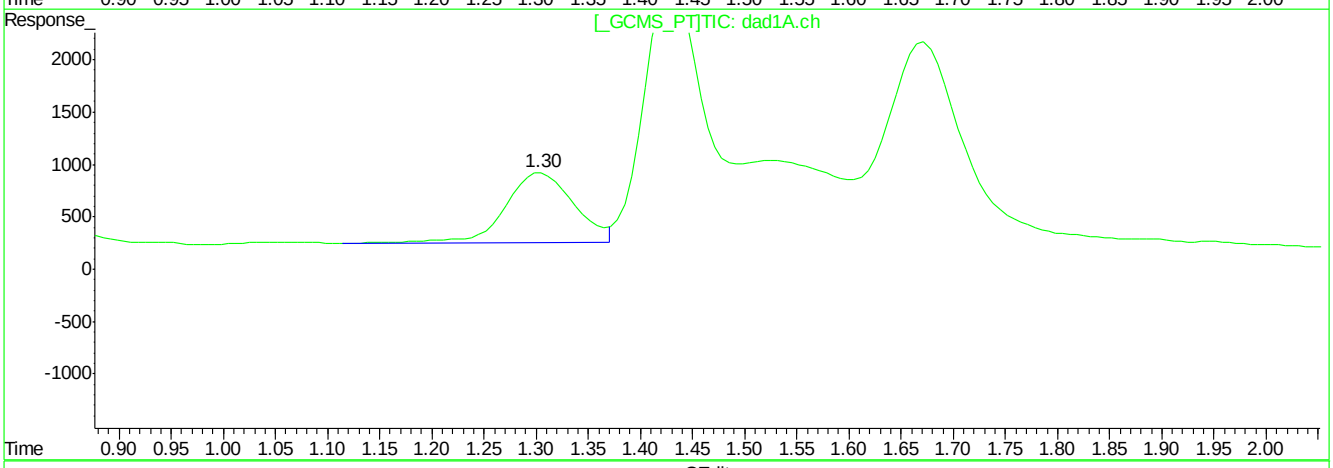
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.30	Poor instrument integration
HMX	2691-41-0	1	1.43	Poor instrument integration
HMX	2691-41-0	2	1.43	Poor instrument integration
RDX	121-82-4	1	2.86	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.83	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.18	Poor instrument integration
Nitrobenzene	98-95-3	1	7.44	Poor instrument integration
Nitrobenzene	98-95-3	2	7.44	Poor instrument integration
Nitroglycerine	55-63-0	2	8.87	Poor instrument integration
Tetryl	479-45-8	1	9.41	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.81	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.20	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.69	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.19	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	11.80	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	11.82	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.28	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.41	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.46	Poor instrument integration
p-Nitrotoluene	99-99-0	2	15.98	Poor instrument integration
p-Nitrotoluene	99-99-0	1	15.99	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.82	Poor instrument integration
PETN	78-11-5	2	18.47	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.43min 13.504ppb

response 25490

(1) TNX #2

1.31min 9.722ppb

response 30173

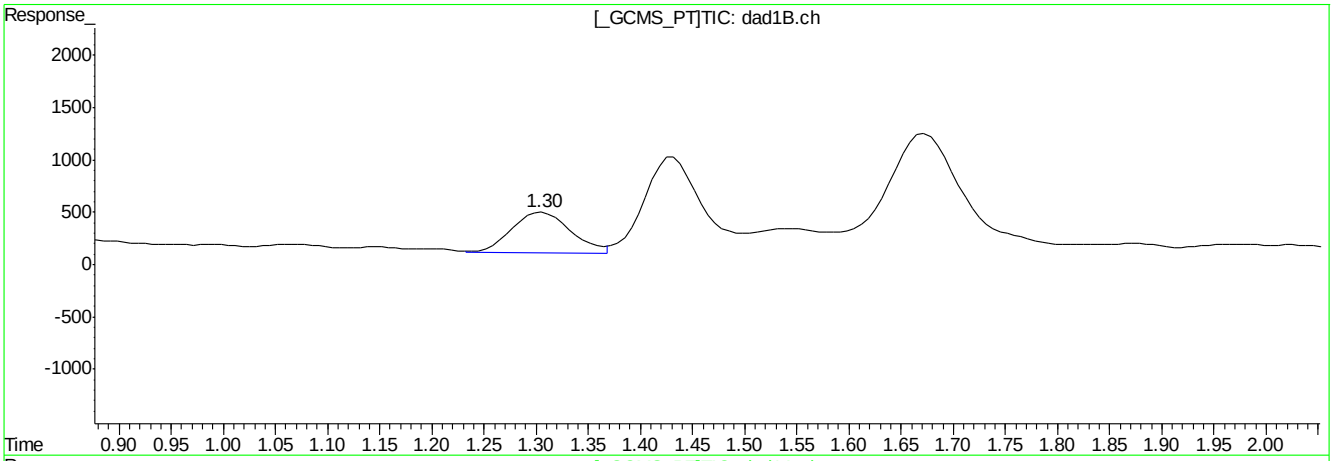
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:28:24 2021

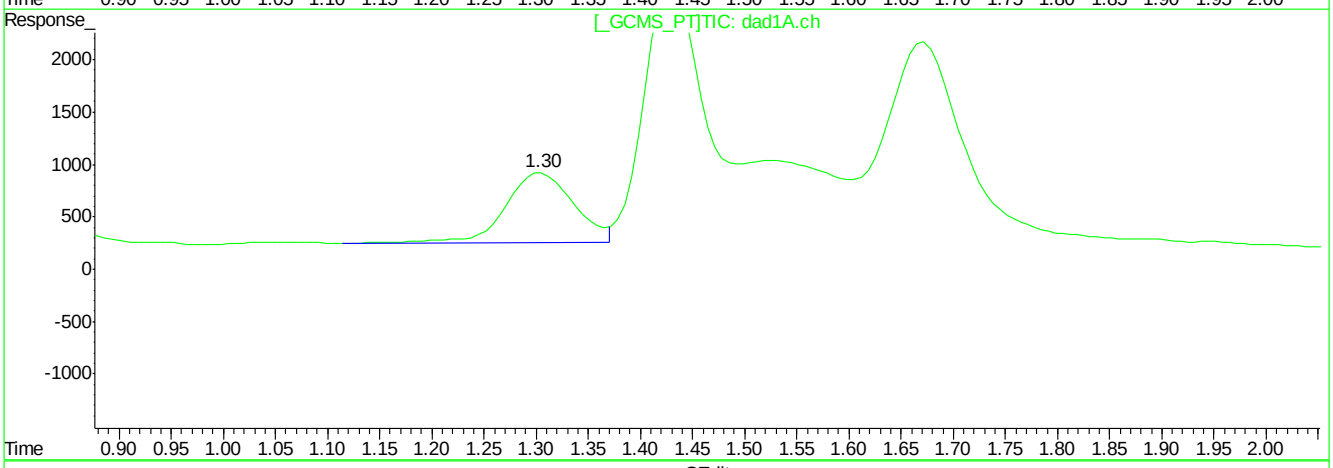
PP391043.D edits: TNX

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.30min 8.369ppb m

response 15798

(1) TNX #2

1.31min 9.722ppb

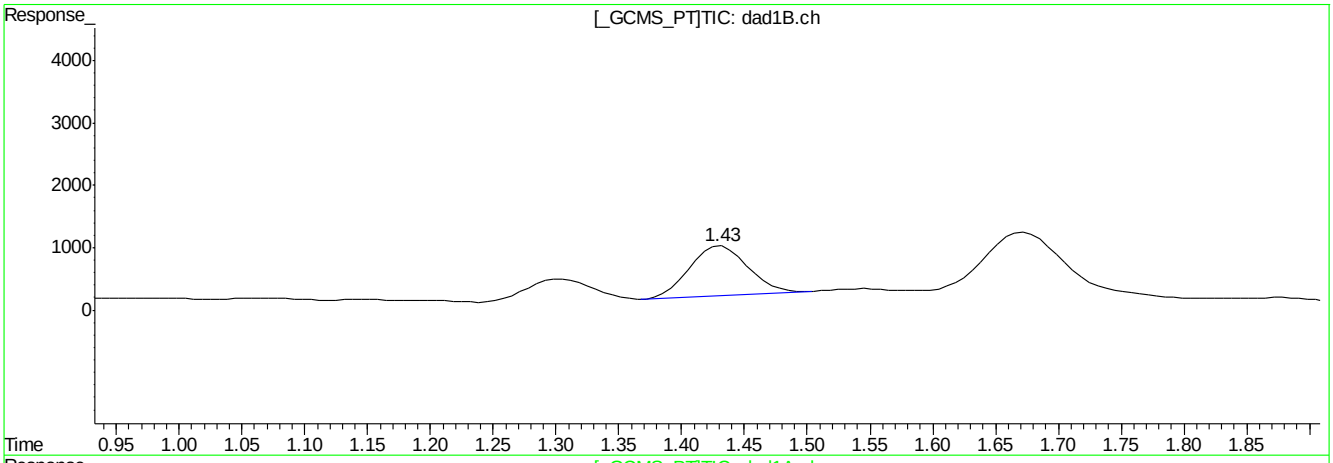
response 30173

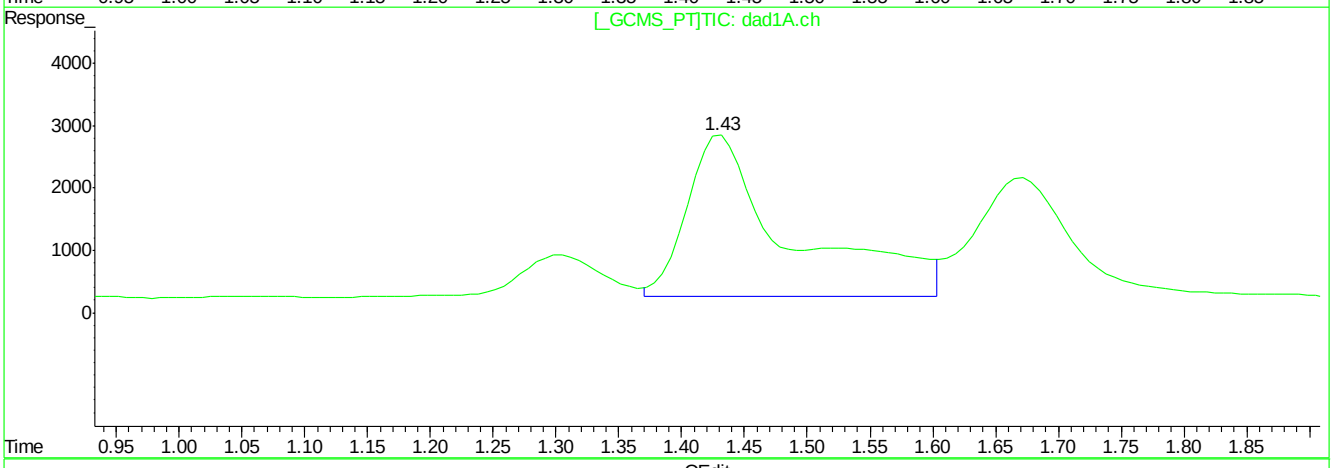
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:28:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.43min 17.637ppb

response 25490

(2) HMX #2

1.43min 34.228ppb

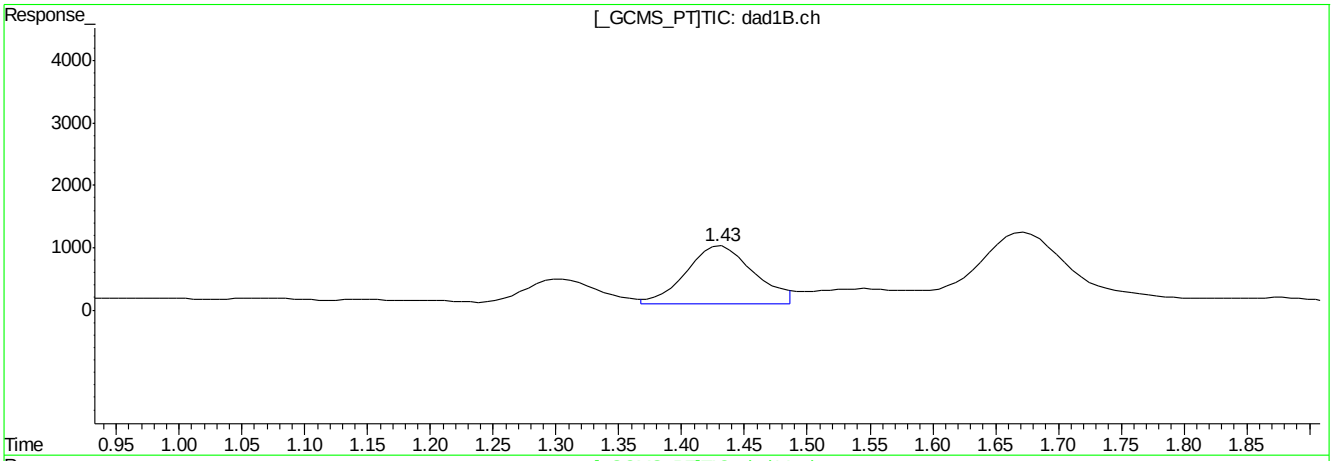
response 146933

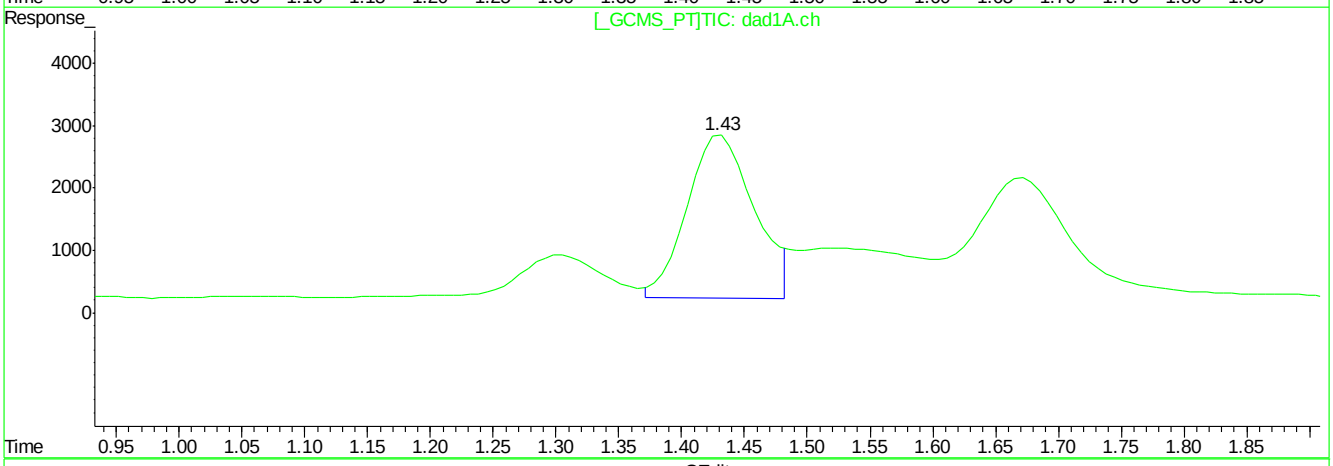
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:28:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.43min 24.448ppb m

response 35334

(2) HMX #2

1.43min 22.362ppb m

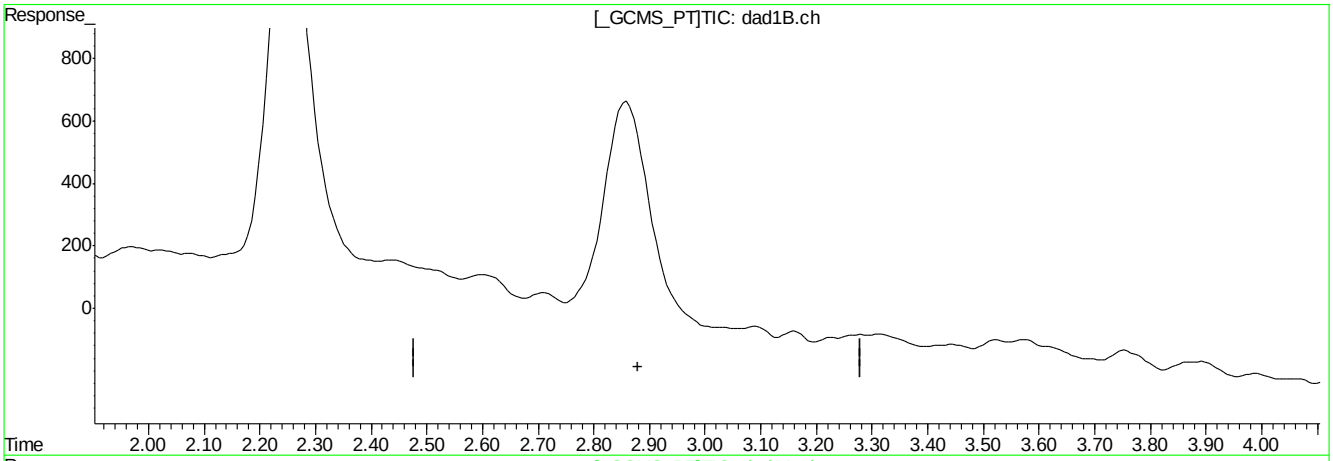
response 95994

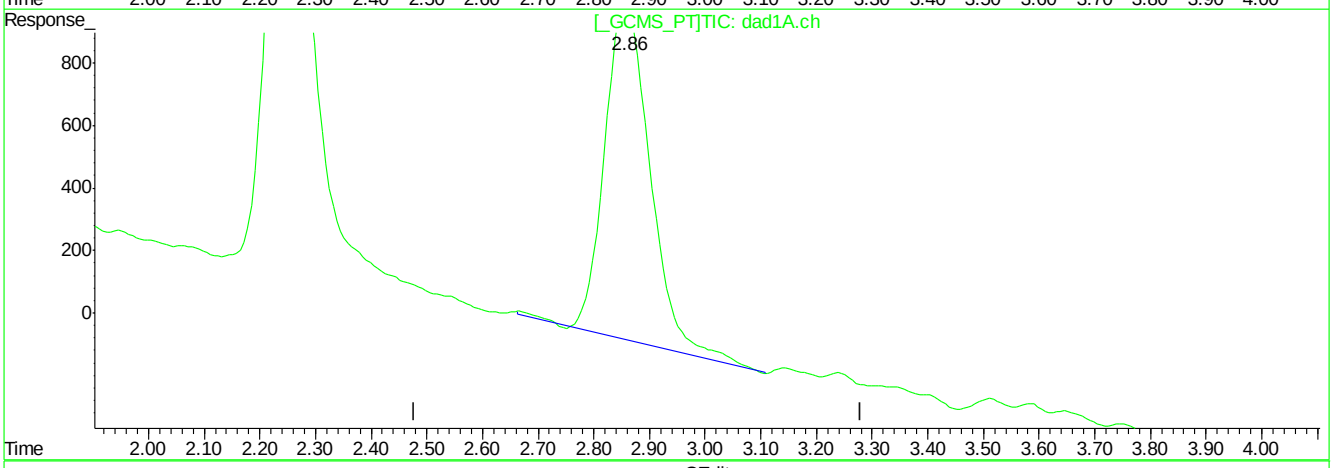
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:28:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

0.00min 0.000ppb

response 0

(5) RDX #2

2.86min 21.231ppb

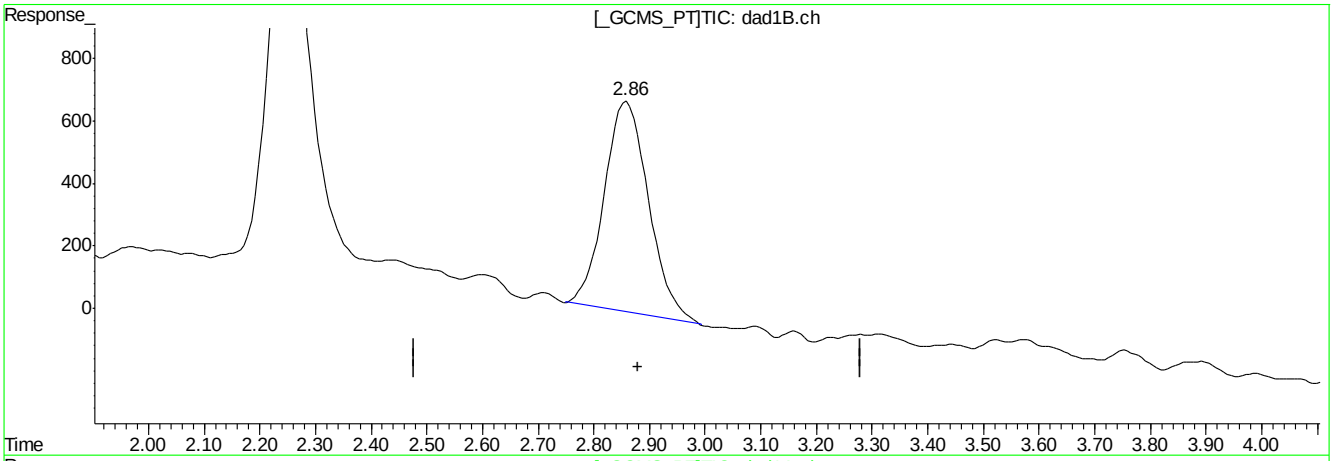
response 62000

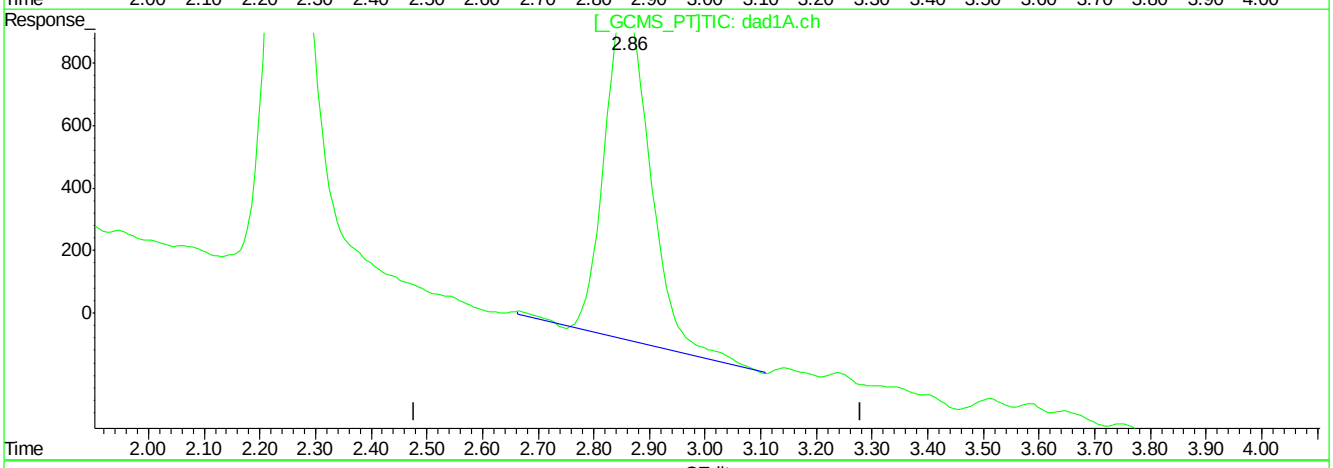
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(5) RDX

2.86min 20.505ppb m

response 37234

(5) RDX #2

2.86min 21.231ppb

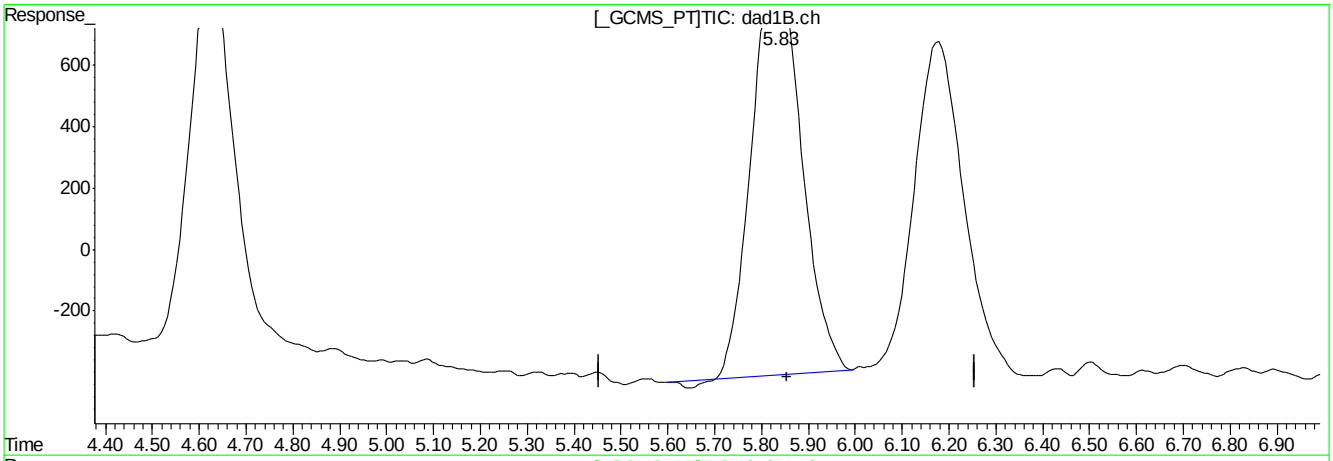
response 62000

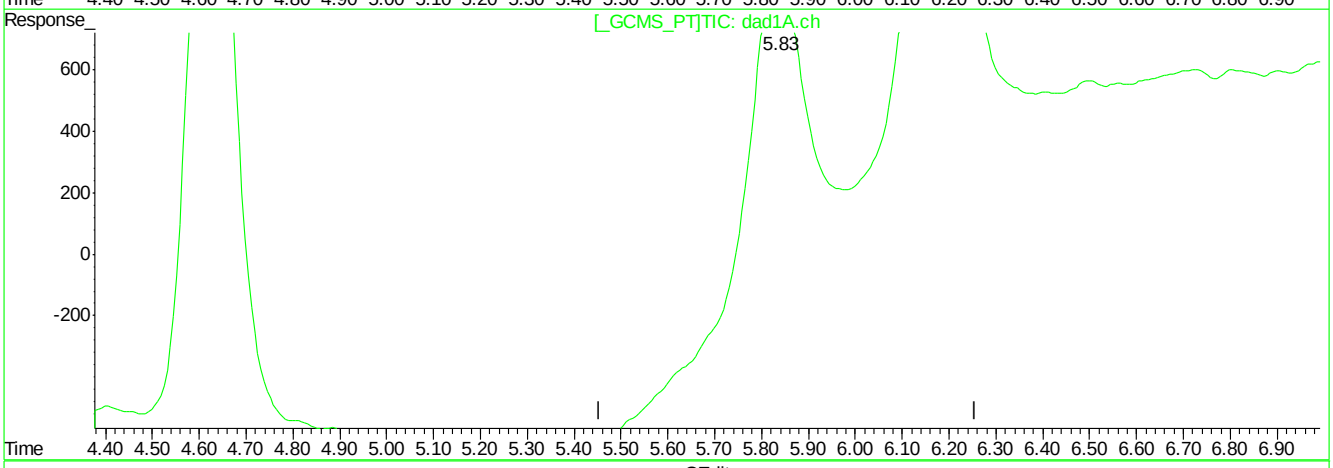
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.83min 19.504ppb

response 98498

(7) 1,3-Dinitrobenzene #2

5.83min 20.741ppb

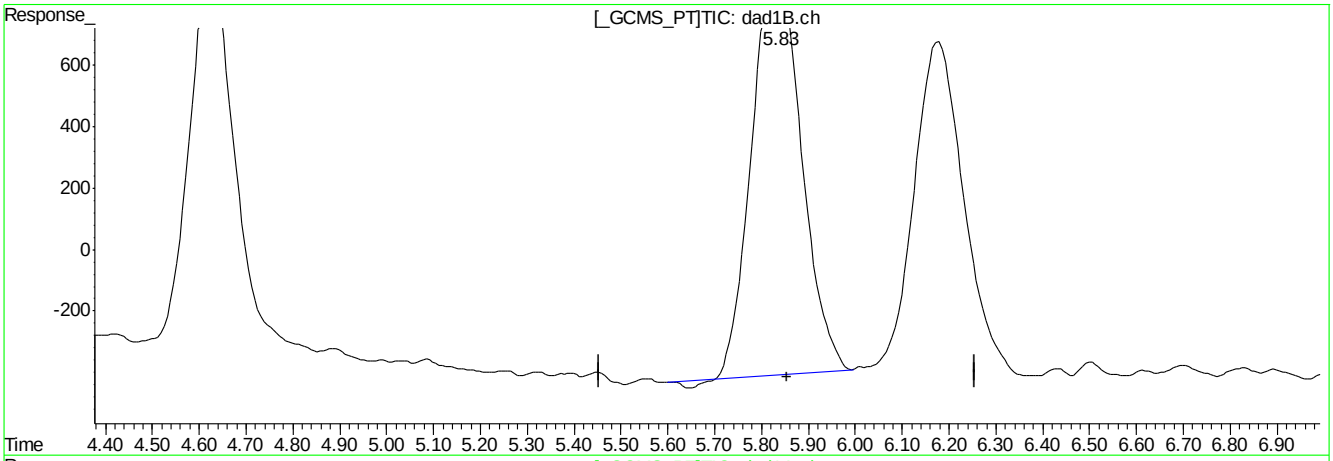
response 77275

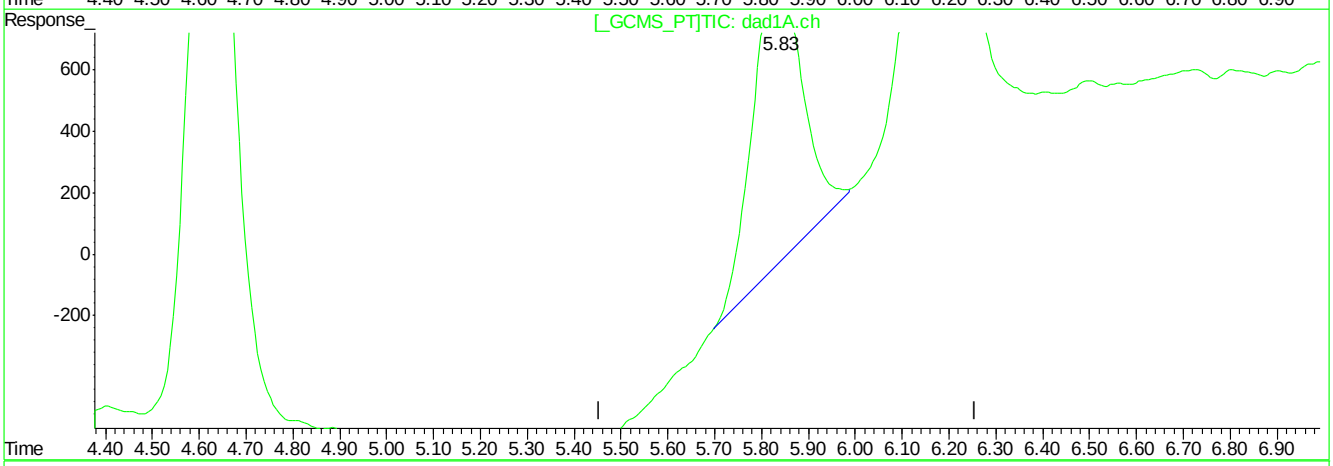
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:26 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.83min 19.504ppb

response 98498

(7) 1,3-Dinitrobenzene #2

5.83min 19.161ppb m

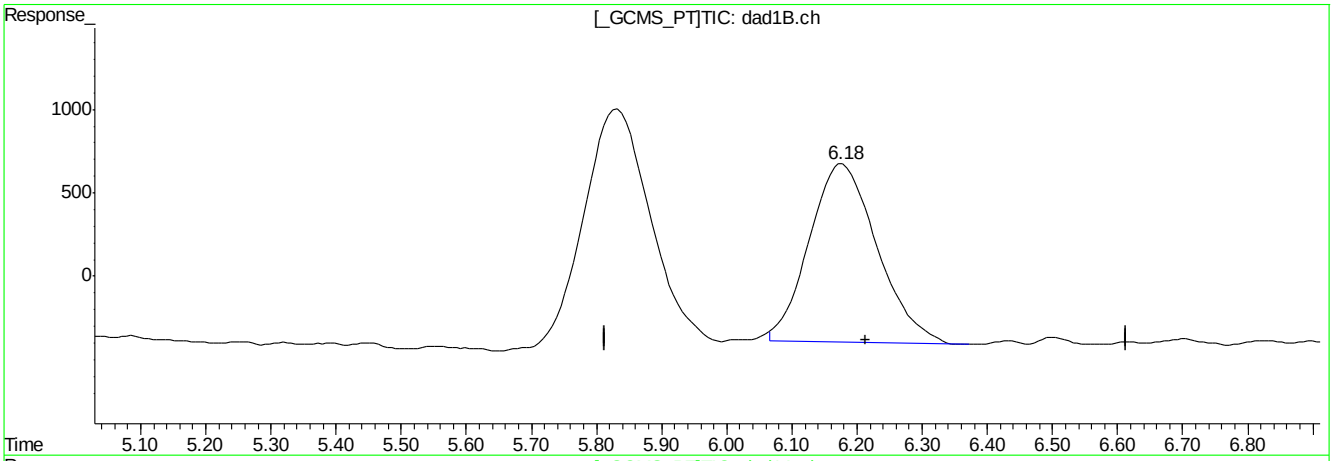
response 71391

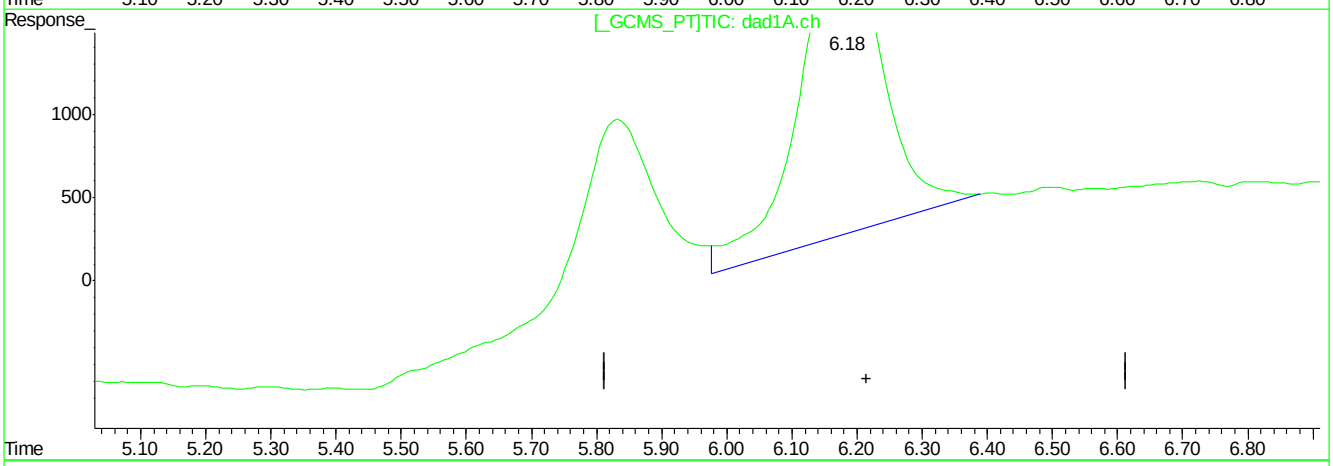
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.18min 20.259ppb

response 77965

(8) 3,5-Dinitroaniline #2

6.18min 24.020ppb

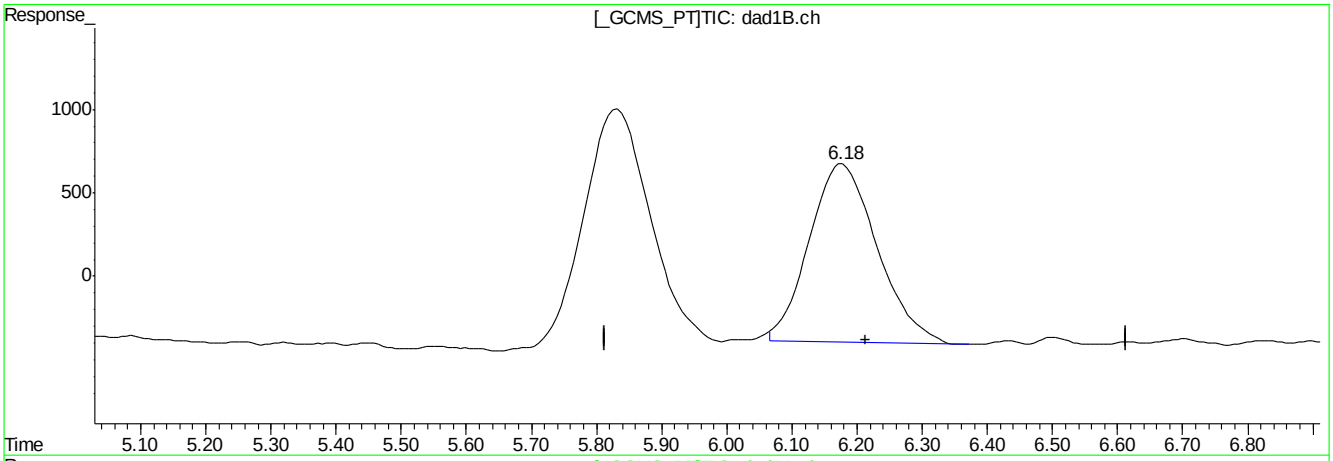
response 165367

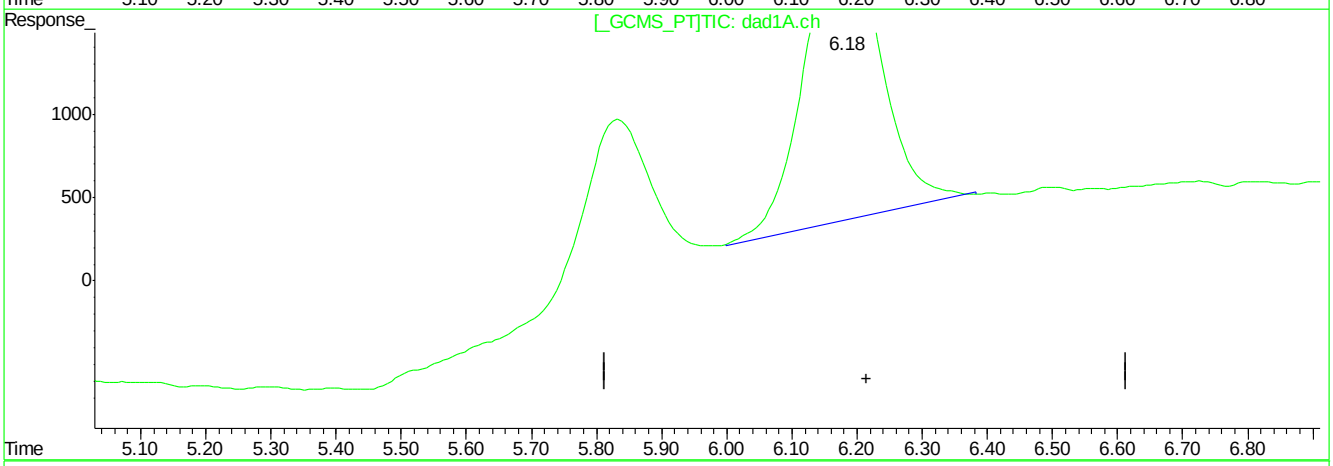
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.18min 20.259ppb

response 77965

(8) 3,5-Dinitroaniline #2

6.18min 21.098ppb m

response 145247

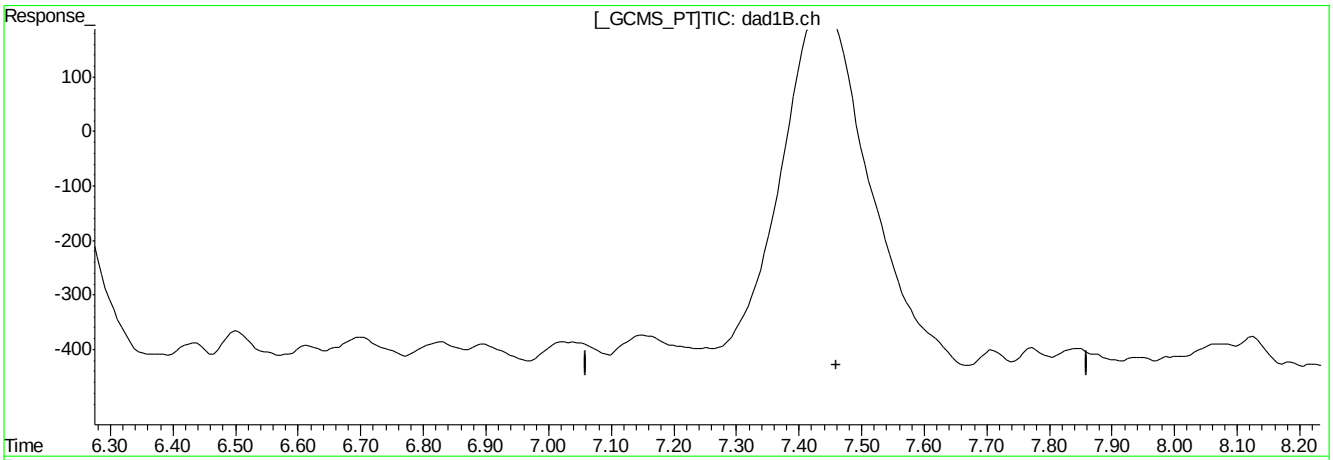
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:51 2021

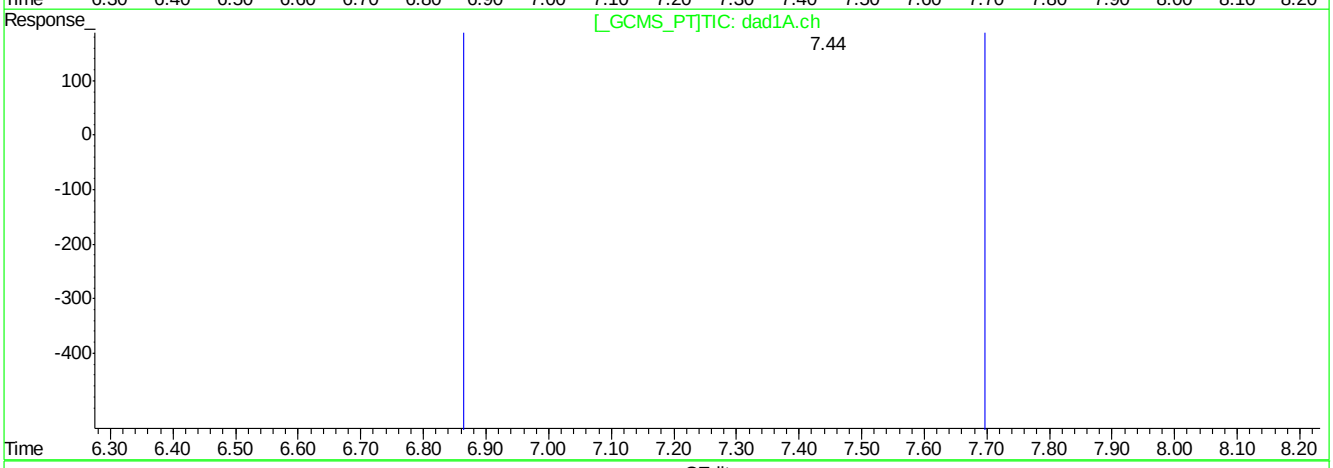
PP391043.D edits: 3,5-Dinitroaniline

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

0.00min 0.000ppb

response 0

(9) Nitrobenzene #2

7.44min 25.115ppb

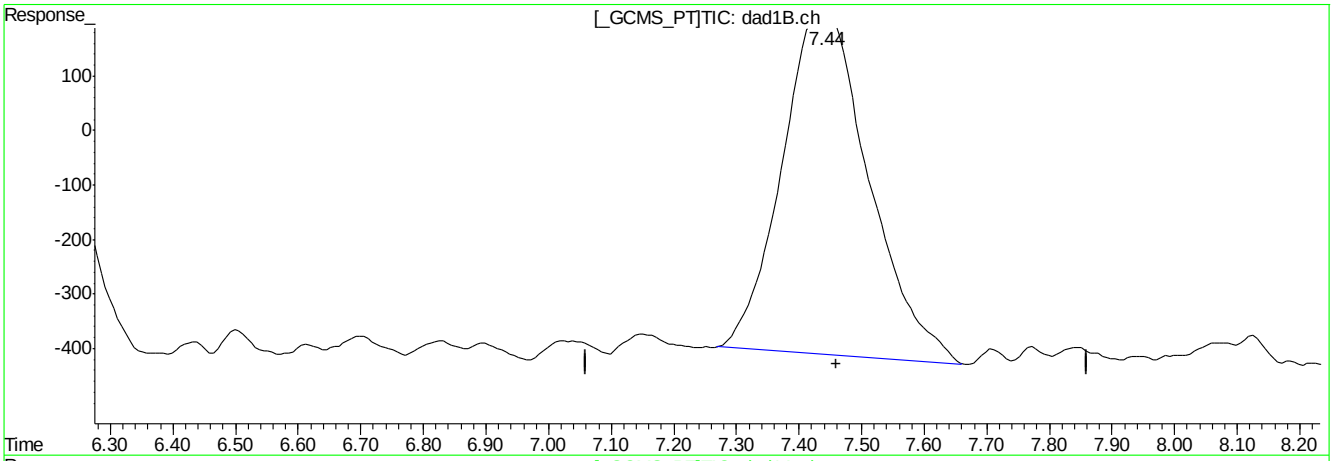
response 71808

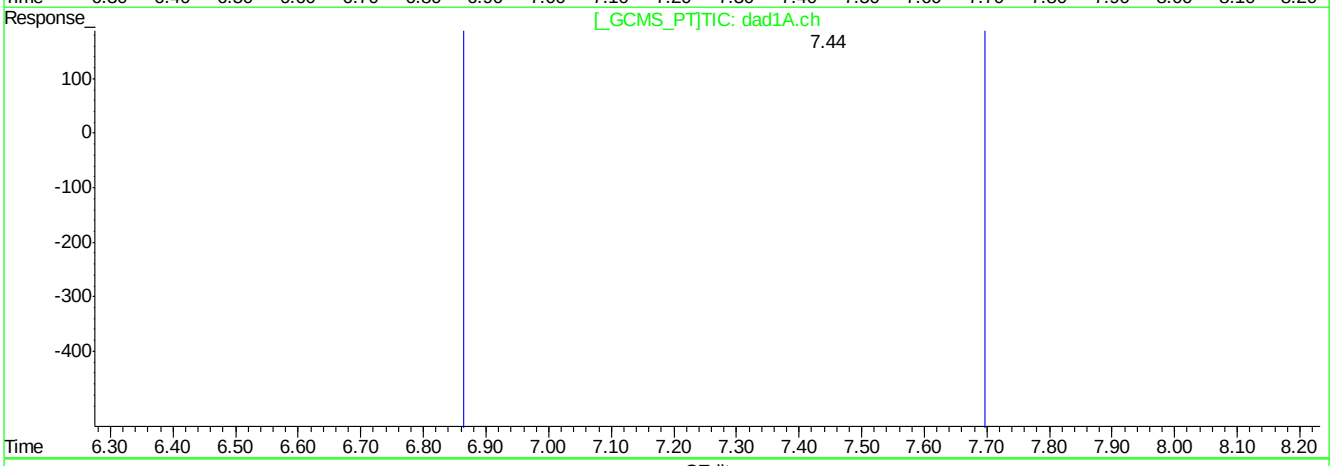
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.44min 20.960ppb m

response 60904

(9) Nitrobenzene #2

7.44min 25.115ppb

response 71808

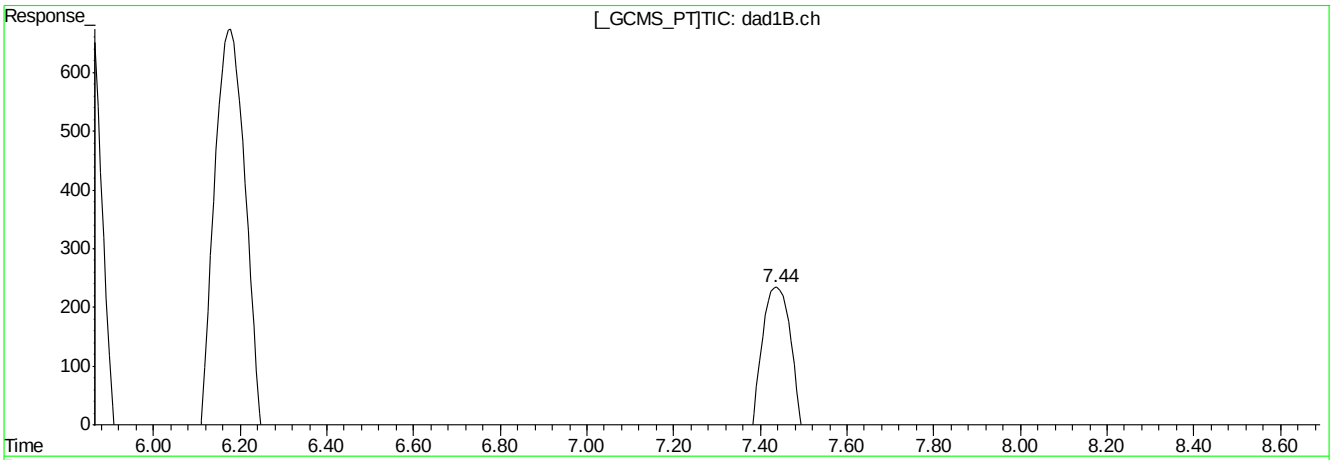
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:29:58 2021

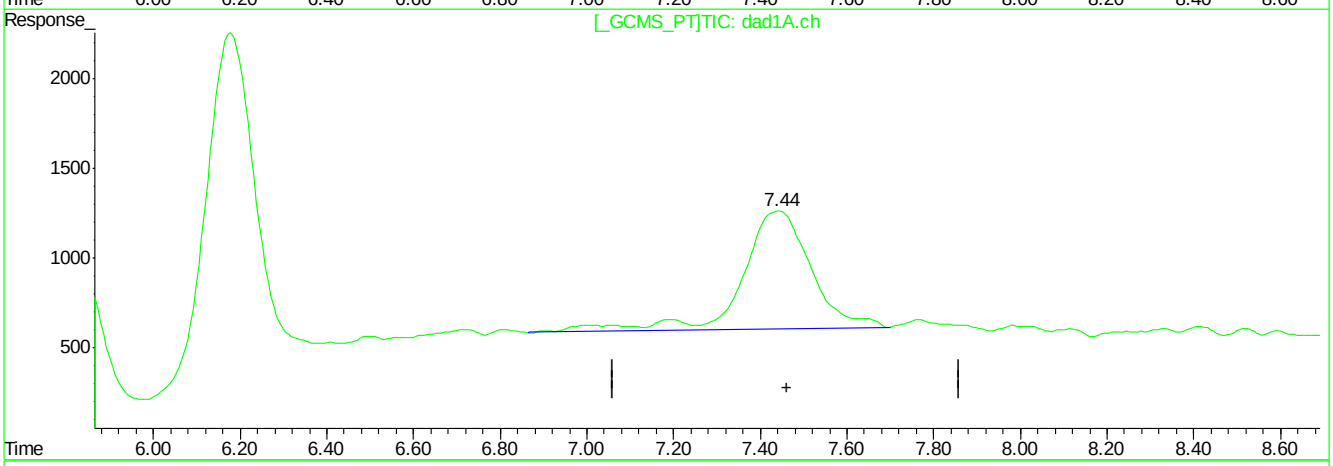
PP391043.D edits: Nitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.44min 20.960ppb m

response 60904

(9) Nitrobenzene #2

7.44min 25.115ppb

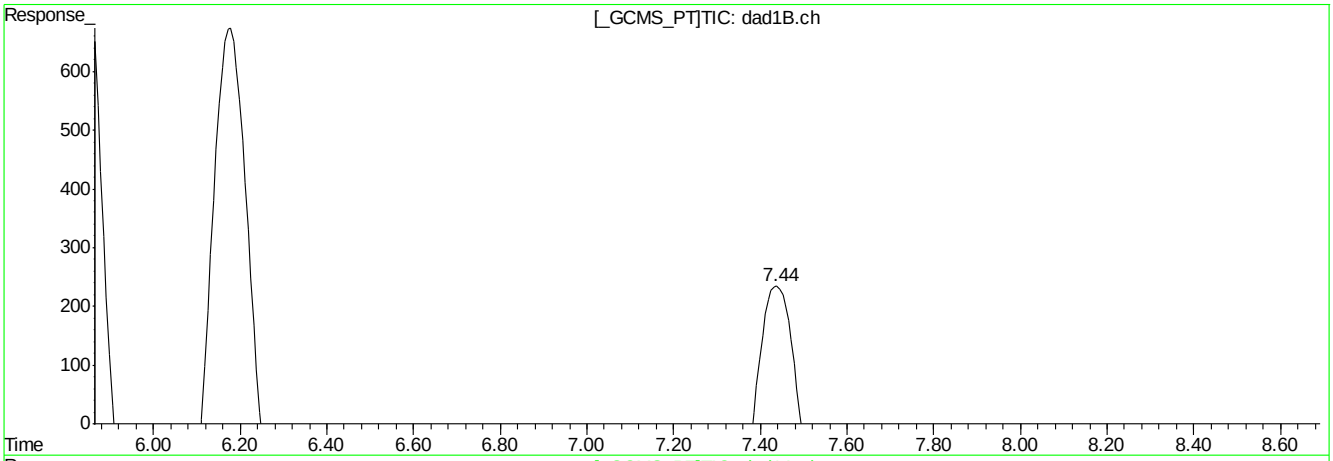
response 71808

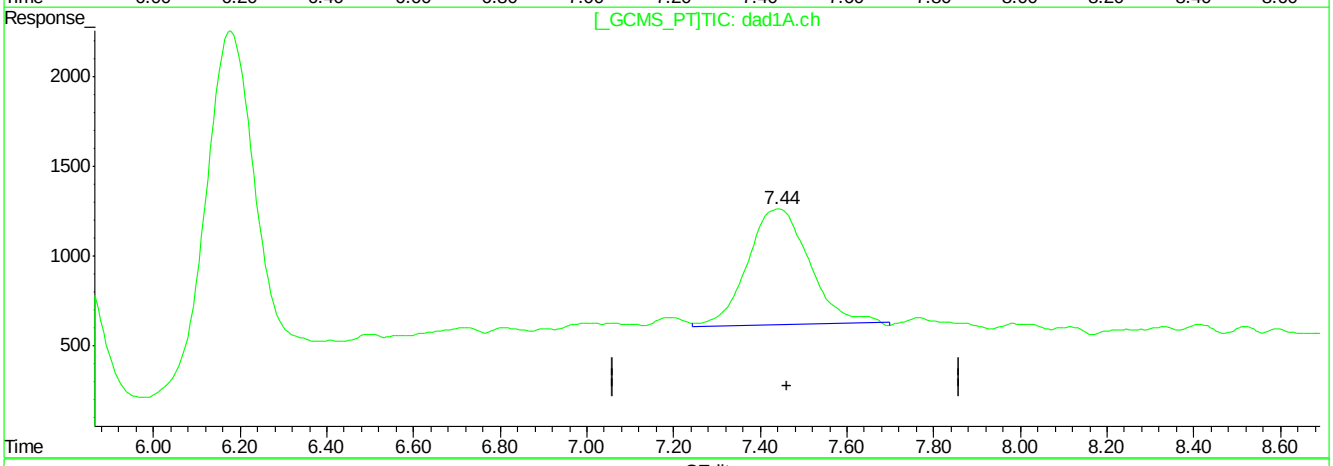
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:01 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.44min 20.960ppb m

response 60904

(9) Nitrobenzene #2

7.44min 22.453ppb m

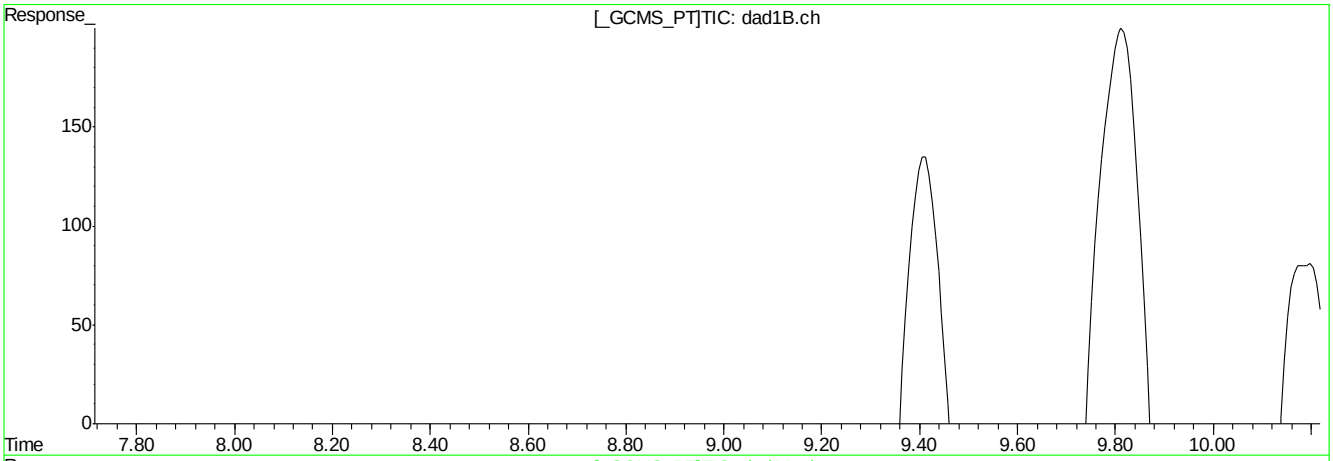
response 64197

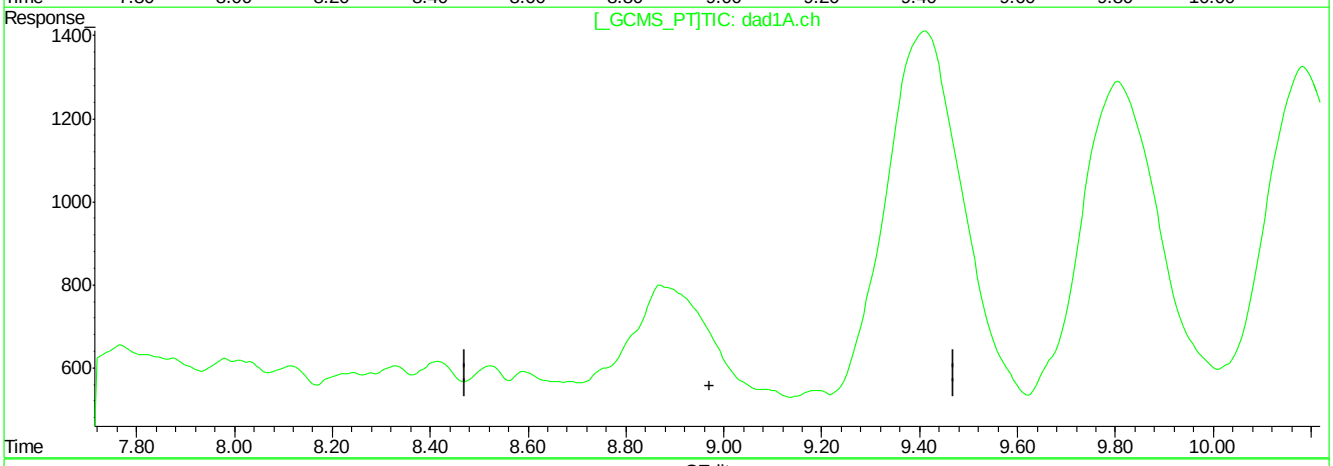
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

0.00min 0.000ppb

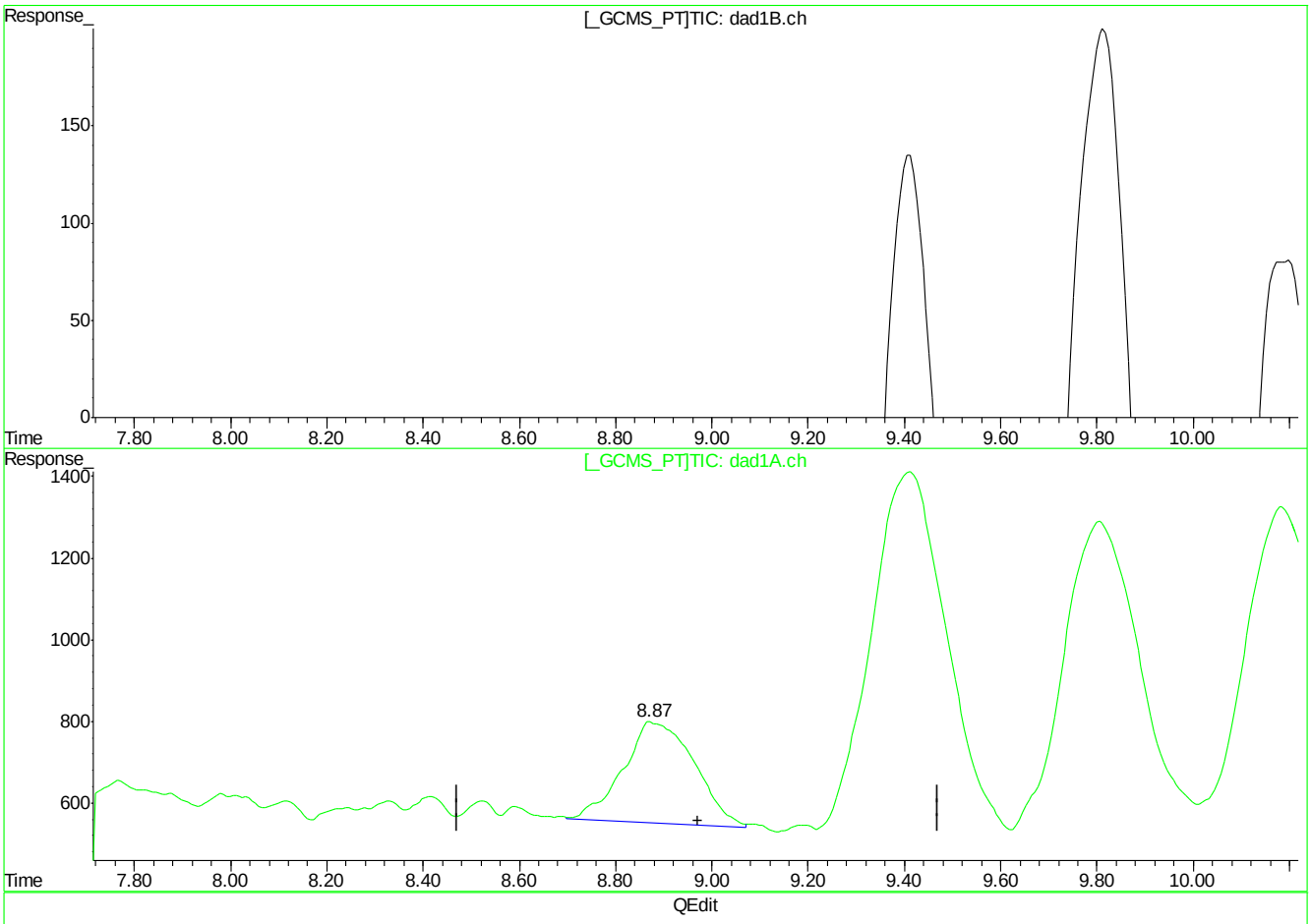
response 0

(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(10) Nitroglycerin

0.00min 0.000ppb

response 0

(10) Nitroglycerin #2

8.87min 21.312ppb m

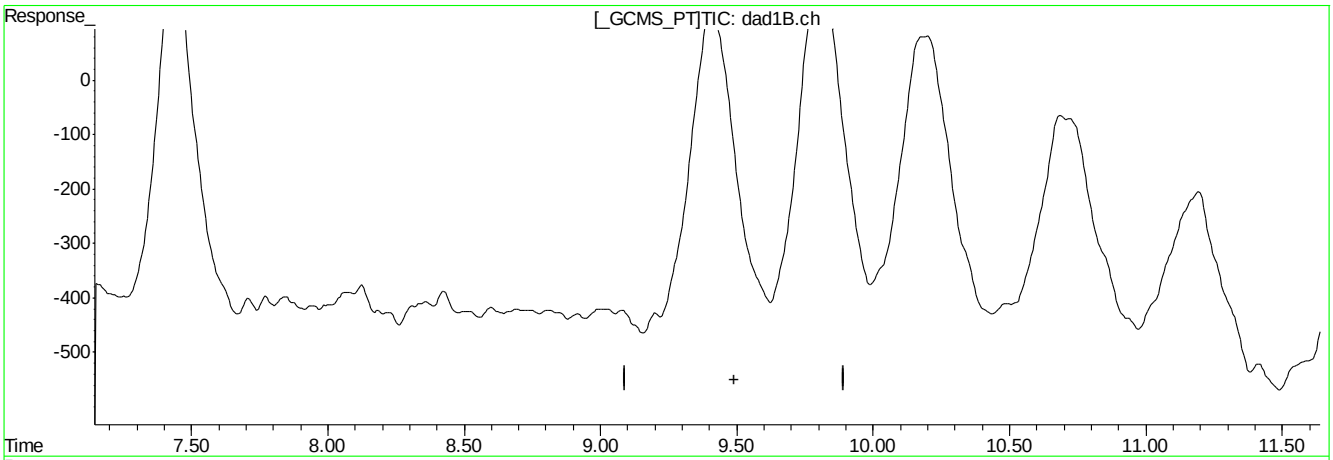
response 25585

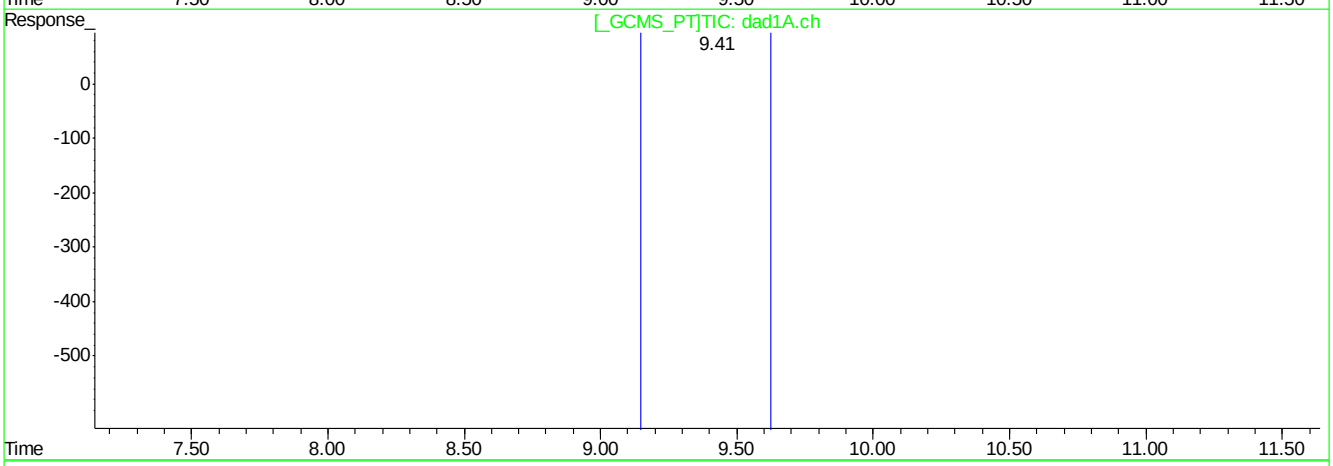
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

0.00min 0.000ppb

response 0

(11) Tetryl #2

9.41min 20.765ppb

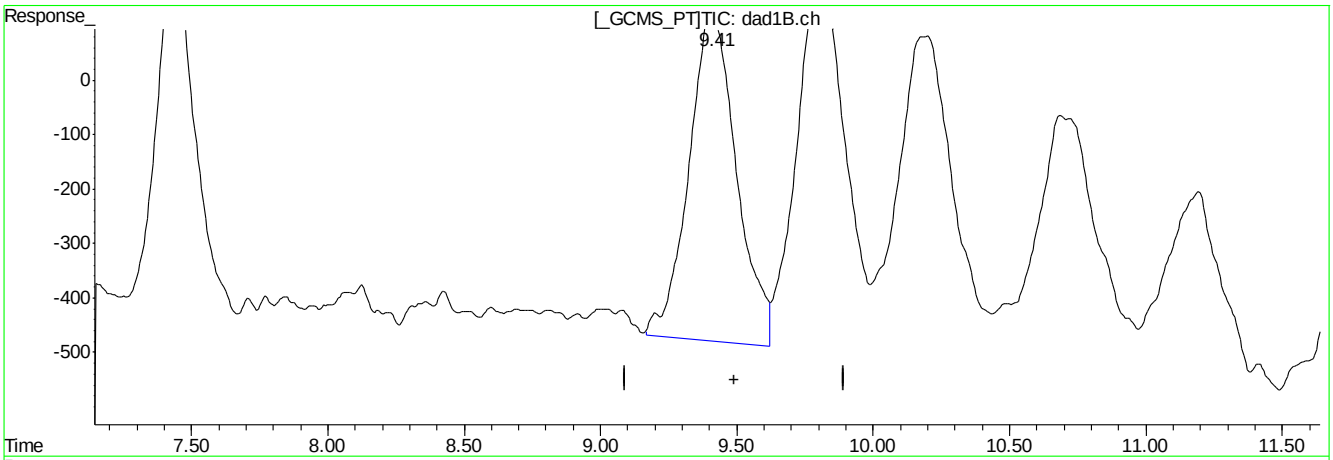
response 95987

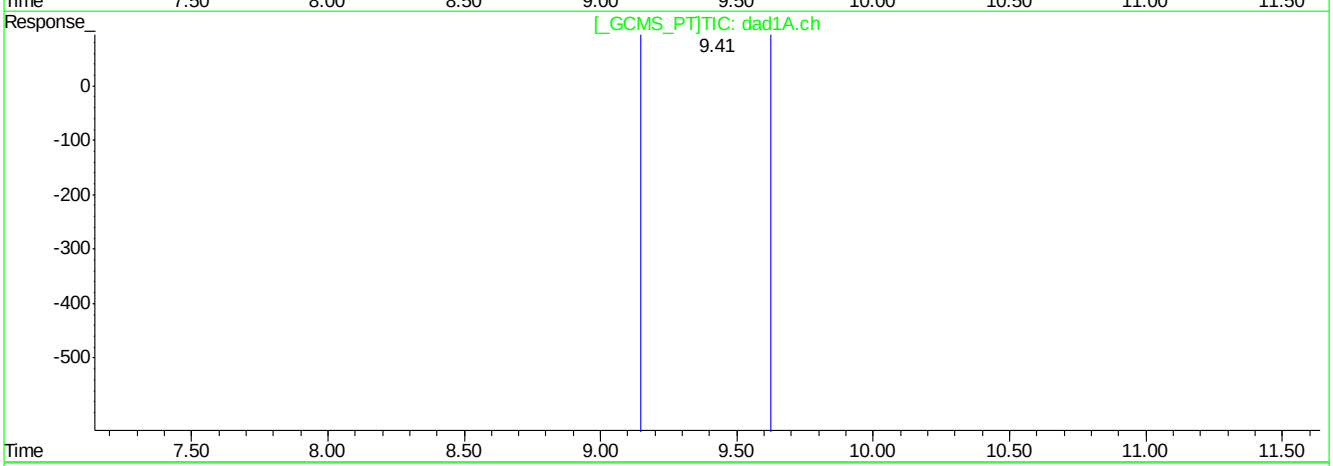
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.41min 25.045ppb m

response 73398

(11) Tetryl #2

9.41min 20.765ppb

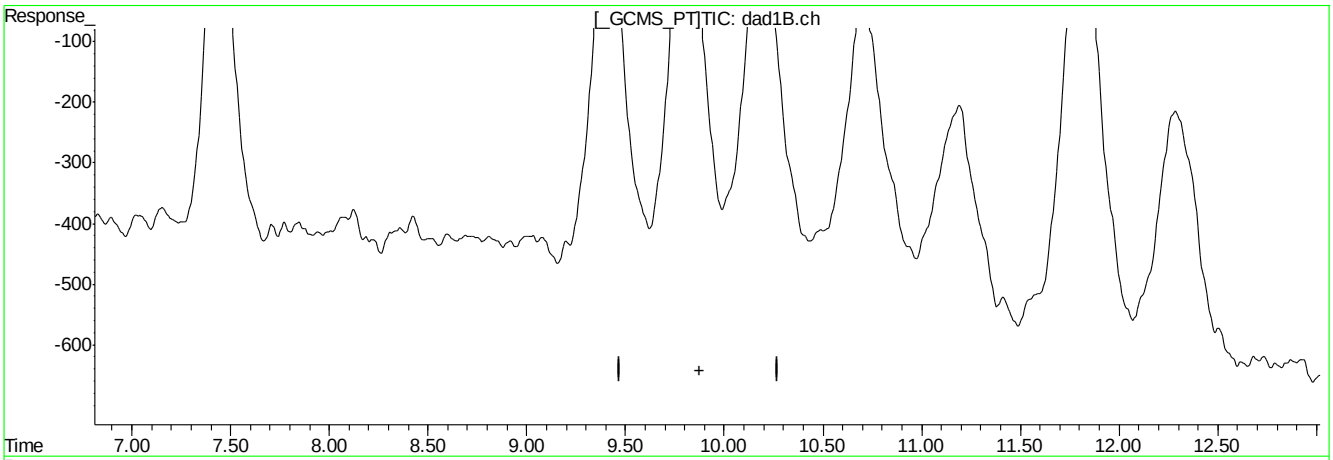
response 95987

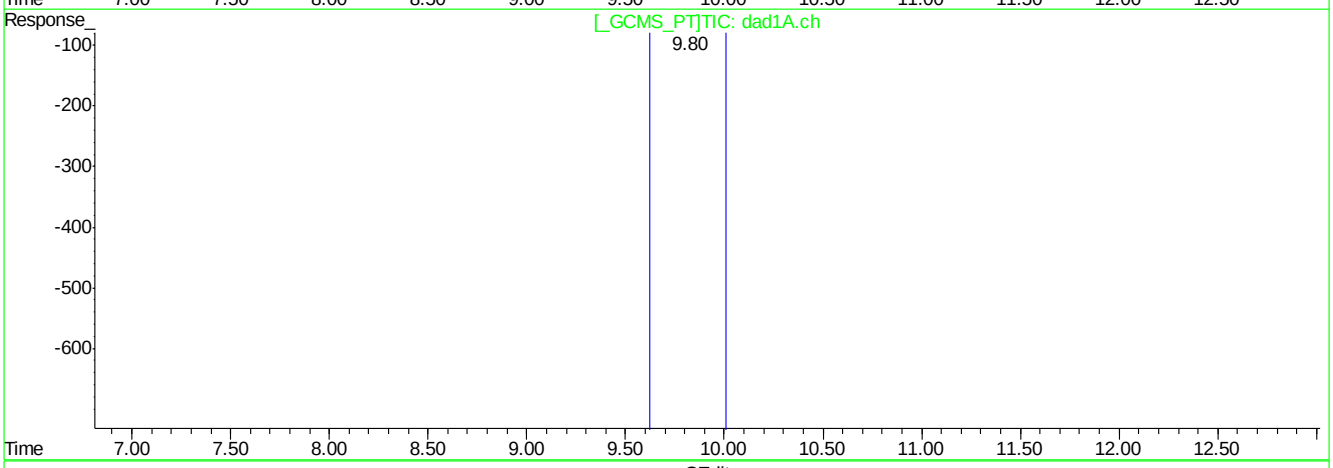
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

0.00min 0.000ppb

response 0

(12) 2,4,6-Trinitrotoluene #2

9.81min 20.208ppb

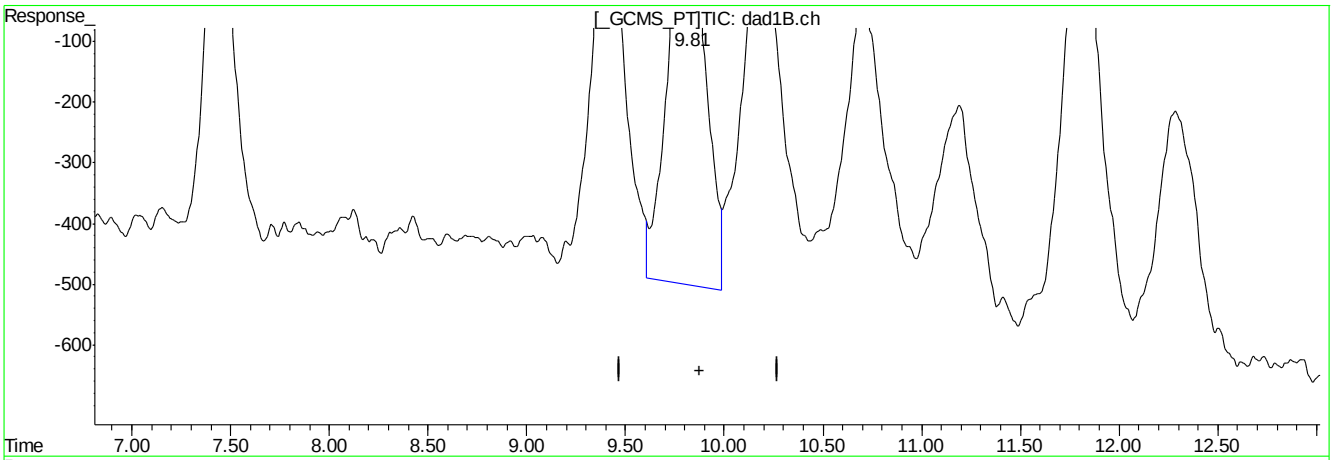
response 88258

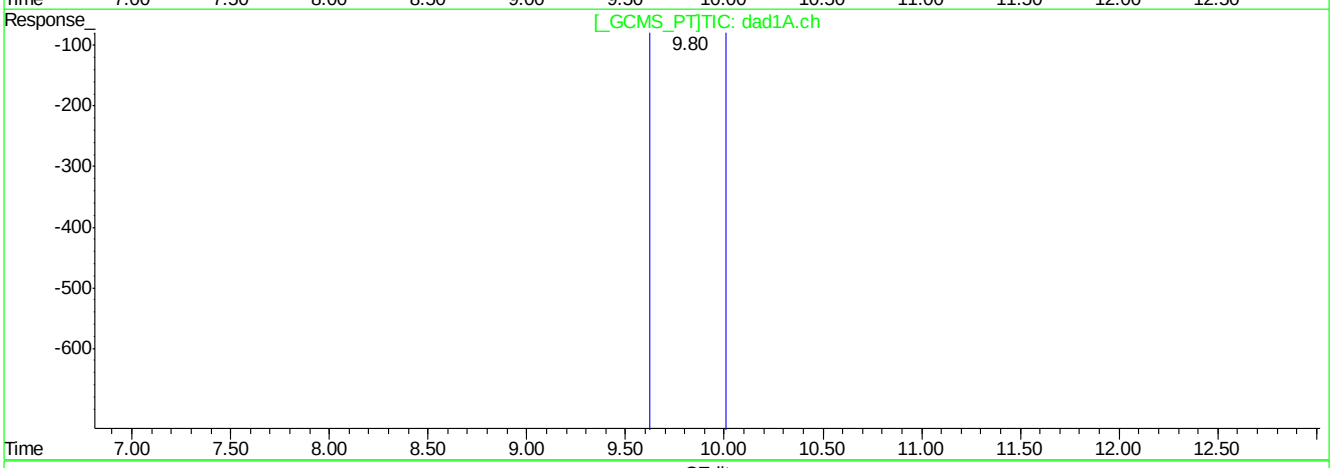
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:38 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

9.81min 23.242ppb m

response 85957

(12) 2,4,6-Trinitrotoluene #2

9.81min 20.208ppb

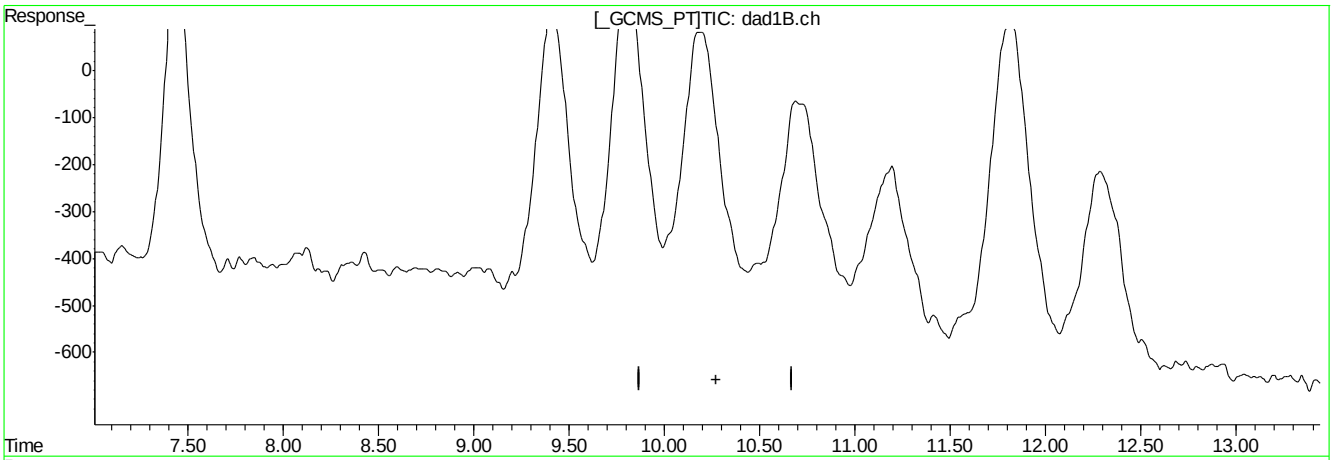
response 88258

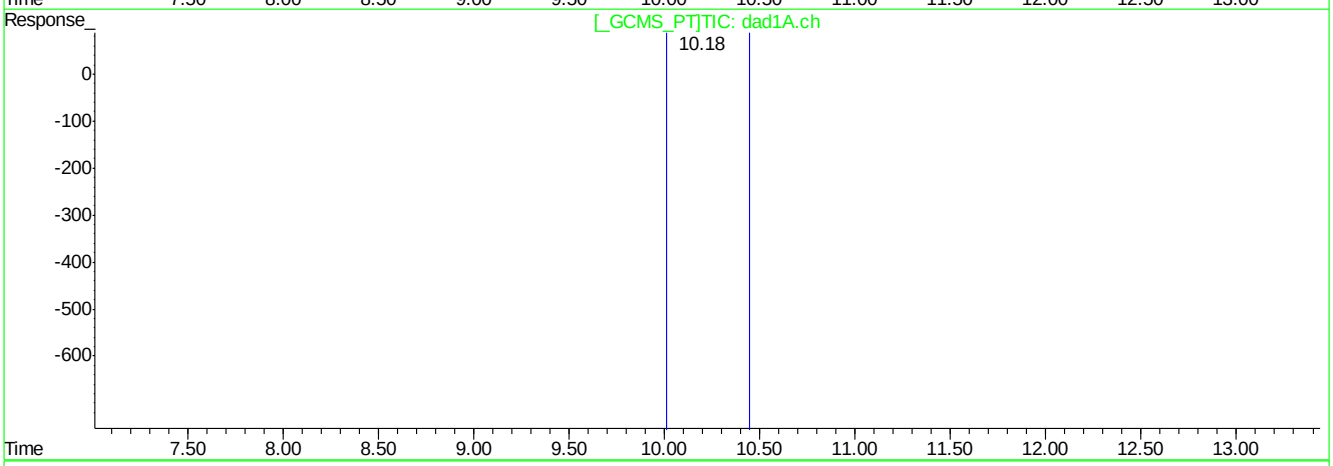
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(13) 2-Amino-4,6-Dinitrotoluene #2

10.19min 20.338ppb

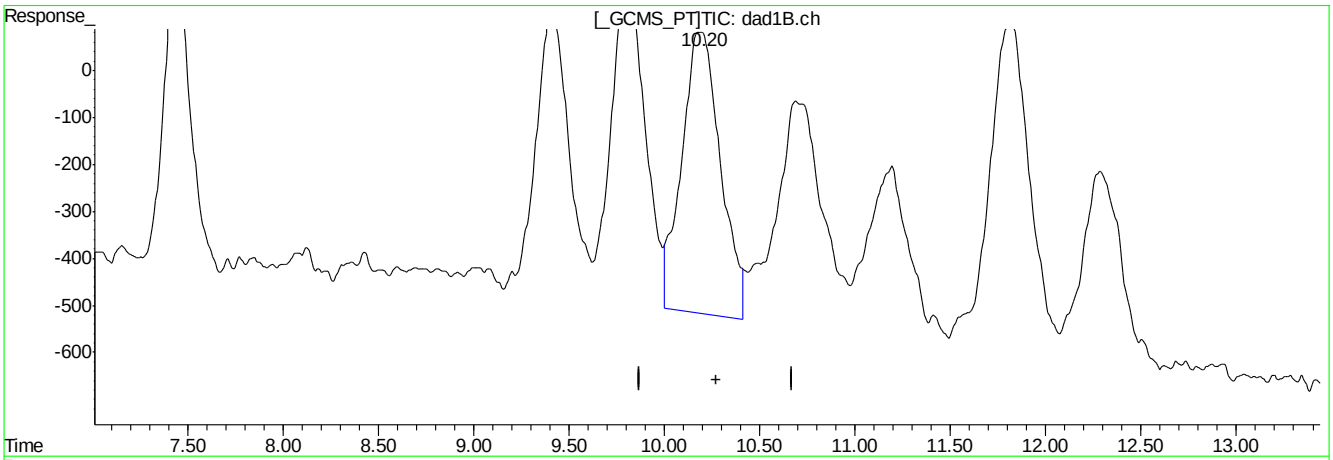
response 97732

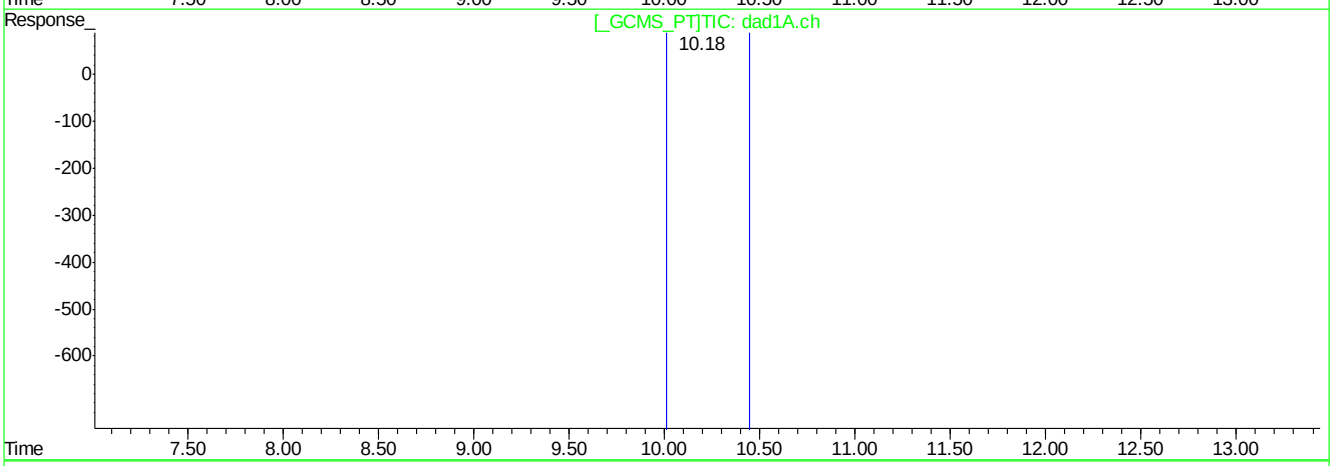
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:30:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.20min 25.826ppb m

response 84948

(13) 2-Amino-4,6-Dinitrotoluene #2

10.19min 20.338ppb

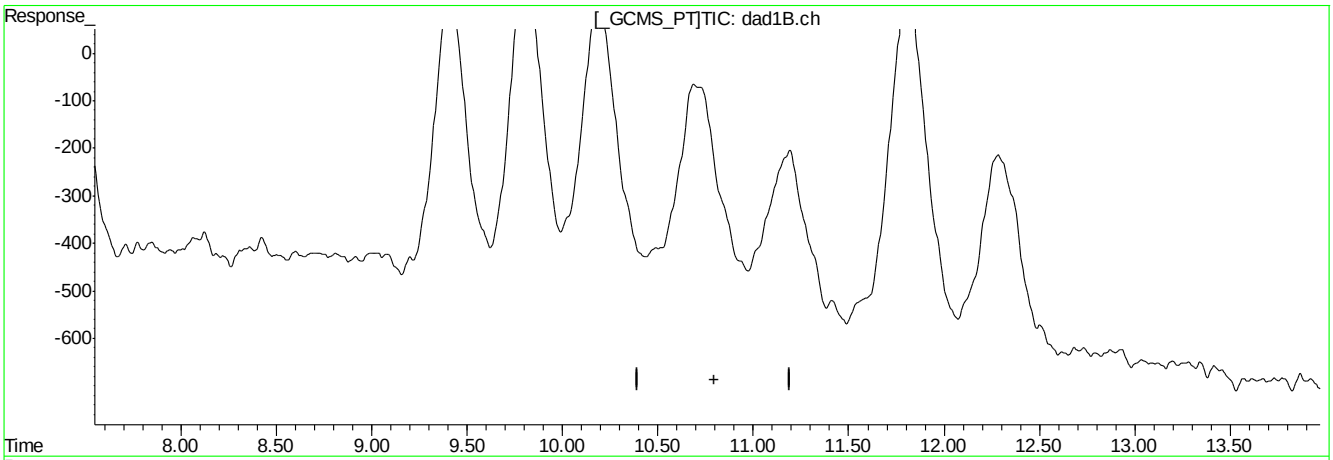
response 97732

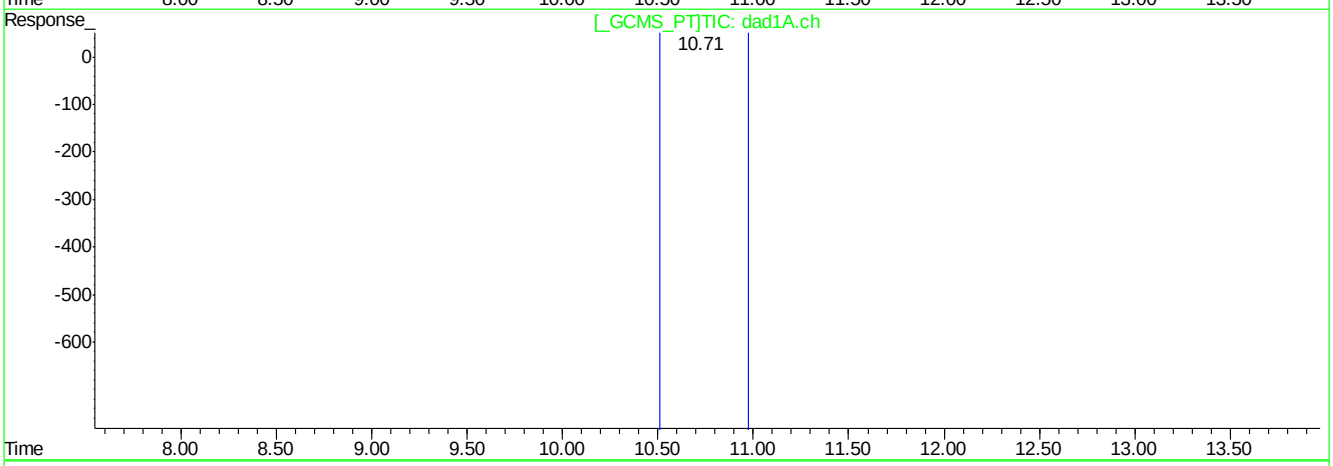
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:00 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(14) 4-Amino-2,6-Dinitrotoluene #2

10.71min 20.989ppb

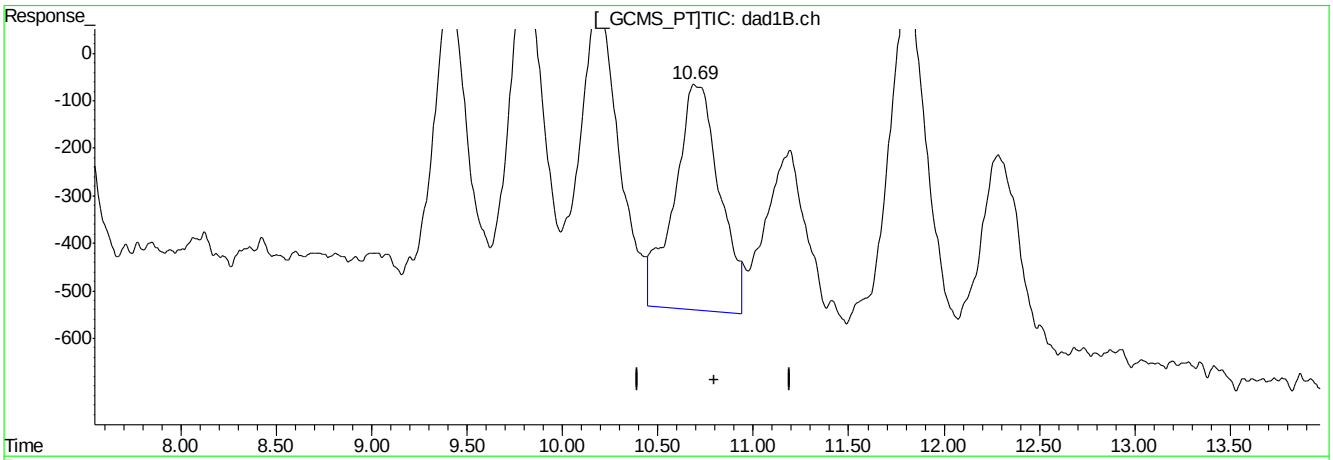
response 94221

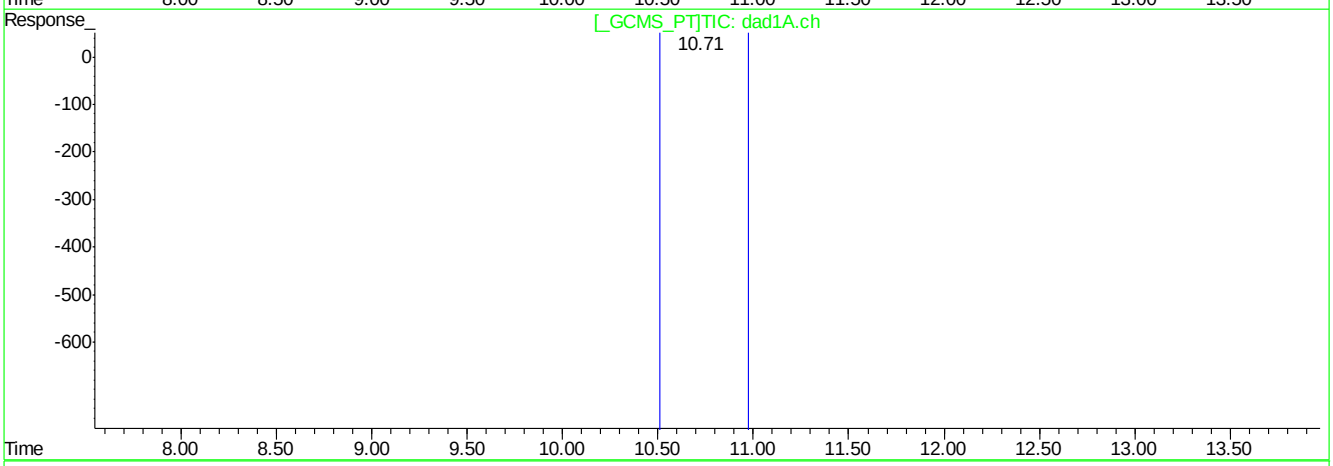
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.69min 31.459ppb m

response 78544

(14) 4-Amino-2,6-Dinitrotoluene #2

10.71min 20.989ppb

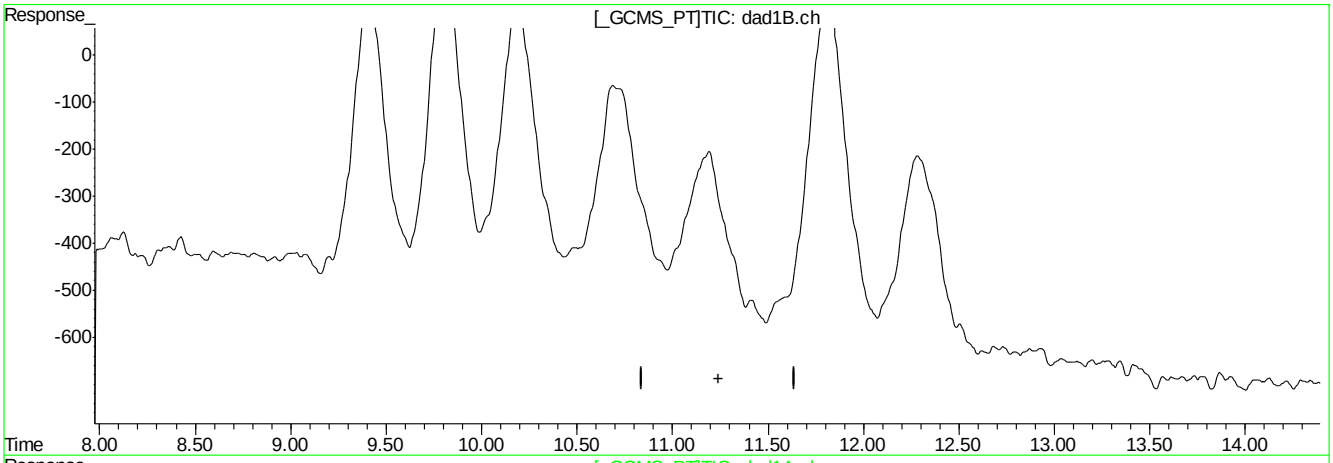
response 94221

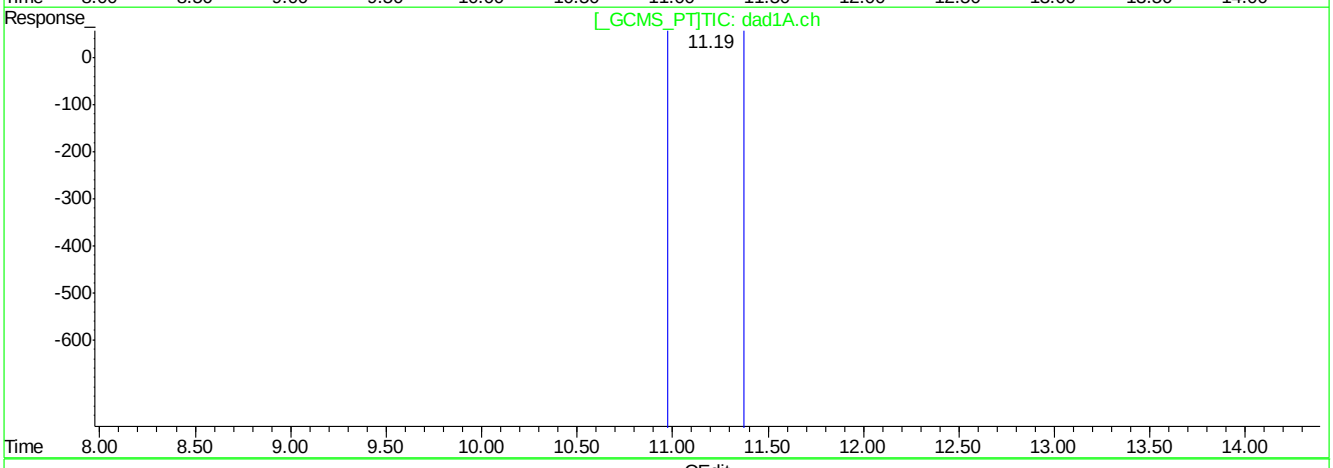
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

0.00min 0.000ppb

response 0

(15) 3,4-Dinitrotoluene #2 (S)

11.19min 16.328ppb

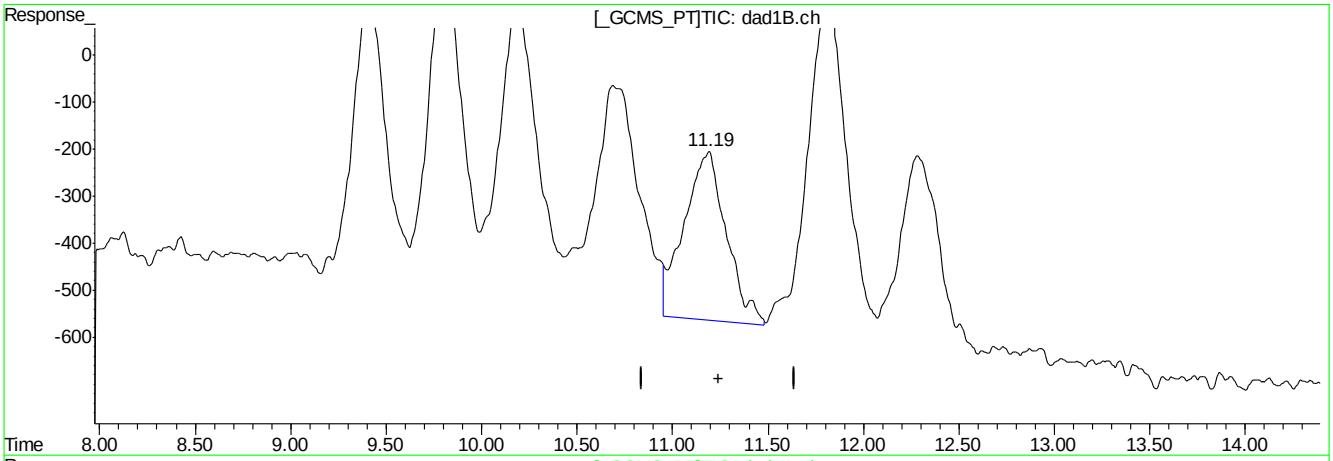
response 54206

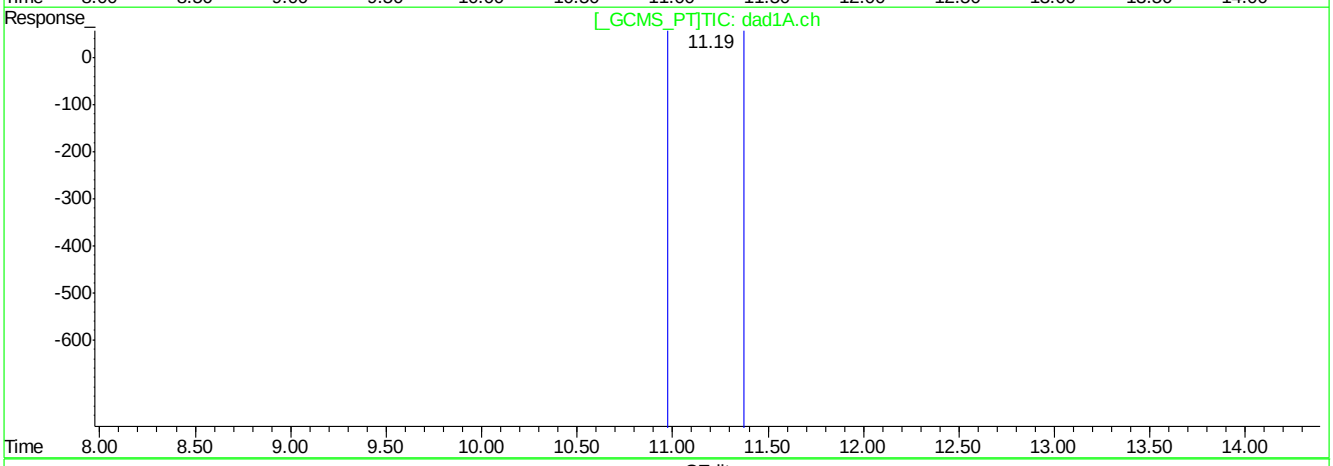
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.19min 26.025ppb m

response 55119

(15) 3,4-Dinitrotoluene #2 (S)

11.19min 16.328ppb

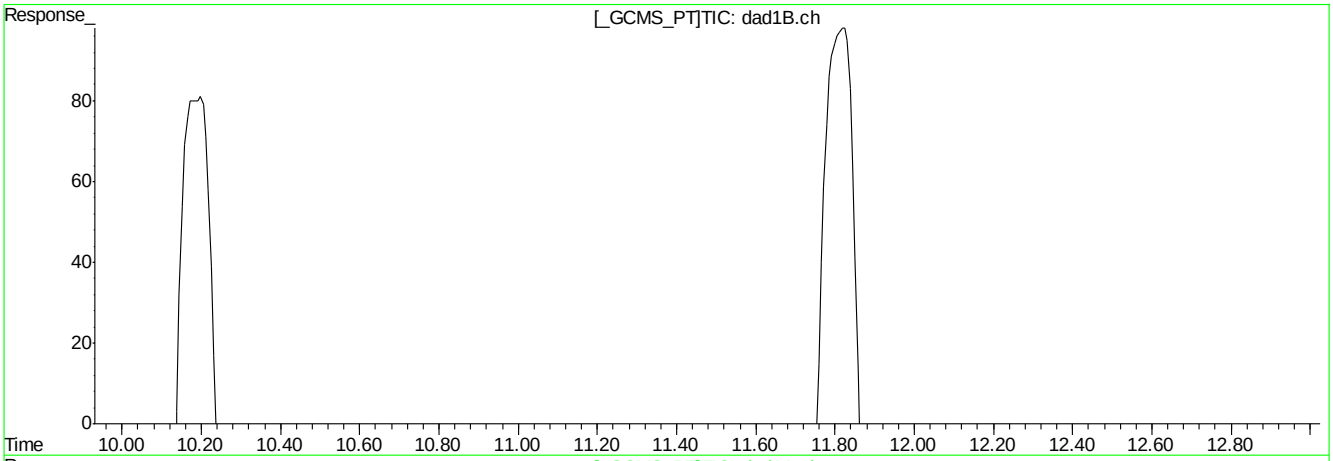
response 54206

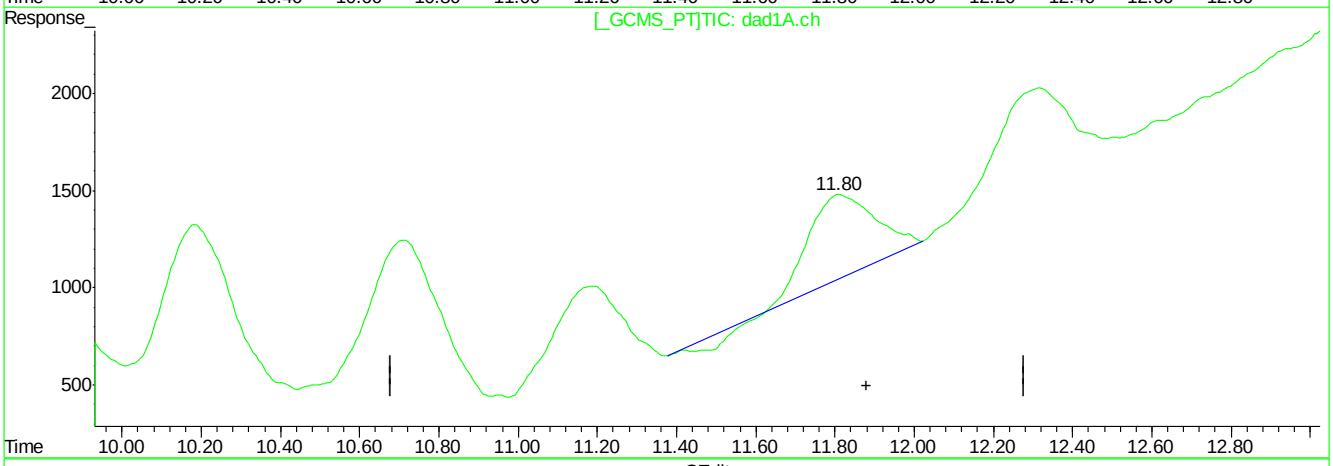
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

0.00min 0.000ppb

response 0

(16) 2,4-Dinitrotoluene #2

11.81min 15.885ppb

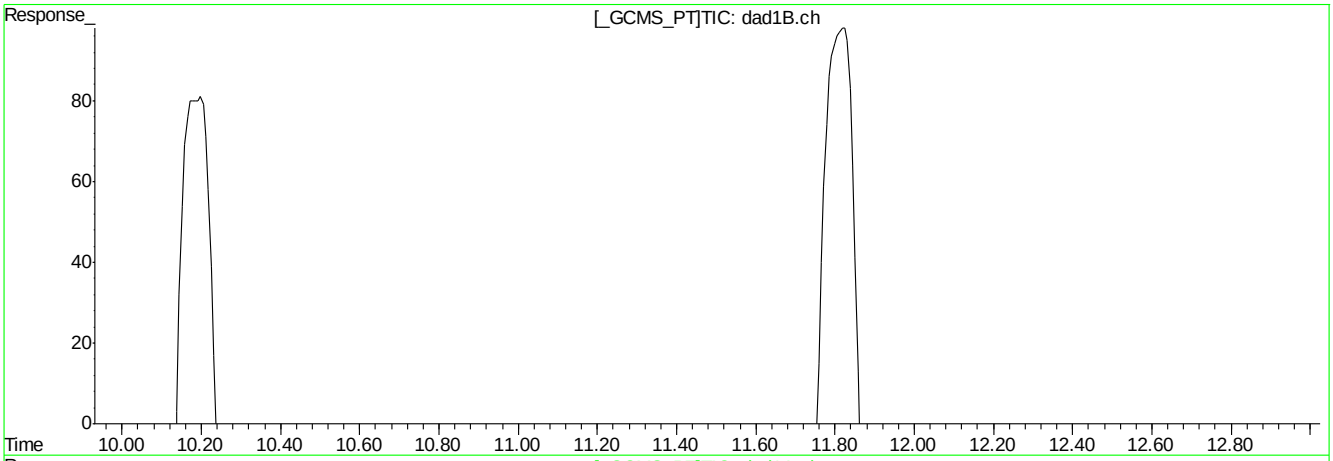
response 45925

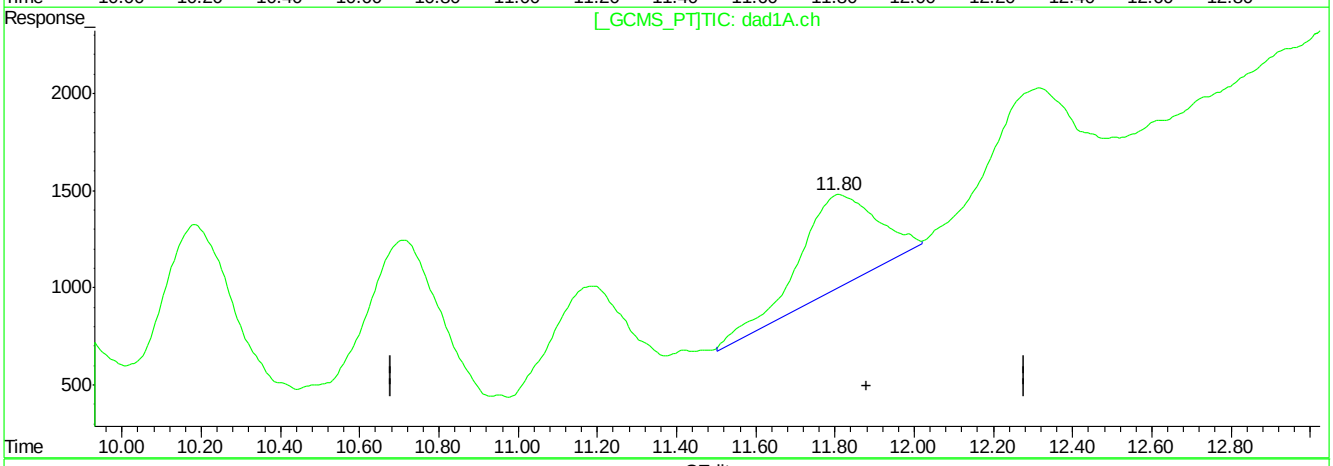
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

0.00min 0.000ppb

response 0

(16) 2,4-Dinitrotoluene #2

11.80min 22.697ppb m

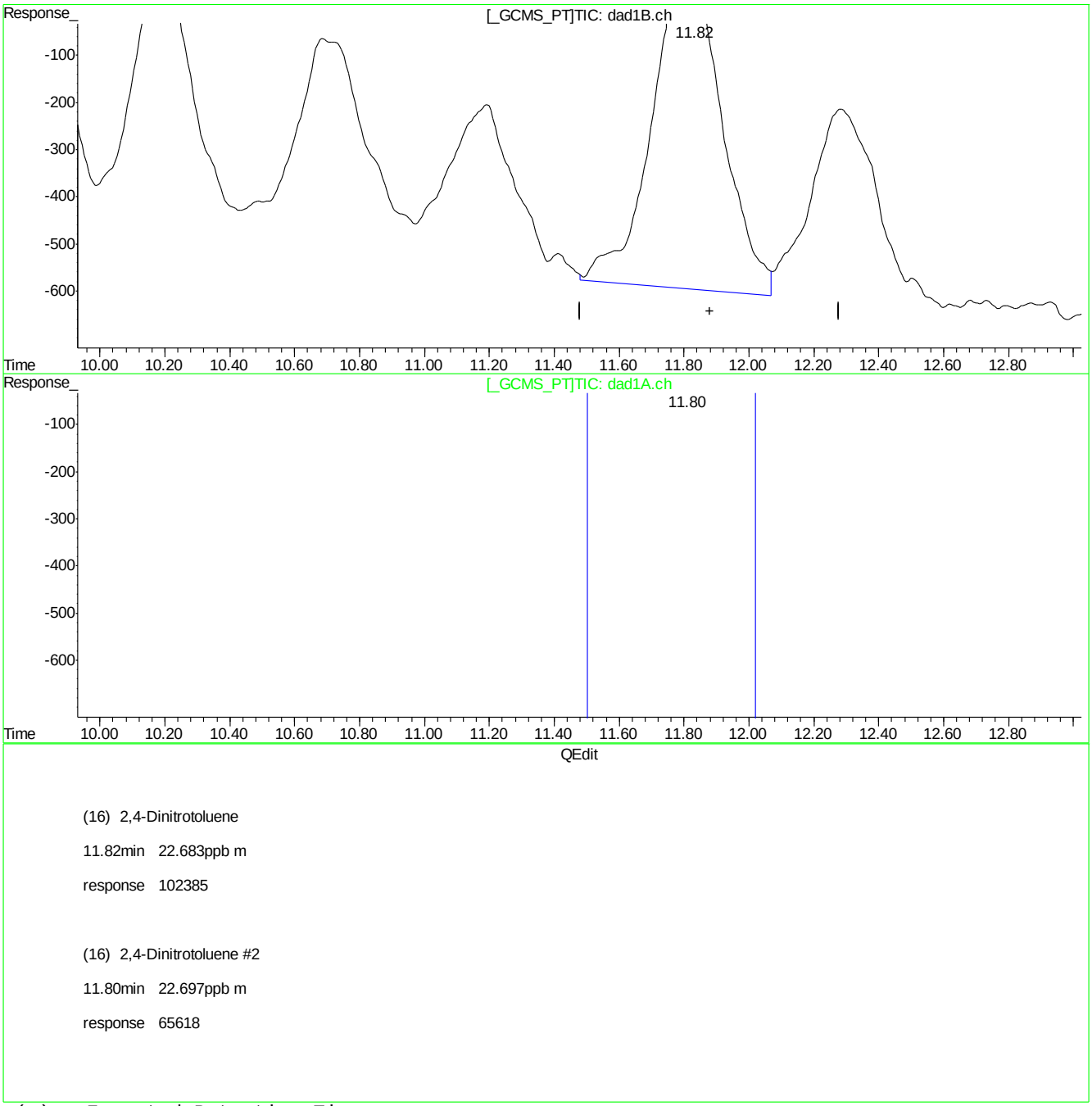
response 65618

(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:36 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(16) 2,4-Dinitrotoluene

11.82min 22.683ppb m

response 102385

(16) 2,4-Dinitrotoluene #2

11.80min 22.697ppb m

response 65618

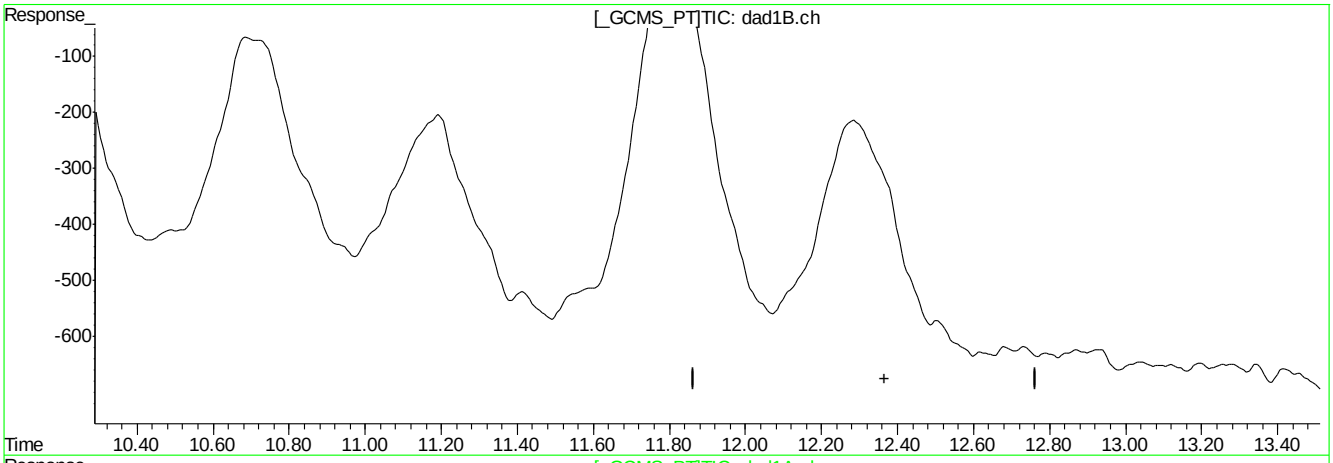
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:42 2021

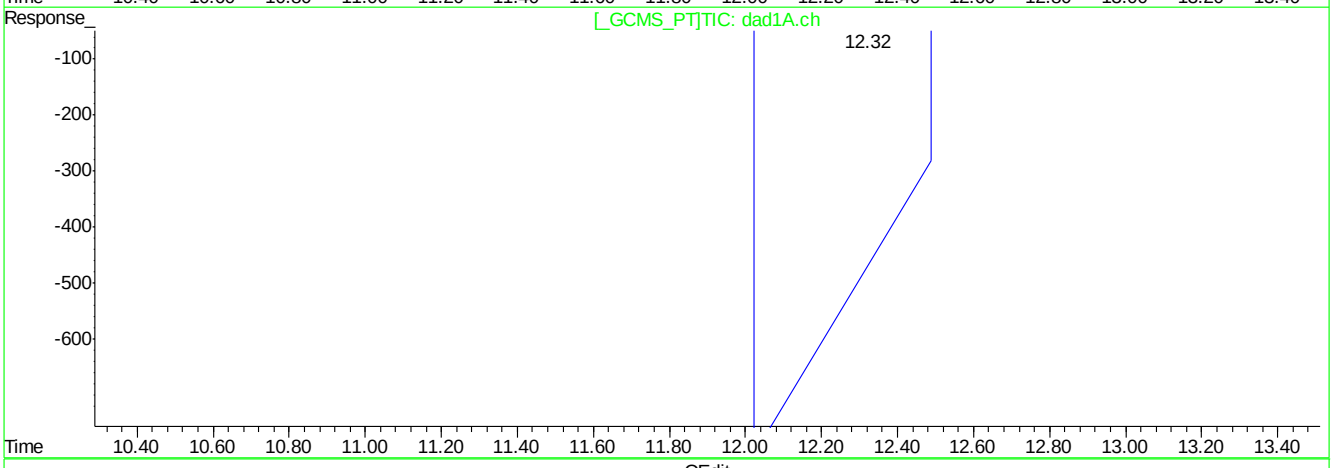
PP391043.D edits: 2,4-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

0.00min 0.000ppb

response 0

(17) 2,6-Dinitrotoluene #2

12.32min 17.790ppb

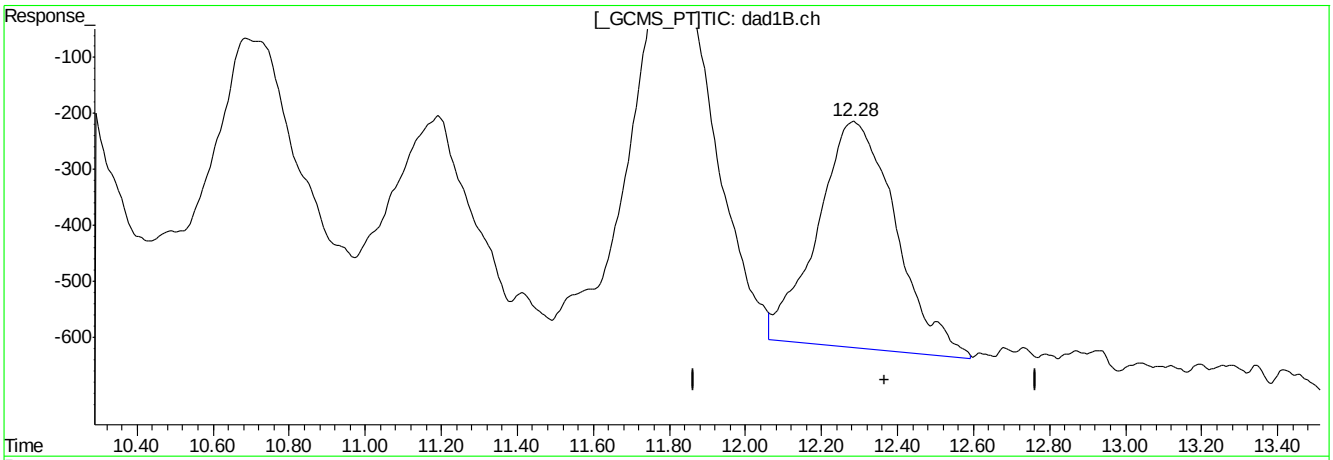
response 57183

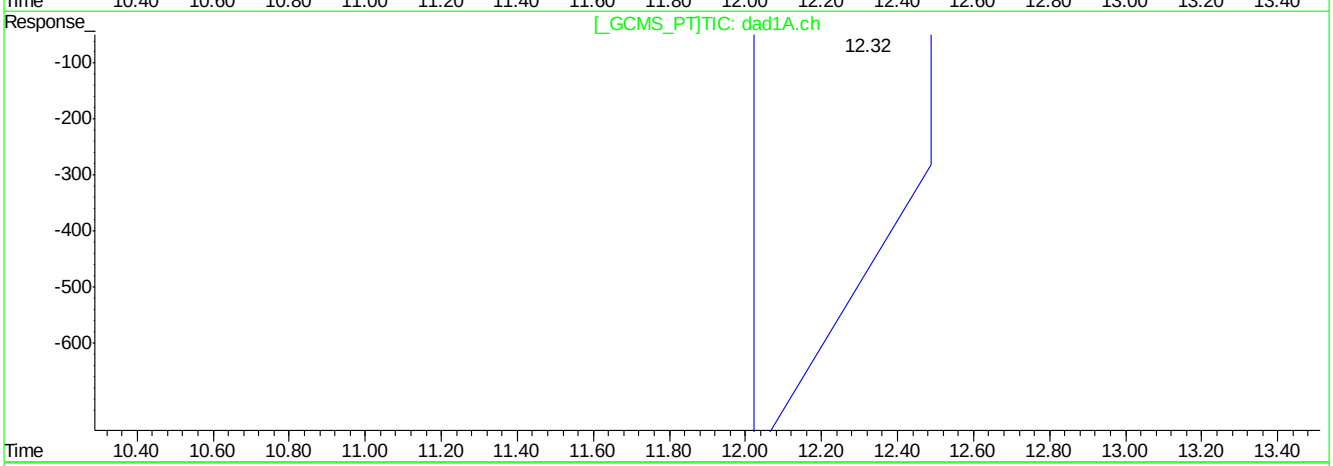
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:49 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.28min 22.800ppb m

response 58085

(17) 2,6-Dinitrotoluene #2

12.32min 17.790ppb

response 57183

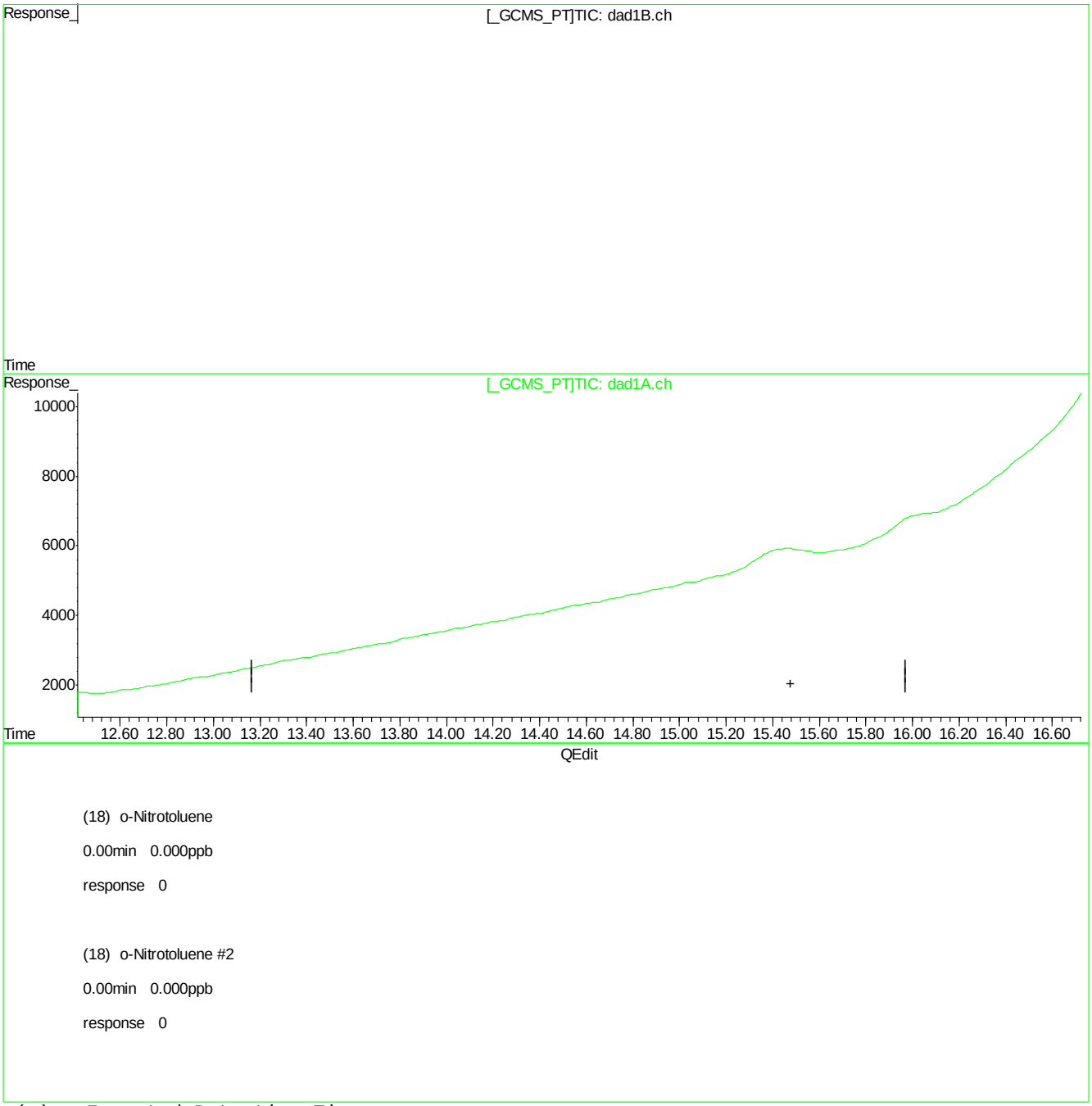
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:54 2021

PP391043.D edits: 2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration

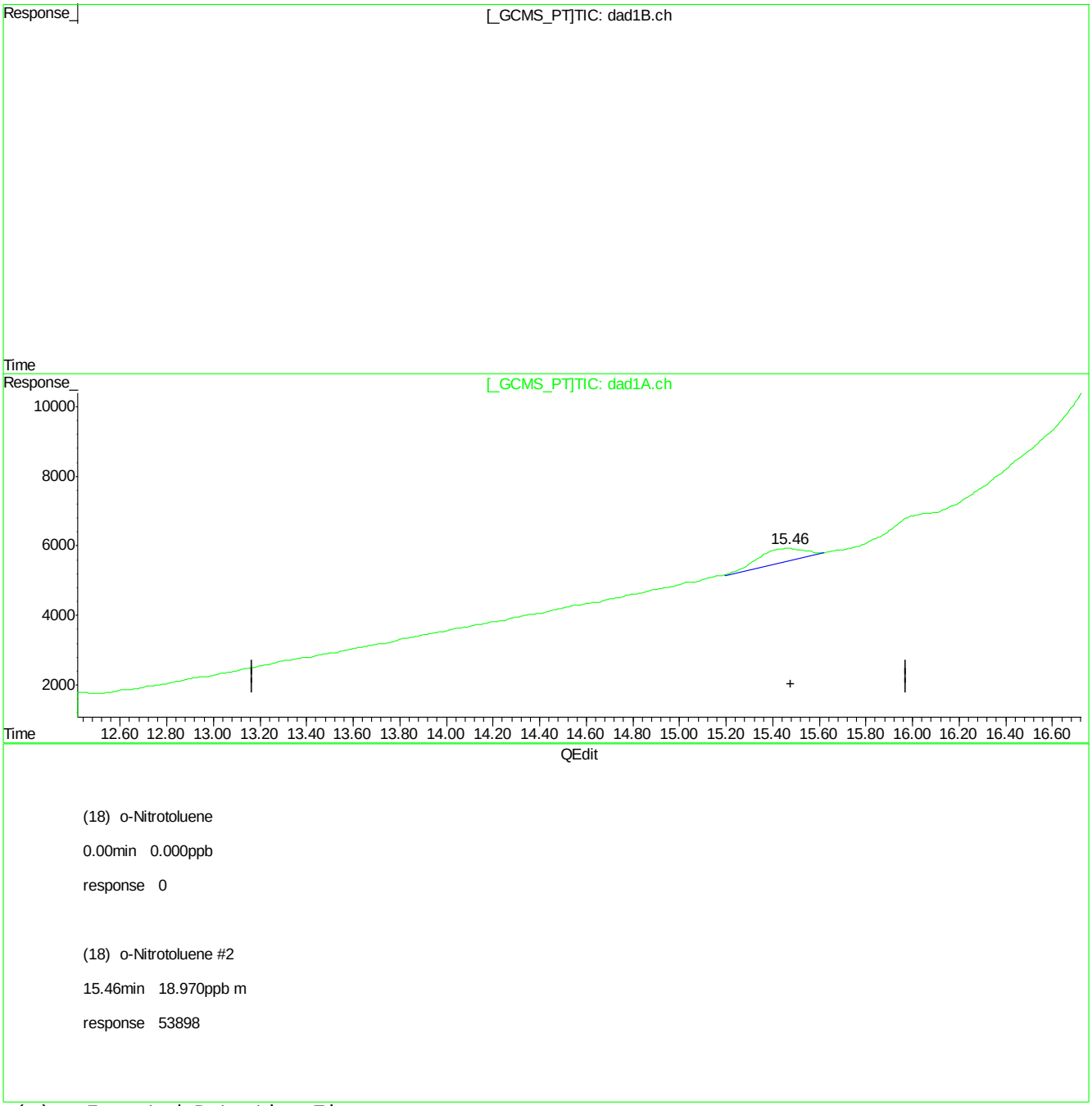


(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:31:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

0.00min 0.000ppb

response 0

(18) o-Nitrotoluene #2

15.46min 18.970ppb m

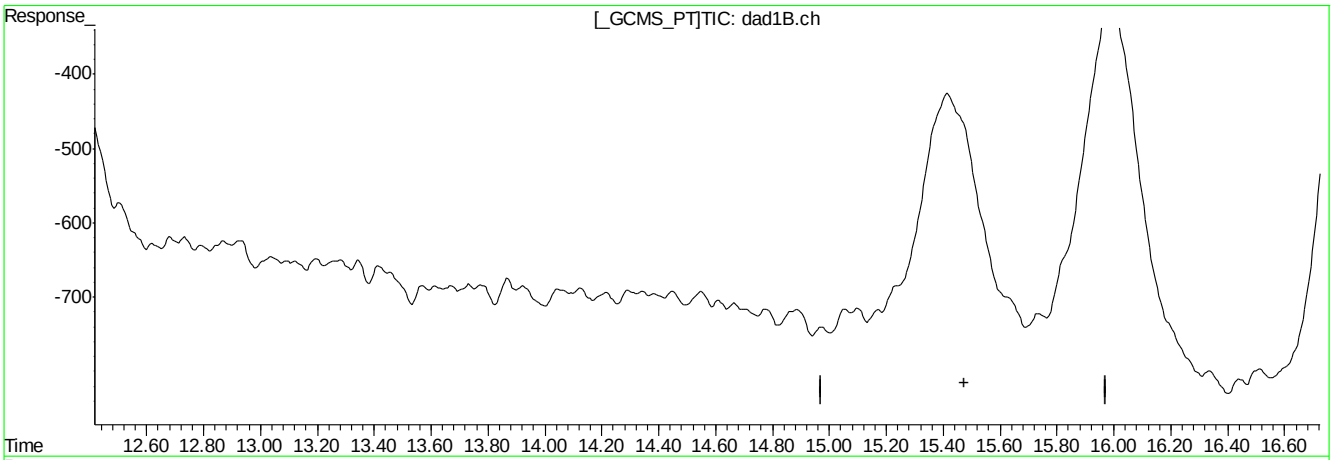
response 53898

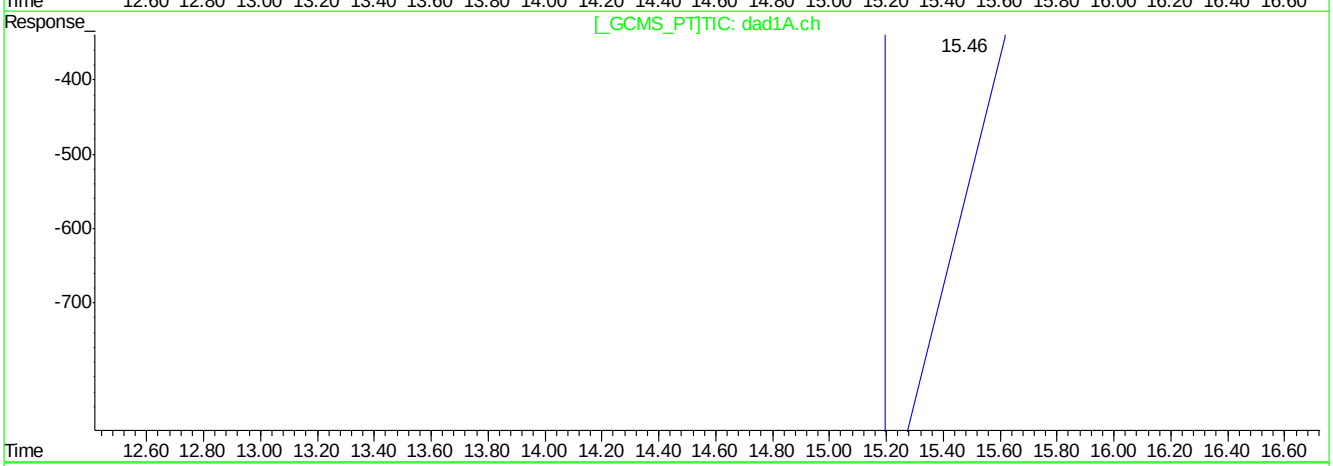
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

0.00min 0.000ppb

response 0

(18) o-Nitrotoluene #2

15.46min 18.970ppb m

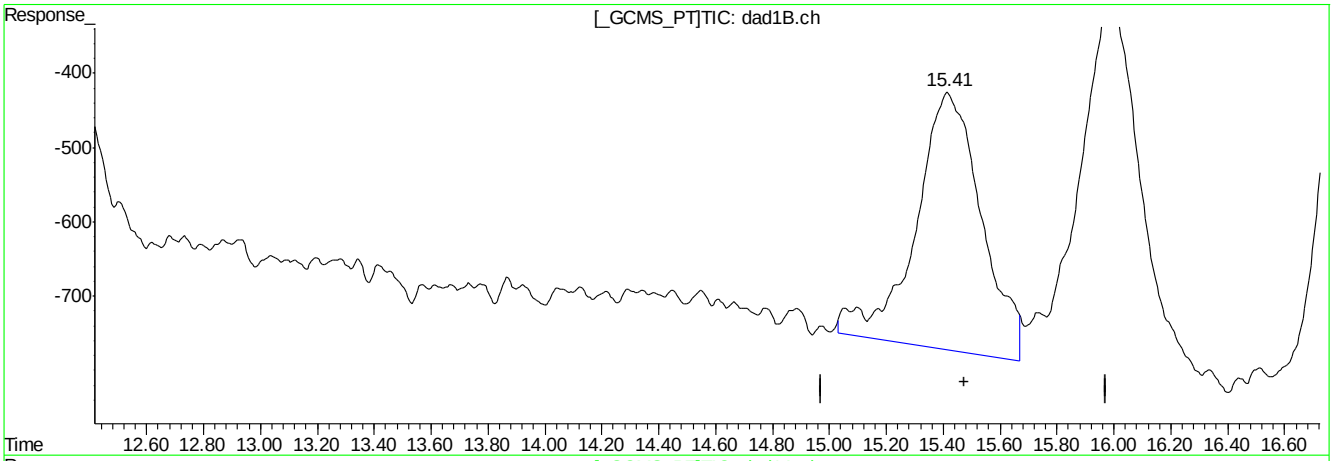
response 53898

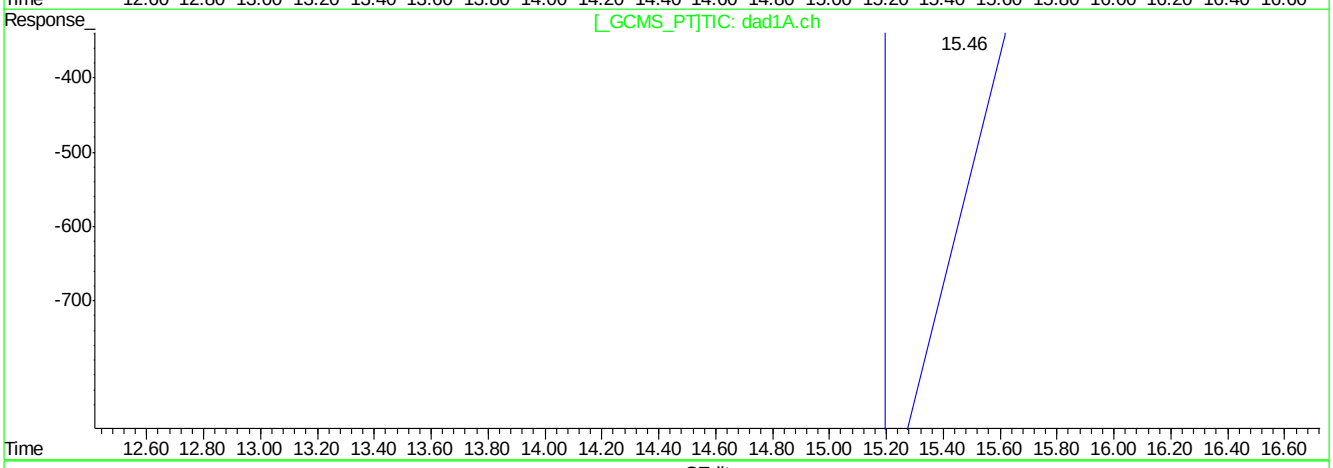
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.41min 26.113ppb m

response 56286

(18) o-Nitrotoluene #2

15.46min 18.970ppb m

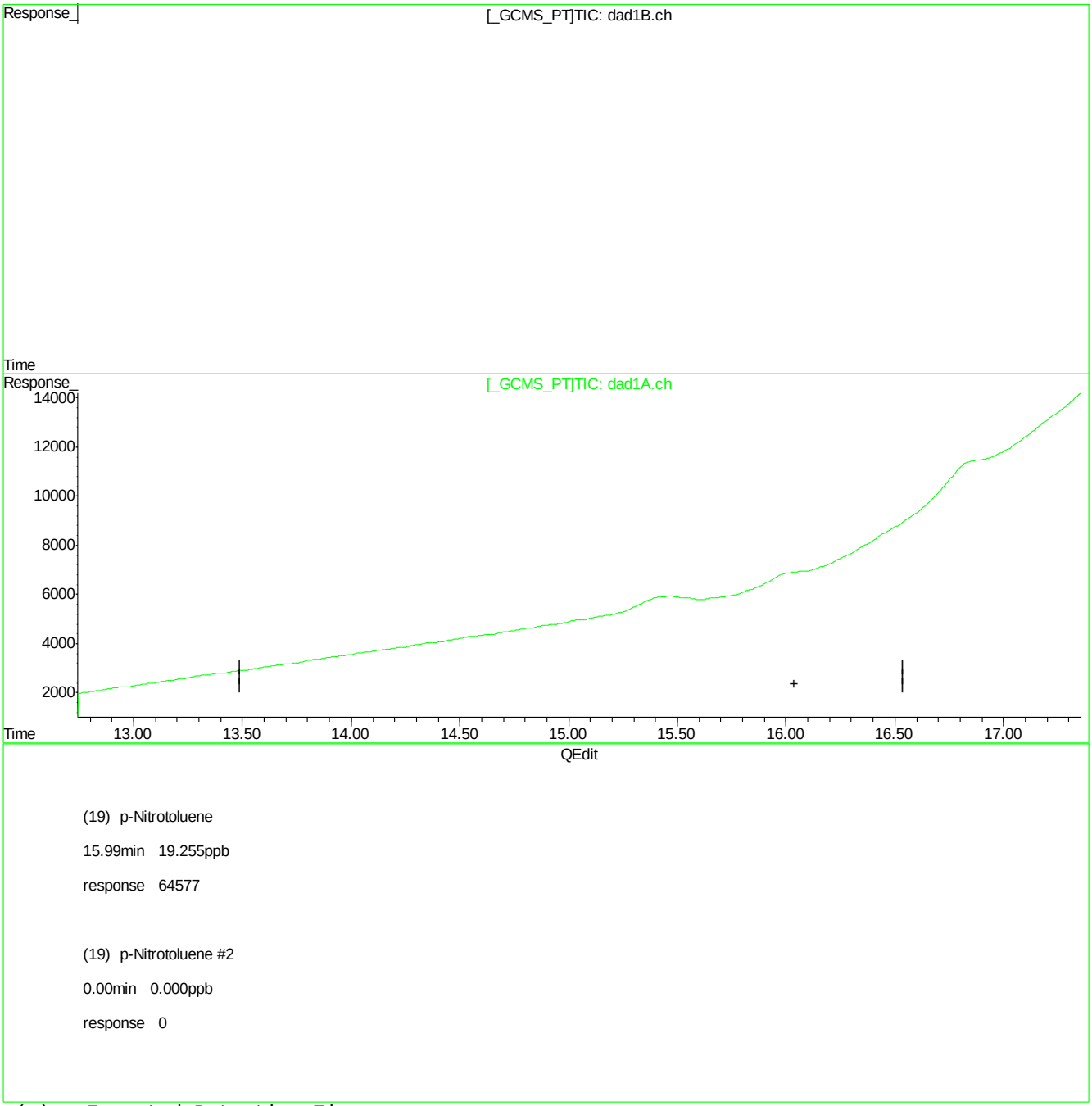
response 53898

(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:11 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.99min 19.255ppb

response 64577

(19) p-Nitrotoluene #2

0.00min 0.000ppb

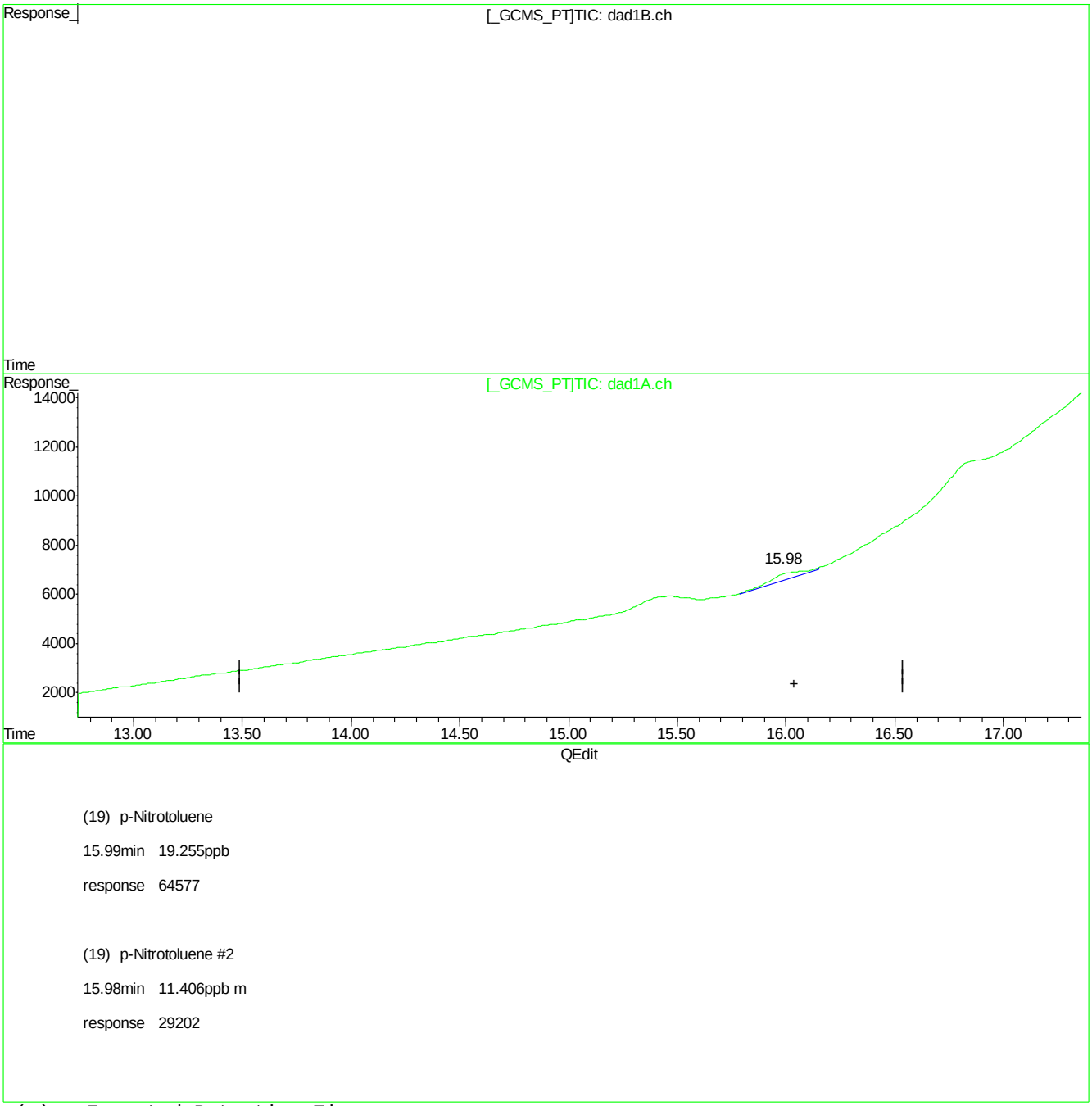
response 0

(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:13 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

15.99min 19.255ppb

response 64577

(19) p-Nitrotoluene #2

15.98min 11.406ppb m

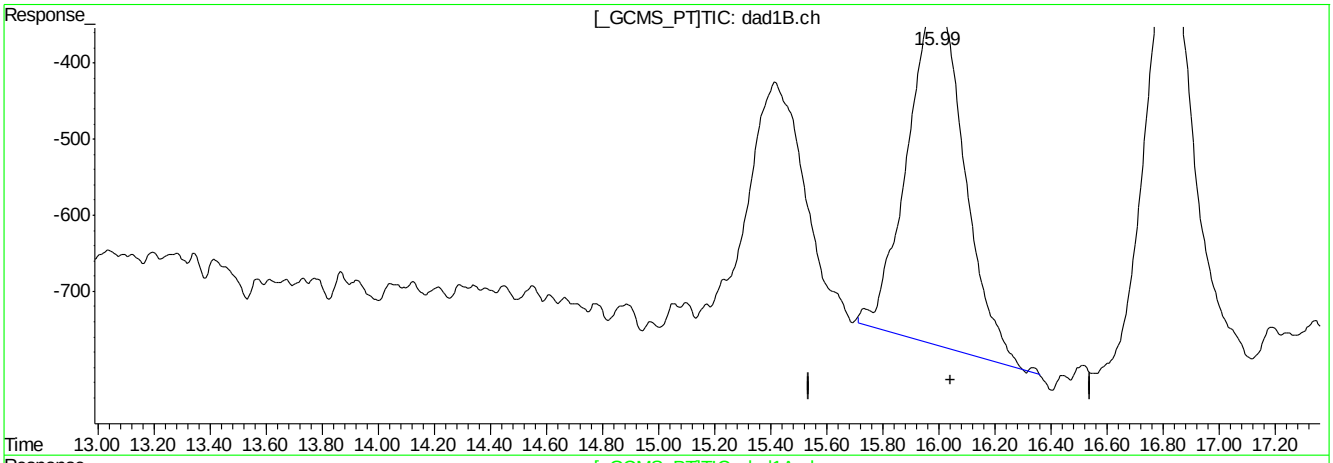
response 29202

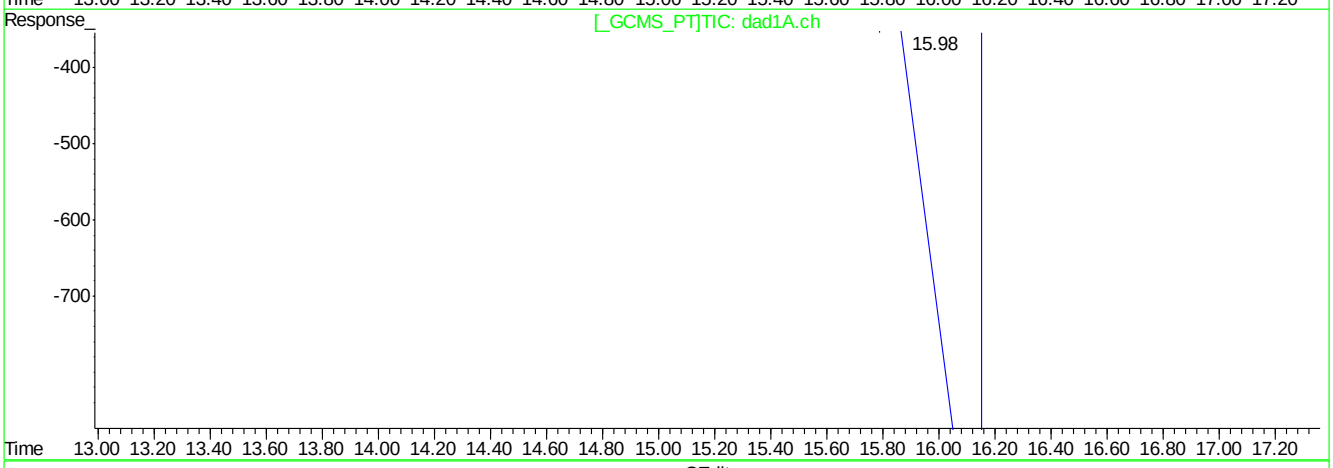
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.99min 19.255ppb

response 64577

(19) p-Nitrotoluene #2

15.98min 11.406ppb m

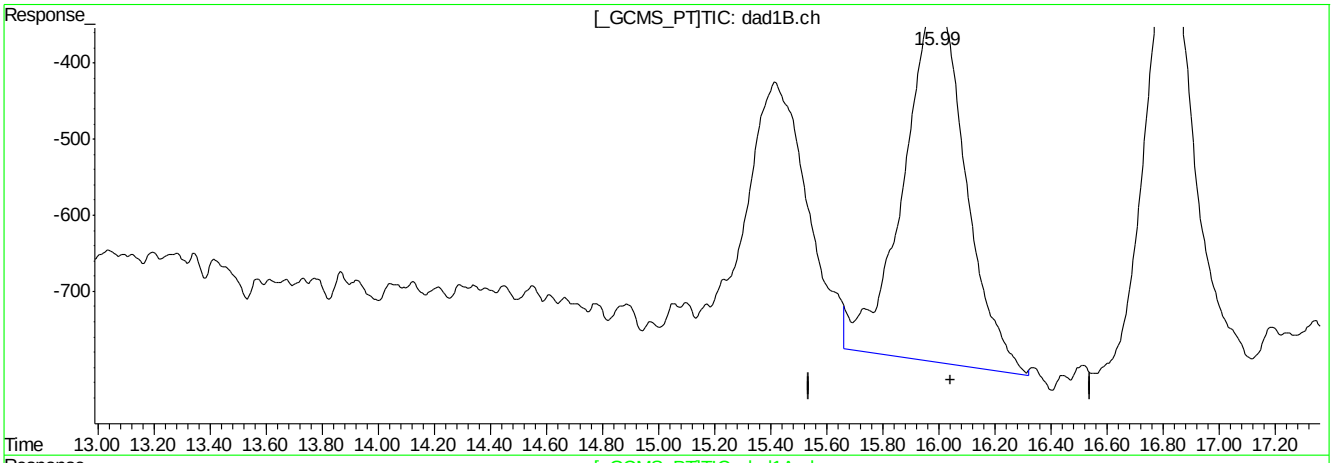
response 29202

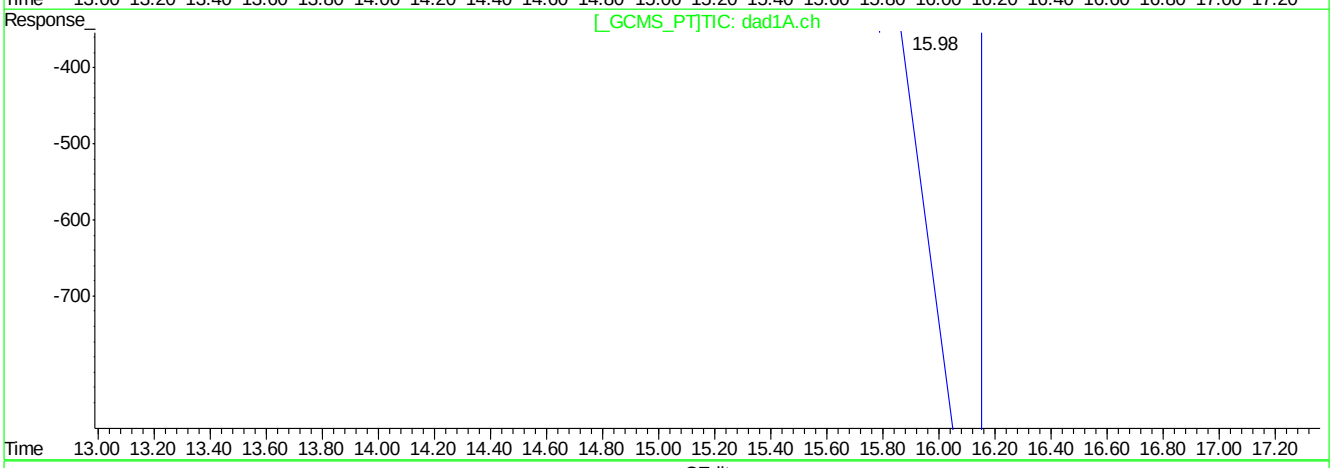
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:21 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

15.99min 21.876ppb m

response 73367

(19) p-Nitrotoluene #2

15.98min 11.406ppb m

response 29202

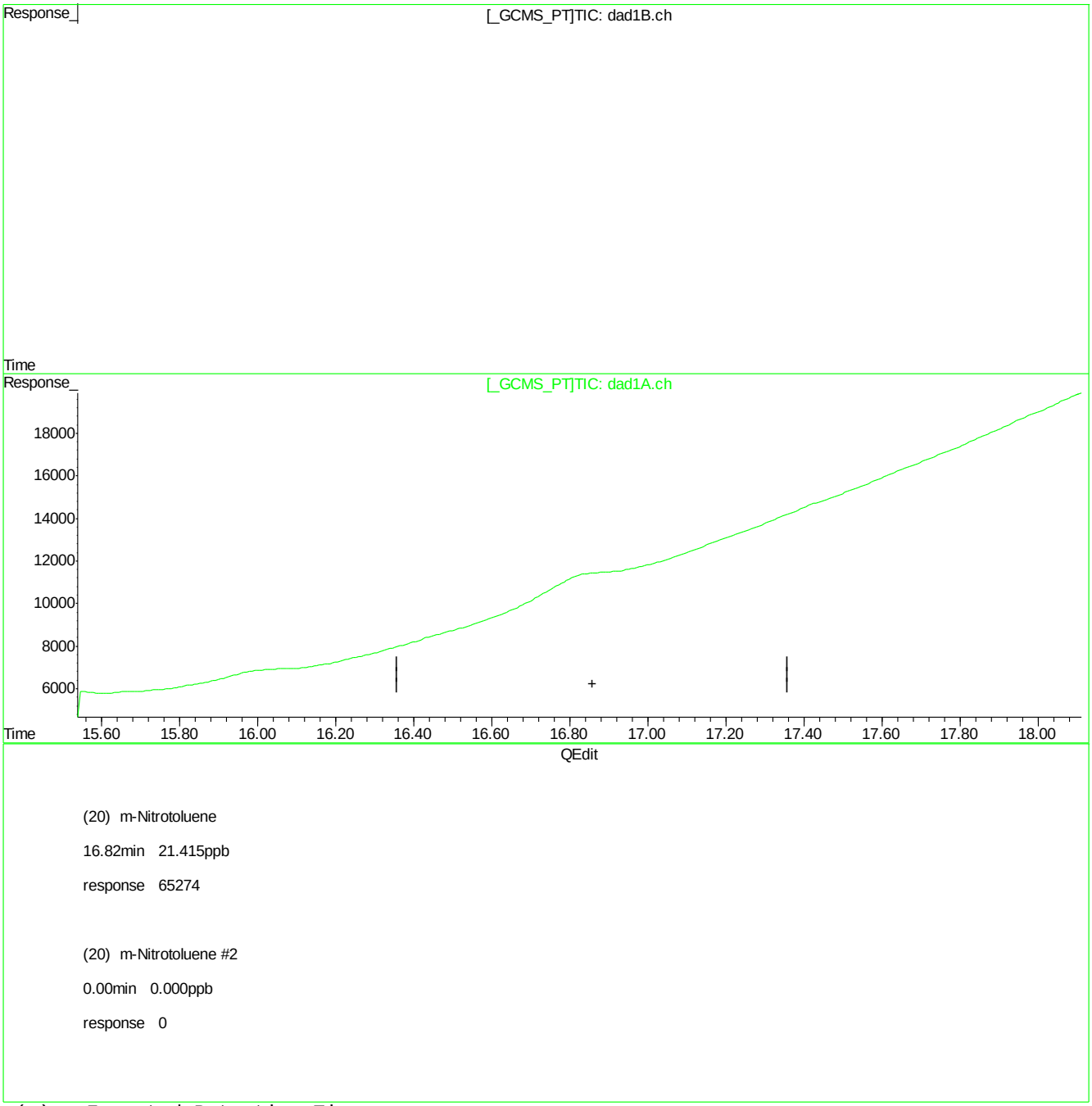
(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:26 2021

PP391043.D edits: p-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration

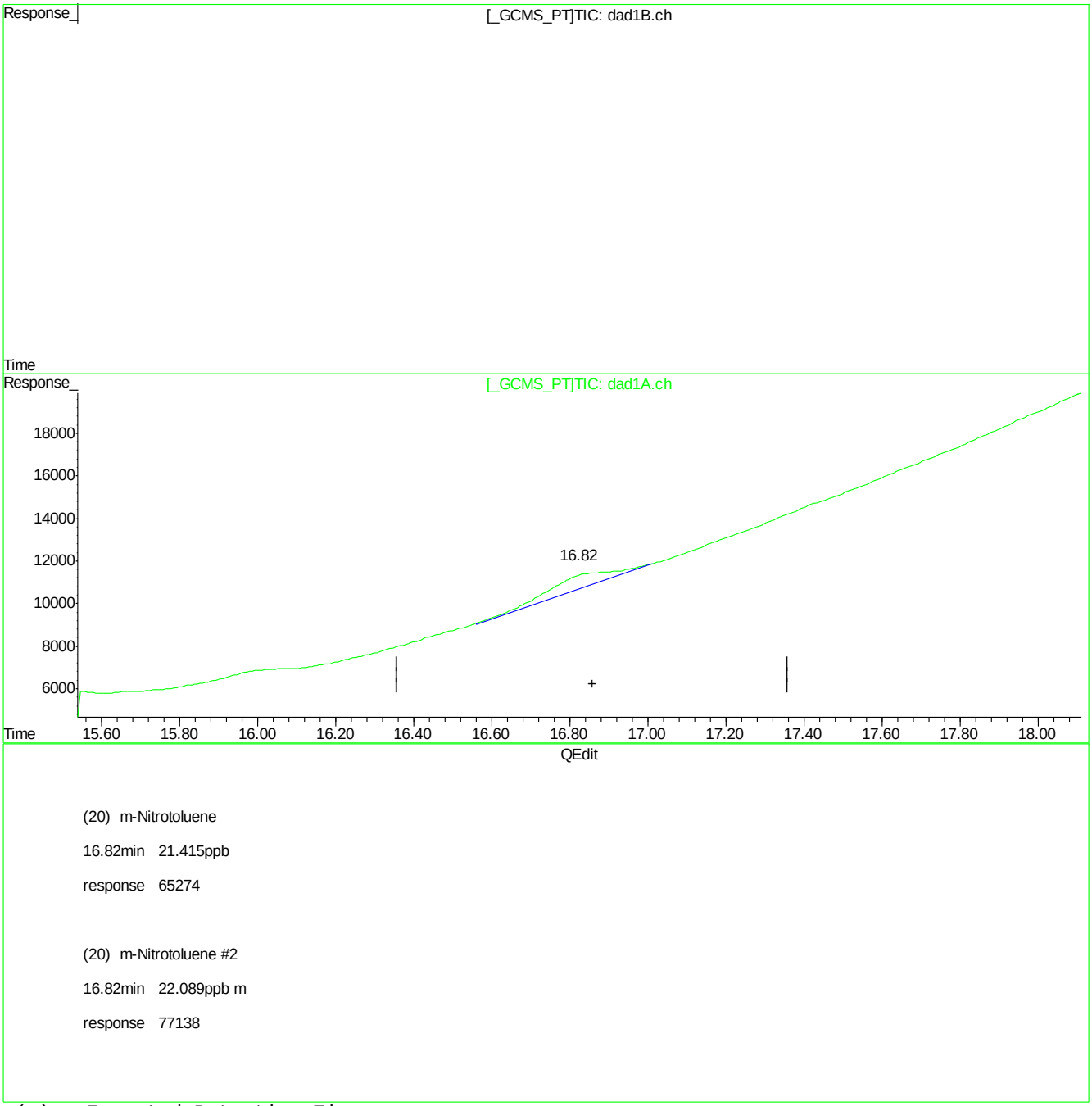


(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.82min 21.415ppb

response 65274

(20) m-Nitrotoluene #2

16.82min 22.089ppb m

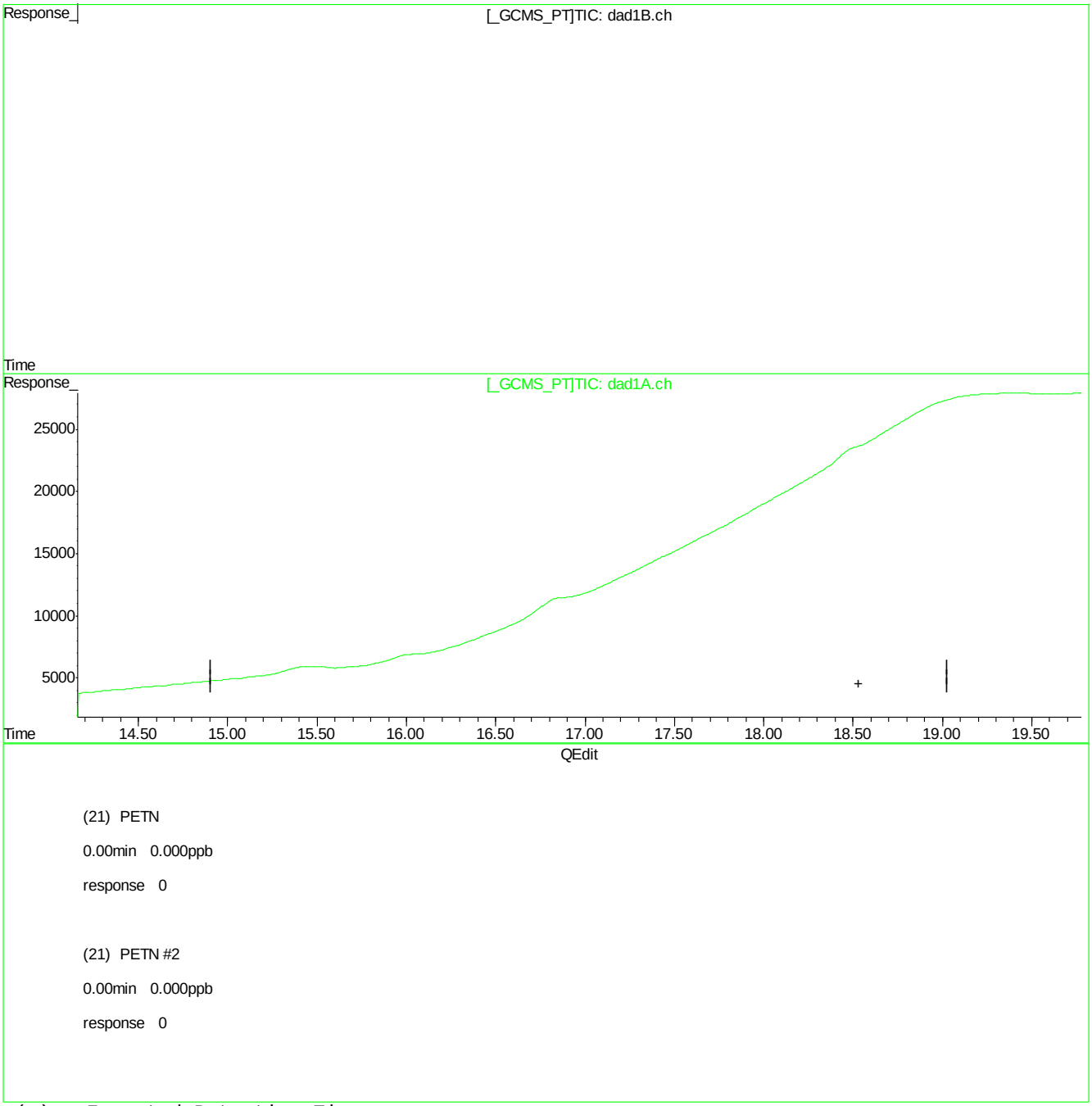
response 77138

(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1B.ch Vial: 91
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391043.D\dad1A.ch
Acq On : 03-Aug-2021, 11:45:45 Operator: jamesb
Sample : ic2464-20 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
PP391043.D GPP2464_080321PRI.M Thu Aug 05 10:32:39 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:32 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	11.22	0	147253	N.D.	44.355 #
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	8.87%#
	Target Compounds						
1)	TNX	1.30	1.31	36764	58359	19.477m	18.804
2)	HMX	1.44	1.44	74591	282137	51.610	65.725
3)	DNX	1.68	1.68	104181	213538	45.141	54.498
4)	MNX	2.26	2.26	153793	236990	60.711	60.619m
5)	RDX	2.87	2.87	93506	148375	51.495	50.808
6)	1,3,5-Trinitrobe	4.64	4.64	198142	381585	50.791	50.351
7)	1,3-Dinitrobenze	5.85	5.84	259124	204018	51.311	54.758m
8)	3,5-Dinitroanili	6.20	6.20	199482	385391	51.836	55.980m
9)	Nitrobenzene	7.46	7.46	151485	144611	52.132	50.579
10)	Nitroglycerin	0.00	8.93	0	64252	N.D.	53.509 #
11)	Tetryl	9.45	9.45	149582	237413	51.041	51.361
12)	2,4,6-Trinitroto	9.84	9.84	176694	216766	47.777	49.633
13)	2-Amino-4,6-Dini	10.23	10.23	153979	240894	46.813	50.130
14)	4-Amino-2,6-Dini	10.76	10.75	109820	225590	43.986	50.252
16)	2,4-Dinitrotolue	11.85	11.86	228274	142914	50.573	49.433
17)	2,6-Dinitrotolue	12.33	12.34	130505	154396	51.226	48.032
18)	o-Nitrotoluene	15.46	15.47	116436	147434	54.019	51.890m
19)	p-Nitrotoluene	16.02	16.05	173143	82337	51.625	32.146m
20)	m-Nitrotoluene	16.84	16.86	162054	160245	53.167	45.888m
21)	PETN	0.00	18.52	0	52867	N.D.	38.436m#

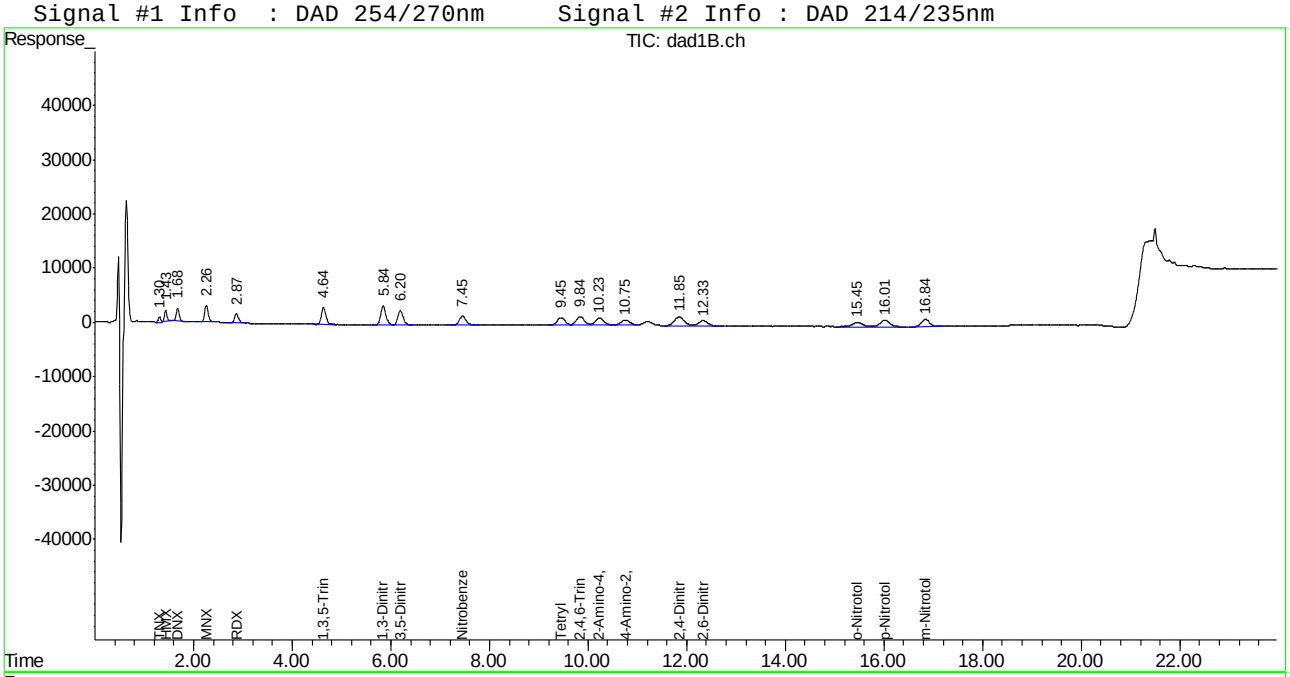
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:35:48 2021 Page 1

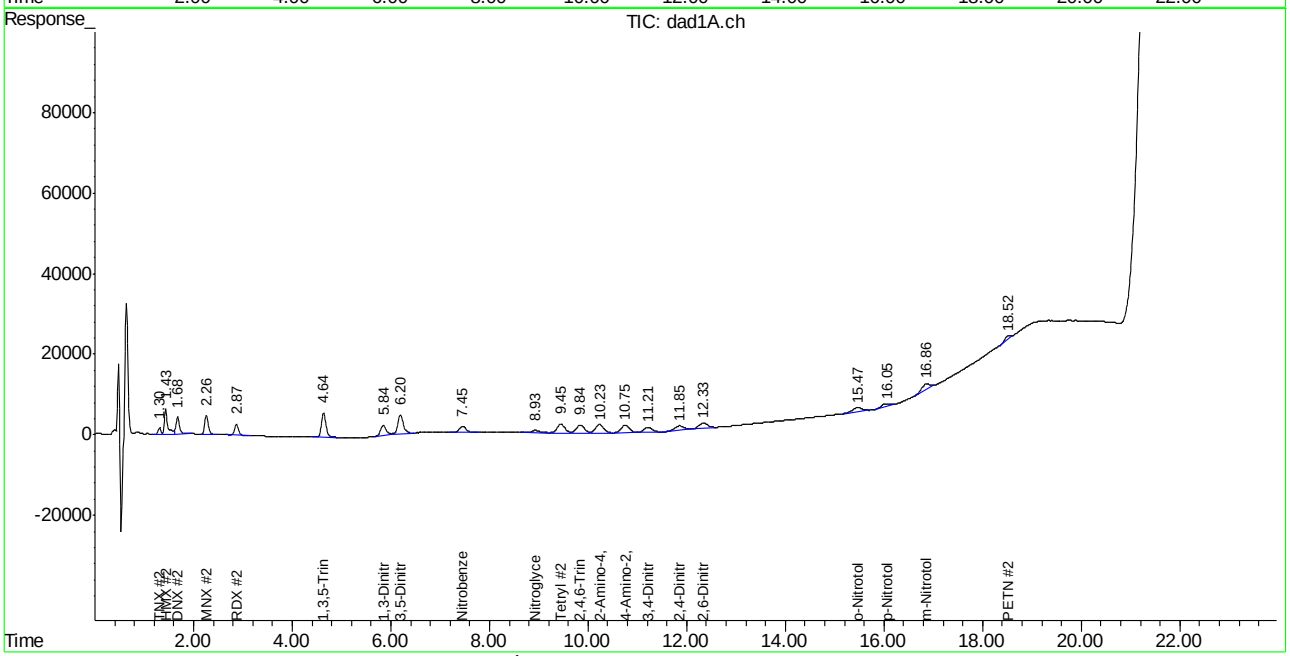
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:27 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

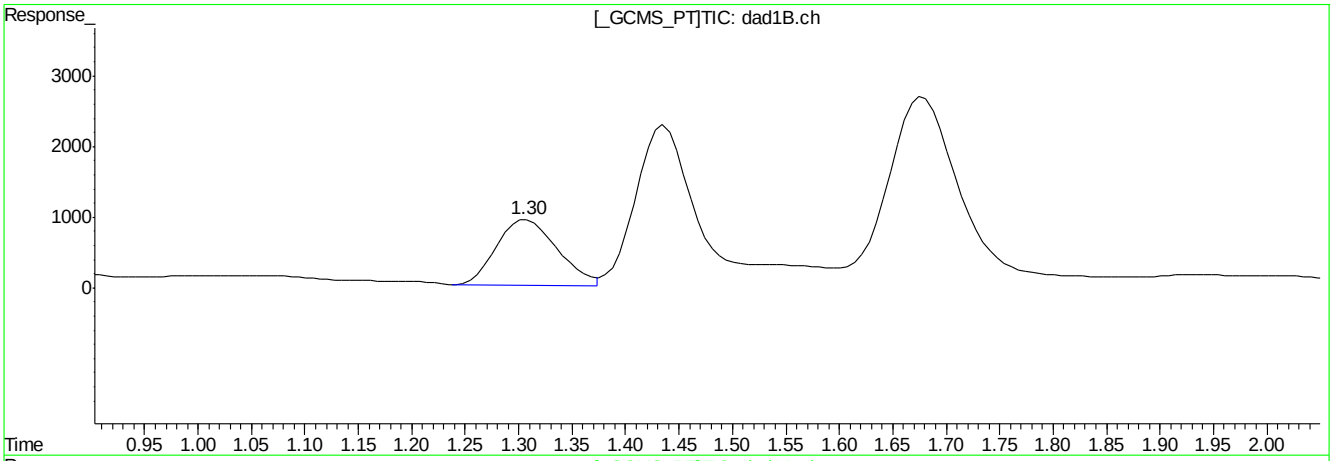
Sample Number: GPP2464-IC2464
Lab FileID: PP391044.D
Injection Time: 08/03/21 12:16
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

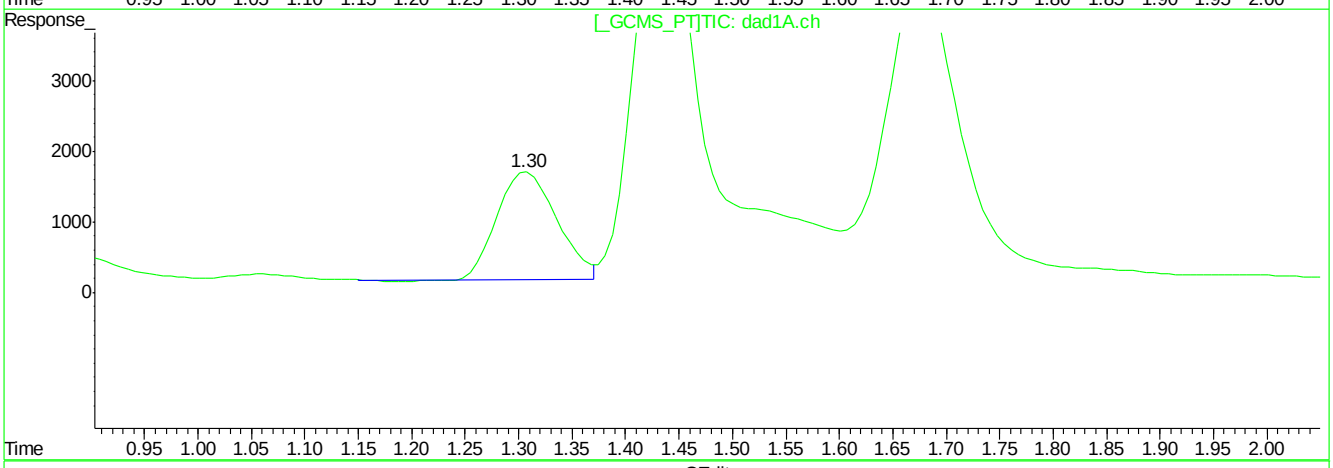
Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.30	Poor instrument integration
MNX		2	2.26	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	5.84	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.20	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.47	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.05	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.52	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.30min 19.477ppb m

response 36764

(1) TNX #2

1.31min 18.804ppb

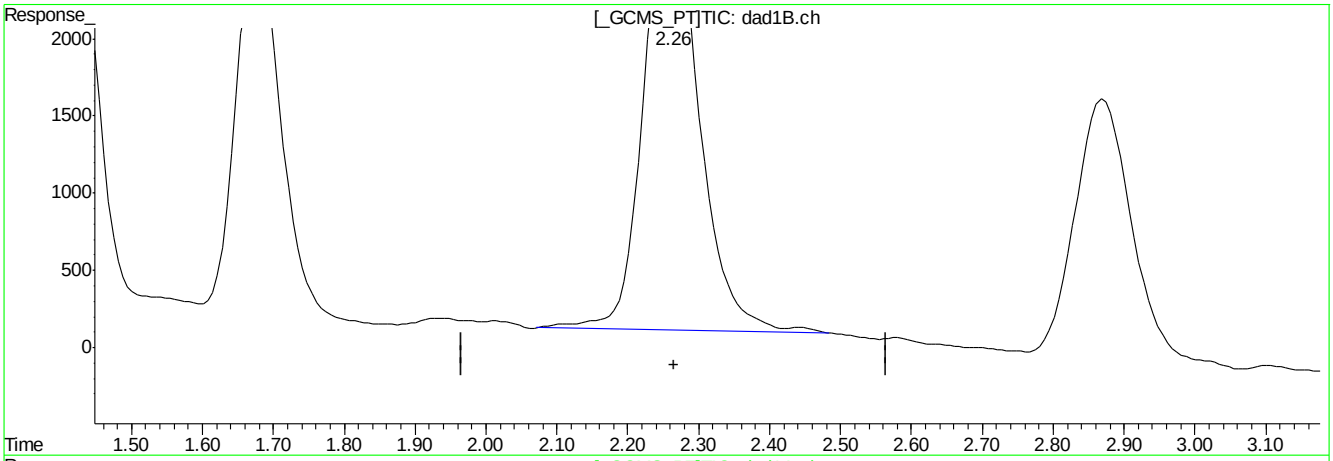
response 58359

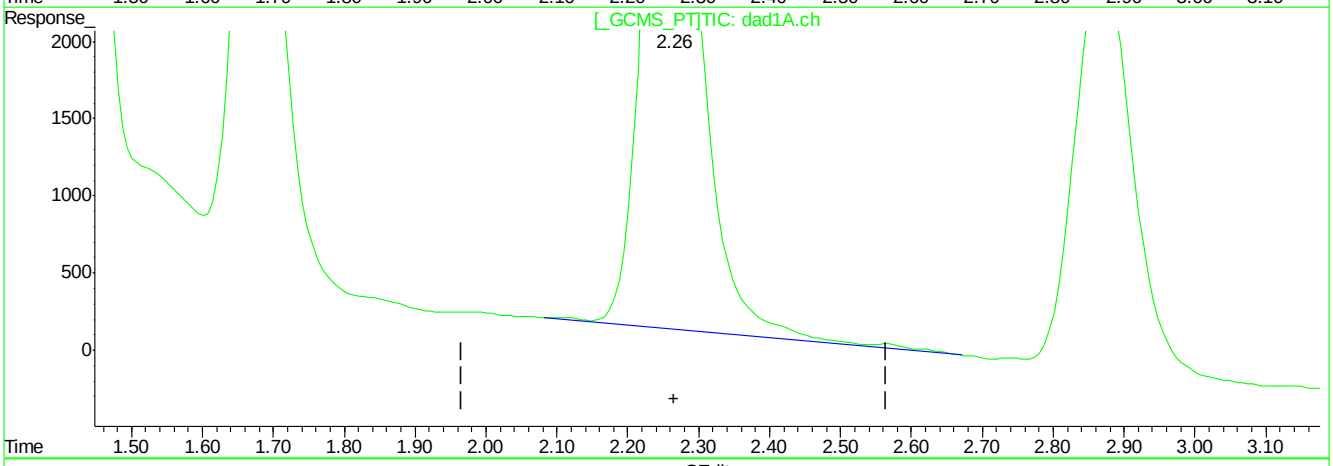
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:26:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.26min 60.711ppb

response 153793

(4) MNX #2

2.26min 61.510ppb

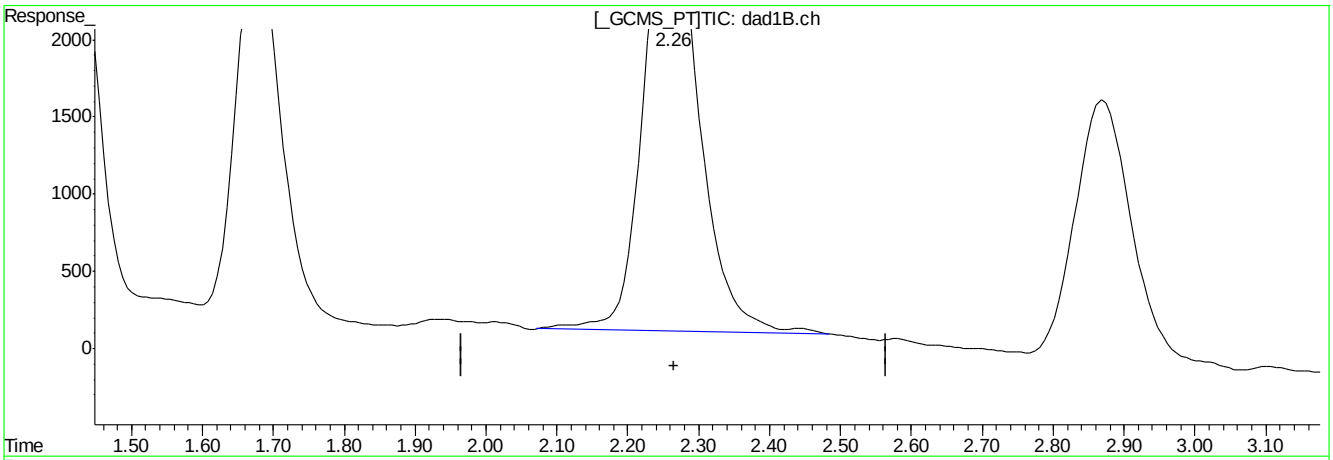
response 240474

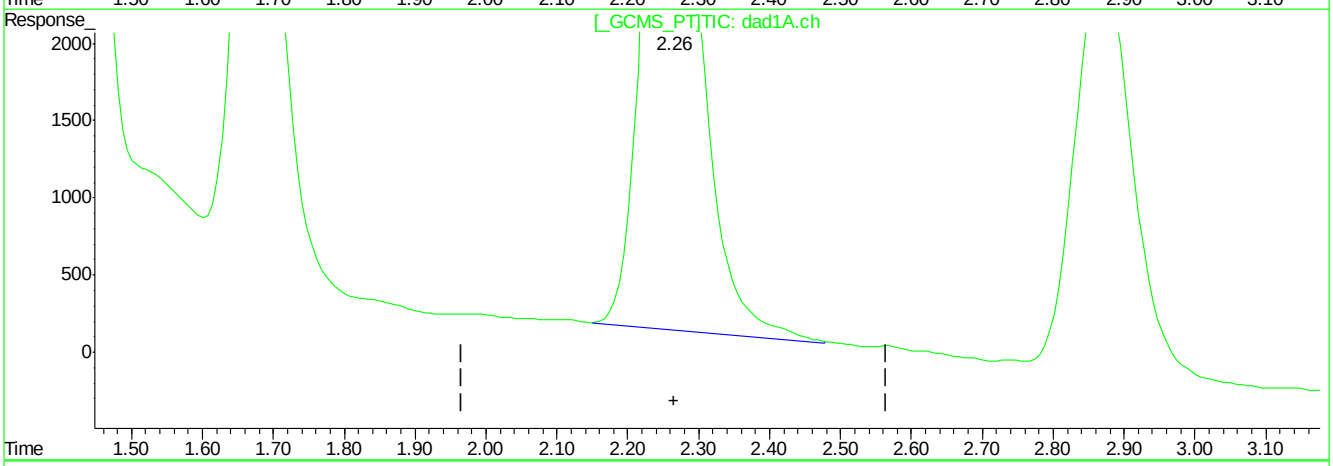
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:26:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.26min 60.711ppb

response 153793

(4) MNX #2

2.26min 60.619ppb m

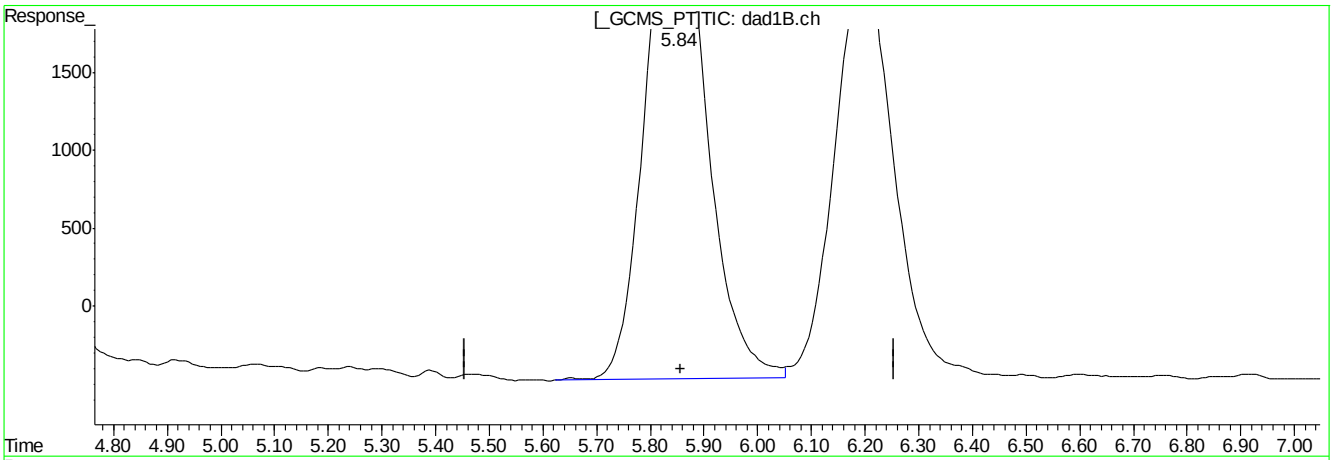
response 236990

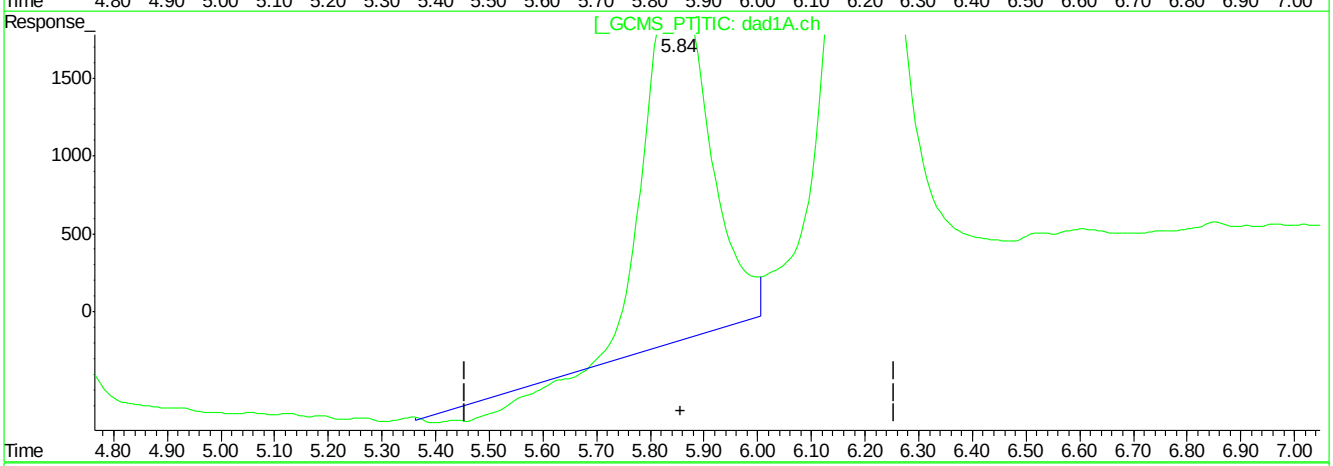
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:26:39 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 51.311ppb

response 259124

(7) 1,3-Dinitrobenzene #2

5.85min 51.216ppb

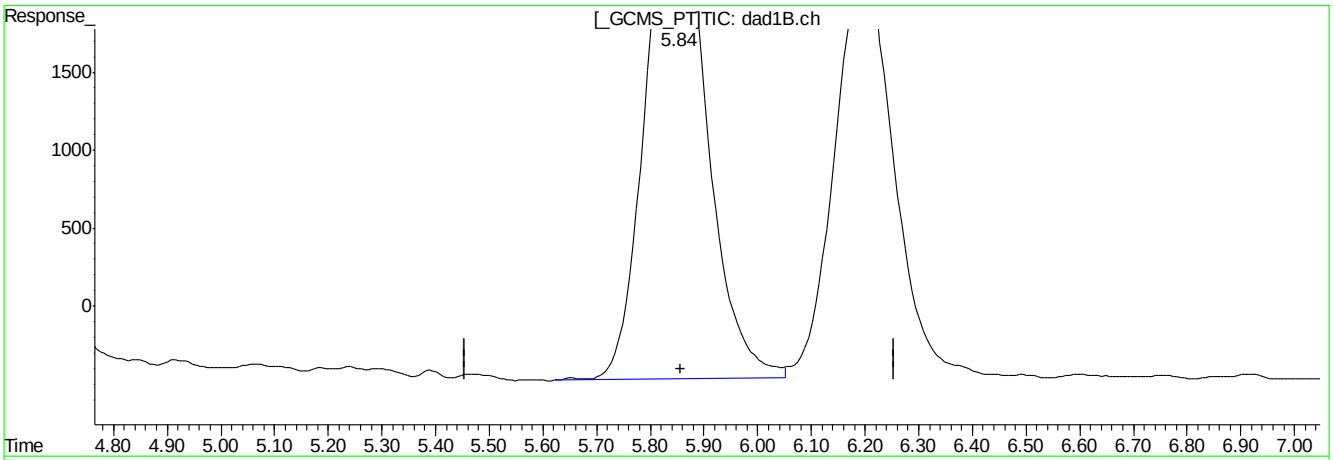
response 190819

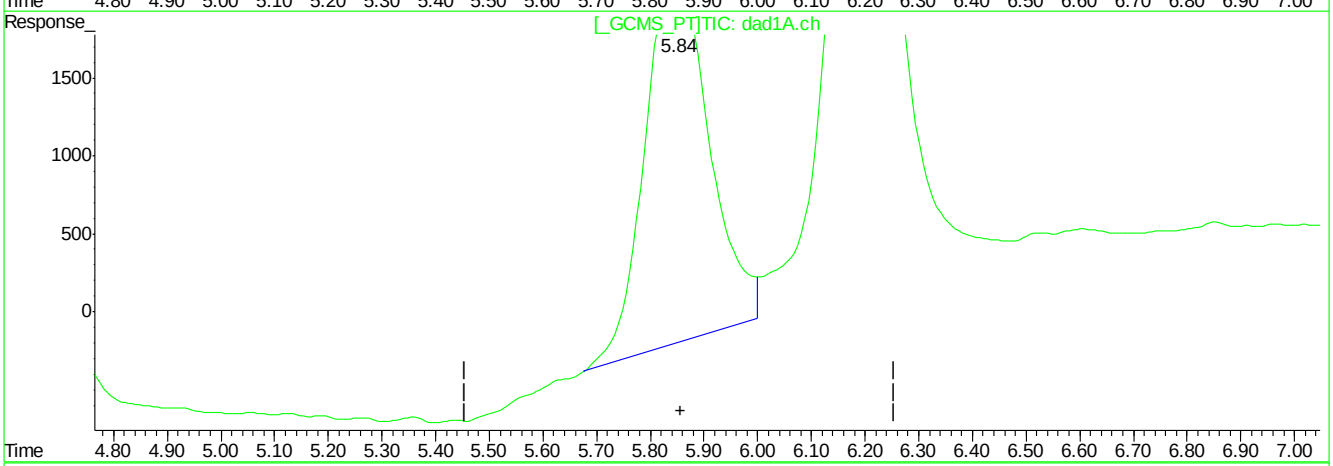
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:26:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 51.311ppb

response 259124

(7) 1,3-Dinitrobenzene #2

5.84min 54.758ppb m

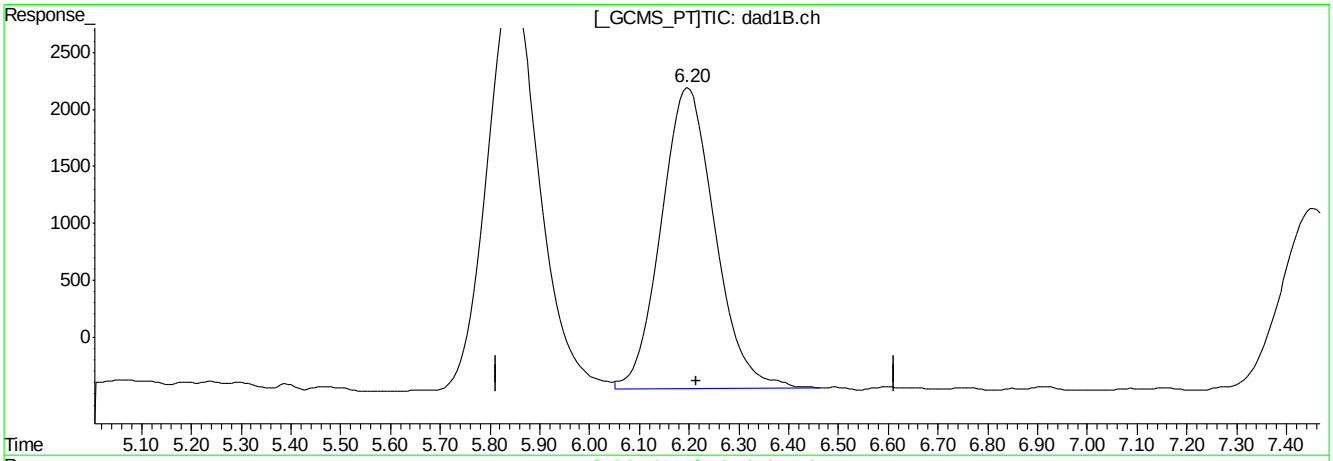
response 204018

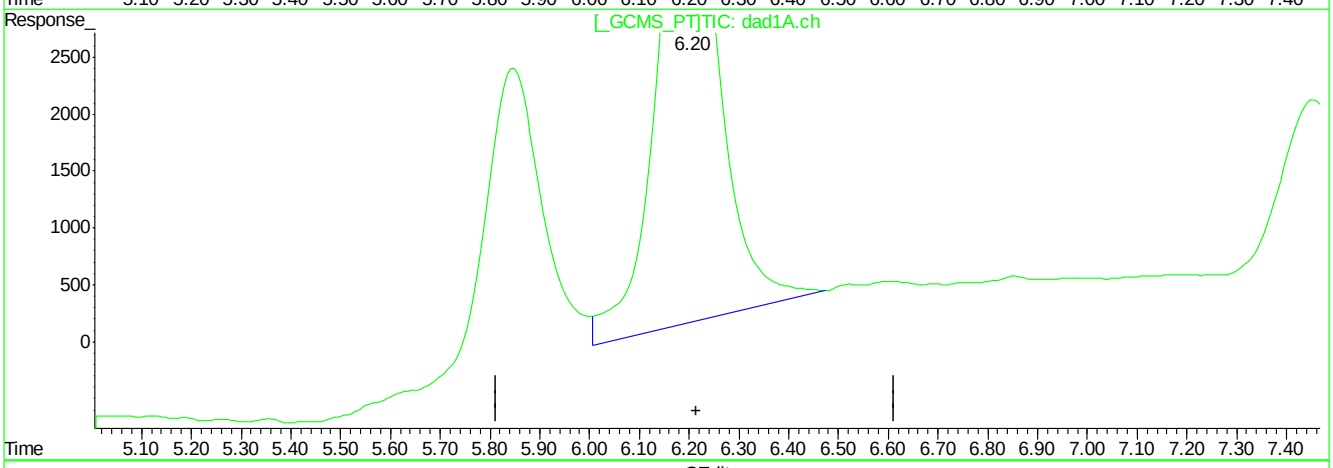
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:26:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.20min 51.836ppb

response 199482

(8) 3,5-Dinitroaniline #2

6.20min 56.245ppb

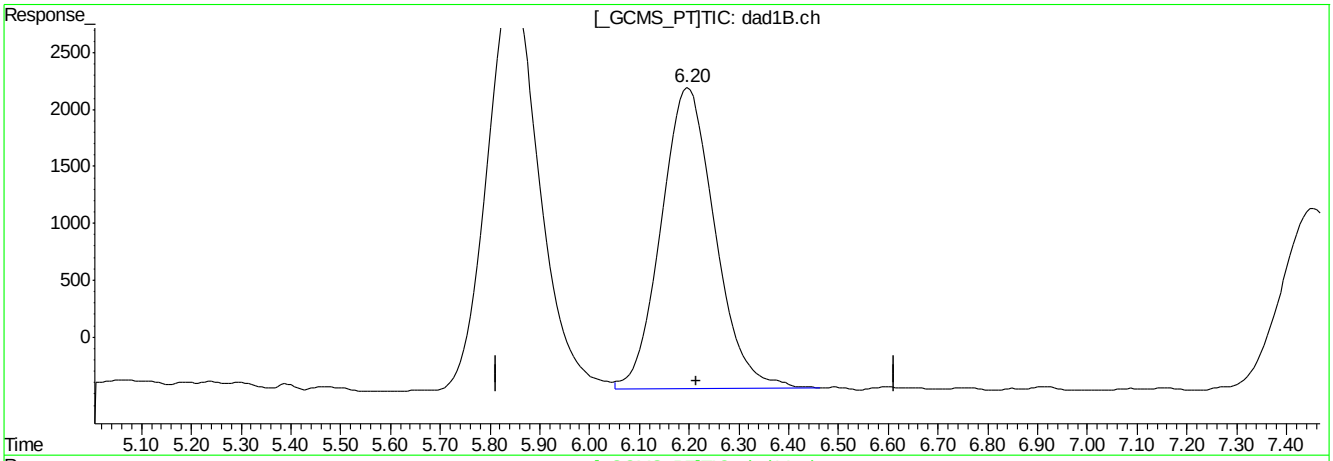
response 387219

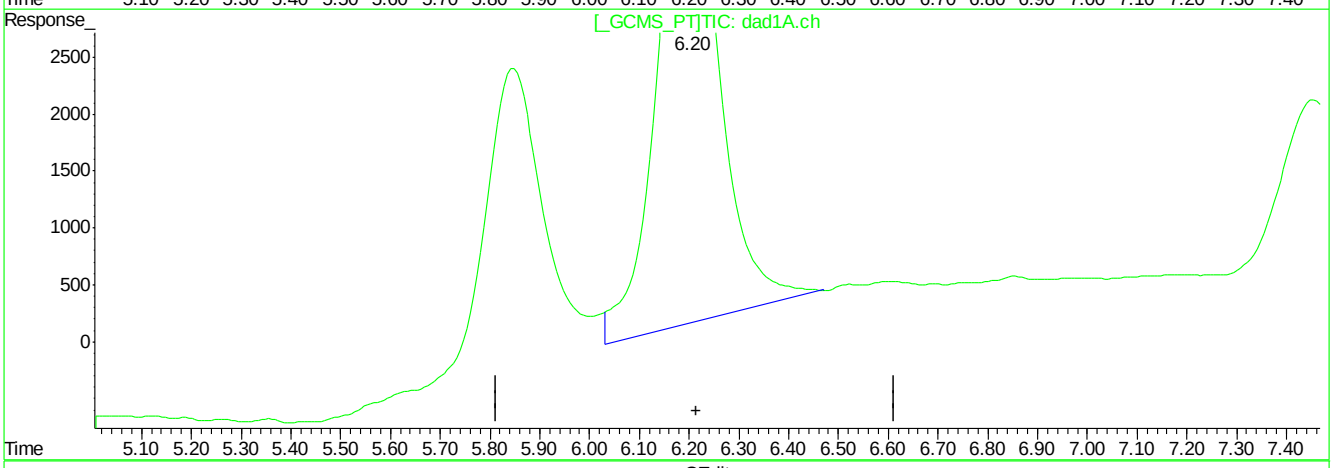
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:26:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.20min 51.836ppb

response 199482

(8) 3,5-Dinitroaniline #2

6.20min 55.980ppb m

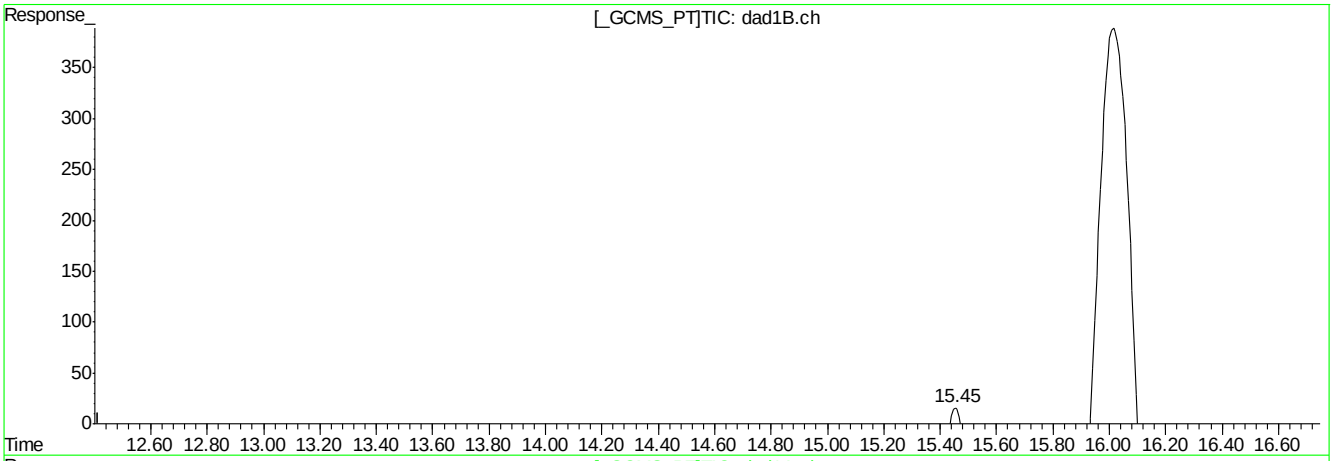
response 385391

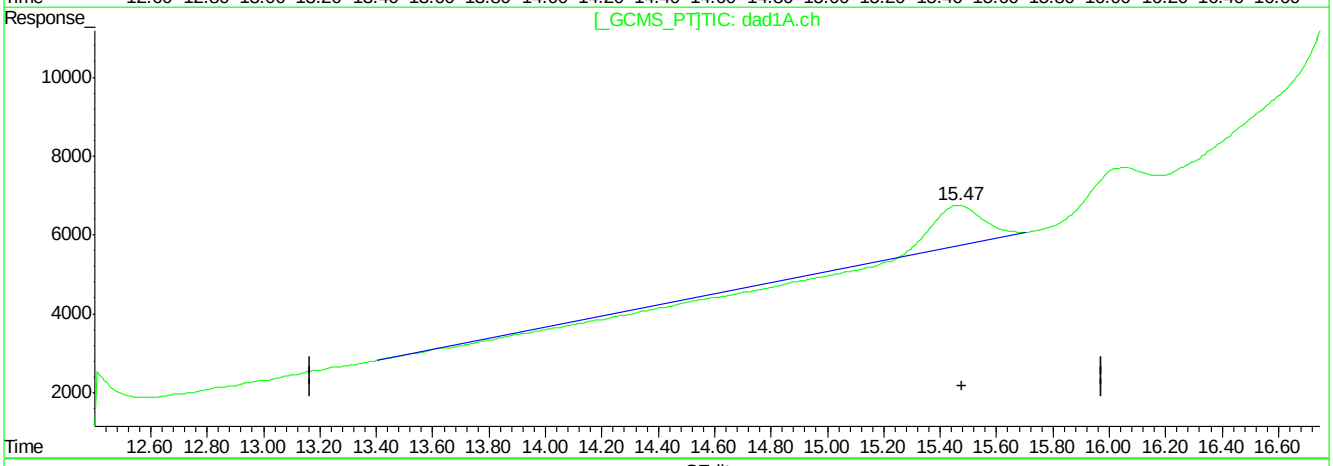
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:06 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.46min 54.019ppb

response 116436

(18) o-Nitrotoluene #2

15.47min 16.750ppb

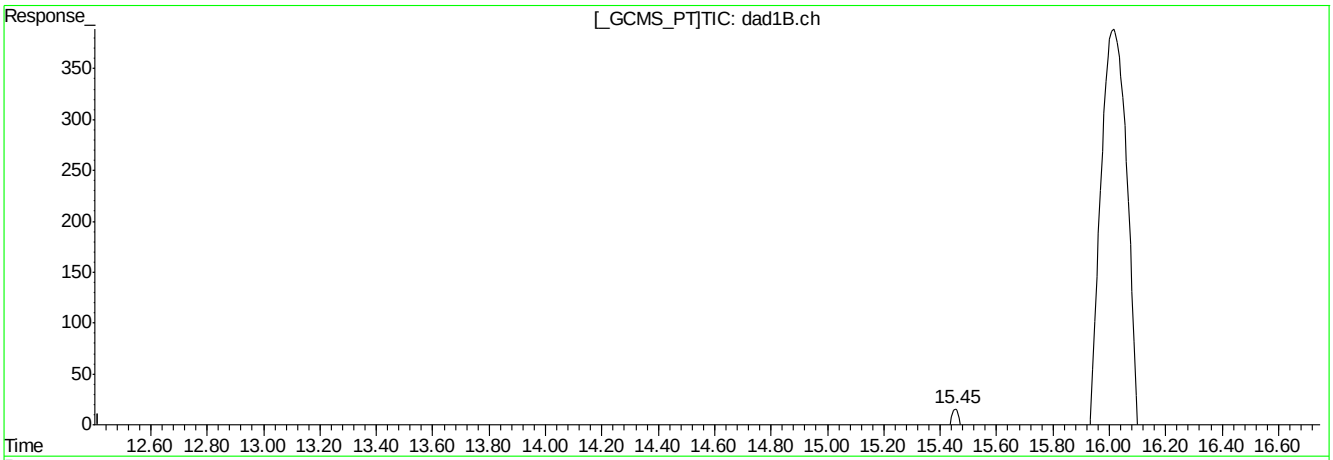
response 47592

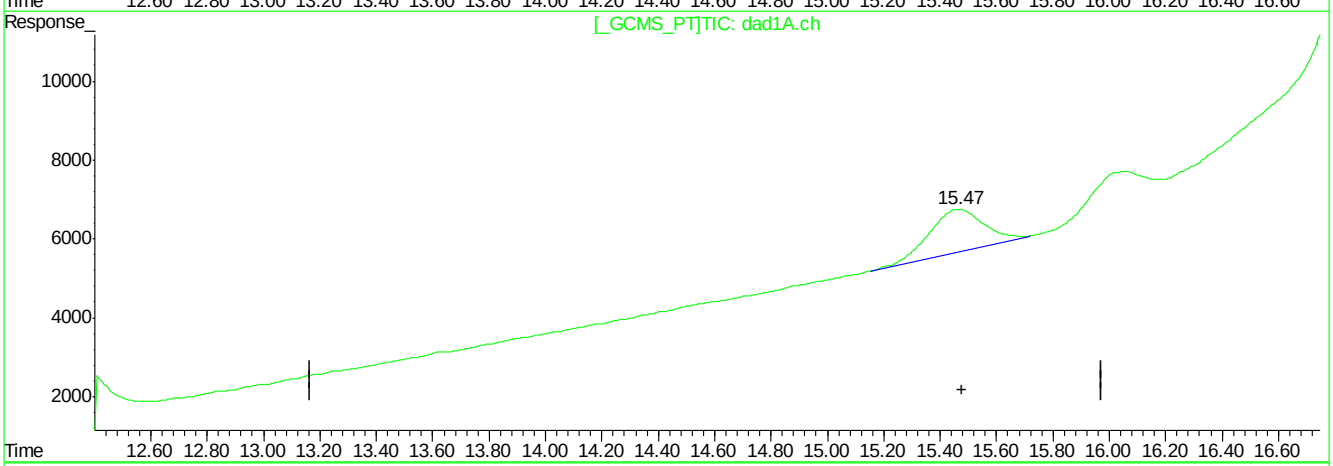
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.46min 54.019ppb

response 116436

(18) o-Nitrotoluene #2

15.47min 51.890ppb m

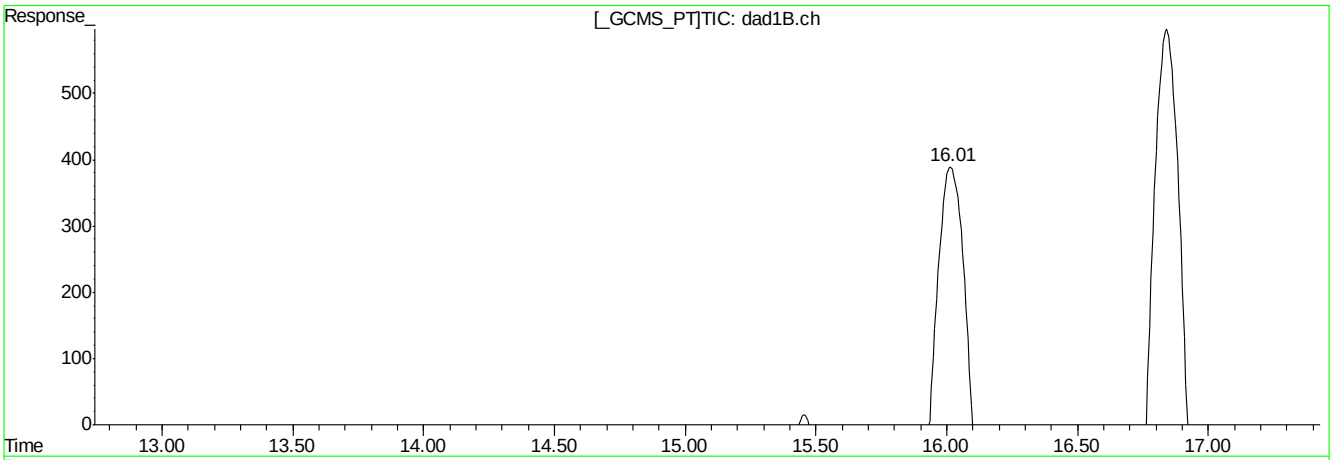
response 147434

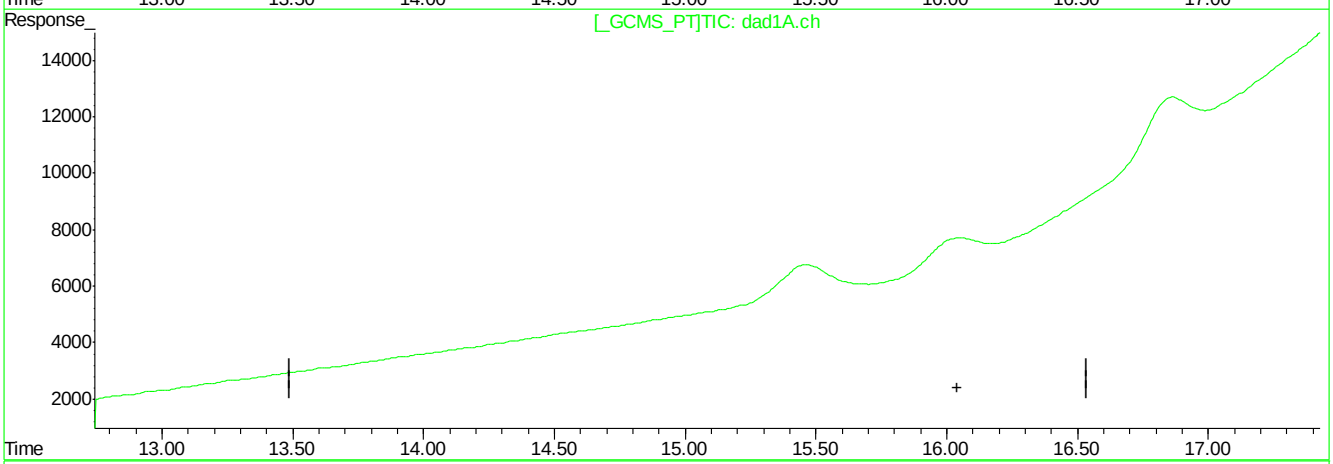
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.02min 51.625ppb

response 173143

(19) p-Nitrotoluene #2

0.00min 0.000ppb

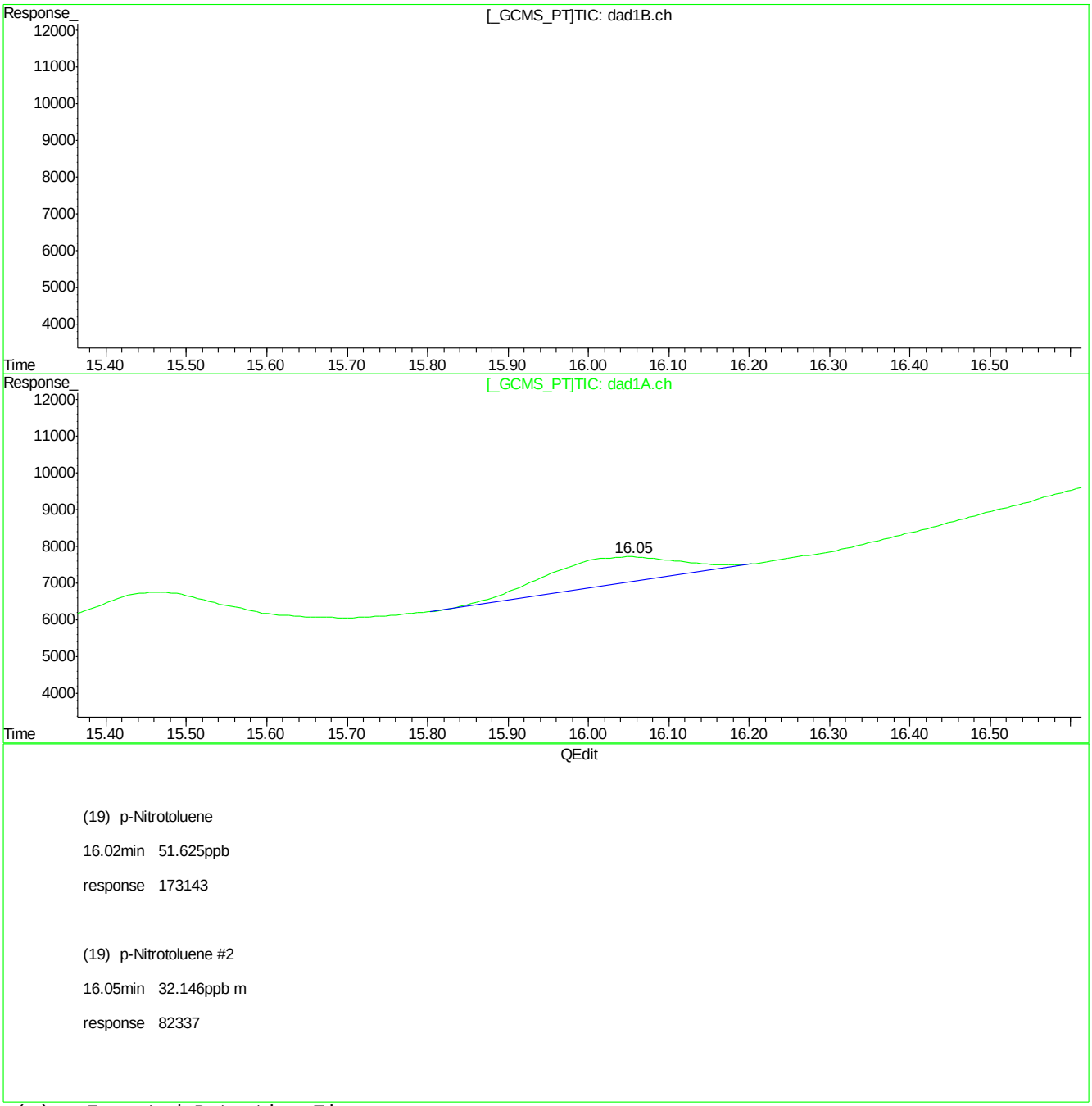
response 0

(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



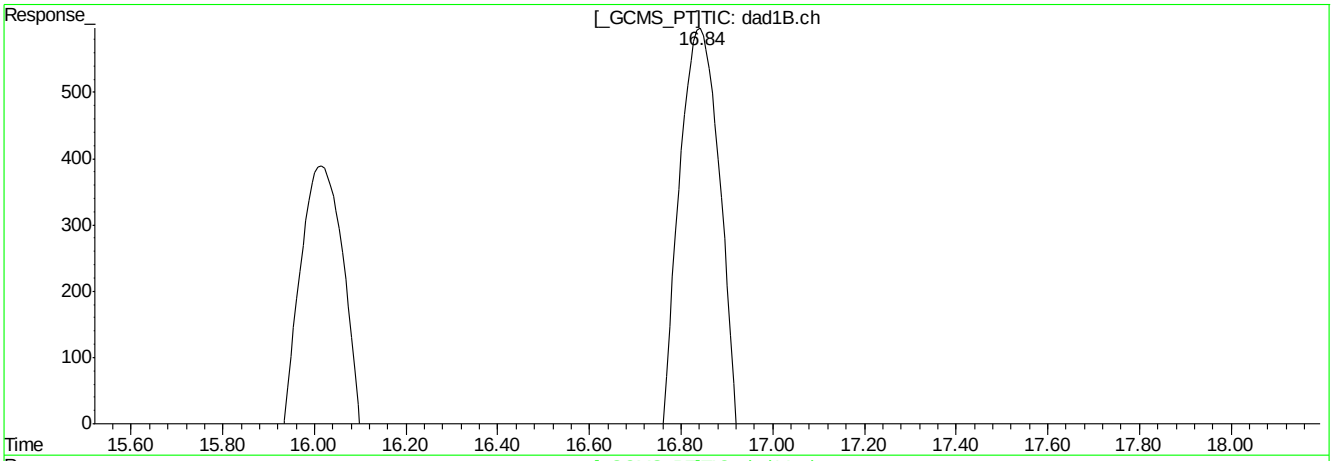
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:35 2021

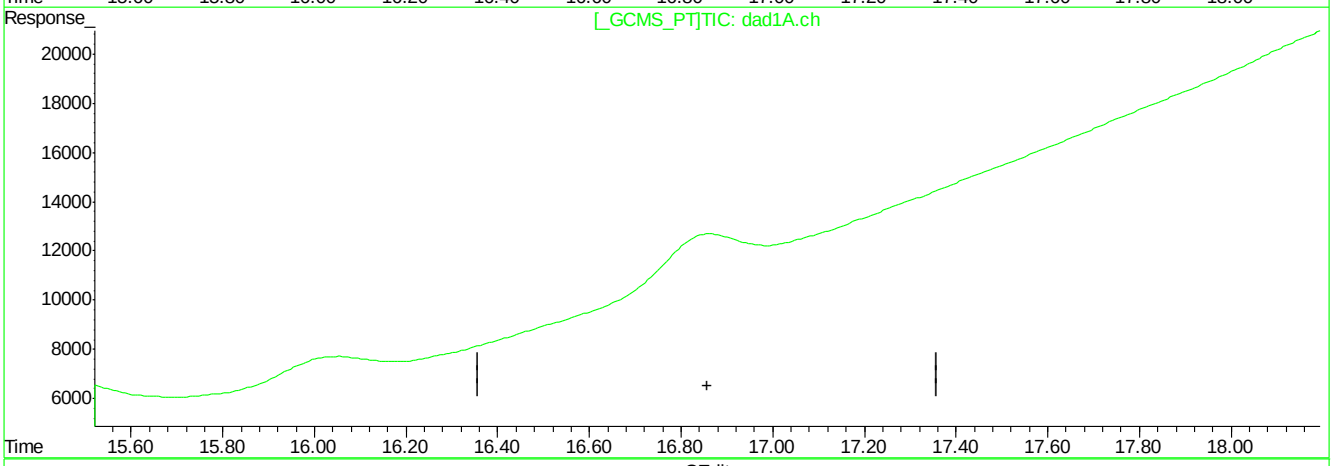
PP391044.D edits: p-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.84min 53.167ppb

response 162054

(20) m-Nitrotoluene #2

0.00min 0.000ppb

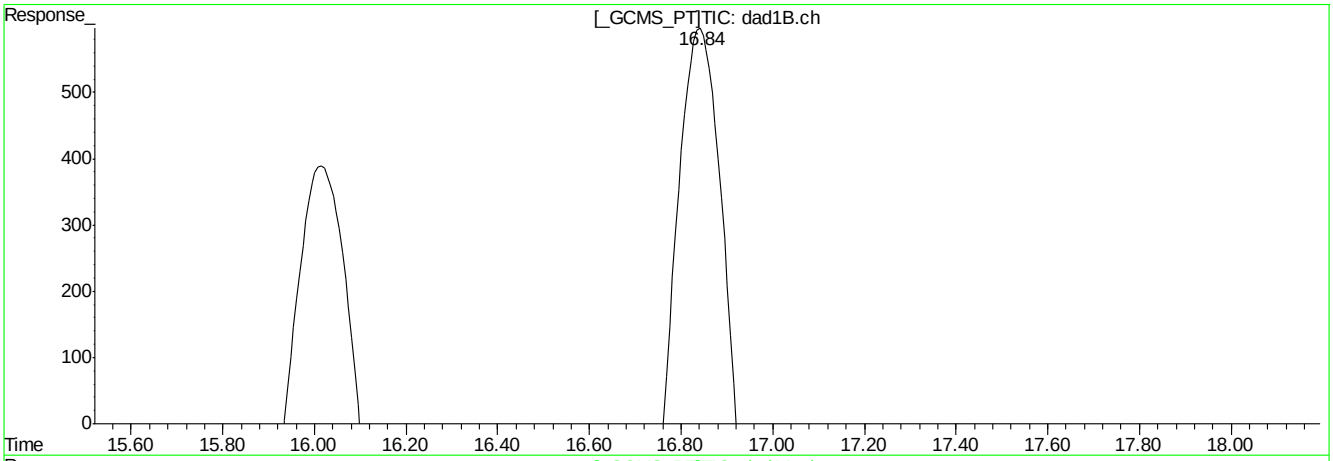
response 0

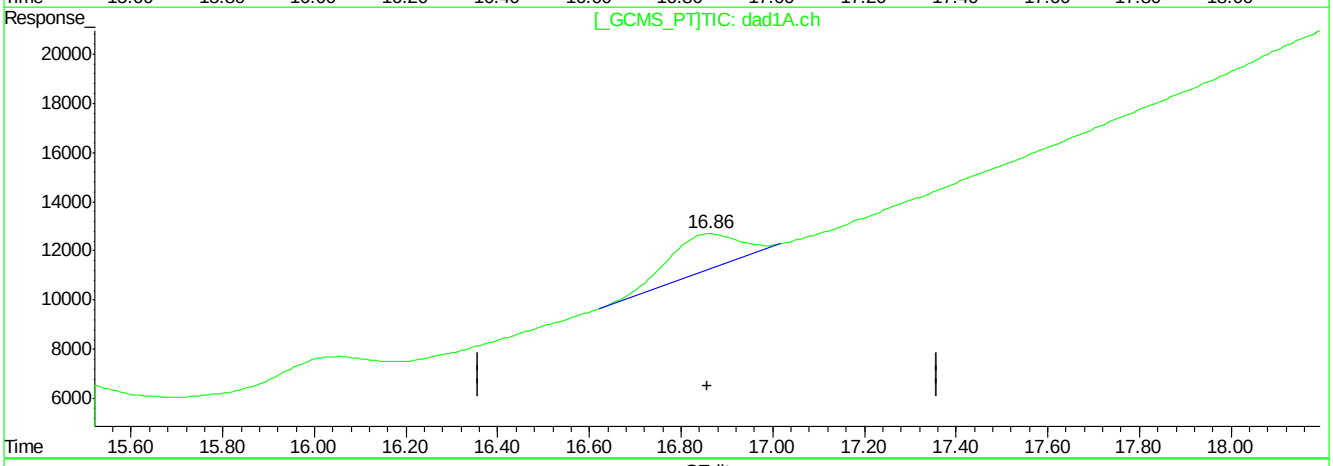
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.84min 53.167ppb

response 162054

(20) m-Nitrotoluene #2

16.86min 45.888ppb m

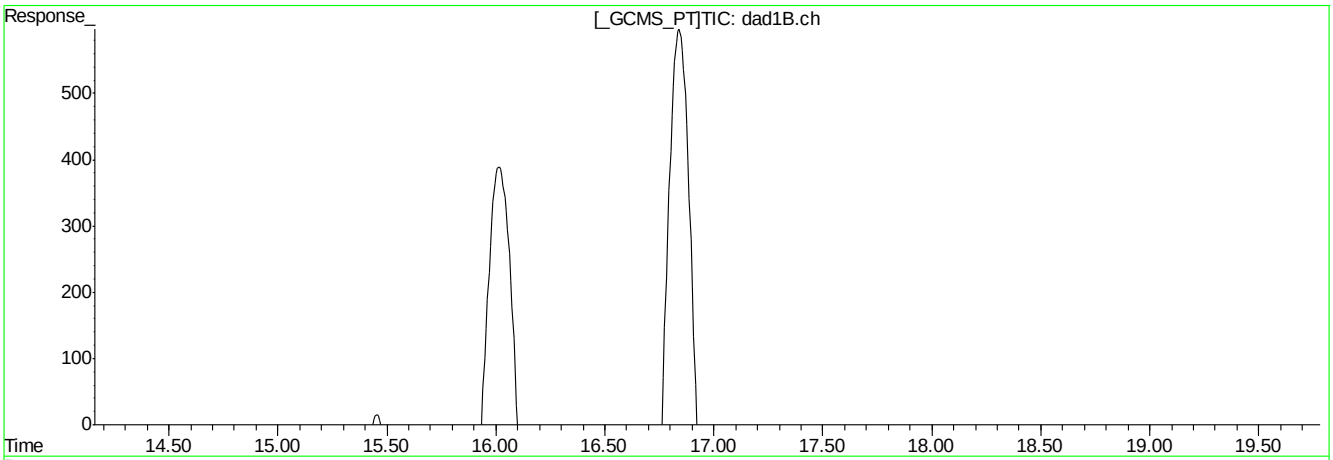
response 160245

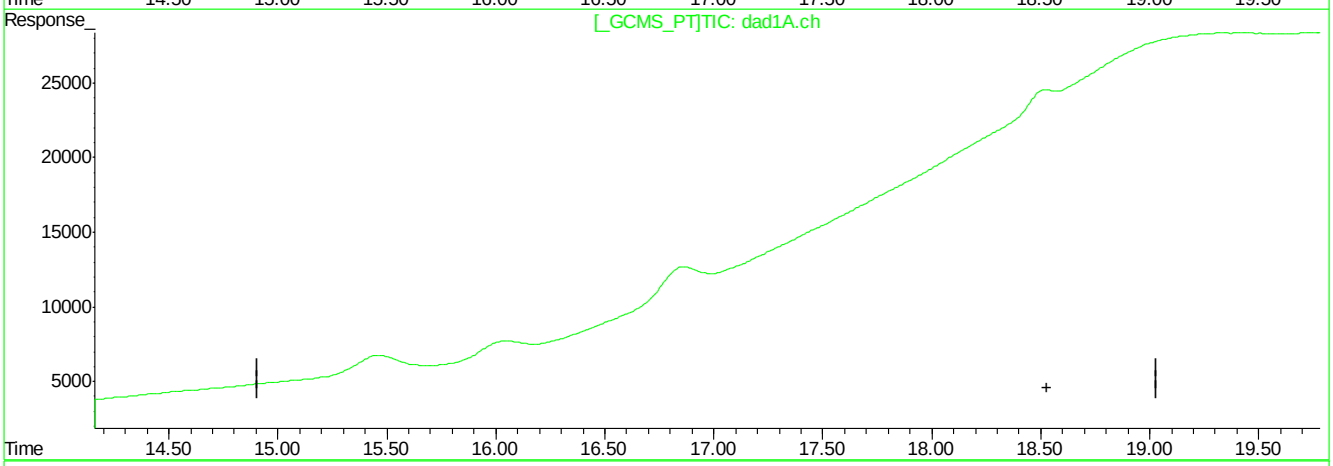
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

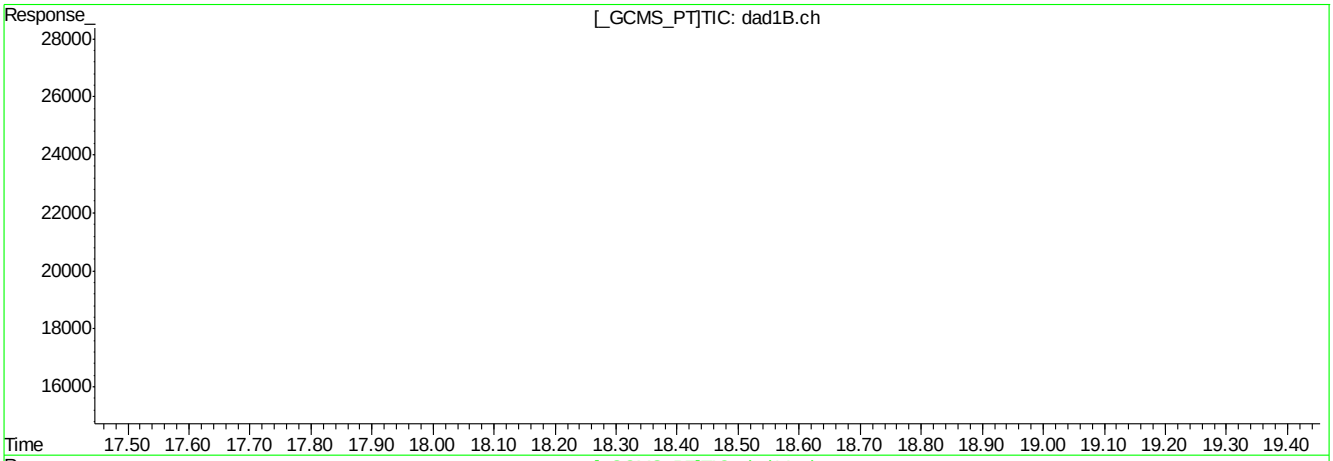
response 0

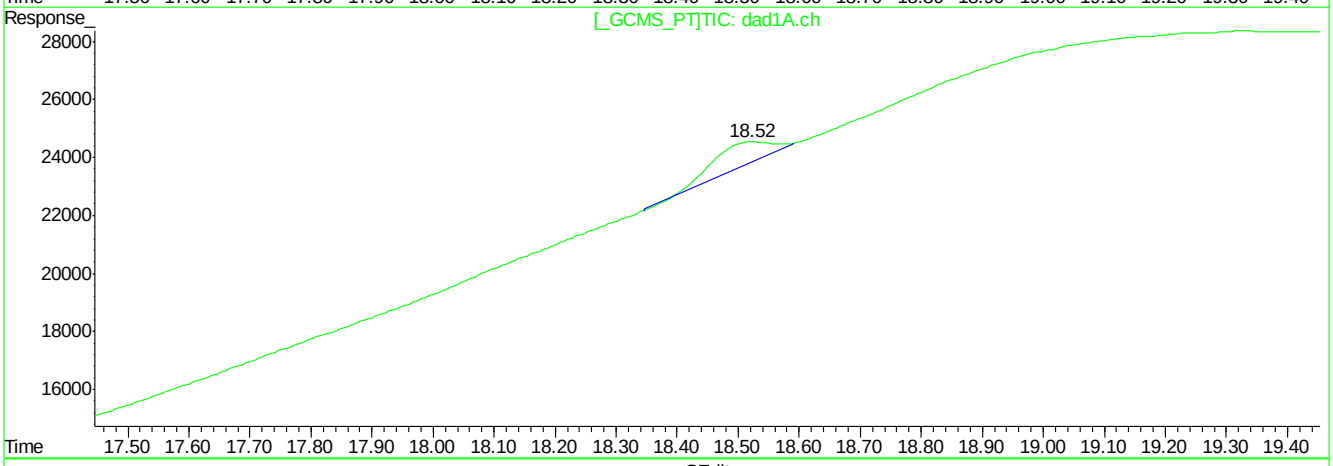
(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1B.ch Vial: 92
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391044.D\dad1A.ch
Acq On : 03-Aug-2021, 12:16:49 Operator: jamesb
Sample : ic2464-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.52min 38.436ppb m

response 52867

(+) = Expected Retention Time
PP391044.D GPP2464_080321PRI.M Thu Aug 05 10:27:55 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:33 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.22	11.22	215286	302408	101.650	91.090
	Spiked Amount 500.000	Range 70 - 136		Recovery =		20.33%#	18.22%#
	Target Compounds						
1)	TNX	1.31	1.31	72360	124678	38.334	40.173
2)	HMX	1.44	1.44	158702	474470	109.807	110.529
3)	DNX	1.68	1.68	223745	370194	96.948	94.479
4)	MNX	2.26	2.26	299090	471558	118.068	120.618
5)	RDX	2.88	2.88	184281	297900	101.487	102.011
6)	1,3,5-Trinitrobe	4.64	4.64	398840	768544	102.237	101.411
7)	1,3-Dinitrobenze	5.85	5.85	512345	381773	101.453	102.468m
8)	3,5-Dinitroanili	6.21	6.20	392368	692378	101.957	100.571m
9)	Nitrobenzene	7.46	7.46	297732	296047	102.461	103.544m
10)	Nitroglycerin	0.00	8.95	0	121721	N.D.	101.338 #
11)	Tetryl	9.47	9.47	308618	476672	105.308	103.121
12)	2,4,6-Trinitroto	9.85	9.85	375905	438391	101.642	100.379
13)	2-Amino-4,6-Dini	10.25	10.25	349071	492542	106.126	102.499
14)	4-Amino-2,6-Dini	10.77	10.77	267905	456178	107.304	101.618
16)	2,4-Dinitrotolue	11.86	11.86	475137	294577	105.264	101.893
17)	2,6-Dinitrotolue	12.34	12.35	282193	331858	110.768	103.240
18)	o-Nitrotoluene	15.46	15.46	222278	286701	103.122	100.906m
19)	p-Nitrotoluene	16.02	16.03	336728	205776	100.401	80.260m
20)	m-Nitrotoluene	16.85	16.85	312923	367838	102.663	105.336m
21)	PETN	0.00	18.51	0	113767	N.D. d	82.713m

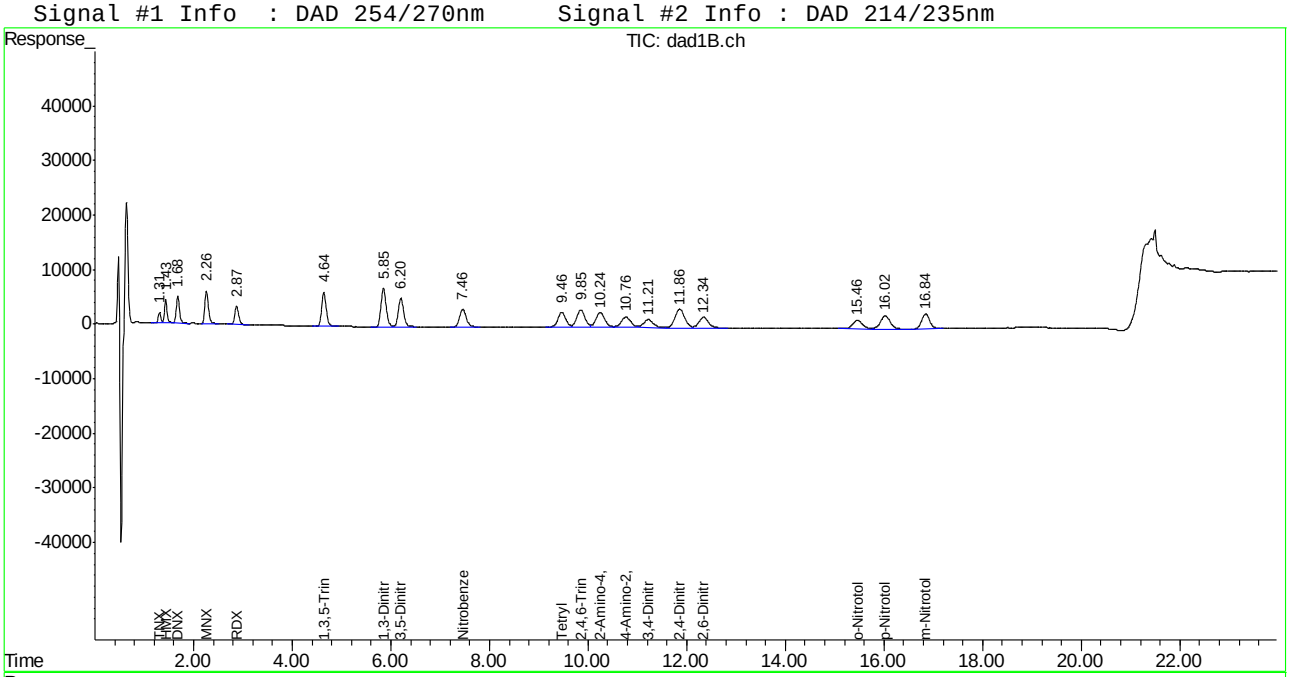
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:35:49 2021 Page 1

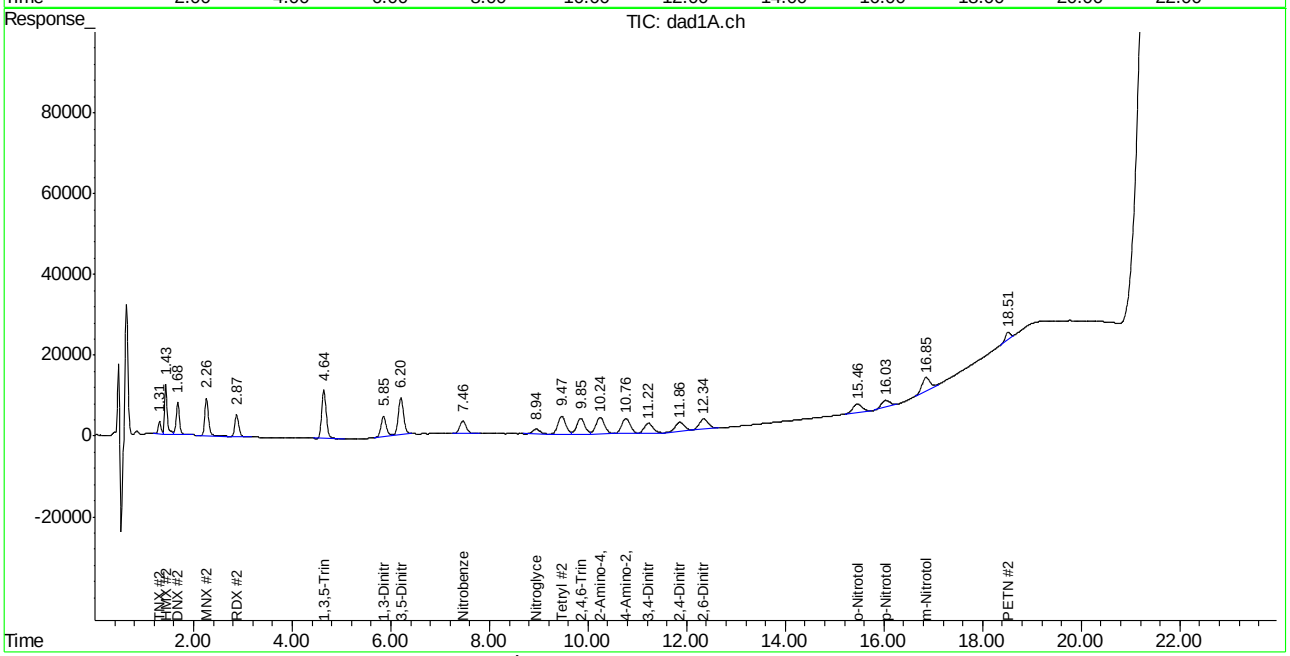
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:25 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

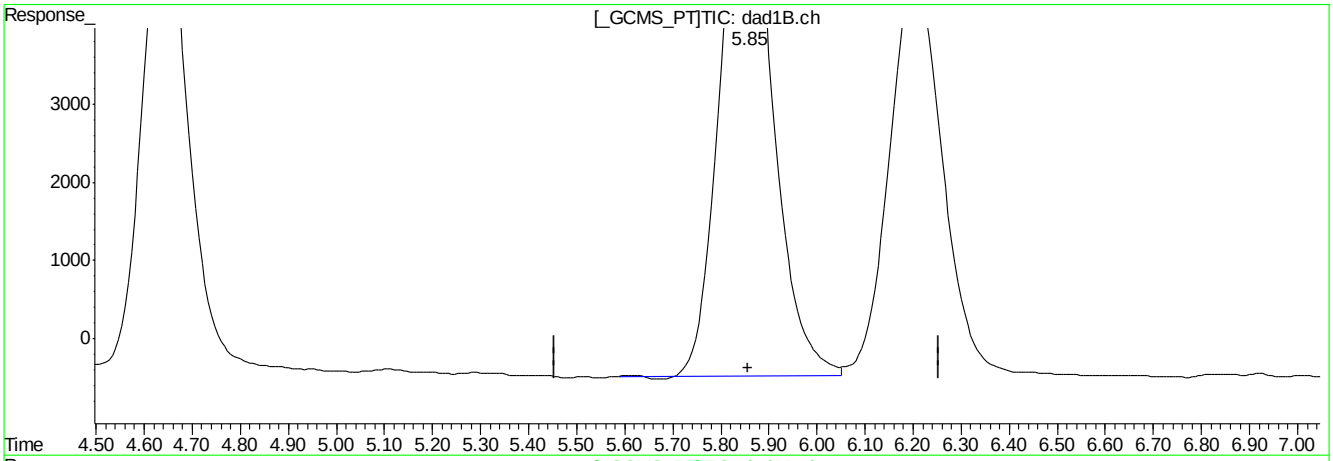
Sample Number: GPP2464-IC2464
Lab FileID: PP391045.D
Injection Time: 08/03/21 12:47
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

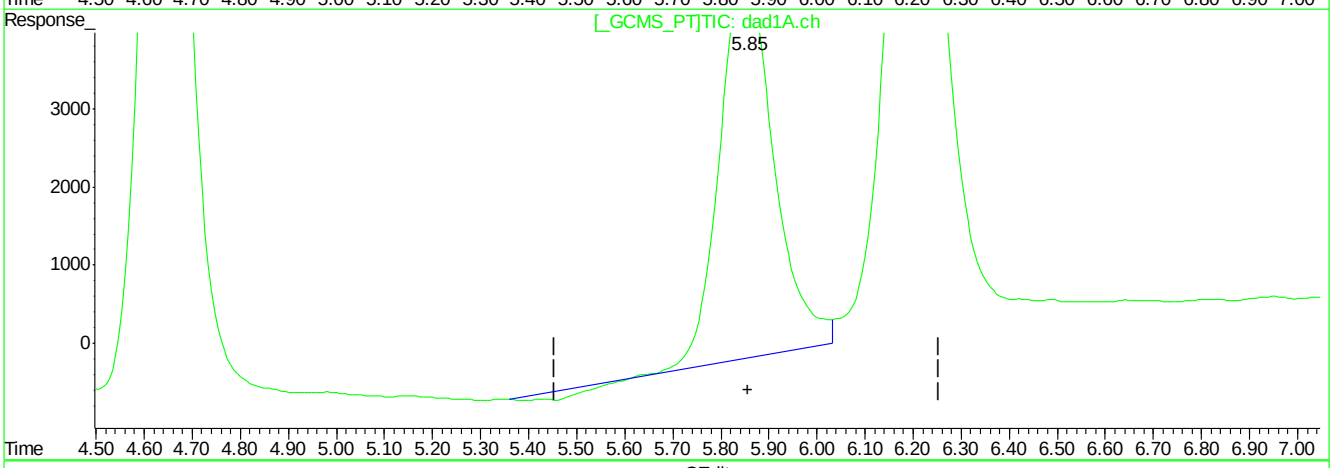
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	5.85	Poor instrument integration
3,5-Dinitroaniline	618-87-1	2	6.20	Poor instrument integration
Nitrobenzene	98-95-3	2	7.46	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.46	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.03	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.85	Poor instrument integration
PETN	78-11-5	2	18.51	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 101.453ppb

response 512345

(7) 1,3-Dinitrobenzene #2

5.85min 102.240ppb

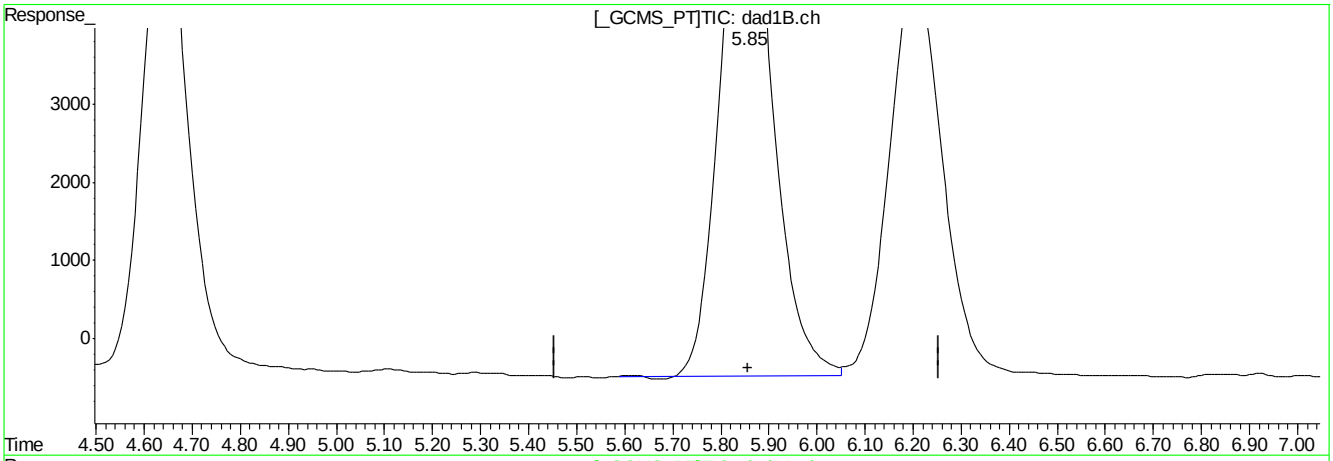
response 380926

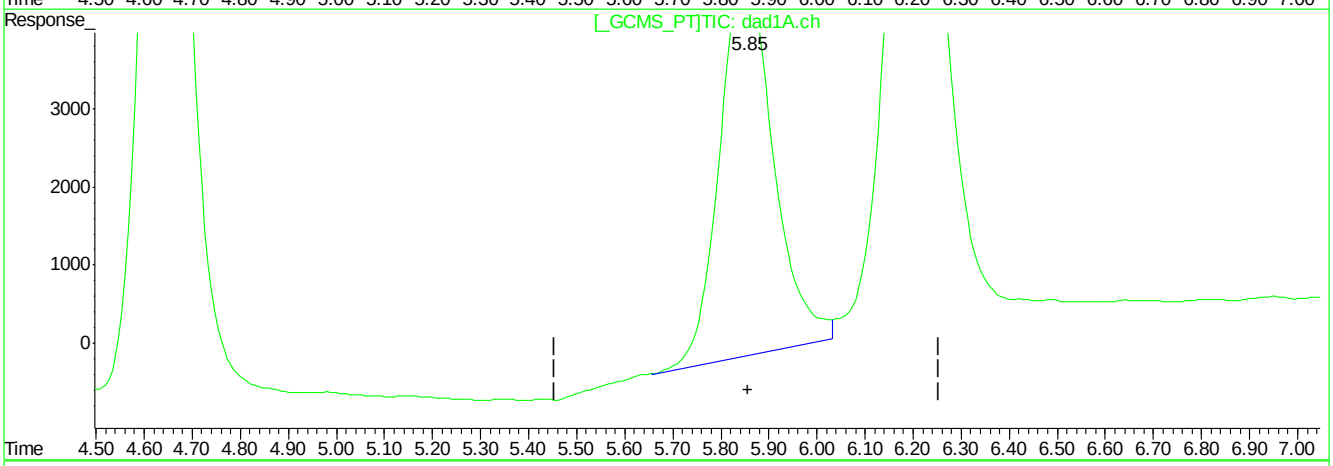
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:24:41 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 101.453ppb

response 512345

(7) 1,3-Dinitrobenzene #2

5.85min 102.468ppb m

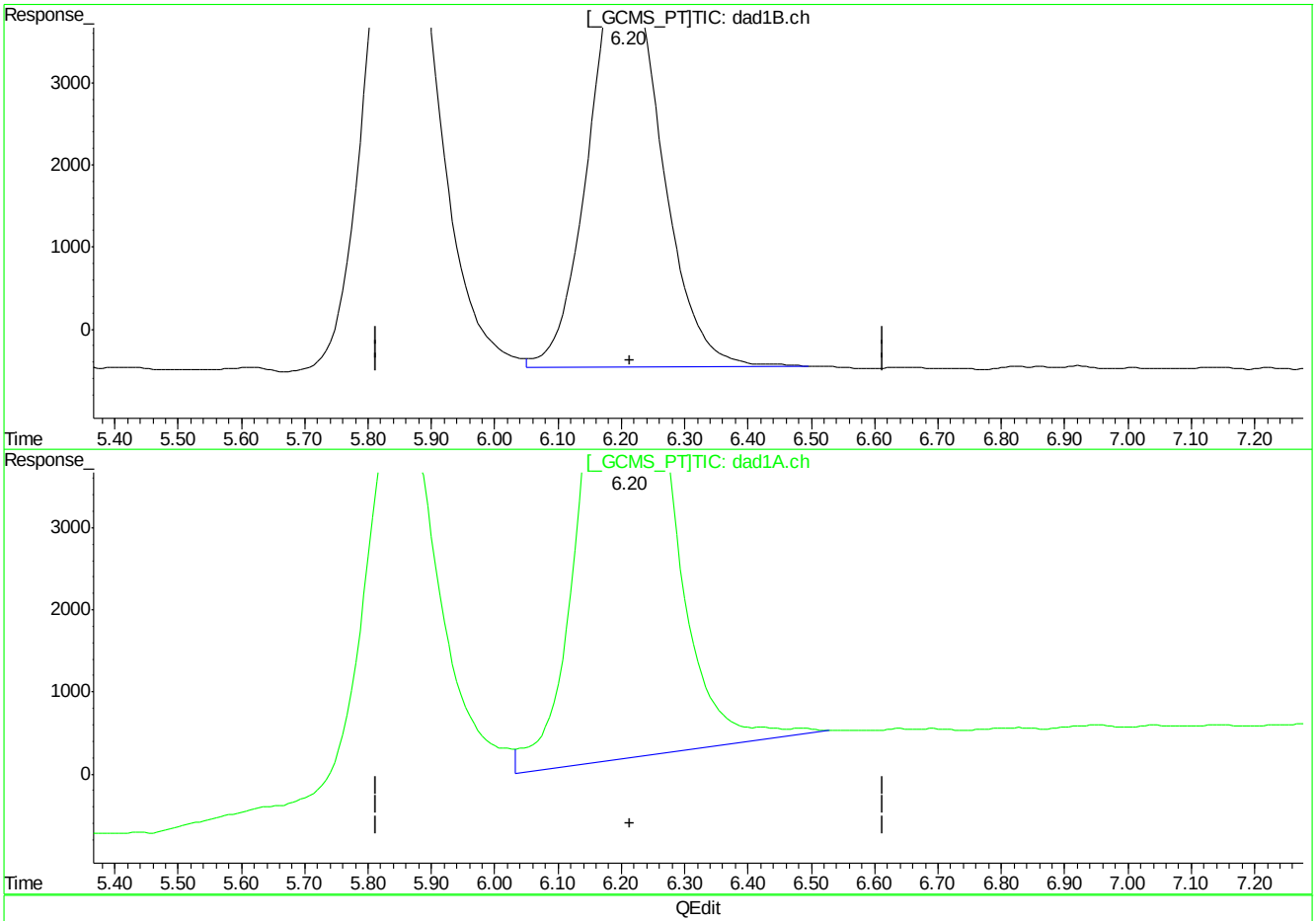
response 381773

(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:24:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(8) 3,5-Dinitroaniline

6.21min 101.957ppb

response 392368

(8) 3,5-Dinitroaniline #2

6.21min 105.306ppb

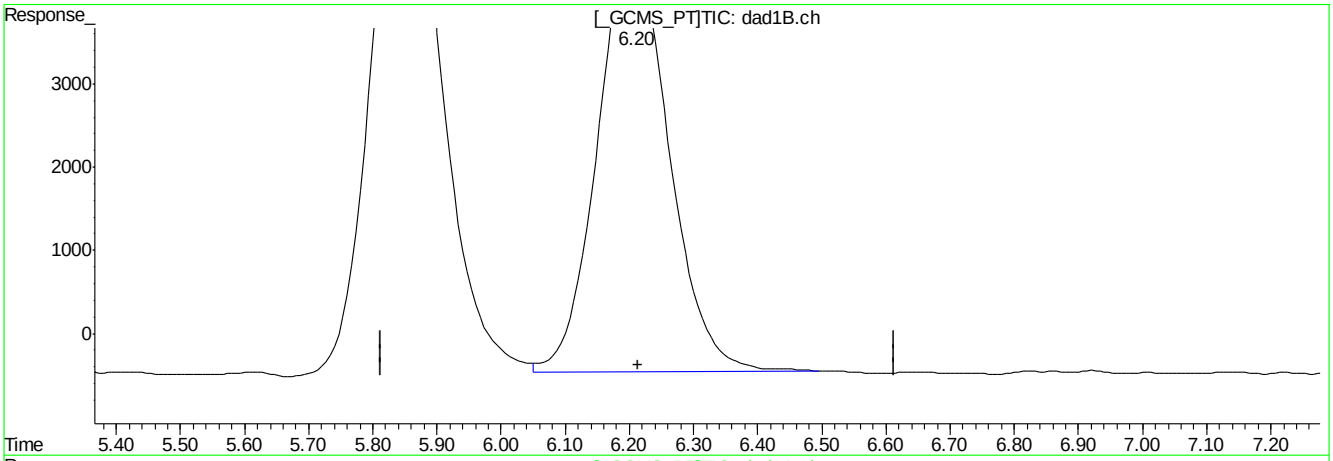
response 724973

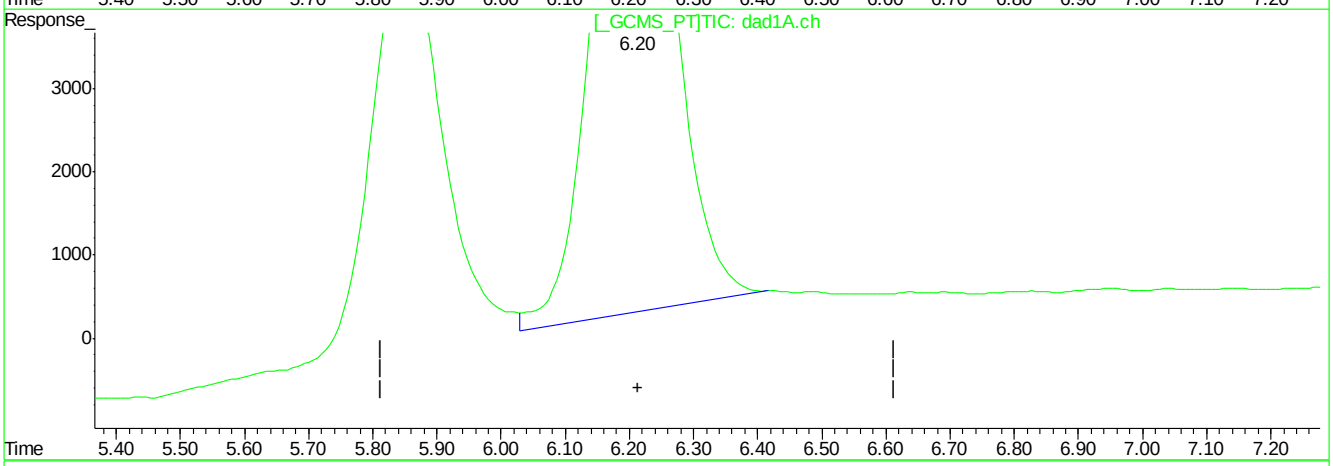
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:24:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(8) 3,5-Dinitroaniline

6.21min 101.957ppb

response 392368

(8) 3,5-Dinitroaniline #2

6.20min 100.571ppb m

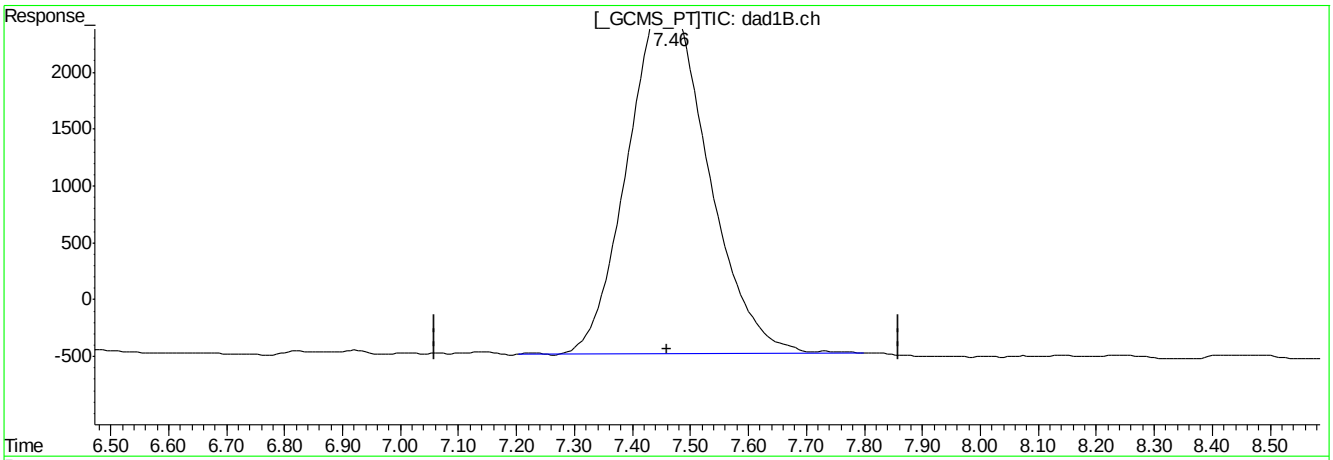
response 692378

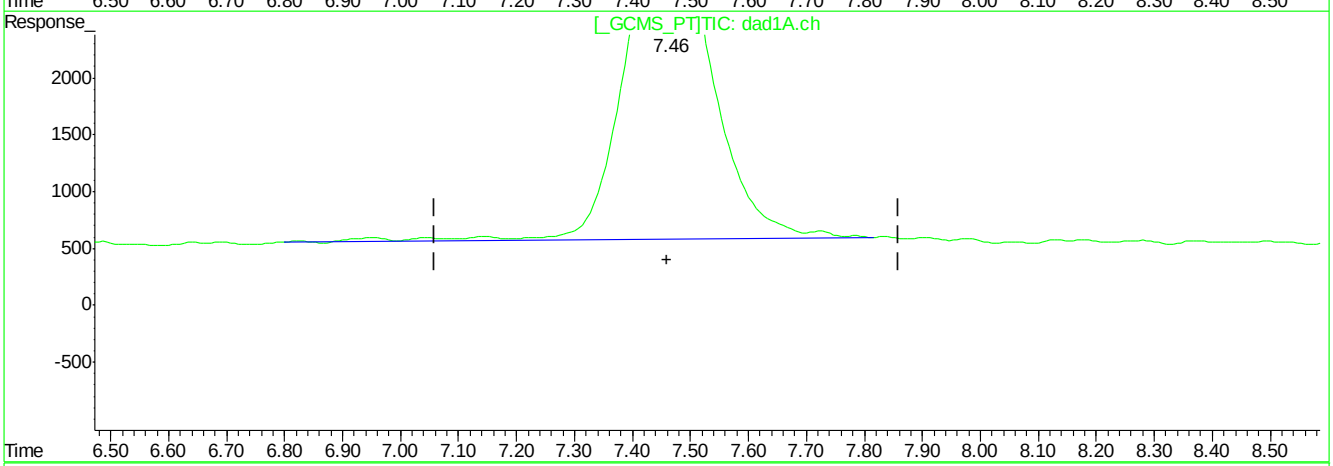
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:24:58 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.46min 102.461ppb

response 297732

(9) Nitrobenzene #2

7.46min 105.534ppb

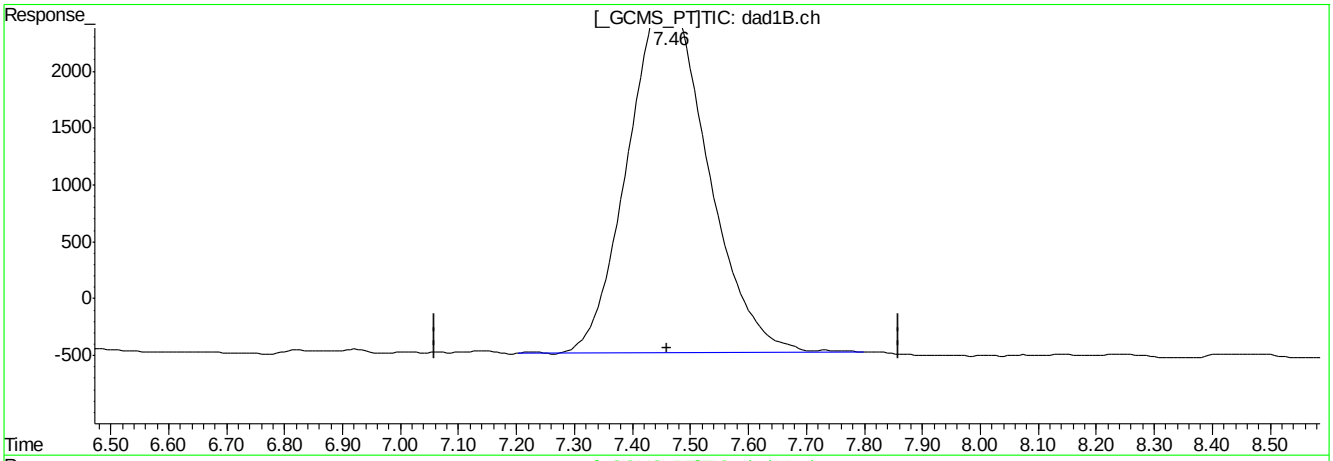
response 301736

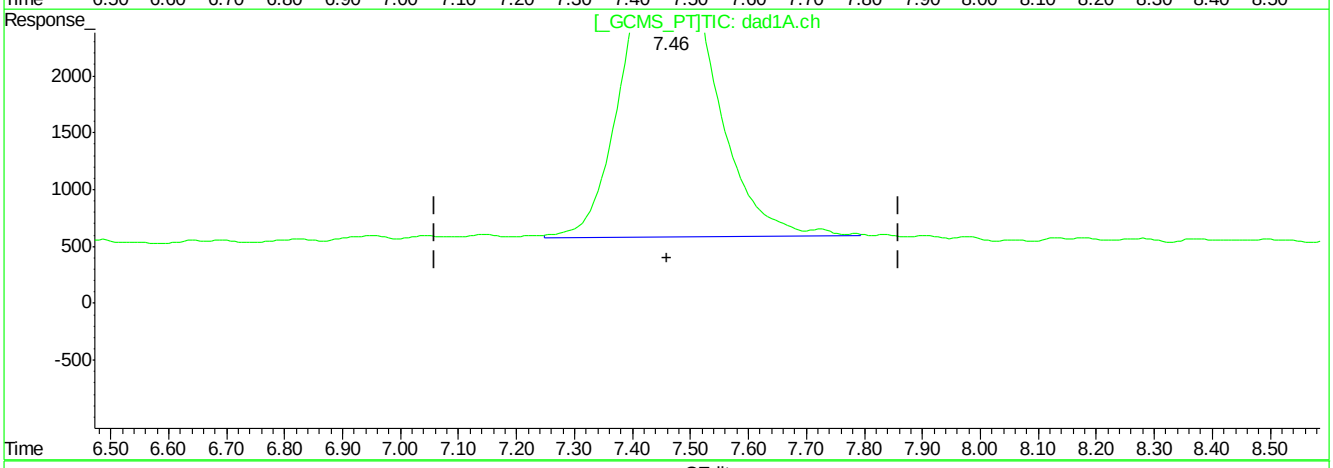
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:02 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.46min 102.461ppb

response 297732

(9) Nitrobenzene #2

7.46min 103.544ppb m

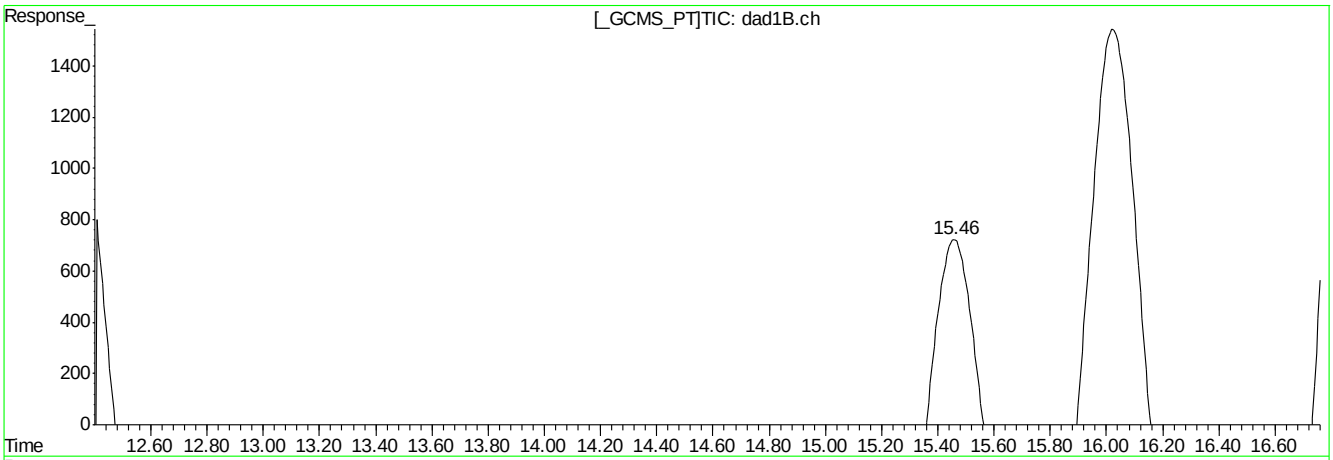
response 296047

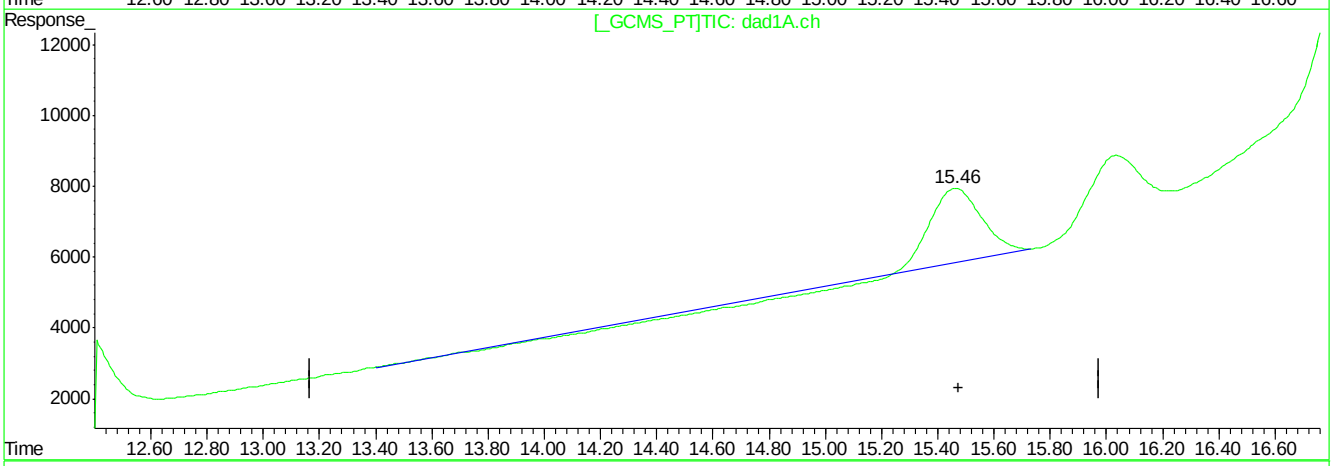
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.46min 103.122ppb

response 222278

(18) o-Nitrotoluene #2

15.46min 62.431ppb

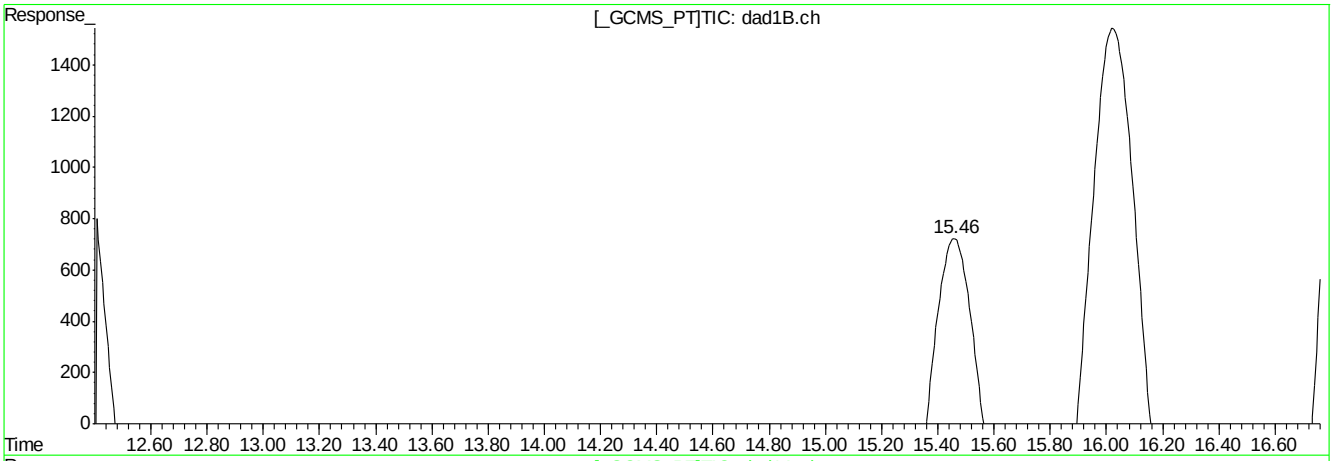
response 177383

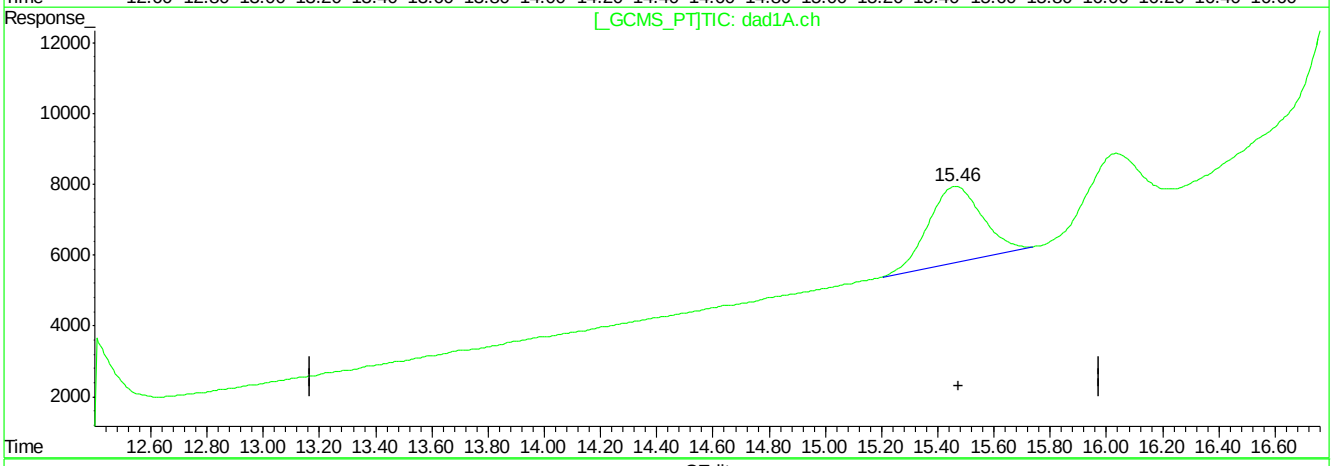
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.46min 103.122ppb

response 222278

(18) o-Nitrotoluene #2

15.46min 100.906ppb m

response 286701

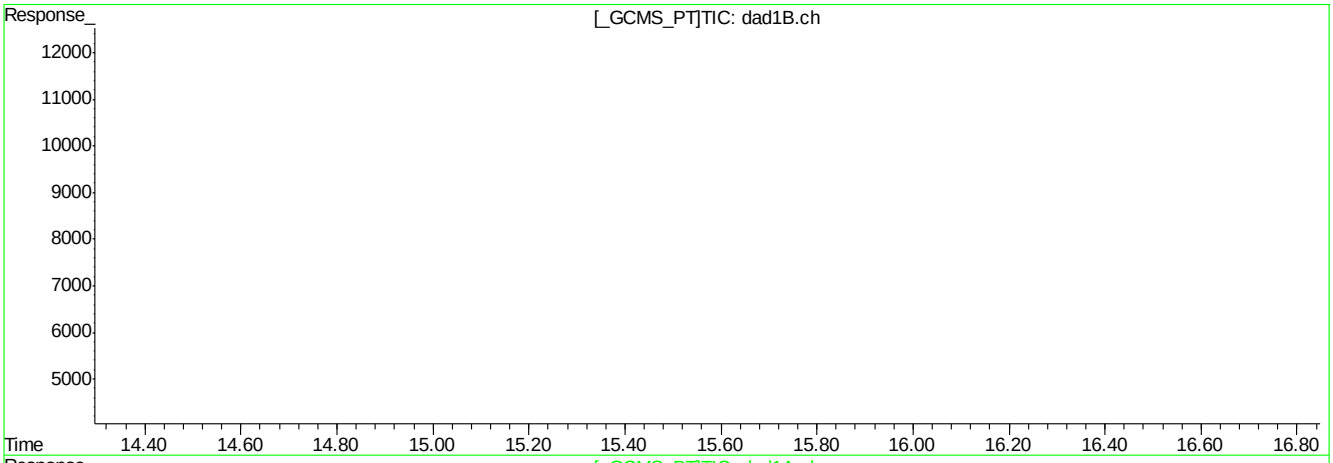
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:23 2021

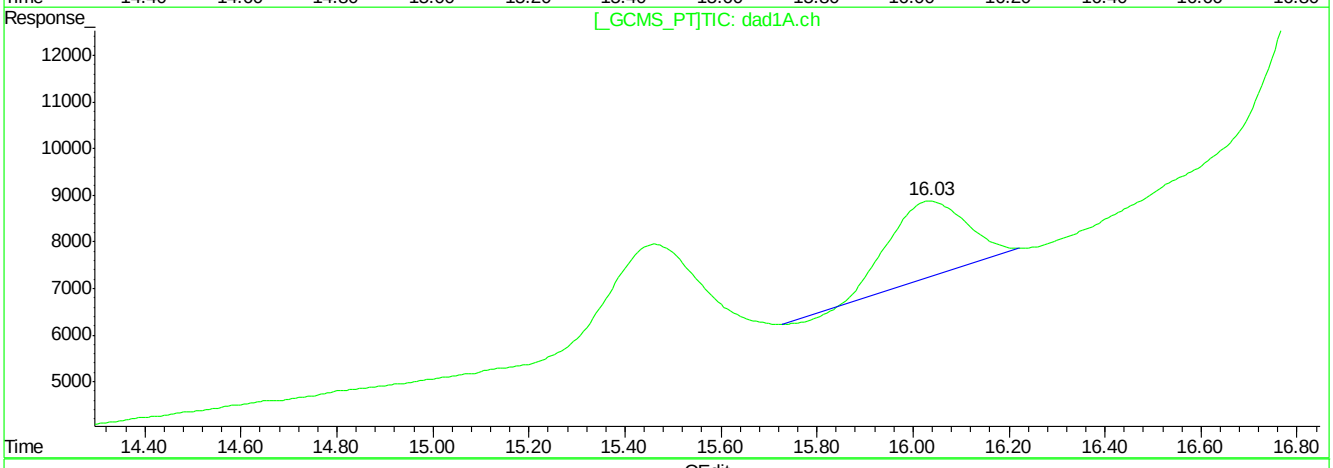
PP391045.D edits: o-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.02min 100.401ppb

response 336728

(19) p-Nitrotoluene #2

16.04min 69.405ppb

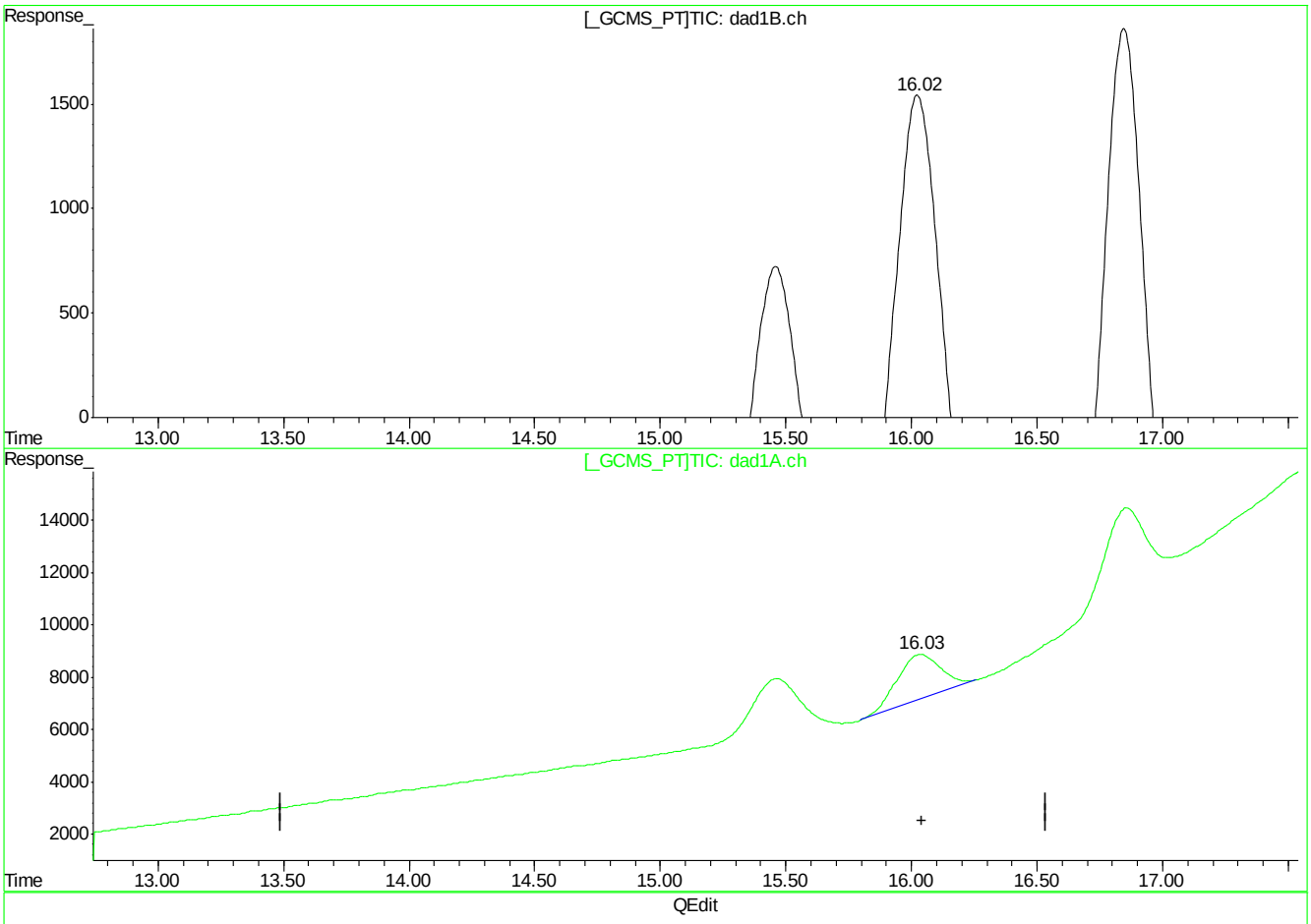
response 177906

(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:28 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.02min 100.401ppb

response 336728

(19) p-Nitrotoluene #2

16.03min 80.260ppb m

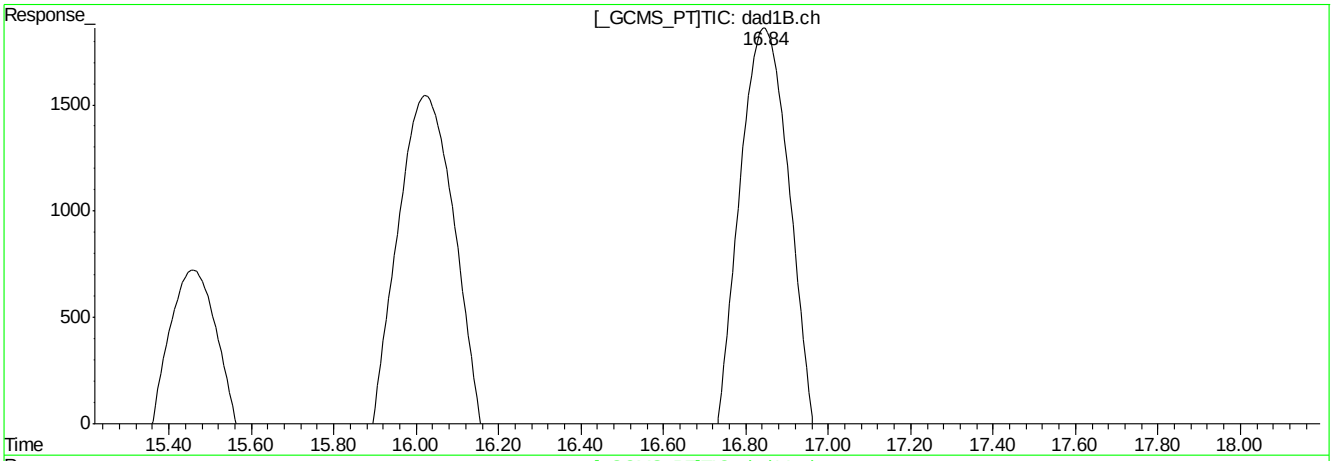
response 205776

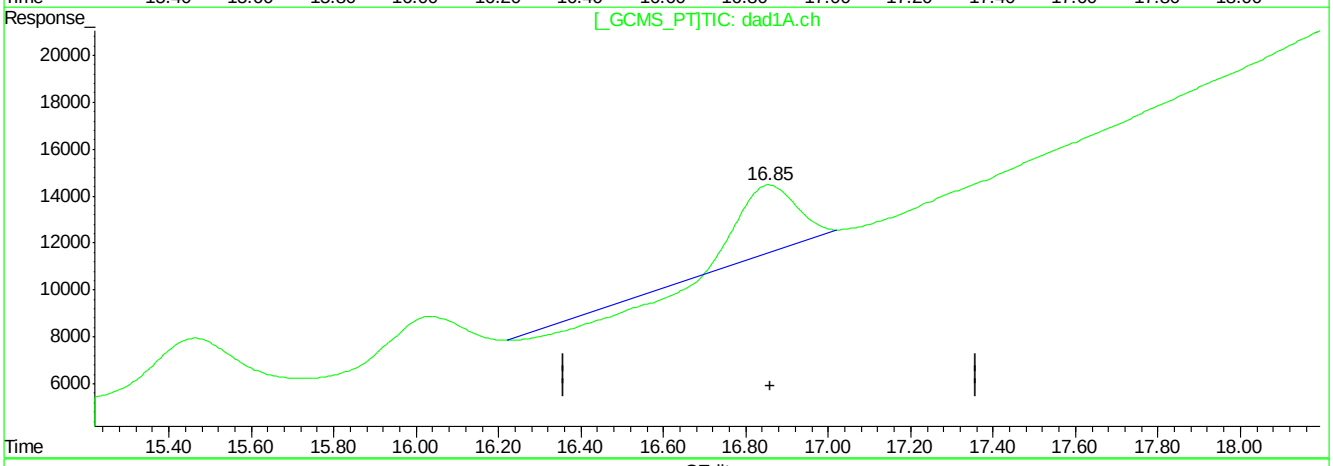
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:34 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.85min 102.663ppb

response 312923

(20) m-Nitrotoluene #2

16.86min 49.479ppb

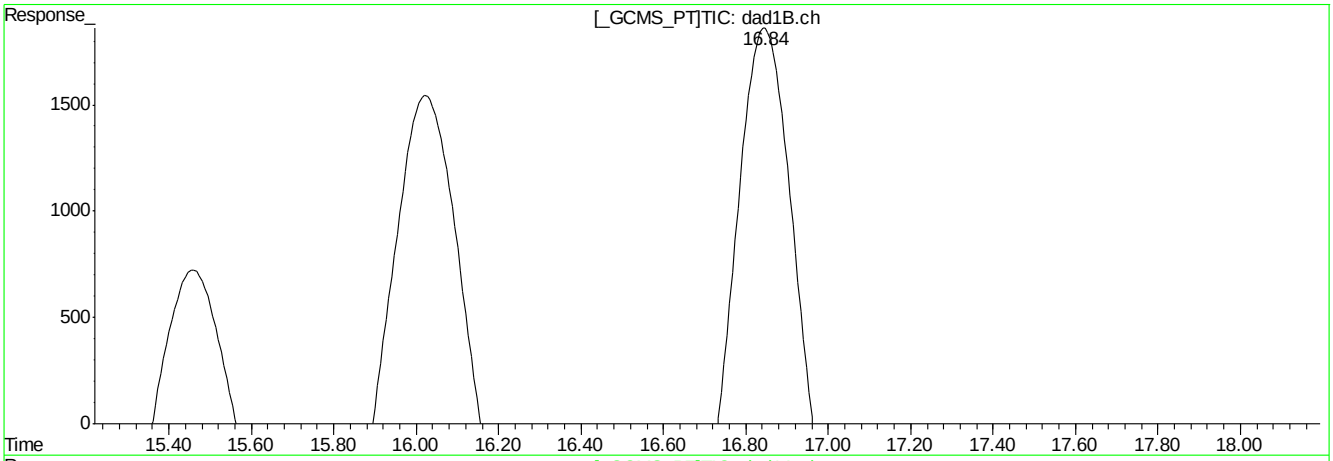
response 172784

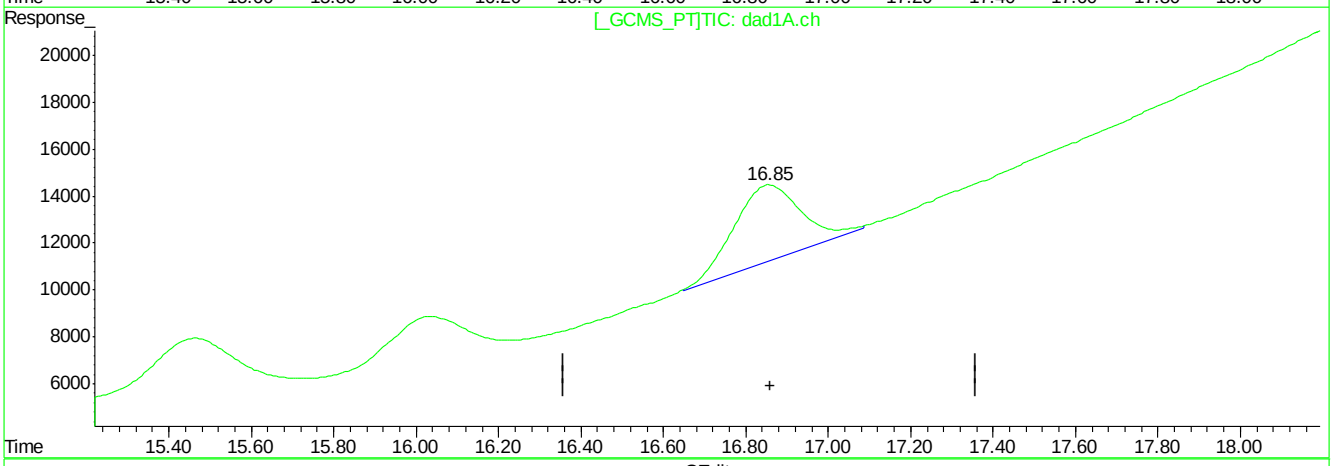
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.85min 102.663ppb

response 312923

(20) m-Nitrotoluene #2

16.85min 105.336ppb m

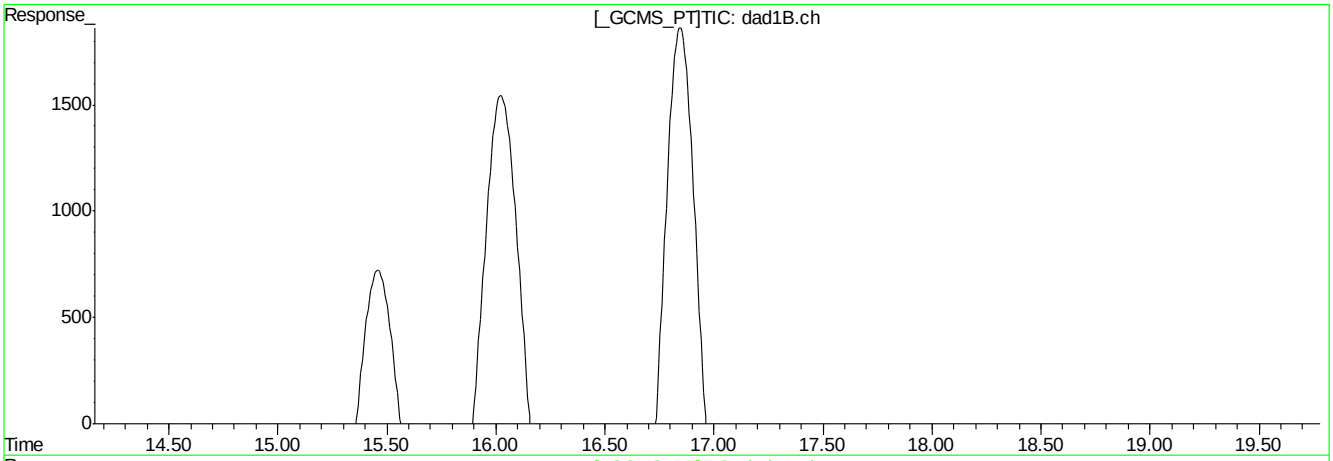
response 367838

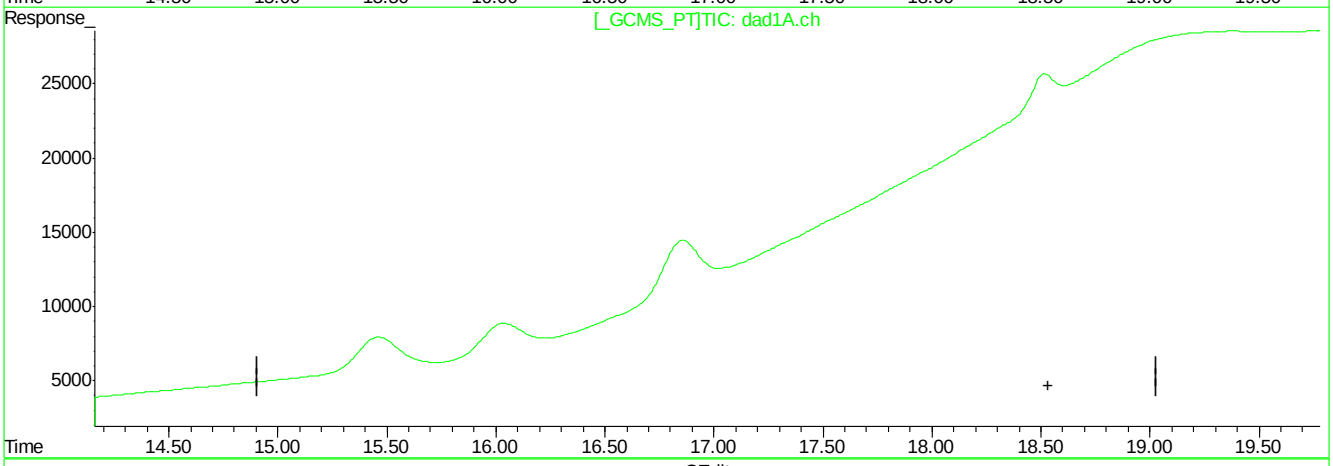
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

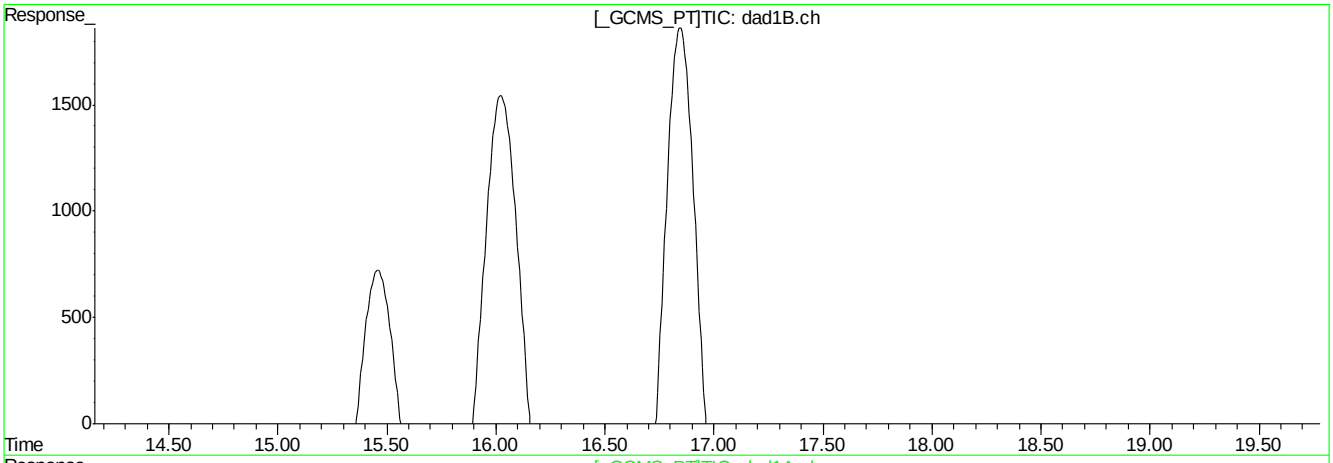
response 0

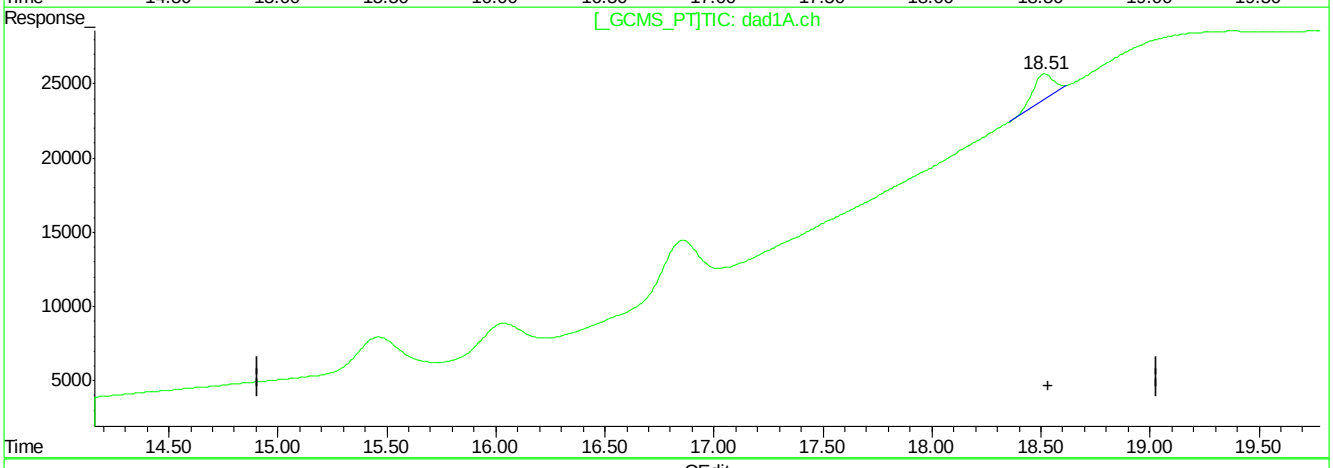
(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1B.ch Vial: 93
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391045.D\dad1A.ch
Acq On : 03-Aug-2021, 12:47:53 Operator: jamesb
Sample : ic2464-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.51min 82.713ppb m

response 113767

(+) = Expected Retention Time
PP391045.D GPP2464_080321PRI.M Thu Aug 05 10:25:50 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:34 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.21	11.22	411506	669064	194.297	201.532
Spiked Amount	500.000	Range	70 - 136	Recovery	=	38.86%#	40.31%#
	Target Compounds						
1)	TNX	1.31	1.31	173978	260591	92.169	83.966
2)	HMX	1.44	1.44	320036	923632	221.434	215.162
3)	DNX	1.68	1.68	450757	733619	195.312	187.231
4)	MNX	2.26	2.26	621562	966935	245.367	247.328
5)	RDX	2.87	2.88	382792	613620	210.809	210.123
6)	1,3,5-Trinitrobe	4.64	4.64	826241	1593265	211.795	210.234
7)	1,3-Dinitrobenze	5.85	5.85	1077690	756038	213.401	202.920m
8)	3,5-Dinitroanili	6.20	6.20	821023	1445136	213.344	209.913
9)	Nitrobenzene	7.45	7.45	614082	604276	211.330	211.349
10)	Nitroglycerin	0.00	8.95	0	250714	N.D.	208.584 #
11)	Tetryl	9.46	9.46	628778	981892	214.554	212.418
12)	2,4,6-Trinitroto	9.85	9.85	765725	907216	207.047	207.727
13)	2-Amino-4,6-Dini	10.24	10.24	694658	1012529	211.193	210.710
14)	4-Amino-2,6-Dini	10.76	10.76	524112	972465	209.922	216.625
16)	2,4-Dinitrotolue	11.86	11.86	964367	628600	213.651	217.431
17)	2,6-Dinitrotolue	12.34	12.34	556357	708736	218.384	220.487
18)	o-Nitrotoluene	15.46	15.46	448911	594838	208.265	209.357m
19)	p-Nitrotoluene	16.02	16.03	694697	468007	207.135	182.154
20)	m-Nitrotoluene	16.85	16.84	656877	738915	215.507	211.598m
21)	PETN	0.00	18.52	0	266949	N.D.	194.083m#

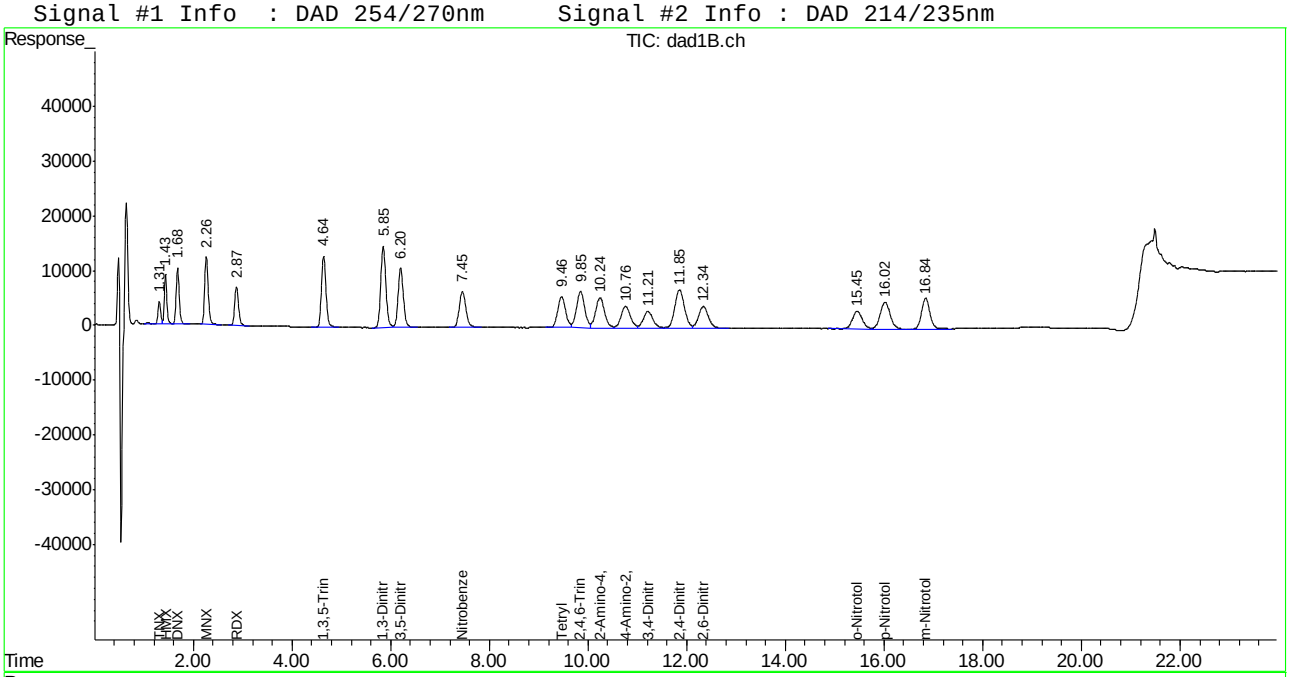
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:35:50 2021 Page 1

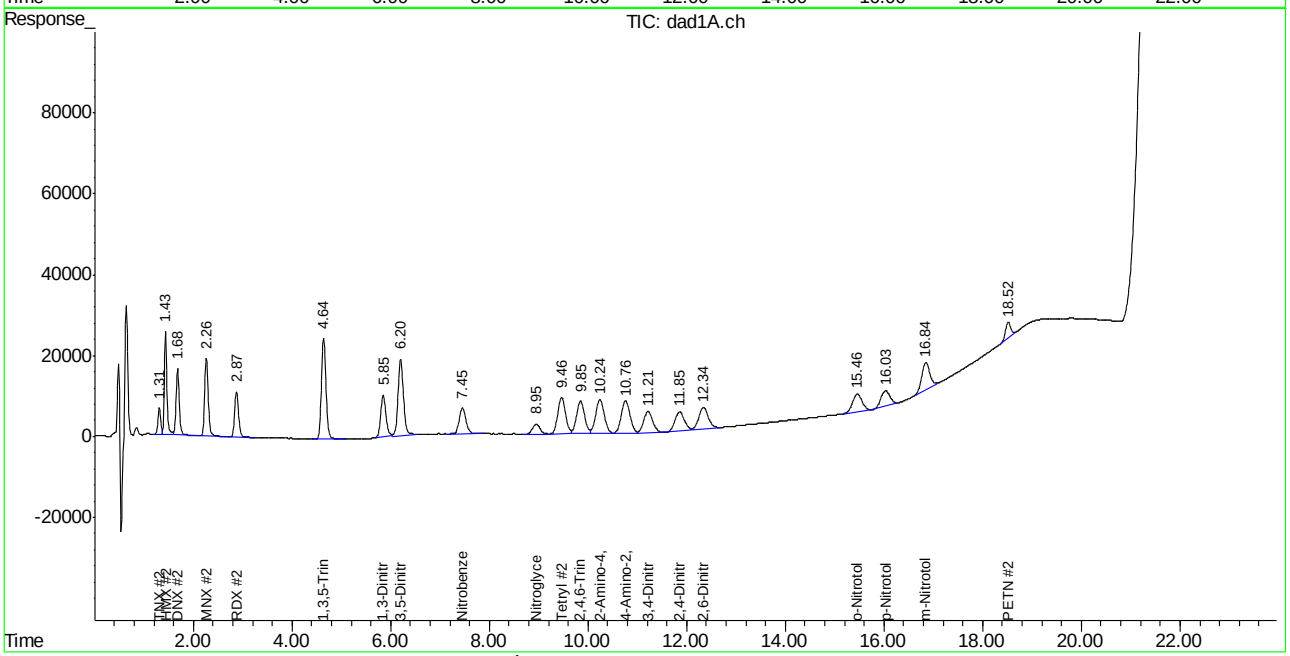
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:23 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

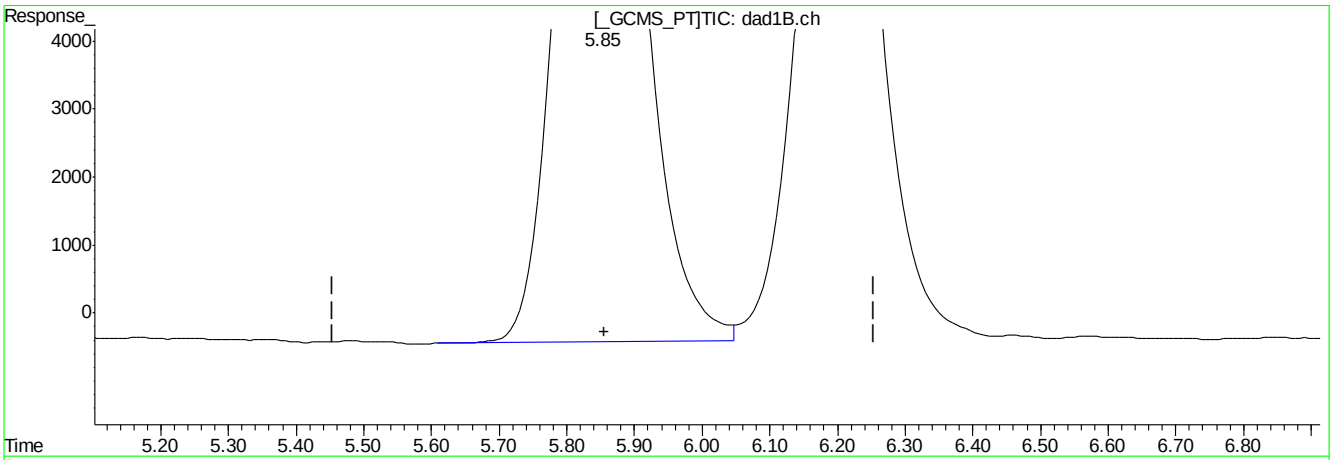
Sample Number: GPP2464-IC2464
Lab FileID: PP391046.D
Injection Time: 08/03/21 13:18
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

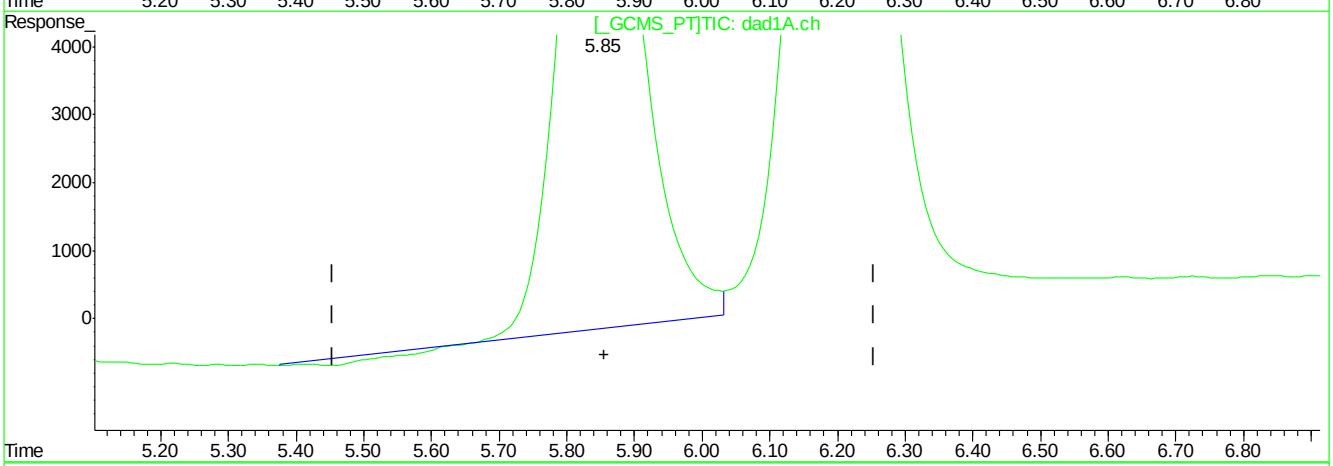
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	5.85	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.46	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.84	Poor instrument integration
PETN	78-11-5	2	18.52	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 213.401ppb

response 1077690

(7) 1,3-Dinitrobenzene #2

5.85min 204.160ppb

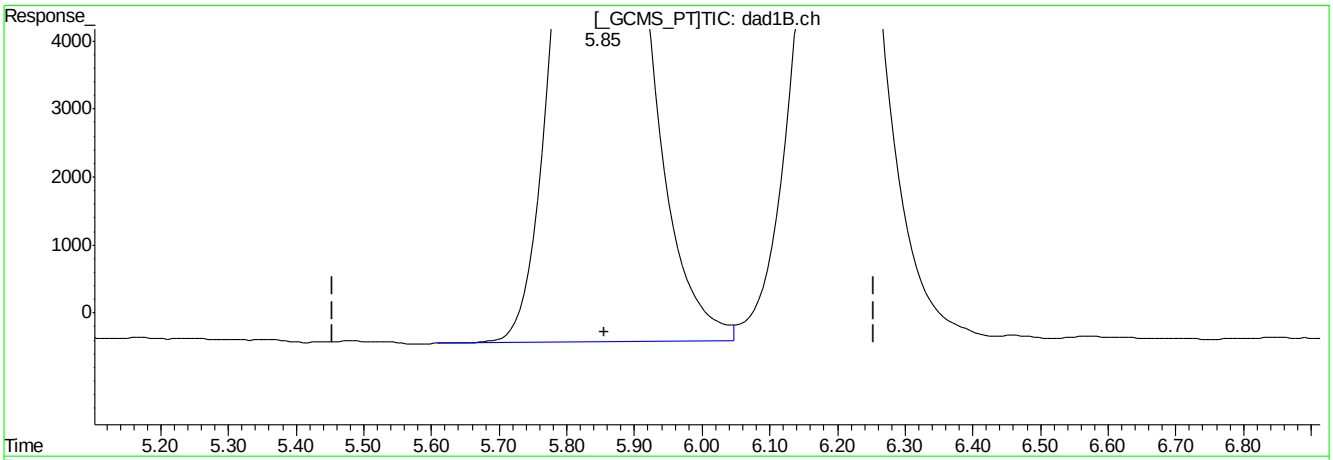
response 760658

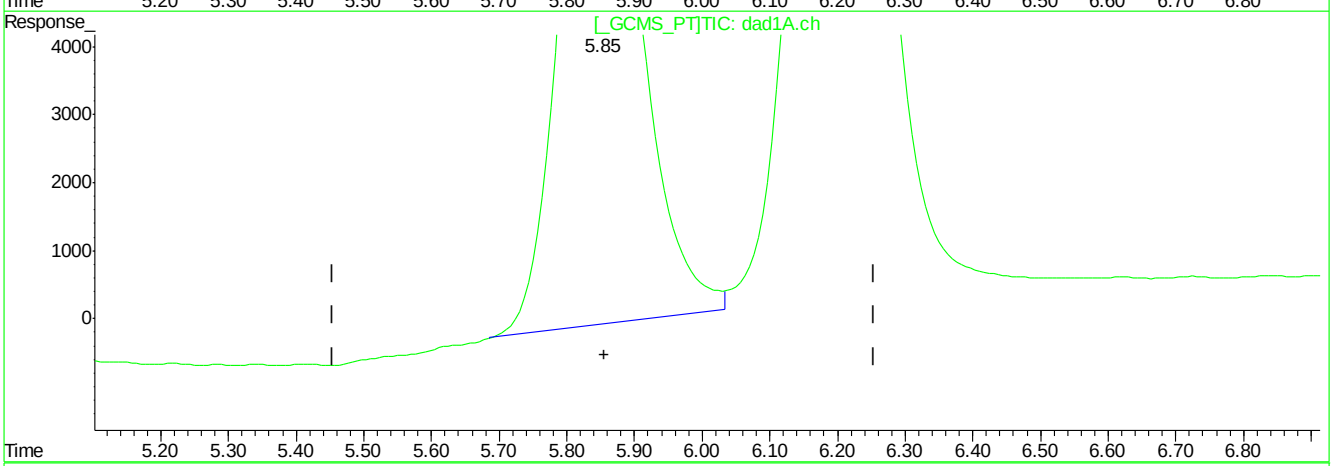
(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

5.85min 213.401ppb

response 1077690

(7) 1,3-Dinitrobenzene #2

5.85min 202.920ppb m

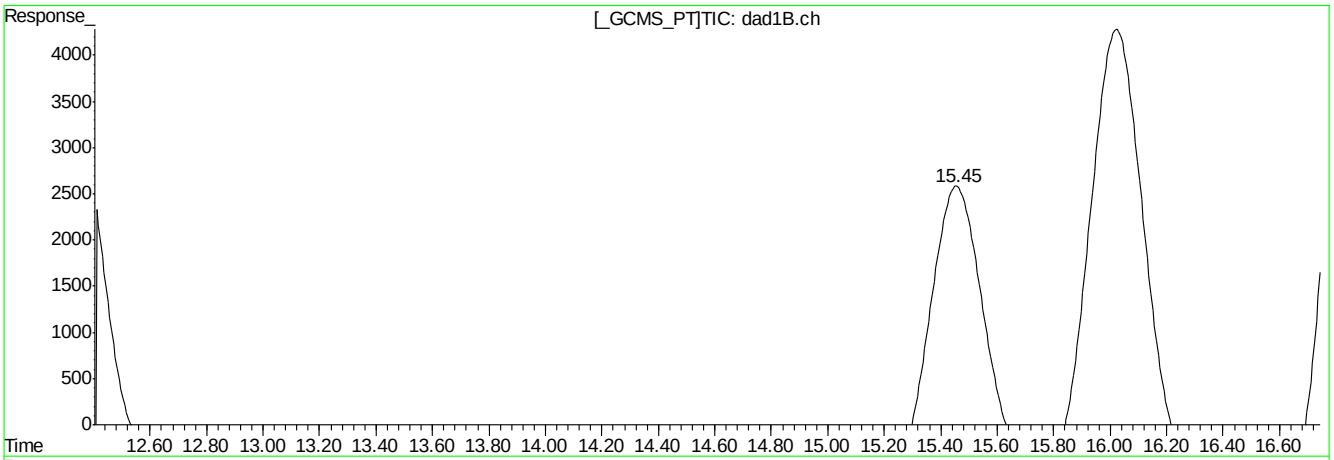
response 756038

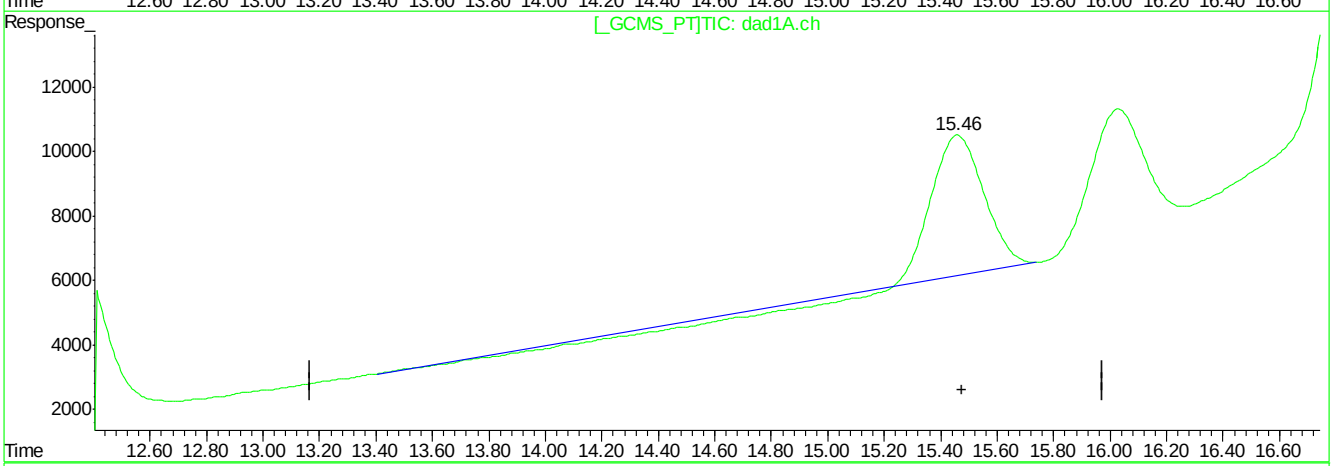
(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.46min 208.265ppb

response 448911

(18) o-Nitrotoluene #2

15.46min 157.930ppb

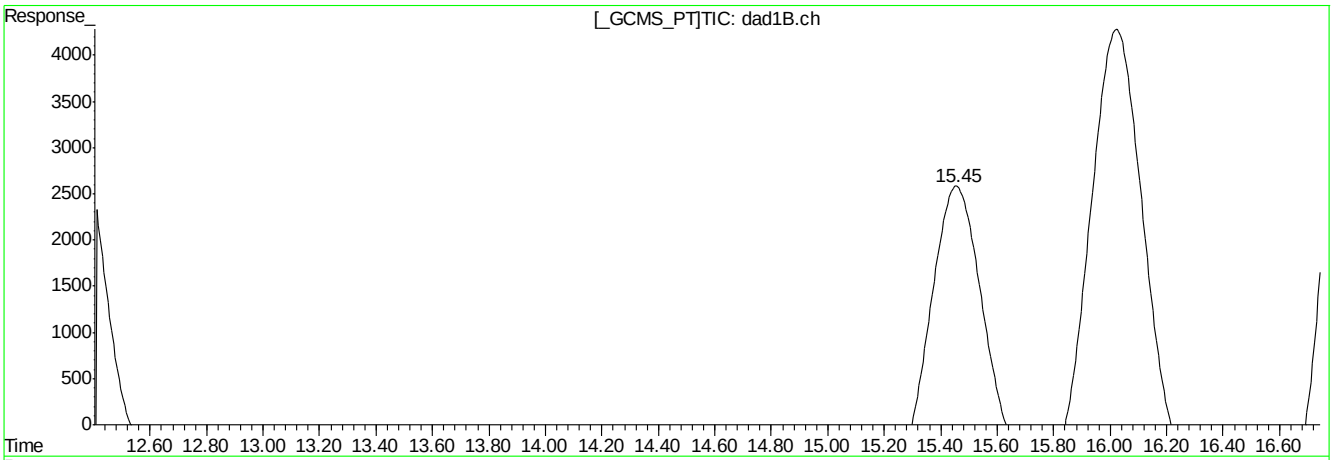
response 448719

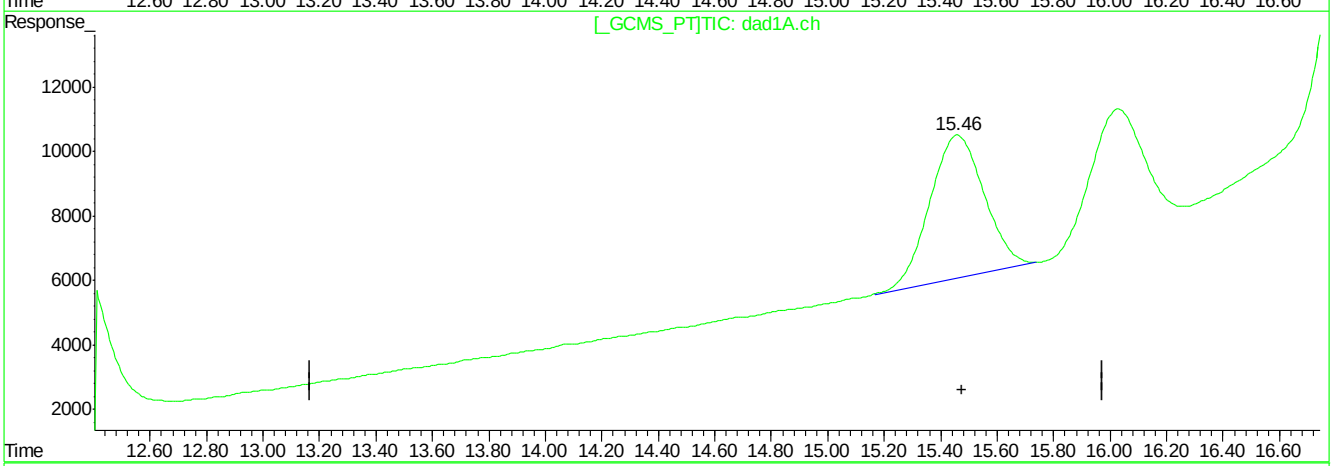
(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:32 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.46min 208.265ppb

response 448911

(18) o-Nitrotoluene #2

15.46min 209.357ppb m

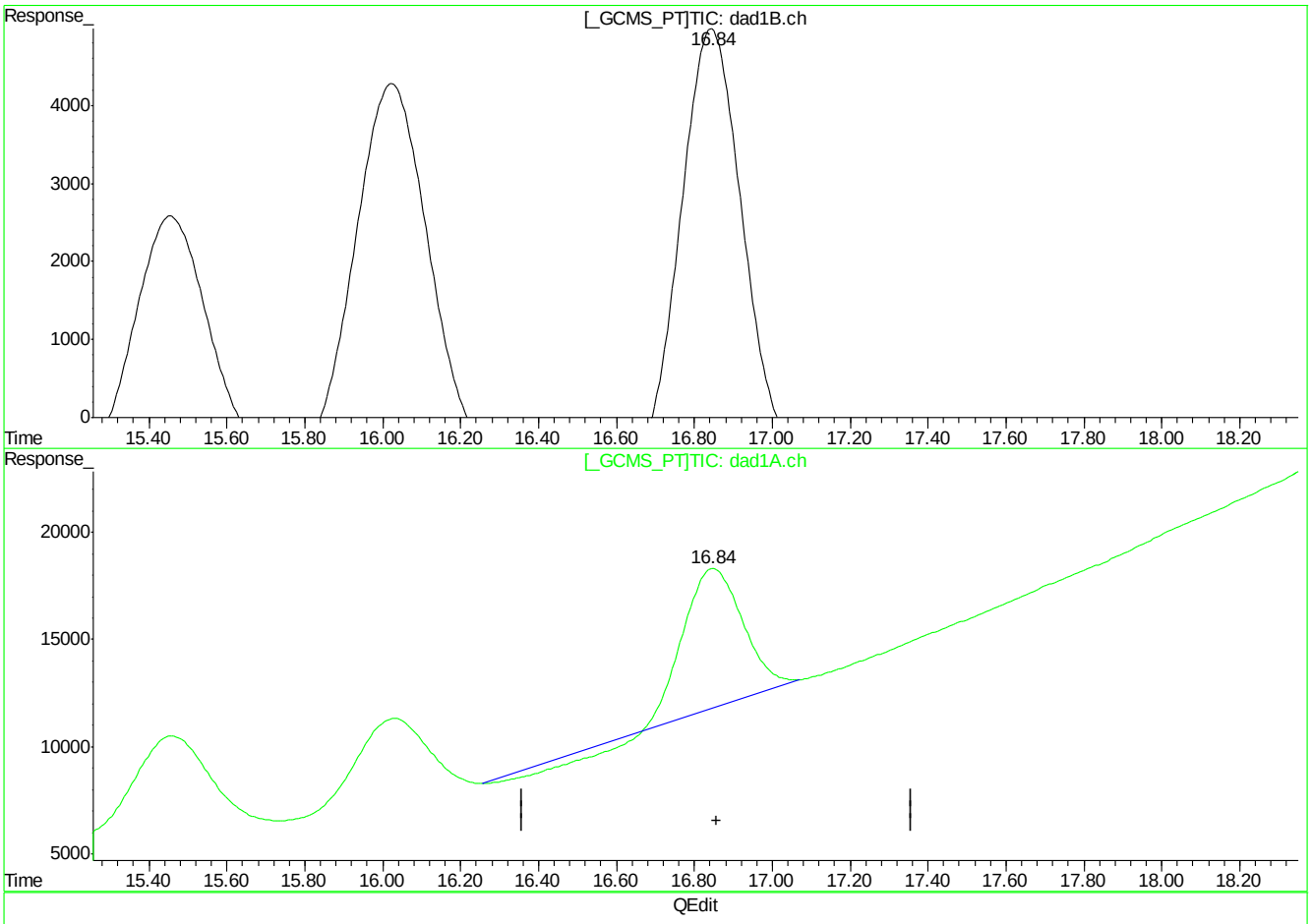
response 594838

(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.85min 215.507ppb

response 656877

(20) m-Nitrotoluene #2

16.85min 175.991ppb

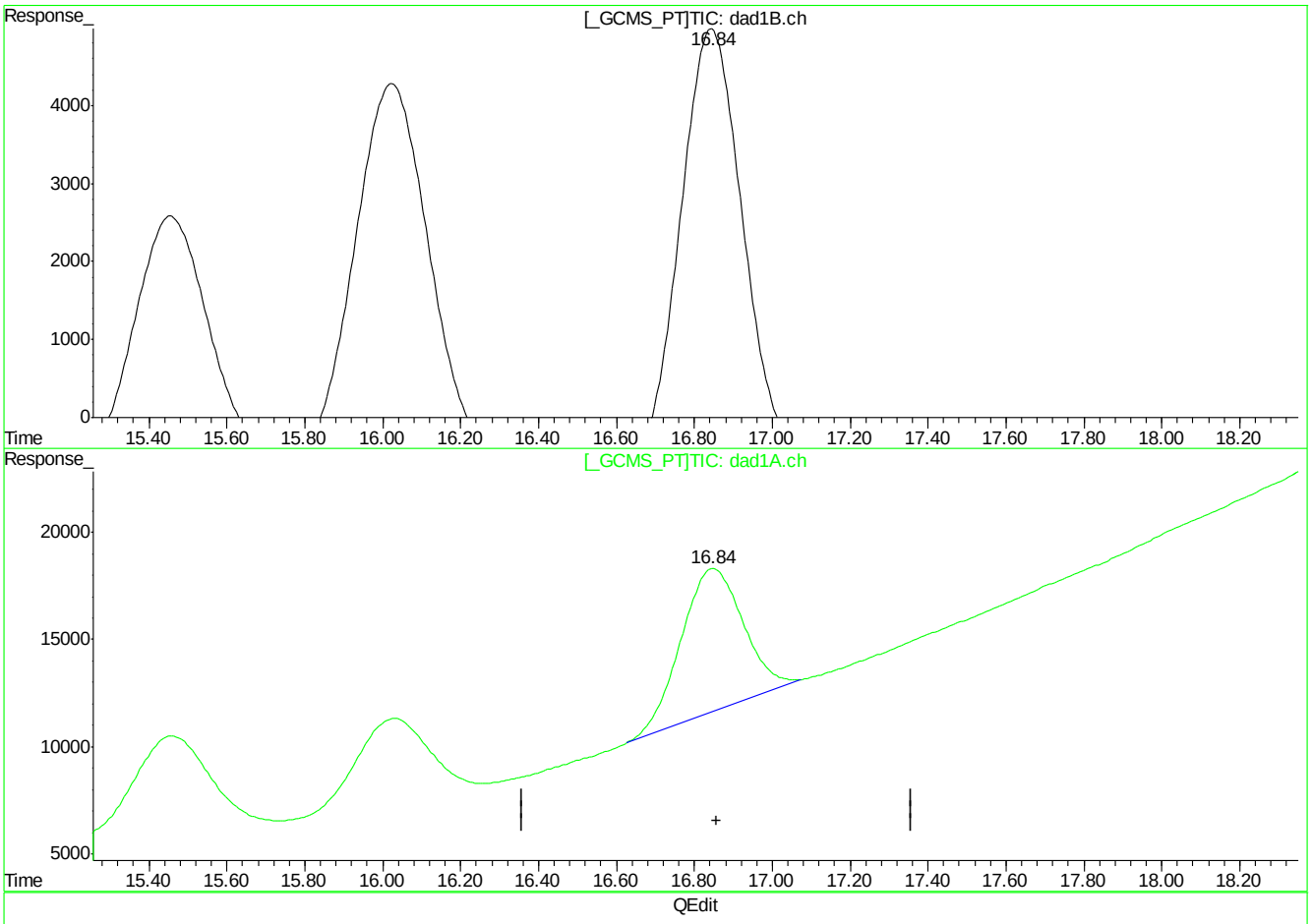
response 614570

(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



QEdit

(20) m-Nitrotoluene

16.85min 215.507ppb

response 656877

(20) m-Nitrotoluene #2

16.84min 211.598ppb m

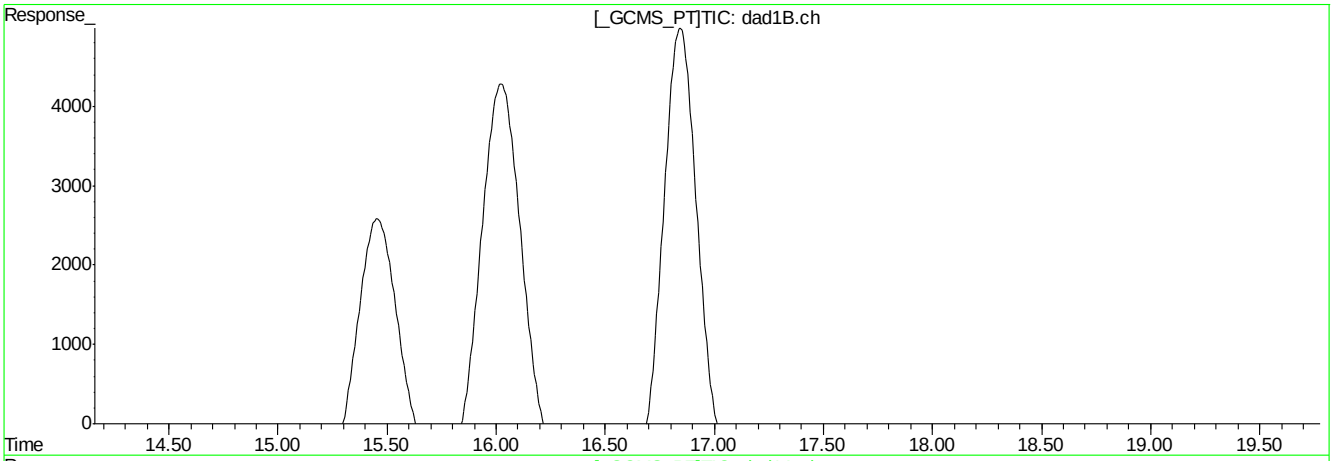
response 738915

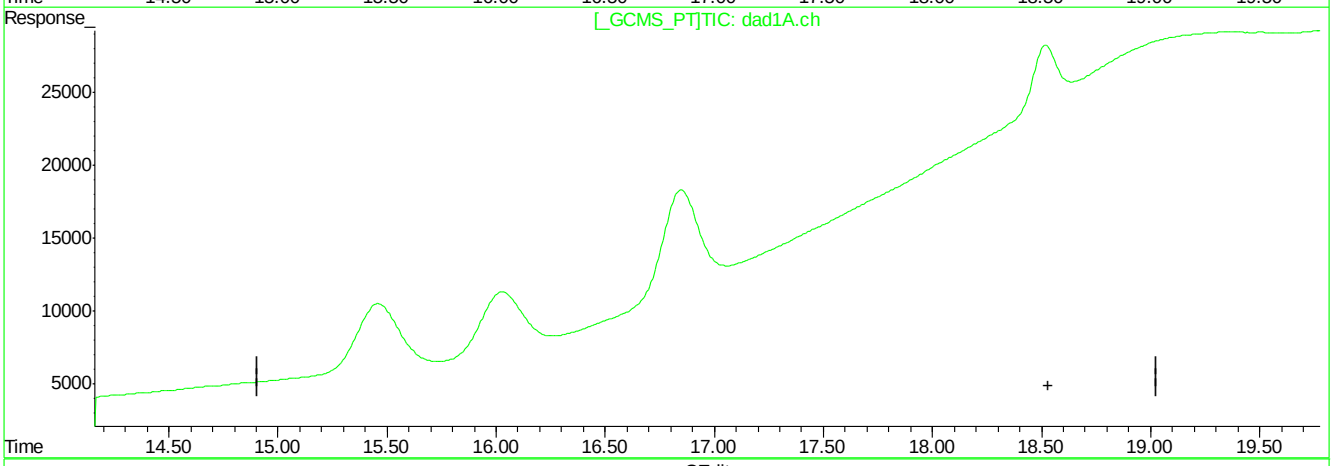
(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:47 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

0.00min 0.000ppb

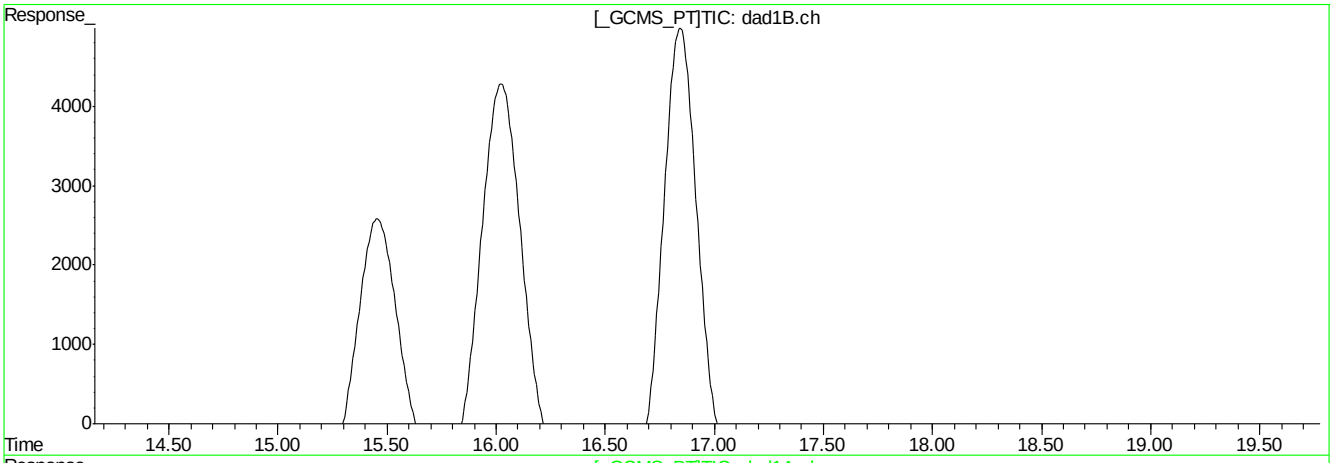
response 0

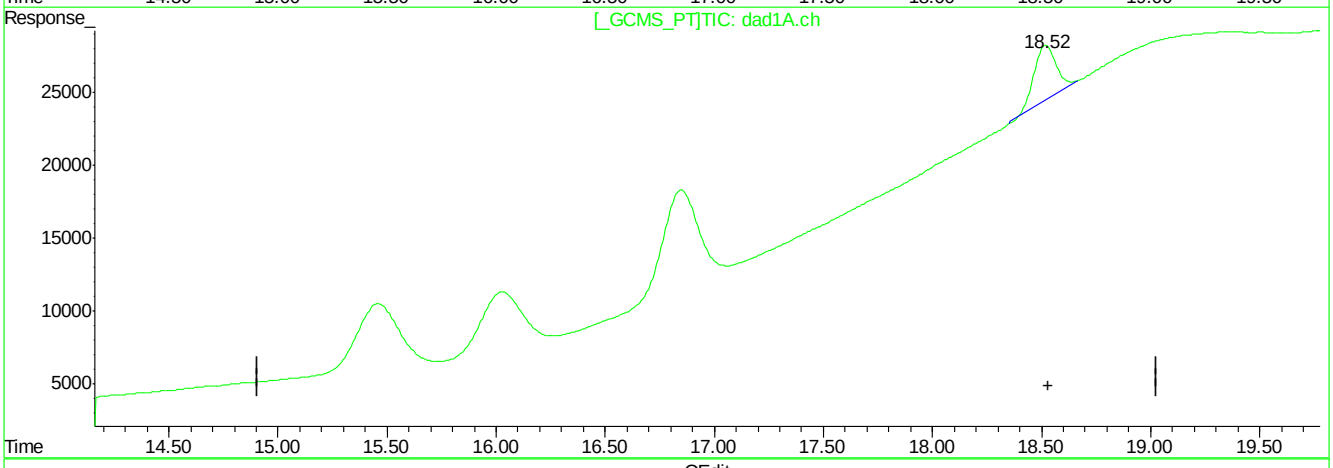
(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1B.ch Vial: 94
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391046.D\dad1A.ch
Acq On : 03-Aug-2021, 13:18:53 Operator: jamesb
Sample : ic2464-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.52min 194.083ppb m

response 266949

(+) = Expected Retention Time
PP391046.D GPP2464_080321PRI.M Thu Aug 05 10:23:57 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:35 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.23	11.24	1000006	1713224	472.165	516.048
Spiked Amount	500.000	Range	70 - 136	Recovery	=	94.43%	103.21%
	Target Compounds						
1)	TNX	1.31	1.31	396758	647935	210.190	208.772
2)	HMX	1.44	1.44	776847	2213812	537.503	515.713
3)	DNX	1.68	1.68	1115285	1772239	483.250	452.303
4)	MNX	2.27	2.27	1509815	2355188	596.013	602.424
5)	RDX	2.88	2.88	940142	1513610	517.751	518.308
6)	1,3,5-Trinitrobe	4.65	4.65	2030446	3925086	520.476	517.922
7)	1,3-Dinitrobenze	5.85	5.85	2649190	1863428	524.584	500.143m
8)	3,5-Dinitroanili	6.21	6.21	2013083	3517517	523.103	510.937
9)	Nitrobenzene	7.46	7.46	1538459	1499224	529.444	524.361
10)	Nitroglycerin	0.00	8.96	0	628351	N.D.	521.705 #
11)	Tetryl	9.48	9.48	1540000	2425988	525.485	524.827
12)	2,4,6-Trinitroto	9.87	9.87	1872544	2271498	506.324	520.109
13)	2-Amino-4,6-Dini	10.26	10.26	1695721	2548977	515.540	530.448
14)	4-Amino-2,6-Dini	10.78	10.78	1253523	2479832	502.074	552.404
16)	2,4-Dinitrotolue	11.87	11.87	2365023	1555027	523.960	537.879
17)	2,6-Dinitrotolue	12.36	12.36	1355158	1748450	531.934	543.940
18)	o-Nitrotoluene	15.47	15.47	1096525	1493372	508.715	525.603m
19)	p-Nitrotoluene	16.04	16.04	1705042	1301929	508.385	503.387
20)	m-Nitrotoluene	16.86	16.85	1605691	1851664	526.793	530.250m
21)	PETN	0.00	18.53	0	708056	N.D.	514.786m#

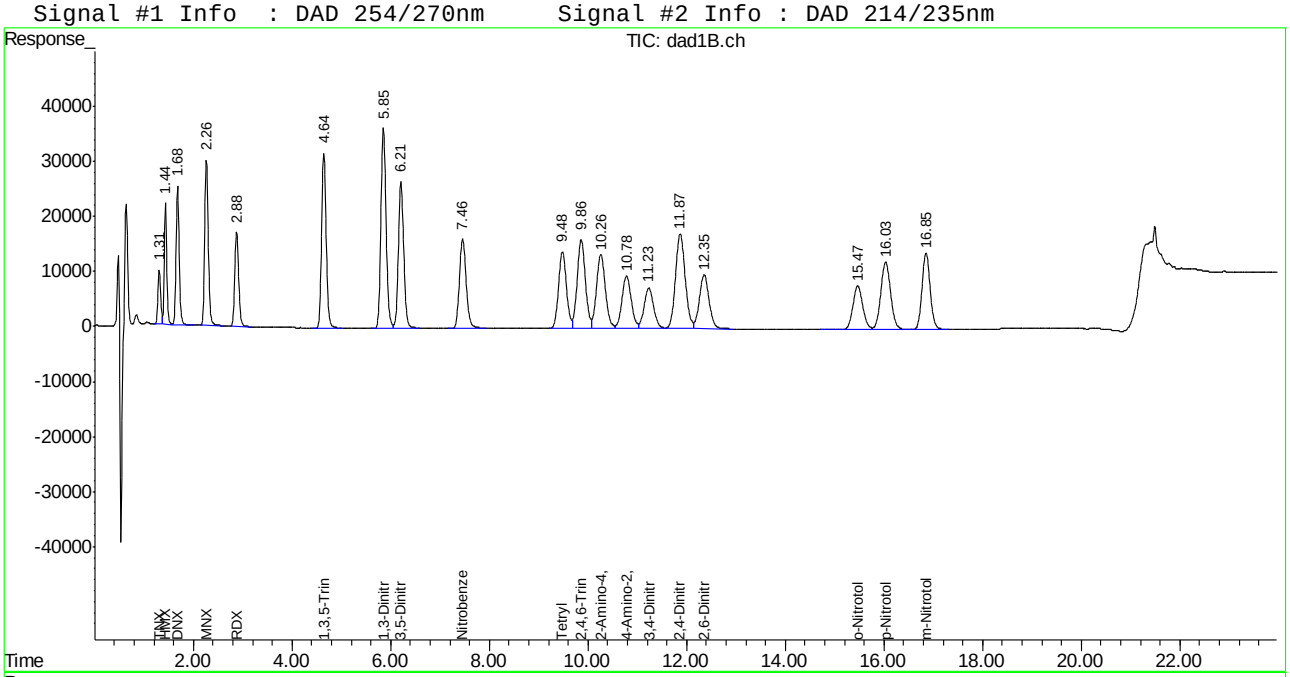
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:35:51 2021 Page 1

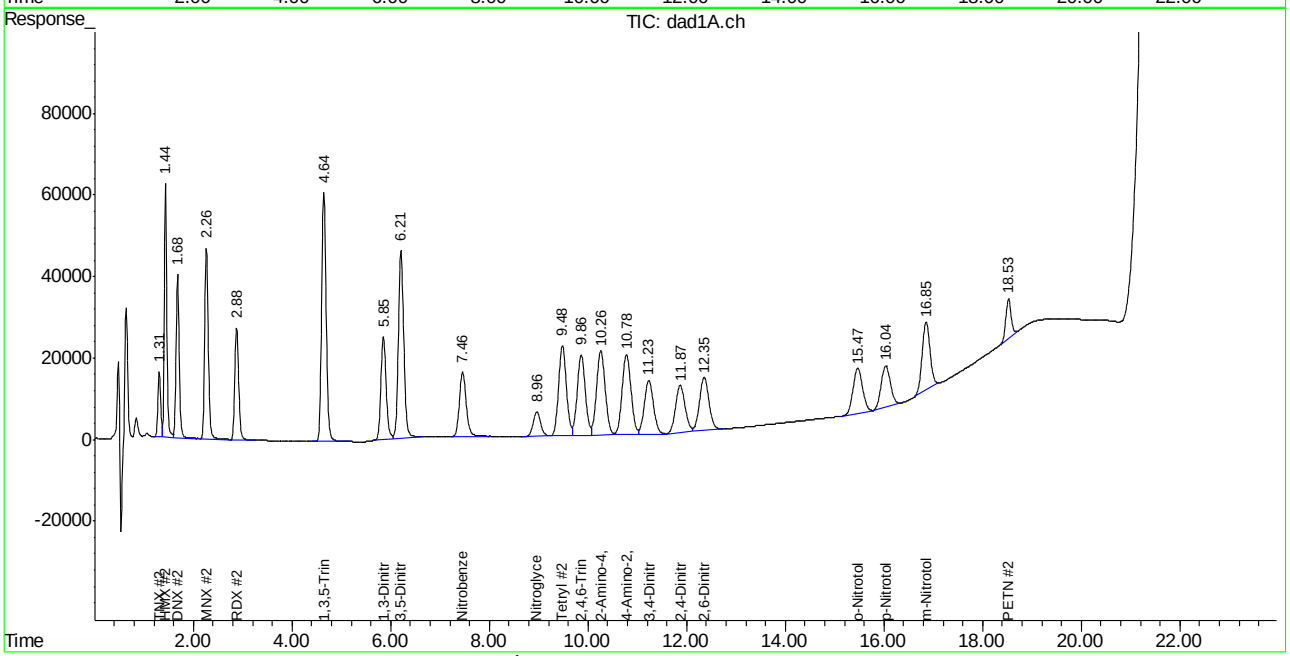
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:22 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

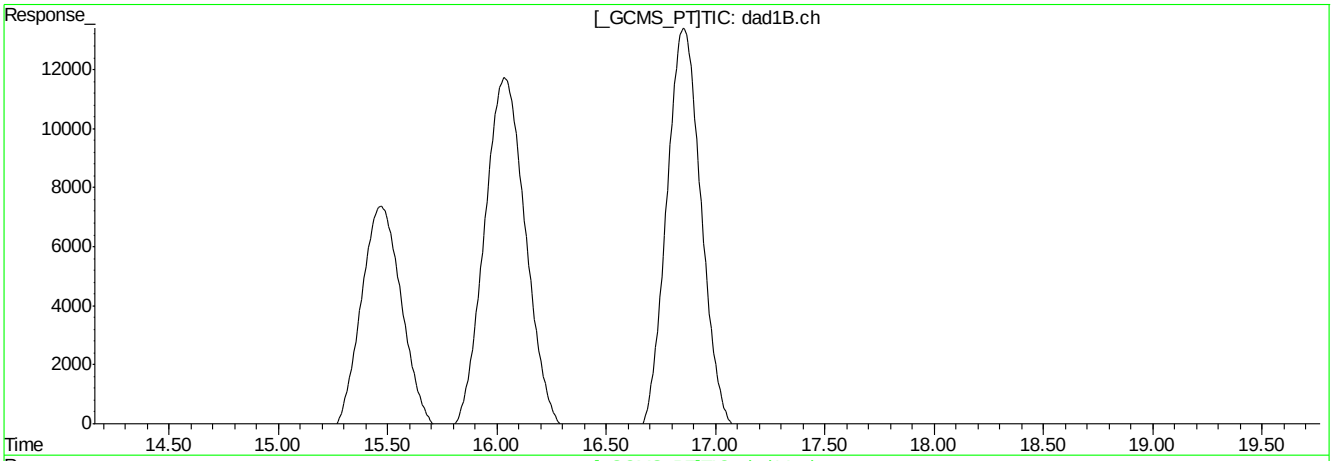
Sample Number: GPP2464-IC2464
Lab FileID: PP391047.D
Injection Time: 08/03/21 13:49
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

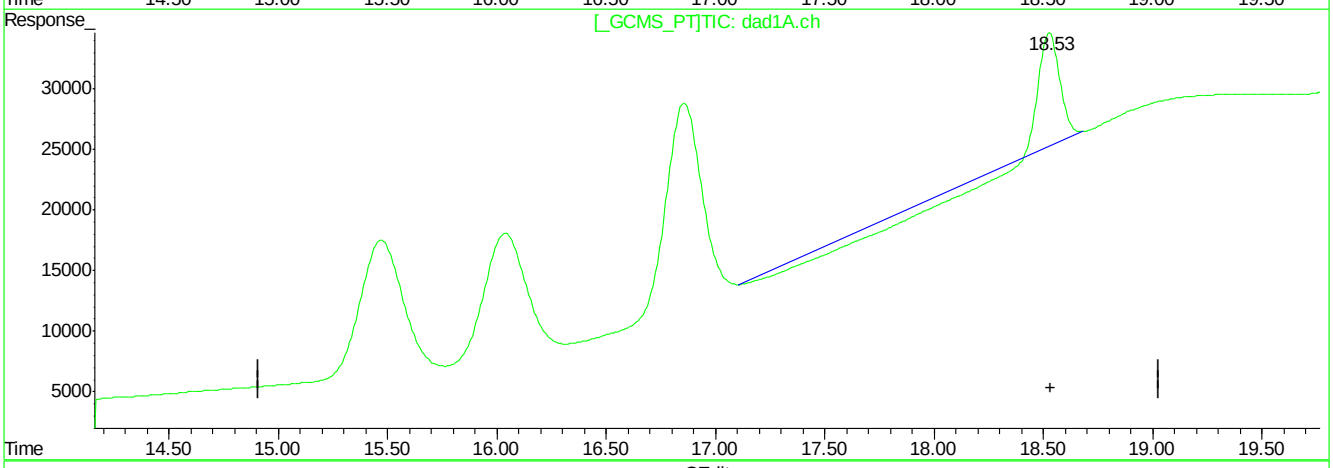
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	5.85	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.47	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.85	Poor instrument integration
PETN	78-11-5	2	18.53	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.53min 72.480ppb

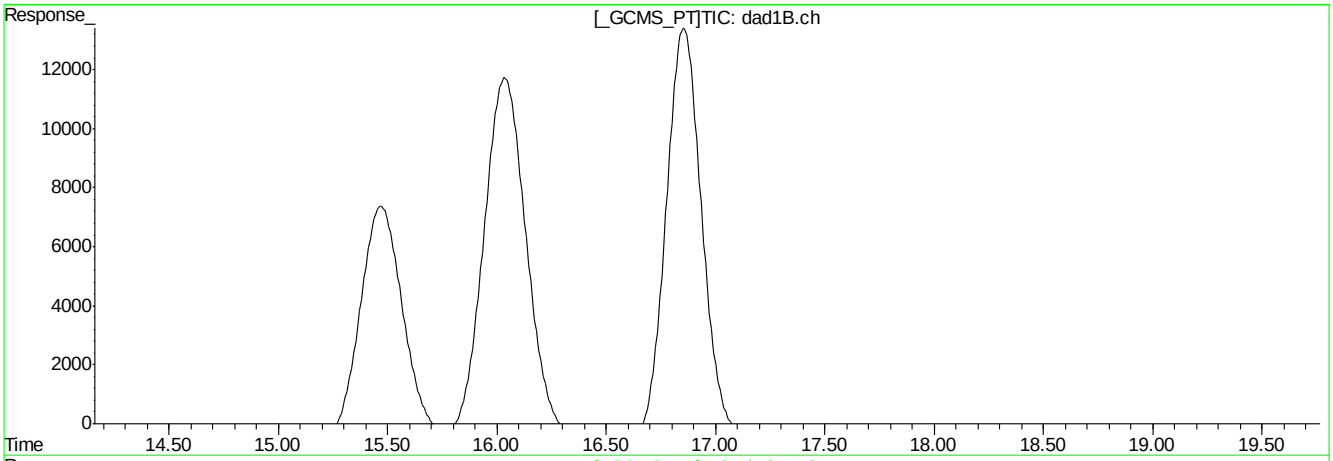
response 99691

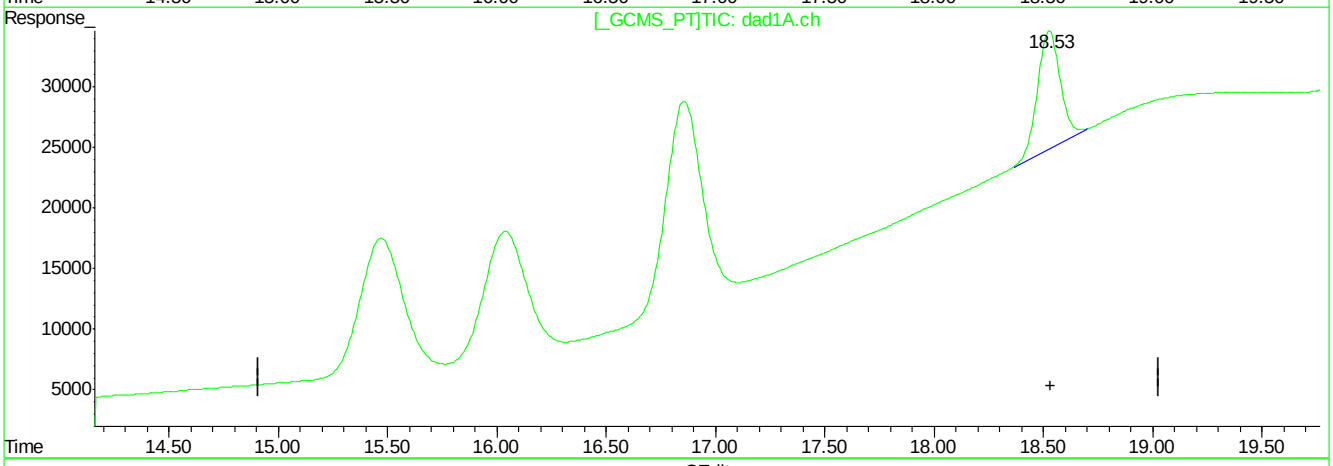
(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:21:19 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.53min 514.786ppb m

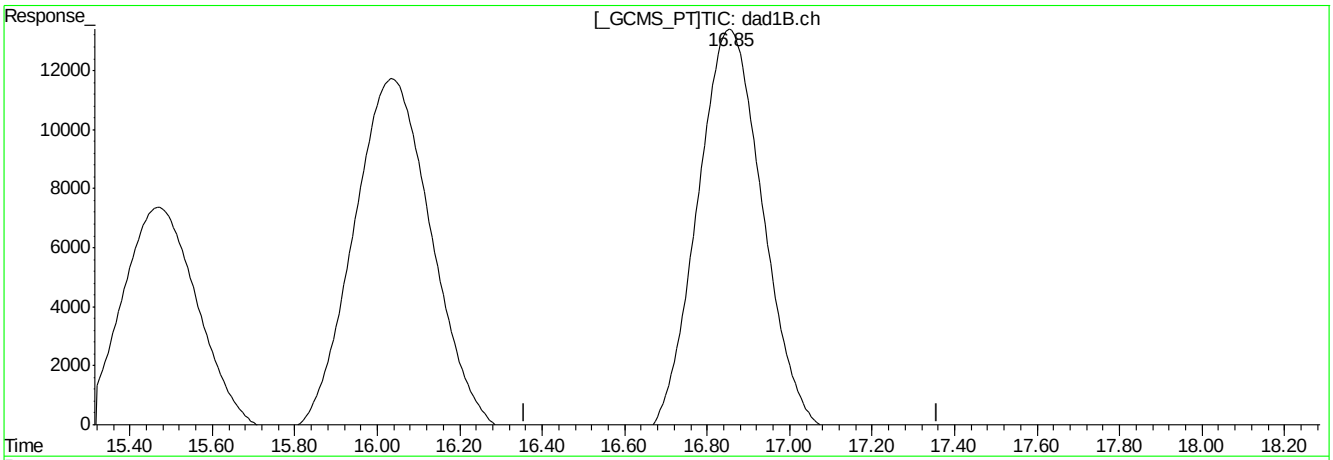
response 708056

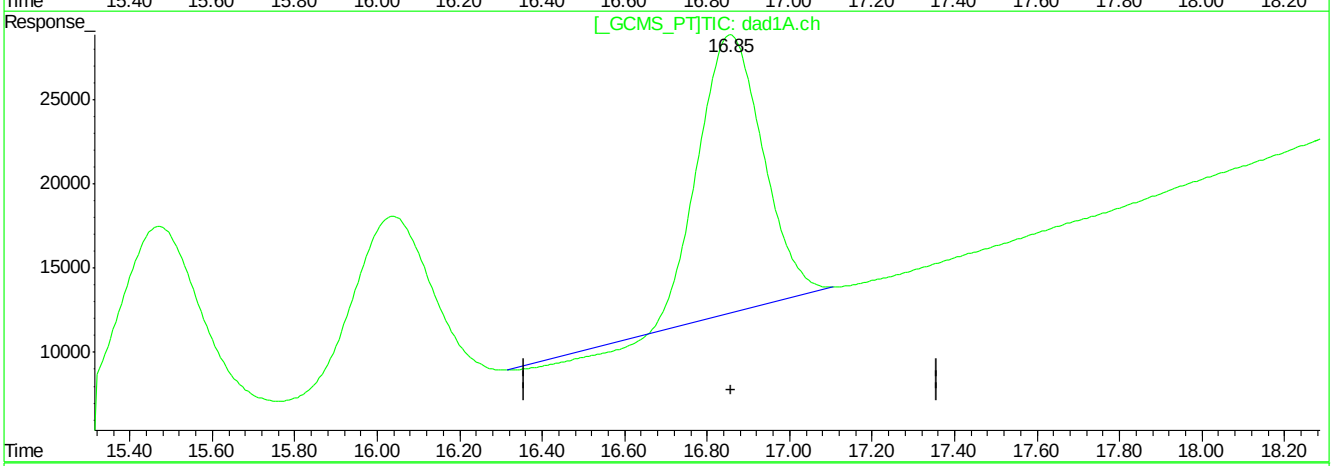
(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:21:27 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 526.793ppb

response 1605691

(20) m-Nitrotoluene #2

16.86min 500.451ppb

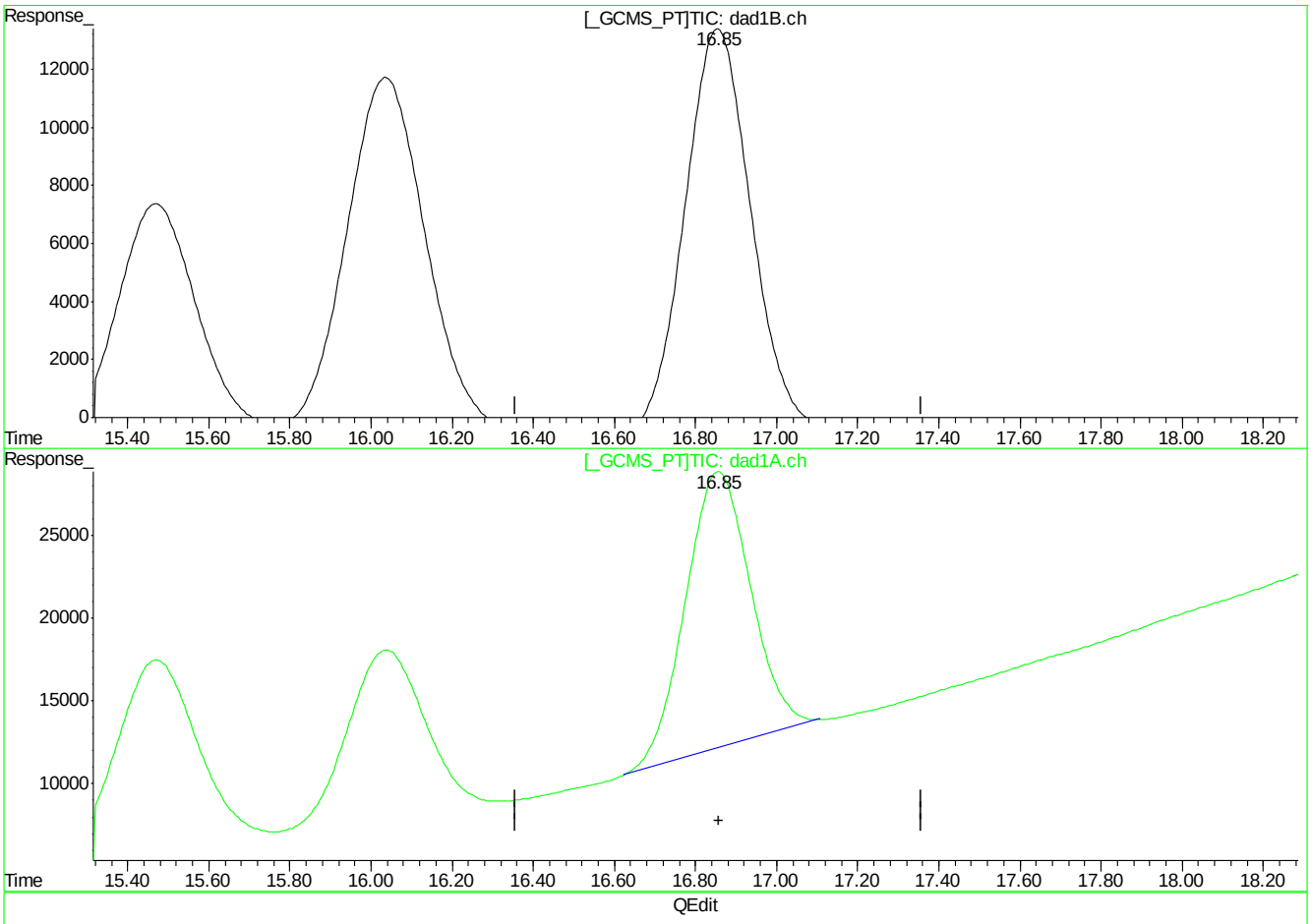
response 1747606

(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:21:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.86min 526.793ppb

response 1605691

(20) m-Nitrotoluene #2

16.85min 530.250ppb m

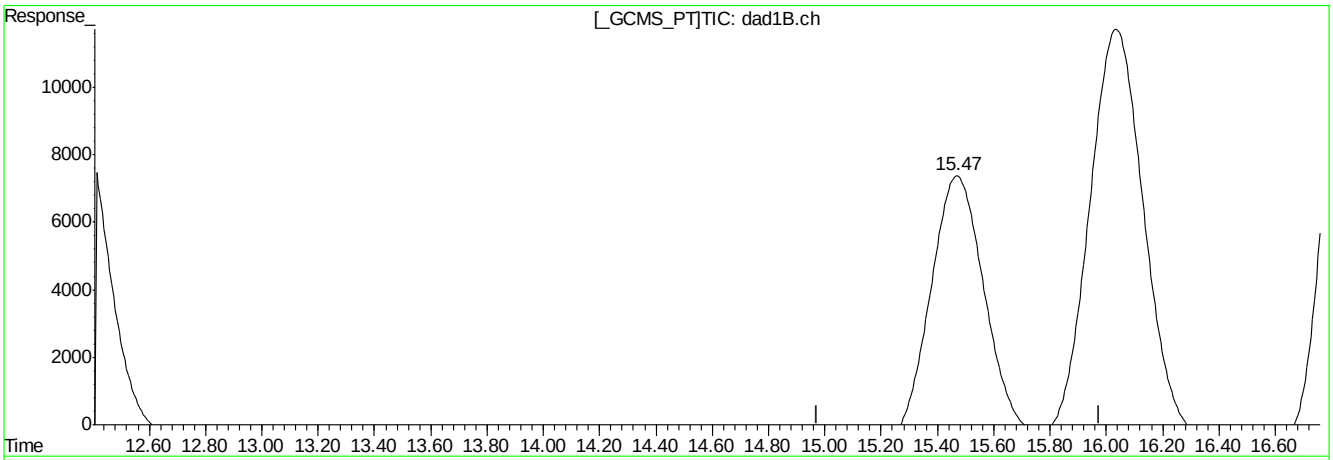
response 1851664

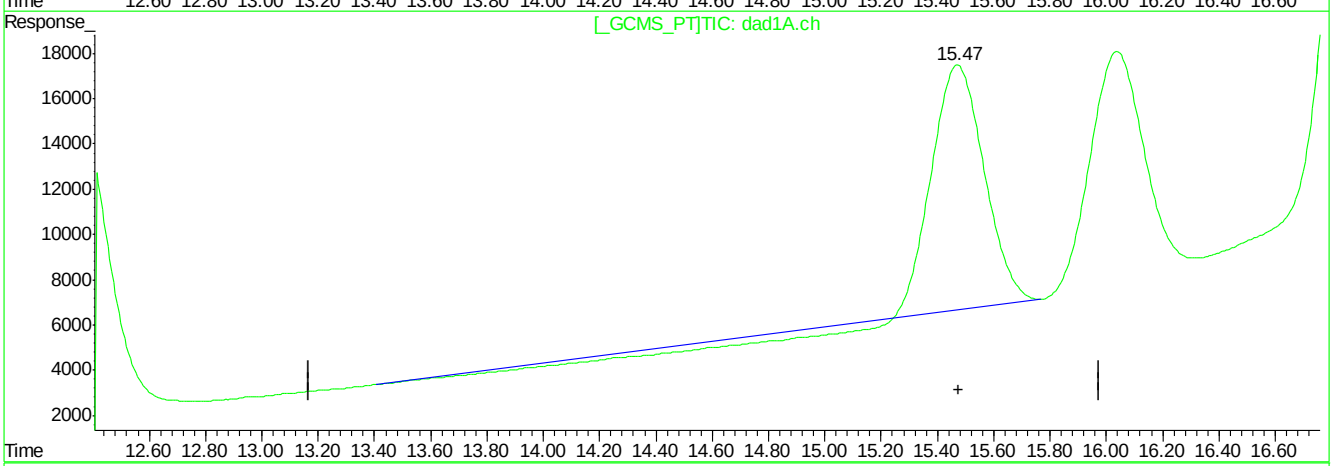
(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:21:37 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 508.715ppb

response 1096525

(18) o-Nitrotoluene #2

15.47min 423.701ppb

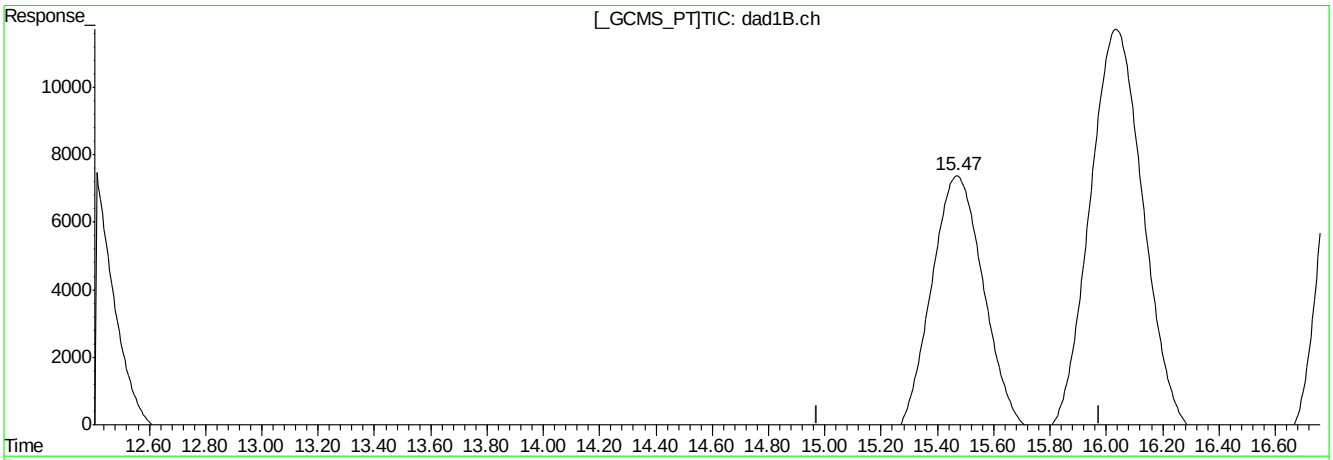
response 1203842

(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:21:42 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.47min 508.715ppb

response 1096525

(18) o-Nitrotoluene #2

15.47min 525.603ppb m

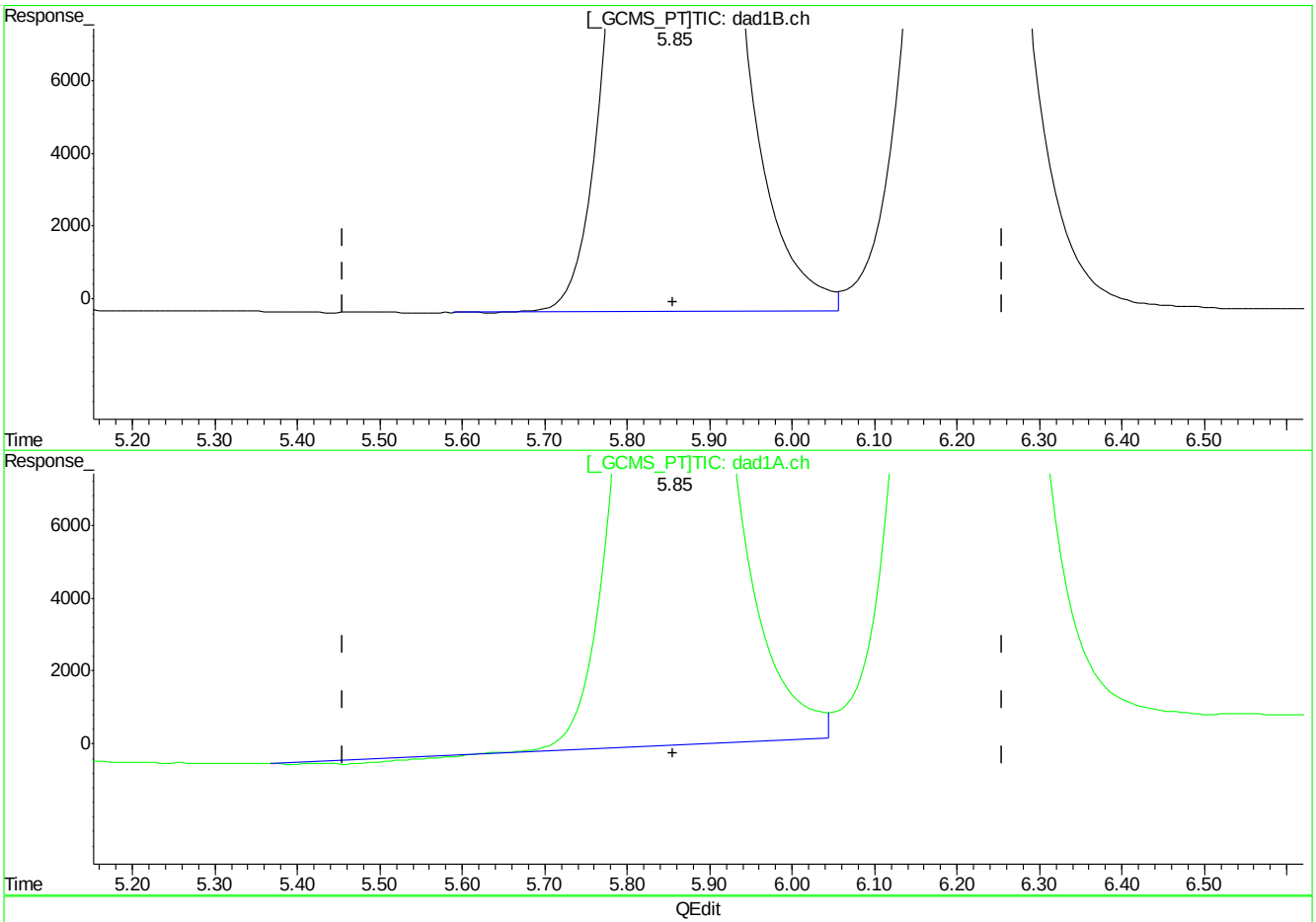
response 1493372

(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:21:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.85min 524.584ppb

response 2649190

(7) 1,3-Dinitrobenzene #2

5.85min 497.832ppb

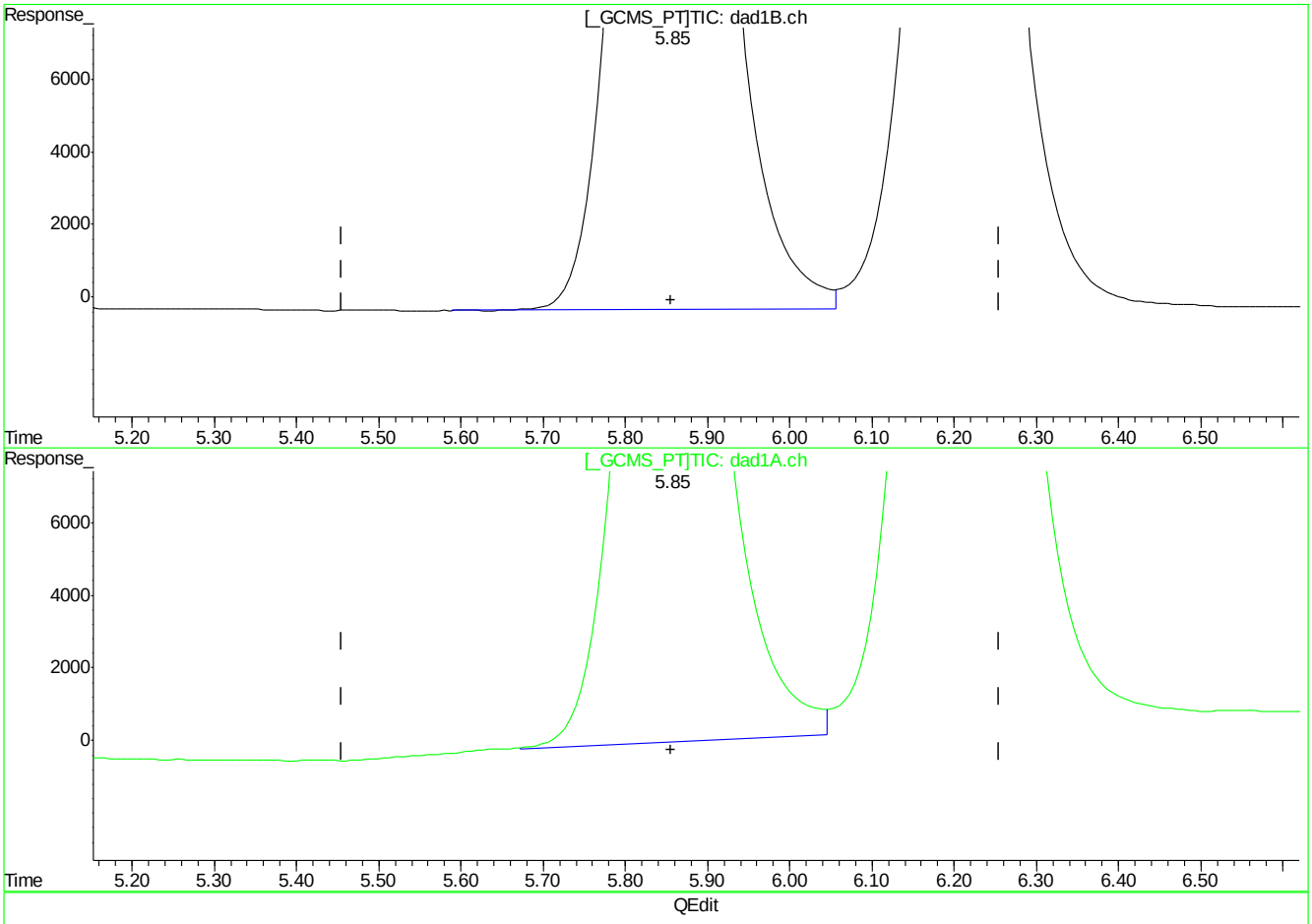
response 1854819

(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:22:05 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1B.ch Vial: 95
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391047.D\dad1A.ch
Acq On : 03-Aug-2021, 13:49:52 Operator: jamesb
Sample : ic2464-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

5.85min 524.584ppb

response 2649190

(7) 1,3-Dinitrobenzene #2

5.85min 500.143ppb m

response 1863428

(+) = Expected Retention Time
PP391047.D GPP2464_080321PRI.M Thu Aug 05 10:22:10 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:36 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.25	11.25	1986465	3469698	937.933	1045.123
	Spiked Amount 500.000	Range 70 - 136		Recovery =		187.59%#	209.02%#
	Target Compounds						
1)	TNX	1.31	1.31	793397	1297449	420.318	418.054
2)	HMX	1.44	1.44	1519202	4320919	1051.142	1006.569
3)	DNX	1.68	1.68	2187293	3480110	947.748	888.178
4)	MNX	2.27	2.27	2981694	4635874	1177.051	1185.791
5)	RDX	2.88	2.88	1857199	2996166	1022.789	1025.983
6)	1,3,5-Trinitrobe	4.65	4.65	4026294	7768170	1032.083	1025.024
7)	1,3-Dinitrobenze	5.86	5.86	5250204	3656190	1039.629	981.319
8)	3,5-Dinitroanili	6.22	6.22	3989024	6898037	1036.554	1001.974
9)	Nitrobenzene	7.46	7.46	3026799	2962458	1041.640	1036.134
10)	Nitroglycerin	0.00	8.97	0	1240163	N.D.	1026.334 #
11)	Tetryl	9.50	9.50	3059567	4824499	1043.999	1043.710
12)	2,4,6-Trinitroto	9.88	9.88	3714292	4527147	1004.321	1036.588
13)	2-Amino-4,6-Dini	10.27	10.27	3349026	5094220	1018.185	1060.118
14)	4-Amino-2,6-Dini	10.80	10.80	2468235	4990716	988.602	1111.725
16)	2,4-Dinitrotolue	11.88	11.88	4687496	3098874	1038.494	1071.892
17)	2,6-Dinitrotolue	12.37	12.37	2687441	3500805	1054.888	1089.094
18)	o-Nitrotoluene	15.48	15.48	2150436	2920568	997.660	1027.914m
19)	p-Nitrotoluene	16.04	16.04	3366947	2666812	1003.909	1020.296
20)	m-Nitrotoluene	16.86	16.86	3179293	3743514	1043.058	1072.007m
21)	PETN	0.00	18.53	0	1385195	N.D.	1007.094m#

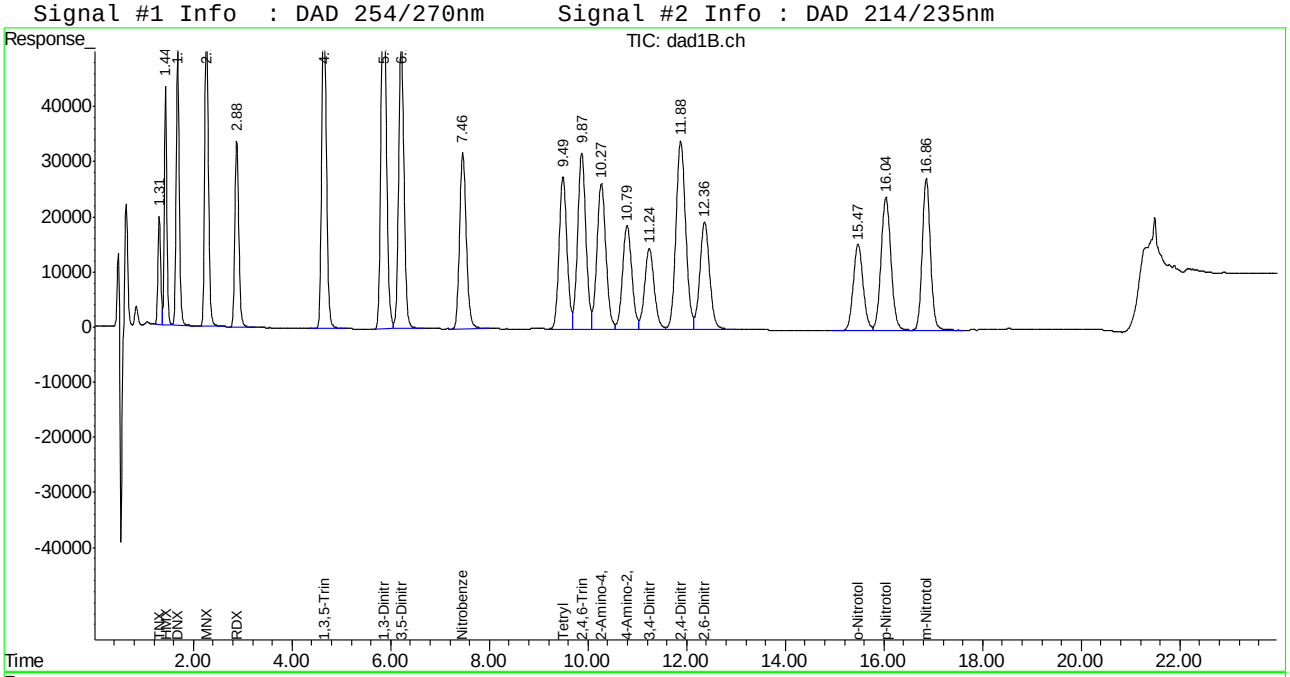
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:35:52 2021 Page 1

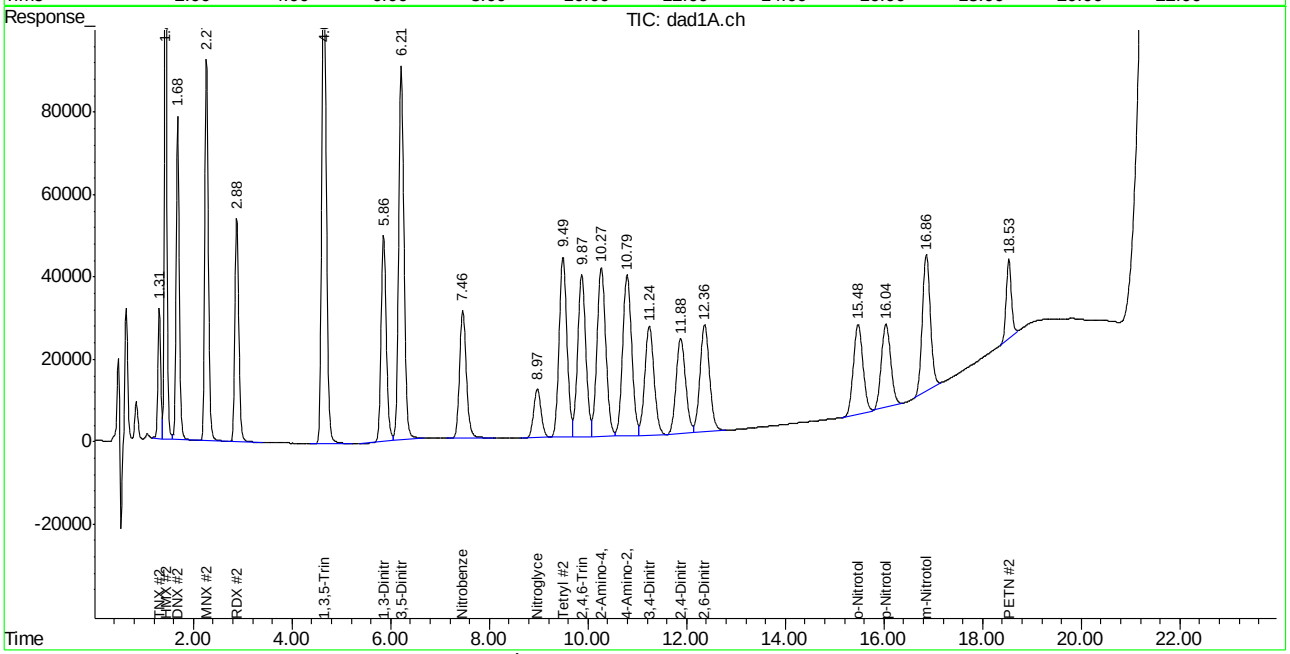
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:20 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

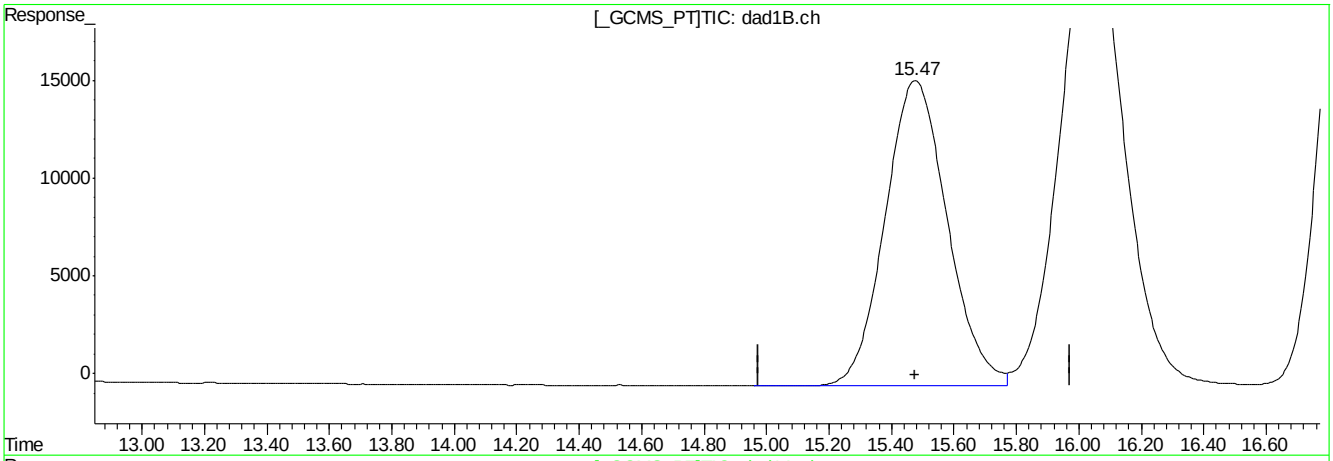
Sample Number: GPP2464-ICC2464
Lab FileID: PP391048.D
Injection Time: 08/03/21 14:20
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

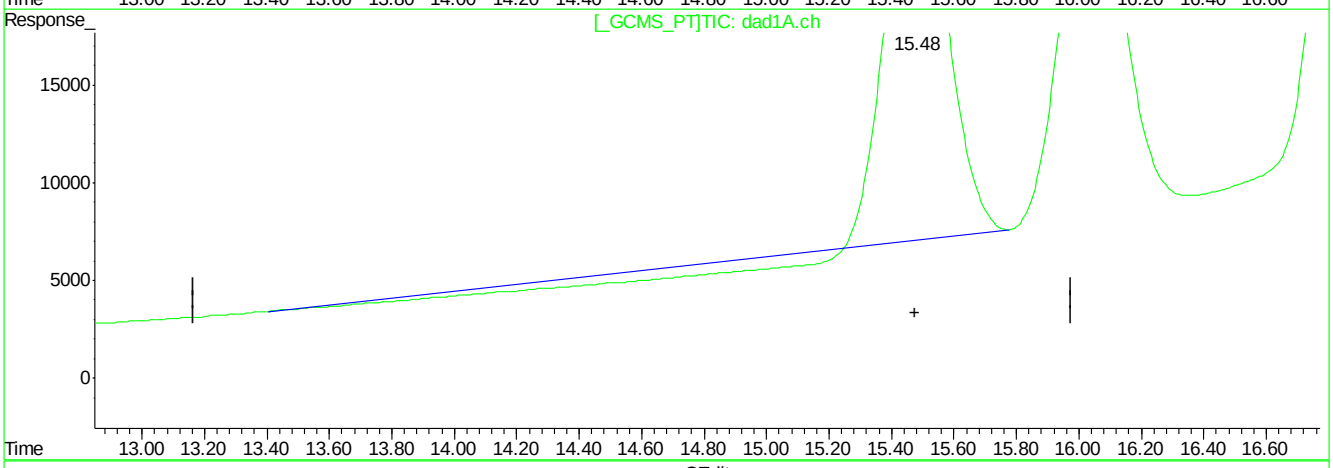
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.48	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.53	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 997.660ppb

response 2150436

(18) o-Nitrotoluene #2

15.48min 843.955ppb

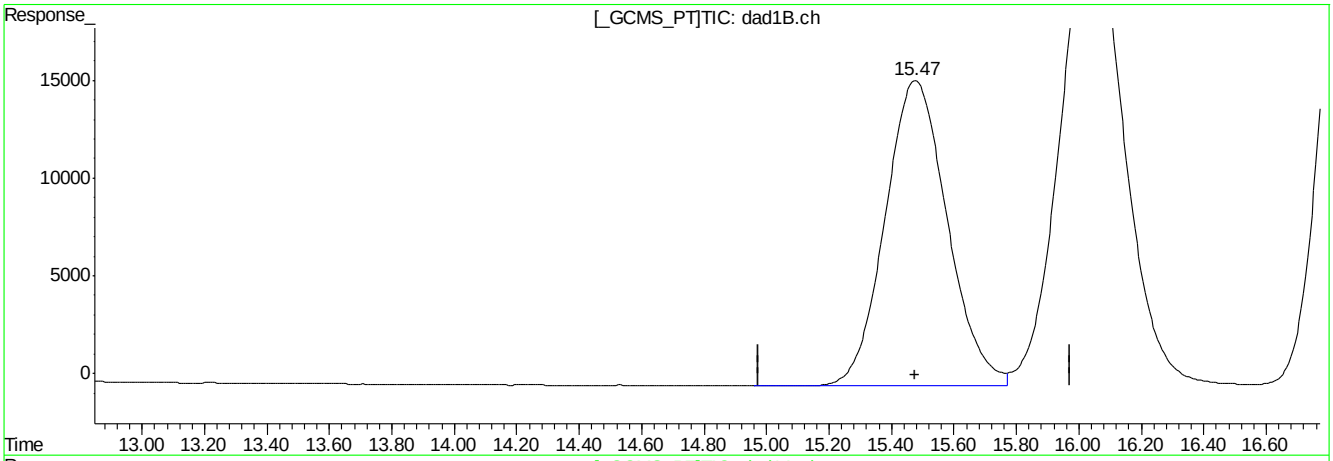
response 2397893

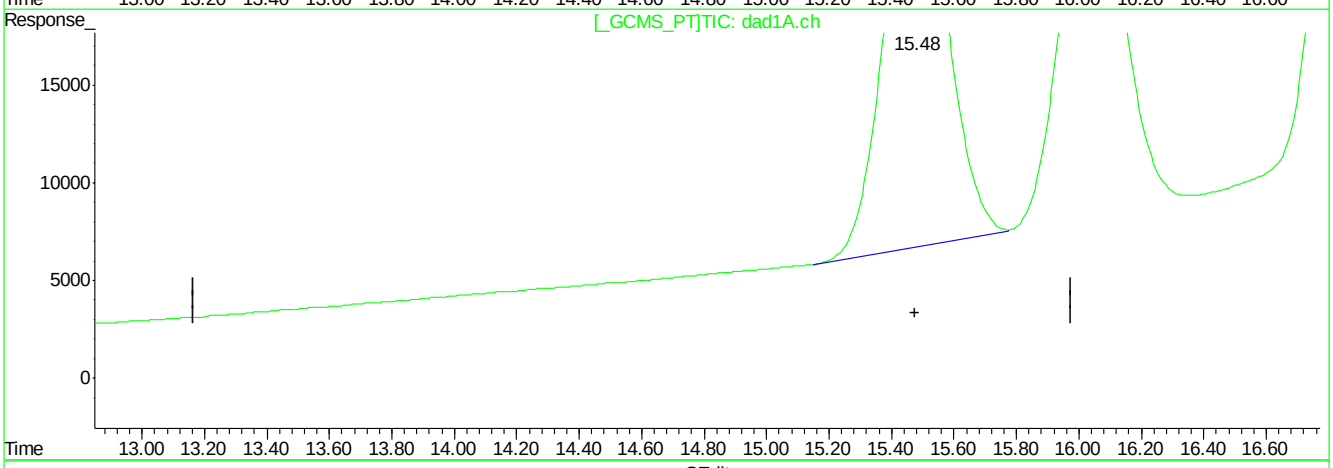
(+) = Expected Retention Time
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:20:31 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 997.660ppb

response 2150436

(18) o-Nitrotoluene #2

15.48min 1027.914ppb m

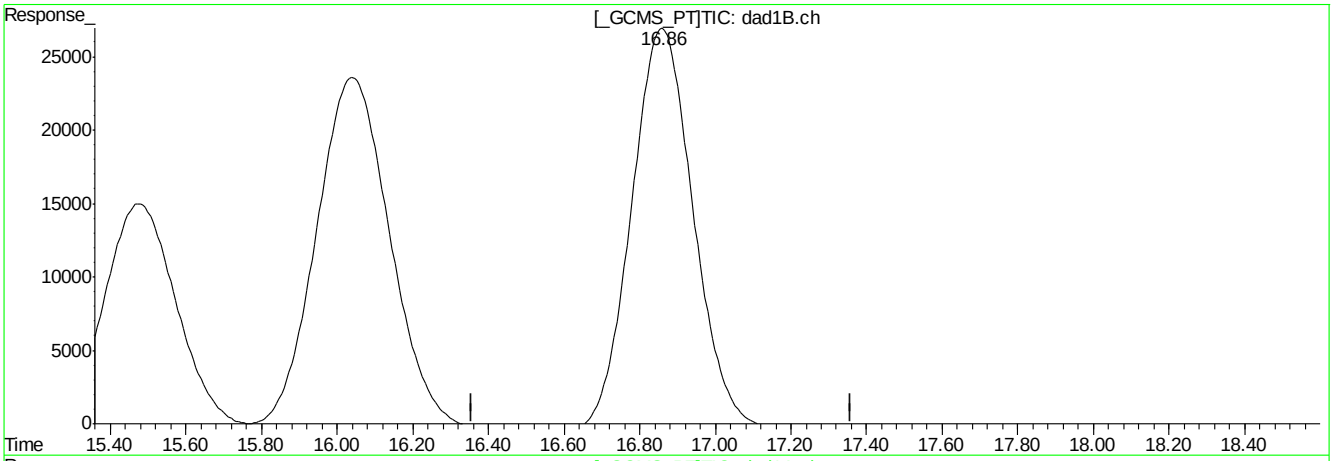
response 2920568

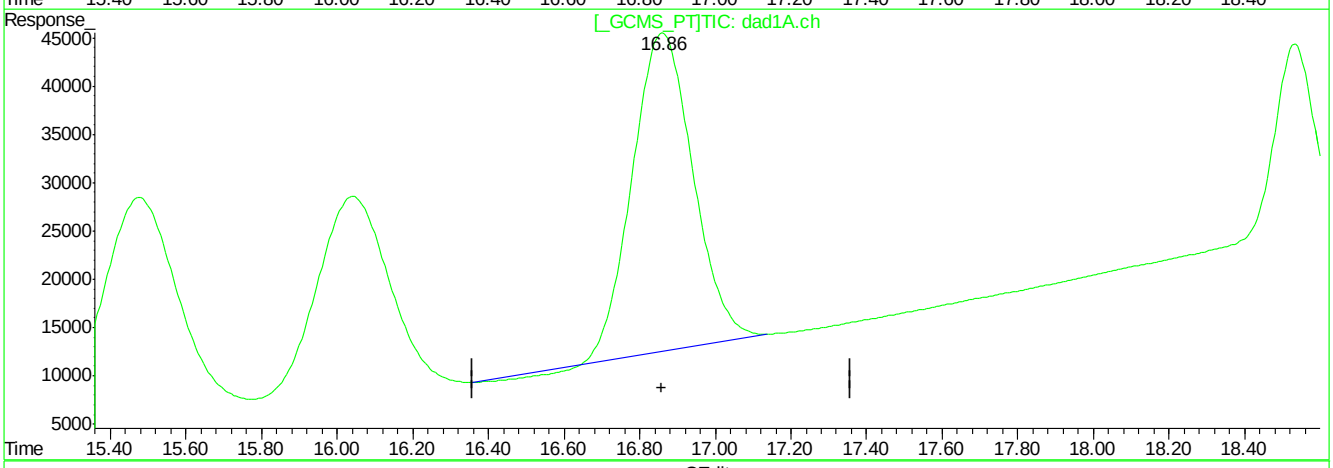
(+) = Expected Retention Time
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:20:40 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 1043.058ppb

response 3179293

(20) m-Nitrotoluene #2

16.86min 1041.441ppb

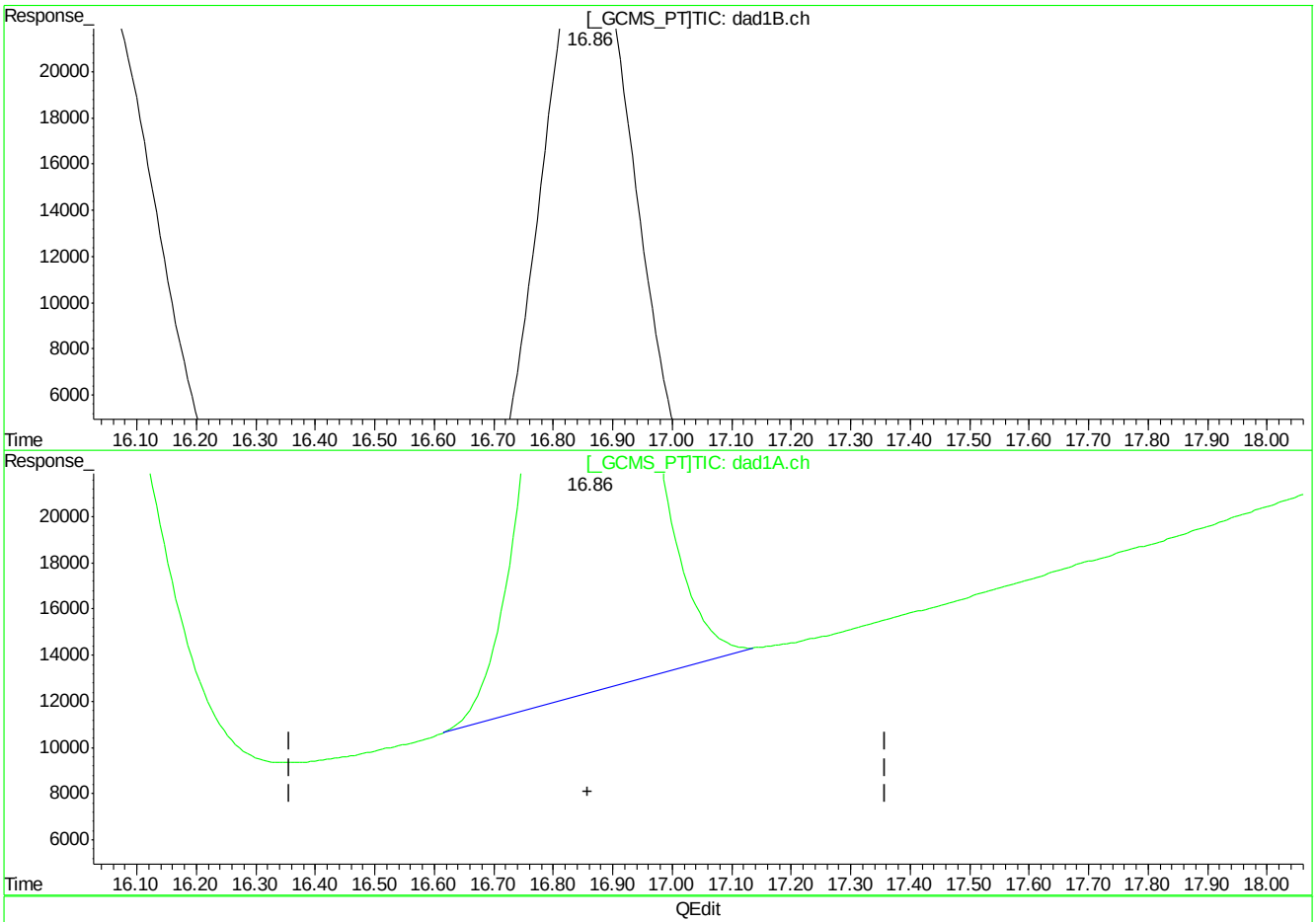
response 3636777

(+) = Expected Retention Time
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:20:44 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.86min 1043.058ppb

response 3179293

(20) m-Nitrotoluene #2

16.86min 1072.007ppb m

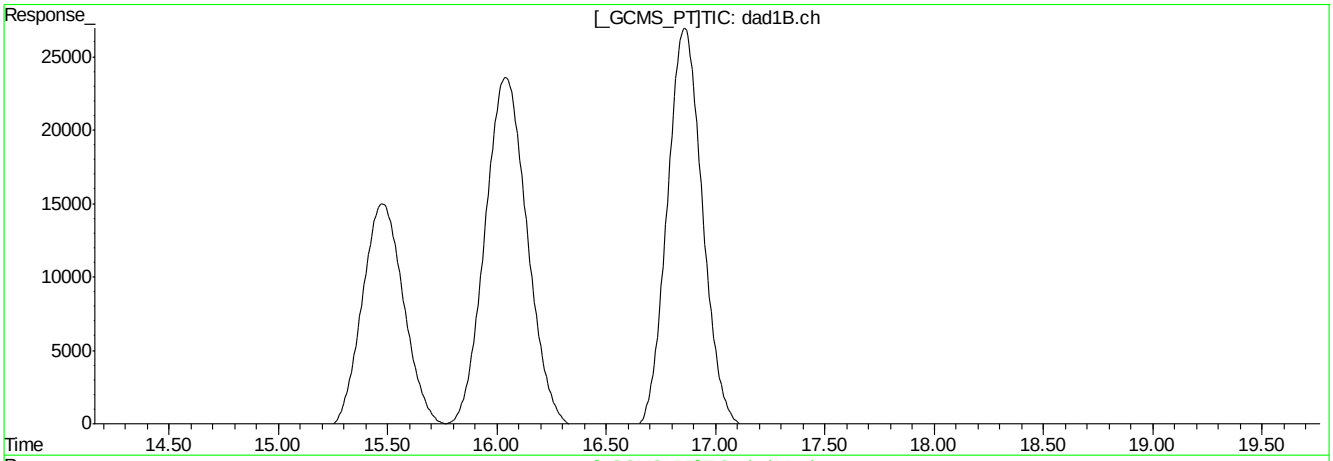
response 3743514

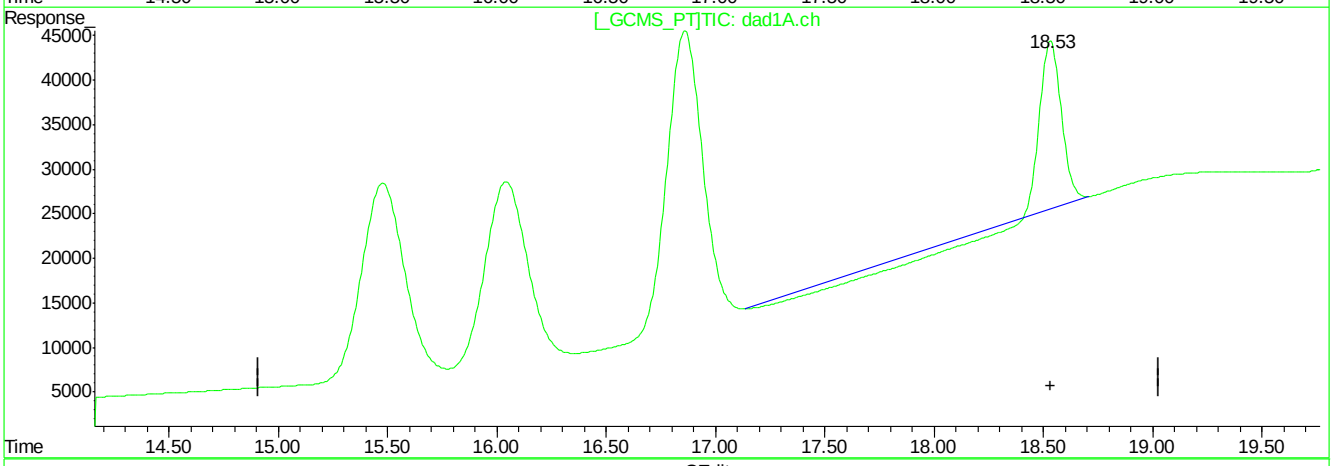
(+) = Expected Retention Time
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:20:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.53min 564.398ppb

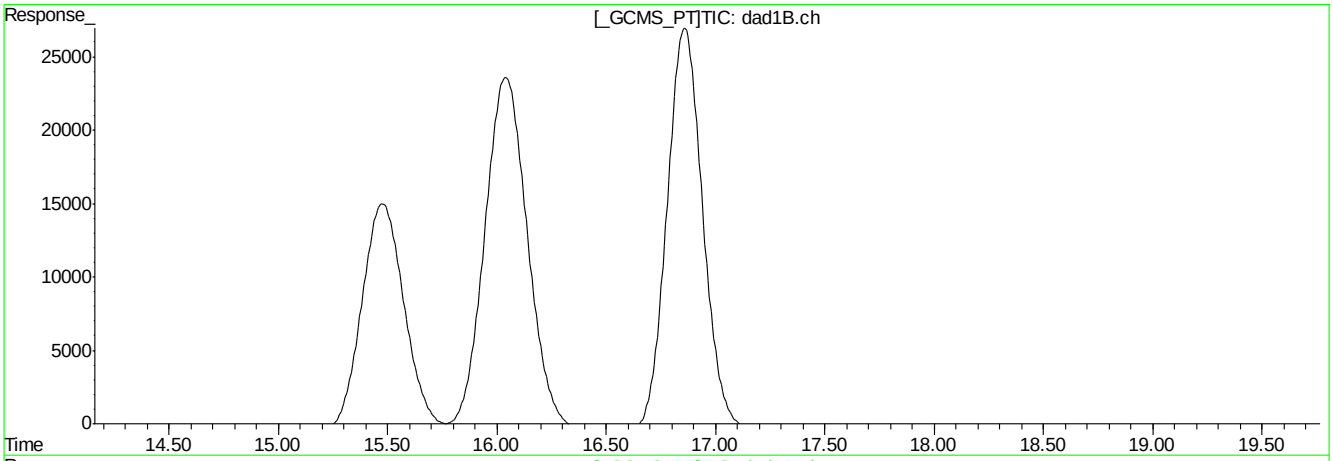
response 776294

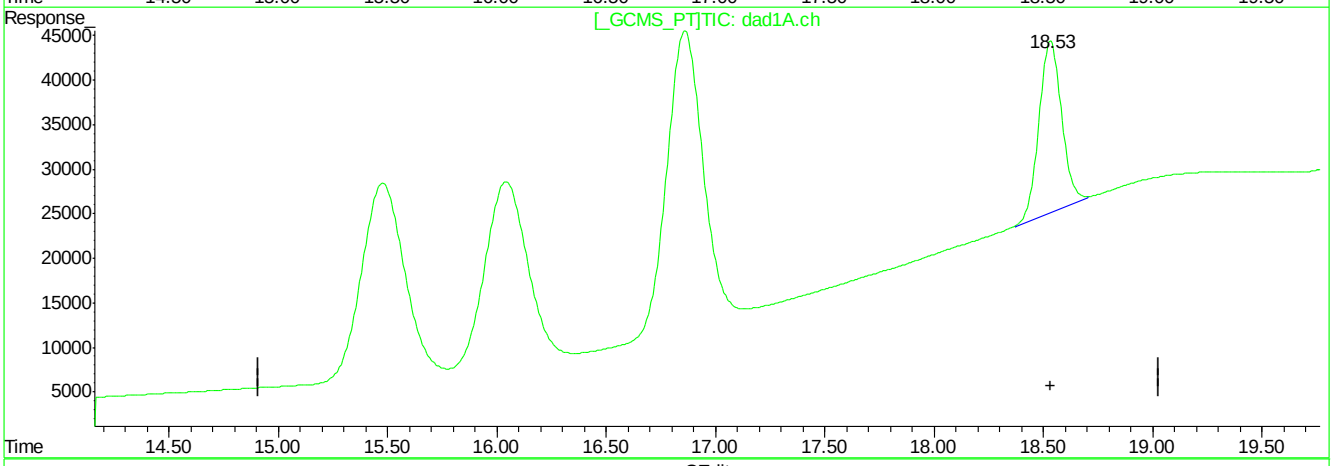
(+) = Expected Retention Time
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:20:55 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1B.ch Vial: 96
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391048.D\dad1A.ch
Acq On : 03-Aug-2021, 14:20:53 Operator: jamesb
Sample : icc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.53min 1007.094ppb m

response 1385195

(+) = Expected Retention Time
PP391048.D GPP2464_080321PRI.M Thu Aug 05 10:21:01 2021

PP391049.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:37 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.25	11.25	4952666	8765580	2338.460	2640.319
	Spiked Amount 500.000	Range 70 - 136		Recovery =		467.69%#	528.06%#
	Target Compounds						
1)	TNX	1.31	1.31	1987029	3175023	1052.667	1023.030
2)	HMX	1.44	1.44	3776592	10616112	2613.038	2473.050
3)	DNX	1.68	1.68	5433682	8586544	2354.400	2191.419
4)	MNX	2.27	2.27	7397232	11514253	2920.124	2945.183
5)	RDX	2.88	2.88	4624811	7460726	2546.955	2554.791
6)	1,3,5-Trinitrobe	4.65	4.65	10041841	19401002	2574.084	2559.997
7)	1,3-Dinitrobenze	5.86	5.86	13094462	9101696	2592.925	2442.890
8)	3,5-Dinitroanili	6.22	6.22	9938339	17093699	2582.493	2482.944
9)	Nitrobenzene	7.46	7.46	7560596	7357638	2601.897	2573.369
10)	Nitroglycerin	0.00	8.98	0	3109453	N.D.	2548.356 #
11)	Tetryl	9.50	9.50	7600723	12068755	2593.552	2610.898
12)	2,4,6-Trinitroto	9.88	9.88	9242136	11334622	2499.014	2595.306
13)	2-Amino-4,6-Dini	10.27	10.27	8328695	12796485	2532.124	2662.977
14)	4-Amino-2,6-Dini	10.80	10.80	6124005	12553009	2452.847	2796.291
16)	2,4-Dinitrotolue	11.88	11.88	11702407	7762939	2592.616	2685.179
17)	2,6-Dinitrotolue	12.37	12.37	6738178	8791051	2644.905	2734.879
18)	o-Nitrotoluene	15.48	15.47	5375914	7442275	2494.069	2619.361m
19)	p-Nitrotoluene	16.04	16.04	8439427	7020624	2516.348	2602.435m
20)	m-Nitrotoluene	16.86	16.86	7957134	9470637	2610.564	2712.048m
21)	PETN	0.00	18.53	0	3476262	N.D. d	2527.387m

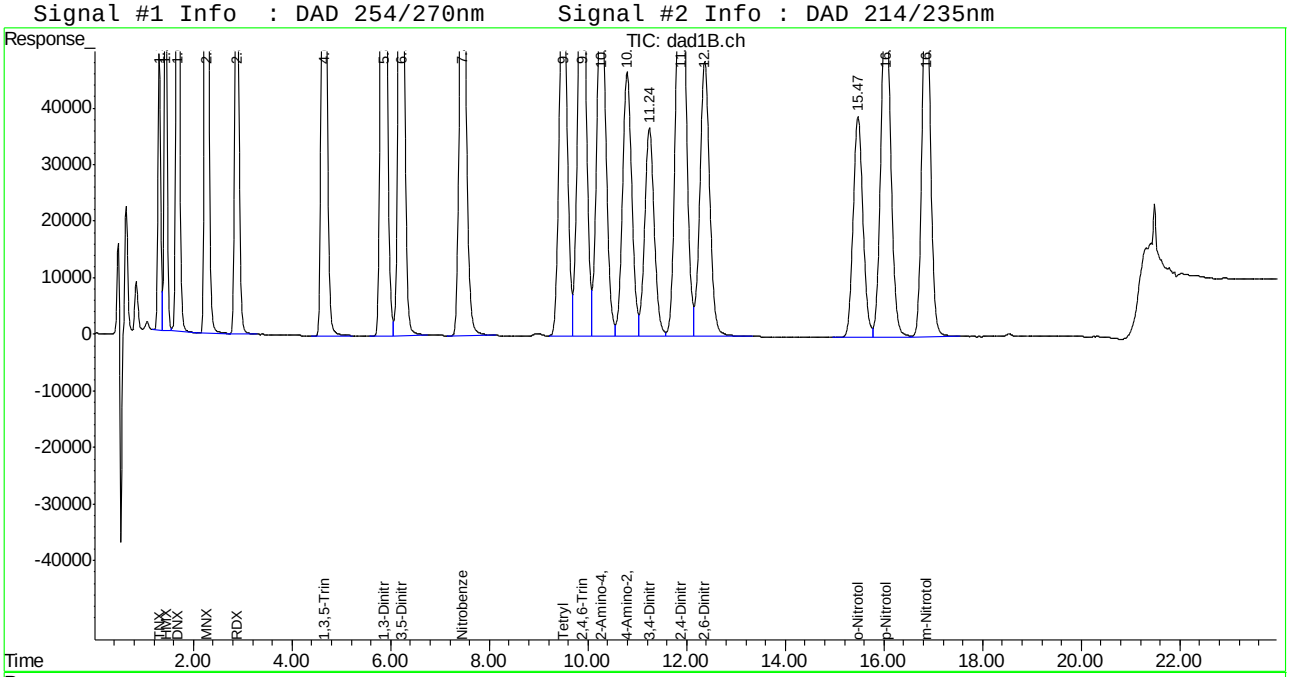
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

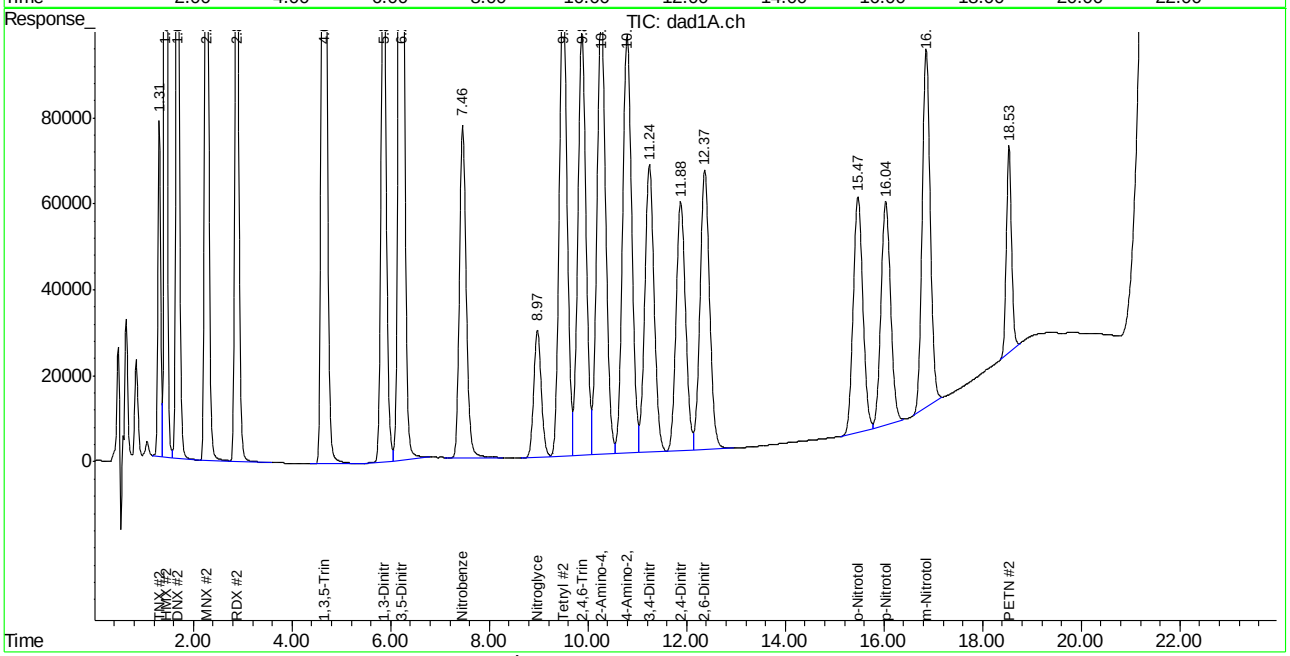
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:19 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

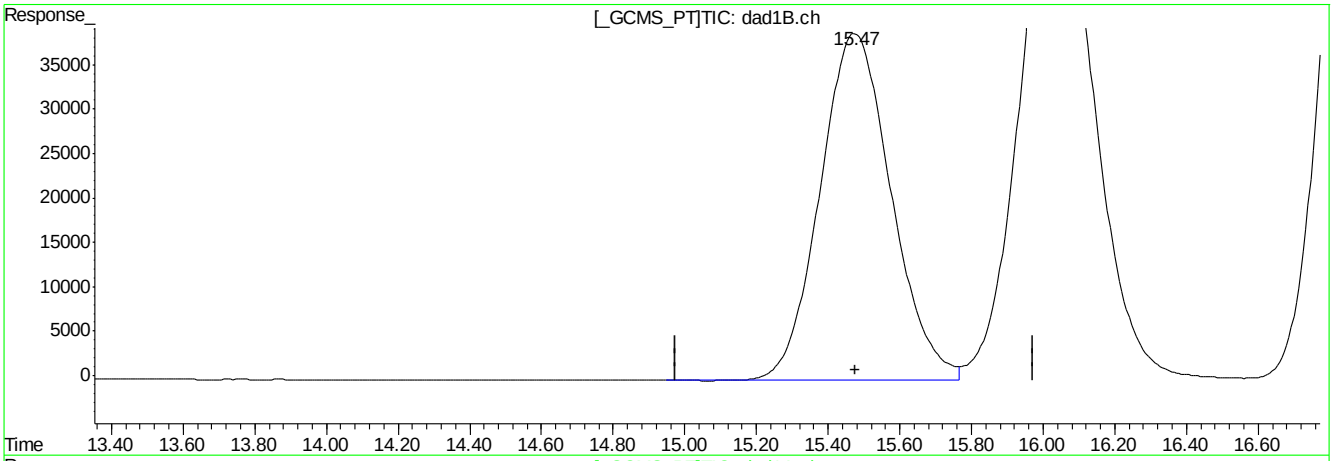
Sample Number: GPP2464-IC2464
Lab FileID: PP391049.D
Injection Time: 08/03/21 14:51
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

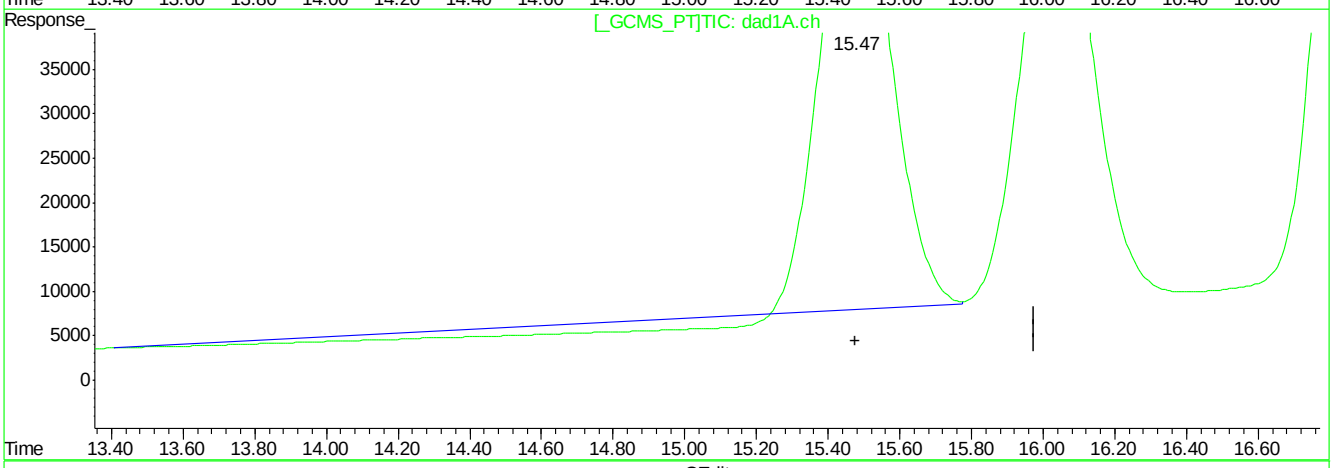
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.47	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.04	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.53	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 2494.069ppb

response 5375914

(18) o-Nitrotoluene #2

15.48min 2213.542ppb

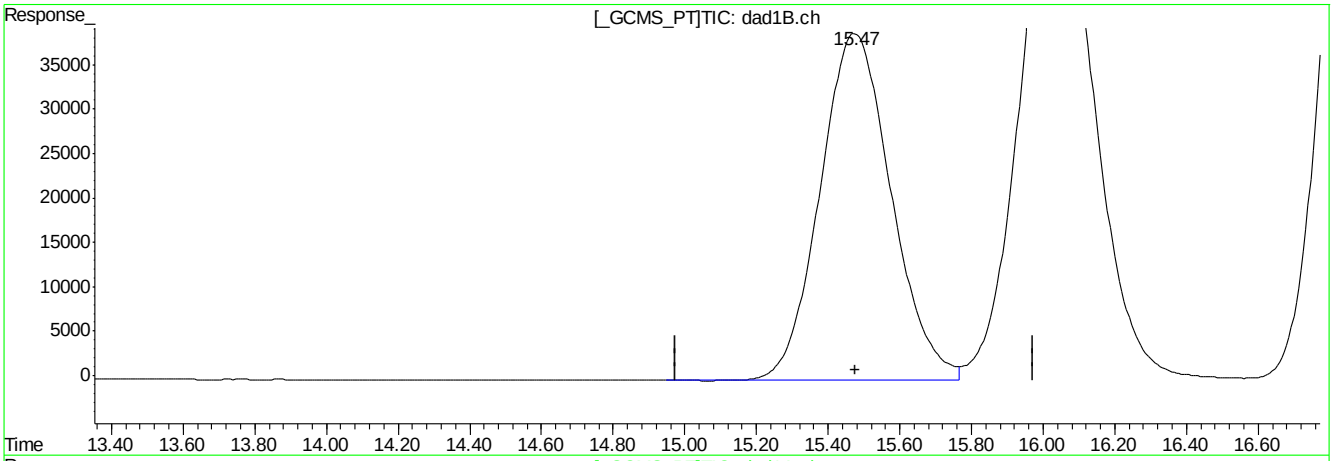
response 6289240

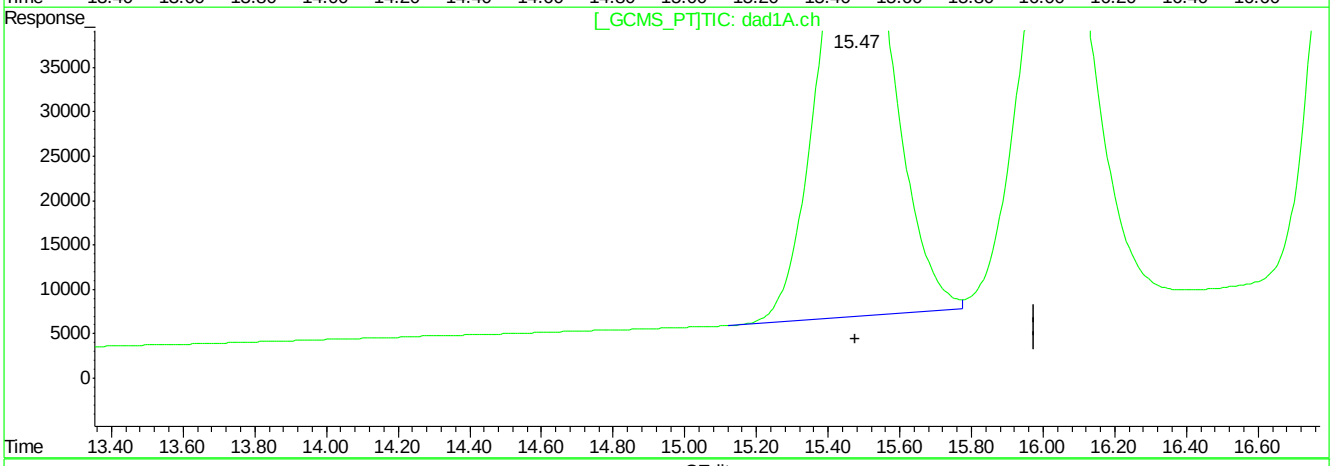
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:18:54 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 2494.069ppb

response 5375914

(18) o-Nitrotoluene #2

15.47min 2619.361ppb m

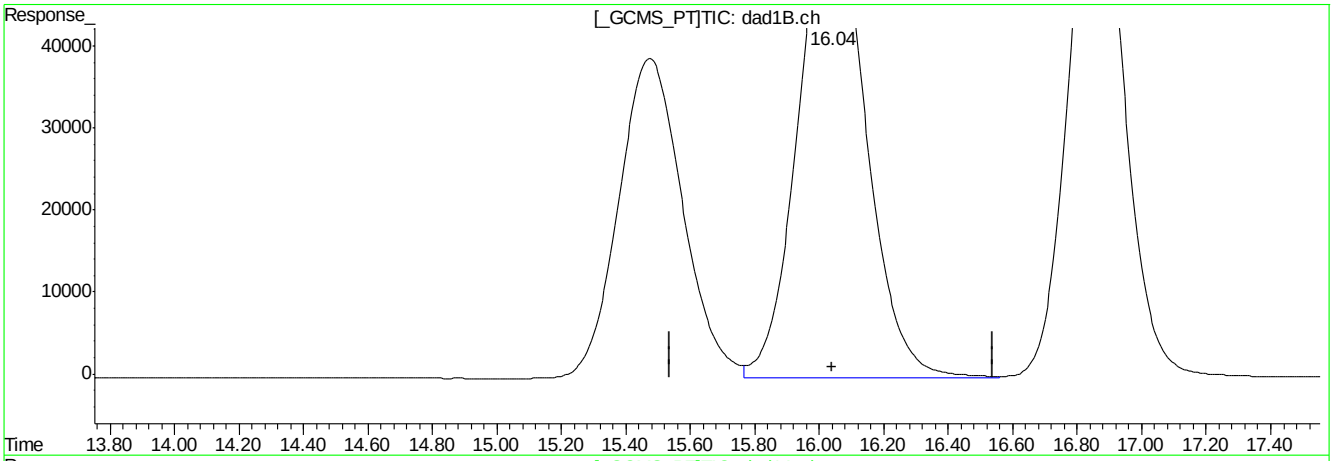
response 7442275

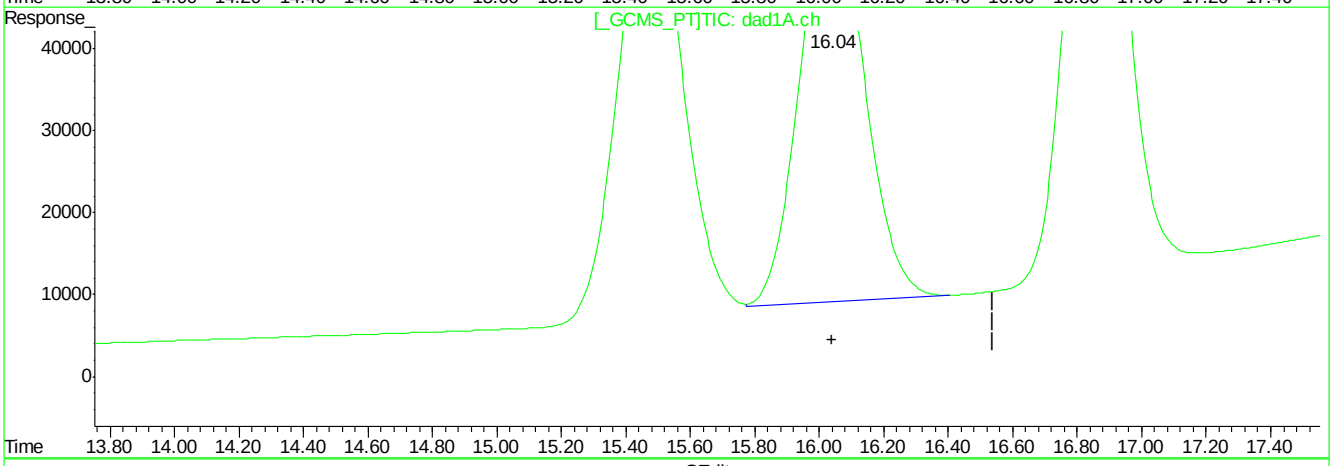
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:03 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.04min 2516.348ppb

response 8439427

(19) p-Nitrotoluene #2

16.04min 2548.155ppb

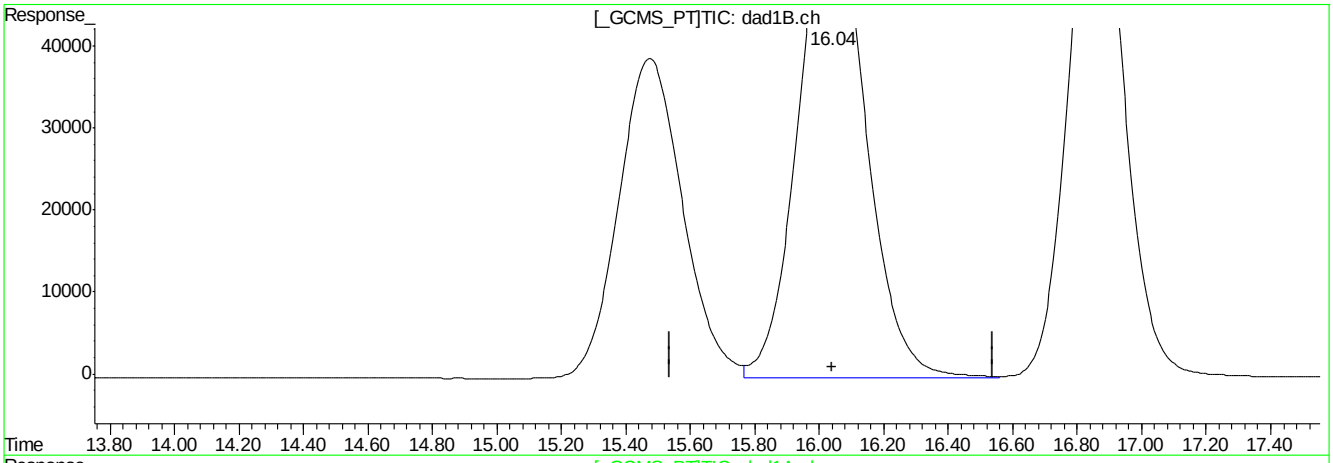
response 6866852

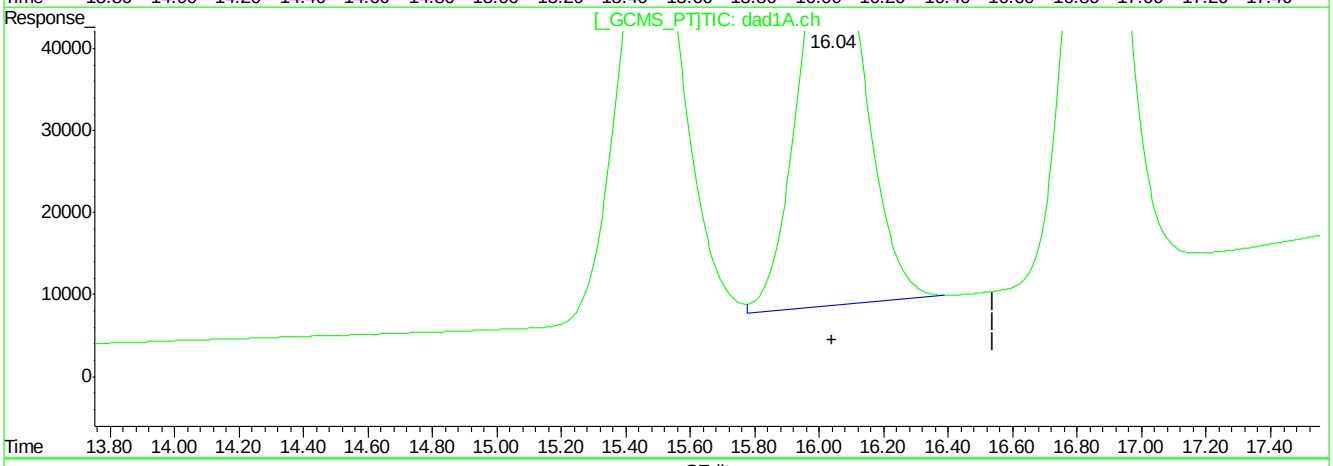
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.04min 2516.348ppb

response 8439427

(19) p-Nitrotoluene #2

16.04min 2602.435ppb m

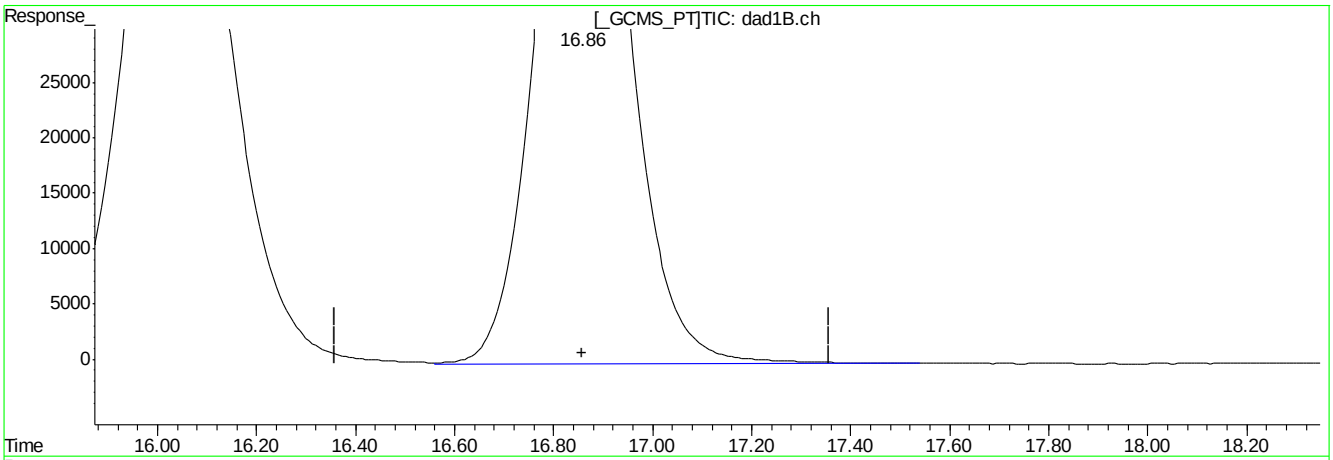
response 7020624

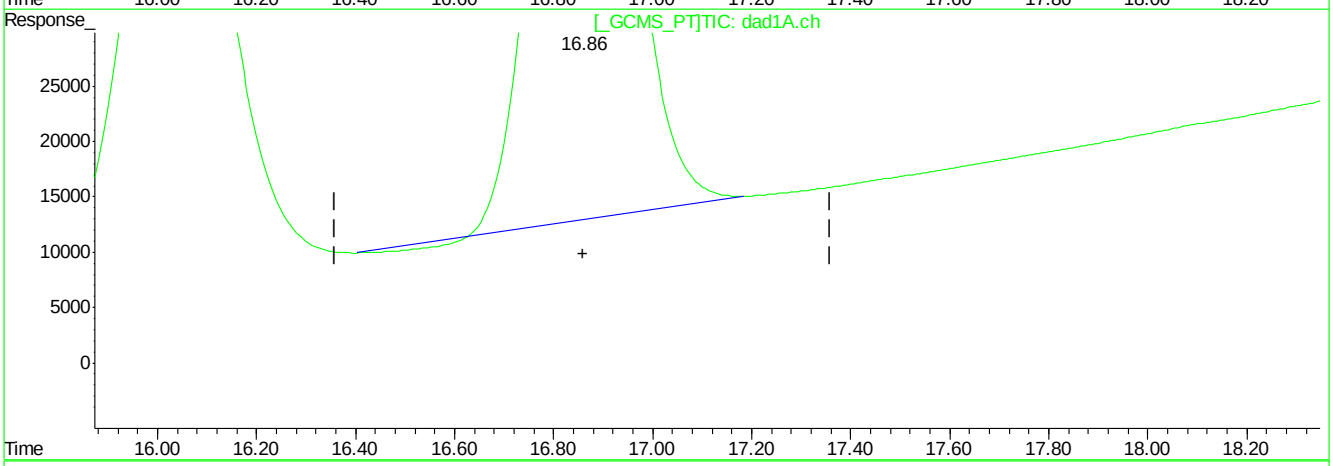
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:15 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 2610.564ppb

response 7957134

(20) m-Nitrotoluene #2

16.86min 2681.736ppb

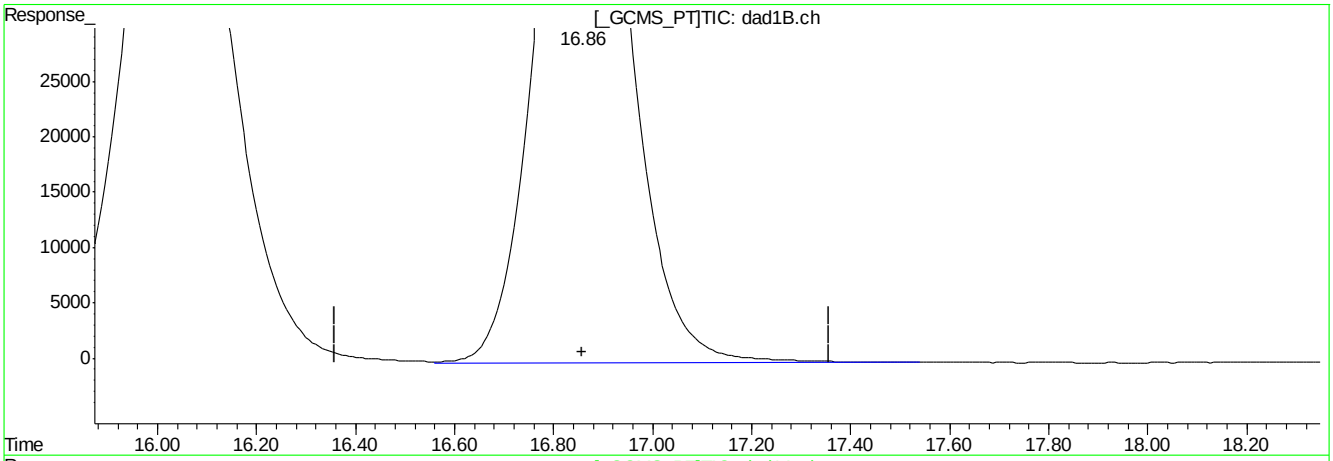
response 9364785

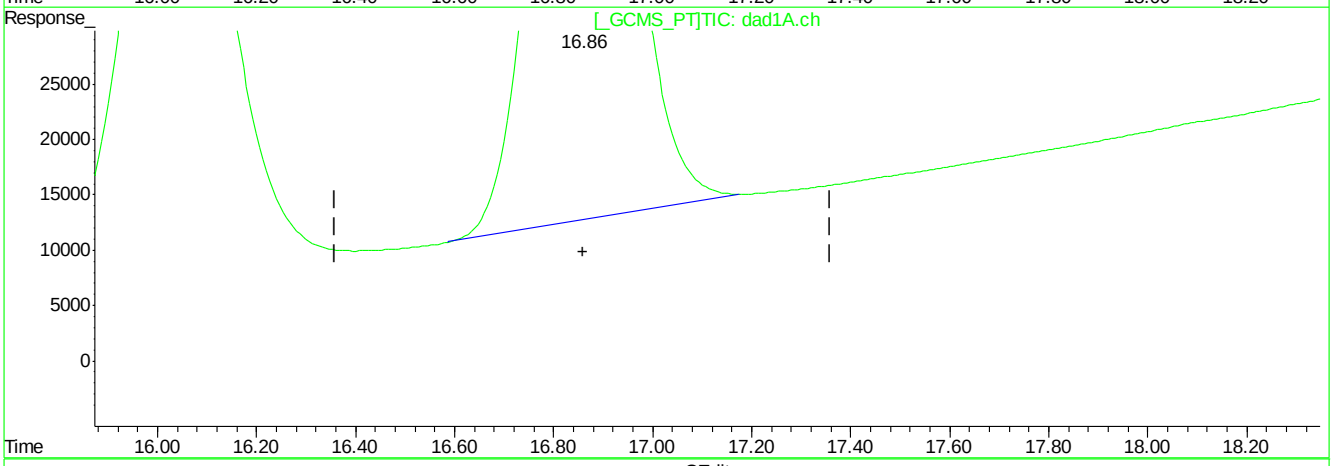
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:20 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 2610.564ppb

response 7957134

(20) m-Nitrotoluene #2

16.86min 2712.048ppb m

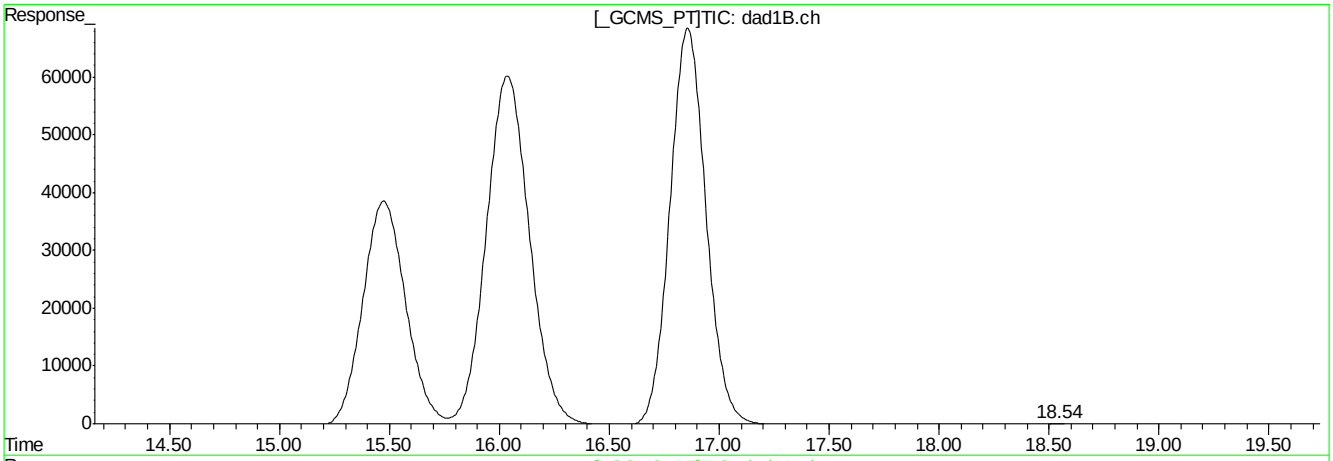
response 9470637

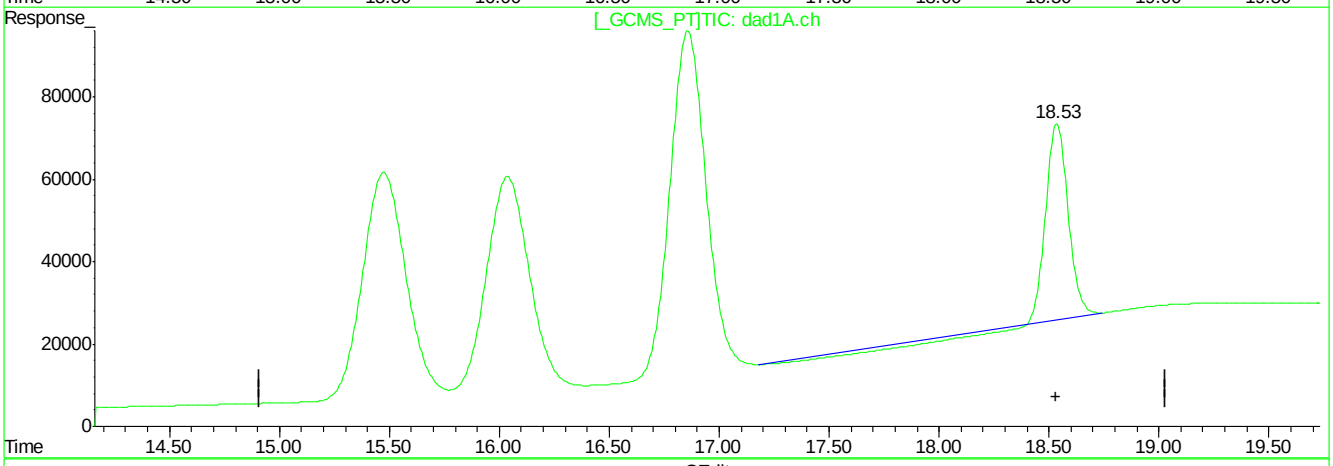
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:25 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.54min 0.000ppb

response 27226

(21) PETN #2

18.54min 2034.067ppb

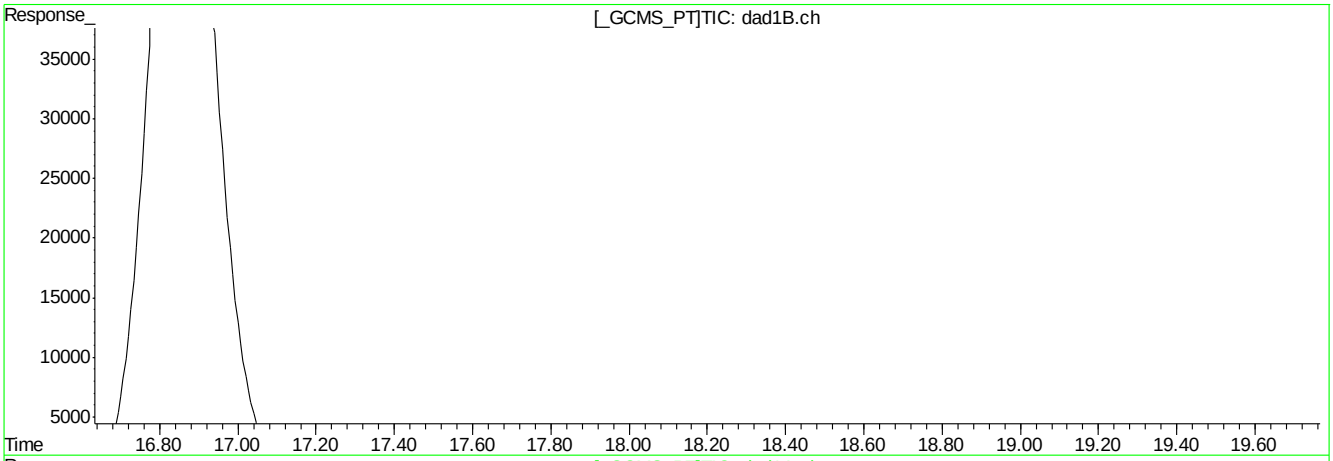
response 2797732

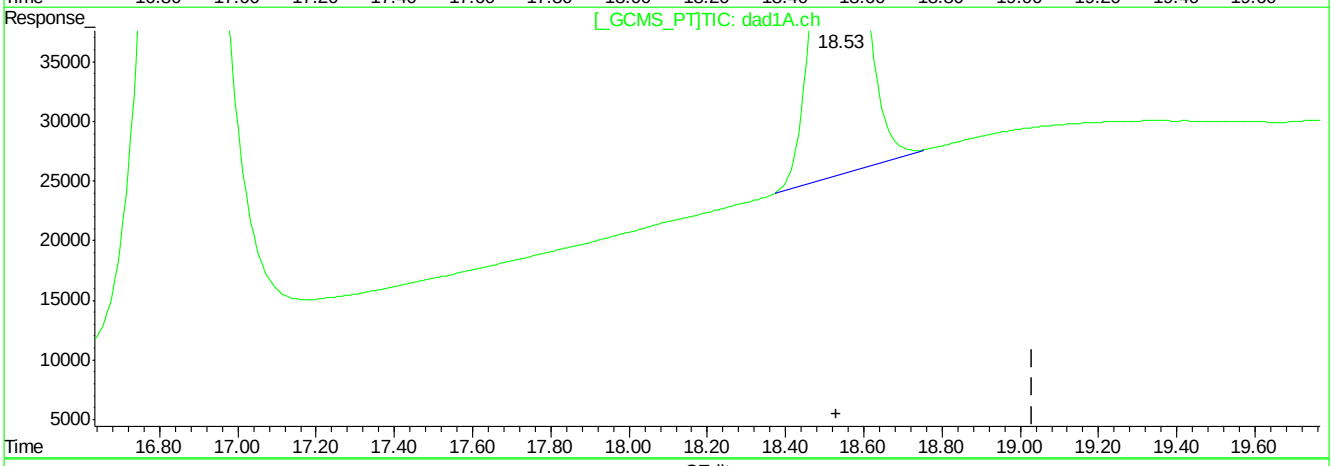
(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:29 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1B.ch Vial: 97
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391049.D\dad1A.ch
Acq On : 03-Aug-2021, 14:51:55 Operator: jamesb
Sample : ic2464-2500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

18.53min 2527.387ppb m

response 3476262

(+) = Expected Retention Time
PP391049.D GPP2464_080321PRI.M Thu Aug 05 10:19:35 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:16:38 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.26	11.26	9876299	17809377	4663.212	5364.442
	Spiked Amount 500.000	Range 70 - 136		Recovery =		932.64%#	1072.89%#
	Target Compounds						
1)	TNX	1.31	1.31	3972994	6275652	2104.771	2022.090
2)	HMX	1.44	1.44	7532644	21103897	5211.865	4916.206
3)	DNX	1.68	1.68	10744398	16965746	4655.519	4329.922
4)	MNX	2.27	2.27	14611386	22721296	5767.977	5811.787
5)	RDX	2.88	2.88	9168937	14764404	5049.477	5055.804
6)	1,3,5-Trinitrobe	4.65	4.65	19915216	38595239	5104.984	5092.711
7)	1,3-Dinitrobenze	5.86	5.86	26082180	18066195	5164.712	4848.956
8)	3,5-Dinitroanili	6.22	6.22	19753762	33938220	5133.046	4929.694
9)	Nitrobenzene	7.46	7.46	15388390	14950193	5295.748	5228.901
10)	Nitroglycerin	0.00	8.98	0	6200453	N.D. d	5003.297
11)	Tetryl	9.50	9.51	14959842	23922684	5104.663	5175.322
12)	2,4,6-Trinitroto	9.89	9.89	18367759	22626715	4966.523	5180.874
13)	2-Amino-4,6-Dini	10.27	10.27	16535863	25604744	5027.301	5328.404
14)	4-Amino-2,6-Dini	10.80	10.80	12139273	25168613	4862.142	5606.526
16)	2,4-Dinitrotolue	11.89	11.89	23326548	15708729	5167.893	5433.606
17)	2,6-Dinitrotolue	12.38	12.38	13465936	17636699	5285.719	5486.744
18)	o-Nitrotoluene	15.48	15.48	10925938	15232507	5068.914	5361.187m
19)	p-Nitrotoluene	16.04	16.04	17011241	14187616	5072.170	5020.370
20)	m-Nitrotoluene	16.86	16.86	16153130	19279539	5299.494	5520.962m
21)	PETN	0.00	18.54	0	6824785	N.D. d	4961.902m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:35:54 2021 Page 1

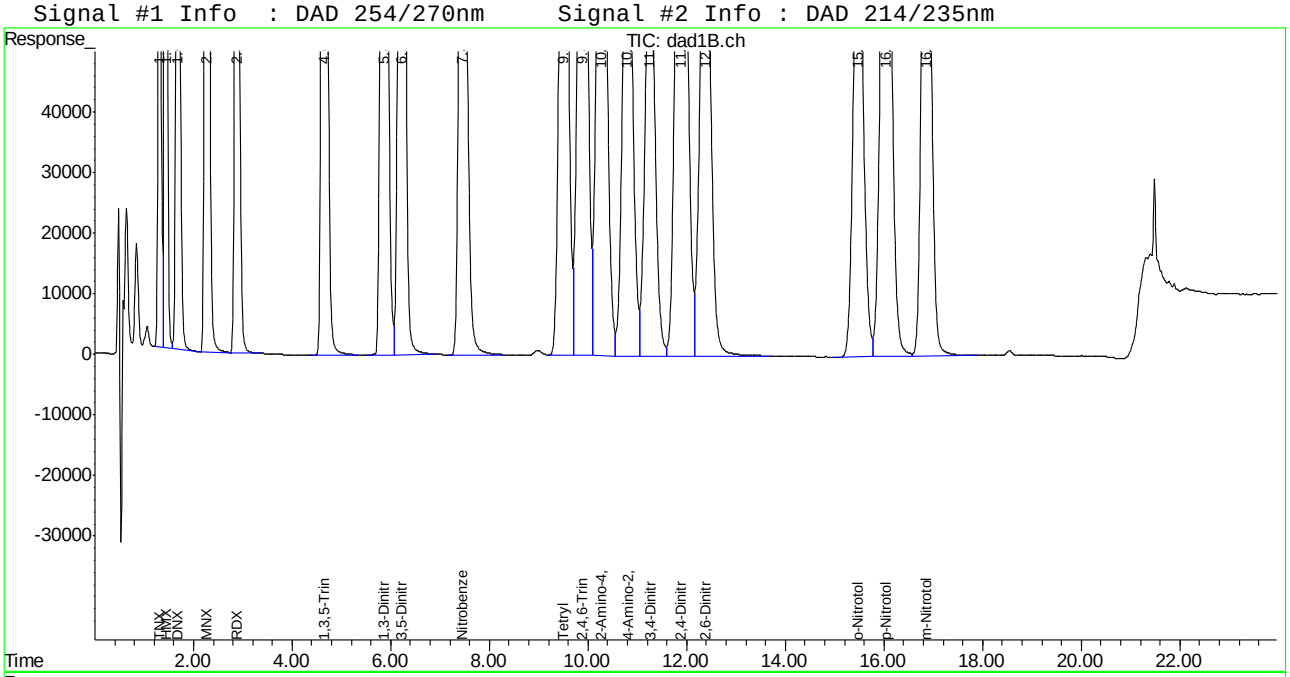
9.5.20
9

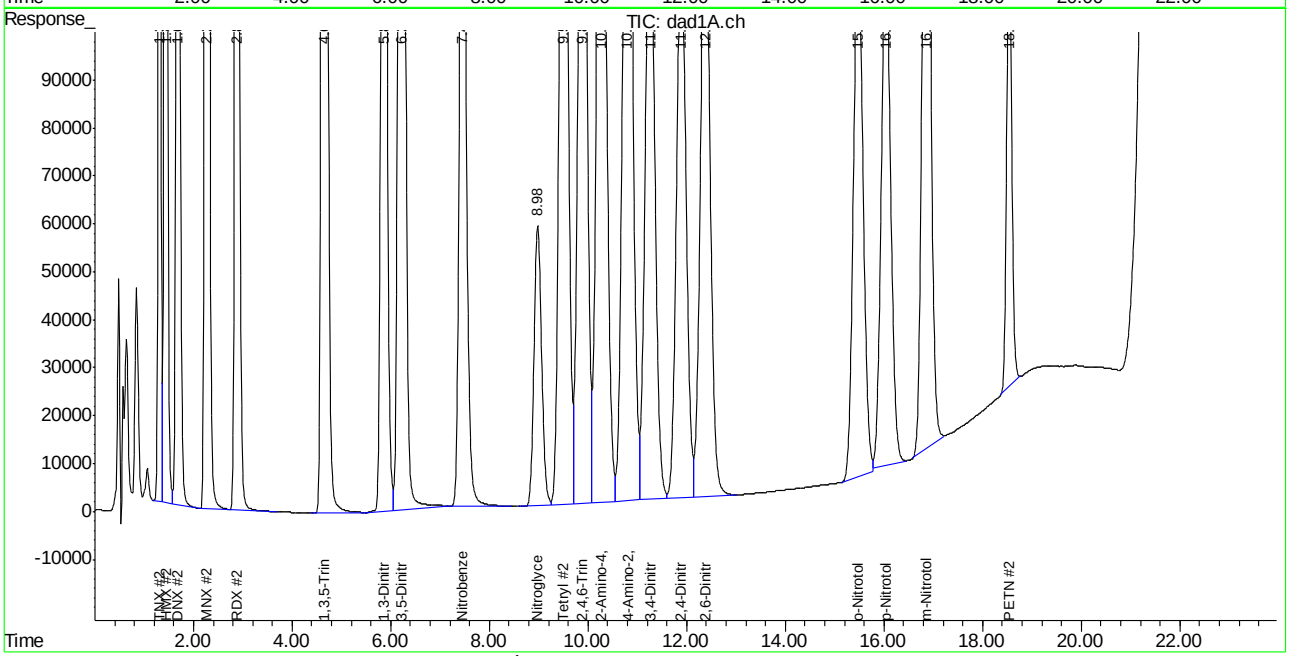
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:18 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

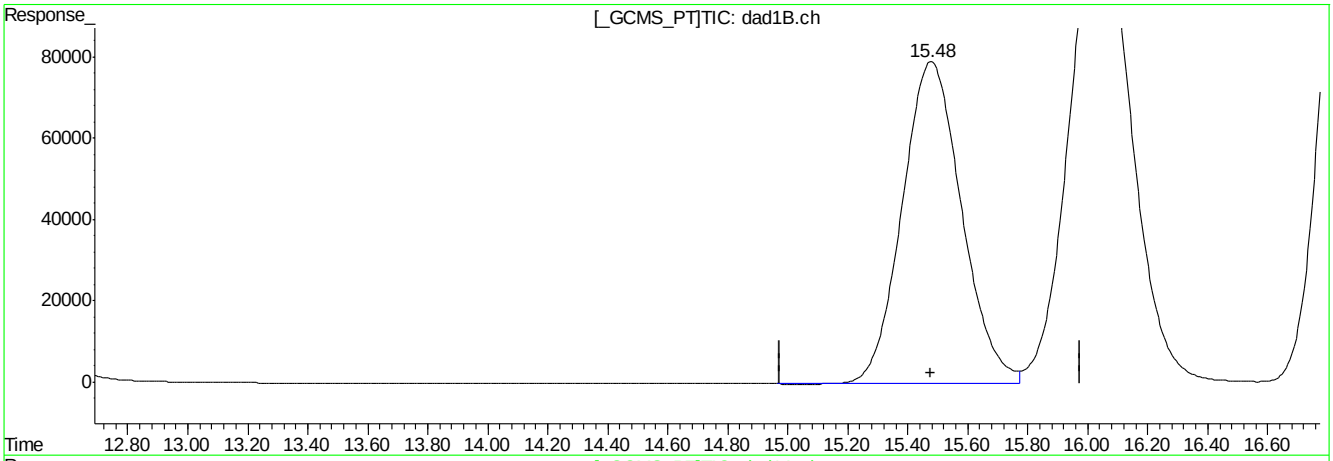
Sample Number: GPP2464-IC2464
Lab FileID: PP391050.D
Injection Time: 08/03/21 15:22
Method: SW846 8330B
Analyst approved: 08/05/21 10:38 James Boone
Supervisor approved: 08/05/21 14:12 Mike Eger

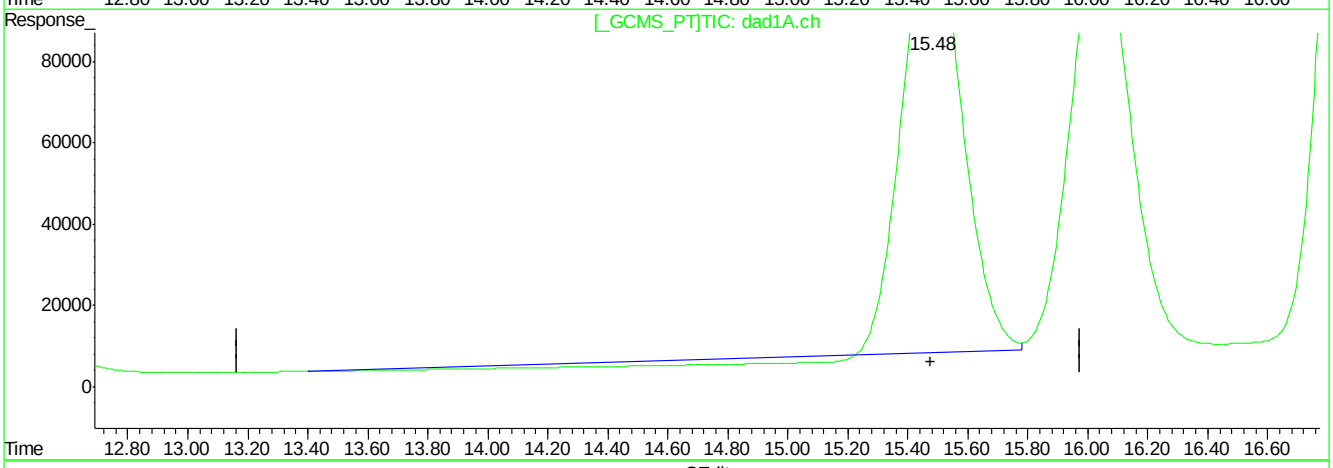
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.48	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.54	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 5068.914ppb

response 10925938

(18) o-Nitrotoluene #2

15.48min 4868.863ppb

response 13833688

(+) = Expected Retention Time
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:17:28 2021

9.5.20.2

9

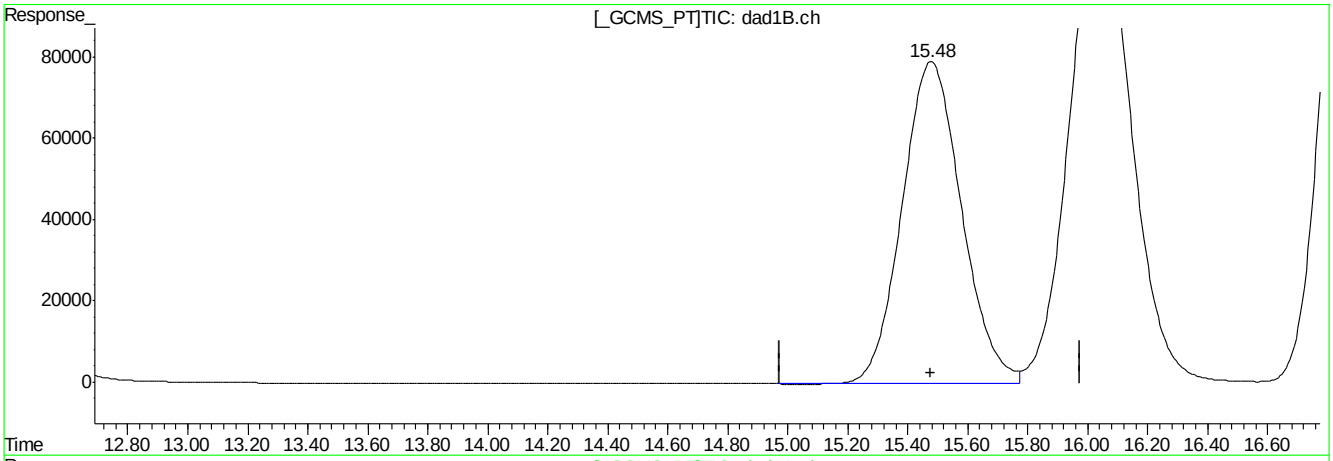
PP391050.D edits: o-Nitrotoluene

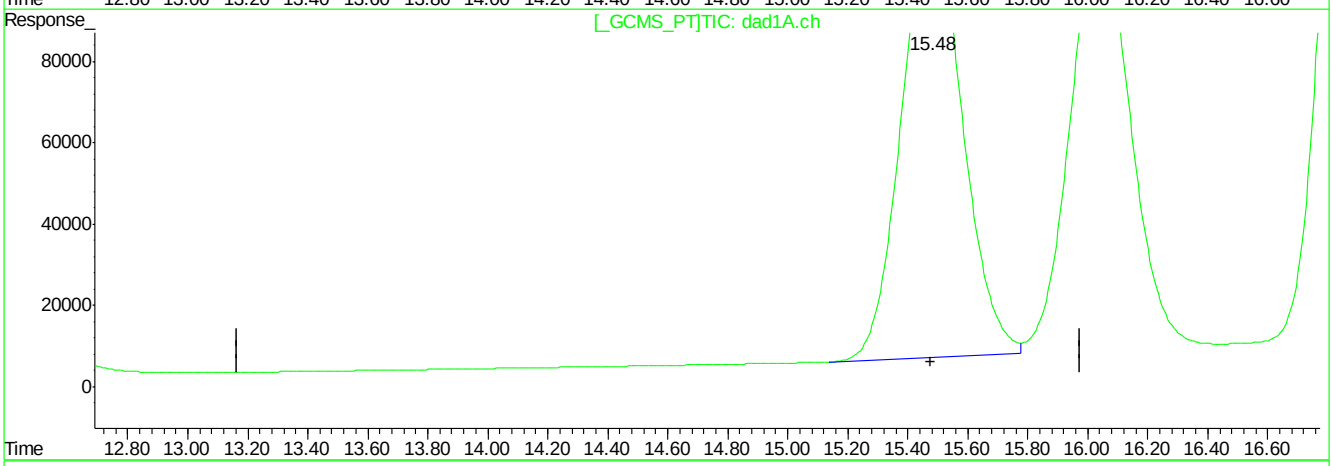
FA87622

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.48min 5068.914ppb

response 10925938

(18) o-Nitrotoluene #2

15.48min 5361.187ppb m

response 15232507

(+) = Expected Retention Time
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:17:38 2021

9.5.20.3

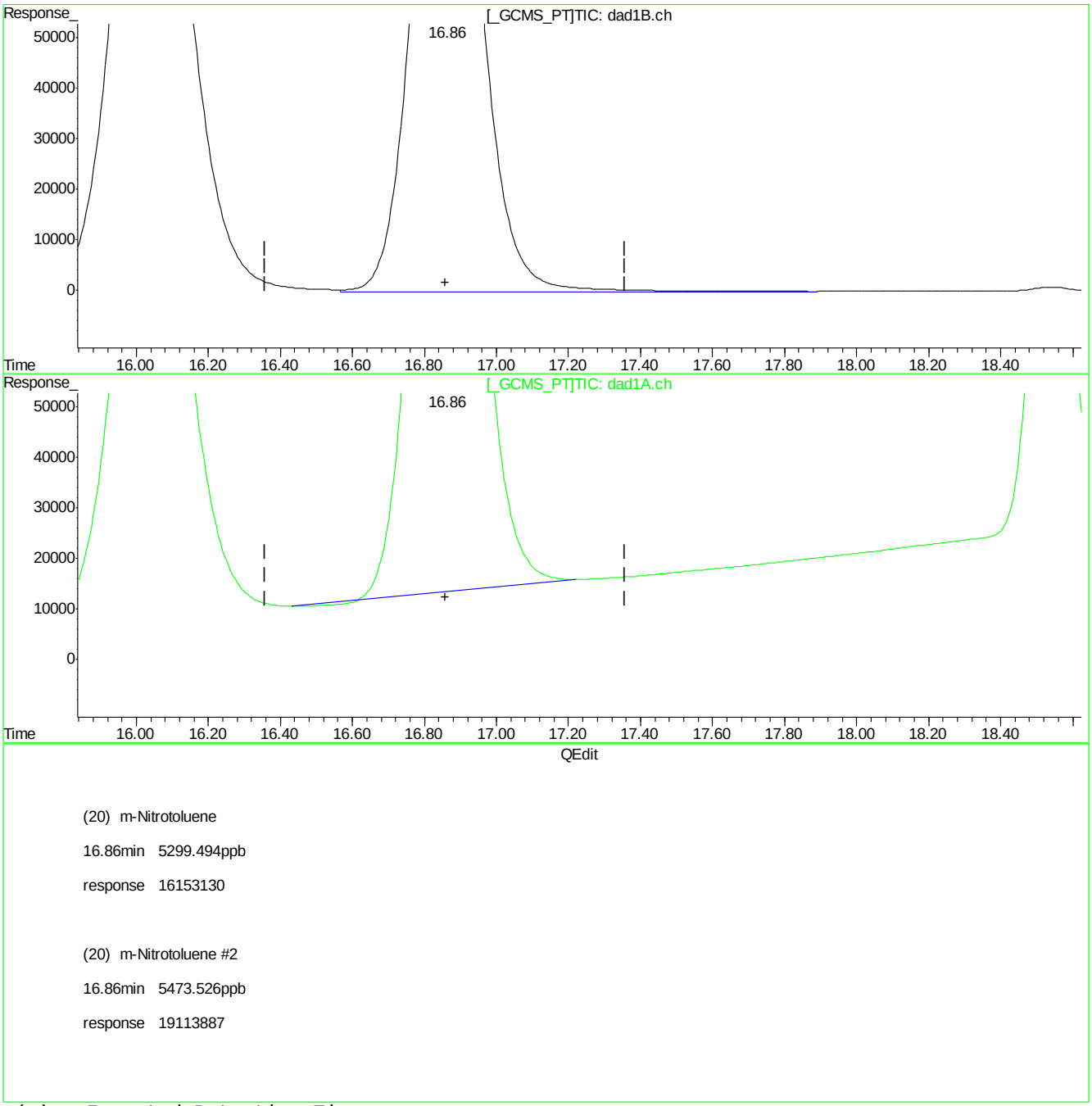
9

PP391050.D edits: o-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration

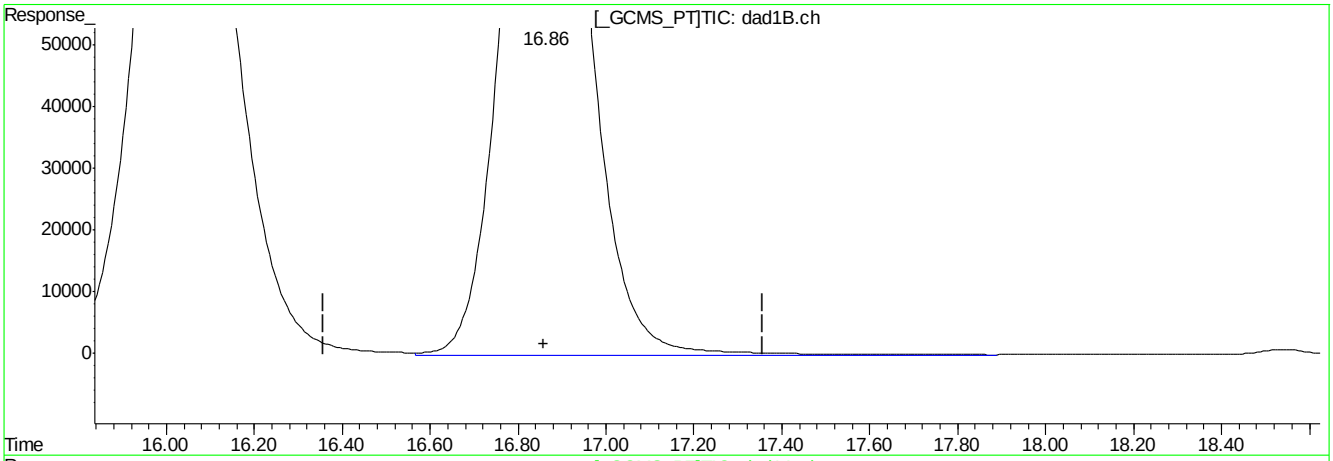


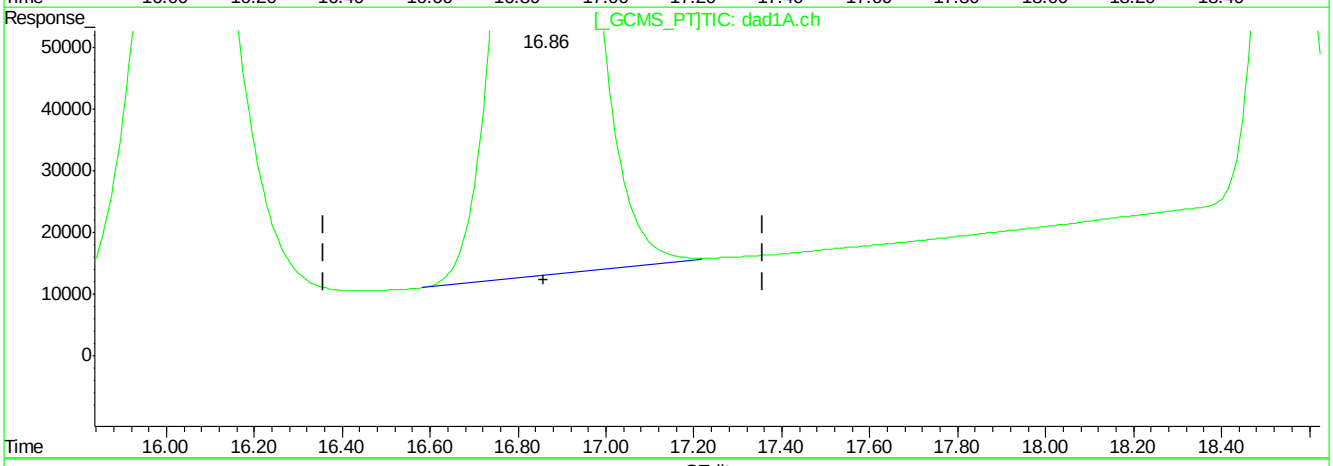
(+) = Expected Retention Time
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:17:45 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 5299.494ppb

response 16153130

(20) m-Nitrotoluene #2

16.86min 5520.962ppb m

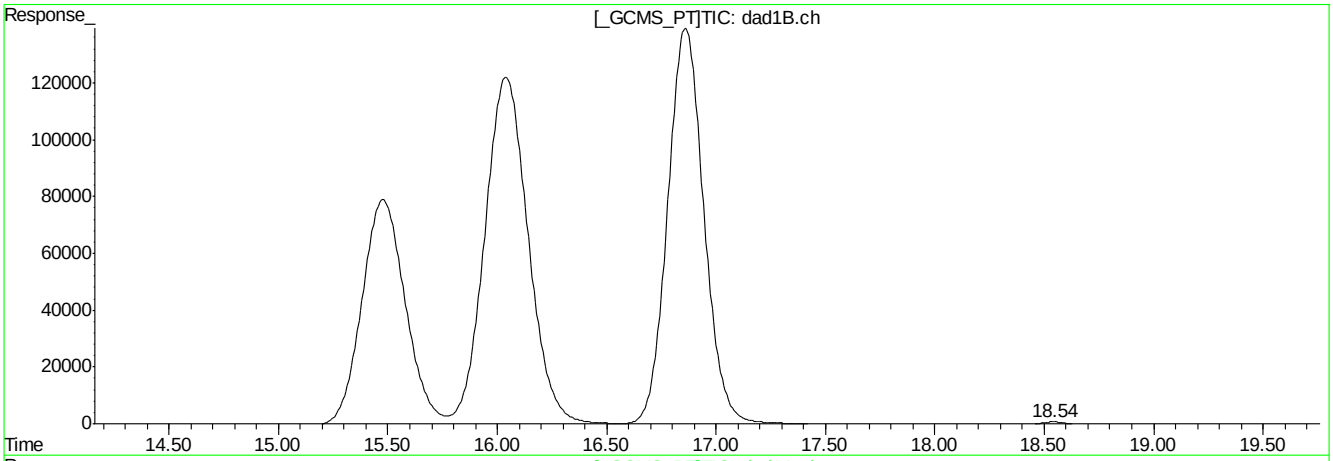
response 19279539

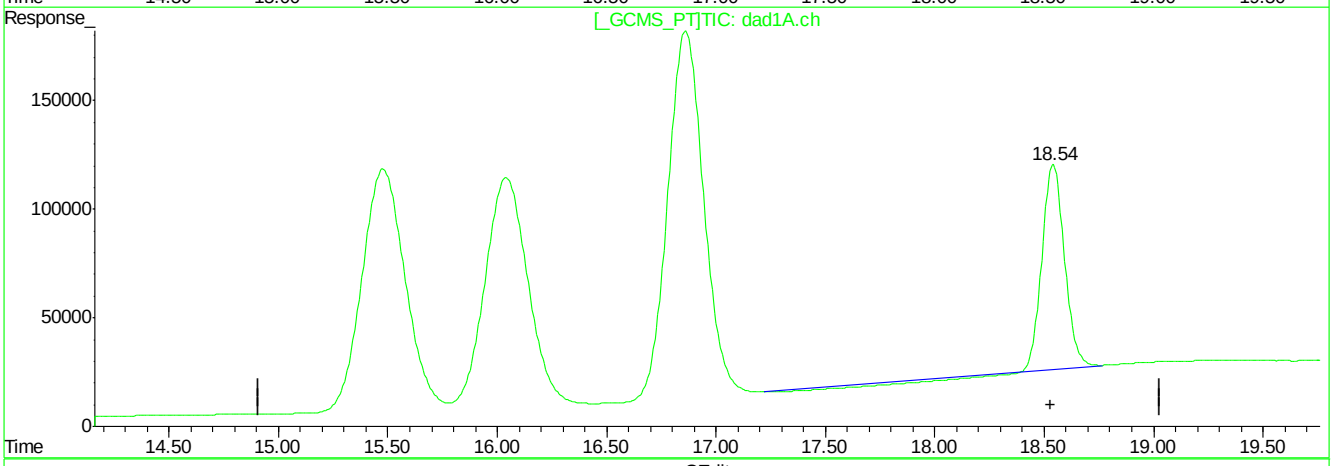
(+) = Expected Retention Time
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:17:50 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.54min 0.000ppb

response 61242

(21) PETN #2

18.54min 4462.408ppb

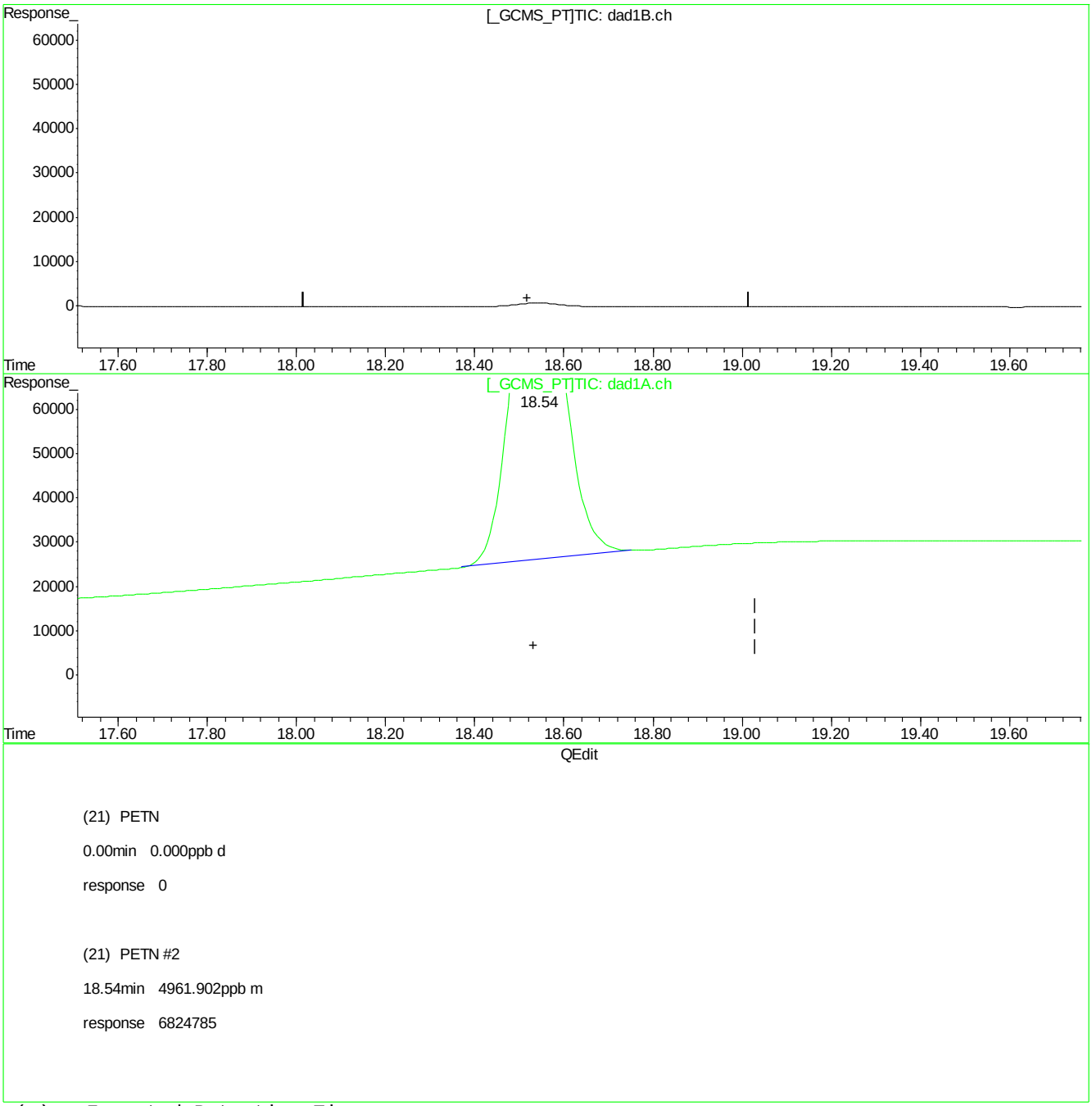
response 6137763

(+) = Expected Retention Time
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:17:53 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1B.ch Vial: 98
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391050.D\dad1A.ch
Acq On : 03-Aug-2021, 15:22:58 Operator: jamesb
Sample : ic2464-5000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:16 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:16:16 2021
Response via : Multiple Level Calibration



(+) = Expected Retention Time
PP391050.D GPP2464_080321PRI.M Thu Aug 05 10:18:03 2021

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/05/21 14:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 05 10:34:23 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
	Spiked Amount 500.000	Range 70 - 136		Recovery =		0.00%#	0.00%#
	Target Compounds						
1)	TNX	1.31	1.31	769344	1248880	462.250	456.694
2)	HMX	1.44	1.44	1510415	4281423	963.905	925.187
3)	DNX	1.69	1.69	2172260	3472697	990.651	1019.742
4)	MNX	2.27	2.27	2930513	4597087	1128.163	1130.153
5)	RDX	2.89	2.89	1832775	2962213	983.394	984.323
6)	1,3,5-Trinitrobe	4.66	4.66	3987431	7679293	990.896	985.463
7)	1,3-Dinitrobenze	5.86	5.87	5167484	3604879	993.219	965.007
8)	3,5-Dinitroanili	6.23	6.23	3908865	6816374	981.572	962.122
9)	Nitrobenzene	7.47	7.47	3019857	2945120	993.036	982.610
10)	Nitroglycerin	0.00	8.99	0	1141963	N.D.	912.128 #
11)	Tetryl	9.52	9.52	3040293	4834577	970.430	1004.267
12)	2,4,6-Trinitroto	9.89	9.89	3658341	4512233	967.521	1008.390
13)	2-Amino-4,6-Dini	10.29	10.29	3368485	5203330	973.899	1037.443
14)	4-Amino-2,6-Dini	10.81	10.81	2459031	5067220	1010.203	1048.781
16)	2,4-Dinitrotolue	11.90	11.90	4619092	3092507	971.884	1002.279
17)	2,6-Dinitrotolue	12.38	12.39	2673896	3511217	976.574	1046.141
18)	o-Nitrotoluene	15.49	15.49	2182696	2945467	954.737	1006.331m
19)	p-Nitrotoluene	16.05	16.06	3437265	2724424	998.951	964.772
20)	m-Nitrotoluene	16.87	16.87	3193554	3855542	993.230	1044.659m
21)	PETN	0.00	18.55	0	1336755	N.D.	1046.344m#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:35:55 2021 Page 1

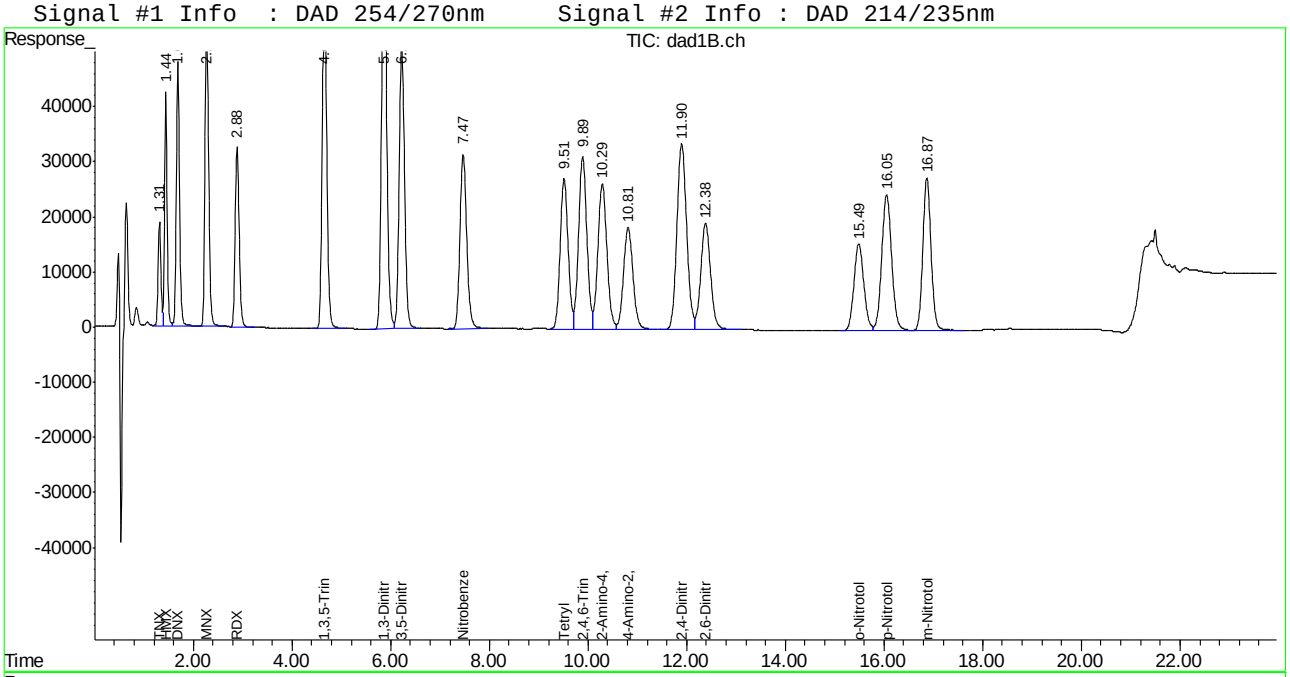
9.5.21
9

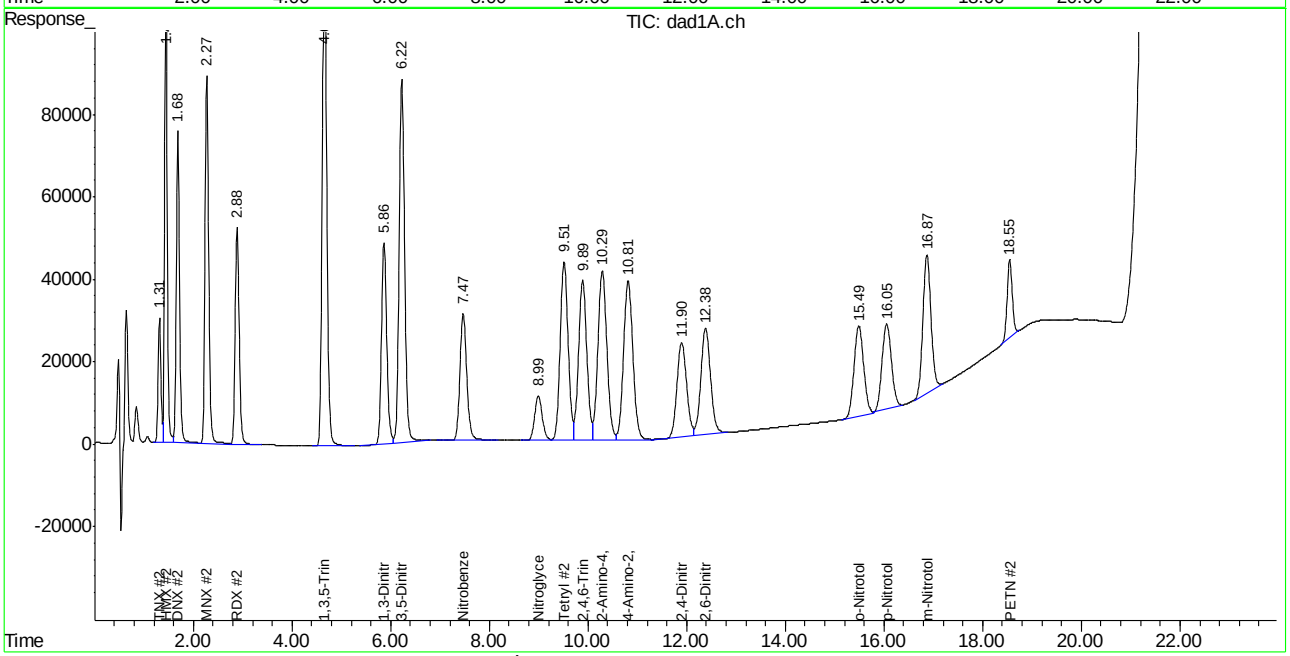
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : op86615,GPP2464,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:35 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

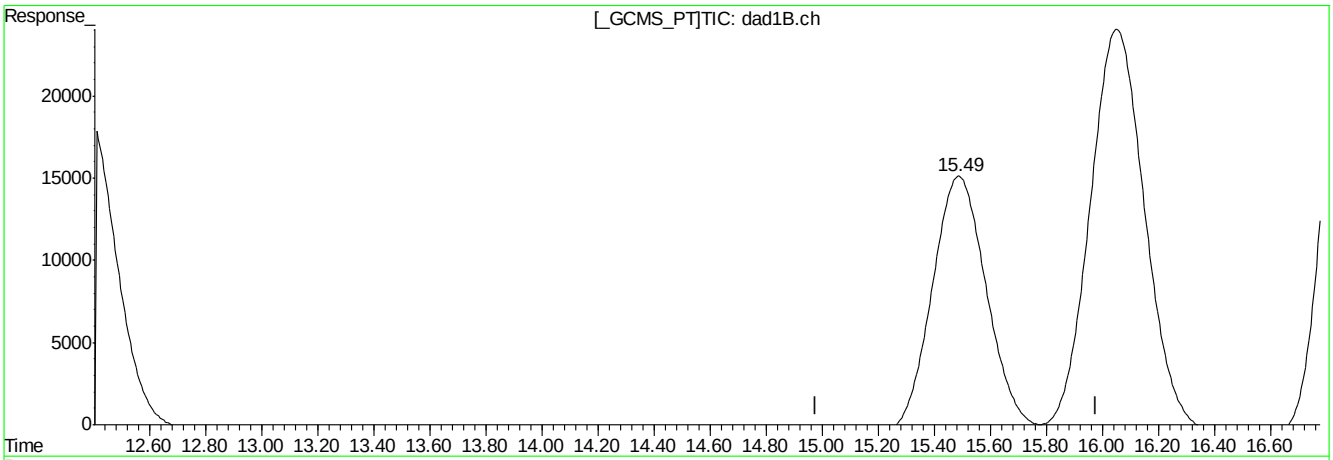
Sample Number: GPP2464-ICV2464 **Method:** SW846 8330B
Lab FileID: PP391051.D **Analyst approved:** 08/05/21 10:38 James Boone
Injection Time: 08/03/21 15:54 **Supervisor approved:** 08/05/21 14:12 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.49	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.87	Poor instrument integration
PETN	78-11-5	2	18.55	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:34 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.49min 954.737ppb

response 2182696

(18) o-Nitrotoluene #2

15.49min 832.540ppb

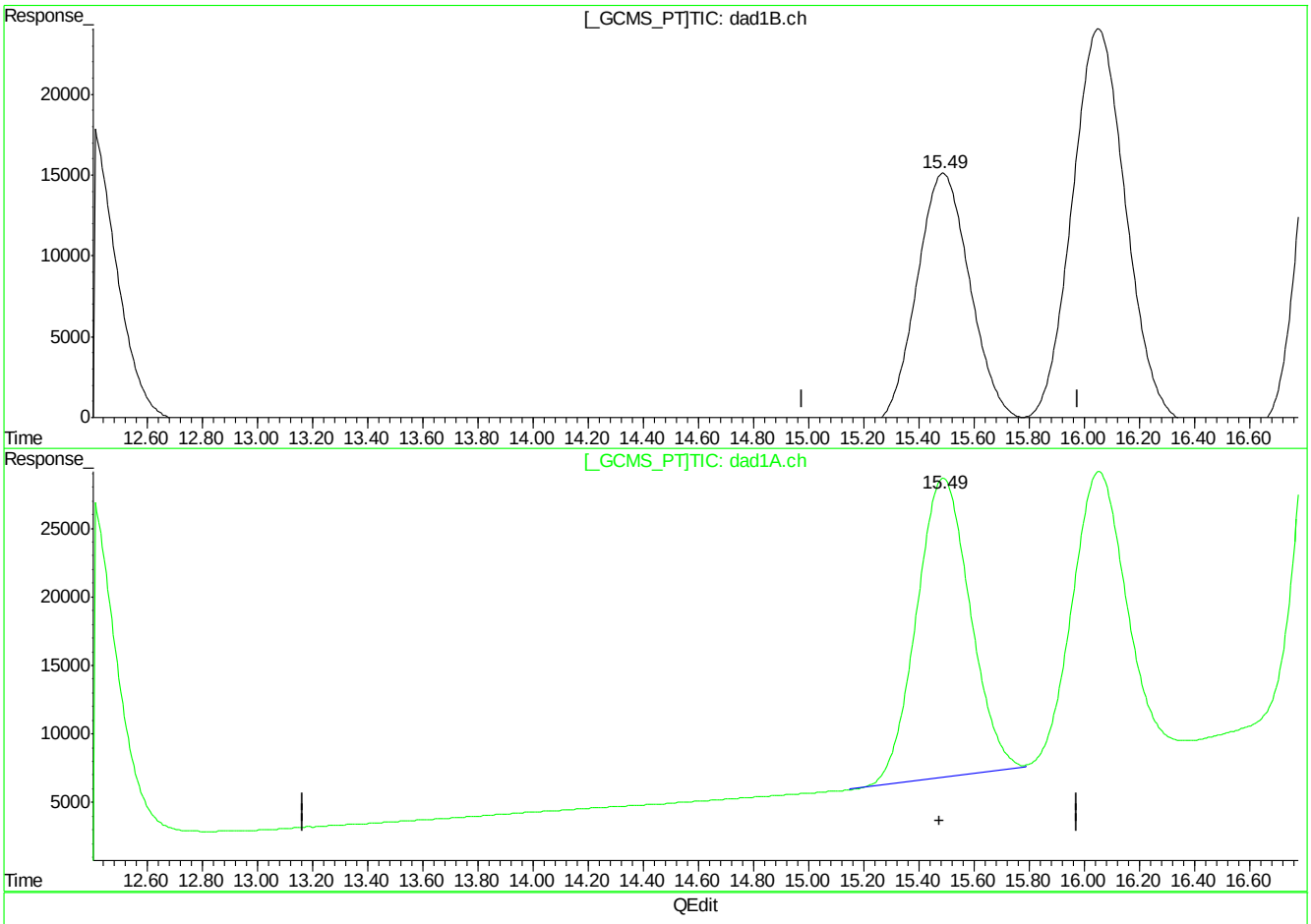
response 2436794

(+) = Expected Retention Time
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:34:52 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:34 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.49min 954.737ppb

response 2182696

(18) o-Nitrotoluene #2

15.49min 1006.331ppb m

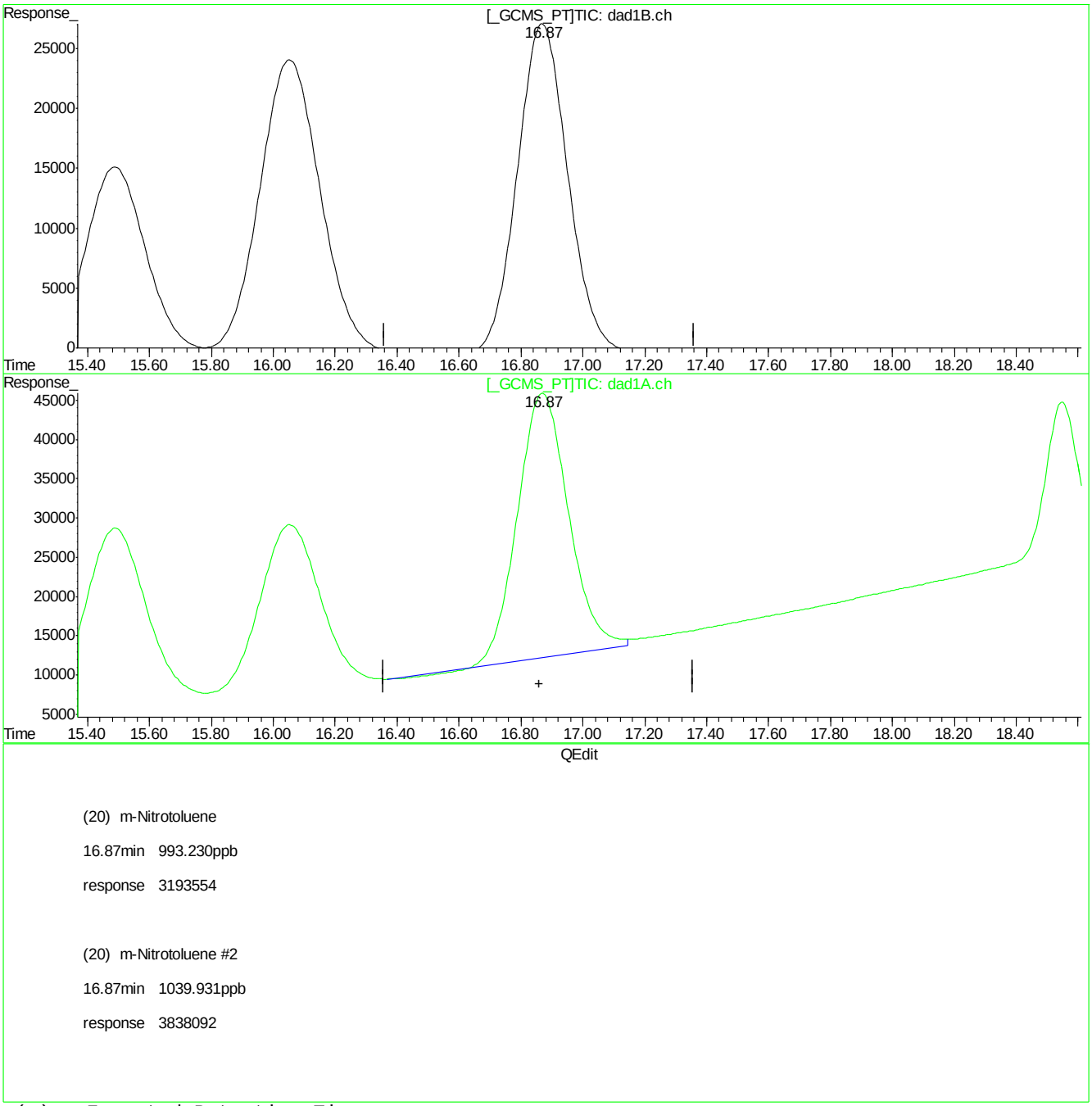
response 2945467

(+) = Expected Retention Time
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:34:59 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:34 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.87min 993.230ppb

response 3193554

(20) m-Nitrotoluene #2

16.87min 1039.931ppb

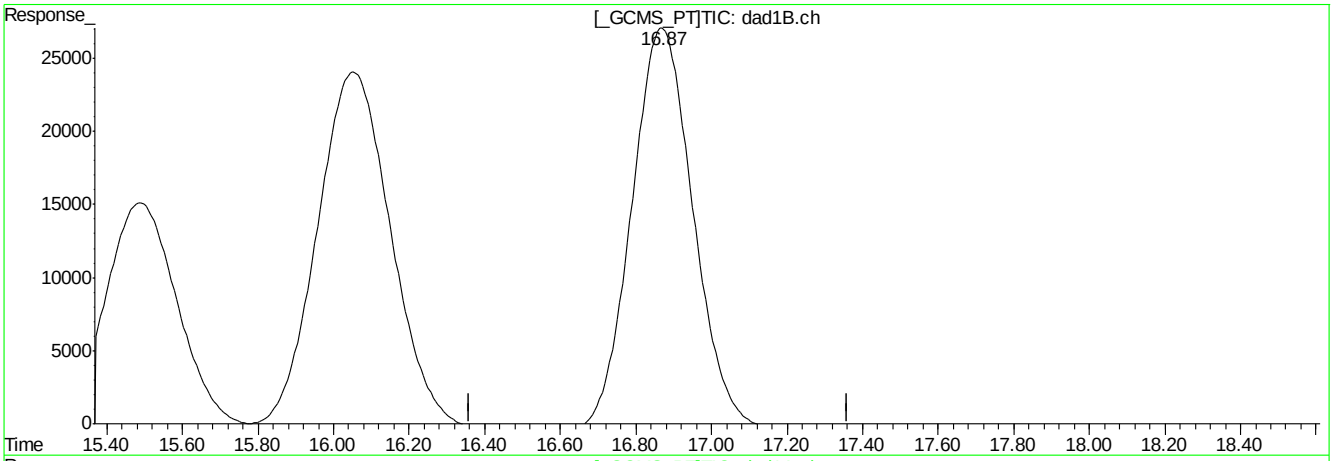
response 3838092

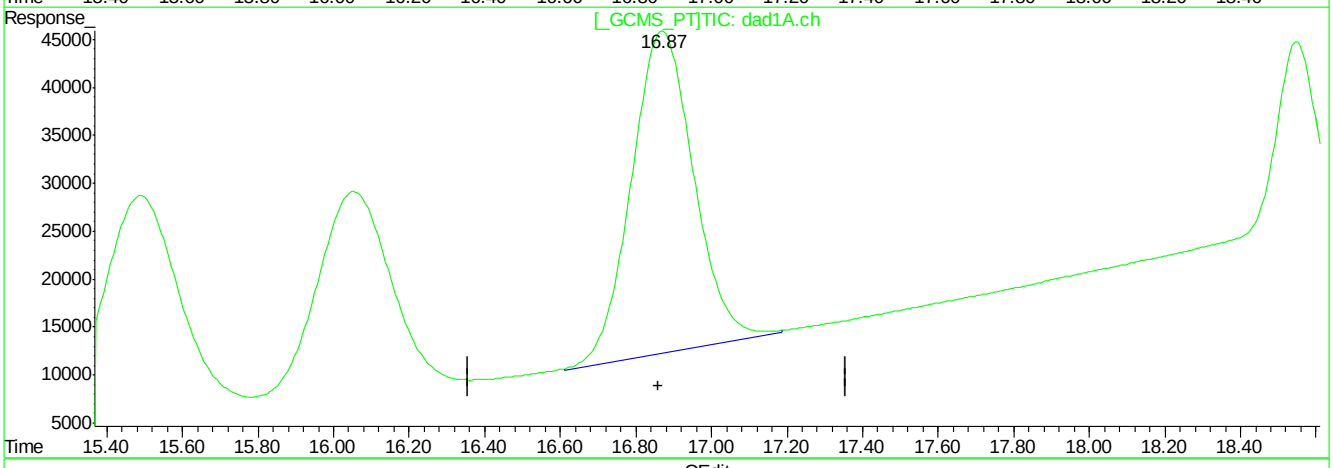
(+) = Expected Retention Time
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:35:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:34 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.87min 993.230ppb

response 3193554

(20) m-Nitrotoluene #2

16.87min 1044.659ppb m

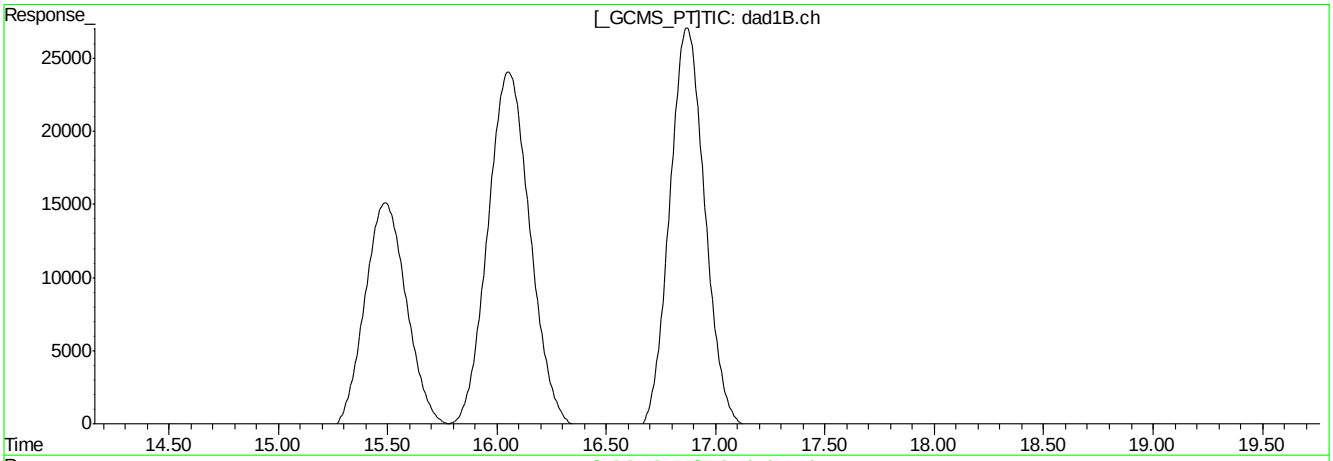
response 3855542

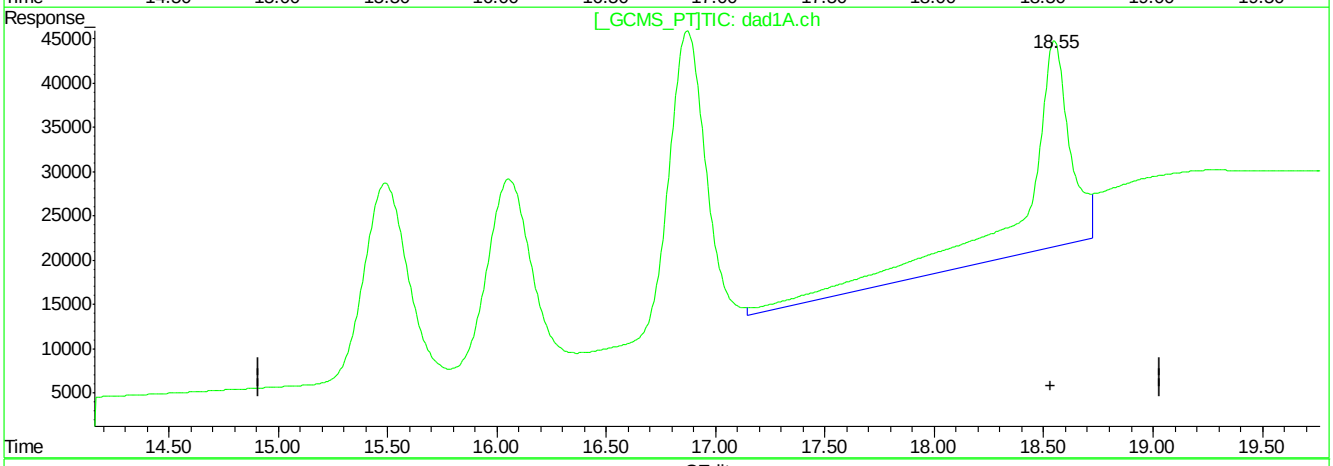
(+) = Expected Retention Time
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:35:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:34 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.55min 2756.768ppb

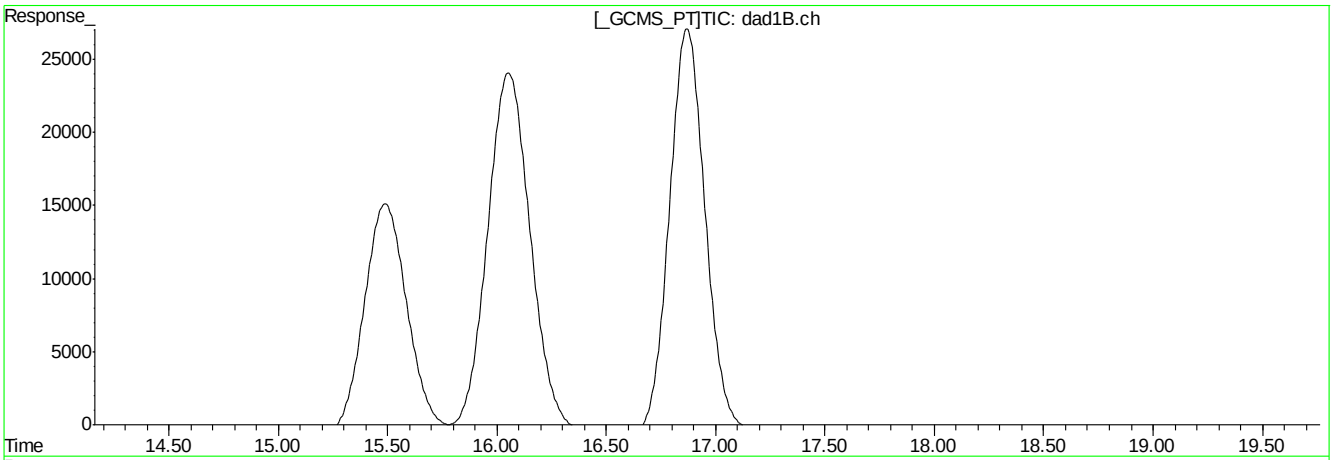
response 3521901

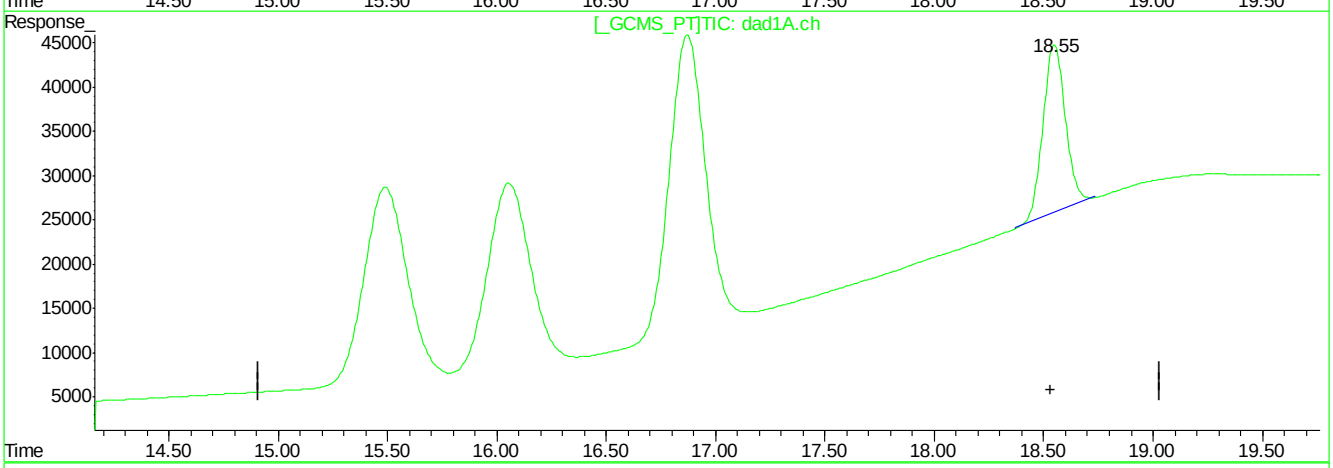
(+) = Expected Retention Time
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:35:12 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1B.ch Vial: 99
Signal #2 : C:\HPCHEM\2\DATA\GPP2464\PP391051.D\dad1A.ch
Acq On : 03-Aug-2021, 15:54:03 Operator: jamesb
Sample : icv2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 5 10:34 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Thu Aug 05 10:34:10 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.55min 1046.344ppb m

response 1336755

(+) = Expected Retention Time
PP391051.D GPP2464_080321PRI.M Thu Aug 05 10:35:16 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/12/21 11:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 09 14:46:56 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.22	11.22	2106206	3580782	988.886	1102.246
	Spiked Amount 500.000	Range 70 - 136		Recovery =		197.78%#	220.45%#
	Target Compounds						
1)	TNX	1.31	1.31	755345	1208542	453.840	441.943
2)	HMX	1.44	1.44	1492623	4200505	952.551	907.701
3)	DNX	1.68	1.68	2132192	3395488	972.378	997.070
4)	MNX	2.26	2.26	2947396	4580596	1134.663	1126.099
5)	RDX	2.88	2.88	1798635	2890533	965.075	960.504
6)	1,3,5-Trinitrobe	4.65	4.65	3904100	7589556	970.188	973.947
7)	1,3-Dinitrobenze	5.85	5.85	5067607	3510308	974.022	939.691
8)	3,5-Dinitroanili	6.19	6.19	3904783	6720004	980.547	948.520
9)	Nitrobenzene	7.44	7.44	3043032	2957971	1000.657	986.897
10)	Nitroglycerin	0.00	9.02	0	1157315	N.D.	924.390 #
11)	Tetryl	9.50	9.50	2802995	4522359	894.687	939.411
12)	2,4,6-Trinitroto	9.89	9.89	3546171	4263824	937.855	952.876
13)	2-Amino-4,6-Dini	10.23	10.23	3378477	5019260	976.788	1000.743
14)	4-Amino-2,6-Dini	10.75	10.75	2385666	4682930	980.064	969.243
16)	2,4-Dinitrotolue	11.86	11.87	4504076	2829705	947.684	917.106
17)	2,6-Dinitrotolue	12.35	12.35	2683738	3400054	980.169	1013.021
18)	o-Nitrotoluene	15.44	15.43	2132393	2875035	932.734	982.267m
19)	p-Nitrotoluene	16.01	16.01	3369395	2532984	979.226	896.979
20)	m-Nitrotoluene	16.84	16.84	3180414	3672258	989.143	994.999
21)	PETN	0.00	18.61	0	1376333	N.D.	1077.325m#

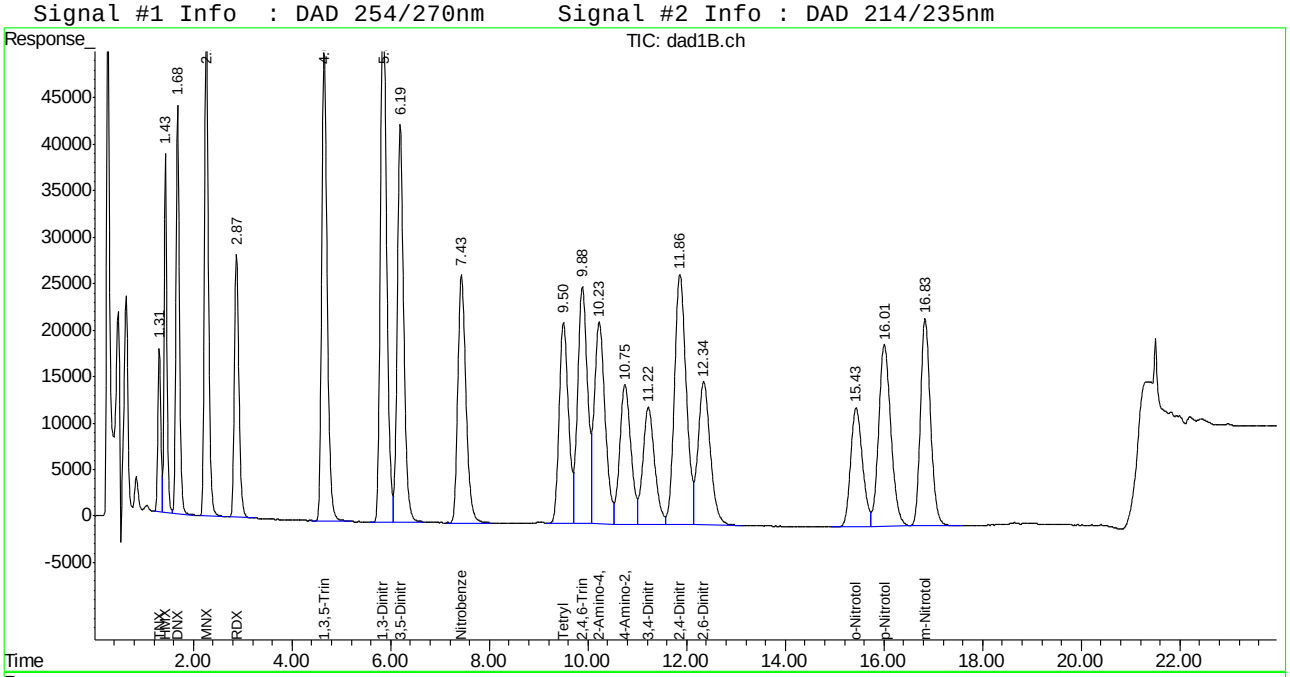
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391140.D GPP2464_080321PRI.M Thu Aug 12 10:52:05 2021 Page 1

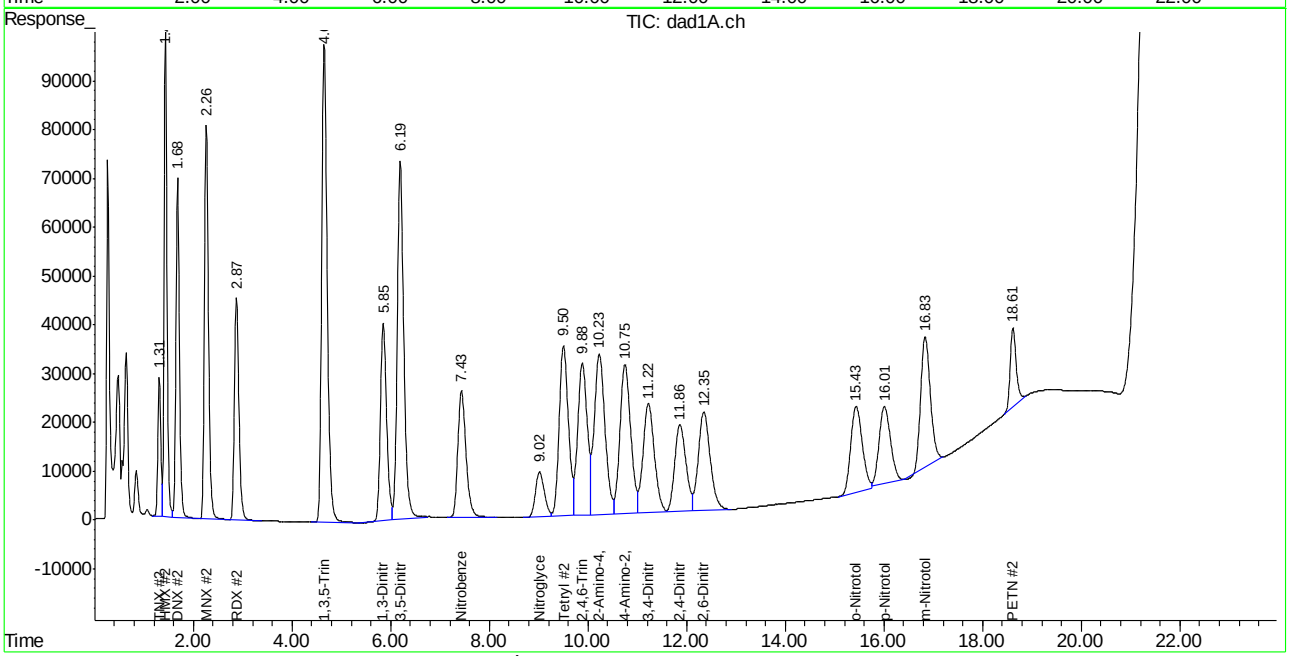
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 9 14:47 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

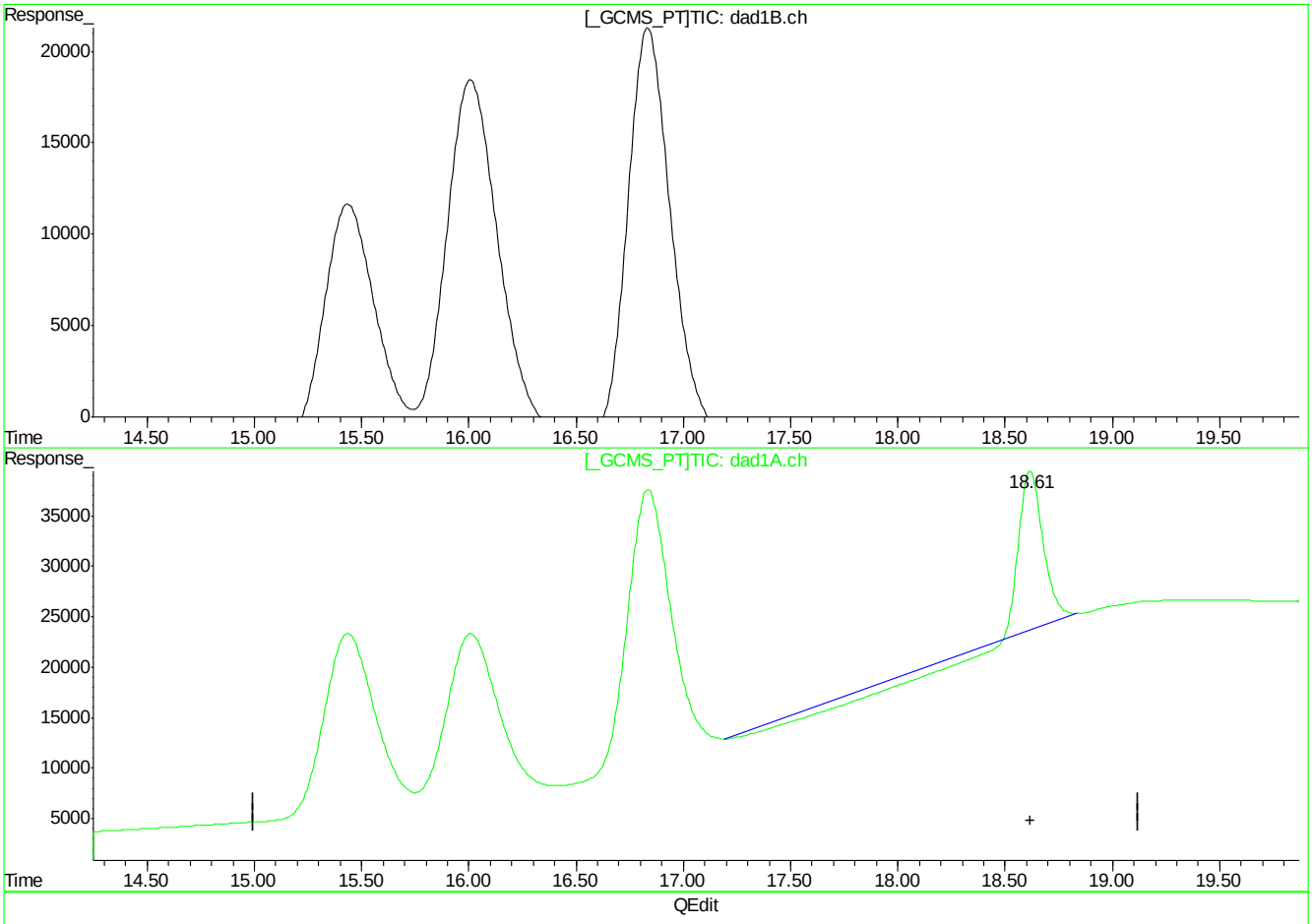
Sample Number: GPP2467-CC2464
Lab FileID: PP391140.D
Injection Time: 08/09/21 13:54
Method: SW846 8330B
Analyst approved: 08/12/21 10:53 James Boone
Supervisor approved: 08/12/21 11:12 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.43	Poor instrument integration
PETN	78-11-5	2	18.61	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 9 14:46 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.62min 553.996ppb

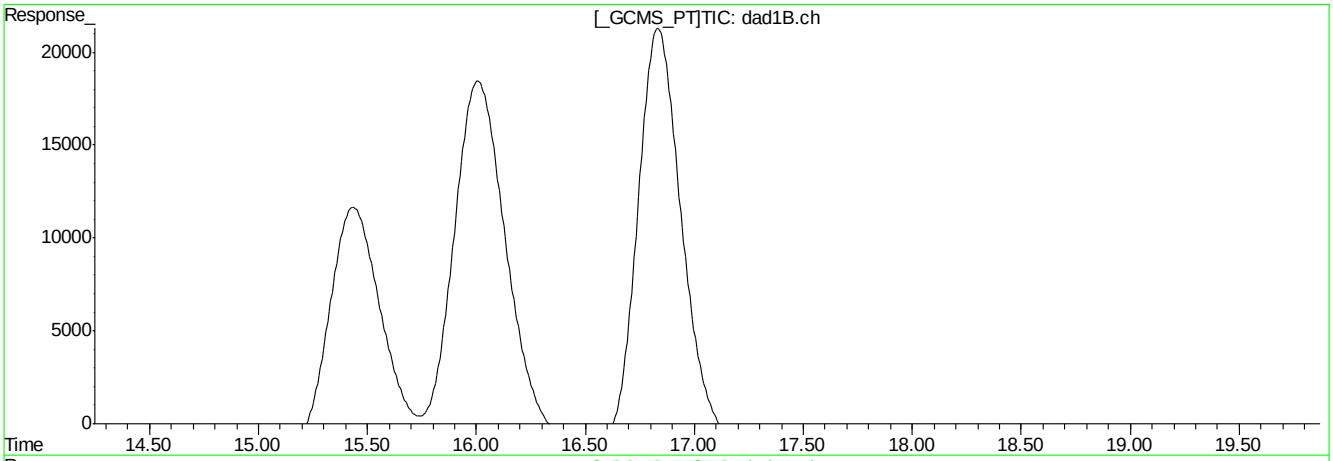
response 707756

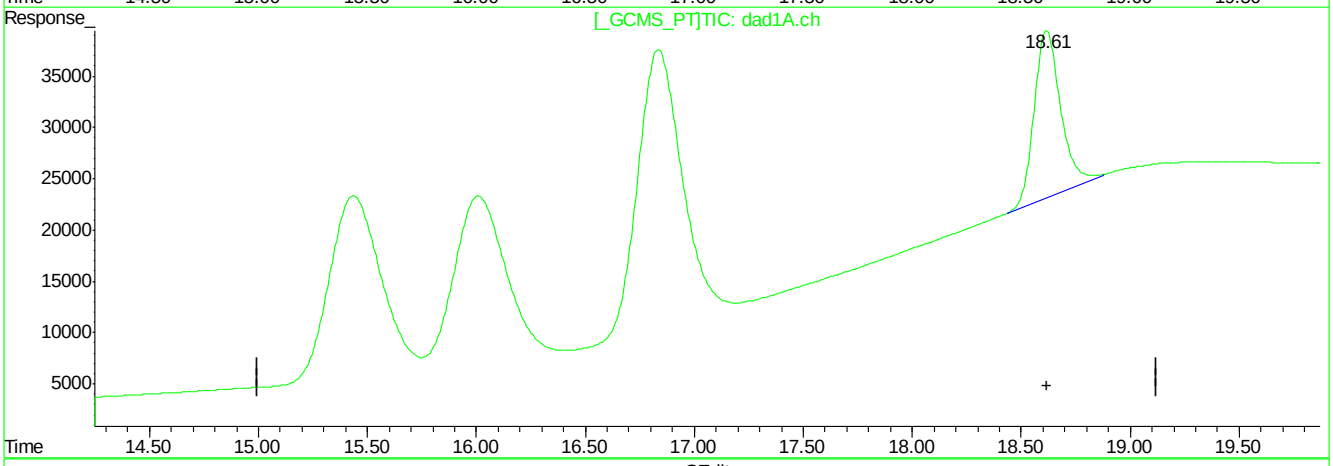
(+) = Expected Retention Time
PP391140.D GPP2464_080321PRI.M Mon Aug 09 14:47:08 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 9 14:46 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.61min 1077.325ppb m

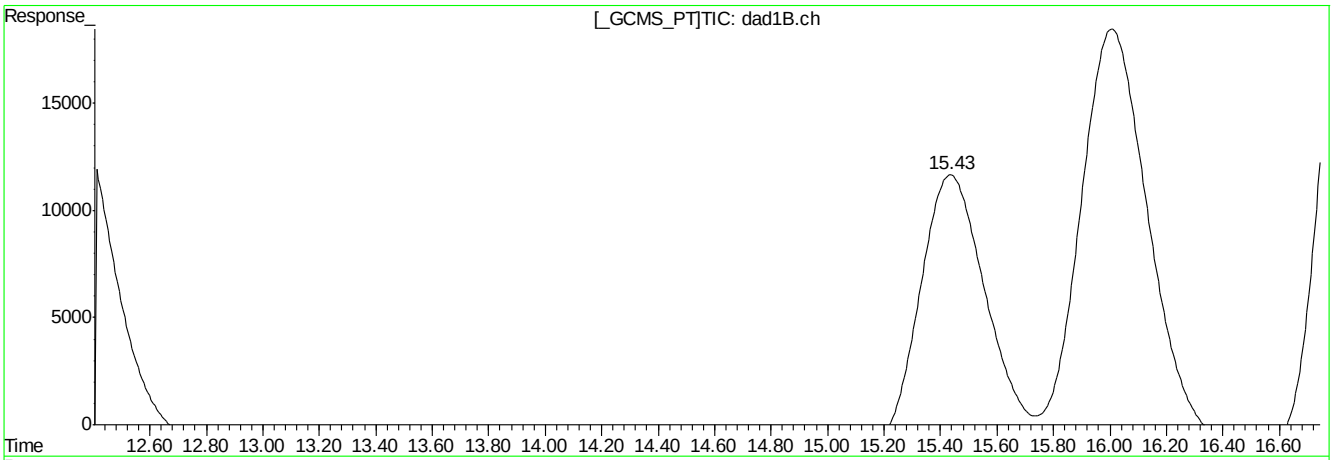
response 1376333

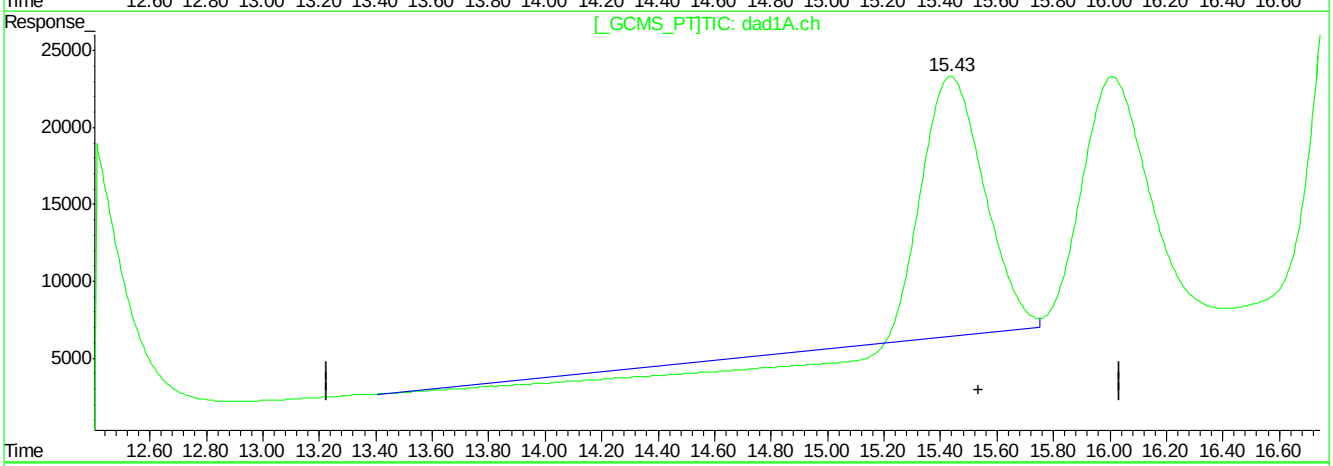
(+) = Expected Retention Time
PP391140.D GPP2464_080321PRI.M Mon Aug 09 14:47:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 9 14:46 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.44min 932.734ppb

response 2132393

(18) o-Nitrotoluene #2

15.44min 697.838ppb

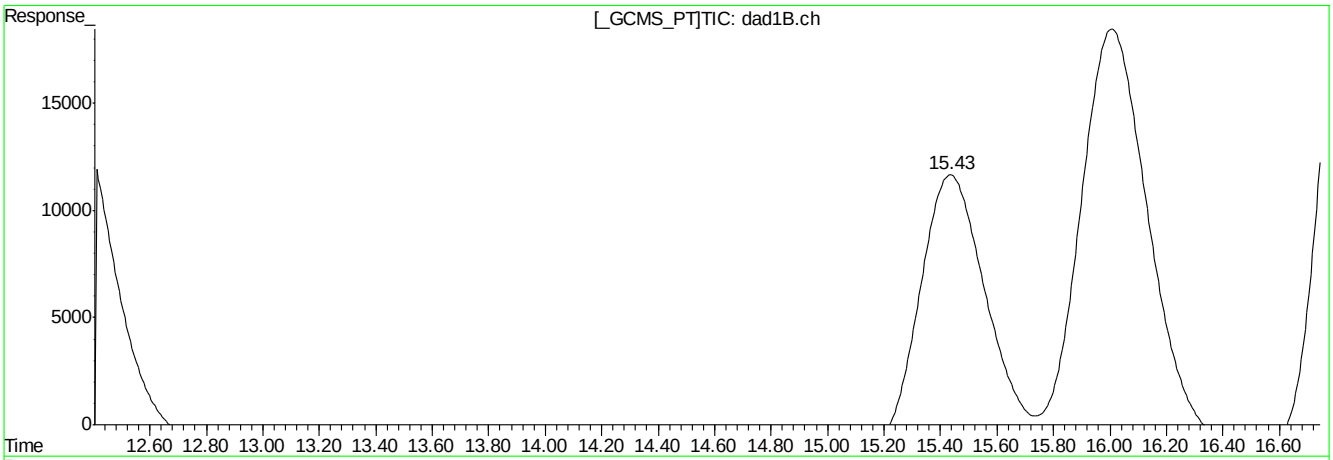
response 2042530

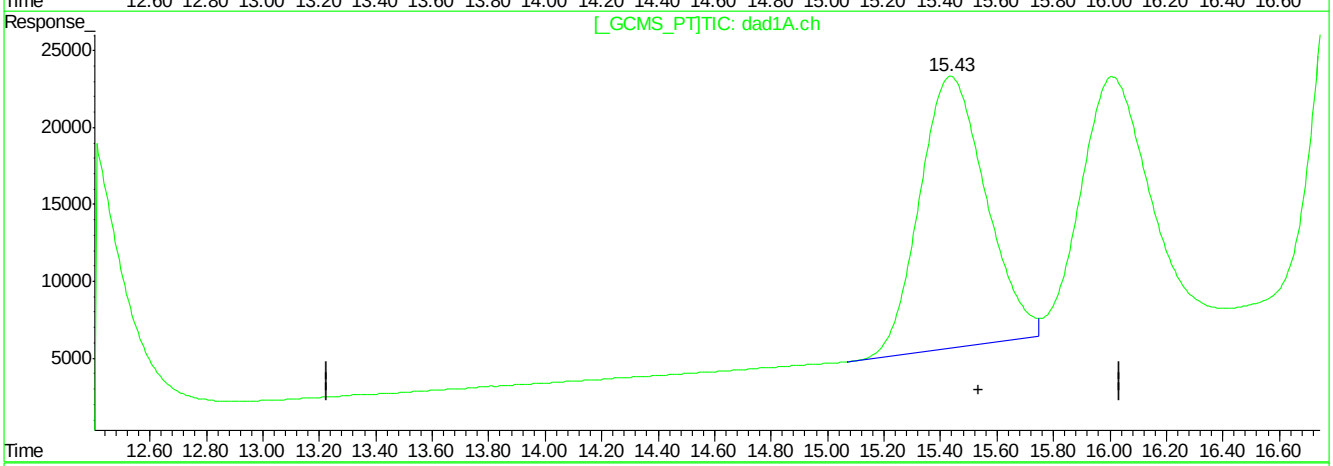
(+) = Expected Retention Time
PP391140.D GPP2464_080321PRI.M Mon Aug 09 14:47:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391140.D\dad1A.ch
Acq On : 09-Aug-2021, 13:54:04 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 9 14:46 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.44min 932.734ppb

response 2132393

(18) o-Nitrotoluene #2

15.43min 982.267ppb m

response 2875035

(+) = Expected Retention Time
PP391140.D GPP2464_080321PRI.M Mon Aug 09 14:47:25 2021

9.5.22.5

9

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/12/21 11:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:34 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.28	11.28	2087715	3498538	980.205	1076.929
	Spiked Amount 500.000	Range 70 - 136		Recovery =		196.04%#	215.39%#
	Target Compounds						
1)	TNX	1.31	1.32	759854	1211711	456.549	443.102
2)	HMX	1.44	1.44	1487200	4170764	949.089	901.274
3)	DNX	1.69	1.69	2119638	3371125	966.653	989.915
4)	MNX	2.27	2.27	2936183	4558834	1130.346	1120.749
5)	RDX	2.89	2.89	1792091	2877177	961.564	956.066
6)	1,3,5-Trinitrobe	4.67	4.67	3877632	7521835	963.610	965.257
7)	1,3-Dinitrobenze	5.87	5.87	5036390	3483264	968.022	932.451
8)	3,5-Dinitroanili	6.22	6.22	3864963	6669452	970.548	941.384
9)	Nitrobenzene	7.46	7.46	2994584	2922447	984.725	975.045
10)	Nitroglycerin	0.00	9.06	0	1100609	N.D.	879.097 #
11)	Tetryl	9.55	9.55	2783231	4450480	888.379	924.480
12)	2,4,6-Trinitroto	9.93	9.93	3527948	4208887	933.036	940.598
13)	2-Amino-4,6-Dini	10.27	10.27	3341563	4940799	966.115	985.099
14)	4-Amino-2,6-Dini	10.80	10.80	2372614	4608338	974.702	953.804
16)	2,4-Dinitrotolue	11.91	11.91	4488767	2801677	944.462	908.022
17)	2,6-Dinitrotolue	12.40	12.40	2674086	3370968	976.644	1004.355
18)	o-Nitrotoluene	15.49	15.48	2112820	2831061	924.172	967.243m
19)	p-Nitrotoluene	16.06	16.06	3347616	2622423	972.896	928.651m
20)	m-Nitrotoluene	16.88	16.88	3148471	3591112	979.208	973.012
21)	PETN	0.00	18.65	0	1306042	N.D.	1022.304m#

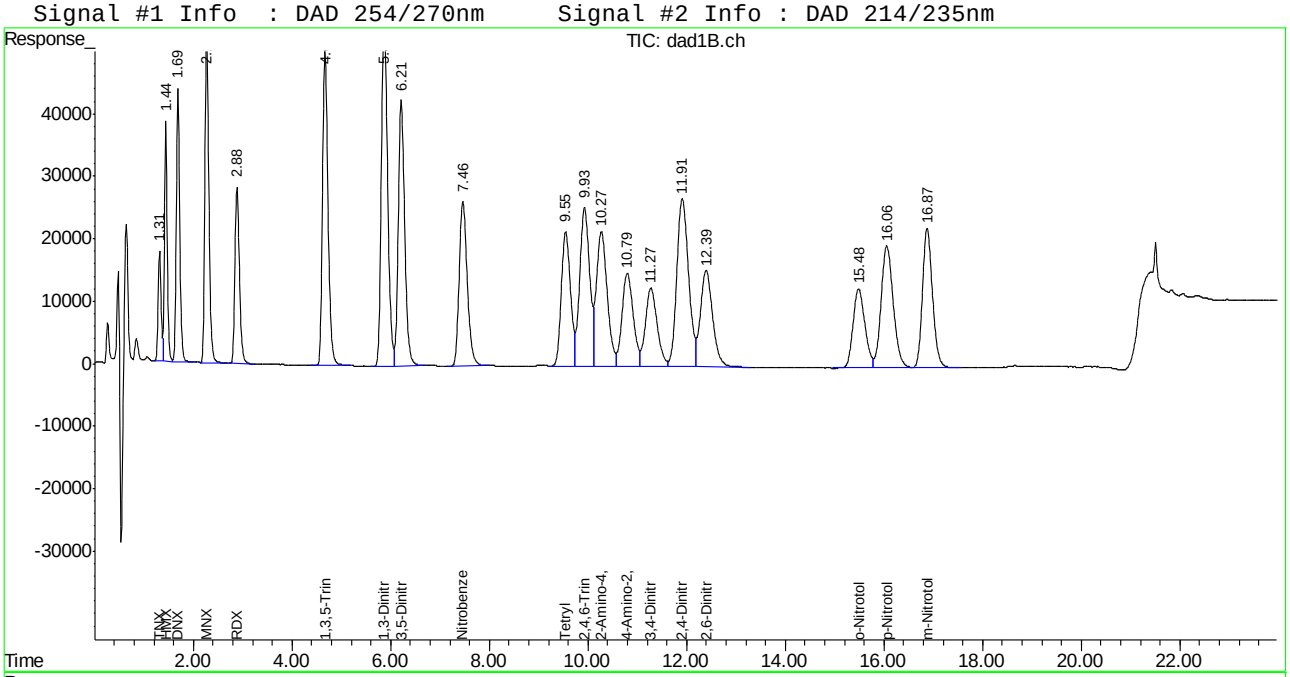
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

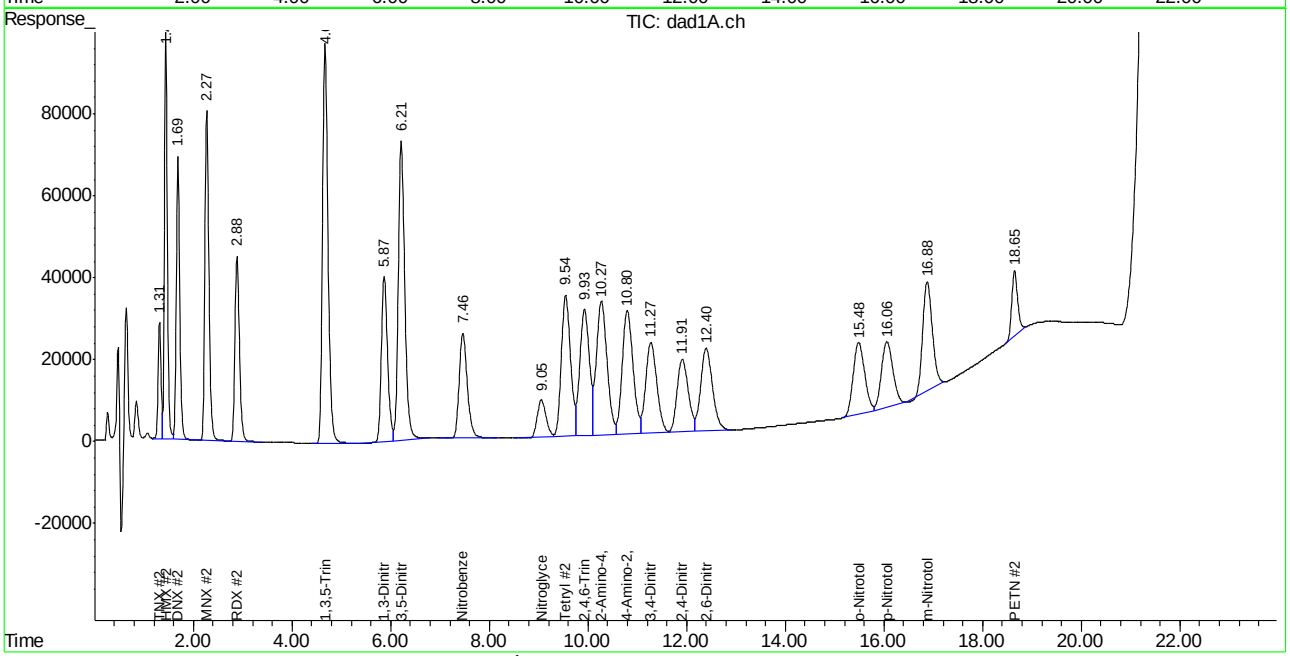
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:48 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

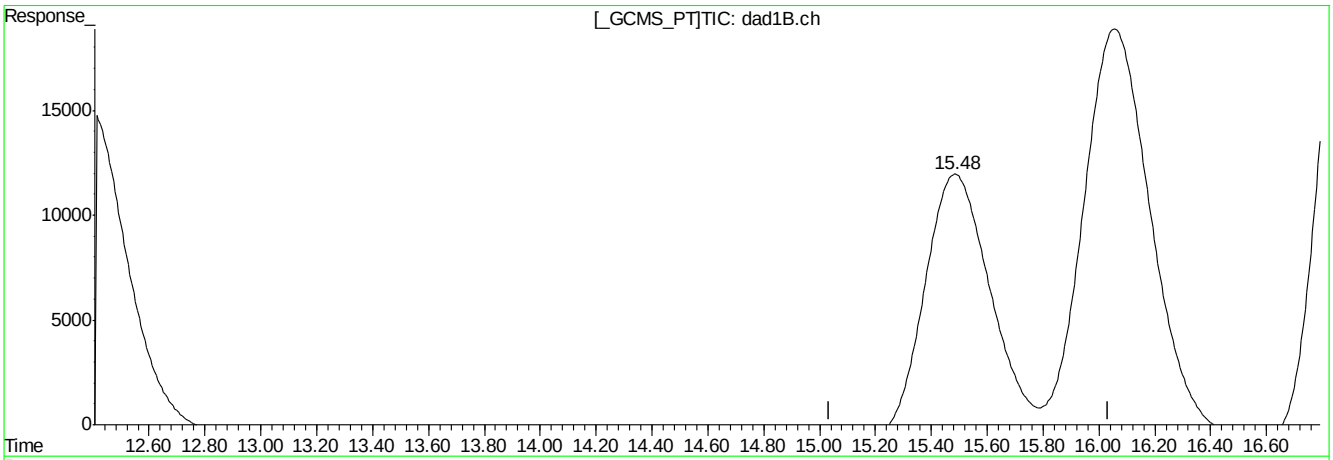
Sample Number: GPP2467-CC2464
Lab FileID: PP391152.D
Injection Time: 08/09/21 20:06
Method: SW846 8330B
Analyst approved: 08/12/21 10:53 James Boone
Supervisor approved: 08/12/21 11:12 Naresh Jiawan

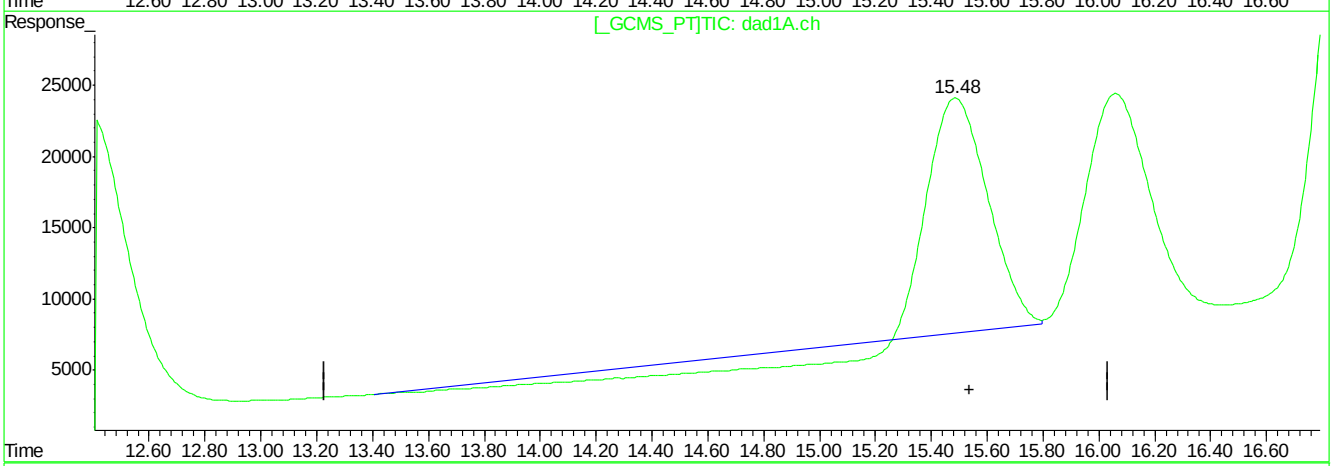
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.48	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.06	Poor instrument integration
PETN	78-11-5	2	18.65	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.49min 924.172ppb

response 2112820

(18) o-Nitrotoluene #2

15.49min 608.747ppb

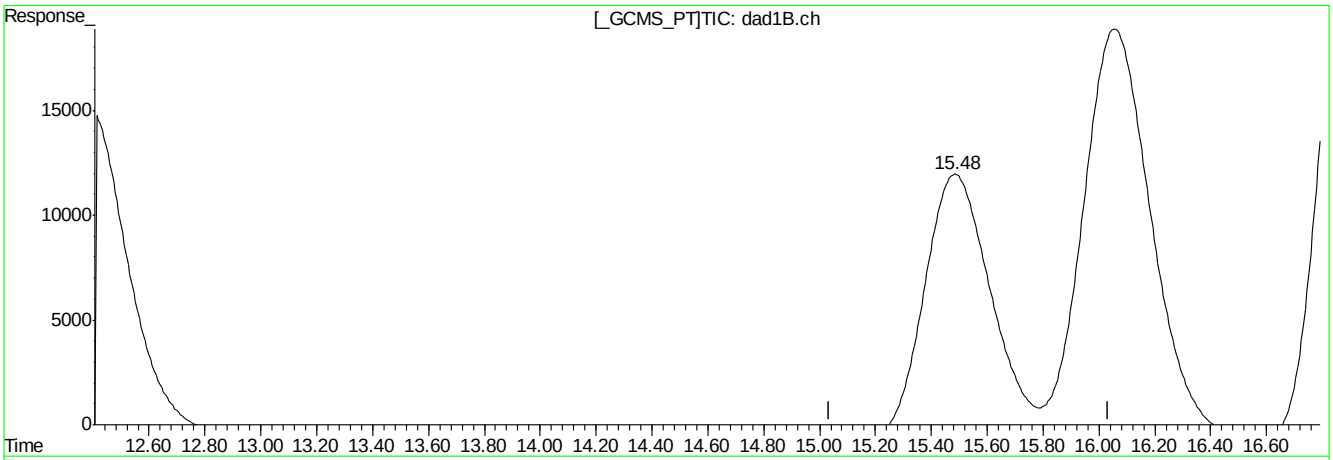
response 1781766

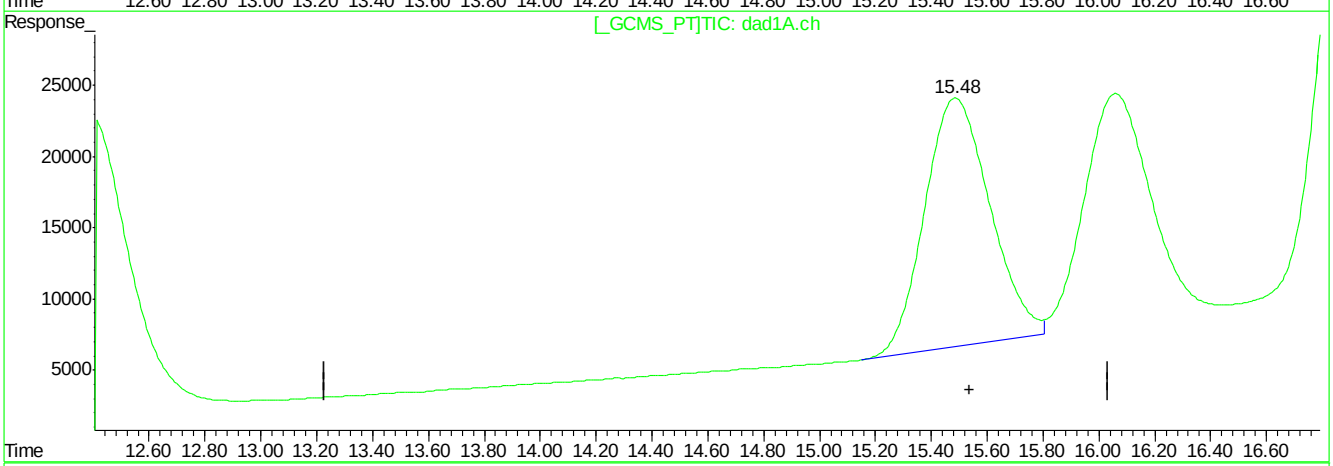
(+) = Expected Retention Time
PP391152.D GPP2464_080321PRI.M Thu Aug 12 10:48:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.49min 924.172ppb

response 2112820

(18) o-Nitrotoluene #2

15.48min 967.243ppb m

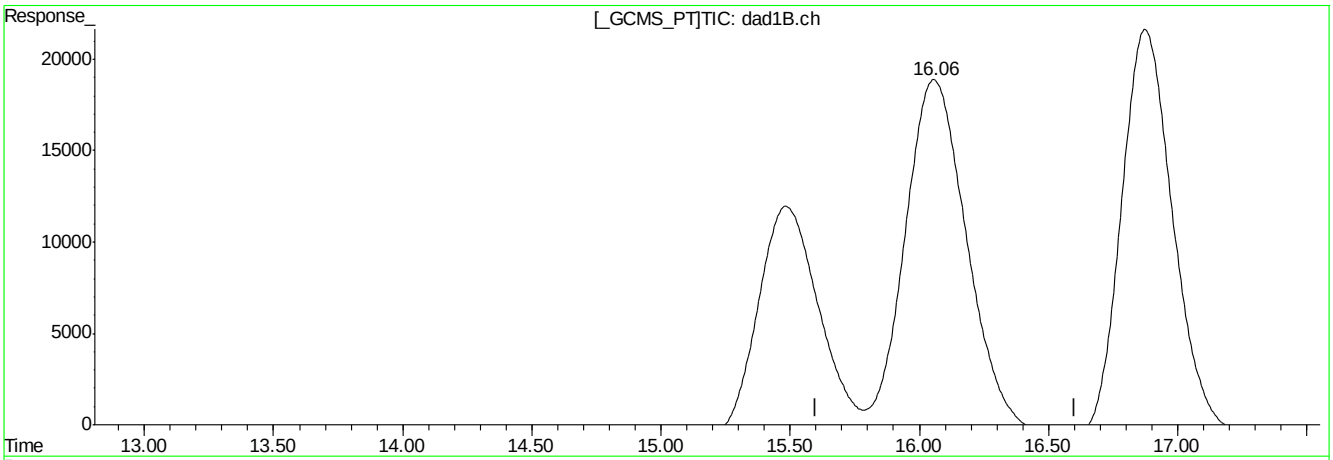
response 2831061

(+) = Expected Retention Time
PP391152.D GPP2464_080321PRI.M Thu Aug 12 10:48:30 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.06min 972.896ppb

response 3347616

(19) p-Nitrotoluene #2

16.06min 873.789ppb

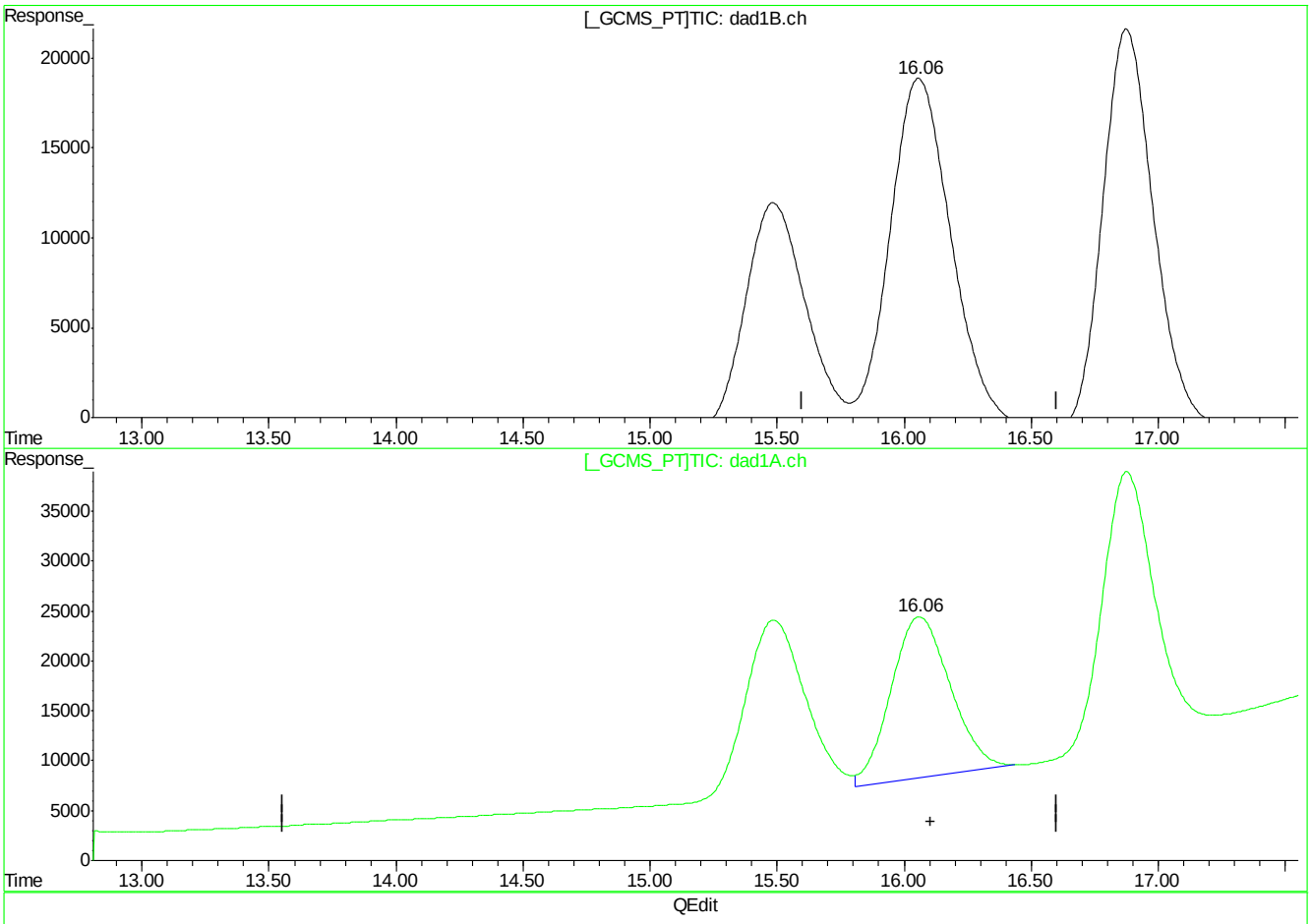
response 2467498

(+) = Expected Retention Time
PP391152.D GPP2464_080321PRI.M Thu Aug 12 10:48:35 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.06min 972.896ppb

response 3347616

(19) p-Nitrotoluene #2

16.06min 928.651ppb m

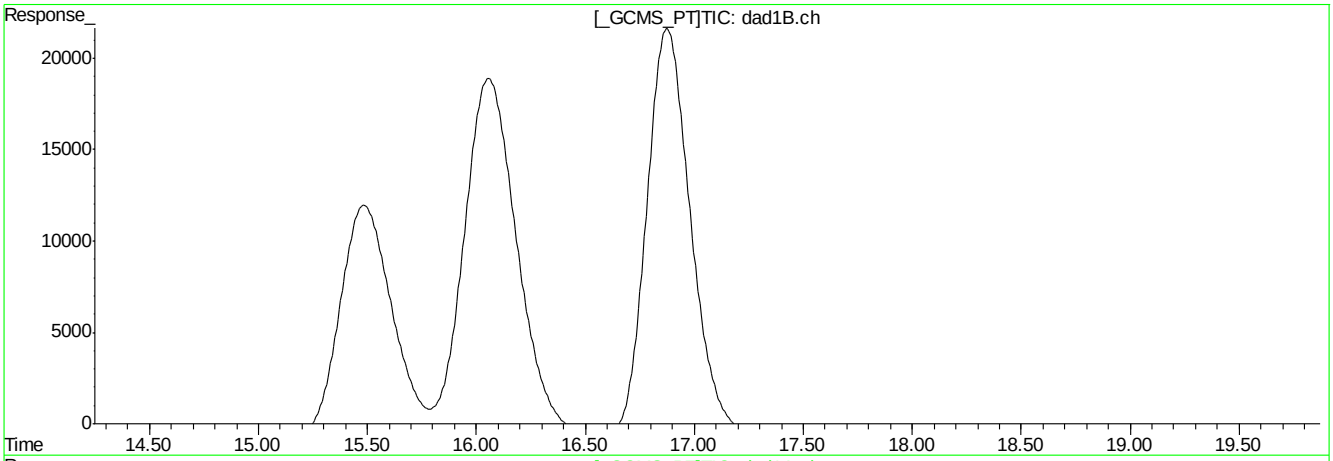
response 2622423

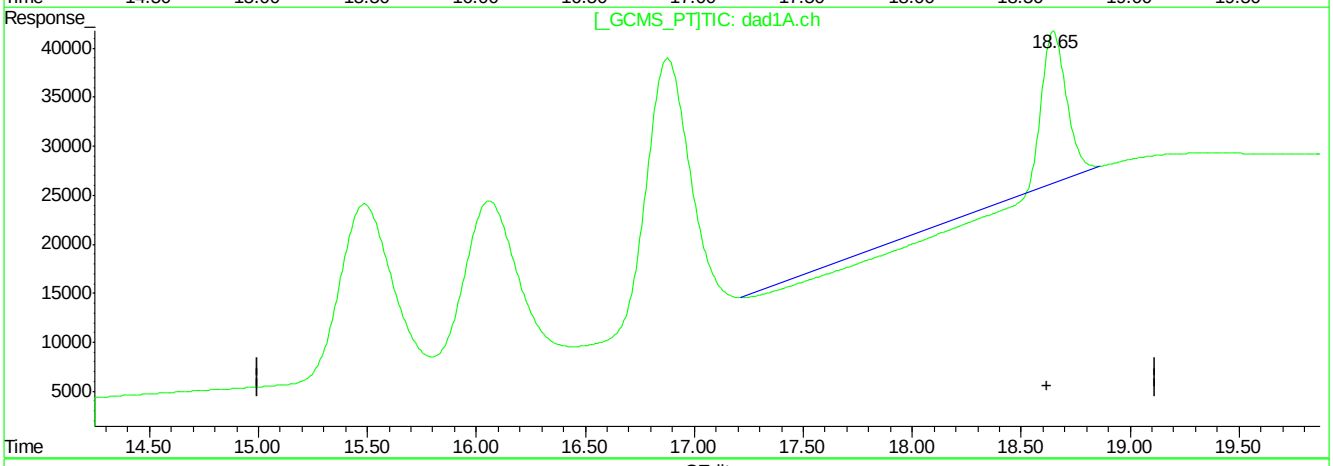
(+) = Expected Retention Time
PP391152.D GPP2464_080321PRI.M Thu Aug 12 10:48:43 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.65min 457.534ppb

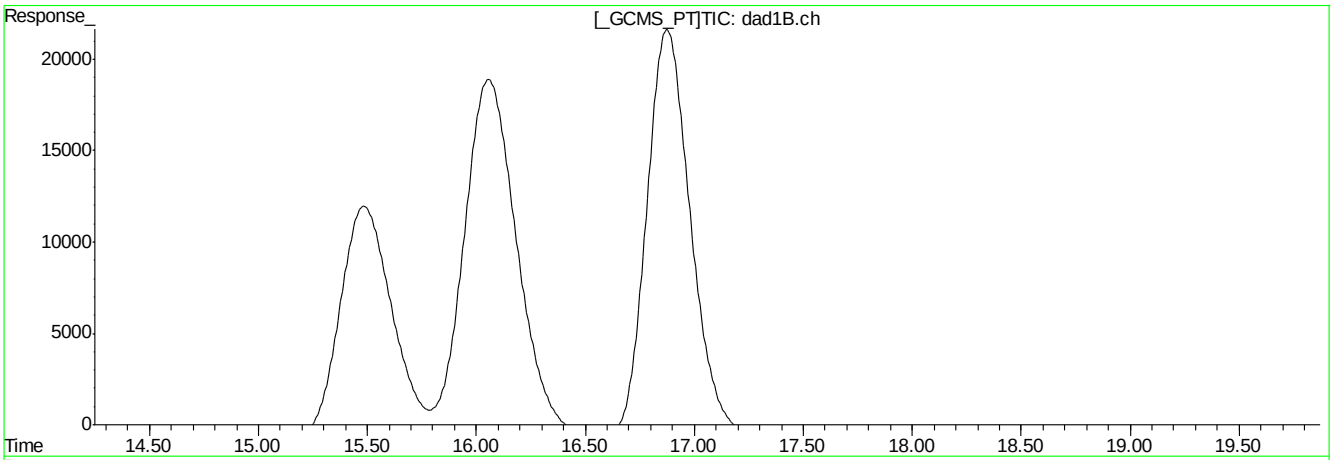
response 584521

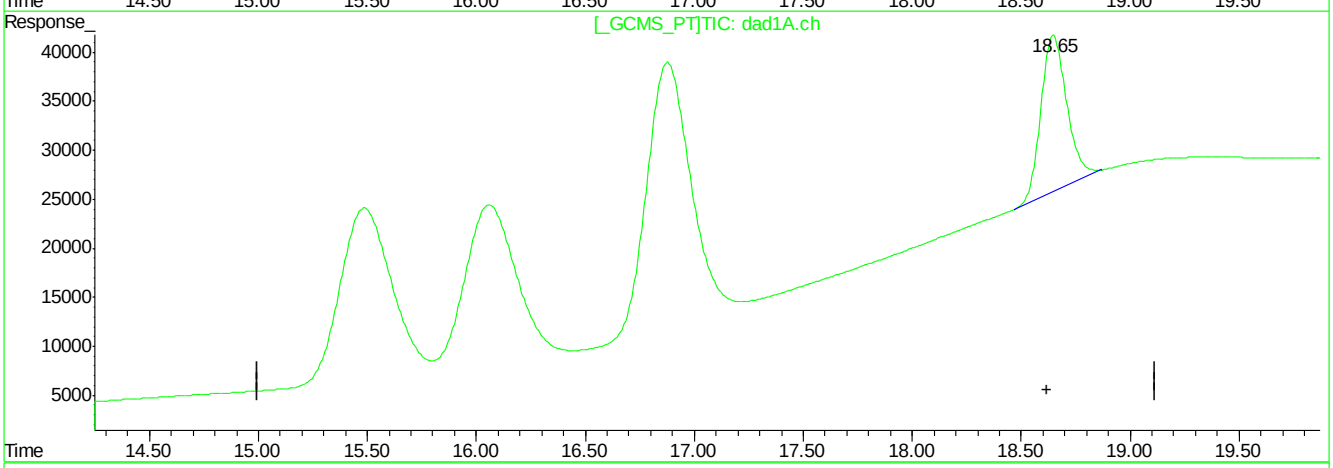
(+) = Expected Retention Time
PP391152.D GPP2464_080321PRI.M Thu Aug 12 10:48:48 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391152.D\dad1A.ch
Acq On : 09-Aug-2021, 20:06:02 Operator: jamesb
Sample : cc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.65min 1022.304ppb m

response 1306042

(+) = Expected Retention Time
PP391152.D GPP2464_080321PRI.M Thu Aug 12 10:48:54 2021

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
08/12/21 11:12

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47:45 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Initial Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.26	11.26	2063824	3472098	968.988	1068.790
	Spiked Amount 500.000	Range 70 - 136		Recovery =		193.80%#	213.76%#
	Target Compounds						
1)	TNX	1.31	1.31	735248	1187340	441.764	434.190
2)	HMX	1.44	1.44	1437911	4062014	917.634	877.774
3)	DNX	1.68	1.68	2027182	3228127	924.488	947.925
4)	MNX	2.27	2.27	2903453	4496692	1117.746	1105.472
5)	RDX	2.88	2.88	1770921	2844413	950.206	945.179
6)	1,3,5-Trinitrobe	4.67	4.67	3845585	7462808	955.646	957.682
7)	1,3-Dinitrobenze	5.86	5.86	5011317	3483741	963.203	932.579
8)	3,5-Dinitroanili	6.20	6.21	3841319	6621335	964.611	934.593
9)	Nitrobenzene	7.46	7.46	2939987	2860348	966.772	954.326
10)	Nitroglycerin	0.00	9.05	0	1124370	N.D.	898.076 #
11)	Tetryl	9.53	9.53	2743628	4411631	875.738	916.410
12)	2,4,6-Trinitroto	9.92	9.92	3488355	4174368	922.564	932.884
13)	2-Amino-4,6-Dini	10.25	10.25	3308778	4908793	956.636	978.718
14)	4-Amino-2,6-Dini	10.77	10.77	2347576	4565135	964.416	944.862
16)	2,4-Dinitrotolue	11.90	11.90	4452404	2769684	936.811	897.653
17)	2,6-Dinitrotolue	12.38	12.38	2667708	3362811	974.314	1001.925
18)	o-Nitrotoluene	15.47	15.46	2039864	2738594	892.260	935.652m
19)	p-Nitrotoluene	16.04	16.04	3260770	2535209	947.657	897.767m
20)	m-Nitrotoluene	16.86	16.86	3068019	3635125	954.187	984.937m
21)	PETN	0.00	18.64	0	1286815	N.D.	1007.254m#

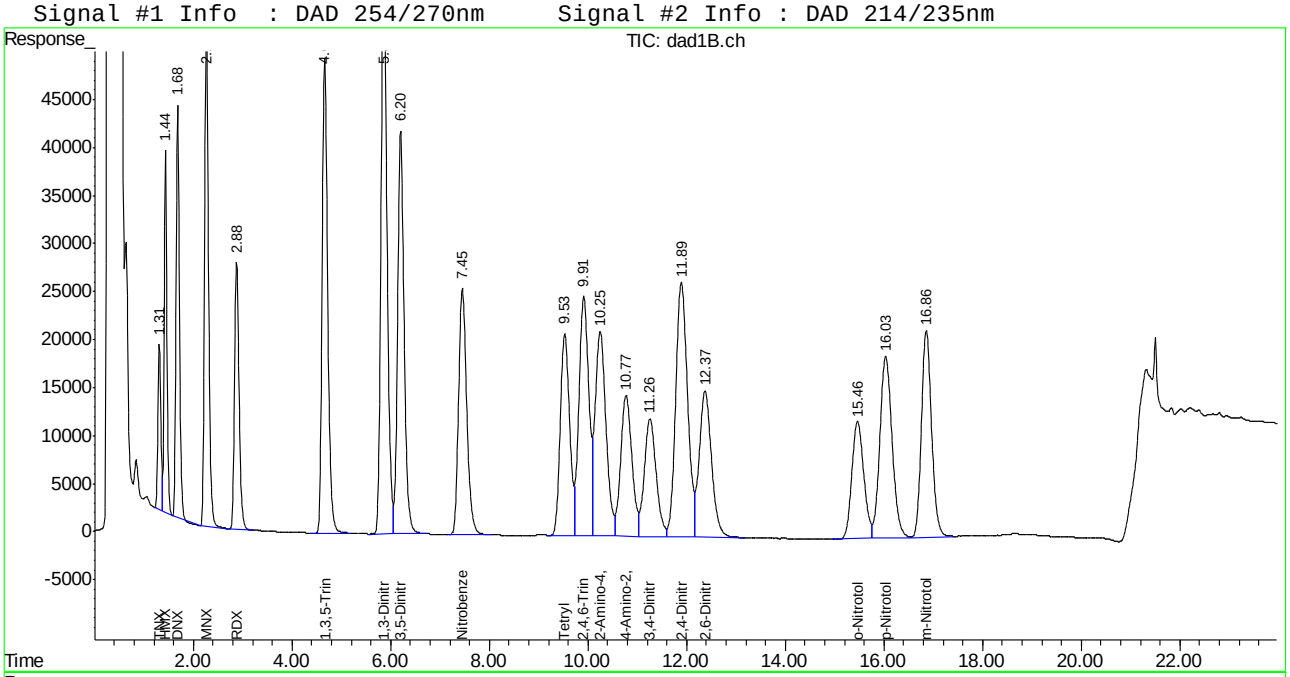
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:52:07 2021 Page 1

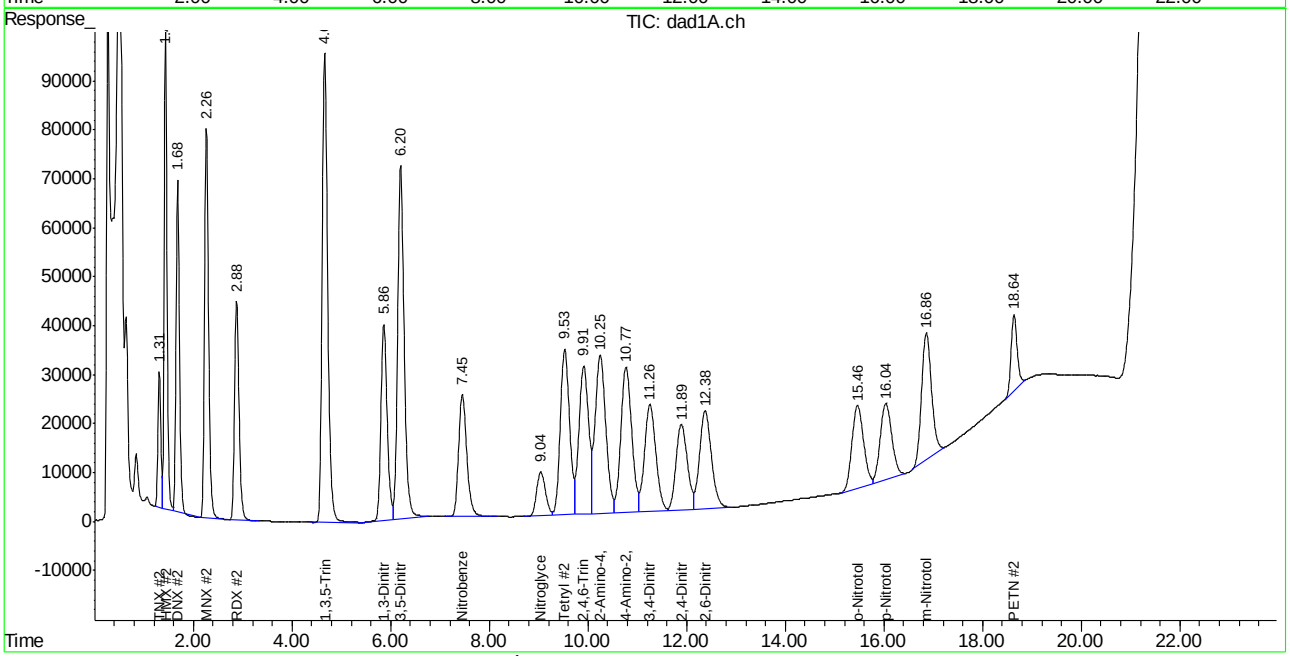
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : op86727,GPP2467,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:50 2021 Quant Results File: GPP2464_080321PRI.RES

Quant Method : C:\MSDCHEM\2...\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration
DataAcq Meth : 8330BPL.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 214/235nm





Manual Integration Approval Summary

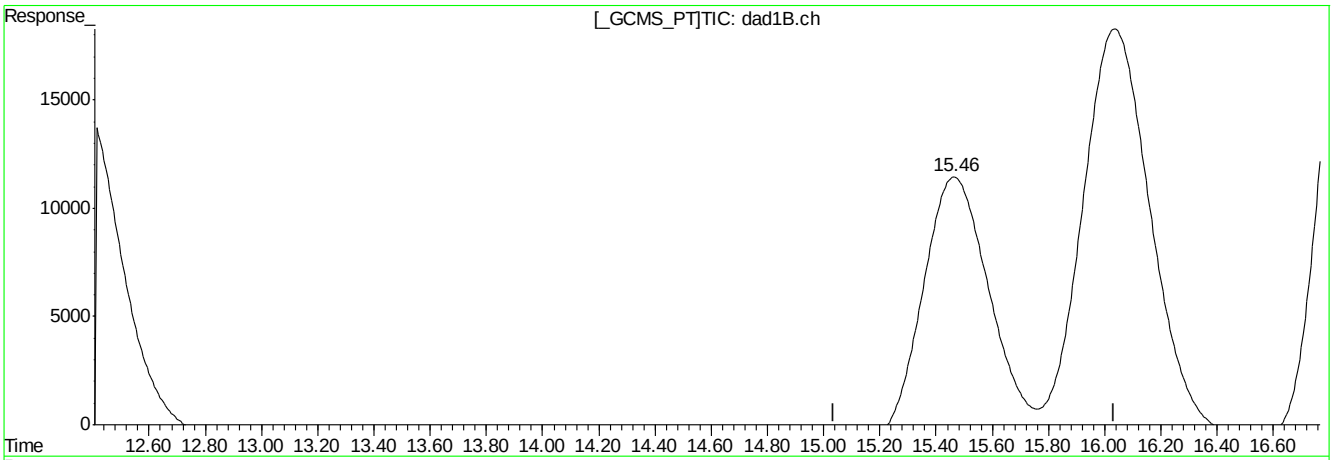
Sample Number: GPP2467-ECC2464 **Method:** SW846 8330B
Lab FileID: PP391163.D **Analyst approved:** 08/12/21 10:53 James Boone
Injection Time: 08/10/21 01:47 **Supervisor approved:** 08/12/21 11:12 Naresh Jiawan

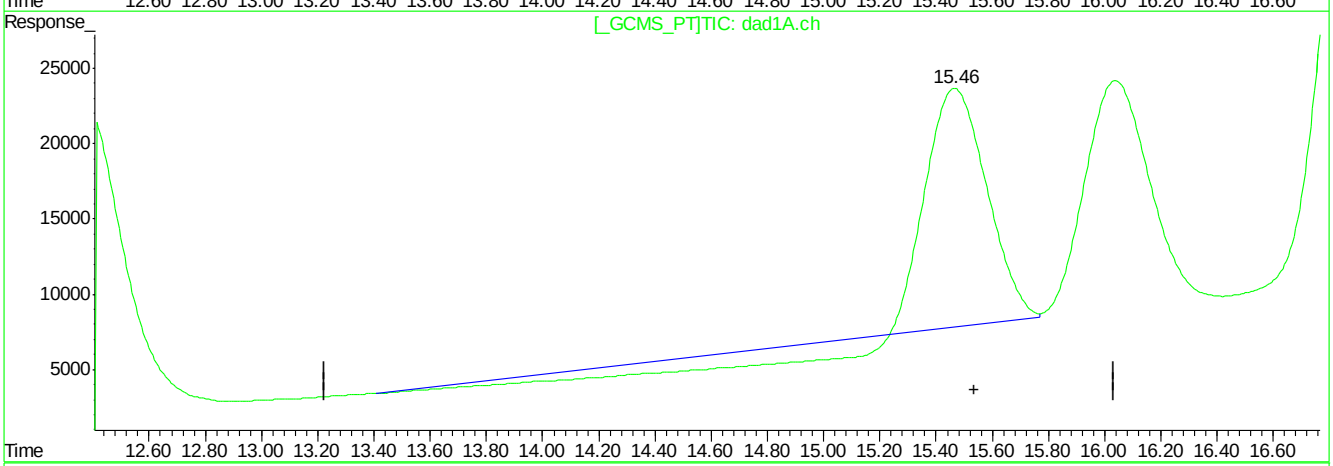
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.46	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.04	Poor instrument integration
m-Nitrotoluene	99-08-1	2	16.86	Poor instrument integration
PETN	78-11-5	2	18.64	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.47min 892.260ppb

response 2039864

(18) o-Nitrotoluene #2

15.47min 579.977ppb

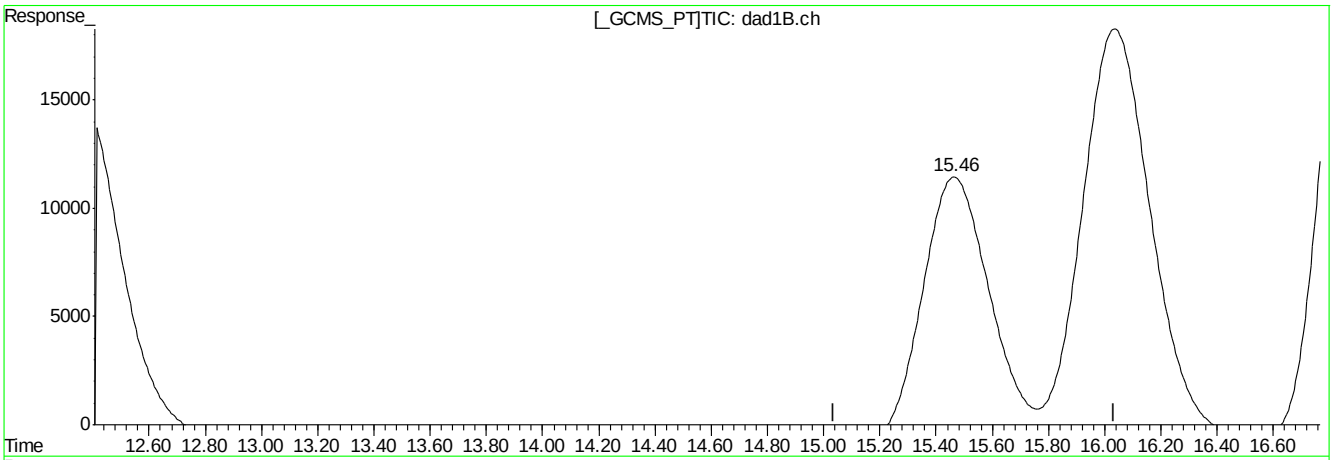
response 1697558

(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:49:57 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.47min 892.260ppb

response 2039864

(18) o-Nitrotoluene #2

15.46min 935.652ppb m

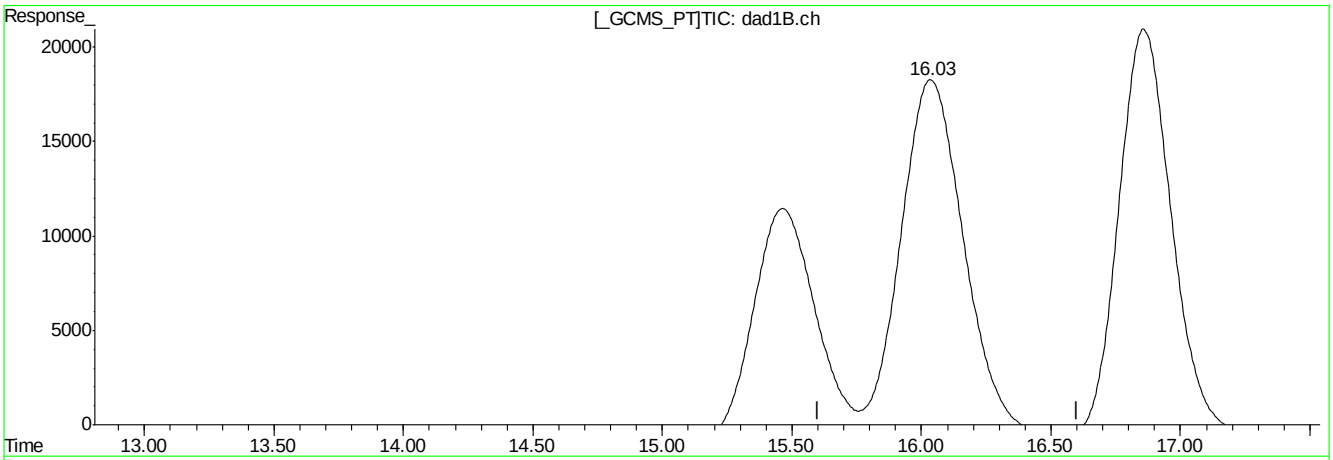
response 2738594

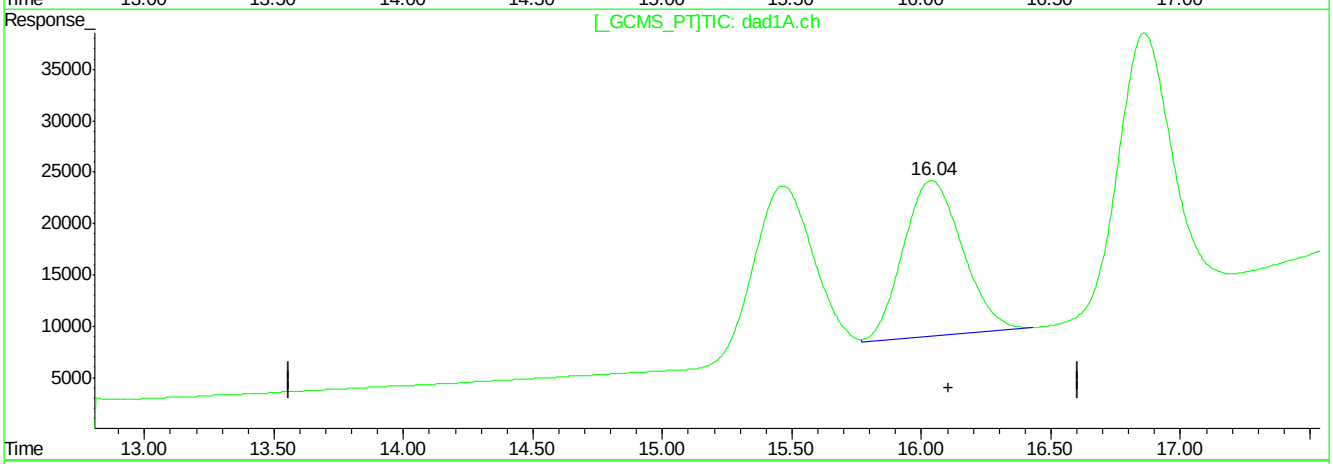
(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:04 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.04min 947.657ppb

response 3260770

(19) p-Nitrotoluene #2

16.04min 850.473ppb

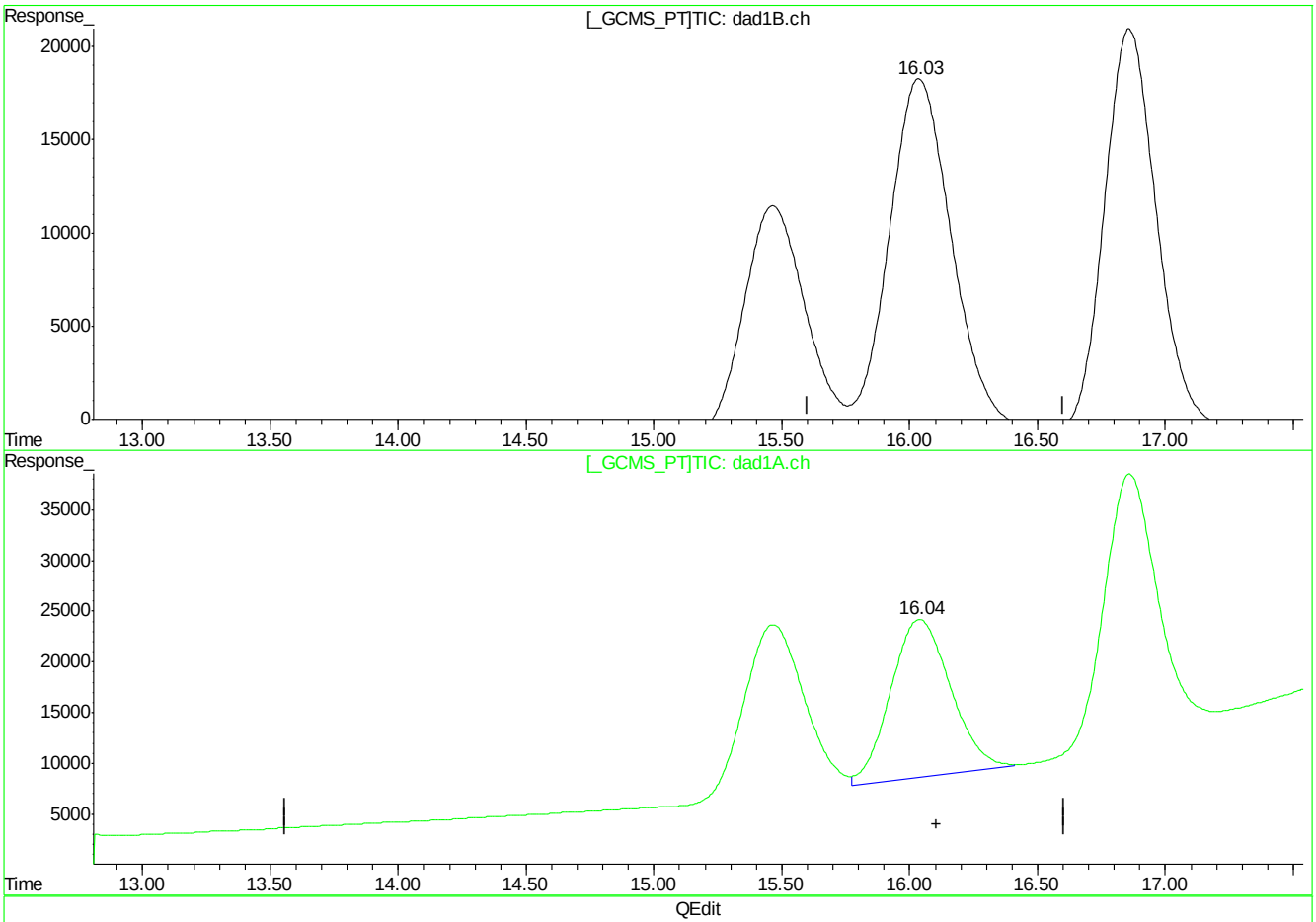
response 2401656

(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:07 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.04min 947.657ppb

response 3260770

(19) p-Nitrotoluene #2

16.04min 897.767ppb m

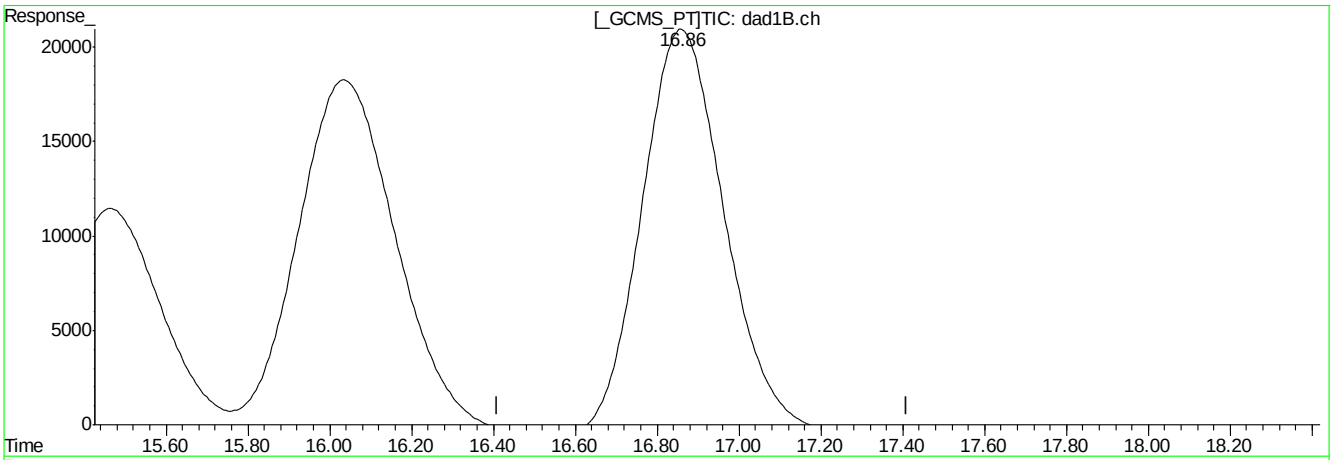
response 2535209

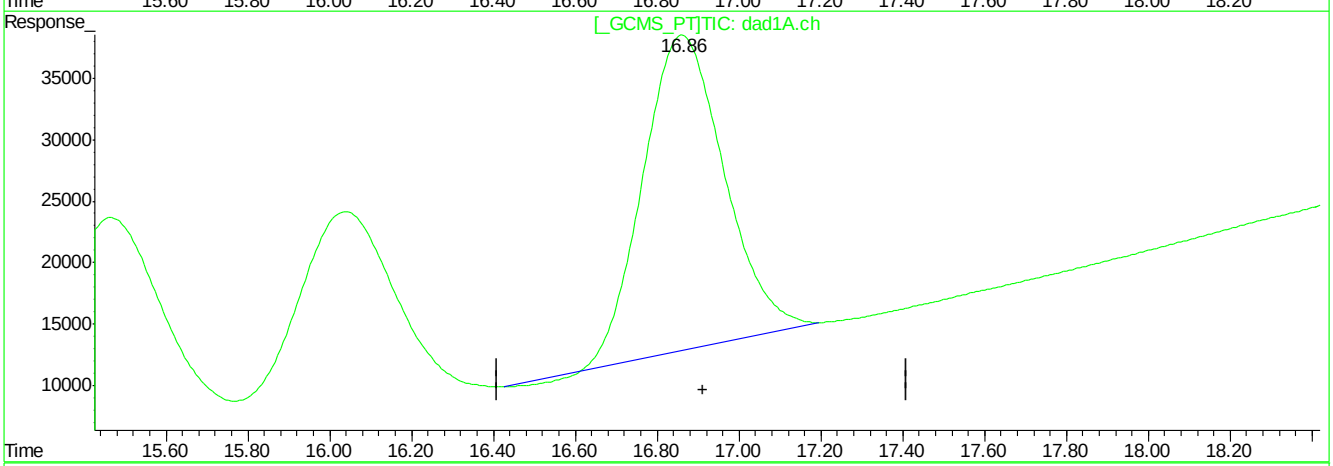
(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:14 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

16.86min 954.187ppb

response 3068019

(20) m-Nitrotoluene #2

16.86min 954.688ppb

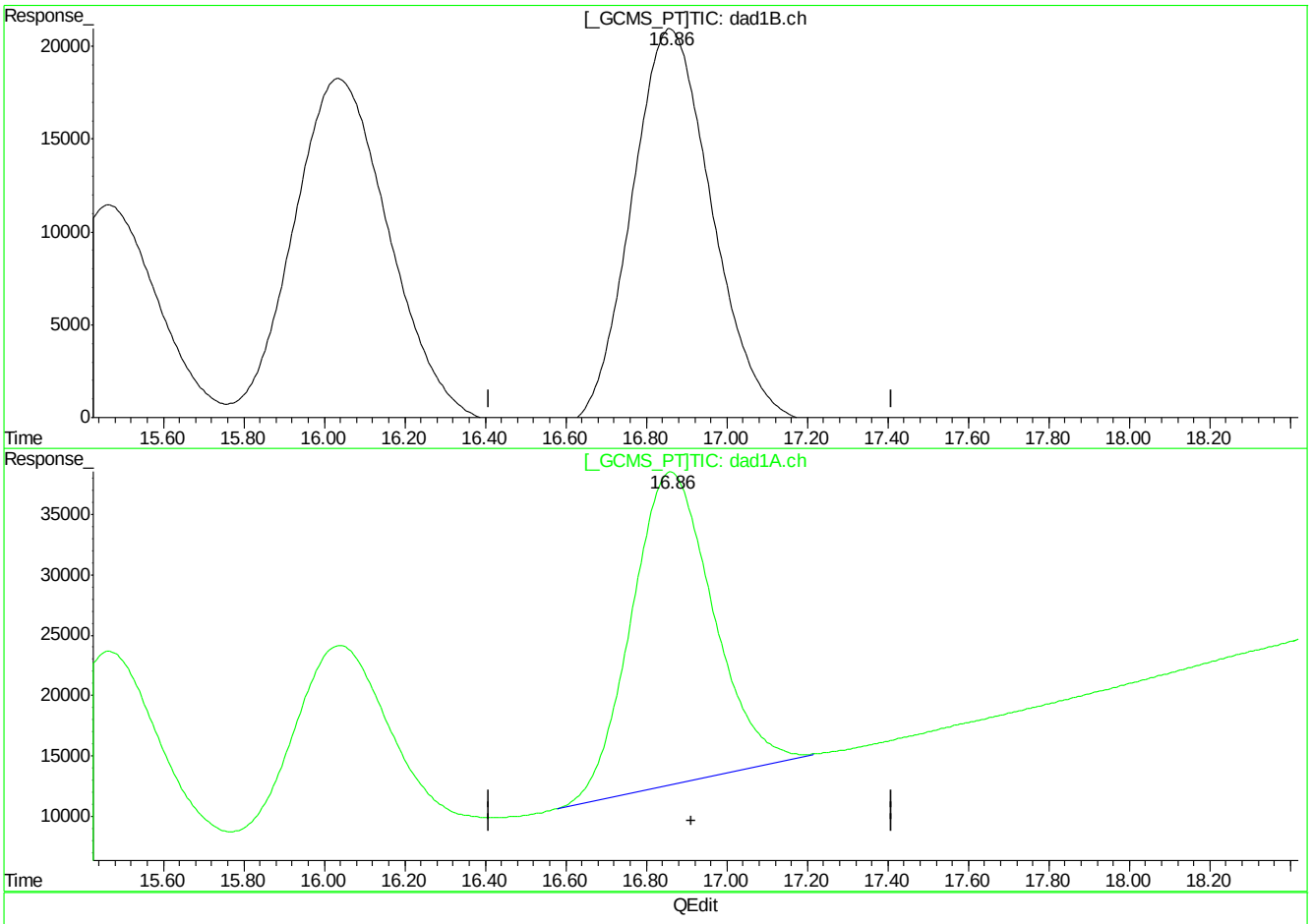
response 3523483

(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:18 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

16.86min 954.187ppb

response 3068019

(20) m-Nitrotoluene #2

16.86min 984.937ppb m

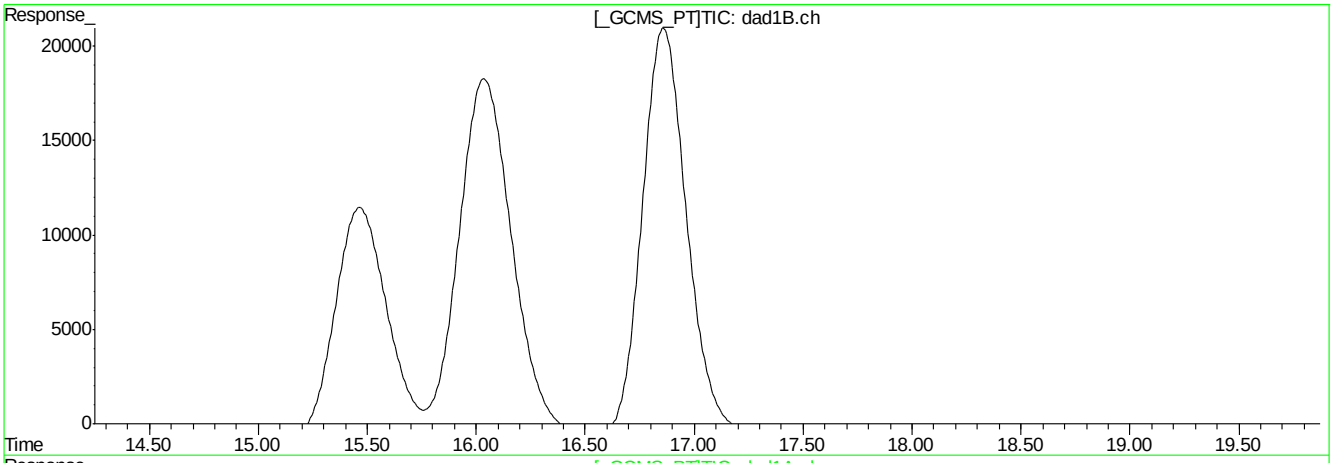
response 3635125

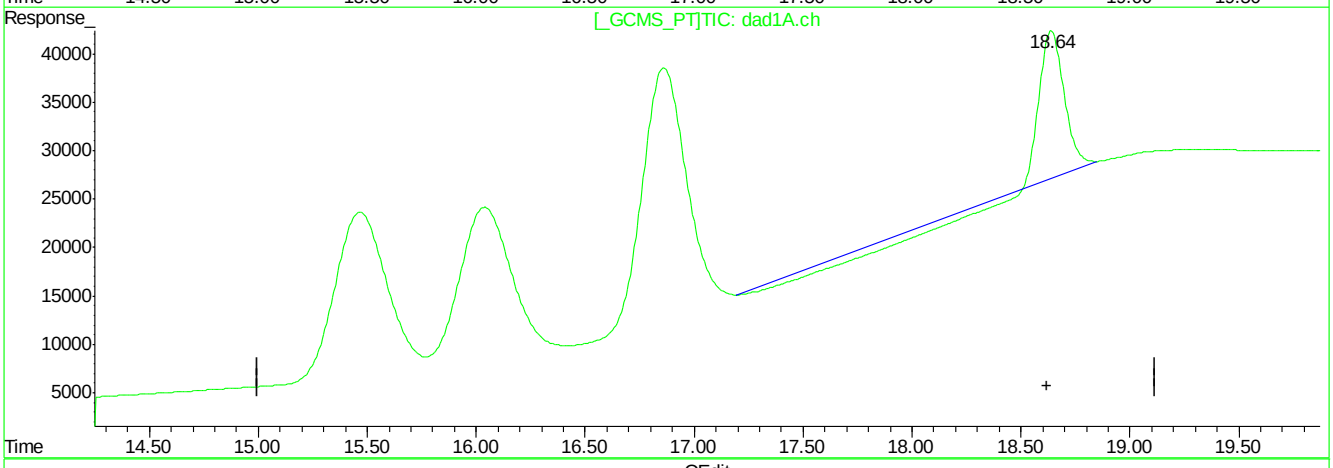
(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:23 2021

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.64min 509.349ppb

response 650717

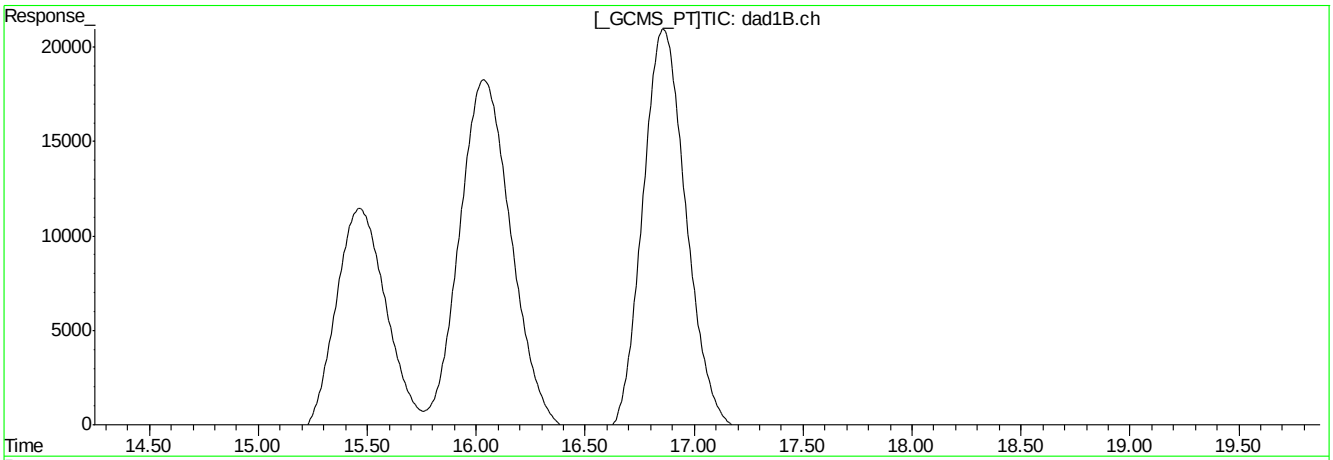
(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:25 2021

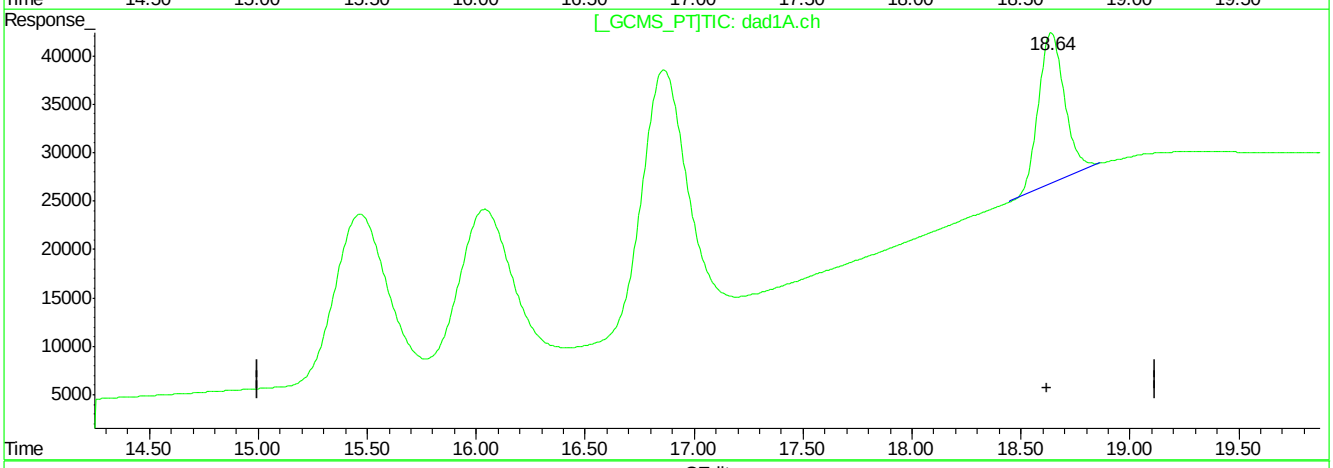
PP391163.D edits: PETN

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\GPP2467\PP391163.D\dad1A.ch
Acq On : 10-Aug-2021, 01:47:14 Operator: jamesb
Sample : ecc2464-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 12 10:47 2021 Quant Results File: GPP2464_080321PRI.RES

Method : C:\MSDCHEM\2\METHODS\GPP2464_080321PRI.M (Chemstation Integrator)
Title : Explosives by 8330A.8330B,8332
Last Update : Sat Aug 07 10:29:02 2021
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb

response 0

(21) PETN #2

18.64min 1007.254ppb m

response 1286815

(+) = Expected Retention Time
PP391163.D GPP2464_080321PRI.M Thu Aug 12 10:50:30 2021

DATE	8/8/2021	METHODS	8330	IC/ICC STD LOT	LC1509
COLUMN TYPE	Bonus-RP	ACQ. METHOD	8330RPB3	ICV STD LOT	LC1510
AMOUNT INJ	100uL	PROC. METHOD	GGG3024_080821.M	SOLVENT	204903
INSTRUMENT	HPLC3-GG	CALIB. DATE	8/8/2021	SOLVENT	204513
ANALYST	JB	RUN BATCH	GGG3024	HEAD PRESSURE	111

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG621999	1	FA87585-5	8330	1	op86681,GGG3024,10.05,,,50,1,soil	DNR
GG622000	91	ic3024-20	8330	2/500	op86681,GGG3024,1000,,,10,1,water	/
GG622001	92	ic3024-50	8330	5/500	op86681,GGG3024,1000,,,10,1,water	/
GG622002	93	ic3024-100	8330	10/500	op86681,GGG3024,1000,,,10,1,water	/
GG622003	94	ic3024-200	8330	20/500	op86681,GGG3024,1000,,,10,1,water	/
GG622004	95	ic3024-500	8330	50/500	op86681,GGG3024,1000,,,10,1,water	/
GG622005	96	icc3024-1000	8330	100/500	op86681,GGG3024,1000,,,10,1,water	/
GG622006	97	ic3024-2500	8330	250/500	op86681,GGG3024,1000,,,10,1,water	/
GG622007	98	ic3024-5000	8330	1	op86681,GGG3024,1000,,,10,1,water	/
GG622008	99	icv3024-1000	8330	1	op86681,GGG3024,1000,,,10,1,water	Pass
GG622009	3	op86681-MB	8330	1	op86681,GGG3024,10,,,50,1,soil	/
GG622010	4	FA87585-1cf	8330	1	op86681,GGG3024,10.77,,,50,1,soil	/
GG622011	5	FA87585-2cf	8330	1	op86681,GGG3024,10.7,,,50,1,soil	/
GG622012	6	FA87585-3cf	8330	1	op86681,GGG3024,10.13,,,50,1,soil	/
GG622013	7	FA87585-4cf	8330	1	op86681,GGG3024,10.1,,,50,1,soil	/
GG622014	8	FA87585-5cf	8330	1	op86681,GGG3024,10.05,,,50,1,soil	/
GG622015	9	FA87585-6cf	8330	1	op86681,GGG3024,10.11,,,50,1,soil	/
GG622016	10	FA87585-7cf	8330	1	op86681,GGG3024,10.15,,,50,1,soil	/
GG622017	11	FA87585-8cf	8330	1	op86681,GGG3024,10.06,,,50,1,soil	/
GG622018	12	FA87585-15cf	8330	1	op86681,GGG3024,10.09,,,50,1,soil	/
GG622019	96	ecc3024-1000	8330	100/500	op86681,GGG3024,1000,,,10,1,water	/
GG622020	1	ccb	8330	1	op86681,GGG3024,1000,,,10,1,water	/
GG622021	13	FA87585-16cf	8330	1	op86681,GGG3024,10.13,,,50,1,soil	DNR RR
GG622022	14	FA87585-17cf	8330	1	op86681,GGG3024,10.1,,,50,1,soil	DNR RR
GG622023	15	FA87585-18cf	8330	1	op86681,GGG3024,10.08,,,50,1,soil	DNR RR
GG622024	16	FA87585-19cf	8330	1	op86681,GGG3024,10.02,,,50,1,soil	DNR RR
GG622025	17	FA87585-10Acf	8330	1	op86681,GGG3024,10.01,,,50,1,soil	DNR RR
GG622026	96	ecc3024-1000	8330	100/500	op86681,GGG3024,1000,,,10,1,water	DNR RR

DATE	8/12/2021	METHODS	8330	IC/ICC STD LOT	LC1509
COLUMN TYPE	Bonus-RP	ACQ. METHOD	8330RPB3	ICV STD LOT	LC1510
AMOUNT INJ	100uL	PROC. METHOD	GGG3024_080821.M	SOLVENT	204903
INSTRUMENT	HPLC3-GG	CALIB. DATE	8/8/2021	SOLVENT	204513
ANALYST	JB	RUN BATCH	GGG3025	HEAD PRESSURE	113

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
GG622027	1	ccb	8330	1	op86682,GGG3025,1000,,,10,1,water	/
GG622028	2	cc3024-1000	8330	100/500	op86682,GGG3025,1000,,,10,1,water	Pass
GG622029	1	ccb	8330	1	op86682,GGG3025,1000,,,10,1,water	/
GG622030	3	op86682-MB	8330	1	op86682,GGG3025,10,,,50,1,soil	/
GG622031	4	FA87678-11Acf	8330	1	op86682,GGG3025,10,,,50,1,soil	/
GG622032	5	op86727-MB	8330	1	op86727,GGG3025,1000,,,10,1,water	/
GG622033	6	FA87760-1cf	8330	1	op86727,GGG3025,1040,,,10,1,water	x DNR
GG622034	7	FA87760-2cf	8330	1	op86727,GGG3025,1050,,,10,1,water	/
GG622035	8	FA87760-4cf	8330	1	op86727,GGG3025,1050,,,10,1,water	only RDX
GG622036	9	FA87785-1cf	8330	1	op86727,GGG3025,1060,,,10,1,water	x DNR
GG622037	10	FA87785-2cf	8330	1	op86727,GGG3025,1030,,,10,1,water	x DNR
GG622038	11	FA87785-3cf	8330	1	op86727,GGG3025,1060,,,10,1,water	x DNR
GG622039	12	FA87620-1cf	8330	1	op86727,GGG3025,1060,,,10,1,water	/
GG622040	2	cc3024-1000	8330	100/500	op86727,GGG3025,1000,,,10,1,water	Pass
GG622041	1	ccb	8330	1	op86727,GGG3025,1000,,,10,1,water	/
GG622042	13	FA87620-2cf	8330	1	op86727,GGG3025,1040,,,10,1,water	/
GG622043	14	FA87622-1cf	8330	1	op86727,GGG3025,1050,,,10,1,water	RDX 135 Merging
GG622044	15	FA87622-2cf	8330	1	op86727,GGG3025,1040,,,10,1,water	RDX 135, 34 26 Merging
GG622045	16	FA87622-3cf	8330	1	op86727,GGG3025,1040,,,10,1,water	RDX 135, 34 26 Merging
GG622046	2	ecc3024-1000	8330	100/500	op86727,GGG3025,1000,,,10,1,water	Pass

DATE	8/3/2021	**METHODS**	8330	**IC/ICC STD LOT**	**LC1497**
COLUMN TYPE	Extend C18	**ACQ. METHOD**	8330BPL	**ICV STD LOT**	**LC1482**
AMOUNT INJ	100uL	**PROC. METHOD**	GPP2464_080321PRI.M	**SOLVENT**	**205227**
INSTRUMENT	HPLC4-PP	**CALIB. DATE**	8/3/2021	**SOLVENT**	**203405**
ANALYST	JB	**RUN BATCH**	GPP2464	**HEAD PRESSURE**	**192**

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
PP391042	1	ccb	8330	1	op86615,GPP2464,1000,,,10,1,water	/
PP391043	91	ic2464-20	8330	2/500	op86615,GPP2464,1000,,,10,1,water	/
PP391044	92	ic2464-50	8330	5/500	op86615,GPP2464,1000,,,10,1,water	/
PP391045	93	ic2464-100	8330	10/500	op86615,GPP2464,1000,,,10,1,water	/
PP391046	94	ic2464-200	8330	20/500	op86615,GPP2464,1000,,,10,1,water	/
PP391047	95	ic2464-500	8330	50/500	op86615,GPP2464,1000,,,10,1,water	/
PP391048	96	icc2464-1000	8330	100/500	op86615,GPP2464,1000,,,10,1,water	/
PP391049	97	ic2464-2500	8330	250/500	op86615,GPP2464,1000,,,10,1,water	/
PP391050	98	ic2464-5000	8330	1	op86615,GPP2464,1000,,,10,1,water	/
PP391051	99	icv2464-1000	8330	1	op86615,GPP2464,1000,,,10,1,water	Pass

DATE	8/9/2021	METHODS	8330	IC/ICC STD LOT	LC1509
COLUMN TYPE	Extend C18	ACQ. METHOD	8330BPL	ICV STD LOT	LC1482
AMOUNT INJ	100uL	PROC. METHOD	GPP2464_080321PRI.M	SOLVENT	205227
INSTRUMENT	HPLC4-PP	CALIB. DATE	8/3/2021	SOLVENT	203405
ANALYST	JB	RUN BATCH	GPP2467	HEAD PRESSURE	197

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
PP391139	1	ccb	8330	1	op86727,GPP2467,1000,,,10,1,water	/
PP391140	2	cc2464-1000	8330	100/500	op86727,GPP2467,1000,,,10,1,water	Pass
PP391141	1	ccb	8330	1	op86727,GPP2467,1000,,,10,1,water	/
PP391142	3	op86727-MB	8330	1	op86727,GPP2467,1000,,,10,1,water	/
PP391143	4	op86727-BS	8330	1	op86727,GPP2467,1000,,,10,1,water	/
PP391144	5	FA87760-1	8330	1	op86727,GPP2467,1040,,,10,1,water	cf-13
PP391145	6	FA87760-2	8330	1	op86727,GPP2467,1050,,,10,1,water	cf-DNX 13
PP391146	7	FA87760-4	8330	1	op86727,GPP2467,1050,,,10,1,water	cf-RDX 13 PETN
PP391147	8	FA87785-1	8330	1	op86727,GPP2467,1060,,,10,1,water	cf-13 PETN
PP391148	9	FA87785-2	8330	1	op86727,GPP2467,1030,,,10,1,water	cf-13
PP391149	10	FA87785-3	8330	1	op86727,GPP2467,1060,,,10,1,water	cf-13 PETN
PP391150	11	FA87620-1	8330	1	op86727,GPP2467,1060,,,10,1,water	cf-HMX MNX 135 13 35 TNT 2a 4a
PP391151	12	FA87620-2	8330	1	op86727,GPP2467,1040,,,10,1,water	cf-RDX 13 NG OP PETN
PP391152	2	cc2464-1000	8330	100/500	op86727,GPP2467,1000,,,10,1,water	Pass
PP391153	1	ccb	8330	1	op86727,GPP2467,1000,,,10,1,water	/
PP391154	13	FA87622-1	8330	1	op86727,GPP2467,1050,,,10,1,water	cf-RDX 135 13 35 TNT 2a 4a OP PETN
PP391155	14	FA87622-2	8330	1	op86727,GPP2467,1040,,,10,1,water	cf-RDX 135 13 35 TNT 2a 4a 26 OP PETN
PP391156	15	FA87622-3	8330	1	op86727,GPP2467,1040,,,10,1,water	cf-RDX 135 13 35 TNT 2a 4a 26 OP PETN
PP391157	16	op86727-MS	8330	1	op86727,GPP2467,520,,,10,1,water	/
PP391158	17	op86727-MSD	8330	1	op86727,GPP2467,520,,,10,1,water	/
PP391159	18	op86727-MS2	8330	1	op86727,GPP2467,520,,,10,1,water	/
PP391160	19	op86727-MSD2	8330	1	op86727,GPP2467,520,,,10,1,water	/
PP391161	20	op86682-DUP	8330	1	op86682,GPP2467,10,,,50,1,soil	/
PP391162	21	op86682-DUP2	8330	1	op86682,GPP2467,10.01,,,50,1,soil	/
PP391163	2	ecc2464-1000	8330	100/500	op86727,GPP2467,1000,,,10,1,water	Pass

SGS - ORLANDO

SPE LIQUID SAMPLE PREP REPORT

MB 08/04/21

Date/Time: 08/06/2021 0900
Started {mm/dd/yy 24:00}

Date/Time: 08/07/21 0800
Finished {mm/dd/yy 24:00}

Prep Method: (3535A) or 537 or 537MOD (circle)

Analytical Method: 8330B

Batch#: OP86727 Ext. By: MB Conc. By: — Vialed By: MB

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP86727 MB	X	1000	6	N/A	250ul		10ml	AT-1	
OP86727 BS	X	1000	↓	↓	↓	200ul/250ul	↓	↓	
FA87760-1	30	1040	↓	↓	↓	↓	↓	↓	
-2	15	1050	↓	↓	↓	↓	↓	↓	
-4	15	1050	↓	↓	↓	↓	↓	AT-2	
MB 08/05/21 FA87785-1	10	1060	↓	↓	↓	↓	↓	↓	
-2	15	1030	↓	↓	↓	↓	↓	↓	
-3	15	1060	↓	↓	↓	↓	↓	↓	
FA87620-1 RE	6	1060	↓	↓	↓	↓	↓	↓	
-2 RE	3	1040	↓	↓	↓	↓	↓	↓	
FA87622-1 RE	2	1050	↓	↓	↓	↓	↓	AT-1	
-2 RE	2	1040	↓	↓	↓	↓	↓	↓	
-3 RE	2	1040	↓	↓	↓	↓	↓	↓	
								AT-1	MB 08/06/21
FA87620-1 MS2	5	520	6	N/A	250ul	200ul/250ul	10ml	AT-1	
-1 MSD2	5	520	↓	↓	↓	↓	↓	↓	
FA87760-1 MS	29	520	↓	↓	↓	250ul	↓	AT-1	
-1 MSD	29	520	↓	↓	↓	↓	↓	↓	
DUP									

Comments: LCM36 25 ppm 09/10/21

Surr.1 ID:	LC1503	Conc:	20 ppm	Exp. Date:	02/03/22	Inj. By:	MB	Ver. By	MB
Spk.1 ID:	LC1499	Conc:	20 ppm	Exp. Date:	02/01/22	Inj. By:	MB	Ver. By	MB
MB 08/06/21 Spk.2 ID:	~~LC1436~~	Conc:	25 ppm	Exp. Date:	04/10/21	Inj. By:	MB	Ver. By	~~MB~~
Spk.3 ID:	—	Conc:	—	Exp. Date:	—	Inj. By:	—	Ver. By	—

TurboVap Temp (Therm ID):	N-Evap Temp (Therm ID):
Observed Temp °C: Corr. Temp °C:	Observed Temp °C: Corr. Temp °C:

Methanol Lot # —	SPE Lot # 5214-0112	pH Paper # 222420
Acetonitrile Lot # — 208069	Syringe filter Lot # —	Reagent # —
Water Lot# DI H2O	Pre-filter Lot# —	Reagent # —
Solvent# —	Carbon Lot# —	Other —

Relinquished By: Date: 08/09/21

Accepted By: Date: 8/9/21

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718

APPENDIX B-2
DATA VALIDATION REPORTS

VALIDATA
Chemical Services, Inc.
(770) 232-0130
(770) 232-5082 (Fax)
2159 Wynnton Pointe, Duluth, GA 30097
www.datavalidator.com

DATA VALIDATION SUMMARY REPORT

COMPANY:	Weston Solutions, Inc.
SITE NAME:	Radford Army Ammunitions Plant
CONTRACTED LAB:	CT Laboratories LLC
QA/QC LEVEL:	EPA Stage 2B and 4
EPA SOW/METHODS:	EPA and SW-846 Methods
VALIDATION GUIDELINES:	*Radford Army Ammunitions Plant, Radford Virginia, SWMU 49 Monitored Natural Attenuation Groundwater Monitoring Work Plan, SWMU 54 Interim Measures Work Plan, QSM 5.1, SW 846 Methods, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* 2017; *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,* 2017
SAMPLE MATRIX:	Water
TYPE OF ANALYSIS:	Volatile Organics (VOA), Dissolved Gases, Total Metals, Total Mercury, Anions, Total Organic Carbon (TOC), Chemical Oxygen Demand (COD), pH
SDG NUMBER:	157538*
SAMPLING DATES:	October 27-29, 2020

SAMPLES:

Client Sample #	Lab Sample #	Matrix	VOA	Dis. Gases
TRIP BLANK	495136	Water	X	
13MW4	495137	Water	X	X
13MW3	495139	Water	X	X
13TW3	495140	Water	X	X
49MW04	495141	Water	X	X
13MW2	495142	Water	X	X
48MW06	496500	Water	X	X
48MW06MS	496500MS	Water	X	X

Client Sample #	Lab Sample #	Matrix	VOA	Dis. Gases
48MW06MSD	496500MSD	Water	X	X
48MW1	496501	Water	X	X
49MW01	496502	Water	X	X
50MW02	496503	Water	X	X
49TW02	496504	Water	X	X
TB-2	496505	Water	X	
49MW02	496507	Water	X	X
RNS-1	496508	Water	X	X
48MW2	496542	Water	X	X
48MW3	496543	Water	X	X
48MW3DL	496543DL	Water	X	
TB-3	496545	Water	X	

Client Sample #	Lab Sample #	Matrix	Total Metals**	Total Mercury
48/49-IDW	496544	Water	X	X
48/49-IDWMS	496544MS	Water	X	
48-49-IDWMSD	496544MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	Anions	TOC
13MW4	495137	Water	X	X
13MW3	495139	Water	X	X
13TW3	495140	Water	X	X
49MW04	495141	Water	X	X
13MW2	495142	Water	X	X
13MW2MS	495142MS	Water	X	
13MW2MSD	495142MSD	Water	X	
48MW06	496500	Water	X	X
48MW06MS	496500MS	Water	X	X
48MW06MSD	496500MSD	Water	X	X
48MW1	496501	Water	X	X
49MW01	496502	Water	X	X
50MW02	496503	Water	X	X
49TW02	496504	Water	X	X
49MW02	496507	Water	X	X
RNS-1	496508	Water	X	X
48MW2	496542	Water	X	X
48MW3	496543	Water	X	X

Client Sample #	Lab Sample #	Matrix	Anions	TOC
48MW3MS	496543MS	Water	X	
48MW3MSD	496543MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	COD	pH
48/49-IDW	496544	Water	X	X
48/49-IDWMD	496544MD	Water		X
48/49-IDWMS	496544MS	Water	X	
48-49-IDWMSD	496544MSD	Water	X	

* - All samples were submitted as SDG 154947. There are three separate analysis folders and EDD files for this data set. The Folders and EDD files are labelled as 157538, 157621, 157624.

**- analysis was for 22 analytes by Method 6010C.

All fractions were validated at Stage 4, except Metals and Mercury, which were validated at Stage 2B.

Suffix Codes: DL = DILUTION, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RA = REANALYSIS

DATA REVIEWERS: Amy L. Hogan, Kevin C. Harmon, Sandra Nacquin

DATA VALIDATION SUMMARY

CT Laboratories LLC – 157538 - Organics & Inorganics

VOLATILE ORGANICS (VOA)

SUMMARY

I.) General:

The analyses for Volatile Organics (VOA) were performed according to SW 846 Method 8260B.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No data qualification was necessary.

III.) Calibration:

Initial Calibration:

The average RRF for 1,4-dioxane (0.005) for the standards analyzed on 11/3/20 on instrument VMS4 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

All other Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

The RRF for 1,4-dioxane (0.0049) for the standards run on 11/3/20 at 15:19 on instrument VMS4 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

Continuing Calibration:

The RRFs for 1,4-dioxane (0.003, 0.0049, 0.0048, 0.0049) for the continuing calibration standards associated with this SDG were below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

The Percent Difference (%D) for the standards run on 11/9/20 at 22:41 on instrument VMS4 was 37.5%, which exceeded the 20% QC limit for opening CCVs. The 1,4-dioxane results for associated samples 13MW4, 13MW3, 13TW3, 49MW04 and13MW2, which were all non-detects, were qualified as estimated (UJ).

The Percent Difference (%D) for the standards run on 11/9/20 at 14:46 on instrument VMS4 was 55.6% for bromomethane, which exceeded the 50% QC limit for closing CCVs. The bromomethane results for associated samples 46MW06, 48MW1, 48MW01, 50MW02, 49TW02, 49MW02 and 48MW2, which were all non-detects, were qualified as estimated (UJ).

The Percent Difference (%D) for the standards run on 11/9/20 at 15:27 on instrument VMS4 was 60% for bromomethane, which exceeded the 20% QC limit for closing CCVs. The bromomethane results for associated sample 48MW3, which was non-detect, was qualified as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Equipment Blank:

Toluene (0.95 ug/L) was detected in associated equipment blank RNS-1. Since there were no positive results for toluene in the SDG samples, no data qualification was necessary.

Trip Blanks:

There were no detections in the associated trip blanks. No data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

VI.) Laboratory Control Samples (LCS):

One LCS and one LCS / LCD set were analyzed for this fraction of the SDG. The Relative Percent Differences (RPDs) for 1,2,4-trichlorobenzene (26%) and 1,4-dioxane (47%) exceeded the 20% QC limit. The results for these two compounds in associated samples 13MW4, 13MW3, 13TW3, 49MW04 and 13MW2, which were all non-detects, were qualified as estimated (UJ).

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 48MW06. The Percent Recoveries (%Rs) exceeded the QC limits for the following compounds:

Compound	MS, %R	MSD, %R
1,1-dichloroethane	132%	132%
1,1-dichloroethene	132%	
1,2-dichloropropane	128%	123%
benzene	127%	126%
carbon disulfide	140%	138%
chloromethane	151%	
cyclohexane	145%	145%
freon 113	137%	
methylcyclohexane	141%	140%
trans-1,2-dichloroethene	126%	
vinyl chloride	155%	153%

The positive 1,1-dichloroethane result for the parent sample was qualified as estimated (J). Since the parent sample results for the other listed compounds were all non-detect, no further data qualification was necessary.

VIII.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 49MW02 / 49TW02) were identified for this SDG. The calculable Relative Percent Differences (RPDs) were carbon tetrachloride (1.3%) and trichloroethene (0) for the first set. All criteria were met. No data qualification was necessary.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

The result for carbon tetrachloride for sample 48MW3 was reported from a dilution analysis. Since all criteria were met and the compound was only reported once, no data qualification was necessary.

All other Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

DISSOLVED GASSES

SUMMARY

I.) General:

The analyses for Dissolved Gases were performed according to Method RSK-175.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Equipment Blank:

There were no detections in the associated equipment blank. No data qualification was necessary.

IV.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

V.) Laboratory Control Samples (LCS):

Two LCS were analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 48MW06. All criteria were met. No data qualification was necessary.

VII.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 49MW02 / 49TW02) were identified for this SDG. The calculable Relative Percent Difference (RPD) for methane (112%) for the second set exceeded the 35% QC limit. The positive methane results for these two samples were qualified as estimated (J).

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

TOTAL METALS and MERCURY

SUMMARY

I.) General:

The analyses for Total Metals were performed according to SW-846 Method 6010C and the analyses for Total Mercury were performed according to SW-846 Method 7470A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) LLCCV and CRDL:

All LLCCV and CRDL criteria were met. No data qualification was necessary

IV.) Blanks:

Method Blanks:

There were no detections in the associated method blanks. No data qualification was necessary.

Calibration Blanks:

Antimony (5.50 ug/L), cobalt (0.818 ug/L) and potassium (126 ug/L, 167 ug/L) were detected in associated CCB for this SDG. Since the blank results were less than ½ the LOQ, no data qualification was necessary.

V.) ICP Interference Check Sample Results:

All Interference Check Sample criteria were met. No data qualification was necessary.

VI.) ICP Serial Dilution Analysis:

Serial dilution analysis was performed using sample 48/49-IDW. All criteria were met. No data qualification was necessary.

VII.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

VIII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 48/49-IDW. The parent sample result for iron was greater than 4X the spike concentrations, so the results for this analyte were not considered meaningful. The Percent Recoveries (%Rs) for aluminum (214%, 215%) exceeded the QC limits. All post spike criteria were met. The positive aluminum result for the parent sample was qualified as estimated (J).

IX.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

ANIONS

SUMMARY

I.) General:

The analyses for Anions were performed according to SW-846 Method 9056A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

The 51 hours between sample collection and analysis for samples 48MW06 and 48MW exceeded the 48-hour QC limit for the nitrate portion of the analysis. The positive nitrate results for both samples were qualified as estimated (J).

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was

necessary.

Equipment Rinsate Blank:

There were no detections in the associated equipment rinsate blank. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 13MW2, 48MW06 and 48MW3. The Percent Recoveries (%Rs) for sulfate (80%, 82%) for sample 13MW2, chloride (86%) for 48MW3 and chloride (84%) and sulfate (85%, 85%) for 13MW2 were all below the QC limits. The results for these analytes in the associated parent samples, which were all positive, were qualified as estimated (J).

VI.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 49MW02 / 49TW02) were identified for this SDG. The calculable Relative Percent Differences (RPDs) were chloride (0%), nitrate (6.9%) and sulfate (9.5%) for the first set and chloride (10%), nitrate (0%) and sulfate (0%) for the second set, which were all within the QC limit. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

TOTAL ORGANIC CARBON

SUMMARY

I.) General:

The analyses for Total Organic Carbon (TOC) were performed according to SW-846 Method 9060A.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 48MW06. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 49MW02 / 49TW02 were identified for this SDG. There were no calculable Relative Percent Differences (RPDs). No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHEMICAL OXYGEN DEMAND (COD)

SUMMARY

I.) General:

The analyses for Chemical Oxygen Demand (COD) were performed according to EPA Method 410.4.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

COD (0.1000 ug/L, 2.5 ug/L) was reported in the ICB and associated CCB. Since the blank concentrations were less than ½ the LOQ, no data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses data were performed using sample 48/49-IDW. The Percent Recoveries (%Rs) were 148% and 148%, which exceeded the QC limits. The positive result for the parent sample was qualified as estimated (J).

VI.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

pH

SUMMARY

I.) General:

The analyses for pH were performed according to SW-846 Method 9040C.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

All Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Blanks data were not required for this fraction of the SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

LCS data was not required for this fraction of the SDG. No data qualification was necessary.

V.) Matrix Duplicate (MD):

MD analysis was performed using sample 48/49-IDW. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

Appendix A
Qualified Form Is

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495142
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 04:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U Y UJ	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Y,Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

ALH 12/8/2020

CT LABORATORIES
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1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495142
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 04:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495142
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 04:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	495142
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:11	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495139
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U Y UJ	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Y,Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495139
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	7.5		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.75	J	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495139
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.4		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	495139
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495137
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 02:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U Y UJ	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Y,Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495137
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 02:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495137
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 02:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.0		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	495137
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 19:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495140
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U Y UJ	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Y,Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495140
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	7.6		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.71	J	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495140
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.4		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	495140
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:04	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496500
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 10:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.42	J	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	2.9	M J	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U M	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U M	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U M	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z UJ	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U M	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496500
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 10:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U M	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	3.8		0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U M	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U M	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U M	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U M	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496500
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 10:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	3.0		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U M	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496500
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496501
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 11:19	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.87	J	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z UJ	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496501
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 11:19	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.96	J	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496501
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 11:19	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	2.2		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496501
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:24	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496542
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 14:16	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z UJ	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496542
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 14:16	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	35		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	3.7		0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496542
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 14:16	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	3.2		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496542
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 21:06	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496543
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	5.00
Date & Time Analyzed:	11/10/2020 / 11:39	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	79		1.5	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496543
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 17:26	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	1.0		0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z UJ	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496543
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 17:26	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	15		0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0
79-01-6	Trichloroethene	16		0.30	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496543
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 17:26	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496543
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 21:09	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496502
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 11:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z UJ	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496502
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 11:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	2.8		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496502
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 11:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496502
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496507
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 13:17	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z UJ	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496507
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 13:17	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496507
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 13:17	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496507
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	3.9	J	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495141
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U Y UJ	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Y,Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495141
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.56	J	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495141
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 03:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	495141
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:07	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

49TW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496504
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 12:48	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z UJ	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49TW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496504
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 12:48	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49TW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496504
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 12:48	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49TW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496504
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:36	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	1.1	J	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496503
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 12:18	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z UJ	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496503
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 12:18	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.2		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.42	J	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496503
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 12:18	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.5		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496503
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 20:33	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

RNS-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496508
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 13:47	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

RNS-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496508
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 13:47	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.95	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

RNS-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496508
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 13:47	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

RNS-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	157538
Sample wt/vol:	23.8 (g/mL)	CTL Sample ID:	496508
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	23.8 (mL)	Date/Time Prepared:	11/03/2020 / 18:40
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	78814
Analytical Run #:	176737	Dilution Factor:	1.00
Date & Time Analyzed:	11/03/2020 / 21:02	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121319	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.70	U	0.40	0.70	0.80	0.80
74-85-1	Ethene	1.0	U	0.50	1.0	1.1	1.1
74-82-8	Methane	0.60	U	0.30	0.60	0.70	0.70

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496505
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 09:21	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496505
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 09:21	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496505
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 09:21	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496545
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 09:50	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U Z	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496545
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 09:50	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	496545
% Solids:		Date Received:	10/30/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176659	Dilution Factor:	1.00
Date & Time Analyzed:	11/09/2020 / 09:50	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TRIP BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495136
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 00:08	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U Y	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Y	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

TRIP BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495136
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 00:08	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TRIP BLANK

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	157538
Sample wt/vol:	(g/mL)	CTL Sample ID:	495136
% Solids:		Date Received:	10/28/2020
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	176563	Dilution Factor:	1.00
Date & Time Analyzed:	11/07/2020 / 00:08	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W110320.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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INORGANIC ANALYSIS DATA SHEET

Sample Description: **48/49-IDW**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496544
Analytical Method:	EPA 6010C	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176769	Analysis Date/Time	11/05/2020 06:41
Analytical Prep Batch #:	78777	Prep. Date/Time:	11/02/2020 11:52
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	1470	J	10	20	40	40
7440-36-0	Total Antimony	10	U	4.7	10	20	20
7440-38-2	Total Arsenic	25	U	12	25	50	50
7440-39-3	Total Barium	129		0.82	2.0	4.0	4.0
7440-41-7	Total Beryllium	0.30	U	0.10	0.30	0.60	0.60
7440-43-9	Total Cadmium	1.0	U	0.42	1.0	2.0	2.0
7440-70-2	Total Calcium	80400		19	50	100	100
7440-47-3	Total Chromium	5.3		1.6	3.5	5.0	5.0
7440-48-4	Total Cobalt	2.4	J	0.60	2.5	4.0	4.0
7440-50-8	Total Copper	25	U	11	25	50	50
7439-89-6	Total Iron	2300		33	70	100	100
7439-92-1	Total Lead	8.1		1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	40900		10	25	40	40
7439-96-5	Total Manganese	634		1.5	3.0	5.0	5.0
7440-02-0	Total Nickel	2.5	J	1.4	3.0	5.0	5.0
7782-49-2	Total Selenium	20	U	9.9	20	40	40
7440-22-4	Total Silver	2.0	U	0.70	2.0	4.0	4.0
7440-28-0	Total Thallium	12	U	5.9	12	20	20
7440-62-2	Total Vanadium	2.4	J	1.1	2.5	5.0	5.0
7440-66-6	Total Zinc	20.0		5.0	10	10	10

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496544
Analytical Method:	EPA 6010C	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176770	Analysis Date/Time	11/06/2020 11:12
Analytical Prep Batch #:	78777	Prep. Date/Time:	11/02/2020 11:52
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7440-09-7	Total Potassium	5430		120	250	500	500
7440-23-5	Total Sodium	18800		180	500	500	500

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496544
Analytical Method:	EPA 7470A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176863	Analysis Date/Time	11/05/2020 16:30
Analytical Prep Batch #:	78793	Prep. Date/Time:	11/05/2020 09:50
ICAL Calibration #:	11052020	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.060	U	0.030	0.060	0.12	0.12

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INORGANIC ANALYSIS DATA SHEET

Sample Description: **13MW2**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495142
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 15:05
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7	J M	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.17	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	48	J M	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495142
Analytical Method:	EPA 9060A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176903	Analysis Date/Time	11/07/2020 19:04
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495139
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 14:04
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.7		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495139
Analytical Method:	EPA 9060A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176903	Analysis Date/Time	11/07/2020 17:33
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495139
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 22:10
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	110		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495137
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 13:44
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.63		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	46		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495137
Analytical Method:	EPA 9060A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176903	Analysis Date/Time	11/07/2020 17:12
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495140
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 14:24
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.7		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495140
Analytical Method:	EPA 9060A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176903	Analysis Date/Time	11/07/2020 17:54
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495140
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 22:30
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	100		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496544
Analytical Method:	EPA 9040C	Date Received:	10/30/2020
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176643	Analysis Date/Time	10/30/2020 14:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	6.51		0.1	0.1	0.1	0.1

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48/49-IDW

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496544
Analytical Method:	EPA 410.4	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176665	Analysis Date/Time	11/02/2020 15:44
Analytical Prep Batch #:	78785	Prep. Date/Time:	11/02/2020 08:07
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
COD	COD	200	J	M	15	35	75	75

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496500
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/31/2020 10:47
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
14808-79-8	Sulfate	130	J	M	4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496500
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 12:38
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	9.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.7	J H	0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496500
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 19:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496501
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/31/2020 12:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	61		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496501
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 13:59
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
16887-00-6	Chloride	9.7			1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.1	J	H	0.12	0.20	0.40	0.40

ALH 12/8/2020

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496501
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 20:48
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496542
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176644	Analysis Date/Time	10/30/2020 22:06
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.6	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.82		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	6.1		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496542
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 22:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496543
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176644	Analysis Date/Time	10/30/2020 22:26
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.8	J J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	5.9		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	28		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496543
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 23:05
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496502
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 10:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.30	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	1.5	J	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496502
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 21:01
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496507
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 11:58
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.9	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.24	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	16		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496507
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 21:44
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495141
Analytical Method:	EPA 9056A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176516	Analysis Date/Time	10/28/2020 14:44
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.4		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.21	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	61		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	495141
Analytical Method:	EPA 9060A	Date Received:	10/28/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176903	Analysis Date/Time	11/07/2020 18:14
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49TW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496504
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 11:38
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.1	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.24	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	16		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49TW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496504
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 21:30
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496503
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 11:17
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	8.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	68		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496503
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 21:18
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

RNS-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496508
Analytical Method:	EPA 9056A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176633	Analysis Date/Time	10/30/2020 12:18
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.5	U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	1.5	U	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

RNS-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	157538
% Solids:		Lab Sample ID:	496508
Analytical Method:	EPA 9060A	Date Received:	10/30/2020
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	176996	Analysis Date/Time	11/10/2020 22:02
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

VALIDATA
Chemical Services, Inc.
(770) 232-0130
(770) 232-5082 (Fax)
2159 Wynnton Pointe, Duluth, GA 30097
www.datavalidator.com

DATA VALIDATION SUMMARY REPORT

COMPANY:	Weston Solutions, Inc.
SITE NAME:	Radford Army Ammunitions Plant – 1ST Quarter 2021
CONTRACTED LAB:	CT Laboratories LLC, Eurofins Eaton Analytical, SGS Orlando
QA/QC LEVEL:	EPA Stage 2B and 4
EPA SOW/METHODS:	EPA and SW-846 Methods
VALIDATION GUIDELINES:	*Radford Army Ammunitions Plant, Radford Virginia, SWMU 49 Monitored Natural Attenuation Groundwater Monitoring Work Plan, SWMU 54 Interim Measures Work Plan, QSM 5.1, SW 846 Methods, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* 2017; *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, 2017
SAMPLE MATRIX:	Water
TYPE OF ANALYSIS:	Volatile Organics (VOA), Dissolved Gases, Perchlorate, Explosives, Total Metals, Total Mercury, Anions, Total Organic Carbon (TOC), Total Inorganic Carbon (TIC), Chlorate, Chemical Oxygen Demand (COD), pH
SDG NUMBER:	159400
SAMPLING DATES:	January 25-28, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	VOA	Dis. Gases
13MW5	527961	Water	X	X
13MW4	527962	Water	X	X
13MW3	527963	Water	X	X
13TW3	527964	Water	X	X
49MW04	527965	Water	X	X
13MW2	527966	Water	X	X
49MW05	527967	Water	X	X

Client Sample #	Lab Sample #	Matrix	VOA	Dis. Gases
TB-01	527969	Water	X	
48MW06	529217	Water	X	X
48MW07	529218	Water	X	X
49MW03	529219	Water	X	X
49MW02	529220	Water	X	X
48MW3	529221	Water	X	X
48MW3DL	529221DL	Water	X	
48TW3	529222	Water	X	X
48TW3DL	529222DL	Water	X	
50MW02	529223	Water	X	X
EQB-50MW02	529224	Water	X	X
TB-2	529225	Water	X	
48MW2	529226	Water	X	X
49MW01	529227	Water	X	X
48MW1	529228	Water	X	X
TB-3	529229	Water	X	
13MW2MS	527966MS	Water	X	X
13MW2MSD	527966MSD	Water	X	X
48MW06MS	529217MS	Water	X	X
48MW06MSD	529217MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	Total Metals**	Total Mercury
IDW-48/49	529230	Water	X	X
IDW-48/49MS	529230MS	Water	X	
IDW-48/49MSD	529230MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	Anions	TOC
13MW5	527961	Water	X	X
13MW5DL	527961DL	Water	X	
13MW4	527962	Water	X	X
13MW3	527963	Water	X	X
13MW3DL	527963DL	Water	X	
13TW3	527964	Water	X	X
13TW3DL	527964DL	Water	X	
49MW04	527965	Water	X	X
13MW2	527966	Water	X	X

Client Sample #	Lab Sample #	Matrix	Anions	TOC
49MW05	527967	Water	X	X
49MW05DL	527967DL	Water	X	
48MW06	529217	Water	X	X
48MW06DL	529217DL	Water	X	
48MW07	529218	Water	X	X
49MW03	529219	Water	X	X
49MW02	529220	Water	X	X
48MW3	529221	Water	X	X
48TW3	529222	Water	X	X
50MW02	529223	Water	X	X
EQB-50MW02	529224	Water	X	X
48MW2	529226	Water	X	X
49MW01	529227	Water	X	X
48MW1	529228	Water	X	X
13MW2MS	527966MS	Water	X	X
13MW2MSD	527966MSD	Water	X	X
48MW06MS	529217MS	Water	X	X
48MW06MSD	529217MSD	Water	X	X
EQB-50MW02MS	529224MS	Water	X	
EQB-50MW02MSD	529224MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	COD	pH
IDW-48/49	529230	Water	X	X
IDW-48/49MD	529230MD	Water		X

SDG NUMBER: 159442
SAMPLING DATES: January 26, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	Total Metals**	Total Mercury
IDW-54	528807	Water	X	X
IDW-54MS	528807MS	Water	X	X
IDW-54MSD	528807MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	Anions	Chlorate
54MW13	528800	Water	X	X
54TW13	528802	Water	X	X
54MW10	528803	Water	X	X
54MW10DL	528803DL	Water	X	
54MW12	528804	Water	X	X
54MW1	528805	Water	X	X
54MW12MS	528804MS	Water	X	
54MW12MSD	528804MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	TOC	TIC
54MW13	528800	Water	X	X
54TW13	528802	Water	X	X
54MW10	528803	Water	X	X
54MW12	528804	Water	X	X
54MW1	528805	Water	X	X
54MW12MS	528804MS	Water	X	X
54MW12MSD	528804MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	COD	pH
IDW-54	528807	Water	X	X
IDW-54MD	528807MD	Water		X
IDW-54MS	528807MS	Water	X	
IDW-54MSD	528807MSD	Water	X	

SDG NUMBER: FA82653
SAMPLING DATES: January 26, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	Explosives	Perchlorate
54MW13	FA82653-1	Water	X	X
54TW13	FA82653-2	Water	X	X
54MW10	FA82653-3	Water	X	X
54MW12	FA82653-4	Water	X	X
54MW1	FA82653-5	Water	X	X

Client Sample #	Lab Sample #	Matrix	Explosives	Perchlorate
54MW12MS	FA82653-4MS	Water	X	X
54MW12MSD	FA82653-4MSD	Water	X	X

**- analysis was for 22 analytes by Method 6010C.

All fractions were validated at Stage 4, except Metals and Mercury, which were validated at Stage 2B.

Suffix Codes: DL = DILUTION, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RA = REANALYSIS

DATA REVIEWERS: Amy L. Hogan, Kevin C. Harmon, Sandra Nacquin

DATA VALIDATION SUMMARY

CT Laboratories LLC – 159400 - Organics & Inorganics

VOLATILE ORGANICS (VOA)

SUMMARY

I.) General:

The analyses for Volatile Organics (VOA) were performed according to SW 846 Method 8260B.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

The laboratory recorded the pH for sample 49MW02 as greater than 2, which indicates that the sample was not properly preserved. The results for this sample, which were all non-detect, were qualified as estimated (UJ).

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No data qualification was necessary.

III.) Calibration:

Initial Calibration:

The average RRF for 1,4-dioxane (0.006) for the standards analyzed on 1/29/21 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

All other Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

The Percent Difference (%D) for the standards run on 1/29/21 on instrument VMS3 was -39%, which exceeded the QC limit. The results for this compound in all samples, which consisted entirely of non-detects, were qualified as estimated (UJ).

Continuing Calibration:

The Percent Difference (%D) for the standards run on 2/2/21 at 10:54 on instrument VMS3 was 30.0%, which exceeded the 20% QC limit for opening CCVs. The 1,4-dioxane results for associated samples 48MW06, 48MW07, 49MW02, 48MW3, 48TW3, 50MW02, 48MW2, 49MW01 and 48MW1, which were all non-detects, were qualified as estimated (UJ).

The Percent Difference (%D) for the standards run on 2/3/21 at 13:32 on instrument VMS3 was -250% for 1,4-dioxane, which exceeded the 20% QC limit for opening CCVs. The 1,4-dioxane results for associated samples 13MW5, 13MW4, 13MW3, 13TW3, 49MW04, 13MW2 and 49MW05, which were all non-detects, were qualified as estimated (UJ).

IV.) Blanks:

Method Blanks:

1,4-dioxane (247 ug/L) was detected in associated method blank 530870. Since there were no positive 1,4-dioxane results for the samples, no data qualification was necessary.

Equipment Blank:

There were detections in associated equipment blank EQB-50MW02 for the following compounds:

bromodichloromethane	2.2 ug/L
chloroform	6.1 ug/L
dibromochloromethane	0.74 ug/L

Since the blank result for chloroform was greater than the LOQ, all positive chloroform results for the samples which were less than the LOQ were qualified as undetected (U) with the result being raised to the LOQ and all positive chloroform results for the samples which were greater than the LOQ but less than the blank result were qualified as undetected (U). Since there were no positive bromodichloromethane or dibromochloromethane results for the samples, no data qualification was necessary.

Trip Blanks:

There were no detections in the associated trip blanks. No data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

VI.) Laboratory Control Samples (LCS):

Two LCS were analyzed for this fraction of the SDG. The Percent Recovery (%R) for 1,4-dioxane at 148% for 530865 exceeded the QC limits. Since there were no positive results for this compound in the associated samples, no data qualification was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using samples 13MW2 and 48MW06. The Percent Recoveries (%Rs) for 1,4-dioxane for 13MW2 (151%, 164%) and 48MW06 (56%) were outside the QC limits. The Relative Percent Difference (RPD) for 1,4-dioxane (61%) for 48MW06 also exceeded the QC limit. Since the %R for 48MW06 was below the QC limits. the non-detect 1,4-dioxane result for the parent sample was qualified as estimated (UJ).

VIII.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 48MW3 / 48TW3) were identified for this SDG. The calculable Relative Percent Differences (RPDs) for carbon tetrachloride (0%) and trichloroethene (8.7%) for the first set and carbon tetrachloride (1.1%), 1,2-dichloroethene (0%), chloroform (0%), and trichloroethene (4.7%) were all within the QC limit. It was also noted that the absolute difference for toluene for the second set was less than the LOQ. All criteria were met, so no data qualification was necessary.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

The carbon tetrachloride results for samples 48MW3 and 48TW3 were reported from a dilution analysis. Since all criteria were met and the compound was only reported once, no data

qualification was necessary.

DISSOLVED GASSES

SUMMARY

I.) General:

The analyses for Dissolved Gases were performed according to Method RSK-175.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

The laboratory recorded the pH for samples 49MW02 and 49MW01 as greater than 2, which indicates that the samples were not properly preserved. The positive and non-detect results for these samples were qualified as estimated (J) and (UJ).

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Equipment Blank:

There were no detections in the associated equipment blank. No data qualification was necessary.

IV.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using samples 13MW2 and 48MW06. All criteria were met. No data qualification was necessary.

VII.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 48MW3 / 48TW3) were identified for this SDG. There were no calculable Relative Percent Differences. No data qualification was necessary.

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

TOTAL METALS and MERCURY

SUMMARY

I.) General:

The analyses for Total Metals were performed according to SW-846 Method 6010C and the analyses for Total Mercury were performed according to SW-846 Method 7470A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) LLCCV and CRDL:

All LLCCV and CRDL criteria were met. No data qualification was necessary

IV.) Blanks:

Method Blanks:

There were no detections in the associated method blanks. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

V.) ICP Interference Check Sample Results:

All Interference Check Sample criteria were met. No data qualification was necessary.

VI.) ICP Serial Dilution Analysis:

Serial dilution analysis was performed using sample IDW-48/49. The Percent Differences (%Ds) for aluminum (45%), calcium (47%) and iron (59%) exceeded the 10% QC limit. The positive results for these analytes in the sample were qualified as estimated (J).

VII.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

VIII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample IDW-48/49. The parent sample result for aluminum and iron were greater than 4X the spike concentrations, so the results for these analytes were not considered meaningful. The Percent Recoveries (%Rs) were below the QC limits for the following analytes: antimony (82%), arsenic (84%), barium (55%, 67%), cadmium (86%), calcium (83%), lead (55%, 65%), nickel (87%) and thallium (78%). The post spike %Rs for lead (70%), nickel (77%) and thallium (76%) were also below the QC limits. The positive and non-detect results for these analytes for sample IDW-48/49 were qualified as estimated (J) and (UJ).

IX.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

ANIONS

SUMMARY

I.) General:

The analyses for Anions were performed according to SW-846 Method 9056A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

The 49 to 51 hours between sample collection and analysis for samples 48MW06, 48MW07 and 49MW03 exceeded the 48-hour QC limit for the nitrate portion of the analysis. The positive nitrate results for these samples were qualified as estimated (J).

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was

necessary.

Equipment Rinsate Blank:

Chloride (1.1 mg/L) was detected in associated equipment rinsate blank EQB-50MW02. Since the blank result was less than the LOQ, all positive chloride results for the samples, which were less than the LOQ, were qualified as undetected (U) with the result being raised to the LOQ.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 13MW2, 48MW2 and EQB-50MW02. The Percent Recoveries (%Rs) for sulfate (79%, 81%) for sample 13MW2 and chloride (86%) for EQB-50MW02 were all below the QC limits. The results for these analytes in the associated parent samples, which were all positive, were qualified as estimated (J).

VI.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 48MW3 / 48TW3) were identified for this SDG. The calculable Relative Percent Differences (RPDs) were chloride (0%), nitrate (0%) and sulfate (0%) for the first set and nitrate (1.9%) and sulfate (4.1%) for the second set, which were all within the QC limit. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

TOTAL ORGANIC CARBON

SUMMARY

I.) General:

The analyses for Total Organic Carbon (TOC) were performed according to SW-846 Method 9060A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 13MW2 and 48MW06. The Relative Percent Difference (RPD) for 48MW06 was 38%, which exceeded the QC limit. The positive result for the parent sample was qualified as estimated (J).

VI.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 48MW3 / 48TW3) were identified for this SDG. There were no calculable Relative Percent Differences (RPDs). No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHEMICAL OXYGEN DEMAND (COD)

SUMMARY

I.) General:

The analyses for Chemical Oxygen Demand (COD) were performed according to EPA Method 410.4.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses data was not submitted for this fraction of the SDG. Data qualification based on the absence of MS / MSD data was not required. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

pH

SUMMARY

I.) General:

The analyses for pH were performed according to SW-846 Method 9040C.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

All Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Blanks data were not required for this fraction of the SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

LCS data was not required for this fraction of the SDG. No data qualification was necessary.

V.) Matrix Duplicate (MD):

MD analysis was performed using sample IDW-48/49. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

DATA VALIDATION SUMMARY

CT Laboratories LLC – 159442 - Inorganics

TOTAL METALS and MERCURY

SUMMARY

I.) General:

The analyses for Total Metals were performed according to SW-846 Method 6010C and the analyses for Total Mercury were performed according to SW-846 Method 7470A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) LLCCV and CRDL:

All LLCCV and CRDL criteria were met. No data qualification was necessary

IV.) Blanks:

Method Blanks:

Calcium (19.8 ug/L), lead (1.73 ug/L) and potassium (248 ug/L) were detected in associated 528819. Since the blank result for lead was greater than half the LOQ, the positive lead result for the sample, which was less than the LOQ, was qualified as undetected (U) with the result being raised to the LOQ. Since the calcium and potassium blank results were less than half the LOQ, no data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

V.) ICP Interference Check Sample Results:

All Interference Check Sample criteria were met. No data qualification was necessary.

VI.) ICP Serial Dilution Analysis:

Serial dilution analysis was performed using sample IDW-54. The Percent Differences (%Ds) for calcium (39%) and magnesium (38%) exceeded the 10% QC limit. The positive results for these analytes in the sample were qualified as estimated (J).

VII.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

VIII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample IDW-54. All criteria were met. No data qualification was necessary.

IX.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

ANIONS

SUMMARY

I.) General:

The analyses for Anions were performed according to SW-846 Method 9056A.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

Equipment Rinsate Blank:

There was no associated equipment rinsate blank for this SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54MW12. The parent sample result for sulfate was greater than 4X the spike concentration, so the results for this analyte were not considered meaningful. All other criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

One sets of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. The calculable Relative Percent Differences (RPDs) were chloride (0%), nitrate (1.3) and sulfate (0%), which were all within the QC limit. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

TOTAL INORGANIC AND ORGANIC CARBON

SUMMARY

I.) General:

The analyses for Total Inorganic Carbon (TIC) and Total Organic Carbon (TOC) were performed according to SW-846 Method 9060A.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54MW12. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

One set of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. The calculable Relative Percent Difference (RPD) for TIC at 0% was within the QC limit and the calculable difference for TOC was less than the LOQ, so no data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHEMICAL OXYGEN DEMAND (COD)

SUMMARY

I.) General:

The analyses for Chemical Oxygen Demand (COD) were performed according to EPA Method 410.4.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample IDW-54. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

pH

SUMMARY

I.) General:

The analyses for pH were performed according to SW-846 Method 9040C.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

All Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Blanks data were not required for this fraction of the SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

LCS data was not required for this fraction of the SDG. No data qualification was necessary.

V.) Matrix Duplicate (MD):

MD analysis was performed using sample IDW-54. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHLORATE / CHLORITE

SUMMARY

I.) General:

The analyses for Chlorate / Chlorite were performed according to EPA Method 300.0.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

Equipment Rinsate Blank:

There was no associated equipment rinsate blank for this SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54MW12. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

One sets of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. There were no calculable Relative Percent Differences (RPDs). No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

DATA VALIDATION SUMMARY

SGS Orlando, FL – FA82653 - Organics

EXPLOSIVES

SUMMARY

I.) General:

The analyses for Explosives were performed according to SW 846 Method 8330.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

The Percent Differences (%Ds) for the standards run on 1/8/21 on instrument G1315B were 20.1% for HMX and 20.5% for 2-amino-4,6-dinitrotoluene, which exceeded the 20% QC limit. The positive and non-detect results for these compounds in the SDG samples were qualified as estimated (J) and (UJ).

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

IV.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. The Percent Recovery (%R) for TNX (48%) was below the QC limits. The results for this compound in the SDG samples, which were all non-detect, were qualified as estimated (UJ).

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 54MW12. The Percent Recoveries (%Rs) for 2,6-dinitrotoluene (161%, 154%) exceeded the QC limits. Data qualification based on MS / MSD data alone was not required. No data qualification was necessary.

VII.) Field Duplicates:

One set of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. The calculable Relative Percent Differences (RPDs) were:

HMX	5.6%
DMX	8.8%
3,5-dinitroaniline	17%
2-amino-4,6-dinitrotoluene	0%
4-amino-2,6-dinitrotoluene	13%
1,3,5-trinitrobenzene	4.7%
2,4,6-trinitrobenzene	3.7%

All criteria were met. No data qualification was necessary.

VIII.) TCL Compound Identification:

The Column Relative Percent Difference (RPD) exceeded the 40% QC limit for the following compounds:

Sample	Compound	RPD
54MW13	3,5-dinitroaniline	109.5%
54TW13	3,5-dinitroaniline	102.7%
54MW12	3,5-dinitroaniline	123.7%
	4-amino-2,6-dinitrotoluene	57.1%

The positive compound results for the listed samples above were qualified as estimated (J).

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

PERCHLORATE

SUMMARY

I.) General:

The analyses for Perchlorate were performed according to SW-846 Method 6350.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 54MW12. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

One set of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. The calculable Relative Percent Differences (RPDs) was 3.5%, which was within the QC limit. No data qualification was necessary.

VII.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

Appendix A
Qualified Form Is

CT LABORATORIES
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1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527966
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 12:10	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
delivering more than data from your environmental analyses

1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527966
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 21:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U		0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U		0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U		0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U		0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U		0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U		0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U		0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U		0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U		0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U		0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U		0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U		0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U		0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	Z,Q,M UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U		2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U		3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U		2.2	6.0	10	10
67-64-1	Acetone	10	U		4.0	10	20	20
71-43-2	Benzene	1.0	U		0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U		0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U		0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U		0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U		0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U		0.60	2.0	4.0	4.0

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CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527966
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 21:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527966
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 21:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527963
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 11:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527963
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 19:42	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527963
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 19:42	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	6.8		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	1.0 ~~0.60~~	~~J~~ U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527963
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 19:42	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.1		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527962
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 11:38	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527962
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 19:11	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527962
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 19:11	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527962
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 19:11	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.80	J	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527961
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 11:33	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527961
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 18:41	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527961
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 18:41	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527961
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 18:41	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527964
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 11:48	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527964
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 20:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527964
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 20:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	6.8		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	1.0 ~~0.65~~	~~J~~ U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527964
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 20:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.2		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529217
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 12:36	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529217
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 15:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.76	J	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	4.2		0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,M,Y UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529217
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 15:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	8.2		0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.98	J	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529217
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 15:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	6.1		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW07

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529218
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 12:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW07

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529218
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 15:59	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW07

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529218
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 15:59	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.49	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW07

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529218
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 15:59	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529228
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:33	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529228
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 20:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.35	J	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.79	J	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529228
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 20:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.89	J	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.25	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529228
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 20:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	2.2		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529226
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	2.3		0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529226
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 19:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529226
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 19:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	14		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	2.5	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.45	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529226
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 19:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	2.1		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529221
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	5.00
Date & Time Analyzed:	02/03/2021 / 10:10	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	94		1.5	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529221
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:05	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529221
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 17:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	1.2		0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529221
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 17:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	16		0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.38	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0
79-01-6	Trichloroethene	21		0.30	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529221
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 17:31	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529222
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	5.00
Date & Time Analyzed:	02/03/2021 / 10:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	95		1.5	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529222
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:10	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529222
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 18:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	1.2		0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529222
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 18:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	16		0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.40	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0
79-01-6	Trichloroethene	22		0.30	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529222
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 18:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529227
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U T UJ	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U T UJ	0.59	1.2	1.4	1.4
74-82-8	Methane	0.54	J T J	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description: **49MW01**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529227
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 20:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529227
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 20:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.4		0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	1.0 ~~0.34~~	~~J~~ U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.43	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529227
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 20:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529220
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers			DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	T	UJ	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	T	UJ	0.59	1.2	1.4	1.4
74-82-8	Methane	2.0		T	J	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529220
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 17:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	T UJ	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	T	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	T	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	T	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	T	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	T	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	T	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	T	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	T	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	T	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	T	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	T	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	T	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	TZ	34	50	100	100
78-93-3	2-Butanone	6.0	U	T	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	T	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	T	2.2	6.0	10	10
67-64-1	Acetone	10	U	T	4.0	10	20	20
71-43-2	Benzene	1.0	U	T	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	T	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	T	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	T	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	T	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	T	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529220
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 17:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U T UJ	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U T	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U T	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U T	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U T	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U T	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U T	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U T	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U T	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U T	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U T	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U T	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U T	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U T	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U T	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U T	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U T	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U T	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U T	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U T	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U T	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U T	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U T	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U T	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529220
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 17:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U T UJ	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U T	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U T	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529219
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 12:49	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529219
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 16:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529219
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 16:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.58	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529219
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 16:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	0.48	J	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527965
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 11:51	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527965
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 20:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527965
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 20:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.61	J	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527965
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 20:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	527967
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 12:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527967
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 21:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527967
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 21:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527967
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 21:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529223
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 09:37	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.33	J	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529223
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 09:37	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.89	J	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.37	J	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.34	J	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529223
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 09:37	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.4		0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529223
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:16	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.71	J	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	21.0 (g/mL)	CTL Sample ID:	529224
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	21.0 (mL)	Date/Time Prepared:	02/01/2021 / 13:05
Analytical Method:	Mod RSK 175	Analytical Prep Batch #	79881
Analytical Run #:	179084	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 13:21	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529224
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 19:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	2.2		0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529224
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 19:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	6.1		0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.74	J	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529224
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 19:01	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527969
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 15:36	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Q	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527969
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 15:36	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	527969
% Solids:		Date Received:	01/26/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	178983	Dilution Factor:	1.00
Date & Time Analyzed:	02/03/2021 / 15:36	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529225
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 14:27	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529225
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 14:27	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529225
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 14:27	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529229
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 14:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.60	U	0.30	0.60	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.40	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.30	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.30	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.40	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.40	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.90	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.60	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529229
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 14:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.30	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.30	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.50	1.0	2.0	2.0
67-66-3	Chloroform	0.60	U	0.30	0.60	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.60	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.30	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.40	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.30	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.70	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.30	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.70	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.50	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.30	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.40	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.30	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	159400
Sample wt/vol:	(g/mL)	CTL Sample ID:	529229
% Solids:		Date Received:	01/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	179112	Dilution Factor:	1.00
Date & Time Analyzed:	02/02/2021 / 14:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W012921.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.30	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.40	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529230
Analytical Method:	EPA 7470A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179138	Analysis Date/Time	02/03/2021 09:06
Analytical Prep Batch #:	79874	Prep. Date/Time:	02/02/2021 13:40
ICAL Calibration #:	02032021	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	0.020	0.080	0.12	0.12

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529230
Analytical Method:	EPA 6010C	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179107	Analysis Date/Time	02/02/2021 16:15
Analytical Prep Batch #:	79854	Prep. Date/Time:	02/01/2021 10:41
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	6570	J	10	20	40	40
7440-36-0	Total Antimony	10	U UJ	4.7	10	20	20
7440-38-2	Total Arsenic	25	U UJ	12	25	50	50
7440-39-3	Total Barium	82.6	J	0.82	2.0	4.0	4.0
7440-41-7	Total Beryllium	0.27	J	0.10	0.30	0.60	0.60
7440-43-9	Total Cadmium	1.0	U UJ	0.42	1.0	2.0	2.0
7440-70-2	Total Calcium	83300	J	19	50	100	100
7440-47-3	Total Chromium	16.4		1.6	3.5	5.0	5.0
7440-48-4	Total Cobalt	4.4		0.60	2.5	4.0	4.0
7440-50-8	Total Copper	20.1	J	11	25	50	50
7439-89-6	Total Iron	8580	J M	33	70	100	100
7439-92-1	Total Lead	6.7	J M	1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	43800		10	25	40	40
7439-96-5	Total Manganese	358		1.5	3.0	5.0	5.0
7440-02-0	Total Nickel	10.7	J M	1.4	3.0	5.0	5.0
7440-09-7	Total Potassium	7470		120	250	500	500
7782-49-2	Total Selenium	20	U	9.9	20	40	40
7440-22-4	Total Silver	2.0	U	0.70	2.0	4.0	4.0
7440-23-5	Total Sodium	17600		180	500	500	500
7440-28-0	Total Thallium	12	U UJ M	5.9	12	20	20
7440-62-2	Total Vanadium	7.2		1.1	2.5	5.0	5.0
7440-66-6	Total Zinc	33.8		5.0	10	20	20

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527966
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 16:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.36	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	38	J	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527966
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 16:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527963
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 15:16
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.8		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527963
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 16:16
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527963
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 18:17
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	95		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527962
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 14:58
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.27	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	54		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527962
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 16:01
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527961
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/27/2021 08:07
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	220		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527961
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 14:40
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.29	J	0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW5

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527961
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 15:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527964
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 16:10
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.8		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527964
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 16:31
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527964
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 18:35
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	95		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529217
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 09:50
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.8	J J Y	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529217
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 13:33
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	11		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.7	H J	0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529217
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 14:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	120		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW07

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529218
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 10:37
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW07

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529218
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 13:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.0 ~~1.5~~	~~J~~ U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.82	J H	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	4.1		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529228
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 13:34
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529228
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179053	Analysis Date/Time	01/29/2021 18:04
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.6		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	52		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529226
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 13:03
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529226
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179053	Analysis Date/Time	01/29/2021 17:28
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.0 ~~1.9~~	~~J~~ U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.85		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	3.9		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529221
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 11:22
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description: **48MW3**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529221
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 12:21
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.0 ~~2.4~~	~~J~~ U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	5.2		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	24		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529222
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 11:36
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529222
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 12:39
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.0 ~~2.4~~	~~J~~ U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	5.3		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	25		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529227
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 13:18
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529227
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179053	Analysis Date/Time	01/29/2021 17:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.38	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	0.85	J	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529220
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 11:11
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	2.7	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529220
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 12:03
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.0 ~~1.7~~	~~J~~ U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.32	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	14		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529219
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 10:53
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW03

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529219
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 11:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.3	J H	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	2.8	J	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527965
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 16:28
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.29	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	57		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527965
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 16:44
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527967
Analytical Method:	EPA 9060A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178964	Analysis Date/Time	01/28/2021 17:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0436 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527967
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 17:59
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.6		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.19	J	0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW05

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	527967
Analytical Method:	EPA 9056A	Date Received:	01/26/2021
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178954	Analysis Date/Time	01/26/2021 18:53
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	91		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529223
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 11:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529223
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 12:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	63		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529224
Analytical Method:	EPA 9060A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179074	Analysis Date/Time	02/04/2021 12:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529224
Analytical Method:	EPA 9056A	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179049	Analysis Date/Time	01/29/2021 13:15
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
16887-00-6	Chloride	1.1	J	M	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	1.5	U		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529230
Analytical Method:	EPA 410.4	Date Received:	01/29/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179079	Analysis Date/Time	02/01/2021 13:20
Analytical Prep Batch #:	79869	Prep. Date/Time:	02/01/2021 09:19
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	210		18	50	75	75

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	159400
% Solids:		Lab Sample ID:	529230
Analytical Method:	EPA 9040C	Date Received:	01/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179066	Analysis Date/Time	01/29/2021 14:00
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	6.96					

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528807
Analytical Method:	EPA 7470A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179138	Analysis Date/Time	02/03/2021 08:59
Analytical Prep Batch #:	79874	Prep. Date/Time:	02/02/2021 13:40
ICAL Calibration #:	02032021	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	0.020	0.080	0.12	0.12

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528807
Analytical Method:	EPA 6010C	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179044	Analysis Date/Time	01/29/2021 14:42
Analytical Prep Batch #:	79829	Prep. Date/Time:	01/28/2021 10:38
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	93.1		10	20	40	40
7440-36-0	Total Antimony	10	U	4.7	10	20	20
7440-38-2	Total Arsenic	25	U	12	25	50	50
7440-39-3	Total Barium	88.7		0.82	2.0	4.0	4.0
7440-41-7	Total Beryllium	0.30	U	0.10	0.30	0.60	0.60
7440-43-9	Total Cadmium	1.0	U	0.42	1.0	2.0	2.0
7440-70-2	Total Calcium	67300	J	19	50	100	100
7440-47-3	Total Chromium	7.7		1.6	3.5	5.0	5.0
7440-48-4	Total Cobalt	2.5	U	0.60	2.5	4.0	4.0
7440-50-8	Total Copper	25	U	11	25	50	50
7439-89-6	Total Iron	124		33	70	100	100
7439-92-1	Total Lead	4.0 ~~3.4~~	~~J~~ U B	1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	23900	J	10	25	40	40
7439-96-5	Total Manganese	7.3		1.5	3.0	5.0	5.0
7440-02-0	Total Nickel	3.0	U	1.4	3.0	5.0	5.0
7440-09-7	Total Potassium	809	B	120	250	500	500
7782-49-2	Total Selenium	20	U	9.9	20	40	40
7440-22-4	Total Silver	2.0	U	0.70	2.0	4.0	4.0
7440-23-5	Total Sodium	5280		180	500	500	500
7440-28-0	Total Thallium	12	U	5.9	12	20	20
7440-62-2	Total Vanadium	2.5	U	1.1	2.5	5.0	5.0
7440-66-6	Total Zinc	10	U	5.0	10	20	20

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528805
Analytical Method:	EPA 9060A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179073	Analysis Date/Time	02/03/2021 14:38
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528805
Analytical Method:	EPA 9060A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179075	Analysis Date/Time	02/02/2021 16:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	56		0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528805
Analytical Method:	EPA 9056A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178979	Analysis Date/Time	01/27/2021 20:21
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.4	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	28		0.80	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528803
Analytical Method:	EPA 9060A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179073	Analysis Date/Time	02/03/2021 13:41
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.3	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528803
Analytical Method:	EPA 9060A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179075	Analysis Date/Time	02/02/2021 16:21
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	67		0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528803
Analytical Method:	EPA 9056A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178979	Analysis Date/Time	01/27/2021 17:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.66		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528803
Analytical Method:	EPA 9056A	Date Received:	01/27/2021
Dilution Factor:	5.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178979	Analysis Date/Time	01/27/2021 18:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	75		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528804
Analytical Method:	EPA 9060A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179073	Analysis Date/Time	02/03/2021 13:52
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.2	J	Y	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528804
Analytical Method:	EPA 9060A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179075	Analysis Date/Time	02/02/2021 16:33
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	66		0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528804
Analytical Method:	EPA 9056A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178979	Analysis Date/Time	01/27/2021 19:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	8.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.73		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	33	M	0.80	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528800
Analytical Method:	EPA 9060A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179073	Analysis Date/Time	02/03/2021 13:18
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528800
Analytical Method:	EPA 9060A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179075	Analysis Date/Time	02/02/2021 15:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	49		0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528800
Analytical Method:	EPA 9056A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178979	Analysis Date/Time	01/27/2021 17:20
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.80		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	24		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528802
Analytical Method:	EPA 9060A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179073	Analysis Date/Time	02/03/2021 13:30
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.1	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528802
Analytical Method:	EPA 9060A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179075	Analysis Date/Time	02/02/2021 16:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	49		0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528802
Analytical Method:	EPA 9056A	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	178979	Analysis Date/Time	01/27/2021 17:38
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.79		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	24		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528807
Analytical Method:	EPA 410.4	Date Received:	01/27/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179079	Analysis Date/Time	02/01/2021 13:20
Analytical Prep Batch #:	79869	Prep. Date/Time:	02/01/2021 09:19
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	18	J	18	50	75	75

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	159442
% Solids:		Lab Sample ID:	528807
Analytical Method:	EPA 9040C	Date Received:	01/27/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	179028	Analysis Date/Time	01/28/2021 14;10
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	7.79					

Client Name: CT Laboratories Report #: 509113

Sampling Point: 54MW13 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	01/30/21 03:36	4822356
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	01/30/21 03:36	4822356

Sampling Point: 54TW13 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	01/30/21 04:03	4822357
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	01/30/21 04:03	4822357

Sampling Point: 54MW10 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	01/30/21 04:30	4822358
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	01/30/21 04:30	4822358

Sampling Point: 54MW12 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	01/30/21 02:15	4822359
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	01/30/21 02:15	4822359

Sampling Point: 54MW1 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	01/30/21 04:57	4822362
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	01/30/21 04:57	4822362

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW13		
Lab Sample ID:	FA82653-1	**Date Sampled:**	01/26/21
Matrix:	AQ - Ground Water	**Date Received:**	01/27/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q78739.D	1	02/02/21 14:36	NAF	02/02/21 08:00	OP83937	SQ1724
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.29	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW13		
Lab Sample ID:	FA82653-1	**Date Sampled:**	01/26/21
Matrix:	AQ - Ground Water	**Date Received:**	01/27/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP389800.D	1	02/05/21 19:29	JB	02/01/21 09:00	OP83930	GPP2402
Run #2 [b]	GG620656.D	1	02/05/21 16:17	JB	02/01/21 09:00	OP83930	GGG2934

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	3.5 J	0.19	0.095	0.076	ug/l	
121-82-4	RDX	0.83	0.19	0.095	0.076	ug/l	
	DNX	0.095 U	0.19	0.095	0.076	ug/l	
	MNX	0.095 U	0.19	0.095	0.076	ug/l	
	TNX	0.095 U UJ	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.38 J	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.5 J	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.4	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	8.4	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	10.7	0.19	0.095	0.076	ug/l	
55-63-0	Nitroglycerine	0.95 U	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	94%	105%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 9/2/21

SGS North America Inc.

Report of Analysis

Client Sample ID: 54TW13
Lab Sample ID: FA82653-2
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 01/26/21
Date Received: 01/27/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q78740.D	1	02/02/21 14:45	NAF	02/02/21 08:00	OP83937	SQ1724
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.28	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54TW13		
Lab Sample ID:	FA82653-2	**Date Sampled:**	01/26/21
Matrix:	AQ - Ground Water	**Date Received:**	01/27/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP389801.D	1	02/05/21 20:00	JB	02/01/21 09:00	OP83930	GPP2402
Run #2 [b]	GG620657.D	1	02/05/21 16:48	JB	02/01/21 09:00	OP83930	GGG2934

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2	1060 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	3.7 J	0.19	0.094	0.075	ug/l	
121-82-4	RDX	0.76	0.19	0.094	0.075	ug/l	
	DNX	0.094 U	0.19	0.094	0.075	ug/l	
	MNX	0.094 U	0.19	0.094	0.075	ug/l	
	TNX	0.094 U UJ	0.19	0.094	0.075	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.45 J	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.5 J	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.6	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	8.8	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	11.1	0.19	0.094	0.075	ug/l	
55-63-0	Nitroglycerine	0.94 U	1.9	0.94	0.47	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	132%	104%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 9/2/21

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA82653-3	**Date Sampled:**	01/26/21
Matrix:	AQ - Ground Water	**Date Received:**	01/27/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q78741.D	1	02/02/21 14:54	NAF	02/02/21 08:00	OP83937	SQ1724
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.62	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA82653-3	**Date Sampled:**	01/26/21
Matrix:	AQ - Ground Water	**Date Received:**	01/27/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP389802.D	1	02/05/21 20:31	JB	02/01/21 09:00	OP83930	GPP2402
Run #2 [b]	GG620660.D	1	02/05/21 18:23	JB	02/01/21 09:00	OP83930	GGG2934

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2	1060 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	7.0 J	0.19	0.094	0.075	ug/l	
121-82-4	RDX	5.8	0.19	0.094	0.075	ug/l	
	DNX	0.094 U	0.19	0.094	0.075	ug/l	
	MNX	0.094 U	0.19	0.094	0.075	ug/l	
	TNX	0.094 U UJ	0.19	0.094	0.075	ug/l	
618-87-1	3,5-Dinitroaniline	0.98	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	3.5 J	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	4.2	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	13.5	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	39.4	0.19	0.094	0.075	ug/l	
55-63-0	Nitroglycerine	0.94 U	1.9	0.94	0.47	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	101%	101%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 9/2/21

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW12
Lab Sample ID: FA82653-4
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 01/26/21
Date Received: 01/27/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q78742.D	1	02/02/21 15:03	NAF	02/02/21 08:00	OP83937	SQ1724
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.46	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW12		
Lab Sample ID:	FA82653-4	**Date Sampled:**	01/26/21
Matrix:	AQ - Ground Water	**Date Received:**	01/27/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP389803.D	1	02/05/21 21:02	JB	02/01/21 09:00	OP83930	GPP2402
Run #2 [b]	GG620661.D	1	02/05/21 18:54	JB	02/01/21 09:00	OP83930	GGG2934

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	17.2 J	0.19	0.095	0.076	ug/l	
121-82-4	RDX	0.095 U	0.19	0.095	0.076	ug/l	
	DNX	0.095 U	0.19	0.095	0.076	ug/l	
	MNX	0.095 U	0.19	0.095	0.076	ug/l	
	TNX	0.095 U UJ	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.33 J	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	3.6 J	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	2.0 J	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	10.4	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	8.6	0.19	0.095	0.076	ug/l	
55-63-0	Nitroglycerine	0.95 U	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	77%	103%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 9/2/21

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW1		
Lab Sample ID:	FA82653-5	**Date Sampled:**	01/26/21
Matrix:	AQ - Ground Water	**Date Received:**	01/27/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q78745.D	1	02/02/21 15:30	NAF	02/02/21 08:00	OP83937	SQ1724
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.10 U	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW1
Lab Sample ID: FA82653-5
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 01/26/21
Date Received: 01/27/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP389806.D	1	02/05/21 22:35	JB	02/01/21 09:00	OP83930	GPP2402
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U UJ	0.19	0.096	0.077	ug/l	
121-82-4	RDX	0.096 U	0.19	0.096	0.077	ug/l	
	DNX	0.096 U	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX	0.096 U UJ	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline	0.096 U	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.096 U UJ	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.096 U	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
55-63-0	Nitroglycerine	0.96 U	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	85%		70-136%

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ALH 9/2/21

VALIDATA
Chemical Services, Inc.
(770) 232-0130
(770) 232-5082 (Fax)
2159 Wynnton Pointe, Duluth, GA 30097
www.datavalidator.com

DATA VALIDATION SUMMARY REPORT

COMPANY:	Weston Solutions, Inc.
SITE NAME:	Radford Army Ammunitions Plant – 2nd Quarter 2021
CONTRACTED LAB:	CT Laboratories LLC, Eurofins Eaton Analytical, SGS Orlando
QA/QC LEVEL:	EPA Stage 2B and 4
EPA SOW/METHODS:	EPA and SW-846 Methods
VALIDATION GUIDELINES:	*Radford Army Ammunitions Plant, Radford Virginia, SWMU 49 Monitored Natural Attenuation Groundwater Monitoring Work Plan, SWMU 54 Interim Measures Work Plan, QSM 5.1, SW 846 Methods, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* 2017; *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, 2017
SAMPLE MATRIX:	Water
TYPE OF ANALYSIS:	Volatile Organics (VOA), Dissolved Gases, Perchlorate, Explosives, Total Metals, Total Mercury, Anions, Total Organic Carbon (TOC), Total Inorganic Carbon (TIC), Chlorate, Chemical Oxygen Demand (COD), pH
SDG NUMBER:	161060
SAMPLING DATES:	April 13-15, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	VOA	Dis. Gases
50MW02	553142	Water	X	X
EQB-50MW02	553148	Water	X	X
48MW2	553149	Water	X	X
48MW3	553150	Water	X	X
48TW3	553151	Water	X	X
49MW02	553152	Water	X	X
TB-1	553153	Water	X	

Client Sample #	Lab Sample #	Matrix	VOA	Dis. Gases
13MW4	553550	Water	X	X
13MW3	553551	Water	X	X
13TW3	553552	Water	X	X
49MW04	553553	Water	X	X
13MW2	553554	Water	X	X
TB-2	553555	Water	X	
49MW01	554737	Water	X	X
48MW1	554738	Water	X	X
48MW06	554739	Water	X	X
TB-3	554740	Water	X	
13MW2MS	553554MS	Water	X	X
13MW2MSD	553554MSD	Water	X	X
49MW01MS	554737MS	Water	X	
49MW01MSD	554737MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	Total Metals**	Total Mercury
IDW-48/49	554741	Water	X	X
IDW-48/49MS	554741MS	Water	X	X
IDW-48/49MSD	554741MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	Anions	TOC
50MW02	553142	Water	X	X
EQB-50MW02	553148	Water	X	X
48MW2	553149	Water	X	X
48MW3	553150	Water	X	X
48TW3	553151	Water	X	X
49MW02	553152	Water	X	X
13MW4	553550	Water	X	X
13MW3	553551	Water	X	X
13TW3	553552	Water	X	X
49MW04	553553	Water	X	X
13MW2	553554	Water	X	X
49MW01	554737	Water	X	X
48MW1	554738	Water	X	X
48MW06	554739	Water	X	X
13MW2MS	553554MS	Water	X	X
13MW2MSD	553554MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	Anions	TOC
49MW01MS	554737MS	Water	X	
49MW01MSD	554737MSD	Water	X	
48MW06MS	554739MS	Water		X
48MW06MSD	554739MSD	Water		X

Client Sample #	Lab Sample #	Matrix	COD	pH
IDW-48/49	554741	Water	X	X
IDW-4//49MD	554741MD	Water		X
IDW-48/49MS	554741MS	Water	X	
IDW-48/49MSD	554741MSD	Water	X	

SDG NUMBER: 161057
SAMPLING DATES: April 12, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	Total Metals**	Total Mercury
IDW-54	553012	Water	X	X
IDW-54RE	553012RE	Water	X	
IDW-54MS	553012MS	Water	X	X
IDW-54MSD	553012MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	Anions	Chlorate
54MW13	553002	Water	X	X
54TW13	553007	Water	X	X
54MW12	553008	Water	X	X
54MW10	553009	Water	X	X
54MW1	553010	Water	X	X
54MW12MS	553008MS	Water	X	X
54MW12MSD	553008MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	TOC	TIC
54MW13	553002	Water	X	X
54TW13	553007	Water	X	X
54MW12	553008	Water	X	X
54MW10	553009	Water	X	X
54MW1	553010	Water	X	X
54MW12MS	553008MS	Water	X	X
54MW12MSD	553008MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	COD	pH
IDW-54	553012	Water	X	X
IDW-54MS	553012MS	Water	X	
IDW-54MSD	553012MSD	Water	X	

SDG NUMBER: FA84640
SAMPLING DATES: April 12, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	Explosives	Perchlorate
54MW13	FA84640-1	Water	X	X
54TW13	FA84640-2	Water	X	X
54MW12	FA84640-3	Water	X	X
54MW12DL	FA84640-3DL	Water	X	
54MW10	FA84640-4	Water	X	X
54MW1	FA84640-5	Water	X	X
54MW12MS	FA84640-3MS	Water	X	X
54MW12MSD	FA84640-3MSD	Water	X	X

**- analysis was for 22 analytes by Method 6010C.

All fractions were validated at Stage 4, except Metals and Mercury, which were validated at Stage 2B.

Suffix Codes: DL = DILUTION, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RA = REANALYSIS

DATA REVIEWERS: Amy L. Hogan, Kevin C. Harmon, Sandra Nacquin

DATA VALIDATION SUMMARY

CT Laboratories LLC – 161060 - Organics & Inorganics

VOLATILE ORGANICS (VOA)

SUMMARY

I.) General:

The analyses for Volatile Organics (VOA) were performed according to SW 846 Method 8260B.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No data qualification was necessary.

III.) Calibration:

Initial Calibration:

The average RRF for 1,4-dioxane (0.003) for the standards analyzed on 4/16/21 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

All other Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

The Percent Differences (%Ds) for the standards run on 4/19/21 at 15:41 on instrument VMS3 exceeded the 20% QC limit for opening CCVs for the following compounds:

dichlorodifluoromethane	-23.2%
acetone	27.3%
methyl acetate	30.3%
2-butanone	21.5%
2-hexanone	23.8%
methylcyclohexane	-21.8%
1,4-dioxane	63.7%
1,2-dibromo-3-chloropropane	24.2%

The results for these compounds in associated samples 49MW01, 48MW1 and 48MW06, which were all non-detect, were qualified as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no detections in the associated method blanks. No data qualification was necessary.

Equipment Blank:

There were no detections in the associated equipment blank. No data qualification was necessary.

Trip Blanks:

There were no detections in the associated trip blanks. No data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

VI.) Laboratory Control Samples (LCS):

Two LCS were analyzed for this fraction of the SDG. The Percent Recovery (%R) for 1,4-

dioxane at 36.4% for 555266 was below the QC limits. The results for this compound in associated samples 49MW01, 48MW1 and 48MW06, which were all non-detect, were qualified as estimated (UJ).

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using samples 13MW2 and 49MW01. All criteria were met. No data qualification was necessary.

VIII.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 48MW3 / 48TW3) were identified for this SDG. The calculable Relative Percent Differences (RPDs) for carbon tetrachloride (5.8%) for the first set and carbon tetrachloride (4.9%), chloroform (0%), and trichloroethene (0%) were all within the QC limit. It was also noted that the absolute difference for chloroform and trichloroethene for the first set were less than the LOQ. All criteria were met, so no data qualification was necessary.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All CRQL criteria were met. No data qualification was necessary.

DISSOLVED GASSES

SUMMARY

I.) General:

The analyses for Dissolved Gases were performed according to Method RSK-175.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Equipment Blank:

There were no detections in the associated equipment blank. No data qualification was necessary.

IV.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

V.) Laboratory Control Samples (LCS):

One LCS / LCSD set was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 13MW2. All criteria were met. No data qualification was necessary.

VII.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 48MW3 / 48TW3) were identified for this SDG. There were no calculable Relative Percent Differences. No data qualification was necessary.

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

TOTAL METALS and MERCURY

SUMMARY

I.) General:

The analyses for Total Metals were performed according to SW-846 Method 6010C and the analyses for Total Mercury were performed according to SW-846 Method 7470A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) LLCCV and CRDL:

All LLCCV and CRDL criteria were met. No data qualification was necessary

IV.) Blanks:

Method Blanks:

There were no detections in the associated method blanks. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

V.) ICP Interference Check Sample Results:

All Interference Check Sample criteria were met. No data qualification was necessary.

VI.) ICP Serial Dilution Analysis:

Serial dilution analysis was performed using sample IDW-48/49. The Percent Difference (%D) for iron (19.9%) exceeded the 10% QC limit. The positive iron result for the sample was qualified as estimated (J).

VII.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

VIII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample IDW-48/49. The parent sample results for

aluminum and iron were greater than 4X the spike concentrations, so the results for these analytes were not considered meaningful. All other criteria were met. No data qualification was necessary.

IX.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

ANIONS

SUMMARY

I.) General:

The analyses for Anions were performed according to SW-846 Method 9056A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

The 50 to 54 hours between sample collection and analysis for samples 48MW06, 48MW1 and 49MW01 exceeded the 48-hour QC limit for the nitrate portion of the analysis. The positive nitrate results for these samples were qualified as estimated (J).

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

Equipment Rinsate Blank:

There were no detections in the associated equipment rinsate blank. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 13MW2 and 49MW0. The sulfate result for parent sample 13MW2 was greater than 4X the spike concentration, so the results for this analyte in the sample set were not considered meaningful. The Percent Recovery (%R) for nitrate (117%) for sample 49MW01 exceeded the QC limit. The positive nitrate result for the parent sample was qualified as estimated (J).

VI.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 48MW3 / 48TW3) were identified for this SDG. The calculable Relative Percent Differences (RPDs) were chloride (2.4%), nitrate (0%) and sulfate (0%) for the first set and nitrate (0%) and sulfate (0%) for the second set, which were all within the QC limit. It was also noted that the absolute difference for chloride for the second set was less than the LOQ. All criteria were met. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

TOTAL ORGANIC CARBON

SUMMARY

I.) General:

The analyses for Total Organic Carbon (TOC) were performed according to SW-846 Method 9060A.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 13MW2 and 48MW06. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 48MW3 / 48TW3) were identified for this SDG. There were no calculable Relative Percent Differences (RPDs). No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHEMICAL OXYGEN DEMAND (COD)

SUMMARY

I.) General:

The analyses for Chemical Oxygen Demand (COD) were performed according to EPA Method 410.4.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample IDW-48/49. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

pH

SUMMARY

I.) General:

The analyses for pH were performed according to SW-846 Method 9040C.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

All Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Blanks data were not required for this fraction of the SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

LCS data was not required for this fraction of the SDG. No data qualification was necessary.

V.) Matrix Duplicate (MD):

MD analysis was performed using sample IDW-48/49. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

DATA VALIDATION SUMMARY

CT Laboratories LLC – 161057 - Inorganics

TOTAL METALS and MERCURY

SUMMARY

I.) General:

The analyses for Total Metals were performed according to SW-846 Method 6010C and the analyses for Total Mercury were performed according to SW-846 Method 7470A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) LLCCV and CRDL:

All LLCCV and CRDL criteria were met. No data qualification was necessary

IV.) Blanks:

Method Blanks:

Beryllium (0.165 ug/L) and potassium (177 ug/L) were detected in associated method blank 553515. Since the blank result for beryllium was greater than half the LOQ, the positive beryllium result for the sample, which was less than the LOQ, was qualified as undetected (U) with the result being raised to the LOQ. Since the potassium result for the blank was less than half the LOQ, no data qualification was necessary.

Calibration Blanks:

Beryllium (0.155 ug/L, 0.206 ug/L) was detected in associated calibration blanks. Since the blank results for beryllium were greater than half the LOQ, the positive beryllium result for the sample, which was less than the LOQ, was qualified as undetected (U) with the result being raised to the LOQ.

V.) ICP Interference Check Sample Results:

All Interference Check Sample criteria were met. No data qualification was necessary.

VI.) ICP Serial Dilution Analysis:

Serial dilution analysis data was not submitted for this fraction of the SDG. Data qualification based on the absence of QC data was not required. No data qualification was necessary.

VII.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

VIII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample IDW-54. The parent sample result for iron was greater than 4X the spike concentration, so the results for this analyte were not considered meaningful. The Percent Recoveries (%Rs) for manganese (88.9%, 89.9%) were below the QC limits. The positive manganese result for the sample was qualified as estimated (J).

IX.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

X.) Sample Result, Calculation/Transcription Verification:

Due to instrument QC issues, the sample was reanalyzed for silver as part of a separate analysis run. Since the silver result was only reported from the reanalysis, no data qualification was necessary.

ANIONS

SUMMARY

I.) General:

The analyses for Anions were performed according to SW-846 Method 9056A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

The 49 to 52 hours between sample collection and analysis for samples 54MW12, 54MW13 and 54TW13 exceeded the 48-hour QC limit for nitrate. The positive nitrate results for these 3 samples were qualified as estimated (J).

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

Equipment Rinsate Blank:

There was no associated equipment rinsate blank for this SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54MW12. The Percent Recoveries (%Rs) for sulfate (82%, 86%) were below the QC limits. The positive sulfate result for the parent sample was qualified as estimated (J).

VI.) Field Duplicates:

One sets of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. The calculable Relative Percent Differences (RPDs) were chloride (0%), nitrate (0%) and sulfate (0%), which were all within the QC limit. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

TOTAL INORGANIC AND ORGANIC CARBON

SUMMARY

I.) General:

The analyses for Total Inorganic Carbon (TIC) and Total Organic Carbon (TOC) were performed according to SW-846 Method 9060A.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54MW12. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

One set of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. The calculable Relative Percent Difference (RPD) for TIC at 3.1% was within the QC limit and the calculable difference for TOC was less than the LOQ, so no data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHEMICAL OXYGEN DEMAND (COD)

SUMMARY

I.) General:

The analyses for Chemical Oxygen Demand (COD) were performed according to EPA Method 410.4.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample IDW-54. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

pH

SUMMARY

I.) General:

The analyses for pH were performed according to SW-846 Method 9040C.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

All Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Blanks data were not required for this fraction of the SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

LCS data was not required for this fraction of the SDG. No data qualification was necessary.

V.) Matrix Duplicate (MD):

MD analysis data was not submitted for this fraction of the SDG. Data qualification based on the absence of QC data was not required. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHLORATE / CHLORITE

SUMMARY

I.) General:

The analyses for Chlorate / Chlorite were performed according to EPA Method 300.0.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

Equipment Rinsate Blank:

There was no associated equipment rinsate blank for this SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54MW12. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

One sets of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. There were no calculable Relative Percent Differences (RPDs). No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

DATA VALIDATION SUMMARY

SGS Orlando, FL – FA82653 - Organics

EXPLOSIVES

SUMMARY

I.) General:

The analyses for Explosives were performed according to SW 846 Method 8330.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

The Percent Difference (%D) for the standards run on 3/22/21 on instrument G1315B was -21.0% for tetryl for signal 2, which exceeded the 20% QC limit. Since the associated samples were used for confirmation analysis only and tetryl was not a target compound for the confirmation analyses, citing professional judgment, the validator determined that data qualification was not necessary.

Continuing Calibration:

The Percent Differences (%Ds) for the standards runs on 4/23/21 at 12:36 and 18:53 on instrument G1315B were -25.4% and -25.6%, respectively, for tetryl for signal 2, which exceeded the 20% QC limit. Since the associated samples were used for confirmation analysis only and tetryl was not a target compound for the confirmation analyses, citing professional judgment, the validator determined that data qualification was not necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

IV.) Surrogate Recoveries:

The surrogates were diluted out of the dilution analysis for sample 54MW12. All other Surrogate Recovery criteria were met. No data qualification was necessary.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 54MW12. A total of 18 Percent Recoveries (%Rs) were outside the QC limits. Data qualification based on MS / MSD data alone was not required. No data qualification was necessary.

VII.) Field Duplicates:

One set of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. The calculable Relative Percent Differences (RPDs) were:

HMX	9.2%
DMX	3.6%
3,5-dinitroaniline	2.6%
2-amino-4,6-dinitrotoluene	5.1%
4-amino-2,6-dinitrotoluene	0%
1,3,5-trinitrobenzene	1.1%
2,4,6-trinitrobenzene	8.1%

All criteria were met. No data qualification was necessary.

VIII.) TCL Compound Identification:

The Column Relative Percent Difference (RPD) exceeded the 40% QC limit for the following compounds:

Sample	Compound	RPD
54MW13	HMX	51.5%
	3,5-dinitroaniline	137.3%
54TW13	HMX	52.8%
	3,5-dinitroaniline	141.1%
	4-amino-2,6-dinitrotoluene	42.4%
54MW12	HMX	58.0%
	3,5-dinitroaniline	154.7%
54MW10	HMX	41.4%
	3,5-dinitroanaline	127.6%

The positive compound results for the listed samples above were qualified as estimated (J).

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

The 2,4,6-trinitroluene result for the initial analysis for sample 54MW12 exceeded the linear calibration range. A dilution analysis was performed for this sample with all calibration criteria met. Since the Form I for the sample is a composite of the results, no data qualification was necessary.

PERCHLORATE

SUMMARY

I.) General:

The analyses for Perchlorate were performed according to SW-846 Method 6350.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 54MW12. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

One set of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. The calculable Relative Percent Differences (RPDs) was 3.5%, which was within the QC limit. No data qualification was necessary.

VII.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

Appendix A
Qualified Form Is

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1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553554
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/18/2021 / 00:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553554
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/18/2021 / 00:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.33	J	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553554
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/18/2021 / 00:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553554
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 12:26	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553551
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 12:07	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553551
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 23:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553551
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 23:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	5.3		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.43	J	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553551
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 23:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.97	J	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553550
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 11:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553550
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 22:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553550
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 22:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553550
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 22:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.45	J	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553552
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 12:10	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553552
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 23:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553552
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 23:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	5.0		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.45	J	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553552
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 23:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.89	J	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.2 (g/mL)	CTL Sample ID:	554739
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	20.2 (mL)	Date/Time Prepared:	04/21/2021 / 08:57
Analytical Method:	RSK 175	Analytical Prep Batch #	80646
Analytical Run #:	181142	Dilution Factor:	1
Date & Time Analyzed:	04/22/2021 / 13:11	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554739
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 19:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.83	J	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	3.8		0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z UJ	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U Z UJ	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U Z UJ	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U Z UJ	4.0	10	20	20
71-43-2	Benzene	1.6	J	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554739
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 19:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	7.4		0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U Z UJ	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U Z UJ	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U Z UJ	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.81	J	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554739
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 19:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	4.9		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.2 (g/mL)	CTL Sample ID:	554738
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	20.2 (mL)	Date/Time Prepared:	04/21/2021 / 08:57
Analytical Method:	RSK 175	Analytical Prep Batch #	80646
Analytical Run #:	181142	Dilution Factor:	1
Date & Time Analyzed:	04/22/2021 / 12:56	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554738
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 19:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.58	J	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z UJ	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U Z UJ	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U Z UJ	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U Z UJ	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554738
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 19:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.39	J	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U Z UJ	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U Z UJ	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U Z UJ	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

ALH 9/3/21

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554738
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 19:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.2		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553149
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 10:16	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553149
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 21:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553149
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 21:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	22		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	3.0		0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553149
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 21:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.00		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553150
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	5
Date & Time Analyzed:	04/18/2021 / 01:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	3.0	U	1.5	3.0	5.0	5.0
79-00-5	1,1,2-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-34-3	1,1-Dichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-35-4	1,1-Dichloroethene	5.0	U	2.0	5.0	10	10
87-61-6	1,2,3-Trichlorobenzene	3.0	U	1.2	3.0	5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	3.0	U	1.4	3.0	5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	3.0	U	1.3	3.0	5.0	5.0
106-93-4	1,2-Dibromoethane	3.0	U	1.5	3.0	5.0	5.0
95-50-1	1,2-Dichlorobenzene	3.0	U	1.5	3.0	5.0	5.0
107-06-2	1,2-Dichloroethane	1.4	J	1.2	3.0	5.0	5.0
78-87-5	1,2-Dichloropropane	3.0	U	0.90	3.0	5.0	5.0
541-73-1	1,3-Dichlorobenzene	3.0	U	1.3	3.0	5.0	5.0
123-91-1	1,4-Dioxane	250	U	170	250	500	500
78-93-3	2-Butanone	30	U	13	30	50	50
591-78-6	2-Hexanone	30	U	15	30	50	50
108-10-1	4-Methyl-2-pentanone	30	U	11	30	50	50
67-64-1	Acetone	50	U	20	50	100	100
71-43-2	Benzene	5.0	U	2.0	5.0	10	10
74-97-5	Bromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-27-4	Bromodichloromethane	3.0	U	1.5	3.0	5.0	5.0
75-25-2	Bromoform	5.0	U	2.0	5.0	10	10
74-83-9	Bromomethane	10	U	4.5	10	20	20
75-15-0	Carbon disulfide	10	U	3.0	10	20	20

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553150
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	5
Date & Time Analyzed:	04/18/2021 / 01:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	84		1.5	3.0	5.0	5.0
108-90-7	Chlorobenzene	3.0	U	1.5	3.0	5.0	5.0
75-00-3	Chloroethane	5.0	U	2.5	5.0	10	10
67-66-3	Chloroform	19		1.5	3.0	5.0	5.0
74-87-3	Chloromethane	5.0	U	3.0	5.0	10	10
156-59-2	cis-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	1.5	U	0.80	1.5	3.0	3.0
110-82-7	Cyclohexane	3.0	U	1.5	3.0	5.0	5.0
124-48-1	Dibromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-71-8	Dichlorodifluoromethane	5.0	U	2.0	5.0	10	10
100-41-4	Ethylbenzene	3.0	U	1.5	3.0	5.0	5.0
76-13-1	Freon 113	10	U	3.5	10	20	20
98-82-8	Isopropylbenzene	3.0	U	1.5	3.0	5.0	5.0
179601-23-1	m & p-Xylene	6.0	U	3.5	6.0	10	10
79-20-9	Methyl Acetate	5.0	U	2.5	5.0	10	10
1634-04-4	Methyl tert-butyl ether	3.0	U	1.5	3.0	5.0	5.0
108-87-2	Methylcyclohexane	3.0	U	1.3	3.0	5.0	5.0
75-09-2	Methylene chloride	5.0	U	2.0	5.0	10	10
95-47-6	o-Xylene	3.0	U	1.3	3.0	5.0	5.0
100-42-5	Styrene	3.0	U	1.5	3.0	5.0	5.0
127-18-4	Tetrachloroethene	3.0	U	1.4	3.0	5.0	5.0
108-88-3	Toluene	3.0	U	1.1	3.0	5.0	5.0
156-60-5	trans-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	3.0	U	1.2	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553150
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	5
Date & Time Analyzed:	04/18/2021 / 01:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	16		1.5	3.0	5.0	5.0
75-69-4	Trichlorofluoromethane	5.0	U	2.0	5.0	10	10
75-01-4	Vinyl chloride	1.5	U	0.70	1.5	3.0	3.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553150
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 10:20	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553151
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	5
Date & Time Analyzed:	04/18/2021 / 01:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	3.0	U	1.5	3.0	5.0	5.0
79-00-5	1,1,2-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-34-3	1,1-Dichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-35-4	1,1-Dichloroethene	5.0	U	2.0	5.0	10	10
87-61-6	1,2,3-Trichlorobenzene	3.0	U	1.2	3.0	5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	3.0	U	1.4	3.0	5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	3.0	U	1.3	3.0	5.0	5.0
106-93-4	1,2-Dibromoethane	3.0	U	1.5	3.0	5.0	5.0
95-50-1	1,2-Dichlorobenzene	3.0	U	1.5	3.0	5.0	5.0
107-06-2	1,2-Dichloroethane	1.4	J	1.2	3.0	5.0	5.0
78-87-5	1,2-Dichloropropane	3.0	U	0.90	3.0	5.0	5.0
541-73-1	1,3-Dichlorobenzene	3.0	U	1.3	3.0	5.0	5.0
123-91-1	1,4-Dioxane	250	U	170	250	500	500
78-93-3	2-Butanone	30	U	13	30	50	50
591-78-6	2-Hexanone	30	U	15	30	50	50
108-10-1	4-Methyl-2-pentanone	30	U	11	30	50	50
67-64-1	Acetone	50	U	20	50	100	100
71-43-2	Benzene	5.0	U	2.0	5.0	10	10
74-97-5	Bromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-27-4	Bromodichloromethane	3.0	U	1.5	3.0	5.0	5.0
75-25-2	Bromoform	5.0	U	2.0	5.0	10	10
74-83-9	Bromomethane	10	U	4.5	10	20	20
75-15-0	Carbon disulfide	10	U	3.0	10	20	20

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553151
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	5
Date & Time Analyzed:	04/18/2021 / 01:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	80		1.5	3.0	5.0	5.0
108-90-7	Chlorobenzene	3.0	U	1.5	3.0	5.0	5.0
75-00-3	Chloroethane	5.0	U	2.5	5.0	10	10
67-66-3	Chloroform	19		1.5	3.0	5.0	5.0
74-87-3	Chloromethane	5.0	U	3.0	5.0	10	10
156-59-2	cis-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	1.5	U	0.80	1.5	3.0	3.0
110-82-7	Cyclohexane	3.0	U	1.5	3.0	5.0	5.0
124-48-1	Dibromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-71-8	Dichlorodifluoromethane	5.0	U	2.0	5.0	10	10
100-41-4	Ethylbenzene	3.0	U	1.5	3.0	5.0	5.0
76-13-1	Freon 113	10	U	3.5	10	20	20
98-82-8	Isopropylbenzene	3.0	U	1.5	3.0	5.0	5.0
179601-23-1	m & p-Xylene	6.0	U	3.5	6.0	10	10
79-20-9	Methyl Acetate	5.0	U	2.5	5.0	10	10
1634-04-4	Methyl tert-butyl ether	3.0	U	1.5	3.0	5.0	5.0
108-87-2	Methylcyclohexane	3.0	U	1.3	3.0	5.0	5.0
75-09-2	Methylene chloride	5.0	U	2.0	5.0	10	10
95-47-6	o-Xylene	3.0	U	1.3	3.0	5.0	5.0
100-42-5	Styrene	3.0	U	1.5	3.0	5.0	5.0
127-18-4	Tetrachloroethene	3.0	U	1.4	3.0	5.0	5.0
108-88-3	Toluene	3.0	U	1.1	3.0	5.0	5.0
156-60-5	trans-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	3.0	U	1.2	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553151
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	5
Date & Time Analyzed:	04/18/2021 / 01:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	16		1.5	3.0	5.0	5.0
75-69-4	Trichlorofluoromethane	5.0	U	2.0	5.0	10	10
75-01-4	Vinyl chloride	1.5	U	0.70	1.5	3.0	3.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553151
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 10:24	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.2 (g/mL)	CTL Sample ID:	554737
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	20.2 (mL)	Date/Time Prepared:	04/21/2021 / 08:57
Analytical Method:	RSK 175	Analytical Prep Batch #	80646
Analytical Run #:	181142	Dilution Factor:	1
Date & Time Analyzed:	04/22/2021 / 12:51	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554737
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 18:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z UJ	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U Z UJ	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U Z UJ	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U Z UJ	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554737
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 18:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	2.8		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.46	J	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U Z UJ	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U Z UJ	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U Z UJ	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554737
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 18:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553152
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 10:27	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	1.6		0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553152
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 22:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553152
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 22:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553152
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 22:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553553
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/18/2021 / 00:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553553
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/18/2021 / 00:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.56	J	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553553
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/18/2021 / 00:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553553
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 12:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553142
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 10:07	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553142
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 21:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.30	J	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553142
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 21:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.83	J	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.39	J	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553142
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 21:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.3		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	20.7 (g/mL)	CTL Sample ID:	553148
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	20.7 (mL)	Date/Time Prepared:	04/15/2021 / 09:00
Analytical Method:	RSK 175	Analytical Prep Batch #	80525
Analytical Run #:	180922	Dilution Factor:	1.00
Date & Time Analyzed:	04/15/2021 / 10:10	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG121720	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553148
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 20:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553148
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 20:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553148
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 20:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553153
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 19:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553153
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 19:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553153
% Solids:		Date Received:	04/14/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 19:45	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553555
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 20:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553555
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 20:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	553555
% Solids:		Date Received:	04/15/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	180903	Dilution Factor:	1
Date & Time Analyzed:	04/17/2021 / 20:15	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554740
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 18:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z	34	50	100	100
78-93-3	2-Butanone	6.0	U Z	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U Z	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U Z	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554740
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 18:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U Z	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U Z	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U Z	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	161060
Sample wt/vol:	(g/mL)	CTL Sample ID:	554740
% Solids:		Date Received:	04/19/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	181064	Dilution Factor:	1
Date & Time Analyzed:	04/19/2021 / 18:00	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W041621.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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Sample Description

IDW-48/49

INORGANIC ANALYSIS DATA SHEET

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554741
Analytical Method:	EPA 6010C	Date Received:	04/19/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181097	Analysis Date/Time	04/22/2021 10:01
Analytical Prep Batch #:	80614	Prep. Date/Time:	04/20/2021 16:41
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	5120		10	20	40	40
7440-36-0	Total Antimony	10	U	4.7	10	20	20
7440-38-2	Total Arsenic	25	U	12	25	50	50
7440-39-3	Total Barium	75.8		0.82	2.0	4.0	4.0
7440-41-7	Total Beryllium	0.60 ~~0.31~~	~~J~~-U B	0.10	0.30	0.60	0.60
7440-43-9	Total Cadmium	1.0	U	0.42	1.0	2.0	2.0
7440-70-2	Total Calcium	151000		19	50	100	100
7440-47-3	Total Chromium	15.7		1.6	3.5	5.0	5.0
7440-48-4	Total Cobalt	8.5		0.60	2.5	4.0	4.0
7440-50-8	Total Copper	19.3	J	11	25	50	50
7439-89-6	Total Iron	9090	J	33	70	100	100
7439-92-1	Total Lead	10.6		1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	77800		10	25	40	40
7439-96-5	Total Manganese	616		1.5	3.0	5.0	5.0
7440-02-0	Total Nickel	25.4		1.4	3.0	5.0	5.0
7440-09-7	Total Potassium	6720		120	250	500	500
7782-49-2	Total Selenium	20	U	9.9	20	40	40
7440-22-4	Total Silver	2.0	U	0.70	2.0	4.0	4.0
7440-23-5	Total Sodium	20800		180	500	500	500
7440-28-0	Total Thallium	12	U	5.9	12	20	20
7440-62-2	Total Vanadium	10.8		1.1	2.5	5.0	5.0
7440-66-6	Total Zinc	38.0		5.0	10	20	20

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554741
Analytical Method:	EPA 7470A	Date Received:	04/19/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181172	Analysis Date/Time	04/21/2021 13:58
Analytical Prep Batch #:	80604	Prep. Date/Time:	04/20/2021 14:10
ICAL Calibration #:	04212021	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	0.020	0.080	0.12	0.12

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553554
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/15/2021 15:38
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.9		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.30	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	33	M	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553554
Analytical Method:	EPA 9060A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/16/2021 16:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.6	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553551
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/15/2021 14:07
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.8		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553551
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/19/2021 14:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	87		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553551
Analytical Method:	EPA 9060A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 17:03
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553550
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/15/2021 13:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.74		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	25		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553550
Analytical Method:	EPA 9060A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 16:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553552
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/15/2021 14:43
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.8		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553552
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/19/2021 15:01
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	87		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553552
Analytical Method:	EPA 9060A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 17:21
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554739
Analytical Method:	EPA 9060A	Date Received:	04/17/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181146	Analysis Date/Time	04/22/2021 12:39
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.8	J	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554739
Analytical Method:	EPA 9056A	Date Received:	04/17/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181073	Analysis Date/Time	04/17/2021 16:32
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	8.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	3.8	J H	0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW06

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554739
Analytical Method:	EPA 9056A	Date Received:	04/17/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181073	Analysis Date/Time	04/21/2021 16:50
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	140		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554738
Analytical Method:	EPA 9056A	Date Received:	04/17/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181073	Analysis Date/Time	04/17/2021 15:56
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.6		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.2	J H	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	43		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554738
Analytical Method:	EPA 9060A	Date Received:	04/17/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181146	Analysis Date/Time	04/21/2021 17:13
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553149
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 15:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553149
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 18:33
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.9	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.83		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	3.3		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553150
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 16:06
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.59	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553150
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 18:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.5	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	4.7		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	22		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553151
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 16:17
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553151
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 19:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.4	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	4.7		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	22		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554737
Analytical Method:	EPA 9056A	Date Received:	04/17/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181073	Analysis Date/Time	04/17/2021 14:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	5.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.39	J J H,M	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	0.87	J	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW01

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554737
Analytical Method:	EPA 9060A	Date Received:	04/17/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181146	Analysis Date/Time	04/21/2021 17:01
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553152
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 16:34
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.91	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553152
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 19:27
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.7	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.38	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	13		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553553
Analytical Method:	EPA 9056A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180945	Analysis Date/Time	04/15/2021 15:19
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.22	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	58		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW04

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553553
Analytical Method:	EPA 9060A	Date Received:	04/15/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 17:40
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553142
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 14:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553142
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 17:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.1		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.4		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	62		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553148
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180921	Analysis Date/Time	04/15/2021 15:08
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

EQB-50MW02

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	553148
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 18:15
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.5	U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	1.5	U	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554741
Analytical Method:	EPA 410.4	Date Received:	04/17/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181214	Analysis Date/Time	04/22/2021 13:47
Analytical Prep Batch #:	80702	Prep. Date/Time:	04/22/2021 09:19
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	310		18	50	75	75

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	161060
% Solids:		Lab Sample ID:	554741
Analytical Method:	EPA 9040C	Date Received:	04/17/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181070	Analysis Date/Time	04/19/2021 14:50
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	8.37		0.1	0.1	0.1	0.1

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553012
Analytical Method:	EPA 6010C	Date Received:	04/14/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181013	Analysis Date/Time	04/17/2021 02:26
Analytical Prep Batch #:	80541	Prep. Date/Time:	04/15/2021 11:08
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	1790		10	20	40	40
7440-36-0	Total Antimony	10	U	4.7	10	20	20
7440-38-2	Total Arsenic	25	U	12	25	50	50
7440-39-3	Total Barium	139		0.82	2.0	4.0	4.0
7440-41-7	Total Beryllium	0.60 ~~0.17~~	~~J~~ U B	0.10	0.30	0.60	0.60
7440-43-9	Total Cadmium	1.0	U	0.42	1.0	2.0	2.0
7440-70-2	Total Calcium	77900		19	50	100	100
7440-47-3	Total Chromium	7.6		1.6	3.5	5.0	5.0
7440-48-4	Total Cobalt	0.91	J	0.60	2.5	4.0	4.0
7440-50-8	Total Copper	25	U	11	25	50	50
7439-89-6	Total Iron	2270	M	33	70	100	100
7439-92-1	Total Lead	4.3		1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	32200		10	25	40	40
7439-96-5	Total Manganese	32.2	J	1.5	3.0	5.0	5.0
7440-02-0	Total Nickel	2.0	J	1.4	3.0	5.0	5.0
7440-09-7	Total Potassium	1650	B	120	250	500	500
7782-49-2	Total Selenium	20	U	9.9	20	40	40
7440-23-5	Total Sodium	9680		180	500	500	500
7440-28-0	Total Thallium	12	U	5.9	12	20	20
7440-62-2	Total Vanadium	4.2	J	1.1	2.5	5.0	5.0
7440-66-6	Total Zinc	13.8	J	5.0	10	20	20

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553012
Analytical Method:	EPA 6010C	Date Received:	04/14/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181013	Analysis Date/Time	04/29/2021 11:59
Analytical Prep Batch #:	80541	Prep. Date/Time:	04/15/2021 11:08
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7440-22-4	Total Silver	2.0	U	0.70	2.0	4.0	4.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553012
Analytical Method:	EPA 7470A	Date Received:	04/14/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	181167	Analysis Date/Time	04/21/2021 13:36
Analytical Prep Batch #:	80556	Prep. Date/Time:	04/20/2021 14:10
ICAL Calibration #:	04212021	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	0.020	0.080	0.12	0.12

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553010
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180901	Analysis Date/Time	04/15/2021 10:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	57		0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553010
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 13:08
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.4	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.13	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	28		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553010
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180904	Analysis Date/Time	04/15/2021 14:38
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553009
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180901	Analysis Date/Time	04/15/2021 10:34
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	71		0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553009
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 12:50
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.5		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.71		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	58		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553009
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180904	Analysis Date/Time	04/15/2021 14:26
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553008
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180901	Analysis Date/Time	04/15/2021 10:22
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	80		0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553008
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180904	Analysis Date/Time	04/15/2021 13:41
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.84	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553008
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 14:20
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.1	J H	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	34	J M	0.80	1.5	3.0	3.0

ALH 9/2/21

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553002
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180901	Analysis Date/Time	04/15/2021 09:59
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	63		0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553002
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180904	Analysis Date/Time	04/15/2021 13:19
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	2.4	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553002
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 13:44
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.64	J H	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	34		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553007
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180901	Analysis Date/Time	04/15/2021 10:10
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	65		0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553007
Analytical Method:	EPA 9060A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180904	Analysis Date/Time	04/15/2021 13:30
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0469 I	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.1	J	0.50	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553007
Analytical Method:	EPA 9056A	Date Received:	04/14/2021
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180881	Analysis Date/Time	04/14/2021 14:02
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.64	J H	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	34		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553012
Analytical Method:	EPA 410.4	Date Received:	04/14/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180925	Analysis Date/Time	04/15/2021 13:24
Analytical Prep Batch #:	80527	Prep. Date/Time:	04/15/2021 08:47
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	26	J	18	50	75	75

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	161057
% Solids:		Lab Sample ID:	553012
Analytical Method:	EPA 9040C	Date Received:	04/14/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	180914	Analysis Date/Time	04/14/2021 14:50
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	7.38		0.1	0.1	0.1	0.1

Client Name: CT Laboratories Report #: 515393

Sampling Point: 54MW13 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	04/17/21 06:56	4877823
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	04/17/21 06:56	4877823

Sampling Point: 54TW13 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	04/17/21 07:23	4877824
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	04/17/21 07:23	4877824

Sampling Point: 54MW12 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	04/17/21 07:50	4877825
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	04/17/21 07:50	4877825

Sampling Point: 54MW10 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	04/17/21 09:11	4877828
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	04/17/21 09:11	4877828

Sampling Point: 54MW1 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	04/17/21 09:38	4877829
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	04/17/21 09:38	4877829

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA84640-1
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q80609.D	1	04/14/21 22:47	NAF	04/14/21 09:00	OP84925	SQ1764
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.34	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA84640-1
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP390604.D	1	04/22/21 12:42	JB	04/16/21 09:30	OP84960	GPP2438
Run #2 [b]	GG621164.D	1	04/23/21 14:10	JB	04/16/21 09:30	OP84960	GGG2966

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX [c]	8.3 J	0.19	0.096	0.077	ug/l	
121-82-4	RDX	0.57	0.19	0.096	0.077	ug/l	
	DNX	0.096 U	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX	0.096 U	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.39 J	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.9	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	1.3	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	17.7	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	17.7	0.19	0.096	0.077	ug/l	
55-63-0	Nitroglycerine	0.96 U	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	102%	130%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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SGS North America Inc.

Report of Analysis

Client Sample ID:	54TW13		
Lab Sample ID:	FA84640-2	**Date Sampled:**	04/12/21
Matrix:	AQ - Ground Water	**Date Received:**	04/13/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q80610.D	1	04/14/21 22:56	NAF	04/14/21 09:00	OP84925	SQ1764
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.34	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54TW13
Lab Sample ID: FA84640-2
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP390605.D	1	04/22/21 13:13	JB	04/16/21 09:30	OP84960	GPP2438
Run #2 [b]	GG621165.D	1	04/23/21 14:41	JB	04/16/21 09:30	OP84960	GGG2966

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX [c]	9.1 J	0.19	0.095	0.076	ug/l	
121-82-4	RDX	0.55	0.19	0.095	0.076	ug/l	
	DNX	0.095 U	0.19	0.095	0.076	ug/l	
	MNX	0.095 U	0.19	0.095	0.076	ug/l	
	TNX	0.095 U	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.38 J	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	2.0	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	1.3 J	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	17.9	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	19.2	0.19	0.095	0.076	ug/l	
55-63-0	Nitroglycerine	0.95 U	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	100%	136%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW12		
Lab Sample ID:	FA84640-3	**Date Sampled:**	04/12/21
Matrix:	AQ - Ground Water	**Date Received:**	04/13/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q80611.D	1	04/14/21 23:05	NAF	04/14/21 09:00	OP84925	SQ1764
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	1.5	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW12
Lab Sample ID: FA84640-3
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP390606.D	1	04/22/21 13:44	JB	04/16/21 09:30	OP84960	GPP2438
Run #2 [b]	GG621166.D	1	04/23/21 15:13	JB	04/16/21 09:30	OP84960	GGG2966
Run #3 [a]	BB068941.D	10	04/24/21 03:24	JB	04/16/21 09:30	OP84960	GBB2027
Run #4 [b]	GG621167.D	10	04/23/21 15:44	JB	04/16/21 09:30	OP84960	GGG2966

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml
Run #3	1040 ml	10.0 ml
Run #4	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX [c]	25.8 J	0.19	0.096	0.077	ug/l	
121-82-4	RDX	6.0	0.19	0.096	0.077	ug/l	
	DNX	0.096 U	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX	0.096 U	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.23 J	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	7.6	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	5.3	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	19.1	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	51.4 [d]	1.9	0.96	0.77	ug/l	
55-63-0	Nitroglycerine	0.96 U	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Run# 4	Limits
610-39-9	3,4-Dinitrotoluene	88%	128%	0% [e]	0% [e]	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	54MW12		
Lab Sample ID:	FA84640-3	**Date Sampled:**	04/12/21
Matrix:	AQ - Ground Water	**Date Received:**	04/13/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q

(d) Result is from Run# 3
(e) Outside control limits due to dilution.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA84640-4	**Date Sampled:**	04/12/21
Matrix:	AQ - Ground Water	**Date Received:**	04/13/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q80614.D	1	04/14/21 23:32	NAF	04/14/21 09:00	OP84925	SQ1764
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.38	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA84640-4	**Date Sampled:**	04/12/21
Matrix:	AQ - Ground Water	**Date Received:**	04/13/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP390607.D	1	04/22/21 14:15	JB	04/16/21 09:30	OP84960	GPP2438
Run #2 [b]	GG621168.D	1	04/23/21 16:16	JB	04/16/21 09:30	OP84960	GGG2966

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX [c]	10.2 J	0.19	0.095	0.076	ug/l	
121-82-4	RDX	3.8	0.19	0.095	0.076	ug/l	
	DNX	0.095 U	0.19	0.095	0.076	ug/l	
	MNX	0.095 U	0.19	0.095	0.076	ug/l	
	TNX	0.095 U	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.42 J	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	2.9	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	2.5	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	16.1	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	30.3	0.19	0.095	0.076	ug/l	
55-63-0	Nitroglycerine	0.95 U	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	90%	126%	70-136%

(a) All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 9/2/21

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW1
Lab Sample ID: FA84640-5
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q80615.D	1	04/14/21 23:40	NAF	04/14/21 09:00	OP84925	SQ1764
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.10 U	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW1
Lab Sample ID: FA84640-5
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 04/12/21
Date Received: 04/13/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP390608.D	1	04/22/21 14:46	JB	04/16/21 09:30	OP84960	GPP2438
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.094 U	0.19	0.094	0.075	ug/l	
121-82-4	RDX	0.094 U	0.19	0.094	0.075	ug/l	
	DNX	0.094 U	0.19	0.094	0.075	ug/l	
	MNX	0.094 U	0.19	0.094	0.075	ug/l	
	TNX	0.094 U	0.19	0.094	0.075	ug/l	
618-87-1	3,5-Dinitroaniline	0.094 U	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.094 U	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
55-63-0	Nitroglycerine	0.94 U	1.9	0.94	0.47	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	104%		70-136%

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

VALIDATA
Chemical Services, Inc.
(770) 232-0130
(770) 232-5082 (Fax)
2159 Wynnton Pointe, Duluth, GA 30097
www.datavalidator.com

DATA VALIDATION SUMMARY REPORT

COMPANY:	Weston Solutions, Inc.
SITE NAME:	Radford Army Ammunitions Plant – 3rd Quarter 2021
CONTRACTED LAB:	CT Laboratories LLC, Eurofins Eaton Analytical, SGS Orlando
QA/QC LEVEL:	EPA Stage 2B and 4
EPA SOW/METHODS:	EPA and SW-846 Methods
VALIDATION GUIDELINES:	*Radford Army Ammunitions Plant, Radford Virginia, SWMU 49 Monitored Natural Attenuation Groundwater Monitoring Work Plan, SWMU 54 Interim Measures Work Plan, QSM 5.1, SW 846 Methods, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* 2017; *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,* 2017
SAMPLE MATRIX:	Water
TYPE OF ANALYSIS:	Volatile Organics (VOA), Dissolved Gases, Perchlorate, Explosives, Total Metals, Total Mercury, Anions, Total Organic Carbon (TOC), Total Inorganic Carbon (TIC), Chlorate, Chemical Oxygen Demand (COD), pH
SDG NUMBER:	163390
SAMPLING DATES:	July 26-30, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	VOA	Dis. Gases
13MW4	1030462	Water	X	X
13MW3	1030468	Water	X	X
13TW3	1030469	Water	X	X
TB-1	1030471	Water	X	
48MW6	1031437	Water	X	X
13MW2	1031438	Water	X	X
LAB TRIP BLANK-1	1031440	Water	X	

Client Sample #	Lab Sample #	Matrix	VOA	Dis. Gases
48MW1	1031957	Water	X	X
49EB1	1031958	Water	X	X
49MW1	1031959	Water	X	X
TB-49	1031960	Water	X	X
50MW2	1031961	Water	X	X
49MW4	1032207	Water	X	X
48MW2	1032208	Water	X	X
LAB TRIP BLANK-2	1032209	Water	X	
48MW3	1032210	Water	X	X
48TW3	1032211	Water	X	X
48RB3	1032212	Water	X	X
49MW2	1032213	Water	X	X
13MW2MS	1031438MS	Water	X	X
13MW2MSD	1031438MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	Total Metals**	Total Mercury
IDW-48/49	1032214	Water	X	X
IDW-48/49MS	1032214MS	Water	X	X
IDW-48/49MSD	1032214MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	Anions	TOC
13MW4	1030462	Water	X	X
13MW3	1030468	Water	X	X
13MW3DL	1030468DL	Water	X	
13TW3	1030469	Water	X	X
13TW3DL	1030469DL	Water	X	
48MW6	1031437	Water	X	X
48MW6DL	1031437DL	Water	X	
13MW2	1031438	Water	X	X
48MW1	1031957	Water	X	X
49EB1	1031958	Water	X	X
49MW1	1031959	Water	X	X
50MW2	1031961	Water	X	X
49MW4	1032207	Water	X	X
48MW2	1032208	Water	X	X
48MW3	1032210	Water	X	X
48TW3	1032211	Water	X	X

Client Sample #	Lab Sample #	Matrix	Anions	TOC
48RB3	1032212	Water	X	X
49MW2	1032213	Water	X	X
13TW3MS	1030469MS	Water	X	
13TW3MSD	1030469MSD	Water	X	
13MW2MS	1031438MS	Water	X	X
13MW2MSD	1031438MSD	Water	X	X
50MW2MS	1031961MS	Water	X	
50MW2MSD	1031961MSD	Water	X	
49MW2MS	1032213MS	Water	X	
49MW2MSD	1032213MSD	Water	X	

Client Sample #	Lab Sample #	Matrix	COD	pH
IDW-48/49	1032214	Water	X	X
IDW-4//49MD	1032214MD	Water		X

SDG NUMBER: 163429
SAMPLING DATES: July 27, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	Total Metals**	Total Mercury
IDW-54	1030878	Water	X	X
IDW-54MS	1030878MS	Water	X	X
IDW-54MSD	1030878MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	Anions	Chlorate
54MW13	1030873	Water	X	X
54TW13	1030874	Water	X	X
54MW12	1030875	Water	X	X
54MW10	1030876	Water	X	X
54MW10DL	1030876DL	Water	X	
54MW1	1030877	Water	X	X
54MW12MS	1030876MS	Water	X	X
54MW12MSD	1030876MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	TOC	TIC
54MW13	1030873	Water	X	X
54TW13	1030874	Water	X	X
54MW12	1030875	Water	X	X
54MW10	1030876	Water	X	X
54MW1	1030877	Water	X	X
54MW12MS	1030876MS	Water	X	X
54MW12MSD	1030876MSD	Water	X	X

Client Sample #	Lab Sample #	Matrix	COD	pH
IDW-54	1030878	Water	X	X
IDW-54MD	1030878MD	Water		X
IDW-54MS	1030878MS	Water	X	
IDW-54MSD	1030878MSD	Water	X	

SDG NUMBER: FA87620
SAMPLING DATES: July 27, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	Explosives	Perchlorate
54MW12	FA87620-1	Water	X	X
54MW12MS	FA87620-1MS	Water	X	X
54MW12MSD	FA87620-1MSD	Water	X	X
54MW1	FA87620-2	Water	X	X

SDG NUMBER: FA87622
SAMPLING DATES: July 27, 2021

SAMPLES:

Client Sample #	Lab Sample #	Matrix	Explosives	Perchlorate
54MW10	FA87622-1	Water	X	X
54MW13	FA87622-2	Water	X	X
54TW13	FA87622-3	Water	X	X

**- analysis was for 22 analytes by Method 6010C.

All fractions were validated at Stage 4, except Metals and Mercury, which were validated at Stage 2B.

Suffix Codes: DL = DILUTION, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RA = REANALYSIS

DATA REVIEWERS: Amy L. Hogan, Kevin C. Harmon, Sandra Nacquin

DATA VALIDATION SUMMARY

CT Laboratories LLC – 163390 - Organics & Inorganics

VOLATILE ORGANICS (VOA)

SUMMARY

I.) General:

The analyses for Volatile Organics (VOA) were performed according to SW 846 Method 8260B.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

Sample 48RB3 was listed as not preserved on the COC and the lab lists the pH at 7, which exceeded the QC limit. All positive and non-detect results for this sample were qualified as estimated (J) and (UJ).

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No data qualification was necessary.

III.) Calibration:

Initial Calibration:

The average RRF for 1,4-dioxane (0.0004) for the standards analyzed on 7/14/21 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

The average RRF for 1,4-dioxane (0.0004) for the standards analyzed on 8/4/21 on instrument VMS3 was below 0.010. Since the limit for this compound is advisory and 1,4-dioxane is a known poor performed, citing professional judgment, the validator determined that no data qualification based on the RRF was necessary.

All other Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

The Percent Difference (%D) for the standards run on 8/4/21 on instrument VMS3 was -26.9% for dichlorodifluoromethane, which exceeded the 20% QC limit. The results for this compound in all SDG samples except 13MW4, 13MW3 and 13TW3, which consisted entirely of non-detects, were qualified as estimated (UJ).

Continuing Calibration:

The Percent Difference (%D) for the standards run on 7/28/21 at 07:57 on instrument VMS3 was 24.5% for 1,4-dioxane, which exceeded the 20% QC limit for opening CCVs. The non-detect 1,4-dioxane results for associated samples 13MW4, 13MW3 and 13TW3 were qualified as estimated (UJ).

The Percent Difference (%D) for the standards run on 8/5/21 at 09:13 on instrument VMS3 was 22.5% for 1,2-dibromo-3-chloropropane, which exceeded the 20% QC limit for opening CCVs. The results for this compound in all samples except 13MW4, 13MW3 and 13TW3, which were all non-detect, were qualified as estimated (UJ).

IV.) Blanks:

Method Blanks:

Chlorobenzene (1.28 ug/L) was detected in associated method blank 1032098. Since there were no positive results for this compound in the associated samples, no data qualification was necessary.

Equipment Blank:

2-butanone (2.9 ug/L) and acetone (15 ug/L) were detected in associated equipment blank 49EB1. Since there were no positive results for these compounds in the associated samples, no data qualification was necessary.

Field Blank:

2-butanone (2.9 ug/L) and acetone (13 ug/L) were detected in associated equipment blank 48RB3.

Since there were no positive results for these compounds in the associated samples, no data qualification was necessary.

Trip Blanks:

2-butanone (3.0 ug/L) and acetone (195 ug/L) were detected in associated trip blank TB-1 and 2-butanone (2.8 ug/L) and acetone (15 ug/L) were detected in associated trip blank TB-49. Since there were no positive results for these compounds in the associated samples, no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

VI.) Laboratory Control Samples (LCS):

One LCS and one LCS / LCSD set were analyzed for this fraction of the SDG. The Relative Percent Differences (RPDs) for 1,4-dioxane (34.5%) and 2-butanone (20.6%) exceeded the QC limit for the LCS set. Data qualification based on LCS RPD data was not required. No data qualification was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 13MW2. All criteria were met. No data qualification was necessary.

VIII.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 48MW3 / 48TW3) were identified for this SDG. The calculable Relative Percent Differences (RPDs) for carbon tetrachloride (2.9%) and trichloroethene (8.7%) for the first set and carbon tetrachloride (1.0%), chloroform (0%), and trichloroethene (14%) were all within the QC limit. It was also noted that the absolute difference for chloroform for the first set and 1,2-dichloroethene for the second set were less than the LOQ. All criteria were met, so no data qualification was necessary.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All CRQL criteria were met. No data qualification was necessary.

DISSOLVED GASSES

SUMMARY

I.) General:

The analyses for Dissolved Gases were performed according to Method RSK-175.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

Sample 48RB3 was listed as not preserved on the COC and the lab lists the pH at 7, which exceeded the QC limit. The results for this sample, which were all non-detect, were qualified as estimated (UJ).

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Equipment Blank:

There were no detections in the associated equipment blank. No data qualification was necessary.

Field Blank:

There were no detections in the associated field blank. No data qualification was necessary.

IV.) Surrogate Recoveries:

All Surrogate Recovery criteria were met.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 13MW2. All criteria were met. No data qualification was necessary.

VII.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 48MW3 / 48TW3) were identified for this SDG. There were no calculable Relative Percent Differences. No data qualification was necessary.

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

TOTAL METALS and MERCURY

SUMMARY

I.) General:

The analyses for Total Metals were performed according to SW-846 Method 6010C and the analyses for Total Mercury were performed according to SW-846 Method 7470A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) LLCCV and CRDL:

All LLCCV and CRDL criteria were met. No data qualification was necessary

IV.) Blanks:

Method Blanks:

Beryllium (0.107 ug/L) was detected in associated method blank 1032231. Since the blank result

was less than half the LOQ, no data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

V.) ICP Interference Check Sample Results:

All Interference Check Sample criteria were met. No data qualification was necessary.

VI.) ICP Serial Dilution Analysis:

Serial dilution analysis was performed using sample IDW-48/49. The Percent Differences (%Ds) exceeded the 10% QC limit for the following compounds:

aluminum	86.2%
barium	15.2%
calcium	104%
iron	57.7%
magnesium	102%
manganese	68.7%

The positive results for these analytes for the sample were qualified as estimated (J).

VII.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

VIII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample IDW-48/49. The parent sample results for aluminum and iron were greater than 4X the spike concentrations, so the results for these analytes were not considered meaningful. The Percent Recoveries (%Rs) were below the QC limits for the following analytes:

Analyte	MS, %R	MSD, %R
antimony	86.0%	86.5%
arsenic	86.5%	88.4%
barium	76.4%	77.1%
beryllium	84.1%	84.1%
cadmium	81.0%	81.5%
calcium	62.4%	62.4%

chromium	77.6%	78.8%
cobalt	82.9%	82.9%
copper	81.0%	
lead	81.9%	83.9%
magnesium	64.1%	64.1%
manganese	26.0%	35.0%
nickel	80.9%	82.4%
potassium	69.3%	73.1%
silver	81.5%	81.5%
sodium	61.6%	63.6%
vanadium	81.8%	82.3%
zinc	72.5%	76.5%

It was noted that the post spike %R for manganese (75.4%) was low and the Relative Percent Difference (RPD) for aluminum (20.9%) exceeded the QC limit. All positive and non-detect results for the listed analytes for the sample were qualified as estimated (J) and (UJ).

IX.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

ANIONS

SUMMARY

I.) General:

The analyses for Anions were performed according to SW-846 Method 9056A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

Equipment Rinsate Blank:

There were no detections in the associated equipment rinsate blank. No data qualification was necessary.

Field Blank:

There were no detections in the associated field blank. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using samples 13MW2, 13TW3, 49MW2 and 50MW2. The

sulfate result for parent samples 13MW2 and 50MW2 were greater than 4X the spike concentration, so the results for this analyte in the sample set were not considered meaningful. The Percent Recoveries (%Rs) for sulfate (77.8%, 85%) for 13TW3 were below the QC limit. The positive sulfate result for the parent sample was qualified as estimated (J).

VI.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 48MW3 / 48TW3) were identified for this SDG. The calculable Relative Percent Differences (RPDs) were chloride (0%), nitrate (0%) and sulfate (3.1%) for the first set and nitrate (0%) and sulfate (5.1%) for the second set, which were all within the QC limit. It was also noted that the absolute difference for chloride for the second set was less than the LOQ. All criteria were met. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

TOTAL ORGANIC CARBON

SUMMARY

I.) General:

The analyses for Total Organic Carbon (TOC) were performed according to SW-846 Method 9060A.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

Equipment Rinsate Blank:

There were no detections in the associated equipment rinsate blank. No data qualification was necessary.

Field Blank:

There were no detections in the associated field blank. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 13MW2. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

Two sets of field duplicate samples (13MW3 / 13TW3 and 48MW3 / 48TW3) were identified for this SDG. There were no calculable Relative Percent Differences (RPDs). No data qualification

was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHEMICAL OXYGEN DEMAND (COD)

SUMMARY

I.) General:

The analyses for Chemical Oxygen Demand (COD) were performed according to EPA Method 410.4.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses data was not submitted for this fraction of the SDG. Data qualification based on the absence of QC data was not required. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

pH

SUMMARY

I.) General:

The analyses for pH were performed according to SW-846 Method 9040C.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

All Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Blanks data were not required for this fraction of the SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

LCS data was not required for this fraction of the SDG. No data qualification was necessary.

V.) Matrix Duplicate (MD):

MD analysis was performed using sample IDW-48/49. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

DATA VALIDATION SUMMARY

CT Laboratories LLC – 163429 - Inorganics

TOTAL METALS and MERCURY

SUMMARY

I.) General:

The analyses for Total Metals were performed according to SW-846 Method 6010C and the analyses for Total Mercury were performed according to SW-846 Method 7470A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) LLCCV and CRDL:

All LLCCV and CRDL criteria were met. No data qualification was necessary

IV.) Blanks:

Method Blanks:

Calcium (24.9 ug/L), magnesium (12.8%) and silver (1.62 ug/L) were detected in associated method blank 1031857. Since the sample results for these analytes were all greater than the action levels, no data qualification was necessary.

Calibration Blanks:

Potassium (195 ug/L, 211 ug/L) and silver (1.11 ug/L) were detected in associated calibration blanks. Since the associated sample results for these analytes were greater than the action levels, no data qualification was necessary.

V.) ICP Interference Check Sample Results:

All Interference Check Sample criteria were met. No data qualification was necessary.

VI.) ICP Serial Dilution Analysis:

Serial dilution analysis was performed using sample IDW-54. The Percent Differences (%Ds) for the following analytes exceeded the 10% QC limit:

aluminum	19.7%
barium	28.3%
calcium	102%
magnesium	102%

The positive results for these analytes in the sample were qualified as estimated (J).

VII.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

VIII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample IDW-54. The parent sample result for iron was greater than 4X the spike concentration, so the results for this analyte were not considered meaningful. The Percent Recoveries (%Rs) for aluminum (205%, 175%) exceeded the QC limits. The positive aluminum result for the sample was qualified as estimated (J).

IX.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

ANIONS

SUMMARY

I.) General:

The analyses for Anions were performed according to SW-846 Method 9056A.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54MW12. The Percent Recoveries (%Rs) for sulfate (77.5%, 80%) were below the QC limits. The positive sulfate result for the parent sample was qualified as estimated (J).

VI.) Field Duplicates:

One sets of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. The calculable Relative Percent Differences (RPDs) were chloride (0%), nitrate (1.9%) and sulfate (3.0%), which were all within the QC limit. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

TOTAL INORGANIC AND ORGANIC CARBON

SUMMARY

I.) General:

The analyses for Total Inorganic Carbon (TIC) and Total Organic Carbon (TOC) were performed according to SW-846 Method 9060A.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54MW12. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

One set of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. The calculable Relative Percent Difference (RPD) for TIC at 2.7% was within the QC limit and the calculable difference for TOC was less than the LOQ, so no data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHEMICAL OXYGEN DEMAND (COD)

SUMMARY

I.) General:

The analyses for Chemical Oxygen Demand (COD) were performed according to EPA Method 410.4.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample IDW-54. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this fraction of the SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

pH

SUMMARY

I.) General:

The analyses for pH were performed according to SW-846 Method 9040C.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

All Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Blanks data were not required for this fraction of the SDG. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

LCS data was not required for this fraction of the SDG. No data qualification was necessary.

V.) Matrix Duplicate (MD):

MD analysis was performed using sample IDW-54. All criteria were met. No data qualification was necessary.

VI.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

CHLORATE / CHLORITE

SUMMARY

I.) General:

The analyses for Chlorate / Chlorite were performed according to EPA Method 300.0.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

Calibration Blanks:

There were no detections in the associated calibration blanks. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed using sample 54MW12. The Percent Recoveries (%Rs) were 77% and 77%, which were below the QC limits. The non-detect result for the parent sample was qualified as estimated (UJ).

VI.) Field Duplicates:

One sets of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. There were no calculable Relative Percent Differences (RPDs). No data qualification was necessary.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No data qualification was necessary.

DATA VALIDATION SUMMARY

SGS Orlando, FL – FA87620 - Organics

EXPLOSIVES

SUMMARY

I.) General:

The analyses for Explosives were performed according to SW 846 Method 8330.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

The 10 days between sample collection and extraction for all SDG samples exceeded the7-day QC limit. All positive and non-detect results for the samples were qualified as estimated (J) and (UJ).

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

IV.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No data qualification was necessary.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. The Percent Recoveries (%Rs) for tetryl (46%) and 2,4,6-trinitrotoluene (66%) were below the QC limits. All positive and non-detect results for these compounds for the SDG samples were qualified as estimated (J) and (UJ).

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 54MW12. The Percent Recoveries (%Rs) for tetryl (47%, 47%) were below the QC limits, along with four additional %Rs. Taken in conjunction with the LCS recoveries, the recoveries for tetryl indicate the potential for a low bias. All positive and non-detect tetryl results for the samples were qualified as estimated (J) and (UJ). No further data qualification was necessary.

VII.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VIII.) TCL Compound Identification:

The Column Relative Percent Difference (RPD) exceeded the 40% QC limit for the following compounds:

Sample	Compound	RPD
54MW12	MNX	153%
	3,5-dinitroaniline	117%
54MW1	RDX	161%
	p-nitrotoluene	148%
	nitroglycerine	60.2%

The positive compound results for the listed samples above were qualified as estimated (J).

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All CRQL criteria were met. No data qualification was necessary.

PERCHLORATE

SUMMARY

I.) General:

The analyses for Perchlorate were performed according to SW-846 Method 6350.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS/ MSD analyses were performed using sample 54MW12. The Percent Recoveries (%Rs) were 50% and 75%, which were below the QC limits. The positive result for the parent sample was qualified as estimated (J).

VI.) Field Duplicates:

There were no field duplicate samples identified for this SDG. No data qualification was necessary.

VII.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

DATA VALIDATION SUMMARY

SGS Orlando, FL – FA87622 - Organics

EXPLOSIVES

SUMMARY

I.) General:

The analyses for Explosives were performed according to SW 846 Method 8330.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

The 10 days between sample collection and extraction for all SDG samples exceeded the7-day QC limit. All positive and non-detect results for the samples were qualified as estimated (J) and (UJ).

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

Method Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

IV.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No data qualification was necessary.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. The Percent Recoveries (%Rs) for tetryl (46%) and 2,4,6-trinitrotoluene (66%) were below the QC limits. All positive and non-detect results for these compounds for the SDG samples were qualified as estimated (J) and (UJ).

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

Batch MS/ MSD analyses data was submitted for this SDG. A total of six Percent Recoveries (%Rs) were outside the QC limits. Data qualification based on batch QC data was not required. No data qualification was necessary.

VII.) Field Duplicates:

One set of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. The calculable differences for RDX, 3,5-dinitroaniline, 2-amino-4,6-dinitrotoluene, 4-amino-2,6-dinitrotoluene, o-nitrotoluene, p-nitrotoluene, 1,3,5-trinitrotoluene and 2,4,6-trinitrotoluene were all less than the LOQ, so all criteria were met. No data qualification was necessary.

VIII.) TCL Compound Identification:

The Column Relative Percent Difference (RPD) exceeded the 40% QC limit for the following compounds:

Sample	Compound	RPD
54MW10	RDX	146%
	3,5-dinitroaniline	111%
	4-amino-2-,6-dinitrotoluene	60%
	o-nitrotoluene	48.5%

	p-nitrotoluene	187%
54MW13	RDX	168%
	3,5-dinitroaniline	170%
	4-amino-2,6-dinitrotoluene	58.8%
	o-nitrotoluene	42.6%
54TW13	RDX	158%
	3,5-dinitroaniline	165%
	4-amino-2,6-dinitrotoluene	51.4%
	o-nitrotoluene	51.6%
	p-nitrotoluene	183%

The positive compound results for the listed samples above were qualified as estimated (J).

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All CRQL criteria were met. No data qualification was necessary.

PERCHLORATE

SUMMARY

I.) General:

The analyses for Perchlorate were performed according to SW-846 Method 6350.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualifications.

MAJOR ISSUES

There were no Major Issues for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Initial Calibration Verification (ICV):

All Initial Calibration Verification criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

III.) Blanks:

There were no detections in the associated method blank. No data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

One LCS was analyzed for this fraction of the SDG. All criteria were met. No data qualification was necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

Batch MS/ MSD analyses data was submitted for this fraction of the SDG. Both Percent Recoveries (%Rs) were below the QC limits. Data qualification based on batch QC data was not required. No data qualification was necessary.

VI.) Field Duplicates:

One set of field duplicate samples (54MW13 / 54TW13) was identified for this SDG. The calculable Relative Percent Difference (RPD) was 18%, which was below the QC limit. No data qualification was necessary.

VII.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

IX.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL) criteria were met. No data qualification was necessary.

Appendix A
Qualified Form Is

CT LABORATORIES
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1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1031438
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 11:48	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

CT LABORATORIES
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1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031438
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 13:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z UJ	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

ALH 9/3/21

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1A

VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031438
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 13:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U UJ	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031438
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 13:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1030468
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030468
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 15:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Y UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U Y	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030468
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 15:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	7.0		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.62	J	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030468
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 15:58	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.1		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1030462
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 11:30	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030462
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 15:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Y UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U Y	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030462
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 15:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.59	J	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030462
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 15:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.7		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1030469
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 11:37	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030469
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 16:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U Z,Y UJ	34	50	100	100
78-93-3	2-Butanone	6.0	U Y	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030469
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 16:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	6.8		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.67	J	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030469
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 16:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.2		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1031957
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 14:05	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031957
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 14:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.46	J	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z UJ	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031957
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 14:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.33	J	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U UJ	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031957
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 14:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.96	J	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1032208
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:25	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032208
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 16:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z UJ	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032208
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 16:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	25		0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	2.9		0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U UJ	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032208
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 16:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.4		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1032210
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:29	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032210
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	5
Date & Time Analyzed:	08/05/2021 / 17:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	3.0	U	1.5	3.0	5.0	5.0
79-00-5	1,1,2-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-34-3	1,1-Dichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-35-4	1,1-Dichloroethene	5.0	U	2.0	5.0	10	10
87-61-6	1,2,3-Trichlorobenzene	3.0	U	1.2	3.0	5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	3.0	U	1.4	3.0	5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	3.0	U Z UJ	1.3	3.0	5.0	5.0
106-93-4	1,2-Dibromoethane	3.0	U	1.5	3.0	5.0	5.0
95-50-1	1,2-Dichlorobenzene	3.0	U	1.5	3.0	5.0	5.0
107-06-2	1,2-Dichloroethane	1.7	J	1.2	3.0	5.0	5.0
78-87-5	1,2-Dichloropropane	3.0	U	0.90	3.0	5.0	5.0
541-73-1	1,3-Dichlorobenzene	3.0	U	1.3	3.0	5.0	5.0
123-91-1	1,4-Dioxane	250	U	170	250	500	500
78-93-3	2-Butanone	30	U	13	30	50	50
591-78-6	2-Hexanone	30	U	15	30	50	50
108-10-1	4-Methyl-2-pentanone	30	U	11	30	50	50
67-64-1	Acetone	50	U	20	50	100	100
71-43-2	Benzene	5.0	U	2.0	5.0	10	10
74-97-5	Bromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-27-4	Bromodichloromethane	3.0	U	1.5	3.0	5.0	5.0
75-25-2	Bromoform	5.0	U	2.0	5.0	10	10
74-83-9	Bromomethane	10	U	4.5	10	20	20
75-15-0	Carbon disulfide	10	U	3.0	10	20	20

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032210
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	5
Date & Time Analyzed:	08/05/2021 / 17:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	100		1.5	3.0	5.0	5.0
108-90-7	Chlorobenzene	3.0	U	1.5	3.0	5.0	5.0
75-00-3	Chloroethane	5.0	U	2.5	5.0	10	10
67-66-3	Chloroform	20		1.5	3.0	5.0	5.0
74-87-3	Chloromethane	5.0	U	3.0	5.0	10	10
156-59-2	cis-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	1.5	U	0.80	1.5	3.0	3.0
110-82-7	Cyclohexane	3.0	U	1.5	3.0	5.0	5.0
124-48-1	Dibromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-71-8	Dichlorodifluoromethane	5.0	U UJ	2.0	5.0	10	10
100-41-4	Ethylbenzene	3.0	U	1.5	3.0	5.0	5.0
76-13-1	Freon 113	10	U	3.5	10	20	20
98-82-8	Isopropylbenzene	3.0	U	1.5	3.0	5.0	5.0
179601-23-1	m & p-Xylene	6.0	U	3.5	6.0	10	10
79-20-9	Methyl Acetate	5.0	U	2.5	5.0	10	10
1634-04-4	Methyl tert-butyl ether	3.0	U	1.5	3.0	5.0	5.0
108-87-2	Methylcyclohexane	3.0	U	1.3	3.0	5.0	5.0
75-09-2	Methylene chloride	5.0	U	2.0	5.0	10	10
95-47-6	o-Xylene	3.0	U	1.3	3.0	5.0	5.0
100-42-5	Styrene	3.0	U	1.5	3.0	5.0	5.0
127-18-4	Tetrachloroethene	3.0	U	1.4	3.0	5.0	5.0
108-88-3	Toluene	3.0	U	1.1	3.0	5.0	5.0
156-60-5	trans-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	3.0	U	1.2	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032210
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	5
Date & Time Analyzed:	08/05/2021 / 17:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	20		1.5	3.0	5.0	5.0
75-69-4	Trichlorofluoromethane	5.0	U	2.0	5.0	10	10
75-01-4	Vinyl chloride	1.5	U	0.70	1.5	3.0	3.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1031437
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 11:42	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031437
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 13:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.43	J	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	2.9		0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z UJ	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	0.41	J	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description: **48MW6**

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031437
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 13:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	5.0		0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U UJ	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.45	J	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031437
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 13:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	3.1		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48RB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032212
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 12:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	UJ	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U		0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U		0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U		0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U		0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U		0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U		0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U	Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U		0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U		0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U		0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U		0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U		0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U		34	50	100	100
78-93-3	2-Butanone	2.9	J	J	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	UJ	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	UJ	2.2	6.0	10	10
67-64-1	Acetone	13	J	J	4.0	10	20	20
71-43-2	Benzene	1.0	U	UJ	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U		0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U		0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U		0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U		0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U		0.6	2.0	4.0	4.0

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CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

48RB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032212
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 12:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U UJ	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48RB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032212
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 12:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U UJ	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

48RB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1032212
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:46	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U UJ	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1032211
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:32	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032211
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	5
Date & Time Analyzed:	08/05/2021 / 17:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	3.0	U	1.5	3.0	5.0	5.0
79-00-5	1,1,2-Trichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-34-3	1,1-Dichloroethane	3.0	U	1.5	3.0	5.0	5.0
75-35-4	1,1-Dichloroethene	5.0	U	2.0	5.0	10	10
87-61-6	1,2,3-Trichlorobenzene	3.0	U	1.2	3.0	5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	3.0	U	1.4	3.0	5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	3.0	U Z UJ	1.3	3.0	5.0	5.0
106-93-4	1,2-Dibromoethane	3.0	U	1.5	3.0	5.0	5.0
95-50-1	1,2-Dichlorobenzene	3.0	U	1.5	3.0	5.0	5.0
107-06-2	1,2-Dichloroethane	1.7	J	1.2	3.0	5.0	5.0
78-87-5	1,2-Dichloropropane	3.0	U	0.90	3.0	5.0	5.0
541-73-1	1,3-Dichlorobenzene	3.0	U	1.3	3.0	5.0	5.0
123-91-1	1,4-Dioxane	250	U	170	250	500	500
78-93-3	2-Butanone	30	U	13	30	50	50
591-78-6	2-Hexanone	30	U	15	30	50	50
108-10-1	4-Methyl-2-pentanone	30	U	11	30	50	50
67-64-1	Acetone	50	U	20	50	100	100
71-43-2	Benzene	5.0	U	2.0	5.0	10	10
74-97-5	Bromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-27-4	Bromodichloromethane	3.0	U	1.5	3.0	5.0	5.0
75-25-2	Bromoform	5.0	U	2.0	5.0	10	10
74-83-9	Bromomethane	10	U	4.5	10	20	20
75-15-0	Carbon disulfide	10	U	3.0	10	20	20

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032211
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	5
Date & Time Analyzed:	08/05/2021 / 17:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	99		1.5	3.0	5.0	5.0
108-90-7	Chlorobenzene	3.0	U	1.5	3.0	5.0	5.0
75-00-3	Chloroethane	5.0	U	2.5	5.0	10	10
67-66-3	Chloroform	20		1.5	3.0	5.0	5.0
74-87-3	Chloromethane	5.0	U	3.0	5.0	10	10
156-59-2	cis-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	1.5	U	0.80	1.5	3.0	3.0
110-82-7	Cyclohexane	3.0	U	1.5	3.0	5.0	5.0
124-48-1	Dibromochloromethane	3.0	U	1.5	3.0	5.0	5.0
75-71-8	Dichlorodifluoromethane	5.0	U UJ	2.0	5.0	10	10
100-41-4	Ethylbenzene	3.0	U	1.5	3.0	5.0	5.0
76-13-1	Freon 113	10	U	3.5	10	20	20
98-82-8	Isopropylbenzene	3.0	U	1.5	3.0	5.0	5.0
179601-23-1	m & p-Xylene	6.0	U	3.5	6.0	10	10
79-20-9	Methyl Acetate	5.0	U	2.5	5.0	10	10
1634-04-4	Methyl tert-butyl ether	3.0	U	1.5	3.0	5.0	5.0
108-87-2	Methylcyclohexane	3.0	U	1.3	3.0	5.0	5.0
75-09-2	Methylene chloride	5.0	U	2.0	5.0	10	10
95-47-6	o-Xylene	3.0	U	1.3	3.0	5.0	5.0
100-42-5	Styrene	3.0	U	1.5	3.0	5.0	5.0
127-18-4	Tetrachloroethene	3.0	U	1.4	3.0	5.0	5.0
108-88-3	Toluene	3.0	U	1.1	3.0	5.0	5.0
156-60-5	trans-1,2-Dichloroethene	3.0	U	1.5	3.0	5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	3.0	U	1.2	3.0	5.0	5.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032211
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	5
Date & Time Analyzed:	08/05/2021 / 17:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	23		1.5	3.0	5.0	5.0
75-69-4	Trichlorofluoromethane	5.0	U	2.0	5.0	10	10
75-01-4	Vinyl chloride	1.5	U	0.70	1.5	3.0	3.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49EB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031958
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 11:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	2.9	J	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	15	J	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49EB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031958
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 11:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49EB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031958
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 11:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49EB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1031958
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 14:09	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1031959
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 12:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031959
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 14:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z UJ	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031959
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 14:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	2.7			0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U		0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U		0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.46	J		0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U		0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U		0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U		0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U		0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U		0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	UJ	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U		0.3	0.60	1.0	1.0
76-13-1	Freon 113	1.4	J		0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U		0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U		0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U		0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U		0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U		0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U		0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U		0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U		0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U		0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U		0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U		0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U		0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031959
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 14:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1032213
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:54	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032213
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 16:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z UJ	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032213
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 16:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.79	J	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U UJ	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032213
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 16:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1032207
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:08	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032207
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 15:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z UJ	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032207
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 15:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U UJ	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

49MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032207
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 15:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	21.3 (g/mL)	CTL Sample ID:	1031961
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	21.3 (mL)	Date/Time Prepared:	08/04/2021 / 09:48
Analytical Method:	RSK 175	Analytical Prep Batch #	81994
Analytical Run #:	194154	Dilution Factor:	1
Date & Time Analyzed:	08/04/2021 / 13:03	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	P4DG070121	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
74-84-0	Ethane	0.80	U	0.38	0.80	1.0	1.0
74-85-1	Ethene	1.2	U	0.59	1.2	1.4	1.4
74-82-8	Methane	0.90	U	0.45	0.90	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031961
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 15:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z UJ	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031961
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 15:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	1.1			0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U		0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U		0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U		0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U		0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.34	J		0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U		0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U		0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U		0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	UJ	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U		0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U		0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U		0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U		0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U		0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U		0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U		0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U		0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U		0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U		0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U		0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U		0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U		0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U		0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	GROUND WATER	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031961
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 15:13	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	1.4		0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	0.42	J	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

LAB TRIP BLANK-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031440
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 10:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

LAB TRIP BLANK-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031440
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 10:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

LAB TRIP BLANK-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031440
% Solids:		Date Received:	07/29/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 10:43	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

LAB TRIP BLANK-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032209
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 12:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	6.0	U	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	10	U	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

CT LABORATORIES
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VOLATILE ORGANICS ANALYSIS

Sample Description

LAB TRIP BLANK-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032209
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 12:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

LAB TRIP BLANK-2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1032209
% Solids:		Date Received:	07/31/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 12:14	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030471
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 10:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U		0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U		0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U		0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U		0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U		0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U		0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U		0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U		0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U		0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U		0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U		0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U		0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U		0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	Z,Y	34	50	100	100
78-93-3	2-Butanone	3.0	J	Y	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U		3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U		2.2	6.0	10	10
67-64-1	Acetone	19	J		4.0	10	20	20
71-43-2	Benzene	1.0	U		0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U		0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U		0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U		0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U		0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U		0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030471
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 10:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1030471
% Solids:		Date Received:	07/27/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	193941	Dilution Factor:	1
Date & Time Analyzed:	07/28/2021 / 10:57	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W071421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031960
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 11:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
71-55-6	1,1,1-Trichloroethane	0.60	U	0.29	0.60	1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	0.6	U	0.3	0.6	1.0	1.0
79-00-5	1,1,2-Trichloroethane	0.60	U	0.30	0.60	1.0	1.0
75-34-3	1,1-Dichloroethane	0.6	U	0.3	0.6	1.0	1.0
75-35-4	1,1-Dichloroethene	1.0	U	0.4	1.0	2.0	2.0
87-61-6	1,2,3-Trichlorobenzene	0.60	U	0.23	0.60	1.0	1.0
120-82-1	1,2,4-Trichlorobenzene	0.60	U	0.28	0.60	1.0	1.0
96-12-8	1,2-Dibromo-3-chloropropane	0.60	U Z	0.25	0.60	1.0	1.0
106-93-4	1,2-Dibromoethane	0.60	U	0.3	0.60	1.0	1.0
95-50-1	1,2-Dichlorobenzene	0.60	U	0.3	0.60	1.0	1.0
107-06-2	1,2-Dichloroethane	0.60	U	0.24	0.60	1.0	1.0
78-87-5	1,2-Dichloropropane	0.60	U	0.18	0.60	1.0	1.0
541-73-1	1,3-Dichlorobenzene	0.60	U	0.26	0.60	1.0	1.0
123-91-1	1,4-Dioxane	50	U	34	50	100	100
78-93-3	2-Butanone	2.8	J	2.6	6.0	10	10
591-78-6	2-Hexanone	6.0	U	3.0	6.0	10	10
108-10-1	4-Methyl-2-pentanone	6.0	U	2.2	6.0	10	10
67-64-1	Acetone	15	J	4.0	10	20	20
71-43-2	Benzene	1.0	U	0.4	1.0	2.0	2.0
74-97-5	Bromochloromethane	0.60	U	0.30	0.60	1.0	1.0
75-27-4	Bromodichloromethane	0.60	U	0.29	0.60	1.0	1.0
75-25-2	Bromoform	1.0	U	0.4	1.0	2.0	2.0
74-83-9	Bromomethane	2.0	U	0.9	2.0	4.0	4.0
75-15-0	Carbon disulfide	2.0	U	0.6	2.0	4.0	4.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031960
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 11:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
56-23-5	Carbon tetrachloride	0.60	U	0.3	0.60	1.0	1.0
108-90-7	Chlorobenzene	0.60	U	0.3	0.60	1.0	1.0
75-00-3	Chloroethane	1.0	U	0.5	1.0	2.0	2.0
67-66-3	Chloroform	0.6	U	0.3	0.6	1.0	1.0
74-87-3	Chloromethane	1.0	U	0.6	1.0	2.0	2.0
156-59-2	cis-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	0.30	U	0.16	0.30	0.60	0.60
110-82-7	Cyclohexane	0.60	U	0.3	0.60	1.0	1.0
124-48-1	Dibromochloromethane	0.60	U	0.3	0.60	1.0	1.0
75-71-8	Dichlorodifluoromethane	1.0	U	0.4	1.0	2.0	2.0
100-41-4	Ethylbenzene	0.60	U	0.3	0.60	1.0	1.0
76-13-1	Freon 113	2.0	U	0.7	2.0	4.0	4.0
98-82-8	Isopropylbenzene	0.60	U	0.3	0.60	1.0	1.0
179601-23-1	m & p-Xylene	1.2	U	0.7	1.2	2.0	2.0
79-20-9	Methyl Acetate	1.0	U	0.5	1.0	2.0	2.0
1634-04-4	Methyl tert-butyl ether	0.60	U	0.3	0.60	1.0	1.0
108-87-2	Methylcyclohexane	0.60	U	0.26	0.60	1.0	1.0
75-09-2	Methylene chloride	1.0	U	0.4	1.0	2.0	2.0
95-47-6	o-Xylene	0.60	U	0.26	0.60	1.0	1.0
100-42-5	Styrene	0.60	U	0.29	0.60	1.0	1.0
127-18-4	Tetrachloroethene	0.60	U	0.27	0.60	1.0	1.0
108-88-3	Toluene	0.60	U	0.21	0.60	1.0	1.0
156-60-5	trans-1,2-Dichloroethene	0.60	U	0.3	0.60	1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	0.60	U	0.23	0.60	1.0	1.0

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VOLATILE ORGANICS ANALYSIS

Sample Description

TB-49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix:	TRIP BLANK	SDG No.:	163390
Sample wt/vol:	(g/mL)	CTL Sample ID:	1031960
% Solids:		Date Received:	07/30/2021
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	194091	Dilution Factor:	1
Date & Time Analyzed:	08/05/2021 / 11:44	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	W080421.	Concentration Units:	ug/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
79-01-6	Trichloroethene	0.60	U	0.3	0.60	1.0	1.0
75-69-4	Trichlorofluoromethane	1.0	U	0.4	1.0	2.0	2.0
75-01-4	Vinyl chloride	0.30	U	0.14	0.30	0.60	0.60

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW 48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032214
Analytical Method:	EPA 7470A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194190	Analysis Date/Time	08/04/2021 13:49
Analytical Prep Batch #:	81952	Prep. Date/Time:	08/03/2021 14:20
ICAL Calibration #:	08042021	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	0.020	0.080	0.12	0.12

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW 48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032214
Analytical Method:	EPA 6010C	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194081	Analysis Date/Time	08/03/2021 22:45
Analytical Prep Batch #:	81955	Prep. Date/Time:	08/02/2021 09:56
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	4860	J Y	10	20	40	40
7440-36-0	Total Antimony	10	U UJ	4.7	10	20	20
7440-38-2	Total Arsenic	25	U UJ	12	25	50	50
7440-39-3	Total Barium	191	J	0.82	2.0	4.0	4.0
7440-41-7	Total Beryllium	0.28	J J B	0.10	0.30	0.60	0.60
7440-43-9	Total Cadmium	1.0	U UJ	0.42	1.0	2.0	2.0
7440-70-2	Total Calcium	83300	J	19	50	100	100
7440-47-3	Total Chromium	21.2	J	1.6	3.5	5.0	5.0
7440-48-4	Total Cobalt	4.2	J	0.60	2.5	4.0	4.0
7440-50-8	Total Copper	28.0	J J	11	25	50	50
7439-89-6	Total Iron	8180	J M	33	70	100	100
7439-92-1	Total Lead	17.2	J	1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	43900	J	10	25	40	40
7439-96-5	Total Manganese	566	J M	1.5	3.0	5.0	5.0
7440-02-0	Total Nickel	15.2	J	1.4	3.0	5.0	5.0
7440-09-7	Total Potassium	5300	J	120	250	500	500
7782-49-2	Total Selenium	20	U	9.9	20	40	40
7440-22-4	Total Silver	2.0	U	0.70	2.0	4.0	4.0
7440-23-5	Total Sodium	47400	J	180	500	500	500
7440-28-0	Total Thallium	12	U	5.9	12	20	20
7440-62-2	Total Vanadium	8.5	J	1.1	2.5	5.0	5.0
7440-66-6	Total Zinc	190	J	5.0	10	20	20

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CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031438
Analytical Method:	EPA 9056A	Date Received:	07/29/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193993	Analysis Date/Time	07/29/2021 13:17
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.25	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	34	M	0.80	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031438
Analytical Method:	EPA 9060A	Date Received:	07/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 17:23
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030468
Analytical Method:	EPA 9056A	Date Received:	07/27/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193948	Analysis Date/Time	07/28/2021 08:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	96		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030468
Analytical Method:	EPA 9056A	Date Received:	07/27/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193948	Analysis Date/Time	07/27/2021 14:54
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.5		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030468
Analytical Method:	EPA 9060A	Date Received:	07/27/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/04/2021 18:21
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030462
Analytical Method:	EPA 9056A	Date Received:	07/27/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193948	Analysis Date/Time	07/27/2021 14:36
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.3		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.73		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	42		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030462
Analytical Method:	EPA 9060A	Date Received:	07/27/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/04/2021 18:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030469
Analytical Method:	EPA 9056A	Date Received:	07/27/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193948	Analysis Date/Time	07/28/2021 08:43
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	99	M J	4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030469
Analytical Method:	EPA 9056A	Date Received:	07/27/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193948	Analysis Date/Time	07/27/2021 15:12
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.5		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

13TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1030469
Analytical Method:	EPA 9060A	Date Received:	07/27/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 16:59
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031957
Analytical Method:	EPA 9056A	Date Received:	07/30/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194031	Analysis Date/Time	07/30/2021 12:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	3.4		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	1.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	44		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031957
Analytical Method:	EPA 9060A	Date Received:	07/30/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 18:11
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032208
Analytical Method:	EPA 9060A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/10/2021 08:58
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032208
Analytical Method:	EPA 9056A	Date Received:	07/31/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194052	Analysis Date/Time	07/31/2021 23:21
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.8	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.82		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	2.9	J	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032210
Analytical Method:	EPA 9060A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/10/2021 09:10
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032210
Analytical Method:	EPA 9056A	Date Received:	07/31/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194052	Analysis Date/Time	07/31/2021 23:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.2	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	4.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	19		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031437
Analytical Method:	EPA 9056A	Date Received:	07/29/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193993	Analysis Date/Time	07/29/2021 12:59
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	8.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.0		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031437
Analytical Method:	EPA 9056A	Date Received:	07/29/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193993	Analysis Date/Time	08/02/2021 15:02
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	120		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48MW6

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031437
Analytical Method:	EPA 9060A	Date Received:	07/29/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 17:12
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	2.7	J	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48RB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032212
Analytical Method:	EPA 9056A	Date Received:	07/31/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194052	Analysis Date/Time	08/01/2021 01:10
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.5	U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	1.5	U	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48RB3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032212
Analytical Method:	EPA 9060A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/10/2021 09:36
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032211
Analytical Method:	EPA 9056A	Date Received:	07/31/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194052	Analysis Date/Time	08/01/2021 00:33
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.3	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	4.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	20		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

48TW3

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032211
Analytical Method:	EPA 9060A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/10/2021 09:23
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49EB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031958
Analytical Method:	EPA 9056A	Date Received:	07/30/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194031	Analysis Date/Time	07/30/2021 13:09
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.5	U	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	1.5	U	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49EB1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031958
Analytical Method:	EPA 9060A	Date Received:	07/30/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 18:24
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031959
Analytical Method:	EPA 9056A	Date Received:	07/30/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194031	Analysis Date/Time	07/30/2021 13:27
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.9		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.38	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	0.88	J	0.80	1.5	3.0	3.0

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031959
Analytical Method:	EPA 9060A	Date Received:	07/30/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 18:35
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032213
Analytical Method:	EPA 9056A	Date Received:	07/31/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194052	Analysis Date/Time	08/01/2021 02:22
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	1.6	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.34	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	12		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032213
Analytical Method:	EPA 9060A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/10/2021 09:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032207
Analytical Method:	EPA 9060A	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/10/2021 08:46
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.61	J	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

49MW4

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032207
Analytical Method:	EPA 9056A	Date Received:	07/31/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194052	Analysis Date/Time	07/31/2021 22:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.2		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.24	J	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	58		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031961
Analytical Method:	EPA 9056A	Date Received:	07/30/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194031	Analysis Date/Time	07/30/2021 13:45
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	6.8		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	2.1		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	59	M	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

50MW2

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1031961
Analytical Method:	EPA 9060A	Date Received:	07/30/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194060	Analysis Date/Time	08/09/2021 18:47
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW 48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032214
Analytical Method:	EPA 410.4	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194113	Analysis Date/Time	08/05/2021 10:40
Analytical Prep Batch #:	81979	Prep. Date/Time:	08/03/2021 10:48
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	84		18	50	75	75

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW 48/49

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-49
Matrix (soil/water):	GROUND WATER	SDG No.:	163390
% Solids:		Lab Sample ID:	1032214
Analytical Method:	EPA 9040C	Date Received:	07/31/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194093	Analysis Date/Time	08/02/2021 14:50
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	7.58		0.1	0.1	0.1	0.1

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030878
Analytical Method:	EPA 6010C	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194019	Analysis Date/Time	07/30/2021 10:35
Analytical Prep Batch #:	81934	Prep. Date/Time:	07/29/2021 09:03
ICAL Calibration #:		Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Total Aluminum	2920	J	10	20	40	40
7440-36-0	Total Antimony	10	U	4.7	10	20	20
7440-38-2	Total Arsenic	25	U	12	25	50	50
7440-39-3	Total Barium	120	J	0.82	2.0	4.0	4.0
7440-41-7	Total Beryllium	0.30	U	0.10	0.30	0.60	0.60
7440-43-9	Total Cadmium	1.0	U	0.42	1.0	2.0	2.0
7440-70-2	Total Calcium	55900	J	19	50	100	100
7440-47-3	Total Chromium	7.9		1.6	3.5	5.0	5.0
7440-48-4	Total Cobalt	1.9	J	0.60	2.5	4.0	4.0
7440-50-8	Total Copper	82.1		11	25	50	50
7439-89-6	Total Iron	4950		33	70	100	100
7439-92-1	Total Lead	58.8		1.4	2.0	4.0	4.0
7439-95-4	Total Magnesium	25000	J	10	25	40	40
7439-96-5	Total Manganese	100		1.5	3.0	5.0	5.0
7440-02-0	Total Nickel	2.7	J	1.4	3.0	5.0	5.0
7440-09-7	Total Potassium	2000		120	250	500	500
7782-49-2	Total Selenium	20	U	9.9	20	40	40
7440-22-4	Total Silver	2.0	U	0.70	2.0	4.0	4.0
7440-23-5	Total Sodium	3820		180	500	500	500
7440-28-0	Total Thallium	12	U	5.9	12	20	20
7440-62-2	Total Vanadium	5.7		1.1	2.5	5.0	5.0
7440-66-6	Total Zinc	37.5		5.0	10	20	20

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INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030878
Analytical Method:	EPA 7470A	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194190	Analysis Date/Time	08/04/2021 13:42
Analytical Prep Batch #:	81952	Prep. Date/Time:	08/03/2021 14:20
ICAL Calibration #:	08042021	Concentration Units:	ug/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Total Mercury	0.080	U	0.020	0.080	0.12	0.12

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030877
Analytical Method:	EPA 9060A	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194077	Analysis Date/Time	08/03/2021 08:18
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	56		0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030877
Analytical Method:	EPA 9056A	Date Received:	07/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193966	Analysis Date/Time	07/28/2021 16:55
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	2.4	J	1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.20	U	0.12	0.20	0.40	0.40
14808-79-8	Sulfate	28		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW1

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030877
Analytical Method:	EPA 9060A	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194059	Analysis Date/Time	08/04/2021 17:57
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030876
Analytical Method:	EPA 9060A	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194077	Analysis Date/Time	08/03/2021 08:04
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	68		0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030876
Analytical Method:	EPA 9056A	Date Received:	07/28/2021
Dilution Factor:	5	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193966	Analysis Date/Time	07/29/2021 09:34
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
14808-79-8	Sulfate	96		4.0	7.5	15	15

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030876
Analytical Method:	EPA 9056A	Date Received:	07/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193966	Analysis Date/Time	07/28/2021 16:37
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	4.7		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.42		0.12	0.20	0.40	0.40

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW10

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030876
Analytical Method:	EPA 9060A	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194059	Analysis Date/Time	08/04/2021 17:44
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	U	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030875
Analytical Method:	EPA 9060A	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194077	Analysis Date/Time	08/03/2021 07:51
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	73		0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030875
Analytical Method:	EPA 9056A	Date Received:	07/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193966	Analysis Date/Time	07/28/2021 15:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	8.0		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.61		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	30	J M	0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW12

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030875
Analytical Method:	EPA 9060A	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194059	Analysis Date/Time	08/04/2021 16:53
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	0.50	J	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030873
Analytical Method:	EPA 9060A	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194077	Analysis Date/Time	08/03/2021 07:24
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	72		0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030873
Analytical Method:	EPA 9056A	Date Received:	07/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193966	Analysis Date/Time	07/28/2021 14:49
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.4		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.53		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	34		0.80	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54MW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030873
Analytical Method:	EPA 9060A	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194059	Analysis Date/Time	08/04/2021 16:25
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.8	J	0.5	1.5	3.0	3.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030874
Analytical Method:	EPA 9060A	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194077	Analysis Date/Time	08/03/2021 07:37
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TIC	Total Inorganic Carbon	74		0.5	1.5	3.0	3.0

CT LABORATORIES
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1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030874
Analytical Method:	EPA 9056A	Date Received:	07/28/2021
Dilution Factor:	1.0000	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193966	Analysis Date/Time	07/28/2021 15:07
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
16887-00-6	Chloride	7.4		1.0	1.5	3.0	3.0
14797-55-8	Nitrate Nitrogen	0.54		0.12	0.20	0.40	0.40
14808-79-8	Sulfate	33		0.80	1.5	3.0	3.0

CT LABORATORIES
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1

INORGANIC ANALYSIS DATA SHEET

Sample Description

54TW13

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030874
Analytical Method:	EPA 9060A	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194059	Analysis Date/Time	08/04/2021 16:39
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:	ICAL 0514	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
TOC	Total Organic Carbon	1.5	J	0.5	1.5	3.0	3.0

CT LABORATORIES
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1

INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030878
Analytical Method:	EPA 410.4	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	194113	Analysis Date/Time	08/05/2021 10:40
Analytical Prep Batch #:	81979	Prep. Date/Time:	08/03/2021 10:48
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
COD	COD	50	U	18	50	75	75

CT LABORATORIES
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1

INORGANIC ANALYSIS DATA SHEET

Sample Description

IDW-54

Lab Name:	CT Laboratories	Contract:	WESTON SOLUTIONS, INC.-RADFORD AAP SWMU-54
Matrix (soil/water):	GROUND WATER	SDG No.:	163429
% Solids:		Lab Sample ID:	1030878
Analytical Method:	EPA 9040C	Date Received:	07/28/2021
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	193972	Analysis Date/Time	07/28/2021 15:30
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	S.U.

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
PH	pH	8.07		0.1	0.1	0.1	0.1

Client Name: CT Laboratories Report #: 525711

Sampling Point: 54MW13 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	07/31/21 03:07	4968322
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	07/31/21 03:07	4968322

Sampling Point: 54TW13 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	07/31/21 03:36	4968323
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	07/31/21 03:36	4968323

Sampling Point: 54MW12 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	UJ ug/L	---	07/31/21 04:05	4968324
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	08/06/21 19:04	4968324

Sampling Point: 54MW10 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	07/31/21 05:32	4968327
14998-27-7	Chlorite	300.0	1000 *	10	< 10	ug/L	---	07/31/21 05:32	4968327

Sampling Point: 54MW1 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14866-68-3	Chlorate	300.0	---	10	< 10	ug/L	---	07/31/21 06:01	4968328
14998-27-7	Chlorite	300.0	1000 *	10	**44**	ug/L	---	07/31/21 06:01	4968328

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

ALH 9/3/21

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW12		
Lab Sample ID:	FA87620-1	**Date Sampled:**	07/27/21
Matrix:	AQ - Ground Water	**Date Received:**	07/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q84262.D	1	08/11/21 14:48	NG	08/11/21 09:00	OP86789	SQ1826
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.30 J	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 9/3/21

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW12
Lab Sample ID: FA87620-1
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 07/27/21
Date Received: 07/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP391150.D	1	08/09/21 19:04	JB	08/06/21 09:00	OP86727	GPP2467
Run #2 [b]	GG622039.D	1	08/12/21 22:54	JB	08/06/21 09:00	OP86727	GGG3025

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2	1060 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	9.8 J	0.19	0.094	0.075	ug/l	J
121-82-4	RDX	0.094 U UJ	0.19	0.094	0.075	ug/l	
	DNX	0.094 U UJ	0.19	0.094	0.075	ug/l	
	MNX [c]	5.3 J	0.19	0.094	0.075	ug/l	J
	TNX	0.094 U UJ	0.19	0.094	0.075	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.21 J	0.19	0.094	0.075	ug/l	J
99-65-0	1,3-Dinitrobenzene	0.094 U UJ	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U UJ	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U UJ	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	3.3 J	0.19	0.094	0.075	ug/l	J
19406-51-0	4-amino-2,6-Dinitrotoluene	2.1 J	0.19	0.094	0.075	ug/l	J
98-95-3	Nitrobenzene	0.094 U UJ	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl [d]	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	10.6 J	0.19	0.094	0.093	ug/l	J
118-96-7	2,4,6-Trinitrotoluene [d]	10.0 J	0.19	0.094	0.075	ug/l	J
55-63-0	Nitroglycerine	0.94 U UJ	1.9	0.94	0.47	ug/l	
78-11-5	PETN	0.94 U UJ	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	94%	99%	70-136%

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Associated BS recovery outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW1
Lab Sample ID: FA87620-2
Matrix: AQ - Ground Water
Method: SW846 6850 IN HOUSE
Project: Radford AAP; VA

Date Sampled: 07/27/21
Date Received: 07/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q84268.D	1	08/11/21 15:39	NG	08/11/21 09:00	OP86789	SQ1826
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.10 U	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW1		
Lab Sample ID:	FA87620-2	**Date Sampled:**	07/27/21
Matrix:	AQ - Ground Water	**Date Received:**	07/28/21
Method:	SW846 8330B SW846 3535A	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP391151.D	1	08/09/21 19:35	JB	08/06/21 09:00	OP86727	GPP2467
Run #2 [b]	GG622042.D	1	08/13/21 00:28	JB	08/06/21 09:00	OP86727	GGG3025

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U UJ	0.19	0.096	0.077	ug/l	
121-82-4	RDX [c]	0.37 J	0.19	0.096	0.077	ug/l	J
	DNX	0.096 U UJ	0.19	0.096	0.077	ug/l	
	MNX	0.096 U	0.19	0.096	0.077	ug/l	
	TNX	0.096 U	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline	0.096 U	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.42 J	0.19	0.096	0.077	ug/l	J
99-08-1	m-Nitrotoluene	0.096 U UJ	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene [c]	0.089 J	0.19	0.096	0.077	ug/l	J
479-45-8	Tetryl [d]	0.096 U UJ	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.096 U UJ	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene [d]	0.096 U UJ	0.19	0.096	0.077	ug/l	
55-63-0	Nitroglycerine [c]	1.6 J	1.9	0.96	0.48	ug/l	J
78-11-5	PETN	0.96 U UJ	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	93%	107%	70-136%

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Associated BS recovery outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW10		
Lab Sample ID:	FA87622-1	**Date Sampled:**	07/27/21
Matrix:	AQ - Ground Water	**Date Received:**	07/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q84269.D	1	08/11/21 15:47	NG	08/11/21 09:00	OP86789	SQ1826
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.19	0.20	0.10	0.050	ug/l	J

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW10
Lab Sample ID: FA87622-1
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 07/27/21
Date Received: 07/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP391154.D	1	08/09/21 21:08	JB	08/06/21 09:00	OP86727	GPP2467
Run #2 [b]	GG622043.D	1	08/13/21 00:59	JB	08/06/21 09:00	OP86727	GGG3025

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2	1050 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.095 U UJ	0.19	0.095	0.076	ug/l	
121-82-4	RDX [c]	0.48 J	0.19	0.095	0.076	ug/l	J
	DNX	0.095 U UJ	0.19	0.095	0.076	ug/l	
	MNX	0.095 U UJ	0.19	0.095	0.076	ug/l	
	TNX	0.095 U UJ	0.19	0.095	0.076	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.12 J	0.19	0.095	0.076	ug/l	J
99-65-0	1,3-Dinitrobenzene	0.095 U UJ	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U UJ	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U UJ	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.2 J	0.19	0.095	0.076	ug/l	J
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	1.4 J	0.19	0.095	0.076	ug/l	J
98-95-3	Nitrobenzene	0.095 U UJ	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene [c]	0.41 J	0.19	0.095	0.076	ug/l	J
99-08-1	m-Nitrotoluene	0.095 U UJ	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene [c]	0.092 J	0.19	0.095	0.076	ug/l	J
479-45-8	Tetryl [d]	0.095 U UJ	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	4.6 J	0.19	0.095	0.094	ug/l	J
118-96-7	2,4,6-Trinitrotoluene [d]	13.0 J	0.19	0.095	0.076	ug/l	J
55-63-0	Nitroglycerine	0.95 U UJ	1.9	0.95	0.48	ug/l	
78-11-5	PETN	0.95 U UJ	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	100%	110%	70-136%

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Associated BS recovery outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 9/3/21

SGS North America Inc.

Report of Analysis

Client Sample ID:	54MW13		
Lab Sample ID:	FA87622-2	**Date Sampled:**	07/27/21
Matrix:	AQ - Ground Water	**Date Received:**	07/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q84270.D	1	08/11/21 15:56	NG	08/11/21 09:00	OP86789	SQ1826
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.26	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54MW13
Lab Sample ID: FA87622-2
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 07/27/21
Date Received: 07/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP391155.D	1	08/09/21 21:38	JB	08/06/21 09:00	OP86727	GPP2467
Run #2 [b]	GG622044.D	1	08/13/21 01:31	JB	08/06/21 09:00	OP86727	GGG3025

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U UJ	0.19	0.096	0.077	ug/l	
121-82-4	RDX [c]	0.38 J	0.19	0.096	0.077	ug/l	J
	DNX	0.096 U UJ	0.19	0.096	0.077	ug/l	
	MNX	0.096 U UJ	0.19	0.096	0.077	ug/l	
	TNX	0.096 U UJ	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.17 J	0.19	0.096	0.077	ug/l	J
99-65-0	1,3-Dinitrobenzene	0.096 U UJ	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U UJ	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U UJ	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.7 J	0.19	0.096	0.077	ug/l	J
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	1.2 J	0.19	0.096	0.077	ug/l	J
98-95-3	Nitrobenzene	0.096 U UJ	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene [c]	0.37 J	0.19	0.096	0.077	ug/l	J
99-08-1	m-Nitrotoluene	0.096 U UJ	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U UJ	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl [d]	0.096 U UJ	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	12.2 J	0.19	0.096	0.095	ug/l	J
118-96-7	2,4,6-Trinitrotoluene [d]	17.0 J	0.19	0.096	0.077	ug/l	J
55-63-0	Nitroglycerine	0.96 U UJ	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U UJ	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	100%	108%	70-136%

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Associated BS recovery outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ALH 9/3/21

SGS North America Inc.

Report of Analysis

Client Sample ID:	54TW13		
Lab Sample ID:	FA87622-3	**Date Sampled:**	07/27/21
Matrix:	AQ - Ground Water	**Date Received:**	07/28/21
Method:	SW846 6850 IN HOUSE	**Percent Solids:**	n/a
Project:	Radford AAP; VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q84271.D	1	08/11/21 16:04	NG	08/11/21 09:00	OP86789	SQ1826
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
14797-73-0	Perchlorate	0.31	0.20	0.10	0.050	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: 54TW13
Lab Sample ID: FA87622-3
Matrix: AQ - Ground Water
Method: SW846 8330B SW846 3535A
Project: Radford AAP; VA

Date Sampled: 07/27/21
Date Received: 07/28/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	PP391156.D	1	08/09/21 22:09	JB	08/06/21 09:00	OP86727	GPP2467
Run #2 [b]	GG622045.D	1	08/13/21 02:02	JB	08/06/21 09:00	OP86727	GGG3025

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2	1040 ml	10.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U UJ	0.19	0.096	0.077	ug/l	
121-82-4	RDX [c]	0.43 J	0.19	0.096	0.077	ug/l	J
	DNX	0.096 U UJ	0.19	0.096	0.077	ug/l	
	MNX	0.096 U UJ	0.19	0.096	0.077	ug/l	
	TNX	0.096 U UJ	0.19	0.096	0.077	ug/l	
618-87-1	3,5-Dinitroaniline [c]	0.20 J	0.19	0.096	0.077	ug/l	J
99-65-0	1,3-Dinitrobenzene	0.096 U UJ	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U UJ	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U UJ	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	1.7 J	0.19	0.096	0.077	ug/l	J
19406-51-0	4-amino-2,6-Dinitrotoluene [c]	1.3 J	0.19	0.096	0.077	ug/l	J
98-95-3	Nitrobenzene	0.096 U UJ	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene [c]	0.39 J	0.19	0.096	0.077	ug/l	J
99-08-1	m-Nitrotoluene	0.096 U UJ	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene [c]	0.096 J	0.19	0.096	0.077	ug/l	J
479-45-8	Tetryl [d]	0.096 U UJ	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	13.3 J	0.19	0.096	0.095	ug/l	J
118-96-7	2,4,6-Trinitrotoluene [d]	17.7 J	0.19	0.096	0.077	ug/l	J
55-63-0	Nitroglycerine	0.96 U UJ	1.9	0.96	0.48	ug/l	
78-11-5	PETN	0.96 U UJ	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	103%	112%	70-136%

(a) Sample extracted beyond hold time. All hits confirmed by reanalysis on a dissimilar column.
(b) Confirmation run.
(c) Primary and confirmation results differ by more than 40%.
(d) Associated BS recovery outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
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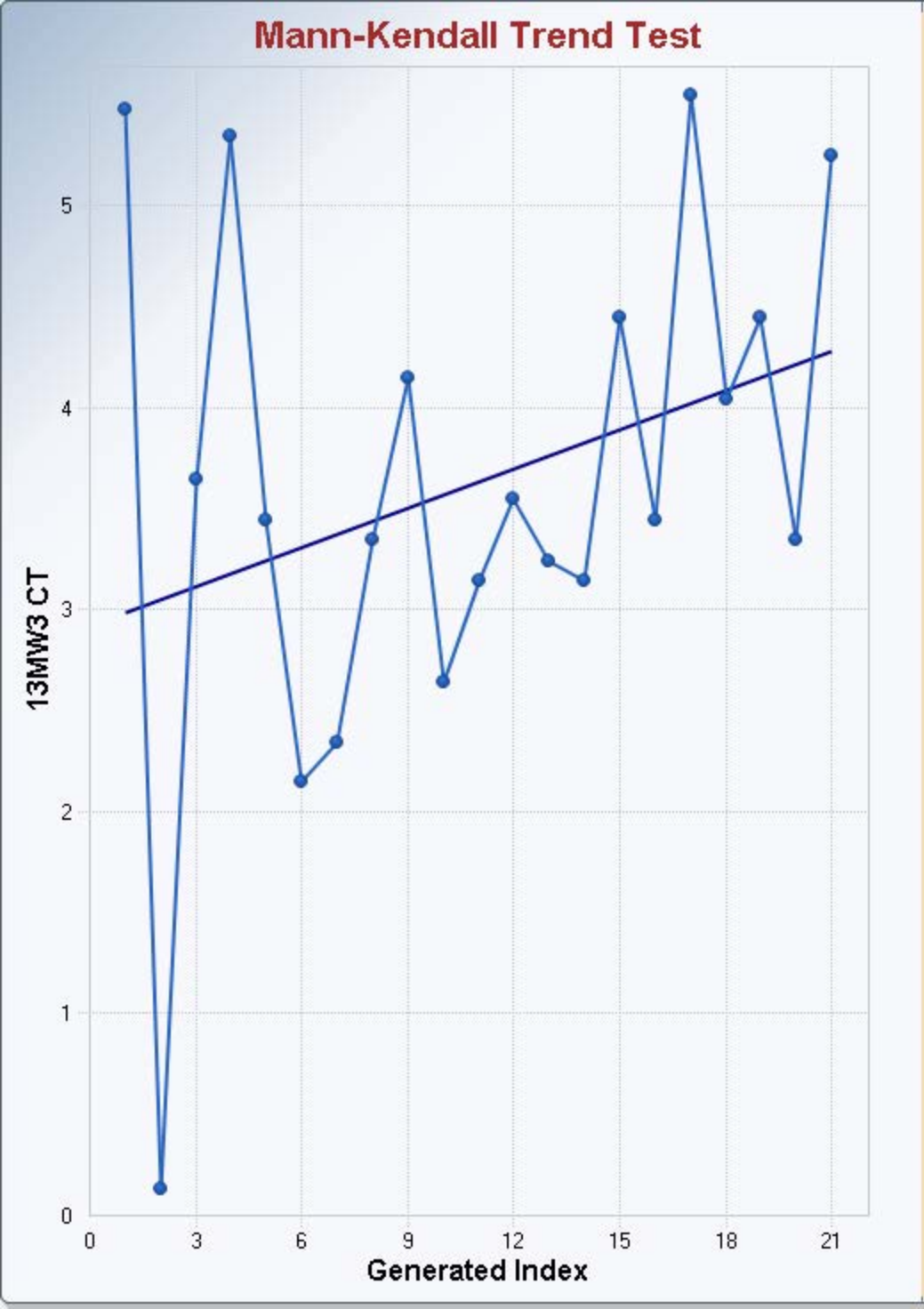
ALH 9/3/21

APPENDIX C
MANN-KENDALL ANALYSIS



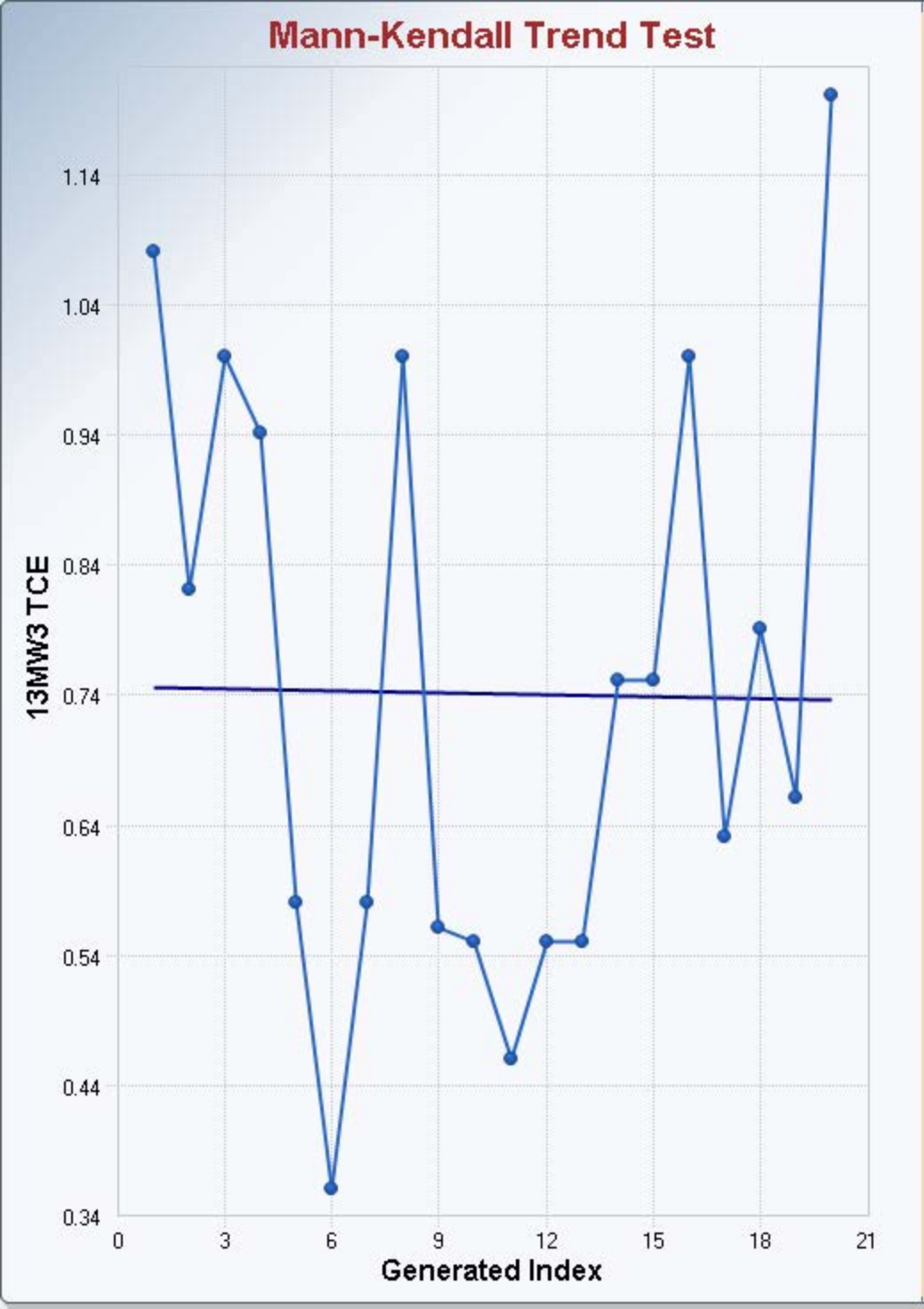
Mann-Kendall Trend Analysis

n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	33.0555
Standardized Value of S	1.3008
M-K Test Value (S)	44
Tabulated p-value	0.0980
Approximate p-value	0.0967

OLS Regression Line (Blue)

OLS Regression Slope	0.0648
OLS Regression Intercept	3.0740

Insufficient statistical evidence of a significant trend at the specified level of significance.



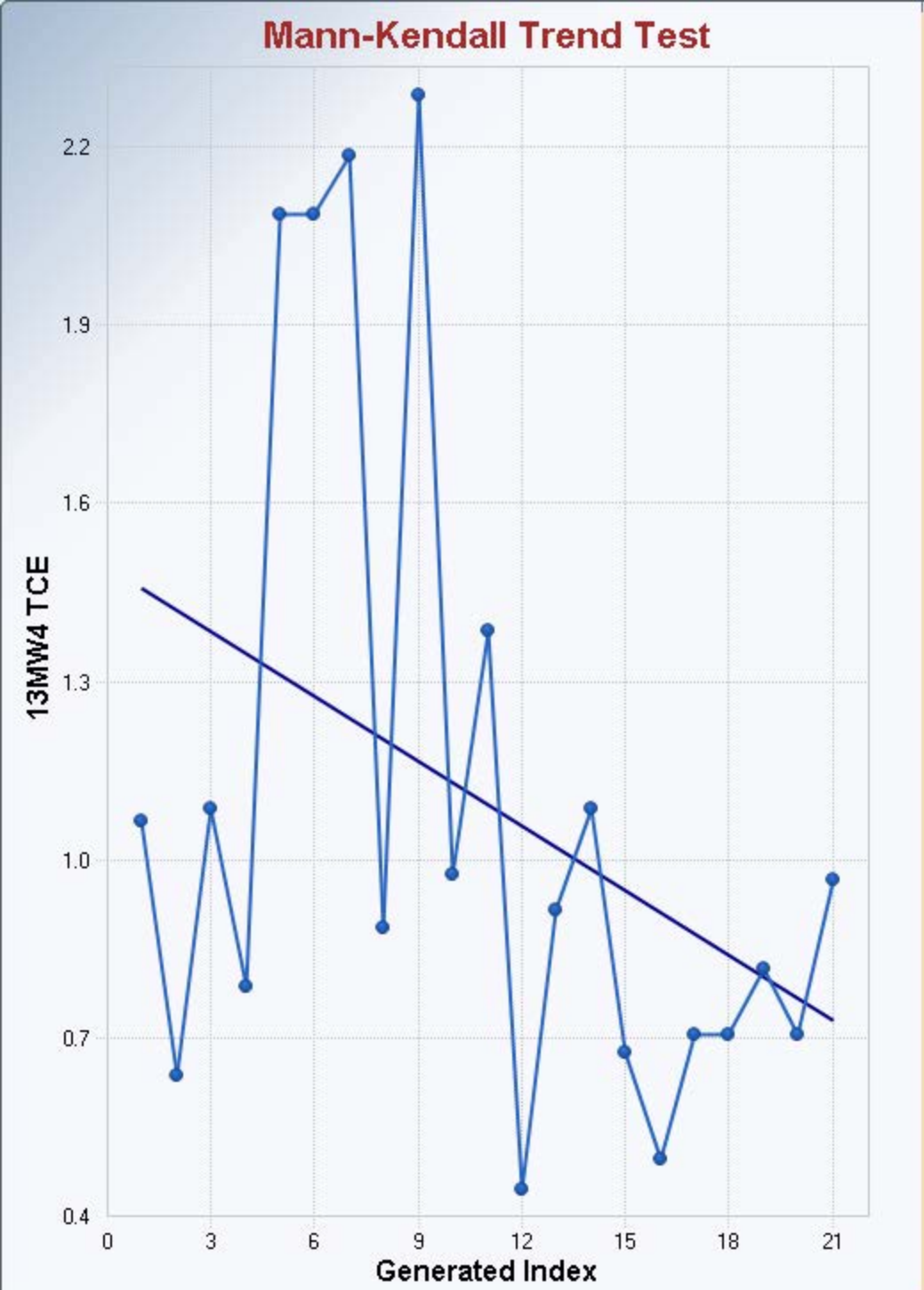
Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.6703
Standardized Value of S	-0.0326
M-K Test Value (S)	-2
Tabulated p-value	0.4870
Approximate p-value	0.4870

OLS Regression Line (Blue)

OLS Regression Slope	-0.0005
OLS Regression Intercept	0.7458

Insufficient statistical evidence of a significant trend at the specified level of significance.



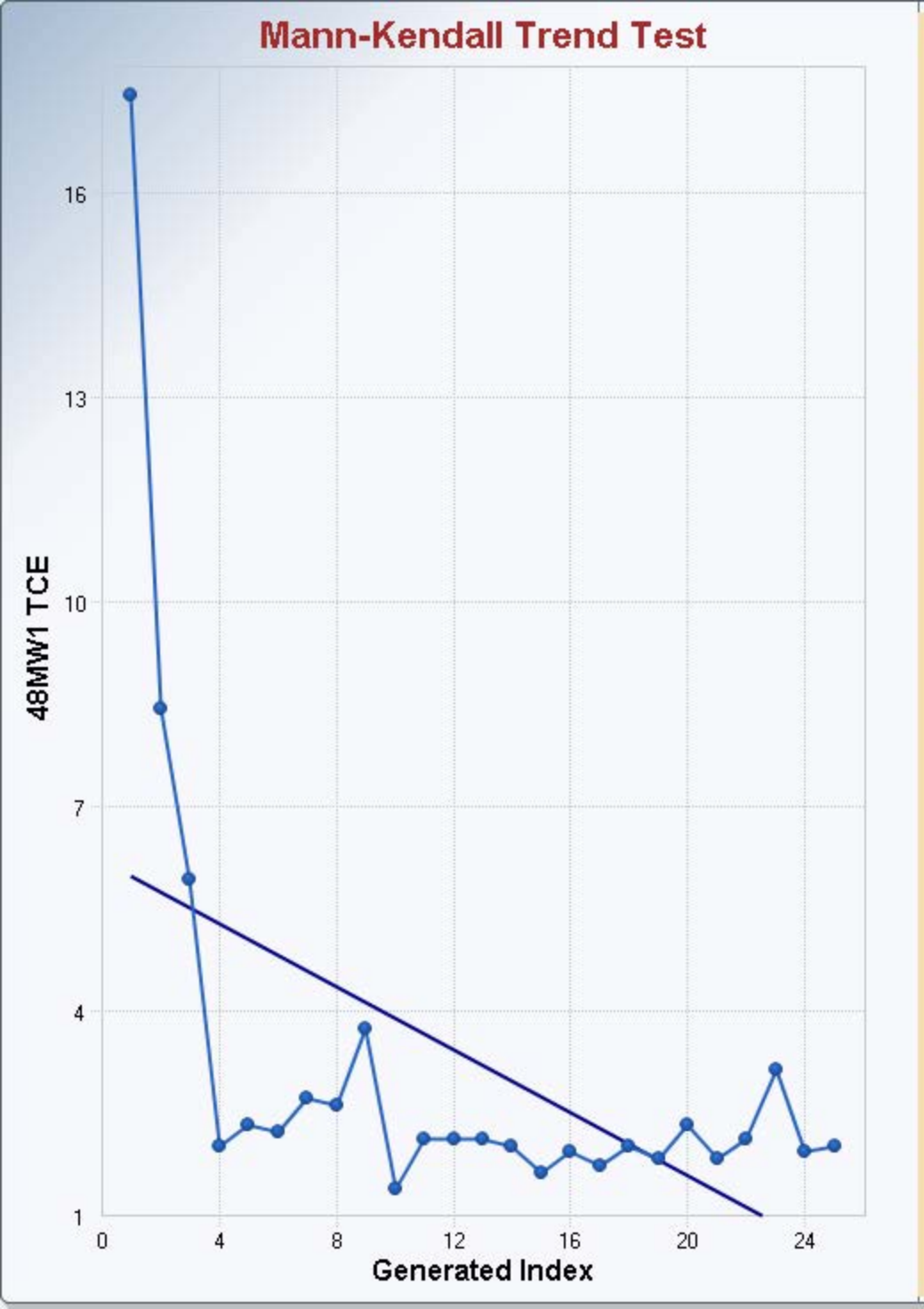
Mann-Kendall Trend Analysis

n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	33.0303
Standardized Value of S	-1.3321
M-K Test Value (S)	-45
Tabulated p-value	0.0980
Approximate p-value	0.0914

OLS Regression Line (Blue)

OLS Regression Slope	-0.0364
OLS Regression Intercept	1.5090

Insufficient statistical evidence of a significant trend at the specified level of significance.



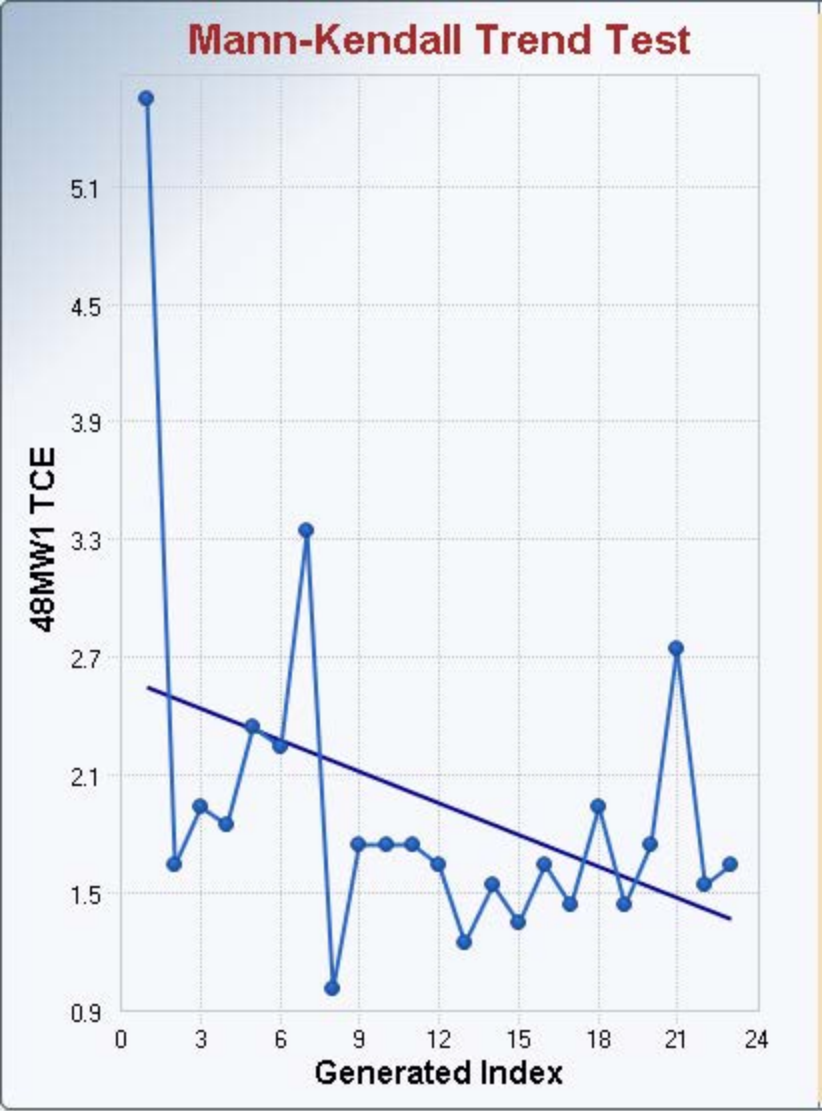
Mann-Kendall Trend Analysis

n	25
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	42.5793
Standardized Value of S	-2.6304
M-K Test Value (S)	-113
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0043

OLS Regression Line (Blue)

OLS Regression Slope	-0.2328
OLS Regression Intercept	5.7889

Statistically significant evidence of a decreasing trend at the specified level of significance.



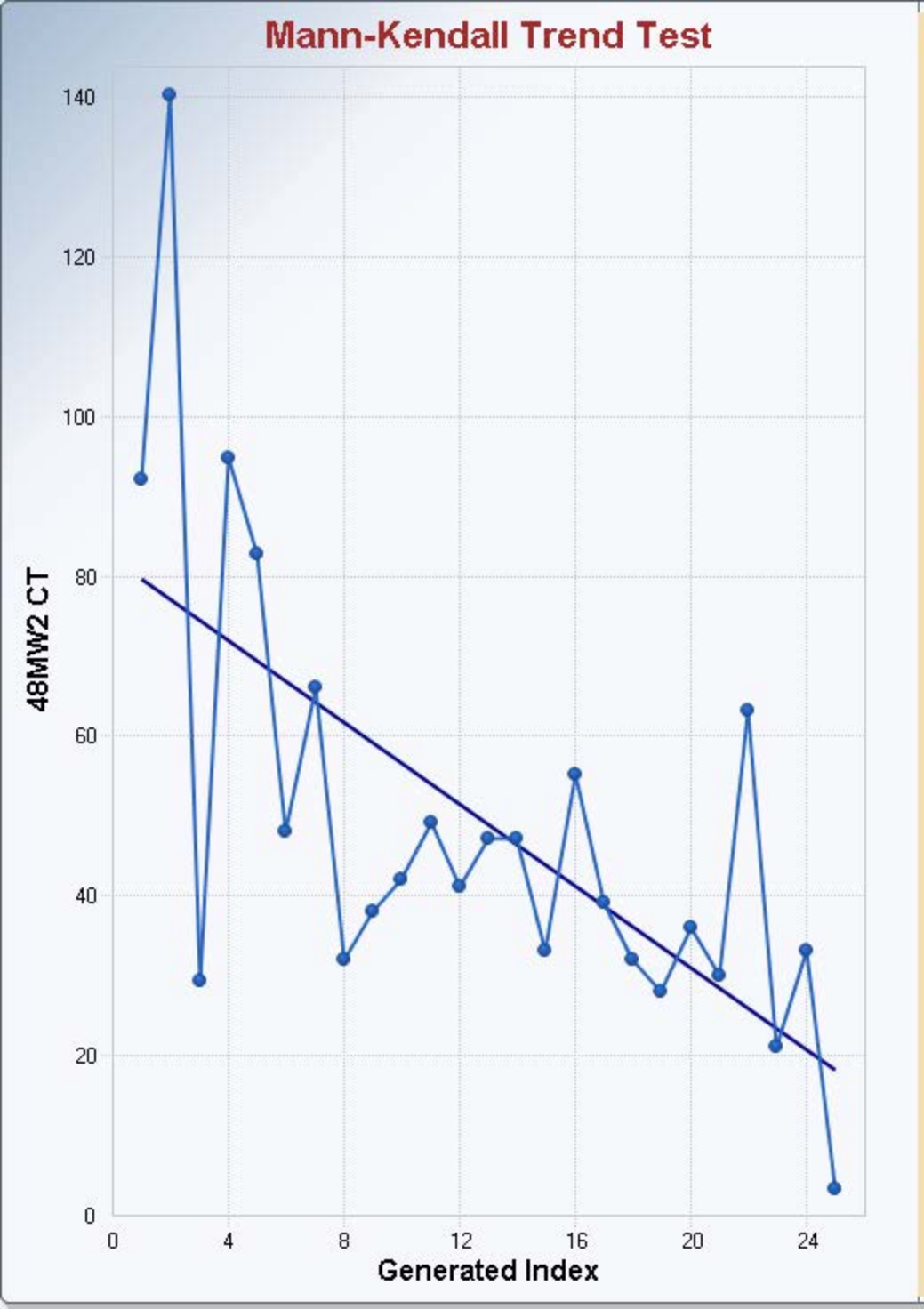
Mann-Kendall Trend Analysis

n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.5943
Standardized Value of S	-1.7290
M-K Test Value (S)	-66
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0419

OLS Regression Line (Blue)

OLS Regression Slope	-0.0540
OLS Regression Intercept	2.5645

Statistically significant evidence of a decreasing trend at the specified level of significance.



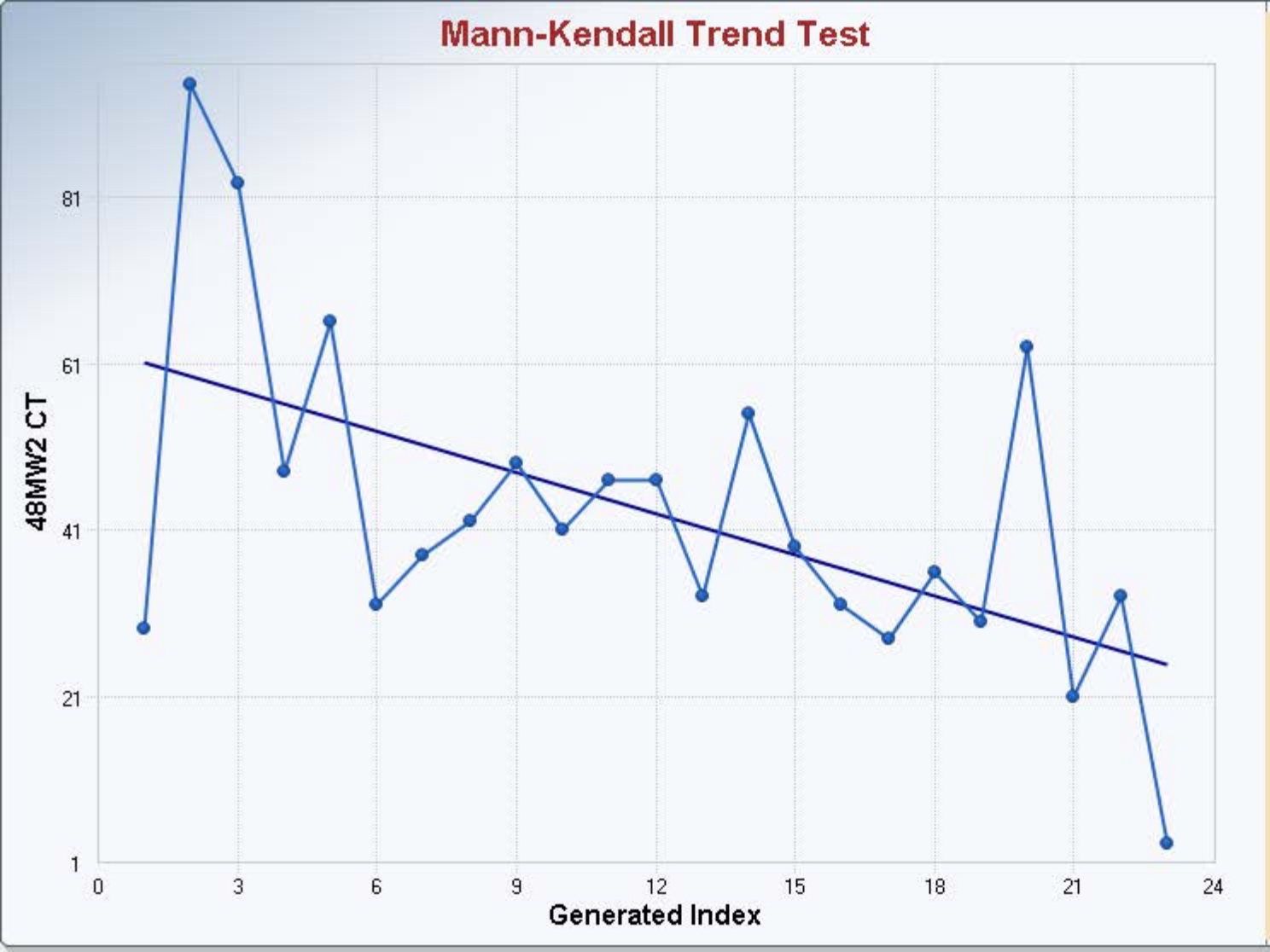
Mann-Kendall Trend Analysis

n	25
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	42.7824
Standardized Value of S	-3.3191
M-K Test Value (S)	-143
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0005

OLS Regression Line (Blue)

OLS Regression Slope	-2.5572
OLS Regression Intercept	82.1160

Statistically significant evidence of a decreasing trend at the specified level of significance.



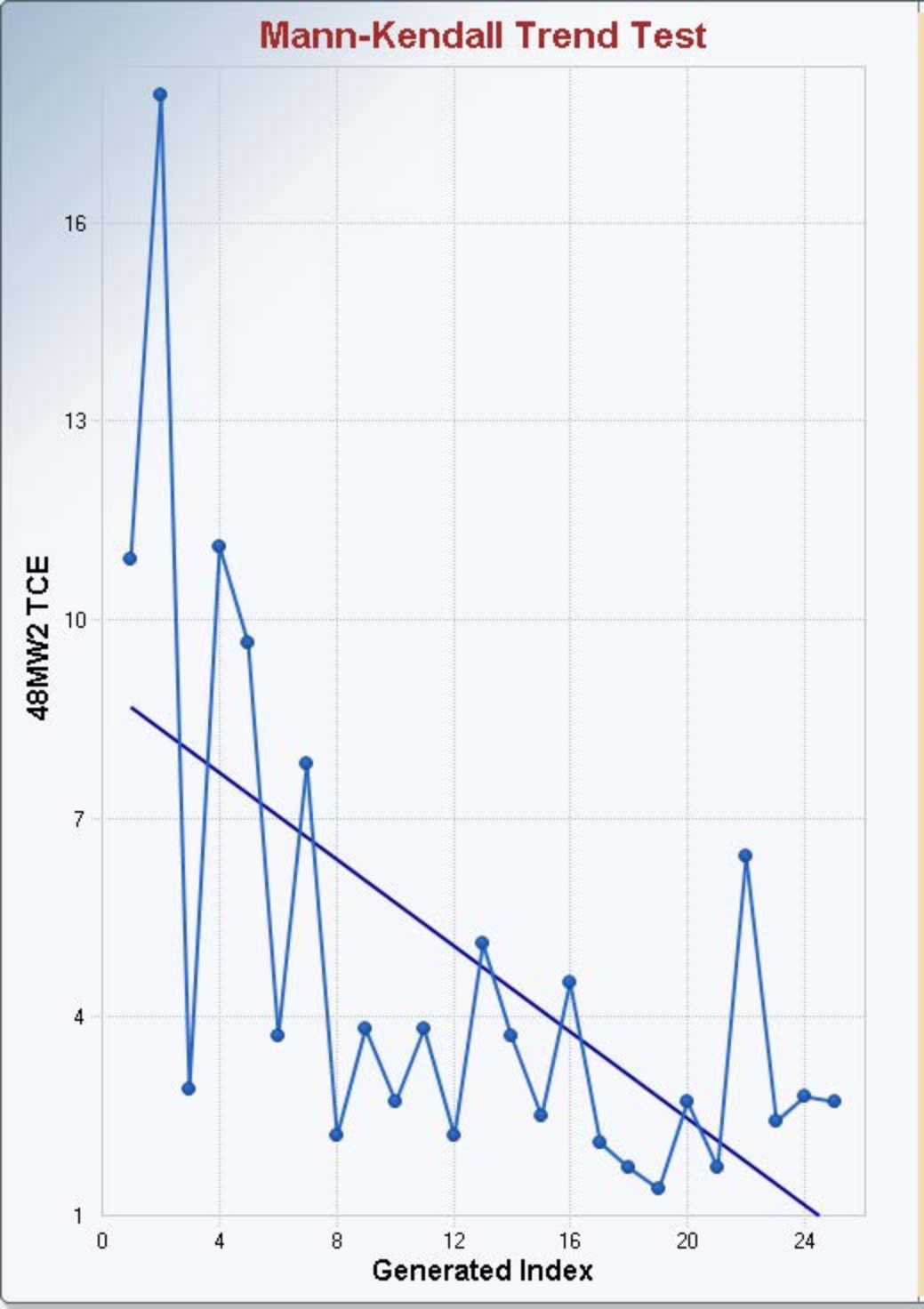
Mann-Kendall Trend Analysis

n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.8242
Standardized Value of S	-2.6174
M-K Test Value (S)	-100
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0044

OLS Regression Line (Blue)

OLS Regression Slope	-1.6504
OLS Regression Intercept	62.8395

Statistically significant evidence of a decreasing trend at the specified level of significance.



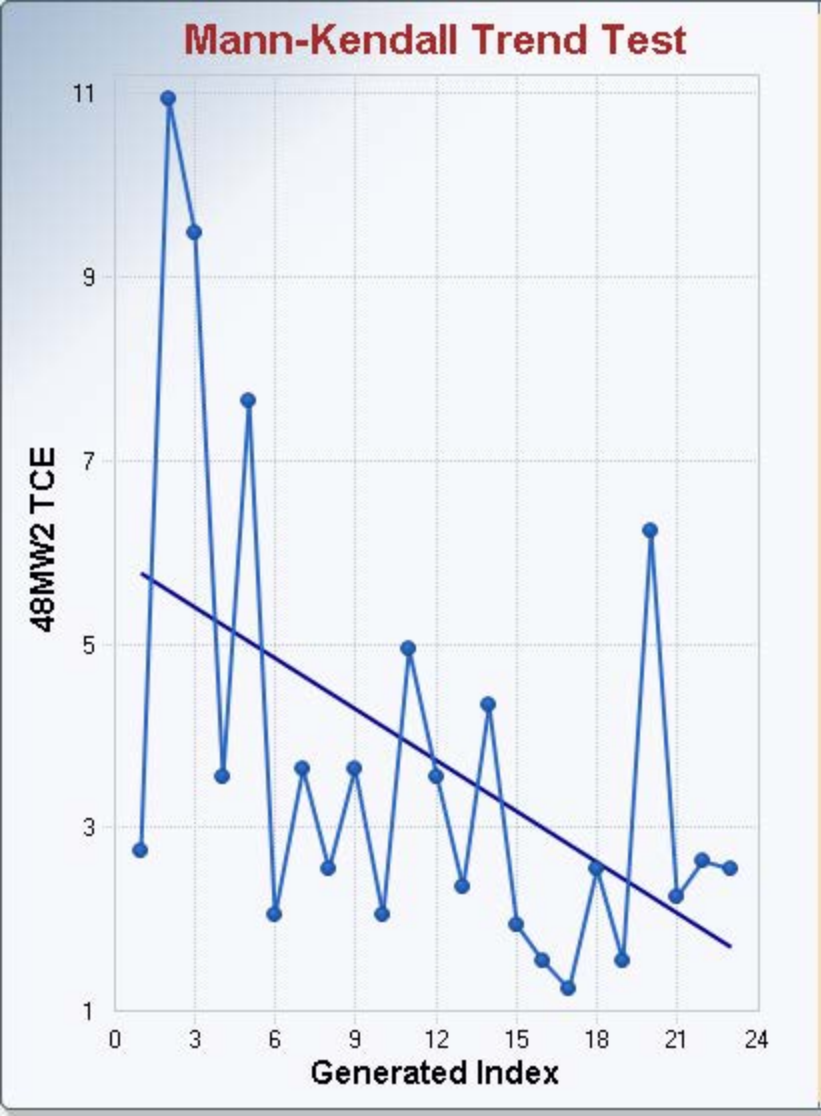
Mann-Kendall Trend Analysis

n	25
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	42.7278
Standardized Value of S	-2.9021
M-K Test Value (S)	-125
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0019

OLS Regression Line (Blue)

OLS Regression Slope	-0.3275
OLS Regression Intercept	9.0920

Statistically significant evidence of a decreasing trend at the specified level of significance.



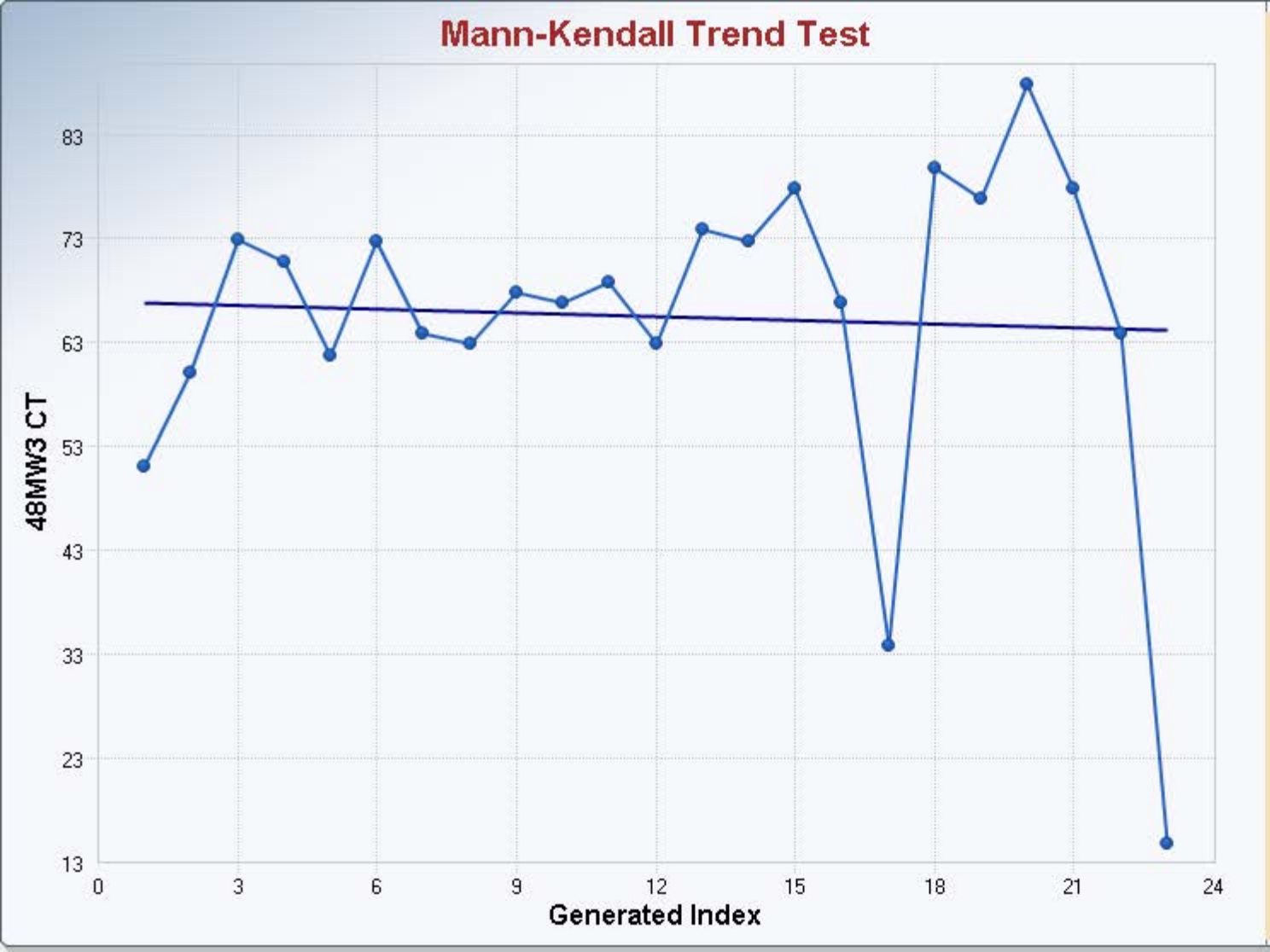
Mann-Kendall Trend Analysis

n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.7624
Standardized Value of S	-2.1450
M-K Test Value (S)	-82
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0160

OLS Regression Line (Blue)

OLS Regression Slope	-0.1854
OLS Regression Intercept	6.2186

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.7977
Standardized Value of S	1.5609
M-K Test Value (S)	60
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0593

OLS Regression Line (Blue)

OLS Regression Slope	-0.1197
OLS Regression Intercept	67.2012

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Analysis

n	25
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	42.7590
Standardized Value of S	0.3274
M-K Test Value (S)	15
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.3717

OLS Regression Line (Blue)

OLS Regression Slope	-1.3758
OLS Regression Intercept	89.5890

Insufficient statistical evidence of a significant trend at the specified level of significance.

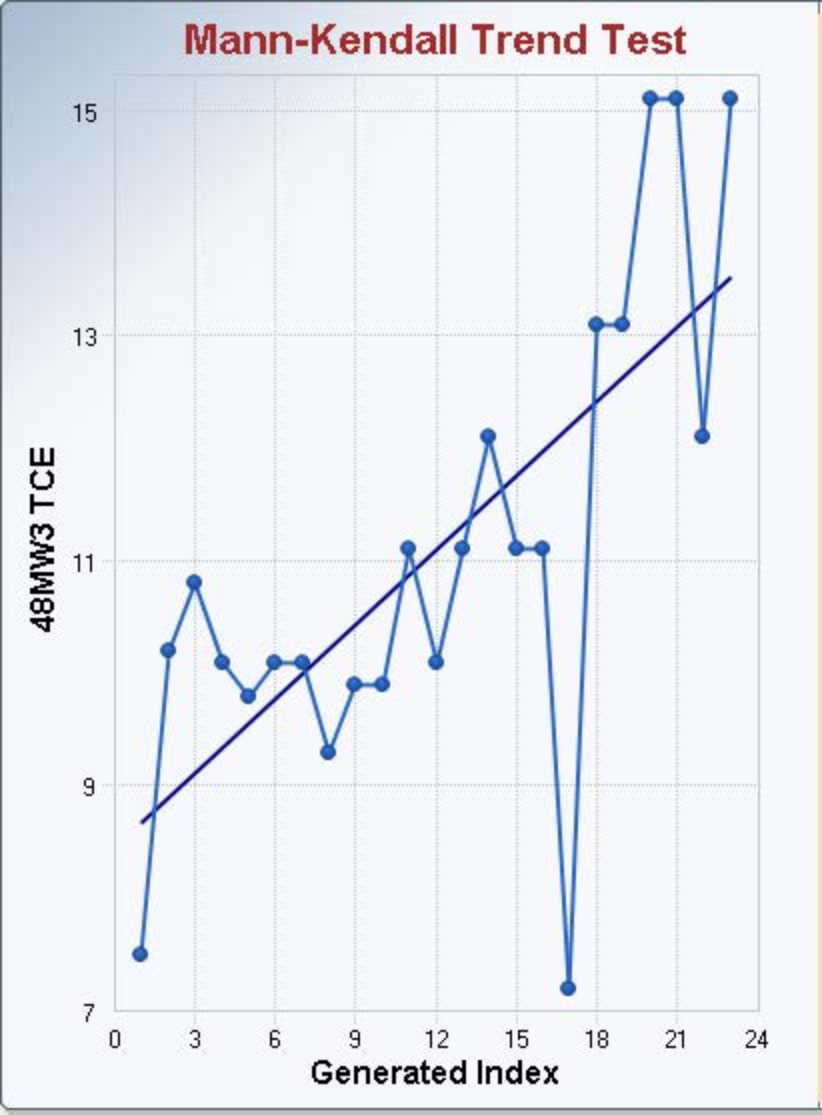
Mann-Kendall Trend Analysis

n	25
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	42.5363
Standardized Value of S	2.0453
M-K Test Value (S)	88
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0204

OLS Regression Line (Blue)

OLS Regression Slope	-0.2547
OLS Regression Intercept	16.2230

Statistically significant evidence of an increasing trend at the specified level of significance.



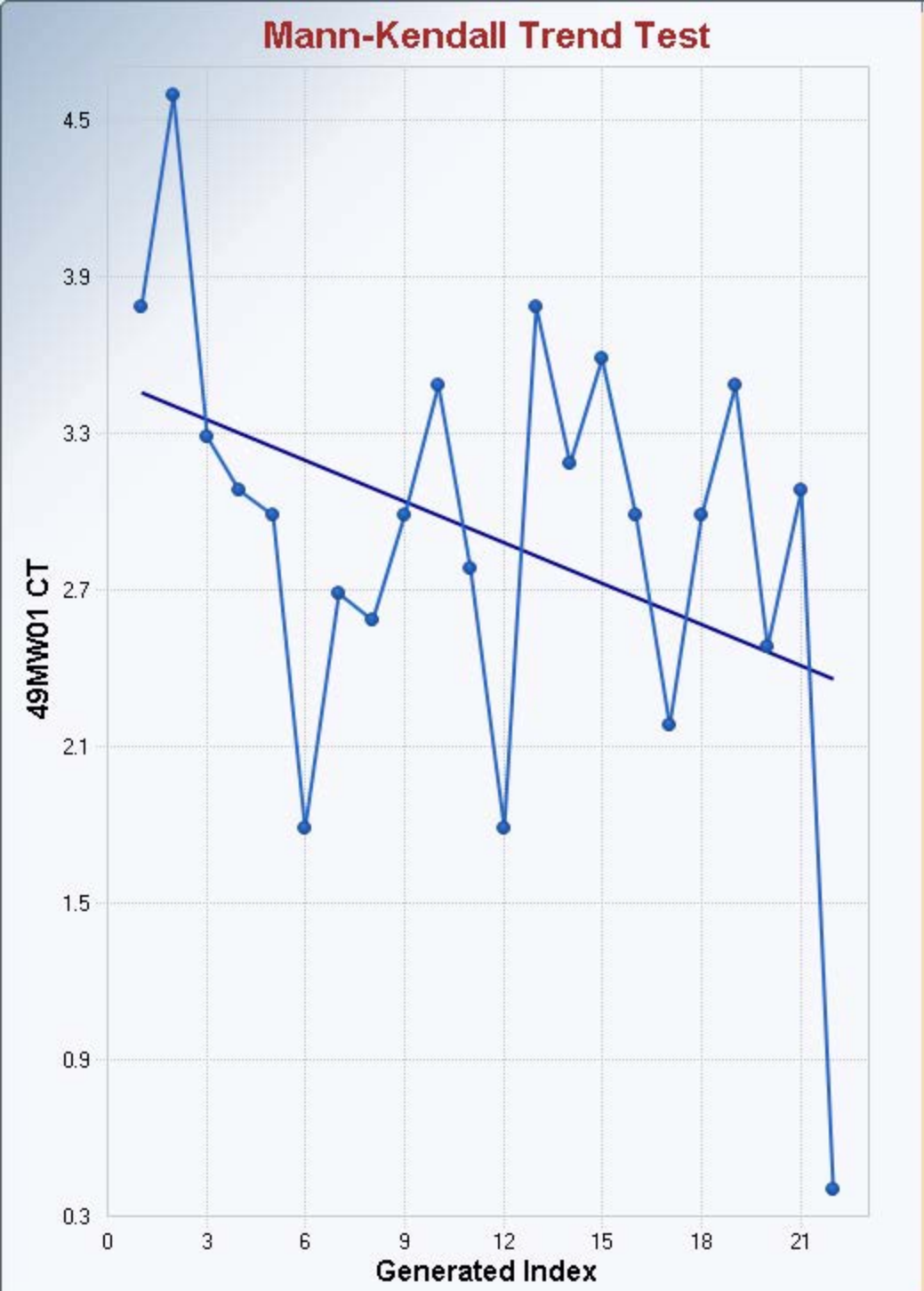
Mann-Kendall Trend Analysis

n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.5455
Standardized Value of S	3.5690
M-K Test Value (S)	135
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0002

OLS Regression Line (Blue)

OLS Regression Slope	0.2205
OLS Regression Intercept	8.3458

Statistically significant evidence of an increasing trend at the specified level of significance.



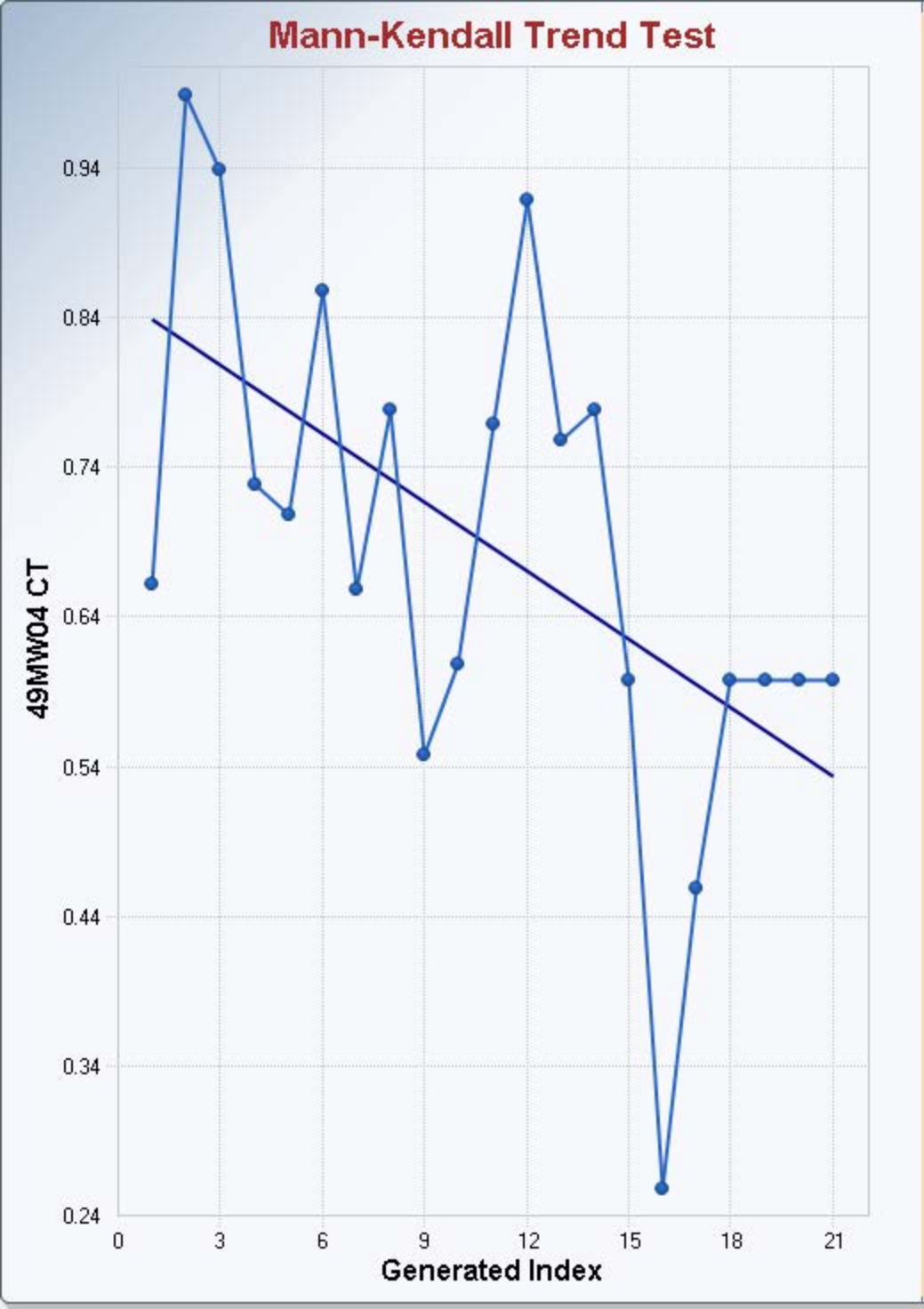
Mann-Kendall Trend Analysis

n	22
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	35.2846
Standardized Value of S	-1.4171
M-K Test Value (S)	-51
Tabulated p-value	0.0800
Approximate p-value	0.0782

OLS Regression Line (Blue)

OLS Regression Slope	-0.0521
OLS Regression Intercept	3.5232

Insufficient statistical evidence of a significant trend at the specified level of significance.



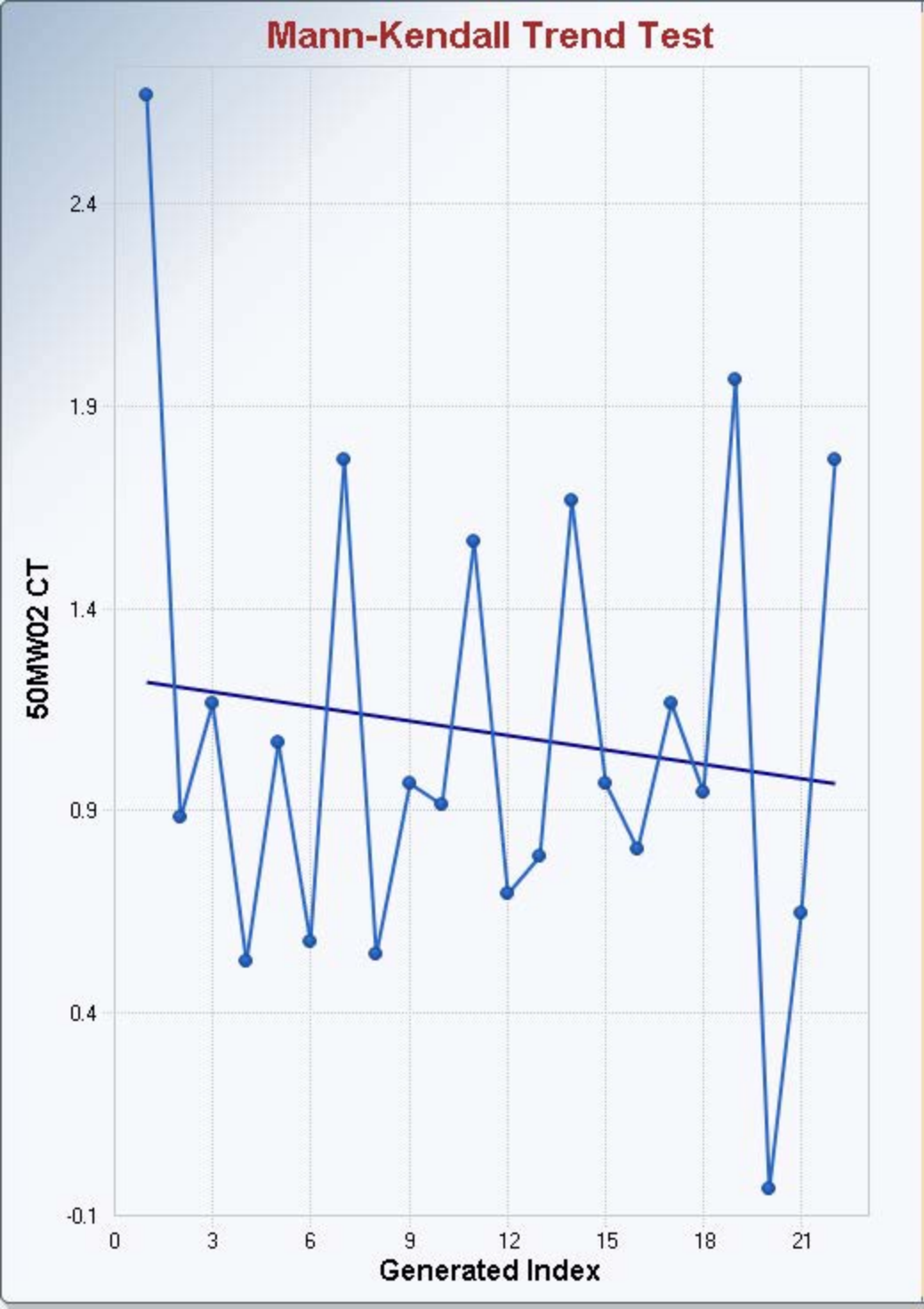
Mann-Kendall Trend Analysis

n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.8481
Standardized Value of S	-2.6790
M-K Test Value (S)	-89
Tabulated p-value	0.0040
Approximate p-value	0.0037

OLS Regression Line (Blue)

OLS Regression Slope	-0.0153
OLS Regression Intercept	0.8562

Statistically significant evidence of a decreasing trend at the specified level of significance.



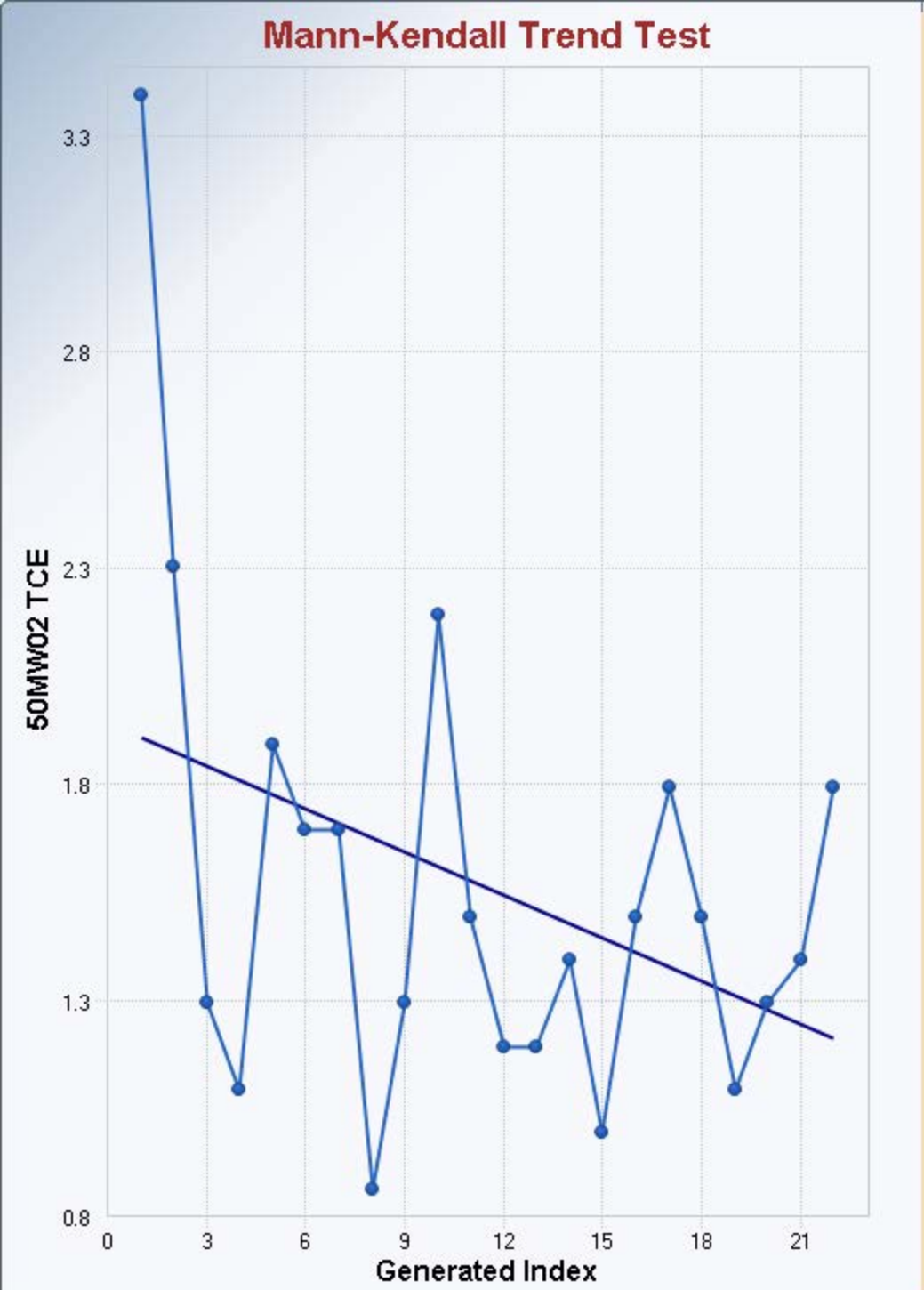
Mann-Kendall Trend Analysis

n	22
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	35.4213
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)

OLS Regression Slope	-0.0117
OLS Regression Intercept	1.2607

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	22
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	35.2893
Standardized Value of S	-1.0485
M-K Test Value (S)	-38
Tabulated p-value	0.1440
Approximate p-value	0.1472

OLS Regression Line (Blue)

OLS Regression Slope	-0.0331
OLS Regression Intercept	1.9483

Insufficient statistical evidence of a significant trend at the specified level of significance.